ENTERED

Department of Energy
Carlsbad Field Office
P. O. Box 3090
Carlsbad, New Mexico 88221

NOV 19 2013

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Mr. John E. Kieling, Chief
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Bldg. 1
Santa Fe, New Mexico 87505-6303

Subject: Transmittal of the Final Audit Report for INL/CCP Recertification Audit A-13-18

Dear Mr. Kieling:

This letter transmits the Final Audit Report for Carlsbad Field Office (CBFO) Audit A-13-18 of the Idaho National Laboratory Central Characterization Program (INL/CCP) performing characterization and certification activities as required by Part 2, Section 2.3.2.3 of the Waste Isolation Pilot Plant (WIPP) Hazardous Waste Facility Permit (HWFP). The audit was conducted on June 3-6, 2013.

The enclosed report contains the results of audit activities performed for recertification of contact-handled (CH) Summary Category Groups S3000 homogenous solids waste, S4000 soils/gravel waste, and S5000 debris waste, and remote-handled (RH) Summary Category Groups S3000 homogenous solids waste and S5000 debris waste. The audit team identified no WAP-related deficiencies or Observations as a result of this audit.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

If you have any questions, please contact Mr. Oba L. Vincent, Acting Director, Office of Quality Assurance, at (575) 234-7525.

Sincerely,

Jose R. Franco, Manager
Carlsbad Field Office

Enclosure

CBFO:OQA:DSM:MAG:13-2091:UFC 2300.00

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cc: w/Report Narrative

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R. Allen, CTAC	ED
T. Ackman, CTAC	ED
D. Harvill, CTAC	ED
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Site Documents	ED
WWIS Database Administrators	ED
R. Chavez, RES	ED
W. Most, RES	ED
L. Pastorello, RES	ED
RCRA Chronology Record	ED

*ED denotes electronic distribution

cc: w/enclosures

WIPP Operating Record	*EF
CBFO QA File	EF
CBFO M&RC	EF

*EF denotes electronic file format

CBFO:OQA:DSM:MAG:13-2091:UFC 2300.00

U.S. Department of Energy
Carlsbad Field Office

CONTENT MAP

Final Audit Report of Audit A-13-18 of the IDAHO NATIONAL LABORTAORY/ Central Characterization Project

Audit Number A-13-18
June 3 – 6, 2013

CONTENT MAP

This box contains the Final Audit Report of CBFO Audit A-13-18 of the Idaho National Laboratory Central Characterization Project (INL/CCP) conducted June 3 – 6, 2013. The box also contains a list of objective evidence used to conduct the audit. The documents have been organized into color-coded folders, one each for the INL/CCP Implementing Procedures (purple folder), Final Audit Report (manila folder), the C-6 Checklists (brown folder), General Information (green folder), Acceptable Knowledge (blue folder), Headspace Gas (brown folder), Real-Time Radiography (red folder), and Visual Examination (yellow folder). The list below identifies each document by name and number and indicates where each may be found.

CONTENT MAP	**Black Folder**

Final Audit Report	**Manila Folder**

Final Audit Report
- Attachment 1: Personnel Contacted During the Audit
- Attachment 2: Personnel Contacted During the Audit by Area
- Attachment 3: Objective Evidence
- Attachment 4: Table of Audited Documents
- Attachment 5: List of Processes and Equipment Reviewed
- Attachment 6: Procedure Revision Matrix

C6 Checklist- May 8, 2012	**Brown Folder**
C6-1	Waste Analysis Plan (WAP) Checklist
C6-2	Solids and Soils/Gravel Sampling (SOL) Checklist
C6-3	Acceptable Knowledge (AK) Checklist
C6-4	Headspace Gas Checklist

C6 Checklist – March 13, 2013	**Brown Folder**
C6-1	Waste Analysis Plan (WAP) Checklist
C6-2	Acceptable Knowledge (AK) Checklist
C6-3	Radiography (RTR) Checklist
C6-4	Visual Examination (VE) Checklist

INL/CCP Implementing Procedures Audited	**Purple Folder**
See Final Report Attachment 4 for List of Audited INL/CCP Procedures	

Attachment 5 - Objective Evidence	
General Information (Checklist C6-1) Waste Analysis Plan (WAP)	**Green Folder**
GEN1	WSPF ID-RF-3114, CIS Lot 109, Rev. 1
GEN2	WSPF ID-RF-S5300, CIS Lot 137
GEN3	WSPF ID-SDA-SOIL, CIS Lot 75 & 76, Rev. 1
GEN4	WSPF ID-NRF-SPC, CIS Lot 3 & 4
GEN5	IN-SRP-VE-000085, IN-ARP-VE-002812, INLRHVE12001
GEN6	INHSG1204, ECL12029M, INHSG1202, ECL12023M, INHSG1206,

	ECL12036M
GEN7	INRTR5120004, RTR11-00132, RTR11-00157, INLRHRTR13005, INLRHRTR12012
GEN8	Quarterly Repeats
GEN9	Random Selection Lot 3 Headspace Gas Random Sample Selection Memorandum For Waste Stream IN-ID-NRF-SPC, Lot 3 and Sample Selection Container Replacement Memorandum For The Second Random Sample Lot Of Waste Stream ID-RF-S5300-A
GEN10	Quarterly Repeats
GEN11	Records packages for NCR-INL-1759-12, R0; NCR-INL-0418-12, R1; NCR-INL-0396-12, R1; NCR-INL-0437-12, R0
GEN12	CH NCR Log for Project Level and Data Generation Level 2012/2013 and RH NCR Log for Project Level and Data Generation Level 2012/2013
GEN13	Nonconformance Reports - NCR-INL-0346-12, R0; NCR-INL-0349-12, R0; NCR-INL-0353-12, R0; NCR-INL-0357-12, R0; NCR-INL-0368-12, R0; NCR-INL-0428-12, R0; NCR-INL-0430-12, R0; NCR-INL-0433-12, R1; NCR-INL-0434-12, R1; NCR-INL-0438-12, R0; NCR-INL-0062-13, R0; NCR-INL-0066-13, R0; NCR-INL-0329-13, R0; NCR-INL-0336-13, R0; NCR-RHINL-0125-12, R1; NCR-RHINL-0496-12, R0; and NCR-RHINL-0502-12, R0
GEN14	CH Characterization data packages
GEN15	RH Characterization data packages
GEN16	CH Records Inventory and Disposition Schedule (RIDS) dated 08/2/2012
GEN17	RH RIDS dated 07/23/2012
GEN18	CCP – INL List of Qualified Individuals dated 5/31/2013
GEN19	RH Program – INL List of Qualified Individuals dated 5/7/2013
GEN20	Qualification records for selected CCP personnel
GEN21	Qualification records for selected CCP personnel
GEN22	RH Hazardous Waste Manifest for - 001499913 JJK
GEN23	RH Hazardous Waste Manifest for - 001499914 JJK
GEN24	CH Hazardous Waste Manifest for - 001600734 GBF
GEN25	CH Hazardous Waste Manifest for - 001600736 GBF
Acceptable Knowledge (Checklist C6-3)	**Blue Folder**
AK1	AK Summary Report for INL Argonne CH TRU Waste from Facility Maint. And Lab Operations, CCP-AK-INL-025 R1
AK2	AK Summary Report for Rocky Flats Immobilized Organic Liquids Stored at the INL, ID-RF-S3150-A, CCP-AK-INL-005 R8,
AK3	CCP AK Summary Report for Waste Retrieved from Designated Areas within the SDA at INL, ID-SDA-SOIL, CCP-AK-INL-001 R11
AK4	AK Summary Report for RH TRU Debris Waste from ANLE Stored at the INL, CCP-AK-INL-500 R11
AK5	AK Summary Report for Bettis Laboratory RH TRU Waste Stored at INL, IN-ID-BTO-030, CCP-AK-INL-590 R2
AK6	Waste Stream Profile Form and attachments for waste stream ID-AECHDM
AK7	Waste Stream Profile Form and attachments for waste stream ID-RF-S3150-A
AK8	Waste Stream Profile Form and attachments for waste stream ID-SDA-

	SOIL
AK9	Waste Stream Profile Form and attachments for waste stream ID-ANLE-S5000
AK10	QMIS Approval Screenshots for AK Summaries for waste streams ID-AECHDM, ID-RF-S3150-A, ID-SDA-SOIL, ID-ANLE-S5000, and IN-ID-BTO-030
AK11	AK Source Documents for waste stream ID-AECHDM
AK12	AK Source Documents for waste stream ID-RF-3150-A
AK13	AK Source Documents for waste stream ID-SDA-SOIL
AK14	AK Source Documents for waste stream ID-ANLE-S5000
AK15	AK Source Documents for waste stream IN-ID-BTO-030
AK16	AK Documentation Checklist, Attachment 1, for waste streams ID-AECHDM, ID-RF-S3150-A, ID-SDA-SOIL, ID-ANLE-S5000, and IN-ID-BTO-030
AK17	AK attachment 4 Information List for waste streams ID-AECHDM, ID-RF-S3150-A, ID-SDA-SOIL, ID-ANLE-S5000, and IN-ID-BTO-030
AK18	AK attachment 5, Hazardous Constituents, for waste streams ID-AECHDM, ID-RF-S3150-A, ID-SDA-SOIL, ID-ANLE-S5000, and IN-ID-BTO-030
AK19	AK attachment 6, Waste Form, Waste Material Parameters, Prohibited Items and Packaging for waste streams ID-AECHDM, ID-RF-S3150-A, ID-SDA-SOIL, ID-ANLE-S5000, and IN-ID-BTO-030
AK20	AK Attachment 8 container list for waste streams ID-AECHDM, ID-RF-S3150-A, ID-SDA-SOIL, ID-ANLE-S5000, and IN-ID-BTO-030
AK21	Training/Qualification records for Acceptable Knowledge personnel performing characterization related activities
AK22	AK Discrepancy Resolutions at Characterization and AK Reevaluations
AK23	NCRs for prohibited items
AK24	IDC database with “reject” field
AK25	AK Tracking Spreadsheets for waste streams ID-AECHDM, ID-RF-S3150-A, ID-SDA-SOIL, ID-ANLE-S5000, and IN-ID-BTO-030
AK26	Container input forms
AK27	Internal Surveillance Report
AK28	Container inspection reports
AK29	“Hold” tag
AK30	AK Accuracy Reports for waste streams ID-AECHDM, ID-RF-S3150-A, ID-SDA-SOIL, ID-ANLE-S5000, and IN-ID-BTO-030
AK31	HSG Random Container Selection Memos for waste streams ID-AECHDM and ID-ANLE-S5000
AK32	HSG Summary Reports for waste streams ID-AECHDM and ID-ANLE-S5000
AK33	Solids Sampling and Analysis Random Container Selection Memo for ID-SDA-SOIL
AK34	Solids S&A Summary Reports for ID-SDA-SOIL Lot 5
AK35	AK Waste Stream Characterization Checklists for ID-SDA-SOIL, lots 73 & 76
AK36	Batch Data Report - IN-ARP-VE002704
AK37	Batch Data Report - IN-ARP-VE002793

AK38	Batch Data Report - VVE05-01744
AK39	Batch Data Report - RHINLVE090002
AK40	Batch Data Report - INRTR5110102
AK41	Batch Data Report - INRTR2050037
AK42	Batch Data Report - INRTR5120002
AK43	Batch Data Report - INRTR2050087
AK44	Batch Data Report - INLRHRTR12010
AK45	Batch Data Report - INLRHRTR12002
AK46	Batch Data Report - INHSGS090011
AK47	Batch Data Report - ECL09029M
AK48	Batch Data Report - INHSG1111
AK49	Batch Data Report - ECL11036M
AK50	Batch Data Report - WCS-0504
AK51	Batch Data Report - ALD05034V
AK52	Batch Data Report - ALD05031S
AK53	Batch Data Report - ALD05034M
AK54	Batch Data Report - ALD05025N
AK55	Batch Data Report - S4200-LOT-05-07
AK56	Batch Data Report - ALD12005V
AK57	Batch Data Report - ALD12005S
AK58	Batch Data Report - ALD12005M
AK59	Batch Data Report - ALD12005N
Headspace Gas (Checklist C6-4)	**Brown Folder**
HSG1	Batch Data Reports - INHSG1202, INHSG1204, and INHSG1206
HSG2	CP:05:01128 – Report of Field Reference Standard Results for the Central Characterization Project – Idaho National Laboratories
Real-Time Radiography (Checklist C6-5)	**Red Folder**
RTR1	Batch Data Reports - INRTR5120001, INRTR5120002, INRTR5120003, INRTR5120004, INLRHRTR12005, INLRHRTR12013, INLRHRTR13001, INLRHRTR13002, and INLRHRTR13003
RTR2	RTR Operator Training Records
Visual Examination (Checklist C6-6)	**Yellow Folder**
VE1	Batch Data Reports - IN-SRP-VE-000028, IN-SRP-VE-000001, IN-ARP-VE-002793, IN-SRP-VE-000183, and INLRHVE12001
VE2	Training records for 6 VE operators and 2 VE Experts
VE3	VEE Appointment Letters and training records

U.S. DEPARTMENT OF ENERGY
CARLSBAD FIELD OFFICE

FINAL AUDIT REPORT

OF THE

IDAHO NATIONAL LABORATORY
CENTRAL CHARACTERIZATION PROGRAM

IDAHO FALLS, IDAHO
AND CARLSBAD, NEW MEXICO

AUDIT NUMBER A-13-18

June 3 – 6, 2013

TRU WASTE CHARACTERIZATION AND CERTIFICATION

Prepared by: Tamara D. Ackman
Tamara D. Ackman, CTAC
Audit Team Leader

Date: 11/6/13

Approved by:
Oba Vincent, CBFO
Acting Quality Assurance Director

Date: 11/6/13

1.0 EXECUTIVE SUMMARY

Carlsbad Field Office (CBFO) Recertification Audit A-13-18 was conducted to evaluate the continued adequacy, implementation, and effectiveness of Idaho National Laboratory (INL) transuranic (TRU) waste characterization activities performed for INL by the Nuclear Waste Partnership LLC (NWP) Central Characterization Program (CCP). Activities were evaluated relative to the requirements of the Waste Isolation Pilot Plant (WIPP) Hazardous Waste Facility Permit (HWFP) and the *CBFO Quality Assurance Program Document* (QAPD).

The audit team evaluated characterization and certification activities for contact-handled (CH) Summary Category Groups (SCGs) S3000 homogeneous solids waste, S4000 soils/gravel waste, and S5000 debris waste, and remote-handled (RH) SCGs S3000 homogeneous solids waste and S5000 debris waste. The audit included other technical elements and, quality assurance (QA) elements, as described in this report.

The audit was conducted at the INL/CCP facility near Idaho Falls, Idaho, and the NWP/CCP facilities in Carlsbad, New Mexico, June 3 – 6, 2013. The audit team concluded that INL/CCP adequately incorporates upper-tier requirements into its program plans and procedures. The audit team verified that the INL/CCP program for characterization and certification activities continues to be adequate, satisfactorily implemented, and effective.

The audit team identified no WAP-related conditions adverse to quality (CAQs) resulting in corrective action reports (CARs) during the audit. No WAP-related deficiencies, isolated in nature and requiring only remedial corrective action, were identified and corrected during the audit (CDA). No WAP-related Observations or Recommendations were identified during the audit.

2.0 SCOPE AND PURPOSE

2.1 Scope

The audit team evaluated the continued adequacy, implementation, and effectiveness of the INL/CCP TRU waste characterization and certification activities for CH SCGs S3000 homogeneous solids, S4000 soils/gravel, and S5000 debris wastes, and RH SCGs S3000 homogeneous solids and S5000 debris wastes. The following elements were evaluated.

General (Idaho Falls)

- Results of Previous Audits
- Changes in Programs or Operations
- New Programs or Activities Being Implemented
- Changes in Key Personnel

Quality Assurance (Carlsbad)

- Personnel Qualification and Training
- Nonconformance Reporting
- Records

Technical Activities

NWP/CCP (Carlsbad)

- WIPP Waste Information System/Waste Data System (WWIS/WDS)

INL/CCP (Idaho Falls)

- Acceptable Knowledge (AK)/Waste Certification
- Project-level Data Verification and Validation (V&V)
- Real-time Radiography (RTR)
- Visual Examination (VE)
- Headspace Gas (HSG) Sampling
- Solids Sampling and Analysis

The evaluation of INL/CCP TRU waste activities and documents was based on current revisions of the following documents:

- Waste Isolation Pilot Plant Hazardous Waste Facility Permit NM4890139088-TSDF (HWFP)

- *Quality Assurance Program Document*, DOE/CBFO-94-1012

- *CCP Transuranic Waste Characterization Quality Assurance Project Plan*, CCP-PO-001

- Related INL/CCP technical and quality assurance implementing procedures

For the purpose of reporting results of the this audit, in an agreement reached with the New Mexico Environment Department (NMED) (reference CBFO Memorandum CBFO:OQA:DSM:MAG:13-1431 dated May 30, 2013), the audit team used C6 checklists dated May 8, 2012, and March 13, 2013, to ensure that the requirements and activities associated with chemical sampling and analysis and solids sampling and analysis were appropriately evaluated, since those activities had been conducted at INL between the dates of the last recertification audit (A-12-13) and the elimination of chemical sampling and analysis and solids sampling and analysis in the Permit Modification issued March 13, 2013. To ensure clarity, this report identifies where the May 8, 2012, version of the C6 was used.

2.2 Purpose

Audit A-13-18 was conducted to assess the level of compliance of waste characterization and certification and QA program activities for CH SCGs S3000 homogeneous solids, S4000 soils/gravel, and S5000 debris wastes, and RH SCGs S3000 homogeneous solids and S5000 debris wastes.

3.0 AUDIT TEAM AND OBSERVERS

AUDITORS/TECHNICAL SPECIALISTS

Dennis Miehls	Management Representative, CBFO Office of Quality Assurance (OQA)
Martin Navarrete	OQA Representative, CBFO
Tamara Bowden	Audit Team Leader, CBFO Technical Assistance Contractor (CTAC)
Cindi Castillo	Auditor, CTAC (HSG)
Berry Pace	Auditor, CTAC (VE and SS)
Rick Castillo	Auditor, CTAC (AK)
Jim Schuetz*	Auditor, CTAC (C6 QA)
Katie Martin*	Auditor, CTAC (C6 QA)
Prissy Martinez	Auditor/Technical Specialist, CTAC (RTR)
Paul Gomez	Technical Specialist, CTAC (HSG)
Porf Martinez	Technical Specialist, CTAC (RTR)
Kirk Kirkes	Technical Specialist, CTAC (PL V&V)
Rhett Bradford	Technical Specialist, CTAC (VE and SS)
Dick Blauvelt	Technical Specialist, CTAC (AK)

*Personnel located in Carlsbad, NM

OBSERVERS

Marcus Pinzel	CBFO Office of the National TRU Program (NTP)
Joe Harvill	Senior Manager, CTAC
Steve Holmes	NMED
Ricardo Maestas	NMED
Connie Walker	NMED

4.0 AUDIT PARTICIPANTS

INL/CCP individuals involved in the audit process are identified in Attachment 1. Attachment 2 contains a list of personnel contacted during the audit by subject area. A pre-audit meeting was held at the INL/CCP site near Idaho Falls, ID, and the Skeen-Whitlock Building in Carlsbad, NM, on June 3, 2013. Daily briefings were held with INL/CCP management and staff to discuss issues and potential deficiencies. The audit was concluded with a post-audit meeting held at the INL/CCP site near Idaho Falls, ID, and in the Skeen-Whitlock Building in Carlsbad, NM, on June 6, 2013.

5.0 SUMMARY OF AUDIT RESULTS

5.1 Program Adequacy, Implementation, and Effectiveness

The audit team concluded that the INL/CCP TRU waste characterization, certification, and transportation programs evaluated are adequately established for compliance with upper-tier requirements, effectively implemented, and satisfactory in achieving the desired results. The specific program elements and areas evaluated are described below.

The audit team identified no WAP-related CAQs resulting in a CAR during the audit. No WAP-related deficiencies, isolated in nature and requiring only remedial corrective action, were identified and corrected during the audit (CDA). No WAP-related Recommendations or Observations were identified during the audit.

Attachment 3 consists of boxes containing objective evidence reviewed during the audit. Attachment 4 is a table listing INL/CCP documents examined during the audit. Attachment 5 lists the processes and equipment evaluated during the audit. Attachment 6 is the procedure revision matrix identifying procedure changes since the last recertification audit (A-12-13). Audit activities, including objective evidence reviewed, are described in this report.

5.2 General Activities

5.2.1 Results of Previous Audits

During the audit, the audit team verified that corrective actions for a CAQ documented during the previous INL/CCP Recertification Audit, A-12-13, was satisfactorily implemented and maintained. Corrective actions for CBFO CAR 12-027 (overall inattention to detail in CCP batch data reports (BDRs)) from Audit A-12-13 were also found to be satisfactorily implemented and maintained.

5.2.2 Changes in Program or Operations

INL/CCP no longer performs CH RTR characterization. The RTR unit was removed in December 2012. CBFO conducted Surveillance S-13-19 on January 24, 2013, to observe VE operations on CH S3000 solids waste, with the understanding that a review of completed BDRs and operator qualification would be evaluated during INL/CCP Recertification Audit A-13-18 (see section 5.4.6 for details). The requirements for Headspace Gas and Analysis and Solids Sampling and Analysis characterization activities were removed from the HWFP on March 13, 2013. These activities were evaluated on all work performed from the previous audit (A-12-13, June 2012) through March 13, 2013.

5.2.3 New Programs or Activities Being Implemented

No new programs or activities have been implemented since the performance of Audit A-12-13.

5.2.4 Changes in Key Personnel

INL/CCP has added Steve Castro as an alternate Site Project Manager (SPM), but there have been no other significant changes in key personnel since the performance of Audit A-12-13.

5.3 WAP-related Quality Assurance Activities

As discussed in section 2.0, WAP-related QA program elements were evaluated using WAP checklists C6-1 and C6-3, dated May 8, 2012.

5.3.1 Personnel Qualification and Training

The audit team interviewed responsible personnel and reviewed documentation to verify that INL/CCP met the requirements of the CBFO QAPD and CCP-QP-002, Rev. 34, *CCP Training and Qualification Plan*. Training and qualification records for the following positions were reviewed: CH waste and RH waste Acceptable Knowledge Experts (AKEs); SPMs; HSG Operators/Independent Technical Reviewers (ITRs); VE Operators/ITRs; and RTR Operators/ITRs.

Records reviewed included the INL CH Program List of Qualified Individuals (LOQI) dated 5/31/2013, the RH Program LOQI dated 5/7/2013, subject matter expert/on-the-job-training appointment letters, test drum (capability demonstrations) and training container documentation, and annual eye examination forms for nondestructive examination (NDE) RTR Operators.

No WAP-related deficiencies regarding personnel qualification and training were identified during the audit. The procedures reviewed and objective evidence assembled and evaluated during the audit indicated that the applicable requirements for Personnel Qualification and Training are adequately established for compliance with upper-tier requirements, and are satisfactorily implemented and effective.

5.3.2 Nonconformance Reporting

The audit team conducted interviews and reviewed implementing procedure CCP-QP-005, Revision 22, *CCP TRU Nonconforming Item Reporting and Control*, to determine the degree to which the procedure adequately addresses upper-tier requirements.

The audit team interviewed the project office quality assurance engineer and then randomly selected a sample of nonconformance reports (NCRs) for review:

NCR-INL-0346-12, R0	NCR-INL-0349-12, R0	NCR-INL-0353-12, R0
NCR-INL-0357-12, R0	NCR-INL-0368-12, R0	NCR-INL-0428-12, R0

NCR-INL-0430-12, R0	NCR-INL-0433-12, R1	NCR-INL-0434-12, R1
NCR-INL-0438-12, R0	NCR-INL-0062-13, R0	NCR-INL-0066-13, R0
NCR-INL-0329-13, R0	NCR-INL-0336-13, R0	NCR-RHINL-0125-12, R1
NCR-RHINL-0496-12, R0	NCR-RHINL-0502-12, R0	

The purpose of the NCR review was to confirm that administrative deficiencies are being appropriately documented and tracked through resolution.

The audit team also reviewed NCR-INL-1759-12, R0; NCR-INL-0418-12, R1; NCR-INL-0396-12, R1; and NCR-INL-0437-12, R0, which documented nonadministrative deficiencies first identified at the SPM level. The team determined that the deficiencies had been reported to the Permittee within seven days, as required. There were no reportable RH NCRs since the previous recertification audit. All NCRs were verified as being managed and tracked in the CCP Integrated Data Center on the CCP NCR Logs.

No WAP-related deficiencies regarding nonconformances were identified during the audit. The procedures reviewed and objective evidence assembled and evaluated during the audit indicated that the applicable requirements for nonconformances are adequately established for compliance with upper-tier requirements, and are satisfactorily implemented and effective.

5.3.3 Records

The audit team conducted interviews and reviewed implementing procedures relative to the control and administration of QA records to determine the degree to which the procedures adequately address upper-tier requirements. The audit team reviewed procedures CCP-PO-001, Rev. 20, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*; CCP-QP-008, Rev. 21, *CCP Records Management*; and CCP-QP-028, Rev. 15, *CCP Records Filing, Inventorying, Scheduling, and Dispositioning.* Control of QA records was verified through review of the CH RIDS dated 8/2/2012, and the RH RIDS dated 7/23/2012.

No WAP-related deficiencies regarding records were identified during the audit. The procedures reviewed and objective evidence assembled and evaluated during the audit indicated that the applicable requirements for records are adequately established for compliance with upper-tier requirements, and are satisfactorily implemented and effective.

5.4 Technical Activities

Audit team evaluations of applicable INL/CCP technical activities are summarized in the following subsections.

5.4.1 Table C6-1, WAP Checklist (May 8, 2012)

As discussed in section 2.0, overall WAP activities were evaluated using WAP checklist C6-1, dated May 8, 2012. Checklist C6-3, dated March 13, 2013, was used for the evaluation of project-level data V&V requirements associated with RTR.

The audit was performed to assess INL/CCP's ability to manage and perform TRU waste characterization and certification activities for CH SCGs S3000 homogeneous solids waste, S4000 soils/gravel waste, and S5000 debris waste, and RH SCGs S3000 homogeneous solids waste and S5000 debris waste. The C6-1 QAP checklist addresses general program requirements from an overall management perspective. The general requirements checklist addresses both technical requirements and specific WAP-related QA programmatic requirements that, when collectively implemented, ensure effective overall management of TRU waste characterization and certification activities. Requirements are integrated into controlled documents to ensure the waste characterization strategy as defined in the WAP is accomplished and documented in accordance with controlled processes and procedures.

Technical activities evaluated for characterization and certification activities consisted of data-generation and project-level V&V, AK, RTR, VE, SS&A, HSG S&A (including Performance Demonstration Program [PDP] participation), preparation of WSPFs for CH SCG S3000 homogeneous solids waste, S4000 soils/gravel waste, and S5000 debris waste, and RH SCG S3000 homogeneous solids waste and RH SCG S5000 debris waste, and WWIS/WDS data entry. Objective evidence was selected and reviewed to evaluate the implementation of the associated characterization activities. BDRs, sampling records, and personnel qualification and training documentation were included in the evaluation. Where possible, the audit included direct observation of actual waste characterization activities. Each characterization process involves:

- Collecting raw data
- Collecting quality assurance/quality control samples or information
- Reducing the data to a useable format, including a standard report
- Review of the report by the data generation facility and the site project office
- Comparing the data against program data quality objectives (DQOs)
- Reporting the final waste characterization information to the WIPP

The flow of data from the point of generation to inclusion in the WSPF for each characterization technique was reviewed to ensure that all applicable requirements were captured in the site operating procedures. Specific procedures audited and the objective evidence reviewed are described in the following sections.

During the audit, INL/CCP demonstrated compliance with the waste characterization requirements of the HWFP WAP through documentation and by performing characterization activities.

The audit team conducted personnel interviews and reviewed objective evidence to ensure project-level activities were adequately performed to support waste

characterization. INL/CCP BDRs were evaluated based on project-level requirements for RTR, VE, DTC, and HSG sampling for the S5000, S4000 and S3000 SCGs. Random selection requirements for HSG were evaluated, as well as the quarterly repeat data generation-level requirements for RTR, HSG, and VE. No solids/soil sampling activities had been conducted since the last recertification audit.

A review was performed on the following WSPF/Characterization Information Summaries (CIS) and associated BDRs:

WSPF ID-RF-3114 and CIS Lot 109, Rev. 1
WSPF ID-RF-S5300-A and CIS Lot 137
WSPF ID-SDA-SOIL and CIS Lots 75 and 76
WSPF IN-NRF-SPC and CIS Lots 3 and 4

Visual Examination BDRs:
IN-SRP-VE-000085
IN-ARP-VE-002812
INLRHVE12001

Headspace Gas:
INHSG1204, ECL12029M
INHSG1202, ECL12023M
INHSG1206, ECL12036M

RTR:
INRTR5120004
RTR11-00132
RTR11-00157
INLRHRTR13005
INLRHRTR12012

The audit team evaluated procedure CCP-TP-530, Rev. 10, *CCP RH TRU Waste Certification and WWIS/WDS Data Entry*, and procedure CCP-TP-030, Rev. 31, *CCP CH TRU Waste Certification and WWIS/WDS Data Entry,* with respect to requirements of the QAPD, Rev. 11, section 2.1, Work Processes. The audit team determined that QAPD requirements are being adequately addressed and that the procedures contain adequate flow-down of CBFO QAPD requirements.

The audit team interviewed CCP Waste Certification Officials (WCOs) and reviewed CCP training records, and determined that the WCOs are qualified to perform certification activities for both RH and CH waste. Waste Certification Assistants (WCAs) were found to be qualified to perform certification activities for RH and CH waste WWIS/WDS data entry activities. WCOs and WCAs are qualified to perform these activities for all CCP host site locations.

The audit team interviewed CCP WCOs and determined that there have been no recent additions of WSPFs for RH or CH waste at the INL/CCP host site location.

The audit team evaluated a sample of data entry packages for both RH and CH waste WWIS/WDS data entry and waste container certification. Data are entered and verified in spreadsheet applications and subsequently submitted to the WWIS/WDS database. Data packages included CIS lists, WWIS/WDS Container Data Reports, WDS Master Template.xls data spreadsheet reports, RH WDS Master Template.xls data spreadsheet reports, and pages from BDRs showing characterization data values that were entered. WWIS/WDS Overpack Data Reports for RH and CH overpack assemblies were included in the data entry packages. Assignment of dunnage containers in CH ten-drum overpack (TDOP) assemblies is performed using functions within WWIS/WDS, and was determined to be adequate. Data for waste SCGs for CH debris and CH and RH soils/solids/vitrified waste were included in the data packages. Data entry and certification of 55-gallon drums, standard waste boxes, TDOPs, and RH canister container types were evaluated and determined to be satisfactory with respect to details of the specific types. The audit team determined that data for individual waste containers and overpack assemblies is properly entered, verified, and certified.

The audit team evaluated software applications used for electronic transfer of data to the WWIS/WDS internet-based application. Application of software QA and control of these software items are adequate.

No WAP-related deficiencies related to Table C6-1 were identified during the audit. The procedures reviewed and objective evidence assembled and evaluated during the audit provided evidence that Table C6-1 requirements are adequately established, satisfactorily implemented and effective.

5.4.2 Table C6-2, Solids and Soil/Gravel Sampling Checklist (May 8, 2012)

Solids sampling procedures include CCP-TP-008, *CCP Solids Sampling Procedure,* and CCP-TP-512, *CCP Remote-Handled Waste Sampling.* No sampling had occurred since the last recertification audit (A-12-13) and as of March 13, 2013, sampling is no longer required by the Permit. Accordingly, no evaluations were performed related to solids sampling.

5.4.3 Table C6-3, Acceptable Knowledge Checklist (May 8, 2012)

As discussed in section 2.0, AK activities were evaluated using WAP checklists C6-1 and C6-3, dated May 8, 2012.

The audit team reviewed specific and complete AK program documentation for CH debris waste stream ID-AECHDM, originally generated at Argonne National Laboratory – East (ANLE) and shipped to INL for WIPP characterization and certification; CH solids stream ID-RF-S3150A, from Rocky Flats Environmental Technology Site; CH soils stream ID-SDA-SOIL, from the excavation of the Subsurface Disposal Area (SDA) at INL; and RH TRU debris stream ID-ANLE-S5000, originally generated in hot cell activities at ANLE.

With respect to review of the AK record for an RH S3000 waste stream, as in the previous audit, there were no RH solids streams completely prepared for audit. Therefore, the audit team once again reviewed the available AK record for waste stream IN-ID-BTO-030. This waste stream was generated at the Bettis Atomic Power Laboratory and then shipped to INL, where it has been repackaged and is being processed for shipment to WIPP. An approved AK Summary, applicable AK attachments, and relevant AK source documents have been prepared and were reviewed along with an RTR BDR for this four-drum waste stream.

The objective evidence compiled and reviewed included the AK Summary Reports, numerous AK source documents, HWFP Waste Analysis Plan (WAP)-compliant waste stream profile forms (WSPFs) and attachments, and BDRs for HSG, Solids Sampling & Analysis, VE, and RTR. Random container selection memos for HSG and solids sampling lots were reviewed, along with corresponding HSG and Solids Analysis Summary Reports. Additional supporting documentation for the WCPIP requirements included Characterization Reconciliation Reports and supporting documentation.

With regard to the WAP requirements, in addition to the AK Summary Reports, AK Source Document Summaries, and other relevant AK records cited above, the audit team reviewed for each waste stream the AK Documentation Checklist (attachment 1), the AK Information List (attachment 4), the AK Hazardous Constituents List (attachment 5), the AK Waste Form, Waste Material Parameters, Prohibited Items and Package (attachment 6), along with the applicable justification memo for waste material parameter weight estimates, and the AK Container List (attachment 8), with memos supporting the process for adding containers to the waste streams. Examples of the resolution of AK discrepancies in the AK record at characterization, NCRs dealing with prohibited items, AK accuracy reports, and the most recent internal surveillance were also collected and examined. Requisite training records were reviewed by the audit team for AKEs and SPMs based upon names provided by the AK auditors. The WAP-required container traceability exercise was conducted for a total of 10 waste containers from the five waste streams. The drums selected provided BDRs for RTR, VE, HSG sampling and analysis, and solids sampling and analysis.

No WAP-related deficiencies related to Table C6-3 were identified during the audit. The procedures reviewed and objective evidence assembled and evaluated during the audit provided evidence that Table C6-3 requirements are adequately established, satisfactorily implemented and effective.

5.4.4 Table C6-4, Headspace Gas Checklist (May 8, 2012)

As discussed in section 2.0, HSG sampling activities were evaluated using WAP checklist C6-4, dated May 8, 2012.

No HSG sampling activities were being performed during the audit. HSG sampling operations were evaluated by conducting personnel interviews and reviewing HSG BDRs INHSG1202, INHSG1204, and INHSG1206, which were found to be satisfactory. Training and qualification of sampling personnel were confirmed to be acceptable. The

audit team verified the field reference standard certificate of accuracy during the audit and found it to be acceptable.

No WAP-related deficiencies related to Table C6-4 were identified during the audit. The procedures reviewed and objective evidence assembled and evaluated during the audit provided evidence that Table C6-4 requirements are adequately established, satisfactorily implemented and effective.

5.4.5 Table C6-3, Radiography Checklist (March 13, 2013)

As discussed in section 2.0, HSG sampling activities were evaluated using WAP checklist C6-3, dated March 13, 2013.

The audit team evaluated the adequacy, implementation and effectiveness of INL/CCP ability to characterize and certify CH and RH SCGs S3000 solids and S5000 debris wastes using the RTR characterization process.
The audit team evaluated the following RTR-related CCP procedures: CCP-QP-002, Rev. 34, *CCP Training and Qualification Plan;* CCP-TP-028, Rev. 7, *CCP Radiographic Test Drum and Training Container Construction;* CCP-TP-053, Rev. 12, *CCP Standard Real-Time Radiography (RTR) Inspection Procedure;* and CCP-TP-508, Rev. 7, *Standard Real-Time Radiography Inspection Procedure.* The results of the review indicate that the referenced procedures adequately address upper-tier requirements.

The audit team evaluated required test and training drum audio/video media for six RTR operators. Record reviews included RTR operator training and qualification cards, waste stream training attendance sheets, eye exams, American Society of Nondestructive Testing (ASNT)-TC-1A Level II Radiography Certificates, and test/training drum documentation. The audit team verified that RTR operators were appropriately qualified.

RTR Unit 5, formerly located in Radioactive Waste Management Complex building WMF-610, was used to characterize CH SCG S3000 solids waste and S5000 debris waste from the date of the previous audit until it was taken out of service in December 2012. The audit team reviewed CH BDRs generated during this period. INL/CCP is no longer performing RTR waste characterization activities for CH SCG S3000 solids waste or S5000 debris waste using RTR Unit 5. Interviews with cognizant INL/CCP RTR personnel indicated that the unit was removed from the site in December 2012.

The audit team conducted a walk-through of the RTR Unit 0659 at the Idaho Nuclear Technology and Engineering Center (INTEC) building 659. The RTR unit contained the required hardware to effectively characterize RH SCG S3000 solids waste and S5000 debris waste. The audit team observed RTR RH waste characterization activities being performed during the audit on June 4, 2013. The audit team observed the lines pair test and the characterization scan on container FCO100A-1. The audit team interviewed RTR operators, reviewed CCP Standing Orders, and verified the availability of current AK Summaries and RTR operating procedures. The audit team also examined RTR

operational logbook CCP-INL-RH-RTR-007, and verified logbook entries were logged, as required, and reviewed by the vendor project manager (VPM) on a weekly basis.

The audit team examined the following CH RTR BDRs:

INRTR5120001 INRTR5120002 INRTR5120003 INRTR5120004

The audit team examined the following RH RTR BDRs:

INLRHRTR12005 INLRHRTR12013 INLRHRTR13001 INLRHRTR13002 INLRHRTR13003

The procedure and document reviews and field observations provided evidence that the applicable requirements for characterizing CH SCG S3000 solids waste and S5000 debris waste using RTR Unit 5 were effectively implemented from the date of the previous audit to the time the unit was taken out of service in December 2012. CH RTR is now being performed at the Advanced Mixed Waste Treatment Project (AMWTP).

No WAP-related deficiencies related to Table C6-3 were identified during the audit. The procedures reviewed and objective evidence assembled and evaluated during the audit provided evidence that Table C6-3 requirements are adequately established, satisfactorily implemented and effective.

5.4.6 Table C6-4, Visual Examination Checklist (March 13, 2013)

As discussed in section 2.0, HSG sampling activities were evaluated using WAP checklist C6-4, dated March 13, 2013.

The audit team evaluated VE activities performed by INL/CCP. For CH waste, VE is performed in accordance with CCP-TP-006, *CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste*. For RH waste, VE is performed in accordance with CCP-TP-500, *CCP Remote-Handled Waste Visual Examination*. The audit team toured the waste management facility, building 1617, on June 4, 2013, to observe VE activities. Additionally, the audit team reviewed BDRs and training records for VE operators and Visual Examination Experts (VEEs). The audit team found no concerns related to VE activities.

The audit team examined the following CH and RH VE BDRs:

IN-ARP-VE-002793 IN-SRP-VE-000028 IN-SRP-VE-000001
IN-SRP-VE-000183 INLRHVE12001

No WAP-related deficiencies related to Table C6-4 were identified during the audit. The procedures reviewed and objective evidence assembled and evaluated during the audit provided evidence that Table C6-4 requirements are adequately established, satisfactorily implemented and effective.

6.0 CORRECTIVE ACTIONS, OBSERVATIONS, AND RECOMMENDATIONS

6.1 Corrective Action Reports

During the audit, the audit team may identify CAQs, as described below, and document such conditions on CARs.

Condition Adverse to Quality (CAQ) – An all-inclusive term used in reference to any of the following: failures, malfunctions, deficiencies, defective items, nonconformances, and technical inadequacies.

Significant Condition Adverse to Quality – A condition which, if uncorrected, could have a serious effect on safety, operability, waste confinement, TRU waste site certification, regulatory compliance demonstration, or the effective implementation of the QA program.

No WAP-related deficiencies necessitating a CAR were identified.

6.2 Deficiencies Corrected During the Audit

During the audit, the audit team may identify CAQs. The audit team members and the Audit Team Leader (ATL) evaluate the CAQs to determine if they are significant. Once a determination is made that the CAQ is not significant, the audit team member, in conjunction with the ATL, determines if the CAQ is an isolated case requiring only remedial action and therefore can be CDA. Deficiencies that can be classified as CDA are those isolated deficiencies that do not require a root cause determination or actions to preclude recurrence, and those for which correction of the deficiency can be verified prior to the end of the audit. Examples include one or two minor changes required to correct a procedure (isolated), one or two forms not signed or not dated (isolated), or one or two individuals have not completed a reading assignment.

Upon determination that the CAQ is isolated, the audit team member, in conjunction with the ATL, evaluates/verifies any objective evidence/actions submitted or taken by the audited organization and determines if the condition was corrected in an acceptable manner. Once it has been determined that the CAQ has been corrected, the ATL categorizes the condition as CDA.

No WAP-related deficiencies, requiring remedial action only, were identified during the audit.

6.3 Observations

During the audit, the audit team may identify potential problems that should be communicated to the audited organization. The audit team members, in conjunction with the ATL, evaluate these conditions and classify them as Observations using the following definition.

Observation – A condition that, if not controlled, could result in a CAQ.

Once a determination is made, the audit team member, in conjunction with the ATL, categorizes the condition appropriately.

No WAP-related Observations were identified during this audit.

6.4 Recommendations

During the audit, the audit team may identify suggestions for improvement that should be communicated to the audited organization. The audit team members, in conjunction with the ATL, evaluate these conditions and classify them as Recommendations using the following definition.

Recommendations – Suggestions that are directed toward identifying opportunities for improvement and enhancing methods of implementing requirements.

Once a determination is made, the audit team member, in conjunction with the ATL, categorizes the condition appropriately.

No WAP-related Recommendations were identified during the audit.

7.0 LIST OF ATTACHMENTS

Attachment 1: Personnel Contacted During the Audit
Attachment 2: Personnel Contacted During the Audit by Subject Area
Attachment 3: Objective Evidence Compiled During the Audit (provided in boxes)
Attachment 4: Table of Audited Documents
Attachment 5: List of Processes and Equipment Evaluated During the Audit
Attachment 6: Procedure Revision Matrix

PERSONNEL CONTACTED DURING AUDIT A-13-18				
NAME	**TITLE/ORG**	**PREAUDIT MEETING**	**CONTACTED DURING AUDIT**	**POST AUDIT MEETING**
Allen, Randall	Audits & Assessments Manager/CTAC	X		X
Ams, David	CCP/LANL AK	X	X	
Andrews, Sway	Operator/DTC/CWI		X	
Armijo, Cheryl	Records Analyst/NTPC Training		X	
Bhatt, Raj	RH TRU/CWI	X	X	
Billett, Michele	Training Coordinator/ NTPC Training		X	
Blyth, Bob	Quality Assurance/DOE-ID			X
Cannon, Val	Assurance Programs Manager/NWP	X		
Castro, Steve	SPM/CCP NWP	X	X	X
Christensen, Tyson	RTR LO/VJT/CCP	X	X	X
Davis, Chris G.	Decon/RTR Operator/ CCP		X	
Fisher, A.J.	Support Group Manager/NWP	X		X
Frost, Lisa	CH Support/CWI	X		X
Harvill, Joe	Senior Manager/CTAC	X		
Holmes, Steve	Observer/NMED	X	X	X
Johnsen, Tom	CH TRU STR/CWI	X		
Jones, Laura	NCR Coordinator/QA/ NWP		X	
Joo, Irene	RH PM/NWP	X	X	X
Kirkes, Creta	WCO/WCA/WWIS-WDA Data Entry/CCP		X	
Klingler, Larry	Quality Assurance/ NWP/CCP			X
LaRue, Bruce	Environmental Scientist/ ID DEQ INL Oversight Program			X
Ledford, Wayne	QA Specialist/NWP	X		X
Lee, Ronnie	PM/NWP/NTPC			X

PERSONNEL CONTACTED DURING AUDIT A-13-18				
NAME	**TITLE/ORG**	**PREAUDIT MEETING**	**CONTACTED DURING AUDIT**	**POST AUDIT MEETING**
Maestas, Ricardo	Observer/NMED	X		X
Miles, Jeri	VPM/CCP	X		X
Murdock, Mel	Shipping Shift Supervisor/CH Packaging/AMWTP		X	
Nesser, Catherine	QA Specialist/NWP			X
Pearcy, Mark	SPM/CCP	X		X
Pearcy, Sheila	CCP Records Manager/ Stoller		X	X
Peters, Kevin	AKE/CCP	X	X	
Pimentel, Trisha	Records/CCP	X	X	X
Pinzel, Marcus	DOE/CBFO	X		X
Poole, Jeff	VE Expert/NWP/CCP		X	X
Pruitt, Doug	DOE-ID	X		
Ramirez, Mike	WCO/WWIS-WDS Data Entry/NWP/CCP		X	X
Reynolds, Tammy	Program Manager/NWP/ CCP			X
Roberts, Ben	DOE-ID	X		X
Sensibaugh, Michael	Operations Manager/ NWP/CCP			X
Smith, Greg	RH VPM/NWP CCP	X	X	X
Smith, Scott	CCP/AKE	X	X	
Stallings, Andrew	RTR/VE/CCP	X		
Verlanic, Bill	P.M./NWP/CCP	X		X
Vernon, Jim	SPM/NWP/CCP	X	X	X
Walker, Connie	Observer/NMED	X	X	
Walters, Eddy	HSG Lead/NFT/CCP	X	X	
Watson, Lisa	LANL AK/CCP	X	X	

PERSONNEL CONTACTED DURING THE AUDIT BY SUBJECT AREA

Personnel Qualification and Training	Michele Billett Cheryl Armijo
Control of Nonconforming Items	Laura Jones
Records	Sheila Pearcy
WIPP Waste Information System (WWIS Data Entry)	Creta Kirkes Mike Ramirez
Waste Certification/Project Level Data V&V	Steve Castro Jim Vernon Irene Joo
Solids Sampling and Analysis	N/A
Acceptable Knowledge	Kevin Peters Raj Bhatt Lisa Watson David Ams Irene Joo Scott Smith
Headspace Gas Sampling and Analysis	Eddy Walters
Real-Time Radiography	Tyson Christensen Greg Smith Chris G. Davis Trisha Pimentel
Visual Examination	Jeff Poole Steve Castro Jim Vernon

Objective Evidence Reviewed During the Audit

The objective evidence supporting Audit A-13-18 is included in the box(es) submitted with this report. Included in the box(es) is a "Content Map" describing the location (using color coding) and identity of all required objective evidence supporting the performance of the audit.

TABLE OF AUDITED DOCUMENTS

	Document No.	Rev	Document Title
1.	CCP-PO-001	20	CCP Transuranic Waste Characterization Quality Assurance Project Plan
2.	CCP-QP-002	34	CCP Training and Qualification Plan
3.	CCP-QP-005	22	CCP TRU Nonconforming Item Reporting and Control
4.	CCP-QP-008	21	CCP Records Management
5.	CCP-QP-021	8	CCP Surveillance Program
6.	CCP-QP-028	15	CCP Records Filing, Inventorying, Scheduling, and Dispositioning
7.	CCP-TP-001	20	CCP Project Level Data Validation and Verification
8.	CCP-TP-002	25	CCP Reconciliation of DQOs and Reporting Characterization Data
9.	CCP-TP-003	19	CCP Data Analysis for S3000, S4000, and S5000 Characterization
10.	CCP-TP-005	24	CCP Acceptable Knowledge Documentation
11.	CCP-TP-006	17	CCP Visual Examination Technique for INL Newly Generated TRU Waste Retrieved from Pits
12.	CCP-TP-008	10	CCP Solids Sampling Procedure
13.	CCP-TP-028	7	CCP Radiographic Test Drum and Training Container Construction
14.	CCP-TP-030	31	CCP CH TRU Waste Certification and WWIS/WDS Data Entry
15.	CCP-TP-033	19	CCP Shipping of CH TRU Waste
16.	CCP-TP-053	12	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
17.	CCP TP-080	5	CCP Operating the WMF 610 Real-Time Radiography (RTR) System
18.	CCP-TP-082	8	CCP Waste Container Filter Vent Operation
19.	CCP-TP-093	17	CCP Sampling of TRU Waste Containers
20.	CCP-TP-106	8	CCP Headspace Gas Sampling Batch Data Report Preparation
21.	CCP-TP-113	16	CCP Standard Contact-Handled Waste Visual Examination
22.	CCP-TP-119	5	CCP Operating the Real-Time Radiography (RTR) System #5
23.	CCP-TP-162	2	CCP Random Selection of Containers for Solids and Headspace Gas Sampling and Analysis
24.	CCP-TP-500	11	CCP Remote-Handled Waste Visual Examination
25.	CCP-TP-506	2	CCP Preparation of the RH TRU Waste AK Characterization Reconciliation Report
26.	CCP-TP-507	7	CCP Shipping of Remote-Handled Transuranic Waste
27.	CCP-TP-508	7	CCP RH Standard Real-Time Radiography Inspection Procedure
28.	CCP-TP-512	5	CCP Remote-Handled Waste Sampling
29.	CCP-TP-530	10	CCP RH TRU Waste Certification and WWIS/WDS Data Entry
30.	WP 13-QA.03	21	Quality Assurance Independent Assessment Program

LIST OF PROCESSES AND EQUIPMENT EVALUATED DURING THE AUDIT

WIPP #	Process/Equipment Description	Applicable to the Following Waste Streams/Groups of Waste Streams	Currently Approved by NMED	Currently Approved by EPA
NEW PROCESSES OR EQUIPMENT				
	NO NEW PROCESSES			
PREVIOUSLY APPROVED PROCESSES OR EQUIPMENT				
14VE1	Visual Examination (VE) Procedure – CCP-TP-006 Description –Visual Examination Technique (VET)	Solids (S3000) Soils (S4000) Debris (S5000)	YES	YES
14RHVE1	Visual Examination Procedure – CCP-TP-500 Description - The VE of audio/video media process used for a total of 70 retrievably stored remote-handled (RH) debris waste drums	Solids (S3000) Soils (S4000) Debris (S5000)	YES	YES
14RR2	Nondestructive Examination Procedure – CCP-TP-053 Equipment – MCS RTR-5 Description – MCS Real-time Radiography (RTR) Mobile Characterization (RTR-5) System	Solids (S3000) Debris (S5000)	YES	YES
14RRH1	Nondestructive Examination Procedure – CCP-TP-508 Equipment – RTR-RTR-0659 Description – VJ Technologies, Real-time Radiography Characterization (RH-RTR-0659) System	Solids (S3000) Debris (S5000)	YES	YES
N/A	Acceptable Knowledge	Solids (S3000) Soils (S4000) Debris (S5000)	YES	YES
N/A	Solids/Soils and Gravel Sampling and Custody for CH	Solids (S3000) Soils (S4000)	YES	N/A

LIST OF PROCESSES AND EQUIPMENT EVALUATED DURING THE AUDIT

WIPP #	**Process/Equipment Description**	Applicable to the Following Waste Streams/Groups of Waste Streams	Currently Approved by NMED	Currently Approved by EPA
N/A	Solids/Soils and Gravel Sampling and Custody for RH	Solids (S3000)	YES	N/A
N/A	SUMMA® Headspace Gas (HSG) Sampling and Custody	Debris (S5000)	YES	N/A
N/A	Data Verification and Validation	Solids (S3000) Soils (S4000) Debris (S5000)	YES	YES
N/A	WIPP Waste Information System (WWIS)	Solids (S3000) Soils (S4000 Debris (S5000)	YES	YES

PROCEDURE REVISION MATRIX

Current INL/CCP Annual Audit A-13-18

Previous INL/CCP Annual Audit A-12-13

No.	Procedure Number	Procedure Title	Revision During Last Annual Audit	Revision During Current Annual Audit	Brief Description of Procedure Changes
1	CCP-PO-001	CCP Transuranic Waste Characterization Quality Assurance Project Plan (QAPjP)	R20	R20	N/A
2	CCP-QP-002	CCP Training and Qualification Plan	R32	R34	33 - As a corrective action in response to CBFO CAR 12-033, revised the document to remove references to Lead SPMs and Alternate SPMs, so that any qualified SPM may perform the actions in Section 3.1. 34 - Revised to incorporate Standing Order CCP-SO-086, *Clarification of the Time Period for Performance of the RTR Semiannual Training Container Required by CCP-QP-002*; incorporate changes to DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*; update the title of the organization, as appropriate; and minor editorial changes.
3	CCP-QP-005	CCP TRU Nonconforming Item Reporting and Control	R21	R22	22- Revised to add definitions; to move 2.5.1 to 4.2.1 [F]; to clarify 4.4.15 and Attachment 1, 4.2.10, and Carlsbad Field Office (CBFO) notification in 4.3.1; to add new 4.9.3 to address removal of Hold Tags when voiding a Nonconformance Report (NCR); to incorporate freeze file changes; to modify Attachment 1; to correct some typos and editorial mistakes.
4	CCP-QP-008	CCP Records Management	R19	R21	20 - Revised to clarify editorial changes, transmitting of records, and destruction of QA records. 21 - Revised to incorporate Nuclear Waste Partnership (NWP) transition changes.
5	CCP-QP-021	CCP Surveillance Program	R7	R8	8 - Revised to incorporate Nuclear Waste Partnership (NWP) transition changes.

PROCEDURE REVISION MATRIX

Current INL/CCP Annual Audit A-13-18 — Previous INL/CCP Annual Audit A-12-13

No.	Procedure Number	Procedure Title	Revision During Last Annual Audit	Revision During Current Annual Audit	Brief Description of Procedure Changes
6	CCP-QP-028	CCP Records Filing, Inventorying, Scheduling and Dispositioning	R14	R15	15 - Revised to incorporate Nuclear Waste Partnership (NWP) transition changes.
7	CCP-TP-001	CCP Project Level Data Validation and Verification	R19	R20	20 – Revised to remove references to P-TS. Also revised due to CAR-LANL-0005-12 and CBFO CAR 12-033.
8	CCP-TP-002	CCP Reconciliation of DQOs and Reporting Characterization Data	R24	R25	25 - Revised to include timeframe for transmitting the waste stream profile form package to records. Also revised to make editorial changes needed.
9	CCP-TP-003	CCP Data Analysis for S3000, S4000, and S5000 Characterization	R18	R19	19 - Revised to incorporate Nuclear Waste Partnership (NWP) transition changes.
10	CCP-TP-005	CCP Acceptable Knowledge Documentation	R24	R24	N/A
11	CCP-TP-006	CCP Visual Examination Technique for INL Newly Generated TRU Waste Retrieve from Pits	R16	R17	17 - Revised to change the Visual Examination (VE) Lead to VE Expert (VEE) as part of an observation from U.S. Department of Energy (DOE) Carlsbad Field Office (CBFO) Surveillance S-08-007. Added requirements for detecting the presence of roaster oxide, and mitigating or eliminating it if discovered in transuranic (TRU) waste.
12	CCP-TP-008	CCP Solids Sampling Procedure	R9	R10	10 - Revised to incorporate standing order CCP-SO-INL-10-006 Rev. 0 and to clarify the solid sampling process.
13	CCP-TP-028	CCP Radiographic Test and Training Drum Requirements	R6	R7	7 - Revised to allow Vendor Project Manager (VPM) to assemble Training Containers.
14	CCP-TP-030	CCP CH TRU Waste Certification and WWIS Data Entry	R30	R30	N/A

PROCEDURE REVISION MATRIX

Current INL/CCP Annual Audit A-13-18

Previous INL/CCP Annual Audit A-12-13

No.	Procedure Number	Procedure Title	Revision During Last Annual Audit	Revision During Current Annual Audit	Brief Description of Procedure Changes
15	CCP-TP-033	CCP Shipping of CH TRU Waste	R19	R19	N/A
16	CCP-TP-053	CCP Standard Real-Time Radiography (RTR) Inspection Procedure	R11	R12	12 - Revised to change format of attachments. Clarified format of container weights and clarified steps for documenting nonconformance reports (NCRs) on Attachment 2, CCP Radiography Data Sheet (Example).
No.	Procedure Number	Procedure Title	Revision During Last Annual Audit	Revision During Current Annual Audit	Brief Description of Procedure Changes
17	CCP-TP-080	CCP Operating the WMF-610 Real-Time Radiography (RTR) System	R3	R5	4 - Revised due to host site installing new equipment on RTR-1001. 5 - Revised to reflect the changes to Advanced Mixed Waste Treatment Project (AMWTP) Technical Safety Requirement/Documented Safety Analysis (TSR/DSA) requirements.
18	CCP-TP-082	CCP Preparing and Handling Waste Containers for Headspace Gas Sampling	R8	R8	N/A
19	CCP-TP-093	CCP Sampling of TRU Waste Containers	R16	R17	17 - Revised to respond to CAR-12-040 to enhance the numbering of the Chain of Custody.
20	CCP-TP-106	CCP Headspace Gas Sampling Batch Data Report Preparation	R7	R8	8 - Revised to incorporate freeze file.
21	CCP-TP-113	CCP Standard Contact-Handled Waste Visual Examination	R16	R16	N/A

PROCEDURE REVISION MATRIX

Current INL/CCP Annual Audit A-13-18 — Previous INL/CCP Annual Audit A-12-13

No.	Procedure Number	Procedure Title	Revision During Last Annual Audit	Revision During Current Annual Audit	Brief Description of Procedure Changes
22	CCP-TP-119	CCP Operating the Real-Time Radiography (RTR) System #5	R4	R5	5 - Revised to reflect the changes to Advanced Mixed Waste Treatment Project (AMWTP's) Technical Safety Requirement/Documented Safety Analysis (TSR/DSA) requirements.
23	CCP-TP-162	CCP Random Selection of Containers for Solids and Headspace Gas Sampling and Analysis	R1	R2	2 - Revised to incorporate Nuclear Waste Partnership (NWP) transition changes and freeze file changes.
24	CCP-TP-500	CCP Remote-Handled Waste Visual Examination	R11	R11	N/A
25	CCP-TP-506	CCP Preparation of the RH Transuranic Waste Acceptable Knowledge Characterization Reconciliation Report	R2	R2	N/A
26	CCP-TP-507	CCP Shipping of Remote-Handled Transuranic	R7	R7	N/A
27	CCP-TP-508	CCP RH Standard Real-Time Radiography Inspection Procedure	R7	R7	N/A
28	CCP-TP-512	CCP Random Selection of Containers for Solids and Headspace Gas Sampling and Analysis	R5	R5	N/A
29	CCP-TP-530	CCP RH TRU Waste Certification and WWIS/WDS Data Entry	R10	R10	N/A

PROCEDURE REVISION MATRIX

Current INL/CCP Annual Audit A-13-18 — Previous INL/CCP Annual Audit A-12-13

No.	Procedure Number	Procedure Title	Revision During Last Annual Audit	Revision During Current Annual Audit	Brief Description of Procedure Changes
30	WP 13-QA.03	Quality Assurance Independent Assessment Program	R19	R21	20 - • Deleted requirements to enter external assessment findings in CTS throughout the document. • Updated organization names in accordance with MD 1.1. 21 - • Removed from section 2.0 last bullet of lead assessor responsibilities and last bullet of surveillor responsibilities. • Added to sections 5.0 and 6.0 provisions to document findings corrected during assessment on the WIPP Form in accordance with WP 04-IM1000 (Corrective action for CBFO CAR 12-020). • Deleted attachment 9, and added reference to WP 09-CN3025 in section 4.3. • Deleted Attachment 10, Concerns Form and its mention from section 5.0.

Table C6-1 Waste Analysis Plan (WAP) Checklist
INL/CCP Recertification Audit A-13-18
June 3 – 6, 2013

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Waste Analysis Plan (WAP) General Checklist for use at DOE's Generator/Storage Sites

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	WASTE STREAM IDENTIFICATION					
1	Does the generator/storage site define "waste stream" as waste materials that have common physical form that contain similar hazardous constituents, and that are generated from a single process or activity? (Attachment C Section C-0a)	CCP-PO-001, S. C-0a CCP-TP-005, S. 4.4.11 NOTE above	Y	AK Summary Report for INL Argonne CH TRU Waste from Facility Maint. And Lab Operations, CCP-AK-INL-025 R1 **(AK-1)** AK Summary Report for Rocky Flats Immobilized Organic Liquids Stored at the INL, ID-RF-S3150-A, CCP-AK-INL-005 R8, **(AK-2)** CCP AK Summary Report for Waste Retrieved from Designated Areas within the SDA at INL, ID-SDA-SOIL, CCP-AK-INL-001 R11 **(AK-3)** AK Summary Report for RH TRU Debris Waste from ANLE Stored at the INL, CCP-AK-INL-500 R11 **(AK-4)** AK Summary Report for Bettis Laboratory RH TRU Waste Stored at INL, IN-ID-BTO-030, CCP-AK-INL-590 R2 **(AK-5)**	Y	
2	Are procedures in place to ensure that the generator/storage site assigns one of the Summary Category Groups (S3000-homogeneous solids, S4000-soils/gravel, S5000-debris waste) to each waste stream? (Section C-1b)	CCP-TP-005, S. 4.4.14 S. 4.4.15 CCP-TP-002, S. 4.3 Att. 2	Y	AK Summary Report for INL Argonne CH TRU Waste from Facility Maint. And Lab Operations, CCP-AK-INL-025 R1, S2.1 **(AK-1)**	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
				AK Summary Report for Rocky Flats Immobilized Organic Liquids Stored at the INL, ID-RF-S3150-A, CCP-AK-INL-005 R8, S2.1 **(AK-2)** CCP AK Summary Report for Waste Retrieved from Designated Areas within the SDA at INL, ID-SDA-SOIL, CCP-AK-INL-001 R11, S2.0 **(AK-3)** AK Summary Report for RH TRU Debris Waste from ANLE Stored at the INL, CCP-AK-INL-500 R11, S2.0 **(AK-4)** AK Summary Report for Bettis Laboratory RH TRU Waste Stored at INL, IN-ID-BTO-030, CCP-AK-INL-590 R2, S2.0 **(AK-5)** Waste Stream Profile Form and attachments for waste stream ID-AECHDM **(AK-6)** Waste Stream Profile Form and attachments for waste stream ID-RF-S3150-A **(AK-7)** Waste Stream Profile Form and attachments for waste stream ID-SDA-SOIL **(AK-8)**		

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
				Waste Stream Profile Form and attachments for waste stream ID-ANLE-S5000 **(AK-9)**		
3	Are procedures in place to ensure that the generator/storage site assigns Waste Matrix Code Groups (e.g., solidified inorganics, solidified organics, salt waste, soils, combustible waste, filters, graphite, heterogeneous debris waste, inorganic nonmetal waste, lead/cadmium metal, uncategorized metal) to each waste stream? (Section C-0a)	CCP-TP-005, S. 4.4.13 NOTE Above CCP-TP-002, S. 4.3 Att. 2	Y	AK Summary Report for INL Argonne CH TRU Waste from Facility Maint. And Lab Operations, CCP-AK-INL-025 R1, S2.1 **(AK-1)** AK Summary Report for Rocky Flats Immobilized Organic Liquids Stored at the INL, ID-RF-S3150-A, CCP-AK-INL-005 R8, S2.1 **(AK-2)** CCP AK Summary Report for Waste Retrieved from Designated Areas within the SDA at INL, ID-SDA-SOIL, CCP-AK-INL-001 R11, S2.0 **(AK-3)** AK Summary Report for RH TRU Debris Waste from ANLE Stored at the INL, CCP-AK-INL-500 R11, S2.0 **(AK-4)** AK Summary Report for Bettis Laboratory RH TRU Waste Stored at INL, IN-ID-BTO-030, CCP-AK-INL-590 R2, S2.0 **(AK-5)** Waste Stream Profile Form and attachments for waste stream ID-AECHDM **(AK-6)** Waste Stream Profile	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
				Form and attachments for waste stream ID-RF-S3150-A **(AK-7)** Waste Stream Profile Form and attachments for waste stream ID-SDA-SOIL **(AK-8)** Waste Stream Profile Form and attachments for waste stream ID-ANLE-S5000 **(AK-9)**		
4	Are procedures in place to ensure that the generator/storage site assigns a Waste Stream WIPP Identifier (ID) to each waste stream? (Section C3-12b(1))	CCP-TP-002, S. 4.3 Att. 2	Y	Waste Stream Profile Form and attachments for waste stream ID-AECHDM **(AK-6)** Waste Stream Profile Form and attachments for waste stream ID-RF-S3150-A **(AK-7)** Waste Stream Profile Form and attachments for waste stream ID-SDA-SOIL **(AK-8)** Waste Stream Profile Form and attachments for waste stream ID-ANLE-S5000 **(AK-9)**	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
4a	Are procedures in place for generator/storage sites to submit an AK Sufficiency Determination (Determination Request) to the Permittees to meet all or part of the waste characterization requirements including: • All information specified in Permit Attachment C4, Section C4-3d • Identification of relevant hazardous constituents, and correctly identifies all toxicity characteristic and listed hazardous waste numbers • All hazardous waste number assignments must be substantiated by supporting data and, if not, whether this lack of substantiation compromises the interpretation • Resolution of data discrepancies between different AK sources must be technically correct and documented • The AK Summary includes all the identification of waste material parameter weights by percentage of the material in the waste stream, and determinations are technically correct • All prohibited items specified in the TSDF-WAC should be addressed, and conclusions drawn are technically adequate and substantiated by supporting information • If the AK record includes process control information specified in Permit Attachment C4, Section C4-3b, the information should include procedures, waste manifests, or other documentation demonstrating that the controls were adequate and sufficient. • The site must provide the supporting information necessary to substantiate technical conclusions within the Determination Request, and this information must be correctly interpreted. (Section C-0b, Section C4-3d)	CCP-TP-005, S. 4.7	Y	N/A	Y	No AK Sufficiency Determinations were requests for the waste streams audited
4b	If a generator/storage site does not submit a Determination Request or if the Determination Request is not approved, are procedures in place for the generator/storage site to perform radiography or VE on 100% of the containers in a waste stream and chemical sampling and analysis on a representative sample of the waste stream using headspace gas sampling and analysis (for debris waste) or solids sampling and analysis (for homogeneous solid or soil/gravel waste) as specified in Permit Attachments C1 and C2? (Section C-0b)	CCP-PO-001, S. C-0b CCP-TP-001, S. 3.1 CCP-TP-002, (All)	Y	IN-SRP-VE-000085, IN-ARP-VE-002812, INLRHVE12001 **(GEN-5)** INHSG1204, ECL12029M, INHSG1202, ECL12023M, INHSG1206, ECL12036M **(GEN-6)**	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
				INRTR5120004, RTR11-00132, RTR11-00157, INLRHRTR13005, INLRHRTR12012 **(GEN-7)**		
4c	Are procedures in place to ensure that the generator/storage sites complete a Waste Stream Profile Form (WSPF) and Characterization Information Summary (CIS) as specified in Permit Attachment C3, Sections C3-12b(1) and C3-12b(2)? (Section C-0c)	CCP-TP-002, S. 1.1	Y	WSPF ID-RF-3114, CIS Lot 109, Rev. 1 **(GEN-1)** WSPF ID-RF-S5300, CIS Lot 137 **(GEN-2)** WSPF ID-SDA-SOIL, CIS Lot 75 & 76, Rev. 1 **(GEN-3)** WSPF ID-NRF-SPC, CIS Lot 3 & 4 **(GEN-4)**	Y	
5	Are procedures in place to ensure that the generator/storage site divides waste streams into waste stream lots if all of the waste within a waste stream is not accessible for sampling and analysis, as required, at one time? If so, is the division of waste streams into waste stream lots based on staging, transportation and handling issues? (Section C-1a)	CCP-PO-001, S. C-1a CCP-TP-002, (All)	Y	WSPF ID-RF-3114, CIS Lot 109, Rev. 1 **(GEN-1)** WSPF ID-RF-S5300, CIS Lot 137 **(GEN-2)** WSPF ID-SDA-SOIL, CIS Lot 75 & 76, Rev. 1 **(GEN-3)** WSPF ID-NRF-SPC, CIS Lot 3 & 4 **(GEN-4)**	Y	
6	Are procedures in place to ensure that the generator/storage site assigns EPA hazardous waste numbers associated with the waste? If so, do these assigned EPA hazardous waste numbers correspond to the permitted EPA hazardous waste numbers in Table C-9? Are there any assigned EPA hazardous waste numbers that are not permitted EPA hazardous waste numbers on the Table C-9? If so, did the generator/storage site reject the waste for shipment to and disposal at WIPP? Did the generator assign a state hazardous waste codes or numbers? If so, is it assigned to waste that is permitted at WIPP? (Section C-1b)	CCP-TP-005, S. 4.4.16 - 4.4.21 Att. 5	Y	AK Summary Report for INL Argonne CH TRU Waste from Facility Maint. And Lab Operations, CCP-AK-INL-025 R1, S5.4.3, table 7 **(AK-1)** AK Summary Report for Rocky Flats Immobilized Organic Liquids Stored at the INL, ID-RF-S3150-A, CCP-AK-INL-005 R8, S6.4.3, table 6-5 **(AK-2)** CCP AK Summary Report for Waste	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
				Retrieved from Designated Areas within the SDA at INL, ID-SDA-SOIL, CCP-AK-INL-001 R11, S2.0, S5.6, tables 5-5, 5-6 **(AK-3)** AK Summary Report for RH TRU Debris Waste from ANLE Stored at the INL, CCP-AK-INL-500 R11, S5.4.2, table 3 **(AK-4)** AK Summary Report for Bettis Laboratory RH TRU Waste Stored at INL, IN-ID-BTO-030, CCP-AK-INL-590 R2, S5.4.2, tables 2, 3 **(AK-5)** AK Att. 5, Hazardous Constituents, for waste streams ID-AECHDM, ID-RF-S3150-A, ID-SDA-SOIL, ID-ANLE-S5000, and IN-ID-BTO-030 **(AK-18)**		
7	Are procedures in place to ensure that Summary Category Groups are defined as follows: S3000- Homogeneous solids are solid material, inorganic process residues, inorganic sludges, salt waste, and pyrochemical salt waste excluding soils, that do not meet NMED criteria for classification as debris and are at least 50 percent by volume homogeneous solids or comprise the majority of the waste stream S4000- Waste streams that are at least 50 percent by volume soil/gravel, or comprise the majority of the waste stream S5000- Waste streams that are at least 50 percent volume materials that meet the NMED criteria for debris, or comprise the majority matrix of materials. The criteria for debris are solid materials intended for disposal that exceed 2.36 inch particle size and is a manufactured object, plant or animal matter, or natural geologic material. Particles smaller than 2.36 inches in size may be considered debris if the debris is a manufactured object and if it is not a particle of S3000 or S4000 material. (Section C-0a)	CCP-TP-005, S. 4.4.14	Y	AK Summary Report for INL Argonne CH TRU Waste from Facility Maint. And Lab Operations, CCP-AK-INL-025 R1, S2.1 **(AK-1)** AK Summary Report for Rocky Flats Immobilized Organic Liquids Stored at the INL, ID-RF-S3114, CCP-AK-INL-005 R8, S2.2 **(AK-2)** CCP AK Summary Report for Waste Retrieved from Designated Areas within	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
				the SDA at INL, ID-SDA-SOIL, CCP-AK-INL-001 R11, S2.0 **(AK-3)** AK Summary Report for RH TRU Debris Waste from ANLE Stored at the INL, CCP-AK-INL-500 R11, S2.0 **(AK-4)** AK Summary Report for Bettis Laboratory RH TRU Waste Stored at INL, IN-ID-BTO-030, CCP-AK-INL-590 R2, S2.0 **(AK-5)** Waste Stream Profile Form and attachments for waste stream ID-AECHDM **(AK-6)** Waste Stream Profile Form and attachments for waste stream ID-RF-S3150-A **(AK-7)** Waste Stream Profile Form and attachments for waste stream ID-SDA-SOIL **(AK-8)** Waste Stream Profile Form and attachments for waste stream ID-ANLE-S5000 **(AK-9)**		

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
8	Does the generator/storage facility have procedures in place to ensure that the following waste characterization parameters will be obtained: • Determination whether TRU mixed waste streams comply with the applicable provisions of the TSDF-WAC • Determination whether TRU mixed wastes exhibit a hazardous characteristic per 20.4.1.200 NMAC (incorporating 40 CFR 261 Subpart C) • Determination whether TRU mixed wastes are listed per 20.4.1.200 NMAC (incorporating 40 CFR 261 Subpart D) • Estimation of waste material parameter weights (Section C-2)	**AK** CCP-TP-005, S. 4.4.16 S. 4.4.17 S. 4.4.27 S. 4.4.31 S. 4.4.34[K], [L] & [M] CCP-TP-006, (All) CCP-TP-500, S. 4.4	Y	Bullet 1- AK Summary Report for INL Argonne CH TRU Waste from Facility Maint. And Lab Operations, CCP-AK-INL-025 R1, S5.4.3.4, 5.4.3.5, 5.4.4 **(AK-1)** AK Summary Report for Rocky Flats Immobilized Organic Liquids Stored at the INL, ID-RF-S3150-A, CCP-AK-INL-005 R8, S6.4.3.4, 6.4.3.5, 6.4.4 **(AK-2)** CCP AK Summary Report for Waste Retrieved from Designated Areas within the SDA at INL, ID-SDA-SOIL, CCP-AK-INL-001 R11, S5.6.5, 5.6.6, 5.7 **(AK-3)** AK Summary Report for RH TRU Debris Waste from ANLE Stored at the INL, CCP-AK-INL-500 R11, S5.4.2.3, 5.4.4, 5.4.5 **(AK-4)** AK Summary Report for Bettis Laboratory RH TRU Waste Stored at INL, IN-ID-BTO-030, CCP-AK-INL-590 R2, S5.4.2.3, 5.4.4, 5.4.5 **(AK-5)** AK Att. 6, Waste Form, Waste Material Parameters, Prohibited Items and Packaging for waste streams ID-AECHDM, ID-RF-S3150-A, ID-SDA-SOIL, ID-	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
				ANLE-S5000, and IN-ID-BTO-030 **(AK-19)** NCRs for prohibited items **(AK-23)** <u>VE BDRS</u> . IN-ARP-VE002704 **(AK-36)** IN-ARP-VE002793 **(AK-37)** VVE05-01744 **(AK-38)** RHINLVE090002 **(AK-39)** Bullet 2&3- AK Summary Report for INL Argonne CH TRU Waste from Facility Maint. And Lab Operations, CCP-AK-INL-025 R1, S5.4.3, table 7 **(AK-1)** AK Summary Report for Rocky Flats Immobilized Organic Liquids Stored at the INL, ID-RF-S3150-A, CCP-AK-INL-005 R8, S6.4.3, table 6-5 **(AK-2)** CCP AK Summary Report for Waste Retrieved from Designated Areas within the SDA at INL, ID-SDA-SOIL, CCP-AK-INL-001 R11, S2.0, S5.6, tables 5-5, 5-6 **(AK-3)** AK Summary Report for RH TRU Debris Waste from ANLE Stored at the INL, CCP-AK-INL-500 R11, S5.4.2, table 3 **(AK-4)**		

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
				AK Summary Report for Bettis Laboratory RH TRU Waste Stored at INL, IN-ID-BTO-030, CCP-AK-INL-590 R2, S5.4.2, tables 2, 3 **(AK-5)** AK Att. 5, Hazardous Constituents, for waste streams ID-AECHDM, ID-RF-S3150-A, ID-SDA-SOIL, ID-ANLE-S5000, and IN-ID-BTO-030 **(AK-18)** Bullet 4- AK Summary Report for INL Argonne CH TRU Waste from Facility Maint. And Lab Operations, CCP-AK-INL-025 R1, S5.4.1.2, table 4 **(AK-1)** Summary Report for Rocky Flats Immobilized Organic Liquids Stored at the INL, ID-RF-S3150-A, CCP-AK-INL-005 R8, S6.4.1.2, table6-1b **(AK-2)** CCP AK Summary Report for Waste Retrieved from Designated Areas within the SDA at INL, ID-SDA-SOIL, CCP-AK-INL-001 R11, S5.4.4, table 5-1d **(AK-3)** AK Summary Report for RH TRU Debris Waste from ANLE Stored at the INL, CCP-AK-INL-500 R11, S5.4.1.2, table 2 **(AK-4)** AK Summary Report for Bettis Laboratory RH TRU Waste Stored at		

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
				INL, IN-ID-BTO-030, CCP-AK-INL-590 R2, S5.4.1.2, table 1 **(AK-5)** Memos attached to AK Att. 6, Waste Form, Waste Material Parameters, Prohibited Items and Packaging for waste streams ID-AECHDM, ID-RF-S3150-A, ID-SDA-SOIL, ID-ANLE-S5000, and IN-ID-BTO-030 **(AK-19)**	Y	
		PL CCP-TP-001, S. 4.2 CCP-TP-002, S. 4.0	Y	**PL** WSPF ID-RF-3114, CIS Lot 109, Rev. 1 **(GEN-1)** WSPF ID-RF-S5300, CIS Lot 137 **(GEN-2)** WSPF ID-SDA-SOIL, CIS Lot 75 & 76, Rev. 1 **(GEN-3)** WSPF ID-NRF-SPC, CIS Lot 3 & 4 **(GEN-4)** IN-SRP-VE-000085, IN-ARP-VE-002812, INLRHVE12001 **(GEN-5)** INHSG1204, ECL12029M, INHSG1202, ECL12023M, INHSG1206, ECL12036M **(GEN-6)** INRTR5120004, RTR11-00132, RTR11-00157, INLRHRTR13005, INLRHRTR12012 **(GEN-7)**		
9	Are procedures in place to ensure that waste streams identified to contain incompatible materials or materials incompatible with waste containers cannot be	CCP-TP-005, S. 4.4.31 &	Y	AK Att. 6, Waste Form, Waste Material	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	shipped unless treated to remove the incompatibility? (Section C-1c)	4.4.34[K] CCP-TP-001, S. 2.7 & 4.0 CCP-TP-068, S. 4.2, 4.4, Att. 1,2 CCP-QP-005, S. 2.3.1 – 2.3.3 CCP-TP-006, (All) CCP-TP-500, S. 4.4		Parameters, Prohibited Items and Packaging for waste streams ID-AECHDM, ID-RF-S3150-A, ID-SDA-SOIL, ID-ANLE-S5000, and IN-ID-BTO-030 **(AK-19)** NCRs for prohibited items **(AK-23)** IDC database with "reject" field **(AK-24)** Container inspection reports **(AK-28)** "Hold" tag **(AK-29)**		
10	Are procedures in place to ensure that the generator/storage site uses acceptable knowledge and, as necessary, headspace-gas sampling and analysis, radiography, (visual examination), and homogeneous waste sampling and analysis as specified in Table C-5? (Section C-3)	**AK** CCP-TP-005, S. 4.4 S. 4.5	Y	AK Summary Report for INL Argonne CH TRU Waste from Facility Maint. And Lab Operations, CCP-AK-INL-025 R1 **(AK-1)** AK Summary Report for Rocky Flats Immobilized Organic Liquids Stored at the INL, ID-RF-S3150-A, CCP-AK-INL-005 R8, **(AK-2)** CCP AK Summary Report for Waste Retrieved from Designated Areas within the SDA at INL, ID-SDA-SOIL, CCP-AK-INL-001 R11 **(AK-3)** AK Summary Report for RH TRU Debris Waste from ANLE Stored at the INL, CCP-AK-INL-500 R11 **(AK-4)** AK Summary Report for Bettis Laboratory RH TRU Waste Stored at	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
				INL, IN-ID-BTO-030, CCP-AK-INL-590 R2 **(AK-5)** IN-ARP-VE-002704 **(AK-36)** IN-ARP-VE-002793 **(AK-37)** VVE05-01744 **(AK-38)** RHINLVE090002 **(AK-39)** INRTR5110102 **(AK-40)** INRTR2050037 **(AK-41)** INRTR5120002 **(AK-42)** INRTR2050087 **(AK-43)** INLRHRTR12010**(AK-44)** INLRHRTR12002**(AK-45)** INHSGS090011 **(AK-46)** ECL09029M **(AK-47)** INHSG1111 **(AK-48)** ECL11036M **(AK-49)** WCS-0504 **(AK-50)** ALD05034V **(AK-51)** ALD05031S **(AK-52)** ALD05034M **(AK-53)** ALD05025N **(AK-54)** S4200-LOT-05-07 **(AK-55)** ALD12005V **(AK-56)** ALD12005S **(AK-57)** ALD12005M **(AK-58)** ALD12005N **(AK-59)**		
		PL CCP-PO-001, S. C-3 CCP-TP-005, S. 4.5 CCP-TP-001, S. 4.2 CCP-TP-002, S. 4.2	Y	**PL** WSPF ID-RF-3114, CIS Lot 109, Rev. 1 **(GEN-1)** WSPF ID-RF-S5300, CIS Lot 137 **(GEN-2)** WSPF ID-SDA-SOIL, CIS Lot 75 & 76, Rev. 1 **(GEN-3)** WSPF ID-NRF-SPC, CIS Lot 3 & 4 **(GEN-4)** IN-SRP-VE-000085, IN-	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
				ARP-VE-002812, INLRHVE12001 **(GEN-5)** INHSG1204, ECL12029M, INHSG1202, ECL12023M, INHSG1206, ECL12036M **(GEN-6)** INRTR5120004, RTR11-00132, RTR11-00157, INLRHRTR13005, INLRHRTR12012 **(GEN-7)**		
	UNACCEPTABLE WASTE					

12	Are procedures in place to ensure that the generator/storage site ensures, through administrative and operational procedures and characterization techniques, that waste containers do not include the following unacceptable waste:
	• liquid waste is not acceptable at WIPP. Liquid in the quantities delineated below is acceptable
	  • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of radiography or visual examination
	  • Internal containers with more than 60 milliliters or 3 percent by volume observable liquid, whichever is greater, are prohibited
	  • Containers with Hazardous Waste number U134 assigned shall have no observable liquid
	  • Overpacking the outermost container that was examined during radiography or visual examination or redistributing untreated liquid within the container shall not be used to meet the liquid volume limits
	• non-radionuclide pyrophoric materials
	• hazardous wastes not occurring as co-contaminants with TRU wastes (non-mixed hazardous wastes)
	• wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes
	• wastes containing explosives or compressed gases (continued below)
		CCP-TP-001, S. 4.2
		CCP-TP-002, Att. 1 & 2
			Y	WSPF ID-RF-3114, CIS Lot 109, Rev. 1 **(GEN-1)** WSPF ID-RF-S5300, CIS Lot 137 **(GEN-2)** WSPF ID-SDA-SOIL, CIS Lot 75 & 76, Rev. 1 **(GEN-3)** WSPF ID-NRF-SPC, CIS Lot 3 & 4 **(GEN-4)** IN-SRP-VE-000085, IN-ARP-VE-002812, INLRHVE12001 **(GEN-5)** INHSG1204, ECL12029M, INHSG1202, ECL12023M, INHSG1206, ECL12036M **(GEN-6)** INRTR5120004, RTR11-00132, RTR11-00157, INLRHRTR13005, INLRHRTR12012 **(GEN-7)**	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
12a	• wastes with polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization • wastes exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003) • waste that has ever been managed as high-level waste and waste from tanks specified in Table C-8, unless specifically approved through a Class 3 permit modification • any waste container from a waste stream (or waste stream lot) which has not undergone either radiographic or visual examination of a statistically representative subpopulation of the wastes stream in each shipment pursuant to Permit Attachment C7 • any waste container from a waste stream which has not been preceded by an appropriate, certified Waste Stream Profile Form (see Section C-1d) (Section C-1c)	CCP-TP-001, S. 4.2 CCP-TP-002, Att. 1 & 2	Y	WSPF ID-RF-3114, CIS Lot 109, Rev. 1 **(GEN-1)** WSPF ID-RF-S5300, CIS Lot 137 **(GEN-2)** WSPF ID-SDA-SOIL, CIS Lot 75 & 76, Rev. 1 **(GEN-3)** WSPF ID-NRF-SPC, CIS Lot 3 & 4 **(GEN-4)** IN-SRP-VE-000085, IN-ARP-VE-002812, INLRHVE12001 **(GEN-5)** INHSG1204, ECL12029M, INHSG1202, ECL12023M, INHSG1206, ECL12036M **(GEN-6)** INRTR5120004, RTR11-00132, RTR11-00157, INLRHRTR13005, INLRHRTR12012 **(GEN-7)**	Y	
	WASTE ACCEPTANCE CONTROL					
14	Are procedures in place to ensure that the generator/storage site uses a Waste Stream Profile Form (WSPF) which includes, at a minimum, the information indicated on the attached WSPF found in Figure C-1 and a Characterization Information Summary (CIS) prior to waste disposal at the WIPP? (Section C-1d)	CCP-TP-002, (All)	Y	WSPF ID-RF-3114, CIS Lot 109, Rev. 1 **(GEN-1)** WSPF ID-RF-S5300, CIS Lot 137 **(GEN-2)** WSPF ID-SDA-SOIL, CIS Lot 75 & 76, Rev. 1 **(GEN-3)** WSPF ID-NRF-SPC, CIS Lot 3 & 4 **(GEN-4)**	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
16	Are procedures in place to ensure that additional WSPFs are provided to WIPP and NMED for waste streams or portions of waste streams that are reclassified based upon waste characterization information? (Section C-1d)	CCP-TP-002, (All)	Y	WSPF ID-RF-3114, CIS Lot 109, Rev. 1 **(GEN-1)** WSPF ID-RF-S5300, CIS Lot 137 **(GEN-2)** WSPF ID-SDA-SOIL, CIS Lot 75 & 76, Rev. 1 **(GEN-3)** WSPF ID-NRF-SPC, CIS Lot 3 & 4 **(GEN-4)**	Y	No waste was reclassified based upon waste characterization information
16a	Are criteria in place to determine the specific circumstances under which a WSPF is revised versus when a new WSPF is required? (Section C-1d)	CCP-TP-002, S. 4.7	Y	Waste Stream Profile Form and attachments for waste stream ID-RF-S3150-A **(AK-7)**	Y	The waste stream profile form package is being revised for this waste stream when HWN D008 was added. The revision is being prepared and will be reviewed and approved before shipments of this stream can resume
	LABORATORY QUALIFICATION					
17	Are procedures in place to ensure that the generator/storage site conduct analyses using laboratories that are qualified through participation in the Performance Demonstration Program (PDP) for headspace gas sampling and analysis, and PDP homogeneous waste sampling and analysis? (Section C-3a(3))	N/A	N/A	N/A	N/A	A-13-18 is not a laboratory qualification audit.
18	Are procedures in place to ensure that the generator/storage sites conduct analyses using laboratories that implement the analytical methods through laboratory-documented standard operating procedures (SOPs) that ensure that analytical QAOs are met? (Section C-3a(3))	N/A	N/A	N/A	N/A	A-13-18 is not a laboratory qualification audit.
19	Are procedures in place to ensure that documented laboratory QA/QC programs include the following: • Facility organization • List of equipment/instrumentation • Operating procedures	N/A	N/A	N/A	N/A	A-13-18 is not a laboratory qualification audit.

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	• Laboratory QA/QC procedures • Quality assurance review • Laboratory records management (Section C-4a(4))					
	GENERAL SAMPLING AND ANALYTICAL REQUIREMENTS					
20	Are procedures in place to ensure that headspace gas sampling and analysis shall be used to: • Determine the types and concentrations of VOCs in the void volume of waste containers • VOC constituents shall be compared to those assigned by Acceptable Knowledge (Section C-3a(1))	CCP-TP-005, S. 4.5.3	Y	WSPF ID-RF-S5300, CIS Lot 137 **(GEN-2)** WSPF ID-NRF-SPC, CIS Lot 3 & 4 **(GEN-4)** INHSG1204, ECL12029M, INHSG1202, ECL12023M, INHSG1206, ECL12036M **(GEN-6)**	Y	
22	Are procedures in place to ensure that compounds not on the list of target analytes are reported as tentatively identified compounds (TICs) and that the TIC will be added to the target analyte list if it appears in the 20.4.1.200 NMAC (incorporating 40 CFR 261) Appendix VIII list and if they are reported in 25% of the waste containers sampled from a given waste stream? (Section C-3a(1))	**PL** CCP-TP-003, S. 4.3 **HSG** N/A	Y **HSG** N/A	**PL** WSPF ID-RF-S5300, CIS Lot 137 **(GEN-2)** WSPF ID-NRF-SPC, CIS Lot 3 & 4 **(GEN-4)** INHSG1204, ECL12029M, INHSG1202, ECL12023M, INHSG1206, ECL12036M **(GEN-6)** **HSG** N/A	Y **HSG** N/A	**HSG** The listing of compounds is monitored by the project office.

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
23	Are procedures in place to ensure that a randomly selected set of samples will be collected through core sampling or other EPA approved sampling from the population of waste containers for homogeneous and soil/gravel waste streams? Are procedures in place that a sufficient number of samples are collected to evaluate the toxicity characteristic of a waste stream at a 90 percent Upper Confidence limit as specified in Attachment C2? (Section C-3a(2))	**PL** CCP-TP-162, (All) **SOL** CCP-TP-162, (All) CCP-TP-008, (All) CCP-TP-512, (All)	Y Y	N/A **SOL** N/A	N/A N/A	No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.
24	Are procedures in place to ensure that total analyses or TCLP of VOCs, SVOCs, and RCRA-regulated metals are performed on all core samples to determine if the waste exhibits a toxicity characteristic? (Section C-3a(2))	N/A	N/A	N/A	N/A	INL/CCP only performs HSG sampling. INL Labs PDP qualification verified during Audit A-13-19.
25	Are procedures in place to ensure that Acceptable Knowledge is used in waste characterization activities to delineate TRU mixed waste streams, to assess whether TRU mixed wastes comply with the TSDF-WAC, to assess whether TRU mixed waste exhibits a hazardous characteristic (20.4.1.200 NMAC, incorporating 40 CFR 261 Subpart C), and to assess whether TRU wastes are listed (20.4.1.200 NMAC, incorporating 40 CFR 261 Subpart D), and to estimate waste material parameter weights? (Section C-3b)	CCP-TP-005, S. 4.4.11 S. 4.4.16 S. 4.4.17 S. 4.4.27 S. 4.4.31 S. 4.4.34[K], [L] & [M] CCP-TP-006, (All) CCP-TP-500, S. 4.4	Y	AK Summary Report for INL Argonne CH TRU Waste from Facility Maint. And Lab Operations, CCP-AK-INL-025 R1, S2.1 **(AK-1)** AK Summary Report for Rocky Flats Immobilized Organic Liquids Stored at the INL, ID-RF-S3150-A, CCP-AK-INL-005 R8, S2.1 **(AK-2)** CCP AK Summary Report for Waste Retrieved from Designated Areas within the SDA at INL, ID-SDA-SOIL, CCP-AK-INL-001 R11, S2.0 **(AK-3)** AK Summary Report for RH TRU Debris Waste from ANLE Stored at the INL, CCP-AK-INL-500 R11, S2.0 **(AK-4)**	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
				AK Summary Report for Bettis Laboratory RH TRU Waste Stored at INL, IN-ID-BTO-030, CCP-AK-INL-590 R2, S2.0 **(AK-5)** AK Summary Report for INL Argonne CH TRU Waste from Facility Maint. And Lab Operations, CCP-AK-INL-025 R1, S5.4.3.4, 5.4.3.5, 5.4.4 **(AK-1)** AK Summary Report for Rocky Flats Immobilized Organic Liquids Stored at the INL, ID-RF-S3150-A, CCP-AK-INL-005 R8, S6.4.3.4, 6.4.3.5, 6.4.4 **(AK-2)** CCP AK Summary Report for Waste Retrieved from Designated Areas within the SDA at INL, ID-SDA-SOIL, CCP-AK-INL-001 R11, S5.6.5, 5.6.6, 5.7 **(AK-3)** AK Summary Report for RH TRU Debris Waste from ANLE Stored at the INL, CCP-AK-INL-500 R11, S5.4.2.3, 5.4.4, 5.4.5 **(AK-4)** AK Summary Report for Bettis Laboratory RH TRU Waste Stored at INL, IN-ID-BTO-030, CCP-AK-INL-590 R2, S5.4.2.3, 5.4.4, 5.4.5 **(AK-5)** AK Att. 6, Waste Form,		

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
				Waste Material Parameters, Prohibited Items and Packaging for waste streams ID-AECHDM, ID-RF-S3150-A, ID-SDA-SOIL, ID-ANLE-S5000, and IN-ID-BTO-030 **(AK-19)** NCRs for prohibited it4ms **(AK-23)** VE BDRS . IN-ARP-VE002704 **(AK-36)** IN-ARP-VE002793 **(AK-37)** VVE05-01744 **(AK-38)** RHINLVE090002 **(AK-39)** AK Summary Report for INL Argonne CH TRU Waste from Facility Maint. And Lab Operations, CCP-AK-INL-025 R1, S5.4.3, table 7 **(AK-1)** AK Summary Report for Rocky Flats Immobilized Organic Liquids Stored at the INL, ID-RF-S3150-A, CCP-AK-INL-005 R8, S6.4.3, table 6-5 **(AK-2)** CCP AK Summary Report for Waste Retrieved from Designated Areas within the SDA at INL, ID-SDA-SOIL, CCP-AK-INL-001 R11, S2.0, S5.6, tables 5-5, 5-6 **(AK-3)** AK Summary Report for		

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
				RH TRU Debris Waste from ANLE Stored at the INL, CCP-AK-INL-500 R11, S5.4.2, table 3 **(AK-4)** AK Summary Report for Bettis Laboratory RH TRU Waste Stored at INL, IN-ID-BTO-030, CCP-AK-INL-590 R2, S5.4.2, tables 2, 3 **(AK-5)** AK Att. 5, Hazardous Constituents, for waste streams ID-AECHDM, ID-RF-S3150-A, ID-SDA-SOIL, ID-ANLE-S5000, and IN-ID-BTO-030 **(AK-18)** AK Summary Report for INL Argonne CH TRU Waste from Facility Maint. And Lab Operations, CCP-AK-INL-025 R1, S5.4.1.2, table 4 **(AK-1)** Summary Report for Rocky Flats Immobilized Organic Liquids Stored at the INL, ID-RF-S3150-A, CCP-AK-INL-005 R8, S6.4.1.2, table6-1b **(AK-2)** CCP AK Summary Report for Waste Retrieved from Designated Areas within the SDA at INL, ID-SDA-SOIL, CCP-AK-INL-001 R11, S5.4.4, table 5-1d **(AK-3)** AK Summary Report for RH TRU Debris Waste from ANLE Stored at the INL, CCP-AK-INL-500		

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
				R11, S5.4.1.2, table 2 **(AK-4)** AK Summary Report for Bettis Laboratory RH TRU Waste Stored at INL, IN-ID-BTO-030, CCP-AK-INL-590 R2, S5.4.1.2, table 1 **(AK-5)** Memos attached to AK Att. 6, Waste Form, Waste Material Parameters, Prohibited Items and Packaging for waste streams ID-AECHDM, ID-RF-S3150-A, ID-SDA-SOIL, ID-ANLE-S5000, and IN-ID-BTO-030 **(AK-19)**		
26	Are procedures in place to ensure that radiography and/or visual examination are used as necessary to: • Examine a waste container to determine the physical form • Identify observable liquid in excess of TSDF-WAC limits and containerized gases • Verify the physical form matches the waste stream description (Section C-3c)	N/A	N/A	N/A	N/A	For RTR/VE refer to C6-1 dated March 13, 2013

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
27	Are procedures in place to ensure that the following characterization activities shall occur for newly generated wastes: • Acceptable Knowledge for all wastes, with sampling and analysis as necessary to augment AK including; - Either visual examination during packaging or radiography (or VE in lieu of radiography) after packaging for all waste containers, ensuring this occurs prior to any treatment designed to supercompact waste - Headspace gas analysis for randomly selected containers, except for qualifying waste containers belonging to LANL sealed sources waste streams - Total VOC, SVOC, and Metals analyses for a selected number of homogeneous solids and soil/gravel waste containers as specified in Attachment C2 - Evaluation of any TICs found in headspace gas and totals analyses (Section C-3d(1))	**AK** CCP-TP-005, S. 4.4 S. 4.5	Y	CCP AK Summary Report for Waste Retrieved from Designated Areas within the SDA at INL, ID-SDA-SOIL, CCP-AK-INL-001 R11 **(AK-3)** IN-ARP-VE-002704 **(AK-36)** IN-ARP-VE-002793 **(AK-37)** S4200-LOT-05-07 **(AK-55)** ALD120055V **(AK-56)** ALD12005S **(AK-57)** ALD12005M **(AK-58)** ALD12005N **(AK-59)** Solids Sampling and Analysis Random Container Selection Memo for ID-SDA-SOIL **(AK-33)** Solids S&A Summary Reports for ID-SDA-SOIL Lot 5 **(AK-34)** AK Waste Stream Characterization Checklists for ID-SDA-SOIL, lots 73 & 76 **(AK-35)**	Y	
		PL CCP-TP-002, (All) CCP-TP-162, (All)	Y	**PL** WSPF ID-RF-3114, CIS Lot 109, Rev. 1 **(GEN-1)** WSPF ID-RF-S5300, CIS Lot 137 **(GEN-2)** WSPF ID-SDA-SOIL, CIS Lot 75 & 76, Rev. 1 **(GEN-3)** WSPF ID-NRF-SPC, CIS Lot 3 & 4	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
				(GEN-4) IN-SRP-VE-000085, IN-ARP-VE-002812, INLRHVE12001 **(GEN-5)** INHSG1204, ECL12029M, INHSG1202, ECL12023M, INHSG1206, ECL12036M **(GEN-6)** INRTR5120004, RTR11-00132, RTR11-00157, INLRHRTR13005, INLRHRTR12012 **(GEN-7)** Random Selection Lot 3 Headspace Gas Random Sample Selection Memorandum For Waste Stream IN-ID-NRF-SPC, Lot 3 Sample Selection Container Replacement Memorandum For The Second Random Sample Lot Of Waste Stream ID-RF-S5300-A **(GEN-9)**		
27a	Are procedures in place to ensure that the visual examination during packaging for all waste containers includes the documentation of packaging configuration, type and number of filters, and rigid liner vent hole presence and diameter necessary to determine the appropriate DAC in accordance with Permit Attachment C1, Section C1-1? (Section C-3d(1))	N/A	N/A	N/A	N/A	For RTR/VE refer to C6-1 dated March 13, 2013
28	Are procedures in place to ensure that the following characterization activities shall occur for retrievably stored wastes: • Acceptable Knowledge for all wastes, with sampling and analysis as necessary to augment AK including; - Visual examination or radiography for all waste containers - Headspace gas analysis for randomly selected containers except for	**AK** CCP-TP-005, S. 4.4 S. 4.5	Y	AK Summary Report for INL Argonne CH TRU Waste from Facility Maint. And Lab Operations, CCP-AK-INL-025 R1 **(AK-1)** AK Summary Report for	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	qualifying waste containers belonging to LANL sealed sources waste streams - Total VOC, SVOC, and Metals analyses for a statistically selected number of homogeneous solids and soil/gravel waste containers as specified in Attachment C2 - Evaluation of any TICs found in headspace gas and totals analyses (Section C-3d(2))			Rocky Flats Immobilized Organic Liquids Stored at the INL, ID-RF-S3150-A, CCP-AK-INL-005 R8, **(AK-2)** AK Summary Report for RH TRU Debris Waste from ANLE Stored at the INL, CCP-AK-INL-500 R11 **(AK-4)** AK Summary Report for Bettis Laboratory RH TRU Waste Stored at INL, IN-ID-BTO-030, CCP-AK-INL-590 R2 **(AK-5)** VVE05-01744 **(AK-38)** RHINLVE090002 **(AK-39)** INRTR5110102 **(AK-40)** INRTR2050037 **(AK-41)** INRTR5120002 **(AK-42)** INRTR2050087 **(AK-43)** INLRHRTR12010**(AK-44)** INLRHRTR12002**(AK-45)** INHSGS090011 **(AK-46)** ECL09029M **(AK-47)** INHSG1111 **(AK-48)** ECL11036M **(AK-49)** WCS-0504 **(AK-50)** ALD05034V **(AK-51)** ALD05031S **(AK-52)** ALD05034M **(AK-53)** ALD05025N **(AK-54)** HSG Random Container Selection Memos for waste streams ID-AECHDM and ID-ANLE-S5000 **(AK-31)** HSG Summary Reports for waste streams ID-AECHDM and ID-ANLE-S5000		

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
				(AK-32) Solids Sampling and Analysis Random Container Selection Memos for ID-RF-S3150-A **(AK-33)** Solids S&A Summary Reports for ID-RF-S3150-A, **(AK-34)** AK Waste Stream Characterization Checklists for waste streams ID-AECHDM lot1, ID-RF-S3150-A, lot 14 and ID-ANLE-S5000, lot 29 **(AK-35)**		
		PL CCP-TP-002, (All) CCP-TP-162, (All)	Y	**PL** WSPF ID-RF-3114, CIS Lot 109, Rev. 1 **(GEN-1)** WSPF ID-RF-S5300, CIS Lot 137 **(GEN-2)** WSPF ID-SDA-SOIL, CIS Lot 75 & 76, Rev. 1 **(GEN-3)** WSPF ID-NRF-SPC, CIS Lot 3 & 4 **(GEN-4)** IN-SRP-VE-000085, IN-ARP-VE-002812, INLRHVE12001 **(GEN-5)** INHSG1204, ECL12029M, INHSG1202, ECL12023M, INHSG1206, ECL12036M **(GEN-6)**	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
				INRTR5120004, RTR11-00132, RTR11-00157, INLRHRTR13005, INLRHRTR12012 **(GEN-7)** Random Selection Lot 3 Headspace Gas Random Sample Selection Memorandum For Waste Stream IN-ID-NRF-SPC, Lot 3 Sample Selection Container Replacement Memorandum For The Second Random Sample Lot Of Waste Stream ID-RF-S5300-A **(GEN-9)**		

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	DATA GENERATION, VERIFICATION, VALIDATION, DOCUMENTATION, AND QUALITY ASSURANCE					
30	Are procedures in place to ensure that the following Data Quality Objectives are met: • Use Acceptable Knowledge to delineate TRU mixed waste streams, assess whether TRU mixed wastes comply with the applicable requirements of the TSDF-WAC, assess whether TRU mixed wastes exhibit a hazardous characteristic, assess whether TRU mixed wastes are listed and to estimate waste material parameter weights • Use Headspace gas sampling and analysis, as necessary, to identify and quantify VOCs in waste containers to resolve the assignment of EPA hazardous waste numbers • Perform totals analyses of homogeneous solids and soils/gravel wastes to establish if the waste is hazardous based on the toxicity characteristics levels in 20.4.1.200 NMAC through a comparison of the upper confidence limits (UCL_{90}) of the mean concentrations to resolve the assignment of hazardous waste numbers • Use radiography or visual examination to determine physical waste form, the absence of prohibited items, and additional waste characterization techniques that may be used based on Summary Category Groups (Section C-4a(1))	**AK** CCP-TP-005, S. 4.4.11 S. 4.4.16 S. 4.4.17 S. 4.4.27 S. 4.4.31 S. 4.4.34[K], [L] & [M] CCP-TP-006, (All) CCP-TP-500, S. 4.4	Y	AK Summary Report for INL Argonne CH TRU Waste from Facility Maint. And Lab Operations, CCP-AK-INL-025 R1, S2.1 **(AK-1)** AK Summary Report for Rocky Flats Immobilized Organic Liquids Stored at the INL, ID-RF-S3150-A, CCP-AK-INL-005 R8, S2.1 **(AK-2)** CCP AK Summary Report for Waste Retrieved from Designated Areas within the SDA at INL, ID-SDA-SOIL, CCP-AK-INL-001 R11, S2.0 **(AK-3)** AK Summary Report for RH TRU Debris Waste from ANLE Stored at the INL, CCP-AK-INL-500 R11, S2.0 **(AK-4)** AK Summary Report for Bettis Laboratory RH TRU Waste Stored at INL, IN-ID-BTO-030, CCP-AK-INL-590 R2, S2.0 **(AK-5)** AK Summary Report for INL Argonne CH TRU Waste from Facility Maint. And Lab Operations, CCP-AK-INL-025 R1, S5.4.3.4, 5.4.3.5, 5.4.4 **(AK-1)** AK Summary Report for	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
				Rocky Flats Immobilized Organic Liquids Stored at the INL, ID-RF-S3150-A, CCP-AK-INL-005 R8, S6.4.3.4, 6.4.3.5, 6.4.4 **(AK-2)** CCP AK Summary Report for Waste Retrieved from Designated Areas within the SDA at INL, ID-SDA-SOIL, CCP-AK-INL-001 R11, S5.6.5, 5.6.6, 5.7 **(AK-3)** AK Summary Report for RH TRU Debris Waste from ANLE Stored at the INL, CCP-AK-INL-500 R11, S5.4.2.3, 5.4.4, 5.4.5 **(AK-4)** AK Summary Report for Bettis Laboratory RH TRU Waste Stored at INL, IN-ID-BTO-030, CCP-AK-INL-590 R2, S5.4.2.3, 5.4.4, 5.4.5 **(AK-5)** AK Att. 6, Waste Form, Waste Material Parameters, Prohibited Items and Packaging for waste streams ID-AECHDM, ID-RF-S3150-A, ID-SDA-SOIL, ID-ANLE-S5000, and IN-ID-BTO-030 **(AK-19)** NCRs for prohibited it4ms **(AK-23)** VE BDRS . IN-ARP-VE002704 **(AK-36)** IN-ARP-VE002793		

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
				(AK-37) VVE05-01744 **(AK-38)** RHINLVE090002 **(AK-39)** AK Summary Report for INL Argonne CH TRU Waste from Facility Maint. And Lab Operations, CCP-AK-INL-025 R1, S5.4.3, table 7 **(AK-1)** AK Summary Report for Rocky Flats Immobilized Organic Liquids Stored at the INL, ID-RF-S3150-A, CCP-AK-INL-005 R8, S6.4.3, table 6-5 **(AK-2)** CCP AK Summary Report for Waste Retrieved from Designated Areas within the SDA at INL, ID-SDA-SOIL, CCP-AK-INL-001 R11, S2.0, S5.6, tables 5-5, 5-6 **(AK-3)** AK Summary Report for RH TRU Debris Waste from ANLE Stored at the INL, CCP-AK-INL-500 R11, S5.4.2, table 3 **(AK-4)** AK Summary Report for Bettis Laboratory RH TRU Waste Stored at INL, IN-ID-BTO-030, CCP-AK-INL-590 R2, S5.4.2, tables 2, 3 **(AK-5)** AK Att. 5, Hazardous Constituents, for waste streams ID-AECHDM, ID-RF-S3150-A, ID-SDA-SOIL, ID-ANLE-S5000, and IN-ID-BTO-030		

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
				(AK-18) AK Summary Report for INL Argonne CH TRU Waste from Facility Maint. And Lab Operations, CCP-AK-INL-025 R1, S5.4.1.2, table 4 **(AK-1)** Summary Report for Rocky Flats Immobilized Organic Liquids Stored at the INL, ID-RF-S3150-A, CCP-AK-INL-005 R8, S6.4.1.2, table6-1b **(AK-2)** CCP AK Summary Report for Waste Retrieved from Designated Areas within the SDA at INL, ID-SDA-SOIL, CCP-AK-INL-001 R11, S5.4.4, table 5-1d **(AK-3)** AK Summary Report for RH TRU Debris Waste from ANLE Stored at the INL, CCP-AK-INL-500 R11, S5.4.1.2, table 2 **(AK-4)** AK Summary Report for Bettis Laboratory RH TRU Waste Stored at INL, IN-ID-BTO-030, CCP-AK-INL-590 R2, S5.4.1.2, table 1 **(AK-5)** Memos attached to AK Att. 6, Waste Form, Waste Material Parameters, Prohibited Items and Packaging for waste streams ID-AECHDM, ID-RF-S3150-A, ID-SDA-SOIL, ID-ANLE-S5000, and IN-ID-		

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
		PL CCP-TP-002, (All)	Y	BTO-030 **(AK-19)** **PL** WSPF ID-RF-3114, CIS Lot 109, Rev. 1 **(GEN-1)** WSPF ID-RF-S5300, CIS Lot 137 **(GEN-2)** WSPF ID-SDA-SOIL, CIS Lot 75 & 76, Rev. 1 **(GEN-3)** WSPF ID-NRF-SPC, CIS Lot 3 & 4 **(GEN-4)** IN-SRP-VE-000085, IN-ARP-VE-002812, INLRHVE12001 **(GEN-5)** INHSG1204, ECL12029M, INHSG1202, ECL12023M, INHSG1206, ECL12036M **(GEN-6)** INRTR5120004, RTR11-00132, RTR11-00157, INLRHRTR13005, INLRHRTR12012 **(GEN-7)**	Y	
31	Are procedures in place to ensure that the following Quality Assurance Objectives are adequately defined and assessed for each characterization method: • Precision as a measure of the mutual agreement among multiple measurements. • Accuracy as the degree of agreement between a measurement result and a true or known value. • Completeness is a measure of the amount of valid data obtained from a method compared to the total amount of data obtained that is expressed as a percentage. • Comparability is the degree to which one data set can be compared to another data set.	**HSG** CCP-TP-106, Attachment 2 **SOL** CCP-TP-008, Att. 3 CCP-TP-512, Att. 3	Y Y	**HSG** INHSG1202 INHSG1204 INHSG1206 **(HSG-1)** **SOL** N/A	Y N/A	INL/CCP only performs HSG sampling. Representativeness is verified by the project office. The list of samples is collected by the sampling team from the random selection of waste containers. No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	• Representativeness as an expression of the degree to which data represent characteristics of a population. (Section C-4a(2))					March 13, 2013. For RTR/VE refer to C6-1 dated March 13, 2013
32	With respect to data generation, are procedures in place to ensure that the generator/storage site's waste characterization program meets the following general requirements: • Analytical data packages and batch data reports must be reported accurately in a pre-approved format, must be maintained in permanent files, and must be traceable? • All data must receive a technical review by another qualified analyst? (Section C3-10a)	**HSG** CCP-TP-106, S. 4.1 and S. 5.0 Attachment 2 **SOL** CCP-TP-008, Att. 3 CCP-TP-512, Att. 2 & 3	Y Y	**HSG** INHSG1202 INHSG1204 INHSG1206 **(HSG-1)** **SOL** N/A	Y N/A	INL/CCP only performs HSG sampling. No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013. For RTR/VE refer to C6-1 dated March 13, 2013
33	Are procedures in place to ensure that the generator/storage site performs validation of waste characterization data for each waste container? (Section C-4)	**HSG** CCP-TP-106, S. 4.1, S. 3.2 and Attachment 2 **PL** CCP-TP-001, S. 4.2 **SOL** CCP-TP-008,	Y Y Y	**HSG** INHSG1202 INHSG1204 INHSG1206 **(HSG-1)** **PL** IN-SRP-VE-000085, IN-ARP-VE-002812, INLRHVE12001 **(GEN-5)** INHSG1204, ECL12029M, INHSG1202, ECL12023M, INHSG1206, ECL12036M **(GEN-6)** INRTR5120004, RTR11-00132, RTR11-00157, INLRHRTR13005, INLRHRTR12012 **(GEN-7)** **SOL** N/A	Y Y N/A	INL/CCP only performs HSG sampling. Analysis is performed by CCP INL Labs. No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013. For RTR/VE refer to C6-1 dated March 13, 2013

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
		Att. 1 & 2 CCP-TP-512, Att. 1 & 2				
34	Are procedures in place to ensure that the generator/storage site has a pre-approved format for reporting waste characterization data? (Section C-4a(4))	**HSG** CCP-TP-106, S. 4.1 Attachment 2	Y	**HSG** INHSG1202 INHSG1204 INHSG1206 **(HSG-1)**	Y	INL/CCP only performs HSG sampling. Analysis is performed by CCP INL Labs.
		PL CCP-TP-001, S. 4.2	Y	**PL** WSPF ID-RF-3114, CIS Lot 109, Rev. 1 **(GEN-1)** WSPF ID-RF-S5300, CIS Lot 137 **(GEN-2)** WSPF ID-SDA-SOIL, CIS Lot 75 & 76, Rev. 1 **(GEN-3)** WSPF ID-NRF-SPC, CIS Lot 3 & 4 **(GEN-4)** IN-SRP-VE-000085, IN-ARP-VE-002812, INLRHVE12001 **(GEN-5)** INHSG1204, ECL12029M, INHSG1202, ECL12023M, INHSG1206, ECL12036M **(GEN-6)** INRTR5120004, RTR11-00132, RTR11-00157, INLRHRTR13005, INLRHRTR12012 **(GEN-7)**	Y	No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013. For RTR/VE refer to C6-1 dated March 13, 2013
		SOL CCP-TP-008, Att. 1-5 CCP-TP-512, Att. 1-7	Y	**SOL** N/A	N/A	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
35	Are procedures in place to ensure that the generator/storage site prepares analytical, testing, and sampling batch data reports to meet the requirements of their own site-specific QAPjP and/or SOPs? (Section C-4a(4))	**HSG** CCP-TP-106, S. 4.1 Attachment 2	Y	**HSG** INHSG1202 INHSG1204 INHSG1206 **(HSG-1)**	Y	INL/CCP only performs HSG sampling. Analysis is performed by CCP INL Labs.
		PL CCP-TP-001, S. 4.2	Y	**PL** IN-SRP-VE-000085, IN-ARP-VE-002812, INLRHVE12001 **(GEN-5)** INHSG1204, ECL12029M, INHSG1202, ECL12023M, INHSG1206, ECL12036M **(GEN-6)** INRTR5120004, RTR11-00132, RTR11-00157, INLRHRTR13005, INLRHRTR12012 **(GEN-7)**	Y	No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013. For RTR/VE refer to C6-1 dated March 13, 2013
		SOL CCP-TP-008, S. 4.4 CCP-TP-512, S. 4.4	Y	**SOL** N/A	N/A	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
36	Are procedures in place to ensure that all raw data is collected and managed at the data generation level in accordance with the following criteria: • All raw data shall be signed and dated in reproducible ink by the individual collecting the data, or signed and dated using electronic signatures • All data shall be recorded clearly, legibly, and accurately in field and laboratory records and include all applicable sample identification numbers • All changes to original data shall be lined out, initialed, and dated by the individual making the change. Original data may not be obliterated or otherwise be made unreadable • All data shall be transferred and reduced from field and laboratory records completely and accurately • All field and laboratory records shall be maintained as specified in Table C-6 of Attachment C • Data shall be organized into standard reporting formats for reporting purposes. • All electronic and video data must be stored to ensure that waste container, sample and QC data are readily retrievable (Section C3-10a)	**HSG** CCP-TP-106, S. 4.1 and S. 5.0 Attachment 2 **SOL** CCP-TP-008, S. 5.0 & Att.3 CCP-TP-512, S. 5.0 & Att. 3	Y Y	**HSG** INHSG1202 INHSG1204 INHSG1206 **(HSG-1)** **SOL** N/A	Y N/A	INL/CCP only performs HSG sampling. Analysis is performed by CCP INL Labs. 1st Bullet: Electronic signatures are not utilized for HSG sample collections. Last Bullet: HSG: N/A No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013. For RTR/VE refer to C6-1 dated March 13, 2013
37	Are procedures in place to ensure that 100% of batch data reports are subject to independent technical review by an individual qualified to review the data who was not involved in the generation or recording of the data under review. The reviewer shall release the data through signature with an associated review checklist prior to characterization of the associated waste and shipment to the WIPP. The review shall ensure the following, as applicable: • Data generation and reduction were conducted according to the methods used and reported in the proper units and significant figures • Calculations have been verified by a valid calculation program, a spot check of verified calculation programs, and/or a 100 percent check of all hand calculations • The data have been reviewed for transcription errors • The testing, sampling, and analytical QA documentation for BDRs is complete and includes, as applicable, raw data, DAC and equilibrium calculations and times, calculation records, chain of custody forms, calibration records, QC sample results and copies or originals of gas canister sample tags. • All QC sample results are within established control limits, and if not, the	**HSG** CCP-TP-106, S. 4.1 Attachment 2 **SOL** CCP-TP-008, Att. 3 CCP-TP-512, Att. 3	Y Y	**HSG** INHSG1202 INHSG1204 INHSG1206 **(HSG-1)** **SOL** N/A	Y N/A	INL/CCP only performs HSG sampling. Analysis is performed by CCP INL Labs. No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013. For RTR/VE refer to C6-1 dated March 13, 2013

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	data has been appropriately qualified • Reporting flags were assigned correctly • Sample holding times and preservation requirements were met, or exceptions documented • Radiography tapes are reviewed on a waste container basis at a minimum of once per testing batch or once per day of operation, whichever is less frequent. The radiography tape will be reviewed against the data on the radiography form to ensure that data are complete and correct • Field sampling records are complete • QAOs have been met (Section C3-10a(1))					
40	Are procedures in place to ensure that 100 percent of all batch data reports receive a Site Project Manager signature release with an associated review checklist prior to characterization of the associated waste and shipment to the WIPP. This release shall ensure the following: • The Site Project Manager or designee shall determine the validity of the drum age criteria (**DAC**) assignment made at the data generation level based upon an assessment of the data collection and evaluation necessary to make the assignment. • Testing batch QC checks were properly performed. Radiography data are complete and acceptable based on evidence of videotape review of one waste container per day or once per testing batch, whichever is less frequent • Sampling batch QC checks were properly performed, and meet the established QAOs and are within established data usability criteria • Analytical batch QC checks were properly performed and meet the established QAOs and are within established data usability criteria • Online batch QC checks were properly performed and meet the established QAOs and are within established data usability criteria • Proper procedures were followed to ensure representative samples of headspace gas and homogeneous solids and soil/gravel were taken • Data generation level independent technical review, validation, and verification have been performed as evidenced by the completed review checklists and appropriate signature releases. • Independent technical reviewers were not involved in the generation or	CCP-TP-001, S. 4.2 CCP-TP-162, (All)	Y	IN-SRP-VE-000085, IN-ARP-VE-002812, INLRHVE12001 **(GEN-5)** INHSG1204, ECL12029M, INHSG1202, ECL12023M, INHSG1206, ECL12036M **(GEN-6)** INRTR5120004, RTR11-00132, RTR11-00157, INLRHRTR13005, INLRHRTR12012 **(GEN-7)** Random Selection Lot 3 Headspace Gas Random Sample Selection Memorandum For Waste Stream IN-ID-NRF-SPC, Lot 3 Sample Selection Container Replacement Memorandum For The Second Random Sample Lot Of Waste Stream ID-RF-S5300-A **(GEN-9)**	Y	5th Bullet: N/A – INL/CCP utilizes canister sampling for HSG

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	recording of the data under review. • Batch Data review checklists are complete • Batch Data Reports are complete and data properly reported • Verify that data are within established data assessment criteria and meet all applicable QAOs (Section C3-10(b)(1))					
42	Are procedures in place to ensure that a repeat of the data review process at the data generation level will be performed on a minimum of one randomly chosen waste container every quarter to determine if the verification and validation is performed according to documented procedures? (Section C3-10b)	CCP-TP-001, S. 4.3	Y	Fourth Quarter 2012 Visual Examination Quarterly Repeat Of Data Generation Level Review At The Idaho National Laboratory – Remote Handled Results Of Visual Examination Quarterly Repeat Data Generation Level Data Review: Idaho National Laboratory – Remote Handled Fourth Calendar Quarter Of 2012 Third Quarter 2012 Real-Time Radiography Quarterly Repeat Of Data Generation Level Review At The Idaho National Laboratory – Remote Handled Results Of Real-Time Radiography Quarterly Repeat Data Generation Level Data Review: Idaho National Laboratory – Remote Handled Third Calendar Quarter Of 2012 First Quarter 2013 Real-Time Radiography Quarterly Repeat Of Data Generation Level Review At The Idaho National Laboratory – Remote Handled	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
				Results Of Real-Time Radiography Quarterly Repeat Data Generation Level Data Review: Idaho National Laboratory Third Quarter 2012 Headspace Gas Sampling Quarterly Repeat Of Data Generation Level Review At The Idaho National Laboratory – Remote Handled Results Of Headspace Gas Sampling Quarterly Repeat Data Generation Level Data Review: Idaho National Laboratories – Remote Handled Third Calendar Quarter Of 2012 Second Quarter 2012 Real-Time Radiography Quarterly Repeat Of Data Generation Level Review At The Idaho National Laboratory – Remote Handled Results Of Real-Time Radiography Quarterly Repeat Data Generation Level Data Review: Idaho National Laboratory – Remote-Handled Second Calendar Quarter Of 2012 Fourth Quarter 2012 Real-Time Radiography Quarterly Repeat Of Data Generation Level Review At The Idaho National Laboratory – Remote-Handled **(GEN-8)** Third Quarter 2012 Headspace Gas		

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
				Sampling Quarterly Repeat Of Data Generation Level Review At The Idaho National Laboratory Results Of Headspace Gas Sampling Quarterly Repeat Data Generation Level Data Review: Idaho National Laboratory Third Calendar Quarter Of 2012 Third Quarter 2012 Visual Examination Quarterly Repeat Of Data Generation Level Review At The Idaho National Laboratory Results Of Visual Examination Quarterly Repeat Data Generation Level Data Review: Idaho National Laboratory Third Calendar Quarter Of 2012 Fourth Quarter 2012 Visual Examination Quarterly Repeat Of Data Generation Level Review At The Idaho National Laboratory Results Of Visual Examination Quarterly Repeat Data Generation Level Data Review: Idaho National Laboratory Fourth Calendar Quarter Of 2012 First Quarter 2013 Visual Examination Quarterly Repeat Of Data Generation Level Review At The Idaho National Laboratory Results Of Visual Examination Quarterly		

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
				Repeat Data Generation Level Data Review: Idaho National Laboratory First Calendar Quarter Of 2013 Revised Second Quarter 2012 Real-Time Radiography Quarterly Repeat Of Data Generation Level Review At The Idaho National Laboratory Results Of Real-Time Radiography Quarterly Repeat Data Generation Level Data Review: Idaho National Laboratory Second Calendar Quarter Of 2012 Second Quarter 2012 Visual Examination Quarterly Repeat Of Data Generation Level Review At The Idaho National Laboratory Results Of Visual Examination Quarterly Repeat Data Generation Level Data Review: Idaho National Laboratory Second Calendar Quarter Of 2012 Third Quarter 2012 Real-Time Radiography Quarterly Repeat Of Data Generation Level Review At The Idaho National Laboratory Results Of Real-Time Radiography Quarterly Repeat Data Generation Level Data Review: Idaho National Laboratory Third Calendar Quarter Of 2012 Fourth Quarter 2012		

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
				Headspace Gas Sampling Quarterly Repeat Of Data Generation Level Review At The Idaho National Laboratory First Quarter 2013 Headspace Gas Sampling Quarterly Repeat Of Data Generation Level Review At The Idaho National Laboratory Second Quarter 2012 Headspace Gas Sampling Quarterly Repeat Of Data Generation Level Review At The Idaho National Laboratory Fourth Quarter 2012 Real Time Radiography Quarterly Repeat Of Data Generation Level Review At The Idaho National Laboratory First Quarter 2013 Real-Time Radiography Quarterly Repeat Of Data Generation Level Review At The Idaho National Laboratory **(GEN-10)**		
43	Are procedures in place and checklists are available to prepare a Site Project Manager (SPM) Summary and a Data Validation Summary (the summaries may be in the same document)? The SPM Summary includes a validation checklist for each batch that is of sufficient detail to document all aspects of a batch data report that could affect data quality. The Data Validation Summary must identify each Batch Data Report reviewed, describe how the validation was performed, identify all problems, and identify all acceptable and unacceptable data. Summaries must include release signatures. (Section C3-10b(2))	CCP-TP-001, S. 3.1.6, 3.1.8, & 4.2	Y	IN-SRP-VE-000085, IN-ARP-VE-002812, INLRHVE12001 **(GEN-5)** INHSG1204, ECL12029M, INHSG1202, ECL12023M, INHSG1206, ECL12036M **(GEN-6)** INRTR5120004, RTR11-00132, RTR11-00157,	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
				INLRHRTR13005, INLRHRTR12012 **(GEN-7)**		
44	Are procedures in place to ensure that non-administrative, WAP-related nonconformances first identified at the site project manager level are reported to the Permittees within seven calendar days of identification, that nonconformance reports are prepared within 30 calendar days, and that corrective action is implemented prior to waste shipment? (Section C3-13)	CCP-QP-005, S. 4.3.1 [D.3]	Y	Records packages for NCR-INL-1759-12, R0; NCR-INL-0418-12, R1; NCR-INL-0396-12, R1; NCR-INL-0437-12, R0 were reviewed and found to include evidence of notification. **(GEN-11)** There were no reportable RH NCRs since the previous recertification audit. CH Nonconformance Report Log for Project Level and Data Generation Level 2012/2013; RH Nonconformance Report Log for Project Level and Data Generation Level 2012/2013 **(GEN-12)**	Y	Verified that these NCRs were appropriately reported to the Permittee (via email to CBFO through "WIPP Notify") within the required amount of days by the Permit.
45	Are procedures in place to ensure that any waste container for which a nonconformance report (NCR) has been written will not be shipped to the WIPP facility unless the condition that led to the NCR for that container is appropriately identified, reconciled, corrected, and documented? Are nonconformance reports prepared for nonconformances identified? Are nonconformances identified and tracked, and does the Site Project Manager oversee the nonconformance report process? (Section C3-13)	CCP-QP-005, (All)	Y	Records packages for the following NCRs: NCR-INL-0346-12, R0; NCR-INL-0349-12, R0; NCR-INL-0353-12, R0; NCR-INL-0357-12, R0; NCR-INL-0368-12, R0; NCR-INL-0428-12, R0; NCR-INL-0430-12, R0; NCR-INL-0433-12, R1; NCR-INL-0434-12, R1; NCR-INL-0438-12, R0; NCR-INL-0062-13, R0; NCR-INL-0066-13, R0; NCR-INL-0329-13, R0;	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
				NCR-INL-0336-13, R0; NCR-RHINL-0125-12, R1; NCR-RHINL-0496-12, R0; NCR-RHINL-0502-12, R0 (**GEN-13)**		
	SAMPLE CONTROL					
46	Are procedures in place to ensure that the site's sample handling and control program includes the following: • Field documentation of samples including point of origin, date of sample, container identification, sample type, analysis requested, and chain-of-custody (COC) number? • Proper labeling and/or tagging including proper sample numbering, sample identification, sample date, sampling conditions, and analysis requested? • COC record including name of sample relinquisher, sample receiver, and date and time of sample transfer? and • Proper sample handling and preservation? (Section C-4a(3))	**HSG** CCP-TP-093, S. 4.4.4; S. 4.5; Attachment 1 **SOL** CCP-TP-008, Att. 1 & 2 CCP-TP-512, Att. 1 & 2	Y Y	**HSG** INHSG1202 INHSG1204 INHSG1206 **(HSG-1)** **SOL** N/A	Y N/A	INL/CCP only performs HSG sampling. Analysis is performed by CCP INL Labs. No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.
47	Are procedures in place to ensure that the site's QAPjP or site-specific procedures includes COC forms to control the sample from the point of origin to the final analysis result reporting? (Section C-4a(3))	**HSG** CCP-TP-093, S. 4.0 Attachment 1 **SOL** CCP-TP-008, Att. 1 & 2 CCP-TP-512, Att. 1 & 2	Y Y	**HSG** INHSG1202 INHSG1204 INHSG1206 **(HSG-1)** **SOL** N/A	Y N/A	INL/CCP only performs HSG sampling. Analysis is performed by CCP INL Labs. No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.
	DATA TRANSMITTAL					
48	Are procedures in place to ensure that the generator/storage site transmits data by hard copy or electronic copy from the data generation level to the site project level? If electronic, does the generator/site have a hard copy available on demand? (Section C-4a(6))	CCP-TP-001, S. 4.2	Y	IN-SRP-VE-000085, IN-ARP-VE-002812, INLRHVE12001 **(GEN-5)** INHSG1204, ECL12029M, INHSG1202,	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
				ECL12023M, INHSG1206, ECL12036M **(GEN-6)** INRTR5120004, RTR11-00132, RTR11-00157, INLRHRTR13005, INLRHRTR12012 **(GEN-7)**		
50	Are procedures in place to ensure that the generator/storage site inputs the data into the WWIS manually or electronically? (Section C-4a(6))	CCP-TP-030, (All) CCP-TP-530, (All)	Y	Characterization data packages for the following containers were reviewed including WWIS/WDS Container Data Reports, CCP "*WDS Master Template.xls"* data spreadsheet reports, and pages from batch data reports showing characterization data values that were entered. **CH** Container Packages: **SRP12038** (this is one of the 10 containers in the TDOP BN10489113) **10017513** (this is one of the 10 containers in the TDOP BN10441819) **ARP70624** (this is one of the 10 containers in the SWB drum overpack BN10436061) **SRP12570** (this is one of the 10 containers in the SWB drum overpack BN10489992) **(GEN-14)** **RH** Packages for Canisters including three containers: **ANLE3E**, **ANLE3A**, and **ANLE26A**, (these are the 3 containers in the RH canister ID0308)	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
				IDAWANL810002C, **IDAWANL850013C**, and **N153C** (these are the 3 containers in the RH canister ID0299) **(GEN-15)**		
51	Are procedures in place to ensure that the generator/storage site enters the data into the WWIS in the exact format required by the database? (Section C-4a(6))	CCP-TP-030, (All) CCP-TP-530, (All)	Y	Characterization data packages for the following containers were reviewed including WWIS/WDS Container Data Reports, CCP "*WDS Master Template.xls"* data spreadsheet reports, and pages from batch data reports showing characterization data values that were entered. **CH** Container Packages: **SRP12038** (this is one of the 10 containers in the TDOP BN10489113) **10017513** (this is one of the 10 containers in the TDOP BN10441819) **ARP70624** (this is one of the 10 containers in the SWB drum overpack BN10436061) **SRP12570** (this is one of the 10 containers in the SWB drum overpack BN10489992) **(GEN-14)** **RH** Packages for Canisters including three containers: **ANLE3E**, **ANLE3A**, and **ANLE26A**, (these are the 3 containers in the RH canister ID0308) **IDAWANL810002C**, **IDAWANL850013C**, and	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
				N153C (these are the 3 containers in the RH canister ID0299) **(GEN-15)**		
51a	Are procedures in place to ensure that if a container was part of a composite headspace gas sample, the analytical results from the composite sample must be assigned as the container headspace gas data results, including associated TICs, for every waste container associated with the composite sample in the WWIS? (Section C3-12b(4))	N/A	N/A	N/A	N/A	INL/CCP does not use composite headspace gas samples.
52	Are procedures in place to ensure all of the data presented on Table C-7 of the Permit is transmitted to the WWIS? (Table C-7)	CCP-TP-030, (All) CCP-TP-530, (All)	Y	Characterization data packages for the following containers were reviewed including WWIS/WDS Container Data Reports, CCP "*WDS Master Template.xls"* data spreadsheet reports, and pages from batch data reports showing characterization data values that were entered. **CH** Container Packages: **SRP12038** (this is one of the 10 containers in the TDOP BN10489113) **10017513** (this is one of the 10 containers in the TDOP BN10441819) **ARP70624** (this is one of the 10 containers in the SWB drum overpack BN10436061) **SRP12570** (this is one of the 10 containers in the SWB drum overpack BN10489992) **(GEN-14)** **RH** Packages for Canisters including three containers: **ANLE3E**, **ANLE3A**, and **ANLE26A**, (these are the	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
				3 containers in the RH canister ID0308) **IDAWANL810002C**, **IDAWANL850013C**, and **N153C** (these are the 3 containers in the RH canister ID0299) **(GEN-15)**		
	RECORDS AND RECORD MANAGEMENT					
55	Are procedures in place to ensure that the generator/storage site's hard copy and/or electronic data reports follow the Permittees' format requirements? (Section C-4a(4))	CCP-TP-001, S. 4.2	Y	WSPF ID-RF-3114, CIS Lot 109, Rev. 1 **(GEN-1)** WSPF ID-RF-S5300, CIS Lot 137 **(GEN-2)** WSPF ID-SDA-SOIL, CIS Lot 75 & 76, Rev. 1 **(GEN-3)** WSPF ID-NRF-SPC, CIS Lot 3 & 4 **(GEN-4)** IN-SRP-VE-000085, IN-ARP-VE-002812, INLRHVE12001 **(GEN-5)** INHSG1204, ECL12029M, INHSG1202, ECL12023M, INHSG1206, ECL12036M **(GEN-6)** INRTR5120004, RTR11-00132, RTR11-00157, INLRHRTR13005, INLRHRTR12012 **(GEN-7)**	Y	
56	Are procedures in place to ensure that hard copy or electronic Waste Stream Profile Form will include the following: • Generator/storage site name • Generator/storage site EPA ID	CCP-TP-002, S. 4.3	Y	WSPF ID-RF-3114, CIS Lot 109, Rev. 1 **(GEN-1)** WSPF ID-RF-S5300, CIS Lot 137 **(GEN-2)** WSPF ID-SDA-SOIL, CIS	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	• Date of audit report approval by NMED (if obtained) • Original generator of waste stream • Whether waste is Contact-Handled or Remote-Handled • Waste Stream WIPP Identification Number • Summary Category Group • Waste Matrix Code Group • Waste Material Parameter Weight Estimates per unit of waste • Waste stream name • A description of the waste stream • Applicable EPA hazardous waste codes numbers • Applicable TRUCON codes • A listing of acceptable knowledge documentation used to identify the waste stream • The waste characterization procedures used and the reference and date of the procedure • Certification signature of Site Project Manager, name, title, and date signed (Section C3-12b(1))			Lot 75 & 76, Rev. 1 **(GEN-3)** WSPF ID-NRF-SPC, CIS Lot 3 & 4 **(GEN-4)**		
56a	Are procedures in place to ensure that hard copy or electronic Characterization Information Summary will include the following: • Data reconciliation with DQOs • Headspace gas summary data listing the identification numbers of samples used in the statistical reduction, the maximum, mean, standard deviation, UCL_{90}, RTL, and associated EPA hazardous waste numbers that must be applied to the waste stream. • Total metal, VOC, and SVOC analytical results for homogeneous solids and soil/gravel (if applicable). • TIC listing and evaluation. • Radiography and visual examination summary to document that all prohibited items are absent in the waste (if applicable). • A complete listing of all container identification numbers used to generate the Waste Stream Profile Form, cross-referenced to each Batch Data	CCP-TP-002, S. 4.3	Y	WSPF ID-RF-3114, CIS Lot 109, Rev. 1 **(GEN-1)** WSPF ID-RF-S5300, CIS Lot 137 **(GEN-2)** WSPF ID-SDA-SOIL, CIS Lot 75 & 76, Rev. 1 **(GEN-3)** WSPF ID-NRF-SPC, CIS Lot 3 & 4 **(GEN-4)**	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	Report. • Complete AK summary, including stream name and number, point of generation, waste stream volume (current and projected), generation dates, TRUCON codes, Summary Category Group, Waste Matrix Code(s) and Waste Matrix Code Group, other TWBIR information, waste stream description, areas of operation, generating processes, RCRA determinations, radionuclide information, all references used to generate the AK summary, and any other information required by Permit Attachment C4, Section C4-2b. • Method for determining Waste Material Parameter Weights per unit of waste. • List of any AK Sufficiency Determinations requested for the waste stream. • Certification through acceptable knowledge or testing and/or analysis that any waste assigned the hazardous waste number of U134 (hydrofluoric acid) no longer exhibits the characteristic of corrosivity. This is verified by ensuring that no liquid is present in U134 waste. • A justification for the selection of radiography and/or VE as an appropriate method of characterizing the waste. (Section C3-12b(2))					
56b	Are procedures in place to assure that ongoing container characterization results are cross referenced to Batch Data Reports? (Section C3-12b)	CCP-TP-002, S. 4.4	Y	WSPF ID-RF-3114, CIS Lot 109, Rev. 1 **(GEN-1)** WSPF ID-RF-S5300, CIS Lot 137 **(GEN-2)** WSPF ID-SDA-SOIL, CIS Lot 75 & 76, Rev. 1 **(GEN-3)** WSPF ID-NRF-SPC, CIS Lot 3 & 4 **(GEN-4)** IN-SRP-VE-000085, IN-ARP-VE-002812, INLRHVE12001 **(GEN-5)** INHSG1204, ECL12029M, INHSG1202, ECL12023M, INHSG1206,	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
				ECL12036M **(GEN-6)** INRTR5120004, RTR11-00132, RTR11-00157, INLRHRTR13005, INLRHRTR12012 **(GEN-7)**		
58	Are procedures in place to ensure that project level reports are compiled into Characterization Information Summaries? (Section C3-12b)	CCP-TP-002, S. 4.4	Y	WSPF ID-RF-3114, CIS Lot 109, Rev. 1 **(GEN-1)** WSPF ID-RF-S5300, CIS Lot 137 **(GEN-2)** WSPF ID-SDA-SOIL, CIS Lot 75 & 76, Rev. 1 **(GEN-3)** WSPF ID-NRF-SPC, CIS Lot 3 & 4 **(GEN-4)**	Y	
59	Are procedures in place to ensure that the generator/storage site uses forms for data reporting that are pre-approved forms in site-specific documentation? (Section C3-12)	**HSG** CCP-TP-106, S. 4.1 Attachments 1 and 2 **SOL** CCP-TP-008, Att. 1-5 CCP-TP-512, Att. 1-7	Y Y	**HSG** INHSG1202 INHSG1204 INHSG1206 **(HSG-1)** **SOL** N/A	Y N/A	INL/CCP only performs HSG sampling. Analysis is performed by CCP INL Labs. No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013. For RTR/VE refer to C6-1 dated March 13, 2013

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
60	Are procedures in place to ensure that the generator/storage site's site project manager submits to the WIPP facility a summary of the waste stream information and reconciliation with data quality objectives (DQOs) once a waste stream is characterized? (Section C-4a(6))	CCP-TP-002, S. 4.6	Y	WSPF ID-RF-3114, CIS Lot 109, Rev. 1 **(GEN-1)** WSPF ID-RF-S5300, CIS Lot 137 **(GEN-2)** WSPF ID-SDA-SOIL, CIS Lot 75 & 76, Rev. 1 **(GEN-3)** WSPF ID-NRF-SPC, CIS Lot 3 & 4 **(GEN-4)** IN-SRP-VE-000085, IN-ARP-VE-002812, INLRHVE12001 **(GEN-5)** INHSG1204, ECL12029M, INHSG1202, ECL12023M, INHSG1206, ECL12036M **(GEN-6)** INRTR5120004, RTR11-00132, RTR11-00157, INLRHRTR13005, INLRHRTR12012 **(GEN-7)**	Y	
61	Are procedures in place to ensure that the generator/storage site project office completes a WSPF based on the Batch Data Reports? (C3-12b)	CCP-TP-002, S. 4.3	Y	WSPF ID-RF-3114, CIS Lot 109, Rev. 1 **(GEN-1)** WSPF ID-RF-S5300, CIS Lot 137 **(GEN-2)** WSPF ID-SDA-SOIL, CIS Lot 75 & 76, Rev. 1 **(GEN-3)** WSPF ID-NRF-SPC, CIS Lot 3 & 4 **(GEN-4)** IN-SRP-VE-000085, IN-ARP-VE-002812, INLRHVE12001 **(GEN-5)** INHSG1204, ECL12029M,	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
				INHSG1202, ECL12023M, INHSG1206, ECL12036M **(GEN-6)** INRTR5120004, RTR11-00132, RTR11-00157, INLRHRTR13005, INLRHRTR12012 **(GEN-7)**		
62	Are procedures in place to ensure that the generator/storage Site Project Manager submits the WSPF to the Permittees for DOE's approval along with the accompanying Characterization Information Summary for that waste stream? (Section C-4a(6))	CCP-TP-002, S. 4.6	Y	WSPF ID-RF-3114, CIS Lot 109, Rev. 1 **(GEN-1)** WSPF ID-RF-S5300, CIS Lot 137 **(GEN-2)** WSPF ID-SDA-SOIL, CIS Lot 75 & 76, Rev. 1 **(GEN-3)** WSPF ID-NRF-SPC, CIS Lot 3 & 4 **(GEN-4)**	Y	
63	Are procedures in place to ensure that the generator/storage site maintains records related to waste characterization sampling and analysis activities in the testing, sampling or analytical facilities files, or site project files for those facilities located on-site? (Section C-4a(7))	CCP-QP-008, (All) CCP-QP-028, (All)	Y	CH Records Inventory and Disposition Schedule (RIDS) dated 08/2/2012. **(GEN-16)** RH RIDS dated 07/23/2012. **(GEN-17)**	Y	
64	Are procedures in place to ensure that the appropriate documented training and indoctrination is performed for all individuals and that procedures are documented in site specific QAPjPs and procedures? (Section C3-14)	CCP-PO-001, (All) CCP-QP-002, S. 4.0	Y	CCP – INL List of Qualified Individuals dated 5/31/2013. **(GEN-18)** RH Program – INL List of Qualified Individuals dated 5/7/2013. **(GEN-19)** Qualification records for selected CCP personnel. **(GEN-20)**	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
65	Are procedures in place to ensure that the generator/storage site requires contract waste analytical facilities to forward testing, sampling and analytical records along with testing, sampling and analytical batch data reports to the site project office for inclusion in the sites project files? (Section C-4a(7))	CCP-QP-008, S. 4.10 CCP-QP-028, (All)	Y	CH Records Inventory and Disposition Schedule (RIDS) dated 08/2/2012. **(GEN-16)** RH RIDS dated 07/23/2012. **(GEN-17)**	Y	
66	Are procedures in place to ensure that the generator/storage site has an appropriate records inventory and disposition schedule (RIDS) or equivalent that was prepared and approved by appropriate site personnel? (Section C-4a(7))	CCP-QP-008, S. 3.1.2 CCP-QP-028, S. 3.1.1	Y	CH Records Inventory and Disposition Schedule (RIDS) dated 08/2/2012. **(GEN-16)** RH RIDS dated 07/23/2012. **(GEN-17)**	Y	
67	Are procedures in place to ensure that the generator/storage site maintains all records relevant to an enforcement action, regardless of disposition, until they are no longer needed for enforcement action, and then dispositioned per the approved RIDS? (Section C-4a(7))	CCP-QP-008, S. 4.15.1 (NOTE) CCP-QP-028, (All)	Y	CH Records Inventory and Disposition Schedule (RIDS) dated 08/2/2012. **(GEN-16)** RH RIDS dated 07/23/2012. **(GEN-17)**	Y	
68	Are procedures in place to ensure that the generator/storage site maintains records that are designated as Lifetime Records for the life of the waste characterization program plus six years or that the records have been transferred to the WIPP Records Archive facility? Lifetime Records include: • Field sampling data forms, • Field and laboratory COC forms, • Test facility and laboratory Batch Data Reports, • Waste Stream Characterization Package, • Sampling plans, • Data reduction, validation, and reporting documentation,	CCP-PO-001, S. C-4a(7) TABLE C-6 CCP-PO-002, S. 5.5 CCP-QP-008, (All) CCP-QP-028, (All)	Y	CH Records Inventory and Disposition Schedule (RIDS) dated 08/2/2012. **(GEN-16)** RH RIDS dated 07/23/2012. **(GEN-17)**	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	• Acceptable knowledge documentation, • WSPF and Characterization Information Summary (Section C-4a(7), Table C-6)					
69	Are procedures in place to ensure that the generator/storage site maintains records that are designated as Non-Permanent Records for ten years from the date of record generation, and then dispositioned according per the approved RIDS or transferred to the WIPP Records Archive facility? Non-Permanent Records include: • Nonconformance documentation, • Variance documentation, • Assessment documentation, • Gas canister tags, • Methods performance documentation, • PDP documentation, • Sampling equipment certifications, • Calculations and related software documentation, • Training/qualification documentation, • QAPjP documentation (all revisions), • Calibration documentation, • Analytical raw data, • Procurement documentation, • QA procedures (all revisions), • Technical implementing procedures (all revisions), and • Audio/video recording (radiography, visual, etc.). (Section C-4a(7), Table C-6)	CCP-PO-001, S. C-4a(7), TABLE C-6 CCP-PO-002, S. 5.5 CCP-QP-008, (All) CCP-QP-028, (All)	Y	CH Records Inventory and Disposition Schedule (RIDS) dated 08/2/2012. **(GEN-16)** RH RIDS dated 07/23/2012. **(GEN-17)**	Y	
70	Are procedures in place to ensure that the generator/storage site has raw data that is identifiable and legible, and provides documentary evidence of quality? (Section C-4a(7))	**HSG** CCP-TP-093, (All) CCP-TP-106, (All)	Y	**HSG** INHSG1202 INHSG1204 INHSG1206 **(HSG-1)**	Y	INL/CCP only performs HSG sampling. Analysis is performed by CCP INL Labs.

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
		SOL CCP-TP-008, Att. 3 CCP-TP-512, Att. 3	Y	**SOL** N/A	N/A	No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013. For RTR/VE refer to C6-1 dated March 13, 2013
71	Are procedures in place to ensure that if the generator/storage site ceases to operate, that all records be transferred before closeout? (Section C-4a(7))	CCP-QP-008, S. 4.10.2	Y	N/A	N/A	This site has not ceased operations.
	SHIPMENT					
72	Are procedures in place to ensure that the generator/storage site accurately completes an EPA Hazardous Waste Manifest prior to shipping the waste to WIPP that contains the following information: • Generator/storage site name and EPA ID • Generator/storage site contact name and phone number • Quantity of waste • List of up to six state and/or federal hazardous waste numbers in each line item • Listing of all container IDS • Signature of authorized generator representative (Section C-5b)	CCP-TP-507, S. 4.2; 4.4 & Att. 1 CCP-TP-033, S. 2.6.7; 4.2	Y	Examined Hazardous Waste Manifests: RH: 001499913 JJK **(GEN-22)** 001499914 JJK **(GEN-23)** CH: 001600734 GBF **(GEN-24)** 001600736 GBF **(GEN-25)**	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
73	Are procedures in place to ensure that the generator/storage site accurately completes the following container specific information: • Waste stream identification number • List of hazardous waste numbers per container • Certification data • Shipping data (Section C-5b)	CCP-TP-507, S. 4.2; 4.4 & Att. 1 CCP-TP-033, S. 2.6.7; 4.2	Y	Examined Hazardous Waste Manifests: RH: 001499913 JJK **(GEN-22)** 001499914 JJK **(GEN-23)** CH: 001600734 GBF **(GEN-24)** 001600736 GBF **(GEN-25)**	Y	

1. The WAP requirements should be presented in documents, such as procedures. Each of the questions posed under WAP requirements is meant to ask whether procedures are in place or whether documents are evident which demonstrate that the specific WAP requirement is or can be met.

Table C6-2 Solids and Soils/Gravel Sampling Checklist
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Solids and Soils/Gravel Sampling Checklist

	WAP Requirement *INL/CCP Recertification Audit A-13-18* Table C6-2 Solids and Soils/Gravel Sampling Checklist [1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	GENERAL SOLIDS SAMPLING REQUIREMENTS					
75	Are procedures documented that adequately ensure that when a Determination Request has not been approved, sampling and analysis of newly generated homogeneous solid and soil/gravel waste streams shall be conducted in accordance with the requirements specified in Attachment C1, Section C1-2? (Section C-3d(1)(a))	CCP-TP-008, (All) CCP-TP-512, (All)	Y	N/A	N/A	No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.
76	Are procedures in place to ensure that the number of newly generated soils/gravel waste containers to be randomly sampled will be determined using the procedure specified in Section C2-1, wherein a statistically selected portion of the waste will be sampled? (Section C-3d(1)(a))	CCP-TP-162, (All)	Y	N/A	N/A	No solids/soils waste was sampled since the last audit
77	Are procedures in place to ensure that the following sample collection requirements for retrievably stored and newly generated waste streams are met: • The number of random samples collected for characterization of retrievably homogeneous solid and soil/gravel stored waste is performed by developing preliminary mean and variance estimates for each analyte to define the number of required random samples; and that the sample selection process is adequately documented. • A minimum of 5 waste containers in a retrievably stored waste streams are sampled to establish the preliminary estimate for the number of samples. • Based on the number of samples required by the preliminary estimate, the subsequent sample means and deviations for each analyte are evaluated against the regulatory threshold for each constituent to determine if additional samples shall be collected. • Samples (the number of which is statistically determined) are collected to verify that a TRU mixed waste is below the regulatory threshold, where the regulatory threshold is the toxicity limit for toxicity characteristics and the PRQL for listed waste constituents. • Samples from preliminary estimates counted as required samples were randomly selected and were collected, analyzed, and validated using representative methods (Section C2-1a)	CCP-TP-162, (All) CCP-TP-001, S. 4.2 CCP-TP-003, S. 4.1	Y	N/A	N/A	No solids/soils waste was sampled since the last audit

	WAP Requirement *INL/CCP Recertification Audit A-13-18* Table C6-2 Solids and Soils/Gravel Sampling Checklist [1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
80	Are procedures in place that allow toxicity characteristic contaminants associated with F-numbers for a waste stream to be omitted from sampling requirements?	CCP-TP-003, Note S. 4.1	Y	N/A	N/A	No solids/soils waste was sampled since the last audit
	SOLIDS SAMPLING PROCEDURES					
81	Do procedures ensure that samples for retrievably stored waste are collected using appropriate coring tools or other EPA approved methods, and that newly generated wastes that are sampled from a process as it is generated are sampled using EPA approved methods, including scoops and ladles, that are capable of collecting a representative sample? (Section C1-2a)	CCP-TP-008, (All) CCP-TP-512, (All)	Y	N/A	N/A	No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.
82	Do site specific procedures, QAPjPs, and/or SOPs indicate that rotational coring tools are available for the collection of cores and non-rotational coring tools available for collection of cores in relatively soft media? The method used shall be appropriate to retrieve the maximum core amount. The coring tools will include the following features: • Removable tube liners constructed of rigid materials unlikely to affect the composition and/or concentration of target analytes in the sample core (Teflon®) and sufficiently transparent to allow visual examination of the core. The liner outer diameters are between 1-2 inches and the liner wall thickness is no greater than 1/16 inch. The liner shall fit flush with the coring tool inner wall and be of sufficient length to hold a core representative of the waste along the entire depth of the waste. • Sleeves composed of polycarbonate, Teflon, or glass for most samples and brass or stainless steel for non-metal samples • Liner end caps shall fit tightly around the ends of the liner and shall be composed of materials unlikely to affect the composition and/or concentration of analytes in the core (Teflon®) • Spring retainers shall be used when the physical properties of the sampling media may cause the sample to fall out of the liner. The retainer shall be composed of inert materials and the inner diameter shall not be less than the inner diameter of the liner • Coring tools may have an air lock mechanism. The air lock shall also close when the core is removed from the waste container • Core extruders shall be used to extrude the liner if the liner does not slide freely • Coring tools shall be of sufficient length to hold the liner and shall be constructed to allow placement of the liner leading edge as close as possible to the coring tools leading edge	N/A	N/A	N/A	N/A	Sampling procedures are for grab Sampling not coring. No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.

	WAP Requirement *INL/CCP Recertification Audit A-13-18* Table C6-2 Solids and Soils/Gravel Sampling Checklist [1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
82a	• All surfaces of the coring tool that have the potential to contact the sample core or sample media shall be cleaned prior to use • Rotational coring tools shall have a mechanism to minimize inner liner rotation and shall be designed to minimize frictional heat transfer to the sample core • The leading edge of the coring tool ~~is~~ may be sharpened and tapered to a diameter equivalent or slightly smaller than the inner diameter of the liner. • Non-Rotational coring tools shall be designed to minimize the kerf width (1/2 the difference between the outer diameter of the tool and the tools inlet inner diameter) (Section C1-2a(1))	N/A	N/A	N/A	N/A	Sampling procedures are for grab Sampling not coring. No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.
83	Does the site adequately document that the liner material and retainers are not likely to contain any analytes of concern? (Section C1-2a(1))	N/A	N/A	N/A	N/A	Sampling procedures are for grab Sampling not coring. No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.
84	Are procedures in place to ensure that equipment blanks are collected and evaluated to verify that liner material, retainers, or other sampling equipment in contact with the sample do not contain analytes of concern? (Section C1-2b(2))	CCP-TP-008, S. 2.6.2 CCP-TP-512, S. 2.7.1 S. 3.4.1	Y	N/A	N/A	No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.
	SAMPLE COLLECTION					
85	Are procedures in place to ensure that sampling is completed in a timely manner, within 60 minutes of core collection, or that the core shall remain in the capped liner, or the coring tool shall remain in the waste container with the air lock mechanism attached? (Section C1-2a(2))	CCP-TP-008, S. 2.3.3 CCP-TP-512, S. 4.2.9 NOTE S. 4.2.18	Y	N/A	N/A	No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.
86	Are procedures in place to ensure that VOC samples are sampled prior to extruding the core from the liner and that the sample locations are documented? These samples may be collected by choosing a single sample from the representative subsection of the core, or three equal length VOC sample locations on the core are selected randomly along the long axis of the core to	N/A	N/A	N/A	N/A	Sampling procedures are for grab Sampling not coring. No solid sampling activities have occurred since the last

	WAP Requirement *INL/CCP Recertification Audit A-13-18* Table C6-2 Solids and Soils/Gravel Sampling Checklist [1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	form a single 15-gram composite sample. Smaller sample sizes may be used if method PRQL requirements are met for all analytes. (Section C1-2a(2))					recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.
87	Are procedures documented to ensure that a VOC sample is collected using a metal coring cylinder or equivalent equipment as described in SW-846 and that the sample is immediately extruded into a 40 mL VOA vial (or other containers specified in appropriate SW-846 methods)? (Section C1-2a(2))	N/A	N/A	N/A	N/A	Sampling procedures are for grab Sampling not coring. No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.
88	Are procedures in place to ensure that SVOC and Metals sample location(s) on the core are selected randomly along the long axis of the core and that the sample locations are documented, or that samples are collected at the same locations as VOC samples? Samples may be collected by splitting or compositing the representative subsection of the core. The representative subsections are chosen by randomly selecting a location along the portion of the core from which the sample was taken? (Section C1-2a(2))	N/A	N/A	N/A	N/A	Sampling procedures are for grab Sampling not coring. No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.
89	Are procedures in place to ensure that the SVOC and Metals sample s are collected using equipment constructed of materials unlikely to affect the composition or concentrations of the samples? (Section C1-2a(2))	CCP-TP-008, S. 2.6.1 & 2.6.2 CCP-TP-512, S. 3.4.1	Y	N/A	N/A	No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.
90	Are procedures in place to ensure that newly generated waste samples collected by means other than coring are collected as soon as possible and that spatial and temporal homogeneity is evaluated to determine if composite or grab samples are appropriate? (Section C1-2a(2))	CCP-TP-008, S. 2.3.3, 4.2.6 [F], 4.2.7 [H] CCP-TP-512, S. 2.5.1, 4.2.9 NOTE	Y	N/A	N/A	No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.
91	Are procedures in place to ensure sample volumes, preservatives, containers, and holding times meet the following specifications: Minimum sample quantity VOC 15 grams SVOC 50 grams Metals 10 grams	CCP-TP-008, S. 4.2 & 4.3 CCP-TP-512, S. 4.2.10	Y	N/A	N/A	No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.

	WAP Requirement *INL/CCP Recertification Audit A-13-18* Table C6-2 Solids and Soils/Gravel Sampling Checklist [1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	(Quantity may be increased or decreased according to the requirements of the analytical laboratory, as long as the QAOs are met.) Preservative VOC Cool to 4C SVOC Cool to 4C Metals Cool to 4C Sample Container VOC 40 mL VOA glass vial (or other appropriate containers) cap SVOC glass jar with Teflon® lined cap Metals polyethylene or polypropylene bottle Holding Time from Date of Collection VOC 14 days prep/40 days analyze SVOC 14 days prep/40 days analyze Metals 180 days/ 28 days Hg (Table C1-4)					
	QUALITY CONTROL SAMPLE COLLECTION					
92	Are procedures in place to ensure that sampling precision will be determined through the collection of co-located core field duplicate samples for core samples and through the collection of co-located samples for samples collected using alternate methods at the frequency of once per 20 sample batch collected over 14 days or once per week, whichever is more frequent? (Section C1-2b(1))	CCP-TP-008, S. 2.3.1 CCP-TP-512, S. 2.3.1 & 2.3.2	Y	N/A	N/A	No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.
93	Are procedures in place to ensure that co-located cores are collected side by side as close as feasible to each other, that the cores are collected and handled in the same manner? (Section C1-2b(1))	CCP-TP-008, S. 2.3.2 CCP-TP-512, S. 2.3.1	Y	N/A	N/A	No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.
94	Are procedures in place to ensure that an additional sampling location is found or new co-located cores are collected if the visual examination of the original co-located cores detects inconsistency in the sample color, texture, or waste type? (Section C1-2b(1))	CCP-TP-008, S. 2.3.2 CCP-TP-512, S. 2.3.1	Y	N/A	N/A	No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.

	WAP Requirement *INL/CCP Recertification Audit A-13-18* Table C6-2 Solids and Soils/Gravel Sampling Checklist [1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
95	Are procedures in place to ensure that all surfaces of sampling tools that have the potential to come into contact with the sample, including tube liners, endcaps, spring retainers, extruders, coring tool surfaces, or any other sampling equipment, are either thoroughly decontaminated or disposed of after each sampling event? (Sections C1-2b(2), C1-2b(3))	CCP-TP-008, S. 2.6.2 CCP-TP-512, S. 2.7.1, 4.1.3 & 4.1.4	Y	N/A	N/A	No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.
96	Are procedures in place to ensure that equipment blanks are collected from randomly selected fully assembled coring tools or randomly selected liners (if they are cleaned separately) and from randomly selected sampling equipment (e.g. VOC subsampler, spoons, bowls) at a frequency of once per equipment cleaning batch and that the sample is collected prior to first use? (Section C1-2b(2))	N/A	N/A	N/A	N/A	Disposable sampling equipment Used and purchased certified Clean. No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.
97	Are procedures in place to ensure that equipment blanks will be collected in the area where sampling equipment coring tools are cleaned, prior to covering the coring tools with protective wrapping and storage? (Section C1-2b(2))	N/A	N/A	N/A	N/A	Disposable sampling equipment Used and purchased certified Clean. No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.
99	Are procedures in place to ensure that miscellaneous sampling tool equipment blanks will be collected by pouring deionized or HPLC water over the surface of the equipment and into a clean sample container appropriate for the requested analysis? (Section C1-2b(2))	N/A	N/A	N/A	N/A	Disposable sampling equipment Used and purchased certified Clean. No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.

	WAP Requirement *INL/CCP Recertification Audit A-13-18* Table C6-2 Solids and Soils/Gravel Sampling Checklist [1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
100	Are procedures in place to ensure that equipment blanks are analyzed for VOC, SVOC, and Metals and that the entire equipment batch will be re-cleaned and re-sampled if any analytes are detected at levels greater than 3 times the MDL or PRDL? (Section C1-2b(2))	N/A	N/A	N/A	N/A	Disposable sampling equipment Used and purchased certified Clean. No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.
101	Are procedures and processes in place to ensure that equipment blanks are traceable to a specific equipment cleaning batch and that the equipment cleaning batch is traceable to specific identified sampling equipment? Are sampling equipment or coring tools labeled with unique identification numbers that are referenced in field records? (Section C1-2b(3))	N/A	N/A	N/A	N/A	Disposable sampling equipment Used and purchased certified Clean. No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.
102	Are procedures in place to ensure that disposable sampling equipment is certified as clean prior to use? (Section C1-2b(2))	CCP-TP-008, S. 2.6.1 & 2.6.2 CCP-TP-512, S. 2.7.1 & 4.1.4	Y	N/A	N/A	No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.

	WAP Requirement *INL/CCP Recertification Audit A-13-18* Table C6-2 Solids and Soils/Gravel Sampling Checklist [1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	SAMPLE EQUIPMENT TESTING, INSPECTION AND MAINTENANCE					
103	Are procedures in place to ensure that all sampling and coring tools are tested prior to use in accordance with manufacturers specification to ensure that the air-lock mechanism and rotation mechanism are in working order? (Section C1-2c)	N/A	N/A	N/A	N/A	Sampling procedures are for grab Sampling not coring. No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.
104	Are procedures in place to ensure that malfunctioning sampling and coring tools are repaired or replaced prior to use? (Section C1-2c)	CCP-TP-008, S. 4.1.4 CCP-TP-512, S. 4.1.6	Y	N/A	N/A	No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.
105	Are procedures in place to ensure that all equipment is cleaned, sealed inside a protective wrapping and stored in a clean area? (Section C1-2c)	CCP-TP-008, S. 4.1.4 CCP-TP-512, S. 4.1.6	Y	N/A	N/A	No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.
106	Are procedures in place to ensure that an adequate spare part inventory is available? (Section C1-2c)	N/A	N/A	N/A	N/A	Sampling procedures are for grab Sampling not coring. No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.
107	Are procedures in place to ensure that all equipment maintenance and repair is documented in field records and that field record logbooks are available to document equipment maintenance and repair activities? (Section C1-2c)	N/A	N/A	N/A	N/A	Sampling procedures are for grab Sampling not coring. No solid sampling activities have occurred since the last recertification audit. Additionally,

	WAP Requirement *INL/CCP Recertification Audit A-13-18* Table C6-2 Solids and Soils/Gravel Sampling Checklist [1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
						the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.
108	Are procedures in place to ensure that inspection of equipment and work area cleanliness will encompass the following: • Sample collection equipment in the immediate area of sample collection shall be inspected daily for cleanliness and that any visible contamination that has a potential to contaminate a waste sample shall be thoroughly cleaned upon discovery • The waste coring and sampling work areas shall be maintained in clean condition • Expendable equipment shall be visually inspected for cleanliness prior to use and properly discarded after use • Protective wrapping on coring tools and other sampling equipment are visually inspected prior to unwrapping. Coring tools or other equipment with torn protective wrappers or with visible contamination are returned to be cleaned or properly discarded prior to use. • All sampling equipment shall be visually inspected prior to use to determine if protective wrapping is torn or if equipment is contaminated after unwrapping. Equipment with torn wrapping or signs of contamination will be returned for cleaning or properly discarded. • Clean sampling and coring equipment is segregated from all equipment that has not been decontaminated. (Section C1-2c)	CCP-TP-008, S. 4.1.1, 4.1.2 & 4.1.3 CCP-TP-512, S. 3.3.1, 3.3.2, 4.1.5 & 4.1.6	Y	N/A	N/A	No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.
109	Are procedures documented to ensure that scales used for weighing sub-samples are calibrated as necessary to maintain its operation within manufacturer's specification, that the calibration is documented, that calibration is verified using NIST traceable weights upon each day of use, and that all calibration verification is documented in field records? (Section C1-2d)	CCP-TP-008, S. 2.6.1 CCP-TP-512, S. 4.1.2	Y	N/A	N/A	No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.

	WAP Requirement *INL/CCP Recertification Audit A-13-18* Table C6-2 Solids and Soils/Gravel Sampling Checklist [1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	SAMPLE HANDLING AND CUSTODY					
111	Do formats for field logs and custody records specify documentation of the following information: • Signature of individual initiating custody control, along with the date and time • Documentation of sample numbers for each sample under custody. Sample numbers will be referenced to a specific sampling event description that will identify the sampler(s) through signature, date and time of sample collection, type/number containers for each sample, sample matrix, preservatives (if applicable), requested methods of analysis, place/address of sample collection and the waste container number • For off-site shipping, method of shipping transfer, responsible shipping organization or corporation, and associated air bill or lading number.	CCP-TP-008, Att. 1 & 2 CCP-TP-512, S. 4.2.13 & Att. 1 & 2	Y	N/A	N/A	No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.
111a	• Signatures of custodians relinquishing and receiving custody of samples including date and time of transfer. • Description of final sample container disposition, along with signature of individual removing sample container from custody • Comments section • Documentation of discrepancies, breakage or tampering (Section C1-5)	CCP-TP-008, S. 4.3 & Att. 1 & 2 CCP-TP-512, S. 4.3 & Att. 1 & 2	Y	N/A	N/A	No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.
112	Are procedures in place to ensure that samples and sampling equipment are identified with unique identification numbers? (Section C1-5)	CCP-TP-008, S. 2.6.1 CCP-TP-512, S. 4.1.10	Y	N/A	N/A	No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.

	WAP Requirement *INL/CCP Recertification Audit A-13-18* Table C6-2 Solids and Soils/Gravel Sampling Checklist [1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
113	Do sample tags or labels contain the following information: • Sample ID number • Sampler initials and organization • Ambient temperature and pressure (for gas samples only) • Sample description • Requested analysis • Date and time of collection • QC designation (if applicable) (Section C1-5)	CCP-TP-008, S. 2.6.1, & Att. 1 & 2 CCP-TP-512, S. 4.1.10 Att. 1 & 2	Y	N/A	N/A	No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.
114	Are procedures in place to ensure waste containers and samples are sealed with intact custody seals and that one or more of the following custody conditions are met: • It is in the possession of an authorized individual • It is in the view of an authorized individual, after being in the possession of that individual • It was in the possession of an authorized individual and access to the sample was controlled by locking or placement of signed custody seals that prevent undetected access • It is in a designated secure area, such as a controlled access location with complete documentation of personnel access or a radiological containment area (hot cell or glove box) (Section C1-5)	CCP-TP-008, S. 2.5.2 Att. 1 & 2 CCP-TP-512, S. 2.3.4 & Att. 1 & 2	Y	N/A	N/A	No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.
117	Are procedures in place to ensure that sample custody is maintained until the sample is released by the SPM or is expended? (Section C1-5)	CCP-PO-001, S. C1-5 CCP-TP-008, Att. 2 CCP-TP-512, Att. 2	Y	N/A	N/A	No solids/soils waste was sampled since the last audit
118	Are procedures in place to ensure that samples in glass jars are wrapped in plastic to prevent breakage and placed in appropriate containers, such as coolers, for shipment? (Section C1-6)	CCP-TP-008, S. 4.2.16, 4.2.19 CCP-TP-512, S. 4.3	Y	N/A	N/A	No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.

	WAP Requirement *INL/CCP Recertification Audit A-13-18* Table C6-2 Solids and Soils/Gravel Sampling Checklist [1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
119	Are procedures in place to ensure that adequate cold packs are included in the sample shipping container to ensure that all temperature requirements are met? (Section C1-6)	CCP-TP-008, S. 2.5.1 & 4.3.4 CCP-TP-512, S. 4.2.22 S. 4.3.1[B]	Y	N/A	N/A	No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.
120	Are procedures in place to ensure that sample COC forms are secured for shipment to the inside of the sealed and locked shipping container and that samples and shipping containers are affixed with tamper proof seals? (Section C1-6)	CCP-TP-008, S. 2.5.3 & 4.3.9 CCP-TP-512, S. 4.3.1[D], 4.2.20 & NOTE	Y	N/A	N/A	No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.
121	Are procedures in place to ensure that appropriate blank samples are included with each shipment container containing VOC samples? (Section C1-6)	CCP-TP-008, S. 4.2.7[F] & Att. 2 CCP-TP-512, S. 2.3.6	Y	N/A	N/A	No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.
122	Are procedures in place to ensure that a custody seal or device is securely affixed across the lid and body of each sample and shipment container, and is traceable to the individual who affixed the seal or device? (Section C1-6)	CCP-TP-008, S. 4.2.12, 4.3.5 CCP-TP-512, S. 4.2.20 & NOTE	Y	N/A	N/A	No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.
	LABORATORY OPERATIONS					
123	Are procedures in place to ensure that only laboratories that are qualified through participation in the Performance Demonstration Program are eligible to analyze waste samples? (Section C-3a(3))	N/A	N/A	N/A	N/A	The INL Labs were evaluated by CBFO Audit A-13-19.
124	Are procedures available from all participating laboratories that adequately document that custody is maintained until the sample is released by the site project manager or until the sample is expended? (Section C1-5)	CCP-TP-008, Att. 2	Y	N/A	N/A	No solids/soils waste was sampled since the last audit

	WAP Requirement *INL/CCP Recertification Audit A-13-18* Table C6-2 Solids and Soils/Gravel Sampling Checklist [1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	VOLATILE AND SEMI-VOLATILE ANALYSIS OF CORE SAMPLES					
125	Are procedures documented to ensure that all VOC and SVOC analyses are evaluated using the following criteria: • GC/MS Tunes, Initial Calibrations and Continuing Calibration will be performed and evaluated using criteria in Table C3-5 (VOCs) or Table C3-7 (SVOCs) and SW-846 methods • Precision is shall be assessed through analyzing of laboratory duplicates or matrix spike duplicates, LCS replicates, and PDP blind-audit samples in comparison to Table C3-4 (VOCs) and Table C3-6 (SVOCs). • Accuracy as %R is shall be assessed through evaluation of LCS, Matrix spikes, PDP blind-audit samples, and surrogate compounds in comparison to criteria in Table C3-4 and Table C3-5 (VOCs) and Table C3-6 and Table C3-7 (SVOCs) or the SW-846 method. • Laboratory completeness shall be expressed as the number of samples analyzed with valid results as a percent of the total number of samples collected. • Comparability is assessed through use of standardized SW-846 methods sample preparation and methods that meet the QAO requirements in Tables C3-4 and C3-5 (VOCs) and Tables C3-6 and C3-7(SVOCs), traceable standards, and by requiring participation in the PDP. • Representativeness is assured through the use of unbiased sample collection. • Results and method detection limits are expressed in Mg/Kg. • All method detection limits and program required quantitation limits shall be less than or equal to the limits listed in Table C3-4 or Table C3-6 and the detection limit study procedures shall be documented in SOPs. (Section C3-6 and C3-7)	N/A	N/A	N/A	N/A	The INL Labs were evaluated by CBFO Audit A-13-19.
126	Are procedures documented to ensure that Tentatively Identified Compounds shall be added to the target analyte list if detected in a given waste stream if they are reported in 25% of the waste containers sampled from a given waste stream, and if they appear in the 20.4.1.200 NMAC (incorporating 40 CFR 261) Appendix VIII list? (Section C-3a(1))	N/A	N/A	N/A	N/A	The INL Labs were evaluated by CBFO Audit A-13-19.

	WAP Requirement *INL/CCP Recertification Audit A-13-18* Table C6-2 Solids and Soils/Gravel Sampling Checklist [1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
126a	Are procedures documented to ensure that the following criteria are met with regard to the recognition and reporting of TICS for GC/MS Methods for homogeneous solids and soils and gravels in accordance with SW-846 criteria: • Relative intensities of major ions in the reference spectrum (ions greater than 10% of the most abundant ion) should be present in the sample spectrum. • The relative intensities of the major ions should agree within ± 20 percent. • Molecular ions present in the reference spectrum should be present in the sample spectrum. • Ions present in the sample spectrum but not in the reference spectrum should be reviewed for possible background contamination or presence of coeluting compounds. • Ions present in the reference spectrum but not in the sample spectrum should be reviewed for possible subtraction from the sample spectrum because of background contamination or coeluting peaks. • The reference spectra used for identifying TICs shall include, at minimum, all of the available spectra for compounds that appear in the 20.4.1.200 NMAC (incorporating 40 CFR 261) Appendix VIII list. The reference spectra may be limited to VOCs when analyzing headspace gas samples. • TICs for headspace gas analyses that are performed through FTIR analyses shall be identified in accordance with the specifications of SW-846 Method 8410. (Section C3-1)	N/A	N/A	N/A	N/A	The INL Labs were evaluated by CBFO Audit A-13-19.
126b	TICs shall be reported as part of the analytical batch data reports for GC/MS Methods in accordance with the following minimum criteria: • a TIC in an individual container headspace gas or solids sample shall be reported in the analytical batch data report if the TIC meets the SW-846 identification criteria listed above and is present with a minimum of 10% of the area of the nearest internal standard. • a TIC in a composited headspace gas sample that contains 2 to 5 individual container samples shall be reported in the analytical batch data report if the TIC meets the SW-846 identification criteria listed above and is present with a minimum of 2% of the area of the nearest	N/A	N/A	N/A	N/A	The INL Labs were evaluated by CBFO Audit A-13-19.

	WAP Requirement *INL/CCP Recertification Audit A-13-18* Table C6-2 Solids and Soils/Gravel Sampling Checklist [1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	internal standard. • a TIC in a composited headspace gas sample that contains 6 to 10 individual container samples shall be reported in the analytical batch data report if the TIC meets the SW-846 identification criteria listed above and is present with a minimum of 1% of the area of the nearest internal standard. • a TIC in a composited headspace gas sample that contains 11 to 20 individual container samples shall be reported in the analytical batch data report if the TIC meets the SW-846 identification criteria listed above and is present with a minimum of 0.5% of the area of the nearest internal standard. (Section C3-1)					

	WAP Requirement *INL/CCP Recertification Audit A-13-18* Table C6-2 Solids and Soils/Gravel Sampling Checklist [1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	METALS ANALYSIS OF CORE SAMPLES					
127	Are procedures in place to ensure that all Metals analyses are evaluated using the following criteria: • Precision shall be assessed by analyzing of laboratory sample duplicates or laboratory matrix spike duplicates, LCS replicates, and PDP blind audit samples in comparison to Table C3-8 • Accuracy is shall be assessed through analysis of laboratory , matrix spikes, PDP blind-audit samples, serial dilutions, interference check samples, and laboratory control samples in comparison to criteria in Tables C3-8 and C3-9 • Instrument detection limits are expressed in ug/L and results are listed in Mg/Kg. • All instrument detection limits and program required detection limits shall be less than the limits listed in Table C3-8 and the detection limit study procedures shall be documented in laboratory SOPs. The Instrument detection limits shall be less than the associated PRDL for each analyte *(This requirement is not mandatory if the sample concentrations are greater than 5 times the instrument detection limit (IDL) for a method)* • Instrument detection limits shall be determined semiannually using procedures documented in laboratory SOPs	N/A	N/A	N/A	N/A	The INL Labs were evaluated by CBFO Audit A-13-19.
127a	• Laboratory completeness shall be expressed as the number of samples analyzed with valid results as a percent of the total number of samples submitted for analysis. • Comparability is assessed through use of standardized SW-846 sample preparation and methods that meet the QAO requirements in Tables C3-8 and C3-9, demonstrating successful participation in the PDP and use of traceable standards. • Representativeness is assured through the use of unbiased sample collection and preparation of samples using unbiased methods. • Results PRQLs are expressed in Mg/Kg wet weight (Section C3-8)	N/A	N/A	N/A	N/A	The INL Labs were evaluated by CBFO Audit A-13-19.

	WAP Requirement *INL/CCP Recertification Audit A-13-18* Table C6-2 Solids and Soils/Gravel Sampling Checklist [1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	QUALITY ASSURANCE OBJECTIVES					
128	Are procedures in place to ensure that the sample completeness rate is expressed as the number of valid samples collected as a percentage of the total samples collected for each waste stream? The rate must be greater than 90 percent for all compounds in a waste stream. (Section C3-3)	CCP-TP-002, Att. 1	Y	N/A	N/A	No solids/soils waste was sampled since the last audit
129	Are procedures in place to ensure that sampling operations are comparable through the use of standardized procedures, sampling equipment, and measurement unit's participation in the PDP? (Section C3-3)	CCP-TP-008, (All) CCP-TP-512, (All)	Y	N/A	N/A	No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.
130	Are procedures in place to ensure that sampling precision shall be determined through the collection of field duplicates at a rate of 1 per sampling batch (up to 20 samples) or 1 per week, whichever is more frequent? (Section C3-3)	CCP-TP-008, S. 2.3.1 CCP-TP-512, S. 2.3.1 & 2.3.2	Y	N/A	N/A	No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.
131	Are procedures in place to ensure that the variance measured between co-located core samples is compared to the variance within the waste stream using the F-test? (Section C3-3)	CCP-TP-001, S. 4.4	Y	N/A	N/A	No solids/soils waste was sampled since the last audit
132	Are procedures in place to ensure that sampling accuracy as a result of equipment blank evaluation is determined through the collection of equipment blanks at a frequency of once per equipment cleaning batch? (Section C3-3)	N/A	N/A	N/A	N/A	Sampling procedures are for grab Sampling not coring. No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.

	WAP Requirement *INL/CCP Recertification Audit A-13-18* Table C6-2 Solids and Soils/Gravel Sampling Checklist [1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
133	Are procedures in place to ensure that the representativeness of samples is demonstrated through the following requirements: • Use of coring tools and sampling equipment that are clean prior to use • The entire depth of the waste minus a documented safety factor shall be cored and the core collected shall have a core length greater than or equal to 50 percent • The core recovery is calculated as the length of the core collected over the depth of the waste in the container • Coring operations and tools should be designed to minimize alteration of the in-place waste characteristics and the minimum waste disturbance shall be verified by visually examining the core and documenting the observation in field logbooks *(Note: if core recovery is less than 50 percent, a second core shall be randomly selected. The core with the best recovery shall be used for sample collection)* (Section C3-3)	N/A	N/A	N/A	N/A	Sampling procedures are for grab Sampling not coring. No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013.

1. The WAP requirements should be presented in documents, such as procedures. Each of the questions posed under WAP requirements is meant to ask whether procedures are in place or whether documents are evident which demonstrate that the specific WAP requirement is or can be met.

Table C6-3 Acceptable Knowledge (AK) Checklist
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Acceptable Knowledge (AK) Checklist[1]

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	GENERAL REQUIREMENTS					
134	Are the primary document(s) required in Permit Attachment C4 containing acceptable knowledge information available? (Section C4-2)	CCP-TP-002, S. 4.3-4.5 CCP-TP-005, S. 4.4	Y	AK Summary Report for INL Argonne CH TRU Waste from Facility Maint. And Lab Operations, CCP-AK-INL-025 R1 **(AK-1)** AK Summary Report for Rocky Flats Immobilized Organic Liquids Stored at the INL, ID-RF-S3150-A, CCP-AK-INL-005 R8, **(AK-2)** CCP AK Summary Report for Waste Retrieved from Designated Areas within the SDA at INL, ID-SDA-SOIL, CCP-AK-INL-001 R11 **(AK-3)** AK Summary Report for RH TRU Debris Waste from ANLE Stored at the INL, CCP-AK-INL-500 R11 **(AK-4)** AK Summary Report for Bettis Laboratory RH TRU Waste Stored at INL, IN-ID-BTO-030, CCP-AK-INL-590 R2 **(AK-5)** QMIS Approval Screenshots for AK Summaries for waste streams ID-AECHDM, ID-RF-S3150-A, ID-SDA-SOIL, ID-ANLE-S5000, and IN-ID-BTO-030 **(AK-10)**	Y	During the week of June 3, 2013, the CTAC auditors conducted at recertification audit of the INL CCP program for CH Summary Category Groups S3000, S4000 and S5000 and RH Summary category Groups S3000 and S5000. The AK auditors examined the AK record for a specific waste stream in each of these SCGs including CH S5000 ID-AECHDM, CH S4000 ID-SDA-SOIL, CH S3000 ID-RF-S3150-A, and RH S5000 ID-ANLE-S5000. For the RH S3000 SCG, the AK auditors examined the available yet incomplete AK record for IN-ID-BTO-030.

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
				Waste Stream Profile Form and attachments for waste stream ID-AECHDM **(AK-6)** Waste Stream Profile Form and attachments for waste stream ID-RF-S3150-A **(AK-7)** Waste Stream Profile Form and attachments for waste stream ID-SDA-SOIL **(AK-8)** Waste Stream Profile Form and attachments for waste stream ID-ANLE-S5000 **(AK-9)**		
135	Has the generator developed a methodology whereby a logical sequence of acceptable knowledge information that progresses from general facility to more detailed waste-specific information can be acquired? (Section C4-2)	CCP-TP-005, S. 4.0	Y	AK Summary Report for INL Argonne CH TRU Waste from Facility Maint. And Lab Operations, CCP-AK-INL-025 R1 **(AK-1)** AK Summary Report for Rocky Flats Immobilized Organic Liquids Stored at the INL, ID-RF-S3150-A, CCP-AK-INL-005 R8, **(AK-2)** CCP AK Summary Report for Waste Retrieved from Designated Areas within the SDA at INL, ID-SDA-SOIL, CCP-AK-INL-001 R11 **(AK-3)**	Y	

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
				AK Summary Report for RH TRU Debris Waste from ANLE Stored at the INL, CCP-AK-INL-500 R11 **(AK-4)** AK Summary Report for Bettis Laboratory RH TRU Waste Stored at INL, IN-ID-BTO-030, CCP-AK-INL-590 R2 **(AK-5)** AK Source Documents for waste stream ID-AECHDM **(AK-11)** AK Source Documents for waste stream ID-RF-3150-A **(AK-12)** AK Source Documents for waste stream ID-SDA-SOIL **(AK-13)** AK Source Documents for waste stream ID-ANLE-S5000 **(AK-14)** AK Source Documents for waste stream IN-ID-BTO-030 **(AK-15)**		
136	Does the site have adequate procedures in place to ensure that the Acceptable Knowledge process is adequately implemented? Do these procedures facilitate the mandatory traceability analysis performed for each Summary Waste Category Group examined during the audit? (Section C4-2)	CCP-TP-005, S. 4.0	Y	AK Summary Report for INL Argonne CH TRU Waste from Facility Maint. And Lab Operations, CCP-AK-INL-025 R1 **(AK-1)** AK Summary Report for Rocky Flats Immobilized Organic Liquids Stored at the INL, ID-RF-S3150-A, CCP-AK-INL-005 R8, **(AK-2)**	Y	The WAP required traceability exercise was conducted on a total of ten containers from the five waste streams. The specific containers were ID-SDA-SOIL ARP30100 ARP71044 ID-RF-S3150-A 10018503 10017133

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
				CCP AK Summary Report for Waste Retrieved from Designated Areas within the SDA at INL, ID-SDA-SOIL, CCP-AK-INL-001 R11 **(AK-3)** AK Summary Report for RH TRU Debris Waste from ANLE Stored at the INL, CCP-AK-INL-500 R11 **(AK-4)** AK Summary Report for Bettis Laboratory RH TRU Waste Stored at INL, IN-ID-BTO-030, CCP-AK-INL-590 R2 **(AK-5)** Waste Stream Profile Form and attachments for waste stream ID-AECHDM **(AK-6)** Waste Stream Profile Form and attachments for waste stream ID-RF-S3150-A **(AK-7)** Waste Stream Profile Form and attachments for waste stream ID-SDA-SOIL **(AK-8)** Waste Stream Profile Form and attachments for waste stream ID-ANLE-S5000 **(AK-9)** AK Source Documents for waste stream ID-AECHDM **(AK-11)** AK Source Documents for waste stream ID-RF-3150-A **(AK-12)**		ID-AECHDM RW47784 RW49571 IID-ANLE-S5000 IDAE000000396 ANLE32E IN-ID-BTO-030 IDBLANL880164A IDBLANL880107C

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
				AK Source Documents for waste stream ID-SDA-SOIL **(AK-13)** AK Source Documents for waste stream ID-ANLE-S5000 **(AK-14)** AK Source Documents for waste stream IN-ID-BTO-030 **(AK-15)** Traceability BDRS <u>VE</u> IN-ARP-VE-002704 **(AK-36)** IN-ARP-VE-002793 **(AK-37)** VVE05-01744 **(AK-38)** RHINLVE090002 **(AK-39)** <u>RTR</u> INRTR5110102 **(AK-40)** INRTR2050037 **(AK-41)** INRTR5120002 **(AK-42)** INRTR2050087 **(AK-43)** INLRHRTR12010**(AK-44)** INLRHRTR12002**(AK-45)** <u>HSG S&A</u> INHSGS090011 **(AK-46)** ECL09029M **(AK-47)** INHSG1111 **(AK-48)** ECL11036M **(AK-49)** <u>Solids S&A</u> WCS-0504 **(AK-50)** ALD05034V **(AK-51)** ALD05031S **(AK-52)** ALD05034M **(AK-53)** ALD05025N **(AK-54)** S4200-LOT-05-07 **(AK-55)** ALD12005V **(AK-56)** ALD12005S **(AK-57)** ALD12005M **(AK-58)** ALD12005N **(AK-59)**		

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
				HSG Random Container Selection Memos for waste streams ID-AECHDM and ID-ANLE-S5000 **(AK-31)** HSG Summary Reports for waste streams ID-AECHDM and ID-ANLE-S5000 **(AK-32)** Solids Sampling and Analysis Random Container Selection Memos for ID-RF-S3150-A and ID-SDA-SOILS **(AK-33)** Solids S&A Summary Reports for ID-RF-S3150-A and ID-SDA-SOILS **(AK-34)** AK Waste Stream Characterization Checklists for waste streams ID-AECHDM lot1, ID-RF-S3150-A, lot 14, ID-SDA-SOIL, lots 73 and 76 and ID-ANLE-S5000, lot 29 **(AK-35)** IDC database screenshots **(AK-24)** AK Tracking Spreadsheets for waste streams ID-AECHDM, ID-RF-S3150-A, ID-SDA-SOIL, ID-ANLE-S5000, and IN-ID-BTO-030 **(AK-25)** AK Attachment 8 container list for waste streams ID-AECHDM, ID-		

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
				RF-S3150-A, ID-SDA-SOIL, ID-ANLE-S5000, and IN-ID-BTO-030 **(AK-20)** Container input forms **(AK-26)**		
137	Does the generator site's TRU mixed waste management program information clearly define (or provide a methodology for defining) waste categorization schemes and terminology, provide a breakdown of the types and quantities of TRU mixed waste generated/stored at the site, and describe how waste is tracked and managed at the generator site (including historical and current operations? Do procedures ensure that waste streams are adequately identified? (Section C4-2a)	CCP-TP-005, S. 4.4, 4.2.2, 4.2.4, 4.2.5, 4.2.6, Att. 8 CCP-TP-001, S. 2.7 S. 4.1 S. 4.2	Y	AK Summary Report for INL Argonne CH TRU Waste from Facility Maint. And Lab Operations, CCP-AK-INL-025 R1 **(AK-1)** AK Summary Report for Rocky Flats Immobilized Organic Liquids Stored at the INL, ID-RF-S3150-A, CCP-AK-INL-005 R8, **(AK-2)** CCP AK Summary Report for Waste Retrieved from Designated Areas within the SDA at INL, ID-SDA-SOIL, CCP-AK-INL-001 R11 **(AK-3)** AK Summary Report for RH TRU Debris Waste from ANLE Stored at the INL, CCP-AK-INL-500 R11 **(AK-4)** AK Summary Report for Bettis Laboratory RH TRU Waste Stored at INL, IN-ID-BTO-030, CCP-AK-INL-590 R2 **(AK-5)** IDC database screenshots **(AK-24)**	Y	

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
				AK Tracking Spreadsheets for waste streams ID-AECHDM, ID-RF-S3150-A, ID-SDA-SOIL, ID-ANLE-S5000, and IN-ID-BTO-030 **(AK-25)** AK Attachment 8 container list for waste streams ID-AECHDM, ID-RF-S3150-A, ID-SDA-SOIL, ID-ANLE-S5000, and IN-ID-BTO-030 **(AK-20)**		
138	Does site documentation procedures indicate that the site will document, justify, and consistently define waste streams and assign EPA hazardous waste numbers? (Section C4-2b)	CCP-TP-005, S. 4.4.16- 4.4.21 Att. 5	Y	AK Summary Report for INL Argonne CH TRU Waste from Facility Maint. And Lab Operations, CCP-AK-INL-025 R1, S5.4.3, table 7 **(AK-1)** AK Summary Report for Rocky Flats Immobilized Organic Liquids Stored at the INL, ID-RF-S3150-A, CCP-AK-INL-005 R8, S6.4.3, table 6-5 **(AK-2)** CCP AK Summary Report for Waste Retrieved from Designated Areas within the SDA at INL, ID-SDA-SOIL, CCP-AK-INL-001 R11, S2.0, S5.6, tables 5-5, 5-6 **(AK-3)** AK Summary Report for RH TRU Debris Waste from ANLE Stored at the INL, CCP-AK-INL-500 R11, S5.4.2, table 3 **(AK-4)**	Y	

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
				AK Summary Report for Bettis Laboratory RH TRU Waste Stored at INL, IN-ID-BTO-030, CCP-AK-INL-590 R2, S5.4.2, tables 2, 3 **(AK-5)** AK Att. 5, Hazardous Constituents, for waste streams ID-AECHDM, ID-RF-S3150-A, ID-SDA-SOIL, ID-ANLE-S5000, and IN-ID-BTO-030 **(AK-18)**		

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	REQUIRED AND ADDITIONAL INFORMATION					
140	Does the generator site document that the following must be included in the acceptable knowledge record:	1-7 CCP-TP-005, S. 4.2.2 S., 4.4.5 Att. 1	Y	CCP-AK-INL-025 **(AK-1)** CCP-AK-INL-005 **(AK-2)** CCP-AK-INL-001 **(AK-3)** CCP-AK-INL-500 **(AK-4)** CCP-AK-INL-590 **(AK-5)**		
	1. Map of the site with the areas and facilities involved in TRU waste generation, treatment, and storage identified			1. S4.1,figures 1, 2 **(AK-1)** S4.1, figures 1-3 **(AK-2)** S4.1, figures 1, 2, 3A-3D, 4 **(AK-3)** S4.1, attachments 1-5 **(AK-4)** S4.1, attachments 1-4 **(AK-5)**	Y	
	2. Facility mission description as related to TRU waste generation and management (e.g., nuclear weapons research may involve metallurgy, radiochemistry, and nuclear physics operations that result in specific waste streams)			2. S4.2, 4.4, 4.5 **(AK-1)** S4.2, 4.3, 4.4 **(AK-2)** S4.2, 4.4, 4.7 **(AK-3)** S4.1.3, 4.2, **(AK-4)** S4.1.3, 4.2, **(AK-5)**	Y	
	3. Description of the operations that generate TRU waste at the site (e.g., plutonium recovery, weapons design, or weapons fabrication)			3. S4.4 **(AK-1)** S4.3 **(AK-2)** S4.4, 4.5 **(AK-3)** S45.2.2 **(AK-4)** S4.2.2 **(AK-5)**	Y	
	4. Waste identification or categorization schemes used at the facility (e.g., item description codes, content codes)			4. S4.5.2 **(AK-1)** S4.5 **(AK-2)** S4.6 **(AK-3)** S4.2 **(AK-4)** S4.2 **(AK-5)**	Y	
	5. Types and quantities of TRU mixed waste generated, including historical generation through future projections			5. S4.5.1 **(AK-1)** S4.4.1 **(AK-2)** S4.7.1 **(AK-3)** S4.2.1 **(AK-4)** S4.2.1 **(AK-5)**	Y	
	6. Correlation of waste streams generated from the same building and			6. S4.5.3 **(AK-1)**	Y	

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	process, as appropriate (e.g., sludge, combustibles, metals, and glass)			S4.4.2 **(AK-2)** S4.7.2 **(AK-3)** S4.2. **(AK-4)** S4.2 **(AK-5)**		
	7. Waste certification procedures for retrievably stored and newly generated wastes to be sent to the WIPP facility (Section C4-2a)			7. S4.5.4 **(AK-1)** S4.6 **(AK-2)** S4.8 **(AK-3)** S1.0 **(AK-4)** S1.0 **(AK-5)**	Y	
141	Does the generator site document that the following shall be collected for each waste stream:	A-F CCP-TP-005, S. 4.2.4 S., 4.4.5 Att. 1	Y	CCP-AK-INL-025 **(AK-1)** CCP-AK-INL-005 **(AK-2)** CCP-AK-INL-001 **(AK-3)** CCP-AK-INL-500 **(AK-4)** CCP-AK-INL-590 **(AK-5)**		
	A. Area(s) and/or building(s) from which the waste stream was or is generated			A. S5.1, 5.3 **(AK-1)** S6.1 **(AK-2)** S5.1 **(AK-3)** S5.1 **(AK-4)** S5.1 **(AK-5)**	Y	
	B. Waste stream volume and time period of generation (e.g., 100 standard waste boxes of retrievable stored waste generated from June 1977 through December 1977)			B. S5.2 **(AK-1)** S6.2 **(AK-2)** S5.2 **(AK-3)** S5.2 **(AK-4)** S5.2 **(AK-5)**	Y	
	C. Waste generating process described for each building (e.g., batch waste stream generated during decommissioning operations of glove boxes), including processes associated with U134 waste generation, if applicable .			C. S5.4, 4.4 **(AK-1)** S6.3 **(AK-2)** S5.3 **(AK-3)** S5.3 **(AK-4)** S5.3 **(AK-5)**	Y	
	D. Documentation demonstrating how the site has historically managed the waste, including the historical regulatory status of the waste (i.e., TRU mixed versus TRU non-mined waste)			D. S5.4.3 **(AK-1)** S6.4.3 **(AK-2)** S5.4.2 **(AK-4)** S5.4.2 **(AK-5)**	Y	
	E. Process flow diagrams (e.g., a diagram illustrating glove boxes from a specific building to a size reduction facility to a container storage area). In the case of research/development, analytical laboratory waste, or the similar processes where process flow diagrams cannot be created, a description of the waste generating processes, rather than a formal process flow diagram, may be included if this modification is justified and			E. AK Source Documents for waste stream ID-AECHDM, P3001 **(AK-11)** Figure 5 **(AK-2)** Figures 6A, 6B **(AK-3)**	Y	

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	the justification is placed in the auditable record F. Material inputs or other information that identifies the chemical content of the waste stream and the physical waste form (e.g., glove box materials and chemical handled during glove box operations, events or processes that may have modified the chemical or physical properties of the waste stream after generation, data obtained through visual examination of newly generated waste that later undergoes radiography; information demonstrating neutralization of U134 [hydrofluoric acid] and waste compatibility. (Section C4-2b)			Attachments 6, 7 **(AK-4)** Attachments 8, 9 **(AK-5)** F. S5.4.1, 5.4.3, tables 4, 7, 8 **(AK-1)** S6.4.1, 6.4.3, tables6-1b, 6-5 **(AK-2)** S5.4, 5.6**,** tables 5-1C, 5-1D**,** 5-5, 5-6 **(AK-3)** S5.4.1, 5.4.2, tables 2, 4 **(AK-4)** S5.4.1, 5.4.2, tables 1, 3, 4 **(AK-5)**	Y	
142	Do site documents/procedures require that the facility will provide a summary to the Permittees that summarizes all information collected, including basis and rationale for all waste stream designations? Is an example of this summary available for audit review? If discrepant hazardous waste data exist in required information, do sites consider applying all hazardous waste numbers, but assess and evaluate the information to determine the appropriate hazardous waste number consistent with RCRA requirements? (Section C4-2b)	CCP-TP-005, S. 4.4 S. 4.9	Y	AK Summary Report for INL Argonne CH TRU Waste from Facility Maint. And Lab Operations, CCP-AK-INL-025 R1 **(AK-1)** AK Summary Report for Rocky Flats Immobilized Organic Liquids Stored at the INL, ID-RF-S3150-A, CCP-AK-INL-005 R8, **(AK-2)** CCP AK Summary Report for Waste Retrieved from Designated Areas within the SDA at INL, ID-SDA-SOIL, CCP-AK-INL-001 R11 **(AK-3)** AK Summary Report for RH TRU Debris Waste from ANLE Stored at the INL, CCP-AK-INL-500 R11 **(AK-4)** AK Summary Report for Bettis Laboratory RH TRU Waste Stored at INL, IN-ID-BTO-030, CCP-AK-INL-590 R2 **(AK-5)**	Y	

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
				AK Discrepancy Resolutions **(AK-21)**		
143	Do site procedures indicate that if the required AK information is not available for a particular waste stream, that the waste stream will not be eligible for an AK Sufficiency Determination? (Section C4-2)	CCP-TP-005, S. 4.2 S. 4.4 S. 4.7	Y	AK Documentation Checklist, Attachment 1, for waste streams ID-AECHDM, ID-RF-S3150-A, ID-SDA-SOIL, ID-ANLE-S5000, and IN-ID-BTO-030 **(AK-16)**	Y	No AK Sufficiency Determinations are being sought for the waste streams audited.

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
144	Have the following procedures been prepared?:	**AK** A. CCP-TP-005, S. 4.4.13 S. 4.4.14 B. CCP-TP-005, S. 4.4.11 NOTE above S. 4.4.12 C. & G. CCP-TP-005, S. 4.9 E. CCP-TP-500, (All) CCP-TP-006, (All) H. CCP-TP-005, S. 4.4.16 -4.4.21 I. CCP-TP-005, S. 4.4.27	Y	CCP-AK-INL-025 **(AK-1)** CCP-AK-INL-005 **(AK-2)** CCP-AK-INL-001 **(AK-3)** CCP-AK-INL-500 **(AK-4)** CCP-AK-INL-590 **(AK-5)**	Y	
	A. Procedures for identifying and assigning the physical waste form of the waste			A. S5.4.1, table 4 **(AK-1)** S6.4.1, table 6-1b **(AK-2)** S5.4, table 5-1D **(AK-3)** S5.4.1, table 2 **(AK-4)** S5.4.1, table1 **(AK-5)**		
	B. Procedures for delineating waste streams and assigning Waste Matrix Codes			B. S5.4.1.1 **(AK-1)** S6.4.1.1 **(AK-2)** S5.4.3 **(AK-3)** S5.4.1.1 **(AK-4)** S5.4.1.1 **(AK-5)**		
	C. Procedures for resolving inconsistencies in acceptable knowledge documentation			C. AK Discrepancy Resolutions **(AK-21)**		
	D. Procedures for headspace gas sampling and analysis, visual examination and/or radiography, and homogeneous waste sampling and analysis, if applicable					
	E. For newly generated waste, procedures describing process controls used to ensure prohibited items (specified in the WAP, Permit Attachment C) are documented and managed			E. IN-ARP-VE-002704 **(AK-36)** IN-ARP-VE-002793 **(AK-37)** VVE05-01744 **(AK-38)** RHINLVE090002 **(AK-39)**		
	F. Procedures to ensure radiography and visual examination include a list of prohibited items that the operator shall verify are not present in each container (e.g. liquid exceeding TSDF-WAC limits, corrosives, ignitables, reactives, and incompatible wastes)					
	G. Procedures to document how changes to Waste Matrix Codes, waste stream assignment, and associated Environmental Protection Agency hazardous waste numbers based on material composition are documented for any waste			G. AK Discrepancy Resolutions **(AK-21)**		

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	H. Procedures that ensure the assignment of EPA hazardous waste numbers is appropriate, consistent with RCRA requirements, and adequately considers site historical waste management I. Procedures for estimating waste material parameter weights (Section C4-2b)			H. AK Summary Report for INL Argonne CH TRU Waste from Facility Maint. And Lab Operations, CCP-AK-INL-025 R1, S5.4.3, table 7 **(AK-1)** AK Summary Report for Rocky Flats Immobilized Organic Liquids Stored at the INL, ID-RF-S3150-A, CCP-AK-INL-005 R8, S6.4.3, table 6-5 **(AK-2)** CCP AK Summary Report for Waste Retrieved from Designated Areas within the SDA at INL, ID-SDA-SOIL, CCP-AK-INL-001 R11, S2.0, S5.6, tables 5-5, 5-6 **(AK-3)** AK Summary Report for RH TRU Debris Waste from ANLE Stored at the INL, CCP-AK-INL-500 R11, S5.4.2, table 3 **(AK-4)** AK Summary Report for Bettis Laboratory RH TRU Waste Stored at INL, IN-ID-BTO-030, CCP-AK-INL-590 R2, S5.4.2, tables 2, 3 **(AK-5)** AK Att. 5, Hazardous Constituents, for waste streams ID-AECHDM, ID-RF-S3150-A, ID-SDA-SOIL, ID-ANLE-S5000, and IN-ID-BTO-030 **(AK-18)**		

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
				I. AK Summary Report for INL Argonne CH TRU Waste from Facility Maint. And Lab Operations, CCP-AK-INL-025 R1, S5.4.1.2, table 4 **(AK-1)** Summary Report for Rocky Flats Immobilized Organic Liquids Stored at the INL, ID-RF-S3150-A, CCP-AK-INL-005 R8, S6.4.1.2, table6-1b **(AK-2)** CCP AK Summary Report for Waste Retrieved from Designated Areas within the SDA at INL, ID-SDA-SOIL, CCP-AK-INL-001 R11, S5.4.4, table 5-1d **(AK-3)** AK Summary Report for RH TRU Debris Waste from ANLE Stored at the INL, CCP-AK-INL-500 R11, S5.4.1.2, table 2 **(AK-4)** AK Summary Report for Bettis Laboratory RH TRU Waste Stored at INL, IN-ID-BTO-030, CCP-AK-INL-590 R2, S5.4.1.2, table 1 **(AK-5)** Memos attached to AK Att. 6, Waste Form, Waste Material Parameters, Prohibited Items and Packaging for waste streams ID-AECHDM, ID-RF-S3150-A, ID-SDA-SOIL, ID-ANLE-S5000, and IN-ID-BTO-030 **(AK-19)**		

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
		HSG Bullet D: CCP-TP-093, (All)	Y	**HSG** Bullet D: INHSG1202 INHSG1204 INHSG1206 **(HSG-1)**	Y	INL/CCP only performs HSG sampling. Analysis is performed by INL/CCP Labs.
		SOL CCP-TP-008, (All) CCP-TP-512, (All)	Y	**SOL** N/A	N/A	No solid sampling activities have occurred since the last recertification audit. Additionally, the requirement for solid sampling was eliminated with the Permit modification that occurred on March 13, 2013. For RTR/VE reference C6-2 dated March 13, 2013
145	Does the generator provide procedures or written commitment to collect additional acceptable knowledge information, as available and as necessary to augment mandatory information? (Section C4-2c)	CCP-TP-005, S. 4.2.5 Att.1	Y	AK Documentation Checklist, Attachment 1, for waste streams ID-AECHDM, ID-RF-S3150-A, ID-SDA-SOIL, ID-ANLE-S5000, and IN-ID-BTO-030 **(AK-16)**	Y	

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
145a	For waste containers that belong to LANL sealed sources waste streams, and for which headspace gas sampling and analysis is not required, are there procedures in place to assure the collection of the following additional AK? A. Documentation that the waste container contents meet the definition of sealed sources per 10 CFR 30.4 and 10 CFR 35.2 (effective January 1, 2004) B. Documentation of the certification of the sealed sources as U.S. Department of Transportation Special Form Class 7 (Radioactive) Material per 49 CFR 173.403 (effective October 1, 2003) C. Documentation of contamination survey results that validate the integrity of each sealed source per 10 CFR 34.27 (effective January 1, 2004). D. AK documentation does not indicate the use of VOCs or VOC-bearing materials as constituents of the sealed sources. E. The outer casing of each sealed source must be of a non-VOC bearing material, which must be verified at the time of packaging. F. AK documentation that includes but is not limited to, as available and as necessary to determine the hazardous constituents associated with sealed sources, the following: source manufacturer's sales catalogues, original purchase records, source manufacturer's fabrication documents, source manufacturer's drawings, source manufacturer's fuel capture assembly reports, source manufacturer's operational procedures for cleanliness requirements, source manufacturer's shipping documents, source manufacturer's welding records, transuranic batch material records, and information from national databases (e.g., NMMSS). All of this information may not and need not be available for each source, but sufficient information must be included in the auditable record to derive an adequate understanding of source construction and history to ensure that no VOCs are present in association with the sealed source itself that would render the source hazardous. If AK data indicate that assignment of a hazardous waste number related to organic materials is required in association with a source, this specific source will be assigned to a separate waste stream and that waste stream will be subject to headspace gas sampling unless a separate AK Sufficiency Determination is approved for the waste stream. (Section C4-2c)	N/A	N/A	N/A	N/A	This is not a LANL audit
146	Does the generator site document that all additional specific, relevant information used in the acceptable knowledge process will be identified and its use explained? Is all necessary information assembled and has it been appropriately used? (Section C4-2c)	CCP-TP-005, S. 4.2.5 Att. 1	Y	AK Documentation Checklist, Attachment 1, for waste streams ID-AECHDM, ID-RF-S3150-A, ID-SDA-SOIL, ID-	Y	

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
				ANLE-S5000, and IN-ID-BTO-030 **(AK-16)**		
147	Does the generator site discrepancy analysis documentation (for acceptable knowledge additional and required documentation) indicate that if discrepancies are detected, the site may consider applying all hazardous waste numbers indicated in the required and additional information, but must assess and evaluate the information to determine the appropriate hazardous waste numbers consistent with RCRA requirements? (Section C4-2c)	CCP-TP-005, S. 4.9	Y	AK Discrepancy Resolutions **(AK-21)**	Y	
	TRAINING					
148	Does the generator site have procedures to ensure that all personnel involved with acceptable knowledge waste characterization have the following training, and is this training documented? A. WIPP WAP in Permit Attachment C and the TSDF-WAC specified in this permit B. State and Federal RCRA regulations associated with solid and hazardous waste characterization C. Discrepancy resolution and reporting D. Site-specific procedures associated with waste characterization using acceptable knowledge (Section C4-3a)	CCP-QP-002, S. 4.3.1	Y	Training/Qualification records for Acceptable Knowledge personnel performing characterization related activities. **(GEN-21)**	Y	
	PROCEDURES					
149	Has the generator site developed the following procedures, and are these procedures technically sufficient? A. Sites must prepare and implement a written procedure outlining the specific methodology used to assemble acceptable knowledge records, including the origin of the documentation, how it will be used, and any limitations associated with the information (e.g., identify the purpose and scope of a study that included limited sampling and analysis data).	**A-D** CCP-TP-005, S. 4.2, 4.3, 4.4 & 4.9 CCP-TP-001, S. 2.7, 4.1 & 4.2 CCP-TP-068, (All) CCP-TP-500, (All) CCP-TP-006, (All)	Y	A. AK Summary Report for INL Argonne CH TRU Waste from Facility Maint. And Lab Operations, CCP-AK-INL-025 R1 **(AK-1)**	Y	

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	B. Sites must develop and implement a written procedure to compile the required acceptable knowledge record. C. Sites must develop and implement a written procedure that ensures unacceptable wastes (e.g., reactive, ignitable, corrosive) are identified and segregated from TRU mixed waste populations sent to WIPP. D. Sites must prepare and implement a written procedure to evaluate acceptable knowledge and resolve discrepancies. For example, if different sources of information indicate different hazardous wastes are present, then sites must include all sources of information in its records and may choose to either conservatively assign hazardous waste numbers, or assign only those numbers deemed appropriate and consistent with RCRA requirements. All information used to justify assignment of hazardous waste numbers must be placed in the auditable record. Further, the assignment of hazardous waste numbers shall be tracked in the auditable record to all required documentation.			AK Summary Report for Rocky Flats Immobilized Organic Liquids Stored at the INL, ID-RF-S3150-A, CCP-AK-INL-005 R8, **(AK-2)** CCP AK Summary Report for Waste Retrieved from Designated Areas within the SDA at INL, ID-SDA-SOIL, CCP-AK-INL-001 R11 **(AK-3)** AK Summary Report for RH TRU Debris Waste from ANLE Stored at the INL, CCP-AK-INL-500 R11 **(AK-4)** AK Summary Report for Bettis Laboratory RH TRU Waste Stored at INL, IN-ID-BTO-030, CCP-AK-INL-590 R2 **(AK-5)** AK Source Documents for waste stream ID-AECHDM **(AK-11)** AK Source Documents for waste stream ID-RF-3150-A **(AK-12)** AK Source Documents for waste stream ID-SDA-SOIL **(AK-13)** AK Source Documents for waste stream ID-ANLE-S5000 **(AK-14)** AK Source Documents for waste stream IN-ID-BTO-030 **(AK-15)**		

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
				B. AK Summary Report for INL Argonne CH TRU Waste from Facility Maint. And Lab Operations, CCP-AK-INL-025 R1 **(AK-1)** AK Summary Report for Rocky Flats Immobilized Organic Liquids Stored at the INL, ID-RF-S3150-A, CCP-AK-INL-005 R8, **(AK-2)** CCP AK Summary Report for Waste Retrieved from Designated Areas within the SDA at INL, ID-SDA-SOIL, CCP-AK-INL-001 R11 **(AK-3)** AK Summary Report for RH TRU Debris Waste from ANLE Stored at the INL, CCP-AK-INL-500 R11 **(AK-4)** AK Summary Report for Bettis Laboratory RH TRU Waste Stored at INL, IN-ID-BTO-030, CCP-AK-INL-590 R2 **(AK-5)**	Y	
				C. AK Att. 6, Waste Form, Waste Material Parameters, Prohibited Items and Packaging for waste streams ID-AECHDM, ID-RF-S3150-A, ID-SDA-SOIL, ID-ANLE-S5000, and IN-ID-BTO-030 **(AK-19)** NCRs for prohibited items **(AK-23)** IDC database with “reject”	Y	

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
				field **(AK-24)** Container inspection reports **(AK-28)** "Hold" tag **(AK-29)** D. AK Discrepancy Resolutions **(AK-21)**	 Y	
149a	E. Sites must prepare and implement a written procedure to identify hazardous wastes and assign the appropriate hazardous waste numbers to each waste stream. The following are minimum baseline requirements/standards that site-specific procedures must include to ensure comparable and consistent characterization of hazardous waste: 1. Compile all of the required information in an auditable record. 2. Review the compiled information and delineate waste streams. Delineation of waste streams must comply with the WAP definition in Permit Attachment C, Section C-0a, and justify combining waste historically managed separately as TRU mixed and TRU non-mixed waste streams into a single waste stream. 3. Review the compiled information to determine if the waste stream is compliant with the TSDF-WAC 4. Review the required information to determine if the waste is listed under 20.4.1.200 NMAC (incorporating 40 CFR 261), Subpart D. Assign all listed hazardous waste numbers, unless the site chooses to justify an alternative assignment and document the justification in the auditable record. 5. Review the required information to determine if the waste exhibits a hazardous characteristic or may contain hazardous constituents included in the toxicity characteristics specified in 20.4.1.200 NMAC (incorporating 40 CFR 261, Subpart C. If a toxicity characteristic contaminant is identified and is not included as a listed waste, sites may evaluate available data and assign the toxicity characteristic hazardous waste number consistent with RCRA requirements. All data examined to reach the hazardous waste number determination must be placed in the auditable record and must present a clear justification for the hazardous waste number analyses. 6. Review the compiled information to provide an estimate of the material parameter weights for each container to be stored or disposed of at WIPP. For newly generated waste, procedures shall be developed and	**E.1 - E.6** CCP-TP-005, S. 1.1, 4.2, 4.3 & 4.4 CCP-TP-006, (All) CCP-TP-500, S. 4.4	Y	E1. AK Summary Report for INL Argonne CH TRU Waste from Facility Maint. And Lab Operations, CCP-AK-INL-025 R1 **(AK-1)** AK Summary Report for Rocky Flats Immobilized Organic Liquids Stored at the INL, ID-RF-S3150-A, CCP-AK-INL-005 R8, **(AK-2)** CCP AK Summary Report for Waste Retrieved from Designated Areas within the SDA at INL, ID-SDA-SOIL, CCP-AK-INL-001 R11 **(AK-3)** AK Summary Report for RH TRU Debris Waste from ANLE Stored at the INL, CCP-AK-INL-500 R11 **(AK-4)** AK Summary Report for Bettis Laboratory RH TRU Waste Stored at INL, IN-ID-BTO-030, CCP-AK-INL-590 R2 **(AK-5)** E2. AK Summary Report for INL Argonne CH TRU	Y Y	

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	implemented to characterize hazardous waste using acceptable knowledge prior to packaging.			Waste from Facility Maint. And Lab Operations, CCP-AK-INL-025 R1, S2.1 **(AK-1)** AK Summary Report for Rocky Flats Immobilized Organic Liquids Stored at the INL, ID-RF-S3150-A, CCP-AK-INL-005 R8, S2.1 **(AK-2)** CCP AK Summary Report for Waste Retrieved from Designated Areas within the SDA at INL, ID-SDA-SOIL, CCP-AK-INL-001 R11, S2.0 **(AK-3)** AK Summary Report for RH TRU Debris Waste from ANLE Stored at the INL, CCP-AK-INL-500 R11, S2.0 **(AK-4)** AK Summary Report for Bettis Laboratory RH TRU Waste Stored at INL, IN-ID-BTO-030, CCP-AK-INL-590 R2, S2.0 **(AK-5)** E3. AK Summary Report for INL Argonne CH TRU Waste from Facility Maint. And Lab Operations, CCP-AK-INL-025 R1, S5.4.3.4, 5.4.3.5, 5.4.4 **(AK-1)** AK Summary Report for Rocky Flats Immobilized Organic Liquids Stored at the INL, ID-RF-S3150-A,	Y	

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
				CCP-AK-INL-005 R8, S6.4.3.4, 6.4.3.5, 6.4.4 **(AK-2)** CCP AK Summary Report for Waste Retrieved from Designated Areas within the SDA at INL, ID-SDA-SOIL, CCP-AK-INL-001 R11, S5.6.5, 5.6.6, 5.7 **(AK-3)** AK Summary Report for RH TRU Debris Waste from ANLE Stored at the INL, CCP-AK-INL-500 R11, S5.4.2.3, 5.4.4, 5.4.5 **(AK-4)** AK Summary Report for Bettis Laboratory RH TRU Waste Stored at INL, IN-ID-BTO-030, CCP-AK-INL-590 R2, S5.4.2.3, 5.4.4, 5.4.5 **(AK-5)** AK Att. 6, Waste Form, Waste Material Parameters, Prohibited Items and Packaging for waste streams ID-AECHDM, ID-RF-S3150-A, ID-SDA-SOIL, ID-ANLE-S5000, and IN-ID-BTO-030 **(AK-19)** NCRs for prohibited it4ms **(AK-23)** VE BDRS . IN-ARP-VE002704 **(AK-36)** IN-ARP-VE002793 **(AK-37)** VVE05-01744 **(AK-38)**		

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
				RHINLVE090002 **(AK-39)** E4 & E5. AK Summary Report for INL Argonne CH TRU Waste from Facility Maint. And Lab Operations, CCP-AK-INL-025 R1, S5.4.3, table 7 **(AK-1)** AK Summary Report for Rocky Flats Immobilized Organic Liquids Stored at the INL, ID-RF-S3150-A, CCP-AK-INL-005 R8, S6.4.3, table 6-5 **(AK-2)** CCP AK Summary Report for Waste Retrieved from Designated Areas within the SDA at INL, ID-SDA-SOIL, CCP-AK-INL-001 R11, S2.0, S5.6, tables 5-5, 5-6 **(AK-3)** AK Summary Report for RH TRU Debris Waste from ANLE Stored at the INL, CCP-AK-INL-500 R11, S5.4.2, table 3 **(AK-4)** AK Summary Report for Bettis Laboratory RH TRU Waste Stored at INL, IN-ID-BTO-030, CCP-AK-INL-590 R2, S5.4.2, tables 2, 3 **(AK-5)** AK Att. 5, Hazardous Constituents, for waste streams ID-AECHDM, ID-RF-S3150-A, ID-SDA-SOIL, ID-ANLE-S5000, and IN-ID-BTO-030 **(AK-18)**	Y	

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
				E6. AK Summary Report for INL Argonne CH TRU Waste from Facility Maint. And Lab Operations, CCP-AK-INL-025 R1, S5.4.1.2, table 4 **(AK-1)** Summary Report for Rocky Flats Immobilized Organic Liquids Stored at the INL, ID-RF-S3150-A, CCP-AK-INL-005 R8, S6.4.1.2, table6-1b **(AK-2)** CCP AK Summary Report for Waste Retrieved from Designated Areas within the SDA at INL, ID-SDA-SOIL, CCP-AK-INL-001 R11, S5.4.4, table 5-1d **(AK-3)** AK Summary Report for RH TRU Debris Waste from ANLE Stored at the INL, CCP-AK-INL-500 R11, S5.4.1.2, table 2 **(AK-4)** AK Summary Report for Bettis Laboratory RH TRU Waste Stored at INL, IN-ID-BTO-030, CCP-AK-INL-590 R2, S5.4.1.2, table 1 **(AK-5)** Memos attached to AK Att. 6, Waste Form, Waste Material Parameters, Prohibited Items and Packaging for waste streams ID-AECHDM, ID-RF-S3150-A, ID-SDA-SOIL, ID-ANLE-S5000, and IN-ID-BTO-030 **(AK-19)**	Y	

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
149b	F. Sites shall ensure that results of audits of the TRU mixed waste characterization programs at the site are available in the records. G. Sites shall identify all process controls (implemented to ensure that the waste contains no prohibited items and to control hazardous waste content and/or physical form) that have been applied to retrievably stored waste and/or may presently be applied to newly generated waste. Process controls are applied at the time of waste generation/packaging to control waste content, whereas any activities performed after waste generation/packaging to identify prohibited items, hazardous waste content, or physical form are waste characterization activities, not process controls. The AK record must contain specific process control and supporting documentation identifying when these process controls are used to control waste content. See Permit Attachment C, Section C-2 for programmatic requirements related to process controls. (Section C4-3b)	**F.)** CCP-PO-001, S. C4-3f, C4-3b CCP-QP-021, (All) WP 13-QA.03, (All) **G.)** CCP-TP-005, S. 4.2 - 4.4 & Att. 1	Y Y	F. Internal Surveillance Report **(AK-27)** G. AK Source Documents for waste stream ID-AECHDM, P055, U009 **(AK-11)** AK Source Document Summaries for waste stream ID-RF-S3150-A, P014, P043 **(AK-12)** AK Source Documents for waste stream ID-ANLE-S5000, P056 **(AK-14)**	Y Y	
150	Does the site have implemented procedures which comply with the following criteria to establish acceptable knowledge records: A. Acceptable knowledge information shall be compiled in an auditable record, including a road map for all applicable information. B. The overview of the facility and TRU mixed waste management operations in the context of the facility's mission shall be correlated to specific waste stream information. C. Correlations between waste streams, with regard to time of generation, waste generating processes, and site-specific facilities shall be clearly described. For newly generated wastes, the rate and quantity of waste to be generated shall be defined. D. A reference list shall be provided that identifies documents, databases,	**A-E** CCP-TP-005, S. 1.1, 4.2, 4.3, 4.4, 4.10, 4.11 & Atts. 1, 4 & 8 CCP-TP-001, S. 2.7	Y	A. CCP-AK-INL-025 **(AK-1)** CCP-AK-INL-005 **(AK-2)** CCP-AK-INL-001 **(AK-3)** CCP-AK-INL-500 **(AK-4)** CCP-AK-INL-590 **(AK-5)** AK Documentation Checklist, Attachment 1, for waste streams ID-AECHDM, ID-RF-S3150-A, ID-SDA-SOIL, ID-ANLE-S5000, and IN-ID-BTO-030 **(AK-16)** B. CCP-AK-INL-025, S4.2, 4.5, 5.4 **(AK-1)**	Y Y	

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	Quality Assurance protocols, and other sources of information that support the acceptable knowledge information. E. Container inventories for TRU mixed waste in retrievable storage shall be delineated into waste streams by correlating the container identification to all of the required and additional AK information. (Section C4-3c)			CCP-AK-INL-005, S4.2, 4.4, 6.4 **(AK-2)** CCP-AK-INL-001, S4.2, 4.7, 5.4, 5.6 **(AK-3)** CCP-AK-INL-500, S4.1.3, 4.2, 5.4 **(AK-4)** CCP-AK-INL-590, S4.1.3, 4.2, 5.4 **(AK-5)** C. CCP-AK-INL-025, S4.5.3, 4.4, 5.2, 5.3 **(AK-1)** CCP-AK-INL-005, S4.4.2, 4.3, 6.2, 6.3 **(AK-2)** CCP-AK-INL-001, S4.7.2, 5.1, 5.2, 5.3 **(AK-3)** CCP-AK-INL-500, S4.2, 5.2, 5.3 **(AK-4)** CCP-AK-INL-590, S4.2, 5.2, 5.3 **(AK-5)** D. AK attachment 4 Information List for waste streams ID-AECHDM, ID-RF-S3150-A, ID-SDA-SOIL, ID-ANLE-S5000, and IN-ID-BTO-030 **(AK-17)** E. IDC database screenshots **(AK-24)** AK Tracking Spreadsheets for waste streams ID-AECHDM, ID-RF-S3150-A, ID-SDA-SOIL, ID-ANLE-S5000, and IN-ID-BTO-030 **(AK-25)**	Y Y Y	

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
				AK Attachment 8 container list for waste streams ID-AECHDM, ID-RF-S3150-A, ID-SDA-SOIL, ID-ANLE-S5000, and IN-ID-BTO-030 **(AK-20)**		
151	If the generator site submitted an AK Sufficiency Determination Request for a specific waste stream, did the site provide all of the requisite information including the identification of the applicable scenario for which approval is sought? (Section C-0b)	CCP-TP-005, S. 4.7	Y	N/A	N/A	No AK Sufficiency Determinations are being sought for the waste streams audited.
	AUGMENTATION OF ACCEPTABLE KNOWLEDGE					
152	Does the generator site have written procedures for the augmentation of all acceptable knowledge information using sampling and analysis. Sampling and analysis consists of radiography, visual examination, headspace gas, and homogeneous waste sampling and analysis. Do site procedures indicate that the following sampling and analysis will be conducted based upon the results of the Determination Request Any scenario denied - 100% RTR or VE and statistical HSG or solids S&A Scenario 1 Granted -No sampling and analysis radiography/visual examination is required Scenario 2 Granted-Radiography/visual examination is not required but statistical HSG or solids S&A is required Scenario 3 Granted-100% RTR or VE is required, sampling and analysis is not required (Section C4-1, C-0b)	CCP-TP-005, S. 4.4, 4.5 & 4.7 CCP-TP-003, S. 4.0	Y	AK Summary Report for INL Argonne CH TRU Waste from Facility Maint. And Lab Operations, CCP-AK-INL-025 R1 **(AK-1)** AK Summary Report for Rocky Flats Immobilized Organic Liquids Stored at the INL, ID-RF-S3150-A, CCP-AK-INL-005 R8, **(AK-2)** CCP AK Summary Report for Waste Retrieved from Designated Areas within the SDA at INL, ID-SDA-SOIL, CCP-AK-INL-001 R11 **(AK-3)** AK Summary Report for RH TRU Debris Waste from ANLE Stored at the INL, CCP-AK-INL-500 R11 **(AK-4)** AK Summary Report for Bettis Laboratory RH TRU Waste Stored at	Y	

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
				INL, IN-ID-BTO-030, CCP-AK-INL-590 R2 **(AK-5)** IN-ARP-VE-002704 **(AK-36)** IN-ARP-VE-002793 **(AK-37)** VVE05-01744 **(AK-38)** RHINLVE090002 **(AK-39)** INRTR5110102 **(AK-40)** INRTR2050037 **(AK-41)** INRTR5120002 **(AK-42)** INRTR2050087 **(AK-43)** INLRHRTR12010**(AK-44)** INLRHRTR12002**(AK-45)** INHSGS090011 **(AK-46)** ECL09029M **(AK-47)** INHSG1111 **(AK-48)** ECL11036M **(AK-49)** WCS-0504 **(AK-50)** ALD05034V **(AK-51)** ALD05031S **(AK-52)** ALD05034M **(AK-53)** ALD05025N **(AK-54)** S4200-LOT-05-07 **(AK-55)** ALD12005V **(AK-56)** ALD12005S **(AK-57)** ALD12005M **(AK-58)** ALD12005N **(AK-59)**		
155	Does the generator site have procedures for reevaluating acceptable knowledge if the results of the waste characterization indicate that the waste to be shipped does not match the approved waste stream or if the data from radiography or visual examination for waste streams without an AK Sufficiency Determination exhibit this discrepancy? Does this procedure describe how the waste is reassigned, acceptable knowledge reevaluation, and appropriate hazardous waste numbers are assigned? (Section C4-3e)	CCP-TP-005, S. 4.8 S. 4.9 Att. 10	Y	AK Discrepancy Resolutions at Characterization and AK Reevaluations **(AK-22)**	Y	
156	Do site procedures indicate that debris wastes are assigned toxicity characteristic EPA numbers based on AK regardless of the quantity or concentration? (C4-3e)	CCP-TP-005, S. 4.4.17 Att. 5	Y	AK Summary Report for INL Argonne CH TRU Waste from Facility Maint. And Lab Operations, CCP-AK-INL-025 R1, S5.4.3.2 table 7 **(AK-1)**	Y	

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
				AK Summary Report for RH TRU Debris Waste from ANLE Stored at the INL, CCP-AK-INL-500 R11, S5.4.2.2 table 3 **(AK-4)** AK Att. 5, Hazardous Constituents, for waste streams ID-AECHDM, ID-ANLE-S5000 **(AK-18)**		
	CRITERIA FOR ASSEMBLING AN ACCEPTABLE KNOWLEDGE RECORD DELINEATING THE WASTE STREAM					
158	If wastes are reassigned to a different waste matrix code based on site visual examination or radiography or Permittee confirmation activities, does the generator site have written documentation to ensure that the following steps are followed: A. Review existing information based on the container identification number and document all differences in hazardous waste number assignments B. If differences exist in the hazardous waste numbers that were assigned, reassess and document all required acceptable knowledge information (Section C3-b) associated with the new designation C. Reassess and document all sampling and analytical data associated with the waste D. Verify and document that the reassigned waste matrix code was generated within the specified time period, area and buildings, waste generating process, and that the process material inputs are consistent with the waste material parameters identified during radiography or visual examination E. Record all changes to acceptable knowledge records F. If discrepancies exist in the acceptable knowledge information for the revised waste matrix code, document the segregation of the affected portion of the waste stream, and define the actions necessary to fully characterize the waste (Section C4-3e)	CCP-TP-005, S. 4.8 S. 4.9 Att. 10	Y	AK Discrepancy Resolutions at Characterization and AK Reevaluations **(AK-22)**	Y	
161	Do site procedures ensure that headspace gas and solid/soil analytical data are used to resolve AK assignments for hazardous waste, as necessary? If a constituent is detected in headspace gas that the site believes isn't from the waste process, the site must provide documentation to support any determination that organic constituents are associated with packaging materials, radiolysis, or other uses not consistent with solvent use. If the source of the detected headspace gas solvents	CCP-TP-005, S. 4.5 S. 4.8 S. 4.9	Y	HSG S&A INHSGS090011 **(AK-46)** ECL09029M **(AK-47)** INHSG1111 **(AK-48)** ECL11036M **(AK-49)**	Y	

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	cannot be identified, the appropriate F listing will be assigned. If a constituent in a listed waste is present in solid/soil analytical results, the appropriate listed waste shall be added to the waste stream. F-listed waste assigned by acceptable knowledge shall not be removed based on headspace gas or solids analysis. In the case of totals/TCLP analysis, do procedures reflect the allowance for concentration assessments, wherein sites may add or remove total/TCLP and non-toxic F003 constituents found in headspace and solid/soil analyses? (Section C4-3e)	CCP-TP-003, S. 4.0		HSG Summary Reports for waste streams ID-AECHDM and ID-ANLE-S5000 **(AK-32)** <u>Solids S&A</u> WCS-0504 **(AK-50)** ALD05034V **(AK-51)** ALD05031S **(AK-52)** ALD05034M **(AK-53)** ALD05025N **(AK-54)** S4200-LOT-05-07 **(AK-55)** ALD12005V **(AK-56)** ALD12005S **(AK-57)** ALD12005M **(AK-58)** ALD12005N **(AK-59)** Solids S&A Summary Reports for ID-RF-S3150-A and ID-SDA-SOILS **(AK-34)**		

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
162	If sampling and analysis conducted to augment AK determines that a hazardous constituent as identified in headspace gas sampling or soil/homogeneous waste sampling is present in the waste, does the generator site indicate that they will: 1) assign the hazardous waste number to the entire waste stream as applicable, or 2) segregate drums containing detectable concentrations of solvent into a separate waste stream, and assign applicable hazardous waste numbers? (Section C4-3e)	CCP-TP-005, S. 4.5 S. 4.8 S. 4.9 CCP-TP-003, S. 4.0	Y	HSG S&A INHSGS090011 **(AK-46)** ECL09029M **(AK-47)** INHSG1111 **(AK-48)** ECL11036M **(AK-49)** HSG Summary Reports for waste streams ID-AECHDM and ID-ANLE-S5000 **(AK-32)** Solids S&A WCS-0504 **(AK-50)** ALD05034V **(AK-51)** ALD05031S **(AK-52)** ALD05034M **(AK-53)** ALD05025N **(AK-54)** S4200-LOT-05-07 **(AK-55)** ALD12005V **(AK-56)** ALD12005S **(AK-57)** ALD12005M **(AK-58)** ALD12005N **(AK-59)** Solids S&A Summary Reports for ID-RF-S3150-A and ID-SDA-SOILS **(AK-34)**	Y	
163	Does the generator site document, justify, and consistently delineate waste streams and assign hazardous waste numbers based on site specific permit requirements or state-enforced agreements? (Section C4-3e)	CCP-TP-005, S. 4.4, 4.5 & Att. 1	Y	N/A	N/A	There are no state specific HWNs. The processing of waste from the SDA is carried out under a state agreement.
164	Does the generator site have written methodologies for determining the mean concentration of solvent VOCs detected by either headspace gas analysis or homogeneous waste sampling for each waste stream or waste stream lot, and are all data ("U" flags designated as one half the MDL and "J" flags, which are less than the PRQL but greater than the MDL)? (Section C4-3e)	CCP-TP-003, Att. 3 & 4	Y	WSPF ID-RF-S5300-A, CIS LOT 137 **(GEN-2)** WSPF ID-NRF-SPC, CIS LOT 3 & 4 **(GEN-4)** INHSG1204, ECL12029M, INHSG1202,	Y	No solids/soils sampling since the last audit.

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
				ECL12023M, INHSG1206, ECL12036M **(GEN-6)**		
165	Do procedures ensure that spent solvent assignments are made by using the UCL_{90} (of mean concentration), and comparing this with the PRQLs? If the UCL_{90} exceeds the PRQL, is acceptable knowledge reevaluated and determine potential source of the constituent? (Section C4-3e)	CCP-TP-005, S. 4.5 S. 4.8 S. 4.9 CCP-TP-003, S. 4.0	Y	HSG S&A INHSGS090011 **(AK-46)** ECL09029M **(AK-47)** INHSG1111 **(AK-48)** ECL11036M **(AK-49)** HSG Summary Reports for waste streams ID-AECHDM and ID-ANLE-S5000 **(AK-32)** Solids S&A WCS-0504 **(AK-50)** ALD05034V **(AK-51)** ALD05031S **(AK-52)** ALD05034M **(AK-53)** ALD05025N **(AK-54)** S4200-LOT-05-07 **(AK-55)** ALD12005V **(AK-56)** ALD12005S **(AK-57)** ALD12005M **(AK-58)** ALD12005N **(AK-59)** Solids S&A Summary Reports for ID-RF-S3150-A and ID-SDA-SOILS **(AK-34)**	Y	
167	Does the site have written procedures for situations where concentrations of some VOCs are orders of magnitude higher than other target analytes? In these cases, elevated MDLs may be generated, and those constituents with an elevated MDL but "U" designation will not be used in mean calculations. (Section C4-3e)	CCP-TP-003, S. 4.2	Y	WSPF ID-RF-S5300-A, CIS LOT 137 **(GEN-2)** WSPF ID-NRF-SPC, CIS LOT 3 & 4 **(GEN-4)** INHSG1204, ECL12029M, INHSG1202, ECL12023M,	Y	This is evaluated at the Project Level. INL/CCP only performs HSG sampling. Analysis is performed at INL/CCP Labs.

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
				INHSG1206, ECL12036M **(GEN-6)**		
	DATA QUALITY REQUIREMENTS					
168	Are acceptable knowledge processes consistently applied among all generator sites, and does each generator site comply with the following data quality requirements for acceptable knowledge documentation: A. Precision - Precision is the agreement among a set of replicate measurements without assumption of the knowledge of a true value. The qualitative determinations, such as compiling and assessing acceptable knowledge documentation, do not lend themselves to statistical evaluations of precision. However, the acceptable knowledge information will be addressed by the independent review of acceptable knowledge information during internal and external audits. B. Accuracy - Accuracy is the degree of agreement between an observed sample result and the true value. The percentage of waste containers which require reassignment to a new waste matrix code and/or designation of different hazardous waste numbers based on sampling and analysis data and discrepancies identified by the Permittees during waste confirmation will be reported as a measure of acceptable knowledge accuracy. C. Completeness - Completeness is an assessment of the number of waste streams or number of samples collected to the number of samples determined to be useable through the data validation process. The acceptable knowledge record must contain 100 percent of the information (Permit Attachment C4-3) The usability of the acceptable knowledge information will be assessed for completeness during audits. D. Comparability - Data are considered comparable when one set of data can be compared to another set of data. Comparability is ensured through sites meeting the training requirements and complying with the minimum standards outlined for procedures that are used to implement the acceptable knowledge process. All sites must assign hazardous waste numbers in accordance with Permit Attachment C4-4 and provide this information regarding its waste to other sites who store or generate a similar waste stream.	A. CCP-PO-001, S. C4-3f CCP-QP-021, (All) WP 13-QA.03, (All) B. CCP-TP-005, S. 4.6 C. CCP-TP-005, S. 4.0 D. CCP-TP-005, S. 2.2 S. 4.4 CCP-QP-002, S. 4.3.1	Y	A. Internal Surveillance Report **(AK-27)** B. AK Accuracy Reports for waste streams ID-AECHDM, ID-RF-S3150-A, ID-SDA-SOIL, ID-ANLE-S5000, and IN-ID-BTO-030 **(AK-30)** C. AK Documentation Checklist, Attachment 1, for waste streams ID-AECHDM, ID-RF-S3150-A, ID-SDA-SOIL, ID-ANLE-S5000, and IN-ID-BTO-030 **(AK-16)** D. Training/Qualification records for Acceptable Knowledge personnel performing characterization related activities. **(GEN-21)**	Y Y Y Y	
	E. Representativeness - Representativeness expresses the degree to which sample data accurately and precisely represent characteristics of a population. Representativeness is a qualitative parameter that will be satisfied by ensuring that the process of obtaining, evaluating, and documenting acceptable knowledge information is performed in accordance with the minimum standards	E. CCP-TP-005, S. 2.2 S. 4.0 CCP-QP-002, S. 4.2.1	Y	E. Training/Qualification records for Acceptable Knowledge personnel performing characterization related	Y	

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	established in Permit Attachment C4. Sites also must assess and document the limitations of the acceptable knowledge information used to assign hazardous waste numbers (e.g., purpose and scope of information, date of publication, type and extent to which waste parameters are addressed). (Section C3-9)			activities. **(GEN-21)** AK Source Documents for waste stream ID-AECHDM **(AK-11)** AK Source Documents for waste stream ID-RF-3150-A **(AK-12)** AK Source Documents for waste stream ID-SDA-SOIL **(AK-13)** AK Source Documents for waste stream ID-ANLE-S5000 **(AK-14)** AK Source Documents for waste stream IN-ID-BTO-030 **(AK-15)**		
169	Does the generator site address quality control by tracking its performance with regard to the use of acceptable knowledge by: 1) assessing the frequency of inconsistencies among information, and 2) documenting the results of waste discrepancies identified by the generator/storage site during waste characterization or the Permittees during waste confirmation using radiography, review of radiography audio/video recordings, or visual examination, or review of visual examination records. In addition, the acceptable knowledge process and waste stream documentation must be evaluated through internal assessments by generator/storage site quality assurance organizations. (Section C4-3e)	CCP-TP-005, S. 4.6 S. 4.9 CCP-QP-021, (All) WP 13-QA.03, (All) CCP-PO-001, S. C4-3f	Y	Internal Surveillance Report **(AK-27)** AK Discrepancy Resolutions at Characterization and AK Reevaluations **(AK-22)** AK Discrepancy Resolutions **(AK-21)** AK Accuracy Reports for waste streams ID-AECHDM, ID-RF-S3150-A, ID-SDA-SOIL, ID-ANLE-S5000, and IN-ID-BTO-030 **(AK-30)**	Y	

1. NMED expects a traceability analysis to be performed, the results of which should be presented on this checklist under the "Examples of Implementation" column. Further, the traceability analysis process and results should be discussed in the Final Audit Report.

2. The WAP requirements should be presented in documents, such as procedures. Each of the questions posed under WAP requirements are meant to determine whether procedures are in place or whether documents are evident which demonstrate that the specific WAP requirement is or can be met.

Table C6-4 Headspace Gas Checklist
INL/CCP Recertification Audit A-13-18
June 3 – 6, 2013

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Headspace Gas Checklist

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-4 Headspace Gas Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	HEADSPACE GAS SAMPLING FREQUENCY					
182	Are procedures in place to ensure that randomly selected retrievably stored and newly generated waste containers will undergo headspace gas sampling and analysis as required to augment AK? (Section C-3a)	**HSG** CCP-TP-106, (All) CCP-TP-093, (All) CCP-TP-162, (All)	Y	**HSG** INHSG1202 INHSG1204 INHSG1206 **(HSG-1)**	Y	INL/CCP only performs HSG sampling. Analysis is performed by INL/CCP Labs.
		PL CCP-TP-162 (All)	Y	**PL** Random Selection Lot 3 Headspace Gas Random Sample Selection Memorandum For Waste Stream IN-ID-NRF-SPC, Lot 3 Sample Selection Container Replacement Memorandum For The Second Random Sample Lot Of Waste Stream ID-RF-S5300-A **(GEN-9)**	Y	
183	Are procedures in place to ensure that randomly selected containers will be allowed to equilibrate to sampling room temperature for 72 hours prior to sampling (18° C or higher) and that the drum ages specified in accordance with Section C1-1a(1) are met? All information necessary to determine drum age criteria must be determined, including but not limited to: • Scenario Determination • Packaging Configuration • Filter Diffusivity • Liner/Lid Opening Diameter (Section C1-1a)	CCP-TP-093, S. 4.3.1 S. 4.3.2 CCP-TP-106, Attachment 2	Y	INHSG1202 INHSG1204 INHSG1206 **(HSG-1)**	Y	Verified all elements of the DAC and that the drums are allowed to equilibrate to sampling room temperature for a minimum of 72 hours.

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-4 Headspace Gas Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	HEADSPACE GAS SAMPLING GENERAL REQUIREMENTS					
184	Are procedures in place to ensure all containers of waste are vented through filters to ensure that gases are adequately vented preventing over pressurization or development of conditions that would lead to the development of ignitable, corrosive, reactive, or other characteristic waste? (Section C-1c)	CCP-TP-082, S. 4.1	Y	INHSG1202 INHSG1204 INHSG1206 **(HSG-1)**	Y	Verified proper use of approved filters for each container.
186	Are procedures in place to ensure that the following gas sample container and holding time requirements are met: • The minimum sample volume for VOC. sample collection is 250 mL. (Note: a single 100 mL sample may be collected if the headspace is limited) • Holding temperatures shall be between 0° C and 40°C (Table C1-1)	CCP-TP-093, S. 2.3.1[A] (canister); S. 4.7.1 CCP-TP-106, Attachment 2	Y	INHSG1202 INHSG1204 INHSG1206 **(HSG-1)**	Y	
187	Are procedures in place to ensure that all sampling is performed in an appropriate radiation containment area? (Section C1-1a)	CCP-TP-093, S. 2.4.1[A]	Y	INHSG1202 INHSG1204 INHSG1206 **(HSG-1)**	Y	Verified information on the top of the chain of custody.
188	Are procedures in place to ensure that headspace gases is analyzed for the analytes listed in Table C3-2 of the Attachment C3? (Section C1-1a(1))	N/A	N/A	N/A	N/A	INL/CCP only performs HSG sampling. Analysis is performed by INL/CCP Labs.
189	Are procedures in place to ensure that all headspace gas analyses utilize either SUMMA® or equivalent canisters or on-line integrated sampling/analysis systems? (Section C1-1a(1))	N/A	N/A	N/A	N/A	INL/CCP only performs HSG sampling. Analysis is performed by INL/CCP Labs.
	MANIFOLD SAMPLING					
190	Are procedures, processes, and equipment in place to ensure that the following sampling procedures are implemented: • The sampling equipment is leak checked and cleaned upon first use and as needed • The manifold and sample canisters are evacuated to 0.1 mm HSG prior to sample collection • Cleaned and evacuated sample canisters are attached to the evacuated manifold before the manifold inlet valve is opened • The manifold inlet valve is attached to a changeable filter connected to	N/A	N/A	N/A	N/A	INL/CCP does not perform Manifold Sampling.

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-4 Headspace Gas Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	either a side port needle sampling head capable of forming an airtight seal (for penetrating a filter or rigid poly liner when necessary), a drum punch sampling head capable of forming an airtight seal (capable of punching through the metal lid of a drum while maintaining and airtight seal for sampling through the drum lid), or a sampling head with an airtight fitting for sampling through a pipe overpack container filter vent hole. Refer to Section C1-1a(4) for descriptions of these sampling heads. • Field blanks are collected using samples of room air collected in the sampling area in the immediate vicinity of the waste container. *(Note: field blanks for SUMMA® canisters are collected directly into the canister without the use of the manifold.)* • Manifold equipped with purge assembly that allows QC samples to be collected through all sampling components that affect compliance with QAOs • The manifold internal volume is calculated and documented in a field logbook • The total volume of headspace gas collected is calculated by adding the canister volume and internal manifold volume and should be less than 10 percent of the available headspace volume when a volume estimate is available (Section C1-1a(2))					
191	Are procedures, processes, and equipment in place to ensure that the following manifold sample side conditions are met: • The sampling head forms a leak-tight connection with the sampling manifold • A flexible hose allowing movement from the purge assembly to the waste container • Pressure sensors that are pneumatically connected to the manifold and must be able to measure absolute pressure from 0.05 mm HSG to 1000 mm HSG with a resolution of that must be 0.01 mm HSG at 0.05 mm of HSG. The pressure sensors shall have an operating range of 15° C to 40° C. • Sufficient canister ports shall be available to allow simultaneous collection of headspace gas samples and duplicates for VOC analysis. • Ports not occupied with sample canisters require a plug to prevent ambient air from entering the system • Ports shall have VCR® fittings for connection to the sample canisters to	N/A	N/A	N/A	N/A	INL/CCP does not perform Manifold Sampling.

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-4 Headspace Gas Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	prevent degradation of the fitting on the canister and manifold. • Sample canisters are leak-free, stainless steel pressure vessels, with a Cr-NiO SUMMA® passivated interior surface or canisters with equivalently inert surfaces, bellows valve, and a pressure/vacuum gauge. All canisters shall have VCR ® fittings to sampling and analytical equipment • The pressure/vacuum gauge must be mounted on each manifold and shall be helium-leak tested to 1.5 X 10^{-7} cc/s, have all stainless steel construction, and be capable of operating at temperatures to 125° C					
191a	• A dry vacuum pump capable of reducing the manifold pressure to 0.05 mm HSG. (Note: If an oil vacuum pump is used precautions such as a molecular sieve or cryogenic trap shall be used to prevent diffusion of oil vapors back into the manifold) • A minimum distance between the needle and the valve that isolates the pump from the manifold in order to minimize the dead volume in the manifold. • If real time equipment blanks are not available, the manifold shall be equipped with an OVA capable of detecting all analytes listed in Table C3-2 and is capable of measuring total VOC concentrations below the lowest headspace gas PRQL (Section C1-1a(2))	N/A	N/A	N/A	N/A	INL/CCP does not perform Manifold Sampling.
192	Are procedures, processes, and equipment in place to ensure that the following manifold standard side conditions are met: • A cylinder of compressed zero air, helium, argon, or nitrogen that is hydrocarbon and CO_2 free air (only hydrocarbon and CO_2-free gases required for FTIRS) and certified by the manufacturer to contain less than one ppm VOCs. The gas is used to clean the manifold between samples and to provide gas for the collection of equipment and on-line blanks *(Note: a zero air or nitrogen generator may be used, provided a sample of air is collected and found to contain less than 1 ppm total VOCs and the air is humidified)* • Cylinders of reference gas with known concentrations of analytes from Table C3-2 certified by the manufacturer to provide gases for evaluating the accuracy of the headspace gas sampling process • All cylinders of reference gases and zero air shall be connected to flow regulating devices • A humidifier filled with ASTM Type I or II water, connected, and opened to the standard side of the manifold between the compressed gas cylinders	N/A	N/A	N/A	N/A	INL/CCP does not perform Manifold Sampling.

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-4 Headspace Gas Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	and the purge assembly shall be used, if the Fourier Transform Infrared System (FTIRS) is not used. No humidifier if the FTIRS is used *(Note: Compressed gas may include water vapor between 1000 and 10000 ppmv in lieu of a humidifier)* • The humidifier is off-line during system evacuation to prevent manifold flooding					
192a	• A purge assembly that allows the sampling head to be connected to the standard side of the manifold. • A flow indicating device or pressure regulator that is connected downstream of the purge assembly to monitor the flow rate or pressure of gases through the purge assembly to ensure that excess flow is available to prevent ambient air from contaminating the QC samples and allow sample of gas from the compress gas cylinders to be collected near ambient pressure. (Section C1-1a(2))	N/A	N/A	N/A	N/A	INL/CCP does not perform Manifold Sampling.
193	Do procedures ensure that NIST Certified (or equivalent) ambient pressure sensors maintained in the sampling area must have a sufficient measurement range for the expected ambient barometric pressures and a resolution shall be 1.0 mm HSG or less? (Section C1-1a(2))	N/A	N/A	N/A	N/A	INL/CCP does not perform Manifold Sampling.
194	Do procedures ensure that the NIST traceable (or equivalent) temperature sensor in the sampling location shall have a sufficient measurement range for the ambient temperatures (18° to 50°C)? (Section C1-1a(2))	N/A	N/A	N/A	N/A	INL/CCP does not perform Manifold Sampling.
	DIRECT CANISTER SAMPLING					
195	Are procedures, processes, and equipment in place to ensure that the following operating conditions are in place for direct canister sampling: • Canisters are evacuated to 0.1 mm HSG prior to use and attached to a changeable filter connected to the sampling head • Sampling heads are capable of either punching through the metal lid of the drums while maintaining an airtight seal for sampling through the drum lid, penetrating a filter or the septum in the orifice of a self-tapping screw, or maintaining an airtight seal for sampling through a pipe overpack container filter vent hole. • Field duplicates are collected in the same manner and at the same time and using the same type of sampling apparatus as used for headspace gas sample collection. • Field blanks shall be samples of room air collected in the immediate	Bullet 1: CCP-TP-093, S. 4.4.3[A] & [B] S. 4.5.2[A] & [B]; Fig. 1 & 2 Bullet 2: CCP-TP-093, S. 4.4.1 S. 4.4.2 Bullet 3: CCP-TP-093, S. 4.5.4 Bullet 4: CCP-TP-093, S. 4.5.3, 2nd NOTE;	Y	INHSG1202 INHSG1204 INHSG1206 **(HSG-1)** CP:05:01128 – Report of Field Reference Standard Results for the Central Characterization Project – Idaho National Laboratories **(HSG-2)**		Bullet 5: Equipment blanks collected at INL/CCP Lab. Bullet 7: Canisters assembled and checked at INL/CCP Lab and audited separately.

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-4 Headspace Gas Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	vicinity of the waste drum sampling area prior to removal of the drum lid. • Equipment blanks and field reference standards shall be collected using a purge assembly equivalent to the standard side of the manifold • Less than 10 percent of the headspace is withdrawn when a headspace estimate is available *(Note: The total volume withdrawn is can be determined by adding the canister volume and the internal volume of the sampling head)* • Each sample canister is shall be equipped with a pressure/vacuum gauge capable of indicating leaks and sample collection volumes. The gauge shall be helium leak tested to 1.5 X 10^{-7} cc/s, have all stainless steel construction and be capable of tolerating temperatures to 125° C • Summa® canisters or equivalent are used to collect samples (Section C1-1a(3))	Bullet 5: N/A Bullet 6: CCP-TP-093, S. 2.3.1[A] S. 4.3.1[A.18] Bullet 7: N/A Bullet 8: CCP-TP-093, S. 2.3.1[A]				
	SAMPLING HEADS UNDER DRUM LIDS: SAMPLING THROUGH A CARBON FILTER					
196	Are procedures, process, and equipment adequate to ensure that samples collected through a filter meet the following requirements: • The lid of the drum's 90-mil rigid poly liner shall contain a hole for venting to the drum • That non-vented drums are not sampled until an internal nonconformance report is prepared, submitted, and resolved in order to obtain a representative sample • The filter shall be sealed to prevent outside air from entering the drum • The sampling head for collecting drum headspace gas shall consist of a side-port needle, a filter to prevent particle contamination of the sample, and an adapter to connect the side-port needle to the filter • The sampling head is cleaned or replaced after each use • The housing of the filter shall allow insertion of the sampling needle through the filter element or a sampling port with septum that bypasses the filter element into the drum headspace • The side port needle shall be used to reduce the potential for plugging • The purge assembly shall be modified for compatibility with the side port needle. (Section C1-1a(4)(i))	Bullet 1: CCP-TP-093, S. 4.2.1; S. 4.3.1[A.7] Bullet 2: CCP-TP-093, S. 4.2.1[B] & [C] Bullet 3: CCP-TP-093, S. 4.5.4[B] Bullet 4: CCP-TP-093, S. 2.3.1[B]; Fig. 1 & 2 Bullet 5: CCP-TP-093, S. 4.5.4[M] Bullet 6: CCP-TP-093, S. 4.5.4 S. 4.5.5 Bullet 7: CCP-TP-093, S. 2.3.1[B]; Fig. 1 & 2 Bullet 8: N/A	Y	INHSG1202 INHSG1204 INHSG1206 **(HSG-1)**	Y	2nd Bullet: no NCRs for data since last certification audit.

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-4 Headspace Gas Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	SAMPLING HEADS UNDER DRUM LIDS: SAMPLING THROUGH THE DRUM LID					
197	Are procedures in place to establish the criteria for sampling through the drum lid as opposed to sampling through a filter? (Section C1-1a(4)(ii))	N/A	N/A	N/A	N/A	INL/CCP does not sample through drum lids.
197a	If sampling through a pipe overpack container filter vent hole with an airtight device is used, are procedures in place to ensure that a sampling head with an airtight seal for sampling through a pipe overpack container filter vent hole are available? (Section C1-1a(4)(iii))	N/A	N/A	N/A	N/A	INL/CCP does not sample through drum lids.
197b	If sampling through a pipe overpack container filter vent hole is used, are the following criteria met: • The seal between the pipe overpack container surface and sampling apparatus shall be designed to minimize intrusion of ambient air. • The filter shall be replaced as quickly as is practicable with the airtight sampling apparatus to ensure that a representative sample can be taken. • All components of the sampling system that come into contact with sample gases shall be cleaned according to requirements for direct canister sampling or manifold sampling, whichever is appropriate, prior to sample collection. • Equipment blanks and field reference standards shall be collected through all the components of the sampling system that contact the headspace-gas sample. • During sampling, openings in the pipe overpack container shall be sealed to prevent outside air from entering the container. • A flow-indicating device shall be connected to sampling system and operated according to the direct canister or manifold sampling requirements, as appropriate. (Section C1-1a(4)(iii))	N/A	N/A	N/A	N/A	INL/CCP does not sample through drum lids.
197c	If sampling through a pipe overpack container filter vent hole is used, are the following criteria met? • The site has documentation that demonstrates that they have determined through testing the appropriate length of time for exchanging the filter with the sampling device to assure representative samples are collected. (Section C1-1a(4)(iii))	N/A	N/A	N/A	N/A	INL/CCP does not sample through drum lids.
198	Are procedures, process, and equipment adequate to ensure that samples collected through the drum lid by punching meet the following requirements:	N/A	N/A	N/A	N/A	INL/CCP does not sample through drum lids.

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-4 Headspace Gas Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	• The lid of the drum's 90-mil rigid poly liner shall contain a hole for venting to the drum. If the DAC for Scenario 1 is met, a sample may be collected from inside the 90-mil rigid poly liner. • If headspace gas samples are collected from the drum headspace prior to venting the 90-mil rigid poly liner, the sample is not acceptable and a nonconformance report shall be prepared, submitted, and resolved. • The drum lid shall be breached using a punch that forms an airtight seal between the drum lid and the manifold or canister • The seal between the drum lid and the sampling head shall be designed to minimize the intrusion of ambient air • All components of the sampling system that come in contact with sample gases shall be purged with humidified zero air, nitrogen, or helium prior to sample collection • Equipment blanks and field reference standards shall be collected through all components of the punch that contact the headspace gas sample • Pressure shall be applied to the punch until the drum lid has been breached • Provisions shall be made to relieve excessive drum pressure increases during drum punch operations; potential pressure increases may occur during sealing of the drum punch to the drum lid • The filter is sealed to prevent outside air from entering the drum (Section C1-1a(4)(ii))					
198a	• A flow indicating device or pressure regulator to verify flow of gases shall be pneumatically connected to the drum punch and operated in the same manner as the flow indicating device • Equipment are used to secure the drum punch sampling system to the drum lid • If the headspace gas sample is not taken at the time of drum punching, the presence and diameter of the rigid liner vent hole is documented during the punching operation for use in determining an appropriate Scenario 2 DAC. (Section C1-1a(4)(ii))	N/A	N/A	N/A	N/A	INL/CCP does not sample through drum lids.

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-4 Headspace Gas Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	QUALITY CONTROL SAMPLE COLLECTION					
199	Are procedures in place to ensure that the following QC sample requirements are met: • Field QC samples are collected on per sample batch basis for manifold and direct canister sampling. A sampling batch is defined as up to 20 samples collected within 14 days of the first sample • Field samples are collected and analyzed on a per on-line batch basis for on-line sampling/analysis systems. An on-line batch is defined as the number of headspace gas samples that are collected within a 12 hour period from the same on-line integrated analysis system • For the manifold sampling method, field blanks, equipment blanks, field duplicates, and field reference samples are collected prior to sample collection on a per sampling batch basis or one per day, whichever is more frequent • For the direct canister sampling method field blanks and field duplicates are collected on a per sampling batch basis prior to sample collection; while equipment blanks and field reference samples are collected after equipment purchase, cleaning, and assembly	Bullet 1: CCP-TP-093, S. 2.6.4 CCP-TP-106, Attachment 2 Bullet 2: N/A Bullet 3: N/A Bullet 4: CCP-TP-093, S. 4.4.5 (EB) S. 4.5.3 (FB) S. 4.5.4 (DUP) S. 4.5.6 (FRS)	Y	INHSG1202 INHSG1204 INHSG1206 **(HSG-1)** CP:05:01128 – Report of Field Reference Standard Results for the Central Characterization Project – Idaho National Laboratories **(HSG-2)**	Y	Bullet 2: INL/CCP does not perform online sampling/analysis. Bullet 3: INL/CCP does not perform manifold sampling. Equipment blanks collected by INL/CCP Lab.
199a	• For the On-line sampling method, field blanks, equipment blanks, field duplicates, and field reference samples are collected on a per on-line batch basis. *(Note: The on-line blank replaces the laboratory and equipment blanks, the on-line duplicate replaces the field duplicate and the laboratory duplicate, and the on-line sample control replace the field reference standard and the laboratory control sample.)* (Section C1-1b, C1-1b(1), C1-1b(2), C1-1b(3), C1-1b(4))	N/A	N/A	N/A	N/A	INL/CCP does not use on-line sampling and analysis.
200	Do procedures adequately assign the site project QA manager with the responsibility of monitoring field QC results and initiate the nonconformance report process in the event the following acceptance criteria are not met or sample collection frequencies are not met: • Field and equipment blanks shall be less than 3 times the detection limits specified in Table C3-2 and equipment blank results determined by FTIR shall be less than the PRQL specified in Table C3-2 (Section C1-1b(1) and C1-1b(2)) • Field reference standards shall have a recovery of between 70 and 130% (Table C1-3) • Field Duplicates shall have an RPD of less than or equal to 25 (Sections C1-1b and C1-1b(4); Table C1-3)	CCP-TP-001, Att. 10	Y	INHSG1204, ECL12029M, INHSG1202, ECL12023M, INHSG1206, ECL12036M, **(GEN-6)**	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-4 Headspace Gas Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
201	Are procedures in place to ensure that field reference standards meet the following criteria: • Field reference standards shall contain a minimum of 6 analytes listed in Table C3-2 at a range of between 10 and 100 ppmv and at concentrations greater than the MDL • Field reference standards shall be traceable to a nationally recognized standard, if available • If commercial gases are used, they shall be accompanied by a Certificate of Analysis and all field reference standards are traceable to certificates. • Commercial gases are not used past the manufacturer specified shelf life. • Field reference samples are submitted blind to the laboratory at a frequency of one per sampling batch. (Note: Field reference standards may be discontinued for direct canister method if QAO accuracy objectives are met) (Section C1-1b(3))	Bullets 1–3 & 5: CCP-TP-093, S. 2.6.3 Bullet 4: CCP-TP-093, S. 2.3.1.[H] CCP-TP-106, Attachment 2, #7	Y	CP:05:01128 – Report of Field Reference Standard Results for the Central Characterization Project – Idaho National Laboratories **(HSG-2)**	Y	Certificate of Analysis was provided to verify the 6 analytes and their true concentrations
202	Are procedures in place to ensure that field duplicate samples are collected sequentially and in accordance with Table C1-1? (Section C1-1b(4))	CCP-TP-093, S. 4.5.4 (DUP)	Y	INHSG1202 INHSG1204 INHSG1206 **(HSG-1)**	Y	Headspace gas duplicates are collected at the same time.
	SAMPLE EQUIPMENT TESTING, INSPECTION AND MAINTENANCE					
203	Are procedures in place to ensure that sample containers are cleaned in accordance with the following specifications: • All sampling components that contact sample gases are constructed of inert materials such as stainless steel or Teflon® • The sampling manifold and canisters are properly cleaned and leak checked prior to each sampling event in accordance to or equivalent with TO-14A or TO-15 methodology • SUMMA® canisters or equivalent are cleaned on an equipment cleaning batch basis. An equipment cleaning batch is defined as the number of canisters that can be cleaned together at one time using the same cleaning method • The cleaning system consists of an optional oven and a vacuum manifold which uses a dry vacuum pump or a cryogenic trap backed by an oil sealed pump • Prior to cleaning a 24 hour leak check shall be performed (+/- 2 psig) on	N/A	N/A	N/A	N/A	INL/CCP performs HSG sampling only. Cleaning operations are performed by INL Labs and evaluated in a separate audit.

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-4 Headspace Gas Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	all canisters • Canisters that shall be checked for leaks, repaired, and reprocessed • One canister per equipment cleaning batch is filled with humid zero air or humid high purity nitrogen and analyzed for VOCs • A batch is considered clean if VOC concentrations are less than 3 times the MDLs specified in Table C3-2 • Certified leak-free canisters are evacuated to 0.1 mm HSG or less for storage • Canister cleaning certification documentation is available at the cleaning facility and the cleaning facility initiates canister tags. (Section C1-1c, C1-1c(1))					
204	Are procedures in place to ensure that manifold pressure sensors and ambient air temperature sensors are certified prior to initial use and annually using NIST traceable standards? In addition OVAs if used shall be calibrated daily using known calibration gases and the balance of the OVA calibration is consistent with the manifold purge gas? (Section C1-1d)	N/A	N/A	N/A	N/A	INL/CCP performs HSG sampling only. Cleaning operations are performed by INL Labs and evaluated in a separate audit.
205	Are procedures in place to ensure that sampling equipment are cleaned and leak checked using the following specifications: • Surfaces of all sampling equipment that will come in contact with sample gases are thoroughly inspected and cleaned prior to assembly • Manifolds and sampling heads shall be purged with humidified zero air, nitrogen, or helium and leak checked after assembly • The cleaning shall be repeated if routine system cleaning is inadequate • Manifolds and sampling heads which are reused shall be cleaned and leak checked according to procedures in the EPA's Compendium Method TO-14A or TO-15 after sample collection, field duplicate collection, field blank collection, and after the additional cleaning require for field reference samples. All manifold ports shall be capped or closed with valves (sample canisters may be attached as well) • Manifolds are cleaned by heating the sample side of the manifold to 150° C and periodically evacuated and flushed with humidified zero air, nitrogen, or helium • Manifolds not in use are demonstrated as clean before storage with a positive pressure of humidified zero air, nitrogen, or helium gas in the sampling and standard sides	N/A	N/A	N/A	N/A	INL/CCP performs HSG sampling only. Cleaning operations are performed by INL Labs and evaluated in a separate audit.

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-4 Headspace Gas Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	• Sampling is suspended when the analysis of an equipment blank indicated the if VOC limits have been exceeded or if a leak test fails • Sampling systems are cleaned after field reference standard collection by installing a gas tight connector in place of the sampling head, between the flexible hose and purge assembly. This allows the sample and standard side to be flushed with humidified zero air, nitrogen, or helium in conjunction with heated pneumatic lines • Needles, airtight fitting or seal, adapters, and filters are cleaned in accordance with the EPA Method TO-14A or TO-15 procedures. Sample heads shall be discarded or cleaned according to Method TO-15. In addition, the needle, the airtight fitting and seal, and the filter should be purged with zero air, nitrogen, or helium and capped for storage (Section C1-1c(2) , Section C1-1c(3), Section C1-1c(4), and Section C1-c(5))					
	SAMPLE HANDLING AND CUSTODY					
207	Do formats for field logs and custody records specify documentation of the following information: • Name of sampling facility • Waste container identification number • Sample identification number of each sample referenced to waste container • Sample matrix • Time and date of sample collection • Type/number and size of sample container(s) • Method of sample preservation • Requested analyses • Sampler(s) name through signature • Signatures of custodians relinquishing and receiving custody of samples including date and time of transfer until time of final disposition • Analytical laboratory • Off-site shipping information (date, time, shipper, mode, air bill or lading	CCP-TP-093, S. 4.4.5[O]; S. 4.5.3[M]; S. 4.5.4[S]; S. 4.5.5[S] & [X]; S. 4.5.6[N] & [O] Attachment 1	Y	INHSG1202 INHSG1204 INHSG1206 **(HSG-1)**	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-4 Headspace Gas Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	number) (Section C1-5)					
208	Are procedures are in place to ensure that samples and sampling equipment are identified with unique identification numbers? (Section C1-5)	CCP-TP-093, S. 4.5.3[M] S. 4.5.4[S] S. 4.5.5[S] S. 4.5.6[N] Attachment 1	Y	INHSG1202 INHSG1204 INHSG1206 **(HSG-1)**	Y	SUMMA canisters are provided by the ECL and audited separately.
209	Do sample tags or labels contain the following information: • Sample Description • Ambient temperature and pressure • Sample identification number • Analyses requested • Date/Time of collection • QC Designation (if applicable) • Sampler's initials and organization (Section C1-5)	CCP-TP-093, Attachment 1	Y	HSG: INHSG1202 INHSG1204 INHSG1206 **(HSG-1)**	Y	
210	All sampling equipment, canisters, and samples are identified with unique identification numbers that are traceable to equipment cleaning batches? (Section C1-5)	CCP-TP-093, S. 4.5.3[M] S. 4.5.4[S] S. 4.5.5[S] S. 4.5.6[N] Attachment 1	Y	INHSG1202 INHSG1204 INHSG1206 **(HSG-1)**	Y	
211	Are procedures in place to ensure samples are sealed with intact custody seals and that one or more of the following custody conditions are met: • It is in the possession of an authorized individual • It is in the view of an authorized individual, after being in the possession of that individual • It was in the possession of an authorized individual and access to the sample was controlled by locking or placement of signed custody seals that prevent undetected access • It is in a designated secure area, such as a controlled access location with complete documentation of personnel access or a radiological containment area (hot cell or glove box) (Section C1-5)	CCP-TP-093, S. 4.6 NOTE S. 4.6.1	Y	INHSG1202 INHSG1204 INHSG1206 **(HSG-1)**	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-4 Headspace Gas Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
212	Are procedures in place to ensure that discrepant sample information, indications of damage, or indications of tampering are documented? (Section C1-5)	CCP-TP-093, Attachment 1	Y	INHSG1202 INHSG1204 INHSG1206 **(HSG-1)**	Y	Comments on the COC Page 2.
214	Are procedures in place to ensure that sample custody is maintained until the sample is released by the site project manager or expended? (Section C1-5)	**HSG** CCP-TP-093, Attachment 1 **PL** CCP-TP-093, Att. 1	Y Y	**HSG** INHSG1202 INHSG1204 INHSG1206 **(HSG-1)** **PL** INHSG1204, ECL12029M, INHSG1202, ECL12023M, INHSG1206, ECL12036M, **(GEN-6)**	Y Y	Chain of custody within the analytical batch reports annotate sample disposition.
215	Are procedures in place to ensure that SUMMA® canisters are packaged to prevent damage to the pressure gauge or associated connections by packaging in metal boxes with separate compartments or cardboard boxes with foam inserts? (Section C1-6)	CCP-TP-093, S. 4.7	Y	INHSG1202 INHSG1204 INHSG1206 **(HSG-1)**	Y	Foam inserts used by field personnel.
216	Are procedures in place to ensure that samples are packaged to prevent damage to the sample container and maintain preservation temperature? (Section C1-6)	CCP-TP-093, S. 4.7.1 S. 4.7.2	Y	INHSG1202 INHSG1204 INHSG1206 **(HSG-1)**	Y	
217	Are procedures in place to ensure that adequate cold packs are included in the DOT approved sample shipping container to ensure that all temperature requirements are met? (Section C1-6)	CCP-TP-093, S. 4.7.1 S. 4.7.4	Y	INHSG1202 INHSG1204 INHSG1206 **(HSG-1)**	Y	INL CCP utilized vehicles that were air conditioned.
218	Are procedures in place to ensure that sample COC forms are secured for shipment to the inside of the sealed or locked shipping container lid and that samples and shipping containers are affixed with tamper proof seals or devices? (Section C1-6)	CCP-TP-093, S. 4.7.9	Y	INHSG1202 INHSG1204 INHSG1206 **(HSG-1)**	Y	
	LABORATORY OPERATIONS					
220	Are procedures in place to ensure that all VOC analyses are evaluated using the	N/A	N/A	N/A	N/A	INL/CCP only performs HSG

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-4 Headspace Gas Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	following criteria: • Precision is assessed by analyzing of laboratory duplicates, Laboratory Control Sample (LCS), and PDP blind-audit samples in comparison to Table C3-2 • Accuracy is as %R shall be assessed by analyzing LCS samples and PDP blind audit samples in comparison to criteria in Table C3-3 • MDLs are expressed in nanograms for VOCs and must be less than or equal to those listed in Table 3-2 • Laboratory completeness shall be expressed as the number of samples analyzed with valid results as a percent of the total number of samples submitted for analysis. A composited sample is treated as one sample for the purposes of completeness, because only one sample is run through the analytical instrument • Comparability shall be achieved through the use of standardized methods, traceable standards by requiring successful participation in the PDP program • Representativeness will be achieved by collecting sufficient numbers of samples using clean sampling equipment that does not introduce sample bias. • All method detection limits and program required detection limits shall be less than the Program Required Detection Limits listed in Table C3-2 and the detection limit study procedures shall be documented in laboratory SOPs. In addition, the laboratory shall demonstrate that they are capable of meeting the Program Required Detection Limits by analyzing at least one calibration standard below the PRQL (Section C3-5)					sampling. Analysis is performed by INL/CCP Labs.
221	Are procedures in place to ensure that only laboratories that are qualified through participation in the Performance Demonstration Program are eligible to analyze waste samples? (Section C-3a(3))	N/A	N/A	N/A	N/A	INL/CCP only performs HSG sampling. Analysis is performed by INL/CCP Labs.
222	Are procedures in place to ensure that Tentatively Identified Compounds shall be added to the target compound list if they are reported in 25% of the waste containers sampled from a given waste stream and if they appear in the 20 NMAC 4.1.200 (incorporating 40 CFR 261) Appendix VIII list? (Section C-3a(1))	CCP-TP-003, S. 4.3	Y	WSPF ID-RF-S5300-A, CIS LOT 137 **(GEN-2)** WSPF ID-NRF-SPC, CIS LOT 3 & 4 **(GEN-4)** INHSG1204, ECL12029M, INHSG1202, ECL12023M,	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-4 Headspace Gas Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
				INHSG1206, ECL12036M **(GEN-6)**		
222a	Are procedures documented to ensure that the following criteria are met with regard to the recognition and reporting of TICS for GC/MS Methods for headspace gas sampling: • Relative intensities of major ions in the reference spectrum (ions greater than 10% of the most abundant ion) should be present in the sample spectrum. • The relative intensities of the major ions should agree within ± 20 percent. • Molecular ions present in the reference spectrum should be present in the sample spectrum. • Ions present in the sample spectrum but not in the reference spectrum should be reviewed for possible background contamination or presence of coeluting compounds. • Ions present in the reference spectrum but not in the sample spectrum should be reviewed for possible subtraction from the sample spectrum because of background contamination or coeluting peaks. • The reference spectra used for identifying TICs shall include, at minimum, all of the available spectra for compounds that appear in the 20.4.1.200 NMAC (incorporating 40 CFR 261) Appendix VIII list. The reference spectra may be limited to VOCs when analyzing headspace gas samples. • TICs for headspace gas analyses that are performed through FTIR analyses shall be identified in accordance with the specifications of SW-846 Method 8410. (Section C3-1)	N/A	N/A	N/A	N/A	INL/CCP only performs HSG sampling. Analysis is performed by INL/CCP Labs.
222b	Are procedures in place to assure that TICs are reported as part of the analytical batch data reports for GC/MS Methods in accordance with the following minimum criteria: • a TIC in an individual container headspace gas or solids sample shall be reported in the analytical batch data report if the TIC meets the SW-846 identification criteria listed above and is present with a minimum of 10% of the area of the nearest internal standard. • a TIC in a composited headspace gas sample that contains 2 to 5 individual container samples shall be reported in the analytical batch data report if the TIC meets the SW-846 identification criteria listed above and is present with a minimum of 2% of the area of the nearest internal standard. • a TIC in a composited headspace gas sample that contains 6 to 10 individual container samples shall be reported in the analytical batch data	N/A	N/A	N/A	N/A	INL/CCP only performs HSG sampling. Analysis is performed by INL/CCP Labs.

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-4 Headspace Gas Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	report if the TIC meets the SW-846 identification criteria listed above and is present with a minimum of 1% of the area of the nearest internal standard. • a TIC in a composited headspace gas sample that contains 11 to 20 individual container samples shall be reported in the analytical batch data report if the TIC meets the SW-846 identification criteria listed above and is present with a minimum of 0.5% of the area of the nearest internal standard. (Section C3-1)					
	QUALITY ASSURANCE OBJECTIVES					
224	Are procedures in place to ensure that the precision of the headspace gas sampling and analysis must be assessed by the sequential collection of field duplicates for manifold sampling operations or simultaneous collection of field duplicates for direct canister sampling operations for VOCs? (Section C3-2)	CCP-TP-093, S. 4.5.4	Y	INHSG1202 INHSG1204 INHSG1206 **(HSG-1)**	Y	INL/CCP utilizes direct canister sampling.
225	Are procedures in place to ensure that corrective action will be taken if the duplicate RPD exceeds 25% for any analyte found greater than the PRQL in both of the duplicate samples? (Section C3-2)	CCP-TP-001, S. 4.2 & Att. 10	Y	INHSG1204, ECL12029M, INHSG1202, ECL12023M, INHSG1206, ECL12036M **(GEN-6)**	Y	This is determined at Project Level.
226	Are procedures in place to ensure that the accuracy of headspace gas sampling is assessed through the collection of field reference standards and at a frequency of one field response standard for every 20 containers sampled or per sampling batch and through the collection of equipment blanks at the frequency of one for every equipment cleaning batch ? (Section C3-2)	CCP-TP-093, S. 4.4.5 (EB) S. 4.5.3 (FB) S. 4.5.6 (FRS)	Y	INHSG1202 INHSG1204 INHSG1206 **(HSG-1)** CP:05:01128 – Report of Field Reference Standard Results for the Central Characterization Project – Idaho National Laboratories **(HSG-2)**	Y	
227	Are procedures in place to ensure that corrective actions are taken if the field reference standard is less than 70% recovery or greater than 130% and that if the blank concentration for any blank exceeds 3 times the MDL listings in Table B3-2? (Section C3-2)	CCP-TP-001, S. 4.2 & Att. 10	Y	INHSG1204, ECL12029M, INHSG1202, ECL12023M, INHSG1206,	Y	This is determined at Project Level.

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-4 Headspace Gas Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
				ECL12036M **(GEN-6)**		
228	Are procedures in place to ensure that sampling completeness shall be expressed as the number of valid samples collected as a percent of the total number of samples collected for each waste steam, where a valid sample is defined as a sample collected in accordance with approved sampling methods and the drum was properly prepared for sampling? (Section C3-2)	CCP-TP-002, Att. 1	Y	WSPF ID-RF-S5300-A, CIS LOT 137 **(GEN-2)** WSPF ID-NRF-SPC, LOT 3 & 4 **(GEN-4)** INHSG1204, ECL12029M, INHSG1202, ECL12023M, INHSG1206, ECL12036M **(GEN-6)**	Y	
229	Are procedures in place to ensure that the minimum sampling completeness percentage for any waste stream is 90 percent? (Section C3-2)	CCP-TP-002, Att. 1	Y	WSPF ID-RF-S5300-A, CIS LOT 137 **(GEN-2)** WSPF ID-NRF-SPC, CIS LOT 3 & 4 **(GEN-4)** INHSG1204, ECL12029M, INHSG1202, ECL12023M, INHSG1206, ECL12036M **(GEN-6)**	Y	
230	Are procedures in place to ensure that sample comparability is assured through the use and application of uniform procedures and equipment and application of data usability criteria, and that corrective action is taken if the uniform procedures and equipment are not used without approved and justified deviations? (Section C3-2)	CCP-TP-106, Attachment 2	Y	INHSG1202 INHSG1204 INHSG1206 **(HSG-1)**	Y	Comparability is completed after sample analysis of duplicates.
231	Are procedures in place to ensure that sample representativeness is maintained? (Section C3-2)	CCP-TP-106, Attachment 2	Y	INHSG1202 INHSG1204 INHSG1206 **(HSG-1)**	Y	

1. The WAP requirements should be presented in documents, such as procedures. Each of the questions posed under WAP requirements is meant to ask whether procedures are in place or whether documents are evident which demonstrate that the specific WAP requirement is or can be met.

Table C6-1 Waste Analysis Plan (WAP) Checklist
INL/CCP Recertification Audit A-13-18
June 3 – 6, 2013

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Waste Analysis Plan (WAP) General Checklist for use at DOE's Generator/Storage Sites

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	WASTE STREAM IDENTIFICATION					
1	Does the generator/storage site define "waste stream" as waste materials that have common physical form, that contain similar hazardous constituents, and that are generated from a single process or activity? (Attachment C Section C-0a)	N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012
2	Are procedures in place to ensure that the generator/storage site assigns one of the Summary Category Groups (S3000-homogeneous solids, S4000-soils/gravel, S5000-debris waste) to each waste stream? (Section C-1b)	N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012
3	Are procedures in place to ensure that the generator/storage site assigns Waste Matrix Code Groups (e.g., solidified inorganics, solidified organics, salt waste, soils, combustible waste, filters, graphite, heterogeneous debris waste, inorganic nonmetal waste, lead/cadmium metal, uncategorized metal) to each waste stream? (Section C-0a)	N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012
4	Are procedures in place to ensure that the generator/storage site assigns a Waste Stream WIPP Identifier (ID) to each waste stream? (Section C3-6b(1))	N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
4a	Are procedures in place for generator/storage sites to submit an AK Sufficiency Determination (Determination Request) to the Permittees to meet all or part of the waste characterization requirements including: • All information specified in Permit Attachment C4, Section C4-3d • Identification of relevant hazardous constituents, and correctly identifies all toxicity characteristic and listed hazardous waste numbers • All hazardous waste number assignments must be substantiated by supporting data and, if not, whether this lack of substantiation compromises the interpretation • Resolution of data discrepancies between different AK sources must be technically correct and documented • The AK Summary includes all the identification of waste material parameter weights by percentage of the material in the waste stream, and determinations are technically correct • All prohibited items specified in the TSDF-WAC should be addressed, and conclusions drawn are technically adequate and substantiated by supporting information • If the AK record includes process control information specified in Permit Attachment C4, Section C4-3b, the information should include procedures, waste manifests, or other documentation demonstrating that the controls were adequate and sufficient. • The site must provide the supporting information necessary to substantiate technical conclusions within the Determination Request, and this information must be correctly interpreted. (Section C-0b, Section C4-3d)	N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012
4b	If a generator/storage site does not submit a Determination Request or if the Determination Request is not approved, are procedures in place for the generator/storage site to perform radiography or VE on 100% of the containers in a waste stream as specified in Permit Attachment C1? (Section C-0b)	N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
4c	Are procedures in place to ensure that the generator/storage sites complete a Waste Stream Profile Form (WSPF) and Characterization Information Summary (CIS) as specified in Permit Attachment C3, Sections C3-6b(1) and C3-6b(2)? (Section C-0c)	N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012
6	Are procedures in place to ensure that the generator/storage site assigns EPA hazardous waste numbers associated with the waste? If so, do these assigned EPA hazardous waste numbers correspond to the permitted EPA hazardous waste numbers in Table C-5? Are there any assigned EPA hazardous waste numbers that are not permitted EPA hazardous waste numbers on the Table C-5? If so, did the generator/storage site reject the waste for shipment to and disposal at WIPP? Did the generator assign a state hazardous waste codes or numbers? If so, is it assigned to waste that is permitted at WIPP? (Section C-1b)	N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012
7	Are procedures in place to ensure that Summary Category Groups are defined as follows: S3000- Homogeneous solids are solid material, inorganic process residues, inorganic sludges, salt waste, and pyrochemical salt waste excluding soils, that do not meet NMED criteria for classification as debris and are at least 50 percent by volume homogeneous solids or comprise the majority of the waste stream S4000- Waste streams that are at least 50 percent by volume soil/gravel, or comprise the majority of the waste stream S5000- Waste streams that are at least 50 percent volume materials that meet the NMED criteria for debris, or comprise the majority matrix of materials. The criteria for debris are solid materials intended for disposal that exceed 2.36 inch particle size and is a manufactured object, plant or animal matter, or natural geologic material. Particles smaller than 2.36 inches in size may be considered debris if the debris is a manufactured object and if it is not a particle of S3000 or S4000 material. (Section C-0a)	N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
8	Does the generator/storage facility have procedures in place to ensure that the following waste characterization parameters will be obtained: • Determination whether TRU mixed waste streams comply with the applicable provisions of the TSDF-WAC • Determination whether TRU mixed wastes exhibit a hazardous characteristic per 20.4.1.200 NMAC (incorporating 40 CFR 261 Subpart C) • Determination whether TRU mixed wastes are listed per 20.4.1.200 NMAC (incorporating 40 CFR 261 Subpart D) • Estimation of waste material parameter weights (Section C-2)	N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012
9	Are procedures in place to ensure that waste streams identified to contain incompatible materials or materials incompatible with waste containers cannot be shipped unless treated to remove the incompatibility? (Section C-1c)	N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012
10	Are procedures in place to ensure that the generator/storage site uses acceptable knowledge and, as necessary, radiography and visual examination analysis as specified in Table C-1? (Section C-3)	N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012
	UNACCEPTABLE WASTE					

12	Are procedures in place to ensure that the generator/storage site ensures, through administrative and operational procedures and characterization techniques, that waste containers do not include the following unacceptable waste:
	• liquid waste is not acceptable at WIPP. Liquid in the quantities delineated below is acceptable
	  • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of radiography or visual examination
	  • Internal containers with more than 60 milliliters or 3 percent by volume observable liquid, whichever is greater, are prohibited
	  • Containers with Hazardous Waste number U134 assigned shall have no observable liquid
	  • Overpacking the outermost container that was examined during radiography or visual examination or redistributing untreated liquid within the container shall not be used to meet the liquid volume limits
		N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	• non-radionuclide pyrophoric materials • hazardous wastes not occurring as co-contaminants with TRU wastes (non-mixed hazardous wastes) • wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes • wastes containing explosives or compressed gases (continued below)					
12a	• wastes with polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization • wastes exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003) • waste that has ever been managed as high-level waste and waste from tanks specified in Table C-4, unless specifically approved through a Class 3 permit modification • any waste container from a waste stream (or waste stream lot) which has not undergone either radiographic or visual examination of a statistically representative subpopulation of the wastes stream in each shipment pursuant to Permit Attachment C7 • any waste container from a waste stream which has not been preceded by an appropriate, certified Waste Stream Profile Form (see Section C-1d) (Section C-1c)	N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012
	WASTE ACCEPTANCE CONTROL					
14	Are procedures in place to ensure that the generator/storage site uses a Waste Stream Profile Form (WSPF) which includes, at a minimum, the information indicated on the attached WSPF found in Figure C-1 and a Characterization Information Summary (CIS) prior to waste disposal at the WIPP? (Section C-1d)	N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012
16	Are procedures in place to ensure that additional WSPFs are provided to WIPP and NMED for waste streams or portions of waste streams that are reclassified based upon waste characterization information? (Section C-1d)	N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012
16a	Are criteria in place to determine the specific circumstances under which a WSPF is revised versus when a new WSPF is required? (Section C-1d)	N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	GENERAL CHARACTERIZATION REQUIREMENTS					
25	Are procedures in place to ensure that Acceptable Knowledge is used in waste characterization activities to delineate TRU mixed waste streams, to assess whether TRU mixed wastes comply with the TSDF-WAC, to assess whether TRU mixed waste exhibits a hazardous characteristic (20.4.1.200 NMAC, incorporating 40 CFR 261 Subpart C), and to assess whether TRU wastes are listed (20.4.1.200 NMAC, incorporating 40 CFR 261 Subpart D), and to estimate waste material parameter weights? (Section C-3a)	N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012
26	Are procedures in place to ensure that radiography and/or visual examination are used as necessary to: • Examine a waste container to determine the physical form • Identify observable liquid in excess of TSDF-WAC limits and containerized gases • Verify the physical form matches the waste stream description (Section C-3b)	**RTR** CCP-TP-053, S. 1.0, Table 1 & Att. 2 CCP-TP-508, S. 1.0, Table 1 & Att. 2 **VE** CCP-TP-113, S. 1.1 Att. 1 & 2 CCP-TP-006, S 1.1 & Att. 1 CCP-TP-500, S. 1.1 & Att. 1	Y Y	**RTR** RTR BDRs: INRTR5120001 INRTR5120002 INRTR5120003 INRTR5120004 INLRHRTR12005 INLRHRTR12013 INLRHRTR13001 INLRHRTR13002 INLRHRTR13003 **(RTR-1)** **VE** IN-SRP-VE-000028 IN-SRP-VE-000001 IN-ARP-VE-002793 IN-SRP-VE-000183 INLRHVE12001 **(VE-1)**	Y Y	
28	Are procedures in place to ensure that the following characterization activities shall occur: • Acceptable Knowledge for all wastes, with testing as necessary to augment AK including; - Visual examination or radiography for all waste containers	N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	DATA GENERATION, VERIFICATION, VALIDATION, DOCUMENTATION, AND QUALITY ASSURANCE					
30	Are procedures in place to ensure that the following Data Quality Objectives are met: • Use Acceptable Knowledge to delineate TRU mixed waste streams, assess whether TRU mixed wastes comply with the applicable requirements of the TSDF-WAC, assess whether TRU mixed wastes exhibit a hazardous characteristic, assess whether TRU mixed wastes are listed and to estimate waste material parameter weights • Use radiography or visual examination to verify the physical form of the waste matches its waste stream description as determined by AK and to verify the absence of prohibited items (Section C-4a(1))	N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012
31	Are procedures in place to ensure that the following Quality Assurance Objectives are adequately defined and assessed for each characterization method: • Precision as a measure of the mutual agreement among multiple measurements. • Accuracy as the degree of agreement between a measurement result and a true or known value. • Completeness is a measure of the amount of valid data obtained from a method compared to the total amount of data obtained that is expressed as a percentage. • Comparability is the degree to which one data set can be compared to another data set. • Representativeness as an expression of the degree to which data represent characteristics of a population. (Section C-4a(2))	**RTR** CCP-TP-053, Att. 3 CCP-TP-508, Att. 4 **VE** CCP-TP-113, Att. 3 CCP-TP-006, Att. 2 CCP-TP-500, Att. 2 & 3	Y Y	**RTR** RTR BDRs: INRTR5120001 INRTR5120002 INRTR5120003 INRTR5120004 INLRHRTR12005 INLRHRTR12013 INLRHRTR13001 INLRHRTR13002 INLRHRTR13003 **(RTR-1)** **VE** IN-SRP-VE-000028 IN-SRP-VE-000001 IN-ARP-VE-002793 IN-SRP-VE-000183 INLRHVE12001 **(VE-1)**	Y Y	
32	With respect to data generation, are procedures in place to ensure that the generator/storage site's waste characterization program meets the following general requirements: • Testing data packages and batch data reports must be reported accurately in a pre-approved format, must be maintained in permanent files, and must be traceable? • All data must receive a technical review by another qualified operator?	**RTR** CCP-TP-053, S. 4.9, 4.10, 5.0, Att. 2 & 3 CCP-TP-508, S. 4.8, 4.9, 5.0, Att. 2 & 3	Y	**RTR** RTR BDRs: INRTR5120001 INRTR5120002 INRTR5120003 INRTR5120004 INLRHRTR12005 INLRHRTR12013 INLRHRTR13001	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	(Section C3-4a)			INLRHRTR13002 INLRHRTR13003 **(RTR-1)**		
		VE CCP-TP-113, Att. 3 CCP-TP-006, Att. 2 CCP-TP-500, Att. 2	Y	**VE** IN-SRP-VE-000028 IN-SRP-VE-000001 IN-ARP-VE-002793 IN-SRP-VE-000183 INLRHVE12001 **(VE-1)**	Y	
33	Are procedures in place to ensure that the generator/storage site performs validation of waste characterization data for each waste container? (Section C-4)	**RTR** CCP-TP-053, S. 4.10 & Att. 3 CCP-TP-508, S. 4.9, Att. 3 & 4	Y	**RTR** RTR BDRs: INRTR5120001 INRTR5120002 INRTR5120003 INRTR5120004 INLRHRTR12005 INLRHRTR12013 INLRHRTR13001 INLRHRTR13002 INLRHRTR13003 **(RTR-1)**	Y	For Project Level refer to C6-1, May 8, 2012
		VE CCP-TP-113, Att. 2 & 3 CCP-TP-006, Att. 1 & 2 CCP-TP-500, Att. 1 & 2	Y	**VE** IN-SRP-VE-000028 IN-SRP-VE-000001 IN-ARP-VE-002793 IN-SRP-VE-000183 INLRHVE12001 **(VE-1)**	Y	
34	Are procedures in place to ensure that the generator/storage site has a pre-approved format for reporting waste characterization data? (Section C-4a(3))	**RTR** CCP-TP-053, (All) CCP-TP-508, (All)	Y	**RTR** RTR BDRs: INRTR5120001 INRTR5120002 INRTR5120003 INRTR5120004 INLRHRTR12005 INLRHRTR12013 INLRHRTR13001 INLRHRTR13002 INLRHRTR13003 **(RTR-1)**	Y	For Project Level refer to C6-1, May 8, 2012

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
		VE CCP-TP-113, Att. 2 & 3 CCP-TP-006, Att.1 & 2 CCP-TP-500, Att. 1 & 2	Y	**VE** IN-SRP-VE-000028 IN-SRP-VE-000001 IN-ARP-VE-002793 IN-SRP-VE-000183 INLRHVE12001 **(VE-1)**	Y	
35	Are procedures in place to ensure that the generator/storage site prepares testing batch data reports to meet the requirements of their own site-specific QAPjP and/or SOPs? (Section C-4a(3))	**RTR** CCP-TP-053, (All) CCP-TP-508, (All)	Y	**RTR** RTR BDRs: INRTR5120001 INRTR5120002 INRTR5120003 INRTR5120004 INLRHRTR12005 INLRHRTR12013 INLRHRTR13001 INLRHRTR13002 INLRHRTR13003 **(RTR-1)**	Y	For Project Level refer to C6-1, May 8, 2012
		VE CCP-TP-113, S. 4.6 CCP-TP-006, S. 4.5 CCP-TP-500, S. 4.3.2	Y	**VE** IN-SRP-VE-000028 IN-SRP-VE-000001 IN-ARP-VE-002793 IN-SRP-VE-000183 INLRHVE12001 **(VE-1)**	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
36	Are procedures in place to ensure that all raw data is collected and managed at the data generation level in accordance with the following criteria: • All raw data shall be signed and dated in reproducible ink by the individual collecting the data, or signed and dated using electronic signatures • All data shall be recorded clearly, legibly, and accurately in field records • All changes to original data shall be lined out, initialed, and dated by the individual making the change. Original data may not be obliterated or otherwise be made unreadable • All data shall be transferred and reduced from field records completely and accurately • All field records shall be maintained as specified in Table C-2 of Attachment C • Data shall be organized into standard reporting formats for reporting purposes • All electronic and video data must be stored to ensure that waste container and QC data are readily retrievable (Section C3-4a)	**RTR** CCP-TP-053, S. 5.0, Att. 2 & 3 CCP-TP-508, S. 5.0, Att. 2, 3 & 4 **VE** CCP-TP-113, S. 5.0 & Att. 3 CCP-TP-006, S. 5.0 & Att. 2 CCP-TP-500, S. 5.0 & Att. 2	Y Y	**RTR** RTR BDRs: INRTR5120001 INRTR5120002 INRTR5120003 INRTR5120004 INLRHRTR12005 INLRHRTR12013 INLRHRTR13001 INLRHRTR13002 INLRHRTR13003 **(RTR-1)** **VE** IN-SRP-VE-000028 IN-SRP-VE-000001 IN-ARP-VE-002793 IN-SRP-VE-000183 INLRHVE12001 **(VE-1)**	Y Y	
37	Are procedures in place to ensure that 100 % of batch data reports are subject to independent technical review by an individual qualified to review the data who was not involved in the generation or recording of the data under review. The reviewer shall release the data through signature with an associated review checklist prior to characterization of the associated waste and shipment to the WIPP. The review shall ensure the following, as applicable: • Data generation and reduction were conducted according to the methods used and reported in the proper units and significant figures • Calculations have been verified by a valid calculation program, a spot check of verified calculation programs, and/or a 100 percent check of all hand calculations • The data have been reviewed for transcription errors • The testing QA documentation for BDRs is complete and includes, as applicable, raw data, calculation records, calibration records • Radiography tapes are reviewed on a waste container basis at a minimum of once per testing batch or once per day of operation, whichever is less frequent. The radiography tape will be reviewed against the data on the radiography form to ensure that data are complete and correct • QAOs have been met (Section C3-4a(1))	**RTR** CCP-TP-053, S. 4.6, 4.10 & Att. 3 CCP-TP-508, S. 4.5, 4.9 & Att. 3 **VE** CCP-TP-113, Att. 3 CCP-TP-006, Att. 2 CCP-TP-500, Att. 2	Y Y	**RTR** RTR BDRs: INRTR5120001 INRTR5120002 INRTR5120003 INRTR5120004 INLRHRTR12005 INLRHRTR12013 INLRHRTR13001 INLRHRTR13002 INLRHRTR13003 **(RTR-1)** **VE** IN-SRP-VE-000028 IN-SRP-VE-000001 IN-ARP-VE-002793 IN-SRP-VE-000183 INLRHVE12001 **(VE-1)**	Y Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
40	Are procedures in place to ensure that 100 percent of all batch data reports receive a Site Project Manager signature release with an associated review checklist prior to characterization of the associated waste and shipment to the WIPP. This release shall ensure the following: • Testing batch QC checks were properly performed. Radiography data are complete and acceptable based on evidence of videotape review of one waste container per day or once per testing batch, whichever is less frequent • Data generation level independent technical review, validation, and verification have been performed as evidenced by the completed review checklists and appropriate signature releases. • Independent technical reviewers were not involved in the generation or recording of the data under review. • Batch Data review checklists are complete • Batch Data Reports are complete and data properly reported • Verify that data are within established data assessment criteria and meet all applicable QAOs (Section C3-4b(1))	N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012
42	Are procedures in place to ensure that a repeat of the data review process at the data generation level will be performed on a minimum of one randomly chosen waste container every quarter to determine if the verification and validation is performed according to documented procedures? (Section C3-4b)	N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012
43	Are procedures in place and checklists are available to prepare a Site Project Manager (SPM) Summary and a Data Validation Summary (the summaries may be in the same document)? The SPM Summary includes a validation checklist for each batch that is of sufficient detail to document all aspects of a batch data report that could affect data quality. The Data Validation Summary must identify each Batch Data Report reviewed, describe how the validation was performed, identify all problems, and identify all acceptable and unacceptable data. Summaries must include release signatures. (Section C3-4b(2))	N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012
44	Are procedures in place to ensure that non-administrative, WAP-related nonconformances first identified at the site project manager level are reported to the Permittees within seven calendar days of identification, that nonconformance reports are prepared within 30 calendar days, and that corrective action is implemented prior to waste shipment?	N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	(Section C3-7)					
45	Are procedures in place to ensure that any waste container for which a nonconformance report (**NCR**) has been written will not be shipped to the WIPP facility unless the condition that led to the NCR for that container is appropriately identified, reconciled, corrected, and documented? Are nonconformance reports prepared for nonconformances identified? Are nonconformances identified and tracked, and does the Site Project Manager oversee the nonconformance report process? (Section C3-7)	N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012
	DATA TRANSMITTAL					
48	Are procedures in place to ensure that the generator/storage site transmits data by hard copy or electronic copy from the data generation level to the site project level? If electronic, does the generator/site have a hard copy available on demand? (Section C-4a(5))	N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012
50	Are procedures in place to ensure that the generator/storage site inputs the data into the WWIS manually or electronically? (Section C-4a(5))	N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012
51	Are procedures in place to ensure that the generator/storage site enters the data into the WWIS in the exact format required by the database? (Section C-4a(5))	N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012
52	Are procedures in place to ensure all of the data presented on Table C-3 of the Permit is transmitted to the WWIS? (Table C-3)	N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012
	RECORDS AND RECORD MANAGEMENT					
55	Are procedures in place to ensure that the generator/storage site's hard copy and/or electronic data reports follow the Permittees' format requirements? (Section C-4a(3))	N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012
56	Are procedures in place to ensure that hard copy or electronic Waste Stream Profile Form will include the following: • Generator/storage site name • Generator/storage site EPA ID • Date of audit report approval by NMED (if obtained) • Original generator of waste stream • Whether waste is Contact-Handled or Remote-Handled	N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	• Waste Stream WIPP Identification Number • Summary Category Group • Waste Matrix Code Group • Waste Material Parameter Weight Estimates per unit of waste • Waste stream name • A description of the waste stream • Applicable EPA hazardous waste codes numbers • Applicable TRUCON codes • A listing of acceptable knowledge documentation used to identify the waste stream • The waste characterization procedures used and the reference and date of the procedure • Certification signature of Site Project Manager, name, title, and date signed (Section C3-6b(1))					
56a	Are procedures in place to ensure that hard copy or electronic Characterization Information Summary will include the following: • Data reconciliation with DQOs • Radiography and visual examination summary to document that all prohibited items are absent in the waste and to verify that the physical form of the waste matches its waste stream description as determined by AK (if applicable) • A complete listing of all container identification numbers used to generate the Waste Stream Profile Form, cross-referenced to each Batch Data Report • Complete AK summary, including stream name and number, point of generation, waste stream volume (current and projected), generation dates, TRUCON codes, Summary Category Group, Waste Matrix Code(s) and Waste Matrix Code Group, other TWBIR information, waste stream description, areas of operation, generating processes, RCRA determinations, radionuclide information, all references used to generate the AK summary, and any other information required by Permit Attachment C4, Section C4-2b. • Method for determining Waste Material Parameter Weights per unit of waste. • List of any AK Sufficiency Determinations requested for the waste stream	N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	• Certification through acceptable knowledge or testing that any waste assigned the hazardous waste number of U134 (hydrofluoric acid) no longer exhibits the characteristic of corrosivity. This is verified by ensuring that no liquid is present in U134 waste. • A justification for the selection of radiography and/or VE as an appropriate method of characterizing the waste. (Section C3-6b(2))					
56b	Are procedures in place to assure that ongoing container characterization results are cross referenced to Batch Data Reports? (Section C3-6b)	N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012
58	Are procedures in place to ensure that project level reports are compiled into Characterization Information Summaries? (Section C3-6b)	N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012
59	Are procedures in place to ensure that the generator/storage site uses forms for data reporting that are pre-approved forms in site-specific documentation? (Section C3-6)	**RTR** CCP-TP-053, Att. 1-5 CCP-TP-508, Att. 1-6 **VE** CCP-TP-113, Att. 2 & 3 CCP-TP-006, Att.1 & 2 CCP-TP-500, Att. 1 & 2	Y Y	**RTR** RTR BDRs: INRTR5120001 INRTR5120002 INRTR5120003 INRTR5120004 INLRHRTR12005 INLRHRTR12013 INLRHRTR13001 INLRHRTR13002 INLRHRTR13003 **(RTR-1)** **VE** IN-SRP-VE-000028 IN-SRP-VE-000001 IN-ARP-VE-002793 IN-SRP-VE-000183 INLRHVE12001 **(VE-1)**	Y Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
60	Are procedures in place to ensure that the generator/storage site's site project manager submits to the WIPP facility a summary of the waste stream information and reconciliation with data quality objectives (DQOs) once a waste stream is characterized? (Section C-4a(5))	N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012
61	Are procedures in place to ensure that the generator/storage site project office completes a WSPF based on the Batch Data Reports? (C3-6b)	N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012
62	Are procedures in place to ensure that the generator/storage Site Project Manager submits the WSPF to the Permittees for DOE's approval along with the accompanying Characterization Information Summary for that waste stream? (Section C-4a(5))	N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012
63	Are procedures in place to ensure that the generator/storage site maintains records related to waste characterization testing activities in the testing facility files, or site project files for those facilities located on-site? (Section C-4a(6))	N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012
64	Are procedures in place to ensure that the appropriate documented training and indoctrination is performed for all individuals and that procedures are documented in site specific QAPjPs and procedures? (Section C3-8)	N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012
66	Are procedures in place to ensure that the generator/storage site has an appropriate records inventory and disposition schedule (RIDS) or equivalent that was prepared and approved by appropriate site personnel? (Section C-4a(6))	N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012
67	Are procedures in place to ensure that the generator/storage site maintains all records relevant to an enforcement action, regardless of disposition, until they are no longer needed for enforcement action, and then dispositioned per the approved RIDS? (Section C-4a(6))	N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012
68	Are procedures in place to ensure that the generator/storage site maintains records that are designated as Lifetime Records for the life of the waste characterization program plus six years or that the records have been transferred to the WIPP Records Archive facility? Lifetime Records include: • Test facility Batch Data Reports, • Waste Stream Characterization Package,	N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	• Data reduction, validation, and reporting documentation, • Acceptable knowledge documentation, • WSPF and Characterization Information Summary (Section C-4a(6), Table C-2)					
69	Are procedures in place to ensure that the generator/storage site maintains records that are designated as Non-Permanent Records for ten years from the date of record generation, and then dispositioned according per the approved RIDS or transferred to the WIPP Records Archive facility? Non-Permanent Records include: • Nonconformance documentation, • Variance documentation, • Assessment documentation, • Calculations and related software documentation, • Training/qualification documentation, • QAPjP documentation (all revisions), • Calibration documentation, • Procurement documentation, • QA procedures (all revisions), • Technical implementing procedures (all revisions), and • Audio/video recording (radiography, visual, etc.). (Section C-4a(6), Table C-2)	N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012
70	Are procedures in place to ensure that the generator/storage site has raw data that is identifiable and legible, and provides documentary evidence of quality? (Section C-4a(6))	**RTR** CCP-TP-053, Att. 1, 2 & 3 CCP-TP-508, Att. 1, 2 & 3 **VE** CCP-TP-113, Att. 2 & 3	Y Y	**RTR** RTR BDRs: INRTR5120001 INRTR5120002 INRTR5120003 INRTR5120004 INLRHRTR12005 INLRHRTR12013 INLRHRTR13001 INLRHRTR13002 INLRHRTR13003 **(RTR-1)** **VE** IN-SRP-VE-000028 IN-SRP-VE-000001	Y Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
		CCP-TP-006, Att.1 & 2 CCP-TP-500, Att. 1 & 2		IN-ARP-VE-002793 IN-SRP-VE-000183 INLRHVE12001 **(VE-1)**		
71	Are procedures in place to ensure that if the generator/storage site ceases to operate, that all records be transferred before closeout? (Section C-4a(6))	N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012
	SHIPMENT					
72	Are procedures in place to ensure that the generator/storage site accurately completes an EPA Hazardous Waste Manifest prior to shipping the waste to WIPP that contains the following information: • Generator/storage site name and EPA ID • Generator/storage site contact name and phone number • Quantity of waste • List of up to six state and/or federal hazardous waste numbers in each line item • Listing of all container IDS • Signature of authorized generator representative (Section C-5b)	N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012
73	Are procedures in place to ensure that the generator/storage site accurately completes the following container specific information: • Waste stream identification number • List of hazardous waste numbers per container • Certification data • Shipping data (Section C-5b)	N/A	N/A	N/A	N/A	Refer to C6-1, May 8, 2012

1. The WAP requirements should be presented in documents, such as procedures. Each of the questions posed under WAP requirements is meant to ask whether procedures are in place or whether documents are evident which demonstrate that the specific WAP requirement is or can be met.

Table C6-2 Acceptable Knowledge (AK) Checklist
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Acceptable Knowledge (AK) Checklist[1]

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-2 Acceptable Knowledge (AK) Checklist[1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	GENERAL REQUIREMENTS					
134	Are the primary document(s) required in Permit Attachment C4 containing acceptable knowledge information available? (Section C4-2)	N/A	N/A	N/A	N/A	Refer to C6-3, May 8, 2012
135	Has the generator developed a methodology whereby a logical sequence of acceptable knowledge information that progresses from general facility to more detailed waste-specific information can be acquired? (Section C4-2)	N/A	N/A	N/A	N/A	Refer to C6-3, May 8, 2012
136	Does the site have adequate procedures in place to ensure that the Acceptable Knowledge process is adequately implemented? Do these procedures facilitate the mandatory traceability analysis performed for each Summary Waste Category Group examined during the audit? (Section C4-2)	N/A	N/A	N/A	N/A	Refer to C6-3, May 8, 2012
137	Does the generator site's TRU mixed waste management program information clearly define (or provide a methodology for defining) waste categorization schemes and terminology, provide a breakdown of the types and quantities of TRU mixed waste generated/stored at the site, and describe how waste is tracked and managed at the generator site (including historical and current operations? Do procedures ensure that waste streams are adequately identified? (Section C4-2a)	N/A	N/A	N/A	N/A	Refer to C6-3, May 8, 2012
138	Does site documentation procedures indicate that the site will document, justify, and consistently define waste streams and assign EPA hazardous waste numbers? (Section C4-2b)	N/A	N/A	N/A	N/A	Refer to C6-3, May 8, 2012

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-2 Acceptable Knowledge (AK) Checklist[1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	REQUIRED AND ADDITIONAL INFORMATION					
140	Does the generator site document that the following must be included in the acceptable knowledge record: • Map of the site with the areas and facilities involved in TRU waste generation, treatment, and storage identified • Facility mission description as related to TRU waste generation and management (e.g., nuclear weapons research may involve metallurgy, radiochemistry, and nuclear physics operations that result in specific waste streams) • Description of the operations that generate TRU waste at the site (e.g., plutonium recovery, weapons design, or weapons fabrication) • Waste identification or categorization schemes used at the facility (e.g., item description codes, content codes) • Types and quantities of TRU mixed waste generated, including historical generation through future projections • Correlation of waste streams generated from the same building and process, as appropriate (e.g., sludge, combustibles, metals, and glass) • Waste certification procedures for retrievably stored and newly generated wastes to be sent to the WIPP facility (Section C4-2a)	N/A	N/A	N/A	N/A	Refer to C6-3, May 8, 2012
141	Does the generator site document that the following shall be collected for each waste stream: A. Area(s) and/or building(s) from which the waste stream was or is generated B. Waste stream volume and time period of generation (e.g., 100 standard waste boxes of retrievable stored waste generated from June 1977 through December 1977) C. Waste generating process described for each building (e.g., batch waste stream generated during decommissioning operations of glove boxes), including processes associated with U134 waste generation, if applicable. D. Documentation demonstrating how the site has historically managed the waste, including the historical regulatory status of the waste (i.e., TRU mixed versus TRU non-mined waste) E. Process flow diagrams (e.g., a diagram illustrating glove boxes from a specific building to a size reduction facility to a container storage area). In the case of research/development, analytical laboratory waste, or the	N/A	N/A	N/A	N/A	Refer to C6-3, May 8, 2012

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-2 Acceptable Knowledge (AK) Checklist[1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	similar processes where process flow diagrams cannot be created, a description of the waste generating processes, rather than a formal process flow diagram, may be included if this modification is justified and the justification is placed in the auditable record F. Material inputs or other information that identifies the chemical content of the waste stream and the physical waste form (e.g., glove box materials and chemical handled during glove box operations, events or processes that may have modified the chemical or physical properties of the waste stream after generation, data obtained through visual examination of newly generated waste that later undergoes radiography; information demonstrating neutralization of U134 [hydrofluoric acid] and waste compatibility. (Section C4-2b)					
142	Do site documents/procedures require that the facility will provide a summary to the Permittees that summarizes all information collected, including basis and rationale for all waste stream designations? Is an example of this summary available for audit review? If discrepant hazardous waste data exist in required information, do sites consider applying all hazardous waste numbers, but assess and evaluate the information to determine the appropriate hazardous waste number consistent with RCRA requirements? (Section C4-2b)	N/A	N/A	N/A	N/A	Refer to C6-3, May 8, 2012
143	Do site procedures indicate that if the required AK information is not available for a particular waste stream, that the waste stream will not be eligible for an AK Sufficiency Determination? (Section C4-2)	N/A	N/A	N/A	N/A	Refer to C6-3, May 8, 2012

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-2 Acceptable Knowledge (AK) Checklist[1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
144	Have the following procedures been prepared?: A. Procedures for identifying and assigning the physical waste form of the waste B. Procedures for delineating waste streams and assigning Waste Matrix Codes C. Procedures for resolving inconsistencies in acceptable knowledge documentation D. Procedures for visual examination and/or radiography, if applicable E. For newly generated waste, procedures describing process controls used to ensure prohibited items (specified in the WAP, Permit Attachment C) are documented and managed F. Procedures to ensure radiography and visual examination include a list of prohibited items that the operator shall verify are not present in each container (e.g. liquid exceeding TSDF-WAC limits, corrosives, ignitables, reactives, and incompatible wastes) G. Procedures to document how changes to Waste Matrix Codes, waste stream assignment, and associated Environmental Protection Agency hazardous waste numbers based on material composition are documented for any waste H. Procedures that ensure the assignment of EPA hazardous waste numbers is appropriate, consistent with RCRA requirements, and adequately considers site historical waste management I. Procedures for estimating waste material parameter weights (Section C4-2b)	**RTR** D, F & I: CCP-TP-053, (All) CCP-TP-508, (All) **VE** D, F & I CCP-TP-113, (All) CCP-TP-006, (All) CCP-TP-500, (All)	Y Y	**RTR** D, F & I: RTR BDRs: INRTR5120001 INRTR5120002 INRTR5120003 INRTR5120004 INLRHRTR12005 INLRHRTR12013 INLRHRTR13001 INLRHRTR13002 INLRHRTR13003 **(RTR-1)** **VE** IN-SRP-VE-000028 IN-SRP-VE-000001 IN-ARP-VE-002793 IN-SRP-VE-000183 INLRHVE12001 (IN-SRP-VE-000028 IN-SRP-VE-000001 IN-ARP-VE-002793 IN-SRP-VE-000183 INLRHVE12001 **(VE-1)**	Y Y	For AK refer to C6-3, May 8, 2012
145	Does the generator provide procedures or written commitment to collect additional acceptable knowledge information, as available and as necessary to augment mandatory information? (Section C4-2c)	N/A	N/A	N/A	N/A	Refer to C6-3, May 8, 2012
146	Does the generator site document that all additional specific, relevant information used in the acceptable knowledge process will be identified and its use explained?	N/A	N/A	N/A	N/A	Refer to C6-3, May 8, 2012

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-2 Acceptable Knowledge (AK) Checklist[1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	Is all necessary information assembled and has it been appropriately used? (Section C4-2c)					
147	Does the generator site discrepancy analysis documentation (for acceptable knowledge additional and required documentation) indicate that if discrepancies are detected, the site may consider applying all hazardous waste numbers indicated in the required and additional information, but must assess and evaluate the information to determine the appropriate hazardous waste numbers consistent with RCRA requirements? (Section C4-2c)	N/A	N/A	N/A	N/A	Refer to C6-3, May 8, 2012
	TRAINING					
148	Does the generator site have procedures to ensure that all personnel involved with acceptable knowledge waste characterization have the following training, and is this training documented? A. WIPP WAP in Permit Attachment C and the TSDF-WAC specified in this permit B. State and Federal RCRA regulations associated with solid and hazardous waste characterization C. Discrepancy resolution and reporting D. Site-specific procedures associated with waste characterization using acceptable knowledge (Section C4-3a)	N/A	N/A	N/A	N/A	Refer to C6-3, May 8, 2012
	PROCEDURES					
149	Has the generator site developed the following procedures, and are these procedures technically sufficient? A. Sites must prepare and implement a written procedure outlining the specific methodology used to assemble acceptable knowledge records, including the origin of the documentation, how it will be used, and any limitations associated with the information (e.g., identify the purpose and scope of a study that included limited sampling and analysis data). B. Sites must develop and implement a written procedure to compile the required acceptable knowledge record. C. Sites must develop and implement a written procedure that ensures unacceptable wastes (e.g., reactive, ignitable, corrosive) are identified and segregated from TRU mixed waste populations sent to WIPP. D. Sites must prepare and implement a written procedure to evaluate	N/A	N/A	N/A	N/A	Refer to C6-3, May 8, 2012

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-2 Acceptable Knowledge (AK) Checklist[1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	acceptable knowledge and resolve discrepancies. For example, if different sources of information indicate different hazardous wastes are present, then sites must include all sources of information in its records and may choose to either conservatively assign hazardous waste numbers, or assign only those numbers deemed appropriate and consistent with RCRA requirements. All information used to justify assignment of hazardous waste numbers must be placed in the auditable record. Further, the assignment of hazardous waste numbers shall be tracked in the auditable record to all required documentation.					
149a	E. Sites must prepare and implement a written procedure to identify hazardous wastes and assign the appropriate hazardous waste numbers to each waste stream. The following are minimum baseline requirements/standards that site-specific procedures must include to ensure comparable and consistent characterization of hazardous waste: 1. Compile all of the required information in an auditable record. 2. Review the compiled information and delineate waste streams. Delineation of waste streams must comply with the WAP definition in Permit Attachment C, Section C-0a, and justify combining waste historically managed separately as TRU mixed and TRU non-mixed waste streams into a single waste stream. 3. Review the compiled information to determine if the waste stream is compliant with the TSDF-WAC 4. Review the required information to determine if the waste is listed under 20.4.1.200 NMAC (incorporating 40 CFR 261), Subpart D. Assign all listed hazardous waste numbers, unless the site chooses to justify an alternative assignment and document the justification in the auditable record. 5. Review the required information to determine if the waste exhibits a hazardous characteristic or may contain hazardous constituents included in the toxicity characteristics specified in 20.4.1.200 NMAC (incorporating 40 CFR 261, Subpart C. If a toxicity characteristic contaminant is identified and is not included as a listed waste, sites may evaluate available data and assign the toxicity characteristic hazardous waste number consistent with RCRA requirements. All data examined to reach the hazardous waste number determination must be placed in the auditable record and must present a clear justification for the hazardous waste number analyses. 6. Review the compiled information to provide an estimate of the material parameter weights for each container to be stored or disposed of at WIPP. For newly generated waste, procedures shall be developed and implemented to characterize hazardous waste using acceptable	N/A	N/A	N/A	N/A	Refer to C6-3, May 8, 2012

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-2 Acceptable Knowledge (AK) Checklist[1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	knowledge prior to packaging.					
149b	F. Sites shall ensure that results of audits of the TRU mixed waste characterization programs at the site are available in the records. G. Sites shall identify all process controls (implemented to ensure that the waste contains no prohibited items and to control hazardous waste content and/or physical form) that have been applied to retrievably stored waste and/or may presently be applied to newly generated waste. Process controls are applied at the time of waste generation/packaging to control waste content, whereas any activities performed after waste generation/packaging to identify prohibited items, hazardous waste content, or physical form are waste characterization activities, not process controls. The AK record must contain specific process control and supporting documentation identifying when these process controls are used to control waste content. See Permit Attachment C, Section C-2 for programmatic requirements related to process controls. (Section C4-3b)	N/A	N/A	N/A	N/A	Refer to C6-3, May 8, 2012
150	Does the site have implemented procedures which comply with the following criteria to establish acceptable knowledge records: A. Acceptable knowledge information shall be compiled in an auditable record, including a road map for all applicable information. B. The overview of the facility and TRU mixed waste management operations in the context of the facility's mission shall be correlated to specific waste stream information. C. Correlations between waste streams, with regard to time of generation, waste generating processes, and site-specific facilities shall be clearly described. For newly generated wastes, the rate and quantity of waste to be generated shall be defined. D. A reference list shall be provided that identifies documents, databases, Quality Assurance protocols, and other sources of information that support the acceptable knowledge information. E. Container inventories for TRU mixed waste in retrievable storage shall be delineated into waste streams by correlating the container identification to all of the required and additional AK information. (Section C4-3c)	N/A	N/A	N/A	N/A	Refer to C6-3, May 8, 2012
151	If the generator site submitted an AK Sufficiency Determination Request for a specific waste stream, did the site provide all of the requisite information for which approval is sought? (Section C-0b)	N/A	N/A	N/A	N/A	Refer to C6-3, May 8, 2012

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-2 Acceptable Knowledge (AK) Checklist[1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	RE-EVALUATING ACCEPTABLE KNOWLEDGE					
152	Does the generator site have written procedures for the augmentation of all acceptable knowledge information using testing. Testing consists of radiography and visual examination. Do site procedures indicate that the following testing will be conducted based upon the results of the Determination Request AKSD denied - 100% RTR or VE (Section C4-1, C-0b)	N/A	N/A	N/A	N/A	Refer to C6-3, May 8, 2012
155	Does the generator site have procedures for reevaluating acceptable knowledge if the results of the waste characterization indicate that the waste to be shipped does not match the approved waste stream or if the data from radiography or visual examination for waste streams without an AK Sufficiency Determination exhibit this discrepancy? Does this procedure describe how the waste is reassigned, acceptable knowledge reevaluation, and appropriate hazardous waste numbers are assigned? (Section C4-3e)	N/A	N/A	N/A	N/A	Refer to C6-3, May 8, 2012
156	Do site procedures indicate that debris wastes are assigned toxicity characteristic EPA numbers based on AK regardless of the quantity or concentration? (C4-3e)	N/A	N/A	N/A	N/A	Refer to C6-3, May 8, 2012

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-2 Acceptable Knowledge (AK) Checklist[1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	CRITERIA FOR ASSEMBLING AN ACCEPTABLE KNOWLEDGE RECORD DELINEATING THE WASTE STREAM					
158	If wastes are reassigned to a different waste matrix code based on site visual examination or radiography or Permittee confirmation activities, does the generator site have written documentation to ensure that the following steps are followed: A. Review existing information based on the container identification number and document all differences in hazardous waste number assignments B. If differences exist in the hazardous waste numbers that were assigned, reassess and document all required acceptable knowledge information (Section C4-3b) associated with the new designation C. Reassess and document all testing data associated with the waste D. Verify and document that the reassigned waste matrix code was generated within the specified time period, area and buildings, waste generating process, and that the process material inputs are consistent with the waste material parameters identified during radiography or visual examination E. Record all changes to acceptable knowledge records F. If discrepancies exist in the acceptable knowledge information for the revised waste matrix code, document the segregation of the affected portion of the waste stream, and define the actions necessary to fully characterize the waste (Section C4-3e)	N/A	N/A	N/A	N/A	Refer to C6-3, May 8, 2012
	DATA QUALITY REQUIREMENTS					
168	Are acceptable knowledge processes consistently applied among all generator sites, and does each generator site comply with the following data quality requirements for acceptable knowledge documentation: A. Precision - The qualitative determinations, such as compiling and assessing acceptable knowledge documentation, do not lend themselves to statistical evaluations of precision. However, the acceptable knowledge information will be addressed by the independent review of acceptable knowledge information during internal and external audits. B. Accuracy - The percentage of waste containers which require reassignment to a new waste matrix code and/or designation of different hazardous waste numbers based on testing data and discrepancies identified by the Permittees during waste confirmation will be reported as a measure of acceptable knowledge accuracy.	N/A	N/A	N/A	N/A	Refer to C6-3, May 8, 2012

	WAP Requirement[2] *INL/CCP Recertification Audit A-13-18* Table C6-2 Acceptable Knowledge (AK) Checklist[1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	C. Completeness - The acceptable knowledge record must contain 100 percent of the information (Permit Attachment C4-3). The usability of the acceptable knowledge information will be assessed for completeness during audits.					
168a	D. Comparability - Comparability is ensured through sites meeting the training requirements and complying with the minimum standards outlined for procedures that are used to implement the acceptable knowledge process. All sites must assign hazardous waste numbers in accordance with Permit Attachment C4-4 and provide this information regarding its waste to other sites who store or generate a similar waste stream. E. Representativeness - Representativeness is a qualitative parameter that will be satisfied by ensuring that the process of obtaining, evaluating, and documenting acceptable knowledge information is performed in accordance with the minimum standards established in Permit Attachment C4. Sites also must assess and document the limitations of the acceptable knowledge information used to assign hazardous waste numbers (e.g., purpose and scope of information, date of publication, type and extent to which waste parameters are addressed). (Section C3-3)	N/A	N/A	N/A	N/A	Refer to C6-3, May 8, 2012
169	Does the generator site address quality control by tracking its performance with regard to the use of acceptable knowledge by: 1) assessing the frequency of inconsistencies among information, and 2) documenting the results of waste discrepancies identified by the generator/storage site during waste characterization or the Permittees during waste confirmation using radiography, review of radiography audio/video recordings, or visual examination, or review of visual examination records. In addition, the acceptable knowledge process and waste stream documentation must be evaluated through internal assessments by generator/storage site quality assurance organizations. (Section C4-3e)	N/A	N/A	N/A	N/A	Refer to C6-3, May 8, 2012

1. NMED expects a traceability analysis to be performed, the results of which should be presented on this checklist under the "Examples of Implementation" column. Further, the traceability analysis process and results should be discussed in the Final Audit Report.

2. The WAP requirements should be presented in documents, such as procedures. Each of the questions posed under WAP requirements are meant to determine whether procedures are in place or whether documents are evident which demonstrate that the specific WAP requirement is or can be met.

Table C6-3 Radiography Checklist
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Radiography Checklist

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-3 Radiography Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	QUALITY ASSURANCE OBJECTIVES					
233	Are process procedures in place to meet the following Quality Assurance Objectives? <u>Precision</u> • Does the site describe in its QAPjP and SOP(s) activities to reconcile any discrepancies between two radiography operators with regard to identification of the waste matrix code, liquids in excess of TSDF-WAC limits, and compressed gases through independent replicate scans and independent observations? And additionally, activities to verify the precision of radiography prior to use by tuning precisely enough to demonstrate compliance with QAOs through viewing an image test pattern? <u>Accuracy</u> • Was accuracy obtained by using a target to tune the image for maximum sharpness and by requiring operators to successfully identify 100 percent of the required items in a training container during their initial qualification and subsequent requalification	CCP-TP-053, S. 4.3.4, 4.5 & 4.6 CCP-TP-508, S. 4.2.3, 4.4, & 4.5 CCP-QP-002, S. 4.3.2 [C.2](a) & Att. 4	Y	RTR BDRs: INRTR5120001 INRTR5120002 INRTR5120003 INRTR5120004 INLRHRTR12005 INLRHRTR12013 INLRHRTR13001 INLRHRTR13002 INLRHRTR13003 **(RTR-1)** RTR Operator Training Records **(RTR-2)**	Y	
233a	<u>Completeness</u> • Was an audio/videotape (or equivalent media) of the radiography examination and a radiography data form validated according to the requirements in Section C3-4? • Was an audio/videotape (or equivalent media) of the radiography examination and a radiography data form obtained for 100% of the waste containers subject to radiography? <u>Comparability</u> • Is comparability ensured through the use of standardized radiography procedures and operator training and qualifications (Section C3-2a)	CCP-TP-053, S. 2.2, 4.4, Att. 2 & 3 CCP-TP-508, S. 2.2, 4.3, Att. 2 & 3 CCP-QP-002, S. 4.3.2	Y	RTR BDRs: INRTR5120001 INRTR5120002 INRTR5120003 INRTR5120004 INLRHRTR12005 INLRHRTR12013 INLRHRTR13001 INLRHRTR13002 INLRHRTR13003 **(RTR-1)** RTR Operator Training Records **(RTR-2)**	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-3 Radiography Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	CHARACTERIZATION AND SYSTEM REQUIREMENTS					
234	Does the site have procedures to ensure that radiography is used to identify and verify waste container contents and verify the waste's physical form? Does the site have procedures to identify prohibited materials? (Section C-3b; C1-1)	CCP-TP-053, S. 1.0, Table 1 & Att. 2 CCP-TP-508, S. 1.0, Table 1 & Att. 2	Y	RTR BDRs: INRTR5120001 INRTR5120002 INRTR5120003 INRTR5120004 INLRHRTR12005 INLRHRTR12013 INLRHRTR13001 INLRHRTR13002 INLRHRTR13003 **(RTR-1)**	Y	
235	Do procedures or other supporting documentation ensure that every waste container will undergo radiography and/or VE as necessary to augment AK? (Section C-3b)	CCP-TP-001, S. 3.1, 4.2 & Att. 2	Y	IN-SRP-VE-000085, IN-ARP-VE-002812, INLRHVE12001 **(GEN-5)** INRTR5120004, RTR11-00132, RTR11-00157, INLRHRTR13005, INLRHRTR12012 **(GEN-7)**	Y	
236	Do procedures ensure that containers whose contents prevent full examination are examined by visual examination rather than by radiography unless the site certifies that visual examination would provide no additional relevant information for that container based on the AK information for the waste stream? (Section C1-1)	CCP-TP-053, S. 4.4.2 [B] & [C] CCP-TP-508, S. 4.3.3 [B]	Y	RTR BDRs: INRTR5120001 INRTR5120002 INRTR5120003 INRTR5120004 INLRHRTR12005 INLRHRTR12013 INLRHRTR13001 INLRHRTR13002 INLRHRTR13003 **(RTR-1)**	Y	The audit team did not observe any instances where container contents prevented full examination of the container.
237	Do procedures or other supporting documentation ensure that the physical form determined by radiography is compared with the waste stream descriptions? If discrepancies are noted, will a new waste stream be identified? (Section C-3b)	**RTR** CCP-TP-053, S. 4.4.2[H.2], Att. 2 & 3 CCP-TP-508, S. 4.3.3 [E.1]	Y	**RTR** RTR BDRs: INRTR5120001 INRTR5120002 INRTR5120003 INRTR5120004 INLRHRTR12005 INLRHRTR12013 INLRHRTR13001 INLRHRTR13002	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-3 Radiography Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
		PL CCP-TP-001, S. 4.2 & Att. 2 CCP-TP-005, S. 4.5.3[A] & 4.8	Y	INLRHRTR13003 **(RTR-1)** **PL** WSPF ID-RF-3114, CIS Lot 109, Rev. 1 **(GEN-1)** WSPF ID-RF-S5300, CIS Lot 137 **(GEN-2)** WSPF ID-SDA-SOIL, CIS Lot 75 & 76, Rev. 1 **(GEN-3)** WSPF ID-NRF-SPC, CIS Lot 3 & 4 **(GEN-4)** INRTR5120004, RTR11-00132, RTR11-00157, INLRHRTR13005, INLRHRTR12012 **(GEN-7)**	Y	
238	Are there procedures to ensure the data is obtained from an audio/video recorded scan provided by trained radiography operators? (Section C1-1)	CCP-TP-053, S. 2.2, Att. 2 & 3 CCP-TP-508, S. 2.2, Att. 2 & 3	Y	RTR BDRs: INRTR5120001 INRTR5120002 INRTR5120003 INRTR5120004 INLRHRTR12005 INLRHRTR12013 INLRHRTR13001 INLRHRTR13002 INLRHRTR13003 **(RTR-1)**	Y	
239	Were all activities required to achieve the radiography objective described in site Quality Assurance Project Plans (QAPjPs) and Standard Operating Procedures (SOPs)? (Section C3-2)	CCP-TP-053, (All) CCP-TP-508, (All)	Y	RTR BDRs: INRTR5120001 INRTR5120002 INRTR5120003 INRTR5120004 INLRHRTR12005	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-3 Radiography Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
				INLRHRTR12013 INLRHRTR13001 INLRHRTR13002 INLRHRTR13003 **(RTR-1)**		
240	Did the radiography system consist of the following equipment or equivalent: • an X-ray producing device? • an imaging system? • an enclosure for radiation protection? • a waste container handling system? • an audio/video recording system or equivalent? • an operator control and data acquisition station? (Section C1-1)	CCP-TP-053, S. 4.2 – 4.4 CCP-TP-508, S. 4.1 – 4.3 CCP-TP-119, (All) CCP-TP-080, (All)	Y	RTR BDRs: INRTR5120001 INRTR5120002 INRTR5120003 INRTR5120004 INLRHRTR12005 INLRHRTR12013 INLRHRTR13001 INLRHRTR13002 INLRHRTR13003 **(RTR-1)**	Y	The audit team verified the radiography system contained the referenced components to adequately characterize container contents.
241	Did the X-ray producing device have controls which allow the operator to vary voltage, thereby controlling image quality? Was it possible to vary the voltage, typically between 150-400 kV, to provide an optimum degree of penetration through the waste? Was high-density material examined with the X-ray device set on the maximum voltage? Was low-density material examined at lower voltage settings to improve contrast and image definition? (Section C1-1)	CCP-TP-053, S. 4.4.1 [C] CCP-TP-508, S. 4.3.2 [D]	Y	RTR BDRs: INRTR5120001 INRTR5120002 INRTR5120003 INRTR5120004 INLRHRTR12005 INLRHRTR12013 INLRHRTR13001 INLRHRTR13002 INLRHRTR13003 **(RTR-1)**	Y	The audit team verified the radiography system contained the referenced components to adequately characterize container contents.
242	Do procedures or other documentation ensure that an audio/videotape or equivalent is made of the waste container scan and maintained as a non-permanent record? (Section C1-1)	CCP-TP-053, S. 4.3, 5.1.2, Att. 1, 2 & 3 CCP-TP-508, S. 4.2, 5.1.2, Att. 1, 2 & 3	Y	RTR BDRs: INRTR5120001 INRTR5120002 INRTR5120003 INRTR5120004 INLRHRTR12005 INLRHRTR12013	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-3 Radiography Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
				INLRHRTR13001 INLRHRTR13002 INLRHRTR13003 **(RTR-1)**		
	DATA COMPILATION					
243	Are there procedures to ensure that a radiography data form is used to document the waste matrix code, ensure the waste container contains no ignitable, corrosive or reactive waste by documenting the absence of liquid in excess of TSDF-WAC limits or compressed gases, and verify that the physical form of the waste is consistent with the waste stream description documented on the WSPF? (Section C1-1)	CCP-TP-053, S. 4.4, Att. 2 & 3 CCP-TP-508, S. 4.3, Att. 2 & 3	Y	RTR BDRs: INRTR5120001 INRTR5120002 INRTR5120003 INRTR5120004 INLRHRTR12005 INLRHRTR12013 INLRHRTR13001 INLRHRTR13002 INLRHRTR13003 **(RTR-1)**	Y	
245	If radiography indicates that the waste does not match the waste stream description, do procedures ensure that the appropriate corrective action was taken? (Section C-3b)	CCP-TP-053, S. 4.4.2 [H.2] CCP-TP-508, S. 4.3.3 [E.1]	Y	RTR BDRs: INRTR5120001 INRTR5120002 INRTR5120003 INRTR5120004 INLRHRTR12005 INLRHRTR12013 INLRHRTR13001 INLRHRTR13002 INLRHRTR13003 **(RTR-1)**	Y	
246	If a discrepancy is noted, do procedures ensure that the proper waste stream assignment is determined, the correct hazardous waste numbers assigned, and the resolution documented? (Section C-3b)	CCP-TP-005, S. 4.8 S. 4.9 Att. 10	Y	AK Discrepancy Resolutions at Characterization and AK Reevaluations **(AK-22)**	Y	
	TRAINING					
247	Do site procedures ensure that only trained personnel are allowed to operate	CCP-TP-053,	Y	RTR BDRs:	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-3 Radiography Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	radiography equipment? (Section C1-1)	S. 2.2.1 CCP-TP-508, S. 2.2.1 CCP-QP-002, S. 4.3.2		INRTR5120001 INRTR5120002 INRTR5120003 INRTR5120004 INLRHRTR12005 INLRHRTR12013 INLRHRTR13001 INLRHRTR13002 INLRHRTR13003 **(RTR-1)** RTR Operator Training Records **(RTR-2)**		
248	Do site procedures ensure that training requirements for radiography operators is based upon existing industry standard training requirements? (Section C1-1)	CCP-QP-002, S. 4.3.2 [A.2]	Y	RTR Operator Training Records **(RTR-2)**	Y	
249	Does the documented training program provide radiography operators with both formal and on-the-job training (OJT)? (Section C1-1)	CCP-QP-002, S. 4.3.2	Y	RTR Operator Training Records **(RTR-2)**	Y	
250	Does the documented training program ensure that the radiography operators are instructed in the specific waste generating practices and typical packaging configurations expected to be found in each waste stream at the site? (Section C1-1)	CCP-QP-002, S. 4.1 & 4.2	Y	RTR Operator Training Records **(RTR-2)**	Y	
251	Does the documented training program ensure that the OJT and apprenticeship are conducted by an experienced, qualified radiography operator prior to qualification of the candidate? (Section C1-1)	CCP-QP-002, S. 4.3.2[A]	Y	RTR Operator Training Records **(RTR-2)**	Y	
252	Is the documented training program site specific? (Section C1-1)	CCP-QP-002, S. 4.1 & 4.3.2	Y	RTR Operator Training Records **(RTR-2)**	Y	
262	Does the documented training program ensure that a training drum with various container sizes is scanned by each operator on a semiannual basis? Is the videotape reviewed by a supervisor to ensure that operator's interpretations remain consistent and accurate? (Section C1-1)	CCP-QP-002, S. 4.3.2 [C.2], [C.3] & [D] CCP-TP-028, (All)	Y	RTR Operator Training Records **(RTR-2)**	Y	
263	Do site procedures ensure that the site prepares Testing Batch Data Reports or equivalent which includes all data pertaining to radiography for up to 20 waste	CCP-TP-053, S. 4.9	Y	RTR BDRs: INRTR5120001 INRTR5120002	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-3 Radiography Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	containers without regard to waste matrix? (Section C3-4)	CCP-TP-508, S. 4.8		INRTR5120003 INRTR5120004 INLRHRTR12005 INLRHRTR12013 INLRHRTR13001 INLRHRTR13002 INLRHRTR13003 **(RTR-1)**		
	QUALITY ASSURANCE					
265	Does the documented training program ensure that the imaging system characteristics are verified on a routine basis? (Section C1-1)	CCP-TP-053, S. 4.3 CCP-TP-508, S. 4.2	Y	RTR BDRs: INRTR5120001 INRTR5120002 INRTR5120003 INRTR5120004 INLRHRTR12005 INLRHRTR12013 INLRHRTR13001 INLRHRTR13002 INLRHRTR13003 **(RTR-1)**	Y	
266	Do procedures ensure that independent replicate scans and replicate observations of the video output of the radiography process are performed under uniform conditions and procedures? Are independent replicate scans performed on one waste container per day or per testing batch of 20 samples, which ever is less frequent, by a qualified radiography operator that was not involved in the original scan of the water container? Are independent observations of one scan (not the replicate scan) performed once per day or per testing batch, which ever is less	CCP-TP-053, S. 4.5 & 4.6 CCP-TP-508, S. 4.4 & 4.5	Y	RTR BDRs: INRTR5120001 INRTR5120002 INRTR5120003 INRTR5120004 INLRHRTR12005 INLRHRTR12013 INLRHRTR13001	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-3 Radiography Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	frequent, by a qualified radiography operator that was not involved in the original scan of the waste container? (Section C1-1)			INLRHRTR13002 INLRHRTR13003 **(RTR-1)**		
267	Do procedures ensure that oversight functions include periodic audio/video media reviews of accepted waste containers, are performed by qualified radiography operators that were not involved in the original scans of the waste containers? (Section C1-1)	CCP-TP-053, S. 4.5 & 4.6 CCP-TP-508, S. 4.4 & 4.5	Y	RTR BDRs: INRTR5120001 INRTR5120002 INRTR5120003 INRTR5120004 INLRHRTR12005 INLRHRTR12013 INLRHRTR13001 INLRHRTR13002 INLRHRTR13003 **(RTR-1)**	Y	
268	Is the site project manager responsible for monitoring the quality of the radiography data and calling for corrective action, when necessary? (Section C1-1)	CCP-TP-001, S. 4.2 & Att. 2	Y	INRTR5120004, RTR11-00132, RTR11-00157, INLRHRTR13005, INLRHRTR12012, **(GEN-7)**	Y	
	DATA VALIDATION, REVIEW, VERIFICATION AND REPORTING					
277	Do procedures ensure that all applicable data generation review verification and validation activities specified in C3-4 are followed, including all signatory releases? (Section C3-4)	CCP-TP-053, S. 4.10 & Att. 3 CCP-TP-508, S. 4.9, Att. 3 & 4	Y	RTR BDRs: INRTR5120001 INRTR5120002 INRTR5120003 INRTR5120004 INLRHRTR12005 INLRHRTR12013 INLRHRTR13001 INLRHRTR13002 INLRHRTR13003 **(RTR-1)**	Y	
278	Do procedures ensure that radiography tapes have been reviewed at a frequency of one waste container per day or once per testing batch, whichever is less frequent, to ensure data are correct and completed?	CCP-TP-053, S. 4.6 CCP-TP-508,	Y	RTR BDRs: INRTR5120001 INRTR5120002 INRTR5120003	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-3 Radiography Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	(Section C1-1)	S. 4.5		INRTR5120004 INLRHRTR12005 INLRHRTR12013 INLRHRTR13001 INLRHRTR13002 INLRHRTR13003 **(RTR-1)**		
279	Do procedures ensure that all applicable project-level signatory releases and DQOs (Section C3-3) as specified in the WAP are performed? (Section C3-4b)	CCP-TP-001, S. 4.2 & Att. 2	Y	WSPF ID-RF-3114, CIS Lot 109, Rev. 1 **(GEN-1)** WSPF ID-RF-S5300, CIS Lot 137 **(GEN-2)** WSPF ID-SDA-SOIL, CIS Lot 75 & 76, Rev. 1 **(GEN-3)** WSPF ID-NRF-SPC, CIS Lot 3 & 4 **(GEN-4)** INRTR5120004, RTR11-00132, RTR11-00157, INLRHRTR13005, INLRHRTR12012 **(GEN-7)**	Y	
282	At the data generation level, do procedures ensure that all electronic and video data stored appropriately to ensure that waste container, sample, and associated QA data are readily retrievable? Are radiography tapes reviewed, at a frequency of one waste container per day or once per testing batch, whichever is less frequent, against the data reported on the radiography form? (Section C3-4a, C3-4a(1))	CCP-TP-053, S. 4.6 & 5.0 CCP-TP-508, S. 4.5 & 5.0	Y	RTR BDRs: INRTR5120001 INRTR5120002 INRTR5120003 INRTR5120004 INLRHRTR12005 INLRHRTR12013 INLRHRTR13001 INLRHRTR13002 INLRHRTR13003 **(RTR-1)**	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-3 Radiography Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
283	At the project level, do procedures require the Site Project Manager to certify that the radiography data are complete and acceptable based on the videotape review of at least one waste container per testing batch or daily, whichever is less frequent? (Section C3-4b(1))	CCP-TP-001, S. 4.2 & Att. 2	Y	INRTR5120004, RTR11-00132, RTR11-00157, INLRHRTR13005, INLRHRTR12012 **(GEN-7)**	Y	

1. The WAP requirements should be presented in documents, such as procedures. Each of the questions posed under WAP requirements is meant to ask whether procedures are in place or whether documents are evident which demonstrate that the specific WAP requirement is or can be met.

Table C6-4 Visual Examination (VE) Checklist
INL/CCP Recertification Audit A-13-18
June 3 – 6, 2013

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Visual Examination (VE) Checklist

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-4 Visual Examination (VE) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	TRAINING					
296	Is there documentation which shows that a standardized training program for visual examination operators has been developed? Is it specific to the site and include the various waste configurations generated/stored at the site? (Section C1-2)	CCP-QP-002, S. 4.1.2, 4.2 & 4.3.8 CCP-TP-113, S. 2.2 CCP-TP-006, S. 2.2 CCP-TP-500, S. 2.2	Y	Training records for 6 VE operators and 2 VE Experts **(VE-2)**	Y	
297	Is there documentation which shows that the visual examination operators receive training on the specific waste generating processes, typical packaging configurations, and waste material parameters expected to be found in each Waste Matrix Code at the site? (Section C1-2)	CCP-QP-002, S. 4.1.2, 4.2 & 4.3.8 CCP-TP-113, S. 2.2 CCP-TP-006, S. 2.2 CCP-TP-500, S. 2.2	Y	Training records for 6 VE operators and 2 VE Experts **(VE-2)**	Y	
298	Are the visual examination personnel requalified once every two years? (Section C1-2)	CCP-QP-002, S. 4.1.2[H] & 4.3.8 CCP-TP-113, S. 2.2 CCP-TP-006, S. 2.2 CCP-TP-500, S. 2.2	Y	Training records for 6 VE operators and 2 VE Experts **(VE-2)**	Y	
298a	Does the training include the following regardless of Summary Category Group? • Identifying and describing the contents of a waste container by examining all items in waste containers of previously packaged waste. • Identifying when VE cannot be used to meet the DQOs. (Section C1-2)	CCP-QP-002, S. 4.1.2, 4.2 & 4.3.8 CCP-TP-113, S. 1.0 & 1.1 CCP-TP-006, S. 1.1 CCP-TP-500, S. 1.1	Y	Training records for 6 VE operators and 2 VE Experts **(VE-2)**	Y	
	VISUAL EXAMINATION EXPERT REQUIREMENTS					
300	Does documentation ensure that the site has designated a visual examination	CCP-QP-002, S. 3.1.6, 4.4.1 &	Y	VEE Appointment Letters and training records	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-4 Visual Examination (VE) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	expert? Is the visual examination expert familiar with the waste generating processes that have taken place at the site? Is the visual examination expert familiar with all of the types of waste being characterized at that site? (Section C1-2)	4.2 CCP-TP-113, S. 3.2 CCP-TP-006, S. 3.1 CCP-TP-500, S. 3.3		**(VE-3)**		
301	Does documentation ensure that the visual examination expert shall be responsible for the overall direction and implementation of the visual examination aspects of the program? Does the site's QAPjP specify the selection, qualification, and training requirements of the visual examination expert? (Section C1-2)	CCP-TP-113, S. 3.2.1 CCP-TP-006, S. 3.1 CCP-TP-500, S. 3.3.1 CCP-PO-001, S. C1-4	Y	IN-SRP-VE-000028 IN-SRP-VE-000001 IN-ARP-VE-002793 IN-SRP-VE-000183 INLRHVE12001 **(VE-1)**	Y	
	VISUAL EXAMINATION PROCEDURES					
304	Do procedures indicate that all visual examination activities are documented on video/audio media or VE performed by using a second operator to provide additional verification by reviewing the contents of the waste container to ensure correct reporting? (Section C1-2)	CCP-TP-113, S. 1.1, Att. 1 & 2 CCP-TP-006, S. 1.1 & Att. 1 CCP-TP-500, S. 1.1 & Att. 1	Y	IN-SRP-VE-000028 IN-SRP-VE-000001 IN-ARP-VE-002793 IN-SRP-VE-000183 INLRHVE12001 **(VE-1)**	Y	
304a	Are procedures in place to ensure that when VE is performed using a second operator, each operator performing VE shall observe for themselves the waste being placed in the container or the contents within the examined waste container when waste is not removed? (Section C1-2)	CCP-TP-113, S. 2.6.3, Att.1 & 2 CCP-TP-006, S. 4.3.2 & Att. 1 CCP-TP-500, S. 4.0 (NOTE) & Att. 1	Y	IN-SRP-VE-000028 IN-SRP-VE-000001 IN-ARP-VE-002793 IN-SRP-VE-000183 INLRHVE12001 **(VE-1)**	Y	
313	Do site procedures ensure that when liquid is found, the non-transparent internal container holding the liquid will be assumed to be filled with liquid and this volume will be added to the total liquid in the container being characterized using VE? The container being characterized using VE would then be rejected and/or repackaged to exclude the internal container if it is over the TSDF-WAC limits. (Section C-3b)	CCP-TP-113, S. 4.0 (NOTE) Att. 2 & Table 1 CCP-TP-006, Att. 1 & Table 1 CCP-TP-500, Att. 1 & Table 1	Y	IN-SRP-VE-000028 IN-SRP-VE-000001 IN-ARP-VE-002793 IN-SRP-VE-000183 INLRHVE12001 **(VE-1)**	Y	
	QUALITY ASSURANCE OBJECTIVES					
314	Are process procedures in place to meet the following Quality Assurance Objectives?		Y	IN-SRP-VE-000028 IN-SRP-VE-000001	Y	

	WAP Requirement[1] *INL/CCP Recertification Audit A-13-18* Table C6-4 Visual Examination (VE) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	<u>Precision</u> • Precision is maintained by reconciling any discrepancies between the operator and the independent technical reviewer with regard to identification of waste matrix code, liquids in excess of TSDF-WAC limits, and compressed gases. <u>Accuracy</u> • Accuracy is maintained by requiring operators to pass a comprehensive examination and demonstrate satisfactory performance in the presence of the VE expert during their initial qualification and subsequent requalification. <u>Completeness</u> • A validated VE data form will be obtained for 100 percent of the waste containers subject to VE. <u>Comparability</u> • The comparability of VE data from different operators shall be enhanced by using standardized VE procedures and operator qualifications. (Section C3-2b)	Bullet 1: CCP-TP-113, Att. 2 & 3 CCP-TP-006, Att. 1 & 2 CCP-TP-500, Att. 1 & 2 Bullet 2: CCP-QP-002, S. 4.3.8 Bullet 3: CCP-TP-113, Att. 1 & 2 CCP-TP-006, Att. 1 CCP-TP-500, Att. 1 Bullet 4: CCP-QP-002, (All) CCP-TP-113, (All) CCP-TP-006, (All) CCP-TP-500, (All)		IN-ARP-VE-002793 IN-SRP-VE-000183 INLRHVE12001 **(VE-1)**		

1. The WAP requirements should be presented in documents, such as procedures. Each of the questions posed under WAP requirements is meant to ask whether procedures are in place or whether documents are evident which demonstrate that the specific WAP requirement is or can be met.

Controlled
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Effective Date: JUN 16 2011

CCP-PO-001
Revision 20

CCP Transuranic Waste Characterization Quality Assurance Project Plan

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RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
3	01/14/2002	Added Tables B-9, B-10, and B-11; Revised the CCP Organization Chart, Figure A-1; and made numerous editorial corrections.
4	05/31/2002	Revised the CCP Organization Chart, Figure A-1 and added 3 new positions in the responsibilities Section A-4; corrected an error in Table B3-1; revised Section B4-2; revised Sections B3-10, B3-12,B-4, and subsections, and revised Tables B3-11, B3-12, and B3-13 to reflect the current WAP.
5	02/05/2003	Revised the CCP Organization Chart, Figure A-1 and section A-4c to update to the Vice President of National TRU Program Division title. Changes made to implement the Drum Age Criteria (DAC) permit Modification.
6	06/11/2003	Updated to Revision 5 of the QAPD.
7	01/08/2004	Added procedures to Table B-9 and Table B-11.
8	03/15/2004	Added procedures to Table B-9, Table B-10 and Table B-11. Modified Site Project Quality Assurance Officer description and CCP Organization chart. Updated Table B1-2, Table B3-3, Section B3-5 to reflect the WAP. Updated Table B3-6, Table B4, Table B1-4, Section B-3a(2), B-3d(1)(a), Table B-1, and Table B-8 to delete PCBs. Section B-1c, 6th bullet revised to reflect the language of the WAP.
9	01/14/05	Revised to add procedures to Table B-9, Table B-10, and Table B-11. Incorporated CBFO DRR comments.
10	02/24/05	Revised to add procedure to table B-11, to incorporate LANL Off-Site Recovery Program Project Scope.
11	03/10/2005	Revised to add procedures to Section B1-2a and Table B-11. Added new table, Table B-9A, Solids Sampling Procedures Used by CCP.
12	03/22/2006	Revised procedures tables, Added new Table B-9, Listing of Permitted hazardous waste numbers and updated responsibilities.

RECORD OF REVISION (Continued)

Revision Number	Date Approved	Description of Revision
13	11/16/2006	Revised to implement changes to the Waste Isolation Pilot Plant Hazardous Waste Facility Permit requirements resulting from the Section 311/RH PMR.
14	03/28/2007	Revised procedure tables to add references to sections implemented by the procedure, and to align the wording of Section B7-2 with the wording in the permit.
15	08/10/2007	Revised to remove Visual Examination (VE) Expert decisions and signature and date from Table B3-11, Testing Batch Data Report Contents. Added the Idaho National Laboratory (INL) procedures to Attachment 1, Implementing Procedures.
16	10/31/2007	Revised to incorporate statistical terminology and text changes included in September 2007 Class 1 Permit Notifications and update Attachment 1, Implementing Procedures.
17	06/23/2009	Updated to agree with the Waste Isolation Pilot Plant (WIPP) Hazardous Waste Facility Permit Class 1 Modification dated July 2008.
18	06/30/2010	Revised to incorporate modifications to the Hazardous Waste Facility Permit. To make editorial changes that are needed and to change the Waste Isolation Pilot Plant (WIPP), Waste Information System (WWIS) to WWIS/Waste Data System (WDS).
19	12/29/2010	Revised to include changes from Permit Renewal.
20	06/16/2011	Revised to incorporate Class 2 Permit Modification (Transuranic Package Transporter Model III and Standard Large Box 2).

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A INTRODUCTION

The Central Characterization Project (CCP) is tasked with characterizing and certifying transuranic (TRU) waste for disposal at the Waste Isolation Pilot Plant (WIPP). Characterization consists of acceptable knowledge (AK), radiography, visual examination (VE), headspace gas sampling and analyses, and total sampling and analyses; as applicable for the waste stream.

This Quality Assurance Project Plan (QAPjP) describes how the waste characterization and certification activities performed by the CCP comply with NM 4890139088-TSDF, *Waste Isolation Pilot Plant Hazardous Waste Facility Permit* (HWFP), Attachment C - C6, *Waste Analysis Plan* (WAP) (New Mexico Environment Department [NMED]). This QAPjP also implements the applicable quality requirements of DOE/CBFO-94-1012, Department of Energy-Carlsbad Field Office (DOE-CBFO) *Quality Assurance Program Document* (QAPD). The format of this QAPjP parallels that of the WAP.

NOTE

Throughout this document, there are references to procedures that implement the requirements. These references appear as a letter and one to three digits (e.g., T93) in parenthesis where the requirement is stated. Document users should then be able to refer to Attachment 1, Implementing Procedures, where these references list the procedure number and title.

A-1 Background

The WAP is organized such that it specifies that the generator/storage sites (hereinafter referred to as “sites”) conduct their own TRU waste characterization and certification, including their own data generation level and project level data validation and verification. However, some sites (typically small quantity sites) do not have the resources necessary to characterize and certify their TRU waste. Additionally, other sites have expressed interest in using subcontractors to augment their existing capabilities. The CCP was established to assist these sites as well as to provide cost-effective TRU waste characterization, confirmation, and certification, including data generation level and project level data validation and verification.

The CCP may provide its services to a site by contracting directly with that site. If this is the case, the scope of services provided by CCP are specified in a Statement of Work (SOW) issued by the site. The SOW also specifies health and safety requirements, quality requirements, and other requirements specific to that site. A site-specific interface document may also be prepared which provides more detail on the site-CCP interface.

The site has general management oversight responsibility for work performed by the CCP at the site. The site is responsible for ensuring that CCP conducts its activities in compliance with site requirements.

A-2 Scope

This QAPjP specifies quality requirements, management activities, and procedures necessary to meet the specific data quality objectives (DQOs) for TRU waste characterization as defined in the WAP and QAPD. Only TRU waste that has been characterized and certified in accordance with the WAP is shipped to the WIPP facility. TRU waste characterization and certification activities conducted by the CCP are performed in accordance with the requirements and implementing procedures identified in this QAPjP. In some cases, some characterization or certification activities are shared between the CCP and the Host site. The applicable implementing site documentation is specified in a SOW and supplemented by a site interface document, if required.

This QAPjP meets WAP characterization and certification requirements for contact-handled (CH) and remote-handled (RH) TRU waste. As used in this document, the term TRU waste includes TRU and TRU-mixed wastes. The term “characterization” is used where applicable to indicate the entire characterization process. Additionally, the WAP allows waste streams to be divided into waste stream lots. Therefore, the term waste stream may be used to indicate waste stream lots.

B PROJECT DESCRIPTION

Consistent with requirements in the WAP, CCP uses AK to initially characterize TRU waste. Section C3 of this QAPjP outlines the process used to characterize TRU waste using AK. AK documentation provides the basis for identifying the TRU waste eligible for WIPP disposal. The characterization process is based on the following:

- Waste considered for characterization is defense-related and has a TRU alpha activity greater than 100 nanocuries (nCi) per gram (g)
- Resource Conservation and Recovery Act (RCRA) hazardous waste determinations are made initially using AK for TRU waste streams

AK information for each waste stream is compiled in AK reports and supporting documentation. Based on AK, waste streams are delineated according to Summary Category Group, and waste matrix codes are assigned to each waste stream.

The CCP evaluates the characterization necessary to certify a particular waste stream. If additional characterization is needed to supplement site capabilities, the CCP uses mobile characterization facilities to perform characterization activities. Mobile

characterization support is provided in accordance with this QAPjP. The CCP has the option to use data or transportation services from established TRU waste characterization activities at a DOE-CBFO-certified site.

B-1 Central Characterization Project Organization and Responsibilities

The CCP organization is shown in Figure B-1, CCP Organization, and responsibilities are described in the following sections. Figure B-1 includes generic CCP positions. More specific positions are described in the SOW or site interface plan.

B-2 Central Characterization Project (CCP) Manager

The CCP Manager is responsible for the day-to-day management and direction of CCP activities related to the characterization, certification, transportation, and disposal of TRU waste for DOE-CBFO. The CCP Manager is responsible for the following:

- Ensuring successful CCP/site interface
- Ensuring CCP plans and operations are coordinated, integrated, and consistent with DOE-CBFO programs, policies, and guidance
- Coordinating CCP activities and functioning as principal point of contact with DOE-CBFO and other regulating agencies
- Reviewing and approving this QAPjP

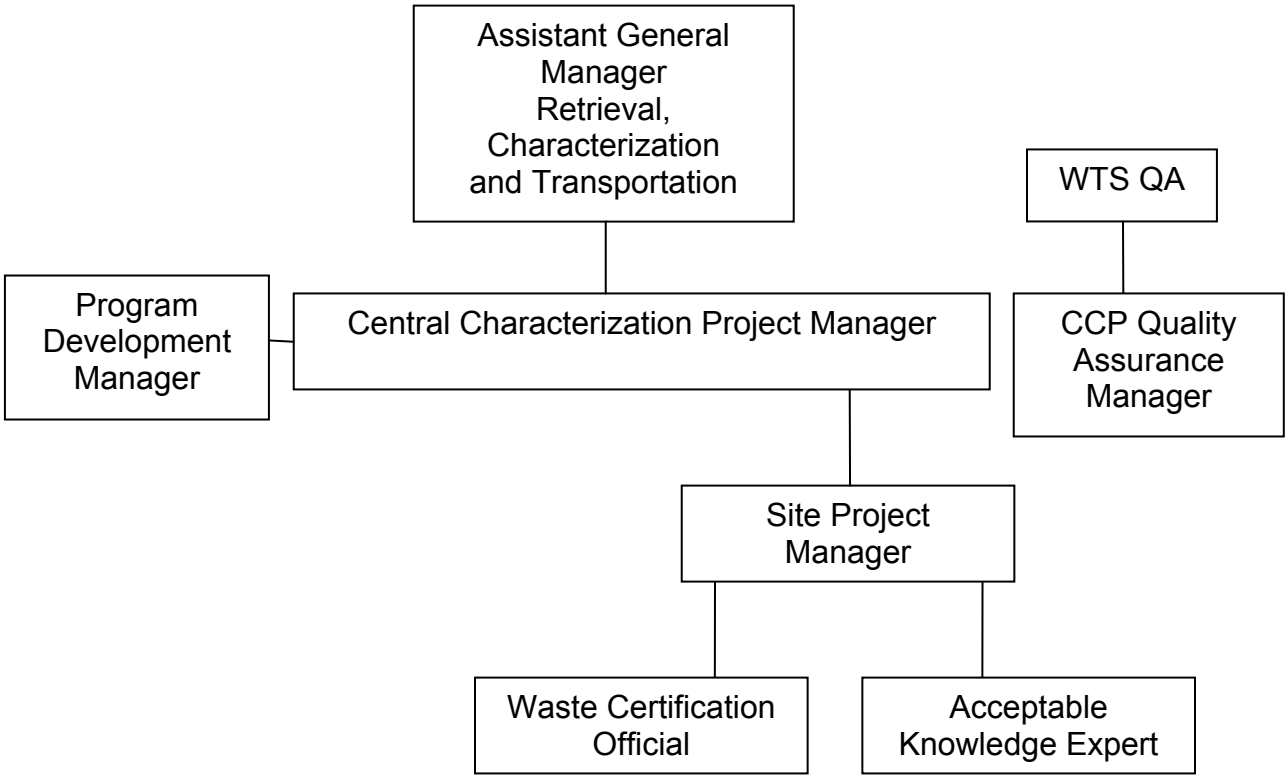
B-3 Site Project Manager

The Site Project Manager (SPM) oversees TRU waste characterization and certification activities and is responsible for the following:

- Developing, maintaining, reviewing, approving, and implementing CCP procedures and plans
- Scheduling revisions and distribution of CCP procedures and plans and forwarding these documents (if significantly revised) to DOE-CBFO for review and approval before implementation
- Reviewing and approving site interface documents (if used)
- Participating in internal audits and assessments
- Assisting CCP Quality Assurance (QA) in developing project assessment criteria and responses to deficiency reports

- Halting characterization or certification activities if problems affecting the quality of the certification or work processes exist
- Ensuring CCP personnel receive appropriate training and orientation and maintain proficiency in work assignments
- Evaluating AK reports
- Reconciling AK information with characterization data
- Reconciling verified data with DQOs
- Ensuring that conditions adverse to quality are resolved and that corrective actions are implemented in a timely manner
- Assigning additional Environmental Protection Agency (EPA) hazardous waste numbers to TRU waste on the basis of analytical results with concurrence from the site, as applicable
- Preparing and submitting SPM Data Validation Summaries, Waste Stream Profile Forms (WSPFs), Characterization Information Summaries, and Waste Stream Characterization Packages (if requested by DOE-CBFO)
- Reviewing semi-annual QA/Quality Control (QC) summary reports and forwarding them and comments to the DOE-CBFO

Figure B-1. CCP Organization



C WASTE ANALYSIS PLAN

C-0 Introduction and Attachment Highlights

This QAPjP has been prepared for waste characterization activities to be conducted to meet requirements set forth in 20.4.1.500 New Mexico Administrative Code (NMAC) (incorporating 40 Code of Federal Regulation [CFR] §264.13) for waste disposal at the WIPP. This QAPjP includes test methods, details of planned waste sampling and analysis for complying with the general waste analysis requirements of 20.4.1.500 NMAC (incorporating 40 CFR §264.13), and a description of the QA/QC program. Before the CCP offers waste for shipment to the WIPP, the CCP implements the applicable requirements of this QAPjP.

TRU waste contains TRU radioactive components and may contain hazardous components, as defined in 20.4.1.800 (incorporating 40 CFR, §268.35[d]), and in the Federal Facility Compliance Act, Public Law 102-386, Title 1, §3021(d). TRU waste is designated and separately packaged as either CH or RH, based on the radiological dose rate at the surface of the waste container.

The hazardous components of the TRU waste to be managed at the WIPP facility are designated in Table C-9, Listing of Permitted Hazardous Waste Numbers. Some of the waste is also identified by unique state hazardous waste numbers and is certified by the CCP if it meets the conditions of the WIPP Hazardous Waste Permit, Part 2, Table 2.3.4. This document describes the measures that will be taken to ensure that the TRU mixed wastes received at the WIPP facility are within the scope of Table C-9 as established by 20.4.1.500 NMAC (incorporating 40 CFR §264), and that they comply with unit-specific requirements of 20.4.1.500 NMAC (incorporating 40 CFR §264.600), Miscellaneous Units.

The CCP has developed this QAPjP to comply with the requirements of the WAP for characterizing CH TRU wastes. The hazardous components of the TRU waste disposed at the WIPP facility are described on a WSPF for each waste stream (T2). TRU waste that may be certified by the CCP are generated at DOE facilities by defense activities, including the following:

- Production of nuclear products
- Plutonium recovery
- Research and development
- Decontamination and decommissioning

Some TRU waste is retrievably stored at the DOE sites. Additional TRU waste is generated and packaged into containers at these sites. Retrievably stored waste is defined as TRU waste generated after 1970 and before NMED notifies the Permittees, by approval of the final audit report, that the characterization requirements of the WAP at a site have been implemented. Newly-generated waste is defined as TRU waste generated after NMED approves the final audit report for a site. Waste characterization of retrievably stored TRU waste is performed on an ongoing basis, as the waste is retrieved. AK information is assembled for both the retrievably stored and newly generated waste. Waste characterization of newly generated TRU waste is performed as it is generated, although some characterization occurs post-generation. Waste characterization requirements for retrievably stored and newly generated TRU wastes differ, as discussed in Sections C-3d(2) and C-3d(1).

Waste characterization is defined in Part 1 as the activities performed by the waste generator to satisfy the general waste analysis requirements of 20.4.1.500 NMAC (incorporating 40 CFR §264.13[a]) before waste containers have been certified for disposal at WIPP. The characterization process for WIPP waste is presented in Figure C-2, Waste Characterization Process. CCP waste characterization programs are first audited by DOE, with the NMED approving the final audit report. After this, CCP determines whether AK alone is sufficient for characterization, or whether a sampling and analysis program in conjunction with AK is necessary to adequately characterize wastes. If an AK Sufficiency Determination is sought, information is provided to the Permittees for their review and DOE's provisional approval; NMED determination of adequacy of the AK information is required before final approval by DOE. If the sampling and analysis route is chosen, CCP will proceed to sample and analyze waste in conjunction with AK and in accordance with this QAPjP. Once an AK Sufficiency Determination is obtained, or when required sampling and analysis data are obtained, CCP would then prepare and submit the Waste Stream Profile Form for DOE's approval. Once the WSPF is approved, CCP may ship waste to WIPP. The Permittees will perform waste confirmation prior to shipment of the waste from the generator/storage site to WIPP pursuant to Section C7, performing radiography or VE of a representative subpopulation of certified waste containers, to ensure that the wastes meet the applicable requirements of the *Treatment, Storage, and Disposal Facility Waste Acceptance Criteria* (TSDF-WAC).

C-0a Waste Characterization

Characterization requirements for individual containers of TRU waste are specified on a waste stream basis. The WAP defines a waste stream as waste materials that have common physical form, that contain similar hazardous constituents, and that are generated from a single process or activity. Waste streams are grouped by waste matrix code groups related to the physical and chemical properties of the waste (DOE 1995b). The CCP uses the characterization techniques described in this QAPjP to assign the appropriate waste matrix code groups to waste streams for WIPP disposal.

The waste matrix code groups are solidified inorganics, solidified organics, salt waste, soils, lead/cadmium metal, inorganic nonmetal waste, combustible waste, graphite, filters, heterogeneous debris waste, and uncategorized metal. Waste matrix code groups are grouped into three Summary Category Groups: Homogeneous Solids (Summary Category Group S3000), Soil/Gravel (Summary Category Group S4000), and Debris Waste (Summary Category Group S5000).

TRU wastes are initially categorized into the three broad Summary Category Groups that are related to the final physical form of the wastes. Waste characterization requirements for these groups are specified separately in Section C-2. Each of the three groups is described below.

S3000 - Homogeneous Solids

Homogeneous solids, are defined as solid materials, excluding soil, that do not meet the NMED criteria for classification as debris (20.4.1.800 NMAC [incorporating 40 CFR §268.2(g) and (h)]). Included in the series of homogeneous solids are inorganic process residues, inorganic sludges, salt waste, and pyrochemical salt waste. Other waste streams are included in this Summary Category Group based on the specific waste stream types and final waste form. This Summary Category Group is expected to contain toxic metals and spent solvents. This category includes wastes that are at least 50 percent by volume homogeneous solids.

S4000 - Soils/Gravel

This Summary Category Group includes S4000 waste streams that are at least 50 percent by volume soil/gravel. This Summary Category Group is expected to contain toxic metals.

S5000 - Debris Wastes

This Summary Category Group includes heterogenous waste that is at least 50 percent by volume materials that meet the criteria specified in 20.4.1.800 NMAC (incorporating 40 CFR §268.2 [g]). Debris means solid material exceeding a 2.36 inch (in.) (60 millimeter) particle size that is intended for disposal and that is:

1. a manufactured object, or

2. plant or animal matter, or

3. natural geologic material.

Particles smaller than 2.36 inches in size may be considered debris if the debris is a manufactured object and if it is not a particle of S3000 or S4000 material.

If a waste does not include at least 50 percent of any given Summary Category Group by volume, characterization is performed using the waste characterization process required for the category constituting the greatest volume of waste for that waste stream (see Section C-3d).

The most common hazardous constituents in the TRU waste to be managed in the WIPP facility consist of the following:

Metals

Some of the TRU waste to be emplaced in the WIPP facility contains metals for which 20.4.1.200 NMAC (incorporating 40 CFR §261.24), toxicity characteristics were established (EPA Hazardous Waste Numbers D004 through D011). Cadmium, chromium, lead, mercury, selenium, and silver are present in discarded tools and equipment, solidified sludges, cemented laboratory liquids, and waste from decontamination and decommissioning activities. A large percentage of the waste consists of lead-lined gloveboxes, leaded rubber gloves and aprons, lead bricks and piping, lead tape, and other lead items. Lead, because of its radiation-shielding applications, is the most prevalent toxicity-characteristic metal present.

Halogenated Volatile Organic Compounds

Some of the TRU waste to be emplaced in the WIPP facility contains spent halogenated volatile organic compound (VOC) solvents identified in 20.4.1.200 NMAC (incorporating 40 CFR §261.31) (EPA Hazardous Waste Numbers F001 through F005). Tetrachloroethylene; trichloroethylene; methylene chloride; carbon tetrachloride; 1,1,1-trichloroethane; and 1,2-trichloro-1,2,2,-trifluoroethane (EPA Hazardous Waste Numbers F001 and F002) are the most prevalent halogenated organic compounds identified in TRU waste that may be managed at the WIPP facility during the Disposal Phase. These compounds are commonly used to clean metal surfaces prior to plating, polishing, or fabrication; to dissolve other compounds; or as coolants. Because they are highly volatile, only small amounts typically remain on equipment after cleaning or, in the case of treated waste waters, in the sludges after clarification and flocculation. Radiolysis may also generate halogenated volatile organic compounds.

Nonhalogenated Volatile Organic Compounds

Xylene, methanol, and n-butanol are the most prevalent nonhalogenated VOCs in TRU waste that may be managed at the WIPP facility during the Disposal Phase. Like the halogenated VOCs, they are used as degreasers and solvents and are similarly volatile. The same analytical methods that are used for halogenated VOCs are used to detect the presence of nonhalogenated VOCs. Radiolysis may also generate non-halogenated volatile organic compounds.

The CCP will characterize waste in accordance with this QAPjP, and ensure that waste proposed for storage and disposal at WIPP meets the applicable requirements of the TSDF-WAC in Part 2. The CCP will assemble the AK information in an auditable record[1] for the waste stream as described in Section C4. For those waste streams with an approved AK Sufficiency Determination (see below), sampling and analysis per the methods described in Sections C1 and C2 are not required.

All waste characterization activities specified in this QAPjP and associated attachments shall be carried out at generator/storage sites and DOE approved laboratories in accordance with this QAPjP. The DOE will audit the CCP waste characterization programs and activities as described in Section C-3. Waste characterization activities at the generator/storage sites include the following, although not all these techniques will be used on each container, as discussed in Section C-3:

- Radiography, an x-ray technique used to determine the physical contents of containers.
- VE of the contents of opened containers as an alternative way to determine their physical contents.
- Headspace gas sampling to determine VOC content of gases in the void volume of the containers.
- Sampling and analysis of waste forms that are homogeneous and can be representatively sampled to determine concentrations of hazardous waste constituents and toxicity characteristic contaminants of waste in containers.
- Compilation of AK documentation into an auditable record.

[1]"Auditable records" means those records which allow the Permittees to conduct a systematic assessment, analysis, and evaluation of the Permittees' compliance with the WAP and the Permit.

C-0b AK Sufficiency Determination

CCP may submit a request to the Permittees for an AK Sufficiency Determination (Determination Request) to meet all or part of the waste characterization requirements (T5). The contents of the Determination Request are specified in Section C4-3d. The Determination Request may take one of the following forms:

Scenario 1	Radiography or VE of the waste stream is not required, and chemical sampling and analysis is not required;
Scenario 2	Radiography or VE of the waste stream is not required, but chemical sampling and analysis of a representative sample of the waste stream is required; or
Scenario 3	Chemical sampling and analysis is not required, but radiography or VE of 100% of the containers in the waste stream is required.

The Permittees shall evaluate the Determination Request for completeness and technical adequacy. This evaluation shall include, but not be limited to whether the Determination Request is technically sufficient for the following:

- The Determination Request must include all information specified in Section C4-3d.
- The AK Summary must identify relevant hazardous constituents, and must correctly identify all toxicity characteristic and listed hazardous waste numbers.
- All hazardous waste number assignments must be substantiated by supporting data and, if not, whether this lack of substantiation comprises the interpretation.
- Resolution of data discrepancies between different AK sources must be technically correct and documented.
- The AK Summary must include all the identification of waste material parameter weights by percentage of the material in the waste stream, and determinations must be technically correct and substantiated by supporting information.
- All prohibited items specified in the TSDF-WAC should be addressed and conclusions drawn and must be substantiated by supporting information.
- If the AK record includes process control information specified in Section C4-3b, the information should include procedures, waste manifests, or other documentation demonstrating that the controls were adequate and sufficient.

- The site must provide the supporting information necessary to substantiate technical conclusions with the Determination Request, and this information must be correctly interpreted.

The Permittees will review the Determination Request for technical adequacy and compliance with the requirements of the Permit, using trained and qualified individuals in accordance with standard operating procedures that shall, at a minimum, address all of the technical and procedural requirements listed above. The Permittees shall resolve comments with the CCP, and the Permittees may change the scope of the Determination Request to one of the three scenarios.

If DOE determines that the AK is sufficient, it shall inform the public of the Determination Request, the Permittees' evaluation of it, and the date and time of a public meeting to provide information to and solicit comments from interested members of the public regarding the Determination Request. Notice of the meeting and comment period shall be provided by the following methods:

1. Written notice to all individuals on the facility mailing list;

2. Public notice in area newspapers, including the Carlsbad Current-Argus, Albuquerque Journal, and Santa Fe New Mexican;

3. Notice on the WIPP Home Page;

4. E-mail notification as specified In Permit Section 1.11.

DOE shall take written comment on the Determination Request for at least 30 days following the public meeting. DOE shall compile all such comments, including any disagreement between the DOE and commenters.

If DOE provisionally approves the Determination Request, it may forward it along with all relevant information submitted with the Determination Request to NMED for an evaluation that the provisional approval made by the DOE is adequate. DOE shall also provide to NMED, as a separate appendix to the Determination Request, the compilation of all comments and DOE's response to each comment. After submitting a Determination Request to NMED, the Permittees will post a link to the transmittal letter to NMED on the WIPP Home Page and inform those on the e-mail notification list as specified in Permit Section 1.11. Based on the results of NMED's evaluation, the Permittees will notify the CCP whether the AK information is sufficient and the Determination Request is approved. The DOE will not approve a Determination Request that NMED has determined to be inadequate unless the CCP resolves the inadequacies and provides the resolution to NMED for evaluation of adequacy. Should the inadequacies not be resolved to NMED's satisfaction, the DOE shall not submit a Determination Request for the same waste stream at a later date. DOE shall not submit

a Determination Request, if a previous Determination Request is pending evaluation by NMED.

In the event the DOE disagrees, in whole or in part, with an evaluation performed by NMED resulting in a determination by NMED that the DOE's provisional approval for a particular waste stream is inadequate, the DOE may seek dispute resolution. The dispute resolution process is specified in Part 1. The Secretary's final decision under Permit Section 1.16.4 shall constitute a final agency action.

By July 1 of each year, the Permittees shall submit to NMED a list of waste streams the Permittees may submit for an AK Sufficiency Determination during the upcoming federal fiscal year. The Permittees will post a link to the transmittal letter to NMED and announce a public meeting to discuss the list with interested members of the public on the WIPP Home Page and inform those on the e-mail notification list as specified in Permit Section 1.11.

If the CCP does not submit a Determination Request, or if the DOE does not approve a Determination Request, or if NMED finds that the DOE's provisional approval of a Determination Request is inadequate, the CCP shall perform radiography or VE on 100% of the containers in a waste stream and chemical sampling and analysis on a representative sample of the waste stream using headspace gas sampling and analysis (for debris waste) or solids sampling and analysis (for homogeneous solid or soil/gravel waste) as specified in Sections C1 and C2.

If the CCP submits a Determination Request, the DOE provisionally approves the Determination Request as Scenario 1, and NMED finds that the DOE's provisional approval is adequate, neither radiography or VE nor chemical sampling and analysis of the waste stream is required.

If the CCP submits a Determination Request, the DOE provisionally approves the Determination Request as Scenario 2, and NMED finds that the DOE's provisional approval is adequate, chemical sampling and analysis of a representative sample of the waste stream is required, but radiography or VE is not required.

If the CCP submits a Determination Request, the DOE provisionally approves the Determination Request as Scenario 3, and NMED finds that the DOE's provisional approval is adequate, radiography or VE of 100% of the containers in the waste stream is required, but chemical sampling and analysis is not required.

C-0c Waste Stream Profile Form Completion

After a complete AK record has been compiled and either a Determination Request has been approved by the DOE or the CCP has completed the applicable representative sampling and analysis requirements specified in Sections C1 and C2, the CCP will complete a WSPF and Characterization Information Summary (CIS) (T3). The requirements for the completion of a WSPF and a CIS are specified in Sections C3-12b(1) and C3-12b(2) respectively.

The WSPF and the CIS for the waste stream resulting from waste characterization activities are transmitted to the Permittees, who shall review them for completeness, and screen them for acceptance before the CCP proceeds with payload assembly of TRU waste into the Contact-Handled or Remote-Handled Packaging. The review and approval process will ensure that the submitted waste analysis information is sufficient to meet the DQOs for AK in Section C-4a(1) and allow the Permittees to demonstrate compliance with the requirements of the WIPP-WAP. Only TRU waste that meets the characterization requirements of the WAP is certified by the CCP. Only waste certified to meet the TSDF-WAC, specified in the WAP, is accepted at the WIPP facility for disposal in the permitted Underground Hazardous Waste Disposal Unit (HWDU). DOE will approve and provide NMED with copies of the approved WSPF and accompanying CIS prior to waste stream shipment. Upon notification of DOE's approval of the WSPF, the CCP may be authorized to ship waste to WIPP.

In the event that the Permittees request detailed information on a waste stream, the CCP provides a Waste Stream Characterization Package, as described in Section C3-12b(3). For each waste stream, this package will include the WSPF, the CIS, and the AK summary. The Waste Stream Characterization Package will also include specific Batch Data Reports (BDRs), and raw analytical data associated with waste container characterization as requested by the Permittees.

C-0d Waste Confirmation

The Permittees will perform waste confirmation on a representative subpopulation of each waste stream shipment after certification and prior to shipment pursuant to Section C7. The Permittees will use radiography, review of radiography audio/video recordings, VE, or review of VE records (e.g., VE data sheets or packaging logs) to examine at least 7 percent of each waste stream shipment to confirm that the waste does not contain ignitable, corrosive, or reactive waste. Waste confirmation will be performed by the Permittees prior to shipment of the waste from the generator/storage site to WIPP.

C-1 Identification of TRU Waste to be Managed at the WIPP Facility

C-1a Waste Stream Identification

TRU waste destined for disposal at WIPP is characterized on a waste stream basis. The waste streams are delineated using AK. Required AK is specified in Section C-3b and Section C-4 of this QAPjP.

Not all of the waste containers within a waste stream may be accessible for sampling and analysis at one time. Section C-2 addresses the requirements for selecting waste containers used for characterization of waste streams as they are generated or retrieved.

C-1b Waste Summary Category Groups and Hazardous Waste Accepted at the WIPP Facility

Once a waste stream is delineated, a waste matrix code is assigned to the waste stream based on its physical form. Waste streams are then assigned to one of the Summary Category Groups; S3000-Homogeneous Solids, S4000-Soils/Gravel, and S5000-Debris Wastes. These Summary Category Groups are then used to determine further characterization requirements.

The CCP considers only those TRU waste streams that are assigned EPA hazardous waste numbers listed in Table C-9. Waste identified by unique state hazardous waste numbers is acceptable at WIPP provided they meet the requirements of the TSDF-WAC. The CCP performs characterization of all waste streams as required by the WAP. If during the characterization process, new hazardous waste numbers are identified, those wastes are prohibited for disposal at the WIPP facility until a permit modification has been submitted and approved by NMED.

C-1c Waste Prohibited at the WIPP Facility

The following TRU wastes are prohibited for disposal at the WIPP facility:

- Liquid waste is not acceptable at WIPP. Liquid in the quantities delineated below is acceptable.
  - Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of radiography or visual examination
  - Internal containers with more than 60 milliliters or 3 percent by volume observable liquid, whichever is greater, are prohibited

- Containers with hazardous waste number U134 assigned shall have no observable liquid

- Overpacking the outermost container that was examined during radiography or visual examination or redistributing untreated liquid within the container shall not be used to meet the volume limits

- Non-radionuclide pyrophoric materials, such as elemental potassium.

- Hazardous wastes not occurring as co-contaminants with TRU waste (non-mixed hazardous waste).

- Wastes incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials, or other wastes.

- Wastes containing explosives or compressed gases.

- Wastes with polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization.

- Wastes exhibiting the characteristic of ignitability, corrosivity, or reactivity (Hazardous Waste Numbers D001, D002, or D003).

- Any waste container from a waste stream (or waste stream lot) that has not undergone either radiographic or VE of a statistically representative subpopulation of the waste stream in each shipment, pursuant to Section C7.

- Any waste container from a waste stream which has not been preceded by an appropriate, certified WSPF (see Section C-1d).

- Waste that has ever been managed as high-level waste and waste from tanks specified in Table C-8, Waste Tanks Subject to Exclusion, unless specifically approved through a Class 3 permit modification.

Before accepting a container holding TRU waste, the Permittees will perform waste confirmation activities pursuant to Permit Attachment C7 on each waste stream shipped to confirm that the waste does not contain ignitable, corrosive, or reactive waste and the assigned EPA hazardous waste numbers are allowed for storage and disposal by this QAPjP. Waste confirmation activities will be performed on at least 7 percent of each waste stream shipment. If a waste stream shipment contains fewer than 14 containers, one container will be examined to satisfy waste confirmation requirements. Section C-4 and Section C7 include descriptions of the waste confirmation processes that the Permittees will conduct prior to receiving a shipment at the WIPP facility.

Containers are vented through filters allowing any gases that are generated by radiolytic and microbial processes within a waste container to escape, thereby preventing over pressurization or development of conditions within the container that would lead to the formation of ignitable, corrosive, reactive, or other characteristic wastes. To ensure the integrity of the WIPP facility, waste streams identified to contain incompatible materials or materials incompatible with waste containers are not shipped to WIPP unless they are treated to remove the incompatibility. The CCP does not certify waste streams identified to contain incompatible materials or materials incompatible with waste containers or backfill.

C-1d Control of Waste Acceptance

The CCP will provide a WSPF and CIS to the Permittee for each waste stream prior to shipment of the waste (T2). The WSPF and CIS elements are found in Section C3-12b(1) and Section C3-12b(2). The CCP will provide the WSPF to the Permittees for each waste stream prior to its acceptance for disposal at WIPP. The WSPF and the CIS will be transmitted to the Permittees for each waste stream. After WSPF submittal, if continued waste characterization activities reveal discrepancies that identify different hazardous waste numbers or indicate that the waste belongs to a different waste stream, the waste is redefined to a separate waste stream and a new WSPF is submitted.

The Permittees are responsible for the review of the WSPF and CISs to verify compliance with the restrictions on TRU wastes for WIPP disposal. Waste characterization data ensures the absence of prohibited items specified in Section C-1c. CCP determines by procedure the specific circumstances under which a WSPF is to be revised versus when a new WSPF is required.

The CCP provides a Waste Stream Characterization Package (as described in Section C3-12b(3)) to the Permittees upon request. The option for the Permittees to request additional information ensures that the waste being offered for disposal is adequately characterized and accurately described on the WSPF.

C-1e Waste Generating Processes at the WIPP Facility

Not applicable. This section applies to the Permittee.

C-2 Waste Characterization Program Requirements and Waste Characterization Parameters

The CCP has developed the procedures which specify the programmatic waste characterization requirements (Q10). DOE will evaluate the procedures during audits and as part of the review and approve of the WSPF.

CCP must notify the Permittees and obtain DOE approval prior to making data-affecting modifications to procedures (Q10). Program procedures shall address the following minimum elements:

- Waste characterization and certification procedures for retrievably stored and newly generated wastes to be sent to the WIPP facility.
- Methods used to ensure prohibited items are documented and managed. These will include procedures for performing radiography, VE, or treatment, if these methods are used to ensure prohibited items are not present in the waste prior to shipment of the waste to WIPP.
- Procedures used to verify packaging configurations to determine the correct Drum Age Criteria (DAC) if headspace gas sampling and analysis is used to collect waste characterization information per Section C1-1a(1).
- Identify the organization(s) responsible for compliance with waste characterization and certification procedures.
- Identify the oversight procedures and frequency of actions to verify compliance with waste characterization and certification procedures.
- Develop training specific to waste characterization and certification procedures.
- Ensure that personnel may stop work if noncompliance with waste characterization or certification procedures is identified.
- Develop a nonconformance process that complies with the requirements in Section C3 to document and establish corrective actions.
- As part of the corrective action process, assess the potential time frame of the noncompliance, the potentially affected waste population(s), and the reassessment and recertification of those wastes.
- A listing of all approved hazardous waste numbers which are acceptable at WIPP are included in Table C-9.

For those waste streams or containers that are not amenable to radiography (e.g., RH TRU waste, direct loaded ten-drum overpacks [TDOPs]) for waste confirmation by the Permittees pursuant to Section C7, CCP VE data may be used for waste acceptance. In those cases, the Permittees will review the CCP VE procedures to ensure that data sufficient for the Permittees' waste acceptance activities pursuant to

Section C7 will be obtained and the procedures meet the minimum requirements for VE specified in Section C1-3.

The following waste characterization parameters are obtained from the CCP prior to waste certification:

- Determination whether TRU waste streams comply with the applicable provisions of the TSDF-WAC.
- Determination whether TRU mixed wastes exhibit a hazardous characteristic (20.4.1.200 NMAC, incorporating 40 CFR §261 Subpart C).
- Determination whether TRU mixed wastes are listed (20.4.1.200 NMAC, incorporating 40 CFR §261 Subpart D).
- Estimation of waste material parameter weights.

Tables C-1, C-2, C-3, and C-4 provide the parameters of interest for the constituent groupings and analytical methodologies.

C-3 Generator Waste Characterization Methods

The characterization techniques used by the CCP include AK and may also include, as necessary, headspace gas sampling and analysis, homogeneous waste sampling and analysis, VE, and radiography. Characterization activities are performed in accordance with this QAPjP. Table C-5, Summary of Parameters, Characterization Methods, and Rationale for CH TRU Waste (Stored Waste), provides a summary of the characterization requirements for TRU waste.

C-3a Sampling and Analytical Methods

C-3a(1) Headspace Gas Sampling and Analysis

Representative headspace gas sampling and analysis shall be used by CCP to determine the types and concentrations of VOCs in the void volume of randomly selected waste containers in order to resolve the assignment of EPA hazardous waste numbers for those debris waste streams for which an AK Sufficiency Determination Request has not been approved by the DOE (T162). In addition, VOC constituents will be compared to those assigned by AK, which may include an analysis of radiolytically derived VOCs. The CCP also considers radiolysis and packaging materials when assessing the presence of hazardous constituents in the headspace gas results, and whether radiolysis generates wastes which exhibit the toxicity characteristic. Refer to Section C4 for additional clarification regarding hazardous waste number assignment and headspace gas results. The methods for random selection of containers for

headspace gas sampling and analysis are specified in Section C2. Headspace gas sampling and analysis shall be subject to the Audit and Surveillance Program.

In accordance with EPA convention, identification of hazardous constituents detected by Gas Chromatography/Mass Spectrometry (GC/MS) methods that are not on the list of target analytes are reported. These compounds are reported as tentatively identified compounds (TICs) in the BDR and are added to the target analyte list for that waste stream if they appear in 20.4.1.200 NMAC (incorporating 40 CFR §261) Appendix VIII and are reported in 25 percent of the samples from a given waste stream (T2). The headspace gas analysis quality assurance objectives (QAOs) are specified in Table C3-2, Gas Volatile Organic Compound Target Analyte List and Quality Assurance Objectives.

C-3a(2) Homogeneous and Soil/Gravel Waste Sampling and Analysis

The CCP uses representative homogeneous and soil/gravel waste sampling and analysis to resolve the assignment of EPA hazardous waste numbers for homogeneous and soil/gravel waste streams for which an AK Sufficiency Determination Request has not been approved by the DOE (T162). The CCP samples homogeneous and soil/gravel wastes to resolve the assignment of hazardous waste numbers. Sampling is accomplished through coring or other EPA approved sampling which is described in Section C1-2. For those waste streams defined as Summary Category Groups S3000 or S4000, debris that may also be present within these wastes need not be sampled. The waste containers for sampling and analysis are selected randomly from the population of containers for the waste stream. The random selection methodology used is described in Section C2. Homogeneous and soil/gravel sampling and analysis shall be subject to the Audit and Surveillance Program.

The CCP uses totals or toxicity characteristic leaching procedures (TCLP) analyses for VOCs, semivolatile organic compounds (SVOCs), and RCRA-regulated metals to determine waste parameters in soils/gravels and solids that are important to the performance within the disposal system (Tables C-3 and C-4). To determine if a waste exhibits a toxicity characteristic for compounds specified in 20.4.1.200 NMAC (incorporating 40 CFR §261, Subpart C), TCLP may be used instead of total analyses. The CCP uses the results from these analyses to determine if a waste exhibits a toxicity characteristic. The mean concentration of toxicity characteristic contaminants is calculated for each waste stream and reported with an upper 90 percent confidence limit (UCL_{90}). The UCL_{90} values for the mean measured contaminant concentrations in a waste stream is compared to the specified regulatory levels in 20.4.1.200 NMAC (incorporating 40 CFR §261, Subpart C), expressed as total/TCLP values, to determine if the waste stream exhibits a toxicity characteristic. A comparison of total analyses and TCLP analyses is presented in Appendix C3 of the WIPP RCRA Part B Permit Application (DOE, 1997), and a discussion of the UCL_{90} is found in Section C2-2a. If

toxicity characteristic wastes are identified, they are compared to those determined by AK and toxicity characteristic waste codes are revised, as warranted.

C-3a(3) Laboratory Qualification

Laboratories providing analytical services are qualified through participation in the DOE-CBFO Performance Demonstration Programs (PDP). In addition, methods and supporting performance data demonstrating QAO compliance are ensured by the DOE during the annual certification audit of the laboratories.

Analytical methods used: 1) satisfy the appropriate QAOs; 2) follow EPA method guidance where available; and 3) are implemented through standard operating procedures. These analytical QAOs are discussed in detail in Section C3.

C-3b Acceptable Knowledge

AK is used in TRU waste characterization activities in five ways:

- To delineate TRU waste streams
- To assess whether TRU mixed wastes comply with the TSDF-WAC
- To assess whether TRU wastes exhibit a hazardous characteristic (New Mexico Hazardous Waste Management Regulations in 20.4.1.200 NMAC incorporating 40 CFR §261 Subpart C)
- To assess whether TRU wastes are listed (20.4.1.200 NMAC, incorporating 40 CFR §261 Subpart D)
- To estimate waste material parameter weights

AK is discussed in detail in Section C4, which outlines the minimum set of requirements and DQOs met by the CCP in order to use AK.

C-3c Radiography and Visual Examination

Radiography and VE are nondestructive qualitative and quantitative techniques used to identify and verify waste container contents as specified in Section C1. The CCP performs radiography or VE of 100 percent of CH-TRU waste containers in waste streams except for those waste streams for which the DOE approves a Scenario 1 or Scenario 2 Determination Request. No RH-TRU waste will be shipped to WIPP for storage or disposal without documentation of radiography or VE of 100 percent of the containers as specified in Section C1. VE consists of either observing the filling of waste containers or opening full containers and physically examining their contents.

Radiography and/or VE are used, when necessary, to examine a waste container to verify its physical form. These techniques detect observable liquid in excess of TSDF-WAC limits and containerized gases which are prohibited for WIPP disposal. The prohibition of liquid in excess of TSDF-WAC limits and containerized gases prevents the shipment of corrosive, ignitable, or reactive wastes. Radiography and/or VE are also able to verify the physical form of the waste matches its waste stream description (i.e., Homogeneous Solids, Soil/Gravel, or Debris Waste [including uncategorized metals]).

If the physical form does not match the waste stream description, the waste is designated as another waste stream and assigned the preliminary hazardous waste numbers associated with that new waste stream assignment. That is, if radiography and/or VE indicate that the waste does not match the waste stream description produced by AK characterization, a nonconformance report (NCR) is completed and the inconsistency resolved as specified in Section C4 (Q5), and the NCR will be dispositioned as specified in Section C3-13. The proper waste stream assignment is determined (including preparation of a new WSPF), the correct hazardous waste numbers are assigned, and the resolution is documented. The AK verification process is discussed in Section C4.

If CCP uses VE , the detection of any liquid in non-transparent internal containers, detected from shaking the internal container, is handled by assuming that the internal container is filled with liquid and adding this volume to the total liquid in the container being characterized using VE. The container being characterized using VE is then repackaged or rejected to exclude the internal container if it does not meet the requirements of the TSDF-WAC. When radiography is used or VE of transparent containers is performed, if any liquid in internal containers is detected, the volume of liquid is added to the total for the container being characterized using radiography or VE. Radiography, or the equivalent, is used as necessary on the existing or stored waste containers to verify the physical characteristics of the TRU waste corresponding with its waste stream identification and waste matrix code and to identify prohibited items. Radiographic examination protocols and QA/QC methods are provided in Section C1-3. Radiography and VE shall be subject to the Audit and Surveillance Program.

C-3d Characterization Techniques and Frequency for Newly Generated and Retrievably Stored Waste

Section C4 describes the use of AK to delineate TRU waste streams for the purpose of grouping waste by Summary Category Group for further characterization. Analyses required may differ based on the waste stream, and the physical form of the waste (i.e., heterogeneous debris waste cannot be sampled for totals analysis). Both retrievably stored and newly generated waste streams are delineated using AK though the types of AK used may differ. Every TRU waste stream is assigned hazardous waste

numbers based on AK, and CCP may resolve the assignment of these hazardous waste numbers using headspace gas sampling and analysis (Summary Category Group S5000 only) and solid sampling and analysis (Summary Category Groups S3000 and S4000 only).

In the CIS for each waste stream, the CCP will document the methods, and the findings from the method used for determining the physical form of the waste and the presence or absence of prohibited items for both retrievably stored and newly generated waste (T3). CCP may use radiography or VE to verify the physical form of retrievably stored TRU mixed waste. For newly generated waste, physical form and prohibited items may either be documented during packaging using VE or will be verified after packaging using radiography or VE.

For debris waste streams that do not have an AK Sufficiency Determination approved by the DOE, containers selected in accordance with Section C2 from those waste streams must be sampled and analyzed for headspace gas VOCs. Likewise, a statistically selected portion of homogeneous solids and soil/gravel waste streams must be sampled and analyzed for RCRA-regulated total VOCs, SVOCs, and metals when those waste streams do not have an AK Sufficiency Determination approved by the DOE (T162). Sampling and analysis methods used to characterize waste are summarized in Section C-3a.

In the process of performing organic headspace and solid sample analyses, nontarget compounds may be identified on the current target analyte list. These compounds are reported as TICs. TICs reported in 25 percent of the samples and listed in 20.4.1.200 NMAC Appendix VIII (incorporating 40 CFR §261) are compared with AK data to determine whether the TIC is in a listed waste in the waste stream. TICs identified through headspace gas analysis that meet the Appendix VIII listing and 25 percent reporting criteria for a waste stream are added to the headspace gas waste stream target analyte list regardless of the hazardous waste listing associated with the waste stream.

TICs subject to inclusion on the target analyte list that are toxicity characteristic parameters are added to the target analyte list regardless of origin because the hazardous waste designation for these numbers is not based on source. However, for toxicity characteristic and non-toxic F003 constituents, the CCP takes concentration into account when assessing whether to add an EPA hazardous waste number. TICs reported from the total VOC, or SVOC analyses may be excluded from the target analyte list for a waste stream if the TIC is a constituent in an F-listed waste whose presence is attributable to waste packaging materials or radiolytic degradation described in AK documentation. If the TIC associated with a total VOC or SVOC analysis cannot be identified as a component of waste packaging materials or as a product of radiolysis, the CCP adds these TICs to the list of hazardous constituents for the waste stream (and assigns additional EPA listed hazardous waste numbers, if

appropriate). A permit modification is submitted to NMED for their approval to add these constituents (and hazardous waste numbers), if necessary. For toxicity characteristic compounds and non-toxic F003 constituents, the CCP considers the waste concentration when determining whether to change a hazardous waste number. Refer to Section C3-1 for additional information on TIC identification.

Waste characterization solid sampling and analysis activities may differ for retrievably stored waste and newly generated waste. The waste characterization processes used by the CCP for both retrievably stored and newly generated waste streams will be evaluated during the DOE's audit of the site. The typical waste characterization data collection design used by CCP for each type of waste is described in the following sections. Table C-1, Summary of Hazardous Waste Characterization Requirements for Transuranic Waste, provides a summary of hazardous waste characterization requirements for all TRU waste by waste characterization parameters. Table C-5 summarizes the parameters, characterization methods, and rationale for CH-TRU wastes according to their form.

The CCP disposes of repackaged or treated TRU waste at the WIPP facility. Treated waste shall retain the original waste stream's listed hazardous waste number designation.

C-3d(1) Newly Generated Waste (T6)

The RCRA-regulated constituents in newly generated wastes are typically documented at the time of generation based on AK for the waste stream. Newly generated TRU waste characterization typically begins with verification that processes generating waste have been operating within established written procedures. Waste containers are delineated into waste streams using AK. The CCP will document the methods used to delineate waste streams in the AK record and AK Summary Report. Determination that the physical form of the waste (Summary Category Group) corresponds to the physical form of the assigned waste stream may be accomplished either using VE during packaging or by performing radiography as specified in Section C1-3 for retrievably stored waste. Instead of using a video/audio tape and a single operator, the VE method for newly generated waste (or repackaged retrievably stored waste) may use a second operator, who is equally trained to the requirements stipulated in Section C1 to provide additional verification by reviewing the contents of the waste container to ensure accurate reporting. If the second operator cannot provide concurrence, corrective actions[2] are taken as specified in Section C3. The subsequent waste characterization activities depend on the assigned Summary Category Group, since waste within the Homogeneous Solids and Soil/Gravel Summary Category Groups may be characterized using different techniques than the waste in the Debris Waste Summary Category Group. The packaging configuration, type and number of filters, and rigid liner vent hole

[2] "Corrective Action" as used in this QAPjP does not mean corrective action as defined under New Mexico Hazardous Waste Act (HWA), RCRA, and their implementing regulations.

presence and diameter necessary to determine the appropriate DAC in accordance with Section C1-1, may be documented as part of the characterization information collected during the packaging of newly generated waste or repackaging of retrievably stored waste for those containers of debris waste that will undergo headspace gas sampling and analysis.

C-3d(1)(a) Sampling of Newly Generated Homogeneous Solids and Soil/Gravel

When a Determination Request has not been approved by the DOE, sampling and analysis of newly generated homogeneous solid and soil/gravel waste streams shall be conducted in accordance with the requirements specified in Section C1-2. The number of newly generated homogeneous solid and soil/gravel waste containers to be sampled will be determined using the procedure specified in Section C2-1, wherein a statistically selected portion of the waste will be sampled.

C-3d(2) Retrievably Stored Waste

Retrievably stored waste containers are first delineated into waste streams using AK (T5). CCP documents the methods used to delineate waste streams in the AK record and AK Summary Report. Retrievably stored waste containers may be examined using either radiography or VE to determine the physical waste form (Summary Category Group), the absence of prohibited items, and additional waste characterization techniques that may be used based on the Summary Category Group. The headspace gas sampling method provided in Section C1 is used, when necessary, to resolve the assignment of EPA hazardous waste numbers to debris waste streams, as described in Section C4.

A statistically-selected portion of retrievably stored homogeneous solids and soil/gravel wastes are sampled and analyzed for total VOCs, SVOCs, and metals, when necessary. The sample location selection method is described in Section C1. The approach used to statistically select the number of drums to be visually examined is described in Section C2.

The CCP determines the toxicity characteristic of retrievably stored homogeneous solids and soil/gravel wastes using total analysis of toxicity characteristic parameters or TCLP. To determine if a waste exhibits a toxicity characteristic for compounds specified in 20.4.1.200 NMAC (incorporating 40 CFR §261, Subpart C), the CCP may use TCLP instead of total analyses. Appendix C3 of the WIPP RCRA Part B Permit Application (DOE, 1997) discusses comparability of totals analytical results to those of the TCLP method.

Representativeness of containers selected for headspace gas sampling and waste subjected to homogeneous solids and soil/gravel sampling and analysis will be validated by the CCP via examination of documentation that shows that true random samples were collected. (Because representativeness is a quality characteristic that expresses the degree to which a sample or group of samples represent the population being studied, the random sampling of waste streams ensures representativeness).

C-4 Data Verification and Quality Assurance

The CCP ensures that its applicable waste characterization process performance for generator/storage sites sending TRU waste to the WIPP for disposal meets WAP requirements through data validation, verification, usability and reporting controls. Verification occurs at three levels: 1) the CCP data generation level, 2) the CCP project level, which consists of verification and validation by the CCP to ensure that applicable WAP requirements are met and; 3) the Permittee level. The validation and verification process and requirements at each level are described in Section C3-10. The validation verification process at the Permittee Level is also described in C-5.

C-4a Data Generation and Project Level Verification Requirements

C-4a(1) Data Quality Objectives

The waste characterization data obtained through implementation of this QAPjP are used by the Permittees to ensure that the regulatory requirements of the WAP are met with regard to compliance and to ensure that TRU wastes are properly managed during the disposal phase.

To satisfy the RCRA regulatory compliance requirements, the following are DQOs established by the WAP and flowed down to this QAPjP (T2):

<u>Acceptable Knowledge</u>

- To delineate TRU waste streams.
- To assess whether TRU mixed wastes comply with the applicable requirements of the TSDF-WAC.
- To assess whether TRU mixed wastes exhibit a hazardous characteristic (20.4.1.200 NMAC, incorporating 40 CFR §261, Subpart C).
- To assess whether TRU mixed wastes are listed (20.4.1.200 NMAC, incorporating 40 CFR §261, Subpart D).
- To estimate waste material parameter weights.

Headspace Gas Sampling and Analysis

- To identify VOCs and quantify the concentrations of VOC constituents in waste containers to resolve the assignment of EPA hazardous waste numbers

Homogeneous Waste Sampling and Analysis

- To compare UCL_{90} values for the mean measured contaminant concentrations in a waste stream with specified toxicity characteristic levels in 20 4.1.200 NMAC (incorporating 40 CFR §261), to determine if the waste is hazardous, and to resolve the assignment of EPA hazardous waste numbers

Radiography

- To determine the physical waste form, the absence of prohibited items, and additional waste characterization techniques that may be used based on the Summary Category Groups (i.e., S3000, S4000, S5000).

Visual Examination

- To determine the physical waste form, the absence of prohibited items, and additional waste characterization techniques that may be used based on the Summary Category Groups (i.e., S3000, S4000, S5000).

Reconciliation of these DQOs by the SPM or DOE approved laboratories, as applicable, is addressed in Section C3-11. Reconciliation requires determining whether sufficient types, quality, and quantity of data have been collected to ensure that the DQOs cited above can be achieved.

C-4a(2) Quality Assurance Objectives

The CCP or the DOE approved laboratories, as applicable, demonstrates compliance with each QAO associated with the various characterization methods presented in Sections C3-2 through C3-9. The SPM or the DOE approved laboratories, as applicable, performs reconciliation of the data with the DQOs established in this QAPjP. The SPM or the DOE approved laboratories, as applicable, concludes that all of the DQOs have been met for the characterization of the waste stream prior to submitting a WSPF to the DOE for approval (T2).

The following QAO elements are considered for each technique, as a minimum:

- Precision - a measure of the mutual agreement among multiple measurements

- Accuracy - the degree of agreement between a measurement result and the true or known value

- Completeness - a measure of the amount of valid data obtained from a method compared to the total amount of data obtained (expressed as a percentage)

- Comparability - the degree to which one data set can be compared to another

- Representativeness - the degree to which sample data represent characteristics of a population

A more detailed discussion of the QAOs including a mathematical representation can be found in Section C3, which describes the QAOs associated with each sampling and analysis method.

C-4a(3) Sample Control

The CCP and DOE approved laboratories, as applicable, implement a sample handling and control program that includes the maintenance of field documentation records, proper labeling and a chain of custody (COC) record (T93, T177, and T180). The procedures referenced in the QAPjP document the sample control program and include COC forms to control the sample from the point of origin to the final analysis result reporting. The DOE reviews and approves the QAPjP, including the determination that the sample control program is adequate. The approved QAPjP is provided to the NMED by the Permittees prior to waste shipment and before the CCP audit. Details of the sample control program are provided in Section C1 and are summarized to include:

- Field documentation of samples including point of origin, date of sample, container identification, sample type, analysis requested, and COC number

- Labeling and/or tagging including sample number, sample ID, sample date, sampling conditions, and analysis requested

- COC control including name of sample relinquisher, sample receiver, and date and time of sample transfer

- Proper sample handling and preservation

C-4a(4) Data Generation

BDRs, in a format approved by the DOE, are used by CCP and DOE approved laboratories, as applicable, for reporting waste characterization data. The CCP and DOE approved laboratories, as applicable, formats for reporting waste characterization

data in BDRs are specified in several procedures. These procedures comply with the waste characterization data reporting requirements described in Section C3.

Analytical laboratories used by the CCP to analyze WIPP waste characterization samples have established and documented QA/QC programs.

The CCP and DOE approved laboratory analytical QA/QC program includes the following:

- Facility organization
- List of equipment/instrumentation
- Operating procedures
- Laboratory QA/QC procedures
- Quality assurance review
- Laboratory records management

C-4a(5) Data Verification

BDRs document the testing, sampling, analytical, and on-line results from required characterization activities, and required QA/QC activities. Data validation, review, and verification are performed at the data generation level and the CCP project level before the required data are transmitted to the Permittees (T1). Section C3-10 discusses the data validation process in greater detail. NMED may request, through the Permittees, copies of any BDR and/or the raw data validated by the CCP to check the DOE's audit of the validation and verification process.

C-4a(6) Data Transmittal

As part of the waste characterization data submittal, the CCP transmits the data electronically to the Permittees via the WIPP Waste Information System (WWIS)/Waste Data System (WDS) (T30, T530). Data will be entered into the WWIS/WDS in the exact format required by the data base as specified in Section C-5a(1) for WWIS/WDS reporting requirements and the *Waste Data System User's Manual* (DOE 2009) for the WWIS/WDS data fields and format requirements.

BDRs include the information required by Section C3-10 and are transmitted by hard copy or electronically (provided a hard copy is available on demand) from the data generation level to the CCP project level.

Once a waste stream is fully characterized the SPM submits a WSPF, accompanied by a Characterization Information Summary for that waste stream to the Permittees, which includes a record of reconciliation with DQOs as described in Sections C3-12b(1) and C3-12b(2).

The WSPF, the Characterization Information Summary, and information from the WWIS/WDS is used as the basis for acceptance of waste characterization information on TRU wastes to be disposed of at WIPP.

C-4a(7) Records Management

Records related to waste characterization activities performed by the generator/storage sites will be maintained in the testing, sampling or analytical facility files or generator/storage site project files or at the WIPP Records Archive facility. DOE approved laboratories will forward testing, sampling, and analytical records along with BDRs, to CCP Records for inclusion in the CCP's project files and to the Permittees for inclusion in the WIPP facility operating record. Raw data obtained by testing, sampling, and analyzing TRU mixed waste in support of the WAP will be identifiable, legible, and provide documentary evidence of quality. TRU mixed waste characterization records submitted to the Permittees shall be maintained in the WIPP facility operating record and be available for inspection by NMED. A detailed description of CCP site-specific records management activities is provided in Section C5-2.

Records inventory and disposition schedule (RIDS) or an equivalent system shall be prepared and approved by CCP. All records relevant to an enforcement action under this Permit, regardless of disposition, shall be maintained in CCP Records at the generator/storage site or at the WIPP Records Archive facility until NMED determines they are no longer needed for enforcement action, and then dispositioned as specified in the approved RIDS. All waste characterization data and related QA/QC records for TRU mixed waste to be shipped to the WIPP facility are designated as either Lifetime Records or Non-Permanent Records. Records that are designated as Lifetime Records shall be maintained for the life of the waste characterization program by CCP Records or generator/storage sites plus six years or transferred for permanent archival storage to the WIPP Records Archive facility.

Waste characterization records designated as Non-Permanent Records shall be maintained for 10 years from the date of (record) generation by CCP Records or at the participating generator/storage site or at the WIPP Records Archive facility and then dispositioned according to their approved RIDS. If a generator/storage site ceases to operate, all records shall be transferred before closeout to the Permittees for management at the WIPP Records Archive facility. Table C-6, Required Program Records, is a listing of records designated as Lifetime Records and Non-Permanent Records.

Classified information will not be transferred to WIPP. Notations will be provided to the Permittees indicating the absence of classified information. The approved CCP RIDS will identify the appropriate disposition of classified information. Nothing in the WIPP Permit is intended to, nor should it be interpreted to, require disclosure of any U.S. Department of Energy classified information to persons without appropriate clearance to view such information.

C-5 Permittee Level Waste Screening and Verification of TRU Mixed Waste

This section is not applicable to CCP. This section applies to the Permittees.

C-5a Phase I Waste Stream Screening and Verification

The first phase of the waste screening and verification process occurs before TRU waste is shipped to the WIPP facility. Before the Permittees begin the process of accepting TRU waste from the CCP, an initial audit is conducted as part of the Audit and Surveillance Program. The audit of CCP provides verification of characterization procedures; BDR preparation; and recordkeeping that ensures that all applicable provisions of the WAP requirements are met. Another portion of the Phase I verification is the WSPF approval process. At the WIPP facility, this process includes verification that all of the required elements of a WSPF and CIS are present and that the summarized waste characterization information meets acceptance criteria required for compliance with the WAP (Section C3-12b(1)).

The CCP has prepared this QAPjP, which includes applicable WAP requirements. This document is submitted to DOE for review and approval. The CCP implements the specific parameters of this QAPjP after Permittee approval. An initial audit is performed after QAPjP implementation and prior to the CCP being certified for shipment of waste to WIPP. Additional audits, focusing on the results of waste characterization, are performed at least annually. The DOE has the right to conduct unannounced audits and to examine any records that are related to the scope of the audit. See Section C-5a(3) for further information regarding audits.

When the required waste stream characterization data have been collected by the CCP and the initial audit is successfully completed, the SPM will verify that the waste stream characterization meets the applicable WAP requirements as part of the project level verification (T3). If the waste characterization does not meet the applicable requirements of the WAP, the waste stream cannot be managed, stored, or disposed of at the WIPP until those requirements are met. The SPM will then complete the WSPF and submit it to the Permittees, along with the accompanying CIS for that waste stream. All data necessary to check the accuracy of the WSPF is transmitted to the Permittees. This provides notification that the CCP considers that the waste stream (identified by the waste stream identification number) has been adequately characterized for disposal prior to shipment to WIPP. The Permittees then compare headspace gas, radiography,

VE and solid sampling and analysis data obtained subsequent to submittal and approval of the WSPF (and prior to submittal) with characterization information presented on this form. If the Permittees determine (through the data comparison) that the characterization information is adequate, DOE will approve the WSPF. Prior to the first shipment of containers from the approved waste stream, the approved WSPF and accompanying CIS is provided to NMED. If the data comparison indicates that analyzed containers have hazardous wastes not present on the WSPF, or a different waste matrix code applies, the WSPF is in error and is resubmitted. Ongoing WSPF examination is discussed in detail in Section C-5a(2).

Audits of CCP will be conducted as part of the Audit and Surveillance Program. The RCRA portion of the CCP audit program will provide on-site verification of waste characterization procedures; BDR preparation; and record keeping to ensure that all applicable provisions of the WAP requirements are met. As part of the waste characterization data submittal, the CCP also transmits the data on a container basis via the WWIS/WDS prior to shipment of that container. This data submittal occurs at any time as the data are being collected, but is complete for each container prior to shipment of that container. The WWIS/WDS conducts internal edit/limit checks based on the approved WSPF. The Permittees compare ongoing sampling and analysis characterization data obtained and submitted via the WWIS/WDS to the approved WSPF. If this comparison shows that containers have hazardous wastes not reported on the WSPF, or a different waste matrix code applies, the data are rejected and the waste containers are not accepted for shipment until a new or revised WSPF is submitted to Permittees' and approved by the DOE.

If discrepancies regarding hazardous waste number assignment or Waste Matrix Code designation arise as a result of the Phase I review, the CCP is contacted by the Permittees and provides the necessary additional information to resolve the discrepancy before that waste stream is approved for disposal at the WIPP facility. If the discrepancy is not resolved, the waste stream is not approved for shipment.

C-5a(1) WWIS/WDS Description

The CCP supplies the required data to the Permittees via the WWIS/WDS (T30, T530). The WWIS/WDS Data Dictionary includes all of the data fields, the field format and the limits associated with the data as established by the WIPP WAP. These data will be subjected to edit and limit checks that are performed automatically by the database, as defined in the *Waste Data System User's Manual* DOE/WIPP-09-3427(DOE, 2009). The Permittees will coordinate the data transmission with CCP. Actual data transmission will use appropriate technology to ensure the integrity of the data transmissions. The Permittees will require sites with large waste inventories and large databases to populate a data structure provided by the Permittees that contains the required data dictionary fields that are appropriate for the waste stream (or waste streams) at the site. For example, totals analysis data will not be requested from sites

that do not have homogeneous solids or soil/gravel waste. The Permittees will access these data via the Internet to ensure an efficient transfer of this data. Small quantity sites will be given a similar data structure by the Permittees that is tailored to their types of waste. Sites with very small quantities of waste will be provided with the ability to assemble the data interactively to this data structure on the WWIS/WDS.

The Permittees will use the WWIS/WDS to verify that all of the supplied data meet the applicable edit and limit checks prior to the shipment of any TRU waste to WIPP. The WWIS/WDS automatically notifies the CCP if any of the supplied data fails to meet the requirements of the edit and limit checks via an appropriate error message. The CCP corrects the discrepancy with the waste or the waste data and re-transmits the corrected data prior to acceptance of the data by the WWIS/WDS. The Permittees review data reported for each container of each shipment prior to providing notification to the CCP that the shipment is acceptable.

Access to the WWIS/WDS is controlled by the Permittees' Data Administrator (DA) who controls the WWIS/WDS users based on approval from management personnel.

The CCP only has access to CCP data supplied to WWIS/WDS, and only until the data have been formally accepted by the Permittees. After the data have been accepted, the data are protected from indiscriminate change and only changed by an authorized DA.

C-5a(2) Examination of the Waste Stream Profile Form and Container Data Checks

The Permittees verify the completeness and accuracy of the WSPF (Section C3-12b(1)). The assignment of the waste stream description, waste matrix code group, and Summary Category Groups; the results of waste analyses, as applicable; the AK summary documentation; the methods used for characterization; the DOE certification, and appropriate designation of hazardous waste number(s) are examined by the Permittees. If the WSPF is inaccurate, efforts are made to resolve discrepancies by contacting the CCP in order for the waste stream to be eligible for shipment to the WIPP facility. If discrepancies in the waste stream are detected, the CCP implements a non-conformance action to identify, document, and report discrepancies.

The WSPF shall pass all verification checks by the Permittees in order for the waste stream to be approved by DOE for shipment to the WIPP facility. The WSPF check against waste container data will occur during the initial WSPF process (Section C5a). Waste data transferred via the WWIS/WDS after WSPF approval is compared with the approved WSPF. Any container from an approved hazardous waste stream with a description different from its WSPF is not shipped to the WIPP for disposal.

The CCP verifies that the three different types of data specified below are available for every container holding TRU waste before that waste is managed, stored, or disposed at WIPP: 1) an assignment of the waste stream's waste description (by waste matrix codes) and waste matrix code group; 2) a determination of ignitability, reactivity, and corrosivity; and 3) a determination of compatibility. The CIS indicates if the waste was checked for the characteristics of ignitability, corrosivity, and reactivity.

Any container with unresolved discrepancies associated with hazardous waste characterization will not be managed, stored, or disposed at the WIPP facility until the discrepancies are resolved. If discrepancies cannot be resolved, the DOE will revoke the approval status of the waste stream and CCP will suspend shipments of the waste stream. Waste stream approval will not be reinstated until the CCP demonstrates all corrective actions have been implemented and the CCP waste characterization program is reassessed by the DOE.

C-5a(3) Audit and Surveillance Program

This section is not applicable to the CCP. It applies to the Permittees.

C-5b Phase II Waste Shipment Screening and Verification

For each container shipped, the CCP provides the following information (T86):

Hazardous Waste Manifest Information:

- Generator/storage site name and EPA Identification Number
- CCP contact name and phone number
- Quantity of waste
- List of up to six state and/or federal hazardous waste numbers in each line item
- Listing of all shipping container identification numbers (IDs) (Shipping Package serial number)
- Signature of authorized generator representative

Specific Waste Container information:

- Waste Stream Identification Number
- List of hazardous Waste Numbers per Container
- Certification Data
- Shipping Data (assembly numbers, ship date, shipping category, etc.)

This information is also supplied electronically to the WWIS/WDS. The container-specific information will be supplied electronically as described in Section C-5a(1), and is supplied prior to shipment.

C-5b(1) Examination of the EPA Uniform Hazardous Waste Manifest and Associated Waste Tracking Information

Manifest discrepancies will be identified during manifest examination and container bar-code WWIS/WDS data comparison. A manifest discrepancy is a difference between the quantity or type of hazardous waste designated on the manifest and the quantity or type of hazardous waste the WIPP facility actually receives. The CCP technical contact (as listed on the manifest) is contacted to resolve the discrepancy. Errors on the manifest are corrected by the WIPP facility with a verbal (followed by a mandatory written) concurrence by the CCP technical contact. If the manifest discrepancies are not resolved in thirty (30) days of waste receipt, the shipment is returned to the facility where the CCP performed the characterization.

C-5b(2) Examination of the Land Disposal Restriction Notice

TRU waste designated by the Secretary of Energy for disposal at WIPP is exempt from the Land Disposal Restrictions (LDRs) by the WIPP Land Withdrawal Act Amendment (Public Law 104-201). This amendment states that WIPP "Waste is exempted from treatment standards promulgated pursuant to section 3004(m) of the Solid Waste Disposal Act (42 U.S.C. 6924[m]) and shall not be subjected to the Land Disposal prohibitions in section 3004(d), (e), (f), and (g) of the Solid Waste Disposal Act." Therefore, with the initial shipment of a TRU waste stream, the CCP provides the Permittees with a one time written notice. The notice includes the information listed below:

Land Disposal Restriction Notice Information:

- EPA hazardous waste numbers and Manifest Numbers of first shipment of a mixed waste stream

- Statement: this waste is not prohibited from land disposal
- Date the waste is subject to prohibition

This information is the applicable information taken from column "268.7(a)(4)" of the "Generator Paperwork Requirements Table" in 20.4.1.800 NMAC (incorporating 40 CFR §268.7(a)(4)). Note that item "5" from the "Generator Paperwork Requirements Table" is not applicable since waste analysis data are provided electronically via the WWIS/WDS and item "7" is not applicable since waste designated by the Secretary of Energy for disposal at WIPP is exempted from the treatment standards.

The Permittees review the LDR notice for accuracy and completeness. The CCP prepares this notice in accordance with the applicable requirements of 20.4.1.800N MAC (incorporating 40 CFR §268.7(a)(4)).

C-5b(3) Verification

This section is not applicable to CCP. This section applies to the Permittees.

C-6 Permittees' Waste Shipment Screening QA/QC

This section is not applicable to CCP. This section applies to the Permittees.

C-7 Records Management and Reporting

All waste characterization data for each TRU waste container transmitted to WIPP shall be maintained by the Permittees for the active life of the WIPP facility plus two years (Q8). The active life of the WIPP facility is defined as the period from the initial receipt of TRU waste at the facility until NMED receives certification of final closure of the facility. After their active life, the records shall be retired to the WIPP Records Archive facility and maintained for 30 years. These records will then be offered to the National Archives. However, this disposition requirement does not preclude the inclusion of these records in the permanent marker system or other requirements for institutional control.

Waste characterization and waste confirmation data and documents related to waste characterization that are part of the WIPP facility operating record are managed in accordance with the following guidelines:

C-7a General Requirements

- Records shall be legible

- Corrections shall be made with a single line through the incorrect information, and the date and initial of the person making the correction shall be added
- Black ink is encouraged, unless a copy test has been conducted to ensure the other color ink will copy
- Use of highlighters on records is discouraged
- Records shall be reviewed for completeness
- Records shall be validated by the cognizant manager or designee

C-7b Records Storage

- Active records shall be stored when not in use
- Quality records shall be kept in a one-hour (certified) fire-rated container or a copy of a record shall be stored separately (sufficiently remote from the original) in order to prevent destruction of both copies as a result of a single event such as fire or natural disaster
- Unauthorized access to the records is controlled by locking the storage container or controlling personnel access to the storage area

C-8 Reporting

This section is not applicable to CCP. This section applies to the Permittees.

Table C-1. Summary of Hazardous Waste Characterization Requirements for Transuranic Mixed Waste[a]

Parameter	Techniques and Procedure
Physical Waste Form Summary Category Names S3000 Homogeneous Solids S4000 Soil/Gravel S5000 Debris Wastes	Waste Inspection Procedures Radiography VE (Section C1)
Headspace Gases VOCs Alcohols and Ketones Benzene — Acetone Bromoform — Butanol Carbon tetrachloride — Methanol Chlorobenzene — Methyl ethyl ketone Chloroform — Methyl isobutyl ketone 1,1-Dichloroethane 1,2-Dichloroethane 1,1-Dichloroethylene trans-1,2-Dichloroethylene Ethyl benzene Ethyl ether Methylene chloride 1,1,2,2-Tetrachloroethane Tetrachloroethylene Toluene 1,1,1-Trichloroethane Trichloroethylene 1,1,2-Trichloro-1,2,2-trifluoroethane Xylenes	Gas Analysis[f] GC/MS, EPA TO-14A, TO-15 or modified SW-846 Method 8240/8260 Gas Chromatography/Flame Ionization Detector (GC/FID), for alcohols and ketones, SW-846 Method 8015

Table C-1. Summary of Hazardous Waste Characterization Requirements for Transuranic Mixed Waste[a] (Continued)

Total VOC Acetone Benzene Bromoform Butanol Carbon disulfide Carbon tetrachloride Chlorobenzene Chloroform 1,4-Dichlorobenzene[d] 1,2-Dichlorobenzene[d] 1,2-Dichloroethane 1,1-Dichloroethylene Ethyl benzene Ethyl ether Formaldehyde[b] Hydrazine[c]	 Isobutanol Methanol Methyl ethyl ketone Methylene chloride Pyridine[d] 1,1,2,2-Tetrachloroethane Tetrachloroethylene Toluene 1,1,2-Trichloro-1,2,2-trifluoroethane Trichlorofluoromethane 1,1,1-Trichloroethane 1,1,2-Trichloroethane Trichloroethylene Vinyl chloride Xylenes (trans) 1,2-Dichloroethylene	Total VOC Analysis TCLP, SW-846 1311 GC/MS, SW-846 8260 GC/FID, SW-846 8015 (Section C3) HPLC, SW-846 8315A AK for Summary Category S5000 (Debris Wastes)
Total Semivolatile Organic Compounds (SVOC) Cresols 1,4-Dichlorobenzene[e] 1,2-Dichlorobenzene[e] 2,4-Dinitrophenol 2,4-Dinitrotoluene Hexachlorobenzene Hexachloroethane Nitrobenzene Pentachlorophenol Pyridine[e]		Total SVOC Analysis[g] TCLP, SW-846 1311 GC/MS, SW-846 8270 (Permit Attachment C3) Acceptable Knowledge for Summary Category S5000 (Debris Wastes)
Total Metals Antimony Arsenic Barium Beryllium Cadmium Chromium Lead	 Mercury Nickel Selenium Silver Thallium Vanadium Zinc	Total Metals Analysis[g] TCLP, SW-846 1311 ICP- MS, SW-846 6020 ICP Emission Spectroscopy, SW-846 6010 Atomic Absorption Spectroscopy, SW-846 7000 (Permit Attachment C3) Acceptable Knowledge for Summary Category S5000 (Debris Wastes)

Table C-1. Summary of Hazardous Waste Characterization Requirements for Transuranic Mixed Waste[a] (Continued)

[a] WAP, HWFP, NMED.

[b] Required only for homogeneous solids and soil/gravel from the Savannah River Site (SRS) to resolve the assignment of EPA hazardous waste numbers.

[c] Required only for homogeneous solids and soil/gravel from Oak Ridge National Laboratory (ORNL) and SRS to resolve the assignment of EPA hazardous waste numbers.

[d] Can also be analyzed as a semi-volatile organic compound.

[e] Can also be analyzed as a volatile organic compound.

[f] Required only to resolve the assignment of EPA hazardous waste numbers to debris waste streams.

[g] Required only to resolve the assignment of EPA hazardous waste numbers to homogeneous solid and soil/gravel waste streams.

Table C-2. Headspace Gas Target Analyte List and Methods[b]

Parameter	Environmental Protection Agency (EPA) Specified Analytical Method
Benzene Bromoform Carbon tetrachloride Chlorobenzene Chloroform 1,1-Dichloroethane 1,2-Dichloroethane 1,1-Dichloroethylene trans-1,2-Dichloroethylene Ethyl benzene Ethyl ether Methylene chloride 1,1,2,2-Tetrachloroethane Tetrachloroethylene Toluene 1,1,1-Trichloroethane Trichloroethylene 1,1,2-Trichloro-1,2,2-trifluoroethane Xylenes	EPA: Modified TO-14A, TO-15[a] Modified SW-846 8240/8260
Acetone Butanol Methanol Methyl ethyl ketone Methyl isobutyl ketone	EPA: Modified TO-14A, TO-15[a] Modified SW-846 Method 8240/8260 SW-846 Method 8015

[a] U.S. Environmental Protection Agency (EPA), 1999 "Compendium Method TO-14, the Determination of Volatile Organic Compounds (VOC) in Ambient Air Using SUMMA® Passivated Canister Sampling and Gas Chromatographic Analysis," in *Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air*-Second Edition (EPA/625/R-96/010b). Research Triangle Park, North Carolina, Quality Assurance Division, Monitoring System Laboratory, U.S. EPA. The most current revision of the specified methods may be used.

[b] Required only for debris waste when required to resolve the assignment of EPA hazardous waste numbers.

Table C-3. Required Organic Analyses and Test Methods Organized by Organic Analytical Groups[e]

Organic Analytical Group	Required Organic Analyses	Environmental Protection Agency (EPA) Analytical Method[a,e]
Nonhalogenated Volatile Organic Compounds (VOCs)	Acetone Benzene n-Butanol Carbon disulfide Ethyl benzene Ethyl ether Formaldehyde Hydrazine[b] Isobutanol Methanol Methyl ethyl ketone Toluene Xylenes	8015 8260 8315A
Halogenated VOCs	Bromoform Carbon tetrachloride Chlorobenzene Chloroform 1,2-Dichloroethane 1,1-Dichloroethylene Methylene chloride 1,1,2,2-Tetrachloroethane Tetrachloroethylene trans-1,2-Dichloroethylene 1,1,2-Trichloroethane 1,1,1-Trichloroethane Trichloroethylene Trichlorofluoromethane 1,1,2-Trichloro-1,2,2-trifluoroethane Vinyl Chloride	8015 8260
Semivolatile Organic Compounds (SVOCs)	Cresols (o, m, p) 1,2-Dichlorobenzene[c] 1,4-Dichlorobenzene[c] 2,4-Dinitrophenol 2,4-Dinitrotoluene Hexachlorobenzene Hexachloroethane Nitrobenzene Pentachlorophenol Pyridine[c]	8270

[a] U.S. Environmental Protection Agency (EPA), 1996, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," SW-846, Third Edition.

[b] Generator/Storage Sites will have to develop an analytical method for hydrazine. This method will be submitted to DOE for approval.

[c] These compounds may also be analyzed as VOCs by SW-846 Method 8260.

[d] TCLP (SW-846 1311) may be used to determine if compounds in 20.4.1.200 NMAC (incorporating 40 CFR §261, Subpart C) exhibit a toxicity characteristic.

[e] Required only to resolve the assignment of EPA Hazardous Waste Numbers.

Table C-4. Summary of Sample Preparation and Analytical Methods for Metals

Parameters	EPA-Specified Analytical Methods[a,b,c]
Sample Preparation	3051, or equivalent, as appropriate for analytical method
Total Antimony	6010, 6020, 7000, 7010, 7062
Total Arsenic	6010, 6020, 7010, 7061, 7062
Total Barium	6010, 6020, 7000, 7010
Total Beryllium	6010, 6020, 7000, 7010
Total Cadmium	6010, 6020, 7000, 7010
Total Chromium	6010, 6020, 7000, 7010
Total Lead	6010, 6020, 7000, 7010
Total Mercury	7471
Total Nickel	6010, 6020, 7000, 7010
Total Selenium	6010, 7010, 7741, 7742
Total Silver	6010, 6020, 7000, 7010
Total Thallium	6010, 6020, 7000, 7010
Total Vanadium	6010, 7000, 7010
Total Zinc	6010, 6020, 7000, 7010

[a] U.S. Environmental Protection Agency (EPA), 1996. "Test Methods for Evaluating Solid Waste," Laboratory Manual Physical/Chemical Methods, SW-846, 3rd ed., U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response, Washington, D.C.

[b] TCLP (SW-846 1311) may be used to determine if compounds in 20.4.1.200 NMAC (incorporating 40 CFR §261, Subpart C) exhibit a toxicity characteristic.

[c] Required only for homogeneous solids and soil/gravel to resolve the assignment of EPA Hazardous Waste Numbers.

Table C-5. Summary of Parameters, Characterization Methods, and Rationale for CH TRU Waste (Stored Waste)

Waste Matrix Code Summary Categories	Waste Matrix Code Groups	Characterization Parameter	Method	Rationale
S3000-Homogeneous Solids S4000-Soil/Gravel	• Solidified inorganics • Salt waste • Solidified organics • Contaminated soil/debris	Physical waste form	Acceptable knowledge, Radiography or VE	• Determine waste matrix • Demonstrate compliance with waste acceptance criteria (e.g., no liquid in excess of TSDF-WAC limits, no incompatible wastes, no compressed gases)
		Hazardous constituents • Listed • Characteristic	Acceptable knowledge or statistical sampling (see Tables C-3, Required Organic Analyses and Test Methods Organized by Organic Analytical Groups, and C-4, Summary of Sample Preparation and Analytical Methods for Metals)	• Determine characteristic metals and organics • Resolve the assignment of EPA Hazardous Waste Numbers
S5000-Debris Waste	• Uncategorized metal (metal waste other than lead/cadmium) • Lead/cadmium waste • Inorganic nonmetal waste • Combustible waste • Graphite waste • Heterogeneous debris waste • Composite filter waste	Physical waste form	Acceptable knowledge, radiography, and/or VE	• Determine waste matrix • Demonstrate compliance with waste acceptance criteria (e.g., no free liquid in excess of TSDF-WAC limits, no incompatible wastes, no compressed gases)
		Hazardous constituents • Characteristic • Listed	Statistical gas sampling and analysis [a] (see Table C-2, Headspace Gas Target Analyte List and Methods)	• Resolve the assignment of EPA Hazardous Waste Numbers
		Hazardous constituents • Characteristic	Acceptable knowledge	• Determine characteristic metals and organics

Table C-5. Summary of Parameters, Characterization Methods, and Rationale for CH TRU Waste (Newly Generated Waste) (Continued)

Waste Matrix Code Summary Categories	Waste Matrix Code Groups	Characterization Parameter	Method	Rationale
S3000-Homogeneous Solids S4000-Soil/Gravel	▪ Solidified inorganic ▪ Salt waste ▪ Solidified organics ▪ Contaminated soil/debris	Physical waste form	Acceptable Knowledge, radiography, and/or VE	▪ Determine waste matrix ▪ Demonstrate compliance with waste acceptance criteria (e.g., no liquid in excess of TSDF-WAC limits, no incompatible wastes, no compressed gases)
		Hazardous constituents ▪ Listed ▪ Characteristic	Statistical sampling[a] (see Tables C-3 and C-4)	▪ Determine characteristic metals and organics ▪ Resolve the assignment of EPA Hazardous Waste Numbers
S5000-Debris Waste	▪ Uncategorized metal (metal waste other than lead/cadmium) ▪ Lead/cadmium waste ▪ Inorganic nonmetal waste ▪ Combustible waste ▪ Graphite waste ▪ Heterogeneous debris waste ▪ Composite filter waste	Physical waste form	Acceptable Knowledge, radiography, and/or VE	▪ Determine waste matrix ▪ Demonstrate compliance with waste acceptance criteria (e.g., no liquid in excess of TSDF-WAC limits, no incompatible wastes, no compressed gases)
		Hazardous constituents ▪ Characteristic ▪ Listed Hazardous constituents ▪ Characteristic	Statistical gas sampling and analysis [a] (see Table C-2) Acceptable knowledge	▪ Resolve the assignment of EPA Hazardous Waste Numbers ▪ Determine characteristic metals and organics

[a] Applies to waste streams that require sampling.

Table C-6. Required Program Records Maintained in Generator/Storage Site Project Files

Lifetime Records
• Field sampling data forms • Field and laboratory chain-of-custody forms • Test facility and laboratory batch data reports • Waste Stream Characterization Packages • Sampling plans • Data reduction, validation, and reporting documentation • AK documentation • WSPFs and CIS
Non-Permanent Records
• Nonconformance documentation • Variance documentation • Assessment documentation • Gas canister tags • Methods performance documentation • PDP documentation • Sampling equipment certifications • Calculations and related software documentation • Training/qualification records • QAPjPs documentation (all revisions) • Calibration documentation • Analytical raw data • Procurement records • QA and technical procedures (all revisions) • Audio/video recordings (radiography, VE)

Table C-7. WIPP Waste Information System Data Fields[a]

Characterization Module Data Fields [b]	
Container ID [c] Generator EPA ID Generator Address Generator Name Generator Contact Hazardous Code Headspace Gas Sample Date Headspace Gas Analysis Date Headspace Gas Analyte [d] Headspace Gas Concentration [d] Headspace Gas Char. Method [d] Layers of Packaging Liner Exists Liner Hole Size Filter Model Number of Filters Installed Total VOC Char. Method [d] Total Metals Char. Method [d] Total Semi-VOC Char. Method [d] Item Description Code Haz. Manifest Number NDE Complete [e]	Total VOC Sample Date Total VOC Analysis Date Total VOC Analyte Name [d] Total VOC Analyte Concentration [d] Total Metal Sample Date Total Metal Analysis Date Total Metal Analyte Name [d] Total Metal Analyte Concentration [d] Semi-VOC Sample Date Semi-VOC Analysis Date Semi-VOC Analyte Name [d] Semi-VOC Concentration [d] Transporter EPA ID Transporter Name Visual Exam Container [e] Waste Material Parameter [d] Waste Material Weight [d] Waste Matrix Code Waste Matrix Code Group Waste Stream Profile Number
Certification Module Data Fields	
Container ID [c] Container type Container Weight Contact Dose Rate Container Certification date Container Closure Date Handling Code	
Transportation Data Module	
Contact Handled Package Number Assembly Number[f] Container IDs [c,d] ICV Closure Date Ship Date Receive Date	
Disposal Module Data	
Container ID [c] Disposal Date Disposal Location	

[a] This is not a complete list of the WWIS/WDS data fields.
[b] Some of the fields required for characterization are also required for certification and/or transportation.
[c] Container ID is the main relational field in the WWIS/WDS Database.
[d] This is a multiple occurring field for each analyte, nuclide, etc.
[e] These are logical fields requiring only a yes/no.
[f] Required for 7-Packs of 55-gallon drums, 4-packs of 85-gallon drums, or 3-packs of 100-gallon drums to tie all of the drums in that assembly together. This facilitates the identification of waste containers in a shipment without need to breakup the assembly.

Table C-8. Waste Tanks Subject to Exclusion

Hanford Site - 177 Tanks	
A-101 through A-106	C-201 through C-204
AN-101 through AN-107	S-101 through S-112
AP-101 through AP-108	SX-101 through SX-115
AW-101 through AW-106	SY-101 through SY-103
AX-101 through AX-104	T-101 through T-112
AY-101 through AY-102	T-201 through T-204
B-101 through B-112	TX-101 through TX-118
B-201 through B-204	TY-101 through TY-106
BX-101 through BX-112	U-101 through U-112
BY-101 through BY-112	U-201 through U-204
C-101 through C-112	
SRS - 51 Tanks	
Tank 1 through 51	
Idaho National Laboratory - 15 Tanks	
WM-103 through WM-106	WM-180 through 190

Table C-9. Listing of Permitted Hazardous Waste Numbers

EPA Hazardous Waste Numbers			
F001	D019	D043	U079
F002	D021	P015	U103
F003	D022	P030	U105
F004	D026	P098	U108
F005	D027	P099	U122
F006	D028	P106	U133*
F007	D029	P120	U134*
F009	D030	U002*	U151
D004	D032	U003*	U154*
D005	D033	U019*	U159*
D006	D034	U037	U196
D007	D035	U043	U209
D008	D036	U044	U210
D009	D037	U052	U220
D010	D038	U070	U226
D011	D039	U072	U228
D018	D040	U078	U239*

* Acceptance of U-numbered wastes listed for reactivity, ignitability, or corrosivity characteristics is contingent upon a demonstration that the wastes no longer exhibit the characteristic of reactivity, ignitability, or corrosivity.

Figure C-1. Waste Stream Profile Form (Example Only)

WASTE STREAM PROFILE FORM

Waste Stream Profile Number: _____
Generator Site Name: _____ Technical Contract: _____
Generator Site EPA ID: _____ Technical Contact Phone Number: _____
Date of audit report approval by NMED: _____
Title, version number and date of documents used for WAP Certification: _____

Did your facility generate this waste? ☐Yes ☐No
If no, provide the name and EPA ID of the original generator: _____

WIPP ID: _____ Summary Category Group: _____
Waste Stream Name: _____
Description from the WTWBIR: _____

Defense Waste: ☐Yes ☐No Check one: ☐CH ☐RH
Number of SWBs _____ Number of Drums _____ Number of Canisters _____
Batch Data Report numbers supporting this waste stream characterization: _____
List applicable EPA Hazardous Waste Numbers [2]: _____
Applicable TRUCON Content Numbers: _____

Acceptable Knowledge Information[1]
(For the following, enter supporting documentation used (i.e., references and dates))

Required Program Information

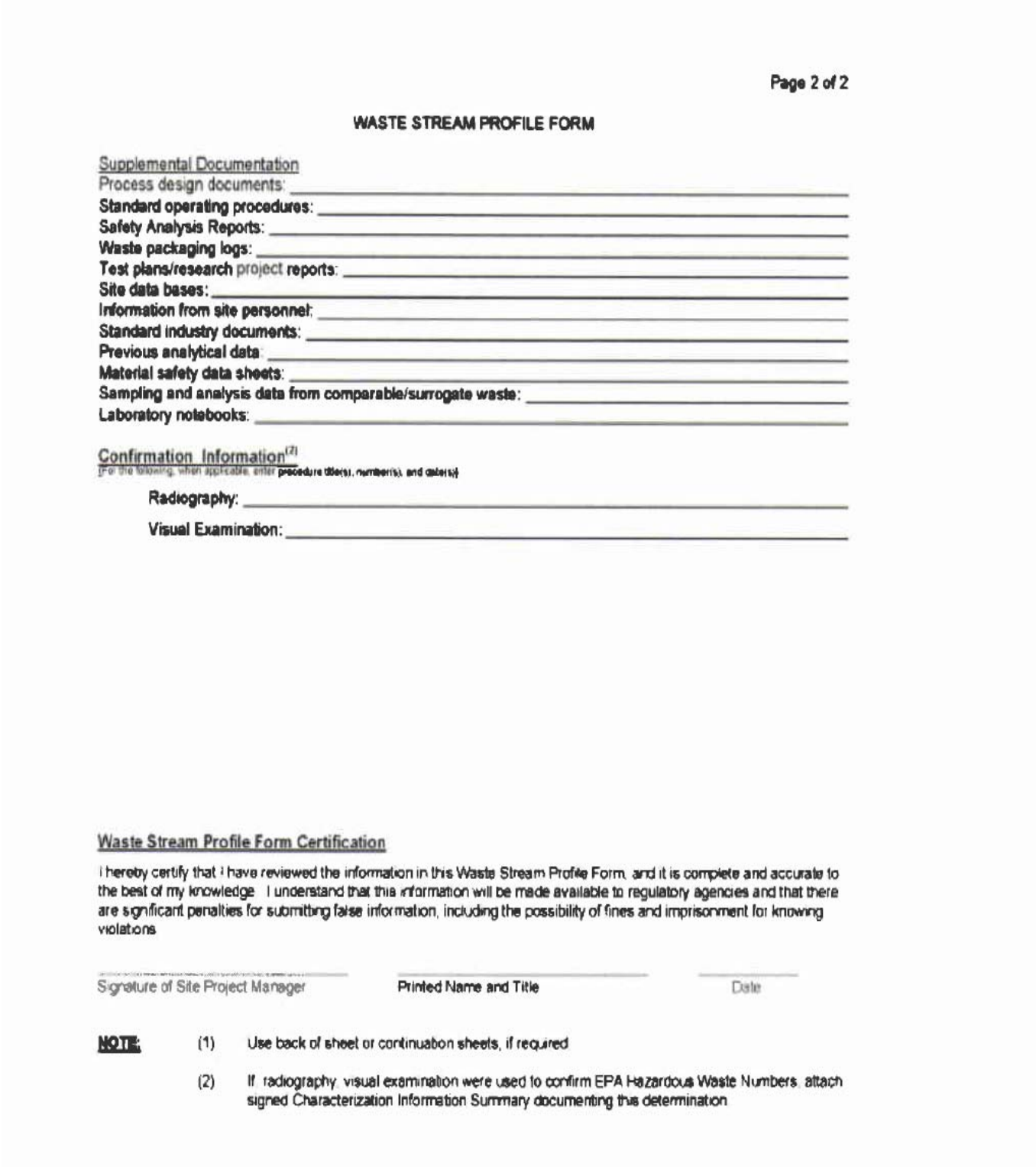
- Map of site: _____
- Facility mission description: _____
- Description of operations that generate waste: _____
- Waste identification/categorization schemes: _____
- Types and quantities of waste generated: _____
- Correlation of waste streams generated from the same building and process, as applicable: _____
- Waste certification procedures: _____

Required Waste Stream Information

- Area(s) and building(s) from which waste stream was generated: _____
- Waste stream volume and time period of generation: _____
- Waste generating process description for each building: _____
- Waste process flow diagrams: _____
- Material inputs or other information identifying chemical/radionuclide content and physical waste form: _____
- Waste material parameter estimates per unit of waste: _____
- Which Defense Activity generated the waste: (check one)

☐ Weapons activities including defense inertial confinement fusion
☐ Naval reactors development
☐ Verification and control technology
☐ Defense research and development
☐ Defense nuclear waste and material by products management
☐ Defense nuclear material production
☐ Defense nuclear waste and materials security and safeguards and security investigations

Figure C-1. Waste Stream Profile Form (Example Only) (continued)



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WASTE STREAM PROFILE FORM

Supplemental Documentation

Process design documents: _____
Standard operating procedures: _____
Safety Analysis Reports: _____
Waste packaging logs: _____
Test plans/research project reports: _____
Site data bases: _____
Information from site personnel: _____
Standard industry documents: _____
Previous analytical data: _____
Material safety data sheets: _____
Sampling and analysis data from comparable/surrogate waste: _____
Laboratory notebooks: _____

Confirmation Information(2)

(For the following, when applicable, enter procedure title(s), number(s), and date(s))

Radiography: _____

Visual Examination: _____

Waste Stream Profile Form Certification

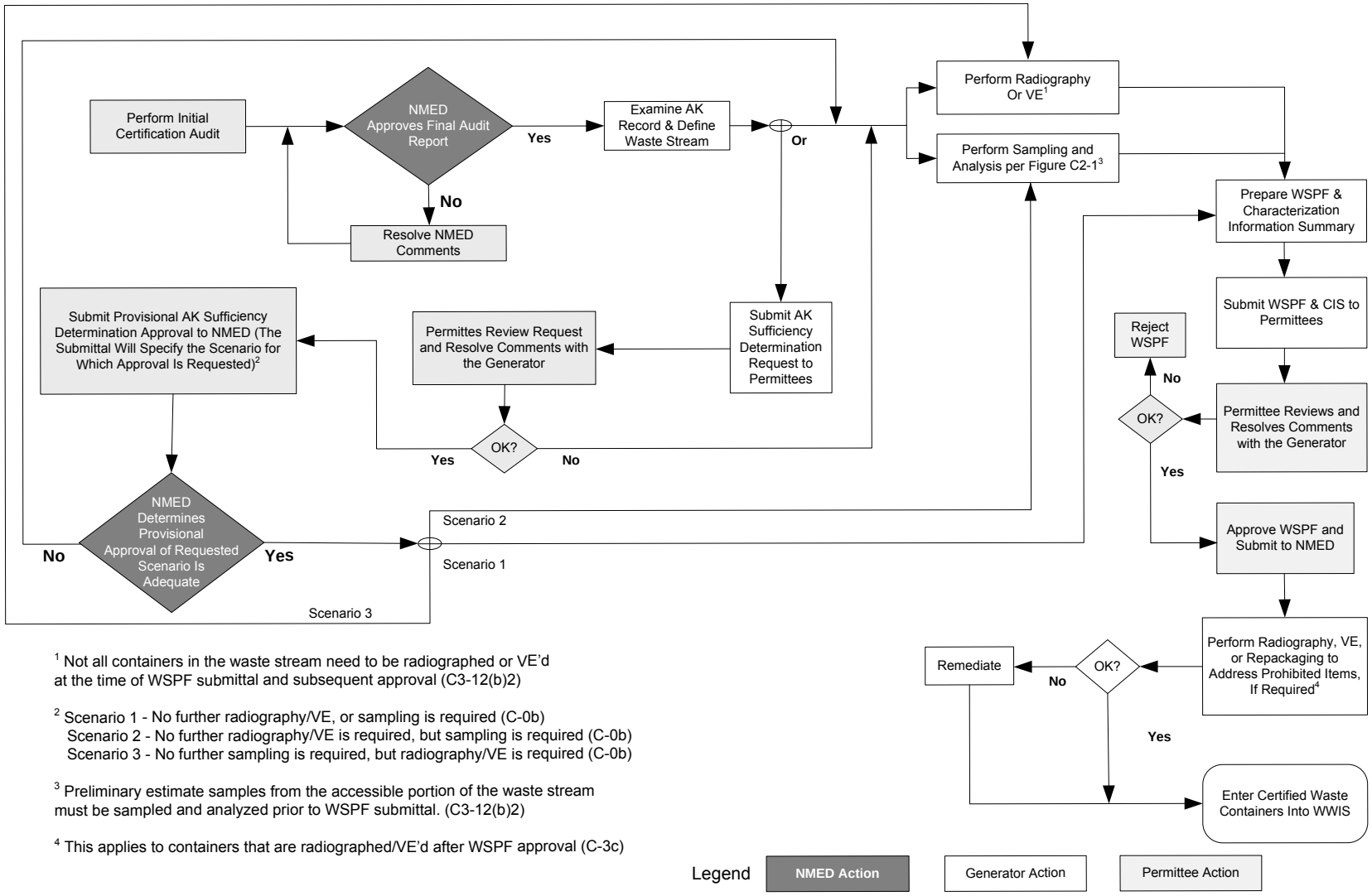
I hereby certify that I have reviewed the information in this Waste Stream Profile Form, and it is complete and accurate to the best of my knowledge. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Signature of Site Project Manager | Printed Name and Title | Date

NOTE: (1) Use back of sheet or continuation sheets, if required

(2) If radiography, visual examination were used to confirm EPA Hazardous Waste Numbers, attach signed Characterization Information Summary documenting this determination

Figure C-2. Waste Characterization Process (Reprinted from the WAP, Figure C-2)



[1] Not all containers in the waste stream need to be radiographed or VE'd at the time of WSPF submittal and subsequent approval (C3-12(b)2)

[2] Scenario 1 - No further radiography/VE, or sampling is required (C-0b)
Scenario 2 - No further radiography/VE is required, but sampling is required (C-0b)
Scenario 3 - No further sampling is required, but radiography/VE is required (C-0b)

[3] Preliminary estimate samples from the accessible portion of the waste stream must be sampled and analyzed prior to WSPF submittal. (C3-12(b)2)

[4] This applies to containers that are radiographed/VE'd after WSPF approval (C-3c)

Figure C-3. TRU Mixed Waste Screening and Verification Flow Diagram

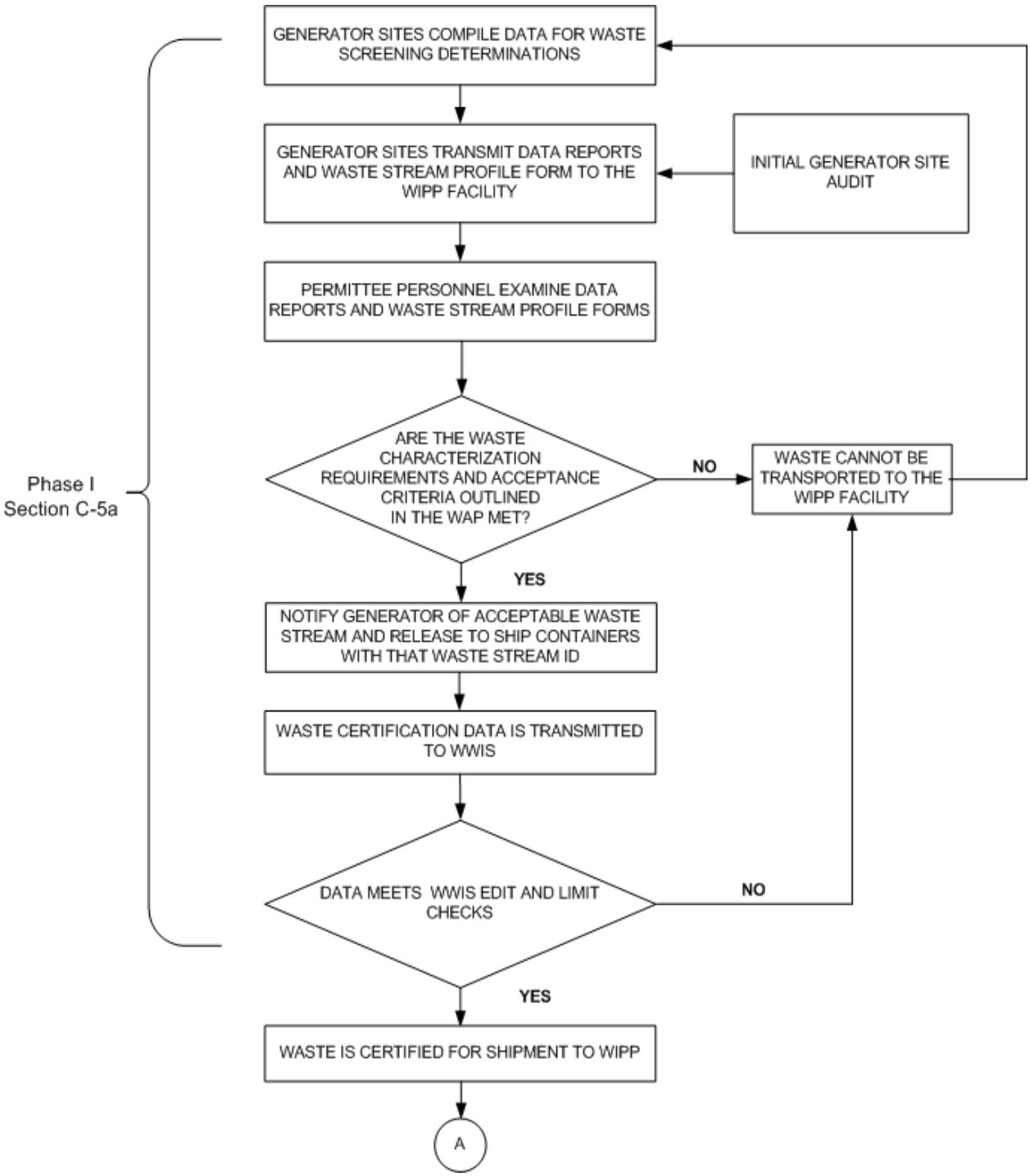
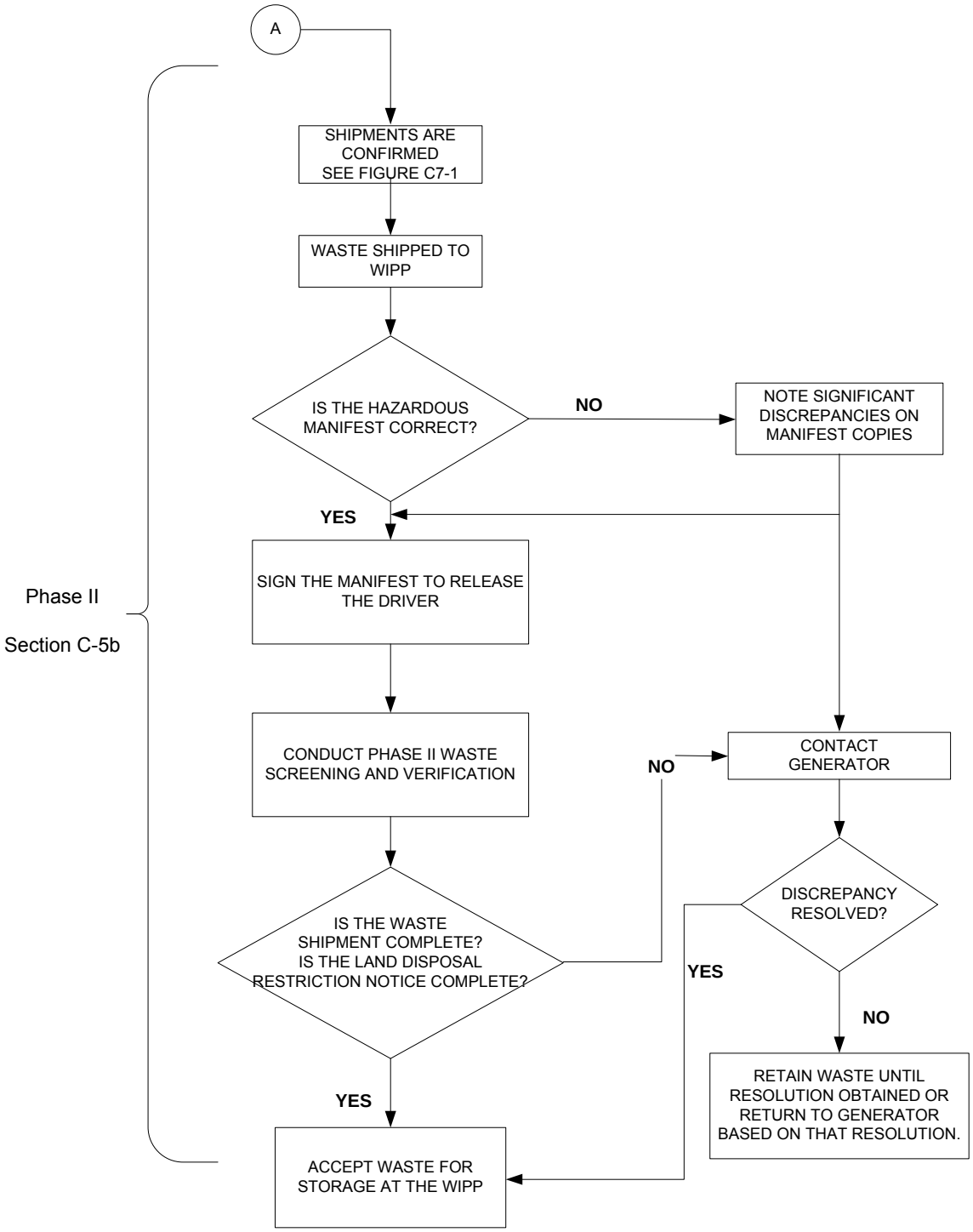


Figure C-3. TRU Mixed Waste Screening and Verification Flow Diagram (continued)



C1 WASTE CHARACTERIZATION SAMPLING METHODS

CCP characterizes TRU waste for shipment to WIPP by using the following methods, if applicable, for characterization of TRU waste. These methods include requirements for headspace gas sampling, sampling of homogeneous solids and soil/gravel, and radiography or VE. This section describes these methods, QC requirements, and sample control requirements.

C1-1 Sampling of Debris Waste (Summary Category S5000)

CCP will use headspace gas sampling and analysis to resolve the assignment of EPA Hazardous Waste Numbers to debris waste streams.

C1-1a Method Requirements

Headspace gas sampling is performed in radiation containment areas on waste containers that are in compliance with container equilibrium requirements (T93) (i.e., 72 hours at 18 degrees Celsius [°C] or higher).

For those waste streams without an AK Sufficiency Determination approved by the DOE, containers shall be randomly selected from waste streams designated as Summary Category Group S5000 (debris waste) and shall be categorized under one of the sampling scenarios shown in Table C1-5, Headspace Gas Drum Age Criteria Sampling Scenarios, and depicted in Figure C1-1, Headspace Gas Drum Age Criteria Sampling Scenario Selection Process. If the container is categorized under Scenario 1, the applicable DAC from Table C1-6, Scenario 1 Drum Age Criteria (in days) Matrix, must be met prior to headspace gas sampling. If the container is categorized under Scenario 2, the applicable Scenario 1 DAC from Table C1-6 must be met prior to venting the container and then the applicable Scenario 2 DAC from Table C1-7, Scenario 2 Drum Age Criteria (in days) Matrix, must be met after venting the container. The DAC for Scenario 2 containers that contain filters or rigid liner vent holes other than those listed in Table C1-7 shall be determined using footnotes ‘a’ and ‘b’ in Table C1-7. Containers that have not met the Scenario 1 DAC at the time of venting must be categorized under Scenario 3. Containers categorized under Scenario 3 must be placed into one of the Packaging Configuration Groups listed in Table C1-8, Scenario 3 Packaging Configuration Groups. If a specific packaging configuration cannot be determined based on the data collected during packaging and/or repackaging (Attachment C, Section C-3d[1]), a conservative default Packaging Configuration Group of 3 for 55-gallon drums, 6 for Standard Waste Boxes (SWBs), TDOPs, and standard large box 2s (SLB2s), and 8 for 85-gallon and 100-gallon drums, must be assigned, provided the drums do not contain pipe component packaging. If a container is designated as Packaging Group 4 (i.e., a pipe component), the headspace gas sample must be taken from the pipe component headspace. Drums, TDOPs, SLB2s, or SWBs that contain compacted 55-gallon drums containing a rigid liner may not be disposed of

under any packaging configuration unless headspace gas sampling was performed before compaction in accordance with this QAPjP. The DAC for Scenario 3 containers that contain rigid liner vent holes that are undocumented during packaging, repackaging, and/or venting (Section C1-1a[4][ii]) shall be determined using the default conditions in footnote 'b' in Table C1-9, Scenario 3 Drum Age Criteria (in days) Matrix for S5000 Waste by Packaging Configuration Group. The DAC for Scenario 3 containers that contain filters that are either undocumented or are other than those listed in Table C1-9 shall be determined using footnote 'a' in Table C1-9. Each of the Scenario 3 containers shall be sampled for headspace gas after waiting the DAC in Table C1-9 based on its packaging configuration (note: Packaging Configuration Groups 4, 5, 6, 7, and 8 are not summary category group dependent, and 85-gallon drum, 100-gallon drum, SWB, TDOP, and SLB2 requirements apply when the 85-gallon drum, 100-gallon drum, SWB, TDOP, or SLB2 is used for the direct loading of waste).

C1-1a(1) General Requirements

The determination of packaging configuration consists of identifying the number of confinement layers and the identification of rigid poly liners when present. CCP will use either the default conditions specified in Tables C1-7 through C1-9 for retrievably stored waste or the data documented during packaging, repackaging, and/or venting (Section C1-1a[4][ii]) for determining the appropriate DAC for each container from which a headspace gas sample is collected (T7, T93). These drum age criteria are to ensure that the container contents have reached 90 percent of steady state concentration within each layer of confinement (Lockheed 1995; BWXT, 2000). The following information must be reported in the headspace gas sampling documents for each container from which a headspace gas sample is collected:

- sampling scenario from Table C1-5 and associated information from Tables C1-6 and/or Table C1-7;
- the packaging configuration from Table C1-8 and associated information from Tables C1-9, including the diameter of the rigid liner vent hole, the number of inner bags, the number of liner bags, the presence/absence of drum liner, and the filter hydrogen diffusivity,
- the permit-required equilibrium time, and
- the drum age,
- for supercompacted waste both:
    - the absence of rigid liners in the compacted 55-gallon drums which have not been headspace gas sampled in accordance with this QAPjP prior to compaction, and

- the absence of layers of confinement must be documented in the WWIS/WDS if Packaging Configuration Group 7 is used.

For all retrievably stored waste containers, the rigid liner vent hole diameter must be assumed to be 0.3 inches unless a different size is documented during drum venting or repackaging. For all retrievably stored waste containers, the filter hydrogen diffusivity must be assumed to be the most restrictive unless container-specific information clearly identifies a filter model and/or diffusivity characteristic that is less restrictive. For all retrievably stored waste containers that have not been repackaged, acceptable knowledge shall not be used to justify any packaging configuration less conservative than the default (i.e., Packaging Configuration Group 3 for 55-gallon drums, 6 for SWBs, TDOPs, and SLB2s, and 8 for 85-gallon and 100-gallon drums). For information reporting purposes listed above, sites may report the default packaging configuration for retrievably stored waste without further verification.

All waste containers with unvented rigid containers greater than 4 liters (exclusive of rigid poly liners) shall be subject to innermost layer of containment sampling or shall be vented prior to initiating drum age and equilibrium criteria. When sampling the rigid poly liner under Scenario 1, the sampling device must form an airtight seal with the rigid poly liner to ensure that a representative sample is collected (using a sampling needle connected to the sampling head to pierce the rigid poly liner, and that allows for the collection of a representative sample, satisfies this requirement). The configuration of the containment area and remote-handling equipment at each sampling facility are expected to differ. Headspace gas samples will be analyzed for the analytes listed in Table C3-2 of Section C3. If additional packaging configurations are identified, an appropriate Permit Modification will be submitted to incorporate the DAC using the methodology in BWXT (2000). Consistent with footnote “a” in Table C1-8, any waste container selected for headspace gas sampling that cannot be assigned a packaging configuration specified in Table C1-8 shall be assigned a conservative default packaging configuration.

DAC apply only to 55-gallon drums, 85-gallon drums, 100-gallon drums, SWBs, TDOPs, and SLB2s. DAC for all other container types must be established through permit modification prior to performing headspace gas sampling.

The CCP requires personnel to collect samples in SUMMA® or equivalent canisters using standard headspace gas sampling methods that meet the general guidelines established by the EPA in the Compendium Method TO-14A or TO-15, Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air (EPA 1999) or by using on-line integrated sampling/analysis systems. Samples are directed to an analytical instrument instead of being collected in SUMMA® or equivalent canister when the single-sample on-line integrated sampling/analysis system is used. When the multi-sample on-line integrated sampling/analysis system is used, samples are directed to an integrated holding area that meets the cleaning requirements of

Section C1-1c(1). The leak proof and inert nature of the integrated holding area interior surface is demonstrated and documented. Samples are not transported to another location when using on-line integrated sampling/analysis system; therefore, the sample custody requirements of Section C1-4 and C1-5 do not apply. The same sampling manifold and sampling heads are used with on-line integrated sampling/analysis systems and all of the requirements associated with sampling manifolds and sampling heads are met. However, when using an on-line integrated sampling and analysis system, the sampling batch and analytical batch QC samples are combined as on-line batch QC samples as outlined in Section C1-1b.

C1-1a(2) Manifold Headspace Gas Sampling

The Automated Manifold System employs a multiport manifold capable of collecting multiple headspace samples for analysis and QC purposes. The Single-Sample Manifold System uses an on-line piping manifold. The manifolds are used to collect samples in Silco steel (or equivalent) sample canisters, holding areas, or as part of an on-line integrated sampling and analysis system. The sampling equipment is leak checked and cleaned prior to first use and as needed thereafter. The manifolds and sample canisters are evacuated to 0.0039 in. (0.10 millimeters [mm] mercury (Hg) prior to sample collection. Cleaned and evacuated sample canisters or holding areas are attached to the evacuated manifold before the manifold inlet valve is opened. The manifold inlet valve is attached to a changeable filter connected to either a side port needle sampling head capable of forming an airtight seal (for penetrating a filter or rigid poly liner when necessary), a drum punch sampling head capable of forming an airtight seal (capable of punching through the metal lid of a drum for sampling through the drum lid), or a sampling head with an airtight fitting for sampling through a pipe overpack container filter vent hole. Refer to Section C1-1a(4) for description of these sampling heads.

The manifolds are equipped with a purge assembly that allows applicable QC samples to be collected through all sampling components that affect compliance with the QAOs. The CCP demonstrates and documents the effectiveness of the sampling equipment design to meet the QAOs. Field blanks are samples of room air collected in the sampling area in the immediate vicinity of the waste container to be sampled. If using gas sample canisters, field blanks are collected directly into the canister without the use of the manifold.

The manifolds, the associated sampling heads, and the headspace gas sample volume requirements are designed to ensure that a representative sample is collected. The manifold internal volume is calculated and documented in a field logbook dedicated to headspace gas sample collection. The total volume of headspace gases collected during each sampling operation is determined by adding the combined volume of the canisters attached to the manifold and the internal volume of the manifold. The sample volume remains small in comparison to the volume of the waste container. When an

estimate of the available headspace gas volume in the drum is made, less than 10 percent of that volume is withdrawn.

The sampling manifold consists of a sample side and a standard side. The sample side is connected to the standard side for cleaning and collecting equipment blanks and field reference standards. The sample side of the sampling manifolds consists of the following major components:

- An applicable sampling head that forms a leak-tight connection with the headspace sampling manifold.
- A flexible hose that allows movement of the sampling head from the purge assembly (standard side) to the waste container.
- A pressure sensor(s) that is pneumatically connected to the manifold. This manifold pressure sensor(s) is able to measure absolute pressure in the range from 0.002 in. (0.05 mm) Hg to 39.3 in. (1,000 mm) Hg. Resolution for the manifold pressure sensors is ±0.0004 in. (0.01 mm) Hg at 0.002 in. (0.05 mm) of Hg. The manifold pressure sensor(s) has an operating range from approximately 59 °Fahrenheit (°F) (15°C) to 104°F (40°C).
- The Automated Manifold System contains 24 stainless steel sample holding areas that provide sufficient capacity to hold a batch of samples plus necessary QC samples. It allows for simultaneous collection of headspace gas samples and duplicates for VOC analysis. When using the Single-Sample Manifold System only one port is necessary for the collection of comparison samples. Ports not occupied with sample canisters during cleaning or headspace gas sampling activities have a plug to prevent ambient air from entering the system. In place of using plugs, the CCP may choose to install valves that can be closed to prevent intrusion of ambient air into the manifold. Ports have VCR® fittings for connection to the sample canister(s) to prevent degradation of the fittings on the canisters and manifold.
- The Automated Manifold System uses sample holding areas that are leak-free, Silco steel passivated pressure vessels. The leak proof and inert nature of the canister interior surface is demonstrated and documented. The canisters are helium-leak tested to 1.5×10^{-7} standard cubic centimeters per second (cc/s). The manifold has all stainless steel construction. The sample holding areas are capable of tolerating temperatures up to 125°C. The gauge range is capable of operating in the leak test range as well as the sample collection range. The system has a VCR® fitting for connecting a sample canister.

- The Single-Sample Manifold System directs the headspace gas sample directly to the analytical equipment. The system is leak checked and made of stainless steel. The leak proof nature of the system is demonstrated and documented. The system has a pressure/ vacuum gauge attached to the sampling manifold. A VCR® fitting is included to allow connection of sample canisters. The canister must be helium-leak tested to 1.5×10^{-7} standard cc/s, have all stainless steel construction, and be capable of tolerating temperatures to 125°C. The gauge range is capable of operating in the leak test range as well as the sample collection range.

- A dry vacuum pump with the ability to reduce the pressure in the manifold to 0.05 mm Hg. If a vacuum pump that requires oil is used, precautions are taken to prevent diffusion of oil vapors back to the manifold. Precautions may include the use of a molecular sieve and a cryogenic trap in series between the headspace sampling ports and the pump.

- A minimum distance, based upon the design of the manifold system, between the tip of the needle and the valve that isolates the pump from the manifold in order to minimize the dead volume in the manifold.

- Real-time equipment blanks are not available with the Single-Sample Manifold System. The manifold is equipped with an organic vapor analyzer (OVA) that is capable of detecting all analytes listed in Table C3-2. The OVA is capable of measuring total VOC concentrations below the lowest headspace gas program required quantitation limit (PRQL). The OVA measurement is verified by the collection of equipment blanks at the frequency specified in Section C1-1 to check for manifold cleanliness.

The standard side consists of the following major elements:

- A cylinder of compressed zero air, helium, argon, or nitrogen gas to clean the manifold between samples and to provide gas for the collection of equipment blanks or on-line blanks. These high-purity gases are certified by the manufacturer to contain less than one part per million (ppm) total VOCs. The gases are metered into the standard side of the manifold using devices that are corrosion proof and that do not allow for the introduction of manifold gas into the purge gas cylinders or generator. Alternatively, if a zero air generator is used, a sample of the zero air is collected and demonstrated to contain less than one ppm total VOCs. Zero air from a generator is humidified.

- The standard side includes cylinders of field-reference standard gases or on-line control sample gases. These cylinders provide gases for evaluating the accuracy of the headspace gas sampling process. Each cylinder of field-reference gas or on-line control sample gas has a flow-regulating device. The field-reference standard gases or on-line control sample gas is certified by the manufacturer to contain analytes from Table C3-2 at known concentrations.

A humidifier filled with American Society for Testing and Materials (ASTM) Type I or II water, connected, and opened to the standard side of the manifold between the compressed gas cylinders and the purge assembly is used. Dry gases flowing to the purge assembly pick up moisture from the humidifier. Moisture is added to the dry gases to condition the equipment blanks and field-reference standards and to assist with system cleaning between headspace gas sample collection.

NOTE

Caution should be exercised to isolate the humidifier during the evacuation of the system to prevent flooding the manifold. In lieu of the humidifier, the compressed gas cylinders (e.g., zero air and field-reference standard gas) may contain water vapor in the concentration range of 1,000 to 10,000 parts per million by volume (ppmv).

- A purge assembly that allows the sampling head (sample side) to be connected to the standard side of the manifold. This connection is used to transfer gases from the compressed gas cylinders to the canisters or on-line analytical instrument. This connection is required for system cleaning.

- A flow-indicating device or a pressure regulator that is connected to the purge assembly to monitor the flow rate of gases through the purge assembly. The flow rate or pressure through the purge assembly is monitored to assure that excess flow exists during cleaning activities and during QC sample collection. Maintaining excess flow prevents ambient air from contaminating the QC samples and allows samples of gas from the compressed gas cylinders to be collected near ambient pressure.

In addition to a manifold consisting of a sample side and a standard side, the area in which the manifold is operated contains sensors for measuring ambient pressure and ambient temperature, as follows:

- The ambient-pressure sensor has a sufficient measurement range for the ambient barometric pressures expected at the sampling location. It is kept in the sampling area during sampling operations. Its resolution is 0.039 in. (1.0 mm) Hg or less. The Single-Sample Manifold System sensor calibration is performed by the manufacturer and is based on National Institute of

Standards and Technology (NIST), or equivalent, standards. The Automated Manifold System is calibrated in-house using NIST, or equivalent, standards.

- The temperature sensor has a sufficient measurement range for the ambient temperatures expected at the sampling location. The measurement range of the temperature sensor is from 18°C to 50°C. The temperature sensor calibration is traceable to NIST, or equivalent, standards.

C1-1a(3) Direct Canister Headspace Gas Sampling

This headspace gas sampling protocol employs a canister-sampling system to collect headspace gas samples for analysis and QC purposes without the use of the manifold described above. Rather than attaching sampling heads to the manifold, the sampling heads are attached directly to an evacuated sample canister (T93, T178, T142).

Canisters shall be evacuated to 0.0039 in. (0.10 mm) Hg prior to use and attached to a changeable filter connected to the appropriate sampling head. The sampling head(s) must be capable of either punching through the metal lid of the drums (and/or the rigid poly liner when necessary) while maintaining an airtight seal when sampling through the drum lid, or penetrating a filter or penetrating the septum in the orifice of the self-tapping screw, or maintaining an airtight seal for sampling through a pipe overpack container filter vent hole to obtain the drum headspace samples. Field duplicates must be collected at the same time, in the same manner, and using the same type of sampling apparatus as used for headspace gas sample collection. Field blanks shall be samples of room air collected in the immediate vicinity of the waste drum sampling area prior to removal of the drum lid. Equipment blanks and field-reference standards shall be collected using a purge assembly equivalent to the standard side of the manifold described above. These samples shall be collected from the needle tip through the same components (e.g., needle and filter) that the headspace gas samples pass through.

The sample canisters, associated sampling heads, and the headspace sample volume requirements ensure that a representative sample is collected. When an estimate of the available headspace gas volume of the waste container is made, less than 10 percent of that volume should be withdrawn. A determination of the sampling head internal volume shall be made and documented. The total volume of headspace gases collected during each headspace gas sampling operation can be determined by adding the volume of the sample canister(s) attached to the sampling head to the internal volume of the sampling head. Every effort shall be made to minimize the internal volume of sampling heads.

Each sample canister used has a pressure/vacuum gauge capable of indicating leaks and sample collection volumes. Canister gauges are intended to be gross leak-detection devices, not vacuum-certification devices. If a canister pressure/vacuum

gauge indicates an unexpected pressure change, determination of whether the change is a result of ambient temperature and pressure differences or a canister leak shall be made. This gauge shall be helium-leak tested to 1.5 x 10^{-7} standard cc/s, have all stainless steel construction, and shall be capable of tolerating temperatures to 125°C.

The SUMMA® or equivalent sample canisters as specified in EPA's Compendium Method TO-14A or TO-15 (EPA 1999) shall be used when sampling each drum. These heads shall form a leak-tight connection with the canister and allow sampling through the drum-lid filter, through the drum-lid itself and/or rigid poly liner when necessary (by use of a punch or self-tapping screw), or using an airtight fitting to collect the sample through the existing filter vent hole of a pipe overpack container, or using a hollow side port needle.

C1-1a(4) Sampling Heads

A sample of the headspace gas directly under the container lid, pipe overpack filter vent hole, or rigid poly liner shall be collected. Several methods have been developed for collecting a representative sample; sampling through the filter, sampling through the drum lid by drum punching; sampling through a pipe overpack container filter vent hole, and sampling through the rigid poly liner. The chosen sampling method preserves the integrity of the drum to contain radionuclides (e.g., replace the damaged filter, replace the filter screw in filter housing, seal the punched drum lid).

C1-1a4(i) Sampling Through the Filter

To sample the drum-headspace gas through the drum's filter, a side-port needle (e.g., a hollow needle sealed at the tip with a small opening on its side close to the tip) is pressed through the filter and into the headspace beneath the drum-lid (T93). The gas is then drawn into the manifold or canister. The Automated Manifold System uses a needle manually inserted by an operator. The Single-Sample Manifold System does not sample through the filter. To assure that the sample collected is representative, all of the general method requirements, sampling apparatus requirements, and QC requirements described in this section are met in addition to the following requirements that are pertinent to drum headspace gas sampling through the filter:

- The lid of the drum's 90-mil rigid poly liner contains a hole for venting to the drum headspace. A representative sample is not collected from the drum headspace until the 90-mil rigid poly liner has been vented. If the DAC for Scenario 1 is met, a sample may be collected from inside the 90-mil rigid poly liner. If the sample is collected by removing the drum lid, the sampling device shall form an airtight seal with the rigid poly liner to prevent the intrusion of outside air into the sample (using a sampling needle connected to the sampling head to pierce the rigid poly liner satisfies this requirement). If headspace gas samples are collected from the drum headspace prior to

venting the 90-mil rigid poly liner, the sample is not accepted and a nonconformance report is prepared, submitted, and resolved. Nonconformances are addressed in Section C3-13.

- For sample collection, the drum's filter is sealed to prevent outside air from entering the drum and diluting and/or contaminating the sample.

The sampling head for collecting drum headspace by penetrating the filter consists of a side-port needle, a filter to prevent particles from contaminating the gas sample, and an adapter to connect the side-port needle to the filter. To prevent cross contamination, the sampling head is cleaned or replaced after sample collection, after field-reference standard collection, and after field-blank collection. The following requirements are met:

- The housing of the filter allows insertion of the sampling needle through the filter element or a sampling port with septum that by-passes the filter element into the drum headspace.
- The side-port needle is used to reduce the potential for plugging.
- The purge assembly has been modified for compatibility with the side-port needle.

C1-1a4(ii) Sampling Through the Drum Lid By Drum Punching

A sample is obtained through the drum lid at the time of drum punching or thereafter may be performed as an alternative to sampling through the drum's filter if an airtight seal can be maintained (T7). To sample the drum headspace gas through the drum lid at the time of drum punching or thereafter, the lid is breached using an appropriate punch. The punch forms an airtight seal between the drum lid and the manifold or direct canister sampling equipment. The Automated Manifold System uses a self-tapping screw, while the Single-Sample Manifold System uses a drill/filter assembly. The drill bit and self-tapping screw forms an airtight seal between the drum lid and the sampling head. To ensure that the sample collected is representative, all of the general method requirements, sampling apparatus requirements, and QC requirements specified in EPA's Compendium Method TO-14A or TO-15 (EPA 1999), as appropriate, are met, in addition to the following requirements:

- The seal between the drum lid and sampling head minimizes intrusion of ambient air.
- All components of the sampling system that come into contact with sample gases are purged with humidified zero air, nitrogen, or helium prior to sample collection.

- Equipment blanks and field reference standards are collected through the same components of the punch that contact the headspace gas sample.
- Pressure is applied to the punch until the drum lid has been breached.
- Provisions are made to relieve excessive drum pressure increases during drum-punch operations; potential pressure increases may occur during sealing of the drum punch to the lid.
- The lid of the drum's 90-mil rigid poly liner contains a hole for venting to the drum headspace. A representative sample cannot be collected from the drum headspace until the 90-mil rigid poly liner has been vented. If the DAC for Scenario 1 is met, a sample may be collected from inside the 90-mil rigid poly liner. If headspace gas samples are collected from the drum headspace prior to venting the 90-mil rigid poly liner, the sample is not acceptable and a nonconformance report is prepared, submitted, and resolved. Nonconformance procedures are outlined in Section C3-13.
- During sampling, the drum's filter, if present, is sealed to prevent outside air from entering the drum.
- While sampling through the drum lid using manifold sampling, a flow-indicating device or pressure regulator to verify flow of gases is pneumatically connected to the drum punch and operated in the same manner as the flow-indicating device described above in Section C1-1a(2).
- Equipment is used to adequately secure the drum-punch sampling system to the drum lid. The drill bit sampling system used in the Single-Sample Manifold System is secured to the drum lid. The self-tapping screw used with the Automated Manifold System secures itself to the drum lid.
- If the headspace gas sample is not taken at the time of drum punching, the presence and diameter of the rigid liner vent hole shall be documented during the punching operation for use in determining an appropriate Scenario 2 DAC.

C1-1a4(iii) Sampling Through a Pipe Overpack Container Existing Filter Vent Hole

The CCP does not currently use sampling through an existing filter vent hole in a pipe overpack container. If this method is initiated, the CCP will incorporate the following requirements in a technical procedure.

When sampling through an existing pipe overpack container filter vent hole an appropriate airtight seal shall be used. The sampling apparatus forms an airtight seal between the pipe overpack container surface and the manifold or direct canister sampling equipment. To assure that the sample collected is representative, all of the general method, sampling apparatus, and QC requirements specified in EPA's Compendium Method TO-14A or TO-15 (EPA 1999) as appropriate, shall be met in addition to the following requirements:

- The seal between the pipe overpack container surface and sampling apparatus shall be designed to minimize intrusion of ambient air.
- The filter shall be replaced as quickly as is practicable with the airtight sampling apparatus to ensure that a representative sample can be taken. CCP must provide documentation demonstrating that the time between removing the filter and installing the airtight sampling device has been established by testing to assure a representative sample.
- All components of the sampling system that come into contact with sample gases shall be cleaned according to requirements for direct canister sampling or manifold sampling, whichever is appropriate, prior to sample collection.
- Equipment blanks and field reference standards shall be collected through all the components of the sampling system that contact the headspace gas sample.
- During sampling, openings in the pipe overpack container shall be sealed to prevent outside air from entering the container.
- A flow-indicating device shall be connected to the sampling system and operated according to the direct canister or manifold sampling requirements, as appropriate.

C1-1b Quality Control

For manifold and direct canister systems, field QC samples are collected and analyzed on an on-line batch or sampling batch basis. Holding temperatures and container requirements for gas sample containers are provided in Table C1-1, Gas Sample Requirements. An on-line batch is the number of headspace gas samples collected within a 12 hour period using the same on-line system. A sampling batch is a suite of samples collected consecutively using the same sampling equipment within a specific time period. A sampling batch can be up to 20 samples (excluding QC samples), all of which are collected within 14 days of the first sample in the batch. For on-line systems, QC samples are collected and analyzed on a per on-line batch basis. The analytical batch requirements are specified by the analytical method used with the on-line system.

Table C1-2, Summary of Drum Field QC Headspace Sample Frequencies, summarizes headspace gas QC sample collection requirements, while Table C1-3, Summary of Sampling Quality Control Sample Acceptance Criteria, presents QC sample acceptance criteria.

For the on-line integrated sampling and analysis system, the on-line batch QC samples serve as combined sampling and analytical batch QC samples as follows:

- The on-line blank replaces the equipment blank and laboratory blank.
- The on-line control sample replaces the field reference standard and laboratory control sample (LCS).
- The on-line duplicate replaces the field duplicate and laboratory duplicate.

The acceptance criteria for on-line batch QC samples are the same as for the sampling batch and analytical batch QC samples they replace. A separate field blank is collected and analyzed for each on-line batch. Acceptance criteria are shown in Table C1-3. For the Single-Sample Manifold System and Automated Manifold System a separate field blank is collected and analyzed for each on-line batch, but if the results of a field blank collected through the sampling head meets the acceptance criterion, a separate on-line blank is not collected.

The Site Project Manager monitors and documents field QC sample results. An NCR is initiated and resolved if acceptance or frequency criteria are not met. The SPM ensures appropriate corrective action is taken.

C1-1b(1) Field Blanks

Field blanks are collected to evaluate background levels of program-required analytes. Field blanks are collected prior to sample collection, and at a frequency of one per sampling batch. The SPM uses the field blank data to assess impacts of ambient contamination, if any, on the sample results. Field blank results determined by GC/MS and GC/FID are acceptable if the concentration of each VOC analyte is less than or equal to three times the method detection limit (MDL) listed in Table C3-2. An NCR is initiated and resolved if the final reported QC sample results do not meet the acceptance criteria.

C1-1b(2) Equipment Blanks

Equipment blanks are collected to assess cleanliness prior to first use after cleaning of all sampling equipment. On-line blanks are used to assess both equipment cleanliness and analytical contamination. After the initial cleanliness check, equipment blanks are collected through the manifold once per on-line sampling batch for VOC analysis or

once per day, whichever is more frequent. If the direct canister method is used, field blanks may be used in lieu of equipment blanks. The SPM uses equipment blank data to assess impacts of potentially contaminated sampling equipment on sample results. Equipment blank results determined by GC/MS or GC/FID shall be acceptable if the concentration of each VOC analyte is less than or equal to three times the MDL listed in Table C3-2.

C1-1b(3) Field Reference Standards

Field reference standards are used to assess the accuracy with which the sampling equipment collects VOC samples into canisters prior to first use of the sampling equipment. The on-line control sample is used to assess the accuracy with which the sampling equipment collects VOC samples and as an indicator of the analytical accuracy of the on-line sampling system. Field reference standards contain a minimum of six of the analytes listed in Table C3-2 at concentrations within 10 to 100 ppmv and greater than the MDL for each compound. Field reference standards are traceable to a nationally recognized standard (e.g., NIST) or, if commercial gases are used, a Certificate of Analysis from the manufacturer documenting traceability is obtained. Commercial stock gases are not used beyond their manufacturer-specified shelf life. After the initial accuracy check, field reference standards are collected at a frequency of one per sampling batch and submitted as blind samples to the analytical laboratory. For the direct canister method, field reference standard collection may be discontinued if the field reference standard results demonstrate the QAOs for accuracy specified in Section C3. Field reference standard results shall be acceptable if the accuracy for each tested compound has a recovery of 70 to 130 percent.

C1-1b(4) Field Duplicates

Field duplicates are collected sequentially and in accordance with Table C1-1 to assess the precision with which the sampling procedure can collect samples into canisters. Field duplicates also serve as a measure of analytical precision for the on-line sampling system. Field duplicate results are acceptable if the relative percent difference is less than or equal to 25 for each tested compound found in concentrations greater than the PRQL in both duplicates.

C1-1c Equipment Testing, Inspection, and Maintenance

Sampling equipment components that come into contact with headspace sample gases are constructed of relatively inert materials such as stainless steel with passivated interior surface or Teflon®.

To minimize the potential for cross contamination of samples, the headspace sampling equipment (manifold and canisters) are properly cleaned and leak-checked prior to each sampling event. Procedures used for cleaning and preparing the manifold and sample

canisters shall be equivalent to those provided in EPA's Compendium Method TO-14A or TO-15 (EPA 1999). Cleaning requirements are presented below.

C1-1c(1) Headspace Gas Sample Canister Cleaning

Silco steel passivated sample holding areas used in the Automated Manifold System or gas canisters used with the direct canister method are subjected to a rigorous cleaning procedure prior to use in the collection of any samples. Guidance for the development of this procedure is derived from Method TO-14A or TO-15 (EPA 1999). Specific detailed instructions are provided in CCP procedures for the cleaning and certification of canisters.

Canisters shall be cleaned and certified on an equipment cleaning batch basis. An equipment cleaning batch will be any number of canisters cleaned together at one time using the same cleaning method. A cleaning system, capable of processing multiple canisters at one time, composed of an oven (optional) and a vacuum manifold which uses a dry vacuum pump or a cryogenic trap backed by an oil sealed pump shall be used to clean SUMMA® or equivalent canisters. Prior to cleaning, a positive or negative pressure leak test shall be performed on all canisters. The duration of the leak test must be greater than or equal to the time it takes to collect a sample, but not greater than 24 hours. For a leak test, a canister passes if the pressure does not change by more than ±2 pounds per square inch gauge (psig) per 24 hours. Any canister that fails shall be checked for leaks, repaired, and reprocessed. One canister per equipment cleaning batch shall be filled with humid zero air or humid high purity nitrogen and analyzed for VOCs. The equipment cleaning batch of canisters shall be considered clean if there are no VOCs above three times the MDLs listed in Table C3-2. After the canisters have been certified for leak-tightness and found to be free of background contamination, they shall be evacuated to 0.0039 in. (0.10 mm) Hg or less for storage prior to shipment. The CCP shall maintain certification documentation and initiate the canister tags as described in Section C3, as appropriate.

C1-1c(2) Sampling Equipment Initial Cleaning and Leak Check

The surfaces of headspace gas sampling equipment components that come into contact with headspace gas are thoroughly inspected and cleaned prior to assembly. The manifold and sampling heads are purged with humidified zero air, nitrogen, or helium, and leak checked after assembly. This cleaning is repeated if the manifold and/or sampling heads are contaminated to the extent that the routine system cleaning is inadequate.

C1-1c(3) Sampling Equipment Routine Cleaning and Leak Check

The sampling heads and manifold used with the Automated Manifold System and Single Sample Manifold System that are reused are cleaned and checked for leaks in

accordance with the cleaning and leak check procedures described in EPA's Compendium Method TO-14A or TO-15 (EPA 1999), rinsing, drying, and sampling system purging. The procedures are conducted after headspace gas and on-line or field duplicate collection through the manifold; after field blank collection; and after the additional cleaning required for on-line control sample collection is completed. The protocol for routine cleaning and leak check requires that sampling ports be capped or closed by valves and that the sampling heads be attached to the purge assembly.

VOCs are removed from the internal surfaces of the headspace sampling equipment to levels less than or equal to three times the MDLs of the analytes listed in Table C3-2, as determined by analysis of an on-line blank in the Automated Manifold System or through use of an OVA in the Single-Sample Manifold System or equipment blank. As recommended, the headspace sampling equipment is typically heated to 150°C and periodically evacuated and flushed with humidified zero air, nitrogen, or helium. When not in use, the sampling equipment is demonstrated clean before storage with a positive pressure of high purity gas (i.e., zero air, nitrogen, or helium) in both the standard and sample sides.

Sampling is suspended and corrective actions are taken when the analysis of an on-line or equipment blank indicates that the VOC limits have been exceeded or if a leak test fails. The SPM ensures that corrective action is taken prior to resumption of sampling.

C1-1c(4) Manifold Cleaning After Field Reference Standard Collection

The sampling system is specially cleaned after a field reference standard is collected because the field reference standard gases contaminate the standard site of the headspace sampling manifold when they are regulated through the purge assembly. This cleaning requires the installation of a gas-tight connector in place of the sampling head, between the flexible hose and the purge assembly. This configuration allows both the sample and the standard sides of the sampling system to be flushed (evacuated and pressurized) with humidified zero air, nitrogen, or helium which, combined with heating the pneumatic lines, should sweep and adequately clean the system's internal surfaces. After this protocol has been completed and prior to collecting another sample, the routine system cleaning and leak check shall also be performed.

C1-1c(5) Sampling Head Cleaning

To prevent cross contamination, the needle, airtight fitting or airtight seal, adapters, and filter of the sampling heads are cleaned in accordance with the cleaning procedures described in EPA's Compendium Method TO-14 (EPA 1988). After sample collection, a sampling head is disposed or cleaned in accordance with Compendium Method TO-14A or TO-15 (EPA 1999) prior to re-use.

As a further QC measure the needle, airtight fitting or airtight seal and filter, after cleaning, is purged with zero air, nitrogen, or helium, and capped for storage to prevent sample contamination by VOCs potentially present in ambient air.

C1-1d Equipment Calibration and Frequency

Pressure sensors are certified prior to initial use and annually thereafter using NIST traceable, or equivalent, standards. If necessary, the pressure indicated by the pressure sensors is temperature compensated. The ambient air temperature sensor is certified prior to initial use and annually thereafter to NIST traceable, or equivalent, temperature standards.

The OVA used with the Single-Sample Manifold System is calibrated once per day, prior to first use, or as necessary according to the manufacturer's specifications. Calibration gases are certified to contain known analytes from Table C3-2 at known concentrations. The balance of the OVA calibration gas is consistent with the purge gas when the OVA is used (i.e., zero air, nitrogen, or helium).

C1-2 Sampling of Homogeneous Solids and Soil/Gravel (Summary Categories S3000/S4000)

For those waste streams without an AK Sufficiency Determination approved by the DOE, randomly selected containers of homogeneous solids and/or soil/gravel waste streams (S3000/S4000) shall be sampled and analyzed to resolve the assignment of EPA Hazardous Waste Numbers. For example, analytical results may be useful to resolve uncertainty regarding hazardous constituents used in a process that generated the waste stream when the hazardous constituents are not documented in the acceptable knowledge information for the waste.

C1-2a Method Requirements

The CCP will ensure that methods used to collect samples of TRU waste, classified as homogeneous solids and soil/gravel from waste containers, are such that the samples are representative of the waste from which they were taken. To minimize the quantity of investigation-derived waste, the CCP laboratories conducting the analytical work will require no more sample than is required for the analysis, based on the analytical methods. However, a sufficient number of samples will be collected to adequately represent waste being sampled. For those waste streams defined as Summary Category Groups S3000 or S4000, debris that may also be present within these wastes need not be sampled.

Samples of retrievably stored waste containers will be collected using appropriate coring equipment or other EPA approved methods to collect a representative sample. Newly generated wastes that are sampled from a process as it is generated may be

sampled using EPA approved methods, including scoops and ladles that are capable of collecting a representative sample. All sampling and core sampling will comply with the QC requirements specified in C1-2b.

C1-2a(1) Core Collection

Coring tools will be used to collect cores of homogeneous solids and soil/gravel from waste containers, when possible, in a manner that minimizes disturbance to the core. A rotational coring tool (i.e., a tool that is rotated longitudinally), similar to a drill bit, to cut, lift the waste cuttings, and collect a core from the bore hole, will be used to collect sample cores from waste containers. For homogeneous solids and soil/gravel that are relatively soft, non-rotational coring tools may be used in lieu of a rotational coring tool.

The following requirements will apply to the use of coring tools:

- Each coring tool shall contain a removable tube (liner) that is constructed of fairly rigid material unlikely to affect the composition or concentrations of target analytes in the sample core. Materials used for coring device sleeves will be constructed of polycarbonate, teflon, or glass for most samples, and stainless steel or brass if samples are not to be analyzed for metals. Analytes of concern will not be present in liner material used for coring by CCP. Materials to be used are unlikely to affect sample results and will be documented through the collection and analysis of an equipment blank prior to first use as specified in Section C1-2b(2). Liner outer diameter will be recommended to be no more than 2 in. and no less than 1 in. Liner wall thickness will be recommended to be no greater than 1/16 in. Before use, the liner will be cleaned in accordance with the requirements in Section C1-2b. The liner will fit flush with the inner wall of the coring tool and will be of sufficient length to hold a core that will be representative of the waste along the entire depth of the waste. The depth of the waste will be calculated as the distance from the top of the sludge to the bottom of the drum (based on the thickness of the liner and the rim at the bottom of the drum). The liner material will have sufficient transparency to allow VE of the core after sampling. If sub-sampling is not conducted immediately after core collection and liner extrusion, then end caps constructed of material unlikely to affect the composition or concentrations of target analytes in the core (e.g., Teflon®) will be placed over the ends of the liner. End caps will fit tightly to the ends of the liner. The CCP will require procedures to indicate the acceptable materials for core liners and end caps.

- A spring retainer will be used with each coring tool when the physical properties of the waste are such that the waste may fall out of the coring tool's liner during sampling activities. The spring retainer will be constructed of relatively inert material (e.g., stainless steel or Teflon®) and its inner diameter will not be less than the inner diameter of the liner. Before use, spring retainers will be cleaned in accordance with the requirements in Section C1-2b.

- Coring tools may have an air-lock mechanism that opens to allow air inside the liners to escape as the tool is pressed into the waste (e.g., ball check valve). If used, this air-lock mechanism also closes when the core is removed from the waste container.

- After disassembling the coring tool, a device (extruder) to forcefully extrude the liner from the coring tool will be used if the liner does not slide freely. All surfaces of the extruder that may come into contact with the core will be cleaned in accordance with the requirements in Section C1-2(b) prior to use.

- Coring tools will be of sufficient length to hold the liner and will be constructed to allow placement of the liner leading edge as close as possible to the coring tools leading edge.

- All surfaces of the coring tool that have the potential to contact the sample core or sample media will be cleaned in accordance with the requirements in Section C1-2(b) prior to use.

- The leading edge of the coring tools may be sharpened and tapered to a diameter equivalent to, or slightly smaller than, the inner diameter of the liner to reduce the drag of the homogeneous solids and soil/gravel against the internal surfaces of the liner, thereby enhancing sample recovery.

- Rotational coring tools will have a mechanism to minimize the rotation of the liner inside the coring tool during coring activities, thereby minimizing physical disturbance to the core.

- Rotational coring will be conducted in a manner that minimizes transfer of frictional heat to the core, thereby minimizing potential loss of VOCs.

- Non-rotational coring tools will be designed such that the tool's kerf width is minimized. Kerf width will be defined as one-half of the difference between the outer diameter of the tool and the inner diameter of the tool's inlet.

C1-2a(2) Sample Collection

Sampling of cores will be conducted in accordance with the following requirements:

- Sampling will be conducted as soon as possible after core collection. If a substantial delay (i.e., more than 60 minutes) is expected between core collection and sampling, the core remains in the liner and the liner is capped at each end. If the liner containing the core is not extruded from the coring tool and capped, then the liner will be left in the coring tool and the coring tool will be capped at each end.

- Samples of homogeneous solids and soil/gravel for VOC analyses will be collected prior to extruding the core from the liner. These samples may be collected by collecting a single sample from the representative subsection of the core, or three sub-samples may be collected from the vertical core to form a single 15-gram composite sample. Smaller sample sizes may be used if method PRQL requirements are met for all analytes. The sampling locations will be randomly selected. If a single sample is used, the representative subsection will be chosen by randomly selecting a location along the portion of the core (i.e., core length). If the three sub-sample method is used, the sampling locations will be randomly selected within three equal-length subsections of the core along the long axis of the liner and access to the waste will be gained by making a perpendicular cut through the liner and the core. The CCP will develop documented procedures to select, and record the selection, of random sampling locations by properly using random numbers for identifying sampling locations. The procedures used to select the random sampling locations will be subject to review as part of annual audits by the DOE. A sampling device such as the metal coring cylinder described in EPA's SW-846 Manual (1996), or equivalent, will be immediately used to collect the sample once the core has been exposed to air. Immediately after sample collection, the sample will be placed in an airtight sample container for VOC analysis, the top rim of the container visually inspected and wiped clean of any waste residue, and the cap secured. Sample handling requirements are outlined in Table C1-4, Sample Handling Requirements for Homogenous Solids and Soil/Gravel. Additional guidance for this type of sampling can be found in SW-846 (EPA 1996).

- Samples of the homogeneous solids and soil/gravel for semi-volatile organic compound, and metals analyses will be collected. These samples may be collected from the same sub-sample locations and in the same manner as the sample collected for VOC analysis, or they may be collected by splitting or compositing the representative subsection of the core. The representative subsection will be chosen by randomly selecting a location along the portion of the core (i.e., core length). The CCP will develop documented procedures

to select, and record the selection, of random sampling locations by properly using random numbers for identifying sampling locations. The procedures used to select the random sampling locations are subject to review as part of annual audits by the DOE. Guidance for splitting and compositing solid materials can be found in SW-846 (EPA 1996). All surfaces of the sampling tools that have the potential to come into contact with the sample will be constructed of materials unlikely to affect the composition or concentrations of target analytes in the waste (e.g., Teflon®). In addition, all surfaces that have the potential to come into contact with core sample media will be either disposed of or decontaminated according to the procedures found in Section C1-2(b). Sample sizes and handling requirements are outlined in Table C1-4.

Newly generated waste samples may be collected using methods other than coring, as discussed in Section C1-2a. Newly generated waste samples will be collected as soon as possible after sampling, but the spatial and temporal homogeneity of the waste stream dictate whether a representative grab sample or composite sample will be collected. As part of the site audit, the DOE shall assess waste sampling to ensure collection of representative samples.

C1-2b Quality Control

QC requirements for sampling of homogeneous solids and soil/gravel include collecting co-located samples from cores or other sample types to determine precision; equipment blanks to verify cleanliness of the sampling and coring tools and sampling equipment; and analysis of reagent blanks to ensure reagents, such as deionized or high pressure liquid chromatography (HPLC) water, will be of sufficient quality. Coring and sampling of homogeneous solids and soil/gravel by the CCP will comply, at a minimum, with the following QC requirements.

C1-2b(1) Co-Located Samples

In accordance with the requirement to collect field duplicates required by the EPA methods found in SW-846 (EPA 1996), samples will be collected to determine the combined precision of the coring and sampling procedures. The co-located core methodology will include a duplicate sample collection methodology intended to collect samples from a second core placed at approximately the same location within the drum when samples are collected by coring. Waste may not be amenable to coring in some instances. In this case, a co-located sample will be collected from a sample (e.g., scoop) collected from approximately the same location in the waste stream. A sample from each co-located core or waste sample collected by other means will be collected side by side as close as feasible to one another, handled in the same manner, visually inspected through the transparent liner (if cored), and sampled in the same manner at the same randomly selected sample location(s). If the VE detects

inconsistencies such as color, texture, or waste type in the waste at the sample location, another sampling location may be randomly selected, or the samples may be invalidated and co-located samples or cores may again be collected. Co-located samples, from either core or other sample type, will be collected at a frequency of one per sampling batch or once per week, whichever is more frequent. A sampling batch will be a suite of homogeneous solids and soil/gravel samples collected consecutively using the same sampling equipment within a specific time period. A sampling batch can be up to 20 samples (excluding field QC samples), all of which will be collected within 14 days of the first sample in the batch.

C1-2b(2) Equipment Blanks

In accordance with SW-846 (EPA 1996), equipment blanks will be collected from fully assembled sampling and coring tools (i.e., at least those portions of the sampling equipment that contact the sample) prior to first use after cleaning at a frequency of one per equipment cleaning batch. An equipment cleaning batch will be the number of sampling equipment items cleaned together at one time using the same cleaning method. The equipment blank will be collected from the fully assembled sampling or coring tool, in the area where the sampling or coring tools will be cleaned, prior to covering with protective wrapping and storage. The equipment blank will be collected by pouring clean water (e.g., deionized water, HPLC water) down the inside of the assembled sampling or coring tool. The water will be collected in a clean sample container placed at the leading edge of the sampling or coring tool and analyzed for the analytes listed in Tables C3-4, C3-6, and C3-8, Metals Target Analyte List and Quality Assurance Objectives. The results of the equipment blank will be considered acceptable if the analysis indicates no analyte at a concentration greater than three times the MDLs listed in Tables C3-4 and C3-6 or in the Program Required Detection Limits (PRDL) in Table C3-8. If analytes are detected at concentrations greater than three times the MDLs (or PRDLs for metals), then the associated equipment cleaning batch of sampling or coring tools will be cleaned again and another equipment blank collected. Equipment from an equipment cleaning batch will not be used until analytical results are received verifying an adequately low level of contamination in the equipment blank.

Equipment blanks for coring tools will be collected from liners that will be cleaned separately from the coring tools. These equipment blanks will be collected at a frequency of one per equipment cleaning batch. The equipment blanks will be collected by randomly selecting a liner from the equipment cleaning batch, pouring clean water (e.g., deionized water or HPLC water) across its internal surface, collecting the water in a clean sample container, and analyzing the water for the analytes listed in Tables C3-4, C3-6, and the PRDLs in Table C3-8. The results of the equipment blank analysis will be considered acceptable if the results indicate no analyte at a concentration greater than three times the MDLs listed in Tables C3-4, C3-6, or PRDLs in Table C3-8. If analytes are detected at concentrations greater than three times the

MDLs (or PRDLs for metals), then the associated equipment cleaning batch of liners will be cleaned again and another equipment blank collected. Equipment from an equipment cleaning batch will not be used until analytical results are received verifying an adequately low level of contamination in the equipment blank.

Sampling equipment (e.g., bowls, spoons, chisel, VOC sub-sampler) will also be cleaned. Equipment blanks will be collected for the sampling equipment at a frequency of one per equipment cleaning batch. After the sampling equipment will be cleaned, one item from the equipment cleaning batch will be randomly selected, water (e.g., deionized water, HPLC water) will be passed over its surface, collected in a clean container, and analyzed for the analytes listed in Tables C3-4, C3-6, and C3-8. The results of the equipment blank will be considered acceptable if the results indicate no analyte present at a concentration greater than three times the MDLs listed in Tables C3-4 and C3-6 and in the PRDLs in C3-8. If analytes are detected at concentrations greater than three times the MDLs (or PRDLs for metals), then the associated equipment cleaning batch of sampling equipment will be cleaned again and another equipment blank collected. Equipment from an equipment cleaning batch will not be used until analytical results are received verifying an adequately low level of contamination in the equipment blank. The above equipment blanks may be performed on a purchased batch basis for sampling equipment purchased sterile and sealed in protective packaging. Equipment blanks need not be performed for equipment purchased in sealed protective packaging accompanied by a certificate certifying cleanliness.

The results of equipment blanks will be traceable to the items in the equipment cleaning batch that the equipment blank represents. All sampling items will be identified, and the associated equipment cleaning batch will be documented. The method of documenting the connection between equipment and equipment cleaning batches will be documented. Equipment blank results for the coring tools, liners, and sampling equipment will be reviewed prior to use. A sufficient quantity of these items will be maintained in storage to prevent disruption of sampling operations.

The Permittees may require a site to use certified clean disposable sampling equipment and discard liners and sampling tools after one use. In this instance, cleaning and equipment blank collection will not be required.

C1-2b(3) Coring Tool and Sampling Equipment Cleaning

Coring tools and sampling equipment shall be cleaned in accordance with the following requirements:

- All surfaces of coring tools and sampling equipment that will come into contact with the samples will be clean prior to use. All sampling equipment will be cleaned in the same manner. Immediately following cleaning, coring

tools and sampling equipment will be assembled and sealed inside clean protective wrapping.

- Each reusable sampling or coring tool will have a unique identification number. Each number will be referenced to the waste container on which it is used. This information will be recorded in the field records. One sampling or coring tool from each equipment cleaning batch will be tested for cleanliness in accordance with the requirements specified above. The identification number of the sampling or coring tool from which the equipment blank was collected will be recorded in the field records. The results of the equipment blank analysis for the equipment cleaning batch in which each sampling or coring tool was cleaned will be submitted to the sampling facility with the identification numbers of all sampling or coring tools in the equipment cleaning batch. If analytes are detected at concentrations greater than three times the MDLs (or PRDLs for metals), then the associated equipment cleaning batch of sampling equipment will be cleaned again and another equipment blank collected. Equipment from an equipment cleaning batch will not be used until analytical results are received verifying an adequately low level of contamination in the equipment blank.

- Sample containers will be cleaned in accordance with SW-846 (EPA 1996).

C1-2c Equipment Testing, Inspection and Maintenance

Prior to initiation of sampling or coring activities, sampling and coring tools are tested in accordance with manufacturer specifications to ensure operation within the manufacturer's tolerance limits. Other specifications specific to the sampling operations (e.g., operation of containment structure and safety systems) are tested and verified as operating properly prior to initiating coring activities. Coring tools are assembled, including liners, and tested. Air-lock mechanisms and rotation mechanisms are inspected for free movement of critical parts. Sampling and coring tools found to be malfunctioning are repaired or replaced prior to use.

Coring tools and sample collection equipment are maintained in accordance with manufacturer's specifications. Clean sampling and coring tools and sampling equipment are sealed inside clean protective wrapping and maintained in a clean storage area prior to use. Sampling equipment is properly maintained to avoid contamination. A sufficient supply of spare parts is maintained to prevent delays in sampling activities due to equipment down time. Records of equipment maintenance and repair are maintained in the field records in accordance with site Standard Operating Procedures (SOPs).

Inspection of sampling equipment and work areas includes the following:

- Sample collection equipment in the immediate area of sample collection is inspected daily for cleanliness. Visible contamination on any equipment (e.g., waste on floor of sampling area, hydraulic fluid from hoses) that has the potential to contaminate a waste core or waste sample is thoroughly cleaned upon its discovery.

- The waste coring and sampling work areas are maintained in clean condition to minimize the potential for cross contamination between waste (including cores) and samples.

- Expendable equipment (e.g., plastic sheeting, plastic gloves) is visually inspected for cleanliness prior to use and properly discarded after each sample.

- Prior to removal of the protective wrapping from a coring tool designated for use, the condition of the protective wrapping should be visually assessed. Coring tools with torn protective wrapping should be returned for cleaning. Coring tools visibly contaminated after the protective wrapping has been removed are not used and are returned for cleaning or properly discarded.

- Sampling equipment is visually inspected prior to use. All sampling equipment that comes into contact with waste samples are stored in protective wrapping until use. Prior to removal of the protective wrapping from sampling equipment, the condition of the protective wrapping is visually assessed. Sampling equipment with torn protective wrapping is discarded or returned for cleaning. Sampling equipment visibly contaminated after the protective wrapping has been removed is not used and is returned for cleaning or properly discarded.

- Cleaned sampling and coring equipment is physically segregated from all equipment that was used for a sampling event and was not decontaminated.

C1-2d Equipment Calibration and Frequency

The scale used for weighing sub-samples is calibrated as necessary to maintain its operation within manufacturer's specifications, and after repairs and routine maintenance. Weights used for calibration are traceable to a nationally recognized standard. Calibration records are maintained in the field records.

C1-3 Radiography

Radiography aids in the examination and identification of containerized waste. There is no equivalent EPA method. Personnel perform radiography in accordance with the procedures to meet the WAP requirements described in the following sections (T53, T508). Additionally, these procedures include instructions specific to the radiography method used. For example, details about moving the drum in a specific way in order to detect liquids are included in the radiography procedures. QAOs for radiography are contained in Section C3-4.

All activities required to achieve the radiography objectives are described in the QAPjP and radiography-related SOPs. A radiography system (e.g., real time radiography, digital radiography/computed tomography) normally consists of the following components: x-ray-producing device; imaging system; an enclosure for radiation protection; a waste container handling system; an audio/visual recording system; and an operator control and data acquisition station. The radiography equipment has controls (or an equivalent process) that allow the operator to control image quality for materials of varying density. On some radiography systems, it should be possible to vary the voltage, typically between 150-400 kilovolts (kV), to provide an optimum degree of penetration through the waste. For example, high-density material is examined with the x-ray device set on the maximum voltage. This ensures maximum penetration through the waste container. Low-density material is examined at lower voltage settings to improve contrast and image definition. The imaging system utilizes a fluorescent screen, a low-light television camera, or x-ray detectors to generate the image.

To perform radiography, the waste container is scanned while the operator views the television screen. A video and audio recording is made of the waste container scan and is maintained as a Non-Permanent Record. A radiography data form is also used to document the waste matrix code, to ensure that the waste container contains no ignitable, corrosive, or reactive waste by documenting the absence of liquids in excess of TSDF-WAC limits or compressed gases, and verify that the physical form of the waste is consistent with the waste stream description documented in the AK Summary Report. Containers whose contents prevent full examination of the remaining contents are subject to VE unless the CCP certifies that VE would provide no additional relevant information for that container based on the acceptable knowledge information for the waste stream. Such certification shall be documented in CCP records.

For containers which contain classified shapes and undergo radiography, the radiography video and audio recording will be considered classified. The radiography data forms will not contain classified information.

The radiography system involves qualitative and semi-quantitative evaluations of visual displays. Operator training and experience are the most important considerations for ensuring QC in regard to the operation of the radiography system and for interpretation

and disposition of radiography results. Only trained personnel are allowed to operate radiography equipment.

Standardized training requirements for radiographic operators are based on existing industry standard training requirements.

Formal and on-the-job training (OJT) elements are listed below. In addition, radiography personnel are instructed in the specific waste generating practices, typical packaging configurations, and associated waste material parameters expected to be found in the waste matrix code. OJT and apprenticeship of radiography personnel are conducted by experienced, qualified radiography operators prior to qualification of training candidates. Training describes the site equipment, waste configurations, and the level of waste characterization efforts for the CCP. In addition, radiography operators are trained on the types of waste, physical forms, packaging configurations, and QC requirements for site waste characterized by the CCP.

All of the radiography QC requirements specified in the QAPjP shall be incorporated into the CCP training programs and radiography operations, so that data quality and comparability will not be affected (T28, T510). The radiography training program is subject to the audit and surveillance program. The training program includes items required by CCP-QP-002, *CCP Training and Qualification Plan,* and the required elements listed below.

One or more training containers with items (including prohibited items) common to the waste streams to be characterized and internal containers of various sizes is scanned semi-annually by each operator. The audio and video media are then reviewed by a supervisor to ensure that operators' interpretations remain consistent and accurate. Imaging system characteristics are verified on a routine basis.

Independent replicate scans and replicate observations of the video output of the radiography process are performed under uniform conditions and procedures. Independent replicate scans are performed on one waste container per day or once per testing batch, whichever is less frequent by a qualified radiography operator that was not involved in the original scan of the waste container. Independent observations of one scan (not the replicate scan) are made once per day or once per testing batch, whichever is less frequent, by a qualified radiography operator that was not involved in the original scan of the waste container. A testing batch is a suite of waste containers undergoing radiography using the same testing equipment. A testing batch can be up to 20 waste containers without regard to waste matrix.

Oversight functions include periodic audio/video media reviews of accepted waste containers and are performed by qualified radiography operators that were not involved in the original scans of the waste containers. The results of this independent verification are available to the radiography operators who performed the original scans. The SPM

is responsible for monitoring the quality of the radiography data and calling for corrective action, when necessary.

C1-4 Visual Examination

The CCP may use VE to verify container's contents. VE is performed by physically examining the contents of waste containers to verify the Waste Matrix Code and to verify that the container is properly included in the appropriate waste stream (T6, T69, T113, T163, T500).

VE is conducted on a waste container to identify and describe all waste items, packaging materials, and waste material parameters in the waste containers. VE activities are documented on video/audio media or by using a second operator to provide additional verification by reviewing the contents of the waste container to ensure correct reporting. When VE is performed using a second operator, each operator performing the VE will observe for themselves the waste being placed in the waste container or the contents within the examined waste container when waste is not removed. The results of all VE are documented on VE data forms, which are used to document the Waste Matrix Code, ensure that the waste container contains no ignitable, corrosive, or reactive waste by documenting the absence of liquids in excess of TSDF-WAC limits or compressed gases, and verify that the physical form of the waste is consistent with the waste stream description documented in the AK Summary.

VE recorded on video/audio media shall meet the following minimum requirements:

- The video/audio media shall record the waste packaging event for the container such that all waste items placed into the container are recorded in sufficient detail and shall contain an inventory of waste items in sufficient detail that another trained VE operator can identify the associated waste material parameters.

- The video/audio media shall capture the waste container identification number.

- The personnel loading the waste container shall be identified on the video/audio media or on packaging records traceable to the loading of the waste container.

- The date of loading of the waste container will be recorded on the video/audio media or on packaging records traceable to the loading of the waste container.

VE performed using two generator site personnel shall meet the following minimum requirements:

- At least two generator site personnel who witnessed the packaging of the waste shall approve the data forms or packaging records attesting to the contents of the waste container.

- The data forms or packaging records shall contain an inventory of waste items in sufficient detail that another trained VE operator can identify the associated waste material parameters.

- The waste container identification number shall be recorded on the data forms or packaging records.

VE video/audio media of containers which contain classified shapes, shall be considered classified information. VE data forms or packaging records will not contain classified information.

Waste container packaging records may be used to meet the VE DQOs, Sections C-4a(1). These records must meet the minimum requirements listed above for either VE recorded on video/audio media or VE performed by two generator site personnel, and shall be reviewed by operators trained and qualified to the requirements listed below. The operators will prepare data forms based on the VE records. VE batch data reports will be prepared, reviewed, and approved as described in Section C-4 and Section C3.

There will be standardized training for VE. VE operators are instructed in the specific waste-generating processes, typical packaging configurations, and waste material parameters expected to be found in each waste matrix code at the site. The training covers the various waste configurations generated/stored at the site. The particular physical forms and packaging configurations will vary at each site, so operators will be trained to examine the types of waste that are generated, stored and/or characterized at that site. Training will include the following regardless of Summary Category Group:

- Identifying and describing the contents of a waste container by examining all items in waste containers of previously packaged waste

- Identifying when VE cannot be used to meet the DQOs

VE personnel are requalified once every two years.

The Program Manager designates VE experts. Designated VE experts are familiar with the waste-generating processes that have taken place at the site and waste types for wastes being characterized at a particular site. VE experts are responsible for the

overall direction and implementation of VE activities for the CCP at that site. VE experts meet the qualification and training requirements specified in CCP-QP-002 and make decisions based on training, previous experience, and knowledge of the waste stream.

C1-5 Custody of Samples

Chain-of-Custody on field samples (including field QC samples) will be initiated immediately after sample collection or preparation. Sample custody will be maintained by ensuring samples are custody sealed during shipment to the laboratory. After samples are accepted by the analytical laboratory, custody will be maintained by assuring that the samples are in the possession of an authorized individual, in that individual's view, in a sealed or locked container controlled by that individual, or in a secure controlled access location. Sample custody will be maintained until the sample is released by the SPM or until the sample is expended. The CCP procedures contain a copy of the sample chain-of-custody form and instructions for completing sample chain-of-custody forms in a legally defensible manner. These forms include provisions for each of the following:

- Signature of individual initiating custody control, along with the date and time.
- Documentation of sample numbers for each sample under custody. Sample numbers are referenced to a specific sampling event description that identifies the sampler(s) through signature, the date and time of sample collection, type/number containers for each sample, sample matrix, preservatives (if applicable), requested methods of analysis, place/address of sample collection and the waste container number.
- For off-site shipping, method of shipping transfer, responsible shipping organization or corporation, and associated air bill or lading number.
- Signatures of custodians relinquishing and receiving custody, along with date and time of the transfer.
- Description of final sample container disposition, along with signature of individual removing sample container from custody.
- Comment section.
- Documentation of discrepancies, breakage or tampering.

All samples and sampling equipment will be identified with unique identification numbers. Sampling coring tools and equipment will be identified with unique equipment numbers that ensure all sampling equipment, coring tools, and sampling canisters will be traceable to equipment cleaning batches.

All samples will be uniquely identified to ensure the integrity of the sample and will be used to identify the facility and date of collection. Sample tags or labels will be affixed to all samples and identify at a minimum:

- Sample ID number
- Sampler initials and organization
- Ambient temperature and pressure (for gas samples only)
- Sample description
- Requested analyses
- Data and time of collection
- QC designation (if applicable)

COC procedures are contained in the sampling procedures identified in Sections C1-1 and C1-2.

C1-6 Sample Packing and Shipping

In the event that the analytical facilities are not at the generator/storage site, the samples shall be packaged and shipped to an off-site laboratory. Sample containers shall be packed to prevent any damage to the sampling container and maintain the preservation temperature, if necessary. Department of Transportation (DOT) regulations shall be adhered to for shipment of the package.

When preparing SUMMA® or equivalent canisters for shipment, special care shall be taken with the pressure gauge and the associated connections. Metal boxes which have separate compartments, or cardboard boxes with foam inserts, are standard shipping containers. The chosen shipping container shall meet selected DOT regulations. If temperatures shall be maintained, an adequate number of cold packs necessary to maintain the preservation temperature shall be added to the package.

Glass jars will be wrapped in bubble wrap or another type of protection. The wrapped jar should be placed in a plastic bag inside of the shipping container, so that if the jar breaks, the inside of the shipping container and the other samples will not be contaminated. The plastic bag will enable the receiving analytical lab to prevent contamination of their shipping and receiving area. Plastic jars do not present a problem for shipping purposes. All shipping containers will contain appropriate blank samples to detect any VOC cross-contamination. A DOT approved cooler, or similar package may be used as the shipping container. If temperatures must be maintained,

an adequate number of cold packs necessary to maintain the preservation temperature shall be added to the package. If fill material is needed, compatibility between the samples and the fill should be evaluated prior to use.

All sample containers should be affixed with signed tamper-proof seals or devices so that it is apparent if the sample integrity has been compromised and that the identity of the seal or device is traceable to the individual who affixed the seal. A seal should also be placed on the outside of the shipping container for the same reason. Sample custody documentation shall be placed inside the sealed or locked shipping container, with the current custodian signing to release custody. Transfer of custody will be completed when the receiving custodian opens the shipping container and signs the custody documentation. The shipping documentation will serve to track the physical transfer of samples between the two custodians.

A Uniform Hazardous Waste Manifest is not required, since samples are exempted from the definition of hazardous waste under RCRA. All other shipping documentation specified in the site-specific SOP for sample shipment (i.e., bill of lading, site-specific shipping documentation) will be required.

Sampling packaging and shipping procedures are included in the sampling procedures listed in Section C1 and C2, where appropriate.

Table C1-1. Gas Sample Requirements

Parameter	Container[a]	Minimum Drum Headspace Sample Volume[b]	Holding Temperatures
VOCs	SUMMA® Canister	250 ml	0-40ºC

[a] Alternately, canisters that meet QAOs may be used.

[b] Alternately, if available headspace is limited, a single 100 milliliter (ml) sample may be collected for determination of VOCS.

Table C1-2. Summary of Drum Field QC Headspace Sample Frequencies

QC Samples	Manifold	Direct Canister	On-Line Systems
Field blanks[a]	1 per sampling batch[d]	1 per sampling batch[d]	1 per on-line batch[f]
Equipment blanks[b]	1 per sampling batch[d]	once[e]	1 per on-line batch[f]
Field reference standards[c]	1 per sampling batch[d]	once[e]	1 per on-line batch[f]
Field duplicates	1 per sampling batch[d]	1 per sampling batch[d]	1 per on-line batch[f]

[a] Analysis of field blanks for VOCs (Table C3-2), only, is required. For on-line integrated sampling/ analysis systems, if field blank results meet the acceptance criterion, a separate on-line blank is not required.

[b] One equipment blank or on-line sample shall be collected, analyzed for VOCs (Table C3-2), and demonstrated clean prior to first use of the headspace gas sampling equipment with each of the sampling heads, then at the specified frequency, for VOCs only thereafter. Daily, prior to work, the sampling manifold, if in use, shall be verified clean using an OVA.

[c] One field reference standard or on-line control sample shall be collected, analyzed, and demonstrated to meet the QAOs specified in Table C3-2 prior to first use, then at the specified frequency thereafter.

[d] A sampling batch is a suite of samples collected consecutively using the same sampling equipment within a specific time period. A sampling batch can be up to 20 samples (excluding field QC samples), all of which shall be collected within 14 days of the first sample in the batch.

[e] One equipment blank and field reference standard shall be collected after equipment purchase, cleaning, and assembly.

[f] An on-line batch is the number of samples collected within a 12-hour period using the same on-line integrated sampling/analysis system. The analytical batch requirements are specified by the analytical method being used in the on-line system.

Table C1-3. Summary of Sampling Quality Control Sample Acceptance Criteria

Quality Control (QC) Samples	Acceptance Criteria	Corrective Action[a]
Field Blanks	Gas Chromatography (GC)/Mass Spectrometry (MS), GC/Flame Ionization Detector (FID) Volatile Organic Compounds (VOCs) ≤ 3 x Method Detection Limits (MDLs) in Table C3-2	Nonconformance if any VOC amount is greater than 3 x MDLs in Table C3-2 for GC/MS and GC/FID
Equipment Blanks	GC/MS, GC/FID VOCs ≤ 3 x MDLs in Table C3-2	Nonconformance if any VOC amount is greater than 3 x MDLs in Table C3-2 for GC/MS and GC/FID
Field Reference Standards or On-Line Control Sample	70 - 130 Percent Recovery (%R)	Nonconformance if %R < 70 or > 130
Field Duplicate or On-Line Duplicate Sample	RPD ≤ 25	Nonconformance if RPD > 25

[a] Corrective action is only required if the final reported QC sample results do not meet the acceptance criteria.

MDL = Method Detection Limit

%R = Percent Recovery

RPD = Relative percent difference

Table C1-4. Sample Handling Requirements for Homogeneous Solids and Soil/Gravel

Parameter	Suggested Quantity[a]	Required Preservative	Suggested Container	Maximum Holding Time[b]
VOCs	15 grams	Cool to 4ºC	Glass Vial[c]	14 Days Prep/ 40 Days Analyze[d]
SVOCs	50 grams	Cool to 4ºC	Glass Jar[e]	14 Days Prep/ 40 Days Analyze[d]
Metals	10 grams	Cool to 4ºC	Plastic Jar[f]	180 Days[g]

[a] Quantity may be increased or decreased according to the requirements of the analytical laboratory, as long as the QAOs are met.

[b] Holding time begins at sample collection (holding times are consistent with SW-846 requirements).

[c] 40-ml VOA vial or other appropriate containers shall have an airtight cap.

[d] 40-day holding time allowable only for methanol extract - 14-day holding time for non-extracted VOCs.

[e] Appropriate containers should be used and should have Teflon® lined caps.

[f] Polyethylene or polypropylene preferred, glass jar is allowable.

[g] Holding time for mercury analysis is 28 days.

Note: Preservation requirements in the most recent version of SW-846 may be used if appropriate.

Table C1-5. Headspace Gas Drum Age Criteria Sampling Scenarios

Scenario	Description
1	A. Unvented 55-gallon drums without rigid poly liners are sampled through the drum lid at the time of venting. B1. Unvented 55-gallon drums with unvented rigid poly liners are sampled through the rigid poly liner at the time of venting or prior to venting. B2. Vented 55-gallon drums with unvented rigid poly liners are sampled through the rigid poly liner at the time of venting or prior to venting. C. Unvented 55-gallon drums with vented rigid poly liners are sampled through the drum lid at the time of venting.
2	55-gallon drums that have met the criteria for Scenario 1 and then are vented, but not sampled at the time of venting. [a]
3	Containers (i.e., 55-gallon drums, 85-gallon drums, 100-gallon drums, SWBs, TDOPs, SLB2s, and pipe components) that are initially packaged in a vented condition and sampled in the container headspace and containers that are not sampled under Scenario 1 or 2.

[a] Containers that have not met the Scenario 1 DAC at the time of venting must be categorized under Scenario 3. This requires the additional information required of each container in Scenario 3 (i.e., determination of packaging configuration) and such containers can only be sampled after meeting the appropriate Scenario 3 DAC.

Table C1-6. Scenario 1 Drum Age Criteria (in days) Matrix

Summary Category Group	DAC (days)
S5000	53

Note: Containers that are sampled using the Scenario 1 DAC do not require information on the packaging configuration because the Scenario 1 DAC are based on a bounding packaging configuration. In addition, information on the rigid liner vent hole presence and diameter do not apply to containers that are sampled using the Scenario 1 DAC because they are unvented prior to sampling.

Table C1-7. Scenario 2 Drum Age Criteria (in days) Matrix

	Summary Category Group S5000			
Filter H_2 Diffusivity [a]	Rigid Liner Vent Hole Diameter (in) [b]			
(mol/s/mod fraction)	0.30	0.375	0.75	1.0
1.9×10^{-6}	29	22	13	12
3.7×10^{-6}	25	20	12	11
3.7×10^{-5}	7	6	6	4

[a] The documented filter H_2 diffusivity must be greater than or equal to the listed value to use the DAC for the listed filter H_2 diffusivity (e.g., a container with a filter H_2 diffusivity of 4.2×10^{-6} must use a DAC for a filter with a 3.7×10^{-6} filter H_2 diffusivity). If a filter H_2 diffusivity for a container is undocumented or unknown or is less than 1.9×10^{-6} filter H_2 diffusivity, a filter of known H_2 diffusivity that is greater than or equal to 1.9×10^{-6} filter H_2 diffusivity must be installed prior to initiation of the relevant DAC period.

[b] The documented rigid liner vent hole diameter must be greater than or equal to the listed value to use the DAC for the listed rigid liner vent hole diameter (e.g., a container with a rigid liner vent hole of 0.5 in. must use a DAC for a rigid liner vent hole of 0.375 in.). If the rigid liner vent hole diameter for a container is undocumented during packaging (Section C-3(d)1), repackaging (Section C-3(d)1), and/or venting (Section C1-1a[4][ii]), that container must use a DAC for a rigid liner vent hole diameter of 0.30 in.

Note: Containers that are sampled using the Scenario 2 DAC do not require information on the packaging configuration because the Scenario 2 DAC are based on a bounding packaging configuration.

Table C1-8. Scenario 3 Packaging Configuration Groups

Packaging Configuration Group	Covered S5000 Packaging Configuration Groups
Packaging Configuration Group 1, 55-gallon drums[a]	• No layers of confinement, filtered inner lid[b] • No inner bags, no liner bags (bounding case)
Packaging Configuration Group 2, 55-gallon drums[a]	• 1 inner bag • 1 filtered inner bag • 1 liner bag • 1 filtered liner bag • 1 inner bag, 1 liner bag • 1 filtered inner bag, 1 filtered liner bag • 2 inner bags • 2 filtered inner bags • 2 inner bags, 1 liner bag • 2 filtered inner bags, 1 filtered liner bag • 3 inner bags • 3 filtered inner bags • 3 filtered inner bags, 1 filtered liner bag • 3 inner bags, 1 liner bag (bounding case)
Packaging Configuration Group 3, 55-gallon drums[a]	• 2 liner bags • 2 filtered liner bags • 1 inner bag, 2 liner bags • 1 filtered inner bag, 2 filtered liner bags • 2 inner bags, 2 liner bags • 2 filtered inner bags, 2 filtered liner bags • 3 filtered inner bags, 2 filtered liner bags • 4 inner bags • 3 inner bags, 2 liner bags • 4 inner bags, 2 liner bags (bounding case)
Packaging Configuration Group 4, pipe components	• No layers of confinement inside a pipe component • 1 filtered inner bag, 1 filtered metal can inside a pipe component • 2 inner bags inside a pipe component • 2 filtered inner bags inside a pipe component • 2 filtered inner bags, 1 filtered metal can inside a pipe component • 2 inner bags, 1 filtered metal can inside a pipe component (bounding case)

Table C1-8. Scenario 3 Packaging Configuration Groups (continued)

Packaging Configuration Group 5, Standard Waste Box ,Ten-Drum Overpack, or Standard Large Box 2[a]	• No layers of confinement • 1 SWB liner bag (bounding case)
Packaging Configuration Group 6, Standard Waste Box, Ten-Drum Overpack, or Standard Large Box 2[a]	• any combination of inner and/or liner bags that is less than or equal to 6 • 5 inner bags, 1 SWB liner bag (bounding case)
Packaging Configuration Group 7, 85-gallon Drums and 100-gallon Drums [a]	• No inner bags, no liner bags, no rigid liner, filtered inner lid (bounding case)[b] • No inner bags, no liner bags, no rigid liner
Packaging Configuration Group 8, 85-gallon Drums and 100-gallon Drums [a]	• 4 inner bags and 2 liner bags, no ridid liner, filtered inner lid (bounding case)[b]

[a] If a specific Packaging Configuration Group cannot be determined based on the data collected during packaging (Section C-3(d)1) and/or repackaging (Section C-3(d)1), a conservative default Packaging Configuration Group of 3 for 55-gallon drums, 6 for SWBs, TDOPs, and SLB2s, and 8 for 85-gallon and 100-gallon drums must be assigned provided the drums do not contain pipe component packaging. If pipe components are present as packaging in the drums, the pipe components must be sampled following the requirements for Packaging Configuration Group 4.

[b] A “filtered inner lid” is the inner lid on a double lid drum that contains a filter.

Definitions:

Liner Bags: One or more optional plastic bags that are used to control radiological contamination. Liner bags for drums have a thickness of approximately 11 mils. SWB liner bags have a thickness of approximately 14 mils. Liner bags are typically similar in size to the container. TDOPs and SLB2s use SWB liner bags.

Inner Bags: One or more optional plastic bags that are used to control radiological contamination. Inner bags have a thickness of approximately 5 mils and are typically smaller than liner bags.

Table C1-9. Scenario 3 Drum Age Criteria (in days) Matrix for S5000 Waste by Packaging Configuration Group

Packaging Configuration Group 1						
	Rigid Liner Vent Hole Diameter[b]					
Filter H_2 Diffusivity [a] (mol/s/mol fraction)	0.3-inch Diameter Hole	0.375-inch Diameter Hole	0.75-inch Diameter Hole	1-inch Diameter Hole	No Liner Lid	No Liner
1.9×10^{-6}	131	95	37	24	4	4
3.7×10^{-6}	111	85	36	24	4	4
3.7×10^{-5}	28	28	23	19	4	4

Packaging Configuration Group 2						
	Rigid Liner Vent Hole Diameter[b]					
Filter H2 Diffusivity [a] (mol/s/mol fraction)	0.3-inch Diameter Hole	0.375-inch Diameter Hole	0.75-inch Diameter Hole	1-inch Diameter Hole	No Liner Lid	No Liner
1.9×10^{-6}	175	138	75	60	30	11
3.7×10^{-6}	152	126	73	59	30	11
3.7×10^{-5}	58	57	52	47	28	8

Packaging Configuration Group 3						
	Rigid Liner Vent Hole Diameter[b]					
Filter H_2 Diffusivity [a] (mol/s/mol fraction)	0.3-inch Diameter Hole	0.375-inch Diameter Hole	0.75-inch Diameter Hole	1-inch Diameter Hole	No Liner Lid	No Liner
1.9×10^{-6}	199	161	96	80	46	16
3.7×10^{-6}	175	148	93	79	46	16
3.7×10^{-5}	72	72	67	62	42	10

Table C1-9. Scenario 3 Drum Age Criteria (in days) Matrix for S5000 Waste by Packaging Configuration Group (continued)

Packaging Configuration Group 4	
Filter H_2 Diffusivity [a] (mol/s/mol fraction)	Headspace Sample Taken Inside Pipe Component
>1.9 x 10^{-6}	152

Packaging Configuration Group 5	
Filter H_2 Diffusivity [a,c] (mol/s/mol fraction)	Headspace Sample Taken Inside SWB/TDOP/SLB2
>7.4 x 10^{-6} (SWB)	15
3.33 x 10^{-5} (TDOP)	15
6.60 x 10^{-4} (SLB2)	21

Packaging Configuration Group 6	
Filter H_2 Diffusivity [a,c] (mol/s/mol fraction)	Headspace Sample Taken Inside SWB/TDOP/SLB2
>7.4 x 10^{-6} (SWB)	56
3.33 x 10^{-5} (TDOP)	56
6.60 x 10^{-4} (SLB2)	56

Packaging Configuration Group 7 [d]			
Filter H_2 Diffusivity [a] (mol/s/mol fraction)	Inner Lid Filter Vent Minimum H_2 Diffusivity (mol/s/mol fraction) [a]		
	7.4 x 10^{-6}	1.85 x 10^{-5}	9.25 x 10^{-5} [e]
3.7 x 10^{-6}	13	7	2
7.4 x 10^{-6}	10	6	2
1.85 x 10^{-5}	6	4	2

Table C1-9. Scenario 3 Drum Age Criteria (in days) Matrix for S5000 Waste by Packaging Configuration Group (continued)

Packaging Configuration Group 8	
Filter H_2 Diffusivity [a] (mol/s/mol fraction)	Inner Lid Filter Vent Minimum H_2 Diffusivity (mol/s/mol fraction)
	7.4×10^{-6}
3.7×10^{-6}	21

[a] The documented filter H_2 diffusivity must be greater than or equal to the listed value to use the DAC for the listed filter H_2 diffusivity (e.g., a container with a filter H_2 diffusivity of 4.2×10^{-6} must use a DAC for a filter with a 3.7×10^{-6} filter H_2 diffusivity). If a filter H_2 diffusivity for a container is undocumented or unknown or is less than 1.9×10^{-6} filter H_2 diffusivity, a filter of known H_2 diffusivity that is greater than or equal to 1.9×10^{-6} filter H_2 diffusivity must be installed prior to initiation of the relevant DAC period.

[b] The documented rigid liner vent hole diameter must be greater than or equal to the listed value to use the DAC for the listed rigid liner vent hole diameter (e.g., a container with a rigid liner vent hole of 0.5 in. must use a DAC for a rigid liner vent hole of 0.375 in.). If the rigid liner vent hole diameter for a container is undocumented during packaging, repackaging, and/or venting (Section C1-1a[4][ii]), that container must use a DAC for a rigid liner vent hole diameter of 0.30 in.

[c] The filter H_2 diffusivity for SWBs, TDOPs, or SLB2s is the sum of the diffusivities for all of the filters on the container because SWBs, TDOPs, and SLB2s have more than one filter.

[d] Headspace sample taken between inner and outer drum lids. If headspace sample is taken inside the filtered inner drum lid prior to placement of the outer drum lid, then a DAC value of two days may be used. Footnote e is also applicable. Packaging Configuration Group seven DAC values apply to drums with up to two lids.

[e] While a DAC value of 2 days may be determined, containers must comply with the equilibrium requirements specified in Section C1-1a (i.e., 72 hours at 18°C or higher). The equilibrium requirement for headspace gas sampling shall be met separately.

Figure C1-1. Headspace Gas Drum Age Criteria Sampling Scenario Selection Process

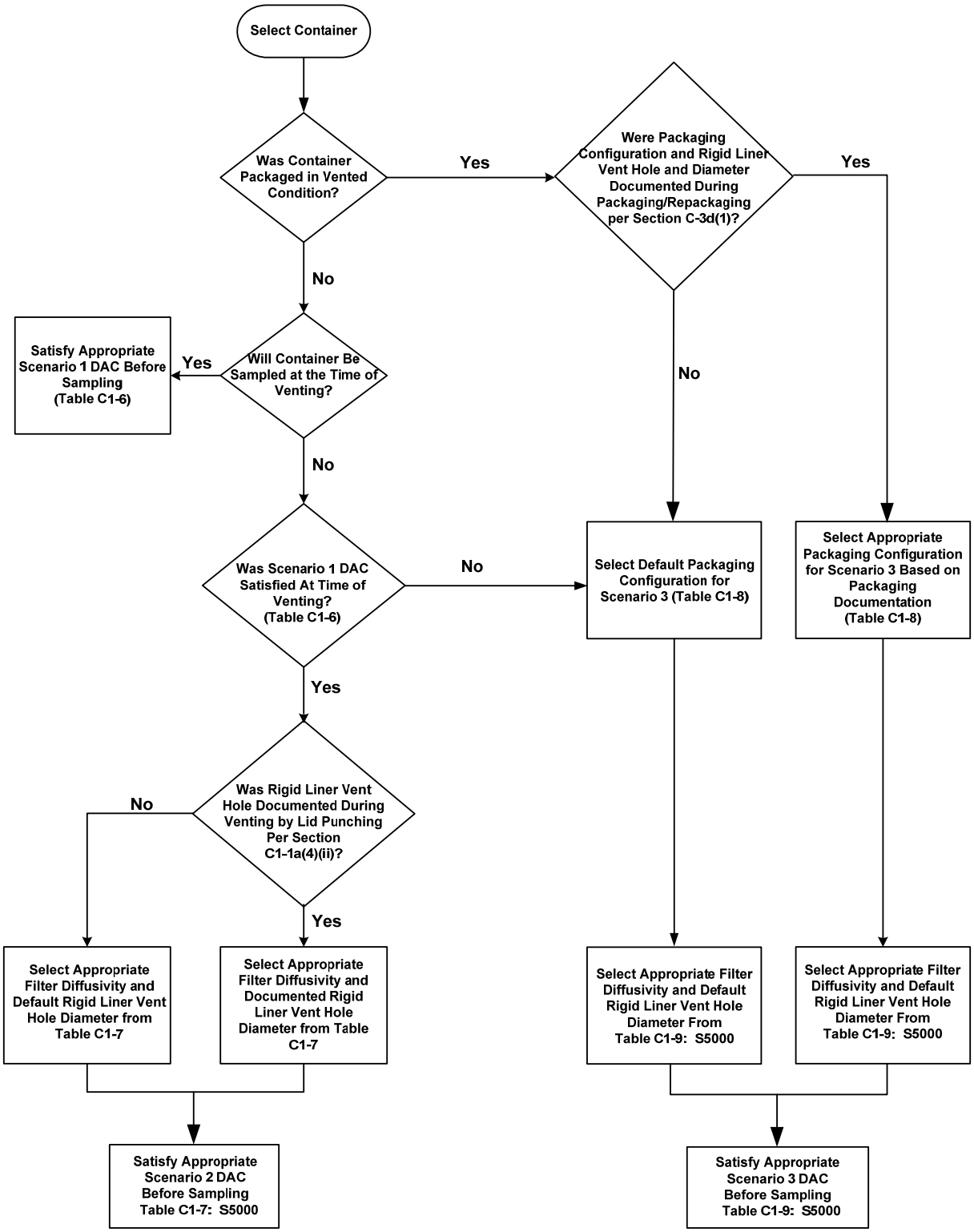


Figure C1-2. Headspace Sampling Manifold

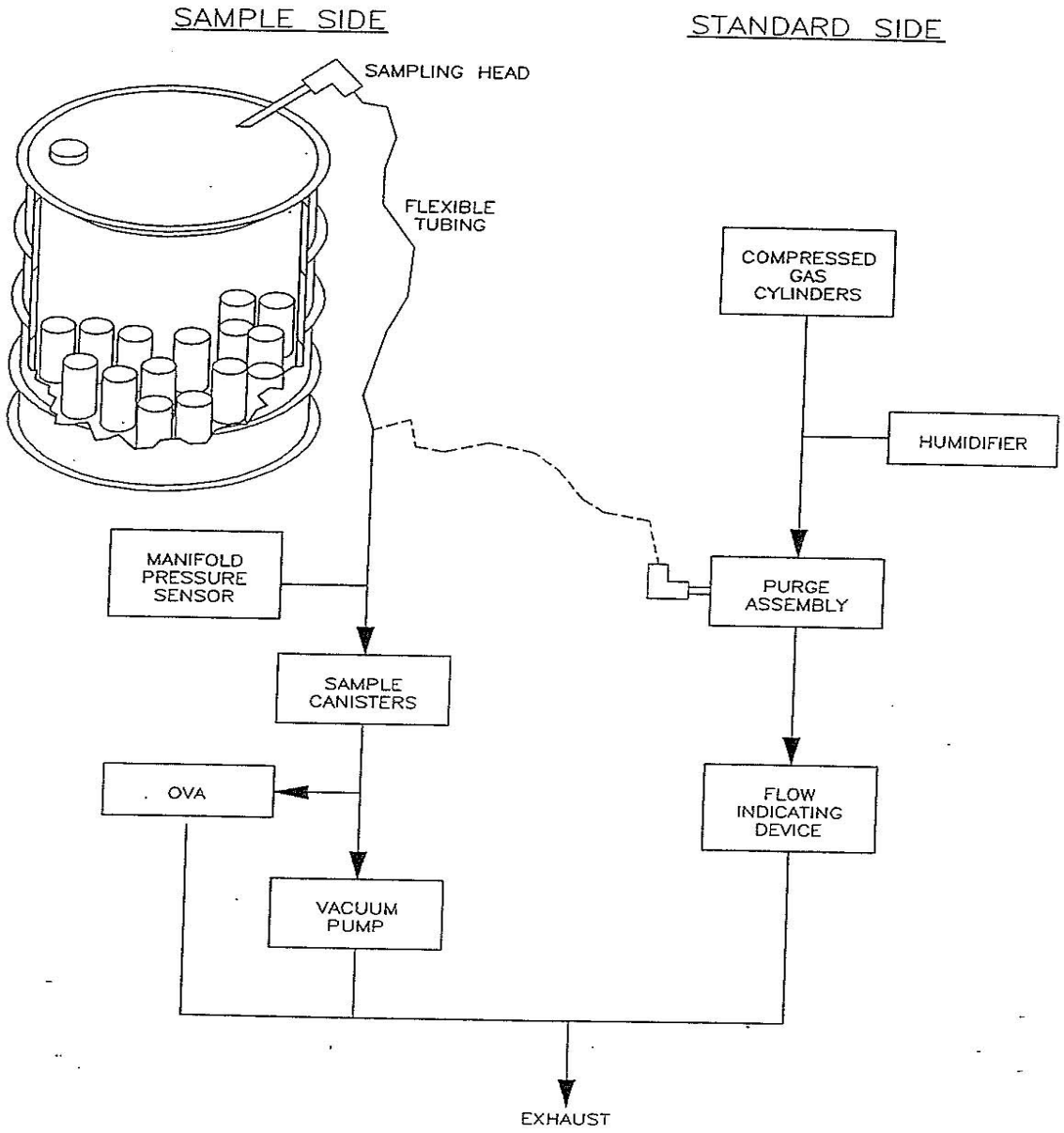


Figure C1-2
Headspace Sampling Manifold

Figure C1-3. SUMMA® C Components Configuration (Not-to-Scale)

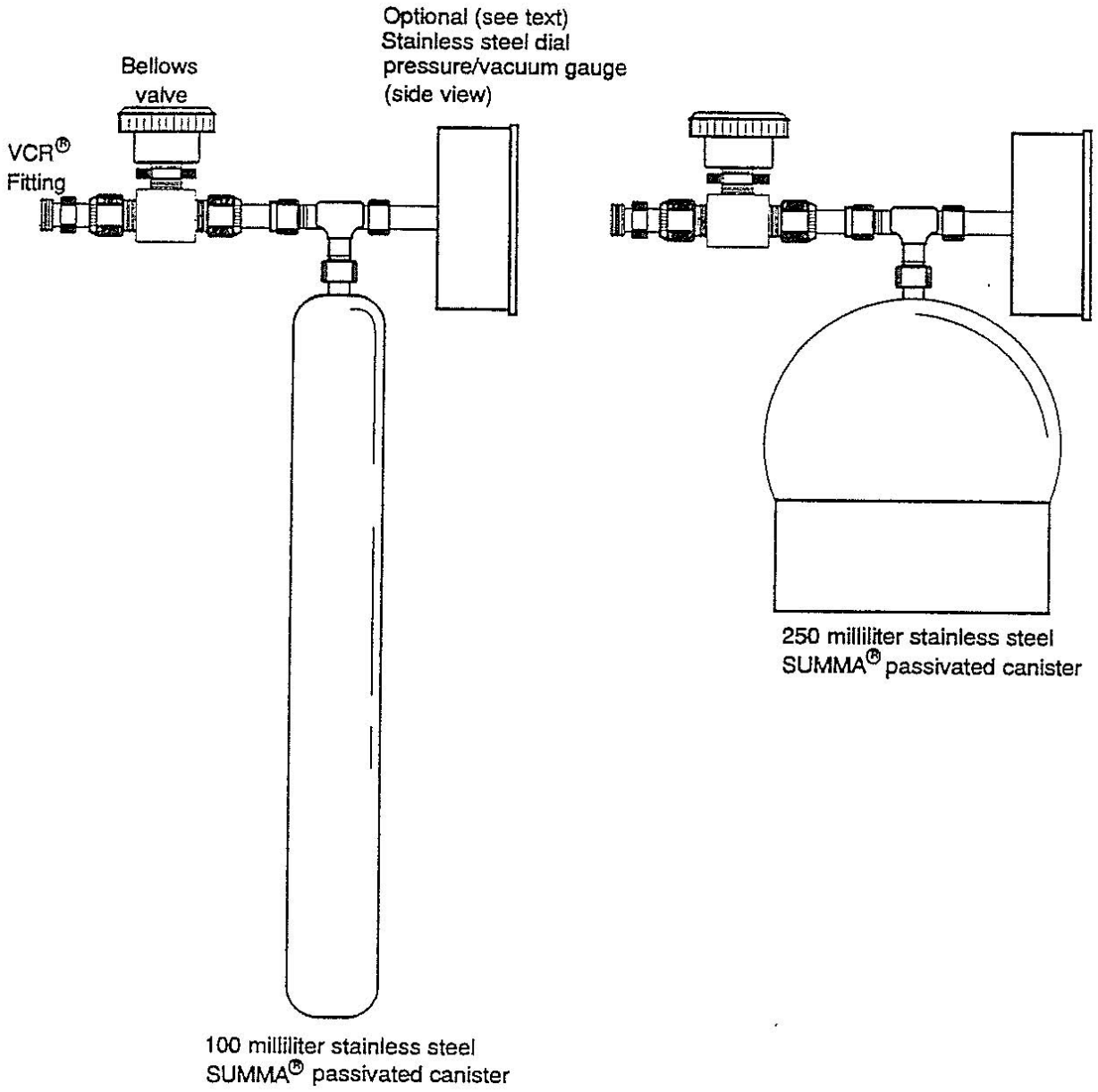


Figure C1-4. Schematic Diagram of Direct Canister with the Poly Bag Sampling Head

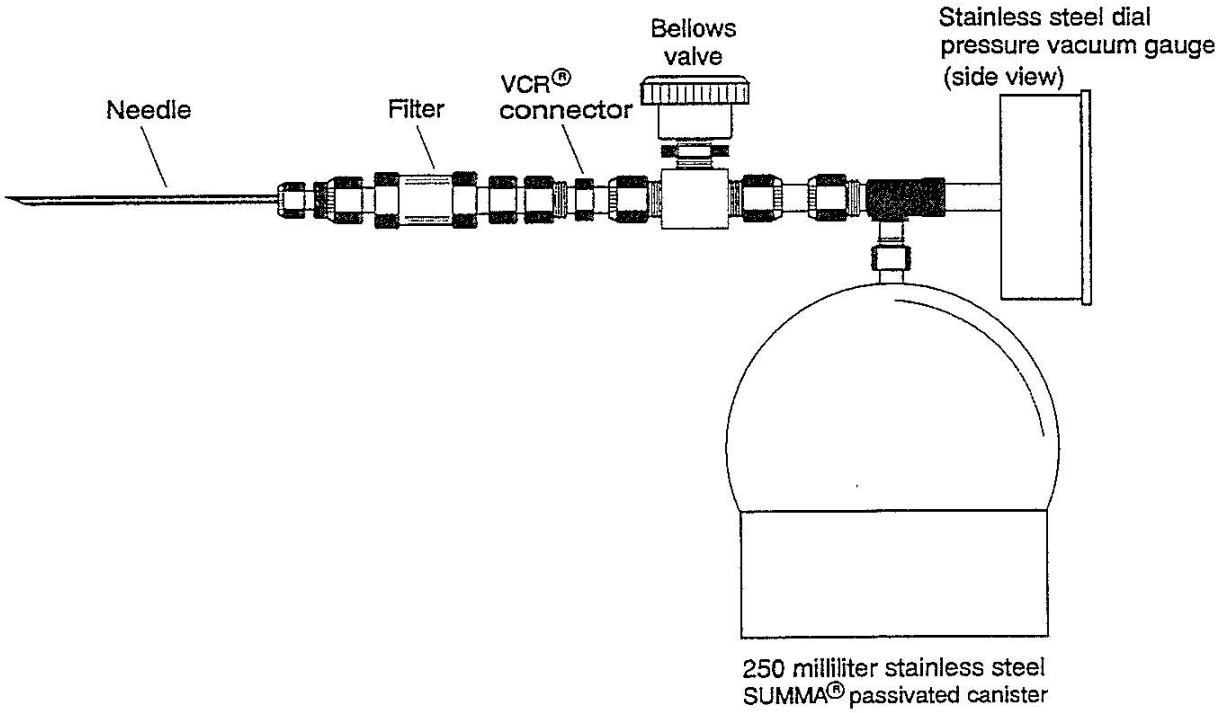
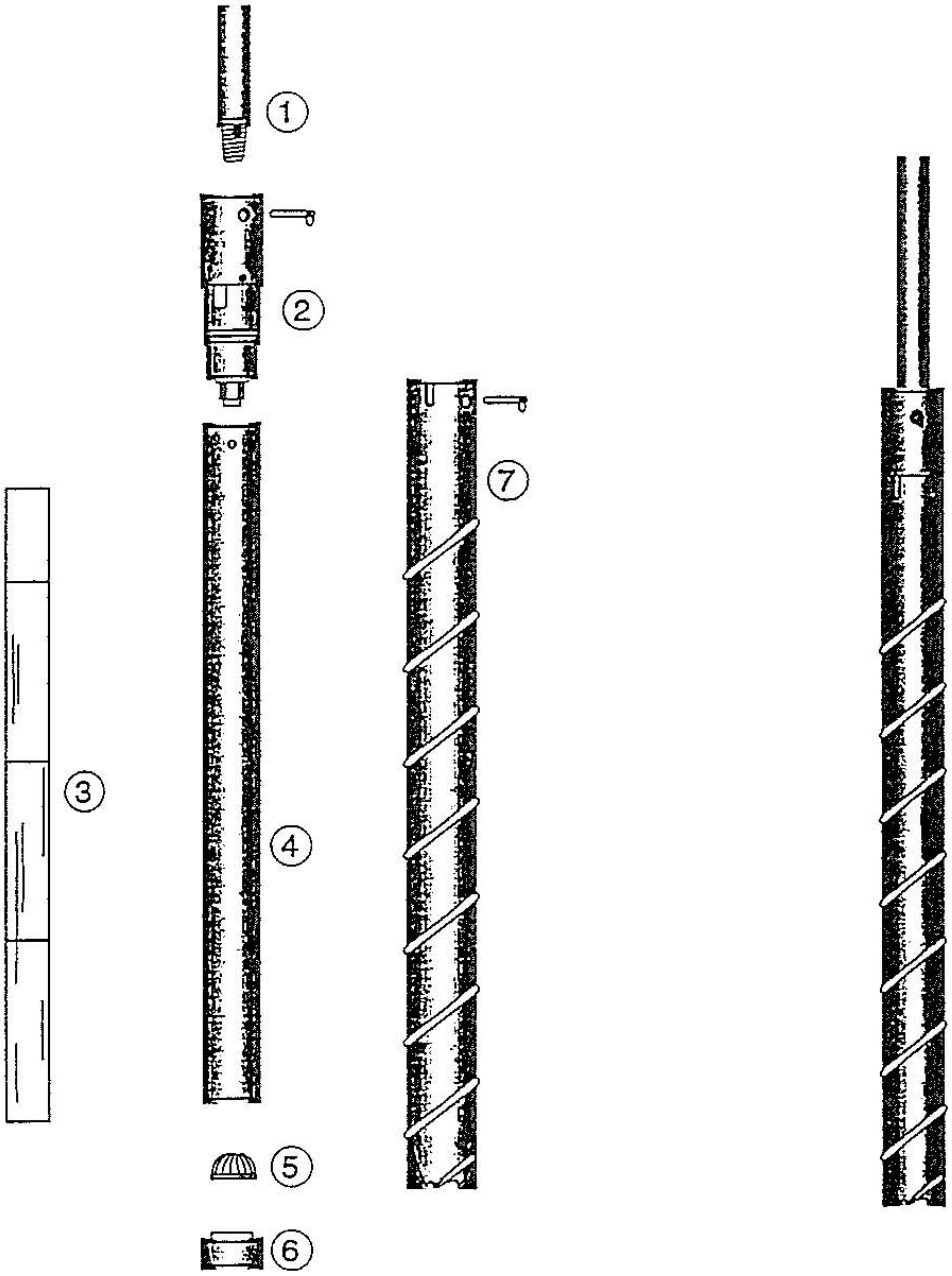
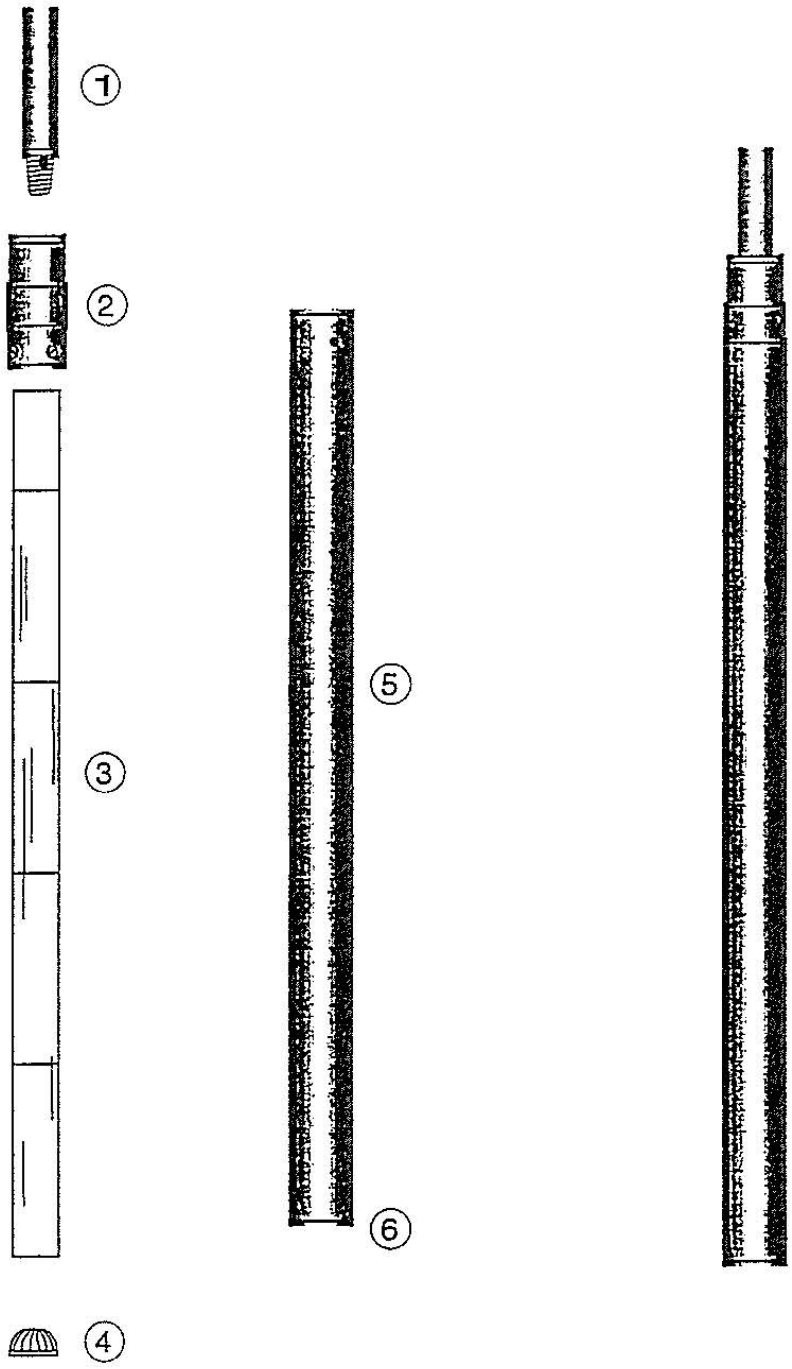


Figure C1-5. Rotational Coring Tool (Light Weight Auger)



1. Drill Rod
2. Thrust Bearing Ball Check Valve
3. Clear Teflon® Liners
4. Core Barrel
5. Spring Retainer (optional)
6. Core barrel tip
7. Auger and Pin

Figure C1-6. Non-Rotational Coring Tool (Thin Walled Sampler)



1. Drill Rod
2. Ball check valve
3. Clear Teflon® liners
4. Spring Retainer (optional)
5. Tube
6. Tapered Tip

Washington TRU Solutions
Carlsbad, NM

C2 STATISTICAL METHODS USED IN SAMPLING AND ANALYSIS

The CCP uses the following statistical methods for sampling and analysis of TRU waste to be disposed at the WIPP, unless determined unnecessary by the DOE as a result of an AK Sufficiency Determination. These statistical methods include methods for selecting waste containers for totals analysis, selecting waste containers for headspace gas sampling and analysis, and setting the upper confidence limit.

C2-1 Approach for Selecting Waste Containers for Statistical Sampling

C2-1a Statistical Selection of Containers for Totals Analysis

The statistical approach for characterizing retrievably stored and newly generated homogeneous solids (S3000) and soil/gravel (S4000) waste and repackaged or treated S3000 waste will rely on using AK to segregate waste containers into relatively homogeneous waste streams. Using AK, the CCP will classify the entire waste stream as hazardous or nonhazardous rather than individual waste containers. Individual waste containers will serve as convenient units for characterizing the combined mass of waste from the waste stream of interest. Once segregated by waste stream, random selection and sampling of the waste containers will be followed by analysis of the waste samples, performed to ensure that the resulting mean contaminant concentration provides an unbiased representation of the true mean contaminant concentration for each waste stream. The SPM will verify that the samples collected from within a waste stream were selected randomly (T162).

An end use of analytical results for retrievably stored homogeneous solids and soil/gravel is for assigning the EPA hazardous waste numbers associated D-numbers that apply to each mixed waste stream. The toxicity characteristic D-numbers are indicators that the waste exhibits the toxicity characteristic for specific contaminants under the RCRA. The RCRA-toxicity determination is made on the basis of sampling and analysis of waste streams and on whether or not the waste stream includes F-numbers wastes. If a waste stream includes one or more RCRA F-numbers identified via AK, toxicity characteristic contaminants associated with the F-numbers waste(s) are not included in the RCRA-toxicity characteristic determination. That is, the F-numbers take precedence over RCRA-toxicity D-numbers, and the waste stream is assumed hazardous regardless of the concentration. Therefore, toxicity characteristics contaminants associated with F-numbers for a waste stream shall be omitted from all calculations for determining the number of containers to sample because these wastes streams are assumed to be hazardous. In addition, each toxicity characteristic contaminant associated with the F-numbers shall be excluded from evaluation of analytical results to determine D-numbers. Contaminants of interest for the sampling, analysis, and RCRA-toxicity determination of a waste stream, then, excludes contaminants associated with F-numbers that have been assigned to the waste stream.

The sampling and analysis strategy is implemented in accordance with approved procedures (T3, T512). Preliminary estimates of the mean concentration and variance of each RCRA regulated contaminant in the waste will be used to determine the number of waste containers to select for sampling and analysis. Preliminary estimates will be based on a minimum of five samples selected randomly from the waste stream. If the entire waste stream is not accessible for sampling then a minimum of five preliminary samples will be selected randomly from the accessible population. As the rest of the waste stream is retrieved or generated, additional selected containers will be sampled as provided below and the analytical results will be reported to the Permittees. Samples collected to establish preliminary estimates that are selected, sampled, and analyzed using a DOE approved laboratory in accordance with applicable provisions of this QAPjP may be used as part of the required number of samples to be collected. The applicability of the preliminary estimates to the waste stream to be sampled will be justified and documented. The preliminary estimates will be determined in accordance with the following equations:

$$\overline{x} = \frac{1}{n}\sum_{i=1}^{n} x_i \qquad \text{(C2-1)}$$

$$s^2 = \frac{1}{n-1}\sum_{i=1}^{n}\left(x_i - \overline{x}\right)^2 \qquad \text{(C2-2)}$$

Where:

$\overline{x}$ = the calculated mean.
s^2 = the calculated concentration variance.
n = the number of samples analyzed.
x_i = the concentration determined in the *ith* sample.
i = an index from 1 to n.

Based upon the preliminary estimates of $\bar{x}$ and s^2 for each chemical contaminant of concern, the appropriate minimum number of samples (*n)* to be collected for each contaminant will be estimated using the following formulas from SW-846 (EPA 1996):

$$n = \frac{t^2_{\alpha,n_o-1} s^2}{(RT - \bar{x})^2} \qquad \text{(C2-3)}$$

Where:

n_0 = the initial number of samples used to calculate the preliminary estimates.

n = the calculated minimum number of required samples.

$t_{\alpha,n-1}$= the 90th percentile for the t distribution with n_0-1 degrees of freedom.

RT = the Regulatory Threshold of the contaminant (limit for toxicity characteristic wastes, PRQL for listed wastes).

The number of samples to be collected is based upon the largest n calculated for each of the contaminants of concern. The actual number of samples collected will be adjusted as necessary to ensure that an adequate number of samples are collected to allow for acceptable levels of completeness.

Non-integer results of calculations for required sample size should be rounded up to the next integer. A minimum of five containers will be sampled and analyzed in each waste stream. If there are fewer containers than the minimum or required number of samples in a waste stream, one or more randomly selected containers will be sampled more than once to obtain the number of needed samples of the waste. Otherwise the CCP selects any one container for sampling only once.

The calculated total number of required waste containers will then be randomly sampled and analyzed using a DOE approved laboratory. The CCP may count waste container samples from the preliminary mean and variance estimates as part of the total number of calculated required samples if and only if:

- There is documented evidence that the waste containers for the preliminary estimate samples were selected in the same random manner as is chosen for the required samples.
- There is documented evidence that the method of sample collection in the preliminary estimate samples were identical to the methodology to be employed for the required samples.

- There is documented evidence that the method of sample analysis in the preliminary estimate samples was identical to the analytical methodology employed for the required samples.

- There is documented evidence that the validation of the sample analyses, in the preliminary estimate samples, was comparable to the validation employed for the required samples. In addition, the validated sample results indicate that all sample results were valid according to the analytical methodology.

If only a portion of a waste stream is accessible for sampling (e.g., the remainder of the waste stream will be recovered from storage at the generator/storage site, or only a portion of the waste stream has been repackaged, treated, or generated), the calculated number of samples will be randomly selected from the accessible portion of the waste stream. DOE may approve the WSPF and authorize the CCP to begin shipping the waste stream to WIPP once the analytical data for the randomly selected samples from the accessible portion of the waste stream have been obtained.

The CCP will also randomly select the calculated number of sample locations from the waste stream as a whole. A minimum of five randomly selected sample locations will be selected from the waste stream as a whole. As those randomly selected locations (e.g., buried or newly generated waste containers) become accessible for sampling, samples will be obtained and analyzed.

For those waste streams where the population of the waste stream as a whole is indeterminate (e.g., continually generated waste streams from ongoing processes) or to facilitate waste processing, the CCP may divide the waste stream into lots. In this case, a minimum of five randomly selected sample locations will be selected from within each subsequent lot. As those randomly selected locations (e.g., buried or newly generated waste containers) become accessible, samples will be obtained and analyzed. As with sampling from the waste stream as a whole, the CCP may ship waste from the lot being generated or retrieved prior to completing sampling and analysis of the lot.

The CCP will use the data to update the UCL_{90} values for the waste stream as described in Section C2-2a and assign EPA hazardous waste numbers as appropriate. The CCP will submit the analytical data from subsequent sampling to the Permittees for inclusion in the WIPP facility operating record upon completion of project level data validation in Section C3-10b. If changes to EPA hazardous waste numbers are required as a result of subsequent sampling, the CCP will notify the Permittees and shipments of the affected waste stream shall be suspended until the DOE approves a revised WSPF for the affected waste stream.

Upon collection and analysis of the preliminary samples, or at any time after the preliminary samples have been analyzed, the CCP may presumptively assign EPA hazardous waste numbers to a waste stream even if the calculated number of required

samples is greater than the preliminary number of samples collected. For waste streams with calculated upper confidence limits below the regulatory threshold, the CCP collects the required number of samples if it intends to establish that the constituent is below the regulatory threshold.

C2-1b Statistical Selection of Containers for Headspace Gas Analysis

Headspace gas sampling of a waste stream may be done on a randomly selected portion of containers in the waste stream (T162). The CCP determines the minimum number of containers, *n*, to be sampled by taking an initial VOC sample from 10 randomly selected containers. These samples are analyzed for all the target analytes using a DOE approved laboratory. The standard deviation, *s*, is calculated for each of the nine VOCs in the HWFP Part 4, Table 4.4.1. The value of *n* is determined as the largest number of samples (not to exceed the number of containers in the waste stream or waste stream lot) calculated using the following equation:

$$n_{VOC_i} = \frac{t^2_{\alpha,n-1} \times s^2_{e_{VOC_i}}}{E^2_{VOC_i}} \qquad \text{(C2-4)}$$

where:

n_{VOC_i} = the number of samples needed to representatively sample the waste stream for VOC_i from Table 4.4.1.

$t_{a,n-1}$ = the 90th percentile of the *t* distribution with *n* - 1 degrees of freedom.

$s_{e_{VOC_i}}$ = the estimated standard deviation, based on the initial *n* samples, for VOC_i from Table 4.4.1.

E_{VOC_i} = the allowable error, determined as 1 percent of the limiting concentration for VOC_i from Table 4.4.1.

Non-integer results of calculations for the required sample size should be rounded up to the next integer. A minimum of 10 containers shall be sampled and analyzed in each waste stream. If there are fewer than the minimum or required number of containers in a waste stream, then each container should be sampled once. The calculated total number of required waste containers will then be randomly sampled and analyzed. The CCP may count waste container samples from the preliminary mean and variance estimates as part of the total number of calculated required samples if and only if:

- There is documented evidence that the waste containers for the preliminary estimate samples were selected in the same random manner as is chosen for the required samples.

- There is documented evidence that the method of sample collection in the preliminary estimate samples was identical to the methodology to be employed for the required samples.

- There is documented evidence that the method of sample analysis in the preliminary estimate samples, was identical to the analytical methodology employed for the required samples.

- There is documented evidence that the validation of the sample analyses, in the preliminary estimate samples, was comparable to the validation employed for the required samples. In addition, the validated sample results indicate that all sample results were valid according to the analytical methodology.

The mean and standard deviation calculated after sampling *n* containers are used to calculate a UCL_{90} for each of the headspace gas VOCs using the methodology presented in Section C2-2b.

If only a portion of a waste stream is accessible for sampling (e.g., the remainder of the waste stream will be recovered from storage at the generator/storage site or only a portion of the waste stream has been repackaged or treated), the calculated number of samples will be randomly selected from the accessible portion of the waste stream. A minimum of 10 randomly selected samples will be obtained and analyzed from the accessible portion of the waste stream. The DOE may approve the WSPF and authorize the CCP to begin shipping the waste stream to WIPP once the analytical data for the randomly selected samples from the accessible portion of the waste stream has been obtained.

CCP will also randomly select the calculated number of sample locations from the waste stream as a whole. A minimum of 10 randomly selected sample locations will be selected from the waste stream as a whole. As those randomly selected locations (e.g., buried or newly generated waste containers) become accessible for sampling, samples will be obtained and analyzed.

For those waste streams where the population of the waste stream as a whole is indeterminate (e.g., continually generated waste streams from ongoing processes) or to facilitate waste processing, the CCP may divide the waste stream into lots. In this case, a minimum of 10 randomly selected containers will be selected from within each subsequent lot. As those randomly selected containers (e.g., buried or newly generated waste containers) become accessible, samples will be obtained and analyzed. As with sampling from the waste stream as a whole, the CCP may ship waste from the lot being generated or retrieved prior to completing sampling and analysis of the lot.

The CCP will use the data to update the UCL_{90} values for the waste stream as described in Section C2-2b and assign EPA Hazardous Waste Numbers as appropriate. The CCP will submit the analytical data from subsequent sampling to the Permittees for inclusion in the WIPP facility operating record upon completion of project level data validation in Section C3-10b. If changes to EPA Hazardous Waste Numbers are required as a result of subsequent sampling, the CCP will notify the Permittees, and shipments of the affected waste stream shall be suspended until the DOE approves a revised WSPF for the affected waste stream.

Upon collection and analysis of the preliminary samples, or at any time after the preliminary samples have been analyzed, the CCP may presumptively assign hazardous waste numbers to a waste stream even if the calculated number of required samples is greater than the preliminary number of samples collected. For waste streams with calculated upper confidence limits below the regulatory threshold, the site shall collect the required number of samples if the site intends to establish that the constituent is below the regulatory threshold.

C2-2 Upper Confidence Limits for Statistical Sampling

C2-2a Upper Confidence Limits for Statistical Solid Sampling

Upon completion of the required sampling, final mean and variance estimates and the UCL_{90} for the mean concentration for each contaminant is determined. The observed sample n^* is checked against the preliminary estimate for the number of samples (n) to be collected before proceeding, where n^* is:

$$n^* = \frac{t^2_{\alpha,n_0-1} s^2}{\left(RT - \bar{x}\right)^2} \qquad \text{(C2-5)}$$

And the right-side terms in equation are as defined in Section C2-1a.

Where:

n_0 = the initial number of samples used to calculate the preliminary sample estimate.

$t_{\alpha, n_o -1}$ = the 90th percentile for the t distribution with n_0-1 degrees of freedom.

RT = the Regulatory Threshold of the contaminant (limit for toxicity characteristic wastes, PRQL for listed wastes).

$\bar{x}$ = the calculated sample mean
s = the calculated sample standard deviation.

If the observed sample n^* estimate results in greater than 20 percent or more required samples than were originally calculated, then the additional samples required to fulfill the revised sample estimate are collected and analyzed. The determination of n^* is an iterative process that follows the collection and analysis of any additional samples and continues until the difference between n^* and the previous sample size determination is less than 20 percent.

Once sufficient sampling and analysis has occurred, the waste characterization proceeds. The assessment is made at the 90 percent confidence level. The UCL_{90} for the mean concentration of each contaminant is calculated using the following equation from OSWER 9285.6-10 (EPA 2002):

$$UCL_{90} = \overline{x} + \frac{t_{\alpha,n-1}s}{\sqrt{n}} \qquad \text{(C2-6)}$$

Where:

$\overline{x}$ = the calculated sample mean
n = the number of samples used to calculate the sample estimate.
$t_{\alpha,n-1}$ = the 90th percentile for the t distribution with n-1 degrees of freedom.
s = the calculated sample standard deviation.

If the UCL_{90} for the mean concentration is less than the regulatory threshold limit, the waste stream is not required to be assigned the hazardous waste number for the associated contaminant. If the UCL_{90} is greater than or equal to the regulatory threshold limit, the hazardous waste number for the associated contaminant is assigned to the waste stream. UCL_{90} calculations are performed and documented using CCP-TP-003, *CCP Data Analysis for S3000, S4000, and S5000 Characterization*.

C2-2b Upper Confidence Limits for Statistical Headspace Gas Sampling

A UCL_{90} concentration for each of the headspace gas VOCs is calculated from the sample data collected. The observed sample n^* is checked against the estimate for the number of samples (n) to be collected before proceeding, where n* is:

$$n^* = \frac{t^2_{\alpha,n-1}s^2}{E^2} \qquad \text{(C2-7)}$$

where E is as defined in Section C2-1b and the remaining right-side terms in the equation are defined in Section C2-1a. When composite headspace gas sample results are used, the mean, standard deviation and t-statistic are based on the number of composite samples analyzed, rather than the number of drums sampled.

If the observed sample n^* estimate results in greater than 20 percent or more required samples than were originally calculated, then the additional samples required to fulfill the revised sample estimate are collected and analyzed. The determination of n^* is an iterative process that follows the collection and analysis of any additional samples and

continues until the difference between n^* and the previous sample determination is less than 20 percent. The UCL_{90} is then calculated using equation C2-6. In this case, UCL_{90} is the 90 percent upper confidence limit for the mean VOC concentration, $\bar{x}$ is the calculated sample mean VOC concentration, and s is the calculated sample standard deviation. The value of $t(\alpha, n-1)$ is found in Table 9-2 of Chapter 9 of SW-846.

C3 QUALITY ASSURANCE OBJECTIVES AND DATA VALIDATION TECHNIQUES FOR WASTE CHARACTERIZATION SAMPLING AND ANALYTICAL METHODS

C3-1 Validation Methods

The CCP performs validation of qualitative and quantitative data so that characterization data are of known and acceptable quality. Validation methods quantitatively assess precision, accuracy, MDLs (as appropriate), and completeness for analytical data (headspace gas VOCs, and total VOCs, SVOCs, and metals). Quantitative data validation is performed according to the methods outlined in this section. Data are assessed for compliance with the QAOs in Sections C3-2 through C3-9.

Comparability and representativeness parameters are assessed qualitatively. The qualitative data or descriptive information generated by radiography and VE are not amenable to statistical data quality analysis. However, radiography and VE are complementary techniques yielding similar data for determining the waste matrix code. The waste matrix code is determined to ensure that the container is properly included in the appropriate waste stream.

Data validation is used to assess the quality of waste characterization data collected based on project precision, accuracy, completeness, comparability, and representativeness objectives. These objectives are described below:

Precision

Precision is a measure of the mutual agreement among multiple measurements of a single analyte, either by the same or different methods. Precision is either expressed as the RPD for duplicate measurements or as the percent relative standard deviation (%RSD) for three or more replicate measurements. For duplicate measurements, the precision expressed as the RPD is calculated as follows:

$$RPD = \frac{C_1 - C_2}{\left(\frac{C_1 + C_2}{2}\right)} \times 100 \qquad \text{(C3-1)}$$

where C_1 and C_2 are the two values obtained by analyzing duplicate samples. C_1 is the larger of the two observed values.

For three or more replicate measurements, the precision expressed as the %RSD is calculated as follows:

$$\%RSD = \frac{s}{y_{mean}} \times 100 \qquad \text{(C3-2)}$$

where s is the standard deviation and y_{mean} is the mean of the replicate sample analysis.

The standard deviation, s, is calculated as follows:

$$s = \sqrt{\frac{\sum_{i=1}^{n} (y_i - y_{mean})^2}{n-1}} \qquad \text{(C3-3)}$$

where y_i is the measured value of the ith replicate sample analysis measurement and n is the number of replicate analysis.

Another aspect of precision is associated with analytical equipment calibration. In these instances, the percent difference (%D) between multiple measurements of an equipment calibration standard is calculated as follows:

$$\%D = \frac{|C_1 - C_2|}{C_1} \times 100 \qquad \text{(C3-4)}$$

where C_1 is the initial measurement and C_2 is the second or other additional measurement.

Accuracy

Accuracy is the degree of agreement between a measured analyte concentration (or the average of replicate measurements of a single analyte concentration) and the true or known concentration. Accuracy is determined as the percent recovery (%R).
For situations in which a standard reference material is used, %R is calculated as follows:

$$\%\ R = \frac{C_m}{C_{srm}} \times 100 \qquad \text{(C3-5)}$$

where C_m is the measured concentration value obtained by analyzing the sample and C_{srm} is the "true" or certified concentration of the analyte in the sample. For measurements where matrix spikes are used, the %R is calculated as follows:

$$\%\ R = \frac{S - U}{C_{sc}} \times 100 \qquad \text{(C3-6)}$$

where S is the measured concentration in the spiked aliquot, U is the measured concentration in the unspiked aliquot, and C_{sc} is the actual concentration of the spike added.

Method Detection Limit

The MDL is the minimum concentration of an analyte that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero. The MDL for quantitative measurements is defined as follows:

$$MDL = t_{(n-1,1-\alpha=.99)} \times s \quad \text{(C3-7)}$$

where $t_{(n-1,\ 1-\alpha=.99)}$ is the t-distribution value corresponding to a 99 percent confidence level with n-1 degrees of freedom, n is the number of observations, and s is the standard deviation of replicate measurements.

For headspace gas analysis using Fourier Transform Infrared Spectroscopy (FTIRS), MDL is defined as follows:

$$MDL = 3s \quad \text{(C3-8)}$$

where s is the standard deviation. Initially, a minimum of seven samples spiked at a level of three to five times the estimated MDL and analyzed on non-consecutive days must be used to establish the MDLs. MDLs should be updated using the results of the laboratory control sample or on-line control samples. CCP does not currently use FTIRS.

Completeness

Completeness is a measure of the amount of valid data obtained from the overall measurement system compared to the amount of data collected and submitted for analysis. Completeness is expressed as the number of samples analyzed with valid results as a percent of the total number of samples submitted for analysis. Completeness, expressed as the percent complete (%C), is calculated as follows:

$$\%\,C = \frac{V}{n} \times 100 \quad \text{(C3-9)}$$

where V is the number of valid sampling or analytical results obtained and n is the number of samples submitted for analysis.

Comparability

Comparability is the degree to which one data set can be compared to another. Comparability of data generated at different sites is ensured through the use of standardized, approved testing, sampling, preservation, and analytical techniques and equipment and by meeting the QAOs specified in Sections C3-2 through C3-9.

The comparability of waste characterization data is ensured by using EPA data usability criteria (EPA 1994b and 1994c). The criteria include the following information:

- Definition or reference of criteria used to define and assign data qualifier flags based on QAO results;
- Criteria for assessing the usability of data impacted by matrix interferences;
- Criteria for assessing usability of data based on positive and negative bias indicated by QC data, and data qualifier flags;
- Criteria for assessing the usability of data due to severe matrix effects, misidentification of compounds, gross exceedance of holding times, and failure to meet calibration or tuning criteria;
- Criteria for assessing usability of data that do not meet MDL requirements.

Representativeness

Representativeness is the degree to which sample data represent a characteristic of a population, parameter variations at a sampling point, or an environmental condition. Representativeness is a qualitative parameter that concerns the proper design of the sampling program.

Representativeness of waste containers from waste streams subjected to headspace gas homogeneous solids and soil/gravel sampling and analysis is validated through documentation that a true random sample from an adequate population was identified and collected consistent with Section C2-1. Since representativeness is a qualitative characteristic that expresses the degree to which a sample represents the population being studied, the random selection of waste containers ensures representativeness on a Program level. The SPM documents that the selected waste containers from within a waste stream were randomly selected. Sampling personnel verify that proper procedures are followed to ensure that samples are representative of the waste contained in a particular waste container or waste stream.

Identification of Tentatively Identified Compounds (T2)

In accordance with the convention of SW-846, identification of compounds detected by GC/MS that are not on the target analyte list are reported. Both composited and individual container headspace gas, VOC (total/TCLP), and SVOC (total/TCLP) analyses are subject to TIC reporting. The process for adding TICs to the target analyte list is described in CCP-TP-002, *CCP Reconciliation of DQOs and Reporting Characterization Data*.

TICs for GC/MS methods are identified in accordance with the following SW-846 criteria:

- Relative intensities of major ions in the reference spectrum (ions greater than 10 percent of the most abundant ion) should be present in the sample spectrum.
- The relative intensities of the major ions should agree within ± 20 percent.
- Molecular ions present in the reference spectrum should be present in the sample spectrum.
- Ions present in the sample spectrum but not in the reference spectrum should be reviewed for possible background contamination or presence of coeluting compounds.
- Ions present in the reference spectrum but not in the sample spectrum should be reviewed for possible subtraction from the sample spectrum because of background contamination or coeluting peaks.
- The reference spectra used for identifying TICs should include, at a minimum, all of the available spectra for compounds that appear in the 20.4.1.200 NMAC (incorporating 40 CFR §261) Appendix VIII list. The reference spectra may be limited to VOCs when analyzing headspace gas samples.

TICs are reported as part of the analytical batch data reports for GC/MS Methods in accordance with the following minimum criteria:

- A TIC in an individual container headspace gas or solids sample is reported in the analytical batch data report if the TIC meets the SW-846 identification criteria listed above and is present with a minimum of 10% of the area of the nearest internal standard.

- A TIC in a composited headspace gas sample that contains two to five individual container samples is reported in the analytical batch data report if the TIC meets the SW-846 identification criteria listed above and is present with a minimum of 2% of the area of the nearest internal standard.

- A TIC in a composited headspace gas sample that contains six to 10 individual container samples is reported in the analytical batch data report if the TIC meets the SW-846 identification criteria listed above and is present with a minimum of 1% of the area of the nearest internal standard.

- A TIC in a composited headspace gas sample that contains 11 to 20 individual container samples is reported in the analytical batch data report if the TIC meets the SW-846 identification criteria listed above and is present with a minimum of 0.5% of the area of the nearest internal standard.

TICs meeting the SW-846 criteria, are reported in 25 percent of all waste sample containers from a given waste stream, and listed in 20.4.1.200 NMAC (incorporating 40 CFR §261) Appendix VIII, are compared with AK data, to determine if the TIC is a listed constituent in the waste stream (T2, T5). TICs identified through headspace gas analyses that are on the Appendix VIII list and meet the 25 percent reporting criteria for a waste stream are added to the headspace gas waste stream target analyte list, regardless of the Hazardous Waste Codes associated with the waste stream.

TICs reported from the totals VOC or SVOC analyses are excluded from the target analyte list for a waste stream if the TIC is a constituent in an F-listed waste whose presence is attributable to waste packaging materials or radiolytic degradation described in AK documentation. If a listed waste constituent TIC cannot be attributed to waste packaging materials, radiolysis, or other origins, the constituent is added to the target analyte list and new hazardous waste numbers are assigned, if appropriate. TICs subject to inclusion on the target analyte list that are also toxicity characteristic parameters are added to the target analyte list regardless of origin because the hazardous waste designation for these numbers is not based on source. However, toxicity characteristic parameter and nontoxic F003 constituent concentration is taken into account when assessing whether to add a hazardous waste number. If a target analyte list for a waste stream is expanded due to the presence of TICs, all subsequent

samples collected from that waste stream are analyzed for constituents on the expanded list.

C3-2 Headspace Gas Sampling (T7 and T106)

Quality Assurance Objectives

The precision and accuracy of the container headspace gas sampling operations are assessed by analyzing field QC headspace gas samples. These samples include equipment blanks, field reference standards, field blanks, and field duplicates. If the QAOs described below are not met, a nonconformance report is prepared, submitted, and resolved (Section C3-13).

Precision

The precision of the headspace gas sampling and analysis operation is assessed by sequential collection of field duplicates for manifold sampling operations or simultaneous collection of field duplicates for direct canister sampling operations for VOCs determination. Corrective actions are taken if the RPD exceeds 25 percent for any analyte found greater than the PRQL in both of the duplicate samples.

Accuracy

A field reference standard is collected using headspace gas sampling equipment to assess the accuracy of the headspace gas sampling operation at a frequency of one field reference standard for every 20 containers sampled or per sampling batch. Corrective action is taken if the %R of the field-reference standard is less than 70 or greater than 130.

Field blanks are also collected at a frequency of 1 field blank for every 20 containers or sampling batch sampled to assess possible contamination in the headspace gas sampling method. Equipment blanks are also collected at a frequency of 1 equipment blank for each equipment cleaning batch to assess possible contamination in the equipment cleaning method. Corrective actions are taken if the blank exceeds three times the MDLs listed for any of the compounds listed in Table C3-2.

Completeness

Sampling completeness is expressed as the number of valid samples collected as a percent of the total number of samples collected for each waste stream. A valid sample is defined as a sample collected in accordance with approved sampling methods and the container was properly prepared for sampling (e.g., the polyliner was vented to the container headspace). The CCP achieves a minimum of 90 percent completeness. The amount and type of data that may be lost during the headspace gas sampling operation cannot be predicted in advance.

The CCP SPM evaluates the importance of any lost or contaminated headspace gas samples and take corrective action as appropriate.

Comparability

Consistent use and application of uniform procedures and equipment, as specified in Section C1 and application of data usability criteria (EPA 1994b and 1994c), ensures that headspace gas sampling operations are comparable when sampling headspace at the different sampling facilities. The CCP will take corrective actions if uniform procedures, equipment, or operations are not followed without approved and justified deviations. In addition, CCP laboratories analyzing samples participate in the PDP.

Representativeness

Specific headspace gas sampling steps to ensure samples are representative include:

- Selection of the correct DAC Scenario and waste packaging configuration and meeting DAC equilibrium times.
- A sample canister cleaning and leak check after assembly.
- Sampling equipment cleaning or disposal after use.
- Sampling equipment leak check after sample collection.
- Use of sample canisters with passivated internal surfaces.
- Use of low-internal-volume sampling equipment.
- Collection of samples with a low-sample volume to available headspace volume ratio (less than 10 percent of the headspace when the headspace can be determined).
- Careful and documented pressure regulation of all activities specified in Section C1-1.
- Performance audits.
- Collection of equipment blanks, field reference standard, field blanks, and field duplicates at the specified frequencies.
- Manifold pressure sensors and temperature sensors calibrated before initial use and annually using NIST, or equivalent standards.

- OVA calibrated daily, prior to first use, or as necessary according to manufacturers specifications.

Failure to perform the checks at the prescribed frequencies would result in corrective actions.

C3-3 Sampling of Homogeneous Solids and Soils/Gravel

Quality Assurance Objectives

For waste containers of homogeneous solids and soil/gravel, the CCP will collect samples randomly in both the horizontal and vertical planes of each container to ensure that sampling is conducted in a representative manner on a waste stream basis. For waste containers that contain homogeneous solids and soil/gravel in smaller containers (e.g., 1 gallon [4.0 L] poly bottles) within the waste container, the CCP will randomly select and sample one smaller container from each container.

Precision

The CCP will determine sampling precision by collecting and sampling field duplicates (e.g., co-located cores or co-located samples) once per sampling batch or once per week during sampling operations, whichever is more frequent. A sampling batch is a suite of homogeneous solids and soil/gravel samples collected consecutively using the same sampling equipment within a specific time period. A sampling batch can be up to 20 samples (excluding field QC samples), all of which must be collected within 14 days of the first sample in the batch. The CCP SPM will calculate and report the RPD between co-located core/samples.

The CCP will use the recommended method (F-test) for establishing acceptance criteria for co-located cores and co-located samples. After 25 to 30 pairs of co-located cores or samples are collected, control charts of the RPD will be developed for each constituent and for each waste matrix or waste type (e.g., pyrochemical salts or organic sludges). The limits for the control chart will be three standard deviations above or below the average RPD. Once constructed, RPDs for additional co-located pairs will be compared with the control charts to determine whether or not the co-located cores are acceptable. Periodically, the CCP will update the control charts using all available data (CCP-TP-003).

The CCP will calculate the variance for co-located cores and samples by pooling the variances computed for each pair of duplicate results. To achieve independence, the variance for the waste stream will be computed excluding any data from containers with co-located cores. All data will be transformed to normality prior to computing variances and performing the test. The test hypothesis will be evaluated using the F distribution and the method for testing the difference in variances.

Accuracy

The CCP does not determine sampling accuracy through the use of standard reference materials. Because waste containers containing homogeneous solids and soil/gravel with known quantities of analytes are not available, sampling accuracy cannot be determined. However, the CCP will use the sampling methods and requirements described in order to minimize sample degradation and maximize sampling accuracy.

Sampling accuracy as a function of sampling cross-contamination will be measured. Equipment blanks will be collected at a frequency of once per equipment cleaning batch. Corrective actions will be taken if the blank exceeds three times the MDLs (PRDLs for metals) listed for any of the compounds or analytes listed in Tables C3-4, C3-6, and C3-8. Equipment blanks will be collected from the following equipment types:

- Fully assembled coring tools
- Liners cleaned separately from coring tools
- Miscellaneous sampling equipment that is reused (bowls, spoons, chisels)

Completeness

The CCP will ensure sampling completeness by expressing the number of valid samples collected as a percent of the total number of samples collected for each waste stream. A valid sample is any sample that is collected from a randomly selected container using randomly selected horizontal and vertical planes in accordance with the approved sampling methods. The sampling facility will achieve a minimum 90 percent completeness.

Comparability

The CCP consistently uses uniform procedures, sampling equipment, and measurement units, and applies data usability criteria (EPA 1994b and 1994c) to ensure that sampling operations are comparable. The CCP participates in the PDP.

Representativeness

The CCP will ensure the representativeness of samples for both waste containers and smaller containers through the following steps:

- Coring tools and sampling equipment will be cleaned prior to sampling.

- The entire depth of the waste, minus a CCP-defined approved safety factor will be cored, and the core collected will have a length greater than or equal to 50 percent of the depth of the waste. The CCP will calculate this core recovery as follows:

$$\text{Core recovery (percent)} = \frac{y}{x} \times 100 \qquad \text{(C3-10)}$$

where:

x = the depth of the waste in the container
y = the length of the core collected from the waste.

- Coring operations and tool selection should be designed to minimize alteration of the in-place waste characteristics. The CCP will verify that minimal waste disturbance occurs by visually examining the core and describing the observation (e.g., undisturbed, cracked, or pulverized) in the field logbook.

  If core recovery is less than 50 percent of the depth of the waste, a second coring location will be randomly selected and the core with the best core recovery will be used for sample collection.

- One randomly selected container within a container will be chosen if the container contains individual waste containers.

C3-4 Nondestructive Examination Methods

Quality Assurance Objectives

The QAOs for nondestructive examination (NDE) are detailed in this section. NDE can be either radiography or VE. If the QAOs in this section are not met, then corrective actions are taken. NDE does not have a specific MDL because it is primarily a qualitative determination. The objective of NDE for the program is to determine the physical waste form, the absence of prohibited items, and additional waste characterization techniques that may be used on the Summary Category Group (i.e., S3000, S4000, and S5000). CCP describes all of the activities required to achieve these objectives in this QAPjP and the operating procedures listed in Section C1.

C3-4a Radiography (T53, T508)

Data to meet the QAOs for radiography are obtained from a video and audio recorded scan provided by trained radiography operators at the Host site. Results are also recorded on a radiography data form. The precision, accuracy, completeness, and comparability objectives for radiography data follow.

Precision

Precision is maintained by reconciling any discrepancies between two radiography operators with regard to identification of the waste matrix code, liquids in excess of TSDF-WAC limits, and compressed gases through independent replicate scans and independent observations. The precision of radiography is also verified prior to use by tuning precisely enough to demonstrate compliance with QAOs listed in Section C-4a through viewing an image test pattern.

Accuracy

Accuracy is obtained by using a target to tune the image for maximum sharpness and by requiring operators to successfully identify 100 percent of the items required to meet the DQOs for radiography specified in Permit Attachment C. Section C-4a(1) in a training container during their initial qualification and subsequent requalification.

Completeness

To ensure completeness, video and audio media recording of the radiography of the radiography examination and a validated radiography data form are obtained for 100 percent of retrievably stored waste containers that are examined by radiography. All video and audio media recordings and radiography data forms are subject to validation as indicated in Section C3-10.

Comparability

The comparability of radiography data from different operators is enhanced by using standardized radiography procedures and operator qualifications.

C3-4b Visual Examination (T6, T113, T163, T500)

Results must be recorded on a VE data form. The precision, accuracy, completeness, and comparability objectives for VE data are presented below.

Precision

Precision is maintained by reconciling any discrepancies between the operator and the independent technical reviewer with regard to identification of waste matrix code, liquids in excess of TSDF-WAC limits, and compressed gases.

Accuracy

Accuracy is maintained by requiring operators to pass a comprehensive examination and demonstrate satisfactory performance in the presence of the VE expert during their initial qualification. VE operators shall be requalified every two years.

Completeness

A validated VE data form will be obtained for 100 percent of the waste containers subject to VE.

Comparability

The comparability of VE data from different operators shall be enhanced by using standardized VE procedures and operator qualifications.

C3-5 Gas Volatile Organic Compound Analysis (T32, T143, T173, T175)

Quality Assurance Objectives

The development of DQOs specifically for this program has resulted in the QAOs listed in Table C3-2. The specified QAOs represent the required quality of data necessary to draw valid conclusions regarding program activities. QAPjP-required limits, such as the PRQL associated with VOC analysis, are specified to ensure that the analytical data collected satisfy the requirements of all data users. A summary of the Quality Control Samples and the associated acceptance criteria is included in Table C3-3, Summary of Laboratory Quality Control Samples and Frequencies for Gas Volatile Organic Compound Analysis. The key data quality indicators for headspace gas sampling and analysis are defined below.

Precision

The CCP assesses precision by analyzing laboratory duplicates and replicate analyses of laboratory-control samples, and PDP blind audit samples. Results are compared to the criteria listed in Table C3-2. The QC measurements are used to demonstrate acceptable method performance. The CCP takes corrective action if the QAOs are not met.

Accuracy

The CCP assesses accuracy as %R for laboratory operations by analyzing PDP blind-audit samples and laboratory control samples. Results are compared to the QAO's listed in Table C3-2. These QC measurements are used to demonstrate acceptable method performance and to trigger corrective action when controls are exceeded.

Calibration

GC/MS tunes, initial calibration, and continuing calibration are performed by the CCP and evaluated using the procedures and criteria specified in Table C3-3. Acceptable performance is demonstrated before sample analysis begins. Corrective action is taken if the control limits are exceeded.

Method Detection Limit

The CCP determines MDLs in accordance with the headspace gas procedures, which comply with the method described in Section C3-1. MDLs are expressed in nanograms (ng) and are less than or equal to those listed in Table C3-2.

Program Required Quantitation Limits

The CCP demonstrates the capability to quantify analytes at or below the PRQL listed in Table C3-2 by setting the concentration of at least one calibration standard below the PRQL as found in the headspace gas procedures.

Completeness

The CCP determines laboratory completeness as the number of samples analyzed with valid results as a percent of the total number of samples submitted for analysis. A composited sample is treated as one sample for the purposes of completeness because only one sample is run through the analytical instrument. Valid results are defined as those that meet the data usability criteria based on application of the QC Criteria specified in Tables C3-2 and C3-3; and meet the detection limit, calibration representativeness, and compatibility criteria within this section.

The CCP meets the criterion of 90 percent for completeness.

Comparability

For VOC analysis, data generated through analysis of samples from different sites are comparable. CCP achieves comparability by using standardized methods, traceable standards, and successful participation in the PDP.

Representativeness

Representatives for VOC analysis is achieved by collecting sufficient numbers of samples using clean sampling equipment that does not introduce sample bias. Samples must be collected as described in Section C1.

C3-6 Total Volatile Organic Compound Analysis (T184 and T186)

Quality Assurance Objectives

The QAOs for total VOC analysis are listed in Table C3-4, Volatile Organic Compounds Target Analyte List and Quality Assurance Objectives. These QAOs represent the required quality of data necessary to draw valid conclusions regarding program objectives. WAP-required limits, such as the PRQL associated with VOC analysis, will be specified to ensure that the analytical data collected satisfy the requirements of all data users. A summary of quality control samples and associated acceptance criteria for this analysis are included in Table C3-5, Summary of Laboratory Quality Control Samples and Frequencies for Volatile Organic Compounds Analysis. The key data-quality indicators for laboratory measurements are defined below.

Precision

The CCP will assess precision by analyzing laboratory duplicates or matrix spike duplicates, replicate analyses of laboratory control samples, and PDP blind-audit samples. Results from measurements on these samples will be compared to the criteria listed in Table C3-4. These QC measurements demonstrate acceptable method performance and trigger corrective action if control limits are exceeded.

Accuracy

The CCP will analyze laboratory control samples, matrix spikes, surrogate compounds, and PDP blind-audit samples will be used to assess accuracy as %R for the laboratory operations. Results from these measurements for matrix spike samples will be compared to the %R criteria listed in Table C3-4. Results for surrogates and internal standards will be evaluated as specified in the SW-846 method (EPA 1996) or Table C3-5. These QC measurements demonstrate acceptable method performance and trigger corrective action when control limits are exceeded.

Laboratory blanks will be assessed and evaluated as specified in Table C3-5 to determine possible laboratory contamination. The QC measurements will demonstrate acceptable levels of laboratory contamination and trigger corrective action if control limits are exceeded.

Calibration

GC/MS tunes, initial calibrations, and continuing calibrations will be performed and evaluated using the procedures and criteria specified in Table C3-5 and the SW-846 method (EPA 1996). These criteria demonstrate acceptable calibration and trigger correction action if control limits are exceeded.

Method Detection Limit

MDLs will be expressed in milligrams per kilogram (mg/kg) for total VOCs and will be less than or equal to those listed in Table C3-4. The detailed procedures for MDL determination are included in the CCP total VOC analysis procedures.

Program Required Quantitation Limit

The CCP will quantitate analytes in samples at or below the PRQLs given in Table C3-4. The concentration of at least one calibration standard will be set below the PRQL. The process for PRQL demonstration will be incorporated in the CCP total VOC analysis procedures.

Completeness

The CCP will express laboratory completeness as the number of samples analyzed with valid results as a percent of the total number of samples submitted for analysis. Valid results will be defined as results that meet the data usability criteria based on application of criteria specified in Tables C3-4 and C3-5, and meet the calibration, detection limit, representativeness, and comparability criteria within this section. The CCP is required to meet the completeness criteria specified in Table C3-4.

Comparability

The CCP will achieve comparability by using standardized SW-846 sample preparation and methods (EPA 1996) that meet the QAO requirements in Tables C3-4 and C3-5, using traceable standards, and successfully participating in the DOE-CBFO PDP. The CCP will use the most recent version of SW-846 (EPA 1996). Any changes to SW-846 methodology that result in the elimination of sample preparation or analytical methods in use by the CCP will result in a corrective action to address the comparability of data before and after the SW-846 modification.

Representativeness

The CCP will accomplish representativeness for total VOC analysis by collecting unbiased samples in accordance with Section C1.

C3-7 Total Semivolatile Organic Compound Analysis (T185 and T187)

Quality Assurance Objectives

The QAOs for total SVOC analyses are listed in Table C3-6, Semi-Volatile Organic Compound Target Analyte List and Quality Assurance Objectives. These QAOs represent the required quality of data necessary to draw valid conclusions regarding program objectives. QAPjP-required limits, such as the PRQLs, are specified to ensure that the analytical data collected satisfy the requirements of all data users. A summary of quality control samples and associated acceptance criteria for this analysis are included in Table C3-7, Summary of Laboratory Quality Control Samples and Frequencies for Semi-volatile Organic Compounds. Key data-quality indicators for CCP laboratory measurements are defined below.

Precision

The CCP will assess precision by analyzing laboratory duplicates or matrix spike duplicates, replicate analyses of laboratory control samples, and PDP blind-audit samples. Results from measurements on these samples will be compared to the criteria listed in Table C3-6. The QC measurements will demonstrate acceptable method performance and corrective action will be initiated if control limits are exceeded.

Accuracy

The CCP will analyze laboratory control samples, matrix spikes, surrogate compounds, and PDP blind-audit samples will be used to assess accuracy as %R for the laboratory operations. Results from these measurements for matrix spikes samples will be compared to the %R criteria listed in Table C3-6. Results for surrogates and internal standards will be evaluated as specified in the SW-846 method (EPA 1996) or Table C3-7. The QC measurements will demonstrate acceptable method performance and corrective action will be initiated if control limits are exceeded.

Laboratory blanks shall be assessed to determine possible laboratory contamination and are evaluated as specified in Table C3-7. The CCP will use these QC measurements to demonstrate acceptable levels of laboratory contamination and to trigger corrective action when control limits are exceeded.

Calibration

GC/MS tunes, initial calibrations, and continuing calibrations will be performed and evaluated using the procedures and criteria specified in Table C3-7 and the SW-846 method (EPA 1996). The QC criteria will be used to demonstrate acceptable calibration and corrective action is initiated if control limits are exceeded.

Method Detection Limit

MDLs will be expressed in mg/kg for total SVOCs and will be less than or equal to those listed in Table C3-6. The detailed procedures for MDL determination will be included in the CCP SOPs.

Program Required Quantitation Limit

The CCP will quantitate analytes in samples at or below the PRQLs given in Table C3-6. The concentration of at least one calibration standard will be set below the PRQL. The process for PRQL demonstration will be included in laboratory SOPs.

Completeness

The CCP will express laboratory completeness as the number of samples analyzed with valid results as a percent of the total number of samples submitted for analysis. Valid results will be defined as results that meet the data usability criteria based on application of criteria specified in Tables C3-6 and C3-7, and meet the calibration, detection limit, representativeness, and comparability criteria within this section. The CCP will be required to meet the level of completeness specified in Table C3-6, Semi-Volatile Organic Compound Target Analyte List and Quality Assurance Objectives.

Comparability

The CCP will achieve comparability by using standardized SW-846 sample preparation and methods (EPA 1996) that meet the QAO requirements in Tables C3-6 and C3-7, using traceable standards, and successfully participating in the DOE-CBFO PDP. The CCP will use the most recent version of SW-846 if the methods are consistent with QAO requirements. Any changes to SW-846 methodology that result in the elimination of sample preparation or analytical methods in use by the CCP will result in a corrective action to address the comparability of data before and after the SW-846 modification.

Representativeness

Representativeness for total SVOC analysis will be accomplished by collecting unbiased samples as described in Section C1.

C3-8 Total Metal Analysis (T181, T182, and T183)

Quality Assurance Objectives

The QAOs for total metals analysis are listed in Table C3-8. The QAOs represent the required quality of data necessary to draw valid conclusions regarding program

objectives. QAPjP-required limits, such as the PRQLs associated with total metals analysis, are specified to ensure that the analytical data collected satisfy the requirements of all data users. A summary of QC samples and the associated acceptance criteria for this analysis are included in Table C3-9, Summary of Laboratory Quality Control Samples and Frequencies for Metals Analysis. Key data-quality indicators for CCP laboratory measurements are defined below.

Precision

The CCP will assess precision by analyzing laboratory duplicates or laboratory matrix spike duplicates, replicate analyses of laboratory-control samples, and PDP blind-audit samples. Results from measurements on these samples will be compared to the criteria listed in Table C3-8. The QC measurements will demonstrate acceptable method performance and corrective action will be initiated if control limits are exceeded.

Accuracy

The CCP will analyze laboratory matrix spikes, PDP blind-audit samples, serial dilutions, interference check samples, and laboratory control samples to assess accuracy. Results from these measurements will be compared to the criteria listed in Tables C3-8 and C3-9. The QC measurements will demonstrate acceptable method performance and corrective action will be initiated if control limits are exceeded.

Laboratory blanks and calibration blanks will be assessed and evaluated as specified in Table C3-9 to determine possible laboratory contamination. The QC measurements will demonstrate acceptable levels of laboratory contamination and corrective action will be initiated if control limits are exceeded.

Calibration

Mass Tunes (for Inductively Coupled Plasma [ICP] MS only), standards calibration, initial calibration verifications, and continuing calibrations will be performed and evaluated using the procedures and criteria specified in Table C3-9 and the SW-846 method (EPA 1996). The criteria will demonstrate acceptable calibration and corrective action will be initiated if control limits are exceeded.

Program Required Detection Limits

PRDLs, expressed in units of micrograms per liter (μg/L), will be the maximum values for instrument detection limits (IDL) permissible for program support under the WAP. IDLs will be less than or equal to the PRDL for the method used to quantitate a specific analyte. Any method listed in Table C-5 may be used if the IDL meets this criteria. For high concentration samples, an exception to the above requirements may be made in cases where the sample concentration exceeds five times the IDL of the instrument

being used. In this case, the CCP may report the analyte concentration even though the IDL may exceed the PRDL. IDLs will be determined semiannually (i.e., every six months). Details for IDL determination will be included in the CCP total metals procedures.

Program Required Quantitation Limit

The CCP will quantitate analytes in samples at or below the PRQLs in units of mg/kg wet weight given in Table C3-8. The PRDLs will be set an order of magnitude less than the PRQLs (assuming 100 percent solid sample diluted by a factor of 100 during preparation). The concentration of at least one QC or calibration standard will be set at or below the solution concentration equivalent of the PRQL. Details for calibration will be found in the CCP total metals analysis procedures.

Completeness

The CCP will express laboratory completeness as the number of samples analyzed with valid results as a percent of the total number of samples submitted for analysis. Valid results will be defined as results that meet the data usability criteria based upon application of the QC criteria specified in Tables C3-8 and C3-9, and meet the detection limit, calibration, representativeness, and comparability criteria within this Section. The CCP will be required to meet the level of completeness specified in Table C3-8.

Comparability

The CCP will achieve comparability by using standardized SW-846 sample preparation and methods (EPA 1999) that meet the QAO requirements in Tables C3-8 and C3-9, using traceable standards, and by successfully participating in the DOE-CBFO PDP. The CCP may use the most recent version of SW-846 if the methods are consistent with QAO requirements. Any changes to SW-846 methodology that result in the elimination of sample preparation or analytical methods used by the CCP will result in a corrective action to address the comparability of data before and after the SW-846 modification.

Representativeness

The CCP will accomplish representativeness for total metals analysis by collecting unbiased samples as described in Section C1 and preparing the samples in the laboratory using representative and unbiased methods.

C3-9 Acceptable Knowledge (T5)

QAOs for analytical results are described in terms of precision, accuracy, completeness, comparability, and representativeness. However, AK documentation provides qualitative information that cannot be assessed according to specific data quality goals

that may be used for analytical techniques. Appropriate analytical and testing results are used to augment the characterization of wastes based on AK. To ensure that the AK process is consistently applied, the CCP complies with the following data quality requirements for AK documentation.

- Precision - Precision is the agreement among a set of replicate measurements without assumption of the knowledge of a true value. The qualitative determinations, such as compiling and assessing AK documentation, do not lend themselves to statistical evaluations of precision. However, the AK information is assessed by independent review during internal and external audits.

- Accuracy - Accuracy is the degree of agreement between an observed sample result and the true value. The percentage of waste containers which require reassignment to a new waste matrix code and/or designation of a different hazardous waste number, based on sampling and analysis data and discrepancies identified during waste confirmation is reported as a measure of AK accuracy. The CCP calculates the AK accuracy in accordance with CCP-TP-005, *CCP Acceptable Knowledge Documentation*.

- Completeness - Completeness is an assessment of the number of waste streams or number of samples collected to the number of samples determined to be useable through the data validation process. The AK record contains 100 percent of the required information (Section C4-3). The usability of the AK information is assessed for completeness during audits.

- Comparability - Data are considered comparable when one set of data can be compared to another set of data. The CCP ensures comparability by meeting the training requirements and complying with the minimum standards outlined for procedures that are used to implement the AK process. The CCP assign hazardous waste numbers in accordance with Section C4-3b and will provide the information regarding the waste being characterized to other sites that store or generate a similar waste stream.

- Representativeness - Representativeness expresses the degree to which sample data accurately and precisely represent characteristics of a population. Representativeness is a qualitative parameter that is satisfied by ensuring that the process of obtaining, evaluating, and documenting AK information is performed in accordance with the minimum standards established in Section C4. The CCP assesses and documents the limitations of the AK information used to assign hazardous waste numbers (e.g., purpose and scope of information, date of publication, type and extent to which waste parameters are addressed).

The CCP complies with the nonconformance notification and reporting requirements of Section C3-13 of this QAPjP if the results of sampling and analysis specified in this QAPjP are inconsistent with AK documentation.

In addition, performance with regard to the use of AK information is tracked by assessing the frequency of inconsistencies among information, and documenting AK inconsistencies identified through radiography, VE, headspace gas analysis, and solidified waste analyses, as appropriate. The AK process and waste stream documentation are evaluated through internal assessments by CCP QA and assessments by auditors external to the organization (i.e. the Permittees).

C3-10 Data Review, Validation, and Verification Requirements

Data review, validation, and verification are performed at the CCP data generation level in accordance with CCP data generation level characterization procedures. Data validation and verification are performed at the project level by the CCP project staff.

Data review determines whether raw data was properly collected and ensures that it was properly reduced. Data validation verifies that the reported data satisfy the WAP requirements and are accompanied by signature release. Data verification authenticates that the data are presented accurately, represent the sampling and analysis activities performed, and have been subject to the appropriate level of review. By meeting the requirements in this section, the CCP ensures that records furnish documentary evidence of quality.

The following types of BDRs (as applicable to the characterization process in use) are required for data validation and verification, and quality assurance activities:

- The Testing BDR or equivalent includes all data pertaining to radiography or VE for up to 20 waste containers without regard to waste matrix. Table C3-11 lists the information required in Testing BDRs (identified with an “X”) and other information necessary for data validation but optional for inclusion in the Testing BDR (identified with an “O”)

- The Sampling BDR or equivalent includes all sample collection data pertaining to a group of no more than 20 headspace gas or homogeneous waste samples that were collected for chemical analysis. Table C3-12, Sampling Batch Data Report Contents, lists the information required in a Sampling BDR (identified with an “X”) and other information not required in the Sampling BDR but necessary for data validation (indicated with an “O”)

- The Analytical BDR or equivalent includes analytical data from the analysis of TRU waste for up to 20 headspace gas or homogeneous samples. Analytical BDRs or equivalent that contain results for composited headspace gas samples must contain sufficient information to identify the containers that were composited for each composite sample and the sample volume that was taken from each container. Because Analytical BDRs are generated based on the number of samples analyzed, an Analytical BDR may contain results that are applicable to more than 20 containers depending on how many composite samples are part of the report, but may not exceed a total of 20 samples analyzed. Table C3-13 lists the information required in Analytical BDR (identified with an "X") and other information that is necessary for data validation, but is optional for Analytical Batch Data Reports (identified with an "O").

  Raw analytical data need not be included in Analytical BDRs, but is maintained in the CCP files and/or the site records system and is readily available for review upon request. Raw data may include analytical bench sheet and instrumentation readouts for calibration standard results, sample data, QC samples, sample preparation conditions and logs, sample run logs, and re-extraction, re-analysis, or dilution information pertaining to the individual samples. Raw data may also include calculation records and any qualitative or semi-quantitative data collected for a sample and that has been recorded on a bench sheet or in a log book.

- On-line BDRs or their equivalent contain the combined information from the Sampling BDR and Analytical BDR that is relevant to the on-line method used.

C3-10a Data Generation Level (T6, T32, T53, T106, T113, T143, T188, T500, T508)

The minimum requirements for raw data collection and management, as well as the definitions and limitations of testing, sampling, analytical, and on-line batches, are described in the data generation level procedures (See Tables C3-9, C3-10, and C3-11 for implementing procedures). The minimum requirements for raw data review include the following:

- All data are signed and dated in reproducible ink by the individual generating the data, or by use of unalterable electronic signature.

- All data are recorded clearly, legibly, and accurately in field and laboratory records (i.e., bench sheets and logbooks [Q11]) as applicable, and include applicable sample identification numbers (for sampling and analytical laboratories).

- All changes to original data are lined out, initialed, and dated by the individual making the change. A justification for changing the original data may also be included. Original data are not obliterated or otherwise disfigured so as to be unreadable. Data changes are made only by the individual who originally collected the data, or by an individual authorized to change the data.

- All data are transferred and reduced from field and laboratory records completely and accurately.

- All field and laboratory records are maintained as specified in Table C-6.

- All data are organized in standard formats (i.e., BDRs) specified in procedures.

- All electronic and video data are stored appropriately to ensure that waste container, sample, and associated QC data are readily retrievable. In the case of classified information, additional security provisions may apply that could restrict retrievability. The additional security provisions will be documented in CCP procedures when required.

Data review, validation, and verification at this level involves scrutiny and signature release from qualified independent technical reviewers not involved in the generation or recording of the data under review as specified below. Individuals conducting the data review, validation, and verification use checklists that address the items in this section. These checklists contain or reference tables showing the results of testing, sampling, analytical, or on-line batch QC samples, if applicable. Checklists reflect review of QC samples and QAOs in accordance with the criteria established in Tables C3-2 through C3-9, as applicable. Checklists are forwarded with BDRs to the CCP Project Office. Analytical raw data are available and reviewed by the data generation level reviewer; however, it does not need to be included in the Batch Data Report. Reviews are conducted as soon as possible following analytical activities, and are performed before any corresponding waste is shipped to WIPP.

C3-10a(1) Independent Technical Review (T6, T32, T53, T106, T113, T143, T188, T500, T508)

The independent technical reviewer ensures by review of raw data that data generation and reduction are technically correct, calculations are verified correct, deviations are documented, and QA/QC results are complete, documented correctly, and compared against the criteria specified in this QAPjP. This review is to validate and verify all of the work done by the originator.

One hundred percent of the BDRs must receive an independent technical review. This review is performed by an individual by a trained and qualified individual who was not involved in the generation or recording of the data under review. The independent technical review is performed as soon as practicably possible in order to determine and correct negative quality trends in the testing, sampling, analytical, and on-line process. However at a minimum, the independent technical review must be performed before any waste associated with the data reviewed is managed, stored, or disposed at WIPP, unless the data are being obtained from waste sampling and analysis as containers are being retrieved or generated after initial WSPF approval as described in Section C2-1. The reviewer(s) must release the data as evidenced by signature, and as a consequence ensure the following:

- Data generation and reduction were conducted in a technically correct manner in accordance with the methods used (procedure revision) and data were reported in the proper units and correct number of significant figures.
- Calculations were verified by a valid calculation program, a spot check of verified calculation programs, and/or 100 percent check of all hand calculations. Values that are not verifiable to within rounding or significant difference discrepancies are rectified prior to completion of independent technical review.
- The data were reviewed for transcription errors.
- The testing, sampling, or analytical data QA documentation for BDRs is complete and includes, as applicable, raw data, DAC and equilibrium calculations and times, calculation records, chain-of-custody forms, calibration records, (or reference to an available calibration package), and QC sample results, copies or originals of gas canister sample tags. Corrective action is taken to ensure that all BDRs are complete and include all necessary raw data prior to completion of the independent technical review.
- QC sample results are within established control limits, and if not, the data are appropriately qualified in accordance with data usability criteria. Data outside of established control limits are assigned an appropriate qualifier flag, discussed in the case narrative, and included as appropriate in calculations for completeness. QC criteria that were not met are documented.
- Data qualifier flags specified in Table C3-14, Data Reporting Flags were assigned correctly.
- The sample holding time and preservation requirements were met, or exceptions documented.

- Radiography tapes were reviewed (independent observation) on a waste container basis at a minimum of once per testing batch or once per day of operation, whichever is less frequent (Section C1-3). The radiography tape was reviewed against the data reported on the radiography form to ensure that the data are correct and complete.

- Field sampling records are complete. Incomplete or incorrect field sampling records are subject to resubmittal prior to completion of the independent technical review.

- QAOs have been met according to the methods outlined in Sections C3-2 through C3-9.

C3-10b Project Level

Data validation and verification at this level involves scrutiny and signature release from the SPM (T1, T500, T508). Any nonconformance identified during this process is documented on an NCR (Section C3-13).

The SPM ensures that a repeat of the data generation level review, verification and validation is performed on the data for a minimum of one randomly chosen waste container quarterly (every three months). This exercise documents that the data generation level review, verification, and validation are being performed in accordance with implementing procedures.

C3-10b(1) Site Project Manager Review

The SPM review is the final validation that all of the data contained in BDRs from the data generation level are complete and are properly reviewed, as evidenced by signature release and completed checklists.

One hundred percent of the BDRs have SPM signature release. At a minimum, the SPM signature release is performed before any waste associated with data reviewed is shipped to the WIPP, unless the data are being obtained from waste sampling and analysis as containers are being retrieved or generated as described in Section C2-1. This signature release ensures the following (T1, T500, T508):

- Proper procedures were followed to ensure representative samples of headspace gas and homogeneous solids and soil/gravel were taken.

- Data generation level independent technical review, validation, and verification are performed as evidenced by completed review checklists and by the appropriate signature releases.

- Independent technical reviewers were not involved in the generation or recording of the data under review.
- Batch data review checklists are complete.
- BDRs are complete and data are properly reported (i.e., data are reported in the correct units, with the correct significant figures, and with qualifying flags).
- Data are within established data assessment criteria and meet all applicable QAOs as described in Sections C3-2 through C3-9.
- The validity of the DAC assignment made at the Data Generation Level based upon assessment of the data collection and evaluation necessary to make the assignment.
- Testing batch QC checks (e.g., replicate scans, measurement system checks) were properly performed. Radiography data are complete and acceptable based on evidence of videotape review of one waste container per day or once per testing batch, whichever is less frequent, as specified in C1-3.
- Sampling batch QC checks (e.g., equipment blanks, field duplicates, field reference standards) were properly performed, and meet the established QAOs and are within established data usability criteria.
- Analytical batch QC checks (e.g., laboratory duplicates, laboratory blanks, matrix spikes, matrix spike duplicates, laboratory control samples) were properly performed and meet the established QAOs and are within established data usability criteria.
- On-line batch QC checks (e.g., field blanks, on-line blanks, on-line duplicates, on-line control samples) were properly performed and meet the established QAOs and are within established data useability criteria.

C3-10b(2) Preparing SPM Summary and Data Validation Summary

To document the project level validation and verification described above, the SPM (or designee) prepares an SPM Summary, and Data Validation Summary (T1). These reports may be combined to eliminate redundancy. The SPM Summary includes a validation checklist for each BDR. Checklists for the SPM Summary are of sufficient detail to validate all aspects of a BDR that affect data quality.

The SPM Data Validation Summary provides verification that, on a per waste container or sample basis as evidenced by BDR reviews, all data have been validated in

accordance with this QAPjP. The SPM Data Validation Summary identifies each BDR data report reviewed (including all waste container numbers), describes how the validation was performed and whether or not problems were detected (e.g., nonconformance reports), and includes a statement indicating that data are acceptable. Summaries must include release signatures.

Once the data have received project-level validation and verification or when the SPM decides the sample no longer needs to be retained, the SPM ensures that the laboratory is notified. Samples are retained by the laboratory until this notification is received. Gas sample canisters are then released from storage for cleaning, recertification, and subsequent reuse. Sample tags are removed and retained in the project files before recycling the canisters. If the SPM requests that samples or canisters be retained for future use (e.g., an experimental holding time study), the same sample identification and COC forms are used and cross-referenced to a document which specifies the purpose for sample or canister retention.

C3-10b(3) Preparing Waste Stream Characterization Packages

If requested by the Permittee, the SPM provides a Waste Stream Characterization Package. The SPM must ensure that the Waste Stream Characterization Package (described in Section C3-12b(3)) supports the waste characterization determinations.

C3-10c Permittee Level

Not applicable to CCP. This is a Permittee function.

C3-11 Reconciliation with Data Quality Objectives

Reconciling the results of waste testing and analysis with DQOs ensures that data are of adequate quality to support regulatory compliance programs. When waste is characterized by CCP, reconciliation with the DQOs is the responsibility of the SPM and occurs prior to waste shipment (T2).

C3-11a Reconciliation at the Project Level

The SPM ensures that all data generated and used in decision making meet the DQOs providing in Section C-4a(1). DQO reconciliation is the responsibility of the SPM, who assesses whether data of sufficient type, quality, and quantity to meet the DQOs (Section C-4a(1)) have been collected and determines whether the variability of the data set is small enough to provide the required confidence in the results. The SPM also determines whether, based on the desired error rates and confidence levels, a sufficient number of valid data points have been determined (as established by the associated completeness rate for each sampling and analytical process). The SPM documents that

random sampling of containers was performed for the purposes of waste stream characterization.

The SPM determines for each waste stream characterized, whether sufficient data have been collected to determine the following required waste parameters (T2):

- Waste matrix code.
- Waste material parameter weights.
- That each container of waste is transuranic radioactive waste.
- Mean concentrations, UCL_{90} for the mean concentrations, standard deviations, and the number of samples collected for each VOC in the headspace gas of waste containers in the waste stream.
- Mean concentrations, UCL_{90} for the mean concentrations, standard deviations, and the number of samples collected for VOCs, SVOCs, and metals in the waste stream.
- Whether the waste stream exhibits a toxic characteristic or is listed under 40 CFR §261, Subpart C.
- Whether the waste stream contains listed waste found in 20.1.4.200 NMAC incorporating 40 CFR §261, Subpart D.
- Whether the waste stream can be classified as hazardous or nonhazardous at the 90 percent confidence level.
- Whether all TICs were appropriately identified and reported in accordance with the requirements of Section C3-1 prior to submittal of a WSPF for a waste stream or waste stream lot.
- Whether an appropriate packaging configuration and DAC were applied and documented in the headspace gas sampling documentation and whether the drum age was met prior to sampling.
- Whether the overall completeness, comparability, and representativeness QAOs were met for the on-line, sampling, analytical, and testing procedures specified in Sections C3-2 through C3-9 prior to submittal of a WSPF for a waste stream or waste stream lot.
- Whether the PRQLs for all analyses were met prior to submittal of a WSPF for a waste stream or waste stream lot.

If the SPM determines that insufficient data have been collected to make the determinations listed above, additional data collection efforts are undertaken. The reconciliation of a waste stream is performed, as described in Section C4, prior to submittal of the WSPF and CIS to the Permittees for that waste stream. The CCP does not ship TRU waste stream to the WIPP unless the SPM determines that the WAP-required waste parameters listed above are met for that waste stream.

The statistical procedure presented in Section C2 shall be used by the SPM to evaluate and report waste characterization data from the analysis of homogeneous solids and soil/gravel. The procedure, which calculates UCL_{90} values, shall be used to assess compliance with the DQOs in Section C-4a(1) as well as with RCRA regulations. The procedure must be applied to all laboratory analytical data for total VOCs, total SVOCs, and total metals. For RCRA regulatory compliance (40 CFR § 261.24), data from the analysis of the appropriate metals and organic compounds may be expressed as TCLP values or results may also be compared to the toxicity characteristic levels expressed as total values. These total values will be considered the regulatory threshold limit (RTL) values for the WAP. RTL values are obtained by calculating the weight/weight concentration (in the solid) of a toxicity characteristic analyte that would give the regulatory weight/volume concentration (in the TCLP extract), assuming 100-percent analyte dissolution.

C3-11b Reconciliation at the Permittee Level

Not applicable to the CCP. This is a Permittee function.

C3-12 Data Reporting Requirements

Data reporting requirements define the type of information and the method of transmittal for data transfer from the data generation level to the CCP Project Office and from the CCP Project Office to the Permittee.

C3-12a Data Generation Level

As described in the data generation procedures, data are transmitted by hard copy or electronically (with hard copies available on demand) from the data generation level to the CCP Project Office. Transmitted data include all testing, sampling, analytical, and on-line BDR, as well as data review checklists. The BDR forms and checklists must contain all the information required by the testing, sampling, and analytical techniques described in Sections C1 through C6, as well as the signature releases to document the review, validation, and verification as described in Section C3-10. BDRs and checklists are on approved forms as provided in procedures. The checklists must be signed.

BDRs are forwarded to the SPM. All BDRs are assigned serial numbers, and each page is numbered. The serial number is the same as the batch number.

QA documentation, including raw data, is maintained in either testing, sampling, and analytical facility files, or the CCP files in accordance with CCP-QP-008. DOE approved laboratories forward testing, sampling and analytical QA documentation along with BDRs to the CCP Project Office for inclusion in site project files.

C3-12b Project Level

The CCP Project Office prepares a WSPF for each waste stream certified for shipment to the WIPP based on information obtained from AK and BDRs, if applicable (T2). The CCP Project Office ensures that the CIS and Waste Stream Characterization Package (when requested by the Permittee) are prepared as appropriate. The SPM verifies these reports are consistent with information found in BDRs. Summarized testing, sampling, analytical, and on-line data are included in the CIS. The contents of the WSPF, the CIS, and the Waste Stream Characterization Package are discussed in the following sections.

A Waste Stream Characterization Package is submitted only when requested by the Permittee. These reports are reviewed, validated, and verified by the SPM (T2).

After approval of a WSPF and the associated Characterization Information Summary by the DOE, CCP will maintain a cross reference of container identification number to each Batch Data Report.

A Waste Stream Characterization Package will be transmitted by hard copy or electronically from the SPM to the Permittees when requested.

C3-12b(1) Waste Stream Profile Form (T2)

The WSPF shall include the following information:

- Site name
- Site EPA ID
- Date of audit report approval by NMED (if obtained)
- Original generator of waste stream
- Whether waste is CH or RH
- The Waste Stream WIPP Identification Number
- Summary category group

- Waste matrix code group
- Waste Material Parameter Weight Estimates per unit of waste
- Waste stream name
- A description of the waste stream
- Applicable U.S. EPA Hazardous Waste Numbers
- Applicable TRUPACT Content (TRUCON) codes
- A listing of AK documentation used to identify the waste stream
- The waste characterization procedures used and the reference and date of the procedure
- Certification signature of SPM, name, title, and date signed

C3-12b(2) Characterization Information Summary (T2)

The CIS shall include the following elements, if applicable:

- Data reconciliation with DQOs.
- Headspace gas summary data listing the identification numbers of samples used in the statistical reduction, associated descriptive statistics (maximum, mean, standard deviation, RTL, and UCL_{90}), and associated hazardous waste numbers that were applied to the waste stream.
- Total metal, VOC, and SVOC analytical results for homogeneous solids and soil/gravel (if applicable).
- TIC listing and evaluation.
- Radiography and VE summary to document that prohibited items are not present, if applicable.
- A justification for the selection of radiography and/or VE as an appropriate method for characterization the waste.
- A complete listing of all container identification numbers used to generate the WSPF, cross-referenced to each BDR.

- Complete AK summary, including waste stream name and number, the point of generation, waste stream volume (current or projected), generation dates, TRUCON codes, Summary Category Group, Waste Matrix Code(s) and Waste Matrix Code Group, other TRU Waste Baseline Inventory Report (TWBIR) information, waste stream description, areas of operation, generation processes, RCRA determinations, radionuclide information, all references used to generate the AK summary, and any other information required by Section C4-2b.

- Method for determining Waste Material Parameter Weights per unit of waste.

- List of any AK Sufficiency Determinations requested for the waste stream.

- Certification through acceptable knowledge or testing and/or analysis that any waste assigned the Hazardous Waste Number of U134 (hydrofluoric acid) no longer exhibits the characteristic of corrosivity. This is verified by ensuring that no liquid is present in U134 waste.

C3-12b(3) Waste Stream Characterization Package (T2)

The waste stream characterization package is submitted when requested by the Permittee and includes the following information:

- WSPF (Section C3-12b(1))

- Applicable Characterization Information Summary (Section C3-12b(2))

- Complete AK summary (Section C3-12b(2))

- Batch Data Reports supporting the characterization of the waste stream and any others requested by the Permittee

- Raw analytical data requested by the Permittee

C3-12b(4) WIPP Waste Information System Data Reporting (T30)

The WWIS/WDS data dictionary includes the data, field formats, and limits associated with waste characterization data established by the WAP. These data are subject to edit and limit checks that are performed automatically by the database, as defined in the "Waste Data System User's Manual" (DOE 2009). If a container is part of a composite headspace gas sample, the analytical results from the composite sample is assigned as the container headspace gas data results, including associated TICs, for every waste container associated with the composite sample.

C3-13 Nonconformances (Q5)

The status of CCP activities are monitored and controlled by the SPM in accordance with the nonconformance and procurement procedures identified below. This includes nonconformance identification, documentation, and reporting.

Nonconformances

Nonconformances are uncontrolled and unapproved deviations from an approved plan or procedure (e.g., this QAPjP). In the context of this QAPjP, deficiencies and nonconformances are synonymous. Nonconforming items and activities are those that do not meet the CCP requirements, procurement document criteria, or approved work procedures. The CCP personnel are responsible for promptly reporting any nonconformance to management. The CCP reconciles and corrects nonconformance items, as appropriate, in accordance with the DOE-CBFO QAPD (DOE). The disposition of nonconforming items is identified and documented and nonconforming items are identified by marking, tagging, or segregating and appropriate notifications are made to the site. When a nonconformance related to the CCP is observed or detected, the CCP QA is notified, and affected management reviews the content of the NCRs and assists the CCP QA in processing the NCR. For each container selected for confirmation pursuant to Permit Attachment C7, the Permittees will examine the respective NCR documentation to verify NCRs have been dispositioned for the selected container.

The CCP identifies and documents nonconformances as follows:

- The NCR procedure establishes the method for CCP personnel to identify, document, control, and disposition nonconforming activities, processes, items, and materials. NCRs are initiated by any individual identifying a nonconformance during performance of work tasks, random observations, inspections, or any other review of CCP procedures, operations, and activities. The CCP personnel identify deficient items by marking, tagging, or segregating them. This procedure implements the requirements of Section 1.3.2 (Nonconformances) of the DOE-CBFO QAPD.

- Corrective Action Reporting and Control procedures establishes the method for personnel to identify and correct potential problems and conditions adverse to quality, in addition to precluding their recurrence, and if necessary, stopping associated work activities (Q8). Any person may temporarily stop work prior to evaluation of the condition by the responsible CCP supervisor. The CCP supervisor then evaluates and reports the condition, as necessary, in accordance with CCP-QP-006, *CCP Corrective Action Reporting and Control*. This procedure implements the requirements of Section 1.3.3 (Corrective Action) of the DOE-CBFO QAPD.

Management at all levels fosters a "no-fault" attitude to encourage the identification of nonconforming items and processes within the CCP. Nonconformances may be detected and identified by anyone performing activities in support of this QAPjP, including:

- The CCP project staff - during field operations, supervision of subcontractors, data validation and verification, and self-assessment
- Laboratory Staff - during the preparation for and performance of laboratory testing; calibration of equipment; QC activities; laboratory data review, validation, and verification; and self-assessment.
- CCP QA personnel - during oversight activities or audits

An NCR is prepared for each nonconformance identified. Each NCR is initiated by the individual(s) identifying the nonconformance. The NCR is then processed by knowledgeable and appropriate personnel. The NCR includes or references results of laboratory analysis, QC tests, audit reports, internal memoranda, or letters, as appropriate. The NCR provides the following information:

- Identification of the individual(s) identifying or originating the nonconformance
- Description of the nonconformance
- Method(s) or suggestions for correcting the nonconformance (corrective action)
- Schedule for completing the corrective action
- An indication of the potential ramifications and overall usability of the data, if applicable
- Any approval signatures specified in the nonconformance procedures.

The SPM oversees the NCR process for the CCP, identifies and tracks the status of deficiencies, reports this information to the Permittees, and is responsible for verifying the close-out of the NCRs.

Nonconformances are tracked and trended in accordance with procedures (Q5, Q14) that establish the method for evaluating trends in nonconformances and identifying appropriate corrective actions.

The SPM ensures that relevant project personnel are notified of nonconformances and verifying completion of corrective action for nonconformances.

Nonconformance to DQOs

For any non-administrative nonconformance related to applicable requirements specified in this QAPjP which are first identified at the SPM signature release level (i.e., a failure to meet a DQO), the SPM will provide a written notification to the Permittees within seven (7) calendar days of identification and shall also provide a nonconformance report within 30 calendar days of identification of the incident. The CCP implements a corrective action process and resolves identified nonconformances prior to shipment of any affected waste to the WIPP.

DOE Corrective Action Process

This section is not applicable to the CCP.

C3-14 Special Training Requirements and Certifications (Q2)

The SPM is responsible for ensuring that all personnel maintain proficiency in the work performed and identifies additional training if required. The training and qualification process for CCP personnel and subcontracted personnel who perform work to support the CCP is documented and controlled. In accordance with these plans, only personnel trained to applicable CCP-related plans and procedures perform CCP activities. Before performing CCP-related activities, assigned staff receive indoctrination into the scope, purpose, and objectives of the WAP and the specific QAOs of assigned tasks. Personnel assigned to perform activities under this QAPjP have the education, experience, and training applicable to the functions associated with the work.

Evidence of personnel proficiency and demonstration of competence in the task(s) assigned are demonstrated and documented. All personnel designated to work on specific aspects of the WAP maintain qualification (i.e., training and certification) throughout the duration of the work as specified in this QAPjP and applicable procedures. Job performance is evaluated and documented at periodic intervals, as specified in the appropriate implementing procedures.

CCP personnel involved in WAP activities (as flowed down in this QAPjP) receive continuing training to ensure that job proficiency is maintained and documented. Training includes both education in principles and enhancement of skills. Job performance is evaluated and documented at periodic intervals, as specified in the implementing procedures or in CCP-QP-002, *CCP Training and Qualification Plan*. Documentation of training, consisting of training records that specify the scope of training, dates of completion, and job proficiency are maintained by the CCP Project Office and/or the site records system as QA records. Personnel assigned to perform analytical or radiography activities for the CCP have obtained the education, experience, and training applicable to their work activities as summarized in Table C3-10, Minimum Training and Qualification Requirments. The requirements in

the table are based on EPA's *Contract Laboratory Program Statement of Work for Organics Analysis* (EPA 1999b).

Analytical laboratory line management must ensure that analytical personnel are qualified to perform the analytical methods for which they are responsible. The minimum qualifications for certain specified positions for the WAP are summarized in Table C3-10. This QAPjP and laboratory procedures specify the titles and minimum training and qualification requirements for personnel performing QAPjP activities.

Evaluation of CCP personnel qualifications includes a comparison of the job description to the skills, training, and experience included in the individual's resume, training records, and other documented bases for job assignment. This evaluation is also performed for personnel who change positions because of a transfer or promotion as well as personnel assigned to short-term or temporary work assignments that may affect the quality of CCP activities. Procedures identify the responsible persons for ensuring all personnel maintain proficiency in the work performed and identify any additional training that may be required.

C3-15 Changes to WAP Related Plans or Procedures

Controlled changes to WAP-related CCP plans or procedures are managed through the document control process (Q10). The SPM reviews all nonadministrative changes and evaluates whether those changes could impact DQOs specified in the WAP. Any changes to the WAP-related plans or procedures that could impact DQOs (i.e., those changes that require prior approval of the DOE as defined in Section C5-2) are reported to the DOE within five days of identification by the project level review.

Table C3-1. Waste Material Parameters and Descriptions

Waste Material Parameter	Description
Iron-Based Metals/Alloys	Iron and steel alloys in the waste excluding the waste container materials.
Aluminum-Based Metals/Alloys	Aluminum or aluminum-based alloys in the waste materials.
Other Metals	All other metals found in the waste materials (e.g., copper, lead, zirconium, tantalum, etc.).
Other Inorganic Materials	Non-metallic inorganic waste, including concrete, glass, firebrick, ceramics, sand, and inorganic sorbents.
Cellulosics	Materials generally derived from high polymer plant carbohydrates (e.g., paper, cardboard, wood, cloth).
Rubber	Natural or man-made elastic latex materials (e.g., surgeon's gloves, leaded rubber gloves).
Plastics (Waste Materials)	Generally man-made materials, often derived from petroleum feedstock (e.g., polyethylene and polyvinylchloride).
Organic Matrix	Cemented organic resins, solidified organic liquids and sludges.
Inorganic Matrix	Any homogeneous materials consisting of sludge or aqueous-based liquids that are solidified with cement, calcium silicate, or other solidification agents; (e.g., waste water treatment sludge, cemented aqueous liquids, and inorganic particulates).
Soils/Gravel	Generally consists of naturally-occurring soils that have been contaminated with inorganic waste materials.
Steel (Packaging Materials)	208-liter (55-gallon) drums.
Plastics (Packaging Materials)	90-mil polyethylene drum liner and plastic bags.

Table C3-2. Gas Volatile Organic Compound Target Analyte List and Quality Assurance Objectives

Compound	CAS Number	Precision[a] (%RSD or RPD)	Accuracy[a] (%R)	MDL[b,d] (ng)	PRQL (ppmv)	Completeness (%)
Benzene	71-43-2	≤25	70-130	10	10	90
Bromoform	75-25-2	≤25	70-130	10	10	90
Carbon tetrachloride	56-23-5	≤25	70-130	10	10	90
Chlorobenzene	108-90-7	≤25	70-130	10	10	90
Chloroform	67-66-3	≤25	70-130	10	10	90
1,1-Dichloroethane	75-34-3	≤25	70-130	10	10	90
1,2-Dichloroethane	107-06-2	≤25	70-130	10	10	90
1,1-Dichloroethylene	75-35-4	≤25	70-130	10	10	90
trans-1,2-Dichloroethylene	156-60-5	≤25	70-130	10	10	90
Ethyl benzene[d]	100-41-4	≤25	70-130	10	10	90
Ethyl ether	60-29-7	≤25	70-130	10	10	90
Methylene chloride	75-09-2	≤25	70-130	10	10	90
1,1,2,2-Tetrachloro-ethane	79-34-5	≤25	70-130	10	10	90
Tetrachloroethylene	127-18-4	≤25	70-130	10	10	90
Toluene	108-88-3	≤25	70-130	10	10	90
1,1,1-Trichloroethane	71-55-6	≤25	70-130	10	10	90
Trichloroethylene	79-01-6	≤25	70-130	10	10	90
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	≤25	70-130	10	10	90
m-Xylene[c]	108-38-3	≤25	70-130	10	10	90
o-Xylene	95-47-6	≤25	70-130	10	10	90
p-Xylene[c]	106-42-3	≤25	70-130	10	10	90
Acetone	67-64-1	≤25	70-130	150	100	90
Butanol	71-36-3	≤25	70-130	150	100	90
Methanol	67-56-1	≤25	70-130	150	100	90
Methyl ethyl ketone	78-93-3	≤25	70-130	150	100	90
Methyl isobutyl ketone	108-10-1	≤25	70-130	150	100	90

[a] Criteria apply to concentrations exceeding the PRQL

[b] Values based on delivering 10 mL to the analytical system

[c] These xylene isomers cannot be resolved by gas chromatography/mass spectroscopy

[d] The ethyl benezene PRQL for FTIRS is 20 ppm

CAS = Chemical Abstract Service
%RSD = Percent relative standard deviation
RPD = Relative percent difference
%R = Percent recovery
MDL = Method detection limit
PRQL = Program required quantitation limit

Table C3-3. Summary of Laboratory Quality Control Samples and Frequencies For Gas Volatile Organic Compound Analysis

QC Sample	Minimum Frequency	Acceptance Criteria	Corrective Action[a]
Method performance samples	Seven (7) samples initially and four (4) semiannually	Meet method QAOs	Repeat until acceptable
Laboratory duplicates or on-line duplicates	One (1) per analytical batch or on-line batch	RPD ≤ 25%[b]	Nonconformance if RPD > 25
Laboratory blanks or on-line blanks	Daily prior to sample analysis for GC/MS and GC/FID. Otherwise, daily prior to sample analysis and one (1) per analytical batch or on-line	Analyte amounts ≤ 3 x MDLs for GC/MS and GC/FID; ≤ PRQL for FTIRS	Flag Data if analyte amounts > 3 x MDLs for GC/MS and GC/FID; > PRQL for FTIRS
Laboratory control samples or on-line control samples	One (1) per analytical batch or on-line batch	70-130 %R	Nonconformance if %R < 70 or >130
GC/MS comparison samples (for FTIRS only)	One (1) per analytical or on-line batch	RPD ≤ 25[b]	Nonconformance if RPD > 25
Blind audit samples	Samples and frequency controlled by the Gas PDP Plan	Specified in the Gas PDP Plan	Specified in the Gas PDP Plan
GC/MS	Bromofluorobenzene (BFB) Tune Every 12 hours	Abundance criteria for key ions are met	Repeat Until Acceptable
GC/MS	Minimum 5-point initial calibration (minimum of 5 standards) Initially and as needed	%RSD of response factor for each target analyte <35	Repeat Until Acceptable
GC/MS	Continuing calibration Every 12 hours	%D for all target analytes ≤ 30 of initial calibration	Repeat Until Acceptable
GC/FID	Minimum 3-point initial calibration (minimum of 3 standards) Initially and as needed	Correlation coefficient ≥ 0.99 or %RSD <20 for each target analyte and the retention time of each target analyte within an acceptable criteria defined in the method	Repeat Until Acceptable
GC/FID	Continuing calibration Every 12 hours	%RSD ≤ 15%	Repeat Until Acceptable

Table C3-3. Summary of Laboratory Quality Control Samples and Frequencies For Gas Volatile Organic Compound Analysis (Continued)

[a] Corrective action per Section C3-13 when final reported QC samples do not meet the acceptance criteria.

[b] Applies only to concentrations greater than the PRQLs listed in Table C3-2.

MDL	=	Method Detection Limit
QAO	=	Quality Assurance Objective
PDP	=	Performance Demonstration Program
PRQL	=	Program Required Quantitation Limit
%R	=	Percent Recovery
RPD	=	Relative Percent Difference
BFB	=	4-Bromofluorobenzene
%D	=	Percent difference
%RSD	=	Percent relative standard deviation

Table C3-4. Volatile Organic Compounds Target Analyte List and Quality Assurance Objectives

Compound	CAS Number	Precision[a] (%RSD or RPD)	Accuracy[a] (%R)	MDL[b] (mg/kg)	PRQL[b] (mg/kg)	Complete-ness (%)
Benzene	71-43-2	≤45	37-151	1	10	90
Bromoform	75-25-2	≤47	45-169	1	10	90
Carbon disulfide	75-15-0	≤50	60-150	1	10	90
Carbon tetrachloride	56-23-5	≤30	70-140	1	10	90
Chlorobenzene	108-90-7	≤38	37-160	1	10	90
Chloroform	67-66-3	≤44	51-138	1	10	90
1,4-Dichlorobenzene[c]	106-46-7	≤60	18-190	1	10	90
ortho-Dichlorobenzene[c]	95-50-1	≤60	18-190	1	10	90
1,2-Dichloroethane	107-06-2	≤42	49-155	1	10	90
1,1-Dichloroethylene	75-35-4	≤250	D-234[d]	1	10	90
trans-1,2-Dichloroethylene	156-60-5	≤50	60-150	1	10	90
Ethyl benzene	100-41-4	≤43	37-162	1	10	90
Methylene chloride	75-09-2	≤50	D-221[d]	1	10	90
1,1,2,2-Tetrachloroethane	79-34-5	≤55	46-157	1	10	90
Tetrachloroethylene	127-18-4	≤29	64-148	1	10	90
Toluene	108-88-3	≤29	47-150	1	10	90
1,1,1-Trichloroethane	71-55-6	≤33	52-162	1	10	90
1,1,2-Trichloroethane	79-00-5	≤38	52-150	1	10	90
Trichloroethylene	79-01-6	≤36	71-157	1	10	90
Trichlorofluoromethane	75-69-4	≤110	17-181	1	10	90
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	≤50	60-150	1	10	90
Vinyl chloride	75-01-4	≤200	D-251[d]	1	4	90
m-xylene	108-38-3	≤50	60-150	1	10	90
o-xylene	95-47-6	≤50	60-150	1	10	90
p-xylene	106-42-3	≤50	60-150	1	10	90
Acetone	67-64-1	≤50	60-150	10[e]	100	90
Butanol	71-36-3	≤50	60-150	10[e]	100	90
Ethyl ether	60-29-7	≤50	60-150	10[e]	100	90
Formaldehyde[f]	50-00-0	≤50	60-150	10[e]	100	90
Hydrazine[g]	302-01-2	≤50	60-150	10[e]	100	90
Isobutanol	78-83-1	≤50	60-150	10[e]	100	90
Methanol	67-56-1	≤50	60-150	10[e]	100	90
Methyl ethyl ketone	78-93-3	≤50	60-150	10[e]	100	90
Pyridine[c]	110-86-1	≤50	60-150	10[e]	100	90

Table C3-4. Volatile Organic Compounds Target Analyte List and Quality Assurance Objectives (continued)

[a] Applies to laboratory control samples and laboratory matrix spikes. If a solid laboratory control sample material which has established statistical control limits is used, then the established control limits for that material should be used for accuracy requirements.

[b] TCLP MDL and PRQL values are reported in units of milligram per liter (mg/l) and limits are reduced by a factor of 20.

[c] Can also be analyzed as a semi-volatile organic compound. If analyzed as a semi-volatile compound, the QAOs of Table C3-6 apply.

[d] Detected; result must be greater than zero.

[e] Estimate, to be determined.

[f] Required only for homogeneous solids and soil/gravel from the Savannah River Site, if analysis is required to resolve assignment of EPA hazardous waste numbers.

[g] Required only for homogeneous solids and soil/gravel from Oak Ridge National Laboratory and Savannah River Site, if analysis is required to resolve assignment of EPA hazardous waste numbers.

CAS = Chemical Abstract Service
%RSD = Percent relative standard deviation
RPD = Relative percent difference
%R = Percent recovery
MDL = Method detection limit (maximum permissible value) (milligrams per kilogram)
PRQL = Program required quantitation limit; calculated from the toxicity characteristic level for benzene assuming a 0.9 oz (25-gram [g]) sample, 0.1 gallon (0.5 liter [L]) of extraction fluid, and 100 percent analyte extraction (milligrams per kilogram)

Table C3-5. Summary of Laboratory Quality Control Samples and Frequencies for Volatile Organic Compounds Analysis

QC Sample	Minimum Frequency	Acceptance Criteria	Corrective Action[a]
Method performance samples	Seven (7) samples initially and four (4) semiannually	Meet Table C3-4 QAOs	Repeat until acceptable
Laboratory duplicates[b]	One (1) per analytical batch	Meet Table C3-4 precision QAOs	Nonconformance if RPDs > values in Table C3-4
Laboratory blanks	One (1) per analytical batch	Analyte concentrations ≤ 3 x MDLs	Nonconformance if analyte concentrations > 3 x MDLs
Matrix spikes[b]	One (1) per analytical batch	Meet Table C3-4 accuracy QAOs	Nonconformance if %Rs are outside the range specified in Table C3-4
Matrix spike duplicates	One (1) per analytical batch	Meet Table C3-4 accuracy and precision QAOs	Nonconformance if RPD>values and %Rs outside range specified in Table C3-4
Laboratory control samples	One (1) per analytical batch	Meet Table C3-4 accuracy QAO's	Nonconformance if %R <80 or >120
GC/MS Calibration	BFB Tune every 12 hours 5-pt. Initial Calibration initially, and as needed	Abundance criteria met as per method Calibrate according to SW-846 Method requirements: %RSD for CCC ≤ 30, %RSD for all other compounds ≤ 15% Average response factor (RRF) used if %RSD ≤ 15, use linear regression if %RSD >15; R or R^2 ≥ 0.990 if using alternative curve System Performance Check Compound (SPCC) minimum average response factor as per SW-846 Method; RRF for all other compounds ≥ 0.01	Repeat until acceptable

Table C3-5. Summary of Laboratory Quality Control Samples and Frequencies for Volatile Organic Compounds Analysis (continued)

QC Sample	Minimum Frequency	Acceptance Criteria	Corrective Action[a]
GC/MS Calibration (continued)	Continuing Calibration every 12 hours	%D ≤ 20 for CCC; SPCC minimum average response factor as per SW-846 Method; RRF for all other compounds ≥ 0.01 RT for internal standard must be ± 30 seconds from last daily calibration, internal standard area count must be >50% and <200% of last daily calibration	Repeat until acceptable
GC/FID Calibration	3-pt. Initial Calibration initially and as needed Continuing Calibration every 12 hours	Correlation Coefficient ≥ 0.990 or %RSD ≤ 20 for all analytes %D or %Drift for all analytes ≤ 15 of expected values, RT ± 3 standard deviations from initial RT calibration per applicable SW-846 Method	Repeat until acceptable.
Surrogate compounds	Each analytical sample	Average %R from minimum of 30 samples for a given matrix ±3 standard deviations	Nonconformance if %R < (average %R - 3 standard deviation) or > (average %R + 3 standard deviation)
Blind audit samples	Samples and frequency controlled by the Solid PDP Plan	Specified in the Solid PDP Plan	Specified in the Solid PDP Plan

[a] Corrective Action per Section C3-13 when final reported QC samples do not meet the acceptance criteria. Nonconformances do not apply to matrix related exceedances.

[b] May be satisfied using matrix spike duplicate; acceptance criteria applies only to concentrations greater than the PRQLs listed in Table C3-4.

MDL = Method detection limit
QAO = Quality assurance objective
PDP = Performance Demonstration Program
%R = Percent recovery
RPD = Relative percent difference

Table C3-6. Semi-Volatile Organic Compound Target Analyte List and Quality Assurance Objectives

Compound	CAS Number	Precision[a] (%RSD or RPD)	Accuracy[a] (%R)	MDL[b] (mg/kg)	PRQL[b] (mg/kg)	Completeness (%)
Cresols	1319-77-3	≤50	25-115	5	40	90
1,4-Dichlorobenzene[bc]	106-46-7	≤86	20-124	5	40	90
ortho-Dichlorobenzene[c]	95-50-1	≤64	32-129	5	40	90
2,4-Dinitrophenol	51-28-5	≤119	D-172[d]	5	40	90
2,4-Dinitrotoluene	121-14-2	≤46	39-139	0.3	2.6	90
Hexachlorobenzene	118-74-1	≤319	D-152[d]	0.3	2.6	90
Hexachloroethane	67-72-1	≤44	40-113	5	40	90
Nitrobenzene	98-95-3	≤72	35-180	5	40	90
Pentachlorophenol	87-86-5	≤128	14-176	5	40	90
Pyridine[c]	110-86-1	≤50	25-115	5	40	90

CAS = Chemical Abstract Service
%RSD = Percent relative standard deviation
RPD = Relative percent difference
%R = Percent recovery
MDL = Method detection limit (maximum permissible value) (milligrams per kilogram)
PRQL = Program required quantitation limit; calculated from the toxicity characteristic level for nitrobenzene assuming a 100-gram (g) sample, 0.5 gallon (2 liter [L]) of extraction fluid, and 100 percent analyte extraction (milligrams per kilograms)

[a] Applies to laboratory control samples and laboratory matrix spikes. If a solid laboratory control sample material which has established statistical control limits is used, then the established control limits for that material should be used for accuracy requirements.

[b] TCLP MDL and PRQL values are reported in units of mg/l and limits are reduced by a factor of 20.

[c] Can also be analyzed as a volatile organic compound.

[d] Detected; result must be greater than zero.

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Table C3-7. Summary of Laboratory Quality Control Samples and Frequencies for Semi-volatile Organic Compounds

QC Sample	Minimum Frequency	Acceptance Criteria	Corrective Action[a]
Method performance samples	Seven (7) samples initially and four (4) semiannually	Meet Table C3-6 QAOs	Repeat until acceptable
Laboratory duplicates[b]	One (1) per analytical batch	Meet Table C3-6 precision QAOs	Nonconformance if RPDs > values in Table C3-6
Laboratory blanks	One (1) per analytical batch	Analyte concentrations ≤ 3 x MDLs	Nonconformance if analyte concentrations > 3 x MDLs
Matrix spikes	One (1) per analytical batch	Meet Table C3-6 accuracy QAOs	Nonconformance if RPDs > values and %Rs > outside range specified in Table C3-6
GC/MS Calibration	DFTPP Tune every 12 hours 5-pt. Initial Calibration initially, and as needed Continuing Calibration every 12 hours	Abundance criteria met as per method Calibrate according to SW-846 Method requirements: %RSD for CCC ≤ 30, %RSD for all other compounds ≤ 15% Average response factor used if %RSD ≤ 15, use linear regression if >15; R or R^2 ≥0.990 if using alternative curve System Performance Check Compound SPCC minimum average response factor as per SW-846 Method; average response factor for all other compounds ≥ 0.01 %D≤ 20 for CCC, SPCC minimum average response factor as per SW-846 Method; average response factor for all other compounds ≥ 0.01 RT for internal standard must be ± 30 seconds from last daily calibration, internal standard area count must be >50% and <200% of last daily calibration	Repeat until acceptable

Table C3-7. Summary of Laboratory Quality Control Samples and Frequencies for Semi-volatile Organic Compounds (continued)

QC Sample	Minimum Frequency	Acceptance Criteria	Corrective Action[a]
GC/ECD Calibration	5 pt. Initial Calibration initially, and as needed Continuing Calibration every 12 hours	Correlation Coefficient 0.990 or %RSD < 20 for all analytes %D or %Drift for all analytes 15 of expected values, RT ± 3 standard deviations of initial RT calibration per applicable SW-846 Method	Repeat until acceptable
Matrix spike duplicates	One (1) per analytical batch	Meet Table C3-6 accuracy and precision QAOs	Nonconformance if RPDs > values and %Rs outside range specified in Table C3-6
Laboratory control samples	One (1) per analytical batch	Meet Table C3-6 accuracy QAO's	Nonconformance if %R < 80 or > 120
Surrogate compounds	Each analytical sample	Average %R from minimum of 30 samples from a given matrix ±3 standard deviations	Nonconformance if %R < (average %R - 3 standard deviations) or > (average %R + 3 standard deviations)
Blind audit samples	Samples and frequency controlled by the Solid PDP Plan	Specified in the Solid PDP Plan [c]	Specified in the Solid PDP Plan [c]

[a] Corrective action per Section C3-13 when final reported QC samples do not meet the acceptance criteria. Nonconformances do not apply to matrix related exceedances.

[b] May be satisfied by using matrix spike duplicate; acceptance criteria applies only to concentrations greater than the PRQLs listed in Table C3-6.

[c] *Performance Demonstration Program Plan for RCRA Constitution Analysis of Solidified Wastes* (DOE 2001b).

MDL = Method Detection Limit
QAO = Quality Assurance Objective
PDP = Performance Demonstration Program
%R = Percent Recovery
RPD = Relative Percent Difference

Table C3-8. Metals Target Analyte List and Quality Assurance Objectives

Analyte	CAS Number	Precision (%RSD or RPD)[a]	Accuracy (%R)[b]	PRDL[d] (μg/L)	PRQL[c] (mg/kg)	Completeness (%)
Antimony	7440-36-0	≤30	80-120	100	100	90
Arsenic	7440-38-2	≤30	80-120	100	100	90
Barium	7440-39-3	≤30	80-120	2000	2000	90
Beryllium	7440-41-7	≤30	80-120	100	100	90
Cadmium	7440-43-9	≤30	80-120	20	20	90
Chromium	7440-47-3	≤30	80-120	100	100	90
Lead	7439-92-1	≤30	80-120	100	100	90
Mercury	7439-97-6	≤30	80-120	4.0	4.0	90
Nickel	7440-02-0	≤30	80-120	100	100	90
Selenium	7782-49-2	≤30	80-120	20	20	90
Silver	7440-22-4	≤30	80-120	100	100	90
Thallium	7440-28-0	≤30	80-120	100	100	90
Vanadium	7440-62-2	≤30	80-120	100	100	90
Zinc	7440-66-6	≤30	80-120	100	100	90

[a] ≤ 30 percent control limits apply when sample and duplicate concentrations are ≥ 10 x IDL for ICP-AES and AA techniques, and ≥ 100 x IDL for Inductively Coupled Plasma—Mass Spectrometry (ICP-MS) techniques. If less than these limits, the absolute difference between the two values shall be less than or equal to the PRQL.

[b] Applies to laboratory control samples and laboratory matrix spikes. If a solid laboratory control sample material which has established statistical control limits is used, then the established control limits for that material should be used for accuracy requirements.

[c] TCLP PRQL values are reported in units of mg/l and limits are reduced by a factor of 20.

[d] PRDL set such that it is a factor of 10 below the PRQL for 100 percent solid samples, assuming a 100x dilution during digestion.

CAS = Chemical Abstract Service
%RSD = Percent relative standard deviation
RPD = Relative percent difference
%R = Percent recovery
PRDL = Program required detection limit (i.e., maximum permissible value for IDL) (micrograms per liter)
PRQL = Program required quantitation limit (milligrams per kilogram)

Table C3-9. Summary of Laboratory Quality Control Samples and Frequencies for Metals Analysis

QC Sample	Minimum Frequency	Acceptance Criteria	Corrective Action[a]
Method performance samples	Seven (7) samples initially and four (4) semiannually	Meet Table C3-8 QAOs	Repeat until acceptable
Laboratory blanks	One (1) per analytical batch	≤ 3 x IDL (≤ 5 x IDL for ICP-MS)[b]	Redigest and reanalyze any samples with analyte concentrations which are ≤10 x blank value and ≥ 0.5 x PRQL
Matrix spikes	One (1) per analytical batch	Meet Table C3-8 accuracy QAOs	Nonconformance if %R outside the range specified in Table C3-8
Matrix spike duplicates	One (1) per analytical batch	Meet Table C3-8 accuracy and precision QAOs	Nonconformance if RPDs > values and %Rs outside the range specified in Table C3-8
ICP-MS Tune (ICP-MS Only)	Daily	4 Replicate %RSD ≤ 5; mass calibration within 0.9 amu; resolution < 1.0 amu full width at 10% peak height	Nonconformance if %RSD > 5; mass calibration > 0.9 amu; resolution > 1.0 amu
Initial Calibration 1 blank, 1 standard (ICP, ICP-MS) 3 standard, 1 blank (GFAA, FLAA) 5 standard, 1 blank (CVAA, HAA)	Daily	90-110 %R (80-120% for CVAA, GFAA, HAA, FLAA) for initial calibration verification solution. Regression coefficient ≥ 0.995 for FLAA, CVAA, GFAA, HAA	Correct problem and recalibrate; repeat initial calibration
Continuing Calibration	Every 10 samples and beginning and end of run	90-110% for continuing calibration verification solution. (80-120% for CVAA, GFAA, HAA, FLAA)	Correct problem and recalibrate; rerun last 10 samples
Internal Standard Area Verification (ICP-MS)	Every Sample	Meet SW-846 Method 6020 criteria	Nonconformance if not reanalyzed at 5 X dilution until criteria are met

Table C3-9. Summary of Laboratory Quality Control Samples and Frequencies for Metals Analysis (continued)

QC Sample	Minimum Frequency	Acceptance Criteria	Corrective Actiona
Serial Dilution (ICP, ICP-MS)	One (1) per analytical batch	5 X dilution must be ≤10% D of initial value for sample > 50xIDL	Flag Data if >10% and > 50xIDL
Interference Correction Verification (ICP, ICP-MS)	Beginning and end of run or every 12 hours (8 for ICP) whichever is more frequent	80-120% recovery for analytes Note: Acceptance Criteria and Corrective Action apply only if interferents found in samples at levels greater than ICS A Solution	Correct problem and recalibrate, nonconformance if not corrected
Laboratory Control Samples	One (1) per analytical batch	Table C3-8 accuracy QAOs	Redigest and reanalyze for affected analytes; non conformance if not reanalyzed
Blind audit samples	Samples and frequency controlled by the Solid PDP Plan	Specified in the Solid PDP Plan	Specified in the Solid PDP Plan

[a] Corrective action per Section C3-13 when final reported QC samples do not meet the acceptance criteria. Nonconformances do not apply to matrix related exceedances.

[b] Applies only to concentrations greater than the PRQLs listed in Table C3-8.

IDL = Instrument Detection Limit
PDP = Performance Demonstration Program
PRQL = Program Required Quantitation Limit
%R = Percent Recovery
RPD = Relative Percent Difference

Table C3-10. Minimum Training and Qualification Requirements

Personnel	Requirements[a]
Radiography Operators[c]	Site-specific training based on waste matrix codes and waste material parameters as described in Section C3-4; requalification every 2 years
Gas Chromatography Technical Supervisors (Lead Operator)[b] Gas Chromatography Operators[c]	Bachelor of Science (BS) or equivalent experience and 6 months previous applicable experience
Gas Chromatography/Mass Spectrometry Operators[c] Mass Spectrometry Operators[c]	BS or equivalent experience and 1 year independent spectral interpretation or demonstrated expertise
Gas Chromatography/Mass Spectrometry Technical Supervisors (Lead Operator)[b] Mass Spectrometry Technical Supervisors (Lead Operator)[b] Atomic Absorption Spectroscopy Technical Supervisors (Lead Operator)[b] Atomic Absorption Spectroscopy Operators[c] Atomic Mass Spectrometry Operators[c] Atomic Emission Spectroscopy Operators[c]	BS or equivalent experience and 1 year applicable experience
Atomic Mass Spectrometry Technical Supervisors (Lead Operator)[b]	BS and specialized training in Atomic Mass Spectrometry and 2 years applicable experience
Atomic Emission Spectroscopy Technical Supervisors (Lead Operator)[b]	BS and specialized training in Atomic Emission Spectroscopy and 2 years applicable experience

[a] Based on requirements contained in U.S. EPA Contract Laboratory Program Statement of Work for Organics Analysis (Document Number OLM 01.0) and Statement of Work for Inorganic Analysis (Document Number ILM 03.0).

[b] Technical Supervisors (Lead Operator) are responsible for the overall technical operation and development of a specific laboratory technique.

[c] Operators are responsible for the actual operation of analytical equipment.

Table C3-11. Testing Batch Data Report Contents

Required Information	Radiography	VE	Comment
Batch Data Report Date	X	X	
Batch number	X	X	
Waste container number	X	X	
Waste stream name and/or number	O	O	
Waste matrix code	X	X	Summary Category Group included in waste matrix code.
Implementing procedure (specific version used)	X	X	If procedure cited contains more than one method, the method used must also be cited. Can use revision number, date, or other means to track specific version used.
Container type	O	O	Drums, Pipe Overpack, SWB, TDOP, etc.
Video media reference	X	X	Reference to video media applicable to each container. For VE for newly generated waste, video media is not required if two trained operators review the contents of the waste container to ensure correct reporting.
Imaging check	O		
Camera check		O	
Audio check	O	O	
QC documentation	X	X	

Table C3-11. Testing Batch Data Report Contents (continued)

Required Information	Radiography	VE	Comment
Verification that the physical form matches the waste stream description and waste matrix code	X	X	Summary Category Group included in waste matrix code.
Comments	X	X	
Reference to or copy of associated NCRs, if any	X	X	Copies of associated NCRs must be available.
Verify absence of prohibited items	X	X	
Operator signature and date of test	X	X	Signatures of both operators required for visual verification of AK.
Data review checklists	X	X	All data review checklists will be identified.

LEGEND:
X = Required in Batch Data Report
O = Information must be documented and traceable; inclusion in Batch Data Report is optional.

Table C3-12. Sampling Batch Data Report Contents

Required Information	Headspace Gas	Solid Sampling	Comment
Batch Data Report date	X	X	
Batch number	X	X	
Waste stream name and/or number	O	O	
Waste matrix code		X	Summary Category Group included in Waste Matrix Code.
Procedure (specific version used)	X	X	If procedure cited contains more than one method, the method used must also be cited. Can use revision number, date, or other means to denote the version used.
Container number	X	X	
Container type	O	O	Drum, Pipe Overpack, SWB, TDOP, etc.
Sample matrix and type	X	X	
Analyses requested and laboratory	X	X	
Point of origin for sampling	X	X	Location where sample was taken (e.g., building number, room).
Sample number	X	X	
Sample size	X	X	
Sample location	X	X	Location within container where sample is taken. For headspace gas, specify what layer of confinement was sampled. For solids, physical location within container.
Sample preservation	X	X	
Person collecting sample	X	X	

Table C3-12. Sampling Batch Data Report Contents (continued)

Required Information	Headspace Gas	Solid Sampling	Comment
Person attaching custody seal	O	O	May or may not be the same as the person collecting the sample.
Chain of custody record	X	X	Original or copy is attached.
Sampling equipment numbers	X	X	For disposable equipment, a reference to the lot.
Cross-reference of sampling equipment numbers to associated cleaning batch numbers	O	X	As applicable to the equipment used for the sampling. For disposable equipment, a reference to the lot and procurement records to support cleanliness is sufficient.
Drum age	X		Must include all supporting determinative information, including but not limited to packaging date, equilibrium start time, storage temperature, and sampling date/time. If Scenario 3 is used, the packaging configuration, filter diffusivity, liner presence/absence, and rigid liner vent hole diameter used in determining the DAC must be documented. If Scenario 1 and 2 are used together, the filter diffusivity and rigid liner vent hole diameter used in determining the DAC must be documented. If default values are used for retrievably stored waste, these values must clearly be identified as such.
Equilibration time	X		
Verification of rigid liner venting	X		Only applicable to containers with rigid liners.
Verification that sample volume taken is small in comparison to the available volume	X		Must include headspace gas volume when it can be estimated.
Scale calibration		O	Must have reference to calibration records.

Table C3-12. Sampling Batch Data Report Contents (continued)

Required Information	Headspace Gas	Solid Sampling	Comment
Depth of waste		X	For newly generated waste, if sampling method other than coring is used, this is replaced by documentation that a representative sample has been taken.
Calculation of core recovery		X	For newly generated waste, if sampling method other than coring is used, this is replaced by documentation that a representative sample has been taken.
Co-located core description		X	For newly generated waste, if sampling method other than coring is used, this is replaced by documentation that a QC sample has been taken.
Time between coring and subsampling		X	Only applicable to coring.
OVA calibration and reading	O		Only applicable to manifold systems. Must be done in accordance with manufacturer's specifications.
Field Records	X	X	Must contain the following as applicable to the sampling method used: Collection problems; sequence of sampling collection; inspection of the solids sampling area; coring tool test; random location of sub-sample; canister pressure; and ambient temperature and pressure.
Reference to or copy of associated NCRs, if any	X	X	Copies of associated NCRs must be available.
Operator signature and date and time of sampling	X	X	
Data review checklists	X	X	All data review checklists will be identified.

LEGEND:
X = Required in Batch Data Report
O = Information must be documented and traceable; inclusion in Batch Data Report is optional

Table C3-13. Analytical Batch Data Report Contents

Required Information	Headspace Gas	Solid Sampling	Comment
Batch Data Report date	X	X	
Batch number	X	X	
Sample numbers	X	X	
QC designation for sample	X	X	
Implementing procedure (specific version used)	X	X	If the procedure cited contains more than one method, the method used must also be cited. Use revision number, date, or other means to track version used.
QC sample results	X	X	
Sample data forms	X	X	Form should contain reduced data for target analytes and TICs.
Chain of custody	X	X	Original or copy
Gas canister tags	X		Original or copy
Sample preservation	X	X	
Holding time		X	
Cross-reference of field numbers to laboratory sample numbers	X	X	
Date and time analyzed	X	X	
Verification of spectra used for results	O	O	Analyst must qualitatively evaluate the validity of the results based on the spectra. Can be implemented as a check box for each sample.
TIC evaluation	X	X	

Table C3-13. Analytical Batch Data Report Contents (continued)

Required Information	Headspace Gas	Solid Sampling	Comment
Reporting flags, If any	X	X	Table C3-14 lists applicable flags.
Case narrative	X	X	
Reference/copy of any associated NCRs	X	X	Copies of associated NCRs must be available.
Operators signature and analysis is date	X	X	
Data review checklists	X	X	All data review checklists will be titled.

LEGEND:
X = Required in Batch Data Report;
O = Information must be documented and traceable; inclusion in Batch Data Report is optional.

Table C3-14. Data Reporting Flags

Data Flag	Indicator
B	Analyte detected in blank (Organics/Headspace gases)
B	Analyte blank concentration greater than or equal to 20 percent of sample concentration prior to dilution corrections (Metals)
E	Analyte exceeds calibration curve (Organics/Headspace gases)
J	Analyte less than PRQL but greater than or equal to the MDL (Organics/Headspace gases)
J	Analyte greater than or equal to IDL but less than 5 times the IDL before dilution correction (Metals)
U	Analyte was not detected and value is reported as the MDL (IDL for Metals)
D	Analyte was quantified from a secondary dilution, or reduced sample aliquot (Organics/Headspace gases)
Z	One or more QC samples do not meet acceptance criteria
H	Holding time exceeded

C4 ACCEPTABLE KNOWLEDGE

C4-1 Introduction

The RCRA regulations codified in 40 CFR and the New Mexico Hazardous Waste Management Regulations in 20.4.1 NMAC, Subparts 100 through 600, Subpart 800, and Subpart 900, authorize the use of AK in appropriate circumstances by waste generators or treatment, storage, or disposal facilities to characterize hazardous waste. AK is described in *Waste Analysis at Facilities that Generate, Treat, Store and Dispose of Hazardous Waste: A Guidance Manual* (EPA 1994a). AK, as an alternative to waste sampling and analysis, is used to meet all or part of RCRA waste characterization requirements (EPA 1994a).

EPA's 1994 Waste Analysis Guidance Manual broadly defines the term "acceptable knowledge" to include process knowledge, whereby detailed information on the wastes is obtained from existing published or documented waste analysis data or studies conducted on hazardous waste generated by processes similar to that which generated the waste; facility records of analysis performed before the effective date of RCRA; and sampling and waste analysis data obtained from generators of similar wastes that send their wastes off-site for treatment, storage, or disposal (EPA 1994a). If it is determined that AK alone is insufficient to accurately characterize a waste, radiography and/or VE, headspace gas sampling and analysis, and homogeneous waste sampling and analysis may be used to complete the waste characterization process and satisfy the requirements of the WAP. AK is used in TRU waste characterization activities in five ways:

- To delineate TRU waste streams
- To assess whether TRU mixed wastes comply with the applicable requirements of the Treatment, Storage, and Disposal Facility Waste Acceptance Criteria (TSDF-WAC)
- To assess whether TRU mixed wastes exhibit hazardous characteristic (20 NMAC 4.1.200, incorporating 40 CFR § 261 Subpart C)
- To assess whether TRU mixed wastes are listed wastes (20 NMAC 4.1.200, incorporating 40 CFR § 261 Subpart D)
- To estimate waste material parameter weights

Sampling and analysis may be performed to augment the characterization of wastes based on AK when an AK Sufficiency Determination has not been requested by the generator/storage site or, if requested, has not been granted by the DOE (see Section C4-3d). Sampling and analysis consists of VE, radiography, headspace gas,

and homogeneous waste sampling and analysis. TRU waste streams undergo applicable provisions of the AK process prior to shipment of the waste to WIPP.

C4-2 Acceptable Knowledge Documentation

The CCP collects and compiles, in a logical sequence, AK information that progresses from general facility information (TRU waste management program information) to more detailed waste-specific information (TRU waste stream information).

The CCP implements the AK process as specified in the WAP to characterize TRU waste (T5). The AK information is then compiled into the AK report (and supporting documentation), as shown in Figure C4-1, Compilation of Acceptable Knowledge Documentation, in Attachment C-4 of the WAP.

The following sections include the information the Permittee will require for the CCP to characterize TRU waste using AK. Because waste generating processes are site-specific, CCP will, as necessary, augment the required AK records with additional supporting information as discussed in Section C4-2c. If the required information is not available for a particular waste stream, the waste stream is not eligible for an AK Sufficiency Determination as specified in Section C4-3d.

C4-2a Required TRU Waste Management Program Information

TRU waste management program information clearly defines waste categorization schemes and terminology, provides a breakdown of the types and quantities of TRU waste that are generated and stored by the site (and processed by the CCP), and describes how waste is tracked and managed, including historical and current operations. Information related to TRU waste certification procedures and the types of documentation (e.g., WSPFs) used to summarize AK are also provided.

The following information is included as part of the AK written record:

- A map of the site with the areas and facilities involved in TRU waste generation, treatment, and storage identified
- Facility mission description as related to TRU waste generation and management
- Description of the operations that generate TRU waste at the site
- Description of waste identification and characterization schemes used at the site or facility (e.g., content codes, item description codes)
- Types and quantities of TRU waste generated, including historical generation through future projections. Includes time and facility/site of generation

- Description of correlation of waste streams generated from the same building and process (e.g., sludge, combustibles, metals, and glass)

- Waste certification procedures for TRU wastes to be shipped to the WIPP

C4-2b Required TRU Waste Stream Information

The CCP uses AK to delineate site-specific waste streams for shipment to the WIPP. The available process information and data that supports the AK used to characterize waste streams are compiled in AK summary reports and supporting documentation in accordance with CCP-TP-005, *CCP Acceptable Knowledge Documentation*. The type and quantity of supporting documentation may vary by waste stream, depending on the waste generating process and site specific requirements imposed by the Permittee. At a minimum, the waste process information on each waste stream includes the following written information:

- Areas and buildings from which the waste stream was or is generated

- The waste stream volume and time period of waste generation

- Waste generating process described for each building (e.g., batch waste stream generated during decommissioning operations of glove boxes), including processes associated with U134 waste generation, if applicable

- Documentation regarding how the site has historically managed the waste, including the historical regulatory status of the waste (i.e., TRU mixed versus TRU non-mixed waste)

- Process flow diagrams. In the event that a process flow diagram cannot be created, a description of the waste generating process, rather than a formal process flow diagram, is used to satisfy this requirement. The use of the waste generating process description is justified, and the justification is placed in the AK record

- Material inputs or other information that identify the chemical content of the waste stream and physical waste form (e.g., glove box materials and chemicals handled during glove box operations; events or processes that may have modified the chemical or physical properties of the waste stream after generation; data obtained through VE of newly generated waste that later undergoes radiography; information demonstrating neutralization of U134 [hydrofluoric acid] and waste compatibility)

The AK written record includes a summary that identifies all sources of waste characterization information used to delineate the waste stream. The basis and rationale for delineating each waste stream, based on the parameters of interest, is

clearly summarized and traceable to referenced documents. Assumptions made in delineating each waste stream also are identified and justified. If discrepancies exist between required information, then the CCP may consider applying all hazardous waste numbers indicated by the information to the subject waste stream but must assess and evaluate the information to determine the appropriate hazardous waste numbers consistent with RCRA requirements.

Implementing procedures address the following AK processes:

- Identifying and assigning the physical waste form of the waste
- Delineating waste streams and assigning Summary Category Groups and waste matrix codes
- Resolving inconsistencies in AK documentation
- Headspace gas sampling and analysis, radiography, VE, and homogeneous waste sampling and analysis, if applicable
- For newly generated waste, procedures describing process controls used to ensure prohibited items (specified in Section C) are documented and managed
- Procedures to ensure that radiography and VE include a list of prohibited items that the operator verifies are not present in each container (e.g., liquid exceeding TSDF-WAC limits, corrosives, ignitables, reactives, and incompatible wastes)
- Procedures for documenting how changes to waste matrix code, waste stream assignment, and associated hazardous waste numbers based on material composition are documented for any waste
- Procedures that ensure the assignment of EPA hazardous waste numbers is appropriate, consistent with RCRA requirements, and considers site historical waste management
- Procedures for estimating waste material parameter weights

C4-2c Additional Acceptable Knowledge Information

CCP shall obtain additional acceptable knowledge information. CCP shall collect information as appropriate to augment required information and provide any other information obtained to further delineate waste stream. Adequacy of this information shall be assessed by DOE during audits. CCP will use this information to compile the acceptable knowledge written record.

All additional specific, relevant acceptable knowledge documentation assembled and used in the acceptable knowledge process, whether it supports or contradicts any required acceptable knowledge documentation, shall be identified and an explanation provided for its use (e.g., identification of a toxicity characteristic). Additional documentation may be used to further document the rationale for the hazardous characterization results. The collection and use of additional information shall be assessed by DOE during site audits to ensure that hazardous waste characterization is supported, as necessary, by such information. Similar to required information, if discrepancies exist between additional information and the required information, then CCP may consider applying all hazardous waste numbers indicated by the additional information to the subject waste stream, but must assess and evaluate the information to determine the appropriate hazardous waste numbers consistent with RCRA requirements. All information considered must be documented and placed in the auditable record, including applicable discrepancy resolution documentation.

Additional AK documentation includes, but is not limited to, the following information:

- Process design documents (e.g., Title II Design)
- Standard operating procedures that may include a list of raw materials or reagents, a description of the process or experiment generating the waste, and a description of wastes generated and how the wastes are managed at the point of generation.
- Preliminary and final safety analysis reports and technical safety requirements
- Waste packaging records
- Test plans or research project reports that describe reagents and other raw materials used in experiments
- Site databases (e.g., chemical inventory database for Superfund Amendments and Reauthorization Act Title III requirements)
- Information from site personnel (e.g., documented interviews)
- Standard industry documents (e.g., vendor information)
- Analytical data relevant to the waste stream, including results from fingerprint analyses, spot checks, routine verification sampling or other processes that collected information pertinent to the waste stream. This may also include new information which augments required information (e.g., VE not performed in compliance with the WAP, radiography screening for prohibited items)

- Material Safety Data Sheet, product labels, or other product package information
- Sampling and analysis data from comparable or surrogate waste streams (e.g., residues, equivalent nonradioactive materials)
- Laboratory notebooks that detail the research processes and raw materials used in an experiment

For waste containers that belong to LANL sealed sources waste streams, these containers do not require headspace gas sampling and analysis, if the following information is part of the AK documentation:

- Documentation that the waste container contents meet the definition of sealed sources per 10 CFR §30.4 and 10 CFR §835.2 (effective January 1, 2004).
- Documentation of the certification of the sealed sources as U.S. Department of Transportation Special Form Class 7 (Radioactive) Material per 49 CFR §173.403 (effective October 1, 2003).
- Documentation of contamination survey results that validate the integrity of each sealed source per 10 CFR §34.27 (effective January 1, 2004).
- AK documentation does not indicate the use of VOCs or VOC-bearing materials as constituents of the sealed sources.
- The outer casing of each sealed source must be of a non-VOC bearing material, which must be verified at the time of packaging.
- AK Documentation shall also include but shall not be limited to, as available and as necessary to determine the hazardous constituents associated with sealed sources, the following: source manufacturer's sales catalogues, original purchase records, source manufacturer's fabrication documents, source manufacturer's drawings, source manufacturer's fuel capture assembly reports, source manufacturer's operational procedures for cleanliness requirements, source manufacturer's shipping documents, source manufacturer's welding records, transuranic batch material records, and information from national databases (e.g., NMMSS). All of this information may not and need not be available for each source, but sufficient information must be included in the auditable record to derive an adequate understanding of source construction and history to ensure that no VOCs are present in association with the sealed source itself that would render the source hazardous. If AK data indicate that assignment of a hazardous waste number related to organic materials is required in association with a source, this specific source will be assigned to a separate waste stream and that waste

stream will be subject to representative headspace gas sampling unless a separate AK Sufficiency Determination is approved by DOE for the waste stream.

C4-3 Acceptable Knowledge Training, Procedures, and Other Requirements

The CCP uses the following to characterize TRU waste by means of AK information:

1) compiling the required and supporting additional AK documentation in an auditable record;

2) auditing AK records, and

3) WSPF approval and waste confirmation.

C4-3a Qualifications and Training Requirements (Q2)

The CCP and site personnel responsible for compiling AK, assessing AK, and resolving discrepancies associated with AK are qualified and trained in the following areas, at a minimum:

- WAP and TSDF-WAC requirements;
- State and Federal RCRA regulations associated with solid and hazardous waste characterization;
- Discrepancy resolution and reporting; and
- CCP and site-specific procedures associated with waste characterization using AK.

Position-specific qualification and training requirements such as those listed above for functional positions within the CCP are established by the SPM and documented (Q2). The SPM ensures that personnel conducting AK activities are qualified and trained as specified.

C4-3b Acceptable Knowledge Assembly and Compilation

The CCP process allows for the consistent application of the AK process and requirements, and addresses the following requirements (T5):

- Written procedures outlining the specific methodology used to assemble AK records, including the origin of the documentation, how it is used, and any limitations associated with the information (e.g., identify the purpose and scope of a study that included limited sampling and analysis data).

- Written procedures to compile the required AK record.

- Written procedures ensuring that unacceptable wastes (e.g., reactive, ignitable, corrosive) are identified and segregated from TRU waste populations sent to the WIPP.

- Procedures to evaluate AK and resolve discrepancies. For example, if different sources of information indicate hazardous wastes are present in a waste stream, the CCP includes all sources of information in its records and may choose to either conservatively assign hazardous waste numbers or assign only those numbers deemed appropriate and consistent with RCRA requirements. All information used to justify assignment of hazardous waste numbers must be placed in the auditable record. Further the assignment of hazardous waste numbers is traceable in the AK record to required documentation.

- Procedures to identify hazardous wastes and assign the appropriate hazardous waste numbers to each waste stream in accordance with the following minimum baseline requirements:

  - Compiling all of the required information in an auditable AK record.

  - Reviewing the compiled information and delineating waste streams. Delineation of waste streams must comply with the definition in C-0a and justify combining waste historically managed separately as TRU mixed and TRU non-mixed waste streams into a single waste stream.

  - Reviewing the compiled information to determine if the waste stream is compliant with the TSDF-WAC.

  - Reviewing the required information to determine whether the waste is listed under 20.4.1.200 NMAC (incorporating 40 CFR §261), Subpart D. Assigning all the hazardous waste numbers unless the CCP chooses to justify an alternative assignment and documents the justification in an auditable record.

  - Reviewing the required information to determine if the waste exhibits a hazardous characteristic or contains toxicity characteristic hazardous constituents specified in 20.4.1.200 NMAC (incorporating 40 CFR §261), Subpart C. If a toxicity characteristic contaminant is identified and is not included as a listed waste, sites may evaluate available data and assign the toxicity characteristic hazardous waste number consistent with RCRA requirements. All data examined to reach the hazardous waste number determination must be placed in the auditable record and must present a clear justification for the hazardous waste number analyses.

- Reviewing the compiled information to provide an estimate of material parameter weights for each container to be stored or disposed of at WIPP.

- For newly generated wastes, procedures are developed and implemented to characterize hazardous waste using AK prior to packaging the waste.

- The CCP ensures that results of other audits of the CCP TRU waste characterization activities are available in the CCP files.

- The CCP identifies all process controls (implemented to ensure that the waste contains no prohibited items and to control hazardous waste content and/or physical form) that may have been applied to retrievably stored waste and/or may presently be applied to newly generated waste. Process controls are applied at the time of waste generation/packaging to control waste content, whereas any activities performed after waste generation/packaging to identify prohibited items, hazardous waste content, or physical form are waste characterization activities not process controls. The AK record must contain specific process controls and supporting documentation identifying when these process controls are used to control waste content. See Section C-2 for programmatic requirements related to process controls.

C4-3c Criteria for Assembling an Acceptable Knowledge Record and Delineating the Waste Stream

CCP-TP-005 describes the process for assembling AK documentation into an auditable record. The first step is to assemble the required AK information and any additional information regarding the materials and processes that generate a specific waste stream. AK records are generated in compliance with the following criteria (T5):

- AK information is compiled in an auditable record, including a road map for applicable information.

- The overview of the facility and TRU waste management operations in the context of the facility's mission is correlated to specific waste stream information.

- Correlations between waste streams, with regard to time of generation, waste generating processes, and site-facilities are described in the AK summary report (Section C4-2b). For newly generated wastes, the rate (or schedule) and quantity of waste to be generated are also maintained in the AK process descriptions compiled in the AK summary report.

- A reference list provided in Section C4-3b that identifies documents, databases, QA protocols, and other sources of information that support AK information.

Container inventories are delineated into waste streams by correlating the container identifications to all of the required AK information and additional information (T5). The CCP assigns a waste matrix code and waste stream description to each container of waste using AK.

C4-3d AK Sufficiency Determination Request Contents (T5)

The CCP may submit an AK Sufficiency Determination Request (Determination Request). The Determination Request shall include, at a minimum.

- Identification of the scenario for which the approval is sought (Section C-0b).
- A complete AK Summary that addresses the following technical requirements:
  - Executive Summary
  - Waste Stream Identification Summary including a demonstration that the waste stream has been properly delineated and meets the Permit definition of waste stream (Attachment C, Introduction);
  - Mandatory Program Information (including, but not limited to, facility location and description, mission, defense waste assessment, spent nuclear fuel and high-level waste assessment, description of waste generating processes, research/development [as necessary], facility support operations [as applicable], types and quantities of TRU waste generated, correlation of waste streams to buildings/processes, waste identification and categorization, physical form identifiers);
  - Mandatory Waste Stream Information (including, but not limited to, Area and Building of Generation, waste stream volume/period of generation) (including, for newly generated waste, the rate and quantity of waste to be generation), waste generating activities, types of waste generated, material input related to physical form and identification of percentage of each waste material parameter in the waste stream, chemical content information including hazardous constituents and hazardous waste identification, prohibited item content (including documented evidence that the waste meets the TSDF-WAC Permit Sections 2.3.3.1 through 2.3.3.10), waste packaging, presence of filter vents, number of layers of confinement;
  - Types of supporting information gathered;
  - Container specific data (if available and relevant); and

- A complete reference list including all mandatory and additional information.

- An AK roadmap (defined as a cross reference between mandatory programmatic and mandatory waste stream information, with references supporting these requirements).

- A complete reference list including all mandatory and additional documentation.

- Additional relevant information for the required programmatic and waste stream data addressed in the AK Summary, examples of which are presented in Section C4-2c.

- Identification of any mandatory requirements supported only by upper tier documents (i.e., there is insufficient supporting data).

- Description or other means of demonstrating that the AK process described in the Permit was followed (for example, AK personnel were appropriately trained; discrepancies were documented, etc.).

- Information showing that CCP has developed a written procedure for compiling the AK information and assigning hazardous waste numbers as required in Section C4-3b.

- Information showing that CCP has assessed the AK process (e.g., internal audits, Section C4-3b).

C4-3e Requirements for Re-evaluating Acceptable Knowledge Information (T5)

AK includes information on the waste physical form, base materials composing the waste, and the waste generating process. Sampling and analysis of waste (i.e., radiography/VE, headspace gas sampling and analysis, and homogeneous sampling and analysis) may be used to augment AK information prior to waste shipment. If retrievably stored waste must be repackaged, either VE prior to or during waste packaging or radiography after waste packaging, shall be used to confirm acceptable knowledge information.

The WSPF and Characterization Information Summary (including the AK summary) will be reviewed by the Permittees for each waste stream prior to DOE approval of the WSPF. The Permittees review will ensure that the submitted AK information was collected under procedures that ensure implementation of the WAP, provides data sufficient to meet the DQOs in Section C-4a(1), and allow the Permittees to demonstrate compliance with the waste analysis requirements of the Permit. A detailed

discussion of the Permittees' waste stream review and DOE's WSPF approval process is provided in Section C-1d.

Re-Evaluation Based on Visual Examination and Radiography

The CCP has established procedures for re-evaluating AK if the results of waste confirmation indicate that the waste to be shipped does not match the approved waste stream, or if data obtained from VE or radiography for waste streams without an AK Sufficiency Determination exhibit this discrepancy. The CCP procedures describe how waste AK is re-evaluated, the waste is reassigned, and appropriate hazardous waste numbers assigned. If the re-evaluation requires that the waste matrix code be changed for the waste stream or the waste does not match the approved waste stream, the following minimum steps are taken to re-evaluate AK:

- Existing information is reviewed based on the container identification number and all differences in hazardous waste number assignments are documented
- If differences exist between the hazardous waste numbers that were assigned, the information is re-assessed, and required AK information associated with the new designation is documented
- Waste sampling and analytical data are re-assessed and documented
- The reassignment of the waste matrix code is documented and verified (e.g., verification that the waste was generated within the specified time period, area, and building and waste generating process, and that the process material inputs are consistent with the waste material parameters of waste identified during VE or radiography)
- Changes to AK records are recorded
- If discrepancies exist in the AK information for the revised waste matrix code, the discrepancies are documented in an NCR in accordance with CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*. The NCR documents the segregation of the affected portion of the waste stream, and defines the corrective actions necessary to fully characterize the waste.

CCP will assign the toxicity characteristic hazardous waste numbers consistent with RCRA requirements. If a toxicity characteristic underlying hazardous constituent is identified during AK, the potential assignment of a hazardous waste number must be evaluated and the results placed in the AK record.

TRU Heterogeneous Debris

The base materials that compose TRU heterogeneous debris (S5000) waste (e.g., lead, stainless steel, glass) are well established and potential toxicity characteristic constituents can be determined without destructive sampling and analysis.

The Summary Category Group, waste matrix code, and waste stream of the waste (waste material parameter) assigned for each container of waste using AK are based on the waste materials and the waste generating process.

Headspace Gas Sampling

The CCP utilizes AK to identify spent solvents associated with each TRU waste stream or waste stream lot.

Headspace gas data are used to resolve the assignment EPA F-listed Hazardous Waste Numbers to debris waste streams when waste streams do not have an AK Sufficiency Determination approved by DOE. In this case, the CCP assigns F-listed Hazardous Waste Numbers (20.4.1.200 NMAC, incorporating 40 CFR § 261.31) by evaluating the average concentrations of each VOC detected in container headspace gas for each waste stream or waste stream lot using the UCL_{90}. The UCL_{90} for the mean concentration is compared to the PRQL for the constituent. If the UCL_{90} for the mean concentration exceeds the PRQL, the AK information is reevaluated to determine the potential source of the constituent.

Documentation is provided to support any determination that F-listed organic constituents are associated with packaging materials, radiolysis, or other uses not consistent with solvent use. If the source of the detected F-listed solvents cannot be identified, the appropriate spent solvent hazardous waste number is conservatively applied to the waste stream. In the case of applicable toxicity characteristic (D-listed) VOCs and non-toxic F003 constituents, the CCP may assess whether the headspace gas concentration renders the waste non-hazardous for those characteristics and change the initial AK determination accordingly.

EPA hazardous waste numbers associated with S3000 and S4000 waste streams will be assigned based on the results of the total/TCLP analysis of a representative homogeneous waste sample when waste streams do not have an AK Sufficiency Determination approved by DOE. As with headspace gas, if the total/TCLP results indicate that the concentration of a toxicity characteristic waste or non-toxic constituent of an F003 waste is below regulatory levels, the hazardous waste number assigned initially by AK will be changed. Otherwise, if an F-listed waste constituent is detected, the appropriate hazardous waste number will be applied.

If the CCP determines that the source of the F-listed constituent is a spent solvent used in the process or is determined to be the result of mixing a listed waste with a solid

waste during waste packaging, or applicable toxicity characteristic or non-toxic F003 wastes are present in excess of regulatory levels, then the CCP either: 1) assigns the applicable listed hazardous waste number to the entire waste stream, or 2) segregates the drums containing detectable concentrations of the solvent into a separate waste stream and assign applicable hazardous waste numbers. The CCP documents, justifies, consistently delineates waste streams, and assigns hazardous waste numbers as required in this QAPjP and consider all generator specific waste streams and hazardous waste number assignments. The CCP must also consider original site-specific permit requirements and other state-enforced agreements in this analysis.

To determine the mean concentration of solvent VOCs, headspace gas data or homogeneous waste data for a waste stream or lot will be used, including data qualified with a 'J' flag (i.e., less than the PRQL but greater than the MDL) or qualified with a 'U' flag (undetected). For data qualified with a 'U' flag, the CCP uses one-half the MDL to calculate the mean concentration. Because listed wastes are not defined based on concentration, the CCP does not remove hazardous waste numbers assigned using AK if hazardous constituents are not detected in the headspace gas or solids/soils analysis.

TRU headspace gas and homogeneous waste may contain one or two constituents at concentrations that are orders of magnitude higher than the other target analytes. In these cases, samples are diluted to remain within the instrument calibration range for the elevated constituents. Sample dilution results in elevated MDLs for the constituents with elevated concentrations. Only the concentrations of detected constituents are used to calculate the mean for the purpose of assigning F-listed hazardous waste numbers. Because the presence or absence of F-listed solvents cannot be confirmed based on the artificially high MDLs that are caused by sample dilution, data flagged as 'U' and showing an elevated MDL are not used in calculating the mean concentration.

C4-3f Acceptable Knowledge Data Quality Requirements (T5)

Data quality objectives for sampling and analysis techniques are described in Section C3. Analytical results are used to augment the characterization of wastes based on AK. To ensure the process is consistently applied and ensure that AK information is accurate, complete, and is representative of the waste stream being evaluated, the CCP complies with data quality requirements for AK documentation in Section C3.

The CCP addresses quality control by tracking its performance with regard to the use of AK by:

- Assessing the frequency of inconsistencies among information
- Documenting the results of waste discrepancies identified by CCP during waste confirmation using radiography, review of radiography audio/video recordings, VE, or review of VE records

In addition, the AK process and waste stream documentation is evaluated through internal assessments by CCP QA organizations and assessment by auditors or observers external to the CCP (i.e., DOE-CBFO, NMED, EPA).

C4-3g Audits of Acceptable Knowledge

The DOE conducts an initial audit of the CCP prior to certifying the CCP for shipment of waste to the WIPP. This audit establishes an approved baseline that is reassessed annually by the DOE. The CCP does not certify waste for disposal until all corrective actions have been completed.

C5 QUALITY ASSURANCE PROJECT PLAN REQUIREMENTS

C5-1 Quality Assurance Project Plans

The CCP has developed and implemented this QAPjP to address the applicable waste characterization requirements specified in the WAP (P1). This QAPjP includes the qualitative or quantitative criteria to ensure that waste characterization activities are being performed satisfactorily. The organization(s) and position(s) responsible for implementation of this QAPjP are identified in Section B. Throughout this QAPjP, CCP documents are referenced that detail how each of the required elements of the characterization project are performed.

This QAPjP follows the format of the WAP and is implemented by the CCP through procedures that address TRU waste characterization activities. Compliance with CCP documents ensures that tasks are performed in a consistent manner that results in achieving the quality required under the CCP QA program. The organization, format, content, and designation of the CCP procedures is described in the CCP-QP-010, *CCP Document Preparation, Approval, and Control*.

C5-2 Document Review, Approval, and Control (Q10)

Prior to the implementation of characterization activities, the SPM ensures that written procedures have been developed for implementing the requirements of this QAPjP. Procedures ensure that tasks are performed in a consistent manner and achieve the quality required for the quality assurance program. The SPM is responsible for ensuring that the procedures meet the organization, format, content, and designation of standard operating procedures. CCP procedures are written so that they may be implemented at several sites simultaneously. Site-specific issues such as safety policies, technical specification requirements, or organizational necessities, may require the CCP to prepare site-specific procedures to supplement the procedures used to ensure WAP compliance. These procedures are identified in the SOW or site interface document. These procedures are prepared and controlled as are the other existing CCP operating

procedures and are subject to site specific review requirements. As a minimum, the following requirements are addressed in CCP procedures:

- Responsibilities of the organizations affected by the document,
- Technical, regulatory, quality assurance, or other program requirements.
- Sequential description of work to be performed,
- Quantitative or qualitative acceptance criteria sufficient for determining that activities were satisfactorily accomplished.
- Prerequisites, limits, precautions, process parameters, and environmental conditions,
- Special qualifications and training requirements,
- Verification points and hold points,
- Methods for demonstrating that the work was performed as required (such as provisions for recording inspection and test results, checklists, or sign-off blocks), and
- Identification and classification of QA records to be generated by the implementing procedure.

Procedures also include examples of data (e.g., reports, forms, and data validation checklists), as appropriate. Internal review and approval requirements are specified. In addition, CCP procedures are formatted, as follows:

- Purpose
- Scope
- Requirements
- Responsibilities
- Procedures
- Records

CCP procedures are reviewed for consistency with the QAPjP in accordance with the above listed requirements. The SPM is responsible for ensuring that the most current

version of all procedures is readily available for use as needed by project personnel after procedures have been reviewed and approved for use.

The SPM ensures that the preparation, issuance, and change to documents that specify quality requirements or prescribe activities affecting quality for the CCP program be controlled to assure that correct and current documents are used and referenced. The CCP uses a document control format consisting of a unique document identification number, current revision number, data, and page number, which will be placed in the header on the individual pages of the document. CCP documents are delineated into five areas: quality procedures, denoted by CCP-QP-XXX; technical procedures, denoted by CCP-TP-XXX; health and safety plans denoted by CCP-HSP-XXX; configuration management denoted by CCP-CM-XXX; and CCP Project Office documents (i.e., this QAPjP), denoted by CCP-PO-XXX. "XXX" denotes a sequential number.

Qualified and independent personnel review all CCP documents (including this QAPjP) prior to approval and issuance. Reviews consider the technical adequacy, completeness, and correctness of CCP documents and the inclusion of and compliance with the requirements established by the WAP. Approval is indicated by a signature and date page included in the front of the document. The SPM ensures that:

- Revisions to site implementing documents are denoted by including the current revision number and date on the document title page and each page of the document.
- Revised pages are marked in redline/strikeout for expeditious review of the entire document.
- A vertical bar, indicating the change to the text, is included along the left-hand margin of the page, except in the case of full document revisions.
- Revised document submittals identify the changes, the reason for the changes, and the justification for concluding that the revised contents continue to satisfy the requirements of the QA program.
- Revisions that affect performance criteria or data quality (e.g., sampling or analytical methods, QAO, calibration requirements), other than editorial or minor changes, undergo the same level of review and approval as the baseline version of each document. These documents are reviewed and approved by the same functional organizations that performed the original review/approval, unless other organizations are specifically designated in accordance with approved procedures. Editorial or minor changes may be made without the same level of review and approval as the original or

otherwise changed documents. The following items are considered editorial or minor changes:

- Correcting grammar or spelling (provided the meaning has not changed),
- Renumbering sections or attachments,
- Updating organizational titles (*A change in an organizational title accompanied by a change in responsibilities is not considered an editorial change*),
- Changes to non-quality-affecting schedules,
- Revised or reformatted forms, providing the original intent is not altered, and
- Attachments marked “Example” or exhibits clearly intended to be representative only

- CCP personnel are responsible for reporting any obsolete or superseded information to the SPM
- All CCP changes are evaluated and approved by the SPM, the appropriate personnel are notified before implementation, and the affected documents are revised as necessary
- Changes that affect performance criteria or data quality, and would take the activity out of compliance because they alter a requirement are not made without prior approval by DOE.

In addition, the SPM is responsible for ensuring that non-administrative changes, non-editorial changes, or changes that could affect performance criteria or data quality (such as sample handling, custody requirements, sampling and analytical procedures, quality assurance objectives, calibration requirements, or QC sample acceptance criteria, to this QAPjP and other WAP-related plans and procedures are reported to the DOE within five days of Project Level review). The SPM ensures that the document control system is implemented to control the process for initiating, revising, modifying, reviewing, and distributing project documents and changes to project documents. As potential changes to project information are identified by the SPM, documents are revised as necessary and distributed to affected organizations in accordance with this procedure.

C6 AUDIT AND SURVEILLANCE PROGRAM

C6-1 Introduction

The WIPP audit and surveillance program ensures that the CCP conducts sampling and analysis of wastes in accordance with the current WAP and that waste certification information is being managed properly. The CCP addresses deficiencies identified during the audits. A deficiency is any failure to comply with an applicable requirement of the WAP.

C6-2 Audit Procedures

This section does not apply to the CCP.

C6-3 Audit Position Functions

This section does not apply to the CCP.

C6-4 Audit Conduct

During audit interviews or audit meetings, CCP or DOE approved laboratory personnel may be advised of deficiencies identified within their areas of responsibility to establish a clear understanding of the identified condition.

The personnel will be given the opportunity to correct any deficiency that can be corrected during the audit period.

When a deficiency is identified by the DOE audit team, a CAR is issued to the CCP. The CCP reviews the CAR which is used to evaluate the extent and cause of the deficiency, and submits an approved response to the Permittees indicating remedial actions and actions taken to preclude recurrence. If these responses to the CAR are acceptable, DOE communicates the acceptance to the CCP.

The CCP completes the remedial actions and actions to preclude recurrence and requests DOE to close the CAR. Following the completion of corrective actions, the Permittees may schedule and perform a verification visit to assure that corrective actions have been completed and are effective.

The corrective action response includes a discussion of the investigation performed to determine the extent and impact of the deficiency, a description of the remedial actions taken, determination of root cause, and action taken to preclude recurrence.

The CCP responds to any deficiencies and observations within thirty (30) days of receipt of any CARs and indicates the corrective action taken or to be taken. If the corrective action has not been completed, the response indicates the expected date the

action will be completed. CARs applicable to WAP requirements are resolved prior to waste shipment.

C7 TRU WASTE CONFIRMATION

Introduction

This section of the QAPjP describes the actions that the Permittees will take to approve and accept waste for and disposal at the WIPP, including waste confirmation activities. Discussion of the Permittees' actions that are relevant to CCP will be included here. The Permittees demonstrate compliance with the WIPP-WAP by ensuring that the waste characterization processes performed by CCP produce data compliant with the WIPP-WAP and through the waste screening and verification processes. Verification occurs at three levels: 1) the data generation level, 2) the project level, and 3) the Permittee level. The Permittees also examine a representative subpopulation of waste prior to shipment to confirm that the waste contains no ignitable, corrosive, or reactive waste; and that assigned EPA Hazardous Waste Numbers are allowed by the WIPP RCRA Permit. The waste confirmation activities described herein occur prior to shipment of the waste from the CCP to WIPP.

C7-1 Permittee Confirmation of TRU Mixed Waste

This section does not apply to CCP.

C7-1a Permittee Confirmation of a Representative Subpopulation of the Waste

The Permittees will confirm that the waste contains no ignitable, corrosive, or reactive waste through radiography or the use of VE of a statistically representative subpopulation of the waste. Prior to shipment to WIPP, waste confirmation will be performed on randomly selected containers from each CH- and RH-TRU waste stream shipment.

C7-1b Radiography Methods Requirements

This section describes the portion of the Permittees' confirmation program that applies to CCP.

For containers that have been characterized using radiography by CCP in accordance with the method in Section C1-3, the Permittees may perform confirmation by review of CCP's radiography audio/video recordings.

When confirmation is performed by review of audio/video recorded scans produced by CCP as specified in Section C1-3, independent observations will be performed on two waste containers per shipment or two containers per day, whichever is less frequent.

C7-1c Visual Examination Methods Requirements

This section describes the portion of the Permittees' confirmation program that applies to CCP.

VE may also be used as a waste confirmation method by the Permittees. VE shall be conducted by the Permittees in accordance with written standard operating procedures to describe the contents of a waste container. Visual examination shall be conducted to identify and describe all waste items, packaging materials, and waste material parameters. VE may be used by the Permittees to examine a statistically representative subpopulation of the waste certified for shipment to WIPP to confirm that the waste contains no ignitable, corrosive, or reactive waste. This is achieved by confirming that the waste contains no liquid in excess of TSDF-WAC limits or compressed gases, and that the physical form of the waste matches the waste stream description documented on the WSPF. During packaging, the waste container contents are directly examined by trained personnel. This form of waste confirmation may be performed by the Permittees at the waste generator/storage site. VE may be documented on video and audio media, or by using a second operator to provide additional verification by reviewing the contents of the waste container to ensure correct reporting. When VE is performed using a second operator, each operator performing the VE shall observe for themselves the waste being placed in the waste container or the contents within the examined waste container when waste is not removed. The results of all VE shall be documented on data forms.

In order to keep radiation doses as low as reasonably achievable, the Permittees may use their own trained VE operators to perform VE for waste confirmation by reviewing CCP VE data, which includes VE data forms, waste packaging records, and may also include audit/video media. If the Permittees perform waste confirmation by review of video media, the video record of the VE must be sufficiently complete for the Permittees to confirm the Waste Matrix Code and waste stream description, and verify the waste contains no liquid in excess of TSDF-WAC limits or compressed gases. CCP VE video/audio media subject to review by the Permittees shall meet the following minimum requirements:

- The video/audio media shall record the waste packaging event for the container such that all waste items placed into the container are recorded in sufficient detail and shall contain an inventory of waste items in sufficient detail that a trained Permittee VE operator can identify the associated waste material parameters.

- The video/audio media shall capture the waste container identification number.

- The personnel loading the waste container shall be identified on the video/audio media or on packaging records traceable to the loading of the waste container.

- The date of loading of the waste container will be recorded on the video/audio media or on packaging records traceable to the loading of the waste container.

The Permittees may also use their own trained VE operators to perform VE for waste confirmation by reviewing VE data forms or packaging logs prepared by the generator during their packaging of the waste. To be acceptable, the CCP VE data must be signed by two CCP personnel who witnessed the packaging of the waste and must provide sufficient information for the Permittees to determine that the waste container contents match the waste stream description on the WSPF and the waste contains no liquid in excess of TSDF-WAC limits or compressed gases. The Permittees will document their review of CCP VE data on Permittee VE data forms. CCP VE forms or packaging records subject to review by the Permittees shall meet the following minimum requirements:

- At least two generator site personnel shall approve the data forms or packaging records attesting to the contents of the waste container.

- The data forms or packaging records shall contain an inventory of waste items in sufficient detail that a trained Permittee VE operator can identify the associated waste material parameters.

- The waste container identification number shall be recorded on the data forms or packaging records.

VE video media of containers which contain classified shapes shall be considered classified information. VE data forms will not contain classified information.

C7-2 Noncompliant Waste Identified During Waste Confirmation

This section describes the portion of the Permittees' confirmation program that applies to CCP.

If the Permittee identifies noncompliant waste during waste confirmation at a CCP site, (i.e., the waste does not match the waste stream description documented in the WSPF or there is liquid in excess of TSDF-WAC limits or compressed gases) the waste will not be shipped.

The DOE will suspend further shipments of the affected waste stream and issue a CAR to CCP. Shipments of affected waste streams will not resume until the CAR has been closed.

As part of the corrective action plan in response to the CAR, CCP will evaluate whether the waste characterization information documented in the CIS or WSPF for the waste stream must be updated because the results of waste confirmation for the waste stream indicated that the TRU waste being examined did not match the waste stream description. CCP will thoroughly evaluate the potential impacts on waste that has been shipped to WIPP. The DOE will evaluate the potential that prohibited items were shipped to WIPP and what remedial actions should occur, if any. The results of these evaluations will be provided to NMED before shipments of affected waste stream resume. If the CIS and/or WSPF requires revision, shipments of the affected waste stream shall not resume until the revised waste stream waste characterization information has been reviewed and approved by the DOE. If CCP certifies noncompliant waste at a site more than once during a running 90-day period, the DOE will suspend acceptance of CCP's waste from that CCP site until the DOE finds that all corrective actions have been implemented and the site complies with all applicable requirements of the WIPP-WAP.

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ACRONYMS AND ABBREVIATIONS

%	percent
%C	percent complete
AK	acceptable knowledge
ASTM	American Society for Testing and Materials
BDR	Batch Data Report
BFB	Bromofluorobenzene
BS	bachelor of science
℃	degrees Celsius
CBFO	Carlsbad Field Office
cc/s	cubic centimeters per second
CCP	Central Characterization Project
CFR	Code of Federal Regulations
CH	contact handled
CIS	Characterization and Information Summary
COC	chain of custody
%D	percent difference
DA	data administrator
DAC	drum age criteria
DOE	U.S. Department of Energy
DOT	U.S. Department of Transportation
DQO	data quality objective
EPA	U.S. Environmental Protection Agency
℉	degrees Fahrenheit
FID	flame ionization detector
FTIR	Fourier transfer infrared
g	gram
GC/MS	gas chromatography/mass spectrometry
Hg	mercury
HPLC	high pressure liquid chromatography
HWA	New Mexico Hazardous Waste Act
HWDU	Hazardous Waste Disposal Unit
HWFP	Hazardous Waste Facility Permit
ICP	instrument calibration procedure
ID	identification number
IDL	instrument detection limit
in.	inches
kV	kilovolts
l	liter
LCS	laboratory control sample
LDR	Land Disposal Restrictions
MDL	method detection limit
ml	milliliter
mm	millimeter

ACRONYMS AND ABBREVIATIONS (Continued)

mg/kg	milligram per kilogram
mg/L	milligram per Liter
nCi	nanocuries
NCR	nonconformance report
NDE	nondestructive examination
ng	nanogram
NIST	National Institute of Standards and Technology
NMAC	New Mexico Administrative Code
NMED	New Mexico Environment Department
OJT	on-the-job training
ORNL	Oak Ridge National Laboratory
OVA	organic vapor analyzer
PCB	polychlorinated biphenyls
PDP	Performance Demonstration Program
ppm	parts per million
ppmv	parts per million by volume
PRDL	program required detection limit
PRQL	program required quantitation limit
psig	pounds per square inch gauge
QA	quality assurance
QAO	quality assurance objective
QAPD	Quality Assurance Program Document
QAPjP	quality assurance project plan
QC	quality control
%R	percent recovery
RCRA	Resource Conservation and Recovery Act
RH	remote handled
RIDS	records inventory and disposition schedule
RPD	relative percent difference
%RSD	percent relative standard deviation
RTL	regulatory threshold limit
SLB2	standard large box 2
SOP	standard operating procedure
SOW	Statement of Work
SPC	statistical process control
SPM	site project manager
SRS	Savannah River Site
SVOCs	semivolatile organic compounds
SWB	standard waste box
TCLP	toxicity characteristic leaching procedure
TCO	transportation certification official
TDOP	ten-drum overpack
TIC	tentatively identified compound
TRU	transuranic
TRUCON	*TRUPACT Content (Code)*

ACRONYMS AND ABBREVIATIONS (Continued)

TSDF-WAC	*Treatment, Storage, and Disposal Facility Waste Acceptance Criteria*
TWBIR	*Transuranic Waste Baseline Inventory Report*
UCL_{90}	upper 90 percent confidence limit
VE	visual examination
VOC	volatile organic compound
WAC	(WIPP) Waste Acceptance Criteria
WAP	Waste Analysis Plan
WDS	Waste Data System
WIPP	Waste Isolation Pilot Plant
WSPF	Waste Stream Profile Form
WWIS	WIPP Waste Information System

Attachment 1 – Implementing Procedures

Reference Number	Procedure Number	Procedure Title
Q2	CCP-QP-002	CCP Training and Qualification Plan
Q5	CCP-QP-005	CCP TRU Nonconforming Item Reporting and Control
Q8	CCP-QP-008	CCP Records Management
Q10	CCP-QP-010	CCP Document Preparation, Approval and Control
Q14	CCP-QP-014	CCP Quality Assurance Trend Analysis and Reporting
Q19	CCP-QP-019	CCP Quality Assurance Reporting to Management
Q28	CCP-QP-028	CCP Records Filing, Inventorying, Scheduling, and Dispositioning
T1	CCP-TP-001	CCP Project Level Data Validation and Verification
T2	CCP-TP-002	CCP Reconciliation of DQOs and Reporting Characterization Data
T3	CCP-TP-003	CCP Data Analysis for S3000, S4000, and S5000 Characterization
T5	CCP-TP-005	CCP Acceptable Knowledge Documentation
T6	CCP-TP-006	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
T7	CCP-TP-007	CCP Single Sample Manifold Headspace Gas Sampling and Analysis Procedure
T28	CCP-TP-028	CCP Radiographic Test and Training Container Construction
T30	CCP-TP-030	CCP CH TRU Waste Certification and WWIS/WDS Data Entry
T32	CCP-TP-032	CCP Single Sample Manifold Data Validation Procedure
T53	CCP-TP-053	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
T56	CCP-TP-056	CCP HSG Performance Demonstration Plan

Attachment 1 – Implementing Procedures (Continued)

Reference Number	Procedure Number	Procedure Title
T69	CCP-TP-069	CCP Sealed Source Visual Examination and Packaging
T86	CCP-TP-086	CCP CH Packaging Payload Assembly
T93	CCP-TP-093	CCP Sampling of TRU Waste Containers
T106	CCP-TP-106	CCP Headspace Gas Sampling Batch Data Report Preparation
T113	CCP-TP-113	CCP Standard Contact-Handled Waste Visual Examination
T162	CCP-TP-162	CCP Random Selection of Containers for Solids and Headspace Gas Sampling and Analysis
T163	CCP-TP-163	CCP Evaluation of Waste Packaging Records for Visual Examination of Records
T173	CCP-TP-173	CCP Analysis of Gas Samples for VOCs by GC/FID
T175	CCP-TP-175	CCP Analysis of Gas Samples for VOCs by GC/MS
T176	CCP-TP-176	CCP Determination of Method Detection Limits for Gas Analysis
T177	CCP-TP-177	CCP Sample Receipt, Custody, and Storage
T178	CCP-TP-178	CCP SUMMA® Canister Cleaning
T179	CCP-TP-179	CCP Gas Transfer Manifold Systems and Sample Compositing
T180	CCP-TP-180	CCP Analytical Sample Management

Attachment 1 – Implementing Procedures (Continued)

Reference Number	Procedure Number	Procedure Title
T181	CCP-TP-181	CCP Determination of Mercury by CVAA for TRU Waste Characterization
T182	CCP-TP-182	CCP Determination of Metals by ICP-AES for TRU Waste Characterization
T183	CCP-TP-183	CCP Microwave Assisted Digestion of Homogeneous Solids and Soil/Gravel
T184	CCP-TP-184	CCP Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry
T185	CCP-TP-185	CCP Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry
T186	CCP-TP-186	CCP Determination of Nonhalogenated Volatile Organics by Gas Chromatography
T187	CCP-TP-187	CCP Sample Preparation for Semivolatile Organic Compounds
T188	CCP-TP-188	CCP Analytical Data Recording, Review, and Reporting
T500	CCP-TP-500	CCP Remote-Handled Waste Visual Examination
T508	CCP-TP-508	CCP RH Standard Real-Time Radiography Inspection Procedure
T510	CCP-TP-510	CCP Remote-Handled Radiography Test and Training Drum Requirements
T512	CCP-TP-512	CCP Remote-Handled Waste Sampling
T530	CCP-TP-530	CCP RH TRU Waste Certification and WWIS/WDS Data Entry

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Revision 34

CCP
Training and Qualification Plan

EFFECTIVE DATE: 01/30/2013

Mike Ramirez

PRINTED NAME

APPROVED FOR USE

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
9	02/20/2002	Major rewrite to streamline and create a more concise procedure. Document reduced from 57 pages to 16 pages.
10	06/05/2002	Added References. Changes to CCP Technical Supervisor responsibilities. Added Training Evaluations to Records section. Deleted 4.2.5 Audit Personnel Qualifications. Other changes for clarification and consistency.
11	09/12/2002	Deleted Sections 3.3.2 and 3.3.3.
12	10/24/2002	Added Steps 3.8.2 and 3.8.3 in response to SRS Recertification Audit.
13	06/30/2003	Added NDE RTR Section, revised qualification letter and other minor editorial changes. Separated electronically fillable forms and updated references in procedure.
14	12/02/2003	Revision initiated to address CAR# 04-002 identified during CBFO audit A-04-03 and CAR# CCP-0009-03. Added information about RTR audio/videotapes and Capability Demonstrations. Added paragraph 4.2.3[A.5] discussing qualification card addenda. Added section 4.2.4[C] discussing FQAO appointment requirements.
15	03/10/2004	Added Capability Demonstration Instructions (Attachment 2) and CCP Capability Demonstration Data Sheet (Attachment 3 or CCP-QP-002-A1).
16	12/07/2004	Deleted the Technical Supervisor responsibilities section and incorporated them into the Vendor Project Manager responsibilities. Added partial qualification section. Removed requirement for the Site Project Manager to appoint the Facility Quality Assurance Officer by letter.
17	06/06/2005	Addressed CAR 05-029 and CAR 05-033 identified during Carlsbad Field Office (CBFO) Audits A-05-09 and A-05-12. Areas modified were qualification requirements for Nondestructive Assay (NDA) Expert Analyst and examination requirements for Central Characterization Project (CCP) Helium Leak Detection (HLD) Level III.
18	12/13/2005	Clarified roles and responsibilities in reviewing Capability Demonstration training audio/video media and modified Attachment 3 – CCP Capability Demonstration Data Sheet.
19	12/15/2005	Clarification for Level of Qualification in step 4.2.2[B.1].

RECORD OF REVISION (Continued)

Revision Number	Date Approved	Description of Revision
20	05/03/2006	Addressed CAR-RHINL-0001-06. Incorporated Remote-Handled waste training and position requirements. Restructured for improved flow.
21	06/13/2006	Updated step 4.2.5 to delete the word “training” from the requirements for VE Operator/ITR/TS/FQAO.
22	11/16/2006	Revised to implement the Waste Isolation Pilot Plant Hazardous Waste Facility Permit requirements resulting from the Section 311/Remote-Handled (RH) Permit Modification Request (PMR). Addressed Carlsbad Field Office (CBFO) Document Review Record (DRR) comments.
23	02/01/2007	Revised to address CCP Quality Assurance Surveillance Number SUR-CCP-0005-06.
24	02/27/2007	Revised to address concern raised during Surveillance #S-07-18.
25	05/08/2007	Revised to address Corrective Action Report (CAR) SRS-0002-07.
26	02/07/2008	Revised to address U.S. Department of Energy (DOE) Carlsbad Field Office (CBFO) Corrective Action Report (CAR) 08-004.
27	09/30/2008	Revised to change nondestructive examination (NDE) to comply with Management Assessment MA-CCP-0023-08. Also revised Section 5.1.1[J] in response to Carlsbad Field Office (CBFO) Corrective Action Report (CAR) 08-036.
28	05/26/2010	Revised to address Corrective Action Report (CAR)-CCP-0012-09, to clarify Acceptable Knowledge (AK) briefings, training for solids lab, and approval process for training material. References to Central Characterization Project (CCP) Program Manager/Project Manager were removed and the responsibilities assigned to the Lead Site Project Manager and CCP Manager responsible for Training.
29	07/08/2010	Revised to incorporate changes into Attachment 4, CCP Test Drum Data Sheet for Contact-Handled Waste, and other minor editorial changes.
30	12/29/2010	Revised to bring into compliance with the revision of the *Waste Isolation Pilot Plant Hazardous Waste Facility Permit.*

RECORD OF REVISION (Continued)

Revision Number	Date Approved	Description of Revision
31	04/21/2011	Revised based on Revision 2 of the DOE/WIPP 02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*.
32	04/03/2012	Revised to simplify the process for tracking waste stream Summary Training in Section 4.2. Added full requalification as an option in Section 4.1.2 [I]. Added the Training Module in Integrated Data Center (IDC) as a source of Training information to the note in Section 4.1. Incorporated Standing Orders CCP-SO-051 in Section 4.4.1[C], CCP-SO-069 in Section 4.2, and CCP-SO-078 in Section 4.1.2[F]. Expanded Section 4.1.1 to add a documented analysis of positions requiring qualification, in response to Carlsbad Field Office (CBFO) Corrective Action Report (CAR) 12-010.
33	08/30/2012	As a corrective action in response to CBFO CAR 12-033, revised the document to remove references to Lead SPMs and Alternate SPMs, so that any qualified SPM may perform the actions in Section 3.1.
34	01/30/2013	Revised to incorporate Standing Order CCP-SO-086, *Clarification of the Time Period for Performance of the RTR Semiannual Training Container Required by CCP-QP-002*; incorporate changes to DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*; update the title of the organization, as appropriate; and minor editorial changes.

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1.0 PURPOSE

NOTE

CCP-QP-040, *Support Training,* applies to those activities that do not fall under the scope of CCP-QP-002, *CCP Training and Qualification Plan* as defined herein. CCP-QP-040 applies to those positions which are not covered by the baseline documents listed in Section 2.1 of this document.

This plan describes the responsibilities of personnel involved in the Central Characterization Program (CCP) Qualification and Training Program. This plan also describes the process for identifying qualification and training requirements for all personnel and technical support personnel, who perform characterization, packaging, certification, and activities.

1.1 Scope

This plan applies to all personnel who conduct quality-affecting activities associated with transuranic (TRU) waste under the CCP, including characterization, packaging, certification, and transportation.

Personnel under this plan are qualified and trained to ensure suitable proficiency is achieved and maintained for assigned tasks. Training and qualification requirements are commensurate with the nature of the activities and level of responsibility.

Training will emphasize the correct performance of work, provide a description of why quality, safety, and TRU waste characterization and certification requirements exist, and describe the fundamentals of the work and its context.

Training will be subject to an on-going evaluation to determine instruction and training program effectiveness and will be upgraded whenever needed improvements or enhancements are identified.

2.0 REQUIREMENTS

2.1 References

Baseline Documents

- DOE/WIPP 02-3183, *CH Packaging Program Guidance*
- DOE/WIPP 02-3184, *CH Packaging Operations Manual*
- DOE/WIPP 02-3185, *CH Packaging Maintenance Manual*
- NRC Docket 71-9212, *RH-TRU 72-B Safety Analysis Report*, Rev. 3, November 2002
- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- CCP-PO-002, *CCP Transuranic Waste Certification Plan*
- CCP-PO-003, *CCP Transuranic Authorized Methods For Payload Control (CCP-CH-TRAMPAC)*

Referenced Documents

- DOE/WIPP 02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*
- ASNT SNT-TC-1A, *Recommended Practice for Personnel Qualification and Certification in Nondestructive Testing,* American Society for Nondestructive Testing (1980 Edition)
- ASTM C1490, *Standard Guide for the Selection, Training, and Qualification of Nondestructive Assay (NDA) Personnel*
- CCP-QP-008, *CCP Records Management*
- CCP-QP-030, *CCP Written Practice for the Qualification of CCP Helium Leak Detection Personnel*
- CCP-QP-032, *CCP Written Practice for the Qualification of CCP Pressure Change Leak Testing Personnel*
- CCP-TP-028, *CCP Radiographic Test Drum and Training Container Construction*

3.0 RESPONSIBILITIES

3.1 Site Project Manager (SPM)

3.1.1 Oversees planning, characterization, and certification activities.

3.1.2 Ensures personnel are qualified and trained to perform their assigned job functions.

3.1.3 Determines initial and continuing qualification and training requirements in cooperation with appropriate Cognizant Engineer (CE), Manager Responsible for Training, and Training to ensure job proficiency is maintained.

NOTE

Staffing changes includes situations where individuals are brought into, re-assigned, or are leaving the program (i.e., situations which require a change to a List of Qualified Individuals [LOQI]).

3.1.4 Notifies Training of staffing changes and candidates for job positions and provides supporting documentation (e.g., resumes, certificates, diplomas, training records).

3.1.5 Verifies education/experience requirements for Nondestructive Assay (NDA) Expert Analysts (EA).

3.1.6 Appoints Visual Examination Experts (VEE), NDA Expert Analysts (EA), and the remote-handled (RH) Technical Staff, based on education and experience, if applicable.

3.1.7 Reviews and approves Qualification Cards.

3.1.8 Ensures project personnel who are assigned to perform project activities that affect quality:

[A] Are cognizant of the qualification and training requirements of this plan.

[B] Satisfy qualification and training requirements for the tasks associated with their assigned job classification(s).

3.1.9 Ensures the requirements of this plan are implemented, as follows:

[A] Personnel receive training and qualification, as necessary, to achieve initial proficiency, maintain proficiency, and adapt to changes in technology, methods, job responsibilities, and quality implementing procedures, prior to performing or verifying any waste characterization, certification, or transportation activities.

3.1.10 Appoints qualified personnel as Subject Matter Expert (SME)/On-the-Job Training (OJT) Instructors.

3.1.11 Ensures qualification and training documentation is complete and is submitted to Training.

3.1.12 Evaluates and documents personnel job performance at periodic intervals (as a minimum, during requalification).

3.1.13 Notifies the Manager Responsible for Training when full requalification is required (e.g., when an individual has been disqualified for unsatisfactory performance).

3.1.14 Analyzes positions to determine major job/task responsibilities as a basis for preparation of qualifications cards (shared responsibility).

3.2 Vendor Project Manager (VPM)

3.2.1 May administer the annual eye examination.

3.3 Training

3.3.1 Determines initial and continuing qualification and training requirements for positions in cooperation with an appropriate SME/OJT Instructor, the CE, and a Site Project Manager (SPM) using a graded approach that is commensurate with scope, complexity, and nature of the work to include:

[A] Descriptions of the fundamentals of the work and the context in which the work is performed.

[B] Identification of the applicable quality and safety requirements related to job performance.

[C] Emphasis on the correct performance of work in accordance with established procedures and/or other relevant technical documents.

[D] Inclusion of education in both principles and enhancement of skills.

3.3.2 Supports a SPM in evaluating training and qualification requirements of each position. This may be done by, but is not limited to, evaluating training requirements using a training analysis. The analysis will result in an approved task list from which tasks may or may not be selected for training. When completed, the analysis will be signed by participants, and the task list reviewed and approved by the designated SME/OJT, the CE, a SPM, and the Manager Responsible for Training for completeness of training requirements.

3.3.3 Develops, implements, and monitors training required to maintain qualification of personnel.

3.3.4 Ensures project-required training effectiveness is reviewed when the need for improvements or enhancements is identified, and ensures the training program is updated.

3.3.5 Maintains documentation of current personnel training status.

3.3.6 Issues approved training materials and assists in the completion of qualifications and training activities.

3.3.7 Prepares Qualification Cards.

3.3.8 Returns incomplete/incorrect training materials to candidate's manager, as applicable.

3.3.9 Ensures qualification, training records, and supporting documentation (including video and audio recorded media for test drum) are maintained, secured, and controlled in accordance with CCP-QP-008, *CCP Records Management*.

3.3.10 Prepares LOQIs delineating those individuals who have completed Qualification Cards, and distributes to the applicable site.

3.3.11 Reviews, develops, and approves Comprehensive Examinations for thoroughness and adequacy.

3.3.12 Reviews real-time radiography (RTR) completed Attachment 4, Test Drum Data Sheet for Contact-Handled (CH) Waste, video and audio recorded media in accordance with CCP-QP-008, *CCP Records Management*.

3.4 SME/OJT Instructor

NOTE

Before any OJT can be performed, it is necessary to initially qualify one SME/OJT Instructor for each discipline based on education and experience. The basis for SME/OJT Instructor qualification will be provided by an SPM and documented in the applicable Training files. The qualification is by discipline and is non-site specific. The basis for qualification will be used to complete a qualification card for the candidate as an SME/OJT Instructor. The successful candidate will be added to the appropriate LOQI(s) once the qualification card is complete.

The SME/OJT Instructor will have adequate education and/or technical knowledge in the applicable discipline, communication skills, and ability to provide trainees with hands-on experience, as determined by an SPM. Technical knowledge may be based on experience with the applicable process or involvement in development of operational procedures or qualification requirements for the applicable process.

The Mobile Loading Unit (MLU) Field Operations Manager (or designee) will appoint SME/OJTs for Transportation Activities.

All SME/OJT candidates must complete the SME/OJT briefing and test.

3.4.1 Provides supervised hands-on training in the work environment to accomplish performance objectives of the training tasks.

3.4.2 Determines initial and continuing qualification and training requirements for NTPC positions in cooperation with a SPM, the CE, the Manager Responsible for Training, and Training.

3.4.3 Ensures trainee(s) have satisfactory knowledge of and competence in skills requirements, as defined on the Qualification Card.

3.4.4 Verifies the correct revision of the qualification card is being used.

3.4.5 Signs and dates Qualification Card, indicating acceptable performance levels are met.

3.4.6 Provides all training documentation generated to an SPM for review and approval.

3.4.7 Analyzes positions to determine major job/task responsibilities as a basis for preparation of qualifications cards (shared responsibility).

3.5 Personnel

3.5.1 Provides copies of their qualification documents (e.g., resumes, education, and experience) to an SPM or Training as applicable.

3.5.2 Completes initial training in accordance with this procedure, as stated on each individual's Qualification Card.

3.5.3 Ensures qualification requirements are completed and signed off before performing assigned tasks without supervision.

3.5.4 Maintains requisite qualifications throughout the duration of work.

3.5.5 Attends CCP and site-specific training, as necessary.

3.6 Trainee

3.6.1 Completes Qualification Card(s) in a timely manner.

3.6.2 Works only under the supervision of a qualified operator or a SME/OJT Instructor.

3.7 Facility Records Custodian

3.7.1 Receives, processes, and transmits records generated at the facility by this procedure in accordance with CCP-QP-008.

3.8 Manager Responsible for Training

3.8.1 Reviews and approves all training material for applicability and technical content.

3.8.2 Determines when full requalification is required.

3.8.3 Analyzes positions to determine major job/task responsibilities as a basis for preparation of qualifications cards (shared responsibility).

3.9 Cognizant Engineer (CE)

3.9.1 The CE is designated for each specific process by the NTPC Manager based on their education, knowledge, and experience for the characterization process.

3.9.2 The CE has overall responsibility for the implementation and quality of the characterization activity.

3.9.3 The CE reviews all training material for applicability and technical content.

3.9.4 Analyzes positions to determine major job/task responsibilities as a basis for preparation of qualifications cards (shared responsibility).

4.0 PROCEDURE

4.1 General Training Requirements

NOTE

The Training Module in the Integrated Data Center (IDC) provides information that may be used to update and maintain the information in documents provided by training, such as the LOQI. Such usage will be described in the applicable sections of this procedure.

4.1.1 Personnel selected to perform or verify NTPC activities will have the education, experience, and training commensurate with job position requirements. The need for job position Qualification Cards will be determined by a SPM, the CE, and the Manager Responsible for Training.

[A] Job position requirements will be analyzed and documented to determine the major duties and tasks associated with the position, as a basis for developing the Qualification Card for each activity requiring qualification. The analyses will be performed by a SPM, a SME/OJT Instructor, the CE, and the Manager Responsible for Training.

[B] A separate analysis may not be required for new positions where the major duties and tasks are closely-related to those for an existing, already-analyzed position. This determination will be made and documented by the performers identified in [A], above.

4.1.2 All training candidates are required to complete a Qualification Card to verify that they possess the knowledge and skills necessary to competently perform specified tasks.

[A] Qualification Cards technical content will be determined by a SME/OJT Instructor, the CE, the Manager Responsible for Training, and a SPM based on project requirements and federal and state regulations.

NOTE

The qualification cards for Helium leak Detection Personnel are issued in accordance with CCP-QP-030, *CCP Written Practice for the Qualification of CCP Helium Leak Detection Personnel*. The qualification cards for Pressure Change Leak (PCLT) Testing personnel are issued in accordance with CCP-QP-032, *CCP Written Practice for the Qualification of CCP Pressure Change Leak Testing Personnel*.

[B] All Qualification Cards shall be issued by Training.

[C] The SME will verify current revision.

[D] Training will verify that prerequisites are met.

[E] Upon completion of the Qualification Card, candidates are considered qualified to perform their respective duties.

[F] The Qualification Cards will contain the following information:

[F.1] Name of job position.

[F.2] Revision number and effective date.

[F.3] Trainee's name.

[F.4] Signature spaces for approvals of format, technical content, and use by a SME/OJT, the CE, a SPM, and the Manager Responsible for Training, as applicable.

[G] The Qualification Card will be divided into the following parts, as applicable:

[G.1] Education/Experience.

[G.2] Job Specific Training (which may include):

- Indoctrination/Orientation
- Initial Reading
- Formal Training
- National Standards Certifications
- OJT
- Signature line and date for trainee
- Approval section for a SME/OJT
- Approval section for a SPM

[G.3] If a Qualification Card requires changes, the following is performed:

(a) Training, prepare the revised Qualification Card, using the next sequential revision number.

(b) Training, route the revised Qualification Card to the following for review and approval: a SME/OJT, the CE, a SPM, and the Manager Responsible for Training.

(c) Training, upon approval, place a new effective date on the Qualification Card and issue the Qualification Card.

[G.4] Other required formal training materials, such as the Waste Analysis Plan (WAP)/Quality Assurance Project Plan (QAPjP) Briefing or training determined by a training evaluation (i.e., classroom, OJT, or self-paced instruction) shall be approved for format, technical content, and use by a SPM and the Manager Responsible for Training.

(a) As initial and continuing qualification and training requirements change, these approved training materials shall be revised by Training.

(b) All approved training materials shall be maintained, secured, and controlled by Training.

[H] Operational Positions (e.g., RTR, NDA, etc.) require requalification every two (2) years. Exceptions are: Helium Leak Detection (HLD) Level III (Limited) has a three year requalification requirement. If necessary, additional training may be required by a SPM, or the Manager Responsible for Training. The sections of the qualification card that must be re-performed during each requalification are identified on the Qualification Cards.

NOTE

Requalifications are due by the end of the month in which the qualification period falls, unless a specific date is listed on the qualification card.

[I] Requalification of Project Office positions is not required.

[J] Unsatisfactory performance will result in disqualification by the Manager Responsible for Training. The candidate must successfully complete a full requalification (i.e., repeat the entire Qualification Card) to re-establish qualification.

[K] Full requalification is also required when a SPM and the Manager Responsible for Training jointly determine that an individual has not been performing in the qualified function for a significant period of time, due to re-assignment and return, or extended absence from the position for other reasons. Typically, full requalification would apply after an absence from the position of more than one year; however, there may be extenuating circumstances and each occurrence is reviewed and documented on a case-by-case basis.

4.1.3 Completion of the Waste Isolation Pilot Plant (WIPP) WAP/QAPjP Briefing is a pre-requisite for all personnel before they perform *Waste Isolation Pilot Plan, Waste Analysis Plan* (WIPP-WAP) specific tasks.

NOTE

RTR and visual examination (VE) personnel shall be trained on newly developed and revised waste stream reports which change the waste generating processes, packaging, and expected waste material parameters (WMP) expected to be found in each Waste Matrix.

4.2 Waste Stream Summary Training

4.2.1 An SPM in conjunction with Acceptable Knowledge Expert (AKE), develop the training in the form of a briefing which identifies as a minimum the following:

- Specific waste generating processes
- Packaging
- WMP for the waste matrix code

4.2.2 SPM, provide the briefing to the required RTR and VE personnel.

4.2.3 SPM, submit the briefing materials and the completed briefing sheet(s) (or personnel can send individual e-mail acknowledgements) to Training.

4.2.4 Training, update the LOQI for all personnel who received the briefing, showing that they are qualified to perform work on the identified waste stream.

[A] Remove the qualified status for the identified waste stream from the LOQI when either:

[A.1] The SPM so directs, because the waste stream is no longer active, or

[A.2] The Training Module in the IDC shows that the waste stream is no longer active.

4.3 Specific Qualification and Training Requirements

4.3.1 Acceptable Knowledge (AK) Personnel

[A] Personnel assigned to compile, evaluate, and resolve discrepancies associated with acceptable knowledge (AK) information, require the following:

[A.1] WIPP-WAP Briefing.

[A.2] Waste Acceptance Criteria (WAC) knowledge.

[A.3] DOE/WIPP 02-3214, *Remote Handled TRU Waste Characterization Program Implementation Plan* knowledge.

[A.4] Training on Federal and State Resource Conservation and Recovery Act (RCRA) regulations associated with solid and hazardous waste determinations. Training requirement will be satisfied by documented completion of a formal RCRA training program, (e.g., a commercially available RCRA Seminar, or a SPM's documented evaluation of adequate training and/or experience).

[A.5] Knowledge of procedures associated with:

(a) Waste characterization using AK.

(b) AK records development including AK discrepancy resolution.

(c) Nonconformance Report (NCR)/Corrective Action Report (CAR) Process

[A.6] Knowledge of resolving and managing prohibited items as noted in nonconformance reporting.

4.3.2 RTR Operator/Independent Technical Reviewer (ITR)

[A] Qualification Process

[A.1] An individual qualifying as an RTR Operator/ITR is considered a trainee. A trainee will work only under the supervision of a qualified operator or SME/OJT Instructor.

[A.2] All RTR personnel will be trained to the guidance of American Society for Nondestructive Testing (ASNT) Recommended Practice Number SNT-TC-1A, *Recommended Practice for Personnel Qualification and Certification in Nondestructive Testing,* modified to suit the RTR application/method.

[A.3] An RTR Operator/ITR will:

(a) Be able to set up and operate equipment, and qualified to interpret and evaluate results with respect to applicable codes, standards, and specifications.

(b) Be thoroughly familiar with the scope and limitations of RTR.

(c) Exercise the responsibility for OJT and apprenticeship of trainees.

(d) Be able to prepare written instructions.

(e) Be able to organize Batch Data Reports (BDRs) with the results of RTR.

[B] Education, Training, and Experience Requirements for Initial Qualification

[B.1] Personnel considered for qualification in RTR must have sufficient education, training, and experience to ensure understanding of the principles and procedures.

[B.2] Education requirements are listed in Attachment 1, Minimum Education and Experience for other Key Positions.

[B.3] Personnel being considered for qualification as an RTR Operator/ITR will complete organized training to become familiar with the principles and practices of the applicable RTR method.

[B.4] A certificate from an approved vendor stating that the individual operator is a qualified RTR operator Level II SNT-TC-1A.

[B.5] To be considered for qualification as an RTR Operator/ITR, the trainee must:

(a) Pass the required examinations in step 4.3.2[C].

(b) Complete the Qualification Card.

[B.6] Any previous training and experience gained in a position similar to the RTR Operator/ITR position may be considered in satisfying the qualification criteria of this procedure and shall be documented in the Training file (i.e., resume).

[C] Examinations

[C.1] Physical

(a) All trainees will pass an initial eye examination to ensure natural or corrected near-distance acuity in at least one eye. The trainee must be capable of reading Jaeger Number 2 at a distance of not less than twelve (12) inches on a standard Jaeger test chart.

(b) The eye examination will demonstrate the capability of distinguishing and differentiating contrast used in RTR.

(c) The eye examination will be administered on an annual basis and the results maintained in the Training files. The Vendor Project Managers (VPMs) at each site may administer the eye examination.

[C.2] Comprehensive

(a) Pass a program-specific comprehensive exam with an 80 percent or better grade that addresses radiography operations, documentation, characterization, and procedural elements.

[C.3] Test Drum (Capability Demonstration)

NOTE

The requirement for completing the test drum defined in the Waste Characterization Program Implementation Plan (WCPIP) is met by successfully completing the Training Container.

Test Drums (Capability Demonstrations) are due by the end of the month in which the qualification period falls.

(a) At initial qualification and subsequent requalification, successfully examine a test drum that includes items common to the waste streams and is representative of the waste matrix codes and WAC required items.

(b) Use Attachment 3, Test Drum Instructions for Contact-Handled Waste Drums.

(c) Documentation required for test drums is as follows:

(c.1) Nondestructive Examination (NDE) Test Drum Inventory Sheet (from CCP-TP-028, *CCP Radiographic Test Drum and Training Container Construction*).

(c.2) Attachment 4, Test Drum Data Sheet for Contact-Handled Waste.

(c.3) Video and audio recorded media of the test drum.

[C.4] Training Container

NOTE

A Training Container is required by CH and RH operators at initial qualification, requalification, and semi-annually. The nominal period for performance of the Training Container is every six months, due by the end of the month of the sixth month from the date the Training Container was successfully passed.

The Training Container will contain items which can be identified by RTR, are representative of the physical properties of the waste based on AK documentation reviewed, and prohibited items.

(a) At initial qualification, requalification, and semiannually, successfully examine a Training Container and identify 100 percent of the items required to meet the Data Quality Objectives (DQO's).

(b) Use Attachment 5, Training Container Instructions

(c) Documentation required for Training Containers is as follows:

(c.1) NDE Training Container Inventory Sheet (from CCP-TP-028).

(c.2) Attachment 6, Training Container Evaluation Data Sheet

(c.3) Video and audio recorded media of the Training Container

(d) The NDE CE will review the audio/video recording to ensure the operator's interpretations remain consistent and accurate.

(e) The NDE CE or the SPM may request an extension of the period between performances of the Training Container for up to one additional month (for a total of seven months between Training Containers, beginning with the date the examination was reviewed and approved by the CE).

(e.1) Upon receipt of a written request from the SPM or NDE CE, Training will extend the Training Container due date for the operator on the LOQI.

(e.2) The request will be retained by Training.

(e.3) When Training receives evidence the operator has satisfactorily completed the Training Container, Training will enter a due date for the next Training Container that takes into account the earlier extension (e.g., 5 month due date, not 6 month).

(e.4) If the operator exceeds the one month extension due date on the LOQI, Training will remove the individual from the LOQI until the Training Container has been successfully completed.

(e.5) Extension is not permitted at the time of requalification.

[D] Qualification

[D.1] Successful qualification of the RTR Operator/ITR is documented by completing the Qualification Card.

[D.2] To maintain qualifications, the CH and RH RTR Operator/ITR must perform a Training Container semiannually, documented on Attachment 6.

[D.3] Complete an annual eye examination.

[E] Requalification

[E.1] Requalification is based on evidence of satisfactory performance of a test drum, a training container, and passing a comprehensive exam with a grade of 80 percent or better once every two years. If necessary, additional training may be required by a SME/OJT, a SPM, the CE, or the Manager Responsible for Training.

4.3.3 Transportation personnel who require qualification in HLD are trained in accordance with CCP-QP-030 and documented on Attachment 1, CCP HLD Qualification Card of CCP-QP-030.

4.3.4 Transportation personnel who require qualification in PCLT are trained in accordance with CCP-QP-032 and documented on Attachment 1, CCP PCLT Qualification Card.

4.3.5 NDA EA requires the completion of a EA Qualification Card.

4.3.6 Head Space Gas (HSG) Analysis personnel are those who perform functions outlined in Attachment 1 (e.g., Gas Chromatography/Mass Spectrometry and Operators).

[A] Minimum education and experience requirements are identified in Attachment 1.

[B] Competency and verification will be documented in the Training files, outlining analytical experience and employment history.

4.3.7 Solid Analysis personnel are those who perform functions outlined in Attachment 1.

[A] Minimum education and experience requirements are identified in Attachment 1.

[B] Competency and verification will be documented in the Training files, outlining analytical experience and employment history.

4.3.8 Visual Examination (VE) Operator/ITR

[A] For the initial qualification and subsequent requalification, the Operator/ITR must:

[A.1] Pass comprehensive exam with an 80 percent or better grade that addresses VE operations, documentation, characterization, formal training elements, and procedural elements.

[A.2] VE Operators must demonstrate capability in the presence of the site VEE during OJT. However, the formal and OJT training is conducted by a qualified SME.

4.4 Appointments

4.4.1 For VEE candidate(s), a SPM performs the following:

[A] Review the training files for qualification/familiarity to waste stream, experience handling TRU waste, and VE Operator qualifications.

[B] Provide written notification to Training delineating the candidate's qualifications and experience.

[C] Ensures that the appointments are facility–specific.

4.4.2 For NDA EA candidate(s), a SPM will perform the following:

[A] Review the training files for an undergraduate degree in physical science or engineering and five years NDA experience; or ten equivalent years of experience in the NDA field.

[B] Provide written notification to Training delineating the candidate's qualifications and experience.

4.4.3 For RH Technical Staff candidate(s), a SPM will perform the following:

[A] Review the training files for the minimum requirements identified in Attachment 2, Other Required Minimum Training, Education, and Experience

[B] Provide written notification to Training delineating the candidate's qualifications and experience.

5.0 RECORDS

5.1 Records generated during the performance of this plan are maintained as quality assurance (QA) records in accordance with CCP-QP-008. The records are the following:

5.1.1 QA/Nonpermanent Records

[A] Written Notification of Appointment

[B] Letters to Training

[C] Certificates of Completion

[D] Analysis documentation for positions requiring qualification

[E] Qualification and training records

[E.1] OJT records

[E.2] Completed exams

[E.3] Qualification Card

[F] Training materials (e.g., course presentation, exam)

[G] Completed attendance/briefing forms,

[H] Training evaluations (which may include a Table-Top Job Analysis)

[I] Attachment 4, Test Drum Data Sheet for Contact-Handled Waste

[I.1] Audio and Video Recording media (primary and backup)

[J] Attachment 6, Training Container Evaluation Data Sheet

[J.1] Audio and Video Recording media (primary and backup)

[K] Resumes as applicable

[L] Comprehensive Examinations

[M] WAP Briefing

[N] Eye Examination (Medical)

- Attachment 7 – Annual Record of RTR Eye Examination, when applicable
- Independent Eye Examination (from medical facility), when applicable

[O] Training Module (Electronic)

Attachment 1 – Minimum Education and Experience for other Key Positions

Personnel	Requirements
Radiography Operators	Site specific training based on waste matrix codes and waste material parameters; requalification every two years.
FTIRS Technical Supervisors[b] FTIRS Operators[c]	Site-specific and on-the-job training based on the site-specific FTIRS[a] system; requalification every two years.
Gas Chromatography Technical Supervisors[b] Gas Chromatography Operators[c]	B.S. or equivalent experience and six months previous applicable experience[a].
Gas Chromatography/Mass Spectrometry Operators[c] Mass Spectrometry Operators[c]	B.S. or equivalent experience and one year independent spectral interpretation or demonstrated expertise[a].
Gas Chromatography/Mass Spectrometry Technical Supervisors[b] Mass Spectrometry Technical Supervisors[b] Atomic Absorption Spectroscopy Technical Supervisors[b] Atomic Absorption Spectroscopy Operators[c] Atomic Mass Spectrometry Operators[c] Atomic Emission Spectroscopy Operators[c]	B.S. or equivalent experience and one year applicable experience[a].
Atomic Mass Spectrometry Technical Supervisors[b]	B.S. and specialized training in Atomic Mass Spectrometry and two years applicable experience[a]
Atomic Emission Spectroscopy Technical Supervisors[b]	B.S. and specialized training in Atomic Emission Spectroscopy and two years applicable experience[a].

[a] Based on requirements contained in *USEPA Contract Laboratory Program Statement of Work for Organics Analysis* (Document Number OLM 01.0) and *Statement of Work for Inorganics Analysis* (Document Number ILM 03.0).

[b] Technical Supervisors are those persons responsible for the overall technical operation and development of a specific laboratory technique. QAPjPs shall include the site-specific title for this position.

[c] Operators are those persons responsible for the actual operation of analytical equipment. QAPjPs shall include the site-specific title for this position.

Attachment 2 – Other Required Minimum Training, Education, and Experience

Personnel	Education/Experience
1. Nondestructive Assay (NDA)	
NDA Personnel	In accordance with ASTM C1490, *Standard Guide for Selection, Training, and Qualification of Nondestructive Assay (NDA) Personnel;* ANSI N15.54, *Radiometric Calorimeters- Measurement Control Program.*
2. Technical Staff	
RH Technical Staff	B.S. Nuclear Engineering or the equivalent knowledge and experience to perform assigned tasks, including: • Calculation of reactor neutron spectra • Generate ORIGEN format cross sections • Perform ORIGEN isotope generation and depletion calculations • Ensure that appropriate samples are collected and analyzed from waste • Perform shielding calculation of waste containers **OR** B.S. degree in statistics or the equivalent knowledge and experiences to problem assigned tasks, including: • Develop Sampling plan to obtain representative samples of waste. Propagate uncertainties to determine Total Measurement Uncertainty.
RH Technical Reviewer	• Equivalent qualifications necessary to have originally performed the task under review. At least five years experience in the technical area applicable to the review task.

Attachment 3 – Test Drum Instructions for Contact-Handled Waste Drums

OPERATOR

1.0 In the presence of a RTR SME/OJT Instructor, perform the following:

1.1 Pre-start operations and video and audio recording media system setup of the RTR equipment per site approved radiography operating procedure.

1.2 Load the test drum into the RTR unit.

1.3 Complete Blocks 1 through 4 of Attachment 4.

1.4 Perform scan of the test drum and complete Blocks 5 and 6 of Attachment 4. Provide a detailed description (including content) of all items found within the container.

1.5 Complete Block 7.

1.6 Forward the video and audio recording media to a RTR SME/OJT Instructor.

SME/OJT INSTRUCTOR

2.0 Observe the test drum and complete Attachment 4 as follows:

2.1 **IF** the Operator has correctly identified the items within the test drum, **THEN** check PASS in Block 9, print name, sign, and date Block 10, **AND** forward the video and audio recording media and Attachment 4 to the Facility Records Custodian.

2.2 **IF** the Operator DOES **NOT** identify all WAC required prohibited items in Block 8 on Attachment 4 correctly,
THEN perform the following:

2.2.1 Document unidentified WAC required prohibited items in Block 8 on Attachment 4.

2.2.2 Check FAIL in Block 9 of Attachment 4.

2.2.3 Print name, sign, and date in Block 10 of Attachment 4.

2.2.4 Notify an SPM and Training.

2.2.5 Forward Attachment 4 and the video and audio recording media to the Facility Records Custodian.

Attachment 3 – Test Drum Instructions for Contact-Handled Waste Drums (Continued)

NOTE
RTR Personnel who fail the test drum will be requalified after meeting initial qualification requirements.

2.3 **IF** any items (other than WAC-required items) were not identified, **THEN** discuss and document the noted discrepancies with the Operator, **AND** provide documentation along with the required test drum documentation.

2.3.1 Document unidentified items on Attachment 4, Block 8, **AND** discuss with the Operator.

2.3.2 Check PASS in Block 9 of Attachment 4.

2.3.3 Print name, sign, and date in Block 10 of Attachment 4.

2.3.4 Forward Attachment 4 with the video and audio recording media to the Facility Records Custodian.

FACILITY RECORDS CUSTODIAN

3.0 Transmit the video and audio recording media and Attachment 4 to Training in accordance with CCP-QP-008.

TRAINING

4.0 Ensure receipt of all required test drum documentation stated in step 4.3.2[C.3](a) of CCP-QP-002.

Attachment 3 – Test Drum Instructions for Contact-Handled Waste Drums (Continued)

5.0 **IF** notified by the RTR SME/OJT Instructor that a currently qualified Operator has failed the test drum,
THEN perform the following:

5.1 Remove the Operator from the LOQI.

5.2 Notify an SPM.

6.0 **IF** Attachment 4 indicates PASS,
THEN perform the following:

6.1 Update the LOQI and the Training files.

Attachment 4 – Test Drum Data Sheet for Contact-Handled Waste

1. Name:	
2. Test Drum #:	**3. Date of Demonstration:**
4. Video and Audio Recording Media Label:	
5. Container Inventory (Provide detailed description)	
6. Operator Printed Name: _____	
Operator Signature: _____ **Date:** _____	

Attachment 4 – Test Drum Data Sheet for Contact-Handled Waste (Continued)

7. Name:				
8. As SME/OJT Instructor, I observed the above demonstration and discussed the below missed items with the Operator.				
WAC Required items missed by Operator (check applicable items)		**Other items missed by Operator**		
	Aerosol can with puncture			
	Horsetail bag			
	Pair of coveralls			
	Empty bottle			
	Irregular shaped pieces of wood			
	Empty one gallon paint can			
	Full container			
	Aerosol can with fluid			
	One gallon bottle with three tablespoons of fluid			
	One gallon bottle with one cup of fluid (upside down)			
	Leaded glove or leaded apron			
	Wrench			
9. I have assigned a grade based on the review above.		**PASS**		**FAIL**
10. SME/OJT Instructor printed name:				
SME/OJT Instructor signature:			**Date:**	

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Attachment 5 – Training Container Instructions

OPERATOR

1.0 Perform the following:

1.1 Verify the RTR unit and video/audio system is configured to run the training container.

1.2 Load the training container into the RTR unit.

1.3 Perform scan of the training container, identifying training container, detailed description of contents including container sizes and volumes of liquid if prohibited.

2.0 Forward the video and audio (primary and backup) recording media to Training, in accordance with CCP-QP-008.

Training

3.0 Forward a copy of the video and audio record to the NDE CE.

RTR CE

4.0 Complete information required in Blocks 1-4 of Attachment 6.

5.0 Review the Training Container scan and document discrepancies (accuracy and consistency) in Block 5 on Attachment 6.

6.0 Record in Block 6 on Attachment 6 if the operator passed or failed based on identification of the DQOs.

7.0 Print, Sign, and Date in Block 7, Attachment 6.

8.0 Forward Attachment 6 and the video and audio recording media to Training.

TRAINING

9.0 Ensure receipt of all required documentation.

9.1 Update Training files and the LOQI.

Attachment 6 – Training Container Evaluation Data Sheet

1. Name:			
2. Training Container #:		□ Box □ Drum	
3. Date of Demonstration:			
4. Video and Audio Recording Media Label:			
5. I have counseled the operator on the following interpretation issues.			
6. PASS		**FAIL**	
7. RTR CE Printed Name:			
RTR CE Signature:		**Date:**	

Attachment 7 – Annual Record of Eye Examination

Employee Name:		
Examination Date:		
Examined by:		
	Printed name	
	Signature	
Examination Type:	**Jaeger- near acuity**	
Jaeger Level Tested:	**J-2**	
Results: **(circle one)**	**Pass**	**Fail**
Contrast Proficient: **(circle one)**	**Yes**	**No**

Note:

A visual acuity examination shall be administered to the candidate prior to the initial qualification and annually thereafter.

A professional optometrist, medical doctor, nurse, or personnel designee by procedure shall administer this examination.

The candidates shall have natural or corrected near distance acuity in at least one eye, capable of reading J-2 letters on a standard Jaeger test chart at a distance of not less then 30.5 centimeters (12 inches).

The candidate shall receive a contrast vision examination to verify the capability of distinguishing and differentiating contrast normally used.

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CCP-QP-005

Revision 22

CCP
TRU Nonconforming
Item Reporting and Control

EFFECTIVE DATE: 09/27/2012

Mike Ramirez

PRINTED NAME

APPROVED FOR USE

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RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
17	08/27/2008	Revised to include language describing the process the Central Characterization Project (CCP) personnel use when performing open Nonconformance Report (NCR) checks and whether the NCR is "resolved" for a particular container in conjunction with software changes to the Progress Tracking System (PT-S) (NCR status) portion of the CCP Datacenter. Also included additional language with respect to reconciliation of HOLD Tags once the NCR's are cleared for containers and incorporated the directive in Standing Order CCP-SO-30, Clarification of Rework and Reject. This is in response to U.S. Department of Energy-Carlsbad Field Office (DOE/CBFO) Corrective Action Report (CAR) CAR-08-025.
18	08/13/2009	Revised to incorporate freeze file editorial changes, clarify the ability to delete/remove containers from the Batch Data Report (BDR)/Container ID list when revising a nonconformance report (NCR) per CAR-LANL-0001-09, and incorporate Central Rev. Characterization Project (CCP) Standing Order (SO) CCP-SO-024, 1.
19	10/14/2010	Revised to: clarify hold tag application; Carlsbad Field Office (CBFO) notification requirements including responsibility, incorporate CCP-SO-054, 1 and CCP-SO-065, 0; revisions to Attachment 1, CCP Nonconformance Report (NCR); and other minor editorial changes.
20	04/26/2011	Revised to incorporate relevant steps from CCP-QP-004, *CCP Corrective Action Management,* and other editorial changes.
21	03/05/2012	Revised to incorporate clarification of K-trend code designees signature authority and other editorial changes and freeze file items.
22	09/27/2012	Revised to add definitions; to move 2.5.1 to 4.2.1 [F]; to clarify 4.4.15 and Attachment 1, 4.2.10, and Carlsbad Field Office (CBFO) notification in 4.3.1; to add new 4.9.3 to address removal of Hold Tags when voiding a Nonconformance Report (NCR); to incorporate freeze file changes; to modify Attachment 1; to correct some typos and editorial mistakes.

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1.0 PURPOSE

This procedure establishes the requirements and responsibilities for identifying, documenting, reporting, and dispositioning items and services that do not meet established requirements.

1.1 Scope

This procedure applies to Central Characterization Project (CCP) waste characterization, certification, packaging, and transportation. It establishes the process for identifying, documenting, controlling, evaluating, dispositioning, and verifying completion of dispositioning of nonconforming conditions associated with items, equipment, and Batch Data Reports (BDRs).

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2.0 REQUIREMENTS

2.1 References

Baseline Documents

- DOE/CBFO-94-1012, *U.S Department of Energy Carlsbad Field Office Quality Assurance Program Document* (QAPD)
- CCP-PO-002, *CCP Transuranic Waste Certification Plan*
- CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)*
- CCP-QP-010, *CCP Document Preparation, Approval, and Control*

Referenced Documents

- DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*
- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- CCP-PO-008, *CCP Quality Assurance Interface with the WTS Quality Assurance Program*
- CCP-QP-004, *CCP Corrective Action Management*
- CCP-QP-006, *CCP Corrective Action Reporting and Control*
- CCP-QP-008, *CCP Records Management*
- CCP-QP-014, *CCP Quality Assurance Trend Analysis and Reporting*
- CCP-TP-001, *CCP Project Level Data Validation and Verification*
- 10 Code of Federal Regulations (CFR) Part 71, *Packaging and Transportation of Radioactive Material*

2.2 Definitions

ALARA (As Low As Reasonably Achievable)	A principle of all work at the site in the use or handling of radioactive materials in which personnel radiation exposure, including the work force and public, is kept at a level as low as possible by reasonable means.
Condition Adverse to Quality (CAQ)	An all-inclusive term used in reference to any of the following: failures, malfunctions, deficiencies, defective items, nonconformances, and technical inadequacies.
Data Quality Objective (DQO) Process	A strategic planning approach based on the scientific method used to prepare for data collection. The DQO process provides a systematic procedure for defining the criteria that a data collection design should satisfy, including when and where to collect samples, the tolerable level of decision errors for the study, and how many samples to collect.
Item	An all-inclusive term used in place of any of the following: appurtenance, assembly, component, equipment, material, module, part, structure, subassembly, subsystem, system, unit, support system, or data.
Nonconformance	A deficiency in a characteristic or record that renders the quality of an item or sample unacceptable or indeterminate.
Orphaned Hold Tag	A Hold Tag no longer attached to its associated nonconforming item.
PAAA (Price-Anderson Amendments Act)	Law passed by Congress intended to minimize the risk to workers and the public by ensuring that DOE nuclear work is conducted so that human health and safety and the environment are protected adequately.
Repair	The process of restoring an item to a condition such that the capability of the item to function reliably and safely is unimpaired even though that item still does not conform to the original requirement.

Rework	The process by which an item is restored to original specifications by completion or correction.
Supplier	Any individual or organization who furnishes items or services in accordance with a contract. An all-inclusive term used in place of any of the following: vendor, seller, source, participant, contractor, or subcontractor.
Technical Change	Changes to container or BDR identifications, Interim or Final Dispositions, Actual Conditions, or Requirements.
Traceability	The ability to trace the history, application, and location of an item, data, or sample using documentation. As related to metrology, traceability means the ability to relate individual measurement results through an unbroken chain of calibrations to one or more of the following: • U.S. national standards maintained by National Institute of Standards and Technology (NIST) or the U.S. Naval Observatory • Fundamental or natural physical constants with values assigned or accepted by NIST • National standards of other countries which are correlated with NIST
Use-As-Is	A disposition permitted for a nonconforming item when it can be established that the item is satisfactory for its intended use.
Work	The process of completing a defined task. Examples include research and development, operations, maintenance and repair, administration, software development and use, inspection, safeguards and security, and data collection and analysis.

2.3 Conditions Adverse to Quality

2.3.1 CCP personnel who discover nonconforming items and processes have the responsibility to initiate NCRs for nonconforming items or equipment or to notify their managers for assistance in ensuring that an NCR is initiated. Personnel are encouraged to suggest improvements. Nonconformances will be documented, evaluated, and dispositioned with a no-fault attitude fostered by management at all levels.

2.3.2 Personnel evaluating and determining the disposition of nonconforming items will have demonstrated competence in the specific area they evaluate, adequate understanding of the requirements, and access to pertinent background information.

2.3.3 NCRs are not to be used as administrative holds (e.g., to stop a shipment when there is **NO** nonconformance). Refer to the container management procedures for specific sites for more details on the proper use of administrative holds.

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2.4 Reporting and Control

NOTE
The precautions selected SHALL **NOT** be solely reliant on a single administrative control to differentiate waste containers that are acceptable for shipment to the Waste Isolation Pilot Plant (WIPP) from those containers that DO **NOT** meet the WIPP acceptance criteria.

NOTE
When it is determined that CCP HOLD TAGS will be applied, the CCP HOLD TAGS SHALL remain on the containers until the nonconforming condition has been resolved and the technical disposition has been implemented and verified under the CCP Program.

Resolution of nonconforming containers is not predicated on the closure of the NCR but rather by verifying the acceptable completion of the disposition for individual containers, and releasing them for shipment to WIPP. For all containers Quality Assurance (QA) confirms resolution using the “Resolve” or “Return” feature in the Nonconformance Report Module (NCRM).

Other methods used to control the affected items may include segregation and the use of dual independent check systems (for non-compliant remote-handled [RH] waste packages based on the As Low As Reasonably Achievable [ALARA] principle) which utilize two separate and distinct processes and data sets for verifying waste packages are acceptable for shipment.

2.4.1 The Site Project Manager (SPM) is responsible for overseeing the NCR process, developing a plan to identify and track all nonconformances, and reporting this information. The requirement for the SPM to develop a plan is satisfied by approval of this procedure. Nonconforming items will be identified by marking (or tagging) or segregating, or both, or other methods that do not adversely affect the end use. The identification will provide traceability to the NCR number, will be legible and easily recognizable, and will remain attached to the nonconforming item(s) until all actions required by the disposition have been completed and accepted. It is required that all containers that are identified with an NCR be physically tagged with a CCP HOLD TAG until resolution of the nonconformance, except as identified in step 4.1.3[A].

2.4.2 Most CCP NCRs are initiated to document conditions that DO **NOT** reflect on the adequacy of the CCP QA program (e.g., NCRs for containers that have a prohibited item, or those involving acceptable knowledge). These NCRs are assigned Trend Code K or L in accordance with CCP-QP-014 (see also Attachment 4, Trend Codes).

NOTE

CCP Training will maintain a list of personnel designated to perform NCR validation and approve interim and final dispositions for Trend Code K NCRs.

[A] Interim and final dispositions for these NCRs may be validated and approved by designated CCP personnel. Those steps in Section 4.0 which include steps that designated CCP personnel may carry out, as described above, will be identified by "or CCP QA Designee."

[B] CCP QA must validate and approve NCRs which are not assigned Trend Code K.

[C] CCP QA will verify disposition completion and closure of **ALL NCRs**.

2.4.3 **IF** marking or tagging of a nonconforming item is impractical, **OR** segregation is impractical or impossible because of physical conditions,
THEN other precautions will be employed to preclude inadvertent use and shipment.

2.4.4 Nonconforming items will be documented by an NCR, including those found by CCP personnel at a supplier's facility or during a receipt inspection.

2.4.5 NCRs will be clearly identified and will describe the characteristics that do not conform to specified requirements.

2.4.6 NCRs will have a unique numbering and logging system and will account for all NCRs issued, including voided NCRs. An NCR log will be maintained (generated either manually or electronically by the generator site and the CCP Project Office) and will identify the following, as a minimum:

[A] NCR number

[B] Initiation date

[C] NCR Originator

This log is used to account for all NCRs issued during a calendar year at a generator site and the CCP Project Office.

The NCR numbering system will provide the capability to determine the following:

- Document is an NCR
- Site Designator (when applicable to remote-handled waste, include "RH" as a prefix to the site designator [e.g., Savannah River Site remote-handled waste = "RHSRS"])
- Number issued for the organization or site in that calendar year
- Calendar year issued
- Revision number

Examples of NCR Numbers

- NCR-INL-0001-12, Rev. 0
- NCR-SRS-0001-12, Rev. 1
- NCR-LANL-0001-12, Rev. 2
- NCR-RHANL-0001-12, Rev. 0

2.4.7 Nonconforming items will be controlled to prevent any adverse impact on test, installation, use, waste certification, or waste shipment. Organizations affected by the nonconformance will be notified.

2.5 Evaluation and Disposition

2.5.1 Once an NCR is validated, the NCR will be evaluated for significance and recurrence in accordance with Steps 4.2.6 through 4.2.10 of this procedure.

2.5.2 NCRs will be reviewed and recommended dispositions of nonconforming items will be proposed.

2.5.3 The disposition for nonconforming items will be identified and documented.

[A] The standard schedule for completing the NCR disposition is ninety (90) calendar days from the date of the final NCR disposition.

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[B] **IF** completion of the NCR is anticipated to take more than ninety (90) calendar days from the date of the final NCR disposition,
THEN the final disposition must identify the expected completion date.

[C] NCRs with a final disposition that is outside the control of CCP are exempted from the requirement to identify an expected completion date. These are typically NCRs where the disposition is to return the container to the Host location for correction of the nonconforming condition.

2.5.4 Interim dispositions will be used only when necessary to achieve a final disposition.

2.5.5 Items that do not meet original design requirements that are dispositioned Use-As-Is or Repair will be subject to design control measures commensurate with those applied to the original design. If changes to the specifying document are required to agree with the as-built condition, the disposition shall include a step to change the specifying document to agree with the as-built condition. Any document or QA record change required by the disposition of the nonconformance shall be identified in the nonconformance documentation, and when a document or record is changed, the justification for the change shall cite the nonconformance documentation.

2.5.6 The disposition of an item to be reworked or repaired will contain requirements to re-examine, inspect, test, or conduct nondestructive examination (NDE) to verify acceptability. Repaired or reworked items will be re-examined using the original process and acceptance criteria, unless alternative acceptance criteria or methods have been established and approved as part of the nonconforming item disposition.

2.5.7 Reject dispositions will be accompanied by instructions for the disposal of the item(s), such as Scrap or Return-to-Vendor, in accordance with applicable procedures.

2.5.8 Final dispositions will address all items described by the NCR and are limited to Use-As-Is, Reject, Repair, Rework, and Scrap. Validated NCRs cannot be closed until completion and verification of the final disposition.

2.5.9 NCRs are limited to only one Interim or Final Disposition type per NCR.

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2.5.10 Recommended dispositions will be evaluated and approved.

2.5.11 Further processing, delivery, installation, or use of a nonconforming item will be controlled, pending the evaluation and approval of the disposition.

2.6 Nonconformance Reporting Module (NCRM)

2.6.1 The NCRM will provide the capability for an accurate and timely assessment of the status of all NCRs.

2.6.2 The NCRM will provide the capability to trend NCRs for conditions adverse to quality.

2.6.3 The NCRM will provide, as a minimum, the following:

- NCR Number and Revision
- Initiation Date
- NCR Originator
- Responsible Manager
- BDR/Container (as applicable)
- Actual Condition
- Final Disposition
- Trend Code
- Closure Date

2.6.4 The NCRM is maintained in the CCP Project Office. The NCRM may also be updated by specified Host facilities.

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3.0 RESPONSIBILITIES

3.1 NCR Originator

3.1.1 CCP personnel who discover conditions adverse to quality are responsible for originating an NCR or ensuring an NCR is initiated.

3.1.2 Applies or ensures application of a CCP HOLD TAG or provides other segregation or control methods.

3.2 CCP QA

3.2.1 Validates the NCR.

3.2.2 Evaluates NCRs in accordance with this procedure.

3.2.3 Approves interim and final dispositions.

3.2.4 Ensures that NCRs are entered into the NCRM.

3.2.5 Verifies interim and final disposition completion and closes NCRs.

3.2.6 Applies, removes, or ensures application or removal of CCP HOLD TAGS (if applicable), and will reconcile the removed HOLD TAGS prior to releasing a container or closing an NCR.

3.2.7 Immediately notifies the SPM or Vendor Project Manager (VPM) when HOLD TAGS DO **NOT** reconcile or when orphaned HOLD TAGS are found in process areas.

3.2.8 Provides CCP Training with a notification of individuals who are designated to validate and approve dispositions for NCRs that are Trend Code K. These individuals will have been briefed and designated for this function by CCP QA.

3.2.9 Assists the NCR Originator as needed to determine status of all affected containers associated with NCRs initiated at the Project level.

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NOTE

CCP QA Designees are allowed to review and sign only NCRs that are assigned Trend Code K. All other NCRs must be reviewed and signed by CCP QA.

3.3 CCP QA Designee

3.3.1 Validates Trend Code K NCRs.

3.3.2 Approves interim and final dispositions for Trend Code K NCRs.

3.3.3 Ensures that NCRs are forwarded to the Host site CCP QA NCR Coordinator or the CCP Project Office NCR Coordinator for entry into the NCRM.

3.3.4 Applies, removes, or ensures application or removal of CCP HOLD TAGS (if applicable) for Trend Code K NCRs and delivers removed HOLD TAGS to CCP QA for validation of removal and reconciliation.

3.4 Responsible Manager

3.4.1 Provides interim and final dispositions to correct identified deficiencies.

3.4.2 Identifies resolutions to deficiencies and (when applicable) identifies actions to preclude recurrence.

3.4.3 Monitors progress of nonconformance resolution, including completion of dispositions in a timely manner.

3.4.4 Provides for the control of further processing, delivery, installation, or operation of nonconforming items or equipment.

3.5 CCP Site Project Manager (SPM) or Project Manager (PM)

3.5.1 Ensures NCR process is followed in accordance with this procedure and is accountable for the implementation of the nonconformance program.

3.5.2 Coordinates CBFO notification between the Certification Manager and the NCR Coordinator.

3.5.3 Prepares interim and final dispositions.

3.5.4 Verifies interim and final disposition completion.

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3.5.5 Ensures forwarding of validated and in-process NCRs to the CCP Project Office for NCRM updates, as necessary.

3.5.6 Ensures distribution of completed NCRs as required by applicable interface documents.

3.5.7 Notifies CBFO of nonconformances as required by this procedure.

3.5.8 Monitors to ensure timely completion of NCRs in their area of responsibility.

3.5.9 Carries out responsibilities of the Responsible Manager, when an NCR so specifies.

3.6 Vendor Project Manager (VPM)

3.6.1 Ensures site personnel evaluating and dispositioning NCRs have demonstrated competence in the specific area they evaluate, have an adequate understanding of the requirements, and have access to pertinent background information.

3.6.2 Monitors to ensure timely completion of NCRs in their area of responsibility.

3.6.3 Carries out responsibilities of the Responsible Manager, when an NCR so specifies.

3.6.4 Concurs with interim and final dispositions (as requested).

3.6.5 Ensures the application of CCP HOLD TAGS and, in coordination with CCP QA, ensures their removal after container resolution or NCR closure, as required, and will assure removed CCP HOLD TAGS are delivered to CCP QA for verification of removal and reconciliation.

3.6.6 Notifies the Host site representative of drums that are inaccessible with a request to make them available as soon as possible so that the drums may be monitored and tagged as soon as they are available.

3.7 NCR Coordinator (Site CCP QA serves as the QA Coordinator for the assigned site)

3.7.1 Maintains the NCR Log.

3.7.2 Distributes NCRs in accordance with this procedure.

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3.7.3 Submits closed NCRs to CCP Records.

3.7.4 Updates the NCRM.

3.8 CCP Training

3.8.1 Annotates each site-specific List of Qualified Individuals (LOQI) with a qualified statement for individuals who have been designated by CCP QA.

3.8.2 Maintains designation notifications in each individual's training file.

3.9 Certification Manager

3.9.1 Ensures a consistent review for all NCRs that have the potential to require CBFO notification according to the seven (7) calendar days notification requirement.

3.10 Waste Certification Official (WCO)

3.10.1 Assists the NCR Originator as needed to determine status of all affected containers associated with NCRs initiated at the Project level.

3.11 Packaging Manager

3.11.1 Reviews NCRs whose description is Transportation for 10 CFR, Part 71, *Packaging and Transportation of Radioactive Material,* applicability.

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4.0 PROCEDURE

4.1 NCR Initiation

NCR Originator

4.1.1 On identifying a nonconforming item obtain the latest issued revision of Attachment 1, CCP Nonconformance Report (NCR) from the sftp site.

NOTE

The NCR Coordinator in the CCP Project Office and the CCP QA representatives located at the Host sites maintain the NCR Logs. The CCP QA representatives located at the Host sites issue numbers when requested. The NCR Coordinator in the CCP Project Office issues NCR numbers for those locations without CCP QA at the Host site (e.g., ECL, ALD, etc.). Any NCR initiated after the Data Generation Level (DGL) validation and verification of a BDR will be designated as a project-level NCR and will be processed through the Carlsbad Project Office.

NOTE

Expert analyst review of Nondestructive Assay (NDA) results can result in preparation and attachment of NCR Hold tags after the NCRs are initiated.

4.1.2 Obtain an NCR number from the NCR Coordinator, OR obtain the NCR Number from the block of numbers assigned, **AND** enter the number and revision on all pages of Attachment 1.

NOTE

Block 1 of Attachment 1 is for entering applicable lot numbers when a procurement or supplier issue is identified. This block is not used to refer to certification lot numbers. Block 6 of Attachment 1 is for entering applicable suppliers. A site is not a supplier.

[A] Complete Blocks 1 through 7, as applicable, of the NCR form.

[A.1] Enter N/A (Not Applicable) for those blocks **NOT** applicable to the NCR Use Attachment 2, CCP Nonconformance Report [NCR] Continuation Sheet, whenever available space on this report is inadequate.

NOTE

An NCR shall be prepared for each nonconformance identified. Multiple containers and other items may be identified on one NCR provided the nonconformances are the same. Each NCR shall be initiated by the individual(s) identifying the nonconformance. For global NCRs where containers may be added without revising the NCR, the individual who identifies the nonconformance assures the container is added to the appropriate NCR.

Global NCRs should be reserved for those rare occasions when there is a physical issue with an entire waste stream or a container issue that causes a major physical effort with containers (e.g., shielded containers within a container, tape over vent holes, etc.) and will be issued through the project office.

For NCRs that are initiated for multiple BDRs and containers (Block 3), the relationship between containers and their applicable BDRs MUST be maintained. All NCRs shall be processed by knowledgeable and appropriate personnel.

An NCR may be prepared on a calendar-year basis to allow drums to be added without revision of the NCR, if there are a number of occurrences or an extended time period is anticipated. For global NCRs where containers may be added without revising the NCR, the individual who identifies the nonconformance assures the container is added to the appropriate NCR. In this case, the fact MUST be clearly stated on the NCR to add drums. Drums may NOT be added to global NCRs from a previous year. The existing drum list will not be carried forward to the new NCR number.

[B] **IF** the NCR is documented against a container and a BDR, **THEN** ensure that Block 3 correctly identifies the container number and BDR number, matching exactly the IDs identified in the BDR.

NOTE

NCRs generated during Project Level reviews in accordance with CCP-TP-001, *CCP Project Level Data Validation and Verification*, which are documented against BDR(s) and associated container(s) shall be managed through the Carlsbad Project Office and the NCR shall indicate a project level issue. The associated containers may require application of CCP HOLD TAGS and shall be controlled at the applicable Host site. The Responsible Manager shall ensure control of these containers and completion of Section 4.1.3[A].

NCR Originator/Waste Certification Official (WCO)/CCP QA

[C] The NCR Originator, with assistance from the Waste Certification Official (WCO) and CCP QA, will determine the status of all affected container(s) associated with NCRs initiated at the Project level as follows:

[C.1] **IF** the container(s) is (are) not in a shipping lot,
THEN go to step 4.1.3.

[C.2] **IF** the container(s) is (are) in a shipping lot,
THEN it must be determined whether the container is in Waste Data System (WDS).

(a) **IF** the container(s) is (are) in WDS **AND** the NCR is not data-affecting,
THEN go to step 4.1.3.

(b) **IF** the container(s) is (are) in WDS **AND** the NCR is data-affecting,
THEN the container(s) must be moved into pre-sub certification **OR** removed from WDS before the NCR can be validated by QA.

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NOTE

When it is determined that CCP HOLD TAGS will be applied, the CCP HOLD TAGS SHALL remain on the containers until the nonconforming condition has been resolved and the technical disposition has been implemented and verified under the CCP Program.

Other methods used to control the affected items may include segregation and the use of dual independent check systems (for non-compliant RH waste packages based on the ALARA principle) which utilize two separate and distinct processes and data sets for verifying waste packages are acceptable for shipment.

4.1.3 NCR Originator or CCP QA Designee

[A] Determine whether CCP HOLD TAGS will be applied **OR** whether other methods will be used to control the affected items, **AND** document in Block 7d of the NCR (if applicable).

[A.1] Apply CCP HOLD TAGS UNLESS one or more of the following conditions exist:

- **IF** containers are physically inaccessible, **THEN** inform the VPM to notify the Host site representative of drums that are inaccessible with a request to make them available as soon as possible so that the drums are monitored and tagged as soon as they are available
- Container is an RH container
- Other physical identification methods (i.e., Permanent Reject Labels Not Certifiable to WIPP)

[B] Enter the following minimum information on the CCP HOLD TAG as follows:

- NCR number
- Container or Item number
- BDR number (if applicable)
- Brief description of nonconforming condition
- Name, date, and signature of individual who applies the CCP HOLD TAG
- Limitations on further processing, if any

[C] Complete Blocks 7a, 7b, and 7c of Attachment 1

[C.1] Ensure that the 7b Requirement(s) correctly includes the procedure, revision, section, and quoted text, and that the 7c Actual Condition is accurate.

[C.2] Check the Transportation box in block 7a only when issues with TRAMPAC limits and packaging materials or conditions for shipped containers are identified.

[D] Print name, sign, and date Block 8.

NOTE

CCP QA Designees are allowed to review and sign only NCRs that are assigned Trend Code K. All other NCRs must be reviewed and signed by CCP QA.

4.1.4 Forward the NCR to the CCP QA Engineer, or CCP QA Designee (Trend Code K NCRs only), for review.

4.1.5 **IF** the NCR is initiated at the Host site, **AND** there is **NOT** an SPM/CCP QA Engineer or CCP QA Designee available, **THEN** carry out the following steps:

[A] Copy the NCR and forward it to the responsible individual at the Host site for NCR Log update, if needed.

[B] Forward the NCR to the NCR Coordinator in the CCP Project Office. The NCR Coordinator will initiate a review by a CCP QA Engineer in the CCP Project Office.

4.2 Review and Validation

CCP QA Engineer or CCP QA Designee

4.2.1 Review the NCR for the following, at a minimum:

[A] Verify that the identified condition and requirement meet the criteria for an NCR (i.e., hardware items or BDRs, or both) and **NOT a** programmatic or process failure, malfunction, or deficiency as specified in CCP-QP-006.

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NOTE

There may be instances where both an NCR and a CAR are appropriate. The NCR may be needed to provide control of nonconforming items, and the CAR may be needed to address programmatic issues relating to the nonconformance. In these instances, both shall be processed as required by each implementing procedure.

[B] **IF** the nonconformance is determined to meet the criteria for a CAR,
THEN void the NCR in accordance with Section 4.9, **AND** instruct the NCR Originator to initiate a CAR in accordance with CCP-QP-006.

[C] **IF** the NCR is documented against a container and a BDR,
THEN verify that Block 3 correctly identifies the container number and BDR number, matching exactly the IDs identified in the BDR.

[C.1] **IF** the IDs do not match,
THEN ensure there is a valid reason for the difference, such as WDS number prefixes, historical ID number differences, etc. OR ensure the numbers in question are captured on the AK Tracking spreadsheet and show a clear correlation between the two.

[D] Verify that the current revision of Attachment 1 has been used, the NCR number and revision are on all pages of the NCR, **AND** the form is filled out correctly.

[E] Verify that the identified requirement (procedure no., revision no., section, and quoted text) is correct and applies to the actual condition requiring disposition.

[F] Verify the disposition, if already documented in Block 19, was not completed prior to the date of NCR validation.

4.2.2 **IF** any inconsistencies, clarifications, or other concerns are identified, **THEN** resolve with the NCR Originator, **AND** reprocess in accordance with step 4.1.1.

4.2.3 **IF** the NCR is determined to be invalid,
THEN void the NCR in accordance with Section 4.9.

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NOTE

Steps 4.2.4 and 4.2.5 may be completed in any order.

4.2.4 Determine whether the identified condition has the potential to impact AK (i.e., related to waste stream variance, waste matrix code, etc.), and, if applicable, enter Trend Code L in Block 10. Refer to first NOTE before 4.2.12.

NOTE

CCP HOLD TAGS can be verified by physically placing or confirming tag placement on the container, or by receiving in writing from the VPM or CCP QA Designee. NCRs that are initiated at the project office may be issued with block 7d incomplete. Once notification is received by CCP QA that hold tags have been applied, update the NCR by completing block 7d. Completion of this block does not require NCR revision.

4.2.5 Verify that the Hold Tags have been applied as needed, **AND** complete Block 7d, if not addressed by NCR Originator or CCP QA Designee (see 4.1.3[A]).

NOTE

NCRs that do not involve a significant or recurring condition adverse to quality will not be screened in accordance with steps 4.2.7 through 4.2.10 (i.e., prohibited items, out of calibration range).

4.2.6 Initially determine whether a significant condition adverse to quality exists by comparing with the following criteria:

[A] Does the noncompliance adversely impact the capability to characterize, certify, or ship waste?

[B] Is the noncompliance a violation of the Hazardous Waste Facility Permit (HWFP)?

[C] Could the noncompliance have a serious effect on Health and safety of employees, the public, or the environment?

4.2.7 **IF** the initial determination is YES to any criterion in step 4.2.7 (see also 4.2.10),
THEN discuss with the CCP QA Manager, **AND** if directed, initiate a CAR in accordance with CCP-QP-006, control as a “Significant” condition, cite the NCR number and revision in the CAR, **AND** document the determination in an email to the NCR Coordinator, who will include it as part of the NCR QA record file.

4.2.8 **IF** the answer is NO to all criteria in step 4.2.7,
THEN search the Corrective Action Report Module (CARM) and NCRM to determine whether there are previous violations of the same requirement and the Actual Condition is the same or similar (recurring conditions adverse to quality).

4.2.9 **IF** three (3) or more NCRs are identified within the last 12 months, or two (2) in the past six (6) months,
THEN discuss with the CCP QA Manager, who will determine whether the recurring nature of the conditions represents a Significant Condition Adverse to Quality.

[A] Email the determination to the NCR Coordinator who will include it as part of the QA record file.

[B] If the determination of a Significant Condition Adverse to Quality is affirmed, check “yes” in NCR Block 12, and GO TO 4.2.8.

[C] Enter the assigned CAR number in Block 12 or 13 (if applicable). If the evaluation of a recurring condition is rejected, check block 13 “no.”

4.2.10 Identify the Trend Code using NCR Trend Codes in Attachment 4, **AND** enter the Trend Code in Block 10, if not previously identified in step 4.2.5.

4.2.11 NCRs that identify possible changes to the AK of a waste stream (Trend Code L) will be forwarded to the SPM as the Responsible Manager.

[A] **IF** re-evaluation is warranted as a result of:

- Inconsistencies noted during the process of comparing AK information to characterization results, **OR**
- The initiation of an NCR(s) identifies potential changes to the AK of a waste stream,

THEN the SPM notifies the AK Expert.

NOTE

Examples of possible changes to the AK of a waste stream are:

- Incorrect assignment of a waste container to a waste stream (e.g., sludge matrix in a debris container)
- Identification of unanticipated waste material parameters (WMPs) in a container (e.g., metal in a combustibles-only debris container)

NOTE

The Responsible Manager determination is based on negotiations and agreements between the SPM and/or CCP QA Engineer, or both, and applicable Responsible Managers.

4.2.12 Determine the manager responsible for resolution.

4.2.13 Enter the Responsible Manager's name in Block 11.

4.2.14 **IF** the NCR is determined to be valid,
THEN validate the NCR by signing concurrence in Block 14.

4.2.15 Forward the NCR to the NCR Coordinator at the Host site (if applicable) or the NCR Coordinator in the CCP Project Office.

NOTE

The SPM and/or CCP QA Engineer may, if deemed expedient, submit directly to the Responsible Manager NCRs that can be readily dispositioned, and then submit to the NCR Coordinator for processing.

4.3 NCR Processing

NCR Coordinator

4.3.1 At receipt of the NCR, carry out the following steps:

[A] Verify the NCR information matches information in the NCR Log.

[B] Enter the NCR information in the NCRM.

[C] **IF** the NCR Description in Block 7a is Transportation,
THEN forward a copy of the NCR to the Packaging Manager or designee for consideration of 10 CFR, Part 71, applicability and request the results of the review.

Packaging Manager

[C.1] Review NCRs whose description is Transportation (in block 7a) for 10 CFR, Part 71, applicability and email the NCR Coordinator the results of the review.

NCR Coordinator

[D] File a copy of the email from the Packaging Manager or designee with the NCR.

[D.1] **IF** the NCR was generated at or after the SPM signature level,
THEN forward a copy of the project-level NCR to the Certification Manager for review to determine whether CBFO notification is required in accordance with Section 4.3.1 [D.2] of this procedure.

Certification Manager

[D.2] **Review** the project-level NCR to determine whether any nonconformance first identified at or after the SPM signature release level (e.g., CCP-TP-001) does not meet applicable requirements of CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan* or DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan* (i.e., a failure to meet a Data Quality Objective [DQO]), and if so,
THEN inform in writing or by email the NCR Coordinator and SPM, the latter of whom notifies the CBFO as required.

SPM

[D.3] Notify the CBFO in accordance with Attachment 3, Additional CBFO Notification Details, and as follows:

- **IF** the Certification Manager determined that the project-level NCR is reportable,
  THEN notify CBFO within seven (7) calendar days of identification of the deficiency.

- Copy the NCR Coordinator on the CBFO notification.

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[D.4] **IF** the NCR was unready for submittal when the initial notification was made,
THEN submit the NCR to DOE CBFO within thirty (30) calendar days of identification of the deficiency.

Certification Manager

[D.5] **IF** the project-level NCR is determined not to be reportable,
THEN email the NCR Coordinator that the NCR is not reportable.

NRC Coordinator

[D.6] Update the NCRM, **AND** file a copy of the CBFO notification and related e-mails with the NCR.

[E] Forward the NCR to the Responsible Manager.

4.4 Disposition Determination

Responsible Manager

NOTE
The Responsible Manager may assign responsibility for interim and final dispositions to responsible individuals (Blocks) 16a and 20 of the NCR), but maintains overall responsibility for NCR completion.

4.4.1 Determine the need for interim disposition, **AND**, if applicable, identify any additional approval requirements.

4.4.2 Complete Block 15a and 15b of the NCR, **AND** print name, sign, and date Block 16a.

4.4.3 **IF** interim disposition is **NOT** required, **THEN** check “N/A” in Block 15a.

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NOTE

Nonconforming items with their CCP HOLD TAGS may be further processed unless otherwise directed by the NCR. Specific limitations or actions identified in the approved NCR disposition must be written on the CCP HOLD TAG. However, no processing steps may be taken that would interfere with the ability to complete and accept the disposition stated in the NCR.

NCRs can have only one final disposition for the containers listed.

4.4.4 Evaluate the nonconforming condition, **AND** provide a final disposition to correct the identified deficiency.

4.4.5 Check the Final Disposition Type in the appropriate box in Block 19.

[A] **IF** the final disposition is expected to take more than ninety (90) days to implement, **AND** the disposition can be implemented by CCP,
THEN include the anticipated completion date in the final disposition (see step 2.5.3 for additional detail).

NOTE

Final dispositions may be deferred until after completion of interim dispositions, if applicable and if deemed necessary.

NOTE

Use-As-Is dispositions MUST **NOT** specify any actions. The nonconforming condition remains as identified in Section 7c and the technical justification provides for acceptance.

4.4.6 **IF** the disposition is Use-As-Is,
THEN provide Technical Justification in Block 19a.

4.4.7 **IF** the disposition is Repair,
THEN provide Technical Justification in Block 19a and instructions for completion in Block 19b.

NOTE

When containers that have been characterized are identified on an NCR and the disposition specifies that the containers are to be returned to the Host site for correction of the nonconforming item they shall have a Final Disposition of Reject, with Instructions for Completion "Return to Host site" or similar. For these containers, the NCR is **NOT** closed, and the container returned to the Host site with the CCP HOLD TAG attached to the container (e.g., a container has a prohibited item and requires remediation to bring the container into compliance with CCP-PO-001 acceptance criteria). For such containers, CCP HOLD TAGS SHALL **NOT** be removed until nonconforming conditions have been corrected **AND** verified by CCP under the CCP Program. Any orphaned tags found SHALL be presented to CCP QA for action to be taken in accordance with step 4.7.4[A].

4.4.8 **IF** the disposition is Reject or Scrap,
THEN provide instructions for completion in Block 19b.

4.4.9 **IF** the nonconforming condition is data which requires that the container be rerun through that characterization (e.g., NDA, Real-Time Radiography [RTR] or Visual Examination [VE], Head Space Gas [HSG], Flammable Gas Analysis [FGA], Gas Generation Testing [GGT]),
THEN the NCR will disposition the container as Reject.

4.4.10 **IF** the nonconforming condition is data for the container that will be corrected without rerunning the container through characterization (e.g., NDA, RTR or VE, HSG, FGA, GGT),
THEN the NCR will disposition the container as Rework.

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NOTE

Some open NCRs exist from a time before creation of the present database. Using step 4.4.9, if these NCRs had been documented with a rework disposition, revise the NCR to change the disposition to reject, allowing the status of the individual containers to be updated in the NCRM as "Resolved" when the resolution for the drum has been completed.

If dispositions have been completed prior to revision of the NCR, the containers may be removed from the NCR, but will remain in the NCRM and be resolved in the NCRM based on the clearly stated reason for revision, and provide objective evidence documenting completion of the actions.

NOTE

NCRs documented on containers that have been characterized, and the nonconformance identifies that the condition is such that the container associated documentation has to be corrected to be certifiable and shippable shall have a final disposition of rework. The container and applicable BDR will also be administratively controlled in NCRM with a status of NCR Hold until resolution of the nonconforming condition.

NOTE

Copies of NCRs that are to be included in the applicable BDRs that identify the container as nonconforming must have an approved disposition before insertion in the BDR.

4.4.11 **IF** the disposition is Rework,
THEN provide instructions for completion in Block 19b.

4.4.12 **IF** changes to the specifying document are required to agree with the as-built condition,
THEN ensure the disposition requires action to change the specifying document to agree with the accepted nonconformance.

4.4.13 **IF** a document or QA record change is required by the disposition of the nonconformance,
THEN identify in the disposition.

4.4.14 **WHEN** a document or QA record is changed as a result of the NCR disposition,
THEN ensure that the document or QA record cites the NCR number.

NOTE

Dispositions for Repair, Rework, and Actions to Prevent Recurrence (if applicable) MUST identify all actions to resolve the nonconforming condition completely. The Responsible Manager or individual may assign completion dates for required actions to meet project requirements and commitments.

4.4.15 Evaluate the need for Actions to Prevent Recurrence (Repair or Rework), **AND** document corrective action(s) or "N/A" in Block 19c.

4.4.16 Identify any additional approval requirement, if applicable, **AND** document in appropriate block(s).

4.4.17 Print name, sign, and date Block 20, **AND** forward the NCR to the CCP QA Engineer.

CCP QA Engineer or CCP QA Designee

NOTE

CCP QA Designees are allowed to review and sign in blocks 14, 16b, and 21 only NCRs that are assigned Trend Code K. All other NCRs must be reviewed and signed by CCP QA.

CCP QA Designees must ensure that they are included on the appropriate List of Qualified Individuals for validation and disposition approval of Trend Code K NCRs prior to implementing this function.

4.4.18 Review the NCR and determine the following:

[A] The disposition (Interim or Final) adequately addresses measures to be taken to correct the identified deficiency.

[B] The disposition (Interim or Final) has been completed in accordance with Section 4.4.

[C] Actions to prevent recurrence (as applicable) address adequate measures to control recurrence.

[D] Assure any attachments have been completed as required by Section 4.10.

4.4.19 **IF** disposition is deemed appropriate,
THEN approve by completing Block 16b (Interim) or Block 21 (Final), **AND** GO TO step 4.4.20.

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4.4.20 **IF** disposition is deemed to be deficient,
THEN recommend changes, resolve with the Responsible Manager, **AND** reprocess according to Section 4.4.

4.4.21 **IF** the NCR is initiated by the DGL against a container or BDR,
THEN copy the validated and dispositioned NCR, **AND** submit it to the appropriate DGL process to be included in the BDR, **OR,** if an NCR revision, to be submitted with the corrected data as an update to the BDR.

4.4.22 **IF** the NCR is initiated by the CCP Project Office against a container or BDR during CCP-TP-001 review,
THEN copy the validated and dispositioned NCR, **OR,** if an NCR revision, **AND** forward a copy to the SPM to be included in the BDR.

4.4.23 **IF** the NCR is initiated by the CCP Project Office against a container or BDR, **AND** the disposition is required to be completed at DGL that correct data in an existing BDR,
THEN, at DGL, include a copy of the validated and dispositioned NCR, **OR,** if an NCR revision, with the corrected data as an update to the BDR.

4.4.24 Forward the NCR to the NCR Coordinator.

4.5 NCRM Update

NCR Coordinator

4.5.1 At receipt of the NCR:

[A] Enter the NCR in NCRM.

[B] Retain the NCR and any attachments in a working file until NCR closure.

4.6 Disposition Completion

Responsible Manager/VPM/ SPM

4.6.1 Monitor disposition completion to assure timely completion.

Responsible Manager

4.6.2 At completion of the required dispositions (Interim or Final), request the original (if necessary) from the NCR Coordinator.

4.6.3 Provide objective evidence of completion of disposition (Interim, Final, and Actions to Prevent Recurrence) by one or more of the following:

[A] Prepare attachments as required by Section 4.10.

[B] Cite traceable documentation that substantiates completion of dispositions and actions to prevent recurrence.

[C] Sign and date statement(s) of fact or include as attachment.

NOTE

Discussions with the SPM may be conducted to review the documentation that substantiates completion of dispositions prior to formal submittal to ensure that the documentation is adequate.

4.6.4 Document in an attachment prepared as required by Section 4.10 that substantiates completion of dispositions (as applicable).

4.6.5 Print name, sign, and date Block 16a (Interim) or Block 22 (Final), or both, **AND** submit original NCR with attachments (if applicable) to the CCP QA Engineer.

4.7 Completion Verification and Closeout

CCP QA Engineer

NOTE

Although nonconforming items may, under certain controlled circumstances, be allowed to continue through normal processing with an open NCR, the approved disposition(s) must always be implemented **AND** verified prior to NCR closure.

4.7.1 Review the NCR and verify the following:

[A] Attachments provide traceability to objective evidence substantiating completion of disposition.

[B] Documentation provides adequate objective evidence of completion of disposition.

[C] Attachments (if applicable) have been completed as required by Section 4.10.

[D] Review the NCR and all attachments (if applicable) to assure conformance to applicable requirements.

4.7.2 Document the Attachment number(s) in Block 23 as needed. If no attachments, enter “N/A.”

4.7.3 **IF** Interim disposition **AND** other requirements in accordance with step 4.7.1 are satisfactorily completed,
THEN print name, sign, and date in Block 18, **OR** continue to step 4.7.4 for Final Disposition.

4.7.4 **IF** Final Disposition,
THEN ensure removal of all CCP HOLD TAGS as required, either by removing them personally or in coordination with the VPM or CCP QA Designee. Reconciliation will be so noted by checking the box in Section 24 of Attachment 1 prior to closing the NCR.

[A] **IF** reconciliation identifies missing tags,
THEN immediately notify the SPM/VPM.

NOTE

Checking the appropriate box in Block 24a or 24b of Attachment 1 is confirmation that CCP QA has validated the basis for the removal of CCP HOLD TAGS and has verified that all CCP HOLD TAGS have been removed or reconciled as applicable. Complete this step prior to proceeding to step 4.7.5.

4.7.5 Print name, sign, and date Block 25.

4.7.6 **IF** disposition (Interim **OR** Final) **AND** other requirements in accordance with step 4.7.1 are **NOT** satisfactorily completed,
THEN return to Responsible Manager (with detailed reasons for return) for correction and resubmittal.

4.7.7 Determine any distribution requirements as identified in applicable interface documents.

4.7.8 Forward the closed NCR and applicable attachments to the NCR Coordinator.

4.8 Closeout

NCR Coordinator

4.8.1 At receipt of the closed NCR:

[A] Update the NCR in the NCRM.

[B] Distribute as required.

[C] Submit the completed NCR with attachments, if applicable, to CCP Records in accordance with CCP-QP-008, *CCP Records Management*.

4.9 Voiding the NCR

Originator/CCP QA Engineer

NOTE

When voiding an NCR, the detailed justification may be written anywhere on the NCR form as long as it does not obliterate existing information. If this is not possible, use Attachment 2, or create an attachment in accordance with CCP-QP-008.

4.9.1 **IF** an NCR is determined to be invalid during the review in accordance with Section 4.2 (prior to NCR validation),
THEN:

[A] On the NCR, document the detailed justification for voiding, **AND** ensure that the NCR Originator and the CCP QA Engineer print name, sign, and date.

[B] Forward the NCR to the NCR Coordinator.

[C] GO TO step 4.9.4.

Responsible Manager/SPM/CCP QA Engineer/NCR Originator

4.9.2 **IF**, at any time after NCR validation, the NCR Originator, the SPM, the Responsible Manager, and the CCP QA Engineer agree that it is appropriate to void a validated NCR,
THEN:

[A] On the NCR, document the technical justification for voiding, **AND** ensure that the NCR Originator, the SPM, the Responsible Manager, and the CCP QA Engineer print name, sign, and date.

[B] Stamp or write “void” on the first page of the NCR, initial, and date.

[C] Forward the NCR to the NCR Coordinator AND a copy of the NCR to the SPM.

NCR Coordinator

4.9.3 Verify Section 24 of Attachment 1 (NCR) has been completed.

4.9.4 Update the NCR Log identifying that the NCR is voided.

4.9.5 Input the NCR into NCRM.

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4.9.6 Submit voided NCR to CCP Records in accordance with CCP-QP-008.

4.9.7 Ensure a copy of the NCR is submitted to the appropriate DGL personnel as required by CCP-TP-001.

4.10 Attachments

NCR Originator/SPM/CCP QA Engineer/Responsible Manager

4.10.1 When using attachments to an NCR:

[A] Identify the NCR number and revision number on each page of the attachment.

[B] Identify the attachment number.

[C] Paginate each page of the attachment.

EXAMPLE:
NCR-LANL-0700-06, Rev 0, Attachment 1,
Page 1 of 1

NCR-SRS-0800-06, Rev 1, Attachment 3, Page 1 of 6,
2 of 6, etc.

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NOTE

Before validation (Block 9), technical changes may be lined through and the correct data entered, initialed, and dated.

Editorial changes (correcting grammar or spelling, renumbering sections, attachments or pagination; transcription errors and date) that DO **NOT** affect technical content may be lined through and the correct data entered, initialed, and dated at any time during the life cycle of the NCR.

Technical changes are defined as changes to container and/or BDR identifications, Interim and Final Dispositions, Actual Conditions, and Required Conditions (which do not meet editorial definition, as described above). Redistribution is required.

4.11 Revisions and Corrections

NCR Originator/SPM/Responsible Manager

4.11.1 After validation of the NCR, change technical content by revising the NCR as follows:

[A] Obtain a blank copy of the current revision of the NCR from the sftp site.

[B] Apply next sequential revision number to all pages of the NCR and all attachments.

[C] Document the reason for revision in Block 7c.

[D] Supersede the previous revision by drawing a diagonal line across the first page of the NCR, **AND** adding a statement, "Superseded by Revision # (next sequential revision #)," **AND** initial and date.

[E] Attach the superseded revision to the new revision.

[F] Submit new revision for review and approval in accordance with Section 4.2.

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4.12 NCR Log Reconciliation - CCP Project Office and Host Site

NCR Coordinators/CCP QA Engineer

4.12.1 At the end of the calendar year, reconcile NCR numbers issued with NCR logs maintained at Host sites (where applicable), the NCR Log, and the NCRM, as follows:

CCP QA Engineer:

[A] Verify that all NCR numbers issued and that appear in the Host Site Log, are accounted for in the NCRM.

[B] Resolve all discrepancies identified with the NCR Coordinator.

[C] Prepare and submit a report to the NCR Coordinator that documents the reconciliation effort.

NCR Coordinator

4.12.2 Reconcile NCR numbers issued to the CCP QA Engineer at Host sites with the NCR Log, based on the report submitted by the CCP QA Engineer.

4.12.3 Annotate any NCR numbers **NOT** used during the year as "Number Not Used" in the Report.

4.12.4 Submit the NCR Reconciliation Report to CCP Records in accordance with CCP-QP-008.

4.13 Work Suspension and CBFO Stop Work Orders

Personnel Working

4.13.1 During Normal Work

NOTE

Any CCP employee concerned with employee safety, the safety of the environment, or the quality of the work has the responsibility and authority to suspend that work.

[A] **IF** work CAN **NOT** be carried out as specified in a procedure **OR** continuing work would result in an undesirable situation, a condition adverse to quality or the environment, or an unacceptable safety risk,
THEN suspend work in a safe configuration **AND**, inform the Lead Operator (LO) or VPM.

Lead Operator or Vendor Project Manager

[B] Resolve the concerns of the employee or inform the SPM of the work suspension and the reason it is suspended.

CCP Management

[C] Resolve the concerns prior to resuming operation **OR** initiate actions to correct the condition using existing procedures. In either event, keep the employee who raised the concern informed of actions taken in response.

[D] Initiate the appropriate documentation in accordance with CCP-QP-004, *CCP Corrective Action Management,* CCP-QP-005, and CCP-QP-006, as applicable to the situation.

4.13.2 During Development of Corrective Actions

CCP Management or CCP QA

[A] During evaluation of significant conditions adverse to quality in accordance with CCP-QP-004, document the determination whether to suspend work.

[A.1] **IF** the decision is to suspend work,
THEN issue a written directive (e.g., memo, e-mail, Standing Order) to the SPM, VPM, or other responsible personnel, identifying the work to be suspended.

[B] Document the actions to be taken or conditions to be met before restarting suspended work.

[C] Resolve deficient conditions, as applicable, to allow restart of suspended work.

CCP QA

[D] During review of the documentation for the significant condition adverse to quality, approve the corrective actions needed to restart suspended work.

[E] Verify completion of corrective actions needed to allow restart of the suspended work.

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[F] **WHEN** all corrective actions have been completed and verified,
THEN direct restart of suspended work.

4.13.3 CBFO Stop Work Orders

NOTE
CBFO is authorized to issue Stop Work Orders for the protection of the environment and health and safety of CCP employees and the public.

CCP Personnel

[A] Immediately comply with the terms of any Stop Work Order issued by the CBFO.

CCP Management

[B] Accept direction set forth in CBFO Stop Work Orders and carry out such directives in a safe and responsible manner in accordance with established procedures.

[C] Submit Stop Work Orders and related documentation to CCP Records according to CCP-QP-008.

5.0 RECORDS

5.1 Records generated during implementation of this procedure are maintained and controlled as QA records in accordance with CCP-QP-008. The records are the following:

5.1.1 QA/Nonpermanent Records

- Attachment 1, CCP Nonconformance Report (NCR) (including related emails and supporting documentation [if applicable])
  - Attachment 2, CCP Nonconformance Report (NCR) Continuation Sheet (if applicable)
  - CBFO Notifications (if applicable)
- NCR Reconciliation Report
- CCP NCRM Database
- Written Directive to suspend work (e.g., memo, email [if applicable])

Attachment 1 – CCP Nonconformance Report (NCR)

CCP NONCONFORMANCE REPORT (NCR)

(Use NCR Continuation, Attachment 2, if necessary)

NCR No. **NCR-** Revision:

1. Lot No., Heat No., or Serial No. (if applicable):	**2. Process (e.g., NDA, HSG, NDE, VE, Other):**	**3. Batch Data Report #(s):**
4. Order/Work Order/Job Control Number (if applicable):	**5. PO # (if applicable):**	**Container #(s):**
	6. Supplier (if applicable):	

DESCRIPTION OF NONCONFORMANCE

7a. NCR Description: ☐ < 100 nCi/g ☐ Prohibited Item ☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☐ Other

7b. Requirement(s) (Enter Implementing Procedure No., Revision, Section No., & Quoted Text):

7c. Actual Condition:

7d. Have the CCP HOLD TAGS associated with this NCR been applied? ☐ **YES** ☐ **NO** **(If no is checked, explain:)**

8. NCR Originator:

printed name _____ signature _____ date _____

9. Does the identified condition have the potential to impact AK? ☐ **YES** ☐ **NO** ☐ **INDETERMINATE**
If YES or INDETERMINATE, enter Trend Code L in Block 10.

10. Trend Code:	**11. Responsible Manager:**
12. Significant Condition? ☐ **YES** ☐ **NO** **(If Yes, enter CAR No.:)**	**13. Recurring Condition?** ☐ **YES** ☐ **NO** **(If Yes, list NCRs and CARs:)**

14. CCP QA Engineer or CCP QA Designee validation:

printed name _____ signature _____ date _____

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. **NCR-** Revision:

INTERIM DISPOSITION

15a. Interim Disposition (Check Only One):

☐ N/A (See Final Disposition) ☐ Hold ☐ Conditionally Accept ☐ Conditionally Use

☐ Sort ☐ Reinspect or Retest ☐ Remediate

15b. Instructions for Completion of the Interim Disposition:

INTERIM DISPOSITION APPROVALS

16a. Responsible Manager or Individual:			**16b. CCP QA Engineer or CCP QA Designee:**		
printed name	signature	date	printed name	signature	date
Additional Approvals:			**Additional Approvals:**		
printed name	signature	date	printed name	signature	date

COMPLETION OF INTERIM DISPOSITION

17. Interim Disposition Complete – Responsible Manager or Individual:

printed name signature date

18. Interim Disposition Verified – CCP QA Engineer:

printed name signature date

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. **NCR-** Revision:

FINAL DISPOSITION

19. Final Disposition (Check Only One):
☐ **Use-As-Is** ☐ **Repair**

19a. Technical Justification – Required for Use-As-Is or Repair dispositions. (Enter "N/A" for Reject, Rework, and Scrap:)

☐ **Reject** ☐ **Rework** ☐ **Scrap**

19b. Instructions for Completion – Required for Reject, Repair, Rework, or Scrap. (Enter "N/A" for Use-As-Is:)

19c. Corrective Actions (Actions to Prevent Recurrence – For Repair or Rework, if applicable. Enter "N/A," if not applicable, and for Use-As-Is, Reject, and Scrap):

FINAL DISPOSITION APPROVALS

20. Responsible Manager or Individual:			**21. CCP QA Engineer or CCP QA Designee:**		
printed name	signature	date	printed name	signature	date
Additional Approvals:			**Additional Approvals:**		
printed name	signature	date	printed name	signature	date

CLOSURE

22. Final Disposition Complete – Responsible Manager or Individual:

printed name signature date

23. Attachments:

24a. HOLD TAG removal has been verified and reconciled for all nonconforming items on the NCR. ☐
24b. Check if not applicable (N/A) and explain. ☐

25. Final Disposition Verified – NCR Closed **CCP QA Engineer:**

printed name signature date

Attachment 2 – CCP Nonconformance Report (NCR) Continuation Sheet

NCR No.	Revision	Attachment #	Page	of
Continuation from Section Number:				

Attachment 3 – Additional CBFO Notification Details

This attachment details reporting notification requirements for CCP-generated Nonconformance Reports (NCRs) which meet the condition identified in CCP-PO-001, Section C3-13, and 4.3.1[D.5] of this procedure.

WIPP e-mail Address: wipp.notify@wipp.ws

Electronic notification is strongly encouraged. If electronic notification is used, the following criteria are required:

On the subject line, preceding the subject, [ncr]. The term “ncr” in brackets [ ] allows the automatic transfer into the proper folder of the receiving system.

Include the NCR number, description of the deficiency, and the date identified.

CCP must email an NCR containing CCP’s procedurally required information thirty (30) days after the nonconformance was identified.

CCP may choose to transmit the NCR within the required seven (7) days, and satisfy both notification requirements, provided the following information is submitted:

- Site NCR #
- Responsible Organization
- Date initiated
- Individual who identified the NCR
- Deficiency
- Requirement violated
- Actions
- Date closed, if applicable

General Notification

If CCP does not have the capability of transmitting documents by e-mail, or elects not to, hard-copy transmittal may be used instead. Correspondence must be sent to the following address:

[Assigned CBFO Contact]
Carlsbad Field Office
U.S. Department of Energy
P.O. Box 3090
Carlsbad, NM 88221-3090

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Attachment 4 – Trend Codes

Trend Codes	Descriptions	Definitions and Examples
A*	Personnel Error and Failure to Follow Procedure	Personnel wrongly entered data or transposed figures or letters; inattention to detail; lack of understanding; use of superseded or incorrect version of specifying document; used procedure, but before required approval(s); required review missed problem(s); failed to follow procedure(s); deliberate violation.
C	Engineering Deficiency	Inadequate or erroneous engineering design, design input, or design output.
D	Procedure Less Than Adequate	Procedure erred or was vague in specifying requirements; failure to revise procedure when work processes change; no procedure to control QA work.
E	Software Deficiency	Software error resulted in deficient data; unqualified software used to obtain QA data; failure to initiate software qualification process; failure to verify software following software or operating system upgrade.
F	Vendor Deficiency	Deficiencies related to a vendor (i.e., procured item including hardware does not meet a requirement prescribed in the purchase order); wrong or less than adequate vendor documentation.
H	Material or Equipment Control Deficiency	Failure of material, equipment, or items because of damage, failure of a component, inadequate maintenance, etc.

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Attachment 4 – Trend Codes (Continued)

Trend Codes	Descriptions	Definitions and Examples
I	Calibration Deficiency	Calibration was inadequate, resulting in nonconforming or indeterminate data; use of out-of-calibration M&TE.
J	Inadequate Documentation	Record is nonconforming: does not include required data; required data are incorrect; record(s) improperly stored.
K	WAP/WAC Deficiency	Noncompliance with a WAP or WAC requirement **(Exempt from trending)**.
L	Acceptable Knowledge Deficiency	Possible changes to the AK of a waste stream (e.g., assignment of waste container to wrong waste stream; identification (ID) of unanticipated waste material parameters in a waste container) **(Exempt from trending)**.
M	Inadequate Communication	Personnel were given ambiguous or incorrect information or instructions to do their work; inadequate or lack of planning.
O	Ineffective Control of Corrective Action	Actions intended to correct deficiencies or preclude recurrence proved ineffective; identification of nonconforming item(s) less than adequate.
P	Inadequate Training	Condition Adverse to Quality resulted from lack of or inadequate indoctrination, training, or qualification; work done before indoctrination, training, or qualification or after qualification expired.
Q	Deficiency Caused by Others	The deficiency was caused by non-WTS personnel working to non-WTS QA program or none at all.
R	Control of Electronic Data Less Than Adequate	Inadequate security access control; inadequate protection of data; failure to backup data; inadequate traceability of data; failure to verify transferred data.

* Former Trend Code B was combined with A.

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CCP-QP-008

Revision 21

CCP
Records Management

EFFECTIVE DATE: 02/28/2013

Mike Ramirez

PRINTED NAME

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RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
6	03/11/2002	Additions for use of e-QA system
7	06/07/2002	Incorporation of instructions for pagination and removal of text in Attachments.
8	09/04/2002	Added the definition of magnetic tape and incorporated text to clarify the requirements of computer generated electronic records (clarified steps 2.3.7 and 4.8.3). Updated Attachment 2 to reflect new fax machine number. Added new steps regarding duties for the CCP Site Project Manager and the release of records (steps 3.1 and 4.7).
9	08/27/2003	Updated to reflect issuance of Revision 5 of the QAPD. Made other editorial changes. Separated electronically fillable forms and updated references in the procedure.
10	10/15/2004	Clarified CCP Personnel and Facility Records Custodian responsibilities. Editorial changes throughout.
11	08/22/2005	Reorganized sections for improved flow and added clarifications. Deleted Attachments 3 through 6.
12	11/16/2006	Revised to implement the Waste Isolation Pilot Plant Hazardous Waste Facility Permit requirements resulting from the Section 311/Remote-Handled (RH) Permit Modification Request (PMR).
13	04/24/2007	Revised to change title in responsibilities and body of procedure and to add statement (Note) from QAPD and remove verbiage about in-process records.
14	09/19/2007	Revised to address finding from U.S. Department of Energy, Carlsbad Field Office, Corrective Action Report 07-016, Audit A-07-24. Also revised to provide some clarifications within the procedure, added a step to address superseding and voiding of documents (i.e., Batch Data Reports, Nonconformance Reports), and added a note at the beginning of section 4.9 to address computer modeling results methods.
15	10/28/2009	Revised to make personnel title changes and name changes to organizations. Added section 4.7.1[G] for lost records as well as a section for receipt and handling of Official Use Only (OUO) and Unclassified Controlled Nuclear (UCN) documents.
16	07/06/2010	Revised to clarify and address the submittal of historical source documents.

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RECORD OF REVISION (Continued)

Revision Number	Date Approved	Description of Revision
17	11/02/2010	Revised to change the submittal process for Acceptable Knowledge (AK) documentation and section on historical source documents.
18	03/30/2011	Revised to support corrective action report (CAR)-LANL-0004-10.
19	08/02/2011	Revised to change the number of the form in the definition of retention period. Change to Section 4.8 for clarification.
20	08/10/2012	Revised to clarify editorial changes, transmitting of records, and destruction of QA records.
21	02/28/2013	Revised to incorporate Nuclear Waste Partnership (NWP) transition changes.

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1.0 PURPOSE

This document outlines the Central Characterization Program (CCP) Records Management Program. The records program involves CCP Records and interaction with WIPP Records Management Services (WRMS) as outlined in this procedure.

1.1 Scope

This procedure applies to the creation, maintenance, use, and disposition of records generated by the CCP.

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2.0 REQUIREMENTS

2.1 References

Baseline Documents

- DOE/CBFO-94-1012, *U.S. Department of Energy Carlsbad Field Office Quality Assurance Program Document* (QAPD)

Referenced Documents

- *National Archives Records Administration (NARA) Approved Record Schedules*
- CCP-QP-002, *CCP Training and Qualification Plan*
- CCP-QP-028, *CCP Records Filing, Inventorying, Scheduling, and Dispositioning*

2.2 Training Requirements

2.2.1 Personnel performing this procedure will be trained and qualified in accordance with CCP-QP-002, *CCP Training and Qualification Plan,* prior to performing this procedure.

2.3 Definitions

2.3.1 **Authentication** - Synonymous with validation.

2.3.2 **Computer System** - A configuration, or working combination, of hardware, software, and data communication devices.

2.3.3 **Destruction** - The physical destruction of records by shredding, incinerating, or other permanent means.

2.3.4 **Disposition** - The action taken regarding records no longer needed for current government business. Actions may include transfer to the Carlsbad Field Office (CBFO) Records Holding Facility or Federal Records Center, transfer from one federal agency to another, transfer of permanent records to the National Archives and Records Administration (NARA), or destruction of nonpermanent records.

2.3.5 **Electronic Record** - A record in a form that is readable only by a computer. Electronic records are most frequently recorded on media such as disk, diskette, tape, and tape cartridges.

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2.3.6 **External Records** - Records generated by the waste generating sites (e.g., procurement records, procedures, radiological surveys, facility operating logs, container packaging records, historical source documents, etc.). These records are not subject to the requirements of this procedure concerning legibility, pagination, accuracy, completeness, or revision.

2.3.7 **Inactive Record** - A record no longer required to conduct government business and therefore dispositioned in accordance with approved records schedules and stored for authorized retention periods.

2.3.8 **Index** - A listing of records and cross-reference information. At a minimum, an index will indicate record location within the record filing and storage system.

2.3.9 **Internal Use Only (IUO)** - A document that has been identified as Internal Use Only (IUO) and is considered proprietary, which is not to be disseminated beyond the organization.

2.3.10 **Legible** - For the purpose of this document, legible means that the characters, letters, and numbers making up data or information contained in a record can be read without difficulty or magnification.

2.3.11 **Lifetime QA Records** - Records that are required to be retained and preserved in an acceptable condition for the operating life of the repository (i.e., until termination of the repository permit). Prior to destruction of any lifetime record, it shall be evaluated for upgrade to a post-closure record.

2.3.12 **Magnetic Tape** - A tape with a magnetizable surface on which data can be stored and retrieved. A tape or ribbon of any material impregnated or coated with magnetic or other material on which information may be placed in the form of magnetically polarized spots.

2.3.13 **Medium** - Refers to the physical form of recorded information such as paper, film, disk, magnetic tape, or other materials on which information can be recorded.

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2.3.14 **Microfilming** - A photographic process used to record images of records on a fine-grain, high-resolution film in sizes greatly reduced from the original. Formats in general use are rolls of 16 millimeter (mm) images, pages of 16 mm images called microfiche, and 35 mm images mounted in aperture cards. Microform is a generic term for all microfilm formats.

2.3.15 **Migrate** - In electronic records, the process of moving from one computer system to another.

2.3.16 **National Archives and Records Administration (NARA)** - An independent government agency responsible for establishing policies and procedures for managing the records of the federal government. NARA exercises final authority for approving the disposition of government records.

2.3.17 **Nonpermanent Records** - Records having value for a specific, limited time and authorized by NARA (via approved disposition schedules) to be destroyed after that time. Nonpermanent records are sometimes referred to as temporary records.

2.3.18 **No Foreign National (NOFORN)** -No Foreign National (NOFORN) is a marking that identifies a document is not to be given to a person who is a foreign national – not a United States citizen.

2.3.19 **Nonrecord Material** - Those classes of documentary or other material that fail to meet the general definition of a record or fall under one of the following categories: (a) library or museum material made or acquired for reference or exhibition purposes; (b) extra copies of documents preserved only for convenience of reference on which no action is recorded or taken; (c) stocks of publications or other processed documents that require no action and are not part of a case on which action is taken; (d) routing slips and transmittal sheets adding no information to that contained in the transmitted material (i.e., concurrences or direction on how to proceed or implement); and (e) papers of a private or nonofficial character that pertain to an individual's private affairs.

2.3.20 **Official Use Only (OUO) Information** - Certain unclassified information that may be exempt from public release under the Freedom of Information Act and has the potential to damage governmental, commercial, or private interests if disseminated to persons who do not need to know the information to perform their jobs or other U.S. Department of Energy (DOE) authorized activities.

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2.3.21 **Personal Papers** - Materials of a private nature maintained by personnel at their work place that DO **NOT** relate to, or have an effect on, the conduct of business or activities related to the CCP. Personal papers maintained in desks and file drawers in the work place must at all times be segregated and stored separately from records.

2.3.22 **Post-closure Records**

- Records that assist in preventing action that could impair the long-term isolation of the waste.
- Records preserving information that would prevent inadvertent human intrusion, such as the nature and hazard of the waste and locations of the geologic repository operation area, the underground facility, bore holes, shafts, and boundaries of the controlled area.
- Records providing information relevant to post-closure monitoring and assessment of performance of the repository system.
- Records preserving, for future generations, information regarding the geologic setting relevant to mitigation of releases of radioactive materials.
- Records which would be of significant value after decommissioning and closure of the repository.

2.3.23 **Privacy Record** - Any item, collection, or grouping of information about an individual that contains his or her name or other personal identifier.

2.3.24 **Project Participant** - Any DOE site, generator site, or contractor organization that participates in a CBFO program. Subcontractor's records are the responsibility of the participant.

2.3.25 **Project Records** - Records created or received in support of the CCP.

2.3.26 **Quality Assurance (QA) Record** - An authenticated record that provides objective evidence of the quality of items or activities.

2.3.27 **Record Medium** - Refers to the physical form of recorded information such as paper, film, disk, magnetic tape, or other materials on which information can be recorded.

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2.3.28 **Records** - Those classes of documentary materials which may be disposed of only after the archival authority is obtained. The statutory definition of records (44 United States Code §3301, Definition of Records), "...includes all books, papers, maps, photographs, machine-readable materials or other documentary materials, regardless of physical form or characteristics, made or received by an agency of the United States government under federal law or in connection with the transaction of public business and preserved or appropriate for preservation by that agency or its legitimate successor as evidence of the organization, functions, policies, decisions, procedures, operations or other activities of the government or because of the informational value of the data in them." This definition applies to all departmental records including those created, received, and maintained by contractors pursuant to their contracts. Virtually all recorded information in the custody of the government (including information held by contractors which is considered by contract to be government information) regardless of its' media (hard copy, machine-readable, microform), is considered "government records." For the CCP, information meeting the above criteria is considered to be a record, unless it can be clearly identified as a nonrecord.

2.3.29 **Records Custodian** - An individual identified within an organization who is assigned the responsibility of, and trained for, assisting record originators regarding records management issues.

2.3.30 **WIPP Records Archive (WRA)** - A facility that meets the regulatory requirements for the storage of noncurrent records pending their destruction or transfer to a Federal Records Center or the NARA. The WIPP Records Archive (WRA) is located in Carlsbad, New Mexico.

2.3.31 **Records Inventory and Disposition Schedule (RIDS)** - The DOE form used to indicate the appropriate disposition of records. The purpose and content of the form may be placed in electronic media as long as all the requirements of the form are met.

2.3.32 **Record Series** - File units or documents arranged according to a filing system or kept together because they relate to a particular subject or function; result from the same activity; document a specific kind of transaction; take a particular physical form; or have some other relationship arising out of their creation, receipt, or use, such as restrictions on access and use. A record series may also include related elements physically separated from it such as finding indexes or large documents (also sometimes called a file series). These records are generally handled as a unit for disposition purposes.

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2.3.33 **Software Generated** - A form that is generated by controlled software that performs approved calculations.

2.3.34 **Unclassified Controlled Nuclear Information (UCNI)** - Certain unclassified but sensitive Government information concerning nuclear material, weapons, and components whose dissemination is controlled under section 148 of the Atomic Energy Act.

2.3.35 **Record Systems** - A common, integrated set of manual and/or automated activities for creating and identifying; collecting and controlling; processing and organizing; distributing; microfilming; storing and preserving; retrieving; and disposing of records applicable to preparation for storage, as well as the storage of machine readable records such as magnetic tapes, floppy disks, etc.

2.3.36 **Retention Period** - The period of time approved by NARA for records to be retained, whether in the originating office, Records Storage Facility or a Federal Records Center. The retention period is indicated on EA15RM300Z-2-0, *Records Inventory and Disposition Schedules (RIDS)*.

2.3.37 **Uniform File Code (UFC)** - A standard filing system for correspondence records required by the DOE.

2.3.38 **Unscheduled Records** - Records for which no disposition authority has been identified on an approved disposition schedule.

2.3.39 **Validation/Authentication** - An activity that certifies the content of a document as being authentic and complete. This certification is documented by signing (or initialing) and dating the document unless otherwise authenticated. Validation/authentication may be made by the author, assigned reviewers, or individual(s) specifically assigned to review and validate documents.

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3.0 RESPONSIBILITIES

3.1 CCP Manager or Designee

3.1.1 CCP Manager has the overall responsibility and authority for the content of records generated.

3.1.2 Verifies that the organization has a current approved Records Inventory and Disposition Schedule (RIDS).

3.1.3 Verifies that records are retained in accordance with retention requirements and not inadvertently or prematurely destroyed.

3.1.4 Verifies the timely disposition of records through in-house destruction.

3.1.5 Verifies that personnel are aware of the requirements to retain records according to approved retention requirements.

3.1.6 Provides adequate records management resources in the form of staff, equipment, and dedicated time to verify good record keeping practices.

3.1.7 Obtains written concurrence to destroy records exceeding their retention periods.

3.2 Cognizant Manager

3.2.1 Identifies those documents that become records.

3.2.2 Determines if the work activities are quality-affecting.

3.2.3 Identifies records in the implementing procedures.

3.3 Lead Records Custodian

3.3.1 Acts as the liaison between the CCP and WRMS for records management.

3.3.2 Carries out the records management duties in accordance with approved implementing procedures.

3.3.3 Determines which nonpermanent records series are eligible for destruction.

3.3.4 Informs the CCP Manager or designee of the records that have expired retention periods.

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3.3.5 After receiving approved written concurrence, dispositions the Quality Assurance (QA) and/or non-QA records.

3.3.6 Prepares and revises the RIDS in accordance with CCP-QP-028, *CCP Records Filing, Inventorying, Scheduling, and Dispositioning,* and verifies the RIDS remain current.

3.3.7 Identifies records that are eligible for in-house destruction.

3.3.8 Assists personnel with record retrieval from CCP Records as required.

3.3.9 Assists in obtaining approved disposition authorities for unscheduled records from NARA.

3.4 Records Custodian

3.4.1 Carries out the records management duties in accordance with approved implementing procedures.

3.4.2 Transmits completed QA records to the Host (generator/storage) site records centers or Waste Isolation Pilot Plant (WIPP) Records Archives (if applicable).

3.4.3 Assists personnel with record retrieval from CCP Records, as required.

3.4.4 Verifies that Records are complete. This includes verifying that there are no missing signatures, the page count is correct, and that the Batch Data Reports (BDRs) contents match their Table of Contents.

3.4.5 Ensure that the Attachment 2, Records Transmittal/Receiving Form, is in agreement with the transmitted record and that it is legible.

3.5 Facility Records Custodian

3.5.1 Coordinates the compilation and the transfer of records generated at the Host (generator/storage) sites.

3.5.2 Verifies that records are complete. This includes verifying that there are no missing signatures, the page count is correct, and that the BDRs contents match their Table of Contents.

3.5.3 Ensure that the Attachment 2 is in agreement with the transmitted record and that it is legible.

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3.5.4 Manages the transfer of completed and in-process records to CCP Records.

3.5.5 Assists personnel with record retrieval from CCP Records where applicable.

3.5.6 Carries out the records management duties in accordance with approved implementing procedures.

3.6 WIPP Records Management Services (WRMS)

3.6.1 Assists in the development and management of the records management system.

3.6.2 Assists with the review and approval of the CCP RIDS.

3.6.3 Assists in obtaining approved disposition authorities for unscheduled records to NARA.

3.7 Personnel

3.7.1 Generates the necessary records that document the activities assigned to them. Each individual who creates records must verify the record(s) are legible, accurate, and complete, appropriate to the work accomplished.

3.7.2 Are aware of, and provide reasonable protection during the generation and processing of records intended to become QA Records.

3.7.3 Ensures that records are legible, accurate and complete, appropriate to the work accomplished, when generating, reviewing and validating records.

3.7.4 Ensures that records are not inadvertently or prematurely destroyed.

3.7.5 Coordinates records issues with the respective Records Custodian(s)/Facility Records Custodian(s).

3.8 WRMS Manager

3.8.1 Provides concurrence for in-house destruction of records.

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4.0 PROCEDURE

4.1 Generation of Records

Cognizant Managers

4.1.1 Prior to conducting a work activity:

[A] Identify those documents that become records.
[B] Determine if the work activities are quality-affecting.
[C] Identify records in the implementing procedures.

NOTE
Records may be originals **OR** reproducible copies; however, original documents are preferred.

4.2 Legibility

Personnel

NOTE
Reproducible ink should be used whenever possible to verify maximum contrast on printed records. Records created in black ink typically produce better quality copies than do records printed in other color inks.

NOTE
Highlighter marking pens SHALL **NOT** be used on records. Bolding or underlining text are preferred alternatives to highlighting.

4.2.1 Verify that the records generated are legible and reproducible. If there is doubt, copy the record and then recopy the copied record (copy-a-copy test) to check the copied copy for legibility.

4.3 Accuracy

4.3.1 Verify that records are accurate to the work accomplished.

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4.4 Completeness

4.4.1 Verify that records are complete per the following:

[A] Blank spaces are filled in where information is required to be entered making the document complete.

[B] Not Applicable (N/A) is entered in spaces where information is not applicable or as otherwise indicated.

[C] Blank spaces are acceptable when a record is a software generated page/form which performs calculations.

[D] The document's intent is clear, even with some blanks not filled in. If so, the record is acceptable as is. A blank space in a record does not, in itself, make the record incomplete. For example:

Is the indicator light illuminated?
___✓___ YES _____ NO

This is an acceptable method of recording information, even when the NO space is blank.

NOTE

Individuals handling documents intended to become QA Records shall provide reasonable protection for the records from damage or loss until the records are submitted to the records system (this includes documents generated during field operations).

4.5 Storage, Maintenance, Control, and Protection of QA Records

4.5.1 Store, maintain, and protect completed QA records as follows:

[A] In an Underwriter Laboratories-listed one-hour fire rated (or equivalent) container, or a container certified by a person competent in the technical field of fire protection,

OR

[B] Retain a copy in a location sufficiently remote from the original to preclude destruction as a result of a single event such as fire or natural disaster,

ALSO

[C] Provide adequate protection of the QA records within the storage location to minimize the risk of damage or loss from

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humidity, natural disasters, adverse weather conditions, mold or infestations of insects or rodents.

[D] DO **NOT** store QA records where they may be exposed to water or heat sources, **OR** where food is kept (to reduce the potential for rodent or insect infestation).

4.5.2 Access

[A] Prevent access to QA records by unauthorized personnel as follows:

NOTE

Authorization must be documented either by signature and date on posted list, **OR** by letter on file. Authorization will be done by the CCP Manager or designee. The authorization list must be kept current.

[A.1] Generate, post, and maintain a list designating the personnel who are authorized and permitted access to the QA records.

NOTE

Provisions for installation of locking mechanisms will be made for storage areas requiring controlled access. Authorized personnel allowed access to the storage areas will be given the lock code **OR** controlled location of the keys.

[A.2] Protect locking mechanisms for storage cabinets/areas that require controlled access.

[A.3] Store all records not currently being used in appropriate storage equipment (e.g., file cabinets, shelving, desks).

[A.4] Lock file cabinets and offices as appropriate when leaving controlled access areas.

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4.6 Records Separation and Availability

NOTE
Records will be separated from non-records and personal papers.

4.6.1 Provide a means to retrieve records by indexing with one of the following methods:

[A] Numerically (such as audit case files):

OR

[B] By subject, with guides dividing different subjects.

4.7 Corrections, Additions, Revisions, Supplements, and Lost Records

NOTE
When in-process record/records intended to become QA Records are being generated they shall be maintained (do not remove or destroy) and if corrections are required, then perform this by proper correction, superceding, or voiding as directed in the following sections of this procedure.

4.7.1 Make necessary changes, additions, revisions and supplements in accordance with the following guidelines:

[A] Corrections

[A.1] Correct errors by drawing a single line through the incorrect information (leaving the original text readable), entering the correct information, **AND** initialing and dating each correction made.

[A.2] DO **NOT** use correction fluid (white-out) or correction tape on records.

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NOTE

Editorial changes may be made to records without the same level of review and approval as the original record. Editorial changes include ONLY the following:

- Clarification statements that do not affect the purpose of the record;
- Correcting grammar or spelling (the meaning has not changed);
- Renumbering sections, attachments or pagination;
- Date(s) that do **NOT** impact final disposition;
- Transcription errors
- Sections that require Not Applicable (N/A), but were left blank.

[A.3] Provide corrected or changed records (except for editorial changes) that have been validated back to the originating organization for review and revalidation.

NOTE

Original records may not be available for remote personnel to make necessary changes; therefore a printed copy of the scanned image from CCP Records may be used to make the changes. Changes will be transmitted in accordance with step 4.10.1.

[A.4] **IF** the original document is unavailable to the individual making a change to a record,
THEN use a printed copy of the scanned image from CCP Records and make the change. This will then become the original.

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[B] Additional Notations

[B.1] **IF** any additional information needs to be added to a record after validation,
THEN enter the notation, **AND** initial and date each notation(s) made.

[C] Revisions, Regeneration, and Supplements

[C.1] **IF** a record needs to be revised due to illegibility or damage,
THEN transcribe **OR** enhance the illegible, or damaged, portion of the record **AND** initial and date each part enhanced or transcribed.

[C.2] **IF** a record must be regenerated due to damage,
THEN regenerate the record and place a notation at the bottom of the regenerated page, "This record has been regenerated because of damage," sign, and date. Place the regenerated record in front or on top of the original damaged record.

[C.3] **IF** a record has already been sent to CCP Records,
AND needs a supplement or revision,
THEN contact CCP Records.

NOTE

The following is a standard way to add new pages to a document, to supersede a page, and to add a corrected page.

[D] Adding Pages to Documents

[D.1] When adding pages to a document, place new pages behind the page within the document that they will follow.

Example: The new pages are to be added right after page 35 within the document. Place the new pages behind page 35, **AND** number the new pages 35A, 35B, 35C.

[D.2] **IF** the pages are added to the end of the document,
THEN number them in sequential order.

Example: The last page of the document is page 40. Place the new pages after page 40, **AND** number the new pages as 41, 42, 43.

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[E] Superceding Pages

[E.1] When superceding a page with a new, corrected page, draw a single, diagonal line through the entire page to be superceded, **AND** initial and date.

[E.2] Place the new, corrected page to the front of the superceded page. Using the page number on the now superceded page, number the new, corrected page with the same number, then renumber the superceded page with the same number and an additional character (i.e., A, B, C).

Example: Superceded page was numbered 35. The new, corrected page will now be numbered 35, **AND** the superceded page will change to 35A.

[F] Superceding or Voiding of Whole Documents

[F.1] When superceding or voiding a whole document (not just pages within a document [i.e., BDRs, Nonconformance Reports]) stamp or write “superceded” or “void” on the first page of the document **AND** initial and date.

[G] Lost Records

[G.1] **IF** replacement or restoration of the record is **NOT** practical,
THEN action should be taken to ensure the quality of the items or activities affecting quality, by using re-examination, investigation, or by other means.

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4.8 Quality Assurance (QA) Record Authentication/Validation

NOTE

Records become QA records when they are completed and authenticated/validated. Authentication/validation may be by the author, assigned reviewer, individual specifically assigned to review and validate documents, or otherwise authenticated/validated.

NOTE

Individuals who review and authenticate/validate records are responsible for the completeness and accuracy of those records.

[A] Authenticate/validate QA records through one of the following methods:

[A.1] Initial **OR** sign and date hard copy records, unless otherwise authenticated/validated.

[A.2] **IF** the nature of the record precludes signing, **THEN** validate the QA record using any reasonable form which clearly indicates that an authorized individual believes the record to be complete and accurate.

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4.9 Generation, Protection, and Preservation of Computer Generated Electronic Records

NOTE

There are two types of electronic records:

- Electronic records that can be printed in a hard copy format.
- Electronic records that cannot be printed in a hard copy format.

Regardless of type, all electronic records must be managed in accordance with the guidelines contained in this section. Properly performing these steps will ensure that electronic records are in compliance with the applicable requirements.

NOTE

Computer modeling results (e.g., Monte Carlo N Particle [MCNP], Origen2.2) that perform statistical and random computer runs of radionuclide distributions will not be maintained but summarized in the hardcopy calculation packages. The calculation packages document these computer runs and shall define the range of possible values, the methodology for randomly selecting from this range, and a representative example of the input values and output result.

NOTE

Electronic media for historical source documents transmitting Adobe portable document format (PDF) files or electronic databases may be compact discs (CDs) or digital video discs (DVDs).

4.9.1 Protection

[A] To minimize the risk of unauthorized additions, deletions, or alterations to electronic files, use power-on, file passwords, or control lists to control any unauthorized access.

[A.1] Place electronic records, when complete to read/write protection.

[B] Provide access of electronic records to authorized staff.

[C] Provide access in the work area of electronic file index printouts, logs, disk labeling, **OR** other means to facilitate retrieval of active records by authorized users. Indicate the method used (including the directory path, if applicable) to transfer the information, the date compressed (if applicable), and file encryption information.

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4.9.2 Preservation

[A] Preserve records for the duration of their authorized retention period to verify their availability and provide verification of work performed by the facility and its supporting agencies.

4.9.3 Storage

[A] Label all electronic media (computer generated) used to store records properly with the following: originating organization, filename, retention period (obtain from Lead Records Custodian), original software used, and the version of the software.

4.9.4 Media Backup

[A] Back up electronic records on a regular basis to safeguard against the loss of information due to equipment malfunctions or human error.

4.9.5 Hardware/Software Changes

[A] Protect records media **AND** migrate information before the media is no longer useful.

[A.1] As software programs change, transfer existing records to the newer software program.

[A.2] As hardware is phased out or upgraded, verify that all existing records can be read utilizing the new hardware.

(a) **IF** new software and hardware will **NOT** read the current electronic record(s),
THEN migrate the records to a more accessible media.

(b) **IF** migration is **NOT** possible,
THEN retain either the old software and hardware **OR** make a printout of the data **AND** file the hard copy.

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4.10 Transmitting Records

NOTE
Transmitting completed QA records is for records going from one location or site to another.

NOTE
Records being forwarded within a Host site location or between Project-Office personnel DOES NOT need an Attachment 2. Completed QA Records being sent from one location or site to another will be sent using Attachment 2.

4.10.1 Transmitting Complete QA Records

[A] Send completed QA records (e.g., BDRs) via Attachment 2 to the Records Custodians/Facility Records Custodians.

[B] Before the completed QA record is transmitted, make a copy of Attachment 2 and the record, **AND** retain until receipt acknowledgement is received from the recipient.

NOTE
Transmittal of completed characterization records to the Host (generator/storage) site (when available) is performed according to the site-specific procedure regarding the submittal of characterization records to their records center. These characterization records will be maintained in accordance with their site-specific records procedures.

NOTE
Records that are designated as lifetime records shall be maintained for the life of the waste characterization program at a participating generator/storage site plus six years, or transferred to the WIPP Records Archive facility. Records designated as non-permanent records shall be maintained for 10 years from the date of record/generation at the participating generator/storage site, or at the WIPP Records Archive facility.

Records Custodian

4.10.2 Transmitting of Completed Characterization Records to the Host (generator/storage) Site or WIPP Records Archive (as applicable)

[A] Return characterization records to the Host (generator/storage) site location or WIPP Records Archive (as applicable) either at pre-determined intervals **OR** at that end of the waste characterization process in accordance with approved RIDS.

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[B] **IF** the Host (generator/storage) site is closed and will no longer be in operation,
THEN submit the documentation pertaining to that site to CBFO for permanent archiving, **OR** the WIPP Records Archive at the end of the waste characterization process in accordance with approved RIDS.

NOTE

The Waste Confirmation Organization represents the permittees and is required to confirm that waste shipments comply with permit requirements prior to shipment.

4.10.3 Transmitting of Waste Confirmation Video and Audio Media Recording

[A] Transmit one copy of the video and audio recording media to the Waste Confirmation Organization.

4.11 Unclassified Controlled Nuclear Information (UCNI) and Official Use Only (OUO) Documentation

---

NOTE

Transmission of Unclassified Controlled Nuclear Information (UCNI) or Official Use Only (OUO) documents must be by means that preclude unauthorized disclosure or dissemination.

NOTE

UCNI documentation must include the required release and markings identified in DOE M 471.1-1, *Identification and Protection of Unclassified Controlled Nuclear Information Manual*. OUO documentation must include the required release and markings identified in DOE M 471.3-1, *Manual for Identifying and Protecting Official Use Only Information*.

4.11.1 Transmitting of UCNI and OUO Documents

[A] Documents identified as UCNI must be transmitted to CCP Records with an Attachment 2 and the transmittal must have the following statement placed in the comment section:

Matter transmitted contains Unclassified Controlled Nuclear Information. When separated from enclosures, this transmittal document does not contain UCNI.

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[B] Documents identified as OUO must be transmitted to CCP Records with an Attachment 2 and the transmittal must have the following statement placed in the comment section: Document transmitted contains OUO information.

[C] When transmitting externally:

[C.1] The UCNI or OUO matter must be contained in a single opaque envelope or wrapping with the recipient's address, a return address, and the words "To Be Opened by Addressee Only".

[C.2] Must be sent by the following U.S. mail methods: First Class, Express, Certified, or Registered Mail,

OR

[C.3] Any commercial carrier, FedEx is preferred.

[D] When transmitting internally the documents may be hand carried as long as the transmitter can maintain control over access to the document being transmitted.

4.11.2 Access and Protection of UCNI and OUO Documents

NOTE

When giving an authorized individual a copy of an UCNI or OUO document, the requirements they will be expected to perform while the document is in their possession must be made clear to the individual, see requirements below.

NOTE

Only authorized individuals may have access to UCNI or OUO documents (e.g., an individual with an official need to know in connection with the performance of official DOE-authorized activities).

[A] Disseminate UCNI or OUO documentation to only authorized individuals.

[B] Must maintain physical control of UCNI or OUO documentation to preclude unauthorized disclosure; store in locked receptacles, such as file cabinets, desks, or bookcases.

[C] Reproduce only to the minimum extent necessary.

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[D] When a copy machine malfunctions during the copying of an UCNI or OUO document the copier must be cleared and all paper paths checked to verify that no UCNI or OUO material remains in the machine.

[E] After its necessary use by an authorized individual, all copies of UCNI or OUO documentation must be destroyed by using strip cut shredders that result in particles of no more than 1/4 inch wide strips or if on a CD the shredding of the disc.

[F] Electronic UCNI or OUO documentation (e.g., PDF) maintained by CCP Records will be stored on a protected server and the files will be properly marked as UCNI or OUO.

4.12 Internal Use Only (IUO) and No Foreign National (NOFORN)

4.12.1 Transmitting of IUO and NOFORN Documents

[A] Documents identified as IUO or NOFORN must be transmitted to CCP with an Attachment 2 and the transmittal must have it clearly identified in the Comments section that the document being transmitted is IUO or NOFORN.

4.12.2 Access and Protection of IUO and NOFORN

NOTE

Only individuals within the project may have access to IUO documents. Dissemination outside of the project will not be permitted.

[A] Disseminate IUO to internal project participants only. NOFORN is not to be disseminated to any Foreign National.

[B] Must maintain physical control of IUO or NOFORN to preclude unauthorized disclosure; store in locked receptacles, such as file cabinets, desks, or bookcases.

[C] Reproduce only to the minimum extent necessary.

[D] After its necessary use by an authorized individual, all copies of IUO and NOFORN must be destroyed by a paper shredder or if on a CD the shredding of the disc.

[E] Electronic IUO or NOFORN documentation (e.g., PDF) maintained by the CCP Records will be stored on a protected server and the files will be properly marked as IUO or NOFORN.

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4.13 Receiving Quality Assurance (QA) Records

4.13.1 Each Host (generator/storage) site or organization responsible for receipt of QA records, designate the person or organization responsible for receiving records.

4.13.2 Ensure that the Attachment 2 is in agreement with the transmitted record and that it is legible and complete.

[A] **IF NOT**,
THEN notify the sender and perform the following:

[A.1] Work to resolve the issues with the sender.

[A.2] **IF** unable to resolve the issues,
THEN identify the record was rejected on Attachment 2 and return Attachment 2 and record to the sender.

4.13.3 Receipt process provides the following:

[A] Provisions to permit a current and accurate assessment of the status of QA records.

[B] A method for identifying the records required to be included in the records system.

[C] A method for identifying the records that have been received.

[D] Procedures for receipt and inspection of incoming records, including verification that the QA records are received in agreement with the transmittal document and that the records are legible.

[E] Provisions to control and protect the records from damage or loss during the receiving processes.

[F] A method for submittal of completed records to the storage facility without unnecessary delay.

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NOTE

Once QA records have been received in CCP Records, original records will **NOT** be removed without a specific need for the original record to be released. If an original record is removed from CCP Records, it is to be returned within fourteen (14) calendar days.

4.14 Retrieval of Original Records from CCP Records at the Project Office

4.14.1 Requests for retrieval of **ORIGINAL** records are handled as follows:

[A] Requestor, provide a written request to CCP Records providing the reason for the request and when the record will be returned.

Records Custodian/Facility Records Custodian

4.14.2 Process requests for retrieval of records already placed into CCP Records as follows:

[A] Pull the requested record.

[B] Make a copy of the record or assure that there is a PDF copy of the record.

[C] **IF** there is not a PDF scanned copy of the record, **THEN** place a copy of record into the records file.

[D] Place a completed Check Out Card in the record file.

[E] Notify requestor of availability of the requested record for pick-up **OR** deliver the **ORIGINAL** requested record to the person who made the request.

4.15 Destruction of QA and Non-QA Records

4.15.1 Destruction of QA Records

[A] DO **NOT** destroy QA records until each of the following conditions are met:

[A.1] Expiration of the NARA approved retention, as noted in the CCP RIDS, has occurred.

[A.2] Evaluation of lifetime records for the potential need to upgrade them to post-closure records has been performed by the CCP Manager or designee.

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[A.3] CCP Manager or designee determines if regulatory requirements are satisfied, operational status permits the disposal of such records, and the related contractual requirements have been satisfied.

[A.4] In cases of conflicting requirements concerning records retention requirements, the most stringent requirements shall be used in determining the final disposition.

AND

[A.5] CCP Manager or designee determines that there are no enforcement actions against the CCP.

NOTE

QA records that may be relevant to an enforcement action, regardless of disposition, will be maintained until the New Mexico Environment Department (NMED) determines they are no longer needed for enforcement action, and then the records may be dispositioned as directed in step 4.15.2.

[B] **IF** all of the listed conditions are **NOT** met,
THEN DO **NOT** destroy the affected records series, **AND** CCP Manager or designee, follow step 4.15.3.

[C] **IF** all of the listed conditions are met,
THEN CCP Manager or designee complete the Written Request for Records Destruction, (See Attachment 1, Written Request for Records Destruction), for an example **AND** submit to the WRMS Manager before destroying QA records.

[D] Upon receipt of the approved written concurrence, CCP Manager or designee forward the approval to the Lead Records Custodian.

Lead Records Custodian

[E] Receive the approved written concurrence and disposition the QA records.

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4.15.2 Destruction of Nonpermanent, Non-QA Records

Lead Records Custodian

[A] Determine which nonpermanent records series are eligible for destruction by reviewing the RIDS to determine the length of time the records series is to be retained.

[B] Inform the CCP Manager or designee of the records which have expired retention periods.

CCP Manager or Designee

[C] **IF** in agreement,
THEN the CCP Manager or designee, completes and forwards Written Request for Records Destruction, including a reference to the current RIDS, to the WRMS Manager before destroying the nonpermanent, non-QA records.

Lead Records Custodian

[D] After receiving the approved written concurrence, disposition identified non-permanent or non-QA records.

4.15.3 Requesting an Extension of the Record Retention Period

[A] **IF** the CCP Manager or designee determines that the approved record retention period needs to be extended,
THEN CCP Manager or designee, perform the following:

[A.1] Send a memorandum to the WRMS Manager with a request and justification of an extension.

[A.2] Maintain the memorandum with the respective RIDS.

[A.3] Take the appropriate action, depending on the response to the memorandum.

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5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as QA records in accordance with the requirements of this procedure. The records are the following:

5.1.1 Non-QA

[A] Written Request for Records Destruction

[B] Written Request for Retrieval of Original Record

[C] Request for Extension Memorandum

5.1.2 QA/Nonpermanent

[A] Attachment 2 – CCP Records Transmittal/Receiving Form

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Attachment 1 – Written Request for Records Destruction (Example)

TRU SOLUTIONS

John Smith
S.M. Stoller Corporation
2101A South Canal
Carlsbad, NM 88220

SUBJECT: REQUEST FOR CONCURRENCE TO DISPOSE OF RECORDS

Dear Mr. Smith:

This is a request for concurrence to dispose of the following record series according to our current Records Inventory and Disposition Schedule dated April 10, 2004.

RECORD SERIES	RETENTION PERIOD	INCLUSIVE DATES
Landlord Housekeeping Pre-checklists - Item #24	1 year	January, 2003 through July, 2003
Key Inventory Logs - Item #17	2 years	January, 2002 through June, 2002

If you have any questions, please contact Ms. Jane Smith, of my staff, at (575)628- 5810.

Sincerely,

David Doe
Characterization Project Manager

CONCURRENCE:

John Smith, Manager
WIPP Records Management Services (WRMS)

SP: ab

cc: J. Smith, S.M. Stoller Corporation

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Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523, 575-234-7431, or 575-234-7095

Fax Number: 575-234-7033

☐ Original Record ☐ Copy
☐ Fax Record
☐ Electronic Record

Attn: _____ From: _____

Ship to: _____ Site: _____

_____ Company: _____

_____ Telephone Number: _____

_____ Date Sent: _____

Telephone Number: _____

Document Number	Title / Description	Record Date	Total Pages

Comments

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted ☐ _____ _____ _____
Signature Printed Name Date

Records Rejected ☐ _____ _____ _____
Signature Printed Name Date

Reason for Rejection:

Re-submittal: _____ _____ _____
Signature Printed Name Date

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CCP-QP-021

Revision 8

CCP Surveillance Program

EFFECTIVE DATE: 01/16/2013

Mike Ramirez

PRINTED NAME

APPROVED FOR USE

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
3	06/03/2002	Section 2.0, Requirements (page 2): Change the first paragraph after the bullets to read as follows: "Planned and periodic surveillance will be conducted to measure item and service quality, process effectiveness, and promote improvement. The organization performing the assessments will have sufficient authority and freedom from the activities being assessed to carry out its responsibilities. Persons conducting surveillances will be qualified in accordance with CCP-QP-002, *CCP Training and Qualification Plan*, and knowledgeable of the items and activities being assessed."
4	05/24/2004	Revised Sections 1.1, 2.0, 2.3, 2.4, 4.0, 5.0 and Figure 2.
5	11/16/2006	Reengineered Surveillance Program to make it more comprehensive, to ensure findings are identified and tracked, and to ensure consistency amongst CCP Quality Assurance (QA) personnel, and to implement the Waste Isolation Pilot Plant Hazardous Waste Facility Permit-requirements resulting from the Section 311/Remote-Handled (RH) Permit Modification Request (PMR). Addressed Carlsbad Field Office (CBFO) Document Review Record (DRR) comment.
6	12/10/2008	Revised to delete reference to “assessments” incorporate conditions Corrected During Surveillance (CDS) and clarify training and qualification of surveillance personnel.
7	05/07/2010	General revision to clarify follow-up to observations and provide clarity of text.
8	01/16/2013	Revised to incorporate Nuclear Waste Partnership (NWP) transition changes.

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1.0 PURPOSE

This procedure establishes the responsibilities and requirements for planning, performing, documenting, and reporting independent surveillances (evaluations) of Central Characterization Program (CCP) transuranic (TRU) waste characterization loading and shipping activities.

1.1 Scope

This procedure applies to CCP organizations and personnel performing surveillances of TRU waste characterization activities. This procedure also applies to CCP facilities being evaluated. Planned and periodic surveillances will be conducted to measure item and service quality, process effectiveness, and promote improvement. The organization performing the surveillance will have sufficient authority and freedom from the activities being evaluated to carry out its responsibilities. Person conducting surveillances will complete a Quality Assurance Surveillance Personnel Qualification Card prepared and approved by required individuals in accordance with CCP-QP-002, *CCP Training and Qualification Plan,* and be knowledgeable of the items and activities being evaluated.

Surveillances will accomplish the following:

- Monitor work in progress;
- Document compliance or noncompliance with established requirements and procedures;
- Identify actual and potential conditions adverse to quality;
- Obtain timely corrective action commitment from cognizant managers for identified conditions adverse to quality;
- Provide notification to responsible managers of the status and performance of work under surveillance; and
- Verify timely implementation of corrective action

All surveillances will have a unique Surveillance (SUR) Number. The Surveillance (SUR) Log, (See Attachment 3, Surveillance [SUR] log, for an example) will provide the following information:

- SUR Number
- Item, activity, or process being evaluated

- Date the surveillance was initiated (Initiation Date)
- Person(s) that initiated the surveillance (Surveillance Lead)

The SUR number system will provide the capability to determine the following:

- Designator for surveillance (SUR)
- Facility identifier (LANL, INL, SRS, ORNL, CCP, etc.)
- Sequential number issued for the organization or facility in that calendar year
- Calendar year issued

Example SUR numbers:

- SUR-LANL-0001-06
- SUR-SRS-0002-06
- SUR-CCP-0013-06

2.0 REQUIREMENTS

2.1 References

Baseline Documents

- DOE/CBFO-94-1012, *U.S. Department of Energy Carlsbad Field Office Quality Assurance Program Document*

Referenced Documents

- CCP-QP-002, *CCP Training and Qualification Plan*
- CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
- CCP-QP-008, *CCP Records Management*
- CCP-QP-029, *CCP Corrective Action Management*

3.0 RESPONSIBILITIES

3.1 Assurance Programs Manager

3.1.1 Ensures implementation of the surveillance program as described in this procedure.

3.1.2 Approves the surveillance schedule.

3.1.3 Ensures that surveillance personnel have successfully completed a Quality Assurance Surveillance Personnel Qualification Card.

3.1.4 Ensures surveillance personnel have sufficient authority and organizational freedom to carry out their assigned responsibilities.

3.1.5 Assigns Surveillance Lead.

3.1.6 Provides information on status and/or findings to the Nonconformance Report (NCR) Coordinator, Corrective Action Report (CAR) Coordinator and Nuclear and Worker Safety Compliance Coordinator.

3.2 Surveillance Lead

3.2.1 Selects the Surveillance Team Members and ensures they have been qualified by the Assurance Programs Manager.

3.2.2 Provides information to the surveillance team.

3.2.3 Notifies affected organizations of surveillances, as applicable.

3.2.4 Develops the surveillance plan.

3.2.5 Approves surveillance checklists, when used by surveillance team members.

3.2.6 Organizes and directs the surveillance.

3.2.7 Reports the surveillance results.

3.2.8 Follows up on observations and findings identified in previous surveillances.

3.3 Surveillance Team Members

3.3.1 Identifies the criteria to be used during the surveillance.

3.3.2 Develops the surveillance checklist(s), if applicable, under the direction of the Surveillance Lead.

3.3.3 Informs the Surveillance Lead of progress and/or problems with assigned tasks periodically during the surveillance.

3.3.4 Notifies the Cognizant Manager/Surveillance Lead if conditions are identified that are believed to be unsafe.

3.4 Surveillance Coordinator

3.4.1 Develops and maintains a surveillance schedule.

3.4.2 Develops and maintains a Surveillance (SUR) Log Example provided as Attachment 3, Surveillance Log).

3.4.3 Develops and maintains surveillance schedules that contain the anticipated surveillances for a specific time frame.

3.4.4 Prepares copies of the surveillance schedules for record or contract deliverable purposes, as necessary.

3.5 Cognizant Manager of Area Evaluated

3.5.1 Provides timely corrective action for conditions adverse to quality and tracks and follows up on Observations identified during the surveillance.

3.6 NCR/CAR Coordinator

3.6.1 Enters NCR/CAR data into the Integrated Data Center or the WIPP Commitment Tracking System (CTS) for tracking and follow-up-purposes.

4.0 PROCEDURE

Assurance Programs Manager

4.1 In conjunction with Management, determine areas/activities to be evaluated.

Surveillance Coordinator

4.2 Prepare and maintain the surveillance schedule based on QA and Management input, **AND** obtain Assurance Programs Manager approval.

Assurance Programs Manager

4.3 Approve the surveillance schedule.

NOTE

The Assurance Programs Manager's signature on correspondence transmitting surveillance schedules to Management will constitute the Assurance Programs Manager's approval of surveillance schedules and assignment of Surveillance Leads.

4.4 Assign a Surveillance Lead.

Surveillance Lead

4.5 Obtain a SUR Number from the Surveillance Coordinator.

NOTE

The following should be considered when selecting Surveillance Team Members:

- Personnel having direct responsibility for performing the activities being evaluated shall **NOT** be involved in the selection of the team.
- Surveillance Team Members shall have requisite authority to perform surveillances, and shall be independent from the organization being evaluated.
- During surveillance, technical specialists shall be used when evaluating the adequacy of technical processes.
- The Surveillance Lead will ensure that technical specialists are knowledgeable of the technical processes being evaluated, and that specialists receive the same instructions as other team members.

4.6 Select Surveillance Team (as needed) based on the scope, complexity, or special nature of the work being evaluated, technical expertise, availability, experience, and the prospective member's ability to provide an objective contribution.

4.7 Ensure that the Surveillance Team collectively have appropriate training and experience commensurate with the scope of the surveillance.

4.8 Prepare the Surveillance Plan (Example provided as Attachment 1, Surveillance Plan) to include the elements specified.

4.9 Review, with Surveillance Team, any plan generated, pertinent background information including previous surveillance or oversight results, applicable procedures, and applicable technical documents to familiarize Surveillance Team with the work being evaluated.

4.10 Notify the cognizant organization(s) of the surveillance date and the purpose of the surveillance.

Surveillance Team Members

4.11 Prepare surveillance checklists (as appropriate) listing the elements to be evaluated.

4.12 Evaluate the applicable quality program element(s) by examining objective evidence, observing activities in progress, examining items (including components, specimens, and machinery, etc.), and/or interviewing personnel responsible for the activity. Include technical evaluations of the applicable procedures, instructions, activities, and items, as appropriate.

4.13 Evaluate the objective evidence related to the planning and technical aspects of work performance to the depth necessary to determine if these elements are being implemented effectively.

4.14 Review previous corrective actions, as applicable, to evaluate implementation and effectiveness when recurring problems are found.

4.15 Review applicable documents, standards, and criteria pertaining to the process to be evaluated.

4.16 Observe, to the extent possible, actual operations to verify conformance to requirements.

4.17 Conduct interviews with selected personnel having knowledge of the activity or area of evaluation.

4.18 Document the results of the surveillance with sufficient detail to allow preparation of the surveillance report including but not limited to objective evidence examined and personnel interviewed.

4.19 Inform the Surveillance Lead of progress and/or problems with assigned tasks periodically during the surveillance.

4.20 Notify the Cognizant Manager/Surveillance Lead if conditions are identified that are believed to be unsafe.

Surveillance Lead

4.21 Notify the Assurance Programs Manager and the management of the cognizant organization as soon as practicable if conditions are discovered that could have a significant adverse impact on prior work or affect work in progress, or if conditions require prompt attention.

4.22 If applicable, prepare NCRs or CARS in accordance with CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control* or CCP-QP-029, *CCP Corrective Action Management*.

4.23 Brief management of the cognizant organization.

4.24 Prepare the formal surveillance report following the guidance in the Surveillance Report (Example provided as Attachment 2, Surveillance Report) and include the following elements, as applicable:

- Identify findings which are conditions that deviate from the requirements, with sufficient detail to enable corrective actions to be taken by the cognizant organization, and subsequent closure by QA. Briefly state the requirement(s) applicable to the deficiencies cited. Group findings of a common nature together whenever possible so that systematic problems can be identified. .
- If observations are identified, state that conditions observed, and if not addressed, could deteriorate into a finding.
- Provide recommendations that could strengthen the existing program or process.
- Include in the report descriptions of all actions taken to resolve conditions, and identify those conditions as being corrected during the surveillance (CDS).

4.25 Submit to the Assurance Programs Manager for review and approval.

Assurance Programs Manager

4.26 Review the surveillance report and resolve any issues with the Surveillance Lead.

NOTE

The preferred system for tracking Surveillances is the Integrated Data Center. However, if the system is unavailable for Surveillance Tracking, use of the WIPP CTS is acceptable.

4.27 Approve and issue the surveillance reports to management, Nuclear and Worker Safety Compliance Coordinator, NCR/CAR Coordinator, Surveillance Coordinator, and the cognizant Subcontract Technical Representative (STR) for the Host site.

NCR/CAR Coordinator

4.28 Make a separate entry for each finding (NCR/CAR) identified in the report into the Integrated Data Center or the WIPP CTS.

Cognizant Manager of Surveilled Area

4.29 Ensure timely and effective corrective actions in response to CARs or NCRs or other conditions requiring resolution resulting from the surveillance.

4.30 Work with the Surveillance Lead and the QA Manager to resolve issues regarding necessary corrective actions.

4.31 Upon completion of corrective actions associated with surveillance, inform the NCR/CAR Coordinator and the Surveillance Coordinator.

Surveillance Lead/Assurance Programs Manager

4.32 Track the progress of corrective actions required by any CAR or NCR written as the result of the surveillance.

Surveillance Coordinator

4.33 Upon completion of corrective actions associated with surveillance, inform the NCR/CAR Coordinator.

4.34 Update the Surveillance Schedule and Log (Attachment 3).

5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as QA records in accordance with CCP-QP-008, *CCP Records Management*. The records are the following:

5.1.1 QA/Nonpermanent

[A] Surveillance File which includes the following:

- Surveillance Notification, if applicable
- Surveillance Plan
- Surveillance Checklist(s), if applicable
- Surveillance Report(s)

[B] Surveillance (SUR) Log

[C] Surveillance Schedule

Attachment 1 – Surveillance Plan (Example)

SURVEILLANCE PLAN

Surveillance Number:

Organization to be Evaluated:

Location:

Surveillance Dates:

Surveillance Team:

Scope:

Applicable Requirements Documents:

Attachment 2 – Surveillance Report (Example)

SURVEILLANCE REPORT

SUR-XXXX-####-##

Central Characterization Program

Surveillance Number:

I. SUMMATION OF RESULTS

II. SURVEILLANCE SCOPE

III. CRITERIA

IV. PERSONNEL CONTACTED

V. FINDINGS (NCR/CAR)

VI. ISSUES CORRECTED DURING THE SURVEILLANCE

VII. CONCERNS PREVIOUSLY IDENTIFIED

VIII. OBSERVATIONS

IX. RECOMMENDATIONS

X. OBJECTIVE EVIDENCE

SURVEILLANCE LEAD_____DATE_____

ASSURANCE PROGRAMS MANAGER_____DATE_____

Attachment 3 – Surveillance (SUR) Log (Example)

SUR Number	Item, Activity, or Process Evaluated	Surveillance Lead	Initiation Date	Completion Date

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CCP-QP-028

Revision 15

CCP
Records Filing, Inventorying, Scheduling, and Dispositioning

EFFECTIVE DATE: 01/22/2013

Mike Ramirez

PRINTED NAME

APPROVED FOR USE

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
3	08/20/2002	Added steps 4.3.3 through 4.3.6. Added a Table of Contents. Added a Record of Revision. Other editorial changes.
4	10/24/2002	Added new Step 3.1.2 and revised Step 4.2.4.[B] making the Project Manager responsible for signing RIDS; added as result of a comment during the SRS Recertification Audit.
5	09/25/2003	Separated electronically fillable forms and updated references in procedure. Added responsibilities for CCP personnel. Other editorial changes.
6	07/25/2006	Revised to change the CCP Project Manager's responsibility to the CCP Project Support Manager.
7	04/18/2007	Revised to change CCP Project Support Manager responsibilities to the CCP Program Development Manager.
8	09/11/2007	Revised to make minor editorial changes and to replace Attachment 1, Records Inventory and Disposition Schedule with new DOE form, DOE F 1324.10 (06-96).
9	02/24/2009	Revised to incorporate changes to titles of personnel and names for organizations. Also, a step was added to Section 4.2 (step 4.2.5) to complete the process performed. Section 4.4 was deleted since the requirements are not applicable to the CCP scope of work (they are implemented at the RCT level).
10	04/08/2010	Revised to incorporate changes to Attachment 2, Instructions for Filling Out the Records Inventory and Disposition Schedule.
11	05/19/2010	Revised to bring instructions regarding location in Attachment 4, Instructions for Filling Out the Records Inventory and Disposition Schedule, in line with current practice.
12	11/09/2010	Revised to remove examples form and re-number remaining attachments and update Attachment 2.
13	09/09/2011	Revised to correct reference section of the procedure and remove a reference that is no longer active.

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
14	01/16/2012	Revised to bring into line with the Waste Isolation Pilot Plant (WIPP) Inventory Worksheets and general editing of the procedure.
15	01/22/2013	Revised to incorporate Nuclear Waste Partnership (NWP) transition changes.

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1.0 PURPOSE

This procedure provides direction and instruction for generating, issuing, and using a Records Inventory and Disposition Schedule (RIDS).

1.1 Scope

The procedure applies to Central Characterization Program (CCP), CCP Manager, and Records Custodians responsible for inventory, scheduling, and disposing of CCP records under their cognizance, regardless of media, in order to document the activities related to the CCP.

2.0 REQUIREMENTS

2.1 References

Baseline Documents

- 44 USC 3301, *Definition of Records*
- DOE/CBFO-94-1012, *U.S. Department of Energy Carlsbad Field Office* (CBFO) *Quality Assurance Program Document* (QAPD)

Referenced Documents

- EA15RM3002-1, *WIPP Records Inventory Work Sheet*
- EA15RM3002-2, *Records Inventory and Disposition Schedule (RIDS)*
- WP 15-RM3002, *Records Filing, Inventorying, Scheduling, and Dispositioning*
- CCP-QP-008, *CCP Records Management*

3.0 RESPONSIBILITIES

3.1 CCP Manager or Designee

3.1.1 Approves the Records Inventory and Disposition Schedule (RIDS).

3.2 Lead Records Custodian

3.2.1 Develops new RIDS.

3.2.2 Performs annual review and revision of RIDS.

3.3 WIPP Records Management Services (WRMS)

3.3.1 Reviews the RIDS and associated WIPP Records Inventory Worksheets.

3.3.2 Provides final approval signature for the RIDS.

4.0 PROCEDURE

4.1 Developing a New Inventory and RIDS

Lead Records Custodian

NOTE
The Lead Records Custodian may request assistance from WIPP Records Management Services (WRMS) for performance of steps 4.1.1 and 4.1.2.

4.1.1 Complete EA15RM3002-1, *WIPP Records Inventory Work Sheet* for each record and non-record series, using the instructions contained in WP 15-RM3002, *Records Filing, Inventorying, Scheduling, and Dispositioning*.

4.1.2 Complete the RIDS on form EA15RM3002-2, *Records Inventory and Disposition Schedule (RIDS),* using the instructions contained in WP 15-RM3002.

4.2 RIDS Review and Approval

Lead Records Custodian

4.2.1 Forward the draft RIDS and all EA15RM3002-1 to WRMS for review and comments.

4.2.2 **IF** WRMS returns the RIDS with comments,
THEN resolve the comments.

4.2.3 **IF** notified by WRMS that the RIDS is acceptable,
THEN print out a final copy of the RIDS for signatures.

4.2.4 Obtain the required signatures in Block 5, RIDS, as follows:

[A] Prepared by - Signature of the designated trained Lead Records Custodian who prepared the RIDS

[B] Approved by - Signature of the CCP Manager or Designee

[C] Record Liaison Officer - Enter “N/A”

4.2.5 Submit signed RIDS to WRMS for final approval by obtaining WRMS signature.

4.3 Revising and Reviewing the RIDS

Lead Records Custodian

4.3.1 Review files annually, at a minimum.

NOTE
Take into consideration organization changes that may affect record series custodianship, location, or when new record series are created.

4.3.2 Check all record and non-record material on the current RIDS.

4.3.3 **IF** a new series is added,
THEN complete an EA15RM3002-1, with the instructions in WP 15-RM3002, **AND** add the new record series to a draft CCP RIDS.

4.3.4 **IF** a record series is no longer generated and maintained,
THEN complete an EA15RM3002-1, with the instructions in WP 15-RM3002, **AND** delete the item on a draft RIDS.

4.3.5 Forward the draft RIDS, **AND** any new EA15RM3002-1 to the WRMS annually at a minimum.

4.3.6 Follow steps 4.2.2 through 4.2.5.

4.3.7 **IF** an interim RIDS change is needed to make an immediate change of information on the RIDS,
THEN complete an EA15RM3002-1, with the instructions in WP 15-RM3002.

4.3.8 Send copy to WRMS and add changes to a draft RIDS to be submitted in the next RIDS review.

5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained in accordance with CCP-QP-008, *CCP Records Management.* The records are the following:

Non-Quality Assurance

5.1.1 Records Inventory and Disposition Schedule

5.1.2 WIPP Records Inventory Worksheet

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CCP-TP-001

Revision 20

CCP
Project Level
Data Validation and Verification

EFFECTIVE DATE: 09/27/2012

Mike Ramirez

PRINTED NAME

APPROVED FOR USE

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
4	12/14/2001	Revised to reflect the use of an electronic data management system at some sites. A new Section 4.4 was created; minor changes to Section 4.7; references and records updated, and Attachments 1 through 4 revised.
5	03/08/2002	Minor editorial changes; added a new Section 4.8, and a new Attachments 7 through 11.
6	05/15/2002	Description of Revision: Changes made due to the Revision of DOE/WIPP-02-3122, *Contact-Handled Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant* (CH-WAC) and changes to the Permit Modification to be implemented June 1, 2002. Plus planned changes due to process improvement. Multiple section changes as well as Attachment changes.
7	01/13/2003	Updated title of CCP-PO-005. Updated attachments 1 through 12.
8	02/03/2003	Additions to Attachment 4 and Attachment 5, DAC requirements. Resolved CBFO comments.
9	07/10/2003	Text and attachments to include Homogeneous Solid/Soil Waste Sampling and Checklists. Added steps to validate BDRs through P-TS. Separated electronically fillable forms and updated references in procedure.
10	08/28/2003	Revised sections 2.1, 2.6, 3.2, 4.3, and 5.1.
11	03/23/2005	Revised to incorporate LANL Off-Site Source Recovery Project (OSRP) requirements. Deleted Section 4.5, e-QA forms, Attachments 1 through 4 due to closure of Argonne National Laboratory (ANL)-East. Revised CCP Records Custodian and Facility Records Custodian responsibilities and actions.
12	05/25/2006	Revised to address Carlsbad Field Office (CBFO) Document Review Record (DRR) comments.
13	07/21/2006	Revised Attachments 10, 11, 13, 14, and 15 in response to Corrective Action Report (CAR) Number CAR-LANL-0006-06.
14	11/16/2006	Revised to implement the Waste Isolation Pilot Plant Hazardous Waste Facility Permit requirements resulting from the Section 311/Remote-Handled (RH) Permit Modification Request (PMR). Addressed Carlsbad Field Office (CBFO) Document Review Record (DRR) comments.
15	11/22/2006	Minor revision to correct header in Attachment 12.

RECORD OF REVISION (Continued)

Revision Number	Date Approved	Description of Revision
16	04/26/2007	Clarification of note in Section 4.3 for quarterly reports.
17	09/24/2007	Revised to clarify the references in the attachments and to remove the 25%RPD limit for solids/soils co-located cores/samples from Attachments 6, 7, 8 and 9. Revised to remove Visual Examination (VE) Expert decisions and signature and date. Modifications were made to Sections 4.4, 4.5, and Attachments 6 through 9 to discuss the F-test and control charts.
18	08/09/2010	Revised to address Hazardous Waste Facility Permit modification, and other editorial and freeze file changes.
19	12/29/2010	Revised to clarify independent technical reviewer (ITR) Independence and to update references to the *Waste Isolation Pilot Plant Hazardous Waste Facility Permit.*
20	09/27/2012	Revised to remove references to P-TS. Also revised due to CAR-LANL-0005-12 and CBFO CAR 12-033.

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1.0 PURPOSE

Waste characterization data generated by characterization activities are validated and verified in compliance with CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan* (QAPjP) and CCP-PO-002, *CCP Transuranic Waste Certification Plan*. The format of CCP-PO-001 parallels that of the *Waste Isolation Pilot Plant Hazardous Waste Facility Permit,* NM 4890139088 TSDF, Attachment C, *Waste Analysis Plan* (WAP). Characterization data requiring review, validation and verification includes Nondestructive Examination (NDE), Nondestructive Assay (NDA), Sealed Sources Radiological Characterization Data, Headspace Gas (HSG) Sampling and Analysis, Solids/Soils Waste Sampling and Analysis, and Visual Examination (VE).

1.1 Scope

NOTE

Gas Generation Testing (GGT) data review and validation are not addressed in this procedure. Refer to CCP-PO-016, *CCP Gas Generation Testing Program Quality Assurance Project Plan* for guidance.

This procedure defines the activities required to perform data validation and verification at the Central Characterization Project (CCP) Project Office. This procedure is applicable to all personnel performing data validation and verification. The Site Project Manager (SPM) is responsible for conducting the data validation and verification activities described in this procedure. Compliance with this procedure ensures that each batch data report (BDR) complies with the requirements of the CCP-PO-001 and CCP-PO-002.

2.0 REQUIREMENTS

2.1 References

Referenced Documents

- *Waste Isolation Pilot Plant Hazardous Waste Facility Permit*, NM 4890139088-TSDF, Attachment C, *Waste Analysis Plan*
- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- CCP-PO-002, *CCP Transuranic Waste Certification Plan*
- CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)*
- CCP-PO-016, *CCP Gas Generation Testing Program Quality Assurance Project Plan*
- CCP-QP-002, *CCP Training and Qualification Plan*
- CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
- CCP-QP-006, *CCP Corrective Action Reporting and Control*
- CCP-QP-008, *CCP Records Management*

2.2 Training Requirements

Personnel performing this procedure will be trained and qualified in accordance with CCP-QP-002, *CCP Training and Qualification Plan* prior to performing this procedure.

2.3 Equipment List

2.3.1 None.

2.4 Precautions and Limitations

2.4.1 None.

2.5 Prerequisite Actions

2.5.1 None.

2.6 Definitions

2.6.1 None.

2.7 Project Office Integrated Data Center (IDC) (where available)

2.7.1 The IDC provides the capability of tracking BDRs for review.

2.7.2 The IDC provides, as a minimum, the following:

[A] Link to a scanned copy of the BDR.

[B] Status of the BDR.

[C] HOLD status of the BDR.

[D] Status of Nonconformance Reports (NCRs).

3.0 RESPONSIBILITIES

NOTE

Implementation of this procedure requires the following positions: Data Generation Level (DGL) Personnel, SPM, CCP Records Custodian, and Facility Records Custodian.

3.1 SPM

3.1.1 Reviews 100 percent of the BDRs generated as a result of waste characterization activities prior to any of the waste associated with the data reviewed being shipped to the Waste Isolation Pilot Plant (WIPP).

3.1.2 Ensures the DGL Independent Technical Reviewer (ITR) reviews, validations, and verifications have been performed by verifying completed review checklists and appropriate signatures.

3.1.3 Ensures BDR review checklists are complete.

3.1.4 Ensures Testing, Sampling, Analytical, BDR Quality Checks (QC), and data are within established data assessment criteria and meet all applicable Quality Assurance Objectives (QAOs) as defined by CCP-PO-001.

3.1.5 Ensures BDRs are complete and data are properly reported (e.g., data are reported in the correct units, correct significant figures, and correct qualifying flags).

3.1.6 Prepares the applicable CCP SPM Project Level Data Validation Summary.

3.1.7 Verifies the validity of the drum age criteria (DAC) assignment made at the DGL based upon an assessment of the data collection and evaluation necessary to make the assignment.

3.1.8 Releases, by signature and date, the BDR upon completion of the SPM review.

3.1.9 Generates NCRs in accordance with CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control* and Corrective Action Reports (CARs) in accordance with CCP-QP-006, *CCP Corrective Action Reporting and Control* as required.

3.1.10 Reviews NCRs and verifies corrective actions, as needed.

3.1.11 Determines if U.S. Department of Energy (DOE)/Carlsbad Field Office (CBFO) reporting is required for NCRs/CARs generated at the SPM level.

[A] Makes notifications to DOE/CBFO, and ensures actions are completed as required.

3.2 CCP Records Custodian

3.2.1 Receives corrected BDR or BDR pages from the Facility Records Custodian, as necessary, in accordance with CCP-QP-008, *CCP Records Management*.

3.3 Facility Records Custodian

3.3.1 Enters BDR into the IDC.

3.3.2 Receives, processes, and transmits corrected BDR or BDR pages to CCP Records Custodian, when applicable, in accordance with CCP-QP-008.

4.0 PROCEDURE

4.1 BDR Receipt

Facility Records Custodian

4.1.1 Enter BDR into the IDC.

NOTE
Steps in Section 4.2 may be performed in any order.

4.2 SPM BDR Review

NOTE
Section 4.2 must be completed for 100 percent of the BDRs transmitted to the SPM.

The SPM must perform a comprehensive review of the data (e.g., correct units, significant figures, and qualifying flags are met, as well as ensuring that data assessment criteria are met).

SPM

4.2.1 Initiate BDR review in the IDC as follows:

[A] Log into the IDC.

[B] Select BDR to review (e.g., the IDC Daily Hot Lists).

[C] Click on START SPM REVIEW.

[D] Compare Container Identifications (IDs) in the BDR to the Container IDs included in the IDC.

[E] **IF** any Container IDs from the BDR are missing from the IDC **OR** DO **NOT** match those entered into the IDC, **THEN** contact the CCP Records Custodian/Facility Records Custodian, **AND** resolve the problem.

[E.1] Place BDR on HOLD by selecting, PLACE BDR ON HOLD, if necessary, **AND** enter reason for HOLD in the Comments/Qualifiers Section by selecting ADD/EDIT COMMENTS.

[E.2] **WHEN** the problem is resolved,
THEN select REMOVE HOLD FROM BDR in the IDC.

[E.3] Compare NCRs included in the BDR to the NCRs in the IDC, if applicable.

[E.4] **IF** any NCRs are missing from the IDC **OR** DO **NOT** match those entered into the IDC for the BDR,
THEN contact the NCR Coordinator, **AND** resolve the problem.

[E.5] Place BDR on HOLD by selecting, PLACE BDR ON HOLD, if necessary, **AND** enter reason for HOLD in the Comments/Qualifiers Section by selecting ADD/EDIT COMMENTS.

[E.6] **WHEN** the problem is resolved,
THEN select REMOVE HOLD FROM BDR in the IDC.

NOTE

Containers for Newly Generated Waste will **NOT** appear in the Acceptable Knowledge (AK) Tracking Spreadsheet on the CCP File Transfer Protocol (ftp) site for VE Technique BDRs. All Newly Generated Waste containers should be listed in the AK Tracking Spreadsheet at the time of validation for all other BDR types.

NOTE

Reports derived from the IDC Search function use the AK Tracking Spreadsheets and can be used to verify Container IDs.

[F] Compare Container IDs in the BDR to the approved AK Tracking Spreadsheet on the CCP ftp site.

[G] **IF** any Container IDs are included in the BDR that are **NOT** on the approved and posted AK Tracking Spreadsheet,
THEN contact the AK Expert.

[G.1] Place BDR on HOLD by selecting, PLACE BDR ON HOLD, if necessary, **AND** enter reason for HOLD in the Comments/Qualifiers Section by selecting ADD/EDIT COMMENTS.

[G.2] **WHEN** the problem is resolved,
THEN select REMOVE HOLD FROM BDR in the IDC.

4.2.2 Select the appropriate SPM checklist for the BDR being reviewed.

4.2.3 Record the BDR Number at the top of the appropriate SPM checklist.

4.2.4 Record the Sampling, Analysis, Sampling/Analysis, or Examination Date(s) at the top of the appropriate SPM checklist.

4.2.5 Verify that the DGL ITR reviews, validations, and verifications have been performed as evidenced by the completed review checklist and appropriate signature release.

4.2.6 Verify the BDR is complete.

4.2.7 Verify that data are within established data assessment criteria and meet all applicable QAOs: Precision, Accuracy, Completeness, Comparability, and Representativeness.

NOTE

To answer questions regarding specific criteria being met, (i.e., QAOs, QCs), the SPM must ensure that the information presented in the BDR meets the requirements identified in CCP-PO-001, CCP-PO-002, and CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)*.

4.2.8 Answer each question on the appropriate SPM checklist after verifying that the specific criteria have been met.

NOTE

All containers listed in the BDR will be listed on the SPM checklist.

4.2.9 **IF** any question is answered NO,
THEN evaluate the impact, **AND** perform steps 4.2.11 and 4.2.14, as appropriate.

4.2.10 **IF** any question is answered NA or NO,
THEN provide justification in the Comments/Qualifiers Section of the appropriate SPM checklist, as applicable.

NOTE

Editorial corrections may be made to the BDR by the Operator, ITR, SPM or a Designee as directed by these personnel. The extent of editorial corrections permitted by a Designee is identified in CCP-QP-008. Data affecting changes are ONLY made by DGL personnel. Any data affecting changes made by DGL personnel will require a re-review by the Operator, ITR, and SPM.

4.2.11 **IF** editorial inconsistencies, mistakes, omissions, etc., are noted during the SPM review, that DO **NOT** change the characterization data,
THEN notify DGL personnel of required corrections, **AND** edit the BDR in accordance with CCP-QP-008.

[A] Place BDR on HOLD by selecting, PLACE BDR ON HOLD, if necessary, **AND** enter reason for HOLD in the Comments/Qualifiers Section by selecting ADD/EDIT COMMENTS.

DGL Personnel

[B] Perform editorial corrections, as needed.

[C] Resubmit corrected BDR or BDR pages to the Facility Records Custodian in accordance with CCP-QP-008.

Facility Records Custodian

[D] Receive, process, and transmit or maintain corrected BDR or BDR pages in accordance with CCP-QP-008.

[E] Notify SPM to continue review.

4.2.12 **IF** required changes CAN **NOT** be adequately documented on the SPM checklist,
THEN include additional information on an additional sheet of paper as needed.

4.2.13 **IF** additional information is placed after an SPM checklist,
THEN indicate, on the appropriate SPM checklist, that additional information is being provided, **AND** paginate the inserted documentation to show which checklist it is associated with (e.g., SPM-1).

NOTE
Corrections to BDRs mandated by Project Office NCRs will not proceed until DGL has been provided a copy of the validated and dispositioned Project Office NCR.

4.2.14 **IF** data affecting inconsistencies, mistakes, omissions, etc., are noted during the SPM review, that impact or change the characterization data,
THEN Initiate an NCR in accordance with CCP-QP-005:

[A] Ensure copy of approved Project Office NCR is provided to DGL documenting required changes in the NCR disposition.

DGL Personnel

[B] Correct the deficiency.

[C] ITR Re-review in accordance with the applicable procedure, **AND** resubmit corrected BDR or BDR pages to CCP Records for processing in accordance with CCP-QP-008.

4.2.15 Record comments in the box at the end of the appropriate SPM checklist or record NA.

4.2.16 Print name, sign, and date the appropriate SPM checklist.

4.2.17 End SPM review in IDC.

4.2.18 Submit completed SPM checklist to CCP Records for processing in accordance with CCP-QP-008.

4.2.19 If SPM re-review is required,

[A] Insert corrections.

[A.1] **IF** revised page contains correction or additional information,
THEN replace the BDR record page with the corrected page.

OR

[A.2] **IF** additional corrected pages are inserted in the numbered section of the BDR,
THEN supercede pages, **AND** properly paginate the inserted documentation in accordance with CCP-QP-008.

[B] Select RE-REVIEW button in the IDC, if necessary.

[C] Perform a re-review of the corrected BDR.

[D] Verify that all criteria have been met and the review is complete.

[E] Select REMOVE HOLD ON BDR in the IDC, if necessary, **AND** complete review in the IDC.

4.2.20 Print name, sign name, enter reason for re-review, and enter date completed on the appropriate SPM checklist in the re-review signature area.

4.2.21 **WHEN** all criteria have been verified, **AND** the review is complete, **THEN** select END SPM BDR REVIEW in the IDC.

NOTE

Additional information is information that is added to the back of the SPM checklist after receipt at the Project Level. Additional information can be in the form of e-mail authorizations for administrative changes, letters or e-mails of clarification to posed questions (This list is not all inclusive).

4.2.22 **IF** additional information is placed after an SPM checklist, **THEN** indicate, on the appropriate SPM checklist, that additional information is being provided, **AND** paginate the inserted documentation to show which checklist it is associated with (e.g., SPM-1).

4.2.23 Forward the completed SPM checklist, and any additional information, to the CCP Records Custodian/Facility Records Custodian.

4.2.24 **IF** the BDR in review was an HSG sampling/analysis or Solids sampling/analysis that includes containers that were randomly selected for HSG or Solids sampling,
THEN notify records to submit the subject BDR to the WIPP Operating Record. This notification is completed by an e-mail to ccprecords@wipp.ws. Include the subject BDR numbers and the corresponding waste stream for which the containers were sampled.

CCP Records Custodian/Facility Records Custodian

4.2.25 Receive, process, and transmit or maintain in accordance with CCP-QP-008.

4.3 Quarterly Repeat of DGL Data Review, Validation, and Verification

NOTE

The SPM shall ensure that a repeat of the DGL data review, validation, and verification of data generated to meet the requirements of CCP-PO-001 is performed quarterly for a minimum of one randomly chosen waste container. The SPM uses this exercise to document that the DGL data review, validation, and verification is being performed in accordance with applicable procedures.

SPM

NOTE

HSG and Total Analysis for all Host sites are performed at INL Laboratories and the randomly selected quarterly re-review will be selected from those analyzed by labs during the last quarter.

4.3.1 Randomly select one waste container for a repeat of the DGL data review, validation, and verification for each characterization methodology performed in the last quarter.

NOTE

The following documents will be included in the quarterly DGL data review, validation, and verification: the original data reported, any nonconformances generated prior to ITR, reviews, and QC Data Sheets. The BDR Batch Narrative will **NOT** be included.

4.3.2 Retrieve a copy of the BDR from CCP Records.

NOTE

When possible, a different ITR will be used for the quarterly DGL data review, validation, and verification of the selected waste container.

4.3.3 Assemble the mini-container package.

4.3.4 Document the container selection and the assignment ofthe DGL ITR by interoffice memorandum.

4.3.5 Submit a copy of the mini-container package to the Host site for re-review.

NOTE

DGL Personnel will review submitted data and generate new Tables of Contents, BDR Batch Narratives and DGL Checklists. Any discrepancies will be noted in the BDR Batch Narrative.

SPM

4.3.6 Perform a review of the re-submitted data in accordance with Section 4.2.

4.3.7 Compare the original BDR submitted for the selected container with the re-submitted data.

4.3.8 Document the comparison, by interoffice memorandum, to CCP Records.

4.3.9 **IF** discrepancies or problems that affect data quality are noted during the review,
THEN perform the following:

[A] Initiate an NCR in accordance with CCP-QP-005.

[B] Notify the appropriate facility personnel.

4.3.10 Submit the re-reviewed package, associated information, and copy of interoffice memorandum to CCP Records.

Facility Records Custodian/CCP Records Custodian

4.3.11 Receive, process, and transmit the reviewed package, associated information, and copy of interoffice memoradum in accordance with CCP-QP-008.

4.4 Reporting Relative Percent Difference (RPD) and F-test Method Results for Co-located Cores/Samples

NOTE

The RPD can only be calculated when each analyte is detected above the MDL for the co-located cores/samples.

SPM

4.4.1 Identify the core/sample and the co-located core/sample in the BDRs that have been reviewed.

4.4.2 Obtain copies of the original BDR from the CCP Records Custodian/Facility Records Custodian, **OR** view the scanned copy on the IDC.

4.4.3 Assemble the analytical results for the co-located core/sample and the core/sample.

4.4.4 Compare the analytical results and calculate the RPD for each analyte detected in the co-located cores/samples using the following equation:

$$RPD = \frac{C_1 - C_2}{\left(\frac{C_1 + C_2}{2}\right)} \times 100$$

where C_1 and C_2 are the two values obtained by analyzing duplicate samples. C_1 is the larger of the two observed values.

NOTE

The F-test method can be used only with multiply-detected (2 or more detections) analytes.

4.4.5 Calculate the F-test method results for each multiply-detected analyte in the batch as follows:

[A] Calculate the co-located pair variance using the following equation:

$$S_C^2 = \frac{1}{2}(C_1 - C_2)^2$$

where C_1 and C_2 are the analytic results for the two co-located cores/samples.

[B] Calculate the batch variance using the following equation:

$$S_B^2 = \frac{\sum_{i=1}^{n}\left(C_i - \overline{C}\right)^2}{n-1}$$

where

C_i = the detected concentration in the ith core/sample
n = the number of cores/samples with detected concentrations

and $\overline{C}$ = the mean (average) of the detected concentrations.

[C] Calculate the F-test method result using the following equation:

$$F = \frac{S_C^2}{S_B^2}$$

[D] Compare the calculated F-test result value to the associated F-test critical value shown in Table 1.

4.4.6 **IF** discrepancies or problems that affect data quality are noted during the review,
THEN perform the following:

[A] Initiate an NCR in accordance with CCP-QP-005.

[B] Notify the appropriate DGL personnel and the SPM.

4.4.7 Document the calculated RPD and F-test method results by interoffice memorandum, to CCP Records.

4.4.8 Submit the interoffice memorandum and associated information to the CCP Records Custodian/Facility Records Custodian.

Facility Records Custodian

4.4.9 Receive, process, and transmit the reviewed record in accordance with CCP-QP-008.

4.5 Acceptance Criteria for Co-located Cores/Samples

NOTE

Calculation of RPD and F-test method results are used to evaluate sampling precision.

Until a sufficient number (25-30) of co-located cores/samples have been evaluated to develop control charts for the RPD, batch F-test method results will be used to evaluate precision. If too few analyte detections exist to permit F-test method calculation for at least one analyte in the batch, RPD should be evaluated for acceptance using the same criterion as for the field duplicate.

Once a sufficient number (25 to 30) of collocated cores/samples have been collected, precision will be evaluated by comparing the calculated batch-related RPD with the RPD control chart limits.

4.5.1 Confirm that the Acceptance Criteria for sampling precision are met by one of the following, as appropriate:

[A] Verify that all multiply-detected analytes in the batch exhibit F-test method results less than the associated 90th percentile for the F probability distribution with 1 and n-1 degrees of freedom as listed in Table 1, Critical Values for the 90th Percentile of the F Probability Distribution with 1 Degree of Freedom in the Numerator and n-1 Degrees of Freedom in the Denominator of the Variance Ratio,

OR

[B] Verify that the calculated RPD for each detected co-located core/sample pair is within the associated control chart limit of three standard deviations above or below the average RPD value.

Table 1. Critical Values for the 90th Percentile of the F Probability Distribution with 1 Degree of Freedom in the Numerator and n-1 Degrees of Freedom in the Denominator of the Variance Ratio

	Number of cores/samples with detected analyte (excluding colocated cores/samples)								
N	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
$F_{1,n-1,0.90}$	39.863	8.526	5.538	4.545	4.060	3.776	3.589	3.458	3.360

5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as Quality Assurance (QA) records in accordance with CCP-QP-008. The records are the following:

5.1.1 QA/Lifetime

[A] Attachment 1, CCP SPM Visual Examination Project Level Validation Checklist and Summary

[B] Attachment 2, CCP SPM Radiography Project Level Validation Checklist and Summary

[C] Attachment 3, CCP SPM Nondestructive Assay Project Level Validation Checklist and Summary

[D] Attachment 4, CCP SPM S3000/S4000 Waste Sampling Checklist and Summary

[E] Attachment 5, CCP SPM S3000/S4000 Total Metals Analysis Project Level Validation Checklist and Summary

[F] Attachment 6, CCP SPM S3000/S4000 Total Non-Halogenated Volatile Organic Compound Analysis Project Level Validation Checklist and Summary

[G] Attachment 7, CCP SPM S3000/S4000 Total Volatile Organic Compound Analysis Project Level Validation Checklist and Summary

[H] Attachment 8, CCP SPM S3000/S4000 Total Semi-Volatile Organic Compound Analysis Project Level Validation Checklist and Summary

[I] Attachment 9, CCP SPM HSG Summa® Sampling Project Level Validation Checklist and Summary

[J] Attachment 10, CCP SPM Summa® HSG Analysis Project Level Validation Checklist and Summary

[K] Attachment 11, CCP SPM Off-Site Source Recovery Sealed Source Radiological Characterization Project Level Validation Checklist and Summary

[L] Interoffice memorandum for the Quarterly Repeat of DGL Data Review BDR

[M] Container selection and the assignment of the DGL ITR interoffice memoramdum

5.1.2 QA/Nonpermanent

[A] Project Office Integrated Data Center (IDC)

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary

BDR Number: _____ **Examination Date:** _____

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
1. Is the completed, signed and dated Independent Technical Reviewer Checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, C3-10b**				
2. Does the BDR contain all items addressed in the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-10b**				
3. Does the BDR include a listing of all container numbers in the batch? **Reference Source: CCP-PO-001, C3-10b**				
4. List all containers that have met QAOs. **Reference Source: CCP-PO-001, C3-10b**				Container Numbers:
5. Is the current implementing procedure and revision number included in the BDR? **Reference Source: CCP-PO-001, C3-4, C3-10b, Table C3-11**				
6. Is the BDR date included? **Reference Source: CCP-PO-001, Table C3-11**				
7. Is there a reference to or copy of any associated NCRs (if any) in the BDR? **Reference Source: CCP-PO-001, Table C3-11**				
8. Are there 20 or fewer containers in the batch? **Reference Source: CCP-PO-001 C3-10**				
9. Are the data properly reported (i.e., data are reported in correct units and with correct significant figures). **Reference Source: CCP-PO-001 C3-10b**				
10. Is there evidence of verification that the physical form matches the Waste Matrix Code? **Reference Source: CCP-PO-001, C3-4**				
11. Is there evidence of verification that the physical form matches the waste stream description? **Reference Source: CCP-PO-001, C1-4**				
12. Are prohibited items absent? **Reference Source: CCP-PO-001, C3-4**				

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: _____ **Examination Date:** _____

Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
13. Does observable liquid, if present, meet the criteria of the TSDF-WAC? **Reference Source: CCP-PO-001, C3-4b**				
14. Were discrepancies between the Visual Examination operator and the ITR with regards to identification of waste matrix code, liquids in excess of the TSDF-WAC, or compressed gases reconciled? NA if no discrepancies. **Reference Source: CCP-PO-001, C3-4b**				
15. Are the training requirements met for the VE Expert and VE Operators who have signed the data forms? **Reference Source: CCP-PO-001, C1-4, C3-4**				
16. Is evidence of a satisfactory audio/video test included in the BDR? NA [not applicable] for VE Method for Newly Generated Waste. **Reference Source: CCP-PO-001, C1-4**				
17. If the VE was not recorded using audio/video media, does the data sheet contain the signature of two qualified operators who observed for themselves the waste being placed into the container? NA if audio/video used. **Reference Source: CCP-PO-001, C1-4**				
18. Are the weights/estimated weights for the 12 waste material parameters reported in kilograms (kg)? **Reference Source: CCP Technical Procedures**				
19. Are the descriptions for each waste material parameter included in the BDR? **Reference Source: CCP-PO-001, C1-4**				
20. Is the gross weight reported (in kg) for each container included in the BDR? **Reference Source: CCP Technical Procedures**				
21. Is the number of layers of confinement recorded? **Reference Source: CCP-PO-001, C-3d**				
22. Is sufficient information included in the BDR to determine the packaging configuration? **Reference Source: CCP-PO-001 C-3d**				

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: _____ **Examination Date:** _____

Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
23. Is the type and number of filters recorded? **Reference Source: CCP-PO-001, C-3d**				
24. Is the size of the rigid liner vent hole recorded to determine the appropriate DAC? NA if no liner lid. **Reference Source: CCP-PO-001, C-3d**				
25. For Los Alamos National Laboratory (LANL) Sealed Sources, does the characterized waste container meet the definition of sealed sources per Title 10 Code of Federal Regulations (CFR) 30.4 and Title 10 CFR 835.2 (effective January 1, 2004) evidence of which is assembled as part of AK documentation? **Reference Source: CCP Technical Procedures**				
26. For LANL Sealed Sources, are sealed sources the only non-packaging items in the waste container? **Reference Source: CCP Technical Procedures**				
27. For LANL Sealed Sources, are the sealed sources a U.S. Department of Transportation (DOT) Special Form Class 7 (Radioactive Material) per Title 49 CFR 34.27 (effective January 1, 2004) and the certification of which is assembled as part of the AK documentation? **Reference Source: CCP Technical Procedures**				
28. For LANL Sealed Sources, is the integrity of each sealed source validated by documented contamination survey results to meet the requirements of Title 10 CFR 34.27 (effective January 1, 2004), and assembled as part of AK documentation? **Reference Source: CCP Technical Procedures**				

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: _____ **Examination Date:** _____

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
29. For LANL Sealed Sources, is each sealed source a rigid sealed container less than or equal to 4 L in size or in a rigid sealed container less than or equal to 4 L? **Reference Source: CCP Technical Procedures**				
30. For LANL Sealed Sources, AK documentation does not indicate the use of volatile organic compounds (VOCs) or VOC-bearing materials as constituents of sealed sources? **Reference Source: CCP Technical Procedures**				
31. For LANL Sealed Sources, the outer casing of each sealed source is of a non VOC-bearing material which is verified using the VE technique at the time of packaging? **Reference Source: CCP Technical Procedures**				

Comments:

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

SPM Printed Name Signature Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

Attachment 2 – CCP SPM Radiography Project Level Validation Checklist and Summary

BDR Number: _____ **Examination Date:** _____

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
1. Is the completed, signed, and dated Independent Technical Reviewer Checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, C3-10b**				
2. Does the BDR contain all items addressed in the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-10b**				
3. Does the BDR include a listing of all the container numbers in the batch? **Reference Source: CCP-PO-001, C3-10b**				
4. List all containers that have met QAOs. **Reference Source: CCP-PO-001, C3-10b**				Container Numbers:
5. Does the BDR identify the current implementing procedure and revision number? **Reference Source: CCP-PO-001, Table C3-11**				
6. Is there a reference to or copy of any associated NCRs (if any) in the BDR? NA if no NCRs. **Reference Source: CCP-PO-001, Table C3-11**				
7. Are there 20 or fewer containers in the batch? **Reference Source: CCP-PO-001, C3-10**				
8. Are the data properly reported (i.e., data are reported in correct units and with correct significant figures)? **Reference Source: CCP-PO-001, C3-10b**				
9. Is there evidence of verification that the physical form matches the Waste Matrix Code? **Reference Source: CCP-PO-001, C3-4, Table C3-11**				

Attachment 2 – CCP SPM Radiography Project Level Validation Checklist and Summary (Continued)

BDR Number: _____ **Examination Date:** _____

Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
10. Is there evidence of verification that the physical form matches the waste stream description? **Reference Source: CCP-PO-001, C1-3, Table C3-11**				
11. Are prohibited items absent? **Reference Source: CCP-PO-001, C3-4a**				
12. Does observable liquid, if present, meet the criteria of the TSDF-WAC? **Reference Source: CCP-PO-001, C3-4a**				
13. Were discrepancies between two operators with regard to identification of waste matrix code, liquids in excess of the TSDF-WAC, or compressed gases through replicate scans and independent observations reconciled? NA if no discrepancies. **Reference Source: CCP-PO-001, C3-4a**				
14. Are the training qualifications for all radiography personnel acceptable? **Reference Source: CCP-PO-001, C3-4a**				
15. Was evidence of the video/audio check included in the BDR? **Reference Source: CCP-PO-001, C3-4a**				
16. Was the Lines-Pair Resolution Test Check included in the BDR? **Reference Source: CCP-PO-001, C3-4a**				
17. Was a replicate scan performed once per day, or once per batch, whichever is LESS frequent? **Reference Source: CCP-PO-001, C1-3**				
18. Was an independent observation performed once per day, or once per batch, whichever is LESS frequent? **Reference Source: CCP-PO-001, C1-3**				

Attachment 2 – CCP SPM Radiography Project Level Validation Checklist and Summary (Continued)

BDR Number: _____ **Examination Date:** _____

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
19. Were the replicate scan and independent observation performed on different waste containers? **Reference Source: CCP-PO-001, C1-3**				
20. Were the personnel performing the replicate scan and independent observation different from the individual who performed the original? **Reference Source: CCP-PO-001, C1-3**				
21. Does the BDR include an estimate of each material parameter weight in kg for each container? **Reference Source: CCP Technical Procedures**				
22. Does the BDR include a description of each material parameter for each container? **Reference Source: CCP-PO-001, Table C3-1**				
23. Is the container gross weight recorded in kilograms (kg) for each container in the BDR? **Reference Source: CCP Technical Procedures**				
24. Was the Scale Weight Calibration Check included in the BDR? **Reference Source: CCP Technical Procedures**				
25. Was the Scale Weight Check included in the BDR? **Reference Source: CCP Technical Procedures**				

Comments:

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

SPM Printed Name Signature Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date

Attachment 3 – CCP SPM Nondestructive Assay Project Level Validation Checklist and Summary

BDR Number: _____ **Examination Date:** _____				
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
1. Are the background measurements performed and recorded daily and included in the BDR? **Reference Source: CCP-PO-002, Attachment 1, A.4.2**				
2. Is the efficiency/energy calibration and resolution check performed and recorded daily and included in the BDR? **Reference Source: CCP-PO-002, Attachment 1, A.4.2**				
3. Were the performance checks and backgrounds done prior to the analysis of the samples? **Reference Source: CCP-PO-002, Attachment 1, A.4.2**				
4. Are the required QC checks specified on the ITR checklist within acceptable limits? **Reference Source: CCP-PO-002, Attachment 1, A.4.2**				
5. Is the matrix drum performed at least once per operational week? **Reference Source: CCP-PO-002, Attachment 1, A.4.2**				
6. List all containers that have met all QC criteria thresholds. **Reference Source: CCP-PO-002, Attachment 1, A.5.2**				Container Numbers:
7. Is there evidence of participation in the PDP program or any relevant approved comparison program? **Reference Source: CCP-PO-002, Attachment 1, A.4.1**				
8. Are the personnel training records acceptable? **Reference Source: CCP-PO-002, Attachment 1, A.4.1**				
9. Is a standard cover sheet included in the BDR? **Reference Source: CCP Technical Procedures**				
10. Is there reference to or copy of associated NCRs included in the BDR? NA if no NCRs associated with BDR. **Reference Source: CCP-QP-005**				

Attachment 3 – CCP SPM Nondestructive Assay Project Level Validation Checklist and Summary (Continued)

BDR Number: _____ **Examination Date:** _____

Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
11. Is the method used for radioassay identified by the implementing procedure(s) and revision number(s) referenced for each container in the BDR? **Reference Source: CCP Technical Procedures**				
12. Is the current software revision number correct for each container in the BDR? **Reference Source: CCP-QP-022**				
13. Is the completed, signed, and dated Independent Technical Reviewer Checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-002, Attachment 1, A.5.1**				
14. Is the correct Waste Matrix Code referenced in the BDR? **Reference Source: CCP Technical Procedures**				
15. Is the method of expressing TMU specified in the BDR? **Reference Source: CCP-PO-002, 3.3.1**				
16. Does the instrument performing TRU/low-level waste measurement have an LLD of 100 nCi/g or less? **Reference Source: CCP-PO-002, Attachment 1, A.3**				
17. Are the ten WIPP tracked radionuclides of 241Am, 238Pu, 239Pu, 240Pu, 242Pu, 233U, 234U, 238U, 90Sr, 137Cs estimated activities and masses, including their associated TMU reported on each radioassay data sheet? **Reference Source: CCP-PO-002, 3.3.1**				
18. Is 235U (in order to calculate FGE) reported as present or absent on each radioassay data sheet? **Reference Source: CCP-PO-002, Attachment 1, A.3**				
19. If 235U is reported as present, is 234U reported as present? NA, if 235U is not present. **Reference Source: CCP Technical Procedures**				
20. Is the TRU alpha activity concentration and associated TMU reported for each container in the BDR? **Reference Source: CCP-PO-002, 3.3.1**				

Attachment 3 – CCP SPM Nondestructive Assay Project Level Validation Checklist and Summary (Continued)

BDR Number: _____ **Examination Date:** _____

Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
21. Is the TRU alpha activity concentration limit of >100 nCi/g met for containers in the BDR? **Reference Source: CCP-PO-002, 3.3.3**				
22. Is the Total Pu239 FGE (g) and associated TMU reported for each container in the BDR? **Reference Source: CCP-PO-002, 3.3.1**				
23. Is the FGE plus two times the TMU less than or equal to the limits for containers in this BDR? 200 FGE for 55-gal drums/325 FGE for SWBs. Note: TMU equals one standard deviation. **Reference Source: CCP-PO-002, Table A-3**				
24. Is the decay heat reported for each container in the BDR? **Reference Source: CCP-PO-002, 3.3.1**				
25. Are all the appropriate QC forms (background, efficiency checks, control charts, and matrix drum) included in the BDR? **Reference Source: CCP-PO-002, Attachment 1, A.5.2**				
26. Is the name of the testing facility included in the BDR? **Reference Source: CCP-PO-002, Attachment 1, A.5.2**				
27. Is the batch number included in the BDR? **Reference Source: CCP-PO-002, Attachment 1, A.5.2**				
28. Is a listing of all container numbers in the BDR? **Reference Source: CCP-PO-002, Attachment 1, A.5.2**				
29. Does the BDR contain a BDR Table of Contents? **Reference Source: CCP-PO-002, Attachment 1, A.5.2**				
30. Are the testing report data sheets including the waste container number for each container included in the BDR? **Reference Source: CCP-PO-002, Attachment 1, A.5.2**				
31. Is the title “Radioassay Data Sheet” included for each container in the BDR? **Reference Source: CCP-PO-002, Attachment 1, A.5.2**				

Attachment 3 – CCP SPM Nondestructive Assay Project Level Validation Checklist and Summary (Continued)

BDR Number: _____ **Examination Date:** _____

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
32. Is the date of radioassay included for each container in the BDR? **Reference Source: CCP-PO-002, Attachment 1, A.5.2**				
33. Is the operator and reviewer signature release and date included for each container in the BDR? **Reference Source: CCP-PO-002, Attachment 1, A.5.2**				
34. Is the total Pu239 equivalent activity (Ci) reported for each container in the BDR? **Reference Source: CCP-PO-002, Attachment 1, A.5.2**				
35. Are the NDA net weights within 5% of the NDE net weight or the VE net weight, whichever is applicable, for each container in the BDR? **Reference Source: CCP Technical Procedures**				

Comments:

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

SPM Printed Name Signature Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

Attachment 4 – CCP SPM S3000/S4000 Waste Sampling Checklist and Summary

BDR Number: _____ **Sampling Date:** _____

Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
1. Does the Batch Data Report (BDR) have a BDR Table of Contents? **Reference Source: CCP Technical Procedures**				
2. Does the BDR contain the sampling BDR number, BDR date, and facility name? **Reference Source: CCP-PO-001, Table C3-12**				
3. Does the BDR contain the identification number(s) and container numbers for the waste packages represented in this BDR? **Reference Source: CCP-PO-001, Table C3-12**				
4. Are there 20 or less field samples per sampling batch? **Reference Source: CCP-PO-001, C3-10**				
5. Is there a reference to or copy of any associated NCRs (if any) in the BDR? **Reference Source: CCP-PO-001, Table C3-12**				
6. Are the chain-of-custody (COC) forms and appropriate data sheets for each waste package included in this BDR? **Reference Source: CCP-PO-001, Table C3-12**				
7. Does the BDR contain the sampling ID numbers and location (physical location within the container)? **Reference Source: CCP-PO-001, Table C3-12**				
8. Does the waste package BDR contain the sampling date and time? **Reference Source: CCP-PO-001, Table C3-12**				
9. Does the waste package BDR contain the sampler's signature? **Reference Source: CCP-PO-001, Table C3-12**				
10. Is the sample matrix and type identified within the sampling BDR? **Reference Source: CCP-PO-001, Table C1-2**				
11. Does the BDR identify the sample number and size? **Reference Source: CCP-PO-001, Table C3-12**				

Attachment 4 – CCP SPM S3000/S4000 Waste Sampling Checklist and Summary (Continued)

BDR Number: _____ **Sampling Date:** _____

Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
12. Does the BDR identify the correct Waste Matrix Code? **Reference Source: CCP-PO-001, Table C3-12**				
13. Is there a minimum of one co-located core/sample (or field duplicate) collected per sample batch or one per week during sampling operation, and is a description of the collected core included in the BDR? **Reference Source: CCP-PO-001, C3-3**				
14. Is there a minimum of one equipment blank for coring tools collected per equipment cleaning batch when sampling with compactor/coring unit? **Reference Source: CCP-PO-001, C1-2b**				
15. Is there a minimum of one equipment blank for coring tools cleaned when sampling with single coring unit? **Reference Source: CCP-PO-001, C1-2b**				
16. Is there a minimum of one equipment blank for liners collected per equipment cleaning batch? **Reference Source: CCP-PO-001, C1-2b**				
17. Are samples preserved by keeping them at a temperature of 4°C, $\pm$ 2° C? **Reference Source: CCP-PO-001, Table C1-4**				
18. Were proper procedures, including revision number, used and referenced in BDR? **Reference Source: CCP-PO-001, Table C3-12**				
19. Were samples collected within 14 days, and is a time given between coring and sub-sampling? **Reference Source: CCP-PO-001, Table C3-12**				
20. Were the samples transferred to the lab within the maximum holding times? **Reference Source: CCP-PO-001, Table C1-4**				
21. Are sampling equipment numbers (lot number for disposable equipment) included in the BDR? **Reference Source: CCP-PO-001, Table C3-12**				

Attachment 4 – CCP SPM S3000/S4000 Waste Sampling Checklist and Summary (Continued)

BDR Number: _____ **Sampling Date:** _____

Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
22. Are field records present in the BDR? Field records include: collecting problems (if applicable), sequence of sampling collection, inspection of the solids sampling area, inspection of the solids sampling equipment, coring tool test, and random location of sub-sample? **Reference Source: CCP-PO-001, Table C3-12**				
23. Is the location (point of origin) where each sample was taken included in the BDR? **Reference Source: CCP-PO-001, Table C3-12**				
24. Is the completed, signed, and dated Independent Technical Reviewer Checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, Table C3-12**				
25. Does the BDR include a record of analysis requested and the laboratory? **Reference Source: CCP-PO-001, Table C3-12**				
26. Is there a cross-reference of sampling equipment numbers with associated cleaning batch numbers in the BDR? **Reference Source: CCP-PO-001, Table C3-12**				
27. Is the depth of waste included for each waste container? **Reference Source: CCP-PO-001, Table C3-12**				
28. Are the calculations of core recovery included in the BDR? NA if the sampling is not a core. **Reference Source: CCP-PO-001, Table C3-12**				

Attachment 4 – CCP SPM S3000/S4000 Waste Sampling Checklist and Summary (Continued)

BDR Number: _____ **Sampling Date:** _____				
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
29. Is the co-located core/sample description included in the BDR? **Reference Source: CCP-PO-001, Table C3-12**				
Comments:				
The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.				
SPM Printed Name	Signature			Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

Attachment 5 – CCP SPM S3000/S4000 Total Metals Analysis Project Level Validation Checklist and Summary

BDR Number: _____ **Analysis Date:** _____

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
1. Does the Batch Data Report (BDR) contain the batch number, laboratory name, and the date of the batch report? **Reference Source: CCP-PO-001, Table C3-13**				
2. Has a BDR Narrative been included in the BDR? **Reference Source: CCP-PO-001, Table C3-13**				
3. Is there a cross-reference between waste container number, field sample number, and lab sample number ID; and signature release by lab personnel in the BDR? **Reference Source: CCP-PO-001, Table C3-13**				
4. Is the BDR complete? **Reference Source: CCP-PO-001, C3-10b**				
5. List all containers that have met QAOs. **Reference Source: CCP-PO-001, C3-10b**				Container Numbers:
6. Are there 20 or less samples per analytical batch? **Reference Source: CCP-PO-001, C3-10**				
7. Is there a reference to or copy of any associated NCRs (if any) in the BDR? NA if no NCRs associated with BDR. **Reference Source: CCP-PO-001, Table C3-13**				
8. Does the BDR contain a complete and signed copy of the COC form? **Reference Source: CCP-PO-001, Table C3-13**				
9. Does the BDR include the date and time of analysis for each sample? **Reference Source: CCP-PO-001, Table C3-13**				
10. Are the training qualifications for all personnel acceptable? **CCP-PO-001, Table C3-13**				
11. Are holding times within the 180-day requirement (except Mercury)? **Reference Source: CCP-PO-001, Table C1-4**				
12. Are holding times within the 28-day requirement for Mercury? **Reference Source: CCP-PO-001, Table C1-4**				

Attachment 5 – CCP SPM S3000/S4000 Total Metals Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: _____ **Analysis Date:** _____

Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
13. Have QC designations for samples been applied as appropriate? **Reference Source: CCP-PO-001, Table C3-13**				
14. Is there a minimum of one laboratory control sample (LCS) analyzed per analytical batch? **Reference Source: CCP-PO-001, Table C3-9**				
14. Do the found values for all LCS analytes fall within the low/high control limits listed on the Laboratory Control Sample Form included in the BDR? **Reference Source: CCP-PO-001, Table C3-8 Footnote b**				
15. Is there a minimum of one matrix spike (MS) analyzed per analytical batch? **Reference Source: CCP-PO-001, Table C3-9**				
16. Do the %Rs for all MS analytes meet the 80-120 %R requirements? **Reference Source: CCP-PO-001, Table C3-8**				
17. Is a minimum of one matrix spike duplicate (MSD) analyzed per analytical batch? Note: The MSD is used in place of the laboratory duplicate. **Reference Source: CCP-PO-001, Table C3-9**				
18. Do the %Rs for all MSD analytes meet the 80-120 %R requirements? Note: The MSD is used in place of the laboratory duplicate. **Reference Source: CCP-PO-001, Table C3-8**				
19. Are the MS/MSD relative percent differences (RPDs) for all analytes less than or equal to 30? **Reference Source: CCP-PO-001, Table C3-8**				
20. Has the CCP Site Project Manager calculated and reported the results of the RPD and F-Test Method? **Reference Source: CCP-PO-001, Section C3-3**				
21. Were the applicable RPD or F-test method acceptance criteria met? **Reference Source: CCP-PO-001, Section C3-3**				

Attachment 5 – CCP SPM S3000/S4000 Total Metals Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: _____ **Analysis Date:** _____

Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
22. Is serial dilution performed once per analytical batch? Note: This applies only to inductively coupled plasma (ICP) analysis. **Reference Source: CCP-PO-001, Table C3-9**				
23. Is the serial dilution result ≤10% D for initial sample results >50 x IDL? If no, sample results must be "Z" flagged for sample results >10% D and >50 x IDL? Note: This applies only to ICP analysis. **Reference Source: CCP-PO-001, Table C3-9**				
24. Is the ICP initial calibration performed each day of operation? Note: This is a one standard and one blank calibration. **Reference Source: CCP-PO-001, Table C3-9**				
25. Is the ICP %R for the initial calibration verification (ICV) check standard within the 90% to 110% acceptance range? **Reference Source: CCP-PO-001, Table C3-9**				
26. Is Mercury initial calibration performed each day of operation? Note: This is a five-standard and one blank calibration. **Reference Source: CCP-PO-001, Table C3-9**				
27. Is the Mercury %R for the ICV within the 80 to 120% acceptance range? **Reference Source: CCP-PO-001, Table C3-9**				
28. Is the Mercury regression coefficient (r) greater than or equal to 0.995? **Reference Source: CCP-PO-001, Table C3-9**				
29. Is continuing calibration verification (CCV) performed every 10 samples, and at the beginning and end of the run? **Reference Source: CCP-PO-001, Table C3-9**				
30. Is the ICP %R for the CCV within the 90 to 110% acceptance range? **Reference Source: CCP-PO-001, Table C3-9**				

Attachment 5 – CCP SPM S3000/S4000 Total Metals Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: _____ **Analysis Date:** _____

Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
31. Is the Mercury %R for the CCV within the 80 to 120% acceptance range? **Reference Source: CCP-PO-001, Table C3-9**				
32. Is there a minimum of one lab blank analyzed per analytical batch? **Reference Source: CCP-PO-001, Table C3-9**				
33. Are all lab blanks analytes ≤ 3 the IDL? **Reference Source: CCP-PO-001, Table C3-9**				
34. Is interference correction verification performed at the beginning and end of the analytical batch or every 8 hours for ICP (12 hours for ICP/MS), whichever is more frequent? **Reference Source: CCP-PO-001, Table C3-9**				
35. Are solutions containing interference plus analytes within the 80 to 120 %R acceptance range for all analytes? *Note: If response is no AND sample interferents are reported on the Total Metals Analysis Data Sheets at levels ≥ levels in the ICS(A) solution and an NCR has not already been produced at the DGL, write an NCR.* **Reference Source: CCP-PO-001, Table C3-9**				
36. Does the BDR include IDLs (µg/L) that are ≤ PRDL? **Reference Source: CCP-PO-001, Table C3-8**				
37. Are analytical procedures (including data revision) used to develop these data referenced in the BDR? **Reference Source: CCP-PO-001, C3-10**				
38. Does the BDR include the operator's signature and analysis date? **Reference Source: CCP-PO-001, Table C3-13**				
39. Are data reporting forms complete with data reported properly (i.e., data is reported in correct units, with correct significant figures, and with correct qualifying flags)? **Reference Source: CCP-PO-001, C3-10b(1)**				

Attachment 5 – CCP SPM S3000/S4000 Total Metals Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: _____ **Analysis Date:** _____

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
40. Have data reporting flags been assigned properly? **Reference Source: CCP-PO-001, C3-10b(1)**				
41. Have the batch samples been properly preserved (cool to 4° C, ± 2° C)? **Reference Source: CCP-PO-001, Table C1-4**				
42. Is the completed, signed, and dated Independent Technical Reviewer Checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, Table C3-13**				
43. Does the BDR contain at least one calibration standard ≤ PRQL? **Reference Source: CCP-PO-001, C3-8**				
44. Does the laboratory use traceable standards? **Reference Source: CCP-PO-001, C3-8**				
45. Has the laboratory successfully participated in the PDP? **Reference Source: CCP-PO-001, C3-8**				
46. Has the laboratory met the 90% completeness requirement? **Reference Source: CCP-PO-001, Table C3-8**				
47. Has the laboratory had acceptable demonstration of precision, accuracy, and IDLs [method performance samples] performed within the last 6 months? **Reference Source: CCP-PO-001, C3-8**				

Comments:

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

SPM Printed Name _____ Signature _____ Date _____

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name _____ Signature _____ Reason _____ Date _____

SPM Printed Name _____ Signature _____ Reason _____ Date _____

Attachment 6 – CCP SPM S3000/S4000 Total Non-Halogenated Volatile Organic Compound Analysis Project Level Validation Checklist and Summary

BDR Number: _____ **Analysis Date:** _____

Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
1. Does the Batch Data Report (BDR) contain the batch number, laboratory name, and the date of the batch report? **Reference Source: CCP-PO-001, Table C3-13**				
2. Has a BDR Narrative been included with the BDR? **Reference Source: CCP-PO-001, Table C3-13**				
3. Is there a cross-reference between waste container number, field sample number, and lab sample number ID; and signature release by lab personnel in the BDR? **Reference Source: CCP-PO-001, Table C3-13**				
4. Is the BDR complete? **Reference Source: CCP-PO-001, C3-10b**				
5. List all containers that have met QAOs. **Reference Source: CCP-PO-001, C3-10b**				Container Numbers:
6. Are there 20 or less samples per analytical batch? **Reference Source: CCP-PO-001, C3-10**				
7. Is there a reference to or copy of any associated NCRs (if any) in the BDR? NA if no NCRs associated with the BDR. **Reference Source: CCP-PO-001, Table C3-13**				
8. Does the BDR contain a complete and signed copy of the COC form? **Reference Source: CCP-PO-001, Table C3-13**				
9. Does the BDR include the date and time of analysis for each sample? **Reference Source: CCP-PO-001, Table C3-13**				
10. Are the training qualifications for all personnel acceptable? **CCP-PO-001, Table C3-13**				
11. Are holding times between collection and analysis within the 14-day requirement? **Reference Source: CCP-PO-001, Table C1-4**				

Attachment 6 – CCP SPM S3000/S4000 Total Non-Halogenated Volatile Organic Compound Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: _____ **Analysis Date:** _____

Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
12. Have QC designations for samples been applied as appropriate? **Reference Source: CCP-PO-001, Table C3-13**				
13. Is there a minimum of one laboratory control sample (LCS) analyzed per analytical batch? **Reference Source: CCP-PO-001, Table C3-5**				
14. Do the %Rs for all LCS analytes meet the 60-150 %R requirements? **Reference Source: CCP-PO-001, Table C3-4**				
15. Is a minimum of one matrix spike/matrix spike duplicate (MS/MSD) pair analyzed per analytical batch? Note: The MSD is used in place of the laboratory duplicate. **Reference Source: CCP-PO-001, Table C3-5**				
16. Do the %Rs for all MS and MSD analytes meet the 60-150 %R requirements? Note: The MSD is used in place of the laboratory duplicate. **Reference Source: CCP-PO-001, Table C3-4**				
17. Do the MS/MSD RPDs for all analytes meet the $\leq$ 50 requirement? **Reference Source: CCP-PO-001, Table C3-4**				
18. Has the CCP Site Project Manager calculated and reported the results of the RPD and F-Test Method? **Reference Source: CCP-PO-001, Section C3-3**				
19. Were the applicable RPD or F-test method acceptance criteria met? **Reference Source: CCP-PO-001, Section C3-3**				
20. Is a minimum of one trip blank analyzed per analytical batch? **Reference Source: CCP-PO-001, SW-846 8015**				

Attachment 6 – CCP SPM S3000/S4000 Total Non-Halogenated Volatile Organic Compound Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: _____ **Analysis Date:** _____

Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
21. Are the results of the trip blank ≤ 3 times the program-required MDL? **Reference Source: CCP-PO-001, SW-846 8015**				
22. Is there a minimum of one lab blank analyzed per analytical batch? **Reference Source: CCP-PO-001, Table C3-5**				
23. Are all lab blank compounds ≤ 3 times the program-required MDL? **Reference Source: CCP-PO-001, Table C3-5**				
24. Are the analytical samples spiked with surrogate matrix compounds (SMCs)? **Reference Source: CCP-PO-001, Table C3-5**				
25. Are the SMCs %R values within specified criteria listed on the Surrogate Recovery Form included in the BDR? **Reference Source: CCP-PO-001, Table C3-5**				
26. Is the GC/FID three-point (minimum) initial calibration complete? **Reference Source: CCP-PO-001, Table C3-5**				
27. Is the $r^2 \geq 0.990$? **Reference Source: CCP-PO-001, Table C3-5**				
28. Is the continuing calibration performed at a minimum frequency of every 12 hours of operation? **Reference Source: CCP-PO-001, Table C3-5**				
29. Is the CCV %D ≤ 15% for all compounds? **Reference Source: CCP-PO-001, Table C3-5**				
30. Are the retention times (RTs) for the continuing calibrations ±3 standard deviations from the initial calibration per applicable SW-846 method? **Reference Source: CCP-PO-001, Table C3-5**				
31. Does the BDR include MDLs (mg/kg) that are ≤PRQL in Table C3-4? **Reference Source: CCP-PO-001, Table C3-4**				

Attachment 6 – CCP SPM S3000/S4000 Total Non-Halogenated Volatile Organic Compound Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: _____ **Analysis Date:** _____

Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
32. Are analytical procedures (including data revision) used to develop these data referenced in the BDR? **Reference Source: CCP-PO-001, C3-10**				
33. Does the BDR include the operator's signature and analysis date? **Reference Source: CCP-PO-001, Table C3-13**				
34. Are data reporting forms complete with data reported properly (i.e., data is reported in correct units, with correct significant figures, and with correct qualifying flags)? **Reference Source: CCP-PO-001, C3-10b**				
35. Have data reporting flags been assigned properly? **Reference Source: CCP-PO-001, C3-10b**				
36. Have the batch samples been properly preserved (cool to 4°C, $\pm$ 2° C)? **Reference Source: CCP-PO-001, Table C1-4**				
37. Is the completed, signed, and dated Independent Technical Reviewer Checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, Table C3-13**				
38. Does the BDR contain at least one calibration standard $\leq$ PRQL? **Reference Source: CCP-PO-001, C3-6**				
39. Does the laboratory use traceable standards? **Reference Source: CCP-PO-001, C3-6**				
40. Has the laboratory had acceptable demonstration of precision, accuracy, and MDLs [method performance samples] performed within the last 6 months? **Reference Source: CCP-PO-001, Table C3-5**				
41. Has the laboratory met the 90% completeness requirement? **Reference Source: CCP-PO-001, Table C3-4**				
42. Has the laboratory successfully participated in the PDP? **Reference Source: CCP-PO-001, C3-6**				

Attachment 6 – CCP SPM S3000/S4000 Total Non-Halogenated Volatile Organic Compound Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: _____ **Analysis Date:** _____

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
43. Has the laboratory successfully participated in the PDP? **Reference Source: CCP-PO-001, C3-6**				

Comments:

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

SPM Printed Name Signature Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date

Attachment 7 – CCP SPM S3000/S4000 Total Volatile Organic Compound Analysis Project Level Validation Checklist and Summary

BDR Number: _____ **Analysis Date:** _____

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
1. Does the Batch Data Report (BDR) contain the batch number, laboratory name, and the date of the batch report? **Reference Source: CCP-PO-001, Table C3-13**				
2. Has a BDR Narrative been included in the BDR? **Reference Source: CCP-PO-001, Table C3-13**				
3. Is there a cross-reference between waste container number, field sample number, and lab sample number ID; and signature release by lab personnel in the BDR? **Reference Source: CCP-PO-001, Table C3-13**				
4. Is the BDR complete? **Reference Source: CCP-PO-001 C3-10b**				
5. List all containers that have met QAOs. **Reference Source: CCP-PO-001, C3-10b**				Container Numbers:
6. Are there 20 or less samples per analytical batch? **Reference Source: CCP-PO-001, C3-10**				
7. Is there a reference to or copy of any associated NCRs (if any) in the BDR? NA if no NCRs associated with the BDR. **Reference Source: CCP-PO-001, Table C3-13**				
8. Does the BDR contain a complete and signed copy of the COC form? **Reference Source: CCP-PO-001, Table C3-13**				
9. Does the BDR include the date and time of analysis for each sample? **Reference Source: CCP-PO-001, Table C3-13**				
10. Are the training qualifications for all personnel acceptable? **CCP-PO-001, Table C3-13**				
11. Are holding times between collection and extraction within the 14-day requirement? **Reference Source: CCP-PO-001, Table C1-4**				
12. Have QC designations for samples been applied as appropriate? **Reference Source: CCP-PO-001, Table C3-13**				

Attachment 7 – CCP SPM S3000/S4000 Total Volatile Organic Compound Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: _____ **Analysis Date:** _____

Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
13. Is there a minimum of one laboratory control sample (LCS) analyzed per analytical batch? **Reference Source: CCP-PO-001, Table C3-5**				
14. Are the percent recoveries (%Rs) for all LCS analytes within the acceptable range? **Reference Source: CCP-PO-001, Table C3-4**				
15. Is a minimum of one matrix spike (MS) analyzed per analytical batch? **Reference Source: CCP-PO-001, Table C3-5**				
16. Are the %Rs for all MS compounds within the acceptable range? **Reference Source: CCP-PO-001, Table C3-4**				
17. Is a minimum of one matrix spike duplicate (MSD) analyzed per analytical batch? Note: The MSD is used in place of the laboratory duplicate. **Reference Source: CCP-PO-001, Table C3-5**				
18. Are the %Rs for all MSD compounds within the acceptable range? Note: The MSD is used in place of the laboratory duplicate **Reference Source: CCP-PO-001, Table C3-4**				
19. Do the MS/MSD relative percent differences (RPDs) for all analytes meet the requirements? **Reference Source: CCP-PO-001, Table C3-4**				
19. Has the CCP Site Project Manager calculated and reported the results of the RPD and F-Test Method? **Reference Source: CCP-PO-001, Section C3-3**				
20. Were the applicable RPD or F-test method acceptance criteria met? **Reference Source: CCP-PO-001, Section C3-3**				
21. Is a minimum of one trip blank analyzed per analytical batch? **Reference Source: EPA Method SW-846 8260**				

Attachment 7 – CCP SPM S3000/S4000 Total Volatile Organic Compound Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: _____ **Analysis Date:** _____

Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
22. Are the results of the trip blank ≤3 times the program-required MDL? **Reference Source: EPA Method SW-846 8260**				
23. Is there a minimum of one lab blank analyzed per analytical batch? **Reference Source: CCP-PO-001, Table C3-5**				
24. Are all lab blank compounds ≤3 times the program-required MDL? **Reference Source: CCP-PO-001, Table C3-5**				
25. Are the analytical samples spiked with surrogate matrix compounds (SMCs)? **Reference Source: CCP-PO-001, Table C3-5**				
26. Are the SMCs %R values within specified criteria? **Reference Source: CCP-PO-001, Table C3-5**				
27. Is the five-point (minimum) initial calibration complete? **Reference Source: CCP-PO-001, Table C3-5**				
28. Is the $r^2 \geq 0.990$? **Reference Source: CCP-PO-001, Table C3-5**				
29. Are the percent relative standard deviations (%RSDs) for all target analytes calibration check compounds (CCCs) less than or equal to 30%? **Reference Source: CCP-PO-001, Table C3-5**				
30. Are the relative response factors for all target analytes System Performance Check Compounds (SPCCs) OK? Chloromethane: ≥ 0.10 1,1-Dichloroethane: ≥ 0.10 Bromoform: ≥ 0.10 Chlorobenzene: ≥ 0.30 1, 1, 2, 2-Tetrachloroethane: ≥ 0.30 SW-846 Method 8260B, Section 7.3.5.4 **Reference Source: CCP-PO-001, Table C3-5**				
31. If %RSD is less than or equal to 15, is average relative response factor used? **Reference Source: CCP-PO-001, Table C3-5**				

Attachment 7 – CCP SPM S3000/S4000 Total Volatile Organic Compound Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: _____ **Analysis Date:** _____

Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
32. If %RSD is greater than 15, is regression equation generated and used? **Reference Source: CCP-PO-001, Table C3-5**				
33. Is RRF for all non-SPCCs ≥0.01? **Reference Source: CCP-PO-001, Table C3-5**				
34. Were the Bromofluorobenzene (BFB) ion abundance criteria satisfied? **Reference Source: CCP-PO-001, Table C3-5**				
35. Is the BFB Tune performed at the beginning of the run before the QC samples? **Reference Source: CCP-PO-001, Table C3-5**				
36. Is BFB Tune performed at a minimum frequency of every 12 hours of operation? **Reference Source: CCP-PO-001, Table C3-5**				
37. Is continuing calibration performed at a minimum frequency of every 12 hours of operation? **Reference Source: CCP-PO-001, Table C3-5**				
38. Are the %Ds less than or equal to 20% for target analytes CCCs? **Reference Source: CCP-PO-001, Table C3-5**				
39. Is the retention time (RT) for internal standards ±30 seconds from last daily calibration check? **Reference Source: CCP-PO-001, Table C3-5**				
40. Is internal standard area count >50% and <200% of the last daily calibration? **Reference Source: CCP-PO-001, Table C3-5**				
41. For GC/FID, are the RTs for the continuing calibrations ±3 standard deviations from the initial calibration per applicable SW-846 method? **Reference Source: CCP-PO-001, Table C3-5**				

Attachment 7 – CCP SPM S3000/S4000 Total Volatile Organic Compound Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: _____ **Analysis Date:** _____

Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
42. Does the BDR include MDLs (mg/kg) that are ≤PRQL in Table C3-4? **Reference Source: CCP-PO-001, Table C3-4**				
43. Are analytical procedures (including data revision) used to develop the data referenced in the BDR? **Reference Source: CCP-PO-001, C3-10**				
44. Does the BDR include the operator's signature and analysis date? **Reference Source: CCP-PO-001, Table C3-13**				
45. Are data reporting forms complete with data reported properly (i.e., data is reported in correct units, with correct significant figures, and with correct qualifying flags)? **Reference Source: CCP-PO-001, C3-10b**				
46. Have data reporting flags been assigned properly? **Reference Source: CCP-PO-001, C3-10b**				
47. Have the batch samples been properly preserved (cool to 4°C, $\pm$ 2° C)? **Reference Source: CCP-PO-001, Table C1-4**				
48. Is the completed, signed, and dated Independent Technical Reviewer Checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, Table C3-13**				
49. Does the BDR contain at least one calibration standard $\leq$ PRQL? **Reference Source: CCP-PO-001, C3-6**				
50. Has the laboratory successfully participated in the PDP? **Reference Source: CCP-PO-001, C3-6**				
51. Does the laboratory use traceable standards? **Reference Source: CCP-PO-001, C3-6**				
52. Has the laboratory had acceptable demonstration of precision, accuracy, and MDLs [method performance samples] performed within the last 6 months? **Reference Source: CCP-PO-001, Table C3-5**				

Attachment 7 – CCP SPM S3000/S4000 Total Volatile Organic Compound Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: _____ **Analysis Date:** _____

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
53. Has the laboratory met the 90% completeness requirement? **Reference Source: CCP-PO-001, Table C3-4**				
54. Has the laboratory met the 90% completeness requirement? **Reference Source: CCP-PO-001, Table C3-4**				

Comments:

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

SPM Printed Name _____ Signature _____ Date _____

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date

Attachment 8 – CCP SPM S3000/S4000 Total Semi-Volatile Organic Compound Analysis Project Level Validation Checklist and Summary

BDR Number: _____ **Analysis Date:** _____

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
1. Does the Batch Data Report (BDR) contain the batch number, laboratory name, and the date of the batch report? **Reference Source: CCP-PO-001, Table C3-13**				
2. Has a BDR Narrative been included with the BDR? **Reference Source: CCP-PO-001, Table C3-13**				
3. Is there a cross-reference between waste container number, field sample number, and lab sample number ID; and signature release by lab personnel in the BDR? **Reference Source: CCP-PO-001, Table C3-13**				
4. Is the BDR complete? **Reference Source: CCP-PO-001, C3-10b**				
5. List all containers that have met QAOs. **Reference Source: CCP-PO-001, C3-10b**				Container Numbers:
6. Is there a reference to or copy of any associated NCRs (if any) in the BDR? NA if no NCRs associated with the BDR. **Reference Source: CCP-PO-001, Table C3-13**				
7. Are there 20 or less samples per analytical batch? **Reference Source: CCP-PO-001, C3-10**				
8. Does the BDR contain a complete and signed copy of the COC form? **Reference Source: CCP-PO-001, Table C3-13**				
9. Does the BDR include the date and time of analysis for each sample? **Reference Source: CCP-PO-001, Table C3-13**				
10. Are the training qualifications for all personnel acceptable? **CCP-PO-001, Table C3-13**				
11. Are holding times between collection and extraction within the 14-day requirement? **Reference Source: CCP-PO-001, Table C1-4**				
12. Are the holding times between extraction and analysis within the 40-day requirement? **Reference Source: CCP-PO-001, Table C1-4**				

Attachment 8 – CCP SPM S3000/S4000 Total Semi-Volatile Organic Compound Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: _____ **Analysis Date:** _____

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
13. Have QC designations for samples been applied as appropriate? **Reference Source: CCP-PO-001, Table C3-13**				
14. Is there a minimum of one laboratory control sample (LCS) analyzed per analytical batch? **Reference Source: CCP-PO-001, Table C3-7**				
15. Are the percent recoveries (%Rs) for all LCS analytes within the acceptable range? **Reference Source: CCP-PO-001, Table C3-6**				
16. Is a minimum of one matrix spike (MS) analyzed per analytical batch? **Reference Source: CCP-PO-001, Table C3-6**				
17. Are the %Rs for all MS compounds within the acceptance range? **Reference Source: CCP-PO-001, Table C3-7**				
18. Is a minimum of one matrix spike duplicate (MSD) analyzed per analytical batch? Note: The MSD is used in place of the laboratory duplicate. **Reference Source: CCP-PO-001, Table C3-7**				
19. Are the %Rs for all MSD compounds within the acceptance range? Note: The MSD is used in place of the laboratory duplicate. **Reference Source: CCP-PO-001, Table C3-6**				
20. Do the MS/MSD relative percent differences (RPDs) for all analytes meet the requirements? **Reference Source: CCP-PO-001, Table C3-6**				
21. Has the CCP Site Project Manager calculated and reported the results of the RPD and F-Test Method? **Reference Source: CCP-PO-001, Section C3-3**				
22. Were the applicable RPD or F-test method acceptance criteria met? **Reference Source: CCP-PO-001, Section C3-3**				

Attachment 8 – CCP SPM S3000/S4000 Total Semi-Volatile Organic Compound Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: _____ **Analysis Date:** _____

Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
23. Is there a minimum of one lab blank analyzed per analytical batch? **Reference Source: CCP-PO-001, Table C3-7**				
24. Are all lab blank compounds ≤3 times the program-required MDL? **Reference Source: CCP-PO-001, Table C3-7**				
25. Are the analytical samples spiked with surrogate matrix compounds (SMCs)? **Reference Source: CCP-PO-001, Table C3-7**				
26. Are the SMCs %R values within specified criteria listed on the Surrogate Recovery Form included in the BDR? **Reference Source: CCP-PO-001, Table C3-7**				
27. Is the five-point (minimum) initial calibration complete? **Reference Source: CCP-PO-001, Table C3-7**				
28. Are the percent relative standard deviations (%RSDs) for all target analytes calibration check compounds (CCCs) less than or equal to 30%? **Reference Source: CCP-PO-001, Table C3-7**				
29. Are the %RSDs for all other compounds ≤ 15%? **Reference Source: CCP-PO-001, Table C3-7**				
30. Are the relative response factors (RRFs) for all target analytes System Performance Check Compounds (SPCCs) ≥ 0.05? **Reference Source: CCP-PO-001, Table C3-7 and SW 846**				
31. If %RSD is less than or equal to 15, is average relative response factor used? **Reference Source: CCP-PO-001, Table C3-7**				
32. When an alternative curve is used, is the r^2 ≥ 0.990? NA if %RSD is less than or equal to 15. **Reference Source: CCP-PO-001, Table C3-7**				

Attachment 8 – CCP SPM S3000/S4000 Total Semi-Volatile Organic Compound Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: _____ **Analysis Date:** _____

Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
33. If %RSD is greater than 15, is regression equation generated and used? NA if %RSD is less than or equal to 15. **Reference Source: CCP-PO-001, Table C3-7**				
34. Is RRF for all non-SPCCs ≥0.01? **Reference Source: CCP-PO-001, Table C3-7**				
35. Were the decafluorotriphenylphosphine (DFTPP) ion abundance criteria satisfied? **Reference Source: CCP-PO-001, Table C3-7**				
36. Is the DFTPP Tune performed at the beginning of the run before the QC samples? **Reference Source: CCP-PO-001, Table C3-7**				
37. Is DFTPP tune performed at a minimum frequency of every 12 hours of operation? **Reference Source: CCP-PO-001, Table C3-7**				
38. Were the ion abundance criteria satisfied? **Reference Source: CCP-PO-001, Table C3-7**				
39. Is continuing calibration performed at a minimum frequency of every 12 hours of operation? **Reference Source: CCP-PO-001, Table C3-7**				
40. Are the %Ds for the continuing calibration less than or equal to 20% for target analytes CCCs? **Reference Source: CCP-PO-001, Table C3-7**				
41. Is the RT for the continuing calibration internal standards ±30 seconds from last daily calibration check? **Reference Source: CCP-PO-001, Table C3-7**				
42. Is the continuing calibration internal standard area count >50% and <200% of the last daily calibration? **Reference Source: CCP-PO-001, Table C3-7**				

Attachment 8 – CCP SPM S3000/S4000 Total Semi-Volatile Organic Compound Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: _____ **Analysis Date:** _____

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
43. Does the BDR include MDLs (mg/kg) that are ≤ PRQL in Table C3-6? **Reference Source: CCP-PO-001, Table C3-6**				
44. Are analytical procedures (including data revision) used to develop the data referenced in the BDR? **Reference Source: CCP-PO-001, C3-10**				
45. Does the BDR include the operator's signature and analysis date? **Reference Source: CCP-PO-001, Table C3-13**				
46. Are data reporting forms complete with data reported properly (i.e., data is reported in correct units, with correct significant figures, and with correct qualifying flags)? **Reference Source: CCP-PO-001, C3-10b**				
47. Have data reporting flags been assigned properly? **Reference Source: CCP-PO-001, C3-10b**				
48. Have the batch samples been properly preserved (cool to 4°C, $\pm$ 2° C)? **Reference Source: CCP-PO-001, Table C1-4**				
49. Is the completed, signed, and dated Independent Technical Reviewer Checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, Table C3-13**				
50. Does the initial calibration contain at least one calibration standard less than or equal to the PRQL? **Reference Source: CCP-PO-001, C3-7**				
51. Has the laboratory successfully participated in the PDP? **Reference Source: CCP-PO-001, C3-7**				
52. Has the laboratory met the 90% completeness requirement? **Reference Source: CCP-PO-001, Table C3-6**				
53. Does the laboratory use traceable standards? **Reference Source: CCP-PO-001, C3-7**				

Attachment 8 – CCP SPM S3000/S4000 Total Semi-Volatile Organic Compound Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: _____ **Analysis Date:** _____

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
54. Has the laboratory had acceptable demonstration of precision, accuracy, and MDLs [method performance samples] performed within the last 6 months? **Reference Source: CCP-PO-001, Table C3-7**				

Comments:

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

SPM Printed Name _____ Signature _____ Date _____

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date

Attachment 9 – CCP SPM HSG Summa Sampling Project Level Validation Checklist and Summary

BDR Number: _____ **Sampling Date:** _____

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
1. Does the Batch Data Report (BDR) contain the batch number? **Reference Source: CCP-PO-001, Table C3-12**				
2. Is the BDR complete according to the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-10b**				
3. Does the BDR contain the BDR date? **Reference Source: CCP-PO-001, Table C3-12**				
4. Is the sample matrix and type included for each sample in the BDR? **Reference Source: CCP-PO-001, Table C3-12**				
5. Is the BDR complete as defined by the process procedures? **Reference Source: CCP-PO-001, C3-10, CCP Technical Procedures**				
6. List all containers that have met QAOs. **Reference Source: CCP-PO-001, Table C3-12**				Container Numbers:
7. Does the BDR include the requested analyses and the name of the laboratory? **Reference Source: CCP-PO-001, Table C3-12**				
8. Is there a reference to or copy of any associated NCRs (if any) in the BDR? NA if no NCRs associated with the BDR. **Reference Source: CCP-PO-001, Table C3-12**				
9. Does the BDR include the point of origin for sampling (e.g., building number, room)? **Reference Source: CCP-PO-001, Table C3-12**				
10. Is the sample size included in the BDR? **Reference Source: CCP-PO-001, Table C3-12**				
11. Does the BDR include the sample location of each container? Note: Location within container is where the sample is taken. The BDR must specify what layer of confinement was sampled (e.g., under the lid). **Reference Source: CCP-PO-001, Table C3-12**				

Attachment 9 – CCP SPM HSG Summa Sampling Project Level Validation Checklist and Summary (Continued)

BDR Number: _____ **Sampling Date:** _____

Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
12. Is the person collecting the sample identified in the BDR and qualified? **Reference Source: CCP-PO-001, Table C3-12**				
13. Does the BDR contain a chain of custody record? **Reference Source: CCP-PO-001, Table C3-12**				
14. Does the chain of custody form correctly identify the Waste Stream ID? **Reference Source: CCP-PO-001, Table C3-12**				
15. Is there a reference to sampling equipment numbers or lot numbers for disposable equipment? **Reference Source: CCP-PO-001, Table C3-12**				
16. Is there verification of rigid liner venting? **Reference Source: CCP-PO-001, Table C3-12**				
17. Does the BDR include the operator/sampler signature and date and time of sampling for each sample? **Reference Source: CCP-PO-001, Table C3-12**				
18. Are there 20 samples or less (excluding QC) in the batch and all samples collected within 14 days of the first sample collected? **Reference Source: CCP-PO-001, C1-1b**				
19. Are the correct revisions of the procedures used and identified? **Reference Source: CCP-PO-001, Table C3-12**				
20. Are all data reporting forms complete with data reported properly (correct units and significant figures)? **Reference Source: CCP-PO-001, C3-10b(1)**				
21. Is there a cross-reference between waste container number and field sample number? **Reference Source: CCP-PO-001, C1-5**				
22. Have the samples been properly preserved (0-40° C)? **Reference Source: CCP-PO-001, Table C1-1**				

Attachment 9 – CCP SPM HSG Summa Sampling Project Level Validation Checklist and Summary (Continued)

BDR Number: _____ **Sampling Date:** _____

Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
23. Have the samples been properly preserved (0-40º C)? **Reference Source: CCP-PO-001, Table C1-1**				
24. Has the correct DAC scenario and waste packaging configuration been selected? **Reference Source: CCP-PO-001, C3-2**				
25. Do the samples meet the required DAC equilibrium times? **Reference Source: CCP-PO-001, C3-2**				
26. Prior to canister use was the following performed: equipment blank, sample canister equipment cleaning and leak check, and field reference standard (or on-line control standard) performed as required? **Reference Source: CCP-PO-001, C1-1b**				
27. Has one field blank per batch been collected? **Reference Source: CCP-PO-001, Table C1-2**				
28. Has a minimum of one equipment blank been collected for the applicable cleaning batch blanks? **Reference Source: CCP-PO-001, Table C1-2**				
29. Has one field duplicate per batch been collected? **Reference Source: CCP-PO-001, Table C1-2**				
30. Has the canister pressure and ambient temperature and pressure been recorded? **Reference Source: CCP-PO-001, Table C3-12**				
31. Have the ambient pressure and temperature sensors been calibrated? **Reference Source: CCP-PO-001, C1-1d**				
32. Have all the waste containers equilibrated for a minimum of 72 hours at 18º C or higher? **Reference Source: CCP-PO-001, C1-1a**				
33. Is the completed, signed, and dated Independent Technical Reviewer Checklist in the BDR? **Reference Source: CCP-PO-001, Table C3-12**				

Attachment 9 – CCP SPM HSG Summa Sampling Project Level Validation Checklist and Summary (Continued)

BDR Number: _____ **Sampling Date:** _____

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
34. Is the completed, signed, and dated Independent Technical Reviewer Checklist in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, Table C3-12**				

Comments:

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

SPM Printed Name Signature Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date

Attachment 10 – CCP SPM Summa HSG Analysis Project Level Validation Checklist and Summary

BDR Number: _____ **Analysis Date:** _____

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
1. Does the Batch Data Report (BDR) contain the batch number, laboratory name, and the date of the batch report? **Reference Source: CCP-PO-001, Table C3-13**				
2. Is the BDR complete according to the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-10b**				
3. Has a BDR Narrative been included with the BDR? **Reference Source: CCP-PO-001, Table C3-13**				
4. Are the correct revisions of the procedures used and identified? **Reference Source: CCP-PO-001, Table C3-13**				
5. List all containers that have met the QAOs. **Reference Source: CCP-PO-001, C3-10b**				Container Numbers:
6. Is there a reference to or copy of any associated NCRs (if any) in the BDR? NA if no NCRS associated with the BDR. **Reference Source: CCP-PO-001, Table C3-13**				
7. Is the completed, signed, and dated Independent Technical Reviewer checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, Table C3-13**				
8. Does the BDR include the operator's signature and analysis date? **Reference Source: CCP-PO-001, Table C3-13**				
9. Are there 20 laboratory samples or less in the analytical batch (excluding QC)? **Reference Source: CCP-PO-001, C3-10**				
10. Does the chain of custody (COC) form correctly identify the Waste Stream ID? **Reference Source: CCP-PO-001, Table C3-13**				
11. Does the BDR contain a complete and signed copy of the COC form? **Reference Source: CCP-PO-001, Table C3-13**				

Attachment 10 – CCP SPM Summa HSG Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: _____ **Analysis Date:** _____

Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
12. Is there a cross-reference between waste container number, field sample number, and lab sample number ID; and signature release by lab personnel in the batch report? **Reference Source: CCP-PO-001, C1-5**				
13. Does the BDR contain gas sample canister tags for each sample that are properly filled out? **Reference Source: CCP-PO-001, Table C3-13**				
14. Have the samples been properly preserved (0-40° C)? **Reference Source: CCP-PO-001, Table C1-1**				
15. Does the BDR include the date and time of analysis for each sample? **Reference Source: CCP-PO-001, Table C3-13**				
16. Have data reporting flags been assigned properly? **Reference Source: CCP-PO-001, Table C3-13**				
17. Did the batch report analysis consist of all the target compounds? **Reference Source: CCP-PO-001, Table C3-2**				
18. Is there a minimum of one laboratory (method) blank per analytical batch with all analytes $\leq$ 3 x MDL? **Reference Source: CCP-PO-001, Table C3-3**				
19. Are all target analytes in field blanks and equipment blanks (if any) $\leq$ 3 x instrument MDL as listed in CCP-PO-001 Table C3-2? **Reference Source: CCP-PO-001, Table C1-3**				
20. Is a minimum of one laboratory control standard (LCS) analyzed per analytical batch and are the percent recoveries (%Rs) within 70-130%? **Reference Source: CCP-PO-001, Table C3-3**				
21. Is there a minimum of one field duplicate analyzed per sampling batch including in the analytical batch? **Reference Source: CCP-PO-001, Table C1-3**				

Attachment 10 – CCP SPM Summa HSG Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: _____ **Analysis Date:** _____

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
22. For field sample and field duplicate results that are both > PRQL, are the relative percent differences (RPDs) ≤ 25%? **Reference Source: CCP-PO-001, Table C3-2**				
23. Is there a minimum of one laboratory duplicate (LD) analyzed per analytical batch? **Reference Source: CCP-PO-001, Table C3-3**				
24. For laboratory duplicate results that are > PRQL (or for laboratory control standard and replicate laboratory control standard results > PRQL), is the RPD ≤ 25%? **Reference Source: CCP-PO-001, Table C3-3**				
25. If no target analytes were present greater than the PRQL, was a replicate LCS satisfactorily performed? **Reference Source: CCP-PO-001, Table C3-3**				
26. Does the field reference standard (FRS) contain at least six analytes and are the %Rs within 70-130%? **Reference Source: CCP-PO-001, C1-1b and Table C1-3**				
27. For GC/MS analyses, was the BFB tune performed at a minimum of every 12 hours and were the ion abundance criteria satisfied? **Reference Source: CCP-PO-001, Table C3-3**				
28. For GC/MS analyses, for the five-point initial calibration, is the %RSD for all compounds < 35%? **Reference Source: CCP-PO-001, Table C3-3**				
29. For GC/MS analyses, is one of the calibration standards less than the PRQL? **Reference Source: CCP-PO-001, Section C3-5**				
30. For GC/MS analyses, is the continuing calibration performed at a minimum frequency of every 12 hours of operation? **Reference Source: CCP-PO-001, Table C3-3**				

Attachment 10 – CCP SPM Summa HSG Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: _____ **Analysis Date:** _____

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
31. For GC/MS analyses, are the continuing calibration internal standard area counts between 50-200% of ICAL? **Reference Source: CCP-PO-001, Table C3-3**				
32. For GC/MS analyses, are non-target compounds identified as Tentatively Identified Compounds (TICs)? **Reference Source: CCP-PO-001, C-3a**				
33. Does the BDR contain all of the target compounds appropriate for the waste stream? **Reference Source: CCP-PO-001, Table C3-2/AK Summary Report**				
34. For GC/MS analyses, is the continuing calibration %D for all compounds ≤ 30% of the ICAL? **Reference Source: CCP-PO-001, Table C3-3**				
35. For methanol analysis by GC/FID, does the initial calibration (ICAL) have a minimum of five points, is the %R within 70-130%, and is the correlation coefficient ≥ 0.990? NA if not methanol analysis by GC/FID. **Reference Source: CCP-PO-001, Table C3-3**				
36. For methanol analysis by GC/FID, is the continuing calibration (CC) analyzed every 12 hours, is the %D ≤ 15%, is the %R within 85-115%, and is the CC retention time within the ICAL window? NA if not methanol analysis by GC/FID. **Reference Source: CCP-PO-001, Table C3-2**				
37. For methanol analysis by GC/FID, is one of the calibration standards less than the PRQL? **Reference Source: CCP-PO-001, C3-5**				
38. Are all data reporting forms complete with data reported properly (correct units and significant figures)? **Reference Source: CCP-PO-001, C3-10b**				
39. Has the laboratory successfully participated in the latest PDP? **Reference Source: CCP-PO-001, C3-5**				

Attachment 10 – CCP SPM Summa HSG Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: _____ **Analysis Date:** _____

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
40. Has the laboratory met the 90% completeness requirement? **Reference Source: CCP-PO-001, Table C3-2**				
41. Does the laboratory use traceable standards? **Reference Source: CCP-PO-001, C3-5**				
42. Has the laboratory had acceptable demonstration of precision, accuracy, and MDLs [method performance samples] performed within the last 6 months? **Reference Source: CCP-PO-001, Table C3-3**				
43. Have QC designations for samples been applied as appropriate? **Reference Source: CCP-PO-001, Table C3-13**				

Comments:

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

SPM Printed Name Signature Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date

Attachment 11 – CCP SPM Off-Site Source Recovery Sealed Source Radiological Characterization Project Level Validation Checklist and Summary

BDR Number: _____ **Examination Date:** _____

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
1. Are the personnel training records acceptable? **Reference Source: Site applicable LOQI**				
2. Does the Batch Data Report (BDR) include the name of the facility? **Reference Source: CCP-PO-002**				
3. Does the BDR include a standard cover sheet? **Reference Source: CCP-PO-002**				
4. Does the BDR include a Table of Contents? **Reference Source: CCP-PO-002**				
5. Does the BDR include a batch number? **Reference Source: CCP-PO-002**				
6. Does the BDR include a listing of all waste container numbers in the batch? **Reference Source: CCP-PO-002**				
7. List all containers. **Reference Source: CCP-PO-002**				Container Numbers:
8. Does the BDR include a Container Characterization Report sheet(s) for each container in the batch? **Reference Source: CCP-PO-002**				
9. Is there a reference to or copy of associated NCRs (if any) in the BDR? NA if no NCRs associated with the BDR. **Reference Source: CCP-PO-002**				
10. Does the BDR include the implementing procedure and revision numbers? **Reference Source: CCP-PO-002**				
11. Does the BDR include a completed, signed, and dated Independent Technical Review Checklist, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-002**				
12. Does the waste meet the definition of sealed sources per 10 CFR 30.4 and 10 CFR 835.2 (effective January 1, 2004) and documentation included with the AK information? **Reference Source: CCP-PO-001, C4-2**				

Attachment 11 – CCP SPM Off-Site Source Recovery Sealed Source Radiological Characterization Project Level Validation Checklist and Summary (Continued)

BDR Number: _____ **Examination Date:** _____

Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
13. Is the sealed source a US DOT Special Form Class 7 (Radioactive Material) per 49 CFR 34.27 (effective January 1, 2004) and is this documented in the AK information? **Reference Source: CCP-PO-001, C4-2**				
14. Is the integrity of each sealed source validated by documented contamination survey results to meet the requirements of 10 CFR 34.27 (effective January 1, 2004), and is assembled as part of AK documentation? **Reference Source: CCP-PO-001, C4-2**				
15. Does the AK information document that no VOC or VOC-bearing material are constituents of the waste? **Reference Source: CCP-PO-001, C4-2**				
16. Does the AK information document that the outer casing of the sealed source is a non-VOC bearing material and is this verified during VE? **Reference Source: CCP-PO-001, C4-2**				
17. Is the Title "Characterization Data Sheet" included on each data sheet? **Reference Source: CCP-PO-002**				
18. Is the waste container number included on each data sheet? **Reference Source: CCP-PO-002**				
19. Is the run date included on each data sheet? **Reference Source: CCP-PO-002**				
20. Is the TRU alpha activity concentration (Ci/g) included on each data sheet? **Reference Source: CCP-PO-002**				
21. Is the Total Pu-239 equivalent activity (PE-Ci) included on each data sheet? **Reference Source: CCP-PO-002**				
22. Is the Total FGE (g) and associated TMU included on each data sheet? **Reference Source: CCP-PO-002**				
23. Is the Decay Heat (W) and associated TMU included on each data sheet? **Reference Source: CCP-PO-002**				
24. Are the activities and/or masses of individual radioisotopes and associated TMUs (curies and/or grams) included on each data sheet? **Reference Source: CCP-PO-002**				

Attachment 11 – CCP SPM Off-Site Source Recovery Sealed Source Radiological Characterization Project Level Validation Checklist and Summary (Continued)

BDR Number: _____ **Examination Date:** _____

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
25. Is the method of expressing TMU specified? **Reference Source: CCP-PO-002**				
26. Are the ten WIPP tracked radionuclides of 241Am, 238Pu, 239Pu, 240Pu, 242Pu, 233U, 234U, 238U, 90Sr, 137Cs identified and reported as present or absent? **Reference Source: CCP-PO-002**				
27. Is 235U (in order to calculate FGE) reported as present or absent? **Reference Source: CCP-PO-002**				
28. Is the TRU Alpha activity concentration >100 nCi/g? **Reference Source: CCP-PO-002**				
29. Is the Fissile Mass $\leq$ FGE limit? **Reference Source: CCP-PO-002**				
30. If 235U is reported as present, is 234U reported as present? NA if 235U is not present. **Reference Source: CCP-PO-002**				

Comments:

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

SPM Printed Name Signature Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

Controlled
Copy

CCP-TP-002

Revision 25

CCP
Reconciliation of DQOs and Reporting Characterization Data

EFFECTIVE DATE: 02/11/2013

Mike Ramirez

PRINTED NAME

APPROVED FOR USE

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
18	11/16/2006	Revised to implement the Waste Isolation Pilot Plant Hazardous Waste Facility Permit requirements resulting from the Section 311/Remote-Handled (RH) Permit Modification Request (PMR). Addressed Carlsbad Field Office (CBFO) Document Review Record (DRR) comments.
19	12/22/2006	Revised to clarify Waste Stream Profile Form contents.
20	08/18/2008	Revised Section 4.2.1 to incorporate Central Characterization Project (CCP) Standing Order CCP-SO-32. Updated several document/procedure titles. Minor changes to Section 5.0.
21	08/04/2009	Revised to answer Waste Isolation Pilot Plant (WIPP) Form 09-050, and add changes to Sections 3 and 4 and make any other editorial changes needed.
22	06/30/2010	Revised for Class 2 Modification Request WIPP Hazardous Waste Facility Permit EPA I.D. Number NM4890139088.
23	12/29/2010	Revised to implement the revision of the *Waste Isolation Pilot Plant Hazardous Waste Facility Permit*.
24	12/28/2011	Revised to make editorial changes. Replacing Waste Stream Profile Form (WSPF) change notice with revision to WSPF. Revising instructions for completing WSPF package.
25	02/11/2013	Revised to include timeframe for transmitting the waste stream profile form package to records. Also revised to make editorial changes needed.

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1.0 PURPOSE

Upon completion of waste characterization activities, and prior to shipment of waste, the Central Characterization Program (CCP) is required to reconcile the data in accordance with the requirements of CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan* (QAPjP). Data reconciliation is required in order for the CCP Site Project Manager (SPM) to complete and submit a Waste Stream Profile Form (WSPF) (see Attachment 2, CCP Waste Stream Profile Form, for an example).

1.1 Scope

This procedure provides data reconciliation with the data quality objectives (DQOs) following data validation and verification at the CCP Project Office. This reconciliation is performed at the waste stream or waste stream lot level. This procedure provides the instructions for the completion of the WSPF Package for submittal to the U.S. Department of Energy (DOE) Carlsbad Field Office (CBFO) for permittee review and CBFO approval prior to shipment.

2.0 REQUIREMENTS

2.1 References

Baseline Documents

- DOE/WIPP 01-3194, *CH-TRU Waste Content Codes* (*CH-TRUCON*)
- DOE/WIPP 90-045, *RH-TRU Waste Content Codes* (*RH-TRUCON*)
- CCP-PO-002, *CCP Transuranic Waste Certification Plan*
- CCP-PO-003, *CCP Transuranic Authorized Methods For Payload Control* (*CCP CH-TRAMPAC*)
- CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control* (*CCP RH-TRAMPAC*)

Referenced Documents

- *Waste Isolation Pilot Plant Hazardous Waste Facility Permit, Waste Analysis Plan*
- DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria For The Waste Isolation Pilot Plan*
- 40 CFR 261, *Identification and Listing of Hazardous Waste,* Subpart C, *Characteristics of Hazardous Waste.*
- 40 CFR 261, *Identification and Listing of Hazardous Waste,* Subpart D, *Lists of Hazardous Wastes*
- DOE/TRU-11-3425, *Annual Transuranic Waste Inventory Report – 2011*
- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- CCP-QP-002, *CCP Training and Qualification Plan*
- CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
- CCP-QP-008, *CCP Records Management*
- CCP-TP-003, *CCP Data Analysis for S3000, S4000, and S5000 Characterization*

- CCP-TP-005, *CCP Acceptable Knowledge Documentation*
- CCP-TP-162, *CCP Random Selection of Containers for Solids and Headspace Gas Sampling and Analysis*

2.2 Training Requirements

2.2.1 Personnel performing this procedure will be trained and qualified in accordance with CCP-QP-002, *CCP Training and Qualification Plan*, prior to performing this procedure.

3.0 RESPONSIBILITIES

3.1 Site Project Manager (SPM)

3.1.1 Ensures that all data generated and used in decision making meet the DQOs

[A] Assesses whether data of sufficient type, quality, and quantity have been collected.

[B] Determines if the variability of the data set is small enough to provide the required confidence in the results.

[C] Determines if, based on the desired error rates and confidence levels, a sufficient number of valid data points have been determined (as established by the associated completeness rate for each sampling and analytical process).

[D] Documents that random sampling of containers, as applicable, was performed for the purpose of waste stream characterization.

[E] Documents any deviation from the containers specified for sampling in the random selection.

NOTE

The WSPF Package consists of the WSPF, the Characterization Information Summary (CIS) (for the lot addressing the applicable headspace or solids analysis data of the subject waste stream), and the Summation of Aspects of the Acceptable Knowledge (AK) Summary.

3.1.2 Completes and submits the WSPF package and required revisions.

3.1.3 Prepares the Waste Stream Characterization Package per CCP-PO-001, Section C3-12b(3) upon request from the DOE CBFO.

3.2 Acceptable Knowledge Expert (AKE)

NOTE

As the waste stream is characterized, the Acceptable Knowledge Expert (AKE) is responsible for corroborating the AK information with the characterization data collected. For the final data reconciliation (conducted in accordance with this procedure), the AKE provides assistance to the SPM.

3.2.1 Compiles the AK information for the waste stream being characterized.

3.2.2 Creates the AK summary which is used to create the Summation of Aspects of the AK summary.

3.2.3 Assigns a unique waste stream number for each waste stream based on information in the DOE/TRU-11-3425, *Annual Transuranic Waste Inventory Report* (ATWIR) and/or information from the Host site.

3.2.4 Reviews and concurs with the WSPF Package and subsequent revisions.

3.3 Host Site Subcontract Technical Representative (STR)

3.3.1 If required by the site-specific interface document, reviews, and concurs with the WSPF Package.

4.0 PROCEDURE

NOTE
The attachments in this document are examples of the requirements. The examples identify the minimum information required in the final approved report.

NOTE
Steps DO **NOT** need to be followed in sequence.

SPM

4.1 Assigning the WSPF Number

NOTE
The unique number will be limited to a maximum of 20 alpha-numeric characters. The first two characters will be the two letter site designator, and the remaining characters should coincide, to the maximum extent possible, with the title page of the AK Summary Report.

4.1.1 Assign the Waste Stream Number to the WSPF per the AK Summary Report.

NOTE
The Waste Stream Number is recorded on all applicable attachments.

4.2 Compilation and Evaluation of DQO Parameters

4.2.1 For the lot to be processed, select an appropriate number of containers that have completed CCP Project Office verification and validation from the waste stream population.

[A] Ensure that all of the containers selected are from the same waste stream by comparing the container numbers/waste stream identification numbers with the AK Tracking Spreadsheet for the subject site.

[B] Ensure (for solids/soils [S3000/S4000] waste streams that require solids sampling and analysis) that the required random selection has been completed, in accordance with CCP-TP-162, *CCP Random Selection of Containers for Solids and Headspace Gas Sampling and Analysis* **AND** the required minimum number of samples has been taken and analyzed, **OR** an AK Sufficiency has been approved.

[B.1] **IF** the required random selection, sampling, and analysis, **OR** an AK Sufficiency Determination has **NOT** been performed,
THEN direct the appropriate site facility to perform the required actions.

[B.2] **IF** the required random selection and sampling has been performed, but there has been a deviation from the containers specified for sampling in the random selection,
THEN confirm that the site project manager has prepared and submitted the required memorandum identifying the replaced and replacement container(s) and the reason for replacement to CCP Records as directed in CCP-TP-162.

[C] Ensure (for debris [S5000] waste streams that require headspace gas [HSG] sampling and analysis), that the required random selection has been completed, in accordance with CCP-TP-162, **AND** the required minimum number of samples has been taken and analyzed, **OR** an AK Sufficiency has been approved.

[C.1] **IF** the required random selection, sampling, and analysis, **OR** AK Sufficiency Determination has **NOT** been performed,
THEN direct the appropriate site facility to perform the required actions.

[C.2] **IF** the required random selection and sampling has been performed, but there has been a deviation from the containers specified for sampling in the random selection,
THEN confirm that the SPM has prepared and submitted the required memorandum identifying the replaced and replacement container(s), and the reason for replacement to CCP Records as directed in CCP-TP-162.

[D] Ensure all containers from any waste stream that requires Gas Generation Testing (GGT) meet one of the following requirements:

[D.1] The container is on an approved GGT Batch Data Report (BDR) and that the BDR is the most recent.

[D.2] The container is included in an approved Long Term Objective population.

[E] Ensure all containers from any waste stream that require Flammable Gas (FG) for Transportation Sampling meet one of the following requirements:

- The container is on an approved HSG BDR and that the BDR is the most recent.
- The container is on an approved FG for Transportation BDR and that the BDR is the most recent.

[F] Ensure all data to be used for certification was generated using certified equipment. Reference https://sftp.wipp.energy.gov in certification folder, file titled CCP SYSTEM PROCESS AND CERTIFICATION STATUS.

[G] Ensure that each of the BDRs chosen to certify the containers is the most recent BDR available for that characterization process (i.e., nondestructive examination [NDE], real-time radiography [RTR] or visual examination [VE], nondestructive assay [NDA], HSG, FG, Dose-to-Curie [DTC]), Radiological Characterization.

4.2.2 Obtain copies of the following documents from CCP Records, as applicable:

- Documentation of Radiological Properties (e.g., NDA BDR), VE, NDE, Solids Analysis, and HSG, **AND/OR** an AK Sufficiency Determination
- HSG Summary Report for previous waste lots
- Solids Summary Report for previous waste lots, if applicable
- CCP Headspace Gas UCL_{90} Evaluation Form (CCP-TP-003, *CCP Data Analysis for S3000, S4000, and S5000 Characterization* - Attachment 3)
- CCP Solids Analysis VOC UCL_{90} Evaluation Form (CCP-TP-003 - Attachment 4)
- CCP Solids Analysis Semi-VOC UCL_{90} Evaluation Form (CCP-TP-003 - Attachment 5)

- CCP Solids Analysis Metals UCL_{90} Evaluation Form (CCP-TP-003 - Attachment 6)
- Previous records of data completion and reconciliation with DQOs (see Attachment 1, CCP Reconciliation with Data Quality Objectives for an example)
- Previously completed CIS submitted to records on interoffice memo

4.2.3 Determine if sufficient data have been collected to determine if program-required waste parameters have been met, by completing the CCP Reconciliation with Data Quality Objective Attachment 1, using the attached instructions.

4.2.4 **IF** sufficient data has been collected,
THEN enter the Waste Stream Number and Lot Number on the CCP Reconciliation with Data Quality Objective.

4.2.5 **IF** data DOES **NOT** meet the criteria on the CCP Reconciliation with Data Quality Objective,
THEN sufficient data has **NOT** been collected to fully characterize the waste stream, therefore, determine the additional waste characterization that needs to be performed **AND** direct the appropriate site facility to collect the additional data.

NOTE

The CCP Reconciliation with Data Quality Objective contains multiple questions for each entry. If there are discrepancies between questions or if entries are Not Applicable (N/A), comments will be added to the form explaining how criteria are met.

4.2.6 Complete the CCP Reconciliation with Data Quality Objective, using the attached questions.

4.2.7 Print name, sign, and date the CCP Reconciliation with Data Quality Objective.

4.2.8 Place the CCP Reconciliation with Data Quality Objective in the holding file.

4.3 Preparing Waste Stream Profile Form (WSPF)

NOTE
The current approved revision of the waste stream AK Summary should be used in preparing or revising the WSPF.

4.3.1 **IF** a WSPF exists for the waste characterization data being reconciled,
THEN GO TO Section 4.7.

4.3.2 Ensure all characterization data obtained from CCP Records for the waste stream in question have gone through project level validation (i.e., signed SPM checklists).

4.3.3 Prepare a CCP WSPF (see CCP Waste Stream Profile Form, for an example) using the instructions included in Attachment 2.

4.3.4 Review, print name, sign, and date the WSPF.

4.3.5 Place the CCP WSPF in the holding file.

4.4 Completing the Characterization Information Summary (CIS)

NOTE
Include the list of site-specific/CCP procedures, revisions, and dates used in characterizing the containers in the lot.

4.4.1 Using the cover page found in the CCP Characterization Information Summary Cover Page (see Attachment 3, CCP Characterization Information Summary Cover Page for an example), record the Waste Stream Number and Lot Number.

4.4.2 Complete the cross-reference listing the container numbers to each BDR (see Attachment 4, CCP Correlation of Container Identification Numbers to Batch Data Report Numbers for an example).

[A] For items **NOT** analyzed enter N/A.

[B] Print name, sign, and date the CCP Correlation of Container Identification Numbers to Batch Data Report Numbers.

[C] Place the CCP Correlation of Container Identification Numbers to Batch Data Report Numbers in the holding file.

4.4.3 Copy the completed UCL_{90} form for the applicable analyses:

- CCP Headspace Gas UCL_{90} Evaluation Form, CCP-TP-003 - Attachment 3
- CCP Solids Analysis VOC UCL_{90} Evaluation Form, CCP-TP-003 - Attachment 4
- CCP Solids Analysis Semi-VOC UCL_{90} Evaluation Form, CCP-TP-003 - Attachment 5
- CCP Solids Analysis Metals UCL_{90} Evaluation Form, CCP-TP-003 - Attachment 6

4.4.4 Complete the summary data for the applicable analyses for the lot of the waste stream:

- CCP Headspace Gas Summary Data (see Attachment 5, CCP Headspace Gas Summary Data for an example)
- CCP Solids VOCs Summary Data (see Attachment 6, CCP Solids VOCs Summary Data for an example)
- CCP Solids SVOCs Summary Data, (see Attachment 7, CCP Solids SVOCs Summary Data for an example)

4.4.5 Sign and date CCP Headspace Gas Summary Data, **OR** CCP Solids VOCs Summary Data **AND** CCP Solids SVOCs Summary Data.

4.4.6 Place CCP Headspace Gas Summary Data, **OR** CCP Solids VOCs Summary Data **AND** CCP Solids SVOCs Summary Data in the holding file.

4.4.7 **IF** the AK Summary for the waste stream identified the U.S. Environmental Protection Agency (EPA) Hazardous Waste Number (HWN) U134 (hydrofluoric acid),
THEN address in CCP RTR/VE Summary of Prohibited Items (see Attachment 8, CCP RTR/VE Summary of Prohibited Items for an example) that any liquid identified is a prohibited item per the applicable operating procedure and is **NOT** acceptable by the Treatment, Storage, and Disposal Facility (TSDF).

4.4.8 Complete the CCP RTR/VE Summary of Prohibited Items to document that prohibited items are **NOT** present in the waste stream or waste stream lot.

NOTE

If CBFO approves, VE may be performed on S3000 and S4000 when the material is not removed from the characterized container.

4.4.9 Complete the justification for the selection of radiography and/or VE as the appropriate method for characterizing the waste.

4.4.10 Print name, sign, and date CCP RTR/VE Summary of Prohibited Items.

4.4.11 Place CCP RTR/VE Summary of Prohibited Items in the holding file.

4.5 Summation of Aspects of the AK Summary

4.5.1 Obtain an approved copy of the AK Summary for the subject waste stream in order to create a summary level version of the AK Summary, entitled the Summation of Aspects of the AK Summary.

4.5.2 Create the Summation of Aspects of AK Summary and include the following information: waste stream name and number, point of generation, waste stream volume (current and projected), generation dates, TRUCON codes, Summary Category Group, Waste Matrix Code(s) (WMC) and Waste Matrix Code Group, other ATWIR information, waste stream description, areas of operation, generating processes, Resource Conservation and Recovery Act (RCRA) determinations, radionuclide information, method for determining Waste Material Parameter (WMP) weights per unit of waste contact-handled ([CH] only), all references used to generate the Summation of Aspects of AK Summary, and any other information required by CCP-PO-001.

4.5.3 Include a list of any approved AK Sufficiency Determinations for the waste stream.

4.6 Submitting the WSPF Package to DOE CBFO

4.6.1 Compile the WSPF Package consisting of the following:

- WSPF

- CIS
- Summation of Aspects of the AK Summary

4.6.2 Forward a copy to the AKE for review and concurrence.

4.6.3 **IF** required by the appropriate site-specific Interface Document, **THEN** forward a copy to the STR for review and concurrence.

4.6.4 **IF** comments are received from the AKE **AND/OR** STR, **THEN** resolve the comments, **AND** forward a copy of the resolution to the reviewer for concurrence.

4.6.5 **AFTER** concurrence(s) is/are received, **THEN** continue with this section.

4.6.6 Transmit the WSPF Package via e-mail to the DOE CBFO electronic mail (email) site at site.documents@wipp.ws for permittee review and CBFO approval.

4.6.7 **IF** comments are received from the permittees, **THEN** repeat steps 4.6.2 through 4.6.6 until comments have been resolved.

4.6.8 Submit approved WSPF Package to CCP Records in accordance with CCP-QP-008, *CCP Records Management,* with an interoffice memo within 30 calendar days of WSPF approval.

4.7 Subsequent Data Reconciliation

4.7.1 Obtain a copy of the WSPF Package from CCP Records.

4.7.2 Perform applicable steps of Sections 4.2 and 4.4.

NOTE

A revision required to the WSPF package that results in the addition of EPA HWNs will require the waste stream to be suspended until DOE approves a revised WSPF.

4.7.3 **IF** the waste DOES **NOT** meet the WSPF Package description, **THEN** revise the WSPF Package, **OR** assign the waste to a new waste stream.

[A] **IF** subsequent data collection reveals discrepancies that identify different EPA HWNs,
THEN the Waste Stream Profile will be revised.

[B] **IF** subsequent data collection reveals discrepancies that indicate the waste belongs to a different waste stream,
THEN initiate a nonconformance report (NCR) in accordance with CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*.

NOTE
A revision required to the WSPF Package that DOES **NOT** result in addition of EPA HWNs will not require the waste stream to be suspended.

[C] **IF** the WSPF Package requires a revision,
THEN make the appropriate changes in accordance with guidance provided in the CCPWSPF, **AND** submit the WSPF revision to CCP Records and DOE CBFO in accordance with the applicable steps in Section 4.6.

[D] **IF** the waste DOES **NOT** match the subject WSPF Package (i.e., have common physical form, contain similar hazardous constituents, and were generated from a single process or activity discrepancies are noted that identify different EPA HWNs or indicate that the waste belongs to a different waste stream),
THEN perform the following:

[D.1] Notify the AKE that the subject waste must be redefined to a separate waste stream in accordance with the applicable steps of CCP-TP-005, *CCP Acceptable Knowledge Documentation*, Section 4.8.

[D.2] Generate a new WSPF Package in accordance with Sections 4.2 through 4.6.

4.7.4 Provide documentation of the waste stream lot data reconciliation to CCP Records that includes the CCP CIS and CCP Reconciliation with Data Quality Objective.

4.8 Completing the Waste Stream Characterization Package

4.8.1 When requested by DOE CBFO, prepare the Waste Stream Characterization Package for the requested waste stream.

4.8.2 Obtain a copy of the subject WSPF Package from CCP Records.

4.8.3 Obtain copies of the subject CISs for each of the waste stream lots associated with the subject waste stream from CCP Records.

4.8.4 Obtain a complete copy of the AK Summary for the subject waste stream from CCP Records.

4.8.5 Obtain copies of the BDRs as requested by DOE CBFO from CCP Records.

4.8.6 Obtain copies of other data requested by DOE CBFO from CCP Records.

4.8.7 Assemble the information, **AND** transmit to DOE CBFO.

5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as quality assurance (QA) Records in accordance with CCP-QP-008. The records are the following:

QA/Lifetime

[A] Characterization Information Summary

[A.1] Attachment 1 – CCP Reconciliation with Data Quality Objective

[A.2] Attachment 3 – CCP Characterization Information Summary Cover Page with attached interoffice memorandum

[A.3] Attachment 4 – CCP Correlation of Container Identification Number to Batch Data Report Numbers

[A.4] Attachment 5 – CCP Headspace Gas Summary Data, when applicable

[A.5] Attachment 6 – CCP Solids VOCs Summary Data, when applicable

[A.6] Attachment 7 – CCP Solids SVOCs Summary Data, when applicable

[A.7] Attachment 8 – CCP RTR/VE Summary of Prohibited Items

[B] Waste Stream Profile Form Package

[B.1] Attachment 2 – CCP Waste Stream Profile Form – includes Interoffice Memorandum of Submittal from the SPM

[B.2] CIS for the lot addressing the applicable headspace or solids analysis data

[B.3] Summation of Aspects of the AK Summary, if applicable

Attachment 1 – CCP Reconciliation with Data Quality Objective (Example)

Sampling Completeness

RTR:
Number of valid samples: _____ Number of total samples analyzed: _____
Percent Complete: _____ (QAO is 100%)

NDA:
Number of valid samples: _____ Number of total samples analyzed: _____
Percent Complete: _____ (QAO is 100%)

HSG:
Number of valid samples: _____ Number of total samples collected: _____
Percent Complete: _____ (QAO is ≥90%)
Number of valid samples: _____ Number of total samples analyzed: _____
Percent Complete: _____ (QAO is ≥90%)

Total VOC:
Number of valid samples: _____ Number of total samples collected: _____
Percent Complete: _____ (QAO is ≥90%)
Number of valid samples: _____ Number of total samples analyzed: _____
Percent Complete: _____ (QAO is ≥90%)

Total SVOC:
Number of valid samples: _____ Number of total samples collected: _____
Percent Complete: _____ (QAO is ≥90%)
Number of valid samples: _____ Number of total samples analyzed: _____
Percent Complete: _____ (QAO is ≥90%)

Total Metals:
Number of valid samples: _____ Number of total samples collected: _____
Percent Complete: _____ (QAO is ≥90%)
Number of valid samples: _____ Number of total samples analyzed: _____
Percent Complete: _____ (QAO is ≥90%)

Attachment 1 – CCP Reconciliation with Data Quality Objective (Example) (Continued)

Waste Stream#: _____ Lot #: _____

	Y/N/NA	Reconciliation Parameter
1.		Waste Matrix Code.
2.		Waste Material Parameter Weights.
3.		The waste matrix code identified is consistent with the type of sampling and analysis used to characterize the waste.
4.		The transuranic (TRU) activity reported in the BDRs for each container demonstrates with a 95 percent probability that the container of waste contains TRU radioactive waste.
5.		AK Sufficiency. Is there an approved AK sufficiency Determination for this waste stream?
6.		Mean concentrations, UCL_{90} values for the mean concentration, standard deviations, and the number of samples collected for each **VOC** in the HSG of each container were calculated and compared with the program required quantitation limits, as reported in CCP-TP-003, Attachment 3, and additional EPA HWNs were assigned as required. Samples were randomly collected (when appropriate).
7a.		Mean concentrations, UCL_{90} values for the mean concentration, standard deviations, and the number of samples collected for **solids VOCs** were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the CIS, CCP-TP-003, Attachment 4, and additional EPA HWNs were assigned as required. Samples were randomly collected.
7b.		Mean concentrations, UCL_{90} values for the mean concentration, standard deviations, and the number of samples collected for **solids SVOCs** were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the CIS, CCP-TP-003, Attachment 5, and additional EPA HWNs were assigned as required. Samples were randomly collected.
7c.		Mean concentrations, UCL_{90}values for the mean concentration, standard deviations, and the number of samples collected for **total metals** were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the CIS, CCP-TP-003, Attachment 6, and additional EPA HWNs were assigned as required. Samples were randomly collected.

Attachment 1 – CCP Reconciliation with Data Quality Objective (Example) (Continued)

Waste Stream#: _____ Lot #: _____

	Y/N/NA	Reconciliation Parameter			
8.		The data demonstrates whether the waste stream exhibits a toxicity characteristic under Title 40 *Code of Federal Regulations* (CFR), Part 261, *Identification and Listing of Hazardous Waste,* Subpart C, *Characteristics of Hazardous Waste*.			
9.		Does the waste stream contain listed waste found in 20.4.1.200 NMAC incorporating 40 CFR Part 261, Subpart D, *Lists of Hazardous Wastes*?			
10.		Waste stream can be classified as hazardous or nonhazardous at the 90 percent confidence level.			
11.		Appropriate packaging configuration and Drum Age Criteria (DAC) is applied and documented in the HSG sampling documentation, and the drum age met prior to sampling.			
12.		Tentatively identified compounds (TICs) were appropriately identified and reported in accordance with the requirements of Section C3-1 of the QAPjP.			
13.		The program required quantitation limits (PRQLs) for HSG VOCs were met for all analyses as evidenced by the analytical BDRs.			
14.		The overall completeness, comparability, and representativeness quality assurance objectives (QAOs) were met for each of the analytical and testing procedures as specified in CCP-PO-001 Sections C3-2 through C3-9 prior to submittal of a WSPF for a waste steam or waste stream lot.			
			Completeness	**Comparability**	**Representativeness**
		Radiography			
		VE			
		Headspace Gas Sampling And Analysis			
		Solids Sampling			
		Solids VOCs			
		Solids SVOCs			
		Total Metals			
Comments					

SPM Printed Name _____ Signature _____ Date _____

Attachment 1 – CCP Reconciliation with Data Quality Objective (Example) (Continued)

Instructions for completing form:

Prior to completing Blocks 1 through 13, the SPM or Designee shall complete the Sampling Completeness portion of Attachment 1.

For each waste container and process, verify that:

- The waste container, by serial number, is included in the BDR shown for each characterization methodology listed in Attachment 4, CCP Correlation of Container Identification Numbers to Batch Data Report Number.

- The BDR has gone through project level validation and verification and has received SPM approval.

- The waste container was not removed from the BDR via NCR.

This information is recorded on Attachment 1 under the Sampling Completeness.

This process confirms that the samples are valid and that there is analysis data in the BDRs to support the determination, by the SPM, of program-required waste parameters for the total number of samples collected.

1. Waste Matrix Code. Is the waste matrix code assigned to the waste stream in the AK Summary Report supported by the radiography and/or VE testing BDRs?

2. Waste Material Parameter Weights. Are the waste material parameters listed in the AK Summary reported in kilograms for each of the waste material parameters identified in the waste stream?

3. Waste Matrix Code. Are the characterization methods used consistent with the identified waste matrix code (CCP-PO-001, Section C3)?

4. TRU Radioactive Waste. Does the TRU activity reported in the BDR for each container demonstrate compliance with CCP-PO-002, *CCP Transuranic Waste Certification Plan*?

5. AK Sufficiency Determinations requested for the waste stream? If the answer is Yes, record request in comments field and document the use of the AK Sufficiency Determination as objective evidence for answering Yes to other DQOs.

Attachment 1 – CCP Reconciliation with Data Quality Objective (Example) (Continued)

6. Mean concentrations. UCL_{90} for the mean concentrations, standard deviations, and the number of samples collected for each VOC in the (HSG) Sampling of waste containers in the waste stream are complete (if applicable). Was the waste stream or lot sampled for the correct number of HSG samples (either 100 percent or the number of samples determined to be representative for the waste stream if reduced sampling is allowable)? If less than 100 percent HSG sampling was performed, is the random selection of the containers documented and were the correct containers sampled.

7. Mean concentrations, UCL_{90} for the mean concentrations, standard deviations, and the number of samples collected for Solid VOCs, Semi Volatile Organic Compounds (SVOCs), and metals in the waste stream. Was the correct number of samples collected for the waste stream? Is the random selection of the containers that were sampled documented and were the correct containers sampled? Questions 7a, 7b, and 7c refer to S3000 and S4000 waste streams.

8. Toxicity Characteristic. Does the waste exhibit a toxicity characteristic under 40 CFR Part 261, Subpart C?

9. Listed Waste. Does the waste stream contain listed waste found in 20.4.1.200 NMAC incorporating 40 CFR Part 261, Subpart D?

10. Hazardous Waste Determination. Can the waste stream be classified as hazardous or nonhazardous at the 90-percent confidence level?

11. Packaging Configuration and Drum Age Criteria (DAC). Was an appropriate packaging configuration and DAC applied and documented in the HSG sampling documentation, and was the DAC met prior to sampling?

12. Tentatively Identified Compounds (TICs). Were all TICs appropriately identified and reported in accordance with the requirements of the QAPjP Section C3-1? Has the number of any individual TIC identified in the entire waste stream been detected in more than 25 percent of the samples? If so, has the TIC been added to the target analyte list? This information is found in the Headspace Gas Data Summary Report (CCP-TP-003, Attachment 10; CCP-TP-003, Attachment 11; CCP-TP-003, Attachment 3; CCP-TP-003, Attachment 4; CCP-TP-003, Attachment 5; and CCP-TP-003, Attachment 6).

13. Program Required Quantitation Limits (PRQLs). Did each of the analytical methods used for characterization of this waste stream or waste stream lot demonstrate the ability to meet the PRQL limits for that technique (BDRs)?

Attachment 1 – CCP Reconciliation with Data Quality Objective (Example) (Continued)

14. Completeness, Comparability, and Representativeness. Have the overall completeness, comparability, and representativeness quality assurance objective (QAOs) for each of the testing, sampling, and analytical processes been met for the waste stream or waste stream lot by answering each of the following questions:

- Completeness: HSG Sampling, HSG Analysis, Solid Sampling, Solids VOCs, Solids SVOCs, Total Metals:
  - Has the amount of valid data obtained from the overall measurement system compared to the amount of data collected and submitted for analysis met the 90 percent threshold?
  - RTR: Is there an audio/videotape (or equivalent media) of the radiography examination and a validated radiography data form for 100 percent of the containers subject to radiography?
  - VE: A validated VE data form will be obtained for 100 percent of the waste containers subject to VE.
- Comparability: HSG Sampling, NDE, VE, HSG Analysis, Solid Sampling, Solid VOCs, Solid SVOCs:
  - Was the correct approved version of the procedure used by qualified operators to acquire, verify, and validate the data?
- Representativeness: Was the correct approved version of the procedure used to control:
  - HSG Sampling: DAC selection, leak checking, cleaning, low volume (<10 percent), pressure controls, and acquisition of QC samples?
  - HSG Analysis: Collecting sufficient numbers of samples using clean sampling equipment that does not introduce sample bias?
  - Solid Sampling: Cleaning, coring depth (50 percent of waste), and minimal waste disturbance?
  - Solid VOCs, Solid SVOCs, Total Metals: The acquisition of unbiased samples?
  - NDE: Viewing test image, resolving discrepancies between two operators
  - VE: Reconciling any discrepancies between the operator and the Independent Technical Reviewer

Attachment 2 – CCP Waste Stream Profile Form (Example)

(1) Waste Stream Profile Number:								
(2) Generator site name:							(3) Generator site EPA ID:	
(4) Technical contact:							(5) Technical contact phone number:	
(6) Date of audit report approval by New Mexico Environment Department (NMED):								
(7) Title, version number, and date of documents used for WIPP-WAP Certification:								
(8) Did your facility generate this waste?	YES		NO					
(9) If no, provide the name and EPA ID of the original generator:								
Waste Stream Information								
(10) WIPP ID:							(11) Summary Category Group:	
(12) Waste Matrix Code Group:							(13) Waste Stream Name:	
(14) Description from the ATWIR:								
(15) Defense TRU Waste:	YES		NO					
(16) Check One:	CH		RH					
(17) Number of SWBs (17a) Number of SLB2		(18) Number of Drums					(19) Number of Canisters	
(20) Batch Data Report numbers supporting this waste stream characterization:								
(21) List applicable EPA Hazardous Waste Numbers:								
(22) Applicable TRUCON Content Numbers:								
(23)**Acceptable Knowledge Information**								
(For the following, enter the supporting documentation used [i.e., references and dates])								
Required Program Information								
(23A) Map of site:								
(23B) Facility mission description:								
(23C) Description of operations that generate waste:								
(23D) Waste identification/categorization schemes:								
(23E) Types and quantities of waste generated:								
(23F) Correlation of waste streams generated from the same building and process, as applicable:								
(24) Waste certification procedures:								
(25) Required Waste Stream Information								
(25A) Area(s) and building(s) from which the waste stream was generated:								
(25B) Waste stream volume and time period of generation:								
(25C) Waste generating process description for each building:								
(25D) Waste Process flow diagrams:								
(25E) Material inputs or other information identifying chemical/radionuclide content and physical waste form:								
(25F) Waste Material Parameter Weight Estimates per unit of waste								
(26) Which Defense Activity generated the waste:								
	Weapons activities including defense inertial confinement fusion						Naval Reactors development	
	Verification and control technology						Defense research and development	
	Defense nuclear waste and material by products management						Defense nuclear material production	
	Defense nuclear waste and materials security and safeguards and security investigations							

Attachment 2 – CCP Waste Stream Profile Form (Example) (Continued)

(27) Supplemental Documentation:	
(27A) Process design documents:	
(27B) Standard operating procedures:	
(27C) Safety Analysis Reports:	
(27D) Waste packaging logs:	
(27E) Test plans/research project reports:	
(27F) Site databases:	
(27G) Information from site personnel:	
(27H) Standard industry documents:	
(27I) Previous analytical data:	
(27J) Material safety data sheets:	
(27K) Sampling and analysis data from comparable/surrogate Waste:	
(27L) Laboratory notebooks:	
Confirmation Information	
For the following, when applicable, enter procedure title(s), number(s) and date(s)	
(28)	Radiography:
	Visual Examination:
(29) Comments: For a list of the waste characterization procedures used and date of respective procedures see the list of procedures on the attached CIS.	

Reviewed by AK Expert: **YES** ☐ **Date:** _____

Reviewed by STR (if necessary): **YES** ☐ **N/A** ☐ **Date:** _____

Waste Stream Profile Form Certification:

I hereby certify that I have reviewed the information in this Waste Stream Profile Form, and it is complete and accurate to the best of my knowledge. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Signature of Site Project Manager	Printed Name	Date

Attachment 2 – CCP Waste Stream Profile Form (Example) (Continued)

CCP WASTE STREAM PROFILE PACKAGE

A WSPF Package should be completed as early as possible (once sufficient data has been obtained [e.g., at least one lot]) and submitted to DOE CBFO for approval.

The SPM, in completing the WSPF, should seek the assistance and participation of the AKE in the preparation of the form and attachments.

The WSPF package submitted to DOE CBFO for approval contains three parts. The first part is the WSPF itself. The second part is the CIS Report for the waste stream or waste stream lot used to support the WSPF. The last part is the *Summation of Aspects of the AK Summary Report*, to support the WSPF. The completion of the first and third parts of the package is addressed in these instructions. Completion of the CIS is addressed in CCP-TP-002, *CCP Reconciliation of DQOs and Reporting Characterization Data*, and associated forms.

Instructions for completing the Waste Steam Profile Form:

Obtain an approved copy of the current WSPF Package from CCP Records; for new WSPFs, it will be blank.

Line numbers indicated below refer to the number in the parenthesis on the CCP WSPF.

The brackets [ ] indicate the primary source of the information requested if not otherwise referred to within the instruction.

Line 1:

Assign a site-specific waste stream profile number to each form generated. The number should normally coincide, to the extent possible, as it appears on the title page of the AK Summary Report. The SPM is responsible for selecting the number after referring to the AK Summary Report. The number should start with the applicable two-digit site designator. The number should be limited to 20 alpha-numeric characters maximum. Indicate waste stream lots with a period and sequentially numbered digits added to the waste stream profile number.

Line 2:

Enter the name of the site where the waste is currently stored. [AK Summary Report]

Attachment 2 – CCP Waste Stream Profile Form (Example) (Continued)

Line 3:

Enter the EPA Identification (ID) Number of the site listed in Line 2. The ID number, if not included in the AK Summary Report, can be obtained from the EPA Regional office in which the site is located. The AKE should assist in the acquisition of this information.

Line 4:

Enter the name of the technical contact for this site. This is the individual to be contacted if there are questions concerning the data reported on the form, usually the SPM.

Line 5:

Provide the telephone number of the person identified in Line 4.

Line 6:

Enter the date of the most recently approved audit report approval by NMED. If the site has been audited but an audit report has not yet been approved by DOE CBFO, contact the CCP Project Manager. If DOE CBFO has approved the audit report and is awaiting approval by New Mexico Environmental Department (NMED), submit the WSPF package to DOE CBFO for distribution to the Waste Isolation Pilot Plant (WIPP) Review Team.

Line 7:

List the site-specific waste program documents (such as CCP-PO-001, the CCP-PO-003, Interface, etc.) listing the current revision.

Line 8:

Check the appropriate box. [AK Summary Report]

Line 9:

If the site where the waste is currently stored is not the site where the waste was generated, then provide the name and EPA identification number of the site where the waste was generated. [The AK Summary Report should provide the information as to where the waste was generated. The ID number, if not included in the AK Summary Report, can be obtained from the EPA Regional Office in which the site is located. The AKE should assist in the acquisition of this information.]

Attachment 2 – CCP Waste Stream Profile Form (Example) (Continued)

If the waste was generated at the site where it is currently stored, place an N/A in this box.

Line 10:

Enter the WIPP identification number from the current revision of the Annual Transuranic Waste Inventory Report (ATWIR) that best describes the waste stream being certified. CCP may split or combine ATWIR waste streams for the purposes of defining waste sampling populations. If CCP has split or combined ATWIR waste streams, all contributing ATWIR waste streams listed on the WSPF should also be indicated on the Summation of Aspects of AK Summary Report.

If there is no corresponding WIPP ID number listed in the ATWIR or if the ATWIR information is in error or no longer applies, enter None Available. If there is no corresponding WIPP ID number listed in the ATWIR, contact the AKE for assistance. (A copy of the ATWIR may be found in the WIPP Technical Library in the Skeen Whitlock Building.)

Line 11:

Enter the Summary Category Group identified in the AK Summary Report as representing this waste stream.

Line 12:

Enter the Waste Matrix Code (WMC) Group identified in the AK Summary Report as representing this waste stream. Use only WMC Groups identified in the *Waste Isolation Pilot Plant Hazardous Waste Facility Permit, Waste Analysis Plan* (WIPP-WAP).

Line 13:

Enter the name of the waste stream from the AK Summary Report.

Line 14:

Enter the waste stream description from the ATWIR (preferred) or AK Summary Report.

Attachment 2 – CCP Waste Stream Profile Form (Example) (Continued)

Line 15:

Check the appropriate box. [AK Summary Report]

If the answer to this question is NO, stop work and notify the CCP Program Manager immediately. This waste can not be disposed of at the WIPP Site.

Line 16:

Check the appropriate box.

CH=contact-handled TRU waste
RH=remote-handled TRU waste

[AK Summary Report for the waste stream identified above.]

Line 17:

Enter the number of standard waste boxes in this waste stream (current and projected). [AK Summary Report] If there are no standard waste boxes in the waste stream, N/A should be entered.

Line 17a:

Enter the number of standard large box 2s (SLB2s) in this waste stream (current and projected). [AK Summary Report] If there are no SLB2s in the waste stream, N/A should be entered.

Line 18:

Enter the total number of drums in the waste stream (current and projected). Enter the number of Ten-Drum Overpacks (TDOPs), 85-gallon drums and 100-gallon drums if applicable (current and projected). [AK Summary Report]

If there are no drums (e.g., only SWBs, SLB2s, or Canisters) in the waste stream, N/A should be entered.

Line 19:

Enter the number of canisters in this waste stream (current and projected). [AK Summary Report]

If there are no canisters in the waste stream, N/A should be entered.

Attachment 2 – CCP Waste Stream Profile Form (Example) (Continued)

Line 20:

List the TRU Waste BDR numbers used to support the completion of this WSPF. This list shall include every container and the associated BDRs from each process in the waste stream OR every container in the waste stream lot and the associated BDRs from each process used in that characterization (for example NDA, NDE, HSG, VE, etc). Reference may be made to the CIS (Attachment 3 and contents) (The CIS for the waste stream, or waste stream lot associated with the WSPF, is submitted as part of the WSPF package to DOE CBFO for approval).

Line 21:

List each EPA HWN that is present in the waste stream. Each EPA HWN must be listed in the WIPP Hazardous Waste Facility Permit, Attachment C, Table C-9, Hazardous Waste Permit Application, Part A. Each EPA HWN must be justified in the Waste stream specific AK Summary Report. The AKE should assist in this determination.

Line 22:

Enter all of the TRUCON Content Numbers, from the current revision of the content codes document applicable to this waste stream. [AK Summary Report]

Line 23: A-F

Reference all of the appropriate sections, figures, or pages in the current revision of the AK Summary Document (including the document title, number, revision number and effective date) for this waste stream where the listed information can be found in the AK document.

Line 24:

List all of the waste stream certification procedures applicable to this waste stream. Include procedure numbers, revision numbers, titles, and effective date. This list should contain all revisions of a document that were used during the characterization of the waste. References may be made to the CIS, Attachment 3.

Attachment 2 – CCP Waste Stream Profile Form (Example) (Continued)

Line 25 A-F:

Reference all of the appropriate sections, figures, or pages in the current revision of the AK Summary Document (including the document title, number, revision number and effective date) for this waste stream where information listed can be found in the AK document.

Line 26:

Check all that apply that describes the defense activities that generated the waste.
[AK Summary Report]

Line 27 A-L:

Sites must provide the appropriate references to the site-specific documents that contain documentation that is used to support the use of AK for TRU waste characterization. Items in this section must be given the same level of consideration as the items in the Required Program Information and Required Waste Stream Information sections. This information may either be inserted into the block or referenced as listed on a continuation sheet. The AKE should provide appropriate lists of documents for use in completing Line 27. Only those documents referenced in the AK Source Documents List in the Summation of Aspects should be included in these lists.

Using information from the AK Record or from a document that is traceable to the AK record, provide a reference for the following parameters:

(A) Process design document (e.g., Title II Design).

(B) Standard operating procedures, including procedure date and reference number, that may include a list of raw materials or reagents, a description of the process or experiment generating the waste, and a description of the process or experiment generating the waste, and a description of waste generated and how the wastes are managed at the point of generation.

(C) Preliminary and final safety analysis reports and technical safety requirements.

(D) Waste packaging records.

(E) Test plans or research project reports that describe reagents and other raw materials used in experiments.

(F) Site databases (e.g., chemical inventory database for Superfund Amendments and Reauthorization Act Title III requirements).

(G) Information from site personnel (e.g., documented interviews).

Attachment 2 – CCP Waste Stream Profile Form (Example) (Continued)

(H) Standard industry documents (e.g., vendor information).

(I) Analytical data relevant to the waste stream, including results from fingerprint analyses, spot checks, routine verification sampling, or other processes that collect information pertinent to the waste stream. This may also include new information acquired apart from the confirmatory process, which supplements required information (e.g., visual examination not performed in compliance with the WIPP-WAP, radiography screening for prohibited items).

(J) MSDSs, product labels, or other product package information.

(K) Sampling and analysis data from comparable or surrogate waste streams (e.g., equivalent nonradioactive materials).

(L) Laboratory notebooks that detail the research processes and raw materials used in an experiment.

Line 28:

List the most current revisions of the approved applicable procedure(s) by the title, number, revision number, and effective date in the appropriate block.

Line 29:

For a list of the waste characterization procedures used and date of respective procedures, see the list of procedures on the attached CIS.

Instructions for completing the Summation of Aspects of the AK Summary Report:

This summation should be as succinct as possible and consistent with the AK Summary Report.

Example:

SUMMATION OF ASPECTS OF AK SUMMARY REPORT: WASTE STREAM NTXXXXXXX

Overview

The overview is an executive summary of the summation. It should contain general information about where the waste was generated, where it is stored, reference to the WSPF number and the AK Summary Report from which the information is compiled, etc. In addition, the overview should contain summary level information that the waste stream is derived from defense related activities.

Waste Stream Identification Summary

This section should contain, as a table, the information identified below, if applicable.

Waste Stream Name
Waste Stream Number

Attachment 2 – CCP Waste Stream Profile Form (Example) (Continued)

Dates of Waste Generation
Waste Stream Volume (current and projected by container)
Summary Category Group
Waste Matrix Code Group
Waste Matrix Code
TRUPACT-II Content code (TRUCON)
TRUPACT-III Content Code
ATWIR ID Number

Waste Stream Description and Physical Form

This section should contain information regarding what the waste consists of generally. For instance: the source of the waste - nonline laboratory trash that is heterogeneous debris and includes plastics, rubber paper glass, etc.

Point of Generation

Location

Specifically where the waste was generated:
Facility, description of the site, state, area designation, building number, production line, etc.

Area and/or Buildings of Generation

Short summary regarding the buildings or areas or productions lines, etc. that generated the waste.

Generating Processes

Description of Waste Generating Processes

This section should be a more detailed description of where and how the waste is generated. It can be building by building, process line by process line, or any other grouping that makes sense. These descriptions should be complete enough for understanding yet still striving for brevity.

Waste Stream Material and Chemical Inputs

A Table of Chemicals, for which an EPA HWN has been assigned. Include at least one identified use for each chemical.

Attachment 2 – CCP Waste Stream Profile Form (Example) (Continued)

RCRA Determinations

Historical Waste Management

The Historical Waste Management section is used to explain site policies or previous RCRA designation of the waste and how CCP uses those determinations. Explanations of how the site physically managed the waste and discussion of waste tracking or other management programs are optional. Include a discussion of duplicated CBFO approved waste streams generated under other certified programs.

Hazardous Waste Determinations

The AKE should assist in the hazardous waste determination. Include discussions in appropriate section below for instances where EPA HWNs are added as a result of confirmation activities (e.g., solids sampling data).

The following text should be used to begin the discussions of ignitable, corrosive, and reactive characteristics.

Ignitability, Corrosivity, Reactivity

The waste material in this waste stream does not meet the definition of ignitable, corrosive, and reactive as defined in 40 CFR 261.21.

The waste in this waste stream is not liquid and does not contain unreacted corrosive chemicals; therefore, it does not meet the definition of corrosivity found in 40 CFR 261.22.

The waste material in the waste stream does not meet the definition of reactivity in 40 CFR 261.23. The materials are stable and will not undergo violent chemical change without detonating. The materials will not react violently with water, form potentially explosive mixtures with water, nor generate toxic gases, vapors, or fumes when mixed with water. Include other text such as the absence of sulfides and cyanides as appropriate.

Provide adequate detail to describe the absence of ignitable, corrosive, or reactive waste in the waste stream. Ensure the discussion closes with a statement such as, “The containers in the waste stream will be evaluated in accordance with the WIPP-WAP using radiography (and/or VE) prior to shipment to ensure the waste is not ignitable, reactive, or corrosive.

Ignitable (D001) wastes are prohibited from disposal at WIPP. Any potential D001 wastes in the waste stream must be evaluated and a determination of whether or not to apply the D001 number must be made.

Attachment 2 – CCP Waste Stream Profile Form (Example) (Continued)

Special care must be taken to address items such as metal powders which are not normally thought of as ignitable.

Some chemicals, to which the D001 EPA HWN is applied, may be identified in the AK. The D001 number is applied due to ignitability. The SPM must be able to address the ignitability of these wastes and determine that the characteristic of ignitability does not apply.

If the SPM can not positively state at the conclusion of this section that "The waste number for ignitability (D001) does not apply to this waste stream," contact the CCP Project Manager.

Corrosive (D002) wastes are prohibited from disposal at WIPP. Any potential D002 wastes in the waste stream must be evaluated and a determination of whether or not to apply the D002 number must be made.

If the SPM can not positively state at the conclusion of this section that "The waste number for Corrosivity (D002) does not apply to this waste stream," contact the CCP Project Manager.

Reactive (D003) wastes are prohibited from disposal at WIPP. Any potential D003 wastes in the waste stream must be evaluated and a determination of where or not to apply the D003 number must be made.

If the SPM can not positively state at the conclusion of this section that "The waste number for Reactivity (D003) does not apply to this waste stream," contact the CCP Project Manager.

Toxicity Characteristic

Determine if the waste in this waste stream meets the definition of toxicity as defined in 40 CFR 261.24. For each chemical listed in CFR 261.24, determine if the EPA HWN should be applied to the waste stream.

If it is not possible to identify a specific source of the chemical, but the determination is made to apply the number, state that the number is being applied based on the information available.

Listed Waste

F-Listed Waste

Determine if the waste in this waste stream meets the requirements for listing as an F-Listed (Hazardous Waste from Non-Specific Sources) as defined in 40 CFR 261.31. For each chemical listed in CFR 261.31, determine if the EPA HWN should be applied to the waste stream.

Attachment 2 – CCP Waste Stream Profile Form (Example) (Continued)

If it is not possible to identify a specific reason to apply the number for a chemical, but never the less the determination is made to apply the number, state that the number is being applied based on the information available.

K-Listed Waste

K-Listed wastes (Hazardous Waste from Specific Sources) are unlikely in waste to be shipped to WIPP. If K wastes are included, document as below for P- and U-Listed wastes.

P- and U-Listed Wastes

P- and U-Listed wastes are lists of chemicals that if present in the waste as pure un-used commercial chemical products would require the application of the EPA HWN.

Determine if the waste in this waste stream meets the requirements for listing as a P- or U-Listed as defined in 40 CFR 261.33. For each chemical listed in CFR 261.33, determine if the EPA HWN should be applied to the waste stream.

If it is not possible to identify a specific reason to apply the number for a chemical, but never the less the determination is made to apply the number, state that the number is being applied based on the information available.

Hydrofluoric acid (U134) and Beryllium (P015) are of special interest and must be addressed in every WSPF.

Polychlorinated Biphenyls

Evaluate the presence of Polychlorinated Biphenyls (PCBs) in the waste.

Prohibited Items

Include the appropriate prohibited items discussion from the AK Summary Report including a discussion as to how the prohibited items will be identified and remediated prior to shipment (such as radiography or VE).

Method for Determining Waste Material Parameter Weights per Unit of Waste

Describe the method used for determining waste material parameter weight estimates per unit of waste and include the WMP estimates table.

List of Any AK Sufficiency Determinations Requested for the Waste Stream

List applicable AK sufficiency determinations.

Attachment 2 – CCP Waste Stream Profile Form (Example) (Continued)

Transportation

Briefly discuss DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria For The Waste Isolation Pilot Plant* (WIPP-WAC) transportation requirements as they pertain to identified TRUCON codes as dictated by the waste stream.

Beryllium

Address the WIPP-WAC requirements for beryllium.

Radionuclide Information

Present the two most prevalent isotopes expected from the waste stream (CH only). Insert radionuclide table from the AK Summary Report.

Include a brief discussion on payload management per the WIPP-WAC, Appendix E.

Source Documents

Insert reference list from AK Summary Report.

Revision to the Waste Stream Profile Form Package

If a revision to the WSPF Package is needed, a revised WSPF is created. Reasons for revising the WSPF Package include:

- Addition of EPA HWNs
- Application of additional TRUCON Content codes
- Revising AK Summary Report due to increased waste stream volume
- Addition of material parameter weight estimates per unit of waste

Attachment 3 – CCP Characterization Information Summary Cover Page (Example)

Waste Stream: #: _____ Lot #: _____

AK Expert Review: _____ Date: _____

SPM Review: _____ Date: _____

SPM signature certifies that through Acceptable Knowledge testing and/or analysis that the waste identified in this summary is not corrosive, ignitable, reactive, or incompatible with the TSDF.

A summary of the Acceptable Knowledge regarding this waste stream containing specific information about the corrosivity, reactivity, and ignitability of the waste stream is included as an attachment to the Waste Stream Profile Form. By reference, that information is included in this lot.

List of procedures used:

Controlled Copy

Attachment 4 – CCP Correlation of Container Identification Number to Batch Data Report Numbers (Example)

Waste Stream #: ______________________________ Lot #: __________

Container ID Number	Headspace Gas BDR	NDA BDR	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Payload Management/ Overpack Yes

Signature of Site Project Manager ______________________ Printed Name ______________________ Date ______________

Attachment 5 – CCP Headspace Gas Summary Data (Example)

Waste Stream Number _____ Lot Number (s) _____

Tentatively Identified Compound	Maximum Observed Estimated Concentrations (ppmv)	# Samples Containing TIC	% Detected
Data Supports EPA Hazardous Waste Numbers Assigned by AK? Yes ☐ No ☐			
If no, describe the basis for assigning the EPA Hazardous Waste Numbers:			

SPM Signature _____ Date _____

Attachment 6 – CCP Solid VOCs Summary Data (Example)

Waste Stream Number: _____ Lot Number (s) _____

Tentatively Identified Compound	Maximum Observed Estimated Concentrations (ppmv)	# Samples Containing TIC	% Detected
Data Supports EPA Hazardous Waste Numbers Assigned by AK? Yes ☐ No ☐			
If no, describe the basis for assigning the EPA Hazardous Waste Numbers:			

SPM Signature _____ Date _____

Attachment 7 – CCP Solids SVOCs Summary Data (Example)

Waste Stream Number: _____ Lot Number (s) _____

Tentatively Identified Compound	Maximum Observed Estimated Concentrations (ppmv)	# Samples Containing TIC	% Detected

Data Supports EPA Hazardous Waste Numbers Assigned by AK? Yes ☐ No ☐

If no, describe the basis for assigning the EPA Hazardous Waste Numbers:

SPM Signature _____ Date _____

Attachment 8 – CCP RTR/VE Summary of Prohibited Items (Example)

CCP RTR/VE Summary of Prohibited Items

Waste Stream Number: _____ Lot(s)#: _____

Container Number	RTR Prohibited Items [a,b]	Visual Examination Prohibited Items [a,b]

a. See Batch Data Reports
b. If AK has assigned U134 to this waste stream, then any liquids in these containers are prohibited items (not acceptable by the TSDF)

Justification for the selection of RTR and/or VE:

_____

Site Project Manager Signature Printed Name Date

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CCP-TP-003

Revision 19

CCP
Data Analysis for S3000, S4000, and S5000 Characterization

EFFECTIVE DATE: 11/02/2012

Mike Ramirez

PRINTED NAME

APPROVED FOR USE

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RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
4	01/17/2002	Added trans-1,2-Dichloroethylene to Attachment 2.
5	03/18/2002	Changed the word “normally” to “normality” in 4.2.6 note.
6	03/20/2002	Changed methyl chloride to methylene chloride in Attachment 2.
7	06/03/2002	Numerous changes throughout the procedure.
8	08/23/2002	Deleted last sentence of note above step 4.9.3.
9	10/10/2002	Deleted Waste Stream Lot Determination Memorandums as a record since no longer used. Made minor revisions to Attachments 3, 4, 5, and 6.
10	12/04/2002	Revised to address the UCL_{90} statistics and the normalization of data.
11	01/20/2003	Update steps 4.3.2[C], 4.3.4, and Attachment 5.
12	01/25/2003	Updated NOTE above 1.1 and step 1.1
13	06/28/2003	Updated to include solids information. Separated electronically fillable forms and updated references in procedure.
14	09/03/2003	Revised to update cross reference in step 4.1.2[F]. Revised sections 4.1 and 4.3. Revised step 4.1.2[I and J], and added section [K].
15	11/16/2006	Revised to implement the Waste Isolation Pilot Plant Hazardous Waste Facility Permit requirements resulting from the Section 311/Remote-Handled (RH) Permit Modification Request (PMR). Addressed Carlsbad Field Office (CBFO) Document Review Record (DRR) comments.
16	10/02/2007	Revised equations above Steps 4.1.2 [C] and 4.2.2 [C], changed TIC reporting requirements to be consistent with the Waste Isolation Pilot Plant Hazardous Waste Facility Permit (HWFP), Waste Analysis Plan (WAP), and minor editorial changes. Revised to incorporate statistical terminology and text changes included in September 2007 Class 1 HWFP Notifications.
17	11/09/2009	Revised to delete a reference that is no longer applicable and add the new reference. Also to update attachments and correct editorial errors.
18	12/29/2010	Revised to implement the revision of the *Waste Isolation Pilot Plant Hazardous Waste Facility Permit*.
19	11/02/2012	Revised to incorporate Nuclear Waste Partnership (NWP) transition changes.

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1.0 PURPOSE

This procedure describes actions for the Central Characterization Program (CCP) to evaluate data on transuranic (TRU) waste streams destined for disposal at the Waste Isolation Pilot Plant (WIPP). Compliance with this procedure ensures that sufficient data of acceptable quality and quantity has been collected to meet applicable requirements from CCP-PO-001, *CCP Quality Assurance Project Plan*, Sections C2-1 and C3-1.

The Headspace Gas Summary Data Report and Solids Summary Data Report (if applicable) developed by this procedure is/are required before assembly of a Waste Stream Profile Form (WSPF) (see CCP-TP-002, *CCP Reconciliation of DQOs and Reporting Characterization Data*).

1.1 Scope

This procedure applies to S3000 homogeneous solids, and S4000 soil/gravel TRU waste streams that require solids sampling and analysis; and S5000 debris TRU waste streams that require headspace gas (HSG) sampling and analysis for disposal at the WIPP. This procedure will be implemented for each sampling activity within a waste stream.

2.0 REQUIREMENTS

2.1 References

Baseline Documents

- CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*

Referenced Documents

- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- CCP-QP-002, *CCP Training and Qualification Plan*
- CCP-QP-008, *CCP Records Management*
- CCP-TP-002, *CCP Reconciliation of DQOs and Reporting Characterization Data*
- CCP-TP-005, *CCP Acceptable Knowledge Documentation*
- CCP-TP-162, *CCP Random Selection of Containers for Solids and Headspace Gas Sampling and Analysis*

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- Clarification Number CAO-00-065, *Determination of Tentatively Identified Compounds (TICS)*

- Title 20 *New Mexico Administrative Code* (NMAC), Chapter 4, *Hazardous Waste,* Part I, *Hazardous Waste Management,* Section 200, *Adoption of 40 CFR Part 261*

- Title 40 *Code of Federal Regulations* (CFR), *Protection of the Environment,* Chapter 1, *Environmental Protection Agency,* Subchapter 1, *Solid Wastes,* Part 261, *Identification and Listing of Hazardous Waste,* Appendix VIII, *Hazardous Constituents*

- Title 40 CFR, Chapter 1, Subchapter I, Part 261, Subpart C, *Characteristics of Hazardous Waste* §261.24, *Toxicity Characteristic*

2.2 Training Requirements

2.2.1 Personnel performing this procedure will be trained and qualified in accordance with CCP-QP-002, *CCP Training and Qualification Plan*, prior to performing this procedure.

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3.0 RESPONSIBILITIES

3.1 Site Project Manager (SPM)

3.1.1 Oversees all program activities within CCP including the following responsibilities associated with process control:

[A] Provides data to support the calculations for each evaluation.

[B] Assigns U.S. Environmental Protection Agency (EPA) Hazardous Waste Numbers based on analysis results.

[C] Assigns Tentatively Identified Compounds (TICs) to the target analyte list.

[D] Calculates the number of samples required for HSG sampling, and analysis of S5000 and solids analysis of S3000 and S4000 waste streams.

3.1.2 Uses data from HSG analysis and solids sampling Batch Data Reports (BDRs) to:

[A] Determine and document the Upper 90 Percent Confidence Level (UCL_{90}) for the mean concentration and associated statistics for each waste constituent and waste stream.

[B] Use the UCL_{90} to assign EPA Hazardous Waste Numbers to containers.

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4.0 PROCEDURE

NOTE
Steps may be performed concurrently at SPM discretion.

NOTE
Initial and Subsequent Waste Stream Lot Size Determination

The number of containers in any waste stream lot is not a fixed quantity and may vary as determined by the SPM. Prior to initial submittal of a WSPF, the SPM must perform reconciliation with Data Quality Objectives (DQOs) as directed in CCP-TP-002. This activity assures that data of sufficient quantity and quality have been acquired and evaluated to characterize the initial waste stream lot. This procedure will be implemented for each sampling activity within a waste stream.

UCL_{90} and TIC Determinations and Evaluation for Initial Waste Stream Lots

UCL_{90} and TIC determinations and evaluations will be performed using HSG (S5000 debris TRU waste streams) and solids sampling (S3000 homogeneous solids and S4000 soil/gravel TRU waste streams) analysis data from the required number of containers randomly selected from the waste stream lot. If the SPM determines that additional EPA Hazardous Waste Numbers must be added to the WSPF in addition to those determined by Acceptable Knowledge (AK), or that TICs must be added to the target analyte list, then the new EPA Hazardous Waste Numbers or additional target analytes will be applicable to all subsequent containers of the waste stream.

UCL_{90} and TIC Determinations and Evaluation for Subsequent Waste Stream Lots

After characterization and approval of a WSPF for the waste stream lot, waste containers will continue to be characterized in waste stream lots. UCL_{90} and TIC determinations and evaluations will be performed on a running total basis. That is, using HSG and solids sampling analysis data from all randomly selected containers characterized to date prior to a planned shipment including those in the current waste stream lot as well as any previously characterized waste stream lots. If after the evaluation, the SPM determines that additional EPA Hazardous Waste Numbers must be added to the WSPF, or that TICs must be added to the target analyte list, the new EPA Hazardous Waste Numbers or additional target analytes will be applicable to all subsequent containers of the waste stream.

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4.1 Determination of Adequate Sample Size for Solids Samples

NOTE

The method used to collect samples of TRU mixed waste, classified as S3000 and S4000 waste streams, from waste containers shall be such that the samples are representative of the waste from which they are taken. A sufficient number of samples shall be collected to adequately represent waste being sampled. A statistically selected portion of each S3000 and S4000 waste stream is sampled and analyzed for Resource Conservation and Recovery Act (RCRA)-regulated total volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and metals.

NOTE

The analytical results for retrievably stored S3000 and S4000 waste streams are used for assigning the EPA Hazardous Waste D-numbers that apply to each mixed waste stream. The RCRA-toxicity determination may be made on the basis of sampling and analysis of waste streams and on whether or not the waste stream includes F-number wastes. If a waste stream includes one or more RCRA F-numbers identified via AK, toxicity characteristic contaminants associated with the F-number waste(s) are not included in the RCRA-toxicity characteristic determination. Therefore, toxicity characteristic contaminants associated with F-number(s) for a waste stream shall be omitted from all calculations for determining the number of containers to sample because these waste streams are assumed to be hazardous. In addition, each toxicity characteristic contaminant associated with the F-number(s) shall be excluded from evaluation of analytical results to determine D-number. Contaminants of interest for the sampling, analysis, and RCRA-toxicity determination of a waste stream, then, exclude contaminants associated with F-numbers that have been assigned to the waste stream.

4.1.1 Obtain the analytical results of the sample set selected by CCP-TP-162, *CCP Random Selection of Containers of Solids and Headspace Gas Sampling and Analysis* as follows:

[A] Obtain a copy of the Random Solids Sample Selection Memorandum from CCP Records.

[B] Obtain, from CCP Records, a copy of the solids analytical BDR(s) that correspond to the container numbers from the Random Solids Sample Selection Memorandum.

[C] Confirm that the identified containers have successfully passed the project level validation and verification.

[D] From the BDR(s), obtain the analytical results for the containers identified in step 4.1.1[A].

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4.1.2 For each chemical contaminant of concern, determine the mean and standard deviation (preliminary estimates) from the results using the following steps:

[A] Input the solid sample results into the Solid Analysis Evaluation Spreadsheet.

NOTE

The mean and variance (squared standard deviation) equations are:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

$$s^2 = \frac{1}{n-1}\sum_{i=1}^{n}\left(x_i - \bar{x}\right)^2$$

Where:

$\bar{x}$ = the calculated mean

s^2 = the calculated concentration variance

n = number of samples analyzed

x_i = concentration determined in the *ith* sample

i = an index from 1 to *n*.

$$n = \frac{t^2_{a,n_o-1}s^2}{(RT - \bar{x})^2}$$

Where:

n_o = the initial number of samples used to calculate the preliminary estimates

n = the calculated minimum number of required samples

$\bar{x}$ = the calculated mean

s^2 = the calculated concentration variance

$t_{\alpha, n_0 - 1}$ = the 90th percentile for the *t* distribution with n_0-1 degrees of freedom

RT = Regulatory Threshold of the contaminate (toxicity characteristic [TC] limit for toxicity characteristic wastes, Program Required Quantitation Limit [PRQL] for listed wastes)

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[B] Based upon the preliminary estimates of $\bar{x}$ and s^2 for each chemical contaminant of concern, estimate the appropriate number of samples (n) to be collected for each contaminant using the Solids Analysis Evaluation Spreadsheet.

NOTE

The number of samples to be collected will be based upon the largest number calculated for each of the contaminants of interest. The actual number of samples collected shall be adjusted, as necessary, to ensure that an adequate number of samples are collected to allow for acceptable levels of completeness.

Non-integer results of calculations for required sample size should be rounded up to the next integer. A minimum of five containers shall be sampled and analyzed in each waste stream. If there are fewer containers than the minimum or required number of samples in a waste stream, one or more randomly-selected containers shall be sampled more than once to obtain the number of needed samples of waste. Otherwise, any one container may be selected for sampling only once.

Waste containers from the preliminary mean and variance estimates may be counted as part of the total number of calculated required samples, if, and only if, the requirements specified in CCP-PO-001, Section C2-1a, are satisfied. The CCP may count waste container samples from the preliminary mean and variance estimates as part of the total number of calculated required samples if and only if:

- There is documented evidence that the waste containers for the preliminary estimate samples were selected in the same random manner as is chosen for the required samples.
- There is documented evidence that the method of sample collection in the preliminary estimate samples were identical to the methodology to be employed for the required samples.
- There is documented evidence that the method of sample analysis in the preliminary estimate samples was identical to the analytical methodology employed for the required samples.
- There is documented evidence that the validation of the sample analyses, in the preliminary estimate samples, was comparable to the validation employed for the required samples. In addition, the validated sample results indicate that all sample results were valid according to the analytical methodology.

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NOTE

To calculate the percent difference of *n* use the following formula:

$$\% \text{ Difference} = \left(\frac{n_{VOC_i} - n_{VOC_{i-1}}}{n_{VOC_{i-1}}} \right) * 100$$

Where:

n_{VOC_i} = The determination of n_{VOC_i} is an iterative process that continues until the difference between n_{VOC_i} and the previous sample determination is less than 20 percent difference.

[C] Calculate the percent difference between the required number of samples estimated in step 4.1.2[B] and the number of samples actually taken and analyzed.

[D] Based on the percent difference calculations,
IF the observed sample n estimate results in greater than 20 percent more required samples than were originally calculated,
THEN:

- Direct additional samples be taken as required to ensure that the cumulative total number of samples for each analyte equals or exceeds the number estimated in step 4.1.2[B].

- Using the analysis results for the combined sample set, reperform steps 4.1.2[A] through 4.1.2[D].

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4.1.3 Upper Confidence Limit Determination for Solids Analysis

NOTE

Normality testing should not be performed using analyte concentrations reported as Minimum Detection Limit (MDL) as identified by a U flag. These should be included in the calculations for UCL_{90} as ½ the reported MDL. Subsequent lots will be added to the UCL_{90} data set as the waste stream is characterized until characterization is complete for the entire waste stream.

NOTE

If for any container the sample was diluted for analysis and the constituent concentration is reported as not detected (U flag), the result is omitted from the distribution tests and subsequent analyses when the sample minimum detectable limit is greater than the PRQL.

[A] Using the Solids Analysis Evaluation Spreadsheet, determine, **AND** record on the appropriate form, Attachment 4, CCP Solids Analysis VOC UCL_{90} Evaluation Form, Attachment 5, CCP Solids Analysis SVOCs UCL_{90} Evaluation Form or Attachment 6, CCP Solids Analysis Metals UCL_{90} Evaluation Form, the following items:

- Number of Samples,
- Number of Samples above MDL,
- Maximum (mg [milligram]/kg [kilogram]) for each target analyte,
- Mean (mg/kg) for each target analyte,
- Standard Deviation (mg/kg) for each target analyte, and
- Additional target analyte compounds (as applicable).

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NOTE

For any normality test performed, the probability of a Type I error, α, should not exceed 10 percent.

NOTE

To determine data or transform that is closest to normal for data sets greater than 200, the form with the smallest D value under the Kolmogorov-Smirnov test for normality should be used. For data sets less than or equal to 200, the form with the largest W value under the Shapiro-Wilk test for normality should be used.

NOTE

If transformation of the data is required to achieve normality, the EPA Solid Waste and Sample Plan guidance may be used.

[B] **WHEN** sufficient data has been collected,
THEN perform test(s) for normality on the data.

[C] Use the data or transform that is closest to normal on the Solids Analysis Evaluation Spreadsheet to determine the UCL_{90} for the mean concentration and associated statistics of each VOC, SVOC, and Metals detected in container solid sample for each waste stream or waste stream lot.

NOTE

The formula for calculating UCL_{90} is:

$$UCL_{90} = \bar{x} + \frac{t_{\alpha,n-1}s}{\sqrt{n}}$$

Where:

$\bar{x}$	=	the calculated sample mean
n	=	the number of samples
$t_{\alpha, n_0 - 1}$	=	the 90th percentile for the *t* distribution with n_0-1 degrees of freedom
s	=	the calculated sample standard deviation

NOTE

If transformations were performed on the data, comparisons must be made using the corresponding transformed values for PRQLs.

[D] Record the required UCL_{90} (mg/kg) data on the appropriate UCL_{90} Evaluation Form (Attachment 4, Attachment 5, and Attachment 6, as necessary).

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[E] Compare the UCL_{90} for the mean concentration and PRQL (or transformed PRQL) for each constituent.

[F] Mark YES in the appropriate column on Attachments 4, 5, or 6 for any constituent where the UCL_{90} exceeds the PRQL.

[G] Enter the EPA Hazardous Waste Number for the analyte found for each entry where the UCL_{90} result exceeds the PRQL.

[G.1] **WHEN** there is NO associated EPA Hazardous Waste Number **OR** an EPA Hazardous Waste Number is inappropriate,
THEN explain with a note on Attachments 4, 5, or 6.

[H] Document and provide data analysis methodology and results on Attachment 7, CCP Data Evaluation Narrative.

[H.1] The Data Evaluation Narrative may include the following information (where applicable):

- WSPF Number
- Distribution test(s) used
- Distribution (normality) test result(s)
- Transformation(s), if any, applied to the data to achieve normality
- Comparison of transformed data results to PRQL, where applicable
- How non-detectable measurements are incorporated in the data set
- Proportion of non-detectable measurements
- Non-detectable measurements omitted for dilution reasons

[I] Cross-reference Container Identification (ID) Numbers, Solids Sample ID Numbers, and BDR Numbers by completing Attachment 2, CCP Correlation of Container ID Numbers to Solids Sample ID Numbers.

[J] Repeat step 4.1.3 each time additional sample results are available.

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[K] Print name, sign, and date Attachment 2.

NOTE

Upon collection and analysis of the preliminary samples, or at any time after the preliminary samples have been analyzed, the generator/storage site may assign EPA Hazardous Waste Numbers to a waste stream. For waste streams with the calculated upper confidence limits below the regulatory threshold, the generator/storage site shall collect the required number of samples if the generator/storage site intends to establish the constituent is below the regulatory threshold.

4.2 Determination of Adequate Sample Size for HSG Samples

4.2.1 Obtain the analytical results of the sample set selected by CCP-TP-162 as follows:

[A] Obtain a copy of the Random Headspace Gas Sample Selection Memorandum from CCP Records.

[B] Obtain, from CCP Records, a copy of the HSG analytical BDR(s) that corresponds to the container numbers from the Random Headspace Gas Sample Selection Memorandum.

[C] Confirm that the identified containers have successfully passed the project level validation and verification.

[D] From the BDR(s), obtain the analytical results for the containers identified in step 4.2.1[A].

4.2.2 For each chemical contaminant of concern, determine the mean and standard deviation (preliminary estimates) from the results using the following steps:

[A] Input the HSG sample results into the Headspace Gas Evaluation Spreadsheet.

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NOTE

The mean and standard deviation equations are:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

$$s^2 = \frac{1}{n-1}\sum_{i=1}^{n}\left(x_i - \bar{x}\right)^2$$

Where:

$\bar{x}$ = the calculated sample mean

s^2 = the calculated concentration sample variance

n = number of samples analyzed

x_i = concentration determined in the ith sample

i = an index from 1 to n

$$n_{VOC_i} = \frac{t^2{}_{\alpha,n-1} s^2{}_{e_{VOC_i}}}{E^2{}_{VOC_i}}$$

Where:

n_{VOC_i} = the number of samples needed to representatively sample the waste stream for the VOC_i

$t_{\alpha, n_0 - 1}$ = the 90th percentile for the t distribution with n_0-1 degrees of freedom (See Table 1, t Distribution for the 90th Percentile).

$s_{e_{VOC_i}}$ = the estimated standard deviation, based on the initial n samples for VOC_i

E_{VOC_i} = the allowable error determined as 1 percent of the limiting concentration for VOC_i

[B] Based upon the preliminary estimates of $\bar{x}$ and s^2 for each chemical contaminant of concern, estimate the appropriate number of samples (n_{VOC_i}) to be collected for each contaminant using the Headspace Gas Evaluation Spreadsheet.

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NOTE

The number of samples to be collected will be based upon the largest number calculated for each of the contaminants of interest.

Non-integer results of calculations for the required sample size should be rounded up to the nearest integer. A minimum of 10 containers shall be sampled and analyzed in each waste stream. If there is fewer than the minimum or required number of containers in a waste stream, then each container should be sampled once.

Waste containers from the preliminary mean and variance estimates may be counted as part of the total number of calculated required samples, if, and only if, the requirements specified in the CCP-PO-001, Section C2-1b, are satisfied. The CCP may count waste container samples from the preliminary mean and variance estimates as part of the total number of calculated required samples if and only if:

- There is documented evidence that the waste containers for the preliminary estimate samples were selected in the same random manner as is chosen for the required samples
- There is documented evidence that the method of sample collection in the preliminary estimate samples were identical to the methodology to be employed for the required samples
- There is documented evidence that the method of sample analysis in the preliminary estimate samples was identical to the analytical methodology employed for the required samples
- There is documented evidence that the validation of the sample analyses, in the preliminary estimate samples, was comparable to the validation employed for the required samples. In addition, the validated sample results indicate that all sample results were valid according to the analytical methodology

NOTE

To calculate the percent difference of n, use the following formula:

$$\% \text{ Difference} = \left(\frac{n_{VOC_i} - n_{VOC_{i-1}}}{n_{VOC_{i-1}}} \right) * 100$$

Where:

n_{VOC_i} = the determination of n_{VOC_i} is an iterative process that continues until the difference between n_{VOC_i} and the previous sample determination is less than 20 percent difference.

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[C] Calculate the percent difference between the required number of samples estimated in step 4.2.2[B] and the number of samples actually taken and analyzed.

[D] Based on the percent difference calculations,
IF the observed sample n_{VOC_i} estimate results in greater than 20 percent more required samples than were originally calculated,
THEN:

- Direct additional samples be taken as required to ensure that the cumulative total number of samples for each analyte equals or exceeds the number estimated in step 4.2.2[B].

- Using the analysis results for the combined sample set, reperform steps 4.2.2[A] through [D].

4.2.3 Calculating UCL_{90} for Headspace Gas

NOTE

Normality testing should not be performed using analyte concentrations reported as MDL as identified by a U flag. These should be included in the calculations for UCL_{90} as ½ the reported MDL. Subsequent lots will be added to the UCL_{90} data set as the waste stream is characterized until characterization is complete for the entire waste stream.

NOTE

If for any container the sample was diluted for analysis and the constituent concentration is reported as not detected (U flag), the result is omitted from the distribution tests and subsequent analyses when the sample MDL is greater than the PRQL.

[A] Using the Headspace Gas Evaluation Spreadsheet, determine and record on Attachment 3, CCP Headspace Gas UCL_{90} Evaluation Form, the following items:

- WSPF Number,

- Number of Samples,

- Number of Samples above MDL,

- Maximum (parts per millions volume [ppmv]) for each target analyte,

- Mean (ppmv) for each target analyte,

- Standard deviation (ppmv) for each target analyte, and
- Additional target analyte compounds (as applicable).

NOTE

For any normality test performed, the probability of a Type I error, α, should not exceed 10 percent.

NOTE

To determine data or transform that is closest to normal for data sets greater than 200, the form with the smallest D value under the Kolmogorov-Smirnov test for normality should be used. For data sets less than or equal to 200 the form with the largest W value under the Shapiro-Wilk test for normality should be used.

NOTE

If transformation of the data is required to achieve normality, the EPA Solid Waste and Sample Plan guidance may be used.

[B] **WHEN** sufficient data has been collected (i.e., a waste lot is complete [a defined group bounding the random selection]), **THEN** perform test(s) for normality on the data.

[C] Use the data or transform that is closest to normal on the Headspace Gas Evaluation Spreadsheet to determine the UCL_{90} for the mean concentration and associated statistics of each VOC detected in the container HSG for each waste stream or waste stream lot.

NOTE

The formula for calculating UCL_{90} is:

$$UCL_{90} = \bar{x} + \frac{t_{\alpha,n-1}s}{\sqrt{n}}$$

Where:

$\bar{x}$	=	the calculated sample mean
n	=	the number of samples
$t_{\alpha, n_0 - 1}$	=	the 90th percentile for the *t* distribution with n_0-1 degrees of freedom
s	=	the calculated sample standard deviation

NOTE

If transformations were performed on the data, comparisons must be made using the corresponding transformed values for PRQLs.

[D] Record the required UCL_{90} (ppmv) data on Attachment 3.

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[E] Compare the UCL_{90} for the mean concentration and PRQL, (or transformed PRQL) for each constituent.

[F] Mark YES in the appropriate column on Attachment 3 for any constituent where the UCL_{90} exceeds the PRQL.

[G] Enter the EPA Hazardous Waste Number for the analyte found for each entry where the UCL_{90} result exceeds the PRQL.

[G.1] **WHEN** there is NO associated EPA Hazardous Waste Number **OR** an EPA Hazardous Waste Number is inappropriate,
THEN explain with a note on Attachment 3.

[H] Document and provide data analysis methodology and results on Attachment 7.

[H.1] The Data Evaluation Narrative may include the following information (where applicable):

- WSPF Number
- Distribution test(s) used
- Distribution (normality) test result(s)
- Transformation(s), if any, applied to the data to achieve normality
- Comparison of transformed data results to PRQL, where applicable
- How non-detectable measurements are incorporated in the data set
- Proportion of non-detectable measurements
- Non-detectable measurements omitted for dilution reasons

[I] Cross-reference Container ID Numbers, HSG Sample ID Numbers, and BDR Numbers by completing Attachment 1, CCP Correlation of Container ID Numbers to Headspace Gas Sample ID Number.

[J] Print name, sign, and date Attachment 1.

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4.3 TIC Evaluation

4.3.1 Evaluate the data for HSG or solids (separately), **AND** perform the following:

[A] Document the WSPF # and number of samples on Attachment 8, CCP Waste Stream Headspace Gas Tentatively Identified Compounds, or Attachment 9, CCP Waste Stream Solids Tentatively Identified Compounds.

[B] **IF** TICs were identified in this waste stream, **THEN** document TICs, Chemical Abstract Service (CAS) Number, and Number of Samples containing that TIC on the appropriate form, Attachment 8, or Attachment 9.

[C] Record "Yes" or "No" in the appropriate column on Attachment 8 or Attachment 9, depending on the sample matrix, whether the TICs appear in Title 20 New Mexico Administrative Code (NMAC), Chapter 4, Hazardous Waste, Part I, Hazardous Waste Management, Section 200, Adoption of 40 CFR Part 261 (incorporating Title 40 Code of Federal Regulations [CFR], Protection of the Environment, Chapter 1, Environmental Protection Agency, Subchapter 1, Solid Wastes, Part 261, *Identification and Listing of Hazardous Waste*, Appendix VIII, Hazardous Constituents) by comparing CAS numbers.

4.3.2 Obtain a copy of the completed Attachment 10, CCP Waste Stream Headspace Gas Tentatively Identified Compounds (Cumulative), or Attachment 11, CCP Waste Stream Solids Tentatively Identified Compounds (Cumulative), from the last sampling activity reviewed from CCP Records, **AND** record the following on current Attachment 10 or Attachment 11 to create accumulative list of TICs in the waste stream:

NOTE

When the evaluation is the first in the waste stream, the information from Attachment 8 or Attachment 9 must be transferred to either Attachment 10 or Attachment 11.

[A] Update the Total number of samples evaluated to date in the waste stream on Attachment 10 or Attachment 11, by adding the Number of Samples on Attachment 8 or Attachment 9 to the total number on the previous Attachment 10 or Attachment 11.

[B] Copy the list of TICs and CAS Numbers from the last sampling activity evaluated, to Columns 1 and 2 of the new Attachment 10 or Attachment 11.

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[C] Total the number of samples containing the TICs by adding the number for each individual TIC (Column 4) from the previous Attachment 10 or Attachment 11 and the number for any additional TICs (third column) from the current evaluation Attachment 8 or Attachment 9 creating the new cumulative number.

[D] Copy any new TICs (CAS number and total number of samples containing the TIC) identified in the waste stream TIC evaluation (Attachment 8 or Attachment 9) to Attachment 10 or Attachment 11, Columns 1, 2, and 4.

4.3.3 Calculate, **AND** document on Attachment 10 or Attachment 11, on an individual TIC basis, the percent of samples in the waste stream that contain the TIC.

[A] Divide the number of samples reporting the TIC from Column 4 by the total number of samples evaluated to date.

[B] Multiply by 100 to obtain the percent and record in Column 5 of Attachment 10 or Attachment 11.

4.3.4 Mark the maximum observed concentration for the TIC in Column 3 on Attachment 10 or Attachment 11.

4.3.5 Mark Yes in Column 6 on Attachment 10 or Attachment 11, those TICs that appear in 25 percent or greater of the samples in the waste stream.

4.3.6 Review Attachment 8, Attachment 9, Attachment 10, and/or Attachment 11.

4.3.7 **IF** TICs were detected in greater than or equal to 25 percent of all samples from the waste stream, and the TICs appear in the Title 20 NMAC, Chapter 4, Part I, Section 200 (incorporating Title 40 CFR, Chapter 1, Subchapter 1, Part 261, Appendix VIII),
THEN instruct the AK Expert (AKE) to perform a re-evaluation of AK in accordance with CCP-TP-005, *CCP Acceptable Knowledge Documentation* to determine whether the TIC can be attributed to waste packaging materials, radiolysis, or other origins.

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4.3.8 **IF** (after the re-evaluation of AK) an F-Listed waste constituent TIC can **NOT** be attributed to waste packaging materials, radiolysis, or other origins,

OR

IF the TIC subject to inclusion on the target analyte list exhibits a toxicity characteristic (i.e., those compounds shown in 40 CFR, Chapter 1, Subchapter I, Part 261, Subpart C, Characteristics of Hazardous Waste § 261.24, Toxicity Characteristic as D EPA Hazardous Waste Number),
THEN add the TIC to the target analyte list regardless of the origin since the hazardous waste designation for D codes is not based on source or use.

[A] Issue a memorandum for addition of TICs to target analyte list, directing the HSG and solids analysis personnel (depending on analysis performed) to add the constituent to the target analyte list.

[B] Assign a PRQL as follows:

[B.1] Include the Waste Stream Identification Number and the analytes that will be listed on the new target analyte list.

[B.2] PRQL for Solids: Use 40 parts per million (ppm) for solids without a toxicity characteristic limit (in accordance with Clarification Number CAO-00-065, *Determination of Tentatively Identified Compounds* ([*TICS*]).

[B.3] For Gases: Use 100 ppm for the PRQL for alcohols and ketones, and use 10 ppm for the PRQL for all others.

[C] Submit a copy of the memorandum to CCP Records in accordance with CCP-QP-008, *CCP Records Management*.

[D] Request AKE to revise the respective AK Summary Report to add the new EPA Hazardous Waste Number(s) to the waste stream as appropriate.

[E] Send a copy of the memorandum and the revised target analyte list to the Carlsbad Field Office (CBFO) and the WIPP Waste Information System (WWIS)/Waste Data System (WDS).

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4.3.9 **IF** changes to EPA Hazardous Waste Numbers are required as a result of subsequent sampling,
THEN notify the CBFO, **AND** suspend shipments of the affected waste stream until the CBFO approves revised WSPF for the affected waste stream.

4.3.10 Complete a new WSPF in accordance with CCP-TP-002.

4.3.11 Document results on Attachment 12, Site Project Manager Data Evaluation Narrative.

[A] Print name, sign, and date Attachment 12.

4.4 HSG Summary Data Report

4.4.1 Assemble the completed Attachment 1, Attachment 3, Attachment 7, Attachment 8, Attachment 10, and Attachment 12.

4.4.2 Paginate the HSG Summary Data Report.

4.4.3 Add a table of contents to the HSG Summary Data Report.

4.4.4 Transmit the Headspace Gas Summary Data Report as a memorandum to CCP Records in accordance with CCP-QP-008.

4.5 Solids Summary Data Report

4.5.1 Assemble the completed Attachment 2, Attachment 4, Attachment 5, Attachment 6, Attachment 7, Attachment 9, Attachment 11 and Attachment 12.

4.5.2 Paginate the Solids Summary Data Report.

4.5.3 Add a table of contents to the Solids Summary Data Report.

4.5.4 Transmit the Solids Summary Data Report as a memorandum to CCP Records in accordance with CCP-QP-008.

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5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as Quality Assurance (QA) records in accordance with CCP-QP-008. The records are the following:

5.1.1 QA/Lifetime

[A] Headspace Gas Summary Data Report:

[A.1] Attachment 1, CCP Correlation of Container ID Numbers to Headspace Gas Sample ID Number

[A.2] Attachment 3, CCP Headspace Gas UCL_{90} Evaluation Form

[A.3] Attachment 7, CCP Data Evaluation Narrative

[A.4] Attachment 8, CCP Waste Stream Headspace Gas Tentatively Identified Compounds

[A.5] Attachment 10, CCP Waste Stream Headspace Gas Tentatively Identified Compounds (Cumulative)

[A.6] Attachment 12, CCP Site Project Manager Data Evaluation Narrative

[B] Solids Summary Data Report:

[B.1] Attachment 2, CCP Correlation of Container ID Numbers to Solids Sample ID Numbers

[B.2] Attachment 4, CCP Solids Analysis VOC UCL_{90} Evaluation Form

[B.3] Attachment 5, CCP Solids Analysis SVOC UCL_{90} Evaluation Form

[B.4] Attachment 6, CCP Solids Analysis Metals UCL_{90} Evaluation Form

[B.5] Attachment 7, CCP Data Evaluation Narrative

[B.6] Attachment 9, CCP Waste Stream Solids Tentatively Identified Compounds

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[B.7] Attachment 11, CCP Waste Stream Solids Tentatively Identified Compounds (Cumulative)

[B.8] Attachment 12, CCP Site Project Manager Data Evaluation Narrative

5.1.2 QA/Nonpermanent

[A] Memorandum directing HSG and/or solids personnel to add constituent(s) to the target analyte list.

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Table 1 – *t* Distribution for the 90th Percentile

Degrees of Freedom (n_o-1)	***t* Value**
1	3.078
2	1.886
3	1.638
4	1.533
5	1.476
6	1.440
7	1.415
8	1.397
9	1.383
10	1.372
11	1.363
12	1.356
13	1.350
14	1.345
15	1.341
16	1.337
17	1.333
18	1.330
19	1.328
20	1.325
21	1.323
22	1.321
23	1.319
24	1.318
25	1.316
26	1.315
27	1.314
28	1.313
29	1.311
30	1.303
40	1.310
60	1.296
120	1.289
∞	1.282

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Attachment 1 – CCP Correlation of Container ID Numbers to Headspace Gas Sample ID Numbers (EXAMPLE)

Page ____ of ____

WSPF Number:_____ Lot Number: _____

Container ID Number	HSG Sample ID Number	Headspace Gas BDR (Sample)	Headspace Gas BDR (Analysis)	

Use multiple copies of this attachment as necessary to document all containers discussed in this summary report. Record Waste Stream Profile Form Number and Waste Stream Lot Number on each sheet issued. Number each sheet in the space provided.

Site Project Manager (or designee):

Signature Print Name Date

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Attachment 2 – CCP Correlation of Container ID Numbers to Solids Sample ID Numbers (EXAMPLE)

Page ____ of ____

WSPF Number: _____ Lot Number: _____

Container ID Number	Sample BDR	VOC Analysis BDR	VOC Analysis Sample ID	SVOC Analysis BDR	SVOC Analysis Sample ID	Non-Halogenated Analysis BDR VOCs	Sample ID Non-Halogenated VOCs	Metals Analysis BDR	Metals Analysis Sample ID

Use multiple copies of this attachment as necessary to document all containers discussed in this summary report. Record Waste Stream Profile Form Number and Waste Stream Lot Number on each sheet issued. Number each sheet in the space provided.

Site Project Manager (or designee):

Signature Print Name Date

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Attachment 3 – CCP Headspace Gas UCL_{90} Evaluation Form (EXAMPLE)

Page ____ of ____

WSPF Number: _____ Lot Number: _____

ANALYTE	Transform Data Used (No, Data-Log, SQTI, other)	# Samples	# Samples above MDL	Maximum (ppmv)	Mean (ppmv)	Standard Deviation (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Hazardous Waste Number
Benzene								10			
Bromoform								10			
Carbon tetrachloride								10			
Chlorobenzene								10			
Chloroform								10			
Cyclohexane[a]											
1,1-Dichloroethane								10			
1,2-Dichloroethane								10			
1,1-Dichloroethylene								10			
trans-1,2-Dichloroethylene								10			
Ethyl benzene								10			
Ethyl ether								10			
Methylene chloride								10			
1,1,2,2-Tetrachloroethane								10			
Tetrachloroethylene								10			
Toluene								10			
1,1,1-Trichloroethane								10			
Trichloroethylene								10			
1,1,2-Trichloro-1,2,2-trifluoroethane								10			
1,2,4-Trimethylbenzene[a]								10			

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Attachment 3 – CCP Headspace Gas UCL_{90} Evaluation Form (Continued) (EXAMPLE)

Page ____ of ____

WSPF Number: _____ Lot Number: _____

ANALYTE	Transform Data Used (No, Data-Log, SQTI, other)	# Samples	# Samples above MDL	Maximum (ppmv)	Mean (ppmv)	Standard Deviation (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Hazardous Waste Number
1,3,5-Trimethylbenzene[a]								10			
p/m-Xylene[b]								10			
o-Xylene								10			
Acetone								100			
Butanol								100			
Methanol								100			
Methyl ethyl ketone								100			
Methyl isobutyl ketone								100			

[a]These compounds are from CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)* and are flammable VOCs that do not appear in CCP-PO-001. These are not part of the target analyte list, but samples may be analyzed for these compounds.
[b]These xylene isomers cannot be resolved by the analytical methods employed in the CCP. M-xylene and p-xylene will be reported as Total m-p-Xylene.

Comments:

_____ _____ _____
Printed name Signature Date

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Attachment 4 – CCP Solids Analysis VOC UCL_{90} Evaluation Form (EXAMPLE)

Page ____ of ____

WSPF #_____ Lot Number: _____

ANALYTE	Transform Data Used (No. Data - Log, SQRT, other)	# Samples	# Samples above MDL	Maximum (mg/kg)	Mean (mg/kg)	SD (mg/kg)	UCL_{90} (mg/kg)	PRQL (mg/kg)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Hazardous Waste Number
Benzene								10			
Bromoform								10			
Carbon disulfide								10			
Carbon tetrachloride								10			
Chlorobenzene								10			
Chloroform								10			
1,4-Dichlorobenzene [(c)]								10			
Ortho-Dichlorobenzene [(c)]								10			
1,2-Dichloroethane								10			
1,1-Dichloroethylene								10			
Trans-1,2-Dichloroethylene								10			
Ethyl benzene								10			
Methylene chloride								10			
1,1,2,2-Tetrachloroethane								10			
Tetrachloroethylene								10			
Toulene								10			
1,1,1,-Trichloroethane								10			
1,1,2,-Trichloroethane								10			
Trichoroethylene								10			
Trichlorofluoromethane								10			
1,1,2-Trichloro-1,2,2-trifluoroethane								10			
Vinyl chloride								4			
p/m-Xylene								10			

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Attachment 4 – CCP Solids Analysis VOC UCL_{90} Evaluation Form (Continued) (EXAMPLE)

Page ____ of ____

WSPF #_____ Lot Number: _____

ANALYTE	Transform Data Used (No. Data - Log, SQRT, other)	# Samples	# Samples above MDL	Maximum (mg/kg)	Mean (mg/kg)	Standard Deviation (mg/kg)	UCL_{90} (mg/kg)	PRQL (mg/kg)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Hazardous Waste Number
o-Xylene								10			
Acetone								100			
Butanol								100			
Ethyl ether								100			
Formaldehyde [(a)]								100			
Hydrazine [(b)]								100			
Isobutanol								100			
Methanol								100			
Methyl ethyl ketone								100			
Pyridine[(c)]								100			

(a) Required only for homogenous solids and soil/gravel waste from Savannah River Site.
(b) Required only for homogenous solids and soil/gravel waste from Oak Ridge National Laboratory and Savannah River Site.
(c) Can also be analyzed as an SVOC. If analyzed as an SVOC, the QAOs of CCP-PO-001, Table C3-6 apply.

Comments:

Printed name Signature Date

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Attachment 5 – CCP Solids Analysis SVOC UCL_{90} Evaluation Form (EXAMPLE)

Page ____ of ____

WSPF #_____ Lot Number: _____

ANALYTE	Transform Data Used (No. Data Log, SQRT, other)	# Samples	# Samples above MDL	Maximum (mg/kg)	Mean (mg/kg)	Standard Deviation (mg/kg)	UCL_{90} (mg/kg)	PRQL (mg/kg)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Hazardous Waste Number
2-Methylphenol (cresols)								40			
3&4-Methylphenol (cresols)								40			
1,4-Dichlorobenzene [(a)]								40			
Ortho-Dichlorobenzene [(a)]								40			
2,4-Dinitrophenol								40			
2,4-Dinitrotoluene								2.6			
Hexachlorobenzene								2.6			
Hexachloroethane								40			
Nitrobenzene								40			
Pentachlorophenol								40			
Pyridine[(a)]								40			

(a) Can also be analyzed as a VOC.

COMMENTS:

Printed name Signature Date

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Attachment 6 – CCP Solids Analysis Metals UCL_{90} Evaluation Form (EXAMPLE)

Page ____ of ____

WSPF #_____ Lot Number: _____

ANALYTE	Transform Data Used (No. Data Log, SQRT, other)	# Samples	# Samples above MDL	Maximum (mg/kg)	Mean (mg/kg)	Standard Deviation (mg/kg)	UCL_{90} (mg/kg)	PRQL (mg/kg)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Hazardous Waste Number
Antimony								100			
Arsenic								100			
Barium								2000			
Berylium								100			
Cadmium								20			
Chromium								100			
Lead								100			
Mercury								4			
Nickel								100			
Selenium								20			
Silver								100			
Thallium								100			
Vanadium								100			
Zinc								100			

Comments:

_____ _____ _____
Printed name Signature Date

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Attachment 7 – CCP Data Evaluation Narrative (EXAMPLE)

Page ____ of ____

WSPF Number: _____Lot Number: _____

Approved By:

_____ _____ _____
Signature Printed Name Date

Attachment 8 – CCP Waste Stream Headspace Gas Tentatively Identified Compounds (EXAMPLE)

Page ____ of ____

Tentatively Identified Compound (TICs)	Chemical Abstract Service (CAS) Number	Number of Samples Containing TIC

Approved By:

Signature Printed Name Date

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Attachment 9 – CCP Waste Stream Solids Tentatively Identified Compounds (EXAMPLE)

Page ____ of ____

Tentatively Identified Compound (TICs)	Chemical Abstract Service (CAS) Number	Number of Samples Containing TIC

Approved By:

Signature Printed Name Date

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Attachment 10 – CCP Waste Stream Headspace Gas Tentatively Identified Compounds (Cumulative) (EXAMPLE)

Page ____ of ____

WSPF Number:_____Lot Number(s):_____

Total number of samples evaluated to date in this waste stream: _____

The following TICs were detected during Headspace Gas analysis of this waste stream:

Tentatively Identified Compound	CAS Number	Maximum Observed Estimated Concentrations (ppmv)	Total Number of Samples Containing TIC	% TIC Detected in Waste Stream	Greater than 25% Yes

Approved by:

_____ _____ _____

Signature Printed Name Date

Attachment 11 – CCP Waste Stream Solids Tentatively Identified Compounds (Cumulative) (EXAMPLE)

Page ____ of ____

WSPF Number:_____Lot Number(s):_____

Total number of samples evaluated to date in this waste stream: _____

The following TICs were detected during Headspace Gas analysis of this waste stream:

Tentatively Identified Compound	CAS Number	Maximum Observed Estimated Concentrations (ppmv)	Total Number of Samples Containing TIC	% TIC Detected in Waste Stream	Greater than 25% Yes

Approved by:

_____ _____ _____

Signature Printed Name Date

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Attachment 12 – CCP Site Project Manager Data Evaluation Narrative (EXAMPLE)

Page ____ of ____

WSPF Number: _____ Lot Number: _____

Approved By:

_____ _____ _____
Signature Printed Name Date

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CCP-TP-005

Revision 24

CCP
Acceptable Knowledge Documentation

EFFECTIVE DATE: 11/28/2011

Mike Ramirez

PRINTED NAME

APPROVED FOR USE

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
4	01/17/2002	Revised to delete the requirement for signing the AK Summary and other minor changes. Added cis & trans-1,2-Dichloroethylene, Attachment 5.
5	01/24/2002	Minor change to Attachment 14 due to the following: Signature lines were struck and approved by all levels of review in previous revision. When preparing document to be issued signature lines were inadvertently left in and must now be removed. Printed name and "approved for use" are being inserted to reflect the CCP Procedure format.
6	07/23/2002	Revised document to: • Comments based on CH-WAC revision • Accommodate comments from an assessment at SRS Document Review Record for Technical and Quality Assurance • Comments from a Program Evaluation at ANL-E
7	09/06/2002	Revised document to: • Minor editorial changes to 2.1, 4.2, 4.3, and 4.4 Changes to 4.4.17 to comply with WAP requirements and Program Evaluation Changes to 4.4.26 to comply with Program Evaluations for NTS.
8	09/19/2002	Revised document based on comments from the ANLE Certification Audit and a CBFO Adequacy Review; revised Sections 3.1, 4.2, 4.3, 4.4, 4.5 and Attachments 7, 10, and 11.
9	09/26/2002	Revised document based on comments from the NTS Certification Audit; revised Sections 4.3, 4.4, 4.5, and 4.6.
10	10/24/2002	Revised step 3.2.13; added Section 3.6 and steps 4.7.18 and 4.7.19; and revised Attachment 10 based on comments from the SRS Recertification Audit.
11	02/05/2003	Revised document to address CAR #02-087 and CAR # 02-088 from the ANL-E Certification Audit. Revised steps 4.4.1 and added NOTE. Revised steps 4.4.17, 4.4.20, 4.4.24, 4.4.26, and 4.5.1 [D.2]

RECORD OF REVISION (Continued)

Revision Number	Date Approved	Description of Revision
12	03/26/2003	Revised step 4.4.8 and preceding NOTE.
13	11/18/2003	Revised document to: - Perform minor editorial changes throughout document. Clarify that Attachments are example forms. Remove Attachments 11 and 12 to create electronically fillable forms of these attachments. Add Section 3.7 to include responsibility of Nondestructive Assay (NDA) Subject Matter Expert (SME) to perform assessment with the Acceptable Knowledge Expert. Update steps 4.4.17 and 4.4.18 to require that the uses and limitations of the radionuclide Acceptable Knowledge information is reviewed by the NDA SME. Add Section 4.9 to address CAR-SRS-006-03 for the process used to document the addition of containers to existing waste streams. Added a new Section 4.3.3 identifying the use of Memorandum to CCP Central Records. Added a new Section 4.6.3 to incorporate preparation of a letter/memorandum to Site Project Manager summarizing AK information; revision of Sections 4.6.4 and 5.1.1[J] to incorporate the addition of 4.6.3. Deleted Section 4.1.3 Process Equipment Description from the AK Summary Report Content Guide. - Modified Attachment 5.
14	11/19/2004	Revised document to: - Perform minor editorial changes and technical clarifications throughout document. - Revised procedure to address WIPP WAC Revision 1 and 2 changes relating to beryllium, payload container management, high plutonium content waste/material, and PCB requirements (Sections 1.0 and 4.4.24). - Revised Section 4.8.1 to allow for resolution of discrepancies within the AK Summary Report. - Deleted redundant records management requirement to attach copies of the AK Source Document Discrepancy reports to all affected sources. - Deleted step 4.4.8[B].

RECORD OF REVISION (Continued)

Revision Number	Date Approved	Description of Revision
15	03/31/2005	Revised document to incorporate WIPP WAP AK requirements for LANL sealed sources. Addressed CBFO comments.
16	02/27/2006	Revised document to: Incorporate minor editorial changes and technical clarifications throughout the document. Add Sections 4.10 and 4.11 to address creation and maintenance of the Container Tracking Spreadsheet on the FTP (CAR-INL-0003-05). Replace revised Attachments 5 and 10 based on recent audit discussions.
17	06/05/2006	Revised to allow the use of attachments to this procedure during the management of Remote-Handled (RH) Acceptable Knowledge (AK) in accordance with DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan* (WCPIP). Revised Attachment 6, Waste Form, Waste Material Parameters, Prohibited Items, and Packaging – Example Form per Los Alamos National Laboratory (LANL) Certification Audit A-06-11.
18	11/16/2006	Revised to implement the Waste Isolation Pilot Plant Hazardous Waste Facility Permit requirements resulting from the Section 311/Remote-Handled (RH) Permit Modification Request (PMR). Addressed Carlsbad Field Office (CBFO) Document Review Record (DRR) comments.
19	07/06/2010	Revised document to address the Waste Isolation Pilot Plant (WIPP) Form WF09-171 from an internal Central Characterization Project (CCP) audit and to incorporate minor editorial changes and technical clarifications noted as a result of various Acceptable Knowledge audits.
20	11/01/2010	Revised to allow new and updated attachments and source documents to be submitted anytime after the initial submittal.
21	12/29/2010	Revised to implement the revision of the *Waste Isolation Pilot Plant Hazardous Waste Facility Permit*.
22	04/21/2011	Revised to address changes in Revision 2 of the *Remote-Handled Tru Waste Characterization Program Implementation Plan* (WCPIP). Incorporated editorial changes and technical clarifications throughout procedure.
23	06/30/2011	Revised to clarify what constitutes a record as part of the resolution to resolve CBFO CAR11-043.

RECORD OF REVISION (Continued)

Revision Number	Date Approved	Description of Revision
24	11/28/2011	Revised to address comments from inspectors during U.S. Environmental Protection Agency (EPA) Baseline Inspection EPA-SNL-CCP-RH-06.11-8 (June 6/8, 2011). Also revised to incorporated lessons learned from Carlsbad Field Office (CBFO) records surveillance.

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Attachment 15 – CCP TRU Waste Correlation and Surrogate Summary Form – Example Form 84

1.0 PURPOSE

The *Waste Isolation Pilot Plant Hazardous Waste Facility Permit, Waste Analysis Plan* (WIPP-WAP), authorizes the use of acceptable knowledge (AK) in appropriate circumstances to delineate waste streams and to characterize hazardous waste. WIPP WAP AK requirements are addressed in CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*, and implemented through this procedure. DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant* (WIPP-WAC), AK requirements are addressed in CCP-PO-002, *CCP Transuranic Waste Certification Plan*. Additionally, implementation of this procedure will generate information required by CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control* (*CCP CH-TRAMPAC*) and CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control* (*CCP RH-TRAMPAC*). This procedure applies to Central Characterization Project (CCP) personnel who perform AK activities for retrievably stored and newly generated transuranic (TRU) waste streams that may be eligible for disposal at Waste Isolation Pilot Plant (WIPP).

1.1 Scope

This procedure describes the processes the CCP uses to compile, review, evaluate, update, and report AK documentation. The procedure also describes how the CCP determines AK Sufficiency, AK accuracy; re-evaluates AK documentation when necessary; resolves AK documentation discrepancies, and uses AK to delineate waste streams and determine whether the waste is hazardous. A waste stream is defined as waste materials that have common physical form, that contain similar hazardous constituents (similar radiological properties for DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan* [WCPIP] compliance), and that are generated from a single process or activity.

Only CCP personnel trained in accordance with CCP-QP-002, *CCP Training and Qualification Plan,* will compile, evaluate, and document AK information in accordance with this procedure. Sites hosting the CCP may assist CCP personnel in the collection of AK information; however, this procedure will be used by the CCP to generate the required AK in accordance with CCP-PO-001, CCP-PO-002, CCP-PO-003, and CCP-PO-505.

AK includes any documentation that describes or verifies site history, mission, and operations, in addition to waste stream-specific information used to define the generating process, waste matrix, waste quantities and contaminants (radiological and chemical).

The information acquired in the performance of this procedure is used to prepare an AK Summary Report or an AK Sufficiency Determination.

This information is provided in the following attachments:

- Attachment 1 – Acceptable Knowledge Documentation Checklist – Example Form
- Attachment 2 – Record of Communication – Example Form
- Attachment 3 – Acceptable Knowledge Source Document Summary – Example Form
- Attachment 4 – Acceptable Knowledge Information List – Example Form
- Attachment 5 – Hazardous Constituents – Example Form
- Attachment 6 – Waste Form, Waste Material Parameters, Prohibited Items, and Packaging
- Attachment 7 – Radionuclides –Example Form (CH only)
- Attachment 8 – Waste Containers List – Example Form
- Attachment 9 – Waste Characterization Data Cross-Reference
- Attachment 10 – Acceptable Knowledge Re-evaluation Checklist – Example Form
- Attachment 11 – Acceptable Knowledge Source Document Discrepancy Resolution – Example Form
- Attachment 12 – Example Form and Content Guide for AK Summary Reports
- Attachment 13 – CCP Waste Stream Characterization Checklist – Example Form
- Attachment 14 – CCP Acceptable Knowledge Accuracy Report – Example Form
- Attachment 15 – CCP TRU Waste Correlation and Surrogate Summary Form – Example Form

The attached forms are provided as examples for the required AK information to be prepared for CCP Records. The forms identify the minimum information that will be prepared to document the AK collection

and review process described in this procedure. Attachment 4, Acceptable Knowledge Information List – Example Form, lists all of the information that was collected and considered during the preparation of an AK Summary Report. Only those sources of information that are referenced in the AK Summary Report are considered source documents and submitted to CCP Records.

Remote-Handled (RH) TRU AK management will be performed in accordance with WCPIP to address U.S. Environmental Protection Agency (EPA) requirements; and CCP-PO-001 to address WIPP-WAP requirements. The attachments for AK management in this procedure were reviewed and determined to meet or exceed the information requirements described for AK management in the WCPIP, and will be used, as appropriate, during the compilation, review, evaluation, and reporting associated with RH AK information.

2.0 REQUIREMENTS

2.1 References

Baseline Documents

- DOE/WIPP 89-004, *TRUPACT-II Content Codes* (TRUCON)

Referenced Documents

- DOE/LLW-217, *DOE Waste Treatability Group Guidance. Idaho Falls*, Idaho, INEL-Lockheed Idaho Technologies
- DOE/TRU-11-3425, *Annual Transuranic Waste Inventory Report – 2011,* (or current revision), Carlsbad, New Mexico, U.S. DOE Carlsbad Field Office
- DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria For the Waste Isolation Pilot Plant*
- DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*
- 20 NMAC 4.1, New Mexico Administrative Code
- 40 CFR Part 261, *Identification and Listing of Hazardous Waste*
- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- CCP-PO-002, *CCP Transuranic Waste Certification Plan*
- CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control* (*CCP CH-TRAMPAC*)
- CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control* (*CCP RH-TRAMPAC*)
- CCP-QP-002, *CCP Training and Qualification Plan*
- CCP-QP-004, *CCP Corrective Action Management*
- CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
- CCP-QP-006, *CCP Corrective Action Reporting and Control*
- CCP-QP-008, *CCP Records Management*

- CCP-QP-010, *CCP Document Preparation, Approval, and Control*
- CCP-TP-002, *CCP Reconciliation of DQOs and Reporting Characterization Data*
- CCP-TP-003, *CCP Data Analysis for S3000, S4000, and S5000 Characterization*
- CCP-TP-069, *CCP Sealed Source Visual Examination and Packaging*
- CCP-TP-101, *CCP Off-Site Source Recovery Project Sealed Source Radiological Characterization*
- 42 U.S.C. 10101, *Nuclear Waste Policy Act of 1982*, U.S. Congress
- 40 CFR part 761*, Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions, U.S. EPA*

2.2 Training Requirements

2.2.1 All personnel performing this procedure will be trained and qualified in accordance with CCP-QP-002*,* prior to performing this procedure.

3.0 RESPONSIBILITIES

3.1 Site Project Manager (SPM)

3.1.1 Ensures that trained AK Experts (AKE) (where allowed) are available to implement this procedure in coordination with the Host site.

3.1.2 Approves, resolves, and requests re-evaluation of AK as necessary.

3.1.3 Makes final waste stream determinations, EPA Hazardous Waste Number assignments, and compares, confirms, and approves the AK documentation.

3.1.4 Prepares the AK Accuracy Report.

3.1.5 Confirms the chemical compatibility to the assigned TRUCON code and reviews the characterization data for each waste stream.

3.2 AK Expert (AKE)

3.2.1 Identifies, locates, compiles, documents, summarizes, and evaluates required AK information.

3.2.2 Delineates waste streams and assigns waste stream numbers.

3.2.3 Recommends hazardous waste determinations to the SPM.

3.2.4 Prepares and revises AK Summary Reports.

3.2.5 Prepares and submits source documents.

3.2.6 Prepares and revises the AK Sufficiency Determination Request.

3.2.7 Documents and resolves discrepancies with AK information.

3.2.8 Records meetings, telecommunications, interviews and other communications.

3.2.9 Completes and maintains document summaries and information lists.

3.2.10 Reviews and verifies AK information.

3.2.11 Develops waste stream descriptions.

3.2.12 Assigns summary category groups and waste matrix codes, and estimates waste material parameter (WMP) weights.

3.2.13 Prepares auditable file of AK information.

3.2.14 Re-evaluates and updates AK as needed.

3.2.15 Reviews and concurs on the Waste Stream Profile Form (WSPF).

3.2.16 Supports the development of the AK qualification method and compliance with the applicable Data Quality Objectives (DQOs) for RH wastes streams in accordance with the WCPIP.

3.3 Off-Site Source Recovery (OSR) Radiological Characterization Technical Supervisor (RCTS)

3.3.1 For Los Alamos National Laboratory (LANL) sealed sources, assists the AKE in preparing the Nondestructive Assay (NDA) Memorandum discussed in step 4.4.25.

3.4 Nondestructive Assay (NDA) Expert Analyst (EA)

3.4.1 Performs the assessment for the NDA Memorandum discussed in step 4.4.25 with the AKE.

4.0 PROCEDURE

NOTE

The data collection, documentation, and AK preparation steps can be performed in any sequence as long as the AK data collection requirements found in CCP-PO-001 are met.

NOTE

The attached forms referenced in this section are provided as examples for the required AK information to be prepared for CCP Records. The forms identify the minimum information that will be prepared to document the AK collection and review process described in this procedure. All attachments submitted must contain a header with the procedure number, revision number, procedure title, effective date, and page number as displayed in the Example Attachments. Attachments must also contain the Attachment number and title immediately following the header, as shown on the Example Attachments.

4.1 AK Documentation Management

AKE

4.1.1 As they are collected, maintain the compiled AK documents with reasonable care (protection from damage or loss).

4.1.2 Assign a unique tracking number to each document collected as AK information using the Acceptable Knowledge Information List (see Attachment 4 for an example), for each waste stream. Describe the specific convention used to assign the unique identifiers to the source documents in the AK Summary Report. Examples of source document categories are as follows:

(EXAMPLE)

C – Correspondence
D – Documents
M – Miscellaneous
P – Procedures and Published Documents
DR – Discrepancy Resolution
U – Unpublished Documents

4.2 Compiling AK Documentation

AKE

4.2.1 Locate and obtain references with assistance of the Host site for documents with reference sections, as applicable.

4.2.2 Compile (i.e., gather) source documents that identify TRU waste management program information in the Acceptable Knowledge Documentation Checklist , AK #s PR1-PR8 (see Attachment 1, Acceptable Knowledge Documentation Checklist - Example Form, for facilities that generated the waste stream.

NOTE

Information collected must be sufficient to accurately characterize the waste stream.

NOTE

Source documents may include published or unpublished documents, correspondence, databases, quality assurance (QA) protocols, operating procedures, work instructions, waste storage/disposal records, waste certification summaries, process flow diagrams, analytical and testing data packages from previous waste characterization activities, and other sources of information descriptive of elements on the Checklist.

4.2.3 Apply a unique waste stream number based on the information in DOE/TRU-11-3425, *Annual Transuranic Waste Inventory Report* (ATWIR), and/or information from the Host site for each waste stream (Refer to CCP-TP-002, *CCP Reconciliation of DQOs and Reporting Characterization Data*, for appropriate numbering format).

4.2.4 Compile and record source documents that identify TRU waste stream-specific information specified in the Acceptable Knowledge Documentation Checklist, AK #s WS1-WS12 for each waste stream.

4.2.5 Compile and record source documents that identify additional AK documentation specified in the Acceptable Knowledge Documentation Checklist, AK #s S1-S16.

[A] Obtain additional AK information as appropriate to augment required information and provide any other information obtained to further characterize the waste stream.

[B] All additional specific, relevant AK documentation assembled and used in the AK process, whether it supports or contradicts any required AK documentation, shall be identified and an explanation provided for its use (e.g., identification of a toxicity characteristic).

[C] Additional documentation may be used to further document the rationale for the hazardous characterization results. If discrepancies exist between additional information and the required information, assess and evaluate the information to

determine the appropriate hazardous waste numbers consistent with RCRA requirements. Document the resolution of RCRA hazardous waste number assignment discrepancies on an Acceptable Knowledge Source Document Discrepancy Resolution (see Attachment 11, Acceptable Knowledge Source Document Discrepancy Resolution - Example Form), or in the AK Summary Report.

NOTE

LANL sealed sources are subject to headspace gas sampling unless the information for AK #s O1-O5 is collected and adequate to demonstrate that assignment of EPA hazardous waste numbers (HWNs) for organic materials is not required or an AK Sufficiency Determination is approved for the sources assigned HWNs for organic materials

4.2.6 For LANL sealed sources, compile source documents that identify OSR-specific documentation specified in the Acceptable Knowledge Documentation Checklist, AK #s O1-O18. If source markings are needed to support radiological characterization, verify that they have been documented in accordance with CCP-TP-069, *CCP Sealed Source Visual Examination and Packaging.*

NOTE

For RH waste streams, the documentation collected and compiled in Sections 4.1 and 4.2 may not be sufficient to meet the DQOs established for the selected parameters in accordance with the WCPIP. If there is insufficient AK information to address each of the DQOs, then either additional AK will be collected and/or the characterization methods described in the WCPIP will be initiated. A combination of AK and other characterization methods may be used to meet the WCPIP DQO requirements.

4.2.7 For RH waste, review the documentation compiled and determine which of the WCPIP DQOs that can be met using the AK information collected.

4.2.8 Collect additional AK documentation and/or identify the characterization method(s) recommended to meet the DQO in accordance with the WCPIP (see step 4.4.34[O]).

4.3 Recording AK Documentation

AKE

NOTE

There are two categories of source documents used to document AK for a waste stream. Documentation generated by CCP and documents and/or other media supplied by the generator site. Generator site provided documents and/or other media are external records created by the waste generator sites and are identified in this procedure as "historical source documents."

4.3.1 Copy the document or the pertinent information from the document that defines source document contents, including cover sheets, executive summaries, introductions, and table of contents, if available **AND** maintain this information in the working files.

NOTE

Classified material CAN **NOT** be copied. If source documents are classified, an unclassified summary will need to be provided by the Host site or the document will be developed and summarized on an Acceptable Knowledge Source Document Summary (see Attachment 3, Acceptable Knowledge Source Document Summary - Example Form), by the AKE **AND** reviewed by the Site's Authorized Derivative Classifier for release.

4.3.2 Record meetings, telecommunications, interviews, and other communication on a Record of Communication (see Attachment 2, Record of Communication - Example Form), including a detailed summary of the content of the communication and data limitations.

NOTE

To avoid redundancy, a Record of Communication form may **NOT** be required if the information is already provided on an interview-related source document.

4.3.3 As necessary, prepare a memorandum or letter to CCP Records and Record of Communication, as appropriate, documenting the method used by the AKE to review AK sources for the purpose of evaluating required AK parameters such as radionuclides, Waste Matrix Codes, assignment of EPA Hazardous Waste Numbers, estimating waste material parameter weights, etc. The memorandum must identify the sources of AK used during the evaluation and clearly document the AKE assumptions and conclusions.

NOTE

Collection and review of AK source documents is an ongoing activity. It is conducted initially during the development of the AK Summary Report and continues as additional information becomes available during subsequent waste stream characterization and management activities. Completion of the Acceptable Knowledge Source Document Summary (see Attachment 3 for an example), for the source documents is an iterative process performed during these activities.

If the source document is a collection of information (i.e., container data sheets, material safety data sheets [MSDS] sheets, etc.) provide a description in the Title field of the Attachment 3 and ensure that it matches the Title field in the AK Source Document section of the AK Summary Report.

Information documents collected but not referenced in the AK Summary Report are not required to be summarized on an Attachment 3.

4.3.4 Initiate an Acceptable Knowledge Source Document Summary for each source document that includes detail sufficient to justify the use of the information. The Acceptable Knowledge Source Document Summary must be completed by the time the associated AK Summary Report is finalized for all AK source documents referenced within the report. Identify the specific waste stream or streams that correspond to the source document in the Waste Stream Number field on Attachment 3. If a comprehensive library is used for all streams at the site, note this in this field.

[A] Source documents referenced in the AK Summary Report and their applicable attachments must be submitted to CCP Records on or before the date of issuance of the AK Summary Report as final.

4.3.5 **IF** the summary consists of multiple pages,
THEN provide the unique source document tracking number on each page **AND** paginate the number of pages (e.g., 2 of 6 pages).

4.3.6 Print name, sign, and date the Acceptable Knowledge Source Document Summary before submitting to CCP Records.

4.3.7 For source documents that CAN **NOT** be reproduced or removed from the source (e.g., classified documents or databases), indicate on the Acceptable Knowledge Source Document Summary that a copy of the source document is **NOT** available, and state the reason.

4.3.8 Include a note on the limitations of the information (e.g., if a document covers a specific period of time) on the Acceptable Knowledge Source Document Summary.

NOTE

Attachment 4 is a listing of information collected during the investigative process. Documents collected must be categorized in accordance with Step 4.1.2.

4.3.9 Create and maintain an Acceptable Knowledge Information List that includes the following:

- Site, waste stream number, and waste stream description.
- Source document tracking number
- Source document title
- Name of author
- Original document number, or publisher's document number (if available)
- Revision number and document date (if applicable)
- Cross-reference to the applicable AK number(s) on the Attachment 1 for which the source document is used.

4.3.10 Print name, sign, and date the Acceptable Knowledge Information List before submitting to CCP Records.

4.4 Review and Submittal of AK Documentation

AKE

4.4.1 Evaluate the waste stream to verify that the waste materials do not meet the definition of spent nuclear fuel or high-level waste as defined in the in Section 10101(3) of the *Nuclear Waste Policy Act of 1982.*

4.4.2 Evaluate the waste stream to verify that the waste materials meet the definition of defense waste defined in CCP-PO-002.

NOTE

According to CCP-PO-002, a TRU waste is eligible for disposal at WIPP if it has been generated in whole or in part by one or more of the following functions:

- Naval reactors development
- Weapons activities including defense inertial confinement fusion
- Verification and control technology
- Defense nuclear materials production
- Defense nuclear waste and materials by-products management
- Defense nuclear materials security and safeguards and security investigations
- Defense research and development

4.4.3 **IF** there is no information linking the waste stream to defense related activities or commingled with defense materials, **OR** if the waste contains spent nuclear fuel or high-level waste,
THEN notify the SPM.

4.4.4 Document the defense determination, high-level waste and spent nuclear fuel assessments in the AK Summary Report.

4.4.5 Verify that 100 percent of the information specified in Acceptable Knowledge Documentation Checklist from AK #s PR1 through PR8 and WS1 through WS12 has been compiled.

4.4.6 **IF** 100 percent of this information is **NOT** available for a particular waste stream,
THEN notify the SPM that waste is **NOT** eligible for disposal at WIPP without the collection of additional information to augment the existing AK.

4.4.7 For LANL sealed sources waste containers, verify that the information on Acceptable Knowledge Documentation Checklist, AK #s O1-O5 has been compiled.

4.4.8 Review all AK information compiled in Section 4.2 of this procedure.

4.4.9 Document and resolve discrepancies regarding AK information among AK source documents as described in Section 4.9 of this procedure.

4.4.10 Print name, sign, and date the Acceptable Knowledge Documentation Checklist once the collection and review of the required AK information has been completed.

NOTE

A waste stream is defined as waste materials that have common physical form, that contain similar hazardous constituents (similar radiological properties for WCPIP compliance), and that are generated from a single process or activity. This definition will be used to obtain information for the waste stream specific description to be written in step 4.4.35.

4.4.11 Using the definition of a waste stream from above, the waste stream-specific documentation from the Acceptable Knowledge Documentation Checklist, and, if applicable, the description from the ATWIR, define the waste stream represented by the compiled AK information, **AND** provide this description in the AK Summary Report (see Attachment 12, Example Form and Content Guide for AK Summary Reports, for a format and content guide to be used when preparing the AK Summary Report). Provide a discussion to justify combining previously identified (i.e., ATWIR or site designations), TRU mixed waste and TRU non-mixed waste streams.

NOTE

Waste matrix code will be assigned based on the physical form of the waste. DOE/LLW-217, *DOE Waste Treatability Group Guidance*, describes the convention for assignment of waste matrix codes for low-level waste treatability groups, and can be used as the basis for the assignment of waste matrix codes that bound the waste stream.

4.4.12 Assign and describe the waste matrix code assigned to each waste stream identified.

NOTE

The Waste Matrix Code Groups identified in CCP-PO-001 are:

- Solidified inorganics
- Solidified organics
- Salt waste
- Soils
- Lead/cadmium metal
- Inorganic nonmetal waste
- Combustive waste
- Graphite
- Filters
- Heterogeneous debris waste
- Uncategorized metals

4.4.13 Assign the waste stream to the appropriate Waste Matrix Code Group.

4.4.14 Assign the waste stream to the appropriate summary category group as defined below:

- S3000 Homogeneous Solids – Homogeneous solids are defined as solid material, excluding soil, that does not meet the New Mexico Environment Department (NMED) criteria for classification as debris (20.4.1.800 New Mexico Administrative Code [NMAC] [incorporating 40 CFR §268.2(g) and (h)]). Included in the series of homogeneous solids are inorganic process residues, inorganic sludges, salt waste, and pyrochemical salt waste. Other waste streams are included in this Summary Category Group based on the specific waste stream types and final waste form. This Summary Category Group is expected to contain toxic metal and spent solvents. This category includes wastes that are at least 50 percent by volume homogeneous solids.

- S4000 Soil/Gravel – This Summary Category Group includes S4000 waste streams that are at least 50 percent by volume soil/gravel. This Summary Category Group is expected to contain toxic metals.

- S5000 Debris Wastes – This Summary Category Group includes heterogeneous waste that is at least 50 percent by volume material that meets the criteria specified in 20.4.1.800 NMAC (incorporating 40 CFR §268.2[g]). Debris means solid material exceeding a 2.36 inch (60 millimeter) particle size that is intended for disposal and that is a manufactured object, plant or animal matter, or natural geologic material. Particles smaller than 2.36 inches in size may be considered debris if the debris

is a manufactured object and if it is **NOT** a particle of S3000 or S4000 material.

4.4.15 **IF** waste DOES **NOT** include at least 50 percent of any given Summary Category Group by volume,
THEN perform characterization using the waste characterization process required for the summary category constituting the greatest volume of waste for that waste stream.

4.4.16 Review the AK information to determine if the waste is listed under 20 NMAC 4.1.200 (incorporating 40 CFR 261.30), Subpart D. If so, assign the appropriate HWNs.

4.4.17 Review the AK information to determine if a toxicity characteristic 20 NMAC 4.1.200 (incorporating 40 CFR 261.20), Subpart C contaminant is identified and has **NOT** been assigned a listed HWN from step 4.4.16. Evaluate the available data and assign the toxicity characteristic HWN consistent with RCRA requirements.

4.4.18 Compare the HWNs assigned from steps 4.4.16and 4.4.17 to the Hazardous Waste Numbers listed in the WIPP Hazardous Waste Facility Permit (HWFP).

4.4.19 **IF** any HWNs are **NOT** included in the WIPP HWFP,
THEN notify the SPM.

4.4.20 Include the justification and basis for steps 4.4.16 and 4.4.17 in the TRU waste stream-specific description of the AK Summary Report, **AND** complete the, Hazardous Constituents form,
(see Attachment 5, Hazardous Constituents - Example Form).

4.4.21 Print name, sign, and date Hazardous Constituents form.

4.4.22 Assess available AK radionuclide data.

4.4.23 For LANL sealed sources, confirm sufficient radionuclide data is available in accordance with CCP-TP-101, *CCP Off-Site Source Recovery Project Sealed Source Radiological Characterization.*

4.4.24 For contact-handled (CH) waste streams and RH waste streams characterized using NDA techniques, review all source documents to determine the two most prevalent radionuclides for the waste stream, and estimated isotopic ratios for the following 10 WIPP-required radionuclides: Sr-90; Cs-137; U-233; U-234; U-238; Pu-238; Pu-239; Pu-240; Pu-242; and Am-241.

4.4.25 Prepare an NDA Memorandum to CCP Records (CH waste only), evaluating the radionuclide characterization of the waste stream. The NDA Memorandum must include a section for an assessment

written with the NDA EA determining how the AK will be applied during assay. For LANL sealed sources waste, the NDA Memorandum must include a section written with the OSR Radiological Characterization Technical Supervisor (RCTS). This assessment should include a discussion of the limitations of the radiological characterization in the AK document and a description of the required assay methods, if any. Any NDA issues for both measured and calculated radionuclides should be discussed and resolved.

4.4.26 **IF** AK is intended as the sole basis for meeting the radiological characterization requirements in CCP-PO-002,
THEN state so in the AK Summary Report.

4.4.27 Prepare a Waste Material Parameter Evaluation Memorandum to CCP Records that estimates the waste material parameter weights for the waste stream. The expected weight percent for each waste material parameter will be calculated using historical waste generator information for the materials in the waste stream or industry documentation for similar waste inventories. This evaluation should include the technical assumptions, justification, and limitations for the estimated weight percentages.

NOTE

The WIPP-WAP allows the generator to utilize visual examination (VE) and real-time radiography (RTR), if there is insufficient AK to estimate for the waste material parameter weight percentages.

AKE

4.4.28 Complete the following forms as appropriate:

[A] See Attachment 6, Waste Form, Waste Material Parameters, Prohibited Items, and Packaging - Example Form for an example. Include the Waste Material Parameter Evaluation Memorandum described in step 4.4.27 as an addendum to Waste Form, Waste Material Parameters, Prohibited Items, and Packaging.

[B] See Attachment 7, Radionuclides - Example Form (CH only), for an example. Include the NDA Memorandum (signed by the AKE and NDA EA) described in step 4.4.25 as an addendum to Radionuclides.

[C] See Attachment 8, Waste Containers List – Example Form, (or an equivalent form, e.g., spreadsheet). Prepare or update the Container Tracking Spreadsheet as described in Section 4.11 for the containers identified in Waste

Containers List and corresponding Waste Stream Container Evaluation Memorandum prepared in steps 4.10.3 and 4.10.4.

4.4.29 Print name, sign, and date all forms generated in step 4.4.28.

4.4.30 Review the waste management program AK documentation specified on the Acceptable Knowledge Documentation Checklist, **AND** write a TRU Waste Management Program Description that addresses AK #s PR1-PR8 in Acceptable Knowledge Documentation Checklist. Include the following:

- Correlation to the waste stream identification and description found in the ATWIR or indication that the waste stream was not included in the ATWIR.
- Determination of whether the TRU waste materials were generated as a result of, or mixed with materials from, defense-related activities as specified in CCP-PO-002.

4.4.31 **IF** prohibited items or incompatible materials are listed on the Waste Form, Waste Material Parameters, Prohibited Items, and Packaging,
THEN perform the following:

[A] Notify the SPM.

SPM

[B] Notify the Host site as directed in the Interface Document between CCP and that site.

AKE

4.4.32 Correlate TRU waste management program information (AK #s PR1 - PR8) with TRU waste stream-specific information (AK #s WS1 - WS12) with regard to the time of generation, waste generation processes, rate and quantity of newly generated waste (when appropriate), and areas and building or facility where the waste stream was generated (Acceptable Knowledge Documentation Checklist).

4.4.33 Identify AK source document tracking numbers, as applicable, in the TRU waste management program description and TRU waste stream-specific description.

4.4.34 Review the waste stream-specific AK documentation specified on the Acceptable Knowledge Documentation Checklist and

information developed in steps 4.4.11 through 4.4.33), **AND** describe the waste stream in the AK Summary Report, including the following:

[A] Waste stream description and waste stream number. The waste stream number is limited to 20 alpha-numeric characters.

[B] Explain the selection of the waste matrix code in the TRU waste stream-specific description of the AK Summary Report.

[C] Ensure the description of the waste stream is sufficient to allow the radiography and VE Operators to determine whether the waste in individual containers is included in the waste stream and matches the assigned waste matrix code.

[D] Include the justification and basis for determination of waste material parameters weights expected in the waste stream.

[E] Include the justification and basis for the method by which the radionuclide AK has been compiled.

[F] For waste streams characterized using NDA, state the method for determination of the (2) most prevalent radionuclides (see CCP-PO-002).

[G] Include the following assessment information:

- Waste identification and categorization schemes relevant to the isotopic composition of the waste
- Description of the isotopic composition of waste streams
- Physical/chemical composition that could affect isotopic distributions
- Numerical adjustments (e.g., scaling factors, decay/ingrowth corrections and secular equilibrium consideration) applied to derive isotopic compositions
- Isotopic ratios for the 10 WAC - specified radionuclides
- Radionuclides that comprise 95 percent of the radioactive hazard

[H] Provide justification for the assumption that the waste stream is TRU waste, (i.e., it contains more than 100 nanocuries

[nCi] of alpha-emitting radionuclides with half-lives greater than 20 years per gram of waste), as specified in CCP-PO-002.

[I] For waste streams with containers selected for payload management, include an assessment estimating the percentage of the TRU waste stream volume above and below 100 nanocuries per gram (nCi/g) in accordance with CCP-PO-002. The AK Summary Report must demonstrate that the waste stream has been historically managed as TRU waste, as applicable for payload management.

[J] Provide justification for determining the physical form, (i.e., solid or particulate) and estimated concentration of beryllium (metal and oxides) for each container within the waste stream as required in CCP-PO-002.

[K] Provide justification for determining that each prohibited item is not present in the waste stream or describe the potential for prohibited items and how they will be identified and remediated. Identify process controls associated with the management of prohibited items, physical form, and hazardous waste content.

[L] Provide justification for determining if any waste in the waste stream contains polychlorinated biphenyls (PCBs) in concentrations equal to or greater than 50 parts per million (ppm). Identify the type of waste containing PCB contamination (e.g., remediation, bulk product), **AND** provide justification for determining that the waste stream will **NOT** contain residual PCB liquids as defined in CCP-PO-002.

[M] For waste streams assigned the EPA Hazardous Waste Number U134 for hydrofluoric acid, provide information demonstrating neutralization of this acid, if available, as required by CCP-PO-001.

[N] **IF** correlating or surrogate information from similar materials or waste streams generated at the same site or other sites is used to support the characterization of the waste stream, **THEN** complete the CCP TRU Waste Correlation and Surrogate Summary Form (see Attachment 15, CCP TRU Waste Correlation and Surrogate Summary Form – Example Form) **AND** describe the use of the information in the AK Summary Report.

[O] For RH waste streams, identify the AK and/or characterization methods to be used to meet the DQOs. Identify how each DQO will be met and describe the qualification method(s) selected for AK used solely to meet a specific DQO in the AK Summary Report.

4.4.35 Summarize the waste stream-specific description in Section 2.0 of the AK Summary Report. Provide a physical, chemical, and radiological description of the waste stream in Section 5.0 of the AK Summary Report (see Attachment 12 for an example format and content guide to be used when preparing the AK Summary Report). This description may be abbreviated for use on attachments as needed.

NOTE

Use the Example Form and Content Guide for AK Summary Reports in Attachment 12 to prepare the AK Summary Report. This guide provides the recommended format for preparation of the reports. However, the format of the report and content of the sections may vary, as long as the required AK elements are presented.

4.4.36 Prepare the AK Summary Report by combining the TRU waste management program description and each of the completed TRU waste stream-specific descriptions, as well as the information from forms 1-8 and Acceptable Knowledge Source Document Discrepancy Resolution (see Attachment 11 for an example), if applicable.

4.4.37 Submit the AK Summary Report to Document Services to initiate the review and approval process in accordance to CCP-QP-010, *CCP Document Preparation, Approval, and Control.*

NOTE

Electronic media for historical source documents shall be managed in accordance with CCP-QP-008, *CCP Records Management*.

AKE

4.4.38 Submit records identified in Section 5.0 to CCP Records in accordance with CCP-QP-008.

NOTE
As the AK Summary Report is revised, resubmit report to CCP Document Services.

4.5 Waste Stream Characterization

NOTE
The Attachment 9, Waste Characterization Data Cross-Reference, is provided as an aid in determining the appropriate characterization method (i.e., HSG, VE, Radiography, NDA, and solids analysis) for each characterization parameter.

NOTE
The following comparison may be performed for a waste stream or a waste stream lot.

SPM

4.5.1 Ensure that audit and other internal and external surveillance reports relating to CCP characterization programs are available.

4.5.2 **IF** any AK Sufficiency Determination Request has been approved by Carlsbad Field Office (CBFO) for any characterization parameter (see Section 4.7),
THEN note the approved scenario on the CCP Waste Stream Characterization Checklist (see Attachment 13, CCP Waste Stream Characterization Checklist - Example Form), for that parameter.

4.5.3 Compare the results of analyses from head space gas (HSG), VE, Radiography, NDA, and solids analysis characterization activities to the waste stream AK by completing a CCP Waste Stream Characterization Checklist, as applicable to certify a waste stream (or lot) for disposal at WIPP.

[A] Headspace Gas (HSG) Analytical Data

[A.1] Compare AK information for S5000 waste streams in Hazardous Constituents (Attachment 5) to Headspace Gas data in CCP-TP-003, *CCP Data Analysis for S3000, S4000, and S5000 Characterization,* Attachment 3, CCP Headspace Gas UCL_{90} Evaluation Form, obtained from CCP Records.

[A.2] Compare each hazardous UCL_{90} from CCP-TP-003, Attachment 3, to the Program Required Quantification Limit (PRQL) for that constituent to resolve AK concerning the presence or absence of F-listed

solvents and concentration of toxicity characteristic solvents in the HSGs.

[A.3] **IF** the UCL_{90} for the mean concentration exceeds the PRQL for a particular constituent that is **NOT** listed in the AK Summary Report (or Hazardous Constituents of this procedure),
THEN note the inconsistency on CCP Waste Stream Characterization Checklist, **AND** proceed with Section 4.8 of this procedure.

[B] Solids Analytical Data

[B.1] Compare the solids analytical results as listed in the appropriate form associated with CCP-TP-003, with AK information in Hazardous Constituents to resolve AK information associated with S3000 and S4000 waste streams.

[B.2] **IF** AK information CAN **NOT** be resolved upon completion of the comparison,
THEN note any inconsistencies on CCP Waste Stream Characterization Checklist, **AND** proceed with Section 4.8 of this procedure.

[C] Radiography and VE Data

[C.1] Compare Radiography and VE results (obtained from CCP Records) in VE Data Forms, and Radiography Data Sheets to AK information in Waste Form, Waste Material Parameters, Prohibited Items, and Packaging of this procedure to verify the physical form of the waste stream and absence of prohibited items.

[C.2] **IF** AK information CAN **NOT** be resolved upon completion of these comparisons,
THEN note any inconsistencies on CCP Waste Stream Characterization Checklist, **AND** proceed with Section 4.8 of this procedure.

[D] NDA Data

[D.1] Compare radionuclides reported on Attachment 7 by Weight percent, Activity, or other parameters justified in the AK Summary Report with NDA Radioassay results.

[D.2] Identify the two most prevalent radionuclides.

[D.3] Compare ratios of the prevalent radionuclides identified, **AND** determine isotopic ratios for each drum in the waste stream lot.

[D.4] Report the differences between ratios expected from AK and those determined by NDA in the CCP Waste Stream Characterization Checklist.

[D.5] Identify drums in which isotopic ratios for the two prevalent radionuclides differ by greater than 50 percent; provide rationale in the Comment section of CCP Waste Stream Characterization Checklist, if this condition was anticipated based on AK, otherwise notify the AKE to perform a re-evaluation.

[D.6] **IF** Am-241 is **NOT** used for isotopic ratioing, **THEN** compare Am-241 content reported in the AK Summary Report (after decay correction) to Am-241 found in each container, **AND** justify why Am-241 was not used for ratioing.

[D.7] When applicable, provide a description of results.

[D.8] Attach data and applicable description to CCP Waste Stream Characterization Checklist.

[D.9] **IF** AK information CAN **NOT** be resolved upon completion of these comparisons, **THEN** note any inconsistencies on CCP Waste Stream Characterization Checklist, **AND** proceed with Section 4.8 of this procedure.

4.5.4 **IF** AK information can be resolved upon completion of the comparisons with the analytical results, **THEN** print name, sign, and date CCP Waste Stream Characterization Checklist, **AND** forward it to the AKE for signature **AND** submit to CCP Records.

4.6 Determining AK Documentation Accuracy

NOTE

The quality assurance objectives (QAOs) and their applicability to AK are discussed in CCP-PO-001. Calculation of the accuracy of AK documentation is required and is performed as follows.

SPM

4.6.1 Obtain a copy of the completed CCP Waste Stream Characterization Checklist, **AND** any Acceptable Knowledge Re-evaluation Checklists (see Attachment 10, CCP Waste Stream Characterization Checklist), applicable to the waste stream or waste stream lot, and any necessary supporting documentation from CCP Records.

NOTE

The Acceptable Knowledge Accuracy Report is used to determine the percentage of containers reassigned to a new waste matrix code, designated with a hazardous waste number assignment different from AK, or inconsistent with anticipated radionuclide composition determined from AK.

NOTE

For AK Accuracy Reports that are prepared for waste stream lots within a waste stream, updates to AK accuracy shall be issued periodically. Although there is no specified timeframe for AK accuracy updates, they should typically be issued annually.

4.6.2 Complete the CCP Acceptable Knowledge Accuracy Report (see Attachment 14, CCP Acceptable Knowledge Accuracy Report - Example Form), after characterization has been completed for a subset of containers in the subject waste stream or waste stream lot.

4.6.3 Prepare an AK Accuracy Memorandum summarizing the following AK accuracy information:

[A] Purpose

[B] Methodology

[C] Results of accuracy determination

[D] Other considerations, if applicable

[E] Summary

4.6.4 For RH waste, **IF** the AK accuracy falls below 90 percent for assigning containers to a Summary Category Group,
THEN CBFO shall be notified of this significant condition adverse to quality, **AND** appropriate corrective actions implemented before proceeding with further characterization activities on the affected waste stream, in accordance with CCP-QP-004, *CCP Corrective Action Management*.

NOTE

For RH waste, significant discrepancies between the radionuclide information in the AK record and measured values will be assessed during preparation of the Acceptable Knowledge Accuracy Report. What constitutes a significant discrepancy will depend on site- and waste stream-specific considerations for each waste stream

4.6.5 For RH waste, describe any significant discrepancies between the radionuclide information in the AK record and measured values in the Acceptable Knowledge Accuracy Report.

4.6.6 Review, print name, sign, and date **AND** submit CCP Acceptable Knowledge Accuracy Report to CCP Records. At the option of the SPM, CCP Acceptable Knowledge Accuracy Report may list only the containers with accuracy issues, as long as the complete list of containers represented by the accuracy report is included by attachment to, or referenced in, the cover memorandum or letter.

4.7 AK Sufficiency Determination

SPM/AKE

NOTE

An AK Sufficiency Determination Request to meet all or part of the waste characterization requirements may be used if AK information available for a waste stream permits.

4.7.1 Evaluate the AK information available for a waste stream to determine if an AK Sufficiency Determination is possible or desirable.

4.7.2 Determine which AK Sufficiency Determination scenario applies using the following definitions:

[A] Scenario 1 – Radiography or VE of the waste stream is not required, and chemical sampling and analysis is not required (CH only);

[B] Scenario 2 – Radiography or VE of the waste stream is not required, but chemical sampling and analysis of a representative sample of the waste stream is required (CH only); or

[C] Scenario 3 – Chemical sampling and analysis is not required, but radiography or VE of 100 percent of the containers in the waste stream is required.

4.7.3 Establish what characterization, if any, will be required based on the proposed scenario and the available AK information.

4.7.4 Prepare an AK Sufficiency Determination Request that includes the following information:

[A] An introduction that briefly describes the waste stream, the type of AK Information available, whether AK alone can be used to meet the characterization requirements or if additional characterization is required.

[B] Identification of the scenario for which the approval is sought (Section 4.7.2).

[C] Identification of any mandatory requirements supported only by upper tier documents (i.e., there is insufficient supporting data).

[D] Description demonstrating that the AK process described in CCP-PO-001 was followed (for example, AK personnel were appropriately trained; discrepancies were documented, etc.).

[E] Information demonstrating that CCP has assessed the AK process (e.g., internal audits).

4.7.5 Obtain copies of the following information from CCP Records and attach to the AK Sufficiency Determination Request:

[A] AK Summary Report for the waste stream;

[B] Acceptable Knowledge Documentation Checklist providing an AK roadmap and cross reference between mandatory programmatic and waste stream information with references supporting these requirements.

[C] Acceptable Knowledge Information List, providing a complete reference list including all mandatory and additional AK documentation.

[D] Current revision of this procedure to demonstrate that CCP has developed a written procedure for compiling AK information and assigning hazardous waste numbers.

[E] Relevant additional information for the required programmatic and waste stream data addressed in the AK Summary Report, as applicable or if requested by CBFO.

4.7.6 Submit the AK Sufficiency Determination Request and attachments to the SPM for approval and submittal to CBFO.

4.7.7 **IF** comments are received from CBFO,
THEN address the comments and resubmit the AK Sufficiency Determination Request.

4.8 Re-evaluating AK Documentation

NOTE

Differences in waste matrix codes, state and EPA Hazardous Waste Numbers, and NDA results may exist between those previously assigned in the AK documentation and those indicated as a result of waste characterization activities performed to certify waste for disposal at the WIPP or during the confirmation testing performed by the Permittee. The presence of tentatively identified compounds may also be confirmed by HSG analysis as described in CCP-TP-003. Under these circumstances, the AK information is re-evaluated and the required AK information associated with the new designation is documented. Sampling and analytical data associated with the waste is re-evaluated and changes in AK resulting from the re-evaluation are documented. Because listed wastes are **NOT** defined based on concentration, EPA HWNs assigned using AK CAN **NOT** be removed if associated constituents are **NOT** detected in the HSG or solids sample analyses.

SPM

4.8.1 **IF** re-evaluation is warranted as a result of 1) inconsistencies noted during the process of comparing AK information to characterization results **OR** 2) the initiation of an nonconformance report (NCRs) that identifies potential changes to the AK of a waste stream (including NCRs generated as a result of discrepancies identified during confirmation testing performed by the Permittee),
THEN notify the AKE.

AKE

4.8.2 Retrieve copies of applicable characterization data and AK information from CCP Records.

4.8.3 **IF** a waste must be assigned to a different waste matrix code (i.e., different waste stream or waste stream lot) based on Radiography or VE,
THEN perform the following:

[A] Review existing information based on the waste container identification number and document all differences in EPA HWN assignments. Consider all generator specific waste streams and hazardous waste number assignments; original site-specific permit requirements; and other state-enforced agreements in this analysis.

[B] **IF** differences exist in the EPA Hazardous Waste Numbers that were assigned,
THEN reassess **AND** document required applicable AK information associated with the new designation.

[C] Reassess **AND** document applicable sampling and analytical data associated with the waste.

[D] Verify **AND** document that waste with a reassigned waste matrix code was generated within the specified time period, area buildings and waste generating process; and that the process material inputs are consistent with the waste material parameters identified during Radiography or VE.

[E] Record all changes to the AK records on the appropriate forms and resubmit to CCP Records.

[F] **IF** unresolved discrepancies exist in the AK information for the reassigned Waste Matrix Code, EPA Hazardous Waste Numbers, or radionuclides,
THEN document the segregation of this container, **AND** define the actions necessary to fully characterize the waste.

4.8.4 **IF** characterization results (i.e., testing and analytical data) indicate that additional or different EPA Hazardous Waste Numbers may apply to the waste,
THEN review the existing AK and characterization information, **AND** perform the following:

[A] **IF** a hazardous constituent is present in the analytical results,
THEN assign the applicable state and EPA Hazardous Waste Numbers unless an alternative assignment can be justified or representative quantitative data are available to preclude the assignment.

NOTE

An alternative assignment may be justified if the hazardous waste spent solvent constituents identified by HSG analysis can be attributed to packaging materials, radiolysis, or another use inconsistent with use as a solvent.

[B] DO **NOT** remove the F-listed Hazardous Waste Number assigned by AK based on confirmatory HSG or solids analytical results.

[C] In the case of applicable toxicity characteristic Volatile Organic Compounds (VOCs) and non-toxic F003 constituents, assess whether the HSG or solids concentrations would render the waste non-hazardous for those characteristics and change the initial AK determination accordingly.

4.8.5 **IF** NDA results indicate the presence of additional or different radionuclides in the waste,
THEN review existing AK and characterization information.

4.8.6 Document the need for changes in the appropriate comment section of the Acceptable Knowledge Re-evaluation Checklist.

4.8.7 Resolve all AK documentation discrepancies as described in Section 4.9 of this procedure.

4.8.8 Modify the AK Summary Report as appropriate.

4.8.9 Forward the completed Acceptable Knowledge Re-evaluation Checklist **AND** the revised AK Summary Report to the SPM for review and approval.

4.8.10 Submit changes to the Document Writers for distribution and approval.

SPM

4.8.11 Review the Acceptable Knowledge Re-evaluation Checklist and the revised AK Summary Report.

4.8.12 **IF** the AK Summary Report requires correction,
THEN return to AKE.

4.8.13 **IF** no correction is required,
THEN approve the Acceptable Knowledge Re-evaluation Checklist by printing name, signing, and dating the checklist.

4.8.14 Approve the revised AK Summary Report.

4.8.15 Review the WSPF to see if the change to the AK Summary Report affects the WSPF.

4.8.16 **IF** the WSPF requires change,
THEN revise the WSPF in accordance with CCP-TP-002.

4.8.17 Submit the Acceptable Knowledge Re-evaluation Checklist and revised AK Summary Report to CCP Records.

[A] Any new source documents referenced in the revised AK Summary Report and the applicable attachments must be submitted to CCP Records on or before the date of issuance of the revised AK Summary Report as final.

4.8.18 Once the re-evaluation is approved, complete the CCP Waste Stream Characterization Checklist, as described in step 4.5.3.

4.9 Resolving AK Discrepancies

NOTE
AK discrepancies may be identified during AK source document compilation, review, characterization, confirmation, and re-evaluation activities.

AKE

4.9.1 Document the nature of the discrepancy **AND** identify the documents involved for the particular waste stream or waste container on the Acceptable Knowledge Source Document Discrepancy Resolution or in the appropriate section of the AK Summary Report.

4.9.2 Use information from interviews, telephone contacts, or other correspondence or other supporting information (such as confirmatory sampling and analysis) to resolve the discrepancy.

4.9.3 Record interviews, telephone conversations, and correspondence needed to resolve discrepancy issues on a Record of Communication.

4.9.4 Print name, sign, and date a Record of Communication.

4.9.5 Complete an Acceptable Knowledge Source Document Summary for each Record of Communication form.

4.9.6 Print name, sign, and date Acceptable Knowledge Source Document Summary, attach to the Record of Communication form, **AND** submit to CCP Records.

4.9.7 Verify that process inputs (hazardous constituents and waste material parameters) are consistent with waste material parameters identified during Radiography and VE.

4.9.8 Assign **OR** revise the AK identified waste material parameters, as necessary, and document the change and the assumptions made on the Acceptable Knowledge Source Document Discrepancy Resolution.

4.9.9 Assign **OR** reassign waste matrix codes, as necessary, using guidance specified in the DOE/LLW-217, **AND** document the assignment and assumptions made on the Acceptable Knowledge Source Document Discrepancy Resolution.

4.9.10 Evaluate the sources of discrepancies among sources of isotopic distribution data to determine whether the sources are credible. Identify limitations of data **AND**, if the data is **NOT** used, provide a justification on the Acceptable Knowledge Source Document Discrepancy Resolution. Otherwise, describe data limitations in the AK Summary Report, as applicable.

4.9.11 Assign or revise the identified radionuclides present, as necessary, **AND** document the change and the assumptions made on the Acceptable Knowledge Source Document Discrepancy Resolution.

4.9.12 Assign or revise state and EPA Hazardous Waste Number, as necessary. Assign the Hazardous Waste Numbers consistent with RCRA requirements. Document the assignment and the assumptions and justifications made on the Acceptable Knowledge Source Document Discrepancy Resolution.

4.9.13 Obtain the affected AK source documentation, as necessary.

4.9.14 Make necessary changes to Acceptable Knowledge Source Document Summary, as appropriate.

4.9.15 Complete, print name, sign, and date the Acceptable Knowledge Source Document Discrepancy Resolution documenting final disposition of the discrepancy.

4.9.16 Complete, print name, sign, and date an Acceptable Knowledge Source Document Summary for each Acceptable Knowledge Source Document Discrepancy Resolution.

4.9.17 Attach the Acceptable Knowledge Source Document Summary to the Acceptable Knowledge Source Document Discrepancy Resolution.

4.9.18 **IF** the form consists of multiple pages,
THEN add a footer identifying the page number and total number of pages.

4.9.19 Forward the form and supporting documentation (if requested) to the SPM for review and concurrence.

SPM

4.9.20 Review the Acceptable Knowledge Source Document Discrepancy Resolution and supporting documentation, as applicable, print name, sign, and date the form if the discrepancy has been resolved, **AND** forward the completed form to the AKE.

AKE

4.9.21 Confirm that the Acceptable Knowledge Source Document Discrepancy Resolution is signed and dated by the SPM.

4.9.22 Submit the original Acceptable Knowledge Source Document Discrepancy Resolution and supporting documentation, as applicable, to CCP Records.

4.9.23 Revise the AK Summary Report as needed.

NOTE

Discrepancies which CAN **NOT** be resolved by CCP will result in the container being returned to the Host site. If the discrepancy is **NOT** container-specific, containers from the subject waste stream will **NOT** be shipped to WIPP until such time as the discrepancy has been resolved. If the discrepancy is related to radiological characterization, notify the SPM that direct measurements of the impacted waste population may be required.

SPM

4.9.24 **IF** the discrepancy CAN **NOT** be resolved,
THEN issue an NCR (if not already identified in an NCR) and manage corrective actions in accordance with CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*, CCP-QP-006, CCP *Corrective Action Reporting and Control*, and the CCP/site interface document.

4.9.25 Record the NCR number on the Acceptable Knowledge Source Document Discrepancy Resolution.

4.9.26 Coordinate with the Host site to place a hold tag on, **AND** segregate waste containers associated with the NCR, if applicable, in accordance with applicable procedures.

4.9.27 Assess the potential timeframe of the noncompliance, the potentially affected waste populations, and the reassessment and recertification of the waste, if applicable.

4.9.28 Coordinate resolution of the nonconforming condition with the AKE and the SPM.

4.9.29 Document information identified during the corrective action process as described in CCP-QP-005, and document any supporting AK information generated by this effort on the discrepancy form.

4.9.30 Once the discrepancy is resolved, applicable NCR(s) closed, and corrective action is completed, sign and date the Acceptable Knowledge Source Document Discrepancy Resolution **AND** forward the form to the AKE.

AKE

4.9.31 **WHEN** discrepancies are resolved, applicable NCRs are closed, **AND** corrective actions completed,
THEN review the discrepancy form, assign the appropriate waste material parameters, waste matrix code, radionuclides or hazardous waste numbers as applicable, **OR** justify the use of alternates and confirm that it has been signed.

4.9.32 Submit the original Acceptable Knowledge Source Document Discrepancy Resolution to CCP Records.

4.10 Updating AK for Additional Waste Stream Containers

NOTE

The following process is followed when the SPM identifies additional containers to be included in a waste stream defined in an existing AK Summary Report. The Waste Containers List identifies the AK source document number(s) designated for the Waste Stream Container Evaluation Memorandum, adding containers, if applicable.

SPM

4.10.1 Provide the AKE with a list of containers to be assessed for inclusion in an existing waste stream.

AKE

4.10.2 Collect container-specific documentation and evaluate the following information for each container:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

4.10.3 **IF** the containers are bounded by the existing AK Summary Report for the waste stream,
THEN notify the SPM **AND** submit a Waste Stream Container Evaluation Memorandum documenting the evaluation to CCP Records.

4.10.4 **IF** the containers are **NOT** bounded by the existing AK Summary Report, but should be included in the waste stream,
THEN revise the AK Summary Report; update the Waste Containers List; notify the SPM, **AND** revise and submit the updated Waste Containers List and Waste Stream Container Evaluation Memorandum documenting the evaluation to CCP Records.

4.11 Container Tracking Spreadsheet Development

AKE or Designee

4.11.1 Develop a spreadsheet which identifies the following minimum criterion for each container listed on Waste Containers List:

- Container I.D.
- Waste Stream I.D.
- Generation Date
- Vent Date
- Change Reason
- New Closure Date

- New Vent Date
- Container Type

4.11.2 Post the copy of the Container Tracking Spreadsheet to the secure file transfer protocol (sftp) site.

4.12 Container Tracking Spreadsheet Maintenance

AKE or Designee

4.12.1 **WHEN** notified of a change to the status of a container(s) identified by the SPM, CCP personnel, Host site personnel, or during the addition of containers to the waste stream inventory,
THEN evaluate the change based on the data provided.

[A] **IF** the change is routine and DOES **NOT** adversely affect data,
THEN GO TO step 4.12.2.

[B] **IF** the change is non-routine or adversely affects data,
THEN notify the SPM to take the appropriate actions prior to proceeding to step 4.12.2.

4.12.2 Update the Container Tracking Spreadsheet and post the change to the sftp site.

4.12.3 Notify the SPM of the change.

5.0 RECORDS

5.1 Records generated during the performance of this procedure in Section 5.1.1 are maintained as QA records. The following records will be maintained in accordance with CCP-QP-008. The records are the following:

5.1.1 QA/Lifetime Records

[A] Acceptable Knowledge Documentation Checklist

[B] Records of Communication

[C] Acceptable Knowledge Source Document Summary forms, and when applicable attached CCP generated source documents

[D] Acceptable Knowledge Information List

[E] Hazardous Constituents forms

[F] Waste Form, Waste Material Parameters, Prohibited Items, and Packaging forms

- Waste Material Parameter Evaluation Memorandum

[G] Radionuclides forms

- NDA Memorandum

[H] Waste Containers List

[I] Acceptable Knowledge Re-evaluation Checklist

[J] Acceptable Knowledge Source Document Discrepancy Resolution, which include Acceptable Knowledge Source Document Summary forms as attachments

[K] CCP Waste Stream Characterization Checklist

[L] CCP Acceptable Knowledge Accuracy Report, including cover memorandum or letter

- AK Accuracy Memorandum

[M] CCP TRU Waste Correlation and Surrogate Summary Form

[N] AK Summary Reports

[O] AK Sufficiency Determination Request

[P] SPM Notifications (emails, letters, memorandums, etc.), as applicable

[Q] AK Container Tracking Spreadsheet (submitted to CCP Records after notification by the site SPM that waste shipments to WIPP have been completed)

5.1.2 Non-QA

[A] Historical Source Documents

Attachment 1 – Acceptable Knowledge Documentation Checklist - Example Form

Site(s): _____

Waste Stream Description:_____

Waste Stream Number(s): _____

Acceptable Knowledge Information	[1]AK#	Compiled? (Y/N)	Source Document Tracking Number
Mandatory generator site TRU waste program (PR) information[a]:			
Map of the generator site that identifies TRU waste generation, treatment, and storage areas.	PR1		
Generator site mission descriptions related to TRU waste generation and management identifying defense and non-defense operations.	PR2		
Overview of the generator site and generator site TRU waste management operations in the context of the facility's mission.	PR3		
Descriptions of historical and current TRU waste generating operations, including how waste is tracked and managed and/or how operations relative to isotopic composition were tracked.	PR4		
Waste identification and/or categorization schemes and terminology used at the generator site, including codes correlating to specific isotopic distributions.	PR5		
Types and quantities of TRU waste generated, including historical generation through future projections.	PR6		
Correlation of waste streams and description of time of generation, waste generating processes, and area and building/facility where each waste stream was generated.	PR7		
Certification procedures for waste to be sent to the WIPP facility (i.e., procedures to ensure that prohibited items are documented and managed in accordance with site-specific certification plans).	PR8		
Mandatory generator site TRU waste stream (WS)-specific information[a]:			
Waste stream designation	WS1		
Area(s) and building(s) from which the waste stream was or is generated.	WS2		
Waste stream volume and time period of generation	WS3		
Waste generating process (describe for each building) including processes associated with U134 waste generation, if applicable.	WS4		

Attachment 1 – Acceptable Knowledge Documentation Checklist - Example Form (Continued)

Waste Stream Number(s): _____

Acceptable Knowledge Information	(1)AK#	Compiled? (Y/N)	Source Document Tracking Number
Process flow diagrams. For research/development, analytical laboratory waste, or other similar processes where process flow diagrams cannot be created, a description of the waste generating processes, rather than a formal process flow diagram, may be included, if justified.	WS5		
Summary of basis and rationale for delineating each waste stream including justification for combining waste historically managed separately as TRU mixed and TRU non-mixed waste streams into a single waste stream, that is traceable to referenced documents.	WS6		
Generator site mission descriptions related to TRU waste generation and management identifying defense and non-defense operations.	WS7		
Material inputs or other information that identified the chemical contents of the waste and the stream. Includes events or processes that may have modified the chemical properties of the waste stream after generation.	WS8		
Physical waste form (e.g., glovebox materials and chemicals handled during glovebox operations, if applicable), assigned summary category group, waste matrix code and materials inputs, including waste material parameters present in the waste stream. Includes events or processes that may have modified the physical properties of the waste stream after generation.	WS9		
Waste identifiers assigned by the generator site (e.g., item description code, packaging identification numbers).	WS10		
Radionuclides present in the waste stream, if available particularly the isotopic distribution of the 10 WIPP-tracked radionuclides and/or the radionuclides that comprise 95% of the radiological hazard of the waste stream, if applicable. Chemical and physical information that could affect the waste isotopic distribution, as well as calculations used to derive the isotopic distribution.	WS11		
State and EPA hazardous waste constituents in the waste stream and state and EPA Hazardous Waste Numbers assigned, including documentation regarding how the site has historically managed the waste, including the historical regulatory status of the waste (i.e., TRU mixed versus TRU non-mixed waste).	WS12		

Attachment 1 – Acceptable Knowledge Documentation Checklist - Example Form (Continued)

Waste Stream Number(s): _____

Acceptable Knowledge Information	(1)AK#	Compiled? (Y/N)	Source Document Tracking Number	
Additional acceptable knowledge documentation (briefly describe):				
Process design documents (e.g., Title II Design)	S1			
Standard operating procedures that may include a list of raw materials or reagents, a description of the process or experiment generating the waste, and a description of the waste generated and how the wastes are managed at the point of generation	S2			
Preliminary and Final Safety Analysis Reports and technical safety requirements	S3			
Waste Packaging records	S4			
Test plans or research project reports that describe the reagents, radionuclides, and other raw materials used in experiments	S5			
Site databases (e.g., chemical inventory database for SARA Title III requirements, SNM or nuclear material databases)	S6			
Information from site personnel (e.g., documented interviews)	S7			
Standard industry documents (e.g., industry specification sheets, handbooks, reference materials, or other vendor information)	S8			
Analytical data relevant to the waste stream, including results from fingerprint analyses, spot checks, routine verification sampling or other processes that collected information pertinent to the waste stream. This may include new information (or previously collected data) which augments required information (e.g., visual examination not performed in compliance with CCP-PO-001, radiography screening for prohibited items).	S9			
Material Safety Data Sheets, product labels, or other product information	S10			
Laboratory notebooks that detail the research processes and raw materials used in an experiment	S11			
Comparable or surrogate sampling and analysis data	S12			
Other (describe)	S13			
Safeguards and security, Materials Control and Accountability, and other nuclear material control system data Reports of nuclear safety or criticality accidents involving special nuclear materials (SNM)	S14			

Attachment 1 – Acceptable Knowledge Documentation Checklist - Example Form (Continued)

Waste Stream Number(s): _____

Acceptable Knowledge Information	[(1)]AK#	Compiled? (Y/N)	Source Document Tracking Number	
NMMA logs or inventory records or waste disposal logs providing SNM or nuclear material information	S15			
Packaging	S16			
OSR-Specific Information				
Evidence that the waste meets the definition of a sealed source reference 10CFR30.4 and 10CFR835.2	O1[b]			
Documentation that sources are Special Form, such as certificates DOT Special Form Class 7 per 49CFR173.403	O2[b]			
Contamination survey results for each source reference requirements of 10CFR34.27	O3[b]			
Documentation that the sources contain no VOC-bearing materials	O4[b]			
Headspace gas data supporting a packaging VOC source term requirements	O5[b]			
Source manufacturer's sales catalogues	O6			
Source purchase records	O7			
Manufacturer fabrication documents	O8			
Manufacturer drawings	O9			
Fuel capsule assembly reports	O10			
Manufacturer's operational procedures for meeting cleanliness requirements	O11			
Manufacturer's shipping documents or records	O12			
Manufacturer welding records	O13			
TRU batch material records	O14			
National database radiological information (e.g., NMMSS, NRC Device Registry)	O15			
NRC or agreement state regulatory licensing information	O16			
Documentation of physical markings on the outer source casing or labels attached to devices housing sources	O17			
Unique physical description attributed to specific source models	O18			

Attachment 1 – Acceptable Knowledge Documentation Checklist - Example Form (Continued)

Acceptable knowledge information regarding waste generated off-site or from similar process:				

(1) AK#s are used as identifiers for program, waste stream-specific and supporting elements. The identifiers are to be used in the Acceptable Knowledge Source Document Summary and Acceptable Knowledge Information List to aid in the page location of program and waste stream-specific elements within a given document. N/A means that item is not applicable.

a. Specified in CCP-PO-001.

b. Required for OSR containers that will **NOT** undergo headspace gas sampling and analysis.

Additional comments:

All required AK information has been compiled and source document tracking numbers assigned.

Acceptable Knowledge Expert: _____ / _____ Date: _____
Print Sign

Attachment 2 – Record of Communication – Example Form

Corresponding Source Document Tracking No:		
Interviewer:	Date:	Time:
Interviewee:	Group/Organization: Job Title:	Phone: E-mail:
Subject:		
Summary:		
Data Limitations:		

Acceptable Knowledge Expert: _____ / _____ Date: _____
Print Sign

Attachment 3 – Acceptable Knowledge Source Document Summary – Example Form

Site(s):	Source Document Tracking Number:
Waste Stream Number: (Applicable only when site library is not in use)	
Acceptable Knowledge Documentation Type: ☐ TRU Waste Management Program Information ☐ Waste Stream-Specific Information ☐ Additional Information	Category: ☐ C - Correspondence ☐ D - Documents ☐ M - Miscellaneous ☐ P - Procedure ☐ DR - Discrepancy Resolution ☐ U - Unpublished Documents
Title or Description of Source Document [a]:	
Source Document Reference Information (author(s), document and revision number, date, publisher):	

AK #[b]	Source Doc. Page #[c]	AK Information Summary

Source Document Data Limitations (if any):

Acceptable Knowledge Expert:

_____/_____ Date: _____
Print Sign

[a] Provide description for non-titled information (i.e., container paperwork, MSDS sheets, etc)
[b] Obtain from Acceptable Knowledge Documentation Checklist
[c] For microfilm or microfiche, identify box, tape, reel number and location.

Attachment 4 –Acceptable Knowledge Information List – Example Form

Page 1 of 1

Site(s): _____

Waste Stream Number(s): _____

Waste Stream Description: _____

Source Document Tracking Number[a/c]	Title or Description [a]	Author	Document #[b]	Document Revision # and Date

[a] From Acceptable Knowledge Source Document Summaries (Attachments 3)
[b] Or publisher's document number if available
[c] In the case where an AK Summary Report has been revised based on information in Attachment 11 - Acceptable Knowledge Source Document Discrepancy Resolution form, identify the tracking number.

Acceptable Knowledge Expert: _____ / _____ Date: _____
Print Sign

Attachment 5 – Hazardous Constituents – Example Form

Site(s): _____

Waste Stream Description: _____

Waste Stream Number:										
Compound	Suspected Present? (Y/N)	Suspected Concen-tration (ppm)	Used as a solvent? [a] (Y/N/NA)	Associated with packaging? (Y/N/NA)	TC constituent concentration less than regulatory level? [a] (Y/N/NA)	TC Hazardous Waste Number [a]	F-Listed Hazardous Waste Number [a]	U- or P-Listed Hazardous Waste Number [a]	EPA Hazardous Waste Number Assigned (N/Specify HWN)	State Hazardous Waste Number [b]
Metal Compounds (CCP-PO-001 - Table C3-8 & 40 CFR Part 261) [l]										
Arsenic			N/A	N/A		D004	N/A	N/A		
Barium			N/A	N/A		D005	N/A	N/A		
Beryllium			N/A	N/A	N/A	N/A	N/A	P015		
Cadmium			N/A	N/A		D006	N/A	N/A		
Chromium			N/A	N/A		D007	N/A	N/A		
Lead			N/A	N/A		D008	N/A	N/A		
Mercury			N/A	N/A		D009	N/A	U151		
Selenium			N/A	N/A		D010	N/A	N/A		
Silver			N/A	N/A		D011	N/A	N/A		
Volatile Organic Compounds (CCP-PO-001 - Tables C3-2 and C3-4 & 40 CFR Part 261)										
1,1,1-Trichloroethane					N/A	N/A	F001/F002	U226		
1,1,2,2-Tetrachloroethane					N/A	N/A	N/A	U209		
1,1,2-Trichloro-1,2,2-trifluoroethane					N/A	N/A	F001/F002	N/A		
1,1,2-Trichloroethane					N/A	N/A	F002	U227 [k]		
1,1-Dichloroethane					N/A	N/A	N/A	U076 [k]		
1,1-Dichloroethylene						D029	N/A	U078		
1,2-Dichlorobenzene [d]					N/A	N/A	F002	U070		
1,2-Dichloroethane						D028	N/A	U077 [k]		
1,4-Dichlorobenzene [d]						D027	N/A	U072		
2-Ethoxyethanol					N/A	N/A	F005	U359 [k]		
2-Nitropropane					N/A	N/A	F005	U171 [k]		
Acetone					N/A	N/A	F003	U002		
Benzene						D018	F005	U019		

Attachment 5 – Hazardous Constituents – Example Form (Continued)

Waste Stream Number:										
Compound	Suspected Present? (Y/N)	Suspected Concen-tration (ppm)	Used as a solvent? [a] (Y/N/NA)	Associated with packaging? (Y/N/NA)	TC constituent concentration less than regulatory level? [a] (Y/N/NA)	TC Hazardous Waste Number [a]	F-Listed Hazardous Waste Number [a]	U- or P-Listed Hazardous Waste Number [a]	EPA Hazardous Waste Number Assigned (N/Specify HWN)	State Hazardous Waste Number [b]
Volatile Organic Compounds (continued)										
Bromoform					N/A	N/A	N/A	U225 [k]		
Butanol (n-Butyl alcohol)					N/A	N/A	F003	U031 [k]		
Carbon disulfide					N/A	N/A	F005	P022 [k]		
Carbon tetrachloride						D019	F001	U211 [k]		
Chlorobenzene						D021	F002	U037		
Chloroform						D022	N/A	U044		
Cyclohexanone					N/A	N/A	F003	U057 [k]		
Ethyl acetate					N/A	N/A	F003	U112 [k]		
Ethyl benzene					N/A	N/A	F003	N/A		
Ethyl ether					N/A	N/A	F003	U117 [k]		
Formaldehyde [g]					N/A	N/A	N/A	U122		
Hydrazine [h]					N/A	N/A	N/A	U133		
Isobutanol					N/A	N/A	F005	U140 [k]		
Methanol					N/A	N/A	F003	U154		
Methyl ethyl ketone						D035	F005	U159		
Methyl isobutyl ketone					N/A	N/A	F003	U161 [k]		
Methylene chloride					N/A	N/A	F001/F002	U080 [k]		
Pyridine [d]						D038	F005	U196		
Tetrachloroethylene						D039	F001/F002	U210		
Toluene					N/A	N/A	F005	U220		
trans-1,2-Dichloroethylene					N/A	N/A	N/A	U079		
Trichloroethylene						D040	F001/F002	U228		
Trichlorofluoromethane					N/A	N/A	F001/F002	U121 [k]		
Vinyl Chloride						D043	N/A	U043		
Xylenes					N/A	N/A	F003	U239		

Attachment 5 – Hazardous Constituents – Example Form (Continued)

Waste Stream Number:										
Compound	Suspected Present? (Y/N)	Suspected Concen-tration (ppm)	Used as a solvent? [a] (Y/N/NA)	Associated with packaging? (Y/N/NA)	TC constituent concentration less than regulatory level? [a] (Y/N/NA)	TC Hazardous Waste Number [a]	F-Listed Hazardous Waste Number [a]	U- or P-Listed Hazardous Waste Number [a]	EPA Hazardous Waste Number Assigned (N/Specify HWN)	State Hazardous Waste Number [b]
Semivolatile Organic Compounds (CCP-PO-001 - Table C3-6 & 40 CFR Part 261)										
2,4,5-Trichlorophenol						D041 [k]	F027 [k]	N/A		
2,4,6-Trichlorophenol						D042 [k]	F027 [k]	N/A		
2,4-Dinitrophenol					N/A	N/A	N/A	P048 [k]		
2,4-Dinitrotoluene						D030	N/A	U105		
Cresols						D026	F004	U052		
Cresols (m)						D024 [k]	N/A	N/A		
Cresols (o)						D023 [k]	N/A	N/A		
Cresols (p)						D025 [k]	N/A	N/A		
Hexachlorobenzene						D032	N/A	U127 [k]		
Hexachlorobutadiene						D033	N/A	U128 [k]		
Hexachloroethane						D034	N/A	U131 [k]		
Nitrobenzene						D036	F004	U169 [k]		
Pentachlorophenol						D037	F027 [k]	N/A		
Pesticides and Herbicides (40 CFR Part 261)										
2,4,5-TP (Silvex)						D017 [k]	F027 [k]	N/A		
2,4-D						D016 [k]	N/A	U240 [k]		
Chlordane						D020 [k]	N/A	U036 [k]		
Endrin						D012 [k]	N/A	P051 [k]		
Heptachlor (and its epoxide)						D031 [k]	N/A	P059 [k]		
Lindane						D013 [k]	N/A	U129 [k]		
Methoxychlor						D014 [k]	N/A	U247 [k]		
Toxaphene						D015 [k]	N/A	P123 [k]		

Attachment 5 – Hazardous Constituents – Example Form (Continued)

Waste Stream Number:										
Compound	Suspected Present? (Y/N)	Suspected Concen-tration (ppm)	Used as a solvent? [a] (Y/N/NA)	Associated with packaging? (Y/N/NA)	TC constituent concentration less than regulatory level? [a] (Y/N/NA)	TC Hazardous Waste Number [a]	F-Listed Hazardous Waste Number [a]	U- or P-Listed Hazardous Waste Number [a]	EPA Hazardous Waste Number Assigned (N/Specify HWN)	State Hazardous Waste Number [b]
Other Constituents										
Wastewater treatment sludges from electroplating operations			N/A	N/A	N/A	N/A	F006	N/A		
Spent cyanide plating bath solutions from electroplating operations			N/A	N/A	N/A	N/A	F007	N/A		
Spent cyanides stripping and cleaning bath solutions from electroplating operations			N/A	N/A	N/A	N/A	F009	N/A		
Total PCB Concentration [j]			N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Additional EPA Hazardous Constituents (List)										
Additional State Hazardous Constituents [b] (List) [e]										
Potentially Flammable VOCs (List) [e,f]			N/A							
Tentatively Identified Compounds (List) [e]										

Attachment 5 – Hazardous Constituents – Example Form (Continued)

a Source: Title 40 Code of Federal Regulations Part 261, Identification and Listing of Hazardous Waste
b. Source: Cite applicable state regulation
c. Superscript not used.
d. Can also be analyzed as a semivolatile organic compound
e. Add rows or attach additional sheets as necessary
f. Flammable VOCs included in the CH-TRAMPAC
g. Required only for homogeneous solids and soil/gravel from LANL and SRS
h. Required only for homogeneous solids and soil/gravel from ORNL and SRS
i. Antimony, nickel, thallium, vanadium, and zinc are included in Table C3-8 of CCP-PO-001but are not regulated under 40 CFR Part 261, and therefore, are not subject to AK evaluation per CCP-PO-001.
j. Source: Title 40 Code of Federal Regulations Part 761, Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions.
k. This EPA Hazardous Waste Number is not permitted for WIPP disposal.

NOTE: If any of the information requested on this form is not available or not applicable, enter N/A in the appropriate box.

Acceptable Knowledge Expert: _____ / _____ Date: _____
Print Sign

Attachment 6 – Waste Form, Waste Material Parameters, Prohibited Items, and Packaging – Example Form

Site(s): _____

Waste Stream Description: _____

Container ID Numbers: _____

Waste Stream Number:	
Physical Waste Form (e.g., debris, solidified waste)	
Summary Category Group[a]	
Waste Matrix Code Group[a]	
Waste Matrix Code[b]	
Waste Material Parameter Weights[c]	Estimated Waste Stream Weight Percent Average (attach evaluation justifying percentages)
Iron-based metals/alloys	
Aluminum-based metals/alloys	
Other metals	
Other inorganic materials	
Cellulosics	
Rubber	
Plastics (waste materials)	
Organic matrix	
Inorganic matrix	
Soils/Gravels	
Packaging materials	Present (Y/N)?
Steel	
Plastics	
Prohibited Wastes[d, e, f, g]	Present (Y/N)?
Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE. Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. Observable liquid shall not be present in a container with EPA HWN U134 assigned.	
Non-radionuclide pyrophoric materials	

Attachment 6 – Waste Form, Waste Material Parameters, Prohibited Items, and Packaging – Example Form (Continued)

Sealed containers > 4 liters	
Hazardous waste not occurring as co-contaminants with TRU mixed waste (non-mixed hazardous waste)	

Waste Stream Number: _____

Explosives	
Compressed gases	
Residual hydrofluoric acid (if U134 assigned to stream)	
Residual PCB liquids[j]	
Ignitables (EPA Hazardous Waste Number D001)	
Corrosives (EPA Hazardous Waste Number D002)	
Reactives (EPA Hazardous Waste Number D003)	
Waste incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials, or other wastes[h]	
Spent Nuclear fuel or high-level waste[i]	
Any unvented plastic bags > 4 liters that have been heat-sealed	
Additional Information (if available)	
Packaging	
Waste container type?	
Liner type?	
Is liner punctured?	
Is filter vent installed?	
Maximum number of confinement layers	

a. Source: *CCP Transuranic Waste Characterization Quality Assurance Project Plan* (CCP-PO-001) Introduction.
b. Source: *Transuranic Waste Baseline Inventory Report* (DOE/CAO-95-1121) or DOE Waste Treatability Group Guidance (DOE/LLW-217). Note: the waste matrix code should not be assigned at the summary category group level.
c. Source: CCP-PO-001 - Table C3-1. Attach the Waste Material Parameter Evaluation Memorandum used to estimate values include in this Table (see Section 4.4.27).
d. Source: CCP-PO-001 - Section C-1c.
e. Source: *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant* (WAC)(DOE/WIPP-02-3122), Section 3
f. Source: *TRUPACT-II Content Codes* (TRUCON) (DOE/WIPP 89-004)
g. Source: *TRUPACT-II Authorized Methods for Payload Control (TRAMPAC),* Washington TRU Solutions, LLC
h. This waste has been approved for disposal at the WIPP by the Permittee as documented by Appendix C1 of the WIPP RCRA Part B Permit Application and the Permittee's approval and assignment of the applicable TRUCON Codes for this waste stream.
i. Source: *Nuclear Waste Policy Act of 1982* (42 U.S.C. 10101)
j. Source: Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution and Commerce, and Use Prohibitions (40 CFR Part 761)

Acceptable Knowledge Expert: _____ / _____ Date: _____
Print Sign

Attachment 7 – Radionuclides – Example Form

*Attach current Radiological Characterization or NDA Memorandum

Site(s): _____

Waste Stream Number(s): _____

Waste Stream Description: _____

Radionuclide	Wt %[b]	Ci[b]	Suspected Present (Yes/No)
From CCP-PO-002			
Sr-90			
Cs-137			
U-233			
U-234			
U-238			
Pu-238			
Pu-239			
Pu-240			
Pu-242			
Am-241			
Other Radionuclides (List)			
[a]Source: *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant* (WAC) (DOE/WIPP-02-3122), Section 3 [b]If available			

Acceptable Knowledge Expert: _____ / _____ Date: _____
Print Sign

Attachment 8 – Waste Containers List – Example Form

(This attachment may be provided in a different format)

Site(s): _____

Waste Stream Number(s): _____

Waste Stream Description: _____

Number of Waste Containers in Waste Stream: _____

Total Existing Volume (m^3): _____

Is waste expected to be generated in the future?: _____

If yes, Estimated Future Volume (m^3): _____

Assumptions: _____

Waste Stream Container Evaluation Memo(s) for Added Containers: _____

Container Identification Number	Generation Date	Generation Point

Acceptable Knowledge Expert: _____ / _____ Date: _____
Print Sign

Attachment 9 – Waste Characterization Data Cross-Reference

NOTE: "X" identifies the methods of characterization for each parameter.

Characterization Parameters for Re-evaluation	Headspace Gas Analysis Data	Radiography Data	VE Data	Assay Data	Solid Waste Analysis Data
S3000:					
Summary Category Group, waste stream and Waste Matrix Code		X	X		
Waste Material Parameter Weights		X	X		
State and EPA Hazardous Waste Numbers		X	X		X
Radionuclide Content				X	
S4000:					
Summary Category Group, waste stream and Waste Matrix Code		X	X		
Waste Material Parameter Weights		X	X		
State and EPA Hazardous Waste Numbers		X	X		X
Radionuclide Content				X	
S5000:					
Summary Category Group, waste stream and Waste Matrix Code		X	X		
Waste Material Parameter Weights		X	X		
State and EPA Hazardous Waste Numbers	X	X	X		
Radionuclide Content				X	
LANL sealed sources waste streams meeting the qualification requirements of CCP-PO-001					
Summary Category Group, waste stream and Waste Matrix Code			X		

Attachment 9 – Waste Characterization Data Cross-Reference (Continued)

Characterization Parameters for Re-evaluation	Headspace Gas Analysis Data	Radiography Data	VE Data	Assay Data	Solid Waste Analysis Data
Waste Material Parameters			X		
State and EPA Hazardous Waste Numbers	X		X		
Radionuclide Content				X (AK Information)	
Sealed sources must be the only non-packaging items in the waste container, which must be verified using the VE technique at the time of packaging.			X		
Each sealed source must be, or be contained in, a rigid sealed container less than or equal to 4 liters in size, which must be verified using the VE technique at the time of packaging.			X		
The outer casing of each sealed source must be of a non-VOC bearing material, which must be verified using the VE technique at the time of packaging.			X		

EPA = Environmental Protection Agency
NDA = nondestructive assay
NDE = nondestructive examination (radiography)
S3000 = homogeneous solids summary category group
S4000 = soil/gravel summary category group
S5000 = debris waste summary category group
VE = visual examination

Attachment 10 – Acceptable Knowledge Re-evaluation Checklist – Example Form

Site(s): _____
Waste Stream Number(s): _____
Waste Stream Description: _____
NCR numbers(s) if applicable: _____
Inconsistency between waste characterization and acceptable knowledge information (describe): _____
_____

Requirements	Completed? Yes/No	Additional Documentation [a]
Review existing information based on the container identification number and document all differences in EPA Hazardous Waste Number assignments. [c]		
If differences exist in the EPA Hazardous Waste Numbers that were assigned, reassess and document all required AK information associated with the new designation. [b,c]		
Reassess and document all sampling and analytical data associated with the waste. [c]		
Verify and document that the reassigned Waste Matrix Code was generated within the specified time period, area and buildings, waste generating process, and that the process material inputs are consistent with the waste material parameters identified during RTR or VE.		
If NDA results indicate the presence of additional or different radionuclides in the waste, reassess and document AK and characterization information associated with the new information. [c]		
Record all changes to the AK records on the appropriate Attachments and resubmit to the CCP Facility Records Custodian.		
If unresolved discrepancies exist in the AK information for the reassigned Waste Matrix Code, EPA Hazardous Waste Numbers, or radionuclides, document the segregation of this container, and define the actions necessary to fully characterize the waste.		

a. Cite the source document, nonconformance report number, attachment, or other documentation used to support a change or no change.
b. If a toxicity characteristic contaminant is identified, it is not included as a listed waste, and analytical data regarding the concentration are not available, the corresponding EPA Hazardous Waste Number is applied.
c. Not applicable for LANL sealed source waste stream.

Acceptable Knowledge Expert:

_____ Date: _____
Print Sign

Site Project Manager:

_____ Date: _____
Print Sign

Attachment 11 – Acceptable Knowledge Source Document Discrepancy Resolution – Example Form

Waste Stream Number(s): _____

Waste Stream Description: _____

AK Source Document Discrepancy Form Tracking Number:

Tracking #	Category[a]	Title	Document/Rev#	Author	Date	Publisher	Page #

Nature of Discrepancy:

Resolution:

Discrepancy Resolved: [ ] Yes [ ] No

Acceptable Knowledge Expert: _____ / _____ Date: _____
Print Sign

Site Project Manager: _____ / _____ Date: _____
Print Sign

[a]Published Document or Controlled Database (Pub.); Unpublished Data (Unpub.); Internal Procedure or Note (Proc.); Correspondence (Corr.) or Discrepancy (Disc.)

Attachment 12 – Example Form and Content Guide for AK Summary Reports

CCP-AK-SITE-XXX

Central Characterization Project
Acceptable Knowledge Summary Report
For

NAME OF THE SITE
NAME OF THE PROCESS

REVISION NUMBER
DATE

Printed Name

APPROVED FOR USE

Attachment 12 – Example Form and Content Guide for AK Summary Reports (Continued)

TABLE OF CONTENTS
LIST OF TABLES
LIST OF FIGURES
LIST OF ATTACHMENTS
LIST OF ACRONYMS AND ABBREVIATIONS

Attachment 12 – Example Form and Content Guide for AK Summary Reports (Continued)

1.0 EXECUTIVE SUMMARY

This Acceptable Knowledge (AK) Summary Report has been prepared for the Central Characterization Project (CCP) for Contact-Handled (CH) (Remote-Handled [RH]) Transuranic (TRU) waste generated and managed by *(NAME THE SITE[s])*. The waste described in this report was generated by (Building/Facility), (and the waste will be repackaged in [Building/Facility]). This report was prepared in accordance with CCP-TP-005, *CCP Acceptable Knowledge Documentation* (Reference 1), to implement the AK requirements of (**RH only** -DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan* [WCPIP] [Reference __]); *Waste Isolation Pilot Plant Hazardous Waste Facility Permit, Waste Analysis Plan* (WIPP-WAP) (Reference __); and DOE/WIPP-02-3122, Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant (WIPP-WAC) (References __).

The WIPP WAP AK requirements are addressed in CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan* (Reference __). The WIPP-WAC AK requirements are addressed in CCP-PO-002, *CCP Transuranic Waste Certification Plan* (Reference __). Additionally, this report provides the AK information required by (**CH only** - CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control [*CCP CH-TRAMPAC] [Reference __]) **OR** (**RH only -** CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control* [CCP RH-TRAMPAC] [Reference __]).

The CCP is tasked with certification of TRU waste for transportation to and disposal at the Waste Isolation Pilot Plant (WIPP). This report was developed in accordance with CCP-TP-005, *CCP Acceptable Knowledge Documentation,* (Reference 1), describes how acceptable knowledge AK is collected, reviewed, and managed by the CCP. The CCP is responsible for collection, review, and management of AK documentation in accordance CCP-TP-005 and reviews and approves this AK Summary Report. CCP maintains responsibility for this AK Summary Report and all CCP-TP-005 generated forms and records as quality assurance (QA) records. In addition, CCP maintains a copy of the “historical source documents” as non-QA records.

(Brief description of the waste stream, facility[ies], and generating process/activity).

Attachment 12 – Example Form and Content Guide for AK Summary Reports (Continued)

This AK Summary Report, along with referenced supporting documents, provides a defensible and auditable record of AK for designated waste streams from the *NAME THE (FACILITY/PROCESS/ACTIVITY)*. The references and AK source documents used to prepare this report are listed in Sections 7.0 (8.0 for RH) and 8.0 (9.0 for RH). The source documents cited throughout this report are identified by alphanumeric designations corresponding to a unique Source Document Tracking Number (i.e., C001, D001, DR001, M001, P001, and U001 (as applicable to match Section 3).

This AK report includes information relating to the facility's history, mission, process operations, waste identification, characterization, and waste management practices. Information contained in this report was obtained from numerous sources, including facility safety basis documentation, historical document archives, generator and storage facility waste records and documents, and interviews with cognizant personnel.

This report and supporting source documentation provide the mandatory waste program and waste stream-specific information required by the WIPP-WAP (Reference 3). (**RH only -** This report also compiles data relevant to the applicable U.S. Environmental Protection Agency [EPA] requirements and presents the documentation necessary to satisfy each WCPIP data quality objective [DQO] and quality assurance objective [QAO] for RH TRU waste streams [Reference 2]).

Attachment 12 – Example Form and Content Guide for AK Summary Reports (Continued)

2.0 WASTE STREAM IDENTIFICATION SUMMARY

Site Where TRU Waste Was Generated and Stored: *SITE ADDRESS and EPA ID*

Facility Where TRU Waste Was Generated: *NAME OF FACILITY*

Facility Mission: *DESCRIBE THE MISSION AND HOW THE WASTE WAS GENERATED*

2.1 Waste Stream #1 (Identifier and Name)

2.2 Waste Stream #2 (Identifier and Name) (repeat following for each waste stream)

Summary Category Group: (Assign per Section 4.4.11)

Waste Matrix Code Group: (Assign per Section 4.4.10)

Waste Matrix Code: (Assign per section 4.4.9)

TRUPACT-II Content Code (TRUCON): (Obtain TRUCON Code(s) from SPM

TRUPACT-III Content Code (TRUCON): (Obtain TRUCON Code(s) from SPM

Waste Stream Description:

As described in Section 5.4.1, waste stream (number) is comprised primarily of (describe type of waste).

(Describe any other specific waste items in the waste stream, equipment, items not included above, secondary waste/chemicals introduced during packaging/repackaging.)

This waste stream was determined to contain Resource Conservation and Recovery Act (RCRA)-regulated constituents and is assigned the following EPA hazardous waste numbers (HWNs): (list HWNs) (Refer to Section 5.4.3).

(Identify the two predominant radionuclides by mass and activity for waste characterized using NDA techniques) (Refer to Section 5.4.2)

(Identify potential prohibited items and characterization method[s] selected to ensure the absence of these items in the final packaging) (Refer to Section 5.4.5).

(Describe waste packaging/repackaging and final waste container configuration) (Refer to Section 5.5).

Attachment 12 – Example Form and Content Guide for AK Summary Reports (Continued)

For CH - Waste Stream (number) meets the WIPP-WAP waste stream definition. The waste stream consists of waste materials that have common physical form, that contain similar hazardous constituents, and that are generated from a single process or activity.

For RH - Waste Stream (number) meets the WIPP-WAP and the WCPIP waste stream definitions. The waste is similar in material, physical form, hazardous constituents, and radiological properties and generated from a single process or activity.

3.0 ACCEPTABLE KNOWLEDGE DATA and INFORMATION

TRU waste destined for disposal at the WIPP must be characterized prior to shipment. Development of knowledge of the waste materials and processes that generate and control the waste is required to provide a clear and convincing argument about the characteristics of each waste stream. The AK characterization documented herein complies with the requirements of the
WIPP-WAP (Reference__) (**RH only**- and the WCPIP [Reference 1]) and was developed in accordance with of CCP-PO-001, (Reference ___), and CCP-TP-005(Reference 1).

[**RH only -** The WCPIP identifies waste characterization requirements and methods to satisfy requirements in:

- 40 Code of Federal Regulations (CFR) Part 191, *Environmental Radiation Protection Standards for the Management and Disposal of Spent Nuclear Fuel, High-Level and Transuranic Radioactive Wastes* (Reference __).
- 40 CFR Part 194, *Criteria for the Certification and Re-Certification of the Waste Isolation Pilot Plant's Compliance with the 40 CFR 191 Disposal Regulations* (Reference __).
- *Criteria for the Certification and Re-Certification of the Waste Isolation Pilot Plant's Compliance with the 40 CFR Part 191 Disposal Regulations: Certification Decision* (Reference __).

Public Law 102-579, *The WIPP Land Withdrawal Act (LWA)* (Reference __).

[Include a summary of the types and sources of AK information used].

Attachment 12 – Example Form and Content Guide for AK Summary Reports (Continued)

The references and AK sources used to prepare this report are listed in Sections 7.0 (8.0 for RH) and 8.0 (9.0 for RH), respectively. The AK sources referenced within this report by alphanumeric designations (e.g., C001, D001, DR001, M001, P001, and U001) correspond to the Source Document Tracking Number using the following convention: (include as applicable)

- C – Correspondence
- D – Documents
- DR – Discrepancy resolution
- M – Miscellaneous
- P – Procedures and Published documents
- U – Unpublished documents

Attachment 12 – Example Form and Content Guide for AK Summary Reports (Continued)

4.0 REQUIRED PROGRAM INFORMATION

This section presents the mandatory TRU waste program information required by the WIPP-WAP and the WCPIP for waste stream (number)(References __ and __). This section provides a description of the facility and operations associated with the generation of (facility/building/operation) TRU waste. Included is a description of the (facility/building/operation), summary of the mission, defense determination, and descriptions of (other operations including D&D, maintenance, repackaging, etc.) operations associated with the generation of waste stream (number) are provided.

4.1 Facility Location
4.2 Facility Description
4.3 Facility Mission
4.4 Defense Waste Assessment
4.5 High-Level Waste and Spent Nuclear Fuel Assessment
4.6 TRU Waste Management
4.6.1 Types and Quantity of TRU Waste Generated
4.6.2 Correlation of Waste Streams Generated from the Same Building and Process
4.6.3 Waste Stream Identification, Categorization, and Delineation
4.7 Description of Waste Generating Process

4.8 Waste Certification Procedures

5.0 REQUIRED WASTE STREAM INFORMATION
(Repeat the following information in additional waste stream sections, as needed)

This section presents the mandatory TRU waste stream specific information required by the WIPP-WAP (**RH only -** and the WCPIP) for waste stream (number) (References __ and __). The area of generation, waste stream volume, period of generation, prohibited items, waste packaging, and the physical, chemical, and radiological composition of the waste stream are described.

5.1 Area and Building of Generation

5.2 Waste Stream Volume and Period of Generation

5.3 Waste Generating Activities

Attachment 12 – Example Form and Content Guide for AK Summary Reports (Continued)

5.4 Type of Waste Generated
5.4.1 Materials Related to Physical Form
5.4.1.1Waste Matrix Code
5.4.1.2Waste Material Parameters
5.4.2 Radiological Characterization
5.4.3 Chemical Content Identification - Hazardous Constituents
5.4.3.1F-Listed Constituents
5.4.3.2Toxicity Characteristic Constituents
5.4.3.3U- and P-Listed Constituents
5.4.3.4K-Listed Constituents
5.4.3.5Ignitables, Reactives, and Corrosives
5.4.3.6State Hazardous Waste Code or Number Assignment (if applicable)
5.4.4 Polychlorinated Biphenyls
5.4.5 Prohibited Items
5.5 Waste Packaging

6.0 QUALIFICATION OF AK – (**RH Only)**

As stated in CCP-PO-002, *CCP Waste Certification Plan,* (Reference __), this AK Summary Report provides a description of the characterization of this RH waste stream. CCP-AK-ORNL-XXX, *CCP RH TRU Waste Certification Plan for 40 CFR 194 Compliance and Confirmation Test Plan for Waste Stream (number)* (Reference __), describes how each DQO and QAO is met along with the rationale for selection of the AK qualification methods used. As required by the WCPIP (Reference __), the description of waste stream (number) is provided in Sections 4.0 and 5.0. The description of the confirmatory testing process, the percentage of containers that are subjected to the process, a discussion of why the process is considered representative of the waste stream, and quantitative acceptance criteria is presented in CCP-AK-ORNL-XXX (Reference __).

The CCP intends to use a combination of methods to qualify the AK information associated with the [site/facility/building] waste stream because this will make the best use of the information available (such as existing sampling and analytical data). Table XX, Waste Stream (number) Determination Summary, lists the DQOs to be addressed using AK associated with waste stream [number] relating to the defense waste, radiological, and physical waste stream determinations. The location (page number, section, etc.) of the relevant information is identified in the AK source identified in Table XX.

Table XX. Waste Stream (number) DQO Determination Summary
(Provide a summary of the AK and identify the AK sources and the characterization method for each WCPIP DQO).

Attachment 12 – Example Form and Content Guide for AK Summary Reports (Continued)

6.0 CONTAINER-SPECIFIC INFORMATION **(Section 7.0 for RH)**

(Provide a summary of the AK documentation reviewed, including a list of the container-specific information).

In accordance with procedure CCP-TP-005 (Reference 1), a CCP Waste Containers List (Attachment 8 of the procedure) is completed and maintained as a quality record for waste tracking purposes. Information tracked includes container identification number, waste stream number, and the closure date for each container.

Attachment 12 – Example Form and Content Guide for AK Summary Reports (Continued)

7.0 REFERENCE INFORMATION **[Section 8.0 for RH]**

1. CCP-TP-005, *CCP Acceptable Knowledge Documentation,* Carlsbad, New Mexico, Washington TRU Solutions, LLC.

2. DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*, Carlsbad, New Mexico, U.S. DOE Carlsbad Field Office

3. *Waste Isolation Pilot Plant Hazardous Waste Facility Permit, Waste Analysis Plan,* New Mexico Environment Department, Santa Fe, New Mexico

4. DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria For the Waste Isolation Pilot Plant,* Carlsbad, New Mexico, U.S. DOE Carlsbad Field Office

5. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan,* Carlsbad, New Mexico, Washington TRU Solutions, LLC.

6. CCP-PO-002, *CCP Transuranic Waste Certification Plan,* Carlsbad, New Mexico, Washington TRU Solutions, LLC.

7. CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC),* Carlsbad, New Mexico, Washington TRU Solutions, LLC.

8. CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC),* Carlsbad, New Mexico, Washington TRU Solutions, LLC.

10. DOE/LLW-217, *DOE Waste Treatability Group Guidance*, Idaho Falls, Idaho, INEL-Lockheed Idaho Technologies

11. 40 CFR Part 191, *Environmental Radiation Protection Standards for Management and Disposal of Spent Nuclear Fuel, High-Level and Transuranic Radioactive Wastes*, Washington, D.C., U.S. EPA

12. 40 CFR Part 194, *Criteria for the Certification and Re-Certification of the Waste Isolation Pilot Plant's Compliance with the 40 CFR Part 191 Disposal Regulations*, Washington, D.C., U.S. EPA

Attachment 12 – Example Form and Content Guide for AK Summary Reports (Continued)

13. *Criteria for the Certification and Re-Certification of the Waste Isolation Pilot Plant's Compliance with the 40 CFR Part 191 Disposal Regulations: Certification Decision*, Washington, D.C., U.S. EPA

14. Public Law 102-579, *The Waste Isolation Pilot Plant Land Withdrawal Act*, October 30, 1992 as amended by Public Law 104-201

15. 42 U.S.C 10101, *Nuclear Waste Policy Act of 1982*, U.S. Congress

Attachment 12 – Example Form and Content Guide for AK Summary Reports (Continued)

8.0 AK SOURCE DOCUMENTS **[Section 9.0 for RH]**

Document Number	Title

[INSERT ALL REFERENCED FIGURES]

Attachment 13 – CCP Waste Stream Characterization Checklist – Example Form

CCP Waste Stream Characterization Checklist

Site(s):

Waste Stream Number: Lot # (if applicable)

Waste Stream Description:

Acceptable Knowledge Information or other data points[a]	Characterization Method(s)[b]	Acceptable Knowledge Re-evaluation Required? Yes/No[c]?	Comments[d]
Physical waste form/description			
Waste material parameters weights			
Waste percent volume consistent with nondestructive examination or visual examination data and audio/video tapes or equivalent media			
Summary category group assignment			
Waste matrix code assignment			
Absence of prohibited items			
Tentatively identified compounds[f]			
EPA Hazardous Waste Number assignment[e]			
Toxicity characteristic code assignment			
UCL_{90} > PRQL?			
VOCs from packaging materials or radiolysis present			
State Hazardous Waste Number assignment			
Radionuclides present			
Other radiological parameters: (specify)			

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Attachment 13 – CCP Waste Stream Characterization Checklist – Example Form (Continued)

CCP Waste Stream Characterization Checklist

Additional Comments:_____

a. Identified in the AK Summary Report or included in the in-process record documentation (e.g., BDR's)
b. Use the *Acceptable Knowledge and Waste Characterization Data Cross-Reference (Attachment 9)* to identify applicable testing, sampling, and analysis information to resolve the acceptable knowledge information, as applicable.
c. If "yes," AKE completes an *Acceptable Knowledge Re-evaluation Checklist.*
d. Identify the source of the waste characterization information (e.g., batch data report). Note if AK sufficiency scenarios 1, 2, or 3 are applicable.
e. Ensure that, if a toxicity characteristic contaminant is identified, it is not included as a listed waste, and if analytical data regarding the concentration are not available, the corresponding EPA Hazardous Waste Number is applied.
f. Tentatively Identified Compounds identified in the Headspace Gas Summary Report were identified on the Hazardous Constituent List, Attachment 5

Site Project Manager:

Date:

Print Sign

Acceptable Knowledge Expert:

Date:

Print Sign

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Attachment 14 – CCP Acceptable Knowledge Accuracy Report – Example Form

CCP Acceptable Knowledge Accuracy Report

Site(s):_____

Waste Stream Number(s):_____

Waste Stream Description:_____

Waste Containers:	Waste Matrix Code Reassigned? (Y/N)	EPA Hazardous Waste Number Reassigned? (Y/N)	Radiological Data Consistent with AK? (Y/N)

Total containers in this report:_____
Total containers consistent with AK: _____
Percent containers consistent with AK:_____

Site Project Manager:
_____/_____ Date:_____
Print Sign

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Attachment 15 – CCP TRU Waste Correlation and Surrogate Summary Form – Example Form

CCP TRU Waste Correlation and Surrogate Summary Form

Generator/Storage Site(s):_____

Waste Stream(s):_____

Waste Used to Correlate:_____

Waste Used as Surrogate:_____

Information	Y/N	Source of Information
Is physical form identified?		
Are chemicals identified?		
Is the absence of prohibited items confirmed?		
Are radiological data described?		

Explain/Justify the Use of Correlating/Surrogate Waste Stream Information:
(Attach additional supporting information, as applicable)

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CCP-TP-006

Revision 17

CCP
Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste

EFFECTIVE DATE: 11/01/2012

Mike Ramirez

PRINTED NAME

APPROVED FOR USE

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
0	11/16/2004	Initial Revision
1	02/21/2005	Incorporates the applicable sections from BBWI procedures into our procedures.
2	03/18/2005	Provide a density range for ceramic waste and add drum closure procedure for different drum types.
3	04/15/2005	Incorporated CBFO DRR comment resolutions.
4	04/19/2005	Incorporate text to align with spreadsheet change.
5	05/05/2005	Revised to add 4.2.4[D] NOTE for clarification on obtaining estimated weights.
6	08/02/2006	Revised to improve the process of the Visual Examination (VE) and delete information not used in the VE Data Sheet.
7	08/09/2006	Revised to correct errors in the references of steps.
8	11/16/2006	Revised to implement the Waste Isolation Pilot Plant Hazardous Waste Facility Permit requirements resulting from the Section 311/Remote-Handled (RH) Permit Modification Request (PMR).
9	10/18/2007	Revised to address NCR-INL-0006-07-0. Added Step to address standing order CCP-INL-07-004, (i.e., verify that the container is empty from any prohibited items). Added new section formatting the packaging configuration to eliminate void space.
10	12/11/2007	Revised to address CAR-INL-0007-07. Removed step to record filter serial number and create consistency in Visual Examination Operator (VEO) and Visual Examination Lead (VEL) reviews of CCP Waste Visual Examination Technique Data Form and Packaging Configuration Correction (PCC) Data Form. Eliminated the recording of unnecessary data in the PCC Data Form.
11	04/14/2008	Revised to change the Visual Examination (VE) Lead to VE Expert (VEE) as part of an observation from U.S. Department of Energy (DOE) Carlsbad Field Office (CBFO) Surveillance S-08-007. Added requirements for detecting the presence of roaster oxide, and mitigating or eliminating it if discovered in transuranic (TRU) waste.

RECORD OF REVISION (Continued)

12	05/01/2008	Minor editorial change to correct error in cross-referencing and question numbering on Attachment 2, CCP Waste VE Technique Independent Technical Reviewer Checklist.
13	10/30/2008	Revised to address the corrective actions from Corrective Action Report (CAR)-INL-0004-08 and changes made to improve the Packaging Configuration Correction (PCC) section of the procedure. Minor editorial changes.
14	11/11/2008	Minor change to update Attachment 1, CCP Waste Visual Examination Technique Data Form (Example).
15	06/30/2010	Revised to improve the process of the Visual Examination (VE), remove steps related to Packaging Configuration Correction (PCC), and update language to reflect permit modification.
16	12/29/2010	Revised to clarify independent technical reviewer (ITR) independence.
17	11/01/2012	Revised to incorporate the requirements of Standing Order CCP-SO-INL-11-001 and improve the process of the Visual Examination (VE).

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1.0 PURPOSE

This procedure describes how to perform the Visual Examination (VE) Technique for newly generated waste and repackaging of waste produced from the retrieval of buried transuranic (TRU) waste at the Idaho National Laboratory (INL) Radioactive Waste Management Complex (RWMC). This procedure also describes how to prepare and review the Batch Data Report (BDR) generated from the VE Technique.

1.1 Scope

This procedure only provides the actions for the collection of the VE data/information required by CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*.

The VE Technique is used to document the physical waste form, confirm the Waste Stream description and Waste Matrix Code document that no prohibited items are present, and estimate the weight of the waste material parameters. The VE Technique for newly generated waste is documented on data forms associated with this procedure.

2.0 REQUIREMENTS

2.1 References

Baseline Documents

- CCP-PO-002, *CCP Transuranic Waste Certification Plan*
- CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)*
- CCP-QP-022, *CCP Software Quality Assurance Plan*

Referenced Documents

- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- CCP-PO-024, *CCP/INL Interface Document*
- CCP-QP-002, *CCP Training and Qualification Plan*
- CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
- CCP-QP-008, *CCP Records Management*

2.2 Training Requirements

2.2.1 Personnel performing this procedure will be trained and qualified in accordance with CCP-QP-002, *CCP Training and Qualification Plan*.

2.2.2 Personnel identified in this procedure will receive site-specific training prior to performing this procedure in accordance with CCP-PO-024, *CCP/INL Interface Document.*

2.3 Equipment List

2.3.1 Calibrated Container/Drum Packaging Station (DPS) Scale

2.3.2 Calibrated/Certified Weights

2.3.3 Empty U.S. Department of Transportation (DOT) 7A Drum

2.3.4 Drum Vent Filter (Nuclear Filter Technology Model NucFil-019 or other Waste Isolation Pilot Plant [WIPP]-approved Model)

2.3.5 Filtered Bags

2.3.6 Drum Liner

2.3.7 Tape Measure or Measuring Device

2.3.8 Calibrated Torque Wrenches

2.3.9 Laptop Personal Computer (PC) or PC Tablet

2.3.10 Empty Standard Waste Box (SWB)

2.4 Software

2.4.1 Waste_VE_Technique.xls

2.5 Precautions and Limitations

2.5.1 This procedure has been evaluated and determined to be operational exempted work for the VE activity.

2.5.2 If unexpected conditions occur during VE, the Visual Examination Expert (VEE)/Operations Foreman (OF) will be contacted.

2.6 Prerequisite Actions

2.6.1 A laptop PC or PC Tablet that is configured for use in accordance with this procedure is accessible to the Visual Examination Operator (VEO).

2.6.2 Obtain OF approval prior to commencing work at the DPS.

2.7 Definitions

2.7.1 **Calibration Due Date** - The date recorded on a tool or scale sticker/label which indicates the date the tool or scale is **NO** longer in calibration.

3.0 RESPONSIBILITIES

3.1 Visual Examination Expert (VEE)

3.1.1 Responsible for the overall VE Technique operations.

3.1.2 Approves Attachment 4, CCP Waste VE Technique Batch Data Report Cover Sheet.

3.1.3 Evaluates and resolves any VE Technique operational question(s) or discrepancies concerning the VE Technique for newly generated waste.

3.1.4 Ensures that all personnel maintain proficiency in the work performed and identifies any additional training that may be required.

3.2 Visual Examination Operator (VEO)

3.2.1 Performs the VE Technique to achieve VE Technique objectives.

3.2.2 Assembles and paginates BDRs.

3.2.3 Completes the Central Characterization Program (CCP) Waste Visual Examination Technique Data Form.

3.2.4 Completes Attachment 3, CCP Waste VE Technique Batch Data Report Table of Contents.

3.2.5 Completes Attachment 4.

3.3 Independent Technical Reviewer (ITR)

NOTE

The Independent Technical Reviewer (ITR) will be someone other than the VEO who performs the VE Technique and who is qualified to perform the VE Technique. The ITR review is conducted by an individual who is qualified to have performed the initial work but who is **NOT** directly responsible for performing the work and who was not involved in the generation or recording of the data under review. The ITR can **NOT** review his/her own work.

3.3.1 Reviews the BDR and completes Attachment 2, CCP Waste VE Technique Independent Technical Reviewer Checklist.

3.3.2 Approves Attachment 4.

3.4 CCP Program Manager

3.4.1 Oversees operations.

3.4.2 Provides guidance when working with prohibited items.

3.4.3 Ensures safe operations.

3.5 Facility Records Custodian

3.5.1 Receives, processes, and transmits all records generated by this procedure in accordance with CCP-QP-008, *CCP Records Management*.

3.6 Operations Foreman (OF)

3.6.1 Ensures operations at the DPS are conducted in a safe and compliant manner.

4.0 PROCEDURE

NOTE

A testing batch includes all data pertaining to the VE Technique for up to 20 newly generated waste containers without regard to Waste Matrix Code. Section 4.0 will be repeated for each container in the testing batch.

Data necessary for the VE Technique will be recorded electronically in the CCP Waste Visual Examination Technique Data Form (see Attachment 1, CCP Waste Visual Examination Technique Data Form, [example]) datasheet. Data shall only be entered in data fields that are shaded pale green; all other fields are protected, and shall **NOT** be compromised. Many of the data fields that are shaded light blue contain formulas for calculating all the necessary parameters to meet the VE Technique objectives. These include, but are **NOT** limited to, ensuring the absence of prohibited items, determination of all Waste Material Parameter (WMP) weights, determination of the waste stream, and determining the Waste Matrix Code.

Data changes and requisite approvals SHALL be made by the individual or individuals who originally collected that data **OR** by an equally-qualified individual or individuals authorized to change data.

4.1 Preparations

VEO

NOTE

The VEO performs all steps in this procedure unless otherwise indicated.

4.1.1 Access the CCP Waste Visual Examination Technique Data Form by double-clicking on the desktop icon Waste_VE_Technique.xls.

4.1.2 Record the following information in Section 1: General Information:

[A] Verify the Container ID Number.

[A.1] Record the Container ID Number in Line 1.

4.1.3 Ensure that the VE Data Form is saved properly by performing the following functions:

[A] Confirm that the Container ID Number is the new Container ID Number being worked with on the VE Data Form.

[B] Click on File in the Toolbar.

[C] In the pull-down menu that appears, click on Save As.

[D] When the pop-up window appears,

[D.1] Ensure that the file is being saved in VE ATT 1 folder.

[D.2] Ensure the Container ID Number is typed in the field proceeding File Name.

[D.3] Click Save.

[E] **IF NOT** already OPEN,
THEN OPEN the CCP Waste Visual Examination Technique Data Form with the file name of the Container ID Number from the VE ATT 1 folder.

[F] Verify the Container ID Number of the CCP Waste Visual Examination Technique Data Form matches the file name of the Container ID Number being worked with.

NOTE
To prevent loss of information the VEO may periodically save the CCP Waste Visual Examination Technique Data Form datasheet.

4.1.4 Record the following information in Section 1: General Information

[A] Record container type as 55-gal. or SWB in Line 1b.

[B] Record Site ID, Location and Airlock Number in Line 2. This will be in the format: IN-RWMC-ARP-X where X being the ARP airlock designation where the VE was performed.

[C] Record Batch Number (IN-ARP-VE-ZZZZZZ) for ARP containers and (IN-SRP-VE-ZZZZZZ) for AMWTP containers where ZZZZZZ is a sequential number in Line 3.

[D] Record Examination START Date in Line 4.

[E] Record Procedure Revision Number in Line 5.

4.1.5 DPS Scale Calibration Check

[A] Record DPS Number in Section 1, Line 6a.

NOTE

In their entirety, steps 4.1.5 and 4.1.6 can be performed in any order. The DPS and container scale checks must be performed and deemed Satisfactory (SAT) once per day and prior to performing the first VE for that day. For multiple VEs, the scale check must have been performed and deemed SAT prior to the first VE of the day in order to enter NA for items 6b through 6q in Section 1.

[B] **IF** scale check was performed prior to the first VE of the day, **THEN** record NA on lines 6b through 6q in Section 1 **AND** GO TO step 4.1.7.

[C] Verify DPS scale is operational.

[D] Obtain **AND** record the DPS Scale Calibration Serial/ID Number in Section 1, Line 6b.

[D.1] Obtain **AND** record DPS Scale Calibration Due Date in Section 1, Line 6c.

[E] Verify scale is tared out with nothing on the scale.

[F] Confirm the DPS scale is set on the kilogram (kg) setting.

[G] Obtain **AND** record DPS Test Weight ID in Section 1, Line 6d.

[H] Obtain **AND** record DPS Test Weight Calibration Due Date in Section 1, Line 6e.

[I] Obtain **AND** record DPS Test Weight's weight in Section 1, Line 6f.

[J] Confirm the certified test weight is on the scale.

[K] Obtain **AND** record DPS Scale Readout of DPS Test Weight in Section 1, Line 6g.

[L] Record the difference between the DPS test weight and DPS scale readout in Section 1, Line 6h.

[M] Verify the scale is within calibration tolerance +/- 0.5 kg.

[N] **IF** scale readout is **NOT** within calibration tolerance, **THEN** initiate a Nonconformance Report (NCR) in accordance with CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control.*

[N.1] Notify VEE, **AND** proceed as directed.

[O] **IF** scale readout is within calibration tolerance, **THEN** proceed.

[P] Verify DPS scale check SAT by recording Yes (Y) in Section 1, Line 6i.

4.1.6 Container Scale Calibration Check

[A] Verify container scale is operational.

[B] Obtain **AND** record calibrated Container Scale Serial/ID Number in Section 1, Line 6j.

[B.1] Obtain **AND** record Container Scale Calibration Due Date in Section 1, Line 6k.

[C] Verify scale is tared out with nothing on the scale.

[D] Confirm the container scale is set on the kg setting.

[E] Obtain **AND** record the Container Test Weight ID in Section 1, Line 6l.

[E.1] Record the Container Test Weight Calibration Due Date in Section 1, Line 6m.

[F] Confirm Container Test Weight is on the scale.

[G] Obtain **AND** record Container Test Weight's weight in Section 1, Line 6n.

[H] Obtain **AND** record Container Scale Readout of Test Weight in Section 1, Line 6o.

[I] Record difference between Container Test Weight and the Container Scale Readout in Section 1, Line 6p.

[J] Verify the scale is within calibration tolerance +/- 1.0 kg.

[K] **IF** scale readout is **NOT** within calibration tolerance, **THEN** initiate an NCR in accordance with CCP-QP-005.

[K.1] Notify VEE, **AND** proceed as directed.

[L] Verify container scale check SAT by recording Yes (Y) in Section 1, Line 6q.

4.1.7 Verify container scale is tared out prior to receiving empty containers.

[A] **IF** using a fully prepped empty Skolnik 55-gallon container, **THEN** obtain the tare weight by using Table 4, Waste Item Historical Weights and Weighing Codes.

[A.1] Record the weight in Section 1, Line 7, **AND** GO TO step 4.1.7[F].

[B] **IF NOT** using an empty Skolnik container, **THEN** GO TO step 4.1.6[C].

[C] Ensure the container is empty prior to being loaded on the container scale.

[D] **AFTER** the empty container has been loaded on the calibrated scale, **THEN** obtain the weight.

[E] Record the weight in Section 1, Line 7.

[F] Obtain the lot number from the receiving container.

[G] Record the lot number Line 7a.

[H] **IF** a lot number is **NOT** stenciled on the container, **THEN** STOP WORK, **AND** notify VEE/VPM.

4.1.8 Verify that the container is empty from any prohibited items and any miscellaneous waste items (e.g., bag-out stubs).

[A] **IF** a prohibited item or any miscellaneous waste items are found, **THEN** STOP WORK, **AND** notify VEE.

4.2 Visual Examination (VE) Technique

VEO

4.2.1 Two qualified VEOs SHALL be present prior to beginning VE, and SHALL remain present during the entire VE process.

4.2.2 Ensure radiological surveys of the waste are performed to determine dose rate.

4.2.3 **IF** a prohibited item, listed in Table 1, Prohibited Items, is encountered during the VE,
THEN contact VEE/OF, **AND** proceed as directed.

4.2.4 Following delivery of incoming waste tray, perform the following as waste is manipulated and examined:

[A] Give a complete description of all waste items, residual materials, and packaging materials WMPs, **AND** provide enough information to estimate WMP weight.

[B] Record the description in Section 2: Waste Material Parameterand Item Description, Column 9 Rows a through z, for the corresponding WMP identified.

NOTE
WMP weights are obtained either by direct measurement or estimation.

[C] As WMP weights are estimated, complete the following information in Section 2, by using these options:

[C.1] Enter estimated weight for corresponding WMP in Section 2 in Column 10 from Table 4, Waste Item Historical Weights and Weighing Codes, **OR** DPS scale measurement, if needed, **OR** a combination of both.

NOTE
In order to use this option the known weights of any weighed waste weight, net weight of empty container, and the gross weight of the container need to be known prior to completing the formula.

[C.2] Enter the estimated weight for corresponding WMP by completing the formula in Section 2, Row 13.

[C.3] **IF** a material is identified that is **NOT** listed in Section 2,
THEN record description of item as Other in Column 9, Rows h, q, x2, **AND/OR** y4, as appropriate.

(a) Estimate the weight of the item, **AND** enter in Section 2, Column 10.

(b) Enter a density in Column 11, **AND** provide an associated technical reference source for density value in Section 2, Line 13b.

[C.4] **IF** the following waste items are identified,
THEN enter corresponding density value(s) in Section 2, Column 11.

(a) Ceramics (row n)

(b) Inorganic sorbents (row p)

(c) Rubber (row v)

(d) Organic matrix (row x1)

(e) Inorganic matrix (row y1)

(f) Roaster oxide (row y2)

(g) Soils/gravel (row z)

4.2.5 Verify there are **NO** prohibited items (see Table 1) in the waste tray to be loaded in the container, **AND** record YES (Y) or NO (N) in Section 3: Prohibited Item(s), Line 14.

CAUTION

Roaster oxide that has not been fully oxidized is still pyrophoric and may smoke, spark, and burn when exposed to air. Large chunks of roaster oxide may smoke, spark, and burn whenever the surface is scraped or scratched or the chunk is broken, exposing new surface area.

NOTE

Although roaster oxide is **NOT** TRU waste, it may be commingled with other waste due to possible lack of container integrity in the Subsurface Disposal Area.

4.2.6 **IF** there is a visual indication that the waste tray contains the prohibited item roaster oxide based on smoking, sparking, or burning,
THEN immediately notify the VEE and VPM, **AND** perform the following as waste is manipulated and examined:

[A] Verify large pieces/chunks are removed from the waste tray and segregated.

[B] Verify no more smoking, sparking, or burning is evident after manipulation of the waste.

4.2.7 **IF** container is loaded with a prohibited item and "N" is recorded, **THEN** initiate an NCR in accordance with CCP-QP-005, immediately notify the VEE and VPM, **AND** proceed as directed.

4.3 Container Loading

NOTE

Items (e.g., pipe, scrap angle iron) that protrude above the bulk of the waste are **NOT** to be included in the fill percent. The fill percent is to be recorded in five percent increments (e.g., 35%, 40%, 45%).

NOTE

Due to radiological reasons, Section 4.3, in its entirety, may be performed in a different order as long as ALL of the internal steps are performed prior to moving to the next section.

4.3.1 Verify that the container is empty from any prohibited items and any miscellaneous waste items (e.g., bag-out stubs).

[A] **IF** a prohibited item or any miscellaneous waste items are found,
THEN STOP WORK, **AND** notify VEE.

4.3.2 Both VEOs SHALL observe for themselves the waste being placed in the waste container.

4.3.3 Estimate the Volume Utilization by measuring the bulk of the waste by choosing one of the following options:

[A] **IF** the container is a 55-gallon container,
THEN confirm the fill percent of the output container as follows:

[A.1] Confirm the level of the waste contained in the output container is marked on the outside of the container.

[A.2] Confirm the distance from the mark to the bottom of the container is measured, **AND** record in inches in Section 4: Waste Packaging Data, Line 15.

OR

[B] **IF** container is a SWB,
THEN record NA in line 15.

4.3.4 As the container is loaded and lid installed, complete Section 4, Lines 17 through 24, as follows:

NOTE
Use approved operator aid and/or Table 4 to estimate weights of liner bags.

NOTE
Original packaging will be breached during retrieval and confirmed during VE to ensure that there are no additional layers of confinement in the final waste package. Therefore, lines 16a through 16d are defaulted to denote as such.

[A] The total number of liner bags (Line 17a).

[B] The closure method of liner bags (e.g., twist and tape, fold and tape) (Line 17b).

[B.1] **IF** bag is filtered,
THEN add “F” after designator.

[C] Estimated weight of each empty liner bag (kg) (Line 17c).

[D] Rigid liner present (Y/N) (Line 18)?

[D.1] **IF** container is loaded without a rigid liner, **AND** "N" is marked,
THEN initiate an NCR in accordance with CCP-QP-005.

[D.2] STOP WORK, notify the VEE, **AND** proceed as directed.

NOTE

Rigid liner lids are **NOT** to be used.

[E] Rigid liner with NO lid verified (Y/N) (Line 19)?

[F] Protection is adequate for heavy and/or sharp objects (Y/N) (Line 20)?

[F.1] **IF** protection is **NOT** adequate for heavy and/or sharp objects, **AND** "N" is marked,
THEN initiate an NCR in accordance with CCP-QP-005.

[F.2] STOP WORK, notify the VEE, **AND** proceed as directed.

NOTE

Closure method for containers may vary depending on manufacturer. The distinction between the manufacturers can be determined by the lot numbers which are stenciled on the container. The manufacturer's instructions for closure will be available at the Airlock.

[G] Record container lid/lid locking ring bolt(s) torque wrench Serial/ID number (Line 21b).

[G.1] **IF** torque wrench is **NOT** required,
THEN record NA (Line 21b).

[H] Record container lid/lid locking ring bolt(s) torque wrench calibration due date (Line 21c).

[H.1] **IF** torque wrench is **NOT** required, **THEN** record NA (Line 21c).

[I] Verify the container lid/lid locking ring bolt(s) are closed per manufacturer's specification, **AND** record Y (Line 21d).

[J] Obtain and record time container was closed (Line 21e).

[K] Record measured gross weight of loaded container assembled (kg) (Line 22).

[L] Verify container closure date (Line 23).

NOTE

120 inch – pounds (in-lbs) equals 10 foot – pounds (ft-lbs).

NOTE

Filter installation/torque specifications for containers may vary depending on manufacturer. The distinction between the manufacturers can be determined by the lot numbers, which are stenciled on the container. The manufacturer's instructions and specifications for filter installation/torque will be available at the Airlock.

[M] Record Filter Torque Wrench Serial/ID Number in Line 24a.

[N] Record Filter Torque Wrench Calibration Due Date in Line 24b.

[O] Record Filter Model Number in Line 24c.

[P] Record filter(s) serial number(s) in Line 24d and 24e, **OR** record NA in line 24e if the container DOES **NOT** contain multiple filter(s).

[Q] Ensure filter(s) is installed and torqued to manufacturer's specifications, **AND** record Yes (Y) in Line 24f.

4.3.5 Adjust WMP weights/applicable densities in Section 2 as necessary until all of the following conditions are met:

[A] Total waste volume in Section 2, Column 12, Row aa, DOES **NOT** exceed 208 L for a 55-gallon drum or 1456 L for a SWB.

[A.1] Verify that the total waste volume in Section 5, Row 33. a., matches the total waste volume in Section 2, Column 12, Row aa.

[B] The estimated weights in Section 2, Column 10, Row aa, match the measured net weight of waste, Section 4, Row 27.

4.3.6 Evaluate the relative volume estimates in Section 5: Waste Data, Lines 30 through 33.

4.3.7 Based on the greatest volume percentage, mark with an "X" the correct waste stream and Waste Matrix Code in Section 5, Line 34 (a) through (i).

4.3.8 Review Section 2 of the VE Data Sheet for any documented amount of Organic Matrix (OR) in the waste.

[A] **IF** there is any documented amount,
THEN mark an "X" in line 38 of Section 5.

[B] **IF** there is **NO** amount of documented Organic Matrix,
THEN mark NA in line 38.

4.3.9 Enter names of VEOs and VEE in Section 6: Approvals.

NOTE

The CCP Waste Visual Examination Technique Data Form was saved in step 4.1.3 with a Container ID Number.

4.3.10 Confirm the CCP Waste Visual Examination Technique Data Form datasheet file name was saved with the correct Container ID Number.

[A] **IF** the CCP Waste Visual Examination Technique Data Form datasheet file was **NOT** saved with a correct Container ID Number,
THEN STOP WORK, notify VEE, **AND** proceed as directed.

VEO 1 and VEO 2

4.4 Approvals

4.4.1 Review the data in the CCP Waste Visual Examination Technique Data Form datasheet file for completeness and accuracy.

[A] **IF** the data is incomplete or an inaccuracy is discovered, **THEN** make corrections as necessary to the CCP Waste Visual Examination Technique Data Form datasheet file.

4.4.2 Save to VE ATT 1 folder **OR** save to the electronic removable media.

4.4.3 Print a hard copy of the CCP Waste Visual Examination Technique Data Form datasheet file to produce the CCP Waste Visual Examination Technique Data Form.

4.4.4 Close the CCP Waste Visual Examination Technique Data Form datasheet file.

4.4.5 Sign and date the CCP Waste Visual Examination Technique Data Form, Section 6.

VEE

4.4.6 Verify the completeness and accuracy of the data and that the correct Waste Matrix Code has been entered on the CCP Waste Visual Examination Technique Data Form.

[A] Verify the Container ID number entered in Section 1, General Information: Line 1, matches the Container ID on the container, **AND** initial Line 1a.

[B] **IF** the data is incomplete or an inaccuracy is discovered, **THEN** ensure VEOs make necessary changes to the CCP Waste Visual Examination Technique Data Form datasheet in accordance with CCP-QP-008.

[C] **IF** the data is complete and accurate, **THEN** sign and date the CCP Waste Visual Examination Technique Data Form, Section 6.

4.5 BDR Preparation

NOTE

VEO ensure that the correct completed Visual Examination Technique Data Forms are in the appropriate BDR.

VEO

4.5.1 Check the number of containers produced for the BDR by confirming with the VEE.

4.5.2 Assemble the following data for the BDR:

[A] Attachment 4, CCP Waste VE Technique Batch Data Report Cover Sheet

[B] Attachment 3, CCP Waste VE Technique Batch Data Report Table of Contents

[C] Completed and signed CCP Waste Visual Examination Technique Data Form

[D] Attachment 2, CCP Waste VE Technique Independent Technical Reviewer Checklist

[E] Copy of NCRs, if applicable

4.5.3 Ensure that the assembly of the BDR matches Attachment 3.

4.5.4 Ensure no more than 20 CCP Waste Visual Examination Technique Data Forms are included in the BDR.

4.5.5 Paginate the BDR by labeling each page with a sequential number.

4.5.6 Complete Attachment 3.

[A] Verify the BDR numbers on the Visual Examination Technique Data Forms match the BDR number recorded on Attachment 3.

4.5.7 Complete Attachment 4 with the Waste Container ID Numbers in the order they are found in the BDR.

[A] Ensure the proper number of containers are entered on Attachment 4.

[B] Verify the number of completed data sheets match the number of container numbers entered on Attachment 4.

4.5.8 Forward the BDR to the ITR.

4.6 ITR

NOTE

If any item on Attachment 2 is marked NO, an NCR will be initiated, if the condition CAN **NOT** be mitigated, in accordance with CCP-QP-005, **AND** only as a single NCR that identifies all deficiencies. If any item in Attachment 2 is marked NA, an explanation may be provided in the comments block as necessary to clarify.

ITR

4.6.1 Review the BDR to the criteria in Attachment 2, **AND** document on Attachment 2.

4.6.2 **IF NO** comments are necessary when completing Attachment 2, **THEN** record NA in the comments section of Attachment 2.

4.6.3 Print name, sign, **AND** date Attachment 2.

4.6.4 Review Attachment 4 for completeness **AND** print name, sign, and date.

4.6.5 Forward the BDR to the VEE for approval of Attachment 4.

4.7 VEE Approval of Attachment 4

VEE

4.7.1 Review the BDR for completeness.

4.7.2 Review Attachment 4 for completeness, **AND** print name, sign, and date.

4.7.3 Forward the BDR to the Facility Records Custodian in accordance with CCP-QP-008.

Facility Records Custodian

4.7.4 Receive, process, and transmit the BDR in accordance with CCP-QP-008.

5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as quality assurance (QA) records in accordance with CCP-QP-008. The records are the following:

5.1.1 QA/Lifetime

[A] Batch Data Report (BDR):

[A.1] Attachment 4 - CCP Waste VE Technique Batch Data Report Cover Sheet

[A.2] Attachment 3 - CCP Waste VE Technique Batch Data Report Table of Contents

[A.3] Attachment 1 - CCP Waste Visual Examination Technique Data Form (may include up to 20 individual forms)

[A.4] Attachment 2 - CCP Waste VE Technique Independent Technical Reviewer Checklist

[A.5] Copy of NCRs, if applicable

Table 1. Prohibited Items

LIST OF PROHIBITED ITEMS
Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE. • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned.
Nonradioactive pyrophorics/radioactive pyrophoric <1% by weight
Non-mixed hazardous waste
Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials, and/or other wastes).
Explosives
Compressed Gases/Pressurized containers (e.g., aerosol cans)
Polychlorinated Biphenyl (PCB) (Present that are not are authorized under an EPA PCB waste disposal authorization).
Ignitables
Corrosives
Reactive waste
Sealed containers greater than 4 liters
Heat Sealed Bags (unvented) greater than 4 liters
Sharp or heavy objects not adequately blocked, braced, or packaged

Table 2. Layers of Confinement

Liner lids packaging layers are distinguished as follows:

Layers of confinement are defined, per the Safety Analysis Report for the TRUPACT-II Shipping Package (SARP), as any plastic bag containing waste which is closed with one of the following closure methods:

Fold and tape closure
Twist and tape closure
Heat-seal closure or twist and tape closure with a minimum of one filter vent

The *Transuranic Waste Authorized Methods for Payload Control (TRAMPAC)* for the TRUPACT-II states in 2.8.1, “Sealed containers that are greater than 4 liters (nominally) in size are prohibited, except for Waste Material Type II.2 packaged in a metal container; waste material Type II.2 in metal cans does **NOT** generate any flammable gas (see Appendix 3.2 of the *CH-TRU Payload Appendices*). Thus, sealed or unsealed containers less than 4 liters are permitted and are **NOT** considered layers of confinement.

The containers that are less than 4 liters (e.g., sealed glass tubes and glass jars) could be considered as a part of the waste. For the purpose of determining transportation compliance, these items are **NOT** considered layers of confinement. Heat-sealed plastic bags that are equal to or less than 4 liters in size are **NOT** considered confinement layers. If the plastic bags referenced in the description are greater than 4 liters, they must be considered in determining transportation compliance.

Abbreviations for Layers of Confinement					
Container		**Plastic Bags**		**Metal Cans**	
Twist and Tape	DTT	Twist and Tape	TT	Sealed	C
Fold and Tape	DFT	Fold and Tape	FT		
Other Closure	DOC	Other Closure	OC		
Vented	(add) F	Vented	(add) F	Vented	(add) F

Table 3. Waste Material Parameters

Waste Material Parameter	Description
Iron-based metals/alloys (IM)	Iron and steel alloys in the waste; does not include the waste container materials
Aluminum-based metals/alloys (AM)	Aluminum or aluminum-based alloys in the waste materials
Other metals (OM)	All other metals found in the waste materials
Other inorganic materials (OI)	Nonmetallic inorganic waste, including concrete, glass, firebrick, ceramics, sand, and inorganic sorbents
Cellulosics (C)	Materials generally derived from high polymer plant carbohydrates (e.g., paper, cardboard, wood, cloth)
Rubber (R)	Natural or man-made elastic Latex materials (e.g., surgeon's gloves, leaded rubber gloves)
Plastics (waste materials) (PW)	Generally man-made materials, often derived from petroleum feedstock (e.g., polyethylene, polyvinylchloride)
Organic matrix (OR)	Cemented organic resins, solidified organic liquids, and sludges
Inorganic matrix (IN)	Any homogeneous materials consisting of sludge, or aqueous-based liquids which are solidified with cement, calcium silicate, or other solidification agents (e.g., waste water treatment sludge, cemented aqueous liquids, and inorganic particulate)
Soils (S)	Generally consists of naturally occurring soils which have been contaminated with inorganic waste materials
Steel (packaging materials) (ST)	208-liter (55-gal.) drums
Plastics (packaging materials) (PP)	90-mil polyethylene drum liner and plastic bags

Table 4. Waste Item Historical Weights and Weighing Codes

ITEM	KILOGRAMS	POUNDS
Drum Description (1 lb = 0.454 kgs) (All containers are 55-gal drums, unless otherwise noted)		
3" Roll of Duct Tape	0.7 kg	1.5 lbs
3" Roll of Masking Tape	0.4 kg	0.8 lbs
10’ Tape Measure	0.1 kg	0.2 lbs
Channel Lock Pliers	0.3 kg	0.6 lbs
Crescent Wrench	0.2 kg	0.4 lbs
Flashlight With Batteries	0.5 kg	1.1 lbs
Flashlight Without Batteries	0.1 kg	0.2 lbs
Flat File	0.4 kg	0.8 lbs
Hacksaw With Blade	0.5 kg	1.1 lbs
Hammer	0.6 kg	1.3 lbs
Large Open-End Wrench	0.5 kg	1.1 lbs
Razor Knife	0.1 kg	0.2 lbs
Scissors	0.2 kg	0.4 lbs
Vice Grip Pliers	0.5 kg	1.1 lbs
Welder’s Chipping Hammer	0.4 kg	0.8 lbs
Wire Brush	0.1 kg	0.2 lbs
Wooden Folding Ruler	0.2 kg	0.4 lbs
Wooden Wedge	0.2 kg	0.4 lbs
13 oz. Aerosol Can ¼ Full	0.2 kg	0.4 lbs
17 oz. Aerosol Can Full of Liquid	0.5 kg	1.1 lbs
17" Section of 1" Electrical Conduit	0.5 kg	1.1 lbs
17" Section of 1" Sch 40 S/s Pipe	1.1 kg	2.4 lbs
2’ X 4’ Board 20" long	0.7 kg	1.5 lbs
Empty 2-Gallon Car-boy	0.7 kg	1.5 lbs
Empty 6-Gallon Car-boy	2.0 kg	4.4 lbs
2-Gallon Car-boy ½ Full of Water	5.8 kg	12.8 lbs
6-Gallon Car-boy ½ Full of Water	14.0 kg	30.8 lbs
5-Gallon Metal Bucket	1.3 kg	2.9 lbs
Metal Can	0.2 kg	0.4 lbs
Metal Can (for salt wastes)	1.1 kg	2.4 lbs
Aluminum Sphincter Can	0.2 kg	0.4 lbs
Sand Bag ½ Full of Gravel	12.7 kg	28 lbs
Plastic Bag for Waste	0.6 kg	1.3 lbs
Liner Bags – Large	1.4 kg	3.0 lbs
Rad Bags – Medium and Small	0.1 kg	0.2 lbs
Tray Liner	0.9 kg	2.0 lbs
Drum Liner Bag	0.9 kg	2.0 lbs

Table 4. Waste Item Historical Weights and Weighing Codes (Continued)

ITEM	KILOGRAMS	POUNDS
Drum Description (1 lb = 0.454 kgs) (All containers are 55-gal drums, unless otherwise noted)		
Bag-Out Stub/Horsetail	0.5 kg	1.0 lbs
55-Gallon 10-mil Plastic Bag (each)	1.8 kg	4.0 lbs
55-Gallon 5-mil Plastic Bag (each)	0.3 kg	0.6 lbs
O-ring Plastic Bag (e.g., sludge, organic setups)	9.0 kg	19.9 lbs
55-Gallon Drum PVC O-ring Bag (60.96 x 213.36 cm)	22.0 kg	48.5 lbs
90-mil Plastic Drum Liner	7.4 kg	16.3 lbs
55-Gallon Fiberboard Disk	48.0 kg	105.7 lbs
55-Gallon Drum Round Bottom 10-mil Liner	9.0 kg	19.3 lbs
55-Gallon Drum 90-mil Liner	4.3 kg	9.5 lbs
55-Gallon Drum 90-mil Rigid Liner	6.4 kg	14.1 lbs
55-Gallon Drum 110-mil Rigid Liner	7.6 kg	16.7 lbs
55-Gallon Drum 125-mil Rigid Liner Without a Lid	7.6 kg	16.7 lbs
55-Gallon Drum Poly Liner (122 x 122 x 213 cm)	12.0 kg	26.4 lbs
55-Gallon Cardboard Liner (graphite mold waste)	9.0 kg	19.8 lbs
55-Gallon Fiberboard Drum Liner (122 x 122 x 213 cm)	9.0 kg	19.8 lbs
55-Gallon Lead Liner (180 cm long, 0.16 cm thick)	23.0 kg	50.7 lbs
55-Gallon Lead Liner (180 cm long, 0.32 cm thick)	46.0 kg	101.3 lbs
Fiber Pack	13.0 kg	28.6 lbs
Fiber Pack Lead-Lined	66.0 kg	145.4 lbs
HEPA Filter (8 x 8 x 3-1/16 in.)	1.0 kg	2.2 lbs
HEPA Filter (8 x 8 x 5-7/8 in.)	1.9 kg	4.2 lbs
HEPA Filter (12 x 12 x 5-7/8 in.)	2.5 kg	5.5 lbs
Lead Brick (5.1 x 10 x 20 cm)	12.0 kg	26.4 lbs
Oil-Dry	0.4 kg/liter	0.9 lbs/liter
Vermiculite	0.1 kg/liter	0.2 lbs/liter
Roaster Oxide Fines	1.5 kg/liter	3.3 lbs/liter
ARP Targeted Sludge	1.2 kg/liter	2.6 lbs/liter
Soil	1.2 kg/liter	2.6 lbs/liter
Evaporator Salt	2.2 kg/liter	4.8 lbs/liter
Aquaset	1.2 kg/liter	2.6 lbs/liter
Petroset II-G	0.8 kg/liter	1.8 lbs/liter
3114 sludge	1.2 kg/liter	2.6 lbs/liter
3150A sludge	1.2 kg/liter	2.6 lbs/liter
Poly Bottles (1 gallon)	2.2 kg	4.8 lbs
Poly Bottles (1 liter)	0.5 kg	1.1 lbs
Setup Portland Cement	1.1 kg/liter	2.4 lbs/liter
Uncured Portland Cement	2.9 kg/liter	6.4 lbs/liter
Leaded Rubber Glove	2.5 kg	5.5 lbs

Table 4. Waste Item Historical Weights and Weighing Codes (Continued)

ITEM	KILOGRAMS	POUNDS
Drum Description (1 lb = 0.454 kgs) (All containers are 55-gal drums, unless otherwise noted)		
Leaded Rubber Glove	12.0 kg	26.4 lbs
Leaded Rubber Apron	2.4 kg	5.3 lbs
Leaded Rubber Apron	11.5 kg	25.3 lbs
Coveralls	0.9 kg	2.0 lbs
25’ Plastic Suit Hose	2.3 kg	5.1 lbs
50’ Plastic Suit Hose	5.0 kg	10 lbs
Plastic Suit Top and Pants	2.3 kg	5.1 lbs
55-Gallon Drum (painted)	27.7 kg	61.0 lbs
55-Gallon Drum (galvanized)	29.0 kg	63.9 lbs
Lead-Lined Drum (1/16" thick, 28" high by 72" long)	22.7 kg	50 lbs
Lead-Lined Drum (1/8" thick, 28" high by 72" long) (.4 lb/in.3)	45.4 kg	100 lbs
Galvanized DOT 17C (Dull Finish)	31.7 kg	69.8 lbs
Galvanized (Shiny Drum and Lid Finish)	24.2 kg	53.3 lbs
Hanford Galvanized (Speckled Dull Finish - UNA1A2)	30.0 kg	66.1 lbs
Myers Galvanized (Shiny Finish - Labeled G5501)	22.7 kg	50 lbs
Myers Galvanized (Shiny Drum/Shiny Speckled Lid - Labeled G5501)	24.0 kg	52.9 lbs
Myers Yellow Painted	21.5 kg	47.4 lbs
Rocky Flats White Painted	27.2 kg	60 lbs
Black 90-mil Slip Fit Lid	7.4 kg	16.3 lbs
Black 110-mil Inner Lid	7.7 kg	17 lbs
Black 110-mil Beveled Top	7.4 kg	16.3 lbs
White 90-mil Slip Fit Lid	7.5 kg	16.5 lbs
B251 Bag - Tare Weight	0.1 kg	0.22 lbs
INL ARP EMPTY Skolnik 55-gallon container fully prepped (with 90 mil liner with NO liner lid, filtered liner bag, Nucfil-019DS filter, lid and ring bolt)	34.0 kg	74.8 lbs

Attachment 1 – CCP Waste Visual Examination Technique Data Form (Example)

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	
	b. Container Type: 55 gal. drum or SWB:	
2.	Site ID and Location (Airlock):	
3.	Batch Number:	
4.	Examination Start Date:	
5.	Procedure CCP-TP-006, Rev.:	
6.	a. Drum Packing Station (DPS) Number:	
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	
	c. Scale Calibration Due Date:	
	d. Test Weight ID:	
	e. Test Weight Calibration Due Date:	
	f. Test Weight (kgs):	
	g. Scale Readout of Test Weight (kgs):	
	h. Difference Between Test Weight and Scale Readout (kgs):	
	i. DPS Scale Check SAT (Y):	
	Container Scale Check	
	j. Scale Serial/ID Number:	
	k. Scale Calibration Due Date:	
	l. Test Weight ID:	
	m. Test Weight Calibration Due Date:	
	n. Test Weight (kg):	
	o. Scale Readout of Test Weight (kgs):	
	p. Difference Between Test Weight and Scale Readout (kgs):	
	q. Container Scale Check SAT (Y):	
7.	Measured Tare Weight of Container fully assembled (kgs):	
	a. Container Manufacturer Lot Number:	
Comments:		
N/A		

Attachment 1 – CCP Waste Visual Examination Technique Data Form (Example)

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID:							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a.	Iron-based metals/alloys (IM)			0.0	N/A		0.0
7				N/A	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b.	Aluminum-based metals/alloys (AM)			0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c.	Other metals (OM)			0.0	N/A		0.0
13		d.	Lead		0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e.	Beryllium		0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f.	Depleted uranium		0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g.	Copper		0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h.	Other (See Note a)		0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

Attachment 1 – CCP Waste Visual Examination Technique Data Form (Example) (Continued) **Page 3 of 7**

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID:							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	i.	Other inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

Attachment 1 – CCP Waste Visual Examination Technique Data Form (Example) (Continued) **Page 4 of 7**

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID:							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.0	N/A		0.0
67				N/A	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				N/A	N/A	0.9		0.0
71				N/A	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				0.0	N/A		0.0
75		x1. Sludge			0.0	N/A		0.0
76				N/A	N/A	1.0 - 1.5	0.0	0.0
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95				N/A	N/A	0.0		0.0
96				N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98				N/A	N/A	1.0 - 1.4	0.0	0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				0.0	N/A		0.0
101	13. (WMP) weight (Waste weight) kg was obtained by subtracting the weighed waste weight of (N/A) kg and the container net weight of (N/A) kg from the gross weight (N/A) kg of the waste container. (Gross Weight) - (Weighed Waste Weight) - (Container Net Weight) = (WMP Weight) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

Attachment 1 – CCP Waste Visual Examination Technique Data Form (Example) (Continued)

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID:	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 – CCP Waste Visual Examination Technique Data Form (Example) (Continued)

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Container ID:		
Section 4: Waste Packaging Data		
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)		
16. Inner Bags:		
	a. Total Number of Inner Bag(s):	0
	b. Closure Method (See Below for Proper Designator):	N/A
	TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
	c. Layers of Confinement (>4 liters):	0
	d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:		
	a. Total Number of Liner Bag(s):	
	b. Closure Method (See Below for Proper Designator):	
	TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
	c. Estimated Weight of Each Liner Bag (kgs):	
18. Rigid Liner Present? (Y/N):		
19. Rigid Liner with NO lid Verified? (Y/N):		
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):		
21. Lid Locking Ring Bolt / Bolt(s) Tightening:		
	a. Container Manufacturer Lot Number:	0
	b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	
	c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	
	d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	
	e. Time the container was closed:	
22. Measured gross weight of loaded container, fully assembled (kgs):		
	a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	0.0
23. Container closure date (mm/dd/yy):		
24. Container Filter Torque Data:		
	a. Filter Torque Wrench Serial/ID Number:	
	b. Filter Torque Wrench Calibration Due Date:	
	c. Filter Model No.:	
	d. Filter Serial No.:	
	e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	
	f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	
25. Percent fill of container:		0.0%
26. Total layers of confinement:		0
27. Measured net weight of waste (kgs):		0.0
28. Estimated plastic added from packaging, including rigid liner (kgs):		0.0
29. Estimated steel added from packaging (kgs):		0.0
29a Total net weight of fully assembled container (kgs):		0.0

Attachment 1 – CCP Waste Visual Examination Technique Data Form (Example) (Continued)

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID:	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.0
31. Total volume of Solidified Organics (L):	0.0
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	0.0
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	0.0%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	
Section 6: Approvals	
Visual Examination Operator 1:	
Enter Name / Signature / Date	
Visual Examination Operator 2:	
Enter Name / Signature / Date	
Visual Examination Expert:	
Enter Name / Signature / Date	

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist

Batch Data Report No.: _____

Description			
1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods used?	☐ NO	☐ YES	☐ NA
a. Was the description of the waste items adequate?	☐ NO	☐ YES	☐ NA
2. Was the correct revision of operating procedure used? (Attachment 1, Section 1, Line 5)	☐ NO	☐ YES	☐ NA
3. Were the following calculation spot checks performed?			
a. Attachment 1, Section 2: Verify the total waste volume in Column 12, Row aa does not exceed 208 L for a 55-gallon drum or 1456 L for an SWB and verify the estimated weights in Column 10, Row aa matches the measured net weight of waste in Attachment 1, Section 4, Row 27.	☐ NO	☐ YES	☐ NA
b. Attachment 1, Section 5: Verify the total waste volume in Row 33 a., matches the total waste volume in Section 2, Column 12, Row aa.	☐ NO	☐ YES	☐ NA
c. Attachment 1, Section 1: Check hand calculations in Lines 6h and 6p, and any additional hand calculations recorded in the comments field or in Section 2, Line 13.	☐ NO	☐ YES	☐ NA
4. Is only one waste stream selected in Line 34 of Attachment 1, Section 5, and is it consistent with the values shown in Attachment 1, Section 2, Column 12?	☐ NO	☐ YES	☐ NA
5. Is the data entered in the correct units and correct number of significant figures?	☐ NO	☐ YES	☐ NA
6. Were the data reviewed for transcription errors?	☐ NO	☐ YES	☐ NA
7. Does the BDR include VE for up to 20 containers?	☐ NO	☐ YES	☐ NA
8. Are BDR contents complete and do they match, Attachment 3, CCP Waste VE Batch Data Report Table of Contents?	☐ NO	☐ YES	☐ NA
9. Was completeness verified for data entry on the CCP VE Technique Data Form for the following?			
a. Section 1	☐ NO	☐ YES	☐ NA
b. Section 2	☐ NO	☐ YES	☐ NA
c. Section 3	☐ NO	☐ YES	☐ NA
d. Section 4	☐ NO	☐ YES	☐ NA
e. Section 5	☐ NO	☐ YES	☐ NA

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: _____

Description			
10. Is all the data signed and dated in Attachment 1, Section 6, using reproducible ink, and by the individual(s) generating it?	☐ NO	☐ YES	☐ NA
11. Is all data entered clearly, legibly, and accurately?	☐ NO	☐ YES	☐ NA
12. Were discrepancies between the operators reconciled?	☐ NO	☐ YES	☐ NA
13. Are all changes to original data lined out, initialed and dated by the individual making the changes?	☐ NO	☐ YES	☐ NA
14. Were data changes made by the individual who originally collected the data or an equally qualified individual?	☐ NO	☐ YES	☐ NA
15. Was the DPS scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☐ YES	☐ NA
16. Was the daily DPS scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☐ YES	☐ NA
17. Was the container scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☐ YES	☐ NA
18. Was the daily container scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☐ YES	☐ NA
19. Was the torque wrench(es) in calibration prior to VE Technique and documented correctly?	☐ NO	☐ YES	☐ NA
20. Were NCR(s) initiated as indicated in Attachment 1, Section 1, dispositioned, and approved appropriately?	☐ NO	☐ YES	☐ NA
21. Was the correct waste stream and waste matrix code assigned?	☐ NO	☐ YES	☐ NA
22. Is there a valid VE data form for each drum in the batch?	☐ NO	☐ YES	☐ NA
23. Were the operators trained and qualified in accordance with the applicable requirements?	☐ NO	☐ YES	☐ NA

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: _____

Description			
24. Was precision maintained by reconciling any discrepancies between the operator(s) and the ITR with regard to identification of waste matrix code, liquids in excess of WIPP Hazardous Waste Facility Permit and WIPP Waste Acceptance Criteria limits and compressed gases?	☐ NO	☐ YES	☐ NA

Description
Comments:

I have reviewed 100 percent of the container-specific and batch data in this BDR and find it acceptable.

ITR:

_____	_____	_____
Printed Name	Signature	Date

Attachment 3 – CCP Waste VE Technique Batch Data Report Table of Contents

Batch Data Report No.: _____ Batch Data Report Date: _____

Table Of Contents		
Item	Description	Page No.
1	Attachment 4, CCP Waste VE Technique Batch Data Report Cover Sheet	
2	Attachment 3, CCP Waste VE Technique Batch Data Report Table of Contents	
3	CCP Waste Visual Examination Technique Data Form	
4	Attachment 2, CCP Waste VE Technique Independent Technical Reviewer Checklist	
5	Copy of NCRs (NA, If Not Applicable)	

Attachment 4 – CCP Waste VE Technique Batch Data Report Cover Sheet

Batch Data Report No.: _____

	Waste Container ID Number
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

ITR:

_____	_____	_____
Printed Name	Signature	Date

VEE:

_____	_____	_____
Printed Name	Signature	Date

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CCP-TP-008

Revision 10

CCP
Solids Sampling Procedure

EFFECTIVE DATE: 09/21/2012

Mike Ramirez

PRINTED NAME

APPROVED FOR USE

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RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
0	12/21/2004	Initial issue.
1	02/09/2005	Incorporated changes to ensure adequate safety and radiological control per BBWI.
2	02/18/2005	Incorporated changes to Sections 4.1.5, 4.1.6, 4.1.7, and Attachment 1.
3	04/15/2005	Addressed Carlsbad Field Office (CBFO) comments for Revision 1.
4	09/01/2005	Revised to address changes in operational procedures and reduction in the area to be sampled. Incorporated Carlsbad Field Office (CBFO) Document Review Record (DRR) comments.
5	06/08/2006	Enhancement to the procedure and in compliance with changes to CCP-PO-025 and changes as a result of CWI procedure changes.
6	08/08/2007	Revised to incorporate Grab Sampling from existing Accelerated Retrieval Project (ARP) drums in the Drum Packaging Station (DPS) units at ARP. Update to new review criteria and section 4 has been extensively rewritten.
7	03/18/2009	Revised in response to Central Characterization Project (CCP) Corrective Action Report (CAR) Number CAR-INL-0001-09. Also revised to add grab sampling from un-containerized waste retrieved from the Subsurface Disposal Area (SDA) at the Idaho National Laboratory (INL), and to update the location of the INL laboratory, which is no longer located at the Idaho Nuclear Technology and Engineering Center (INTEC) facility.
8	08/13/2009	Revised to incorporate cancellation of CCP-TP-161, *CCP Random Selection of Containers for Solids Sampling and Analysis* and addition of CCP-TP-162, *CCP Random Selection of Containers for Solids and Headspace Gas Sampling and Analysis*.

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RECORD OF REVISION (Continued)

Revision Number	Date Approved	Description of Revision
9	12/29/2010	Revised to clarify independent technical reviewer (ITR) independence.
10	09/21/2012	Revised to incorporate standing order CCP-SO-INL-10-006 Rev. 0 and to clarify the solid sampling process.

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1.0 PURPOSE

This procedure provides instruction for obtaining random grab samples from trays of retrieved waste of newly generated S3000 homogeneous solids and S4000 soil/gravel waste streams generated from retrieval of transuranic (TRU) waste and assembling and reviewing solids sampling batch data reports (BDRs). Containers for sampling will be randomly selected as described in CCP-TP-162, *CCP Random Selection of Containers for Solids and Headspace Gas Sampling and Analysis.*

1.1 Scope

This procedure identifies the steps to collect, handle, and package samples; prepare sample data and records; and review BDRs.

2.0 REQUIREMENTS

2.1 References

Baseline Documents

- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- CCP-PO-002, *CCP Transuranic Waste Certification Plan*

Referenced Documents

- CCP-QP-002, *CCP Training and Qualification Plan*
- CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
- CCP-QP-008, *CCP Records Management*
- CCP-TP-006, *CCP Visual Examination Technique for INL Newly Generated TRU Waste Retrieved from Pits*
- CCP-TP-162, *CCP Random Selection of Containers for Solids and Headspace Gas Sampling and Analysis*
- CCP-TP-180, *CCP Analytical Sample Management*

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2.2 Training

2.2.1 Central Characterization Project (CCP) personnel identified in this procedure will be trained and qualified in accordance with CCP-QP-002, *CCP Training and Qualification Plan*, prior to performing this procedure.

2.3 Precautions and Limitations

2.3.1 Co-located samples are collected at a frequency of one per sampling batch, or once per week, whichever is more frequent. A sampling batch is a suite of homogeneous solids and/or soil/gravel samples collected consecutively using the same sample equipment within a specific time period. A sampling batch can be up to 20 samples (excluding field quality control [QC] samples), all of which shall be collected within 14 days of the first sample in the batch.

2.3.2 A co-located sample is collected side by side as close as feasible to the primary sample, handled in the same manner, and sampled in the same manner at the same randomly selected sample location(s). If inconsistencies such as color, texture, or waste type in the waste at the sample location exist, another sampling location may be selected, or the samples may be invalidated and co-located samples may again be collected.

2.3.3 The first samples collected are for volatile organic compound (VOC) and non-halogenated volatile organic compound (NHVOC) samples for regular and co-located, including Matrix Spike (MS) and Matrix Spike Duplicate (MSD) samples. To minimize vaporization of VOCs, there is a one-hour time frame in which the sampling operation must be performed. The one-hour time frame is defined as the point the waste tray is brought into the Drum Packaging Station (DPS). The one-hour time frame will be satisfied when these samples have been filled and capped.

2.3.4 For the purposes of this procedure, the word “clean” refers to U.S. Environmental Protection Agency’s (EPA) definition of “Clean” not radiological clean.

2.3.5 The hammer will **NOT** come in contact with the sample. The hammer will be reused as needed and is not certified clean.

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2.3.6 Industrial Hygiene (IH) monitoring for non-radiological contaminants must be performed.

2.4 Prerequisite Actions

2.4.1 Obtain concurrence from Accelerated Retrieval Project (ARP), Shift Operations Manager (SOM), or Operation Foreman (OF) that sampling can commence.

2.4.2 Radiological Control Technician (RCT) coverage is required during DPS operations.

2.4.3 ARP sample refrigerator is in operation and temperature is being maintained 4 ± 2 °C.

2.4.4 Portable sample cooler(s) containing frozen ice packs are staged in the Airlock prior to commencing sampling operations.

2.4.5 Prior to introduction of waste tray that will be sampled, verify a DPS is available for waste sampling.

2.5 Sample Handling and Custody Requirements

NOTE

The field sample storage refrigerator has a temperature range of approximately ± 2 °C. The refrigerator temperature is monitored using a calibrated data logger.

2.5.1 Samples will be placed in the sample refrigerator to be stored at 4 ± 2 ºC or placed in a shipping container with frozen ice packs for shipping/transfer.

2.5.2 Chain of custody (COC) will be initiated after container and equipment inspection. Sample custody will be maintained by ensuring the samples are in the possession of or within the view of a Solids Sampler, in a sealed or locked container controlled by a Solids Sampler, or in a secure controlled-access location.

2.5.3 Tamper indicating devices (TIDs) have physical characteristics that would immediately indicate tampering should container integrity be violated. TIDs must be affixed to loaded shipping containers.

2.6 Supplies

2.6.1 Certified-clean clear glass, pre-weighed, labeled sample containers and lids will be provided by the approved laboratory in accordance with CCP-TP-180, *Analytical Sample Management*. The labels will contain fields indicating the sample identification (ID) and the requested analysis. The tare weight for the sample container and lid will be provided by the approved laboratory and documented at the laboratory.

2.6.2 One-time-use certified-clean sample collection equipment includes but not limited to plastic spoons, stainless-steel scoopulas, stainless-steel chisels, or stainless-steel tongs in sealed packaging.

2.6.3 Other equipment could include:

[A] Aluminum foil

[B] Hammer – (will **NOT** come in contact with sample)

[C] Black indelible pens

[D] Large resealable plastic bags

[E] Custody seals

[F] Frozen ice packs

[G] TIDs

[H] Kimwipes, Terri wipes, or suitable wipe-down cloths

[I] Sample kit

[J] Shipping container

[K] Tape

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3.0 RESPONSIBILITIES

3.1 Independent Technical Reviewer (ITR)

NOTE
The independent technical review will be performed by someone who is qualified to have done the work but shall not be involved in the generation or recording of the data under review.

3.1.1 Performs independent technical review of BDR.

3.1.2 Completes Attachment 3.

3.1.3 Verifies the completeness and accuracy of the data and approves Attachment 5, CCP Solids Sampling Batch Data Report Cover Sheet.

3.2 Visual Examination Expert (VEE)

3.2.1 Ensures the compliant operation of the sampling process.

3.2.2 Verifies the completeness and accuracy of the data and approve Attachment 5.

3.2.3 Responsible for submittal of BDR to Facility Records Custodian to be managed in accordance with CCP-QP-008, *CCP Records Management*.

3.3 Solids Sampler

3.3.1 Inspects sample area to ensure that gross visible contamination (e.g., excessive waste in DPS, hydraulic fluid from hoses, etc.) that has the potential to contaminate waste samples is thoroughly removed prior to sampling.

3.3.2 Inspects sample containers and sampling equipment for cleanliness and damage before sampling.

3.3.3 Observes and records the activities of the sample collection within the DPS.

3.3.4 Completes sample tracking forms and/or log(s) and COC Form(s).

3.3.5 Assembles BDRs.

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3.3.6 Prepares samples for transfer and/or shipment.

3.3.7 Ensures sample transfer and/or shipment.

3.3.8 Completes Attachment 4.

3.4 Facility Records Custodian

3.4.1 Receives, processes, and transmits all records generated by this procedure in accordance with CCP-QP-008, *CCP Records Management*.

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4.0 PROCEDURE

4.1 Preliminary Sample Collection Activities Within the DPS

NOTE

All Host site requirements for health, safety, and operations in the work place will be addressed in a Host site procedure.

Solids Sampler

4.1.1 Ensure the sample area within the DPS is visibly clean, **AND** indicate YES on Attachment 1, CCP Solids Sample Tracking Form (Item 2).

NOTE

The Radiological Control Technician (RCT) SHALL be present to conduct radiological surveys in accordance with the Host site procedures.

NOTE

The COC Form provided by the approved laboratory provides some pre-printed information including the I-CHEM Container Production Number.

4.1.2 Obtain a set of regular and co-located sample containers and sampling equipment, as necessary.

4.1.3 Visually inspect sampling equipment and container bags for integrity.

4.1.4 **IF** damage to sampling equipment packaging or to the sample containers (including overpack jars) is observed,
THEN discard the damaged kit and obtain a new set.

4.1.5 **WHEN** an acceptable set of containers and equipment are obtained,
THEN check YES on Attachment 1 Items 3, 4, and 5.

[A] During the sample collecting activity, if any containers are damaged only the unusable kit (regular or co-located) will be replaced. The remaining components of the damaged set will be discarded and the corresponding COC voided and forwarded to the Facility Records Custodian. The INL approved laboratory will be notified of the voided COC Form. The unusable kit will be processed as Waste Added In Process (WAIP) or disposed of per Host site procedures.

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Repeat steps 4.1.2 through 4.1.4 as necessary until an acceptable set is obtained.

4.1.6 Initiate the COC Form

[A] For Newly Generated Waste placed into the DPS, verify that the tray contains more than 50% of the selected waste form to be sampled.

[B] Record the Sample Batch Number on the COC, (e.g., XXSSYYZZ where XX is the site ID, SS indicates Solid Sampling, YY is the last two digits of year and ZZ is the BDR sequential number starting with 01 each year).

[C] Record the waste container number associated with the sample on the COC Form.

4.1.7 Enter the following information on Attachment 1:

[A] Sample Date (Item 6)

[B] Co-Located Sample? (Item 7) Circle YES or NO

[C] COC Form Number (Item 8)

[D] Waste Drum Number (Item 9)

[E] Sample Batch Number (Item 10)

4.1.8 Ensure that the sample containers are staged and ready for sampling.

4.1.9 Set aside the 250 milliliters (ml) semi-volatile organic compound (SVOC) and metals jars for later use.

4.2 Sample Selection from Tray

NOTE
Additional radiological surveys may be performed at any step in this section as deemed necessary by the RCT.

4.2.1 Ensure the Lot Number, Random Selection Number and the time waste was received in the DPS is recorded on Attachment 1 (Item 11).

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NOTE

The sampling approach within the tray will be to obtain samples representative of the container contents. The tray will be divided into quadrants: 1-top left, 2-top right, 3-bottom left, and 4-bottom right. The sample will be collected from an assigned randomly selected quadrant. Table 1 designates the quadrant from which the samples will be collected for each container.

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Table 1. Identification of Assigned Tray Quadrant for Each Sample of Soil and Sludge

	Random Selection Number	Excel® "rand()" Number	Assigned Tray Quadrant
Random Selection Lot 1	1	0.994269	4
	2	0.347857	2
	3	0.522142	3
	4	0.177662	1
	5	0.033876	1
	6	0.915488	4
	7	0.224135	1
	8	0.448786	2
	9	0.747725	3
	10	0.622587	3
Random Selection Lot 2	1	0.639589	3
	2	0.621974	3
	3	0.624304	3
	4	0.508580	3
	5	0.984154	4
	6	0.591604	3
	7	0.360183	2
	8	0.574759	3
	9	0.919905	4
	10	0.604090	3
Random Selection Lot 3	1	0.979728	4
	2	0.128751	1
	3	0.684693	3
	4	0.583278	3
	5	0.592716	3
	6	0.280865	2
	7	0.591564	3
	8	0.963153	4
	9	0.341868	2
	10	0.697996	3
Random Selection Lot 4	1	0.233844	1
	2	0.794693	4
	3	0.891395	4
	4	0.609959	3
	5	0.624622	3
	6	0.624532	3
	7	0.744433	3
	8	0.296603	2
	9	0.155278	1
	10	0.205542	1
Random Selection Lot 5	1	0.843293	4
	2	0.195634	1
	3	0.535563	3
	4	0.982452	4
	5	0.872710	4
	6	0.097449	1
	7	0.261370	2
	8	0.128330	1
	9	0.545505	3
	10	0.621211	3
Random Selection Lot 6	1	0.131662	1
	2	0.267960	2
	3	0.847529	4
	4	0.795365	4
	5	0.493783	2
	6	0.657725	3
	7	0.729289	3
	8	0.561035	3
	9	0.143969	1
	10	0.133467	1

Methodology Used for Tray Quadrant Assignment:

The MS-Excel® "rand()" function was used to generate a random number between 0 and 1 for each Random Sample. If the random number fell between 0.00 and 0.25, Quadrant 1 was assigned; if between 0.25 and 0.50, Quadrant 2 was assigned; if between 0.50 and 0.75, Quadrant 3 was assigned; and if between 0.75 and 1.00, Quadrant 4 was assigned.

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NOTE

Information is to be documented describing the sample event, such as sample collection problems in the Comment section of Attachment 1, line 15.

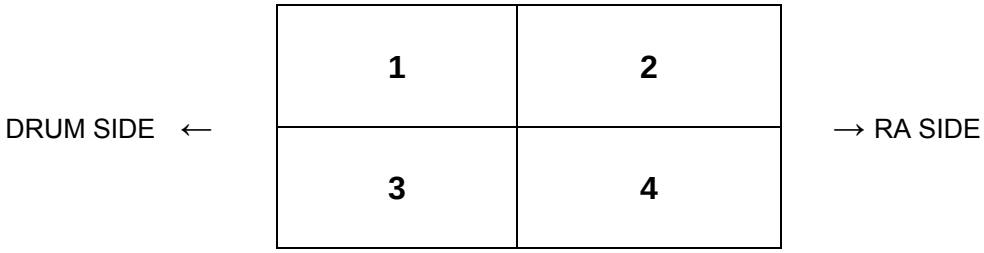
NOTE

When the waste tray being sampled is not among the first ten positions on the Random Selection listing, the tray quadrant will be assigned based upon the final digit of the waste tray's random number order position for the associated Random Selection Lot (e.g., A sampled container in position 17 on the Random Selection listing would use Random Selection Number 7 to determine the Assigned Tray Quadrant for the sample.

4.2.2 Record the sampling location (Assigned Tray Quadrant) for the sample number from Table 1, on Attachment 1 (Item 12).

4.2.3 Using the Random Selection Number and Random Selection Lot Number, identify and locate the assigned Tray Quadrant for sample collection per Figure 1, Diagram of Waste Tray Quadrant Locations below and collect samples from approximately the middle of the quadrant.

Figure 1. Diagram of Waste Tray Quadrant Locations



NOTE

Debris that block the area from where the sample is to be collected may be moved in order to obtain the sample.

NOTE

The sampling process requires the collection of approximately 350 ml of materials. This could include sludge, cemented sludge, or soil. If a solid mass of material (e.g., solidified waste) is encountered, a hammer and chisel will be used to collect the needed volume. If needed, the hammer and chisel will be used to reduce solid materials to a size appropriate for homogenization and sampling. The hammer will not come in contact with the sample. Intact containers or plastic bags of waste in the selected quadrant will be breached for sampling if necessary. The operator will use professional judgment in making these determinations.

4.2.4 Observe and record the sample description (i.e., Homogeneous Solid or Soil/Gravel) on Attachment 1 (Item 13), **AND** all COC Forms.

4.2.5 **IF** sample material is solidified (i.e., a monolith),
THEN GO TO step 4.2.7.

NOTE

Rocks or debris SHALL **NOT** be part of a sample.

NOTE

Trip Blanks are **NOT** to be opened.

4.2.6 **IF** the sample material in the identified quadrant is **NOT** solidified (i.e., **NOT** a monolith),
THEN collect sample from the identified quadrant associated with the sample number by ensuring the following is performed:

[A] Remove the sample vial(s) from the overpack jar, excluding Trip Blanks working with only one overpack jar at a time.

[B] Place, using the clean stainless-steel sample equipment, the sample material into 20 ml glass sample vial(s), cap the **vial(s) immediately**, **AND** replace the vials in their original overpack containers with the plastic lids against the bottom, **AND** replace the lid on the overpack jar.

[C] Record the date and time each sample is collected (vial is closed) on the COC.

[D] For Trip Blanks, the time and date are to be recorded to reflect when the 250 ml overpack jar that is associated with 20 ml sample vials is closed.

[E] Repeat this activity for each of the VOC and NHVOC (regular or co-located) sample vials.

[F] Upon completion of the filling process of ALL VOC and NHVOC (regular or co-located) sample vials, confirm that the one-hour sample time limit is met, **AND** record Yes on line 14 of Attachment 1.

[F.1] **IF** one-hour sample time limit is **NOT** met, record No on line 14 of Attachment 1,
THEN complete sample procedure, **AND** initiate a Nonconformance Report (NCR) in accordance with CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*.

[G] Record any collection problems in comment section on line 15 of Attachment 1.

[H] Record the sample equipment used on line 16 of Attachment 1, **AND** GO TO step 4.2.8.

NOTE
The hammer is **NOT** to come in contact with the sample material.

4.2.7 **IF** solidified waste is located in the sample quadrant,
THEN ensure the following is performed:

[A] Notify VEE of intent to sample solidified waste.

[B] Use the appropriate, certified-clean tool to reduce solid materials to a size appropriate for homogenization and sampling.

[C] Remove the sample vials from the overpack jar, excluding Trip Blanks working with only one overpack at a time.

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[D] Place, using the clean stainless-steel sample equipment, the sample material into 20 ml glass sample vial(s), cap the vial immediately, **AND** replace the vial(s) in their original overpack containers with the plastic lids against the bottom, **AND** replace the lid on the overpack jar.

[E] Record the date and time each vial is closed on the COC.

[F] For Trip Blanks, the time and date are to be recorded to reflect when the 250 ml overpack jar that is associated with 20 ml sample jars is closed.

[G] Repeat this activity for each of the VOC and NHVOC (regular or co-located) sample vials.

[H] Upon completion of the filling process of ALL VOC and NHVOC (regular or co-located) sample vials, confirm that the one-hour sample time limit is met, **AND** record Yes on line 14 of Attachment 1.

[H.1] **IF** one-hour sample time limit is **NOT** met, record No on line 14 of Attachment 1,
THEN complete sample procedure, **AND**
initiate a NCR in accordance with CCP-QP-005.

[I] Record any collection problems in comments section on line 15 of attachment 1.

[J] Record the sample equipment used on line 16 of Attachment 1.

4.2.8 Using either plastic or stainless-steel sample tools, collect the Metals and SVOC sample into the 250 ml sample containers (regular or co-located), **AND** CLOSE the containers.

4.2.9 Record the date and time each 250 ml jar is sampled (closed) on the COC.

4.2.10 Ensure the following information is recorded on each label on all 250 ml jars:

[A] Time, using repeat backs from the times previously recorded on the COC form,

[B] Date,

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[C] Operator initials on each of the 250 ml jar labels.

4.2.11 Ensure that the outside of the 250 ml jar(s) are wiped down using a dry wipe.

NOTE

TIDs shall be installed such that the container **CANNOT** be opened without breaking one or more seals. TIDs or seals will be traceable to the individual who affixed these items.

4.2.12 Ensure a TID is applied to all 250 ml jars containing samples, **AND** the operator's initials are recorded on the TID.

4.2.13 On the COC leave the DISPOSITION column blank.

4.2.14 On the COC, enter NA on any row without a sample ID number.

NOTE

Samples must be refrigerated as soon as possible after collection.

4.2.15 Ensure line of sight is maintained by solids sampler having custody of sample at all times.

4.2.16 Ensure the bagged-out items are placed in the shipping container with frozen ice packs.

4.2.17 Print name, sign, date, and enter time on all COC Forms, **AND** Item 17 on Attachment 1.

4.2.18 Repeat Section 4.1 and 4.2 for any additional drums to be sampled.

4.2.19 **IF** the samples are not going to be shipped directly to the laboratory,
THEN place the samples in a sample refrigerator.

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4.3 Sample Shipment/Transport to Laboratory

NOTE

Samples should be transported to the laboratory within four days of collection.

4.3.1 Ensure that the required site Shipment Request Form(s), or equivalent, has been completed.

4.3.2 Ensure that transportation of the shipping container to approved laboratory has been arranged.

4.3.3 Ensure that the sample container(s) are obtained from the refrigerator if applicable.

4.3.4 Ensure that the samples are packaged in frozen ice packs to ensure and maintain sample temperature.

4.3.5 For the TID to be applied to shipping container, record the TID number on the COC in the comments section located at the bottom of the page.

4.3.6 Sign, date, and enter time on the COC to relinquish custody of samples for shipment.

4.3.7 Photocopy the COC Form(s) and Attachment 1.

NOTE

The COC Form MUST be placed inside the sealed shipping container. Transfer of custody is complete when the Sample Custodian receives, opens the shipping container, **AND** signs, dates, and enters the time on the COC Form.

4.3.8 Place the original COC Form(s) and all copies of Attachment 1 in a re-sealable bag, **AND** attach to the bottom (interior) of the shipping container lid.

NOTE

TIDs shall be installed such that the container CAN **NOT** be opened without breaking one or more seals. Old or broken seals shall be completely removed from the shipping container **AND** replaced with a new seal(s) prior to shipment.

4.3.9 Apply the TID identified on the COC form to shipping container.

4.3.10 Ship/Transport samples to the approved laboratory.

4.4 BDR Preparation and Submission

4.4.1 Assemble the following data for the BDR by performing the following:

[A] Attach and complete CCP Solids Sampling Batch Data Report Cover Sheet (Attachment 5).

[B] Attach CCP Solids Sampling Batch Data Report Table of Contents (Attachment 4).

[C] Attach CCP Solids Sample Tracking Form (s) (Attachment 1).

[D] Attach CCP Solids Sampling Independent Technical Review Checklist (Attachment 3).

[E] Attach copy of NCRs, if applicable.

[F] Attach copy of Temperature Data Logger Sheets for the time period that the sample is in field sample refrigerator, if applicable.

[G] Attach copies of the CCP Solids Sample Chain of Custody Form(s).

[H] Attach copy of cleanliness certification for the sampling equipment.

[I] Attach appropriate forms to reflect the waste matrix of the sampled material.

4.4.2 Ensure that the assembly order of BDR matches BDR Table of Contents.

4.4.3 Paginate the BDR, labeling each page with a sequential number.

4.4.4 Complete Attachment 4, CCP Solids Sampling Batch Data Report Table of Contents.

4.4.5 Submit the BDR package to the ITR.

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4.5 Independent Technical Review

ITR

4.5.1 Review the BDR to the criteria in Attachment 3.

4.5.2 Notify the solid sampler of all errors or omissions found during the review.

4.5.3 Recheck the data after the errors or omissions have been rectified.

4.5.4 Print name, sign, and date Attachment 3 and Attachment 5.

4.5.5 Forward BDR to the VEE for review.

4.6 VEE Review

4.6.1 Review BDR for completeness and accuracy.

4.6.2 Have the solid sampler and/or ITR make the corrections and ITR review, re-sign and date Attachment 3.

4.6.3 Recheck the data after the errors or omissions have been rectified.

4.6.4 Print name, sign, and date Attachment 5.

4.6.5 Submit BDR to Facility Records Custodian to be managed in accordance with CCP-QP-008, CCP Records Management.

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5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as quality assurance (QA) records in accordance with CCP-QP-008. The records are the following:

5.1.1 QA/Lifetime

[A] BDR:

[A.1] Attachment 1, CCP Solids Sample Tracking Form(s)

[A.2] Attachment 2, CCP Solids Sample Chain-of-Custody Form (s)

[A.3] Attachment 3, CCP Solids Sampling Independent Technical Review Checklist

[A.4] Attachment 4, CCP Solids Sampling Batch Data Report Table of Contents

[A.5] Attachment 5, CCP Solids Sampling Batch Data Report Cover Sheet

[A.6] Copy of Attachment 1, the Waste Data and Approvals Sections, of CCP-TP-006

[A.7] Copy of NCRs, if applicable

[A.8] Copy of Temperature Data Logger Sheets

[A.9] Copy of Certification of Cleanliness for Sampling Equipment

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Attachment 1 – CCP Solids Sample Tracking Form

General Information – Complete form in indelible ink. Make correction with a single line strikeout. Initial and date changes.

1. Sample Purpose: Support of Acceptable Knowledge
2. Sampling area within DPS is visibly clean? YES ☐
3. Sample equipment and bags are **NOT** damaged? YES ☐
4. Sampling containers are **NOT** damaged and the containers are visibly clean? YES ☐
5. Kit acceptable and ready for use? YES ☐
6. Sample date: _____ 7. Co-Located Sample? Circle Yes or NO
8. Chain of Custody Form Number: _____
9. Waste Drum Number: _____
10. Sample Batch Number: _____
11. Lot and Random Selection Number: _____ Time waste tray brought into DPS: _____
12. Sampling location - Assigned Tray Quadrant: _____
13. Sample Description:

☐ Homogeneous Solids (Waste Matrix Code S3900 Waste Stream ID-SDA-Sludge)

☐ Soil/Gravel (Waste Matrix Code S4200, Waste Stream ID-SDA-Soil)

14. One Hour sample time limit met: ☐ YES ☐ NO
15. Comments (Include sample collection problems, if any): _____
_____
_____
16. Sampling equipment used:
_____
_____
17. Name of Solids Sampler: _____ _____ _____
Printed Name Signature Date

Attachment 2 – CCP Solids Sample Chain-of-Custody Form (Example)

Form # AR4 rev 0 24Sep04

Accelerated Retrieval Project Chain Of Custody

COC No. **AR4«Fld_ID_Num»R1**

Sampling Location: **RWMC AR** Lab: **INL** Type Sample: **Regular** Waste Container ID Number: _____

Sample Matrix……: **SOLIDS** Homogeneous Solids Soil/Gravel Sampling Batch No: _____

Sampler(s): _____ _____ _____
Printed Signature Date/Time

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No	Sample Analysis	Comments	Disposition*
AR4«Fld_ID_			1 x 20		**VOC** Sample		
AR4«Fld_ID_			1 x 20		**VOC** Spare		
AR4«Fld_ID_			1 x 20		**VOC** Trip Blank Sample		
AR4«Fld_ID_			1 x 20		**VOC** Trip Blank Spare		
AR4«Fld_ID_			1 x 20		**NHVOC** Sample		
AR4«Fld_ID_			1 x 20		**NHVOC** Spare		
AR4«Fld_ID_			1 x 20		**NHVOC** Trip Blank Sample		
AR4«Fld_ID_			1 x 20		**NHVOC** Trip Blank Spare		

NOTE: For preservation, all samples were stored at a controlled temperature of 4° C, then packed with chemical ice for shipment.

Samples Relinquished by (Signature):	**Date**	**Time**	**Samples Received by** (Signature):	**Date**	**Time**

Comments: * Disposition fields are completed by the laboratory.

All samples analysis complete and samples removed from custody control and dispositioned

_____ _____
Signature Date

Attachment 2 – CCP Solids Sample Chain-of-Custody Form (Example) (Continued)

Form #
AR4 rev 0
24Sep04

Accelerated Retrieval Project Chain Of Custody

COC No. **AR4«Fld_ID _Num»R2**

Sampling Location: **RWMC AR** Lab: **INL** Type Sample: **Regular** Waste Container ID Number: _____

Sample Matrix……: **SOLIDS** Homogeneous Solids Soil/Gravel Sampling Batch No: _____

Sampler(s): _____ Printed _____ Signature _____ Date/Time

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No	Sample Analysis	Comments	Disposition*
AR4«Fld_ID			1 x		**Metals and SVOC**		
N/A	**N/A**	N/A	N/A	N/A	N/A	N/A	N/A
N/A	**N/A**	N/A	N/A	N/A	N/A	N/A	N/A
N/A	**N/A**	N/A	N/A	N/A	N/A	N/A	N/A
N/A	**N/A**	N/A	N/A	N/A	N/A	N/A	N/A
N/A	**N/A**	N/A	N/A	N/A	N/A	N/A	N/A
N/A	**N/A**	N/A	N/A	N/A	N/A	N/A	N/A
N/A	**N/A**	N/A	N/A	N/A	N/A	N/A	N/A

NOTE: For preservation, all samples were stored at a controlled temperature of 4° C, then packed with chemical ice for shipment.

Samples Relinquished by (Signature):	**Date**	**Time**	**Samples Received by** (Signature):	**Date**	**Time**

Comments: * Disposition fields are completed by the laboratory.

All samples analysis complete and samples removed from custody control and dispositioned _____ Signature _____ Date

Attachment 2 – CCP Solids Sample Chain-of-Custody Form (Example) (Continued)

Form # AR4 rev 0 24Sep04

Accelerated Retrieval Project Chain Of Custody

COC No. **AR4«Fld_ID_Num»C1**

Sampling Location: **RWMC AR** Lab: **INL** Type Sample: **Co-located** Waste Container ID Number: _____

Sample Matrix…..: **SOLIDS** Homogeneous Solids Soil/Gravel Sampling Batch No: _____

Sampler(s): _____ (Printed) _____ (Signature) _____ (Date/Time)

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No	Sample Analysis	Comments	Disposition*
AR4«Fld_ID			1 x 20		**VOC** Sample		
AR4«Fld_ID			1 x 20		**VOC** Spare		
AR4«Fld_ID			1 x 20		**VOC** MS		
AR4«Fld_ID			1 x 20		**VOC** MSD		
AR4«Fld_ID			1 x 20		**VOC** Trip Blank Sample		
AR4«Fld_ID			1 x 20		**VOC** Trip Blank Spare		
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

NOTE: For preservation, all samples were stored at a controlled temperature of 4° C, then packed with chemical ice for shipment.

Samples Relinquished by (Signature):	**Date**	**Time**	**Samples Received by** (Signature):	**Date**	**Time**

Comments: * Disposition fields are completed by the laboratory.

All samples analysis complete and samples removed from custody control and dispositioned _____ (Signature) _____ (Date)

Attachment 2 – CCP Solids Sample Chain-of-Custody Form (Example) (Continued)

Form # AR4 rev 0 24Sep04

Accelerated Retrieval Project Chain Of Custody

COC No. **AR4«Fld_ID_Num»C2**

Sampling Location: **RWMC AR** Lab: **INL** Type Sample: **Co-located** Waste Container ID Number: _____

Sample Matrix……: **SOLIDS** Homogeneous Solids Soil/Gravel Sampling Batch No: _____

Sampler(s): _____ Printed _____ Signature _____ Date/Time

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No	Sample Analysis	Comments	Disposition*
AR4«Fld_ID			1 x 20		**NHVOC** Sample		
AR4«Fld_ID			1 x 20		**NHVOC** Spare		
AR4«Fld_ID			1 x 20		**NHVOC** MS		
AR4«Fld_ID			1 x 20		**NHVOC** MSD		
AR4«Fld_ID			1 x 20		**NHVOC** Trip Blank		
AR4«Fld_ID			1 x 20		**NHVOC** Trip Blank Spare		
AR4«Fld_ID			1 x 250		**Metals and SVOC**		
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

NOTE: For preservation, all samples were stored at a controlled temperature of 4° C, then packed with chemical ice for shipment.

Samples Relinquished by (Signature):	**Date**	**Time**	**Samples Received by** (Signature):	**Date**	**Time**

Comments: * Disposition fields are completed by the laboratory.

All samples analysis complete and samples removed from custody control and dispositioned _____ Signature _____ Date

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Attachment 3 – CCP Solids Sampling Independent Technical Review Checklist

Batch Data Report No.: _____

Description	YES	NO	N/A
1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods used?			
2. Was the correct revision of operating procedure used? Rev. _____			
3. Were the data reviewed for transcription errors?			
4. Are BDR contents and field sampling records complete and do they match the CCP Solids Sampling Batch Data Report Table of Contents (Attachment 4)?			
5. Does the Sample Batch Report include up to 20 samples all taken within 14 days of the first sample?			
6. Were the sampling equipment and sample containers (e.g., spoons, sub-samplers, vials) used for all samples in this batch cleaned (or purchased clean)?			
7. Was a co-located sample collected once per sampling batch or every seven days (whichever is more frequent)? (Attachment 1)			
8. Was the co-located sample collected from the same quadrant? (Attachment 1)			
9. Was a trip blank included in each sample package?			
10. Were the samples stored in a field storage refrigerator at 4 ± 2 ºC and/or transported in a shipping container with frozen ice packs?			
11. For each sample taken, were the data complete in Attachments 1 and 2 for the following?			
a. Name of sampling facility			
b. Waste container ID number			
c. Sample ID number			
d. Type of sample matrix (i.e., solids or soil/gravel)			
e. Type of sampling equipment used (e.g., scoop, chisel)			
f. Type of sample container used and manufacturer's lot number assigned to that container.			
g. Analysis requested			
h. QC designation, if applicable (e.g., trip blank, field duplicate [co-located])			
i. COC form number			
j. Analytical laboratory requested to do analysis			
k. Names, signatures, dates, times of sample handlers			
l. Randomly selected quadrant(s)			
m. Sample size [container size]			
12. Is all the data provided using indelible ink and by the individual(s) generating it?			
12. Is all data entered clearly, legibly, and accurately?			
13. All changes to original data lined out, initialed and dated by the individual making the changes?			
14. Was justification made for changing the original data?			
15. Were data changes made by a qualified individual?			
16. Individual sample VOC containers were closed within one-hour of the sample being brought into the DPS.			
Comments:			

Independent Technical Reviewer:

Printed Name	Signature	Date

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Attachment 4 – CCP Solids Sampling Batch Data Report Table of Contents

Sampling Batch No.:_____ **Date:** _____

Table of Contents

Item	Description	Page No.
1	CCP Solids Sampling Batch Data Report Cover Sheet	
2	CCP Solids Sampling Batch Data Report Table of Contents	
3	CCP Solids Sampling Tracking Form(s)	
4	CCP Solids Sampling Independent Technical Review Checklist	
5	Copy of NCRs (N/A, if **NOT** applicable)	
6	Copy of Temperature Data Logger Sheets (N/A, if **NOT** applicable)	
7	Copy of Chain of Custody (COC) Form(s)	
8	Copy of Certification of cleanliness for sampling equipment	
9	Copy of Attachment 1, CCP Waste Visual Examination Technique Data Form, Section 5 Waste Data of CCP-TP-006	

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Attachment 5 – CCP Solids Sampling Batch Data Report Cover Sheet

Batch Data Report No.: _____

	Waste Container ID Number
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

ITR:

_____	_____	_____
Printed Name	**Signature**	**Date**

VEE:

_____	_____	_____
Printed Name	**Signature**	**Date**

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CCP-TP-028

Revision 7

CCP
Radiographic Test Drum and Training Container Construction

EFFECTIVE DATE: 07/13/2012

Mike Ramirez

PRINTED NAME

APPROVED FOR USE

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
2	02/04/2004	In response to CAR No: CAR-CCP-010-03, revision change to create electronically fillable form and update references. Change FQAO to CCP Training and add Facility Records Custodian in Responsibilities section of procedure. Minor editorial corrections throughout procedure. Revision to Waste codes on Attachment 1 and fillable form.
3	01/19/2006	Revised procedure steps and Attachment 1, CCP NDE Test Drum Inventory Sheet to allow for multiple Summary Category Groups to be represented in a test/training drum. Revised Drum Contents section of Attachment 1 to include WAP-required items and other non-WAP items.
4	05/26/2010	Revised to clarify the difference between a Test Drum and a Training Drum and how they are to be constructed.
5	07/27/2010	Revised to correct editorial errors.
6	12/29/2010	Revised to incorporate training containers in place of training drums. Also revised training container assembly procedures to meet the requirements of the revised *Waste Isolation Pilot Plant Hazardous Waste Facility Permit.*
7	07/13/2012	Revised to allow Vendor Project Manager (VPM) to assemble Training Containers.

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1.0 PURPOSE

The purpose of this procedure is to provide the requirements for the assembly of nondestructive examination (NDE) test drums and training containers, required by CCP-PO-002*, CCP Transuranic Waste Certification Plan* and training containers, required by CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan,* and the *CH-TRU Payload Appendices* which are used to qualify Radiography Operators in accordance with CCP-QP-002, *CCP Training and Qualification Plan.*

1.1 Scope

This procedure provides the instruction for assembling test drums and training containers. Test drums are representative of the Waste Matrix Codes (WMC) for which the Waste Stream Profile Form (WSPF) approval is being sought. Training containers are required to be scanned semi-annually.

2.0 REQUIREMENTS

2.1 References

Baseline Documents

- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- CCP-PO-002, *CCP Transuranic Waste Certification Plan*
- *CH-TRU Payload Appendices*

Referenced Documents

- CCP-QP-002, *CCP Training and Qualification Plan*
- CCP-QP-008, *CCP Records Management*

3.0 RESPONSIBILITIES

3.1 Vendor Project Manager (VPM) or Cognizant Engineer (CE)

3.1.1 Ensures that test drums and training containers are constructed in accordance with the requirements of this procedure.

3.1.2 Completes Attachment 1, CCP NDE Test Drum Inventory Sheet, and Attachment 2, CCP NDE Training Container Inventory Sheet.

3.2 CCP Training

3.2.1 Tracks the use of test drums and training containers to ensure that testing and evaluation of NDE Operators are conducted on test drums and training containers, as specified in CCP-QP-002.

3.3 Facility Records Custodian

3.3.1 Transmits all records generated by this procedure in accordance with CCP-QP-008, *CCP Records Management*.

4.0 PROCEDURE

4.1 Test Drum Assembly

NOTE

Test Drums are to be assembled representing all three Summary Category Groups, with the bottom ¼ being sludge, a spacer (e.g., cardboard), next ¼ being naturally occurring soil, and the top half containing debris using the listed required items and other material representing all the waste material parameters for debris.

VPM

4.1.1 Identify **AND** obtain the items needed to match the WMCs (items common to the waste streams to be characterized).

4.1.2 Obtain the following required items for each drum to be constructed:

[A] US Department of Transportation (DOT) Type A 55-gallon drum

[B] Aerosol can with puncture

[C] Horsetail bag (Liner Bag)

[D] Pair of coveralls

[E] Empty bottle

[F] Irregular-shaped pieces of wood

[G] Empty one-gallon paint can

[H] Full container

[I] Aerosol can with fluid

[J] One-gallon bottle with three tablespoons of fluid

[K] One-gallon bottle with one cup of fluid

[L] Leaded glove or leaded apron

[M] Wrench

4.1.3 Construct the test drum(s) as follows:

NOTE
NDE test drum identification number format is NDE-TEST-01, NDE-TEST-02.

[A] Label the test drum with a unique identification number obtained from CCP Training.

[B] Record the test drum identification number and date on Attachment 1.

[C] Place sludge and spacer in drum.

[D] Place soil in drum.

NOTE
The one-gallon bottle with one cup of fluid (step 4.1.2[K]) MUST be placed upside down in the test drum. In addition, the test drum will be divided into layers with varying densities to represent different situations that may occur during radiography examinations.

[E] Place the remaining items listed in Section 4.1.2 (steps 4.1.2[B] through 4.1.2[M]), along with items common to the waste stream(s) (step 4.1.1), in the test drum.

[F] Record the placement of items (step 4.1.3[E]) on Attachment 1.

[G] Secure the lid to the test drum using the outside ring.

[H] Place a tamper indicating device/lock on the test drum.

[I] Complete Attachment 1, print name, sign, **AND** date on Attachment 1.

4.1.4 Repeat steps in Section 4.1.3 for each NDE test drum constructed.

4.1.5 Forward Attachment 1 to the Facility Records Custodian.

Facility Records Custodian

4.1.6 Transmit Attachment 1 in accordance with CCP-QP-008 to the CCP Training Group.

4.2 Assembling Training Containers

CE or VPM

4.2.1 Obtain the following items for each training container to be constructed:

- Container type regularly examined, for example a 55-gallon drum or standard waste box (SWB)
- Items which can be identified by real-time radiography (RTR), items that are representative of the physical properties of the waste based on acceptable knowledge documentation reviewed (including internal containers of various sizes with various amounts of liquid), and prohibited items (for example, liquids in excess of one percent)

NOTE
NDE Training container identification number format is NDE-TRAINING-01.

4.2.2 Label the training container with a unique identification number obtained from the training department.

4.2.3 Place the items in the containers.

4.2.4 Record training container identification number on Attachment 2.

4.2.5 Record date of construction on Attachment 2.

4.2.6 Record the placement of the items on Attachment 2.

4.2.7 Install the container lid.

4.2.8 Install tamper indicating device/lock on the training container.

4.2.9 Print name, sign, and date Attachment 2.

4.2.10 Repeat steps in Section 4.2 for each NDE training container constructed.

4.2.11 Forward Attachment 2 to CCP Training.

5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as quality assurance (QA) records in accordance with CCP-QP-008. The records are the following:

5.1.1 QA/Nonpermanent Records

[A] Attachment 1 – CCP NDE Test Drum Inventory Sheet

[B] Attachment 2 – CCP NDE Training Container Inventory Sheet

Attachment 1 – CCP NDE Test Drum Inventory Sheet

Test drum identification number:	Date:
Drum contents:	

CCP-PO-002 required items	Other items
1. Aerosol can with puncture	1.
2. Horsetail bag (Liner Bag)	2.
3. Pair of coveralls	3.
4. Empty bottle	4.
5. Irregular-shaped pieces of wood	5.
6. Empty one-gallon paint can	6.
7. Full container	7.
8. Aerosol can with fluid	8.
9. One-gallon bottle with three (3) tablespoons of fluid	9.
10. One-gallon bottle with one (1) cup of fluid (upside down)	10.
11. Leaded glove or leaded apron	11.
12. Wrench	12.

Comments:

VPM Printed Name	Signature	Date

Attachment 2 – CCP NDE Training Container Inventory Sheet

Training container identification number:	Date:
Container contents:	
1.	14.
2.	15.
3.	16.
4.	17.
5.	18.
6.	19.
7.	20.
8.	21.
9.	22.
10.	23.
11.	24.
12.	25.
13.	26.
Comments:	
CE or VPM Printed Name Signature Date	

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CCP-TP-030

Revision 31

CCP
CH TRU Waste Certification and WWIS/WDS Data Entry

EFFECTIVE DATE: 11/19/2012

Mike Ramirez

PRINTED NAME

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RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
24	08/20/2008	Revised in response to Central Characterization Project Corrective Active Report CAR 08-025, deleted Characterization Data System Waste Certification Official review form, and made editorial changes.
25	01/22/2009	Revised to update data sources for the Waste Isolation Pilot Plant (WIPP) Waste Information System (WWIS) Data Spreadsheet (SS). Also made minor editorial changes.
26	05/27/2009	Revised to implement changes made to the *Contact-Handled Transuranic Waste Authorized Methods for Payload Control* (CH-TRAMPAC).
27	12/14/2009	Revised to allow use of the Waste Data System (WDS).
28	05/12/2010	Revised to include steps for direct load 100-Gallon drums that require characterization prior to placement in a direct load Standard Waste Box (SWB) and for minor editorial changes.
29	04/26/2011	Revised Attachment 2, WCO Waste Certification Requirements, to include Standard Large Box 2 (SLB2) Waste Certification Official (WCO) Waste Certification Requirements. Also revised Sections 3.1.6, 4.2.6, and Attachment 1 of the Data Sources for the WDS Master Template.
30	05/21/2012	Revise Table 1, Data Sources for the WDS Master Template, to include the acceptable knowledge (AK) Tracking Spreadsheet (SS) for another source for Layers of Confinement; added the reference for the Transuranic Package Transporter (TRUPACT)-III; added new records section for waste data system (WDS) flammable gas analysis (FGA) Certification.
31	11/19/2012	Revised to address CAR-CCP-0003-12 and various editorial changes. Also revised to better streamline the nonconformance report (NCR)/Corrective Action Report (CAR) quality assurance (QA) request.

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1.0 PURPOSE

The purpose of this procedure is to describe the steps the Central Characterization Program (CCP) uses for certifying contact-handled (CH) transuranic (TRU) waste for disposal at the Waste Isolation Pilot Plant (WIPP). This procedure also describes the process for entering data into the WIPP Waste Information System (WWIS)/Waste Data System (WDS) and reporting data on containers for disposal at the WIPP.

In addition, this procedure may be used to enter data into the WWIS/WDS for site-to-site waste shipments using Transuranic Package Transporter (TRUPACT)-IIs, TRUPACT-IIIs, or HalfPACTs. Site-to-site waste shipments are defined as shipments with destinations to sites other than the WIPP for storage, characterization, or treatment, and are distinct from site-to-WIPP waste shipments for disposal.

1.1 Scope

This procedure defines the parameters necessary for certification of CH TRU waste for disposal at the WIPP. This procedure includes the records that are generated to document that the CCP Waste Certification Official (WCO) has performed the necessary verifications and has certified the waste for disposal.

This procedure also describes how to obtain access and enter data into the WWIS/WDS for containers to be certified for disposal at the WIPP.

This procedure also describes the steps for entering data into the WWIS/WDS for site-to-site waste shipments. Site-to-site waste shipments are shipments of waste destined for sites other than the WIPP.

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2.0 REQUIREMENTS

2.1 References

Baseline Documents

- CCP-TP-035, *CCP Container Management*
- CCP-TP-068, *CCP Standardized Container Management*
- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- *CH-TRU Payload Appendices*

Referenced Documents

- DOE/WIPP-09-3427*, Waste Data System User's Manual*
- DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant*
- DOE/WIPP-01-3194, *CH-TRU Waste Content Codes (CH-TRUCON)*
- DOE/WIPP-11-3458, *TRUPACT-III CONTENT CODES (TRUCON-III)*
- CCP-PO-002, *CCP Transuranic Waste Certification Plan*
- CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)*
- CCP-PO-050, *CCP TRUPACT-III TRU Waste Authorized Methods for Payload Control (CCP TRUPACT-III TRAMPAC)*
- CCP-QP-002, *CCP Training and Qualification Plan*
- CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
- CCP-QP-008, *CCP Records Management*
- CCP-TP-002, *CCP Reconciliation of DQOs and Reporting Characterization Data*
- CCP-TP-120, *CCP Container Management*

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2.2 Training Requirements

2.2.1 Personnel who use this procedure to certify waste will be trained and qualified to the requirements for the WCO in accordance with CCP-QP-002, *CCP Training and Qualification Plan*.

2.2.2 Personnel who use this procedure to enter data will be trained and qualified to the requirements for the Waste Certification Assistant (WCA) in accordance with CCP-QP-002*.*

2.2.3 Personnel who use this procedure to enter data into the WWIS/WDS will refer to DOE/WIPP-09-3427, *Waste Data System User's Manual.*

2.3 Equipment List

2.3.1 None.

2.4 Software

2.4.1 WDS Master Template.XLS

2.4.2 SRS IPAN TEMPLATE.XLS

2.4.3 WWISMCLB.XLS

2.4.4 HSGNDATransfer.XLS

2.4.5 FGECheckU23511172004.XLS

2.4.6 concat_wds_files.bat

2.4.7 clean_container_files.bat

2.4.8 WDS FGA Template*.XLS

2.5 Precautions and Limitations

2.5.1 None.

2.6 Prerequisite Actions

2.6.1 None.

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2.7 Definitions

2.7.1 None.

NOTE

The Data Administrator (DA) in this document refers to the WWIS/WDS DA.

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3.0 RESPONSIBILITIES

3.1 Site Project Manager (SPM) or Designee

3.1.1 Confirms that personnel performing this procedure are trained and qualified in accordance with applicable requirements in CCP-QP-002.

3.1.2 Prepares a list of candidate containers for certification and submits to the WCO and WCA.

3.1.3 Notifies the WCO and WCA of approved WSPF.

3.1.4 Notifies the WCO and WCA of completed Lot Characterization Information Summary (CIS).

3.1.5 Serves as focal point for resolution of data issues.

3.2 Quality Assurance (QA)

3.2.1 Provides assistance in verifying data, completing documentation, and reviewing requirements and provides status of applicable Nonconformance Reports (NCRs) and Corrective Action Reports (CARs).

3.2.2 Confirms, individually and with an independent verification (does not have to be Quality Assurance [QA]), that there are no unresolved NCRs and/or CARs for containers to be certified when requested by the WCA or WCO.

3.3 Waste Certification Official (WCO) or Designee

3.3.1 Confirms that WCOs and WCAs are granted access to the WWIS/WDS.

3.3.2 Obtains a copy of the approved WSPF for applicable containers to be certified.

3.3.3 Certifies the data for the container to be certified as identified on the WDS Spreadsheets (SS) (WDS Master Template).

3.4 Waste Certification Assistant (WCA)

3.4.1 Works with the WCO to obtain access to the WWIS/WDS.

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3.4.2 Gathers copies of data for each container from CCP Records or the Site Project Manager (SPM) that show data to be entered into the WDS Master Template.

3.4.3 Generates the WDS Master Template and has a second WCA confirm the data is transferred correctly to the WDS Master Template. The second data entry person verifies the information and places initials and date in the WDS Master Template prior to certification by the WCO.

3.4.4 Forwards the WDS Master Template to the WCO for certification.

3.4.5 Requests that QA confirm that NCRs and/or CARs associated with containers to be certified have been resolved, as appropriate, via electronic mail (E-mail).

3.4.6 Submits the container data from the WDS Master Template to the WWIS/WDS, as applicable.

3.4.7 Submits data package to CCP Records Custodian in accordance with CCP-QP-008, *CCP Records Management.*

3.5 CCP Records Custodian

3.5.1 When applicable, receives and processes all records generated by this procedure in accordance with CCP-QP-008.

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4.0 PROCEDURE

4.1 Obtaining and Changing Access to the WWIS/WDS

WCO

4.1.1 Determine which personnel need access to the WWIS/WDS (see Section 4.0 of DOE/WIPP-09-3427).

4.1.2 Request WWIS/WDS access for each person by filling out a WIPP/WDS access request form and submitting it to a DA with a copy provided to the SPM.

4.1.3 Notify the DA when personnel who have received WWIS/WDS access:

[A] Leave the project;

[B] No longer need WWIS/WDS access; **OR**

[C] Need to change the type of WWIS/WDS access.

CCP Personnel

4.1.4 Once the DA has been notified by the WCO that access is to be granted, contact the DA to receive WWIS/WDS training and a WWIS/WDS username in accordance with the DOE/WIPP-09-3427.

4.2 Verifying WSPF in WWIS/WDS Tables and Listing Associated Containers

SPM

4.2.1 Obtain the WSPF Number in accordance with CCP-TP-002.

4.2.2 Request the DA establish the WSPF Number in the WWIS/WDS.

4.2.3 Confirm that the WSPF Number is correct in the WWIS/WDS Reference Table upon notification that the DA has added the WSPF Number to the WWIS/WDS.

4.2.4 Notify the WCO and WCA of the WSPF.

4.2.5 Develop a list of containers for certification under the appropriate WSPF.

4.2.6 Review the list of containers for certification, revise as necessary, **AND** submit the list to the WCO and WCA when the CIS is complete.

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4.3 Entering and Verifying Characterization Data Using the WDS Master Template

WCA

4.3.1 Obtain, from CCP Records or the SPM, a copy of the appropriate WSPF, Batch Data Reports (BDRs), Packaging Records, Acceptable Knowledge (AK) Summary Report, AK Tracking SS, and radiological survey data as applicable.

NOTE

When entering data that has been analyzed by the Imaging Passive/Active Neutron (IPAN) instrument, the WCA must use the appropriate Savannah River Site (SRS) IPAN Template.

4.3.2 Use copies of appropriate BDRs or other data source, from CCP Records or the SPM, as listed in Table 1, Data Sources for the WDS Master Template, to enter characterization data into the appropriate WDS Master Template for each container record used to support the WSPF.

NOTE

Section 4.3.3 is for data entry of waste that requires characterization prior to placement in a direct loaded Standard Waste Box (SWB).

4.3.3 Standard Waste Box(es) (SWBs) Direct Loaded

[A] **IF** the container is **NOT** a SWB direct loaded, **THEN** proceed to step 4.3.4.

[B] Add up the Waste Material Parameters (WMPs) from the real-time radiography (RTR) or visual examination (VE) data sheets for the drums loaded in the SWB, **AND** enter on the WDS Master Template as single values for the SWB.

[C] Add up the drum weights, **AND** enter the value as steel waste by adding the value to the WMP for the steel waste on the WDS Master Template.

[D] Add up the drum liner weights, **AND** enter the value as plastic waste by adding the value to the WMP for plastic waste on the WDS Master Template.

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[E] **IF** the drums to be direct-loaded require gas generation testing (GGT) data,
THEN add up the GGT values for each drum and enter a single value for the SWB on the WDS Master Template,
AND report the oldest GGT completion date of the drums.

[F] **IF** the drums to be direct loaded are from a Polychlorinated Biphenyl (PCB) Waste Stream,
THEN assign the earliest closure date or the earliest Out-of-Service date on the AK tracking SS of the direct-loaded drums as the Out-of-Service date for the PCB waste in the SWB.

[G] **IF** a flammable gas test is run on the SWB,
THEN use the results.

[H] **IF** SWB does not have flammable gas results,
THEN proceed to step 4.3.3[I].

NOTE

Use a flammable gas analysis (FGA) sample date one day after the closure and vent.

[I] The Volatile Organic Compound (VOC) concentration values for each 55-gallon drum packaged in the SWB shall be compared, and the highest single value for each flammable VOC shall be selected for reporting as the SWB values on the WDS Master Template.

4.3.4 Enter DOE/WIPP-01-3194 CH TRU Waste Content Codes (CH-TRUCON) or DOE/WIPP-11-3458 TRUPACT-III Content Codes (TRUCON-III) as described in Attachment 1, Entering of Content Code and Shipping Category into the WWIS/WDS.

4.3.5 Enter shipping categories as described in Attachment 1, if necessary.

4.3.6 Enter initials and submit the completed WDS Master Template to a second WCA for verification.

WCA (Verifier)

4.3.7 Confirm the data entered into the WDS Master Template for each container record by checking the data to confirm the accuracy and completeness of the data.

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4.3.8 **IF** there are any discrepancies,
THEN the correction must be made by a WCA.

4.3.9 **IF** the discrepancies CAN **NOT** be resolved,
THEN provide the WDS Master Template to the WCO or SPM for resolution.

4.3.10 **WHEN** the WDS Master Template is complete and verified,
THEN enter initials and date verified in the SS, print WDS Master Template, **AND** submit to the WCO.

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Table 1. Data Sources for the WDS Master Template

Field Label	Source
Characterization, Certification, and Shipping Data	
Shipper Site ID or Site ID Location ID Destination Program ID Shipping Purpose	CIS and WDS reference table
Waste Stream Profile	AK Summary Report
Container Number	Completed CIS (Add "BN" to front of ID Number for the Advanced Mixed Waste Treatment Project [AMWTP] containers not being Overpacked); AK Tracking SS
Container Type	Packaging records; visual inspection; AK Summary Report; or designate for Overpacking, AK Tracking SS
Waste Acceptance Criteria (WAC) Rev #	DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant*
Cert Site	CIS and WDS reference table
Cert Date	Date WCO certifies payload container
Waste Handling Code	CH Radioassay BDR; Radiological Characterization BDR; WSPF
Waste Type Code	WSPF or AK Summary Report (if no Hazardous Waste Numbers, enter TRU) TRU or mixed-TRU (MTRU)
Waste Stream Baseline Inventory Report (BIR) ID Waste Stream Mixed Waste Inventory Report (MWIR) ID	WSPF or AK Summary Report
Generator Site ID Item Description Code (IDC) Code Matrix Code	WSPF or AK Summary Report AK Summary Report (not applicable [NA] if no IDC available) WDS reference table
TRUCON Code	AK Summary Report, WSPF. See Attachment 1 and the CH-TRUCON or TRUCON-III.
Shipping Category	CH-TRUCON or TRUCON-III
TRU Alpha Act TRU Alpha Act Uncertainty TRU Alpha Act Concentration (conc.) Pu-239 Fissile Gram Equivalent Pu-239 Fissile Gram Equivalent Uncertainty Pu-239 eq. act. Decay Heat Decay Heat Uncertainty	Radioassay BDR, Radiological Characterization BDR Note – Nondestructive Assay (NDA) uncertainties must be reported to the WWIS/WDS at 1-sigma. Verify the data to be submitted to WWIS/WDS is at 1-sigma.

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Table 1. Data Sources for the WDS Master Template (Continued)

Field Label	Source
Layers of Packaging	VE BDR, RTR BDR, AK Tracking SS or AK Summary Report
Fill Factor	VE BDR, RTR BDR or AK Summary Report
Liner Type or Liner Exists	VE BDR, RTR BDR or AK Summary Report
Liner Lid Present	VE BDR, RTR BDR or AK Summary Report
Liner Punctured, Liner Hole Size	VE BDR, RTR BDR, or AK Summary Report. No liner lid indicates liner is vented with default hole size of 478 mm for a 55-gallon drum
PCB Waste PCB Concentration PCB Mass PCB Out-Of-Service Date	WSPF or AK Summary Report VE BDR, RTR BDR, or AK Tracking SS
Aqueous Material Beryllium (Be) less than or equal to 100 kg Be less than or equal to 1% Be Present Machine Compacted	AK Tracking SS or AK Summary Report
Closure Date	AK Tracking SS, Remediated Drum SS, IDC, FGA BDR, Headspace Gas (HSG) BDR
Vent Date	AK Tracking SS, Remediated Drum SS, IDC, FGA BDR, HSG BDR
Filter Install Date Filter Manufacturer Filter Model Number Number of Filters Installed	HSG BDR, FGA BDR, VE BDR, AK Tracking SS, Remediated Drum Sheet, Drum Filter Change Out Form, or Container Inspection Report, SLB2 Vent Configuration Sheet
Waste Gen Date Filter Reduction Date Reduced Filter Model	AK Tracking SS
Aspiration Method ID	AK Tracking SS, Remediated Drum SS, AK Summary Report HSG BDR, FGA BDR, Off-site Sealed Source Recovery (OSR) Project AK Summary Report
Gas Generation Rate Hydrogen/Methane Gen. Rate Gas Generation Completion Date	GGT BDR, Long Term Objective (LTO) as applicable
Gross Weight	VE BDR, Radiography BDR, CCP-TP-120, *CCP Container Management* (OSR only),
Gross Weight Uncertainty	2.3 kg for drums, 16.3 kg for SWBs, and 90.7 kg for SLB2s may be entered as the bounding case where actual measurement data is not readily available

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Table 1. Data Sources for the WDS Master Template (Continued)

Field Label	Source
Alpha Surf Cont Beta/Gamma Surf Cont Neutron Dose Rate Beta/Gamma Dose Rate	Radiological Control Technician (RCT) Report
Radionuclide Data Radionuclide Activity (curie [Ci] Activity Uncertainty (Ci) Assay Method Data Radioassay Method Data Package Number Assay Date (actual assay date)	 Radioassay BDR, Radiological Characterization BDR Note – NDA uncertainties must be reported to the WWIS/WDS at 1-sigma. Verify the data to be submitted to WWIS/WDS is at 1-sigma. Certification Letters or Certified Equipment List
Material Parameter Data WMP Weight of Material Parameter	 VE BDR or Radiography BDR, AK Summary Report
Characterization Method Data Charz Method ID Data Package Number Charz Method Date	 RTR, VE BDR, Certification Letters or Certified Equipment List
Hazardous Waste Numbers Data Hazardous Waste Numbers	 WSPF or AK Summary Report
Sample Type Layer No. Sampled Date Sampled Method ID Data Package Number	HSG or Solids Analytical BDR, FGA BDR, OSR AK Summary Report
Analyte	HSG for CCP-PO-002, *CCP Transuranic Waste Certification Plans* or Transportation, HSG, or Solids Analytical BDR, FGA BDR, OSR AK Summary Report, Certification Letters, or Certified Equipment List Analytical BDR
Concentration (% volume [vol.], milligram/kilogram [mg/kg], parts per million [ppm]) Date Analyzed	HSG or Solids Analytical BDR, FGA BDR, OSR AK Summary Report
Reporting Flag B Reporting Flag D Reporting Flag E Reporting Flag J Reporting Flag U Reporting Flag N/A	HSG or Solids Analytical BDR, FGA BDR, OSR AK Summary Report

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4.4 Waste Certification (By Container of Waste)

NOTE
Steps 4.4.1 through 4.4.13 can be performed in any order.

WCO

4.4.1 Verify the appropriate WDS Master Template is being used.

NOTE
For waste streams that are approved for load management, TRU alpha activity concentrations of less than 100 nanocuries per gram (nCi/g) are allowable, if containers meet step 4.4.7, and must be assigned an overpack status.

4.4.2 Confirm that the TRU alpha activity concentration is greater than 100 nCi/g for each payload container.

4.4.3 Confirm that the WDS Master Template contains accurate and complete information for the container by checking that the WCA has completed their input and review.

4.4.4 **IF** there are any open NCRs/CARs,
THEN verify that each container certified has no unresolved NCRs/CARs.

4.4.5 Review the waste stream information against the applicable Content Code and data sources to confirm the waste is **NOT** an incompatible waste.

4.4.6 Verify that the WDS Master Template contains the correct WSPF Number for that container as listed in the AK Tracking SS.

4.4.7 Verify at least one TRU isotope is greater than the lower limit of detection (LLD) for waste containers.

4.4.8 Confirm the criteria on Attachment 2, WCO Waste Certification Requirements, have been met.

4.4.9 **IF** the Methane concentrations is greater than or equal to 1,250 ppm,
THEN the container is **NOT** eligible for certification.

4.4.10 **IF** the Methane concentration is less than the minimum detectable limit (MDL) as indicated by a “U” flag,
THEN adjust the Methane concentration to 2.5 percent of the Hydrogen concentration, as appropriate.

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4.4.11 **IF** the NDA BDR was run on a version of Gamma-Ray Waste Assay Software (GWAS) prior to 2.3cGen **AND** either U-233 or U-235 is above LLD,
THEN recalculate the fissile gram equivalent (FGE) using FGECheckU23511172004.xls.

4.4.12 **IF** GGT is indicated for the waste container,
THEN ensure that the shipping period of the selected Shipping Category is valid for the testing period of GGT.

NOTE

The designator "BN" must be added to the beginning of the Container number for all data sets for waste containers from AMWTP waste streams and containers **NOT** designated to be overpacked. This designator is only required to be applied to the Container ID for submittal to the WWIS/WDS.

WCO

4.4.13 **IF** the container is certifiable,
THEN sign and date the WDS Master Template, **AND** forward to WCA for submittal to WWIS/WDS **AND** proceed to step 4.5.4.

4.4.14 **IF** container is **NOT** certifiable,
THEN attempt to resolve issue with SPM.

4.4.15 **IF** a deficiency in data is identified after a Container Data Folder is created and before submittal to the WWIS/WDS,
THEN perform the following:

[A] Write a description of the deficiency near the top of Page 1 of the WDS Master Template.

[B] Initiate an NCR in accordance with CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control,* as necessary.

4.4.16 **IF** a container does not have an approved/proper TRUCON code,
THEN have the container put on an electronic exclusion in the Integrated Data Center (IDC) database.

4.5 Waste Certification Data Submittal

WCA

4.5.1 Request that QA confirms that each container certified and entered into the WDS Master Template has **NO** unresolved NCRs and/or CARs, if applicable.

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QA

4.5.2 Prepare a report verifying that each container certified has **NO** unresolved NCRs and/or CARs.

4.5.3 Forward report to WCA.

NOTE

The WCA uses a macro (CreateTmpTables) and ancillary worksheets that are part of the WDS Master Template.

WCA

4.5.4 Generate tab-delimited files from the electronic WDS Master Template corresponding to the WWIS/WDS Database Tables by selecting the Create Temp Tables button.

4.5.5 OPEN TempTables Folder to run batch programs, **AND** run concat_wds_files to copy all containers into upload files readable by WWIS/WDS.

4.5.6 LOGON to the WWIS/WDS.

[A] Select Data Upload Function.

[B] Select Browse to open Temp Tables Folder.

[C] Select the text file to be uploaded.

[D] Select Certification or Characterization based on whether or not the waste stream is approved.

[E] Select perform evaluations as applicable.

[F] Select upload containers.

[G] **IF** container upload is successful,
THEN GO TO step 4.5.7.

[H] **IF** container upload fails,
THEN select view exit codes or print error messages on screen as applicable.

[I] **IF** container transfer error(s) can be fixed,
THEN fix errors, **AND** repeat steps 4.5.6[A] through 4.5.6[I] until successful, **OR** container errors CAN **NOT** be fixed.

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[J] **IF** container transfer CAN **NOT** be fixed,
THEN exit the system, **AND** RETURN Container Data Folder to WCO.

4.5.7 **WHEN** complete,
THEN Open the TempTables Folder and RUN clean_container_files to clear the TempTables Folder of all upload file data.

4.5.8 **IF** a deficiency is identified after the container data is submitted to the WWIS/WDS,
THEN:

[A] Request in writing CCP management approval for the WCO to reject the container from the WWIS/WDS, if applicable, **AND**

[B] Obtain confirmation that the container is rejected, if applicable.

[C] Initiate an NCR in accordance with CCP-QP-005, as necessary.

4.5.9 Compile the following items used in the submission of data to the WWIS/WDS, **AND** submit to CCP Records:

[A] The completed WDS Master Template for each CH Packaging Payload Container submitted to and approved by the WWIS/WDS.

[B] NCR/CAR check from QA E-mail.

[C] Any correspondence (e.g., memorandum/E-mail notifications) associated.

CCP Records Custodian

4.5.10 When applicable, receive and process all records generated by this procedure in accordance with CCP-QP-008.

WCO or WCA

4.6 Data Entry into the WWIS/WDS of FGA Data Generated by CCP for Non-CCP Waste Containers

4.6.1 Obtain List of Non-CCP Waste Containers that require CCP-Generated FGA Data from Ad Hoc Query from WWIS/WDS.

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4.6.2 Entering and Verifying FGA Data for Non-CCP Waste Containers using the WDS FGA Template.

WCA

[A] Obtain, from CCP Records or the WCO, a copy of the FGA BDRs.

[B] Use copies of FGA BDRs from CCP Records or a WCO as listed in Table 1 to enter FGA data into the appropriate WDS FGA Template for each waste container.

[C] Enter initials **AND** submit the completed WDS FGA Template to a WCA for verification.

NOTE

Section 4.6.2[D] is for data entry of waste that requires characterization prior to placement in a direct loaded SWB.

NOTE

Use a FGA sample date one day after the closure and vent.

[D] For SWBs Direct Loaded, the VOC concentration values for each 100-gallon drum packaged in the SWB shall be compared and the highest single value for each flammable VOC shall be selected for reporting as the SWB values on the WDS FGA Template.

WCA (Verifier)

[E] Confirm the data entered into the WDS FGA Template for each container record by checking the data to confirm the accuracy of the data.

[E.1] **IF** there are any discrepancies,
THEN forward to a WCA for correction.

[E.2] **IF** the discrepancies CAN NOT be resolved,
THEN provide the WDS FGA Template to a WCO for resolution.

[E.3] **WHEN** the WDS FGA Template is complete **AND** verified,
THEN enter initials and date verified on the SS, **AND** submit to the WCO.

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4.6.3 Waste Certification of Non-CCP Waste Containers with CCP-Generated FGA Data

WCO

[A] Verify the appropriate WDS FGA Template is being used.

[B] Confirm that the WDS FGA Template contains accurate information for the non-CCP waste container by checking that the appropriate review and input has been completed.

NOTE

Steps [C] and [D] shall only be performed for 100-gallon drums containing 55-gallon puck drums.

[C] **IF** the headspace hydrogen/methane concentration is greater than 5,883 ppm, but less than 17,150 ppm,
THEN designate the container for a 10-day controlled shipment.

[D] **IF** the headspace hydrogen/methane concentration is greater than or equal to 17,150 ppm,
THEN place the non-CCP waste container on hold, **AND** initiate an NCR in accordance with CCP-QP-005.

[E] **IF** the Methane concentration is less than the MDL as indicated by a “U” flag,
THEN adjust the Methane concentration to 2.5 percent of the Hydrogen concentration, as appropriate.

[F] Select and enter appropriate shipping category for non-CCP waste container.

[G] **IF** a deficiency in data is identified after a WDS FGA Template is created and before copying data to the WWIS/WDS,
THEN place the waste container on hold, **AND** initiate an NCR in accordance with CCP-QP-005, as necessary.

[H] **IF** the container is certifiable,
THEN sign and date the WDS FGA Template, **AND** forward to a WCA.

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QA

[I] Prepare report verifying that each non-CCP waste container being certified has **NO** unresolved CCP NCRs and/or CCP CARs.

[J] Forward report to WCA and WCO.

WCA

[K] Generate tab-delimited files from the electronic WDS FGA Template corresponding to the WWIS/WDS container record by selecting the Create Temp Tables Button.

[L] Open TempTables Folder to run batch programs, **AND** RUN concat_wds_files.to copy all containers into upload files readable by the WWIS/WDS.

[M] LOGON to the WWIS/WDS.

[M.1] Select Data Upload Function.

[M.2] Select Browse to find upload file.

[M.3] Select Certification.

[M.4] Select upload containers.

[N] **IF** container upload is successful,
THEN go to step 4.6.3[R].

[O] **IF** container upload fails,
THEN select view exit codes or print error messages on screen as applicable.

[P] **IF** container transfer error(s) can be fixed,
THEN fix errors, **AND** repeat steps 4.6.3[M] through 4.6.3[P] until successful, **OR** container errors CAN **NOT** be fixed.

[Q] **IF** container transfer error(s) CAN NOT be fixed,
THEN exit the system, **AND** RETURN Container Data Folder to WCO.

[R] Go to Container Certification Data Submittal.

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[S] Open the Container in the WWIS/WDS container certification date submittal, **AND** enter all data that was not part of the WDS FGA Template flat files.

[T] Perform eTRAMPAC evaluation.

[U] **IF** non-CCP waste container fails the eTRAMPAC evaluation,
THEN submit to a WCO for resolution, **OR** initiate an NCR in accordance with CCP-QP-005, if applicable.

[V] **IF** non-CCP waste container passes the eTRAMPAC evaluation,
THEN submit the WDS FGA Template to a WCO.

[W] **WHEN** complete,
THEN open the TempTables Folder AND run clean_container_files to clear the TempTables Folder of all unused data that is **NOT** in useable WWIS/WDS format.

[X] Exit the WWIS/WDS.

WCO (Verifier)

[Y] Confirm the data entered into the WWIS/WDS by checking the WDS FGA Template to confirm the accuracy and completeness of the data.

[Z] **IF** there are any discrepancies,
THEN submit to a WCA for correction.

[AA] **WHEN** data is accurate and complete,
THEN sign and date the WDS FGA Template.

NOTE

The WWIS/WDS Overpack Data Entry Module utilizes edit limit checks when data is entered and selected. The WWIS/WDS steps in the following section may be repeated until Overpack compliance is satisfied. Default data may be used to generate the build list for the Transportation Certification Officials (TCOs).

WCO

4.7 Container Selection and certification for Overpacks/Load Management Containers using the WWIS/WDS

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4.7.1 LOGON to the WWIS/WDS.

4.7.2 Enter the Overpack Planning and Completion Module.

4.7.3 Select New.

4.7.4 Enter the data for the Overpack information and select search.

[A] Select Overpack Configuration

[B] Select Certification Program ID

[C] Select Current Location

[D] Select Destination Site ID

[E] Select Shipping Program

[F] Select Waste Stream Profile Code

[G] Select Search

4.7.5 Select the Containers for the Overpack.

4.7.6 Enter filter model number, number of filters, and date of filter installation and add as applicable.

4.7.7 Perform evaluation checks.

4.7.8 Select Accept and Enter Overpack number.

NOTE

To have the WWIS/WDS perform the edit and limit checks on the Overpack/Load Management Container without submitting the Overpack/Load Management Container for approval as in step 4.7.21, the WCO can select all evaluations as applicable and select execute checks.

4.7.9 Enter Beta/Gamma and Neutron dose rate, if applicable.

4.7.10 Enter Shipping Purpose.

4.7.11 Enter the Closure and Vent Date of the Overpack/Load Management Container, if applicable.

4.7.12 Enter the WAC revision number.

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4.7.13 Enter Alpha Surface and Beta/Gamma Surface Contamination, if applicable.

4.7.14 Enter filter model number, number of filters, and date of filter installation, and add as applicable.

4.7.15 Select all evaluation checkbox, select execute checks, **AND**
IF fail,
THEN repeat steps 4.7.4 through 4.7.14 as applicable.

4.7.16 Generate Overpack Build List.

4.7.17 Send Overpack Build List to applicable TCO's.

4.7.18 Receive the Loading Form from the TCO and enter the required certification data, **AND** enter certification date.

4.7.19 For the ten-drum overpacks (TDOPs), verify that the heavier drums are on the bottom layer and the lighter drums are on the top layer.

4.7.20 Submit the Overpack/Load Management Container for approval.

4.7.21 After successful submittal for approval, print the Overpack data report and print title, sign, and date the cover page of the report.

4.7.22 Compile the following items used in the submission of data to the WWIS/WDS, **AND** submit to the CCP Records Custodian:

[A] Copies of the data containing the Overpack/Load Management Container, radiological survey, and filter information used to enter data above.

[B] The completed Waste Container Data Report for the data submitted.

[C] Correspondence (e.g., memorandum/E-mail notifications).

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4.8 Waste Certification (For Site-to-Site Shipments Only)

NOTE

The following section is only to be used for containers to be shipped to destinations other than WIPP. These containers are CCP containers that will be sent to a destination site other than WIPP for additional processing as needed. The steps that follow are for transportation only of the container to the site for additional processing and the return shipment from the additional processing location back to the original site. Only CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP-CH-TRAMPAC),* parameters are required to be entered.

WCA

4.8.1 Obtain, from CCP Records or the SPM, a copy of the appropriate WSPF, BDRs, Packaging Records, AK Summary Report, AK Tracking SS, and radiological survey data as applicable.

4.8.2 Use copies of appropriate BDRs or other data sources, from CCP Records or the SPM, as listed in Table 1, to enter characterization data into the appropriate WDS Master Template for each container record being used to support the WSPF.

WCA (Verifier)

4.8.3 Confirm the data entered into the WDS Master Template for each container record by checking the data to confirm the accuracy and completeness of the data.

4.8.4 **IF** there are any discrepancies,
THEN the correction must be made by a WCA.

4.8.5 **IF** the discrepancies CAN **NOT** be resolved,
THEN provide the WDS Master Template to the WCO or SPM for resolution.

4.8.6 **WHEN** the WDS Master Template is complete **AND** verified,
THEN enter initials and date verified in the SS, print WDS Master Template, **AND** submit to the WCO.

WCO

4.8.7 Verify the appropriate WDS Master Template is being used.

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4.8.8 Confirm that the WDS Master Template contains accurate and complete information for the container by checking that the WCA has completed their input and review.

4.8.9 **IF** there are any open NCRs/CARs,
THEN verify that each container certified has no unresolved NCRs/CARs.

4.8.10 Review the waste stream information against the applicable Content Code and data sources to confirm the waste is **NOT** an incompatible waste.

4.8.11 Verify that the WDS Master Template contains the correct WSPF Number, if applicable, for that container as listed in the AK Tracking SS.

4.8.12 Verify at least one TRU isotope is greater than the LLD for waste containers.

4.8.13 Confirm the criteria on Attachment 2, have been met.

4.8.14 **IF** the Methane concentration is greater than or equal to 1,250 ppm,
THEN the container is NOT eligible for certification.

4.8.15 **IF** the Methane concentration is less than the MDL as indicated by a “U” flag,
THEN adjust the Methane concentration to 2.5 percent of the Hydrogen concentration, as appropriate.

4.8.16 **IF** the HSG data is from composite sampling or analysis **AND** any flammable HSG analytes are measured above the MDL,
THEN multiply the measured value by the number of samples in the composite.

4.8.17 **IF** the NDA BDR was run on a version of GWAS prior to 2.3cGen **AND** either U-233 or U-235 is above LLD,
THEN recalculate the FGE using FGECheckU23511172004.XLS.

4.8.18 **IF** GGT is indicated for the waste container,
THEN ensure that the shipping period of the selected Shipping Category is valid for the testing period of GGT.

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WCO

4.8.19 **IF** the container can be shipped,
THEN sign and date the WDS Master Template, **AND** forward to WCA for submittal to WWIS/WDS.

4.8.20 **IF** container can NOT be shipped,
THEN proceed to step 4.8.23.

WCA

4.8.21 Proceed to step 4.9.

WCO

4.8.22 **IF** there is an issue with data,
THEN attempt to resolve issue with SPM.

4.8.23 **IF** a deficiency in data is identified after a Container Data Folder is created and before submittal to the WWIS/WDS,
THEN perform the following:

[A] Write a description of the deficiency near the top of Page 1 of the WDS Master Template.

[B] Initiate an NCR in accordance with CCP-QP-005, as necessary.

4.9 Waste Certification Data Submittal for Site-To-Site Shipments

WCA

NOTE
The WCA uses a macro (CreateTempTables) and ancillary worksheets that are part of the WDS Master Template.

4.9.1 Request that QA confirms that each container being entered into the WDS Master Template has NO unresolved NCRs and/or CARs, if applicable.

QA

4.9.2 Prepare a report verifying that each container has NO unresolved NCRs and/or CARs.

4.9.3 Forward report to WCA.

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WCA

4.9.4 Generate tab-delimited files from the electronic WDS Master Template corresponding to the WWIS Database Tables/WDS by selecting the Create Temp Tables button.

4.9.5 OPEN TempTables Folder to run batch programs, **AND** run concat_wds_files to copy all containers into upload files readable by WWIS/WDS.

4.9.6 LOG ON to the WWIS/WDS.

[A] Select Data Upload Function

[B] Select Browse button to open Temp Tables folder

[C] Select the text files to be uploaded

[D] Select Intersite Shipping Module

[E] Select perform evaluations and do not save if fail, as applicable.

[F] Select upload containers

[G] **IF** container upload is successful,
THEN GO TO step 4.9.7.

[H] **IF** container upload fails,
THEN select view exit codes or print error messages on screen, as applicable.

[I] **IF** container transfer error(s) can be fixed,
THEN fix errors, **AND** repeat step 4.9.6[A] through 4.9.6[I] until successful, **OR** container errors CAN **NOT** be fixed.

[J] **IF** container transfer CAN NOT be fixed,
THEN exit the system, **AND** return Container Data Folder to WCO.

4.9.7 **WHEN** complete,
THEN Open the TempTables Folder and RUN clean_container_files to clear the TempTables Folder of all upload file data.

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4.9.8 **IF** a deficiency is identified after the container data is submitted to the WWIS/WDS,
THEN:

[A] Request in writing (e.g., E-mail), with management approval, that the DA reject the container from the WWIS/WDS, if applicable, **AND**

[B] Obtain confirmation (e.g., E-mail) from the DA that the container is on HOLD **OR** rejected, if applicable, **AND**

[C] Initiate an NCR in accordance with CCP-QP-005, as necessary.

4.9.9 Compile the following items used in the submission of data to the WWIS/WDS, **AND** submit to CCP Records:

[A] The completed WDS Master Template for each CH Packaging Payload Container submitted to and approved by the WWIS/WDS.

[B] NCR/CAR check from QA E-mail.

[C] Any correspondence (e.g., memorandum/E-mail notifications) associated.

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5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as QA records in accordance with CCP-QP-008. The records are the following:

5.1.1 QA/Lifetime

[A] Container Certification:

[A.1] WDS Master Template

[A.2] Correspondence (memorandum/E-mail notifications)

[A.3] Radiological Survey Information, if applicable

[B] Overpack Certification:

[B.1] Overpack Data Report (for Overpacks only, e.g., TDOP, SWB)

[B.2] Radiological Survey Information, if applicable

[B.3] Correspondence (memorandum/E-mail notifications)

[C] WDS FGA Certification

[C.1] WDS FGA Template

[C.2] Correspondence (memorandum/E-mail notifications)

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Attachment 1 – Entering of Content Code and Shipping Category into the WWIS/WDS

1. INTRODUCTION

This attachment describes the steps used to enter assigned Content Codes into the WDS Master Template using various sources of characterization data. Entering the Content Code is performed by the waste certification staff based on the waste material contents and the layers of packaging used for each container. Content Code assignment is reviewed and approved by the WCO during container certification.

2. ASSIGNING THE NUMERIC VALUE

Assign the Content Code based on the container waste stream assignment. The Content Code identified in AK will be confirmed by RTR and VE when performed, and to confirm the absence of incompatible waste in the waste stream. Enter the Content Code in WDS Master Template.

3. ASSIGNING A LETTER DESIGNATOR FOR LEGACY WASTE

For retrievably-stored waste, the letter designator of the Content Code is assigned using packaging information from the following sources which are listed in order of priority of usage:

- VE BDRs, if available
- If RTR information is undetermined, use the default assignment given in (or determined from) the AK Summary Report for the applicable waste stream

4. OTHER

For waste packaged under a DOE CBFO audited and approved certification program (newly generated waste exempted from RTR), use the Content Code assigned in the packaging documents.

5. SHIPPING CATEGORY

After selection of appropriate Content Code using the CH-TRUCON or TRUCON-III, assign the Shipping Category number and document on the WDS Master Template.

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Attachment 2 – WCO Waste Certification Requirements

Acceptable Container 55-gallon drums, 100-gallon drums SWB TDOP Standard Large Box 2 (SLB2)
Gross Weight 55-gallon drum – varies (1000/453.6 kg max) SPO 6" pipe- <328 SPO 12" pipe, and gamma, neutron shielded 12" pipe - <547 SPO neutron shielded 6" pipe - <550 SWB – 4000 lbs TDOP – 6700 lbs SLB2 – 10500 lbs
Surface Contamination <20 dpm/100 cm^2 alpha & <200 dpm/100 cm^2 beta-gamma
Liner (if present) punctured filtered
Properly aspirated/ filter vents Drum – 1 SWB – 1 to 4: See Minimum Filter Vent Specifications of CCP-PO-003. TDOP – 1 to 10: See Minimum Filter Vent Specifications of CCP-PO-003. SLB2 – 1 to 6: See Minimum Filter Vent Specification of CCP-PO-050, *CCP TRUPACT-III TRU Waste Authorized Methods for Payload Control (CCP TRUPACT-III TRAMPAC).*
Ten Required Isotopes AM-241; PU-238, -239, -240, -242; U-233, -234, -238; Sr-90; Cs-137. -1 value for LLD if expected. 0 value for LLD if not expected.
Pu-239 FGE + 2X error (Be ≤ 1 wt. %) ≤ 200 (55-gallon drum) ≤ 325 SWB, TDOP, SLB2 ≤ 5 Kg Be & ≤ 200 55-gallon drum pipe overpack
Pu-239 FGE + 2X error (Be > 1 wt. % </= Pu-239 FGE) ≤ 100 (Drum, SWB, TDOP, SLB2) (Be from AK)
Be prohibited > 100 Kg/55-gallon Be > 18.14kg SWB, TDOP, SLB2 (Be from AK)
Pu-239 Equiv. Activity < 80 Drum < 560 (SWB, TDOP, SLB2 direct load) < 1100 (Good 55-gallon drum overpacked into 85-gallon drum) < 1200 (good SWB into TDOP) < 1200 (overpacked 55, 85 undamaged into SWB,TDOP) < 1800 (pipe overpacks, S100, S200, S300) < 1800 all solidified
Radiation Dose Equivalent < 200 mrem/hr contact, except S100 pipe overpack < 179 mrem/hr & S300 pipe < 155 mrem/h
Pyrophorics Radioactive < 1 w/o Non-rad. pyrophorics – prohibited
Hazardous Waste Codes permitted for disposal at WIPP
No explosives
No corrosives
No pressurized containers
PCBs Not all sites approved removed service date, mass, type of waste

Controlled
Copy

Attachment 2 – WCO Waste Certification Requirements (Continued)

Closure and Vent Date correct
Lot ID
Correct/Most Current BDR

Controlled
Copy

CCP-TP-033

Revision 19

CCP
Shipping of
CH TRU Waste

EFFECTIVE DATE: 05/23/2011

Larry Porter

PRINTED NAME

APPROVED FOR USE

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
2	12/17/2001	Addition of Attachment 6 - Container Integrity Checklist and other minor changes throughout procedure.
3	05/20/2002	The procedure is updated to the requirements of Rev 19 of the TRAMPAC and compatibility to the WAC DOE/WIPP 02-3122
4	06/26/2003	Revised sections 3.1.4, 4.1, and 4.2, added section 3.4, and other minor editorial changes. Revised CCP-TP-033-A1. Separated electronically fillable forms and updated references in procedure.
5	09/19/2003	Added reference DOE/WIPP 02-3220, *CH Packaging Operations for High Wattage Waste at LANL.*
6	10/12/2004	Revised to incorporate more generic title descriptions to accommodate the use of different titles at the sites. Added fillable forms back into procedure.
7	11/22/2004	Incorporation of CH-TRAMPAC Revision 1 requirements.
8	01/25/2005	Incorporation of requirements for controlled shipments.
9	03/23/2005	Incorporated changes to support the newly required requirements in DOE/WIPP 02-3184 Rev. 2.
10	02/01/2006	Revised to incorporate *CH-TRAMPAC*, Revision 2 requirements and *TRUPACT-II Safety Analysis Report*, Revision 21 requirements, and other editorial changes throughout procedure.
11	11/16/2006	Revised to implement the Waste Isolation Pilot Plant Hazardous Waste Facility Permit-requirements resulting from the Section 311/Remote-Handled (RH) Permit Modification Request (PMR). Revised to implement confirmation activities and to consolidate transportation Waste Isolation Pilot Plant Waste Information System (WWIS) steps from CCP-TP-030, *CCP TRU Waste Certification and WWIS Data Entry.* Addressed Carlsbad Field Office (CBFO) Document Review Record (DRR) comments.
12	03/07/2007	Added reference to 40 CFR Part 761, Subpart C § 761.40, Marking of PCBs and PCB Items.

RECORD OF REVISION (Continued)

Revision Number	Date Approved	Description of Revision
13	03/28/2008	Revised to implement the new Waste Isolation Pilot Plant (WIPP) Waste Acceptance Criteria (WAC) requirements and editorial changes. Also for the implementation of Advanced Mixed Waste Treatment Project (AMWTP) process.
14	11/05/2008	Revised to incorporate a second drum label verification as required by Central Characterization Project (CCP) Corrective Action Report (CAR)-LANL-0004-08. Also, revised to incorporate editorial changes and updates from shipping requirements.
15	07/08/2009	Revised based on changes in Revision 3 of the *CH-TRAMPAC* from the U.S. Nuclear Regulatory Commission (NRC). Editorial changes were also made. Polychlorinated Biphenyls (PCBs) checks added.
16	12/11/2009	Revised to incorporate Waste Data System (WDS) operations. Editorial changes were also made.
17	05/18/2010	Revised to align procedure with modifications made to the WDS system, and editorial corrections.
18	12/29/2010	Minor revision to update references to the *Waste Isolation Pilot Plant Hazardous Waste Facility Permit*.
19	05/23/2011	Revised to incorporate TRUPACT-III Shipping Certification

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1.0 PURPOSE

This procedure establishes requirements for assembling transuranic (TRU) waste payloads and performance of shipments in contact-handled (CH) packaging containers and ensures that the requirements of one of the following are met (as applicable):

- CCP-PO-003, (TRUPACT-II/HalfPACT), *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)*
- CCP-PO-050, (TRUPACT-III), *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)*
- U.S. Department of Energy (DOE) Carlsbad Field Office (CBFO) audited/approved site-specific CH TRU Waste Authorized Methods Payload Control (CH-TRAMPAC)

1.1 Scope

This procedure applies to the personnel who conduct the following transportation functions:

- CH packaging payload container and assembly verification.
- Assembling and loading the CH packaging containers.
- Reviewing shipping paper, marking, labeling, and placarding associated with each shipment of CH TRU waste transported in CH packaging containers by the Central Characterization Project (CCP).
- Radiological Control Technician (RCT) or equivalent position functions associated with CH packaging and transportation operations.

2.0 REQUIREMENTS

2.1 References

Baseline Documents

- Appendix to 40 *Code of Federal Regulations* (CFR), *Protection of Environment,* Part 262, *Standards Applicable to Generators of Hazardous Waste, Uniform Hazardous Waste Manifest and Instructions* (EPA Forms 8700-22 and 8700-22A and their instructions)
- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- CCP-PO-002, *CCP Transuranic Waste Certification Plan*
- CCP-TP-030, *CCP CH TRU Waste Certification and WWIS/WDS Data Entry*
- DOE/WIPP-01-3194, *CH-TRU Waste Content Codes* (CH-TRUCON)
- DOE/WIPP 02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant*
- DOE/WIPP 02-3183, *CH Packaging Program Guidance*
- DOE/WIPP 02-3185, *CH Packaging Maintenance Manual*
- DOE/WIPP 11-3456, *TRUPACT-III Program Guidance*
- DOE/WIPP 11-3458, *TRUPACT-III Content Codes (TRUCON-III)*
- 40 CFR Part 262, *Standards Applicable to Generators of Hazardous Waste*
- 40 CFR Part 262, Subpart B, *The Manifest* § 262.20, *General Requirements*
- 40 CFR Part 262, Subpart C*, Pre-Transport Requirements*
- 40 CFR Part 761, *Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions: Subpart C Marking of PCB's and PCB Items* § 761.40

- 49 CFR, *Transportation,* Part 172, *Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, Training Requirements, and Security Plans Subpart C* § 172.200, *Applicability*
- 49 CFR Part 172 Subpart H § 172.704, *Training Requirements*
- 49 CFR 172, Subpart G, *Emergency Response Information*
- 49 CFR Part 173, *Shippers – General Requirements for Shipments and Packagings,* Subpart I, *Class 7 Radioactive Materials* § 173.401 through 173.476
- *Safety Analysis Report for the TRUPACT-II Shipping Package* (SARP) (Docket 9218, Washington, D.C., U.S. Nuclear Regulatory Commission [NRC])
- *Safety Analysis Report for the HalfPACT Shipping Package* (SARP) (Docket 9279, Washington, D.C., U.S. NRC)
- Safety Analysis Report for the TRUPACT-III Shipping Package (SARP) (Docket 71-9305, Washington, D.C., U.S. NRC)

Referenced Documents

- CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)*
- CCP-PO-050, TRUPACT-III*, CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)*
- CCP-QP-002, *CCP Training and Qualification Plan*
- CCP-QP-008, *CCP Records Management*
- *CH TRU Payload Appendices*
- DOE/WIPP-02-3184, *CH Packaging Operations Manual*
- DOE/WIPP 11-3451, *TRUPACT-III Operations Manual*
- DOE/WIPP-02-3220, *CH Packaging Operations for High-Wattage Waste*
- 10 CFR Part 21, *Reporting of Defects and Nonconformances*

- 10 CFR Part 71, *Packaging and Transportation of Radioactive Materials*
- 40 CFR Part 262, Subpart B
- 40 CFR Part 262, Subpart C § 262.31, *Labeling*
- 40 CFR Part 262, Subpart C § 262.32, *Marking*
- 40 CFR Part 262, Subpart C § 262.33, *Placarding*
- 40 CFR Part 268, *Land Disposal Restrictions*, Subpart A, *General*
- 40 CFR Part 761, Subpart C § 761.40, *Marking of PCBs and PCB Items*
- 49 CFR Part 172, Subpart C, *Shipping Papers* § 172.201 through 172.205
- 49 CFR Part 172, Subpart D, *Marking* § 172.300 through 172.338
- 49 CFR Part 172, Subpart E, *Labeling* § 172.400 through 172.450
- 49 CFR Part 172, Subpart F, *Placarding* § 172.500 through 172.560
- TRANSCOM 2000 Designated User Handbook
- DOE/WIPP-09-3427, Waste Data System User's Manual

2.2 Training Requirements

2.2.1 Personnel performing this procedure will be trained and qualified in accordance with CCP-QP-002, *CCP Training and Qualification Plan,* prior to performing this procedure.

2.2.2 CCP Transportation Certification Officials (TCOs) completing the Payload Container Transportation Certification Documents (PCTCDs), Overpack Payload Container Transportation Certification Documents (OPCTCDs), and Payload Assembly Transportation Certification Documents (PATCDs), Payload Transportation Certification Documents (PTCD), as required by this procedure, are qualified in accordance with CCP-QP-002 prior to performing this procedure.

2.3 Equipment List

2.3.1 None.

2.4 Precautions and Limitations

2.4.1 Nonconformances related to defects or failure to comply with requirements applicable to NRC-licensed packaging (e.g., TRUPACT-II, TRUPACT-III, HalfPACT) shall be reported to the CBFO Office of National TRU Program. The Waste Isolation Pilot Plant (WIPP) management and operating (M&O) contractor will evaluate issues and nonconformances for reporting to the NRC under 10 CFR Part 21, *Reporting of Defects and Nonconformances*, or 10 CFR Part 71, *Packaging and Transportation of Radioactive Materials*, and provide the results of this evaluation to CBFO.

2.4.2 TRUPACT-II/HalfPACT payload containers must have filter vents installed as specified in Section 2.5 of CCP-PO-003.

2.4.3 TRUPACT-III, Standard Large Box 2 (SLB2) payloads must have filter vents installed as specified in Section 2.4 of CCP-PO-050.

2.4.4 TRUPACT-II/HalfPACT Dunnage Containers

[A] Dunnage containers used for payload assembly shall have open vent ports (not filtered or plugged).

[B] Dunnage containers used for payload assembly shall be labeled either Dunnage or Empty.

[C] Dunnage shall have a unique serial number. If dunnage constitutes any of the following: seven packs, four packs, three packs, or SWBs, then the unique serial number is **NOT** required.

[D] Dunnage containers shall meet the requirements of Section 2.2 of CCP-PO-003.

2.4.5 Radiation Dose Rates and Removable Surface Contamination

[A] The external radiation dose rates of individual payload containers and a loaded CH package to be shipped shall be less than or equal to 200 millirem/hour (mrem/hr) at the surface, and less than or equal to 10 mrem/hr at two meters for beta/gamma and neutron.

[B] Removable surface contamination of individual payload containers and a loaded CH package to be shipped to the WIPP shall **NOT** be greater than 20 disintegrations per minute (dpm)/100 centimeters square (cm^2) for alpha emitting radionuclides and 200 dpm/100 cm^2 for beta/gamma emitting radionuclides.

2.4.6 Controlled Shipments

[A] TRUPACT-II, For High-Wattage Waste Shipments, attachments from DOE/WIPP-02-3220, *CH Packaging Operations for High-Wattage Waste,* will be used to control and document loading, transport, and unloading times.

[B] For all other CCP Controlled TRUPACT-II Shipments, Attachment 1, CCP Shipping Site Control Checklist for Controlled Shipments, and Attachment 2 or equivalent, CCP Receiving Site Control Checklist for Receipt of Controlled Shipments, will be used to control and document loading, transport, and unloading times.

[C] For CCP Controlled TRUPACT-III Shipments, (Attachment 7, [TRUPACT-III] CCP Shipping Site Control Checklist for Controlled Shipments, and Attachment 8, [TRUPACT-III] CCP Receiving Site Control Checklist for Controlled Shipments), or equivalent, CCP Receiving Site Control Checklist for Receipt of Controlled Shipments, will be used to control and document loading, transport, and unloading times.

[D] Receipt sites may use CBFO-approved site-specific Controlled Shipment Receipt Forms in place of Attachment 2 and/or 8 (as applicable), provided that the same information is recorded and a completed copy is returned to the applicable TCO.

2.5 Prerequisite Actions

2.5.1 Ensure that workers who will be working in a radiation area have read the applicable Radiation Work Permit (RWP) or equivalent site-specific document.

2.6 Definitions

2.6.1 **CH Package** – TRUPACT-II, TRUPACT-III, or HalfPACT

2.6.2 **Generator** – The organization/individual that generated the waste and/or is offering the waste for transport.

2.6.3 **Land Disposal Restrictions (LDR) Notification** – Notification to a receiving facility that the waste is subject to LDR (from 40 CFR, *Protection of Environment,* Part 268, *Land Disposal Restrictions*, Subpart A, *General*).

2.6.4 **Shipper** – Authorized personnel who declare, by signing the shipping paper, that the contents of the package are fully and accurately described, packaged, labeled/placarded, and proper for conditions of transport per appropriate regulations.

2.6.5 **Shipping Paper** – Uniform Hazardous Waste Manifest (UHWM) or Straight Bill of Lading-Short Form. The shipping paper accompanies the waste during transportation.

2.6.6 **Straight Bill of Lading-Short Form** – Shipping paper used to transport non-mixed radioactive TRU waste.

2.6.7 **Uniform Hazardous Waste Manifest (UHWM)** – The U.S. Environmental Protection Agency (EPA) Form 8700-22 prepared by a generator who transports or offers for transportation hazardous waste for off-site treatment, storage, or disposal (from 40 CFR Part 262, *Standards Applicable to Generators of Hazardous Waste,* Subpart B, *The Manifest*).

3.0 RESPONSIBILITIES

3.1 Transportation Certification Official (TCO)

3.1.1 Interfaces and coordinates with the generator, shipper, Site Project Manager (SPM), Waste Certification Official (WCO), CCP Quality Assurance (QA), and CCP Operations Leaders to plan payloads for shipment.

3.1.2 Documents and certifies that containers prepared for shipments in CH packaging meet specified shipping criteria using the PCTCD, PATCD, PTCD, and OPCTCD spreadsheets and the Waste Data System (WDS) as appropriate.

3.1.3 Reviews payload certification documentation to ensure compliance with the applicable CCP CH-TRAMPAC requirements or a CBFO audited/approved site-specific CH-TRAMPAC.

3.1.4 Requests and obtains approval/authority from WIPP to effect WIPP shipments.

3.1.5 Provides the necessary TRU waste shipping data to the Host site Shipping Coordinator.

3.1.6 Ensures all manifests and shipping papers are correct, as required.

3.1.7 Ensures all labeling, marking, and placarding is correct, as required.

3.1.8 Provides PATCDs, PTCDs, and/or WDS Reports to the CCP CH Packaging and Transportation Team.

3.2 Radiological Control Technician (RCT) or Equivalent Position

3.2.1 Provides contamination and radiation surveys to the TCO for shipment certification purposes.

3.3 CCP CH Packaging and Transportation Team

3.3.1 Ensures the payload assembly and CH Packaging Containers are prepared in accordance with this procedure.

3.3.2 Ensures visible container identification (ID) labels, within a payload assembly, are an exact match to the ID numbers listed on the applicable PATCD or PTCD (as applicable).

3.4 Host Site Shipping Coordinator

3.4.1 Interfaces with TCO and acts as the site point-of-contact (POC) for operations, manifesting, and release of shipments.

3.4.2 Assists TCO in scheduling and facilitating TRU waste shipments.

3.4.3 Provides data received from TCO to the Host site transportation and material control/accountability groups (as applicable).

3.5 State Motor Vehicle Department (SMVD)

3.5.1 Performs Commercial Vehicle Safety Alliance (CVSA) inspections of the tractor, trailer, and CH packages.

4.0 PROCEDURE

NOTE

The WDS utilizes edit and limit checks when data is entered and selected. The WDS steps in Section 4.1 may be repeated until payloads and shipping compliance is satisfied.

NOTE

Steps in this procedure may be performed in parallel as applicable.

NOTE

Steps in this procedure are performed by the TCO, unless another group/discipline is mentioned in the step or a note preceding the step.

NOTE

Trained and qualified TCOs perform the WDS operation per the guidance found in DOE/WIPP-09-3427, Waste Data System User's Manual. The WDS manual is NOT required to be opened when performing the task listed below, but shall be available if questions arise.

NOTE

Contact Information of organizations called out in this procedure are listed as follows. Specific email addresses can be obtained by contacting the numbers below:

WIPP Shipment Scheduler 575-234-8993 or 575-234-8230

WIPP Transportation Group 575-234-8993 or 575-234-8230

WIPP RCT Group 575-234-8657

WIPP Central Monitoring Room (CMR) 575-234-8863 or 575-234-8640

FAX notifications can be made in lieu of emails if needed. FAX numbers can be obtained by contacting the specific group.

4.1 WDS Data Entry/CH Shipment Certification

NOTE
Step 4.1.1 is only performed if dunnage is required for the payload. No dunnage is required for SLB2, TRUPACT-III shipments.

4.1.1 Creating Dunnage Container(s) using WDS

[A] Enter the following information into the WDS for each dunnage container:

- Unique container number
- Current Location (Site ID)
- Shipping Program (Site ID)
- Container Type

4.1.2 Creating Payloads Using the WDS

[A] Select the NEW button to create/generate a Payload Plan ID.

[B] For each payload enter the following information in the WDS:

- Payload Number
- Payload Container Type
- Current Location (Site ID)
- Destination Site (Site ID)
- Shipping Program (Site ID)

[C] For TRUPACT-II/HalfPACT, select payload container(s) until a CCP-PO-003 compliant payload is obtained.

[D] For TRUPACT-III, select payload container (SLB2) until a CCP-PO-050 compliant payload is obtained.

[E] Select the accept button.

[F] Select the submit button.

[G] Generate PCTCDs, preliminary PATCDs, PTCD, and OPCTCDs (as applicable).

[H] Review PCTCD, preliminary PATCD, PTCD, and OPCTCD reports (as applicable), **AND** confirm that all container/payload certification parameters have been met.

NOTE

Containers designated for Controlled Shipment must be marked accordingly on PCTCD and applicable PATCD or PTCD (Controlled Shipment designated container(s) assigned to payload); Attachment 1 or 7 will be initiated for the applicable CH package/shipment (as applicable).

NOTE

The applicable certification document; PATCD or PTCD are signed after the TRUPACT-IIs/HalfPACTs or TRUPACT-IIIs are loaded so that the final information is entered into the WDS.

[I] For TRUPACT-II/HalfPACTs, once container/payload parameter requirements have been met, sign and initial the PCTCD and OPCTCD (if applicable) reports, as required, certifying that CCP-PO-003 requirements have been satisfied.

NOTE

For TRUPACT-II/HalfPACTs, once a CCP-PO-003-compliant payload assembly is approved, the payload is physically assembled (SWBs, drums, and shielded containers) in accordance with DOE/WIPP-02-3184, *CH Packaging Operations Manual,* or DOE/WIPP-02-3220, as applicable, and this procedure.

4.1.3 Creating Shipments Using the WDS

[A] Enter the following information into the WDS:

- Shipment Number (From WIPP 8-week Rolling Schedule)
- Shipping Program (Site ID)
- Current Location (Site ID)
- Destination Site (Site ID)

[B] For TRUPACT-II/HalfPACTs, select payloads until a CCP-PO-003 compliant payload set is obtained.

[C] For TRUPACT-III, select payload (SLB2) compliant with CCP-PO-050.

NOTE

Once the submit button is selected, the confirmation process for the shipment, is activated.

[D] Once the virtual CCP-PO-003 or CCP-PO-050 (as applicable) compliant shipment is built, select Save then select the submit button.

NOTE

Transporter, Tractor, Trailer, and CH Package numbers are obtained from the WIPP Equipment Assignment email, generated by the WIPP Transportation Group. Default values contained in the WDS system are used for Handling Material Weights and Uncertainty. Handling Material weights uncertainty is left blank in the WDS system.

[E] When the following becomes available, enter the information into the WDS:

- Transporter Name
- Tractor Number
- Trailer Number
- CH Package Number(s)
- Handling Material Weights (if applicable)

[F] For controlled or High Wattage Shipment, email the WIPP Shipment Scheduler of impending shipment.

4.1.4 Finalizing Shipments Using the WDS

[A] Enter the following information into the WDS:

- Manifest Number
- Outer Containment Assembly (OCA) Lid Number (for each TRUPACT-II or HalfPACT) from DOE/WIPP-02-3184, Attachment 2, CH Packaging Loading Data Sheet, or DOE/WIPP-02-3220, Attachment 2, High-Wattage CH Packaging Loading Data Sheet, as applicable.

- Closure Lid (CL) number for TRUPACT-III, from DOE/WIPP 11-3451, *TRUPACT-III Operations Manual,* Attachment 2, TRUPACT-III (Loaded) Shipment data sheet.

- Inner Containment Vessel (ICV) closure date and time for each TRUPACT-II or HalfPACT, from DOE/WIPP-02-3184 Attachment 2, CH Packaging Loading Data Sheet, or DOE/WIPP-02-3220, Attachment 2, High-Wattage CH Packaging Loading Data Sheet, as applicable.

- CL closure date and time for TRUPACT-III, from DOE/WIPP 11-3451, Attachment 2, TRUPACT-III (Loaded) Shipment data sheet.

- Dose Rate Surface (mrem/hr) (for each CH Package) from Radiological Survey Report.

- Dose Rate 1-meter (mrem/hr) (for each CH Package) from Radiological Survey Report.

- Dose Rate 2-meters (mrem/hr) (for each CH Package) from Radiological Survey Report.

- Alpha contamination survey results in dpm (for each CH Package) from Radiological Survey Report.

- Beta/gamma contamination survey results in dpm (for each CH Package) from Radiological Survey Report.

- U.S. Department of Transportation (DOT) Description (for each CH Package) from Bill of Lading or UHWM.

- Reportable Quantity (RQ) or Highway Route Control Quantity (HRCQ) flag(s) (as applicable) from Bill of Lading or UHWM.

[B] Select Save.

[C] Print final PATCDS or PTCD (as applicable).

[D] Review PATCDs or PTCD (as applicable), **AND** sign reports if all parameters are correct and in compliance with the appropriate TRAMPAC; CCP-PO-003 or CCP-PO-050.

[E] Enter the send date and time in WDS.

[F] Select the Finalize button to complete the WDS process.

4.2 Shipping Preparations

NOTE
E-mail notifications may be performed by Host site Shipping Coordinator.

4.2.1 Transmit the draft PATCDs or PTCD (as applicable), WDS Shipment Summary Report, and WDS Shipment Data report to the Host site Shipping Coordinator for preparation of shipping papers.

4.2.2 Host site Transportation Personnel, develop shipping papers.

4.2.3 Host site Shipping Coordinator, provide TCO with draft copy of shipping paper and RadCalc work sheets (or equivalent).

4.2.4 Review the shipping documentation (Bill of Lading or UHWM) in accordance with 49 CFR Part 172, Subpart C, *Shipping Papers*.

NOTE
Completion of an LDR is necessary only for each initial shipment of a mixed waste stream. The LDR is completed in accordance with 40 CFR Part 268.

4.2.5 Complete Attachment 3, Land Disposal Restriction Exemption Notification.

4.2.6 Print name, sign, date, and initial Attachment 3.

4.2.7 Provide copy of Attachment 3 to Host site Shipping Coordinator.

4.2.8 Host site Shipping Coordinator, attach copy of Attachment 3 to the shipping papers.

4.2.9 As soon as available, prior to releasing the shipment, email a copy of the Draft Manifest to the WIPP Transportation group.

NOTE
If the Transportation Tracking and Communications (TRANSCOM) system is out of service, secondary shipment protocol is followed, as directed by the WIPP Transportation group. Step 4.2.10 can be omitted.

4.2.10 Prior to releasing the shipment to the carrier prepare the TRANSCOM system by entering a Draft Bill of Lading or UHWM in

TRANSCOM per the guidance found in the TRANSCOM 2000 Designated User Handbook.

4.2.11 E-mail Draft Bill of Lading or UHWM to TRANSCOM. TRANSCOM email is transcom@transcom.energy.gov.

4.2.12 Host site Shipping Coordinator, notify the applicable State Motor Vehicle Department (SMVD) at least 24-hours prior to releasing a shipment.

[A] Request the performance of a Commercial Vehicle Safety Alliance (CVSA) inspection at the Host site of the trailer, tractor, and loaded CH Packaging Containers.

4.3 Inspections and Loading Operations

4.3.1 Verify that the payload containers are DOT Type 7A or equivalent (17C, 17H, UN1A2).

NOTE
The specific filter information is listed on the applicable PCTCD or OPCTCD.

4.3.2 For TRUPACT-II/HalfPACTs, verify filter vents, as specified in Section 2.5 of CCP-PO-003 and Section 6.12 of *CH TRU Payload Appendices* (as applicable), are installed in payload containers.

4.3.3 For TRUPACT-III verify filter vents as specified in Section 2.4 of CCP-PO-050 are installed in the SLB2.

4.3.4 Perform Container Integrity Inspection on each payload container identified for shipment per Attachment 5, CCP Container Integrity Checklist.

4.3.5 Print name, sign, and date Attachment 5.

4.3.6 Ensure the following labels are clearly marked on each payload container:

[A] Unique Identification Number (Bar Code)

- Minimum three (3) per 55-gal., 85-gal., 100-gal. drum, and shielded overpack
- Minimum two (2) per SWB
- Minimum one (1) per TDOP

- Minimum one (1) per SLB2

[B] Caution Radioactive Material Label

[C] Hazardous Waste label, if applicable

[D] Polychlorinated Biphenyls (PCB) label, if applicable.

NOTE

The dunnage container(s) SHALL be labeled with a unique identification number. Exception: seven packs, four packs, three packs, or SWBs, are **NOT** required to be numbered uniquely. All dunnage containers SHALL also be labeled Dunnage or Empty. Dunnage containers are labeled in accordance with site-specific procedures.

4.3.7 For each TRUPACT-II/HalfPACT CH Package that has a dunnage container, complete Attachment 4, CCP Dunnage Certification Statement.

4.3.8 Print name, sign, date, and initial Attachment 4.

4.3.9 Ensure that each waste container is checked to see that there are **NO** Hold Tags attached.

[A] **IF** a Hold Tag is found,
THEN determine the disposition to ensure that the container is acceptable for shipping.

4.3.10 Host site RCT **OR** equivalent position, provide Container Contamination Survey Report(s) to the TCO.

NOTE

Host site personnel may assemble payload containers under the direction of the TCO or a CCP CH Packaging and Transportation team member.

4.3.11 Provide the PATCDs or PTCD to the CH Packaging and Transportation Team.

4.3.12 For TRUPACT-II/HalfPACT, record applicable Payload Pallet Identification Number or SWB Ratchet Strap Serial Numbers and inspection date on Attachment 6, Payload Accessories.

4.3.13 For TRUPACT-II/HalfPACT, CH Packaging and Transportation Team assemble the payload containers into a payload assembly in accordance with DOE/WIPP 02-3184, or DOE/WIPP-02-3220 (as applicable) or approved site-specific procedures.

4.3.14 Host site RCT **OR** equivalent position, provide dose rate survey of the payload assembly.

4.3.15 Perform the following:

[A] Verify from the applicable PATCD or PTCD (as applicable) that the selected container(s) within a payload are correct for the designated CH Packaging Container to be loaded.

[B] Verify that all of the visible container ID labels are an exact match to the ID numbers listed on the PATCD or PTCD (as applicable).

[C] Record on the payload the designated CH Packaging number, payload ID number, initial, and date.

[D] **IF** not already performed,
THEN provide PATCDs or PTCD (as applicable) to the CCP CH Packaging and Transportation Team.

4.3.16 CCP CH Packaging and Transportation Team, perform the following:

[A] Verify from the applicable PATCD or PTCD (as applicable) that the selected container(s) within a payload are correct for the designated CH Packaging Container to be loaded.

[B] Verify that all of the visible container ID labels are an exact match to the ID numbers listed on the PATCD or PTCD (as applicable).

4.3.17 CH Packaging and Transportation Team, load the payload assembly into the CH Packaging Container(s) in accordance with DOE/WIPP-02-3184, DOE/WIPP 02-3220, or DOE/WIPP 11-3451 (as applicable).

NOTE
If High-Wattage shipments are loaded per DOE/WIPP 02-3220, then the attachments found in DOE/WIPP-02-3220 will be used.

4.3.18 Controlled Shipment Processing

[A] **IF** Controlled Shipment Payload, other than High-Wattage,
THEN record applicable dates and times of ICV or CL lid (as applicable) installation on Attachment 1 or 7 (as applicable), **AND** ensure 24-hour Loading Time will not be exceeded.

[B] **IF** total loading time is calculated to be ≥ 24-hours, **THEN** vent the package, **AND** repeat the lid installation process.

4.3.19 Host site RCT **OR** equivalent position, provide the dose rate and contamination surveys of CH Packaging Container(s) exteriors to the TCO. Dose Rates readings: on Contact, 1-meter, and 2-meter, including Neutron contribution.

4.3.20 Review the survey report of the loaded CH Packaging Container(s), **AND** verify that the survey data meets applicable radiation/contamination requirements.

4.4 Shipping Completion

4.4.1 Host site Transportation personnel, perform marking, labeling, and placarding (if applicable) of the CH Packages and Transport Trailer.

4.4.2 Ensure correct marking, labeling, and placarding (if applicable) per the following:

[A] Marking of CH Packaging Container shipments of CH TRU waste is conducted in accordance with 49 CFR Part 172, Subpart D, *Marking*, § 172.300 through 172.338; 40 CFR Part 262, Subpart C, § 262.32, *Marking*; and 40 CFR Part 761.40, Subpart C, *Marking of PCBs and PCB Items*.

[B] Labeling of CH Packaging Container shipments of CH TRU waste is conducted in accordance with 49 CFR Part 172,Subpart E, *Labeling*, § 172.400 through 172.450; and 40 CFR Part 262, Subpart C, § 262.31, *Labeling.*

[C] Placarding of CH Packaging Container transport vehicles of CH TRU waste is conducted in accordance with 49 CFR Part 172, Subpart F, *Placarding*, § 172.500 through 172.560; and 40 CFR Part 262, Subpart C, § 262.33, *Placarding.*

4.4.3 Trucking company, attach tractor to trailer.

4.4.4 **IF** the shipment contains Controlled Shipment Packages, **THEN** provide the following to the Host site Transportation personnel (as applicable):

[A] For High-Wattage Shipments, a copy of Attachment 9 from procedure DOE/WIPP 02-3220.

[B] For Controlled Shipments, a copy of Attachment 1 or 7 (as applicable), from this procedure.

4.4.5 If the shipment contains High Wattage Packages, TCO contact the WIPP CMR for notification of impending High Wattage Shipment.

4.4.6 Host site Transportation personnel, sign the shipping documentation (Bill of Lading or UHWM) in accordance with 49 CFR Subpart C.

4.4.7 Host site Transportation personnel, provide carrier with appropriate shipping documentation package, including LDR (if applicable), and controlled shipment package attachments (if applicable).

4.4.8 SMVD, perform CVSA inspection of the tractor, trailer, and CH packages.

4.4.9 Host site Transportation personnel, provide TCO with a signed copy of the shipping documentation (Bill of Lading or UHWM).

4.4.10 Ensure Shipment Radiological Information is emailed to WIPP RCT group.

4.4.11 **IF** the shipment contains Controlled Shipment Packages, **THEN** ensure Attachment 9 from DOE/WIPP 02-3220 or Attachment 1 or 7 (as applicable), from this procedure is emailed to WIPP Transportation.

4.4.12 For TRUPACT-II/HalfPACT, ensure Attachment 6 is emailed to WIPP Transportation.

4.4.13 For shipment finalization, complete Sections 4.1.4.

4.4.14 For TRUPACT-II/HalfPact, ensure the PATCD's are signed to certify that the payload in each CH Packaging Container meets the requirements of the CCP CH-TRAMPAC, CCP-PO-003.

4.4.15 For TRUPACT-III, ensure the PTCD is signed to certify that the SLB2 in the CH Package meets the requirements of CCP CH-TRAMPAC, CCP-PO-050.

4.4.16 TCO **OR** Host Site Shipping Coordinator, contact WIPP CMR **AND** request to release shipment.

4.4.17 Once approval is granted, TCO or Host Site Shipping Coordinator, release shipment.

4.4.18 Change WDS status to “In Transit”.

4.5 Shipment Receipt

NOTE
Receipt sites may use CBFO-approved site-specific Controlled Shipment or High-Wattage Receipt Attachments, provided that the same information is recorded **AND** a completed copy is returned to the applicable TCO.

4.5.1 **IF** the shipment contains Controlled Shipment Packages, **THEN** request the Receipt Site to email the following (as applicable) once the payloads are unloaded:

[A] For High-Wattage Shipments, completed Attachment 10 from procedure DOE/WIPP 02-3220, or site equivalent form.

[B] For TRUPACT-II/HalfPACT controlled Shipments, completed Attachment 2 from this procedure, or site equivalent form.

[C] For TRUPACT-III controlled Shipments, completed Attachment 8 from this procedure, or site equivalent form.

4.5.2 **ONCE** the shipment status in WDS is “Shipment Received”, **THEN** send an email to the Host site Shipping Coordinator, stating shipment received with the date of receipt.

4.5.3 **ONCE** the shipping data entry is complete, **THEN** compile and submit items listed in Section 5.1.1, to CCP Records.

5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as QA records in accordance with CCP-QP-008, *CCP Records Management*. The records are the following:

NOTE

Records generated by DOE/WIPP-02-3184 or DOE/WIPP-02-3220 (see Section 3.1.5), as applicable are included in the Shipping Documentation Package.

QA/Nonpermanent

5.1.1 Shipping Documentation Package:

- PATCD, PCTCD, PTCD, OPCTCD Spreadsheet(s), as applicable
- WDS Shipment Summary Report
- Attachment 1, CCP Shipping Site Control Checklist for Controlled Shipments, if applicable
- Attachment 2, CCP Receiving Site Control Checklist for Receipt of Controlled Shipments (Receipt sites may use CBFO-approved site-specific Controlled Shipment Receipt Forms in place of Attachment 2), if applicable
- Attachment 3, Land Disposal Restriction Exemption Notification (initial shipment of a waste stream only)
- Attachment 4, CCP Dunnage Certification Statement (complete one statement for each group of dunnage containers)
- Attachment 5, CCP Container Integrity Checklist
- Attachment 6, Payload Accessories
- Attachment 7, (TRUPACT-III) CCP Shipping Site Control Checklist for Controlled Shipments
- Attachment 8, (TRUPACT-III) CCP Receiving Site Control Checklist for Controlled Shipments

- Fax or email correspondence, if applicable
- Draft Bill of Lading or UHWM, if applicable

5.1.2 Radiological Surveys

- Dose Rate Survey Report
- Contamination Survey

Attachment 1 – CCP Shipping Site Control Checklist for Controlled Shipments*

Shipment No. _____ Packaging No. _____.

To be completed by CCP Transportation Certification Official, or designee, for each package designated as a controlled shipment.

Activity	Date	Time	Completion of Activity (Indicate by initials)
Record date and time of ICV lid installation from Attachment 2, DOE/WIPP 02-3184 *CH Packaging Operations Manual*.			
Record date and time the shipment containing the loaded package is ready to depart from the site.			
Calculate and record total Loading Time. (Limit = 24-hours)			
Total Loading time ≤ 1 day, sign and date below. *Total Loading Time > 1 day, STOP, vent package, and repeat closure process.*			
I certify the above data is accurate and compliant with the Loading Time limit of 24-hours, as specified in Section 6.2.3 of the CCP CH-TRAMPAC.			
Printed Name Signature Date Initials CCP Transportation Certification Official (or designee)			

*Control shipments (10 days) shall be made in accordance with the conditions specified in Appendix 3.6 of the *CH-TRU Payload Appendices* and CCP CH-TRAMPAC Section 6.2.3.

Attachment 2 – CCP Receiving Site Control Checklist for Receipt of Controlled Shipments*

Shipment No. _____ Packaging No. _____.

To be completed by designated Receiving Site Operations personnel for each package designated as a controlled shipment:

Activity	Date	Time	Completion of Activity (Indicate by initials)
Record date and time that the package was ready to depart from the shipping site (from data recorded on Attachment 1).			
Vent package within 9-days of date and time recorded above and record vent date and time.			
I certify the above data is accurate and compliant with the Unloading Time of 9-days, as specified in Section 6.2.3 of the CCP CH-TRAMPAC.			
Printed Name Receiving Site Personnel	Signature	Date	Initials

*Control shipments (10 days) shall be made in accordance with the conditions specified in Appendix 3.6 of the *CH-TRU Payload Appendices* and Section 6.2.3 of the CCP CH-TRAMPAC.

Attachment 3 – Land Disposal Restriction Exemption Notification

The non-waste water identified in this shipment, Manifest Number _____, and bearing the EPA Hazardous Waste Number(s) listed below are exempted from the land disposal prohibitions of 20 NMAC 4.1, 268 because the waste is exempted by the WIPP Land Withdrawal Act. The Land Withdrawal Act also exempts this waste from the treatment standards in 20 NMAC 4.1, 268. This waste is **NOT** prohibited from land disposal.

EPA Hazardous Waste Number (No additional codes to those listed below can be accepted at the WIPP. Check only those that are included in this shipment.):

Waste Stream Profile Number: _____

☐	D004	Arsenic	05/08/92	☐	D038	Pyridine	09/19/96
☐	D005	Barium	08/08/90	☐	D039	Tetrachloroethylene	09/19/96
☐	D006	Cadmium	08/08/90	☐	D040	Trichloroethylene	09/19/96
☐	D007	Chromium	08/08/90	☐	D043	Vinyl Chloride	09/19/96
☐	D008	Lead	08/08/90	☐	F001	Spent Solvents	11/08/86
☐	D009	Mercury	05/08/92	☐	F002	Spent Solvents	11/08/86
☐	D010	Selenium	08/08/90	☐	F003	Spent Solvents	11/08/86
☐	D011	Silver	08/08/90	☐	F004	Spent Solvents	11/08/86
☐	D018	Benzene	09/19/96	☐	F005	Spent Solvents	11/08/86
☐	D019	Carbon Tetrachloride	09/19/96	☐	F006	Sludges	09/08/88
☐	D021	Chlorobenzene	09/19/96	☐	F007	cyanide salts	07/08/89
☐	D022	Chloroform	09/19/96	☐	F009	cyanide salts	07/08/89
☐	D026	Cresol	09/19/96	☐	P015	Beryllium Powder	08/08/90
☐	D027	1,4-Dichlorobenzene	09/19/96	☐	P030	Cyanides (soluble cyanide salts), not otherwise specified (H)	06/08/89
☐	D028	1,2-Dichloroethane	09/19/96	☐	P098	Potassium Cyanide (H)	06/08/89
☐	D029	1,1-Dichloroethylene	09/19/96	☐	P099	Potassium Silver Cyanide (H)	08/08/90
☐	D030	2,4-Dinitrotolune	09/19/96	☐	P106	Sodium Cyanide (H)	06/08/89
☐	D032	Hexachlorobenzene	09/19/96	☐	P120	Vanadium Pentoxide	08/08/90
☐	D033	Hexachlorobutadiene	09/19/96	☐	U002	Acetone	08/08/90
☐	D034	Hexachloroethane	09/19/96	☐	U003	Acetonitrile (I,T)	08/08/90
☐	D035	Methyl ethyl ketone	09/19/96	☐	U019	Benzene	08/08/90
☐	D036	Nitrobenzene	09/19/96	☐	U037	Chlorobenzene	08/08/90
☐	D037	Pentachlorophenol	09/19/96	☐	U043	Vinyl Chloride	08/08/90

Attachment 3 – Land Disposal Restriction Exemption Notification (Continued)

Waste Stream Profile Number: _____

☐	U044	Chloroform	08/08/90	☐	U226	1,1,1-Trichloroethane	08/08/90
☐	U052	Cresol	08/08/90	☐	U228	Trichloroethylene	08/08/90
☐	U070	1,2-Dichlorobenzene	08/08/90	☐	U239	Xylene	08/08/90
☐	U072	1,4-Dichlorobenzene	08/08/90	☐			
☐	U078	1,1-Dichloroethylene	08/08/90	☐			
☐	U079	1,2-Dichloroethylene (T) 156-60-5	08/08/90	☐			
☐	U103	Dimethyl Sulfate (T)	08/08/90	☐			
☐	U105	2,4-Dinitrotoluene (T) 121-14-2	08/08/90	☐			
☐	U108	1,4-Dioxane (T)		☐			
☐	U122	Formaldehyde	08/08/90	☐			
☐	U133	Hydrazine	08/08/90	☐			
☐	U134	Hydrofluoric Acid	08/08/90	☐			
☐	U151	Mercury	08/08/90	☐			
☐	U154	Methanol	08/08/90	☐			
☐	U159	Methyl Ethyl Ketone	08/08/90	☐			
☐	U196	Pyridine	08/08/90	☐			
☐	U209	1,1,2,2-Tetrachloroethane	08/08/90	☐			
☐	U210	Tetrachloroethylene	08/08/90	☐			
☐	U220	Toluene	08/08/90	☐			

TCO:

Printed Name/Signature	Date	Initials

REFERENCE:

20 NMAC 4.1, 268.7(a) (3)
OCT. 30, 1992–Public Law 102-579 as amended Sept. 23, 1996–Public Law 104-201, Subtitle F
WIPP Hazardous Waste Facility Permit, Attachment C-5a (2)
WIPP Hazardous Waste Facility Permit, Part 2, Table 2.3.4, Permitted TRU Mixed Wastes

Attachment 4 – CCP Dunnage Certification Statement

Page 1 of 1

Payload ID _____

Record dunnage container numbers.

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

	Acceptance Criteria	**Initials**
Container Type	55-gal. drum, 85-gal. drum, 100-gal. drum, or SWB (circle one)	
Surface Contamination	<20 dpm/100 cm^2 alpha <200 dpm/100 cm^2 beta-gamma	
Container Marking	"Dunnage"	
Liquids	Dry	
Pu-239 FGE	Zero	
Thermal Power	Zero	
Dunnage Properly Vented??	Minimum one open vent port	
Comments:		

I certify that I have reviewed the data for this assembly dunnage and have determined that it meets the requirements stated in the current revision of CCP-PO-003.

TCO:

_____ _____ _____

Printed Name/Signature Date Initials

Attachment 5 – CCP Container Integrity Checklist

Payload ID _____

Record container numbers for the selected payload assembly.

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

NOTE

Any YES answer on the inspection checklist will result in the operator immediately contacting the TCO. The TCO will have the drum segregated **AND** the appropriate site-specific corrective actions invoked. The TCO will provide another waste container **OR** dunnage for the selected payload assembly. The new waste container will require the same inspection per the checklist.

Visually examine 100% of each container for selected payload assembly per the checklist below.

CONTAINER EXAMINATION		DISCUSSION OF CRITERIA	CHECK ONE	
1.	Is the payload container obviously degraded?	Obviously degraded means clearly visible and potentially significant defects in the payload container or payload container surface.	YES ☐	NO ☐
2.	Is there evidence that the payload container is, or has been, pressurized?	Pressurization can be indicated by a fairly uniform expansion of the sidewalls, bottom or top. Past pressurization can be indicated by a notable outward deflection of the bottom or top. Verify that the drum payload container is not warped.	YES ☐	NO ☐

Attachment 5 – CCP Container Integrity Checklist (Continued)

CONTAINER EXAMINATION		DISCUSSION OF CRITERIA	CHECK ONE	
3.	Is there any potentially significant rust or corrosion such that wall thinning, pin holes, or breaches are likely or the load bearing capacity is suspect?	Rust shall be assessed in terms of its type, extent, and location. Pitting, pocking, flaking, or dark coloration characterizes potentially significant rust or corrosion. This includes the extent of the payload container surface area covered, thickness, and, if it occurs in large flakes or built-up (caked) areas. Rusted payload containers may not be accepted if: • Rust is present in caked layers or deposits • Rust is present in the form of deep metal flaking, or built-up areas of corrosion products In addition, the location of rust should be noted; for example on a drum: top lid; filter region; locking chine; top one-third, above the second rolling hoop; middle one-third, between the first and second rolling hoops; bottom one-third, below the second rolling hoop; and on the bottom. Payload containers may still be considered acceptable if the signs of rust show up as: • Some discoloration on the payload container • If rubbed would produce fine grit or dust or minor flaking (such that wall thinning does not occur)	YES ☐	NO ☐
4.	Are any of the following apparent? • wall thinning • pin holes • breaches	Wall thinning, pin holes, and breaches can be a result of rust/corrosion (see discussion for #3).	YES ☐	NO ☐
5.	Are there any split seams, tears, obvious holes, punctures (of any size), creases, broken welds, or cracks?	Payload containers with obvious leaks, holes or openings, cracks, deep crevices, creases, tears, broken welds, sharp edges or pits, are either breached or on the verge of being breached. Verify that there is no warpage that could cause the container to be unstable or prevent it from fitting properly in the applicable package.	YES ☐	NO ☐
6.	Is the load-bearing capacity suspect?	The load-bearing capacity could be reduced for excessive rust (see discussion for #3), wall thinning (see discussion for #4), breaches, cracks, creases, broken welds, etc. (see discussion for #5).	YES ☐	NO ☐
7.	Is the payload container improperly closed?	Inspect the fastener and fastener ring (chine) if applicable for damage or excessive corrosion. Check the alignment of the fastener to ensure that it is in firm contact around the entire lid and the payload container will not open during transportation.	YES ☐	NO ☐

Attachment 5 – CCP Container Integrity Checklist (Continued)

CONTAINER EXAMINATION		DISCUSSION OF CRITERIA	CHECK ONE	
8.	Are there any dents, scrapes, or scratches that make the payload container's structural integrity questionable or prevent the top and bottom surfaces from being parallel?	Deep gouges, scratches, or abrasions over wide areas are not acceptable. If top and bottom surfaces are not parallel, this would indicate that the container is warped. Dents should be less than ¼ inch deep by 3 inches long and between ½ inch to 6 inches wide. All other dents must be examined to determine impact of structural integrity.	YES ☐	NO ☐
9.	Is there discoloration which would indicate leakage or other evidence of leakage of material from the payload container?	Examine the payload container regions near vents, top lid fittings, bottom fittings, welds, seams and intersections of one or more metal sheets or plates. Payload containers must be rejected if evidence of leakage is present.	YES ☐	NO ☐
10.	Is the payload container bulged?	For the purposes of this examination, bulging is indicated by: • A fairly uniform expansion of the sidewalls, bottom, or top (e.g., in the case of a drum, either the top or bottom surface protrudes beyond the planar surface of the top or bottom ring, • A protrusion of the side wall (e.g., in the case of a drum, beyond a line connecting the peaks of the surrounding rolling hoops or a line between a surrounding rolling hoop and the bottom or top ring), or • Expansion of the sidewall (e.g., in the case of a drum, such that it deforms any portion of a rolling hoop).	YES ☐	NO ☐

Comments: _____
_____
_____
_____

Inspected By:

_____ _____ _____
Printed Name Signature Date

Attachment 6 – Payload Accessories

Page 1 of 1

CH Package S/N	Payload Pallet ID# and Inspection Date	SWB Ratchet Strap S/N and Inspection Date	SWB Ratchet Strap S/N and Inspection Date	SWB Ratchet Strap S/N and Inspection Date
Position #1:_____				
Position #2:_____				
Position #3:_____				

Shipment Number: _____

Trailer Number: _____

Attachment 7 – (TRUPACT-III) CCP Shipping Site Control Checklist for Controlled Shipments

Shipment No. _____ Packaging No. _____

To be completed by Shipping Site Transportation Certification Official, or designee, for each package designated as a controlled shipment:

TRUPACT-III TRAMPAC Section No.	Activity	Recorded Date	Recorded Time	Completion of Activity (Indicate by checkmark [√])
6.2.3.1	Record date and time of TRUPACT-III closure			
6.2.3.2	Record date and time the shipment containing the loaded package is scheduled to depart from the site			
6.2.3.3	Calculate and record total **Loading Time** [Limit = 24 hours]			
	Total Loading Time ≤ 1 day, proceed to No. 6.2.3.4 *Total Loading Time > 1 day,* ***STOP.*** *Vent package and repeat closure process.*			
6.2.3.4	I certify that the above data is accurate and compliant with the Loading Time limit of 24 hours, as specified in Section 6.2.3 of the TRUPACT-III TRAMPAC. _____ / _____ TRANSPORTATION CERTIFICATION OFFICIAL (OR DESIGNEE) DATE			

Attachment 8 – (TRUPACT-III) CCP Receiving Site Control Checklist for Controlled Shipments

Shipment No. _____ Packaging No. _____

To be completed by designated Receiving Site Operations Personnel for each package designated as a controlled shipment:

TRUPACT-III TRAMPAC Section No.	Activity	Recorded Date	Recorded Time	Completion of Activity (Indicate by checkmark [√])
6.2.3.5	Record date and time that The package was scheduled to depart from the shipping site			
6.2.3.6	Vent package within 9 days of date and time Recorded above and record vent date and time			
6.2.3.7	I certify that the above data is accurate and compliant with the Transport and Unloading Time Limit of 9 days, as specified in Section 6.2.3 of the TRUPACT-III TRAMPAC. _____ / _____ RECEIVING SITE OPERATIONS PERSONNEL DATE			

Controlled
Copy

CCP-TP-053

Revision 12

CCP
Standard Real-Time Radiography (RTR) Inspection Procedure

EFFECTIVE DATE: 08/22/2012

Mike Ramirez

PRINTED NAME

APPROVED FOR USE

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
9	09/30/2010	Revised to incorporate another test image type.
10	03/04/2011	Revised to address Carlsbad Field Office (CBFO) Corrective Action Report (CAR)-11-015. Deleted requirement to identify locations of dense waste material, sharp/heavy objects. Deleted requirement of identification of block and/or bracing of sharp/heavy objects and heterogeneity of the waste (e.g., DO **NOT** just list plastic, describe it as small plastic bottles, plastic tubing, plastic sheeting, or plastic coveralls etc.). Deleted requirement of recording of liquid amounts on attachments. All prohibited conditions will be addressed in the Nonconformance Report (NCR) process. Added the ability to use procedure to Real-Time Radiography (RTR) Remote-Handled (RH) waste.
11	07/20/2011	Revised to add checklist question based on agreement with New Mexico Environmental Department (NMED).
12	08/22/2012	Revised to change format of attachments. Clarified format of container weights and clarified steps for documenting nonconformance reports (NCRs) on Attachment 2, CCP Radiography Data Sheet (Example).

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1.0 PURPOSE

Real-Time Radiography (RTR) inspection is used to verify that the physical form matches the waste stream description and that the Waste Matrix Code (WMC) assigned to the waste container is consistent with acceptable knowledge (AK) of the waste. The system is also used to estimate Waste Material Parameter (WMP) weights and identify prohibited items within a waste container.

This procedure contains the requirements for the collection of data and the generation level review of data from the RTR process.

1.1 Scope

This procedure applies to S3000 homogeneous solids, S4000 soils/gravel and S5000 debris transuranic (TRU) waste streams that require Nondestructive Examination (NDE). This procedure specifies instructions for performing NDE of waste containers using a RTR system. It also specifies methods for documenting the examination results as required by CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*, CCP-PO-002*, CCP Transuranic Waste Certification Plan*, DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*, and CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC)*.

2.0 REQUIREMENTS

2.1 References

Baseline Documents

- CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)*

Referenced Documents

- CCP-PO-001*, CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- CCP-PO-002, *CCP Transuranic Waste Certification Plan*
- CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC)*
- CCP-QP-002, *CCP Training and Qualification Plan*
- CCP-QP-005, CCP *TRU Nonconforming Item Reporting and Control*

- CCP-QP-008, *CCP Records Management*

2.2 Training Requirements

2.2.1 Personnel performing this procedure will be trained and qualified in accordance with CCP-QP-002, *CCP Training and Qualification Plan,* prior to performing this procedure.

2.3 Equipment List

2.3.1 Test Image

2.4 Software

2.4.1 None

2.5 Precautions and Limitations

2.5.1 If this procedure CAN **NOT** be implemented as written, RTR personnel shall notify appropriate supervisors. If it is determined that a portion of the work CAN **NOT** be accomplished as described in this procedure, or would result in an undesirable situation, work shall be STOPPED. Work will **NOT** be resumed until this procedure is modified or replaced by a new document that reflects the current work practice.

2.5.2 Workers who will be working in a radiation area must have met the Host site requirements prior to entering the area.

2.5.3 Review the Job Hazards Analysis.

2.6 Prerequisite Actions

2.6.1 None

2.7 Definitions

2.7.1 **Internal Container** – A container inside the outermost container examined during radiography or visual examination (VE). Drum liners, liner bags, plastic bags used for contamination control, capillary-type labware, and debris not designed to hold liquid at the time of original waste packaging are not internal containers.

2.7.2 **Observable Liquid** – Liquid that is observable using radiography or VE as specified in the Waste Isolation Pilot Plant (WIPP) Hazardous Waste Facility Permit.

3.0 RESPONSIBILITIES

3.1 RTR Operator

3.1.1 Operates the RTR system to determine the waste content attributes within a waste container.

3.1.2 Produces video/audio recorded media and a written record of the x-ray scan of the waste containers.

3.1.3 Performs the initial review of the data generated.

3.1.4 A second and independent qualified RTR Operator performs a Replicate Scan on one waste container per testing batch, or once per calendar day of operation, whichever is less frequent. In this context, independence means the individual did not perform, nor review the original work.

3.1.5 A second and independent qualified RTR Operator other than any RTR Operator involved in the original scan of the container selected performs an Independent Observation (IO) on a waste container, from a radiography video/audio recorded media, at a minimum of once per batch, or once per calendar day of operation, whichever is less frequent.

3.1.6 Assembles the Batch Data Report (BDR).

3.2 Independent Technical Reviewer (ITR)

NOTE
The Independent Technical Reviewer (ITR) will be a third and independent qualified RTR Operator.

3.2.1 Reviews the raw data (e.g., Attachment 2, CCP Radiography Data Sheet Example).

3.2.2 Completes Attachment 3, CCP Radiography Independent Technical Reviewer Checklist.

3.3 Lead Operator (LO)

3.3.1 Provides supervision of the overall operation of the RTR system.

3.4 Records Custodian

3.4.1 Receives, processes, and transmits records generated by this procedure in accordance with CCP-QP-008, *CCP Records Management*.

4.0 PROCEDURE

NOTE

All steps within this procedure will be performed by the RTR Operator unless otherwise specified.

4.1 Waste Container Preparation

4.1.1 Prepare the waste containers for examination in accordance with Host site and/or Central Characterization Project (CCP) procedures.

4.1.2 Install the Image Test device as applicable.

4.2 RTR System Startup

4.2.1 Startup the RTR system for operation in accordance with the CCP procedure.

4.3 Video/Audio Recorded Media System Startup/Image Test

NOTE

Video/audio recording of the RTR examination **MUST** be produced for all waste containers. The Image Test is performed once per day.

Attachments are found on the CCP Secure File Transfer Protocol (SFTP) site.

4.3.1 Record the following on Attachment 1, CCP RTR Measurement Control Report :

[A] Site.

[B] BDR Number.

[C] Examination Date.

4.3.2 Prepare the video/audio media recording systems for operation in accordance with the manufacturer's instructions.

[A] Verify/Turn ON all the video/audio media system components and monitors.

[B] Label each video/audio media with the following information:

[B.1] For the primary video/audio recording media, record the BDR Number followed by a unique identifier (e.g., LA-RTR1-060004A).

[B.2] **IF** additional recording media is required to complete a BDR,
THEN label the additional media with the BDR number followed by another unique identifier as described in step 4.3.2[B.1].

4.3.3 Perform a video/audio recorded media system check by recording the results of the Image Test on Attachment 1 as follows:

[A] Perform the Image Test.

[A.1] **IF** the test image is correctly observed (Minimum acceptable is five lines-pair/centimeters [cm] or the #6 sieve is viewable),
THEN record the results of the test, **AND** mark SAT on Attachment 1.

[A.2] **IF** the test image is **NOT** correctly observed,
THEN record the results of the test **AND** mark UNSAT on Attachment 1, STOP WORK **AND** notify the Lead Operator (LO) and Vendor Project Manager (VPM).

[B] Replay the video/audio recording media, **AND** verify the video/audio recording media check are satisfactory.

[B.1] **IF** the results of the video/audio recording media check are satisfactory,
THEN mark SAT on Attachment 1.

[B.2] **IF** the results of the video/audio recording media checks are **NOT** satisfactory,
THEN record the results of the test and mark UNSAT on Attachment 1, STOP WORK, and notify the LO and VPM.

4.3.4 Remove the Image Test device when it is conducive to operations.

4.3.5 Record comments if necessary, print name, sign, and date Attachment 1.

4.3.6 Place in holding file.

4.4 RTR System Operation

4.4.1 Waste Container Scanning

NOTE

Waste Container Identification (ID) Numbers shall be obtained by direct visual observation. An Attachment 2 must be completed for all waste containers examined.

[A] Enter the appropriate scan information (e.g., Container ID No., Date) on the video display.

[B] Start recording the examination scan **AND** record verbally the information for the waste container being examined.

[C] Manipulate the container and x-ray controls such that 100% of the container volume is examined.

[D] Scan the waste container.

[E] Record the results verbally **AND** in Section 3, Container Inventory and Comments of Attachment 2.

4.4.2 Data Entry

NOTE

The data required by steps [A.1] through [A.8], and [D.1] through [D.5](a), may be entered on Attachment 2 at any time after the waste container is loaded to the RTR unit. The remaining data required to be entered on Attachment 2 may be entered as the operator determines it during the scan.

All fractional weights will be recorded to 1/10 of a kilogram.

Attachments are found on the CCP SFTP site.

[A] Record the following data in Section 1 of Attachment 2:

[A.1] Check "√" the applicable type of RTR examination.

[A.2] Site ID.

[A.3] Batch Number.

[A.4] Examination Date.

[A.5] Waste Container ID.

[A.6] Waste Container ID at the top of Page 2 and Page 3 of Attachment 2.

[A.7] Video/Audio Recorded Media Number.

[A.8] Procedure and Revision No.

[A.9] Check "√" yes or no for NCR and if yes is checked record the NCR number.

[B] **IF** a container is identified in the S5000 summary category group that CAN **NOT** be penetrated by the RTR method because of the presence of lead, or other shielding, **THEN** initiate a nonconformance report (NCR) in accordance with CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*.

[C] **IF** a container is identified in the S3000 or S4000 summary category group, **AND** RTR is **NOT** capable of penetrating the container so that any liquid present on the top, sides, or bottom of the waste form is identifiable, **THEN** initiate a NCR in accordance with CCP-QP-005.

[D] Ensure the following data is recorded in Section 2, Waste Container Data, of Attachment 2:

[D.1] Container Type (55/85/100 gal. Drum, Standard Waste Box, Standard Large Box).

[D.2] Content (TRUCON) Code.

[D.3] Waste Matrix Code.

[D.4] Waste Stream ID.

[D.5] Waste Container Weights (kilograms [kg]).

(a) Gross Weight (from the CCP Container Traveler or obtain the weight in accordance with the Host site Interface Document).

(b) Tare Weight (Total Packaging Weight from Section 4: Packaging Material and Waste Material Parameters, of Attachment 2).

(c) Net Weight (subtract Tare Weight from Gross Weight).

[D.6] Rigid Liner and Liner Vent Description.

(a) Describe both the rigid liner **AND** liner venting method (e.g., "90 millimeter liner with punctured lid," **OR** "No Liner").

[D.7] Estimated number of Layers of Confinement.

NOTE

The fill percent of the container is based on the highest level of the bulk of the waste. Items (e.g., pipe, scrap angle, plastic bags) that protrude above the bulk of the waste are not to be included in the fill percent determination. The fill percent is to be recorded in five percent increments (e.g., 35%, 40%, 45%).

[D.8] Record the estimated Volume Utilization Percentage (VUP).

[E] Complete an itemized description of the waste inventory in the container in Section 3.

NOTE

Additional weight information for items commonly found in waste streams at each site may be provided in accordance with a controlled Operator Aid.

[F] Using packaging weight information provided by the Host site, record the estimated weight (kg) for the packaging materials in Section 4: Packaging Material and Waste Material Parameters, of Attachment 2.

[G] Using Table 2, Waste Material Parameters, Table 3, Waste Item Weights, and additional item weight information provided by the Host site, record the estimated weight for each WMP in Section 3 and sum all WMPs and record the total WMP weight in Section 4 of Attachment 2.

NOTE

The potential exists for prohibited items to be present in the waste container based upon shapes seen in the image and the RTR Operator's knowledge of the waste stream. For example; if the AK for the waste stream DOES **NOT** indicate the presence of Polychlorinated Biphenyl (PCB) free light ballasts, and a ballast is present in the container, the RTR Operator will have reason to believe that PCBs are present.

Investigate the presence of liquids by rotating the container back and forth, tilting, or per the equipment manufacturer's instructions.

Internal containers (e.g., bottles, cans, etc.) shall have no more than 60 milliliters or 3 percent by volume, whichever is greater, observable liquid **AND** in no case, shall the total observable liquid volume (i.e., the sum of all internal and/or outermost container volumes) exceed >1%.

[H] Using Table 1, Prohibited Items, as a reference, complete the checklist in Section 5: RTR Summary, of Attachment 2, to confirm there are **NO** prohibited items in the waste container.

[H.1] **IF** any hazardous waste(s) **NOT** identified in the AK Summary Report(s) for the waste stream being characterized **OR** any nonconforming/prohibited items are noted during the RTR examination,
THEN perform the following:

(a) Initiate an NCR in accordance with CCP-QP-005 **AND** record the NCR number in Section 1 and in the comments block of Attachment 2.

NOTE

The physical waste form requirements and waste stream descriptions for the waste stream being evaluated are found in the AK Summary Report. The AK Summary will be available in the work area and referenced as needed.

[H.2] **IF** the waste form DOES **NOT** match the Waste Stream description and/or the Waste Matrix Code, **THEN** initiate an NCR in accordance with CCP-QP-005, **AND** record NCR number in Section 1 and in the comments block of Attachment 2.

[I] Review Attachment 2 for completeness and accuracy.

NOTE

Data changes shall be made by the individual who originally collected the data or an equally qualified individual authorized to change the data.

[I.1] Ensure changes to the data have been initialed and dated with a justification, as necessary, provided in the Comments block of Attachment 2.

[J] Print name, sign, and date Attachment 2.

[K] Place in holding file.

[L] **IF** the waste container constitutes the last container of the batch or day,
THEN STOP, remove the video/audio recording media from the recording components, **AND** properly store the media.

[M] Repeat steps 4.4.1 through 4.4.2 until all containers in the batch have been examined.

4.5 Replicate Scan

NOTE

A Replicate Scan shall be performed once per calendar day or once per testing batch, whichever is less frequent. The Replicate Scan is performed by a second and independent qualified RTR Operator who was not involved in the original scan of the waste container. The Replicate Scan will be performed under the same uniform conditions as a routine scan of a waste container in Section 4.4.

Second RTR Operator

4.5.1 Prior to reviewing the initial, Attachment 2, scan the replicate waste container per Section 4.4, **AND** record the results on a new Attachment 2.

4.5.2 Review the original Attachment 2, **AND** compare the results with the second Attachment 2.

4.5.3 Perform the following when identification of the waste matrix code, liquids in excess of Treatment, Storage, Disposal Facility (TSDF)-Waste Acceptance Criteria (WAC) limits, and compressed gases differ between the two operators:

[A] Reconcile the results with the initial RTR Operator as follows:

[A.1] Jointly perform a real-time review of the Attachment 2(s).

[A.2] Jointly review the video/audio recording media **OR** re-scan the container, **AND** make corrections, as required, to the Attachment 2(s).

[B] **IF** the results CAN **NOT** be reconciled, **THEN** STOP WORK **AND** notify the LO.

4.6 Independent Observations

NOTE

An Independent Observation of one container scan, other than the Replicate Scan, shall be performed once per calendar day or once per testing batch, whichever is less frequent. The Independent Observation will be performed by a second and independent qualified RTR Operator who was not involved in the original scan of the waste container. The Independent Observation will be performed by observing the video recording of the original scan with no audio.

Second RTR Operator

4.6.1 Review the video/audio recording media of the original scan, **AND** complete a second Attachment 2.

4.6.2 Review the original Attachment 2 for the subject container, **AND** compare the results with the Independent Observation Attachment 2.

4.6.3 Perform the following when identification of the waste matrix code, liquids in excess of TSDF-WAC limits, and compressed gases differ between the two operators.

[A] Reconcile the results with the initial RTR Operator as follows:

[A.1] Jointly perform a real-time review of Attachment 2(s).

[A.2] Jointly review the video/audio recording media, **OR** re-scan the container, **AND** make corrections, as required, to the Attachment 2(s).

[B] **IF** the results CAN **NOT** be reconciled, **THEN** STOP WORK **AND** notify the LO.

4.7 RTR System Shutdown

4.7.1 Shutdown the RTR system in accordance with CCP procedure.

4.8 Video/Audio Recording Media System Shutdown

4.8.1 Verify all video/audio recording media have been finalized if necessary and removed from the recording components.

4.8.2 Turn OFF the video/audio media recording systems in accordance with the manufacturer's instructions.

4.9 Batch Data Report Preparation

RTR Operator

4.9.1 Assemble Attachment 2(s) for up to 20 waste containers (regardless of matrix) that have been processed from a single RTR unit.

4.9.2 Complete Attachment 5, CCP Radiography Batch Data Report Cover Sheet, **AND** record the following:

[A] BDR No.

[B] Contact-handled (CH) or remote-handled (RH) waste.

[C] Date.

[D] Waste Container ID Numbers.

[E] Record which containers are by designation, Replicate Scan and Independent Observation.

[F] Site ID

[G] Print name, sign, and date.

4.9.3 Assemble the following data for the BDR:

[A] Attachment 5, CCP Radiography Batch Data Report Cover Sheet

[B] Attachment 4, CCP Radiography Batch Data Report Table Of Contents and Batch Narrative

[C] Attachment 1, CCP RTR Measurement Control Report

[D] Attachment 2, CCP Radiography Data Sheet

[E] Copy of NCRs, if applicable.

[F] Attachment 3, CCP Radiography Independent Technical Reviewer Checklist

[G] Paginate the BDR.

[H] Two sets of Audio/Video Media.

4.9.4 Forward the BDR package to the ITR.

4.10 RTR Independent Technical Review

NOTE

The independent technical review is conducted by a third and independent qualified RTR Operator who was not involved in the generation or recording of the data under review. The Independent Technical Reviewer CAN **NOT** review his/her own work.

Attachments are found on the CCP SFTP site.

ITR

4.10.1 Review Attachment 1, Attachment 2s, and associated video/audio media recordings, **AND** resolve any comments with the RTR Operator(s).

4.10.2 Review the BDR to the criteria in the checklist of Attachment 3, **AND** document the results.

4.10.3 Print name, sign, and date Attachment 3 and Attachment 5 and any additional Attachments to be inserted in the BDR.

4.10.4 Insert completed Attachment 3, CCP Radiography Independent Technical Reviewer Checklist, into the BDR.

4.10.5 Insert any additional attachments generated during ITR into the BDR.

4.10.6 Forward the BDR package to the Records Custodian.

Records Custodian

[A] Receive, process, and transmit records in accordance with CCP-QP-008.

5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as QA records in accordance with CCP-QP-008. The records are the following:

5.1.1 QA/Lifetime

[A] Batch Data Report (BDR):

- Attachment 1, CCP RTR Measurement Control Report
- Attachment 2, CCP Radiography Data Sheet
- Attachment 3, CCP Radiography Independent Technical Reviewer Checklist
- Attachment 4, CCP Radiography Batch Data Report Table of Contents and Batch Narrative
- Attachment 5, CCP Radiography Batch Data Report Cover Sheet
- Copies of NCRs, if applicable

5.1.2 QA/Non-permanent

[A] Two sets RTR media VHS or DVD

Table 1. Prohibited Items

LIST OF PROHIBITED ITEMS
Liquid waste - Observable liquid shall be no more than 1 percent by volume of the outermost container. - Internal containers with more than 60 milliliters or 3 percent by volume observable liquid, whichever is greater, are prohibited. - Containers with Hazardous Waste Number U134 assigned shall have no observable liquid.
Nonradioactive pyrophorics
Non-mixed hazardous waste
Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials, and/or other wastes).
Explosives
Compressed Gases/Pressurized containers (e.g., aerosol cans)
PCB liquids
Ignitables
Corrosives
Reactive waste
Sealed containers greater than 4 liters
Heat Sealed Bags (unvented) with surface area less than 390 square inches and greater than 4 liters, or heat sealed bags not authorized in the RH TRUCON Code.
Sharp or heavy objects, that could reasonably be expected to cause a breach of the container during transport because it is not adequately blocked, braced, or packaged.

Table 2. Waste Material Parameters

Waste Material Parameter	Description
Iron-based metals/alloys (IM)	Iron and steel alloys in the waste; does not include the waste container materials
Aluminum-based metals/alloys (AM)	Aluminum or aluminum-based alloys in the waste materials
Other metals (OM)	All other metals found in the waste materials
Other inorganic materials (OI)	Nonmetallic inorganic waste, including concrete, glass, firebrick, ceramics, sand, and inorganic sorbents
Cellulosics (C)	Materials generally derived from high polymer plant carbohydrates (e.g., paper, cardboard, wood, cloth)
Rubber (R)	Natural or man-made elastic Latex materials (e.g., surgeon's gloves, leaded rubber gloves)
Plastics (waste materials) (XPM)	Generally man-made materials, often derived from petroleum feedstock (e.g., polyethylene, polyvinylchloride)
Organic matrix (OR)	Cemented organic resins, solidified organic liquids, and sludges
Inorganic matrix (IN)	Any homogeneous materials consisting of sludge, or aqueous-based liquids which are solidified with cement, calcium silicate, or other solidification agents (e.g., waste water treatment sludge, cemented aqueous liquids, and inorganic particulate)
Soils (S)	Generally consists of naturally occurring soils which have been contaminated with inorganic waste materials
Steel (packaging materials) (ST)	Steel Drums (55- and 85- Gallon)
Plastics (packaging materials) (PP)	90-mil polyethylene drum liner and plastic bags

Table 3. Waste Item Weights[a] Page 1 of 2

ITEM	WEIGHT
Electric Drill Motor	2.2 kg
Electric 4” Side Grinder	2.5 kg
Plastic bag for waste	0.6 kg
Fiber pack	13.0 kg
Fiber pack lead-lined	66.0 kg
Lead brick (5.1 x 10 x 20 cm)	12.0 kg
Leaded Rubber Glove	2.5 kg
Aluminum Sphincter Can	0.2 kg
Leaded Rubber Apron	2.4 kg
Vermiculite	0.1 kg/liter
Oil-Dry	0.4 kg/liter
Poly Bottles (1 gallon)	2.2 kg
Poly Bottles (1 liter)	0.5 kg
Metal Can (for salt wastes)	1.1 kg
Metal Can	0.2 kg
Uncured Portland Cement	2.9 kg/liter
Setup Portland Cement	1.1 kg/liter
High-Efficiency Particulate Air (HEPA) Filter (8 x 8 3-1/16)	1.0 kg
HEPA Filter (8 x 8 x 5-7/8)	1.9 kg
HEPA Filter (12 x 12 x 5-7/8)	2.5 kg
HEPA Filter (24 x 24 x 5- 7/8)	7.2 kg
HEPA Filter (24 x 24 x 11-1/2)	14.1 kg
10’ Tape Measure	0.1 kg
13 Oz. Aerosol Can ¼ Full	0.2 kg
17 Oz. Aerosol Can Full of Liquid	0.5 kg
17" Section of 1" Electrical Conduit	0.5 kg
17" Section of 1" Sch 40 S/s Pipe	1.1 kg
2-Gallon Car-boy ½ Full of Water	5.8 kg
2’ X 4’ Board 20" long	0.7 kg
25’ Plastic Suit Hose	2.3 kg
3" Roll of Duct Tape	0.7 kg
3" Roll of Masking Tape	0.4 kg
5-Gallon Metal Bucket	1.3 kg
50’ Plastic Suit Hose	5.0 kg
6-Gallon Car-boy ½ Full of Water	14.0 kg

Table 3. Waste Items Weights[a] (Continued) Page 2 of 2

ITEM	WEIGHT
Channel Lock Pliers	0.3 kg
Coveralls	0.9 kg
Crescent Wrench	0.2 kg
Empty 2-Gallon Car-boy	0.7 kg
Empty 6-Gallon Car-boy	2.0 kg
Flashlight with Batteries	0.5 kg
Flashlight Without Batteries	0.1 kg
Flat File	0.4 kg
Hacksaw with Blade	0.5 kg
Hammer	0.6 kg
Large Open End Wrench	0.5 kg
Plastic Suit Top and Pants	2.3 kg
Razor Knife	0.1 kg
Sand Bag ½ Full of Gravel	12.7 kg
Scissors	0.2 kg
Vice Grip Pliers	0.5 kg
Welder's Chipping Hammer	0.4 kg
Wire Brush	0.1 kg
Wooden Folding Ruler	0.2 kg
Wooden Wedge	0.2 kg
Liner Bags – Large	0.5 kg
Rad Bags – Medium and Small	0.1 kg

[a]The weights for waste packaging and containers will use the nominal values except where identified by the program. Additional Host site/AK specification weights for waste items shall be provided in accordance with an approved Operator Aid.

Attachment 1 – CCP RTR Measurement Control Report

Site ID:		
Batch Data Report No.:		
Examination Date:		
Control Checks		
Video/Audio Recorded Media System Check	☐ SAT	☐ UNSAT
Image Test : _____ (Minimum acceptable is 5 lines-pair/cm or #6 Sieve is viewable)	☐ SAT	☐ UNSAT
Comments:		
RTR Operator:		
Printed Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet (Example)

Section 1: General Information	
☐ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	
Batch Number:	
Examination Date:	
Waste Container ID:	
Video/Audio Recorded Media Number:	
Procedure and Revision No.:	Rev.
NCR(s) associated with the container? (e.g., Prohibited Items)	☐ NO ☐ YES NCR No.: _____ NCR No.:
Section 2: Waste Container Data	
Container Type:	
TRUCON Code:	
Waste Matrix Code:	
Waste Stream I.D.:	
Waste Container Weights:	Gross Wt.: _____ kg Tare Wt.: _____ kg Net Wt.: kg
Rigid Liner and Liner Vent Description:	Liner Present: ☐ NO ☐ YES Lid: ☐ NO ☐ YES Type: ☐ 30-mil ☐ 90-mil ☐ 110-mil ☐ 125-mil Vented: ☐ NO ☐ YES Fiberboard: ☐ NO ☐ YES
Number of Layers of Confinement:	
Volume Utilization Percentage:	

Attachment 2 – CCP Radiography Data Sheet (Example) (Continued)

Waste Container ID:

Section 3: Container Inventory and Comments (Detailed descriptions)
IM:
AM:
OM:
OI:
C:
R:
XPM:
OR:
IN:
S:

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	
Plastics (PP):	
Others:	
Total Packaging Weight	
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	
Organic Matrix (OR):	
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	

Attachment 2 – CCP Radiography Data Sheet (Example) (Continued)

Waste Container ID:

Section 5: RTR Summary (Questions answered "YES" will be explained in the Comments block)		
Is there observable liquid?	☐ YES	☐ NO
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐ YES	☐ NO
Is the total volume of observable liquid in the outermost container GREATER than 1% of the container?	☐ YES	☐ NO
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134??	☐ YES	☐ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☐ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☐ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐ YES	☐ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☐ NO
Is there an indication of PCBs liquids?	☐ YES	☐ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐ YES	☐ NO
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐ YES	☐ NO
CH or RH TRAMPAC		
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐ YES	☐ NO
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☐ NO
Are there sealed containers GREATER than 4 liters?	☐ YES	☐ NO
Are there indications of inadequate protection for heavy and/or sharp objects?	☐ YES	☐ NO
Comments:		
RTR Operator		
Print Name	Signature	Date

Attachment 3 – CCP Radiography Independent Technical Reviewer Checklist

Batch Data Report No.:_____

Description				
1.	Data generation and reduction were conducted in a technically correct manner in accordance with the methods used?	☐ NO	☐ YES	
2.	Was the correct revision of the procedure used? Procedure: Rev.:	☐ NO	☐ YES	
3.	Are the WMPs entered correctly?	☐ NO	☐ YES	
4.	Do the estimated weights in Section 4 of Attachment 2 equal the container gross weight?	☐ NO	☐ YES	
5.	Is the data reported in the proper units with the correct number of significant figures (e.g., one tenth of a kilogram)?	☐ NO	☐ YES	
6.	Has the data been verified for transcription errors?	☐ NO	☐ YES	☐ N/A
7.	Does the Testing Batch Report include radiography for up to 20 containers?	☐ NO	☐ YES	
8.	BDR contents are complete and match the CCP Waste RTR Batch Data Report Table of Contents?	☐ NO	☐ YES	
9.	Is all the data signed and dated in reproducible ink and by the individual(s) generating it?	☐ NO	☐ YES	
10.	Is all data recorded clearly, legibly, and accurately?	☐ NO	☐ YES	
11.	All changes to original data lined out, initialed and dated by the individual making the changes?	☐ NO	☐ YES	☐ N/A
12.	Was justification made for changing the original data?	☐ NO	☐ YES	☐ N/A
13.	Were data changes made by the individual who originally collected the data?	☐ NO	☐ YES	☐ N/A
14.	Does the waste match the Waste Matrix Code and Waste Stream description?	☐ NO	☐ YES	
15.	Are the RTR Operator's decisions regarding the Radiography documented?	☐ NO	☐ YES	
16.	Is there an adequate written description of the contents of each item?	☐ NO	☐ YES	
17.	Was the video/audio recording media properly prepared and labeled for each waste container?	☐ NO	☐ YES	
18.	Was the video/audio recording media check performed satisfactorily and recorded on Attachment 1?	☐ NO	☐ YES	

Attachment 3 – CCP Radiography Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.:_____

Description				
19.	Was the Image Test performed satisfactorily and recorded on Attachment 1?	☐ NO	☐ YES	
20.	Was the Replicate Scan performed and recorded on an Attachment 2? (1 per batch or 1 per day, whichever is less frequent).	☐ NO	☐ YES	
21.	Was the Replicate Scan RTR Operator different from the first RTR Operator?	☐ NO	☐ YES	
22.	Did the Replicate Scan RTR Operator and the first RTR Operator agree on the results?	☐ NO	☐ YES	
23.	Was the Independent Observation performed and recorded on an Attachment 2? (1 per batch or 1 per day, whichever is less frequent).	☐ NO	☐ YES	
24.	Was the Independent Observation RTR Operator different from the first RTR Operator?	☐ NO	☐ YES	
25.	Did the Independent Observation RTR Operator and the first RTR Operator agree on the results?	☐ NO	☐ YES	
26.	Was the data collection performed by qualified individuals?	☐ NO	☐ YES	
27.	Are the NCR(s) associated with the RTR examination included in the BDR?	☐ NO	☐ YES	☐ N/A
28.	QAOs (precision, accuracy, completeness, representativeness) have been met?	☐ NO	☐ YES	

Comments:

I have reviewed 100% of the container specific and batch data in this report and find it acceptable.

Independent Technical Reviewer:

Printed Name	Signature	Date

Attachment 4 – CCP Radiography Batch Data Report Table of Contents and Batch Narrative

Batch Data Report No.:_____ Date:_____

Table Of Contents		
Item	Description	Page No.
1	CCP Radiography Batch Data Report Cover Sheet	
2	CCP Radiography Batch Data Report Table Of Contents	
3	CCP RTR Measurement Control Report	
4	CCP Radiography Data Sheets	
5	Copy of NCRs (NA, If Not Applicable)	
6	CCP Independent Technical Reviewer Checklist	

Batch Narrative

RTR Operator _____ Signature _____ Date

Attachment 5 – CCP Radiography Batch Data Report Cover Sheet

Site ID:_____

Batch Data Report No.:_____ ☐ CH ☐ RH Date:_____

Waste Container ID Numbers	
Replicate Scan:	
Independent Observation:	
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

RTR Operator:

Printed Name Signature Date

Independent Technical Reviewer:

Printed Name Signature Date

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CCP-TP-080

Revision 5

CCP Operating the WMF 610 Real-Time Radiography (RTR) System

EFFECTIVE DATE: 10/23/2012

Mark Pearcy

PRINTED NAME

APPROVED FOR USE

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
0	07/01/2005	Initial issue.
1	05/16/2006	Revised Section 2.4, Prerequisite Actions, and Section 4.0 to procedure steps and clarify documentation of semi-annual safety and inspection checks.
2	06/01/2010	Revised document to clarify correct management position titles at the request of the host site.
3	02/24/2011	Revised to address an alternative method for Controlling Hazardous Energy for compliance with Host site procedures.
4	07/26/2012	Revised due to host site installing new equipment on RTR-1001.
5	10/23/2012	Revised to reflect the changes to Advanced Mixed Waste Treatment Project (AMWTP's) Technical Safety Requirement/Documented Safety Analysis (TSR/DSA) requirements.

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1.0 PURPOSE

The purpose of this procedure is to provide instructions for the startup, operation, and shutdown of the Waste Management Facility (WMF) 610 Real-Time Radiography (RTR) System.

1.1 Scope

This procedure specifies actions necessary for startup, daily operational safety checks and shutdown of the WMF 610 RTR System for use in fast scanning waste containers in conjunction with CCP-TP-066, *CCP Radiography Screening Procedure for Prohibited Items*.

2.0 REQUIREMENTS

2.1 References

Baseline Documents

- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- CCP-PO-002, *CCP Transuranic Waste Certification Plan*
- CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)*

Referenced Documents

- CCP-HSP-009, *CCP RTR Health and Safety Plan*
- CCP-QP-002, *CCP Training and Qualification Plan*
- CCP-QP-008, *CCP Records Management*
- CCP-TP-066, *CCP Radiography Screening Procedure for Prohibited Items*

2.2 Training Requirements

2.2.1 Personnel performing this procedure will be trained and qualified in accordance with CCP-QP-002, *CCP Training and Qualification Plan* prior to performing this procedure.

2.3 Precautions and Limitations

2.3.1 An alternative method of hazardous energy control may be used performing daily inspections of the shielded enclosure, drum cart, or testing the emergency stop switches in the shielded enclosure. The RTR operator complies with the alternative method by removing and maintaining control of the x-ray key.

2.3.2 Any equipment modifications that could alter radiation protection shall be reviewed and approved by the Vendor Project Manager (VPM), Rad Engineer, and the Subcontract Technical Representative (STR). After the modifications are completed, a survey shall be conducted to ensure personnel will **NOT** be

exposed to unnecessarily high levels of radiation. This step must comply with the Host site configuration management system.

2.3.3 If this procedure CAN **NOT** be implemented as written, RTR personnel SHALL notify appropriate supervision. If it is determined that a portion of the work CAN **NOT** be accomplished as described in this procedure, OR would result in an undesirable situation, work SHALL be STOPPED and the VPM and Shift Supervisor SHALL be notified, and the RTR System SHALL be placed Out Of Service. Work WILL **NOT** be resumed until this procedure is modified OR replaced by a new document that reflects the current work practice.

2.3.4 The personal protective equipment (PPE) for normal operations is contained in CCP-HSP-009, *CCP RTR Health and Safety Plan*. Personnel will don the required or specified PPE before starting RTR operations.

2.3.5 High energy x-rays, high voltages (HVs), and pinch points are the potential hazards associated with the RTR System. These hazards are addressed in CCP-HSP-009, for personnel who operate the RTR System.

2.3.6 Workers who will be working in a radiation area must have read and signed that they understand the applicable Radiation Work Permit (RWP) or Approved Method of Work (AMOW).

2.3.7 The barcode scanner, cart homing sensor, and alignment laser present a laser eye hazard. Eye contact with the beams must be avoided.

2.3.8 When approaching the radiation source, use a suitable operable calibrated survey instrument to verify that the source is in its fully shielded condition or that the x-ray tube has been de-energized.

2.4 Prerequisite Actions

NOTE
Work is authorized via the Plan of the Day (POD).

NOTE
The WMF 610 RTR System SHALL be placed Out Of Service anytime the facility, process, OR equipment is **NOT** capable of being operated and maintained as intended.

2.4.1 Prior to initial startup, ensure cave surveys are completed in accordance with Host site procedures.

2.4.2 Verify that the most recent documented radiation survey of the RTR System has been performed within the last six months, and after any maintenance or modification of the x-ray shielding.

[A] Record status on Attachment 1 of CCP-TP-066.

[B] **IF** Radiation Survey is **NOT** current,
THEN STOP WORK **AND** notify RTR Lead Operator (LO) and VPM.

2.4.3 Verify door interlocks, audible and visual warning signals, minimum 20 second delay function and emergency shut down switches have been inspected and tested semi-annually.

[A] Record status on Attachment 1 of CCP-TP-066.

[B] **IF** inspections and tests are **NOT** current,
THEN STOP WORK **AND** notify RTR LO and VPM.

2.4.4 If any of the system checks fail, STOP WORK, **AND** notify the RTR LO and VPM.

2.4.5 Verify that the existing working copy of this procedure is current by comparing the revision number of the working copy to the revision number of the controlled copy of the procedure on the Central Characterization Program (CCP) secure file transfer protocol (sftp) site. If the CCP sftp site is **NOT** available, contact CCP Document Control to determine the current revision.

3.0 RESPONSIBILITIES

3.1 WMF 610 RTR Operator (RTR Operator)

3.1.1 Implements this procedure to conduct waste container screening in conjunction with CCP-TP-066.

3.1.2 Reports failure of any operational safety check to the VPM and RTR LO.

NOTE

Cart, joggers, and vertical drive motors may be homed when necessary.

4.0 PROCEDURE

NOTE

Before leaving the RTR control console unattended, the x-ray controller must be placed in STAND BY mode and the key must be removed and maintained under operator control or stored in the master key locker.

NOTE

For RTR enclosure entry the x-ray controller key shall be removed and each person entering the enclosure shall establish individual control of the x-ray controller key.

4.1 RTR Operator

NOTE

The following step is performed to verify the x-ray system will not generate x-rays to satisfy using an alternate method to hazardous energy control.

4.1.1 Ensure the x-ray console is in STAND BY with the x-ray key removed to verify power is available to the console.

4.1.2 Press the black X-RAY ON button and verify x-rays are not generated (no response from the x-ray console).

4.1.3 Inspect the shielded vault and associated equipment for the following:

[A] Foreign objects.

[B] General cleanliness.

[C] Oil on floor.

[D] The drive rods on both the tube head and Digital Image Panel (DIP) assemblies are free of obstruction.

[E] The x-ray shutters are CLOSED.

[F] Turn the camera, monitor, and system display components and DIP power strip (inside the shielded vault) ON, if necessary.

[G] Door interlock damage.

[H] Drum cart condition.

4.1.4 In the control room, turn on camera monitors, system display components and applicable rack mounted computer systems as necessary. Insert power key, turn to the on position, and press the reset button.

4.1.5 Test **AND** inspect the Emergency Stop Switches Daily located on the East and West side of the vault door, control console, motor control center cabinet as follows:

[A] Ensure the E-STOP occurred light is out, by pressing the E-stop reset button and the Motion Enables button.

[B] Visually inspect the emergency stop switch for damage.

[C] Press the emergency stop switch.

[D] Ensure the E-STOP occurred light is lit.

[E] Reset the emergency stop switch.

[F] Press the E-STOP RESET button on the control console.

[G] Wait until the light stops flashing.

[H] Press the MOTION ENABLE button.

[I] Repeat steps 4.1.5[A] through 4.1.5[H] to test the emergency stop switches.

4.1.6 Test **AND** inspect the Emergency Stop Switches Daily located inside the vault on the West, East, and South as follows:

[A] Ensure the E-STOP occurred light is out, by pressing the E-stop reset button and the Motion Enables button.

[B] Ensure the x-ray console is in STAND BY with x-ray key removed to verify power is available to the console.

[C] Press the black X-RAY ON button and verify x-rays are not generated (No response from the x-ray console).

[D] Visually inspect the emergency stop switch for damage.

[E] Press the emergency stop switch.

[F] Ensure the E-STOP occurred light is lit.

[G] Ensure the x-ray console is in STAND BY with x-ray key removed to verify power is available to the console.

[H] Press the black X-RAY ON button and verify x-rays are not generated (No response from the x-ray console).

[I] Reset the emergency stop switch.

[J] Press the E-STOP RESET button on the control console.

[K] Wait until the light stops flashing.

[L] Press the MOTION ENABLE button.

[M] Repeat steps 4.1.6[A] through 4.1.6[L] to test the emergency stop switches inside the vault.

NOTE

The x-ray controller may have to be turned OFF and ON to get the x-ray tube conditioning prompt.

4.2 Performing WMF 610 RTR Door Interlocks Safety Checks

4.2.1 Turn ON the YXLON® controller.

4.2.2 Select tube conditioning No = 0.

4.2.3 Set the x-ray control to 40 kilovolt (kV) and 1.0 milli amp (mA).

4.2.4 Ensure the cart, x-ray head, and DIP are homed.

4.2.5 Move the cart in, **AND** CLOSE the door.

4.2.6 Using the closed circuit television (CCTV) camera, ensure NO personnel are inside the shielded vault.

4.2.7 Slightly OPEN the shielded vault door.

4.2.8 Energize the x-ray tube head by pressing the black x-ray ON button.

4.2.9 Ensure the x-ray tube head DOES NOT energize.

[A] **IF** the x-ray head attempts to energize,
THEN STOP RTR operations, **AND** inform the VPM, and RTR LO.

4.2.10 CLOSE the shielded vault door.

4.3 Testing Audible/Visual Warning Devices and Minimum 20 Second Time Delay

4.3.1 Using the CCTV camera, ensure NO personnel are inside the shielded vault.

NOTE
After step 4.3.3 has been performed, the x-ray will switch to ON and the kv and mA indicators will change to previously programmed values. The remainder of the warm-up sequence will be completed automatically.

NOTE
The white lamp on the YXLON® controller console will be ON for a minimum of 20 seconds indicating a pre-warning time. Warning indicators and alarms listed in step 4.3.3 will actuate quickly upon energizing the x-ray head.

NOTE
Steps 4.3.3 and 4.3.4 may be performed simultaneously.

4.3.2 Energize the x-ray head.

4.3.3 Ensure the following:

[A] Warning light inside the shielded vault flashes for a minimum of 20 seconds before x-ray generation.

[B] Amber warning lights on the roof of the shielded vault flashes for at least 20 seconds before x-ray generation.

[C] Audible alarm inside the shielded vault is activated for at least 20 seconds before x-ray generation.

[D] Warning light inside the shielded vault flashes when x-rays are being generated.

[E] Exterior red warning lights flash and the "Grave Danger – Very High Radiation Inside When Illuminated" warning light is illuminated when x-rays are generated.

4.3.4 STOP x-rays by pressing the red x-ray OFF button.

4.3.5 Ensure safety checks have been completed and are recorded on Attachment 1 of CCP-TP-066.

4.4 Beginning of Shift Activities

4.4.1 Ensure the x-ray monitor is ON.

4.4.2 Ensure the CCTV monitor is ON.

4.4.3 Ensure the system display components are ON.

4.4.4 **IF** the shielded vault door is opened with the x-ray controller key in the ON position,
THEN the door interlocks must be reset by closing the shielded vault door and switching the YXLON® controller key to STANDBY, **AND** then back to the ON position.

NOTE

Check Attachment 1, YXLON® X-Ray Controller Error Codes, when an error code is observed from the YXLON® X-Ray Controller.

4.4.5 Startup the YXLON® x-ray unit as follows:

[A] Move the cart into the shielded vault, if necessary.

[B] CLOSE the shielded vault door.

[C] Turn the YXLON® x-ray controller to STANDBY.

[C.1] **IF** the x-ray tube conditioning prompt is **NOT** visible,
THEN turn the x-ray controller OFF,
THEN back to STANDBY.

[D] Enter 1 at the tube conditioning prompt.

[E] Enter the rest period as follows: (0 – days [00–99] Confirmation=F1).

[E.1] Determine the rest period from the RTR Operations Logbook.

[E.2] Enter the rest period (0 days is entered if the rest period is less than 8 hours).

[E.3] Press key F1 to confirm data entry.

[F] **IF** warm-up is required,
THEN perform the following:

[F.1] Select the conditioning voltage of 450.

[F.2] Select between the three values with the cursor keys [“4” () and “6” ()].

[F.3] Using the CCTV camera, ensure NO personnel are inside the shielded vault.

[F.4] Ensure x-ray shutters are CLOSED.

[F.5] Initiate the conditioning process by switching the YXLON® controller key to ON.

[F.6] Energize the x-ray head by pressing the x-ray ON button.

[F.7] Press the red x-ray OFF button to turn OFF x-rays, once the warm-up is completed, if necessary.

4.4.6 Remove the cart from the shielded vault, if necessary.

NOTE

During the performance of Radiography screening, in accordance with CCP-TP-066, the RTR Operator may adjust settings and rotate the drum, as required.

4.4.7 Commence Radiography screening in accordance with CCP-TP-066.

4.4.8 Continue the screening process in accordance with CCP-TP-066 until the number of drums have been screened for the shift or the day.

4.5 End of Shift Activities

4.5.1 Ensure the x-ray shutters are CLOSED.

4.5.2 Shut down the x-ray head as follows:

[A] Press the red x-ray OFF button.

[B] Turn the YXLON® key to STANDBY.

4.5.3 OPEN the shielded vault door.

4.5.4 Move the cart out of the shielded vault.

RTR Operator

4.6 Complete Shutdown

NOTE

Steps 4.6.1 through 4.6.4 may be performed while waiting for the x-ray head to cool down.

4.6.1 Turn the x-ray monitor OFF, if necessary.

4.6.2 Turn the CCTV monitor system display components OFF, if necessary.

4.6.3 Turn the system power key OFF, **AND** remove the system power key, if necessary.

4.6.4 Turn the YXLON® key to OFF, **AND** remove the key.

5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as Quality Assurance (QA) records in accordance with CCP-QP-008, *CCP Records Management*.

Attachment 1 – YXLON® X-Ray Controller Error Codes

Code A	Text	Phillips Industrial X-ray System Manual Chapter
0001	Serial interface	Normally no error
0002	Time elapsed	Normally no error
0004	Filament	4.12
0008	Undervoltage prim	4.9
0010	Identification	4.11
0020	MA-reference	4.10
0040	KV-reference	4.10
0080	Undervoltage sec.	4.9
0100	Tube arcing	4.8
0200	Overcurrent	4.7
0400	Overvoltage	4.6
0800	Automatic systems	4.3
1000	Warning lamp	4.5
2000	Manual switch-off	Normally no error
4000	Safety circuit internal (cooling)	4.3
8000	Switching-on circuit	4.2
4800	Safety circuit external (door)	4.3

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CCP-TP-082

Revision 8

CCP
Waste Container Filter Vent Operation

EFFECTIVE DATE: 02/22/2011

Larry Porter

PRINTED NAME

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RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
0	10/02/2003	Initial Issue.
1	03/31/2004	Incorporated CBFO Comment resolutions, and updated Section 2.0-4.0 and Attachment 1.
2	04/02/2004	Incorporated LANL Facility Oversight Review Committee Comment resolutions into Sections 1.0, 2.0, and 4.0.
3	02/27/2005	Incorporated process changes to include the removal of WIPP-approved drum venting system (DVS) Filter Vents and updated equipment list. Revised to incorporate Host site-specific requirements.
4	03/21/2005	Revised to address Carlsbad Field Office (CBFO) Document Review Record (DRR) comments and to address filter replacement criteria.
5	04/13/2005	Revised to address Carlsbad Field Office (CBFO) Document Review Record (DRR) comments.
6	10/10/2005	Revised to add provision for multiple container filter change form and to incorporate Host site-specific requirements.
7	08/15/2007	Revised to include DOE/WIPP-06-3345, *Waste Isolation Pilot Plant Flammable Gas Analysis* and to delete CCP procedures that are obsolete, and to change references to drums to include sampling other containers.
8	02/22/2011	Removed elements no longer required or redundant to host site procedures.

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ATTACHMENT 1 – CONTAINER FILTER VENT CHANGE OUT FORM – EXAMPLE. 11

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1.0 PURPOSE

The purpose of this procedure is to describe the protocol for preparing, removing, and replacing filter vents on waste containers in designated filter vent change out areas.

1.1 Scope

This procedure defines the processes for preparing, removing and replacing filter vents on waste containers in designated filter vent areas.

2.0 REQUIREMENTS

2.1 References

Baseline Documents

- None

Referenced Documents

- CCP-QP-002, *CCP Training and Qualification Plan*
- CCP-QP-008, *CCP Records Management*

2.2 Training Requirements

2.2.1 Personnel performing this procedure will be trained and qualified in accordance with CCP-QP-002, *CCP Training and Qualification Plan* prior to performing this procedure.

2.3 Equipment List

2.3.1 Recommended Tools

[A] 15/16-in. Long Arm Hex Key

[B] 15/16-in. Square Drive Socket Hex Key

[C] Square Drive Ratchet

[D] Square Drive Socket

[E] Calibrated Torque Wrench

[F] Filter Socket

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2.3.2 Recommended Materials

[A] Loctite 271

[B] Loctite 680

[C] Cheesecloth

[D] Kimwipes

[E] Waste Isolation Pilot Plant (WIPP) approved container filter vent

[F] Room Temperature Vulcanized (RTV)-732 Sealant **OR** Equivalent

2.4 Precautions and Limitations

2.4.1 Continuous Radiological Control Technician (RCT) coverage will be maintained during the performance of this procedure.

2.4.2 When a filter is removed, it must be replaced immediately in order to maintain the Drum Age Criteria (DAC).

2.4.3 All personnel must don appropriate Personal Protective Equipment (PPE) in accordance with Host site work requirements.

2.5 Prerequisite Actions

2.5.1 Read all applicable Material Safety Data Sheets (MSDSs) prior to performing this procedure.

2.6 Definitions

2.6.1 None.

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3.0 RESPONSIBILITIES

3.1 Operator

3.1.1 Prepares, removes, and replaces filter vents.

3.1.2 Documents filter vent change out.

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4.0 PROCEDURE

4.1 Removal and Replacement of Filter Vents

WARNING

DO **NOT** stand between the container and the High Efficiency Particulate Air (HEPA) inlet when removing a container filter vent.

NOTE

When a filter vent is removed, it must be replaced immediately in order to maintain the DAC.

4.1.1 Remove the applicable Container Traveler from the container, if necessary.

4.1.2 Verify the drums are at the host site designated filter change out area.

NOTE

At Oak Ridge National Laboratory (ORNL) the Ventilation System Magnehelic Differential Pressure Gauge(s) for Flammable Gas Analysis (FGA) is in the FGA area.

4.1.3 Check that the Ventilation System Magnehelic Differential Pressure Gauge(s) is less than three inches H_2O, if applicable.

4.1.4 Verify the contamination control system is operational according to the host site requirements.

4.1.5 Remove the old filter vent.

4.1.6 Clean the gasket surface on the waste container as appropriate.

CAUTION

Loctite could damage neoprene gaskets.

4.1.7 Apply Loctite 271 **OR** Loctite 680 on the first three threads of the WIPP-approved container filter vent.

4.1.8 Install a WIPP approved container filter vent with the neoprene gasket provided, if required.

4.1.9 Engage the filter threads.

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4.1.10 Torque the filter vent to manufacturer's specifications.

4.1.11 **IF** a stripped thread(s) is encountered,
THEN seal the new filter vent to the container surface with RTV-732 sealant or equivalent.

4.1.12 **AFTER** the RTV-732 sealant **OR** equivalent has set,
THEN make an additional seal between the filter vent and the container surface, completely covering the gasket, but **NOT** the vent holes, with RTV-732 sealant **OR** equivalent, if applicable.

4.1.13 Request the RCT to survey the container for radiological contamination.

4.1.14 Record data on Container Filter Vent Change Out Form as follows:

[A] Container Number.

[B] New Filter vent Install Date.

[C] New Filter vent Model Number.

[D] New Filter vent Manufacture Date.

[E] New Filter vent Serial Number.

[F] Filter Torque Value

[G] Comments such as encountering a stripped thread or an old filter vent, as required.

[H] Torque Wrench M&TE ID and Calibration Due Date, if applicable, **OR** N/A.

[I] Print name, sign, **AND** date.

4.1.15 Remove container from the negative air pressure HEPA filtration area, hood, containment room, **OR** sampling filter change-out area, if applicable.

4.1.16 Re-attach the Container Traveler (label) to the container, if necessary.

4.1.17 Repeat steps 4.1.1 through 4.1.16 until all containers are complete.

4.1.18 Review Container Filter Vent Change Out Form to ensure the form is completely filled out.

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4.1.19 Forward Container Filter Vent Change Out Form to another operator for review.

4.1.20 Review Container Filter Vent Change Out Form to ensure the form is completely filled out.

4.1.21 Print name, sign, **AND** date Container Filter Change Out Form.

4.1.22 Submit the records generated by this procedure to the facility records custodian to be managed in accordance with CCP-QP-008, *CCP Records Management.*

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5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as Quality Assurance (QA) records in accordance with CCP-QP-008. The records are the following:

5.1.1 QA/Lifetime

[A] Container Filter Vent Change Out Form

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Attachment 1 – Container Filter Vent Change Out Form – Example

Container Number	New Filter Vent Install Date	New Filter Vent Model Number	New Filter Vent Manufacturer Date	New Filter Vent Serial Number	Filter Torque Value (ft/lb or in/lb)	Comments

Torque Wrench M&TE/Serial Number:_____
Calibration Due Date: _____

Operator

_____ _____ _____
Print Name Signature Date

Operator

_____ _____ _____
Print Name Signature Date

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CCP-TP-093

Revision 17

CCP
Sampling of TRU Waste Containers

EFFECTIVE DATE: 11/20/2012

Mike Ramirez

PRINTED NAME

APPROVED FOR USE

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
0	10/02/2003	Initial Issue
1	12/05/2003	Management Assessment Recommendations: Revised steps and sequencing of sub-steps in Sections 4.1-4.6. Added MAC-21 HEPA system to steps 4.4.4[B] and 4.4.5[B]. Updated Attachments 1 and 2.
2	03/19/2004	Incorporated CBFO Comment resolutions and revised Sections 2.0, 4.0 and Attachments 1 and 2 resulting from the LANL MSA, LRA and Dry-runs in December 2003 - February 2004.
3	02/26/2005	Incorporated Certification Audit Recommendations and process improvements for CAR-CCP-LANL-0002-04. Incorporated changes to allow for sampling with various types of filters.
4	03/11/2005	Revised in response to the DOE Line Management Assessment.
5	03/22/2005	Inserted new steps for multiple filters.
6	04/15/2005	Revised Table 4 to update Configuration Group 5 and 6.
7	06/29/2005	Revised in response to Certification Audit Recommendations.
8	12/22/2005	Revised to coincide with QA surveillance and to respond to CAR-INL-0009-05 requirements.
9	07/26/2006	Revised in response to CAR LANL-0006-06 and editorial changes.
10	09/11/2006	Revised step 4.3.1[A.14][b].
11	11/16/2006	Revised to implement the Waste Isolation Pilot Plant Hazardous Waste Facility Permit requirements resulting from the Section 311/Remote-Handled (RH) Permit Modification Request (PMR). Addressed Carlsbad Field Office (CBFO) Document Review Record (DRR) comments.
12	02/12/2007	Revised to incorporate sampling at risk.
13	03/19/2007	Revised step 4.3.2, to identify temperature as 18° C or higher.

RECORD OF REVISION (Continued)

Revision Number	Date Approved	Description of Revision
14	12/29/2010	Revised to eliminate the allowance of the procedure to perform Transportation Headspace sampling. Revised the note under step 4.5.6 per CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*. Made editorial changes. Clarified the Field Reference Standard process. Eliminated the allowance of compositing samples. Updated the Chain-of-Custody form. Changed the batch data report (BDR) numbering format. Incorporated recommendations from Audit A-10-04. Updated references to the *Waste Isolation Pilot Plant Hazardous Waste Facility Permit*.
15	03/10/2011	Revised to update the procedure so the field blank criteria matches the permit, eliminated the Vendor Project Manager (VPM) from the responsibilities section, and clarified the use of Chain-of-Custody.
16	09/07/2011	Deleted incorrect Uniform Resource Locator (URL) for approved filters and add Standard Large Box 2 (SLB2) information to Packaging Configuration Table and Drum Age Criteria (DAC) table, and other editorial changes.
17	11/20/2012	Revised to respond to CAR-12-040 to enhance the numbering of the Chain of Custody.

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1.0 PURPOSE

The Central Characterization Program (CCP) will perform manual sampling of headspace gas (HSG) in transuranic (TRU) waste containers. HSG sampling operations are required to ensure compliance with CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan.*

This procedure provides CCP-specific requirements and interface instructions for Manual Container Gas Sampling, Needle Assembly, and Sample Shipping/Transport Preparations.

1.1 Scope

This procedure identifies the steps to perform manual HSG sampling of TRU waste containers using a side port needle assembly. This procedure applies to Summary Category Group S5000 waste as indicated in Table 1, Headspace Gas Drum Age Criteria Sampling Scenario, Table 2, Scenario 1 Drum Age Criteria (in days) Matrix, Table 3, Scenario 2 Drum Age Criteria (in days) Matrix, Table 4, Scenario 3 Packaging Configuration Groups, and Table 5, Scenario 3 Drum Age Criteria (in days) Matrix for S5000 Waste by Packaging Configuration Group. This sampling procedure is conducted at a facility specified by the Host site. After sampling, the canisters are sealed and prepared for shipment/transport to an approved laboratory for analysis.

2.0 REQUIREMENTS

2.1 References

Baseline Documents

- CCP-PO-002, *CCP Transuranic Waste Certification Plan*

Referenced Documents

- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- CCP-QP-002, *CCP Training and Qualification Plan*
- CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
- CCP-QP-008, *CCP Records Management*
- CCP-QP-022, *CCP Software Quality Assurance Plan*
- CCP-TP-106, *CCP Headspace Gas Sampling Batch Data Report Preparation*

2.2 Training Requirements

2.2.1 Personnel performing this procedure will be trained and qualified in accordance with CCP-QP-002, *CCP Training and Qualification Plan,* prior to performing this procedure.

2.3 Equipment List

2.3.1 Materials

[A] 250 milliliter(s) (mL) or greater SUMMA® or equivalent canisters cleaned and certified.

[B] Needle assemblies containing:

- 3 inches (in.) x 1/16 in. Side Port Needle
- Swagelok 1/4 in. x 1/16 in. Reducing Union
- Swagelok 1/4 in. Tube Adapter Gland
- Cajon 1/4 in. Vacuum Coupling Radlab (VCR) Nut

- Cajon VCR Filter Gasket (0.5 micron)
- 1/16 in. Swagelok Union Tee (Duplicate assembly)
- 1/16 in. Teflon Tubing (Duplicate assembly)
- Plastic Protective Cap

[C] Ambient Pressure Meter (Calibrated and listed in the Measuring and Test Equipment [M&TE] database).

[D] Ambient Temperature Thermometer (Calibrated and listed in the M&TE database).

[E] Temperature Recorder (e.g., datalogger, mechanical temperature recorder, Min/Max thermometer), (calibrated and listed in the M&TE database).

[F] Latex or equivalent gloves.

[G] Tamper Indicating Devices (TID).

[H] A gaseous Field Reference Standard (FRS) containing at least six of the target compounds listed in CCP-PO-001.

[I] Ultra High Purity (UHP) Nitrogen.

[J] Tools:

- 5/16 in. Wrench
- 1/2 in. Wrench
- 9/16 in. Wrench
- 1-1/8 in. Wrench
- 5/8 in. Wrench
- 3/4 in. Wrench
- 5/64 in. Allen Wrench
- Vise (recommended)
- Filter Cover Blank
- Latex Cover Material and Rubber O-Ring

[K] Canned or Compressed Gas.

[L] High Efficiency Particulate Air (HEPA) System, if applicable.

[M] Valve Locking Device.

[N] 2 in. Vinyl Tape.

[O] Sample Port Assembly:

[O.1] Septa

[O.2] Septum Seal Cap

[O.3] Flat Metal Plate

[O.4] Clamps

[P] Penetrating Tool.

2.3.2 Software

[A] The software listed below complies with the requirements of CCP-QP-022, *CCP Software Quality Assurance Plan*.

[A.1] Dickson® Data Logger Software.

2.4 Precautions and Limitations

2.4.1 Safety Precautions

[A] All container sampling activities using this procedure shall be performed in accordance with site-specific health, safety, and Approved Method of Work (AMOW) requirements. Applicable documents include CCP procedures, Host site procedures, and safety requirements for access control, radioactive and hazardous waste monitoring, personal protective equipment (PPE), operations, containment, and decontamination.

2.4.2 Hazards

[A] Hazards associated with the sampling process may include chemical and radiation exposure.

2.4.3 SUMMA® or equivalent Canister Gauge Pressure Reading Limitations

[A] SUMMA® or equivalent canisters are equipped with pressure gauges reading pressure or vacuum relative to atmospheric pressure (i.e., initial gauge reading of greater than or equal to 22 in. Mercury [Hg]); full samples are less than or equal to 4 inches Hg.

2.5 Prerequisite Actions

2.5.1 Perform the following prior to any sampling activities:

[A] Check to see if any TRU waste containers readied for sampling have CCP Hold Tags.

[B] **IF** any TRU waste containers have a CCP Hold Tag, **THEN** verify with Vendor Project Manager (VPM), if it is appropriate to collect a sample for HSG from a TRU waste container with a CCP Hold Tag.

2.5.2 Ensure the following documentation has been obtained for each canister before proceeding with the sampling activity:

[A] The designated analytical laboratory's canister tag.

2.5.3 Receive and stage waste containers in accordance with applicable Host site procedures.

2.5.4 Prepare the designated sampling area in accordance with applicable Host site procedures.

2.5.5 Ensure the temperature has been maintained greater than or equal to 18 degree Celsius (°C) for 72 hours in the staging area prior to waste container HSG sampling by reviewing the temperature data loggers output.

2.6 Definitions

2.6.1 **Field Blank (FB)** – Field blanks (FB) shall be samples of room air collected in the immediate vicinity of the waste container sampling area. Field blanks shall be collected prior to sample collection, and at a frequency of one per sampling batch.

2.6.2 **Field Duplicates (FD)** - Two separate, independent samples collected simultaneously from the same source using a duplicate sampling needle assembly (one needle connected to two SUMMA® or equivalent

canisters); stored in separate containers, and analyzed independently; duplicates are used to document the precision of the sampling and analysis process field duplicates (FD) are collected one per sampling batch.

2.6.3 **Field Reference Standard (FRS)** – FRS shall be used to assess the accuracy with which the sampling equipment collects Volatile Organic Compound (VOC) samples into SUMMA® or equivalent canisters prior to first use of the sampling equipment. The FRS contains a minimum of six of the analytes listed in CCP-PO-001, at concentrations within a range of 10 to 100 parts per million by volume and greater than the Method Detection Limit of each compound. For the direct canister method, FRS collection may be discontinued if the FRS results demonstrate the quality assurance objective (QAO) for accuracy specified in CCP-PO-001. FRSs have a known valid relationship to a nationally recognized standard (e.g., National Institute of Science and Technology [NIST]), if available. If NIST-traceable standards are not available and commercial gases are used, a Certificate of Analysis from the manufacturer documenting traceability is required.

2.6.4 **Sampling Batch** - A suite of samples of similar matrix (i.e., gas or solid) collected consecutively using the same sampling equipment within a specified time period. A batch can be up to 20 samples (excluding Quality Control [QC] samples), all of which shall be collected within 14 days of the first sample in the batch.

2.6.5 **Single Sample** - Containers that must be analyzed individually.

2.6.6 **Field Batch Number and Chain-of-Custody (COC) Number** – The Field Batch Number and the COC number for that sampling batch are the same and in the case of the Needle Assembly Cleanliness Batch number, the Needle Assembly Cleanliness Batch number.

3.0 RESPONSIBILITIES

3.1 HSG Sampler

3.1.1 Receives sample canisters, collects, and prepares for shipment/transport of HSG samples.

3.1.2 Verifies compliance, when applicable, by signing, initialing, and dating the acceptance of the sampling canisters and the Chain-of-Custody (COC) documentation.

3.1.3 Prepares the waste containers for HSG sampling.

3.1.4 Performs activities including removing container filter protective caps, installing new filters or the installation of sample ports.

3.1.5 Verifies Carlsbad Field Office (CBFO) approved filter before sampling.

3.1.6 Verifies waste containers have been properly prepared.

3.1.7 Assigns batch numbers to required batches.

4.0 PROCEDURE

NOTE
Sections of this procedure may be performed independently.

Independent Task	Section to Perform
Process Prior to Sampling	Section 4.1 through Section 4.3
Assembling Single Needle Assemblies	Step 4.4.1
Assembling Duplicate Needle Assemblies	Step 4.4.2
Prepare SUMMA® or equivalent Canisters For Collecting Needle Assembly Certification Blanks	Step 4.4.3
Prepare COC and Sample Tags For Needle Assembly Certification Blanks	Step 4.4.4
Collect Needle Assembly Certification Blanks Using Nitrogen Gas	Step 4.4.5
Initiate Waste Container COC/Sample Tags	Step 4.5.1
Prepare SUMMA® or equivalent Canisters With Certified Needle Assemblies For Sample Collection	Step 4.5.2
FB Sample Collection	Step 4.5.3
Waste Container and Waste Container Duplicate HSG Sample Collection	Step 4.5.4
Collection of Waste Container HSG Sample	Step 4.5.5
Collection of FRS	Step 4.5.6
Pre-Transport/Shipping Activities of Canister Samples to Laboratory	Section 4.6
Final disposition of SUMMA® or equivalent Canister to Laboratory	Section 4.7

HSG Container Samplers

4.1 Process Prior to Sampling

4.1.1 Perform the following before sampling:

[A] Verify the presence of a CBFO approved filter.

4.2 Waste Container Preparation

4.2.1 Verify the waste containers have been properly prepared for sampling (i.e., rigid liner vented, if present, no rigid sealed internal containers > 4 liters) by reviewing one of the following documents: real-time radiography (RTR), visual examination (VE) data sheets, or standard waste box (SWB) Assembly Sheet.

[A] **IF** the waste containers have been properly prepared, **THEN** GO TO Section 4.3.

NOTE
Performing sampling at risk can only be authorized by the CCP Program Manager.

[B] **IF** the containers are to be sampled at risk, **THEN** generate a Nonconformance Report (NCR) per CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*:

[C] **IF** the waste containers have **NOT** been properly prepared, **THEN** apply a CCP Hold Tag, contact the VPM, **AND** disposition in accordance with the applicable Container Management procedure.

4.3 Container Data

NOTE
Drum Age Criteria (DAC) data may be obtained from the approved acceptable knowledge (AK) documentation (e.g., AK Tracking Spreadsheet), Container Travelers, RTR **AND/OR** VE Data Sheets. Attachment 2, Sample Container Data Form, can be filled out prior to sampling.

NOTE
Waste container Field Batch and COC Number is defined as SSHSGYYXX, where SS is defined as Host site (e.g., IN), HSG is headspace gas, YY is the year, XX is a sequential number. The sequential number, XX, is reset to 01 at the beginning of each year.

4.3.1 For all the containers to be sampled, verify the DAC prior to Sampling by using Tables 1-5, as appropriate **AND** perform the following:

[A] Record the container information listed below on Attachment 2:

[A.1] Field Batch Number (on Page 1 and Page 2).

[A.2] Container ID (on Page 1 and 2).

[A.3] Sampling Scenario.

[A.4] Summary Category Group.

[A.5] Rigid Liner (Y/N).

[A.6] Rigid Liner Lid (Y/N).

[A.7] Rigid Liner Lid Hole Diameter (in.).

NOTE

The "bounding case" configuration used in Table 4 is the "conservative default" referred to in footnote "a" of Table 4.

[A.8] Number of Inner Bags (Scenario 3 only) or NA, for Scenario 1 or 2.

[A.9] Number of Liner Bags (Scenario 3 only) or NA, for Scenario 1 or 2.

NOTE

The documented filter hydrogen (H_2) diffusivity must be greater than or equal to the listed value to use the DAC for the listed filter H_2 diffusivity (e.g., a container with a filter H_2 diffusivity of 4.2×10^{-6} must use a DAC for a filter with a 3.7×10^{-6} filter H_2 diffusivity). If a filter H_2 diffusivity for a container is undocumented or unknown or is less than 1.9×10^{-6} filter H_2 diffusivity, a filter of known H_2 diffusivity that is greater than or equal to 1.9×10^{-6} filter H_2 diffusivity must be installed prior to initiation of the relevant DAC period.

[A.10] Filter Model No.

[A.11] Number of Filters.

[A.12] **IF** the CBFO approved filter has a Restrictive Hydrogen Diffusivity listed in the appropriate Table of this procedure,
THEN enter the CBFO approved filters diffusivity from the Table, **ELSE** enter the more conservative diffusivity used to determine the Permit Required Equilibrium days.

[A.13] Package Configuration Group No. from Table 3 (Scenario 3 only) (NA for Scenario 1 or 2).

[A.14] Closure Date.

[A.15] Vent Date (for Scenario 2 and 3) (NA for Scenario1).

[A.16] Permit Required Equilibrium Time (Days):

(a) For Scenario 1 - Record the Summary Category Group (SCG) DAC from Table 2.

(b) For Scenario 2 - In addition to meeting the Scenario 1 SCG DAC from Table 2, record the number of days listed in Table 3 for the SCG, hole diameter and diffusivity rate.

(c) For Scenario 3 - Record the number of days for the SCG listed in Table 5 for the Packaging Configuration Group, hole diameter, and filter diffusivity.

[A.17] Container Age (Days) (the difference in the number of days between the closure/vent date and the present date [e.g., date sampling for headspace]).

[A.18] Container Fill Factor (%), if applicable.

4.3.2 Ensure the waste containers have equilibrated for a minimum of 72 hours at 18° C (64.4 degree fahrenheit [°F]) or higher, prior to sampling by reviewing the temperature recorder information, **AND** record on Attachment 2 the 72-Hour Container Equilibrium Start and scheduled End Dates/Times.

4.3.3 Record the temperature recorder M&TE ID Number and temperature recorder calibration due date on Attachment 2.

4.3.4 Can this container be sampled? (Y or N)

4.3.5 Print name, sign, and date Attachment 2 after all information has been recorded.

4.3.6 Inspect all tools and parts to be used to ensure they are available and operable.

4.4 Sampling Preparation

NOTE

Needle Assembly batches will consist of single needle assemblies and/or duplicate assemblies.

Needle assemblies will be kept in a controlled HSG area.

4.4.1 Single Unit Needle Assembly

NOTE

For illustration of Single Unit Needle Assembly, see Figure 1, Single Canister Sampling Components.

Single Unit Needle Assemblies consist of five components. Needle assemblies are less than 2 mL internal volume.

[A] Inspect all components for damage, **AND** if necessary, blowdown each item with compressed gas (e.g., canned air, compressed UHP Nitrogen).

[B] Place a 1/4 in. VCR female nut onto a 1/4 in. Swagelok tube adapter to VCR gland.

[C] Install the 1/4 in. Swagelok nut, ferrule backing ring, **AND** ferrule onto the 1/4 in. tube adapter.

[D] Insert the 1/4 in. Swagelok tube adapter into the 1/4 in. fitting on the 1/4 in. x 1/16 in. Swagelok reducing union.

[E] Ensure the 1/4 in. tube rests firmly on the shoulder of the fitting.

[F] Gently tighten the nut, finger tight.

[G] Hold the fitting body with a backup wrench, **AND** tighten the nut 3/4 to 1-1/2 turns.

[H] Insert the open end of the needle into the 1/16 in. fitting on the 1/4 in. x 1/16 in. Swagelok reducing union.

[I] Ensure the needle rests firmly on the shoulder of the fitting.

[J] Gently tighten the nut, finger tight.

[K] Hold the fitting body with a backup wrench, **AND** tighten the nut 3/4 to 1-1/2 turns.

[L] Snap the 1/4 in. VCR filter onto the VCR gland.

[M] Install the plastic protective cap into the 1/4 in. VCR nut, if applicable.

[N] Repeat steps 4.4.1[A] through 4.4.1[M] for all needle assemblies required.

4.4.2 Duplicate Unit Needle Assembly

NOTE

For illustration of Duplicate Unit Needle Assembly, see Figure 2, Duplicate Canister Sampling Components.

Duplicate Unit Needle Assemblies consist of seven components. Needle assemblies are less than 2 mL internal volume.

[A] Inspect all components for damage, **AND** if necessary, blowdown each item with compressed gas (e.g., canned air, compressed UHP Nitrogen).

[B] Prepare two single unit needle assemblies without needles per steps 4.4.1[A] through 4.4.1[F].

[C] Snap a 1/4 in. VCR filter onto each of the two VCR glands.

[D] Install the plastic protective caps into the 1/4 in. VCR nuts, if applicable.

[E] Install Teflon tubing sections into the two single unit needle assemblies in place of the needles.

[F] Gently tighten the nuts, finger tight.

[G] Hold each fitting body with a backup wrench, **AND** tighten the nuts 3/4 to 1-1/2 turns.

[H] Install a needle in the 1/16 in. Swagelok tee.

[I] Ensure the needle rests firmly on the shoulder of the fitting.

[J] Gently tighten the nut, finger tight.

[K] Hold the fitting body with a backup wrench, **AND** tighten the nut 3/4 to 1-1/2 turns.

[L] Install the two Teflon tubes from the two needle assemblies into the 1/16 in. tee.

[M] Ensure the Teflon tubes rest firmly on the shoulder of the fitting.

[N] Gently tighten the nuts, finger tight.

[O] Hold the fitting body with a backup wrench, **AND** tighten the nut 3/4 to 1-1/2 turns.

[P] Repeat steps 4.4.2[A] through 4.4.2[O] for all Duplicate Needle Assemblies required.

4.4.3 SUMMA® or equivalent Canister/Needle Assembly Preparation for Cleanliness Certification

NOTE

Needle Assembly Cleanliness Batches and COC are defined similar to waste container field batches. The format is SSHSGYYXXNB, where SS is defined as the Host site (e.g., IN), HSG is headspace gas, YY is the year, XX is a sequential number and NB is needle blank. The sequential number, XX, is reset to 01 at the beginning of each year.

NOTE

When a Needle Assembly batch is complete, a Needle Assembly Cleanliness Batch sample is collected. A minimum of three percent from the Needle Assembly Batch (single and/or duplicate assemblies) are chosen at random and a nitrogen purge test is performed.

[A] **IF** the canister has not been evacuated to greater than **OR** equal to 22 inches Hg,
THEN reject canister and return to analytical laboratory.

[B] Attach needle assemblies to the required canisters as follows:

[B.1] Verify the presence of a Cajon VCR filter gasket.

[B.2] **IF** the needle assembly DOES **NOT** have a Cajon VCR filter gasket,
THEN obtain another new needle assembly.

[B.3] Purge the needle assembly with compressed gas (e.g., canned gas, Nitrogen Gas).

[B.4] Attach the needle assembly to the canister, **AND** finger tighten and then an additional ¼ turn with a wrench.

4.4.4 Prepare COC and Sample Tags for Needle Assembly Certification Blanks

NOTE
Point of Origin is to be specific as to the location where sample was taken (e.g., Bldg. No., Room).

NOTE
Only one COC shall be used per sampling batch.

[A] Record the following information on Attachment 1, Chain of Custody/Canister Tag.

[A.1] COC number on Page 1 and 2.

[A.2] Location (i.e., NA for Location).

[A.3] Point of Origin (i.e., Bldg. No., Room).

[A.4] Ambient Conditions:

(a) Temperature reported to 0.1°C.

(b) Pressure reported to the nearest whole number inches Hg or pound per square inch gauge (psig).

[A.5] Record the following in the Instrument section Attachment 1 (Page 2 of 2):

(a) Pressure Meter M&TE Identification (ID) Number, **AND** Calibration Due Date, Initial, and Date.

(b) Thermometer M&TE ID Number, **AND** Calibration Due Date, Initial, and Date.

4.4.5 Needle Assembly Cleanliness Certification Blank Collection Using Nitrogen Gas

[A] Perform Leak Check of the needle assembly while connected to the canister by placing a septum over the side port of the needle **AND** opening the canister valve five seconds **AND** ensuring that the needle assembly is free of leaks.

[A.1] **IF** the canister pressure gauge reading changes by more than 2 in. Hg,
THEN DO **NOT** use the needle assembly.

[B] Connect the cleanliness sample purge assembly to the nitrogen gas regulator **OR** nitrogen gas cylinder.

[C] OPEN the valve, **AND** set the cylinder's output regulator pressure from 0 to 1 psig.

[D] Bleed the purge assembly to ensure no room air remains in the purge assembly.

[E] Insert the canister needle into the cleanliness sample purge assembly.

[F] Record NA in the VENT SEAL block on Attachment 1.

[G] Record the canister gauge BEGINNING PRESSURE and START TIME on Attachment 1, **AND** OPEN the valve on the SUMMA® or equivalent canister.

[H] Adjust the regulator to obtain 13 to 15 psig in the SUMMA® or equivalent canister.

[I] CLOSE the valve on the SUMMA® or equivalent canister, **AND** record the canister END PRESSURE and END TIME on Attachment 1.

[J] **IF** the canister gauge DOES **NOT** read 13 to 15 psig,
THEN obtain a new SUMMA® or equivalent canister and new needle assembly from the newly assembled batch, **AND** resample by repeating steps 4.4.5[A] through 4.4.5[I].

[K] Return canister which did not read 13 to 15 psig to the analytical laboratory.

[L] Remove the canister needle from the purge assembly.

[M] Remove the needle assembly from the canister.

[N] Attach a valve locking device and a TID to the canister.

[N.1] Record the TID NUMBER on Attachment 1.

[N.2] **IF** the TID is **NOT** numbered,
THEN initial and date TID with a permanent marker, **AND** record NA on Attachment 1.

[O] Record or ensure all data listed below, for the Needle Assembly Cleanliness Sample, is recorded on Attachment 1:

[O.1] Site (zz) (Host site abbreviation).

[O.2] Date (date of the sample - mmddyy, where mm is the month in two digits, dd is the date in two digits and yy is the last two digits of the year). DO **NOT** use slash marks when recording the date on Attachment 1.

[O.3] SUMMA® or equivalent Canister No. (from the metal tag on the canister) Example: EI234.

[O.4] Canister Size (e.g., 250 mL).

[O.5] Container ID/Barcode No. (e.g., Nitrogen Gas Cylinder No. for cleanliness samples).

[O.6] Waste Stream ID (record NA for cleanliness samples).

[O.7] Cleaning Batch No. (from the laboratory canister tag).

[O.8] Needle Assembly Batch No.

[O.9] Record C - Needle Assembly Cleanliness Certification.

[O.10] Sampler's Initials.

[P] Record the relevant data to the laboratory canister tag, including any additional information required by the analytical laboratory.

[P.1] Record Needle Assembly in the Sample Description on the laboratory canister tag.

[P.2] **IF** it is necessary to remove the laboratory canister tag to record data,
THEN remove the tag from the canister, record the data,
AND immediately re-attach the tag to the canister.

[Q] Repeat steps 4.4.5[A] through 4.4.5[O.7] until a minimum of three percent of the needle assemblies have been sampled.

[R] Sign the CUSTODY INITIATED BY block on Page 2 of Attachment 1, record DATE and TIME.

[S] CLOSE valve on Nitrogen Gas Cylinder.

[T] Bleed out all the pressurized nitrogen from the lines and fittings.

NOTE
If more than one qualified sampler is part of the sampling evolution, only one qualified sampler is required to sign on the SAMPLER'S SIGNATURE line on Attachment 1.

[U] On Attachment 1 sign on the SAMPLER'S SIGNATURE line.

4.5 Waste Container Sampling Activity

NOTE
Section 4.5 provides the directions for collecting all QC and waste container samples associated with a BDR. All sampling activities conducted for any sampling event, including FB collection, FD collection, waste container sample collection, and FRS (if required); will be contained in the same BDR. If a sampling event is conducted only for the purpose of analyzing a FRS, FB, and FD will be collected and submitted with the associated BDR.

NOTE
Point of origin is to be specific as to the location where sample was taken (e.g., Bldg. No., Room). Location is to be specific as to the location within the waste container where sample is taken (e.g., under lid).

NOTE
Data on Attachment 1 for steps 4.5.1[A.1] through 4.5.1[A.6] may be recorded prior to or during sampling activities.

CAUTION
To prevent damage to the needle and needle assembly, the sample canister must be supported while performing sampling activities.

4.5.1 Preparing Waste Container COC/Sample Tags

NOTE
Only one COC shall be used per sampling batch.

[A] Record the following information on Attachment 1:

[A.1] COC number on Page 1 and 2.

[A.2] Location (i.e., under lid).

[A.3] Point of Origin (i.e., Bldg. No., Room).

[A.4] **IF** the pressure meter or the thermometer is out of calibration,
THEN do not use and obtain a pressure meter or thermometer that is within the Calibration Due Date.

[A.5] Ambient Conditions:

(a) Temperature reported to 0.1°C.

(b) Pressure reported to nearest whole number inches Hg or psig.

[A.6] Record the following in the Instrument Section of Attachment 1 (Page 2 of 2):

(a) Pressure Meter M&TE ID Number, Calibration Due Date.

(b) Thermometer M&TE ID Number, Calibration Due Date.

(c) Initial and date.

4.5.2 Preparing SUMMA® or equivalent canister with Certified Needle Assemblies for Sample Collection

[A] **IF** the canister has not been evacuated to greater than **OR** equal to 22 inches Hg,
THEN reject canister and return to the analytical laboratory.

[B] Attach needle assemblies to the canisters as follows:

[B.1] Verify the presence of a Cajon VCR filter gasket.

(a) **IF** the needle assembly DOES **NOT** have a Cajon VCR filter gasket,
THEN obtain a new needle assembly.

[B.2] Attach the needle assembly to the canister **AND** finger tighten and then an additional ¼ turn with a wrench.

4.5.3 Field Blank Sample Collection

NOTE
Vent Seal, canister gauge Beginning Pressure, and TID number information may be recorded prior to or during sampling activities on Attachment 1.

NOTE
HSG samples should take approximately two to five minutes to reach equilibrium. Collect the field blank sample in the vicinity of the waste container sampling area.

[A] All personnel, don PPE in accordance with the appropriate Host site work control document.

[B] Ensure the HEPA System has been turned on, if applicable.

[C] Record NA in the Vent Seal block on Attachment 1, if applicable.

[D] Record the canister gauge Beginning Pressure and Start Time on Attachment 1, **AND** OPEN the valve on the SUMMA® or equivalent canister for a maximum of five minutes to allow the canister pressure to reach equilibrium (less than or equal to 4 in. Hg).

[E] Close the valve on the SUMMA® or equivalent canister, **AND** record the canister End Pressure and End Time on Attachment 1.

[F] **IF** the gauge DOES **NOT** reach less than or equal to 4 in. Hg, **THEN** obtain new SUMMA® or equivalent canister and certified needle assembly, **AND** repeat steps 4.5.3[B] through 4.5.3[E].

[F.1] **IF** the second attempt FAILS,
THEN troubleshoot and fix.

[G] Remove the needle assembly from the canister, **AND** hand it to the Radiological Control Technician (RCT) or Radiological Technician (RT) for survey and follow RCT or RT guidance for contamination control requirements.

[H] **AFTER** the survey is complete,
THEN dispose of needle assembly per Host site requirements.

[I] Attach a valve locking device and a TID to the canister.

[J] Record the TID number on Attachment 1, if applicable.

[K] **IF** the TID is **NOT** numbered,
THEN initial and date the TID with a permanent marker, **AND** record NA on Attachment 1.

NOTE

Custody will be initiated after the Field Blank sample has been collected. The Date/Time on Page 2 of Attachment 1 for Custody Initiated By block will be the same as the Date and End Time for the Field Blank sample.

[L] Initiate COC by recording the date and time in the DATE/TIME block next to the CUSTODY INITIATED BY: block of Attachment 1.

NOTE

Data on Attachment 1 for steps 4.5.3[M.1] through 4.5.3[M.9] may be recorded prior to or during activities.

[M] Enter the data listed below for the Field Blank, on Attachment 1:

[M.1] Site (zz) (Host site abbreviation).

[M.2] Date (date of the sample - mmddyy, where mm is the month in two digits, dd is the date in two digits and yy is the last two digits of the year). DO **NOT** use slash marks when recording the date on Attachment 1.

[M.3] SUMMA® or equivalent Canister No. (from the metal tag on the canister) Example: EI234.

[M.4] Canister Size (e.g., 250 mL).

[M.5] Container ID/Barcode No. (NA for Field Blank).

[M.6] Waste Stream ID (NA for Field Blank).

[M.7] Cleaning Batch No. (from the laboratory canister tag).

[M.8] Needle Assembly Batch No.

[M.9] Record B - Field Blank.

NOTE
Signature of samplers can be found at the bottom of Attachment 1.

[M.10] Sampler's Initials.

NOTE
Relevant data for the laboratory canister tags can be recorded prior to or during sampling activities.

[N] Copy the relevant data to the laboratory canister tag, including any additional information required by the analytical laboratory.

[N.1] Record Field Blank in the Sample Description on the laboratory canister tag, if applicable.

[N.2] **IF** it is necessary to remove the laboratory canister tag to record the data,
THEN remove the tag from the canister, record the data,
AND immediately re-attach the tag to the canister.

4.5.4 Waste Container and Waste Container Duplicate HSG Sample Collection

NOTE
Vent Seal, canister gauge Beginning Pressure, and TID number information may be recorded prior to or during sampling activities on Attachment 1.

NOTE
HEPA Filtration System will be used as determined by the Host site for TRU waste container sampling. Contamination and radiation surveys may be performed at any step in this section as deemed necessary by the RCT or RT.

[A] **IF** the container filters have a sample septum (e.g., NFT019DS, NFT7DS),
THEN GO TO step 4.5.4[E].

[B] Ensure that all filters on the container that are **NOT** used for sampling are blocked by placing an appropriate cover over the filter medium.

[C] Ensure HEPA System is running, if applicable.

NOTE
HSG Sampler DOES **NOT** need to prime septa if sampling through filter media sample port assembly.

[D] **IF** filter **OR** waste container DOES **NOT** have a septum sample port,
THEN GO TO step 4.5.4[W], **ELSE** GO TO step 4.5.4[E].

[E] Insert filter cover blank between the protective cap and filter media for filters that have protective caps, **OR** cover filters without protective caps with latex cover material secured with a rubber o-ring, **AND** cover/block all other unused filters.

[F] If necessary, prime the sample port as follows:

[F.1] Remove the sample port seal screw from the container sample port, **AND** insert the penetrating tool through the sample port septum, if applicable.

[F.2] Withdraw the penetrating tool from the sample port septum.

[F.3] Hand the penetrating tool to the RCT or RT for survey, **AND** follow RCT or RT guidance for contamination control requirements,
THEN re-use or dispose of per Host site requirements.

[G] Insert the common needle of the duplicate sampling needle assembly through the septum of the sampling port **OR** the filter medium sample port assembly, if applicable.

[H] Record Y in the Vent Seal block on Attachment 1, **AND** seal all vents, if applicable.

[I] Record the canister gauge Beginning Pressure and Start Time of the Duplicate canisters on Attachment 1, **AND** simultaneously OPEN the valves for the two SUMMA® or equivalent canisters for a maximum of five minutes to allow the canister pressure of both canisters to reach equilibrium (less than or equal to 4- inches Hg).

[J] CLOSE the SUMMA® or equivalent canister valves, **AND** record the canister End Pressures and End Times on Attachment 1.

[K] **IF** the gauge DOES **NOT** reach less than or equal to 4-inches Hg,
THEN obtain new SUMMA® or equivalent canister and certified duplicate needle assembly, **AND** re-sample once by repeating steps 4.5.4[B] through 4.5.4[J].

[K.1] **IF** the second attempt FAILS,
THEN troubleshoot and fix.

[K.2] Return canister(s) that did not meet the pressure requirement to analytical laboratory.

[L] Withdraw the needle assembly from the container's sample port.

[M] Remove the needle assembly from the canister, **AND** hand it to the RCT or RT for survey and follow RCT or RT guidance for contamination control requirements.

[N] **AFTER** the survey is complete,
THEN dispose of the needle assembly per Host site requirements.

[O] Attach a valve locking device and a TID to the canister.

[O.1] Record the TID number on Attachment 1, if applicable.

[O.2] **IF** the TID is **NOT** numbered,
THEN initial and date TID with a permanent marker, **AND** record NA on Attachment 1.

[P] Check the pressure/vacuum gauge for an indication of an unexpected pressure change indicating a canister leak.

[Q] **IF** a canister leak is indicated,
THEN record the canister number and document that the canister leaked in the comments section of Attachment 1 and re-sample the waste container using a new canister.

[R] Re-install the sample port seal screw if applicable, **AND** remove all covers and/or blocks.

NOTE
Data on Attachment 1 for steps 4.5.4[S.1] through 4.5.4[S.9] may be recorded prior to or during sampling activities.

[S] Enter the data listed below for each Duplicate Sample canister on Attachment 1:

[S.1] Site (zz) (Host site abbreviation).

[S.2] Date (date of the sample - mmddyy, where mm is month in two digits, dd is date in two digits and yy is the last two digits of the year). DO **NOT** use slash marks when recording the date on Attachment 1.

[S.3] SUMMA® or equivalent Canister No. (from the metal tag on the canister) Example: EI234.

[S.4] Canister Size (e.g., 250 mL).

[S.5] Container ID No./Barcode No.

[S.6] Waste Stream ID.

[S.7] Cleaning Batch No. (from the laboratory canister tag).

[S.8] Needle Assembly Batch No., if applicable.

[S.9] Record D - Duplicate.

[S.10] Sampler's Initials.

NOTE
Relevant data for the laboratory canister tags can be recorded prior to or during sampling activities.

[T] Record the relevant data to the laboratory canister tag, including any additional information required by the analytical laboratory.

[T.1] Record DUPLICATE in the SAMPLE DESCRIPTION on the laboratory canister tag, if applicable.

[T.2] **IF** it is necessary to remove the laboratory canister tag to record data,
THEN remove the tag from the canister, record the data,
AND immediately re-attach the tag to the canister.

[U] Initial and date Container Traveler, **AND** submit to VPM after sampling activities are complete, if applicable.

[V] GO TO step 4.5.5, Collection of Waste Container HSG Sample.

NOTE
The use of various spacers may be required to ensure a good seal of the septum on the carbon filter.

[W] **IF** the filter protective cap was removed (e.g., NFT-013, etc.),
THEN sample as follows,
ELSE GO TO step 4.5.4[X]:

[W.1] Remove the strip of vinyl tape, if required.

[W.2] Place septum and/or latex material, **AND** secure appropriately over filter, if applicable.

[W.3] Place septum cap over septum, if applicable.

[W.4] Place steel flat plate over septum and cap, **AND** secure plate with clamps if applicable.

[W.5] Gently insert sample needle of the duplicate sampling needle assembly through filter media sampling port assembly to ensure a leak tight connection between the sampling needle assembly and the container headspace directly beneath the waste container lid.

[W.6] GO TO step 4.5.4[H].

[X] **IF** the container contains a penetrable filter
(e.g., NFT-020, NFT-049S, etc.),
THEN sample as follows:

[X.1] Gently insert sample needle of the duplicate sampling needle assembly through filter media sampling port assembly to ensure a leak tight connection between the sampling needle assembly and the container headspace directly beneath the waste container lid.

[X.2] GO TO step 4.5.4[H].

4.5.5 Collection of Waste Container HSG Sample

NOTE
HEPA Filtration System will be used as determined by the Host site for TRU waste container sampling activities. Contamination and radiation surveys may be performed at any step in this section as deemed necessary by the RCT or RT.

NOTE
Signature on Attachment 1 will be obtained upon completion of the sampling activities.

[A] Ensure that all filters on the container that are **NOT** used for sampling are blocked by placing an appropriate cover over the filter media, if applicable.

NOTE
Operator/Sampler DOES **NOT** need to prime septa if sampling through filter media sample port assembly.

NOTE
Steps 4.5.5[B] through 4.5.5[Y] will be performed in sequence, as required, for each container to be sampled in the sampling batch. Container samples may be started for each container in the batch prior to completing the procedure sequence for the previous container.

[B] **IF** filter DOES **NOT** have a septum sample port,
THEN GO TO step 4.5.5[V],
ELSE GO TO step 4.5.5[C].

[C] Insert filter cover blank between the protective cap and filter media for filters that have protective caps **OR** cover filters without protective caps with latex cover material secured with a rubber o-ring, **AND** cover/block all other unused filters.

[D] If necessary prime the sample port as follows:

[D.1] Remove the sample port seal screw from the container sample port, **AND** insert the penetrating tool through the sample port septum, if applicable.

[D.2] Withdraw the penetrating tool from the sample port septum.

[D.3] Hand the penetrating tool to the RCT or RT for survey, **AND** follow RCT or RT guidance for contamination control requirements,
THEN re-use or dispose of per Host site requirements.

[E] Insert the canister needle through the septum of the sampling port **OR** the filter medium sampling port assembly, if applicable.

NOTE
Vent Seal, canister gauge Beginning Pressure, and TID number information may be recorded prior to or during sampling activities on Attachment 1.

[F] Record Y in the VENT SEAL block on Attachment 1, **AND** seal all vents, if applicable.

[G] Record the canister gauge BEGINNING PRESSURE and START TIME on Attachment 1, **AND** OPEN the valve on the SUMMA® or equivalent canister for a maximum of five minutes to allow the canister pressure to reach equilibrium (less than or equal to 4-inches Hg).

[H] CLOSE the valve on the SUMMA® or equivalent canister, **AND** record the canister END PRESSURE and END TIME on Attachment 1.

[I] **IF** the canister gauge DOES **NOT** indicate collection of sample, **THEN** perform the following:

[I.1] CLOSE the canister valve.

[I.2] Remove sampling mechanism from septa.

[I.3] **IF** needle is clogged,
THEN replace needle, discard clogged needle as waste according to Host site requirement, **AND** repeat steps 4.5.5[E] through 4.5.5[H].

[J] **IF** the gauge DOES **NOT** reach less than or equal to 4-inches Hg,
THEN obtain new SUMMA® or equivalent canister and certified needle assembly, **AND** re-sample once by repeating steps 4.5.5[A] through 4.5.5[H].

[J.1] **IF** the second attempt FAILS,
THEN troubleshoot and fix.

[J.2] Return canister(s) that do not meet the pressure requirements to the analytical laboratory.

[K] Withdraw the needle assembly from the containers sample port.

[L] Remove the needle assembly from the canister, **AND** hand it to the RCT or RT for survey and follow RCT or RT guidance for contamination control requirements.

[M] **AFTER** the survey is complete,
THEN dispose of the needle assembly per Host site requirements.

[N] Attach a valve locking device and a TID to the canister.

[N.1] Record the TID NUMBER on Attachment 1, if applicable.

[N.2] **IF** the TID is **NOT** numbered,
THEN initial and date TID with a permanent marker, **AND** record NA on Attachment 1.

[O] Check the pressure/vacuum gauge for an indication of an unexpected pressure change indicating a canister leak.

[P] **IF** a canister leak is indicated,
THEN record the canister number and document that the canister leaked in the comments section of Attachment 1 and re-sample the waste container using a new canister.

[Q] Re-install the sample port seal screw if applicable, **AND** remove all covers and/or blocks.

NOTE

RCT or RT will conduct a contamination survey on the steel flat plate, septum cap (if applicable), and septum during the disassembly.

[R] **IF** the filter protective cap was removed,
THEN complete the following,
ELSE GO TO step 4.5.5[S].

[R.1] Disassemble/remove the steel flat plate, if applicable.

[R.2] Remove the septum cap, septum and/or latex material and securing device, if applicable.

[R.3] Discard the septum and/or latex material in accordance with Host site requirements.

[R.4] Place a strip of vinyl tape over the damaged filter media.

NOTE
Data on Attachment 1 for steps 4.5.5[S.1] through 4.5.5[S.9] may be recorded prior to or during sampling activities.

[S] Enter the following data for each container sample on Attachment 1:

[S.1] Site (zz) (Host site abbreviation).

[S.2] Date (date of the sample - mmddyy, where mm is month in two digits, dd is date in two digits and yy is the last two digits of the year). DO **NOT** use slash marks when recording the date on Attachment 1.

[S.3] SUMMA® or equivalent Canister No. (from the metal tag on the canister) Example: EI234.

[S.4] Canister Size (e.g., 250 mL).

[S.5] Container ID No./Barcode No.

[S.6] Waste Stream ID.

[S.7] Cleaning Batch No. (from the laboratory canister tag).

[S.8] Needle Assembly Batch No.

[S.9] Record SS - Single Sample.

[S.10] Sampler's Initials.

[T] Initial and date Container Traveler, **AND** submit to the VPM after sampling activities are complete, as applicable.

[U] GO TO step 4.5.5[X].

NOTE
The use of various spacers may be required to ensure a good seal of the septum on the carbon filter.

[V] **IF** filter protective cap was removed, (e.g., NFT-013, etc.),
THEN sample as follows,
ELSE GO TO step 4.5.4[W]:

[V.1] Remove the strip of vinyl tape, if required.

[V.2] Place septum and/or latex material, **AND** secure appropriately over filter.

[V.3] Place septum cap over septum, if applicable.

[V.4] Place steel flat plate over septum and cap, **AND** secure plate with clamps, if applicable.

[V.5] Gently insert sample needle assembly through filter media sampling port assembly to ensure a leak tight connection between the sampling needle assembly and the container headspace directly beneath the waste container lid.

[V.6] GO TO step 4.5.5[F].

[W] **IF** the container has a penetrable filter (e.g., NFT-020, NFT049S, etc.),
THEN sample as follows:

[W.1] Gently insert sample needle assembly through filter media sampling port assembly to ensure a leak tight connection between the sampling needle assembly and the container headspace directly beneath the waste container lid.

[W.2] GO TO step 4.5.5[F].

NOTE

Relevant data for the laboratory canister tags can be recorded prior to or during sampling activities.

[X] Record the relevant data to the laboratory canister tag, including any additional information required by the analytical laboratory.

[Y] **IF** it is necessary to remove the laboratory canister tag to record data,
THEN remove the tag from the canister, record the data, **AND** immediately re-attach the tag to the canister.

[Z] Repeat steps 4.5.5[A] through 4.5.5[Y] for the remaining samples using only one needle and one SUMMA® or equivalent canister assembly per sample.

[AA] Turn HEPA blower OFF, if applicable.

[BB] **IF** using data loggers,
THEN perform the following steps:

[BB.1] Download temperature data (graphs) from temperature data loggers to a computer.

[BB.2] Print the data loggers information.

[BB.3] Ensure the M&TE ID number is printed on the data logger information.

[CC] **IF** using a mechanical temperature recorder,
THEN perform the following steps:

[CC.1] Remove the chart from temperature recorder.

[CC.2] Ensure the M&TE ID number is printed on the chart.

NOTE

If more than one qualified sampler is part of the sampling evolution, only one qualified sampler is required to sign on the SAMPLER'S SIGNATURE line on Attachment 1.

[DD] **IF** a FRS does not need to be collected,
THEN on Attachment 1 sign the SAMPLER'S SIGNATURE line on Attachment 1, **AND** sign the CUSTODY INITIATED BY: block of Attachment 1.

4.5.6 Collection of Field Reference Standard (FRS)

NOTE

A FRS is collected at the end of the gas sample collection or can be collected prior to all HSG operations.

[A] **IF** FRS results demonstrate the QAOs for accuracy have been met,
THEN proceed to Section 4.6.

[B] Attach the standard purge assembly to the FRS gas cylinder, if applicable.

[C] OPEN the FRS gas cylinder valve, **AND** set the cylinder's output regulator pressure from 0 to 1 psig.

[D] Bleed the purge assembly to ensure no room air remains in the purge assembly.

[E] Insert the canister needle into the purge assembly.

[F] Record NA in the VENT SEAL block on Attachment 1.

[G] Record the canister gauge BEGINNING PRESSURE and START TIME on Attachment 1, **AND** OPEN the valve on the SUMMA® or equivalent canister.

[H] Adjust the regulator to obtain approximately atmospheric pressure of 13 to 15 psig in the SUMMA® or equivalent canister.

[I] CLOSE the valve on the SUMMA® or equivalent canister, **AND** record the canister END PRESSURE and END TIME on Attachment 1.

[J] **IF** the canister gauge DOES **NOT** read 13 to 15 psig, **THEN** obtain new SUMMA® or equivalent canister and certified needle assembly **AND** re-sample once by repeating steps 4.5.2[A], 4.5.2[B], **AND** 4.5.6[C] through 4.5.6[I].

[J.1] **IF** the second attempt FAILS, **THEN** troubleshoot and fix.

[J.2] Return canister(s) that do not meet pressure requirement to the analytical laboratory.

[K] Withdraw the canister needle from the purge assembly, **AND** CLOSE the FRS cylinder shutoff valve.

[L] Remove the needle assembly from the canister.

[M] Attach a valve locking device, and a TID to the canister.

[M.1] Record the TID NUMBER on Attachment 1.

[M.2] **IF** the TID is **NOT** numbered, **THEN** initial and date TID with a permanent marker, **AND** record NA on Attachment 1.

[N] Enter the data listed below, for the FRS sample on Attachment 1:

[N.1] Site (zz) (Host site abbreviation).

[N.2] Date (date of the sample - mmddyy, where mm is month in two digits, dd is date in two digits and yy is the last

two digits of the year). DO **NOT** use slash marks when recording the date on Attachment 1.

[N.3] SUMMA® or equivalent Canister No. (from the metal tag on the canister) Example: EI234.

[N.4] Canister Size (e.g., 250 mL).

[N.5] Container ID/Barcode No. (Cylinder No. for FRS).

[N.6] Waste Stream ID (NA for FRS).

[N.7] Cleaning Batch No. (from the laboratory canister tag).

[N.8] Needle Assembly Batch No. (created when needles are assembled).

[N.9] Record F - Field Reference Standard.

[N.10] Sampler's Initials.

[O] Copy the relevant data to the laboratory canister tag, including any additional information required by the analytical laboratory.

[O.1] Record FRS in the SAMPLE DESCRIPTION on the laboratory canister tag.

[O.2] **IF** it is necessary to remove the laboratory canister tag to record the data,
THEN remove the tag from the canister, record the data,
AND immediately re-attach the tag to the canister.

[P] Bleed out FRS from the lines and fittings.

NOTE

If more than one qualified sampler is part of the sampling evolution, only one qualified sampler is required to sign on the SAMPLER'S SIGNATURE line on Attachment 1.

[Q] On Attachment 1 sign on the SAMPLER'S SIGNATURE line, **AND** sign the CUSTODY INITIATED BY: block.

4.6 Pre-Transport/Shipping Activities of Canister Samples to Laboratory

NOTE
Sample custody will be maintained by ensuring that samples:

- are in the possession of an authorized individual
- are in that individual's view
- are in a sealed or locked container controlled by that individual
- are in a secure controlled access area

4.6.1 Prepare all the canisters from the Field Batch for shipping by verifying a valve locking device TID, **AND** Canister Tag has been installed on each individual SUMMA® or equivalent canister.

4.6.2 Verify the TID Number for each canister has been recorded on Attachment 1.

4.6.3 Place the canisters in a holding area secured by TID(s), along with Attachment 1, if applicable.

[A] Install **OR** verify installed a temperature recorder in the holding area, **AND** record the M&TE ID Number on Attachment 1.

[B] Record the holding area TID Number(s) on Attachment 1.

[C] **IF** the TID is blank and DOES **NOT** contain a number, **THEN** initial and date TID with permanent marker, **AND** record on Attachment 1.

4.6.4 **IF** transferring custody of the containers, **THEN** perform the following:

[A] Ensure the RELINQUISHED BY box is signed, dated, and time recorded by the Custody Initiated By Sampler or Received By Individual on Page 2 of Attachment 1.

[B] Individual taking custody will sign, date, and record time in RECEIVED BY box on Page 2 of Attachment 1.

[B.1] Check for damage on SUMMAs® or equivalent and observable changes in end pressures.

(a) Report any damage to relinquisher, **AND** note in comments section on Page 2 of Attachment 1.

4.7 Final Disposition of SUMMA® or equivalent Canister to Laboratory

NOTE
Shipping/transport of SUMMA® or equivalent canisters will be processed through the Host site shipping/transportation department.

4.7.1 Review the temperature recorder to verify the sample canisters in the holding area have been maintained in the temperature range of 0° C to 40° C.

4.7.2 Check for damage on SUMMAs® or equivalent canisters and observable changes in end pressures.

4.7.3 Package the canisters into the final container for shipment/transport to the analytical laboratory, **AND** add a minimum of one Min/Max thermometer.

4.7.4 Record the following on Attachment 1, Page 2 of 2 for the Min/Max thermometer:

[A] M&TE ID No.

[B] Calibration Due Date

[C] Initials of person making entry and date

4.7.5 Record the TID number that will be used on the outside of the case, if applicable, as well as the date and initials of the person applying the TID on Page 2 of Attachment 1.

4.7.6 Record the shipment tracking number and method of shipping or NA on Attachment 1, Page 2 of 2, if applicable.

NOTE
The last person to relinquish the COC will be the person who will be applying the TID on the shipping container.

4.7.7 Sign the RELINQUISHED BY and DATE/TIME block on Attachment 1.

4.7.8 Make a photocopy of Attachment 1.

4.7.9 Place original copy of Attachment 1 into the shipping container, **AND** apply the TID to the outside of the shipping container, **AND** initial and date with permanent marker.

4.7.10 Place a photocopy of Attachment 1 in the BDR Holding File.

4.7.11 Complete a Host site Shipment Request Form **OR** equivalent documentation, if applicable.

4.7.12 Deliver the container(s) with the SUMMA® or equivalent canister samples to the Host site/responsible personnel for shipping/transporting the canisters to the analytical laboratory.

5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as QA records in accordance with CCP-QP-008, *CCP Records Management*. The records are the following:

NOTE
The records identified in step 5.1.1 are compiled into the BDR in CCP-TP-106, *CCP Headspace Gas Sampling Batch Data Report Preparation*.

5.1.1 QA/Lifetime

[A] Attachment 1 – Chain of Custody/Canister Tag

[B] Attachment 2 – Sample Container Data Form

[C] Shipment Request Form (or equivalent), if applicable.

Table 1. Headspace Gas Drum Age Criteria Sampling Scenario

Scenario	Description
1.	A. Unvented containers without rigid poly liners are sampled through the container lid at the time of venting. B. Unvented containers with unvented rigid poly liners are sampled through the rigid poly liner at the time of venting or prior to venting. C. Vented containers with unvented rigid poly liners are sampled through the rigid poly liner at the time of venting or prior to venting. D. Unvented containers with vented rigid poly liners are sampled through the container lid at the time of venting.
2.	Containers that have met the criteria for Scenario 1 and then are vented, but not sampled at the time of venting.[a]
3.	Containers (i.e., 55-gallon drums, 85-gallon drums, 100-gallon drums, SWBs, Ten-Drum Overpacks (TDOPs) and pipe components) that are initially packaged in a vented condition and sampled in the container headspace and containers that are not sampled under Scenario 1 or 2.

[a] Containers that have not met the Scenario 1 DAC at the time of venting must be categorized under Scenario 3. This requires the additional information required of each container in Scenario 3 (i.e., determination of packaging configuration), and such containers can only be sampled after meeting the appropriate Scenario 3 DAC.

Table 2. Scenario 1 Drum Age Criteria (in days) Matrix

Summary Category Group	DAC (days)
S5000	53

Note: Containers that are sampled using the Scenario 1 DAC do not require information on the packaging configuration because the Scenario 1 DAC is based on a bounding packaging configuration. In addition, information on the rigid liner vent hole presence and diameter do not apply to containers that are sampled using the Scenario 1 DAC because they are unvented prior to sampling.

Table 3. Scenario 2 Drum Age Criteria (in days) Matrix

	Summary Category Group S5000			
Filter H_2 Diffusivity [a]	**Rigid Liner Vent Hole Diameter (in)[b]**			
(mol/s/mod fraction)	0.30	0.375	0.75	1.0
1.9×10^{-6}	29	22	13	12
3.7×10^{-6}	25	20	12	11
3.7×10^{-5}	7	6	6	4

a The documented filter H_2 diffusivity must be greater than or equal to the listed value to use the DAC for the listed filter H_2 diffusivity (e.g., a container with a filter H_2 diffusivity of 4.2×10^{-6} must use a DAC for a filter with a 3.7×10^{-6} filter H_2 diffusivity). If a filter H_2 diffusivity for a container is undocumented or unknown or is less than 1.9×10^{-6} filter H_2 diffusivity, a filter of known H_2 diffusivity that is greater than or equal to 1.9×10^{-6} filter H_2 diffusivity must be installed prior to initiation of the relevant DAC period.

b The documented rigid liner vent hole diameter must be greater than or equal to the listed value to use the DAC for the listed rigid liner vent hole diameter (e.g., a container with a rigid liner vent hole of 0.5 in. must use a DAC for a rigid liner vent hole of 0.375 in.). If the rigid liner vent hole diameter for a container is undocumented during packaging that container must use a DAC for a rigid liner vent hole diameter of 0.30 in.

Note: Containers that are sampled using the Scenario 2 DAC do not require information on the packaging configuration because the Scenario 2 DAC are based on a bounding packaging configuration.

Table 4. Scenario 3 Packaging Configuration Groups

Packaging Configuration Group	Covered S5000 Packaging Configuration Groups
Packaging Configuration Group 1, 55-gal. drums[a]	• No layers of confinement, filtered inner lid[b] • No inner bags, no liner bags (bounding case)
Packaging Configuration Group 2, 55-gal. drums[a]	• 1 inner bag • 1 filtered inner bag • 1 liner bag • 1 filtered liner bag • 1 inner bag, 1 liner bag 1 filtered inner bag, 1 filtered liner bag • 2 inner bags • 2 filtered inner bags • 2 inner bags, 1 liner bag • 2 filtered inner bags, 1 filtered liner bag • 3 inner bags • 3 filtered inner bags • 3 filtered inner bags, 1 filtered liner bag • 3 inner bags, 1 liner bag (bounding case)
Packaging Configuration Group 3, 55-gal. drums[a]	• 2 liner bags • 2 filtered liner bags • 1 inner bag, 2 liner bags • 1 filtered inner bag, 2 filtered liner bags • 2 inner bags, 2 liner bags • 2 filtered inner bags, 2 filtered liner bags • 3 filtered inner bags, 2 filtered liner bags • 4 inner bags • 3 inner bags, 2 liner bags • 4 inner bags, 2 liner bags (bounding case)

Table 4. Scenario 3 Packaging Configuration Groups (Continued)

Packaging Configuration Group	Covered S5000 Packaging Configuration Groups
Packaging Configuration Group 4, pipe components	• No layers of confinement inside a pipe component • 1 filtered inner bag, 1 filtered metal can inside a pipe component • 2 inner bags inside a pipe component • 2 filtered inner bags inside a pipe component • 2 filtered inner bags, 1 filtered metal can inside a pipe component • 2 inner bags, 1 filtered metal can inside a pipe component (bounding case)
Packaging Configuration Group 5, SWB, Ten-Drum Overpack, or SLB 2 [a]	• No layers of confinement • 1 SWB liner bag (bounding case)
Packaging Configuration Group 6, SWB, Ten-Drum Overpack, or SLB 2 [a]	• Any combination of inner and/or liner bags that is less than or equal to 6 • 5 inner bags, 1 SWB liner bag (bounding case)
Packaging Configuration Group 7, 85-gallon. Drums and 100-gallon. Drums[a]	• No inner bags, no liner bags, no rigid liner, filtered inner lid (bounding case)[b] • No inner bags, no liner bags, no rigid liner
Packaging Configuration Group 8, 85-gallon. Drums and 100-gallon. Drums [a]	• 4 inner bags and 2 liner bags, no rigid liner, filtered inner lid (bounding case)[b]

[a] If specific Packaging Configuration Groups cannot be determined based on the data collected during packaging and/or repackaging, a conservative default Packaging Configuration Group of 3 for 55-gallon drums, 6 for SWBs, TDOPs, and SLB2s, and 8 for 85-gallon drums must be assigned provided the drums do not contain pipe component packaging. If pipe components are present as packaging in the drums, the pipe components must be sampled following the requirements for Packaging Configuration Group 4.

[b] A “filtered inner lid” is the inner lid on a double lid drum that contains a filter.

Definitions:
Liner Bags: One or more optional plastic bags that are used to control radiological contamination. Liner bags for drums have a thickness of approximately 11 mils. Liner bags are typically similar in size to the container. SWB liner bags have a thickness of approximately 14 mils. TDOPs and SLB2s use SWB liner bags.

Inner Bags: One or more optional plastic bags that are used to control radiological contamination. Inner bags have a thickness of approximately 5 mils and are typically smaller than liner bags.

Table 5. Scenario 3 Drum Age Criteria (in days) Matrix for S5000 Waste by Packaging Configuration Group

Packaging Configuration Group 1						
	Rigid Liner Vent Hole Diameter[b]					
Filter H_2 Diffusivity[a] (mol/s/mol fraction)	0.3-inch Diameter Hole	0.375-inch Diameter Hole	0.75-inch Diameter Hole	1-inch Diameter Hole	No Liner Lid	No Liner
1.9×10^{-6}	131	95	37	24	4	4
3.7×10^{-6}	111	85	36	24	4	4
3.7×10^{-5}	28	28	23	19	4	4

Packaging Configuration Group 2						
	Rigid Liner Vent Hole Diameter[b]					
Filter H_2 Diffusivity[a] (mol/s/mol fraction)	0.3-inch Diameter Hole	0.375-inch Diameter Hole	0.75-inch Diameter Hole	1-inch Diameter Hole	No Liner Lid	No Liner
1.9×10^{-6}	175	138	75	60	30	11
3.7×10^{-6}	152	126	73	59	30	11
3.7×10^{-5}	58	57	52	47	28	8

Packaging Configuration Group 3						
	Rigid Liner Vent Hole Diameter[b]					
Filter H_2 Diffusivity[a] (mol/s/mol fraction)	0.3-inch Diameter Hole	0.375-inch Diameter Hole	0.75-inch Diameter Hole	1-inch Diameter Hole	No Liner Lid	No Liner
1.9×10^{-6}	199	161	96	80	46	16
3.7×10^{-6}	175	148	93	79	46	16
3.7×10^{-5}	72	72	67	62	42	10

Table 5. Scenario 3 Drum Age Criteria (in days) Matrix for S5000 Waste by Packaging Configuration Group (Continued)

Packaging Configuration Group 4	
Filter H_2 Diffusivity [a] (mol/s/mol fraction)	**Headspace Sample Taken Inside Pipe Component**
>1.9 x 10^{-6}	152

Packaging Configuration Group 5	
Filter H_2 Diffusivity [a,c] (mol/s/mol fraction)	**Headspace Sample Taken Inside SWB**
>7.4 x 10^{-6} (SWB)	15
3.33 x 10^{-5} (TDOP)	15
6.60 x 10^{-4} (SLB2)	21

Packaging Configuration Group 6	
Filter H_2 Diffusivity [a,c] (mol/s/mol fraction)	**Headspace Sample Taken Inside SWB**
>7.4 x 10^{-6} (SWB)	56
3.33 x 10^{-5} (TDOP)	56
6.60 x 10^{-4} (SLB2)	56

Packaging Configuration Group 7 [d]			
Filter H_2 Diffusivity [a] (mol/s/mol fraction)	**Inner Lid Filter Vent Minimum H_2 Diffusivity (mol/s/mol fraction) [a]**		
	7.4 x 10^{-6}	1.85 x 10^{-5}	9.25 x 10^{-5} [e]
3.7 x 10^{-6}	13	7	2
7.4 x 10^{-6}	10	6	2
1.85 x 10^{-5}	6	4	2

Packaging Configuration Group 8	
Filter H_2 Diffusivity [a] (mol/s/mol fraction)	**Inner Lid Filter Vent Minimum H_2 Diffusivity (mol/s/mol fraction)**
	7.4 x 10^{-6}
3.7 x 10^{-6}	21

[a] The documented filter H_2 diffusivity must be greater than or equal to the listed value to use the DAC for the listed filter H_2 diffusivity (e.g., a container with a filter H_2 diffusivity of 4.2 x 10^{-6} must use a DAC for a filter with a 3.7 x 10^{-6} filter H_2 diffusivity). If a filter H_2 diffusivity for a container is undocumented or unknown or is less than 1.9 x 10^{-6} filter H_2 diffusivity, a filter of known H_2 diffusivity that is greater than or equal to 1.9 x 10^{-6} filter H_2 diffusivity must be installed prior to initiation of the relevant DAC period.

Table 5. Scenario 3 Drum Age Criteria (in days) Matrix for S5000 Waste by Packaging Configuration Group (Continued)

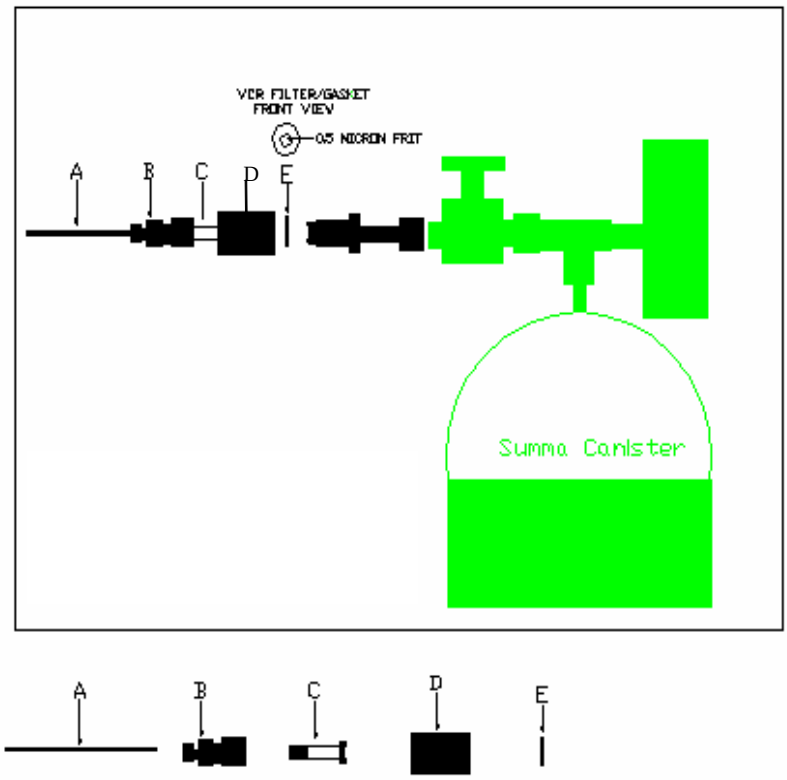
b The documented rigid liner vent hole diameter must be greater than or equal to the listed value to use the DAC for the listed rigid liner vent hole diameter (e.g., a container with a rigid liner vent hole of 0.5 in. must use a DAC for a rigid liner vent hole of 0.375 in.). If the rigid liner vent hole diameter for a container is undocumented during packaging, repackaging, and/or venting, that container must use a DAC for a rigid liner vent hole diameter of 0.30 in.

c The filter H_2 diffusivity for SWBs, TDOPs, or SLB2s is the sum of the diffusivities for all of the filters on the container because SWBs, TDOPs, and SLB2s have more than 1 filter.

d Headspace sample taken between inner and outer drum lids. If headspace sample is taken inside the filtered inner drum lid prior to placement of the outer drum lid, then a DAC value of 2 days may be used. Footnote “e” is also applicable. Packaging Configuration Group 7 DAC values apply to drums with up to two lids.

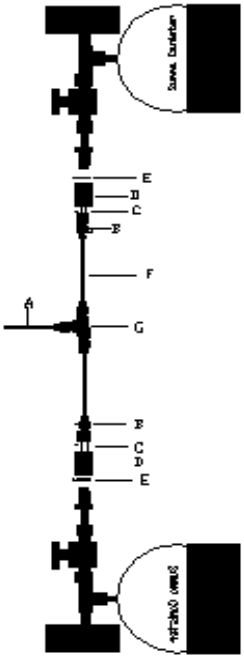
e While a DAC value of two days may be determined, containers must comply with the equilibrium requirements (i.e., 72 hours at 18°C or higher). The equilibrium requirement for headspace gas sampling shall be met separately.

Figure 1. Single Canister Sampling Components



A -1/16 in. O.D. SIDE PORT NEEDLE
B -1/4 in. x 1/16 in. SWAGELOK REDUCING UNION
C -1/4 in. SWAGELOK TO VCR ADAPTER
D -1/4 in. VCR FEMALE CONNECTOR
E - SS VCR FILTER GASKET (0.5 MICRONS)

Figure 2. Duplicate Canister Sampling Components



A - 1/16 in. O.D. SIDE PORT NEEDLE
B - 1/4 in. x 1/16 in. SWAGELOK REDUCING UNION
C - 1/4 in. SWAGELOK TO VCR ADAPTER
D - 1/4 in. VCR FEMALE CONNECTOR
E - SS VCR FILTER GASKET (0.5 MICRONS)
F - 1/16 in. O.D. TEFLON TUBING (6 in.TO 8 in. LONG)
G - 1/16 in. SWAGELOK UNION TEE

Attachment 1 – Chain of Custody/Canister Tag

Location:	Point of Origin:	**Sample Matrix is Gas**	Ambient Conditions	
	COC Number:		Temperature (centigrade):	
			Pressure (in. Hg):	

Site	Date	SUMMA® Canister No.	Size (mL)	TID No.	Container ID /Barcode No.	Waste Stream ID	Cleaning Batch No.	Needle Assembly Batch No.	Type SS B D F C (Note 1)	Vent Seal (Y/NA)	Start Time	End Time	Beginning Pressure (in.Hg or psig)	End Pressure (in.Hg or psig)	Sampler's Initials

Note 1. Analysis required:

C - Needle Assembly Cleanliness Certification: VOC.
SS - Single Sample: VOC, H_2, CH_4
B - Field Blank: VOC
D - Duplicate: VOC, H_2, CH_4
F - Field Reference Standard: VOC

Sampler's Signature:_____

Attachment 1 – Chain of Custody/Canister Tag (Continued) Page 2 of 2

COC Number:					
Comments:		Instrument Section	M&TE ID No.	Calibration Due Date	Initials/Date
Analytical Laboratory - ECL		Pressure Meter			
Shipping Tracking #	Method of Shipping	Thermometer			
		Min /Max Thermometer			
Analysis Requested VOC		Preservation Method: 0 - 40°C			
TID Number(s)		TID Initials and Date:			
Custody Initiated By: (Sampler Name/Organization)	Date/Time				
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)			Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)			Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)			Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)			Date/Time
Final Disposition By: (Name/Organization)	Date/Time	Disposition:			

Attachment 2 – Sample Container Data Form

Field Batch Number:

	Container ID	Sampling Scenario	Summary Category Group	Rigid Liner (Y/N/)	Rigid Liner Lid (Y/N)	Rigid Liner Lid Hole Diameter (in.)	Number of Inner Bags	Number of Liner Bags	Filter Model No.	Number of Filters	Restrictive Hydrogen Diffusivity (m/s/mf)	Package Configuration Group No.
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												

Attachment 2 – Sample Container Data Form (Continued) Page 2 of 2

Field Batch Number:

Container ID		Closure Date	Vent Date	Permit Required Equilibrium Time (Days)	Container Age (Days)	Container Fill Factor (%)	Can This Container Be Sampled? (Y / N)	Temperature Recorder M&TE /ID No.: Temperature Recorder Calibration Due Date: 72 – Hour Container Equilibrium	
								Start Date/Time	End Date/Time
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									

HSG Sampler: _____ _____ _____
Print Name **Signature** **Date**

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CCP-TP-106

Revision 8

CCP
Headspace Gas Sampling
Batch Data Report
Preparation

EFFECTIVE DATE: 02/04/2013

Mike Ramirez

PRINTED NAME

APPROVED FOR USE

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
0	12/08/2003	Initial Issue.
1	03/31/2004	Revised Sections 2.0-5.0 and Attachments 1-5 to reflect changes to HSG procedures CCP-TP-043 and CCP-TP-093.
2	03/03/2005	Revised to incorporate Host site-specific requirements.
3	04/15//2005	Revised to address CBFO comments.
4	08/21/2006	Revised to address CAR-LANL-0006-06 and incorporated a change on Attachment 2, HSG Sampling Batch Data Report Table of Contents.
5	11/16/2006	Revised to implement the Waste Isolation Pilot Plant Hazardous Waste Facility Permit requirements resulting from the Section 311/Remote-Handled (RH) Permit Modification Request (PMR).
6	07/12/2007	Revised to combine requirements of Attachment 4, CCP HSG Lead Operator (LO) Review Checklist, into Attachment 3, Independent Technical Reviewer (ITR) Review Checklist, and incorporate procedural step changes to support it. Incorporated changes to Items 4 and 5 of Attachment 3 to reflect wording changes to CCP-TP-093, Revision 13, *CCP Sampling of TRU Waste Containers*, and incorporated editorial changes.
7	12/29/2010	Revised to clarify independent technical reviewer (ITR) independence.
8	02/04/2013	Revised to incorporate freeze file.

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1.0 PURPOSE

This procedure describes the process to prepare the sampling Batch Data Report(s) (BDRs) for Headspace Gas (HSG) analysis of transuranic (TRU) waste containers. This procedure provides data generation level verification and validation.

1.1 Scope

This procedure applies to personnel responsible for TRU waste container HSG Sampling BDR preparation and performance of data generation level reviews for sampling activities associated with CCP-TP-093, *CCP Sampling of TRU Waste Containers*. The data generated by this procedure meets the requirements found in CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*.

2.0 REQUIREMENTS

2.1 Referenced Documents

- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- CCP-QP-002, *CCP Training and Qualification Plan*
- CCP-QP-008, *CCP Records Management*
- CCP-TP-082, *CCP Waste Container Filter Vent Operation*
- CCP-TP-093, *CCP Sampling of TRU Waste Containers*

2.2 Training Requirements

2.2.1 Personnel performing this procedure will be trained and qualified in accordance with the requirements of CCP-QP-002, *CCP Training and Qualification Plan*, prior to performing this procedure.

2.3 Equipment List

2.3.1 None.

2.4 Precautions and Limitations

2.4.1 None.

2.5 Prerequisite Actions

2.5.1 None.

3.0 RESPONSIBILITIES

3.1 HSG Samplers

3.1.1 Prepares the Sampling BDR.

3.1.2 Reviews the Sampling BDR.

3.2 HSG Independent Technical Reviewer (ITR)

NOTE
The independent technical review will be performed by someone who is trained and qualified to have done the work but shall not be involved in the generation or recording of the data under review.

3.2.1 Performs the independent technical review of Sampling BDRs.

4.0 PROCEDURE

4.1 Sampling BDR Assembly at the Data Generation Level

HSG Sampler

4.1.1 HSG Sampling Batch Data Report

[A] On Attachment 1, HSG Sampling Batch Data Report, record the HSG Sampling Batch Number.

4.1.2 HSG Sampling Batch Data Report Table of Contents

[A] Ensure the following items have been included in the Sampling BDR package, and are in the correct order, **AND** record on Attachment 1:

[A.1] Attachment 1, HSG Sampling Batch Data Report

[A.2] Attachment 2, Independent Technical Reviewer (ITR) Review Checklist

[A.3] Chain of Custody/Canister Tag Forms (Attachment 1 from CCP-TP-093)

[A.4] Copy of Canister Tags

[A.5] Cleanliness Certifications for needle assemblies as applicable to the Sampling BDR

[A.6] Sample Container Data Forms (Attachment 2 of CCP-TP-093)

[A.7] Copy of Container Filter Vent Change Out Form (Attachment 1 of CCP-TP-082,*Waste Container Filter Vent Operation*), if applicable

[A.8] Shipment Request Forms, if applicable

[A.9] 72-Hour Temperature Equilibration Plots

[A.10] Copy of Nonconformance Reports (NCRs), if applicable

[A.11] Copy of Certificate of Analysis or Accuracy (COA) for Field Reference Sample (FRS), if applicable

4.1.3 Forward the Sampling BDR to the HSG ITR.

HSG ITR

4.1.4 Review the Sampling BDR to the criteria and record the following on Attachment 2, Independent Technical Reviewer (ITR) Review Checklist:

[A] Resolve any discrepancies with the HSG Samplers, as necessary, before approving the Sampling BDR.

[B] Print name, sign, and date Attachments 1 and 2 to annotate approval of the Sampling BDR.

[C] Paginate the BDR and complete Attachment 1.

[D] Submit the records generated by this procedure to the facility records custodian to be managed in accordance with CCP-QP-008, *CCP Records Management*.

5.0 RECORDS

5.1 Records generated in procedure CCP-TP-093 and, if applicable, CCP-TP-082, is included as part of the compilation of the Sampling BDR, **AND** are listed in Attachment 2.

5.2 Records generated during the performance of this procedure are maintained as QA records in accordance with CCP-QP-008. The records are the following:

5.2.1 QA/Lifetime Records

[A] HSG Sampling BDR:

[A.1] Attachment 1 – HSG Sampling Batch Data Report

[A.2] Attachment 2 – Independent Technical Reviewer (ITR) Review Checklist

[A.3] Chain of Custody/Canister Tag Forms (Attachment 1 of CCP-TP-093)

[A.4] Copy of Canister Tags

[A.5] Cleanliness Certifications for needle assemblies as applicable to the Sampling BDR

[A.6] Sample Container Data Form (Attachment 2 of CCP-TP-093)

[A.7] Copy of Container Filter Vent Change Out Form (Attachment 1 of CCP-TP-082,*Waste Container Filter Vent Operation*), if applicable

[A.8] Shipment Request Forms, (or equivalent), if applicable

[A.9] 72-Hour Temperature Equilibration Plots

[A.10] Copies of NCRs, if applicable

[A.11] Copy of COA for FRS, if applicable

Attachment 1 – HSG Sampling Batch Data Report Page 1 of 1

HSG Sampling Batch Number: _____

Section	Contents	Page No.
1.	HSG Sampling Batch Data Report (Attachment 1)	_____
2.	Independent Technical Reviewer (ITR) Review Checklist (Attachment2)	_____
3.	Chain of Custody/Canister Tag Forms (Attachment 1 from CCP-TP-093)	_____
4.	Copy of Canister Tags	_____
5.	Cleanliness Certification for needle assemblies as applicable to the Sampling Batch Data Report	_____
6.	Sample Container Data Form (Attachment 2 from CCP-TP-093)	_____
7.	Copy of Container Filter Vent Change Out Form (Attachment 1 of CCP-TP-082), if applicable.	_____
8.	Shipment Request Form, if applicable.	_____
9.	72-Hour Temperature Equilibration Plots	_____
10.	Copy of NCRs, if applicable	_____
11.	Copy of COA for FRS, if applicable	_____

Comments:

HSG Independent Technical Reviewer:

Printed Name	Signature	Date
_____	_____	_____

Attachment 2 – Independent Technical Reviewer (ITR) Review Checklist

HSG Sampling Batch Number: _____

Description	YES	NO	NA	Comments
1. Is the HSG Sampling BDR complete as specified in step 4.1.2 and are the field sampling records complete?				
2. Are calculations correct for the Container Age and temperature equilibrium time, and percent complete?				
3. Did the waste containers meet the Drum Age Criteria (DAC)?				
4. Did the waste containers meet the temperature equilibrium requirement (stored at 18°C or higher for 72-hours prior to sampling)?				
5. Do the temperature plots indicate the waste containers were stored at 18 °C (64.5 °F) or higher for 72-hours prior to sampling?				
5a. Are the waste stream IDs completed correctly on the Chain of Custody (COC) Form?				
6. Was a Field Duplicate collected once per batch?				
7. Was a Field Reference Sample (FRS) collected? NA if FRS previously demonstrated the quality assurance objective (QAO) and is no longer required.				
8. Was a Field Blank collected one per batch prior to sampling waste containers?				
9. Is the data technically reasonable based upon the technique used?				
10. Was the sampling equipment checked for leaks after sample collection?				
11. Was the data generation and reduction conducted in a technically correct manner?				
12. Was the data reported in proper units and with the correct number of significant figures?				
13. Were the samples maintained at a temperature between 0°C - 40°C?				

Attachment 2 – Independent Technical Reviewer (ITR) Review Checklist (Continued)

HSG Sampling Batch Number: _____

Raw Data Collection and Management	YES	NO	NA	Comments
14. Was the equipment involved in the sampling activities in calibration (i.e., torque wrenches, ambient temperature and pressure gauges, dataloggers, ultrasonic micrometer, min/max thermometers)?				
15. Are the sampling needle assemblies demonstrated to be clean?				
16. Has the data been reviewed for transcription errors?				
17. Was all signed and dated, and the data is recorded clearly, legibly, and accurately?				
18. Are there less than or equal to 20 waste containers in the batch excluding the quality control (QC) samples?				
19. Is the procedure number and revision correct?				
20. Were changes to original data lined out, initialed, and dated by the individual making the change, and a justification included? (NOTE: Original data must not be obliterated or otherwise disfigured as not to be readable. Data changes shall only be made by the individual who originally collected the data or an individual authorized to change the data.)				

Independent Technical Reviewer:

Printed Name _____ Signature _____ Date _____

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CCP-TP-113

Revision 16

CCP
Standard Contact-Handled Waste Visual Examination

EFFECTIVE DATE: 04/25/2011

Larry Porter

PRINTED NAME

APPROVED FOR USE

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RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
0	03/26/2004	Initial Issue.
1	04/02/2004	Incorporated Facility Oversight Review Committee Comment resolutions, from Los Alamos National Laboratory, into Sections 1.0, 2.0 and 4.0.
2	07/15/2004	Revised in response to CBFO CAR #04-026. The change in this document involved addition of a note for clarification and implementation on percent fill of a drum. As such, this change is data quality affecting.
3	01/25/2005	Made corrections to procedure per LANL, to comply with the MSA review.
4	12/22/2005	Revised Table 4 to add the weight of an 85- and 110-Gallon Drum as well as a 55-Gallon 12-mil. Plastic Bag. Revised responsibility for pagination of the BDR.
5	08/28/2006	Revised to address CAR LANL-0006-06.
6	11/16/2006	Revised to implement changes to the Waste Isolation Pilot Plant Hazardous Waste Facility Permit requirements resulting from the Section 311/RH PMR.
7	03/19/2007	Revised to clarify notes and procedural steps. Revised to record Output Drum information in Section 4 of Attachment 1. Revised to record Waste Container ID on each page of Attachment 1.
8	09/04/2007	Revised to separate and clarify each Visual Examination (VE) process. Revised Attachment 1, CCP Waste Visual Examination Data Form and Attachment 2, CCP Waste VE Independent Technical Reviewer Checklist, to support the changes. Added new Section 4.11, Newly Generated Waste Container Data Submission, and Attachment 5, CCP Newly Generated Waste Container Data, to assist in container tracking. Incorporated additional editorial changes.
9	03/05/2008	Revised to add a step to Section 2.4 for use of Host site procedures for anomalous conditions. Attachment 1, Section 5, Prohibited Items revised to be consistent with Central Characterization Project (CCP) Nondestructive Examination (NDE) procedures and made additional editorial changes.

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RECORD OF REVISION (Continued)

Revision Number	Date Approved	Description of Revision
10	07/09/2008	Revised to address U.S. Department of Energy (DOE) Carlsbad Field Office (CBFO) Corrective Action Request (CAR) Number CAR-08-021 and New Mexico Environmental Department (NMED) Observer Inquiry from Audit A-08-16. Also, revised to maintain control of internal package/items so that payload containers are surveyed at <200 millirem per hour (mrem/hr).
11	11/12/2008	Revised to incorporate concurrent use with CCP-TP-163, *CCP Standard Visual Examination of Records*.
12	12/01/2008	Minor revision to add notes for clarification of visual examination (VE) of record.
13	03/11/2009	Revised to address the U.S. Department of Energy (DOE) Carlsbad Field Office (CBFO) Corrective Action Report (CAR) Number 09-015 and Environmental Protection Agency (EPA) Issue Numbers INL-CCP-RH-VE-T1-002CR, 003CR, and 007CR.
14	06/30/2010	Revised to incorporate modifications to Hazardous Waste Facility Permit. Revised to address CBFO Corrective Action Report (CAR) 10-019. Revised to address procedural steps, to accommodate the visual examination (VE) process for newly generated waste and to make additional editorial changes.
15	12/29/2010	Revised to clarify independent technical reviewer (ITR) independence.
16	04/25/2011	Revised to remove recording location and clarify transportation packaging requirements.

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1.0 PURPOSE

CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*, Section C-3c, requires that containers be examined to verify the physical form of the waste and to identify items that are prohibited from disposal at the Waste Isolation Pilot Plant (WIPP). This procedure establishes how to perform visual examination (VE) of contact-handled (CH) transuranic (TRU) waste containers, which may include the removal of prohibited items; and how to prepare and review Batch Data Reports (BDRs) generated from the VE process. This procedure is designed to be accomplished in conjunction with Host site facility operating procedures that address the use of those facilities for VE. All Host site requirements for health, safety, and operations in the work place will be addressed in a Host site procedure.

1.1 Scope

This procedure applies to retrievably stored and newly generated S3000 homogeneous solids, S4000 soils/gravel, and S5000 debris waste streams. VE will be used when necessary to examine a waste container to verify its physical form and to detect and remediate items that are prohibited from disposal at the WIPP.

VE cannot identify prohibited items imbedded in forms, such as S3000 and S4000, when the material is not removed from the characterized container.

VE may be performed on S3000 or S4000 when the material is not removed from the characterized container if Carlsbad Field Office (CBFO) approves the method for the specific waste form, typically from a surveillance.

There are two methods allowed for performing a VE process. Method 1 uses one VE Operator (VEO) with audio/video recording of the process, and Method 2 uses two VEOs (without audio/video recording of the process).

Full use of this procedure is **NOT** currently authorized at Los Alamos National Laboratory (LANL), in that processing of a prohibited item(s) found during VE of homogeneous solid waste containers is **NOT** authorized at this time.

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2.0 REQUIREMENTS

2.1 References

Baseline Documents

- CCP-PO-002, *CCP Transuranic Waste Certification Plan*
- CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)*
- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*

Referenced Documents

- CCP-QP-002, *CCP Training and Qualification Plan*
- CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
- CCP-QP-008, *CCP Records Management*

2.2 Training Requirements

2.2.1 Personnel performing this procedure will be trained and qualified in accordance with CCP-QP-002, *CCP Training and Qualification Plan*, prior to performing this procedure.

2.3 Equipment List

2.3.1 Torque Wrenches

2.3.2 Certified VE Scale, as needed

2.3.3 Certified Container Scale

2.3.4 Certified Weights

2.4 Precautions and Limitations

2.4.1 Processing of prohibited item(s) found during VE of homogeneous solid waste containers is **NOT** authorized at LANL at this time.

2.4.2 Containers with a total dose rate >200 millirem per hour (mrem/hr) at surface SHALL **NOT** be processed under this procedure.

2.4.3 Host site procedures may be used in conjunction with this procedure in order to handle anomalous conditions, as necessary.

2.5 Prerequisite Actions

2.5.1 Prepare containers for VE in accordance with Host site procedures.

2.5.2 Ensure **NO** hold tags that would prevent the performance of VE are on the containers before proceeding.

2.5.3 Review the radiation levels of the containers before proceeding.

2.5.4 Ensure Method 1 or Method 2 for performing the VE has been determined by the Site Project Manager (SPM).

2.5.5 Ensure Input Waste Container(s) is on the AK Tracking Spreadsheet (if applicable).

2.5.6 For Newly Generated waste processing, confirm that waste is described in an approved Acceptable Knowledge (AK) Summary Report.

2.6 Definitions

2.6.1 **Calibration Due Date** – The date recorded on a tool's or scale's sticker/label that indicates the last date the tool or scale is in calibration.

2.6.2 **Method 1** – One VEO with audio/video recording of the process created during VE.

2.6.3 **Method 2** – Two VEOs (without audio/video recording of the process) performing VE. Each VEO shall observe for themselves the waste being placed in the waste container or the contents within the examined waste container when the waste is not removed.

2.6.4 **Outermost Container** – Outer container that holds waste at time of VE.

2.6.5 **Internal Container** – A container inside the outermost container examined during visual examination. Drum liners, liner bag, plastic bags used for contamination control, capillary-type labware, and debris not designed to hold liquid at the time of original waste packaging are not internal containers.

2.6.6 **Observable Liquid** – Liquid that is observable by a qualified operator performing VE of the waste.

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2.6.7 **Field Records** – are records which are generated in the field under adverse conditions (i.e., personnel are wearing Anti Cs), which need to be transcribed into a final format for legibility. Field records shall be obtained using the forms from this procedure to ensure the required information is obtained. The field record shall be signed and dated by the operator(s) performing the task. Field records that are transcribed will be included in the Batch Data Reports to ensure the absence of transcription errors.

2.6.8 **Package Control Indicator (PCI)** – A device with a unique identifier that is used when a package is uncontrolled.

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3.0 RESPONSIBILITIES

3.1 Site Project Manager (SPM)

3.1.1 Determines the use of Method 1 or Method 2 for performing a VE process.

3.2 Visual Examination Expert (VEE)

3.2.1 Responsible for the overall direction and implementation of the VE operations.

3.3 Visual Examination Operator (VEO)

3.3.1 Performs the VE.

3.3.2 Assembles, paginates, and reviews the BDR.

3.4 Independent Technical Reviewer (ITR)

NOTE

The Independent Technical Reviewer (ITR) will be someone, other than the VEO, who is qualified to have performed the work and who was not involved in the generation or recording of the data under review.

3.4.1 Reviews the BDR.

3.5 Vendor Project Manager (VPM)

3.5.1 Ensures the safe operation of the VE process.

3.5.2 Ensures all personnel maintain proficiency and identifies any additional training that may be required.

3.5.3 Coordinates remediation of prohibited items with the Host site.

3.5.4 Facilitates container tracking and management.

3.6 Facility Records Custodian

3.6.1 Receives, processes, and transmits all records generated by this procedure in accordance with CCP-QP-008, *CCP Records Management*.

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4.0 PROCEDURE

NOTE

Weights will be recorded in kilograms (kg) out to one tenth of a kg.

A Testing Batch includes all data pertaining to VE for up to 20 waste containers without regard to waste matrix.

If, during the performance of VE, multiple Input Waste Containers are used to produce an Output Waste Container or multiple Output Waste Containers are generated from an Input Waste Container, separate data sections shall be completed for each waste container, as applicable.

N/A shall be marked in all fields of the Attachments that are not applicable.

The sections of this procedure may be performed independently and concurrently to accommodate the VE process; however, the internal steps should be performed in order. The internal steps in this procedure may only be performed in a different order than specified when required by Host site facility-specific operation procedures or as otherwise directed in that section.

For VE of Newly Generated Waste, Section 4.2 is not performed.

Remediation of prohibited items (e.g., removal, absorption, etc.) may be performed in unison with Waste Material Parameter (WMP) identification (ID).

Prohibited items are listed in Table 1, Prohibited Items, are remediated per Host site procedures, as necessary.

Any liquid in non-transparent internal containers, detected from shaking the internal container, will be handled by assuming that the internal container is filled with liquid.

Data changes and requisite approvals SHALL be made by the individual or individuals who originally collected the data, **OR** by an equally-qualified individual or individuals authorized to change data.

VEO

4.1 General Information and Performance Checks

4.1.1 Record Batch Data Report No. on Attachment 1, CCP Waste Visual Examination General Information Form, and Attachment 2, CCP Waste Visual Examination Data Form, (xxVEzzyyyy - where xx is the Site Identifier [e.g., LA for LANL], zz is the VE area identifier, and yyyy is a sequential number for that site).

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[A] Record the following information on Attachment 1:

[A.1] Mark applicable VE process to be performed.

[A.2] Mark VE Method used.

[A.3] Site ID

[A.4] Examination Date

[A.5] Procedure No.

[A.6] Revision No.

4.1.2 Camera(s) Check (Method 1)

NOTE

If the VE continues for more than one day, a camera check will be conducted prior to continuing the VE for the new day. The results of the second camera check will be recorded on the audio/video media and noted in the Comments block on Attachment 1. The audio/video camera will be checked prior to each VE BDR to ensure proper operation of the camera. The test image segment SHALL remain intact without being erased or recorded over.

[A] **IF** audio/video recording will **NOT** be created,
THEN mark N/A on Attachment 1, **AND** GO TO step 4.1.3.

[B] Record the Date, Container ID Number(s), BDR Number, and the Audio/Video Media Recording Number on the Audio/Video Media Label.

[C] Ensure the audio/video media is at its beginning or at the point where recording was stopped the previous day.

[D] Start the camera(s).

[E] Record a test image and narrative.

[F] Review the test segment by playing the audio/video media, **AND** verify the image is in focus and the narration is clear.

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[G] Save the test recording (i.e., stop the audio/video media at the end of the playback).

[G.1] **IF** the results are UNSAT,
THEN notify the Visual Examination Expert (VEE) and Vendor Project Manager (VPM).

(a) **WHEN** the camera/audio/video media recording system is operational,
THEN repeat steps 4.1.2[D] through 4.1.2[H].

[H] Record the results of the camera/audio/video media recording check as SAT on Attachment 1.

4.1.3 Scale Operational Check

NOTE

If the VE continues for more than one day, a scale operational check will be conducted prior to continuing the VE for the new day. The results will be recorded in the Comments block on Attachment 1.

The VEE will determine when the VE Scale or the Container Scale will not be used. This section will be performed when scales are used in the performance of the VE process.

[A] VE Scale

[A.1] **IF** VE Scale is **NOT** used,
THEN mark N/A on Attachment 1, **AND** GO TO step 4.1.3[B].

[A.2] Start the camera(s) in the record mode for the Scale Operational Check, as applicable.

[A.3] Verbally record the Scale Serial/ID Number and the Calibration Due Date on the audio/video media, if in use, **AND** record the data on Attachment 1.

[A.4] Place test weight(s) on the scale to verify the scale's operability.

(a) **IF** the reading is within the scales calibration tolerance,
THEN record as SAT on Attachment 1.

(b) **IF** the reading is **NOT** within the scales calibration tolerance,
THEN STOP WORK, **AND** notify the VPM,
AND record as UNSAT on Attachment 1.

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[A.5] Record the following Test Weight Information data on Attachment 1:

(a) Test Weight Serial/ID Number and Calibration Due Date for each weight used.

(b) Test Weight Total placed on the scale.

(c) Tray Weight, as required.

[A.6] With the tray placed on the scale, set the Tare to zero, as required.

[B] Container Scale

[B.1] Record the Scale Serial/ID Number and the Calibration Due Date on Attachment 1.

[B.2] Perform an operational check of the scale as follows:

(a) Place a known check weight(s) on the scale, **AND** verify the scale reads within 1.0 percent of the check weight used.

(a.1) **IF** the scale reads within the operational range,
THEN record SAT on Attachment 1.

(a.2) **IF** the scale reads outside of the operational range,
THEN, SUSPEND WORK, **AND** notify the VPM **AND** record as UNSAT on Attachment 1.

4.1.4 Record the following on Attachment 1:

[A] Method 1

VEO 1

[A.1] Print name, sign, and date.

[A.2] Mark VEO 2 as N/A.

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[B] Method 2

VEO 1

[B.1] Print name, sign, and date.

VEO 2

[B.2] Print name, sign, and date.

4.2 Previously Packaged Input Waste Container Preparation.

NOTE
Section 4.2 is not performed for VE of Newly Generated Waste.

4.2.1 Record the Input Waste Container ID in Section 1, Output Waste Container Data, of Attachment 2.

NOTE
When performing Method 1, audio/video media recording is created to document activities that manipulate waste during the VE. It is expected that recording will be halted whenever VE is suspended. If recording is suspended, the reason is verbally documented on the audio/video media.

4.2.2 Position the camera(s) to record the VE of the Input Waste Container and its contents, **AND** start the camera(s) (if using Method 1).

4.2.3 Record verbally the Input Waste Container ID (if using Method 1).

NOTE
The Radiological Control Technician (RCT) SHALL be present to conduct radiological surveys in accordance with the Host site Interface Document and Host site procedures.

4.2.4 Remove/verify removal of the input waste container lid in accordance with Host site procedures.

[A] **IF** a rigid liner lid is present, **AND** the rigid liner lid is **NOT** vented (>0.3 in.) or filtered,
SUSPEND WORK, **AND** notify the VPM

[B] Remove the rigid liner lid, if applicable, in accordance with Host site procedures.

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NOTE

VE on large or heavy packages/items SHALL be performed as they are removed from the container.

Waste from the Input Waste Container may be segregated for VE as determined by the VEO.

4.2.5 Remove/verify removal of the waste from the Input Waste Container, as appropriate.

4.2.6 Open/verify opening of waste package/items, as appropriate.

4.3 Output Waste Container Verification

4.3.1 Record the following data for the Output Waste Container in Section 1 of Attachment 2:

[A.1] Output Waste Container ID

[A.2] Waste Stream ID

[A.3] Container Type (e.g., 55-gallon drum)

[A.4] TRUCON Code

[A.5] Waste Matrix Code

[A.6] Audio/Video Media Recording Number (if applicable)

NOTE

The RCT SHALL be present to conduct radiological surveys in accordance with the Host site Interface Document and Host site procedures.

4.3.2 Perform the following, **AND** record the applicable data for the Output Waste Container in Section 1 of Attachment 2:

[A] Record Output Waste Container Tare Weight.

[B] Remove the container lid in accordance with Host site procedures, as applicable.

[C] **IF** a rigid liner is **NOT** present,
THEN perform the following:

[C.1] Record NO, Rigid Liner Present?

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[C.2] Record NO, Rigid Liner Lid Present?

[C.3] Record N/A, Rigid Liner Lid is Vented (>0.3 in.), Filtered, and Serial No.?

[C.4] GO TO step 4.3.2[G].

[D] **IF** a rigid liner is present,
THEN record YES, the Type of Liner, and Thickness.

[E] **IF** a rigid liner lid is NOT present,
THEN record NO **AND** perform the following**:**

[E.1] Record N/A, Rigid Liner Lid is Vented (>0.3 in.) or Filtered?

[E.2] GO TO step 4.3.2[G].

[F] **IF** a rigid liner lid is present,
THEN record YES, **AND** perform the following**:**

[F.1] **IF** the rigid liner lid is vented (punctured) **AND** the puncture is >0.3 inches,
THEN record Vented, **AND** measure and record the Hole Size.

[F.2] **IF** the rigid liner lid is filtered,
THEN record Filtered, **AND** the Model No. and Serial No.

[F.3] Remove the rigid liner lid, if applicable, in accordance with Host site procedures.

[G] **IF** a bag liner is used,
THEN record YES.

[H] **IF** NO bag liner is used,
THEN record NO.

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4.4 Visual Examination (VE)

NOTE

Steps 4.4.1 through 4.4.8 may be repeated, as necessary, until loading of the Output Waste Container is complete.

Waste container(s) SHALL be closed and have a PCI applied when access to the container is uncontrolled.

A new Section 2 of Attachment 2 SHALL be used each time the waste container is opened, the PCI is removed, and waste is added.

Steps 4.4.1 through 4.4.5 may be performed in any order to accommodate the process.

Individual package/item(s) may be inspected and have a Section 2 of Attachment 2 completed for each, prior to bag out. A PCI may be applied to these package/item(s) for verification purposes.

4.4.1 **IF** a container PCI is applied to the waste container lid, **THEN** remove PCI in accordance with Host site procedures, **AND** record Removed Container PCI Number in Section 2 of Attachment 2, as required.

4.4.2 Remove lid in accordance with Host site procedures, as required.

4.4.3 Position that camera(s) to record the VE of the Output Waste Container and its contents, **AND** start the camera(s), as applicable.

4.4.4 Record verbally the Output Waste Container ID, as applicable.

NOTE

When performing Method 1, the camera(s) may require repositioning to record (audio/video) the weighing and final weight of each package from the container.

4.4.5 Examine the waste, **AND** record the applicable data in Section 2 of Attachment 2, except as noted:

[A] Date.

[B] Record Package Number, as applicable.

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NOTE
VEE will make determination on the disposition of waste > 200 mrem/hr at the surface.

[C] **IF** the waste is > 200 mrem/hr at the surface, **AND** is going to be placed into the Output Drum,
THEN perform the following:

(a) **WHEN** loading the waste,
THEN position as close as reasonably achievable to the side of the output container.

(b) **IF** the waste is a can with material in it,
THEN document it in the Comments block of Section 1 of Attachment 2.

[D] Record Waste Description.

[E] Determine the contents by WMP category per Table 3, **AND** document as follows:

[E.1] Ensure that there are no prohibited items present in the waste package/item.

NOTE
WMP weight and the method used to determine the weight of the WMP from Table 4, Waste Item Weights and Weighing Codes, may be recorded in Steps 4.4.5[E.2] **OR** 4.4.9 **OR** 4.4.14[A] to accommodate the process.

[E.2] Weight of each WMP and the method used to determine the weight of the WMP from Table 4, as required.

[F] Place a PCI on the package/item **AND** record the number, as required

[G] Place the package/item into the Output Waste Container as needed.

[H] **IF** package/item(s) are not to be direct loaded,
THEN record the following in Section 2 of Attachment 2:

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VEO 1

[H.1] Print name, sign, and date to annotate VE of package/item(s) is complete, **AND** NO Prohibited Items, listed in Table 1, are present.

(a) **IF** Method 1 is being performed,
THEN mark VEO 2 as N/A.

VEO 2

[H.2] **IF** Method 2 is being performed,
THEN print name, sign, and date to annotate VE of package/item(s) is complete, **AND** NO Prohibited Items, listed in Table 1, are present.

4.4.6 **IF** loading an Output Waste Container(s) with package/items(s) that were previously inspected,
THEN obtain appropriate Section 2(s) for items being loaded **AND** verify the information recorded on the Section 2(s) matches the package/items.

[A] **IF** package/item information recorded DOES **NOT** match the package/item,
THEN SUSPEND work and notify VPM.

4.4.7 Record Output Waste Container ID in Section 2 of Attachment 2.

4.4.8 Place the package/item into the Output Waste Container, as needed.

4.4.9 Record the weight of each WMP and the method used to determine the weight of the WMP from Table 4 in Section 2 of Attachment 2, as required.

4.4.10 **IF** additional waste packages/item(s) are to be added at a later time and access to the waste container is going to be left uncontrolled,
THEN perform the following:

[A] Apply the container PCI to the waste container in accordance with Host site procedures, **AND** record the applied PCI Number on Section 2 of Attachment 2, as required.

VEO

4.4.11 **IF** loading an Output Waste Container(s) with package/item(s) that were previously inspected, AND the loading is completed for the day,
THEN record the following on Section 2 of Attachment 2:

VEO 1

[A.1] **IF** Method 1 is being performed,
THEN mark VEO 2 as N/A.

VEO 2

[A.2] **IF** Method 2 is being performed,
THEN print name, sign and date.

4.4.12 **WHEN** loading of the Output Waste Container is complete,
THEN perform the following:

[A] Paginate page(s) of Section 2 of Attachment 2.

[B] Record the data listed below for the Output Waste Container in Section 1 of Attachment 2 as follows:

NOTE

The Volume Utilization Percentage (VUP) of the container is based on the highest level of the bulk of the waste. Items (e.g., pipe, scrap angle, plastic bags) which protrude above the bulk of the waste are **NOT** to be included in the fill percent determination. The fill percent is to be recorded in five percent increments (e.g., 35%, 40%, 45%).

[B.1] Estimate the VUP.

[B.2] Record NO or YES, to indicate whether the waste is consistent with the assigned Waste Stream Description and Waste Matrix Code.

(a) **IF** NO,
THEN initiate a Nonconformance Report (NCR) in accordance with CCP-QP-005, **AND** record the NCR No. in Section 1 of Attachment 2.

[B.3] Record Closure Method for layers of confinement, if applicable (see Table 2, Layers of Confinement).

[B.4] Using Table 2, determine the number and record the Number of Layers of Confinement, as applicable.

[C] GO TO Section 4.5 for Output Waste Container Lid Installation and Closure Verification.

4.4.13 Apply the PCI to the waste container **AND** record the applied PCI Number on Section 2 of Attachment 2, as required.

4.4.14 Record the Gross Weight by weighing the Output Waste Container after it is released to be moved to its staging area, in Section 1 of Attachment 2.

[A] Record the weight of each WMP and the method used to determine the weight of the WMP from Table 4 in Section 2 of Attachment 2, as required.

4.4.15 Perform the following, **AND** record the data in Section 3 of Attachment 2:

[A] Weigh or use Table 4 to estimate the weight of the Packaging Materials of the Output Waste Container, **AND** Total Packaging Weight.

[B] Weights of the WMPs by reviewing the WMPs listed in Section 2(s) of Attachment 2, **AND** combine all consistent WMPs.

[C] Total the WMPs, **AND** record the Total WMP Weight.

[D] Ensure the total of the WMP weights (Section 3, Attachment 2) is within five percent of the net weight of waste of the Output Waste Container obtained from subtracting the tare weight from the gross weight (Section 1, Attachment 2).

4.4.16 Record the following information in Section 4, Prohibited Item(s) Summary, of Attachment 2:

[A] Output Waste Container ID.

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[B] **IF** Section 2(s) of Attachment 2 were completed for individual package/items(s),
THEN verify signatures in Section 2(s) of Attachment 2, answer questions in Section 4 of Attachment 2 NO **OR** NA, as applicable.

[C] **IF** packaged/item(s) were direct loaded into Output Waste Container,
THEN answer NO, YES, or N/A appropriately, to the questions in Section 4 with all explanations annotated in the Comments block of Section 4 of Attachment 2.

[C.1] **IF** YES is marked in Section 4,
THEN initiate an NCR in accordance with CCP-QP-005, **AND** record the NCR No. in Section 1 of Attachment 2.

4.4.17 Determine (e.g., via Radiological Label or Dose Rate Survey) if the total dose rate of the waste container is >200 mrem/hr at the surface, **AND** record YES or NO in Section 1 of Attachment 2.

[A] **IF** the total dose rate is >200 mrem/hr at the surface,
THEN initiate an NCR in accordance with CCP-QP-005,
AND record NCR No. in Section 1 of Attachment 2.

4.4.18 STOP the camera(s) recording when VE is complete, as applicable.

4.4.19 Ensure YES or NO is recorded in Section 1 of Attachment 2 to indicate if any NCRs are associated with the applicable waste container.

[A] **IF** YES,
THEN ensure the appropriate NCR number(s) are recorded.

NOTE

All areas in the attachments that DO **NOT** have completed information SHALL be marked N/A.

4.4.20 Ensure Examination date recorded on Attachment 1 is the date the examination was completed.

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4.4.21 Record the following in Section 5, Approvals, of Attachment 2:

[A] Method 1

VEO 1

(a) Print name, sign, and date to annotate that the VE process has been completed.

(b) Mark VEO 2 as N/A.

(c) Prepare two (2) audio/video media recordings.

[B] Method 2

VEO 1

[B.1] Print name, sign, and date to annotate that the VE process has been completed.

VEO 2

[B.2] Print name, sign, and date to annotate that the VE process has been completed.

VEO

4.4.22 Affix new CCP Container Traveler(s) (Labels) to the Output Waste Container(s) in accordance with appropriate CCP Site Container Management procedure, as necessary.

4.4.23 **WHEN** all containers for a batch are complete,
THEN GO TO Section 4.6.

4.5 Container Lid Installation and Closure Verification

NOTE

Steps 4.5.1[A], [B], [C], [D], and [E] may be performed at any time during or after, Output Waste Container setup.

4.5.1 Perform the following, **AND** record the applicable data, for the Output Waste Container, in Section 1 of Attachment 2:

[A] Verify the Filter and Lid Ring/Bolt Torque Wrenches to be used are in calibration.

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[B] Filter Torque Wrench Serial/ID Number and Calibration Due Date.

[C] Container Lid Filter Model and Serial Number.

[D] Ensure the filter is installed in accordance with the manufacturer's instructions.

[E] Torque the filter to the manufacturer's specifications, **AND** record the Torque Value.

[F] Ensure the container lid is installed in accordance with the manufacturer's instructions.

[G] Lid Ring/Bolt Torque Wrench Serial/ID Number and Calibration Due Date.

[H] Torque the Container Lid Ring/Bolt(s) to the manufacturer's specifications, **AND** record the Torque Value.

4.5.2 GO TO step 4.4.13 as applicable.

VEO

4.6 Batch Data Report Preparation

4.6.1 Verify Field Records have been transcribed into the appropriate forms.

4.6.2 Assemble the following data for the BDR ensuring that the BDR number and, Examination Date, and Output Waste Container ID(s), as needed, are recorded on each Attachment:

[A] Attachment 5, CCP Waste VE Batch Data Report Cover Sheet

[B] Attachment 4, CCP Waste VE Batch Data Report Table of Contents

[C] Attachment 1, CCP Waste VE General Information Form

[D] Attachment 2, CCP Waste Visual Examination Data Form

[E] Attachment 3, CCP Waste VE Independent Technical Reviewer Checklist

[F] Copies of NCRs, if applicable

[G] Field Records, if applicable

4.6.3 Paginate the BDR.

4.6.4 Complete Attachment 4.

4.6.5 Forward the BDR package and the audio/video media, if applicable, to the ITR.

4.7 VE Independent Technical Review

NOTE

The independent technical review is conducted by an individual who is qualified to have performed the initial work, but who is **NOT** directly responsible for performing the work. The ITR can **NOT** review his/her own work.

If any item on Attachment 3 is marked NO and the condition **CAN NOT** be mitigated, an NCR will be initiated, per CCP-QP-005, **AND** only as a single NCR that identifies all deficiencies.

Independent Technical Reviewer (ITR)

4.7.1 Review the BDR to the criteria in Attachment 3, **AND** document.

4.7.2 Items marked NO require explanation in the Comments block, **AND** items marked NA may require explanation in the Comments block, as necessary to clarify.

4.7.3 Print, sign, and date Attachment 3 and Attachment 5.

4.7.4 Forward the BDR and the audio/video media, if applicable, to the Facility Records Custodian.

Facility Records Custodian

4.7.5 Receive, process, and transmit the BDR and the audio/video media, if applicable, in accordance with CCP-QP-008.

4.8 Newly Generated Waste Container Data Submission

VPM/Designee

4.8.1 Complete Attachment 6, CCP Newly Generated Waste Container Data, for newly generated waste containers generated during the performance of VE for the BDR.

4.8.2 Print name, sign, and date Attachment 6.

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4.8.3 Transmit the Attachment 6 to the Facility Records Custodian and transmit a copy of Attachment 6 to the cognizant Acceptable Knowledge Expert (AKE).

Facility Records Custodian

4.8.4 Receive, process, and transmit the Attachment 6 in accordance with CCP-QP-008.

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5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as Quality Assurance (QA) records in accordance with CCP-QP-008. The records are the following:

5.1.1 QA/Lifetime

[A] Batch Data Report (BDR)

[A.1] Attachment 1 – CCP Waste Visual Examination General Information Form

[A.2] Attachment 2 – CCP Waste Visual Examination Data Form

[A.3] Attachment 3 – CCP Waste VE Independent Technical Reviewer Checklist

[A.4] Attachment 4 - CCP Waste VE Batch Data Report Table of Contents

[A.5] Attachment 5 - CCP Waste VE Batch Data Report Cover Sheet

[A.6] Copies of NCRs, if applicable

[A.7] Field Records, if applicable

[B] Attachment 6 - CCP Newly Generated Waste Container Data

5.1.2 QA/Nonpermanent

[A] Two (2) Audio/Video Media Recordings (VHS Tape or DVD), if applicable

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Table 1. Prohibited Items

LIST OF PROHIBITED ITEMS
Liquid waste is not acceptable at WIPP - Observable liquid shall be no more than 1 percent by volume of the outermost container. - Internal containers with more than 60 milliliters or 3 percent by volume observable liquid, whichever is greater, are prohibited - Containers with Hazardous Waste Number U134 assigned shall have no observable liquid -Overpacking the outermost container that was examined or redistributing untreated liquid within the container shall not be used to meet the liquid volume limits.
Non-Radionuclide Pyrophorics
Non-mixed hazardous waste
Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials, and/or other wastes.)
Explosives
Compressed Gases/Pressurized containers (e.g., aerosol cans)
Polychlorinated Biphenyl (PCB) Liquids
Ignitables
Corrosives
Reactive waste
Sealed containers greater than 4 liters
Heat-sealed bags (unvented) with a surface area <390 square inches
Sharp or heavy objects (Large, bulky dense objects with sharp and obtrusive members or components with dispersible Form 1 and 2) (e.g., steel or concrete boxes, steel plate, electric motors, steel pipe, or concrete blocks) not adequately blocked, braced, or packaged.
Waste that has ever been managed as high-level waste and waste from tanks specified in Table C-8 of CCP-PO-001.

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Table 2. Layers of Confinement

Container [a]		Plastic Bags		Metal Cans	
Twist and Tape	CTT/STT	Twist and Tape	TT	Sealed	C
Fold and Tape	CFT/SFT	Fold and Tape	FT		
Other Closure	COC/SOC	Other Closure	OC		
Vented	(add) F	Vented	(add) F	Vented	(add) F

[a] Container: "C" - Container
"S" - Standard Waste Box (SWB)

Liner lids and packaging layers are distinguished as follows:

Layers of confinement are defined, per Section 3.8 of the CH-TRU Payload Appendices, as any boundary that restricts, but does not prohibit, the release of hydrogen gas across the boundary.

Examples of confinement layers are plastic bags (smaller inner bags or larger container liner bags) with the allowable closure methods described below and metal containers fitted with filter vents.

- Fold and tape closure
- Twist and tape closure
- Heat-seal closure or twist and tape closure with a minimum of one filter vent

NOTE

Punctured plastic bags, liner bags open at the end, pieces of plastic sheeting wrapped around the waste for handling, and metal containers with lid closures that allow free hydrogen release are not considered as confinement layers.

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Table 3. Waste Material Parameters

Waste Material Parameter	Description
Iron-based metals/alloys (IM)	Iron and steel alloys in the waste; does not include the waste container materials
Aluminum-based metals/alloys (AM)	Aluminum or aluminum-based alloys in the waste materials
Other metals (OM)	All other metals found in the waste materials
Other inorganic materials (OI)	Nonmetallic inorganic waste, including concrete, glass, firebrick, ceramics, sand, and inorganic sorbents
Cellulosics (C)	Materials generally derived from high polymer plant carbohydrates (e.g., paper, cardboard, wood, cloth)
Rubber (R)	Natural or man-made elastic Latex materials (e.g., surgeon's gloves, leaded rubber gloves)
Plastics (waste materials) (PW)	Generally man-made materials, often derived from petroleum feedstock (e.g., polyethylene, polyvinylchloride)
Organic matrix (OR)	Cemented organic resins, solidified organic liquids, and sludges
Inorganic matrix (IN)	Any homogeneous materials consisting of sludge, or aqueous-based liquids which are solidified with cement, calcium silicate, or other solidification agents (e.g., waste water treatment sludge, cemented aqueous liquids, and inorganic particulate)
Soils (S)	Generally consists of naturally occurring soils which have been contaminated with inorganic waste materials
Steel (packaging materials) (ST)	Container (e.g., 208-liter [55-gal.] drums)
Plastics (packaging materials) (PP)	Liner (e.g., 90-mil polyethylene drum liner and plastic bags)

Table 4. Waste Item Weights and Weighing Codes Page 1 of 3

ITEM	WEIGHT
3" Roll of Duct Tape	0.7 kg
3" Roll of Masking Tape	0.4 kg
10’ Tape Measure	0.1 kg
Channel Lock Pliers	0.3 kg
Crescent Wrench	0.2 kg
Flashlight With Batteries	0.5 kg
Flashlight Without Batteries	0.1 kg
Flat File	0.4 kg
Hacksaw With Blade	0.5 kg
Hammer	0.6 kg
Large Open-End Wrench	0.5 kg
Razor Knife	0.1kg
Scissors	0.2 kg
Vice Grip Pliers	0.5 kg
Welder’s Chipping Hammer	0.4 kg
Wire Brush	0.1 kg
Wooden Folding Ruler	0.2 kg
Wooden Wedge	0.2 kg
13 oz. Aerosol Can ¼ Full	0.2 kg
17 oz. Aerosol Can Full of Liquid	0.5 kg
17" Section of 1" Electrical Conduit	0.5 kg
17" Section of 1" Sch 40 S/s Pipe	1.1 kg
2’ X 4’ Board 20" long	0.7 kg
Empty 2-Gallon Car-boy	0.7 kg
Empty 6-Gallon Car-boy	2.0 kg
Empty POC	154.2 kg
Empty SWB	290.3 kg
2-Gallon Car-boy ½ Full of Water	5.8 kg
6-Gallon Car-boy ½ Full of Water	14.0 kg
5-Gallon Metal Bucket	1.3 kg
Metal Can	0.2 kg
Metal Can (for salt wastes)	1.1 kg
Aluminum Sphincter Can	0.2 kg
Sand Bag ½ Full of Gravel	12.7 kg
Plastic Bag for Waste	0.6 kg
Liner Bags – Large	0.5 kg
Rad Bags – Medium and Small	0.1 kg
55-Gallon 10-mil Plastic Bag (each)	1.8 kg
55-Gallon 5-mil Plastic Bag (each)	0.3 kg
55-Gallon 12-mil Plastic Bag (each)	2.1 kg
O-ring Plastic Bag (e.g., sludge, organic setups)	9.0 kg

Table 4. Waste Item Weights and Weighing Codes (Continued) Page 2 of 3

ITEM	WEIGHT
55-Gallon Drum PVC O-ring Bag (60.96 x 213.36 cm)	22.0 kg
55-Gallon Fiberboard Disk	48.0 kg
55-Gallon Drum Round Bottom 10-mil Liner	9.0 kg
(White) 55-Gallon Drum 90-mil Rigid Liner No Lid, used at LANL	4.3 kg
55-Gallon Drum 110-mil Rigid Liner	7.6 kg
(Black) 55-Gallon Drum 125-mil Rigid Liner No Lid, used at LANL	7.6 kg
55-Gallon Drum Poly Liner (122 x 122 x 213 cm)	12.0 kg
55-Gallon Cardboard Liner (graphite mold waste)	9.0 kg
55-Gallon Fiberboard Drum Liner (122 x 122 x 213 cm)	9.0 kg
55-Gallon Lead Liner, 180 cm long, 0.16 cm thick	23.0 kg
55-Gallon Lead Liner, 180 cm long, 0.32 cm thick	46.0 kg
Fiber Pack	13.0 kg
Fiber Pack Lead-Lined	66.0 kg
HEPA Filter (8 x 8 3-1/16)	1.0 kg
HEPA Filter (8 x 8 x 5-7/8)	1.9 kg
HEPA Filter (12 x 12 x 5-7/8)	2.5 kg
Lead Brick (5.1 x 10 x 20 cm)	12.0 kg
Oil-Dry	0.4 kg/liter
Vermiculite	0.1 kg/liter
Poly Bottles (1 gallon)	2.2 kg
Poly Bottles (1 liter)	0.5 kg
Setup Portland Cement	1.1 kg/liter
Uncured Portland Cement	2.9 kg/liter
Leaded Glovebox Glove	0.8 kg
Leaded Rubber Glove	2.5 kg
Leaded Rubber Glove	12.0 kg
Leaded Rubber Apron	2.4 kg
Leaded Rubber Apron	11.5 kg
Coveralls	0.9 kg
25’ Plastic Suit Hose	2.3 kg
50’ Plastic Suit Hose	5.0 kg
Plastic Suit Top and Pants	2.3 kg
55-Gallon Drum (painted – tan or white)	27.7 kg
55-Gallon Drum (painted – mustard yellow)	24.0 kg
55-Gallon Drum (painted – green)	30.0 kg
55-Gallon Drum (painted – grey)	26.3 kg
55-Gallon Drum (galvanized)	29.0 kg
85-Gallon Drum (painted)	37.2 kg

Table 4. Waste Item Weights and Weighing Codes (Continued) Page 3 of 3

ITEM	WEIGHT
Item Description (1 lb = 0.454 kgs) (All containers are 55-gal drums, unless otherwise noted	
110-Gallon Drum (painted)	45.0 kg
Lead-Lined Drum (1/16" thick, 28" high by 72" long)	22.7 kg
Lead-Lined Drum (1/8" thick, 28" high by 72" long) (.4 lb/in.^{3})	45.4 kg
Galvanized DOT 17C (Dull Finish) [Drum Bottom Labels 00040-00705]	31.7 kg
Galvanized (Shiny Drum and Lid Finish) [Drum Bottom Labels 01391 - 01568]	24.2 kg
Hanford Galvanized (Speckled Dull Finish - UNA1A2) [Drum Bottom Labels 00754 - 00933]	30.0 kg
Myers Galvanized (Shiny Finish - Labeled G5501) [Drum Bottom Labels 01200 - 01384]	22.7 kg
Myers Galvanized (Shiny Drum/Shiny Speckled Lid - Labeled G5501) [Drum Bottom Labels 00950 - 01150]	24.0 kg
Myers Yellow Painted	21.5 kg
Rocky Flats White Painted	27.2 kg
Black 90-mil Slip Fit Lid	7.4 kg
Black 110-mil Inner Lid	7.7 kg
Black 110-mil Beveled Top	7.4 kg
White 90-mil Slip Fit Lid	7.5 kg
125-mil Rigid Liner Lid	1.3 kg
B251 Bag - Tare Weight	0.1 kg
55-Gallon Fiberboard Liner (90 Mil)	3.7 kg
5-Gallon drum (LANL)	2.3 kg
7-Gallon drum (LANL)	2.8 kg
10-Gallon drum (LANL)	7.5 kg
30-Gallon drum (LANL)	16.4 kg

Weighing Notes and Codes			
[a] Record weights in kg out to one-tenth of a kg.			
W	Weight measured by the Operator.	E	Weight estimated by Operator

Attachment 1 – CCP Waste Visual Examination General Information Form

Batch Data Report No.:_____

☐ VE for Previously Packaged Waste ☐ VE for Newly Generated Waste	
☐ Method 1 ☐ Method 2	
Site ID:	
Examination Date:	
Procedure No.:	Revision No.:
Camera/Audio/Video Media Recording Check: ☐ N/A	☐ SAT
VE Scale Information: ☐ N/A	Serial/ID Number: Calibration Due Date: Operational Check: ☐ SAT ☐ UNSAT
Test Weight Information Test Weight Total: kg. Tray Weight: kg.	Serial/ID Number: Calibration Due Date: Serial/ID Number: Calibration Due Date: Serial/ID Number: Calibration Due Date:
Container Scale Information:	Serial/ID Number: Calibration Due Date: Operational Check: ☐ SAT ☐ UNSAT
Comments:	

Visual Examination Operator 1:		
Print Name	Signature	Date
Visual Examination Operator 2:		
Print Name	Signature	Date

Attachment 2 – CCP Waste Visual Examination Data Form Page 1 of 5

Batch Data Report No.:_____

Section 1: Output Waste Container Data		
Input Waste Container ID, as applicable:		
Output Waste Container ID:	Waste Stream ID:	
Container Type:	TRUCON Code:	Waste Matrix Code:
Audio/Video Media Recording Number: ☐ N/A		
Waste Container Weights: Tare Wt: kg.	Gross Wt: kg.	
Rigid Liner Present? ☐ NO ☐ YES Type of Liner: ☐ Lead ☐ Plastic ☐ Fiberboard ☐ Other: Thickness: ☐ 30-mil ☐ 90-mil ☐ 110-mil ☐ 125-mil	Rigid Liner Lid Present? ☐ NO ☐ YES Rigid Liner Lid is Vented (>0.3 in.) or Filtered? ☐ NO ☐ YES ☐ N/A ☐ Vented: Hole Size: ☐ N/A ☐ Filtered: Model No.: ☐ N/A Serial No.: ☐ N/A	
Bag Liner Present? ☐ NO ☐ YES	Volume Utilization Percentage: %	
Does the physical form of the waste match the Waste Stream Description (i.e., Homogeneous Solids, Soil/Gravel, or Debris Waste [including uncategorized metals])? ☐ NO ☐ YES		
Does the physical form of the waste match the Waste Matrix Code? ☐ NO ☐ YES		
Closure Method: Number of Layers of Confinement:		
<u>Filter Torque Wrench</u> Serial/ID No.: Calibration Due Date: Filter: Model No.: Serial No.: Torque Value:	<u>Lid Ring/Bolt Torque Wrench</u> Serial/ID No.: Calibration Due Date: Lid Ring/Bolt Torque Value:	
Is total dose rate greater than 200mrem/hr? ☐ NO ☐ YES		
NCR(s) associated with the output container? ☐ NO ☐ YES NCR No.:_____ NCR No.:_____		
Comments:		

Attachment 2 – CCP Waste Visual Examination Data Form (continued) Page 2 of 5

Batch Data Report No.:_____ **Date:**_____

Section 2: Waste Package Data				
Package and Package PCI Number (as applicable)	Waste Description	WMP [Table 3]	Weight (kg) [Table 4,[a]]	Weighing Code(s) [Table 4[b]]

_____ _____ _____
VEO 1: Print Name Signature Date

_____ _____ _____
VEO 2: Print Name Signature Date
Signatures annotate the absence of prohibited items.

Output Waste Container ID:_____

PCI Removed:_____ **PCI Applied:**_____

_____ _____ _____
VEO 1: Print Name Signature Date

_____ _____ _____
VEO 2: Print Name Signature Date

Signatures of VEO's verifying the loading of the Output Waste Container.

Attachment 2 – CCP Waste Visual Examination Data Form (continued) Page 3 of 5

Batch Data Report No.:_____

Output Waste Container ID:_____

Section 3: Packaging Material and Waste Material Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	
Plastics (PP):	
Others:	
Total Packaging Weight:	
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal/Alloys (IM):	
Aluminum-based Metals/Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (PW):	
Organic Matrix (OR):	
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	

Attachment 2 – CCP Waste Visual Examination Data Form (continued) Page 4 of 5

Batch Data Report No.:_____ Output Waste Container ID:_____

Section 4: Prohibited Item(s) Summary (Questions answered "YES" will be explained in the Comments block)		
	Yes	No
Is there any observable liquid in internal containers, that is more than 60 milliliters or 3 percent by volume, whichever is greater.	☐	☐
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☐	☐
Is there detectable observable liquid in outermost containers with an EPA Hazardous Waste Number of U134?	☐	☐
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☐
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☐
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match TRUCON Code[s])?	☐	☐
Is there an indication of wastes containing explosives or compressed gases?	☐	☐
Is there PCB liquids present?	☐	☐
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☐
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☐
TRUPACT II Criteria		
Are there heat-sealed bags (unvented) **GREATER** than 4 liters and LESS than 390 square inches in the waste?	☐	☐
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☐
Are there sealed containers **GREATER** than 4 liters?	☐	☐
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☐

Attachment 2 – CCP Waste Visual Examination Data Form (continued) Page 5 of 5

Batch Data Report No.:_____ Output Waste Container ID:_____

Section 4: Prohibited Item(s) Summary (Continued)

(Questions answered "YES" will be explained in the Comments block)

Comments:

Section 5: Approvals

Visual Examination Operator 1:

Print Name	Signature	Date

Visual Examination Operator 2:

Print Name	Signature	Date

Attachment 3 – CCP Waste VE Independent Technical Reviewer Checklist

Batch Data Report No.:_____ Page 1 of 2

Description			
1. Data generation and reduction were conducted in a technically correct manner in accordance with the methods used?	☐ NO	☐ YES	☐ N/A
2. Was the correct revision of operating procedure used?	☐ NO	☐ YES	☐ N/A
3. Are the waste material parameters (WMPs) entered correctly?	☐ NO	☐ YES	☐ N/A
4. Verify the hand calculations on the VE Data Form for the following:			
a. WMP weight totals	☐ NO	☐ YES	☐ N/A
b. Weight totals	☐ NO	☐ YES	☐ N/A
c. Summed volume of observable liquid, as necessary	☐ NO	☐ YES	☐ N/A
d. The total of the WMP weights is within 5% of the net weight of waste of the Output Waste Container obtained from subtracting the tare weight from the gross weight.	☐ NO	☐ YES	☐ N/A
5. Is the data reported in the correct units and correct number of significant figures?	☐ NO	☐ YES	☐ N/A
6. Has the data been reviewed for transcription errors?	☐ NO	☐ YES	☐ N/A
7. Does the Testing Batch Report include VE for up to 20 containers?	☐ NO	☐ YES	☐ N/A
8. BDR contents are complete and match the CCP Waste VE Batch Data Report Table of Contents?	☐ NO	☐ YES	☐ N/A
9. Is all the data signed and dated in reproducible ink and by the individual(s) generating it?	☐ NO	☐ YES	☐ N/A
10. Is all data recorded clearly, legibly, and accurately?	☐ NO	☐ YES	☐ N/A
11. All changes to original data lined out, initialed and dated by the individual making the changes?	☐ NO	☐ YES	☐ N/A
12. Were data changes made by the individual who originally collected the data or an equally qualified individual?	☐ NO	☐ YES	☐ N/A
13. Did the physical form of the waste match the Waste Matrix Code and Waste Stream Description?	☐ NO	☐ YES	☐ N/A

Attachment 3 – CCP Waste VE Independent Technical Reviewer Checklist (continued)

Batch Data Report No.: _____ Page 2 of 2

Description			
14. Was the waste in the Output Waste Container(s) examined for prohibited items?	☐ NO	☐ YES	☐ N/A
15. Is there an adequate written description of the contents of each item?	☐ NO	☐ YES	☐ N/A
16. Were the scale(s) in calibration prior to the VE and documented correctly?	☐ NO	☐ YES	☐ N/A
17. Were the scale checks SAT prior to the VE and documented correctly?	☐ NO	☐ YES	☐ N/A
18. Was the audio/video media recording properly prepared and labeled for each waste container?	☐ NO	☐ YES	☐ N/A
19. Was the audio/video media recording check performed satisfactorily prior to the VE?	☐ NO	☐ YES	☐ N/A
20. Precision: Was precision maintained by reconciling any discrepancies between the operator and the independent technical reviewer with regard to identification of waste matrix code, liquids in excess of TSDF-WAC limits, and compressed gases?	☐ NO	☐ YES	☐ N/A
21. Accuracy: Was accuracy maintained by requiring operators to pass a comprehensive examination and demonstrate satisfactory performance in the presence of the VE expert during their initial qualification and subsequent requalification (operators on LOQI)?	☐ NO	☐ YES	☐ N/A
22. Completeness: Is there a completed VE data form for each waste container in the BDR?	☐ NO	☐ YES	☐ N/A
23. Were NCRs initiated as required?	☐ NO	☐ YES	☐ N/A
Comments:			
I have reviewed 100 percent of the container-specific and batch data in this report and find it acceptable. Independent Technical Reviewer: _____ _____ _____ Printed Name Signature Date			

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Attachment 4 – CCP Waste VE Batch Data Report Table of Contents

Batch Data Report No.: _____ Examination Date: _____

Table of Contents		
Item	Description	Page No.
1	CCP Waste VE Batch Data Report Cover Sheet	
2	CCP Waste VE Batch Data Report Table of Contents	
3	CCP Waste Visual Examination General Information Form	
4	CCP Waste Visual Examination Data Forms	
5	CCP Waste VE Independent Technical Reviewer Checklist	
6	Copy of NCRs (N/A, If Not Applicable)	
7	Field Records (N/A, If Not Applicable)	

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Attachment 5 – CCP Waste VE Batch Data Report Cover Sheet

Batch Data Report No.: _____ Examination Date: _____

Waste Container ID Number:	
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

Independent Technical Reviewer:

_____	_____	_____
Print Name	Signature	Date

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Attachment 6 – CCP Newly Generated Waste Container Data

Batch Data Report No.: _____ Examination Date: _____

Container ID	Waste Stream ID	Generation Date	Closure Date	Vent Date	Container Type

VPM/Designee:

_____ _____ _____
Print Name Signature Date

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CCP-TP-119

Revision 5

CCP
Operating the Real-Time Radiography (RTR) System #5

EFFECTIVE DATE: 09/13/2012

Mike Ramirez

PRINTED NAME

APPROVED FOR USE

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
0	09/08/2005	Initial issue.
1	05/16/2006	Revised Section 4.0 to add console EMERGENCY STOP Button and clarify procedural steps and documentation of semi-annual safety checks and inspections.
2	11/16/2006	Revised to remove reference to CCP-TP-102 and replace with CCP-TP-053, and to implement the Waste Isolation Pilot Plant Hazardous Waste Facility Permit requirements resulting from the Section 311/Remote-Handled (RH) Permit Modification Request (PMR).
3	11/08/2007	Revised to keep personnel safe from standing on conveyor per CCP-PO-005, *Conduct of Operations*, when testing emergency stop (E-STOP) buttons.
4	02/24/2011	Revised document to clarify correct management position titles at the request of the Host site. Procedure updated to correct missing step for manual warm-up of RTR unit. Address alternative Method for Controlling Hazardous Energy for compliance with Host site procedures.
5	09/13/2012	Revised to reflect the changes to Advanced Mixed Waste Treatment Project (AMWTP's) Technical Safety Requirement/Documented Safety Analysis (TSR/DSA) requirements.

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Attachment 1 – CCP Radiography System Safety Checks 21

1.0 PURPOSE

The purpose of this procedure is to provide instructions for the startup, operation, and shutdown of the Real-Time Radiography (RTR) System #5.

1.1 Scope

This procedure specifies actions necessary for startup, daily operational safety checks, operations, and shutdown of RTR System #5, for use in fast scanning waste containers in conjunction with CCP-TP-066, *CCP Radiography Screening Procedure for Prohibited Items*, or for use in certified scanning of waste containers in conjunction with CCP-TP-053, *CCP Standard Real-Time Radiography (RTR) Inspection Procedure*.

2.0 REQUIREMENTS

2.1 References

Referenced Documents

- CCP-HSP-009, *CCP RTR Health and Safety Plan*
- CCP-QP-002, *CCP Training and Qualification Plan*
- CCP-QP-008, *CCP Records Management*
- CCP-TP-053, *CCP Standard Real-Time Radiography (RTR) Inspection Procedure*
- CCP-TP-066, *CCP Radiography Screening Procedure for Prohibited Items*
- CCP-TP-140, *CCP Equipment Maintenance*

2.2 Training Requirements

2.2.1 Personnel performing this procedure will be trained and qualified in accordance with CCP-QP-002, *CCP Training and Qualification Plan,* prior to performing this procedure.

2.3 Precautions and Limitations

2.3.1 An alternative method of hazardous energy control may be used when performing daily inspections of the shielded enclosure or testing the emergency stop switch in the shielded enclosure. The RTR operator complies with the alternative method by removing and maintaining control of the X-Ray console X-Ray key and the control room access key for hydraulic driven equipment.

2.3.2 Any equipment modifications that could alter radiation protection shall be reviewed and approved by the Vendor Project Manager (VPM), Rad Engineer, and the Subcontract Technical Representative (STR). After the modifications are completed, a survey shall be conducted to ensure personnel will **NOT** be exposed to unnecessarily high levels of radiation. This step must comply with the Host site configuration management system.

2.3.3 If this procedure can **NOT** be implemented as written, RTR personnel shall notify appropriate supervision. If it is determined that a portion of the work can **NOT** be accomplished as described in this procedure, **OR** would result in an undesirable situation, work shall be STOPPED and the VPM and Shift Supervisor (SS) shall be notified, **AND** the RTR system SHALL be placed Out Of Service . Work will **NOT** be resumed until this procedure is modified or replaced by a new document that reflects the current work practice.

2.3.4 The personal protective equipment (PPE) for normal operations is contained in CCP-HSP-009, *CCP RTR Health and Safety Plan*. Personnel will don the required or specified PPE before starting RTR operations.

2.3.5 High energy X-Rays, high voltages (HVs), and pinch points are the potential hazards associated with the RTR System. These hazards are addressed in CCP-HSP-009, for personnel who operate the RTR system.

2.4 Prerequisite Actions

2.4.1 When approaching the radiation source, use a suitable operable calibrated survey instrument to verify that the source is in its fully shielded condition or that the X-Ray tube has been de-energized.

NOTE

The RTR System #5 SHALL be placed Out Of Service anytime the facility process, or equipment is **NOT** capable of being operated and maintained as intended.

2.4.2 Prior to initial startup, perform shielding surveys in accordance with Host site work orders.

2.4.3 Verify that the most recent documented radiation survey of the RTR system has been performed within the last six months, **AND** after any maintenance or modification of the X-Ray shielding.

[A] Record status on Attachment 1, CCP Radiography System Safety Checks.

[B] **IF** Radiation Survey is **NOT** current,
THEN STOP WORK **AND** notify RTR Lead Operator (LO) and VPM.

2.4.4 Verify Vault Door Interlocks, Audible and Visual Warning Signals, Minimum 20 Second Delay Function and EMERGENCY STOP Buttons have been inspected and tested semi-annually.

[A] Record status on Attachment 1.

[B] **IF** inspections and tests are **NOT** current,
THEN STOP WORK, **AND** notify RTR LO and VPM.

NOTE

System repairs, including replacement of parts, will be performed in accordance with CCP-TP-140, *CCP Equipment Maintenance*.

2.4.5 **IF** any of the system checks fail,
THEN STOP WORK, **AND** notify the RTR LO and VPM.

3.0 RESPONSIBILITIES

3.1 RTR Operator

3.1.1 Implements this procedure to conduct waste container scanning in conjunction with CCP-TP-053 or CCP-TP-066.

3.1.2 Reports failure of any operational safety check to the VPM and RTR LO.

3.2 Facility Records Custodian

3.2.1 Receives, processes, and transmits all records generated by this procedure in accordance with CCP-QP-008, *CCP Records Management.*

4.0 PROCEDURE

NOTE
Section 4.1 MUST be performed prior to operating RTR System #5.

4.1 Pre-Startup Operations

4.1.1 **IF** during this operation any abnormal conditions are observed, **THEN** STOP WORK, place equipment in a safe configuration, **AND** notify the RTR LO and VPM to place the RTR system Out Of Service.

4.1.2 Perform the following pre-startup operations before powering up the RTR System #5:

[A] Verify the conveyor doors are unlocked, open, **AND** secured, as needed.

[B] Verify all radiation warning signs are posted in accordance with applicable Host site procedures.

[C] Visually check the conveyors to make sure they are free from obstructions.

[D] Enter the Control Room, **AND** perform the following:

NOTE
The Hydraulic Control Panel EMERGENCY STOP Button is **NOT** part of the daily or semi-annual INTERLOCK/EMERGENCY STOP switch checks.

[D.1] Visually inspect the Hydraulic Control Panel EMERGENCY STOP Button for damage.

[D.2] Energize the Hydraulic Control Panel by pulling the EMERGENCY STOP Button to the OUT position, **AND** turn ON the hydraulic pump at the end of the Operator's Bench **OR** exit the control room and enter the equipment room, **AND** energize the hydraulic pump locally if necessary.

[D.3] Turn ON all monitors, **AND** all rack-mounted equipment.

[D.4] OPEN vault doors and ensure that applicable RAD survey is performed, **AND** conditions are safe.

[D.5] CLOSE the Vault Doors after RAD survey.

4.2 Powering the X-Ray System

NOTE
The key switch, Red and Green Buttons, and display readouts referenced in this Section are located on the PANTAK Industrial X-Ray Controller.

4.2.1 Verify that NO one is in the vault by visually checking the vault monitor.

4.2.2 Verify the vault doors are CLOSED by checking the conveyor monitor, switching the camera inputs as necessary, **AND** that the Door Closed Indicator light on the control panel is illuminated.

4.2.3 Verify that NO one is on the conveyors by checking the conveyor monitor, **AND** switching camera inputs, as necessary.

4.2.4 Maintain constant surveillance during the test to make sure that NO personnel enter the area.

4.2.5 Insert the X-Ray console X-Ray key into the switch, **AND** turn the key from the OFF (O) position to the SAFE (~) position.

4.3 EMERGENCY STOP Button and Interlock Operation Check and Inspection

NOTE
This section will verify the operation of the X-Ray safety interlocks. This verification will be documented on Attachment 1, CCP Radiography System Safety Checks.

4.3.1 Visually inspect the following for damage:

[A] Vault EMERGENCY STOP Button, while performing step 4.3.8.

[B] X-Ray control panel EMERGENCY STOP Button

[C] (2) Vault door Interlock switches

4.3.2 Ensure that the vault doors are closed.

4.3.3 Turn X-Ray key to the X-Rays ON position.

4.3.4 Verify that the Interlock status LED is OFF.

[A] **IF** the LED remains ON,
THEN STOP WORK, **AND** notify the RTR LO and VPM.

4.3.5 Turn the X-Ray key to X-Rays safe position, **AND** remove key.

4.3.6 OPEN the vault doors.

4.3.7 Press EMERGENCY STOP Button inside the vault.

4.3.8 Re-enter control room, insert the X-Ray key, **AND** turn to the X-Rays ON position.

4.3.9 Close the vault doors.

4.3.10 Verify that the Interlock status LED is ON.

[A] **IF** the LED remains OFF,
THEN STOP WORK, **AND** notify the RTR LO and VPM.

4.3.11 Turn the X-Ray key to the X-Rays safe position, **AND** remove the key.

4.3.12 OPEN the vault doors.

4.3.13 Reset EMERGENCY STOP Button inside the vault.

4.3.14 Re-enter the control room, insert the X-Ray key, **AND** turn to the X-Rays ON position.

4.3.15 Close the vault doors.

4.3.16 Verify that the Interlock status LED is OFF.

[A] **IF** the LED remains ON,
THEN STOP WORK, **AND** notify the RTR LO and VPM.

4.3.17 Press the EMERGENCY STOP Button on the X-Ray control panel.

4.3.18 Verify that the X-Ray control cabinet and control panel powers down.

[A] **IF** the power remains ON,
THEN STOP WORK, **AND** notify the RTR LO and VPM.

4.3.19 Reset the EMERGENCY STOP Button.

4.3.20 Verify that the X-Ray control cabinet and control panel powers back up.

[A] **IF** the power remains OFF,
THEN STOP WORK, **AND** notify the RTR LO and VPM.

4.3.21 On Attachment 1, record Vault Door Interlock and EMERGENCY STOP Button operating status.

4.4 X-Ray Unit Warm-Up

NOTE

This section must be carried out at the start of each day's work, **OR** after a period of more than four hours idle time. The warm-up complete condition can be canceled by turning the Key Switch to the OFF position. If the warm-up LED is illuminated, either automatic or manual warm-up sequence must be completed prior to beginning X-Ray operations.

4.4.1 Check the previous RTR Operational Logbook entry for last operation of the X-Ray unit, **AND** determine how long since the last operation, **AND** if any abnormalities were noted.

NOTE

If the unit has been inactive for greater than four weeks, a manual warm-up MUST be performed.

4.4.2 Verify that NO personnel are inside the vault.

4.4.3 Ensure vault doors are closed.

4.4.4 Ensure the Image Intensifier shutters are CLOSED.

NOTE

After the START Button is pushed, the X-Ray controller begins the 20 second pre-warning (delay function) period. Unless vault door interlocks or EMEGENCY STOP Buttons are operated, X-Ray generation will commence automatically at the end of this period.

NOTE

The warm-up is automatically completed once the maximum Kilovolt (kV) value for the X-Ray tube is achieved.

4.4.5 For Automatic Warm-up perform the following:

[A] Insert key **AND** turn to X-Rays ON position.

[B] Verify that the warm-up LED is illuminated.

[C] Press the Green START Button.

4.4.6 For Manual Warm-up, perform the following:

[A] Ensure the X-Ray key is in the X-Ray ON position.

[B] Toggle the Manual Warm-up, if necessary, using the round key.

[C] Holding the PRESET Switch, adjust the command parameters to 160kV, max mA.

[D] Press the Green START Button.

[E] Increase the kV demand by 10kV at approximately three minute intervals.

[F] Maintain close observation of the kV and mA feedback meters watching for instability.

[G] **IF** the readings fluctuate,
THEN reduce the demand to a stable point, **AND** restart the interval timing.

[H] Repeat steps 4.4.6[E] and 4.4.6[F] until maximum output is reached.

[I] **AFTER** warm-up is complete,
THEN press the Red STOP Button.

4.4.7 During the pre-warning period, verify the Minimum 20 Second Delay, **AND** observe the following pre-warning alarms inside the vault:

[A] Amber warning light

[B] Audible alarm

4.4.8 With X-Rays ON, observe the following:

[A] X-Ray LED on the controller is illuminated.

[B] kV/mA displays are operational.

[C] Flashing red beacon inside the vault is illuminated.

[D] “GRAVE DANGER, VERY HIGH RADIATION AREA INSIDE” signs over the vault doors are illuminated.

4.4.9 Record the status of the audible and visual WARNING lights, including the Minimum 20 Second Delay on Attachment 1.

4.4.10 **IF** the audible or visual WARNING signals, **OR** the Minimum 20 Second Delay are inoperable,
THEN notify the VPM, **AND** RTR LO to place the RTR system Out Of Service.

4.4.11 Record site location and examination date on Attachment 1.

4.4.12 Print name, sign, and date Attachment 1.

4.4.13 Submit Attachment 1 to the Facility Records Custodian.

Facility Records Custodian

4.4.14 Receive, process and transmit Attachment 1 in accordance with CCP-QP-008.

4.5 Audio/Video Recording System Setup

NOTE

The audio/video recording system is comprised of an Image Intensifier with integrated closed caption device (CCD) camera, raw video monitor, audio/video media recorders, video character generator, and video printer. Additionally, there is a CCD video camera and a dedicated monitor for surveillance of the X-Ray vault and two additional CCD video cameras, one at load and one at unload.

4.5.1 Audio/Video Recording System Power Up

NOTE

Powering of equipment can be verified with the pilot lights on each piece of equipment.

[A] **IF** a piece of equipment is **NOT** powered ON, **THEN** check the individual power switch.

[B] **IF** this DOES **NOT** correct the problem, **THEN** perform the following:

[B.1] Power OFF the individual piece of equipment, **AND** check the associated fuse, circuit breaker, **OR** electrical cord.

[B.2] DO **NOT** proceed until the equipment is repaired or replaced.

[C] Insert the audio/video recording media to be used for recording the scans.

[D] Verify counts are set to ZERO, if applicable.

4.5.2 Video Monitor Setup

[A] Verify the POWER Switches for all video monitors are in the ON position.

[B] Verify the power ON lights are illuminated on all video monitors.

4.5.3 Video Graphic Printer Setup (if required)

[A] Verify the video graphic printer POWER Switch is in the ON position, **AND** the green light is illuminated.

[B] Verify the printer paper supply is adequate to support the RTR scanning activities.

[B.1] **IF** printer paper is required,
THEN load paper in accordance with the manufacturer's instructions.

4.5.4 Character Generation (if required)

[A] Press the POWER Button on the Character Generator Keyboard.

[B] **IF** the Keyboard Power Switch DOES **NOT** function normally,
THEN perform the following:

[B.1] Check the ON/OFF Switch located in the back of the instrument rack as follows:

(a) **IF** the switch is in the OFF position,
THEN press the switch to the ON position.

(b) **IF** the switch is in the ON position,
THEN cycle the switch OFF for a few seconds,
AND return the switch to the ON position.

[C] Press the New Page Key, **AND** verify the cursor appears on the monitor.

[D] Perform the following at the Character Generator Keyboard:

[D.1] Type the container number,
AND press New Line.

[D.2] Type the date, **AND** press New Line.

[D.3] Type the RTR Operator name.

[E] Press the PLAY key.

NOTE
The information entered will be the overlay for the container scan that is being recorded. This information will be entered for each container at the time of RTR for that particular container.

[F] Check that the information entered appears on the monitor.

4.6 Container Loading

NOTE
This section is performed for each container entering the vault for RTR scanning.

4.6.1 Load one or more containers onto the in-feed conveyor using the applicable Host site procedures.

4.6.2 **IF** applicable,
THEN obtain the container number and weights supplied by the governing procedure, **AND** verify the container number is listed in the Acceptable Knowledge (AK) documentation.

4.6.3 **IF** applicable,
THEN ensure container number on the traveler matches the number on the container.

4.6.4 **IF** the container number is **NOT** valid,
THEN notify the RTR LO, **AND** DO **NOT** process the container until the discrepancy is resolved.

4.6.5 Verify that the measuring devices and/or the Lines-Pair Resolution Test Gauge are affixed to the containers as necessary.

NOTE
When the container reaches the staged location, the in-feed conveyor will automatically STOP if INFEED AUTO is selected. The in-feed conveyor may also be jogged in either direction using the INFEED FOR/OFF/REV Selector Switch on the Hydraulic Control Panel.

4.6.6 While viewing the in-feed and vault video monitors, perform the following:

[A] Energize the in-feed conveyor, **AND** position container as necessary.

[B] OPEN the Vault Doors,

[C] Lower, **AND** shift the turntable to the front of the vault as needed.

[D] Energize the pusher to the PART FWD position to stage the container on the center of the turntable.

[E] Return the pusher to the HOME position.

[F] View the vault monitor to ensure no personnel have entered the vault.

[G] CLOSE the Vault Doors.

[H] Verify the correct container number by viewing vault camera monitor.

[I] START X-Rays, **AND** view the X-Ray image monitor

4.7 Radiography Operations

NOTE

During the performance of Radiography, the RTR Operator may adjust settings and rotate the drum, as required.

4.7.1 Commence RTR in accordance with CCP-QP-002, CCP-TP-066, or CCP-TP-053.

4.7.2 Continue RTR until all containers have been scanned for the shift or the day.

4.8 Container Unloading

4.8.1 At the Operator Control Panel, perform the following while maintaining visual surveillance on the out-feed and vault video monitors:

[A] OPEN the vault doors.

[B] Lower and shift the turntable to the rear of the vault.

[C] Energize the pusher to the Full FWD position to remove the container from the vault.

[D] Jog the out-feed conveyor as needed to position the container for unloading.

[E] Energize the pusher to the HOME position.

[F] Unload the container(s) from the out-feed conveyor using the applicable Host site procedures.

[G] Remove measuring devices from the containers, as necessary.

4.9 RTR System Shutdown

NOTE
This Section is used to shutdown the RTR system after all scanning activities have been completed.

4.9.1 At the X-Ray Controller, turn the X-Ray key to OFF (O) position, **AND** remove the key.

4.9.2 CLOSE the vault doors as directed by the LO or VPM.

4.9.3 Turn OFF hydraulic pump in the equipment room or at the end of the Operator's Bench, **AND** CLOSE the conveyor doors, as necessary.

NOTE
The Hydraulic Control Panel EMERGENCY STOP Button is **NOT** part of the daily or semi-annual interlock/emergency stop switch checks.

4.9.4 Push in EMERGENCY STOP Button at the Hydraulic Control Panel.

4.9.5 CLOSE the II Shutters.

4.10 Audio/Video Recording System Shutdown

4.10.1 Rewind if applicable, **AND** remove the audio/video recording media from the recording equipment.

4.10.2 Verify the audio/video recording media are marked as specified in accordance with CCP-TP-053.

4.10.3 Power-down the audio/video media recorders.

4.10.4 Power-down all video monitors.

4.10.5 Power-down the video graphic printer, if required.

4.10.6 Power-down the character generator.

5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as Quality Assurance (QA) records in accordance with CCP-QP-008. The records are the following:

5.1.1 QA Nonpermanent

[A] Attachment 1 – CCP Radiography System Safety Checks

Controlled
Copy

Attachment 1 – CCP Radiography System Safety Checks

Site Location:_____

Examination Date:_____

X-Ray Compliance Certification Current	☐ Yes	☐ No
Audible and Visual Warning Signals Operating	☐ Yes	☐ No
Door Interlocks Operating	☐ Yes	☐ No
Minimum 20 Second Delay Function	☐ Yes	☐ No
Emergency Stop Buttons	☐ Yes	☐ No

RTR Operator Approval

Operator's Printed Name:_____

Signature: _____ Date:_____

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CCP-TP-162

Revision 2

CCP Random Selection of Containers for Solids and Headspace Gas Sampling and Analysis

EFFECTIVE DATE: 01/16/2013

Mike Ramirez

PRINTED NAME

APPROVED FOR USE

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
0	06/19/2009	Initial issue to combine CCP-TP-160, *CCP Random Selection of Containers for Headspace Gas Sampling and Analysis,* and CCP-TP-161, *CCP Random Selection of Containers for Solids Sampling and Analysis,* into single procedure and incorporate freeze file changes and Central Characterization Project (CCP) Management Assessment, CCP-MA-0027-08 findings.
1	12/29/2010	Minor revision to update references to the *Waste Isolation Pilot Plant Hazardous Waste Facility Permit.*
2	01/16/2013	Revised to incorporate Nuclear Waste Partnership (NWP) transition changes and freeze file changes.

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1.0 PURPOSE

CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan,* Section C2, requires that containers be randomly selected for solids and headspace gas (HSG) sampling and analysis. This procedure describes the process the Central Characterization Program (CCP) uses for random selection of contact-handled (CH) and remote-handled (RH) transuranic (TRU) waste containers for Solids and HSG sampling and analysis.

1.1 Scope

This procedure applies to retrievably stored, repackaged or treated, and newly generated S5000 debris, S4000 soil/gravel, and S3000 homogeneous solids waste streams that require solids or HSG sampling and analysis for waste characterization.

2.0 REQUIREMENTS

2.1 References

- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- CCP-QP-002, *CCP Training and Qualification Plan*
- CCP-QP-008, *CCP Records Management*
- CCP-TP-003, *CCP Data Analysis for S3000, S4000, and S5000 Characterization*

2.2 Training Requirements

2.2.1 Personnel performing this procedure will be trained and qualified in accordance with CCP-QP-002, *CCP Training and Qualification Plan*, prior to performing this procedure.

3.0 RESPONSIBILITIES

3.1 Site Project Manager (SPM)

3.1.1 Reviews the acceptable knowledge (AK) documentation to determine the number of containers in the waste stream Random Selection (RS) lot.

3.1.2 Identifies the containers in the waste stream RS lot, **AND** records identified containers for electronic delivery to the Site Project Manager (SPM) performing RS.

3.1.3 Estimates the number of containers expected for indeterminate subsequent RS lots, if any, as needed for selection of subsequent RS lot samples.

3.1.4 Documents the justification for any deviation from the list of selected containers developed by the SPM performing RS as occurring.

3.1.5 Ensures containers identified for sampling are properly staged and sampled or sent for coring as soon as practical in coordination with the Vendor Project Manager (VPM).

3.1.6 Reports those containers that have completed sampling and analysis to the SPM performing RS so that they may be released from shipping exclusion lists.

3.2 SPM Performing Random Selection

3.2.1 Obtains listing of containers in the accessible portion of the waste stream RS lot and estimated range of numbers of indeterminate containers for subsequent RS lots from the responsible SPM.

3.2.2 Performs random selection of containers to be sampled and analyzed.

3.2.3 Prepares and submits the Headspace Gas Random Sample Selection Memorandum or Solids Random Sample Selection Memorandum, as appropriate.

3.2.4 Prepares and submits the Subsequent Headspace Gas Random Sample Candidate Selection Memorandum or Subsequent Solids Random Sample Candidate Selection Memorandum, as appropriate.

3.2.5 Prepares and submits the Subsequent Headspace Gas Random Sample Selection Memorandum or Subsequent Solids Random Sample Selection Memorandum, as appropriate.

3.2.6 Ensures that the appropriate RS Lot Identification (RS Lot ID) numbers and Exclusion Listing holds are placed on the containers in the CCP Data Center container and data tracking system.

3.2.7 Performs the assignment of container identification (ID) numbers in Indeterminate Waste Stream RS lots as previously indeterminate containers are identified and added to the corresponding AK Tracking Spreadsheets.

3.2.8 Removes Exclusion Listing holds as sampled containers are reported by the SPM or when RS lot sampling is complete and contingency selections are no longer needed.

3.3 Vendor Project Manager (VPM)

3.3.1 Ensures that the containers selected for sampling go through the appropriate sampling process in coordination with the SPM or Designee.

4.0 PROCEDURE

NOTE
If there are fewer containers than the minimum required number of samples in a waste stream, then each container will be sampled at least once as described in Section 4.2.

4.1 Determining Random Sampling Population

SPM

4.1.1 Review the AK documentation to determine the number of containers in the waste stream or waste stream RS lot.

4.1.2 Identify the containers in the waste stream RS lot, **AND** record identified containers for electronic delivery to the SPM performing the random selection.

4.1.3 Estimate the number of containers expected for indeterminate subsequent RS lots, if any, as needed for the SPM performing RS.

NOTE
Specific steps used in performing the random selection of containers for sampling cite spreadsheet functions and menu selections associated with Microsoft Excel®. If another commercial spreadsheet program is used, the functionally equivalent functions and menu selections should be used.

SPM Performing Random Selection

[A] **IF** the entire population of the waste stream is accessible for sampling and analysis,
THEN GO TO Section 4.2.

[B] **IF** the entire population of the waste stream is known, **AND** only a portion of the waste stream is accessible for sampling and analysis,
THEN GO TO Section 4.2.

[C] **IF** the population of the waste stream as a whole is indeterminate, (e.g., continually generated waste streams from ongoing processes),
THEN divide the waste stream into waste stream RS lots,
AND GO TO Section 4.3.

4.2 Container RS for Sampling from Accessible Waste Stream or Waste Stream RS Lot Populations

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NOTE

When the waste stream population is divided into multiple waste stream RS lots, the steps of Section 4.2 will be repeated for each waste stream RS lot for which all containers are known. For RS lots with indeterminate containers, the steps of Section 4.3 will be followed.

NOTE

For the initial sample selection for a solids waste stream RS lot, *n* will equal five. If the waste stream has fewer than five containers, the entire waste stream will be characterized in one lot and one or more containers will require multiple sampling to yield a total of five samples in addition to the required co-located pair.

For the initial sample selection for a HSG waste stream RS lot, *n* will equal ten. For HSG waste streams with fewer than ten containers, the entire waste stream will be characterized in one lot and all containers will be HSG sampled.

For subsequent required samples from within the same solids or HSG waste stream RS lot, *n* will be determined using the minimum required sample size calculations described in CCP-TP-003, *CCP Data Analysis for S3000, S4000, and S5000 Characterization*.

If the RS Lot size permits, the total number of selected and contingency containers identified and held for potential sampling should be at least 15.

4.2.1 Create a spreadsheet with the title to include the waste stream identification (WSID) number and waste stream RS Lot ID number, using Microsoft Excel® or equivalent.

4.2.2 Create a column within the spreadsheet containing the Container ID numbers for the waste stream or waste stream RS lot, excluding all containers identified in previous Solids or Headspace Gas Random Sample Selection Memorandum.

4.2.3 Generate a random number associated with each container in the waste stream RS lot in an adjacent column, using the Random Number Function in Microsoft Excel® or equivalent.

[A] The function used in Microsoft Excel® is:

=RAND()

Where:

=RAND() is a Microsoft Excel® Function that produces a random number greater than or equal to 0 and less than 1.

[B] Select and copy the column containing the generated random numbers, using the Edit, Copy menu selections.

[C] Replace the column containing the generated random numbers with its corresponding fixed values, using the Edit, Paste Special, Value menu selections.

4.2.4 Sort the container numbers based on the numbers in the random number column in ascending order, using the Data, Sort menu options.

4.2.5 Identify the first *n* containers in the resulting Solids or HSG Random Sample Selection Listing as the primary Solids or HSG sample selection for the associated waste stream RS lot.

4.2.6 Identify a sufficient additional number of containers in the Solids or HSG Random Sample Selection Listing to serve as contingency selections in the event additional containers require sampling, any selected containers cannot be physically and safely sampled, or any selected containers are subsequently removed from the waste stream by AK reevaluation.

4.2.7 Print the completed Solids or HSG Random Sample Selection Listing of all containers, and associated generated random numbers to be included as an attachment to the applicable Solids or Headspace Gas Random Selection Memorandum.

4.2.8 Create a Solids Random Sample Selection Memorandum or Headspace Gas Random Sample Selection Memorandum, as applicable, to include the following information as a minimum:

- The name of the SPM performing RS preparing the memorandum.
- The identification of the waste stream and waste stream RS lot ID number.
- The date the memorandum is signed by the SPM performing RS.
- The population size (number of containers in the waste stream RS lot) from which containers have been selected for Solids or HSG sampling and analysis.
- The quantity of containers selected for Solids or HSG sampling and analysis and number of containers identified as contingency selections.
- A complete listing of the randomly selected container numbers that were selected by this random selection method with their associated random numbers and order of selection for sampling.
- Identification of all containers within the entire population of the waste stream RS lot with their associated random numbers.

4.2.9 Attach the corresponding Solids or HSG Random Sample Selection Listing, when applicable.

4.2.10 Sign the Solids or Headspace Gas Random Sample Selection Memorandum.

4.2.11 Forward copies of the completed Solids or Headspace Gas Random Sample Selection Memorandum to the SPM(s) and VPM(s) for the associated site.

4.2.12 Submit the signed original Solids or Headspace Gas Random Sample Selection Memorandum for the waste stream RS lot to the CCP Records Center in accordance with CCP-QP-008, *CCP Records Management*.

4.2.13 Apply appropriate Exclusion List holds to selected and contingency containers in the CCP Data Center container and data tracking system to preclude shipping of such containers until required sampling and analysis have been performed.

4.2.14 Apply appropriate RS Lot ID numbers to all containers in the waste stream RS lot population in the CCP Data Center container and data tracking system.

4.3 Container RS for Sampling from Indeterminate Waste Stream Populations

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NOTE

For the initial sample selection for a Solids waste stream RS lot, the sample size, *n,* will equal five. If the waste stream has fewer than five containers, the entire waste stream will be characterized in one RS lot and one or more containers will require multiple sampling to yield a total of five samples in addition to the required co-located pair.

For the initial sample selection for a HSG waste stream RS lot, the sample size, *n,* will equal ten. For HSG waste streams with fewer than ten containers, the entire waste stream will be characterized in one RS lot and all containers will be HSG sampled.

For subsequent required samples from within the same Solids or HSG waste stream RS lot, the size of *n* will be determined using the minimum sample size calculations described in CCP-TP-003.

If the RS lot size permits, the total number of selected and contingency containers identified and held for potential sampling should be at least 15.

4.3.1 Determination of Sample Selection for Waste Stream RS Lot 1

[A] Create a spreadsheet with the title to include the WSID number and waste stream RS Lot ID number, using Microsoft Excel® or equivalent.

NOTE

The accessible containers in an indeterminate Solids waste stream will be considered the first waste stream RS lot and must include at least five containers.

The accessible containers in an indeterminate HSG waste stream will be considered the first waste stream RS lot and must include at least 10 containers.

[B] Create a column within the spreadsheet containing the Container ID numbers for the first waste stream RS lot.

[C] Generate a random number associated with each container in the first waste stream RS lot in an adjacent column, using the Random Number function in Microsoft Excel® or equivalent.

[C.1] The function used in Microsoft Excel® is:

=RAND()

Where:

=RAND() is a Microsoft Excel® Function that produces a random number greater than or equal to 0 and less than 1.

[C.2] Select and copy the column containing the generated random numbers, using the Edit, Copy menu selections.

[C.3] Replace the column containing the generated random numbers with its corresponding fixed values using the Edit, Paste Special, Value menu selections.

[D] Sort the container numbers based on the numbers in the random number column in ascending order, using the Data, Sort menu selections.

[E] Identify the first *n* containers in the resulting Solids or HSG Random Sample Selection Listing as the primary Solids or HSG sample selection for the associated waste stream RS lot.

[F] Identify a sufficient additional number of containers in the Solids or HSG Random Sample Selection Listing to serve as contingency selections in the event additional containers require sampling, any selected containers cannot be physically and safely sampled, or any selected containers are subsequently removed from the waste stream by AK reevaluation.

NOTE

For very small waste stream RS lots the Random Sample Selection Listing of step 4.3.1[G] may be incorporated into the body of the Random Selection Memorandum instead of included as a separate attachment.

[G] Print the completed Solids or HSG Random Sample Selection Listing to be included as an attachment to the applicable Solids or Headspace Gas Random Selection Memorandum.

[H] Create a Solids Random Sample Selection Memorandum or Headspace Gas Random Sample Selection Memorandum, as applicable, to include the following information as a minimum:

- The name of the SPM performing RS preparing the memorandum.
- The identification of the waste stream and waste stream RS lot number.
- The date the memorandum is signed by the SPM performing RS.
- The population size (number of containers in the waste stream RS lot) from which containers have been selected for Solids or HSG sampling and analysis.
- The quantity of containers selected for Solids or HSG sampling and analysis and number of containers identified as contingency selections.
- A complete listing of the randomly selected container numbers that were selected by this random selection method with their associated random numbers and order of selection for sampling.

- Identification of all containers within the entire population of the waste stream RS lot with their associated random numbers.

[I] Attach the corresponding Solids or HSG Random Sample Selection Listing, when applicable.

[J] Sign the Solids or Headspace Gas Random Sample Selection Memorandum.

[K] Forward copies of the completed Solids or Headspace Gas Random Sample Selection Memorandum to the SPM(s) and VPM(s) for the associated site.

[L] Submit the signed original Solids or Headspace Gas Random Sample Selection Memorandum for the waste stream RS Lot 1 to the CCP Records Center in accordance with CCP-QP-008.

[M] Apply appropriate Exclusion List holds to selected and contingency containers in the CCP Data Center container and data tracking system to preclude shipping of such containers until required sampling and analysis have been performed.

[N] Apply RS Lot ID number 1 to all containers in the RS Lot 1 population in the CCP Data Center container and data tracking system.

4.3.2 Selection of Subsequent RS Lot Samples

NOTE
Normally, waste streams need to be divided into no more than two RS lots.

[A] In consultation with the SPM, estimate a conservatively low minimum and a conservatively high maximum for the number of containers expected in the subsequent waste stream RS lot population.

[B] Create a spreadsheet with the title to include the Waste Stream ID Number and RS Lot ID Number, if applicable, using Microsoft Excel® or equivalent.

[C] Create a column in the spreadsheet with sufficient rows for the maximum number of containers identified in step 4.3.2[A]. Fill in the column with the known container IDs and "to be determined (TBD)" for the remaining rows up to the identified maximum.

[D] Create a second column containing a unique container sequence number for the indeterminate containers (those containers with "TBD" in the container ID column).

[E] Generate a random number associated with each container and/or container sequence number combination in an adjacent column using the Random Number function in Microsoft Excel® or equivalent.

[E.1] The function used in Microsoft Excel® is:

=RAND()

Where:

=RAND() is a Microsoft Excel® Function that produces a random number greater than or equal to 0 and less than 1.

[E.2] Select and copy the column containing the generated random numbers, using the Edit, Copy menu selections.

[E.3] Replace the column containing the generated random numbers with its corresponding fixed values, using the Edit, Paste Special, Value menu selections.

[F] Sort the container sequence numbers based on the numbers in the random number column in ascending order, using the Data, Sort menu selections.

[G] Identify the first *n* containers in the resulting sorted listing with sequence numbers less than or equal to the minimum number estimated in step 4.3.2[A] as initial candidate containers for sampling, while preserving the sorted listing order.

[H] Identify a sufficient additional number of containers in the Solids or HSG Random Sample Selection Listing to serve as contingency selections in the event additional containers require sampling, any selected containers cannot be physically and safely sampled, or any selected containers are subsequently removed from the waste stream by AK reevaluation.

[I] Create a Subsequent Solids Random Sample Candidate Selection Memorandum or Subsequent Headspace Gas Random Sample Candidate Selection Memorandum, as appropriate, to include the following information as a minimum:

- The name of the SPM performing RS preparing the memorandum.
- The identification of the waste stream and waste stream RS lot number.
- The date the memorandum is signed by the SPM performing RS.
- The estimated minimum and maximum population sizes (number of containers in the waste stream RS lot) from which candidate container sequence numbers have been selected for Solids or HSG sampling and analysis.
- The quantity of containers selected for Solids or HSG sampling and analysis and number of containers identified as contingency selections.
- A complete listing of the randomly selected candidate container sequence numbers that were determined to be eligible for selection by this random selection method with their associated random numbers, preserving the random-number-sorted order established in step 4.3.2[G] and showing the associated order of selection for sampling.
- Description of methodology used for objective assignment of sequential container numbers.

[J] Attach the corresponding Solids or HSG Random Sample Selection Listing, when applicable.

[K] Sign the Subsequent Solids or Headspace Gas Random Sample Candidate Selection Memorandum created in step 4.3.2[I].

[L] Forward copies of the completed Subsequent Solids or Headspace Gas Random Sample Candidate Selection Memorandum to the SPM(s) and VPM(s) for the associated site.

[M] Submit the signed original Subsequent Solids or Headspace Gas Random Sample Candidate Selection Memorandum for the waste stream RS lot to the CCP Records Center in accordance with CCP-QP-008.

[N] Apply appropriate Exclusion List holds to selected and contingency containers identified in step 4.3.2[G] and step 4.3.2[H] in the CCP Data Center container and data tracking system to preclude shipping of such containers until required sampling and analysis have been performed.

[O] Apply appropriate RS Lot ID numbers to all containers in the RS lot population in the CCP Data Center container and data tracking system.

[P] As additional containers with sequence numbers in excess of the estimated minimum are received, repeat step 4.3.2[G] and step 4.3.2[H] as necessary to select previously non-selected container sequence numbers as they become available and release previously selected containers no longer contained within the first n containers on the listing with sequence numbers less than or equal to the currently encountered population size.

[Q] Monitor the AK Tracking Spreadsheet updates on the Waste Isolation Pilot Plant (WIPP) sftp web site to identify additional containers for the waste stream RS lot.

[Q.1] Associate such containers with the next available indeterminate container sequence number.

[Q.2] Repeat steps 4.3.2[N] and 4.3.2[O] for the additional identified containers.

[Q.3] Notify the site SPM(s) and VPM(s) by e-mail when any such additional containers are selected for sampling or contingency hold pending potential sample selection.

[R] Upon completion of identification of all containers in the waste stream RS lot or upon reaching the maximum number of containers estimated in step 4.3.2[A], create a Subsequent Solids Random Sample Selection Memorandum or Subsequent Headspace Gas Random Sample Selection Memorandum to include, as a minimum, the following information:

- The name of the SPM performing RS preparing the memorandum.
- The identification of the waste stream and waste stream RS lot number.
- The date the memorandum is signed by the SPM performing RS.
- The title, date, and serial number of the previously issued Subsequent Solids Random Sample Candidate Selection Memorandum or Subsequent Headspace Gas Random Sample Candidate Selection Memorandum associated with this waste stream RS lot.
- The quantity of containers selected for Solids or HSG sampling and analysis and the number of containers identified as contingency selections.
- A complete listing of the randomly selected candidate container sequence numbers that were ultimately selected for Solids or HSG sampling and analysis using this random selection method, preserving the random-number-sorted order established in step 4.3.2[F] and showing the associated order of selection for sampling.
- Identification of all containers within the entire population of the waste stream RS lot.
- A listing of the correlation of randomly generated numbers selected, sequence numbers, and associated actual Container ID numbers.

[S] Attach the corresponding Solids or HSG Random Sample Selection Listing, when applicable.

[T] Sign the Subsequent Solids Random Sample Selection Memorandum or Subsequent Headspace Gas Random Sample Selection Memorandum created in step 4.3.2[R].

[U] Forward copies of the completed Subsequent Solids Random Sample Selection Memorandum or Subsequent Headspace Gas Random Sample Selection Memorandum to the SPM(s) and VPM(s) for the associated site.

[V] Submit the signed original Subsequent Solids Random Sample Selection Memorandum or Subsequent Headspace Gas Random Sample Selection Memorandum for the waste stream RS lot to the CCP Records Center.

SPM

4.3.3 Upon receipt of the RS Memorandum, verify that the sampling selection is random by confirming that each listed container in the RS lot has an associated random number assigned, **AND** verify that the RS lot has been sorted into ascending random number order for selection of the containers to be sampled.

4.3.4 Report those containers that have completed sampling and analysis to the SPM performing RS so that they may be released from shipping exclusion lists.

NOTE

If any container selected for sampling CAN **NOT** be sampled because it is removed from the waste stream, **OR** CAN **NOT** be safely retrieved and sampled, **OR** other adequate justification exists for removal from the RS population, the container may be replaced with a contingency container identified in Section 4.2 or Section 4.3 as next in order using the following step.

4.3.5 **IF** any container identified for sampling in Section 4.2 or Section 4.3 CAN **NOT** be sampled,
THEN perform the following:

[A] Replace the affected container with the container next in order among the identified contingency selections.

[B] **IF** sampling cannot be performed on a selected container or containers,
THEN prepare a Sample Selection Container Replacement Memorandum to include, as a minimum, the following information:

- Name of the SPM preparing the memorandum.
- Identification of the waste stream and waste stream RS lot number.
- The date the memorandum is signed by the SPM.
- The reasons sampling could not be successfully performed on the selected container(s) taken from the selection listing and substituted for the unsuccessfully sampled container(s).

[C] Sign the Sample Selection Container Replacement Memorandum.

[D] Forward copies of the completed Sample Selection Container Replacement Memorandum to the SPM performing the RS and VPM(s) for the associated site.

[E] Submit the signed original Sample Selection Container Replacement Memorandum for the waste stream RS lot to the CCP Records Center in accordance with CCP-QP-008.

5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as Quality Assurance records in accordance with CCP-QP-008. The records are the following:

5.1.1 QA/Nonpermanent

[A] **Solid Sampling**

[A.1] Solids Random Sample Selection Memorandum with attached listing when applicable.

[A.2] Subsequent Solids Random Sample Candidate Selection Memorandum with attached listing when applicable.

[A.3] Subsequent Solids Random Sample Selection Memorandum with attached listing when applicable.

[A.4] Sample Selection Container Replacement Memorandum when applicable.

[B] **HSG Sampling**

[B.1] Headspace Gas Random Sample Selection Memorandum with attached listing when applicable.

[B.2] Subsequent Headspace Gas Random Sample Candidate Selection Memorandum with attached listing when applicable.

[B.3] Subsequent Headspace Gas Random Sample Selection Memorandum with attached listing when applicable.

[B.4] Sample Selection Container Replacement Memorandum when applicable.

Controlled
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CCP-TP-500

Revision 11

CCP
Remote-Handled Waste
Visual Examination

EFFECTIVE DATE: 04/21/2011

Larry Porter

PRINTED NAME

APPROVED FOR USE

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
0	02/15/2006	Initial issue.
1	04/27/2006	Revised in response to CBFO comments.
2	06/19/2006	Revised to address concerns raised during the Idaho National Laboratory (INL) Remote-Handled (RH) Audit A-06-21.
3	10/12/2006	Revised to resolve issue identified in EPA Concern ANL-CCP-RH-VE-06-001CR.
4	11/16/2006	Revised to incorporate Visual Examination Expert (VEE) decisions and signature.
5	06/01/2007	Revised to incorporate February 27, 2007, modification of the Waste Isolation Pilot Plant Hazardous Waste Facility Permit (HWFP), Attachment B-B6, Waste Analysis Plan (WAP).
6	10/25/2007	Revised in response to Central Characterization Project (CCP) Corrective Action Report (CAR) CAR-RHBCL-00002-07, to clarify questions 11 and 12 on Attachment 2, Visual Examination Independent Technical Review Checklist.
7	02/27/2008	Revised to address Carlsbad Field Office (CBFO) Corrective Action Report (CAR) 08-005.
8	07/24/2008	Clarification changes for ease of operations.
9	06/30/2010	Revised to make changes for a two shift operation and two different sets of qualified operators to be able to work on the same Remote-Handled (RH)-Visual Examination (VE). Added Table 1, Prohibited Items List, and updated language to reflect the permit modification.
10	12/29/2010	Revised to incorporate Permit Modification Independent Technical Review (ITR) language.
11	04/21/2011	Implement Revision 2 of Remote-Handled Transuranic (TRU) Waste Characterization Program Implementation Plan DOE/WIPP-02-3214.

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1.0 PURPOSE

This procedure establishes how to perform the visual examination (VE) for remote-handled (RH) transuranic (TRU) waste. This procedure also describes how to prepare and review batch data reports (BDRs) generated by VE.

This procedure provides the actions for collection of VE data and information required by CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan;* CCP-PO-002, *CCP Transuranic Waste Certification Plan;* and DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan* (WCPIP).

1.1 Scope

VE verifies the physical waste form, confirms the Waste Stream Description and Waste Matrix Codes provided by Acceptable Knowledge (AK), and confirms that no prohibited items are present. VE is performed by two qualified operators, which is documented on the attachments to this procedure.

VE cannot identify prohibited items imbedded in forms, such as soils and solids, when the material is not removed from the characterized container.

VE may be performed on S3000 or S4000 when the material is not removed from the characterized container if CBFO approves the method for the specific waste form, typically from a surveillance.

VE may be performed in two phases. In the first phase, VE is performed by two qualified operators at the point of generation where the waste is visually inspected, identified, and placed into small containers. At this point (after waste has been placed in small containers), the waste may no longer be visible in its packaging. The packaging could be the small containers that will eventually be packaged into a larger container or a final container. In the second phase, VE is performed when small packages are placed in a larger container or the final container, documented, and then closed rendering VE of the waste no longer possible.

In addition to being used to perform VE at the time waste is actually being placed into the waste container, this procedure may also be used to perform VE of video media of waste being placed into waste containers. In the case of VE being performed for video tapes of waste contents, the VE operators are not in direct control of the waste examination and packaging process. Consequently, the video recordings must be adequate and complete to identify waste materials and verify the absence

of prohibited items as required in the execution of this procedure. Attachment 1, Visual Examination Data Form, for the individual containers, is completed based on the review of the video media.

All site-specific requirements for health, safety, and operations in the work place will be addressed in a site-specific operating procedure.

2.0 REQUIREMENTS

2.1 References

Baseline Documents

- *Safety Analysis Report for the RH-TRU 72-B Waste Shipping Package,* U.S. Department of Energy Carlsbad Field Office
- CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC)*
- DOE/WIPP 90-045, *Remote-Handled-Transuranic Waste Content Codes (RH-TRUCON)*

Referenced Documents

- DOE/WIPP-02-3214*, Remote-Handled TRU Waste Characterization Program Implementation Plan*
- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- CCP-PO-002, *CCP Transuranic Waste Certification Plan*
- CCP-QP-002, *CCP Training and Qualification Plan*
- CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
- CCP-QP-008, *CCP Records Management*

2.2 Training Requirements

2.2.1 Personnel performing this procedure will be trained and qualified in accordance with CCP-QP-002, *CCP Training and Qualification Plan,* prior to performing this procedure.

2.3 Equipment List

2.3.1 None.

2.4 Precautions and Limitations

2.4.1 Facility Requirements

[A] This procedure augments, but DOES **NOT** supersede, applicable requirements of the facilities in which the activities are conducted.

[B] This procedure DOES **NOT** address radiological protection requirements. All activities described SHALL be conducted in accordance with work plans, procedures, or other process controls generated by the facility where the work is performed.

[C] Personnel will have read and understand the applicable health and safety plan prior to performing work.

2.4.2 Conditions Adverse to Quality

[A] If a condition adverse to quality is identified, the individual(s) identifying the condition SHALL initiate a nonconformance report (NCR) in accordance with CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*.

3.0 RESPONSIBILITIES

3.1 Visual Examination Operator (VEO)

3.1.1 Performs the VE.

3.1.2 Assembles the BDR.

3.1.3 Completes Attachment 1(s).

3.1.4 Paginates the BDR.

3.1.5 Completes Attachment 4, Visual Examination Batch Data Report Cover Sheet.

3.1.6 Completes Attachment 5, Visual Examination Batch Data Report Table of Contents.

NOTE

The Independent Technical Reviewer (ITR) will be someone, other than the visual examination operator (VEO), who is qualified to have performed the work. ITRs shall not be involved in the generation or recording of the data.

3.2 Independent Technical Reviewer (ITR)

3.2.1 Reviews the BDR.

3.2.2 Completes Attachment 2(s), Visual Examination Independent Technical Reviewer Checklist.

3.3 Visual Examination Expert (VEE)

3.3.1 Responsible for overall direction and implementation of the VE at that facility.

3.4 Site Project Manager (SPM)

3.4.1 Reviews and approves the BDR.

3.4.2 Completes Attachment 3, Visual Examination Site Project Manager Checklist.

3.5 Facility Records Custodian/Records Custodian

3.5.1 Receives, processes, and transmits all records generated by this procedure in accordance with CCP-QP-008, *CCP Records Management*.

4.0 PROCEDURE

NOTE

A separate Attachment 1 will be used for each small container or package used to contain waste, **AND** an Attachment 1 will be used when combining several smaller packages into a larger container.

A Testing Batch includes all data pertaining to VE for up to 20 containers without regard to waste matrix.

A separate Attachment 1 will be used if the original operators that started the VE could not complete the container (e.g., end of the shift), **AND** two different qualified operators had to resume or finish VE of the container.

Two VEOs, who are equally trained in accordance with CCP-QP-002, will confirm the contents of the waste whether video recording is used or not used.

VEO

4.1 VE for Single Packages (small packages or final containers)

4.1.1 Preparations

[A] Record the following information on Attachment 1:

[A.1] Site Identification (ID) (e.g., RHANL)

[A.2] Examination Date

[A.3] Batch Number if known, otherwise mark as N/A

[A.4] Procedure and Revision Number

[B] Prepare the recording equipment as follows (optional):

[B.1] **IF** recording equipment is to be used,
THEN operate the recording equipment in accordance with site procedures.

[B.2] Verify the recording media is labeled with the container number and date, **AND** annotate the video number on Attachment 1.

[B.3] To verify the recording equipment is operating satisfactorily, record a short segment, **AND** review segment for clarity of image and audio, if applicable.

[B.4] Check SAT (Satisfactory), UNSAT (Unsatisfactory), or N/A on Attachment 1 to record the result of the Recording Equipment Check.

NOTE

If using video/audio media, record the waste packaging event for the container such that the waste placed into the containers are recorded in sufficient detail that a trained VEO can determine what the waste is and its associated waste material parameter.

[B.5] **IF** recording the VE,
THEN enter the Recording Start time on Attachment 1, **AND** begin recording.

4.1.2 Visual Examination (VE)

[A] **IF** a single container will be used for all of the waste to be packaged,
THEN check the Initial Container field N/A, **AND** use the Final Container fields to record steps 4.1.2[B.1] through 4.1.2[J.2].

[B] **IF** the waste will be packaged in small containers and later combined in a final container,
THEN check the Final Container field N/A, **AND** record the following in the Initial Container fields on a separate Attachment 1 for each small container:

NOTE

The Container or Package ID Number is user defined (must be unique to the package or container) but shall be such that the small containers in a final container can be distinguished from each other.

[B.1] Container or Package ID Number

[B.2] Container Type (e.g., less than 4-liter plastic bottle, plastic bag, filtered plastic bag, unsealed 5-gallon pail, 55-gallon drum)

[B.3] Waste Matrix Code as identified from AK

[B.4] Waste Stream as listed in the AK Summary Report

[C] **IF** combining smaller containers into a larger container,
THEN GO TO Section 4.2.

NOTE

The description of the material to be placed in the package shall be sufficiently detailed to allow a reviewer to evaluate the Waste Material Parameters (e.g., crescent wrench Iron-based Metals/Alloys [IM]). The material parameters are listed in Table 2, Waste Material Parameters.

[D] Examine the waste, **AND** record the description of the material to be placed in the package in the Waste Description field on Attachment 1.

[E] Ensure the waste is placed into the package.

[F] **IF** VE of the container can **NOT** be completed by the original qualified operators that started the waste container for any reason,
THEN STOP and notify the VE Expert.

[G] Complete comment section of on Attachment 1, initial and date comments. New qualified operators SHALL initial and date comments for acceptance of waste previously placed into the waste container.

[H] **IF** different qualified operators resume or complete the VE the operators will start a separate Attachment 1 at step 4.1.2[D],
THEN complete Attachment 1 per CCP-TP-500, *CCP Remote-Handled Waste Visual Examination*.

[I] **WHEN** the waste package is full,
OR the bag has met the packaging limit,
THEN perform the following and document on Attachment 1:

[I.1] **IF** recording,
THEN STOP the recording device, **AND** enter the Recording Stop time.

[I.2] **IF** packaging waste in smaller containers that will be combined into a larger container,
THEN GO TO step 4.1.2[I.6]

[I.3] Check Y (Yes) or N (No) to record use of Rigid Liner and enter type (i.e., rigid liner thickness).

[I.4] Check Y or N to record use of Rigid Liner Lid.

[I.5] **IF** liner lid is used,
THEN record hole size in Rigid Liner Lid.

NOTE

The fill percent of the container is based on the highest level of the bulk of the waste. Items (e.g., pipe, plastic bags) that protrude above the bulk of the waste are **NOT** to be included in the fill percent determination. The fill percent is to be recorded in five percent increments (e.g., 35%, 40%, and 45%).

[I.6] Estimate, **AND** record the fill percent.

[I.7] Determine and record the amount of organic waste in 10 percent increments by volume.

[I.8] Ensure the bag liner is closed by either VE or AK record, if applicable.

[I.9] Enter the number of Layers of Confinement for the package.

[I.10] Enter the Closure Method(s) for the individual Layers of Confinement (use the Comments field on Attachment 1 if additional room is needed). N/A if there are no Layers of Confinement.

[I.11] Ensure the lid of the waste container is installed in accordance with Host site procedures, if applicable.

[I.12] **IF** the waste stream is S3000 **OR** S4000 waste that also contains debris,
THEN visually estimate the total weight of debris in the container of waste, **AND** record the debris weight in the Comments field of Attachment 1.

[I.13] Answer the Prohibited Item/RH 72B Criteria questions on Attachment 1.

NOTE

Packaging material applies to the final container only.

[J] Certify the contents of the package by performing the following:

VEO 1

[J.1] Print name, sign, **AND** date Attachment 1 to annotate that the VE has been completed.

VEO 2

[J.2] Print name, sign, **AND** date Attachment 1 to annotate that the VE has been completed.

VEO

[K] Ensure the waste package is stored with reasonable protection from tampering.

4.2 VE for Final Packaging

NOTE

VE for Final Packaging applies when waste package(s) are to be placed into a larger container. For packages VE'd by tape review, the applicable steps in Section 4.2 are completed using AK information.

VEO

4.2.1 Prepare packages for loading as follows:

[A] Identify the packages to be placed in the larger container, **AND** obtain the Attachment 1 for those containers.

[B] Ensure all of the Attachment 1s show that the waste belongs to the same waste stream, there are NO prohibited items present, **AND** there are NO NCRs open that would require additional handling of the waste.

4.2.2 Verify each Package ID Number against the Attachment 1 prior to loading into the larger container.

4.2.3 For each package to be loaded into the larger container, perform the following:

[A] Record the Package ID Number(s) in the Waste Description field on Attachment 1.

[B] Ensure the package is placed into the larger container.

[C] Repeat steps 4.2.3[A] and 4.2.3[B] for each package to be loaded.

[D] **IF** waste container can NOT be completed by the original qualified Operators that started the waste container for any reason,
THEN STOP AND Notify the VE Expert.

[E] Complete comment section of Attachment 1, initial and date comments. New qualified operators SHALL initial and date comments for acceptance of waste previously placed into the waste container.

[F] **IF** different qualified operators resume or complete the VE, **THEN** the operators will start with a separate Attachment 1 at step 4.1.2[D] and complete Attachment 1 per CCP-TP-500.

4.2.4 **WHEN** the waste container is FULL,
OR the waste container has met the packaging limit as defined in the AK Summary Report,
THEN perform the following:

[A] **IF** recording,
THEN STOP the recording device,
AND enter the Recording Stop time on Attachment 1.

[B] Check Y or N to record use of Rigid Liner, **AND** enter type.

[C] Check Y or N to record use of Rigid Liner Lid.

[D] **IF** liner lid is used,
THEN record hole size in Rigid Liner Lid.

NOTE

The fill percent of the container is based on the highest level of the bulk of the waste. Items (e.g., pipe, plastic bags) that protrude above the bulk of the waste are **NOT** to be included in the fill percent determination. The fill percent is to be recorded in five percent increments (e.g., 35%, 40%, and 45%).

[E] Estimate, **AND** record the fill percent.

[F] Determine and record the amount of organic waste in 10 percent increments by volume.

[G] Ensure the bag liner is closed by either VE or AK record, if applicable.

[H] Enter the number of Layers of Confinement for the package.

[I] Record the Closure Methods(s) for the individual Layers of Confinement. Use the Comments field on Attachment 1 if additional room is needed. N/A if there are no Layers of Confinement.

[J] Ensure the lid of the waste container is installed in accordance with Host site procedures, if applicable.

[K] **IF** the waste stream is S3000 OR S4000 waste that also contains debris,
THEN visually estimate the total weight of debris in the container of waste and record the debris weight in the comment field of Attachment 1.

[L] Answer the Prohibited Item/RH 72B questions on Attachment 1.

4.2.5 Certify the contents of the package by performing the following:

VEO 1

[A] Print name, sign, **AND** date Attachment 1 to annotate that the VE has been completed.

VEO 2

[B] Print name, sign, **AND** date Attachment 1 to annotate that the VE has been completed.

VEO

[C] Ensure the waste package is stored with reasonable protection from tampering.

4.3 Batch Data Report Preparation

NOTE

The Testing BDR will contain Attachment 1s for no more than 20 containers. Each container may hold several smaller packages, and each of those may potentially also hold smaller packages, resulting in a number of Attachment 1s for each container.

BDR numbering will be as follows: Site ID, process, year, next sequential number to start back at one at the beginning of the new year (e.g.,ANLRHVEO5001).

VEO

NOTE

For packages VE'd by tape review, the original packaging data sheet, if available (obtained from AK), is included in the BDR and placed behind the corresponding Attachment 1 (See Attachment 6, Waste Package Data Sheet, for an example).

4.3.1 Complete Attachment 4.

4.3.2 Assemble the following data for the BDR:

[A] Attachment 5, Visual Examination Batch Data Report Table of Contents

[B] Attachment 1 for each container, original packaging data sheet (if applicable), and the associated Attachment 1s for the internal containers

[C] Attachment 2, Visual Examination Independent Technical Reviewer Checklist

[D] Copy of NCRs, if applicable

4.3.3 Prepare the BDR as follows:

[A] Assemble and organize the BDR.

[B] Place the Internal Container Attachment 1s and original packaging data sheet if applicable, behind the Final Container Attachment 1 in which it resides.

[C] Paginate the BDR.

[D] Complete Attachment 5.

4.3.4 Submit the in process BDR to the VE Expert. The VE Expert will designate ITR.

NOTE

The independent technical review is conducted by an individual who is qualified to have performed the initial work, but who is **NOT** directly responsible for performing the work. The ITR shall not be involved in the generation or recording of the data.

ITR

4.3.5 Enter the BDR Number on Attachment 2.

4.3.6 Review the BDR to the criteria in Attachment 2, **AND** document on Attachment 2.

4.3.7 Print name, sign, and date Attachment 2.

4.3.8 Submit the completed BDR and audio/video media, when applicable, to the Facility Records Custodian/Records Custodian.

NOTE

The historical audio/media record may be submitted on a container basis (individual audio/video record per container) or pre-submitted as a library (audio/video records which contain multiple containers) to Central Characterization Project (CCP) Records.

Facility Records Custodian/Records Custodian

4.3.9 Receive, process, and transmit the completed BDR and audio/video media, where applicable, in accordance with CCP-QP-008.

4.4 Site Project Manager (SPM) Review

SPM

4.4.1 Obtain copy of BDR.

4.4.2 Enter the BDR Number on Attachment 3.

4.4.3 Review the BDR to the criteria in Attachment 3, **AND** document on Attachment 3.

4.4.4 Print name, sign, and date Attachment 3.

4.4.5 Forward the completed Attachment 3 to the Facility Records Custodian/Records Custodian.

5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as Quality Assurance (QA) records in accordance with CCP-QP-008. The records are the following:

5.1.1 QA/Lifetime

[A] Batch Data Report (BDR):

[A.1] Attachment 1, Visual Examination Data Form(s) (There will be multiple Attachment 1s to each BDR package.)

[A.2] Attachment 2, Visual Examination Independent Technical Reviewer Checklist

[A.3] Attachment 3, Visual Examination Site Project Manager Checklist

[A.4] Attachment 4, Visual Examination Batch Data Report Cover Sheet

[A.5] Attachment 5, Visual Examination Batch Data Report Table of Contents

[A.6] Copy of NCRs, if applicable

5.1.2 QA/Nonpermanent

[A] VHS Tape or DVD, as applicable

Table 1. Prohibited Items List

LIST OF PROHIBITED ITEMS
Liquid Wastes Observable liquid shall be less than 1 percent by volume of the outermost container at the time of RTR or VE. Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. Observable liquid shall not be present in a container with EPA HWN U134 assigned.
Non-Radionuclide Pyrophorics
Non-mixed hazardous waste
Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials, and/or other wastes).
Explosives
Compressed Gases/Pressurized containers (e.g., aerosol cans)
Observable liquid containing Polychlorinated Biphenyls
Ignitables
Corrosives
Reactive waste
Sealed containers greater than 4 liters
Heat-sealed bags not defined in the applicable RH-TRU Payload Appendices, Table 2.5.1
Sharp or heavy objects not adequately blocked, braced, or packaged
Waste that has ever been managed as high-level waste and waste from tanks specified in Table C-8 of CCP-PO-001.

Table 2. Waste Material Parameters

Waste Material Parameter	Description
Iron-based Metals/Alloys (IM)	Iron and steel alloys in the waste; does not include the waste container materials
Aluminum-based Metals/Alloys (AM)	Aluminum or aluminum-based alloys in the waste materials
Other Metals (OM)	All other metals found in the waste materials
Other Inorganic Materials (OIM)	Nonmetallic inorganic waste including concrete, glass, firebrick, ceramics, sand, and inorganic sorbents
Cellulosics (C)	Materials generally derived from high-polymer plant carbohydrates; (e.g., paper, cardboard, wood, and cloth)
Rubber (R)	Natural or man-made elastic rubber gloves, latex materials; (e.g., surgeons' gloves, and leaded rubber gloves)
Plastics (waste materials) (P)	Generally man-made materials, often derived from petroleum feedstock; (e.g., polyethylene and polyvinylchloride)
Organic Matrix (OGM)	Cemented organic resins, solidified organic liquids and sludges
Inorganic Matrix (IGM)	Any homogeneous materials consisting of sludge or aqueous-based liquids that are solidified with cement, calcium silicate, or other solidification agents; (e.g., wastewater treatment sludge, cemented aqueous liquids, and inorganic particulates)
Soils/gravel (S)	Generally consists of naturally occurring soils that have been contaminated with inorganic waste materials

Attachment 1 – Visual Examination Data Form

	Site ID:				
	Examination Date:		Batch Number:		
	Procedure #:		Revision #:		Video Number:
	Recording Equipment Check: ☐SAT ☐UNSAT ☐N/A		Recording Start:		Recording Stop:
Initial Container ☐ N/A			Final Container ☐ N/A		
	Container or Package ID Number:			Container or Package ID Number:	
	Container Type:			Container Type:	
	Waste Matrix Code:			Waste Matrix Code:	
	Waste Stream:			Waste Stream:	
				Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
				Rigid Liner Vented or Hole Size:	
	Percent Fill:	Percent Organic Waste:		Percent Fill:	Percent Organic Waste:
	Layers of Confinement:	Closure Method:		Layers of Confinement:	Closure Method:
	Comments (e.g., filter information, NCRs):				
Waste Description:					

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number _____

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☐	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☐	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☐	
Does the container have observable liquid containing PCBs?	☐	☐	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☐	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☐	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☐	
Is there an indication of wastes containing explosives or compressed gases?	☐	☐	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☐	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☐	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☐	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☐	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☐	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☐	
Is the waste consistent with the TRUCON Code?	☐	☐	
Comments:			
Visual Examination Operator 1: _____ Print Name _____ Signature _____ Date			
Visual Examination Operator 2: _____ Print Name _____ Signature _____ Date			

Attachment 2 – Visual Examination Independent Technical Reviewer Checklist

Batch Data Report No.: _____

1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods (procedure) used?	☐ NO	☐ YES	☐ N/A
2. Was the correct revision of the operating procedure used?	☐ NO	☐ YES	☐ N/A
3. Were all the transcription errors corrected?	☐ NO	☐ YES	☐ N/A
4. Are BDR contents complete and match the Visual Examination Batch Data report Table of Contents?	☐ NO	☐ YES	☐ N/A
5. Does the BDR include VE for no more than 20 containers?	☐ NO	☐ YES	☐ N/A
6. Is all data recorded signed and dated in reproducible ink?	☐ NO	☐ YES	☐ N/A
7. Is all raw data recorded clearly, legibly, and accurately?	☐ NO	☐ YES	☐ N/A
8. Are all changes to original data lined out, initialed and dated by the individual making the changes or an individual authorized to make the change?	☐ NO	☐ YES	☐ N/A
9. Is there an adequate written description of the contents?	☐ NO	☐ YES	☐ N/A
10. Were the recording equipment checks satisfactory?	☐ NO	☐ YES	☐ N/A
11. Has each container in this BDR been evaluated for the presence of prohibited wastes?	☐ NO	☐ YES	☐ N/A
12. Has the physical waste form in each container in this BDR been evaluated against the Waste Stream Description and the Waste Matrix Code?	☐ NO	☐ YES	☐ N/A
13. Have the RH Quality Assurance Objectives (QAOs) for VE been met?	☐ NO	☐ YES	☐ N/A
Precision – reconciled discrepancies between operators or between the operator and ITR.	☐	☐	☐
Accuracy – trained operators	☐	☐	☐
Representativeness – description of container contents	☐	☐	☐
Completeness – completed data form and/or recording	☐	☐	☐
Comparability – proper training and adequate AK source documents are available for unopened containers.	☐	☐	☐
14. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☐ N/A
Comments:			

Independent Technical Reviewer:

_____ _____ _____

Printed Name Signature Date

Attachment 3 – Visual Examination Site Project Manager Checklist

Batch Data Report No.: _____

1.	Has all the data received an independent technical review as evidenced by a completed checklist (Attachment 2) and the appropriate ITR signature?		☐ NO	☐ YES
2.	Are BDR contents complete and match the Visual Examination Batch Data Report Table of Contents?		☐ NO	☐ YES
3.	Is the BDR complete (appropriately filled in forms for each container)?		☐ NO	☐ YES
4.	Have the RH Quality Assurance Objectives (QAOs) for VE been met? Precision – reconciled discrepancies between operators Accuracy – trained operators Representativeness – description of container contents Completeness – completed data form and/or recording Comparability – proper training and adequate AK for unopened containers		☐ NO ☐ NO ☐ NO ☐ NO ☐ NO ☐ NO	☐ YES ☐ YES ☐ YES ☐ YES ☐ YES ☐ YES
5.	Were NCRs generated included in the BDR?	☐ NO	☐ YES	☐ N/A
Comments:				

SPM:

_____ _____ _____

Printed Name Signature Date

Attachment 4 – Visual Examination Batch Data Report Cover Sheet

Batch Data Report No.: _____ Date: _____

	Waste Container ID Number:
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

Attachment 5 – Visual Examination Batch Data Report Table of Contents

Batch Data Report No.: _____ Date: _____

Item	Description	Page No.
1	Visual Examination Batch Data Report Cover Sheet (Attachment 4)	
2	Visual Examination Batch Data Report Table of Contents (Attachment 5)	
3	Visual Examination Data Forms (Attachment 1)	
4	Visual Examination Independent Technical Reviewer Checklist (Attachment 2)	
5	Copy of NCRs (N/A [If not applicable])	

Attachment 6 – Waste Package Data Sheet (Example)

RH-TRU (30 Gallon Drum)
Waste Package Data Sheet

RW 81798
AGHCF Drum #: 849

Date Loaded: 6/4/02
Seal No.: 00849
Drum Vent No.: ANL-176

Combustible: (check)
Noncombustible: ✓ (check)
Loaded By: Dgm, DPM

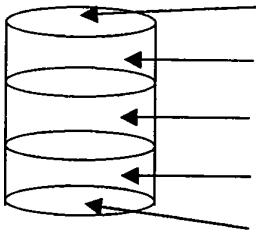
Top Waste Can No.: 324
Bottom Waste Can No.: 323
Drum packaging materials inspected by: JP
Total Weight of Loaded Drum: 115 lbs

Inner Pouch Vent No.: A-31-94
Outer Pouch Vent No.: A-56-94

Acceptable Smearable Levels: <20 dpm/100cm^2 alpha and 1000 dpm/100 cm^2 beta-gamma:

Inner Pouch Primary Seal (dpm/100 cm^2)	NCD	alpha	NCD	beta-gamma
Outer Pouch Secondary Seal (dpm/100 cm^2)	NCD	alpha	NCD	beta-gamma
Exterior of 30-gal Drum (dpm/900 cm^2) (large area smear)	NCD	alpha	NCD	beta-gamma

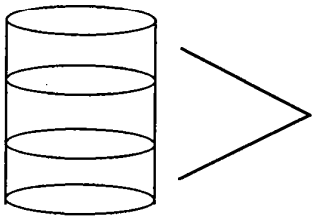
Radiation Levels from 30-gal Drum at 6 cm, R/hr, gamma:



top	~~0.785~~ 1.5
top third	4.4
middle third	4.4
bottom third	5.3
bottom	12

Survey meter used: RMS 3
Serial Number: 263
Last Calibration: 3/02

Radiation Levels at Various Distances from Drum:



Distance from Drum:	1 m (3 ft)	.78 m (6 ft)
Gamma Rad. Level (mR/hr)	600	300
Survey Meter Used:	RMS 3	RMS 3
Serial No.:	263	263
Last Calibration:	3/02	3/02

Surveyed at the AGHCF by: S Yan Location: AGHCF Date: 6.4.02

Controlled
Copy

CCP-TP-506

Revision 2

CCP Preparation of the Remote-Handled Transuranic Waste Acceptable Knowledge Characterization Reconciliation Report

EFFECTIVE DATE: 06/08/2006

Eric D'Amico

PRINTED NAME

APPROVED FOR USE

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
0	04/28/2006	Initial issue.
1	05/05/2006	Revised to address Carlsbad Field Office (CBFO) Document Review Record (DRR) comments.
2	06/08/2006	Revised to reference the correct line numbers for completing the attachments.

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1.0 PURPOSE

Prior to shipment of Remote-Handled (RH) Transuranic (TRU) waste, the Central Characterization Project (CCP) will reconcile the data in accordance with the requirements of DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan* (WCPIP). Data reconciliation is required in order for the Site Project Manager (SPM) to complete the Acceptable Knowledge (AK) Characterization Reconciliation Report (CRR).

1.1 Scope

This procedure provides the methodology for data reconciliation with the Data Quality Objectives (DQOs) provided in the WCPIP, following data validation and verification by the SPM. This reconciliation is performed at the waste stream or waste stream lot level. This procedure provides instructions for the completion of the CRR. The CRR for an RH TRU waste stream shall be submitted to the U.S. Department of Energy (DOE)/Carlsbad Field Office (CBFO) for approval prior to shipment of that RH TRU waste stream to the Waste Isolation Pilot Plant (WIPP).

2.0 REQUIREMENTS

2.1 References

Baseline Documents

- *Waste Isolation Pilot Plant Land Withdrawal Act* (Public Law 102-579)

Referenced Documents

- DOE/WIPP 02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*
- DOE/WIPP 94-1012, *Quality Assurance Program Document*
- CCP-PO-002, *CCP Transuranic Waste Certification Plan*
- CCP-QP-002, *CCP Training and Qualification Plan*
- CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
- CCP-QP-008, *CCP Records Management*
- CCP-TP-005, *CCP Acceptable Knowledge Documentation*

2.2 Training Requirements

2.2.1 Personnel performing this procedure will be trained and qualified in accordance with CCP-QP-002, *CCP Training and Qualification Plan*, prior to performing this procedure.

2.3 Equipment List

2.3.1 None.

2.4 Precautions and Limitations

2.4.1 None.

2.5 Prerequisite Actions

2.5.1 Ensure the AK Summary Report for the subject waste stream of the CRR is approved.

2.6 Definitions

2.6.1 None.

3.0 RESPONSIBILITIES

NOTE

Implementation of this procedure requires four positions as follows: Acceptable Knowledge Expert (AKE), CCP Records Custodian, Site Project Quality Assurance Officer (SPQAO), and SPM.

3.1 Site Project Quality Assurance Officer (SPQAO)

3.1.1 Reviews the AK Summary Report, confirmatory test data, and identified AK discrepancies and prepares an AK Accuracy Report.

3.2 Site Project Manager (SPM)

3.2.1 Ensures that all data generated and used in decision making meet the DQOs provided in the WCPIP.

[A] Assesses whether data of sufficient type, quality, and quantity have been collected.

[B] Determines that all DQOs and Quality Assurance Objectives (QAOs) have been met.

[C] Documents DQO and QAO compliance in the CRR and provides the CRR to DOE/CBFO prior to shipment of the waste to the WIPP.

3.3 Acceptable Knowledge Expert (AKE)

3.3.1 Compiles the AK information for the waste stream being characterized.

3.3.2 As the waste stream is characterized, confirms the AK information with the characterization data collected.

3.3.3 For the completion of the CRR (conducted in accordance with this procedure), provides assistance to the SPM.

3.3.4 Reviews the CRR.

3.3.5 Provides a signature release on Attachment 5, Remote-Handled Characterization Reconciliation Report Cover Sheet EXAMPLE, verifying that the AK information contained in the CRR is correct.

3.4 CCP Records Custodian

3.4.1 Provides records requested by the SPM and AKE during the generation of the CRR in accordance with CCP-QP-008, *CCP Records Management*.

3.4.2 Receives and processes all records generated by this procedure in accordance with CCP-QP-008.

4.0 PROCEDURE

4.1 Establishing CRR Scope

SPM

NOTE

The CRR scope is an objective determination based on the size of the waste stream and the number of containers for which characterization has been completed and which are available to be included in the CRR.

4.1.1 Determine which containers will be included in the CRR.

4.1.2 Identify the data necessary to complete the CRR (e.g., AK Summary Report, Confirmatory Test Plan applicable to the waste stream, Batch Data Reports [BDRs], source documents), **AND** request any necessary documents from the CCP Records Custodian in accordance with CCP-QP-008.

CCP Records Custodian

4.1.3 Provide SPM with copies of any documents requested.

SPM

NOTE

The CRR number is a unique sequential number (e.g., CRR-ANLE-AERHDM-0001) that will identify the CRR, site, and waste stream.

4.2 RH CRR Container Data Work Sheet 1 (Attachment 1)

4.2.1 General Information

[A] Record information for container on Lines 1 through 19, **AND** reference the source.

4.3 RH CRR Container Data Work Sheet 2 (VE/RTR) (Attachment 2)

4.3.1 Correlation Between Attachments

NOTE
Lines 20 through 24 are automatically populated by the link from Attachment 1.

[A] Record information for container on Lines 25 through 29, **AND** reference source.

4.4 RH CRR Data Quality Objectives (DQOs) (Attachment 3)

4.4.1 Correlation Between Attachments

NOTE
Lines 30 through 32 are automatically populated by the link from Attachment 1.

[A] Record information (qualification method [e.g., data record, peer review]) for waste stream on Lines 33 through 58, **AND** list the supporting documentation and resolution for DQOs.

[B] **IF** the DQO for any category has **NOT** been met, **THEN** generate a nonconformance report (NCR) in accordance with CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*.

4.5 RH CRR Quality Assurance Objectives (QAOs) (Attachment 4)

4.5.1 Correlation Between Attachments

NOTE
Lines 59 through 61 are automatically populated by the link from Attachment 1.

NOTE
The sources requested to complete Attachment 4 include, but are not limited to, citing the AK section, citing the AK source documents, citing the BDR Number, sampling plan or any other data or information used to determine that the QAO has been met.

4.5.2 AK Evaluation of QAO

[A] Reference Table 4.1,Quality Assurance Objectives (QAOs) by Method for definition of Precision, Accuracy, Representativeness, Completeness, Comparability, determine if the QAOs for AK have been met, **AND** indicate the answers on Lines 62 through 66 (CCP-PO-002, *CCP Transuranic Waste Certification Plan*).

4.5.3 VE Method Evaluation of QAOs

[A] Reference Table 4.1, determine if the QAOs for AK have been met, **AND** indicate the answers on Lines 67 through 71 (CCP-PO-002).

4.5.4 Dose-to-Curie Conversion Evaluation of QAOs

[A] Reference Table 4.1, determine if the QAOs for AK have been met, **AND** indicate the answers on Lines 72 through 76 (CCP-PO-002).

4.5.5 Radiography Evaluation of QAOs

[A] Reference Table 4.1, determine if the QAOs for AK have been met, **AND** indicate the answers on Lines 77 through 81 (CCP-PO-002).

4.5.6 NDA Evaluation of QAOs

[A] Reference Table 4.1, determine if the QAOs for AK have been met, **AND** indicate the answers on Lines 82 through 86 (CCP-PO-002).

4.5.7 Destructive Assay Evaluation of QAOs

[A] Reference Table 4.1, determine if the QAOs for AK have been met, **AND** indicate the answers on Lines 87 through 91 (CCP-PO-002).

4.5.8 Surface Dose Rate Evaluation of QAOs

[A] Reference Table 4.1, determine if the QAOs for AK have been met, **AND** indicate the answers on Lines 92 through 96 (CCP-PO-002).

4.5.9 Sampling Methodologies Evaluation of QAOs

[A] Reference Table 4.1, determine if the QAOs for AK have been met, **AND** indicate the answers on Lines 97 through 101 (CCP-PO-002).

4.5.10 **IF** the QAOs have **NOT** been met,
THEN generate an NCR in accordance with CCP-QP-005.

4.5.11 Provide an explanation for answers that contain N/A [not applicable] in the source field.

4.6 RH CRR Cover Sheet (Attachment 5)

4.6.1 Correlation Between Attachments.

NOTE
Lines 102 through 106 are automatically populated by the link from Attachment 1.

[A] Record information for the waste stream on Lines 107 through 131.

[B] Discuss any remediation activity or other relevant information in the Visual Examination/Real-Time Radiography (VE/RTR) Summary Results.

4.7 RH CRR Container Continuation Sheet (Attachment 6)

4.7.1 Use Attachment 6 for additional information needed for any line item from Attachments 1 through 5.

4.8 RH CRR SPM/AKE Comments Sheet (Attachment 7)

NOTE
Attachment 7 need **NOT** be completed if NO comments are desired.

4.8.1 Indicate any comments, clarifications, additional information necessary on Attachment 7.

4.9 Summary of Radiological Results by Container Number (Attachment 8)

NOTE
The TRU Container Activity field in Attachment 8 is a logical field populated based on the values entered in the attachment.

4.9.1 Complete Attachment 8 for each payload container by identifying the container number, associated BDR number, method used to confirm radiological data, TRU activity and associated Total Measurement Uncertainty (TMU).

4.9.2 Record any additional information for radiological data in the Comments section.

4.10 RH CRR Completion

NOTE
Attachments 1 and 2 are supplemental information for each container. Include
Atachments 1 and 2 will be submitted to the Records Custodian only.

4.10.1 Complete the CRR, which consists of (in this order):

- Attachment 5
- Table of Contents
- Attachment 7 (if applicable)
- Attachment 8
- Attachment 3
- Attachment 4
- Attachment 6 (where applicable)
- A complete copy of the AK Summary Report for the waste stream
- Listing of AK discrepancies generated by an AK Qualification process and the corresponding resolutions

4.10.2 Paginate the CRR.

4.10.3 Submit the CRR to the AKE for review.

AKE

4.10.4 Review the CRR.

4.10.5 Identify any errors or omissions in references or other AK-related entries.

4.10.6 Notify the SPM of identified errors and omissions.

4.10.7 Provide any comments on Attachment 7.

[A] Print name, sign and date Attachment 7.

SPM/AKE

4.10.8 Resolve any questions identified during AKE review.

AKE

4.10.9 List any discrepancies during resolution in the SPM/AKE/SPQAO Comments section on Attachment 7.

NOTE

The AKE's signature on Attachment 5 (Cover Sheet) indicates that the AKE has reviewed the CRR and concurs with the findings and the references related to AK. All issues identified by the AKE during review have been resolved.

4.10.10 Print name, sign, and date Attachment 5 (Cover Sheet).

4.10.11 Submit the CRR to the SPQAO.

NOTE

The SPQAO's signature indicates that the SPQAO has reviewed the AK Summary Report, confirmatory test data, notes, any AK discrepancies, and that any issues identified have been resolved.

SPQAO

4.10.12 Identify any errors or omissions in references or other AK related entries.

4.10.13 Notify the SPM of identified errors and omissions.

4.10.14 Provide any comments on Attachment 7.

[A] Print name, sign and date Attachment 7.

4.10.15 Review the AK Summary Report, confirmatory test data, notes and identified AK discrepancies.

4.10.16 Resolve comments with SPM.

4.10.17 Prepare an AK Accuracy Report in accordance with CCP-TP-005, *CCP Acceptable Knowledge Documentation*.

4.10.18 Print name, sign, and date Attachment 5.

4.10.19 Submit the CRR to the SPM.

SPM

4.10.20 Resolve any questions identified during SPQAO review.

NOTE

The SPM's signature indicates that the SPM has either prepared the document personally or had responsible charge of the preparation and verifies that the information is correct. All issues identified by the AKE/SPQAO have been resolved.

SPM

4.10.21 Print name, sign, and date Attachment 5.

4.10.22 Prepare transmittal letter to DOE/CBFO.

4.10.23 Provide a copy of CRR, DOE/CBFO transmittal letter, and Attachments 1 and 2 to the CCP Records Custodian.

4.10.24 Transmit the CRR to DOE/CBFO.

CCP Records Custodian

4.10.25 Receive and process records generated by this procedure in accordance with CCP-QP-008 once CBFO has provided approval.

5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as quality assurance (QA) records in accordance with CCP-QP-008, The records are the following:

5.1.1 QA/Lifetime

[A] CRR:

[A.1] Attachment 1, Remote-Handled Characterization Reconciliation Report Container Data Work Sheet 1

[A.2] Attachment 2, Remote-Handled Characterization Reconciliation Report Container Data Work Sheet 2 (VE/RTR)

[A.3] Attachment 3, Remote-Handled Characterization Reconciliation Report Data Quality Objectives (DQOs)

[A.4] Attachment 4, Remote-Handled Characterization Reconciliation Report Quality Assurance Objectives (QAOs)

[A.5] Attachment 5, Remote-Handled Characterization Reconciliation Report Cover Sheet

[A.6] Attachment 6, Remote-Handled Characterization Reconciliation Report Container Continuation Sheet

[A.7] Attachment 7, Remote-Handled Characterization Reconciliation Report SPM/AKE Comment Sheet

[A.8] Attachment 8, Summary of Radiological Results by Container Number

Table 4.1. Quality Assurance Objectives (QAOs) by Method

	METHODS							
	AK	**VE**	**Dose-to-Curie**	**Radiography**	**NDA**	**Destructive Assay**	**Surface Dose Rate**	**Sampling**
Precision	Precision is the agreement among a set of replicate measurements without assumption of the knowledge of a true value. The qualitative determinations, such as compiling and assessing AK documentation, do not lend themselves to statistical evaluations of precision. Therefore, a precision requirement is **NOT** established for AK.	Precision is maintained by reconciling any discrepancies between two operators (or between the operator and the independent technical reviewer) with regard to the identification of important waste characteristics (i.e., physical form of the waste and absence of residual liquid in excess of one percent by volume) within a single container. Any container with unreconciled discrepancies can **NOT** be shipped to the WIPP.	Precision shall be established and maintained within the recommendations of the manufacturer of the dose-rate instrument used. This will be demonstrated by a satisfactory source check of the instrument prior to obtaining dose rate measurements. The precision of the instrument shall be documented and factored into the TMU [Total Measurement Uncertainty] determined for the overall method.	Precision is maintained by reconciling any discrepancies between two operators with regard to the identification of important waste characteristics (i.e., physical form of the waste and absence of residual liquid in excess of one percent by volume) within a single container. Any container with unreconciled discrepancies can **NOT** be shipped to the WIPP.	Precision is reported as %RSD [percent relative standard deviation]. The %RSD shall **NOT** exceed the values listed in Table 4.2, Upper Limits for %RSD vs. Number of Replicates.	Precision is reported as RPD [Relative Percent Difference]. The RPD is derived from analysis of laboratory duplicates as listed in Table 4.3, Quality Control Requirements for Radiochemistry. The RPD shall **NOT** exceed the values listed in Table 4.3.	Precision is established and maintained within the recommendations of the manufacturer of the instrument used to measure dose.	Sampling precision is established by comparing the RPD between duplicate samples. A nonconformance report (NCR) shall be issued for any duplicate samples with RPDs greater than 25%.

Table 4.1. Quality Assurance Objectives (QAOs) by Method (Continued)

METHODS								
	AK	**VE**	**Dose-to-Curie**	**Radiography**	**NDA**	**Destructive Assay**	**Surface Dose Rate**	**Sampling**
Accuracy	Accuracy is the degree of agreement between an observed sample result and the true value. The percentage of waste containers which require reassignment to a new SCG [Summary Category Group] or new waste stream based on the reevaluation of AK or on obtaining testing, sampling and/or analysis data will be reported as a measure of AK accuracy. The sites shall, in addition, develop a methodology to compare radionuclide information from confirmation with the information in the AK record and address significant discrepancies. What constitutes a significant discrepancy will depend on site and waste stream-specific considerations. If AK accuracy falls below 90%, the site shall document this as a significant condition adverse to quality as defined by the DOE/CBFO 94-1012, *Quality Assurance Program Document* (QAPD). The site shall notify the DOE/CBFO of this condition and implement appropriate corrective actions before proceeding with further characterization activities on the affected waste stream(s).	Accuracy is maintained by requiring operators to pass a comprehensive examination with a score of 80% and demonstrate satisfactory performance in the presence of the VE Expert during the initial qualification and subsequent requalification.	Calibration shall be established and maintained within the recommendations of the manufacturer of the dose-rate instrument used. The accuracy of the instrument shall be documented and factored into the TMU determined for the overall method.	Accuracy is obtained by using a target to tune the image for maximum sharpness and by requiring operators to successfully identify 100 percent of the items in a training container during their initial qualification and subsequent requalification.	Accuracy is reported as %R [percent recovery]. Accuracy will not exceed ± 30% on a non-interfering matrix.	Accuracy is reported as %R. The %R is derived from analysis of laboratory control samples and matrix spikes as listed in Table 4.3. The % R shall **NOT** exceed the values listed in Table 4-3.	Calibration [is] established and maintained within the recommendations of the manufacturer of the dose measurement instrument used.	Sampling accuracy through the use of standard reference materials shall not be measured. Because waste containers containing RH TRU waste with known quantities of radionuclides are not available, sampling accuracy cannot be determined. Sampling accuracy as a function of sampling cross-contamination will be measured. Sampling equipment will be verified as clean by the use of standard radiological control survey methods.

Table 4.1. Quality Assurance Objectives (QAOs) by Method (Continued)

METHODS								
	AK	**VE**	**Dose-to-Curie**	**Radiography**	**NDA**	**Destructive Assay**	**Surface Dose Rate**	**Sampling**
Represent-ativeness	Representativeness is the degree to which sample data accurately and precisely represent characteristics of a population. Representativeness is a qualitative parameter that will be satisfied by ensuring that the process of obtaining, evaluating, and documenting AK information is performed in accordance with the minimum standards established in Attachment A, Acceptable Knowledge Procedure for Remote-Handled TRU Waste of the WCPIP.	The contents placed in a container will be described on the data forms.	Representativeness of the isotopic distributions will be confirmed by sampling in accordance with an approved sampling plan (see Section 4.1.8 of the WCPIP). The representativeness of the sampling shall be documented and factored into the TMU determined for the overall method.	All of the relevant contents in a container selected for radiography will be described.	Representativ e-ness is ensured through assay of each waste container when NDA is used to satisfy DQOs.	Representative-ness of Destructive Assay (DA) data shall be achieved by the collection of unbiased samples.	The measurement [is] applied to the entire waste container.	A sampling plan must be developed by the RH TRU generator site that describes the sampling strategy for obtaining representative samples.

Table 4.1. Quality Assurance Objectives (QAOs) by Method (Continued)

METHODS								
	AK	**VE**	**Dose-to-Curie**	**Radiography**	**NDA**	**Destructive Assay**	**Surface Dose Rate**	**Sampling**
Complete-ness	Completeness is an assessment of the number of waste streams or number of samples collected compared to the number of samples determined to be useable through the data validation process. The AK record shall contain 100% of the information specified in Attachment A of the WCPIP. The usability of the AK information will be assessed for completeness during audits.	The relevant waste information must be collected. The information must be documented on a videotape and/or data form, or other unalterable media.	Completeness is verified by measuring the dose rate for every container. The sites must verify that the measured dose rate is at least 10 times greater than background.	All of the relevant waste information must be assembled and must show that each of the containers in the waste stream belong to the waste stream. The information must be documented on videotape or other equivalent media and data form.	Required completeness is 100%. All NDA data used to satisfy a DQO must be valid and usable.	Completeness of DA data shall be expressed as the ratio of the number samples that are analyzed with valid results to the total number of samples that are submitted for analysis, expressed as a percent. Acceptable DA data shall be obtained for 90 percent of the samples acquired for waste characterization. Valid results for radioassay data are those that were obtained when the laboratory or testing facility demonstrated that the instrumentation and method were in control.	100% of the measurements needed to determine surface dose rate are performed and useable.	Sampling completeness shall be expressed as the number of valid samples collected as a percent of the total number of samples collected for each waste stream. The participating sampling facilities are required to achieve a minimum 90 percent completeness.

Table 4.1. Quality Assurance Objectives (QAOs) by Method (Continued)

METHODS								
	AK	**VE**	**Dose-to-Curie**	**Radiography**	**NDA**	**Destructive Assay**	**Surface Dose Rate**	**Sampling**
Compara-bility	Data are considered comparable when one set of data can be compared to another set of data. Comparability is ensured through sites meeting the training requirements and complying with the minimum standards outlined for procedures that are used to implement the AK process.	Comparability is ensured by a site meeting the training requirements and complying with the minimum standards used to implement this characterization process. In some instances, waste will be contained in opaque containers and not all items will be visible to the operator (e.g., sealed paint cans or 5-gallon buckets). If these containers are **NOT** opened during VE, source documents must be available in the AK record that allows the operator to identify the contents of the closed containers.	Standardized instructions must be used in designing and implementing the measurement program.	Comparability is ensured through a site meeting the training requirements and complying with the minimum standards used to implement the radiography process.	Comparability is ensured through a site meeting the training requirements and complying with the minimum standards used to implement the NDA process.	Comparability is ensured through a site meeting the training requirements and complying with the minimum standards used to implement the DA process.	Dose rate measurements are performed by site health physics personnel in accordance with the DOE Orders governing radiological control.	Compliance with the requirements of Section [4.1.8] of the WCPIP will ensure comparability between RH TRU waste generator sites.

Table 4.2. Upper Limits for %RSD vs. Number of Replicates

Number of Replicates	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Max %RSD	1.8	6.6	10.0	12.3	14.0	15.2	16.2	17.1	17.7	18.3	18.8	19.3	19.7	20.0

Table 4.3. Quality Control Requirements for Radiochemistry

QC Sample	Minimum Frequency	Acceptance Criteria	Corrective Action
Laboratory control samples (LCS)	One per analytical batch	75% to 125%R	See Laboratory Control Sample[a]
Method blank	One per analytical batch	Site-specific statistical control limits	See Method Blanks[b]
Laboratory duplicate	One per analytical batch	RPD 40	See Laboratory Duplicate[c]
Matrix spike (MS)	One per analytical batch for ICP-MS, as required by the test performed	50 to 150%R	See Matrix Spike and Matrix Spike Duplicate[d]
Matrix spike duplicate (MSD)	One per analytical batch, as required by the test performed	50 to 150%R RPD 40	See Matrix Spike and Matrix Spike Duplicate[d]
Radioisotopic tracers	Every sample	Site-specific statistical control limits	See Radioisotopic Tracer[e]

[a]**Laboratory Control Sample (LCS)**: An LCS is analyzed at least once per analytical batch. If a solid matrix with established control limits is used as the LCS, the established limits may be used for the acceptance criteria. The control limits will meet the criteria in Table 4-4.
[b]**Method Blanks**: A method blank is analyzed at least once per analytical batch. It contains all reagents in proportions equal to those in the samples and is carried through the analytical procedure to identify if contamination is present. Each site establishes the acceptance criteria for method blanks; if they are expressed as statistical control limits they shall meet the requirements in Table 4-4. Criteria may be absolute values, multiples of background variation, fractions of activity concentrations observed in samples, or other appropriate units.
[c]**Laboratory Duplicates**: A laboratory duplicate is analyzed at least once per analytical batch. A laboratory duplicate is a separate aliquot from the same field sample carried through the entire analytical procedure. The RPD between duplicate results is compared with the criteria.
[d]**Matrix Spike and Matrix Spike Duplicate**: Duplicate MSs on individual field samples are performed for inductively couple plasma-mass spectrometry (ICP-MS) analysis at a minimum frequency of one pair (MS plus MSD) per analytical batch. The MSDs are preferred for any analytical procedure not using radioactive tracers. The MS and MSD results are acceptable if the criteria given above for percent recovery and RPD are met.
[e]**Radioisotopic Tracer**: Some methods require that all samples, blanks, LCSs, and laboratory duplicates be spiked with radioisotopic tracers to determine chemical recoveries, counting efficiencies, or a combination thereof. Each site establishes the acceptance criteria for method blanks; if they are expressed as statistical control limits they shall meet the requirements in Table 4-4.

Table 4.4. Statistical Control Limits

	Acceptability Range	**Required Response**
Acceptable Range	Data[b] $2\sigma^a$	No action required.
Warning Range	$2\sigma^a$ < Data $3\sigma^a$	The QC measurement shall be run no more than twice. If the rerun QC measurement results in data within $\pm$ 2σ, then the QC measurements shall be documented and work may continue. If the system does not fall within $\pm$ 2σ after two QC measurements, then the required response for the Action Range shall be followed.
Action Range	Data > $3\sigma^a$	Work shall stop and the occurrence shall be documented and appropriately dispositioned (e.g., initiating an NCR). The measurement system shall be removed from service pending successful resolution of all necessary actions, and all assays performed since the last acceptable QC measurement are suspect, pending satisfactory resolution.

[a]σ – The standard deviation is only based on the reproducibility of the data check measurements themselves. This is not TMU.
[b] – Absolute Value

Attachment 1 – Remote-Handled Characterization Reconciliation Report Container Data Work Sheet 1 EXAMPLE

line #			Source
1	CRR Number	CRR-ANLE-AGHCF-S5000-001	AGHCF (Alpha Gamma Hot Cell Facility)
2	**Container Number**	743	
3	Site	INL	Waste generated at ANLE
4	Waste Stream	ID-ANLE-S5000	CCP-AK-INL-500 Rev. 1
5	Waste Matrix Code	not assigned as of 5/2/06	not available
6	Summary Category Group	**S5000 - Debris Waste**	CCP-AK-INL-500 Rev. 1
7	Radiological BDR number(s)	Dose to Curie INL060314	
8	VE BDR Number	RHINLVE060001	
9	NDE BDR Number	N/A	PRINT
10	Waste Stream Profile Number	not assigned as of 5/2/06	

		Identify Confirmatory Testing Methods	List Confirmatory Test Plan Document Number			
11		Radiological Characterization Technical Report	CCP-AK-INL-501			LANL ICP-MS Dose-to-Curie Methodology
12						
13						
14						
15						
16						
17						
18						
19	Were alternative methods of confirmatory testing not listed above used to qualify AK?		☑ yes	☐ no	☐ NA	VE using video tape

Attachment 2 – Remote-Handled Characterization Reconciliation Report Container Data Work Sheet 2 (VE/RTR) EXAMPLE

line #					
20	CRR Number	CRR-ANLE-AGHCF-S5000-001			
21	**Container Number**	743			
22	Site	INL			
23	Waste Stream	ID-ANLE-S5000			
24	Summary Category Group	S5000 - Debris Waste			
	Waste Stream VE/RTR Information		**SOURCE**		
25	How many containers are identified in the waste stream/lot which includes this container?	**549**	**CCP-AK-INL-500 Rev. 1**		
	Container Specific VE/RTR Information	**SOURCE**			
26	Was this container packaged or re-packaged as a result of prohotibed item?		☐ yes	☑ no	☐ NA
27	Did the contents of the container match the waste stream description?	RHINLVE060001	☑ yes	☐ no	☐ NA
	Prohibited Items				
	Liquids				
28	Did this container include any liquids?		☐ yes	☑ no	☐ NA
29	If the container included liquids, did these liquids exceed 1% of the volume of the waste container?		☐ yes	☐ no	☑ NA

Attachment 3 – Remote-Handled Characterization Reconciliation Report Data Quality Objectives (DQOs) EXAMPLE

line #								
30	CRR Number	CRR-INL-AGHCF-S5000-001						
31	Site	INL						
32	Waste Stream	ID-ANLE-S5000						
	DQO						**List the Qualification Method and Supporting Sources of DQO**	**AK discrepancy/ resolutions relevent to DQO**
33	**Defense Waste Determination**	Is the waste stream identified in AK?	☑ yes	☐ no			CCP-AK-INL-500, Rev. 2	None
34		According to AK, was the Waste generated by defense activities?	☑ yes	☐ no			CCP-AK-INL-500, Rev. 2, Section 4.1.4	None
35		What is the source of the information regarding the Defense Determination?					CCP-AK-INL-500, Rev. 2, Section 4.1.4	None
36		Has the DQO been met? RH Tru Waste Characterization Program Implementation Plan Section 2.2.1.	☑ yes	☐ no			CCP-AK-INL-500, Rev. 2, Section 4.1.4	None
37	**TRU Waste Determination**	Is the TAAC greater than 100nCi/g for all containers?	☑ yes	☐ no			INLRHDTC06001 Waste Container Dose-to-Curie Conversion Record sheets	None
38		How was TRU Alpha Activity Concentration (TAAC) determined?					INLRHDTC06001 Waste Container Dose-to-Curie Conversion Record sheets	None
39		Is the Lower Limit of detection of the instument and method used to determine the TAAC 100nCi/g or less?	☐ yes	☐ no	☑ NA		LLD is not established for probes utilized for Dose-to-Curie	None
40		Is the waste in this waste stream TRU Waste?	☑ yes	☐ no			INLRHDTC06001 Waste Container Dose-to-Curie Conversion Record sheets	None
41		What is the source of the information regarding the TAAC?					INLRHDTC06001 Waste Container Dose-to-Curie Conversion Record sheets	None
42		Has the DQO been met? RH Tru Waste Characterization Program Implementation Plan Section 2.2.2.1.	☑ yes	☐ no			INLRHDTC06001 Waste Container Dose-to-Curie Conversion Record sheets	None

Attachment 3 – Remote-Handled Characterization Reconciliation Report Data Quality Objectives (DQOs) EXAMPLE (Continued)

	DQO				List the Qualification Method and Supporting Sources of DQO	AK discrepancy/ resolutions relevent to DQO
43	RH Waste Determination	Is the surface dose rate greater than 200 mrem/hr for all containers in this waste stream?	☑ yes	☐ no	Radiological Survey Report 441.45 Rev. 3	None
44		Is the surface dose rate less than or equal to 1000 rem/hr for all containers in this waste stream?	☑ yes	☐ no	Radiological Survey Report 441.45 Rev. 3	None
45		Does the calibration of the instrument used to measure the surface dose meet the requirements of the QAPD?	☑ yes	☐ no	need	None
46		What is the source of the information regarding the surface dose rate?			Provided by INL Radioloical program	None
47		Has the DQO been met? RH Tru Waste Characterization Program Implementation Plan Section 2.2.2.2.	☑ yes	☐ no	Radiological Survey Report 441.45 Rev. 3; Training records; instrument calibration records	None

Attachment 3 – Remote-Handled Characterization Reconciliation Report Data Quality Objectives (DQOs) EXAMPLE (Continued)

	DQO					List the Qualification Method and Supporting Sources of DQO	AK discrepancy/ resolutions relevent to DQO
48	Total Activity Determination	Is the activity plus two times the TMU less than or equal to 23 Ci/L for each payload container in this waste stream? Maximum of 4788 Ci per 55 gal. drum.	☑ yes	☐ no		INLRHDTC06001 Waste Container Dose-to-Curie Conversion Record sheets	None
49		What is the source of the information regarding the activity?				INLRHDTC06001 Waste Container Dose-to-Curie Conversion Record sheets	None
50		Has the DQO been met? RH Tru Waste Characterization Program Implementation Plan Section 2.2.2.3.	☑ yes	☐ no			None
51	Residual Liquids	Are there residual liquids in the waste?	☐ yes	☑ no		RHINLVE060001 Visual Examination data sheet	None
52		What is the approximate volume of the residual liquid? If none indicate none.			units	No liquids identified in containers	None
53		Do any residual liquids exceed 1% of the volume of the container? If no residual liquids indicate NA.	☐ yes	☐ no	☑ NA	No liquids identified in containers	None
54		What is the source of the information regarding residual liquids (i.e. AK, RTR, VE)?				RHINLVE060001 Visual Examination data sheet	None
55		Has the DQO been met? RH Tru Waste Characterization Program Implementation Plan Section 2.2.3.1.	☑ yes	☐ no			None
56	Physical Form	Has the Cellulose, Plastic, and Rubber (CPR) been submitted for determining the physical form of the waste?	☑ yes	☐ no		RHINLVE060001 Visual Examination data sheet	None
57		Has the information on the type and number of containers, waste forms, processes and materials that produced the waste been submitted?	☑ yes	☐ no		RHINLVE060001 Visual Examination data sheet; CCP-AK-INL-500, Rev. 2	None
58		Has the DQO been met? RH Tru Waste Characterization Program Implementation Plan Section 2.2.3.2.	☑ yes	☐ no		RHINLVE060001 Visual Examination data sheet; CCP-AK-INL-500, Rev. 2	None

Attachment 4 – Remote-Handled Characterization Reconciliation Report Quality Assurance Objectives (QAOs) EXAMPLE

line #								
59	CRR Number	CRR-INL-AGHCF-S5000-001						
60	Site	INL						
61	Waste Stream	ID-ANLE-S5000						
	Method	**QAO**	**QAO met?**			**Procedure Section**	**Source**	**WCPIP Section**
62	**AK**	Precision	☐ yes	☐ no	☑ NA	CCP-TP-506 Section 4.5.2	QAO not established for AK Precision	4.1.1.2
63		Accuracy	☑ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.2		4.1.1.2
64		Representativeness	☑ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.2		4.1.1.2
65		Completeness	☑ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.2		4.1.1.2
66		Comparability	☑ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.2		4.1.1.2
67	**VE**	Precision	☑ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.3	RHINLVE060001 Attachment 1 Signature lines	4.1.2.3
68	**Method**	Accuracy	☑ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.3	Training records (LOQI)	4.1.2.3
69	Does method apply?	Representativeness	☑ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.3	RHINLVE060001 Attachment 1	4.1.2.3
70	☑ yes ☐ no	Completeness	☑ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.3	RHINLVE060001 Data Sheets	4.1.2.3
71		Comparability	☑ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.3	Training	4.1.2.3
72	**Dose to Curie**	Precision	☑ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.4	INLRHDTC06001 Attachment 1	4.1.3.2
73	**Conversion**	Accuracy	☑ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.4		4.1.3.2
74	Does method apply?	Representativeness	☑ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.4	INLRHDTC06001 Attachment 2	4.1.3.2
75	☑ yes ☐ no	Completeness	☑ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.4	INLRHDTC06001 Attachment 2	4.1.3.2
76		Comparability	☑ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.4	CCP-TP-504	4.1.3.2
77	**Radiography**	Precision	☐ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.5		4.1.4.3
78	Does method apply?	Accuracy	☐ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.5		4.1.4.3
79	☐ yes ☑ no	Representativeness	☐ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.5		4.1.4.3
80		Completeness	☐ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.5		4.1.4.3
81		Comparability	☐ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.5		4.1.4.3
82	**Nondestructive**	Precision	☐ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.6		4.1.5.1
83	**Assay**	Accuracy	☐ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.6		4.1.5.1
84	Does method apply?	Representativeness	☐ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.6		4.1.5.1
85	☐ yes ☑ no	Completeness	☐ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.6		4.1.5.1

Attachment 4 – Remote-Handled Characterization Reconciliation Report Quality Assurance Objectives (QAOs) EXAMPLE (Continued)

	Method	QAO	QAO met?			Procedure Section	Source	WCPIP Section
86		Comparability	☐ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.6		4.1.5.1
87	Destructive	Precision	☐ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.7		4.1.5.2
88	Assay	Accuracy	☐ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.7		4.1.5.2
89	Does method apply?	Representativeness	☐ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.7		4.1.5.2
90	☐ yes ☑ no	Completeness	☐ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.7		4.1.5.2
91		Comparability	☐ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.7		4.1.5.2
92	Surface Dose	Precision	☑ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.8	Johnson Extender 2000W Telescoping G-M Probe, Appendix A, Record of Calibration	4.1.6.2
93	Rate	Accuracy	☑ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.8	Johnson Extender 2000W Telescoping G-M Probe, Appendix A, Record of Calibration and Picture of the calibration sticker on the instrument	4.1.6.2
94	Does method apply?	Representativeness	☑ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.8		4.1.6.2
95	☑ yes ☐ no	Completeness	☑ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.8		4.1.6.2
96		Comparability	☑ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.8	Employee qualification report for Cammy Montgomery	4.1.6.2
97	Sampling	Precision	☐ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.9		4.1.8.2
98	Methodologies	Accuracy	☐ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.9		4.1.8.2
99	Does method apply?	Representativeness	☐ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.9		4.1.8.2
100	☐ yes ☑ no	Completeness	☐ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.9		4.1.8.2
101		Comparability	☐ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.9		4.1.8.2

Attachment 5 – Remote-Handled Characterization Reconciliation Report Cover Sheet EXAMPLE

line #				
102	CRR Number	CRR-INL-AGHCF-S5000-001		
103	Waste Stream	ID-ANLE-S5000		
104	Site	INL		
105	Waste Matrix Code	not assigned as of 5/31/06		
106	Summary Category Group	S5000 - Debris Waste		
107	Have all DQOs been met?	☑ yes	☐ no	
108	Are any prohibited items present?	☐ yes	☑ no	
109	Are any liquids present at greater than 1% of the volume of the container?	☐ yes	☑ no	
110	Was AK qualified in accordance with the requirements of the WCPIP?	☑ yes	☐ no	
111	Are all containers Remote-handled TRU waste?	☑ yes	☐ no	
	List all container numbers used to generate the CRR	**VE BDR #**	**RTR BDR #**	**Radiological BDR #**
112	00738	RHINLVE060001	NA	INLRHDTC06001
113	00739	RHINLVE060001	NA	INLRHDTC06001
114	00740	RHINLVE060001	NA	INLRHDTC06001
115	00741	RHINLVE060001	NA	INLRHDTC06001
116	00742	RHINLVE060001	NA	INLRHDTC06001
117				
118				
119				
120				
121				
122				
123				
124				
125				
126				
127				
128				
129				
130				
131				

RTR/VE Summary Results
Visual Examination confirmed that liquids greater than 1 percent are absent from the waste and that the physical properties of the waste are consistent with ID-ANLE-S5000.

	SPQAO Signature	SPQAO Printed Name	Date
	AKE Signature	AKE Printed Name	Date
	SPM Signature	SPM Printed Name	Date

Controlled
Copy

Attachment 6 – Remote-Handled Characterization Reconciliation Report Container Continuation Sheet EXAMPLE

	CRR Number	CRR-ANLE-AGHCF-S5000-001
	Site	INL
	Waste Stream	ID-ANLE-S5000
continuation from line #	**INFORMATION**	**SOURCE**

Attachment 7 – Remote-Handled Characterization Reconciliation Report SPM/AKE Comments Sheet EXAMPLE

CRR Number	CRR-ANLE-AGHCF S5000-001
Site	INL
Waste Stream	ID-ANLE-S5000
SPM/AKE/SPQAO COMMENTS	
Commenter shall Print their name, Sign and date comments.	

Attachment 8 – Summary of Radiological Results by Container Number EXAMPLE

Summary Radiological Results by Container Number

CRR Number	CRR-ANLE-AGHCF-S5000-001
Site	INL
Waste Stream	ID-ANLE-S5000

		Radiological Characterization Method				TRU Waste Determination			Total Activity Determination			RH Waste Determination		
Container number	BDR number	AK	DTC	DA	NDA	TRU Alpha Activity Concentration (TAAC)	Uncertainty at 1 simga	TRU waste (100 nCi/g or greater)	Activity	TMU (2 simga)	Is Activity + 2*TMU < 23 Ci/L?	Surface Dose Rate	Unit	Surface Dose Rate > 200 mrem/hr and ≤ 1,000 rem/hr?
738	INL060314	☐	☑	☐	☐	6.86E+03	5.19E+03	Yes	3.40E-02	2.65E-02	Yes	4	rem/hr	Yes
739	INL060314	☐	☑	☐	☐	1.24E-04	9.41E+03	No	5.98E-02	4.66E-02	Yes	6	rem/hr	Yes
740	INL060314	☐	☑	☐	☐	1.90E+04	1.44E+04	Yes	1.02E-01	7.94E-03	Yes	9	rem/hr	Yes
741	INL060314	☐	☑	☐	☐	1.27E+04	9623.6	Yes	7.14E-02	5.57E-02	Yes	4	rem/hr	Yes
742	INL060314	☐	☑	☐	☐	4.09E+03	1.58E+03	Yes	2.36E-02	1.84E-02	Yes	2.5	rem/hr	Yes
743	INL060314	☐	☑	☐	☐	1.39E+03	5.35E+02	Yes	7.98E-03	6.23E-03	Yes	0.5	rem/hr	Yes
		☐	☐	☐	☐			No			Yes			
		☐	☐	☐	☐			No			Yes			
		☐	☐	☐	☐			No			Yes			
		☐	☐	☐	☐			No			Yes			
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		☐	☐	☐	☐			No			Yes			
		☐	☐	☐	☐			No			Yes			
		☐	☐	☐	☐			No			Yes			

Comments: N/A

Controlled
Copy

CCP-TP-507

Revision 7

CCP
Shipping of
Remote-Handled
Transuranic Waste

EFFECTIVE DATE: 12/29/2010

Larry Porter

PRINTED NAME

APPROVED FOR USE

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
0	11/14/2006	Initial issue.
1	05/03/2007	Revised to include 40 CFR part 761, Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in commerce, and use prohibitions: Marking of PCB's and PCB Items § 761.40 and 40 CFR 761.40, Marking as references.
2	12/04/2007	Revised to incorporate CNS 10-160B requirements and to implement new Waste Isolation Pilot Plant (WIPP) Waste Acceptance Criteria (WAC) requirements.
3	12/12/2007	Minor editorial change to correct error in section cross references.
4	09/02/2009	Revised to incorporate corrective actions from Waste Isolation Pilot Plant (WIPP) Form 09-120 (Controlled Shipment Notifications), Corrective Action Report (CAR)-RHLANL-0001-09, Land Disposal Restrictions (LDR) Form code updates, and peer verifications steps.
5	12/11/09	Revised to incorporate Waste Data System (WDS) operations, remove 10-160B steps, and various editorial changes.
6	04/20/2010	Alignment of the procedure with modifications made to the Waste Data Systems (WDS), and editorial corrections.
7	12/29/2010	Minor revision to update references to the *Waste Isolation Pilot Plant Hazardous Waste Facility Permit*.

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1.0 PURPOSE

This procedure establishes requirements for certifying and assembling Transuranic (TRU) waste payloads and performance of shipments in the Remote-Handled (RH) TRU 72-B shipping container and ensures that the requirements of CCP-PO-505, *CCP Remote-Handled Transuranic Authorized Methods for Payload Control (CCP RH-TRAMPAC),* are met.

1.1 Scope

This procedure applies to the personnel who conduct the following transportation functions:

- The Waste Data System (WDS) data entry for transportation certification of RH TRU waste in the RH TRU 72-B.
- RH TRU 72-B payload canister verification.
- Verification of the assembled payload to be loaded into the RH TRU 72-B shipping cask.
- Preparing and certifying shipping paper, marking, labeling, and placarding associated with each shipment of RH TRU waste transported in the RH TRU 72-B shipping cask by the Central Characterization Project (CCP).
- Radiological Control Technician (RCT) or equivalent position functions associated with RH TRU 72-B packaging and transportation operations.

2.0 REQUIREMENTS

2.1 References

Baseline Documents

- CCP-PO-002, *CCP Transuranic Waste Certification Plan*
- CCP-TP-530*, CCP RH TRU Waste Certification and WWIS/WDS Data Entry*
- DOE/WIPP 90-045*, Remote-Handled Transuranic Waste Content Codes, RH TRUCON*
- DOE/WIPP 02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant*

- DOE/WIPP 02-3283, *RH Packaging Program Guidance*
- DOE/WIPP 02-3285, *RH Packaging Maintenance Manual*
- 40 CFR Part 761, *Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distibution in commerce, and use prohibitions: Marking of PCB's and PCB Items* § 761.40
- 49 CFR, *Transportation,* Part 172, *Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, Training Requirements, and Security Plans* § 172.200, *Applicability*
- 49 CFR Part 173, *Shippers—General Requirements for Shipments and Packagings,* Subpart I, *Class 7 Radioactive Materials* § 173.401 through 173.476
- *Safety Analysis Report for the RH-TRU 72B Waste Shipping Package* (SARP) (Docket 9212, Washington, D.C., U.S. Nuclear Regulatory Commission [NRC], 2002)

Referenced Documents

- 40 CFR 262, Subpart B*, The Manifest,* and Subpart C*, Pre-Transport Requirements.*
- 40 CFR 262.31*, Labeling*
- 40 CFR 262.32*, Marking*
- 40 CFR 761.40, *Marking requirements*
- 40 CFR 268*,* Subpart A*, Land Disposal Restrictions*
- 49 CFR 172.200 through 172.205 *(Subpart C, Shipping Papers)*
- 49 CFR 172.300 through 172.338 *(Subpart D, Marking)*
- 49 CFR 172.400 through 172.450 *(Subpart E, Labeling)*
- 49 CFR 172.500 through 172.560 *(Subpart F, Placarding)*
- CCP-PO-505*, CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC)*
- CCP-QP-002*, CCP Training and Qualification Plan*

- CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
- CCP-QP-008*, CCP Records Management*
- DOE/WIPP 02-3284*, RH Packaging Operations Manual*
- *TRANSCOM 2000 Designated User Handbook*
- DOE/WIPP-09-3427, *Waste Data System User's Manual*
- *Waste Isolation Pilot Plant Hazardous Waste Facility Permit*, Attachments C-C6, *Waste Analysis Plan*

2.2 Training Requirements

2.2.1 CCP personnel performing this procedure will be trained and qualified in accordance with CCP-QP-002, *CCP Training and Qualification Plan,* prior to performing this procedure.

2.3 Equipment List

2.3.1 None.

2.4 Precautions and Limitations

2.4.1 Nonconformances related to defects or failure to comply with requirements applicable to Nuclear Regulatory Commission (NRC)-licensed packaging (e.g., RH TRU 72-B cask) shall be reported to the Carlsbad Field Office (CBFO) Office of the National TRU Program. The Waste Isolation Pilot Plant (WIPP) maintenance and operating (M&O) contractor will evaluate issues and nonconformances for reporting to the NRC under 10 CFR Part 21 or Part 71 and provide the results of this evaluation to CBFO.

[A] CCP personnel writing nonconformance reports (NCRs) identified as Transportation-related will provide a copy of these NCRs to the WTS Manager of Transportation in accordance with CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*.

2.4.2 Filter vents, as specified in Section 2.4 of the CCP RH-TRAMPAC must be installed in payload containers and canisters (as applicable).

2.4.3 Radiation Dose Rates and Removable Surface Contamination

[A] The external radiation dose rate of a loaded RH TRU 72-B shipping cask to be shipped, shall be less than or equal to 200 millirem per hour (mrem/hr) at the surface, and less than or equal to 10 mrem/hr at two meters for beta/gamma and neutron.

[B] Removable surface contamination of individual payload canisters and a loaded RH TRU 72-B shipping cask to be shipped to WIPP shall **NOT** be greater than 20 disintegrations per minute (dpm)/100 centimeters square (cm^2) for alpha emitting radionuclides and 200 dpm/100 cm^2 for beta/gamma emitting radionuclides.

2.4.4 Controlled Shipments

NOTE

Receipt sites may use CBFO-approved site-specific Controlled Shipment Receipt Forms in place of Attachment 6, CCP Control Checklist for Receipt of RH Controlled Shipments, provided that the same information is recorded and a completed copy is returned to the applicable Transportation Certification Official (TCO).

[A] CCP RH Controlled Shipments, (Attachment 5, CCP Control Checklist for RH Controlled Shipments, and Attachment 6), will be used to control and document loading and shipping times.

2.5 Prerequisite Actions

2.5.1 Ensure that workers who will be working in a radiation area have read the applicable Radiation Work Permit (RWP) or equivalent site-specific document.

2.6 Definitions

2.6.1 **Generator** - The organization/individual that generated the waste and/or are offering the waste for transport.

2.6.2 **Land Disposal Restrictions (LDR) Notification** - Notification to a receiving facility that the waste is subject to LDR (from 40 *Code of Federal Regulations* [CFR] 268, Subpart A, *Land Disposal Restrictions*.)

2.6.3 **Shipper** - Authorized personnel who declare by signing the shipping paper that the contents of the package are fully and accurately described, packaged, labeled/placarded, and proper for conditions of transport per appropriate regulations.

2.6.4 **Shipping Paper** – Uniform Hazardous Waste Manifest (UHWM) or Straight Bill of Lading-Short Form. The shipping paper accompanies the waste during transportation.

2.6.5 **Straight Bill of Lading-Short Form** - Shipping paper used to transport non-mixed radioactive TRU waste.

2.6.6 **Uniform Hazardous Waste Manifest (UHWM)** - The U.S. Environmental Protection Agency (EPA) form 8700-22 prepared by a generator who transports, or offers for transportation, hazardous waste for off-site treatment, storage, or disposal (from 40 CFR 262, Subpart B, *The Manifest*.)

2.6.7 **Payload Canister/Container** – A fixed lid or removable lid canister (RLC) that contains waste drums or direct loaded waste that is used to ship waste in the RH TRU 72-B or a 55-gallon drum that is used to ship waste in the CNS 10-160B. These packages have Type A certifications.

2.6.8 **RH TRU 72-B Cask** – The cask used to ship the payload canister to the WIPP or other remote sites. This package has Type B certifications.

2.6.9 **Controlled Shipment** – Shipments that are controlled to a 10 day shipping period in accordance with conditions specified in Appendix 2.4 of the *RH-TRU Payload Appendices* and Section 6.2.3 of the CCP *RH-TRAMPAC*.

NOTE

More detailed, specific interface responsibilities between CCP and the Host site are contained in site-specific interface documents, Statements of Work, etc.

3.0 RESPONSIBILITIES

3.1 CCP Transportation Certification Official (TCO)

3.1.1 Interfaces and coordinates with the generator, shipper, Site Project Manager (SPM), Waste Certification Official (WCO), and CCP Operations Leaders to plan payloads and shipments.

3.1.2 Documents and certifies that containers prepared for shipments in RH packaging meet specified shipping criteria using the Payload Transportation Certification Document (PTCD), and the WDS, as appropriate.

3.1.3 Reviews payload certification documentation to ensure compliance with applicable governing documents (associated Safety Analysis Reports, Certificates of Compliance, WIPP WAC, TRAMPAC's etc.).

3.1.4 Requests and obtains approval/authority from the WIPP to effect WIPP shipments.

NOTE

TRU waste shipping documentation includes a number of data sheets required by DOE/WIPP 02-3284, *RH Packaging Operations Manual*. CCP treats these data sheets as Quality Assurance (QA) nonpermanent records, and they form part of the overall Transportation and Shipping Packages for TRU waste. However, because the format and content of these data sheets are controlled by DOE/WIPP 02-3284, they are not included as attachments to this procedure.

3.1.5 Provides the necessary TRU waste shipping data to the Host site Shipping Coordinator.

3.1.6 Ensures all manifests and shipping papers are correct, as required.

3.1.7 Ensures all labeling, marking, and placarding is correct, as required.

3.2 Radiological Control Technician (RCT) or Equivalent Position

3.2.1 Provides contamination and radiation surveys to the TCO for shipment certification purposes.

3.3 CCP RH Packaging and Transportation Team

3.3.1 Ensures the payload canister and the RH TRU 72-B shipping cask are prepared in accordance with the associated approved procedures.

3.3.2 Ensures visible canister/container ID labels, within a payload assembly, are an exact match to the ID numbers listed on the applicable PTCD.

3.4 Host Site Shipping Coordinator

3.4.1 Interfaces with TCO and acts as the Host site point-of-contact (POC) for operations, manifesting, and release of shipments.

3.4.2 Assists TCO in scheduling and facilitating TRU waste shipments.

3.4.3 Provides data received from TCO to the Host site transportation and material control/accountability groups (as applicable).

4.0 PROCEDURE

NOTE
The WDS utilizes edit and limit checks when data is entered and selected. The WDS steps in Section 4.1 may be repeated until payloads and shipping compliance is satisfied.

NOTE
Steps in this procedure may be performed in parallel as applicable.

NOTE
Steps in this procedure are performed by the TCO, unless another group/discipline is mentioned in the step or a note preceding the step.

NOTE
Trained and qualified TCO's perform the WDS operation per the guidance found in DOE/WIPP-09-3427, *Waste Data System User's Manual*. The WDS manual is **NOT** required to be opened when performing the task listed below, but shall be available for reference if questions arise.

NOTE
Contact Information of organizations called out in this procedure are listed as follows. Specific email addresses can be obtained by contacting the numbers below:

WIPP Shipment Scheduler 575-234-8993 or 575-234-8230
WIPP Transportation group 575-234-8993 or 575-234-8230
WIPP RCT group 575-234-8657
WIPP Central Monitoring Room (CMR) 575-234-8863 or 575-234-8640

FAX notifications can be made in lieu of emails if needed. FAX numbers can be obtained by contacting the specific group.

4.1 WDS Data Entry/RH Shipment Certification

4.1.1 Creating Payloads Using the WDS

[A] Select the new button to create/generate a Payload Plan ID

[B] For each payload enter the following information into the WDS:

- Payload Number
- Payload Container Type
- Current Location (Site ID)

- Destination Site (Site ID)
- Shipping Program (Site ID)

[C] Select canister until a CCP-PO-505 compliant payload is obtained.

[D] **ONCE** the virtual CCP-PO-505 compliant payload is built, **THEN** select the accept button.

[E] Select the submit button.

[F] Generate PTCD.

NOTE
Canisters designated for Controlled Shipment must be marked accordingly on PTCD. Attachment 5 will be initiated for the applicable RH TRU 72-B.

[G] Print report.

NOTE
The PTCD is signed after the RH TRU 72-B is loaded so that the final information is entered into the WDS.

[H] Review PTCD report, **AND** confirm that all payload certification parameters have been met.

4.1.2 Creating Shipments Using the WDS

[A] Enter the following information into the WDS:

- Shipment Number (From WIPP 8-week Rolling Schedule)
- Shipping Program (Site ID)
- Current Location (Site ID)
- Destination Site (Site ID)

[B] Select payload until a CCP-PO-505 compliant shipment is obtained.

NOTE
Once the submit button is selected, the confirmation process for the shipment is activated.

[C] **ONCE** the virtual CCP-PO-505 compliant shipment is built, **THEN** select save **AND** the submit button.

NOTE
Transporter, Tractor, Trailer, and CH Package numbers are obtained from the WIPP Equipment Assignment email, generated by the WIPP Transportation Group. Default values contained in the WDS system are used for Handling Material Weights and Uncertainty. Handling Material weights uncertainty is left blank in the WDS system.

[D] **WHEN** the following becomes available, **THEN** enter the information into the WDS:

- Transporter Name
- Tractor Number
- Trailer Number
- RH Package Number(s)
- Handling Material Weights

[E] For controlled shipments, email the WIPP Shipment Scheduler of impending shipment.

4.1.3 Finalizing Shipments Using the WDS

[A] Enter the following information into the WDS:

- Manifest Number
- Outer Containment (OC) Lid Number (from DOE/WIPP 02-3284, Attachment 2, Packaging Loading Data Sheet)
- Inner Vessel (IV) closure date and time (from DOE/WIPP 02-3284, Attachment 2, Packaging Loading Data Sheet)
- Dose Rate Surface (mrem/hr) from Radiological Survey Report
- Dose Rate 1-meter (mrem/hr) from Radiological Survey Report

- Dose Rate 2-meter (mrem/hr) from Radiological Survey Report
- Alpha contamination survey results in dpm from Radiological Survey Report
- Beta/gamma contamination survey results in dpm from Radiological Survey Report
- U.S. Department of Transportation (DOT) Description from Bill of Lading or UHWM.
- RQ or HRCQ flag(s) (as applicable) from Bill of Lading or UHWM.

[B] Select SAVE.

[C] Print final PTCD.

[D] Review PTCD, **AND** sign report if all parameters are in compliance with CCP-PO-505.

[E] Enter the send date and time in WDS.

[F] Select the Finalize Button to complete the WDS process.

4.2 Shipping Preparations

NOTE
Email notifications may be performed by Host site Shipping Coordinator.

4.2.1 Transmit the draft PTCDs (if applicable), WDS Shipment Summary Report, and WDS Shipment Data report to the Host site Shipping Coordinator for preparation of shipping papers.

4.2.2 Host site Transportation Personnel, develop shipping papers.

4.2.3 Host site Shipping Coordinator, provide TCO with draft copy of shipping paper and RadCalc work sheets (or equivalent).

4.2.4 Review the shipping documentation (Bill of Lading or UHWM) in accordance with 49 CFR Part 172, Subpart C, *Shipping Papers*.

NOTE

Completion of an LDR is necessary only for each initial shipment of a mixed waste stream. The LDR is completed in accordance with 40 CFR Part 268.

4.2.5 Complete Attachment 3, Land Disposal Restriction Exemption Notification.

4.2.6 Print name, sign, date, and initial Attachment 3.

4.2.7 Provide copy of Attachment 3 to Host site Shipping Coordinator.

4.2.8 Host site Shipping Coordinator, attach copy of Attachment 3 to the shipping papers.

4.2.9 As soon as available, prior to releasing the shipment, email a copy of the Draft Manifest and LDR (if applicable), to the WIPP Transportation Group.

NOTE

If the Transportation Tracking and Communications (TRANSCOM) system is out of service, secondary shipment protocol is followed as directed by the WIPP Transportation group. Step 4.2.10 can be omitted.

4.2.10 Prior to releasing the shipment to the carrier, prepare the TRANSCOM system by entering a Draft Bill of Lading or UHWM in TRANSCOM per the guidance found in the TRANSCOM 2000 Designated User Handbook.

4.2.11 Email Draft Bill of Lading or UHWM to TRANSCOM. TRANSCOM email transcom@transcom.energy.gov.

4.2.12 Host site Shipping Coordinator, notify the applicable State Motor Vehicle Department (SMVD) at least 24-hours prior to releasing a shipment.

[A] Request the performance of a Commercial Vehicle Safety Alliance (CVSA) inspection at the Host site of the trailer, tractor, and loaded RH Packaging Containers.

4.3 Inspections and Loading Operations

4.3.1 Verify that payload canisters or containers are DOT Type 7A or equivalent by reviewing the procurement record, specific certification report, or actual canister markings.

NOTE

Evidence of specific filter information is listed on the applicable site Canister Loading Record.

NOTE

Canister Integrity inspections, Marking/Labeling and/or Filter verification, may be performed by reviewing remote camera inspections or by reviewing recent recorded video.

4.3.2 Verify filter vents, as specified in Section 2.4 of the CCP RH-TRAMPAC, are installed in payload containers.

4.3.3 Perform Integrity Inspection on the payload canister identified for shipment per Attachment 4, CCP RH Canister Integrity Checklist.

4.3.4 Print name, sign, and date Attachment 4.

NOTE

Each canister shall be labeled with a unique payload canister identification (ID) number that includes a site identifier as a prefix. The characters composing the canister ID number shall be approximately 2 inches high and of a color contrasting with their background. Canister ID numbers shall be placed at approximately equal intervals around the circumference of the canister and within 18-inches of the top of the canister.

NOTE

Variances from the marking and labeling requirements listed in step 4.3.5, require CBFO approval. CCP will develop and transmit a formal letter requesting the variance to CBFO. CBFO will respond in writing of approval on specific deviation from these requirements.

4.3.5 Ensure the following Marking and Labeling is clearly legible on the payload canister:

[A] Minimum of three canister ID number labels spaced equally around canister

[B] Minimum of one “Caution Radioactive Material" label

[C] Minimum of one, when applicable, “Hazardous Waste” label

[D] Minimum of one, when applicable, PCB label

4.3.6 Ensure that each payload canister is checked to see that there are NO HOLD TAGS attached.

[A] **IF** a HOLD TAG is found,
THEN determine the disposition to ensure that the canister is acceptable for shipment.

4.3.7 Host site RCT or equivalent position, provide Canister Contamination Survey Report to the TCO.

4.3.8 Host site RCT or equivalent position, provide a Dose Rate Survey Report of the payload canister to the TCO (dose rate readings: on contact, including Neutron contribution).

NOTE

Host site personnel will provide payload canister/containers to loading area under the direction of the TCO.

4.3.9 Perform the following:

[A] Verify from the applicable PTCD that the selected payload canister is correct for the designated RH TRU 72-B to be loaded.

[B] Verify that all of the visible container ID labels are an exact match to the ID numbers listed on the PTCD.

[C] **IF** not already performed,
THEN provide PTCD CCP RH Packaging and Transportation Team.

4.3.10 CCP RH Packaging and Transportation Team, perform the following:

[A] Verify from the applicable PTCD that the selected canister is correct for the designated RH TRU 72-B to be loaded.

[B] Verify that all of the visible container ID labels are an exact match to the ID numbers listed on the PTCD.

[C] Load the payload canister/containers into the RH TRU 72-B in accordance with DOE/WIPP-02-3284.

[D] Provide TCO with completed loading documentation.

4.3.11 Host site RCT or equivalent position, provide the dose rate and contamination surveys of the RH TRU 72-B exterior to the TCO (dose rate readings: on contact, 1-meter, and 2-meter, including Neutron contribution).

4.3.12 Review the Radiological Survey Report of the loaded RH TRU 72-B, **AND** verify that the survey data meets applicable radiation/contamination requirements in step 2.4.3.

4.3.13 Controlled Shipment Processing

[A] **IF** Controlled Shipment Payload,
THEN record applicable dates and times of IV lid installation on Attachment 5, **AND** ensure 24-hour Loading Time will not be exceeded.

[B] **IF** total loading time is calculated to be $\geq$ 24-hours,
THEN vent the package, **AND** repeat the lid installation process.

[C] Provide a copy of completed Attachment 5, to the Host Site Shipping Coordinator.

4.4 Shipping Completion

4.4.1 Host site Transportation personnel, perform marking, labeling, and placarding (if applicable) of the RH Package and Transport Trailer.

4.4.2 Ensure correct marking, labeling, and placarding (if applicable) per the following:

[A] Marking of RH Packaging Container shipments of RH TRU waste is conducted in accordance with 49 CFR Part 172, Subpart D, *Marking*, § 172.300 through 172.338; 40 CFR Part 262, Subpart C, § 262.32, *Marking*; and 40 CFR 761.40, Subpart C, *Marking of PCBs and PCB Items*.

[B] Labeling of RH Packaging Container shipments of RH TRU waste is conducted in accordance with 49 CFR Part 172,Subpart E, *Labeling*, § 172.400 through 172.450; and 40 CFR Part 262, Subpart C, § 262.31, *Labeling*.

[C] Placarding of RH Packaging Container transport vehicles of RH TRU waste is conducted in accordance with 49 CFR Part 172, Subpart F, *Placarding*, § 172.500 through 172.560; and 40 CFR Part 262, Subpart C, § 262.33, *Placarding.*

4.4.3 Trucking company, attach tractor and trailer.

4.4.4 Host site Transportation personnel, sign the shipping documentation (Bill of Lading or UHWM) in accordance with 49 CFR Subpart C.

4.4.5 Host site Transportation personnel, provide carrier with appropriate shipping documentation package, including LDR (if applicable), and controlled shipment package Attachment 5 (if applicable).

4.4.6 SMVD, perform CVSA inspection of the tractor, trailer, and RH package.

4.4.7 Host site Transportation personnel, provide TCO with a signed copy of the shipping documentation (Bill of Lading or UHWM).

4.4.8 Ensure Shipment Radiological Information is emailed to WIPP RCT group.

4.4.9 **IF** the shipment contains a Controlled Shipment Package, **THEN** ensure Attachment 5, is emailed to WIPP Transportation.

4.4.10 Ensure the PTCD is signed to certify that the payload in the RH Packaging Container meets the requirements of CCP-PO-505.

4.4.11 TCO **OR** Host Site Shipping Coordinator, contact WIPP Central Monitoring Room **AND** request to release shipment.

4.4.12 **ONCE** approval is granted, **THEN** TCO or Host Site Shipping Coordinator, release shipment.

4.4.13 Change WDS status to “In Transit.”

4.5 Shipment Receipt

NOTE

Receipt sites may use CBFO-approved site-specific Controlled Shipment forms in place of CCP-TP-507, Attachment 6, provided that the same information is recorded **AND** a completed copy is returned to the applicable TCO.

4.5.1 **IF** the shipment contains a Controlled Shipment Package, **THEN** request the Receipt Site to fax/email the completed Attachment 6, or a site equivalent form, once the payloads are unloaded.

4.5.2 **ONCE** the shipment status in WDS is “Shipment Received,” **THEN** send a fax/email to the Host site Shipping Coordinator, stating shipment received with the date of receipt.

4.5.3 **ONCE** the shipping data entry is complete, **THEN** compile and submit items listed in Section 5.1.1, to CCP Records.

5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as QA records in accordance with CCP-QP-008, *CCP Records Management.* The records are the following:

NOTE

Records generated by DOE/WIPP 02-3284 (see Section 3.1.4) as applicable, are included in the Shipping Documentation Package.

QA/Nonpermanent

5.1.1 Shipping Documentation Package:

- PTCD Spreadsheet(s), as applicable
- WDS Shipment Summary Report
- Copy of Attachment 1 - Uniform Hazardous Waste Manifest (mixed waste only), if applicable
- Copy of Attachment 2 - Straight Bill of Lading - Short Form (non-mixed waste only), if applicable
- Attachment 3 - Land Disposal Restriction Exemption Notification (initial shipment of a waste stream only)
- Attachment 4 - CCP RH Canister Integrity Checklist
- Attachment 5 - CCP Control Checklist for RH Controlled Shipments
- Attachment 6 - CCP Control Checklist for Receipt of RH Controlled Shipments
- Fax or e-mail correspondence, if applicable

5.1.2 Radiological Surveys

[A] Dose Rate Survey Report

[B] Contamination Survey

Attachment 1 – Uniform Hazardous Waste Manifest (EXAMPLE)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number

GENERATOR

5. Generator's Name and Mailing Address — Generator's Site Address (if different than mailing address)

Generator's Phone:

6. Transporter 1 Company Name — U.S. EPA ID Number

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number

Facility's Phone:

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1.					
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name — Signature — Month Day Year

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name — Signature — Month Day Year

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name — Signature — Month Day Year

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Attachment 2 – Straight Bill of Lading – Short Forms (EXAMPLE)

STRAIGHT BILL OF LADING

ORIGINAL–NOT NEGOTIABLE

Shipper No. _____

Carrier No. _____

Date _____

ge _____ of _____ (Name of carrier) (SCAC)

FROM:
Shipper

Street

City State Zip Code

24 hr. Emergency Contact Tel. No.

Vehicle Number

No. of Units / Container Type	HM	BASIC DESCRIPTION Proper Shipping Name, Hazard Class, Identification Number (UN or NA), Packing Group, per 172.101, 172.202, 172.203	TOTAL QUANTITY (Weight, Volume, Gallons, etc.)	WEIGHT (Subject to Correction)	RATE	CHARGES (For Carrier Use Only)

PLACARDS TENDERED: YES ☐ NO ☐

Note – (1) Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property as follows: "The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____ per _____."
2) Where the Applicable tariff publishes specific limitation of the carrier's liability absent a release or a value declaration by the shipper and the shipper does not release the carrier's liability or declare a value, the carrier's liability shall be limited to the extent provided by such provisions. See MHFC Item 173.
3) Commodities requiring special or additional care or attention in handling or stowing must be so marked and packaged as to ensure safe transportation. See Section 2(e) of Item 360, Bills of Lading, Freight Bills and Statements of Charges and Section 7(a) of the Contract Terms and Conditions for a list of such articles.

I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

_____ Signature

HMIT
C.O.D. TO:
ADDRESS

COD Amt: $

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

_____ Signature of Consignor

C.O.D. FEE: PREPAID ☐ COLLECT ☐ $

TOTAL CHARGES: $

FREIGHT CHARGES
FREIGHT CHARGES are PREPAID unless marked otherwise ☐ Check box if charges are to be COLLECT

RECEIVED, subject to classifications and tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its own route, otherwise to deliver to another carrier on the route to said destination. It is hereby agreed as to each carrier of all or any of said property over all or any portion of said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the terms and conditions in the governing classification on the date of shipment.
Shipper hereby certifies that he is familiar with all the bill of lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER

PER

CARRIER

PER

DATE

1

Attachment 3 – Land Disposal Restriction Exemption Notification

The non-waste water identified in this shipment, Manifest Number_____, and bearing the EPA hazardous waste number(s) listed below are exempted from the land disposal prohibitions of 20 NMAC 4.1, 268 because the waste is exempted by the WIPP Land Withdrawal Act. The Land Withdrawal Act also exempts this waste from the treatment standards in 20 NMAC 4.1, 268. This waste is **NOT** prohibited from land disposal.

EPA Hazardous Waste Number (No additional codes to those listed below can be accepted at the WIPP, Check only those that are included in this shipment.):

Waste Stream Profile Number: _____

☐	D004	Arsenic	05/08/92	☐	D038	Pyridine	09/19/96
☐	D005	Barium	08/08/90	☐	D039	Tetrachloroethylene	09/19/96
☐	D006	Cadmium	08/08/90	☐	D040	Trichloroethylene	09/19/96
☐	D007	Chromium	08/08/90	☐	D043	Vinyl Chloride	09/19/96
☐	D008	Lead	08/08/90	☐	F001	Spent Solvents	11/08/86
☐	D009	Mercury	05/08/92	☐	F002	Spent Solvents	11/08/86
☐	D010	Selenium	08/08/90	☐	F003	Spent Solvents	11/08/86
☐	D011	Silver	08/08/90	☐	F004	Spent Solvents	11/08/86
☐	D018	Benzene	09/19/96	☐	F005	Spent Solvents	11/08/86
☐	D019	Carbon Tetrachloride	09/19/96	☐	F006	Sludges	09/08/88
☐	D021	Chlorobenzene	09/19/96	☐	F007	cyanide salts	07/08/89
☐	D022	Chloroform	09/19/96	☐	F009	cyanide salts	07/08/89
☐	D026	Cresol	09/19/96	☐	P015	Beryllium Powder	08/08/90
☐	D027	1,4-Dichlorobenzene	09/19/96	☐	P030	Cyanides (soluble cyanide salts), not otherwise specified (H)	06/08/89
☐	D028	1,2-Dichloroethane	09/19/96	☐	P098	Potassium Cyanide (H)	06/08/89
☐	D029	1,1-Dichloroethylene	09/19/96	☐	P099	Potassium Silver Cyanide (H)	08/08/90
☐	D030	2,4-Dinitrotolune	09/19/96	☐	P106	Sodium Cyanide (H)	06/08/89
☐	D032	Hexachlorobenzene	09/19/96	☐	P120	Vanadium Pentoxide	08/08/90
☐	D033	Hexachlorobutadiene	09/19/96	☐	U002	Acetone	08/08/90
☐	D034	Hexachloroethane	09/19/96	☐	U003	Acetonitrile (I,T)	08/08/90
☐	D035	Methyl ethyl ketone	09/19/96	☐	U019	Benzene	08/08/90
☐	D036	Nitrobenzene	09/19/96	☐	U037	Chlorobenzene	08/08/90
☐	D037	Pentachlorophenol	09/19/96	☐	U043	Vinyl Chloride	08/08/90

Attachment 3 – Land Disposal Restriction Exemption Notification (Continued)

Waste Stream Profile Number: _____

☐	U044	Chloroform	08/08/90	☐	U226	1,1,1-Trichloroethane	08/08/90
☐	U052	Cresol	08/08/90	☐	U228	Trichloroethylene	08/08/90
☐	U070	1,2-Dichlorobenzene	08/08/90	☐	U239	Xylene	08/08/90
☐	U072	1,4-Dichlorobenzene	08/08/90	☐	N/A	N/A	N/A
☐	U078	1,1-Dichloroethylene	08/08/90	☐	N/A	N/A	N/A
☐	U079	1,2-Dichloroethylene (T) 156-60-5	08/08/90	☐	N/A	N/A	N/A
☐	U103	Dimethyl Sulfate (T)	08/08/90	☐	N/A	N/A	N/A
☐	U105	2,4-Dinitrotoluene (T) 121-14-2	08/08/90	☐	N/A	N/A	N/A
☐	U108	1,4-Dioxane (T)		☐	N/A	N/A	N/A
☐	U122	Formaldehyde	08/08/90	☐	N/A	N/A	N/A
☐	U133	Hydrazine	08/08/90	☐	N/A	N/A	N/A
☐	U134	Hydrofluoric Acid	08/08/90	☐	N/A	N/A	N/A
☐	U151	Mercury	08/08/90	☐	N/A	N/A	N/A
☐	U154	Methanol	08/08/90	☐	N/A	N/A	N/A
☐	U159	Methyl Ethyl Ketone	08/08/90	☐	N/A	N/A	N/A
☐	U196	Pyridine	08/08/90	☐	N/A	N/A	N/A
☐	U209	1,1,2,2-Tetrachloroethane	08/08/90	☐	N/A	N/A	N/A
☐	U210	Tetrachloroethylene	08/08/90	☐	N/A	N/A	N/A
☐	U220	Toluene	08/08/90	☐	N/A	N/A	N/A

_____/_____/_____/_____
TCO Printed Name Signature Date Initials

REFERENCE:

20 NMAC 4.1, 268.7(a) (3)
OCT. 30, 1992–PUBLIC LAW 102-579 as amended Sept. 23, 1996–PUBLIC LAW 104-201, Subtitle F
WIPP Hazardous Waste Facility Permit, Attachment C-5b(2)
WIPP Hazardous Waste Facility Permit, Table 2.3.4

Attachment 4 – CCP RH Canister Integrity Checklist

Record Canister ID number_____

RH TRU 72-B Cask Number (if applicable) _____

Any YES answer on the inspection checklist will result in the TCO immediately contacting the facility supervisor. The facility supervisor will have the canister/container segregated **AND** the appropriate site-specific corrective actions invoked. The TCO will select a new waste canister/container for shipment. The new waste canister/container will require the same inspection per the checklist.

Visually examine 100% of each canister/container for selected payload assembly per the checklist below.

CANISTER/CONTAINER EXAMINATION		**DISCUSSION OF CRITERIA**	**CHECK ONE**	
1.	Is the canister/container obviously degraded?	Obviously degraded means clearly visible and potentially significant defects in the canister/container or canister/container surface.	YES ☐	NO ☐
2.	Is there evidence that the canister/container is, or has been, pressurized?	Pressurization can be indicated by a fairly uniform expansion of the sidewalls, bottom or top. Past pressurization can be indicated by a notable outward deflection of the bottom or top. Verify that the canister/container is not warped.	YES ☐	NO ☐
3.	Is there any potentially significant rust or corrosion such that wall thinning, pin holes, or breaches are likely or the load bearing capacity is suspect?	Rust shall be assessed in terms of its type, extent, and location. Pitting, pocking, flaking, or dark coloration characterizes potentially significant rust or corrosion. This includes the extent of the canister/container surface area covered, thickness, and, if it occurs in large flakes or built-up (caked) areas. Rusted canisters/containers may not be accepted if: • Rust is present in caked layers or deposits • Rust is present in the form of deep metal flaking, or built-up areas of corrosion products In addition, the location of rust should be noted; for example on a drum: top lid; filter region; locking chine; top one-third, above the second rolling hoop; middle one-third, between the first and second rolling hoops; bottom one-third, below the second rolling hoop; and on the bottom. Canisters/containers may still be considered acceptable if the signs of rust show up as: • Some discoloration on the canister/container • If rubbed would produce fine grit or dust or minor flaking (such that wall thinning does not occur)	YES ☐	NO ☐

Attachment 4 – CCP RH Canister Integrity Checklist (Continued)

CANISTER/**CONTAINER EXAMINATION**		**DISCUSSION OF CRITERIA**	**CHECK ONE**	
4.	Are any of the following apparent? • wall thinning • pin holes • breaches	Wall thinning, pin holes, and breaches can be a result of rust/corrosion (see discussion for #3).	YES ☐	NO ☐
5.	Are there any split seams, tears, obvious holes, punctures (of any size), creases, broken welds, or cracks?	Canisters/containers with obvious leaks, holes or openings, cracks, deep crevices, creases, tears, broken welds, sharp edges or pits, are either breached or on the verge of being breached. Verify that there is no warpage that could cause the canister/container to be unstable or prevent it from fitting properly in the applicable package.	YES ☐	NO ☐
6.	Is the load-bearing capacity suspect?	The load-bearing capacity could be reduced for excessive rust (see discussion for #3), wall thinning (see discussion for #4), breaches, cracks, creases, broken welds, etc. (see discussion for #5).	YES ☐	NO ☐
7.	Is the canister/container improperly closed?	Inspect the fastener and fastener ring (chine) if applicable for damage or excessive corrosion. Check the alignment of the fastener to ensure that it is in firm contact around the entire lid and the canister/container will not open during transportation.	YES ☐	NO ☐
8.	Are there any dents, scrapes, or scratches that make the canister's/container's structural integrity questionable or prevent the top and bottom surfaces from being parallel?	Deep gouges, scratches, or abrasions over wide areas are not acceptable. If top and bottom surfaces are not parallel, this would indicate that the container is warped. Dents should be less than ¼ inch deep by 3 inches long and between ½ inch to 6 inches wide. All other dents must be examined to determine impact of structural integrity.	YES ☐	NO ☐
9.	Is there discoloration which would indicate leakage or other evidence of leakage of material from the canister/container?	Examine the canister/container regions near vents, top lid fittings, bottom fittings, welds, seams and intersections of one or more metal sheets or plates. Canisters/containers must be rejected if evidence of leakage is present.	YES ☐	NO ☐
10.	Is the canister/container bulged?	For the purposes of this examination, bulging is indicated by: • A fairly uniform expansion of the sidewalls, bottom, or top (e.g., in the case of a drum, either the top or bottom surface protrudes beyond the planar surface of the top or bottom ring, • A protrusion of the side wall (e.g., in the case of a drum, beyond a line connecting the peaks of the surrounding rolling hoops or a line between a surrounding rolling hoop and the bottom or top ring), or Expansion of the sidewall (e.g., in the case of a drum, such that it deforms any portion of a rolling hoop).	YES ☐	NO ☐

Note: Remote Camera Inspections can be performed by reviewing recent recorded video.

Attachment 4 – CCP RH Canister Integrity Checklist (Continued)

Comments: _____
_____
_____
_____

Inspected by: _____/_____/_____
TCO Printed Name Signature Date

Attachment 5 – CCP Control Checklist for RH Controlled Shipments*

Shipment No. _____ Packaging No. _____

To be completed by CCP Transportation Certification Official, or designee, for package designated as a controlled shipment.

Activity	Recorded Date	Recorded Time	Completion of Activity (√)
Record date and time of IV closure and installation of IV vent port plug, DOE/WIPP 02-3284, *RH Packaging Operations Manual.*			
Record date and time the shipment containing the loaded package is ready to depart from site to destination			
Calculate and record total Loading Time (Limit = 24 hours)			
Total Loading time ≤ 1day, proceed to certification signature block *Total Loading time > 1, STOP. Vent package and repeat closure process*			
I certify the above data is accurate and compliant with the Loading Time limit of 24 hours, as specified in Section 6.2.3 of the RH-TRAMPAC.			
Transportation Certification Official (or designee)		Date	

*Controlled shipments (10 days) shall be made in accordance with the conditions specified in RH-TRAMPAC Section 6.2.3

_____/_____/_____/_____

TCO Printed Name Signature Date Initials

Attachment 6 – CCP Control Checklist for Receipt of RH Controlled Shipments*

Shipment No. _____ Packaging No. _____

To be completed by Site Operations personnel for package designated as a controlled shipment:

Activity	Recorded Date	Recorded Time	Completion of Activity (√)
Record date and time of package receipt			
Vent package within 24 hours of date and time recorded above and record vent date and time			
I certify the above data is accurate and compliant with the Unloading Time limit of 24 hours, as specified in Section 6.2.3 of the RH-TRAMPAC.			
Designated Site Personnel	Site	Date	

*Controlled shipments (10 days) shall be made in accordance with the conditions specified in RH-TRAMPAC Section 6.2.3. This attachment may be reformatted for Receipt Site use provided that the same information is recorded.

Contact TCO _____, at Ph# _____, upon completion of attachment for notification of completion of 24 hour unloading time, completion of 10 day controlled shipment and to arrange return email/FAX of “Attachment 6” copy, for Shipping Documentation Package.

Controlled
Copy

CCP-TP-508

Revision 7

CCP RH
Standard Real-Time Radiography Inspection Procedure

EFFECTIVE DATE: 04/21/2011

Larry Porter

PRINTED NAME

APPROVED FOR USE

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
0	11/16/2006	Initial issue.
1	12/13/2006	Revised to make changes to Section 4.3 and Attachment 2.
2	02/27/2008	Revised to address Carlsbad Field Office (CBFO) Corrective Action Report (CAR) 08-005.
3	04/22/2009	Revised to address Corrective Action Report (CAR)-RHINL-0001-09.
4	06/30/2010	Update language to align with permit modification.
5	07/14/2010	Revised to resolve conflict between operator and independent technical reviewer (ITR) completing and signing Attachment 6.
6	12/29/2010	Revised to incorporate Permit Modification Independent Technical Review (ITR) language.
7	04/21/2011	Revised to implement Revision 2 of Remote-Handled TRU Waste Characterization Program Implementation Plan DOE/WIPP-02-3214.

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1.0 PURPOSE

The Real-Time Radiography (RTR) system is used to verify that the physical form matches the waste stream description and that the Waste Matrix Code (WMC) assigned to the waste container is consistent with Acceptable Knowledge (AK) of the waste. The system is also used to identify prohibited items within a waste container.

This procedure contains the requirements for the collection and review of all data generated during the RTR process.

1.1 Scope

This procedure specifies instructions for performing Nondestructive Examination (NDE) of waste containers using the RTR system. It also specifies methods for documenting the examination results as required by DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan,* and CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*.

2.0 REQUIREMENTS

2.1 References

Baseline Documents

- CCP-PO-002, *CCP Transuranic Waste Certification Plan*
- Safety Analysis Report for the RH-TRU 72-B Waste Shipping Package

Referenced Documents

- DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*
- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- CCP-PO-505*, Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*
- CCP-QP-002, *CCP Training and Qualification Plan*
- CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
- CCP-QP-008, *CCP Records Management*

2.2 Training Requirements

2.2.1 Personnel conducting RTR activities will be trained and qualified in accordance with CCP-QP-002, *CCP Training and Qualification Plan,* prior to performing this procedure.

2.3 Equipment List

2.3.1 Drum handling equipment.

2.4 Precautions and Limitations

2.4.1 If this procedure can **NOT** be implemented as written, RTR personnel shall notify appropriate supervision. If it is determined that a portion of the work can **NOT** be accomplished as described in this procedure or would result in an undesirable situation, work shall be stopped. Work will **NOT** be resumed until this procedure is modified or replaced by a new document that reflects the current work practice.

2.4.2 Workers who will be working in a radiation area must have read and signed the applicable Radiation Work Permit (RWP), and received orientation to the applicable work package.

2.5 Prerequisite Actions

2.5.1 None.

2.6 Definitions

2.6.1 None.

3.0 RESPONSIBILITIES

3.1 RTR Operator

3.1.1 Completes Attachment 1, CCP RTR Measurement Control Report, and Attachment 2, CCP Radiography Data Sheet.

3.1.2 Operates the RTR system to determine the waste content attributes within a waste container.

3.1.3 Produces the audio/video media and a written record of the x-ray scan of the waste containers.

3.1.4 Performs the initial review of the data generated.

3.1.5 Performs a Independent Replicate Scan on one waste container per testing batch, or once per day of operation, whichever is less frequent.

3.1.6 Performs an Independent Observation (IO) on a waste container, from a RTR recording, at a minimum of once per batch, or once per day of operation, whichever is less frequent.

3.1.7 Assembles the Batch Data Report (BDR).

[A] Paginates the Batch Data Report (BDR) and completes Attachment 5, CCP Radiography Batch Data Report Table of Contents.

3.2 Independent Technical Reviewer (ITR)

NOTE

The Independent Technical Reviewer (ITR) will be an individual, other than the data generator, who is qualified to perform this procedure. The ITR shall not be involved in the generation or recording of the data.

3.2.1 Reviews the data (e.g., Attachment 2).

3.2.2 Completes Attachment 3, CCP Radiography Independent Technical Reviewer Checklist.

3.2.3 Signs Attachment 6, CCP Radiography Batch Data Report Cover Sheet.

3.2.4 Review Attachments 1, 2, and the Audio/Video for each container **AND** resolve any comments with the RTR Operator(s).

3.3 RTR Lead Operator (LO)

3.3.1 Provides supervision of the characterization activities of the RTR system.

3.3.2 Ensures the technical quality for all aspects of the RTR process.

3.3.3 Ensures an ITR is designated for the BDR.

3.3.4 Ensures all RTR personnel maintain qualification and are on the List of Qualified Individuals (LOQI) before performing RTR operations.

3.3.5 Ensures that a Replicate Scan is performed once per day, or once per testing batch, whichever is less frequent.

3.3.6 Ensures that an IO is performed once per day, or once per testing batch, whichever is less frequent.

3.4 Site Project Manager (SPM)

3.4.1 Reviews and approves the BDR.

3.4.2 Completes Attachment 4, CCP Radiography Site Project Manager Review Checklist.

3.5 Facility Records Custodian

3.5.1 Transmits all records generated by this procedure in accordance with CCP-QP-008, *CCP Records Management*.

4.0 PROCEDURE

RTR Operator

NOTE

If during this operation any abnormal conditions are observed, STOP WORK authority should be implemented, equipment should be placed in a safe configuration, **AND** the Lead Operator (LO) and the Host facility supervisor should be notified immediately.

4.1 RTR System Startup

4.1.1 Startup the RTR System for operation in accordance with Host site and/or Central Characterization Project (CCP) procedures.

4.2 Audio/Video System Startup/Image Test Pattern

NOTE

An audio/video media of the RTR examination will be made for all waste containers.

NOTE

To assist the RTR Operator in recording information onto the data sheets, another person may be used for data entry. This person does not require any RTR qualifications, as the RTR Operator retains responsibility for the data recorded. However, if another RTR Operator performs this function, that operator must sign the data sheet below the first Operator, and shall not perform the IO, Replicate, and ITR functions.

4.2.1 Install the Image Test Pattern drum assembly/device in accordance with Host site and/or CCP procedures, **AND** record the following on Attachment 1:

[A] Site

NOTE

BDR numbers are assigned based on the following: Site Identification (ID), remote-handled (RH) RTR designator for radiography, last two digits of year, and the next sequential number (e.g., INLRHRTR06001).

[B] Batch Data Report No.

[C] Examination Date

4.2.2 Ensure the audio/video media recording systems are prepared for operation in accordance with Host site and/or CCP procedures and/or the manufacturer's instructions.

NOTE

Only new, unrecorded media shall be used. Record RTR scan to audio/video media and label audio/video media as applicable according to type and/or requirements of the recording system.

[A] Mark each audio/video media with the following information:

[A.1] For the primary audio/video media, record the BDR number followed by the letter A (e.g., INLRHRTR06001A).

[A.2] For the backup audio/video media, record the same BDR number followed by the letter B (e.g., INLRHRTR06001B).

4.2.3 Perform an audio/visual check by recording the results of the Image Test Pattern Test as follows:

[A] Perform the Image Test Pattern Test.

[A.1] **IF** the Image Test Pattern is correctly observed (minimum acceptable is five lines-pair/centimeters [lp/cm]),
THEN record the results of the test, **AND** mark SAT on Attachment 1.

[A.2] **IF** the Image Test Pattern is **NOT** correctly observed,
THEN STOP WORK, **AND** notify the RTR LO.

[B] Stop **AND** replay the audio/video media to verify the audio/visual checks are satisfactory, **AND** record SAT on Attachment 1.

4.2.4 Remove the Image Test Pattern drum assembly/device in accordance with Host site and/or CCP procedures.

4.2.5 Record comments, if any, in the Comments field of Attachment 1.

[A] **IF** there are no comments,
THEN record N/A in the Comments field.

4.2.6 Print name, sign, and date Attachment 1.

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4.3 RTR System Operation

NOTE
Steps 4.3.1 through 4.3.4 will be repeated for each waste container to be examined. Sub-steps will be performed in sequential order.

4.3.1 Waste Container Loading

[A] Load the waste container to be examined in accordance with Host site and/or CCP procedures.

4.3.2 Waste Container Scanning

NOTE
Verify Waste Container ID Numbers. Attachment 2 will be completed for all waste containers examined.

NOTE
The data required by steps 4.3.3. [A.1] through [A.7] and 4.3.3 [C.1] through [C.3] may be entered on Attachment 2 at any time after the waste container is loaded into the RTR unit. The remaining data required to be entered on Attachment 2 may be entered as the operator determines it during the scan.

[A] Enter the appropriate scan information (e.g., Waste Container ID, Examination Date) on the video display.

[B] Initiate x-rays.

[C] Initiate the recording of the RTR scan.

[D] Manipulate the waste container and x-ray controls such that 100 percent of the waste container volume is examined.

NOTE
The description of the material to be placed in the package shall be sufficiently detailed to allow a reviewer to evaluate the Waste Material Parameters (e.g., crescent wrench IM). The material parameters are listed in Table 2, Waste Material Parameters.

[E] Scan the waste container, record a running commentary of the waste container contents, **AND** record the contents on Section 3, Waste Container Inventory and Comments, of Attachment 2.

[F] **IF** the waste stream is S3000 or S4000 waste that also contains debris,
THEN visually estimate the total weight of debris in the container of waste and record it in the comment field of Attachment 2.

4.3.3 Complete the RTR Scan

NOTE

If a waste container has been placed by AK into the S3000 or S4000 category and if the RTR penetration is sufficient to determine whether there are no prohibited items or there is no liquid on the surface of the contents or along the edges of the Waste Container, then the container DOES **NOT** need to be rejected for these conditions. Otherwise, if the RTR penetration was **NOT** sufficient to determine whether there is liquid on the surface of the contents or along the edges of the Waste Container, then the waste container will be rejected in accordance with CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*.

[A] Record the following data in Section 1, General Information, of Attachment 2:

[A.1] Check (✔) the applicable type of RTR examination

[A.2] Site ID

[A.3] Batch Number

[A.4] Examination Date

[A.5] Waste Container ID

NOTE

The audio/video is divided into chapters when recorded on DVD. If applicable, name these chapters the same as the container number to meet the access requirement to view the container, which is equivalent to start and stop time on VHS media.

[A.6] Audio/Video Media Number

[A.7] Procedure and Revision No.

[A.8] Nonconformance reports (NCRs), if applicable (NCR No., Date, and YES/NO)

[B] **IF** a container is identified in the S5000 Summary Category Group that can **NOT** be penetrated by RTR method because of the presence of lead or other shielding,
THEN the waste container will be rejected in accordance with CCP-QP-005.

[C] Record the following data in Section 2, Waste Container Data, of Attachment 2:

[C.1] Container Type

[C.2] Waste Matrix Code

[C.3] Waste Stream Number

[C.4] **IF** a Rigid Polyethylene Liner is present,
THEN check (✔) YES.

[C.5] **IF** a Rigid Polyethylene Liner is **NOT** present,
THEN check (✔) NO, **AND** GO TO step 4.3.3[C.7].

[C.6] Check (✔) NO, YES, or NA to indicate if the Rigid Polyethylene Liner is vented or filtered.

(a) Check (✔) VENTED, FILTERED, **OR** NO LID, as applicable.

[C.7] Estimate Number of Layers of Confinement.

NOTE

The fill percent of the waste container is based on the highest level of the bulk of the waste. Items (e.g., pipe, scrap angle, plastic bags) which protrude above the bulk of the waste are **NOT** to be included in the fill percent determination. The fill percent is to be recorded in five percent increments (e.g., 35%, 40%, 45%).

NOTE

When the Radiological Characterization Technical Report requires fill factors for the internal cans, the fill percent is to be recorded in five percent increments (e.g., 35%, 40%, 45%) in Section 2 of Attachment 2 for each can.

[C.8] Record the estimated Fill Percent.

[C.9] Record the estimated Internal can fill percent, if applicable.

[D] Use Table 1, Prohibited Items, to complete the checklist in Section 4, RTR Summary, of Attachment 2, to confirm there are **NO** prohibited items in the waste container.

[D.1] **IF** any hazardous waste(s) **NOT** identified in the AK Summary Report(s) for the waste stream being characterized **OR** any nonconforming/prohibited items are noted during the RTR examination, **THEN** perform the following:

(a) Record a detailed description of the prohibited item(s), including location and volume of liquid, in the Comments field of Section 5, Waste Summary, of Attachment 2.

(b) Initiate a NCR in accordance with CCP-QP-005, **AND** record the NCR number in Section 1 of Attachment 2.

NOTE

The physical waste form requirements and waste stream descriptions for the waste stream being evaluated are found in the AK Summary Report.

[E] Complete the checklist in Section 4 of Attachment 2, to record if the physical form of the waste matches the Waste Stream Description and the Waste Matrix Code.

[E.1] **IF** the waste form DOES **NOT** match the Waste Stream Description and/or the Waste Matrix Code, **THEN** initiate an NCR in accordance with CCP-QP-005.

[F] Stop x-ray generation.

[G] Review Attachment 2 for completeness and accuracy.

NOTE

Data changes shall be made by the individual who originally collected the data, or an individual authorized to change the data. Changes will be made in accordance with CCP-QP-008.

[G.1] Ensure changes to the data have been initialed and dated.

[H] Print name, sign, and date Attachment 2.

4.3.4 Waste Container Unloading

[A] Unload the waste container in accordance with Host site and/or CCP procedures.

[B] **IF** the waste container constitutes the last container of the batch or day,
THEN STOP, remove the audio/video media from the recording components, if applicable, **AND** properly store the media.

[C] Repeat steps 4.3.1 through 4.3.4 until all containers in the batch have been examined.

4.4 Replicate Scan

NOTE

A Replicate Scan shall be performed once per day or once per testing batch, whichever is less frequent. The Replicate Scan is performed by a qualified RTR Operator other than the RTR Operator who performed the original scan. The Replicate Scan will be performed under the same uniform conditions as a routine scan of a waste container in Section 4.3.

Second RTR Operator

4.4.1 Prior to reviewing the initial Attachment 2, scan the replicate waste container in accordance with Section 4.3, **AND** record the results on a new Attachment 2.

4.4.2 Review the original Attachment 2, **AND** compare the results with the second Attachment 2.

4.4.3 **IF** sections 4 and 5 of Attachment 2 differ,
THEN perform the following:

[A] Reconcile the results (with both RTR Operators) as follows:

[A.1] Jointly perform a real-time review of the Attachment 2(s).

[A.2] Jointly review the media **OR** re-scan the container, **AND** make corrections, as required, to the Attachment 2(s).

[B] **IF** the results can **NOT** be reconciled,
THEN STOP WORK, **AND** notify the RTR LO.

4.5 Independent Observations

NOTE
An IO of one container scan, other than the Replicate Scan, shall be performed once per calendar day or once per testing batch, whichever is less frequent. The IO will be performed by a second and independent qualified RTR Operator who was not involved in the original scan of the waste container. The IO will be performed by observing the video recording of the original scan with no audio.

Second RTR Operator

4.5.1 Review the audio/video media of the original scan, **AND** complete a second Attachment 2.

4.5.2 Review the original Attachment 2, **AND** compare the results with the second Attachment 2.

4.5.3 **IF** Sections 4 and 5 of Attachment 2 differ,

THEN perform the following:

[A] Reconcile the results (with both RTR Operators) as follows:

[A.1] Jointly perform a real-time review of the Attachment 2(s).

[A.2] Jointly review the media **OR** re-scan the container, **AND** make corrections, as required, to the Attachment 2(s).

[B] **IF** the results can **NOT** be reconciled,
THEN STOP WORK, **AND** notify the RTR LO.

4.6 RTR System Shutdown

RTR Operator

4.6.1 Shutdown the RTR System in accordance with Host site and/or CCP procedures.

4.7 Audio/Video System Shutdown

4.7.1 Ensure all audio/video media have been removed from the recording components, if applicable.

4.7.2 Turn OFF the audio/video media recording systems in accordance with Host site and/or CCP procedures and/or the manufacturer's instructions.

4.8 Batch Data Report (BDR) Preparation

RTR Operator

4.8.1 Assemble Attachment 2(s) for up to 20 waste containers (regardless of matrix) that have been processed from a single RTR unit.

4.8.2 Complete Attachment 6, **AND** record the following:

[A] Batch Data Report No.

[B] Date

[C] Waste Container ID Numbers

[D] Record which containers are by designation, Replicate Scans, and Independent Observations.

4.8.3 Assemble, organize, and prepare the BDR as follows:

[A] Attachment 6

[B] Attachment 5

[C] Attachment 3

[D] Attachment 1(s)

[E] Attachment 2(s)

[F] Copy of NCRs, if applicable

[G] Paginate the BDR

[H] Audio/Video media

4.8.4 Submit the BDR to the ITR.

4.9 Independent Technical Reviewer (ITR) Review

NOTE
The independent technical review is conducted by an individual that is qualified to have performed the initial work but who was **NOT** directly responsible for performing the work. The ITR shall not be involved in the generation or recording of the data.

ITR

4.9.1 Review Attachments 1, 2, and the Audio/Video for each container **AND** resolve any comments with the RTR Operator(s).

4.9.2 Review the BDR to the criteria in the checklist of Attachment 3, **AND** complete Attachment 3.

4.9.3 Print name, sign, and date Attachment 3 and 6, **AND** return the BDR to the RTR Operator.

4.10 BDR Submission

RTR Operator

4.10.1 Submit the BDR as follows:

NOTE
A second backup copy of the audio/video record shall be created to aid Waste Confirmation activities.

[A] Obtain primary and one backup copy of audio/video media record.

[B] Submit the BDR and audio/video media to the Facility Records Custodian in accordance with CCP-QP-008.

Facility Records Custodian

[C] Receive, process, and transmit the BDR in accordance with CCP-QP-008.

4.10.2 Site Project Manager (SPM) Review

[A] Obtain copy of BDR.

[B] Enter the BDR Number on Attachment 4.

[C] Review the BDR to the criteria in the checklist of Attachment 4, **AND** complete Attachment 4.

[D] Print name, sign, and date Attachment 4.

[E] Forward the completed Attachment 4 to the Facility Records Custodian or the CCP Records Custodian.

Facility Records Custodian

4.10.3 Transmit all records generated by this procedure in accordance with CCP-QP-008.

5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as quality assurance (QA) records in accordance with CCP-QP-008. The records are the following:

5.1.1 QA/Lifetime

[A] BDR:

[A.1] Attachment 1, CCP RTR Measurement Control Report

[A.2] Attachment 2(s), CCP Radiography Data Sheet

[A.3] Attachment 3, CCP Radiography Independent Technical Reviewer Checklist

[A.4] Attachment 6, CCP Radiography Batch Data Report Cover Sheet

[A.5] Attachment 4, CCP Radiography Site Project Manager Review Checklist

[A.6] Attachment 5, CCP Radiography Batch Data Report Table of Contents

[A.7] Copies of NCRs, if applicable

5.1.2 QA/Non-Permanent

[A] RTR Audio/Video VHS tapes or DVDs (Primary/Backup/Confirmation Copy)

Table 1. Prohibited Items

LIST OF PROHIBITED ITEMS
Liquid Wastes Observable liquid shall be less than 1 percent by volume of the outermost container at the time of RTR or VE. Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. Observable liquid shall not be present in a container with U.S. Environmental Protection Agency (EPA) Hazardous Waste Number (HWN) U134 assigned.
Pyrophorics
Non-radioactive pyrophorics
Non-mixed hazardous waste
Incompatible wastes (wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials, and/or other wastes).
Explosives
Compressed Gases/Pressurized containers (e.g., aerosol cans)
Observable liquid containing Polychlorinated Biphenyls (PCBs) is prohibited.
Ignitables
Corrosives
Reactive waste
Sealed containers greater than 4 liters
Heat Sealed Bags **NOT** defined in the applicable RH-TRU Payload Appendices, Table 2.5-1
Sharp or heavy objects, that could reasonably be expected to cause a breach of the container during transport because it is not adequately blocked, braced, or packaged

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Table 2. Waste Material Parameters

Waste Material Parameter	Description
Iron-based metals/alloys (IM)	Iron and steel alloys in the waste; does not include the waste container materials
Aluminum-based metals/alloys (AM)	Aluminum or aluminum-based alloys in the waste materials
Other metals (OM)	All other metals found in the waste materials
Other inorganic materials (OI)	Nonmetallic inorganic waste, including concrete, glass, firebrick, ceramics, sand, and inorganic sorbents
Cellulosics (C)	Materials generally derived from high polymer plant carbohydrates (e.g., paper, cardboard, wood, cloth)
Rubber (R)	Natural or man-made elastic Latex materials (e.g., surgeon's gloves, leaded rubber gloves)
Plastics (waste materials) (XPW)	Generally man-made materials, often derived from petroleum feedstock (e.g., polyethylene, polyvinylchloride)
Organic matrix (OR)	Cemented organic resins, solidified organic liquids, and sludges
Inorganic matrix (IN)	Any homogeneous materials consisting of sludge, or aqueous-based liquids which are solidified with cement, calcium silicate, or other solidification agents (e.g., waste water treatment sludge, cemented aqueous liquids, and inorganic particulate)
Soils (S)	Generally consists of naturally occurring soils which have been contaminated with inorganic waste materials
Steel (packaging materials) (ST)	U.S. Department of Transportation (DOT)-approved container
Plastics (packaging materials) (PP)	Polyethylene drum liner and plastic bags
Cellulosic packaging (CP)	Fiber Liners

Attachment 1 – CCP RTR Measurement Control Report

CCP RTR Measurement Control Report		
Site:		
Batch Data Report No.:		
Examination Date:		
Control Checks		
Image Test Pattern Test Lines-pair/cm: _____ (Minimum acceptable is five lines-pair/cm)	☐ SAT	☐ UNSAT
Audio/Video Media Recording System - Audio/Video Checks	☐ SAT	☐ UNSAT
Comments:		
RTR Operator:		
Printed Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☐ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	
Batch Number:	
Examination Date:	
Waste Container ID:	
Audio/Video Media Number:	Primary:_____ Backup: _____
Procedure and Revision No.:	Rev.
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☐ NO ☐ YES NCR No.:_____ Date:_____
Section 2: Waste Container Data	
Container Type:	
Waste Matrix Code:	
Waste Stream Number:	
Is a Rigid Polyethylene Liner present? ☐ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☐ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	_____Layers
Estimated Fill Percent:	_____%
Internal Can Fill Percent:	_____, _____, _____

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID:_____

Section 3: Waste Container Inventory and Comments (Detailed descriptions)

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID:_____

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☐ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☐ NO
Does the container have observable liquid containing PCBs?	☐ YES	☐ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☐ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☐ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☐ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☐ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☐ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☐ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☐ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☐ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☐ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☐ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☐ NO

Section 5: Waste Summary
Comments:

RTR Operator:

Printed Name	Signature	Date

Attachment 3 – CCP Radiography Independent Technical Reviewer Checklist

Batch Data Report No.:_____

Description				
1.	Data generation and reduction were conducted in a technically correct manner in accordance with the methods used?	☐ NO	☐ YES	☐ N/A
2.	Was the correct revision of the procedure used? Procedure: Rev.:	☐ NO	☐ YES	☐ N/A
3.	Are there transcription errors?	☐ NO	☐ YES	☐ N/A
4.	Does the BDR include RTR for up to 20 containers?	☐ NO	☐ YES	☐ N/A
5.	Are BDR contents complete and match Attachment 5?	☐ NO	☐ YES	☐ N/A
6.	Is all the data signed and dated in reproducible ink and by the individual(s) generating it?	☐ NO	☐ YES	☐ N/A
7.	Is all data recorded clearly, legibly, and accurately?	☐ NO	☐ YES	☐ N/A
8.	Are all changes to original data lined out, initialed, and dated?	☐ NO	☐ YES	☐ N/A
9.	Were data changes made by the individual who originally collected the data or an individual authorized to change the data?	☐ NO	☐ YES	☐ N/A
10.	Does the waste match the Waste Matrix Code and waste stream description?	☐ NO	☐YES	☐ N/A
11.	Are the RTR Operator's decisions regarding the RTR documented?	☐ NO	☐ YES	☐N/A
12.	Is there an adequate written description of the contents of each item?	☐ NO	☐ YES	☐ N/A
13.	Was the audio/video media properly prepared and labeled?	☐ NO	☐ YES	☐ N/A
14.	Was the audio/video check performed satisfactorily and recorded on Attachment 1?	☐ NO	☐ YES	☐ N/A
15.	Was the Image Test Pattern Test performed satisfactorily and recorded on Attachment 1?	☐ NO	☐ YES	☐ N/A
16.	Was the Replicate Scan performed and recorded on an Attachment 2? (Once per batch or once per day, whichever is less frequent).	☐ NO	☐ YES	☐ N/A
17.	Was the Replicate Scan RTR Operator different from the original scan RTR Operator?	☐ NO	☐ YES	☐ N/A
18.	Did the Replicate Scan RTR Operator and the original scan RTR Operator agree on the results?	☐ NO	☐ YES	☐ N/A
19.	Was the IO performed and recorded on an Attachment 2? (Once per batch or once per day, whichever is less frequent).	☐ NO	☐ YES	☐ N/A
20.	Was the IO RTR Operator different from the original scan RTR Operator?	☐ NO	☐ YES	☐ N/A
21.	Did the IO RTR Operator and the first RTR Operator agree on the results?	☐ NO	☐ YES	☐ N/A
22.	Were the operators qualified to perform the tasks by verification of the LOQI?	☐ NO	☐ YES	☐ N/A
23.	Are the NCR(s) associated with the RTR included in the BDR?	☐ NO	☐ YES	☐ N/A

Attachment 3 – CCP Radiography Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.:_____

Comments:

I have reviewed 100 percent of the container-specific and batch data in this BDR and find it acceptable for SPM review.

ITR:

Printed Name	Signature	Date

Attachment 4 – CCP Radiography Site Project Manager Review Checklist

Batch Data Report No.:_____

1.	Has all the data received an independent technical review as evidenced by a completed Attachment 3 and the appropriate ITR signature?	☐NO	☐YES
2.	Are BDR contents complete and match Attachment 5?	☐NO	☐YES
3.	Is the BDR complete (appropriately completed forms for each container)?	☐NO	☐YES
4.	Have Quality Assurance Objectives (QAOs) for RTR been met? <u>Waste Characterization Program Implementation Plan (WCPIP)</u> • Precision – Reconciled discrepancies between RTR Operators • Accuracy – Target used to tune the image for maximum sharpness and qualified operators performed the work • Representativeness – Description of container contents • Completeness – Completed data form and recording • Comparability – Training requirements met <u>Quality Assurance Project Plan (QAPjP)</u> • Image test satisfactory (Minimum acceptable is five lines-pair/cm) • Replicate scan performed • Independent observation performed • ITR review complete	☐ NO	☐YES

Comments:

I have reviewed 100 percent of the container-specific and batch data in this BDR and find it acceptable.

SPM:

Printed Name	Signature	Date

Attachment 5 – CCP Radiography Batch Data Report Table of Contents

Batch Data Report No.:_____ Date:_____

Table Of Contents		
Item	Description	Page No.
1	Attachment 6, CCP Radiography Batch Data Report Cover Sheet	
2	Attachment 5, CCP Radiography Batch Data Report Table of Contents	
3	Attachment 3, CCP Independent Technical Reviewer Checklist	
4	Attachment 1, CCP RTR Measurement Control Report	
5	Attachment 2(s), CCP Radiography Data Sheets	
6	Copy of NCRs (N/A [Not Applicable])	

Attachment 6 – CCP Radiography Batch Data Report Cover Sheet

Batch Data Report No.:_____ Date:_____

Waste Container ID Numbers	
Replicate Scan:	
Independent Observation:	
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

ITR:

Printed Name	Signature	Date

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CCP-TP-512

Revision 5

CCP
Remote-Handled Waste Sampling

EFFECTIVE DATE: 04/25/2011

Larry Porter

PRINTED NAME

APPROVED FOR USE

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
0	07/23/2008	Initial issue.
1	08/06/2008	Clarified when data may be pre-recorded for ALARA reasons.
2	04/16/2009	Revised to accommodate remote-handled (RH) transuranic (TRU) sampling event for various events.
3	05/04/2010	Add step to perform pre-job briefing of sampling plan.
4	12/29/2010	Revised to incorporate Permit Modification Independent Technical Review (ITR) language.
5	04/25/2011	Revised to implement revision 2 of DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*.

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1.0 PURPOSE

This procedure provides instructions for sampling (not analysis) remote-handled (RH) transuranic (TRU) waste forms. The physical and chemical diversity of RH TRU waste, as well as the dissimilarity of storage facilities and sampling equipment associated with them, require a specific Sampling Analysis Plan (SAP) for each waste stream. Therefore, the sampling is performed in conjunction with a U.S. Department of Energy (DOE) Carlsbad Field Office (CBFO) approved SAP. The SAP will provide specific sampling details/instructions required for the selected analysis for each waste stream. Depending on the specific SAP, the sampling is performed as defined by DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan* (WCPIP), or as defined by the *Waste Isolation Pilot Plant Hazardous Waste Facility Permit,* Attachments C-C6, *Waste Analysis Plan* (WIPP-WAP).

1.1 Scope

This procedure applies to personnel responsible for collecting samples and sampling information, including preparation of the sampling batch data report (BDR). It also addresses the Independent Technical Review (ITR) and Site Project Manager (SPM) review of the BDR.

2.0 REQUIREMENTS

2.1 References

Baseline Documents

- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- CCP-PO-002, *CCP Transuranic Waste Certification Plan*
- 49 *Code of Federal Regulations* (CFR), *Transportation Regulations*

Referenced Documents

- CCP-QP-002, *CCP Training and Qualification Plan*
- CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
- CCP-QP-008, *CCP Records Management*
- DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan* (WCPIP)

- *Waste Isolation Pilot Plant Hazardous Waste Facility Permit,* Attachments C-C6, *Waste Analysis Plan* (WIPP-WAP)

- EPA SW-846, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*

2.2 Training Requirements

2.2.1 Personnel identified in this procedure will be trained and qualified in accordance with CCP-QP-002, *CCP Training and Qualification Plan*, prior to performing this procedure.

2.3 Definitions

2.3.1 **Duplicate Samples**: Duplicate samples will be taken as co-located samples if required by the sampling plan. A co-located sample is collected side-by-side, as close as feasible, to the primary sample, handled in the same manner, and sampled in the same manner at the same randomly selected sample location(s). If inconsistencies, such as color, texture, or waste type in the waste at the sample location exist, another sampling location may be selected, or the samples may be invalidated and co-located samples may again be collected.

2.3.2 **Sampling Batch**: A sampling batch is a suite of samples collected consecutively using the same sample equipment within a specific time period. A sampling batch can be up to 20 samples (excluding field quality control [QC] samples), all of which shall be collected within 14 days of the first sample in the batch. The 14 day time limit is not applicable to Radiochemistry or ICP-MS Analyses radiological characterization only.

2.3.3 **Clean**: For the purposes of this procedure, the word “clean” refers to U.S. Environmental Protection Agency (EPA) environmentally clean.

2.3.4 **Chain of Custody (COC)**: Chain of custody (COC) will be initiated immediately after sampling. Sample custody will be maintained by ensuring the samples are sealed or locked in the possession of or within the view of a Sampler, in a sealed or locked container controlled by a Sampler, or in a secure controlled-access location.

2.3.5 **Tamper Indicating Device (TID)**: Tamper indicating devices (TIDs) have physical characteristics that would immediately indicate tampering should container integrity be violated. TIDs must be affixed to sample containers and to loaded shipping containers.

2.3.6 **Trip Blank (TB)**: A closed container which contains certified organic-free sand. This container is shipped/transferred with the sampling containers to the sampling site and with the sampling containers when shipped/transferred back to the Analytical Laboratory. This serves as a check of contamination during the shipment/transfer process. Trip blanks (TBs) are only required when volatile organic compounds (VOCs) and/or non-halogenated volatile organic compounds (NHVOCs) are being sampled.

2.3.7 **Shipment**: A shipment is when sample containers are shipped off site using an off-site shipping company.

2.3.8 **Transfer**: A transfer is when sample containers are transferred to another location, but a person is always in the physical custody of the sample containers.

2.4 Quality Assurance Objectives (QAOs)

2.4.1 **Precision**: Sampling precision is established by comparing the relative percent difference (RPD) between duplicate samples. A nonconformance report (NCR) shall be issued for any duplicate samples with RPDs greater that 25 percent. NCRs shall be initiated in accordance with CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*.

2.4.2 **Accuracy**: Sampling accuracy through the use of standard reference materials shall not be measured. Because waste containers containing RH TRU waste with known quantities of radionuclides are not available, sampling accuracy cannot be determined. Sampling accuracy as a function of sampling cross-contamination will be measured. Sampling equipment will be verified as clean by the use of standard radiological control survey methods.

2.4.3 **Representativeness**: A sampling plan must be developed that describes the sampling strategy for obtaining representative samples. The sampling plan must be approved.

2.4.4 **Completeness**: Sampling completeness shall be expressed as the number of valid samples collected as a percent of the total number of samples collected for each waste stream. The participating sampling facilities are required to achieve a greater than or equal to 90 percent completeness.

2.4.5 **Comparability**: Compliance with the requirements of the WCPIP will ensure comparability between RH TRU waste sites.

2.5 Precautions and Limitations

2.5.1 When applicable, to minimize vaporization of VOCs, there is a one-hour time frame in which the sampling operation must be performed. For a sample for VOC analysis, this is defined as from the point the drum lid bag is opened until the sample collected in the sample container and sample container(s) is/are closed.

2.6 Prerequisite Actions

2.6.1 Personnel shall have signed applicable Radiation Work Permit (RWP) or equivalent As Low As Reasonably Achievable (ALARA) Task and shall wear required dosimetry.

2.6.2 Document briefing of the applicable sampling plan prior to work.

2.6.3 Portable sample cooler(s) containing frozen Blue Ice® packs are staged prior to sampling, if needed.

2.7 Equipment

2.7.1 Certified-clean and/or free of radiological contamination sample collection equipment

2.7.2 Large re-sealable plastic bags

2.7.3 Frozen Blue Ice®

2.7.4 TIDs

2.7.5 Kimwipes, Terri wipes, or suitable wipe-down cloths

2.7.6 Tape

2.7.7 Bag-out bags

2.7.8 Calibrated balance capable of reading, at a minimum, ±0.01 grams

2.7.9 Calibrated check weights

3.0 RESPONSIBILITIES

3.1 Independent Technical Reviewer (ITR)

NOTE
The independent technical review will be performed by someone, other than the individual who performed sampling or data generation, who is qualified to have performed the work. Independent Technical Reviewers shall not be involved in the generation or recording of the data.

3.1.1 Reviews the BDR using Attachment 3, Independent Technical Review Checklist.

3.2 Site Project Manager (SPM)

3.2.1 Reviews the Sampling BDR using Attachment 6, Site Project Manager Sampling Batch Data Report Checklist.

3.2.2 Reviews the Radiochemistry or Inductively Coupled Plasma-Mass Spectrometry (ICP-MS) Analytical BDR using Attachment 7, Site Project Manager Radiochemistry or ICP-MS Analytical Batch Data Report Checklist.

3.3 Sampler

3.3.1 Inspects sample area to ensure that gross visible contamination that has the potential to contaminate waste samples is thoroughly removed prior to sampling.

3.3.2 Inspects sample containers and sampling equipment for damage and proper documentation.

3.3.3 Collects samples, **AND** applies TIDs.

3.3.4 Completes sample tracking forms and/or log(s) and COC Form(s).

3.3.5 Assembles and paginates BDR.

3.3.6 Prepares samples for transfer or shipment.

3.4 Analytical Laboratories

3.4.1 Procures and provides certified-clean and/or free of radiological contamination sample containers, if applicable.

3.4.2 Provides TBs.

3.4.3 Analyzes samples.

3.5 Radiological Control Technician (RCT)

3.5.1 Performs surveys and records results, when needed, on applicable forms and affixes labels, as needed, on items, as required.

3.6 Lead Operator (LO)

3.6.1 Provides guidance in the event of abnormal conditions.

3.6.2 Performs Sampler duties.

3.7 Facility Records Custodian/Records Custodian

3.7.1 Receives, processes, and transmits, when applicable, all records generated by this procedure in accordance with CCP-QP-008, *CCP Records Management*.

4.0 PROCEDURE

NOTE

Sampling will be performed in conjunction with the applicable SAP for the waste stream being sampled. The SAP will provide specific sampling details/instructions required for the selected waste containers or sampling area.

NOTE

Opening and closure of waste containers are performed by site-specific procedures.

Sampler

4.1 Preliminary Sample Collection Activities

4.1.1 Ensure all prerequisites have been met.

4.1.2 If applicable, verify the balance is operational by performing the following steps:

[A] **IF** the balance calibration has expired,
THEN DO **NOT** use and have the balance recalibrated, **OR** use a balance whose calibration has **NOT** expired.

[B] Record the calibration certification number of the balance in the Operational Logbook.

[C] **IF** the verification check weight calibration has expired,
THEN DO **NOT** use and have the weight calibrated, **OR** use a weight whose calibration has **NOT** expired.

[D] Record the calibration certification number of the check weight in the Operational Logbook.

[E] Place check weight on the balance.

[F] Record the reading of the weight of check weight in the Operational Logbook.

[G] **IF** the indicated weight of the check weight is **NOT** equal to or within the acceptable calibration tolerance of the check weight,
THEN weigh the check weight a second time.

[H] Record the reading of the weight of check weight in the Operational Logbook.

[I] **IF** the second weighing is performed and also fails, **THEN** use another operational balance and GO TO step 4.1.2[A].

4.1.3 Obtain a set of sample containers, co-located sample containers, if applicable, and/or sampling equipment for each waste container, area, event, etc., to be sampled.

4.1.4 Obtain a copy or copies of the documentation that certifies the sampling equipment and sample containers are clean and/or radiologically free of contamination.

4.1.5 Visually inspect sampling equipment and container bags for integrity and damaged containers.

4.1.6 **IF** damage to sampling equipment packaging or to the sample containers is observed,
THEN discard the damaged package, **AND** RETURN TO step 4.1.3.

4.1.7 Obtain a copy of Attachment 1, Sample Tracking Form, for each container or number of items to be sampled.

4.1.8 Record sampling equipment set number and/or sampling container set number on Attachment 1.

4.1.9 Record sampling equipment certification number and/or sampling container certification number on Attachment 1.

NOTE
During the sample collecting activity, any damaged sample collection containers will be discarded.

4.1.10 Initiate an Attachment 1 for each sample by recording:

[A] SAP and Revision of SAP

[B] Sampling Date

[C] BDR Number in the format XXRHYYZZ, where XX is the site identification (ID), RH is remote-handled, YY is the last two digits of year, and ZZ is sequential numbers starting with 01 each year

[D] Unique Sample ID Number or as specified in the SAP

[E] Waste Container Number

[E.1] **IF** this is an area sample or not containerized waste, **THEN** mark as N/A.

[F] Sampling Facility (i.e., name of the site, facility, building, and room)

[G] Sampling Location (e.g., drum, can, top, middle, as appropriate)

[H] Sample Matrix (e.g., swipe, solid)

[I] Sample Type (e.g., co-located, blank)

[J] Sample Container Size

[K] Procedure Number and Revision

[L] Requested Laboratory

[M] Analysis Requested

4.2 Sampling

4.2.1 Inspect the sample area and sampling work area for cleanliness.

4.2.2 Visually inspect sampling equipment and container bags for integrity and damaged containers.

4.2.3 **IF** damage to sampling equipment or to the sample containers is observed,
THEN discard the equipment or sample container set, **AND** RETURN TO step 4.1.3.

4.2.4 Open a sampling equipment package, as needed.

4.2.5 Open a package containing the sample collection container(s), if applicable and as needed, and stage the sampling container(s) for receipt of sample material, if needed.

4.2.6 From an opened sampling equipment package and/or sample container package, visually inspect sampling equipment and sample containers for damage.

4.2.7 **IF** damage to sampling equipment or to the sample containers is observed,
THEN discard the equipment or sample container set, **AND** RETURN TO step 4.1.3.

4.2.8 Record the time waste container is opened on Attachment 1.

4.2.9 Weigh the sample container and record weight on Attachment 1, if applicable.

NOTE

VOC sample collection is to be performed as quickly as possible to minimize VOC loss. To accommodate time considerations, all VOC and NHVOC samples for regular and co-located samples will be collected first, including Matrix Spike (MS) and Matrix Spike Duplicate (MSD) samples. The one-hour time frame will be satisfied when the last of the sample containers for an individual waste container for VOC samples have been filled and closed.

NOTE

TBs are **NOT** to be opened.

4.2.10 Collect the appropriate sample matrix and sample amount for sample container size and analysis required by the appropriate SAP, **AND** place it into sample container.

4.2.11 Close the sample collection container immediately, **AND** record the sampling time on Attachment 1.

NOTE
For ALARA reasons, sample container/package label information (excluding time and sampler initials) may be pre-filled out as necessary/applicable.

NOTE
Due to sampling dynamics/conditions, the sample container/package label may be affixed after the sample is removed from the sampling environment.

4.2.12 Record the following on the sample container/package label and affix to sample container/package, as necessary/applicable:

[A] Requested Analysis

[B] Date of sampling

[C] Time of sampling

[D] Sample ID Number

[E] Sampler initials

[F] Sampler organization

[G] Sample description

[H] QC designation, if applicable

4.2.13 Initiate COC using Attachment 2, Chain-of-Custody, by recording the following:

NOTE
More than one COC may be needed for the same BDR; therefore, information is entered on the first COC and as needed on each additional COC.

[A] COC number in the format COCXXRHYYZZ# where the XXRHYYZZ is the BDR number and # is consecutive numbers starting with 1, per BDR

[B] BDR Number

[C] Waste Container Number

[D] Sampling location (as appropriate

[E] Sample Matrix (e.g., smear, solid)

[F] Sample Type

[G] Off-site shipping information (Method of Transfer, Shipping Organization, Bill of Lading Number)

[G.1] **IF NOT** applicable,
THEN mark N/A.

[H] Sample ID number

[I] Sampling date

[J] Sampling time

[K] Requested sample analysis

[L] Preservation method

[L.1] **IF NOT** applicable,
THEN mark N/A.

4.2.14 Weigh the sample/container and record the weight on Attachment 1, if applicable.

4.2.15 Sampler initiating custody: print name, sign, date, and enter time to initiate COC.

4.2.16 Record the COC number(s) on Attachment 1.

4.2.17 For any additional samples needed for this container, GO TO step 4.2.1 but skip step 4.2.8.

4.2.18 **IF** samples for VOC and NHVOC analysis were taken,
THEN upon completion of the sample collecting of VOC and NHVOC samples, confirm that the one-hour sample time limit is met, **AND** record in Comments section of Attachment 1(s) along with any collection problems.

[A] **IF** one-hour sample time limit is **NOT** met,
THEN complete sample procedure, **AND** initiate an NCR in accordance with CCP-QP-005.

NOTE
Due to sampling dynamics/conditions, TID's may be attached to the sample container/package after the sample is removed from the sampling environment.

4.2.19 Attach a TID to each sample container/package, if applicable.

[A] Date and sign/initial, as applicable.

4.2.20 Record TID number(s) on Attachment 1 in the comments section, if applicable.

NOTE
TIDs shall be installed such that the sample collection container(s) CAN **NOT** be opened without breaking one or more seals. TIDs or seals will be traceable to the individual who affixed these items.

4.2.21 Remove sample containers from sampling area according to facility procedures.

4.2.22 **IF** required by SAP,
THEN place the bagged-out sample containers in the sample holding containers with frozen Blue Ice®.

4.2.23 **IF** any TID applied to any part of the sample package is found to be broken during the process of transfer,
THEN initiate **AND** document this event on an NCR in accordance with CCP-QP-005.

4.2.24 **IF** additional waste containers are to be sampled,
THEN return to step 4.2.1.

4.3 Sample Transfer or Shipment

4.3.1 Sample Shipment

NOTE
Shipping will be processed through the Host site shipping/transportation department.

[A] **IF** samples are to be shipped,
THEN ensure that the required site Shipment Request Form(s), or equivalent, has been completed, if applicable.

[B] **IF** samples are required to be packaged in frozen Blue Ice®, **THEN** ensure that the samples are packaged in frozen Blue Ice®.

[C] Ensure that the samples are secured.

[D] Ensure the TID number used on the shipping container is recorded on Attachment 1(s) **AND** on Attachment 2(s) in the Comments section located at the bottom of the page.

[E] Sign, date, and enter time on Attachment 2(s) to relinquish custody of samples for shipment.

[F] Complete Attachment 1(s) by entering the Sampler(s) printed name, signature, and date on Attachment 1(s).

[G] Photocopy the Attachment 2(s) and Attachment 1(s).

[H] Confirm the following accompanies the samples:

[H.1] Attachment 2(s) (original)

[H.2] Attachment 1(s) (copy)

NOTE

The Attachment 2(s) MUST be placed inside the sealed shipping container. Transfer of custody is complete when the Analytical Laboratory Sample Custodian receives the shipping container, opens the shipping container, **AND** signs, dates, and enters the time on the Attachment 2(s). The shipping documentation will serve to track physical transfer of the samples between the two Sample Custodians.

[I] Ensure that the original Attachment 2(s) and copies of Attachment 1(s) are in a re-sealable bag **AND** attached to the underneath (interior) of the shipping container lid.

NOTE

TIDs shall be installed such that the shipping container CAN **NOT** be opened without breaking one or more seals. Old or broken seals shall be completely removed from the shipping container **AND** replaced with a new seal(s) prior to shipment.

[J] Ensure the shipping container lid is installed **AND** TID is applied.

[K] Place the photocopied Attachment 2(s) and original Attachment 1(s) in the BDR Holding File.

4.3.2 Sample Transfer

[A] **IF** samples are required to be packaged in frozen Blue Ice®, **THEN** ensure that the samples are packaged in frozen Blue Ice®.

[B] Ensure that the samples are secured.

[C] Complete Attachment 1(s) by entering the sampler(s) printed name, signature, and date.

[D] Photocopy the Attachment 1(s).

[E] Place original Attachment 1(s) in the BDR holding file.

[F] Confirm that the original Attachment 2(s) and copies of Attachment 1(s) accompany the sample containers.

[G] Transfer sample containers to new location.

[H] Sign, date, and enter time on the Attachment 2(s) to relinquish custody of sample containers.

[I] After the receiving person at new location signs, dates, and enters the time on Attachment 2(s), photocopy Attachment 2(s).

[J] Place copies of Attachment 2(s) in the BDR holding file.

4.4 BDR Preparation and Submission

4.4.1 Assemble the following data for the BDR by performing the following:

[A] Attach and complete (minus the name, signature, and date) Attachment 5, Batch Data Report Cover Sheet.

[B] Attach Attachment 4, Batch Data Report Table of Contents.

[C] Attach Attachment 1(s), Sample Tracking Form.

[D] Attach Attachment 2(s), Chain-of-Custody.

[E] Attach Attachment 3, Independent Technical Review Checklist.

[F] Attach copy of NCRs, if applicable.

[G] Attach copy of cleanliness and/or radiological contamination certification for the sampling equipment, if applicable.

[H] Any applicable documentation required by the SAP.

4.4.2 Paginate the BDR, numbering each page with a sequential number.

4.4.3 Complete Attachment 4.

4.4.4 Ensure that the assembly order of BDR matches Attachment 4.

4.4.5 Print name, sign, and date Attachment 5.

4.4.6 Forward the BDR package to the ITR.

ITR

4.4.7 Review the BDR to the criteria in Attachment 3, **AND** document on Attachment 3.

4.4.8 Notify the Sampler of all errors or omissions found during the review.

4.4.9 Recheck the data after the errors or omissions have been rectified.

4.4.10 Ensure Attachment 3 is complete, print name, sign, and date Attachment 3 and Attachment 5.

4.4.11 Submit BDR to the Facility Records Custodian.

Facility Records Custodian

4.4.12 Receive, process, and transmit BDR(s) generated by this procedure in accordance with CCP-QP-008.

SPM

4.4.13 Retrieve copy of BDR from CCP Records.

4.4.14 Review the BDR to the criteria in Attachment 6, and document on Attachment 6.

4.4.15 Notify the Sampler or ITR of all errors or omissions found during the review.

4.4.16 Recheck the data after the errors or omissions have been rectified.

4.4.17 Ensure Attachment 6 is complete, print name, sign, and date Attachment 6.

4.4.18 Submit the completed Attachment 6 to Facility Records Custodian/Records Custodian.

Facility Records Custodian/Records Custodian

4.4.19 Receive, process, and transmit, when applicable, the Attachment 6 in accordance with CCP-QP-008.

4.5 SPM Radiochemistry or ICP-MS Analytical BDR Review

SPM

4.5.1 Obtain a copy of the Radiochemistry or ICP-MS Analytical BDR from CCP Records.

4.5.2 Review the BDR to the criteria in Attachment 7, and document on Attachment 7.

4.5.3 **IF** quality affecting problem is identified,
THEN initiate an NCR in accordance with CCP-QP-005, **AND** resolve accordingly.

4.5.4 Ensure Attachment 7 is complete, print, sign, and date Attachment 7.

4.5.5 Submit Attachment 7 to the Facility Records Custodian/Records Custodian.

Facility Records Custodian/Records Custodian

4.5.6 Receive, process, and transmit, when applicable, all records generated by this procedure in accordance with CCP-QP-008.

5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as quality assurance (QA) records in accordance with CCP-QP-008. The records are the following:

5.1.1 **QA/Lifetime**

[A] BDR:

[A.1] Attachment 5, Batch Data Report Cover Sheet

[A.2] Attachment 4, Batch Data Report Table of Contents

[A.3] Attachment 1(s), Sample Tracking Form

[A.4] Attachment 2(s), Chain-of-Custody

[A.5] Attachment 3, Independent Technical Review Checklist

[A.6] Copy of NCRs, if applicable

[A.7] Copy of cleanliness and/or radiological contamination certification for the sampling equipment, if applicable

[B] Attachment 7, Site Project Manager Radiochemistry or ICP-MS Analytical Batch Data Report Checklist

[C] Attachment 6, Site Project Manager Batch Data Report Checklist

Attachment 1 – Sample Tracking Form

SAP and Revision of SAP
Sampling Date *Sampling Time*
Waste Container Open Time
BDR Number
Sampling Equipment Set Number
Sampling Container Set Number
Sampling Equipment Certification Number
Sampling Container Certification Number
Sample ID Number
Waste Container Number
Sampling Facility
Sampling Location
Sample Matrix
Sample Type
Sample Container Size
Sample Container Weight (Grams)
Sample/Container Weight (Grams)
Procedure Number and Revision
Requested Laboratory
Analysis Requested:
Comments:
COC No.
Samplers: *Print Name:*_____*Signature:*_____*Date:*_____ *Print Name:*_____*Signature:*_____*Date*_____

Attachment 2 – Chain-of-Custody

COC No.: _____BDR No.:_____ Waste Container No.:_____

Sampling Location:_____ Sample Matrix:_____ Sample Type:_____

Method of Transfer:_____ Shipping Organization: _____Bill of Lading Number:_____

Sample ID Number	Sampling Date	Sampling Time	Requested Sample Analysis	Preservation Method	Comments	Disposition

Sampler Initiating Custody:_____
Print Name Signature Date Time

Samples relinquished by:	Date:	Time:	Samples received by:	Date:	Time:

Comments:_____

Sample Disposition: Signature:_____ Printed Name: _____Date: _____Time:_____

Attachment 3 – Independent Technical Review Checklist

BDR No.:			
DESCRIPTION	**YES**	**NO**	**N/A**
1. Were data generation and reduction conducted in a technically correct manner with the methods used?			
2. Was the correct revision of operating procedure used? Record the revision number:_____			
3. Were all VOC and NHVOC samples for regular and co-located samples collected in 1 hour?			
4. If the 1 hour requirement was not met, was an NCR initiated?			
5. Was the correct SAP and revision used? Record the revision number:_____			
6. Were the data reviewed for transcription errors?			
7. Are BDR contents and field sampling records complete and do they match the Sampling Batch Data Report Table of Contents (Attachment 4)?			
8. Does the Sample Batch Report include no more than 20 samples (excluding field Quality Control samples).			
9. Were all samples collected within 14 days of the first sample in the batch (not applicable to Radiochemistry or ICP-MS Analysis radiological characterization only)?			
10. Were the sampling equipment and sample containers (e.g., spoons, sub-samplers, sampling containers) used for all samples in this batch clean (or purchased clean)?			
11. Are there acceptable cleanliness certificates for the sampling equipment used?			
12. Was a co-located sample (field duplicate), collected, if required once per sampling batch or every seven days (whichever is more frequent)? (Attachment 1)?			
13. Are the field sampling records complete and include acceptable sample area and sampling equipment inspections?			
14. Are data properly reported (e.g., data are reported in the correct units and with the correct number of significant figures)?			
15. Was the COC initiated after sample collection?			
16. Is all the data provided using reproducible ink and by the individual(s) generating it?			
17. Is all data entered clearly, legibly, and accurately and include sample identification numbers?			
18. Are all changes to original data lined out, initialed and dated by the individual making the changes?			
19. Was justification made for changing the original data?			
20. Were data changes made by a qualified individual?			
21. Have calculations been verified by a valid calculation program, a spot check of verified calculation programs, or 100 percent check of all hand calculations?			
22. Are values that are not verifiable to within rounding or significant difference discrepancies rectified?			
23. Was the QAO for precision met for collection of a field duplicate, if applicable?			
24. Was the QAO for representativeness met (an approved sampling plan is established for this activity), if applicable?			
25. Was the QAO for completeness met for RCRA samples (acceptance criteria is equal to or greater than 90 percent), if applicable?[1]			
Comments:			

[1] The completeness QAO is determined by dividing the number of samples that are acceptable for analyses by the number of samples that were attempted to be collected.

I have reviewed 100 percent of the container specific and batch data in this report.

Independent Technical Reviewer:

_____ _____ _____

Printed Name Signature Date

Attachment 4 – Batch Data Report Table of Contents

BDR No.:_____ **Date:** _____

Table of Contents		
Item	Description	Page No.
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		

Attachment 5 – Batch Data Report Cover Sheet

BDR No.: _____

	Sample Number
1	
2	
3	
4	
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16	
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19	
20	

Sampler:

_____	_____	_____
Printed Name	Signature	Date

ITR:

_____	_____	_____
Printed Name	Signature	Date

Attachment 6 – Site Project Manager Sampling Batch Data Report Checklist

BDR No.:			
	YES	**NO**	**N/A**
1. Was the Independent Technical Review checklist completed and signed?			
2. Are Batch Data Report contents and field sampling records complete and do they match the Batch Data Report Table of Contents (Attachment 5)?			
3. Was the data reported in the correct units and with the correct number of significant figures?			
4. Was a Field Duplicate collected, if applicable?			
5. Was the RPD criteria met, if applicable?[1] (Precision)			
6. Was the sampling equipment certified free contamination? (Accuracy)			
7. Was the Sampling Plan approved? (Representativeness)			
8. Was the completeness $\geq$ 90 percent? (Completeness)?			
9. Was the procedure approved? (Comparability)			
Comments:			

[1] The precision criteria will be evaluated after analysis.

I have reviewed 100 percent of the container specific and batch data in this report.

Site Project Manager:

_____ _____ _____

Printed Name Signature Date

Attachment 7 – Site Project Manager Radiochemistry or ICP-MS Analytical Batch Data Report Checklist

BDR No.: _____

DESCRIPTION	YES	NO	N/A
1. Date generation level independent technical review, validation, and verification are complete as evidenced by a completed, signed Independent Technical Review checklist?			
2. Are BDR contents complete (do they match the table of contents and include the Independent Technical Review checklist deliverable)?			
3. Are data properly reported (e.g., data are reported in the correct units and with the correct number of significant figures)?			
4. Have the analytical QAOs been met? (QAOs acceptance criteria may be altered if the analytical laboratory has other acceptable QC controls, see the waste-stream specific sampling and analysis plan.)			
a. Precision – relative percent difference (RPD) derived from laboratory duplicates $\leq$ 40?			
b. Accuracy – percent R derived from laboratory control samples 75 percent to 125 percent R and matrix spikes/matrix spike duplicates 50 to 150 percent R (when applicable)?			
c. Representativeness – collection of unbiased samples, mark as "N/A"			
5. Have the analytical QCs been met as evidenced by an acceptable laboratory ITR that used the QC acceptance criteria as specified in the waste-stream specific sampling and analysis plan?			
Comments:			

I have reviewed 100 percent of the container specific and batch data in this report.

Site Project Manager:

_____ _____ _____
Printed Name Signature Date

Controlled
Copy

CCP-TP-530

Revision 10

CCP
RH TRU Waste Certification and WWIS/WDS Data Entry

EFFECTIVE DATE: 04/25/2011

Larry Porter

PRINTED NAME

APPROVED FOR USE

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
0	04/25/2006	Initial issue.
1	05/05/2006	Revised to address CBFO comments.
2	06/15/2006	Revised to address concerns raised during the Idaho National Laboratory (INL) Remote-Handled (RH) Audit A-06-21.
3	11/16/2006	Revised to implement the Waste Isolation Pilot Plant Hazardous Waste Facility Permit requirements resulting from the Section 311/Remote-Handled (RH) Permit Modification Request (PMR) and to remove Transportation Certification Official (TCO) activities.
4	04/20/2007	Revised to incorporate guidance for assignment of packaging material weight for RH canister assembly and to perform miscellaneous editing.
5	07/23/2007	Revised to include the CNS 10-160B information.
6	06/25/2008	Revised to include the process for submitting transportation data only for the Battelle Columbus Laboratory (BCL) waste at Savannah River Site (SRS) using the CNS 10-160B.
7	07/11/2008	Revised to address comments from the Remote-Handled (RH)-Oak Ridge National Laboratory (ORNL) Audit as well as remove any reference to the Characterization Data System (CDS) Waste Certification Official (WCO) Review Form.
8	09/09/2009	Revised to remove Section 4.4.24 in response to CAR-RHLANL-0001-09 as well as minor editorial changes.
9	12/11/2009	Revised to allow use of the Waste Data System (WDS) as well as include steps for canisters measuring <200 millirem (mRem) per Central Characterization Project (CCP)-Standing Order (SO)-042.
10	04/25/2011	Revised Table 1, Data Sources for the RH WDS Master Template, to include a new source for Gross Weight and a new field label and source for remote-handled (RH) nondestructive assay (NDA).

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1.0 PURPOSE

The purpose of this procedure is to describe the steps the Central Characterization Project (CCP) uses for certifying remote-handled (RH) transuranic (TRU) waste for disposal at the Waste Isolation Pilot Plant (WIPP). This procedure also describes the process for entering data into the WIPP Waste Information System (WWIS)/ Waste Data System (WDS) and reporting data on containers and payload assemblies in the RH TRU 72-B and the 10-160B transportation casks that are intended for disposal at the WIPP.

In addition, this procedure may be used to enter data into the WWIS/WDS for site-to-site waste shipments using the RH TRU 72-B and/or the 10-160B transportation casks. Site-to-site waste shipments are defined as shipments with destinations to sites other than the WIPP for storage, characterization, or treatment and are distinct from site-to-WIPP waste shipments for disposal.

1.1 Scope

This procedure defines the parameters necessary for certification of RH TRU waste for disposal at the WIPP. This procedure includes the records that are generated to document that the CCP Waste Certification Official (WCO) has performed the necessary verifications and has certified the waste for disposal.

This procedure also describes how to obtain access and enter data into the WWIS/WDS for containers to be certified.

This procedure also describes the steps for entering data into the WWIS/WDS for site-to-site waste shipments.

2.0 REQUIREMENTS

2.1 References

Baseline Documents

- CCP-QP-022, *CCP Software Quality Assurance Plan*

Referenced Documents

- DOE/WIPP-09-3427, *Waste Data System User's Manual*
- DOE/WIPP 90-045, *RH-TRU Waste Content Codes* (RH-TRUCON)
- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- CCP-PO-002, *CCP Transuranic Waste Certification Plan*
- CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control* (CCP RH-TRAMPAC)
- CCP-QP-002, *CCP Training and Qualification Plan*
- CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
- CCP-QP-008, *CCP Records Management*
- CCP-TP-002, *CCP Reconciliation of DQOs and Reporting Characterization Data*
- CCP-TP-500, *CCP Remote-Handled Waste Visual Examination*
- CCP-TP-506, *CCP Preparation of the Remote-Handled Transuranic Waste Acceptable Knowledge Characterization Reconciliation Report*
- Safety Analysis Report for Model 10-160B Type B Radwaste Shipping Cask, Appendix 4.10.2.1, *Compliance Methodology for TRU Waste from Battelle Columbus Laboratories.* Duratek, Inc.

2.2 Training Requirements

2.2.1 Personnel who use this procedure to certify waste will be trained and qualified to the requirements for the WCO in accordance with CCP-QP-002, *CCP Training and Qualification Plan*.

2.2.2 Personnel who use this procedure to enter data will be trained and qualified to the requirements for the Waste Certification Assistant (WCA) in accordance with CCP-QP-002.

2.2.3 Personnel who use this procedure to enter data into the WWIS/WDS will refer to DOE/WIPP-09-3427, *Waste Data System User's Manual*.

2.3 Equipment List

2.3.1 None.

2.4 Software

NOTE
An "*" is a wild card used to indicate the version number included in a software name.

2.4.1 RH WDS Master Template*.xls

2.4.2 concat_WDS_files.bat

2.4.3 clean_container_files.bat

2.5 Precautions and Limitations

2.5.1 None.

2.6 Prerequisite Actions

2.6.1 None.

2.7 Definitions

2.7.1 None.

NOTE
The Data Administrator (DA) in this document refers to the WWIS/WDS Data Administrator.

3.0 RESPONSIBILITIES

3.1 Site Project Manager (SPM) or Designee

3.1.1 Confirms that personnel performing this procedure are trained and qualified in accordance with applicable requirements in CCP-QP-002.

3.1.2 Prepares a list of candidate containers for certification and transportation, as applicable, and submits to the WCO and WCA.

3.1.3 Provides the DA with a list of Waste Stream Profile Form (WSPF) Numbers.

3.1.4 Submits the WSPF to the DA for review and approval in accordance with CCP-TP-002, *CCP Reconciliation of DQOs and Reporting Characterization Data,* and CCP-TP-506, *CCP Preparation of the Remote-Handled Transuranic Waste Acceptable Knowledge Characterization Reconciliation Report*.

3.1.5 Notifies the WCO and WCA of approved WSPF.

3.1.6 Notifies the WCO and WCA of completed Characterization Information Summary (CIS).

3.1.7 Serves as focal point for resolution of data issues.

3.2 CCP Quality Assurance (QA)

3.2.1 Provides assistance in verifying data, completing documentation, and reviewing requirements and provides status of applicable Nonconformance Reports (NCRs) and Corrective Action Requests (CARs).

3.2.2 Confirms that there are no unresolved NCRs or CARs for containers to be certified when requested by the WCA or WCO.

3.3 Waste Certification Official (WCO) or Designee

3.3.1 Confirms that the WCOs and WCAs are granted access to the WWIS/WDS.

3.3.2 Obtains a copy of the approved WSPF for applicable containers to be certified.

3.3.3 Certifies the data for the container to be certified as identified on the CCP RH WDS Master Template.

3.3.4 Reviews the data for the container as identified on the RH WDS Master Template to be submitted for transportation purposes only.

3.3.5 Notifies Transportation Certification Official (TCO) of the WWIS/WDS Certification Module approval, if necessary.

3.3.6 Notifies the TCO of containers that are approved for Controlled Shipment, if necessary.

3.4 Acceptable Knowledge (AK) Expert

3.4.1 Extracts the necessary information for site-to-site waste shipments.

3.4.2 Works with the WCA, WCO, and DA for WWIS/WDS data input for site-to-site waste shipments.

3.5 Waste Certification Assistant (WCA)

3.5.1 Works with the WCO to obtain access to the WWIS/WDS.

3.5.2 Obtains copies of data for the RH WDS Master Template for each container from CCP Records or the Site Project Manager (SPM).

3.5.3 Generates the RH WDS Master Template and has a second WCA confirm the data is transferred correctly to the RH WDS Master Template. The second data entry person verifies the information prior to certification by the WCO.

3.5.4 Forwards the RH WDS Master Template to the WCO for certification.

3.5.5 Requests that CCP quality assurance (QA) confirm that NCRs and CARs associated with containers to be certified have been resolved as appropriate, via electronic mail (e-mail).

3.5.6 Submits the container data from the RH WDS Master Template to the WWIS/WDS Characterization and/or Certification Modules, as applicable.

3.5.7 Submits data package to CCP Records Custodian in accordance with CCP-QP-008, *CCP Records Management*.

3.6 CCP Records Custodian

3.6.1 When applicable, receives and processes all records generated by this procedure in accordance with CCP-QP-008.

4.0 PROCEDURE

4.1 Obtaining and Changing Access to the WWIS/WDS

WCO

4.1.1 Determine which personnel need access to the WWIS/WDS (see Section 4.0 of DOE/WIPP-09-3427).

4.1.2 Request WWIS/WDS access for each person by requesting the WDS access form from the Data Administrator with a copy provided to the SPM.

4.1.3 Notify the DA when personnel who have received WWIS/WDS access:

[A] Leave the project;

[B] No longer need WWIS/WDS access; **OR**

[C] Need to change the type of WWIS/WDS access.

CCP Personnel

4.1.4 Once the DA has been notified by the WCO that personnel are to be granted access, those personnel will contact the DA to receive WWIS/WDS training and a WWIS/WDS username in accordance with the DOE/WIPP-09-3427.

NOTE
Section 4.2 is **NOT** required for site-to-site waste shipments.

4.2 Submitting the WSPF Number to the DA

SPM

4.2.1 Obtain the WSPF Number in accordance with CCP-TP-002.

4.2.2 Request the DA to establish the WSPF Number in the WWIS/WDS.

4.2.3 Confirm that the WSPF Number is correct in the WWIS/WDS Reference Table upon notification that the DA has added the WSPF Number to the WWIS/WDS.

4.2.4 Notify the WCO and WCA of the WSPF.

4.2.5 Develop a list of containers for Characterization, **AND** submit the list to the WCO and WCA for WSPF approval.

4.2.6 Develop a list of containers from an approved WSPF for certification, **AND** submit the list to the WCO and WCA when the CIS is complete.

NOTE

For site-to-site waste shipments, the required information may be obtained from the acceptable knowledge (AK) Expert. This Data will come from the process knowledge documentation. For site-to-site shipments not qualified under CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control* (CCP RH-TRAMPAC), the data will be recorded from the approved shipping plan. The source data column in Table 1, Data Sources for the RH WDS Master Template, DOES **NOT** apply to site-to-site waste shipments. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*, and CCP-PO-002, *CCP Transuranic Waste Certification Plan*, information is **NOT** required to be entered.

4.3 Entering and Verifying Characterization Data Using the RH WDS Master Template

NOTE

For site-to-site waste shipments, verification may be from data received from the AK Expert.

WCA

4.3.1 Obtain from CCP Records or the SPM, a copy of the appropriate WSPF, Batch Data Reports (BDRs), Packaging Records, AK Summary Report, AK Tracking Spreadsheet, and radiological survey data for the list of candidate containers for certification, as applicable.

4.3.2 Request via email that CCP QA confirm that each container being certified and entered into the RH WDS Master Template has NO unresolved NCRs and CARs.

4.3.3 Use the copies of the appropriate BDR or other data source, from CCP Records or the SPM, as listed in Table 1, to enter characterization data into the appropriate site-specific RH WDS Master Template, for each container record used to support the WSPF.

NOTE

The designator "H" must be added to the end of the Container Identification (ID) Number for all waste containers overpacked into a 55-gallon drum as identified on the applicable AK Tracking Spread Sheet. This will be the new Container ID Number.

4.3.4 Enter RH TRU Waste Content Codes (Content Codes) as described in Attachment 1, Entering of Content Codes into WWIS/WDS, as required.

4.3.5 **IF** a 30-gallon container is packaged into a 55-gallon container, **AND** the Dose-to-Curie (DTC) was performed on the 30-gallon container,
THEN add the tare weight of the 55-gallon container to the gross weight of the 30-gallon container to obtain the new gross weight.

4.3.6 Forward the completed RH WDS Master Template to a second WCA for verification.

WCA (Verifier)

4.3.7 Confirm the data entered into the RH WDS Master Template for each container record by checking the data to confirm the accuracy and completeness of the data.

4.3.8 **IF** data is accurate **AND** complete,
THEN enter initials and the date verified on the RH WDS Master Template.

4.3.9 **IF** there are any discrepancies,
THEN resolve the discrepancies with original WCA, if applicable,
AND return to step 4.3.8.

NOTE

For site-to-site shipments, contact the WCO/AK Expert if discrepancies CAN **NOT** be resolved.

4.3.10 **IF** the discrepancies CAN **NOT** be resolved,
THEN provide the RH WDS Master Template to the WCO or SPM for resolution.

NOTE

For site-to-site waste shipments, the WCO or the AK Expert will review the data prior to submittal to the WWIS/WDS.

.

4.3.11 **WHEN** the RH WDS Master Template is complete **AND** verified,
THEN forward to the WCO.

Table 1. Data Sources for the RH WDS Master Template

Field Label	Source
Characterization, Certification and Shipping Data	
Shipper Site ID or Site ID	AK Summary Report
Location ID Destination Program ID Shipping Purpose	AK Summary Report
Waste Stream Profile	AK Summary Report; WSPF
Container ID Number or Container Number	Completed CIS (Ensure payload container has a unique site-identifier prefix). For all waste containers overpacked into a 55-gallon drum as identified on the applicable AK Tracking Spread Sheet, include an "H" at the end of the drum number.
Container Type	Packaging records; visual inspection; AK Summary Report; Associated BDRs
WAC Rev #	DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant*
WAC Ex #	Executive Order Letter from the U.S. Department of Energy (DOE) Carlsbad Field Office (CBFO) in CCP Records
Cert Site or Certified Site	WSPF or AK Summary Report
Cert Date or Certification Date	Date WCO certifies payload container
Waste Handling Code or Handling Code	RH from Dose to Curie BDR; Radiological Characterization Report; WSPF; AK Summary Report
Waste Type Number or Waste Type	WSPF or AK Summary Report (If no hazardous waste numbers, enter TRU) If hazardous number(s) apply, enter "MTRU."
Waste Stream Baseline Inventory Report (BIR) ID Waste Stream Mixed Waste Inventory Report (MWIR) ID	WSPF or AK Summary Report (If not applicable, enter NONE)
Generator Site ID or Generator Site Item Description Code (IDC) Code or IDC Waste Matrix (parameter) Code or Matrix Code	WSPF or AK Summary Report (NONE if no IDC available)
Content Code or TRUCON Code	Remote-Handled Transuranic Content Codes, AK Summary Report, WSPF, Characterization Info. Summary. See Attachment 1.
TRU Alpha Act TRU Alpha Act Uncertainty TRU Alpha Act Concentration (conc.) TRU Alpha Act Conc. Uncertainty Pu239 fissile Gram Equivalent Pu-239 Fissile Gram Equivalent Uncertainty Pu-239 eq. act. Decay Heat Decay Heat Uncertainty	Waste Container Dose-to-Curie Conversion Record (DTC BDR), Radiological Characterization Report, Waste Container Radiological Characterization Record AK record for BCL waste
Layers of Packaging	Visual Examination (VE) BDR; Radiography BDR; AK Summary Report; WSPF
Fill Factor	Dose-to-Curie BDR, Radiological Characterization Report, VE BDR
Liner Type or Liner Exists	VE BDR. Radiography BDR; AK Summary Report; RH Content Code Document

Table 1. Data Sources for the RH WDS Master Template (Continued)

Field Label	Source
Liner Punctured or Liner Hole Size Liner Lid Present	VE BDR. Radiography BDR or AK Summary Report. No liner lid indicates liner is vented with default hole size of 457.2 mm for 30-gallon drum and 478 mm for 55-gallon drum.
Polychlorinated Biphenyl (PCB) Waste, PCB Concentration, PCB Mass PCB Out-Of-Service Date	WSPF or AK Summary Report. If yes, then PCB mass = net weight and PCB out-of-service = Closure date.
Aqueous Material Beryllium Present Beryllium less than or equal to 100 kg Beryllium less than or equal to 1% Machine Compacted Beryllium chemically/mechanically bound	AK Tracking Spreadsheet or AK Summary Report
Closure Date	AK Tracking Spreadsheet, Remediated Drum Spreadsheet, or AK Summary Report, Canister Loading Data Sheet
Vent Date	AK Tracking Spreadsheet, Remediated Drum Spreadsheet, or AK Summary Report, Canister Loading Data Sheet
Filter Install Date Filter Model Number of filters installed	Headspace Gas BDR, Flammable Gas Analysis BDR, VE BDR, RTR BDR, AK Tracking Spreadsheet or Remediated Drum Sheet, Canister Loading Data Sheet, AK Summary Report
Aspiration Method ID	AK Tracking Spreadsheet, Remediated Drum Spreadsheet, AK Summary Report Headspace Gas BDR, Flammable Gas Analysis BDR, Project AK Summary Report
Gross Weight	Waste Container Dose-to-Curie Conversion Record (DTC BDR) or Scale Certification Data, Canister Loading Data Sheet, Radiological Characterization Report, Waste Container Radiological Characterization Record
Gross Weight Uncertainty	VE BDR, Radiography BDR, or Scale Certification Data, Canister Loading Data Sheet, Bounding Case for drums loaded in canisters (2.3 kg)
Alpha Surf Cont Beta/Gamma Surf Cont Neutron Dose Rate Beta/Gamma Dose Rate	RCT Report RCT Report RCT Report RCT Report
Radionuclide Data	
Radionuclide Activity (Ci) Activity Uncertainty (Ci)	Waste Container Dose-to-Curie Conversion Record(DTC BDR), Canister loading data sheet, Radioassay BDR, Radiological Characterization BDR/Radiological Characterization Report, Waste Container Radiological Characterization Record
Assay Method Data	
Radioassay Method	WWIS/WDS Reference Tables/Library; Certification Letters
Data Package Number	Dose-to-Curie BDR, Radiological Characterization Report, Waste Container Radiological Characterization Record, Radioassay BDR
Assay Date (actual assay date)	Dose-to-Curie BDR, Radiological Characterization Report, Waste Container Radiological Characterization Record, Radioassay BDR
Material Parameter Data	
Waste Material Parameter	VE BDR or Real-Time Radiography (RTR) BDR
Waste Weight	Waste Container Dose-to-Curie Conversion Record (DTC BDR), Radiological Characterization Report, Waste Container Radiological Characterization Record

Table 1. Data Sources for the RH WDS Master Template (Continued)

Field Label	Source
Characterization Method Data	
Charz Method ID	WWIS/WDS Reference Table/Library; Certification Letters
Data Package Number	VE or RTR BDR
Charz Method Date	VE or RTR BDR
Hazardous Waste Numbers Data	
Hazardous Waste Numbers	WSPF or AK Summary Report
Date Sampled	Headspace Gas or Solids Analytical BDR, Flammable Gas Analysis BDR, N/A for canister, AK Sufficiency
Method ID	WWIS/WDS Reference Table/Library; Certification Letters
Data Package #	Headspace Gas or solids analytical BDR, Flammable Gas Analysis BDR, AK Sufficiency
Analyte	
Sample ID	
Sample Type	
Layer Sampled	
Units (% vol., mg/kg, ppm) Concentration Date Analyzed	Headspace Gas or solids analytical BDR, Flammable Gas Analysis BDR, AK Sufficiency
Cas #	Headspace Gas or solids analytical BDR, Flammable Gas Analysis BDR
Reporting Flag B	
Reporting Flag D	
Reporting Flag E Reporting Flag J Reporting Flag U Reporting Flag Z	
Reporting Flag N/A	
Flammable VOCs < 500 ppm	AK Summary Report, Content Code, Process Knowledge Summary Report

NOTE

Section 4.4 is **NOT** required for site-to-site waste shipments.

4.4 Waste Certification (By Container of Waste)

WCO

4.4.1 Verify the appropriate WWIS/WDS Data Entry RH WDS Master Template is being used.

4.4.2 Confirm that the TRU alpha activity concentration is greater than 100 nanocuries per gram (nCi/g) for each container.

4.4.3 Confirm that the RH WDS Master Template contains accurate, and complete information for the container by checking that the WCA has completed their input and review.

4.4.4 **IF** there are any open NCRs/CARs,
THEN confirm that, for the container you are certifying, all issues associated with the open NCRs/CARs have been resolved.

4.4.5 Review the waste stream information against the applicable Content Code and data sources to confirm the waste is **NOT** an incompatible waste.

4.4.6 Verify that the RH WDS Master Template contains the correct WSPF Number for that container as listed in the AK Tracking Spreadsheet.

4.4.7 Verify at least one TRU isotope is greater than lower limit of detection (LLD).

4.4.8 Ensure that each payload container has a site-specific identifier as a prefix to the Container ID Number.

NOTE

For debris waste (S5000), the WCO will assess the data for the container to assign the material parameter weights. In steps 4.4.9 and 4.4.10, the WCO will compare the material parameter data (waste weights in kg) to the number obtained by multiplying the volume of the waste container by the maximum loading density of plastic (620 kg/m^3).

4.4.9 **IF** the calculated weight of the plastic is greater than or equal to the waste weight (kg) of the container,
THEN enter the waste weight of the container as “Plastic” in the RH WDS Master Template.

4.4.10 **IF** the calculated weight of the plastic is less than the waste weight (kg) of the container,
THEN enter the calculated weight as “Plastic” in the RH WDS Master Template, **AND** assign in the RH WDS Master Template the remaining waste weight to the waste material per the percentages as identified in the applicable waste stream AK Summary Report.

NOTE

For soil/gravel waste (S4000), the WCO will assess the data for the container to determine the estimated weight of cellulose, plastics, and rubber (CPR) for any reported debris material. In steps 4.4.11 and 4.4.12, the WCO will review the data and confirm that the derived weight entered into RH WDS Master Template for any debris material reported will have a waste material parameter type of "Plastic."

4.4.11 **IF** the container (S4000) DOES **NOT** contain any debris material,
THEN assign the net weight of the container as waste material parameters of "Soil" in the RH WDS Master Template.

4.4.12 **IF** the container (S4000) does contain any debris material,
THEN enter the estimated weight of the debris as "Plastic" and the remaining net weight of the container as "Soil" in the RH WDS Master Template.

NOTE

For homogeneous solid waste (S3000), the WCO will assess the data for the container to determine the estimated weight of CPR for any reported debris material. In steps 4.4.13 and 4.4.14, the WCO will review the data and confirm that the derived weight entered into RH WDS Master Template for any debris material reported will have a waste material parameter type of "Plastic."

4.4.13 **IF** the container (S3000) DOES **NOT** contain any debris material,
THEN assign the net weight of the container as waste material parameter type appropriate to the waste (e.g., solidified inorganic material, solidified organic material, cement) in the RH WDS Master Template.

4.4.14 **IF** the container (S3000) does contain debris material,
THEN enter the estimated weight of the debris as "Plastic" and the remaining net weight of the container as the waste material parameter type appropriate to the waste (e.g., solidified inorganic material, solidified organic material, and cement) in the RH WDS Master Template.

4.4.15 **IF** the container is certifiable,
THEN sign and date the RH WDS Master Template **AND** forward to WCA for submittal to WWIS/WDS.

4.4.16 **IF** container is **NOT** certifiable,
THEN proceed to step 4.4.20.

WCA

4.4.17 Request, via e-mail, that CCP QA confirm that each container being certified and entered into the WWIS/WDS has NO unresolved NCRs and CARs, if applicable.

CCP QA

4.4.18 Prepare report verifying that each container being certified has NO unresolved NCRs and CARs.

4.4.19 Forward report to WCA.

WCO

NOTE
To remove the HOLD on a Container Data Folder, a WCO must confirm deficiencies NO longer exist.

NOTE
Prior to submittal to the WWIS/WDS, WCO/WCA and QA must perform step 4.4.17 through 4.4.19, as applicable.

4.4.20 **IF** there is an issue with data,
THEN attempt to resolve issue with SPM.

[A] **IF** resolved,
THEN proceed to Step 4.5.

4.4.21 **IF** a deficiency in data is identified after a Container Data Folder is created and before submittal to the WWIS/WDS and CAN **NOT** be resolved with SPM,
THEN perform the following:

[A] Initiate an NCR in accordance with CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*, as directed by the SPM.

[B] Place the Container Data Folder in the WCO Hold Drawer until disposition is met.

NOTE

Data entry for site-to-site waste shipments shall be submitted into the Intersite Shipping Module within the WWIS/WDS.

NOTE

The WCO or WCA uses a macro (CreateTmpTables) and ancillary worksheets that are part of the RH WDS Master Template.

NOTE

If required, for filtered waste containers or containers requiring inner can data, the data required by WWIS/WDS for the inner cans will be entered as applicable based on an individual container basis (inner can ID, decay heat, decay heat uncertainty, closure date, vent date, filter diffusivity, flammable gas generation rate or hydrogen concentration, and sample date) after the waste containers are entered into the WWIS/WDS.

4.5 Waste Certification WWIS/WDS Submittal

WCO or WCA

4.5.1 Generate tab-delimited files from the electronic WWIS/WDS DATA RH WDS Master Template corresponding to the WWIS/WDS Temporary Database Tables by selecting the CREATE TMP TABLES.

4.5.2 OPEN TempTables Folder to run batch programs, **AND** OPEN concat_WDS_files.bat to copy all containers into upload files readable by WWIS/WDS.

4.5.3 Log on to WWIS/WDS.

[A] Select DATA UPLOAD FUNCTION.

[B] Select BROWSE to open the Temptables folder.

[C] Select the text file to be uploaded.

[D] Select CERTIFICATION or CHARACTERIZATION based on whether or not the waste stream is approved.

[E] Select PERFORM EVALUATIONS if applicable.

[F] Select UPLOAD CONTAINERS.

[G] **IF** container upload is successful,
THEN GO TO step 4.5.4 if inner can data is required or GO TO step 4.5.5 if complete.

[H] **IF** container upload fails,
THEN select VIEW EXIT CODES **OR** print error messages on screen as applicable.

[I] **IF** container upload error(s) can be fixed,
THEN fix errors, **AND** repeat steps 4.5.1 through 4.5.3[H] until successful **OR** container CAN **NOT** be fixed.

[J] **IF** container transfer CAN **NOT** be fixed,
RETURN Container Data Folder to WCO.

NOTE

For containers with inner can data and/or data for a 30-gallon container overpacked into a 55-gallon container, follow steps 4.5.4 through 4.5.5. Once complete proceed to step 4.5.7.

NOTE

A unique Inner Container ID must be entered using the 55-gallon number with an H suffix when a 30-gallon container is overpacked into a 55-gallon container in the Inner Can Data in WWIS/WDS.

4.5.4 Select CONTAINER CERTIFICATION DATA SUBMITTAL/CONTAINER CHARACTERIZATION DATA SUBMITTAL based on whether or not the waste stream is approved

[A] Select SEARCH and enter the container number and select SEARCH.

[B] Select applicable container.

[C] Select INNER LAYER and enter the applicable data.

[D] Select SUBMIT for approval.

4.5.5 **WHEN** complete,
THEN exit the system AND open the temptables folder and RUN clean_container_files.bat to clear the temptables folder of all upload file data.

4.5.6 **IF** a deficiency is identified after the container data is submitted to the WWIS/WDS,
THEN:

[A] Request in writing (e.g., e-mail), with CCP Management approval, that the Data Administrator reject the container from the WWIS/WDS, if applicable, AND

[B] Obtain confirmation (e.g., email) from the Data Administrator that the container is rejected, if applicable.

[C] Initiate an NCR in accordance with CCP-QP-005, as necessary.

4.5.7 Compile the following items used in the submission of data to the WWIS/WDS, **AND** submit to the CCP Records Custodian:

[A] The completed RH WDS Master Template for each container submitted to and approved by the WWIS/WDS

[B] The completed WWIS/WDS Transportation Only RH WDS Master Template for each Packaging Container submitted to and approved by the WWIS/WDS

[C] NCR/CAR check from CCP QA e-mail (not applicable for BCL transportation data)

[D] Any correspondence (e.g., memorandum/e-mail notifications) associated.

CCP Records Custodian

4.5.8 When applicable, receives and processes all records generated by this procedure in accordance with CCP-QP-008.

NOTE

The WWIS/WDS Canister Planning and Completion Module utilizes edit and limit checks when data is entered and selected. The WWIS/WDS steps in the following section may be repeated until overpack compliance is satisfied. Default data may be used to generate the build list for the TCOs.

NOTE

The recommended container selection for the canister can either be provided by the Host site, based on As Low As Reasonably Achievable (ALARA) needs for movement of the drums and container retrievability, or determined by the WCO.

NOTE

Some 55-gallon containers loaded into the Removable Lid Canister use an RH TRU Drum Handling Bag (lift bag). The lift bag weighs 1.42 kg and is made of polyester fabric. The lift bag can not be retrieved from the canister after loading.

WCO

4.6 Container Selection and certification for RH TRU 72-B waste canister using the WWIS/WDS

4.6.1 LOGON to the WWIS/WDS.

4.6.2 Select CANISTER PLANNING and COMPLETION.

4.6.3 Select NEW.

4.6.4 Enter applicable data in the Canister Information Section as follows, then select SEARCH.

[A] Canister Configuration Type

[B] Certification Program ID

[C] Current Location

[D] Destination Site ID

[E] Shipping Program ID

[F] Waste Stream Profile Code

4.6.5 Select the appropriate containers from the Candidate Containers Section.

4.6.6 Select ACCEPT.

4.6.7 Enter the Canister number in the Enter Container Number field and select ACCEPT.

4.6.8 **ONCE** the Canister Plan is accepted,
THEN enter the remaining applicable canister information for Certification.

4.6.9 Generate the Build List and provide to TCO as applicable.

4.6.10 **IF** the canister requires a controlled shipping period,
THEN the WCO will indicate on the Build List.

4.6.11 Receive the Loading Form from the TCO and enter the required certification data.

4.6.12 **IF** 55-gallon container(s) is used for canister loading **AND** a lift bag is used,
THEN add 1.42 kg of plastic/liner container material per 55-gallon container used for loading.

4.6.13 **IF** the canister dose rate from the TCOs is < 200 mRem **AND** all inner containers are > 200 mRem,
THEN use the highest dose rate from the inner containers.

4.6.14 SUBMIT the canister for approval.

4.6.15 After successful submittal for approval, print the Canister Data Report, date and sign with title.

4.6.16 Compile the following items used in the submission of data to the WWIS/WDS, **AND** submit to the CCP Records Custodian:

[A] Copies of the data containing the RH TRU waste canister, radiological survey, and filter information used to enter data above

[B] The completed Canister Data Report for the data submitted

[C] Correspondence (e.g., memorandum/e-mail notifications).

CCP Records Custodian

4.6.17 When applicable, receives and processes all records generated by this procedure in accordance with CCP-QP-008.

5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as QA records in accordance with CCP-QP-008. The records are the following:

5.1.1 QA/Lifetime Records

[A] Container Certification:

[A.1] RH WDS Master Template

[A.2] Correspondence (memorandum/e-mail notifications)

[A.3] Radiological Survey Information, if applicable

[B] Canister Certification:

[B.1] RH WDS Master Template

[B.2] Waste Canister Data Report

[B.3] Waste Canister Loading Sheet, if applicable

[B.4] Radiological Survey Information, if applicable

Attachment 1 – Entering of Content Codes into WWIS/WDS

NOTE
The Content Code may be assigned by the WWIS/WDS based on the information submitted on the RH WDS Master Template.

1. INTRODUCTION

This appendix describes the steps used to enter assigned RH Content Codes into the RH WDS Master Template using various sources of characterization data. Entering the Content Code is performed by the waste certification staff based on the waste material contents and the layers of packaging used for each container. Content Code assignment is reviewed and approved by the WCO during container certification unless the Content Code is assigned by the WWIS/WDS.

2. ASSIGNING THE NUMERIC VALUE

Assign the Content Code based on the container waste stream assignment. The Content Code identified in AK may be confirmed by RTR or VE. Enter the Content Code in RH WDS Master Template.

3. ASSIGNING A LETTER DESIGNATOR

The letter designator of the Content Code is assigned using packaging information from the following sources, which are listed in order of priority of usage:

- VE BDRs, if available
- If RTR information is undetermined, use the default assignment given in (or determined from) the AK Summary Report for the applicable waste stream.

4. OTHER

For waste packaged under a U.S. Department of Energy (DOE) Carlsbad Field Office (CBFO) audited and approved certification program (newly generated waste exempted from RTR), use the Content Code assigned in the packaging documents.

Effective Date: 03/04/13

WP 13-QA.03
Revision 21

Quality Assurance Independent Assessment Program

Cognizant Department: Quality Assurance

Approved by: Val Cannon

Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA

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CHANGE HISTORY SUMMARY

REVISION NUMBER	DATE ISSUED	DESCRIPTION OF CHANGES
18	06/20/11	Added allowance for the Assurance Programs manager to extend the time limit for issuance of an audit report. (6.0)
19	02/28/12	Added discussion of effectiveness reviews (Introduction). Added clarification for developing criteria for (4.3) and performing (5.0) effectiveness reviews. Deleted reference to EFCOG Contractor Guide For Performance of Effectiveness Reviews (4.3, 5.0).
20	01/25/13	• Deleted requirements to enter external assessment findings in CTS throughout the document. • Updated organization names in accordance with MD 1.1.
21	03/04/13	• Removed from section 2.0 last bullet of lead assessor responsibilities and last bullet of surveillor responsibilities. • Added to sections 5.0 and 6.0 provisions to document findings corrected during assessment on the WIPP Form in accordance with WP 04-IM1000 (Corrective action for CBFO CAR 12-020). • Deleted attachment 9, and added reference to WP 09-CN3025 in section 4.3. • Deleted Attachment 10, Concerns Form and its mention from section 5.0.

ABBREVIATIONS and ACRONYMS

ALARA	as low as reasonably achievable
CAM	continuous air monitor
CAQ	condition adverse to quality
CBFO	Carlsbad Field Office
CDA	corrected during assessment
CFR	Code of Federal Regulations
CH	contact-handled
CMS	Central Monitoring System
CTS	commitment tracking system
DNFSB	Defense Nuclear Facilities Safety Board
DOE	U.S. Department of Energy
HEPA	high-efficiency particulate air (filter)
HVAC	Heating, Ventilation, and Air Conditioning
ISM	Integrated Safety Management
NRC	U.S. Nuclear Regulatory Commission
NWP	Nuclear Waste Partnership LLC
P-A	Price-Anderson
PPE	personal protective equipment
QA	Quality Assurance
QAPD	Quality Assurance Program Description
QSL	Qualified Suppliers List
RH	remote-handled
SDD	System Design Description
VSS	Vital Safety System
WHB	Waste Handling Building
WIPP	Waste Isolation Pilot Plant

1.0 INTRODUCTION [1]

The purpose of this document is to define and prescribe quality assurance (QA) methods and techniques used to identify, schedule, plan, perform, report, and close independent assessments, and to identify the resulting records.

This document applies to Nuclear Waste Partnership LLC (NWP) QA personnel qualified to lead and/or perform independent assessments. It also applies to cognizant managers of organizations being assessed.

Independent assessments may be performed as audits or surveillances. Audits are generally larger, more formal assessments of quality program elements or supplier programs. Surveillances are generally smaller assessments of specific activities, but may also be expanded and performed on quality program elements. Where the term "assessment" is used in this document, it applies to both audits and surveillances. Where actions apply only to an audit or surveillance, it will be so stated.

Effectiveness reviews are conducted as surveillances to verify the effectiveness of corrective actions implemented to prevent the recurrence of significant issues, problems, or events.

Assessments may contain elements of inspections, testing, monitoring work in progress, and checking to support the reviews that comprise assessment activities.

Assessments evaluate the adequacy of program documents and implementation, including effectiveness of established programs, and processes for compliance with WP 13-1, *Nuclear Waste Partnership LLC Quality Assurance Program Description* (NWP QAPD), other QA program documents, and purchase order requirements, as applicable. Assessments focus on improving items, services, and processes by emphasizing the achievement of quality by line organizations. Regularly scheduled program assessments may be supplemented by or integrated with additional technical assessments (e.g., surveillances and limited scope audits).

Assessments are performed using reviews, interviews, observation and monitoring, and checks. Actual and/or potential deficiencies are noted. Timeliness of corrective actions is evaluated. Supplier assessments verify conformance to applicable purchase orders and the QA requirements imposed by contract, or evaluate potential for providing products or services in compliance with NWP QA requirements. Scheduling is based on frequency required by regulation, ongoing project activities (e.g., previous audit results, adverse trends, or requests from other line organizations), and capabilities. Internal assessment findings and associated corrective actions are entered and tracked in the Issues Management (WIPP Form) System in accordance with WP 04-IM1000, *Issues Management Processing of WIPP Forms* (EA04IM1000-1-0).

Implementation of the program generates the following record(s), as applicable. Any records generated are handled in accordance with departmental Records Inventory and Disposition Schedules.

- NWP QA Independent Assessment Subject Master Table
- Approved Audit Schedule
- Audit Plan
- Assessment Checklist
- Audit Report
- Audit follow-up documentation
- Surveillance Report
- Surveillance follow-up documentation
- Independent Assessment Record File Completion Checklist
- Technical Specialist/Auditor Participation Indoctrination for Quality Assurance Audits (Attachment 12)

2.0 RESPONSIBILITIES

The Assurance Programs manager is responsible for:

- Implementation of this document.
- Ensuring that assessment personnel have sufficient authority and organizational freedom to carry out their assigned responsibilities.
- Approval of the assessment schedules.
- Qualification of lead auditors and QA Surveillors (surveillors) in accordance with WP 13-QA.04, *Quality Assurance Department Administrative Program*.
- Assignment of assessment team leaders.
- Concurrence with assessment team selection.
- Assignment of surveillors.

The lead assessor is responsible for:

- Selecting the assessment team.
- Approving assessment checklists.
- Organizing and directing the assessment.
- Reporting the assessment results.

The surveillor is responsible for:

- Performing surveillances.
- Organizing and directing the surveillance.
- Reporting the surveillance results.

3.0 DEFINITIONS

Corrected During the Assessment (CDA) – An isolated condition adverse to quality (CAQ) requiring only remedial action to correct and for which resolution can be verified through review of objective evidence prior to the exit meeting.

Finding – A condition, applicable to the program or process being audited, that deviates from specified requirements defined by codes, standards, or other established specifications (a clear violation of a clear requirement).

Observation – A condition that, if left unattended, could become a deviation from established acceptance criteria; or a suggestion that, if enacted, could strengthen the existing program.

4.0 PREPARATION FOR ASSESSMENTS

4.1 QA Independent Assessment Identification

Waste Isolation Pilot Plant (WIPP) program elements or activities requiring independent assessment are found in:

- WP 13-1, *Nuclear Waste Partnership LLC Quality Assurance Program Description*
- DOE/CBFO 94-1012, *U.S. Department of Energy Carlsbad Field Office Quality Assurance Program Document*
- Hazardous Waste Facility Permit NM4890139088-TSDF

Additional programs, processes, or activities important to compliance application, nuclear safety, waste characterization, or the isolation of waste within the disposal system require independent assessments to verify adequate and effective performance. These programs are found in:

- Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 2000-2, Configuration Management Vital Safety Systems
- DOE/WIPP-04-3310, *WIPP Environmental Policy Statement*
- DOE/WIPP-07-3372, *Waste Isolation Pilot Plant Documented Safety Analysis*

- DOE/WIPP-07-3373, *Waste Isolation Pilot Plant Technical Safety Requirements*
- EFCOG Contractor Guide For Performance of Effectiveness Reviews
- NWP procedures that prescribe assessments

Activities which affect the following require independent assessments, in accordance with the contractor assurance system established by U.S. Department of Energy (DOE) Order 226.1B, Implementation of Department of Energy Oversight Policy:

- Environment, safety, and health (e.g., protection of the environment, workers, and the public from damage or injury)
- Safeguards and security
- Emergency management
- Cyber security

Independent assessments performed in accordance with the contractor assurance system include evaluations of compliance with the following, as applicable:

- Laws
- Regulations
- National standards
- DOE directives
- DOE-approved plans and program documents (e.g., authorization basis documents and QA program)
- Site-specific procedures/manuals
- Criteria review and approach documents
- Contractual performance objectives, and other contractually mandated requirements

The scope and frequency of audits scheduled and performed in accordance with the contractor assurance system must ensure that:

- Assessments required by applicable DOE directives, including environment, safety, and health, safeguards and security, emergency management, and cyber security, are being performed;

- The effectiveness of safety management programs, including programs that are credited in the safety basis, is being assessed adequately;

- Deficiencies are being self-identified; and

- Corrective actions are being taken in a timely and effective manner.

Supplier audits are based on requests for new suppliers to be added to the NWP QSL; those suppliers currently on the QSL which are due for reevaluation, or have their authorized scope changed; and suppliers providing products or services under Title 10 *Code of Federal Regulations* (CFR) Part 71, that require a facility audit every three years. These requests and reevaluations are processed in accordance with WP 13-QA3012, *Supplier Evaluation/Qualification*.

The Assurance Programs manager or assigned cognizant individual will:

- Review WIPP requirements documents and identify needs for independent assessments based on both written requirements for independent assessments and other programs or processes that affect safety, storage of waste, or the environment, the importance of which necessitates assurance of compliance.

- Upon notification from a QA procurement reviewer or a NWP Contracting Officer that a project is scheduled to begin or is ongoing, evaluate the need for initial and follow-on independent assessments based on this section 4.0.

- Review the potential assessment to be added using the criteria in the Assessment Priority Determination Tables (provided in attachment 1). Document a decision for either an audit or a surveillance on the NWP QA Independent Assessment Subject Master Table (example provided in attachment 2). This table is controlled by Assessment Services and each revision, with date, is a record. A copy is located on the network in WQNRA on the Torreon server, under the folder "Assessment Planning," subfolder "Assessment Subject Master Table."

- Determine a frequency at which the assessment should be performed. If established by the requirement, that frequency is to be used. If not established by requirement, determine an adequate frequency based on relative risk, hazards, and complexity of the processes and activities to be evaluated. Also consider the scope and coverage of previous oversight activities, and historical performance. Document the frequency on the NWP QA Independent Assessment Subject Master Table.

4.2 QA Independent Assessment Scheduling

The scheduling of audits and surveillances is a continuing function of the identification in the previous section. Audits will be scheduled to begin as early in the life of a project or activity as practicable, and will continue at intervals consistent with the schedule for accomplishing the work. Certain surveillances may be scheduled on a repetitive basis, and others may be requested on an as-needed basis.

The Assurance Programs manager or assigned cognizant individual will:

- Evaluate the timing of the first, or next, occurrence for the assessment to be scheduled against all current or planned assessments. Consider resources, date required, time available, known regulatory oversight preparedness needs, associated historical issues, and client expectations, then schedule the assessment to best accommodate the need.

- Document external (supplier) audits on the NWP QA Fiscal Year External Audit Schedule (example supplied in attachment 3), completing all necessary fields as applicable. Suppliers of parts and materials, and services regulated by 10 CFR 71, Subpart H, will require the performance of a site audit on a triennial basis. (Reg. Guide 7.10, section 18.2)

- Document internal audits on the NWP QA Fiscal Year Internal Audit Schedule (example supplied in attachment 3), completing all necessary fields as applicable.

- Develop additional informal schedule tools to track assessments, as necessary.

The Assurance Programs manager will:

- Review and approve internal and external audit schedules and revisions.

- Revise or update QA audit schedules, as applicable, to reflect current needs.

- Approve any extensions, cancellations, or other changes to the audit schedules prior to deviating from the approved schedule and place documentation of the approved extension or cancellation in the appropriate audit schedule file.

- Distribute audit schedules to the Carlsbad Field Office (CBFO), affected NWP management, applicable assessment personnel, and the assessment file.

4.3 QA Independent Assessment Planning

Assessments include audits and surveillances. Direction regarding assessments applies to both audits and surveillances. The term "assessor" denotes the person performing either the audit or surveillance, as appropriate. Any direction specific to either audits or surveillances is indicated where applicable.

The Assurance Programs manager will:

- Direct an assessment coordinator to maintain the Independent Assessment schedule and tracking documents. The log (see example in attachment 11) will be used to issue assessment numbers, and collect certain information regarding the assessments. The schedules (example, see attachment 3) contain certain deliverable information.

- Assign a qualified lead auditor to lead/perform audits. Determine if an audit team is necessary due to size or complexity of the scope.

- Assign a qualified surveillor or qualified lead auditor to perform surveillances.

The assessment coordinator will:

- Develop and maintain an independent assessment log for systematically issuing unique numbers to assessments performed by NWP QA. The log is to contain, at a minimum, the assessment number, assessment subject or manufacturer, date performed, assessor identification, and status.

- Develop and maintain schedules that contain the anticipated audits for a specific time frame. The anticipated assessments are identified in the NWP QA Independent Assessment Subject Master Table with their respective performance frequencies. As the audits are performed, collect applicable information and enter into the appropriate document.

- Prepare copies of the schedules for record or contract deliverable purposes, as necessary.

The lead auditor/surveillor will:

- Obtain from the assessment coordinator an audit or surveillance number that denotes the type of assessment ("I" or "E" for internal or external audit, or "S" for surveillance, the fiscal year, and a sequential number beginning with 01 (e.g., I06-01, E06-01, S06-01).

- Contact the cognizant individual for internal audits/surveillances or the supplier for external audits/surveillances to determine any safety/security issues and precautions of which the team should be aware. This includes Personal Protective Equipment (PPE), badging, logistics information, etc. Document the safety/security issues and precautions in the audit plan.

- Select an assessment team, if a team is needed, based on the scope, complexity, or special nature of the work being assessed, technical expertise, availability, experience, and the prospective assessor's ability to provide an objective contribution.

- Consider the following:

    — Personnel having direct responsibility for performing the activities being assessed shall not be involved in the selection of the team. Team members shall have the authority and be independent from the items and/or processes being audited. Independent assessors shall be trained/indoctrinated in accordance with WP 13-QA.04, technically qualified and knowledgeable of the items and activities being audited, and/or perform under the supervision of a lead auditor.

- During audits, technical specialists shall be used when evaluating the adequacy of technical processes. Technical specialists will be indoctrinated by the lead auditor commensurate with the scope, complexity, or special nature of the work being audited, and of the audit process associated with their duties. This indoctrination will be documented using a format similar to that defined in attachment 12. Attachment 12 may also be used to indoctrinate other auditors from the assessment group, at the discretion of the lead auditor.

- External peers or subject matter experts may be used as necessary to support assessment activities.

- Ensure that the team members collectively have appropriate training and experience commensurate with the scope of the assessment.

- Indoctrinate the audit team to the audit process, as needed, and their associated tasks before the audit. Include a review of potential hazards and plan accordingly for proper PPE, ALARA (as low as reasonably achievable), and additional controls deemed necessary. Document the indoctrination using a format similar to that defined in attachment 12.

- Prepare the audit plan, for both internal audits and external supplier audits, using guidance in attachment 4, and obtain QA management approval. The audit plan will include purpose, scope (including the work to be assessed and related corrective actions since previous assessments), requirements, audit personnel, organizations to be notified, applicable documents, written procedures to be used, schedule, safety/security issues and precautions, and background. Background should include previous findings, Corrective Action Requests, and weaknesses noted within the intended scope. For external supplier assessments, obtain supplier history from the QSL file or Coordinator.

- Review, with team members, any plan generated, pertinent background information that includes previous audit or oversight results, applicable procedures, and applicable technical documents so that team members are familiar with the work being assessed.

- If the assessment is external, notify the affected organization or company management by correspondence of the scheduled assessment, identifying the scope of the assessment. The notification need not include the audit checklist.

- Determine, with QA management, when internal surveillances are to be formally announced prior to performance. In such cases, notify the organization to be surveilled by correspondence of the surveillance, its scope, and schedule.

Assessor(s) will:

- Refer to the NWP QA Independent Assessment Subject Master Table for identification of requirements documents from which assessment criteria should be developed.

- Develop the criteria to be used during the assessment based on approved requirements; will also consider the following when developing criteria:

  — For internal assessments, include criteria, as applicable, to assess application of Integrated Safety Management (ISM) in accordance with Management Policy MP 1.28, *Integrated Safety Management*, and WP 15-GM.03, *Integrated Safety Management System Description*. The Safety Management Responsibilities section of the latter document provides a source from which criteria can be generated. For internal assessments, the intention is to review the ISM controls in evidence or exhibited in the activity being assessed. For external assessments, ISM controls may be considered regarding the hazards that the assessor could encounter (e.g., anticipated hazards mitigated by adequate PPE).

  — Although Graded Approach is assessed separately, consider possible criteria in accordance with WP 09-CN3005, *Graded Approach to Application of QA Controls*.

  — Consider Conduct of Operations criteria applicable to the activity being assessed.

  — Consider environmental controls or environmental response to unusual occurrences applicable to the activity being assessed.

  — Consider software controls applicable to the activity being assessed.

- When assessing a WIPP Vital Safety System (VSS), develop criteria from the following:

  — Applicable portion of WP 09-CN3025, Annual System Health/Walkdown/Requalification, Attachment 1, Assessment Boundary for Vital Safety System Definitions

  — General for VSS assessments - Timely closure of modifications, Cognizant Engineer walkdowns, periodic maintenance performed as required in SDDs, maintenance performed in accordance with manufacturer recommendations, combustible materials in the disposal circuit in the underground, software QA

- For an audit, develop the audit checklist(s) under the direction of the lead auditor using the guidance in attachment 5. Checklist line items are generally written as directions to verify conformance of the activity being evaluated with established requirements, or as questions whether or not the activity being evaluated conforms with the requirement.

- For a surveillance, the criteria may be identified briefly on the Surveillance Report or on a detailed checklist to be filed with the assessment. Examples of brief criteria include, "observe actions based on steps XX through and including YY," or "observe waste hoist lifting activity for adherence to Procedure XXX, Revision Y, Section ZZ," or "review 15 WIPP Forms for adequacy, completeness, and implementation of corrective actions," etc. Criteria typically are found in QA manuals and program plans, procedures, previous assessments and corrective action documents, and contract requirements.

- For Effectiveness Reviews of completed corrective actions for 'significant' WIPP Forms, P-A externally-reportable issues, etc., develop criteria considering the following:

  — Effectiveness reviews are performed to verify the effectiveness of corrective actions that have been implemented to prevent the recurrence of significant issues.

  — Effectiveness is measured by a significant change in one of more of these four measures:

    1. The probability of the original event recurring

    2. The frequency of the problem recurring

    3. Reduction in the magnitude or severity of the problem

    4. Elimination of the original problem

5.0 ASSESSMENT PERFORMANCE

The lead auditor/surveillor will:

- For audits and external surveillances (optional for internal surveillances), conduct an entrance meeting with the assessment team and appropriate personnel representing the assessed organization(s). The entrance meeting is intended to introduce the assessors, explain the purpose, scope, and schedule for the assessment, and establish interfaces and contacts with the organization being assessed.

- For Effectiveness Reviews of completed corrective actions for 'significant' WIPP Forms, P-A externally reportable issues, etc., perform the assessment using one or more of the following methods. The method selected should be appropriate for the specific corrective/preventive actions. The direct observation method is the method of preference, but other methods should also be applied, as necessary.

  — Observe the work or performance of an evolution.

  — Conduct facility inspections or activity monitoring.

  — Utilize past performance indicators to track any ongoing recurrences.

  — Review databases of indications of similar problems.

  — Run a test to challenge the system or process (if applicable).

  — Run a mock item through the process, or complete a performance test (if applicable).

  — Interview impacted managers and workers on their understanding of, and involvement with, the implemented corrective actions.

The assessment team will:

- Evaluate the applicable quality program element(s) by examining objective evidence, observing activities in progress, examining items (including components, specimens, and machinery, etc.), and/or interviewing personnel responsible for the activity. Include technical evaluations of the applicable procedures, instructions, activities, and items, as appropriate. Objective evidence related to the planning and technical aspects of the work performance is to be examined to the depth necessary to determine if these elements are being implemented effectively.

- Review previous corrective actions, as applicable, to evaluate implementation and effectiveness when recurring problems are found.

- Observe, to the extent possible, actual operations to verify conformance to requirements.

- Record the results of the evaluations performed on the assessment checklist or surveillance report, as applicable.

- Record, on the assessment checklist or surveillance report, as applicable, objective evidence examined, including all documents reviewed, with sufficient detail so that any conditions or practices may be noted in the report with adequate detail. Include, as applicable, document number, title, and revision.

- Record, on the assessment checklist or surveillance report, as applicable, the results of observations of processes or items, including the quantity of items examined to indicate the size or breadth of the examination. Identify the items, where possible.

- Record, on the assessment checklist or surveillance report, as applicable, the names of personnel interviewed.

- Inform the lead auditor/surveillor of progress and/or problems with assigned tasks periodically during the assessment.

- Notify immediately the lead auditor/surveillor if conditions are identified during an internal audit or surveillance that qualify as an event or potentially reportable occurrence under the requirements of 10 CFR Part 21, 10 CFR Part 71, WP 12-ES3918, *Reporting Occurrences in Accordance with DOE Order 232.2*, etc.

- Notify immediately the lead auditor/surveillor if conditions are identified that are believed to be unsafe. If an internal assessment condition requires immediate work stoppage, proceed as directed in MP 1.2, *Stop-Work Policy*. During external assessments, notify the supplier management, or their designated point-of-contact.

- Acknowledge and track any CDAs. Verify that the actions completed correct the condition. Document CDAs on a WIPP Form, in accordance with WP 04-IM1000, for trending.

The lead auditor/surveillor will:

- Notify QA management and the management of the assessed organization as soon as practicable if conditions are discovered that could have a significant adverse impact on prior work or affect work in progress, or if conditions require prompt attention. If conditions require immediate attention as defined in WP 12-ES3918 or MP 1.2, perform action as directed by the appropriate document.

- Notify the management of the assessed organization as soon as practicable of any issues identified, to assure accuracy, and allow opportunity for resolution during the assessment.

- Notify Packaging Manager of issues that affect nuclear packaging (TRUPACTs, HalfPACTs, etc.) or are otherwise potentially reportable to the U.S. Nuclear Regulatory Commission (NRC), to allow them to screen for reportability under 10 CFR Part 21 or 10 CFR Part 71, etc.

- For audits and external surveillances, conduct an exit meeting with appropriate personnel representing the assessed organization(s). The exit meeting is intended to provide a general overview of the evaluation of the program element and any issues requiring attention.

- QA management will notify the CBFO of any deficiencies in DOE requirements (e.g., conflicting, unclear, or incomplete requirements contained in a DOE Order or other DOE document) identified through QA assessments.

6.0 ASSESSMENT REPORTING

The reporting of the assessment, if performed as an audit or external surveillance, will follow the guidance provided in attachment 6; and, if performed as an internal surveillance, will use the example provided in attachment 8.

Assessments that involve sensitive (e.g., permit- or personnel-related) information are to be coordinated through the NWP Legal Counsel. The lead auditor/surveillor and QA management will determine the necessary reviewers (i.e., NWP Legal Counsel, etc.) for proper processing of such assessment information.

The lead auditor/surveillor/manager will:

- Prepare the assessment report with the assistance, as necessary, of the assessment team, and sign the report.

- Ensure that the assessment report includes the following, as appropriate:

  — Assessment purpose and scope (surveillances to include criteria used)

  — Identification of assessors

  — Identification of personnel contacted

  — Identification of documents reviewed, including revision indicator

  — Summary statement(s) indicating program (or program element) adequacy, implementation, effectiveness (applicable to scope), and a brief statement of ISM evaluations performed

  — Commendable practices or situations (if any are identified)

NOTE

Internal assessment finding issues (conditions adverse to quality) are to be issued on the Issues Management WIPP Form in accordance with WP 04-IM1000. Corrections will be made within the WIPP Form process; however, the issue also must be similarly stated in the assessment report to allow both the assessment report and WIPP Form to be stand-alone documents. (A suggestion is to 'copy and paste' the text from one to the other.)

— Findings (conditions adverse to quality, if any are identified) - Identify findings in the report as directed in attachments 6 and 8. Concisely describe in the report (and on the WIPP Form for internal findings) the specific condition that deviates from the requirements, with sufficient detail to enable remedial actions to be taken by the audited organization, and subsequent closure by QA. Clearly quote or state the requirement from which the deviation was noted. Group findings of a common nature together whenever possible so that systematic breakdowns can be identified. Evaluate findings based on the relative importance to indicate the degree of impact on compliance application, waste characterization, repository performance assessment, waste isolation, waste transportation, nuclear safety, environmental protection, or management and operation of the WIPP facility. Enter internal (NWP) conditions adverse to quality into the Issues Management System using the WIPP Form in accordance with WP 04-IM1000.

— Observations (if any are identified) - Concisely state either the condition observed that, if left unaddressed, could deteriorate into a finding, or the suggestion that could strengthen the existing program or process.

— Findings Corrected During Assessment (CDA) - Concisely describe the CAQ found, the requirement from which the condition deviated, and the action(s) taken to resolve the condition. Document CDAs on a WIPP Form, in accordance with WP 04-IM1000, for trending.

— Include the following statement in external supplier audit reports:

(Name of Company) will be (select "retained on," "added to," "added to pending successful resolution of finding," or "removed from") the NWP QSL for (state the scope or limitations of products or services authorized).

— Include the following statement in audit reports for suppliers currently on the NWP QSL:

If the agreements and commitments contained herein are deemed by the supplier to involve a change in the order concerning work scope, price, or schedule, it is agreed that such work will not commence or continue until authorized by a written change notice. It is understood that if the supplier commences such work without a written change notice, it is at the supplier's risk.

- Using cover correspondence, issue the assessment report to all affected entities within 45 calendar days of conclusion of the audit. The 45 calendar day time limit may be extended at the discretion of the Assurance Programs manager.

  — Cognizant department manager (all reports)

  — P-A Coordinator (all reports)

  — CTS Coordinator (external reports containing findings)

  — Facility point-of-contact (external reports)

  — QSL Coordinator (external qualification or requalification audits)

  — Packaging Manager (reports affecting packaging)

  — Assessment Coordinator (all reports)

  — Lessons Learned Coordinator (reports containing findings determined by the lead auditor/surveillor/management to be potential Lessons Learned issues)

  — QA assessment file for this assessment

  — Others as designated by QA management

Because internal findings are transferred to WIPP Forms, internal reports are considered closed at the time of issue. For external audit reports, include direction to the supplier for responding to any findings.

- Document CDAs on a WIPP Form, in accordance with WP 04-IM1000, for trending.

- For external supplier qualification audits, complete the Supplier Evaluation/QSL Update Request Form in accordance with WP 13-QA3012, and forward to the QSL Coordinator.

  It is recommended to electronically file a copy of the completed checklist and the report in the applicable assessment folder within "Assessment Reports" in the shared folder WQNRA on the Torreon server.

7.0 ASSESSMENT RESPONSE

The cognizant manager of the assessed WIPP organization will review the assessment (audit or surveillance) results assigned to their organization on the WIPP Form, and respond using the Issues Management (WIPP Form) process in accordance with WP 04-IM1000.

The facility contact (for external assessments) is expected to respond as directed in the issuing cover letter and report. Any request for extension of corrective action due date shall be reviewed by the Assurance Programs Manager or designee.

8.0 ASSESSMENT FOLLOW-UP

In accordance with WP 04-IM1000, the WIPP Form screening committee will assign the lead auditor/surveillor as a technical reviewer of actions/corrective action plans developed in response to a WIPP Form issued as the result of an internal audit/surveillance finding. As a technical reviewer, the lead auditor/surveillor/manager will be responsible for determining the long-term effectiveness of the corrective actions, and will be expected to sign the Correction Action Plan, so indicating, in accordance with WP 04-IM1000. Issues that cannot be resolved will be referred to management.

For external supplier audit or surveillance findings and the resulting supplier's committed actions, the lead auditor/surveillor/manager will review the supplier's actions, and report completion based on the supplier's approved commitment(s).

9.0 ASSESSMENT CLOSURE AND FILING

The lead auditor/surveillor/manager will:

- For external supplier audits or surveillances with findings, verify that the corrective actions were completed as committed, issue a closure letter to the supplier and any other affected organizations, and ensure that copies are distributed to the QSL Coordinator (if applicable) and the P-A Coordinator.

- Review, using the file checklist (attachment 7), the assessment file for completeness: purge working documents, sign the checklist, notify the assessment coordinator, and forward the complete file to the QA file. The assessment file is to include:

  — Audit Plan (for audits)

  — Completed Assessment Checklist (required for audits, or when used for surveillances)

  — Completed Assessment Report (including identification of documents reviewed and personnel contacted)

  — Assessment response (for external assessments)

  — Corrective Action completion, follow-up, and verification (for external assessments)

  — Other documentation determined to be necessary to support the assessment (closure correspondence, etc.)

REFERENCES	
DOCUMENT NUMBER AND TITLE	KEY STEP
10 CFR Part 21, "Reporting of Defects and Noncompliance"	
10 CFR Part 71, "Packaging and Transportation of Radioactive Material"	
Reg. Guide 7.10, *Establishing Quality Assurance Programs for Packaging Used in Transport of Radioactive Material (NRC)*	
DNFSB Recommendation 2000-2, *Configuration Management Vital Safety Systems*	
DOE O 226.1B, *Implementation of Department of Energy Oversight Policy*	
Hazardous Waste Facility Permit, Waste Isolation Pilot Plant, Permit #NM4890139088 TSDF, Issued by New Mexico Environment Department	
DOE/CBFO 94-1012, *Carlsbad Field Office Quality Assurance Program Document*	
DOE/WIPP 04-3310, *WIPP Environmental Policy Statement*	
DOE/WIPP-07-3372, *Waste Isolation Pilot Plant Documented Safety Analysis*	
DOE/WIPP-07-3373, *Waste Isolation Pilot Plant Technical Safety Requirements*	
EFCOG Contractor Guide for Performance of Effectiveness Reviews	
MP 1.2, *Stop-Work Policy*	
MP 1.28, *Integrated Safety Management*	
WP 04-IM1000, *Issues Management Processing of WIPP Forms*	
WP 09-CN3005, *Graded Approach to Application of QA Controls*	
WP 09-CN3025, *Annual System Health/Walkdown/Requalification*	
WP 12-ES3918, *Reporting Occurrences in Accordance with DOE Order 232.2*	
WP 13-1, *Nuclear Waste Partnership LLC Quality Assurance Program Description*	**1**
WP 13-QA.04, *Quality Assurance Department Administrative Program*	
WP 13-QA3012, *Supplier Evaluation/Qualification*	
WP 15-GM.03, *Integrated Safety Management System Description*	
EA04IM1000-1-0, *WIPP Form*	

Attachment 1 – NWP QA Internal Assessment Priority Determination Tables

Determine whether the assessment will be performed as an audit or surveillance using the tables below:

- Review the assessment to be performed against the criteria in the Risk and Hazard Table to determine a numeric value.
- Review the assessment also against the criteria in the Importance and Complexity Table to determine a numeric value.
- Multiply the two numeric values.
- Use the Assessment Priority Table and the number derived from the previous bullet to determine the priority of the assessment to be performed and schedule the type of assessment indicated.

Risk and Hazard Table	
Description	Probability and Consequence Level
If not performed, improbable undetected impact on environment safety, health, safeguards and security, emergency management, cyber security, or QA	1
If not performed, possible minor undetected impact on environment, safety, health, safeguards, and security, emergency management, cyber security, or QA	2
If not performed, possible major undetected impact on environment, safety, health, safeguards, and security, emergency management, cyber security, or unknown status of QA program, or possible continuation of negative trend or repetitive nonconformance	3

Importance and Complexity Table	
Description	Importance and Complexity Level
Necessary to verify actions in document other than a requirement-source or implementing procedure	1
Necessary to verify an action required by an implementing procedure	2
Necessary to complete an assessment required by an implementing procedure	3
Necessary to complete an assessment required by an implementing procedure, and complex in nature	4
Necessary to complete a specific program assessment requirement, or commitment (both non-complex and complex in nature)	4

Attachment 1 – NWP QA Internal Assessment Priority Determination Tables

Assessment Priority Table		
Derived Numeric Value	Priority	Action
1-4	Low	Schedule Surveillance
5-8	Medium	Schedule Surveillance or Audit
9-12	High	Schedule Audit

Attachment 2 – Example of NWP QA Internal Assessment Subject Master Table

NWP QA INDEPENDENT ASSESSMENT SUBJECT MASTER TABLE Revision XX mm/dd/yy							
Area of Interest	**Source/Reference**	**Risk/Hazard**	**Complexity**	**Priority**	**Audit**	**Surv**	**Frequency**
Management System NWP Organization Facility Ops Chain of Command QA Organization	Source WP 13-1, R.27, §1.1 Reference DSA/TSR 10 CFR 71 Subpart H	3	4	12	**X**		Biennial (frequency not specified in 830.122, NQA-1, WP 13-1, R.27, or WP 13-QA.03)
Personnel Qualification and Training **Facility Staff Qualifications Training** **Qualified Operators**	Source WP 13-1, R.27, §1.2 Reference DSA/TSR 10 CFR 71 Subpart H DSA/TSR	3	4	12	**X**		Biennial

Attachment 3 – Example of QA Fiscal Year External and Internal Audit Schedules

NWP QUALITY ASSURANCE
FISCAL YEAR 2007 EXTERNAL AUDIT SCHEDULE

Supplier/Location Audit	Product/Service	Lead Auditor	Audit Number	Remarks
ACME Manufacturing 123 Any Street Anywhere, NM	Pipe, flanges, fittings	Lead Auditor Name	E07-01	Completed October 2006
Jones Cal Services 456 Busy Highway Big City, NM	Calibration Services	Lead Auditor Name		Scheduled January 2008

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Signatures on last printed page: Manager, Assurance Programs, and Manager, Quality Assurance

NWP QUALITY ASSURANCE
FISCAL YEAR 2007 INTERNAL AUDIT SCHEDULE

Audit Title and Audit Criteria	Scheduled	Lead Auditor (when determined)	Audit Number (when determined)	Status
Personnel Qualification	March 2007			

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Signatures on last printed page: Manager, Assurance Programs, and Manager, Quality Assurance

Attachment 4 – Audit Plan Guidance

NUCLEAR WASTE PARTNERSHIP LLC
QUALITY ASSURANCE AUDIT PLAN
Title of audit (subject)

Audit number

Audited organization(s) (and location if supplier audit)

1. Purpose and Scope of the audit
2. Applicable Requirements Documents
   WP 13-1, *NWP Quality Assurance Program Description*
   (Any others, including regulatory documents containing requirements)

3. Procedure(s) to be used to perform the audit
   WP 13-QA.03, *Quality Assurance Independent Assessment Program*

4. Audit Team
   Lead Auditor
   Team Auditors (if any)
   Technical Expertise (if any)
   Anticipated Observers (if any)

5. Schedule
   Pre-Audit Meeting
   Audit Activities
   Post-Audit Meeting

6. Background
   Previously reported findings (if any)
   Previous corrective action issues (if any)
   Previously reported weaknesses (if any)

7. Hazards, Safety/security issues
   Precautions
   Badging, logistics information
   PPE (if any)

Signatures:

Prepared by: _____
(Printed Name)
Lead Auditor

Approved by: _____
(Printed Name)
Manager, Assurance Programs

Attachment 5 – Example of NWP Quality Assurance Assessment Checklist

(The following table is shown on first page only, followed by the second table as space allows.)

NWP Quality Assurance Assessment Checklist	
Organization Assessed: _____	Assessment Number: _____
Requirements Documents: _____	Dates of Assessment: _____
Assessor(s): _____	**Key: S=Satis., U=Unsat., N=N/A**

(The top row of the following table is a header to be shown on each page to which this table expands with usage.)

Item	[Type in Assessment # here] Assessment Item	Reference Document(s)	**Key**	Assessor Comments
	(Add rows as needed)			

(The following signature line is shown on the last page only, following the end of the above table.)

Approved by: _____ _____
Lead Auditor/Surveillor (print name and sign) Date:

Notes: Refer to the NWP QA Independent Assessment Subject Master Table for identification of requirements documents from which assessment criteria should be developed.
Review any corrective actions committed as a result of the previous assessment; develop criteria to evaluate their effectiveness.
Develop criteria that evaluate a broad range of the requirements with enough detail to be meaningful in verifying compliance and effectiveness.
Develop criteria to evaluate effectiveness of Graded Approach and the ISM system.

Attachment 6 – Audit Report Guidance

Nuclear Waste Partnership LLC
Quality Assurance (select either **Internal** or **External**) **Audit Report**
[Descriptive, yet concise **title** - if external, provide company and address]
[**Audit Number**]

I. Executive Summary: Concise summary (generally one page or less), written in paragraph format including brief mention of organization audited (include location for external supplier) and audit date, abbreviated purpose and scope, results in general terms, conclusion of program adequacy (including ISM), any commendable situations noted, and any major issues requiring further action.

II. Audit Details

Purpose and Scope (more detailed than the Executive Summary)
Criteria used (identify or make reference to checklist, and specifically address ISM)
Audit Team
Inclusive dates of audit
Location(s) of audit
Conclusion(s) regarding compliance, effectiveness, and ISM evaluations performed. Include a statement addressing the number of findings, observations, and/or "CDAs." An acceptable method would be, "The assessment resulted in 2 Findings, 0 Observations, and 3 issues closed during the assessment."
Commendable practices or activities (if applicable)

[Include the following statement, as applicable, in assessment reports containing findings.]

Response to Findings (external supplier audits only) - When responding to audit findings, the following elements are required to be addressed:

- Cause of nonconformance
- Interim actions planned to correct the nonconformance
- Evaluation of the extent of the condition beyond that cited in the report
- Actions planned to prevent recurrence
- Schedule of implementation/completion

Findings (are to be numbered as [audit no.]-F-[sequential number beginning with 01], and internal findings are to also cross-reference to the WIPP Form Number. Example – "S04-027-F-01 issued as WF04-120")

- Condition noted
- Requirement not met

Observations (numbered as [assessment no.]-O-[sequential number beginning with 01])

- Condition (noted, or considered to be an improvement)

Attachment 6 – Audit Report Guidance

Conditions corrected during the assessment (numbered as [assessment no.]-CDA-[sequential number beginning with 01])

- Condition noted
- Requirement from which condition deviated
- Action taken, and verification of completion

[Include the following statements in external supplier audit reports]

[Name of company] will be [select "retained on," "added to," "added to, pending successful resolution of findings," or "removed from"] the NWP Qualified Suppliers List for [state the scope or limitations of products or services authorized].

If the agreements and commitments contained herein are deemed by the supplier to involve a change in the order concerning work scope, price, or schedule, it is agreed that such work will not commence until authorized by a written change notice. It is understood that if the supplier commences such work without a written change notice, it is at the supplier's expense.

III. Attachments:

1. Table of Personnel Contacted
2. Table of Documents Reviewed
3. (Any other information deemed appropriate for attachment)

IV. Signatures:

Prepared by: _____ _____
(Printed Name) Date

Approved by: _____ _____
(Printed Name) Date
Manager, Assurance Programs

Attachment 6 – Audit Report Guidance

Attachment 1 Table of Personnel Contacted

[A] Attended Audit Entrance Meeting
[B] Contacted During the Audit
[C] Attended Audit Exit Meeting

Personnel Contacted	A	B	C
(Added rows as needed)			

Attachment 2 Table of Documents Reviewed

Document Identification	Document Title or Description
(Add rows as needed)	

Attachment 7 – Example of Independent Assessment Record File Completion Checklist

INDEPENDENT ASSESSMENT RECORD FILE COMPLETION CHECKLIST	
Assessment No. _____	
	Complete
Audit Team/Technical Specialist Indoctrination	☐
Assessment Plan (required for audit, optional for surveillance)	☐
Assessment report	☐
Assessment response (if external assessment contained findings)	☐
Assessment Checklist (required for audit)	☐
Closure letter (if external assessment contained findings)	☐
Other	
_____	☐
_____	☐
_____	☐
_____	☐
I have reviewed the above listed records and verified their completeness and legibility.	
[Type or Print Name here]_____	
Lead Auditor/Surveillor Signature Date	

Attachment 8 – Example of Surveillance Report

Nuclear Waste Partnership LLC Quality Assurance **(make this a header row)** **Surveillance Report Number:** **Date:**	
Subject	Organization(s) Surveilled
Scope Surveillor(s)	
Requirement References (include revision no.)	
Surveillance Criteria [ ] Checklist on file in QA	
Personnel Contacted (* indicates persons to whom a copy of this report is to be distributed)	
Documents reviewed [ ] See Attachment	
Details/Results/Conclusions [ ] WIPP Form(s) identified in Findings [Print and Sign] Date Lead Auditor/Surveillor [Print and Sign] Date Manager, Assurance Programs	
Comments	
cc: Manager of assessed organization, WIPP Form Coordinator (if containing findings), P-A Coordinator, Assessment Coordinator, CTS Coordinator (if containing findings), Packaging Manager (if containing packaging issues) Page 1 of (total)	

Make the top row a header to appear on every page.
Insert pagination (page X of Y) at the bottom center

Attachment 9 – Example of NWP QA Independent Assessment Log

NWP QUALITY ASSURANCE
INDEPENDENT ASSESSMENT LOG

Assessment Number	Subject/Manufacturer	Location	Date Performed	Lead Auditor/ Surveillor	Assessment Team	Results Findings/CDAs/ Observations	Status of External Findings
E05-06	Supplier X	Wichita, KS	5/10/2005	(Name)	(Names)	8 Findings 1 CDA 2 Obs.	All findings closed 5/10/05, QA:05-00287

Attachment 10 – Technical Specialist/Auditor Participation Indoctrination for Quality Assurance Audits Example

Technical Specialist/Auditor Participation Indoctrination
for Quality Assurance Audits
Audit XXX0XX
(Audit Title)

In preparation for participation as a Technical specialist/Auditor, this documentation serves as a record that the below listed individual has been indoctrinated per the requirements of the NWP QAPD, and procedure WP 13-QA.03.

Items discussed:

- Applicable portion of the NWP QAPD
- Applicable section of WP 13-QA.03, which includes audit checklist preparation and completion, documentation required during the audit process, and the audit report format.
- Applicable requirements documentation associated with this audit.
- Expectations of an Auditor.

Experience Background:

(Enter short biography for each specialist [auditor as desired] detailing previous experience and qualifications.)

Technical Specialist/Auditor:

Print Name	Signature

Lead Auditor:

Print Name	Signature

CHARACTERIZATION INFORMATION SUMMARY

GEN1

WSPF # ID-RF-S3114 Rev. 1

Lot 109

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CCP Characterization Information Summary Cover Page

Waste Stream # ID-RF-S3114 Lot #: 109

AK Expert Review: N/A Date: N/A

SPM Review: Beverly Schrock BSSchrock Date: 5/21/2013

SPM signature certifies that through Acceptable Knowledge testing and/or analysis that the waste identified in this summary is not corrosive, ignitable, reactive, or incompatible with the TSDF.

A summary of the Acceptable Knowledge regarding this waste stream containing specific information about the corrosivity, reactivity, and ignitability of the waste stream is included as an attachment to the Waste Stream Profile Form. By reference, that information is included in this lot.

List of procedures used:

Radiography (RTR/NDE):

CCP-TP-053	Rev. 13	05/14/13	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
CCP-TP-053	Rev. 12	08/22/12	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
CCP-TP-053	Rev. 11	07/20/11	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
CCP-TP-053	Rev. 10	03/04/11	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
CCP-TP-053	Rev. 9	09/30/10	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
CCP-TP-053	Rev. 8	06/30/10	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
CCP-TP-053	Rev. 7	10/21/09	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
CCP-TP-053	Rev. 6	03/04/08	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
CCP-TP-053	Rev. 5	11/16/06	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
CCP-TP-053	Rev. 4	12/22/05	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
CCP-TP-053	Rev. 3	03/21/05	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
CCP-TP-053	Rev. 2	07/14/04	CCP Standard Real-Time Radiography (RTR) Inspection Procedure

Non Destructive Assay (NDA):

CCP-TP-109	Rev. 9	02/14/13	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 8	08/10/11	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 7	01/26/11	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 6	03/16/09	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 5	11/16/06	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 4	09/21/05	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 3	04/12/05	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 2	03/18/05	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 1	05/06/04	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-115	Rev. 5.1	04/08/13	CCP SWEPP Gamma-Ray Spectrometer (SGRS) Operating Procedure
CCP-TP-115	Rev. 4	06/24/09	CCP SWEPP Gamma-Ray Spectrometer (SGRS) Operating Procedure
CCP-TP-115	Rev. 3	12/08/06	CCP SWEPP Gamma-Ray Spectrometer (SGRS) Operating Procedure
CCP-TP-115	Rev. 2	06/12/06	CCP SWEPP Gamma-Ray Spectrometer (SGRS) Operating Procedure
CCP-TP-115	Rev. 1	04/15/05	CCP SWEPP Gamma-Ray Spectrometer (SGRS) Operating Procedure
CCP-TP-115	Rev. 0	02/27/05	CCP SWEPP Gamma-Ray Spectrometer (SGRS) Operating Procedure
CCP-TP-107	Rev. 12	02/28/13	Operating the CCP High Efficiency Neutron Counter Using NDA2000
CCP-TP-107	Rev. 11	11/30/09	Operating the CCP High Efficiency Neutron Counter Using NDA2000
CCP-TP-107	Rev. 10	02/08/08	Operating the CCP High Efficiency Neutron Counter Using NDA2000
CCP-TP-107	Rev. 9	04/11/07	Operating the CCP High Efficiency Neutron Counter Using NDA2000
CCP-TP-107	Rev. 8	06/15/06	Operating the CCP High Efficiency Neutron Counter Using NDA2000
CCP-TP-107	Rev. 7	03/17/06	Operating the CCP High Efficiency Neutron Counter Using NDA2000
CCP-TP-107	Rev. 6	04/12/05	Operating the CCP High Efficiency Neutron Counter Using NDA2000
CCP-TP-019	Rev. 6	04/15/13	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
CCP-TP-019	Rev. 5	09/16/09	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
CCP-TP-019	Rev. 4	10/19/06	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
CCP-TP-019	Rev. 3	06/15/06	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
CCP-TP-019	Rev. 2	06/10/05	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
CCP-TP-019	Rev. 1	04/16/05	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
CCP-TP-019	Rev. 0	02/27/05	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
CCP-TP-146	Rev. 8	03/13/09	CCP SuperHENC Operating Procedure
CCP-TP-146	Rev. 7	04/13/09	CCP SuperHENC Operating Procedure
CCP-TP-146	Rev. 6	02/27/09	CCP SuperHENC Operating Procedure
CCP-TP-146	Rev. 5	05/20/08	CCP SuperHENC Operating Procedure
CCP-TP-146	Rev. 4	07/10/07	CCP SuperHENC Operating Procedure
CCP-TP-146	Rev. 3	03/01/07	CCP SuperHENC Operating Procedure
CCP-TP-146	Rev. 2	01/24/07	CCP SuperHENC Operating Procedure
CCP-TP-146	Rev. 1	01/04/07	CCP SuperHENC Operating Procedure
CCP-TP-146	Rev. 0	09/21/06	CCP SuperHENC Operating Procedure
CCP-TP-148	Rev. 8	01/17/13	CCP SuperHENC Data Reviewing, Validating and Reporting Procedure
CCP-TP-148	Rev. 7	07/28/11	CCP SuperHENC Data Reviewing, Validating and Reporting Procedure
CCP-TP-148	Rev. 6	02/10/11	CCP SuperHENC Data Reviewing, Validating and Reporting Procedure
CCP-TP-148	Rev. 5	09/27/10	CCP SuperHENC Data Reviewing, Validating and Reporting Procedure
CCP-TP-148	Rev. 4	11/01/07	CCP SuperHENC Data Reviewing, Validating and Reporting Procedure
CCP-TP-148	Rev. 3	07/10/07	CCP SuperHENC Data Reviewing, Validating and Reporting Procedure
CCP-TP-148	Rev. 2	03/01/07	CCP SuperHENC Data Reviewing, Validating and Reporting Procedure
CCP-TP-148	Rev. 1	01/10/07	CCP SuperHENC Data Reviewing, Validating and Reporting Procedure
CCP-TP-148	Rev. 0	09/21/06	CCP SuperHENC Data Reviewing, Validating and Reporting Procedure

CIS-002

CCP Characterization Information Summary Cover Page

Visual Examination (VE):

CCP-TP-006	Rev. 17	11/01/12	CCP Visual Examination Technique for INL Newly Generated Waste
HFEF-01-6890	Rev. 5	04/07/03	WCP Visual Examination
W0102-0168-AP	Rev. 5	04/15/03	NT-AP-09 TWCP Visual Exam Expert (VEE) Functions and Process
INST-OI-34	Rev. 11 FC1	07/21/05	Visual Examination Operating Procedures and Data Reporting

Solids Sampling:

INST-OI-73	Rev. 3	07/24/08	Manual Drum Coring Operations
INST-OI-73	Rev. 2	04/07/08	Manual Drum Coring Operations
INST-OI-73	Rev. 1	07/18/07	Manual Drum Coring Operations
INST-OI-73	Rev. 0	03/28/07	Manual Drum Coring Operations
INST-OI-16	Rev. 29	07/03/08	Drum Coring Operations
INST-OI-16	Rev. 28	06/30/08	Drum Coring Operations
INST-OI-16	Rev. 27	04/10/08	Drum Coring Operations
INST-OI-16	Rev. 26	07/16/07	Drum Coring Operations
INST-OI-16	Rev. 25	07/05/07	Drum Coring Operations
INST-OI-16	Rev. 24	12/20/06	Drum Coring Operations
CCP-TP-008	Rev. 10	09/21/12	CCP Solids Sampling Procedure

Solids Analysis:

CCP-TP-183	Rev. 0	05/02/07	CCP Microwave Assisted Digestion of Homogeneous Solids and Soil/Gravel
ACCM-8909	Rev. 10	01/17/06	Microwave Assisted Digestion of Homogeneous Solids and Soil/Gravel
ACCM-8909	Rev. 9	01/20/05	Microwave Assisted Digestion of Homogeneous Solids and Soil/Gravel
CCP-TP-187	Rev. 1	11/18/08	CCP Sample Preparation for Semivolatile Organic Compounds
CCP-TP-187	Rev. 0	05/02/07	CCP Sample Preparation for Semivolatile Organic Compounds
ACCM-9500	Rev. 11	12/15/05	Sample Preparation for Semivolatile Organic Compounds and Polychlorinated Biphenyls
ACCM-9500	Rev. 10	07/28/04	Sample Preparation for Semivolatile Organic Compounds and Polychlorinated Biphenyls
CCP-TP-185	Rev. 2	02/21/13	CCP Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry
CCP-TP-185	Rev. 1	11/18/08	CCP Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry
CCP-TP-185	Rev. 0	05/02/07	CCP Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry
ACMM-9270	Rev. 8	01/20/05	Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry
CCP-TP-184	Rev. 1	02/21/07	CCP Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry
CCP-TP-184	Rev. 0	05/02/07	CCP Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry
ACMM-9260	Rev. 14	12/01/05	Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry
ACMM-9260	Rev. 13	12/21/04	Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry
CCP-TP-182	Rev. 1	01/26/09	CCP Determination of Metals by ICP-AES for TRU Waste Characterization
CCP-TP-182	Rev. 0	05/02/07	CCP Determination of Metals by ICP-AES for TRU Waste Characterization
ACMM-2901	Rev. 3	01/27/05	Determination of Trace Elements by ICP-AES for TRU Waste Characterization
CCP-TP-181	Rev. 0	05/02/07	CCP Determination of Mercury by CVAA for TRU Waste Characterization
ACMM-2810	Rev. 3	01/27/05	Determination of Mercury by CVAA for TRU Waste Characterization
CCP-TP-186	Rev. 2	02/21/13	CCP Determination of Nonhalogenated Volatile Organics by Gas Chromatography
CCP-TP-186	Rev. 1	08/22/07	CCP Determination of Nonhalogenated Volatile Organics by Gas Chromatography
CCP-TP-186	Rev. 0	05/02/07	CCP Determination of Nonhalogenated Volatile Organics by Gas Chromatography
ACMM-9441	Rev. 12	03/16/06	Determination of Nonhalogenated Volatile Organic Compunds by Gas Chromatography
ACMM-9441	Rev. 11	12/22/04	Determination of Nonhalogenated Volatile Organic Compunds by Gas Chromatography

Project Level Data Validation / DQO Reconciliation:

CCP-TP-001	Rev. 20	09/27/12	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 19	12/29/10	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 18	08/09/10	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 17	09/24/07	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 16	04/26/07	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 15	11/22/06	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 14	11/16/06	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 13	07/21/06	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 12	05/25/06	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 11	03/23/05	CCP Project Level Data Validation and Verification
CCP-TP-002	Rev. 25	02/11/13	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 24	12/28/11	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 23	12/29/10	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 22	06/30/10	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 21	08/04/09	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 20	08/18/08	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 19	12/22/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 18	11/16/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 17	10/11/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 16	06/06/06	CCP Reconciliation of DQOs and Reporting Characterization Data

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CCP-TP-002	Rev. 15	08/16/05	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 14	03/29/05	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-003	Rev. 19	11/02/12	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 18	12/29/10	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 17	11/09/09	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 16	10/02/07	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 15	11/16/06	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 14	09/03/03	CCP Sampling Design and Data Analysis for RCRA Characterization
CCP-TP-005	Rev. 24	11/28/11	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 23	06/30/11	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 22	04/21/11	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 21	12/29/10	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 20	11/01/10	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 19	07/06/10	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 18	11/16/06	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 17	06/05/06	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 16	02/27/06	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 15	03/31/05	CCP Acceptable Knowledge Documentation
CCP-TP-030	Rev. 31	11/19/12	CCP CH TRU Waste Certification and WWIS/WDS Data Entry
CCP-TP-030	Rev. 30	05/21/12	CCP CH TRU Waste Certification and WWIS/WDS Data Entry
CCP-TP-030	Rev. 29	04/26/11	CCP CH TRU Waste Certification and WWIS/WDS Data Entry
CCP-TP-030	Rev. 28	05/12/10	CCP CH TRU Waste Certification and WWIS/WDS Data Entry
CCP-TP-030	Rev. 27	12/14/09	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 26	05/27/09	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 25	01/22/09	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 24	08/20/08	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 23	03/12/08	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 22	07/24/07	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 21	05/21/07	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 20	02/07/07	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 19	11/16/06	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 18	05/01/06	CCP TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 17	12/29/05	CCP TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 16	04/22/05	CCP TRU Waste Certification and WWIS Data Entry

WAP Certification:

CCP-PO-001	Rev. 20	06/16/11	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 19	12/29/10	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 18	06/30/10	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 17	06/23/09	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 16	10/31/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 15	08/08/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 14	03/27/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 13	11/16/06	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 12	03/22/06	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 11	03/10/05	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-002	Rev. 26	07/14/11	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 25	12/29/10	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 24	06/30/10	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 23	04/07/10	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 22	01/12/10	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 21	01/26/09	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 20	11/02/07	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 19	05/22/07	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 18	11/16/06	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 17	11/16/06	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 16	11/16/06	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 15	03/22/06	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 14	12/29/05	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 13	05/09/05	CCP Transuranic Waste Certification Plan
CCP-PO-024	Rev. 13	11/02/12	CCP/INL Interface Document
CCP-PO-024	Rev. 12	10/01/12	CCP/INL Interface Document
CCP-PO-024	Rev. 11	07/18/11	CCP/INL Interface Document
CCP-PO-024	Rev. 10	12/29/10	CCP/INL Interface Document
CCP-PO-024	Rev. 9	03/16/09	CCP/INL Interface Document
CCP-PO-024	Rev. 8	07/07/08	CCP/INL Interface Document
CCP-PO-024	Rev. 7	01/04/08	CCP/INL Interface Document
CCP-PO-024	Rev. 6	05/15/07	CCP/INL Interface Document
CCP-PO-024	Rev. 5	11/16/06	CCP/INL Interface Document
CCP-PO-024	Rev. 4	03/14/06	CCP/INL Interface Document
CCP-PO-024	Rev. 3	04/29/05	CCP/INL Interface Document
CCP-PO-024	Rev. 2	04/12/05	CCP/INL Interface Document
CCP-PO-024	Rev. 1	02/23/05	CCP/INL Interface Document
CCP-PO-024	Rev. 0	10/25/04	CCP/INL Interface Document

C15-004

CCP-TP-002 Rev. 25
Effective Date: 2/11/13
CCP Reconciliation of DQO's and Reporting Characterization Data

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-RF-S3114

Lot # 109

Container ID Number	Inner Container ID	NDA BDR	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Overpack Required	LTO	Transportation Headspace Gas BDR					GGT BDR
										Sample	Analysis				
SRP13969	N/A	INNDAS130012	N/A	IN-SRP-VE-000144	N/A	N/A	N/A	Yes	LTO 2	IN13FG9028	N/A	N/A	N/A	N/A	N/A
SRP13970	N/A	INNDAW130060	N/A	IN-SRP-VE-000142	N/A	N/A	Yes	Yes	LTO 2	IN13FG9028	N/A	N/A	N/A	N/A	N/A
SRP13971	N/A	INNDAS130011	N/A	IN-SRP-VE-000142	N/A	N/A	N/A	Yes	LTO 2	IN13FG9027	N/A	N/A	N/A	N/A	N/A
SRP13972	N/A	INNDAW130059	N/A	IN-SRP-VE-000142	N/A	N/A	Yes	Yes	LTO 2	IN13FG10029	N/A	N/A	N/A	N/A	N/A
SRP13973	N/A	INNDAW130059	N/A	IN-SRP-VE-000141	N/A	N/A	N/A	Yes	LTO 2	IN13FG10029	N/A	N/A	N/A	N/A	N/A
SRP13975	N/A	INNDAS130011	N/A	IN-SRP-VE-000143	N/A	N/A	Yes	Yes	LTO 2	IN13FG10029	N/A	N/A	N/A	N/A	N/A
SRP13979	N/A	INNDAW130060	N/A	IN-SRP-VE-000144	N/A	N/A	N/A	Yes	LTO 2	IN13FG9028	N/A	N/A	N/A	N/A	N/A
SRP13980	N/A	INNDAW130059	N/A	IN-SRP-VE-000144	N/A	N/A	N/A	Yes	LTO 2	IN13FG10029	N/A	N/A	N/A	N/A	N/A
SRP13981	N/A	INNDAS130011	N/A	IN-SRP-VE-000144	N/A	N/A	Yes	Yes	LTO 2	IN13FG10029	N/A	N/A	N/A	N/A	N/A
SRP13982	N/A	INNDAS130012	N/A	IN-SRP-VE-000145	N/A	N/A	N/A	Yes	LTO 2	IN13FG9028	N/A	N/A	N/A	N/A	N/A
SRP13984	N/A	INNDAS130011	N/A	IN-SRP-VE-000144	N/A	N/A	N/A	Yes	LTO 2	IN13FG10029	N/A	N/A	N/A	N/A	N/A
SRP13985	N/A	INNDAW130060	N/A	IN-SRP-VE-000145	N/A	N/A	N/A	Yes	LTO 2	IN13FG10030	N/A	N/A	N/A	N/A	N/A
SRP13986	N/A	INNDAS130011	N/A	IN-SRP-VE-000144	N/A	N/A	Yes	Yes	LTO 2	IN13FG10029	N/A	N/A	N/A	N/A	N/A
SRP13990	N/A	INNDAS130012	N/A	IN-SRP-VE-000145	N/A	N/A	N/A	Yes	LTO 2	IN13FG9028	N/A	N/A	N/A	N/A	N/A
SRP13992	N/A	INNDAS130011	N/A	IN-SRP-VE-000145	N/A	N/A	Yes	Yes	LTO 2	IN13FG10029	N/A	N/A	N/A	N/A	N/A
SRP13993	N/A	INNDAW130060	N/A	IN-SRP-VE-000144	N/A	N/A	Yes	Yes	LTO 2	IN13FG9028	N/A	N/A	N/A	N/A	N/A
SRP13994	N/A	INNDAW130060	N/A	IN-SRP-VE-000144	N/A	N/A	N/A	Yes	LTO 2	IN13FG9027	N/A	N/A	N/A	N/A	N/A
SRP13997	N/A	INNDAS130012	N/A	IN-SRP-VE-000145	N/A	N/A	Yes	Yes	LTO 2	IN13FG9028	N/A	N/A	N/A	N/A	N/A
SRP14009	N/A	INNDAS130011	N/A	IN-SRP-VE-000141	N/A	N/A	N/A	Yes	LTO 2	IN13FG10029	N/A	N/A	N/A	N/A	N/A
SRP14031	N/A	INNDAS130012	N/A	IN-SRP-VE-000146	N/A	N/A	Yes	Yes	LTO 2	IN13FG9028	N/A	N/A	N/A	N/A	N/A
SRP14035	N/A	INNDAW130059	N/A	IN-SRP-VE-000144	N/A	N/A	Yes	Yes	LTO 2	IN13FG10029	N/A	N/A	N/A	N/A	N/A
SRP14064	N/A	INNDAS130011	N/A	IN-SRP-VE-000142	N/A	N/A	Yes	Yes	LTO 2	IN13FG10029	N/A	N/A	N/A	N/A	N/A
SRP14069	N/A	INNDAW130060	N/A	IN-SRP-VE-000141	N/A	N/A	N/A	Yes	LTO 2	IN13FG9028	N/A	N/A	N/A	N/A	N/A
SRP14070	N/A	INNDAS130011	N/A	IN-SRP-VE-000141	N/A	N/A	N/A	Yes	LTO 2	IN13FG10029	N/A	N/A	N/A	N/A	N/A
SRP14071	N/A	INNDAS130011	N/A	IN-SRP-VE-000143	N/A	N/A	Yes	Yes	LTO 2	IN13FG10029	N/A	N/A	N/A	N/A	N/A
SRP14074	N/A	INNDAS130012	N/A	IN-SRP-VE-000142	N/A	N/A	Yes	Yes	LTO 2	IN13FG9028	N/A	N/A	N/A	N/A	N/A
SRP14075	N/A	INNDAW130060	N/A	IN-SRP-VE-000144	N/A	N/A	N/A	Yes	LTO 2	IN13FG10030	N/A	N/A	N/A	N/A	N/A
SRP14078	N/A	INNDAS130011	N/A	IN-SRP-VE-000146	N/A	N/A	N/A	Yes	LTO 2	IN13FG10029	N/A	N/A	N/A	N/A	N/A
SRP14080	N/A	INNDAW130059	N/A	IN-SRP-VE-000145	N/A	N/A	N/A	Yes	LTO 2	IN13FG9027	N/A	N/A	N/A	N/A	N/A
SRP14081	N/A	INNDAS130011	N/A	IN-SRP-VE-000145	N/A	N/A	Yes	Yes	LTO 2	IN13FG10029	N/A	N/A	N/A	N/A	N/A
SRP14082	N/A	INNDAS130011	N/A	IN-SRP-VE-000144	N/A	N/A	Yes	Yes	LTO 2	IN13FG10029	N/A	N/A	N/A	N/A	N/A
SRP14083	N/A	INNDAS130012	N/A	IN-SRP-VE-000148	N/A	N/A	N/A	Yes	LTO 2	IN13FG9028	N/A	N/A	N/A	N/A	N/A
SRP14085	N/A	INNDAS130012	N/A	IN-SRP-VE-000145	N/A	N/A	N/A	Yes	LTO 2	IN13FG9027	N/A	N/A	N/A	N/A	N/A
SRP14087	N/A	INNDAS130011	N/A	IN-SRP-VE-000144	N/A	N/A	N/A	Yes	LTO 2	IN13FG10029	N/A	N/A	N/A	N/A	N/A
SRP14091	N/A	INNDAS130011	N/A	IN-SRP-VE-000145	N/A	N/A	N/A	Yes	LTO 2	IN13FG10029	N/A	N/A	N/A	N/A	N/A
SRP14092	N/A	INNDAW130060	N/A	IN-SRP-VE-000145	N/A	N/A	Yes	Yes	LTO 2	IN13FG9028	N/A	N/A	N/A	N/A	N/A
SRP14093	N/A	INNDAS130012	N/A	IN-SRP-VE-000148	N/A	N/A	Yes	Yes	LTO 2	IN13FG9028	N/A	N/A	N/A	N/A	N/A
SRP14094	N/A	INNDAS130012	N/A	IN-SRP-VE-000144	N/A	N/A	N/A	Yes	LTO 2	IN13FG9028	N/A	N/A	N/A	N/A	N/A
SRP14097	N/A	INNDAW130060	N/A	IN-SRP-VE-000147	N/A	N/A	Yes	Yes	LTO 2	IN13FG10030	N/A	N/A	N/A	N/A	N/A
SRP14099	N/A	INNDAS130011	N/A	IN-SRP-VE-000145	N/A	N/A	N/A	Yes	LTO 2	IN13FG10029	N/A	N/A	N/A	N/A	N/A
SRP14100	N/A	INNDAS130012	N/A	IN-SRP-VE-000145	N/A	N/A	N/A	Yes	LTO 2	IN13FG9028	N/A	N/A	N/A	N/A	N/A

BSSchrock
Signature of Site Project Manager

Beverly Schrock
Printed Name

5/21/2013
Date

CS-008

CCP-TP-003 Rev 19
Effective Date: 11/02/12
CCP Data Analysis for S3000, S4000, and S5000 Characterization

CCP Solids Analysis VOC UCL_{90} Evaluation Form

WSPF #: ID-RF-S3114 Rev. 1 **Waste Stream Lot Number** 1 through 2

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples (2)	Maximum (ppmv) (2)	Mean (ppmv) (2)	SD (ppmv) (2)	UCL_{90} (ppmv) (2)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Benzene	No	0	8	0.00	0.00	0.00	0.00	10	N/A		
Bromoform	No	0	8	0.00	0.00	0.00	0.00	10	N/A		
Carbon Disulfide	No	0	8	0.00	0.00	0.00	0.00	10	N/A		
Carbon Tetrachloride	No	7	8	71000.00	44285.71	23070.29	56840.02	10	N/A	Yes	F001
Chlorobenzene	No	0	8	0.00	0.00	0.00	0.00	10	N/A		
Chloroform	SQRT	3	8	71.41	52.61	17.29	71.42	10	3.16	Yes	D022
1,2-Dichloroethane	No	0	8	0.00	0.00	0.00	0.00	10	N/A		
1,1-Dichloroethylene	No	0	8	0.00	0.00	0.00	0.00	10	N/A		
trans-1,2-Dichloroethylene	No	0	8	0.00	0.00	0.00	0.00	10	N/A		
Ethyl benzene	No	0	8	0.00	0.00	0.00	0.00	10	N/A		
Methylene chloride	No	0	8	0.00	0.00	0.00	0.00	10	N/A		
1,1,2,2-Tetrachloroethane	No	0	8	0.00	0.00	0.00	0.00	10	N/A		
Tetrachloroethylene (3)	No	1	8	5000.00	5000.00	0.00	(3)	10	N/A	Yes	F002 (4)
Toluene	No	0	8	0.00	0.00	0.00	0.00	10	N/A		
1,1,1-Trichloroethane	Log	6	8	12.35	10.79	1.39	11.63	10	2.30	Yes	F001, F002
1,1,2-Trichloroethane	No	0	8	0.00	0.00	0.00	0.00	10	N/A		
Trichloroethylene (3)	No	2	8	470000.00	235440.00	N/A	(3)	10	N/A	Yes	F002 (4)
Trichlorofluoromethane (3)	No	1	8	7800.00	7800.00	0.00	(3)	10	N/A	Yes	F001 F002 (5)
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	Log	4	8	9.85	9.49	0.41	9.82	10	2.30	Yes	F002
Vinyl chloride	No	0	8	0.00	0.00	0.00	0.00	4	N/A		
m,p-Xylene[d]	No	0	8	0.00	0.00	0.00	0.00	10	N/A		
o-Xylene	No	0	8	0.00	0.00	0.00	0.00	10	N/A		
Acetone	Log	4	8	3.26	1.06	1.41	1.76	100	4.61		
Butanol	Log	3	8	2.20	0.69	1.05	1.21	100	4.61		
Methanol	No	0	8	1.10	0.99	0.20	1.09	100	N/A		
Methyl ethyl ketone	Log	2	8	1.72	0.46	0.72	0.82	100	4.61		
Ethyl ether	No	0	8	1.65	1.52	0.19	1.62	100	N/A		

CIS-006

CCP-TP-003 Rev 19
Effective Date: 11/02/12
CCP Data Analysis for S3000, S4000, and S5000 Characterization

CCP Solids Analysis VOC UCL_{90} Evaluation Form

WSPF #: ID-RF-S3114 Rev. 1 **Waste Stream Lot Number** 1 through 2

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples (2)	Maximum (ppmv) (2)	Mean (ppmv) (2)	SD (ppmv) (2)	UCL_{90} (ppmv) (2)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Isobutanol	Log	1	8	2.77	0.23	1.07	0.76	100	4.61		
Pyridine[c]	Log	1	8	1.57	0.55	0.44	0.77	100	4.61		
1,4-Dichlorbenzene [c]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Ortho-Dichlorobenzene [c]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Formaldehyde [a]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Hydrazine [b]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		

[a] Required only for homogenous solids and soil/gravel waste from the Savannah River Site.

[b] Required only for homogenous solids and soil/gravel wast from Oak Ridge National Laboratory and Savannah River Site.

[c] Can also be analyzed as an SVOC. If analyzed as an SVOC, the QAOs of CCP-PO-001, Table C3-6 apply.

[d] These xylene isomers cannot be resolved by the analytical methods employed in the program. m-Xylene and p-Xylene will be reported as "Total m-p-Xylene."

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per section C4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

(2) As a result of dilution requirements, several analytes were reported as non-detected with MDL values in excess of the PRQL. In accordance with Section C4-3d of the WIPP-WAP, such "U" flagged observations with elevated MDL values due to dilution were not used in calculating mean concentration. Consequently, the subject analytes were statistically evaluated using only the useable observations. For analytes with no useable data, there is no corresponding data reported on the UCL90 evaluation form. See the Solids Sampling and Analysis Information section of the AK Summation for assignment of Hazardous Waste Numbers per AK.

(3) Because the noted analyte has < 3 different observations, no meaningful covariance exists and the UCL90 value could not be calculated. Therefore, the PRQL was compaired to the maximum for the purpose of confirming HWNs

(4) For Tetrachloroethylene and Trichloroethylene there was only one usable data point. Due to the lack of variability of the data no UCL90 value can be calculated. The F002 EPA code is assigned in AK for both HWN's.

(5) For Trichlorofluoromethane there was only one usable data point. Due to the lack of variability of the data no UCL90 value can be calculated. The F001 and F002 EPA codes are assigned in AK.

BSSchrock
Signature of Site Project Manager

Beverly Schrock
Printed Name

5/21/2013
Date

CS-007

CCP-TP-003 Rev 19
Effective Date: 11/02/12
CCP Data Analysis for S3000, S4000, and S5000 Characterization

CCP Solids Analysis SVOC UCL_{90} Evaluation Form

WSPF #: ID-RF-S3114 Rev. 1 **Waste Stream Lot Number** 1 through 2

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples (2)	Maximum (ppmv)	Mean (ppmv)	SD (ppmv) (2)	UCL_{90} (ppmv) (2)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
2-Methylphenol (cresols)	Log	0	8	3.00	2.17	0.66	2.53	40	3.69		
3&4 -Methylphenol (cresols)	Log	4	8	5.52	3.54	1.05	4.06	40	3.69	Yes	D026
1,4-Dichlorobenzene [a]	Log	0	8	3.00	2.17	0.66	2.53	40	3.69		
Ortho-Dichlorobenzene [a]	Log	2	8	6.41	3.07	1.62	3.88	40	3.69	Yes	F002
2,4-Dinitrophenol	SQRT	0	8	4.47	3.62	1.02	4.24	40	6.32		
2,4-Dinitrotoluene	No	0	8	0.00	0.00	0.00	0.00	2.6	N/A		
Hexachlorobenzene	No	0	8	0.00	0.00	0.00	0.00	2.6	N/A		
Hexachloroethane	Log	5	8	5.83	4.03	1.56	4.88	40	3.69	Yes	D034
Nitrobenzene	Log	0	8	3.00	2.17	0.66	2.53	40	3.69		
Pentachlorophenol	Log	0	8	3.00	2.17	0.66	2.53	40	3.69		
Pyridine [a]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		

[a] Can also be analyzed as an VOC. If analyzed as an VOC, the QAO's of CCP-PO-001, Table C3-4 apply.

Comments:

(1) For Analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per section C4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration)

(2) As a result of dilution requirements, several analytes were reported as non-detected with MDL values in excess of the PRQL. In accordance with Section C4-3d of the WIPP-WAP, such "U" flagged observations with elevated MDL values due to dilution were not used in calculating mean concentration. Consequently, the subject analytes were statistically evaluated using only the useable observations. For analytes with no useable data, there is no corresponding data reported on the UCL90 evaluation form. See the AK summation portion of the WSPF for assignment of Hazardous Waste Numbers per AK.

BSSchrock
Signature of Site Project Manager

Beverly Schrock
Printed Name

5/21/2013
Date

C15-008

CCP-TP-003 Rev 19
Effective Date: 11/02/12
CCP Data Analysis for S3000, S4000, and S5000 Characterization

CCP Solids Analysis Metals UCL_{90} Evaluation Form

WSPF #: ID-RF-S3114 Rev. 1 **Waste Stream Lot Number** 1 through 2

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL	# Samples	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Antimony	Log	1	8	-0.34	-1.03	0.33	-0.87	100	4.61		
Arsenic	Log	4	8	1.34	-0.25	0.96	0.23	100	4.61		
Barium	No	8	8	72.00	42.75	19.67	52.59	2000	N/A		
Beryllium	Log	7	8	1.03	-0.54	1.46	0.19	100	4.61		
Cadmium	Log	8	8	0.47	-0.05	0.31	0.11	20	3.00		
Chromium	Log	8	8	3.43	2.79	0.28	2.93	100	4.61		
Lead	Log	8	8	2.08	1.31	0.45	1.54	100	4.61		
Mercury	Log	8	8	-1.77	-2.92	0.79	-2.53	4	1.39		
Nickel	Log	8	8	3.87	2.70	0.52	2.96	100	4.61		
Selenium	Log	1	8	-0.09	-1.01	0.38	-0.82	20	3.00		
Silver	Log	4	8	-0.45	-1.02	0.52	-0.76	100	4.61		
Thallium	SQRT	1	8	1.00	0.69	0.17	0.77	100	10.00		
Vanadium	Log	8	8	3.81	3.40	0.18	3.49	100	4.61		
Zinc	No	8	8	42.00	29.50	9.32	34.16	100	N/A		

Comments:
None

BSSchrock
Signature of Site Project Manager

Beverly Schrock
Printed Name

5/21/2013
Date

CS-009

CCP Solid VOCs Summary Data

Waste Stream Number ID-RF-S3114 Waste Stream Lot Number 2

Tentatively Identified Compound	Maximum Observed Estimated Concentrations (ppmv)	# Samples Containing TIC	% Detected
NONE	N/A	N/A	N/A

Data Supports EPA Hazardous Waste Numbers Assigned by AK? Yes ☑ No ☐

If no, describe the basis for assigning the EPA Hazardous Waste Codes:

SPM Signature BSchuck Date 5/21/2013

CIS-010

CCP-TP-002 Rev. 25
Effective Date: 2/11/13
CCP Reconciliation of DQO's and Reporting Characterization Data

CCP Solid SVOCs Summary Data

Waste Stream Number ID-RF-S3114 Waste Stream Lot Number 2

Tentatively Identified Compound	Maximum Observed Estimated Concentrations (ppmv)	# Samples Containing TIC	% Detected
Dibutyl phthalate	47.00	1	12.50%
tetrachlorobiphenyl	140.00	1	12.50%
pentachlorobiphenyl	180.00	1	12.50%
Hexachlorobiphenyl	96.00	1	12.50%
1,2-Benzenedicarboxylic acid, diheptyl ester	88.00	1	12.50%
bis(2-Ethylhexyl)phthalate	760.00	2	25.00%
Di-n-octyl phthalate	170.00	1	12.50%
Hexachloroethane	100.00	1	12.50%
phenol	760.00	1	12.50%

Data Supports EPA Hazardous Waste Numbers Assigned by AK? Yes ☑ No ☐

If no, describe the basis for assigning the EPA Hazardous Waste Codes:

Note: Bis(2-ethylhexyl)phthalate is listed in Appendix VIII to 40CFR Part 261 and is present as a TIC in greater than 25% of the samples in the waste stream. This analyte has been added to the target analyte list for ID-RF-S3114. Bis(2-ethylhexyl)phthalate was detected in two samples; however, the Hazardous Waste Code for Bis(2-ethylhexyl)phthalate U028 will not be applied to ID-RF-S3114. Waste stream ID-RF-S3114 does not contain wastes that were mixed commercial chemical product Bis(2-ethylhexyl)phthalate, an off-specification chemical product or a container residue or a spill residue thereof.

SPM Signature BSSchnoor Date 5/21/2013

CIS-011

CCP RTR/VE Summary of Prohibited Items and AK Confirmation

Waste Stream Number: ID-RF-S3114 Lot #: 109

Container Number	RTR Prohibited Items [a,b]	Visual Examination Prohibited Items [a,b]
See correlation of container ID numbers for list of remaining drum numbers in this Lot.	RTR was not used to certify any containers in this lot.	None of the containers in this Lot had prohibited items identified during Visual Examination technique.

a. See Batch Data Reports
b. If AK has assigned U134 to this waste stream, then any liquids in these containers are prohibited items (not acceptable by the TSDF).

Justification for the selection of RTR and/or VE: VE was selected as the characterization method for the containers in this lot because the containers in this lot were repackaged and Visual Examination Technique was used to meet all the Data Quality Objectives for NDE.

BSSchrock
Site Project Manager Signature

Beverly Schrock
Printed Name

5/21/2013
Date

CIS-012

CCP Reconciliation with Data Quality Objectives

WSF# ID-RF-S3114 Rev. 1 Lot # 109

Sampling Completeness

RTR/VE:

Number of Valid Samples: 41 Number of Total Samples Analyzed: 41
Percent Complete: 100 (QAO is 100%)

NDA

Number of Valid Samples: 41 Number of Total Samples Analyzed: 41
Percent Complete: 100 (QAO is 100%)

HSG

Number of Valid Samples: NA Number of Total Samples Collected: NA
Percent Complete: NA (QAO is ≥90%)
Number of Valid Samples: NA Number of Total Samples Analyzed: NA
Percent Complete: NA (QAO is ≥90%)

Total VOC

Number of Valid Samples: 8 Number of Total Samples Collected: 8
Percent Complete: 100 (QAO is ≥90%)
Number of Valid Samples: 8 Number of Total Samples Analyzed: 8
Percent Complete: 100 (QAO is ≥90%)

Total SVOC

Number of Valid Samples: 8 Number of Total Samples Collected: 8
Percent Complete: 100 (QAO is ≥90%)
Number of Valid Samples: 8 Number of Total Samples Analyzed: 8
Percent Complete: 100 (QAO is ≥90%)

Total Metals

Number of Valid Samples: 8 Number of Total Samples Collected: 8
Percent Complete: 100 (QAO is ≥90%)
Number of Valid Samples: 8 Number of Total Samples Analyzed: 8
Percent Complete: 100 (QAO is ≥90%)

C15-013

CCP Reconciliation with Data Quality Objectives

WSF# ID-RF-S3114 Rev. 1 Lot # 109

	Y/N/NA	Reconciliation Parameter
1	Y	Waste Matrix Code.
2	Y	Waste Material Parameter Weights.
3	Y	The waste matrix code identified is consistent with the type of sampling and analysis used to characterize the waste.
4	Y	The TRU activity reported in the BDRs for each container demonstrates with a 95% probability that the container of waste contains TRU radioactive waste.
5	N	AK Sufficiency. Is there an approved AK sufficiency Determination for this waste stream?
6	NA	Mean concentrations, UCL_{90} values for the mean concentration, standard deviations, and the number of samples collected for each VOC in the HSG of each container were calculated and compared with the program required quantitation limits, as reported in CCP-TP-003 Attachment 3, and additional U.S. Environmental Protection Agency (EPA) Hazardous Waste Numbers were assigned as required. Samples were randomly collected (when appropriate).
7a	Y	Mean concentrations, UCL_{90} values for the mean concentration, standard deviations, and the number of samples collected for solids VOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003 Attachment 4, and additional EPA HWNs were assigned as required. Samples were randomly collected.
7b	Y	Mean concentrations, (UCL_{90}) values for the mean concentration, standard deviations, and the number of samples collected for solids SVOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003 Attachment 5, and additional EPA HWNs were assigned as required. Samples were randomly collected.
7c	Y	Mean concentrations, (UCL_{90}) values for the mean concentration, standard deviations, and the number of samples collected for total metals were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003 Attachment 6, and additional EPA HWNs were assigned as required. Samples were randomly collected.

CIS-014

CCP Reconciliation with Data Quality Objectives

WSF# ID-RF-S3114 Rev. 1 Lot # 109

8	Y	The data demonstrates whether the waste stream exhibits a toxicity characteristic under Title 40 Code of Federal Regulations (CFR), Part 261, Identification and Listing of Hazardous Waste, Subpart C, Characteristics of Hazardous Waste.
9	Y	Does the waste stream contain listed waste found in 20.4.1.200 NMAC incorporating 40 CFR Part 261, Subpart D, Lists of Hazardous Wastes.
10	Y	Waste stream can be classified as hazardous or nonhazardous at the 90-percent confidence level.
11	NA	Appropriate packaging configuration and Drum Age Criteria (DAC) is applied and documented in the headspace gas sampling documentation, and the drum age met prior to sampling.
12	Y	TICs were appropriately identified and reported in accordance with the requirements of Section C3-1 of the QAPjP.
13	NA	The PRQLs for headspace gas VOCs were met for all analyses as evidenced by the analytical batch data reports.
14		The overall completeness, comparability, and representativeness QAOs were met for each of the analytical and testing procedures as specified in the WAP Sections C3-2 through C3-9 prior to submittal of a waste stream profile form for a waste steam or waste stream lot.

	Completeness	Comparability	Representativeness
Radiography	NA	NA	NA
VE	Y	Y	Y
Headspace Gas Analysis	NA	NA	NA
Solids Sampling	Y	Y	Y
Solids VOCs	Y	Y	Y
Solids SVOCs	Y	Y	Y
Solids Metals	Y	Y	Y

Comments:

A total of 8 containers have been sampled for solids RCRA analysis. Solids summary lot 2 included as part of this shipping lot, accumulates 5 containers from solids summary lot 1 and 3 additional containers from solids summary lot 2. The 5 samples from solids summary lot 1 were submitted in the CIS for the original revision of the WSPF for the ID-RF-S3114 waste stream.

BSSchrock — Signature of Site Project Manager

Beverly Schrock — Printed Name

5/21/2013 — Date

CIS-015

DIVIDER

PAGE

CHARACTERIZATION INFORMATION SUMMARY

WSPF # ID-RF-S3114 Rev. 1

Lot 108

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CCP Characterization Information Summary Cover Page

Waste Stream # ID-RF-S3114 Lot #: 108

AK Expert Review: N/A Date: N/A

SPM Review: Beverly Schrock BSSchrock Date: 5/17/2013

SPM signature certifies that through Acceptable Knowledge testing and/or analysis that the waste identified in this summary is not corrosive, ignitable, reactive, or incompatible with the TSDF.

A summary of the Acceptable Knowledge regarding this waste stream containing specific information about the corrosivity, reactivity, and ignitability of the waste stream is included as an attachment to the Waste Stream Profile Form. By reference, that information is included in this lot.

List of procedures used:

Radiography (RTR/NDE):

CCP-TP-053	Rev. 12	08/22/12	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
CCP-TP-053	Rev. 11	07/20/11	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
CCP-TP-053	Rev. 10	03/04/11	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
CCP-TP-053	Rev. 9	09/30/10	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
CCP-TP-053	Rev. 8	06/30/10	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
CCP-TP-053	Rev. 7	10/21/09	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
CCP-TP-053	Rev. 6	03/04/08	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
CCP-TP-053	Rev. 5	11/16/06	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
CCP-TP-053	Rev. 4	12/22/05	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
CCP-TP-053	Rev. 3	03/21/05	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
CCP-TP-053	Rev. 2	07/14/04	CCP Standard Real-Time Radiography (RTR) Inspection Procedure

Non Destructive Assay (NDA):

CCP-TP-109	Rev. 9	02/14/13	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 8	08/10/11	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 7	01/26/11	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 6	03/16/09	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 5	11/16/06	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 4	09/21/05	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 3	04/12/05	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 2	03/18/05	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 1	05/06/04	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-115	Rev. 5.1	04/08/13	CCP SWEPP Gamma-Ray Spectrometer (SGRS) Operating Procedure
CCP-TP-115	Rev. 4	06/24/09	CCP SWEPP Gamma-Ray Spectrometer (SGRS) Operating Procedure
CCP-TP-115	Rev. 3	12/08/06	CCP SWEPP Gamma-Ray Spectrometer (SGRS) Operating Procedure
CCP-TP-115	Rev. 2	06/12/06	CCP SWEPP Gamma-Ray Spectrometer (SGRS) Operating Procedure
CCP-TP-115	Rev. 1	04/15/05	CCP SWEPP Gamma-Ray Spectrometer (SGRS) Operating Procedure
CCP-TP-115	Rev. 0	02/27/05	CCP SWEPP Gamma-Ray Spectrometer (SGRS) Operating Procedure
CCP-TP-107	Rev. 12	02/28/13	Operating the CCP High Efficiency Neutron Counter Using NDA2000
CCP-TP-107	Rev. 11	11/30/09	Operating the CCP High Efficiency Neutron Counter Using NDA2000
CCP-TP-107	Rev. 10	02/08/08	Operating the CCP High Efficiency Neutron Counter Using NDA2000
CCP-TP-107	Rev. 9	04/11/07	Operating the CCP High Efficiency Neutron Counter Using NDA2000
CCP-TP-107	Rev. 8	06/15/06	Operating the CCP High Efficiency Neutron Counter Using NDA2000
CCP-TP-107	Rev. 7	03/17/06	Operating the CCP High Efficiency Neutron Counter Using NDA2000
CCP-TP-107	Rev. 6	04/12/05	Operating the CCP High Efficiency Neutron Counter Using NDA2000
CCP-TP-019	Rev. 6	04/15/13	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
CCP-TP-019	Rev. 5	09/16/09	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
CCP-TP-019	Rev. 4	10/19/06	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
CCP-TP-019	Rev. 3	06/15/06	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
CCP-TP-019	Rev. 2	06/10/05	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
CCP-TP-019	Rev. 1	04/16/05	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
CCP-TP-019	Rev. 0	02/27/05	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
CCP-TP-146	Rev. 8	03/13/09	CCP SuperHENC Operating Procedure
CCP-TP-146	Rev. 7	04/13/09	CCP SuperHENC Operating Procedure
CCP-TP-146	Rev. 6	02/27/09	CCP SuperHENC Operating Procedure
CCP-TP-146	Rev. 5	05/20/08	CCP SuperHENC Operating Procedure
CCP-TP-146	Rev. 4	07/10/07	CCP SuperHENC Operating Procedure
CCP-TP-146	Rev. 3	03/01/07	CCP SuperHENC Operating Procedure
CCP-TP-146	Rev. 2	01/24/07	CCP SuperHENC Operating Procedure
CCP-TP-146	Rev. 1	01/04/07	CCP SuperHENC Operating Procedure
CCP-TP-146	Rev. 0	09/21/06	CCP SuperHENC Operating Procedure
CCP-TP-148	Rev. 8	01/17/13	CCP SuperHENC Data Reviewing, Validating and Reporting Procedure
CCP-TP-148	Rev. 7	07/28/11	CCP SuperHENC Data Reviewing, Validating and Reporting Procedure
CCP-TP-148	Rev. 6	02/10/11	CCP SuperHENC Data Reviewing, Validating and Reporting Procedure
CCP-TP-148	Rev. 5	09/27/10	CCP SuperHENC Data Reviewing, Validating and Reporting Procedure
CCP-TP-148	Rev. 4	11/01/07	CCP SuperHENC Data Reviewing, Validating and Reporting Procedure
CCP-TP-148	Rev. 3	07/10/07	CCP SuperHENC Data Reviewing, Validating and Reporting Procedure
CCP-TP-148	Rev. 2	03/01/07	CCP SuperHENC Data Reviewing, Validating and Reporting Procedure
CCP-TP-148	Rev. 1	01/10/07	CCP SuperHENC Data Reviewing, Validating and Reporting Procedure
CCP-TP-148	Rev. 0	09/21/06	CCP SuperHENC Data Reviewing, Validating and Reporting Procedure

CIS-002

CCP Characterization Information Summary Cover Page

Visual Examination (VE):

CCP-TP-006	Rev. 17	11/01/12	CCP Visual Examination Technique for INL Newly Generated Waste
HFEF-01-6890	Rev. 5	04/07/03	WCP Visual Examination
W0102-0168-AP	Rev. 5	04/15/03	NT-AP-09 TWCP Visual Exam Expert (VEE) Functions and Process
INST-OI-34	Rev. 11 FC1	07/21/05	Visual Examination Operating Procedures and Data Reporting

Solids Sampling:

INST-OI-73	Rev. 3	07/24/08	Manual Drum Coring Operations
INST-OI-73	Rev. 2	04/07/08	Manual Drum Coring Operations
INST-OI-73	Rev. 1	07/18/07	Manual Drum Coring Operations
INST-OI-73	Rev. 0	03/28/07	Manual Drum Coring Operations
INST-OI-16	Rev. 29	07/03/08	Drum Coring Operations
INST-OI-16	Rev. 28	06/30/08	Drum Coring Operations
INST-OI-16	Rev. 27	04/10/08	Drum Coring Operations
INST-OI-16	Rev. 26	07/16/07	Drum Coring Operations
INST-OI-16	Rev. 25	07/05/07	Drum Coring Operations
INST-OI-16	Rev. 24	12/20/06	Drum Coring Operations
CCP-TP-008	Rev. 10	09/21/12	CCP Solids Sampling Procedure

Solids Analysis:

CCP-TP-183	Rev. 0	05/02/07	CCP Microwave Assisted Digestion of Homogeneous Solids and Soil/Gravel
ACCM-8909	Rev. 10	01/17/06	Microwave Assisted Digestion of Homogeneous Solids and Soil/Gravel
ACCM-8909	Rev. 9	01/20/05	Microwave Assisted Digestion of Homogeneous Solids and Soil/Gravel
CCP-TP-187	Rev. 1	11/18/08	CCP Sample Preparation for Semivolatile Organic Compounds
CCP-TP-187	Rev. 0	05/02/07	CCP Sample Preparation for Semivolatile Organic Compounds
ACCM-9500	Rev. 11	12/15/05	Sample Preparation for Semivolatile Organic Compounds and Polychlorinated Biphenyls
ACCM-9500	Rev. 10	07/28/04	Sample Preparation for Semivolatile Organic Compounds and Polychlorinated Biphenyls
CCP-TP-185	Rev. 2	02/21/13	CCP Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry
CCP-TP-185	Rev. 1	11/18/08	CCP Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry
CCP-TP-185	Rev. 0	05/02/07	CCP Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry
ACMM-9270	Rev. 8	01/20/05	Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry
CCP-TP-184	Rev. 1	02/21/07	CCP Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry
CCP-TP-184	Rev. 0	05/02/07	CCP Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry
ACMM-9260	Rev. 14	12/01/05	Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry
ACMM-9260	Rev. 13	12/21/04	Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry
CCP-TP-182	Rev. 1	01/26/09	CCP Determination of Metals by ICP-AES for TRU Waste Characterization
CCP-TP-182	Rev. 0	05/02/07	CCP Determination of Metals by ICP-AES for TRU Waste Characterization
ACMM-2901	Rev. 3	01/27/05	Determination of Trace Elements by ICP-AES for TRU Waste Characterization
CCP-TP-181	Rev. 0	05/02/07	CCP Determination of Mercury by CVAA for TRU Waste Characterization
ACMM-2810	Rev. 3	01/27/05	Determination of Mercury by CVAA for TRU Waste Characterization
CCP-TP-186	Rev. 2	02/21/13	CCP Determination of Nonhalogenated Volatile Organics by Gas Chromatography
CCP-TP-186	Rev. 1	08/22/07	CCP Determination of Nonhalogenated Volatile Organics by Gas Chromatography
CCP-TP-186	Rev. 0	05/02/07	CCP Determination of Nonhalogenated Volatile Organics by Gas Chromatography
ACMM-9441	Rev. 12	03/16/06	Determination of Nonhalogenated Volatile Organic Compunds by Gas Chromatography
ACMM-9441	Rev. 11	12/22/04	Determination of Nonhalogenated Volatile Organic Compunds by Gas Chromatography

Project Level Data Validation / DQO Reconciliation:

CCP-TP-001	Rev. 20	09/27/12	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 19	12/29/10	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 18	08/09/10	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 17	09/24/07	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 16	04/26/07	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 15	11/22/06	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 14	11/16/06	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 13	07/21/06	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 12	05/25/06	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 11	03/23/05	CCP Project Level Data Validation and Verification
CCP-TP-002	Rev. 25	02/11/13	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 24	12/28/11	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 23	12/29/10	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 22	06/30/10	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 21	08/04/09	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 20	08/18/08	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 19	12/22/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 18	11/16/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 17	10/11/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 16	06/06/06	CCP Reconciliation of DQOs and Reporting Characterization Data

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CCP-TP-002	Rev. 15	08/16/05	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 14	03/29/05	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-003	Rev. 19	11/02/12	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 18	12/29/10	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 17	11/09/09	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 16	10/02/07	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 15	11/16/06	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 14	09/03/03	CCP Sampling Design and Data Analysis for RCRA Characterization
CCP-TP-005	Rev. 24	11/28/11	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 23	06/30/11	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 22	04/21/11	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 21	12/29/10	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 20	11/01/10	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 19	07/06/10	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 18	11/16/06	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 17	06/05/06	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 16	02/27/06	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 15	03/31/05	CCP Acceptable Knowledge Documentation
CCP-TP-030	Rev. 31	11/19/12	CCP CH TRU Waste Certification and WWIS/WDS Data Entry
CCP-TP-030	Rev. 30	05/21/12	CCP CH TRU Waste Certification and WWIS/WDS Data Entry
CCP-TP-030	Rev. 29	04/26/11	CCP CH TRU Waste Certification and WWIS/WDS Data Entry
CCP-TP-030	Rev. 28	05/12/10	CCP CH TRU Waste Certification and WWIS/WDS Data Entry
CCP-TP-030	Rev. 27	12/14/09	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 26	05/27/09	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 25	01/22/09	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 24	08/20/08	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 23	03/12/08	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 22	07/24/07	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 21	05/21/07	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 20	02/07/07	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 19	11/16/06	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 18	05/01/06	CCP TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 17	12/29/05	CCP TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 16	04/22/05	CCP TRU Waste Certification and WWIS Data Entry

WAP Certification:

CCP-PO-001	Rev. 20	06/16/11	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 19	12/29/10	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 18	06/30/10	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 17	06/23/09	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 16	10/31/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 15	08/08/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 14	03/27/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 13	11/16/06	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 12	03/22/06	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 11	03/10/05	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-002	Rev. 26	07/14/11	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 25	12/29/10	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 24	06/30/10	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 23	04/07/10	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 22	01/12/10	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 21	01/26/09	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 20	11/02/07	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 19	05/22/07	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 18	11/16/06	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 17	11/16/06	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 16	11/16/06	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 15	03/22/06	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 14	12/29/05	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 13	05/09/05	CCP Transuranic Waste Certification Plan
CCP-PO-024	Rev. 13	11/02/12	CCP/INL Interface Document
CCP-PO-024	Rev. 12	10/01/12	CCP/INL Interface Document
CCP-PO-024	Rev. 11	07/18/11	CCP/INL Interface Document
CCP-PO-024	Rev. 10	12/29/10	CCP/INL Interface Document
CCP-PO-024	Rev. 9	03/16/09	CCP/INL Interface Document
CCP-PO-024	Rev. 8	07/07/08	CCP/INL Interface Document
CCP-PO-024	Rev. 7	01/04/08	CCP/INL Interface Document
CCP-PO-024	Rev. 6	05/15/07	CCP/INL Interface Document
CCP-PO-024	Rev. 5	11/16/06	CCP/INL Interface Document
CCP-PO-024	Rev. 4	03/14/06	CCP/INL Interface Document
CCP-PO-024	Rev. 3	04/29/05	CCP/INL Interface Document
CCP-PO-024	Rev. 2	04/12/05	CCP/INL Interface Document
CCP-PO-024	Rev. 1	02/23/05	CCP/INL Interface Document
CCP-PO-024	Rev. 0	10/25/04	CCP/INL Interface Document

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CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-RF-S3114

Lot # 108

Container ID Number	Inner Container ID	NDA BDR	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Overpack Required	LTO	Transportation Headspace Gas BDR					GGT BDR
										Sample	Analysis				
SRP12546	N/A	INNDAS130010	N/A	IN-SRP-VE-000048	N/A	N/A	Yes	Yes	LTO 2	IN13FG9026	N/A	N/A	N/A	N/A	N/A
SRP12550	N/A	INNDAW130058	N/A	IN-SRP-VE-000047	N/A	N/A	N/A	Yes	LTO 2	IN13FG10029	N/A	N/A	N/A	N/A	N/A
SRP12556	N/A	INNDAW130058	N/A	IN-SRP-VE-000047	N/A	N/A	Yes	Yes	LTO 2	IN13FG9026	N/A	N/A	N/A	N/A	N/A
SRP12561	N/A	INNDAS130009	N/A	IN-SRP-VE-000047	N/A	N/A	N/A	Yes	LTO 2	IN13FG9027	N/A	N/A	N/A	N/A	N/A
SRP12567	N/A	INNDAS130010	N/A	IN-SRP-VE-000047	N/A	N/A	Yes	Yes	LTO 2	IN13FG9026	N/A	N/A	N/A	N/A	N/A
SRP12598	N/A	INNDAW130058	N/A	IN-SRP-VE-000047	N/A	N/A	N/A	Yes	LTO 2	IN13FG9026	N/A	N/A	N/A	N/A	N/A
SRP12600	N/A	INNDAS130009	N/A	IN-SRP-VE-000047	N/A	N/A	N/A	Yes	LTO 2	IN13FG9027	N/A	N/A	N/A	N/A	N/A
SRP12994	N/A	INNDAS130010	N/A	IN-SRP-VE-000079	N/A	N/A	N/A	Yes	LTO 2	IN13FG9026	N/A	N/A	N/A	N/A	N/A
SRP13001	N/A	INNDAS130010	N/A	IN-SRP-VE-000077	N/A	N/A	Yes	Yes	LTO 2	IN13FG10029	N/A	N/A	N/A	N/A	N/A
SRP13006	N/A	INNDAS130012	N/A	IN-SRP-VE-000077	N/A	N/A	Yes	Yes	LTO 2	IN13FG10030	N/A	N/A	N/A	N/A	N/A
SRP13008	N/A	INNDAS130012	N/A	IN-SRP-VE-000076	N/A	N/A	N/A	Yes	LTO 2	IN13FG9028	N/A	N/A	N/A	N/A	N/A
SRP13013	N/A	INNDAW130060	N/A	IN-SRP-VE-000078	N/A	N/A	N/A	Yes	LTO 2	IN13FG10030	N/A	N/A	N/A	N/A	N/A
SRP13019	N/A	INNDAS130010	N/A	IN-SRP-VE-000078	N/A	N/A	N/A	Yes	LTO 2	IN13FG9026	N/A	N/A	N/A	N/A	N/A
SRP13022	N/A	INNDAS130010	N/A	IN-SRP-VE-000078	N/A	N/A	Yes	Yes	LTO 2	IN13FG10029	N/A	N/A	N/A	N/A	N/A
SRP13023	N/A	INNDAW130060	N/A	IN-SRP-VE-000079	N/A	N/A	Yes	Yes	LTO 2	IN13FG10030	N/A	N/A	N/A	N/A	N/A
SRP13024	N/A	INNDAW130060	N/A	IN-SRP-VE-000079	N/A	N/A	N/A	Yes	LTO 2	IN13FG10030	N/A	N/A	N/A	N/A	N/A
SRP13026	N/A	INNDAS130012	N/A	IN-SRP-VE-000078	N/A	N/A	N/A	Yes	LTO 2	IN13FG9028	N/A	N/A	N/A	N/A	N/A
SRP13027	N/A	INNDAS130010	N/A	IN-SRP-VE-000079	N/A	N/A	N/A	Yes	LTO 2	IN13FG10029	N/A	N/A	N/A	N/A	N/A
SRP13038	N/A	INNDAS130010	N/A	IN-SRP-VE-000078	N/A	N/A	N/A	Yes	LTO 2	IN13FG9026	N/A	N/A	N/A	N/A	N/A
SRP13053	N/A	INNDAS130012	N/A	IN-SRP-VE-000094	N/A	N/A	Yes	Yes	LTO 2	IN13FG10030	N/A	N/A	N/A	N/A	N/A
SRP13057	N/A	INNDAW130060	N/A	IN-SRP-VE-000092	N/A	N/A	N/A	Yes	LTO 2	IN13FG10030	N/A	N/A	N/A	N/A	N/A
SRP13081	N/A	INNDAS130010	N/A	IN-SRP-VE-000091	N/A	N/A	Yes	Yes	LTO 2	IN13FG10029	N/A	N/A	N/A	N/A	N/A
SRP13083	N/A	INNDAS130010	N/A	IN-SRP-VE-000091	N/A	N/A	Yes	Yes	LTO 2	IN13FG9026	N/A	N/A	N/A	N/A	N/A
SRP13084	N/A	INNDAS130010	N/A	IN-SRP-VE-000092	N/A	N/A	Yes	Yes	LTO 2	IN13FG9026	N/A	N/A	N/A	N/A	N/A
SRP13116	N/A	INNDAW130058	N/A	IN-SRP-VE-000092	N/A	N/A	N/A	Yes	LTO 2	IN13FG9026	N/A	N/A	N/A	N/A	N/A
SRP13154	N/A	INNDAW130057	N/A	IN-SRP-VE-000085	N/A	N/A	Yes	Yes	LTO 2	IN13FG9028	N/A	N/A	N/A	N/A	N/A
SRP13194	N/A	INNDAS130010	N/A	IN-SRP-VE-000092	N/A	N/A	Yes	Yes	LTO 2	IN13FG9026	N/A	N/A	N/A	N/A	N/A
SRP13225	N/A	INNDAS130010	N/A	IN-SRP-VE-000091	N/A	N/A	N/A	Yes	LTO 2	IN13FG10029	N/A	N/A	N/A	N/A	N/A
SRP13235	N/A	INNDAW130058	N/A	IN-SRP-VE-000092	N/A	N/A	Yes	Yes	LTO 2	IN13FG9026	N/A	N/A	N/A	N/A	N/A
SRP13245	N/A	INNDAS130010	N/A	IN-SRP-VE-000094	N/A	N/A	Yes	Yes	LTO 2	IN13FG9026	N/A	N/A	N/A	N/A	N/A
SRP13253	N/A	INNDAS130010	N/A	IN-SRP-VE-000092	N/A	N/A	N/A	Yes	LTO 2	IN13FG9026	N/A	N/A	N/A	N/A	N/A
SRP13441	N/A	INNDAS130008	N/A	IN-SRP-VE-000110	N/A	N/A	Yes	Yes	LTO 2	IN13FG9026	N/A	N/A	N/A	N/A	N/A
SRP13558	N/A	INNDAW130056	N/A	IN-SRP-VE-000117	N/A	N/A	Yes	Yes	LTO 2	IN13FG9026	N/A	N/A	N/A	N/A	N/A
SRP13577	N/A	INNDAS130008	N/A	IN-SRP-VE-000112	N/A	N/A	N/A	Yes	LTO 2	IN13FG9026	N/A	N/A	N/A	N/A	N/A
SRP13580	N/A	INNDAW130056	N/A	IN-SRP-VE-000112	N/A	N/A	N/A	Yes	LTO 2	IN13FG9026	N/A	N/A	N/A	N/A	N/A
SRP13595	N/A	INNDAS130008	N/A	IN-SRP-VE-000110	N/A	N/A	N/A	Yes	LTO 2	IN13FG9026	N/A	N/A	N/A	N/A	N/A
SRP13601	N/A	INNDAW130056	N/A	IN-SRP-VE-000120	N/A	N/A	Yes	Yes	LTO 2	IN13FG9026	N/A	N/A	N/A	N/A	N/A
SRP13605	N/A	INNDAS130008	N/A	IN-SRP-VE-000119	N/A	N/A	N/A	Yes	LTO 2	IN13FG9026	N/A	N/A	N/A	N/A	N/A
SRP13606	N/A	INNDAS130008	N/A	IN-SRP-VE-000119	N/A	N/A	Yes	Yes	LTO 2	IN13FG9026	N/A	N/A	N/A	N/A	N/A
SRP13608	N/A	INNDAW130057	N/A	IN-SRP-VE-000123	N/A	N/A	Yes	Yes	LTO 2	IN13FG9027	N/A	N/A	N/A	N/A	N/A
SRP13609	N/A	INNDAS130008	N/A	IN-SRP-VE-000120	N/A	N/A	N/A	Yes	LTO 2	IN13FG9026	N/A	N/A	N/A	N/A	N/A
SRP13617	N/A	INNDAS130009	N/A	IN-SRP-VE-000122	N/A	N/A	N/A	Yes	LTO 2	IN13FG9027	N/A	N/A	N/A	N/A	N/A
SRP13622	N/A	INNDAW130057	N/A	IN-SRP-VE-000122	N/A	N/A	Yes	Yes	LTO 2	IN13FG9027	N/A	N/A	N/A	N/A	N/A
SRP13639	N/A	INNDAS130008	N/A	IN-SRP-VE-000120	N/A	N/A	Yes	Yes	LTO 2	IN13FG9026	N/A	N/A	N/A	N/A	N/A
SRP13652	N/A	INNDAW130056	N/A	IN-SRP-VE-000120	N/A	N/A	N/A	Yes	LTO 2	IN13FG9026	N/A	N/A	N/A	N/A	N/A
SRP13659	N/A	INNDAW130057	N/A	IN-SRP-VE-000119	N/A	N/A	Yes	Yes	LTO 2	IN13FG9027	N/A	N/A	N/A	N/A	N/A
SRP13660	N/A	INNDAS130008	N/A	IN-SRP-VE-000119	N/A	N/A	N/A	Yes	LTO 2	IN13FG9026	N/A	N/A	N/A	N/A	N/A
SRP13664	N/A	INNDAS130009	N/A	IN-SRP-VE-000119	N/A	N/A	Yes	Yes	LTO 2	IN13FG9027	N/A	N/A	N/A	N/A	N/A
SRP13684	N/A	INNDAW130057	N/A	IN-SRP-VE-000121	N/A	N/A	Yes	Yes	LTO 2	IN13FG9027	N/A	N/A	N/A	N/A	N/A
SRP13706	N/A	INNDAS130009	N/A	IN-SRP-VE-000127	N/A	N/A	Yes	Yes	LTO 2	IN13FG9027	N/A	N/A	N/A	N/A	N/A
SRP13708	N/A	INNDAW130057	N/A	IN-SRP-VE-000128	N/A	N/A	N/A	Yes	LTO 2	IN13FG9027	N/A	N/A	N/A	N/A	N/A
SRP13721	N/A	INNDAS130009	N/A	IN-SRP-VE-000127	N/A	N/A	Yes	Yes	LTO 2	IN13FG9028	N/A	N/A	N/A	N/A	N/A
SRP13735	N/A	INNDAW130058	N/A	IN-SRP-VE-000130	N/A	N/A	N/A	Yes	LTO 2	IN13FG10029	N/A	N/A	N/A	N/A	N/A
SRP13736	N/A	INNDAW130057	N/A	IN-SRP-VE-000128	N/A	N/A	Yes	Yes	LTO 2	IN13FG9027	N/A	N/A	N/A	N/A	N/A
SRP13737	N/A	INNDAS130009	N/A	IN-SRP-VE-000127	N/A	N/A	N/A	Yes	LTO 2	IN13FG9028	N/A	N/A	N/A	N/A	N/A
SRP13741	N/A	INNDAS130009	N/A	IN-SRP-VE-000128	N/A	N/A	N/A	Yes	LTO 2	IN13FG9028	N/A	N/A	N/A	N/A	N/A
SRP13747	N/A	INNDAS130009	N/A	IN-SRP-VE-000128	N/A	N/A	Yes	Yes	LTO 2	IN13FG9027	N/A	N/A	N/A	N/A	N/A
SRP13758	N/A	INNDAS130009	N/A	IN-SRP-VE-000128	N/A	N/A	N/A	Yes	LTO 2	IN13FG9027	N/A	N/A	N/A	N/A	N/A

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CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-RF-S3114

Lot # 108

Container ID Number	Inner Container ID	NDA BDR	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Overpack Required	LTO	Transportation Headspace Gas BDR					GGT BDR
										Sample	Analysis				
SRP13759	N/A	INNDAW130057	N/A	IN-SRP-VE-000127	N/A	N/A	Yes	Yes	LTO 2	IN13FG10031	N/A	N/A	N/A	N/A	N/A
SRP13767	N/A	INNDAW130058	N/A	IN-SRP-VE-000130	N/A	N/A	N/A	Yes	LTO 2	IN13FG9026	N/A	N/A	N/A	N/A	N/A
SRP13771	N/A	INNDAS130009	N/A	IN-SRP-VE-000127	N/A	N/A	N/A	Yes	LTO 2	IN13FG9027	N/A	N/A	N/A	N/A	N/A
SRP13772	N/A	INNDAS130009	N/A	IN-SRP-VE-000127	N/A	N/A	N/A	Yes	LTO 2	IN13FG9026	N/A	N/A	N/A	N/A	N/A
SRP13773	N/A	INNDAW130057	N/A	IN-SRP-VE-000127	N/A	N/A	Yes	Yes	LTO 2	IN13FG9028	N/A	N/A	N/A	N/A	N/A
SRP13774	N/A	INNDAS130009	N/A	IN-SRP-VE-000127	N/A	N/A	Yes	Yes	LTO 2	IN13FG9027	N/A	N/A	N/A	N/A	N/A
SRP13781	N/A	INNDAS130009	N/A	IN-SRP-VE-000127	N/A	N/A	N/A	Yes	LTO 2	IN13FG9027	N/A	N/A	N/A	N/A	N/A
SRP13796	N/A	INNDAS130009	N/A	IN-SRP-VE-000129	N/A	N/A	N/A	Yes	LTO 2	IN13FG9028	N/A	N/A	N/A	N/A	N/A
SRP13797	N/A	INNDAW130058	N/A	IN-SRP-VE-000131	N/A	N/A	Yes	Yes	LTO 2	IN13FG9026	N/A	N/A	N/A	N/A	N/A
SRP13798	N/A	INNDAW130058	N/A	IN-SRP-VE-000130	N/A	N/A	N/A	Yes	LTO 2	IN13FG9026	N/A	N/A	N/A	N/A	N/A
SRP13799	N/A	INNDAS130010	N/A	IN-SRP-VE-000130	N/A	N/A	N/A	Yes	LTO 2	IN13FG10029	N/A	N/A	N/A	N/A	N/A
SRP13805	N/A	INNDAW130058	N/A	IN-SRP-VE-000131	N/A	N/A	Yes	Yes	LTO 2	IN13FG10029	N/A	N/A	N/A	N/A	N/A
SRP13930	N/A	INNDAW130060	N/A	IN-SRP-VE-000148	N/A	N/A	Yes	Yes	LTO 2	IN13FG10030	N/A	N/A	N/A	N/A	N/A
SRP13951	N/A	INNDAS130011	N/A	IN-SRP-VE-000141	N/A	N/A	N/A	Yes	LTO 2	IN13FG10029	N/A	N/A	N/A	N/A	N/A
SRP13952	N/A	INNDAS130011	N/A	IN-SRP-VE-000145	N/A	N/A	N/A	Yes	LTO 2	IN13FG10029	N/A	N/A	N/A	N/A	N/A
SRP13957	N/A	INNDAW130059	N/A	IN-SRP-VE-000143	N/A	N/A	Yes	Yes	LTO 2	IN13FG10029	N/A	N/A	N/A	N/A	N/A
SRP13958	N/A	INNDAS130012	N/A	IN-SRP-VE-000142	N/A	N/A	N/A	Yes	LTO 2	IN13FG9027	N/A	N/A	N/A	N/A	N/A
SRP13960	N/A	INNDAW130060	N/A	IN-SRP-VE-000147	N/A	N/A	Yes	Yes	LTO 2	IN13FG10030	N/A	N/A	N/A	N/A	N/A
SRP13961	N/A	INNDAS130011	N/A	IN-SRP-VE-000143	N/A	N/A	N/A	Yes	LTO 2	IN13FG10029	N/A	N/A	N/A	N/A	N/A
SRP13962	N/A	INNDAW130060	N/A	IN-SRP-VE-000145	N/A	N/A	Yes	Yes	LTO 2	IN13FG10030	N/A	N/A	N/A	N/A	N/A
SRP13966	N/A	INNDAS130012	N/A	IN-SRP-VE-000141	N/A	N/A	N/A	Yes	LTO 2	IN13FG9028	N/A	N/A	N/A	N/A	N/A
SRP13968	N/A	INNDAW130059	N/A	IN-SRP-VE-000142	N/A	N/A	Yes	Yes	LTO 2	IN13FG10029	N/A	N/A	N/A	N/A	N/A

BSSchrock
Signature of Site Project Manager

Beverly Schrock
Printed Name

5/17/2013
Date

CIS-006

CCP-TP-003 Rev 19
Effective Date: 11/02/12
CCP Data Analysis for S3000, S4000, and S5000 Characterization

CCP Solids Analysis VOC UCL_{90} Evaluation Form

WSPF #: ID-RF-S3114 Rev. 1

Waste Stream Lot Number 1 through 2

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples (2)	Maximum (ppmv) (2)	Mean (ppmv) (2)	SD (ppmv) (2)	UCL_{90} (ppmv) (2)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Benzene	No	0	8	0.00	0.00	0.00	0.00	10	N/A		
Bromoform	No	0	8	0.00	0.00	0.00	0.00	10	N/A		
Carbon Disulfide	No	0	8	0.00	0.00	0.00	0.00	10	N/A		
Carbon Tetrachloride	No	7	8	71000.00	44285.71	23070.29	56840.02	10	N/A	Yes	F001
Chlorobenzene	No	0	8	0.00	0.00	0.00	0.00	10	N/A		
Chloroform	SQRT	3	8	71.41	52.61	17.29	71.42	10	3.16	Yes	D022
1,2-Dichloroethane	No	0	8	0.00	0.00	0.00	0.00	10	N/A		
1,1-Dichloroethylene	No	0	8	0.00	0.00	0.00	0.00	10	N/A		
trans-1,2-Dichloroethylene	No	0	8	0.00	0.00	0.00	0.00	10	N/A		
Ethyl benzene	No	0	8	0.00	0.00	0.00	0.00	10	N/A		
Methylene chloride	No	0	8	0.00	0.00	0.00	0.00	10	N/A		
1,1,2,2-Tetrachloroethane	No	0	8	0.00	0.00	0.00	0.00	10	N/A		
Tetrachloroethylene (3)	No	1	8	5000.00	5000.00	0.00	(3)	10	N/A	Yes	F002 (4)
Toluene	No	0	8	0.00	0.00	0.00	0.00	10	N/A		
1,1,1-Trichloroethane	Log	6	8	12.35	10.79	1.39	11.63	10	2.30	Yes	F001, F002
1,1,2-Trichloroethane	No	0	8	0.00	0.00	0.00	0.00	10	N/A		
Trichloroethylene (3)	No	2	8	470000.00	235440.00	N/A	(3)	10	N/A	Yes	F002 (4)
Trichlorofluoromethane (3)	No	1	8	7800.00	7800.00	0.00	(3)	10	N/A	Yes	F001 F002 (5)
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	Log	4	8	9.85	9.49	0.41	9.82	10	2.30	Yes	F002
Vinyl chloride	No	0	8	0.00	0.00	0.00	0.00	4	N/A		
m,p-Xylene[d]	No	0	8	0.00	0.00	0.00	0.00	10	N/A		
o-Xylene	No	0	8	0.00	0.00	0.00	0.00	10	N/A		
Acetone	Log	4	8	3.26	1.06	1.41	1.76	100	4.61		
Butanol	Log	3	8	2.20	0.69	1.05	1.21	100	4.61		
Methanol	No	0	8	1.10	0.99	0.20	1.09	100	N/A		
Methyl ethyl ketone	Log	2	8	1.72	0.46	0.72	0.82	100	4.61		
Ethyl ether	No	0	8	1.65	1.52	0.19	1.62	100	N/A		

CIS-007

CCP Solids Analysis VOC UCL_{90} Evaluation Form

WSPF #: ID-RF-S3114 Rev. 1 **Waste Stream Lot Number** 1 through 2

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples (2)	Maximum (ppmv) (2)	Mean (ppmv) (2)	SD (ppmv) (2)	UCL_{90} (ppmv) (2)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Isobutanol	Log	1	8	2.77	0.23	1.07	0.76	100	4.61		
Pyridine[c]	Log	1	8	1.57	0.55	0.44	0.77	100	4.61		
1,4-Dichlorbenzene [c]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Ortho-Dichlorobenzene [c]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Formaldehyde [a]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Hydrazine[b]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		

[a] Required only for homogenous solids and soil/gravel waste from the Savannah River Site.

[b] Required only for homogenous solids and soil/gravel wast from Oak Ridge National Laboratory and Savannah River Site.

[c] Can also be analyzed as an SVOC. If analyzed as an SVOC, the QAOs of CCP-PO-001, Table C3-6 apply.

[d] These xylene isomers cannot be resolved by the analytical methods employed in the program. m-Xylene and p-Xylene will be reported as "Total m-p-Xylene."

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per section C4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

(2) As a result of dilution requirements, several analytes were reported as non-detected with MDL values in excess of the PRQL. In accordance with Section C4-3d of the WIPP-WAP, such "U" flagged observations with elevated MDL values due to dilution were not used in calculating mean concentration. Consequently, the subject analytes were statistically evaluated using only the useable observations. For analytes with no useable data, there is no corresponding data reported on the UCL90 evaluation form. See the Solids Sampling and Analysis Information section of the AK Summation for assignment of Hazardous Waste Numbers per AK.

(3) Because the noted analyte has < 3 different observations, no meaningful covariance exists and the UCL90 value could not be calculated. Therefore, the PRQL was compaired to the maximum for the purpose of confirming HWNs

(4) For Tetrachloroethylene and Trichloroethylene there was only one usable data point. Due to the lack of variability of the data no UCL90 value can be calculated. The F002 EPA code is assigned in AK for both HWN's.

(5) For Trichlorofluoromethane there was only one usable data point. Due to the lack of variability of the data no UCL90 value can be calculated. The F001 and F002 EPA codes are assigned in AK.

BSSchrock
Signature of Site Project Manager

Beverly Schrock
Printed Name

5/17/2013
Date

CIS-008

CCP-TP-003 Rev 19
Effective Date: 11/02/12
CCP Data Analysis for S3000, S4000, and S5000 Characterization

CCP Solids Analysis SVOC UCL_{90} Evaluation Form

WSPF #: ID-RF-S3114 Rev. 1 **Waste Stream Lot Number** 1 through 2

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples (2)	Maximum (ppmv)	Mean (ppmv)	SD (ppmv) (2)	UCL_{90} (ppmv) (2)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
2-Methylphenol (cresols)	Log	0	8	3.00	2.17	0.66	2.53	40	3.69		
3&4 -Methylphenol (cresols)	Log	4	8	5.52	3.54	1.05	4.06	40	3.69	Yes	D026
1,4-Dichlorobenzene [a]	Log	0	8	3.00	2.17	0.66	2.53	40	3.69		
Ortho-Dichlorobenzene [a]	Log	2	8	6.41	3.07	1.62	3.88	40	3.69	Yes	F002
2,4-Dinitrophenol	SQRT	0	8	4.47	3.62	1.02	4.24	40	6.32		
2,4-Dinitrotoluene	No	0	8	0.00	0.00	0.00	0.00	2.6	N/A		
Hexachlorobenzene	No	0	8	0.00	0.00	0.00	0.00	2.6	N/A		
Hexachloroethane	Log	5	8	5.83	4.03	1.56	4.88	40	3.69	Yes	D034
Nitrobenzene	Log	0	8	3.00	2.17	0.66	2.53	40	3.69		
Pentachlorophenol	Log	0	8	3.00	2.17	0.66	2.53	40	3.69		
Pyridine [a]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		

[a] Can also be analyzed as an VOC. If analyzed as an VOC, the QAO's of CCP-PO-001, Table C3-4 apply.

Comments:

(1) For Analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per section C4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration)

(2) As a result of dilution requirements, several analytes were reported as non-detected with MDL values in excess of the PRQL. In accordance with Section C4-3d of the WIPP-WAP, such "U" flagged observations with elevated MDL values due to dilution were not used in calculating mean concentration. Consequently, the subject analytes were statistically evaluated using only the useable observations. For analytes with no useable data, there is no corresponding data reported on the UCL90 evaluation form. See the AK summation portion of the WSPF for assignment of Hazardous Waste Numbers per AK.

BSSchrock
Signature of Site Project Manager

Beverly Schrock
Printed Name

5/17/2013
Date

C1S-009

CCP-TP-003 Rev 19
Effective Date: 11/02/12
CCP Data Analysis for S3000, S4000, and S5000 Characterization

CCP Solids Analysis Metals UCL_{90} Evaluation Form

WSPF #: ID-RF-S3114 Rev. 1 **Waste Stream Lot Number** 1 through 2

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL	# Samples	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Antimony	Log	1	8	-0.34	-1.03	0.33	-0.87	100	4.61		
Arsenic	Log	4	8	1.34	-0.25	0.96	0.23	100	4.61		
Barium	No	8	8	72.00	42.75	19.67	52.59	2000	N/A		
Beryllium	Log	7	8	1.03	-0.54	1.46	0.19	100	4.61		
Cadmium	Log	8	8	0.47	-0.05	0.31	0.11	20	3.00		
Chromium	Log	8	8	3.43	2.79	0.28	2.93	100	4.61		
Lead	Log	8	8	2.08	1.31	0.45	1.54	100	4.61		
Mercury	Log	8	8	-1.77	-2.92	0.79	-2.53	4	1.39		
Nickel	Log	8	8	3.87	2.70	0.52	2.96	100	4.61		
Selenium	Log	1	8	-0.09	-1.01	0.38	-0.82	20	3.00		
Silver	Log	4	8	-0.45	-1.02	0.52	-0.76	100	4.61		
Thallium	SQRT	1	8	1.00	0.69	0.17	0.77	100	10.00		
Vanadium	Log	8	8	3.81	3.40	0.18	3.49	100	4.61		
Zinc	No	8	8	42.00	29.50	9.32	34.16	100	N/A		

Comments:
None

BSSchrock
Signature of Site Project Manager

Beverly Schrock
Printed Name

5/17/2013
Date

CIS.010

CCP-TP-002 Rev. 25
Effective Date: 2/11/13
CCP Reconciliation of DQO's and Reporting Characterization Data

CCP Solid VOCs Summary Data

Waste Stream Number ID-RF-S3114 Waste Stream Lot Number 2

Tentatively Identified Compound	Maximum Observed Estimated Concentrations (ppmv)	# Samples Containing TIC	% Detected
NONE	N/A	N/A	N/A

Data Supports EPA Hazardous Waste Numbers Assigned by AK? Yes ☑ No ☐

If no, describe the basis for assigning the EPA Hazardous Waste Codes:

SPM Signature BSSchrock Date 5/17/2013

CIS-011

CCP Solid SVOCs Summary Data

Waste Stream Number ID-RF-S3114 Waste Stream Lot Number 2

Tentatively Identified Compound	Maximum Observed Estimated Concentrations (ppmv)	# Samples Containing TIC	% Detected
Dibutyl phthalate	47.00	1	12.50%
tetrachlorobiphenyl	140.00	1	12.50%
pentachlorobiphenyl	180.00	1	12.50%
Hexachlorobiphenyl	96.00	1	12.50%
1,2-Benzenedicarboxylic acid, diheptyl ester	88.00	1	12.50%
bis(2-Ethylhexyl)phthalate	760.00	2	25.00%
Di-n-octyl phthalate	170.00	1	12.50%
Hexachloroethane	100.00	1	12.50%
phenol	760.00	1	12.50%

Data Supports EPA Hazardous Waste Numbers Assigned by AK? Yes ☑ No ☐

If no, describe the basis for assigning the EPA Hazardous Waste Codes:

Note: Bis(2-ethylhexyl)phthalate is listed in Appendix VIII to 40CFR Part 261 and is present as a TIC in greater than 25% of the samples in the waste stream. This analyte has been added to the target analyte list for ID-RF-S3114. Bis(2-ethylhexyl)phthalate was detected in two samples; however, the Hazardous Waste Code for Bis(2-ethylhexyl)phthalate U028 will not be applied to ID-RF-S3114. Waste stream ID-RF-S3114 does not contain wastes that were mixed commercial chemical product Bis(2-ethylhexyl)phthalate, an off-specification chemical product or a container residue or a spill residue thereof.

SPM Signature BSSchrock Date 5/17/2013

CIS-012

CCP-TP-002 Rev. 25
Effective Date: 2/11/13
CCP Reconciliation of DQO's and Reporting Characterization Data

CCP RTR/VE Summary of Prohibited Items and AK Confirmation

Waste Stream Number: ID-RF-S3114 Lot #: 108

Container Number	RTR Prohibited Items [a,b]	Visual Examination Prohibited Items [a,b]
See correlation of container ID numbers for list of remaining drum numbers in this Lot.	RTR was not used to certify any containers in this lot.	None of the containers in this Lot had prohibited items identified during Visual Examination technique.

a. See Batch Data Reports
b. If AK has assigned U134 to this waste stream, then any liquids in these containers are prohibited items (not acceptable by the TSDF).

Justification for the selection of RTR and/or VE: VE was selected as the characterization method for the containers in this lot because the containers in this lot were repackaged and Visual Examination Technique was used to meet all the Data Quality Objectives for NDE.

BSSchrock — Site Project Manager Signature

Beverly Schrock — Printed Name

5/17/2013 — Date

CIS-013

CCP Reconciliation with Data Quality Objectives

WSF# ID-RF-S3114 Rev. 1 Lot # 108

Sampling Completeness

RTR/VE:

Number of Valid Samples: 80 Number of Total Samples Analyzed: 80
Percent Complete: 100 (QAO is 100%)

NDA

Number of Valid Samples: 80 Number of Total Samples Analyzed: 80
Percent Complete: 100 (QAO is 100%)

HSG

Number of Valid Samples: NA Number of Total Samples Collected: NA
Percent Complete: NA (QAO is ≥90%)
Number of Valid Samples: NA Number of Total Samples Analyzed: NA
Percent Complete: NA (QAO is ≥90%)

Total VOC

Number of Valid Samples: 8 Number of Total Samples Collected: 8
Percent Complete: 100 (QAO is ≥90%)
Number of Valid Samples: 8 Number of Total Samples Analyzed: 8
Percent Complete: 100 (QAO is ≥90%)

Total SVOC

Number of Valid Samples: 8 Number of Total Samples Collected: 8
Percent Complete: 100 (QAO is ≥90%)
Number of Valid Samples: 8 Number of Total Samples Analyzed: 8
Percent Complete: 100 (QAO is ≥90%)

Total Metals

Number of Valid Samples: 8 Number of Total Samples Collected: 8
Percent Complete: 100 (QAO is ≥90%)
Number of Valid Samples: 8 Number of Total Samples Analyzed: 8
Percent Complete: 100 (QAO is ≥90%)

CIS-014

CCP Reconciliation with Data Quality Objectives

WSF# ID-RF-S3114 Rev. 1 Lot # 108

	Y/N/NA	Reconciliation Parameter
1	Y	Waste Matrix Code.
2	Y	Waste Material Parameter Weights.
3	Y	The waste matrix code identified is consistent with the type of sampling and analysis used to characterize the waste.
4	Y	The TRU activity reported in the BDRs for each container demonstrates with a 95% probability that the container of waste contains TRU radioactive waste.
5	N	AK Sufficiency. Is there an approved AK sufficiency Determination for this waste stream?
6	NA	Mean concentrations, UCL_{90} values for the mean concentration, standard deviations, and the number of samples collected for each VOC in the HSG of each container were calculated and compared with the program required quantitation limits, as reported in CCP-TP-003 Attachment 3, and additional U.S. Environmental Protection Agency (EPA) Hazardous Waste Numbers were assigned as required. Samples were randomly collected (when appropriate).
7a	Y	Mean concentrations, UCL_{90} values for the mean concentration, standard deviations, and the number of samples collected for solids VOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003 Attachment 4, and additional EPA HWNs were assigned as required. Samples were randomly collected.
7b	Y	Mean concentrations, (UCL_{90}) values for the mean concentration, standard deviations, and the number of samples collected for solids SVOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003 Attachment 5, and additional EPA HWNs were assigned as required. Samples were randomly collected.
7c	Y	Mean concentrations, (UCL_{90}) values for the mean concentration, standard deviations, and the number of samples collected for total metals were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003 Attachment 6, and additional EPA HWNs were assigned as required. Samples were randomly collected.

CCP Reconciliation with Data Quality Objectives

WSF# ID-RF-S3114 Rev. 1 Lot # 108

8	Y	The data demonstrates whether the waste stream exhibits a toxicity characteristic under Title 40 Code of Federal Regulations (CFR), Part 261, Identification and Listing of Hazardous Waste, Subpart C, Characteristics of Hazardous Waste.
9	Y	Does the waste stream contain listed waste found in 20.4.1.200 NMAC incorporating 40 CFR Part 261, Subpart D, Lists of Hazardous Wastes.
10	Y	Waste stream can be classified as hazardous or nonhazardous at the 90-percent confidence level.
11	NA	Appropriate packaging configuration and Drum Age Criteria (DAC) is applied and documented in the headspace gas sampling documentation, and the drum age met prior to sampling.
12	Y	TICs were appropriately identified and reported in accordance with the requirements of Section C3-1 of the QAPjP.
13	NA	The PRQLs for headspace gas VOCs were met for all analyses as evidenced by the analytical batch data reports.
14		The overall completeness, comparability, and representativeness QAOs were met for each of the analytical and testing procedures as specified in the WAP Sections C3-2 through C3-9 prior to submittal of a waste stream profile form for a waste steam or waste stream lot.

	Completeness	Comparability	Representativeness
Radiography	NA	NA	NA
VE	Y	Y	Y
Headspace Gas Analysis	NA	NA	NA
Solids Sampling	Y	Y	Y
Solids VOCs	Y	Y	Y
Solids SVOCs	Y	Y	Y
Solids Metals	Y	Y	Y

Comments: A total of 8 containers have been sampled for solids RCRA analysis. Solids summary lot 2 included as part of this shipping lot, accumulates 5 containers from solids summary lot 1 and 3 additional containers from solids summary lot 2. The 5 samples from solids summary lot 1 were submitted in the CIS for the original revision of the WSPF for the ID-RF-S3114 waste stream.

BSSchrock
Signature of Site Project Manager

Beverly Schrock
Printed Name

5/17/2013
Date

DIVIDER

PAGE

NWP
Nuclear Waste Partnership LLC
A URS-led partnership with B&W and AREVA

CP:13:01114
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: March 7, 2013

FROM: M. F. Ramirez — LOCATION: CCP Certification

TO: NTP Records Custodian GSA-212 — LOCATION: National TRU Program Certification

SUBJECT: TRANSMITTAL OF IDAHO NATIONAL LABORATORY WASTE STREAM PROFILE FORM ID-RF-S3114, REVISION 1 FOR WASTE STREAM ID-RF-S3114

Please accept the attached Idaho National Laboratory Waste Stream Profile Form ID-RF-S3114, Rev. 1 to be placed in records for Waste Stream # ID-RF-S3114.

MFR:jmc

Attachment

cc: (without attachment)

R. P. Kantrowitz ED
M.W. Pearcy ED

NTPC RECORDS ORIGINAL
DATE REC'D 4-23-13

P.O. Box 2078 • Carlsbad, New Mexico USA 88221-2078
Phone: (575) 234-7200 • Fax: (575) 234-7083

Attachment 2 – CCP Waste Stream Profile Form

(1) Waste Stream Profile Number: ID-RF-S3114, Revision 1						
(2) Generator site name: Idaho National Laboratory					(3) Generator site EPA ID: ID4890008952	
(4) Technical contact: Jim Vernon					(5) Technical contact phone number: 575-234-7141	
(6) Date of audit report approval by New Mexico Environment Department (NMED): December 23, 2011						
(7) Title, version number, and date of documents used for WIPP-WAP Certification: CCP-PO-001, CCP Transuranic Waste Characterization Quality Assurance Project Plan, Revision 20, June 16, 2011; CCP-PO-002, CCP Transuranic Waste Certification Plan, Revision 26, July 14, 2011; CCP-PO-024, CCP/INL Interface Document, Revision 13, November 2, 2012						
(8) Did your facility generate this waste?	YES		NO	X		
(9) If no, provide the name and EPA ID of the original generator: Rocky Flats Environmental Technology Site CO7890010526						
Waste Stream Information						
(10) WIPP ID: IN-ID-RF-S3114[1]					(11) Summary Category Group: S3000 – Homogeneous Solids	
(12) Waste Matrix Code Group: Solidified Organics					(13) Waste Stream Name: Organic Setups	
(14) Description from the ATWIR: This waste consists of various organic liquids that were transferred to Building 774 where they were immobilized using Micro-cel E (a synthetic calcium silicate) to form a grease or paste-like material. The organic liquids were primarily a mixture of oils and chlorinated solvents. Small amounts of Oil-Dri were sometimes added to the mixture as well. This process was shutdown in 1985 and replaced by the OASIS process.						
(15) Defense TRU Waste:	YES	X	NO			
(16) Check One:	CH	X	RH			
(17) Number of SWBs: NA (17a) Number of SLB2: NA	(18) Number of Drums[2]: 7,440 55-gallon drums – Current 2,439 55-gallon drums - Projected				(19) Number of Canisters: NA	
(20) Batch Data Report numbers supporting this waste stream characterization: See Characterization Information Summary (CIS) Correlation of Container Identification Numbers to Batch Data Report Numbers.						
(21) List applicable EPA Hazardous Waste Numbers[3]: D008, D022, D026, D027, D028, D029, D030, D032, D034, D036, D037, F001, F002 and F005						
(22) Applicable TRUCON Content Numbers: ID 112 / ID 212						
(23)**Acceptable Knowledge Information**						
(For the following, enter the supporting documentation used [i.e., references and dates])						
Required Program Information						
(23A) Map of site: CCP-AK-INL-005, Revision 7, September 28, 2012, Figures 1, 2 and 3						
(23B) Facility mission description: CCP-AK-INL-005, Revision 7, September 28, 2012, Section 4.2						
(23C) Description of operations that generate waste: CCP-AK-INL-005, Revision 7, September 28, 2012, Section 4.3						
(23D) Waste identification/categorization schemes: CCP-AK-INL-005, Revision 7, September 28, 2012, Section 4.5						
(23E) Types and quantities of waste generated: CCP-AK-INL-005, Revision 7, September 28, 2012, Section 4.4.1						
(23F) Correlation of waste streams generated from the same building and process, as applicable: CCP-AK-INL-005, Revision 7, September 28, 2012, Section 4.4.2						
(24) Waste certification procedures: CCP-TP-030, Revision 31, November 19, 2012						

(25) Required Waste Stream Information			
(25A) Area(s) and building(s) from which the waste stream was generated: CCP-AK-INL-005, Revision 7, September 28, 2012, Section 5.1			
(25B) Waste stream volume and time period of generation: CCP-AK-INL-005, Revision 7, September 28, 2012, Section 5.2			
(25C) Waste generating process description for each building: CCP-AK-INL-005, Revision 7, September 28, 2012, Section 5.3			
(25D) Waste Process flow diagrams: CCP-AK-INL-005, Revision 7, September 28, 2012, Figures 4 and 5			
(25E) Material inputs or other information identifying chemical/radionuclide content and physical waste form: CCP-AK-INL-005, Revision 7, September 28, 2012, Section 5.4			
(25F) Waste Material Parameter Weight Estimates per unit of waste: See table entitled "Waste Stream ID-RF-S3114 Waste Material Parameters" in Summation of Aspects of AK Summary Report: Waste Stream ID-RF-S3114			
(26) Which Defense Activity generated the waste:			
X	Weapons activities including defense inertial confinement fusion		Naval Reactors development
	Verification and control technology		Defense research and development
	Defense nuclear waste and material by products management		Defense nuclear material production
	Defense nuclear waste and materials security and safeguards and security investigations		
(27) Supplemental Documentation			
(27A) Process design documents: NA			
(27B) Standard operating procedures: See P014, P026, P043, P063, P064, P501, P502, P503, P504, P505, P535 and P536 in the Summation of Aspects of AK Summary Report: Waste Stream ID-RF-S3114, AK Source Documents.			
(27C) Safety Analysis Reports: NA			
(27D) Waste packaging logs: See U040, U043, U059 and U069 in the Summation of Aspects of AK Summary Report: Waste Stream ID-RF-S3114, AK Source Documents.			
(27E) Test plans/research project reports: See P002, P089, P167, P178, P179, P180, P181, P182, P183, P184, P185, P186, P187, P188, P189, P190, P191, P192, P193, P194, P195, P196, P197, P198, P199, P200, P201, P534 and P538 in the Summation of Aspects of AK Summary Report: Waste Stream ID-RF-S3114, AK Source Documents.			
(27F) Site databases: See U092 in the Summation of Aspects of AK Summary Report: Waste Stream ID-RF-S3114, AK Source Documents.			
(27G) Information from site personnel: See C057, C134, C137, C154, C159, C170, C171, C184, C185, C514, C515 and P016 in the Summation of Aspects of AK Summary Report: Waste Stream ID-RF-S3114, AK Source Documents.			
(27H) Standard industry documents: NA			
(27I) Previous analytical data: See D013, D014, P033, P512, P516 and U098 in the Summation of Aspects of AK Summary Report: Waste Stream ID-RF-S3114, AK Source Documents.			
(27J) Material safety data sheets: See P084, P091, P142, P517 and P518 in the Summation of Aspects of AK Summary Report: Waste Stream ID-RF-S3114, AK Source Documents.			
(27K) Sampling and analysis data from comparable/surrogate Waste: NA			
(27L) Laboratory notebooks: NA			
Confirmation Information			
For the following, when applicable, enter procedure title(s), number(s) and date(s)			
(28)	Radiography: CCP-TP-053, Revision 12, August 22, 2012		
	Visual Examination: NA		

(29) Comments: For a list of the waste characterization procedures used and date of respective procedures see the list of procedures on the attached CIS.

This WSPF was revised to add Hazardous Waste Number D008 (Lead) to waste stream ID-RF-S3114.

Reviewed by AK Expert: YES [X] Date: 2/15/2013

Reviewed by STR (if necessary): YES [X] N/A [ ] Date: 2/20/2013

Waste Stream Profile Form Certification:

I hereby certify that I have reviewed the information in this Waste Stream Profile Form, and it is complete and accurate to the best of my knowledge. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Signature of Site Project Manager	Jim Vernon Printed Name	2-26-13 Date

NOTE: (1) WIPP ID IN-W309.609 was previously used in the original WSPF. The ID was changed in the current Annual Transuranic Waste Inventory Report – 2012 DOE/TRU-12-3425.

(2) This includes 836 drums overpacked in 85-gallon drums to be certified and shipped to WIPP in the 85-gallon drums.

(3) If, radiography, visual examination were used to confirm EPA Hazardous Waste Numbers, attach signed Characterization Information Summary documenting this determination.

Summation of Aspects of AK Summary Report: Waste Stream ID-RF-S3114

Overview

Waste Stream ID-RF-S3114 consists of contact handled (CH) transuranic (TRU) mixed homogeneous solid waste generated at Rocky Flats Environmental Technology Site (formerly Rocky Flats Plant) in Golden, Colorado. The drums of this Rocky Flats waste are stored at the Idaho National Laboratory (INL) Radioactive Waste Management Complex (RWMC). Rocky Flats had two primary missions: the production of triggers for nuclear weapons, and the processing of retired weapons for plutonium recovery. The triggers, also known as pits, were the first-stage fission bombs used to initiate the second-stage fusion reaction in hydrogen bombs. Plutonium metal was recovered from retired warheads and manufacturing residues for reuse. This transuranic waste stream was generated in support of these defense related weapons activities. Therefore, this waste stream is defense related waste.

This summation of the Acceptable Knowledge (AK) Summary Report includes information to support Waste Stream Profile Form (WSPF) number ID-RF-S3114 Rev. 1. The primary source of information for this summation is CCP-AK-INL-005, *Central Characterization Project Acceptable Knowledge Summary Report for Rocky Flats Immobilized Organic Liquids Stored at the Idaho National Laboratory, Waste Streams:ID-RF-S3114 and ID-RF-S3150-A*, Revision 7, September 28, 2012.

Waste Stream Identification Summary

Waste Stream Name:	Organic Setups
Waste Stream Number:	ID-RF-S3114
Dates of Waste Generation:	June 1968 - Present[1]
Waste Stream Volume – Current:	7,440 55-gallon drums[2]
Waste Stream Volume – Projected:	2,439 55-gallon drums[2]
Summary Category Group:	S3000, Homogeneous Solids
Waste Matrix Code Group:	Solidified Organics
Waste Matrix Code:	S3114, Absorbed Organic Liquids
TRUPACT-II Content Code:	ID 112/ ID212
Annual Transuranic Waste Inventory Report Identification Number:	IN-ID-RF-S3114[3]

[1] Waste with generation dates after 1986 are the result of waste characterization activities, such as VE.
[2] This includes 836 drums overpacked in 85-gallon drums to be certified and shipped to WIPP in the 85-gallon drums.
[3] WIPP ID IN-W309.609 was previously used in the original WSPF. The ID was changed in the current Annual Transuranic Waste Inventory Report – 2012 DOE/TRU-12-3425.

Waste Stream Description and Physical Form:

Waste stream ID-RF-S3114 consists of various organic liquids that were transferred to Building 774 where they were immobilized using Micro-cel E (a synthetic calcium silicate) to form a grease or paste-like material. The organic liquids were primarily a mixture of oils and chlorinated solvents. Small amounts of Oil-Dri were sometimes added to the mixture as well. The waste may also include small amounts of soil and debris materials (e.g., cellulosic, plastic, metals, etc.).

This waste stream meets the definition of waste materials that have common physical form, that contain similar hazardous constituents, and that are generated from a single process or activity. This waste stream was generated from the solidification of organic liquids in Building 774.

Point of Generation

Location

Waste stream ID-RF-S3114 was generated at Rocky Flats, located in northern Jefferson County, Colorado, approximately 16 miles northwest of downtown Denver. The waste is currently stored at the RWMC, located approximately 51 miles west of Idaho Falls, Idaho.

Area and/or Buildings of Generation

Organic liquid wastes from numerous buildings on site were transferred to Building 774 for treatment. The liquids were then treated as described in the following.

Generating Processes

Description of Waste Generation Processes

Organic Liquid Waste Generation

Organic liquid wastes from numerous buildings on site were transferred to Building 774 for treatment. The organic liquids originated in Buildings 334, 371, 443, 444, 447, 559, 707, 771, 776, 777, 778, 779, 865, 881, 883, and 991 (References U040 and U043). The feed waste oils and solvents were generated primarily from machining and degreasing operations in Buildings 707 and 777. A cutting oil, Texaco Regal A (a nonhazardous oil), flowed onto a part during machining (References P052, P077, and P518). After machining, the part was rinsed to remove residual oil. Various solvents were used to rinse machined parts and degrease tools. These included carbon tetrachloride, 1,1,2-trichloro-1,2,2-trifluoroethane, 1,1,1-trichloroethane, trichloroethylene, and tetrachloroethylene. Ultrasonic cleaner baths using 1,1,1-trichloroethane were used to clean parts. Metal turnings and scrap were cleaned in carbon tetrachloride baths before forming the turnings into briquettes (References P052, P053, and P077). Trichloroethylene was replaced by 1,1,1-trichloroethane for vapor degreasing of plutonium parts. Trichloroethylene remained in use in only one plutonium operation, and later was used only in research and analytical activities (Reference P023). A logbook was used in Building 774 to record the types of organic waste and generation source of the liquids that made up the immobilized organic liquids wastes. The date of treatment, generation location, waste description, and volume of waste were entered in the logbook (References U040 and U043).

The feed materials from Buildings 334, 371, 443, 444, 447, 559, 771, 776, 778, 779, 865, 881, 883 and 991 included pump oil, hydraulic oil, engine oil, lathe cutting oil, coolant oils and some organic solvents (See TC Characteristic and F-Listed Constituents, Waste Stream ID-RF-S3114 table below for hazardous constituents identified in feed materials).

Organic Liquid Waste Treatment

Organic liquids were processed through an extruder with Micro-cel E, a synthetic calcium silicate (References P002 and P517). Small amounts of Oil-Dri absorbent were sometimes added to the mixture as well (Reference P024). The amounts of materials added to the mixture were not metered; however, the operator would adjust the composition if the outgoing mixture did not have a paste-like consistency. The mixture would then drop into a polyvinyl chloride (PVC) O-ring bag contained in a 55-gallon drum (Reference P016). The composition of organic setups was approximately 30-gallons of liquid organic waste to 100 pounds of Micro-cel E. (Reference P024). The Grease Plant shut down in 1985 and was replaced by the new ENVIROSTONE process called the Organic and Sludge Immobilization System (OASIS). The treated organic liquids from the OASIS process are included in a separate WSPF (waste stream ID-RF-S3150-A).

Waste Repackaging and Liquid Waste Remediation

Drums of solidified organic waste containing liquids are remediated and or repackaged in the Advanced Mixed Waste Treatment Project (AMWTP) Drum Treatment Facility (DTF), located in Building WMF-628; the Advanced Mixed Waste Treatment Facility (AMWTF), Building WMF-676; or the Sludge Repackage Project (SRP). The drums are processed in the DTF to breach layers of confinement, segregate prohibited items, and remove liquids as necessary by liquid absorption and/ or shaker table operations with Micro-cel E. Other operations conducted may include rigid liner removal and repackaging, and drum over packing and un-over packing. Secondary waste items, such as leather, latex, and Silver Shield gloves, knives, cutters, drum filters, and plastic sleeving and aprons, may be packaged in the remediated drums (References C515, P535, and P536).

Drums repackaged in the AMWTF and SRP will be characterized by visual examination (VE) to breach layers of confinement, segregate prohibited items, and remove liquids as necessary by absorption (References C518, C522, P536, P542, P543, and P544). Incidental spills of waste material during SRP reprocessing activities will be collected with small quantities of surrounding oil and included with the sludge (References P542, P543, and P546).

Waste Stream Material and Chemical Inputs

The following table identifies the Resource Conservation and Recovery Act (RCRA) toxicity characteristic and F-listed constituents identified in this waste stream.

TC Characteristic and F-Listed Constituents, Waste Stream ID-RF-S3114

Chemical	EPA HWNs	Use	References
1,1,1-Trichloroethane	F001 and F002	Plutonium fabrication Research and development Analytical laboratory reagent Metallography laboratory	P053, P060, P076, P079, P520
1,1,2-Trichloro-1,2,2-triflouroethane (Freon TF)	F002	Plutonium fabrication Depleted uranium fabrication Beryllium fabrication Stainless-steel fabrication Research and development Analytical laboratory reagent	P052, P060, P076, P079, P520
1,1-Dichloroethylene	D029	Analytical laboratory reagent	P052
1,2-Dichlorobenzene (ortho-dichlorobenzene)	F002	Minimum detection limit (MDL) exceeded program required quantitation limit (PRQL) due to dilution for Rocky Flats solids data	P521
1,2-Dichloroethane	D028	Analytical laboratory reagent**Error! Bookmark not defined.**	P052
1,4-Dichlorobenzene	D027	MDL exceeded PRQL due to dilution for Rocky Flats solids data	P521
2-Ethoxyethanol	F005	Analytical laboratory reagent	P052
2,4-Dinitrotoluene	D030	MDL exceeded PRQL due to dilution for Rocky Flats solids data	P521
Benzene	F005	Plutonium fabrication Analytical laboratory reagent	P053, P076
Carbon disulfide	F005	Analytical laboratory reagent	P076
Carbon tetrachloride	F001	Plutonium fabrication Analytical laboratory reagent	P053, P060, P076, P520
Chloroform	D022	Analytical laboratory reagent Research and development	P052, P053, P076
Cresol	D026	MDL exceeded PRQL due to dilution for Rocky Flats solids data	P521
Hexachlorobenzene	D032	MDL exceeded PRQL due to dilution for Rocky Flats solids data	P521
Hexachloroethane	D034	90-percent Upper Confidence Limit (UCL_{90}) exceeded the regulatory threshold limit (RTL) in both Rocky Flats and INL 3,100 Cubic Meter Project solids data	P507, P521, U098
Lead	D008	Lead items identified by real-time radiography (RTR)	D024

Chemical	EPA HWNs	Use	References
Methyl ethyl ketone	F005	Research and development Analytical laboratory reagent	P052, P062
Methylene chloride	F002	Research and development Analytical laboratory reagent**Error! Bookmark not defined.Error! Bookmark not defined.**	P052, P053, P062, P076
Nitrobenzene	D036	Analytical laboratory reagent; non-solvent use	P052
Pentachlorophenol	D037	MDL exceeded PRQL due to dilution for Rocky Flats solids data	P521
Pyridine	F005	Analytical laboratory reagent**Error! Bookmark not defined.Error! Bookmark not defined.**	P076
Tetrachloroethylene	F002	Plutonium fabrication Depleted uranium fabrication Stainless-steel fabrication Analytical laboratory reagent	P052, P053, P520
Toluene	F005	Analytical laboratory reagent	P052, P076
Trichloroethylene	F002	Plutonium fabrication Beryllium and uranium fabrication Stainless-steel fabrication Analytical laboratory reagent Decontamination solvent**Error! Bookmark not defined.**	P023, P052, P053, P076, P520
Trichlorofluoromethane	F001 and F002	Component of Kester Residue Remover – Formula 5211 Detected as a TIC in headspace gas sampling	P540

RCRA Determinations

Historical Waste Management

The subject waste has historically been managed in accordance with INL waste management practices in compliance with the requirements imposed by the Idaho Department of Environment Quality. This waste has been historically managed as TRU mixed waste. In addition, this waste stream has been characterized by several different TRU waste programs. For this reason, the assignment of EPA Hazardous Waste Numbers (HWNs) to waste stream ID-RF-S3114 considered the EPA HWNs assigned by these programs in addition to the review of the AK record (References D005, D024, P052, P507, and P521).

Hazardous Waste Determinations

Ignitability, Corrosivity, Reactivity

Ignitability

The materials in this waste stream do not meet the definition of ignitability as defined in Title 40 of the Code of Federal Regulations, Part 261.21 (40 CFR 261.21). The materials are not liquid and absorbents were added to wastes having the potential of generating free liquids (i.e., dewatering of wastes) (References P015, P024, P501, and P503). The waste is not capable of causing fire through friction, absorption of moisture, or spontaneous chemical change (References P012, P016, P024, and P501). The materials are not compressed gases, nor do the wastes contain compressed gases, and the waste is not an oxidizer (References P012, P013, P015, P016, P022, P024, and P501). Waste stream ID-RF-S3114 is therefore not an ignitable waste (D001).

Corrosivity

The materials in this waste stream do not meet the definition of corrosivity as defined in 40 CFR 261.22. The materials are not liquids and absorbents were added to wastes having the potential of generating free liquids (i.e., dewatering of wastes) (References P015, P024, P501, and P503). Waste stream ID-RF-S3114 is therefore not a corrosive waste (D002).

Reactivity

The materials in this waste stream do not meet the definition of reactivity as defined in 40 CFR 261.23. The materials are stable and will not undergo violent chemical change. The materials will not react violently with water, form potentially explosive mixtures with water, or generate toxic gases, vapors, or fumes when mixed with water. The materials do not contain cyanides or sulfides and are not capable of detonation or explosive reaction. The materials are not explosive, nor do the drums contain any explosives (References P012, P013, P015, P016, P022, and P024). Waste stream ID-RF-S3114 is therefore not a reactive waste (D003).

The containers in the waste stream will be evaluated in accordance with the WIPP-WAP using RTR and/or VE prior to shipment to ensure the waste is not ignitable, corrosive, or reactive.

Toxicity Characteristic

Waste stream ID-RF-S3114 exhibits the characteristic of toxicity for metal compounds as defined in 40 CFR 261.24. EPA hazardous waste numbers for metals were assigned to organic liquid wastes that may have been treated in Building 774, but have never been assigned to organic setups (IDC 003). Analysis of the organic setups waste conducted by the Rocky Flats and INL 3100 m^3 TRU Waste Programs demonstrates that the UCL_{90} does not exceed the RTL for any of the RCRA-regulated metals (References P507, P521, and U098). However, lead (D008) including lead tape, scrap lead, leaded rubber gloves, and lead seals, has been identified by RTR. Therefore, EPA hazardous waste number D008 is assigned to waste stream ID-RF-S3114 (Reference D024).

Waste stream ID-RF-S3114 exhibits the characteristic of toxicity for organic compounds as defined in 40 CFR 261.24. Chloroform (D022); 1,2-dichloroethane (D028); 1,1-dichloroethylene (D029); and nitrobenzene (D036) were identified as potential organic constituents in organic setups waste. Therefore, EPA hazardous waste numbers D022, D028, D029, and D036 are assigned to waste stream ID-RF-S3114 (Reference D005).

Although carbon tetrachloride (D019/F001), tetrachloroethylene (D039/F002), and trichloroethylene (D040/F002) are present in this waste above the RTL, these compounds were used as solvents (i.e., for cleaning and degreasing); and therefore, the F-listed EPA hazardous

waste number is applied. The toxicity characteristic EPA hazardous waste numbers are not assigned.

Homogeneous solids sampling and analysis of organic setups was previously conducted by both the Rocky Flats and INL 3,100 m^3 TRU Waste Programs. Based on the analytical data from both programs, the UCL_{90} exceeded the RTL for hexachloroethane (D034). Therefore, EPA hazardous waste number D034 is also assigned to waste stream ID-RF-S3114 (References P507, P521, and U098).

During the analytical data review of the "non-detect" observations for homogeneous solids data, Rocky Flats determined that the MDL exceeded the PRQL for cresols (D026), 1,4-dichlorobenzene (D027), 2,4-dinitrotoluene (D030), hexachlorobenzene (D032), and pentachlorophenol (D037) due to dilution. The dilution was due to high hydrocarbon content in the waste matrix that caused difficulties in analysis per the required methodology. Subsequent review of the solid sampling data and reconsideration of process knowledge confirms that cresols, 1,4-dichlorobenzene, 2,4-dinitrotoluene, hexachlorobenzene, and pentachlorophenol were not expected contaminants in this waste stream. Where a constituent has been identified and there is no or limited quantitative data available to demonstrate that the concentration of a constituent is below regulatory threshold levels, the applicable EPA HWN is applied to the waste stream. Therefore, EPA hazardous waste numbers D026, D027, D030, D032, and D037 are also assigned to waste stream ID-RF-S3114 (Reference P521).

Therefore, EPA hazardous waste numbers D008, D022, D026, D027, D028, D029, D030, D032, D034, D036, and DO37 are assigned to this waste stream.

Listed Waste

F-Listed Waste

Waste stream ID-RF-S3114 was derived from the treatment of hazardous wastes from non-specific sources as listed in 40 CFR 261.31. Carbon tetrachloride, 1,1,1-trichloroethane, 1,1,2-trichloro-1,2,2-trifluorethane, methylene chloride, tetrachloroethylene, trichloroethylene, trichlorofluoromethane, 2-ethoxyethanol, benzene, carbon disulfide, methyl ethyl ketone, pyridine, and toluene were used for their solvent properties, and therefore meet the definition of an F-listed waste. Therefore, EPA hazardous waste numbers F001, F002, and F005 are assigned to waste stream ID-RF-S3114 (References D005, P076, and P540).

During the analytical data review of the "non-detect" observations for homogeneous solids data, Rocky Flats determined that the MDL exceeded the PRQL for 1,2-dichlorobenzene (F002) due to dilution. The dilution was due to high hydrocarbon content in the waste matrix that caused difficulties in analysis per the required methodology. Review of the Rocky Flats solid sampling data and reconsideration of process knowledge confirms that 1,2-dichlorobenzene was not an expected contaminant in this waste stream. Where a constituent has been identified and there is no or limited quantitative data available to demonstrate that the concentration of a constituent is below regulatory threshold levels, the applicable EPA HWN is applied to the waste stream. Therefore, EPA hazardous waste number F002 for 1,2-dichlorobenzene is included in waste stream ID-RF-S3114 (Reference P521).

Flammable F003-listed solvents, acetone, ethyl benzene, ethyl ether, methanol, and xylene were used at Rocky Flats and are potential contaminants of the organic setups waste. Homogeneous solids and/or headspace gas data from the Rocky Flats and/or INL 3,100 m^3

TRU Waste Programs detected acetone, butanol, methanol, and xylene in the organic setups waste. However, F003-listed solvents are listed solely for ignitability, and this waste stream does not exhibit the characteristic of ignitability because the solvents are not in liquid form. Therefore, this waste stream is not an F003-listed hazardous waste (References P052, P077, P507, and P521).
Nitrobenzene, an F004-listed constituent, was used for its solvent properties at Rocky Flats in 1967; however, this pre-dates the containers in this waste stream. Other documentation also identifies nitrobenzene as potentially present in IDC 003, but its specific use was not identified (References C517, D022, P052, and P538). Therefore, this waste stream is assigned EPA hazardous waste number D036 and is not an F004-listed hazardous waste.

K-Listed Waste

Waste stream ID-RF-S3114 does not contain hazardous waste from the specific sources in 40 CFR 261.32 and therefore is not a K-listed waste.

P- and U- Listed Waste

There is no documentation indicating that waste stream ID-RF-S3114 contains discarded commercial chemical products, off-specification species, container residues, or spill residues thereof (References P052, P077, P507, P521, and U099). This waste stream is therefore not a P- or U-listed hazardous waste as defined in 40 CFR 261.33.

Beryllium is regulated as a P-listed waste, but only as the commercial chemical product beryllium powder. Most of the beryllium used on site, primarily in Buildings 444 and 883, was in the form of metal (not powder). The exception is experimental work in Building 865 that involved pressing of the powder into shapes; however, only beryllium-contaminated oil from Building 865 was solidified. Therefore, waste stream ID-RF-S3114 is not a P015-listed waste (References P052 and P053).

The constituent 1,2-benzenedicarboxylic acid, bis (2-ethylhexyl) ester (Chemical Abstract Service [CAS] No. 117-81-7), also known as bis (2-ethylhexyl) phthalate, was detected as a tentatively identified compound (TIC) in Rocky Flats semi-volatile organic compound (SVOC) analysis of IDC 003. An evaluation to compare the TIC identification with AK was performed by Rocky Flats to determine if this TIC is a U-listed hazardous waste in this waste stream. This evaluation (which included the onsite use of bis [2-ethylhexyl] phthalate for filter testing and in vacuum pump oil) determined that this constituent was not present as an unused commercial chemical product. There is no evidence that bis (2-ethylhexyl) phthalate used on site for filter testing would have contributed to this waste stream; however, AK does indicate that the vacuum pump oil used in mass spectrometers in Buildings 707 and 777 may have been composed of this constituent and this oil may have been disposed of in the oil/solvent mixture feed to the Grease Plant process, but not as an unused product. Bis (2-ethylhexyl) phthalate is also a common plasticizer used in plastic, including the plastic bags/packaging used to package this waste. Accordingly, this waste stream is not a U028-listed hazardous waste (Reference P521).

Hydrofluoric acid (U134) was not identified as a potential chemical input to the waste stream.

Polychlorinated Biphenyls

Waste stream ID-RF-S3114 contains greater than 50 parts-per-million (ppm) polychlorinated biphenyls (PCBs) and is regulated as a Toxic Substances Control Act (TSCA) waste under 40

CFR 761. Based on written communications with the EPA, this waste is categorized as PCB Remediation Waste (References C505, C506, C519, C520, and P546).

Prohibited Items

Prohibited items potentially in this waste stream based on VE and RTR are sealed containers greater than four liters and liquids.

Based on a review of several waste packaging and inspection procedures, the drum and rigid liner lids were not vented, nor did the rigid liner lid contain a vent hole when the waste was shipped from Rocky Flats to INL (References P008, P026, P063, P064, P501, P502, P503, and P505). As the drums are retrieved for characterization, they are vented and aspirated to ensure equilibration of any gases that may have accumulated in the closed container.

Since this waste stream contains greater than 50 ppm PCBs, any residual liquids including containerized liquids, identified during RTR and/or VE are assumed to contain greater than 50 ppm PCBs (References P024, and U519). Certified RTR and/or VE are performed by CCP to ensure liquids do not exceed TSDF-WAC limits and to ensure the absence of sealed containers greater than four liters. Any container identified with liquids in excess of TSDF-WAC limits, or having unvented rigid liners will be segregated from the waste stream and will not be eligible for disposal at WIPP until the prohibited materials are removed and/or remediated (References P008, P024, P026, P063, P064, P501, P502, P503, P505, and U519).

Method for Determining Waste Material Parameter Weights per Unit of Waste

To estimate the waste material parameter weight percentages for waste stream ID-RF-S3114, data were obtained from CCP, AMWTP, and the WIPP Waste Information System (WWIS) database as of October 3, 2006. The CCP and AMWTP data were derived from RTR and VE of Rocky Flats absorbed organic liquid wastes by the CCP and AMWTP TRU waste certification programs at INL. The Rocky Flats WWIS data were derived from RTR and VE of Rocky Flats absorbed organic liquid wastes by the Rocky Flats TRU waste certification program.

A statistical analysis of the data was performed, the results of which are presented in Waste Stream ID-RF-S3114 Waste Material Parameters table.

Waste Stream ID-RF-S3114 Waste Material Parameters

Waste Material Parameter	Weight Percent	Weight Percent Range
Iron-based Metals/Alloys	0.53%	0 – 17.22%
Aluminum-based Metals/Alloys	0.0%	0 – 0.0%
Other Metals	<0.01%	0 – 2.44%
Other Inorganic Materials	1.96	0 – 7.28%
Cellulosics	0.02%	0 – 9.95%
Plastics (waste materials)	0.84%	0 – 5.06%
Rubber	<0.01%	0 – 8.36%
Organic Matrix	96.58%	75.65 – 100%
Inorganic Matrix	0.0%	0 – 0.0%
Soils/Gravel	<0.01%	0 – <0.01%

List of Any AK Sufficiency Determinations Requested for the Waste Stream

There are no AK sufficiency determination requests for this waste stream.

Transportation

This waste stream and its chemical constituents have been reviewed for consistency with listed TRUCON codes and they are consistent.

Beryllium

Beryllium may be present in the organic setups waste but only in particulate form as a trace contaminant. Analysis conducted by Rocky Flats shows that the UCL_{90} for beryllium in IDC 003 is 3.4 milligrams per kilogram (mg/kg) (Reference P521). Therefore, beryllium concentrations will be less than one percent by weight of the waste in each drum and less than 18.14 kilograms in any payload container, including ten drum overpacks.

Radionuclide Information

The radiological content of waste stream ID-RF-S3114 is based primarily on previous assay data. A summary of the potential radionuclides in waste stream ID-RF-S3114 has been compiled and provided in Waste Stream ID-RF-S3114 Radiological Characterization table. To determine isotopic ratios for waste stream ID-RF-S3114 as a whole, the average gram values for each radionuclide from the 3,100 m^3 Project data were first multiplied by the number of events to obtain the total gram value for each individual radionuclide. These totals were then divided by the total mass of all radioactive constituents in the waste stream and converted to a percentage. These results are listed as "Relative Weight %." As shown in the table, the two most prevalent radionuclides are U-238 and Pu-239 (Reference C502, D009, D025, P507).

Waste Stream ID-RF-S3114 Radiological Characterization

Radionuclide	Average Weight (g)	Events	Total Weight (g)	Relative Weight %	Expected Present
WIPP Required Radionuclides					
Americium-241	5.37E-03	152	8.16E-01	0.05%	Yes
Plutonium-238	1.78E-04	152	2.70E-02	<0.01%	Yes
Plutonium-239	1.36E+00	152	2.07E+02	12.13%	Yes
Plutonium-240	8.37E-02	152	1.27E+01	0.75%	Yes
Plutonium-242	5.20E-04	152	7.91E-02	<0.01%	Yes
Uranium-233	3.43E-02	1	3.43E-02	<0.01%	Yes
Uranium-234	2.59E-04	48	1.24E-02	<0.01%	Yes
Uranium-238	7.03E+01	21	1.48E+03	86.53%	Yes
Cesium-137	N/A	N/A	N/A	N/A	Yes
Strontium-90	N/A	N/A	N/A	N/A	Yes
Other Measured Radionuclides					
Plutonium-241	2.32E-03	152	3.52E-01	0.02%	Yes
Uranium-235	1.34E-01	66	8.85E+00	0.52%	Yes
Other Potentially Present Radionuclides					
Americium-240	Californium-252	Neptunium-237	Thorium-228	Uranium-232	
Americium-243	Curium-244	Tritium (H-3)		Uranium-236	

Payload management will be implemented in accordance with the WIPP Waste Acceptance Criteria, Appendix E. Prior to 1982, TRU waste was defined as containing greater than 10 nCi/g TRU alpha contamination. In 1982, the DOE redefined TRU waste as materials contaminated with greater than or equal to 100 nCi/g TRU alpha. Much of the TRU wastes (based on these definitions) were shipped to the INL. This entire population has been managed as TRU waste since receipt at the INL (Reference P513). Based on historical assay data from the waste generator, the percentage of IDC 003 drums above 100 nCi/g is 36 percent, and the percentage of the drums below 100 nCi/g is 64 percent (Reference P512). Each payload container shipped to WIPP will be certified as containing more than 100 nCi/g of alpha emitting isotopes with half-lives greater than 20 years.

AK Source Documents

Source Document Number	Title
C032	External letter from J. K. Paynter to J. N. Davis, Idaho National Engineering Laboratory. Data Package Information Change for Drum D40197-0743-18283
C039	Internal Correspondence from J. K. Paynter to B. C. Barrett
C057	Drum, gasket, liner usage at RFP compiled by Larry Bearly
C086	Memorandum from Jeff Paynter to Pamela of IT Corporation. Use of the Complexing Agent DHDECMP
C130	Fax from Steve Cunningham, Rocky Flats, to Jeff Paynter
C134	Interview Record and associated documentation of several former Rocky Flats employees
C137	Interview Record of E. Putzier and E. Vejvoda by D. Herrick and J. Lamb
C154	Interview Record of W. V. Conner by T Widner and D. Lamb
C159	Interview Record of R. Hoffman by D. Herrick and J. Lamb
C170	Telecon between Al Morgan of Rocky Flats (retired) and Jeff Harrison
C171	Telecon between Bill Connor of Kaiser-Hill LATO and Jeff Harrison
C184	Interview Record of Al Morgan by Jeff Harrison
C185	Telecon between Bill Connor of LAPO and Jeff Harrison
C207	Summary of Review of PCB AK Sources
C502	Letter from John A. Ciucci to Joseph A. Legare. Resolution of Cesium-137 AK Discrepancy Between Rocky Flats Environmental Technology Site and Idaho National Engineering and Environmental Laboratory
C505	Letter from Cynthia Zvonar, Department of Energy Carlsbad Field Office, to Lou E. Roberts, Environmental Protection Agency
C506	Letter from John H. Smith, Environmental Protection Agency, to Lynne Smith, Department of Energy WIPP Office Director, EM-23
C510	E-mail Correspondence from Murthy Devarakonda to Michael Rivera. Subject: IDC 003 Packaging
C511	Record of Communication with Mark Crocker. Subject: OASIS Waste Packaging
C514	Email from Mike Rivera to Kathy Leonard, "WMF-633 ARP Drums"
C515	Email from Whitney St Michel to Barbara Broomfield, Vince Medina, Bill Verlanic, "RF-003 Treated Drums"
C516	Letter to Vincent C. Vespe, "Request for Approval - Shipments of Radioactive Waste in 55-Gallon Steel Drums"
C517	Earliest Pack Date for Rocky Flats Waste Retrieved From Pits 11 and 12
C518	Email from Jason P. Lance to Jim Vernon, "RF-743 Summary"
C519	Letter from Scott Raish, AMWTP, to Dave Wessman, U.S. DOE Idaho, "Toxic Substances Control Act Application for a Risk-Based Disposal Approval to Process Radiologically Contaminated Liquids Containing Polychlorinated Biphenyls-SCR-003-07
C520	Letter from Michael Bussell, U.S. EPA, to David Wessman, U.S. DOE Idaho, "Approval of the (TSCA) RBDA Application for Management of Transuranic PCB Remediation Waste at AMWTP Facility

Source Document Number	Title
C521	Memorandum to CCP Records: Waste Stream Volume Adjustment for Waste Stream ID-RF-S3114, Rocky Flats Organic Setups Waste, Shipped in 85-Gallon Drums
C522	Internal Memo re: Evaluation of Chemicals Used in the Sludge Repackage Project for Waste Streams ID-RF-S3114 and ID-RF-S3150-A, Rocky Flats Absorbed and Solidified Organic Liquids Waste
D004	Discrepancy Resolution for Waste Matrix Code Assignments for Waste Streams ID-RF-S3114 and ID-RF-S3150-A
D005	Discrepancy Resolution for EPA Hazardous Waste Number Assignments for Waste Streams ID-RF-S3114 and ID-RF-S3150-A, Rev. 1
D009	Discrepancy Resolution for Cs-137 and Sr-90 in Rocky Flats TRU Waster
D013	Discrepancy Resolution. Incorrect Waste Matrix Code
D014	Discrepancy Resolution. Incorrect Waste Matrix Code
D019	Discrepancy Resolution. Liquids Identified During Characterization
D022	Discrepancy Resolution. Solvent Use of Nitrobenzene
D023	Graphite in Waste
D024	Discrepancy Resolution. Addition of EPA Hazardous Waste Number D008 to Waste Stream ID-RF-S3114.
D025	Discrepancy Resolution. Addition of EPA Hazardous Waste Number D008 to Waste Stream ID-RF-S3150-A
M001	Memorandum to CCP Records: Addition of Containers to Waste Stream ID-RF-S3114
M003	RTR Analysis Report
M004	Material Safety Data Sheet for Fabric
P001	TRU Waste Compliance Program for WIPP-WAC (U)
P002	Organic and Sludge Immobilization System
P004	Rocky Flats Plant Waste Management Site Plan
P008	Packaging and Handling Line- and Nonline-Generated Materials (U)
P012	TRUPACT-II Content Codes (TRUCON)
P013	EG&G Sampling Program Results FY1987
P014	TRU Waste Certification Program for WIPP-WAC (U)
P015	TRU Waste Sampling Program: Volume I-Waste Characterization
P016	Idaho National Engineering Laboratory Code Assessment of the Rocky Flats Transuranic Waste
P020	Characteristics of Transuranic Waste at Department of Energy Sites

Source Document Number	Title
P022	EG&G Sampling Program Results FY1989
P023	(Task 5 Draft Report) Estimating Historical Emissions from Rocky Flats (Partial)
P024	Content Code Assessments for INEL Contact-Handled Stored Transuranic Wastes
P026	Transuranic Solid Waste Inspection (U)
P033	Summary of Transuranic Waste Characterization Programs at the INEL (1979-Present)
P043	TRU Waste Compliance Program for WIPP-WAC (U)
P052	Backlog Waste Reassessment Baseline Book
P053	(Tasks 3&4 Final Draft Report) Reconstruction of Historical Rocky Flats Operations and Identification of Release Points
P060	Waste Stream and Residue Identification and Characterization Building 707
P061	Waste Stream and Residue Identification and Characterization Building 771
P062	Waste Stream and Residue Identification and Characterization Building 779
P063	Packaging Wastes for Shipment Offsite (U)
P064	Waste Packaging Requirements
P066	Material Safety Data Sheets for Envirostone Accelerator, Envirostone Emulsifier, and Envirostone Gypsum Cement
P069	Nuclear Materials Control Elements printout. SAN Database Report
P076	Waste Stream and Residue Identification and Characterization Building 559
P077	Waste Stream Residue Identification and Characterization Building 774
P078	Waste Stream Residue Identification and Characterization Building 776
P079	Waste Stream Residue Identification and Characterization Building 777
P081	Waste Stream Residue Identification and Characterization Building 371
P082	Waste Stream Residue Identification and Characterization Building 374
P084	Material Safety Data Sheet for Varsol 1
P089	Waste Systems Progress Report March 1984 through February 1985
P090	History of Rocky Flats Waste Streams
P091	Materials Hazards Manual
P142	Material Safety Data Sheet for ZL-22A Zyglo Penetrant
P152	Plutonium Metal Feed Specification for Use in the Weapons Program. Volume 1
P161	Dose Reconstruction Project Task 5
P164	A History of The Rocky Flats Plutonium/Actinide Recovery Plant 1952-1991
P166	Rocky Flats Risk Assessment Guide
P167	Neptunium Processing at the Rocky Flats Plant
P169	Plutonium Isotopic Ratios at Rocky Flats
P178	Research and Development Quarterly Progress Report. October, November, and December 1968
P179	Research and Development Quarterly Progress Report. April, May, and June 1969

Source Document Number	Title
P180	Research and Development Quarterly Progress Report. July, August, and September 1969
P181	Research and Development Quarterly Progress Report. January, February, and March 1970; Chemistry
P182	Research and Development Quarterly Progress Report. April, May, and June 1970; Chemistry
P183	Research and Development Quarterly Progress Report. July, August, and September 1970; Chemistry
P184	Research and Development Quarterly Progress Report. October, November, and December 1970; Chemistry
P185	Research and Development Quarterly Progress Report. January, February, and March 1971; Chemistry
P186	Research and Development Quarterly Progress Report. April, May, and June 1971; Chemistry
P187	Research and Development Quarterly Progress Report. July, August, and September 1971
P188	Research and Ecology Annual Report. Chemistry Research and Development
P189	Research and Ecology Semi-Annual Progress Report January – June 1972
P190	Research and Ecology Semi-Annual Progress Report. Chemistry Research and Development. July through December 1972
P191	Research and Ecology Semi-Annual Progress Report. Chemistry Research and Development. January-June 1973
P192	Research and Ecology Semi-Annual Progress Report. Chemistry Research and Development. July-December 1973
P193	Research and Development Semi-Annual Progress Report for July through December 1974; Chemistry
P194	Research and Development Semi-Annual Progress Report for January through June 1975
P195	Research and Development Semi-Annual Progress Report for January through June 1977
P196	Chemistry Research and Development Annual Progress Report November 1, 1979 through October 31, 1980
P197	Chemistry Research and Development Annual Progress Report November 1, 1980 to September 30, 1981
P198	Chemistry Research and Development Annual Progress Report. October 1, 1981 to September 30, 1982
P199	Chemistry Research and Development Annual Progress Report October 1, 1982 to September 30, 1983
P200	Chemistry Research and Development Annual Progress Report October 1, 1983 to September 30, 1984
P201	Chemistry Research and Development Annual Progress Report October 1, 1984 through September 30, 1985
P202	Chemistry R&D Monthly Progress Report

Source Document Number	Title
P210	Default Plutonium Mass Fractions for Rocky Flats Plant Waste
P227	Plutonium Mass Fractions Derived from SGRS Data
P501	Packaging Waste for Shipment Offsite
P502	Packaging and Handling Plutonium Wastes and Residues
P503	Packaging Wastes for Shipment Off-Site
P504	Packaging Waste for Shipment Offsite
P505	Procedure for Packaging and Handling Pu Waste and Residue Drums
P507	Acceptable Knowledge Document for INEEL Stored Transuranic Waste – Rocky Flats Plant Waste
P508	Radioactive Waste Management Complex Map Drawing
P509	Radioactive Waste Management Complex – Idaho Completion Project
P512	Waste Description Information for Transuranically Contaminated Wastes Stored at Idaho National Engineering Laboratory.
P513	Determination of Radioisotopic Content In TRU Waste Based on Acceptable Knowledge.
P515	Estimated Earthen and Geofabric Covered TRU Waste Inventory in the TSA at Radioactive Waste Management Complex (RWMC)
P516	Advanced Mixed Waste Treatment Project Waste Stream Designations
P517	Material Safety Data Sheet, Micro-Cel® E (All Grades)
P518	Material Safety Data Sheets for Various Texaco Oils and Shell Vitrea M Oil
P519	Waste Systems Progress Report March 1983 through February 1984
P520	Building Histories for Building 371, 444, 447, 460, 707, 771, 776/777, 881, 883, and 991 Historical Release Report (HRR)
P521	Rocky Flats Environmental Technology Site WIPP Waste Stream Profile Form, TRM Solidified Organic Waste
P522	Rocky Flats Environmental Technology Site WIPP Waste Stream Profile Form, TRM Solidified Organic Waste
P524	Determination of H2 Diffusion Rates through Various Closures on TRU Waste Bag-Out Bags
P532	Summary of Rocky Flats Waste Buried in the Subsurface Disposal Area
P534	Shipment And Disposal Of Solidified Organic Waste (Waste Type IV) TO The Waste Isolation Pilot Plant (WIPP), Presented at WM'06 Conference, February 26-March 2, 2006, Tucson, AZ.
P535	Drum Treatment Facility Operations
P536	Visual Examination of S3000 Waste in the Facility

Source Document Number	Title
P537	Subsurface Disposal Area (SDA) Waste Identification (1952-1970 Emphasis)
P538	Colorimetric Determination of Iron in Plutonium Metal Using a Nitrobenzene Extraction Technique
P539	Acceptable Knowledge Document for INL Stored Transuranic Waste – Rocky Flats Plant
P540	Acceptable Knowledge Re-evaluation Checklist, CCP-TP-005, Attachment 10, 3/28/06
P541	WMF-615 Filter Insertion Operations
P542	SRP DPS Waste Packaging
P543	SRP RA V Waste Processing
P544	WMF-1617 SRP-Support Systems
P545	RWMC Waste Handling and Overpacking
P546	Risk-Based Disposal Approval Application for Management of Polychlorinated Biphenyl (PCB) Remediation Waste Contaminated with Transuranic Radioisotopes at the Idaho Cleanup Project (ICP) Accelerated Retrieval Project V (ARP V) Facility
P547	RWMC-55 Gallon Drum Assembly
U010	OASIS Solidification and Off Gas Analysis
U040	Building 774 Low Level Organic and TRU-Waste Organic Waste Log Book.
U043	Building 774 Set Up Log Book
U059	Drum Prefix Numbers and Corresponding Material Balance Areas
U064	Radioactive Materials Associated with Rocky Flats
U069	Drum Prefix Issue Dates Log Book
U092	Inventory values as generated by TRIPS Change Request (TCR) 1821
U098	Preliminary data for the IDC 003 waste stream
U099	Draft Waste Stream Profile Form – Solidified Organics and Supporting Documentation
U505	Rocky Flats Prefix History Timeline
U517	Advanced Mixed Waste Treatment Project (AMWTP) Visual Examination (VE) Data Sheets
U518	Advanced Mixed Waste Treatment Project (AMWTP) Glove Box Glove Specifications
U519	Excerpts of CCP Nonconformance Reports (NCRs) for Prohibited Liquids
U520	Att 1 - CCP Waste Visual Examination Technique Data Form SCO#798 Addendum 5 Windows XP 2002 MS Excel 2003

NWP
Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA

CP:13:01013
UFC:5900.00

GEN2

INTER-OFFICE CORRESPONDENCE

DATE: January 10, 2013

FROM: J. A. Vernon LOCATION: CCP Certification

TO: NTP Records Custodian GSA-212 LOCATION: National TRU Program Certification

SUBJECT: TRANSMITTAL OF IDAHO NATIONAL LABORATORY CHARACTERIZATION INFORMATION SUMMARY FOR WASTE STREAM #ID-RF-S5300-A, LOT 137

Please accept the attached Idaho National Laboratory Characterization Information Summary to be placed in records for Waste Stream #ID-RF-S5300-A, Lot 137.

JAV:jmc

Attachment

cc: (without attachment)
R. Kantrowitz ED

CCP RECORDS ORIGINAL
DATE REC'D 1-11-13

CHARACTERIZATION INFORMATION SUMMARY

WSPF # ID-RF-S5300-A

Lot 137

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CCP Characterization Information Summary Cover Page

Waste Stream # ID-RF-S5300-A Lot #: 137

AK Expert Review: N/A Date: N/A

SPM Review: Jim Vernon Date: 11/20/2012

SPM signature certifies that through Acceptable Knowledge testing and/or analysis that the waste identified in this summary is not corrosive, ignitable, reactive, or incompatible with the TSDF.

A summary of the Acceptable Knowledge regarding this waste stream containing specific information about the corrosivity, reactivity, and ignitability of the waste stream is included as an attachment to the Waste Stream Profile Form. By reference, that information is included in this lot.

List of procedures used:

Radiography (RTR/NDE):

CCP-TP-053	Rev. 12	08/22/12	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
CCP-TP-053	Rev. 11	07/20/11	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
CCP-TP-053	Rev. 10	03/04/11	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
CCP-TP-053	Rev. 9	09/30/10	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
CCP-TP-053	Rev. 8	06/30/10	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
CCP-TP-053	Rev. 7	10/21/09	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
CCP-TP-053	Rev. 6	03/04/08	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
CCP-TP-053	Rev. 5	11/16/06	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
CCP-TP-053	Rev. 4	12/22/05	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
CCP-TP-053	Rev. 3	03/21/05	CCP Standard Real-Time Radiography (RTR) Inspection Procedure

Non Destructive Assay (NDA):

CCP-TP-109	Rev. 8	08/10/11	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 7	01/26/11	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 6	03/16/09	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 5	11/16/06	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 4	09/21/05	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 3	04/12/05	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 2	03/18/05	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 1	05/06/04	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-115	Rev. 4	06/24/09	CCP SWEPP Gamma-Ray Spectrometer (SGRS) Operating Procedure
CCP-TP-115	Rev. 3	12/08/06	CCP SWEPP Gamma-Ray Spectrometer (SGRS) Operating Procedure
CCP-TP-115	Rev. 2	06/12/06	CCP SWEPP Gamma-Ray Spectrometer (SGRS) Operating Procedure
CCP-TP-115	Rev. 1	04/15/05	CCP SWEPP Gamma-Ray Spectrometer (SGRS) Operating Procedure
CCP-TP-115	Rev. 0	02/27/05	CCP SWEPP Gamma-Ray Spectrometer (SGRS) Operating Procedure
CCP-TP-019	Rev. 5	09/16/09	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
CCP-TP-019	Rev. 4	10/19/06	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
CCP-TP-019	Rev. 3	06/15/06	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
CCP-TP-019	Rev. 2	06/10/05	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
CCP-TP-019	Rev. 1	04/16/05	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
CCP-TP-019	Rev. 0	02/27/05	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
CCP-TP-097	Rev. 8	04/11/07	Operating the CCP Tomographic Gamma Scanner (TGS)
CCP-TP-097	Rev. 7	11/16/06	Operating the CCP Tomographic Gamma Scanner (TGS)
CCP-TP-097	Rev. 6	04/26/06	Operating the CCP Tomographic Gamma Scanner (TGS)
CCP-TP-097	Rev. 5	03/21/06	Operating the CCP Tomographic Gamma Scanner (TGS)
CCP-TP-097	Rev. 4	01/23/06	Operating the CCP Tomographic Gamma Scanner (TGS)
CCP-TP-097	Rev. 3	07/22/05	Operating the CCP Tomographic Gamma Scanner (TGS)
CCP-TP-097	Rev. 2	04/15/05	Operating the CCP Tomographic Gamma Scanner (TGS)
CCP-TP-097	Rev. 1	04/12/05	Operating the CCP Tomographic Gamma Scanner (TGS)
CCP-TP-097	Rev. 0	02/27/05	Operating the CCP Tomographic Gamma Scanner (TGS)

Headspace Gas Sampling and Analysis (HSG):

CCP-TP-093	Rev. 16	09/07/11	CCP Sampling of TRU Waste Containers
CCP-TP-093	Rev. 15	03/10/11	CCP Sampling of TRU Waste Containers
CCP-TP-093	Rev. 14	12/29/10	CCP Sampling of TRU Waste Containers
CCP-TP-093	Rev. 13	03/19/07	CCP Sampling of TRU Waste Containers
CCP-TP-093	Rev. 12	02/12/07	CCP Sampling of TRU Waste Containers
CCP-TP-093	Rev. 11	11/16/06	CCP Sampling of TRU Waste Containers
CCP-TP-093	Rev. 10	09/11/06	CCP Sampling of TRU Waste Containers
CCP-TP-093	Rev. 9	08/21/06	CCP Sampling of TRU Waste Containers
CCP-TP-093	Rev. 8	12/22/05	CCP Sampling of TRU Waste Containers
CCP-TP-093	Rev. 7	06/29/05	CCP Sampling of TRU Waste Containers
CCP-TP-093	Rev. 6	04/15/05	CCP Sampling of TRU Waste Containers
CCP-TP-093	Rev. 5	03/22/05	CCP Sampling of TRU Waste Containers
CCP-TP-093	Rev. 4	03/11/05	CCP Sampling of TRU Waste Containers
CCP-TP-093	Rev. 3	02/26/05	CCP Sampling of TRU Waste Containers
CCP-TP-106	Rev. 7	12/28/10	CCP Headspace Gas Sampling Batch Data Report Preparation
CCP-TP-106	Rev. 6	07/12/07	CCP Headspace Gas Sampling Batch Data Report Preparation
CCP-TP-106	Rev. 5	11/16/06	CCP Headspace Gas Sampling Batch Data Report Preparation
CCP-TP-106	Rev. 4	08/21/06	CCP Headspace Gas Sampling Batch Data Report Preparation
CCP-TP-106	Rev. 3	04/15/05	CCP Headspace Gas Sampling Batch Data Report Preparation
CCP-TP-106	Rev. 2	03/03/05	CCP Headspace Gas Sampling Batch Data Report Preparation
ACMM-9910	Rev. 7	04/24/06	Analysis of Gas Samples for VOCs by GC/FID
ACMM-9910	Rev. 6	04/15/04	Analysis of Gas Samples for VOCs by GC/FID

CIS-002

CCP Characterization Information Summary Cover Page

ACMM-9925	Rev. 2	05/13/06	Analysis of Gas Samples for Hydrogen and Methane by GC/TCD
ACMM-9925	Rev. 1	04/20/04	*Analysis of Gas Samples for Hydrogen and Methane by GC/TCD*
ACMM-9930	Rev. 9	02/16/06	Analysis of Gas Samples for VOCs by GC/MS
ACMM-9930	Rev. 8	07/10/03	Analysis of Gas Samples for VOCs by GC/MS

Visual Examination (VE):

HFEF-01-6890	Rev. 5	04/07/03	WCP Visual Examination
W0102-0168-AP	Rev. 5	04/15/03	*NT-AP-09 TWCP Visual Exam Expert (VEE) Functions and Process*
INST-OI-34	Rev. 11 FC1	07/21/05	Visual Examination Operating Procedures and Data Reporting

Project Level Data Validation / DQO Reconciliation:

CCP-TP-001	Rev. 20	09/27/12	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 19	12/29/10	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 18	08/09/10	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 17	09/24/07	*CCP Project Level Data Validation and Verification*
CCP-TP-001	Rev. 16	04/26/07	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 15	11/22/06	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 14	11/16/06	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 13	07/21/06	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 12	05/25/06	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 11	03/23/05	CCP Project Level Data Validation and Verification
CCP-TP-002	Rev. 24	12/28/11	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 23	12/29/10	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 22	06/30/10	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 21	09/04/09	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 20	08/18/08	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 19	12/22/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 18	11/16/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 17	10/11/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 16	06/06/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 15	08/16/05	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-003	Rev. 19	11/02/12	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 18	12/29/10	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 17	11/09/09	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 16	10/02/07	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 15	11/16/06	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 14	09/03/03	CCP Sampling Design and Data Analysis for RCRA Characterization
CCP-TP-005	Rev. 24	11/28/11	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 23	06/30/11	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 22	04/21/11	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 21	12/29/10	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 20	11/01/10	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 19	07/06/10	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 18	11/16/06	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 17	06/05/06	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 16	02/27/06	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 15	03/31/05	CCP Acceptable Knowledge Documentation
CCP-TP-030	Rev. 31	11/19/12	CCP CH TRU Waste Certification and WWIS/WDS Data Entry
CCP-TP-030	Rev. 30	05/21/12	CCP CH TRU Waste Certification and WWIS/WDS Data Entry
CCP-TP-030	Rev. 29	04/26/11	CCP CH TRU Waste Certification and WWIS/WDS Data Entry
CCP-TP-030	Rev. 28	05/12/10	CCP CH TRU Waste Certification and WWIS/WDS Data Entry
CCP-TP-030	Rev. 27	12/17/09	CCP CH TRU Waste Certification and *WWIS Data Entry*
CCP-TP-030	Rev. 26	05/27/09	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 25	01/22/09	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 24	08/20/08	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 23	03/12/08	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 22	07/24/07	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 21	05/21/07	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 20	02/07/07	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 19	11/16/06	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 18	05/01/06	*CCP TRU Waste Certification and WWIS Data Entry*
CCP-TP-030	Rev. 17	12/29/05	CCP TRU Waste Certification and WWIS Data Entry

WAP Certification:

CCP-PO-001	Rev. 20	06/16/11	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 19	12/29/10	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 18	06/30/10	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 17	06/23/09	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 16	10/31/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 15	08/08/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 14	03/28/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 13	11/16/06	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 12	03/22/06	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 11	03/10/05	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-002	Rev. 26	07/14/11	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 25	12/29/10	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 24	06/30/10	*CCP Transuranic Waste Certification Plan*
CCP-PO-002	Rev. 23	01/12/10	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 22	01/12/10	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 21	01/26/09	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 20	11/02/07	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 19	05/22/07	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 18	11/16/06	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 17	11/16/06	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 16	11/16/06	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 15	03/22/06	*CCP Transuranic Waste Certification Plan*
CCP-PO-002	Rev. 14	12/29/05	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 13	05/09/05	CCP Transuranic Waste Certification Plan

CIS-003

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-RF-S5300-A

Lot # 137

Container ID Number	Historical Container ID	NDA BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Transportation Headspace Gas BDR			
							Sample	Analysis		
10101976	N/A	INNDAW080220	INRTR5080079	N/A	N/A	Yes	IN08FG1150	INHSG1204	ECL12029M	N/A
10102259	N/A	INNDAW080220	INRTR5080079	N/A	N/A	Yes	IN08FG1150	INHSG1204	ECL12029M	N/A
10102536	N/A	INNDAW120056	INRTR5120005	N/A	N/A	Yes	IN12FG5064	INHSG1204	ECL12029M	N/A
10124637	N/A	INNDAW120042	INRTR5120004	N/A	N/A	Yes	IN12FG5064	INHSG1204	ECL12029M	N/A
10127573	N/A	INNDAS060270	INRTR5060420	N/A	N/A	Yes	IN07FG1123	INHSG1204	ECL12029M	N/A
10153146	N/A	INNDAS070115	INRTR5070079	N/A	N/A	No	IN07FG1142	N/A	N/A	N/A
10181543	N/A	INNDAW070162	INRTR5070124	N/A	N/A	Yes	IN07FG1230	N/A	N/A	N/A
10186445	N/A	INNDAW080075	INRTR5080040	N/A	N/A	Yes	IN08FG6154	INHSG1204	ECL12029M	N/A
10195143	N/A	INNDAW070207	INRTR5070158	N/A	N/A	Yes	IN10FG5054	N/A	N/A	N/A
10196053	N/A	INNDAW080024	INRTR5080016	N/A	N/A	Yes	IN10FG5054	N/A	N/A	N/A
10201839	N/A	INNDAW080044	INRTR5080026	N/A	N/A	Yes	IN10FG5054	N/A	N/A	N/A
10215731	N/A	INNDAW080135	INRTR5080054	N/A	N/A	Yes	IN10FG5054	N/A	N/A	N/A
10217850	N/A	INNDAW120042	INRTR5120004	N/A	N/A	Yes	IN12FG5064	INHSG1204	ECL12029M	N/A
10221733	N/A	INNDAW080248	INRTR5080082	N/A	N/A	No	IN08FG5119	INHSG1204	ECL12029M	N/A

Signature of Site Project Manager

Jim Vernon
Printed Name

11/20/2012
Date

085 - 040

CCP Headspace Gas UCL_{90} Evaluation Form

CCP Data Analysis for S3000, S4000, and S5000 Characterization

WSPF #: ID-RF-S5300-A

Waste Stream Lot Number 1 through 2

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples (2)	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Acetone	Log	10	12	5.14	2.97	1.55	3.58	100	4.61		
Benzene	Log	0	10	1.57	-0.18	1.33	0.40	10	2.30		
Bromoform	Log	0	12	1.44	-0.69	1.46	-0.12	10	2.30		
Butanol	Log	7	12	3.00	1.50	0.96	1.88	100	4.61		
Carbon Disulfide (a)	SQRT	8	9	12.25	6.18	3.68	7.89	10	3.16	Yes	F005
Carbon Tetrachloride	Log	1	11	1.60	-0.25	1.50	0.37	10	2.30		
Chlorobenzene	Log	0	10	1.15	-0.44	1.30	0.13	10	2.30		
Chloroform	Log	2	10	4.79	0.29	2.04	1.19	10	2.30		
Chloromethane (a)	Log	1	7	1.93	0.10	1.17	0.74	10	2.30		
Cyclohexane (a)	Log	7	10	3.58	1.41	0.97	1.83	10	2.30		
1,1-Dichloroethane	Log	2	10	3.64	0.45	1.85	1.26	10	2.30		
1,2-Dichloroethane	Log	0	10	1.36	-0.50	1.35	0.09	10	2.30		
1,1-Dichloroethylene	Log	1	9	1.59	-0.08	1.25	0.50	10	2.30		
cis-1,2-Dichloroethylene	Log	0	10	1.44	-0.17	1.30	0.40	10	2.30		
trans-1,2-Dichloroethylene	Log	0	10	1.57	-0.06	1.29	0.50	10	2.30		
1,2-Dichloropropane (a)	Log	7	13	8.91	2.24	3.85	3.69	10	2.30	Yes	(3)
Ethyl benzene	Log	2	10	1.57	0.15	1.12	0.64	10	2.30		
Ethyl Ether	No	0	7	1.35	0.90	0.48	1.17	100	10.00		
Methanol	Log	1	14	4.61	1.95	0.84	2.26	100	4.61		
Methyl Ethyl Ketone	No	5	12	18.00	6.45	4.76	8.32	100	100.00		
Methyl Isobutyl Ketone	Log	2	12	1.95	0.03	1.39	0.58	100	4.61		
Methylene Chloride	Log	8	12	11.33	3.67	4.32	5.37	10	2.30	Yes	F002
1,1,2,2-Tetrachloroethane	Log	0	11	1.61	-0.23	1.35	0.33	10	2.30		
Tetrachloroethylene	Log	2	11	4.54	0.25	2.11	1.12	10	2.30		
Toluene	SQRT	8	11	5.29	3.24	1.42	3.83	10	3.16	Yes	F005
1,1,1-Trichloroethane	Log	6	11	7.00	2.04	3.45	3.47	10	2.30	Yes	F001, F002
Trichloroethylene	Log	10	12	6.91	2.61	2.71	3.68	10	2.30	Yes	F002
Trichlorofluoromethane (a)	No	0	2	3.25	1.90	1.91	6.05	10	10.00		
1,1,2-Trichloro-1,2,2-trifluoroethane	SQRT	3	11	2.59	1.42	0.82	1.76	10	3.16		
1,3,5-Trimethylbenzene (a)	Log	0	10	1.27	-0.38	1.29	0.19	10	2.30		
1,2,4-Trimethylbenzene (a)	Log	0	10	1.15	-0.46	1.30	0.11	10	2.30		
m/p-Xylene (b)	Log	4	11	3.40	0.31	1.56	0.96	10	2.30		
o-Xylene	Log	0	10	1.31	-0.32	1.29	0.25	10	2.30		
Formaldehyde[c]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hydrazine[d]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

CIS-005

CCP Headspace Gas UCL_{90} Evaluation Form

CCP Data Analysis for S3000, S4000, and S5000 Characterization

WSPF #: ID-RF-S5300-A **Waste Stream Lot Number** 1 through 2

[a] These compounds are from the TRAMPAC and are flammable VOCs that do not appear in the QAPjP or the WIPP WAP. These are not part of the target analyte list, but samples may be analyzed for these compounds.
[b] These xylene isomers cannot be resolved by the analytical methods employed in the program. m-Xylene and p-Xylene will be reported as "Total m-p-Xylene."
[c] Required only for homogenous solids and soil/gravel waste from Savannah River Site.
[d] Required only for homogenous solids and soil/gravel waste from Oak Ridge National Laboratory and Savannah River Site.

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per section B4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

(2) As a result of dilution requirements, several analytes were reported as non-detected with MDL values in excess of the PRQL. In accordance with Section B4-3d of the WIPP-WAP, such "U" flagged observations with elevated MDL values due to dilution were not used in calculating mean concentration. Consequently, the subject analytes were statistically evaluated using only the useable observations. For analytes with no useable data, there is no corresponding data to report on the UCL90 evaluation form. See the Headspace Gas/Volatile Organic Compound Information section of the AK Summation for assignment of Hazardous Waste Numbers per AK.

(3) There is no documentation in AK indicating that waste stream ID-RF-S5300-A contains discarded commercial chemical products, off-specification species, container residues, or spill residues thereof. This waste stream is therefore not a U-listed hazardous waste as defined in 40CFR261 and U083 is not assigned for 1,2-Dichloropropane.

Signature of Site Project Manager

Jim Vernon
Printed Name

11/20/2012
Date

Jan-SD

CCP Headspace Gas Summary Data

Waste Stream Number ID-RF-S5300-A Lot Number (s) 137

Tentatively Identified Compound	Maximum Observed Estimated Concentrations (ppmv)	# Samples Containing TIC	% Detected
NONE			

Data Supports EPA Hazardous Waste Numbers Assigned by AK? Yes ☑ No ☐

If no, describe the basis for assigning the EPA Hazardous Waste Codes:

SPM Signature _____ Date 11/20/2012

CDS-007

CCP RTR/VE Summary of Prohibited Items and AK Confirmation

Waste Stream Number: ID-RF-S5300-A Lot(s)#: 137

Container Number	RTR Prohibited Items [a,b]	Visual Examination Prohibited Items [a,b]
See correlation of container ID numbers for list of remaining drum numbers in this Lot.	None of the containers in this Lot had prohibited items identified during RTR technique.	VE was not used to certify any containers in this lot.

a. See Batch Data Reports
b. If AK has assigned U134 to this waste stream, then any liquids in these containers are prohibited items (not acceptable by the TSDF).

Justification for the selection of RTR and/or VE: RTR was selected as the characterization method for this lot because RTR meets all the Data Quality Objectives for NDE for the waste.

Site Project Manager Signature | Jim Vernon (Printed Name) | 11/20/2012 (Date)

CBS-008

CCP Reconciliation with Data Quality Objectives

WSF# ID-RF-S5300-A Lot # 137

Sampling Completeness

RTR:

Number of Valid Samples: 14 Number of Total Samples Analyzed: 14
Percent Complete: 100 (QAO is 100%)

NDA

Number of Valid Samples: 14 Number of Total Samples Analyzed: 14
Percent Complete: 100 (QAO is 100%)

HSG

Number of Valid Samples: 14 Number of Total Samples Collected: 14
Percent Complete: 100 (QAO is ≥90%)
Number of Valid Samples: 14 Number of Total Samples Analyzed: 14
Percent Complete: 100 (QAO is ≥90%)

Total VOC

Number of Valid Samples: NA Number of Total Samples Collected: NA
Percent Complete: NA (QAO is ≥90%)
Number of Valid Samples: NA Number of Total Samples Analyzed: NA
Percent Complete: NA (QAO is ≥90%)

Total SVOC

Number of Valid Samples: NA Number of Total Samples Collected: NA
Percent Complete: NA (QAO is ≥90%)
Number of Valid Samples: NA Number of Total Samples Analyzed: NA
Percent Complete: NA (QAO is ≥90%)

Total Metals

Number of Valid Samples: NA Number of Total Samples Collected: NA
Percent Complete: NA (QAO is ≥90%)
Number of Valid Samples: NA Number of Total Samples Analyzed: NA
Percent Complete: NA (QAO is ≥90%)

CBS-009

CCP Reconciliation with Data Quality Objectives

WSF# ID-RF-S5300-A Lot # 137

	Y/N/NA	Reconciliation Parameter
1	Y	Waste Matrix Code.
2	Y	Waste Material Parameter Weights.
3	Y	The waste matrix code identified is consistent with the type of sampling and analysis used to characterize the waste.
4	Y (1)	The TRU activity reported in the BDRs for each container demonstrates with a 95% probability that the container of waste contains TRU radioactive waste.
5	N	AK Sufficiency. Is there an approved AK sufficiency Determination for this waste stream?
6	Y	Mean concentrations, UCL90 values for the mean concentration, standard deviations, and the number of samples collected for each VOC in the HSG of each container were calculated and compared with the program required quantitation limits, as reported in CCP-TP-003 Attachment 3, and additional U.S. Environmental Protection Agency (EPA) Hazardous Waste Numbers were assigned as required. Samples were randomly collected (when appropriate).
7a	NA	Mean concentrations, UCL90 values for the mean concentration, standard deviations, and the number of samples collected for solids VOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003 Attachment 4, and additional EPA HWNs were assigned as required. Samples were randomly collected.
7b	NA	Mean concentrations, (UCL90) values for the mean concentration, standard deviations, and the number of samples collected for solids SVOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003 Attachment 5, and additional EPA HWNs were assigned as required. Samples were randomly collected.
7c	NA	Mean concentrations, UCL90 values for the mean concentration, standard deviations, and the number of samples collected for total metals were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003 Attachment 6, and additional EPA HWNs were assigned as required. Samples were randomly collected.

CES-010

CCP Reconciliation with Data Quality Objectives

WSF# ID-RF-S5300-A Lot # 137

8	Y	The data demonstrates whether the waste stream exhibits a toxicity characteristic under Title 40 Code of Federal Regulations (CFR), Part 261, Identification and Listing of Hazardous Waste, Subpart C, Characteristics of Hazardous Waste.
9	Y	Does the waste stream contain listed waste found in 20.4.1.200 NMAC incorporating 40 CFR Part 261, Subpart D, Lists of Hazardous Wastes.
10	Y	Waste stream can be classified as hazardous or nonhazardous at the 90-percent confidence level.
11	Y	Appropriate packaging configuration and Drum Age Criteria (DAC) is applied and documented in the headspace gas sampling documentation, and the drum age met prior to sampling.
12	Y	TICs were appropriately identified and reported in accordance with the requirements of Section B3-1 of the QAPjP.
13	Y	The PRQLs for headspace gas VOCs were met for all analyses as evidenced by the analytical batch data reports.
14		The overall completeness, comparability, and representativeness QAOs were met for each of the analytical and testing procedures as specified in the WAP Sections C3-2 through C3-9 prior to submittal of a waste stream profile form for a waste steam or waste stream lot.

	Completeness	Comparability	Representativeness
Radiography	Y	Y	Y
VE	NA	NA	NA
Headspace Gas Analysis	Y	Y	Y
Solids Sampling	NA	NA	NA
Solids VOCs	NA	NA	NA
Solids SVOCs	NA	NA	NA
Solids Metals	NA	NA	NA

Comments: (1) Not all containers in this Lot are > 100nCi/g Tru Alpha Activity concentration. All containers do contain measureable amounts of TRU isotopes, and will be Load Managed, whereby the payload assembly that the container will be shipped to WIPP in will be > 100 nCi/g TRU Alpha Activity concentration. These drums are identified on the "CCP Correlation of Container Identification Numbers to Batch Data Report Numbers".

Signature of Site Project Manager | Jim Vernon (Printed Name) | 11/20/2012 (Date)

CBS-011

DIVIDER

PAGE

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Washington
TRU Solutions LLC

CP:07:01274
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: June 6, 2007

FROM: B. J. Broomfield — LOCATION: Retrieval, Characterization & Transportation

TO: CCP Records Custodian GSA-103 — LOCATION: Retrieval, Characterization & Transportation

SUBJECT: SUBMISSION OF CHANGE NOTICE #2 FOR WASTE STREAM PROFILE FORM ID-RF-S5300-A

Enclosed is Change Notice #2 for the Waste Stream Profile Form (WSPF) ID-RF-S5300-A for waste stream Rocky Flats Environmental Technology Site Combustibles and Plastics stored at Idaho National Laboratory.

The WSPF was approved by DOE/CBFO on November 18, 2005. Change Notice #1 was approved on November 16, 2006.

BJB:jm

Enclosure

cc: (without enclosure)

R. R. Chavez, WRES ED
M. L. Sensibaugh, WTS ED

RFETS Combustibles and Plastics Stored at INL (ID-RF-S5300-A)
Change Notice #2
Update for WIPP Operating Record

Please add the following information to the WIPP Operating Record for Waste Stream Profile Form (WSPF) ID-RF-S5300-A. This waste stream is RFETS Combustibles and Plastics Stored at INL and was approved by DOE/CBFO on November 18, 2005. Change notice 1 was approved on November 16, 2006.

This WSPF is being revised. The WSPF components are bolded. The updates are:

1. **WSPF, Title, version, number, and date of documents used for WAP Certification**

   Update the following procedure revisions:

   CCP-PO-001, CCP Transuranic Waste Characterization Quality Assurance Project Plan, Revision 14, March 28, 2007

   CCP-PO-002, CCP Transuranic Waste Certification Plan, Revision 18, November 16, 2006

   CCP-PO-003, CCP Transuranic Authorized Methods for Payload Control, Revision 10, November 16, 2006

   CCP-PO-024, CCP/INL Interface Document, Revision 6, May 15, 2007.

2. **Summation of Aspects of AK Summary Report: ID-RF-S5300-A, Table 2-Radionuclides in Waste Stream:**

   Include (NA) after radionuclide Cs-137.

   Add U-236 to the list of Other Radionuclides.

Reason/Justification for the Change

Documents used for WAP certification have been updated to reflect the most recent revisions.

The radionuclide Cs-137 has been updated to include an (NA) because it is not expected to be present in the waste stream. The radionuclide U-236 has been added because it is expected to be present in the waste stream.

Update for the WIPP Operating Record (ID-RF-S5300-A) certification:
I hereby certify that I have reviewed this Update for WIPP Operating Record, and it is complete and accurate to the best of my knowledge. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Signature of Site Project Manager	Barbara Broomfield Printed Name and Title	5/17/07 Date

DIVIDER

PAGE

COPY

Washington
TRU Solutions LLC

CP:06:01187
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: April 18, 2006

FROM: R. R. Chavez — LOCATION: Retrieval, Characterization & Transportation

TO: CCP Records Custodian — LOCATION: Retrieval, Characterization & Transportation

SUBJECT: TRANSMITTAL OF WASTE STREAM PROFILE FORMS FOR WASTE STREAMS ID-RF-S5300-A, ID-RF-S5126, ID-RF-S3114, ID-RF-S3150-A, ID-RF-S5100-A

Please accept the subject waste stream profile forms to be placed in records for the Idaho National Laboratory.

RRC:jm

Enclosures (6)

cc: (without enclosures)
R. Chavez, WRES ED

CCP Waste Stream Profile Form

(1) Waste Stream Profile Number: ID-RF-S5300-A			
(2) Generator site name:	Idaho National Laboratory (INL) Radioactive Waste Management Complex	(4)Technical contact:	Barbara Broomfield
(3) Generator site EPA ID:	ID4890008952	(6) Technical contact phone number:	(208) 526-6965
(5) Date of audit report approval by NMED: September 19, 2005			
(7) Title, version number, and date of documents used for WAP Certification: CCP-PO-001, Rev 11, CCP Transuranic Waste Characterization Quality Assurance Project Plan, March 10, 2005 CCP-PO-002, Rev 13, CCP Transuranic Waste Certification Plan, May 9, 2005 CCP-PO-003, Rev 8, CCP-TRUPACT-II Authorized Methods for Payload Control, Jan 25, 2005 CCP-PO-024, Rev 3, CCP/BBWI Interface Document, April 29, 2005			
(8) Did your facility generate this waste?	YES	NO	X
(9) If no, provide the name and EPA ID of the original generator: Rocky Flats Environmental Technology Site, CO7890010526			
Waste Stream Information[1]			
(10) WIPP ID: IN-W169.191[3]		(11) Summary Category Group: S5000	
(12) Waste Matrix Code Group: Combustible Waste		(13) Waste Stream Name: RFETS Combustibles and Plastics Stored at INL	
(14) Description from the TWBIR: The waste stream is from Rocky Flats Plant and primarily consists of line- and nonline-generated dry combustible materials such as paper, rags, plastics, surgical gloves, cloth overalls and booties, cardboard, wood, wood filter frames, PE bottles, and laundry lint. Limited amounts of noncombustibles such as glass, concrete, cement, leaded glovebox gloves, batteries, and metal scrap may also be present.			
(15) Defense TRU Waste:	YES X	NO	
(16) Check One:	CH X	RH	
(17) Number of SWBs 0	(18) Number of Drums 26,000[4] 55-gal.	(19) Number of Canisters 0	
(20) Batch Data report numbers supporting this waste stream characterization: See Characterization Information summary (CIS) Correlation of Container Identification Numbers to Batch Data Report Numbers			
(21) List applicable EPA Hazardous Waste Codes:[2] D004, D005, D006, D007, D008, D009, D010, D011, D022, D028, D029, F001, F002, F005, F006, F007, F009			
(22) Applicable TRUCON Content Codes: ID 116, ID216			
(23)Acceptable Knowledge Information[1]			
[For the following, enter the supporting documentation used (i.e., references and dates)]			
Required Program Information			
(23A) Map of site: CCP-AK-INL-004, Rev. 1, October 6, 2005 Figures 1, 2 and 3			
(23B) Facility mission description: CCP-AK-INL-004, Rev. 1, October 6, 2005 Sections 2.0 and 4.2			
(23C) Description of operations that generate waste: CCP-AK-INL-004, Rev. 1, October 6, 2005 Section 4.3			
(23D) Waste identification/categorization schemes: CCP-AK-INL-004, Rev. 1, October 6, 2005 Section 4.5			
(23E) Types and quantities of waste generated: CCP-AK-INL-004, Rev. 1, October 6, 2005 Section 4.4.1			
(23F) Correlation of waste streams generated from the same building and process, as appropriate: CCP-AK-INL-004, Rev. 1, October 6, 2005 Section 4.4.2			
(24) Waste certification procedures: CCP-TP-030, Rev. 16, CCP TRU Waste Certification and WWIS Data Entry, April 22, 2005			
(25) Required Waste Stream Information			
(25A) Area(s) and building(s) from which the waste stream was generated: CCP-AK-INL-004, Rev. 1, October 6, 2005 Section 5.1			
(25B) Waste stream volume and time period of generation: CCP-AK-INL-004, Rev. 1, October 6, 2005 Section 5.2			

(25C) Waste generating process description for each building: CCP-AK-INL-004, Rev. 1, October 6, 2005 Section 4.3			
(25D) Process flow diagrams: CCP-AK-INL-004, Rev. 1, October 6, 2005 Section 4.3			
(25E) Material inputs or other information identifying chemical/radionuclide content and physical waste form: CCP-AK-INL-004, Rev. 1, October 6, 2005 Section 5.4.1			
(26) Which Defense Activity generated the waste: (check one)			
X	**Weapons activities including defense inertial confinement fusion**		**Naval Reactors development**
	Verification and control technology		**Defense research and development**
	Defense nuclear waste and material by products management		**Defense nuclear material production**
	Defense nuclear waste and materials security and safeguards and security investigations		
(27)Supplemental Documentation			
(27A) Process design documents: NA			
(27B) Standard operating procedures: See S2 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27C) Safety Analysis Reports: NA			
(27D) Waste packaging logs: See S4 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27E) Test plans/research project reports: See S5 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27F) Site databases: See S6 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27G) Information from site personnel: See S7 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27H) Standard industry documents: NA			
(27I) Previous analytical data: See S9 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27J) Material safety data sheets: NA			
(27K) Sampling and analysis data from comparable/surrogate Waste: NA			
(27L) Laboratory notebooks: NA			
Sampling and Analysis Information[2]			
For the following, when applicable, enter procedure title(s), number(s) and date(s)			
(28)	Radiography: See procedures listed on the attached CIS, CCP-TP-002, Attachment 3		
(29)	Visual Examination: See procedures listed on the attached CIS, CCP-TP-002, Attachment 3		
(30)	**Headspace Gas Analysis**		
(30A)	VOCs: See procedures listed on the attached CIS, CCP-TP-002, Attachment 3		
(30B)	Flammable: See procedures listed on the attached CIS, CCP-TP-002, Attachment 3		
(30C)	Other gases (specify): NA		
(31)	**Homogeneous Solids/Soils/Gravel Sample Analysis**		
(31A)	Total metals: NA		
(31B)	PCBs: NA		
(31C)	Total VOCs: NA		
(31D)	Nonhalogenated VOCs: NA		
(31E)	Semi-VOCs: NA		

CCP Waste Stream Profile Form

(31F)	Other (specify): NA
(32)Comments:	

Reviewed by AK Expert: YES [X] Date: 11-1-05

Reviewed by STR (if necessary): YES [X] NA [ ] Date: 11-4-05

Waste Stream Profile Form Certification:

I hereby certify that I have reviewed the information in this Waste Stream Profile Form, and it is complete and accurate to the best of my knowledge. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

(33)	(34) Barbara Broomfield	(35) 11/15/05
Signature of Site Project Manager	Printed Name	Date

NOTE:

(1) Use back of sheet or continuation sheets, if required.
(2) If radiography, visual examination, headspace gas analysis, and/or homogeneous solids/soils/gravel sample analysis were used to determine EPA Hazardous Waste Codes, attach signed Characterization Information Summary documenting this determination.
(3) The following WIPP ID numbers for RFETS Combustibles and Plastics also apply; IN-W169.192, IN-W169.985, IN-W197.196, IN-W197.802, IN-W197.803, IN-W196.202, IN-W196.203, IN-W196.804
(4) The total waste volume is approximately 26,000 drums. 2,689 55-gallon drums are currently available for characterization and processing by CCP.

CHARACTERIZATION INFORMATION SUMMARY

WSPF# ID-RF-S5300-A , LOT 1

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CCP Reconciliation with Data Quality Objectives 011

CCP Characterization Information Summary Cover Page

WSP: #: ID-RF-S5300-A Lot #: 1

SPQAO Review: Christine Gomez Date: 11/14/05

SPM Review: Mark Peercy Date: 11/14/05

SPQAO signature indicates that the information presented in this package is consistent with analytical batch reports.

SPM signature certifies that through Acceptable Knowledge testing and/or analysis that the waste identified in this summary is not corrosive, ignitable, reactive, or incompatible with the TSDF.

A summary of the Acceptable Knowledge regarding this waste stream containing specific information about the corrosivity, reactivity, and ignitability of the waste stream is included as an attachment to the Waste Stream Profile Form. By reference, that information is included in this lot.

List of procedures used:

Radiography (RTR/NDE)

CCP-TP-102 CCP Radiography Inspection Procedure, 09-08-2005, Rev 8
CCP-TP-102 CCP Radiography Inspection Procedure, 06-09-2005, Rev 7
CCP-TP-102 CCP Radiography Inspection Procedure, 04-05-2005, Rev 6

Non Destructive Assay (NDA):

CCP-TP-109 CCP Data Reviewing, Validating, and Reporting Procedure, 09-21-2005, Rev 4
CCP-TP-109 CCP Data Reviewing, Validating, and Reporting Procedure, 04-12-2005, Rev 3
CCP-TP-109 CCP Data Reviewing, Validating, and Reporting Procedure, 03-18-2005, Rev 2
CCP-TP-109 CCP Data Reviewing, Validating, and Reporting Procedure, 05-06-2004, Rev 1

CCP-TP-115 CCP SWEPP Gamma-Ray Spectrometer (SRGS) Operating Procedure, 04-15-2005, Rev 1
CCP-TP-115 CCP SWEPP Gamma-Ray Spectrometer (SRGS) Operating Procedure, 02-27-2005, Rev 0

CCP-TP-019 CCP Waste Assay Gamma Pectrometer (WAGS) Operating Procedure, 08-10-2005, Rev 2
CCP-TP-019 CCP Waste Assay Gamma Pectrometer (WAGS) Operating Procedure, 04-18-2005, Rev 1
CCP-TP-019 CCP Waste Assay Gamma Pectrometer (WAGS) Operating Procedure, 02-27-2005, Rev 0

Headspace Gas Sampling and Analysis (HSG):

CCP-TP-093 CCP Sampling of TRU Waste Containers, 06-29-2005, Rev 7
CCP-TP-093 CCP Sampling of TRU Waste Containers, 04-15-2005, Rev 6
CCP-TP-093 CCP Sampling of TRU Waste Containers, 03-22-2005, Rev 5
CCP-TP-093 CCP Sampling of TRU Waste Containers, 03-11-2005, Rev 4
CCP-TP-093 CCP Sampling of TRU Waste Containers, 02-28-2005, Rev 3

CCP-TP-106 CCP Headspace Gas Sampling Batch Data Report Preparation, 04-15-2005, Rev 3
CCP-TP-106 CCP Headspace Gas Sampling Batch Data Report Preparation, 03-03-2005, Rev 2

ACMM-9910, Analysis of Gas Samples for VOCs by GC/FID, 04-15-2004, Rev 6

ACMM-9925, Analysis of Gas Samples for Hydrogen and Methane by GC/TD, 04-20-2004, Rev 1

ACMM-9930, Analysis of Gas Samples for VOCs by GC/MS, 07-10-2003, Rev 8

Visual Examination (VE):

TWCP Visual Examination HFEF-01-6890 04/07/03, Rev 5

NT-AP-09 TWCP Visual Exam Expert (VEE) Functions and Process, W0102-0168-AP, 04/15/03, Rev 5

Project Level Data Validation / DQO Reconciliation:

CCP-TP-001 CCP Project Level Data Validation and Verification, 03/23/05 Rev 11

CCP-TP-002 CCP Reconciliation of DQOs and Reporting Characterization Data 09/16/05 Rev 15
CCP-TP-002 CCP Reconciliation of DQOs and Reporting Characterization Data 03/29/05 Rev 14

CCP-TP-003 CCP Sampling Design and Data Analysis for RCRA Characterization 9/3/03 Rev 14

CCP-TP-005 CCP Acceptable Knowledge Documentation 03/31/05 Rev 15

CCP-TP-030 CCP TRU Waste Certification and WWIS Data Entry 4/22/05 Rev 18

WAP Certification:

CCP-PO-001 CCP-TRU Waste Characterization Quality Assurance Project Plan 03/10/05 Rev 11

CCP-PO-002 CCP Transuranic Waste Certification Plan 05/09/05 Rev 13

Numbers to Batch Data Report Numbers

WSP: # ID-RF-S5300-A

Lot # 1

Container ID Number	Historical Container ID	Headspace Gas BDR				NDA BDR	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/Overpack Yes
		Sample	Analysis								
10000023	IDRF074608121	INHSGS050030	ECL05046C	ECL05045M	ECL05045G	INNDAW050018	INRTR2050015	NA	NA	NA	Yes
10000024	IDRF003900213	INHSGS050030	ECL05046C	ECL05045M	ECL05045G	INNDAW050018	INRTR2050015	NA	NA	NA	Yes
10000288	IDRF005500427	INHSGS050029	ECL05045C	ECL05045M	ECL05045G	INNDAS050021	INRTR2050015	NA	NA	NA	
10000289	IDRF005500400	INHSGS050020	ECL05032C	ECL05032M	ECL05032G	INNDAS050024	INRTR2050017	NA	NA	NA	
10000292	IDRF001701511	INHSGS050021	ECL05033C	ECL05033M	ECL05033G	INNDAW050020	INRTR2050017	NA	NA	NA	Yes
10000294	IDRF001701466	INHSGS050017	ECL05031C	ECL05031M	ECL05031G	INNDAW050021	INRTR2050014	NA	NA	NA	Yes
10000296	IDRF005500416	INHSGS050029	ECL05045C	ECL05045M	ECL05045G	INNDAS050021	INRTR2050015	NA	NA	NA	
10000306	IDRF000210239	INHSGS050020	ECL05032C	ECL05032M	ECL05032G	INNDAS050025	INRTR2050017	NA	NA	NA	Yes
10000327	IDRF002500409	INHSGS050020	ECL05032C	ECL05032M	ECL05032G	INNDAS050024	INRTR2050017	NA	NA	NA	
10000333	IDRF008903499	INHSGS050021	ECL05033C	ECL05033M	ECL05033G	INNDAW050020	INRTR2050017	NA	NA	NA	
10000351	IDRF003101083	INHSGS050017	ECL05031C	ECL05031M	ECL05031G	INNDAS050020	INRTR2050014	NA	NA	NA	
10000405	IDRF000236454	INHSGS050020	ECL05032C	ECL05032M	ECL05032G	INNDAS050024	INRTR2050017	NA	NA	NA	Yes
10000421	IDRF006500122	INHSGS050029	ECL05045C	ECL05045M	ECL05045G	INNDAW050017	INRTR2050014	NA	NA	NA	Yes
10002821	IDRF002301720	INHSGS050017	ECL05031C	ECL05031M	ECL05031G	INNDAW050017	INRTR2050013	WCV-10002821	NA	NA	Yes
10002956	IDRF002200233	INHSGS050030	ECL05046C	ECL05045M	ECL05045G	INNDAW050018	INRTR2050015	NA	NA	NA	Yes
10003004	IDRF008903552	INHSGS050030	ECL05046C	ECL05045M	ECL05045G	INNDAW050019	INRTR2050016	NA	NA	NA	Yes
10003197	IDRF008903436	INHSGS050020	ECL05032C	ECL05032M	ECL05032G	INNDAW050019	INRTR2050016	NA	NA	NA	Yes
10003344	IDRF001701529	INHSGS050021	ECL05033C	ECL05033M	ECL05033G	INNDAW050020	INRTR2050017	NA	NA	NA	Yes
10003348	IDRF000210363	INHSGS050017	ECL05031C	ECL05031M	ECL05031G	INNDAS050020	INRTR2050014	NA	NA	NA	
10003357	IDRF000210476	INHSGS050030	ECL05046C	ECL05045M	ECL05045G	INNDAW050019	INRTR2050017	NA	NA	NA	
10003367	IDRF000210442	INHSGS050030	ECL05046C	ECL05045M	ECL05045G	INNDAW050018	INRTR2050016	NA	NA	NA	Yes
10003369	IDRF008000071	INHSGS050030	ECL05046C	ECL05045M	ECL05045G	INNDAW050018	INRTR2050015	NA	NA	NA	Yes
10003375	IDRF008903671	INHSGS050021	ECL05033C	ECL05033M	ECL05033G	INNDAW050019	INRTR2050017	NA	NA	NA	Yes
10003377	IDRF000239312	INHSGS050021	ECL05033C	ECL05033M	ECL05033G	INNDAW050020	INRTR2050017	NA	NA	NA	Yes
10003381	IDRF000236450	INHSGS050021	ECL05033C	ECL05033M	ECL05033G	INNDAW050019	INRTR2050016	NA	NA	NA	Yes
10003386	IDRF074602921	INHSGS050021	ECL05033C	ECL05033M	ECL05033G	INNDAW050020	INRTR2050016	NA	NA	NA	Yes
10003496	IDRF004200283	INHSGS050020	ECL05032C	ECL05032M	ECL05032G	INNDAW050020	INRTR2050017	NA	NA	NA	Yes
10003566	IDRF000237221	INHSGS050021	ECL05033C	ECL05033M	ECL05033G	INNDAS050024	INRTR2050017	NA	NA	NA	
10003637	IDRF001701182	INHSGS050028	ECL05040C	ECL05040M	ECL05040G	INNDAW050024	INRTR2050025	NA	NA	NA	Yes
10003650	IDRF000210650	INHSGS050031	ECL05047C	ECL05045M	ECL05045G	INNDAW050027	INRTR2050028	NA	NA	NA	Yes
10003681	IDRF008903442	INHSGS050028	ECL05040C	ECL05040M	ECL05040G	INNDAW050024	INRTR2050025	NA	NA	NA	Yes
10003683	IDRF008500136	INHSGS050028	ECL05040C	ECL05040M	ECL05040G	INNDAS050033	INRTR2050023	NA	NA	NA	Yes
10003685	IDRF008903467	INHSGS050017	ECL05031C	ECL05031M	ECL05031G	INNDAW050017	INRTR2050013	WCV-10003685	NA	NA	
10003688	IDRF000108460	INHSGS050028	ECL05040C	ECL05040M	ECL05040G	INNDAW050024	INRTR2050023	NA	NA	NA	Yes

Numbers to Batch Data Report Numbers

WSP: # ID-RF-S5300-A

Lot # 1

Container ID Number	Historical Container ID	Headspace Gas BDR				NDA BDR	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/Overpack Yes
		Sample	Analysis								
10003722	IDRF006903546	INHSGS050032	ECL05046C	ECL05045M	ECL05045G	INNDAW050026	INRTR2050026	NA	NA	NA	Yes
10003775	IDRF000210526	INHSGS050032	ECL05046C	ECL05045M	ECL05045G	INNDAW050025	INRTR2050026	NA	NA	NA	Yes
10003798	IDRF001701506	INHSGS050026	ECL05038C	ECL05038M	ECL05038G	INNDAW050022	INRTR2050018	NA	NA	NA	Yes
10004011	IDRF003100933	INHSGS050029	ECL05045C	ECL05045M	ECL05045G	INNDAS050021	INRTR2050015	NA	NA	NA	
10004205	IDRF005500392	INHSGS050017	ECL05031C	ECL05031M	ECL05031G	INNDAS050020	INRTR2050014	NA	NA	NA	
10004214	IDRF003900226	INHSGS050017	ECL05031C	ECL05031M	ECL05031G	INNDAS050020	INRTR2050014	NA	NA	NA	
10004274	IDRF003600722	INHSGS050032	ECL05046C	ECL05045M	ECL05045G	INNDAW050026	INRTR2050025	NA	NA	NA	Yes
10004292	IDRF000108434	INHSGS050031	ECL05047C	ECL05045M	ECL05045G	INNDAW050027	INRTR2050026	NA	NA	NA	Yes
10004300	IDRF006903606	INHSGS050026	ECL05040C	ECL05040M	ECL05040G	INNDAW050024	INRTR2050023	NA	NA	NA	Yes
10004373	IDRF000210328	INHSGS050026	ECL05040C	ECL05040M	ECL05040G	INNDAW050024	INRTR2050020	NA	NA	NA	Yes
10004375	IDRF006903522	INHSGS050020	ECL05032C	ECL05032M	ECL05032G	INNDAW050019	INRTR2050016	NA	NA	NA	Yes
10004402	IDRF006903554	INHSGS050030	ECL05046C	ECL05045M	ECL05045G	INNDAW050018	INRTR2050016	NA	NA	NA	Yes
10004403	IDRF006500119	INHSGS050030	ECL05046C	ECL05045M	ECL05045G	INNDAW050019	INRTR2050016	NA	NA	NA	Yes
10004853	IDRF006903502	INHSGS050030	ECL05046C	ECL05045M	ECL05045G	INNDAW050018	INRTR2050015	NA	NA	NA	Yes
10004855	IDRF000212457	INHSGS050032	ECL05046C	ECL05045M	ECL05045G	INNDAW050025	INRTR2050025	NA	NA	NA	Yes
10004941	IDRF000210278	INHSGS050026	ECL05038C	ECL05038M	ECL05038G	INNDAW050021	INRTR2050019	NA	NA	NA	Yes
10004942	IDRF001701389	INHSGS050026	ECL05040C	ECL05040M	ECL05040G	INNDAW050024	INRTR2050023	NA	NA	NA	Yes
10004943	IDRF009000064	INHSGS050027	ECL05039C	ECL05038M	ECL05038G	INNDAS050032	INRTR2050023	NA	NA	NA	
10004945	IDRF000108359	INHSGS050026	ECL05038C	ECL05038M	ECL05038G	INNDAS050031	INRTR2050022	NA	NA	NA	Yes
10004946	IDRF000210436	INHSGS050026	ECL05040C	ECL05040M	ECL05040G	INNDAW050024	INRTR2050020	NA	NA	NA	Yes
10004953	IDRF000108925	INHSGS050023	ECL05036C	ECL05036M	ECL05036G	INNDAS050029	INRTR2050019	NA	NA	NA	
10004968	IDRF003600661	INHSGS050027	ECL05039C	ECL05038M	ECL05038G	INNDAS050032	INRTR2050022	NA	NA	NA	
10004970	IDRF003700712	INHSGS050026	ECL05038C	ECL05038M	ECL05038G	INNDAS050031	INRTR2050020	NA	NA	NA	
10005006	IDRF000212466	INHSGS050028	ECL05040C	ECL05040M	ECL05040G	INNDAW050024	INRTR2050023	NA	NA	NA	Yes
10005037	IDRF001701530	INHSGS050020	ECL05032C	ECL05032M	ECL05032G	INNDAW050019	INRTR2050016	NA	NA	NA	Yes
10005056	IDRF000210394	INHSGS050030	ECL05046C	ECL05045M	ECL05045G	INNDAW050018	INRTR2050016	NA	NA	NA	Yes
10005084	IDRF001701229	INHSGS050030	ECL05046C	ECL05045M	ECL05045G	INNDAW050018	INRTR2050016	NA	NA	NA	Yes
10005101	IDRF006903615	INHSGS050032	ECL05048C	ECL05045M	ECL05045G	INNDAW050027	INRTR2050028	NA	NA	NA	Yes
10005197	IDRF006903702	INHSGS050031	ECL05047C	ECL05045M	ECL05045G	INNDAW050028	INRTR2050030	NA	NA	NA	Yes
10005201	IDRF001101646	INHSGS050028	ECL05040C	ECL05040M	ECL05040G	INNDAW050024	INRTR2050023	NA	NA	NA	Yes
10005206	IDRF006903713	INHSGS050031	ECL05047C	ECL05045M	ECL05045G	INNDAW050028	INRTR2050030	NA	NA	NA	Yes
10005207	IDRF003600655	INHSGS050031	ECL05047C	ECL05045M	ECL05045G	INNDAW050028	INRTR2050030	NA	NA	NA	Yes

h00 S10

Numbers to Batch Data Report Numbers

WSP: # ID-RF-S5300-A

Lot # 1

Container ID Number	Historical Container ID	Headspace Gas BDR				NDA BDR	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/Overpack Yes
		Sample	Analysis								
10005261	IDRF001701534	INHSGS050032	ECL05048C	ECL05045M	ECL05045G	INNDAW050026	INRTR2050026	NA	NA	NA	Yes
10005444	IDRF008903536	INHSGS050031	ECL05047C	ECL05045M	ECL05045G	INNDAW050026	INRTR2050031	NA	NA	NA	Yes
10005464	IDRF003700710	INHSGS050031	ECL05047C	ECL05045M	ECL05045G	INNDAW050026	INRTR2050030	NA	NA	NA	Yes
10005477	IDRF000210266	INHSGS050031	ECL05047C	ECL05045M	ECL05045G	INNDAW050025	INRTR2050025	NA	NA	NA	Yes
10005484	IDRF008904201	INHSGS050032	ECL05048C	ECL05045M	ECL05045G	INNDAW050026	INRTR2050023	NA	NA	NA	Yes
10005521	IDRF000210261	INHSGS050031	ECL05047C	ECL05045M	ECL05045G	INNDAW050026	INRTR2050031	NA	NA	NA	Yes
10005523	IDRF000106321	INHSGS050031	ECL05047C	ECL05045M	ECL05045G	INNDAW050026	INRTR2050030	NA	NA	NA	Yes
10005569	IDRF000210267	INHSGS050028	ECL05040C	ECL05040M	ECL05040G	INNDAW050024	INRTR2050024	NA	NA	NA	Yes
10005601	IDRF008903751	INHSGS050026	ECL05038C	ECL05038M	ECL05038G	INNDAW050022	INRTR2050020	NA	NA	NA	Yes
10005606	IDRF003600606	INHSGS050031	ECL05047C	ECL05045M	ECL05045G	INNDAW050026	INRTR2050031	NA	NA	NA	Yes
10005662	IDRF008903549	INHSGS050031	ECL05047C	ECL05045M	ECL05045G	INNDAW050026	INRTR2050031	NA	NA	NA	Yes
10005664	IDRF002200941	INHSGS050032	ECL05048C	ECL05045M	ECL05045G	INNDAW050025	INRTR2050025	NA	NA	NA	Yes
10005722	IDRF001701376	INHSGS050026	ECL05038C	ECL05038M	ECL05038G	INNDAW050022	INRTR2050018	NA	NA	NA	Yes
10014289	IDRF000106486	INHSGS050016	ECL05028C	ECL05028M	ECL05028G	INNDAW050011	INRTR2050012	WCV-10014289	NA	NA	
10014299	IDRF000210077	INHSGS050031	ECL05047C	ECL05045M	ECL05045G	INNDAW050027	INRTR2050026	NA	NA	NA	Yes
10014414	IDRF000212431	INHSGS050032	ECL05048C	ECL05045M	ECL05045G	INNDAW050027	INRTR2050026	NA	NA	NA	Yes
10014684	IDRF000212146	INHSGS050016	ECL05028C	ECL05028M	ECL05028G	INNDAW050011	INRTR2050012	WCV-10014684	NA	NA	
10014761	IDRF000106690	INHSGS050017	ECL05031C	ECL05031M	ECL05031G	INNDAW050017	INRTR2050014	NA	NA	NA	
10014770	IDRF008903402	INHSGS050020	ECL05032C	ECL05032M	ECL05032G	INNDAS050024	INRTR2050016	NA	NA	NA	
10014779	IDRF000106852	INHSGS050017	ECL05031C	ECL05031M	ECL05031G	INNDAS050020	INRTR2050014	NA	NA	NA	
10014925	IDRF008903672	INHSGS050030	ECL05046C	ECL05045M	ECL05045G	INNDAS050023	INRTR2050016	NA	NA	NA	
10015066	IDRF002300433	INHSGS050016	ECL05028C	ECL05028M	ECL05028G	INNDAS050014	INRTR2050012	WCV-10015066	NA	NA	
10015294	IDRF009000062	INHSGS050026	ECL05038C	ECL05038M	ECL05038G	INNDAS050031	INRTR2050020	NA	NA	NA	
10015316	IDRF008903606	INHSGS050032	ECL05048C	ECL05045M	ECL05045G	INNDAW050026	INRTR2050027	NA	NA	NA	Yes
10015327	IDRF008903460	INHSGS050030	ECL05046C	ECL05045M	ECL05045G	INNDAW050018	INRTR2050016	NA	NA	NA	Yes
10015340	IDRF000210273	INHSGS050032	ECL05048C	ECL05045M	ECL05045G	INNDAW050026	INRTR2050026	NA	NA	NA	Yes
10015636	IDRF008903489	INHSGS050030	ECL05046C	ECL05045M	ECL05045G	INNDAS050023	INRTR2050016	NA	NA	NA	
10015664	IDRF008903483	INHSGS050023	ECL05036C	ECL05036M	ECL05036G	INNDAS050029	INRTR2050019	NA	NA	NA	Yes
10015681	IDRF008903667	INHSGS050016	ECL05028C	ECL05028M	ECL05028G	INNDAW050011	INRTR2050012	WCV-10015681	NA	NA	Yes
10015692	IDRF000106486	INHSGS050028	ECL05040C	ECL05040M	ECL05040G	INNDAW050024	INRTR2050023	NA	NA	NA	Yes
10015732	IDRF000106365	INHSGS050021	ECL05033C	ECL05033M	ECL05033G	INNDAW050019	INRTR2050017	NA	NA	NA	

Numbers to Batch Data Report Numbers

WSP: # ID-RF-S5300-A

Lot # 1

Container ID Number	Historical Container ID	Headspace Gas BDR				NDA BDR	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/Overpack Yes
		Sample	Analysis								
10015879	IDRF001101612	INHSGS050017	ECL05031C	ECL05031M	ECL05031G	INNDAW050021	INRTR2050014	NA	NA	NA	Yes
10016083	IDRF006903504	INHSGS050020	ECL05032C	ECL05032M	ECL05032G	INNDAW050019	INRTR2050016	NA	NA	NA	Yes
10016092	IDRF000108910	INHSGS050026	ECL05038C	ECL05038M	ECL05038G	INNDAW050022	INRTR2050018	NA	NA	NA	Yes
10016244	IDRF074403697	INHSGS050017	ECL05031C	ECL05031M	ECL05031G	INNDAS050020	INRTR2050014	NA	NA	NA	

Mark Pearcy
Signature of Site Project Manager

MARK PEARCY
Printed Name

11-14
Date

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CCP Headspace Gas UCL90 Evaluation Form

WSPF #: ID-RF-S5300-A **Waste Stream Lot Number** 1 through 1

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples (2)	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Benzene	Log	13	91	2.21	-0.51	1.10	-0.36	10	2.30		N/A
Bromoform	Log	0	99	1.48	-1.17	1.29	-1.01	10	2.30		N/A
Carbon tetrachloride	Log	37	100	11.26	-0.18	2.00	0.08	10	2.30		N/A
Chlorobenzene	Log	0	99	1.61	-1.14	1.30	-0.97	10	2.30		N/A
Chloroform	Log	35	99	5.80	-0.13	1.55	0.07	10	2.30		N/A
Cyclohexane [a]	Log	18	91	1.10	-0.39	1.13	-0.24	10	2.30		N/A
1,1-Dichloroethane	Log	11	91	3.43	-0.46	1.18	-0.30	10	2.30		N/A
1,2-Dichloroethane	Log	1	91	1.52	-0.65	1.07	-0.51	10	2.30		N/A
1,1-Dichloroethylene	Log	19	91	3.04	0.32	1.49	0.52	10	2.30		N/A
cis-1,2-Dichloroethylene	Log	0	91	1.05	-0.53	1.05	-0.39	10	2.30		N/A
trans-1,2-Dichloroethylene	Log	0	91	0.97	-0.38	1.00	-0.25	10	2.30		N/A
Ethyl benzene	Log	40	97	3.66	-0.03	1.43	0.16	10	2.30		N/A
Ethyl ether	SQRT	0	90	2.16	1.06	0.48	1.13	10	3.16		N/A
Methylene chloride	Log	40	91	6.85	1.44	2.70	1.80	10	2.30		N/A
1,1,2,2-Tetrachloroethane	Log	0	91	0.72	-0.92	1.01	-0.78	10	2.30		N/A
Tetrachloroethylene	Log	74	94	5.83	0.85	1.78	1.08	10	2.30		N/A
Toluene	Log	88	91	4.70	2.32	1.01	2.46	10	2.30	Yes	F005
1,1,1-Trichloroethane	SQRT	99	100	18.17	8.33	3.80	8.82	10	3.16	Yes	F001, F0
Trichloroethylene	Log	95	100	9.80	4.46	2.19	4.74	10	2.30	Yes	F002
1,1,2-Trichloro-1,2,2-trifluoroethane	Log	13	101	8.16	-0.81	2.08	-0.54	10	2.30		N/A
1,2,4-Trimethylbenzene [a]	Log	11	91	0.81	-0.75	0.86	-0.64	10	2.30		N/A
1,3,5-Trimethylbenzene [a]	Log	2	91	1.10	-0.61	0.98	-0.48	10	2.30		N/A
m-Xylene [b]	Log	50	91	4.87	0.38	1.77	0.62	10	2.30		N/A
p-Xylene [b]	Log	50	91	4.87	0.38	1.77	0.62	10	2.30		N/A

L80 CS0

CCP Headspace Gas UCL90 Evaluation Form

WSPF #: ID-RF-S5300-A **Waste Stream Lot Number** 1 through 1

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples (2)	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
o-Xylene	Log	37	91	3.50	-0.18	1.30	-0.01	10	2.30		N/A
Acetone	Log	73	100	6.29	2.40	1.77	2.63	100	4.61		N/A
1-Butanol	Log	36	100	3.26	1.01	1.16	1.16	100	4.61		N/A
Methanol	Log	4	101	5.89	1.84	0.84	1.94	100	4.61		N/A
Methyl ethyl ketone	Log	24	100	3.50	0.56	1.27	0.72	100	4.61		N/A
Methyl isobutyl ketone	Log	14	100	3.87	-0.14	1.44	0.04	100	4.61		N/A
Chloromethane	Log	4	91	4.49	0.21	1.29	0.38	10	2.30		NA
Carbon Disulfide	Log	12	90	2.09	-0.12	0.88	0.00	10	2.30		NA
Formaldehyde[c]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hydrazine[d]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

[a] These compounds are from the TRAMPAC and are flammable VOCs that do not appear in the QAPjP or the WIPP WAP. These are not part of the target analyte list, but samples may be analyzed for these compounds.
[b] These xylene isomers cannot be resolved by the analytical methods employed in the program. m-Xylene and p-Xylene will be reported as "Total m-p-Xylene."
[c] Required only for homogenous solids and soil/gravel waste from Savannah River Site.
[d] Required only for homogenous solids and soil/gravel wast from Oak Ridge National Laboratory and Savannah River Site.

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per section B4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)
(2) As a result of dilution requirements, several analytes were reported as non-detected with MDL values in excess of the PRQL. In accordance with Section B4-3d of the WIPP-WAP, such 'U'-flagged observations with elevated MDL values due to dilution were not used in calculating mean concentration. Consequently, the subject analytes were statistically evaluated using only the usable observations.

CCP Headspace Gas Summary Data

WSPF Number: ID-RF-S5300-A Lot Number (s) 1

Tentatively Identified Compound	Maximum Observed Estimated Concentrations (ppmv)	# Samples Containing TIC	% Detected
2-DICHLOROPROPANE	360.00	42	41.58%
METHYL-1-PROPANOL	3.30	1	0.99%
4-DIOXANE	0.50	1	0.99%

ata Confirms Acceptable Knowledge? Yes ☑ No ☐

no, describe the basis for assigning the EPA Hazardous Waste Codes: NA

2-Dichloropropane is > 25% of samples, and is included in 40CFR261 AppVIII.

SPM Signature Mark Pearcy Date 11-14-05

CIS 009

CCP RTR/VE Summary of Prohibited Items and AK Confirmation

WSP#: ID-RF-S5300-A Lot(s)#: 1

Container Number	RTR Prohibited Items [a]	Visual Examination Prohibited Items [a]	AK Confirmation [b c]
See correlation of container ID numbers for list of drum numbers in this Lot.	RTR Data sheets confirm that none of the containers in this lot contain any prohibited items.	No Prohibited items were detected in VE.	Consistent with CCP-TP-005 AK Confirmation checklist, U-134 is not assigned to this waste stream.

a. See Batch Data Reports
b. Attachment 13 of CCP-TP-005, *CCP Acceptable Knowledge Documentation*
c. If AK has assigned U134 to this waste stream, then any liquids in these containers are prohibited items (not acceptable by the TSDF).

Mark Pearcy
te Project Manager Signature

Mark Pearcy
Printed Name

11/14/05
Date

CIS
010

CCP Reconcilliation with Data Quality Objectives

WSF# ID-RF-S5300-A Lot # 1

SPQAO Sampling Completeness

RTR:
Number of Valid Samples: 101 Number of Total Samples Analyzed: 101
Percent Complete: 100 (QAO is 100%)

NDA
Number of Valid Samples: 101 Number of Total Samples Analyzed: 101
Percent Complete: 100 (QAO is 100%)

HSG
Number of Valid Samples: 101 Number of Total Samples collected: 101
Percent Complete: 100 (QAO is ≥90%)
Number of Valid Samples: 101 Number of Total Samples analyzed: 101
Percent Complete: 100 (QAO is ≥90%)

Total VOC
Number of Valid Samples: NA Number of Total Samples collected: NA
Percent Complete: NA (QAO is ≥90%)
Number of Valid Samples: NA Number of Total Samples analyzed: NA
Percent Complete: NA (QAO is ≥90%)

Total SVOC
Number of Valid Samples: NA Number of Total Samples collected: NA
Percent Complete: NA (QAO is ≥90%)
Number of Valid Samples: NA Number of Total Samples analyzed: NA
Percent Complete: NA (QAO is ≥90%)

Total Metals
Number of Valid Samples: NA Number of Total Samples collected: NA
Percent Complete: NA (QAO is ≥90%)
Number of Valid Samples: NA Number of Total Samples analyzed: NA
Percent Complete: NA (QAO is ≥90%)

SPQAO Signature and Date: Christine M Gyoney 11/14/05

I certify that sufficient data have been collected to determine the following Program-required waste parameters:

	Y/N/NA	Reconcilliation Parameter
1	Y	Waste Matrix Code.
2	Y	Waste Material Parameter Weights.
3	Y	The waste matrix code identified is consistent with the type of sampling and analysis used to characterize the waste.
4	Y (1).	The TRU activity reported in the BDRs for each container demonstrates with a 95% probability that the container of waste contains TRU radioactive waste.

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CIS
011

CCP Reconcilliation with Data Quality Objectives

WSF# ID-RF-S5300-A Lot # 1

5	Y	Potential Flammability. Is there sufficient AK or analytical data to demonstrate that the waste meets the potential flammability limits (Headspace Gas, BDR and Summary Sheet)?
6	Y	Mean concentrations, UCL90 values for the mean concentration, standard deviations, and the number of samples collected for each VOC in the headspace gas of each container were calculated and compared with the program required quantitation limits, as reported in CCP-TP-003-A3, and additional EPA Hazardous Waste codes were assigned as required. Samples were randomly collected (when appropriate)
7a	NA	Mean concentrations, UCL90 values for the mean concentration, standard deviations, and the number of samples collected for total VOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003-A4, and additional EPA Hazardous Waste codes were assigned as required. Samples were randomly collected.
7b	NA	Mean concentrations, UCL90 values for the mean concentration, standard deviations, and the number of samples collected for total SVOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP TP 003 A5, and additional EPA Hazardous Waste Codes were assigned as required. Samples were randomly collected.
7c	NA	Mean concentrations, (UCL90) values for the mean concentration, standard deviations, and the number of samples collected for total metals were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP TP 003 A6, and additional EPA Hazardous Waste codes were assigned as required. Samples were randomly collected.
8	Y	The data demonstrates whether the waste stream exhibits a toxicity characteristic under 40 CFR 261, Subpart C.
9	Y	Waste stream can be classified as hazardous or nonhazardous at the 90-percent confidence level.
10	Y	Sufficient number of waste containers have been visually examined to determine the UCL90 for the miscertification rate is less than 14%.

 CIS 012

CCP Reconcilliation with Data Quality Objectives

WSF# ID-RF-S5300-A Lot # 1

11	Y	Appropriate packaging configuration and Drum Age Criteria (DAC) is applied and documented in the headspace gas sampling documentation, and the drum age met prior to sampling.
12	Y	TICs were appropriately identified and reported in accordance with the requirements of Section B3-1 of the QAPjP.
13	Y	The PRQLs for headspace gas VOCs were met for all analyses as evidenced by the analytical batch data reports.
14		The overall completeness, comparability, and representativeness QAOs were met for each of the analytical and testing procedures as specified in the WAP Sections B3-2 through B3-9 prior to submittal of a waste stream profile form for a waste steam or waste stream lot.

	Completeness	Comparability	Representativeness
Radiography	Y	Y	Y
Headspace Gas Sampling and Analysis	Y	Y	Y
Headspace Gas Analysis	NA	NA	NA
Solids Sampling	NA	NA	NA
Total VOCs	NA	NA	NA
Total SVOCs	NA	NA	NA
Total Metals	NA	NA	NA

Mark Pearcy
Signature of Site Project Manager

Mark Pearcy
Printed Name

11/14/05
Date

NOTES: (1) Not all containers in this Lot are > 100nCi/g Tru Alpha Activity concentration. All containers do contain measureable amounts of TRU isotopes, and will be Load Managed, whereby the payload assembly that the container will be shipped to WIPP in will be > 100 nCi/g TRU Alpha Activity concentration. These drums are identified on the "CCP Correlation of Container Identification Numbers to Batch Data Report Numbers".

C15
013

SUMMATION OF ASPECTS OF AK SUMMARY REPORT: ID-RF-S5300-A

Overview

Waste Stream ID-RF-S5300-A is combustible and plastic debris waste generated at Rocky Flats Environmental Technology Site (RFETS) in Golden, Colorado. The drums of this RFETS waste are stored at the Idaho National Laboratory (INL) Radioactive Waste Management Complex (RWMC). Rocky Flats had two primary missions: the production of triggers for nuclear weapons, and the processing of retired weapons for plutonium recovery. The triggers, also known as pits, were the first-stage fission bombs used to initiate the second-stage fusion reaction in hydrogen bombs. Plutonium metal was recovered from retired warheads and manufacturing residues for reuse. This transuranic waste stream was generated in support of these defense related weapons activities.

This summation of the AK Summary Report includes information to support Waste Stream Profile Form (WSPF) number ID-RF-S5300-A. The primary source of information for this summation was CCP-AK-INL-004, *Central Characterization Project Acceptable Knowledge Summary Report for Rocky Flats Combustibles and Plastic Stored at the Idaho National Laboratory, Waste Stream:ID-RF-S5300-A, Revision 1, dated October 6, 2005.* CCP-AK-INL-004 includes information obtained from numerous sources, including facility safety basis documentation, historical document archives, generator and storage facility waste records and documents including databases and interviews with operational and waste management personnel.

Waste Stream Identification Summary

Site Where TRU Waste Was Generated:	Rocky Flats Environmental Technology Site
Waste Stream Name:	RFETS Combustibles and Plastics Stored at the INL
Waste Stream Number:	ID-RF-S5300-A
Dates of Waste Generation:	1972 to 2002
Facility Where TRU Waste Was Generated:	Bldg. 371, 374, 559, 707, 771, 774, 776, 777, 779, 881, and 886
Summary Category Group:	S5000 – Debris Waste
Waste Matrix Code Group:	Combustible Waste
Waste Matrix Code:	S5300
Waste Stream TWBIR Identification:	IN-W169.191[1]
Waste Stream Volume	26,000[2] 55-gallon drums (current/retrievably stored) 0 55-gallon drums (projected/newly generated)
RCRA EPA Hazardous Waste Numbers:	D004, D005, D006, D007, D008, D009, D010, D011, D022, D028, D029, F001, F002, F005, F006, F007, F009
TRUPACT-II Content Code (TRUCON) :	ID 116, ID 216

[1]The following TWBIR Identification Numbers for RFETS Combustible and Plastic Stored at the INL also apply; IN-W169.192, IN-W169.985, IN-W197.196, IN-W197.802, IN-W197.803, IN-W198.202, IN-W198.203, IN-W198.804.
[2]The total waste volume is approximately 26,000 drums. 2,689 55-gallon drums are currently available for characterization and processing by CCP.

Waste Stream Description and Physical Form

Waste stream ID-RF-S5300-A is comprised of combustibles and plastic heterogeneous debris waste. Some combustible wastes were dry when they were originally generated while others contained a discernable amount of moisture. The moist combustible wastes were packaged with absorbents, such as Oil-Dri or Portland cement. The wastes include cloth, paper, wood, polypropylene, polyethylene, polyvinyl chloride (PVC), rubber, latex, Plexiglas, Teflon, Hypalon, Neoprene, and Tygon. Examples of specific waste items include wipes, towels, rags, tape, protective clothing (e.g., gloves, booties, respirator parts, supplied air suits), filter paper, wood filter frames, cotton swabs, cardboard, sandpaper, labels, gasket material, plastic bottles, bags, plastic sheeting, hoses, filters, labware (e.g., sample vials, syringes, funnels, pipette tips), and glovebox windows. Drums may contain a small quantity of metals, glass and miscellaneous materials. Examples include Raschig rings, nails, cans, vials, bottles, lead sheeting, bolts, pipes, welding rods, batteries, tools, leaded glass, asphalt, concrete and wire. The bottles included in this waste stream are less than 4 liters in volume or are vented bottles greater than 4 liters.

This waste stream is assigned Waste Matrix Code S5300, Organic Debris.

Point of Generation - Area and Building of Generation

This waste was generated at Rocky Flats in Buildings 371, 374, 559, 707, 771, 774, 776, 777, 779, 881, and 886.

Generating Process

Combustibles and plastic wastes were generated by component production, recovery and purification, laboratory operations, waste treatment, R&D, maintenance and utilities, and non-routine activities (e.g., fire cleanup) associated with plutonium operations at the site. A description of these operations is provided below.

Plutonium Component Production

Plutonium component production consisted of operations directly associated with the manufacturing of plutonium metal parts including casting, rolling, forming, machining, and assembly processes. Buildings 707 and 777 were the primary weapons components production facilities at the site. The foundry in Building 707 cast molten plutonium into classified components, subassemblies, and assemblies. Other parts were manufactured by rolling, forming, and machining plutonium ingots also cast in the foundry. Components were assembled using a number of welding and joining techniques in Buildings 707, 777, and 779. Production support operations in Buildings 707 and 777 included a variety of inspection, calibration, measurement, weighing, leak testing, and cleaning activities to assure that the parts met stringent specifications. Rejected plutonium parts, scraps, and turnings were returned to be recast. Small pieces of metal, fines, and sweepings were typically burned to oxide and sent to Building 771 to be recovered.

Buildings 707 and 777 housed carbon tetrachloride and 1,1,1-trichloroethane systems that collected and filtered solvents generated during production operations. The filtered solvents were transferred to Building 774 for treatment.

Plutonium Recovery and Purification

Several operations at the plant were responsible for either the purification of non-specification plutonium metal or the recovery of plutonium from production waste and residues. Building 771 housed operations that recovered plutonium from waste materials and other sources. Plutonium purification was performed primarily in Buildings 371, 771, 776, and 779. Recovery operations in Building 771 used acid to dissolve solid materials containing plutonium. The resulting solutions

were processed by a series of ion exchange, precipitation, calcination, fluorination, and reduction operations to produce purified plutonium metal to be recycled back into the foundry.

Plutonium metal from returned parts and metal from other DOE facilities was purified at Rocky Flats. Plutonium parts were disassembled in Building 777. Initially, the molten salt extraction (MSE) process in Building 776 recovered americium from plutonium metal. Americium was precipitated from the MSE residue salts followed by an ammonium thiocyanate anion exchange process. The process changed to cation exchange followed by anion exchange (no thiocyanate) and then precipitation using oxalic acid. The process changed again the following year to the salt scrub process which used a magnesium/zinc or a magnesium/aluminum extractant. The purified plutonium metal from MSE was either sent to the foundry in Building 707 or sent to the electrorefining process in Building 371 or Building 776 if the metal contained other impurities.

Spray leaching (Building 771) and hydride leaching (Building 779) also used acids to remove plutonium surface contamination from uranium metal and other metals or beryllium contamination from plutonium metal.

Building 771 also recovered plutonium from Raschig rings, High-Efficiency Particulate Air (HEPA) filters, and sludges from the filter plenum and from process piping. Filters were disassembled to remove plutonium-contaminated dust. Process piping removed from service was cut up and cleaned of built-up sludge. Sludge from the process piping and from the filter plenum was dissolved in nitric acid to recover plutonium. Until 1984, plutonium was recovered from Raschig rings by nitric acid leaching. Building 771 also housed an incinerator for processing combustible wastes. The resulting incinerator ash was sent for acid dissolution to recover the plutonium.

Laboratory Operations

Buildings 371, 559, and 771 housed the main analytical laboratories at the site. The laboratories' primary function was to provide analytical support to production activities in addition to supporting recovery, purification, and liquid waste treatment operations. Each of the laboratories used acids, bases, solvents, and other chemical reagents. The analytical laboratory analyzed samples from various operations on site.

Building 559 housed the Plutonium Analytical Laboratory responsible for spectrochemical, chemical, and mass spectrometric analyses of samples from plutonium production operations. Uranium, Raschig rings, solutions, and commercial product and gas samples were also analyzed in the laboratory.

Building 771 housed analytical and chemical standards laboratories. The chemical standards laboratory prepared control sample standards for the analytical laboratories in Buildings 371, 559, and 771. The analytical laboratory provided analyses in support of plutonium operations.

Buildings 371, 559, 771, and 881 also had a chemical standards laboratory. The chemical standards laboratory prepared nitrate, oxide, and metal standards of uranium, plutonium, and americium for various users, inspected standards that had been used in the field, and developed methods for checking the accuracy of analyses. Types of standards included equipment calibration standards, nondestructive assay standards used at drum counters, and fluoride standards for chemical operations.

The tritium surveillance laboratory located in Building 777 analyzed solid, liquid, and gas samples for tritium content. The process involved sample dissolution, filtration, and radioactivity counting.

The plutonium metallography laboratory located in Building 777 prepared and examined metallographic specimens. The process included sample size reduction, encasing, grinding, polishing, and etching.

Building 886 contained the critical mass laboratory where critical mass experiments were performed using uranium and plutonium in solutions.

Research and Development

Research and Development (R&D) included activities related to production, recovery, and purification as well as "special order" work. Building 779, which was built in 1965, housed much of the R&D operations at the plant. The primary purpose of R&D activities in Building 779 was to gain more knowledge of the chemistry and metallurgy of plutonium and its interactions with other materials, which might be used in plutonium operations. Other areas at the plant supporting R&D included Buildings 559, 771, 776, 777, and 881.

The plant conducted special order work for other facilities in the DOE complex, the U.S. Department of Defense, or other federal departments or agencies. One example is the introduction of radionuclide tracers into pits destined for off-site test shots. This work took place in the 1960s and well into the 1970s.

Liquid Waste Treatment

Waste processing at Rocky Flats included both liquid and solid process wastes. The primary purpose of Building 774 was to treat radioactive aqueous waste from Building 771. Radionuclides were removed by precipitation, and the resulting slurry filtered. The solids removed from filters were combined with cement or other solidifying agents. The aqueous waste from this first stage went through a second precipitation.

The evaporator in Building 774 treated liquids from the second stage treatment and from the solar ponds. The concentrate from the evaporator was introduced into a steam-heated, double-drum drier, which produced a salt waste. The Building 774 evaporator was removed in 1979, and the liquids from the second stage treatment and solar ponds were transferred to Building 374 for additional treatment.

Building 774 processed organic liquid wastes. Plutonium-contaminated organic liquids were generated from plutonium machining (Reference P053). The spent organic liquid was filtered and then mixed with a Microcel-E (calcium silicate) solidifying agent. The process was later changed to a one step process in which the organic liquid was mixed with Envirostone (gypsum cement) and allowed to set up.

In 1978, Building 374 went into operation as an integral part of the new plutonium recovery facility, Building 371. Building 374 was primarily designed to handle the wastes generated by Building 371, but also helped to relieve the demand on the Building 774 (References P001, P053). Prior to treatment in Building 374, the caustic waste treatment process in Building 371 precipitated and filtered plutonium from various Building 371 feed solutions, including solutions from the utility scrubbers, process vacuum separators, process vent scrubber, and criticality drain tanks. Solutions that were below the plutonium or americium discard limits were transferred to Building 374 for further treatment.

Building 374 contained five major processes: acid neutralization, radioactive decontamination, sludge solidification, evaporation, and spray dryer/salt solidification. The acid neutralization process used potassium hydroxide with incoming acidic waste to adjust the pH of these solutions. The radioactive decontamination process used a three-stage precipitation, flocculation, and clarification system to remove radioactive solids from aqueous wastes. The sludge solidification process solidified sludges from the radioactive decontamination process and acid neutralization process. The evaporation and salt solidification process evaporated water from aqueous plant waste and the radioactive decontamination process. The spray dryer and salt solidification process solidified the remaining salts with cement.

Solid Waste Treatment

Building 776 processed solid wastes below the economic discard limit (EDL). The size reduction area in Building 776 removed materials from drums and sorted them in an airlock vault. Materials such as light metals, filters, glass, combustibles, and Raschig rings were then put into containers with like materials. Light metals and leaded gloves were washed with water in a ball mill. Advanced size reduction operations in Building 776 disassembled or cut plutonium-contaminated gloveboxes and miscellaneous large equipment into sizes that could be packaged in approved containers. The fluidized-bed incinerator in Building 776 received low-level plutonium-contaminated combustible solid and liquid wastes.

In Building 371, wastes such as incinerator sludge, sand, slag, and crucible dissolution residues (heels), and resins were stabilized. In this process, Portland cement and water were mixed with the material to be immobilized and poured into a 1-gallon polyethylene container mold and allowed to cure. The mold was removed from the solidified "puck" which was placed in a 55-gallon drum.

Maintenance and Utilities

Routine maintenance at Rocky Flats included: utilities, change-out of oils, coolants, filters, Raschig rings, and other general maintenance activities. Utility systems included heating, ventilation, and air conditioning (HVAC) systems, fume scrubbers, and process vacuum systems. The HVAC systems contained air supply units for filtering incoming air and plenums for filtering exhaust air. HVAC equipment was lubricated, generating non-hazardous waste oil and oily wipes. KW detergent, a non-hazardous detergent, was used for periodic maintenance inside and outside the plenums. Scrubbers housed in Buildings 371, 559, 771, and 779 used potassium or sodium hydroxide to neutralize acid fumes from various process off gas streams and glovebox exhaust streams. Process vacuum systems provided an absolute pressure at a vacuum header which served as a means to transfer fluids on demand by valve arrangements.

Non-hazardous oils such as Texaco Regal A, coolants, filters, and Raschig rings were used in numerous processes and required periodic change out. During oil and coolant changes, wipes were generated from spill cleanup. During Raschig ring removal, wipes, gloves, or other combustible materials may have been contaminated with oils, solvents, acids, or bases. Other general maintenance activities included repair or replacement of gloveboxes, tanks, valves, pumps, and pipes.

Non-Routine Operations

Non-routine operations include spill clean up, strip-out operations, and activities associated with fires and other contaminant releases. Occasionally, spills of various materials occurred due to leaks in tanks and piping or from material releases from gloveboxes. Tanks or pipes may have contained acids, bases, or solvents used during normal process operations. A paint stripper containing methylene chloride was often used for decontamination. Combustible and plastic wastes containing paint (possibly containing lead), were generated from this type of activity.

An example of a non-routine activity was the strip-out of glovebox lines, process piping, valves, and associated systems. Strip-out activities were performed when a glovebox line was scheduled to be replaced or during renovation. Solvents such as trichloroethylene or 1,1,1-trichloroethane may have been used during this type of operation for decontamination.

The following is a table of toxicity characteristic and F-listed chemicals identified in the waste. These contaminate the waste, but the chemical itself was not discarded in the TRU waste stream as commercial chemical product, an off-specification commercial chemical product or container residue or spill residue thereof (40 CFR 261.33).

Table 1 - TC and F-Listed Contaminants

Waste Stream ID-RF-S5300-A

Constituent	CAS #	EPA Hazardous Waste Number
1,1,1-Trichloroethane	71-55-6	F001 and F002
1,1,2-Trichloro-1,2,2-trifluorethane (Freon 113)	76-13-1	F002
1,1-Dichloroethylene	75-35-4	D029
1,2-Dichloroethane	107-06-2	D028
2-Ethoxyethanol	110-80-5	F005
Arsenic	7440-38-2	D004
Barium	7440-39-3	D005
Benzene	71-43-2	F005
Cadmium	7440-43-9	D006
Carbon disulfide	75-15-0	F005
Carbon tetrachloride	56-23-5	F001
Chlorobenzene	108-90-7	F002
Chloroform	67-66-3	D022
Chromium	7440-47-3	D007
Spent cyanide plating bath solutions from electroplating operations	57-12-5	F007
Spent stripping and cleaning bath solutions from electroplating operations	57-12-5	F009
Isobutanol	78-83-1	F005
Lead	7439-92-1	D008
Mercury	7439-97-6	D009
Methyl ethyl ketone	78-93-3	F005
Methylene chloride	75-9-2	F002
Pyridine	110-86-1	F005
Selenium	7782-49-2	D010
Silver	7440-22-4	D011
Tetrachloroethylene	127-18-4	F002
Toluene	108-88-3	F005
Trichloroethylene	79-01-6	F002
Wastewater treatment sludges from electroplating operations	57-12-5	F006

RCRA Determinations - Hazardous Waste Determinations

Ignitability, Corrosivity, & Reactivity

Waste generated in this waste stream does not qualify for any of the exclusions outlined in 40 CFR 260 or 261. Real Time Radiography (RTR) or visual examination is used to verify that the waste stream is not a liquid waste and does not contain explosives, non radioactive pyrophoric materials, compressed gasses or reactive waste. Therefore, this waste stream does not exhibit the characteristic for ignitability (D001), corrosivity (D002), or reactivity (D003).

Ignitability

The waste does not meet the definition of ignitability as defined in 40 CFR 261.21. The materials are not liquid, and packaging procedures prohibited the addition of liquids to the containers (References P016, P501, P503). In addition, absorbents (e.g., Oil-Dri or Portland cement) were added to moist wastes, i.e., wet combustibles (References P012, P015, P024, P503). The materials are not compressed gases, nor does the waste contain compressed gases (References P012, P014, P015, P024, P501). The materials are not capable of causing fire through friction or absorption of moisture (References P012, P024, P501).

Prior to 1974, nitric acid was not rinsed from combustibles prior to removal from the glovebox and therefore combustibles generated prior to 1974 may be contaminated with minimal amounts of nitrate salts (References C076, P024, U060, U097). However, nitration of material does not result from casual or incidental contact (Reference U097). The conditions needed to produce nitrocellulose were not and are not present. The waste does not meet the definition of a Department of Transportation (DOT) oxidizer as defined in 49 CFR 173 (References U097, P239, P282, P283, P284, P285). Therefore this waste stream does not exhibit the characteristic of ignitability (D001).

Corrosivity

This waste does not meet the definition of corrosivity as defined in 40 CFR 261.22. These wastes are not liquid, and packaging procedures prohibited the addition of liquids to the containers (References P016, P501, P503). In addition, absorbents (e.g., Oil-Dri or Portland cement) were added to moist wastes (References P012, P015, P024, P503). The characteristic of corrosivity (D002) does not apply to this waste stream.

Reactivity

The materials in this waste stream do not meet the definition of reactivity as defined in 40 CFR 261.23 (References P015, U060). The materials are stable and will not undergo violent chemical change. The materials will not react violently with water, form potentially explosive mixtures with water, or generate toxic gases, vapors, or fumes when mixed with water. The materials do not contain sulfides, and are not capable of detonation or explosive reaction. The wastes may contain trace quantities of cyanide from analytical laboratory and electroplating operations but this will not cause the combustibles and plastic wastes to be reactive (References D003, P052, P081, P284, P285). The materials are not explosive nor do the drums contain other explosive materials (References P012, P015, P024, P501). The reactivity characteristic (D003) does not apply to this waste stream.

Toxicity Characteristic

The waste in this waste stream exhibits the characteristic of toxicity per 40 CFR 261.24. The toxicity characteristic contaminants fall into two categories; metals and organics.

ID-RF-S5300-A meets the definition of toxicity for metal compounds as defined in Title 40 of the Code of Federal Regulations (CFR), Part 261, Subpart C (40 CFR 261.24). Several compounds or materials containing the toxicity characteristic metals were used in the processes generating this waste and may contaminate this waste or were components of the debris. For example arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver were used in analytical laboratory analysis standards or laboratory reagents. Nickel-cadmium batteries, leaded glass and lead gloves are examples of debris items containing the toxicity characteristic metals. Therefore, EPA hazardous waste numbers for arsenic (D004), barium (D005), cadmium (D006), chromium (D007), lead (D008), mercury (D009), selenium (D010), and silver (D011) are assigned to this waste stream (Reference D003).

Waste stream ID-RF-S5300-A meets the definition of toxicity for organic compounds as defined in 40 CFR 261, Subpart C (40 CFR 261.24). Some toxicity organic compounds were used in the processes generating this waste and may contaminate this waste. Chloroform, 1,2-dichloroethane, and 1,1-dichloroethylene were used in analytical laboratory reagents. Therefore, EPA hazardous waste numbers for Chloroform (D022), 1,2-dichloroethane (D028), and 1,1-dichloroethylene (D029), are assigned to this waste stream (Reference D003).

F-Listed Waste

Waste stream ID-RF-S5300-A is an F-listed hazardous waste because the wastes were mixed with hazardous wastes from non-specific sources as listed in 40 CFR 261, Subpart D (40 CFR 261.31). Acceptable knowledge information sources specify F001, F002 and F005 listed solvents being used in RFETS process that may contaminate this waste. For example the F001-listed solvents carbon tetrachloride and 1,1,1-trichlroethane were used in baths in buildings 707 and 777 for cleaning and degreasing (References P060, P079). The primary F002-listed solvents used in RFETS process were 1,1,1-Trichloroethane, 1,1,2-Trichloro-1,2,2-trifluorethane (Freon 113). These were used primarily cleaning of plutonium parts, glovebox interiors, furnaces, and equipment. Other F002 and F005-listed solvents (see list below) were used on a smaller scale for cleaning and in R&D laboratory operations. Therefore, this waste stream is assigned EPA hazardous waste numbers F001, F002 and F005.

F003-listed solvents such as acetone, cyclohexanone, ethyl acetate, ethyl ether, methanol, and xylene were used at Rocky Flats. F003-listed solvents are listed solely for ignitability; however this waste does not exhibit the characteristic of ignitability and is therefore not assigned HWN F003 (Reference P052).

Aqueous waste treatment operations in Buildings 374 and 774 treated spent stripping, cleaning, and plating solutions from Building 444 electroplating operations (Reference P052). The Building 444 electroplating operations utilized cyanide and therefore the Buildings 374 and 774 wastewater treatment operations received F007 and F009 wastes, and generated F006 wastewater treatment sludge (References P067, U045). The combustibles and plastic wastes generated from these operations were contaminated with wastes from these processes. Therefore, this waste stream is assigned EPA hazardous waste numbers F006, F007, and F009.

EPA hazardous waste numbers F001, F002, F005, F006, F007 and F009 are assigned to this waste stream as indicated below.

(F001)
Carbon tetrachloride, 1,1,1-Trichloroethane

(F002)
1,1,1-Trichloroethane, 1,1,2-Trichloro-1,2,2-trifluorethane (Freon 113), Methylene chloride, Tetrachloroethylene, Trichloroethylene, Chlorobenzene

(F005)
2-Ethoxyethanol, Benzene, Carbon disulfide, Isobutanol, Methyl ethyl ketone, Pyridine, Toluene,

(F006)
Wastewater treatment sludges from electroplating operations

(F007)
Spent cyanide plating bath solutions from electroplating operations

(F009)
Spent stripping and cleaning bath solutions from electroplating operations where cyanides were used in the process

U, K, and P-Listed Chemicals

This waste stream was not mixed with a discarded commercial chemical product, an off-specification species, a container residue, or a spill residue thereof, 40 CFR 261.33 (References D003, P016, P052, P060, P061, P062, P076, P078, P079, P081, P082, P507). Hydrofluoric acid was used in Building 771 plutonium recovery and Building 559 and 881 analytical laboratory operations. However, hydrofluoric acid from these operations was used for its intended purpose and will not be present in combustibles and plastics as unused product. Therefore, waste stream ID-RF-S5300-A is not a U134-listed waste (References P053, P061, P076, P078, P081, and P163). This waste stream is therefore not a P- or U-listed hazardous waste as defined in 40 CFR 261, Subpart D.

Beryllium

Any beryllium present is as a contaminant of the process and not an unused, commercial product. Therefore, waste stream ID-RF-S5300-A is not a P015-listed waste (References P052, P053).

Other Similar Combustibles and Plastics Debris Waste Streams

Waste stream profiles INW169.01 and INW198.01 were reviewed as being pertinent to this waste stream. The HWNs in ID-RF-S5300-A Combustibles are inclusive of the HWNs in INW169.01, and INW198.01 with the exception of HWN F003. The HWN F003 was applied to INW169.01 and INW198.01 but is not applied to ID-RF-S5300 because the waste is not ignitable and application is not required. The following EPA HWNs are applied to ID-RF-S5300-A but were not applied to INW169.01 and INW198.01; D004, D005, D028 and D029. These HWNs are conservatively applied to ID-RF-S5300 because the AK identified chemical usage that may have contaminated the waste.

Conclusion

The following EPA hazardous waste numbers are assigned to this waste stream: D004, D005, D006, D007, D008, D009, D010, D011, D022, D028, D029, F001, F002, F005, F006, F007, F009.

Polychlorinated Biphenyls

Waste stream ID-RF-S5300-A is not regulated as a Toxic Substances Control Act (TSCA) waste under 40 CFR 761 (References C154, C207, D008, P012, P049, P052, P053, P060, P061, P078, P091, P161, U506). PCB items are not expected to be present in the majority of the combustible and plastic containers. A portion of the containers in this waste stream may contain PCB items (e.g., fluorescent light ballasts, Reference P507). Containers with PCB items will be managed and disposed in accordance with WIPP-WAC.

Prohibited Items

The absence of prohibited items is determined and documented through acceptable knowledge and confirmation activities. Radiography or visual examination is performed on each container in this waste stream as a confirmation activity. The following items have been determined as not present in the waste:

- Liquids
- Non-radioactive pyrophoric materials
- Waste incompatible with backfill, seal and panel closure materials, container and packaging materials, or other wastes
- Explosives or compressed gases
- Waste with PCBs not authorized under an EPA PCB waste disposal authorization
- Waste exhibiting the characteristics of ignitability, corrosivity, or reactivity
- Non-mixed hazardous wastes

Headspace Gas/Volatile Organic Compound Information

Lot 1 consists of 101 drums. The UCL_{90} values for all the target analytes are below the program required quantitation limits (PRQLs) with the exception of 1,1,1-trichloroethane, trichloroethylene and toluene. EPA hazardous waste numbers F002 for 1,1,1-trichloroethane and trichloroethylene, F001 for 1,1,1-trichloroethane and F005 for toluene were previously applied by AK. One TIC, 1,2-dichloropropane, listed in 40 CFR 261 Appendix VIII was found in greater than 25% of the containers in this lot. A request has been made to the INL laboratory to add this compound to the Target Analyte List. An AK Re-evaluation was conducted (CCP-TP-005, Attachment 10, 8/23/05). The re-evaluation confirmed that EPA HWN U083 for 1,2-dichloropropane does not apply to this waste stream. No additional hazardous waste numbers were added to the waste stream based on headspace gas sampling (HSGS). Therefore, the HSGS analysis confirms the acceptable knowledge for this waste stream. The specifics of this information are included in the attached Characterization Information Summary.

Transportation

This waste stream and its chemical constituents have been reviewed for consistency with the listed TRUCON codes and they are consistent.

Beryllium may be present in the wastes but only as a trace contaminant. Therefore, beryllium concentrations are less than one percent by weight of the waste in each drum and less than 18.14 kilograms in any payload container, including ten drum overpacks.

Flammable VOCs have the potential to exceed 500 ppm in the headspace gas. Therefore payload containers are evaluated with applicable CH TRAMPAC requirements using the CH-TRAMPAC software compliance evaluation system in the WIPP WWIS prior to shipment.

Radionuclide Information

The two most prevalent radionuclides in this waste stream (by weight) are U-238 and Pu-239. Previous data were evaluated to determine the radionuclide distribution in the waste stream. The results of this evaluation identified the isotopes listed in the table below.

Table 2 – Radionuclides in Waste Stream

WIPP Tracked	Other Radionuclides
Am-241	Am-240
Cs-137	Am-243
Pu-238	Cf-252
Pu-239	Cm-244
Pu-240	Th-228
Pu-242	H-3
Sr-90 (NA)	Np-237
U-233	Pu-241
U-234	U-232
U-238	U-235

Payload management will be implemented in accordance with the WIPP Waste Acceptance Criteria, Appendix E. The percentage of the waste stream that is above 100 nCi/g is approximately 50 percent. The percentage of the waste stream that is below 100 nCi/g is approximately 50 percent. However, each payload container shipped to WIPP will be certified in accordance with CCP-PO-002, CCP Transuranic Waste Certification Plan as containing more than 100 nCi/g of alpha emitting isotopes with half-lives greater than 20 years.

Attachment 1, AK Source Documents- Supplemental Documentation

Source Document Number	AK#	Title	Document Number	Date
C039	S15	Internal Correspondence from J. K. Paynter to B. C. Barrett	WCP8-20	3/23/89
C057	S7, S16	Drum, gasket, liner usage at RFP compiled by Larry Bearly		1989
C072	S7	Record of Conversation of Rod Hoffman, recorded by Doug Herrick and Jennifer Lamb		9/4/91
C076	NA	Internal Memorandum to File from Jeff Harrison. Combustibles and Plastic Characterization		5/23/96
C134	S7	Interview Record and associated documentation of several former Rocky Flats employees		Undated
C137	S7	Interview Record of E. Putzier and E. Vejvoda by D. Herrick and J. Lamb		9/5/91
C145	S7	Interview Record D. Del Pizzo by D. Herrick and Flack.		1/21/92
C154	S7	Interview Record of W. V. Conner by T Widner and D. Lamb		8/13/91
C159	S7	Interview Record of R. Hoffman by D. Herrick and J. Lamb		9/4/91
C170	S7, S15	Telecon between Al Morgan of Rocky Flats (retired) and Jeff Harrison		2/17/97
C171	S7	Telecon between Bill Connor of Kaiser-Hill LATO and Jeff Harrison		2/13/97
C184	S7	Interview Record of Al Morgan by Jeff Harrison		3/19/97
C185	S7	Telecon between Bill Connor of LAPO and Jeff Harrison		3/20/97
C501	S7, S16	Record of Communication. Subject: Fibre-Pak Containers		1/28/05
C207	NA	Summary of Review of PCB AK Sources		9/05/01
D003	NA	Discrepancy Resolution for Combustibles and Plastic EPA Hazardous Waste Numbers	Rev. 1	9/2/2005
D008	NA	Discrepancy Resolution for Combustibles and Plastic PCB Content		9/12/05
P001	S16	TRU Waste Compliance Program for WIPP-WAC (U). WO-4500-H		1989
P008	S2, S16	Packaging and Handling Line- and Nonline-Generated Materials (U)	1-1002-C/O	1988
P012	S16	TRUPACT-II Content Codes (TRUCON)	89-004	1992

Source Document Number	AK#	Title	Document Number	Date
P014	NA	TRU Waste Certification Program for WIPP-WAC (U).	CO-4500-A	5/24/83
P015	S9, S16	TRU Waste Sampling Program: Volume I-Waste Characterization	EGG-WM-6503	1985
P016	S7	Idaho National Engineering Laboratory Code Assessment of the Rocky Flats Transuranic Waste	INEL-95/0281	1995
P024	NA	Content Code Assessments for INEL Contact-Handled Stored Transuranic Wastes	WM-F1-82-021	10/1/82
P026	S2	Transuranic Solid Waste Inspection (U)	WC-4003-A	11/11/85
P033	S9	Summary of Transuranic Waste Characterization Programs at the INEL (1979-Present)	INEL-95/0397	1995
P043	S16	TRU Waste Compliance Program for WIPP-WAC (U)	WO-4500-F	1/19/87
P049	NA	Annual Land Disposal Restriction Progress Report. Rocky Flats Plant		3/31/94
P052	NA	Backlog Waste Reassessment Baseline Book.	WF52 Combustibles	10/28/04
P053	NA	(Tasks 3&4 Final Draft Report) Reconstruction of Historical Rocky Flats Operations and Identification of Release Points.		8/92
P060	NA	Waste Stream and Residue Identification and Characterization Building 707	707-V3.2	2/19/93
P061	NA	Waste Stream and Residue Identification and Characterization Building 771	771-V3.2	9/13/93
P062	NA	Waste Stream and Residue Identification and Characterization Building 779	779-V3.2	6/24/93
P063	S2, S16	Packaging Wastes for Shipment Offsite (U)	WO-4034-C	10/13/86
P064	S2, S16	Waste Packaging Requirements	WO-4034-F	7/8/88
P067	NA	Waste Stream Identification and Characterization		4/6/87
P069	S15	Nuclear Materials Control Elements printout. SAN Database Report	6016-01	6/1/84
P076	NA	Waste Stream and Residue Identification and Characterization Building 559	559-V3.2	1991
P078	NA	Waste Stream Residue Identification and Characterization Building 776	776-V3.2	1991

Source Document Number	AK#	Title	Document Number	Date
P079	NA	Waste Stream Residue Identification and Characterization Building 777	777-V3.2	1991
P081	NA	Waste Stream Residue Identification and Characterization Building 371	371-V3.2	1992
P082	NA	Waste Stream Residue Identification and Characterization Building 374.	374-V3.2	1992
P090	S16	History of Rocky Flats Waste Streams	RFP-3186	1982
P091	NA	Materials Hazards Manual		8/01/76
P161	NA	Dose Reconstruction Project Task 5		11/92
P163	NA	Rocky Flats Plant Plutonium Recovery Reference Process (Including Historical References 1952 to 1991)	RT92-002	2/3/92
P167	S5	Neptunium Processing at the Rocky Flats Plant	RFP-2899	9/20/81
P169	NA	Plutonium Isotopic Ratios at Rocky Flats		11/16/90
P178	S5	Research and Development Quarterly Progress Report. October, November, and December 1968	RFP-1311-A	1/31/69
P179	S5	Research and Development Quarterly Progress Report. April, May, and June 1969	RFP-1406-A	7/31/69
P180	S5	Research and Development Quarterly Progress Report. July, August, and September 1969	RFP-1436-A	10/31/69
P181	S5	Research and Development Quarterly Progress Report. January, February, and March 1970	RFP-1519-A	4/30/70
P182	S5	Research and Development Quarterly Progress Report. April, May, and June 1970	RFP-1579-A	9/16/70
P183	S5	Research and Development Quarterly Progress Report. July, August, and September 1970	RFP-1602-A	10/30/70
P184	S5	Research and Development Quarterly Progress Report. October, November, and December 1970	RFP-1638-A	1/31/71
P185	S5	Research and Development Quarterly Progress Report. January, February, and March 1971	RFP-1691-A	4/30/71
P186	S5	Research and Development Quarterly Progress Report. April, May, and June 1971	RFP-1748-A	7/30/71

Source Document Number	AK#	Title	Document Number	Date
P187	S5	Research and Development Quarterly Progress Report. July, August, and September 1971	RFP-1790-A	10/29/71
P188	S5	Research and Ecology Annual Report. Chemistry Research and Development	RFP-1837-A	4/14/72
P189	S5	Research and Ecology Semi-Annual Progress Report January – June 1972	RFP-1921-A	8/30/72
P190	S5	Research and Ecology Semi-Annual Progress Report. Chemistry Research and Development. July through December 1972	RFP-2004-A	5/16/73
P191	S5	Research and Ecology Semi-Annual Progress Report. Chemistry Research and Development. January-June 1973	RFP-2102-A	8/13/73
P192	S5	Research and Ecology Semi-Annual Progress Report. Chemistry Research and Development. July-December 1973	RFP-2200-A	3/18/74
P193	S5	Research and Development Semi-Annual Progress Report for July through December 1994	RFP-2360-A	2/24/75
P194	S5	Research and Development Semi-Annual Progress Report for January through June 1975	RFP-2417-A	8/29/75
P195	S5	Research and Development Semi-Annual Progress Report for January through June 1977	RFP-2680-A	10/21/77
P196	S5	Chemistry Research and Development Annual Progress Report November 1, 1979 through October 31, 1980	RFP-3180	8/4/81
P197	S5	Chemistry Research and Development Annual Progress Report November 1, 1980 to September 30, 1981	RFP-3324	8/11/82
P198	S5	Chemistry Research and Development Annual Progress Report. October 1, 198 to September 30, 1982	RFP-3511	9/16/83
P199	S5	Chemistry Research and Development Annual Progress Report October 1, 1982 to September 30, 1983	RFP-3654	9/24/84
P200	S5	Chemistry Research and Development Annual Progress Report October 1, 1983 to September 30, 1984	RFP-3825	6/13/86
P201	S5	Chemistry Research and Development Annual Progress Report October 1, 1984 through September 30, 1985	RFP-3931	8/18/86

Source Document Number	AK#	Title	Document Number	Date
P202	S5	Chemistry R&D Monthly Progress Report	R&D 86-012	1/86
P239	NA	Disagreement with the Assignment of EPA Hazardous Waste Numbers by the Acceptable Knowledge Document, INEL-96/0280. EDF-RWMC-942, Rev. 0	INEL/INT-97-00214, Rev. 0	8/14/97
P282	NA	INEEL Acceptable Knowledge Waste Stream Summary Sheet–Combustibles. Bechtel BWXT Idaho, LLC.	EDF-2891, Rev. 3	1/6/03
P283	NA	INEEL Acceptable Knowledge Waste Stream Summary Sheet–Plastics. Bechtel BWXT Idaho, LLC.	EDF-2944, Rev. 3	1/6/03
P284	S9	Waste Stream Profile Form INW169.001-Combustibles	CCN 29583	2/1/02
P285	S9	Waste Stream Profile Form INW198.001-Plastics	CCN 29583	2/1/02
P501	S2, S16	Packaging Waste for Shipment Offsite	WO-4034-A	8/16/85
P502	S2, S16	Packaging and Handling Plutonium Wastes and Residues	CO-1073-A	8/8/77
P503	S2, S16	Packaging Wastes for Shipment Off-Site	CO-4034-A	9/2/77
P504	S2, S16	Packaging Waste for Shipment Offsite	WO-4034-B	1/21/86
P505	S2, S16	Procedure for Packaging and Handling Pu Waste and Residue Drums	9250 (50)	3/29/74
P507	NA	Acceptable Knowledge Document for INEEL Stored Transuranic Waste – Rocky Flats Plant Waste	INEL-96/0280, Rev. 3	2/28/03
P512	S9, S16	Waste Description Information for Transuranically Contaminated Wastes Stored at Idaho National Engineering Laboratory.	INEL-95/0412	12/95
U045	NA	Monthly Report - Liquid Waste Operations for Time Period 1981 – 1991.		1991
U057	S7	Building 881. Presentation by Ernie English		7/3/96
U059	S15	Drum Prefix Numbers and Corresponding Material Balance Areas		1/11/84 – 6/3/94
U060	NA	Chemical Constituents in Transuranic Storage Area (TSA) Waste.	RWMC-803	1996
U069	S4, S15	Drum Prefix Issue Dates Log Book		1987-1997
U097	NA	Response to Inquiry Relating Directly to EDF-RWMC-942 Information and Additional Questions Associated with the EDF		11/01

Source Document Number	AK#	Title	Document Number	Date
U506	S6	AMWTP Waste Tracking System (WTS) Query for IDCs 330, 336, and 337		5/11/05
U507	S9, S15, S16	AMWTP Combustible Waste Inventory Information: RTR and Assay Batch Data		Various
U508	NA	PCB Data for Rocky Flats Paint Samples		2002 & 2003

Alphanumeric Designations

C Correspondence
D Documents (e.g. published reports)
M Miscellaneous (e.g. unpublished data)
P Procedures
U Unpublished Documents

AK Numbers

S1 Process Design Documents
S2 Standard Operating Procedure
S3 Safety Analysis Reports
S4 Waste Packaging Logs
S5 Test plans/research project reports
S6 Site databases
S7 Information from site personnel
S8 Standard industry documents
S9 Previous analytical data
S10 Material safety data sheets
S11 Laboratory Notebooks
S12 Comparable or surrogate sampling and analysis data
S13 Other
S14 Safeguards and Security and other related information
S15 NMMA logs or inventory records or other related information
S16 Packaging
NA Not a supplemental source document, but cited in the AK Summation

NWP
Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA

GEN3

CP:13:01006
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: January 9, 2013

FROM: J. A. Vernon LOCATION: CCP Certification

TO: NTP Records Custodian GSA-212 LOCATION: National TRU Program Certification

SUBJECT: TRANSMITTAL OF IDAHO NATIONAL LABORATORY CHARACTERIZATION INFORMATION SUMMARY FOR WASTE STREAM #ID-SDA-SOIL, LOT 75, 76

Please accept the attached Idaho National Laboratory Characterization Information Summary to be placed in records for Waste Stream #ID-SDA-SOIL, Lot 75, Lot 76.

JAV:jmc

Attachment

cc: (without attachment)
R. Kantrowitz ED

CCP RECORDS ORIGINAL
DATE REC'D 1-13-13
14
SP 1-1413

CHARACTERIZATION INFORMATION SUMMARY

WSPF # ID-SDA-SOIL Rev. 1

Lot 75

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CCP Characterization Information Summary Cover Page

Waste Stream # ID-SDA-SOIL Lot #: 75

AK Expert Review: N/A Date: N/A

SPM Review: Roger Whiteaker Date: 6/22/2012

SPM signature certifies that through Acceptable Knowledge testing and/or analysis that the waste identified in this summary is not corrosive, ignitable, reactive, or incompatible with the TSDF.

A summary of the Acceptable Knowledge regarding this waste stream containing specific information about the corrosivity, reactivity, and ignitability of the waste stream is included as an attachment to the Waste Stream Profile Form. By reference, that information is included in this lot.

List of procedures used:

Visual Examination Technique

CCP-TP-006	Rev. 16	12/29/10	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 15	06/30/10	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 14	11/11/08	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 13	10/30/08	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 12	05/01/08	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 11	04/14/08	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 10	12/11/07	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 9	10/18/07	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 8	11/16/06	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 7	08/09/06	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 6	08/02/05	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 5	05/05/05	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 4	04/19/05	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 3	04/15/05	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 2	03/18/05	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 1	02/21/05	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 0	11/16/04	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits

Non Destructive Assay (NDA):

CCP-TP-109	Rev. 8	08/10/11	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 7	01/26/11	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 6	03/16/09	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 5	11/16/06	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 4	09/21/05	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 3	04/12/05	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 2	03/18/05	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 1	05/06/04	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-115	Rev. 4	06/24/09	CCP SWEPP Gamma-Ray Spectrometer (SGRS) Operating Procedure
CCP-TP-115	Rev. 3	12/08/06	CCP SWEPP Gamma-Ray Spectrometer (SGRS) Operating Procedure
CCP-TP-115	Rev. 2	06/12/06	CCP SWEPP Gamma-Ray Spectrometer (SGRS) Operating Procedure
CCP-TP-115	Rev. 1	04/15/05	CCP SWEPP Gamma-Ray Spectrometer (SGRS) Operating Procedure
CCP-TP-115	Rev. 0	02/27/05	CCP SWEPP Gamma-Ray Spectrometer (SGRS) Operating Procedure
CCP-TP-019	Rev. 5	09/16/09	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
CCP-TP-019	Rev. 4	10/19/06	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
CCP-TP-019	Rev. 3	06/15/06	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
CCP-TP-019	Rev. 2	06/10/05	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
CCP-TP-019	Rev. 1	04/16/05	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
CCP-TP-019	Rev. 0	02/27/05	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
CCP-TP-107	Rev. 11	11/30/09	Operating the CCP High Efficiency Neutron Counter Using NDA2000
CCP-TP-107	Rev. 10	02/08/08	Operating the CCP High Efficiency Neutron Counter Using NDA2000
CCP-TP-107	Rev. 9	04/11/07	Operating the CCP High Efficiency Neutron Counter Using NDA2000
CCP-TP-107	Rev. 8	06/15/06	Operating the CCP High Efficiency Neutron Counter Using NDA2000
CCP-TP-107	Rev. 7	03/17/06	Operating the CCP High Efficiency Neutron Counter Using NDA2000
CCP-TP-107	Rev. 6	04/12/05	Operating the CCP High Efficiency Neutron Counter Using NDA2000

Solids Sampling:

INST-OI-73	Rev. 5	09/04/09	Manual Drum Coring Operations
INST-OI-73	Rev. 4	04/07/09	Manual Drum Coring Operations
INST-OI-73	Rev. 3	07/24/08	Manual Drum Coring Operations
INST-OI-73	Rev. 2	04/07/08	Manual Drum Coring Operations
INST-OI-73	Rev. 1	07/18/07	Manual Drum Coring Operations
INST-OI-16	Rev. 31	09/04/09	Drum Coring Operations
INST-OI-16	Rev. 30	04/07/09	Drum Coring Operations
INST-OI-16	Rev. 29	07/03/08	Drum Coring Operations
INST-OI-16	Rev. 28	06/30/08	Drum Coring Operations
INST-OI-16	Rev. 27	04/10/08	Drum Coring Operations

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CCP Characterization Information Summary Cover Page

Solids Analysis:

CCP-TP-181	Rev. 0	05/02/07	CCP Determination of Mercury by CVAA for TRU Waste Characterization
CCP-TP-182	Rev. 1	01/26/09	CCP Determination of Metals by ICP-AES for TRU Waste Characterization
CCP-TP-182	Rev. 0	05/02/07	CCP Determination of Metals by ICP-AES for TRU Waste Characterization
CCP-TP-183	Rev. 0	05/02/07	CCP Microwave Assisted Digestion of Homogeneous Solids and Soil/Gravel
CCP-TP-184	Rev. 0	05/02/07	CCP Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry
CCP-TP-185	Rev. 1	11/18/08	CCP Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry
CCP-TP-185	Rev. 0	05/02/07	CCP Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry
CCP-TP-186	Rev. 1	08/22/07	CCP Determination of Nonhalogenated Volatile Organics by Gas Chromatography
CCP-TP-186	Rev. 0	05/02/07	CCP Determination of Nonhalogenated Volatile Organics by Gas Chromatography
CCP-TP-187	Rev. 1	11/18/08	CCP Sample Preparation for Semivolatile Organic Compounds
CCP-TP-187	Rev. 0	05/02/07	CCP Sample Preparation for Semivolatile Organic Compounds

Project Level Data Validation / DQO Reconciliation:

CCP-TP-001	Rev. 19	12/29/10	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 18	08/09/10	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 17	09/24/07	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 16	04/26/07	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 15	11/22/06	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 14	11/16/06	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 13	07/21/06	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 12	05/25/06	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 11	03/23/05	CCP Project Level Data Validation and Verification
CCP-TP-002	Rev. 24	12/28/11	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 23	12/29/10	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 22	06/30/10	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 21	08/04/09	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 20	08/18/08	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 19	12/22/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 18	11/16/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 17	10/11/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 16	06/06/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 15	08/16/05	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-003	Rev. 18	12/29/10	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 17	11/09/09	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 16	10/02/07	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 15	11/16/06	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 14	09/03/03	CCP Sampling Design and Data Analysis for RCRA Characterization
CCP-TP-005	Rev. 24	11/28/11	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 23	06/30/11	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 22	04/21/11	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 21	12/29/10	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 20	11/01/10	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 19	07/06/10	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 18	11/16/06	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 17	06/05/06	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 16	02/27/06	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 15	03/31/05	CCP Acceptable Knowledge Documentation
CCP-TP-030	Rev. 30	05/21/12	CCP TRU Waste Certification and WWIS/WDS Data Entry
CCP-TP-030	Rev. 29	04/26/11	CCP CH TRU Waste Certification and WWIS/WDS Data Entry
CCP-TP-030	Rev. 28	05/12/10	CCP CH TRU Waste Certification and WWIS/WDS Data Entry
CCP-TP-030	Rev. 27	12/14/09	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 26	05/27/09	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 25	01/22/09	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 24	08/20/08	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 23	03/12/08	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 22	07/24/07	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 21	05/21/07	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 20	02/07/07	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 19	11/16/06	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 18	05/01/06	CCP TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 17	12/29/05	CCP TRU Waste Certification and WWIS Data Entry

WAP Certification:

CCP-PO-001	Rev. 20	06/16/11	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 19	12/29/10	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 18	06/30/10	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 17	06/23/09	CCP Transuranic Waste Characterization Quality Assurance Project Plan

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CCP Characterization Information Summary Cover Page

CCP-PO-001	Rev. 16	10/31/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 15	08/08/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 14	03/28/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 13	11/16/06	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 12	03/22/06	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 11	03/10/05	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-002	Rev. 26	07/14/11	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 25	12/29/10	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 24	06/30/10	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 23	03/30/10	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 22	01/12/10	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 21	01/26/09	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 20	11/02/07	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 19	05/22/07	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 18	11/16/06	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 17	11/16/06	CCP Transuranic Waste Certification Plan

CIS 004

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-SDA-SOIL

Lot # 75

Container ID Number	Historical Container ID	NDA BDR	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Overpack Required	Transportation Headspace Gas BDR				GGT
									Sample	Analysis			
ARP70483	N/A	INNDAW120037	N/A	IN-ARP-VE-002750	N/A	N/A	Yes	Yes	IN12FG5049	N/A	N/A	N/A	N/A
ARP70494	N/A	INNDAW120039	N/A	IN-ARP-VE-002750	N/A	N/A	Yes	Yes	IN12FG5049	N/A	N/A	N/A	N/A

Signature of Site Project Manager

Roger Whiteaker
Printed Name

6/22/2012
Date

CIS 005

CCP Solids Analysis VOC UCL_{90} Evaluation Form

WSPF #: ID-SDA-SOIL Rev. 1 **Solids Summary Waste Stream Lot Number** 1 through 4

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL [1]	# Samples	Maximum (mg/kg)	Mean (mg/kg)	SD (ppmv)	UCL_{90} (mg/kg)	PRQL (mg/kg)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA HWN [2]
Benzene	Log	0	20[4]	1.2669	-1.8671	1.1319	-1.5114	10	2.30		
Bromoform	Log	0	20[4]	0.5596	-1.9842	0.9039	-1.7002	10	2.30		
Carbon Disulfide	Log	0	20[5]	0.9361	-1.8765	0.9618	-1.5647	10	2.30		
Carbon Tetrachloride	Log	10	20	7.9010	0.8031	3.8949	1.9595	10	2.30		
Chlorobenzene	Log	0	20[4]	1.2669	-1.8671	1.1319	-1.5114	10	2.30		
Chloroform	Log	6	20	4.7005	-0.7183	2.5064	0.0258	10	2.30		
1,1-Dichloroethylene	Log	0	20[4]	1.2669	-1.6335	1.1115	-1.2842	10	2.30		
1,2-Dichloroethane	Log	0	20[4]	1.2669	-1.7105	1.1438	-1.3511	10	2.30		
Ethylbenzene	Log	0	20[4]	1.2669	-1.8671	1.1319	-1.5114	10	2.30		
Methylene Chloride	Log	0	20[4]	1.2669	-1.6741	1.1986	-1.2974	10	2.30		
m.p-Xylene [b]	Log	0	20[5]	0.9361	-1.7108	0.9749	-1.3947	10	2.30		
o-Xylene	Log	0	20[4]	1.2669	-1.8671	1.1319	-1.5114	10	2.30		
1,1,2,2-Tetrachloroethane	Log	2	20[4]	1.2669	-1.4706	1.1716	-1.1024	10	2.30		
Tetrachloroethylene	Log	12	20	5.7038	0.6750	3.1245	1.6027	10	2.30		
Toluene	Log	4	20[4]	1.2669	-1.5706	1.1818	-1.1992	10	2.30		
Trans-1,2-Dichloroethylene	Log	0	20[4]	1.2669	-1.8671	1.1319	-1.5114	10	2.30		
1,1,1-Trichloroethane	Log	3	20[3]	3.9512	-1.0869	2.0712	-0.4547	10	2.30		
Trichloroethylene	Log	8	20	6.8244	0.1692	3.2224	1.1259	10	2.30		
1,1,2-Trichloro-1,2,2-trifluoroethane	Log	0	20[4]	1.2669	-1.6266	1.1362	-1.2696	10	2.30		
1,1,2-Trichloroethane	Log	0	20[4]	1.2669	-1.7499	1.1060	-1.4023	10	2.30		
Trichlorofluoromethane	Log	0	20[4]	1.2669	-1.5694	1.0707	-1.2329	10	2.30		
Vinyl Chloride	Log	0	20[5]	0.5306	-1.7249	0.7938	-1.4676	10	2.30		

CTS 006

CCP Solids Analysis VOC UCL_{90} Evaluation Form

WSPF #: ID-SDA-SOIL Rev. 1 **Solids Summary Waste Stream Lot Number** 1 through 4

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL [1]	# Samples	Maximum (mg/kg)	Mean (mg/kg)	SD (ppmv)	UCL_{90} (mg/kg)	PRQL (mg/kg)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA HWN [2]
Acetone	Log	0	20	2.8904	-0.3921	0.8234	-0.1476	4	1.39		
Butanol	Log	2	20	3.5973	-0.0160	1.3665	0.3897	100	4.61		
Methanol	Log	0	20	3.5973	-0.1185	0.9424	0.1613	100	4.61		
Methyl ethyl ketone	Log	0	20	2.8904	-0.2556	0.8012	-0.0177	100	4.61		
Ethyl ether	Log	0	20	3.5973	0.3284	0.8051	0.5675	100	4.61		
Isobutanol	Log	0	20	2.8904	-0.4614	0.8077	-0.2216	100	4.61		
Pyridine	Log	0	20	2.8904	0.0528	0.7698	0.2813	100	4.61		

[a] Can also be analyzed as an SVOC. If analyzed as an SVOC, the QAO's of CCP-PO-001, Table C3-6 apply.

[b] These xylene isomers cannot be resolved by the analytical methods employed in the program. m-Xylene and p-Xylene will be reported as "Total m-p-Xylene."

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per section C4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

(2) No additional EPA Hazardous Waste Numbers were identified for this waste stream.

(3) As a result of dilution requirements for one of the twenty samples 1,1,1-Trichloroethane were reported as non-detected with an MDL value in excess of the PRQL. In accordance with the Waste Analysis Plan, Section C4-3d such observations with elevated MDL values due to dilution were not used in calculating the mean concentration. Consequently, the subject analytes were statistically evaluated with 19, rather than 20, usable observations.

(4) As a result of dilution requirements for two of the twenty samples, Benzene, Bromoform, Chlorobenzene, 1,1-Dichloroethylene, 1,2-Dichloroethane, Ethylbenzene, Methylene Chloride, o-Xylene, 1,1,2,2-Tetrachloroethane, Toluene, Trans-1,2-Dichloroethylene, 1,1,2-Trichloro-1,2,2-trifluoroethane, 1,1,2-Trichloroethane and Trichlorofluoromethane were reported as non-detected with an MDL value in excess of the PRQL. In accordance with the Waste Analysis Plan, Section C4-3d such observations with elevated MDL values due to dilution were not used in calculating the mean concentration. Consequently, the subject analytes were statistically evaluated with 18, rather than 20, usable observations.

(5) As a result of dilution requirements for seventeen of the twenty samples, Carbon Disulfide, m.p-Xylene, and Vinyl Chloride were reported as non-detected with an MDL value in excess of the PRQL. In accordance with the Waste Analysis Plan, Section C4-3d such observations with elevated MDL values due to dilution were not used in calculating the mean concentration. Consequently, the subject analytes were statistically evaluated with 17, rather than 20, usable observations.

Roger Whiteaker
Signature of Site Project Manager

Roger Whiteaker
Printed Name

6/22/2012
Date

CIS 007

CCP Solids Analysis SVOC UCL_{90} Evaluation Form

WSPF #: ID-SDA-SOIL Rev. 1 **Solids Summary Waste Stream Lot Number** 1 through 4

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples	Maximum (mg/kg)	Mean (mg/kg)	SD (mg/kg)	UCL90 (mg/kg)	PRQL (mg/kg)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code (2)
bis(2-Ethylexyl)phthalate[5]	Log	6	7	2.71	0.66	1.74	1.61	41.00	3.71		
1,2-Dichlorobenzene [a]	Log	0	20(3)	2.71	-1.22	1.61	-0.73	40.00	3.69		
1,4-Dichlorobenzene[a]	Log	0	20(3)	2.71	-1.22	1.61	-0.73	40.00	3.69		
2,4-Dinitrophenol	Log	0	20(3)	2.71	-1.41	1.44	-0.97	40.00	3.69		
2,4-Dinitrotoluene	Log	0	20(4)	-0.11	-1.85	0.77	-1.59	40.00	3.69		
Hexachlorobenzene	Log	0	20(4)	-0.11	-1.75	0.83	-1.48	2.60	0.96		
Hexachlorobutadiene[5]	Log	4	7	2.40	-0.20	1.92	0.84	4.60	1.53		
Hexachloroethane	Log	11	20(3)	6.02	1.15	3.22	2.13	40.00	3.69		
2-Methylphenol (cresols)	Log	0	20(3)	2.71	-1.35	1.77	-0.81	40.00	3.69		
3&4-Methylphenol (cresols)	Log	0	20(3)	2.71	-1.22	1.61	-0.73	40.00	3.69		
Nitrobenzene	Log	0	20(3)	2.71	-1.22	1.61	-0.73	40.00	3.69		
Pentachlorphenol	Log	0	20(3)	2.71	-1.26	1.61	-0.77	40.00	3.69		

[a] Can also be analyzed as a VOC. If analyzed as a VOC, the QAO's of CCP-PO-001, Table C3-6 apply.

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per C4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

(2) No additional EPA Hazardous Waste Numbers were identified for this waste stream.

(3) As a result of dilution requirements for one of the twenty samples, 1,2-Dichlorobenzene, 1,4-Dichlorobenzene, 2,4-Dinitrophenol, Hexachloroethane, 2-Methylphenol, 3&4-Methylphenol, Nitrobenzene, and Pentachlorophenol were reported as non-detected with an MDL value in excess of the PRQL. In accordance with the Waste Analysis Plan, Section C4-3d such observations with elevated MDL values due to dilution were not used in calculating the mean concentration. Consequently, the subject analytes were statistically evaluated with 19, rather than 20, usable observations.

(4) As a result of dilution requirements for sixteen of the twenty samples, 2,4-Dinitrotoluene and Hexachlorobenzene were reported as non-detected with an MDL value in excess of the PRQL. In accordance with the Waste Analysis Plan, Section C4-3d such observations with elevated MDL values due to dilution were not used in calculating the mean concentration. Consequently, the subject analytes were statistically evaluated with 16, rather than 20, usable observations.

(5) bis(2-Ethylexyl)phthalate and Hexachlorobutadiene were added to the target analyte list.

C15 009

Signature of Site Project Manager

Roger Whiteaker
Printed Name

6/22/2012
Date

CCP Solids Analysis Metals UCL_{90} Evaluation Form

WSPF #: ID-SDA-SOIL Rev. 1 **Solids Summary Waste Stream Lot Number** 1 through 4

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples	Maximum (mg/kg)	Mean (mg/kg)	SD (mg/kg)	UCL90 (mg/kg)	PRQL (mg/kg)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Antimony	Log	18	20	2.48	0.37	0.85	0.62	100	4.61		
Arsenic	Log	20	20	2.83	2.22	0.19	2.27	100	4.61		
Barium	Log	20	20	6.63	5.50	0.30	5.59	2000	7.60		
Beryllium	SQRT	20	20	7.14	3.59	2.14	4.23	100	10.00		
Cadmium	Log	20	20	4.94	1.79	1.55	2.26	20	3.00		
Chromium	Log	20	20	5.44	3.95	0.50	4.10	100	4.61		
Lead	Log	20	20	4.87	3.22	0.58	3.39	100	4.61		
Mercury	Log	18	20	1.48	-2.36	1.53	-1.91	4	1.39		
Nickel	Log	20	20	5.63	3.85	0.63	4.03	100	4.61		
Selenium	SQRT	7	20	1.18	0.71	0.24	0.78	20	4.47		
Silver	Log	11	20	1.86	-0.63	1.42	-0.21	100	4.61		
Thallium	SQRT	11	20	1.97	1.06	0.51	1.21	100	10.00		
Vanadium	No	20	20	63.00	52.40	9.08	55.10	100	N/A		
Zinc	Log	20	20	6.41	4.90	0.54	5.06	100	4.61	Yes	(2)

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per section C4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

(2) Zinc is not listed under 40CFR 261.30 or as a toxicity characteristic metal per 40CFR 261.24.

Signature of Site Project Manager

Roger Whiteaker
Printed Name

6/22/2012
Date

CIS 009

CCP Solid VOCs Summary Data

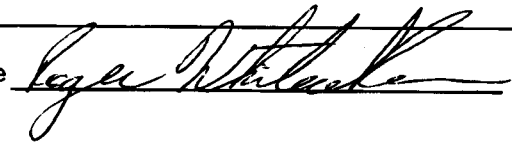
Waste Stream Number: ID-SDA-SOIL

Waste Stream Lot Number: 1 through 4

Tentatively Identified Compound	Maximum Observed Estimated Concentrations (mg/kg)	# Samples Containing TIC	% Detected
NONE	N/A	N/A	N/A

Data Supports EPA Hazardous Waste Numbers Assigned by AK? Yes ☑b ☐

If no, describe the basis for assigning the EPA Hazardous Waste Codes:

SPM Signature  Date 6/22/2012

CIS 010

CCP Solid SVOCs Summary Data

Waste Stream Number: ID-SDA-SOIL

Solids Summary Waste Stream Lot Number: 1 through 4

Tentatively Identified Compound	Maximum Observed Estimated Concentrations (mg/kg)	# Samples Containing TIC	% Detected
Pentachlorobiphenyl	810.00	9	45.00%
Tetrachlorobiphenyl	27.00	5	25.00%
Hexachloropropene	5.40	3	15.00%
1,4-Dioxane	1.10	2	10.00%
Diethyl phthalate	2.10	1	5.00%
Hexachlorobiphenyl	9.80	3	15.00%
Benzene, 1,2,3,5-tetrachloro	21.00	1	5.00%
bis (7-methyloctyl)phthalate	0.84	1	5.00%

Note: Tetrachlorobiphenyl, and Pentachlorobiphenyl are listed in 20.4.1.200 NMAC (incorporating 40 CFR 261) Appendix VIII, and are present as TICs in greater than 25% of samples in the waste stream. These analytes have been added to the target analyte list for ID-SDA-SOIL.

Data Supports EPA Hazardous Waste Numbers Assigned by AK? Yes ☑ No ☐

If no, describe the basis for assigning the EPA Hazardous Waste Codes:

SPM Signature Date 6/22/2012

CIS 011

CCP RTR/VE Summary of Prohibited Items and AK Confirmation

Waste Stream Number: ID-SDA-SOIL Lot #: 75

Container Number	RTR Prohibited Items [a,b]	Visual Examination Prohibited Items [a,b]
See correlation of container ID numbers for list of remaining drum numbers in this Lot.	RTR was not used to certify any containers in this lot.	None of the containers in this Lot had prohibited items identified during Visual Examination technique.

a. See Batch Data Reports
b. If AK has assigned U134 to this waste stream, then any liquids in these containers are prohibited items (not acceptable by the TSDF).

Justification for the selection of RTR and/or VE: VE was selected as the characterization method for this lot because the containers were newly generated and met all the Data Quality Objectives for NDE for the waste.

Site Project Manager Signature | Roger Whiteaker (Printed Name) | 6/22/2012 (Date)

CIS 012

CCP Reconciliation with Data Quality Objectives

WSPF# ID-SDA-SOIL Rev. 1 Lot # 75

Sampling Completeness

RTR/VE:

Number of Valid Samples: 2 Number of Total Samples Analyzed: 2
Percent Complete: 100 (QAO is 100%)

NDA

Number of Valid Samples: 2 Number of Total Samples Analyzed: 2
Percent Complete: 100 (QAO is 100%)

HSG

Number of Valid Samples: NA Number of Total Samples Collected: NA
Percent Complete: NA (QAO is ≥90%)
Number of Valid Samples: NA Number of Total Samples Analyzed: NA
Percent Complete: NA (QAO is ≥90%)

Total VOC

Number of Valid Samples: 20 Number of Total Samples Collected: 20
Percent Complete: 100 (QAO is ≥90%)
Number of Valid Samples: 20 Number of Total Samples Analyzed: 20
Percent Complete: 100 (QAO is ≥90%)

Total SVOC

Number of Valid Samples: 20 Number of Total Samples Collected: 20
Percent Complete: 100 (QAO is ≥90%)
Number of Valid Samples: 20 Number of Total Samples Analyzed: 20
Percent Complete: 100 (QAO is ≥90%)

Total Metals

Number of Valid Samples: 20 Number of Total Samples Collected: 20
Percent Complete: 100 (QAO is ≥90%)
Number of Valid Samples: 20 Number of Total Samples Analyzed: 20
Percent Complete: 100 (QAO is ≥90%)

CIS 013

CCP Reconciliation with Data Quality Objectives

WSPF# ID-SDA-SOIL Rev. 1 Lot # 75

	Y/N/NA	Reconciliation Parameter
1	Y	Waste Matrix Code.
2	Y	Waste Material Parameter Weights.
3	Y	The waste matrix code identified is consistent with the type of sampling and analysis used to characterize the waste.
4	Y	The TRU activity reported in the BDRs for each container demonstrates with a 95% probability that the container of waste contains TRU radioactive waste.
5	N	AK Sufficiency. Is there an approved AK sufficiency Determination for this waste stream?
6	NA	Mean concentrations, UCL_{90} values for the mean concentration, standard deviations, and the number of samples collected for each VOC in the HSG of each container were calculated and compared with the program required quantitation limits, as reported in CCP-TP-003 Attachment 3, and additional U. S. Environmental Protection Agency (EPA) Hazardous Waste Numbers were assigned as required. Samples were randomly collected (when appropriate).
7a	Y	Mean concentrations, UCL_{90} values for the mean concentration, standard deviations, and the number of samples collected for solids VOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003 Attachment 4, and additional EPA HWNs were assigned as required. Samples were randomly collected.
7b	Y	Mean concentrations, (UCL_{90}) values for the mean concentration, standard deviations, and the number of samples collected for solids SVOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003 Attachment 5, and additional EPA HWNs were assigned as required. Samples were randomly collected.
7c	Y	Mean concentrations, (UCL_{90}) values for the mean concentration, standard deviations, and the number of samples collected for total metals were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003 Attachment 6, and additional EPA HWNs were assigned as required. Samples were randomly collected.

CIS 014

CCP Reconciliation with Data Quality Objectives

WSPF# ID-SDA-SOIL Rev. 1 Lot # 75

8	Y	The data demonstrates whether the waste stream exhibits a toxicity characteristic under Title 40 Code of Federal Regulations (CFR), Part 261, Identification and Listing of Hazardous Waste, Subpart C, Characteristics of Hazardous Waste.
9	Y	Does the waste stream contain listed waste found in 20.4.1.200 NMAC incorporating 40 CFR Part 261, Subpart D, Lists of Hazardous Wastes.
10	Y	Waste stream can be classified as hazardous or nonhazardous at the 90-percent confidence level.
11	Y	Appropriate packaging configuration and Drum Age Criteria (DAC) is applied and documented in the headspace gas sampling documentation, and the drum age met prior to sampling.
12	Y	TICs were appropriately identified and reported in accordance with the requirements of Section C3-1 of the QAPjP.
13	NA	The PRQLs for headspace gas VOCs were met for all analyses as evidenced by the analytical batch data reports.
14		The overall completeness, comparability, and representativeness QAOs were met for each of the analytical and testing procedures as specified in the WAP Sections C3-2 through C3-9 prior to submittal of a waste stream profile form for a waste steam or waste stream lot.

	Completeness	Comparability	Representativeness
Radiography	NA	NA	NA
VE	Y	Y	Y
Headspace Gas Analysis	NA	NA	NA
Solids Sampling	Y	Y	Y
Solids VOCs	Y	Y	Y
Solids SVOCs	Y	Y	Y
Solids Metals	Y	Y	Y

Comments:
None

Roger Whiteaker — Signature of Site Project Manager

Roger Whiteaker — Printed Name

6/22/2012 — Date

CIS 015

DIVIDER

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CHARACTERIZATION INFORMATION SUMMARY

WSPF # ID-SDA-SOIL Rev. 1

Lot 76

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CCP Characterization Information Summary Cover Page

Waste Stream # ID-SDA-SOIL Lot #: 76

WK Expert Review: N/A Date: N/A

SPM Review: Jim Vernon Date: 9/19/2012

SPM signature certifies that through Acceptable Knowledge testing and/or analysis that the waste identified in this summary is not corrosive, ignitable, reactive, or incompatible with the TSDF.

A summary of the Acceptable Knowledge regarding this waste stream containing specific information about the corrosivity, reactivity, and ignitability of the waste stream is included as an attachment to the Waste Stream Profile Form. By reference, that information is included in this lot.

List of procedures used:

Visual Examination Technique

CCP-TP-006	Rev. 16	12/29/10	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 15	06/30/10	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 14	11/11/08	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 13	10/30/08	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 12	05/01/08	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 11	04/14/08	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 10	12/11/07	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 9	10/18/07	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 8	11/16/06	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 7	08/09/06	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 6	08/02/05	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 5	05/05/05	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 4	04/19/05	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 3	04/15/05	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 2	03/18/05	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 1	02/21/05	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 0	11/16/04	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits

Non Destructive Assay (NDA):

CCP-TP-109	Rev. 8	08/10/11	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 7	01/26/11	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 6	03/16/09	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 5	11/16/06	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 4	09/21/05	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 3	04/12/05	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 2	03/18/05	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 1	05/06/04	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-115	Rev. 4	06/24/09	CCP SWEPP Gamma-Ray Spectrometer (SGRS) Operating Procedure
CCP-TP-115	Rev. 3	12/08/06	CCP SWEPP Gamma-Ray Spectrometer (SGRS) Operating Procedure
CCP-TP-115	Rev. 2	06/12/06	CCP SWEPP Gamma-Ray Spectrometer (SGRS) Operating Procedure
CCP-TP-115	Rev. 1	04/15/05	CCP SWEPP Gamma-Ray Spectrometer (SGRS) Operating Procedure
CCP-TP-115	Rev. 0	02/27/05	CCP SWEPP Gamma-Ray Spectrometer (SGRS) Operating Procedure
CCP-TP-019	Rev. 5	09/16/09	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
CCP-TP-019	Rev. 4	10/19/06	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
CCP-TP-019	Rev. 3	06/15/06	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
CCP-TP-019	Rev. 2	06/10/05	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
CCP-TP-019	Rev. 1	04/16/05	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
CCP-TP-019	Rev. 0	02/27/05	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
CCP-TP-107	Rev. 11	11/30/09	Operating the CCP High Efficiency Neutron Counter Using NDA2000
CCP-TP-107	Rev. 10	02/08/08	Operating the CCP High Efficiency Neutron Counter Using NDA2000
CCP-TP-107	Rev. 9	04/11/07	Operating the CCP High Efficiency Neutron Counter Using NDA2000
CCP-TP-107	Rev. 8	06/15/06	Operating the CCP High Efficiency Neutron Counter Using NDA2000
CCP-TP-107	Rev. 7	03/17/06	Operating the CCP High Efficiency Neutron Counter Using NDA2000
CCP-TP-107	Rev. 6	04/12/05	Operating the CCP High Efficiency Neutron Counter Using NDA2000

Solids Sampling:

INST-OI-73	Rev. 5	09/04/09	Manual Drum Coring Operations
INST-OI-73	Rev. 4	04/07/09	Manual Drum Coring Operations
INST-OI-73	Rev. 3	07/24/08	Manual Drum Coring Operations

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NST-OI-73	Rev. 2	04/07/08	Manual Drum Coring Operations
NST-OI-73	Rev. 1	07/18/07	Manual Drum Coring Operations
NST-OI-16	Rev. 31	09/04/09	Drum Coring Operations
NST-OI-16	Rev. 30	04/07/09	Drum Coring Operations
NST-OI-16	Rev. 29	07/03/08	Drum Coring Operations
NST-OI-16	Rev. 28	06/30/08	Drum Coring Operations
NST-OI-16	Rev. 27	04/10/08	Drum Coring Operations

Solids Analysis:

CCP-TP-181	Rev. 0	05/02/07	CCP Determination of Mercury by CVAA for TRU Waste Characterization
CCP-TP-182	Rev. 1	01/26/09	CCP Determination of Metals by ICP-AES for TRU Waste Characterization
CCP-TP-182	Rev. 0	05/02/07	CCP Determination of Metals by ICP-AES for TRU Waste Characterization
CCP-TP-183	Rev. 0	05/02/07	CCP Microwave Assisted Digestion of Homogeneous Solids and Soil/Gravel
CCP-TP-184	Rev. 0	05/02/07	CCP Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry
CCP-TP-185	Rev. 1	11/18/08	CCP Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry
CCP-TP-185	Rev. 0	05/02/07	CCP Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry
CCP-TP-186	Rev. 1	08/22/07	CCP Determination of Nonhalogenated Volatile Organics by Gas Chromatography
CCP-TP-186	Rev. 0	05/02/07	CCP Determination of Nonhalogenated Volatile Organics by Gas Chromatography
CCP-TP-187	Rev. 1	11/18/08	CCP Sample Preparation for Semivolatile Organic Compounds
CCP-TP-187	Rev. 0	05/02/07	CCP Sample Preparation for Semivolatile Organic Compounds

Project Level Data Validation / DQO Reconciliation:

CCP-TP-001	Rev. 19	12/29/10	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 18	08/09/10	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 17	09/24/07	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 16	04/26/07	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 15	11/22/06	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 14	11/16/06	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 13	07/21/06	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 12	05/25/06	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 11	03/23/05	CCP Project Level Data Validation and Verification
CCP-TP-002	Rev. 24	12/28/11	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 23	12/29/10	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 22	06/30/10	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 21	08/04/09	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 20	08/18/08	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 19	12/22/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 18	11/16/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 17	10/11/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 16	06/06/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 15	08/16/05	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-003	Rev. 18	12/29/10	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 17	11/09/09	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 16	10/02/07	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 15	11/16/06	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 14	09/03/03	CCP Sampling Design and Data Analysis for RCRA Characterization
CCP-TP-005	Rev. 24	11/28/11	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 23	06/30/11	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 22	04/21/11	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 21	12/29/10	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 20	11/01/10	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 19	07/06/10	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 18	11/16/06	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 17	06/05/06	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 16	02/27/06	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 15	03/31/05	CCP Acceptable Knowledge Documentation
CCP-TP-030	Rev. 30	05/21/12	CCP TRU Waste Certification and WWIS/WDS Data Entry
CCP-TP-030	Rev. 29	04/26/11	CCP CH TRU Waste Certification and WWIS/WDS Data Entry

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CP-TP-030	Rev. 28	05/12/10	CCP CH TRU Waste Certification and WWIS/WDS Data Entry
CP-TP-030	Rev. 27	12/14/09	CCP CH TRU Waste Certification and WWIS Data Entry
CP-TP-030	Rev. 26	05/27/09	CCP CH TRU Waste Certification and WWIS Data Entry
CP-TP-030	Rev. 25	01/22/09	CCP CH TRU Waste Certification and WWIS Data Entry
CP-TP-030	Rev. 24	08/20/08	CCP CH TRU Waste Certification and WWIS Data Entry
CP-TP-030	Rev. 23	03/12/08	CCP CH TRU Waste Certification and WWIS Data Entry
CP-TP-030	Rev. 22	07/24/07	CCP CH TRU Waste Certification and WWIS Data Entry
CP-TP-030	Rev. 21	05/21/07	CCP CH TRU Waste Certification and WWIS Data Entry
CP-TP-030	Rev. 20	02/07/07	CCP CH TRU Waste Certification and WWIS Data Entry
CP-TP-030	Rev. 19	11/16/06	CCP CH TRU Waste Certification and WWIS Data Entry
CP-TP-030	Rev. 18	05/01/06	CCP TRU Waste Certification and WWIS Data Entry
CP-TP-030	Rev. 17	12/29/05	CCP TRU Waste Certification and WWIS Data Entry

***NAP* Certification:**

CP-PO-001	Rev. 20	06/16/11	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CP-PO-001	Rev. 19	12/29/10	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CP-PO-001	Rev. 18	06/30/10	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CP-PO-001	Rev. 17	06/23/09	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CP-PO-001	Rev. 16	10/31/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CP-PO-001	Rev. 15	08/08/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CP-PO-001	Rev. 14	03/28/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CP-PO-001	Rev. 13	11/16/06	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CP-PO-001	Rev. 12	03/22/06	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CP-PO-001	Rev. 11	03/10/05	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-002	Rev. 26	07/14/11	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 25	12/29/10	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 24	06/30/10	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 23	03/30/10	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 22	01/12/10	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 21	01/26/09	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 20	11/02/07	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 19	05/22/07	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 18	11/16/06	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 17	11/16/06	CCP Transuranic Waste Certification Plan

CIS-004

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

CIS-005

aste Stream: # ID-SDA-SOIL

Lot # 76

Container ID Number	Historical Container ID	NDA BDR	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Overpack Required	Transportation Headspace Gas BDR				GGT
									Sample	Analysis			
ARP71044	N/A	INNDAS120025	N/A	IN-ARP-VE-002793	N/A	N/A	N/A	No	IN12FG5088	N/A	N/A	N/A	N/A
ARP71061	N/A	INNDAS120026	N/A	IN-ARP-VE-002795	N/A	N/A	N/A	No	IN12FG5090	N/A	N/A	N/A	N/A

Signature of Site Project Manager

Jim Vernon
Printed Name

9/19/2012
Date

CCP Solids Analysis VOC UCL_{90} Evaluation Form

WSPF #: ID-SDA-SOIL Rev. 1 **Solids Summary Waste Stream Lot Number** 1 through 4

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL [1]	# Samples	Maximum (mg/kg)	Mean (mg/kg)	SD (ppmv)	UCL_{90} (mg/kg)	PRQL (mg/kg)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA HWN [2]
Benzene	Log	0	20[4]	1.2669	-1.8671	1.1319	-1.5114	10	2.30		
Bromoform	Log	0	20[4]	0.5596	-1.9842	0.9039	-1.7002	10	2.30		
Carbon Disulfide	Log	0	20[5]	0.9361	-1.8765	0.9618	-1.5647	10	2.30		
Carbon Tetrachloride	Log	10	20	7.9010	0.8031	3.8949	1.9595	10	2.30		
Chlorobenzene	Log	0	20[4]	1.2669	-1.8671	1.1319	-1.5114	10	2.30		
Chloroform	Log	6	20	4.7005	-0.7183	2.5064	0.0258	10	2.30		
1,1-Dichloroethylene	Log	0	20[4]	1.2669	-1.6335	1.1115	-1.2842	10	2.30		
1,2-Dichloroethane	Log	0	20[4]	1.2669	-1.7105	1.1438	-1.3511	10	2.30		
Ethylbenzene	Log	0	20[4]	1.2669	-1.8671	1.1319	-1.5114	10	2.30		
Methylene Chloride	Log	0	20[4]	1.2669	-1.6741	1.1986	-1.2974	10	2.30		
m.p-Xylene [b]	Log	0	20[5]	0.9361	-1.7108	0.9749	-1.3947	10	2.30		
o-Xylene	Log	0	20[4]	1.2669	-1.8671	1.1319	-1.5114	10	2.30		
1,1,2,2-Tetrachloroethane	Log	2	20[4]	1.2669	-1.4706	1.1716	-1.1024	10	2.30		
Tetrachloroethylene	Log	12	20	5.7038	0.6750	3.1245	1.6027	10	2.30		
Toluene	Log	4	20[4]	1.2669	-1.5706	1.1818	-1.1992	10	2.30		
Trans-1,2-Dichloroethylene	Log	0	20[4]	1.2669	-1.8671	1.1319	-1.5114	10	2.30		
1,1,1-Trichloroethane	Log	3	20[3]	3.9512	-1.0869	2.0712	-0.4547	10	2.30		
Trichloroethylene	Log	8	20	6.8244	0.1692	3.2224	1.1259	10	2.30		
1,1,2-Trichloro-1,2,2-trifluoroethane	Log	0	20[4]	1.2669	-1.6266	1.1362	-1.2696	10	2.30		
1,1,2-Trichloroethane	Log	0	20[4]	1.2669	-1.7499	1.1060	-1.4023	10	2.30		
Trichlorofluoromethane	Log	0	20[4]	1.2669	-1.5694	1.0707	-1.2329	10	2.30		
Vinyl Chloride	Log	0	20[5]	0.5306	-1.7249	0.7938	-1.4676	10	2.30		

CES-006

CCP Solids Analysis VOC UCL_{90} Evaluation Form

WSPF #: ID-SDA-SOIL Rev. 1 **Solids Summary Waste Stream Lot Number** 1 through 4

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL [1]	# Samples	Maximum (mg/kg)	Mean (mg/kg)	SD (ppmv)	UCL_{90} (mg/kg)	PRQL (mg/kg)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA HWN [2]
Acetone	Log	0	20	2.8904	-0.3921	0.8234	-0.1476	4	1.39		
Butanol	Log	2	20	3.5973	-0.0160	1.3665	0.3897	100	4.61		
Methanol	Log	0	20	3.5973	-0.1185	0.9424	0.1613	100	4.61		
Methyl ethyl ketone	Log	0	20	2.8904	-0.2556	0.8012	-0.0177	100	4.61		
Ethyl ether	Log	0	20	3.5973	0.3284	0.8051	0.5675	100	4.61		
Isobutanol	Log	0	20	2.8904	-0.4614	0.8077	-0.2216	100	4.61		
Pyridine	Log	0	20	2.8904	0.0528	0.7698	0.2813	100	4.61		

[a] Can also be analyzed as an SVOC. If analyzed as an SVOC, the QAO's of CCP-PO-001, Table C3-6 apply.

[b] These xylene isomers cannot be resolved by the analytical methods employed in the program. m-Xylene and p-Xylene will be reported as "Total m-p-Xylene."

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per section C4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

(2) No additional EPA Hazardous Waste Numbers were identified for this waste stream.

(3) As a result of dilution requirements for one of the twenty samples 1,1,1-Trichloroethane were reported as non-detected with an MDL value in excess of the PRQL. In accordance with the Waste Analysis Plan, Section C4-3d such observations with elevated MDL values due to dilution were not used in calculating the mean concentration. Consequently, the subject analytes were statistically evaluated with 19, rather than 20, usable observations.

(4) As a result of dilution requirements for two of the twenty samples, Benzene, Bromoform, Chlorobenzene, 1,1-Dichloroethylene, 1,2-Dichloroethane, Ethylbenzene, Methylene Chloride, o-Xylene, 1,1,2,2-Tetrachloroethane, Toluene, Trans-1,2-Dichloroethylene, 1,1,2-Trichloro-1,2,2-trifluoroethane, 1,1,2-Trichloroethane and Trichlorofluoromethane were reported as non-detected with an MDL value in excess of the PRQL. In accordance with the Waste Analysis Plan, Section C4-3d such observations with elevated MDL values due to dilution were not used in calculating the mean concentration. Consequently, the subject analytes were statistically evaluated with 18, rather than 20, usable observations.

(5) As a result of dilution requirements for seventeen of the twenty samples, Carbon Disulfide, m.p-Xylene, and Vinyl Chloride were reported as non-detected with an MDL value in excess of the PRQL. In accordance with the Waste Analysis Plan, Section C4-3d such observations with elevated MDL values due to dilution were not used in calculating the mean concentration. Consequently, the subject analytes were statistically evaluated with 17, rather than 20, usable observations.

Signature of Site Project Manager

Jim Vernon
Printed Name

9/19/2012
Date

CES-007

CCP Solids Analysis SVOC UCL_{90} Evaluation Form

WSPF #: ID-SDA-SOIL Rev. 1 **Solids Summary Waste Stream Lot Number** 1 through 4

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples	Maximum (mg/kg)	Mean (mg/kg)	SD (mg/kg)	UCL90 (mg/kg)	PRQL (mg/kg)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code (2)
bis(2-Ethylexyl)phthalate[5]	Log	6	7	2.71	0.66	1.74	1.61	41.00	3.71		
1,2-Dichlorobenzene [a]	Log	0	20(3)	2.71	-1.22	1.61	-0.73	40.00	3.69		
1,4-Dichlorobenzene[a]	Log	0	20(3)	2.71	-1.22	1.61	-0.73	40.00	3.69		
2,4-Dinitrophenol	Log	0	20(3)	2.71	-1.41	1.44	-0.97	40.00	3.69		
2,4-Dinitrotoluene	Log	0	20(4)	-0.11	-1.85	0.77	-1.59	40.00	3.69		
Hexachlorobenzene	Log	0	20(4)	-0.11	-1.75	0.83	-1.48	2.60	0.96		
Hexachlorobutadiene[5]	Log	4	7	2.40	-0.20	1.92	0.84	4.60	1.53		
Hexachloroethane	Log	11	20(3)	6.02	1.15	3.22	2.13	40.00	3.69		
2-Methylphenol (cresols)	Log	0	20(3)	2.71	-1.35	1.77	-0.81	40.00	3.69		
3&4-Methylphenol (cresols)	Log	0	20(3)	2.71	-1.22	1.61	-0.73	40.00	3.69		
Nitrobenzene	Log	0	20(3)	2.71	-1.22	1.61	-0.73	40.00	3.69		
Pentachlorphenol	Log	0	20(3)	2.71	-1.26	1.61	-0.77	40.00	3.69		

[a] Can also be analyzed as a VOC. If analyzed as a VOC, the QAO's of CCP-PO-001, Table C3-6 apply.

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per C4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

(2) No additional EPA Hazardous Waste Numbers were identified for this waste stream.

(3) As a result of dilution requirements for one of the twenty samples, 1,2-Dichlorobenzene, 1,4-Dichlorobenzene, 2,4-Dinitrophenol, Hexachloroethane, 2-Methylphenol, 3&4-Methylphenol, Nitrobenzene, and Pentachlorophenol were reported as non-detected with an MDL value in excess of the PRQL. In accordance with the Waste Analysis Plan, Section C4-3d such observations with elevated MDL values due to dilution were not used in calculating the mean concentration. Consequently, the subject analytes were statistically evaluated with 19, rather than 20, usable observations.

(4) As a result of dilution requirements for sixteen of the twenty samples, 2,4-Dinitrotoluene and Hexachlorobenzene were reported as non-detected with an MDL value in excess of the PRQL. In accordance with the Waste Analysis Plan, Section C4-3d such observations with elevated MDL values due to dilution were not used in calculating the mean concentration. Consequently, the subject analytes were statistically evaluated with 16, rather than 20, usable observations.

(5) bis(2-Ethylexyl)phthalate and Hexachlorobutadiene were added to the target analyte list.

Signature of Site Project Manager

Jim Vernon
Printed Name

9/19/2012
Date

CES-08

CCP Solids Analysis Metals UCL_{90} Evaluation Form

WSPF #: ID-SDA-SOIL Rev. 1 **Solids Summary Waste Stream Lot Number** 1 through 4

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples	Maximum (mg/kg)	Mean (mg/kg)	SD (mg/kg)	UCL90 (mg/kg)	PRQL (mg/kg)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Antimony	Log	18	20	2.48	0.37	0.85	0.62	100	4.61		
Arsenic	Log	20	20	2.83	2.22	0.19	2.27	100	4.61		
Barium	Log	20	20	6.63	5.50	0.30	5.59	2000	7.60		
Beryllium	SQRT	20	20	7.14	3.59	2.14	4.23	100	10.00		
Cadmium	Log	20	20	4.94	1.79	1.55	2.26	20	3.00		
Chromium	Log	20	20	5.44	3.95	0.50	4.10	100	4.61		
Lead	Log	20	20	4.87	3.22	0.58	3.39	100	4.61		
Mercury	Log	18	20	1.48	-2.36	1.53	-1.91	4	1.39		
Nickel	Log	20	20	5.63	3.85	0.63	4.03	100	4.61		
Selenium	SQRT	7	20	1.18	0.71	0.24	0.78	20	4.47		
Silver	Log	11	20	1.86	-0.63	1.42	-0.21	100	4.61		
Thallium	SQRT	11	20	1.97	1.06	0.51	1.21	100	10.00		
Vanadium	No	20	20	63.00	52.40	9.08	55.10	100	N/A		
Zinc	Log	20	20	6.41	4.90	0.54	5.06	100	4.61	Yes	(2)

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per section C4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

(2) Zinc is not listed under 40CFR 261.30 or as a toxicity characteristic metal per 40CFR 261.24.

Signature of Site Project Manager

Jim Vernon
Printed Name

9/19/2012
Date

CTS-009

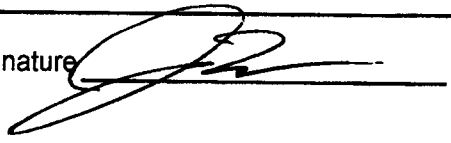
CCP Solid VOCs Summary Data

Waste Stream Number	ID-SDA-SOIL	Solids Summary Waste Stream Lot Number	1 through 4

Tentatively Identified Compound	Maximum Observed Estimated Concentrations (mg/kg)	# Samples Containing TIC	% Detected
NONE	N/A	N/A	N/A

Data Supports EPA Hazardous Waste Numbers Assigned by AK? Yes ☑ No ☐

If no, describe the basis for assigning the EPA Hazardous Waste Codes:

SPM Signature  Date 9/19/2012

CIS-010

CCP Solid SVOCs Summary Data

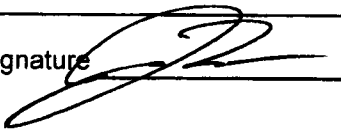
Waste Stream Number	ID-SDA-SOIL	Solids Summary Waste Stream Lot Number	1 through 4

Tentatively Identified Compound	Maximum Observed Estimated Concentrations (mg/kg)	# Samples Containing TIC	% Detected
Pentachlorobiphenyl	810.00	9	45.00%
Tetrachlorobiphenyl	27.00	5	25.00%
Hexachloropropene	5.40	3	15.00%
1,4-Dioxane	1.10	2	10.00%
Diethyl phthalate	2.10	1	5.00%
Hexachlorobiphenyl	9.80	3	15.00%
Benzene, 1,2,3,5-tetrachloro	21.00	1	5.00%
bis (7-methyloctyl)phthalate	0.84	1	5.00%

Note: Tetrachlorobiphenyl, and Pentachlorobiphenyl are listed in 20.4.1.200 NMAC (incorporating 40 CFR 261) Appendix VIII, and are present as TICs in greater than 25% of samples in the waste stream. These analytes have been added to the target analyte list for ID-SDA-SOIL.

Data Supports EPA Hazardous Waste Numbers Assigned by AK? Yes ☑ No ☐

If no, describe the basis for assigning the EPA Hazardous Waste Codes:

SPM Signature  Date 9/19/2012

CTS-011

CCP RTR/VE Summary of Prohibited Items and AK Confirmation

Waste Stream Number: ID-SDA-SOIL Lot #: 76

Container Number	RTR Prohibited Items [a,b]	Visual Examination Prohibited Items [a,b]
See correlation of container ID numbers for list of remaining drum numbers in this Lot.	RTR was not used to certify any containers in this lot.	None of the containers in this Lot had prohibited items identified during Visual Examination technique.

a. See Batch Data Reports

b. If AK has assigned U134 to this waste stream, then any liquids in these containers are prohibited items (not acceptable by the TSDF).

Justification for the selection of RTR and/or VE: VE was selected as the characterization method for this lot because the containers were newly generated and met all the Data Quality Objectives for NDE for the waste.

Site Project Manager Signature	Jim Vernon Printed Name	9/19/2012 Date

CIS-012

CCP Reconciliation with Data Quality Objectives

NSPF# ID-SDA-SOIL Rev. 1 Lot # 76

Sampling Completeness

RTR/VE:
Number of Valid Samples: 2 Number of Total Samples Analyzed: 2
Percent Complete: 100 (QAO is 100%)

NDA
Number of Valid Samples: 2 Number of Total Samples Analyzed: 2
Percent Complete: 100 (QAO is 100%)

HSG
Number of Valid Samples: NA Number of Total Samples Collected: NA
Percent Complete: NA (QAO is ≥90%)
Number of Valid Samples: NA Number of Total Samples Analyzed: NA
Percent Complete: NA (QAO is ≥90%)

Total VOC
Number of Valid Samples: 20 Number of Total Samples Collected: 20
Percent Complete: 100 (QAO is ≥90%)
Number of Valid Samples: 20 Number of Total Samples Analyzed: 20
Percent Complete: 100 (QAO is ≥90%)

Total SVOC
Number of Valid Samples: 20 Number of Total Samples Collected: 20
Percent Complete: 100 (QAO is ≥90%)
Number of Valid Samples: 20 Number of Total Samples Analyzed: 20
Percent Complete: 100 (QAO is ≥90%)

Total Metals
Number of Valid Samples: 20 Number of Total Samples Collected: 20
Percent Complete: 100 (QAO is ≥90%)
Number of Valid Samples: 20 Number of Total Samples Analyzed: 20
Percent Complete: 100 (QAO is ≥90%)

CIS-013

CCP Reconciliation with Data Quality Objectives

WSPF# ID-SDA-SOIL Rev. 1 Lot # 76

	Y/N/NA	Reconciliation Parameter
1	Y	Waste Matrix Code.
2	Y	Waste Material Parameter Weights.
3	Y	The waste matrix code identified is consistent with the type of sampling and analysis used to characterize the waste.
4	Y	The TRU activity reported in the BDRs for each container demonstrates with a 95% probability that the container of waste contains TRU radioactive waste.
5	N	AK Sufficiency. Is there an approved AK sufficiency Determination for this waste stream?
6	NA	Mean concentrations, UCL_{90} values for the mean concentration, standard deviations, and the number of samples collected for each VOC in the HSG of each container were calculated and compared with the program required quantitation limits, as reported in CCP-TP-003 Attachment 3, and additional U. S. Environmental Protection Agency (EPA) Hazardous Waste Numbers were assigned as required. Samples were randomly collected (when appropriate).
7a	Y	Mean concentrations, UCL_{90} values for the mean concentration, standard deviations, and the number of samples collected for solids VOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003 Attachment 4, and additional EPA HWNs were assigned as required. Samples were randomly collected.
7b	Y	Mean concentrations, (UCL_{90}) values for the mean concentration, standard deviations, and the number of samples collected for solids SVOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003 Attachment 5, and additional EPA HWNs were assigned as required. Samples were randomly collected.
7c	Y	Mean concentrations, (UCL_{90}) values for the mean concentration, standard deviations, and the number of samples collected for total metals were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003 Attachment 6, and additional EPA HWNs were assigned as required. Samples were randomly collected.

CDS-014

CCP Reconciliation with Data Quality Objectives

WSPF# ID-SDA-SOIL Rev. 1 Lot # 76

8	Y	The data demonstrates whether the waste stream exhibits a toxicity characteristic under Title 40 Code of Federal Regulations (CFR), Part 261, Identification and Listing of Hazardous Waste, Subpart C, Characteristics of Hazardous Waste.
9	Y	Does the waste stream contain listed waste found in 20.4.1.200 NMAC incorporating 40 CFR Part 261, Subpart D, Lists of Hazardous Wastes.
10	Y	Waste stream can be classified as hazardous or nonhazardous at the 90-percent confidence level.
11	Y	Appropriate packaging configuration and Drum Age Criteria (DAC) is applied and documented in the headspace gas sampling documentation, and the drum age met prior to sampling.
12	Y	TICs were appropriately identified and reported in accordance with the requirements of Section C3-1 of the QAPjP.
13	NA	The PRQLs for headspace gas VOCs were met for all analyses as evidenced by the analytical batch data reports.
14		The overall completeness, comparability, and representativeness QAOs were met for each of the analytical and testing procedures as specified in the WAP Sections C3-2 through C3-9 prior to submittal of a waste stream profile form for a waste steam or waste stream lot.

	Completeness	Comparability	Representativeness
Radiography	NA	NA	NA
VE	Y	Y	Y
Headspace Gas Analysis	NA	NA	NA
Solids Sampling	Y	Y	Y
Solids VOCs	Y	Y	Y
Solids SVOCs	Y	Y	Y
Solids Metals	Y	Y	Y

Comments:
None

Signature of Site Project Manager	Jim Vernon Printed Name	9/19/2012 Date

CIS-015

DIVIDER PAGE

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URS

CP:11:01449
UFC:5900.00

Washington TRU Solutions LLC

INTER-OFFICE CORRESPONDENCE

DATE: June 22, 2011

FROM: M.F. RAMIREZ MR 3-7-12
~~G.R. Kirkes~~ MR

LOCATION: Certification

TO: CCP Records Custodian GSA-212

LOCATION: Retrieval, Characterization and Transportation

SUBJECT: TRANSMITTAL OF IDAHO NATIONAL LABORATORY CHANGE NOTICE FOR WASTE STREAM #ID-SDA-SOIL REVISION 1

Please accept the attached Idaho National Laboratory Change Notice to be placed in Records for Waste Stream #ID-SDA-SOIL REVISION 1.

CRK:jmc

Attachment

cc: (without attachment)
M. Pearcy ED
W. Weyerman ED

CCP RECORDS ORIGINAL
DATE REC'D 3/7/2012

Update for WIPP Operating Record (Change Notice #1)

Interstitial SOIL from the Subsurface Disposal Area

(ID-SDA-SOIL Revision 1)

Please add the following information to the WIPP operating record for Waste Stream Profile Form (WSPF) ID-SDA-SOIL revision 1. This waste stream is Interstitial Soil from the Subsurface Disposal Area at Idaho National Laboratory (INL) and was approved by DOE/CBFO on October 9, 2009.

This WSPF is being revised. The WSPF components are bolded. The updates are:

1. **WSPF, Date of audit report approval by NMED**

   Update the audit approval date to include October 20, 2010

2. **WSPF, Title, version, number, and date of documents used for WAP certification**

   Update the following procedure revision numbers and approval dates:

   CCP-PO-001, CCP Transuranic Waste Characterization Quality Assurance Project Plan, Revision 19, December 29, 2010.

   CCP-PO-002, CCP Transuranic Waste Certification Plan, Revision 25, December 29, 2010

   CCP-PO-024, CCP/INL Interface Document, Revision 10, December 29, 2010

3. **WSPF, Waste Stream Information, Number of Drums and Number of SWBs**

   Update the Number of Drums from 8,451 to 6,224
   Update the number of SWBs from 134 to NA.

4. **WSPF, Required Program Information, Required Waste Stream Information, and Supplemental Documentation**

   Update reference CCP-AK-INL-001, Rev.8, September 8, 2009 to CCP-AK-INL-001, Rev. 10, February 16, 2011.

5. **WSPF, For the following, when applicable, enter procedure title(s), number(s) and date(s)**

   Update Radiography from NA to CCP-TP-053, Revision 10, March 4, 2011

6. **Characterization Information Summary, List of procedures used**

   Add the following to the list of procedure used, CCP-TP-053 rev.10 3-4-2011 CCP Standard Real-Time Radiography (RTR) Inspection Procedure

7. **Characterization Information Summary, CCP Reconciliation with Data Quality Objectives item 14 Completeness, Comparability, Representativeness**

Update Radiography from NA to Y

8. **Characterization Information Summary, CCP RTR/VE Summary of Prohibited Items and AK Confirmation, new section entitled Justification for the Selection of Radiography or VE**

The following information will be added to the last cell in the table Both Radiography and VE are used to characterize containers in waste stream ID-SDA-SOIL, Rev. 1. RTR is selected as a characterization method because some of the containers are already packaged and RTR meets all the Data Quality Objectives for NDE for previously packaged waste in this waste stream. VE is selected as a characterization method because VE meets all the Data Quality Objectives for NDE for newly generated waste in this waste stream.

9. **Summation of Aspects of AK Summary Report: ID-SDA-SOIL Revision 1, Overview**

Update reference CCP-AK-INL-001, Rev.8, September 8, 2009 to CCP-AK-INL-001, Rev. 10, February 16, 2011.

10. **Summation of Aspects of AK Summary Report: ID-SDA-SOIL Revision 1, Waste Stream Identification Summary, Waste Stream Volume:**

Update the waste stream volume from 1,969 to 2,917 55-gallon drums (current), 6,482 to 3,307 55-gallon drums (projected) SWB from 134 to NA (projected).

11. **Summation of Aspects of AK Summary Report: ID-SDA-SOIL Revision 1 , Generating Process, Idaho National Laboratory, Other INL Generating Facilities:**

Add the following bullets to the list of facilities:

- INTEC-602/630 and RWMC WMF-TR-14 Modular Analytical Laboratory- Laboratory wastes (including unaltered sample material) from INTEC/RWMC laboratory support operations are generated from analyzing the soil and homogeneous solid samples collected by ARP or ARP waste but do not include unaltered sample material or laboratory waste generated in support of characterizing waste streams or samples submitted by other generators. The processes that generate the wastes are the same for both INTEC and RWMC.

- Glove box Excavator Method (GEM) Project (within the SDA) - GEM waste forms are analogous to those in the ARP in terms of form and time spent buried.

12. **Summation of Aspects of AK Summary Report: ID-SDA-SOIL Revision 1 , RCRA Determinations – Hazardous Waste Determinations New Section Entitled Historical Waste Management**

Add to the first paragraph of the RCRA section.

Waste disposal at the SDA ceased in 1970 when the AEC directed that all waste contaminated with TRU radioisotopes be segregated in a readily retrievable manner from other types of radioactive waste. In August 1987, DOE and the EPA entered into a Consent Order and Compliance Agreement requiring DOE to conduct an initial assessment of all solid and hazardous waste disposal units at the INL and set up a process for conducting any necessary corrective actions. The DOE, EPA, and Idaho Department of Environmental Quality (IDEQ) entered into the "Federal Facility Agreement and Consent Order for the Idaho National Engineering Laboratory" (FFA/CO) in December 1991. The FFA/CO, in part, established the framework for developing, prioritizing, implementing, and monitoring appropriate response actions at INL in accordance with the CERCLA, RCRA, and Hazardous Waste Management Act (HWMA). In addition, the DOE had made other commitments to the State of Idaho and the EPA in a 1995 Settlement Agreement that was renegotiated and amended in 2008. The final agreement required DOE to exhume targeted waste from a defined area of the SDA of 5.69 acres. The "Agreement to Implement U.S. District Court Order Dated May 25, 2006" fully implements the 1995 Settlement Agreement relating to buried TRU waste in the SDA and set the Targeted Waste to those outlined in this AK Summary Report (References ID-P091, ID-P104, ID-P108, ID-P109, and ID-P124).

The subject waste stream is newly generated and is being managed in accordance with the generator site requirements and in compliance with the requirements of the IDEQ. EPA hazardous waste numbers (HWNs) were assigned to the waste stream based on a review of available AK documentation to identify chemical usage and potentially hazardous materials that may have been contained in the waste buried in the retrieval area. The same EPA HWNs are assigned to Waste Stream ID-SDA-SOIL Rev.1.

13. Summation of Aspects of AK Summary Report: ID-SDA-SOIL Revision 1, RCRA Determinations- Hazardous Waste Determinations, Ignitability, 2nd paragraph.

Before the last sentence add the following information to the 2nd paragraph of the Ignitability Section: Evaporator salts (745-series SLUDGE) are composed of an approximately 90 weight percent mixture of potassium nitrate and sodium nitrate, and in concentrated form this material is an oxidizer. For this reason, 745-series SLUDGE is removed from the waste during retrieval and packaging operations so the waste stream does not meet the definition of an oxidizer (References ID-P269, ID-P398 and ID-P400).

14. Summation of Aspects of AK Summary Report: ID-SDA-SOIL Revision 1, new section entitled Justification for the Selection of Radiography or VE

This section should be added between the Prohibited Items and Method for Determining Waste Material Parameter (WMPs) Weights Per Unit of Waste sections.

Both Radiography and VE are used to characterize containers in waste stream ID-SDA-SOIL, Rev. 1. RTR is selected as a characterization method because some of the containers are already packaged and RTR meets all the Data Quality Objectives for NDE for previously package waste in this waste stream. VE is selected as a characterization method because VE meets all the Data Quality Objectives for NDE for newly generated waste in this waste stream.

15. Summation of Aspects of AK Summary Report: ID-SDA-SOIL , Attachment 1, AK Source Documents-Supplemental Documentation

Add the following references to attachment 1:

ID-P269, AK # S2, S4, ARP Project II – Drum Packaging System, Document Number TPR-7415-2, Rev. 3, 06/20/2007

ID-P398, AK #, S5 and S12 Results of Oxidizing Solids Testing, Document Number EMRTC Report FR 10-13, 4/12/2010

ID-P400, AK #, S9 and S12 Allowable Nitrate Salt Concentration in ARP Waste, Document Number EDF-8723, Rev. 2, 6/30/2010

ID-P104, AK# S3 Safety Analysis Report for the Accelerated Retrieval Project at Area G of Pit 4 within the Radioactive Waste Management Complex

ID-P108, AK# S3 Safety Analysis Report for the Radioactive Waste Management Complex

ID-P124, AK# NA Agreement to Implement; U.S. District Court Order Dated May 25, 2006

Reason/justification for the change

The audit report approval date has been revised to reflect the most recent approval date.

Documents used for WAP certification have been revised to reflect the most recent revisions.

Reference to CCP-AK-INL-001, Revision 8, September 8, 2009 is being updated to reflect the most current version CCP-AK-INL-001, Revision 10, February 16, 2011.

Changes to the waste volume have been made in order to more accurately reflect waste generated since the original profile was approved, as well as to support waste generated from the INTEC-602/630 and RWMC WMF-TR-14 Modular Analytical Laboratory and the GEM Project. .

The INTEC-602/630 and RWMC WMF-TR-14 Modular Analytical Laboratory has been added to the generating facilities as a support laboratory to the TRU waste certification process. The GEM Project has been included as a retrieval project within the SDA that contributed waste to this waste stream.

The Ignitability Section has been revised to discuss that nitrate salts, identified during retrieval, are not ignitable and to include the associated references.

Added two new sections: "Justification for the Selection of Radiography or VE" and the "Historical Waste Management" to support the revision to the Waste Isolation Pilot Plant Hazardous Waste Permit date November 30, 2010

Added new source documents to Attachment 1 of the Summation of Aspects.

The waste being added to the waste stream has common physical form, similar hazardous constituents, and is from the same process as the waste currently identified in waste stream ID-SDA-SOIL, Rev.1. Therefore there is no impact to the EPA HWNs assigned to ID-SDA-SOIL, Rev. 1.

Update for the WIPP Operating Record (ID-SDA-SOIL) certification:

I hereby certify that I have reviewed this Update for WIPP Operating Record, and it is complete and accurate to the best of my knowledge. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Signature of Site Project Manager	Printed Name and Title	Date
	Tim Vernon	6-16-11

DIVIDER

PAGE

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Washington TRU Solutions LLC

INTER-OFFICE CORRESPONDENCE

DATE: June 8, 2010

FROM: V. M. Waldram V.Waldram LOCATION: Certification

TO: CCP Records Custodian GSA-212 LOCATION: Retrieval, Characterization & Transportation

SUBJECT: TRANSMITTAL OF IDAHO NATIONAL LABORATORY WASTE STREAM PROFILE FORM FOR WASTE STREAM #ID-SDA-SOIL, REVISION 1

Please accept the attached Idaho National Laboratory Waste Stream Profile Form to be placed in Records for Waste Stream # ID-SDA-SOIL, Revision 1 – Interstitial Soil from the Subsurface Disposal Area.

VMW:jmc

Attachment

cc: (without attachment)

R. Kantrowitz ED
M. Pearcy ED

ORIGINAL

Department of Energy
Carlsbad Field Office
P. O. Box 3090
Carlsbad, New Mexico 88221

OCT 09 2009

Mr. D. K. Ploetz, Manager
Central Characterization Project
Washington TRU Solutions LLC
P. O. Box 2078
Carlsbad, NM 88221-2078

Subject: Review of CCP-INL Waste Stream Profile Form Number ID-SDA-SOIL, Revision 1 – Interstitial Soil from the Subsurface Disposal Area

Dear Mr. Ploetz:

The Carlsbad Field Office (CBFO) has reviewed the subject Waste Stream Profile Form (WSPF) ID-SDA-SOIL, Revision 1 – Interstitial Soil from the Subsurface Disposal Area and have concluded that the WSPF is complete and that the waste stream determinations were made in accordance with applicable procedures and guidance.

The CBFO therefore approves the WSPF as submitted. Using the methods approved for CCP-INL, CCP-INL may enter the data into the certification and shipping modules of the WIPP Waste Information System.

If you have questions on this matter, please contact me at (575) 234-7313.

Sincerely,

J. R. Stroble

J. R. Stroble, Acting Director
Office of the National TRU Program

cc:
N. Castaneda, CBFO *ED
C. Fesmire, CBFO ED
G. Basabilvazo, CBFO ED
S. McCauslin, CBFO ED
D. Miehls, CBFO ED
M. Navarrete, CBFO ED
K. Watson, CBFO ED
P. Gilbert, LANL ED
S. Lott, LANL ED
G. Lyshik, LANL ED
CBFO, M&RC
WIPP Operating Record 459-09
*ED denotes electronic distribution

CBFO:NTP: IRS:GS:09-0777:UFC 5822.00

Attachment 2 –CCP Waste Stream Profile Form

(1) Waste Stream Profile Number: ID-SDA-SOIL, Revision 1							
(2) Generator site name: Idaho National Laboratory					(4)Technical contact: Barbara Broomfield		
(3) Generator site EPA ID: ID4890008952					(6) Technical contact phone number: (208) 526-6466		
(5) Date of audit report approval by New Mexico Environment Department (NMED): January 12, 2007; May 8, 2008; September 22, 2008, September 11, 2009							
(7) Title, version number, and date of documents used for WAP Certification: CCP-PO-001, CCP Transuranic Waste Characterization Quality Assurance Project Plan, Revision 17, June 23, 2009 CCP-PO-002, CCP Transuranic Waste Certification Plan, Revision 21, January 26, 2009 CCP-PO-024, CCP/INL Interface Document, Revision 9, March 16, 2009							
(8) Did your facility generate this waste?	YES	X	NO				
(9) If no, provide the name and EPA ID of the original generator: NA							
Waste Stream Information[1]							
(10) WIPP ID: IN-ID-SDA-SOIL[3]					(11) Summary Category Group: S4000		
(12) Waste Matrix Code Group: Soil					(13) Waste Stream Name: Interstitial Soil from the Subsurface Disposal Area		
(14) Description from the TWBIR: Pre-1970 buried waste retrieved from the Idaho Completion Project							
(15) Defense TRU Waste:	YES	X	NO				
(16) Check One:	CH	X	RH				
(17) Number of SWBs 134	(18) Number of Drums 8,451 55-gallon drums				(19) Number of Canisters 0		
(20) Batch Data report numbers supporting this waste stream characterization: See Characterization Information Summary (CIS) Correlation of Container Identification Numbers to Batch Data Report Numbers							
(21) List applicable EPA Hazardous Waste Numbers:[2] D004, D005, D006, D007, D008, D009, D010, D011, D022, D027, D028, D029, D030, D032, D033, D034, D037, D038, D043, F001, F002, F004, F005, F006, F007, F009, P098 and P106							
(22) Applicable TRUCON Content Numbers: : ID 112, ID 122, ID 127, SQ 154							
(23)**Acceptable Knowledge Information**[1]							
[For the following, enter the supporting documentation used (i.e., references and dates)]							
Required Program Information							
(23A) Map of site: CCP-AK-INL-001, Revision 8, September 8, 2009, Figures 1, 2 and 3							
(23B) Facility mission description: : CCP-AK-INL-001, Revision 8, September 8, 2009, Sections 4.1 and 4.2							
(23C) Description of operations that generate waste: CCP-AK-INL-001, Revision 8, September 8, 2009, Section 4.4 and 4.5							
(23D) Waste identification/categorization schemes: CCP-AK-INL-001, Revision 8, September 8, 2009, Section 4.6							
(23E) Types and quantities of waste generated: CCP-AK-INL-001, Revision 8, September 8, 2009, Section 4.7.1							
(23F) Correlation of waste streams generated from the same building and process, as applicable: CCP-AK-INL-001, Revision 8, September 8, 2009, Section 4.7.2							
(24) Waste certification procedures: CCP-TP-030, CCP TRU Waste Certification and WWIS Data Entry, Rev. 26, May 27, 2009							
(25)Required Waste Stream Information							

(25A) Area(s) and building(s) from which the waste stream was generated: CCP-AK-INL-001, Revision 8, September 8, 2009, Section 5.1			
(25B) Waste stream volume and time period of generation: CCP-AK-INL-001, Revision 8, September 8, 2009, Section 5.2			
(25C) Waste generating process description for each building: CCP-AK-INL-001, Revision 8, September 8, 2009, Section 4.4, 4.5, and 5.3			
(25D) Waste Process flow diagrams: See CCP-AK-INL-001, Revision 8, September 8, 2009, Section 4.4, 4.5 and 5.3 for Waste Generating Activities in lieu of process flow diagrams			
(25E) Material inputs or other information identifying chemical/radionuclide content and physical waste form: CCP-AK-INL-001, Revision 8, September 8, 2009, Section 5.4, 5.5, and 5.6			
(25F) Waste Material Parameter Weight Estimates per unit of waste: See Table 2 of the Summation of Aspects of AK Summary Report: ID-SDA-SOIL			
(26) Which Defense Activity generated the waste: (check one)			
X	Weapons activities including defense inertial confinement fusion		Naval Reactors development
	Verification and control technology		Defense research and development
	Defense nuclear waste and material by products management		Defense nuclear material production
	Defense nuclear waste and materials security and safeguards and security investigations		
(27)Supplemental Documentation			
(27A) Process design documents: : See S1 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27B) Standard operating procedures: See S2 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27C) Safety Analysis Reports: See S3 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27D) Waste packaging logs: See S4 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(28E) Test plans/research project reports: See S5 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27F) Site databases: See S6 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27G) Information from site personnel: See S7 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27H) Standard industry documents: See S8 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27I) Previous analytical data: See S9 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27J) Material safety data sheets: See S10 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27K) Sampling and analysis data from comparable/surrogate Waste: See S12 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27L) Laboratory notebooks: NA			
Confirmation Information[2]			
For the following, when applicable, enter procedure title(s), number(s) and date(s)			
(28)	Radiography: NA		
(29)	Visual Examination: CCP-TP-006, Revision 14, November 11, 2008		

(30)Comments:
For a list of the waste characterization procedures used and date of the respective procedures see the list of procedures on the attached CIS.

This waste stream profile was revised in accordance with NMED direction received in the September 22, 2008 NMED Approval of the Idaho National Laboratory/Central Characterization Project Audit A-08-10. The original WSPF was approved on June 19, 2008.

Reviewed by AK Expert: YES [X] **Date:** 9/24/09

Reviewed by STR (if necessary): YES [X] NA [ ] **Date:** 9/24/09

Waste Stream Profile Form Certification:

I hereby certify that I have reviewed the information in this Waste Stream Profile Form, and it is complete and accurate to the best of my knowledge. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

(31)	(32)	(33)
Signature of Site Project Manager	Michael Walentine Printed Name	10/7/09 Date

NOTE: (1) Use back of sheet or continuation sheets, if required.
(2) If radiography, visual examination, headspace gas analysis, and/or homogeneous solids/soils/gravel sample analysis were used to determine EPA Hazardous Waste Numbers, attach signed Characterization Information Summary documenting this determination.
(3) TWBIR numbers IN-ICP-002, IN-ICP-003, IN-ICP-004, and IN-ICP-005 also apply.

CHARACTERIZATION INFORMATION SUMMARY

WSPF # ID-SDA-SOIL Rev. 1

Lot 22*

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Characterization Information Summary Cover Page..... 002

Correlation of Container Identification Numbers to Batch Data Report Numbers..... 004

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Solids Analysis SVOC UCL_{90} Evaluation Form..... 008

Solids Analysis Metals UCL_{90} Evaluation Form..... 009

Solid VOCs Summary Data..... 010

Solid SVOCs Summary Data..... 011

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Reconciliation with Data Quality Objectives..... 013

* See comments on page 016

CIS-001

CCP Characterization Information Summary Cover Page

Waste Stream # ID-SDA-SOIL Lot #: 22

AK Expert Review: N/A Date: N/A

SPM Review: Michael Walentine Date: 10/7/2009

SPM signature certifies that through Acceptable Knowledge testing and/or analysis that the waste identified in this summary is not corrosive, ignitable, reactive, or incompatible with the TSDF.

A summary of the Acceptable Knowledge regarding this waste stream containing specific information about the corrosivity, reactivity, and ignitability of the waste stream is included as an attachment to the Waste Stream Profile Form. By reference, that information is included in this lot.

List of procedures used:

Visual Examination Technique

CCP-TP-006	Rev. 14	11/11/08	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 13	10/30/08	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 12	05/01/08	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 11	04/14/08	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 10	12/11/07	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 9	10/18/07	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 8	11/16/06	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 7	08/09/06	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 6	08/02/05	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 5	05/05/05	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 4	04/19/05	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 3	04/15/05	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 2	03/18/05	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 1	02/21/05	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 0	11/16/04	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits

Non Destructive Assay (NDA):

CCP-TP-109	Rev. 6	03/16/09	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 5	11/16/06	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 4	09/21/05	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 3	04/12/05	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 2	03/18/05	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 1	05/06/04	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-115	Rev. 4	06/24/09	CCP SWEPP Gamma-Ray Spectrometer (SGRS) Operating Procedure
CCP-TP-115	Rev. 3	12/08/06	CCP SWEPP Gamma-Ray Spectrometer (SGRS) Operating Procedure
CCP-TP-115	Rev. 2	06/12/06	CCP SWEPP Gamma-Ray Spectrometer (SGRS) Operating Procedure
CCP-TP-115	Rev. 1	04/15/05	CCP SWEPP Gamma-Ray Spectrometer (SGRS) Operating Procedure
CCP-TP-115	Rev. 0	02/27/05	CCP SWEPP Gamma-Ray Spectrometer (SGRS) Operating Procedure
CCP-TP-019	Rev. 5	09/16/09	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
CCP-TP-019	Rev. 4	10/19/06	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
CCP-TP-019	Rev. 3	06/15/06	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
CCP-TP-019	Rev. 2	06/10/05	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
CCP-TP-019	Rev. 1	04/16/05	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
CCP-TP-019	Rev. 0	02/27/05	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
CCP-TP-097	Rev. 8	04/11/07	Operating the CCP Tomographic Gamma Scanner (TGS)
CCP-TP-097	Rev. 7	11/16/06	Operating the CCP Tomographic Gamma Scanner (TGS)
CCP-TP-097	Rev. 6	04/26/06	Operating the CCP Tomographic Gamma Scanner (TGS)
CCP-TP-097	Rev. 5	03/21/06	Operating the CCP Tomographic Gamma Scanner (TGS)
CCP-TP-097	Rev. 4	01/23/06	Operating the CCP Tomographic Gamma Scanner (TGS)
CCP-TP-097	Rev. 3	07/22/05	Operating the CCP Tomographic Gamma Scanner (TGS)
CCP-TP-097	Rev. 2	04/15/05	Operating the CCP Tomographic Gamma Scanner (TGS)
CCP-TP-097	Rev. 1	04/12/05	Operating the CCP Tomographic Gamma Scanner (TGS)
CCP-TP-097	Rev. 0	02/27/05	Operating the CCP Tomographic Gamma Scanner (TGS)
CCP-TP-107	Rev. 10	02/08/08	Operating the CCP High Efficiency Neutron Counter Using NDA2000
CCP-TP-107	Rev. 9	04/11/07	Operating the CCP High Efficiency Neutron Counter Using NDA2000
CCP-TP-107	Rev. 8	06/15/06	Operating the CCP High Efficiency Neutron Counter Using NDA2000
CCP-TP-107	Rev. 7	03/17/06	Operating the CCP High Efficiency Neutron Counter Using NDA2000
CCP-TP-107	Rev. 6	04/12/05	Operating the CCP High Efficiency Neutron Counter Using NDA2000

Solids Sampling:

INST-OI-73	Rev. 0	03/28/07	Manual Drum Coring Operations
INST-OI-16	Rev. 24	12/20/06	Drum Coring Operations

Solids Analysis:

CCP-TP-181	Rev. 0	05/02/07	CCP Determination of Mercury by CVAA for TRU Waste Characterization
CCP-TP-182	Rev. 1	01/26/09	CCP Determination of Metals by ICP-AES for TRU Waste Characterization
CCP-TP-182	Rev. 0	05/02/07	CCP Determination of Metals by ICP-AES for TRU Waste Characterization
CCP-TP-183	Rev. 0	05/02/07	CCP Microwave Assisted Digestion of Homogeneous Solids and Soil/Gravel

CIS-002

CCP-TP-184	Rev. 0	05/02/07	CCP Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry
CCP-TP-185	Rev. 1	11/18/08	CCP Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry
CCP-TP-105	Rev. 0	05/02/07	CCP Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry
CCP-TP-186	Rev. 1	08/22/07	CCP Determination of Nonhalogenated Volatile Organics by Gas Chromatography
CCP-TP-186	Rev. 0	05/02/07	CCP Determination of Nonhalogenated Volatile Organics by Gas Chromatography
CCP-TP-187	Rev. 1	11/18/08	CCP Sample Preparation for Semivolatile Organic Compounds
CCP-TP-187	Rev. 0	05/02/07	CCP Sample Preparation for Semivolatile Organic Compounds

Project Level Data Validation / DQO Reconciliation:

CCP-TP-001	Rev. 17	09/24/07	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 16	04/26/07	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 15	11/22/06	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 14	11/16/06	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 13	07/21/06	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 12	05/25/06	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 11	03/23/05	CCP Project Level Data Validation and Verification
CCP-TP-002	Rev. 21	08/04/09	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 20	08/18/08	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 19	12/22/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 18	11/16/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 17	10/11/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 16	06/06/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 15	08/16/05	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-003	Rev. 16	10/02/07	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 15	11/16/06	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 14	09/03/03	CCP Sampling Design and Data Analysis for RCRA Characterization
CCP-TP-005	Rev. 18	11/16/06	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 17	06/05/06	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 16	02/27/06	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 15	03/31/05	CCP Acceptable Knowledge Documentation
CCP-TP-030	Rev. 26	05/27/09	CCP CH TRU Waste Certification and WMS Data Entry
CCP-TP-030	Rev. 25	01/22/09	CCP CH TRU Waste Certification and WMS Data Entry
CCP-TP-030	Rev. 24	08/20/08	CCP CH TRU Waste Certification and WMS Data Entry
CCP-TP-030	Rev. 23	03/12/08	CCP CH TRU Waste Certification and WMS Data Entry
CCP-TP-030	Rev. 22	07/24/07	CCP CH TRU Waste Certification and WMS Data Entry
CCP-TP-030	Rev. 21	05/21/07	CCP CH TRU Waste Certification and WMS Data Entry
CCP-TP-030	Rev. 20	02/07/07	CCP CH TRU Waste Certification and WMS Data Entry
CCP-TP-030	Rev 19	11/16/06	CCP CH TRU Waste Certification and WMS Data Entry
CCP-TP-030	Rev. 18	05/01/06	CCP TRU Waste Certification and WMS Data Entry
CCP-TP-030	Rev. 17	12/29/05	CCP TRU Waste Certification and WMS Data Entry

WAP Certification:

CCP-PO-001	Rev 17	06/23/09	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 16	10/31/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 15	08/08/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 14	03/28/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 13	11/16/06	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 12	03/22/06	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 11	03/10/05	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-002	Rev. 21	01/26/09	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 20	11/02/07	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 19	05/22/07	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 18	11/16/06	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 17	11/16/06	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 16	11/16/06	CCP Transuranic Waste Certification Plan

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-SDA-SOIL

Lot # 22

Container ID Number	Historical Container ID	NDA BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Transportation Headspace Gas BDR			
							Sample	Analysis		
ARP03111	10157002	INNDAS070107	IN-ARP-VE-000459	SSC07-00021	ALD08021V ALD08021S ALD08013N ALD08044M		IN07FG1082	N/A	N/A	N/A
ARP03117	10157016	INNDAS070113	IN-ARP-VE-000458	SSC07-00165	ALD08021V ALD08021S ALD08013N ALD08044M		IN07FG1081	N/A	N/A	N/A
ARP09073*	10246517	INNDAS080234	IN-ARP-VE-001010	SSC08-00014	ALD08030V ALD08030S ALD08022N ALD08055M		IN08FG1136	N/A	N/A	N/A
ARP09261	10245890	INNDAH080300	IN-ARP-VE-001010	SSC08-00014	ALD08030V ALD08030S ALD08022N ALD08055M		IN08FG1138	N/A	N/A	N/A
ARP09283	10240709	INNDAH080274	IN-ARP-VE-001027	SSC08-00014	ALD08030V ALD08030S ALD08022N ALD08055M		IN08FG6109	N/A	N/A	N/A
ARP09351	10240033	INNDAH080271	IN-ARP-VE-001031	SSC08-00014	ALD08030V ALD08030S ALD08022N ALD08055M		IN08FG1124	N/A	N/A	N/A
ARP09371	10239882	INNDAS080201	IN-ARP-VE-001028	SSC08-00014	ALD08030V ALD08030S ALD08022N ALD08055M		IN08FG6101	N/A	N/A	N/A
ARP09485	N/A	INNDAH080290	IN-ARP-VE-001081	S4200-LOT-04-03	ALD08022V ALD08022S ALD08014N ALD08045M		IN08FG6120	N/A	N/A	N/A
ARP00398**	10128437	INNDAH060043	IN-ARP-VE-000141	SSC07-00021	ALD07012M ALD07003N ALD07005S ALD07007V		IN07FG1223	N/A	N/A	N/A
ARP01516**	10126249	INNDAH060109	IN-ARP-VE-000408	SSC07-00021	ALD07012M ALD07003N ALD07005S ALD07007V		IN07FG1219	N/A	N/A	N/A
ARP00007**	10153378	INNDAH060041	IN-ARP-VE-000057	SSC07-00165	ALD07076M ALD07013N ALD07024S ALD07034V		INHSGS060070	ECL06075C	ECL06064G	ECL06064M

CIS-004

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-SDA-SOIL

Lot # 22

Container ID Number	Historical Container ID	NDA BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Transportation			
							Sample	Analysis		
ARP00585**	10137334	INNDAH060001	IN-ARP-VE-000168	SSC07-00165	ALD07076M ALD07013N ALD07024S ALD07034V		IN07FG1264	N/A	N/A	N/A
ARP01474**	10131289	INNDAH060128	IN-ARP-VE-000406	SSC07-00165	ALD07076M ALD07013N ALD07024S ALD07034V		IN07FG1148	N/A	N/A	N/A

* This container is included only as it was randomly selected for solids sampling and analysis. This container's TRU Alpha Activity Concentration is less than 100 nCi/g and will not be certified for shipment.

** These containers were submitted as part of ID-SDA-SOIL Lot 1. They are inlcuded in this cross correlation only for comlpeteness.

Signature of Site Project Manager

Michael Walentine
Printed Name

10/7/2009
Date

C15-DC

CCP Solids Analysis VOC UCL_{90} Evaluation Form

WSPF #: ID-SDA-SOIL Rev. 1 **Solids Summary Waste Stream Lot Number** 1 through 2

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL [1]	# Samples	Maximum (mg/kg)	Mean (mg/kg)	SD (ppmv)	UCL_{90} (mg/kg)	PRQL (mg/kg)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA HWN [2]
Benzene	Log	0	13 [3]	1.2669	-1.6399	1.2768	-1.1373	10	2.30		
Bromoform	Log	0	13 [3]	0.5596	-1.8155	0.9943	-1.4242	10	2.30		
Carbon Disulfide	Log	0	13 [4]	0.9361	-1.7597	1.0984	-1.3053	10	2.30		
Carbon Tetrachloride	Log	6	13	7.4384	0.5260	3.7430	1.9340	10	2.30		
Chlorobenzene	Log	0	13 [3]	1.2669	-1.6399	1.2768	-1.1373	10	2.30		
Chloroform	Log	4	13	4.2767	-0.7345	2.3898	0.1644	10	2.30		
1,1-Dichloroethylene	Log	0	13 [3]	1.2669	-1.3485	1.1237	-0.9062	10	2.30		
1,2-Dichloroethane	Log	0	13 [3]	1.2669	-1.4640	1.2009	-0.9913	10	2.30		
Ethylbenzene	Log	0	13 [3]	1.2669	-1.6399	1.2768	-1.1373	10	2.30		
Methylene Chloride	Log	0	13 [3]	1.2669	-1.4640	1.2009	-0.9913	10	2.30		
m,p-Xylene [b]	Log	0	13 [4]	0.9361	-1.4419	0.9364	-1.0545	10	2.30		
o-Xylene	Log	1	13 [3]	1.2669	-1.6399	1.2768	-1.1373	10	2.30		
1,1,2,2-Tetrachloroethane	Log	1	13 [3]	1.2669	-1.2872	1.1602	-0.8306	10	2.30		
Tetrachloroethylene	Log	8	13	4.7875	0.4749	2.9137	1.5708	10	2.30		
Toluene	Log	3	13 [3]	1.2669	-1.3809	1.2416	-0.8922	10	2.30		
Trans-1,2-Dichloroethylene	Log	0	13 [3]	1.2669	-1.6399	1.2768	-1.1373	10	2.30		
1,1,1-Trichloroethane	Log	1	13 [3]	3.5264	-1.2143	1.8101	-0.5019	10	2.30		
Trichloroethylene	Log	5	13 [5]	6.8244	0.2180	3.2580	1.4435	10	2.30		
1,1,2-Trichloro-1,2,2-trifluoroethane	Log	0	13 [3]	1.2669	-1.6399	1.2768	-1.1373	10	2.30		
1,1,2-Trichloroethane	Log	0	13 [3]	1.2669	-1.4640	1.2009	-0.9913	10	2.30		
Trichlorofluoromethane	Log	0	13 [3]	1.2669	-1.5243	1.2227	-1.0431	10	2.30		
Vinyl Chloride	Log	0	13 [4]	0.5306	-1.7781	0.8914	-1.4093	10	2.30		

215-0

CCP Solids Analysis VOC UCL_{90} Evaluation Form

WSPF #: ID-SDA-SOIL Rev. 1

Solids Summary Waste Stream Lot Number 1 through 2

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples	Maximum (mg/kg)	Mean (mg/kg)	SD (ppmv)	UCL_{90} (mg/kg)	PRQL (mg/kg)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA HWN (2)
Acetone	Log	0	13	2.8904	-0.2520	0.9885	0.1199	4	1.39		
Butanol	Log	2	13	3.5973	0.3266	1.5993	0.9282	100	4.61		
Methanol	Log	0	13	3.5973	-0.0421	1.1429	0.3878	100	4.61		
Methyl ethyl ketone	Log	0	13	2.8904	-0.2032	0.9641	0.1594	100	4.61		
Ethyl ether	Log	0	13	3.5973	0.4324	0.9608	0.7938	100	4.61		
Isobutanol	Log	0	13	2.8904	-0.3586	0.9822	0.0109	100	4.61		
Pyridine [a]	Log	0	13	2.8904	0.2713	0.8438	0.5887	100	4.61		

[a] Can also be analyzed as an SVOC. If analyzed as an SVOC, the QAO's of CCP-TP-001, Table B3-6 apply.

[b] These xylene isomers cannot be resolved by the analytical methods employed in the program. m-Xylene and p-Xylene will be reported as "Total m-p-Xylene."

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per section B4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

(2) No additional EPA Hazardous Waste Numbers were identified for this waste stream.

(3) As a result of dilution requirements for one of the thirteen samples, Benzene, Bromoform, Chlorobenzene, 1,1-Dichloroethylene, 1,2-Dichloroethane, Ethylbenzene, Methylene Chloride, o-Xylene, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloro-1,2,2-trifluoroethane, 1,1,2-Trichloroethane, and Trichloroethane were reported as non-detected with an MDL value in excess of the PRQL. In accordance with the Waste Analysis Plan, Section B4-3d such observations with elevated MDL values due to dilution were not used in calculating the mean concentration. Consequently, the subject analytes were statistically evaluated with 12, rather than 13, usable observations.

(4) As a result of dilution requirements for two of the thirteen samples, Carbon Disulfide, m,p-Xylene, and Vinyl chloride were reported as non-detected with an MDL value in excess of the PRQL. In accordance with the Waste Analysis Plan, Section B4-3d such observations with elevated MDL values due to dilution were not used in calculating the mean concentration. Consequently, the subject analytes were statistically evaluated with 11, rather than 13, usable observations.

(5) As a result of dilution requirements for eight of the thirteen samples, Trichloroethylene was reported as non-detected with an MDL value in excess of the PRQL. In accordance with the Waste Analysis Plan, Section B4-3d such observations with elevated MDL values due to dilution were not used in calculating the mean concentration. Consequently, the subject analytes were statistically evaluated with 5, rather than 13, usable observations.

Signature of Site Project Manager

Michael Walentine
Printed Name

10/7/2009
Date

215-10

CCP Solids Analysis SVOC UCL_{90} Evaluation Form

WSPF #: ID-SDA-SOIL Rev. 1 **Solids Summary Waste Stream Lot Number** 1 through 2

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples	Maximum (mg/kg)	Mean (mg/kg)	SD (mg/kg)	UCL90 (mg/kg)	PRQL (mg/kg)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code [2]
1,2-Dichlorobenzene [a]	Log	0	13 [3]	2.71	-0.89	1.91	-0.14	40.00	3.69		
1,4-Dichlorobenzene[a]	Log	0	13 [3]	2.71	-0.89	1.91	-0.14	40.00	3.69		
2,4-Dinitrophenol	Log	0	13 [3]	2.71	-1.13	1.72	-0.45	40.00	3.69		
2,4-Dinitrotoluene	SQRT	0	13 [4]	0.95	0.44	0.24	0.55	40.00	6.32		
Hexachlorobenzene	SQRT	0	13 [4]	0.95	0.44	0.24	0.55	2.60	1.61		
Hexachloroethane	SQRT	6	13 [3]	20.25	5.53	6.70	8.17	40.00	6.32	Yes	D034
2-Methylphenol (cresols)	Log	0	13 [3]	2.71	-0.89	1.91	-0.14	40.00	3.69		
3&4-Methylphenol (cresols)	Log	0	13 [3]	2.71	-0.89	1.91	-0.14	40.00	3.69		
Nitrobenzene	Log	0	13 [3]	2.71	-0.89	1.91	-0.14	40.00	3.69		
Pentachlorphenol	Log	0	13 [3]	2.71	-0.89	1.91	-0.14	40.00	3.69		

[a] Can also be analyzed as a VOC. If analyzed as a VOC, the QAO's of CCP-TP-001, Table B3-4 apply.

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per B4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

(2) The EPA Hazardous Waste Number for Hexachloroethane (D034) is assigned to this waste stream.

(3) As a result of dilution requirements for one of the thirteen samples, 1,2-Dichlorobenzene, 1,4-Dichlorobenzene, 2,4-Dinitrophenol, Hexachloroethane, 2-Methylphenol, 3&4-Methylphenol, Nitrobenzene, and Pentachlorophenol were reported as non-detected with an MDL value in excess of the PRQL. In accordance with the Waste Analysis Plan, Section B4-3d such observations with elevated MDL values due to dilution were not used in calculating the mean concentration. Consequently, the subject analytes were statistically evaluated with 12, rather than 13, usable observations.

(4) As a result of dilution requirements for four of the thirteen samples, 2,4-Dinitrotoluene and Hexachlorobenzene were reported as non-detected with an MDL value in excess of the PRQL. In accordance with the Waste Analysis Plan, Section B4-3d such observations with elevated MDL values due to dilution were not used in calculating the mean concentration. Consequently, the subject analytes were statistically evaluated with 12, rather than 13, usable observations.

Signature of Site Project Manager

Michael Walentine
Printed Name

10/7/2009
Date

C15-00

CCP Solids Analysis Metals UCL_{90} Evaluation Form

WSPF #: ID-SDA-SOIL Rev. 1 **Solids Summary Waste Stream Lot Number** 1 through 2

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples	Maximum (mg/kg)	Mean (mg/kg)	SD (mg/kg)	UCL90 (mg/kg)	PRQL (mg/kg)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Antimony	SQRT	12	13	1.84	1.28	0.32	1.40	100	10.00		
Arsenic	Log	13	13	2.83	2.22	0.21	2.30	100	4.61		
Barium	No	13	13	280.00	233.08	34.25	245.96	2000	N/A		
Beryllium	SQRT	13	13	6.86	3.70	1.89	4.41	100	10.00		
Cadmium	Log	13	13	4.41	1.50	1.44	2.04	20	3.00		
Chromium	Log	13	13	5.44	4.02	0.57	4.24	100	4.61		
Lead	Log	13	13	3.85	3.15	0.40	3.30	100	4.61		
Mercury	Log	11	13	1.48	-1.98	1.65	-1.36	4	1.39		
Nickel	Log	13	13	5.63	3.95	0.71	4.21	100	4.61		
Selenium	Log	4	13	0.10	-0.92	0.46	-0.75	20	3.00		
Silver	Log	8	13	1.86	-0.15	1.27	0.33	100	4.61		
Thallium	SQRT	8	13	1.97	1.08	0.53	1.28	100	10.00		
Vanadium	No	13	13	63.00	51.15	9.97	54.90	100	N/A		
Zinc	Log	13	13	6.13	4.88	0.48	5.06	100	4.61	Yes	(2)

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per section B4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

(2) Zinc is not listed under 40CFR 261.30 or as a toxicity characteristic metal per 40CFR 261.24.

Signature of Site Project Manager

Michael Walentine
Printed Name

10/7/2009
Date

C15-01

CCP Solid VOCs Summary Data

Waste Stream Number: ID-SDA-SOIL

Solids Summary Waste Stream Lot Number: 1 and 2

Tentatively Identified Compound	Maximum Observed Estimated Concentrations (mg/kg)	# Samples Containing TIC	% Detected
NONE	N/A	N/A	N/A

Data Supports EPA Hazardous Waste Numbers Assigned by AK? Yes ☑ No ☐

If no, describe the basis for assigning the EPA Hazardous Waste Codes:

SPM Signature: [signature] Date: 10/7/2009

C15-0

CCP Solid SVOCs Summary Data

Waste Stream Number: ID-SDA-SOIL

Solids Summary Waste Stream Lot Number: 1 and 2

Tentatively Identified Compound	Maximum Observed Estimated Concentrations (mg/kg)	# Samples Containing TIC	% Detected
Bis(2-ethylhexyl)phthalate	21.00	6	46.15%
Pentachlorobiphenyl	810.00	5	38.46%
Tetrachlorobiphenyl	9.70	2	15.38%
Hexachlorobutadiene	71.00	4	30.77%
Hexachloropropene	0.51	1	7.69%
1,4-Dioxane	1.10	1	7.69%
Diethyl phthalate	2.10	1	7.69%
Hexachlorobiphenyl	4.80	1	7.69%

Note: Hexachlorobutadiene, bis(2-ethylhexyl)phthalate, and Pentachlorobiphenyl are listed in 20.4.1.200 NMAC (incorporating 40 CFR 261) Appendix VIII, and are present as TICs in greater than 25% of samples in the waste stream. These analytes will be added to the target analyte list for ID-SDA-SOIL.

Data Supports EPA Hazardous Waste Numbers Assigned by AK? Yes ☑ No ☐

If no, describe the basis for assigning the EPA Hazardous Waste Codes:

SPM Signature [signature] Date 10/7/2009

CIS-011

CCP RTR/VE Summary of Prohibited Items and AK Confirmation

Waste Stream Number: ID-SDA-SOIL Lot #: 22

Container Number	RTR Prohibited Items	Visual Examination Prohibited Items [a]
See correlation of container ID numbers for list of remaining drum numbers in this Lot.	None of the containers in this lot were processed through RTR.	None of the containers in this lot had prohibited items identified during Visual Examination technique.

a. See Batch Data Reports

b. If AK has assigned U134 to this waste stream, then any liquids in these containers are prohibited items (not acceptable by the TSDF).

Site Project Manager Signature Michael Walentine (Printed Name) 10/7/2009 (Date)

C15-C

CCP Reconciliation with Data Quality Objectives

WSPF# ID-SDA-SOIL Rev. 1 Lot # 22

Sampling Completeness

RTR/VE:

Number of Valid Samples: 13
Percent Complete: 100 (QAO is 100%)
Number of Total Samples Analyzed: 13

NDA

Number of Valid Samples: 13
Percent Complete: 100 (QAO is 100%)
Number of Total Samples Analyzed: 13

HSG

Number of Valid Samples: NA
Percent Complete: NA (QAO is ≥90%)
Number of Total Samples collected: NA
Number of Valid Samples: NA
Percent Complete: NA (QAO is ≥90%)
Number of Total Samples analyzed: NA

Total VOC

Number of Valid Samples: 13
Percent Complete: 100 (QAO is ≥90%)
Number of Total Samples collected: 13
Number of Valid Samples: 13
Percent Complete: 100 (QAO is ≥90%)
Number of Total Samples analyzed: 13

Total SVOC

Number of Valid Samples: 13
Percent Complete: 100 (QAO is ≥90%)
Number of Total Samples collected: 13
Number of Valid Samples: 13
Percent Complete: 100 (QAO is ≥90%)
Number of Total Samples analyzed: 13

Total Metals

Number of Valid Samples: 13
Percent Complete: 100 (QAO is ≥90%)
Number of Total Samples collected: 13
Number of Valid Samples: 13
Percent Complete: 100 (QAO is ≥90%)
Number of Total Samples analyzed: 13

CCP Reconciliation with Data Quality Objectives

WSPF# ID-SDA-SOIL Rev. 1 Lot # 22

	Y/N/NA	Reconciliation Parameter
1	Y	Waste Matrix Code.
2	Y	Waste Material Parameter Weights.
3	Y	The waste matrix code identified is consistent with the type of sampling and analysis used to characterize the waste.
4	Y	The TRU activity reported in the BDRs for each container demonstrates with a 95% probability that the container of waste contains TRU radioactive waste.
5	N	AK Sufficiency. Is there an approved AK sufficiency Determination for this waste stream?
6	NA	Mean concentrations, UCL_{90} values for the mean concentration, standard deviations, and the number of samples collected for each VOC in the HSG of each container were calculated and compared with the program required quantitation limits, as reported in CCP-TP-003 Attachment 3, and additional Environmental Protection Agency (EPA) Hazardous Waste Numbers were assigned as required. Samples were randomly collected (when appropriate).
7a	Y	Mean concentrations, UCL_{90} values for the mean concentration, standard deviations, and the number of samples collected for solids VOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003 Attachment 4, and additional EPA Hazardous Waste Numbers were assigned as required. Samples were randomly collected.
7b	Y	Mean concentrations, UCL_{90} values for the mean concentration, standard deviations, and the number of samples collected for solids SVOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003 Attachment 5, and additional EPA Hazardous Waste Numbers were assigned as required. Samples were randomly collected.
7c	Y	Mean concentrations, (UCL_{90}) values for the mean concentration, standard deviations, and the number of samples collected for total metals were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003 Attachment 6, and additional EPA Hazardous Waste Numbers were assigned as required. Samples were randomly collected.

CCP Reconciliation with Data Quality Objectives

WSPF# ID-SDA-SOIL Rev. 1 Lot # 22

8	Y	The data demonstrates whether the waste stream exhibits a toxicity characteristic under Title 40 Code of Federal Regulations (CFR), Part 261, Identification and Listing of Hazardous Waste, Subpart C, Characteristics of Hazardous Waste.
9	Y	Does the waste stream contain listed waste found in 20.4.1.200 NMAC incorporating 40 CFR Part 261, Subpart D, Lists of Hazardous Wastes.
10	Y	Waste stream can be classified as hazardous or nonhazardous at the 90 percent confidence level.
11	Y	Appropriate packaging configuration and Drum Age Criteria (DAC) is applied and documented in the headspace gas sampling documentation, and the drum age met prior to sampling.
12	Y	TICs were appropriately identified and reported in accordance with the requirements of Section B3-1 of the QAPjP.
13	NA	The PRQLs for headspace gas VOCs were met for all analyses as evidenced by the analytical batch data reports.
14		The overall completeness, comparability, and representativeness QAOs were met for each of the analytical and testing procedures as specified in the WAP Sections B3-2 through B3-9 prior to submittal of a waste stream profile form for a waste steam or waste stream lot.

	Completeness	Comparability	Representativeness
Radiography	NA	NA	NA
VE	Y	Y	Y
Headspace Gas Analysis	NA	NA	NA
Solids Sampling	Y	Y	Y
Solids VOCs	Y	Y	Y
Solids SVOCs	Y	Y	Y
Solids Metals	Y	Y	Y

C15-D

CCP Reconciliation with Data Quality Objectives

WSPF# ID-SDA-SOIL Rev. 1 Lot # 22

Comments:

This CIS represents the NDE and NDA data from the 22nd shipping lot and the solids analytical data from Solid Summary lots 1 and 2 from waste stream ID-SDA-SOIL. A total of 1106 containers have been evaluated in shipping lots 1 through 22.

A total of 13 containers have been sampled for solids RCRA analysis. Solids summary lot 2 included as part of this shipping lot, accumulates 5 containers from solids summary lot 1 and 8 additional containers from solids summary lot 2. The 5 samples from solids summary lot 1 were submitted in the CIS for the original revision of the WSPF for the ID-SDA-SOIL waste stream.

UCL90 values are computed from the statistical evaluation of data from all 13 drums. However, in cases where the MDL for a given analyte was reported above the PRQL due to dilution and the analyte was not detected (i.e. flagged with a "U" qualifier) those data were not used in calculating mean concentration in accordance with Section B4-3d of the WIPP-WAP.

3 analytes - bis(2-ethylhexyl)phthalate, hexachlorobutadiene, and pentachlorobiphenyl, are listed in 20.4.1.200 NMAC (incorporating 40 CFR 261) and are present as TICs in greater than 25% of samples in the waste stream. An AK re-evaluation was performed and the results are detailed as follows:

- Bis(2-ethylhexyl)phthalate carries EPA HWN U028, but because the compound is not present as a unused commercial chemical product, off-specification chemical product, or spill residue thereof, U028 is not assigned to this waste stream. This compound will be added to the target analyte list.
- Hexachlorobutadiene carries EPA HWNs D033 and U128, but because the compound is not present as a unused commercial chemical product, off-specification chemical product, or spill residue thereof, U128 is not assigned to this waste stream. EPA HWN D033 is already assigned to this waste stream. This compound will be added to the target analyte list.
- Although pentachlorobiphenyl is listed in 20.4.1.200 NMAC (incorporating 40 CFR 261), there is no EPA HWN associated it. No additional EPA HWNs are assigned as a result of the addition of this compound. This compound will be added to the target analyte list.

Signature of Site Project Manager | Michael Walentine (Printed Name) | 10/7/2009 (Date)

SUMMATION OF ASPECTS OF AK SUMMARY REPORT: ID-SDA-SOIL

Overview:

Waste Stream ID-SDA-SOIL is comprised of interstitial soil buried in the Subsurface Disposal Area (SDA) at Idaho National Laboratory (INL) Radioactive Waste Management Complex (RWMC). The waste is being retrieved and packaged for disposal.

Waste Stream ID-SDA-SOIL was originally approved on June 19, 2008. This waste stream profile has been revised in accordance with NMED direction described in the September 22, 2008 NMED Approval of the Idaho National Laboratory/Central Characterization Project Audit A-08-10 to add EPA HWNs P098 and P106. The waste stream designation has not changed because there is no change to the generating process, physical form, or hazardous constituents. Second stage sludge (742 sludge) has always been part of this waste stream but is now targeted waste. Cyanide is an anticipated hazardous constituent in waste stream ID-SDA- SOIL and EPA HWNs F006, F007 and F009 were applied. At the direction of NMED, P098 and P106 are conservatively applied to this waste stream to address the potential for other cyanide (breached bottles of potassium and sodium cyanide pellets) to enter the waste stream. Because F006, F007 and F009 HWNs were previously applied, there is no change to the hazardous constituents and the waste stream designation. This will allow for disposal of targeted waste if bottles of potassium cyanide and sodium cyanide are inadvertently broken during future excavation or visual examination. If packages or bottles of cyanide pellets are identified in the soil during the visual examination, they will be removed from the waste.

Most of the waste in the retrieval areas, and all of the targeted waste, was generated from defense activities (i.e., production of nuclear weapons) at the decommissioned Rocky Flats Plant (RFP) in Golden, Colorado. Waste in the retrieval areas was also generated by the INL and other government sponsored small quantity generators (i.e., Rockwell Atomics International Division, Denver Research Institute, United States Geological Survey, Colorado School of Medicine, Colorado School of Mines Research Foundation, and the United States Department of the Interior). Waste, from the INL and the small quantity generators, was historically generated from reactor research including testing of nuclear reactors, fuel development, fuel reprocessing and isotope studies. Defense related activities conducted at the INL included Army, Navy, and space reactor development. Although soil is not a targeted waste, some containers packaged with targeted waste are predominantly soils. Waste stream ID-SDA-SOIL is therefore considered defense related waste.

This summation of the AK Summary Report includes information to support Waste Stream Profile Form (WSPF) number ID-SDA-SOIL, Revision 1, for mixed soil. The primary source of information for this report was CCP-AK-INL-001, *Central Characterization Project Acceptable Knowledge Summary Report For Waste Retrieved from Designated Areas within the Subsurface Disposal Area at the Idaho National Laboratory: Transuranic Waste Streams ID-SDA-DEBRIS, ID-SDA-SLUDGE, ID-SDA-SOIL,* Revision 8, dated September 8, 2009. CCP-AK-INL-001 includes information obtained from numerous sources, including facility safety basis documentation, historical document archives, generator and storage facility waste records and documents including databases, and interviews with operational and waste management personnel.

Waste Stream Identification Summary:

Site Where TRU Waste Was Generated:	Idaho National Laboratory

Waste Stream Name:	Interstitial Soil from the Subsurface Disposal Area
Waste Stream Number:	ID-SDA-SOIL, Revision 1
Dates of Waste Generation:	2005 to Present
Summary Category Group:	S4000
Waste Matrix Code Group:	Soils
Waste Matrix Code:	S4200
Waste Stream TWBIR Identification:	IN-ID-SDA-SOIL[1]
Waste Stream Volume:	1969 55-gallon drums (current) 6482 55-gallon drums (projected) 134 SWBs (projected)
RCRA EPA Hazardous Waste Numbers:	D004, D005, D006, D007, D008, D009, D010, D011, D022, D027, D028, D029, D030, D032, D033, D034, D037, D038, D043, F001, F002, F004, F005, F006, F007, F009, P098 and P106
TRUPACT-II Content Code (TRUCON):	ID 112, ID 122, ID 127, SQ 154

Waste Stream Description and Physical Form:

This waste stream is predominantly interstitial soils from the retrieval area. Soils are not targeted waste; however, there may be containers packaged with targeted waste forms where the predominant waste is soil. Other types of waste may include debris such as rags, paper, plastic, rubber, wood, filters, glass, graphite, metal, equipment, and concrete, as well as roaster oxide and inorganic and organic sludge.

Waste stream ID-SDA-SOIL is predominantly soil by volume with the balance being homogenous solids (i.e., roaster oxide, sludge and absorbed liquids such as organic setups) and debris. Waste Matrix Code S4200, Soil/Debris, is applied to this waste stream. This category includes waste that is predominantly soil, sand, silt, rock, or gravel with rock and gravel volumes totaling at least 50 percent of the matrix. No individual containers consist of more than 50% debris or sludge. The waste that comprises waste stream ID-SDA-SOIL was generated from an activity that is similar in material, physical form and hazardous constituents and is therefore a single waste stream.

Point of Generation - Area and Building of Generation

The point of generation for newly generated waste stream ID-SDA-SOIL is the INL SDA. Although this soil was generated at the INL, the degradation of drums and subsequent retrieval process may result in co-mingling of waste from the following facilities:

[1] TWBIR numbers IN-ICP-002, IN-ICP-003, IN-ICP-004, and IN-ICP-005 also apply.

RFP

- Buildings 122, 123, 331, 334, 441, 444, 447, 551, 559, 771, 774, 776, 777, 779, 881, 883, 886, 889, and 991, as well as the solar evaporation ponds.

Idaho National Laboratory

- Argonne National Laboratory-West (ANL-W) Buildings 601 and 767
- Auxiliary Reactor Area (ARA) Building 602, 616, and 626
- Central Facilities Area (CFA) Buildings 601, 633, 646, 654, 674, 687, and 690
- Idaho Chemical Processing Plant (CPP) Buildings 601 and 630
- Naval Reactors Facility (NRF) Buildings 601, 617, and 618
- Power Excursion Reactor (PER) Building 601
- Test Area North (TAN) Buildings 607 and 633
- Test Reactor Area (TRA) Buildings 603, 642, 653, and 661
- Radioactive Waste Management Complex (RWMC)

Other Off-Site Facilities

- Rockwell Atomics International Division (ATI) (Canoga Park, California)
- Denver Research Institute (DRI) (Denver, Colorado)
- United States Geological Survey (USGS) (Denver, Colorado)
- Colorado School of Medicine (CSM) (Denver, Colorado)
- Colorado School of Mines Research Foundation (CSMRF) (Golden, Colorado)
- United States Department of the Interior (USDI)

Generating Process

The objective of the Accelerated Retrieval Project (ARP) is to perform a targeted retrieval of certain RFP waste that is contaminated with transuranic radionuclides, uranium, and volatile organic compounds (VOCs). The waste-zone material, or targeted waste, will be retrieved using excavators. Dust suppression is used during the retrieval process as conditions warrant. This activity includes addition of localized water, Soiltac® (a non-hazardous vinyl acrylic copolymer emulsion), or other non-hazardous dust suppressants (e.g., Durasoil®).

Retrieved waste will be placed into trays fitted with a liner. Targeted and non-targeted waste determinations are made by an operator by way of closed-circuit television cameras at the dig-face. If the tray contents are exclusively non-targeted waste, it is returned to the pit. If targeted waste is present in the tray, operators support transfer of the tray to the drum packaging station. Operators then perform visual examination, and prohibited item removal and sampling as required. Soil is loaded into the drum in the tray liner. Absorbent (e.g., Oil-Dri®) may be added to ensure the absence of liquids. The drum is then removed from the drum port, closed, and transferred from the area.

The following information provides a summary of the historical operations, by facility, that generated waste disposed of in the retrieval areas:

RFP

Plutonium Operations

TRU waste generated at the RFP was primarily associated with operations that manufactured, recovered, and treated plutonium metal and plutonium containing materials. Plutonium operations were conducted in Buildings 771, 776, and 777. Activities included:

- Plutonium Component Production
- Plutonium Recovery and Purification

Enriched Uranium (EU) Operations

EU operations included production chemistry, foundry operations, fabrication, inspection, parts cleaning, EU recovery, and scrap material recycling. Activities included:

- Enriched Uranium Component Production
- Enriched Uranium Recovery

Depleted Uranium (DU) Operations

DU operations were conducted in Buildings 444, 447, and 883. Operations included casting, machining, heat treating, coating, plating, cleaning, and inspection. These operations were similar to those described for plutonium and EU fabrication. Rolling and forming was conducted in Building 883. To make the metal malleable for rolling, the ingots were placed in a furnace and/or heated, rolled, and annealed. The parts were cut for forming, then returned to Building 444 for final machining. Turnings and other DU residue materials were returned to Building 444 for recasting or conversion to roaster oxide in Building 447 for disposal. Roaster Oxide is depleted uranium chips, turning, and fines that have been thermally stabilized (self-sustained combustion) to an oxide.

Beryllium (Be) Operations

Beryllium operations were primarily conducted in buildings containing DU and/or EU operations. Some beryllium operations, such as machining, were segregated from uranium operations; however waste from other operations was commingled.

Final Assembly

The original final assembly building was Building 991. The original final assembly operations used acetone or trichloroethylene to clean components and the finished product. As a result of the additional requirements associated with the hollow-core design, Building 777 was put into service to provide necessary support. The operations involved in final assembly of the hollow-core design included drilling, welding, brazing, turning and polishing DU, EU, beryllium and plutonium parts.

Laboratory Operations

The laboratories in Buildings 559, 771 and 881 supported production operations at RFP. The laboratories provided sampling and analysis support for production activities. In addition, the laboratories supported recovery, purification, and liquid waste treatment operations.

Building 123 was a health physics laboratory that performed bioassays and low-level radiological studies. These efforts generated a few drums per year of combustible waste which was shipped to INL.

Building 441 contained a general analytical laboratory, including a spectrochemical laboratory and chemical stockroom, which supported the depleted uranium and beryllium operations and general site chemical analyses.

Research and Development (R&D) and Special Order Work

R&D included activities related to production, recovery, and purification as well as "special order" work, or work involving materials processed separately. Building 779 conducted many of the R&D operations at the RFP. Other areas supporting R&D included Buildings 331, 771, 776, 777, 881, and 886. Activities included:

- Research and Development
- Special Order Work

Waste Treatment

Waste processing at RFP treated both liquid and solid process waste. Most of the waste treatment operations were conducted in Building 774 and subsequently shipped to INL. Solid waste treatment operations were conducted for plutonium and uranium recovery, or to render the waste suitable for transportation and disposal. Waste treatment operations relative to recovery were conducted in Buildings 771, 776, 881, and 883. Activities included:

- Liquid Waste Treatment
- Solid Waste Treatment

The aqueous liquid waste treatment process was divided into two separate areas or "stages". The first stage received and treated only plutonium and americium contaminated liquid wastes by neutralization (lime and sodium or potassium hydroxide), precipitation (ferric sulfate and calcium chloride or magnesium sulfate), flocculation (Purifloc nonhazardous polyacrylamide coagulation agent), clarification and filtration. The sludge from precipitation and flocculation was fed to the vacuum drum filter for de-watering and drumming for off-site disposal. The second stage received and treated enriched and depleted uranium contaminated aqueous liquid wastes, in addition to treated plutonium and americium contaminated wastes from the first stage. Similar to first stage operations, these liquids were made basic when necessary, then processed by precipitation and flocculation. Liquid effluent was recycled back to the process, sent to the evaporation ponds, or discharged from the site. Solids were filtered and drummed for off-site disposal.

The "Grease Plant" processed backlog and newly generated organic liquid waste. Contaminated lathe coolant and organic solvents from plutonium and Enriched Uranium (EU)

machining operations, were transferred into a mixer/processor. The organic liquids were blended with calcium silicate and extruded into lined 55-gallon drums. This waste was identified as organic setups or 743-sludge.

Routine Maintenance and Utilities

Building 334 was the primary maintenance support facility and conducted operations including utilities maintenance, filter testing and replacement, removal and replacement of equipment, and change-out of oils, coolants, and Raschig rings. Most of the buildings contained maintenance operations for the building and peripheral areas. Utility operations included the up-keep of the heating, ventilation and air conditioning, fume scrubbers, and process vacuum systems.

Non-Routine Operations

Non-routine operations included strip-out operations, renovation, and activities associated with fires and Site incidents. Strip-out of glovebox lines, process piping, valves, and associated systems were performed to remediate radioactive contamination from these incidents as well as for renovation or decommissioning of operations.

Miscellaneous Operations

Building 122 was the medical facility where routine physicals and industrial injuries were treated. Capabilities included first aid, taking X-rays, minor surgical treatment, and providing ambulances. The personnel decontamination center handled plutonium and highly enriched uranium personnel contamination cases. Building 122 also housed the internal dosimetry center which measured radioactive material in the body.

Building 551 provided warehousing for equipment, materials, chemicals, supplies, metal fabrication, a service shop and a large equipment and tool crib. Scrap metal (iron, aluminum, beryllium and copper) was stored near Building 551. Periodically, uranium chips were found in the scrap metal due to the cross contamination of machining equipment in Building 444. Occasionally, chemicals stored and received in the building leaked or were spilled. The non-destructive testing group performed tests on beryllium parts in Building 551 beginning in 1968.

Idaho National Laboratory

The facilities that generated waste at the INL and for which small amounts of the described waste may be included in this waste stream are described below.

ANL-W

Activities that generated waste included:

- General plant operation, maintenance, decontamination, and monitoring.
- Hot cell operations at the Fuel Cycle Facility (FCF). Most of this waste was stored in the Radioactive Scrap Waste Facility (RSWF), but some was sent to the RWMC.
- Hot cell operations at ANL-W.
- Large pieces of excess or demolished equipment from ANL-W radiological control areas were shipped to the RWMC on a non-routine basis.

- Concreted evaporator bottoms were generated from the evaporation of radioactive liquids received from FCF and Transient Reactor Test Facility (TREAT).

Idaho Chemical Process Plant (CPP)

The CPP facilities that sent waste to the SDA are as follows.

- Fuel Processing Facility
- Support Facility

Activities that generated waste included:

- Fuel Processing
- Decontamination of tools and equipment
- Miscellaneous laboratory operations
- Water treatment

Naval Reactors Facility (NRF)

The NRF facilities that sent waste to the SDA are as follows.

- The Submarine Thermal Reactor

  This facility generated occasional metal valves and piping sections. Metal tanks and drums containing spent ion-exchange resins and sludge from water processing systems were also generated.

- The Large Ship Reactor Prototypes

  Waste was generated by this facility as a result of reactor coolant sampling, maintenance, operation of the oil-water separation equipment, repair, and refueling. Waste includes empty oil drums from the oil-water separation system.

- Expended Core Facility (ECF)

  The majority of the radioactivity (curies) and the volume of waste transferred from NRF to the RWMC came from ECF. Most of the radioactivity from ECF is in structural materials removed during the naval fuel examinations.

Test Area North (TAN)

Most of the waste produced at TAN was a result of specific test and evaluation programs. The decontamination, disassembly, evaluation, and discarding of components of the tests generated debris waste.

Test Reactor Area (TRA)

The TRA generated waste from the test reactors, craft and maintenance shops, radiochemistry and physics laboratories, and hot cells. Waste included contaminated dirt, concrete, spent ion-exchange resins, filters, gloveboxes, irradiated experiment components, and equipment.

Other INL Generating Facilities

Other generators disposed of scrap metals and combustible materials that were radiologically contaminated. These facilities and related waste materials include:

- Auxiliary Reactor Area – Solvents, thinners, acids, and mineral oils were used at this facility.
- Central Facilities Area - Radioactive waste includes contaminated combustibles, scrap metal, sewage sludge, and nuclear radiation sources.
- Power Excursion Reactor - This waste consisted of metals, combustibles, and core and loop components. Small amounts of non-radiological waste (solvents, resins, cleaning solutions, and acids) were included with waste shipments to the SDA.
- RWMC - Waste consists of radiologically contaminated materials (combustibles, soil, and plastic) associated with decontamination processes at the RWMC.

Other Off-Site Generating Facilities

Off-site educational institutions, private companies, and other federal agencies shipped waste to RFP for disposal. RFP accepted this waste and shipped it to the INL RWMC SDA. For the current retrieval areas five Colorado-based waste generators are identified: University of Colorado School of Medicine (CSM), Colorado School of Mines Research Foundation (CSMRF), United States Geological Service (USGS), the Denver Research Institute (DRI), and the United States Department of the Interior (USDI). In addition, the Rockwell Atomics International Division (ATI) of Canoga Park, California generated waste that is buried in the retrieval areas.

The CSM, the medical school associated with the University of Colorado, conducted various biomedical research activities with radionuclides. The CSMRF was a research institute conducting research for the Defense Atomic Support. The USGS office in the Denver Federal Center operated a small nuclear reactor used to determine the age and chemical makeup of rocks and minerals. The USGS also evaluated the effects of underground nuclear explosions at the Atomic Energy Commission's (AECs) Nevada Test Site (NTS); that program was expanded to study the geologic and hydrogeologic conditions affecting the peaceful uses of atomic energy and the disposal of radioactive waste. DRI was a chemistry laboratory affiliated with the University of Denver that used small amounts of radioactive material and beryllium oxide in chemistry classes. The USDI encompasses several organizations including: the USGS, the Bureau of Land Management, the Bureau of Reclamation, the Bureau of Mines, the Bureau of Indian Affairs, the Interstate Commerce Commission, the National Park Service, Territorial Oversight (including the Marshall Islands), and the U.S. Fish and Wildlife Service. It is not known what project or organization within the USDI generated the waste shipped to the INL. The USDI waste is not targeted for retrieval. Rockwell ATI conducted R&D, design, construction, and testing of nuclear reactors and associated systems.

Table 1 identifies toxicity characteristic (TC) and F-listed chemicals in waste stream ID-SDA-SOIL. These chemicals were used in the processes and contaminate the waste, but the chemical itself was not discarded in the TRU waste stream as commercial chemical product, an off-specification commercial chemical product or spill residue thereof (40 CFR 261.33)

Table 1 – Metals and Organic TC and F-Listed Contaminants for Waste Stream ID-SDA-SOIL

Constituent	CAS Number	EPA Hazardous Waste Number
1,2-Dichlorobenzene	95-50-1	F002
Carbon tetrachloride	56-23-5	F001
Chlorobenzene	108-90-7	F002
Isobutanol	78-83-1	F005
Methylene chloride	75-09-2	F001, F002
Tetrachloroethylene	127-18-4	F001, F002
1,1,1-Trichloroethane	71-55-6	F001, F002
1,1,2-Trichloroethane	79-00-5	F002
Trichloroethylene	79-01-6	F001, F002
Trichlorofluoromethane	75-69-4	F001, F002
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113, Freon TF)	76-13-1	F001, F002
Cresols	1319-77-3	F004
Nitrobenzene	98-95-3	F004
Benzene	71-43-2	F005
Carbon disulfide	75-15-0	F005
2-Ethoxyethanol	110-80-5	F005
Methyl ethyl ketone (MEK)	78-93-3	F005
2-Nitropropane	79-46-9	F005
Toluene	108-88-3	F005
Wastewater treatment sludges from electroplating operations	NA	F006
Spent cyanide plating bath solutions from electroplating operations	NA	F007
Spent stripping and cleaning bath solutions from electroplating operations	NA	F009

Constituent	CAS Number	EPA Hazardous Waste Number
Arsenic	7440-38-2	D004
Barium	7440-39-3	D005
Cadmium	7440-43-9	D006
Chromium	7440-47-3	D007
Lead	7439-92-1	D008
Mercury	7439-97-6	D009
Selenium	7782-49-2	D010
Silver	7440-22-4	D011
Chloroform	67-66-3	D022
1,4-Dichlorobenzene	106-46-7	D027
1,2-Dichloroethane	107-06-2	D028
1,1-Dichloroethylene	75-35-4	D029
2,4-Dinitrotoluene	121-14-2	D030
Hexachlorobenzene	118-74-1	D032
Hexachlorobutadiene	87-68-3	D033
Hexachloroethane	67-72-1	D034
Pentachlorophenol	87-86-5	D037
Pyridine	110-86-1	D038, F005
Sodium cyanide	143-33-9	P106
Potassium cyanide	151-50-8	P098
Vinyl chloride	75-01-4	D043

RCRA Determinations - Hazardous Waste Determinations

Ignitability, Corrosivity, Reactivity

Waste generated in this waste stream does not qualify for any of the exclusions outlined in 40 CFR 260 or 261. The Visual Examination Technique (VET) is used to verify that the waste stream is not a liquid waste and does not contain explosives, non-radioactive pyrophoric material, compressed gasses or reactive waste. Therefore, this waste stream does not exhibit the characteristic for ignitability (D001), corrosivity (D002), or reactivity (D003).

Ignitability

The waste does not meet the definition of ignitability as defined in 40 CFR 261.21 (Reference ID-C101). The materials are not liquid, ignitable compressed gases, or oxidizers, and are not capable of causing fire through friction, absorption of moisture, or spontaneous chemical

change. Un-containerized liquids discovered during retrieval or packaging are absorbed into the soil or other suitable absorbents (References ID-P109, ID-P122, ID-P253). Bottles of chemicals (if present) will be removed from the waste during retrieval and packaging operations. Ignitable compressed gases (e.g., un-punctured aerosol cans or compressed gas cylinders), if present, are removed from the waste stream or vented during packaging activities (References ID-P105, RF-C045, RF-P047).

Based on review of AK documentation, oxidizers (e.g., chromates, nitrates, perchlorates, permanganate, peroxides) have been identified in processes that generated waste buried in the retrieval area. Bottles of chemicals, including oxidizers, may have been buried in the SDA. For that reason, bottles of chemicals (solids and liquids) will be removed from the waste during retrieval and packaging operations. Cellulosic (e.g., wipes) waste may be contaminated with oxidizers; however, tests performed by Savannah River Site in 1984 to determine burning characteristics of wipes and mop heads contaminated with nitric acid and potassium permanganate indicated that this waste is not considered an oxidizer. In addition, studies evaluating the formation of lead nitrate from leaded rubber gloves contaminated with nitric acid concluded that the gloves are not oxidizers. Therefore, the waste will not exhibit the characteristic of ignitability (References ID-P111, ID-P250, ID-P253, RF-C028, RF-C102, RF-C260, RF-P090).

Depleted uranium machine turnings were thermally stabilized to an oxide (i.e., roaster oxide); however, due to incomplete oxidation of some of the turnings, combustion is possible if un-oxidized surfaces are exposed to oxygen (Reference ID-P105). To ensure retrieved roaster oxide will not ignite, the material is raked multiple times after placement in the waste tray. In addition, multiple samples of roaster oxide transferred into the drum packaging station are tested to ensure the material will not ignite (References ID-P122, ID-P250, ID-P253, and ID-U106).

Other radioactively-contaminated machine turnings from RFP were typically cemented. Small quantities of laboratory metals such as potassium and sodium were reacted with alcohol in the labs (Reference RF-C416). Sodium and sodium-potassium metals from ATI were encased in concrete and therefore do not pose a hazard. Pyrophoric materials, such as zirconium chips from INL generators, were buried in the SDA and will be segregated from the waste stream if encountered (Reference ID-U298).

Nitrocellulose formation on un-washed acid-contaminated combustibles and plastics has been evaluated, resulting in a determination that the formation of nitrocellulose is not possible for the waste in the SDA. It was determined that the use of nitric acid and subsequent contact with cellulose material will not form a nitrocellulose compound. If nitrocellulose could have formed, the reaction would have occurred within a short period of time at the point of generation. The combustible material within the SDA has been exposed to outside environmental conditions for nearly 40 years and as such would not form nor retain the potential for residual nitrocellulose formation (References RF-C028, RF-P086, and RF-P090).

Because the waste in the SDA was buried nearly 40 years ago, and there have previously been floods in the SDA, the waste containers may show various degrees of degradation (Reference ID-P109). As a result, the potential risk for chemical reaction is expected to be significantly reduced. Waste will be examined for ignitability characteristics (e.g., burning, smoking, smoldering, sparking) during retrieval and packaging operations. Magnesium oxide will be used to extinguish the material if these characteristics are observed, and the materials segregated from the waste (References ID-P122, ID-P250, ID-P253 and ID-P269). In addition, potentially

ignitable materials (e.g., un-oxidized metal turnings, bottles containing liquid or solid materials) will be segregated from the waste if encountered during visual examination. Further evaluation of the waste will be required if any of these characteristics are observed.

The waste does not exhibit the characteristic of ignitability. Therefore, the hazardous waste number for ignitability (D001) does not apply to this waste stream.

Corrosivity

The waste does not meet the definition of corrosivity as defined in 40 CFR 261.22. The waste is not a liquid waste (Reference ID-C101) and absorbent (e.g., Oil-Dri®.) is added as needed to ensure the absence of liquids. Bottles of chemicals will be removed from the waste during retrieval and packaging operations (References ID-P122). There is the possibility that lead-acid batteries were buried but they are not part of this waste stream. Un-containerized liquids discovered during retrieval or packaging are absorbed into the soil or other suitable absorbents (References ID-P109, RF-P084, and ID-P269). Therefore the characteristic of corrosivity (D002) does not apply to this waste stream.

Reactivity

The waste does not meet the definition of reactivity as defined in 40 CFR 261.23 (Reference ID-C101). The materials are stable and will not undergo violent chemical change. The materials will not react violently with water, form potentially explosive mixtures with water, or generate toxic gases, vapors, or fumes when mixed with water. The waste is not a liquid waste (Reference ID-C101) and absorbent (e.g., Oil-Dri®.) is added as needed to ensure the absence of liquids. The materials are not capable of detonation or explosive reaction if subjected to a strong initiating source or if heated under confinement. The materials are not readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure.

Cyanide pellets were placed into drums of RFP Building 774 second-stage sludge. If packages or bottles of cyanide pellets are identified in the soil during the visual examination, they will be removed from the waste.

Ion-exchange resins may not have been denitrated (washed with water) or mixed with cement prior to disposal. Studies indicate that no credible mechanism exists for detonation by degradation of a nitrate-form ion-exchange resin, therefore posing no flammable or explosive hazard (References RF-C045, RF-C120, RF-C409, RF-C416, and RF-P047).

The potential for shock sensitivity or exothermic reaction of leaded gloves exposed to nitric acid was investigated. Although leaded gloves did come in contact with nitric acid, mere contact with nitric acid does not constitute the criteria for forming shock sensitive and/or thermally unstable compounds. This information in conjunction with the fact that the RFP waste has been buried in a pit for nearly 40 years and has been subjected to outside environmental conditions and that on two known occasions has undergone flooding, is the basis for determining that the waste is not reactive (References RF-C028 and RF-P090).

Small quantities of reactive materials were used at RFP; however, they were strictly controlled and would not have been placed in drums for burial (Reference RF-C416). Blasting caps and primacord, were used at several INL facilities. Chemicals, such as hydrazine and picric acid, have been identified in several documents (References ID-P109, PER-P006, RF-C227, RF-P040, RF-P085, and RF-P260) and were disposed of in the SDA (References ID-P109). Water

reactive metals (e.g., calcium, lithium, and magnesium) have been identified in AK documents. Because the waste has been buried for nearly 40 years, and there have been subsequent floods in the SDA, the potential risk for chemical reaction is expected to be reduced.

During waste retrieval and packaging operations, the waste will be observed for unanticipated reaction (e.g., bubbling, smoking, smoldering, sparking). Potentially reactive materials (e.g., un-oxidized metal turnings, bottles containing liquid or solid materials) will be segregated from the waste stream if encountered during VET. The characteristic of reactivity does not apply to this waste stream. Therefore, the EPA hazardous waste number for reactivity (D003) is not assigned to this waste stream.

Toxicity Characteristic

This waste stream exhibits the characteristic of toxicity per 40 CFR 261.24. The toxicity characteristic contaminants fall into two categories; metals and organics.

This waste is contaminated with toxicity characteristic metal compounds listed in 40 CFR 261.24. Based on the evaluation of the AK source documentation several compounds or materials may contaminate this waste. Solutions containing arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver were used in laboratory operations at RFP. Compounds found in laboratory solutions include: arsenic trioxide, barium chloride, cadmium nitrate, chromium nitrate, lead acetate, mercury nitrate, selenium dioxide, and silver nitrate. Metals such as barium, cadmium, chromium, selenium, and silver were used in R&D operations and metallurgical operations. Therefore, EPA hazardous waste numbers for arsenic (D004), barium (D005), cadmium (D006), chromium (D007), lead (D008), mercury (D009), selenium (D010), and silver (D011) are assigned to this waste stream (Reference ID-C101).

This waste stream is contaminated with toxicity characteristic organic compounds listed in 40 CFR 261.24. Based on the evaluation of the AK source documentation, including analytical data from previous sampling at the INL, chloroform (D022) , 1,4-dichlorobenzene (D027), 1,2-dichloroethane (D028), 1,1-dichloroethylene (D029), 2,4-dinitrotoluene (D030), hexachlorobenzene (D032), hexachlorobutadiene (D033), hexachloroethane (D034), pentachlorophenol (D037), pyridine (D038), and vinyl chloride (D043) were used in the laboratories at RFP. Therefore, EPA hazardous waste numbers D022, D027, D028, D029, D030, D032, D033, D034, D037, D038, and D043 are assigned to this waste stream (References ID-C101 and RF-P429).

The INL 3100 m^3 Project sampled and analyzed waste that may be intermixed with this soil waste stream. The INL 3,100 m^3 Project sampled and analyzed IDC 003, Organic Setups, and IDC 801, Solidified Organics. The process that generated IDC 003 is identical to the 743-series organic setups in the retrieval areas. The solidification process that generated IDC 801 was somewhat different than IDC 003 but the organic liquid feed streams were much the same. The 743-series organic setups are in waste stream ID-SDA-SLUDGE. An evaluation of the results indicated that the UCL_{90} was greater than the regulatory threshold limit (RTL) for chloroform (D022), 1,2-dichloroethane (D028), 1,1-dichloroethylene (D029), 2,4-dinitrotoluene (D030), hexachlorobenzene (D032), hexachloroethane (D034), and vinyl chloride (D043). Hexachlorobutadiene (D033) is attributed to waste from INL laboratory facilities that is stored in the SDA and is conservatively assigned to this waste. Although the UCL_{90} for 1,4-dichlorobenzene (D027) and pyridine (D038) are less than their respective RTL, their maximum concentration is above the RTL (Reference RF-P090).

Analysis performed at the RFP indicated that the UCL90 is greater than the RTL for chloroform (D022). During the data review of the "non-detect" observations, Rocky Flats determined that the method detection limit (MDL) exceeded the program required quantification limit (PRQL) for cresols (D026), 1,4-dichlorobenzene (D027), 2,4-dinitrotoluene (D030), hexachlorobenzene (D032), hexachloroethane (D034), nitrobenzene (D036), and pentachlorophenol (D037) due to dilution. The dilution was due to high hydrocarbon content in the waste matrix that caused difficulties in analysis per the required methodology (RFETS WSPF RF135.01). EPA hazardous waste numbers D027, D030, D032 and D034 have already been assigned to this waste stream. EPA hazardous waste numbers D026 and D036 are not assigned as described in the next paragraph. Although no source has been identified for pentachlorophenol, EPA hazardous waste number D037 is also assigned to the waste stream as a conservative measure (Reference RF-P429).

Several toxicity characteristic compounds identified as potential contaminants of the waste stream are also F-listed solvents. Because the applicable F-listed EPA hazardous waste numbers have been assigned for these compounds, the corresponding EPA hazardous waste numbers D018 (benzene), D019 (carbon tetrachloride), D021 (chlorobenzene), D026 (cresols), D035 (methyl ethyl ketone), D036 (nitrobenzene), D039 (tetrachloroethylene), and D040 (trichloroethylene) are not assigned to the waste stream.

Listed Waste

The material in this waste stream was mixed with or derived from waste listed in 40 CFR 261, Subpart D as a hazardous waste from non-specific sources. Based on the evaluation of the AK source documentation, EPA hazardous waste codes F001, F002, F004, F005, F006, F007, and F009 are assigned to waste stream (Reference ID-C101).

Table 1 identifies the specific solvents associated with the assignment of the F001, F002, F004, and F005 EPA hazardous waste numbers. In most cases, specific information relating to the use of these compounds for their solvent properties was identified. In the absence of information relating to the specific use of these compounds (e.g., analytical reagents typically used to dissolve or mobilize other constituents), the F listed HWN was conservatively assigned for these solvents.

F003-listed solvents (i.e., acetone, butanol, ethyl acetate, ethyl benzene, methanol, methyl isobutyl ketone, and xylene) were used in the historical processes that generated this waste. F003-listed solvents are listed solely for ignitability; however, this waste stream does not exhibit the characteristic of ignitability and is therefore not assigned EPA hazardous waste number F003. The absence of ignitable liquids will be verified during retrieval and packaging activities (Reference ID-P109).

RF Building 774 treated spent stripping, cleaning, and plating solution from electroplating operations in Building 444. These operations utilized various cyanide plating solutions. Building 774 sludge was derived from the treatment of the hazardous electroplating waste, and is therefore assigned EPA hazardous waste numbers F006, F007, and F009. This waste stream is potentially commingled with Building 774 sludge and is consequently assigned EPA hazardous waste numbers F006, F007, and F009. The following is a listing of the EPA HWNs and associated constituents assigned to waste stream ID-SDA-SOIL.

(F001)
Carbon tetrachloride, methylene chloride, tetrachloroethylene, 1,1,1-trichloroethane, trichloroethylene, 1,1,2-trichloro-1,2,2-trifluoroethane (Freon 113), trichlorofluoromethane

(F002)
Chlorobenzene, 1,2-dichlorobenzene, methylene chloride, tetrachloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, trichloroethylene, 1,1,2-trichloro-1,2,2-trifluoroethane (Freon 113, Freon TF), trichlorofluoromethane

(F004)
Cresols, nitrobenzene

(F005)
Benzene, carbon disulfide, 2-ethoxyethanol, isobutanol, methyl ethyl ketone, 2-nitropropane, pyridine and toluene

(F006)
Wastewater treatment sludges from electroplating operations

(F007)
Spent cyanide plating bath solutions from electroplating operations

(F009)
Spent stripping and cleaning solutions from electroplating operations where cyanides were used in the process

U, K, and P-Listed Chemicals

This waste stream was mixed with a discarded commercial chemical product, an off-specification commercial chemical product, or a container residue or spill residue thereof (40 CFR 261.33).

Bottles of potassium or sodium cyanide pellets were distributed among drums of RFP Building 774 second-stage sludge (References ID-P103 and RF-P047). As of July 1, 2008, second stage sludge (742 sludge) became targeted waste. Even though bottles of cyanide pellets will be segregated from the waste stream if encountered during VE, targeted waste may potentially become contaminated by the breach of these bottles during excavation operations. Consequently, EPA hazardous waste numbers P098 and P106 are conservatively assigned to the waste stream (References ID-C101, ID-C112, ID-P103, RF-C045, RF-C416, RF-C420, RF-P047, RF-P260, RF-P266, RF-P562, and TAN-U002).

The review of the AK source documentation did not specifically identify the disposal of unused hydrofluoric acid or disposal of materials contaminated with spills of this acid, therefore EPA hazardous waste number U134 is not assigned to the waste streams.

Beryllium is present in the waste stream but does not meet the definition of a P015-listed waste. Beryllium exists as contamination only. Various forms of beryllium waste (i.e., beryllium metal, beryllium oxide, and beryllium fines) may be encountered in 742-sludge, 743-sludge, combustible debris, noncombustible debris (e.g., graphite molds and crucibles) and soil. Beryllium metal and oxide may include metal castings and rejected parts; casting skulls; and

turnings, chips, or grinding fines from machining operations. Beryllium may also be present from the periodic replacement of reactor reflection shields. Minor amounts would not be recognized as beryllium in the soil, which looks like a shiny metal or stainless steel. These forms of beryllium do not meet the definition of the commercial chemical product beryllium powder (40 CFR 261.33) and P015 is not applied.

Solids Sampling/Analysis Information

Solid sampling and analysis was completed on 13 drums from Solid Summary Lots #1 and 2. No new hazardous waste numbers were assigned as a consequence of sampling and analysis for metals, VOCs and SVOCs, although the PRQLs were exceeded for trichloroethylene (F001, F002) and hexachloroethane (D034). The PRQL for zinc was also exceeded but this constituent is not listed in 40 CFR 261.24 or 40 CRF 261.30. Three SVOC Tentatively Identified Compounds (TICs) (bis(2-ethylhexyl)phthalate, pentachlorobiphenyl and hexachlorobutadiene) were found in greater than 25% of the containers in this lot and have been added to the target analyte list. Neither bis(2-ethylhexyl)phthalate (U028) nor hexachlorobutadiene (D033,U128) are present as an unused commercial chemical product, off-specification chemical product, or spill residue thereof. Therefore, neither U028 nor U128 are applied. However, EPA HWN D033 has been previously applied by AK for hexachlorobutadiene. Although pentachlorophenol is listed in 20.4.1.200 NMAC (incorporating 40 CFR 261), there is no EPA HWN associated with it. No additional EPA HWN is assigned as a result of the addition of pentachlorophenol. These data are consistent with AK.

Based on the analytical results, no new HWNs were assigned. The specifics of this information are included in the attached Characterization Information Summary report.

Conclusion

The following EPA hazardous waste numbers are assigned to this waste stream: D004, D005, D006, D007, D008, D009, D010, D011, D022, D027, D028, D029, D030, D032, D033, D034, D037, D038, D043, F001, F002, F004, F005, F006, F007, F009, P098 and P106.

Polychlorinated Biphenyls

Sources of PCBs in waste shipped to Idaho for burial may include:

- Oils containing PCBs solidified in organic setups in RF Building 774. Oils originated from transformers, oil-filled electrical equipment, and hydraulic equipment from RF. Organic setups are identified as 74A- or 743-series waste.
- Drums that contained these oils were emptied, and the empty drums were shipped to Idaho for burial in 1967 and 1968. Oil-Dri was added to the drum to absorb residual liquid prior to shipment. These drums would have been categorized as Type V, Noncombustible Waste (746-series waste).
- Fluorescent light ballasts. Based on the disposal dates of waste in the retrieval areas, ballasts will contain a small amount of PCB fluid. Ballasts would have been categorized as Type V, Noncombustible Waste.
- Painted surfaces (e.g., gloveboxes). Based on the disposal dates of waste in retrieval areas, paints will contain PCBs. Waste with painted surfaces would have been categorized as Type V, Noncombustible Waste.

- Some combustible rags and wipes may have been used to cleanup spills of hydraulic and transformer fluids contaminated with PCBs. Combustibles would have been categorized as Type I waste.

Soil samples have been collected from the ARP and analyzed for PCBs. One sample contained PCBs at 0.84 ppm. PCBs were not detected in the remaining samples (Reference ID-U310). However, analysis of soil samples from ARP-II for Waste Stream ID-SDA-SOIL detected PCB congeners in soil that did not contain organic setups waste. The PCB congeners were detected as TICs from SVOC analysis. Considering this data, newly packaged drums determined by VE to be waste stream ID-SDA-SOIL, are managed in accordance with the PCB disposal requirements of the WIPP-WAC (References ID-C238 and ID-U310).

Prohibited Items

The absence of prohibited items is determined and documented through acceptable knowledge and confirmation activities. Visual examination technique is performed on each container in this waste stream. The following items have been determined as not present in the waste:

- Liquids
- Non-radioactive pyrophoric materials
- Waste incompatible with backfill, seal and panel closure materials, container and packaging materials, or other wastes
- Explosives or compressed gases
- Waste with PCBs not authorized under an EPA PCB waste disposal authorization
- Waste exhibiting the characteristics of ignitability, corrosivity, or reactivity,
- Non-mixed hazardous wastes
- Waste that has ever been managed as high-level waste and waste from tanks specified in Table B-8 of the WIPP Hazardous Waste Facility Permit, unless specifically approved through a Class 3 permit modification.
- Any waste container from a waste stream (or waste stream lot) which has not undergone either radiographic or visual examination of a statistically representative subpopulation of the waste stream in each shipment, as described in WIPP Hazardous Waste Facility Permit, Attachment B7.

Each container of waste is certified and shipped only after visual examination:

- Did not identify any prohibited items in the waste container, or
- All prohibited items found in a waste container by visual examination are identified and corrected (i.e., eliminated or removed) through the site non-conformance reporting system.

Method for Determining Waste Material Parameter Weights per Unit of Waste

The WMPs for waste stream ID-SDA-SOIL were estimated by CCP VE batch data reports. VE was conducted for 2067 containers from waste stream ID-SDA-SOIL, packaged through December 2008. This evaluation is documented in a memorandum as required by CCP-TP-005, *CCP Acceptable Knowledge Documentation*. The results of this evaluation are presented in Table 2.

Table 2. Waste Stream ID-SDA-SOIL Waste Material Parameter Estimates

Waste Material Parameter	Avg. Weight Percent
Iron-based Metals/Alloys	<1.0 %
Aluminum-based Metals/Alloys	<1.0 %
Other Metals	<1.0 %
Other Inorganic Materials	2.8 %
Cellulosics	1.8 %
Rubber	<1.0 %
Plastic (waste materials)	<1.0 %
Organic Matrix	<1.0 %
Inorganic Matrix	<1.0 %
Soil/Gravel	93.4 %

List of AK Sufficiency Determinations

No AK Sufficiency Determinations apply to this waste stream.

Transportation

This waste stream and its chemical constituents have been reviewed for consistency with CCP-AK-INL-001 and they are consistent.

Although some individual containers may contain greater than 1 weight percent depleted uranium, the waste stream as a whole does not.

Graphite in this waste stream, if present due to commingling with debris and sludge, is chemically or physically bound to the radiological contaminants associated with the debris waste materials.

The level of beryllium contamination in individual drums is expected to be less than one weight percent. Payload containers (including Ten Drum Overpacks) are expected to contain less than 18.14 kg of beryllium. Because beryllium metal and beryllium oxide are not targeted for retrieval, payload containers will likely contain very little beryllium. Waste determined to contain greater than one percent beryllium will be managed in accordance with the WIPP-WAC and the CH-TRAMPAC.

Flammable VOCs have the potential to exceed 500 ppm in the headspace gas. Therefore payload containers are evaluated with applicable CH TRAMPAC requirements using the CH-TRAMPAC software compliance evaluation system in the WIPP WWIS prior to shipment.

Radiological Characterization

The two most prevalent radionuclides (by weight) in this waste stream based on AK are U-238 and U-235. The isotopes expected to be present in the waste stream are listed in Table 3.

Table 3 – Radionuclides in Waste Stream ID-SDA-SOIL

WIPP Tracked	Other Radionuclides
Am-241	Pu-241 (<0.01%)
Cs-137 (<0.01%)	U-235
Pu-238 (<0.01%)	Ce-144 (<0.01%)
Pu-239	Co-60 (<0.01%)
Pu-240 (<0.01%)	Ni-63 (<0.01%)
Pu-242 (<0.01%)	Pm-147 (<0.01%)
Sr-90 (<0.01%)	
U-233 (<0.01%)	
U-234 (<0.01%)	
U-238	

Payload management will not be utilized for this waste stream.

Attachment 1, AK Source Documents – Supplemental Documentation

Source Document Number	AK#	Title	Document Number	Revision	Date
ARA-P003	S5	A Summary Report on ML-1 Fuel Element Development In-Pile Test History	IDO-10040	NA	06/01/1964
ARA-P004	S9	Final Disassembly and Examination of the ML-1 Reactor Core	IDO-17190	NA	01/01/1966
ARA-U006	S6	Radioactive Waste Management Information System Solid Master Database List for 1954 to 1970, BGP04 for ARA	P61SHO90	NA	Run Date 9/24/92
ARA-U007	S6	Radioactive Waste Management Information System Solid Master Database List for 1954 to 1970, BGP04 for ARA	P61SHO90	NA	Run Date 9/24/92
CFA-U005	S6	Radioactive Waste Management Information System Solid Master Database List for 1954 to 1970, BGT41 for CFA	P61SHO90	NA	Run Date 9/24/92
CFA-U007	S6, S13	Radioactive Waste Management Information System Solid Master Database List for 1954 to 1970, BGT41 for CFA	P61SHO90	NA	Run Date 9/24/92
ID-C101	S10	Pit 4, Area 1, Chemical Evaluation and RCRA Hazards Analysis	NA	1	01/13/2006
ID-C112	NA	Results of AK Documentation Review and Response to the May 24, 2008 Observer Inquiry Related to Hazardous Waste Numbers Assigned to INL SDA Waste Streams	NA	NA	07/16/2008
ID-P091	S6, S9	A Comprehensive Inventory of Radiological and Nonradiological Contaminants in Waste Buried in the Subsurface Disposal Area of the INEL RWMC During the Years 1952-1983 (Volumes 1 through 5)	INEL-95/0310 (formerly EGG-WM-10903)	1	06/01/1994 to 08/01/1995
ID-P097	S13	Instrument Development Branch Annual Report, 1965	IDO-17211	NA	09/01/1966
ID-P103	NA	Excavation Plan and Sequential Process Narrative for the Accelerated Retrieval Project for a Described Area within Pit 4	ICP/EXT-04-00283	0	04/01/2004
ID-P105	S13	Waste Categories and Characteristics for the Accelerated Retrieval Project for a Described Area within Pit 4	EDF-4591	0	04/21/2004
ID-P109	NA	Removal Action Plan for the Accelerated Retrieval Project for a Described Area within Pit 4	DOE/NE-ID-11178	0	10/2004
ID-P111	NA	Excerpt from Separations Monthly Report for August 1984. Savannah River Plant	DPSP84-14-B SEP	NA	8/1984
ID-P122	S2, S4	ARP Drum Packaging Procedure	TPR-7415	16 and 20	4/12/2006 and 08/24/2006

Source Document Number	AK#	Title	Document Number	Revision	Date
ID-P250	S3	Justification for Continued Operation for SAR-4, Addendum K, and TSR-4: Accelerated Retrieval Project Continued Retrieval Operations	JCO-3	1	05/03/2006
ID-P253	S2	Manual: ARP Technical Procedures Manual, AR Project - Waste Retrieval	TPR-7420	22 and 24	06/13/2006 and 08/28/2006
ID-P269	NA	AR Project II – Drum Packaging System	TPR-7415-2	3	06/20/2007
ID-U101	S6	Beryllium Shipments in Pit 4, Area 1, Phase I.	NA	NA	03/30/2005
ID-U106	NA	ARP Roaster Oxide DOT Drop Test and Sample Tracking Log	NA	NA	3/29/2006 - 4/17/2006
ID-U297	S13	Historical Report of the Transuranic Waste Pits and Trenches at the Subsurface Disposal Area of the Radioactive Waste Management Complex at the INEL	WTD-91-027	NA	08/01/1991
ID-U298	S13	Subsurface Disposal Area (SDA) Waste Identification (1952-1970 Emphasis)	EGG-WM-8727	2	01/01/1990
ID-U304	S6	ARP I Retrieval Area Shipment Lists	NA	NA	02/24/2005
ID-U310	NA	Idaho Completion Project Analytical Laboratories Department. PCB Analysis Results from Accelerated Retrieval Project Waste Zone Samples	NA	NA	03/24/2005 - 11/22/2005
INTEC-U001	S6	Radioactive Waste Management Information System Solid Master Database List for 1954 to 1970, BGP04 for CPP	P61SHO90	NA	09/24/1992
INTEC-U002	S5	CPP Production Monthly Reports	Ay-22-66A	NA	1/03/1966 to 12/26/1966
PER-P006	S2	SPERT III Reactor Facility E Core Revision	IDO-17036	NA	11/01/1965
PER-P008	S8	The Effects of Coolant Temperature and Initial Power Level on the Excursion Behavior of a Highly Enriched Plate Core in SPERT III, Experiment and Analysis	IDO-17138	NA	03/01/1967
PER-P009	S13	Quarterly Technical Report, SPERT Project, October, November, and December 1964	IDO-17084	NA	04/01/1965
PER-P012	S8	SPERT II Facility Report Issued August 23, 1963	IDO-16888	NA	08/23/1963
PER-P031	S2	SPERT I Low-Enrichment Oxide Core Destructive Test Program Safety Analysis Report	IDO-16906	NA	08/01/1963
PER-P039	S13	Quarterly Technical Report, SPERT Program, July, August, September, 1965	IDO-17146	NA	02/01/1966
PER-P040	S13	Quarterly Technical Report, SPERT Program, October, November, December, 1965	IDO-17179	NA	06/01/1966
PER-P043	S13	Quarterly Technical Report, Spert Program, April, May, June 1965	IDO-17123	NA	01/01/1966

Source Document Number	AK#	Title	Document Number	Revision	Date
PER-P044	S13	Quarterly Technical Report, Spert Program, January, February, March 1966	IDO-17206	NA	09/01/1966
RF-C018	S7	Letter to Rod Thomas re: Sludges from building 881 - Your FAX of 10-24-00	N/A	N/A	01/18/2001
RF-C025	S13	Letter to Rod Thomas re: NDA Reports	NA	NA	02/12/2001
RF-C028	NA	Memo to Paul Sentieri re: pre 1970 RFP waste	NA	NA	11/07/2002
RF-C037	S9, S10	Rocky Flats Reports-Letter with attached report-To Ms. Marianne Little	EV-L01045-Marianne Little	NA	12/11/2001
RF-C045	S7	Rod Thomas notes on telephone conversations with Ed Vejvoda, LATA	NA	NA	06/20/2001
RF-C102	NA	TWX to J. B. Mailocci re: Disposition of Unclassified Scrap (Shipment of material to Rocky Flats for disposal at INEEL)	NA	NA	12/1/1960
RF-C120	NA	Rocky Flats Waste Information-ION EXCHANGE INFORMATION-Letter-To Rod Thomas-This letter covers two waste items (1) ion exchange resins and (2) waste generation information	ev-1-99019-thomas	NA	11/29/1999
RF-C123	S7	Letter to Rod Thomas re: Meeting Notes	NA	NA	09/12/2000
RF-C180	S1	Memo to H. E. Bowman re: Interim Capability - South Line	NA	NA	07/23/1969
RF-C227	NA	Reactive Materials Survey - Building 444 and 881 Metallurgical Operations. To W. H. Hauschildt. Chemicals used in the processes in Building 444 and 881 Metallurgical operations.	NA	NA	10/07/1971
RF-C243	S7	Interview of RFP former employee, Al Wilson, conducted by Scott Smith on 4/30/03 regarding historical Rocky Flats plutonium operations	NA	NA	04/30/2003
RF-C260	NA	Letter to J. L. Long, Identification and Thermal Studies of the Residue from Nitric Acid Reaction with Leaded Neoprene Gloves	MSL-2507	NA	03/30/1973
RF-C400	S13	Letter to J. R. Seed, Chemical Waste Disposal	NA	NA	01/13/1972
RF-C402	S13	Letter to unknown, untitled, concerns unwanted chemical disposal	NA	NA	09/20/1971
RF-C406	S9	Letter to Sheila Hailey from Kevin Peters, Evaluation of Potential Sources of RCRA Compounds Found in Graphite Waste Headspace	KJP/114/0298	NA	02/25/1998
RF-C408	S10	Letter to J. L. Summers from T. L. Waldrup. Reactive Chemical Hazard Data on Samples Submitted October 7, 1971.	NA	NA	10/7/1971
RF-C409	S12	Miscellaneous Correspondence Concerning Ion-Exchange Resin	NA	NA	Various
RF-C415	S13	Compilation of History Reports from Waste Disposal.	NA	NA	4/1958 – 9/1964

Source Document Number	AK#	Title	Document Number	Revision	Date
RF-C416	S7	Interview with Ed Vejvoda. Waste Management Practices at Rocky Flats.	NA	NA	9/27/2004
RF-C420	NA	Record of Communication, Interview with Ed Vejvoda, Disposal of Chemicals in Building 774 Sludges	NA	NA	06/09/2008
RF-P021	S5	Evaluation of Filter Flammability and Filter Bank Fire Detection Systems-Evaluation Report	RFP-222	NA	02/24/1961
RF-P040	NA	Reconnaissance Level Characterization Report for the 779 Cluster.	RF/RMRS-96-0071	0	12/17/1997
RF-P047	NA	Waste Characterization of Rocky Flats Plant Waste Shipped to INEL 1954-1980	WS-F2-81-001	NA	03/01/1980
RF-P075	S5	Thorium Canning Methods	RFP-268	NA	06/20/1962
RF-P080	S5	Vacuum Induction Casting	RFP-317B	NA	05/03/1963
RF-P084	NA	Building Histories for Bldgs. 371,444,447,461,707,771,776/777,881,883, and 991 Historical Release Report	NA	NA	11/01/1994
RF-P085	S5	Reconstruction of Historical Rocky Flats Operations and Identification of Release Points	N/A	0	08/01/1992
RF-P086	NA	Pit 9 Estimated Inventory of Radiological And Nonradiological Constituents.	INEEL/EXT-99-00602	NA	10/01/1999
RF-P090	NA	Acceptable Knowledge Document for INEEL Stored Transuranic Waste - Rocky Flats Plant Waste	INEL-96.0280	3	02/28/2003
RF-P103	S5	Waste Reduction Studies	RFP-1676	N/A	03/18/1971
RF-P104	S5	Evaluation of Methods to Recover Plutonium from Incinerator Ash	RFP-1723	N/A	08/16/1971
RF-P109	S5	The Molten Salt Extraction of Americium from Plutonium Metal	RFP-1356	NA	8/26/1969
RF-P110	S5	Plutonium Handling Safety Analysis of the Rocky Flats Nuclear Safety Facility	RFP-977	N/A	11/08/1967
RF-P114	S5	Disposal of Contaminated Lithium-Metal Scrap-Report.	RFP-1347	N/A	09/19/1969
RF-P137	S5	Effect of Water Vapor, Reduced Oxygen Concentrations, and Solvent Vapors on Plutonium Ignition	RFP-1566	N/A	01/28/1971
RF-P138	S5	Performance of High Efficiency Particulate Air Filter for Fume from Burning Plutonium Metal	RFP-1680	N/A	02/01/1971
RF-P142	S5	Effects of Acid Concentration and Feed-Particle Size on the Dissolution of Pu-Bearing Materials	RFP-890	N/A	02/29/1968
RF-P160	S5	Plating Beryllium-Copper Alloy with a Copper-Silver-Gold Laminate	RFP-366	NA	01/11/1964
RF-P167	S5	Fabrication of Ingot-Sheet Beryllium	RFP-1262	NA	10/07/1968
RF-P184	S5	Vacuum Coating of Boron Nitride	RFP-972	N/A	04/18/1969

Source Document Number	AK#	Title	Document Number	Revision	Date
RF-P216	S5	Joining Beryllium by Electron Beam Braze Welding Technique	RFP-908	NA	02/06/1967
RF-P218	S5	The Rolling Texture of Some Plutonium-Gallium Alloys	RFP-1315	NA	05/12/1969
RF-P244	S5	Ingot-Sheet Beryllium Fabrication	RFP-910	NA	02/09/1968
RF-P260	NA	Actinide Processing at Rocky Flats	NA	NA	07/01/1984
RF-P261	S9	A Survey of the Rocky Flats Division Waste Streams	CRDL-950351-009	N/A	06/30/1972
RF-P265	S7, S13	The Past 30 Years at Rocky Flats Plant	HS 371	N/A	11/01/1982
RF-P266	S7	TWTF Buried Waste Characterization; Allied Chemical Corp., Rocky Flats Trip Report from 1973	TWTF-46	NA	03/03/1981
RF-P267	S6, S9	Radioassay Data Collected During 3100 Cubic Meter Project-EDF	EDF-3374	0	02/26/2002
RF-P429	NA	Rocky Flats Environmental Technology Site WIPP Waste Stream Profile Form, TRM Solidified Organic Waste	RFP135.01	0	3/23/2005
RF-P562	S5	Summary of Rocky Flats Plant Waste Buried in the Subsurface Disposal Area.	ICP/EXT-04-00717	0	04/2005
RF-U026	NA	Rocky Flats to INEEL Shipping and Loading Record Search for the 1960's and Early 1970's.	NA	Interim	12/11/1998
RF-U117	S5	An Evaluation of Fiberglass for Use in Plutonium Fabrication Line	RFP-1725	N/A	05/27/1971
RF-U201	S5	Metallographic Preparation of Plutonium	RFP-1184	N/A	06/04/1968
RF-U202	S5	Preliminary Report on the Electron Metallography of Alpha Plutonium	RFP-374	N/A	03/30/1964
RF-U203	S5	Annealing of a Cold-Rolled Pu/1 WT % Ga Alloy	N/A	N/A	N/A
RF-U206	S5	A Laboratory Ignition System	RFP-397	N/A	N/A
RF-U208	S5	Kinetics of the Reaction between Plutonium (III) and Xenon Trioxide	RFP-857	N/A	12/01/1966
RF-U210	S5	The Recovery of Electrical Resistivity in Pu-1 w/o Gallium after Plastic Deformation	RFP-1285	NA	02/05/1969
RF-U217	S5	The Rolling Texture of Pu-3.4 Atomic Percent Gallium	RFP-1278	NA	02/10/1969
RF-U235	S2	Vacuum Deposition of Thick Aluminum Films for Beryllium Joining	RFP-1306	NA	05/07/1969
RF-U286	S5	Vacuum Induction Casting of Beryllium	RFP-340	NA	02/04/1964
RF-U292	S9	Evaluation of the EPA Code D001, Ignitability; D002, Corrosivity; and D003, Reactivity; Designations for RFP IDCs that are Stored at the INEL	N/A	N/A	02/29/1996

Source Document Number	AK#	Title	Document Number	Revision	Date
RF-U402	S13	Problems Associated with Contaminated Waste Disposal.	NA	NA	3/1965
RF-U405	S9	Table 4-4 from EDF-5164, GEM Retrieval Document.	NA	NA	NA
RF-U1282	NA	Analysis Results for Organic Setups Waste from the INL 3,100 m3 Project	NA	NA	1997, 1998
TAN-U002	NA	Program Plan for NRTS Solid Radioactive Waste Repackaging Facility Studies	Draft	NA	08/21/1973
TAN-U105	S10	Historical Perspective of Solvent Usage at TAN	WM-ERP-91-008	NA	04/01/1992
TRA-P008	S13	Findings on Chloride Stress Corrosion in the MTR and ETR Primary Systems	CI-1004	NA	8/66
TRA-U008	S13	Health Physics Logsheet	N/A	NA	6/22/66

Alphanumeric Designations

C Correspondence
D Documents
DR Discrepancy Resolution
M Miscellaneous
P Procedures and Published Documents
U Unpublished Documents

AK Numbers

S1 Process Design Documents
S2 Standard Operating Procedure
S3 Safety Analysis Reports
S4 Waste Packaging Logs
S5 Test plans/research project reports
S6 Site databases
S7 Information from site personnel
S8 Standard industry documents
S9 Previous analytical data
S10 Material safety data sheets
S11 Laboratory Notebooks
S12 Comparable or surrogate sampling and analysis data
S13 Other

GEN4

URS

Washington TRU Solutions LLC

CP:12:01264
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: May 30, 2012

FROM: I. S. Quintana LOCATION: CCP Project Management - Remote-Handled

TO: CCP Records Custodian GSA-212 LOCATION: Retrieval, Characterization and Transportation

SUBJECT: TRANSMITTAL OF WASTE STREAM PROFILE FORM FOR WASTE STREAM IN-ID-NRF-SPC, IDAHO NATIONAL LABORATORY

Please accept the attached Waste Stream Profile Form for IN-ID-NRF-SPC, managed at the Idaho National Laboratory, to be placed in records.

ISQ:yhs

Attachment

cc: (without attachment)
L. M. Nelson ED

CCP RECORDS ORIGINAL
DATE REC'D 5-31-12

Attachment 2 – CCP Waste Stream Profile Form (Example)

(1) Waste Stream Profile Number: IN-ID-NRF-SPC			
(2) Generator site name: Idaho National Laboratory		(3) Generator site EPA ID: ID4890008952	
(4) Technical contact: Irene Quintana		(5) Technical contact phone number: 575-499-4579	
(6) Date of audit report approval by New Mexico Environment Department (NMED): December 23, 2011			
(7) Title, version number, and date of documents used for WIPP-WAP Certification: CCP-PO-001, CCP Transuranic Waste Characterization Quality Assurance Project Plan, Revision 20, June 16, 2011 CCP-PO-002, CCP Transuranic Waste Certification Plan, Revision 26, July 14, 2011 CCP-PO-501, CCP/INL RH TRU Interface Document, Revision 5, December 29, 2010			
(8) Did your facility generate this waste? YES [X] NO [ ]			
(9) If no, provide the name and EPA ID of the original generator: NA			
Waste Stream Information[1]			
(10) WIPP ID: IN-NRF-SPC		(11) Summary Category Group: S5000	
(12) Waste Matrix Code Group: Heterogeneous Debris Waste		(13) Waste Stream Name: Remote-Handled Transuranic Debris Waste from the Naval Reactors Facility	
(14) Description from the ATWIR: Waste stream IN-ID-NRF-SPC consists predominantly of metal debris waste materials contaminated during the sectioning of fuel elements for examination.			
(15) Defense TRU Waste: YES [X] NO [ ]			
(16) Check One: CH [ ] RH [X]			
(17) Number of SWBs NA (17a) Number of SLB2 NA	(18) Number of Drums NA	(19) Number of Canisters 31[3]	
(20) Batch Data Report numbers supporting this waste stream characterization: See Characterization Information Summary (CIS) Correlation of Container Identification Numbers to Batch Data Report Numbers			
(21) List applicable EPA Hazardous Waste Numbers:[2] D004, D005, D006, D007, D008, D010, D011			
(22) Applicable TRUCON Content Numbers: ID 321, ID 322, ID 325			
(23)**Acceptable Knowledge Information**[1]			
(For the following, enter the supporting documentation used [i.e., references and dates])			
Required Program Information			
(23A) Map of site: CCP-AK-INL-570, Revision 2, December 5, 2011, Attachment 3			
(23B) Facility mission description: CCP-AK-INL-570, Revision 2, December 5, 2011, Section 4.1.3			
(23C) Description of operations that generate waste: CCP-AK-INL-570, Revision 2, December 5, 2011, Section 4.2.2			
(23D) Waste identification/categorization schemes: CCP-AK-INL-570, Revision 2, December 5, 2011, Section 5.4			
(23E) Types and quantities of waste generated: CCP-AK-INL-570, Revision 2, December 5, 2011, Sections 4.2.1			
(23F) Correlation of waste streams generated from the same building and process, as applicable: NA			

(24) Waste certification procedures: CCP-TP-530, Revision 10, CCP RH TRU Waste Certification and WWIS/WDS Data Entry, April 25, 2011			
(25)Required Waste Stream Information			
(25A) Area(s) and building(s) from which the waste stream was generated: CCP-AK-INL-570, Revision 2, December 5, 2011, Section 5.1			
(25B) Waste stream volume and time period of generation: CCP-AK-INL-570, Revision 2, December 5, 2011, Section 5.2			
(25C) Waste generating process description for each building: CCP-AK-INL-570, Revision 2, December 5, 2011, Section 5.3			
(25D) Waste Process flow diagrams: CCP-AK-INL-570, Revision 2, December 5, 2011, Attachment 12			
(25E) Material inputs or other information identifying chemical/radionuclide content and physical waste form: CCP-AK-INL-570, Revision 2, December 5, 2011, Section 5.4			
(25F) Waste Material Parameter Weight Estimates per unit of waste See Table 2 of the Summation of Aspects of AK Summary Report: IN-ID-NRF-SPC			
(26) Which Defense Activity generated the waste:			
	Weapons activities including defense inertial confinement fusion	X	Naval Reactors development
	Verification and control technology	X	Defense research and development
	Defense nuclear waste and material by products management		Defense nuclear material production
	Defense nuclear waste and materials security and safeguards and security investigations		
(27)Supplemental Documentation:			
(27A) Process design documents: See P019 in Summation of Aspects of AK Summary Report IN-ID-NRF-SPC, Attachment 1, Source Documents.			
(27B) Standard operating procedures: See C011, P007, P008, P010, P012, P033, P049, P052, U039, U041, U042, U043, U044, U045, U046, U047, U048, U049, U050, U051, U052, U053, U054, U055, U056, U057, U058, U145, U146, U147 in Summation of Aspects of AK Summary Report IN-ID-NRF-SPC, Attachment 1, Source Documents.			
(27C) Safety Analysis Reports: See P053 in Summation of Aspects of AK Summary Report IN-ID-NRF-SPC, Attachment 1, Source Documents.			
(27D) Waste packaging logs: See P015, P073, U002, U027, U028, U106, U132, U133, U137 in Summation of Aspects of AK Summary Report IN-ID-NRF-SPC, Attachment 1, Source Documents.			
(27E) Test plans/research project reports: NA			
(27F) Site databases: NA			
(27G) Information from site personnel: See C029, C039, C111 in Summation of Aspects of AK Summary Report IN-ID-NRF-SPC, Attachment 1, Source Documents.			
(27H) Standard industry documents: See U068 in Summation of Aspects of AK Summary Report IN-ID-NRF-SPC, Attachment 1, Source Documents.			
(27I) Previous analytical data: See C014, C085, C109, U027, U028, U060, U061, U112, U125, U136 in Summation of Aspects of AK Summary Report IN-ID-NRF-SPC, Attachment 1, Source Documents.			
(27J) Material safety data sheets: See P017 and U068 in Summation of Aspects of AK Summary Report IN-ID-NRF-SPC, Attachment 1, Source Documents.			
(27K) Sampling and analysis data from comparable/surrogate Waste: NA			
(27L) Laboratory notebooks: See U027, U028, U038, U132 in Summation of Aspects of AK Summary Report IN-ID-NRF-SPC, Attachment 1, Source Documents.			
Confirmation Information[2]			
For the following, when applicable, enter procedure title(s), number(s) and date(s)			
(28)	Radiography: CCP-TP-508, Rev 7, April 21, 2011		
	Visual Examination: N/A		

(29) Comments: For a list of the waste characterization procedures used and date of respective procedures see the list of procedures on the attached CIS.

Reviewed by AK Expert: YES [X] Date: 3/6/12

Reviewed by STR (if necessary): YES [X] N/A [ ] Date: 3/6/12

Waste Stream Profile Form Certification:

I hereby certify that I have reviewed the information in this Waste Stream Profile Form, and it is complete and accurate to the best of my knowledge. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Signature of Site Project Manager	Irene Quintana Printed Name	3/25/12 Date

NOTE: (1) Use back of sheet or continuation sheets, if required.
(2) If, radiography, visual examination were used to confirm EPA Hazardous Waste Numbers, attach signed Characterization Information Summary documenting this determination.
(3) This waste stream consists of 93 55-gallon drums that will be loaded into 31 RH canisters.

CHARACTERIZATION INFORMATION SUMMARY

WSPF # IN-ID-NRF-SPC

Lot 1

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CIS-001

CCP Characterization Information Summary Cover Page

Waste Stream #: IN-ID-NRF-SPC Lot #: 1

AK Expert Review: Jim Lupishki Date: 3/13/2012

SPM Review: Laura Nelson Date: 3/13/12

SPM signature certifies that through Acceptable Knowledge testing and/or analysis that the waste identified in this summary is not corrosive, ignitable, reactive, or incompatible with the TSDF.

A summary of the Acceptable Knowledge regarding this waste stream containing specific information about the corrosivity, reactivity, and ignitability of the waste stream is included as an attachment to the Waste Stream Profile Form. By reference, that information is included in this lot.

List of procedures used:

Headspace Gas Sampling and Analysis (HSG):

CCP-TP-093	Rev. 16	9/7/2011	CCP Sampling of TRU Waste Containers
CCP-TP-106	Rev. 7	12/29/10	CCP Headspace Gas Sampling Batch Data Report Preparation
CCP-TP-173	Rev. 1	09/30/09	CCP Analysis of Gas Samples for VOCs by GC/FID
CCP-TP-176	Rev. 3	08/02/11	CCP Analysis of Gas Samples for VOCs by GC/MS

Real-Time Radiography (RTR):

CCP-TP-508	Rev. 8	12/29/10	CCP RH Standard Real-Time Radiography Inspection Procedure
CCP-TP-508	Rev. 7	04/21/11	CCP RH Standard Real-Time Radiography Inspection Procedure

Project Level Data Validation / DQO Reconciliation:

CCP-TP-001	Rev. 19	12/29/10	CCP Project Level Data Validation and Verification
CCP-TP-002	Rev. 24	12/28/11	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-003	Rev. 18	12/29/10	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-005	Rev. 24	11/28/11	CCP Acceptable Knowledge Documentation
CCP-TP-530	Rev. 10	04/25/11	CCP RH TRU Waste Certification and WWIS/WDS Data Entry

WAP Certification:

CCP-PO-001	Rev. 20	06/16/11	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-501	Rev. 5	12/29/10	CCP/INL RH TRU Waste Interface Document

WIPP Certification:

CCP-PO-002	Rev. 28	7/14/2011	CCP Transuranic Waste Certification Plan

CIS-002

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # IN-ID-NRF-SPC

Lot # 1

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR		
								Sample	Analysis	
*NRFTRUSPC065-1	NA	N/A	N/A	N/A	N/A	N/A		INHSG1103	ECL11014M	ECL11014G
NRFTRUSPC047-1	NA	INLRHDTC11001	INLRHRTR11001	N/A	N/A	N/A		INHSG1103	ECL11014M	ECL11014G
*NRFTRUSPC062-1	NA	N/A	N/A	N/A	N/A	N/A		INHSG1103	ECL11014M	ECL11014G
*NRFTRUSPC059-1	NA	N/A	N/A	N/A	N/A	N/A		INHSG1103	ECL11014M	ECL11014G
NRFTRUSPC064-1	NA	INLRHDTC11001	INLRHRTR11001	N/A	N/A	N/A		INHSG1103	ECL11014M	ECL11014G
NRFTRUSPC063-1	NA	INLRHDTC11001	INLRHRTR11001	N/A	N/A	N/A		INHSG1103	ECL11014M	ECL11014G
NRFTRUSPC039A-1	NA	INLRHDTC11001	INLRHRTR11001	N/A	N/A	N/A		INHSG1103	ECL11014M	ECL11014G
*NRFTRUSPC061-1	NA	N/A	N/A	N/A	N/A	N/A		INHSG1103	ECL11014M	ECL11014G
NRFTRUSPC040-1	NA	INLRHDTC11001	INLRHRTR11001	N/A	N/A	N/A		INHSG1103	ECL11014M	ECL11014G
NRFTRUSPC046-1	NA	INLRHDTC11001	INLRHRTR11001	N/A	N/A	N/A		INHSG1103	ECL11014M	ECL11014G

* These drums are only included for HSG Analysis purposes of the Tier 1 change. These drums will not be shipped to WIPP due to falling out as LLW.

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

4/9/12
Date

115-003

CCP Headspace Gas UCL_{90} Evaluation Form

WSPF #: IN-ID-NRF-SPC **Waste Stream Lot Number** 1 through 1

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Benzene	Log	0	10	-3.91	-4.01	0.04	-3.99	10	2.30		
Bromoform	No	0	10	0.01	0.01	0.00	0.01	10	N/A		
Carbon tetrachloride	Log	0	10	-3.99	-4.08	0.03	-4.06	10	2.30		
Chlorobenzene	Log	0	10	-4.17	-4.25	0.04	-4.24	10	2.30		
Chloroform	Log	0	10	-3.77	-3.86	0.03	-3.84	10	2.30		
Cyclohexane [a]	Log	0	10	-3.59	-3.69	0.04	-3.67	10	2.30		
1,1-Dichloroethane	Log	0	10	-3.04	-3.13	0.04	-3.11	10	2.30		
1,2-Dichloroethane	Log	0	10	-3.61	-3.71	0.04	-3.69	10	2.30		
1,1-Dichloroethylene	Log	0	10	-4.07	-4.16	0.03	-4.15	10	2.30		
trans-1,2-Dichloroethylene	Log	0	10	-3.82	-3.90	0.03	-3.88	10	2.30		
Ethyl benzene	Log	0	10	-3.94	-4.03	0.04	-4.02	10	2.30		
Ethyl ether	Log	0	10	-3.11	-3.20	0.03	-3.18	10	2.30		
Methylene chloride	Log	0	10	-3.89	-3.97	0.03	-3.96	10	2.30		
1,1,2,2-Tetrachloroethane	Log	0	10	-4.34	-4.44	0.04	-4.42	10	2.30		
Tetrachloroethylene	Log	0	10	-4.27	-4.37	0.04	-4.35	10	2.30		
Toluene	Log	3	10	-0.60	-2.63	0.86	-2.26	10	2.30		
1,1,1-Trichloroethane	Log	0	10	-3.99	-4.08	0.04	-4.07	10	2.30		
Trichloroethylene	Log	0	10	-3.91	-4.00	0.04	-3.98	10	2.30		
1,1,2-Trichloro-1,2,2-trifluoroethane	Log	0	10	-4.51	-4.60	0.04	-4.59	10	2.30		
1,2,4-Trimethylbenzene [a]	Log	0	10	-4.10	-4.18	0.03	-4.17	10	2.30		
1,3,5-Trimethylbenzene [a]	Log	0	10	-3.99	-4.08	0.04	-4.07	10	2.30		
m-p-Xylene [b]	Log	0	10	-4.02	-4.11	0.04	-4.09	10	2.30		
o-Xylene	Log	0	10	-3.94	-4.03	0.04	-4.02	10	2.30		
Acetone	Log	8	10	0.99	-1.68	1.55	-1.00	100	4.61		
Butanol	Log	0	10	-3.52	-3.61	0.03	-3.59	100	4.61		
Methanol	Log	0	10	2.77	2.68	0.04	2.69	100	4.61		
Methyl ethyl ketone	Log	0	10	-3.00	-3.05	0.02	-3.04	100	4.61		
Methyl isobutyl ketone	Log	1	10	-2.47	-3.26	0.28	-3.13	100	4.61		
Chloromethane [c]	Log	0	10	-3.31	-3.40	0.03	-3.38	10	2.30		
Carbon Disulfide [a]	Log	10	10	-1.77	-2.58	0.38	-2.41	10	2.30		

CIS-004

CCP Headspace Gas UCL_{90} Evaluation Form

WSPF #: IN-ID-NRF-SPC **Waste Stream Lot Number** 1 through 1

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
1,2-Dichloropropane[a]	Log	0	10	-3.73	-3.82	0.04	-3.81	10	2.30		
Trichlorofluoromethane[c]	No	0	10	0.02	0.02	0.00	0.02	10	N/A		

[a] These compounds are from the TRAMPAC and or CH TRUCON Appendix B and are flammable VOCs that do not appear in the QAPjP or the WIPP WAP. These are not part of the target analyte list, but samples may be analyzed for these compounds.
[b] These xylene isomers cannot be resolved by the analytical methods employed in the program. m-Xylene and p-Xylene will be reported as "Total m-p-Xylene."
[c] Noted analytes are not required but are reported by the Environmental Chemistry Laboratory at Idaho and are included on the UCL90 for completeness.

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per section B4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

4/12/12
Date

CS-005

CCP Headspace Gas Summary Data

Waste Stream Number IN-ID-NRF-SPC Lot Number (s) 1

Tentatively Identified Compound	Maximum Observed Estimated Concentrations (ppmv)	# Samples Containing TIC	% Detected
None	NA	NA	NA

Data Supports EPA Hazardous Waste Numbers Assigned by AK? Yes ☑ No ☐

If no, describe the basis for assigning the EPA Hazardous Waste Codes:

SPM Signature Laura Nelson Date 4/2/2012

CIS 000

CCP RTR/VE Summary of Prohibited Items and AK Confirmation

Waste Stream Number: IN-ID-NRF-SPC Lot #: 1

Container Number	RTR Prohibited Items [a]	Visual Examination Prohibited Items [a]
See correlation of container ID numbers for list of remaining drum numbers in this Lot.	None of the containers in this lot had prohibited items identified during RTR.	VE was not used to certify any containers in this Lot.

a. See Batch Data Reports

Justification for the selection of RTR and/or VE: RTR was selected as the characterization method for this lot because the waste containers were previously packaged and RTR is an acceptable characterization method to meet the applicable Data Quality Objectives for previously packaged debris in waste stream IN-ID-NRF-SPC.

Laura Nelson
Site Project Manager Signature

Laura Nelson
Printed Name

4/9/12
Date

PIS 007

CCP Reconciliation with Data Quality Objectives

WSF# IN-ID-NRF-SPC Lot # 1

Sampling Completeness

VE

Number of Valid Samples: NA
Percent Complete: NA (QAO is 100%)
Number of Total Samples Analyzed: NA

RTR

Number of Valid Samples: 6
Percent Complete: 100 (QAO is 100%)
Number of Total Samples Analyzed: 6

NDA

Number of valid samples: 6
Percent Complete: 100 (QAO is 100%)
Number of Total Samples Analyzed: 6

HSG

Number of Valid Samples: 10
Percent Complete: 100 (QAO is ≥90%)
Number of Total Samples collected: 10

Total VOC

Number of Valid Samples: NA
Percent Complete: NA (QAO is ≥90%)
Number of Total Samples collected: NA
Number of Valid Samples: NA
Percent Complete: NA (QAO is ≥90%)
Number of Total Samples analyzed: NA

Total SVOC

Number of Valid Samples: NA
Percent Complete: NA (QAO is ≥90%)
Number of Total Samples collected: NA
Number of Valid Samples: NA
Percent Complete: NA (QAO is ≥90%)
Number of Total Samples analyzed: NA

Total Metals

Number of Valid Samples: NA
Percent Complete: NA (QAO is ≥90%)
Number of Total Samples collected: NA
Number of Valid Samples: NA
Percent Complete: NA (QAO is ≥90%)
Number of Total Samples analyzed: NA

CCP Reconciliation with Data Quality Objectives

WSF# IN-ID-NRF-SPC Lot # 1

	Y/N/NA	Reconcilliation Parameter
1	Y	Waste Matrix Code.
2	Y	Waste Material Parameter Weights.
3	Y	The waste matrix code identified is consistent with the type of sampling and analysis used to characterize the waste.
4	Y	The TRU activity reported in the BDRs for each container demonstrates with a 95% probability that the container of waste contains TRU radioactive waste.
5	N	AK Sufficiency. Is there an approved AK sufficiency Determination for this waste stream?
6	Y	Mean concentrations, UCL90 values for the mean concentration, standard deviations, and the number of samples collected for each VOC in the HSG of each container were calculated and compared with the program required quantitation limits, as reported in CCP TP 003, Attachment 3, and additional Environmental Protection Agency (EPA) Hazardous Waste Numbers were assigned as required. Samples were randomly collected (when appropriate).
7a	NA	Mean concentrations, UCL90 values for the mean concentration, standard deviations, and the number of samples collected for solids VOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003-Attachment 4, and additional EPA Hazardous Waste Numbers were assigned as required. Samples were randomly collected.
7b	NA	Mean concentrations, UCL90 values for the mean concentration, standard deviations, and the number of samples collected for solids SVOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP TP 003 Attachment 5, and additional EPA Hazardous Waste Numbers were assigned as required. Samples were randomly collected.
7c	NA	Mean concentrations, (UCL90) values for the mean concentration, standard deviations, and the number of samples collected for total metals were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP TP 003 Attachment 6, and additional EPA Hazardous Waste Numbers were assigned as required. Samples were randomly collected.

CIS-009

CCP Reconciliation with Data Quality Objectives

WSF# IN-ID-NRF-SPC Lot # 1

8	Y	The data demonstrates whether the waste stream exhibits a toxicity characteristic under Title 40 Code of Federal Regulations (CFR), Part 261, Identification and Listing of Hazardous Waste, Subpart C, Characteristics of Hazardous Waste.
9	N	Does the waste stream contain listed waste found in 20.4.1.200 NMAC incorporating 40 CFR Part 261, Subpart D, Lists of Hazardous Wastes.
10	Y	Waste stream can be classified as hazardous or nonhazardous at the 90-percent confidence level.
11	Y	Appropriate packaging configuration and Drum Age Criteria (DAC) is applied and documented in the headspace gas sampling documentation, and the drum age met prior to sampling.
12	Y	TICs were appropriately identified and reported in accordance with the requirements of Section C3-1 of the QAPjP.
13	Y	The PRQLs for headspace gas VOCs were met for all analyses as evidenced by the analytical batch data reports.
14		The overall completeness, comparability, and representativeness QAOs were met for each of the analytical and testing procedures as specified in CCP-PO-001 Sections C3-2 through C3-9 prior to submittal of a waste stream profile form for a waste steam or waste stream lot.

	Completeness	Comparability	Representativeness
Radiography	Y	Y	Y
VE	NA	NA	NA
Headspace Gas Analysis	Y	Y	Y
Solids Sampling	NA	NA	NA
Solids VOCs	NA	NA	NA
Solids SVOCs	NA	NA	NA
Solids Metals	NA	NA	NA

Comments: N/A

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

3/13/2012
Date

CIS-010

SUMMATION OF ASPECTS OF AK SUMMARY REPORT: IN-ID-NRF-SPC

Overview

Waste Stream IN-ID-NRF-SPC is Remote Handled (RH) inorganic debris waste generated in the Alpha Box and the Wet Element Transverse Sectioning Abrasive Wheel (WETSAW) Enclosure in the Expended Core Facility (ECF) at the Naval Reactors Facility (NRF), located within the boundaries of the Idaho National Laboratory (INL). The RH transuranic (TRU) waste generated by these operations was transferred to the Idaho Nuclear Technology and Engineering Center (INTEC) facility for repackaging and characterization where it is currently stored in the INTEC Waste Management Facility. (References C016, C087, C093, P050, P066, P067, P073, U086, U106, U123, U124, U131, U132, and U133).

Waste Stream IN-ID-NRF-SPC is contaminated with materials from atomic energy defense activities conducted in the facility and with radiological materials examined in association with naval reactors development, and defense research and development activities. This waste stream was generated during the sectioning of fuel elements from primarily naval reactor fuels for evaluation of fuel.

This Summation of the AK Summary Report includes information to support Waste Stream Profile Form (WSPF) number IN-ID-NRF-SPC for Remote Handled (RH) TRU inorganic debris. The primary source of information for this Summation is CCP-AK-INL-570, *Central Characterization Project Acceptable Knowledge Summary Report For Idaho National Laboratory Remote-Handled Transuranic Debris Waste from the Naval Reactors Facility, Waste Stream: IN-ID-NRF-SPC*, Revision 2, December 5, 2011. CCP-AK-INL-570 includes information obtained from numerous sources, including facility safety basis documentation, historical document archives, generator and storage facility waste records and documents, interviews with cognizant personnel, and program/process documents (e.g., plans, procedures, etc.).

Waste Stream Identification Summary

Waste Stream Name:	Remote-Handled Transuranic Debris Waste from the Naval Reactors Facility
Waste Stream Number:	IN-ID-NRF-SPC
Waste Stream Volume – Current:	31 canisters[1]
Waste Stream Volume – Projected:	None
Dates of Waste Generation:	March 1975 – February 2007
Remote-Handled Transuranic Waste Content Code (RH TRUCON):	ID 321, ID 322, and ID 325
Summary Category Group:	S5000 – Debris Waste
Waste Matrix Code:	S5100 – Inorganic Debris Waste
Waste Matrix Code Group:	Heterogeneous Debris Waste
Annual Transuranic Waste Inventory Report Identification Numbers:	IN-NRF-SPC

[1]This waste stream consists of 93 55-gallon drums that will be loaded into 31 RH canisters.

Waste Stream Description and Physical Form

The waste stream is a mixed RH-TRU waste generated during analysis of post-irradiated nuclear fuel assemblies from naval reactor programs, using destructive examination methods (References P073, U106, U109, U132, and U133).

Waste stream IN-ID-NRF-SPC consists predominantly of metal debris waste materials contaminated during the sectioning of fuel elements for examination, and based on the review of the AK documentation, may contain the following materials (References C016, P050, P066, P067, U086, U106, U109, U123, U124, U132, and U133).

Iron Based Metals/Alloys: including ferrous materials made from carbon steel, stainless steel, and iron. Specific items include the Sludge Pan Container (SPC), stainless steel aircraft cable with crimps, steel saw parts, and stainless steel nuts and bolts.

Aluminum Based Metals/Alloys: including aluminum sludge pans, aluminum hex containers, and aluminum foil.

Other Metals: materials include items made from lead, brass, bronze and zirconium (Zircaloy). Specific items include cut-off wheel shaft assembly bronze bearings, brass tags, fuel fines, lead foil, and/or zircaloy foil.

Rubber: waste consists of the rubber binder used in the abrasive cut-off wheel blades, Buna-N (nitrile), slave fingers, and Room Temperature Vulcanizing (RTV) silicon rubber used to seal some of the small sludge pan lids.

Other Inorganic Material: items include Fuller's Earth absorbent, Calcium Carbonate, vermiculite, resin and silicon carbide grit from the cut-off wheels. Waste stream IN-ID-NRF-SPC contains less than 50 percent by volume in any container of homogeneous inorganic materials. Water used as the cutting wheel coolant was absorbed with Fuller's Earth or vermiculite if it was not allowed to air dry. No liquids were placed in the waste (References C029, C084, P008, and P012).

The inorganic debris from the operations in the Alpha Box and WETSAW Enclosure in waste stream IN-ID-NRF-SPC was placed into one of four types of sludge pan configurations:

1. Open top sludge pans (1.5 inches x 18 inches x 3.75 inches)
2. Foil Pouches (The open top sludge pan was lined with either aluminum foil or Zircaloy Foil. When full, the foil was folded over and removed from the sludge pan so that the sludge pan could be reused).
3. Small sludge pans with loose lids (1.75 inches x 14.25 inches x 2.75 inches)
4. Small sludge pans with the lids sealed with RTV silicon rubber

The sludge pans are made of 0.06-inch thick aluminum. Each sludge pan contained approximately three teaspoons of fuel fines (References C093, C098, C101, P043, P050, and U131).

The sludge pans or foil pouches were placed in either a carbon steel SPC or a stainless steel SPC. The stainless steel SPC is 23.62 inches long with four lifting rings. The carbon steel SPC is 26.25 inches long with two lifting rings. Of the 93 SPCs, 15 are carbon steel and 78 are stainless steel (References C093, C098, P068, and P216).

For shipment to INTEC, the SPC is placed in a plastic bag and then in a shielded container, which has a shielding sleeve welded on the outside. The shielded container is constructed of carbon steel. The shielded container with the SPC is placed in a drum with cribbing to hold the items in the centered-location of the drum. Filtered vents are located on all the containers to prevent pressurization and allow gasses to flow in and out of the drum (Reference U131).

The waste materials that comprise waste stream IN-ID-NRF-SPC have common physical form, contain similar hazardous constituents, and were generated from a single process or activity and are, therefore, a single waste stream. All the waste was generated from remote sectioning of fuel specimens operations associated with the operations of the Alpha Box.

Point of Generation

Location

Waste stream IN-ID-NRF-SPC was generated at the NRF at the INL.

Area and/or Buildings of Generation

Waste stream IN-ID-NRF-SPC was generated at the Alpha Box and WETSAW Enclosure in the Expended Core Facility (ECF) at the NRF.

Generating Processes

Description of Waste Generating Processes

All of the waste described in this document was generated from NRF operations associated with the operations of the Alpha Box conducted from 1975 through 1995 or in the WETSAW Enclosure from 1995 through 2007. All work activity generating SPCs was controlled by specific Route Cards (RCs) detailing every activity (References P008, P073, and U106).

The Alpha Box and WETSAW Enclosure were used for remote sectioning of specimens to obtain specific portions of that specimen for subsequent destructive tests. Destructive tests were used to predict and confirm the behavior of nuclear fuel (References C011, P006, and P019).

Sectioning of the fuel elements requires a method that minimizes air-borne contaminations to reduce filter loads and contain contamination. A slow speed, wet abrasive cut-off wheel is used for that purpose. The Alpha Box cut-off wheel was modular in design and could be installed through a 14-inch by 16-inch port in the containment box when dismantled. The unit was capable of cutting specimens up to two inches by four inches, with lengths up to 20 inches (longer if outriggers are used). The Alpha Box cut-off wheels were composite blades with no reinforcement. They were made of silicon carbide grit and rubber bonding particles. Operations were designed to be performed remotely using the master-slave manipulators. The lower portion of the cutting wheel was immersed in water. The water kept the wheel cool and acted as a lubricant. The abrasive wheel had to be changed regularly because it was designed to wear as it cut the material. The used wheels were placed in the sludge pans (References C037, P006, P008, and P050).

The WETSAW Enclosure used a similar process except the blade was replaced with a diamond impregnated metal saw blade (10 inch diameter, 0.05 inch thickness) that would not wear as quickly. The saw blade rotated at approximately 60 revolutions per minute (rpm). The diamond edge saw blade was also used in the Alpha Box before the operations ended in that enclosure. The Saw Table in the WETSAW Enclosure had a capacity of 4.0 inches wide by 3.0 inches high and 61.0 inches long (References C039, P052, and U028).

Due to the high radiation in the fuel element sectioning operation, it was determined that the material in the waste would not be directly measured. Approximately 85 percent of the fuel chips that were cut away by the abrasive wheel fell into the sludge pan beneath the cut-off wheel. Approximately 15 percent of the material removed by the wheel was considered lost into the Alpha Box or WETSAW Enclosure. When the enclosures were cleaned out, the material lost into the box was picked up by the cleaning materials. That portion of the material was disposed of as combustible waste (the combustible waste is not part of this waste stream) (Reference U015). The 85/15 percent distribution of the fuel chips was confirmed through experiments (Reference P014).

All outputs from the fuel element sectioning operation can be divided into five different categories. Three of these categories were waste, but only one of those waste categories is included in waste stream IN-ID-NRF-SPC (References C011, P008, P015, P049, and U110). Outputs from the Alpha Box and WETSAW Enclosure were as follows:

> Waste stream IN-ID-NRF-SPC consists of the fuel chips that were collected in the sludge pans. It is estimated that 85 percent of the fuel chips were in the sludge pans. Worn or broken abrasive wheels and other non-combustible waste were placed in the sludge pans.

The Alpha Box and the WETSAW Enclosure logbooks were kept current and used to record the specific details of every activity. The logbook entries included fuel element sectioning, equipment installation, and cleaning. Form ECF-NRFE-169 was used to record necessary details of each container of waste (References P008, P015, U027, U028, and U106).

Historic Fuel Element Sectioning Process Description

The Alpha Box was constructed beginning in 1974 and was completed in 1975. Operation in the Alpha Box began in 1975 and continued until 1995. The WETSAW Enclosure was constructed in 1992 and operations started in 1995. Sawing operations on samples continued in the WETSAW Enclosure until 2001. The last SPC was generated during decontamination and cleanup operations in 2007. The WETSAW Enclosure was dismantled in 2008 (Reference C039).

Originally a silicon carbide abrasive blade was used to cut the fuel elements. That type of blade was later replaced by a diamond edged blade. Otherwise, the process of sectioning reactor core samples was stable (References C029, P008, P012, U027, U028, U038, U039, U041, U042, U043, U044, U045, U046, U047, U048, U049, U050, U051, U052, U053, U054, U055, U056, U057, U058, U106, U145, U146, and U147).

SPC Hydrogen Remediation Process

In 2003, a Cut Fuel Storage Container (CFSC), which is similar to the SPC, ruptured while submerged in the ECF water pit. The cause was determined to be the buildup of hydrogen gas. The source of hydrogen was the radiolysis of water that leaked into the container and the corrosion of canister materials such as zinc. The event resulted in a hydrogen remediation program to render safe all sealed containers in the ECF water pit. All 67 SPCs in the water pit

were permanently vented in this program. One SPC was generated in 2007 and not stored in the water pit. Pressurization was not a concern for this SPC and it was not vented. The 25 SPCs stored in the Transuranic Vault (TUVs) could have been wet when placed in the TUV. The SPCs were shipped in the TUVs to INTEC for remediation (References C075, C086, C088, C089, C092, C093, C094, C098, C100, C104, C105, C106, P207, P208, P209, P210, P211, P212, P213, P214, P215, U139, U140, and U339).

The SPCs stored in the water pit were placed inside of the Pressure Abatement Container (PAC) while submerged in the water pit. All water was pumped out of the PAC and it was pressurized to approximately five pounds per square inch gauge (psig) using nitrogen. Hydraulic cylinders forced the vent/plug punch through the side of the SPC. After punching the hole, the vent/plug punch was pushed further into the side of the SPC until seated in the hole, forming a water-tight seal.

Water Inspection Operation

To ensure that no free standing water was in the SPC, a Water Inspection Tool was designed. A 7/16-inch hole was drilled in the side of the SPC at the same location as the hole punched earlier. The water inspection tool was placed in the drilled hole. The Water Inspection Tool has a water indication polyester/paper laminate that permanently changes color from white to red when in contact with water.

After the Water Inspection Tool was inserted in the SPC, the SPC was installed in the CFSC Rotator, Water Inspection Tooling. The SPC was rotated to place the Water Inspection Tool on Bottom Dead Center (BDC). If any water was present inside the SPC, it would flow toward the Water Inspection Tool and contact the water indication laminate. Of the 67 SPCs stored in the water pit, 22 indicated water present during the inspection.

After the inspection was completed, the Water Inspection Tool was pressed inside of the SPC, where it became part of the waste (References C048, C049, C101, P031, P051, U103, U104, and U121).

Vacuum Drying Operation

The vacuum drying process (also referred to as cold evaporation) was used to dry wetted materials by evaporation inside a vacuum sealed container at temperatures above the freezing point, but below the standard boiling point temperature (at atmospheric pressure). During the evaporation process, the less volatile contaminants remained inside the vacuum sealed container and the moisture saturated vapor was pumped out of the container where it collected and condensed into a distillate.

This process allowed the evaporation of water at a lower temperature (<100 degrees C), which was one of the assumptions made as part of the National Emission Standards for Hazardous Air Pollutants (NESHAPS) evaluation for work inside the hot cells.

The vacuum system was connected to the SPC through the 7/16-inch hole drilled into the side of the SPC. The SPC is heated using Thinband heaters. Once the water inside the SPC reached 80 to 90 degrees C, the moisture saturated vapor was pumped out of the container, through a filter, using an oil-less diaphragm pump. The procedure continued until no more moisture was removed from the SPC. The filter was placed inside the SPC after use (References C090, C093, C094, C101, P032, and U103).

Packaging for Shipment to INTEC

After venting and drying, as necessary, the SPC was placed in a Sludge Pan Container Shielded Container (SPCSC). The SPCSCs were fitted with filters, Model 019DS. A plastic bag lined the inside of the SPCSC. The plastic bag was closed with a velcro strip, but not sealed. The SPCSC was then placed into a 55-gallon drum. The 55-gallon drum has plywood cribbing to keep the SPCSC in place. Up to four 55-gallon drums were then placed into a concrete INTEC Interim Storage Container (IISC) for shipment to INTEC. The 25 SPCs stored in the TUVs were shipped to INTEC for remediation (References C087, C093, C094, C110, P033, P034, P035, P036, P037, P038, P039, P040, P041, P042, P046, P061, P071, P072, U107, U131, and U339).

Characterization, Remediation, and Packaging for Shipment to WIPP

Because the SPCSC is too thick for RTR to be effective, at INTEC the SPCSCs were removed from the 55-gallon drums, and the SPC was removed from the SPCSC. The SPC was placed in an unshielded 30-gallon drum. The 30-gallon drum was overpacked in an unshielded 55-gallon drum. The drums were sent through RTR. Any prohibited items will be remediated. Table 1 identifies the toxicity characteristic constituents in waste stream IN-ID-NRF-SPC.

Table 1 – Toxicity Characteristic Constituents in Waste Stream IN-ID-NRF-SPC

Chemical/Material	Use/Description/Location	AK Source	EPA HWNs
Arsenic	Metal found in the fuel core	C031, P212, P213	D004
Barium	Metal found in the fuel core	C031, P212, P213	D005
Cadmium	Metal found in the fuel core	C031, P212, P213	D006
Chromium	An alloy of the Zircaloy structural members of the fuel	C031, P212, P213	D007
Lead	Metal found in the fuel core, Lead pouches and Bronze bearings and bushings.	P008, C029, P050, C115, P212, P213	D008
Selenium	Metal found in the fuel core	C031, P212, P213	D010
Silver	Metal found in the fuel core and diamond edged saw blade	C031	D011

RCRA Determinations - Hazardous Waste Determinations

Historical Waste Management

The 93 containers in this waste stream were historically managed as non-hazardous waste (References C032 and U072). To assign EPA HWNs to this waste stream, AK sources, including procedures, personnel interviews, previous AK reports, container packaging and shipping documentation, and material safety data sheet (MSDS) information for commercial products noted in the AK record, were reviewed to determine potential waste material inputs and

possible chemical contaminants associated with the NRF program and historic fuel element sectioning operations. A comprehensive list of materials and chemicals identified during this assessment were used to assign EPA HWNs for Waste Stream IN-ID-NRF-SPC. The toxicity characteristic metals were assigned to all of the containers in the waste stream for compounds used in Alpha Box or WETSAW Enclosure due to the lack of analytical evidence quantifying the concentration of RCRA contaminants in the waste matrix (Reference U072).

Ignitability, Corrosivity, Reactivity

Waste generated in this waste stream does not qualify for any of the exclusions outlined in 40 CFR 260 or 261. Real Time Radiography (RTR) is used to verify that the waste stream is not a liquid waste and does not contain explosives, non-radioactive pyrophoric materials, compressed gases or reactive waste. Therefore, this waste stream does not exhibit the characteristic for ignitability (D001), corrosivity (D002), or reactivity (D003).

This waste does not exhibit the characteristic of ignitability as defined in 40 CFR 261.21. The waste is not a liquid, an ignitable compressed gas, or an oxidizer, and is not capable of causing fire through friction, absorption of moisture, or spontaneous chemical change. The materials are not compressed gases, nor does the waste contain compressed gases. Although potentially ignitable compounds such as naphtha, isopropyl alcohol, and mineral spirits were managed in the facility, these materials were absorbed, deactivated and solidified as necessary.

This waste does not exhibit the characteristic of corrosivity as defined in 40 CFR 261.22. The waste materials are not liquid and RTR was performed to verify the absence of prohibited liquids. Corrosive liquids were not used in the fuel element sectioning processes. The materials are not liquid and VE was performed to ensure liquids were not present in the waste. Aqueous liquids such as light machine oil, neolube, and isopropyl alcohol were allowed to air dry or absorbed with Fuller's Earth.

This waste stream does not meet the definition of reactivity as defined in 40 CFR 261.23. The materials are stable and will not undergo violent chemical change. The materials will not react violently with water, form potentially explosive mixtures with water, or generate toxic gases, vapors, or fumes when mixed with water. The materials do not contain cyanides or sulfides and are not capable of detonation or explosive reaction.

The waste is not pyrophoric. The waste contains some zircaloy swarf from the processing of spent fuel assemblies. Because of reported concerns that finely divided zirconium may spontaneously combust, tests were performed on the zircaloy swarf. Zircaloy particles of various sizes, including zircaloy powder, were tested. The test results showed that even particles much smaller than what is included in the waste were not pyrophoric (References C014, C030, C032, C033, C049, C069, C093, P010, U016, and U120).

The containers in the waste stream will be evaluated in accordance with the WIPP-WAP using radiography prior to shipment to ensure the waste is not ignitable, reactive or corrosive.

Toxicity Characteristic

This waste stream exhibits the characteristic of toxicity per 40 CFR 261.24. The toxicity characteristic contaminants fall into two categories; metals and organics. Where a constituent has been identified and there is no quantitative data available to demonstrate that the concentration is below regulatory threshold, the applicable EPA HWN is applied, in accordance with RCRA, to the waste stream.

A Toxicity Characteristic Leachate Procedure (TCLP) was performed outside of the certified program on the fuel-bearing region of a naval reactor core and zircaloy core structural material (which contains chromium) (Reference C031). The TCLP results for selenium (D010) and chromium (D007) were above the regulatory threshold (Reference C031). Therefore, EPA HWNs D007 (chromium) and D010 (selenium) are applied to this waste stream. The TCLP on the naval reactor fuel also indicated the presence of arsenic (D004), barium (D005), cadmium (D006), lead (D008) and silver (D011). Although that test indicated levels below regulatory limits for that sample, the HWNs for arsenic (D004), barium (D005), cadmium (D006), lead (D008) and silver (D011) were applied to the waste in the absence of any other confirmatory test results on the waste stream (References C029, C111, P050, U141, U028).

The AK sources did not identify the use of any organic toxicity characteristic compounds. Therefore, no EPA HWNs for organic toxicity characteristic compounds were assigned to waste stream IN-ID-NRF-SPC.

The waste stream contains or is contaminated with toxicity characteristic metals. Based on the references identified EPA HWNs D004, D005, D006, D007, D008, D010, and D011 are assigned to waste stream IN-ID-NRF-SPC.

Listed Waste

F-Listed Waste

Waste stream IN-ID-NRF-SPC was not mixed with or derived from F-listed hazardous waste from non-specific sources as listed in Title 40 CFR 261.31. One F002-listed solvent (1,1,1-trichloroethane was used in the Alpha Box for clean-up but, based on review of AK and personnel interviews the solvent contaminated waste was never placed in the Sludge Pans. Procedures required the Alpha Box be completely wiped down and cleaned between cutting operations of different fuel types. The wet or damp rags were allowed to dry and placed in a poly canister, packaged as combustible TRU waste, and are not included in this waste stream (References C097, P008, U015, U027, and U028).

Although organic solvents were used to clean the Alpha Box, there is no indication that any of the organic solvents were placed in the SPCs (References C096, C097, and P050).

U, K, and P-Listed Chemicals

Waste stream IN-ID-NRF-SPC was not mixed with a discarded commercial chemical product, an off-specification commercial chemical product, or a container residue or spill residue thereof (40 CFR 261.33). No listed chemicals were identified in the container-specific documentation completed in accordance with the INL waste management program. No specific source for beryllium powder (P015) was identified for this waste stream in the AK record. Therefore, P015 is not assigned to this waste stream. Waste stream IN-ID-NRF-SPC is, therefore, not assigned a P- or U-listed HWN (C031, P006, P017, P212, and P213),

The review of the AK source documentation did not identify the disposal of unused hydrofluoric acid (U134) or disposal of materials contaminated with spills of this acid; therefore the EPA HWN U134 is not assigned to waste stream IN-ID-NRF-SPC.

Waste stream IN-ID-NRF-SPC does not include any of the manufacturing process wastes from the specific industries or sources listed in 40 CFR 261.32. Waste stream IN-ID-NRF-SPC is, therefore, not assigned a K-listed HWN (C014, C030, C031, P212, P213, and U016).

Waste Stream IN-ID-NRF-SPC is not assigned any U-, K-, or P-Listed EPA HWNs.

Polychlorinated Biphenyls (PCBs)

The paint on the carbon steel SPCs from the TUVs is assumed to be PCB contaminated. Containers will be managed in accordance with the PCB disposal requirements in the WIPP-WAC (P047).

Prohibited Items

The absence of prohibited items is determined and documented through acceptable knowledge and characterization activities. RTR is performed on each container to verify the absence of prohibited items.

Materials entering the Alpha Box and WETSAW Enclosure were closely monitored. Water, used as the coolant for the abrasive cut-off wheel and the diamond blade, was the main liquid. Free liquids were not packaged. The SPC was either allowed to air dry before packaging or the SPC was filled with absorbent to remove all free liquids. A concern that water could have leaked into the SPC prompted an inspection of all SPCs to look for free water. Any SPCs determined to have water inside went through a vacuum drying process to remove the free water (C092, C093, C098, P008, P010, P012, P032, and U103).

All containers in this waste stream will be characterized using RTR to ensure no prohibited items are present. Any prohibited item will be remediated prior to shipment to WIPP.

Method for Determining Waste Material Parameter Weights per Unit of Waste

The waste material parameters (WMPs) for waste stream IN-ID-NRF-SPC were estimated based on the data logs used in the loading of the SPCs and Alpha Box waste material identification (C016 and U106). This waste stream is greater than 50 percent by volume material that meets the criteria for debris (References C016 and U130).

Waste items were categorized into one or more of the following WMPs: iron-based metals/alloys, aluminum-based metals/alloys, other metals, other inorganic materials, cellulosics, rubber, plastics (waste materials), inorganic matrix, and organic matrix. Weights were calculated based on volume averages for each waste parameter. The calculations were used to conclude that the relative waste weight percentages for inorganic waste materials and organic waste materials for Waste Stream IN-ID-NRF-SPC are 99.8 percent and 0.2 percent, respectively. The results of the assessment are presented in Table 2, Waste Stream IN-ID-NRF-SPC Waste Material Parameter Estimates (ReferencesC016, C048, P044, P050, P066, P067, U086, U106, U111, U112, U123, U124, U130, U131, U132, and U137).

Table 2. Waste Stream IN-ID-NRF-SPC Waste Material Parameter Estimates

Waste Material Parameter	Average Weight Percent	Weight Percent Range
Iron-based Metals/Alloys	92.03 %	61.38 – 99.49 %
Aluminum-based Metals/Alloys	1.56 %	0 – 4.18 %
Other Metals	0.17 %	0 – 0.19 %
Other Inorganic Materials	6.07 %	0 – 38.60 %
Cellulosics	0.004 %	0 – 0.14 %
Rubber	0.14 %	0 – 0.15 %
Plastic (waste materials)	0.03 %	0.02 – 0.03 %
Organic Matrix	0 %	0 – 0 %
Inorganic Matrix	0 %	0 – 0 %
Soils/Gravel	0 %	0 – 0 %

List of AK Sufficiency Determinations

No AK Sufficiency Determinations were requested for this waste stream.

Transportation

This waste stream and its chemical constituents have been reviewed for consistency with the listed TRUCON codes and they are consistent.

Beryllium

Beryllium will not be present in amounts greater than 1% by weight of the waste in each container.

Radionuclide Information

Containers in this waste stream have surface dose rates exceeding 200 mrem/h, but less than 1000 rem/h, and contain more than 100 nanocuries per gram (nCi/g) of waste of alpha-emitting TRU isotopes with half lives greater than 20 years. The waste is contaminated primarily with U235 and Th-232 by mass and Cs-137, Sr-90, Ba-137m and Y-90 by activity. The isotopes expected to be present in this waste stream are listed in Table 3.

The 10 WIPP tracked radionuclides are presented in Table 3 in addition to other radionuclides that are expected to be present in the waste stream.

Table 3. Summary of IN-ID-NRF-SPC Radionuclides

Radionuclide	Specific Activity curies per gram(Ci/g)	Activity Fraction	Mass Fraction
WIPP Required Radionuclides			
Pu-238	1.73E+01	1.58E-02	1.82E-03
Pu-239	6.29E-02	4.06E-05	1.29E-03
Pu-240	2.30E-01	1.71E-05	1.48E-04
Pu-242	3.97E-03	5.15E-08	2.59E-05
Am-241	3.47E+00	2.02E-04	1.16E-04
U-233	9.76E-03	4.9E-05	1.00E-02
U-234	6.32E-03	1.86E-05	5.88E-03
U-238	3.40E-07	2.48E-09	1.46E-02
Cs-137	8.80E+01	2.54E-01	5.75E-03
Sr-90	1.38E+02	2.39E-01	3.45E-03
Additional Radionuclides			
Pu-241	1.04E+02	1.73E-03	3.31E-05
U-235	2.19E-06	6.55E-07	5.96E-01
U-236	6.54E-05	2.17E-06	6.61E-02
Th-228	8.29E+02	8.45E-05	2.03E-07
Th-232	1.11E-07	1.46E-08	2.63E-01
Ac-227	7.32E+01	5.21E-07	1.42E-08
Ra-224	1.59E+05	8.45E-05	1.06E-09
U-232	2.16E+01	8.21E-05	7.58E-06
Pa-231	4.78E-02	8.36E-07	3.49E-06
Ba-137m	5.38E+08	2.39E-01	8.87E-10
Y-90	5.44E+05	2.39E-01	8.76E-07
All Other Identified Radionuclides	–	1.10E-02	3.12E-02
Total	–	**1.00E+00**	**1.00E+00**

Payload Management

Payload management is not authorized to be utilized on this waste stream.

Attachment 1

AK SOURCE DOCUMENTS

Source Document Tracking Number	Title
C002	Correspondence to Phil Hamric (DOE-ID) and Stan Ahrends (DOE-OR) from Goetz K. Oertel, Re: Disposal of TRU Waste from Naval Reactors Facilities.
C003	Letter to Phil Hamric (DOE-ID) from C. K. Gaddis Re: Certification of Transuranic Waste at the Idaho National Engineering Laboratory
C007	Letter to P.W. Eselgroth from H.F. Daugherty, Re: Information to Support Previous Request, Attachment Annex 10-1, Sequence Chart for Measurement Recording and Shipment of Transuranic Waste
C009	Letter to Mr. D.J. Miller from G.D. Carpenter, Re: Transuranic Curie Content of Enriched Uranium Fuels TWR No. 09865 pp. 93-100
C011	Interview of N. Spackman and S. Lunt, Re: Flow Diagram For Alpha Box Operations
C014	Letter to Jeff W. Frazier from Timothy L. Cox, Vicente Munne, and Michael S. Wilkie, Re: DOT Hazard Categorization of Zircaloy Swarf
C016	Memorandum to Harker/Wade: Re: Alpha Box Waste Material Identification
C021	Letter to Manager, Pittsburgh Naval Reactors Office, Re: Approval Request of NRF Alpha-Box Waste Accountability Facilities
C022	Letter to C.H. Price, Re: Documentation of Measurement Methods For Accountable Nuclear Material Content of Transuranic Waste
C023	Letter to J.A. Logan, Re: Documentation of Measurement Methods for Accountable Nuclear Material Content of Scrap
C024	Telephone Conference Confirming Uncertainty in Pu Values for ECF TRU wastes
C025	Draft Letter to Manager, Re: Proposed Nuclear Material Measurement and Accountability Methods to Be Used By Facility PZB for Alpha-Box Generated Waste Shipments To The INEL Burial Grounds

Source Document Tracking Number	Title
C026	Correspondence to C.H. Price, Re: Documentation of Measurement Methods For Accountable Nuclear Material Content of Scrap
C027	Correspondence to C.H. Price, Re: Documentation of Measurement Methods For Accountable Nuclear Material Content of Scrap
C028	Correspondence to M.W. Littleton, Re: ECF Transuranic Waste Disposal Plan Summary
C029	Interview of J.F. Ruggiero, Re: History of NRF Combustible TRU Waste
C030	Telephone Conference with ECF Examination Engineering on Combustible Transuranic Waste From The ECF Hot Cell Alpha Box
C031	Correspondence to Mr. Joe Nagel, Re: TCLP Testing
C032	Correspondence to File, Re: Incidental Material Accumulation in the Expended Core Facility (ECF) Water Pits
C033	Correspondence to Jeff W. Frasier, Re: method for the passivation of the zirconium swarf in the ECF water pits.
C037	Correspondence to R.D. Denney, Re: Custom Processing ECF Residual Spent Fuel
C039	Interview of Harold Thompson, NRF Hot Cell Technician, Re: WETSAW Operations
C048	Letter to C.J. Sing, Re: Design Process Requirements and Documentation for the SPC Water Inspection Tool and SPC Rotator Spacer
C049	Email to Heidi Walk, Re: SPC AK Package Info: Zirc Pyrophoricity and Water Checker
C069	Correspondence to Mr. E.L. Juell, Re: Zircaloy and Uranium Shipment Request
C071	Correspondence to J.L. Gregory, Re: ECF Plan To Reduce Backlog of Transuranic
C075	Correspondence to B. Kammenzind, Re: Hydrogen Detonation Pressure Transient
C084	Email to Mark Sherick, Re: Pressurized Containers
C085	Correspondence to C.J. Sing, Re: Sludge Pan Container Activity Estimates
C086	Letter to T. Clements, from J. I. Eavenson, Re: SPC I (For INTEC) Remediation Documentation
C087	Letter to T. Clements from T. N. Miller Re: SPC II (For INTEC) "Initial Acceptable Knowledge Package"
C088	Letter to T. Clements from T. N. Miller Re: SPC V (INTEC) "Acceptable Knowledge Package"
C089	Letter from T. N. Miller to T. Clements Re: SPC VIII (For INTEC) "Acceptable Knowledge Package"
C090	Letter to C. J. Sing from NRF Engineering Re: Design Process Requirements and Documentation for the SPC Vacuum Dry System
C091	Letter to Manager, Pittsburgh Naval Reactors Office from C. E. Congelio Re: Expended Core Facility-Sludge Pan Container Remediation Planning Letter Revision D-for Naval Reactors Information and Servicing Facility Use

Source Document Tracking Number	Title
C092	Letter to Manager, Pittsburgh Naval Reactors Office from R. L. Elder Re: Expended Core Facility- Sludge Pan Container Remediation Planning Letter-For Approval
C093	Letter to Manager, Pittsburgh Naval Reactors Office from M. J. Zavidny, NRF East Engineering Re: Expended Core Facility-Sludge Pan Container Disposal Plan-for Approval
C094	Letter to T. Clements from T. N. Miller Re: SPC VII (For INTEC) "Acceptable Knowledge Package"
C095	Letter to C. J. Sing from Radiological Controls Engineering Re: Sludge Pan Container Radionuclide Mixture Control Systems
C096	Letter to T. Clements from R. D. Wingfield Re: SPC X (For INTEC) "Acceptable Knowledge Package"
C097	To File from T. N. Miller Re: Response to References Organic Solvents in Alpha Box Log
C098	Letter to Manager, Pittsburgh Naval Reactors Office from R. L. Elder Re: Expended Core Facility-Sludge Pan Container Remediation Planning Letter-for Servicing Facility Use
C099	PCER Number B-REO(A4W)-7130; Re: Radiological Controls for Potential Containers Requiring Remediation
C100	Letter to T. Clements from T. N. Miller Re: SPC VI (For INTEC) "Acceptable Knowledge Package"
C101	Letter to file from T. N. Miller, CC: H. B. Gonzales Re: SPC Procedures with Liquid
C102	Letter to T. Clements from J. I. Eavenson Re: Trans-U Vault Information (For INTEC)
C103	Correspondence to D. A. Arcidiacono, Manager, RPCO/NRF Re: Transuranic Vault Sludge Pan Containers
C104	Correspondence to D. Arcidiacona, Manager, ECF-RPCO Re: Detonation Pressure in the Transuranic Vaults
C105	Correspondence to D. A. Arcidiacono, Manager, RPCO/NRF Re: Response to B-REO(SC)-291
C106	Correspondence to D. Arcidiacono, Manager, ECF-RPCO, Re: Transuranic Vault Structural Assessment
C108	Letter to Tom Clements, Re: Transmittal of Documents Supporting Acceptable Knowledge for the Naval Reactors Facility Remote-Handled Waste
C109	Letter to Tom Clements, Re: Letter to INTEC Documenting the Updated Sludge Pan Activities
C110	Letter to DOE, Re: Sludge Pan Shielded Container Modification Final Design for Naval Reactors Information
C111	Second Interview with Harold Thompson, NRF Hot Cell Technician, Re: Hazardous material note in Alpha Box Log for SPC-88, and Vacuum bag information
C112	Letter to J. Sherman, Re: Fuel Contents of NRX Rods
C115	Letter to T. Clements, Re: Letter to INTEC Documenting the Radionuclide Activities and Hazard Evaluation for Sludge Pan Container 96
P003	Expended Core Facility Maintenance and Operations Guide

Source Document Tracking Number	Title
P005	Transmittal of the Evaluation of Naval Reactors Facility Radioactive Waste Disposed of at the Radioactive Waste Management Complex
P006	Slow Speed Abrasive Cut-Off Wheel Operation
P007	Alpha Box Support Operations
P008	Alpha Box Operations and Maintenance
P010	Alpha Box Support Operations
P012	Alpha Box Operations and Maintenance
P013	RH-TRU – CPP-1634 Drum Handling/Venting Operations
P014	Technical Work Record 61033 Summary
P015	Management of Alpha Box Waste
P016	The NRF Environmental Monitoring Program
P017	MSDS for Neolube and Graphite in Isopropanol
P018	Canister Remediation Prioritization
P019	Attachment B: Description of Naval Spent Nuclear Fuel Receipt and Handling at the Expended Core Facility at the Idaho National Engineering Laboratory
P025	Mission Need Statement: RH-TRU to WIPP Project
P027	AK Summary Documentation RH-TRU Repackaging
P031	SPC Remediation in Hot Cell 1
P032	SPC Vacuum Drying in Hot Cell 1
P033	SPC Shielded Container Packaging
P034	Shielded Container Operations
P035	SPC Shielded Container Assembly
P036	SPC Shielded Container Canister Weldment
P037	SPC Shielded Container Lid Weldment
P038	Drain Plug Detail
P039	SPC Shielded Container 38.00 inches Long External Bag Weldment
P040	SPC Shielded Container 60.00 inches Long External Bag Weldment
P041	SP Shielded Internal Bag Weldment
P042	SPC Shielded Container Shipping Assembly
P043	Cut Off Wheel Sludge Pan
P044	Dry SPC Weight Table
P046	Nuclear Filter Technology (NucFIL) Product List 2005
P047	The NRF Environmental Controls Manual
P049	NRF 1664.03 Radiological Control Requirements for Work Area No. 2

Source Document Tracking Number	Title
P050	Hazardous Evaluation/Disposition Form No. 2954 for ECF Sludge Pan Containers (SPCs) and Contents for SPCs 31 through 95, 39A and 71A
P051	Deficiency Form For SPC 39
P052	Wet Element Transverse Sectioning Abrasive Wheel (Wetsaw) Enclosure Operations and Maintenance
P053	NRF Local Safeguards Manual for Control of High-Grade Special Nuclear Material
P054	Component Movement and Inventory System
P055	Transuranic and Alpha Container Remediation Meeting at Naval Reactors Facility
P056	ECF Trans-U Waste Vault Liner for Sludge Pipes
P057	ECF Transuranic Waste Shipping Vault Details and Ass'y
P058	ECF Transuranic Waste Vault Details and Ass'y
P061	Design Verification of Interim Storage Containers for Increased Drum Size for NRF
P062	Naval Nuclear Form Procedure, Re: Control and Protection of Unclassified Naval Nuclear Propulsion Information
P063	Naval Nuclear Form Procedure, Re: Control and Protection of Classified Naval Nuclear Propulsion Information
P065	RWMC Remote-Handled TRU Waste Interim Storage System—Interim
P066	ECF Sample Storage Tube (Hex Containers)
P067	Cut Fuel Storage Container (Hex Container)
P068	ECF Cut-Off Wheel Stainless Steel Sludge Pan Container
P069	PAC Operations
P070	Phase 3 PAC Venting Operations in the Hot Cells
P071	SPC Packaging Prep
P072	SPC Shielded Container Packaging
P073	Store WETSAW Fines in the Main Hot Cell Bank
P207	Stainless Steel Sludge Pan Containers (SPCs) and Contents for SPCs 21 through 30 which are currently located in Trans Uranic Vaults (TUVs)
P208	ECF Carbon Steel Sludge Pan Containers (SPCs) and Contents for SPCs 00, 1, 2, 3, 4, 5, 6, 7, 9, 11, 13, 14, 15, 16, 18
P209	ECF Empty Group 1 Transuranic Waste Vaults (POLY-6-LWBR, TRU-POLY-7-S3G)
P210	ECF Empty Group 1 Transuranic Waste Vault ECO100004 which contains Carbon Steel SPCs 15, 16, 18 and Stainless Steel SPC 22 in a SPC storage insert
P211	ECF Group 1 Transuranic Waste Vault ECO200002 which contains Carbon Steel SPCs 00, 14 and Stainless Steel SPCs 21, 24, 25, 28 in a SPC storage insert
P212	ECF Group 1 Transuranic Waste Vault ECO300001 which contains Carbon Steel SPCs 1, 2, 3, 4 and Stainless Steel SPC 26 in a SPC storage insert

Source Document Tracking Number	Title
P213	ECF Group 1 Transuranic Waste Vault ECO300002 which contains Carbon Steel SPCs 5, 6, 7 and 9 in a SPC storage insert
P214	ECF Group 1 Transuranic Waste Vault TR-U- SPC-5-MIX which contains Carbon Steel SPCs 11, 13 and Stainless Steel SPCs 23, 27, 29, 30 in a SPC storage insert
P215	Transuranic Vault Transport System Assembly and spare parts
P216	Cut-Off Wheel Sludge Pan Container
U001	Attachment-Table I-Pu Curie Conversion Factors and Figures
U002	ECF Route Card on Resin Column Beads and Fuel Chips Disposal
U015	General Procedures for the Expended Core Facility Nuclear Material Balance Area
U016	Pyrophoricity and Ignitability of SPC Contents
U019	Summation of Partial Activities of SPCs
U027	Alpha Box Log Volume I
U028	Alpha Box Log Volume 2
U038	NRF Form 433 (Pages from Log Book)
U039	Route Card For Element Sectioning
U041	Route Card For Element Sectioning
U042	Route Card For Element Sectioning
U043	Route Card For Element Sectioning
U044	Route Card For Element Sectioning
U045	Route Card For Element Sectioning
U046	Route Card For Element Sectioning
U047	Route Card For Element Sectioning
U048	Route Card For Element Sectioning
U049	Route Card For Element Sectioning
U050	Route Card For Element Sectioning
U051	Route Card For Element Sectioning
U052	Route Card For Element Sectioning
U053	Route Card For Element Sectioning
U054	Route Card For Subassembly Preparation
U055	Route Card For Element Sectioning
U056	Route Card For Element Sectioning
U057	Route Card For Element Sectioning
U058	ECF Route Card-Grip II Rod 79-441D Alpha Box Sectioning
U060	Results of Plutonium Analysis of Core

Source Document Tracking Number	Title
U061	Plutonium and Uranium Content Per Drum Number
U068	Various Material Safety Data Sheets-Chlorothene NU P/N 6997-0001, T Grade Marking Pen Ink, T-Grade Pigment Type Marking Pen Ink (AEC)
U069	ECF Route Card: "Facit" Specimen Hysol Mounting and Harding Mill Sectioning
U070	ANL Radiation Dose To Packaging Over 20 Year Storage Hand Calculations
U072	Review of the Intermediate Level Transuranic Storage Facility Mixed Waste
U086	Technical Work Record on Noncombustible "Transuranic Waste" in ECF Storage
U101	UN Test Summary for Type A Drums
U103	SPC Remediation Flow Chart
U104	Basic Illustrations of SPC Remediation and Packaging
U105	Test Summary, Non-Bulk Steel Packagings, DOT 7A-Type A Compliance Testing
U106	SPC Load Logs for SPCs 31-85, 87-89, 71A, and 39A
U107	Polybags Filter Information
U109	Data Logs for SPCs in TUVs
U110	SPC Generation Flow Chart
U111	SPC Weight Check Comparisons of Load Cell versus Mettler-Toledo to Scale
U112	NRF Metrology Laboratory Calibration Data Report
U115	Approximate SPC Initial Pressures
U116	UN Test Summary for Non-Bulk Steel Packagings
U120	Drill Plug Ignition Test Video
U121	INTEC Initial Data Needs for NRF Sludge Pan Containers
U122	Technical Work Record (TWR) No. 18515
U123	ECF Route Card on Resin Column Disposal
U124	ECF Route Card on Repackaging Zirc Chips and Resin For Water Pit Storage
U125	NRF Chemistry Analysis Requests/Reports For a Resin Samples
U126	Sludge Pan Container (SPC) Printout
U127	Gamma Scan Zirc Chip Waste ECF Route Card 30759
U128	ECF Route Card-Alpha Box Waste Container Radiation Survey
U130	SPC Drum Evaluation, WMP, Red
U131	Engineering Design File: Radiological Properties of Remote-Handled Transuranic Waste from Naval Reactors Facility
U132	Log Book for WETSAW
U133	WETSAW Records
U134	WETSAW Drawings

Source Document Tracking Number	Title
U135	DOT7A-Type A Compliance Testing
U136	Radiological Survey Forms, SPC In-Cell Radiation Survey Map
U137	Report of SPC 86, 91, 92, 93, 94, and 95, Gemini Printouts (Classified)
U139	Trouble Record Cut Fuel Storage Container (Hex Container)
U140	Trouble Record ECF Sample Storage Tube (Hex Container)
U141	Trouble Record Response
U145	Route Card for Alpha Box Sectioning
U146	Route Card for Alpha Box Sectioning
U147	Route Card for WETSAW Sectioning
U148	Sludge Pan Container Activity Estimates
U339	Technical Work Record, Free Standing Water in the TUVs
U357	NRF TUV Project: Vault Processing Options for CPP-659
U358	Engineering Design File, Packaging Configuration for Repackaged Naval Reactors Facility Sludge Pan Containers

DIVIDER PAGE

COPY

URS

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CP:12:01407
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: August 20, 2012

FROM: L. M. Nelson LOCATION: Certification

TO: CCP Records Custodian GSA-212 LOCATION: Retrieval, Characterization and Transportation

SUBJECT: TRANSMITTAL OF CHARACTERIZATION INFORMATION SUMMARY FOR REMOTE-HANDLED LOT 3 IN-ID-NRF-SPC AT THE IDAHO NATIONAL LABORATORY

Please accept the attached Characterization Information Summary for the Remote-Handled Idaho National Laboratory Lot 3 IN-ID-NRF-SPC.

LMN:yhs

Attachment

cc: (without attachment)

I. S. Quintana ED

CCP RECORDS ORIGINAL
DATE REC'D 8.22.12

CHARACTERIZATION INFORMATION SUMMARY

WSPF # IN-ID-NRF-SPC

Lot 3

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Characterization Information Cover Page..... 002

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CIS-001

05-002

CCP Characterization Information Summary Cover Page

Waste Stream # IN-ID-NRF-SPC Lot #: 3

AK Expert Review: James Luginbyhl Date: 8/16/2012

SPM Review: Laura Nelson Date: 8/17/12

SPM signature certifies that through Acceptable Knowledge testing and/or analysis that the waste identified in this summary is not corrosive, ignitable, reactive, or incompatible with the TSDF.

A summary of the Acceptable Knowledge regarding this waste stream containing specific information about the corrosivity, reactivity, and ignitability of the waste stream is included as an attachment to the Waste Stream Profile Form. By reference, that information is included in this lot.

List of procedures used:

Headspace Gas Sampling and Analysis (HSG):

CCP-TP-093	Rev. 15	3/10/2011	CCP Sampling of TRU Waste Containers
CCP-TP-093	Rev. 14	12/29/2010	CCP Sampling of TRU Waste Containers
CCP-TP-093	Rev. 13	03/19/07	CCP Sampling of TRU Waste Containers
CCP-TP-106	Rev. 7	12/29/10	CCP Headspace Gas Sampling Batch Data Report Preparation
CCP-TP-106	Rev. 6	07/12/07	CCP Headspace Gas Sampling Batch Data Report Preparation
CCP-TP-173	Rev. 0	05/03/07	CCP Analysis of Gas Samples for VOCs by GC/FID
CCP-TP-173	Rev. 1	09/30/09	CCP Analysis of Gas Samples for VOCs by GC/FID
CCP-TP-175	Rev. 0	05/02/07	CCP Analysis of Gas Samples for VOCs by GC/MS
CCP-TP-175	Rev. 1	03/29/10	CCP Analysis of Gas Samples for VOCs by GC/MS
CCP-TP-175	Rev. 2	12/29/10	CCP Analysis of Gas Samples for VOCs by GC/MS

Real-Time Radiography (RTR)

CCP-TP-508	Rev. 3	04/22/09	CCP RH Standard Real-Time Radiography Inspection Procedure
CCP-TP-508	Rev. 4	06/30/10	CCP RH Standard Real-Time Radiography Inspection Procedure
CCP-TP-508	Rev. 5	07/14/10	CCP RH Standard Real-Time Radiography Inspection Procedure
CCP-TP-508	Rev. 6	12/29/10	CCP RH Standard Real-Time Radiography Inspection Procedure
CCP-TP-508	Rev. 7	04/21/11	CCP RH Standard Real-Time Radiography Inspection Procedure

CIS-003

CCP Characterization Information Summary Cover Page

Visual Examination (VE):

CCP-TP-500	Rev. 7	02/27/08	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 8	07/24/08	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 9	06/30/10	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 10	12/29/10	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 11	04/21/11	CCP Remote-Handled Waste Visual Examination

Project Level Data Validation / DQO Reconciliation:

CCP-TP-001	Rev. 17	09/24/07	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 18	08/09/10	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 19	12/29/10	CCP Project Level Data Validation and Verification
CCP-TP-002	Rev. 20	08/18/08	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 21	08/04/09	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 22	06/30/10	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 23	12/29/10	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-003	Rev. 16	10/02/07	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 17	11/09/09	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 18	12/29/10	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-005	Rev. 18	11/16/06	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 19	07/06/10	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 20	11/01/10	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 21	12/29/10	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 22	04/21/11	CCP Acceptable Knowledge Documentation
CCP-TP-530	Rev. 7	07/11/08	CCP RH TRU Waste Certification and WWIS Data Entry
CCP-TP-530	Rev. 8	09/09/09	CCP RH TRU Waste Certification and WWIS Data Entry
CCP-TP-530	Rev. 9	12/11/09	CCP RH TRU Waste Certification and WWIS Data Entry

WAP Certification:

CCP-PO-001	Rev. 16	10/31/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 17	06/23/09	CCP Transuranic Waste Characterization Quality Assurance Project Plan

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # IN-ID-NRF-SPC Lot # 3

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR		
								Sample	Analysis	
NRFTRUSPC003-1	NA	INLRHDTC12008	INLRHRTR12009	N/A	N/A	N/A		INHSG1202	ECL12023M	NA
NRFTRUSPC026-1	NA	INLRHDTC12008	INLRHRTR12009	N/A	N/A	N/A		INHSG1202	ECL12023M	NA
NRFTRUSPC004-1	NA	INLRHDTC12008	INLRHRTR12009	N/A	N/A	N/A		NA	NA	NA
NRFTRUSPC029-1	NA	INLRHDTC12008	INLRHRTR12007	N/A	N/A	N/A		NA	NA	NA

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

CLS-004

CCP-TP-003 Rev. 18
Effective Date: 12/29/10
CCP Data Analysis for S3000, S4000, S5000 Characterization

CCP Headspace Gas UCL_{90} Evaluation Form

WSPF #: IN-ID-NRF-SPC **Waste Stream Lot Number** 1 through 3

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Benzene	log	1	24	-2.53	-4.21	0.85	-3.98	10	2.30		
Bromoform	log	0	24	-3.75	-5.24	0.71	-5.05	10	2.30		
Carbon tetrachloride	No	0	24	0.04	0.01	0.01	0.02	10	N/A		
Chlorobenzene	LOG	0	24	-3.00	-4.51	0.76	-4.30	10	2.30		
Chloroform	sqrt	0	24	0.24	0.14	0.05	0.15	10	3.16		
Cyclohexane [a]	sqrt	0	24	0.27	0.14	0.06	0.15	10	3.16		
1,1-Dichloroethane	No	0	24	0.07	0.03	0.02	0.04	10	N/A		
1,2-Dichloroethane	log	0	24	-2.73	-3.87	0.52	-3.73	10	2.30		
1,1-Dichloroethylene	LOG	0	24	-2.66	-4.12	0.59	-3.96	10	2.30		
cis-1,2-Dichloroethylene	log	0	24	-2.73	-4.28	0.78	-4.07	10	2.30		
trans-1,2-Dichloroethylene	log	0	24	-2.73	-4.08	0.69	-3.89	10	2.30		
Ethyl benzene	sqrt	0	24	0.22	0.12	0.05	0.13	10	3.16		
Ethyl ether	sqrt	0	24	0.30	0.18	0.05	0.20	10	3.16		
Methylene chloride	log	0	24	-2.47	-3.96	0.62	-3.79	10	2.30		
1,1,2,2-Tetrachloroethane	sqrt	0	24	0.19	0.09	0.05	0.11	10	3.16		
Tetrachloroethylene	sqrt	1	24	0.20	0.10	0.04	0.11	10	3.16		
Toluene	Log	12	24	-0.60	-3.15	0.85	-2.92	10	2.30		
1,1,1-Trichloroethane	sqrt	0	24	0.22	0.12	0.05	0.13	10	3.16		
Trichloroethylene	sqrt	0	24	0.23	0.12	0.05	0.13	10	3.16		
1,1,2-Trichloro-1,2,2-trifluoroethane	log	0	24	-3.23	-4.91	0.86	-4.68	10	2.30		
1,2,4-Trimethylbenzene [a]	log	0	24	-3.01	-4.39	0.67	-4.21	10	2.30		
1,3,5-Trimethylbenzene [a]	sqrt	0	24	0.22	0.11	0.05	0.13	10	3.16		
m/p-Xylene [b]	sqrt	0	24	0.23	0.11	0.05	0.13	10	3.16		
o-Xylene	sqrt	0	24	0.23	0.12	0.05	0.13	10	3.16		
Acetone	Log	22	24	3.14	-0.86	1.66	-0.41	100	4.61		
Butanol	Log	8	24	-1.83	-3.29	0.55	-3.15	100	4.61		
Methanol	Log	13	24	3.78	2.67	0.47	2.80	100	4.61		
Methyl ethyl ketone	sqrt	2	24	0.36	0.20	0.06	0.22	100	10.00		
Methyl isobutyl ketone	Sqrt	6	24	0.29	0.15	0.07	0.17	100	10.00		

900 SIN

CCP-TP-003 Rev. 18
Effective Date: 12/29/10
CCP Data Analysis for S3000, S4000, S5000 Characterization

CCP Headspace Gas UCL_{90} Evaluation Form

WSPF #: IN-ID-NRF-SPC **Waste Stream Lot Number** 1 through 3

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Chloromethane[c]	Log	4	24	-1.77	-3.07	0.64	-2.89	10	2.30		
Carbon Disulfide[a]	log	20	24	-1.17	-2.53	0.63	-2.37	10	2.30		
1,2-Dichloropropane[a]	No	0	24	0.06	0.02	0.02	0.02	10	N/A		
Trichlorofluoromethane[c]	log	0	24	-2.90	-4.26	0.66	-4.08	10	2.30		

[a] These compounds are from the TRAMPAC and or CH TRUCON Appendix B and are flammable VOCs that do not appear in the QAPJP or the WIPP WAP. These are not part of the target analyte list, but samples may be analyzed for these compounds.
[b] These xylene isomers cannot be resolved by the analytical methods employed in the program. m-Xylene and p-Xylene will be reported as "Total m-p-Xylene."
[c] Noted analytes are not required but are reported by the Environmental Chemistry Laboratory at Idaho and are included on the UCL90 for completeness.

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per section B4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

8/17/12
Date

NIS 000

CCP Headspace Gas Summary Data

Waste Stream Number IN-ID-NRF-SPC Lot Number (s) 3

Tentatively Identified Compound	Maximum Observed Estimated Concentrations (ppmv)	# Samples Containing TIC	% Detected
NA	NA	NA	NA

Data Supports EPA Hazardous Waste Numbers Assigned by AK? Yes ☑ No ☐

If no, describe the basis for assigning the EPA Hazardous Waste Codes:

SPM Signature Laura Nilson Date 8/17/2012

CS-007

CCP RTR/VE Summary of Prohibited Items and AK Confirmation

Waste Stream Number: IN-ID-NRF-SPC Lot #: 3

Container Number	RTR Prohibited Items [a]	Visual Examination Prohibited Items [a]
See correlation of container ID numbers for list of remaining drum numbers in this Lot.	RTR was not used to certify any containers in this lot.	None of the containers in this Lot had prohibited items identified during Visual Examination technique.

a. See Batch Data Reports
b. If AK has assigned U134 to this waste stream, then any liquids in these containers are prohibited items (not acceptable by the TSDF).

Justification for the selection of RTR and/or VE: RTR was selected as the characterization method for this lot because RTR meets all the Data Quality Objectives for NDE for the waste.

Laura Nelson
Site Project Manager Signature

Laura Nelson
Printed Name

8/17/12
Date

CIS-008

CCP Reconcilliation with Data Quality Objectives

WSF# IN-ID-NRF-SPC Lot # 3

Sampling Completeness

VE
Number of Valid Samples: NA
Percent Complete: NA (QAO is 100%)
Number of Total Samples Analyzed: NA

RTR
Number of Valid Samples: 4
Percent Complete: 100 (QAO is 100%)
Number of Total Samples Analyzed: 4

NDA
Number of valid samples: NA
Percent Complete: NA (QAO is 100%)
Number of Total Samples Analyzed: NA

HSG
Number of Valid Samples: 24
Percent Complete: 100 (QAO is ≥90%)
Number of Total Samples collected: 24

Total VOC
Number of Valid Samples: NA
Percent Complete: NA (QAO is ≥90%)
Number of Total Samples collected: NA
Number of Valid Samples: NA
Percent Complete: NA (QAO is ≥90%)
Number of Total Samples analyzed: NA

Total SVOC
Number of Valid Samples: NA
Percent Complete: NA (QAO is ≥90%)
Number of Total Samples collected: NA
Number of Valid Samples: NA
Percent Complete: NA (QAO is ≥90%)
Number of Total Samples analyzed: NA

Total Metals
Number of Valid Samples: NA
Percent Complete: NA (QAO is ≥90%)
Number of Total Samples collected: NA
Number of Valid Samples: NA
Percent Complete: NA (QAO is ≥90%)
Number of Total Samples analyzed: NA

CIS-009

CCP Reconcilliation with Data Quality Objectives

WSF# IN-ID-NRF-SPC Lot # 3

	Y/N/NA	Reconcilliation Parameter
1	Y	Waste Matrix Code.
2	Y	Waste Material Parameter Weights.
3	Y	The waste matrix code identified is consistent with the type of sampling and analysis used to characterize the waste.
4	Y	The TRU activity reported in the BDRs for each container demonstrates with a 95% probability that the container of waste contains TRU radioactive waste.
5	NA	AK Sufficiency. Is there an approved AK sufficiency Determination for this waste stream?
6	Y	Mean concentrations, UCL90 values for the mean concentration, standard deviations, and the number of samples collected for each VOC in the HSG of each container were calculated and compared with the program required quantitation limits, as reported in CCP TP 003, Attachment 3, and additional Environmental Protection Agency (EPA) Hazardous Waste Numbers were assigned as required. Samples were randomly collected (when appropriate).
7a	NA	Mean concentrations, UCL90 values for the mean concentration, standard deviations, and the number of samples collected for solids VOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003-Attachment 4, and additional EPA Hazardous Waste Numbers were assigned as required. Samples were randomly collected.
7b	NA	Mean concentrations, UCL90 values for the mean concentration, standard deviations, and the number of samples collected for solids SVOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP TP 003 Attachment 5, and additional EPA Hazardous Waste Numbers were assigned as required. Samples were randomly collected.
7c	NA	Mean concentrations, (UCL90) values for the mean concentration, standard deviations, and the number of samples collected for total metals were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP TP 003 Attachment 6, and additional EPA Hazardous Waste Numbers were assigned as required. Samples were randomly collected.

CIS-010

CCP Reconciliation with Data Quality Objectives

WSF# IN-ID-NRF-SPC Lot # 3

8	Y	The data demonstrates whether the waste stream exhibits a toxicity characteristic under Title 40 Code of Federal Regulations (CFR), Part 261, Identification and Listing of Hazardous Waste, Subpart C, Characteristics of Hazardous Waste.
9	Y	Does the waste stream contain listed waste found in 20.4.1.200 NMAC incorporating 40 CFR Part 261, Subpart D, Lists of Hazardous Wastes.
10	Y	Waste stream can be classified as hazardous or nonhazardous at the 90-percent confidence level.
11	Y	Appropriate packaging configuration and Drum Age Criteria (DAC) is applied and documented in the headspace gas sampling documentation, and the drum age met prior to sampling.
12	Y	TICs were appropriately identified and reported in accordance with the requirements of Section B3-1 of the QAPjP.
13	Y	The PRQLs for headspace gas VOCs were met for all analyses as evidenced by the analytical batch data reports.
14		The overall completeness, comparability, and representativeness QAOs were met for each of the analytical and testing procedures as specified in CCP-PO-001 Sections B3-2 through B3-9 prior to submittal of a waste stream profile form for a waste steam or waste stream lot.

	Completeness	Comparability	Representativeness
Radiography	Y	Y	Y
VE	NA	NA	NA
Headspace Gas Analysis	Y	Y	Y
Solids Sampling	NA	NA	NA
Solids VOCs	NA	NA	NA
Solids SVOCs	NA	NA	NA
Solids Metals	NA	NA	NA

Comments: N/A

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

8/17/12
Date

CS-011

DIVIDER

PAGE

Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA

CP:12:01520
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: October 23, 2012

FROM: L. M. Nelson LOCATION: CCP Certification

TO: NTP Records Custodian GSA-212 LOCATION: National TRU Program Certification

SUBJECT: TRANSMITTAL OF CHARACTERIZATION INFORMATION SUMMARY FOR REMOTE-HANDLED LOT 4 IN-ID-NRF-SPC AT THE IDAHO NATIONAL LABORATORY

Please accept the attached Characterization Information Summary for the Remote-Handled Idaho National Laboratory Lot 4 IN-ID-NRF-SPC.

LMN:jmc

Attachment

cc: (without attachment)

I. S. Quintana ED

CCP RECORDS ORIGINAL
DATE REC'D 11-19-12

CHARACTERIZATION INFORMATION SUMMARY

WSPF # IN-ID-NRF-SPC

Lot 4

TABLE OF CONTENTS

Characterization Information Cover Page..... 002

Correlation of Container Identification Numbers to Batch Data Report Numbers..... 004

CCP Headspace Gas UCL_{90} Evaluation Form..... 005

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CIS-001

CCP Characterization Information Summary Cover Page

Waste Stream # IN-HD-NRF-SPC Lot #: 4

AK Expert Review: James Lupishyhl Date: 10/18/2012

SPM Review: Laura Nelson Date: 10/19/12

SPM signature certifies that through Acceptable Knowledge testing and/or analysis that the waste identified in this summary is not corrosive, ignitable, reactive, or incompatible with the TSDF.

A summary of the Acceptable Knowledge regarding this waste stream containing specific information about the corrosivity, reactivity, and ignitability of the waste stream is included as an attachment to the Waste Stream Profile Form. By reference, that information is included in this lot.

List of procedures used:

Headspace Gas Sampling and Analysis (HSG):

CCP-TP-093	Rev. 16	9/7/2011	CCP Sampling of TRU Waste Containers
CCP-TP-093	Rev. 15	3/10/2011	CCP Sampling of TRU Waste Containers
CCP-TP-093	Rev. 14	12/29/2010	CCP Sampling of TRU Waste Containers
CCP-TP-093	Rev. 13	03/19/07	CCP Sampling of TRU Waste Containers
CCP-TP-106	Rev. 7	12/29/10	CCP Headspace Gas Sampling Batch Data Report Preparation
CCP-TP-106	Rev. 6	07/12/07	CCP Headspace Gas Sampling Batch Data Report Preparation
CCP-TP-173	Rev. 0	05/03/07	CCP Analysis of Gas Samples for VOCs by GC/FID
CCP-TP-173	Rev. 1	09/30/09	CCP Analysis of Gas Samples for VOCs by GC/FID
CCP-TP-175	Rev. 0	05/02/07	CCP Analysis of Gas Samples for VOCs by GC/MS
CCP-TP-175	Rev. 1	03/29/10	CCP Analysis of Gas Samples for VOCs by GC/MS
CCP-TP-175	Rev. 2	12/29/10	CCP Analysis of Gas Samples for VOCs by GC/MS
CCP-TP-175	Rev. 3	06/02/11	CCP Analysis of Gas Samples for VOCs by GC/MS

Real-Time Radiography (RTR)

CCP-TP-508	Rev. 3	04/22/09	CCP RH Standard Real-Time Radiography Inspection Procedure
CCP-TP-508	Rev. 4	08/30/10	CCP RH Standard Real-Time Radiography Inspection Procedure
CCP-TP-508	Rev. 5	07/14/10	CCP RH Standard Real-Time Radiography Inspection Procedure
CCP-TP-508	Rev. 6	12/29/10	CCP RH Standard Real-Time Radiography Inspection Procedure
CCP-TP-508	Rev. 7	04/21/11	CCP RH Standard Real-Time Radiography Inspection Procedure

Visual Examination (VE):

CCP-TP-500	Rev. 7	02/27/08	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 8	07/24/08	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 9	08/30/10	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 10	12/29/10	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 11	04/21/11	CCP Remote-Handled Waste Visual Examination

Project Level Data Validation / DQO Reconciliation:

CCP-TP-001	Rev. 17	09/24/07	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 18	08/09/10	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 19	12/29/10	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 20	09/27/12	CCP Project Level Data Validation and Verification
CCP-TP-002	Rev. 20	08/18/08	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 21	08/04/09	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 22	08/30/10	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 23	12/29/10	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 24	12/28/11	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-003	Rev. 16	10/02/07	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 17	11/09/08	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 18	12/29/10	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-005	Rev. 18	11/16/06	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 19	07/08/10	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 20	11/01/10	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 21	12/29/10	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 22	04/21/11	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 23	08/30/11	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 24	11/28/11	CCP Acceptable Knowledge Documentation

CK-002

CCP Characterization Information Summary Cover Page

CCP-TP-530	Rev. 7	07/11/08	CCP RH TRU Waste Certification and WWIS Data Entry
CCP-TP-530	Rev. 8	09/09/09	CCP RH TRU Waste Certification and WWIS Data Entry
CCP-TP-530	Rev. 9	12/11/09	CCP RH TRU Waste Certification and WWIS Data Entry
CCP-TP-530	Rev. 10	04/25/11	CCP RH TRU Waste Certification and WWIS Data Entry

WAP Certification:

CCP-PO-001	Rev. 16	10/31/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 17	08/23/08	CCP Transuranic Waste Characterization Quality Assurance Project Plan

C15-003

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # IN-ID-NRF-SPC

Lot # 4

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR		
								Sample	Analysis	
NRFTRUSPC022-1	NA	NA	INLRHRTR12012	N/A	N/A	N/A		INHSG1206	ECL12036M	NA
NRFTRUSPC015-1	NA	NA	INLRHRTR12012	N/A	N/A	N/A		NA	NA	NA
NRFTRUSPC018-1	NA	NA	INLRHRTR12012	N/A	N/A	N/A		INHSG1206	ECL12036M	NA
NRFTRUSPC014-1	NA	NA	INLRHRTR12012	N/A	N/A	N/A		NA	NA	NA
NRFTRUSPC005-1	NA	NA	INLRHRTR12012	N/A	N/A	N/A		INHSG1206	ECL12036M	NA
NRFTRUSPC007-1	NA	NA	INLRHRTR12012	N/A	N/A	N/A		INHSG1206	ECL12036M	NA
NRFTRUSPC009-1	NA	NA	INLRHRTR12012	N/A	N/A	N/A		INHSG1206	ECL12036M	NA
NRFTRUSPC006-1	NA	NA	INLRHRTR12012	N/A	N/A	N/A		NA	NA	NA
NRFTRUSPC025-1	NA	NA	INLRHRTR12012	N/A	N/A	N/A		NA	NA	NA
NRFTRUSPC028-1	NA	NA	INLRHRTR12012	N/A	N/A	N/A		NA	NA	NA
NRFTRUSPC021-1	NA	NA	INLRHRTR12012	N/A	N/A	N/A		NA	NA	NA
NRFTRUSPC024-1	NA	NA	INLRHRTR12012	N/A	N/A	N/A		NA	NA	NA
NRFTRUSPC001-1	NA	NA	INLRHRTR12009	N/A	N/A	N/A		NA	NA	NA
NRFTRUSPC011-1	NA	NA	INLRHRTR12007	N/A	N/A	N/A		NA	NA	NA
NRFTRUSPC013-1	NA	NA	INLRHRTR12007	N/A	N/A	N/A		NA	NA	NA
NRFTRUSPC030-1	NA	NA	INLRHRTR12007	N/A	N/A	N/A		NA	NA	NA
NRFTRUSPC002-1	NA	NA	INLRHRTR12009	N/A	N/A	N/A		NA	NA	NA
*NRFTRUSPC018-1	NA	NA	NA	N/A	N/A	N/A		INHSG1206	ECL12036M	NA

*Drum included for HSG purposes only, drum will not be shipped to the WIPP site.

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

CTS-004

CCP-TP-003 Rev. 18
Effective Date: 12/29/10
CCP Data Analysis for S3000, S4000, S5000 Characterization

CCP Headspace Gas UCL_{90} Evaluation Form

WSPF #: IN-ID-NRF-SPC **Waste Stream Lot Number** 1 through 4

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Benzene	log	2	30	-1.83	-3.92	0.99	-3.68	10	2.30		
Bromoform	log	0	30	-3.56	-5.04	0.78	-4.85	10	2.30		
Carbon tetrachloride	sqrt	0	30	0.23	0.12	0.05	0.13	10	3.16		
Chlorobenzene	LOG	0	30	-2.59	-4.25	0.87	-4.04	10	2.30		
Chloroform	sqrt	0	30	0.26	0.15	0.06	0.16	10	3.16		
Cyclohexane [a]	sqrt	0	30	0.32	0.16	0.07	0.17	10	3.16		
1,1-Dichloroethane	No	0	30	0.10	0.04	0.02	0.04	10	N/A		
1,2-Dichloroethane	log	0	30	-2.35	-3.69	0.60	-3.55	10	2.30		
1,1-Dichloroethylene	log	0	30	-2.30	-3.89	0.73	-3.71	10	2.30		
cis-1,2-Dichloroethylene	log	0	30	-2.21	-3.99	0.92	-3.77	10	2.30		
trans-1,2-Dichloroethylene	log	0	30	-2.25	-3.85	0.79	-3.66	10	2.30		
Ethyl benzene	sqrt	0	30	0.26	0.13	0.06	0.15	10	3.16		
Ethyl ether	sqrt	0	30	0.35	0.20	0.06	0.21	10	3.16		
Methylene chloride	log	0	30	-2.16	-3.72	0.75	-3.54	10	2.30		
1,1,2,2-Tetrachloroethane	sqrt	0	30	0.23	0.11	0.05	0.12	10	3.16		
Tetrachloroethylene	sqrt	1	30	0.25	0.12	0.06	0.13	10	3.16		
Toluene	Log	12	30	-0.60	-3.14	0.78	-2.95	10	2.30		
1,1,1-Trichloroethane	sqrt	0	30	0.24	0.13	0.05	0.14	10	3.16		
Trichloroethylene	sqrt	0	30	0.26	0.13	0.06	0.15	10	3.16		
1,1,2-Trichloro-1,2,2-trifluoroethane	log	0	30	-3.01	-4.66	0.93	-4.43	10	2.30		
1,2,4-Trimethylbenzene[a]	log	0	30	-2.66	-4.18	0.76	-4.00	10	2.30		
1,3,5-Trimethylbenzene[a]	sqrt	0	30	0.25	0.13	0.06	0.14	10	3.16		
m/p-Xylene[b]	sqrt	0	30	0.26	0.13	0.06	0.15	10	3.16		
o-Xylene	sqrt	0	30	0.26	0.13	0.06	0.15	10	3.16		
Acetone	Log	28	30	3.33	-0.34	1.98	0.13	100	4.61		
Butanol	Log	8	30	-1.83	-3.15	0.60	-3.01	100	4.61		
Methanol	Log	19	30	3.87	2.69	0.54	2.82	100	4.61		
Methyl ethyl ketone	log	3	30	-0.67	-3.09	0.74	-2.91	100	4.61		
Methyl isobutyl ketone	Sqrt	6	30	0.30	0.16	0.07	0.18	100	10.00		

90.510

CCP-TP-003 Rev. 18
Effective Date: 12/29/10
CCP Data Analysis for S3000, S4000, S5000 Characterization

CCP Headspace Gas UCL_{90} Evaluation Form

WSPF #: IN-ID-NRF-SPC

Waste Stream Lot Number 1 through 4

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Chloromethane[c]	Log	4	30	-1.77	-2.97	0.63	-2.82	10	2.30		
Carbon Disulfide[a]	log	25	30	0.18	-2.19	1.01	-1.95	10	2.30		
1,2-Dichloropropane[a]	sqrt	0	30	0.28	0.13	0.07	0.15	10	3.16		
Trichlorofluoromethane[c]	sqrt	0	30	0.25	0.14	0.05	0.15	10	3.16		

[a] These compounds are from the TRAMPAC and or CH TRUCON Appendix B and are flammable VOCs that do not appear in the QAPjP or the WIPP WAP. These are not part of the target analyte list, but samples may be analyzed for these compounds.
[b] These xylene isomers cannot be resolved by the analytical methods employed in the program. m-Xylene and p-Xylene will be reported as "Total m-p-Xylene."
[c] Noted analytes are not required but are reported by the Environmental Chemistry Laboratory at Idaho and are included on the UCL90 for completeness.

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per section B4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

10-18-12
Date

CS-006

CCP Headspace Gas Summary Data

Waste Stream Number IN-ID-NRF-SPC Lot Number (s) 4

Tentatively Identified Compound	Maximum Observed Estimated Concentrations (ppmv)	# Samples Containing TIC	% Detected
NA	NA	NA	NA

Data Supports EPA Hazardous Waste Numbers Assigned by AK? Yes ☑ No ☐

If no, describe the basis for assigning the EPA Hazardous Waste Codes:

SPM Signature [signature] Date 10-18-12

CS-007

CCP RTR/VE Summary of Prohibited Items and AK Confirmation

Waste Stream Number: IN-ID-NRF-SPC Lot #: 4

Container Number	RTR Prohibited Items [a]	Visual Examination Prohibited Items [a]
See correlation of container ID numbers for list of remaining drum numbers in this Lot.	RTR was not used to certify any containers in this lot.	None of the containers in this Lot had prohibited items identified during Visual Examination technique.

a. See Batch Data Reports

b. If AK has assigned U134 to this waste stream, then any liquids in these containers are prohibited items (not acceptable by the TSDF).

Justification for the selection of RTR and/or VE: RTR was selected as the characterization method for this lot because RTR meets all the Data Quality Objectives for NDE for the waste stream IN-ID-NRF-SPC.

Site Project Manager Signature | Laura Nelson Printed Name | 10/18/12 Date

CIS-008

CCP Reconcilliation with Data Quality Objectives

WSF# IN-ID-NRF-SPC Lot # 4

Sampling Completeness

VE
Number of Valid Samples: NA Number of Total Samples Analyzed: NA
Percent Complete: NA (QAO is 100%)

RTR
Number of Valid Samples: 17 Number of Total Samples Analyzed: 17
Percent Complete: 100 (QAO is 100%)

NDA
Number of valid samples: NA Number of Total Samples Analyzed: NA
Percent Complete: NA (QAO is 100%)

HSG
Number of Valid Samples: 30 Number of Total Samples collected: 30
Percent Complete: 100 (QAO is ≥90%)

Total VOC
Number of Valid Samples: NA Number of Total Samples collected: NA
Percent Complete: NA (QAO is ≥90%)
Number of Valid Samples: NA Number of Total Samples analyzed: NA
Percent Complete: NA (QAO is ≥90%)

Total SVOC
Number of Valid Samples: NA Number of Total Samples collected: NA
Percent Complete: NA (QAO is ≥90%)
Number of Valid Samples: NA Number of Total Samples analyzed: NA
Percent Complete: NA (QAO is ≥90%)

Total Metals
Number of Valid Samples: NA Number of Total Samples collected: NA
Percent Complete: NA (QAO is ≥90%)
Number of Valid Samples: NA Number of Total Samples analyzed: NA
Percent Complete: NA (QAO is ≥90%)

CIS-009

CCP Reconcilliation with Data Quality Objectives

WSF# IN-ID-NRF-SPC Lot # 4

	Y/N/NA	Reconcilliation Parameter
1	Y	Waste Matrix Code.
2	Y	Waste Material Parameter Weights.
3	Y	The waste matrix code identified is consistent with the type of sampling and analysis used to characterize the waste.
4	Y	The TRU activity reported in the BDRs for each container demonstrates with a 95% probability that the container of waste contains TRU radioactive waste.
5	NA	AK Sufficiency. Is there an approved AK sufficiency Determination for this waste stream?
6	Y	Mean concentrations, UCL90 values for the mean concentration, standard deviations, and the number of samples collected for each VOC in the HSG of each container were calculated and compared with the program required quantitation limits, as reported in CCP TP 003, Attachment 3, and additional Environmental Protection Agency (EPA) Hazardous Waste Numbers were assigned as required. Samples were randomly collected (when appropriate).
7a	NA	Mean concentrations, UCL90 values for the mean concentration, standard deviations, and the number of samples collected for solids VOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003-Attachment 4, and additional EPA Hazardous Waste Numbers were assigned as required. Samples were randomly collected.
7b	NA	Mean concentrations, UCL90 values for the mean concentration, standard deviations, and the number of samples collected for solids SVOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP TP 003 Attachment 5, and additional EPA Hazardous Waste Numbers were assigned as required. Samples were randomly collected.
7c	NA	Mean concentrations, (UCL90) values for the mean concentration, standard deviations, and the number of samples collected for total metals were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP TP 003 Attachment 6, and additional EPA Hazardous Waste Numbers were assigned as required. Samples were randomly collected.

CIS-010

CCP Reconcilliation with Data Quality Objectives

WSF# IN-ID-NRF-SPC Lot # 4

8	Y	The data demonstrates whether the waste stream exhibits a toxicity characteristic under Title 40 Code of Federal Regulations (CFR), Part 261, Identification and Listing of Hazardous Waste, Subpart C, Characteristics of Hazardous Waste.
9	Y	Does the waste stream contain listed waste found in 20.4.1.200 NMAC incorporating 40 CFR Part 261, Subpart D, Lists of Hazardous Wastes.
10	Y	Waste stream can be classified as hazardous or nonhazardous at the 90-percent confidence level.
11	Y	Appropriate packaging configuration and Drum Age Criteria (DAC) is applied and documented in the headspace gas sampling documentation, and the drum age met prior to sampling.
12	Y	TICs were appropriately identified and reported in accordance with the requirements of Section B3-1 of the QAPjP.
13	Y	The PRQLs for headspace gas VOCs were met for all analyses as evidenced by the analytical batch data reports.
14		The overall completeness, comparability, and representativeness QAOs were met for each of the analytical and testing procedures as specified in CCP-PO-001 Sections B3-2 through B3-9 prior to submittal of a waste stream profile form for a waste steam or waste stream lot.

	Completeness	Comparability	Representativeness
Radiography	Y	Y	Y
VE	NA	NA	NA
Headspace Gas Analysis	Y	Y	Y
Solids Sampling	NA	NA	NA
Solids VOCs	NA	NA	NA
Solids SVOCs	NA	NA	NA
Solids Metals	NA	NA	NA

Comments: N/A

Laura Nelson — Signature of Site Project Manager

Laura Nelson — Printed Name

10-18-12 — Date

CS-011

Attachment 3 – Visual Examination Site Project Manager Checklist

Batch Data Report No.: INERHVE1Z001

1. Has all the data received an independent technical review as evidenced by a completed checklist (Attachment 2) and the appropriate ITR signature?		☐ NO	☑ YES
2. Are BDR contents complete and match the Visual Examination Batch Data Report Table of Contents?		☐ NO	☑ YES
3. Is the BDR complete (appropriately filled in forms for each container)?		☐ NO	☑ YES
4. Have the RH Quality Assurance Objectives (QAOs) for VE been met?			
Precision – reconciled discrepancies between operators		☐ NO	☑ YES
Accuracy – trained operators		☐ NO	☑ YES
Representativeness – description of container contents		☐ NO	☑ YES
Completeness – completed data form and/or recording		☐ NO	☑ YES
Comparability – proper training and adequate AK for unopened containers		☐ NO	☑ YES
5. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☑ N/A

Comments

No NCRs.

SPM:

Laura Nelson
Printed Name

Laura Nelson
Signature

11-19-12
Date

COPY

CCP RECORDS ORIGINAL
DATE REC'D 11.19.12

Attachment 4 – Visual Examination Batch Data Report Cover Sheet

Batch Data Report No.: INLRHVE12001 Date: 11/14/12

	Waste Container ID Number:
1	FF-43C
2	FF-45D
3	DD-45D
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

N
A
ASP 11-14-12

CCP RECORDS ORIGINAL
DATE REC'D 11-15-12

001

Attachment 5 – Visual Examination Batch Data Report Table of Contents

Batch Data Report No.: INLRHVE12001 Date: 11/14/12

Item	Description	Page No.
1	Visual Examination Batch Data Report Cover Sheet (Attachment 4)	1
2	Visual Examination Batch Data Report Table of Contents (Attachment 5)	2
3	Visual Examination Data Forms (Attachment 1)	3
4	Visual Examination Independent Technical Reviewer Checklist (Attachment 2)	15
5	Copy of NCRs (N/A [If not applicable])	N/A

Attachment 1 – Visual Examination Data Form

Site ID: RHINL			
Examination Date: 11/14/12	Batch Number: INLRHVE12001		
Procedure #: CCP-TP-500	Revision #: 11	Video Number: N/A	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: N/A	Recording Stop: N/A	

Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: FF-43C	
Container Type:		Container Type: 55 GAL DRUM	
Waste Matrix Code:		Waste Matrix Code: S5110	
Waste Stream:		Waste Stream: ID-EBR-S5000	
		Rigid Liner: ☐Y ☒N Type:	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: N/A	

Percent Fill:	Percent Organic Waste:	Percent Fill: 90	Percent Organic Waste: 10
Layers of Confinement:	Closure Method:	Layers of Confinement: 0	Closure Method: N/A

Comments (e.g., filter information, NCRs):
FILTER MODEL: NUCFIL- 019SDS, SERIAL NUMBER: BL-34

Waste Description:
30 GALLON DRUM # FF-43C (IM)
WIRE ROPE SLING WITH METAL HOOK (IM)
BREACHED PLASTIC SLEEVING (P)
NYLON DRUM LIFTING BAG (P)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number FF-43C

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:

Bret Parmer
Print Name

J Bret Parmer
Signature

11-14-12
Date

Visual Examination Operator 2:

Jeffrey Poole
Print Name

J.S. Poole
Signature

11-14-12
Date

Attachment 1 – Visual Examination Data Form

Site ID: RHINL			
Examination Date: 11/12/12	Batch Number: INLRHVE12001		
Procedure #: CCP-TP-500	Revision #: 11	Video Number:NA	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: N/A	Recording Stop: N/A	

Initial Container ☐ N/A	Final Container ☒ N/A
Container or Package ID Number: FF-43C	Container or Package ID Number:
Container Type: 30 GAL DRUM	Container Type:
Waste Matrix Code: S5110	Waste Matrix Code:
Waste Stream: ID-EBR-S5000	Waste Stream:
	Rigid Liner: ☐Y ☐N Type: / Rigid Liner Lid: ☐ Y ☐N
	Rigid Liner Vented or Hole Size:
Percent Fill: 30 Percent Organic Waste: 0	Percent Fill: Percent Organic Waste:
Layers of Confinement: 0 / Closure Method: N/A	Layers of Confinement: / Closure Method:
Comments (e.g., filter information, NCRs): NUCFIL-019DS, SERIAL NUMBER GE-1072	

Waste Description:

METAL BRICKS 4 (IM) (OM)
WIRE ROPE SLINGS 3 (IM)
DRILL BITS 3 (IM)
WIRE ROPE WITH METAL HOOK (IM)
BRACING (AM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number FF-43C

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	
Comments: N/A			

Visual Examination Operator 1:

Bret Parmer
Print Name

J Bret Parmer
Signature

11-12-12
Date

Visual Examination Operator 2:

Jeffrey Poole
Print Name

J.S. Poole
Signature

11-12-12
Date

Attachment 1 – Visual Examination Data Form

Site ID: RHINL			
Examination Date: 11/14/12		Batch Number: INLRHVE12001	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: N/A
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: N/A	Recording Stop: N/A
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: FF-45D	
Container Type:		Container Type: 55 GAL DRUM	
Waste Matrix Code:		Waste Matrix Code: S5110	
Waste Stream:		Waste Stream: ID-EBR-S5000	
		Rigid Liner: ☐Y ☒N Type:	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: N/A	
Percent Fill: Percent Organic Waste:		Percent Fill: 90 Percent Organic Waste: 10	
Layers of Confinement:	Closure Method:	Layers of Confinement: 0	Closure Method: N/A
Comments (e.g., filter information, NCRs): FILTER MODEL: NUCFIL- 019SDS, SERIAL NUMBER: BL-50			

Waste Description:
30 GALLON DRUM # FF-45D (IM)
WIRE ROPE SLING WITH METAL HOOK (IM)
BREACHED PLASTIC SLEEVING (P)
NYLON DRUM LIFTING BAG (P)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number FF-45D

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags NOT defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	
Comments: N/A			

Visual Examination Operator 1:

Bret Parmer
Print Name

J Bret Parmer
Signature

11-14-12
Date

Visual Examination Operator 2:

Jeffrey Poole
Print Name

J.S. Poole
Signature

11-14-12
Date

Attachment 1 – Visual Examination Data Form

Site ID: RHINL			
Examination Date: 11/12/12	Batch Number: INLRHVE12001		
Procedure #: CCP-TP-500	Revision #: 11	Video Number:N/A	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: N/A	Recording Stop: N/A	

Initial Container ☐ N/A	Final Container ☒ N/A
Container or Package ID Number: FF-45D	Container or Package ID Number:
Container Type: 30 GAL DRUM	Container Type:
Waste Matrix Code: S5110	Waste Matrix Code:
Waste Stream: ID-EBR-S5000	Waste Stream:
	Rigid Liner: ☐Y ☐N Type: / Rigid Liner Lid: ☐ Y ☐N
	Rigid Liner Vented or Hole Size:
Percent Fill: 20 Percent Organic Waste: 0	Percent Fill: Percent Organic Waste:
Layers of Confinement: 0 / Closure Method: N/A	Layers of Confinement: / Closure Method:

Comments (e.g., filter information, NCRs): NUCFIL-019DS, SERIAL NUMBER AJ-2600

Waste Description:
METAL BRICKS 2 (IM) (OM)
WIRE ROPE SLINGS 2 (IM)
BRACING (AM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number FF-45D

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags NOT defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	
Comments: N/A			

Visual Examination Operator 1:

Bret Parmer
Print Name

J. Bret Parmer
Signature

11-12-12
Date

Visual Examination Operator 2:

Jeffrey Poole
Print Name

J.S Poole
Signature

11-12-12
Date

Attachment 1 – Visual Examination Data Form

Site ID: RHINL	
Examination Date: 11/14/12	Batch Number: INLRHVE12001
Procedure #: CCP-TP-500	Revision #: 11 / Video Number: N/A
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: N/A / Recording Stop: N/A

Initial Container ☒ N/A	Final Container ☐ N/A
Container or Package ID Number:	Container or Package ID Number: DD-45D
Container Type:	Container Type: 55 GAL DRUM
Waste Matrix Code:	Waste Matrix Code: S5110
Waste Stream:	Waste Stream: ID-EBR-S5000
	Rigid Liner: ☐Y ☒N Type: / Rigid Liner Lid: ☐ Y ☒N
	Rigid Liner Vented or Hole Size: N/A
Percent Fill: Percent Organic Waste:	Percent Fill: 90 Percent Organic Waste: 10
Layers of Confinement: / Closure Method:	Layers of Confinement: 0 / Closure Method: N/A

Comments (e.g., filter information, NCRs):
FILTER MODEL: NUCFIL- 019SDS, SERIAL NUMBER: BL-39

Waste Description:
30 GALLON DRUM # DD-45D (IM)
WIRE ROPE SLING WITH METAL HOOK (IM)
BREACHED PLASTIC SLEEVING (P)
NYLON DRUM LIFTING BAG (P)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number DD-45D

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags NOT defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:

Bret Parmer
Print Name

J Bret Parmer
Signature

11-14-12
Date

Visual Examination Operator 2:

Jeffrey Poole
Print Name

J.S. Poole
Signature

11-14-12
Date

Attachment 1 – Visual Examination Data Form

Site ID: RHINL			
Examination Date: 11/12/12		Batch Number: INLRHVE12001	
Procedure #: CCP-TP-500		Revision #: 11	Video Number:N/A
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: N/A	Recording Stop: N/A

Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: DD-45D		Container or Package ID Number:	
Container Type: 30 GAL DRUM		Container Type:	
Waste Matrix Code: S5110		Waste Matrix Code:	
Waste Stream: ID-EBR-S5000		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 20 Percent Organic Waste: 0		Percent Fill: Percent Organic Waste:	
Layers of Confinement: 0	Closure Method: N/A	Layers of Confinement:	Closure Method:

Comments (e.g., filter information, NCRs): NUCFIL-019DS, SERIAL NUMBER DJ-1815

Waste Description:
METAL BRICKS 2 (IM) (OM)
WIRE ROPE SLINGS WITH HOOKS 2 (IM)
BRACING (AM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number DD-45D

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:

Bret Parmer
Print Name

J Bret Parmer
Signature

11-12-12
Date

Visual Examination Operator 2:

Jeffrey Poole
Print Name

J.S. Poole
Signature

11-12-12
Date

Attachment 2 – Visual Examination Independent Technical Reviewer Checklist

Batch Data Report No.: INLRHVE12001

1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods (procedure) used?	☐ NO	☒ YES	☐ N/A
2. Was the correct revision of the operating procedure used?	☐ NO	☒ YES	☐ N/A
3. Were all the transcription errors corrected?	☐ NO	☐ YES	☒ N/A
4. Are BDR contents complete and match the Visual Examination Batch Data report Table of Contents?	☐ NO	☒ YES	☐ N/A
5. Does the BDR include VE for no more than 20 containers?	☐ NO	☒ YES	☐ N/A
6. Is all data recorded signed and dated in reproducible ink?	☐ NO	☒ YES	☐ N/A
7. Is all raw data recorded clearly, legibly, and accurately?	☐ NO	☒ YES	☐ N/A
8. Are all changes to original data lined out, initialed and dated by the individual making the changes or an individual authorized to make the change?	☐ NO	☐ YES	☒ N/A
9. Is there an adequate written description of the contents?	☐ NO	☒ YES	☐ N/A
10. Were the recording equipment checks satisfactory?	☐ NO	☐ YES	☒ N/A
11. Has each container in this BDR been evaluated for the presence of prohibited wastes?	☐ NO	☒ YES	☐ N/A
12. Has the physical waste form in each container in this BDR been evaluated against the Waste Stream Description and the Waste Matrix Code?	☐ NO	☒ YES	☐ N/A
13. Have the RH Quality Assurance Objectives (QAOs) for VE been met?	☐ NO	☒ YES	☐ N/A
Precision – reconciled discrepancies between operators or between the operator and ITR.	☐	☒	☐
Accuracy – trained operators	☐	☒	☐
Representativeness – description of container contents	☐	☒	☐
Completeness – completed data form and/or recording	☐	☒	☐
Comparability – proper training and adequate AK source documents are available for unopened containers.	☐	☒	☐
14. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☒ N/A

Comments: N/A

Independent Technical Reviewer:

Spencer Patten
Printed Name

Signature

11/15/12
Date

DIVIDER PAGE

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary

BDR Number: IN-ARP-VE-002812 **Examination Date:** 09/12/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
1. Is the completed, signed and dated Independent Technical Reviewer Checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, C3-10b**	X			
2. Does the BDR contain all items addressed in the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-10b**	X			
3. Does the BDR include a listing of all container numbers in the batch? **Reference Source: CCP-PO-001, C3-10b**	X			
4. List all containers that have met QAOs. **Reference Source: CCP-PO-001, C3-10b**				Container Numbers: ARP71211 ARP71213, ARP71218, ARP71219 ARP71221, ARP71225, ARP71227 ARP71228, ARP71230
5. Is the current implementing procedure and revision number included in the BDR? **Reference Source: CCP-PO-001, C3-4, C3-10b, Table C3-11**	X			
6. Is the BDR date included? **Reference Source: CCP-PO-001, Table C3-11**	X			
7. Is there a reference to or copy of any associated NCRs (if any) in the BDR? **Reference Source: CCP-PO-001, Table C3-11**			X	No NCR's
8. Are there 20 or fewer containers in the batch? **Reference Source: CCP-PO-001 C3-10**	X			
9. Are the data properly reported (i.e., data are reported in correct units and with correct significant figures). **Reference Source: CCP-PO-001 C3-10b**	X			
10. Is there evidence of verification that the physical form matches the Waste Matrix Code? **Reference Source: CCP-PO-001, C3-4**	X			
11. Is there evidence of verification that the physical form matches the waste stream description? **Reference Source: CCP-PO-001, C1-4**	X			
12. Are prohibited items absent? **Reference Source: CCP-PO-001, C3-4**	X			

COPY

CCP RECORDS ORIGINAL
DATE REC'D 9-17-12

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-ARP-VE-002812 **Examination Date:** 09/12/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
13. Does observable liquid, if present, meet the criteria of the TSDF-WAC? **Reference Source: CCP-PO-001, C3-4b**	X			
14. Were discrepancies between the Visual Examination operator and the ITR with regards to identification of waste matrix code, liquids in excess of the TSDF-WAC, or compressed gases reconciled? NA if no discrepancies. **Reference Source: CCP-PO-001, C3-4b**			X	No Discrepancies
15. Are the training requirements met for the VE Expert and VE Operators who have signed the data forms? **Reference Source: CCP-PO-001, C1-4, C3-4**	X			
16. Is evidence of a satisfactory audio/video test included in the BDR? NA [not applicable] for VE Method for Newly Generated Waste. **Reference Source: CCP-PO-001, C1-4**			X	Newly Generated Waste
17. If the VE was not recorded using audio/video media, does the data sheet contain the signature of two qualified operators who observed for themselves the waste being placed into the container? NA if audio/video used. **Reference Source: CCP-PO-001, C1-4**	X			
18. Are the weights/estimated weights for the 12 waste material parameters reported in kilograms (kg)? **Reference Source: CCP Technical Procedures**	X			
19. Are the descriptions for each waste material parameter included in the BDR? **Reference Source: CCP-PO-001, C1-4**	X			
20. Is the gross weight reported (in kg) for each container included in the BDR? **Reference Source: CCP Technical Procedures**	X			
21. Is the number of layers of confinement recorded? **Reference Source: CCP-PO-001, C-3d**	X			
22. Is sufficient information included in the BDR to determine the packaging configuration? **Reference Source: CCP-PO-001 C-3d**	X			

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-ARP-VE-002812 **Examination Date:** 09/12/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
23. Is the type and number of filters recorded? **Reference Source: CCP-PO-001, C-3d**	X			
24. Is the size of the rigid liner vent hole recorded to determine the appropriate DAC? NA if no liner lid. **Reference Source: CCP-PO-001, C-3d**			X	No liner lid
25. For Los Alamos National Laboratory (LANL) Sealed Sources, does the characterized waste container meet the definition of sealed sources per Title 10 Code of Federal Regulations (CFR) 30.4 and Title 10 CFR 835.2 (effective January 1, 2004) evidence of which is assembled as part of AK documentation? **Reference Source: CCP Technical Procedures**			X	Not a sealed source
26. For LANL Sealed Sources, are sealed sources the only non-packaging items in the waste container? **Reference Source: CCP Technical Procedures**			X	Not a sealed source
27. For LANL Sealed Sources, are the sealed sources a U.S. Department of Transportation (DOT) Special Form Class 7 (Radioactive Material) per Title 49 CFR 34.27 (effective January 1, 2004) and the certification of which is assembled as part of the AK documentation? **Reference Source: CCP Technical Procedures**			X	Not a sealed source
28. For LANL Sealed Sources, is the integrity of each sealed source validated by documented contamination survey results to meet the requirements of Title 10 CFR 34.27 (effective January 1, 2004), and assembled as part of AK documentation? **Reference Source: CCP Technical Procedures**			X	Not a sealed source

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-ARP-VE-002812 **Examination Date:** 09/12/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
29. For LANL Sealed Sources, is each sealed source a rigid sealed container less than or equal to 4 L in size or in a rigid sealed container less than or equal to 4 L? **Reference Source: CCP Technical Procedures**			X	Not a sealed source
30. For LANL Sealed Sources, AK documentation does not indicate the use of volatile organic compounds (VOCs) or VOC-bearing materials as constituents of sealed sources? **Reference Source: CCP Technical Procedures**			X	Not a sealed source
31. For LANL Sealed Sources, the outer casing of each sealed source is of a non VOC-bearing material which is verified using the VE technique at the time of packaging? **Reference Source: CCP Technical Procedures**			X	Not a sealed source

Comments: None

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

Steve Castro	Steve Castro	09/17/12
SPM Printed Name	Signature	Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

Attachment 4 – CCP Waste VE Technique Batch Data Report Cover Sheet

Batch Data Report No.: IN-ARP-VE-002812

	Waste Container ID Number
1	ARP 71211
2	ARP 71219
3	ARP 71227
4	ARP 71221
5	ARP 71225
6	ARP 71228
7	ARP 71218
8	ARP 71230
9	ARP 71213
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

N/A 9/12/12

ITR:

David Jeckman		9-13-12
Printed Name	Signature	Date

VEE:

Jeffrey Poole	J.S. Poole	9-13-12
Printed Name	Signature	Date

CCP RECORDS ORIGINAL
DATE REC'D 9-13-12

001

Attachment 3 – CCP Waste VE Technique Batch Data Report Table of Contents

Batch Data Report No.: IN-ARP-VE-002812 **Batch Data Report Date:** 9/12/12

Table Of Contents		
Item	Description	Page No.
1	Attachment 4, CCP Waste VE Technique Batch Data Report Cover Sheet	1
2	Attachment 3, CCP Waste VE Technique Batch Data Report Table of Contents	2
3	CCP Waste Visual Examination Technique Data Form	3
4	Attachment 2, CCP Waste VE Technique Independent Technical Reviewer Checklist	66
5	Copy of NCRs (NA, If Not Applicable)	N/A

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	ARP71211
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	8/09
	b. Container Type: 55 gal. drum or SWB:	55 GAL.
2.	Site ID and Location:	IN-RWMC-ARP-6
3.	Batch Number:	IN-ARP-VE-002812
4.	Examination Date:	09/12/12
5.	Procedure CCP-TP-006, Rev.:	16
6.	a. Drum Packing Station (DPS) Number:	701
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	XC0917
	c. Scale Calibration Due Date:	06/07/13
	d. Test Weight ID:	XC0834
	e. Test Weight Calibration Due Date:	12/16/12
	f. Test Weight (kgs):	5.0
	g. Scale Readout of Test Weight (kgs):	5.0
	h. Difference Between Test Weight and Scale Readout (kgs):	0.0
	i. DPS Scale Check SAT (Y):	Y
	Container Scale Check	
	j. Scale Serial/ID Number:	729255
	k. Scale Calibration Due Date:	11/07/12
	l. Test Weight ID:	722311
	m. Test Weight Calibration Due Date:	11/07/12
	n. Test Weight (kg):	224.0
	o. Scale Readout of Test Weight (kgs):	224.0
	p. Difference Between Test Weight and Scale Readout (kgs):	0.0
	q. Container Scale Check SAT (Y):	Y
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	220177
8.	Container Filter Torque Data:	
	a. Filter Torque Wrench Serial/ID Number:	724693
	b. Filter Torque Wrench Calibration Due Date:	11/01/12
	c. Filter Model No.:	NUCFIL-019DS
	d. Filter Serial No.:	GL-200
	e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
	f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71211							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				METAL (NSW)	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71211							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	i.	Other inorganic materials (OI)			10.0	N/A		15.5
30		j.	Graphite		1.0	N/A		0.5
31				GRAPHITE	1.0	2.2		0.5
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		9.0	N/A		15.0
49				OIL-DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				PAPER (NSW)	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71211							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.0	N/A		0.0
67				RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC (NSW)	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				92.2	N/A		76.8
75		x1. Sludge			92.2	N/A		76.8
76				PALE YELLOWISH ORANGE POWDERY SLUDGE WITH CALCIUM SILICATE	92.2	1.0 - 1.5	1.2	76.8
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				4.0	N/A		1.8
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			4.0	N/A		1.8
92				EVAPORATOR SALT	4.0	2.2		1.8
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				35.0	N/A		29.2
95				SOIL	35.0	1.0 - 1.4	1.2	29.2
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				141.2	N/A		123.3
98	13. (ORGANIC SLUDGE) weight (92.2) kg was obtained by subtracting the weighed waste weight of (49.0) kg and the container net weight of (34.0) kg from the gross weight (175.2) kg of the waste container. (175.2) - (49.0) - (34.0) = (92.2) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. REFERENCE LETTER: CP:08:00210/UFC:2300.00							
101								

006

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71211	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71211	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	23.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	220177
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	720178
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	09/21/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	0944
22. Measured gross weight of loaded container, fully assembled (kgs):	175.2
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	386.2
23. Container closure date (mm/dd/yy):	09/12/12
24. Percent fill of container:	70.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	141.2
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71211	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.5
31. Total volume of Solidified Organics (L):	76.8
32. Total volume of Solidified Inorganics (L):	16.8
33. Total volume of Soils/Gravel (L):	29.2
a. Total volume (L):	123.3
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	65.3%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

L. VERLANIC	S. Verlanic	9-12-12
Enter Name	Signature	Date

Visual Examination Operator 2:

J. STANTON	Jodi M. Stanton	9/12/12
Enter Name	Signature	Date

Visual Examination Expert:

B. STARK	Brad Stark	9-12-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	ARP71219
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	BDS
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location:	IN-RWMC-ARP-6
3.	Batch Number:	IN-ARP-VE-002812
4.	Examination Date:	09/12/12
5.	Procedure CCP-TP-006, Rev.:	16
6.	a. Drum Packing Station (DPS) Number:	701
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	220177
8.	Container Filter Torque Data:	
	a. Filter Torque Wrench Serial/ID Number:	724693
	b. Filter Torque Wrench Calibration Due Date:	11/01/12
	c. Filter Model No.:	NUCFIL-019DS
	d. Filter Serial No.:	GL-213
	e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
	f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71219							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.5	N/A		0.1
7				METAL	0.5	8.0		0.1
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				ALUMINUM (NSW)	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71219							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	i.	Other inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31			N/A		N/A	2.2		0.0
32			N/A		N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34			N/A		N/A	2.3		0.0
35			N/A		N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37			N/A		N/A	2.0		0.0
38			N/A		N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40			N/A		N/A	3.0		0.0
41			N/A		N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43			N/A		N/A	2.0 - 5.0	0.0	0.0
44			N/A		N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46			N/A		N/A	2.0		0.0
47			N/A		N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49			N/A		N/A	0.1 - 2.8	0.0	0.0
50			N/A		N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52			N/A		N/A	0.0		0.0
53			N/A		N/A	0.0		0.0
54			N/A		N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57			PAPER (NSW)		N/A	0.9		0.0
58			N/A		N/A	0.9		0.0
59			N/A		N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61			N/A		N/A	0.8		0.0
62			N/A		N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64			N/A		N/A	1.0		0.0
65			N/A		N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71219							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.0	N/A		0.0
67				N/A	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.9	N/A		1.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC (NSW)	N/A	0.9		0.0
72				TRAY LINER (WAIP)	0.9	0.9		1.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				0.0	N/A		0.0
75		x1. Sludge			0.0	N/A		0.0
76				N/A	N/A	1.0 - 1.5	0.0	0.0
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				15.3	N/A		12.6
83		y1. Sludge			15.0	N/A		12.5
84				MODERATE RED CRUMBLY SLUDGE WITH WHITE CHUNKS AND PORTLAND CEMENT	15.0	1.0 - 1.5	1.2	12.5
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.3	N/A		0.1
92				EVAPORATOR SALT	0.3	2.2		0.1
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				148.5	N/A		123.8
95				SOIL	148.5	1.0 - 1.4	1.2	123.8
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				165.2	N/A		137.5
98	13. (SOIL) weight (148.5) kg was obtained by subtracting the weighed waste weight of (16.7) kg and the container net weight of (34.0) kg from the gross weight (199.2) kg of the waste container. (199.2) - (16.7) - (34.0) = (148.5) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. REFERENCE LETTER: CP:08:00210/UFC:2300.00							
101								

013

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71219	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71219	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	29.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	220177
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	720178
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	09/21/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1020
22. Measured gross weight of loaded container, fully assembled (kgs):	199.2
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	439.2
23. Container closure date (mm/dd/yy):	09/12/12
24. Percent fill of container:	90.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	165.2
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71219	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	1.1
31. Total volume of Solidified Organics (L):	0.0
32. Total volume of Solidified Inorganics (L):	12.6
33. Total volume of Soils/Gravel (L):	123.8
a. Total volume (L):	137.5
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	
c. Soil (S4200):	X
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	0.0%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	N/A

Section 6: Approvals

Visual Examination Operator 1:		
J. STANTON	Jodi M. Stanton	9/12/12
Enter Name	Signature	Date
Visual Examination Operator 2:		
L. VERLANIC	S. VerLanic	9-12-12
Enter Name	Signature	Date
Visual Examination Expert:		
B. STARK	Brad Stark	9-12-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	ARP71227
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	BRS
b. Container Type: 55 gal. drum or SWB:	55 GAL.
2. Site ID and Location:	IN-RWMC-ARP-6
3. Batch Number:	IN-ARP-VE-002812
4. Examination Date:	09/12/12
5. Procedure CCP-TP-006, Rev.:	16
6. a. Drum Packing Station (DPS) Number:	701
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	220177
8. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	724693
b. Filter Torque Wrench Calibration Due Date:	11/01/12
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	GL-201
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71227							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.8	N/A		0.1
7				METAL	0.8	8.0		0.1
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71227							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	i.	Other inorganic materials (OI)			9.0	N/A		15.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		9.0	N/A		15.0
49				OIL-DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				PAPER (NSW)	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71227							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.0	N/A		0.0
67				RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC (NSW)	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				111.3	N/A		92.8
75		x1. Sludge			111.3	N/A		92.8
76				MODERATE YELLOWISH ORANGE CRUMBLY SLUDGE WITH CALCIUM SILICATE	111.3	1.0 - 1.5	1.2	92.8
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.3	N/A		0.1
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.3	N/A		0.1
92				EVAPORATOR SALT	0.3	2.2		0.1
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				18.0	N/A		15.0
95				SOIL	18.0	1.0 - 1.4	1.2	15.0
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				139.4	N/A		123.0
98	13. (ORGANIC SLUDGE) weight (111.3) kg was obtained by subtracting the weighed waste weight of (28.1) kg and the container net weight of (34.0) kg from the gross weight (173.4) kg of the waste container. (173.4) - (28.1) - (34.0) = (111.3) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b.			REFERENCE LETTER: CP:08:00210 / UFC:2300.00				
101								

020

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71227	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71227	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	27.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	220177
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	720178
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	09/21/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1050
22. Measured gross weight of loaded container, fully assembled (kgs):	173.4
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	382.3
23. Container closure date (mm/dd/yy):	09/12/12
24. Percent fill of container:	85.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	139.4
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71227	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.1
31. Total volume of Solidified Organics (L):	92.8
32. Total volume of Solidified Inorganics (L):	15.1
33. Total volume of Soils/Gravel (L):	15.0
a. Total volume (L):	123.0
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	79.8%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

L. VERLANIC	S. Verlanic	9-12-12
Enter Name	Signature	Date

Visual Examination Operator 2:

J. STANTON	Jodi M. Stanton	9/12/12
Enter Name	Signature	Date

Visual Examination Expert:

B. STARK	Brad Stark	9-12-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	ARP71221
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	[illegible]
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location:	IN-RWMC-ARP-6
3.	Batch Number:	IN-ARP-VE-002812
4.	Examination Date:	09/12/12
5.	Procedure CCP-TP-006, Rev.:	16
6.	a. Drum Packing Station (DPS) Number:	701
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	220177
8.	Container Filter Torque Data:	
	a. Filter Torque Wrench Serial/ID Number:	724693
	b. Filter Torque Wrench Calibration Due Date:	11/01/12
	c. Filter Model No.:	NUCFIL-019DS
	d. Filter Serial No.:	HL-499
	e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
	f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71221							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				METAL (NSW)	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71221							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	i.	Other inorganic materials (OI)			9.0	N/A		15.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		9.0	N/A		15.0
49				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				PAPER (NSW)	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71221							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.0	N/A		0.0
67				RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC (NSW)	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				86.5	N/A		72.1
75		x1. Sludge			86.5	N/A		72.1
76				YELLOWISH GRAY PUTTY LIKE SLUDGE WITH ~~CALCIUM~~ SILICATE	86.5	1.0 - 1.5	1.2	72.1
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				10.3	N/A		8.4
83		y1. Sludge			10.0	N/A		8.3
84				MODERATE RED CRUMBLY SLUDGE WITH PORTLAND CEMENT	10.0	1.0 - 1.5	1.2	8.3
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.3	N/A		0.1
92				EVAPORATOR SALT	0.3	2.2		0.1
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				35.0	N/A		29.2
95				SOIL	35.0	1.0 - 1.4	1.2	29.2
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				140.8	N/A		124.7
98	13. (ORGANIC SLUDGE) weight (86.5) kg was obtained by subtracting the weighed waste weight of (54.3) kg and the container net weight of (34.0) kg from the gross weight (174.8) kg of the waste container. (174.8) - (54.3) - (34.0) = (86.5) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. REFERENCE LETTER: CP:08:00210/UFC:2300.00							
101								

CALCIUM L.V. 9-13-12

027

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71221	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71221	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	28.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	220177
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	720178
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	09/21/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1115
22. Measured gross weight of loaded container, fully assembled (kgs):	174.8
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	385.4
23. Container closure date (mm/dd/yy):	09/12/12
24. Percent fill of container:	90.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	140.8
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71221	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.0
31. Total volume of Solidified Organics (L):	72.1
32. Total volume of Solidified Inorganics (L):	23.4
33. Total volume of Soils/Gravel (L):	29.2
a. Total volume (L):	124.7
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	61.4%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

J. STANTON	Jodi M. Stanton	9/12/12
Enter Name	Signature	Date

Visual Examination Operator 2:

L. VERLANIC	L. Verlanic	9-12-12
Enter Name	Signature	Date

Visual Examination Expert:

B. STARK	Brad Stark	9-12-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	ARP71225
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	BDS
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location:	IN-RWMC-ARP-6
3. Batch Number:	IN-ARP-VE-002812
4. Examination Date:	09/12/12
5. Procedure CCP-TP-006, Rev.:	16
6. a. Drum Packing Station (DPS) Number:	701
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	220177
8. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	724693
b. Filter Torque Wrench Calibration Due Date:	11/01/12
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	HL-505
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71225							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5					0.0	N/A		0.0
6	a. Iron-based metals/alloys (IM)				N/A	8.0		0.0
7				METAL (NSW)	N/A	8.0		0.0
8				N/A	0.0	N/A		0.0
9	b. Aluminum-based metals/alloys (AM)				N/A	3.0		0.0
10				N/A	N/A	3.0		0.0
11				N/A	0.0	N/A		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			N/A	11.0		0.0
14				N/A	N/A	11.0		0.0
15				N/A	0.0	N/A		0.0
16		e. Beryllium			N/A	1.8		0.0
17				N/A	N/A	1.8		0.0
18				N/A	0.0	N/A		0.0
19		f. Depleted uranium			N/A	19.1		0.0
20				N/A	N/A	19.1		0.0
21				N/A	0.0	N/A		0.0
22		g. Copper			N/A	9.0		0.0
23				N/A	N/A	9.0		0.0
24				N/A	0.0	N/A		0.0
25		h. Other (See Note a)			N/A	0.0		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A				

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71225							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	i. Other inorganic materials (OI)				0.0	N/A		0.0
30		j. Graphite			0.0	N/A		0.0
31			N/A		N/A	2.2		0.0
32			N/A		N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34			N/A		N/A	2.3		0.0
35			N/A		N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37			N/A		N/A	2.0		0.0
38			N/A		N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40			N/A		N/A	3.0		0.0
41			N/A		N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43			N/A		N/A	2.0 - 5.0	0.0	0.0
44			N/A		N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46			N/A		N/A	2.0		0.0
47			N/A		N/A	2.0		0.0
48		p. Inorganic sorbents			0.0	N/A		0.0
49			N/A		N/A	0.1 - 2.8	0.0	0.0
50			N/A		N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52			N/A		N/A	0.0		0.0
53			N/A		N/A	0.0		0.0
54			N/A		N/A	0.0		0.0
55	r. Cellulosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57			PAPER (NSW)		N/A	0.9		0.0
58			N/A		N/A	0.9		0.0
59			N/A		N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61			N/A		N/A	0.8		0.0
62			N/A		N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64			N/A		N/A	1.0		0.0
65			N/A		N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71225							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.0	N/A		0.0
67				N/A	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.9	N/A		1.0
70				NO BAG-OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC (NSW)	N/A	0.9		0.0
72				1 TRAY LINER (WAIP)	0.9	0.9		1.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				8.0	N/A		6.7
75		x1. Sludge			8.0	N/A		6.7
76				VERY PALE ORANGE CRUMBLY SLUDGE WITH CALCIUM SILICATE	8.0	1.0 - 1.5	1.2	6.7
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				12.1	N/A		10.1
83		y1. Sludge			12.0	N/A		10.0
84				MODERATE REDDISH ORANGE CRUMBLY SLUDGE WITH PORTLAND CEMENT AND WHITE CHUNKS	12.0	1.0 - 1.5	1.2	10.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.1	N/A		0.1
88				ROASTER OXIDE FINES	0.1	1.5 - 4.0	1.5	0.1
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				130.0	N/A		108.3
95				SOIL	130.0	1.0 - 1.4	1.2	108.3
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				151.0	N/A		126.1
98	13. (SOIL) weight (130.0) kg was obtained by subtracting the weighed waste weight of (21.0) kg and the container net weight of (34.0) kg from the gross weight (185.0) kg of the waste container. (185.0) - (21.0) - (34.0) = (130.0) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. N/A							
101								

034

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71225	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71225	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	30.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	220177
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	720178
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	09/21/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1310
22. Measured gross weight of loaded container, fully assembled (kgs):	185.0
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	407.8
23. Container closure date (mm/dd/yy):	09/12/12
24. Percent fill of container:	95.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	151.0
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71225	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	1.0
31. Total volume of Solidified Organics (L):	6.7
32. Total volume of Solidified Inorganics (L):	10.1
33. Total volume of Soils/Gravel (L):	108.3
a. Total volume (L):	126.1
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	
c. Soil (S4200):	X
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	5.3%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

L. VERLANIC	S. Verlanic	9-12-12
Enter Name	Signature	Date

Visual Examination Operator 2:

J. STANTON	Jodi M. Stanton	9/12/12
Enter Name	Signature	Date

Visual Examination Expert:

B. STARK	Brad Stark	9-12-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	ARP71228
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	BDS
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location:	IN-RWMC-ARP-6
3. Batch Number:	IN-ARP-VE-002812
4. Examination Date:	09/12/12
5. Procedure CCP-TP-006, Rev.:	16
6. a. Drum Packing Station (DPS) Number:	701
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	220177
8. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	724693
b. Filter Torque Wrench Calibration Due Date:	11/01/12
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	HL-495
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71228							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				METAL (NSW)	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				ALUMINUM (NSW)	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71228							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4				9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	i.	Other inorganic materials (OI)			9.0	N/A		15.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		9.0	N/A		15.0
49				OIL-DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				WOOD (NSW)	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71228							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.0	N/A		0.0
67				N/A	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				PLASTIC (NSW)	N/A	0.9		0.0
71				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				6.0	N/A		5.0
75		x1. Sludge			6.0	N/A		5.0
76				VERY PALE ORANGE CRUMBLY SLUDGE WITH CALCIUM SILICATE	6.0	1.0 - 1.5	1.2	5.0
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				88.2	N/A		73.5
83		y1. Sludge			88.2	N/A		73.5
84				MODERATE REDDISH BROWN CRUMBLY SLUDGE WITH PORTLAND CEMENT AND WHITE CHUNKS	88.2	1.0 - 1.5	1.2	73.5
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				35.0	N/A		29.2
95				SOIL	35.0	1.0 - 1.4	1.2	29.2
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				138.2	N/A		122.7
98	13. (INORGANIC SLUDGE) weight (88.2) kg was obtained by subtracting the weighed waste weight of (50.0) kg and the container net weight of (34.0) kg from the gross weight (172.2) kg of the waste container. (172.2) - (50.0) - (34.0) = (88.2) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. N/A							
101								

041

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71228	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71228	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	22.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	220177
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	720178
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	09/21/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1345
22. Measured gross weight of loaded container, fully assembled (kgs):	172.2
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	379.6
23. Container closure date (mm/dd/yy):	09/12/12
24. Percent fill of container:	70.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	138.2
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71228	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.0
31. Total volume of Solidified Organics (L):	5.0
32. Total volume of Solidified Inorganics (L):	88.5
33. Total volume of Soils/Gravel (L):	29.2
a. Total volume (L):	122.7
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	4.3%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

J. STANTON	Jodi M Stanton	9/12/12
Enter Name	Signature	Date

Visual Examination Operator 2:

L. VERLANIC	S. Verlanic	9-12-12
Enter Name	Signature	Date

Visual Examination Expert:

B. STARK	Brad Stark	9-12-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	ARP71218
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	BDB
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location:	IN-RWMC-ARP-6
3. Batch Number:	IN-ARP-VE-002812
4. Examination Date:	09/12/12
5. Procedure CCP-TP-006, Rev.:	16
6. a. Drum Packing Station (DPS) Number:	701
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	220177
8. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	724693
b. Filter Torque Wrench Calibration Due Date:	11/01/12
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	GL-202
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71218							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				METAL (NSW)	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71218							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	i.	Other inorganic materials (OI)			9.0	N/A		15.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		9.0	N/A		15.0
49				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				PAPER (NSW)	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71218							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
66	v. Rubber (R)				0.0	N/A		0.0
67				RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC (NSW)	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				3.0	N/A		2.5
75		x1. Sludge			3.0	N/A		2.5
76				VERY PALE ORANGE PUTTY LIKE SLUDGE WITH CALCIUM SILICATE	3.0	1.0 - 1.5	1.2	2.5
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				77.6	N/A		64.7
83		y1. Sludge			77.6	N/A		64.7
84				MODERATE RED CLAY LIKE SLUDGE WITH PORTLAND CEMENT	77.6	1.0 - 1.5	1.2	64.7
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				5.0	N/A		4.2
95				SOIL	5.0	1.0 - 1.4	1.2	4.2
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				94.6	N/A		86.4
98	13. (IN SLUDGE) weight (77.6) kg was obtained by subtracting the weighed waste weight of (17.0) kg and the container net weight of (34.0) kg from the gross weight (128.6) kg of the waste container. (128.6) - (17.0) - (34.0) = (77.6) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. N/A							
101								

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71218	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71218	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	19.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	220177
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	720178
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	09/21/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1417
22. Measured gross weight of loaded container, fully assembled (kgs):	128.6
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	283.5
23. Container closure date (mm/dd/yy):	09/12/12
24. Percent fill of container:	60.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	94.6
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71218	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.0
31. Total volume of Solidified Organics (L):	2.5
32. Total volume of Solidified Inorganics (L):	79.7
33. Total volume of Soils/Gravel (L):	4.2
a. Total volume (L):	86.4
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	3.2%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

L. VERLANIC	S. Verlanic	9-12-12
Enter Name	Signature	Date

Visual Examination Operator 2:

J. STANTON	Jodi M. Stanton	9/12/12
Enter Name	Signature	Date

Visual Examination Expert:

B. STARK	Brad Stark	9-12-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	ARP71230
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	BSS
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location:	IN-RWMC-ARP-6
3. Batch Number:	IN-ARP-VE-002812
4. Examination Date:	09/12/12
5. Procedure CCP-TP-006, Rev.:	16
6. a. Drum Packing Station (DPS) Number:	701
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	220653
8. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	724693
b. Filter Torque Wrench Calibration Due Date:	11/01/12
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	HL-504
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71230							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
6	a.	Iron-based metals/alloys (IM)			1.0	N/A		0.1
7				METAL	1.0	8.0		0.1
8				N/A	N/A	8.0		0.0
9	b.	Aluminum-based metals/alloys (AM)			0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c.	Other metals (OM)			0.0	N/A		0.0
13		d.	Lead		0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e.	Beryllium		0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f.	Depleted uranium		0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g.	Copper		0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h.	Other (See Note a)		0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71230							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	i.	Other inorganic materials (OI)			9.0	N/A		15.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		9.0	N/A		15.0
49				OIL-DRI TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other.(See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				PAPER (NSW)	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				CARDBOARD (NSW)	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71230							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4				9. Waste Material Parameter and Item Description	10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
66	v. Rubber (R)				0.0	N/A		0.0
67				N/A	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				NO BAG-OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC (NSW)	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				110.2	N/A		91.8
75		x1. Sludge			110.2	N/A		91.8
76				PALE YELLOWISH ORANGE POWDERY SLUDGE WITH CALCIUM SILICATE	110.2	1.0 - 1.5	1.2	91.8
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				5.4	N/A		4.4
83		y1. Sludge			5.0	N/A		4.2
84				DUSKY RED CRUMBLY SLUDGE WITH PORTLAND CEMENT	5.0	1.0 - 1.5	1.2	4.2
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.4	N/A		0.2
92				EVAPORATOR SALT	0.4	2.2		0.2
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				12.0	N/A		10.0
95				SOIL	12.0	1.0 - 1.4	1.2	10.0
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				137.6	N/A		121.3
98	13. (ORGANIC SLUDGE) weight (110.2) kg was obtained by subtracting the weighed waste weight of (27.4) kg and the container net weight of (34.0) kg from the gross weight (171.6) kg of the waste container. (171.6) - (27.4) - (34.0) = (110.2) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. REFERENCE LETTER: CP:08:00210/UFC:2300.00							
101								

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71230	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71230	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	24.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	220653
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	720178
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	09/21/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1453
22. Measured gross weight of loaded container, fully assembled (kgs):	171.6
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	378.3
23. Container closure date (mm/dd/yy):	09/12/12
24. Percent fill of container:	75.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	137.6
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71230	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.1
31. Total volume of Solidified Organics (L):	91.8
32. Total volume of Solidified Inorganics (L):	19.4
33. Total volume of Soils/Gravel (L):	10.0
a. Total volume (L):	121.3
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	80.1%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

J. STANTON	Jodi M. Stanton	9/12/12
Enter Name	Signature	Date

Visual Examination Operator 2:

L. VERLANIC	L. Verlanic	9-12-12
Enter Name	Signature	Date

Visual Examination Expert:

B. STARK	Brad Stark	9-12-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	ARP71213
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	BJ>
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location:	IN-RWMC-ARP-6
3.	Batch Number:	IN-ARP-VE-002812
4.	Examination Date:	09/12/12
5.	Procedure CCP-TP-006, Rev.:	16
6.	a. Drum Packing Station (DPS) Number:	701
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	220177
8.	Container Filter Torque Data:	
	a. Filter Torque Wrench Serial/ID Number:	724693
	b. Filter Torque Wrench Calibration Due Date:	11/01/12
	c. Filter Model No.:	NUCFIL-019DS
	d. Filter Serial No.:	GL-210
	e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
	f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71213							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				1.0	N/A		0.1
7				METAL	1.0	8.0		0.1
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)			Aluminum	0.0	N/A		0.0
10				~~ALUMINIUM~~ (NSW) GS 9/13/12	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71213							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	i.	Other inorganic materials (OI)			9.3	N/A		15.1
30		j.	Graphite		0.3	N/A		0.1
31				GRAPHITE	0.3	2.2		0.1
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		9.0	N/A		15.0
49				OIL-DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				PAPER (NSW)	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71213							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.0	N/A		0.0
67				N/A	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC (NSW)	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				15.0	N/A		12.5
75		x1. Sludge			15.0	N/A		12.5
76				PALE YELLOWISH BROWN POWDERY SLUDGE WITH CALCIUM SILICATE	15.0	1.0 - 1.5	1.2	12.5
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				97.5	N/A		81.1
83		y1. Sludge			97.2	N/A		81.0
84				MODERATE RED CRUMBLY SLUDGE WITH PORTLAND CEMENT	97.2	1.0 - 1.5	1.2	81.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.3	N/A		0.1
92				EVAPORATOR SALT	0.3	2.2		0.1
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				30.0	N/A		25.0
95				SOIL	30.0	1.0 - 1.4	1.2	25.0
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				152.8	N/A		133.8
98	13. (IN SLUDGE) weight (97.2) kg was obtained by subtracting the weighed waste weight of (55.6) kg and the container net weight of (34.0) kg from the gross weight (186.8) kg of the waste container. (186.8) - (55.6) - (34.0) = (97.2) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. REFERENCE LETTER: CP:08:00210 / UFC:2300.00							
101								

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71213	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71213	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	24.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	220177
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	720178
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	09/21/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1520
22. Measured gross weight of loaded container, fully assembled (kgs):	186.8
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	411.8
23. Container closure date (mm/dd/yy):	09/12/12
24. Percent fill of container:	75.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	152.8
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71213	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.2
31. Total volume of Solidified Organics (L):	12.5
32. Total volume of Solidified Inorganics (L):	96.1
33. Total volume of Soils/Gravel (L):	25.0
a. Total volume (L):	133.8
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	9.8%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

L. VERLANIC	S. Verlanic	9-12-12
Enter Name	Signature	Date

Visual Examination Operator 2:

J. STANTON	Jodi M Stanton	9/12/12
Enter Name	Signature	Date

Visual Examination Expert:

B. STARK	Brad Stark	9-12-12
Enter Name	Signature	Date

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist

Batch Data Report No.: IN-ARP-VE-002812

Description			
1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods used?	☐ NO	☒ YES	☐ NA
a. Was the description of the waste items adequate?	☐ NO	☒ YES	☐ NA
2. Was the correct revision of operating procedure used? (Attachment 1, Section 1, Line 5)	☐ NO	☒ YES	☐ NA
3. Were the following calculation spot checks performed?			
a. Attachment 1, Section 2: Verify the total waste volume in Column 12, Row aa does not exceed 208 L for a 55-gallon drum or 1456 L for an SWB and verify the estimated weights in Row aa matches the measured net weight of waste in Attachment 1, Section 4, Row 26.	☐ NO	☒ YES	☐ NA
b. Attachment 1, Section 5: Verify the total waste volume in Row 33 a., matches the total waste volume in Section 2, Column 12, Row aa.	☐ NO	☒ YES	☐ NA
c. Attachment 1, Section 1: Check hand calculations in Lines 6h and 6p, and any additional hand calculations recorded in the comments field or in Section 2, Line 13.	☐ NO	☒ YES	☐ NA
4. Is only one waste stream selected in Line 34 of Attachment 1, Section 5, and is it consistent with the values shown in Attachment 1, Section 2, Column 12?	☐ NO	☒ YES	☐ NA
5. Is the data entered in the correct units and correct number of significant figures?	☐ NO	☒ YES	☐ NA
6. Were the data reviewed for transcription errors?	☐ NO	☒ YES	☐ NA
7. Does the BDR include VE for up to 20 containers?	☐ NO	☒ YES	☐ NA
8. Are BDR contents complete and do they match, Attachment 3, CCP Waste VE Batch Data Report Table of Contents?	☐ NO	☒ YES	☐ NA
9. Was completeness verified for data entry on the CCP VE Technique Data Form for the following?			
a. Section 1	☐ NO	☒ YES	☐ NA
b. Section 2	☐ NO	☒ YES	☐ NA
c. Section 3	☐ NO	☒ YES	☐ NA
d. Section 4	☐ NO	☒ YES	☐ NA
e. Section 5	☐ NO	☒ YES	☐ NA

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: IN-ARP-VE-002812

Description			
10. Is all the data signed and dated in Attachment 1, Section 6, using reproducible ink, and by the individual(s) generating it?	☐ NO	☒ YES	☐ NA
11. Is all data entered clearly, legibly, and accurately?	☐ NO	☒ YES	☐ NA
12. Were discrepancies between the operators reconciled?	☐ NO	☐ YES	☒ NA
13. Are all changes to original data lined out, initialed and dated by the individual making the changes?	☐ NO	☐ YES	☒ NA
14. Were data changes made by the individual who originally collected the data or an equally qualified individual?	☐ NO	☐ YES	☒ NA
15. Was the DPS scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
16. Was the daily DPS scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
17. Was the container scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
18. Was the daily container scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
19. Was the torque wrench(es) in calibration prior to VE Technique and documented correctly?	☐ NO	☒ YES	☐ NA
20. Were NCR(s) initiated as indicated in Attachment 1, Section 1, dispositioned, and approved appropriately?	☐ NO	☐ YES	☒ NA
21. Was the correct waste stream and waste matrix code assigned?	☐ NO	☒ YES	☐ NA
22. Is there a valid VE data form for each drum in the batch?	☐ NO	☒ YES	☐ NA
23. Were the operators trained and qualified in accordance with the applicable requirements?	☐ NO	☒ YES	☐ NA

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: IN-ARP-VE-002812

Description			
24. Was precision maintained by reconciling any discrepancies between the operator(s) and the ITR with regard to identification of waste matrix code, liquids in excess of WIPP Hazardous Waste Facility Permit and WIPP Waste Acceptance Criteria limits and compressed gases?	☐ NO	☐ YES	☒ NA

Description

Comments:

12. There were no discrepancies between operators. DJ 9-13-12
13. There were no data changes. DJ 9-13-12
14. There were no data changes. DJ 9-13-12
20. There were no NCR's. DJ 9-13-12
24. There were no discrepancies between operators and ITR. DJ 9-13-12

I have reviewed 100 percent of the container-specific and batch data in this BDR and find it acceptable.

ITR:

David Jackman		9-13-12
Printed Name	Signature	Date

DIVIDER PAGE

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary

BDR Number: IN-SRP-VE-000085				Examination Date: 03-12-2013
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
1. Is the completed, signed and dated Independent Technical Reviewer Checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, C3-10b**	X			
2. Does the BDR contain all items addressed in the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-10b**	X			
3. Does the BDR include a listing of all container numbers in the batch? **Reference Source: CCP-PO-001, C3-10b**	X			
4. List all containers that have met QAOs. **Reference Source: CCP-PO-001, C3-10b**				Container Numbers: SRP13109, SRP13118, SRP13133, SRP13138, SRP13146, SRP13147, SRP13148, SRP13150, SRP13151, SRP13154, SRP13155, SRP13156, SRP13158, SRP13161, SRP13164, SRP13165, SRP13166, SRP13167, SRP13168, SRP13169
5. Is the current implementing procedure and revision number included in the BDR? **Reference Source: CCP-PO-001, C3-4, C3-10b, Table C3-11**	X			
6. Is the BDR date included? **Reference Source: CCP-PO-001, Table C3-11**	X			
7. Is there a reference to or copy of any associated NCRs (if any) in the BDR? **Reference Source: CCP-PO-001, Table C3-11**			X	No NCR's
8. Are there 20 or fewer containers in the batch? **Reference Source: CCP-PO-001 C3-10**	X			
9. Are the data properly reported (i.e., data are reported in correct units and with correct significant figures). **Reference Source: CCP-PO-001 C3-10b**	X			
10. Is there evidence of verification that the physical form matches the Waste Matrix Code? **Reference Source: CCP-PO-001, C3-4**	X			
11. Is there evidence of verification that the physical form matches the waste stream description? **Reference Source: CCP-PO-001, C1-4**	X			
12. Are prohibited items absent? **Reference Source: CCP-PO-001, C3-4**	X			

COPY

NTPC RECORDS ORIGINAL
DATE REC'D 3-20-13

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-SRP-VE-000085	Examination Date: 03-12-2013			
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
13. Does observable liquid, if present, meet the criteria of the TSDF-WAC? **Reference Source: CCP-PO-001, C3-4b**	X			
14. Were discrepancies between the Visual Examination operator and the ITR with regards to identification of waste matrix code, liquids in excess of the TSDF-WAC, or compressed gases reconciled? NA if no discrepancies. **Reference Source: CCP-PO-001, C3-4b**			X	No Discrepancies
15. Are the training requirements met for the VE Expert and VE Operators who have signed the data forms? **Reference Source: CCP-PO-001, C1-4, C3-4**	X			
16. Is evidence of a satisfactory audio/video test included in the BDR? NA [not applicable] for VE Method for Newly Generated Waste. **Reference Source: CCP-PO-001, C1-4**			X	VE Method for Newly Generated Waste
17. If the VE was not recorded using audio/video media, does the data sheet contain the signature of two qualified operators who observed for themselves the waste being placed into the container? NA if audio/video used. **Reference Source: CCP-PO-001, C1-4**	X			
18. Are the weights/estimated weights for the 12 waste material parameters reported in kilograms (kg)? **Reference Source: CCP Technical Procedures**	X			
19. Are the descriptions for each waste material parameter included in the BDR? **Reference Source: CCP-PO-001, C1-4**	X			
20. Is the gross weight reported (in kg) for each container included in the BDR? **Reference Source: CCP Technical Procedures**	X			
21. Is the number of layers of confinement recorded? **Reference Source: CCP-PO-001, C-3d**	X			
22. Is sufficient information included in the BDR to determine the packaging configuration? **Reference Source: CCP-PO-001 C-3d**	X			

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-SRP-VE-000085 **Examination Date:** 03-12-2013

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
23. Is the type and number of filters recorded? **Reference Source: CCP-PO-001, C-3d**	X			
24. Is the size of the rigid liner vent hole recorded to determine the appropriate DAC? NA if no liner lid. **Reference Source: CCP-PO-001, C-3d**			X	No Liner Lid
25. For Los Alamos National Laboratory (LANL) Sealed Sources, does the characterized waste container meet the definition of sealed sources per Title 10 Code of Federal Regulations (CFR) 30.4 and Title 10 CFR 835.2 (effective January 1, 2004) evidence of which is assembled as part of AK documentation? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Sources
26. For LANL Sealed Sources, are sealed sources the only non-packaging items in the waste container? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Sources
27. For LANL Sealed Sources, are the sealed sources a U.S. Department of Transportation (DOT) Special Form Class 7 (Radioactive Material) per Title 49 CFR 34.27 (effective January 1, 2004) and the certification of which is assembled as part of the AK documentation? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Sources
28. For LANL Sealed Sources, is the integrity of each sealed source validated by documented contamination survey results to meet the requirements of Title 10 CFR 34.27 (effective January 1, 2004), and assembled as part of AK documentation? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Sources

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-SRP-VE-000085 **Examination Date:** 03-12-2013

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
29. For LANL Sealed Sources, is each sealed source a rigid sealed container less than or equal to 4 L in size or in a rigid sealed container less than or equal to 4 L? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Sources
30. For LANL Sealed Sources, AK documentation does not indicate the use of volatile organic compounds (VOCs) or VOC-bearing materials as constituents of sealed sources? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Sources
31. For LANL Sealed Sources, the outer casing of each sealed source is of a non VOC-bearing material which is verified using the VE technique at the time of packaging? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Sources

Comments: None

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

Roger Whiteaker	Roger Whiteaker	03/19/2013
SPM Printed Name	Signature	Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

Attachment 4 – CCP Waste VE Technique Batch Data Report Cover Sheet

Batch Data Report No.: IN-SRP-VE-000085

	Waste Container ID Number
1	SRP13148
2	SRP13151
3	SRP13150
4	SRP13167
5	SRP13146
6	SRP13166
7	SRP13147
8	SRP13158
9	SRP13118
10	SRP13164
11	SRP13161
12	SRP13156
13	SRP13165
14	SRP13154
15	SRP13155
16	SRP13169
17	SRP13168
18	SRP13109
19	SRP13138
20	SRP13133

ITR:

Printed Name	Signature	Date
Jodi M. Stanton	Jodi M. Stanton	3/13/13

VEE:

Printed Name	Signature	Date
Brad Stark	Brad Stark	3/14/13

NTPC RECORDS ORIGINAL
DATE REC'D 3-14-13

001

Attachment 3 – CCP Waste VE Technique Batch Data Report Table of Contents

Batch Data Report No.: IN-SRP-VE-000085 **Batch Data Report Date:** 3/12/13

Table Of Contents		
Item	Description	Page No.
1	Attachment 4, CCP Waste VE Technique Batch Data Report Cover Sheet	1
2	Attachment 3, CCP Waste VE Technique Batch Data Report Table of Contents	2
3	CCP Waste Visual Examination Technique Data Form	3
4	Attachment 2, CCP Waste VE Technique Independent Technical Reviewer Checklist	143
5	Copy of NCRs (NA, If Not Applicable)	N/A

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP13148
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
b. Container Type: 55 gal. drum or SWB:	55 GAL.
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000085
4. Examination Start Date:	03/12/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	501
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	XC0977
c. Scale Calibration Due Date:	07/02/13
d. Test Weight ID:	XC0490
e. Test Weight Calibration Due Date:	04/03/13
f. Test Weight (kgs):	5.0
g. Scale Readout of Test Weight (kgs):	5.0
h. Difference Between Test Weight and Scale Readout (kgs):	0.0
i. DPS Scale Check SAT (Y):	Y
Container Scale Check	
j. Scale Serial/ID Number:	725494
k. Scale Calibration Due Date:	11/21/13
l. Test Weight ID:	722311
m. Test Weight Calibration Due Date:	10/16/13
n. Test Weight (kg):	226.8
o. Scale Readout of Test Weight (kgs):	226.6
p. Difference Between Test Weight and Scale Readout (kgs):	0.2
q. Container Scale Check SAT (Y):	Y
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	232553
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13148							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)		11. Density (kg/L)	12.Volume (L)
5					0.0		N/A	0.0
6	a. Iron-based metals/alloys (IM)				N/A		8.0	0.0
7				N/A	N/A		8.0	0.0
8				N/A	0.0		N/A	0.0
9	b. Aluminum-based metals/alloys (AM)				N/A		3.0	0.0
10				N/A	N/A		3.0	0.0
11				N/A	0.0		N/A	0.0
12	c. Other metals (OM)				0.0		N/A	0.0
13		d. Lead			N/A		11.0	0.0
14				N/A	N/A		11.0	0.0
15				N/A	0.0		N/A	0.0
16		e. Beryllium			N/A		1.8	0.0
17				N/A	N/A		1.8	0.0
18				N/A	0.0		N/A	0.0
19		f. Depleted uranium			N/A		19.1	0.0
20				N/A	N/A		19.1	0.0
21				N/A	0.0		N/A	0.0
22		g. Copper			N/A		9.0	0.0
23				N/A	N/A		9.0	0.0
24				N/A	0.0		N/A	0.0
25		h. Other (See Note a)			N/A		0.0	0.0
26				N/A	N/A		0.0	0.0
27				N/A	N/A		0.0	0.0
28				N/A				

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13148							
3	**Section 2: Waste Material Parameter (WMP) Estimates**							
4				9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	l.	Other Inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

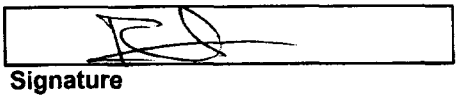
	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13148							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4				9. Waste Material Parameter and Item Description	10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
66	v. Rubber (R)				0.3	N/A		0.3
67				RUBBER BANDS TIGHTLY BOUND ON TOP (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				1.9	N/A		2.2
70				POLY BOTTLE BREACHED AND EMPTY AND PLASTIC TIGHTLY BOUND ON TOP	0.5	0.9		0.6
71				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
72				1 TRAY LINER, 1 BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				119.6	N/A		99.7
75		x1. Sludge			119.6	N/A		99.7
76				MODERATE YELLOWISH BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE	119.6	1.0 - 1.5	1.2	99.7
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95				N/A	N/A	0.0		0.0
96				N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98				N/A	N/A	1.0 - 1.4	0.0	0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				121.8	N/A		102.2
101	13. (ORGANIC SLUDGE) weight (119.6) kg was obtained by subtracting the weighed waste weight of (2.2) kg and the container net weight of (34.0) kg from the gross weight (155.8) kg of the waste container. (155.8) - (2.2) - (34.0) = (119.6) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

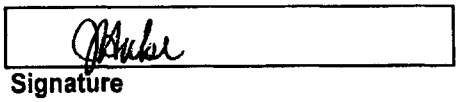
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13148	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

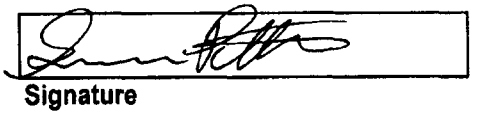
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13148	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	32.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	232553
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728558
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	04/22/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	0900
22. Measured gross weight of loaded container, fully assembled (kgs):	155.8
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	343.5
23. Container closure date (mm/dd/yy):	03/12/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	728707
b. Filter Torque Wrench Calibration Due Date:	05/04/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	EM-440
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	100.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	121.8
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13148	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	2.5
31. Total volume of Solidified Organics (L):	99.7
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	102.2
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	98.2%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:		
R. CUMMINS		3-12-13
Enter Name	Signature	Date

Visual Examination Operator 2:		
J. HULSE		3/12/13
Enter Name	Signature	Date

Visual Examination Expert:		
S. PATTEE		3/12/13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP13151
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
b. Container Type: 55 gal. drum or SWB:	55 GAL.
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000085
4. Examination Start Date:	03/12/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	502
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	XC0972
c. Scale Calibration Due Date:	07/02/13
d. Test Weight ID:	XC0838
e. Test Weight Calibration Due Date:	06/13/14
f. Test Weight (kgs):	5.0
g. Scale Readout of Test Weight (kgs):	5.0
h. Difference Between Test Weight and Scale Readout (kgs):	0.0
i. DPS Scale Check SAT (Y):	Y
Container Scale Check	
j. Scale Serial/ID Number:	725494
k. Scale Calibration Due Date:	11/21/13
l. Test Weight ID:	722311
m. Test Weight Calibration Due Date:	10/16/13
n. Test Weight (kg):	226.8
o. Scale Readout of Test Weight (kgs):	226.6
p. Difference Between Test Weight and Scale Readout (kgs):	0.2
q. Container Scale Check SAT (Y):	Y
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	236188
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13151							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				N/A	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13151							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	l.	Other inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				PAPER (NSW)	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				WOOD (NSW)	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13151							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
66	v. Rubber (R)				0.3	N/A		0.3
67	RUBBER BANDS TIGHTLY BOUND ON TOP (WAIP)				0.3	0.9 - 2.0	1.1	0.3
68	N/A				N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				2.9	N/A		3.3
70	NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED				N/A	0.9		0.0
71	TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)				1.4	0.9		1.6
72	PLASTIC TIGHTLY BOUND ON TOP				1.5	0.9		1.7
73	N/A				N/A	0.9		0.0
74	x. Organic matrix (OR)				100.0	N/A		83.3
75		x1. Sludge			100.0	N/A		83.3
76		PALE YELLOWISH BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE			100.0	1.0 - 1.5	1.2	83.3
77		N/A			N/A	1.0 - 1.5	0.0	0.0
78		N/A			N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80		N/A			N/A	0.0		0.0
81		N/A			N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84		N/A			N/A	1.0 - 1.5	0.0	0.0
85		N/A			N/A	1.0 - 1.5	0.0	0.0
86		N/A			N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88		N/A			N/A	1.5 - 4.0	0.0	0.0
89		N/A			N/A	1.5 - 4.0	0.0	0.0
90		N/A			N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92		N/A			N/A	0.0		0.0
93		N/A			N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95		N/A			N/A	0.0		0.0
96		N/A			N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98	N/A				N/A	1.0 - 1.4	0.0	0.0
99	N/A				N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				103.2	N/A		86.9
101	13. (ORGANIC SLUDGE) weight (100.0) kg was obtained by subtracting the weighed waste weight of (3.2) kg and the container net weight of (34.0) kg from the gross weight (137.2) kg of the waste container. (137.2) - (3.2) - (34.0) = (100.0) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13151	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13151	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	30.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	236188
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728558
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	04/22/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	0913
22. Measured gross weight of loaded container, fully assembled (kgs):	137.2
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	302.5
23. Container closure date (mm/dd/yy):	03/12/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	728707
b. Filter Torque Wrench Calibration Due Date:	05/04/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	EM-427
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	95.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	103.2
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13151	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	3.6
31. Total volume of Solidified Organics (L):	83.3
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	86.9
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	96.9%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:		
G. BARR	Gerard Barr	3-12-13
Enter Name	Signature	Date
Visual Examination Operator 2:		
J. POOLE	J.S. Poole	3-12-13
Enter Name	Signature	Date
Visual Examination Expert:		
S. PATTEE		3-12-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	SRP13150
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location (Airlock):	IN-RWMC-ARP-5
3.	Batch Number:	IN-SRP-VE-000085
4.	Examination Start Date:	03/12/13
5.	Procedure CCP-TP-006, Rev.:	17
6.	a. Drum Packing Station (DPS) Number:	504
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	XC0969
	c. Scale Calibration Due Date:	12/10/13
	d. Test Weight ID:	XC0832
	e. Test Weight Calibration Due Date:	06/13/14
	f. Test Weight (kgs):	5.0
	g. Scale Readout of Test Weight (kgs):	5.0
	h. Difference Between Test Weight and Scale Readout (kgs):	0.0
	i. DPS Scale Check SAT (Y):	Y
	Container Scale Check	
	j. Scale Serial/ID Number:	725494
	k. Scale Calibration Due Date:	11/21/13
	l. Test Weight ID:	722311
	m. Test Weight Calibration Due Date:	10/16/13
	n. Test Weight (kg):	226.8
	o. Scale Readout of Test Weight (kgs):	226.6
	p. Difference Between Test Weight and Scale Readout (kgs):	0.2
	q. Container Scale Check SAT (Y):	Y
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	232553
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13150							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
6	a. Iron-based metals/alloys (IM)				3.0	N/A		0.4
7	METAL				0.1	8.0		0.0
8	DPS SCALE TIGHTLY BOUND ON TOP (WAIP)				2.9	8.0		0.4
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10	N/A				N/A	3.0		0.0
11	N/A				N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14		N/A			N/A	11.0		0.0
15		N/A			N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17		N/A			N/A	1.8		0.0
18		N/A			N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20		N/A			N/A	19.1		0.0
21		N/A			N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23		N/A			N/A	9.0		0.0
24		N/A			N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26		N/A			N/A	0.0		0.0
27		N/A			N/A	0.0		0.0
28		N/A			N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13150							
3	**Section 2: Waste Material Parameter (WMP) Estimates**							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	l. Other Inorganic materials (OI)				0.0	N/A		0.0
30		j. Graphite			0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p. Inorganic sorbents			0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r. Cellulosics (C)				0.5	N/A		0.5
56		s. Paper			0.5	N/A		0.5
57				2 LEATHER GLOVES	0.4	0.9		0.4
58				PAPER TIGHTLY BOUND ON TOP (WAIP)	0.1	0.9		0.1
59				N/A	N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61				CARDBOARD (NSW)	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13150							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4 5	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
66	v. Rubber (R)				0.3	N/A		0.3
67				RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
68				RUBBER BANDS TIGHTLY BOUND ON TOP (WAIP)	0.3	0.9 - 2.0	1.1	0.3
69	w. Plastics (waste materials) (PW)				1.9	N/A		2.2
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC TIGHTLY BOUND ON TOP	0.5	0.9		0.6
72				TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				95.3	N/A		79.4
75		x1. Sludge			95.3	N/A		79.4
76				LIGHT OLIVE GRAY PUTTY LIKE SLUDGE WITH CALCIUM SILICATE	95.3	1.0 - 1.5	1.2	79.4
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95				N/A	N/A	0.0		0.0
96				N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98				N/A	N/A	1.0 - 1.4	0.0	0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				101.0	N/A		82.8
101	13. (ORGANIC SLUDGE) weight (95.3) kg was obtained by subtracting the weighed waste weight of (5.7) kg and the container net weight of (34.0) kg from the gross weight (135.0) kg of the waste container. (135.0) - (5.7) - (34.0) = (95.3) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

020

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13150	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003			
Container ID: SRP13150			
Section 4: Waste Packaging Data			
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)			29.0
16. Inner Bags:			
	a. Total Number of Inner Bag(s):		0
	b. Closure Method (See Below for Proper Designator):		N/A
	TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)		
	c. Layers of Confinement (>4 liters):		0
	d. Estimated Weight of Each Inner Bag (kgs):		0.0
17. Liner Bags:			
	a. Total Number of Liner Bag(s):		1
	b. Closure Method (See Below for Proper Designator):		TTF
	TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)		
	c. Estimated Weight of Each Liner Bag (kgs):		0.9
18. Rigid Liner Present? (Y/N):			Y
19. Rigid Liner with NO lid Verified? (Y/N):			Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):			Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:			
	a. Container Manufacturer Lot Number:		232553
	b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:		720178
	c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:		04/22/13
	d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):		Y
	e. Time the container was closed:		1428
22. Measured gross weight of loaded container, fully assembled (kgs):			135.0
	a. Gross weight of loaded container, fully assembled converted to pounds (lbs)		297.6
23. Container closure date (mm/dd/yy):			03/12/13
24. Container Filter Torque Data:			
	a.	Filter Torque Wrench Serial/ID Number:	724694
	b.	Filter Torque Wrench Calibration Due Date:	04/15/13
	c.	Filter Model No.:	NUCFIL-019DS
	d.	Filter Serial No.:	EM-432
	e.	Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
	f.	Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:			90.0%
26. Total layers of confinement:			1
27. Measured net weight of waste (kgs):			101.0
28. Estimated plastic added from packaging, including rigid liner (kgs):			5.4
29. Estimated steel added from packaging (kgs):			28.6
29a Total net weight of fully assembled container (kgs):			34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13150	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	3.4
31. Total volume of Solidified Organics (L):	79.4
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	82.8
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	94.4%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

J. POOLE	J.S. Poole	3-12-13
Enter Name	Signature	Date

Visual Examination Operator 2:

G. BARR	Gerard Barr	3-12-13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		3-12-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	SRP13167
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location (Airlock):	IN-RWMC-ARP-5
3.	Batch Number:	IN-SRP-VE-000085
4.	Examination Start Date:	03/12/13
5.	Procedure CCP-TP-006, Rev.:	17
6.	a. Drum Packing Station (DPS) Number:	501
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	236188
Comments:		
N/A		

024

~~017~~
3-12-13

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13167							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				METAL (NSW)	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

3-27-7 ~~2018~~

025

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13167							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	l. Other inorganic materials (OI)				0.0	N/A		0.0
30		j. Graphite			0.0	N/A		0.0
31			N/A		N/A	2.2		0.0
32			N/A		N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34			N/A		N/A	2.3		0.0
35			N/A		N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37			N/A		N/A	2.0		0.0
38			N/A		N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40			N/A		N/A	3.0		0.0
41			N/A		N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43			N/A		N/A	2.0 - 5.0	0.0	0.0
44			N/A		N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46			N/A		N/A	2.0		0.0
47			N/A		N/A	2.0		0.0
48		p. Inorganic sorbents			0.0	N/A		0.0
49			N/A		N/A	0.1 - 2.8	0.0	0.0
50			N/A		N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52			N/A		N/A	0.0		0.0
53			N/A		N/A	0.0		0.0
54			N/A		N/A	0.0		0.0
55	r. Cellulosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57			N/A		N/A	0.9		0.0
58			N/A		N/A	0.9		0.0
59			N/A		N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61			N/A		N/A	0.8		0.0
62			N/A		N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64			N/A		N/A	1.0		0.0
65			N/A		N/A	1.0		0.0

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5.12.13

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13167							
3	**Section 2: Waste Material Parameter (WMP) Estimates**							
4				**9. Waste Material Parameter and Item Description**	**10. WMP Estimate**	**11. Density**		**12.Volume**
5					**By Weight (kg)**	**(kg/L)**		**(L)**
66	v. Rubber (R)				0.3	N/A		0.3
67				RUBBER BANDS TIGHTLY BOUND ON TOP (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				2.4	N/A		2.7
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
72				PLASTIC TIGHTLY BOUND ON TOP	1.0	0.9		1.1
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				101.3	N/A		84.4
75		x1. Sludge			101.3	N/A		84.4
76				OLIVE BROWN PUTTY LIKE SLUDGE WITH CALCIUM SILICATE	101.3	1.0 - 1.5	1.2	84.4
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95				N/A	N/A	0.0		0.0
96				N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98				N/A	N/A	1.0 - 1.4	0.0	0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				104.0	N/A		87.4
101	13. (ORGANIC SLUDGE) weight (101.3) kg was obtained by subtracting the weighed waste weight of (2.7) kg and the container net weight of (34.0) kg from the gross weight (138.0) kg of the waste container. (138.0) - (2.7) - (34.0) = (101.3) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

5/12/13

027

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13167	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

028

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RSP-1213

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13167	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	24.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	236188
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728558
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	04/22/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	0930
22. Measured gross weight of loaded container, fully assembled (kgs):	138.0
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	304.2
23. Container closure date (mm/dd/yy):	03/12/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	728707
b. Filter Torque Wrench Calibration Due Date:	05/04/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	EM-442
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	75.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	104.0
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

029

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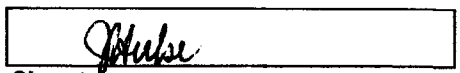
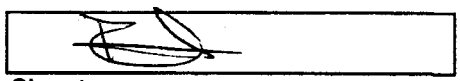
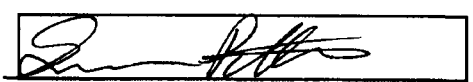
3-12-13

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13167	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	3.0
31. Total volume of Solidified Organics (L):	84.4
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	87.4
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	97.4%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X
Section 6: Approvals	

Visual Examination Operator 1:		
J. HULSE		3/12/13
Enter Name	Signature	Date
Visual Examination Operator 2:		
R. CUMMINS		3-12-13
Enter Name	Signature	Date
Visual Examination Expert:		
S. PATTEE		3-12-13
Enter Name	Signature	Date

030

~~023~~
3.12.13

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	SRP13146
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location (Airlock):	IN-RWMC-ARP-5
3.	Batch Number:	IN-SRP-VE-000085
4.	Examination Start Date:	03/12/13
5.	Procedure CCP-TP-006, Rev.:	17
6.	a. Drum Packing Station (DPS) Number:	502
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	232553
Comments:		
N/A		

031

~~024~~
EC 3-12-13

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13146							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				N/A	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

3.1.13 8025

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13146							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4 5	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
29	i. Other inorganic materials (OI)				0.0	N/A		0.0
30		j. Graphite			0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p. Inorganic sorbents			0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r. Cellulosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57				PAPER (NSW)	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

3.12.13 ~~026~~

033

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13146							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.3	N/A		0.3
67				RUBBER BANDS TIGHTLY BOUND ON TOP (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				2.4	N/A		2.7
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC TIGHTLY BOUND ON TOP	1.0	0.9		1.1
72				TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				121.5	N/A		101.3
75		x1. Sludge			121.5	N/A		101.3
76				MODERATE OLIVE BROWN PUTTY LIKE SLUDGE WITH CALCIUM SILICATE	121.5	1.0 - 1.5	1.2	101.3
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95				N/A	N/A	0.0		0.0
96				N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98				N/A	N/A	1.0 - 1.4	0.0	0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				124.2	N/A		104.3
101	13. (ORGANIC SLUDGE) weight (121.5) kg was obtained by subtracting the weighed waste weight of (2.7) kg and the container net weight of (34.0) kg from the gross weight (158.2) kg of the waste container. (158.2) - (2.7) - (34.0) = (121.5) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

034

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13146	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

035

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3.12.13

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13146	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	32.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	232553
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728558
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	04/22/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	0942
22. Measured gross weight of loaded container, fully assembled (kgs):	158.2
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	348.8
23. Container closure date (mm/dd/yy):	03/12/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	728707
b. Filter Torque Wrench Calibration Due Date:	05/04/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	EM-445
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	100.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	124.2
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

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BC 3-12-13

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13146	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	3.0
31. Total volume of Solidified Organics (L):	101.3
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	104.3
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	97.8%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

J. POOLE	G.S. Poole	3-12-13
Enter Name	Signature	Date

Visual Examination Operator 2:

G. BARR	Gerard Barr	3-12-13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		3-12-13
Enter Name	Signature	Date

037

~~030~~ 3-12-13

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	SRP13166
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
	b. Container Type: 55 gal. drum or SWB:	55 GAL.
2.	Site ID and Location (Airlock):	IN-RWMC-ARP-5
3.	Batch Number:	IN-SRP-VE-000085
4.	Examination Start Date:	03/12/13
5.	Procedure CCP-TP-006, Rev.:	17
6.	a. Drum Packing Station (DPS) Number:	501
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	236188
Comments:		
N/A		

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~~031~~ 3.12.13

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13166							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.4	N/A		0.1
7	METAL TIGHTLY BOUND ON TOP				0.4	8.0		0.1
8	N/A				N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10	N/A				N/A	3.0		0.0
11	N/A				N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14		N/A			N/A	11.0		0.0
15		N/A			N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17		N/A			N/A	1.8		0.0
18		N/A			N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20		N/A			N/A	19.1		0.0
21		N/A			N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23		N/A			N/A	9.0		0.0
24		N/A			N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26		N/A			N/A	0.0		0.0
27		N/A			N/A	0.0		0.0
28		N/A			N/A	0.0		0.0

5.12.13 ~~032~~ 039

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13166							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	l.	Other inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				WOOD (NSW)	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

3.12.13 ~~033~~

040

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13166							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.3	N/A		0.3
67				RUBBER BANDS TIGHTLY BOUND ON TOP (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				2.8	N/A		3.2
70				POLY BOTTLE BREACHED AND EMPTY AND PLASTIC TIGHTLY BOUND ON TOP	1.4	0.9		1.6
71				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
72				1 TRAY LINER, 1 BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				112.1	N/A		93.4
75		x1. Sludge			112.1	N/A		93.4
76				VERY PALE ORANGE POWDERY SLUDGE WITH CALCIUM SILICATE	112.1	1.0 - 1.5	1.2	93.4
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95				N/A	N/A	0.0		0.0
96				N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98				N/A	N/A	1.0 - 1.4	0.0	0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				115.6	N/A		97.0
101	13. (ORGANIC SLUDGE) weight (112.1) kg was obtained by subtracting the weighed waste weight of (3.5) kg and the container net weight of (34.0) kg from the gross weight (149.6) kg of the waste container. (149.6) - (3.5) - (34.0) = (112.1) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

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041

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13166	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

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KS 3/12/13

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13166	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	28.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	236188
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728558
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	04/22/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1000
22. Measured gross weight of loaded container, fully assembled (kgs):	149.6
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	329.8
23. Container closure date (mm/dd/yy):	03/12/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	728707
b. Filter Torque Wrench Calibration Due Date:	05/04/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	EM-437
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	90.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	115.6
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

043

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3-12-13

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13166	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	3.6
31. Total volume of Solidified Organics (L):	93.4
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	97.0
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	97.0%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

R. CUMMINS		3-12-13
Enter Name	Signature	Date

Visual Examination Operator 2:

J. HULSE		3/12/13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		3-12-13
Enter Name	Signature	Date

044

~~037~~

3.12.13

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	SRP13147
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
	b. Container Type: 55 gal. drum or SWB:	55 GAL.
2.	Site ID and Location (Airlock):	IN-RWMC-ARP-5
3.	Batch Number:	IN-SRP-VE-000085
4.	Examination Start Date:	03/12/13
5.	Procedure CCP-TP-006, Rev.:	17
6.	a. Drum Packing Station (DPS) Number:	502
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	236188
Comments:		
N/A		

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3-12-13

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13147							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				N/A	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

~~039~~

046

	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003					
2	Container ID: SRP13147					
3	**Section 2: Waste Material Parameter (WMP) Estimates**					
4	9. Waste Material Parameter and Item Description		10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
29	l. Other Inorganic materials (OI)		0.0	N/A		0.0
30	j. Graphite		0.0	N/A		0.0
31		N/A	N/A	2.2		0.0
32		N/A	N/A	2.2		0.0
33	k. Concrete		0.0	N/A		0.0
34		N/A	N/A	2.3		0.0
35		N/A	N/A	2.3		0.0
36	l. Glass		0.0	N/A		0.0
37		N/A	N/A	2.0		0.0
38		N/A	N/A	2.0		0.0
39	m. Firebrick		0.0	N/A		0.0
40		N/A	N/A	3.0		0.0
41		N/A	N/A	3.0		0.0
42	n. Ceramics		0.0	N/A		0.0
43		N/A	N/A	2.0 - 5.0	0.0	0.0
44		N/A	N/A	2.0 - 5.0	0.0	0.0
45	o. Sand		0.0	N/A		0.0
46		N/A	N/A	2.0		0.0
47		N/A	N/A	2.0		0.0
48	p. Inorganic sorbents		0.0	N/A		0.0
49		N/A	N/A	0.1 - 2.8	0.0	0.0
50		N/A	N/A	0.1 - 2.8	0.0	0.0
51	q. Other (See Note a)		0.0	N/A		0.0
52		N/A	N/A	0.0		0.0
53		N/A	N/A	0.0		0.0
54		N/A	N/A	0.0		0.0
55	r. Cellulosics (C)		0.0	N/A		0.0
56	s. Paper		0.0	N/A		0.0
57		N/A	N/A	0.9		0.0
58		N/A	N/A	0.9		0.0
59		N/A	N/A	0.9		0.0
60	t. Cardboard		0.0	N/A		0.0
61		N/A	N/A	0.8		0.0
62		N/A	N/A	0.8		0.0
63	u. Wood		0.0	N/A		0.0
64		N/A	N/A	1.0		0.0
65		N/A	N/A	1.0		0.0

~~040~~ 047

	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003					
2	Container ID: SRP13147					
3	Section 2: Waste Material Parameter (WMP) Estimates					
4	9. Waste Material Parameter and Item Description	10. WMP Estimate By Weight (kg)	11. Density (kg/L)			12.Volume (L)
66	v. Rubber (R)	0.3	N/A			0.3
67	RUBBER BANDS TIGHTLY BOUND ON TOP (WAIP)	0.3	0.9 - 2.0		1.1	0.3
68	N/A	N/A	0.9 - 2.0		0.0	0.0
69	w. Plastics (waste materials) (PW)	2.3	N/A			2.6
70	NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9			0.0
71	2 TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	2.3	0.9			2.6
72	PLASTIC (NSW)	N/A	0.9			0.0
73	N/A	N/A	0.9			0.0
74	x. Organic matrix (OR)	119.4	N/A			99.5
75	x1. Sludge	119.4	N/A			99.5
76	MODERATE OLIVE BROWN PUTTY LIKE SLUDGE WITH CALCIUM SILICATE	119.4	1.0 - 1.5		1.2	99.5
77	N/A	N/A	1.0 - 1.5		0.0	0.0
78	N/A	N/A	1.0 - 1.5		0.0	0.0
79	x2. Other (See Note a)	0.0	N/A			0.0
80	N/A	N/A	0.0			0.0
81	N/A	N/A	0.0			0.0
82	y. Inorganic matrix (IN)	0.0	N/A			0.0
83	y1. Sludge	0.0	N/A			0.0
84	N/A	N/A	1.0 - 1.5		0.0	0.0
85	N/A	N/A	1.0 - 1.5		0.0	0.0
86	N/A	N/A	1.0 - 1.5		0.0	0.0
87	y2. Roaster Oxides	0.0	N/A			0.0
88	N/A	N/A	1.5 - 4.0		0.0	0.0
89	N/A	N/A	1.5 - 4.0		0.0	0.0
90	N/A	N/A	1.5 - 4.0		0.0	0.0
91	y3. Salt	0.0	N/A			0.0
92	N/A	N/A	0.0			0.0
93	N/A	N/A	0.0			0.0
94	y4. Other (See Note a)	0.0	N/A			0.0
95	N/A	N/A	0.0			0.0
96	N/A	N/A	0.0			0.0
97	z. Soils/gravel (S)	0.0	N/A			0.0
98	N/A	N/A	1.0 - 1.4		0.0	0.0
99	N/A	N/A	1.0 - 1.4		0.0	0.0
100	aa. TOTAL	122.0	N/A			102.4

101 13. (ORGANIC SLUDGE) weight (119.4) kg was obtained by subtracting the weighed waste weight of (2.6) kg and the container net weight of (34.0) kg from the gross weight (156.0) kg of the waste container. (156.0) - (2.6) - (34.0) = (119.4) kg

102 a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.

103 b. N/A

104

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Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13147	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13147	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	29.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	236188
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728558
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	04/22/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1014
22. Measured gross weight of loaded container, fully assembled (kgs):	156.0
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	343.9
23. Container closure date (mm/dd/yy):	03/12/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	728707
b. Filter Torque Wrench Calibration Due Date:	05/04/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	EM-444
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	90.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	122.0
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

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3.12.13

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13147	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	2.9
31. Total volume of Solidified Organics (L):	99.5
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	102.4
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	97.9%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

G. BARR	Gerard Barr	3-12-13
Enter Name	Signature	Date

Visual Examination Operator 2:

J. POOLE	J.S. Poole	3-12-13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE	S. Pattee	3-12-13
Enter Name	Signature	Date

051

~~044~~ RK 3-12-13

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	SRP13158
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location (Airlock):	IN-RWMC-ARP-5
3.	Batch Number:	IN-SRP-VE-000085
4.	Examination Start Date:	03/12/13
5.	Procedure CCP-TP-006, Rev.:	17
6.	a. Drum Packing Station (DPS) Number:	501
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	232553
Comments:		
N/A		

052

~~045~~
RJ 3.12.13

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13158							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				METAL (NSW)	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

~~046~~ 3/12/13

053

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13158							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	i.	Other Inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.2	N/A		0.2
56		s.	Paper		0.2	N/A		0.2
57				PAPER	0.2	0.9		0.2
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

~~047~~ 3/12/13

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	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13158							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.5	N/A		0.5
67				RUBBER BANDS TIGHTLY BOUND ON TOP (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68				RUBBER	0.2	0.9 - 2.0	1.1	0.2
69	w. Plastics (waste materials) (PW)				2.6	N/A		2.9
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
72				PLASTIC TIGHTLY BOUND ON TOP	1.2	0.9		1.3
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				113.5	N/A		94.6
75		x1. Sludge			113.5	N/A		94.6
76				YELLOWISH GRAY POWDERY SLUDGE WITH CALCIUM SILICATE	113.5	1.0 - 1.5	1.2	94.6
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95				N/A	N/A	0.0		0.0
96				N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98				N/A	N/A	1.0 - 1.4	0.0	0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				116.8	N/A		98.2
101	13. (ORGANIC SLUDGE) weight (113.5) kg was obtained by subtracting the weighed waste weight of (3.3) kg and the container net weight of (34.0) kg from the gross weight (150.8) kg of the waste container. (150.8) - (3.3) - (34.0) = (113.5) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

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Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13158	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

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Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13158	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	32.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	232553
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728558
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	04/22/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1030
22. Measured gross weight of loaded container, fully assembled (kgs):	150.8
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	332.5
23. Container closure date (mm/dd/yy):	03/12/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	728707
b. Filter Torque Wrench Calibration Due Date:	05/04/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	EM-426
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	100.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	116.8
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

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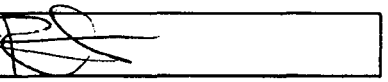
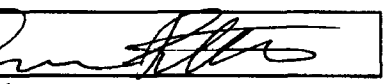
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13158	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	3.6
31. Total volume of Solidified Organics (L):	94.6
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	98.2
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	97.2%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:		
J. HULSE		3/12/13
Enter Name	Signature	Date

Visual Examination Operator 2:		
R. CUMMINS		3-12-13
Enter Name	Signature	Date

Visual Examination Expert:		
S. PATTEE		3-12-13
Enter Name	Signature	Date

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Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	SRP13118
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location (Airlock):	IN-RWMC-ARP-5
3.	Batch Number:	IN-SRP-VE-000085
4.	Examination Start Date:	03/12/13
5.	Procedure CCP-TP-006, Rev.:	17
6.	a. Drum Packing Station (DPS) Number:	502
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	232553
Comments:		
N/A		

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	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13118							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.1	N/A		0.0
7				METAL	0.1	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

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	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13118							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4				9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	l.	Other inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				PAPER (NSW)	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

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	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13118							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.3	N/A		0.3
67	RUBBER (NSW)				N/A	0.9 - 2.0	0.0	0.0
68	RUBBER BANDS TIGHTLY BOUND ON TOP (WAIP)				0.3	0.9 - 2.0	1.1	0.3
69	w. Plastics (waste materials) (PW)				1.5	N/A		1.7
70	NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED				N/A	0.9		0.0
71	PLASTIC				0.1	0.9		0.1
72	TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)				1.4	0.9		1.6
73	N/A				N/A	0.9		0.0
74	x. Organic matrix (OR)				101.9	N/A		84.9
75		x1. Sludge			101.9	N/A		84.9
76		YELLOWISH GRAY CRUMBLY SLUDGE WITH CALCIUM SILICATE			101.9	1.0 - 1.5	1.2	84.9
77		N/A			N/A	1.0 - 1.5	0.0	0.0
78		N/A			N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80		N/A			N/A	0.0		0.0
81		N/A			N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84		N/A			N/A	1.0 - 1.5	0.0	0.0
85		N/A			N/A	1.0 - 1.5	0.0	0.0
86		N/A			N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88		N/A			N/A	1.5 - 4.0	0.0	0.0
89		N/A			N/A	1.5 - 4.0	0.0	0.0
90		N/A			N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92		N/A			N/A	0.0		0.0
93		N/A			N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95		N/A			N/A	0.0		0.0
96		N/A			N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98	N/A				N/A	1.0 - 1.4	0.0	0.0
99	N/A				N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				103.8	N/A		86.9
101	13. (ORGANIC SLUDGE) weight (101.9) kg was obtained by subtracting the weighed waste weight of (1.9) kg and the container net weight of (34.0) kg from the gross weight (137.8) kg of the waste container. (137.8) - (1.9) - (34.0) = (101.9) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

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Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13118	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

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Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13118	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	20.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	232553
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728558
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	04/22/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1043
22. Measured gross weight of loaded container, fully assembled (kgs):	137.8
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	303.8
23. Container closure date (mm/dd/yy):	03/12/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	728707
b. Filter Torque Wrench Calibration Due Date:	05/04/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	EM-362
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	65.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	103.8
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

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Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13118	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	2.0
31. Total volume of Solidified Organics (L):	84.9
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	86.9
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	98.2%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

J. POOLE	J.S. Poole	3-12-13
Enter Name	Signature	Date

Visual Examination Operator 2:

G. BARR	Gerard Barr	3-12-13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		3-12-13
Enter Name	Signature	Date

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Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	SRP13164
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
	b. Container Type: 55 gal. drum or SWB:	55 GAL.
2.	Site ID and Location (Airlock):	IN-RWMC-ARP-5
3.	Batch Number:	IN-SRP-VE-000085
4.	Examination Start Date:	03/12/13
5.	Procedure CCP-TP-006, Rev.:	17
6.	a. Drum Packing Station (DPS) Number:	501
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	232657
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13164							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.1	N/A		0.0
7	METAL TIGHTLY BOUND ON TOP				0.1	8.0		0.0
8	N/A				N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10	N/A				N/A	3.0		0.0
11	N/A				N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14		N/A			N/A	11.0		0.0
15		N/A			N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17		N/A			N/A	1.8		0.0
18		N/A			N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20		N/A			N/A	19.1		0.0
21		N/A			N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23		N/A			N/A	9.0		0.0
24		N/A			N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26		N/A			N/A	0.0		0.0
27		N/A			N/A	0.0		0.0
28		N/A			N/A	0.0		0.0

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	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13164							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	i.	Other inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.4	N/A		0.4
56		s.	Paper		0.4	N/A		0.4
57				LEATHER GLOVES TIGHTLY BOUND ON TOP	0.4	0.9		0.4
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

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	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003					
2	Container ID: SRP13164					
3	**Section 2: Waste Material Parameter (WMP) Estimates**					
4		**9. Waste Material Parameter and Item Description**	**10. WMP Estimate**	**11. Density**		**12.Volume**
5			**By Weight (kg)**	**(kg/L)**		**(L)**
66	v. Rubber (R)		0.3	N/A		0.3
67		RUBBER BANDS TIGHTLY BOUND ON TOP (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68		N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)		1.9	N/A		2.2
70		PLASTIC TIGHTLY BOUND ON TOP	0.5	0.9		0.6
71		NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
72		1 TRAY LINER, 1 BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
73		N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)		104.1	N/A		86.8
75	x1. Sludge		104.1	N/A		86.8
76		MODERATE YELLOWISH BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE	104.1	1.0 - 1.5	1.2	86.8
77		N/A	N/A	1.0 - 1.5	0.0	0.0
78		N/A	N/A	1.0 - 1.5	0.0	0.0
79	x2. Other (See Note a)		0.0	N/A		0.0
80		N/A	N/A	0.0		0.0
81		N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)		0.0	N/A		0.0
83	y1. Sludge		0.0	N/A		0.0
84		N/A	N/A	1.0 - 1.5	0.0	0.0
85		N/A	N/A	1.0 - 1.5	0.0	0.0
86		N/A	N/A	1.0 - 1.5	0.0	0.0
87	y2. Roaster Oxides		0.0	N/A		0.0
88		N/A	N/A	1.5 - 4.0	0.0	0.0
89		N/A	N/A	1.5 - 4.0	0.0	0.0
90		N/A	N/A	1.5 - 4.0	0.0	0.0
91	y3. Salt		0.0	N/A		0.0
92		N/A	N/A	0.0		0.0
93		N/A	N/A	0.0		0.0
94	y4. Other (See Note a)		0.0	N/A		0.0
95		N/A	N/A	0.0		0.0
96		N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)		0.0	N/A		0.0
98		N/A	N/A	1.0 - 1.4	0.0	0.0
99		N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL		106.8	N/A		89.7
101	13. (ORGANIC SLUDGE) weight (104.1) kg was obtained by subtracting the weighed waste weight of (2.7) kg and the container net weight of (34.0) kg from the gross weight (140.8) kg of the waste container. (140.8) - (2.7) - (34.0) = (104.1) kg					
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.					
103	b.	N/A				
104						

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Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13164	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

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Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13164	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	30.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	232657
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728558
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	04/22/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1055
22. Measured gross weight of loaded container, fully assembled (kgs):	140.8
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	310.4
23. Container closure date (mm/dd/yy):	03/12/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	728707
b. Filter Torque Wrench Calibration Due Date:	05/04/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	HM-245
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	95.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	106.8
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

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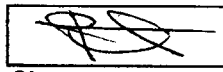
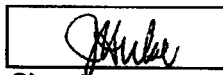
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13164	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	2.9
31. Total volume of Solidified Organics (L):	86.8
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	89.7
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	97.5%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

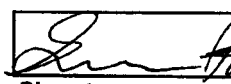
Visual Examination Operator 1:

R. CUMMINS		3-12-13
Enter Name	Signature	Date

Visual Examination Operator 2:

J. HULSE		3/12/13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		3-12-13
Enter Name	Signature	Date

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Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	SRP13161
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
	b. Container Type: 55 gal. drum or SWB:	55 GAL.
2.	Site ID and Location (Airlock):	IN-RWMC-ARP-5
3.	Batch Number:	IN-SRP-VE-000085
4.	Examination Start Date:	03/12/13
5.	Procedure CCP-TP-006, Rev.:	17
6.	a. Drum Packing Station (DPS) Number:	502
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	232657
Comments:		
N/A		

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	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13161							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				N/A	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

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	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13161							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	i.	Other inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

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	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13161							
3	**Section 2: Waste Material Parameter (WMP) Estimates**							
4	**9. Waste Material Parameter and Item Description**				**10. WMP Estimate**	**11. Density**		**12.Volume**
5					**By Weight (kg)**	**(kg/L)**		**(L)**
66	v. Rubber (R)				0.3	N/A		0.3
67				RUBBER BANDS TIGHTLY BOUND ON TOP (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				3.8	N/A		4.3
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
72				PLASTIC TIGHTLY BOUND ON TOP	2.4	0.9		2.7
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				104.7	N/A		87.3
75		x1. Sludge			104.7	N/A		87.3
76				MODERATE OLIVE BROWN PUTTY LIKE SLUDGE WITH CALCIUM SILICATE	104.7	1.0 - 1.5	1.2	87.3
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95				N/A	N/A	0.0		0.0
96				N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98				N/A	N/A	1.0 - 1.4	0.0	0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				108.8	N/A		91.9
101	13. (ORGANIC SLUDGE) weight (104.7) kg was obtained by subtracting the weighed waste weight of (4.1) kg and the container net weight of (34.0) kg from the gross weight (142.8) kg of the waste container. (142.8) - (4.1) - (34.0) = (104.7) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13161	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13161	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	27.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	232657
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728558
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	04/22/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1110
22. Measured gross weight of loaded container, fully assembled (kgs):	142.8
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	314.8
23. Container closure date (mm/dd/yy):	03/12/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	728707
b. Filter Torque Wrench Calibration Due Date:	05/04/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	EM-436
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	85.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	108.8
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13161	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	4.6
31. Total volume of Solidified Organics (L):	87.3
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	91.9
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	96.2%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

G. BARR	David Barr	3-12-13
Enter Name	Signature	Date

Visual Examination Operator 2:

J. POOLE	J.S. Poole	3-12-13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		3-12-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	SRP13156
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location (Airlock):	IN-RWMC-ARP-5
3.	Batch Number:	IN-SRP-VE-000085
4.	Examination Start Date:	03/12/13
5.	Procedure CCP-TP-006, Rev.:	17
6.	a. Drum Packing Station (DPS) Number:	502
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	236188
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13156							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.1	N/A		0.0
7				METAL	0.1	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13156							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	i.	Other inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.2	N/A		0.2
56		s.	Paper		0.2	N/A		0.2
57				PAPER (NSW)	N/A	0.9		0.0
58				LEATHER GLOVE	0.2	0.9		0.2
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13156							
3	**Section 2: Waste Material Parameter (WMP) Estimates**							
4	**9. Waste Material Parameter and Item Description**				**10. WMP Estimate**	**11. Density**		**12.Volume**
5					**By Weight (kg)**	**(kg/L)**		**(L)**
66	v. Rubber (R)				0.3	N/A		0.3
67				RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
68				RUBBER BANDS TIGHTLY BOUND ON TOP (WAIP)	0.3	0.9 - 2.0	1.1	0.3
69	w. Plastics (waste materials) (PW)				1.9	N/A		2.2
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC TIGHTLY BOUND ON TOP	0.5	0.9		0.6
72				TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				107.7	N/A		89.8
75		x1. Sludge			107.7	N/A		89.8
76				OLIVE GRAY CRUMBLY SLUDGE WITH CALCIUM SILICATE	107.7	1.0 - 1.5	1.2	89.8
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95				N/A	N/A	0.0		0.0
96				N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98				N/A	N/A	1.0 - 1.4	0.0	0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				110.2	N/A		92.5
101	13. (ORGANIC SLUDGE) weight (107.7) kg was obtained by subtracting the weighed waste weight of (2.5) kg and the container net weight of (34.0) kg from the gross weight (144.2) kg of the waste container. (144.2) - (2.5) - (34.0) = (107.7) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13156	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13156	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	25.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	236188
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728558
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	04/22/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1312
22. Measured gross weight of loaded container, fully assembled (kgs):	144.2
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	317.9
23. Container closure date (mm/dd/yy):	03/12/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	728707
b. Filter Torque Wrench Calibration Due Date:	05/04/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	EM-428
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	80.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	110.2
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13156	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	2.7
31. Total volume of Solidified Organics (L):	89.8
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	92.5
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	97.7%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

J. POOLE	J.S. Poole	3-12-13
Enter Name	Signature	Date

Visual Examination Operator 2:

G. BARR	Girard Barr	3-12-13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		3-12-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	SRP13165
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location (Airlock):	IN-RWMC-ARP-5
3.	Batch Number:	IN-SRP-VE-000085
4.	Examination Start Date:	03/12/13
5.	Procedure CCP-TP-006, Rev.:	17
6.	a. Drum Packing Station (DPS) Number:	501
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	232657
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13165							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				N/A	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13165							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	l. Other Inorganic materials (OI)				0.0	N/A		0.0
30		j. Graphite			0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p. Inorganic sorbents			0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r. Cellulosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13165							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.3	N/A		0.3
67				RUBBER BANDS TIGHTLY BOUND ON TOP (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				2.4	N/A		2.7
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
72				PLASTIC TIGHTLY BOUND ON TOP	1.0	0.9		1.1
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				97.9	N/A		81.6
75		x1. Sludge			97.9	N/A		81.6
76				GRAYISH OLIVE PUTTY LIKE SLUDGE WITH CALCIUM SILICATE	97.9	1.0 - 1.5	1.2	81.6
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95				N/A	N/A	0.0		0.0
96				N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98				N/A	N/A	1.0 - 1.4	0.0	0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				100.6	N/A		84.6
101	13. (ORGANIC SLUDGE) weight (97.9) kg was obtained by subtracting the weighed waste weight of (2.7) kg and the container net weight of (34.0) kg from the gross weight (134.6) kg of the waste container. (134.6) - (2.7) - (34.0) = (97.9) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

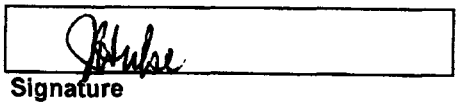
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13165	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13165	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	30.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	232657
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728558
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	04/22/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1320
22. Measured gross weight of loaded container, fully assembled (kgs):	134.6
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	296.7
23. Container closure date (mm/dd/yy):	03/12/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	728707
b. Filter Torque Wrench Calibration Due Date:	05/04/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	HM-244
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	95.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	100.6
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

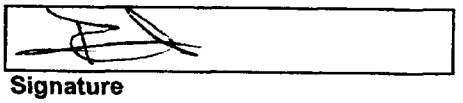
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13165	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	3.0
31. Total volume of Solidified Organics (L):	81.6
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	84.6
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	97.3%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

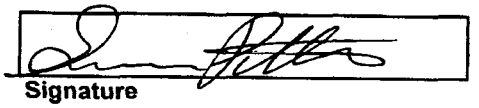
Visual Examination Operator 1:

J. HULSE		3/12/13
Enter Name	Signature	Date

Visual Examination Operator 2:

R. CUMMINS		3-12-13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		3-12-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	SRP13154
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
	b. Container Type: 55 gal. drum or SWB:	55 GAL.
2.	Site ID and Location (Airlock):	IN-RWMC-ARP-5
3.	Batch Number:	IN-SRP-VE-000085
4.	Examination Start Date:	03/12/13
5.	Procedure CCP-TP-006, Rev.:	17
6.	a. Drum Packing Station (DPS) Number:	501
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	236188
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13154							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
6	a. Iron-based metals/alloys (IM)				2.6	N/A		0.3
7	OPEN METAL VALVE TIGHTLY BOUND ON TOP AND METAL				2.6	8.0		0.3
8	N/A				N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10	N/A				N/A	3.0		0.0
11	N/A				N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13	d. Lead				0.0	N/A		0.0
14	N/A				N/A	11.0		0.0
15	N/A				N/A	11.0		0.0
16	e. Beryllium				0.0	N/A		0.0
17	N/A				N/A	1.8		0.0
18	N/A				N/A	1.8		0.0
19	f. Depleted uranium				0.0	N/A		0.0
20	N/A				N/A	19.1		0.0
21	N/A				N/A	19.1		0.0
22	g. Copper				0.0	N/A		0.0
23	N/A				N/A	9.0		0.0
24	N/A				N/A	9.0		0.0
25	h. Other (See Note a)				0.0	N/A		0.0
26	N/A				N/A	0.0		0.0
27	N/A				N/A	0.0		0.0
28	N/A				N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13154							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4 5	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
29	l. Other inorganic materials (OI)				0.0	N/A		0.0
30		j. Graphite			0.0	N/A		0.0
31			N/A		N/A	2.2		0.0
32			N/A		N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34			N/A		N/A	2.3		0.0
35			N/A		N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37			N/A		N/A	2.0		0.0
38			N/A		N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40			N/A		N/A	3.0		0.0
41			N/A		N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43			N/A		N/A	2.0 - 5.0	0.0	0.0
44			N/A		N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46			N/A		N/A	2.0		0.0
47			N/A		N/A	2.0		0.0
48		p. Inorganic sorbents			0.0	N/A		0.0
49			N/A		N/A	0.1 - 2.8	0.0	0.0
50			N/A		N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52			N/A		N/A	0.0		0.0
53			N/A		N/A	0.0		0.0
54			N/A		N/A	0.0		0.0
55	r. Cellulosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57			N/A		N/A	0.9		0.0
58			N/A		N/A	0.9		0.0
59			N/A		N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61			N/A		N/A	0.8		0.0
62			N/A		N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64			N/A		N/A	1.0		0.0
65			N/A		N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13154							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.3	N/A		0.3
67	RUBBER (NSW)				N/A	0.9 - 2.0	0.0	0.0
68	RUBBER BANDS TIGHTLY BOUND ON TOP (WAIP)				0.3	0.9 - 2.0	1.1	0.3
69	w. Plastics (waste materials) (PW)				2.9	N/A		3.3
70	PLASTIC TIGHTLY BOUND ON TOP				1.5	0.9		1.7
71	NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED				N/A	0.9		0.0
72	1 TRAY LINER, 1 BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)				1.4	0.9		1.6
73	N/A				N/A	0.9		0.0
74	x. Organic matrix (OR)				107.4	N/A		89.5
75		x1. Sludge			107.4	N/A		89.5
76		PALE YELLOWISH BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE			107.4	1.0 - 1.5	1.2	89.5
77		N/A			N/A	1.0 - 1.5	0.0	0.0
78		N/A			N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80		N/A			N/A	0.0		0.0
81		N/A			N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84		N/A			N/A	1.0 - 1.5	0.0	0.0
85		N/A			N/A	1.0 - 1.5	0.0	0.0
86		N/A			N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88		N/A			N/A	1.5 - 4.0	0.0	0.0
89		N/A			N/A	1.5 - 4.0	0.0	0.0
90		N/A			N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92		N/A			N/A	0.0		0.0
93		N/A			N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95		N/A			N/A	0.0		0.0
96		N/A			N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98	N/A				N/A	1.0 - 1.4	0.0	0.0
99	N/A				N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				113.2	N/A		93.4
101	13. (ORGANIC SLUDGE) weight (107.4) kg was obtained by subtracting the weighed waste weight of (5.8) kg and the container net weight of (34.0) kg from the gross weight (147.2) kg of the waste container. (147.2) - (5.8) - (34.0) = (107.4) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13154	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13154	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	30.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	236188
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728558
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	04/22/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1350
22. Measured gross weight of loaded container, fully assembled (kgs):	147.2
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	324.5
23. Container closure date (mm/dd/yy):	03/12/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	728707
b. Filter Torque Wrench Calibration Due Date:	05/04/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	EM-448
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	95.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	113.2
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13154	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	3.9
31. Total volume of Solidified Organics (L):	89.5
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	93.4
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	94.9%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

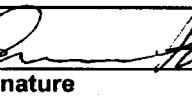
Visual Examination Operator 1:

R. CUMMINS		3-12-13
Enter Name	Signature	Date

Visual Examination Operator 2:

J. HULSE		3/12/13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		3-12-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP13155
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
b. Container Type: 55 gal. drum or SWB:	55 GAL.
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000085
4. Examination Start Date:	03/12/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	502
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	236188
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13155							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
6	a. Iron-based metals/alloys (IM)				0.1	N/A		0.0
7				METAL	0.1	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13155							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	i. Other Inorganic materials (OI)				0.0	N/A		0.0
30		j. Graphite			0.0	N/A		0.0
31			N/A		N/A	2.2		0.0
32			N/A		N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34			N/A		N/A	2.3		0.0
35			N/A		N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37			N/A		N/A	2.0		0.0
38			N/A		N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40			N/A		N/A	3.0		0.0
41			N/A		N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43			N/A		N/A	2.0 - 5.0	0.0	0.0
44			N/A		N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46			N/A		N/A	2.0		0.0
47			N/A		N/A	2.0		0.0
48		p. Inorganic sorbents			0.0	N/A		0.0
49			N/A		N/A	0.1 - 2.8	0.0	0.0
50			N/A		N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52			N/A		N/A	0.0		0.0
53			N/A		N/A	0.0		0.0
54			N/A		N/A	0.0		0.0
55	r. Cellulosics (C)				0.2	N/A		0.2
56		s. Paper			0.2	N/A		0.2
57			LEATHER GLOVE TIGHTLY BOUND ON TOP		0.2	0.9		0.2
58			N/A		N/A	0.9		0.0
59			N/A		N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61			N/A		N/A	0.8		0.0
62			N/A		N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64			N/A		N/A	1.0		0.0
65			N/A		N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13155							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.8	N/A		0.8
67	RUBBER BANDS TIGHTLY BOUND ON TOP (WAIP)				0.3	0.9 - 2.0	1.1	0.3
68	RUBBER GLOVE TIGHTLY BOUND ON TOP				0.5	0.9 - 2.0	1.1	0.5
69	w. Plastics (waste materials) (PW)				1.9	N/A		2.2
70	NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED				N/A	0.9		0.0
71	TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)				1.4	0.9		1.6
72	PLASTIC TIGHTLY BOUND ON TOP				0.5	0.9		0.6
73	N/A				N/A	0.9		0.0
74	x. Organic matrix (OR)				94.8	N/A		79.0
75		x1. Sludge			94.8	N/A		79.0
76			PALE YELLOWISH BROWN PUTTY LIKE SLUDGE WITH CALCIUM SILICATE		94.8	1.0 - 1.5	1.2	79.0
77			N/A		N/A	1.0 - 1.5	0.0	0.0
78			N/A		N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80			N/A		N/A	0.0		0.0
81			N/A		N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84			N/A		N/A	1.0 - 1.5	0.0	0.0
85			N/A		N/A	1.0 - 1.5	0.0	0.0
86			N/A		N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88			N/A		N/A	1.5 - 4.0	0.0	0.0
89			N/A		N/A	1.5 - 4.0	0.0	0.0
90			N/A		N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92			N/A		N/A	0.0		0.0
93			N/A		N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95			N/A		N/A	0.0		0.0
96			N/A		N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98	N/A				N/A	1.0 - 1.4	0.0	0.0
99	N/A				N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				97.8	N/A		82.2
101	13. (ORGANIC SLUDGE) weight (94.8) kg was obtained by subtracting the weighed waste weight of (3.0) kg and the container net weight of (34.0) kg from the gross weight (131.8) kg of the waste container. (131.8) - (3.0) - (34.0) = (94.8) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13155	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13155	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	26.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	236188
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728558
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	04/22/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1340
22. Measured gross weight of loaded container, fully assembled (kgs):	131.8
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	290.6
23. Container closure date (mm/dd/yy):	03/12/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	728707
b. Filter Torque Wrench Calibration Due Date:	05/04/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	EM-430
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	80.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	97.8
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13155	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	3.2
31. Total volume of Solidified Organics (L):	79.0
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	82.2
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	96.9%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

G. BARR	Gerard Barr	3-12-13
Enter Name	Signature	Date

Visual Examination Operator 2:

J. POOLE	J.S. Poole	3-12-13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		3-12-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	SRP13169
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location (Airlock):	IN-RWMC-ARP-5
3.	Batch Number:	IN-SRP-VE-000085
4.	Examination Start Date:	03/12/13
5.	Procedure CCP-TP-006, Rev.:	17
6.	a. Drum Packing Station (DPS) Number:	501
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	236188
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13169							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				N/A	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13169							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	l. Other inorganic materials (OI)				0.0	N/A		0.0
30		j. Graphite			0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p. Inorganic sorbents			0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r. Cellulosics (C)				0.5	N/A		0.6
56		s. Paper			0.6	N/A		0.6
57				LEATHER GLOVE AND PAPER	0.5	0.9		0.6
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13169							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.3	N/A		0.3
67				RUBBER BANDS TIGHTLY BOUND ON TOP (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				2.7	N/A		3.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				TRAY LINER AND BAG OUT OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
72				PLASTIC TIGHTLY BOUND ON TOP	1.3	0.9		1.4
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				126.5	N/A		105.4
75		x1. Sludge			126.5	N/A		105.4
76				GRAYISH YELLOW POWDERY SLUDGE WITH CALCIUM SILICATE	126.5	1.0 - 1.5	1.2	105.4
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95				N/A	N/A	0.0		0.0
96				N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98				N/A	N/A	1.0 - 1.4	0.0	0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				130.0	N/A		109.3
101	13. (ORGANIC SLUDGE) weight (126.5) kg was obtained by subtracting the weighed waste weight of (3.5) kg and the container net weight of (34.0) kg from the gross weight (164.0) kg of the waste container. (164.0) - (3.5) - (34.0) = (126.5) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

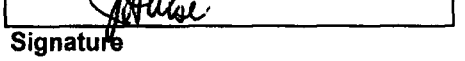
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13169	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13169	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	31.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	236188
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728558
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	04/22/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1415
22. Measured gross weight of loaded container, fully assembled (kgs):	164.0
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	361.6
23. Container closure date (mm/dd/yy):	03/12/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	728707
b. Filter Torque Wrench Calibration Due Date:	05/04/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	HM-249
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	95.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	130.0
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

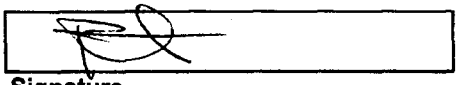
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13169	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	3.9
31. Total volume of Solidified Organics (L):	105.4
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	109.3
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	97.3%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

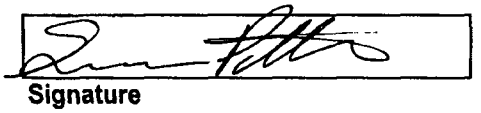
Visual Examination Operator 1:

J. HULSE		3/12/13
Enter Name	Signature	Date

Visual Examination Operator 2:

R. CUMMINS		5-12-13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		3-13-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	SRP13168
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
	b. Container Type: 55 gal. drum or SWB:	55 GAL.
2.	Site ID and Location (Airlock):	IN-RWMC-ARP-5
3.	Batch Number:	IN-SRP-VE-000085
4.	Examination Start Date:	03/12/13
5.	Procedure CCP-TP-006, Rev.:	17
6.	a. Drum Packing Station (DPS) Number:	501
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	236188
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13168							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
6	a. Iron-based metals/alloys (IM)				0.1	N/A		0.0
7				METAL	0.1	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13168							
3	**Section 2: Waste Material Parameter (WMP) Estimates**							
4	**9. Waste Material Parameter and Item Description**				**10. WMP Estimate**	**11. Density**		**12.Volume**
5					**By Weight (kg)**	**(kg/L)**		**(L)**
29	l.	Other inorganic materials (OI)			0.0	N/A		0.0
30		j.	**Graphite**		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	**Concrete**		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	**Glass**		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	**Firebrick**		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	**Ceramics**		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	**Sand**		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	**Inorganic sorbents**		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	**Other (See Note a)**		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.2	N/A		0.2
56		s.	**Paper**		0.2	N/A		0.2
57				LEATHER GLOVE	0.2	0.9		0.2
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	**Cardboard**		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	**Wood**		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13168							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4				9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v.	Rubber (R)			0.3	N/A		0.3
67				RUBBER BANDS TIGHTLY BOUND ON TOP (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w.	Plastics (waste materials) (PW)			2.4	N/A		2.7
70				PLASTIC TIGHTLY BOUND ON TOP	1.0	0.9		1.1
71				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
72				1 TRAY LINER, 1 BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
73				N/A	N/A	0.9		0.0
74	x.	Organic matrix (OR)			113.8	N/A		94.8
75		x1.	Sludge		113.8	N/A		94.8
76				MODERATE YELLOWISH BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE	113.8	1.0 - 1.5	1.2	94.8
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2.	Other (See Note a)		0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y.	Inorganic matrix (IN)			0.0	N/A		0.0
83		y1.	Sludge		0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2.	Roaster Oxides		0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3.	Salt		0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94		y4.	Other (See Note a)		0.0	N/A		0.0
95				N/A	N/A	0.0		0.0
96				N/A	N/A	0.0		0.0
97	z.	Soils/gravel (S)			0.0	N/A		0.0
98				N/A	N/A	1.0 - 1.4	0.0	0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa.	TOTAL			116.8	N/A		98.0
101	13. (ORGANIC SLUDGE) weight (113.8) kg was obtained by subtracting the weighed waste weight of (3.0) kg and the container net weight of (34.0) kg from the gross weight (150.8) kg of the waste container. (150.8) - (3.0) - (34.0) = (113.8) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

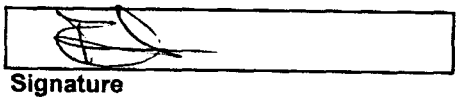
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13168	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13168	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	32.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	236188
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728558
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	04/22/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1455
22. Measured gross weight of loaded container, fully assembled (kgs):	150.8
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	332.5
23. Container closure date (mm/dd/yy):	03/12/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	728707
b. Filter Torque Wrench Calibration Due Date:	05/04/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	HM-250
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	100.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	116.8
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

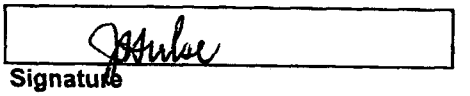
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13168	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	3.2
31. Total volume of Solidified Organics (L):	94.8
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	98.0
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	97.4%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

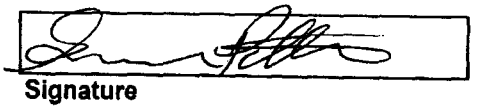
Visual Examination Operator 1:

R. CUMMINS		3-12-13
Enter Name	Signature	Date

Visual Examination Operator 2:

J. HULSE		3/12/13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		3-12-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP13109
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
b. Container Type: 55 gal. drum or SWB:	55 GAL.
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000085
4. Examination Start Date:	03/12/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	504
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	232553
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13109							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				N/A	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13109							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	l. Other inorganic materials (OI)				0.0	N/A		0.0
30		j. Graphite			0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p. Inorganic sorbents			0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r. Cellulosics (C)				0.4	N/A		0.4
56		s. Paper			0.4	N/A		0.4
57				2 LEATHER GLOVES	0.4	0.9		0.4
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003					
2	Container ID: SRP13109					
3	**Section 2: Waste Material Parameter (WMP) Estimates**					
4	**9. Waste Material Parameter and Item Description**	**10. WMP Estimate**	**11. Density**			**12.Volume**
5		**By Weight (kg)**	**(kg/L)**			**(L)**
66	v. Rubber (R)	0.0	N/A			0.0
67	N/A	N/A	0.9 - 2.0		0.0	0.0
68	N/A	N/A	0.9 - 2.0		0.0	0.0
69	w. Plastics (waste materials) (PW)	0.0	N/A			0.0
70	NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9			0.0
71	N/A	N/A	0.9			0.0
72	N/A	N/A	0.9			0.0
73	N/A	N/A	0.9			0.0
74	x. Organic matrix (OR)	156.0	N/A			130.0
75	x1. Sludge	156.0	N/A			130.0
76	PALE YELLOWISH BROWN PUTTY LIKE SLUDGE WITH CALCIUM SILICATE	156.0	1.0 - 1.5		1.2	130.0
77	N/A	N/A	1.0 - 1.5		0.0	0.0
78	N/A	N/A	1.0 - 1.5		0.0	0.0
79	x2. Other (See Note a)	0.0	N/A			0.0
80	N/A	N/A	0.0			0.0
81	N/A	N/A	0.0			0.0
82	y. Inorganic matrix (IN)	0.0	N/A			0.0
83	y1. Sludge	0.0	N/A			0.0
84	N/A	N/A	1.0 - 1.5		0.0	0.0
85	N/A	N/A	1.0 - 1.5		0.0	0.0
86	N/A	N/A	1.0 - 1.5		0.0	0.0
87	y2. Roaster Oxides	0.0	N/A			0.0
88	N/A	N/A	1.5 - 4.0		0.0	0.0
89	N/A	N/A	1.5 - 4.0		0.0	0.0
90	N/A	N/A	1.5 - 4.0		0.0	0.0
91	y3. Salt	0.0	N/A			0.0
92	N/A	N/A	0.0			0.0
93	N/A	N/A	0.0			0.0
94	y4. Other (See Note a)	0.0	N/A			0.0
95	N/A	N/A	0.0			0.0
96	N/A	N/A	0.0			0.0
97	z. Soils/gravel (S)	0.0	N/A			0.0
98	N/A	N/A	1.0 - 1.4		0.0	0.0
99	N/A	N/A	1.0 - 1.4		0.0	0.0
100	aa. TOTAL	156.4	N/A			130.4
101	13. (ORGANIC SLUDGE) weight (156.0) kg was obtained by subtracting the weighed waste weight of (0.4) kg and the container net weight of (34.0) kg from the gross weight (190.4) kg of the waste container. (190.4) - (0.4) - (34.0) = (156.0) kg					
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.					
103	b. N/A					
104						

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13109	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13109	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	30.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	232553
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	720178
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	04/22/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1456
22. Measured gross weight of loaded container, fully assembled (kgs):	190.4
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	419.8
23. Container closure date (mm/dd/yy):	03/12/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	724694
b. Filter Torque Wrench Calibration Due Date:	04/15/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	EM-372
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	95.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	156.4
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13109	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.4
31. Total volume of Solidified Organics (L):	130.0
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	130.4
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	99.7%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

G. BARR	Brad Barr	3-12-13
Enter Name	Signature	Date

Visual Examination Operator 2:

J. POOLE	J.S. Poole	3-12-13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		3-12-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP13138
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000085
4. Examination Start Date:	03/12/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	504
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	232657
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13138							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				N/A	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13138							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4				9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	l.	Other Inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003

Container ID: SRP13138

Section 2: Waste Material Parameter (WMP) Estimates

	9. Waste Material Parameter and Item Description	10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
66	v. Rubber (R)	0.6	N/A		0.5
67	4 RUBBER BANDS TIGHTLY BOUND ON TOP (WAIP)	0.8	0.9 - 2.0	1.1	0.5
68	N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)	3.8	N/A		4.2
70	NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71	PLASTIC TIGHTLY BOUND ON TOP	1.0	0.9		1.1
72	2 TRAY LINERS AND 2 BAG OUT STUBS TIGHTLY BOUND ON TOP (WAIP)	2.8	0.9		3.1
73	N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)	61.4	N/A		51.2
75	x1. Sludge	61.4	N/A		51.2
76	DARK YELLOWISH BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE	61.4	1.0 - 1.5	1.2	51.2
77	N/A	N/A	1.0 - 1.5	0.0	0.0
78	N/A	N/A	1.0 - 1.5	0.0	0.0
79	x2. Other (See Note a)	0.0	N/A		0.0
80	N/A	N/A	0.0		0.0
81	N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)	0.0	N/A		0.0
83	y1. Sludge	0.0	N/A		0.0
84	N/A	N/A	1.0 - 1.5	0.0	0.0
85	N/A	N/A	1.0 - 1.5	0.0	0.0
86	N/A	N/A	1.0 - 1.5	0.0	0.0
87	y2. Roaster Oxides	0.0	N/A		0.0
88	N/A	N/A	1.5 - 4.0	0.0	0.0
89	N/A	N/A	1.5 - 4.0	0.0	0.0
90	N/A	N/A	1.5 - 4.0	0.0	0.0
91	y3. Salt	0.0	N/A		0.0
92	N/A	N/A	0.0		0.0
93	N/A	N/A	0.0		0.0
94	y4. Other (See Note a)	0.0	N/A		0.0
95	N/A	N/A	0.0		0.0
96	N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)	0.0	N/A		0.0
98	N/A	N/A	1.0 - 1.4	0.0	0.0
99	N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL	65.8	N/A		55.9

101 13. (ORGANIC SLUDGE) weight (61.4) kg was obtained by subtracting the weighed waste weight of (4.4) kg and the container net weight of (34.0) kg from the gross weight (99.8) kg of the waste container. (99.8) - (4.4) - (34.0) = (61.4) kg

102 a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.

103 b. N/A

104

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13138	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13138	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	31.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	232657
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	720178
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	04/22/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1527
22. Measured gross weight of loaded container, fully assembled (kgs):	99.8
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	220.0
23. Container closure date (mm/dd/yy):	03/12/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	724694
b. Filter Torque Wrench Calibration Due Date:	04/15/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	EM-389
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	95.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	65.8
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13138	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	4.7
31. Total volume of Solidified Organics (L):	51.2
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	55.9
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	93.3%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

J. POOLE	J.S. Poole	3-12-13
Enter Name	Signature	Date

Visual Examination Operator 2:

G. BARR	Grant Barr	3-12-13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		3-12-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP13133
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000085
4. Examination Start Date:	03/12/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	501
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	236188
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13133							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density	12.Volume	
5					By Weight (kg)	(kg/L)	(L)	
6	a. Iron-based metals/alloys (IM)				0.1	N/A	0.0	
7				METAL	0.1	8.0	0.0	
8				N/A	N/A	8.0	0.0	
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A	0.0	
10				N/A	N/A	3.0	0.0	
11				N/A	N/A	3.0	0.0	
12	c. Other metals (OM)				0.0	N/A	0.0	
13		d. Lead			0.0	N/A	0.0	
14				N/A	N/A	11.0	0.0	
15				N/A	N/A	11.0	0.0	
16		e. Beryllium			0.0	N/A	0.0	
17				N/A	N/A	1.8	0.0	
18				N/A	N/A	1.8	0.0	
19		f. Depleted uranium			0.0	N/A	0.0	
20				N/A	N/A	19.1	0.0	
21				N/A	N/A	19.1	0.0	
22		g. Copper			0.0	N/A	0.0	
23				N/A	N/A	9.0	0.0	
24				N/A	N/A	9.0	0.0	
25		h. Other (See Note a)			0.0	N/A	0.0	
26				N/A	N/A	0.0	0.0	
27				N/A	N/A	0.0	0.0	
28				N/A	N/A	0.0	0.0	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13133							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	i. Other inorganic materials (OI)				0.0	N/A		0.0
30		j. Graphite			0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p. Inorganic sorbents			0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r. Cellulosics (C)				0.3	N/A		0.3
56		s. Paper			0.3	N/A		0.3
57				LEATHER AND PAPER	0.3	0.9		0.3
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP13133							
3	**Section 2: Waste Material Parameter (WMP) Estimates**							
4				**9. Waste Material Parameter and Item Description**	**10. WMP Estimate**	**11. Density**		**12.Volume**
5					**By Weight (kg)**	**(kg/L)**		**(L)**
66	v. Rubber (R)				0.3	N/A		0.3
67				RUBBER BANDS TIGHTLY BOUND ON TOP (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				3.1	N/A		3.5
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				2 TRAY LINERS AND A BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	2.3	0.9		2.6
72				PLASTIC TIGHTLY BOUND ON TOP	0.8	0.9		0.9
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				141.8	N/A		118.2
75		x1. Sludge			141.8	N/A		118.2
76				DUSKY YELLOW POWDERY SLUDGE WITH CALCIUM SILICATE	141.8	1.0 - 1.5	1.2	118.2
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95				N/A	N/A	0.0		0.0
96				N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98				N/A	N/A	1.0 - 1.4	0.0	0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				145.6	N/A		122.3
101	13. (ORGANIC SLUDGE) weight (141.8) kg was obtained by subtracting the weighed waste weight of (3.8) kg and the container net weight of (34.0) kg from the gross weight (179.6) kg of the waste container. (179.6) - (3.8) - (34.0) = (141.8) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13133	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13133	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	32.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	236188
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728558
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	04/22/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1530
22. Measured gross weight of loaded container, fully assembled (kgs):	179.6
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	395.9
23. Container closure date (mm/dd/yy):	03/12/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	728707
b. Filter Torque Wrench Calibration Due Date:	05/04/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	EM-400
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	100.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	145.6
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

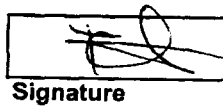
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP13133	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	4.1
31. Total volume of Solidified Organics (L):	118.2
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	122.3
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	97.4%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

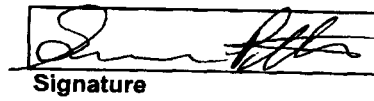
Visual Examination Operator 1:

J. HULSE		3/12/13
Enter Name	Signature	Date

Visual Examination Operator 2:

R. CUMMINS		3-12-13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		3-12-13
Enter Name	Signature	Date

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist

Batch Data Report No.: IN-SRP-VE-000085

Description			
1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods used?	☐ NO	☑ YES	☐ NA
a. Was the description of the waste items adequate?	☐ NO	☑ YES	☐ NA
2. Was the correct revision of operating procedure used? (Attachment 1, Section 1, Line 5)	☐ NO	☑ YES	☐ NA
3. Were the following calculation spot checks performed?			
a. Attachment 1, Section 2: Verify the total waste volume in Column 12, Row aa does not exceed 208 L for a 55-gallon drum or 1456 L for an SWB and verify the estimated weights in Column 10, Row aa matches the measured net weight of waste in Attachment 1, Section 4, Row 27.	☐ NO	☑ YES	☐ NA
b. Attachment 1, Section 5: Verify the total waste volume in Row 33 a., matches the total waste volume in Section 2, Column 12, Row aa.	☐ NO	☑ YES	☐ NA
c. Attachment 1, Section 1: Check hand calculations in Lines 6h and 6p, and any additional hand calculations recorded in the comments field or in Section 2, Line 13.	☐ NO	☑ YES	☐ NA
4. Is only one waste stream selected in Line 34 of Attachment 1, Section 5, and is it consistent with the values shown in Attachment 1, Section 2, Column 12?	☐ NO	☑ YES	☐ NA
5. Is the data entered in the correct units and correct number of significant figures?	☐ NO	☑ YES	☐ NA
6. Were the data reviewed for transcription errors?	☐ NO	☑ YES	☐ NA
7. Does the BDR include VE for up to 20 containers?	☐ NO	☑ YES	☐ NA
8. Are BDR contents complete and do they match, Attachment 3, CCP Waste VE Batch Data Report Table of Contents?	☐ NO	☑ YES	☐ NA
9. Was completeness verified for data entry on the CCP VE Technique Data Form for the following?			
a. Section 1	☐ NO	☑ YES	☐ NA
b. Section 2	☐ NO	☑ YES	☐ NA
c. Section 3	☐ NO	☑ YES	☐ NA
d. Section 4	☐ NO	☑ YES	☐ NA
e. Section 5	☐ NO	☑ YES	☐ NA

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: IN SRP-VE-000085

Description			
10. Is all the data signed and dated in Attachment 1, Section 6, using reproducible ink, and by the individual(s) generating it?	☐ NO	☑ YES	☐ NA
11. Is all data entered clearly, legibly, and accurately?	☐ NO	☑ YES	☐ NA
12. Were discrepancies between the operators reconciled?	☐ NO	☐ YES	☑ NA
13. Are all changes to original data lined out, initialed and dated by the individual making the changes?	☐ NO	☐ YES	☑ NA
14. Were data changes made by the individual who originally collected the data or an equally qualified individual?	☐ NO	☐ YES	☑ NA
15. Was the DPS scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☑ YES	☐ NA
16. Was the daily DPS scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☑ YES	☐ NA
17. Was the container scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☑ YES	☐ NA
18. Was the daily container scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☑ YES	☐ NA
19. Was the torque wrench(es) in calibration prior to VE Technique and documented correctly?	☐ NO	☑ YES	☐ NA
20. Were NCR(s) initiated as indicated in Attachment 1, Section 1, dispositioned, and approved appropriately?	☐ NO	☐ YES	☑ NA
21. Was the correct waste stream and waste matrix code assigned?	☐ NO	☑ YES	☐ NA
22. Is there a valid VE data form for each drum in the batch?	☐ NO	☑ YES	☐ NA
23. Were the operators trained and qualified in accordance with the applicable requirements?	☐ NO	☑ YES	☐ NA

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: IN-SRP-VE-000085

Description			
24. Was precision maintained by reconciling any discrepancies between the operator(s) and the ITR with regard to identification of waste matrix code, liquids in excess of WIPP Hazardous Waste Facility Permit and WIPP Waste Acceptance Criteria limits and compressed gases?	☐ NO	☐ YES	☑ NA

Description

Comments:

N/A

I have reviewed 100 percent of the container-specific and batch data in this BDR and find it acceptable.

ITR:

Jodi M. Stanton	Jodi M. Stanton	3/13/13
Printed Name	Signature	Date

Attachment 9 – CCP SPM HSG Summa Sampling Project Level Validation Checklist and Summary

BDR Number: INHSG1204 **Sampling Date:** 7-17-12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
1. Does the Batch Data Report (BDR) contain the batch number? **Reference Source: CCP-PO-001, Table C3-12**	X			
2. Is the BDR complete according to the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-10b**	X			
3. Does the BDR contain the BDR date? **Reference Source: CCP-PO-001, Table C3-12**	X			
4. Is the sample matrix and type included for each sample in the BDR? **Reference Source: CCP-PO-001, Table C3-12**	X			
5. Is the BDR complete as defined by the process procedures? **Reference Source: CCP-PO-001, C3-10, CCP Technical Procedures**	X			
6. List all containers that have met QAOs. **Reference Source: CCP-PO-001, Table C3-12**				Container Numbers: 10124637,10186445,10127573 10088793,10221733,10223021 10101976,10102259,10102536 10202170,10217850
7. Does the BDR include the requested analyses and the name of the laboratory? **Reference Source: CCP-PO-001, Table C3-12**	X			
8. Is there a reference to or copy of any associated NCRs (if any) in the BDR? NA if no NCRs associated with the BDR. **Reference Source: CCP-PO-001, Table C3-12**			X	No NCR's
9. Does the BDR include the point of origin for sampling (e.g., building number, room)? **Reference Source: CCP-PO-001, Table C3-12**	X			
10. Is the sample size included in the BDR? **Reference Source: CCP-PO-001, Table C3-12**	X			
11. Does the BDR include the sample location of each container? Note: Location within container is where the sample is taken. The BDR must specify what layer of confinement was sampled (e.g., under the lid). **Reference Source: CCP-PO-001, Table C3-12**	X			

Attachment 9 – CCP SPM HSG Summa Sampling Project Level Validation Checklist and Summary (Continued)

BDR Number: INHSG1204 **Sampling Date:** 7-17-12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
12. Is the person collecting the sample identified in the BDR and qualified? **Reference Source: CCP-PO-001, Table C3-12**	X			
13. Does the BDR contain a chain of custody record? **Reference Source: CCP-PO-001, Table C3-12**	X			
14. Does the chain of custody form correctly identify the Waste Stream ID? **Reference Source: CCP-PO-001, Table C3-12**	X			
15. Is there a reference to sampling equipment numbers or lot numbers for disposable equipment? **Reference Source: CCP-PO-001, Table C3-12**	X			
16. Is there verification of rigid liner venting? **Reference Source: CCP-PO-001, Table C3-12**	X			
17. Does the BDR include the operator/sampler signature and date and time of sampling for each sample? **Reference Source: CCP-PO-001, Table C3-12**	X			
18. Are there 20 samples or less (excluding QC) in the batch and all samples collected within 14 days of the first sample collected? **Reference Source: CCP-PO-001, C1-1b**	X			
19. Are the correct revisions of the procedures used and identified? **Reference Source: CCP-PO-001, Table C3-12**	X			
20. Are all data reporting forms complete with data reported properly (correct units and significant figures)? **Reference Source: CCP-PO-001, C3-10b(1)**	X			
21. Is there a cross-reference between waste container number and field sample number? **Reference Source: CCP-PO-001, C1-5**	X			
22. Have the samples been properly preserved (0-40° C)? **Reference Source: CCP-PO-001, Table C1-1**	X			

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Attachment 9 – CCP SPM HSG Summa Sampling Project Level Validation Checklist and Summary (Continued)

BDR Number: INHSG1204 **Sampling Date:** 7-17-12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
23. Have the samples been properly preserved (0-40° C)? **Reference Source: CCP-PO-001, Table C1-1**	X			
24. Has the correct DAC scenario and waste packaging configuration been selected? **Reference Source: CCP-PO-001, C3-2**	X			
25. Do the samples meet the required DAC equilibrium times? **Reference Source: CCP-PO-001, C3-2**	X			
26. Prior to canister use was the following performed: equipment blank, sample canister equipment cleaning and leak check, and field reference standard (or on-line control standard) performed as required? **Reference Source: CCP-PO-001, C1-1b**	X			
27. Has one field blank per batch been collected? **Reference Source: CCP-PO-001, Table C1-2**	X			
28. Has a minimum of one equipment blank been collected for the applicable cleaning batch blanks? **Reference Source: CCP-PO-001, Table C1-2**	X			
29. Has one field duplicate per batch been collected? **Reference Source: CCP-PO-001, Table C1-2**	X			
30. Has the canister pressure and ambient temperature and pressure been recorded? **Reference Source: CCP-PO-001, Table C3-12**	X			
31. Have the ambient pressure and temperature sensors been calibrated? **Reference Source: CCP-PO-001, C1-1d**	X			
32. Have all the waste containers equilibrated for a minimum of 72 hours at 18° C or higher? **Reference Source: CCP-PO-001, C1-1a**	X			
33. Is the completed, signed, and dated Independent Technical Reviewer Checklist in the BDR? **Reference Source: CCP-PO-001, Table C3-12**	X			

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Attachment 9 – CCP SPM HSG Summa Sampling Project Level Validation Checklist and Summary (Continued)

BDR Number: INHSG1204 **Sampling Date:** 7-17-12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
34. Is the completed, signed, and dated Independent Technical Reviewer Checklist in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, Table C3-12**	X			

Comments: None

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

Jim Vernon		8-9-12
SPM Printed Name	Signature	Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

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Attachment 1 – HSG Sampling Batch Data Report Cover Sheet Page 1 of 1

Headspace Gas Sampling

HSG Sampling Batch Number: INHSG1204

Waste Matrix Code: S5300

Waste Container Identification Numbers

10223021	10102536
10124637	N/A
10102259	N/A
10101976	N/A
10221733	N/A
10217850	N/A
10127573	N/A
10088793	N/A
10186445	N/A
10202170	N/A

Comments: **Waste Stream ID's for this batch are ID-RF-S5300-A. No filter change out required.**

HSG Independent Technical Reviewer:

Jeri Miles — Printed Name

Signature

08/01/2012 — Date

CCP RECORDS ORIGINAL
DATE REC'D 8-2-12

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Attachment 2 – HSG Sampling Batch Data Report Table of Contents Page 1 of 1

Section		Page No.
1.	HSG Sampling Batch Data Report Cover Sheet (Attachment 1)	1
2.	HSG Sampling Batch Data Report Table of Contents (Attachment 2)	2
3.	Independent Technical Reviewer (ITR) Review Checklist (Attachment 3)	3
Sampling Batch Data Report Forms:		
4.	Chain of Custody/Canister Tag Forms (Attachment 1 from CCP-TP-093)	5
5.	Copy of Laboratory Canister Tags	7
6.	Cleanliness Certification for needle assemblies as applicable to the Sampling Batch Data Report (or copy of the certifications from CCP-TP-093)	20
7.	Sample Drum Data Form (Attachment 2 from CCP-TP-093)	21
8.	Copy of Sampling Port Installation Records (CCP-TP-098, Attachment 1), if applicable	N/A
9.	Copy of Drum Filter Changeout Form (Attachment 1 of CCP-TP-082), if applicable.	N/A
10.	Shipment Request Forms, if applicable.	N/A
11.	72-Hour Temperature Equilibration Plots	23
12.	Copy of NCRs, if applicable	N/A

Attachment 3 – Independent Technical Reviewer (ITR) Review Checklist

HSG Sampling Batch Number: INHSG1204

		YES	NO	NA	
1.	Is the HSG Sampling BDR complete as specified in step 4.1.2 and are the field sampling records complete?	X			
Sampling Documentation		**YES**	**NO**	**NA**	**Comments**
2.	Are calculations correct for the Drum Age Criteria (DAC), temperature equilibrium time, and percent complete?	X			
3.	Did the containers meet the DAC?	X			
4.	Did the containers meet the temperature equilibrium requirement (stored at 18°C or higher for 72-hours prior to sampling)?	X			
5.	Do the temperature plots indicate the drums were stored at 18 °C (64.5 °F) or higher for 72-hours prior to sampling?	X			
5a.	Are the waste stream IDs completed correctly on the Chain of Custody (COC) Form?	X			
Quality Control Samples					
Precision		**YES**	**NO**	**NA**	**Comments**
6.	Was a Field Duplicate collected once per batch?	X			
Accuracy		**YES**	**NO**	**NA**	**Comments**
7.	Was a Field Reference Sample collected?		X		NOT NEEDED
8.	Was a Field Blank collected one per batch prior to sampling containers?	X			
Completeness		**YES**	**NO**	**NA**	**Comments**
9.	Is the percentage of valid samples collected and submitted for analysis greater than or equal to 90 percent?	X			
Additional Criteria		**YES**	**NO**	**NA**	**Comments**
10.	Is the data technically reasonable based upon the technique used?	X			
11.	Was the sampling equipment checked for leaks after sample collection?	X			
12.	Was the data generation and reduction conducted in a technically correct manner?	X			
13.	Was the data reported in proper units and with the correct number of significant figures?	X			
14.	Were the samples maintained at a temperature between 0°C - 40°C?	X			
15.	Was the equipment involved in the sampling activities in calibration (i.e., torque wrenches, ambient temperature and pressure gauges, dataloggers, ultrasonic micrometer, min/max thermometers)?	X			

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Attachment 3 – Independent Technical Reviewer (ITR) Review Checklist (continued)

HSG Sampling Batch Number: INHSG1204

Raw Data Collection and Management		YES	NO	NA	Comments
16.	Are there satisfactory equipment blanks, canister cleaning blanks, and needle assembly cleanliness results?	X			
17.	Has the data been reviewed for transcription errors?	X			
18.	Verify all the data is signed and dated, and the data is recorded clearly, legibly, and accurately.	X			
19.	No more than 20 waste containers are in the batch (excluding the QC samples).	X			
20.	Procedure Number: CCP-TP-093				Revision: 16
21.	Is the procedure number and revision correct?	X			
22.	All changes to original data are lined out, initialed, and dated by the individual making the change, and a justification included. (NOTE: Original data must not be obliterated or otherwise disfigured as not to be readable. Data changes shall only be made by the individual who originally collected the data or an individual authorized to change the data.)	X			

Independent Technical Reviewer:

Jeri Miles
Printed Name

Jeri Miles
Signature

08/01/2012
Date

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Attachment 1 – Chain of Custody/Canister Tag Chain of Custody # 593 Page 1 of 2

Location: Under Drum Lid	Point of Origin: WMF-628	Sample Matrix is Gas	Ambient Conditions
	Field Batch Number: INHSG1204		Temperature (centigrade): 28.0
			Pressure (in. Hg): 25

Site	Date	SUMMA® Canister No.	Size (mL)	TID No.	Container ID /Barcode No.	Waste Stream ID	Cleaning Batch No.	Needle Assembly Batch No	Type SS B D F C (Note 1)	Vent Seal (Y/NA)	Start Time	End Time	Beginning Pressure (in.Hg or psig)	End Pressure (in.Hg or psig)	Sampler's Initials
IN	071712	EI209	250	0825562	N/A	N/A	436C	INHSG1203NB	B	N/A	1329	1334	25 in.Hg	2 in.Hg	
IN	071712	EID18	250	0825563	10223021	ID-RF-S5300-A	436C	INHSG1203NB	D	Y	1339	1344	25 in.Hg	2 in.Hg	
IN	071712	EI340	250	0825564	10223021	ID-RF-S5300-A	436C	INHSG1203NB	D	Y	1339	1344	25 in.Hg	0 in.Hg	
IN	071712	EIC62	250	0825565	10124637	ID-RF-S5300-A	436C	INHSG1203NB	SS	Y	1349	1354	25 in.Hg	3 in.Hg	
IN	071712	EI392	250	0825566	10102259	ID-RF-S5300-A	436C	INHSG1203NB	SS	Y	1350	1355	25 in.Hg	1 in.Hg	
IN	071712	EID01	250	0825567	10101976	ID-RF-S5300-A	429C	INHSG1203NB	SS	Y	1351	1356	25 in.Hg	3 in.Hg	
IN	071712	EIC87	250	0825568	10221733	ID-RF-S5300-A	436C	INHSG1203NB	SS	Y	1351	1356	24 in.Hg	2 in.Hg	
IN	071712	EI558	250	0825569	10217850	ID-RF-S5300-A	436C	INHSG1203NB	SS	Y	1405	1410	25 in.Hg	2 in.Hg	
IN	071712	EIB47	250	0825570	10127573	ID-RF-S5300-A	436C	INHSG1203NB	SS	Y	1354	1359	26 in.Hg	2 in.Hg	
IN	071712	EI451	250	0825571	10088793	ID-RF-S5300-A	436C	INHSG1203NB	SS	Y	1354	1359	25 in.Hg	2 in.Hg	
IN	071712	EI780	250	0825572	10186445	ID-RF-S5300-A	436C	INHSG1203NB	SS	Y	1406	1411	24 in.Hg	2 in.Hg	
IN	071712	EIB42	250	0825573	10202170	ID-RF-S5300-A	436C	INHSG1203NB	SS	Y	1407	1412	24 in.Hg	2 in.Hg	
IN	071712	EI367	250	0825574	10102536	ID-RF-S5300-A	436C	INHSG1203NB	SS	Y	1423	1428	26 in.Hg	3 in.Hg	
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Note 1. Analysis required:
C - Needle Assembly Cleanliness Certification: VOC
SS - Single Sample: VOC, H_2, CH_4
B - Field Blank: VOC
D - Duplicate: VOC, H_2, CH_4
F - Field Reference Standard: VOC

Sampler's Signature:

Attachment 1 – Chain of Custody/Canister Tag (Continued) Chain of Custody # 593 Page 2 of 2

Field Batch Number: INHSG1204					
Comments: N/A		Instrument Section	M&TE ID No.	Calibration Due Date	Initials/Date
Analytical Laboratory - ECL		Pressure Meter	XC0566	8-16-12	DD 7-17-12
Shipping Tracking #N/A	Method of Shipping ECL Pickup	Thermometer	XC0363	6-5-13	DD 7-17-12
		Min /Max Thermometer	XC0553 XC0692	10-12-12 10-12-12	DD 7-17-12
Analysis Requested VOC		Preservation Method: 0 - 40°C			
TID Number(s) 0825575		TID Initials and date: DD 7-18-12			

Custody Initiated By: (Sampler Name/Organization) CCP	Date/Time 7-17-12 1334		
Relinquished By: (Name/Organization) CCP	Date/Time 7-18-12 1500	Received By: (Name/Organization)	Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)	Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)	Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)	Date/Time
Final Disposition By: (Name/Organization)	Date/Time	Disposition:	

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GAS SAMPLE CANISTER TAG

1	N	0	7	1	7	1	2	E	I	2	0	9
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSC1204 Drum Number: ~~FIELD BLANK~~ 07-17-12 N/A

Sampling Organization: CCP Sample Description: FIELD BLANK

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	070512	1330	TBL
Cleaning Batch: 436C	M= <5.0E-2	P= 640T			
Field-	C= 25" Hg	T= 28.0			
Before Sample Collection	M=	P= 25	071712	1329	DD
Field-	C= 2" Hg	T= 28.0			
After Sample Collection	M=	P= 25	071712	1334	DD
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? (Y) / N (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

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GAS SAMPLE CANISTER TAG

1	N	0	7	1	7	1	2	E	I	D	1	8
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INH561204 Drum Number: 10223021

Sampling Organization: CCI Sample Description: DUPLICATE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	070512	1330	TBL
Cleaning Batch: 436C	M= <5.0E-2	P= 640T			
Field-	C= 25" Hg	T= 28.0	071712	1339	DD
Before Sample Collection	M=	P= 25			
Field-	C= 2" Hg	T= 28.0	071712	1344	DD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	7	1	7	1	2	E	I	3	4	0
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1204 Drum Number: 10223021

Sampling Organization: CCP Sample Description: DUPLICATE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	070512	1330	TBL
Cleaning Batch: 436C	M= <5.0E-2	P= 640T			
Field-	C= 25" Hg	T= 28.0	071712	1339	DD
Before Sample Collection	M=	P= 25			
Field-	C= 0" Hg	T= 28.0	071712	1344	DD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	7	1	7	1	Z	E	I	C	6	2
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: 1N1HS61204 **Drum Number:** 10124637

Sampling Organization: CCP **Sample Description:** SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	070512	1330	TBL
Cleaning Batch: 436C	M= <5.0E-2	P= 640T			
Field-	C= 25" Hg	T= 28.0			
Before Sample Collection	M=	P= 25	071712	1349	AD
Field-	C= 3" Hg	T= 28.0			
After Sample Collection	M=	P= 25	071712	1354	AD
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: [signature]

Notes:
(1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	D	7	1	7	1	2	E	I	3	9	2
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INH561204 Drum Number: 10102259

Sampling Organization: CCL Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	070512	1330	TBL
Cleaning Batch: 436C	M= <5.0E-2	P= 640T			
Field-	C= 25" Hg	T= 28.0	071712	1350	DD
Before Sample Collection	M=	P= 25			
Field-	C= 1" Hg	T= 28.0	071712	1355	DD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

I	N	0	7	I	7	I	2	E	I	D	0	1
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHS61204 Drum Number: 10101976

Sampling Organization: CCP Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 23	061312	1430	TBL
Cleaning Batch: 429C	M= <5.0E-2	P= 639T			
Field-	C= 25" Hg	T= 28.0	071712	1351	on
Before Sample Collection	M=	P= 25			
Field-	C= 3" Hg	T= 28.0	071712	1356	ND
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	U	7	1	7	1	2	E	I	C	8	7
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1204 Drum Number: 10221733

Sampling Organization: CCP Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	070512	1330	TBL
Cleaning Batch: 436C	M= <5.0E-2	P= 640T			
Field-	C= 24" Hg	T= 28.0	071712	1351	AD
Before Sample Collection	M=	P= 25			
Field-	C= 2" Hg	T= 28.0	071712	1356	AD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	7	1	7	1	2	E	I	5	5	8
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: 1NH56120Y Drum Number: 10217850

Sampling Organization: CCP Sample Description: Sample

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	070512	1330	TBL
Cleaning Batch: 436C	M= <5.0E-2	P= 640T			
Field-	C= 25" Hg	T= 28.0	071712	1405	M
Before Sample Collection	M=	P= 25			
Field-	C= 2 " Hg	T= 28.0	071712	1410	M
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-03)

GAS SAMPLE CANISTER TAG

1	N	U	7	1	7	1	2	E	I	B	4	7
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHS61204 Drum Number: 10127573

Sampling Organization: CCP Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	070512	1330	TBL
Cleaning Batch: 436C	M= <5.0E-2	P= 640T			
Field-	C= 26" Hg	T= 28.0	071712	1354 (0839-24-12)	AD
Before Sample Collection	M=	P= 25			
Field-	C= 2" Hg	T= 28.0	071712	1359	AD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	7	1	7	1	2	E	I	4	5	1
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: 1NH561204 Drum Number: 100887793

Sampling Organization: CCI Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	070512	1330	TBL
Cleaning Batch: 436C	M= <5.0E-2	P= 640T			
Field-	C= 25" Hg	T= 28.0			
Before Sample Collection	M=	P= 25	071712	1354	MD
Field-	C= 2" Hg	T= 28.0	071712 AM 07-17-12 07179		
After Sample Collection	M=	P= 25		1359	MD
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

09	6	N	0	7	1	7	1	2	E	I	7	8	0
07.17.12	Z	Z	M	M	D	D	Y	Y	A	A	X	X	X
	Sampling Site				Date						Canister ID		

Batch Number: 1NH561204 Drum Number: 10186445

Sampling Organization: CCL Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	070512	1330	TBL
Cleaning Batch: 436C	M= <5.0E-2	P= 640T			
Field-	C= 24" Hg	T= 28.0	071712	1406	DD
Before Sample Collection	M=	P= 25			
Field-	C= 2" Hg	T= 28.0	071712	1411	DD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: [signature]

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	7	1	7	1	2	E	I	B	4	2
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: 1N1456 1204 Drum Number: 10202170

Sampling Organization: CCP Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	070512	1330	TBL
Cleaning Batch: 436C	M= <5.0E-2	P= 640T			
Field-	C= 24" Hg	T= 28.0			
Before Sample Collection	M=	P= 25	071712	1407	MM
Field-	C= 2" Hg	T= 28.0			
After Sample Collection	M=	P= 25	071712	1412	MM
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

I	N	0	7	I	7	I	2	E	I	3	6	7
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHS61204 Drum Number: 10102536

Sampling Organization: CCI Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	070512	1330	TBL
Cleaning Batch: 436C	M= <5.0E-2	P= 640T			
Field-	C= 26" Hg	T= 28.0			
Before Sample Collection	M=	P= 25	071712	1423	DD
Field-	C= 3" Hg	T= 28.0			
After Sample Collection	M=	P= 25	071712	1428	DD
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: [signature]

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

From: Catherine A Crowder
To: Dale A. Dover; charles.turner@wipp.ws
Subject: Needle Assembly Blanks
Date: Wednesday, July 11, 2012 3:55:40 PM

Analytical results for needle assembly equipment blanks in field batch INHSG1203NB were acceptable. Concentrations of all VOC target analytes were less than or equal to three times the MDLs listed in Table C3-2 in Permit Attachment C3.

Attachment 2 – Sample Container Data Form

Field Batch Number: INHSG1204

Container ID		Sampling Scenario	Summary Category Group	Rigid Liner (Y/N/)	Rigid Liner Lid (Y/N)	Rigid Liner Lid Hole Diameter (in.)	Number of Inner Bags	Number of Liner Bags	Filter Model No.	Number of Filters	Restrictive Hydrogen Diffusivity (m/s/mf)	Package Configuration Group No.
1	10223021	2	S5000	N	N	1	N/A	N/A	NucFil-020DS	1	1.90E-06	N/A
2	10124637	2	S5000	N	N	1	N/A	N/A	NucFil-020S	1	1.90E-06	N/A
3	10102259	2	S5000	N	N	1	N/A	N/A	NucFil-7DS	1	3.70E-06	N/A
4	10101976	2	S5000	N	N	1	N/A	N/A	NucFil-7DS	1	3.70E-06	N/A
5	10221733	2	S5000	N	N	1	N/A	N/A	NucFil-020DS	1	1.90E-06	N/A
6	10217850	2	S5000	N	N	1	N/A	N/A	NucFil-020DS	1	1.90E-06	N/A
7	10127573	2	S5000	Y	Y	0.3	N/A	N/A	NucFil-020	1	1.90E-06	N/A
8	10088793	3	S5000	Y	N	N/A	0	2	NucFil-019SDS	1	3.70E-06	3
9	10186445	2	S5000	Y	Y	0.3	N/A	N/A	NucFil-020DS	1	1.90E-06	N/A
10	10202170	2	S5000	N	N	1	N/A	N/A	NucFil-7DS	1	3.70E-06	N/A
11	10102536	2	S5000	N	N	1	N/A	N/A	NucFil-7DS	1	3.70E-06	N/A
12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
22	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Attachment 2 – Sample Container Data Form (Continued)

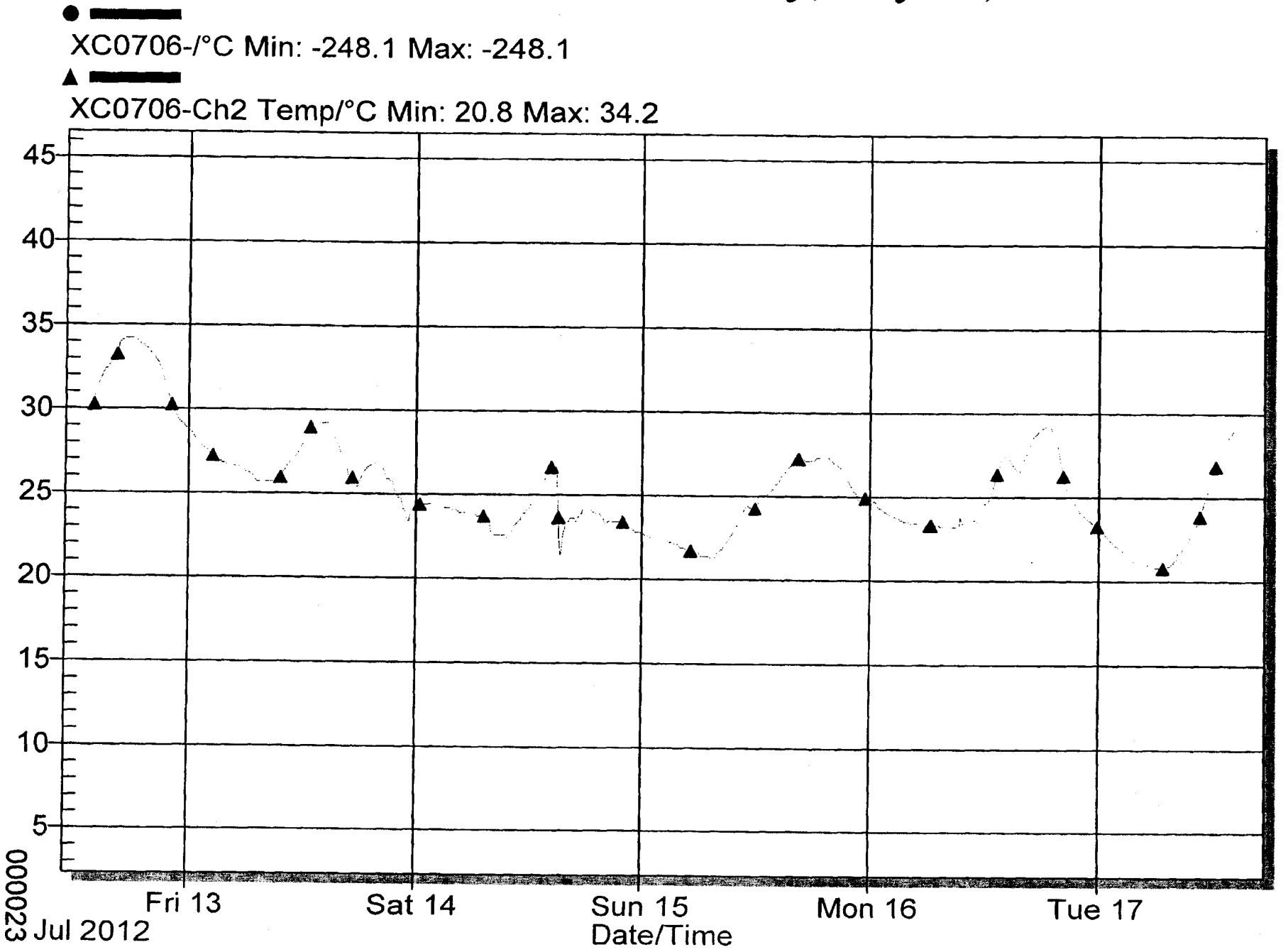
Field Batch Number: INHSG1204

	Container ID	Closure Date	Vent Date	Permit Required Equilibrium Time (Days)	Container Age (Days)	Container Fill Factor (%)	Can This Container Be Sampled? (Y / N)	Temperature Recorder M&TE /ID No.: XC0706 12/13/12 XC0709 12/13/12 Temperature Recorder Calibration Due Date: 72 – Hour Container Equilibrium Start Date/Time	End Date/Time
1	10223021	3/16/72	5/23/08	12	1515	100	Y	7-12-12 1500	7-17-12 1250
2	10124637	10/14/72	12/15/06	12	2040	100	Y	7-12-12 1500	7-17-12 1250
3	10102259	12/14/73	7/25/06	11	2183	95	Y	7-12-12 1500	7-17-12 1250
4	10101976	10/2/73	7/26/06	11	2182	90	Y	7-12-12 1500	7-17-12 1250
5	10221733	1/3/72	7/11/08	12	1466	95	Y	7-12-12 1500	7-17-12 1250
6	10217850	2/11/72	5/10/08	12	1528	95	Y	7-12-12 1500	7-17-12 1250
7	10127573	10/11/72	11/16/06	29	2069	85	Y	7-12-12 1500	7-17-12 1250
8	10088793	6/29/10	6/29/10	46	748	85	Y	7-12-12 1500	7-17-12 1250
9	10186445	7/14/72	12/29/11	29	200	85	Y	7-12-12 1500	7-17-12 1250
10	10202170	4/10/72	1/5/08	11	1654	90	Y	7-12-12 1500	7-17-12 1250
11	10102536	3/4/74	7/16/06	11	2192	90	Y	7-12-12 1500	7-17-12 1250
12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
22	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

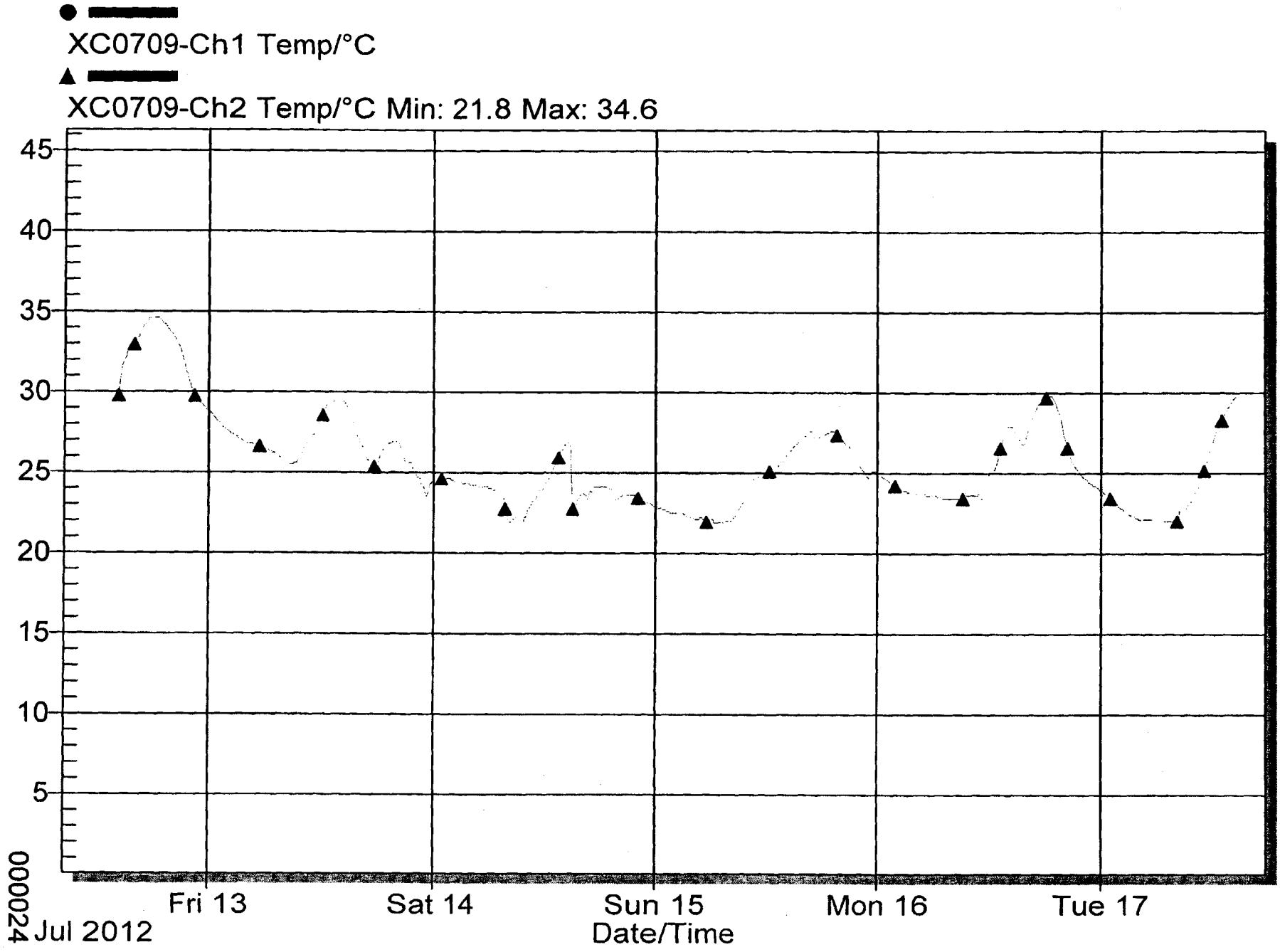
INSG Sampler: DALE WOLVER — 07-18-12
Print Name — Signature — Date

000022

Downloaded Data - Tuesday, July 17, 2012



Downloaded Data - Tuesday, July 17, 2012



Agilent

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PAGE

Attachment 10 – CCP SPM Summa HSG Analysis Project Level Validation Checklist and Summary

BDR Number: ECL12029M **Analysis Date:** 7-26, 7-30-2012

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
1. Does the Batch Data Report (BDR) contain the batch number, laboratory name, and the date of the batch report? **Reference Source: CCP-PO-001, Table C3-13**	X			
2. Is the BDR complete according to the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-10b**	X			
3. Has a BDR Narrative been included with the BDR? **Reference Source: CCP-PO-001, Table C3-13**	X			
4. Are the correct revisions of the procedures used and identified? **Reference Source: CCP-PO-001, Table C3-13**	X			
5. List all containers that have met the QAOs. **Reference Source: CCP-PO-001, C3-10b**				Container Numbers: 10223021, 10124637, 10102259, 10101976, 10221733, 10217850, 10127573, 10088793, 10186445, 10202170, 10102536
6. Is there a reference to or copy of any associated NCRs (if any) in the BDR? NA if no NCRS associated with the BDR. **Reference Source: CCP-PO-001, Table C3-13**			X	
7. Is the completed, signed, and dated Independent Technical Reviewer checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, Table C3-13**	X			
8. Does the BDR include the operator's signature and analysis date? **Reference Source: CCP-PO-001, Table C3-13**	X			
9. Are there 20 laboratory samples or less in the analytical batch (excluding QC)? **Reference Source: CCP-PO-001, C3-10**	X			
10. Does the chain of custody (COC) form correctly identify the Waste Stream ID? **Reference Source: CCP-PO-001, Table C3-13**	X			
11. Does the BDR contain a complete and signed copy of the COC form? **Reference Source: CCP-PO-001, Table C3-13**	X			

Attachment 10 – CCP SPM Summa HSG Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: ECL12029M **Analysis Date: 7-26, 7-30-2012**

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
12. Is there a cross-reference between waste container number, field sample number, and lab sample number ID; and signature release by lab personnel in the batch report? **Reference Source: CCP-PO-001, C1-5**	X			
13. Does the BDR contain gas sample canister tags for each sample that are properly filled out? **Refere nce Source: CCP-PO-001, Table C3-13**	X			
14. Have the samples been properly preserved (0-40° C)? **Reference Source: CCP-PO-001, Table C1-1**	X			
15. Does the BDR include the date and time of analysis for each sample? **Reference Source: CCP-PO-001, Table C3-13**	X			
16. Have data reporting flags been assigned properly? **Reference Source: CCP-PO-001, Table C3-13**	X			
17. Did the batch report analysis consist of all the target compounds? **Reference Source: CCP-PO-001, Table C3-2**	X			
18. Is there a minimum of one laboratory (method) blank per analytical batch with all analytes ≤ 3 x MDL? **Reference Source: CCP-PO-001, Table C3-3**	X			
19. Are all target analytes in field blanks and equipment blanks (if any) ≤ 3 x instrument MDL as listed in CCP-PO-001 Table C3-2? **Reference Source: CCP-PO-001, Table C1-3**	X			
20. Is a minimum of one laboratory control standard (LCS) analyzed per analytical batch and are the percent recoveries (%Rs) within 70-130%? **Reference Source: CCP-PO-001,Table C3-3**	X			
21. Is there a minimum of one field duplicate analyzed per sampling batch including in the analytical batch? **Reference Source: CCP-PO-001, Table C1-3**	X			

Attachment 10 – CCP SPM Summa HSG Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: ECL12029M **Analysis Date:** 7-26, 7-30-2012

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
22. For field sample and field duplicate results that are both > PRQL, are the relative percent differences (RPDs) ≤ 25%? **Reference Source: CCP-PO-001, Table C3-2**	X			
23. Is there a minimum of one laboratory duplicate (LD) analyzed per analytical batch? **Reference Source: CCP-PO-001, Table C3-3**	X			
24. For laboratory duplicate results that are > PRQL (or for laboratory control standard and replicate laboratory control standard results > PRQL), is the RPD ≤ 25%? **Reference Source: CCP-PO-001, Table C3-3**	X			
25. If no target analytes were present greater than the PRQL, was a replicate LCS satisfactorily performed? **Reference Source: CCP-PO-001, Table C3-3**			X	Target > PRQL
26. Does the field reference standard (FRS) contain at least six analytes and are the %Rs within 70-130%? **Reference Source: CCP-PO-001, C1-1b and Table C1-3**			X	FRS has been successfully completed.
27. For GC/MS analyses, was the BFB tune performed at a minimum of every 12 hours and were the ion abundance criteria satisfied? **Reference Source: CCP-PO-001, Table C3-3**	X			
28. For GC/MS analyses, for the five-point initial calibration, is the %RSD for all compounds < 35%? **Reference Source: CCP-PO-001, Table C3-3**	X			
29. For GC/MS analyses, is one of the calibration standards less than the PRQL? **Reference Source: CCP-PO-001, Section C3-5**	X			
30. For GC/MS analyses, is the continuing calibration performed at a minimum frequency of every 12 hours of operation? **Reference Source: CCP-PO-001, Table C3-3**	X			

Attachment 10 – CCP SPM Summa HSG Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: ECL12029M **Analysis Date:** 7-26, 7-30-2012

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
31. For GC/MS analyses, are the continuing calibration internal standard area counts between 50-200% of ICAL? **Reference Source: CCP-PO-001, Table C3-3**	X			
32. For GC/MS analyses, are non-target compounds identified as Tentatively Identified Compounds (TICs)? **Reference Source: CCP-PO-001, C-3a**	X			
33. Does the BDR contain all of the target compounds appropriate for the waste stream? **Reference Source: CCP-PO-001, Table C3-2/AK Summary Report**	X			
34. For GC/MS analyses, is the continuing calibration %D for all compounds ≤ 30% of the ICAL? **Reference Source: CCP-PO-001, Table C3-3**	X			
35. For methanol analysis by GC/FID, does the initial calibration (ICAL) have a minimum of five points, is the %R within 70-130%, and is the correlation coefficient ≥ 0.990? NA if not methanol analysis by GC/FID. **Reference Source: CCP-PO-001, Table C3-3**			X	Not methanol analysis by GC/FID
36. For methanol analysis by GC/FID, is the continuing calibration (CC) analyzed every 12 hours, is the %D ≤ 15%, is the %R within 85-115%, and is the CC retention time within the ICAL window? NA if not methanol analysis by GC/FID. **Reference Source: CCP-PO-001, Table C3-2**			X	Not methanol analysis by GC/FID
37. For methanol analysis by GC/FID, is one of the calibration standards less than the PRQL? **Reference Source: CCP-PO-001, C3-5**			X	Not methanol analysis by GC/FID
38. Are all data reporting forms complete with data reported properly (correct units and significant figures)? **Reference Source: CCP-PO-001, C3-10b**	X			
39. Has the laboratory successfully participated in the latest PDP? **Reference Source: CCP-PO-001, C3-5**	X			

Attachment 10 – CCP SPM Summa HSG Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: ECL12029M	Analysis Date: 7-26, 7-30-2012			
Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
40. Has the laboratory met the 90% completeness requirement? **Reference Source: CCP-PO-001, Table C3-2**	X			
41. Does the laboratory use traceable standards? **Reference Source: CCP-PO-001, C3-5**	X			
42. Has the laboratory had acceptable demonstration of precision, accuracy, and MDLs [method performance samples] performed within the last 6 months? **Reference Source: CCP-PO-001, Table C3-3**	X			
43. Have QC designations for samples been applied as appropriate? **Reference Source: CCP-PO-001, Table C3-13**	X			
Comments: none				
The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.				
Charles Turner				8-6-2012
SPM Printed Name	Signature			Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

Idaho National Laboratory

Chemical and Radiation Measurement Department

Environmental Chemistry Laboratory

Gas Headspace Analysis Data Report

ISSUED TO:

Records Coordinator
Central Characterization Program

REPORT IDENTIFICATION:

Report Number: ECL12029M
Analysis Method: CCP-TP-175
Analyte: VOCs
Revision Number: 0
Change Number: 0
Issue Date: 08/02/2012

SUMMARY: This report provides analysis results and associated documentation for volatile organic compounds (VOCs) analyses of samples received 07/19/2012 from Field batch INHSG1204. Because one of these samples contained an analyte at a high concentration, a different dilution for this sample was analyzed and reported (more than one analysis data sheet for this sample).

Report Content:

Section	Content	Page #
1.0	Sample Identification Table/Analysis Request Form	0002-0003
2.0	Sample Custody Documents and Sample Tags	0004-0019
3.0	Analysis Results	0020-0049
4.0	Quality Control Measurements Results	0050-0060
5.0	Calibration Results	0061-0067
6.0	Data Review Checklists	0068-0075
7.0	GC VOC Raw Data	0076-0213
8.0	Miscellaneous Supporting Data	0214-0249

Release Authorization:

Name & Position	Signature	Date
Catherine A. Crowder ECL Group/Technical Leader	Catherine A. Crowder	8-2-12

SECTION 1.0

SAMPLE IDENTIFICATION TABLE/ ANALYSIS REQUEST FORM

ENVIRONMENTAL CHEMISTRY LABORATORY

ANALYTICAL REQUEST FORM

PAGE: 1 RECEIVING GROUP NO. ECL12029 ANALYSES REQUIRED:

FIELD SITE: INL GC-VOC: X GC-H2:

SAMPLE TYPE: GAS GC/MS: X GC-CH4:

NUMBER OF SAMPLES: 13 VTSR: 1340 07/19/12

	LAB ID.	FIELD ID.	FIELD BATCH #	FIELD COC #	CANISTER SIZE (mL)	BLANK?
1	12201009	IN071712EI209	INHSG1204	593	250	Y
2	12201010	IN071712EID18	INHSG1204	593	250	N
3	12201011	IN071712EI340	INHSG1204	593	250	N
4	12201012	IN071712EIC62	INHSG1204	593	250	N
5	12201013	IN071712EI392	INHSG1204	593	250	N
6	12201014	IN071712EID01	INHSG1204	593	250	N
7	12201015	IN071712EIC87	INHSG1204	593	250	N
8	12201016	IN071712EI558	INHSG1204	593	250	N
9	12201017	IN071712EIB47	INHSG1204	593	250	N
10	12201018	IN071712EI451	INHSG1204	593	250	N
11	12201019	IN071712EI780	INHSG1204	593	250	N
12	12201020	IN071712EIB42	INHSG1204	593	250	N
13	12201021	IN071712EI367	INHSG1204	593	250	N

SECTION 2.0

SAMPLE CUSTODY DOCUMENTS AND SAMPLE TAGS

Attachment 1 – Chain of Custody/Canister Tag Chain of Custody # 593 Page 1 of 2

Location: Under Drum Lid		Point of Origin: WMF-628		Sample Matrix is Gas	Ambient Conditions	
		Field Batch Number: INHSG1204			Temperature (centigrade): 28.0	
					Pressure (in. Hg): 25	

Site	Date	SUMMA® Canister No.	Size (mL)	TID No.	Container ID /Barcode No.	Waste Stream ID	Cleaning Batch No.	Needle Assembly Batch No.	Type SS B D F C (Note 1)	Vent Seal (Y/NA)	Start Time	End Time	Beginning Pressure (in.Hg or psig)	End Pressure (in.Hg or psig)	Sampler's Initials
IN	071712	EI209	250	0825562	N/A	N/A	436C	INHSG1203NB	B	N/A	1329	1334	25 in.Hg	2 in.Hg	
IN	071712	EID18	250	0825563	10223021	ID-RF-S5300-A	436C	INHSG1203NB	D	Y	1339	1344	25 in.Hg	2 in.Hg	
IN	071712	EI340	250	0825564	10223021	ID-RF-S5300-A	436C	INHSG1203NB	D	Y	1339	1344	25 in.Hg	0 in.Hg	
IN	071712	EIC62	250	0825565	10124637	ID-RF-S5300-A	436C	INHSG1203NB	SS	Y	1349	1354	25 in.Hg	3 in.Hg	
IN	071712	EI392	250	0825566	10102259	ID-RF-S5300-A	436C	INHSG1203NB	SS	Y	1350	1355	25 in.Hg	1 in.Hg	
IN	071712	EID01	250	0825567	10101976	ID-RF-S5300-A	429C	INHSG1203NB	SS	Y	1351	1356	25 in.Hg	3 in.Hg	
IN	071712	EIC87	250	0825568	10221733	ID-RF-S5300-A	436C	INHSG1203NB	SS	Y	1351	1356	24 in.Hg	2 in.Hg	
IN	071712	EI558	250	0825569	10217850	ID-RF-S5300-A	436C	INHSG1203NB	SS	Y	1405	1410	25 in.Hg	2 in.Hg	
IN	071712	EIB47	250	0825570	10127573	ID-RF-S5300-A	436C	INHSG1203NB	SS	Y	1354	1359	26 in.Hg	2 in.Hg	
IN	071712	EI451	250	0825571	10088793	ID-RF-S5300-A	436C	INHSG1203NB	SS	Y	1354	1359	25 in.Hg	2 in.Hg	
IN	071712	EI780	250	0825572	10186445	ID-RF-S5300-A	436C	INHSG1203NB	SS	Y	1406	1411	24 in.Hg	2 in.Hg	
IN	071712	EIB42	250	0825573	10202170	ID-RF-S5300-A	436C	INHSG1203NB	SS	Y	1407	1412	24 in.Hg	2 in.Hg	
IN	071712	EI367	250	0825574	10102536	ID-RF-S5300-A	436C	INHSG1203NB	SS	Y	1423	1428	26 in.Hg	3 in.Hg	
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Note 1: Analysis required:
C - Needle Assembly Cleanliness Certification: VOC.
SS - Single Sample: VOC, H_2, CH_4
B - Field Blank: VOC
D - Duplicate: VOC, H_2, CH_4
F - Field Reference Standard: VOC

Sampler's Signature:

Attachment 1 – Chain of Custody/Canister Tag (Continued) Chain of Custody # 593 Page 2 of 2

Field Batch Number: INHSG1204					
Comments: N/A		Instrument Section	M&TE ID No.	Calibration Due Date	Initials/Date
Analytical Laboratory - ECL		Pressure Meter	XC0566	8-16-12	DD 7-17-12
Shipping Tracking #N/A	Method of Shipping ECL Pickup	Thermometer	XC0363	6-5-13	DD 7-17-12
		Min /Max Thermometer	XC0553 XC0692	10-12-12 10-12-12	DD 7-17-12
Analysis Requested VOC		Preservation Method: 0 - 40°C			
TID Number(s) 0825575		TID Initials and date: DD 7-18-12			

Custody Initiated By: (Sampler Name/Organization) CCP	Date/Time 7-17-12 1334		
Relinquished By: (Name/Organization) CCP	Date/Time 7-18-12 1500	Received By: (Name/Organization) Thomas B. Linto INL/ECL	Date/Time 07-19-12 1340
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)	Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)	Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)	Date/Time
Final Disposition By: (Name/Organization) Carlos A. Crowder/ECL	Date/Time 073012 1700	Disposition: Cleaning	

3000000

GAS SAMPLE CANISTER TAG

1	N	0	7	1	7	1	2	E	I	2	0	9
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: 1WHSC1204 Drum Number: ~~Field Blank~~ 07-17-12 N/A

Sampling Organization: CCP Sample Description: FIELD BLANK

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	070512	1330	TBL
Cleaning Batch: 436C	M= <5.0E-2	P= 640T			
Field-	C= 25" Hg	T= 28.0	071712	1329	MM
Before Sample Collection	M=	P= 25			
Field-	C= 2" Hg	T= 28.0	071712	1334	MM
After Sample Collection	M=	P= 25			
Analytical Laboratory	C= 2" Hg	T= 22	071912	1402	~~MM~~
	M=	P= 645T			

Blank Sample? (Y) / N (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	7	1	7	1	2	E	I	D	1	8
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHS61204 **Drum Number:** 10223021

Sampling Organization: CCI **Sample Description:** DUPLICATE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	070512	1330	TBL
Cleaning Batch: 436C	M= <5.0E-2	P= 640T			
Field-	C= 25" Hg	T= 28.0	071712	1339	DD
Before Sample Collection	M=	P= 25			
Field-	C= 2" Hg	T= 28.0	071712	1344	DD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C= 2" Hg	T= 22	071912	1404	JEB
	M=	P= 645T			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: [signature]

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	7	1	7	1	2	E	I	3	4	0
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1204 **Drum Number:** 10223021

Sampling Organization: CCP **Sample Description:** DUPLICATE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	070512	1330	TBL
Cleaning Batch: 436C	M= <5.0E-2	P= 640T			
Field-	C= 25" Hg	T= 28.0	071712	1339	DD
Before Sample Collection	M=	P= 25			
Field-	C= 0" Hg	T= 28.0	071712	1344	DD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C= 0" Hg	T= 22	071913	1405	JRB
	M= 0	P= 645T			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: [signature]

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	7	1	7	1	2	E	I	C	6	2
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: 1NH56 1204 **Drum Number:** 10124637

Sampling Organization: CCP **Sample Description:** SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	070512	1330	TBL
Cleaning Batch: 436C	M= <5.0E-2	P= 640T			
Field-	C= 25" Hg	T= 28.0			
Before Sample Collection	M=	P= 25	071712	1349	DM
Field-	C= 3" Hg	T= 28.0			
After Sample Collection	M=	P= 25	071712	1354	DM
Analytical Laboratory	C= 3" Hg	T= 22			
	M= 0	P= 645T	071912	1408	JBB

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: [signature]

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	7	1	7	1	2	E	I	3	9	2
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: 1N456120Y Drum Number: 10102259

Sampling Organization: CCL Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	070512	1330	TBL
Cleaning Batch: 436C	M= <5.0E-2	P= 640T			
Field-	C= 25" Hg	T= 28.0	071712	1350	DD
Before Sample Collection	M=	P= 25			
Field-	C= 1" Hg	T= 28.0	071712	1355	DD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C= 1" Hg	T= 22	071912	1410	TBL
	M= 0	P= 645T			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	7	1	7	1	2	E	I	D	0	1
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHS61204 Drum Number: 10101976

Sampling Organization: CCP Sample Description: Sample

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 23	061312	1430	TBL
Cleaning Batch: 429C	M= <5.0E-2	P= 639T			
Field-	C= 25" Hg	T= 28.0	071712	1351	ON
Before Sample Collection	M=	P= 25			
Field-	C= 3" Hg	T= 28.0	071712	1356	ON
After Sample Collection	M=	P= 25			
Analytical Laboratory	C= 3" Hg	T= 22	071912	1412	TBL
	M= 0	P= 645T			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	U	7	1	7	1	2	E	I	C	8	7
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site — Date — Canister ID

Batch Number: INHSG1204 Drum Number: 10221733

Sampling Organization: CCP Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	070512	1330	TBL
Cleaning Batch: 436C	M= <5.0E-2	P= 640T			
Field-	C= 24" Hg	T= 28.0			
Before Sample Collection	M=	P= 25	071712	1351	AD
Field-	C= 2" Hg	T= 28.0			
After Sample Collection	M=	P= 25	071712	1356	AD
Analytical Laboratory	C= 3" Hg	T= 22			
	M= 0	P=645T	071912	1415	JMS

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	7	1	7	1	2	E	I	5	5	8
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHS61204 **Drum Number:** 10217850

Sampling Organization: CCP **Sample Description:** Sample

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	070512	1330	TBL
Cleaning Batch: 436C	M= <5.0E-2	P= 640T			
Field-	C= 25" Hg	T= 28.0	071712	1405	MM
Before Sample Collection	M=	P= 25			
Field-	C= 2" Hg	T= 28.0	071712	1410	MM
After Sample Collection	M=	P= 25			
Analytical Laboratory	C= 2" Hg	T= 22	071912	1447	[illegible]
	M= 0	P= 645T			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: [signature]

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	7	1	7	1	2	E	I	B	4	7
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INH561204 Drum Number: 10127573

Sampling Organization: CCP Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	070512	1330	TBL
Cleaning Batch: 436C	M= <5.0E-2	P= 640T			
Field-	C= 26" Hg	T= 28.0			
Before Sample Collection	M=	P= 25	071712	1354	AD
Field-	C= 2" Hg	T= 28.0			
After Sample Collection	M=	P= 25	071712	1359	AD
Analytical Laboratory	C= 3" Hg	T= 22			
	M= 0	P= 645T	071912	1418	SEG

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	7	1	7	1	2	E	I	4	5	1
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: 1NH5G1204 Drum Number: 100088793

Sampling Organization: CCP Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	070512	1330	TBL
Cleaning Batch: 436C	M= <5.0E-2	P= 640T			
Field-	C= 25" Hg	T= 28.0			
Before Sample Collection	M=	P= 25	071712	1354	10
Field-	C= 2" Hg	T= 28.0	071212 on 07-17-12 ~~071709~~		
After Sample Collection	M=	P= 25		1359	00
Analytical Laboratory	C= 2" Hg	T= 22			
	M= 0	P= 645T	071912	1422	~~BBC~~

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

DM 07-17-12	16	N	0	7	1	7	1	2	E	I	7	8	0
	Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: 1N1561204 **Drum Number:** 10186445

Sampling Organization: CCP **Sample Description:** SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	070512	1330	TBL
Cleaning Batch: 436C	M= <5.0E-2	P= 640T			
Field-	C= 24" Hg	T= 28.0	071712	1406	DM
Before Sample Collection	M=	P= 25			
Field-	C= 2" Hg	T= 28.0	071712	1411	AD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C= 2" Hg	T= 22	071912	1423	BK
	M= 0	P= 645T			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: C. Q C

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	7	1	7	1	2	E	I	B	4	2
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1204 Drum Number: 10202170

Sampling Organization: CCP Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	070512	1330	TBL
Cleaning Batch: 436C	M= <5.0E-2	P= 640T			
Field-	C= 24" Hg	T= 28.0	071712	1407	MT
Before Sample Collection	M=	P= 25			
Field-	C= 2" Hg	T= 28.0	071712	1412	MD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C= 2" Hg	T= 22	071912	1425	TBL
	M= 0	P= 645T			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	a	7	1	7	1	2	E	I	3	6	7
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHS61204 Drum Number: 10102536

Sampling Organization: CCI Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	070512	1330	TBL
Cleaning Batch: 436C	M= <5.0E-2	P= 640T			
Field-	C= 26" Hg	T= 28.0			
Before Sample Collection	M=	P= 25	071712	1423	DD
Field-	C= 3" Hg	T= 28.0			
After Sample Collection	M=	P= 25	071712	1428	DD
Analytical Laboratory	C= 3" Hg	T= 22			
	M= 0	P= 645T	071912	1428	JBP

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: [signature]

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

SECTION 3.0

ANALYSIS RESULTS

- DATA QUALIFIERS
- FORM 1s

DATA QUALIFIERS

IDAHO NATIONAL LABORATORY
ENVIRONMENTAL CHEMISTRY LABORATORY

Data qualifiers (flags) are as follows:

U - This flag indicates that the analyte was either not detected or found to be less than the MDL.

J - This flag is used when the data indicates the presence of a compound that meets the identification criteria and the result is $\geq$ MDL but less than the PRQL. For example, if the PRQL is 10 ppmv and if the MDL is 0.05 ppmv, and a sample analyte concentration of 0.30 ppmv is calculated, the data are reported as 0.30 J.

This flag is also used when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response compared to the closest eluting internal standard is assumed for quantitation of GC/MS analysis.

B - This flag is used when an analyte is found in the associated blank. It indicates possible/probable blank contamination and warns the data user to take appropriate action. This flag must be used for a TIC as well as for a positively identified target compound.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample is reanalyzed at a higher dilution factor, as in the "E" flag below, the suffix "DL" is appended to the sample number on the reporting form for the diluted sample, and all concentration values reported on that form are flagged with the "D" flag. This flag alerts data user that any discrepancies between the concentration reported may be due to dilution of the sample.

E - This flag identifies compounds whose concentrations exceed the calibration range of GC/MS or GC instruments for specific analysis. If one or more compounds have a response greater than full scale, the sample must be diluted and reanalyzed. All such compounds with a response greater than full scale have the concentration flagged with an "E" for the original analysis. If the dilution causes any compounds identified in the analysis to be below the calibration range in the second analysis, then the results of both analyses are reported separately. The reporting form for the diluted sample has the suffix "DL" appended to the sample number.

NOTE: For total xylenes, in GC/MS analysis, where three isomers are quantified, as two peaks, the calibration range of each peak is considered separately, e.g., a diluted analysis is not required for total zylenes unless the concentration of either peak separately exceeds the high standard.

N - This flag is used with TICs to indicate presumptive evidence of a compound's identification, based on a mass spectral library search.

Z - One or more QC samples do not meet acceptance criteria.

NR - Not Reported

Form Date (07/12/05)

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12201009		Field Sample ID:	IN071712EI209	
Analytical Batch:	ECL12029M		Sampling Batch:	INHSG1204	
Data Report:	ECL12029M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/26/2012	1226	Date Sampled:	7/17/2012	
Lab File ID:	L26JC		Date Received:	07/19/12	
Instrument ID:	GCMS-J		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	0.15	U
Benzene	0.095	U
Bromoform	0.029	U
Butanol	0.092	U
Carbon disulfide	0.12	U
Carbon tetrachloride	0.046	U
Chlorobenzene	0.063	U
Chloroform	0.066	U
Chloromethane	0.17	U
Cyclohexane	0.092	U
1,1-Dichloroethane	0.082	U
1,2-Dichloroethane	0.078	U
1,1-Dichloroethylene	0.084	U
cis-1,2-Dichloroethylene	0.082	U
trans-1,2-Dichloroethylene	0.082	U
1,2-Dichloropropane	0.072	U
Ethyl benzene	0.062	U
Ethyl ether	0.11	U
Methyl ethyl ketone	0.11	U
Methyl isobutyl ketone	0.070	U
Methylene chloride	0.10	U
1,1,2,2-Tetrachloroethane	0.046	U
Tetrachloroethylene	0.047	U
Toluene	0.079	U
1,1,1-Trichloroethane	0.063	U
Trichloroethylene	0.065	U
Trichlorofluoromethane	0.065	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.048	U
1,3,5-Trimethylbenzene	0.057	U
1,2,4-Trimethylbenzene	0.060	U
p/m-Xylene	0.068	U
o-Xylene	0.065	U
Methanol	0.28	U

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12201009		Field Sample ID:	IN071712EI209	
Analytical Batch:	ECL12029M		Sampling Batch:	INHSG1204	
Data Report:	ECL12029M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/26/2012	1226	Date Sampled:	7/17/2012	
Lab File ID:	L26JC		Date Received:	07/19/12	
Instrument ID:	GCMS-J		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12201010		Field Sample ID:	IN071712EID18	
Analytical Batch:	ECL12029M		Sampling Batch:	INHSG1204	
Data Report:	ECL12029M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/26/2012	1334	Date Sampled:	7/17/2012	
Lab File ID:	L26JD		Date Received:	07/19/12	
Instrument ID:	GCMS-J		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	2.3	U
Benzene	1.5	U
Bromoform	0.45	U
Butanol	1.4	U
Carbon disulfide	5.0	J
Carbon tetrachloride	2.6	J
Chlorobenzene	0.98	U
Chloroform	4.9	J
Chloromethane	2.6	U
Cyclohexane	1.4	U
1,1-Dichloroethane	1.3	U
1,2-Dichloroethane	1.2	U
1,1-Dichloroethylene	1.3	U
cis-1,2-Dichloroethylene	1.3	U
trans-1,2-Dichloroethylene	1.3	U
1,2-Dichloropropane	66	
Ethyl benzene	0.97	U
Ethyl ether	1.7	U
Methyl ethyl ketone	1.7	U
Methyl isobutyl ketone	1.1	U
Methylene chloride	130	
1,1,2,2-Tetrachloroethane	0.72	U
Tetrachloroethylene	0.73	U
Toluene	8.5	J
1,1,1-Trichloroethane	1.5	J
Trichloroethylene	12	
Trichlorofluoromethane	1.0	U
1,1,2-Trichloro-1,2,2-trifluoroethane	3.7	J
1,3,5-Trimethylbenzene	0.89	U
1,2,4-Trimethylbenzene	0.94	U
p/m-Xylene	1.1	U
o-Xylene	1.0	U
Methanol	4.4	U

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12201010		Field Sample ID:	IN071712EID18	
Analytical Batch:	ECL12029M		Sampling Batch:	INHSG1204	
Data Report:	ECL12029M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/26/2012	1334	Date Sampled:	7/17/2012	
Lab File ID:	L26JD		Date Received:	07/19/12	
Instrument ID:	GCMS-J		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12201011		Field Sample ID:	IN071712EI340	
Analytical Batch:	ECL12029M		Sampling Batch:	INHSG1204	
Data Report:	ECL12029M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/26/2012	1417	Date Sampled:	7/17/2012	
Lab File ID:	L26JE		Date Received:	07/19/12	
Instrument ID:	GCMS-J		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	2.0	U
Benzene	1.3	U
Bromoform	0.40	U
Butanol	1.3	U
Carbon disulfide	4.9	J
Carbon tetrachloride	2.7	J
Chlorobenzene	0.88	U
Chloroform	5.0	J
Chloromethane	2.4	U
Cyclohexane	1.4	J
1,1-Dichloroethane	1.1	U
1,2-Dichloroethane	1.1	U
1,1-Dichloroethylene	1.2	U
cis-1,2-Dichloroethylene	1.1	U
trans-1,2-Dichloroethylene	1.1	U
1,2-Dichloropropane	67	
Ethyl benzene	0.87	U
Ethyl ether	1.5	U
Methyl ethyl ketone	1.5	U
Methyl isobutyl ketone	0.97	U
Methylene chloride	130	
1,1,2,2-Tetrachloroethane	0.65	U
Tetrachloroethylene	0.68	J
Toluene	8.7	J
1,1,1-Trichloroethane	1.6	J
Trichloroethylene	12	
Trichlorofluoromethane	0.90	U
1,1,2-Trichloro-1,2,2-trifluoroethane	3.6	J
1,3,5-Trimethylbenzene	0.80	U
1,2,4-Trimethylbenzene	0.84	U
p/m-Xylene	0.95	U
o-Xylene	0.91	U
Methanol	3.9	U

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12201011		Field Sample ID:	IN071712EI340	
Analytical Batch:	ECL12029M		Sampling Batch:	INHSG1204	
Data Report:	ECL12029M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/26/2012	1417	Date Sampled:	7/17/2012	
Lab File ID:	L26JE		Date Received:	07/19/12	
Instrument ID:	GCMS-J		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12201012		Field Sample ID:	IN071712EIC62	
Analytical Batch:	ECL12029M		Sampling Batch:	INHSG1204	
Data Report:	ECL12029M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/26/2012	1501	Date Sampled:	7/17/2012	
Lab File ID:	L26JF		Date Received:	07/19/12	
Instrument ID:	GCMS-J		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	2.5	U
Benzene	1.6	U
Bromoform	0.49	U
Butanol	1.6	U
Carbon disulfide	2.0	U
Carbon tetrachloride	4.1	J
Chlorobenzene	1.1	U
Chloroform	1.1	J
Chloromethane	2.9	U
Cyclohexane	1.6	U
1,1-Dichloroethane	1.4	U
1,2-Dichloroethane	1.3	U
1,1-Dichloroethylene	1.4	U
cis-1,2-Dichloroethylene	1.4	U
trans-1,2-Dichloroethylene	1.4	U
1,2-Dichloropropane	1.2	U
Ethyl benzene	1.1	U
Ethyl ether	1.9	U
Methyl ethyl ketone	1.8	U
Methyl isobutyl ketone	1.2	U
Methylene chloride	1.8	U
1,1,2,2-Tetrachloroethane	0.79	U
Tetrachloroethylene	94	
Toluene	8.3	J
1,1,1-Trichloroethane	1.9	J
Trichloroethylene	3.1	J
Trichlorofluoromethane	1.1	U
1,1,2-Trichloro-1,2,2-trifluoroethane	2.4	J
1,3,5-Trimethylbenzene	0.98	U
1,2,4-Trimethylbenzene	1.0	U
p/m-Xylene	1.2	U
o-Xylene	1.1	U
Methanol	4.8	U

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12201012		Field Sample ID:	IN071712EIC62	
Analytical Batch:	ECL12029M		Sampling Batch:	INHSG1204	
Data Report:	ECL12029M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/26/2012	1501	Date Sampled:	7/17/2012	
Lab File ID:	L26JF		Date Received:	07/19/12	
Instrument ID:	GCMS-J		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12201013		Field Sample ID:	IN071712EI392	
Analytical Batch:	ECL12029M		Sampling Batch:	INHSG1204	
Data Report:	ECL12029M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/30/2012	1303	Date Sampled:	7/17/2012	
Lab File ID:	L30JB		Date Received:	07/19/12	
Instrument ID:	GCMS-J		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers		
Acetone	1600			
Benzene	58	U		
Bromoform	17	U		
Butanol	56	U		
Carbon disulfide	71	U		
Carbon tetrachloride	28	U		
Chlorobenzene	38	U		
Chloroform	40	U		
Chloromethane	100	U		
Cyclohexane	56	U		
1,1-Dichloroethane	50	U		
1,2-Dichloroethane	47	U		
1,1-Dichloroethylene	51	U		
cis-1,2-Dichloroethylene	50	U		
trans-1,2-Dichloroethylene	50	U		
1,2-Dichloropropane	1700			
Ethyl benzene	38	U		
Ethyl ether	67	U		
Methyl ethyl ketone	65	U		
Methyl isobutyl ketone	42	U		
Methylene chloride	9400		B	E
1,1,2,2-Tetrachloroethane	28	U		
Tetrachloroethylene	29	U		
Toluene	48	U		
1,1,1-Trichloroethane	38	U		
Trichloroethylene	40	U		
Trichlorofluoromethane	39	U		
1,1,2-Trichloro-1,2,2-trifluoroethane	29	U		
1,3,5-Trimethylbenzene	35	U		
1,2,4-Trimethylbenzene	37	U		
p/m-Xylene	42	U		
o-Xylene	40	U		
Methanol	210			

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12201013		Field Sample ID:	IN071712EI392	
Analytical Batch:	ECL12029M		Sampling Batch:	INHSG1204	
Data Report:	ECL12029M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/30/2012	1303	Date Sampled:	7/17/2012	
Lab File ID:	L30JB		Date Received:	07/19/12	
Instrument ID:	GCMS-J		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12201013DL		Field Sample ID:	IN071712EI392DL	
Analytical Batch:	ECL12029M		Sampling Batch:	INHSG1204	
Data Report:	ECL12029M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/30/2012	1454	Date Sampled:	7/17/2012	
Lab File ID:	L30JD		Date Received:	07/19/12	
Instrument ID:	GCMS-J		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	1600	D
Benzene	97	U
Bromoform	29	U
Butanol	93	U
Carbon disulfide	120	U
Carbon tetrachloride	47	U
Chlorobenzene	64	U
Chloroform	67	U
Chloromethane	170	U
Cyclohexane	93	U
1,1-Dichloroethane	83	U
1,2-Dichloroethane	79	U
1,1-Dichloroethylene	86	U
cis-1,2-Dichloroethylene	84	U
trans-1,2-Dichloroethylene	84	U
1,2-Dichloropropane	1700	D
Ethyl benzene	63	U
Ethyl ether	110	U
Methyl ethyl ketone	110	U
Methyl isobutyl ketone	71	U
Methylene chloride	9300	B D
1,1,2,2-Tetrachloroethane	47	U
Tetrachloroethylene	48	U
Toluene	80	U
1,1,1-Trichloroethane	64	U
Trichloroethylene	66	U
Trichlorofluoromethane	66	U
1,1,2-Trichloro-1,2,2-trifluoroethane	49	U
1,3,5-Trimethylbenzene	58	U
1,2,4-Trimethylbenzene	61	U
p/m-Xylene	69	U
o-Xylene	66	U
Methanol	280	U

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12201013DL		Field Sample ID:	IN071712EI392DL	
Analytical Batch:	ECL12029M		Sampling Batch:	INHSG1204	
Data Report:	ECL12029M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/30/2012	1454	Date Sampled:	7/17/2012	
Lab File ID:	L30JD		Date Received:	07/19/12	
Instrument ID:	GCMS-J		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12201014		Field Sample ID:	IN071712EID01	
Analytical Batch:	ECL12029M		Sampling Batch:	INHSG1204	
Data Report:	ECL12029M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/30/2012	1347	Date Sampled:	7/17/2012	
Lab File ID:	L30JC		Date Received:	07/19/12	
Instrument ID:	GCMS-J		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	330	
Benzene	30	U
Bromoform	9.0	U
Butanol	29	U
Carbon disulfide	37	U
Carbon tetrachloride	14	U
Chlorobenzene	20	U
Chloroform	21	U
Chloromethane	53	U
Cyclohexane	29	U
1,1-Dichloroethane	26	U
1,2-Dichloroethane	25	U
1,1-Dichloroethylene	27	U
cis-1,2-Dichloroethylene	26	U
trans-1,2-Dichloroethylene	26	U
1,2-Dichloropropane	700	
Ethyl benzene	20	U
Ethyl ether	35	U
Methyl ethyl ketone	34	U
Methyl isobutyl ketone	22	U
Methylene chloride	2500	B
1,1,2,2-Tetrachloroethane	15	U
Tetrachloroethylene	15	U
Toluene	25	U
1,1,1-Trichloroethane	20	U
Trichloroethylene	20	U
Trichlorofluoromethane	20	U
1,1,2-Trichloro-1,2,2-trifluoroethane	15	U
1,3,5-Trimethylbenzene	18	U
1,2,4-Trimethylbenzene	19	U
p/m-Xylene	22	U
o-Xylene	20	U
Methanol	88	U

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12201014		Field Sample ID:	IN071712EID01	
Analytical Batch:	ECL12029M		Sampling Batch:	INHSG1204	
Data Report:	ECL12029M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/30/2012	1347	Date Sampled:	7/17/2012	
Lab File ID:	L30JC		Date Received:	07/19/12	
Instrument ID:	GCMS-J		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12201015		Field Sample ID:	IN071712EIC87	
Analytical Batch:	ECL12029M		Sampling Batch:	INHSG1204	
Data Report:	ECL12029M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/26/2012	1840	Date Sampled:	7/17/2012	
Lab File ID:	L26JK		Date Received:	07/19/12	
Instrument ID:	GCMS-J		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	8.4	U
Benzene	5.5	U
Bromoform	1.7	U
Butanol	5.3	U
Carbon disulfide	11	
Carbon tetrachloride	2.7	U
Chlorobenzene	3.6	U
Chloroform	290	
Chloromethane	9.8	U
Cyclohexane	71	
1,1-Dichloroethane	4.7	U
1,2-Dichloroethane	4.5	U
1,1-Dichloroethylene	4.9	U
cis-1,2-Dichloroethylene	4.8	U
trans-1,2-Dichloroethylene	4.8	U
1,2-Dichloropropane	4.2	U
Ethyl benzene	3.6	U
Ethyl ether	6.4	U
Methyl ethyl ketone	6.2	U
Methyl isobutyl ketone	4.0	U
Methylene chloride	6.0	U
1,1,2,2-Tetrachloroethane	2.7	U
Tetrachloroethylene	2.7	U
Toluene	4.6	U
1,1,1-Trichloroethane	3.6	U
Trichloroethylene	3.8	U
Trichlorofluoromethane	3.7	U
1,1,2-Trichloro-1,2,2-trifluoroethane	2.8	U
1,3,5-Trimethylbenzene	3.3	U
1,2,4-Trimethylbenzene	3.5	U
p/m-Xylene	4.0	U
o-Xylene	3.8	U
Methanol	25	J

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12201015		Field Sample ID:	IN071712EIC87	
Analytical Batch:	ECL12029M		Sampling Batch:	INHSG1204	
Data Report:	ECL12029M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/26/2012	1840	Date Sampled:	7/17/2012	
Lab File ID:	L26JK		Date Received:	07/19/12	
Instrument ID:	GCMS-J		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12201016		Field Sample ID:	IN071712EI558	
Analytical Batch:	ECL12029M		Sampling Batch:	INHSG1204	
Data Report:	ECL12029M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/26/2012	1923	Date Sampled:	7/17/2012	
Lab File ID:	L26JL		Date Received:	07/19/12	
Instrument ID:	GCMS-J		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	17	J
Benzene	3.8	U
Bromoform	1.1	U
Butanol	3.7	U
Carbon disulfide	4.7	U
Carbon tetrachloride	1.8	U
Chlorobenzene	2.5	U
Chloroform	2.6	U
Chloromethane	6.7	U
Cyclohexane	3.7	U
1,1-Dichloroethane	3.3	U
1,2-Dichloroethane	3.1	U
1,1-Dichloroethylene	3.4	U
cis-1,2-Dichloroethylene	3.3	U
trans-1,2-Dichloroethylene	3.3	U
1,2-Dichloropropane	110	
Ethyl benzene	2.5	U
Ethyl ether	4.4	U
Methyl ethyl ketone	4.3	U
Methyl isobutyl ketone	2.8	U
Methylene chloride	290	
1,1,2,2-Tetrachloroethane	1.9	U
Tetrachloroethylene	1.9	U
Toluene	5.6	J
1,1,1-Trichloroethane	2.5	U
Trichloroethylene	3.0	J
Trichlorofluoromethane	2.6	U
1,1,2-Trichloro-1,2,2-trifluoroethane	1.9	U
1,3,5-Trimethylbenzene	2.3	U
1,2,4-Trimethylbenzene	2.4	U
p/m-Xylene	2.7	U
o-Xylene	2.6	U
Methanol	20	J

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12201016		Field Sample ID:	IN071712EI558	
Analytical Batch:	ECL12029M		Sampling Batch:	INHSG1204	
Data Report:	ECL12029M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/26/2012	1923	Date Sampled:	7/17/2012	
Lab File ID:	L26JL		Date Received:	07/19/12	
Instrument ID:	GCMS-J		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12201017		Field Sample ID:	IN071712EIB47	
Analytical Batch:	ECL12029M		Sampling Batch:	INHSG1204	
Data Report:	ECL12029M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/26/2012	2007	Date Sampled:	7/17/2012	
Lab File ID:	L26JM		Date Received:	07/19/12	
Instrument ID:	GCMS-J		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	45	J
Benzene	9.6	U
Bromoform	2.9	U
Butanol	11	J
Carbon disulfide	12	U
Carbon tetrachloride	4.6	U
Chlorobenzene	6.3	U
Chloroform	6.7	U
Chloromethane	17	U
Cyclohexane	9.2	U
1,1-Dichloroethane	8.2	U
1,2-Dichloroethane	7.8	U
1,1-Dichloroethylene	8.5	U
cis-1,2-Dichloroethylene	8.3	U
trans-1,2-Dichloroethylene	8.3	U
1,2-Dichloropropane	7.3	U
Ethyl benzene	6.3	U
Ethyl ether	11	U
Methyl ethyl ketone	11	U
Methyl isobutyl ketone	7.0	U
Methylene chloride	10	U
1,1,2,2-Tetrachloroethane	4.7	U
Tetrachloroethylene	11	
Toluene	7.9	U
1,1,1-Trichloroethane	280	
Trichloroethylene	470	
Trichlorofluoromethane	6.5	U
1,1,2-Trichloro-1,2,2-trifluoroethane	4.8	U
1,3,5-Trimethylbenzene	5.8	U
1,2,4-Trimethylbenzene	6.1	U
p/m-Xylene	6.9	U
o-Xylene	6.5	U
Methanol	28	U

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12201017		Field Sample ID:	IN071712EIB47	
Analytical Batch:	ECL12029M		Sampling Batch:	INHSG1204	
Data Report:	ECL12029M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/26/2012	2007	Date Sampled:	7/17/2012	
Lab File ID:	L26JM		Date Received:	07/19/12	
Instrument ID:	GCMS-J		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12201018		Field Sample ID:	IN071712EI451	
Analytical Batch:	ECL12029M		Sampling Batch:	INHSG1204	
Data Report:	ECL12029M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/26/2012	1546	Date Sampled:	7/17/2012	
Lab File ID:	L26JG		Date Received:	07/19/12	
Instrument ID:	GCMS-J		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	9.5	J
Benzene	0.60	U
Bromoform	0.18	U
Butanol	2.3	J
Carbon disulfide	0.74	U
Carbon tetrachloride	4.2	J
Chlorobenzene	0.40	U
Chloroform	0.42	U
Chloromethane	1.1	U
Cyclohexane	0.58	U
1,1-Dichloroethane	0.52	U
1,2-Dichloroethane	0.49	U
1,1-Dichloroethylene	0.53	U
cis-1,2-Dichloroethylene	0.52	U
trans-1,2-Dichloroethylene	0.52	U
1,2-Dichloropropane	0.62	J
Ethyl benzene	0.40	U
Ethyl ether	0.70	U
Methyl ethyl ketone	1.6	J
Methyl isobutyl ketone	0.44	U
Methylene chloride	4.6	J
1,1,2,2-Tetrachloroethane	0.29	U
Tetrachloroethylene	0.30	U
Toluene	7.5	J
1,1,1-Trichloroethane	0.40	U
Trichloroethylene	3.6	J
Trichlorofluoromethane	0.41	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.30	U
1,3,5-Trimethylbenzene	0.36	U
1,2,4-Trimethylbenzene	0.38	U
p/m-Xylene	0.43	U
o-Xylene	0.41	U
Methanol	15	J

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12201018		Field Sample ID:	IN071712EI451	
Analytical Batch:	ECL12029M		Sampling Batch:	INHSG1204	
Data Report:	ECL12029M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/26/2012	1546	Date Sampled:	7/17/2012	
Lab File ID:	L26JG		Date Received:	07/19/12	
Instrument ID:	GCMS-J		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12201019		Field Sample ID:	IN071712EI780	
Analytical Batch:	ECL12029M		Sampling Batch:	INHSG1204	
Data Report:	ECL12029M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/26/2012	1757	Date Sampled:	7/17/2012	
Lab File ID:	L26JJ		Date Received:	07/19/12	
Instrument ID:	GCMS-J		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	3.9	U
Benzene	2.5	U
Bromoform	0.76	U
Butanol	2.4	U
Carbon disulfide	3.1	U
Carbon tetrachloride	2.2	J
Chlorobenzene	1.7	U
Chloroform	1.8	U
Chloromethane	4.5	U
Cyclohexane	2.4	U
1,1-Dichloroethane	2.2	U
1,2-Dichloroethane	2.1	U
1,1-Dichloroethylene	2.2	U
cis-1,2-Dichloroethylene	2.2	U
trans-1,2-Dichloroethylene	2.2	U
1,2-Dichloropropane	1.9	U
Ethyl benzene	1.7	U
Ethyl ether	2.9	U
Methyl ethyl ketone	2.8	U
Methyl isobutyl ketone	1.9	U
Methylene chloride	2.8	U
1,1,2,2-Tetrachloroethane	1.2	U
Tetrachloroethylene	1.3	U
Toluene	2.1	U
1,1,1-Trichloroethane	120	
Trichloroethylene	110	
Trichlorofluoromethane	1.7	U
1,1,2-Trichloro-1,2,2-trifluoroethane	1.3	U
1,3,5-Trimethylbenzene	1.5	U
1,2,4-Trimethylbenzene	1.6	U
p/m-Xylene	1.8	U
o-Xylene	1.7	U
Methanol	7.5	U

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12201019		Field Sample ID:	IN071712EI780	
Analytical Batch:	ECL12029M		Sampling Batch:	INHSG1204	
Data Report:	ECL12029M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/26/2012	1757	Date Sampled:	7/17/2012	
Lab File ID:	L26JJ		Date Received:	07/19/12	
Instrument ID:	GCMS-J		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12201020		Field Sample ID:	IN071712EIB42	
Analytical Batch:	ECL12029M		Sampling Batch:	INHSG1204	
Data Report:	ECL12029M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/26/2012	1630	Date Sampled:	7/17/2012	
Lab File ID:	L26JH		Date Received:	07/19/12	
Instrument ID:	GCMS-J		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	5.5	J
Benzene	0.57	U
Bromoform	0.17	U
Butanol	0.55	U
Carbon disulfide	0.70	U
Carbon tetrachloride	0.28	U
Chlorobenzene	0.38	U
Chloroform	0.40	U
Chloromethane	1.0	U
Cyclohexane	0.55	U
1,1-Dichloroethane	1.4	J
1,2-Dichloroethane	0.47	U
1,1-Dichloroethylene	0.51	U
cis-1,2-Dichloroethylene	0.50	U
trans-1,2-Dichloroethylene	0.50	U
1,2-Dichloropropane	0.44	U
Ethyl benzene	0.38	U
Ethyl ether	0.66	U
Methyl ethyl ketone	0.65	U
Methyl isobutyl ketone	0.42	U
Methylene chloride	0.63	U
1,1,2,2-Tetrachloroethane	0.28	U
Tetrachloroethylene	0.28	U
Toluene	7.2	J
1,1,1-Trichloroethane	6.5	J
Trichloroethylene	38	
Trichlorofluoromethane	0.39	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.67	J
1,3,5-Trimethylbenzene	0.35	U
1,2,4-Trimethylbenzene	0.36	U
p/m-Xylene	0.41	U
o-Xylene	0.39	U
Methanol	2.3	J

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12201020		Field Sample ID:	IN071712EIB42	
Analytical Batch:	ECL12029M		Sampling Batch:	INHSG1204	
Data Report:	ECL12029M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/26/2012	1630	Date Sampled:	7/17/2012	
Lab File ID:	L26JH		Date Received:	07/19/12	
Instrument ID:	GCMS-J		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12201021		Field Sample ID:	IN071712EI367	
Analytical Batch:	ECL12029M		Sampling Batch:	INHSG1204	
Data Report:	ECL12029M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/26/2012	1713	Date Sampled:	7/17/2012	
Lab File ID:	L26JI		Date Received:	07/19/12	
Instrument ID:	GCMS-J		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	2.6	J
Benzene	0.70	U
Bromoform	0.21	U
Butanol	0.68	U
Carbon disulfide	0.99	J
Carbon tetrachloride	0.34	U
Chlorobenzene	0.46	U
Chloroform	0.49	U
Chloromethane	1.2	U
Cyclohexane	1.4	J
1,1-Dichloroethane	0.60	U
1,2-Dichloroethane	0.57	U
1,1-Dichloroethylene	0.62	U
cis-1,2-Dichloroethylene	0.61	U
trans-1,2-Dichloroethylene	0.61	U
1,2-Dichloropropane	0.62	J
Ethyl benzene	3.9	J
Ethyl ether	0.81	U
Methyl ethyl ketone	0.79	U
Methyl isobutyl ketone	0.51	U
Methylene chloride	26	
1,1,2,2-Tetrachloroethane	0.34	U
Tetrachloroethylene	0.35	U
Toluene	70	
1,1,1-Trichloroethane	0.46	U
Trichloroethylene	2.6	J
Trichlorofluoromethane	0.48	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.35	U
1,3,5-Trimethylbenzene	0.42	U
1,2,4-Trimethylbenzene	0.53	J
p/m-Xylene	25	
o-Xylene	7.2	J
Methanol	2.1	U

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12201021		Field Sample ID:	IN071712EI367	
Analytical Batch:	ECL12029M		Sampling Batch:	INHSG1204	
Data Report:	ECL12029M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/26/2012	1713	Date Sampled:	7/17/2012	
Lab File ID:	L26JI		Date Received:	07/19/12	
Instrument ID:	GCMS-J		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

SECTION 4.0

QUALITY CONTROL MEASUREMENTS RESULTS

- **Laboratory Duplicate Comparison Form**
- **Laboratory Blank Summary Form**
- **Laboratory Blank Results Form**
- **Internal Standard Area Form**
- **Laboratory Control Sample Results Form**

LABORATORY DUPLICATE FORM
GAS VOC ANALYSIS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Method:	CCP-TP-175	Rev. 3	Data Report:	ECL12029M	
Instrument ID:	GCMS-J		Analytical Batch:	ECL12029M	
Lab Sample ID:	12201017		Dup Lab Sample ID:	12201017D	
Field Sample ID:	IN071712EIB47		Dup Field Sample ID:	IN071712EIB47D	
Date/Time Analyzed:	7/26/2012	2007	Date/Time Dup Analyzed:	7/26/2012	2050
Lab File ID:	L26JM		Dup Lab File ID:	L26JN	

COMPOUND	SAMPLE CONCENTRATION (PPMV)	FLAG(S)	DUPLICATE CONCENTRATION (PPMV)	FLAG(S)	RPD* (%)
Acetone	44.50388	J	45.63533	J	2.51
Benzene	9.6	U	9.6	U	NC
Bromoform	2.9	U	2.9	U	NC
Butanol	11.37805	J	12.15382	J	6.59
Carbon disulfide	12	U	12	U	NC
Carbon tetrachloride	4.6	U	4.6	U	NC
Chlorobenzene	6.3	U	6.3	U	NC
Chloroform	6.7	U	6.7	U	NC
Chloromethane	17	U	17	U	NC
Cyclohexane	9.2	U	9.2	U	NC
1,1-Dichloroethane	8.2	U	8.2	U	NC
1,2-Dichloroethane	7.8	U	7.8	U	NC
1,1-Dichloroethylene	8.5	U	8.5	U	NC
cis-1,2-Dichloroethylene	8.3	U	8.3	U	NC
trans-1,2-Dichloroethylene	8.3	U	8.3	U	NC
1,2-Dichloropropane	7.3	U	7.3	U	NC
Ethyl benzene	6.3	U	6.3	U	NC
Ethyl ether	11	U	11	U	NC
Methyl ethyl ketone	11	U	11	U	NC
Methyl isobutyl ketone	7.0	U	7.0	U	NC
Methylene chloride	10	BU	10	BU	NC
1,1,2,2-Tetrachloroethane	4.7	U	4.7	U	NC
Tetrachloroethylene	11.04627		11.21138		1.48
Toluene	7.9	U	7.9	U	NC
1,1,1-Trichloroethane	275.78915		281.64536		2.10
Trichloroethylene	467.82903		480.14525		2.60
Trichlorofluoromethane	6.5	U	6.5	U	NC
1,1,2-Trichloro-1,2,2-trifluoroethane	4.8	U	4.8	U	NC
1,3,5-Trimethylbenzene	5.8	U	5.8	U	NC
1,2,4-Trimethylbenzene	6.1	U	6.1	U	NC
p/m-Xylene	6.9	U	6.9	U	NC
o-Xylene	6.5	U	6.5	U	NC
Methanol	28	U	28	U	NC

NC = NOT CALCULABLE

* Specification limit <= 25% for analytes present in the sample and duplicate at concentrations greater than or equal to the PRQL

LABORATORY BLANK SUMMARY FORM
GAS VOC ANALYSIS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

METHOD:	CCP-TP-175	Rev. 3	ANALYTICAL BATCH:	ECL12029M
INSTRUMENT:	GCMS-J		DATA REPORT:	ECL12029M
LAB SAMPLE ID:	LBMJL26		FIELD SAMPLE ID:	LB31751L19
LAB FILE ID:	L26JA			
DATE/TIME ANALYZED:	7/26/2012	1059		

THIS LABORATORY BLANK APPLIES TO THE FOLLOWING SAMPLES:

FIELD SAMPLE ID	LAB SAMPLE ID	DATE/TIME ANALYZED
LCS30443SL02	LCSMJL26	7/26/2012 1141
IN071712EI209	12201009	7/26/2012 1226
IN071712EID18	12201010	7/26/2012 1334
IN071712EI340	12201011	7/26/2012 1417
IN071712EIC62	12201012	7/26/2012 1501
IN071712EI451	12201018	7/26/2012 1546
IN071712EIB42	12201020	7/26/2012 1630
IN071712EI367	12201021	7/26/2012 1713
IN071712EI780	12201019	7/26/2012 1757
IN071712EIC87	12201015	7/26/2012 1840
IN071712EI558	12201016	7/26/2012 1923
IN071712EIB47	12201017	7/26/2012 2007
IN071712EIB47D	12201017D	7/26/2012 2050

LABORATORY BLANK SUMMARY FORM
GAS VOC ANALYSIS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

METHOD:	CCP-TP-175	Rev. 3	ANALYTICAL BATCH:	ECL12029M
INSTRUMENT:	GCMS-J		DATA REPORT:	ECL12029M
LAB SAMPLE ID:	LBMJL30		FIELD SAMPLE ID:	LB31751L19
LAB FILE ID:	L30JA			
DATE/TIME ANALYZED:	7/30/2012	1220		

THIS LABORATORY BLANK APPLIES TO THE FOLLOWING SAMPLES:

FIELD SAMPLE ID	LAB SAMPLE ID	DATE/TIME ANALYZED
IN071712EI392	12201013	7/30/2012 1303
IN071712EID01	12201014	7/30/2012 1347
IN071712EI392DL	12201013DL	7/30/2012 1454

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	LBMJL26		Field Sample ID:	LB31751L19	
Analytical Batch:	ECL12029M		Sampling Batch:		
Data Report:	ECL12029M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/26/2012	1059	Date Sampled:		
Lab File ID:	L26JA		Date Received:		
Instrument ID:	GCMS-J		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	0.039	U
Benzene	0.026	U
Bromoform	0.0078	U
Butanol	0.025	U
Carbon disulfide	0.032	U
Carbon tetrachloride	0.012	U
Chlorobenzene	0.017	U
Chloroform	0.018	U
Chloromethane	0.046	U
Cyclohexane	0.025	U
1,1-Dichloroethane	0.022	U
1,2-Dichloroethane	0.021	U
1,1-Dichloroethylene	0.023	U
cis-1,2-Dichloroethylene	0.022	U
trans-1,2-Dichloroethylene	0.022	U
1,2-Dichloropropane	0.020	U
Ethyl benzene	0.017	U
Ethyl ether	0.030	U
Methyl ethyl ketone	0.029	U
Methyl isobutyl ketone	0.019	U
Methylene chloride	0.028	U
1,1,2,2-Tetrachloroethane	0.013	U
Tetrachloroethylene	0.013	U
Toluene	0.021	U
1,1,1-Trichloroethane	0.017	U
Trichloroethylene	0.018	U
Trichlorofluoromethane	0.017	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.013	U
1,3,5-Trimethylbenzene	0.015	U
1,2,4-Trimethylbenzene	0.016	U
p/m-Xylene	0.018	U
o-Xylene	0.018	U
Methanol	0.076	U

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	LBMJL26		Field Sample ID:	LB31751L19	
Analytical Batch:	ECL12029M		Sampling Batch:		
Data Report:	ECL12029M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/26/2012	1059	Date Sampled:		
Lab File ID:	L26JA		Date Received:		
Instrument ID:	GCMS-J		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	LBMJL30		Field Sample ID:	LB31751L19	
Analytical Batch:	ECL12029M		Sampling Batch:		
Data Report:	ECL12029M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/30/2012	1220	Date Sampled:		
Lab File ID:	L30JA		Date Received:		
Instrument ID:	GCMS-J		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	0.039	U
Benzene	0.026	U
Bromoform	0.0078	U
Butanol	0.025	U
Carbon disulfide	0.032	U
Carbon tetrachloride	0.012	U
Chlorobenzene	0.017	U
Chloroform	0.018	U
Chloromethane	0.046	U
Cyclohexane	0.025	U
1,1-Dichloroethane	0.022	U
1,2-Dichloroethane	0.021	U
1,1-Dichloroethylene	0.023	U
cis-1,2-Dichloroethylene	0.022	U
trans-1,2-Dichloroethylene	0.022	U
1,2-Dichloropropane	0.020	U
Ethyl benzene	0.017	U
Ethyl ether	0.030	U
Methyl ethyl ketone	0.029	U
Methyl isobutyl ketone	0.019	U
Methylene chloride	0.032	J
1,1,2,2-Tetrachloroethane	0.013	U
Tetrachloroethylene	0.013	U
Toluene	0.021	U
1,1,1-Trichloroethane	0.017	U
Trichloroethylene	0.018	U
Trichlorofluoromethane	0.017	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.013	U
1,3,5-Trimethylbenzene	0.015	U
1,2,4-Trimethylbenzene	0.016	U
p/m-Xylene	0.018	U
o-Xylene	0.018	U
Methanol	0.076	U

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	LBMJL30		Field Sample ID:	LB31751L19	
Analytical Batch:	ECL12029M		Sampling Batch:		
Data Report:	ECL12029M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/30/2012	1220	Date Sampled:		
Lab File ID:	L30JA		Date Received:		
Instrument ID:	GCMS-J		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

Internal Standard Area Summary Report

Instrument ID : GCMS - J

Tune File : D:\ECL12029\BJ12048.D
Tune Time : 26 Jul 2012 9:39 am

Daily Calibration File : D:\ECL12029\WJ12048.D
Date Acquired : 26 Jul 2012 10:15 am

	IS1	IS2
Daily Calibration IS Areas:	4206616	2865485

File	Sample	IS1	IS2
L26JA.D	LBMJL26	4231593	2870321
L26JB.D	LCSMJL26	4222846	2870593
L26JC.D	12201009	4193141	2884356
L26JD.D	12201010	4263054	2866625
L26JE.D	12201011	4266533	2892286
L26JF.D	12201012	4277354	2893112
L26JG.D	12201018	4276697	2927533
L26JH.D	12201020	4282909	2930427
L26JI.D	12201021	4327376	2998486
L26JJ.D	12201019	4386630	2997035
L26JK.D	12201015	4315288	2942918
L26JL.D	12201016	4279587	2919866
L26JM.D	12201017	4210838	2891695
L26JN.D	12201017D	4227884	2881638

(fails) - fails 12hr time check * - fails criteria

IS1 = Fluorobenzene
IS2 = Chlorobenzene-d5

Area UPPER limit = 200 percent of IS Area
Area LOWER limit = 50 percent of IS Area

Created: Wed Aug 01 09:33:26 2012

Internal Standard Area Summary Report

Instrument ID : GCMS - J

Tune File : D:\ECL12029\BJ12049.D
Tune Time : 30 Jul 2012 10:40 am

Daily Calibration File : D:\ECL12029\WJ12049.D
Date Acquired : 30 Jul 2012 11:36 am

	IS1	IS2
Daily Calibration IS Areas:	4381443	3010588

File	Sample	IS1	IS2
L30JA.D			
	LBMJL30	4292111	2939507
L30JB.D			
	12201013	4245551	2874771
L30JC.D			
	12201014	4186915	2883653
L30JD.D			
	12201013DL	4197699	2861320

(fails) - fails 12hr time check * - fails criteria

IS1 = Fluorobenzene
IS2 = Chlorobenzene-d5

Area UPPER limit = 200 percent of IS Area
Area LOWER limit = 50 percent of IS Area

Created: Wed Aug 01 09:34:31 2012

LABORATORY CONTROL SAMPLE FORM
GAS VOC ANALYSIS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Method:	CCP-TP-175	Rev. 3	Data Report:	ECL12029M
Instrument ID:	GCMS-J		Analytical Batch:	ECL12029M

Lab Sample ID:	LCSMJL26	
Field Sample ID:	LCS30443SL02	
Date/Time Analyzed:	7/26/2012	1141
Lab File ID:	L26JB	

COMPOUND	FOUND CONCENTRATION (PPMV)	KNOWN CONCENTRATION (PPMV)	Recovery* (%)
Benzene	17.7101	20.20	87.67
Carbon tetrachloride	11.8089	11.89	99.32
Methyl isobutyl ketone	15.6265	16.20	96.46
Methylene chloride	21.2908	20.00	106.45
Toluene	18.5570	18.26	101.63
1,1,1-Trichloroethane	12.0766	12.16	99.31
Trichloroethylene	12.6297	12.26	103.02

* Recovery specification limits 70 - 130%

Form Rev 05-07

SECTION 5.0

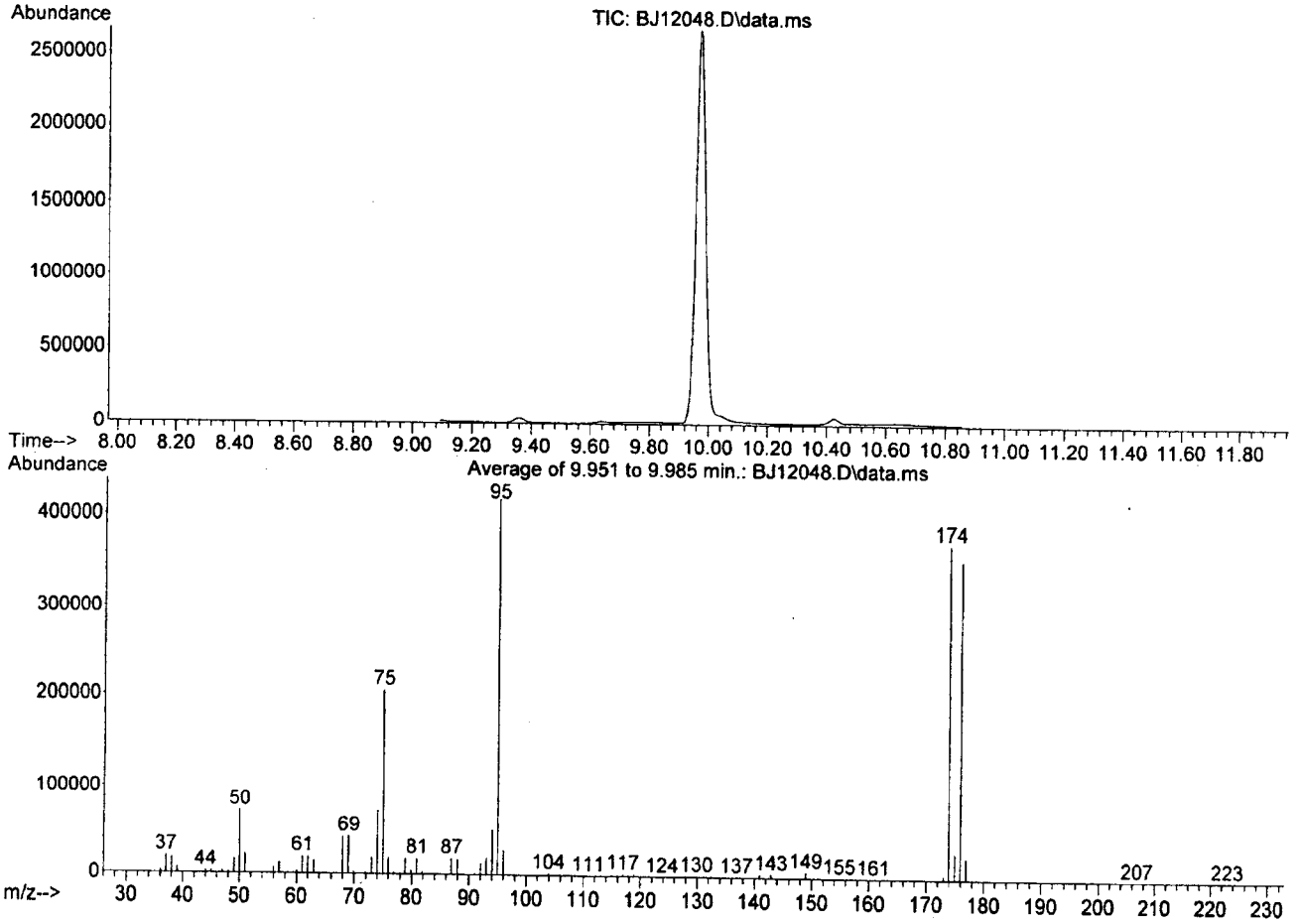
CALIBRATION RESULTS

- BFB Tune Form
- Initial Calibration Form
- Continuing Calibration Form
- MDL Reporting Form

Data Path : D:\ECL12029\
Data File : BJ12048.D
Acq On : 26 Jul 2012 9:39 am
Operator :
Sample : 50 NG BFB
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\gcms-j\WPJD006.M
Title : WPJD006 CCP-TP-175 ICAL
Last Update : Mon Jun 04 07:22:01 2012



Spectrum Information: Average of 9.951 to 9.985 min.

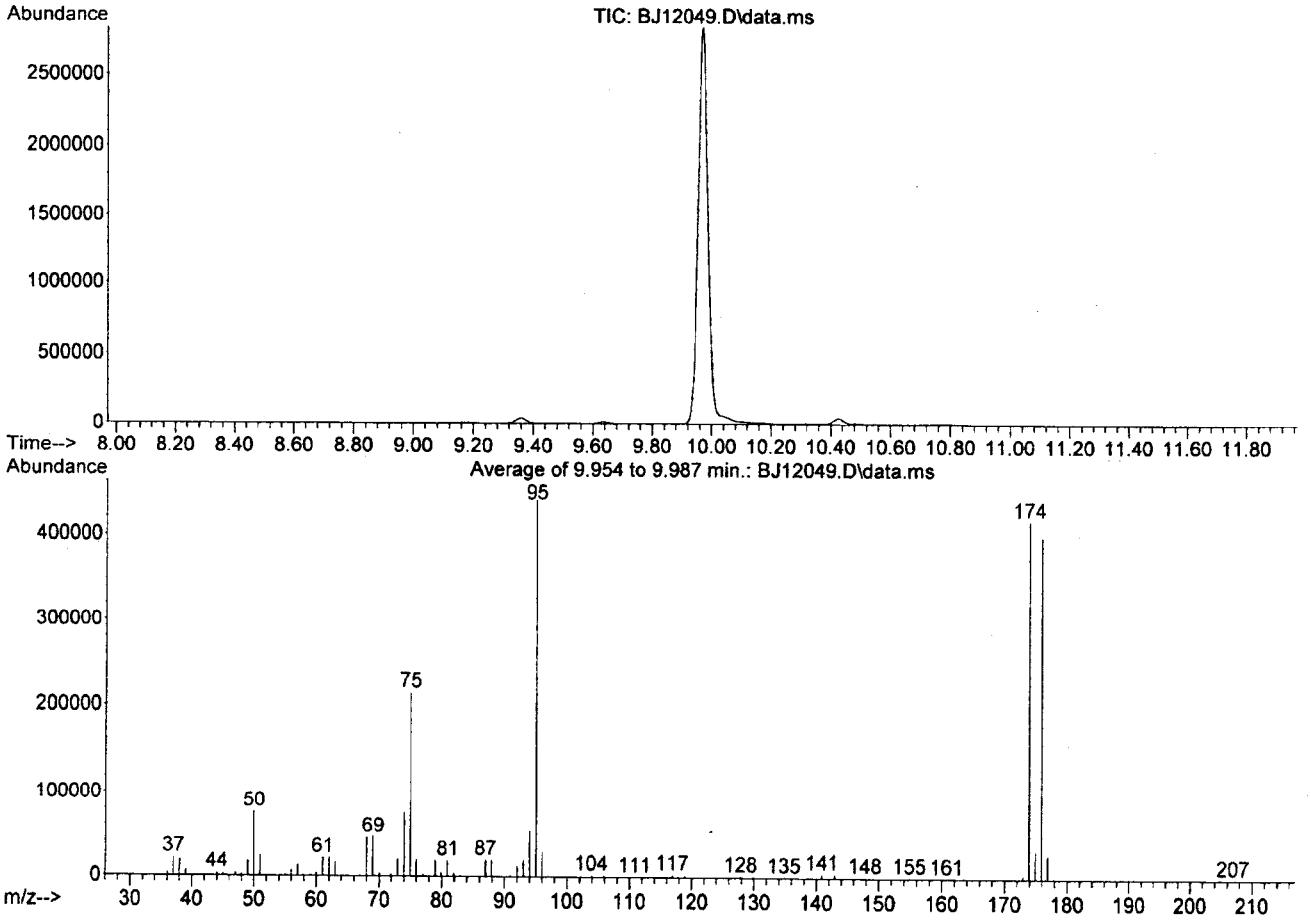
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.6	73493	PASS
75	95	30	60	49.2	205575	PASS
95	95	100	100	100.0	417984	PASS
96	95	5	9	6.7	27980	PASS
173	174	0.00	2	1.1	4193	PASS
174	95	50	100	89.3	373189	PASS
175	174	5	9	7.6	28492	PASS
176	174	95	101	95.6	356647	PASS
177	176	5	9	6.6	23689	PASS

7/26/12

Data Path : D:\ECL12029\
Data File : BJ12049.D
Acq On : 30 Jul 2012 10:40 am
Operator :
Sample : 50 NG BFB
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\gcms-j\WPJD006.M
Title : WPJD006 CCP-TP-175 ICAL
Last Update : Mon Jun 04 07:22:01 2012



Spectrum Information: Average of 9.954 to 9.987 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.5	76997	PASS
75	95	30	60	48.9	214361	PASS
95	95	100	100	100.0	438740	PASS
96	95	5	9	6.6	29068	PASS
173	174	0.00	2	1.0	4305	PASS
174	95	50	100	94.9	416271	PASS
175	174	5	9	7.5	31234	PASS
176	174	95	101	96.0	399611	PASS
177	176	5	9	6.6	26468	PASS

7-30-12

Response Factor Report GCMS - J

Method Path : C:\gcms-j\
Method File : WPJD006.M
Title : WPJD006 CCP-TP-175 ICAL
Last Update : Mon Jun 04 07:22:01 2012
Response Via : Initial Calibration

Calibration Files
1250=Y31JA.D 1000=Y31JB.D 750 =Y31JC.D 500 =Y31JD.D 250 =Y31JE.D 125 =Y31JF.D

		Compound	1250	1000	750	500	250	125	Avg	%RSD
1)	I	Fluorobenzene	----------ISTD----------							
2)	T	Ethyl Ether	0.281	0.274	0.271	0.268	0.264	0.267	0.271	2.23
3)	T	Methylene Chlo...	0.332	0.326	0.324	0.321	0.324	0.336	0.327	1.76
4)	T	1,1,2-Trichlor...	0.380	0.368	0.365	0.361	0.361	0.372	0.368	1.94
5)	T	1,1-Dichloroet...	0.324	0.316	0.311	0.308	0.307	0.313	0.313	1.95
6)	T	1,1-Dichloroet...	0.588	0.584	0.572	0.570	0.562	0.582	0.576	1.70
7)	T	cis-1,2-Dichlo...	0.343	0.335	0.331	0.328	0.324	0.330	0.332	1.98
8)	T	Chloroform	0.548	0.538	0.532	0.526	0.522	0.532	0.533	1.71
9)	T	1,2-Dichloroet...	0.453	0.448	0.439	0.427	0.415	0.420	0.434	3.56
10)	T	1,1,1-Trichlor...	0.494	0.486	0.480	0.474	0.465	0.478	0.479	2.03
11)	T	Carbon Tetrach...	0.447	0.438	0.429	0.424	0.418	0.423	0.430	2.51
12)	T	Trichloroethene	0.321	0.314	0.307	0.299	0.293	0.297	0.305	3.62
13)	T	Cyclohexane	0.523	0.508	0.497	0.480	0.464	0.472	0.491	4.63
14)	T	Benzene	1.179	1.148	1.127	1.085	1.053	1.069	1.110	4.42
15)	T	Acetone	0.710	0.699	0.702	0.699	0.693	0.703	0.701	0.80
16)	T	2-Butanone	0.220	0.215	0.211	0.207	0.202	0.204	0.210	3.29
17)	T	1-Butanol	0.300	0.288	0.283	0.268	0.248	0.238	0.271	8.92
18)	T	Methanol	0.213	0.209	0.211	0.214	0.203	0.205	0.209	2.11
19)	T	trans-1,2-Dich...	0.338	0.334	0.331	0.327	0.327	0.332	0.332	1.26
20)	T	Chloromethane	0.508	0.504	0.507	0.514	0.515	0.535	0.514	2.17
21)	T	Carbon Disulfide	1.258	1.238	1.233	1.213	1.214	1.233	1.232	1.33
22)	T	1,2-Dichloropr...	0.290	0.281	0.275	0.264	0.258	0.261	0.272	4.62
23)	T	Trichlorofluor...	0.617	0.606	0.602	0.599	0.601	0.621	0.608	1.51
24)	I	Chlorobenzene-d5	----------ISTD----------							
25)	T	Bromoform	0.429	0.413	0.438	0.399	0.387	0.380	0.408	5.71
26)	T	Tetrachloroethene	0.378	0.370	0.351	0.353	0.347	0.346	0.357	3.74
27)	T	1,1,2,2-Tetrac...	0.639	0.613	0.672	0.585	0.568	0.570	0.608	6.86
28)	T	Toluene	1.064	1.032	0.966	0.961	0.936	0.945	0.984	5.25
29)	T	Chlorobenzene	1.091	1.064	1.042	1.009	0.981	0.994	1.030	4.13
30)	T	Ethylbenzene	0.604	0.581	0.567	0.539	0.523	0.525	0.556	5.88
31)	T	Xylene (meta &...	0.763	0.731	0.718	0.672	0.638	0.641	0.694	7.37
32)	T	Xylene (ortho)	0.683	0.650	0.674	0.618	0.584	0.586	0.633	6.81
33)	T	1,3,5-Trimethy...	1.592	1.513	1.594	1.355	1.262	1.241	1.426	11.28
34)	T	1,2,4-Trimethy...	1.567	1.492	1.550	1.315	1.224	1.195	1.390	11.96
35)	T	4-Methyl-2-Pen...	0.955	0.925	0.866	0.850	0.815	0.795	0.868	7.14

(#) = Out of Range

Evaluate Continuing Calibration Report

Data Path : D:\ECL12029\
Data File : WJ12048.D
Acq On : 26 Jul 2012 10:15 am
Operator :
Sample : CCP-TP-1745 CCAL
Misc : 1X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 10:47:54 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	1.000	1.000	0.0	85	0.00
2	T	Ethyl Ether	0.271	0.271	0.0	86	0.00
3	T	Methylene Chloride	0.327	0.331	-1.2	88	-0.02
4	T	1,1,2-Trichlorofluoroethane	0.368	0.383	-4.1	90	-0.01
5	T	1,1-Dichloroethene	0.313	0.321	-2.6	88	-0.01
6	T	1,1-Dichloroethane	0.576	0.561	2.6	84	0.00
7	T	cis-1,2-Dichloroethene	0.332	0.332	0.0	86	0.00
8	T	Chloroform	0.533	0.523	1.9	84	0.00
9	T	1,2-Dichloroethane	0.434	0.414	4.6	82	0.00
10	T	1,1,1-Trichloroethane	0.479	0.470	1.9	84	0.00
11	T	Carbon Tetrachloride	0.430	0.426	0.9	85	0.00
12	T	Trichloroethene	0.305	0.311	-2.0	88	0.00
13	T	Cyclohexane	0.491	0.470	4.3	83	0.00
14	T	Benzene	1.110	1.090	1.8	85	0.00
15	T	Acetone	0.701	0.711	-1.4	86	-0.01
16	T	2-Butanone	0.210	0.206	1.9	85	0.00
17	T	1-Butanol	0.271	0.254	6.3	80	-0.01
18	T	Methanol	0.209	0.195	6.7	77	0.00
19	T	trans-1,2-Dichloroethene	0.332	0.333	-0.3	86	-0.01
20	T	Chloromethane	0.514	0.527	-2.5	87	0.00
21	T	Carbon Disulfide	1.232	1.255	-1.9	88	-0.02
22	T	1,2-Dichloropropane	0.272	0.264	2.9	85	-0.01
23	T	Trichlorofluoromethane	0.608	0.621	-2.1	88	0.00
24	I	Chlorobenzene-d5	1.000	1.000	0.0	86	0.00
25	T	Bromoform	0.408	0.439	-7.6	94	0.00
26	T	Tetrachloroethene	0.357	0.370	-3.6	90	-0.01
27	T	1,1,2,2-Tetrachloroethane	0.608	0.606	0.3	89	0.00
28	T	Toluene	0.984	0.963	2.1	86	-0.01
29	T	Chlorobenzene	1.030	1.027	0.3	87	0.00
30	T	Ethylbenzene	0.556	0.551	0.9	88	-0.01
31	T	Xylene (meta & para)	0.694	0.680	2.0	87	0.00
32	T	Xylene (ortho)	0.633	0.623	1.6	87	0.00
33	T	1,3,5-Trimethylbenzene	1.426	1.388	2.7	88	0.00
34	T	1,2,4-Trimethylbenzene	1.390	1.366	1.7	89	0.00
35	T	4-Methyl-2-Pentanone	0.868	0.806	7.1	82	-0.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0

7-26-12

Evaluate Continuing Calibration Report

Data Path : D:\ECL12029\
Data File : WJ12049.D
Acq On : 30 Jul 2012 11:36 am
Operator :
Sample : CCP-TP-1745 CCAL
Misc : 1X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 30 14:02:15 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	1.000	1.000	0.0	88	0.00
2	T	Ethyl Ether	0.271	0.268	1.1	88	-0.01
3	T	Methylene Chloride	0.327	0.327	0.0	90	-0.02
4	T	1,1,2-Trichlorofluoroethane	0.368	0.375	-1.9	92	-0.01
5	T	1,1-Dichloroethene	0.313	0.317	-1.3	91	-0.01
6	T	1,1-Dichloroethane	0.576	0.556	3.5	86	0.00
7	T	cis-1,2-Dichloroethene	0.332	0.328	1.2	88	0.00
8	T	Chloroform	0.533	0.526	1.3	88	0.00
9	T	1,2-Dichloroethane	0.434	0.412	5.1	85	0.00
10	T	1,1,1-Trichloroethane	0.479	0.471	1.7	88	0.00
11	T	Carbon Tetrachloride	0.430	0.428	0.5	89	0.00
12	T	Trichloroethene	0.305	0.308	-1.0	91	0.00
13	T	Cyclohexane	0.491	0.468	4.7	86	0.00
14	T	Benzene	1.110	1.076	3.1	88	0.00
15	T	Acetone	0.701	0.691	1.4	87	-0.01
16	T	2-Butanone	0.210	0.203	3.3	87	0.00
17	T	1-Butanol	0.271	0.243	10.3	80	-0.01
18	T	Methanol	0.209	0.184	12.0	76	0.00
19	T	trans-1,2-Dichloroethene	0.332	0.328	1.2	89	0.00
20	T	Chloromethane	0.514	0.509	1.0	88	0.00
21	T	Carbon Disulfide	1.232	1.229	0.2	90	-0.02
22	T	1,2-Dichloropropane	0.272	0.260	4.4	87	-0.01
23	T	Trichlorofluoromethane	0.608	0.617	-1.5	91	0.00
24	I	Chlorobenzene-d5	1.000	1.000	0.0	90	0.00
25	T	Bromoform	0.408	0.430	-5.4	97	0.00
26	T	Tetrachloroethene	0.357	0.367	-2.8	94	-0.01
27	T	1,1,2,2-Tetrachloroethane	0.608	0.583	4.1	90	0.00
28	T	Toluene	0.984	0.944	4.1	89	-0.02
29	T	Chlorobenzene	1.030	0.999	3.0	89	0.00
30	T	Ethylbenzene	0.556	0.535	3.8	90	-0.01
31	T	Xylene (meta & para)	0.694	0.663	4.5	89	0.00
32	T	Xylene (ortho)	0.633	0.604	4.6	88	0.00
33	T	1,3,5-Trimethylbenzene	1.426	1.342	5.9	89	0.00
34	T	1,2,4-Trimethylbenzene	1.390	1.312	5.6	90	0.00
35	T	4-Methyl-2-Pentanone	0.868	0.792	8.8	84	-0.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0

7-30-12

MDL REPORTING FORM
GAS VOC ANALYSIS

IDAHO NATIONAL LABORATORY
ENVIRONMENTAL CHEMISTRY LABORATORY

METHOD: CCP-TP-175 Rev. 3
Instrument ID: GCMS-J MDL Determination Date: 5/8/2012

ANALYTE	MOLECULAR WEIGHT	MDL (ng)	PRQL (ppmv)
Acetone	58.08	9.3	100
Benzene	78.12	8.2	10
Bromoform	252.75	8.0	10
Butanol	74.12	7.5	100
Carbon disulfide	76.14	9.8	10
Carbon tetrachloride	153.82	7.8	10
Chlorobenzene	112.56	7.8	10
Chloroform	119.38	8.7	10
Chloromethane	50.49	9.4	10
Cyclohexane	84.16	8.5	10
1,1-Dichloroethane	98.94	8.9	10
1,2-Dichloroethane	98.94	8.5	10
1,1-Dichloroethylene	96.94	9.0	10
cis-1,2-Dichloroethylene	96.94	8.8	10
trans-1,2-Dichloroethylene	96.94	8.8	10
1,2-Dichloropropane	112.99	9.0	10
Ethyl benzene	106.17	7.3	10
Ethyl ether	74.12	9.0	10
Methyl ethyl ketone	72.11	8.5	100
Methyl isobutyl ketone	100.16	7.7	100
Methylene chloride	84.93	9.7	10
1,1,2,2-Tetrachloroethane	167.85	8.6	10
Tetrachloroethylene	165.83	8.6	10
Toluene	92.15	8.0	10
1,1,1-Trichloroethane	133.41	9.2	10
Trichloroethylene	131.39	9.4	10
Trichlorofluoromethane	137.37	9.8	10
1,1,2-Trichloro-1,2,2-trifluoroethane	187.38	9.9	10
1,3,5-Trimethylbenzene	120.2	7.6	10
1,2,4-Trimethylbenzene	120.2	8.0	10
p/m-Xylene	106.17	8.0	10
o-Xylene	106.17	7.6	10
Methanol	32.04	9.9	100

Form Rev 05-07

SECTION 6.0

DATA REVIEW CHECKLISTS

- SAMPLE RECEIVING & CUSTODY REVIEW CHECKLIST
- DATA GENERATOR CHECKLIST
- INDEPENDENT REVIEW CHECKLIST

Environmental Chemistry Laboratory
Sample Receiving & Custody Review Checklist

Receiving Group: **ECL** 12029	Nonconformance Report Initiation Required? Yes or (No) NCR Number:
Reviewer Signature: Thomas B. Lints	Date: 07/19/12

Instructions: Complete one checklist per Report Group. Enter appropriate response for each question. Each "NO" response requires explanation. A "NO" response to a question may require initiation of an NCR.

REQUIREMENT	YES	NO	COMMENTS
1. FIELD CHAIN OF CUSTODY (COC)			
a. Are all field samples listed on the accompanying COC form included in the shipment?	✓		NA
b. Are all samples included in the shipment listed on the COC form?	✓		NA
c. Are all custody transfers completely documented by signatures of relinquishers and acceptors, time, and date of transfer?	✓		NA
d. Does all sample information (e.g., sample ID, sampling date and time, sample location, field batch, analytical request) listed on the COC correspond with the information on the sample tags?	✓		NA
e. Are any corrections on the COC appropriately made [a single line through the incorrect data, correct data written in (not overwritten), initialed and dated]?	✓		NA
2. SAMPLE TAGS			
a. Is each sample accompanied by a corresponding sample tag?	✓		NA
b. Do the field IDs on the sample tags correspond with those on the COC?	✓		NA
c. Does the sampling date and time correspond with the date and time on the COC?	✓		NA
d. Is the field batch number recorded on each sample tag, and does it correspond with that recorded on the COC?	✓		NA
e. Are the Sampling Organization and Sample Description fields completed?	✓		NA
f. Are ambient pressure and temperature, date and time and sampler initials recorded on each tag?	✓		NA
g. Are VOCs analyses requested as appropriate for each sample?	✓		NA
h. Are VOCs analyses requested for each field blank sample?	✓		NA
i. Did the sampler sign each sample tag?	✓		NA
j. Are any corrections on the sample tag appropriately made [a single line through the incorrect data, correct data written in (not overwritten), initialed and dated]?	✓		NA
k. Is the SUMMA® canister ID listed on the sample tag and/or COC?	✓		NA
3. ANALYSIS REQUEST FORM (ANRF)			
a. Do all field sample numbers correspond to those on the field COC?	✓		NA
b. Do the listed sample sizes correspond with the SUMMA® canisters?	✓		NA
c. Do VTSR and the Field Batch number match those on the COC?	✓		NA
d. If there is a COC number does it match the COC form number?	✓		NA
e. Are the correct analysis requests checked?	✓		NA
4. SAMPLE INTEGRITY			
a. Is a signed and dated or otherwise traceable custody seal present on the shipping container?	✓		NA
b. Is the shipping container custody seal intact and undamaged upon receipt at the laboratory?	✓		NA
c. Is the shipping container custody seal placed such that the container cannot be opened without breaking the seal?	✓		NA
d. Is a custody seal present on the valve of each sample canister?	✓		NA
e. Is the custody seal on each SUMMA® canister intact and undamaged upon receipt at the laboratory?	✓		NA
f. Is each custody seal placed such that the valve cannot be opened without breaking the seal?	✓		NA
g. Has physical integrity of all samples been preserved (such as, no dents, no missing connectors)?	✓		NA
h. Are the canister gauge pressure and ambient temperature and pressure recorded on the sample tag by ECL after canister receipt and equilibration to room temperature?	✓		NA
i. Did all of the SUMMA® canisters maintain pressure during shipment?	✓		NA
j. Does each sample have an ECL Sample ID tag corresponding to the ANRF?	✓		NA

The field sampling organization must be contacted if any discrepancies are found in the sample COC and tag documentation. This contact must be documented in writing.

TWCP SAMPLE RECEIVING & CUSTODY REVIEW CHECKLIST ATTACHMENT

FIELD BATCH: INHSG1204

LABORATORY RECEIVING GROUP: ECL12029

Temperature Probe Identification Number: XC0553

Expiration Date: 10/12/12

The temperature probe associated with the samples registered 22.3°C upon receipt at the laboratory. The minimum temperature registered by the probe during transport was 20.2°C and the maximum was 31.5°C.

Temperature Probe Identification Number: XC0692

Expiration Date: 10/12/12

The temperature probe associated with the samples registered 23.1°C upon receipt at the laboratory. The minimum temperature registered by the probe during transport was 19.9°C and the maximum was 31.6°C.

Signature of Sample Custodian: Thomas B. Lintz Date: 07-19-12

Form Date: 08/14/2006

Environmental Chemistry Laboratory
Data Generator Checklist

CCP-TP-175 (VOCs by GC/MS)

Analytical Batch#:	Procedure Revision:
ECL12029M	3
Analyst Signature: Carlie A. Crowder	Analysis Date: 7-26-12

Criteria	Yes	No	N/A	Comments
1. Samples analyzed in accordance with CCP-TP-175 requirements.	✓			NA
2. BFB tune analyzed at the beginning of the run (once every 12 hours of instrument operation), and meets acceptance criteria.	✓			NA
3. CCAL analyzed at the beginning of the run (once every 12 hours of instrument operation), and meets acceptance criteria.	✓			NA
4. LB analyzed after the CCAL, and meets acceptance criteria.	✓			NA
5. Analytical batch QC (LCS, laboratory duplicate or LCS duplicate) analyzed if appropriate, and meet acceptance criteria. [N/A if these analyses are performed on another day within the batch.]	✓			NA
6. All samples quantitated within the calibration range for all target analytes, diluted and reanalyzed, or scheduled for reanalysis within the batch.	✓			NA
7. All non-target analyte peaks having total ion areas >10% of the nearest internal standard evaluated against a NIST Appendix VIII VOC mass spectral library for tentative identification.	✓			NA
8. All TICs identified using criteria defined in CCP-TP-175.	✓			NA
9. All logbook entries completed in accordance with CCP-QP-011.	✓			NA
10. All raw data corrections made per CCP-TP-188 requirements [lined out, initialed, dated, and justified (as necessary)].	✓			NA
11. All raw data evaluated, signed/initialed and dated in indelible black ink.	✓			NA
12. Raw data reviewed for completeness and accuracy.	✓			NA

Environmental Chemistry Laboratory
Data Generator Checklist

CCP-TP-175 (VOCs by GC/MS)

Analytical Batch#: EC12029M	Procedure Revision: 3
Analyst Signature: Cathie A. Crowder	Analysis Date: 7-30-12

Criteria	Yes	No	N/A	Comments
1. Samples analyzed in accordance with CCP-TP-175 requirements.	✓			NA
2. BFB tune analyzed at the beginning of the run (once every 12 hours of instrument operation), and meets acceptance criteria.	✓			NA
3. CCAL analyzed at the beginning of the run (once every 12 hours of instrument operation), and meets acceptance criteria.	✓			NA
4. LB analyzed after the CCAL, and meets acceptance criteria.	✓			NA
5. Analytical batch QC (LCS, laboratory duplicate or LCS duplicate) analyzed if appropriate, and meet acceptance criteria. [N/A if these analyses are performed on another day within the batch.]			✓	NA
6. All samples quantitated within the calibration range for all target analytes, diluted and reanalyzed, or scheduled for reanalysis within the batch.	✓			NA
7. All non-target analyte peaks having total ion areas >10% of the nearest internal standard evaluated against a NIST Appendix VIII VOC mass spectral library for tentative identification.	✓			NA
8. All TICs identified using criteria defined in CCP-TP-175.	✓			NA
9. All logbook entries completed in accordance with CCP-QP-011.	✓			NA
10. All raw data corrections made per CCP-TP-188 requirements [lined out, initialed, dated, and justified (as necessary)].	✓			NA
11. All raw data evaluated, signed/initialed and dated in indelible black ink.	✓			NA
12. Raw data reviewed for completeness and accuracy.	✓			NA

Environmental Chemistry Laboratory Independent Technical Review (ITR) Checklist

Analytical Batch:	Data Report Number:	Method : CCP-TP-175
ECL12029M	ECL12029M	

Run#	Analysis Date	Data Generator	ITR Signature	Sections Reviewed	Date of Review
1	7-26-12	Catherine Crowder	[signature]	1-7	8-1-12
2	7-30-12	Catherine Crowder	[signature]	1-7	8-1-12
3	NA	NA	NA	NA	NA

Final Independent Technical Reviewer Release Signature: [signature] Sections Reviewed: 1-10 Date: 8/2/12

Instructions: Complete one checklist per analytical batch. If more than three instrument runs were needed to complete the batch analysis, use a second checklist. Enter the appropriate response for each question. Each "No" response requires explanation.

Requirement	Run #1		Run #2		Run #3		Comments
	Yes	No	Yes	No	Yes	No	
1. Instrument Performance Check (BFB Tune)	///	///	///	///	///	///	
a. Was a BFB tune performed each day prior to analysis of samples?	✓		✓		NA	NA	NA
b. Is the raw data present, and signed/initialed and dated by the analyst, for each BFB tune?	✓		✓		NA	NA	NA
c. Do all the BFB tunes meet CCP-TP-175 requirements [Table 2]?	✓		✓		NA	NA	NA
2. Continuing Calibration Verification (CCAL)	///	///	///	///	///	///	
a. Was a CCAL performed each day after the BFB tune and prior to analysis of samples?	✓		✓		NA	NA	NA
b. Is the raw data present, and signed/initialed and dated by the analyst, for each CCAL?	✓		✓		NA	NA	NA
c. Is the %D less than or equal to 30% for all target analytes?	✓		✓		NA	NA	NA
d. Are the retention times of the internal standards within 30 seconds of those in the associated ICAL?	✓		✓		NA	NA	NA
e. Are the internal standard areas within a factor of 2 (i.e., 50 to 200%) of those in the associated ICAL?	✓		✓		NA	NA	NA
3. Laboratory Blanks (LBs)	///	///	///	///	///	///	
a. Was a laboratory blank analyzed daily after the CCAL and prior to analysis of samples?	✓		✓		NA	NA	NA
b. Are all laboratory blank results ≤3 times the program-required MDLs for all target analytes ?	✓		✓		NA	NA	NA
4. Samples (Including LCSs, Blanks and Duplicates)	///	///	///	///	///	///	
a. Are the raw data present, and signed/initialed and dated by the analyst, for all samples listed on the Analysis Request Form, and for all associated LCSs, blanks and duplicates?	✓		✓		NA	NA	NA
b. Are the internal standard areas within a factor of 2 (i.e., 50% to 200%) of those in the associated CCAL?	✓		✓		NA	NA	NA
c. Do the sample component RRT's compare within ± 0.06 RRT units of the standard component in the continuing calibration?	✓		✓		NA	NA	NA
d. Are all analytes found below the MDLs marked with an "X" to the right or left of the concentration on the Quant Report and marked with "No, <MDL", initialed and dated on the following spectral data sheets?	✓		✓		NA	NA	NA
e. Are all positive hits identified by a "Yes", initialed and dated on the spectral data sheets?	✓		✓		NA	NA	NA
f. Are negative hits identified by an "X" on the Quant Report, and by "No", justified, initialed and dated on the data sheets?	✓		✓		NA	NA	NA
g. Were all samples analyzed within 12 hours of the daily BFB tune?	✓		✓		NA	NA	NA
h. In your opinion, do the sample spectra for positive hits match the reference spectra?	✓		✓		NA	NA	NA
i. Was a TIC search conducted on each sample, blank, duplicate and LCS in the batch, using a NIST library containing Appendix VIII VOCs?	✓		✓		NA	NA	NA
j. Were the TICs reviewed and identified using the guidelines defined in CCP-TP-175, initialed and dated?	✓		✓		NA	NA	NA
k. Were all samples having analytes detected in amounts exceeding the upper calibration range reanalyzed at a different dilution or at a lower volume?	✓		✓		NA	NA	NA
l. Were all dilutions factors for all samples calculated correctly?	✓		✓		NA	NA	NA

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Environmental Chemistry Laboratory Independent Technical Review (ITR) Checklist

Analytical Batch:	Data Report Number:	Method : CCP-TP-175
ECL12029M	ECL12029M	

Requirement	Yes	No	Comments
5. Initial Calibration	///	///	
a. Does the BFB tune meet CCP-TP-175 requirements [Table 2]?	✓		NA
b. Are the %RSDs less than 35% for all target analytes?	✓		NA
c. Is at least one of the calibration standards at a concentration below the PRQL?	✓		NA
d. Are the correct ions used for quantitation?	✓		NA
e. Is the ICAL raw data signed/initialed and dated by the analyst and included, or referenced, as appropriate for the report?	✓		NA
f. Does the ICAL use at least 5 points (at least one below the PRQL), with %RSD < 35% for all target analytes?	✓		NA
6. Laboratory Control Samples (LCSs)	///	///	
a. Was at least one unique LCS analyzed with the analytical batch?	✓		NA
b. Is the LCS second-source from the ICAL standard source?	✓		NA
c. Do the recoveries for all target analytes in each LCS fall between 70% and 130%?	✓		NA
d. IF a duplicate LCS was analyzed, are all RPDs for all analytes greater than the PRQL ≤25%?	✓		NA
7. Duplicate Sample	///	///	
a. Was at least one field sample from the analytical batch analyzed in duplicate?	✓		NA
b. Do the RPDs for analytes above the PRQL meet the ≤25% precision requirement?	✓		NA
8. Sample Integrity Verification	///	///	
a. Is COC documentation complete and accurate for all reported samples?	✓		NA
b. Was physical integrity of all samples maintained?	✓		NA
c. Were all samples stored at temperatures between 0 and 40° C?	✓		NA
9. Instrument, Method and Personnel Qualification Verification	///	///	
a. Were all analyses conducted by analysts having current CCP qualification records on file?	✓		NA
b. Were acceptable demonstrations of precision, accuracy, and MDLs performed semiannually?	✓		NA
10. Data Report Validation and Completeness	///	///	
a. Are all changes to original data or forms made by a single line through of incorrect data, initialed/signed and dated by the person making the change?	✓		NA
b. Does the report contain a Cover Page with Table of Contents?	✓		NA
c. Does the report contain a Sample Number Cross-Reference Table?	✓		NA
d. Does the report contain copies of the COC and Gas Sample Canister Tags?	✓		NA
e. Are Analysis Data Sheets and TIC Analysis Data Sheets present and accurate for all samples in the analytical batch?	✓		NA
f. Are Lab Blank Summary Forms present for all lab blanks associated with the reported samples?	✓		NA
g. Are Lab Blank Results Forms present for all lab blanks associated with the reported samples?	✓		NA
h. Are BFB Tune Reports present for each continuing calibration associated with the reported samples?	✓		NA
i. Are Initial Calibration Forms present for all Initial Calibrations associated with the reported samples?	✓		NA
j. Are Continuing Calibration Forms present for each Continuing Calibration associated with the reported samples?	✓		NA
k. Are Internal Standard Area Summary Forms present for each daily calibration and associated sample analyses?	✓		NA
l. Are Lab Control Sample Forms present for each LCS associated with the reported samples?	✓		NA
m. Are Lab Duplicate Forms present for each duplicate analysis associated with the reported samples?	✓		NA
n. Does the report contain an MDL reporting form?	✓		NA
o. Does the report contain Quantitation Reports for every standard, sample, and QC sample reported?	✓		NA
p. Are Mass Spectra for all detected analytes and reported TICs present?	✓		NA
q. Are copies of Gas Transfer Manifold logs showing all sample pressurizations/dilutions included for all reported samples?	✓		NA

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Environmental Chemistry Laboratory Independent Technical Review (ITR) Checklist

Analytical Batch:	Data Report Number:	Method : CCP-TP-175
ECL12029M	ECL12029M	

Requirement		Yes	No	Comments
r.	Are copies of analysis run logs for every standard, sample and QC sample present and accurate?	✓		NA
s.	Are U, J, B, D, E, H, Z, and N qualifying flags correctly assigned on the reporting forms?	✓		NA
t.	Are all data reporting forms completely and correctly filled out (e.g., correct batch numbers, analyst IDs, analysis times and dates, dilution factors, sample ID numbers and file IDs)?	✓		NA
u.	If there were any NCRs associated with the data are copies included?	✓		NA
v.	Are the analyte concentrations on the Analysis Data Sheets reported in units of ppm, and correctly rounded to 2 significant figures?	✓		NA
w.	Have all data received documented data generator review and signature?	✓		NA
x.	Were all calculations verified by a valid calculation program or a spot check of verified calculation programs?	✓		NA
y.	Have the data been reviewed for transcription errors?	✓		NA
z.	Are all pages in the data report legible and correctly paginated?	✓		NA

S20000

SECTION 7.0

GCMS VOC RAW DATA

DATE: 7-26-12

GC/MS GAS ANALYSIS SUPPLEMENTAL DATA INPUT SHEET

DATA REPORT #:	**ECL12029M**	**METHOD:**	**CCP-TP-175**
ANALYSIS BATCH #:	**ECL12029M**	**INSTRUMENT:**	**J**
CCAL #:	**WJ12048**	**REPORT TICs:**	**YES**
REPORT GROUP(s):	**ECL12029**		

FILE #	LABORATORY SAMPLE ID	DILUTION #1	DILUTION #2	DILUTION #3	DILUTION #4	FINAL DILUTION	VOLUME INJECTED mLs	TIME ANALYZED	DATE ANALYZED
L26JA	LBMJL26	1.0000	---------	---------	---------	1.00	100	10:59	26-Jul-12
L26JB	LCSMJL26	3.5000	---------	---------	---------	3.50	40	11:41	26-Jul-12
L26JC	12201009	3.6961	---------	---------	---------	3.70	100	12:26	26-Jul-12
L26JD	12201010	4.0794	3.5366	---------	---------	14.43	25	13:34	26-Jul-12
L26JE	12201011	3.5661	3.6220	---------	---------	12.92	25	14:17	26-Jul-12
L26JF	12201012	3.7495	5.0574	---------	---------	18.96	30	15:01	26-Jul-12
L26JG	12201018	3.7938	6.1952	---------	---------	23.50	100	15:46	26-Jul-12
L26JH	12201020	3.5459	3.1501	---------	---------	11.17	50	16:30	26-Jul-12
L26JI	12201021	3.6305	3.0079	---------	---------	10.92	40	17:13	26-Jul-12
L26JJ	12201019	3.6969	8.0000	---------	---------	29.58	30	17:57	26-Jul-12
L26JK	12201015	3.8115	14.0664	---------	---------	53.61	25	18:40	26-Jul-12
L26JL	12201016	3.6653	10.0775	---------	---------	36.94	25	19:23	26-Jul-12
L26JM	12201017	3.6520	30.6032	---------	---------	111.76	30	20:07	26-Jul-12
L26JN	12201017D	3.6520	30.6032	---------	---------	111.76	30	20:50	26-Jul-12
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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[redacted]

GC/MS-J USE LOG
Environmental Chemistry Laboratory
Idaho National Laboratory

CCP-TP-175 — Page UMJ-01- 0060

Analyst	Date	Analytical Batch #		File ID	Lab Sample ID	Field Sample ID	Dilution Factor	Volume (mL)	Comments
CAE	7-24-12	Needle BLKS NA	M	L24JF	12201005	NA	1	100	Folder ECL12028 ITSD VOA-WJ-26-5-16
			M	L24JG	12201006		1	100	
			M	L24JH	12201007		1	100	
			M	L24JI	12201008		1	100	
CAE	7-25-12	NA	M	BJ12047	50ng BFB	VOA-BF-26-1.36-11	1	36	Folder Oven Cleaning BLKS ITSD VOA-WJ-26-5-16
			M	WJ12047	CCP-TP-175 CCAL	VOA-WC-26-5-17	1	100	
			M	L25JA	LBMJL25	LB317 22L12	1	100	
			M	L25JB	Cleaning Blk	Batch # 438C	1	100	
			M	L25JC	Cleaning Blk	Batch # 439C	1	100	
CAE	7-26-12	ECL12029	M	BJ12048	50ng BFB	VOA-BF-26-1.36-11	1	36	Folder ECL12029 ITSD VOA-WC-26-5-16
			M	WJ12048	CCP-TP-175 CCAL	VOA-WC-26-5-17 WC 7-26-12	1	100	
			M	L26JA	LBMJL26	LB31751L19	1	100	
			M	L26JB	LCSMJL26	LCS30443SL02	3.5000	40	
			M	L26JC	12201009	NA	3.6961	100	
			M	L26JD	12201010		14.4272	25	
			M	L26JE	12201011		12.9164	25	
			M	L26JF	12201012		18.9627	30	
			M	L26JG	12201018		23.5033	100	
			M	L26JH	12201020		11.1699	50	
			M	L26JI	12201021		10.9202	40	

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GC/MS-J USE LOG
Environmental Chemistry Laboratory
Idaho National Laboratory

CCP-TP-175 | Page UMJ-01- 0041

Analyst	Date	Analytical Batch #		File ID	Lab Sample ID	Field Sample ID	Dilution Factor	Volume (mL)	Comments
CAE	7-26-12	ECL12029	M	L26JJ	12201019	NA	29.5752	30	Folder ECL12029 ITSD VOA-WI-26-9-5-16
↓	↓	↓	M	L26JK	12201015	↓	53.6141	25	↓
↓	↓	↓	M	L26JL	12201016	↓	36.9371	25	↓
↓	↓	↓	M	L26JM	12201017	↓	111.7629	30	↓
↓	↓	↓	M	L26JN	12201017D	↓	111.7629	30	↓
CAE	7-30-12	ECL12029	M	BJ12049	50ng BFB	VOA-BF-26-1-30-11	1	36	Folder ECL12029 ITSD VOA-WI-26-9-5-16
↓	↓	↓	M	WJ12049 (cae 7-30-12)	CCP-TP-175 CCAL (cae 7-30-12)	VOA-WC-26-5-17	1	100	↓
↓	↓	↓	M	L30JA	LBMJL30 (cae 7-30-12)	LB3175IL19	1	100	↓
↓	↓	↓	M	L30JB	12201013 (cae 7-30-12)	NA	5603.4196	25	↓
↓	↓	↓	M	L30JC (cae 7-30-12)	12201014	↓	349.5512	30	↓
↓	↓	↓	M	L30JD	12201013DL	↓	1128.3042	30	↓
			M			N/A			
			M						
			M						
			M						
			M						
			M						
			M						
			M						
			M						

ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12029\
Data File : WJ12048.D
Acq On : 26 Jul 2012 10:15 am
Operator :
Sample : CCP-TP-1745 CCAL
Misc : 1X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 10:47:54 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	15.07	96	4206616	473.00	ng		0.00
24) Chlorobenzene-d5	21.61	117	2865485	490.00	ng		0.00
Target Compounds							Qvalue
2) Ethyl Ether	6.51	59	1336441	554.74	ng		97
3) Methylene Chloride	8.66	84	1613015	554.82	ng		88
4) 1,1,2-Trichlorofluoroe...	7.20	101	1960210	599.27	ng		94
5) 1,1-Dichloroethene	7.13	96	1560956	560.73	ng		95
6) 1,1-Dichloroethane	10.72	63	2842036	554.45	ng		99
7) cis-1,2-Dichloroethene	12.28	96	1633449	553.37	ng		95
8) Chloroform	13.10	83	2674552	564.27	ng		100
9) 1,2-Dichloroethane	14.44	62	2098355	544.19	ng		98
10) 1,1,1-Trichloroethane	13.53	97	2433803	570.88	ng		99
11) Carbon Tetrachloride	13.93	117	2021526	528.56	ng		99
12) Trichloroethene	15.90	130	1584919	584.14	ng		95
13) Cyclohexane	13.67	56	2314044	530.24	ng		90
14) Benzene	14.41	78	5221747	528.80	ng		98
15) Acetone	7.26	43	3595249	576.66	ng		97
16) 2-Butanone	12.33	72	989104	530.16	ng	#	80
17) 1-Butanol	15.78	56	1215072	504.33	ng		99
18) Methanol	4.51	31	984254	528.92	ng		94
19) trans-1,2-Dichloroethene	9.51	96	1592731	540.12	ng		98
20) Chloromethane	3.74	50	2441973	534.25	ng		99
21) Carbon Disulfide	7.71	76	6312983	576.40	ng		93
22) 1,2-Dichloropropane	16.38	63	1289696	534.00	ng		98
23) Trichlorofluoromethane	5.71	101	3023649	559.34	ng		99
25) Bromoform	23.38	173	1365336	572.62	ng		100
26) Tetrachloroethene	19.87	164	1273184	609.17	ng		97
27) 1,1,2,2-Tetrachloroethane	24.32	83	2021012	568.76	ng		100
28) Toluene	18.70	92	3136198	544.90	ng		99
29) Chlorobenzene	21.67	112	3146613	522.28	ng		95
30) Ethylbenzene	21.89	106	1646278	505.92	ng		89
31) Xylene (meta & para)	22.12	106	2274598	560.75	ng		89
32) Xylene (ortho)	22.97	106	1958788	529.41	ng		88
33) 1,3,5-Trimethylbenzene	24.93	105	4617888	553.71	ng		96
34) 1,2,4-Trimethylbenzene	25.64	105	4584403	563.83	ng		96
35) 4-Methyl-2-Pentanone	18.30	43	2699002	531.90	ng		98

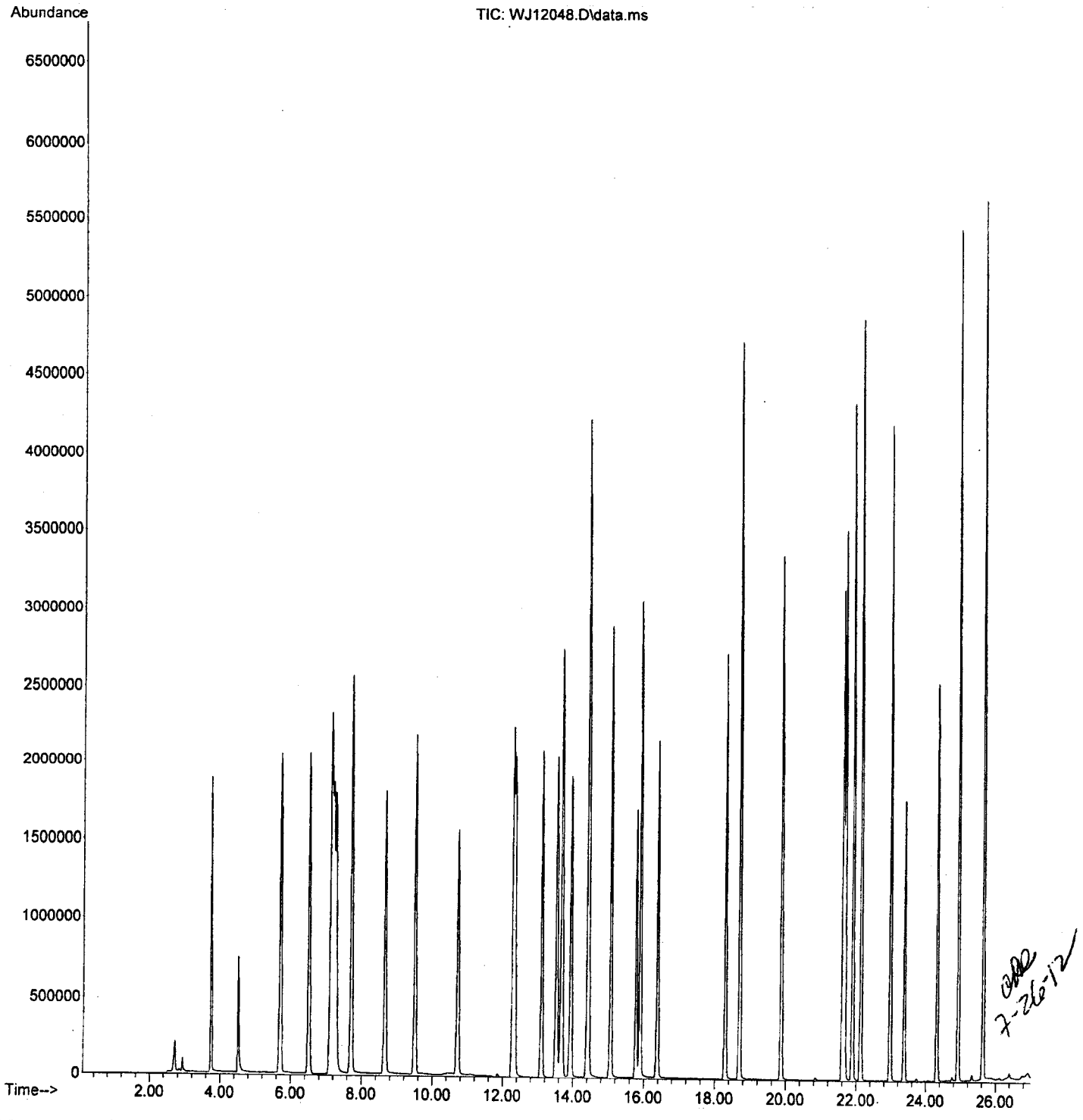
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7-26-12

ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12029\
Data File : WJ12048.D
Acq On : 26 Jul 2012 10:15 am
Operator :
Sample : CCP-TP-1745 CCAL
Misc : 1X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 10:47:54 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration



7-26-12

ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12029\
Data File : L26JA.D
Acq On : 26 Jul 2012 10:59 am
Operator :
Sample : LBMJL26
Misc : LB31751L19 1X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 15:32:08 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	15.07	96	4231593	473.00	ng	0.00
24) Chlorobenzene-d5	21.61	117	2870321	490.00	ng	0.00

Target Compounds	Qvalue

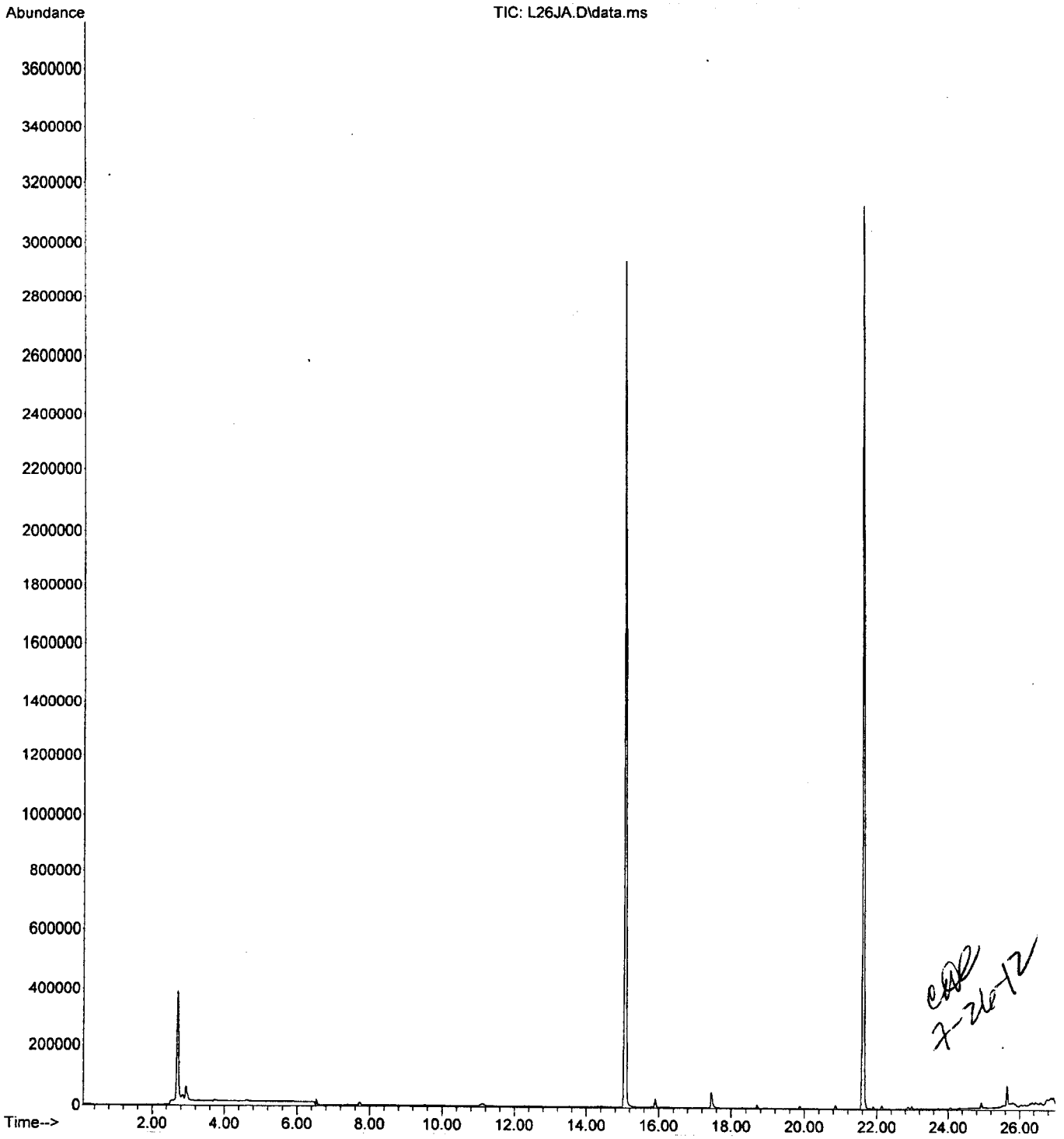
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7-26-12

ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12029\
Data File : L26JA.D
Acq On : 26 Jul 2012 10:59 am
Operator :
Sample : LBMJL26
Misc : LB31751L19 1X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 15:32:08 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration



7-26-12

Library Search Compound Report

Data Path : D:\ECL12029\
Data File : L26JA.D
Acq On : 26 Jul 2012 10:59 am
Operator :
Sample : LBMJL26
Misc : LB31751L19 1X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL

TIC Library : C:\Database\Apendix8.1
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected
****

7-30-12

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	LCSMJL26		Field Sample ID:	LCS30443SL02	
Analytical Batch:	ECL12029M		Sampling Batch:		
Data Report:	ECL12029M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/26/2012	1141	Date Sampled:		
Lab File ID:	L26JB		Date Received:		
Instrument ID:	GCMS-J		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	0.34	U
Benzene	18	
Bromoform	0.068	U
Butanol	0.22	U
Carbon disulfide	0.28	U
Carbon tetrachloride	12	
Chlorobenzene	0.15	U
Chloroform	0.16	U
Chloromethane	0.40	U
Cyclohexane	0.22	U
1,1-Dichloroethane	0.19	U
1,2-Dichloroethane	0.18	U
1,1-Dichloroethylene	0.20	U
cis-1,2-Dichloroethylene	0.19	U
trans-1,2-Dichloroethylene	0.19	U
1,2-Dichloropropane	0.17	U
Ethyl benzene	0.15	U
Ethyl ether	0.26	U
Methyl ethyl ketone	0.25	U
Methyl isobutyl ketone	16	J
Methylene chloride	21	
1,1,2,2-Tetrachloroethane	0.11	U
Tetrachloroethylene	0.11	U
Toluene	19	
1,1,1-Trichloroethane	12	
Trichloroethylene	13	
Trichlorofluoromethane	0.15	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.11	U
1,3,5-Trimethylbenzene	0.14	U
1,2,4-Trimethylbenzene	0.14	U
p/m-Xylene	0.16	U
o-Xylene	0.15	U
Methanol	0.66	U

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	LCSMJL26		Field Sample ID:	LCS30443SL02	
Analytical Batch:	ECL12029M		Sampling Batch:		
Data Report:	ECL12029M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/26/2012	1141	Date Sampled:		
Lab File ID:	L26JB		Date Received:		
Instrument ID:	GCMS-J		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12029\
Data File : L26JB.D
Acq On : 26 Jul 2012 11:41 am
Operator :
Sample : LCSMJL26
Misc : LCS30443SL02 3.5X 40ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 15:34:45 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	15.08	96	4222846	473.00	ng	0.01
24) Chlorobenzene-d5	21.61	117	2870593	490.00	ng	0.00
Target Compounds						Qvalue
3) Methylene Chloride	8.67	84	2461729	843.49	ng	88
9) 1,2-Dichloroethane	14.43	62	55809	14.42	ng	94
10) 1,1,1-Trichloroethane	13.54	97	3216371	751.55	ng	99
11) Carbon Tetrachloride	13.95	117	3253158	847.32	ng	99
12) Trichloroethene	15.91	130	2108338	774.07	ng	94
14) Benzene	14.43	78	6397476	645.37	ng	98
28) Toluene	18.71	92	4599262	797.68	ng	100
35) 4-Methyl-2-Pentanone	18.31	43	3711325	730.10	ng	98

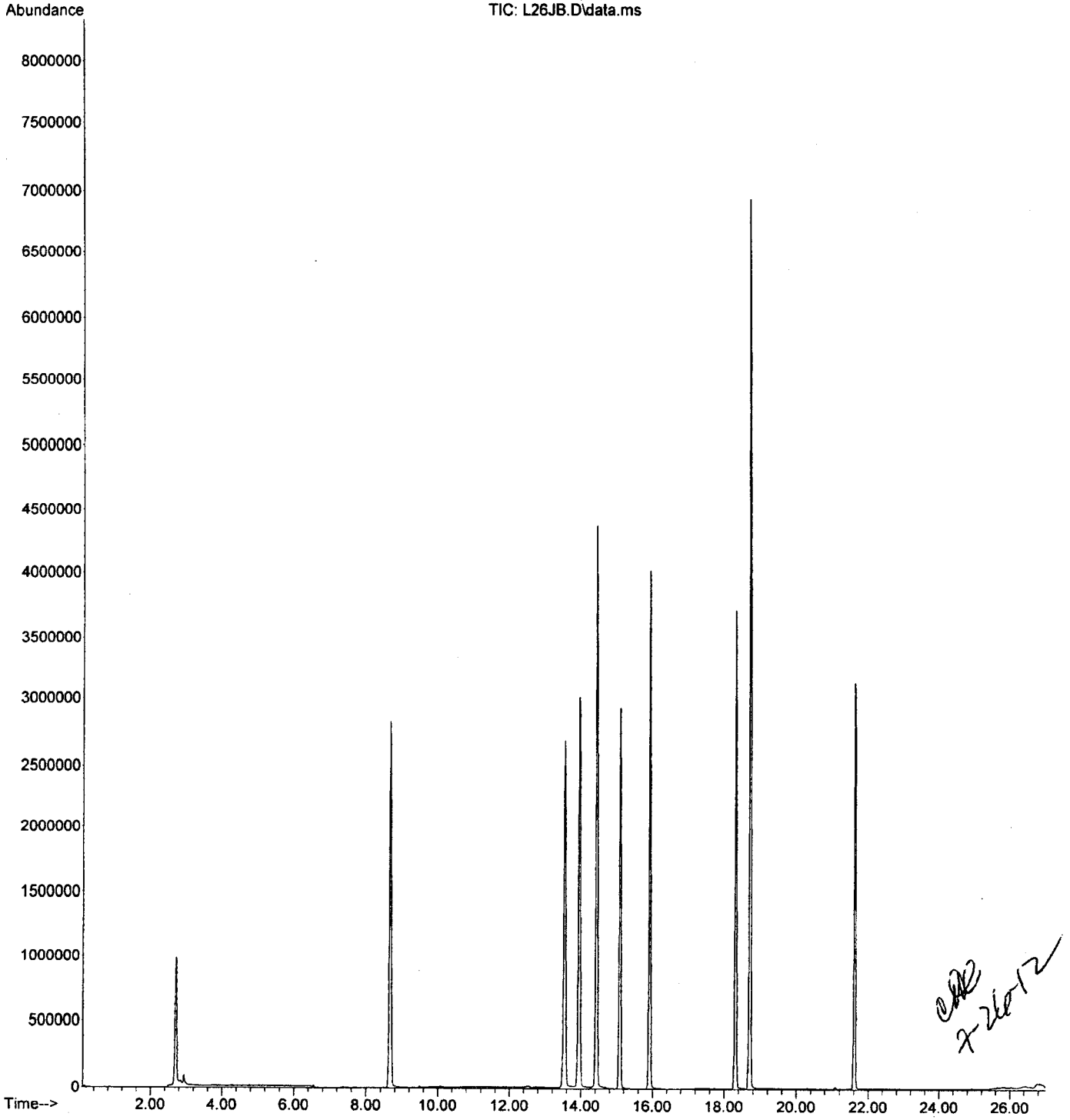
(#) = qualifier out of range (m) = manual integration (+) = signals summed

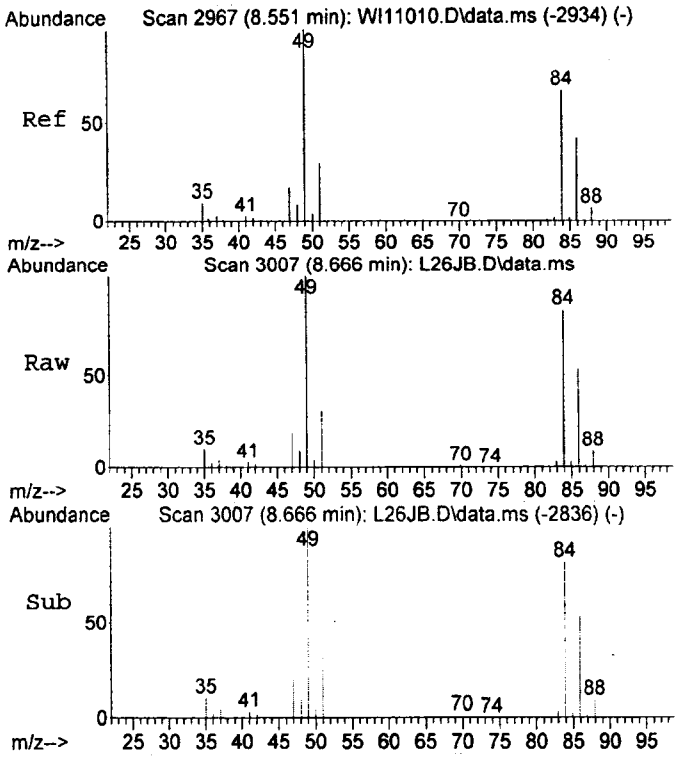
7/26/12

ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12029\
Data File : L26JB.D
Acq On : 26 Jul 2012 11:41 am
Operator :
Sample : LCSMJL26
Misc : LCS30443SL02 3.5X 40ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 15:34:45 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration

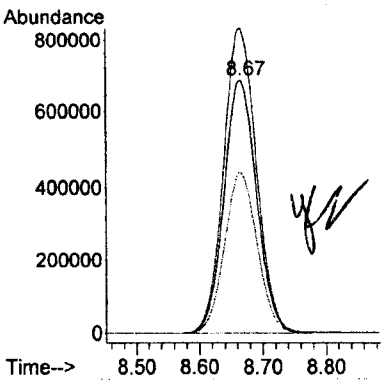


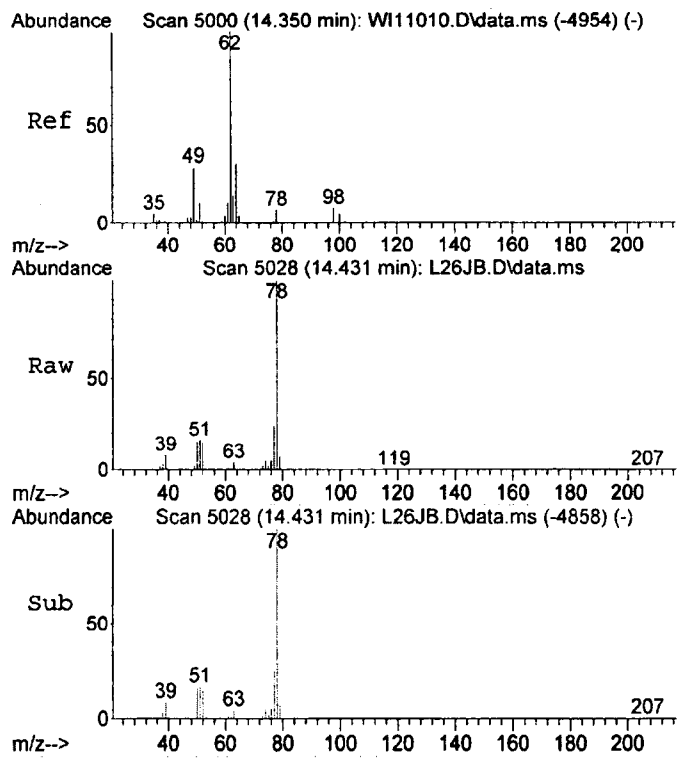


#3
Methylene Chloride
Concen: 843.49 ng
RT: 8.67 min Scan# 3007
Delta R.T. -0.012 min
Lab File: L26JB.D
Acq: 26 Jul 2012 11:41 am

Tgt Ion: 84 Resp: 2461729

Ion	Ratio	Lower	Upper
84	100		
49	121.3	111.6	171.6
86	64.1	33.6	93.6

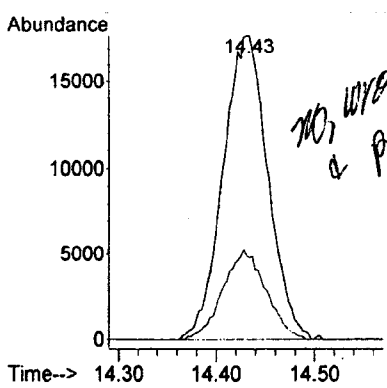




#9
1,2-Dichloroethane
Concen: 14.42 ng
RT: 14.43 min Scan# 5028
Delta R.T. -0.014 min
Lab File: L26JB.D
Acq: 26 Jul 2012 11:41 am

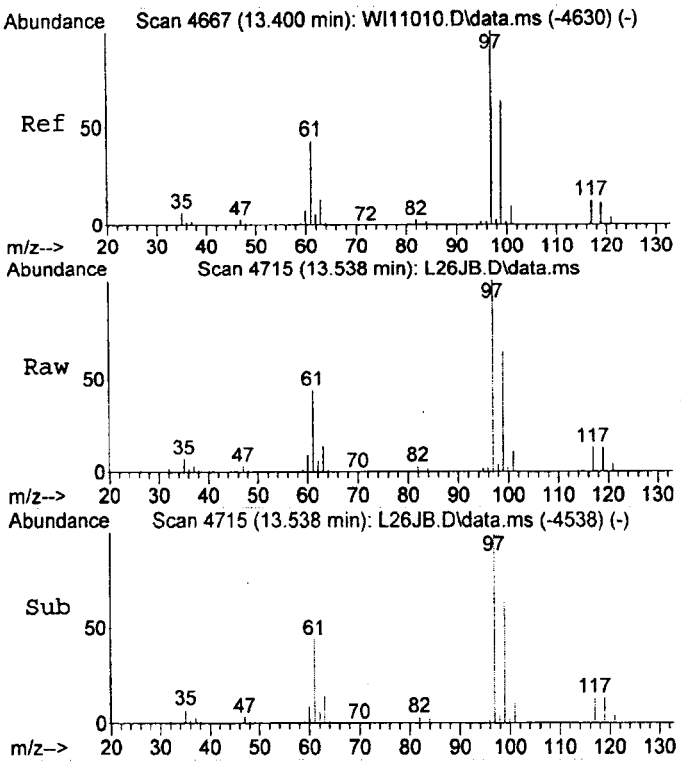
Tgt Ion: 62 Resp: 55809

Ion	Ratio	Lower	Upper
62	100		
64	27.6	1.1	61.1



wrong spectrum
BP

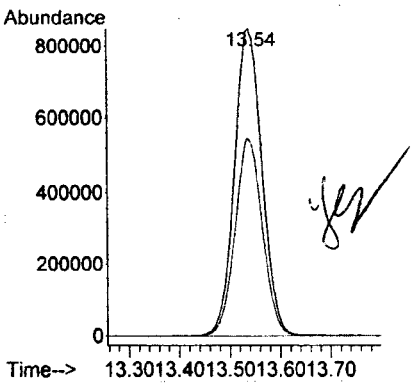
7-26-12

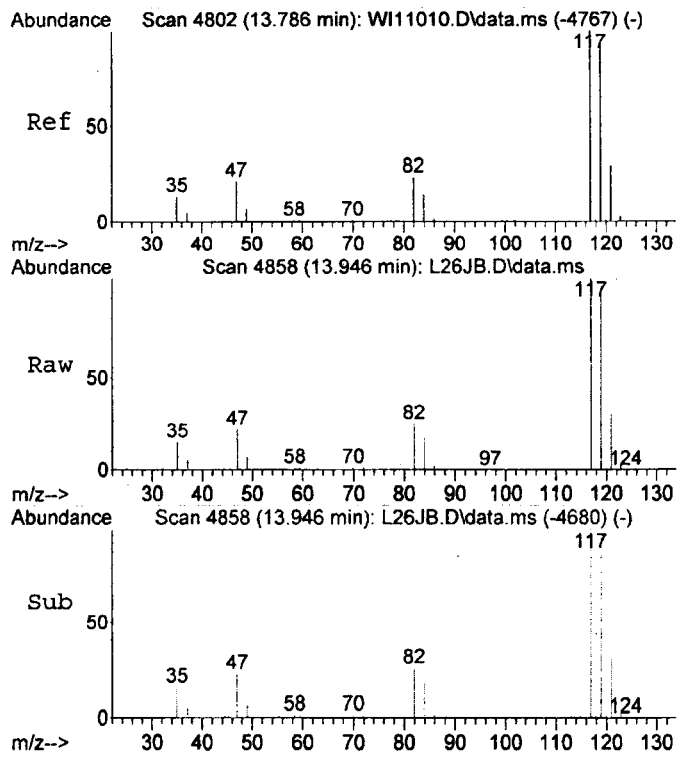


#10
1,1,1-Trichloroethane
Concen: 751.55 ng
RT: 13.54 min Scan# 4715
Delta R.T. 0.006 min
Lab File: L26JB.D
Acq: 26 Jul 2012 11:41 am

Tgt Ion: 97 Resp: 3216371

Ion	Ratio	Lower	Upper
97	100		
99	63.6	32.9	92.9

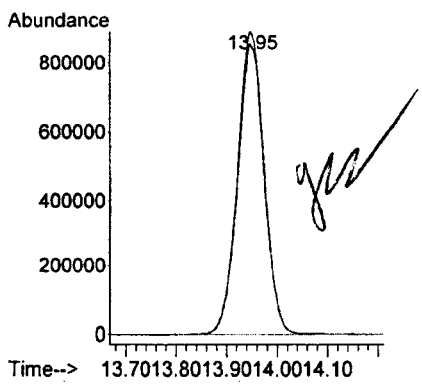


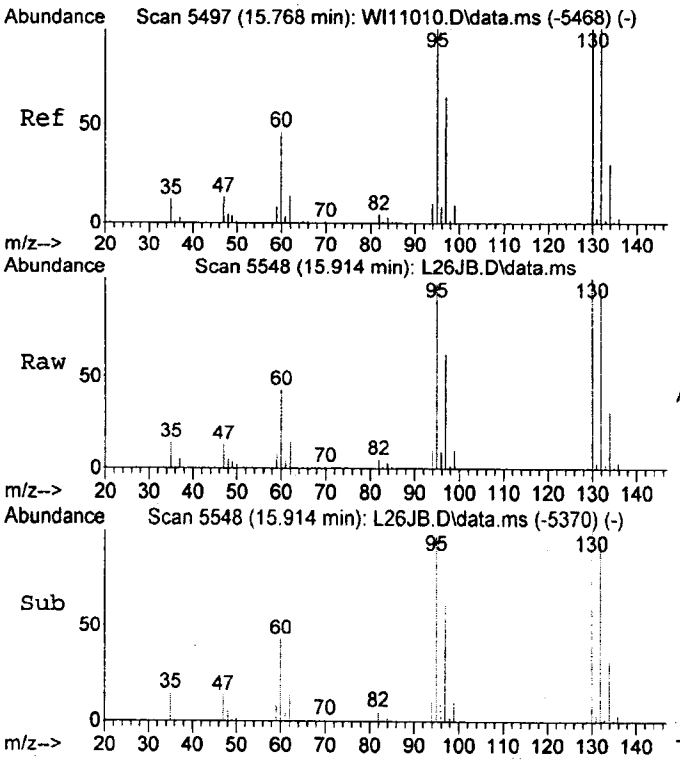


#11
Carbon Tetrachloride
Concen: 847.32 ng
RT: 13.95 min Scan# 4858
Delta R.T. 0.008 min
Lab File: L26JB.D
Acq: 26 Jul 2012 11:41 am

Tgt Ion:117 Resp: 3253158

Ion	Ratio	Lower	Upper
117	100		
119	95.8	65.1	125.1

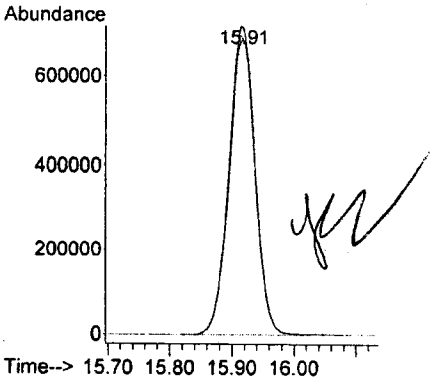


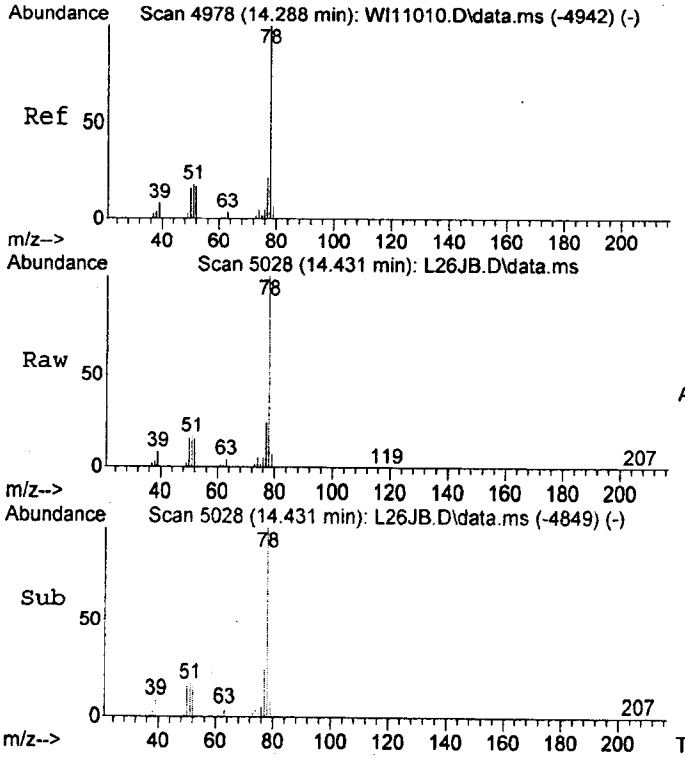


#12
Trichloroethene
Concen: 774.07 ng
RT: 15.91 min Scan# 5548
Delta R.T. 0.008 min
Lab File: L26JB.D
Acq: 26 Jul 2012 11:41 am

Tgt Ion:130 Resp: 2108338

Ion	Ratio	Lower	Upper
130	100		
132	94.7	71.2	131.2
95	96.9	72.7	132.7

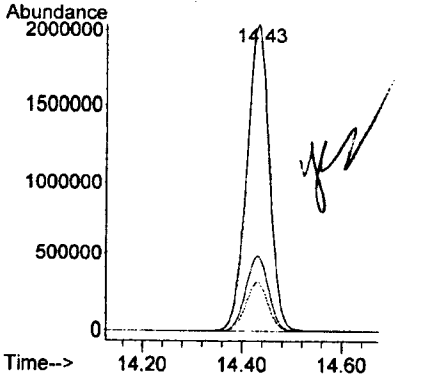




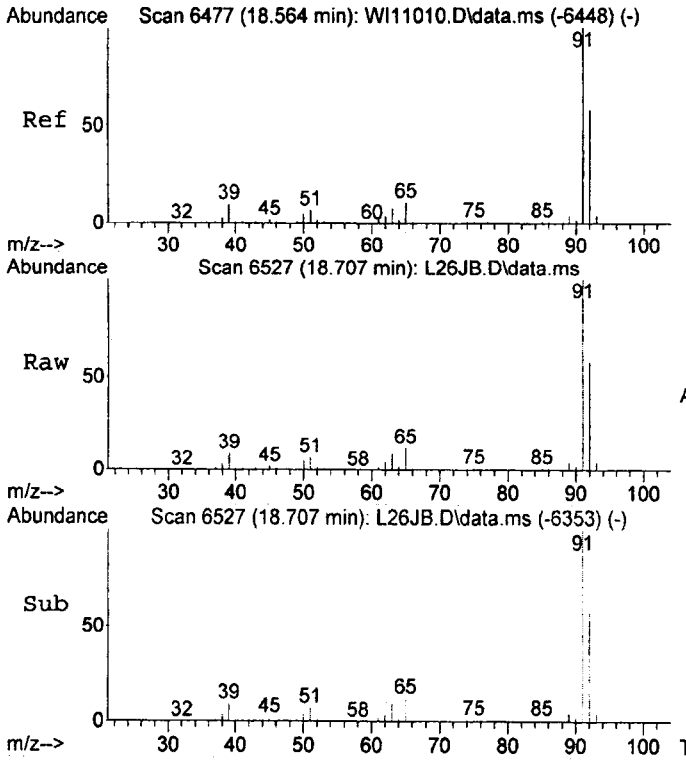
#14
Benzene
Concen: 645.37 ng
RT: 14.43 min Scan# 5028
Delta R.T. 0.011 min
Lab File: L26JB.D
Acq: 26 Jul 2012 11:41 am

Tgt Ion: 78 Resp: 6397476

Ion	Ratio	Lower	Upper
78	100		
77	23.6	0.0	53.4
52	15.2	0.0	46.9



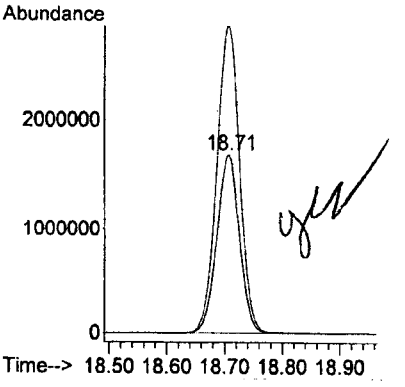
7-26-12

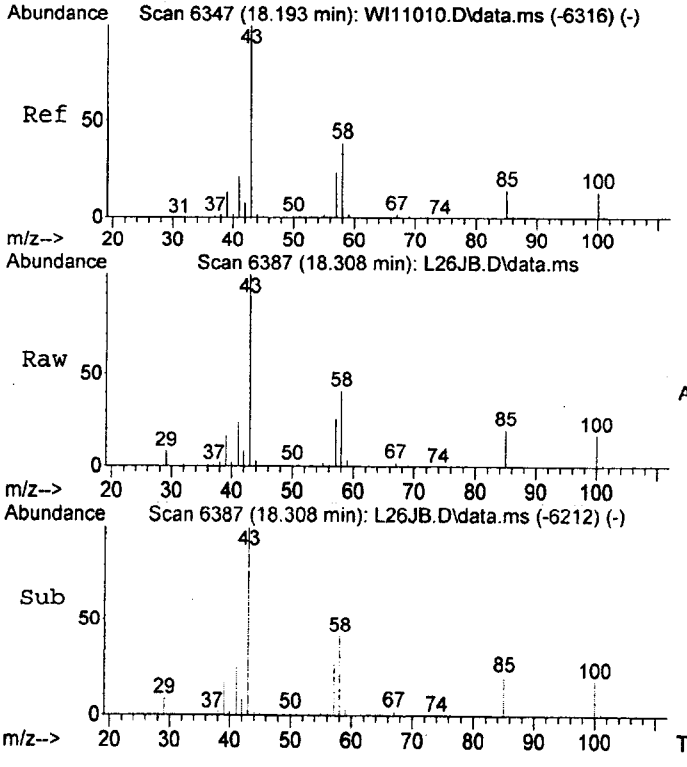


#28
Toluene
Concen: 797.68 ng
RT: 18.71 min Scan# 6527
Delta R.T. -0.003 min
Lab File: L26JB.D
Acq: 26 Jul 2012 11:41 am

Tgt Ion: 92 Resp: 4599262

Ion	Ratio	Lower	Upper
92	100		
91	172.4	142.1	202.1

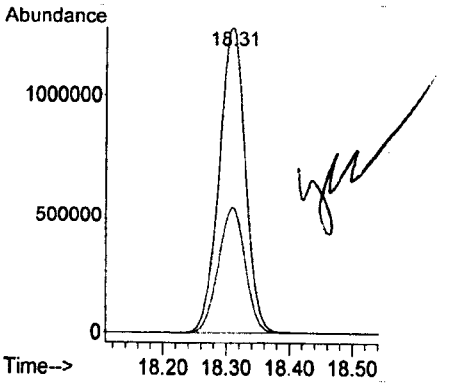




#35
4-Methyl-2-Pentanone
Concen: 730.10 ng
RT: 18.31 min Scan# 6387
Delta R.T. -0.000 min
Lab File: L26JB.D
Acq: 26 Jul 2012 11:41 am

Tgt Ion: 43 Resp: 3711325

Ion	Ratio	Lower	Upper
43	100		
58	41.5	10.3	70.3



Library Search Compound Report

Data Path : D:\ECL12029\
Data File : L26JB.D
Acq On : 26 Jul 2012 11:41 am
Operator :
Sample : LCSMJL26
Misc : LCS30443SL02 3.5X 40ML
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL

TIC Library : C:\Database\Apendix8.1
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected
****

7-26-12

ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12029\
Data File : L26JC.D
Acq On : 26 Jul 2012 12:26 pm
Operator :
Sample : 12201009
Misc : 3.6961X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 12:59:53 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	15.07	96	4193141	473.00	ng	0.00
24) Chlorobenzene-d5	21.62	117	2884356	490.00	ng	0.00

Target Compounds Qvalue

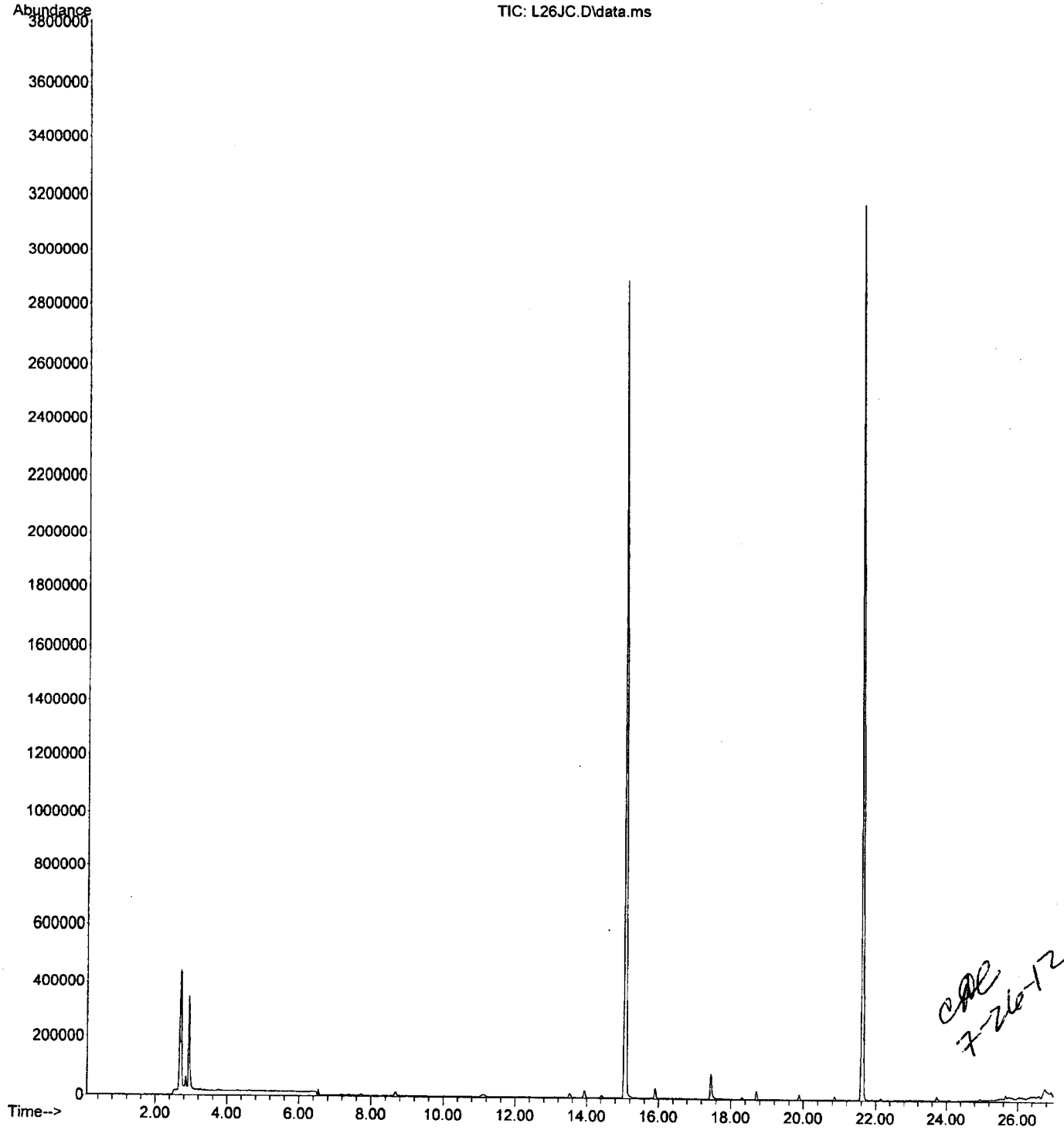
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7-26-12

ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12029\
Data File : L26JC.D
Acq On : 26 Jul 2012 12:26 pm
Operator :
Sample : 12201009
Misc : 3.6961X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 12:59:53 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration



7-26-12

Library Search Compound Report

Data Path : D:\ECL12029\
Data File : L26JC.D
Acq On : 26 Jul 2012 12:26 pm
Operator :
Sample : 12201009
Misc : 3.6961X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL

TIC Library : C:\Database\Apendix8.l
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected
****

7-26-12

ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12029\
Data File : L26JD.D
Acq On : 26 Jul 2012 1:34 pm
Operator :
Sample : 12201010
Misc : 14.4272X 25ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 14:49:58 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	15.06	96	4263054	473.00	ng	0.00
24) Chlorobenzene-d5	21.60	117	2866625	490.00	ng	0.00
Target Compounds						Qvalue
3) Methylene Chloride	8.65	84	2293519	778.44	ng	88
4) 1,1,2-Trichlorofluoroe...	7.19	101	162206m	48.93	ng	
8) Chloroform	13.10	83	199946	41.63	ng	97
10) 1,1,1-Trichloroethane	13.52	97	60526	14.01	ng	99
11) Carbon Tetrachloride	13.93	117	107749	27.80	ng	95
12) Trichloroethene	15.90	130	305350	111.05	ng	93
13) Cyclohexane	13.65	56	37280m	X8.43	ng	
21) Carbon Disulfide	7.70	76	297419	26.80	ng	94
22) 1,2-Dichloropropane	16.38	63	1292533	528.09	ng	98
26) Tetrachloroethene	19.86	164	16287	X7.79	ng	90
28) Toluene	18.69	92	318499	55.32	ng	97

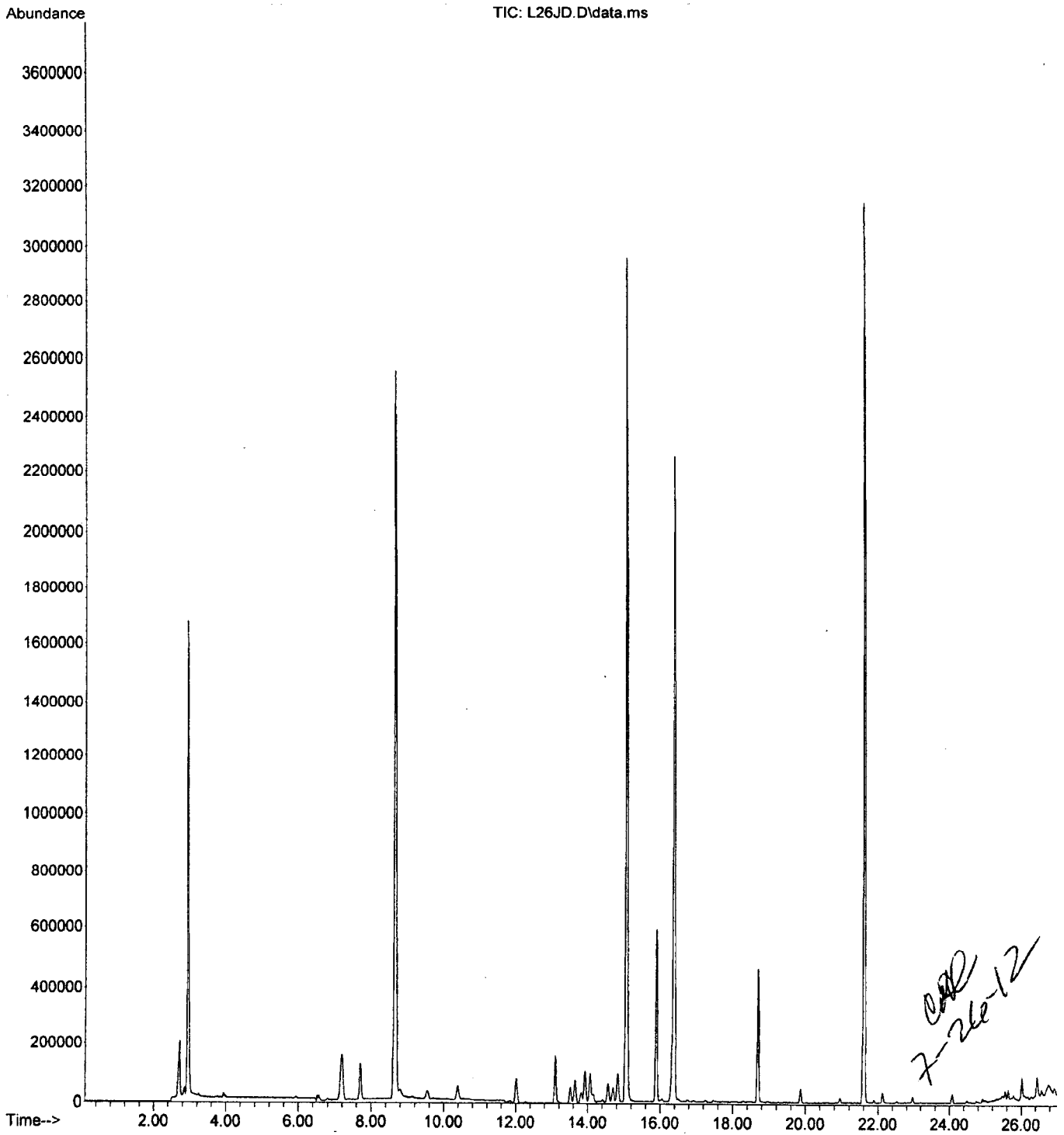
(#) = qualifier out of range (m) = manual integration (+) = signals summed

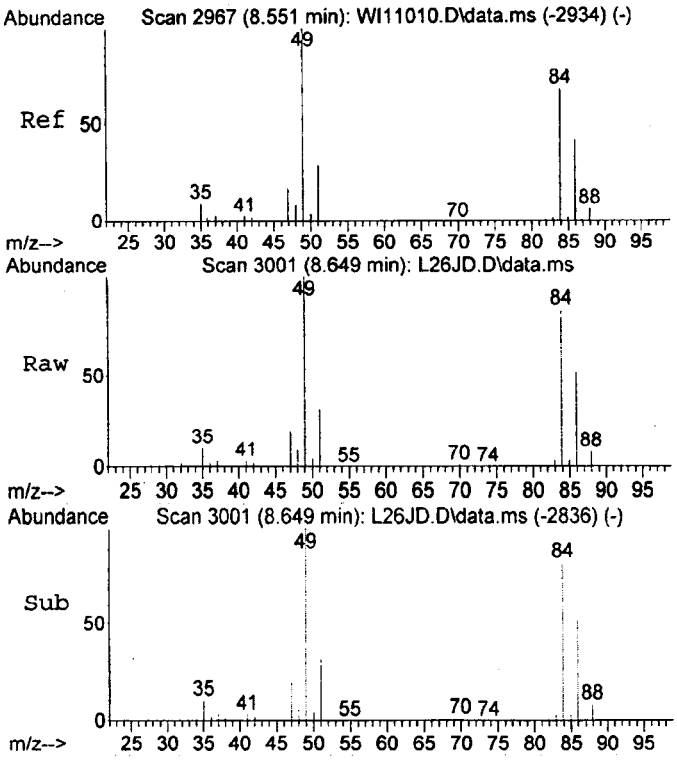
7-26-12

ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12029\
Data File : L26JD.D
Acq On : 26 Jul 2012 1:34 pm
Operator :
Sample : 12201010
Misc : 14.4272X 25ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 14:49:58 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration

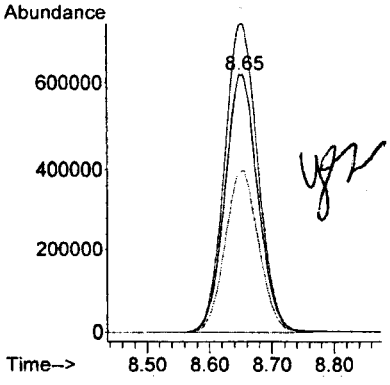


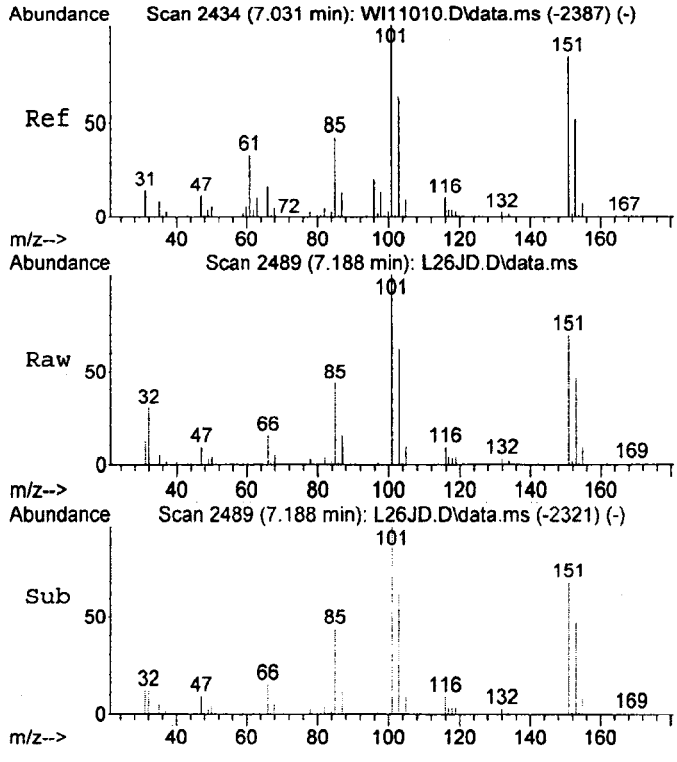


#3
Methylene Chloride
Concen: 778.44 ng
RT: 8.65 min Scan# 3001
Delta R.T. -0.029 min
Lab File: L26JD.D
Acq: 26 Jul 2012 1:34 pm

Tgt Ion: 84 Resp: 2293519

Ion	Ratio	Lower	Upper
84	100		
49	120.6	111.6	171.6
86	63.3	33.6	93.6

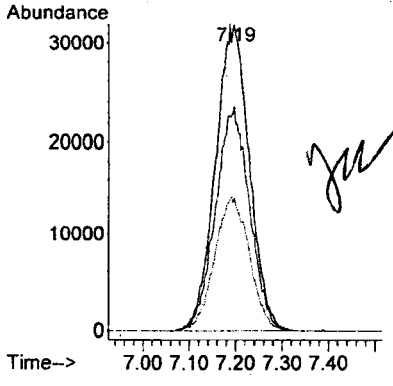




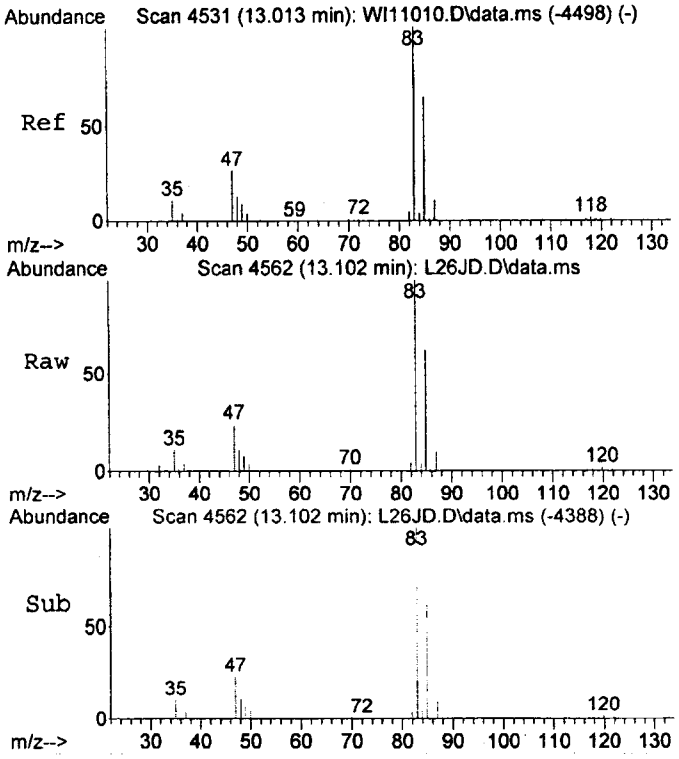
#4
1,1,2-Trichlorofluoroethane
Concen: 48.93 ng m
RT: 7.19 min Scan# 2489
Delta R.T. -0.020 min
Lab File: L26JD.D
Acq: 26 Jul 2012 1:34 pm

Tgt Ion:101 Resp: 162206

Ion	Ratio	Lower	Upper
101	100		
151	73.5	52.3	112.3
85	44.3	12.6	72.6



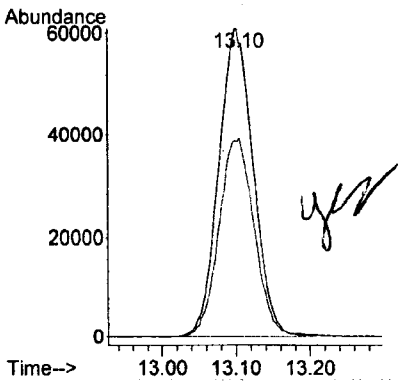
7-26-12

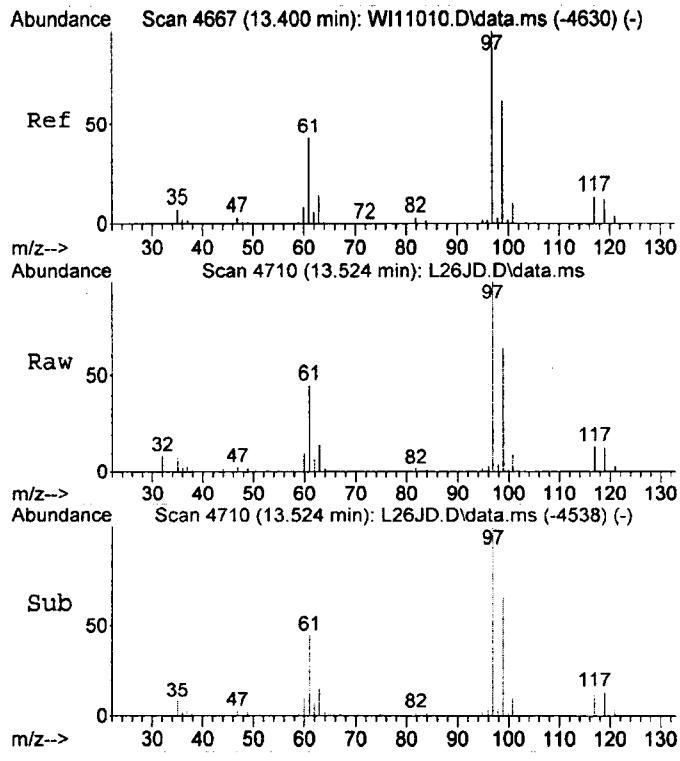


#8
Chloroform
Concen: 41.63 ng
RT: 13.10 min Scan# 4562
Delta R.T. -0.003 min
Lab File: L26JD.D
Acq: 26 Jul 2012 1:34 pm

Tgt Ion: 83 Resp: 199946

Ion	Ratio	Lower	Upper
83	100		
85	63.3	35.3	95.3

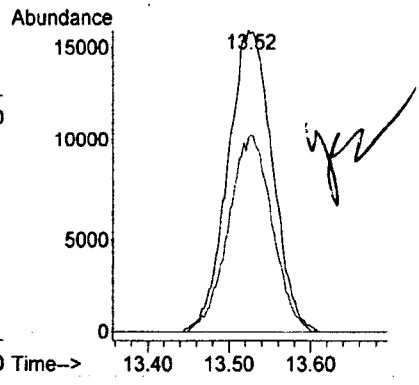


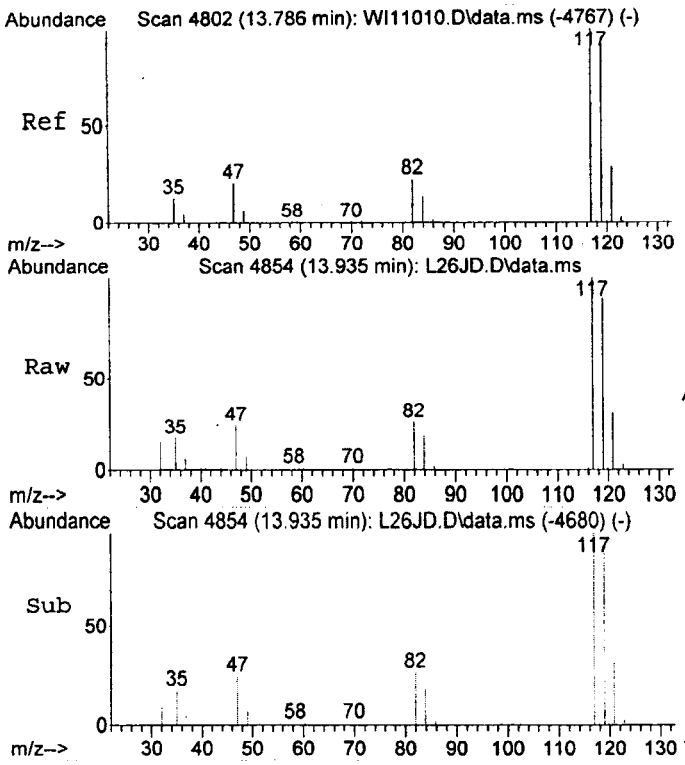


#10
1,1,1-Trichloroethane
Concen: 14.01 ng
RT: 13.52 min Scan# 4710
Delta R.T. -0.009 min
Lab File: L26JD.D
Acq: 26 Jul 2012 1:34 pm

Tgt Ion: 97 Resp: 60526

Ion	Ratio	Lower	Upper
97	100		
99	63.7	32.9	92.9

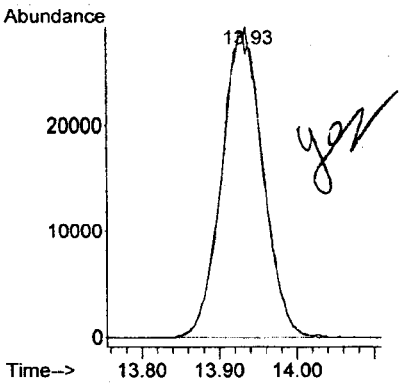


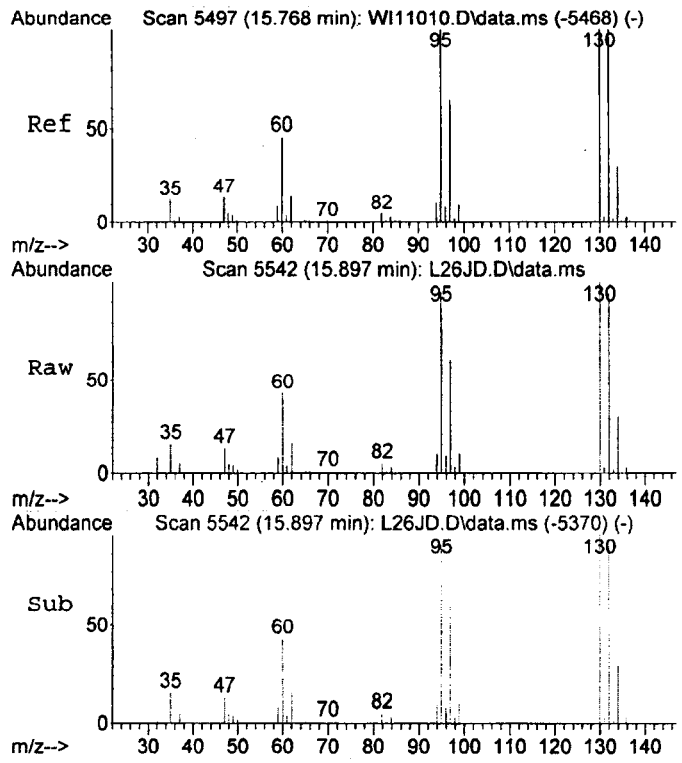


#11
Carbon Tetrachloride
Concen: 27.80 ng
RT: 13.93 min Scan# 4854
Delta R.T. -0.003 min
Lab File: L26JD.D
Acq: 26 Jul 2012 1:34 pm

Tgt Ion:117 Resp: 107749

Ion	Ratio	Lower	Upper
117	100		
119	90.3	65.1	125.1

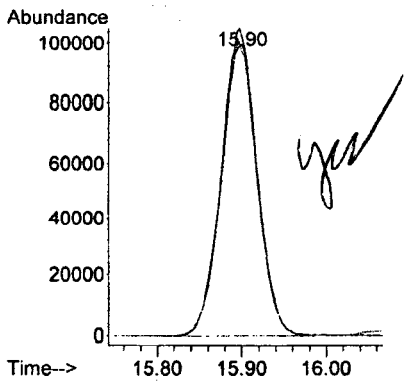




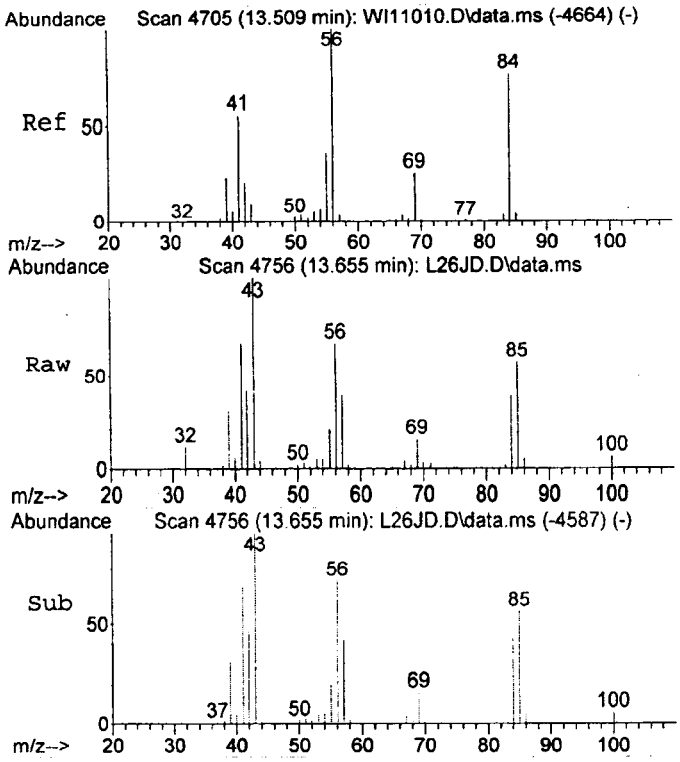
#12
Trichloroethene
Concen: 111.05 ng
RT: 15.90 min Scan# 5542
Delta R.T. -0.009 min
Lab File: L26JD.D
Acq: 26 Jul 2012 1:34 pm

Tgt Ion:130 Resp: 305350

Ion	Ratio	Lower	Upper
130	100		
132	93.9	71.2	131.2
95	95.4	72.7	132.7



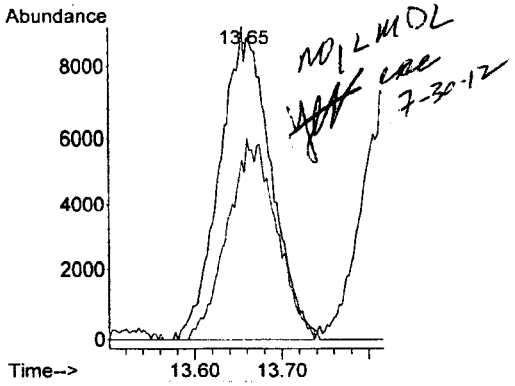
7-26-12



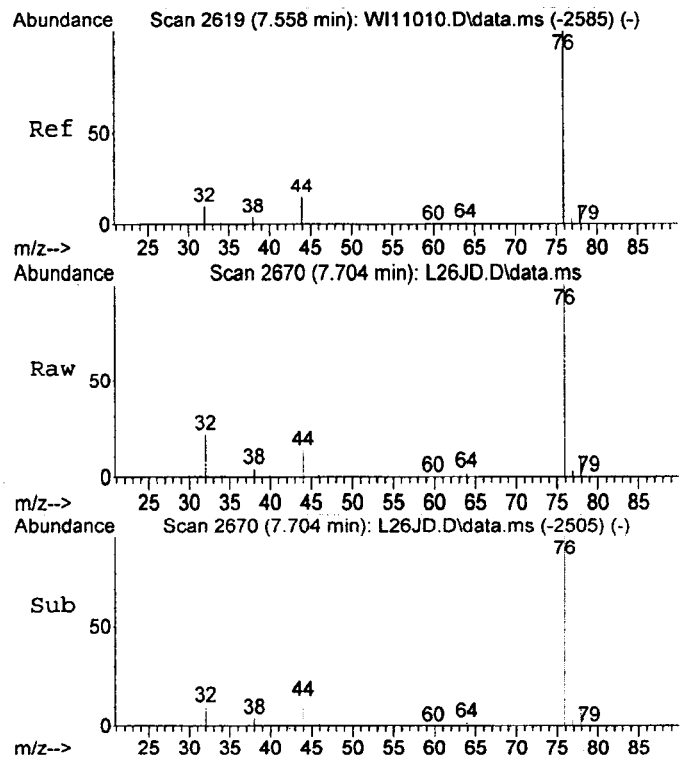
#13
Cyclohexane
Concen: 8.43 ng m
RT: 13.65 min Scan# 4756
Delta R.T. -0.017 min
Lab File: L26JD.D
Acq: 26 Jul 2012 1:34 pm

Tgt Ion: 56 Resp: 37280

Ion	Ratio	Lower	Upper
56	100		
84	58.5	52.3	112.3



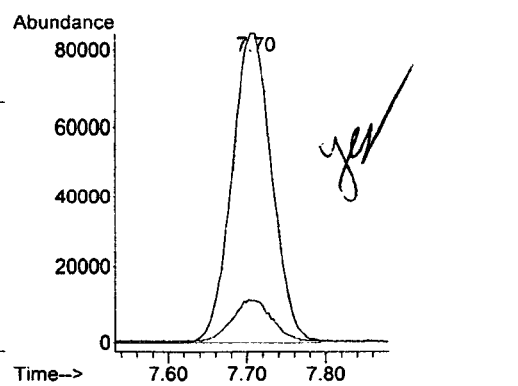
NDLMDL
cae 7-30-12



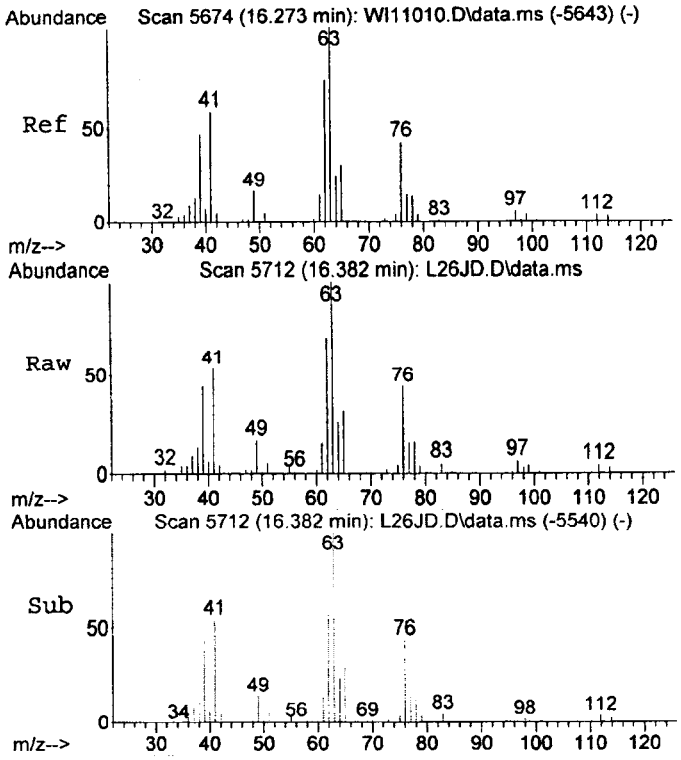
#21
Carbon Disulfide
Concen: 26.80 ng
RT: 7.70 min Scan# 2670
Delta R.T. -0.029 min
Lab File: L26JD.D
Acq: 26 Jul 2012 1:34 pm

Tgt Ion: 76 Resp: 297419

Ion	Ratio	Lower	Upper
76	100		
44	12.9	8.3	22.5



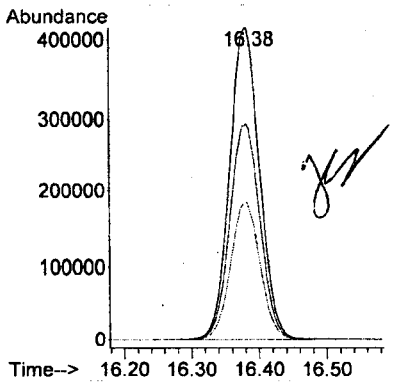
cae 7-26-12

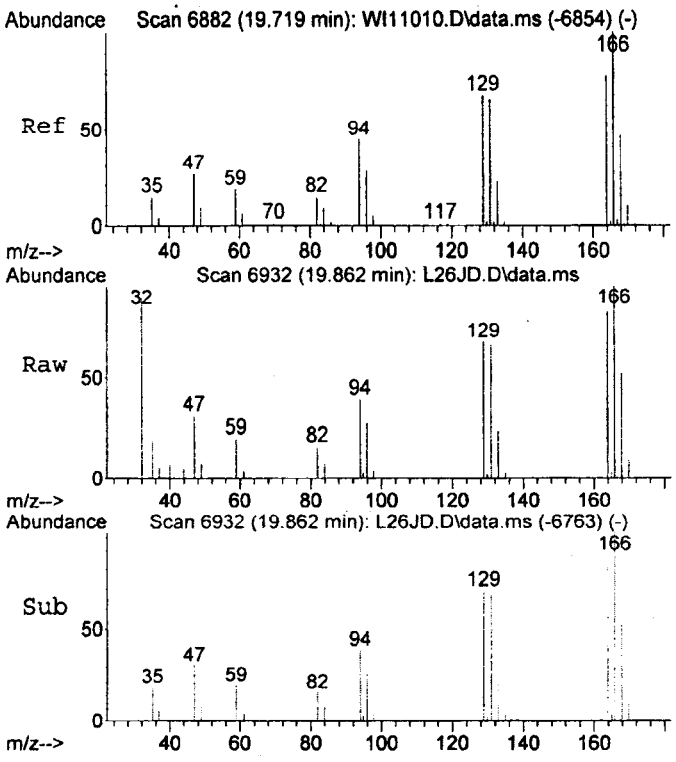


#22
1,2-Dichloropropane
Concen: 528.09 ng
RT: 16.38 min Scan# 5712
Delta R.T. -0.009 min
Lab File: L26JD.D
Acq: 26 Jul 2012 1:34 pm

Tgt Ion: 63 Resp: 1292533

Ion	Ratio	Lower	Upper
63	100		
62	70.7	42.4	102.4
76	44.1	14.8	74.8

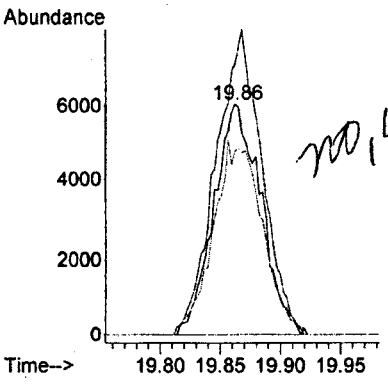




#26
Tetrachloroethene
Concen: 7.79 ng
RT: 19.86 min Scan# 6932
Delta R.T. -0.017 min
Lab File: L26JD.D
Acq: 26 Jul 2012 1:34 pm

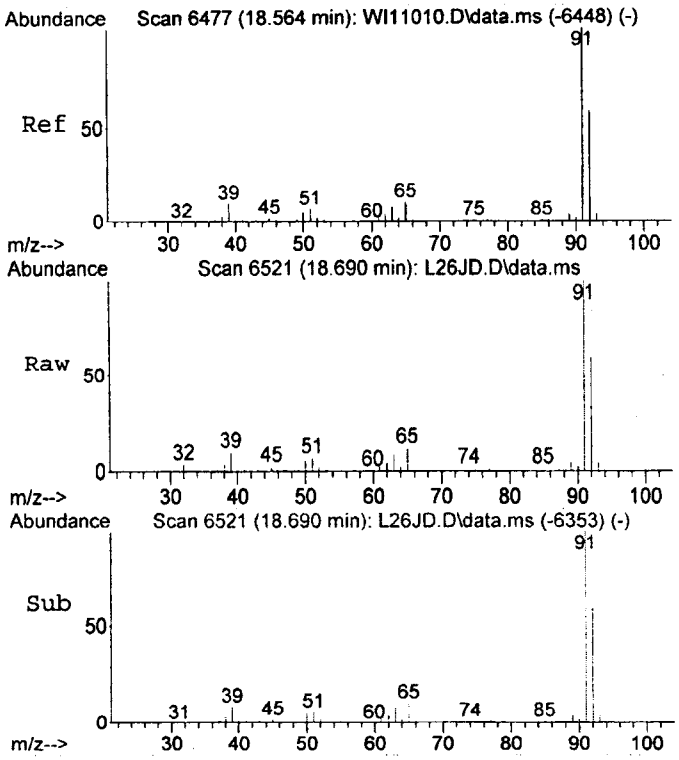
Tgt Ion:164 Resp: 16287

Ion	Ratio	Lower	Upper
164	100		
166	116.8	95.3	155.3
131	78.8	60.6	120.6



MDL

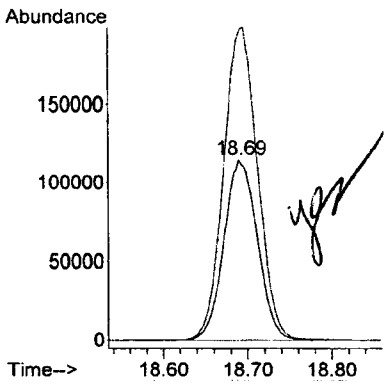
7-26-12



#28
Toluene
Concen: 55.32 ng
RT: 18.69 min Scan# 6521
Delta R.T. -0.020 min
Lab File: L26JD.D
Acq: 26 Jul 2012 1:34 pm

Tgt Ion: 92 Resp: 318499

Ion	Ratio	Lower	Upper
92	100		
91	167.3	142.1	202.1



7-26-12

Library Search Compound Report

Data Path : D:\ECL12029\
Data File : L26JD.D
Acq On : 26 Jul 2012 1:34 pm
Operator :
Sample : 12201010
Misc : 14.4272X 25ML
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL

TIC Library : C:\Database\Apendix8.l
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected
****

7-26-12

ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12029\
Data File : L26JE.D
Acq On : 26 Jul 2012 2:17 pm
Operator :
Sample : 12201011
Misc : 12.9164X 25ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 14:47:30 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	15.07	96	4266533	473.00	ng	0.00
24) Chlorobenzene-d5	21.62	117	2892286	490.00	ng	0.00
Target Compounds						Qvalue
3) Methylene Chloride	8.67	84	2595385	880.18	ng	87
4) 1,1,2-Trichlorofluoroe...	7.21	101	178484	53.80	ng	94
8) Chloroform	13.10	83	226223	47.06	ng	100
10) 1,1,1-Trichloroethane	13.53	97	73794	17.07	ng	99
11) Carbon Tetrachloride	13.94	117	128039	33.01	ng	98
12) Trichloroethene	15.90	130	348320	126.58	ng	94
13) Cyclohexane	13.67	56	42209	9.54	ng	83
21) Carbon Disulfide	7.72	76	325144	29.27	ng	94
22) 1,2-Dichloropropane	16.39	63	1458677	595.48	ng	99
26) Tetrachloroethene	19.88	164	18722	8.87	ng	98
28) Toluene	18.70	92	368143	63.37	ng	99

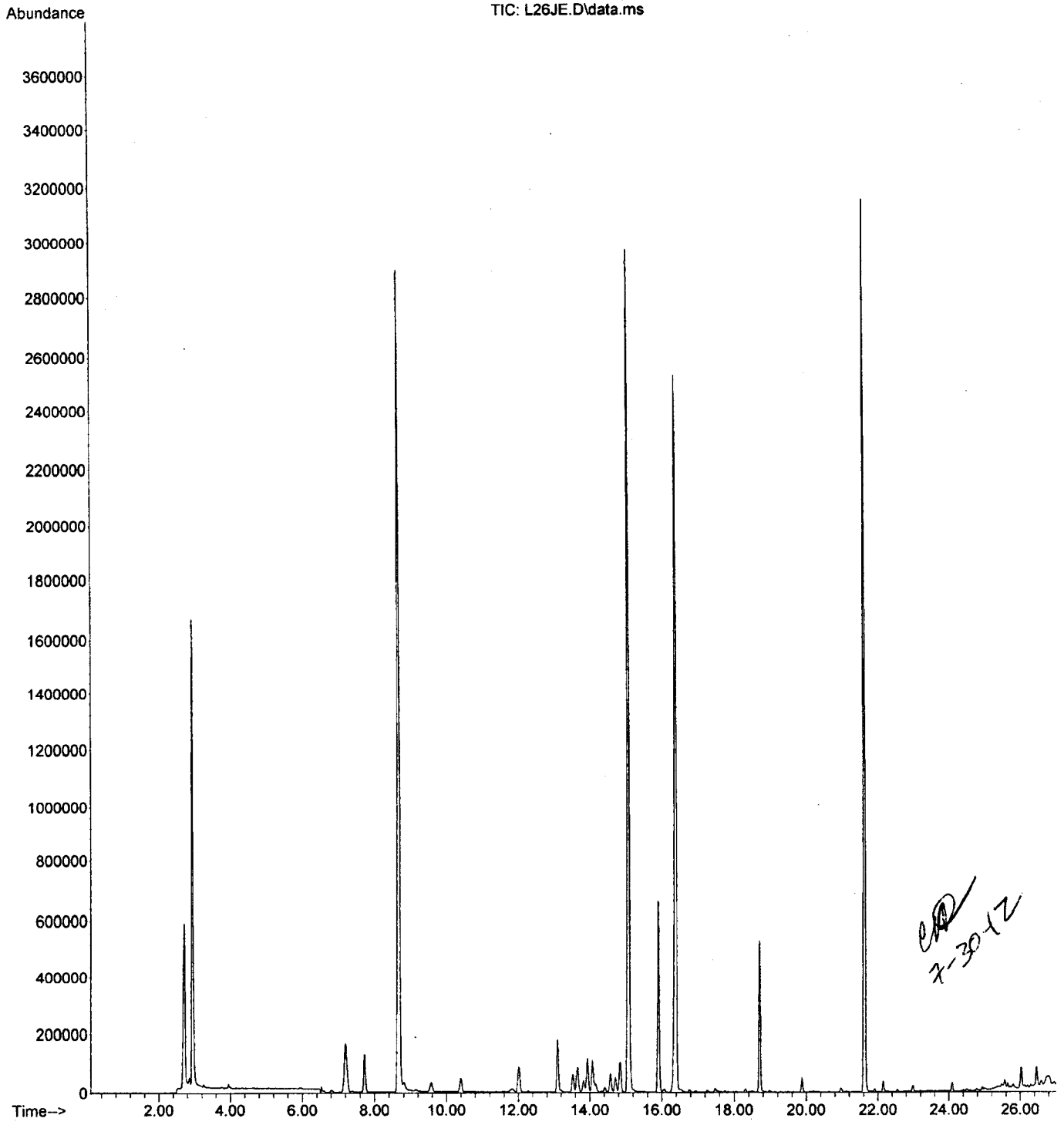
(#) = qualifier out of range (m) = manual integration (+) = signals summed

1-30-12

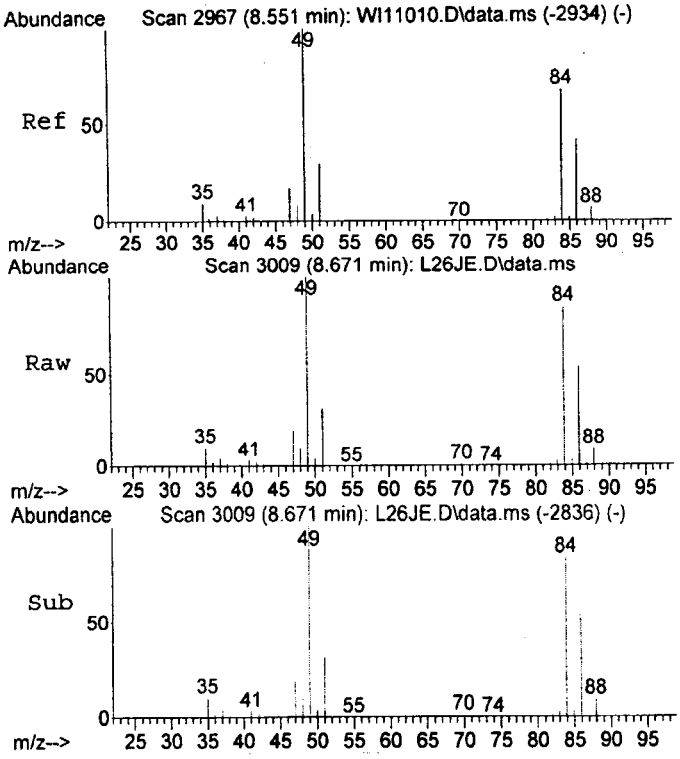
ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12029\
Data File : L26JE.D
Acq On : 26 Jul 2012 2:17 pm
Operator :
Sample : 12201011
Misc : 12.9164X 25ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 14:47:30 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration



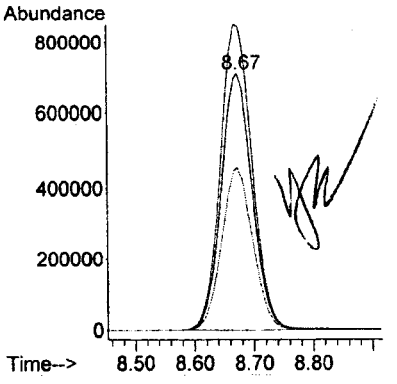
7-30-12

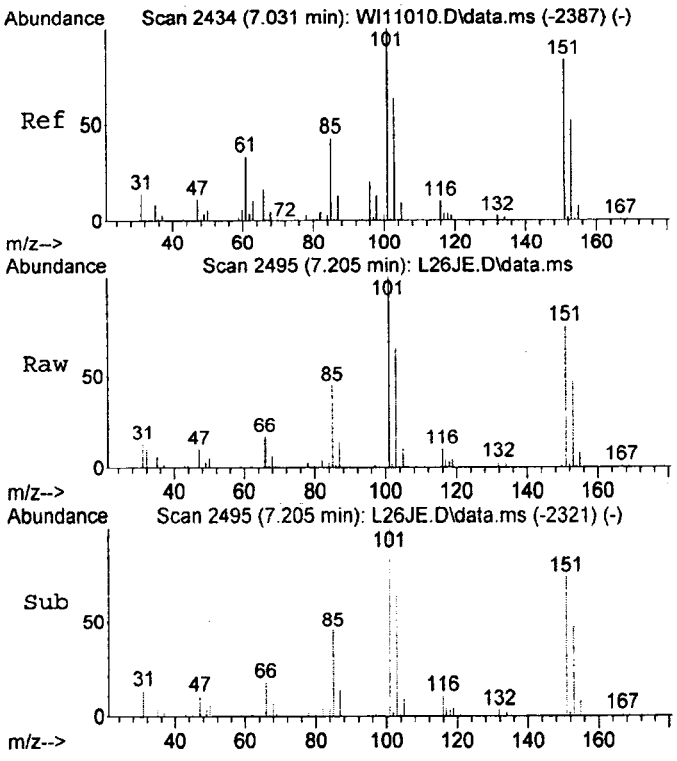


#3
Methylene Chloride
Concen: 880.18 ng
RT: 8.67 min Scan# 3009
Delta R.T. -0.006 min
Lab File: L26JE.D
Acq: 26 Jul 2012 2:17 pm

Tgt Ion: 84 Resp: 2595385

Ion	Ratio	Lower	Upper
84	100		
49	119.6	111.6	171.6
86	64.3	33.6	93.6

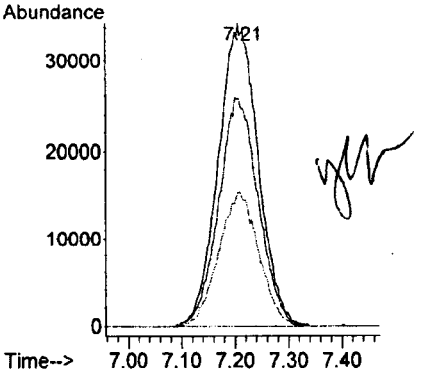




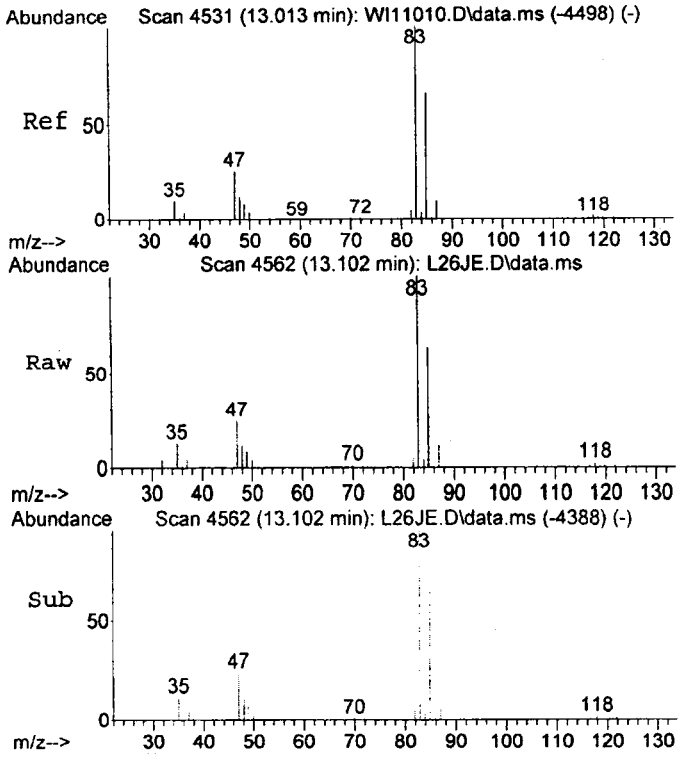
#4
1,1,2-Trichlorofluoroethane
Concen: 53.80 ng
RT: 7.21 min Scan# 2495
Delta R.T. -0.003 min
Lab File: L26JE.D
Acq: 26 Jul 2012 2:17 pm

Tgt Ion:101 Resp: 178484

Ion	Ratio	Lower	Upper
101	100		
151	74.9	52.3	112.3
85	44.6	12.6	72.6



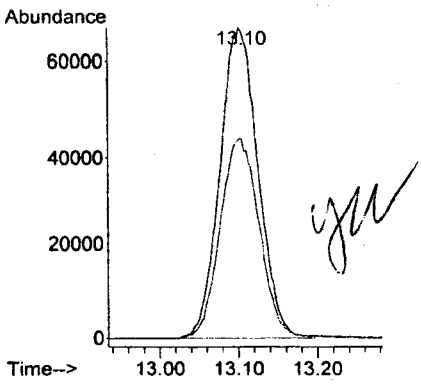
7-30-12

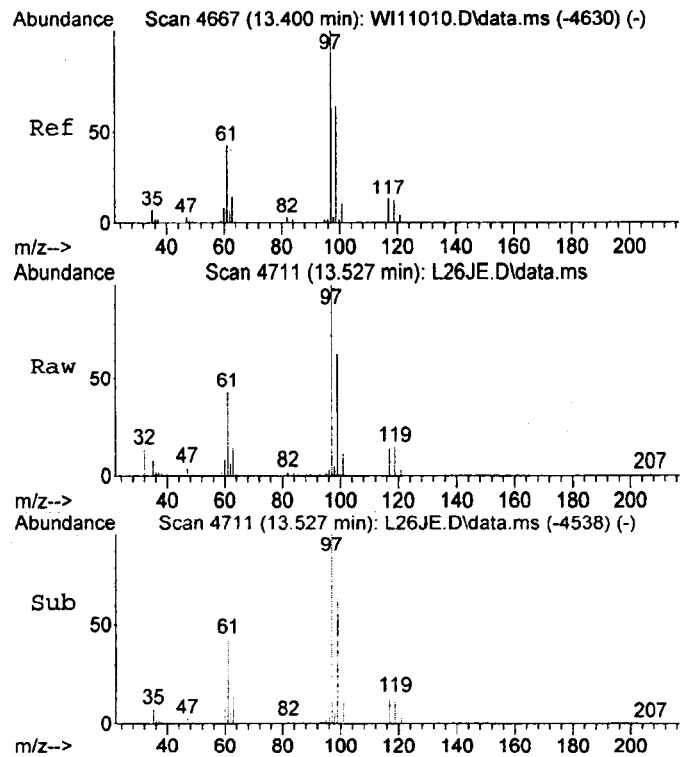


#8
Chloroform
Concen: 47.06 ng
RT: 13.10 min Scan# 4562
Delta R.T. -0.003 min
Lab File: L26JE.D
Acq: 26 Jul 2012 2:17 pm

Tgt Ion: 83 Resp: 226223

Ion	Ratio	Lower	Upper
83	100		
85	65.1	35.3	95.3

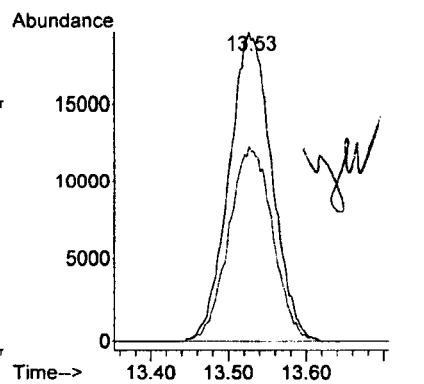




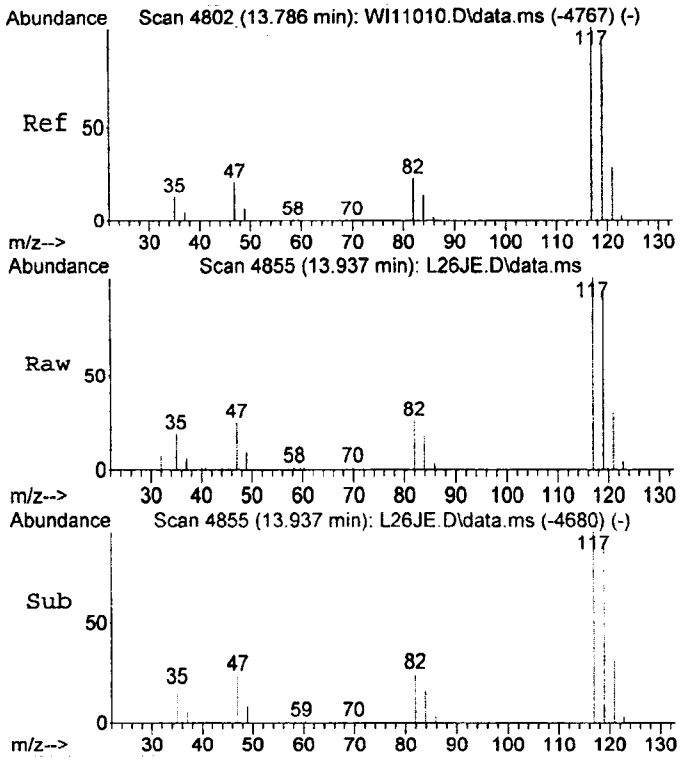
#10
1,1,1-Trichloroethane
Concen: 17.07 ng
RT: 13.53 min Scan# 4711
Delta R.T. -0.006 min
Lab File: L26JE.D
Acq: 26 Jul 2012 2:17 pm

Tgt Ion: 97 Resp: 73794

Ion	Ratio	Lower	Upper
97	100		
99	63.9	32.9	92.9



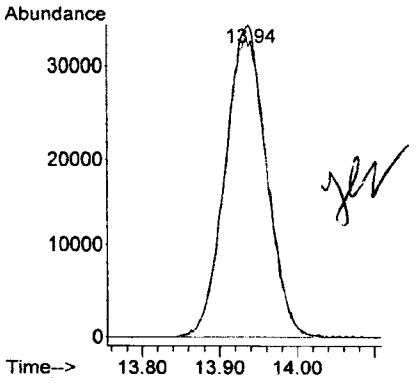
7-30-12

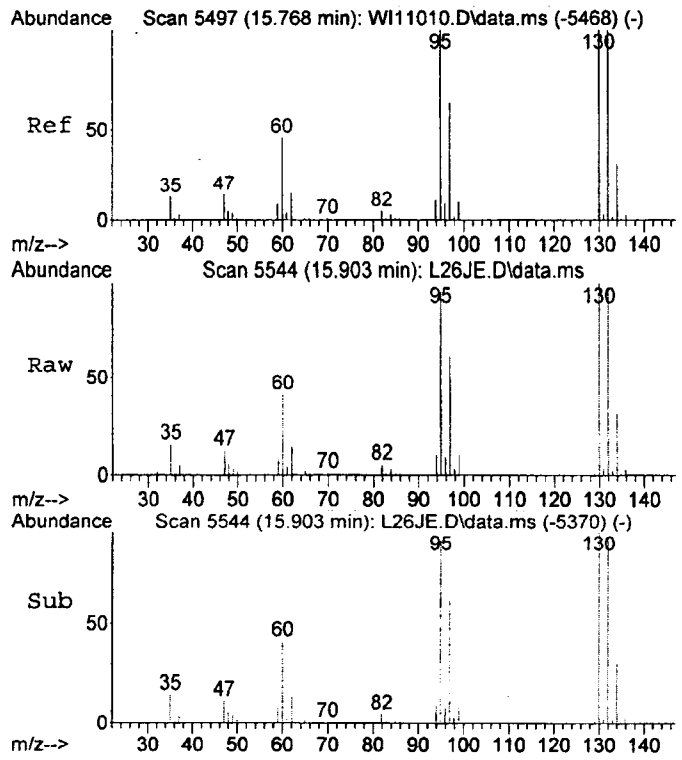


#11
Carbon Tetrachloride
Concen: 33.01 ng
RT: 13.94 min Scan# 4855
Delta R.T. -0.000 min
Lab File: L26JE.D
Acq: 26 Jul 2012 2:17 pm

Tgt Ion:117 Resp: 128039

Ion	Ratio	Lower	Upper
117	100		
119	92.7	65.1	125.1

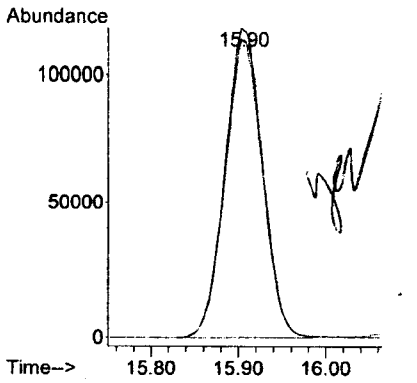




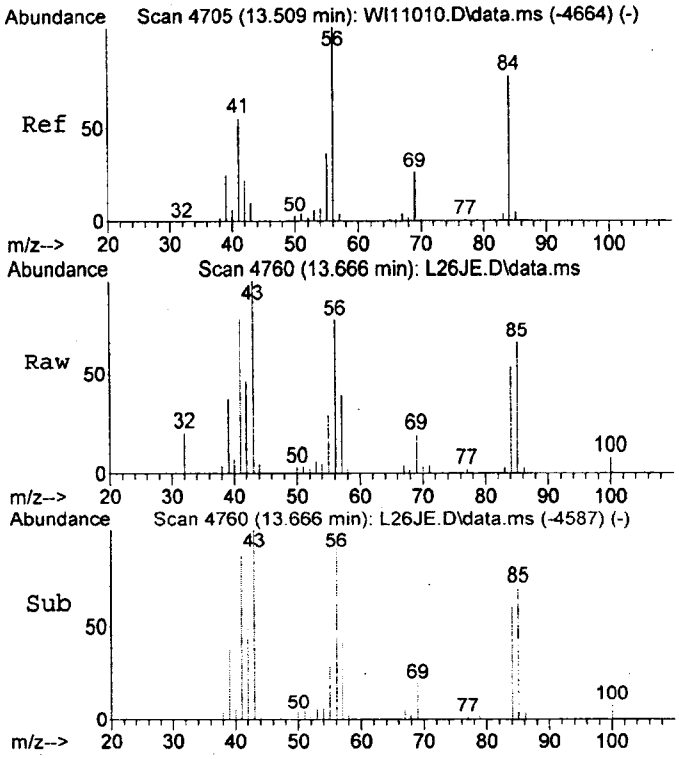
#12
Trichloroethene
Concen: 126.58 ng
RT: 15.90 min Scan# 5544
Delta R.T. -0.003 min
Lab File: L26JE.D
Acq: 26 Jul 2012 2:17 pm

Tgt Ion:130 Resp: 348320

Ion	Ratio	Lower	Upper
130	100		
132	96.6	71.2	131.2
95	95.6	72.7	132.7



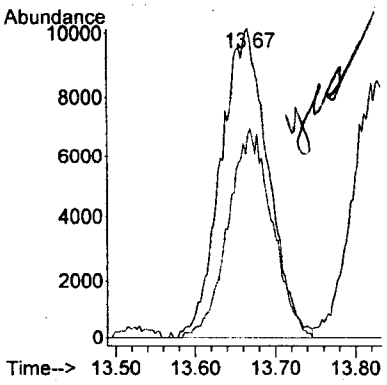
7-30-12

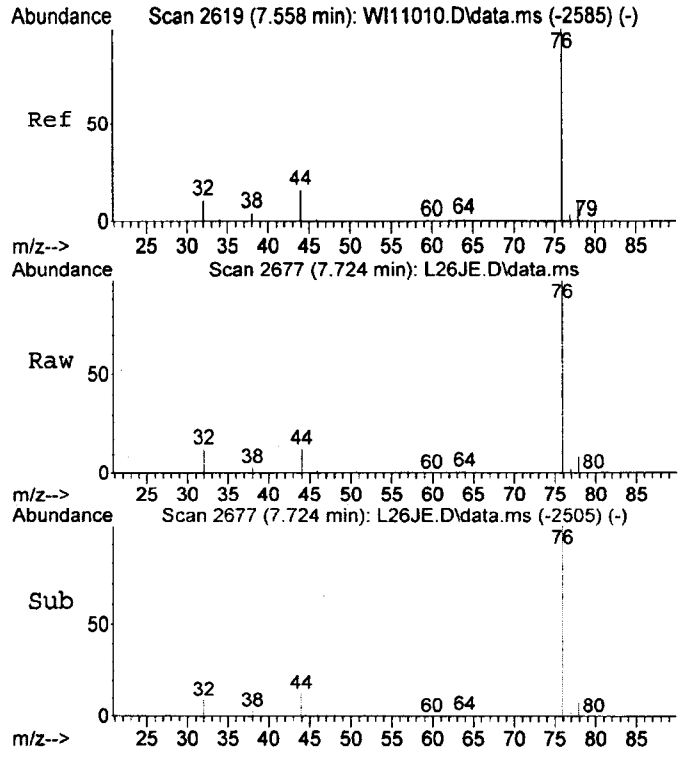


#13
Cyclohexane
Concen: 9.54 ng
RT: 13.67 min Scan# 4760
Delta R.T. -0.006 min
Lab File: L26JE.D
Acq: 26 Jul 2012 2:17 pm

Tgt Ion: 56 Resp: 42209

Ion	Ratio	Lower	Upper
56	100		
84	66.9	52.3	112.3

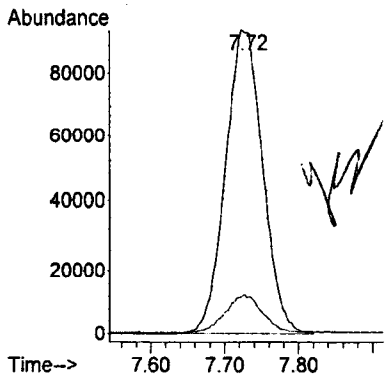




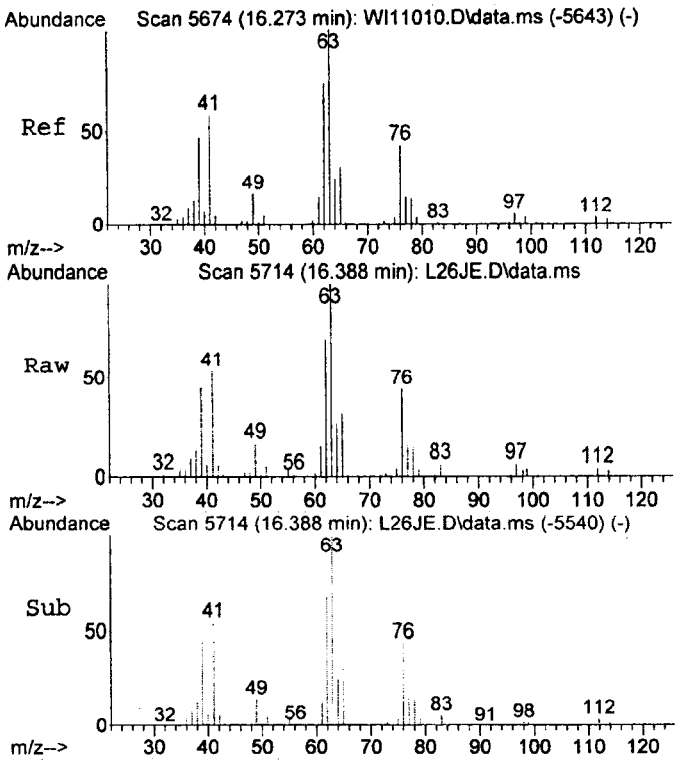
#21
Carbon Disulfide
Concen: 29.27 ng
RT: 7.72 min Scan# 2677
Delta R.T. -0.009 min
Lab File: L26JE.D
Acq: 26 Jul 2012 2:17 pm

Tgt Ion: 76 Resp: 325144

Ion	Ratio	Lower	Upper
76	100		
44	12.7	8.3	22.5



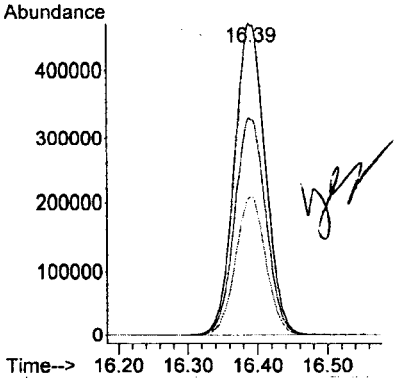
7-30-12

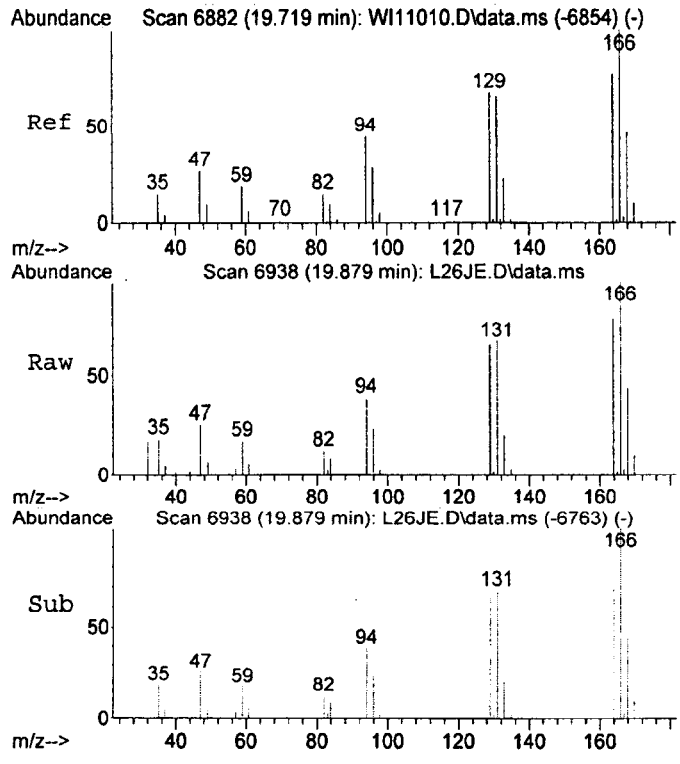


#22
1,2-Dichloropropane
Concen: 595.48 ng
RT: 16.39 min Scan# 5714
Delta R.T. -0.003 min
Lab File: L26JE.D
Acq: 26 Jul 2012 2:17 pm

Tgt Ion: 63 Resp: 1458677

Ion	Ratio	Lower	Upper
63	100		
62	71.0	42.4	102.4
76	44.0	14.8	74.8

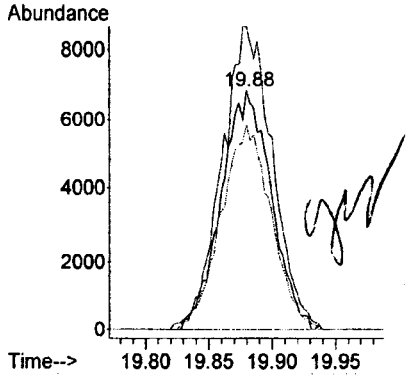




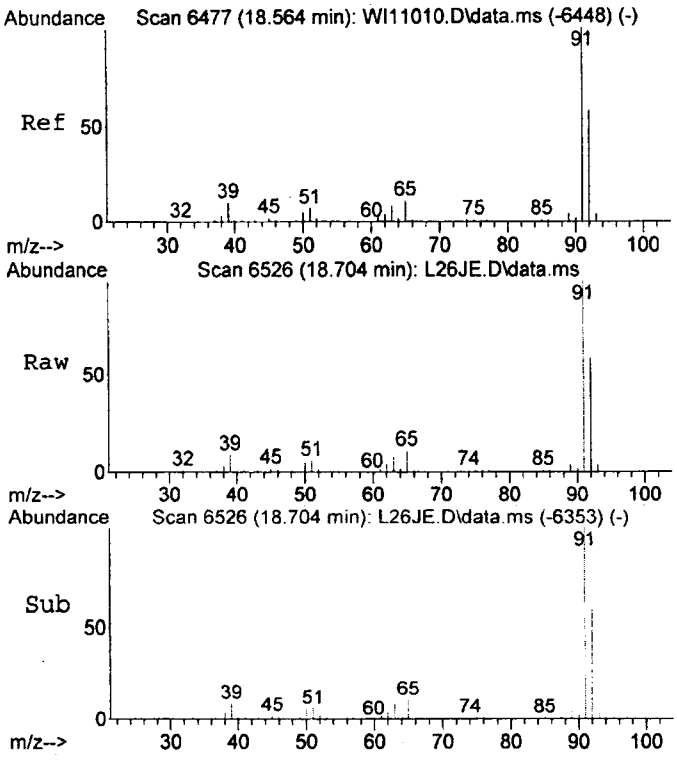
#26
Tetrachloroethene
Concen: 8.87 ng
RT: 19.88 min Scan# 6938
Delta R.T. -0.000 min
Lab File: L26JE.D
Acq: 26 Jul 2012 2:17 pm

Tgt Ion:164 Resp: 18722

Ion	Ratio	Lower	Upper
164	100		
166	125.5	95.3	155.3
131	85.5	60.6	120.6



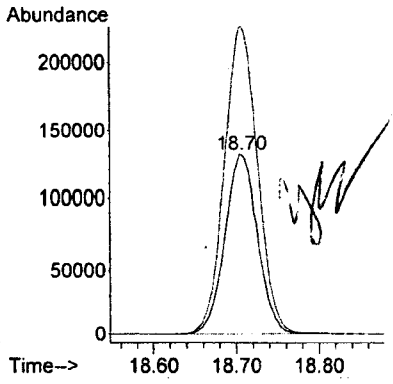
7-30-12



#28
Toluene
Concen: 63.37 ng
RT: 18.70 min Scan# 6526
Delta R.T. -0.006 min
Lab File: L26JE.D
Acq: 26 Jul 2012 2:17 pm

Tgt Ion: 92 Resp: 368143

Ion	Ratio	Lower	Upper
92	100		
91	170.5	142.1	202.1



7-30-12

Library Search Compound Report

Data Path : D:\ECL12029\
Data File : L26JE.D
Acq On : 26 Jul 2012 2:17 pm
Operator :
Sample : 12201011
Misc : 12.9164X 25ML
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL

TIC Library : C:\Database\Apendix8.1
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected
****

7-30-12

ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12029\
Data File : L26JF.D
Acq On : 26 Jul 2012 3:01 pm
Operator :
Sample : 12201012
Misc : 18.9627X 30ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 15:40:22 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	15.07	96	4277354	473.00	ng	0.00
24) Chlorobenzene-d5	21.61	117	2893112	490.00	ng	0.00
Target Compounds						Qvalue
4) 1,1,2-Trichlorofluoroe...	7.21	101	96365m	28.97	ng	
8) Chloroform	13.11	83	42439	8.81	ng	100
10) 1,1,1-Trichloroethane	13.54	97	72402	16.70	ng	97
11) Carbon Tetrachloride	13.93	117	157354	40.46	ng	97
12) Trichloroethene	15.90	130	72731	26.36	ng	91
13) Cyclohexane	13.66	56	34543	X7.78	ng	75
21) Carbon Disulfide	7.71	76	107639	X9.67	ng	94
26) Tetrachloroethene	19.87	164	2115651	1002.59	ng	97
28) Toluene	18.69	92	288472	49.64	ng	97

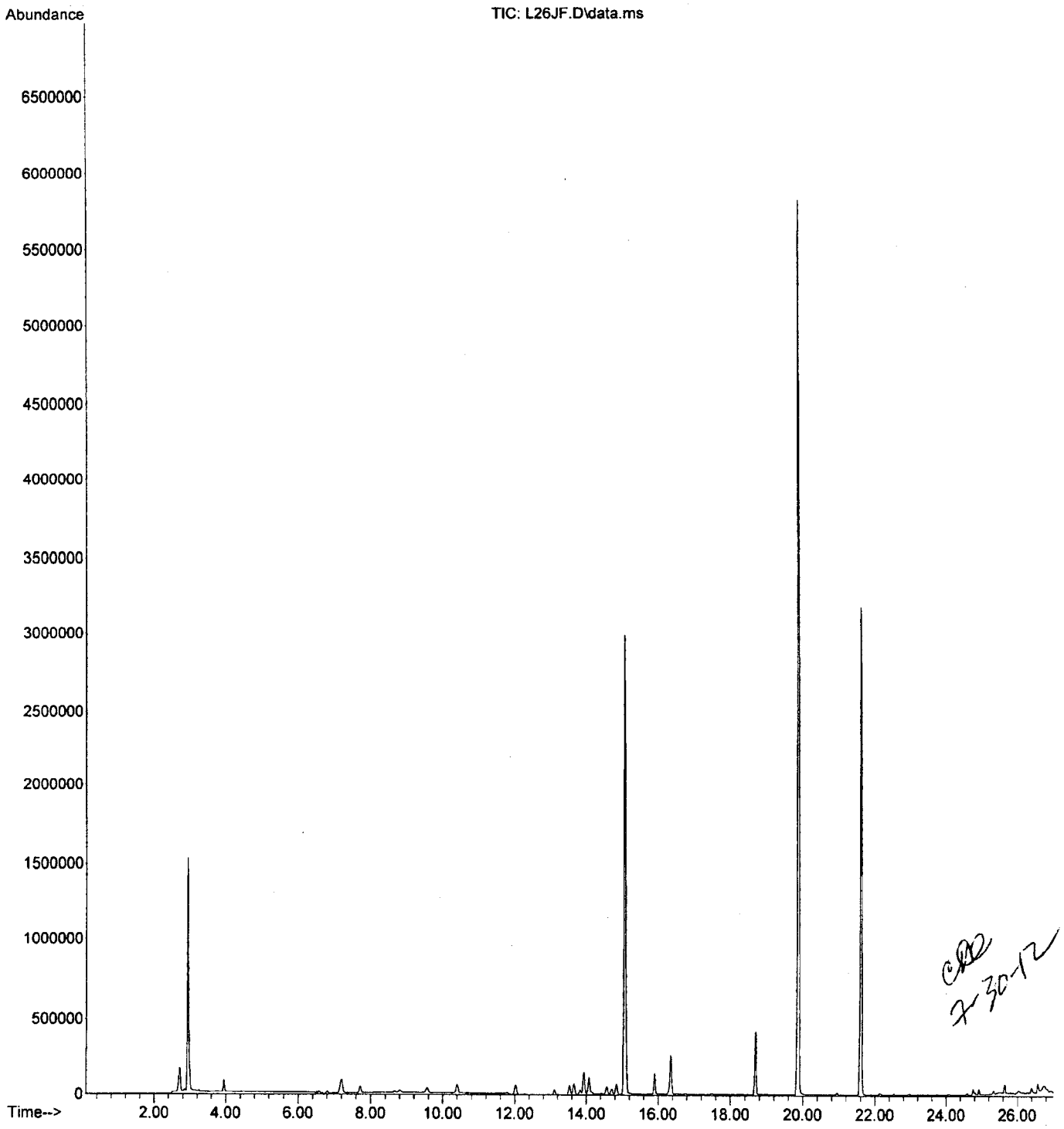
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7-30-12

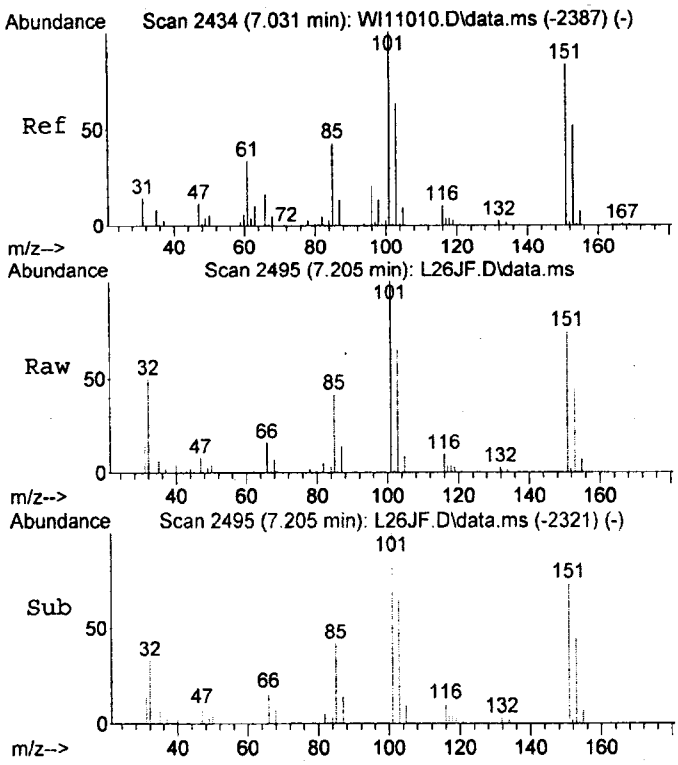
ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12029\
Data File : L26JF.D
Acq On : 26 Jul 2012 3:01 pm
Operator :
Sample : 12201012
Misc : 18.9627X 30ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 15:40:22 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration



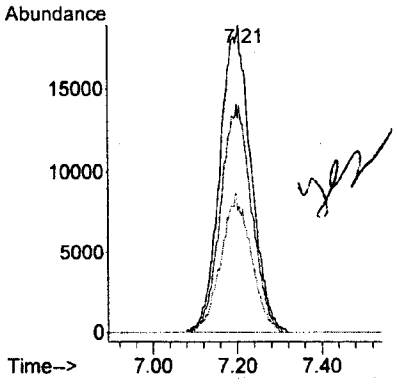
7-30-12

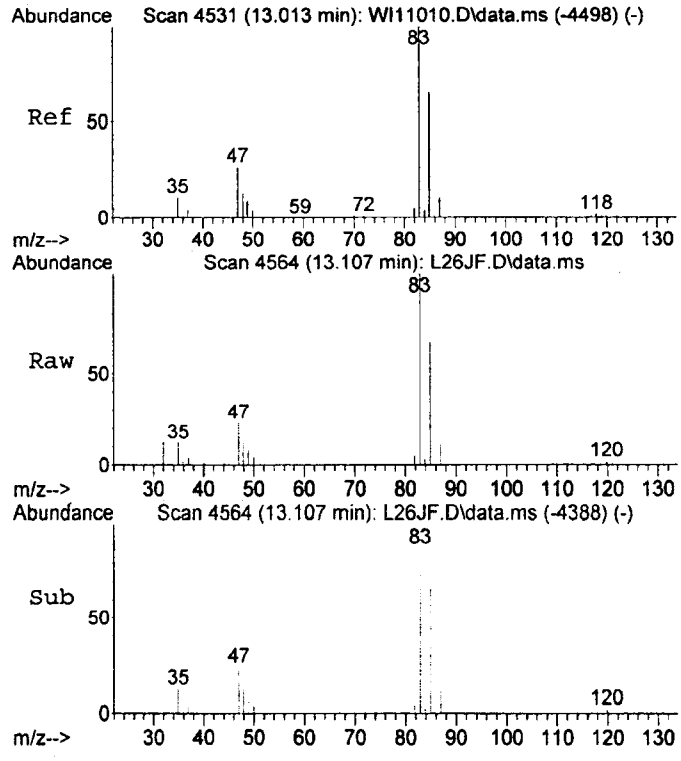


#4
1,1,2-Trichlorofluoroethane
Concen: 28.97 ng m
RT: 7.21 min Scan# 2495
Delta R.T. -0.003 min
Lab File: L26JF.D
Acq: 26 Jul 2012 3:01 pm

Tgt Ion:101 Resp: 96365

Ion	Ratio	Lower	Upper
101	100		
151	74.2	52.3	112.3
85	44.2	12.6	72.6

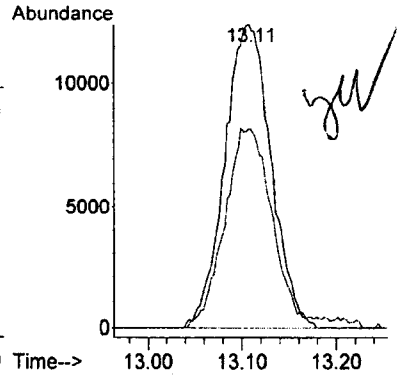




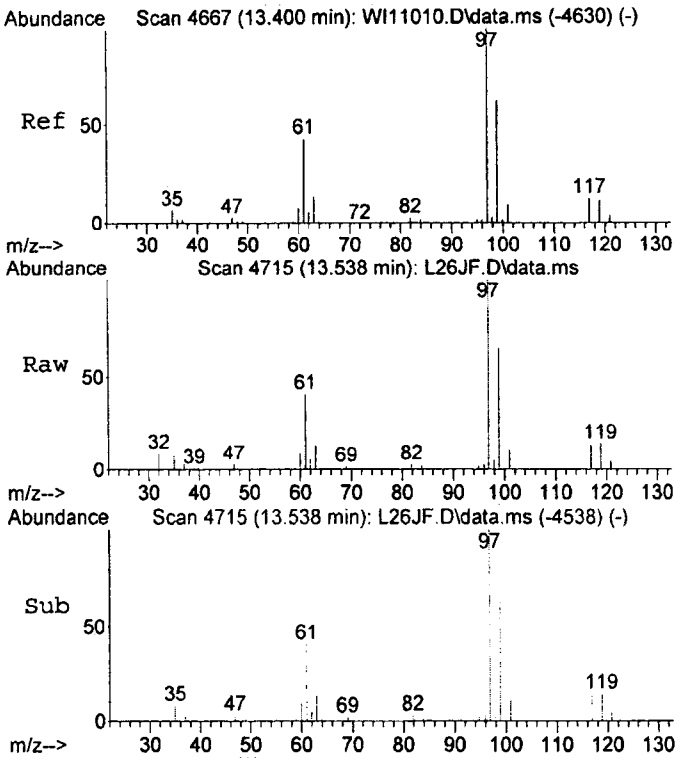
#8
Chloroform
Concen: 8.81 ng
RT: 13.11 min Scan# 4564
Delta R.T. 0.003 min
Lab File: L26JF.D
Acq: 26 Jul 2012 3:01 pm

Tgt Ion: 83 Resp: 42439

Ion	Ratio	Lower	Upper
83	100		
85	65.6	35.3	95.3



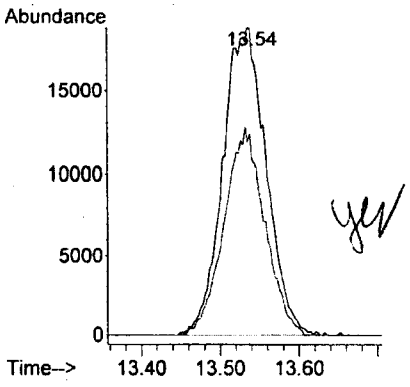
7-30-12

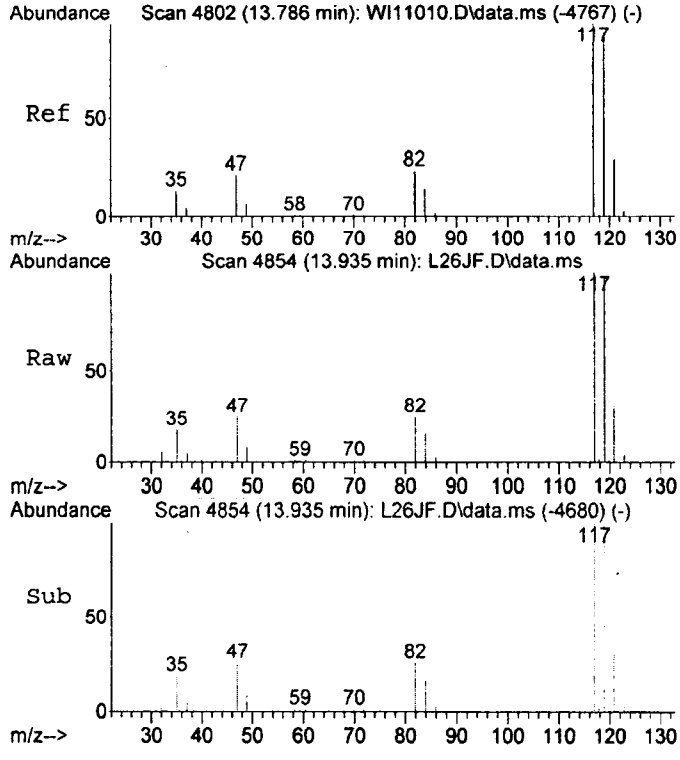


#10
1,1,1-Trichloroethane
Concen: 16.70 ng
RT: 13.54 min Scan# 4715
Delta R.T. 0.006 min
Lab File: L26JF.D
Acq: 26 Jul 2012 3:01 pm

Tgt Ion: 97 Resp: 72402

Ion	Ratio	Lower	Upper
97	100		
99	64.9	32.9	92.9

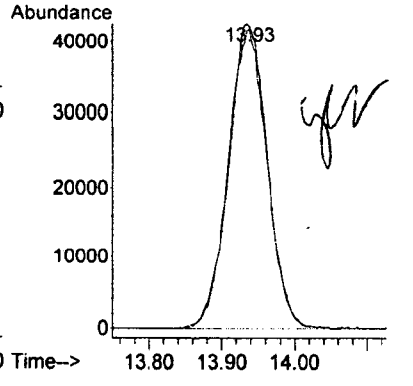




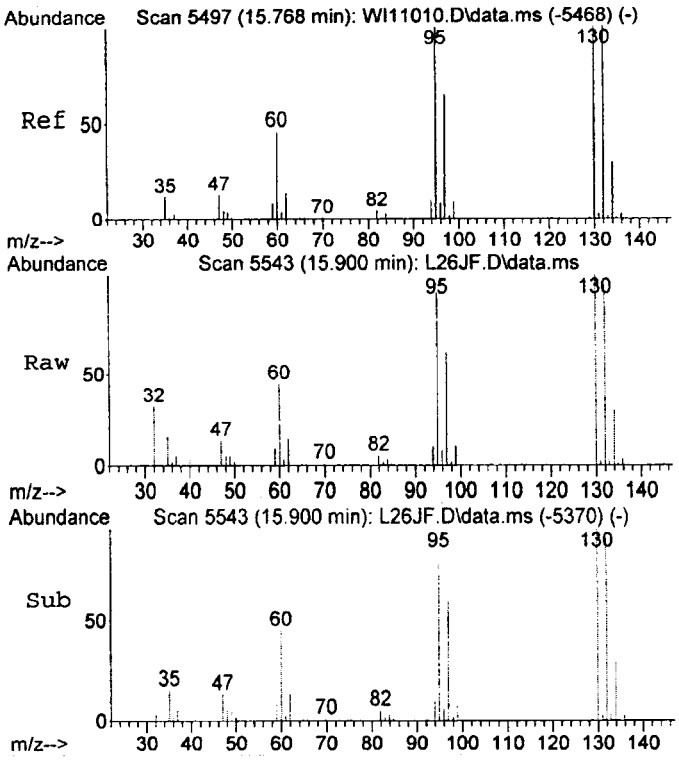
#11
Carbon Tetrachloride
Concen: 40.46 ng
RT: 13.93 min Scan# 4854
Delta R.T. -0.003 min
Lab File: L26JF.D
Acq: 26 Jul 2012 3:01 pm

Tgt Ion:117 Resp: 157354

Ion	Ratio	Lower	Upper
117	100		
119	97.6	65.1	125.1



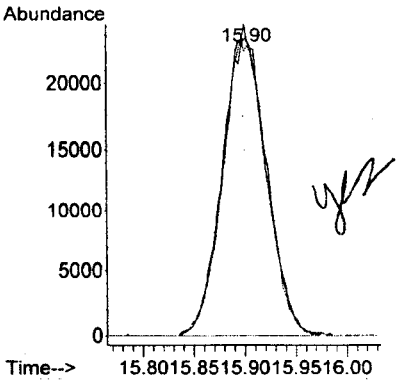
7-30-12

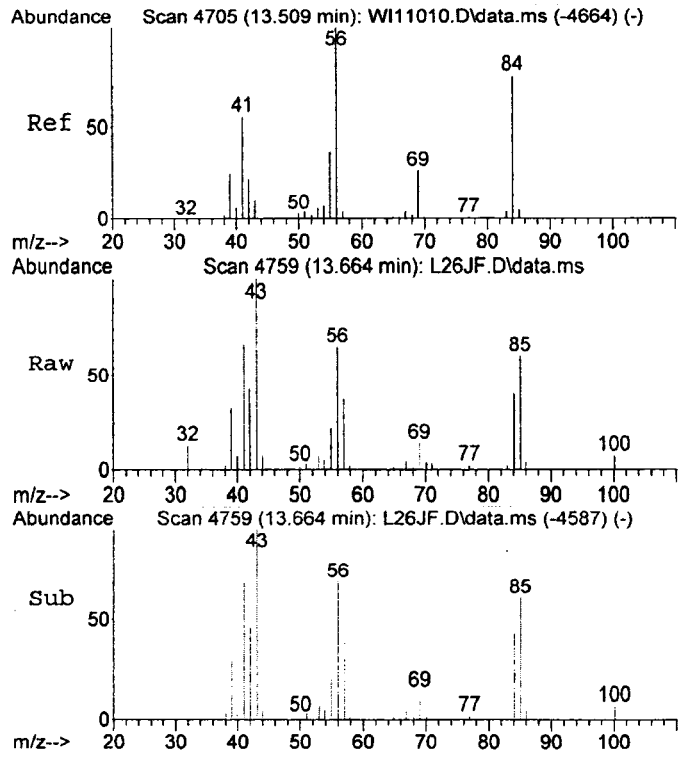


#12
Trichloroethene
Concen: 26.36 ng
RT: 15.90 min Scan# 5543
Delta R.T. -0.006 min
Lab File: L26JF.D
Acq: 26 Jul 2012 3:01 pm

Tgt Ion:130 Resp: 72731

Ion	Ratio	Lower	Upper
130	100		
132	95.1	71.2	131.2
95	90.5	72.7	132.7

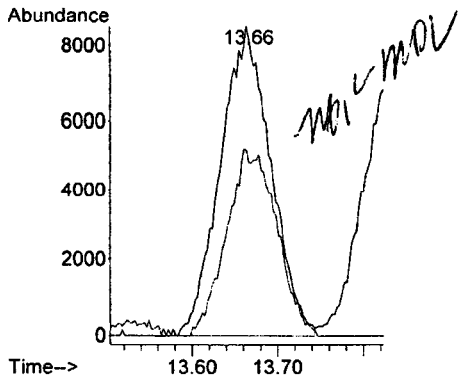




#13
Cyclohexane
Concen: 7.78 ng
RT: 13.66 min Scan# 4759
Delta R.T. -0.009 min
Lab File: L26JF.D
Acq: 26 Jul 2012 3:01 pm

Tgt Ion: 56 Resp: 34543

Ion	Ratio	Lower	Upper
56	100		
84	60.3	52.3	112.3



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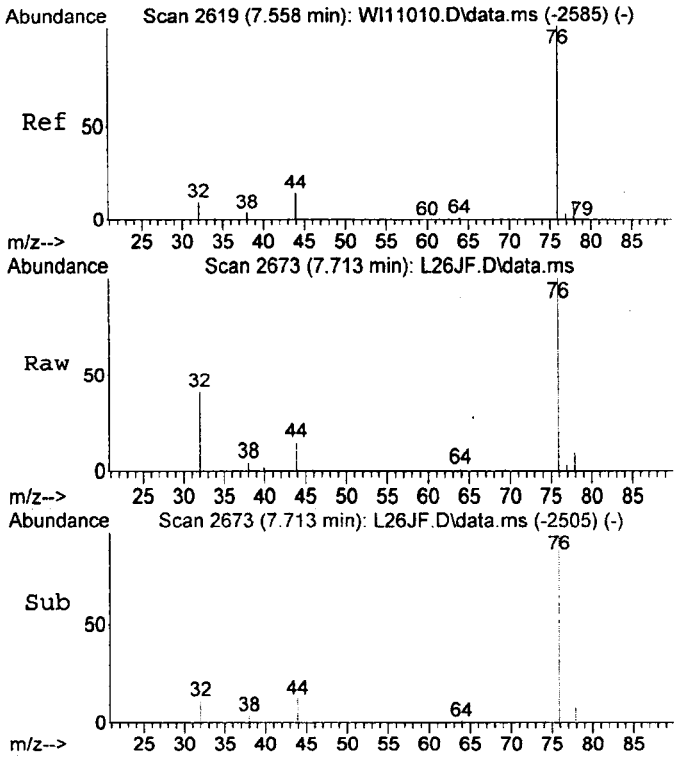
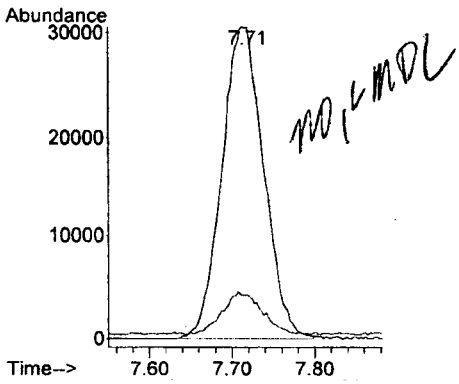
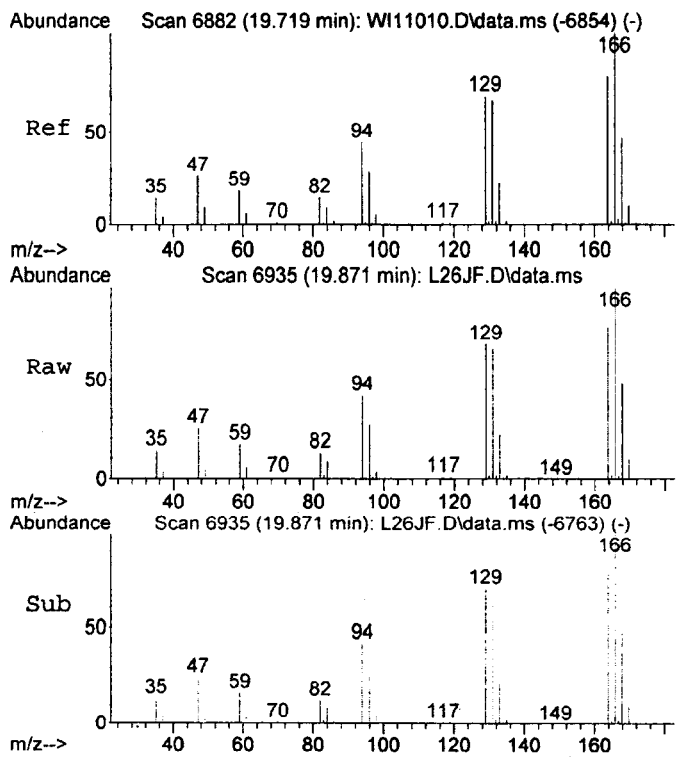


#21
Carbon Disulfide
Concen: 9.67 ng
RT: 7.71 min Scan# 2673
Delta R.T. -0.020 min
Lab File: L26JF.D
Acq: 26 Jul 2012 3:01 pm

Tgt Ion: 76 Resp: 107639

Ion	Ratio	Lower	Upper
76	100		
44	13.0	8.3	22.5

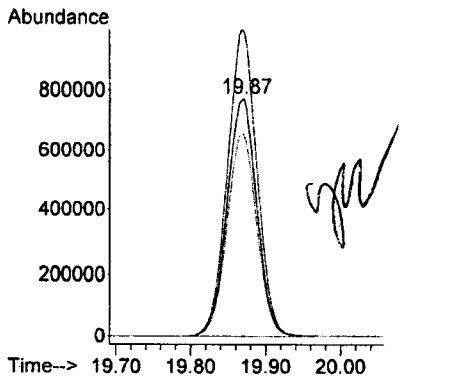




#26
Tetrachloroethene
Concen: 1002.59 ng
RT: 19.87 min Scan# 6935
Delta R.T. -0.009 min
Lab File: L26JF.D
Acq: 26 Jul 2012 3:01 pm

Tgt Ion:164 Resp: 2115651

Ion	Ratio	Lower	Upper
164	100		
166	126.3	95.3	155.3
131	84.6	60.6	120.6



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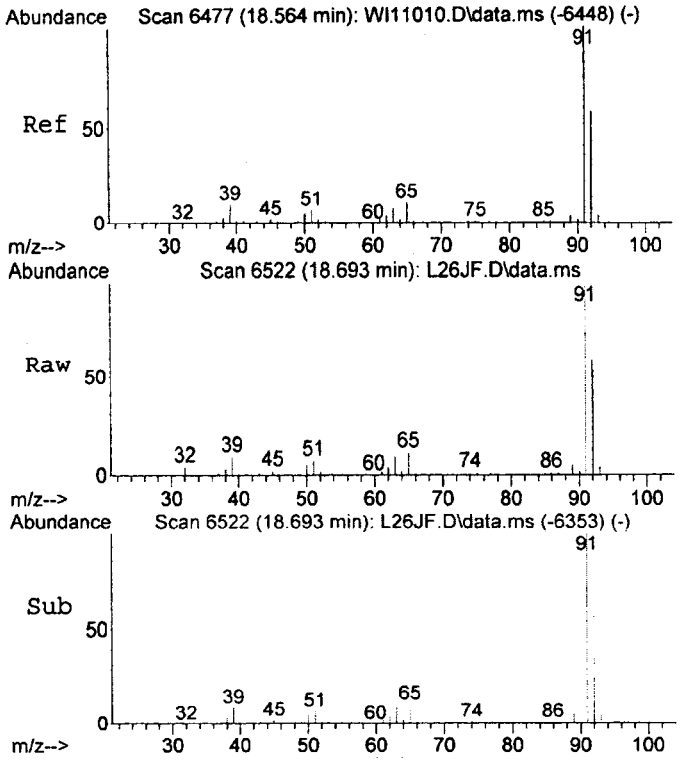
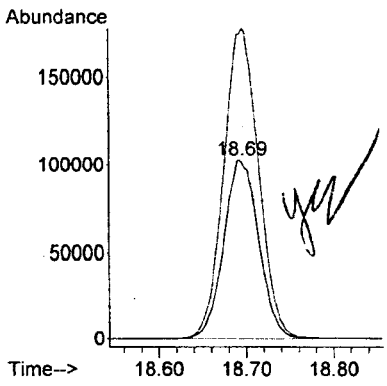


#28
Toluene
Concen: 49.64 ng
RT: 18.69 min Scan# 6522
Delta R.T. -0.017 min
Lab File: L26JF.D
Acq: 26 Jul 2012 3:01 pm

Tgt Ion: 92 Resp: 288472

Ion	Ratio	Lower	Upper
92	100		
91	168.4	142.1	202.1



7-30-12

ECL LSC Area Percent Report

Data Path : D:\ECL12029\
Data File : L26JF.D
Acq On : 26 Jul 2012 3:01 pm
Operator :
Sample : 12201012
Misc : 18.9627X 30ML
ALS Vial : 1 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\gcms-j\WPJD006.M
Title : WPJD006 CCP-TP-175 ICAL

Signal : TIC: L26JF.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.947	1339	1353	1368	rBV3	76435	162346	1.02%	0.427%
2	7.199	2460	2493	2494	rBV3	87015	247548	1.56%	0.651%
3	12.020	4157	4183	4213	rBV4	61067	238475	1.50%	0.627%
4	13.658	4736	4757	4789	rVB8	73965	280076	1.76%	0.736%
5	13.935	4832	4854	4880	rVB5	141128	495665	3.12%	1.303%
6	15.067	5222	5251	5291	rBV	2977230	9426263	59.29%	24.775%
7	15.900	5520	5543	5564	rBV3	136482	403342	2.54%	1.060%
8	16.345	5663	5699	5728	rBV6	259215	959796	6.04%	2.523%
9	18.696	6499	6523	6548	rBV2	413897	1162297	7.31%	3.055%
10	19.868	6905	6934	6972	rBV	5805664	15898936	100.00%	41.787%
11	21.605	7516	7543	7577	rBV	3165003	8599536	54.09%	22.602%
12	26.569	9268	9283	9302	rBV4	57667	173576	1.09%	0.456%

Sum of corrected areas: 38047856

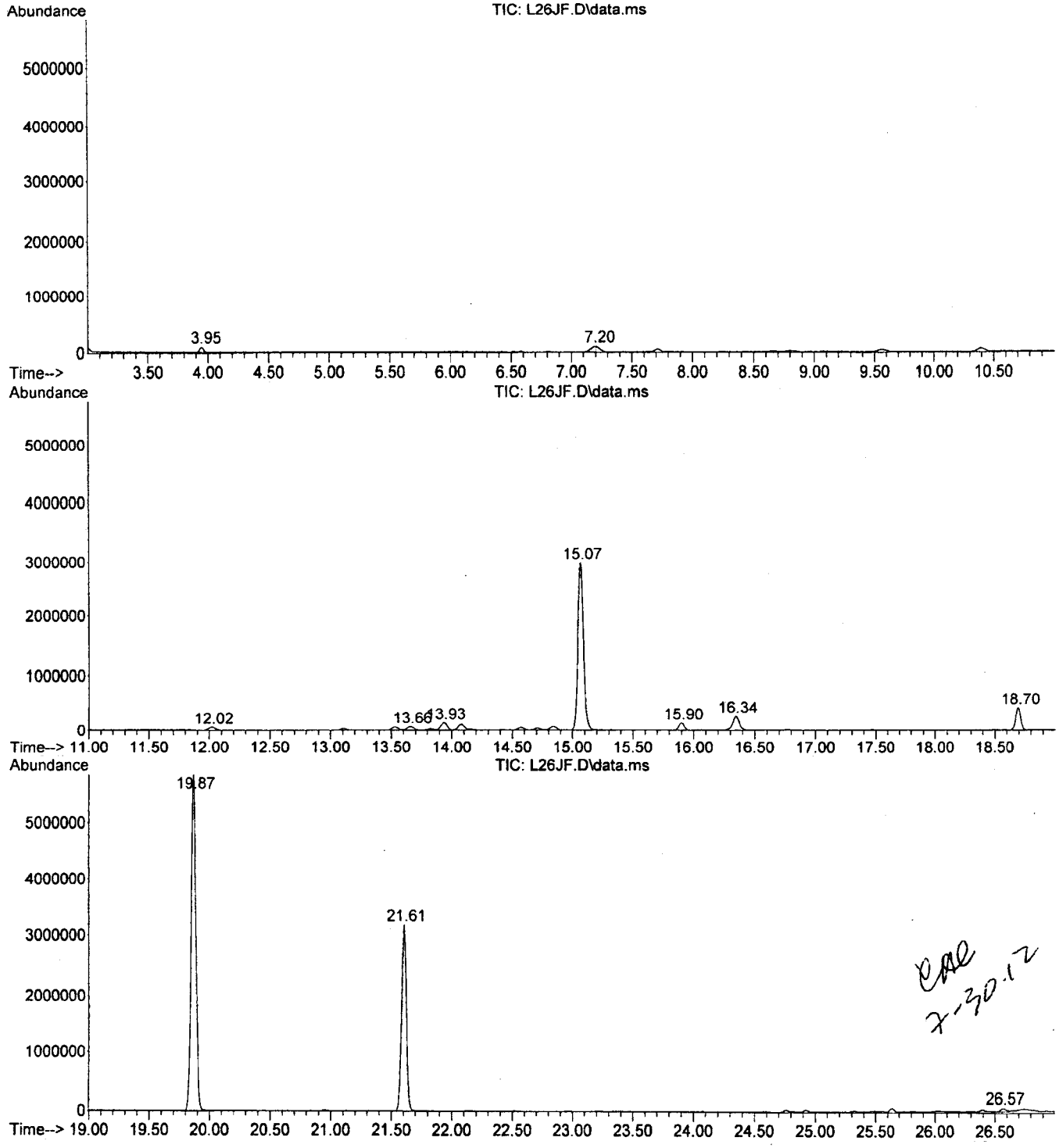
7-30-12

LSC Report - Integrated Chromatogram

Data Path : D:\ECL12029\
Data File : L26JF.D
Acq On : 26 Jul 2012 3:01 pm
Operator :
Sample : 12201012
Misc : 18.9627X 30ML
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL

TIC Library : C:\Database\Apendix8.l
TIC Integration Parameters: LSCINT.P



EAE 7-30-12

Library Search Compound Report

Data Path : D:\ECL12029\
Data File : L26JF.D
Acq On : 26 Jul 2012 3:01 pm
Operator :
Sample : 12201012
Misc : 18.9627X 30ML
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL

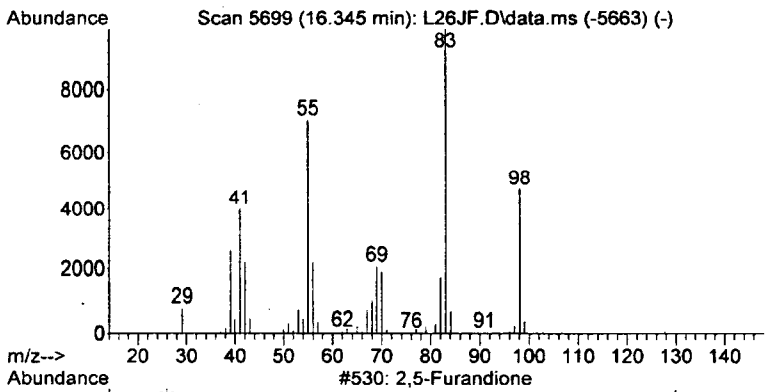
TIC Library : C:\Database\Apendix8.l
TIC Integration Parameters: LSCINT.P

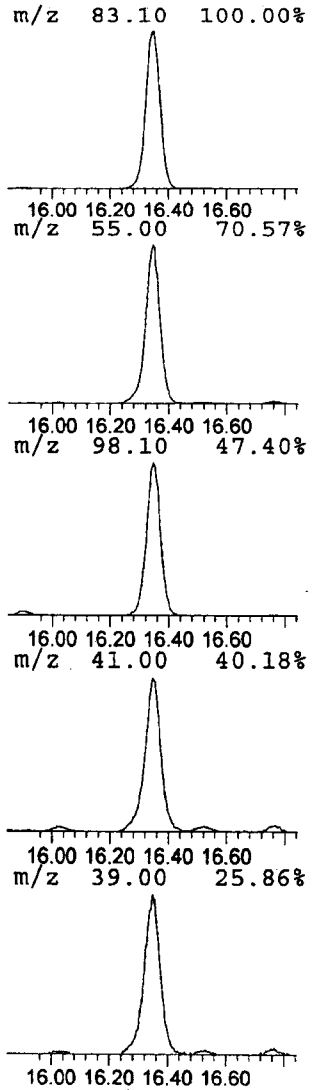
****

Peak Number 1 2,5-Furandione Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.34	48.16 ng	959796	Fluorobenzene	15.07

Hit# of 2	Tentative ID	MW	MolForm	CAS#	Qual
1	2,5-Furandione Do not report	98	C4H2O3	000108-31-6	5
2	Ethane, 1,1,2-trichloro-	132	C2H3Cl3	000079-00-5	1





m83 ion

m55 ion

CR 7-30-12

ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12029\
Data File : L26JG.D
Acq On : 26 Jul 2012 3:46 pm
Operator :
Sample : 12201018
Misc : 23.5033X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 30 10:48:21 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
Internal Standards						
1) Fluorobenzene	15.07	96	4276697	473.00 ng		0.00
24) Chlorobenzene-d5	21.61	117	2927533	490.00 ng		0.00
Target Compounds						Qvalue
3) Methylene Chloride	8.67	84	199544	67.51 ng		88
4) 1,1,2-Trichlorofluoroe...	7.21	101	26726m	X8.04 ng		
10) 1,1,1-Trichloroethane	13.53	97	34946	X8.06 ng		95
11) Carbon Tetrachloride	13.93	117	432220	111.16 ng		99
12) Trichloroethene	15.91	130	229533	83.21 ng		95
13) Cyclohexane	13.66	56	32513	X7.33 ng		76
15) Acetone	7.29	43	605667	95.55 ng		99
16) 2-Butanone	12.34	72	37166	19.59 ng	#	82
17) 1-Butanol	15.79	56	71759	29.30 ng		99
18) Methanol	4.55	31	153370	81.07 ng	#	59
22) 1,2-Dichloropropane	16.39	63	29661	12.08 ng		93
28) Toluene	18.71	92	706127	120.09 ng		100

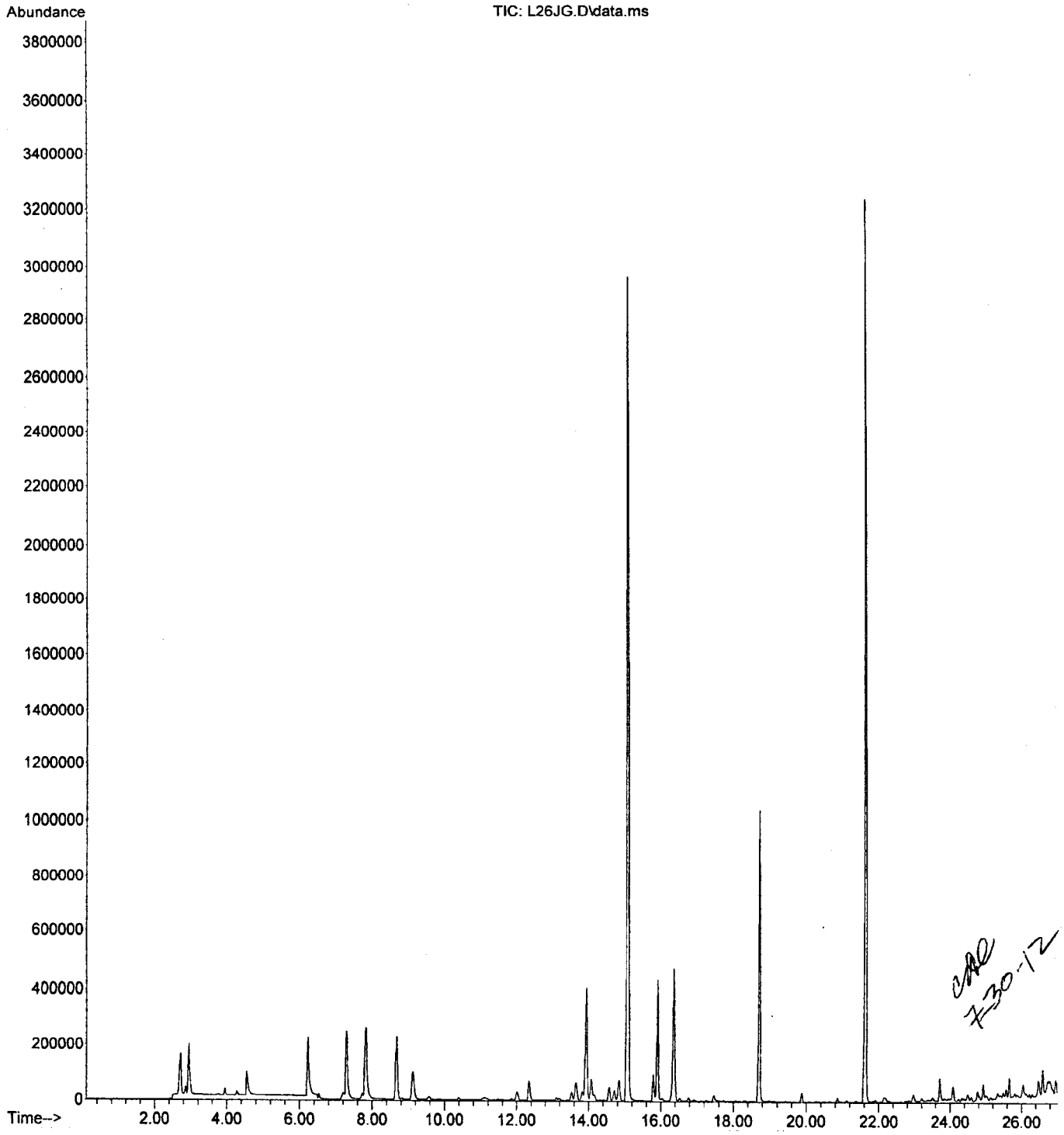
(#) = qualifier out of range (m) = manual integration (+) = signals summed

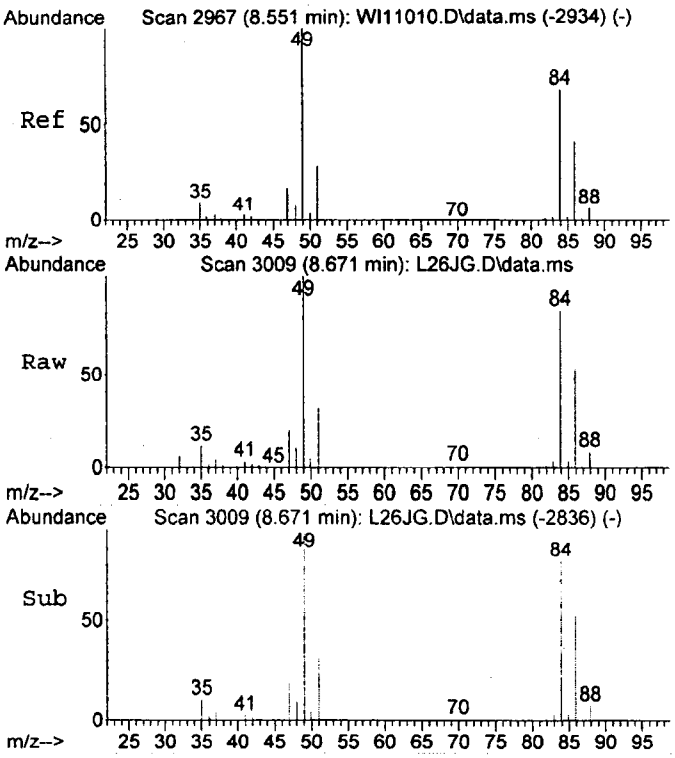
7-30-12

ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12029\
Data File : L26JG.D
Acq On : 26 Jul 2012 3:46 pm
Operator :
Sample : 12201018
Misc : 23.5033X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 30 10:48:21 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration

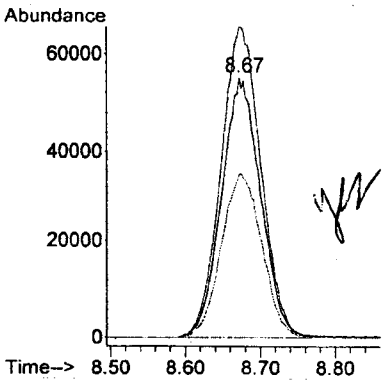


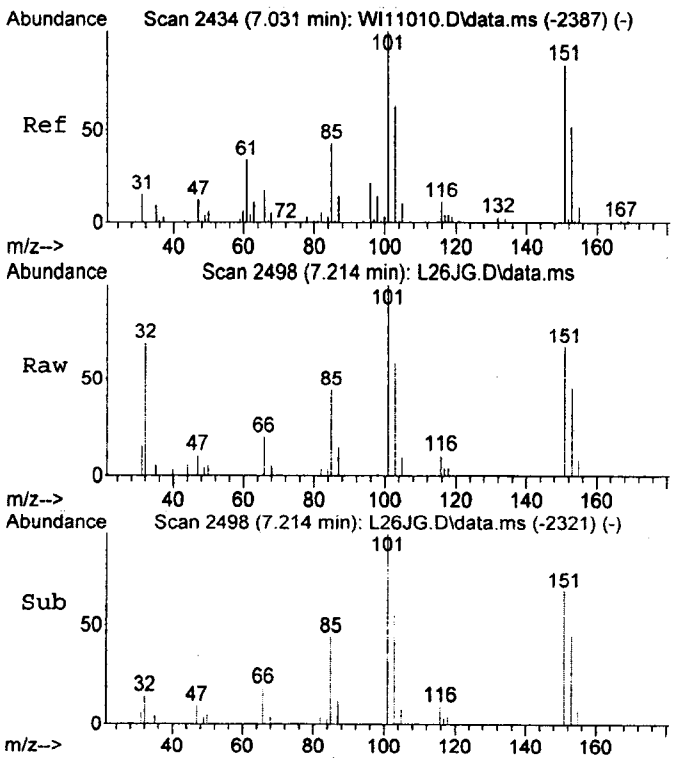


#3
Methylene Chloride
Concen: 67.51 ng
RT: 8.67 min Scan# 3009
Delta R.T. -0.006 min
Lab File: L26JG.D
Acq: 26 Jul 2012 3:46 pm

Tgt Ion: 84 Resp: 199544

Ion	Ratio	Lower	Upper
84	100		
49	120.2	111.6	171.6
86	63.3	33.6	93.6

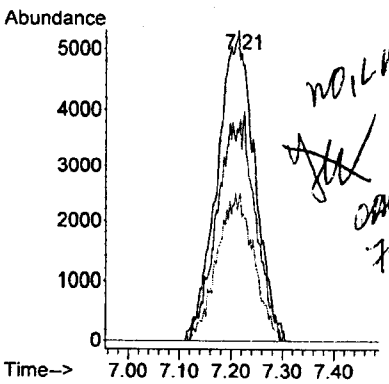




#4
1,1,2-Trichlorofluoroethane
Concen: 8.04 ng m
RT: 7.21 min Scan# 2498
Delta R.T. 0.006 min
Lab File: L26JG.D
Acq: 26 Jul 2012 3:46 pm

Tgt Ion:101 Resp: 26726

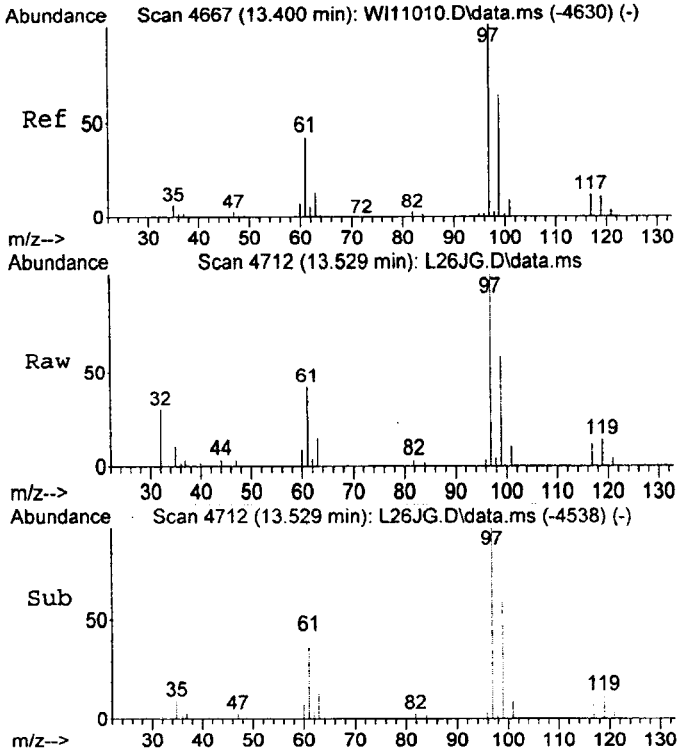
Ion	Ratio	Lower	Upper
101	100		
151	36.9	52.3	112.3#
85	18.9	12.6	72.6



NO LMDL

7-30-12

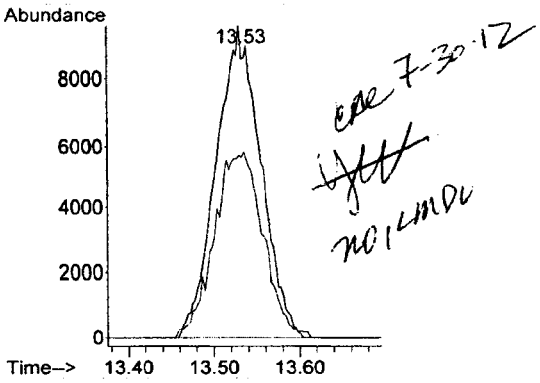
7-30-12

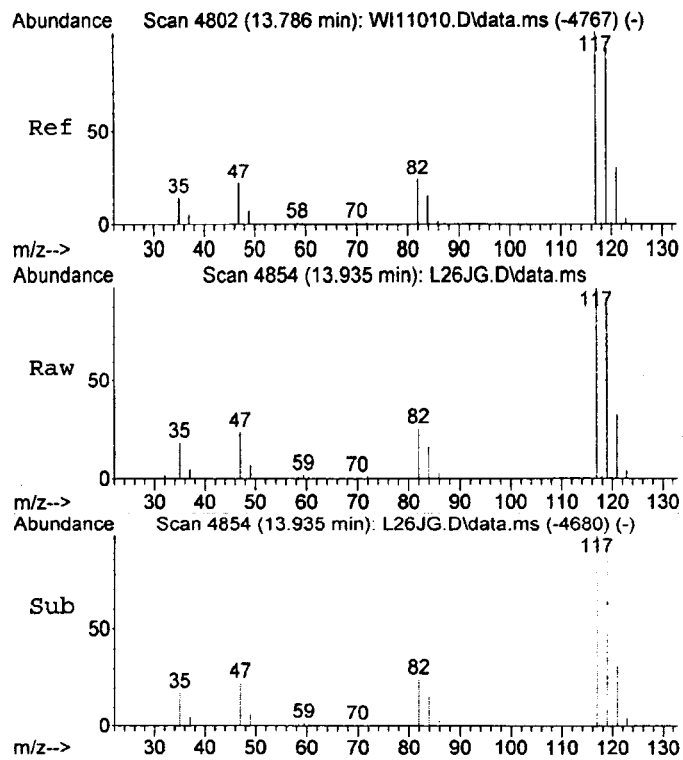


#10
1,1,1-Trichloroethane
Concen: 8.06 ng
RT: 13.53 min Scan# 4712
Delta R.T. -0.003 min
Lab File: L26JG.D
Acq: 26 Jul 2012 3:46 pm

Tgt Ion: 97 Resp: 34946

Ion	Ratio	Lower	Upper
97	100		
99	59.0	32.9	92.9

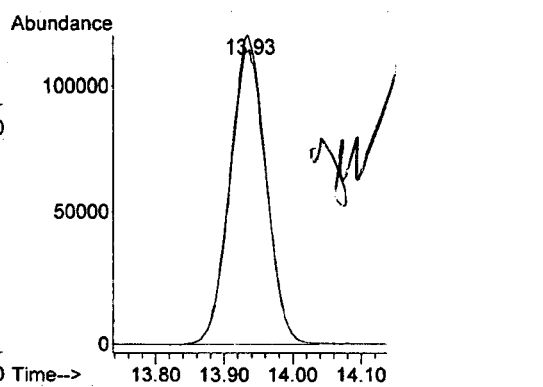


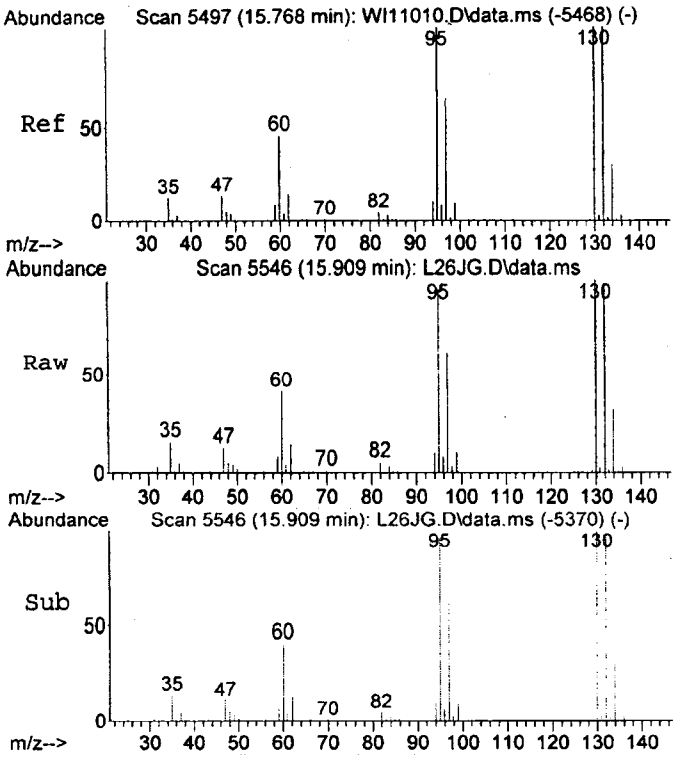


#11
Carbon Tetrachloride
Concen: 111.16 ng
RT: 13.93 min Scan# 4854
Delta R.T. -0.003 min
Lab File: L26JG.D
Acq: 26 Jul 2012 3:46 pm

Tgt Ion:117 Resp: 432220

Ion	Ratio	Lower	Upper
117	100		
119	94.6	65.1	125.1

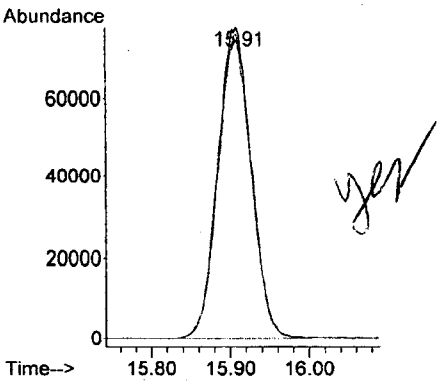


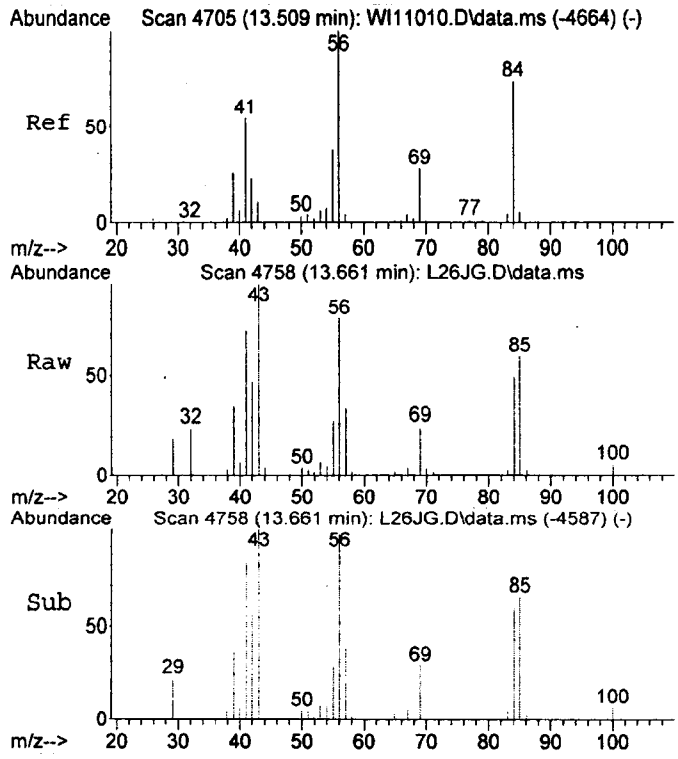


#12
Trichloroethene
Concen: 83.21 ng
RT: 15.91 min Scan# 5546
Delta R.T. 0.003 min
Lab File: L26JG.D
Acq: 26 Jul 2012 3:46 pm

Tgt Ion:130 Resp: 229533

Ion	Ratio	Lower	Upper
130	100		
132	97.7	71.2	131.2
95	95.4	72.7	132.7

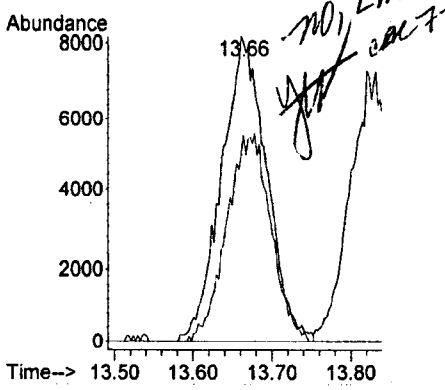


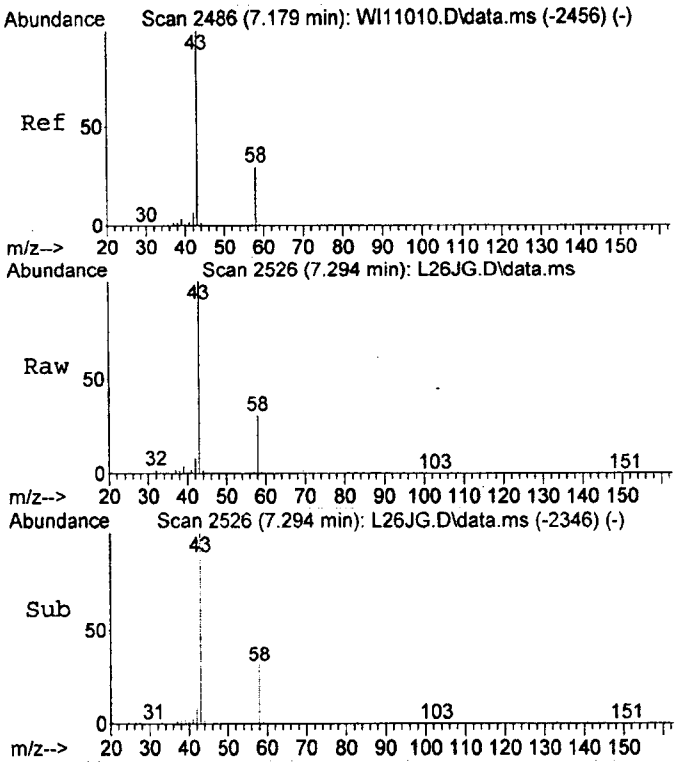


#13
Cyclohexane
Concen: 7.33 ng
RT: 13.66 min Scan# 4758
Delta R.T. -0.012 min
Lab File: L26JG.D
Acq: 26 Jul 2012 3:46 pm

Tgt Ion: 56 Resp: 32513

Ion	Ratio	Lower	Upper
56	100		
84	60.8	52.3	112.3

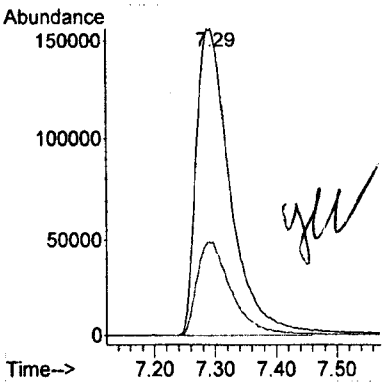


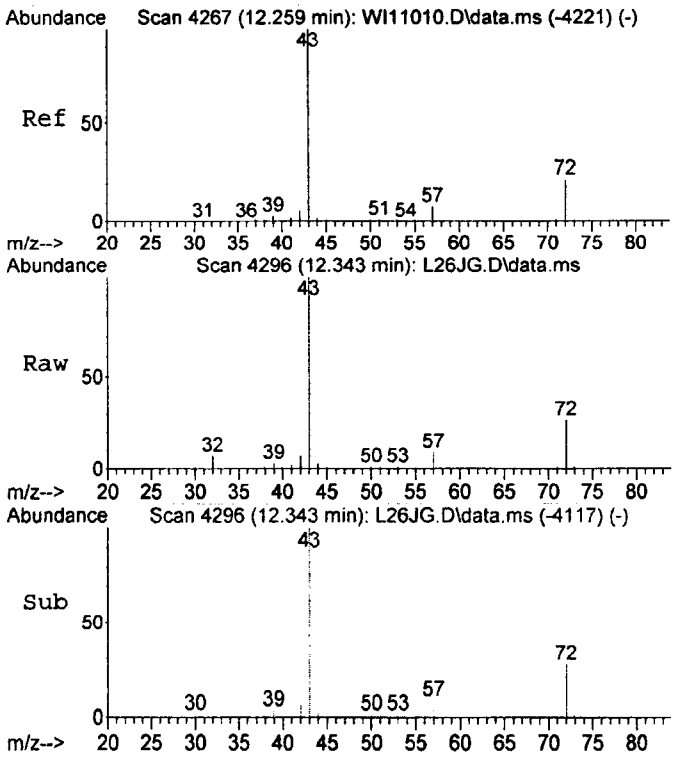


#15
Acetone
Concen: 95.55 ng
RT: 7.29 min Scan# 2526
Delta R.T. 0.014 min
Lab File: L26JG.D
Acq: 26 Jul 2012 3:46 pm

Tgt Ion: 43 Resp: 605667

Ion	Ratio	Lower	Upper
43	100		
58	31.3	0.7	60.7

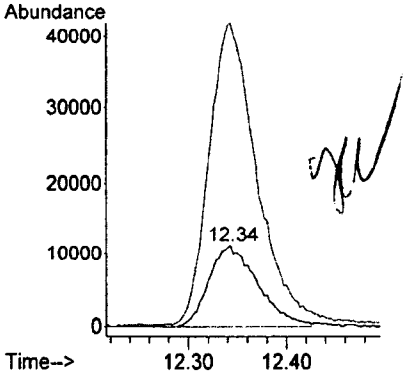




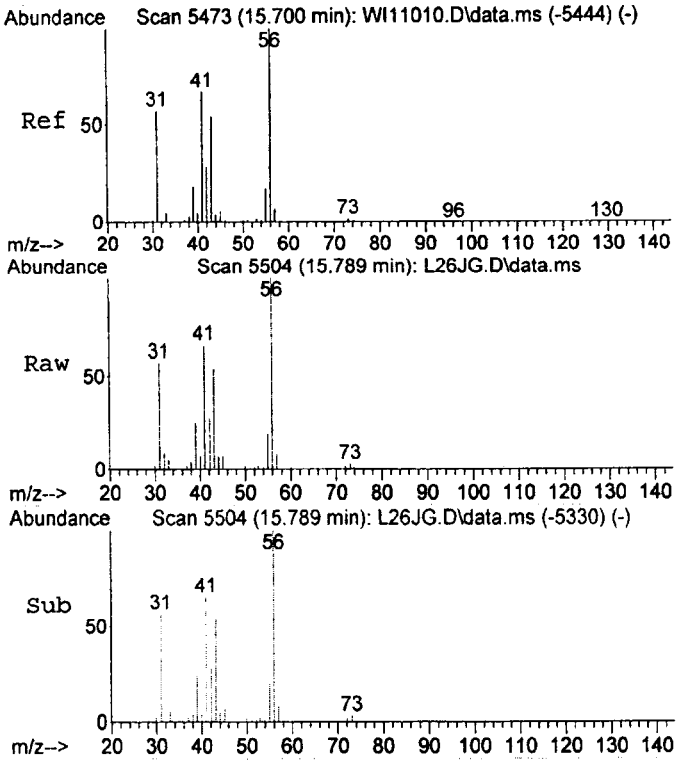
#16
2-Butanone
Concen: 19.59 ng
RT: 12.34 min Scan# 4296
Delta R.T. 0.011 min
Lab File: L26JG.D
Acq: 26 Jul 2012 3:46 pm

Tgt Ion: 72 Resp: 37166

Ion	Ratio	Lower	Upper
72	100		
43	374.7	388.5	448.5#



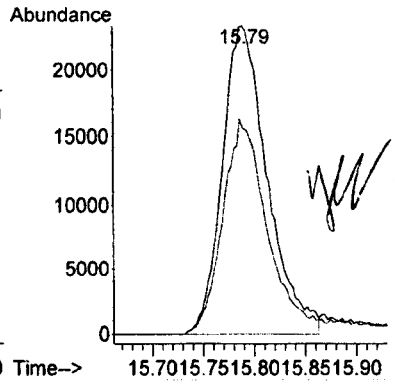
7-30-12

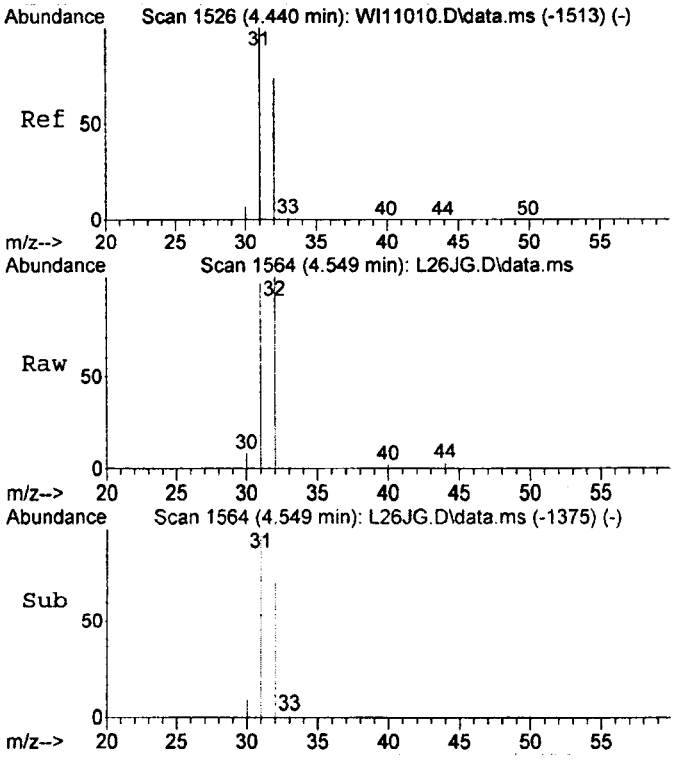


#17
1-Butanol
Concen: 29.30 ng
RT: 15.79 min Scan# 5504
Delta R.T. -0.003 min
Lab File: L26JG.D
Acq: 26 Jul 2012 3:46 pm

Tgt Ion: 56 Resp: 71759

Ion	Ratio	Lower	Upper
56	100		
41	66.3	35.3	95.3

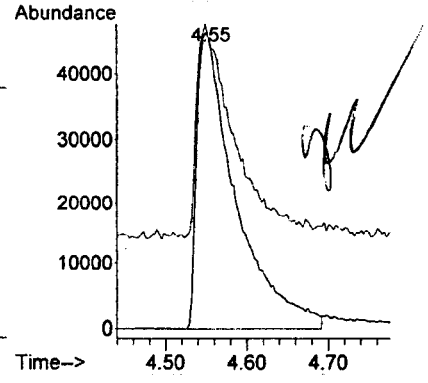




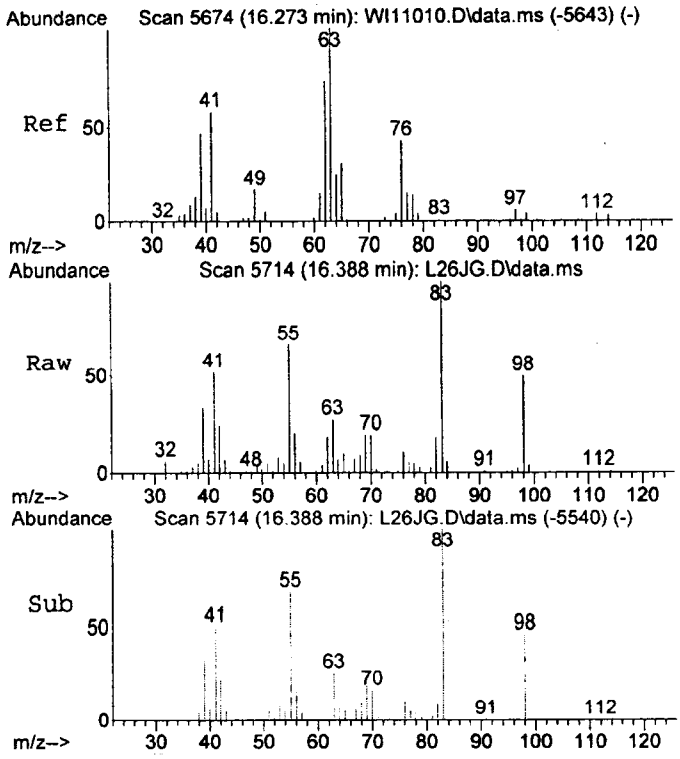
#18
Methanol
Concen: 81.07 ng
RT: 4.55 min Scan# 1564
Delta R.T. 0.040 min
Lab File: L26JG.D
Acq: 26 Jul 2012 3:46 pm

Tgt Ion: 31 Resp: 153370

Ion	Ratio	Lower	Upper
31	100		
32	103.3	40.0	100.0#



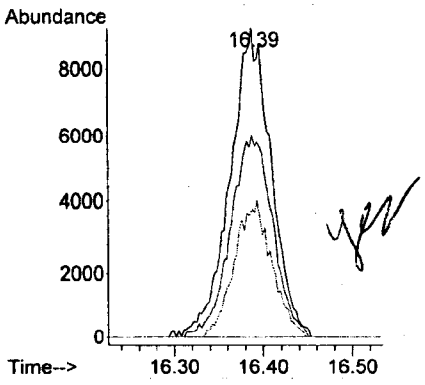
7-30-12

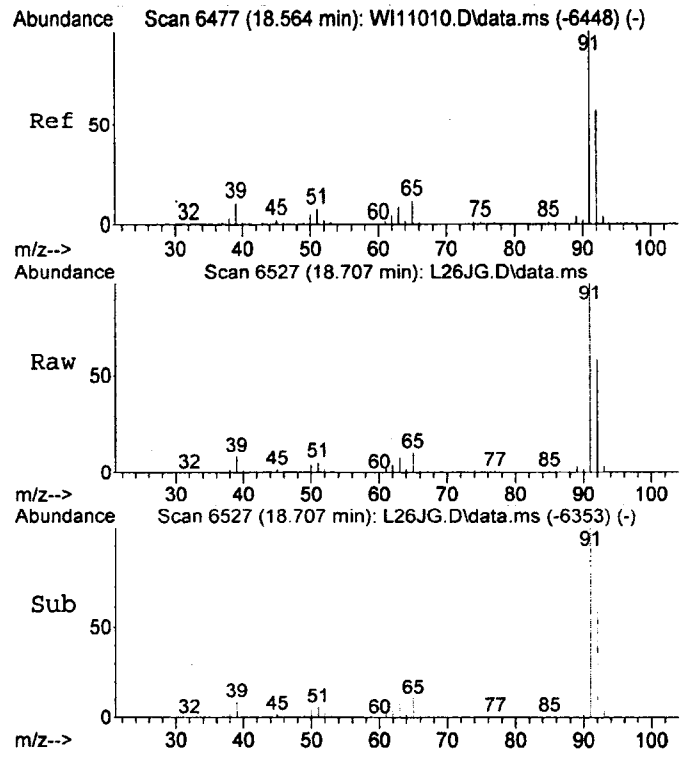


#22
1,2-Dichloropropane
Concen: 12.08 ng
RT: 16.39 min Scan# 5714
Delta R.T. -0.003 min
Lab File: L26JG.D
Acq: 26 Jul 2012 3:46 pm

Tgt Ion: 63 Resp: 29661

Ion	Ratio	Lower	Upper
63	100		
62	65.7	42.4	102.4
76	41.3	14.8	74.8

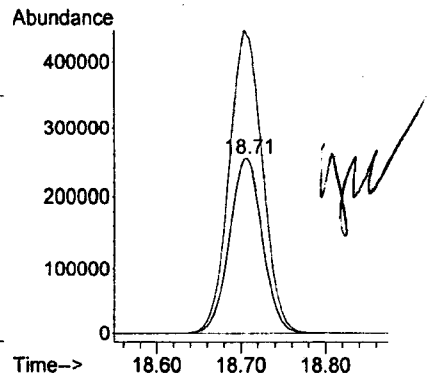




#28
Toluene
Concen: 120.09 ng
RT: 18.71 min Scan# 6527
Delta R.T. -0.003 min
Lab File: L26JG.D
Acq: 26 Jul 2012 3:46 pm

Tgt Ion: 92 Resp: 706127

Ion	Ratio	Lower	Upper
92	100		
91	172.5	142.1	202.1



7-30-12

ECL LSC Area Percent Report

Data Path : D:\ECL12029\
Data File : L26JG.D
Acq On : 26 Jul 2012 3:46 pm
Operator :
Sample : 12201018
Misc : 23.5033X 100ML
ALS Vial : 1 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\gcms-j\WPJD006.M
Title : WPJD006 CCP-TP-175 ICAL

Signal : TIC: L26JG.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.549	1556	1564	1598	rBV	85011	262722	2.83%	0.839%
2	6.224	2139	2151	2195	rBV2	211262	746726	8.04%	2.384%
3	7.288	2509	2524	2565	rVB2	236620	857472	9.23%	2.738%
4	7.816	2689	2709	2768	rVB	255389	1114136	12.00%	3.557%
5	8.671	2981	3009	3039	rBV2	224445	822673	8.86%	2.627%
6	9.122	3142	3167	3168	rBV2	95791	204643	2.20%	0.653%
7	12.012	4155	4180	4206	rVB3	28683	115367	1.24%	0.368%
8	12.346	4277	4297	4323	rBV	67989	220269	2.37%	0.703%
9	13.658	4731	4757	4785	rVB7	60912	257854	2.78%	0.823%
10	13.935	4832	4854	4882	rVB4	395607	1413245	15.22%	4.512%
11	14.071	4882	4902	4905	rBV3	69207	132544	1.43%	0.423%
12	14.713	5102	5127	5147	rBV6	34219	117886	1.27%	0.376%
13	14.839	5150	5171	5172	rBV4	66672	119960	1.29%	0.383%
14	15.070	5223	5252	5300	rBV	2956371	9286705	100.00%	29.650%
15	15.786	5483	5503	5522	rBV2	95013	284117	3.06%	0.907%
16	15.906	5525	5545	5571	rVB4	428702	1286734	13.86%	4.108%
17	16.354	5658	5702	5737	rBV4	468523	1828222	19.69%	5.837%
18	18.704	6500	6526	6554	rBV	1034136	2869413	30.90%	9.161%
19	21.611	7516	7545	7584	rBV	3229663	8721999	93.92%	27.847%
20	23.708	8262	8280	8304	rBV3	80038	219268	2.36%	0.700%
21	24.079	8395	8410	8429	rVB4	48967	140631	1.51%	0.449%
22	24.923	8691	8706	8724	rBV9	51024	137734	1.48%	0.440%
23	25.653	8949	8962	8979	rVB3	67627	160941	1.73%	0.514%

Sum of corrected areas: 31321261

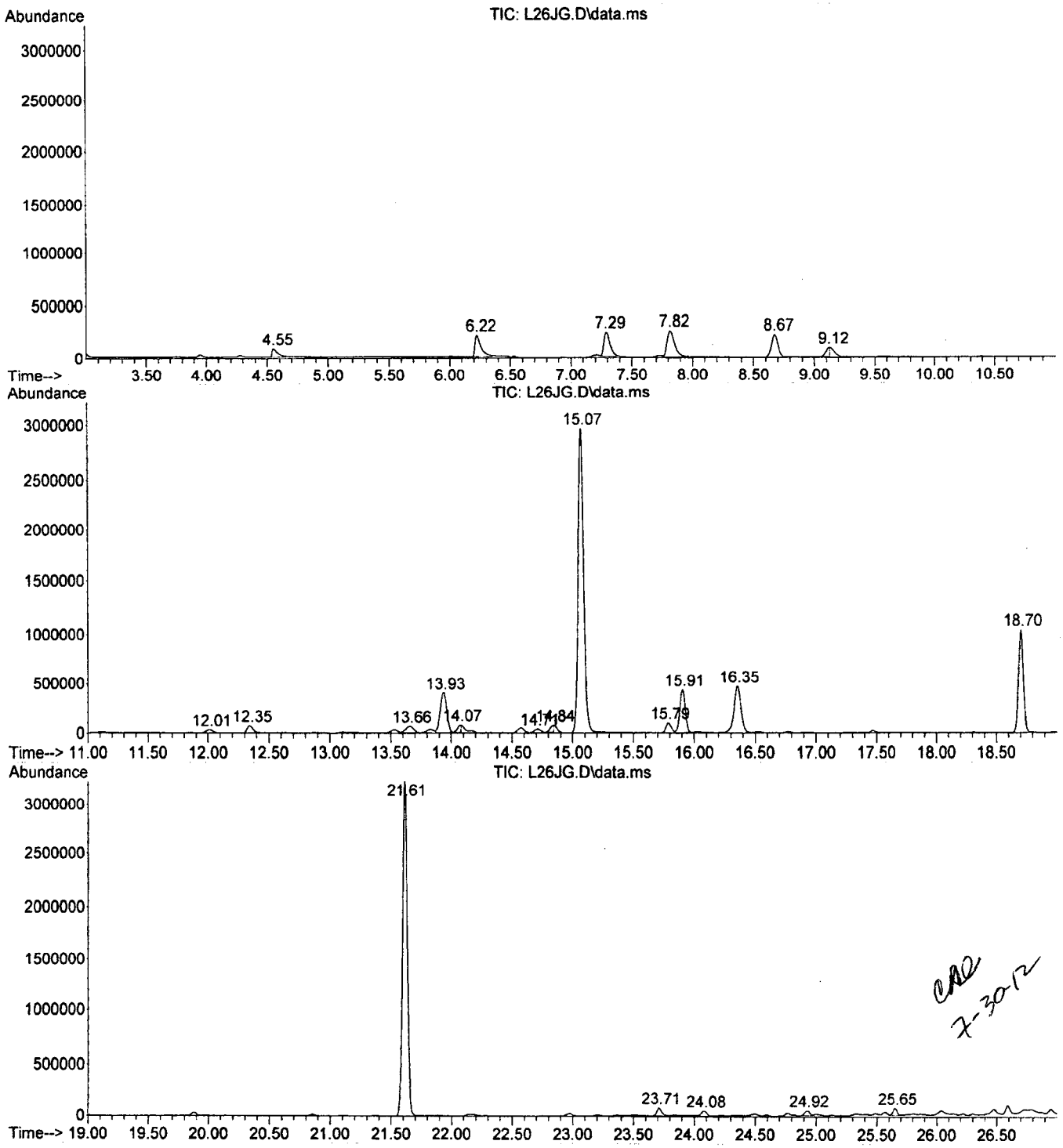
CAP 7-30-12

LSC Report - Integrated Chromatogram

Data Path : D:\ECL12029\
Data File : L26JG.D
Acq On : 26 Jul 2012 3:46 pm
Operator :
Sample : 12201018
Misc : 23.5033X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL

TIC Library : C:\Database\Apendix8.1
TIC Integration Parameters: LSCINT.P



X-30-12

Library Search Compound Report

Data Path : D:\ECL12029\
Data File : L26JG.D
Acq On : 26 Jul 2012 3:46 pm
Operator :
Sample : 12201018
Misc : 23.5033X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL

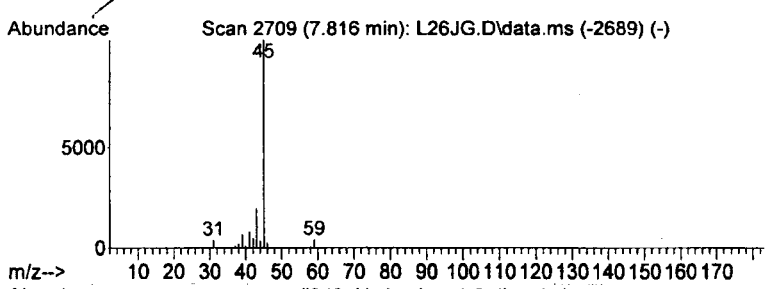
TIC Library : C:\Database\Apendix8.l
TIC Integration Parameters: LSCINT.P

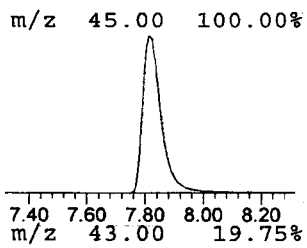
****
Peak Number 1 Hydrazine, 1,2-dimethyl- Concentration Rank 1

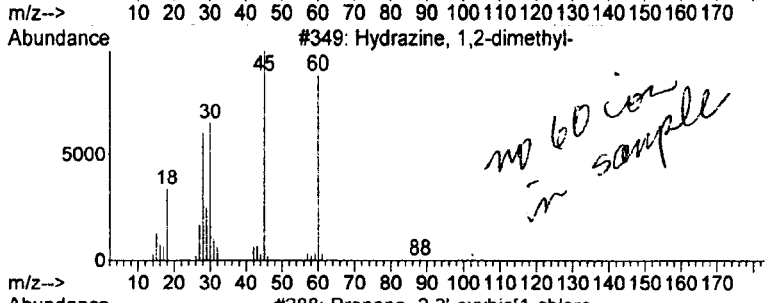
R.T.	EstConc	Area	Relative to ISTD	R.T.
7.82	56.75 ng	1114140	Fluorobenzene	15.07

Hit# of 4	Tentative ID	MW	MolForm	CAS#	Qual
1	Hydrazine, 1,2-dimethyl-	60	C2H8N2	000540-73-8	9
2	Propane, 2,2'-oxybis[1-chloro-	170	C6H12Cl2O	000108-60-1	2
3	Formic acid	46	CH2O2	000064-18-6	1
4	Hydrazinecarbothioamide	91	CH5N3S	000079-19-6	1

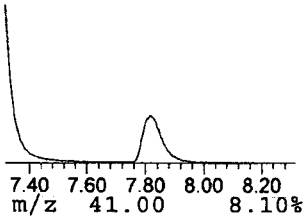
Do not report

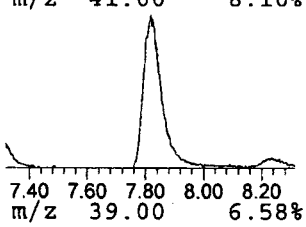


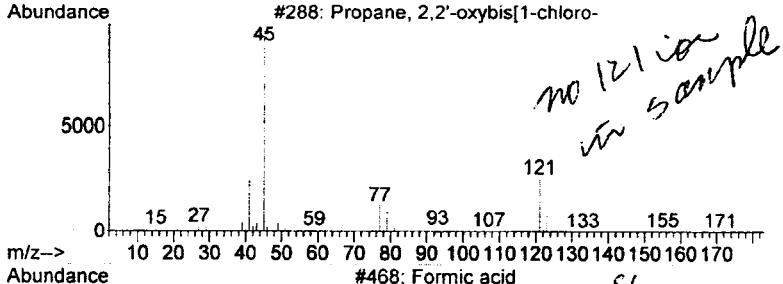




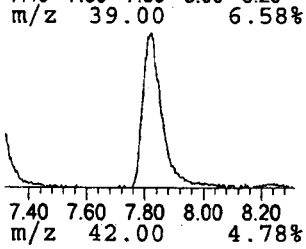
no 60 ion in sample

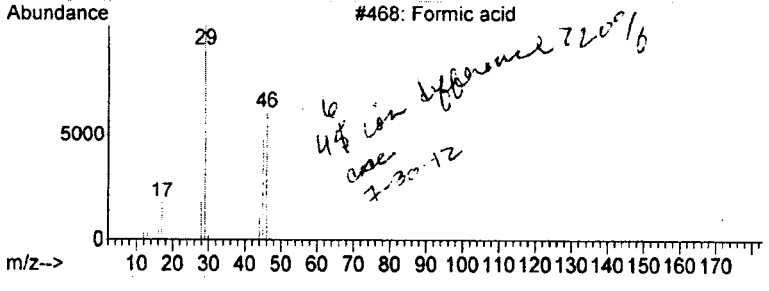




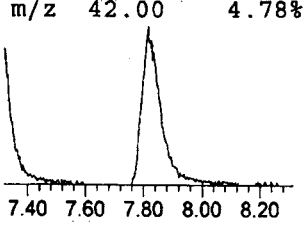


no 121 ion in sample





6 4% ion abundance 72.0% case 7-30-12



case 7-30-12

ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12029\
Data File : L26JH.D
Acq On : 26 Jul 2012 4:30 pm
Operator :
Sample : 12201020
Misc : 11.1699X 50ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 30 10:50:34 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	15.07	96	4282909	473.00	ng	0.00
24) Chlorobenzene-d5	21.61	117	2930427	490.00	ng	0.00
Target Compounds						Qvalue
4) 1,1,2-Trichlorofluoroe...	7.20	101	76748	23.05	ng	# 59
6) 1,1-Dichloroethane	10.72	63	134568	25.78	ng	100
10) 1,1,1-Trichloroethane	13.54	97	689229	158.79	ng	97
12) Trichloroethene	15.90	130	2521642	912.83	ng	95
15) Acetone	7.28	43	372206	58.64	ng	99
18) Methanol	4.58	31	25594m	13.51	ng	
21) Carbon Disulfide	7.72	76	92924	18.33	ng	91
28) Toluene	18.69	92	713226	121.17	ng	99

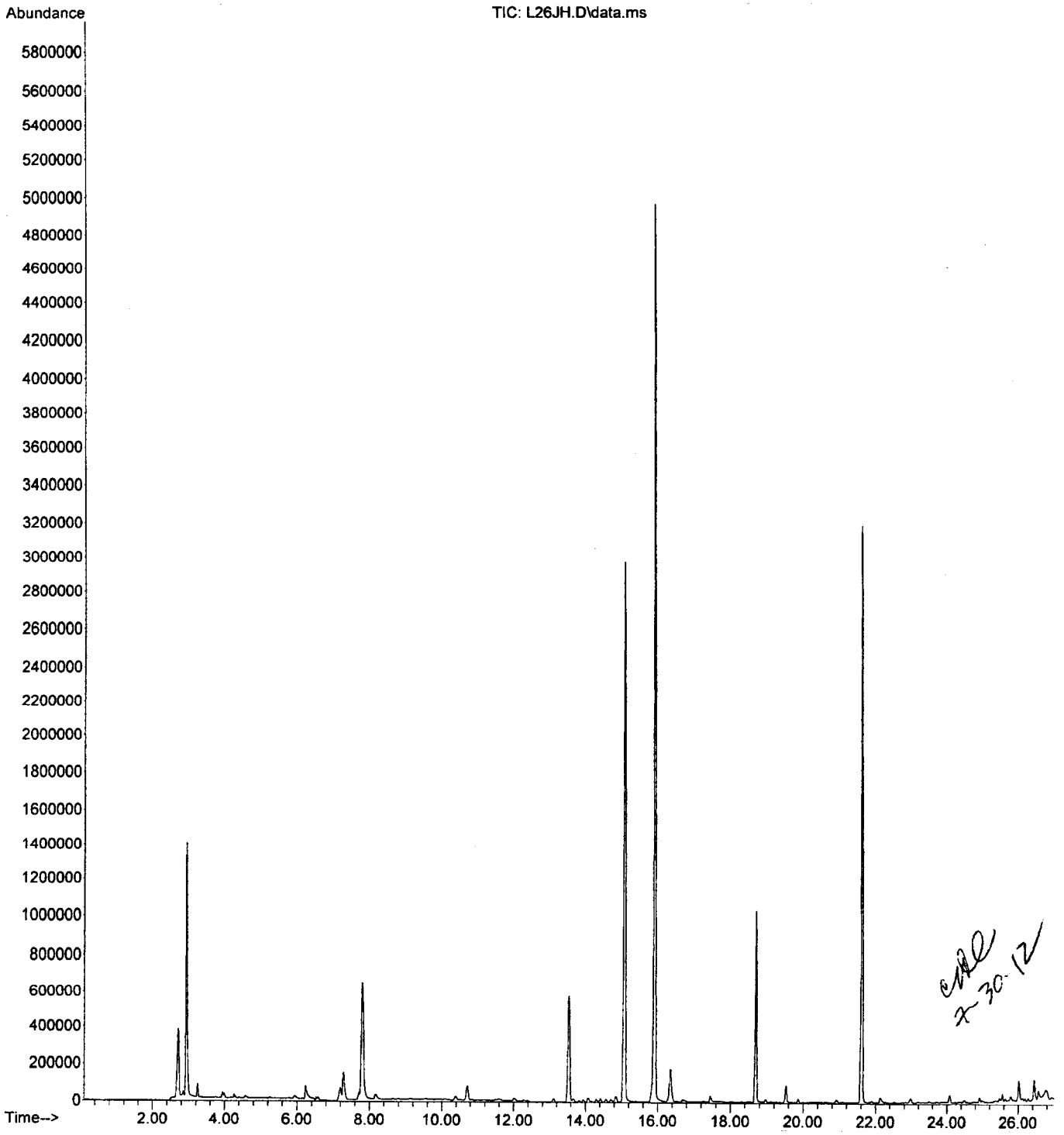
(#) = qualifier out of range (m) = manual integration (+) = signals summed

2-30-17

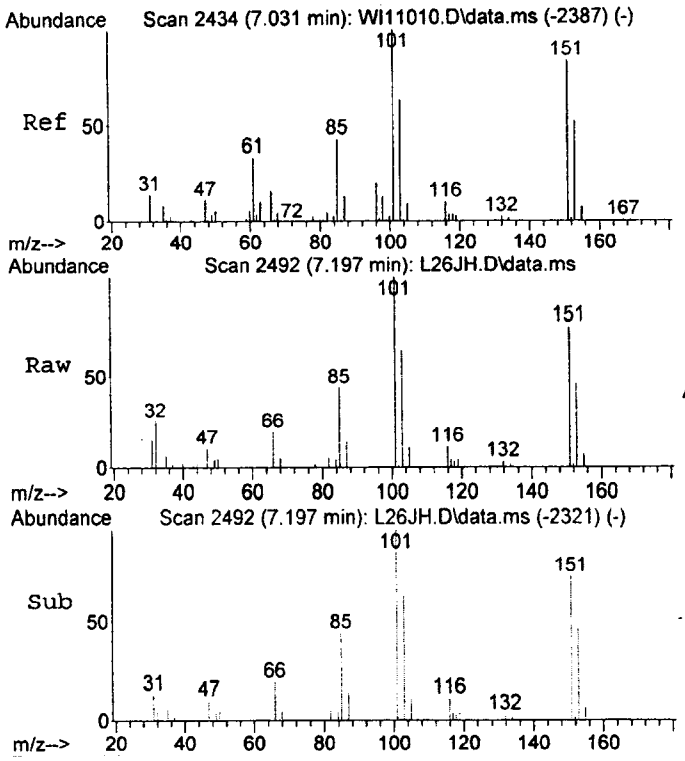
ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12029\
Data File : L26JH.D
Acq On : 26 Jul 2012 4:30 pm
Operator :
Sample : 12201020
Misc : 11.1699X 50ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 30 10:50:34 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration



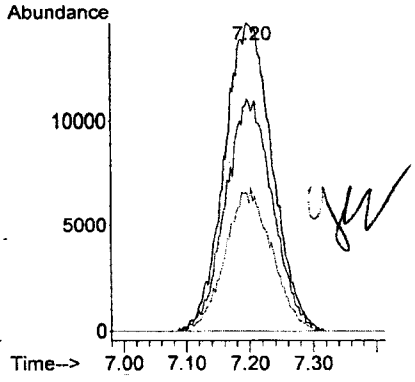
7/30/12

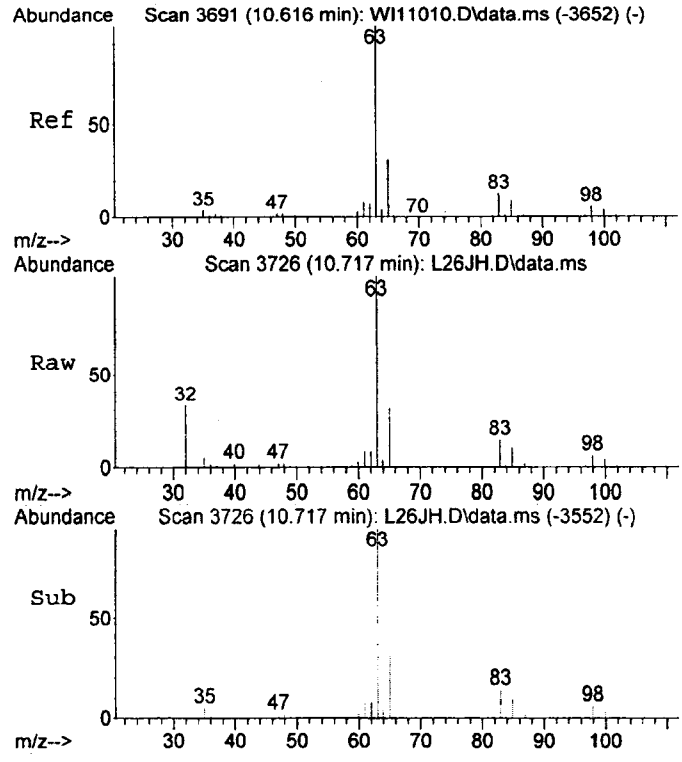


#4
1,1,2-Trichlorofluoroethane
Concen: 23.05 ng
RT: 7.20 min Scan# 2492
Delta R.T. -0.012 min
Lab File: L26JH.D
Acq: 26 Jul 2012 4:30 pm

Tgt Ion:101 Resp: 76748

Ion	Ratio	Lower	Upper
101	100		
151	40.5	52.3	112.3#
85	23.3	12.6	72.6

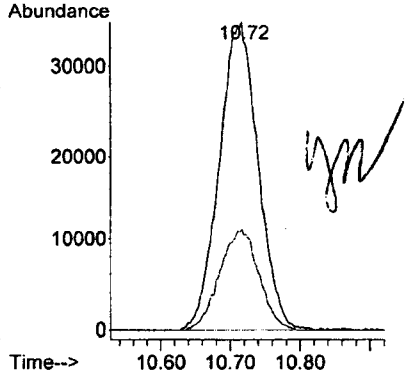




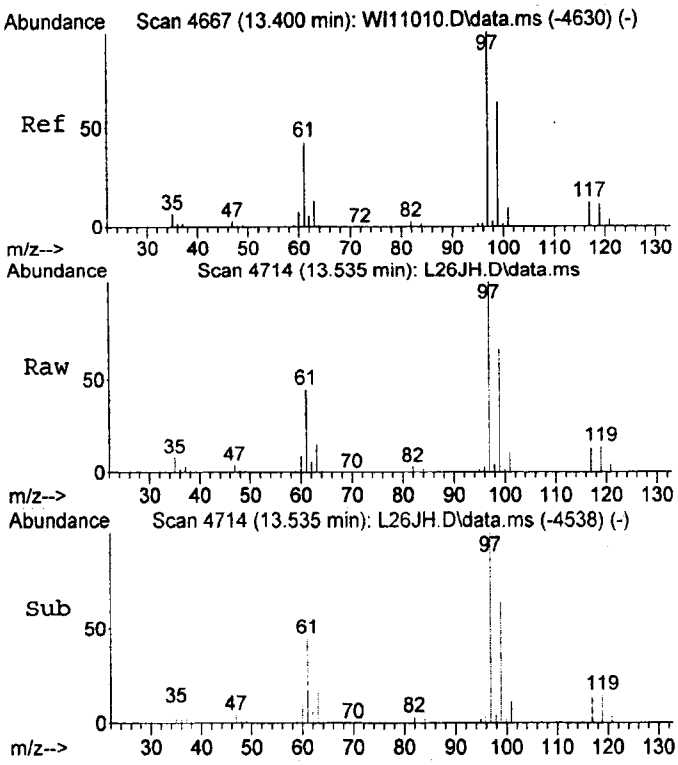
#6
1,1-Dichloroethane
Concen: 25.78 ng
RT: 10.72 min Scan# 3726
Delta R.T. -0.003 min
Lab File: L26JH.D
Acq: 26 Jul 2012 4:30 pm

Tgt Ion: 63 Resp: 134568

Ion	Ratio	Lower	Upper
63	100		
65	31.4	1.2	61.2



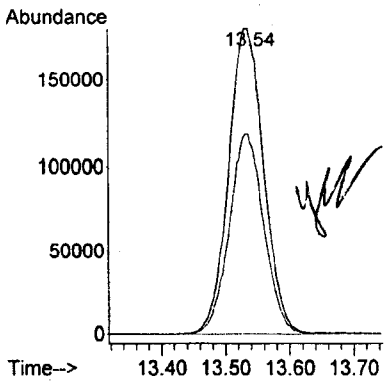
7-30-12

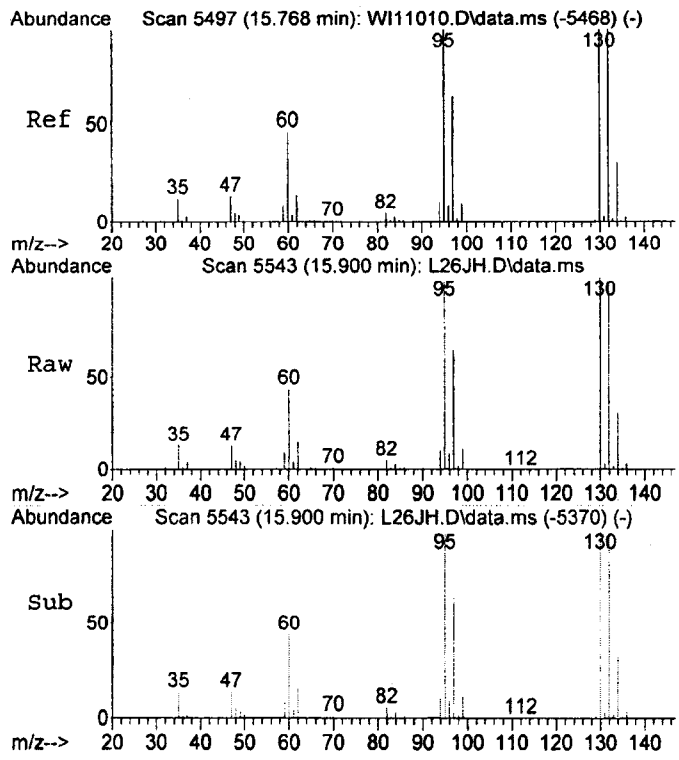


#10
1,1,1-Trichloroethane
Concen: 158.79 ng
RT: 13.54 min Scan# 4714
Delta R.T. 0.003 min
Lab File: L26JH.D
Acq: 26 Jul 2012 4:30 pm

Tgt Ion: 97 Resp: 689229

Ion	Ratio	Lower	Upper
97	100		
99	65.2	32.9	92.9

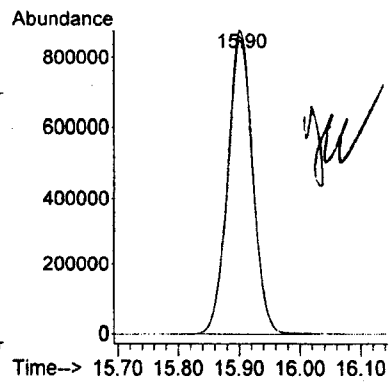




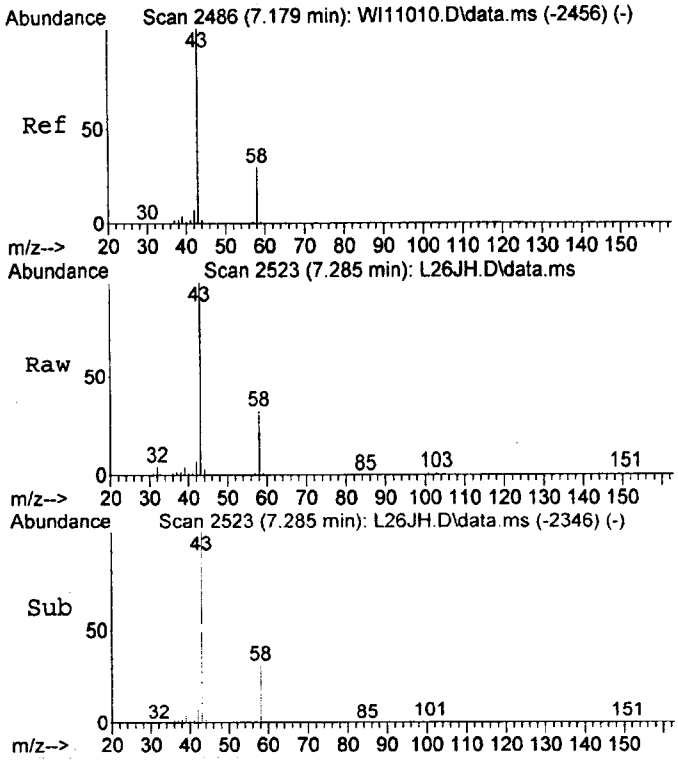
#12
Trichloroethene
Concen: 912.83 ng
RT: 15.90 min Scan# 5543
Delta R.T. -0.006 min
Lab File: L26JH.D
Acq: 26 Jul 2012 4:30 pm

Tgt Ion:130 Resp: 2521642

Ion	Ratio	Lower	Upper
130	100		
132	96.5	71.2	131.2
95	98.1	72.7	132.7



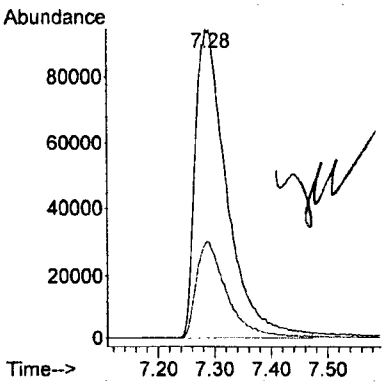
7-30-12

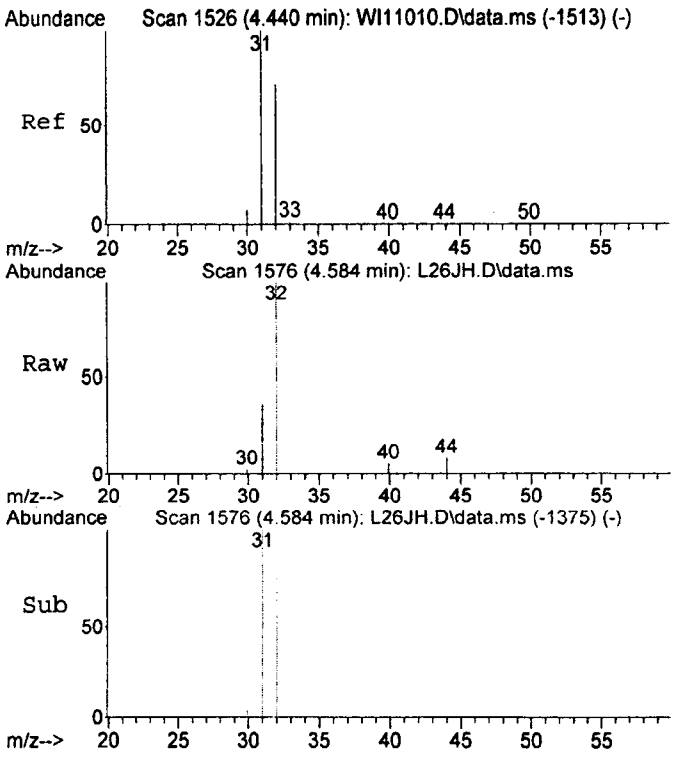


#15
Acetone
Concen: 58.64 ng
RT: 7.28 min Scan# 2523
Delta R.T. 0.005 min
Lab File: L26JH.D
Acq: 26 Jul 2012 4:30 pm

Tgt Ion: 43 Resp: 372206

Ion	Ratio	Lower	Upper
43	100		
58	30.3	0.7	60.7

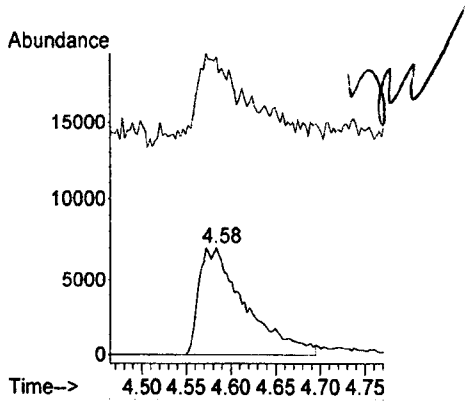




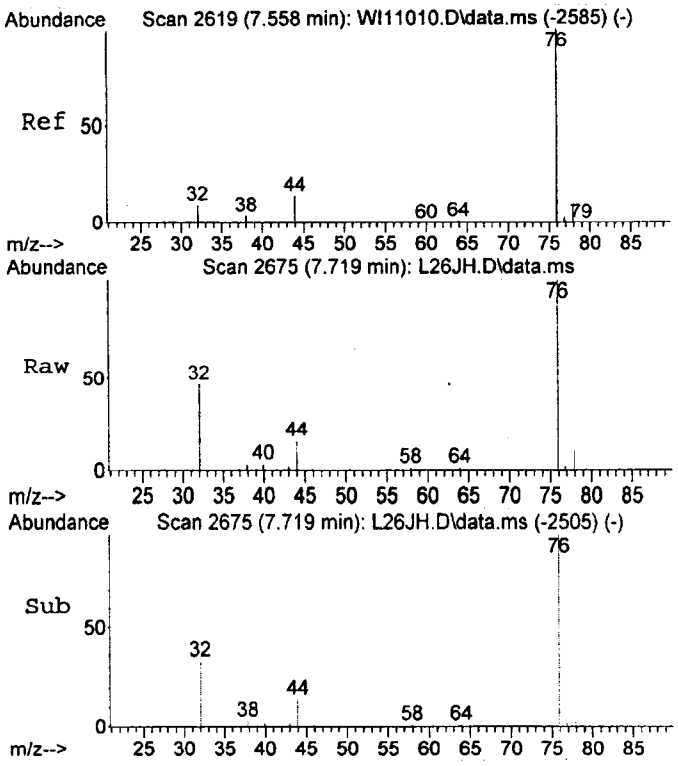
#18
Methanol
Concen: 13.51 ng m
RT: 4.58 min Scan# 1576
Delta R.T. 0.074 min
Lab File: L26JH.D
Acq: 26 Jul 2012 4:30 pm

Tgt Ion: 31 Resp: 25594

Ion	Ratio	Lower	Upper
31	100		
32	273.6	40.0	100.0#



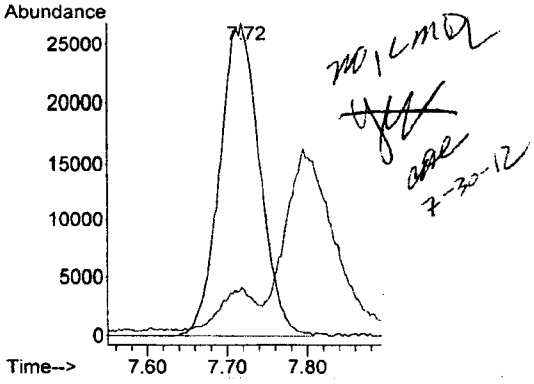
7-30-12

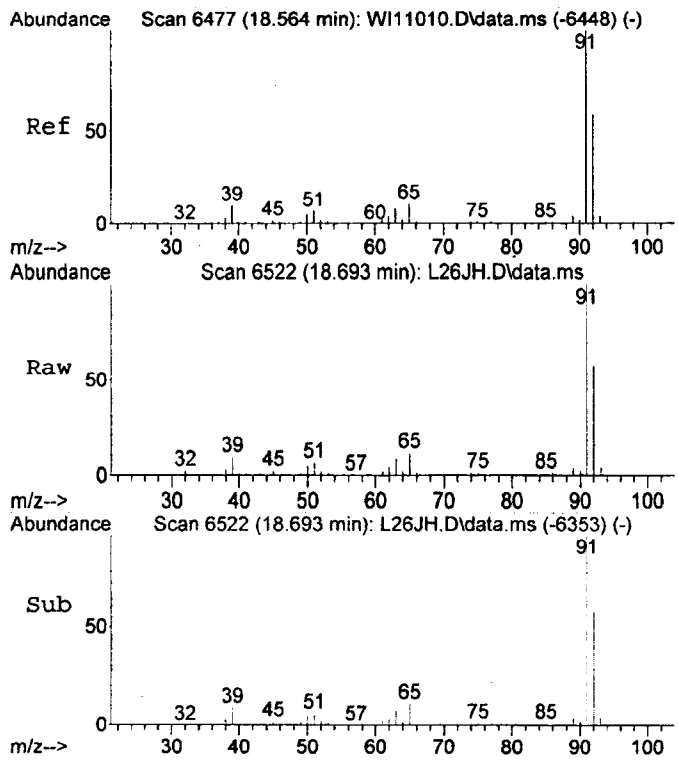


#21
Carbon Disulfide
Concen: 8.33 ng
RT: 7.72 min Scan# 2675
Delta R.T. -0.014 min
Lab File: L26JH.D
Acq: 26 Jul 2012 4:30 pm

Tgt Ion: 76 Resp: 92924

Ion	Ratio	Lower	Upper
76	100		
44	11.5	8.3	22.5

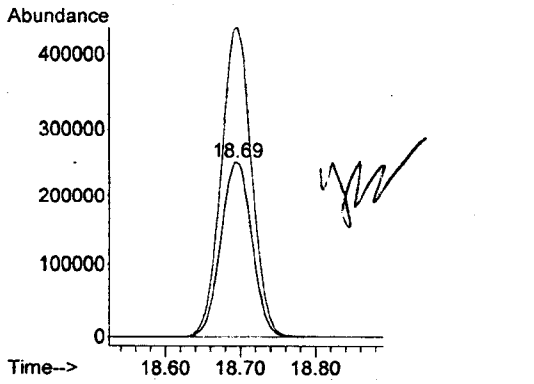




#28
Toluene
Concen: 121.17 ng
RT: 18.69 min Scan# 6522
Delta R.T. -0.017 min
Lab File: L26JH.D
Acq: 26 Jul 2012 4:30 pm

Tgt Ion: 92 Resp: 713226

Ion	Ratio	Lower	Upper
92	100		
91	173.8	142.1	202.1



ECL LSC Area Percent Report

Data Path : D:\ECL12029\
Data File : L26JH.D
Acq On : 26 Jul 2012 4:30 pm
Operator :
Sample : 12201020
Misc : 11.1699X 50ML
ALS Vial : 1 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\gcms-j\WPJD006.M
Title : WPJD006 CCP-TP-175 ICAL

Signal : TIC: L26JH.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.232	2144	2154	2184	rBV4	66615	240457	1.67%	0.567%
2	7.197	2455	2492	2509	rBV4	69249	325316	2.26%	0.767%
3	7.291	2511	2525	2558	rVB2	141947	509353	3.54%	1.201%
4	7.798	2682	2703	2752	rVB	630610	2611266	18.15%	6.160%
5	10.717	3704	3726	3755	rVB2	72784	271571	1.89%	0.641%
6	13.535	4679	4714	4744	rBV2	581404	2201940	15.30%	5.194%
7	15.067	5223	5251	5286	rBV	2966022	9104981	63.28%	21.477%
8	15.900	5492	5543	5578	rBV	4959389	14387486	100.00%	33.938%
9	16.345	5673	5699	5700	rBV2	165977	320982	2.23%	0.757%
10	18.693	6498	6522	6547	rBV	1024143	2878313	20.01%	6.790%
11	19.526	6796	6814	6838	rVB4	88483	254176	1.77%	0.600%
12	21.605	7516	7543	7576	rBV	3176606	8707011	60.52%	20.539%
13	26.021	9075	9091	9114	rVB4	99581	270876	1.88%	0.639%
14	26.449	9226	9241	9268	rVB4	104423	309708	2.15%	0.731%

Sum of corrected areas: 42393436

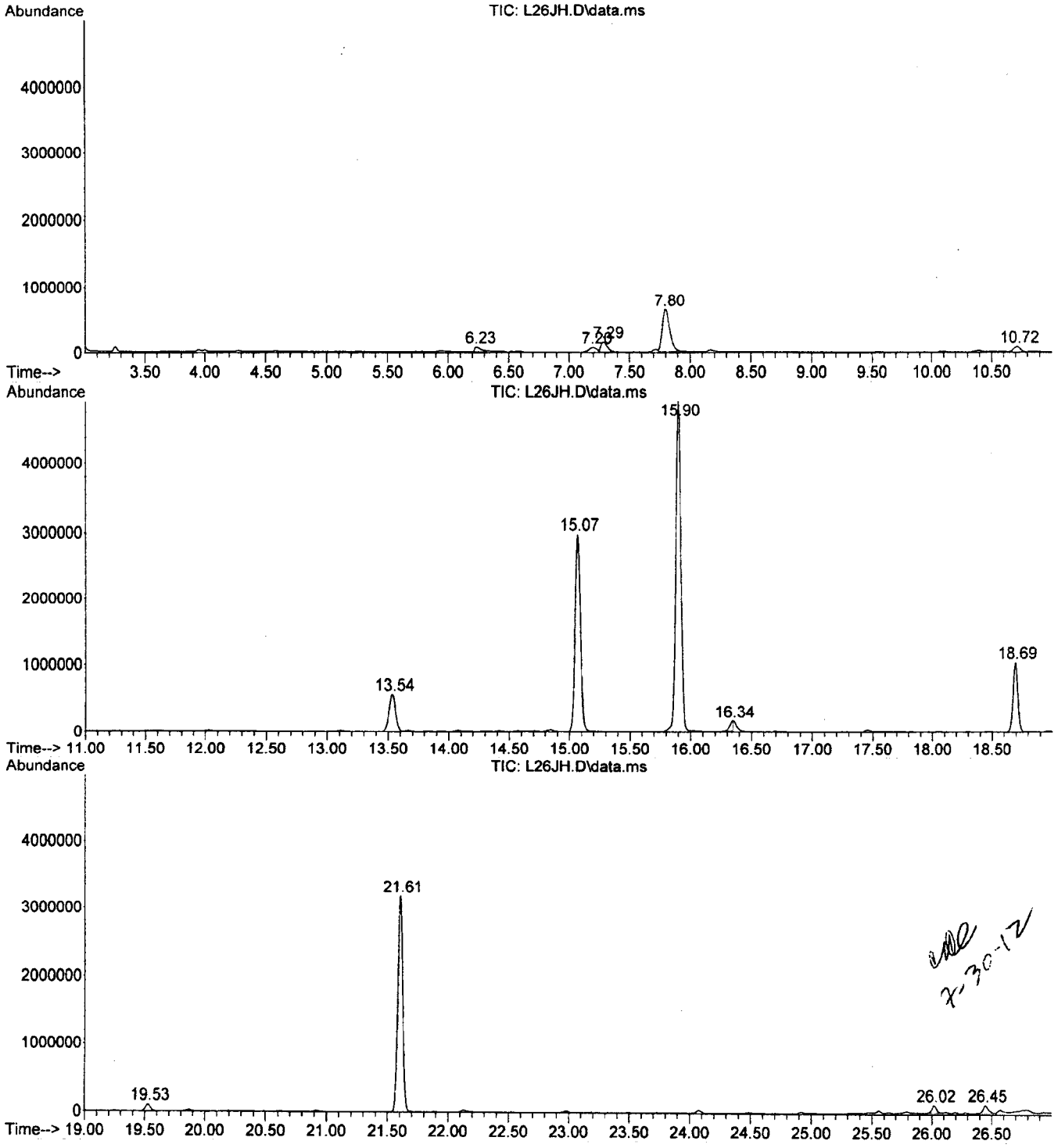
7-30-12

LSC Report - Integrated Chromatogram

Data Path : D:\ECL12029\
Data File : L26JH.D
Acq On : 26 Jul 2012 4:30 pm
Operator :
Sample : 12201020
Misc : 11.1699X 50ML
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL

TIC Library : C:\Database\Apendix8.l
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : D:\ECL12029\
Data File : L26JH.D
Acq On : 26 Jul 2012 4:30 pm
Operator :
Sample : 12201020
Misc : 11.1699X 50ML
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL

TIC Library : C:\Database\Apendix8.l
TIC Integration Parameters: LSCINT.P

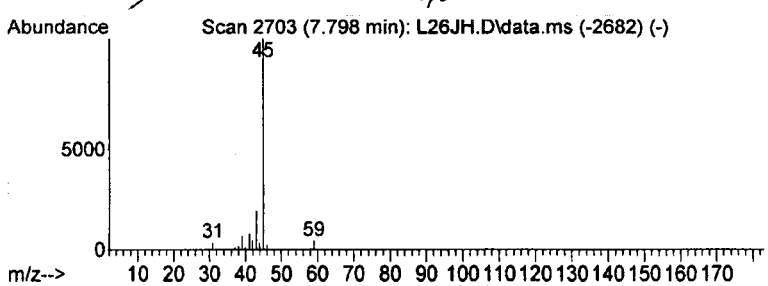
****

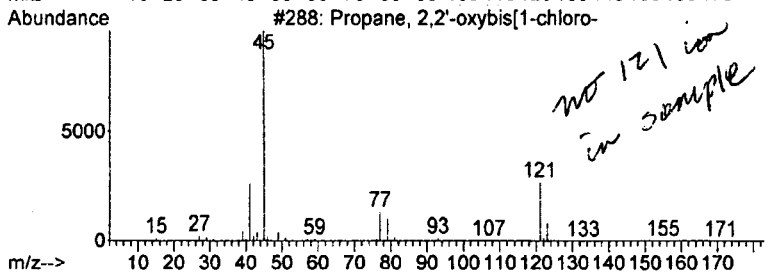
Peak Number 1 Propane, 2,2'-oxybis[1-chloro- Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.80	135.65 ng	2611270	Fluorobenzene	15.07

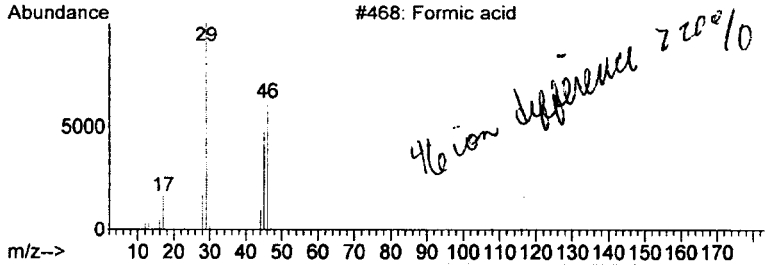
Hit# of 4	Tentative ID	MW	MolForm	CAS#	Qual
1	Propane, 2,2'-oxybis[1-chloro-	170	C6H12Cl2O	000108-60-1	2
2	Formic acid	46	CH2O2	000064-18-6	1
3	Hydrazine, 1,2-dimethyl-	60	C2H8N2	000540-73-8	1
4	Hydrazinecarbothioamide	91	CH5N3S	000079-19-6	1

Do not report

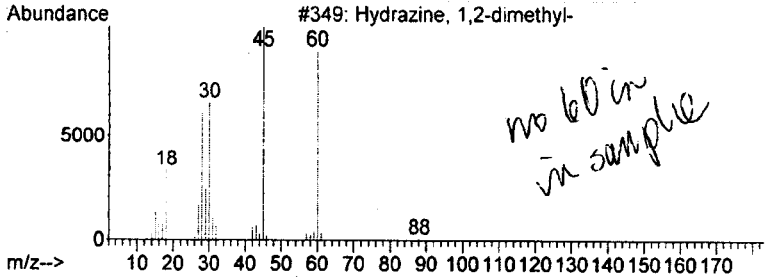




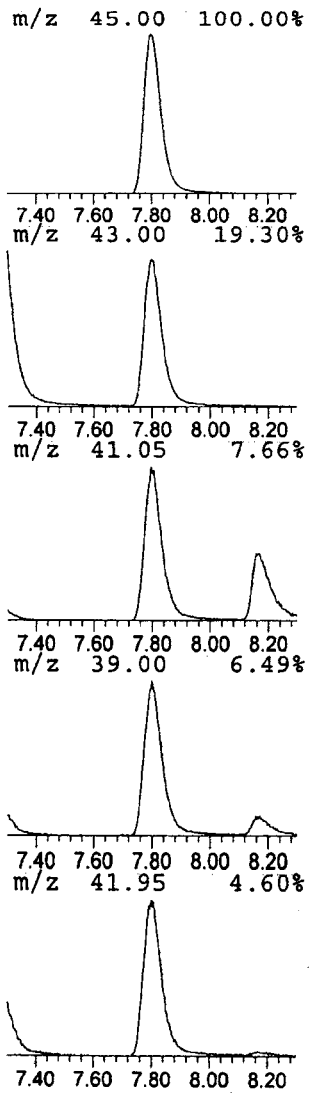
no 121 ion in sample



46 ion difference 220%



no 60 in in sample



ok 7-30-12

ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12029\
Data File : L26JI.D
Acq On : 26 Jul 2012 5:13 pm
Operator :
Sample : 12201021
Misc : 10.9202X 40ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 30 10:54:29 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	15.07	96	4327376	473.00	ng		0.00
24) Chlorobenzene-d5	21.61	117	2998486	490.00	ng		0.00
Target Compounds							Qvalue
3) Methylene Chloride	8.67	84	980337	327.79	ng		89
10) 1,1,1-Trichloroethane	13.53	97	38999m	8.89	ng		
12) Trichloroethene	15.91	130	145097	51.99	ng		91
13) Cyclohexane	13.67	56	77568	17.28	ng		88
15) Acetone	7.31	43	144601	22.55	ng		98
21) Carbon Disulfide	7.72	76	126552	11.23	ng	#	77
22) 1,2-Dichloropropane	16.38	63	26134	10.52	ng		90
28) Toluene	18.71	92	5814504	965.44	ng		100
30) Ethylbenzene	21.90	106	213004	62.56	ng	#	84
31) Xylene (meta & para)	22.14	106	1702485	401.09	ng		89
32) Xylene (ortho)	22.98	106	444217	114.74	ng		86
34) 1,2,4-Trimethylbenzene	25.65	105	80365	9.45	ng		100

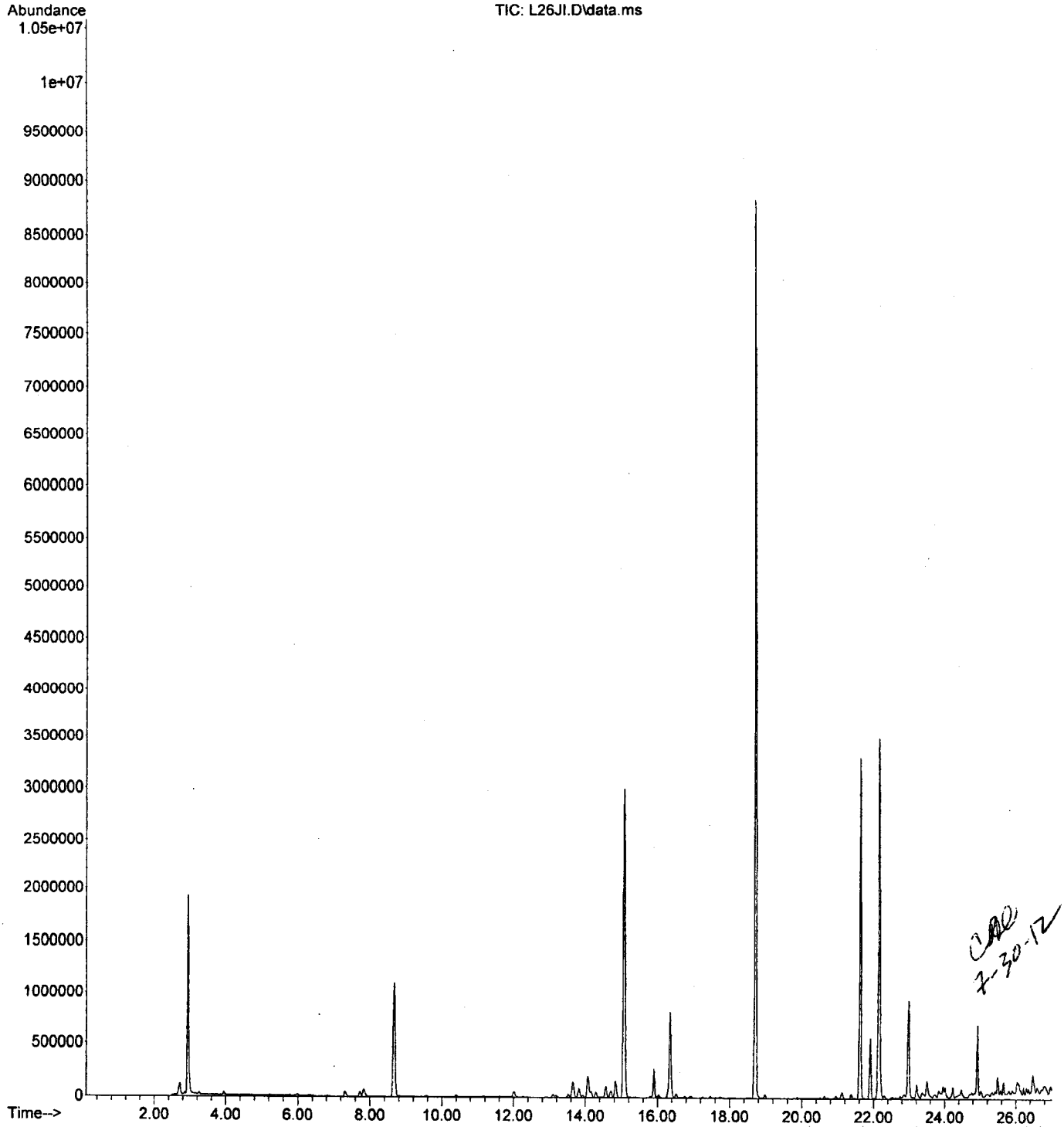
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7-30-12

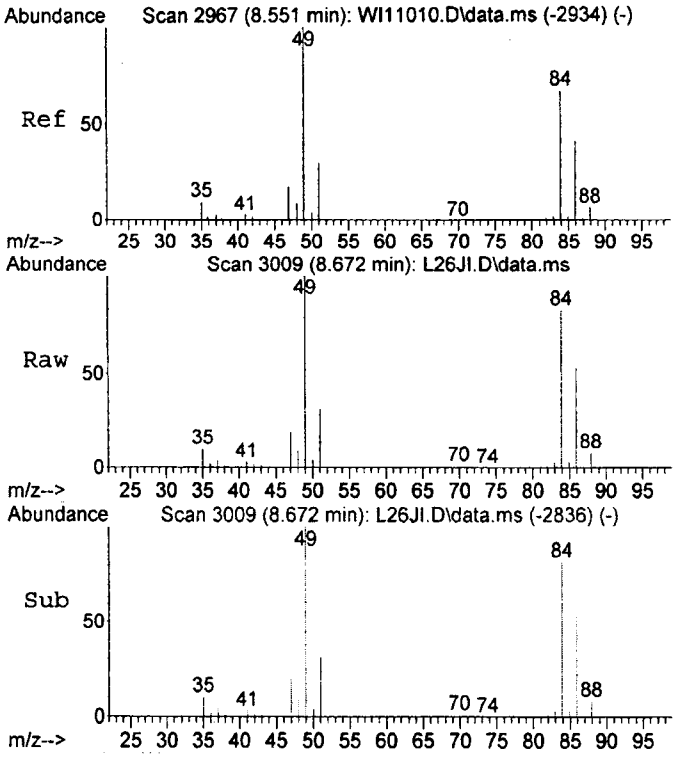
ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12029\
Data File : L26JI.D
Acq On : 26 Jul 2012 5:13 pm
Operator :
Sample : 12201021
Misc : 10.9202X 40ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 30 10:54:29 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration



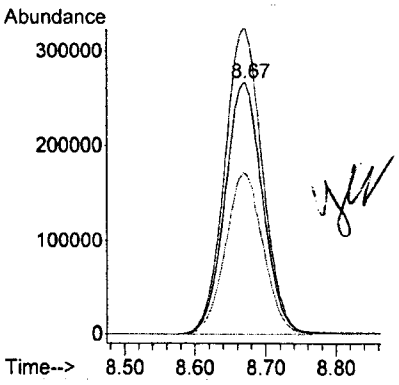
7-30-12

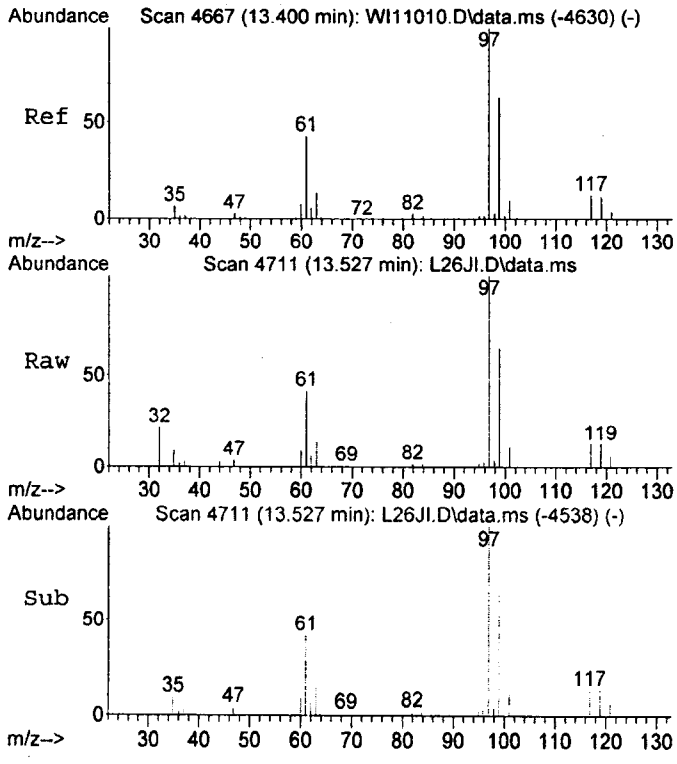


#3
Methylene Chloride
Concen: 327.79 ng
RT: 8.67 min Scan# 3009
Delta R.T. -0.006 min
Lab File: L26JI.D
Acq: 26 Jul 2012 5:13 pm

Tgt Ion: 84 Resp: 980337

Ion	Ratio	Lower	Upper
84	100		
49	121.9	111.6	171.6
86	64.4	33.6	93.6

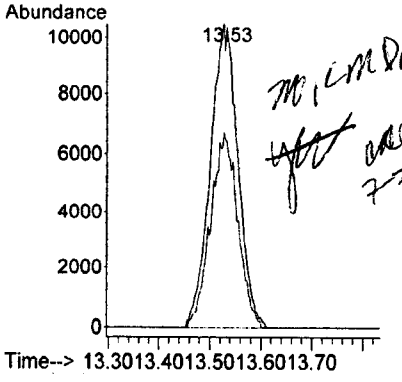




#10
1,1,1-Trichloroethane
Concen: 8.89 ng m
RT: 13.53 min Scan# 4711
Delta R.T. -0.006 min
Lab File: L26JI.D
Acq: 26 Jul 2012 5:13 pm

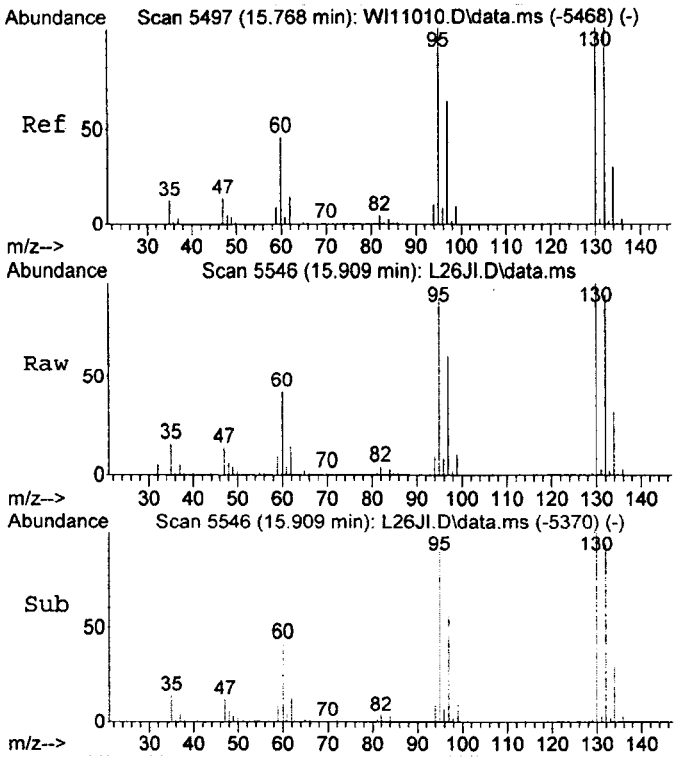
Tgt Ion: 97 Resp: 38999

Ion	Ratio	Lower	Upper
97	100		
99	64.0	32.9	92.9



7-30-12

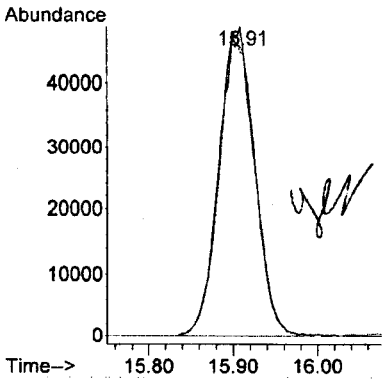
7-30-12

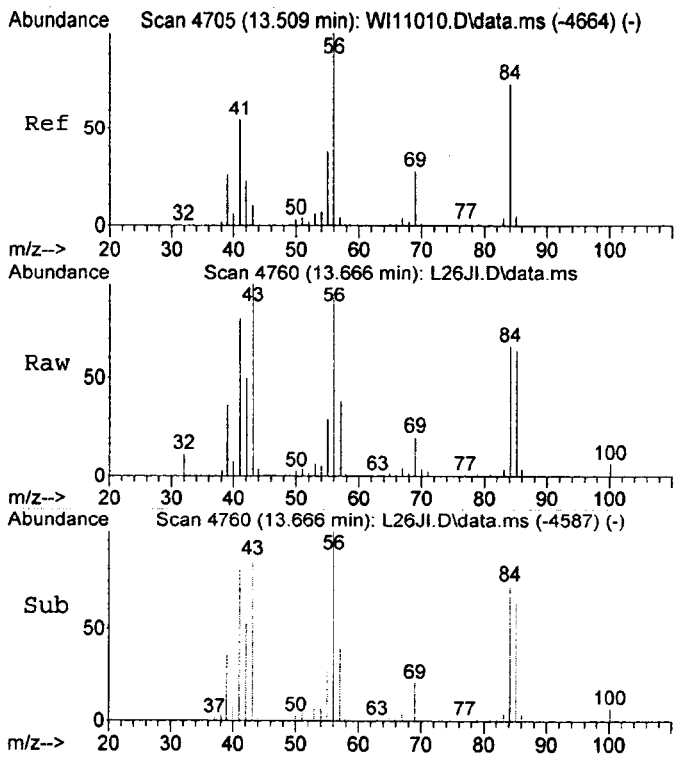


#12
Trichloroethene
Concen: 51.99 ng
RT: 15.91 min Scan# 5546
Delta R.T. 0.003 min
Lab File: L26JI.D
Acq: 26 Jul 2012 5:13 pm

Tgt Ion:130 Resp: 145097

Ion	Ratio	Lower	Upper
130	100		
132	93.5	71.2	131.2
95	91.9	72.7	132.7

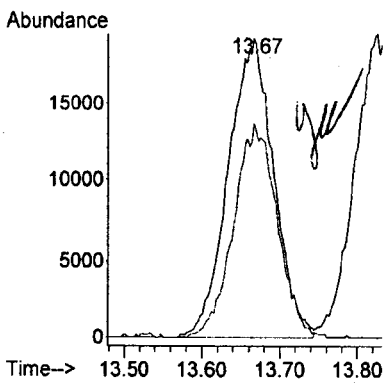




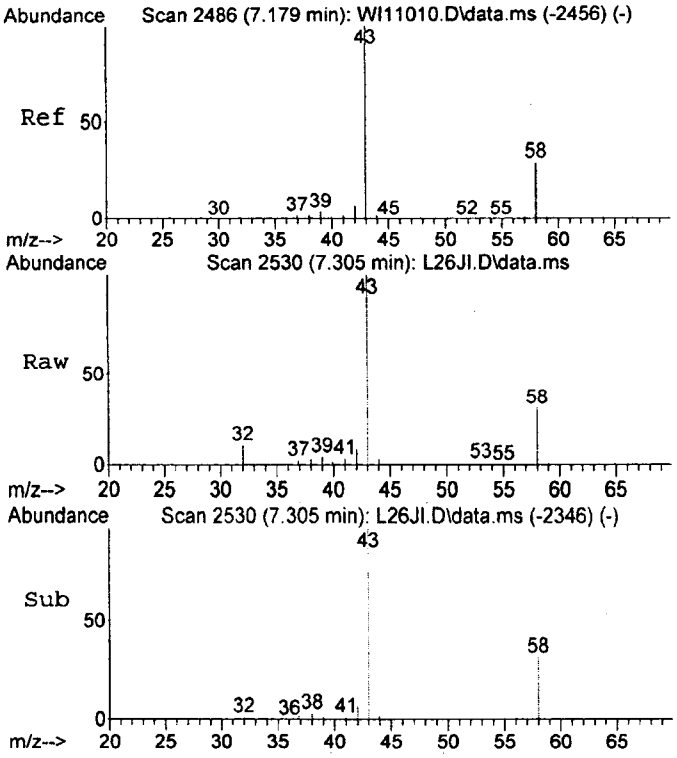
#13
Cyclohexane
Concen: 17.28 ng
RT: 13.67 min Scan# 4760
Delta R.T. -0.006 min
Lab File: L26JI.D
Acq: 26 Jul 2012 5:13 pm

Tgt Ion: 56 Resp: 77568

Ion	Ratio	Lower	Upper
56	100		
84	71.5	52.3	112.3



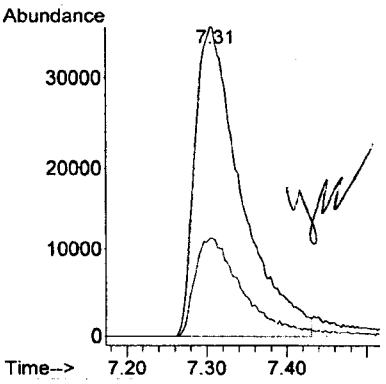
7-30-12

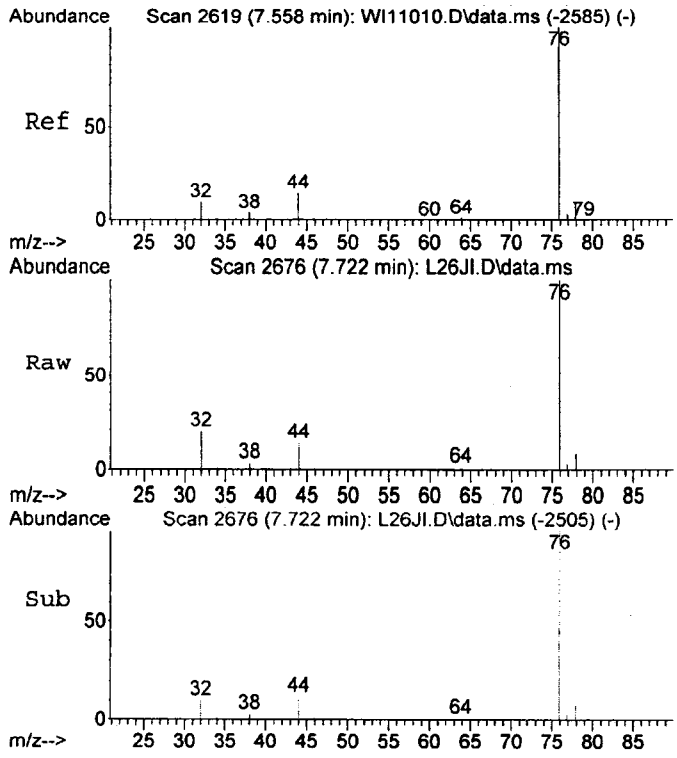


#15
Acetone
Concen: 22.55 ng
RT: 7.31 min Scan# 2530
Delta R.T. 0.026 min
Lab File: L26JI.D
Acq: 26 Jul 2012 5:13 pm

Tgt Ion: 43 Resp: 144601

Ion	Ratio	Lower	Upper
43	100		
58	29.9	0.7	60.7

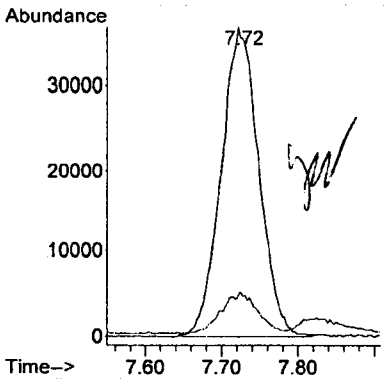




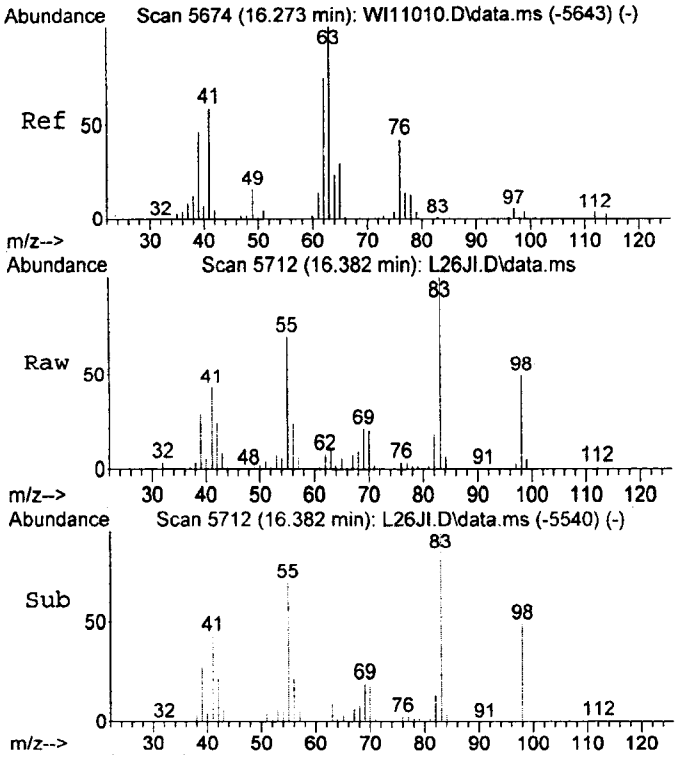
#21
Carbon Disulfide
Concen: 11.23 ng
RT: 7.72 min Scan# 2676
Delta R.T. -0.011 min
Lab File: L26JI.D
Acq: 26 Jul 2012 5:13 pm

Tgt Ion: 76 Resp: 126552

Ion	Ratio	Lower	Upper
76	100		
44	5.7	8.3	22.5#



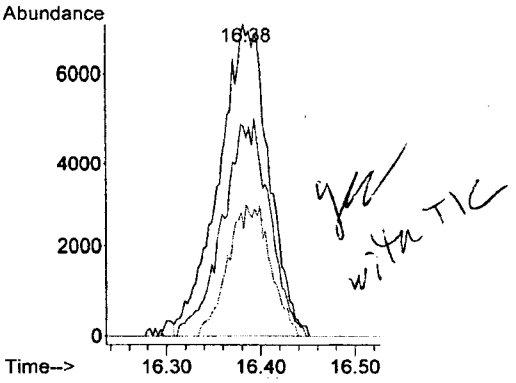
7-30-12



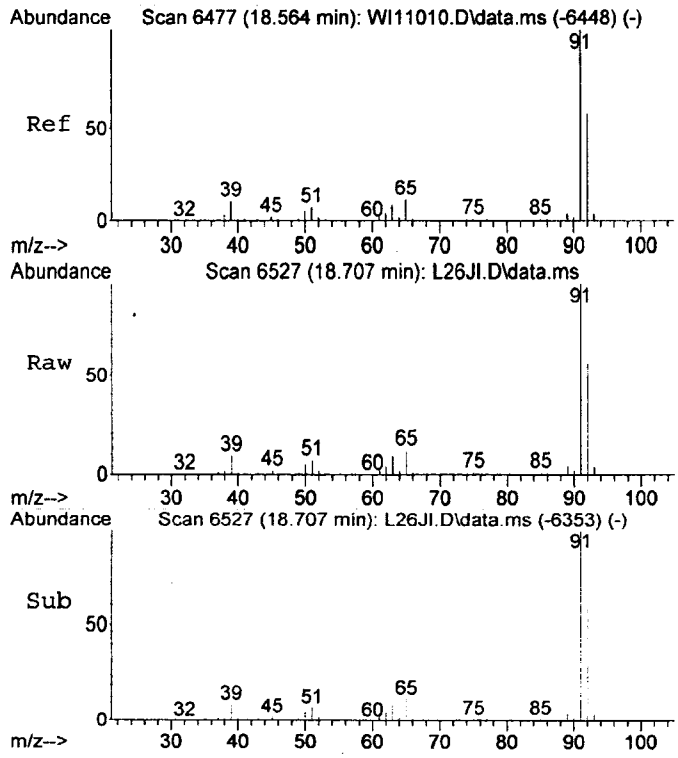
#22
1,2-Dichloropropane
Concen: 10.52 ng
RT: 16.38 min Scan# 5712
Delta R.T. -0.009 min
Lab File: L26JI.D
Acq: 26 Jul 2012 5:13 pm

Tgt Ion: 63 Resp: 26134

Ion	Ratio	Lower	Upper
63	100		
62	68.2	42.4	102.4
76	33.5	14.8	74.8



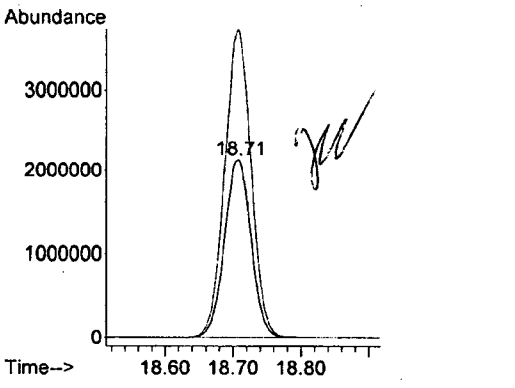
with TIC



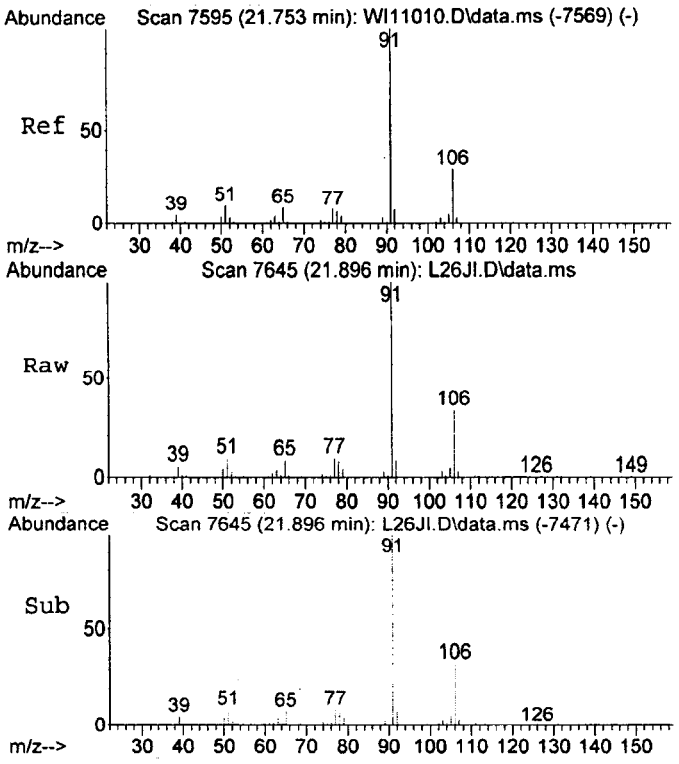
#28
Toluene
Concen: 965.44 ng
RT: 18.71 min Scan# 6527
Delta R.T. -0.003 min
Lab File: L26JI.D
Acq: 26 Jul 2012 5:13 pm

Tgt Ion: 92 Resp: 5814504

Ion	Ratio	Lower	Upper
92	100		
91	172.5	142.1	202.1



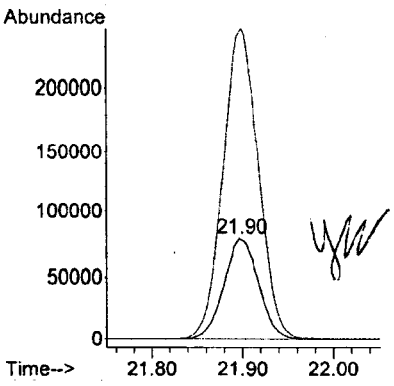
7-30-12

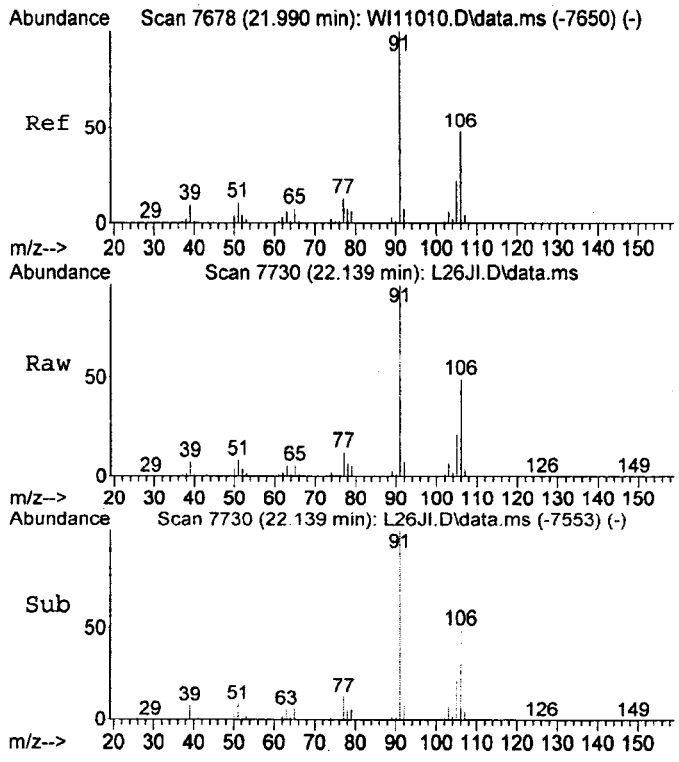


#30
Ethylbenzene
Concen: 62.56 ng
RT: 21.90 min Scan# 7645
Delta R.T. -0.003 min
Lab File: L26JI.D
Acq: 26 Jul 2012 5:13 pm

Tgt Ion:106 Resp: 213004

Ion	Ratio	Lower	Upper
106	100		
91	306.5	311.0	371.0#

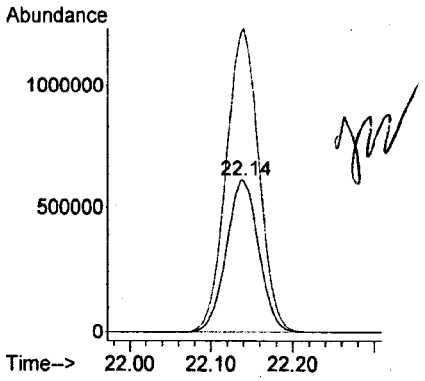




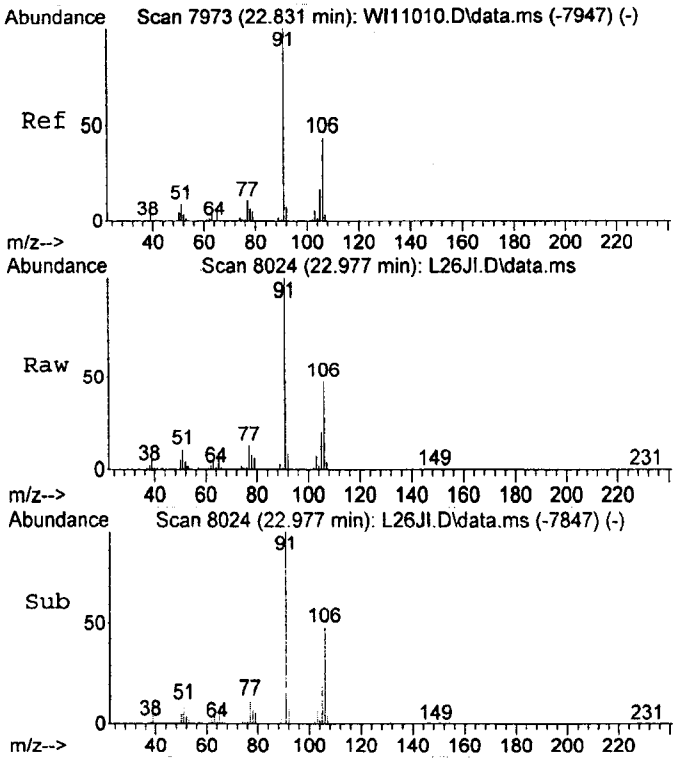
#31
Xylene (meta & para)
Concen: 401.09 ng
RT: 22.14 min Scan# 7730
Delta R.T. 0.006 min
Lab File: L26JI.D
Acq: 26 Jul 2012 5:13 pm

Tgt Ion:106 Resp: 1702485

Ion	Ratio	Lower	Upper
106	100		
91	202.3	190.6	250.6



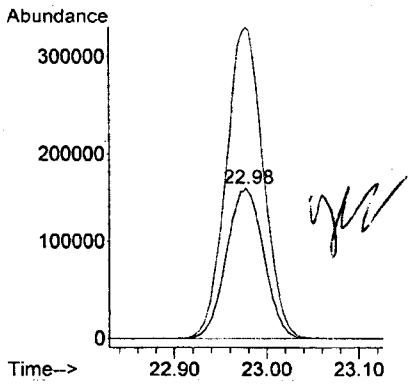
7-30-12

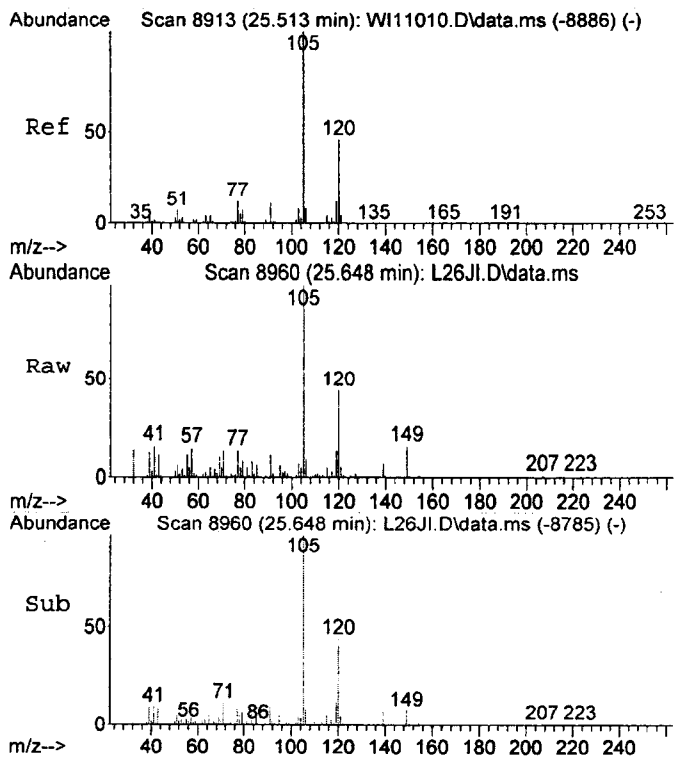


#32
Xylene (ortho)
Concen: 114.74 ng
RT: 22.98 min Scan# 8024
Delta R.T. 0.006 min
Lab File: L26JI.D
Acq: 26 Jul 2012 5:13 pm

Tgt Ion:106 Resp: 444217

Ion	Ratio	Lower	Upper
106	100		
91	207.0	201.0	261.0

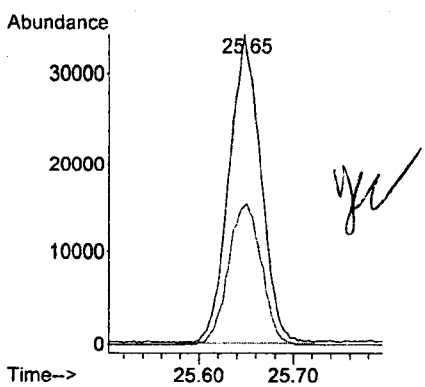




#34
1,2,4-Trimethylbenzene
Concen: 9.45 ng
RT: 25.65 min Scan# 8960
Delta R.T. -0.000 min
Lab File: L26JI.D
Acq: 26 Jul 2012 5:13 pm

Tgt Ion:105 Resp: 80365

Ion	Ratio	Lower	Upper
105	100		
120	44.3	14.2	74.2



ECL LSC Area Percent Report

Data Path : D:\ECL12029\
Data File : L26JI.D
Acq On : 26 Jul 2012 5:13 pm
Operator :
Sample : 12201021
Misc : 10.9202X 40ML
ALS Vial : 1 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\gcms-j\WPJD006.M
Title : WPJD006 CCP-TP-175 ICAL

Signal : TIC: L26JI.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	7.824	2695	2712	2754	rVB2	68861	294450	1.24%	0.414%
2	8.669	2973	3008	3044	rBV2	1097522	4075048	17.12%	5.733%
3	13.655	4732	4756	4787	rVB6	146439	571809	2.40%	0.804%
4	14.077	4875	4904	4905	rBV4	204061	437922	1.84%	0.616%
5	14.571	5048	5077	5102	rBV4	104532	385127	1.62%	0.542%
6	14.711	5103	5126	5147	rVV5	67307	249151	1.05%	0.350%
7	14.845	5147	5173	5205	rVB4	157605	606483	2.55%	0.853%
8	15.070	5222	5252	5292	rBV2	2991423	9739755	40.91%	13.701%
9	15.900	5524	5543	5567	rVB3	268400	808114	3.39%	1.137%
10	16.354	5655	5702	5740	rBV2	812725	3121701	13.11%	4.391%
11	18.707	6498	6527	6572	rBV	8820186	23808173	100.00%	33.492%
12	21.614	7520	7546	7576	rBV	3285107	8910595	37.43%	12.535%
13	21.899	7621	7646	7675	rVB2	558531	1548684	6.50%	2.179%
14	22.139	7706	7730	7770	rVV	3468503	10463652	43.95%	14.720%
15	22.978	8002	8024	8045	rBV2	903000	2488409	10.45%	3.501%
16	23.209	8087	8105	8122	rBV2	127572	349860	1.47%	0.492%
17	23.505	8192	8209	8234	rVB7	134656	415714	1.75%	0.585%
18	24.920	8689	8705	8723	rVB4	649900	1622123	6.81%	2.282%
19	25.485	8890	8903	8919	rVB2	167365	387194	1.63%	0.545%
20	25.648	8948	8960	8974	rBV3	111654	251519	1.06%	0.354%
21	26.472	9236	9249	9277	rVB4	163506	550206	2.31%	0.774%

Sum of corrected areas: 71085689

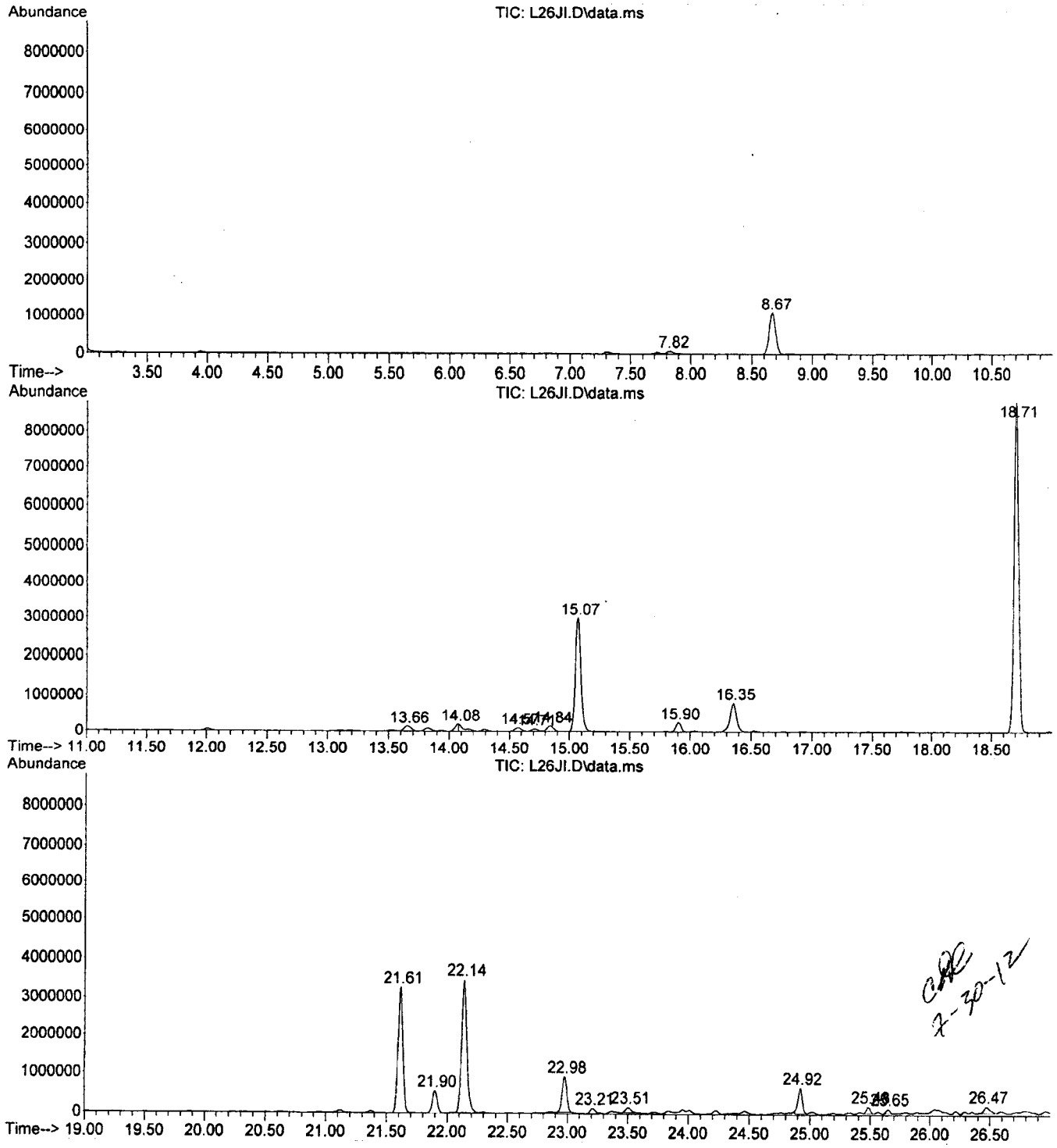
CAR 7-30-12

LSC Report - Integrated Chromatogram

Data Path : D:\ECL12029\
Data File : L26JI.D
Acq On : 26 Jul 2012 5:13 pm
Operator :
Sample : 12201021
Misc : 10.9202X 40ML
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL

TIC Library : C:\Database\Apendix8.l
TIC Integration Parameters: LSCINT.P



000154

Library Search Compound Report

Data Path : D:\ECL12029\
Data File : L26JI.D
Acq On : 26 Jul 2012 5:13 pm
Operator :
Sample : 12201021
Misc : 10.9202X 40ML
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL

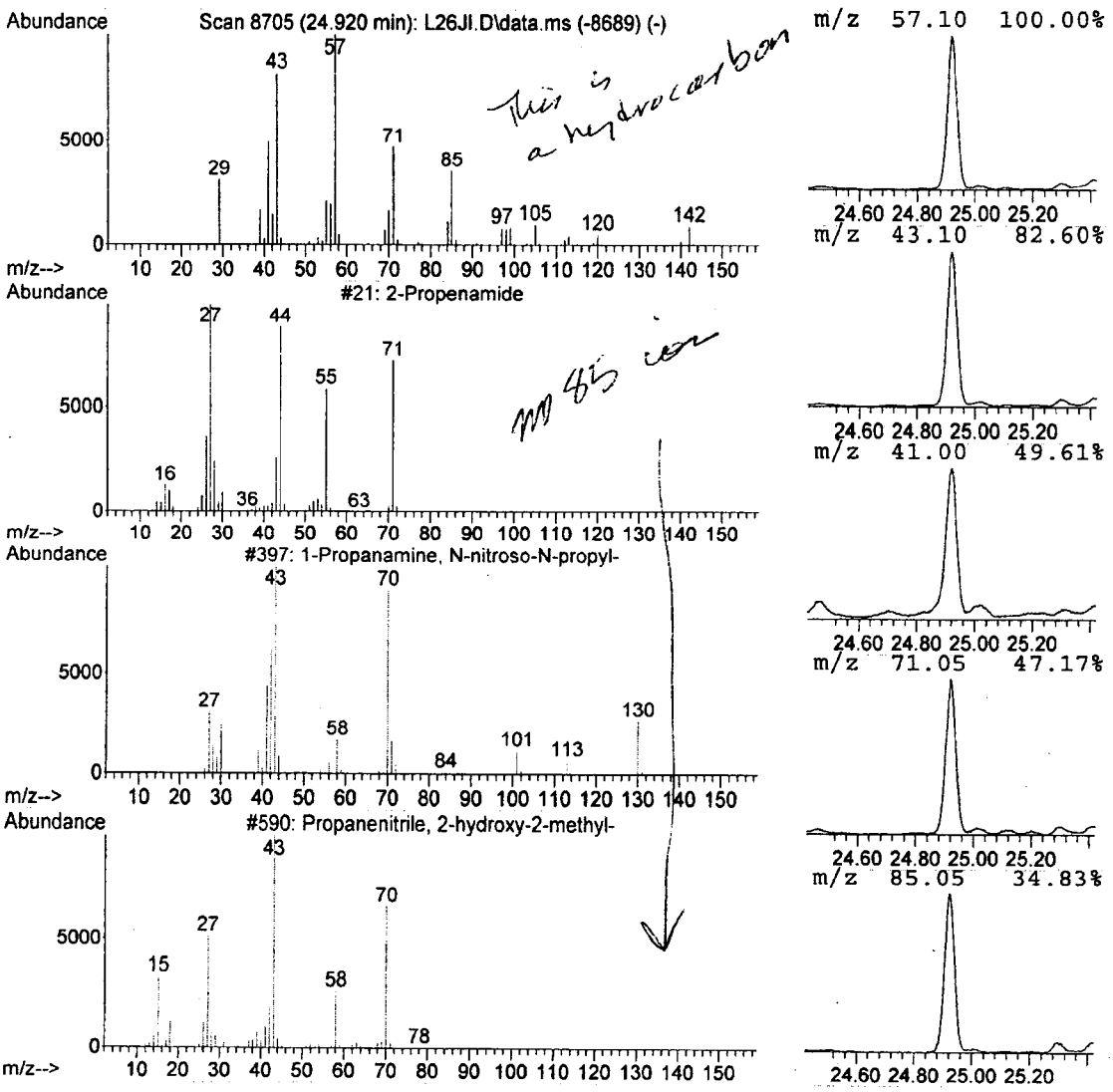
TIC Library : C:\Database\Apendix8.1
TIC Integration Parameters: LSCINT.P

****

Peak Number 1 2-Propenamide Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
24.92	89.20 ng	1622120	Chlorobenzene-d5	21.61

Hit# of 3	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Propenamide — Do not report	71	C3H5NO	000079-06-1	4
2	1-Propanamine, N-nitroso-N-propyl-	130	C6H14N2O	000621-64-7	1
3	Propanenitrile, 2-hydroxy-2-methyl-	85	C4H7NO	000075-86-5	1



CCP 7-30-12

ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12029\
Data File : L26JJ.D
Acq On : 26 Jul 2012 5:57 pm
Operator :
Sample : 12201019
Misc : 29.5752X 30ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 30 10:58:49 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	15.07	96	4386630	473.00	ng	0.00
24) Chlorobenzene-d5	21.61	117	2997035	490.00	ng	0.00
Target Compounds						Qvalue
8) Chloroform	13.11	83	38386	X7.77	ng	98
10) 1,1,1-Trichloroethane	13.54	97	2923415	657.59	ng	99
11) Carbon Tetrachloride	13.94	117	55512	13.92	ng	99
12) Trichloroethene	15.91	130	1665888	588.79	ng	94
15) Acetone	7.32	43	58081m	X8.93	ng	

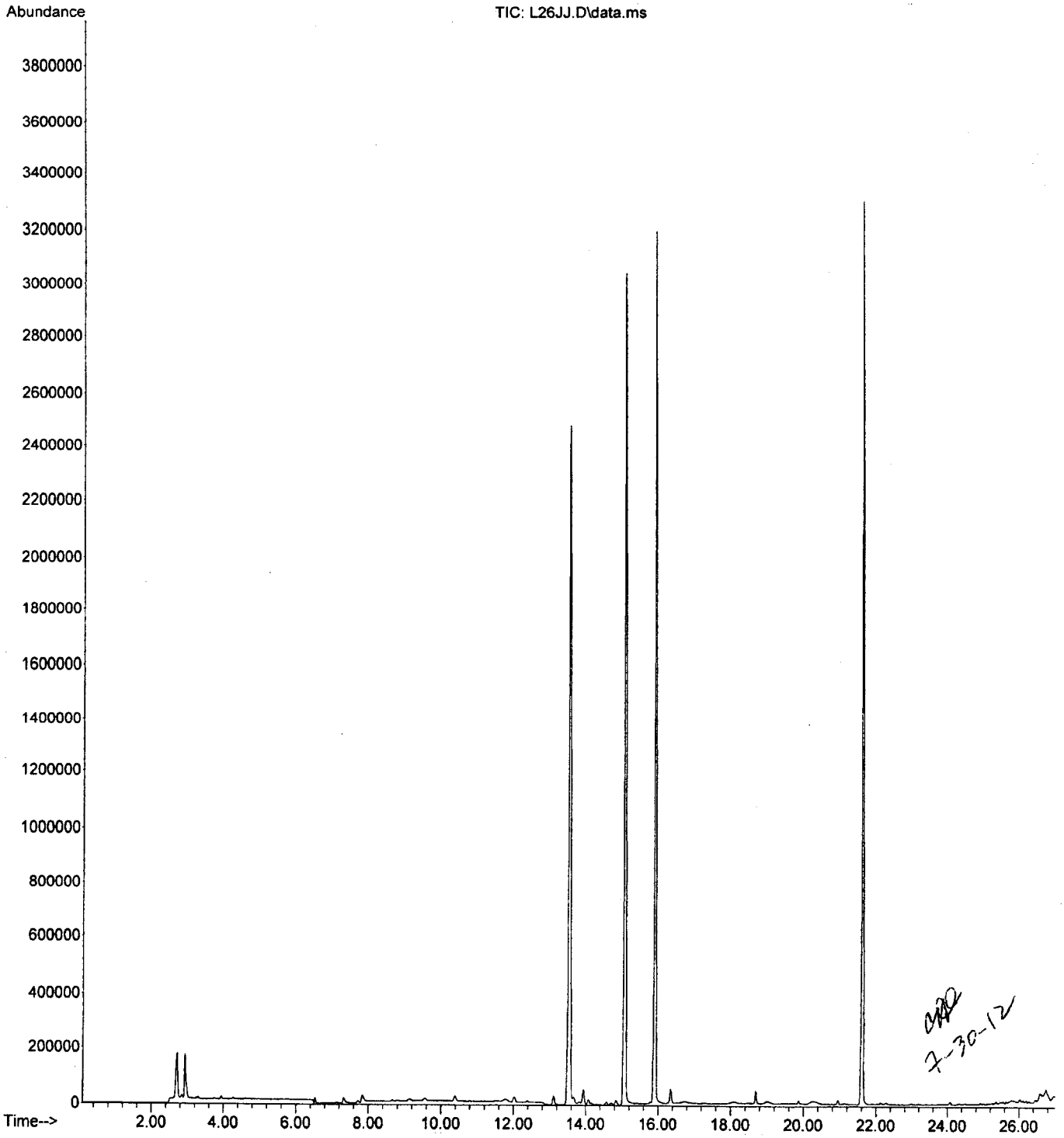
(#) = qualifier out of range (m) = manual integration (+) = signals summed

CAR 7-30-12

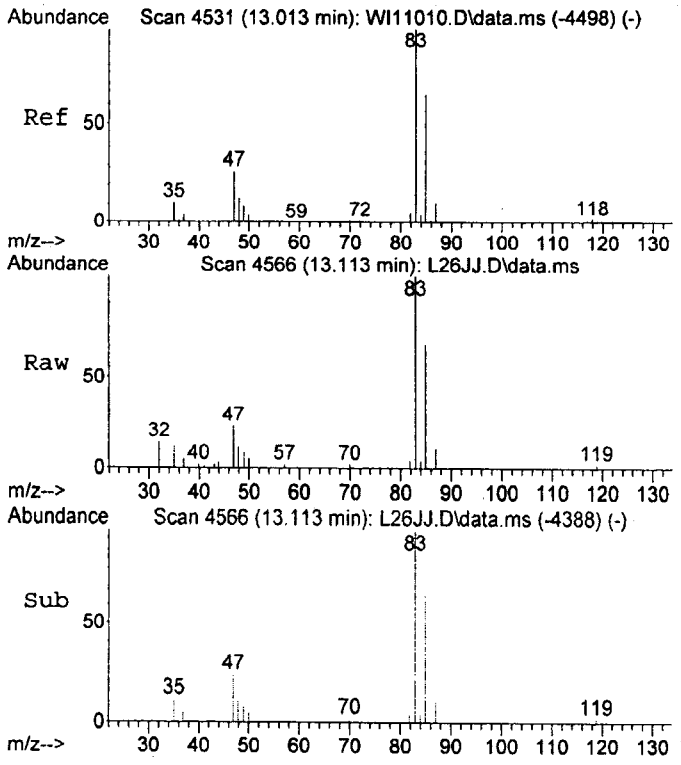
ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12029\
Data File : L26JJ.D
Acq On : 26 Jul 2012 5:57 pm
Operator :
Sample : 12201019
Misc : 29.5752X 30ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 30 10:58:49 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration



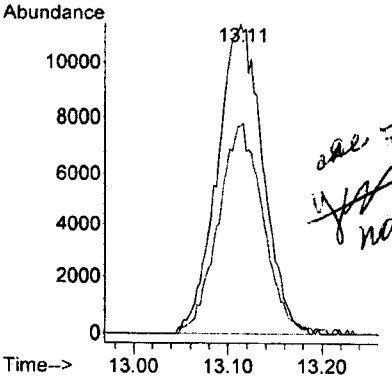
7-30-12



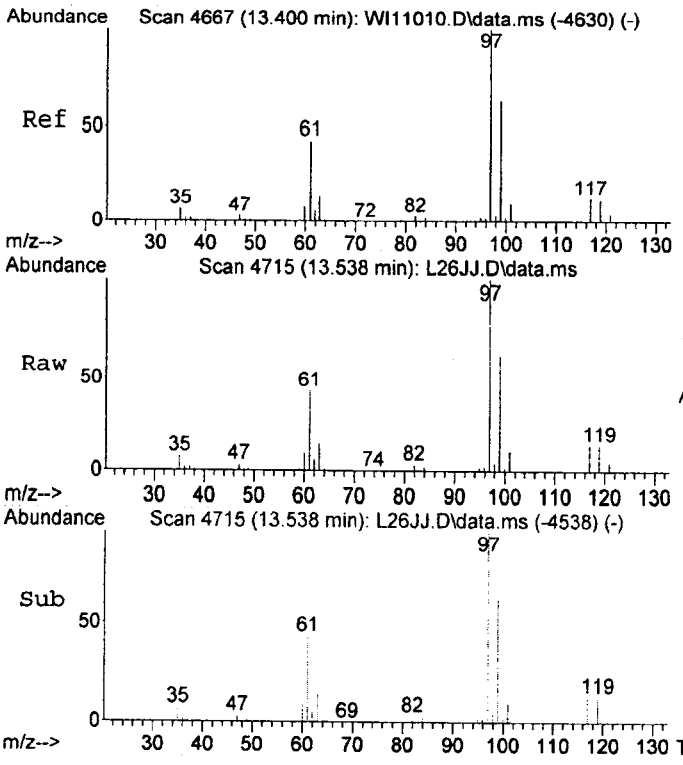
#8
Chloroform
Concen: 7.77 ng
RT: 13.11 min Scan# 4566
Delta R.T. 0.008 min
Lab File: L26JJ.D
Acq: 26 Jul 2012 5:57 pm

Tgt Ion: 83 Resp: 38386

Ion	Ratio	Lower	Upper
83	100		
85	66.9	35.3	95.3



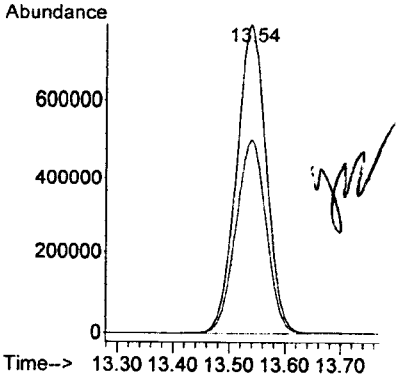
date 7-30-12
NO LMDL



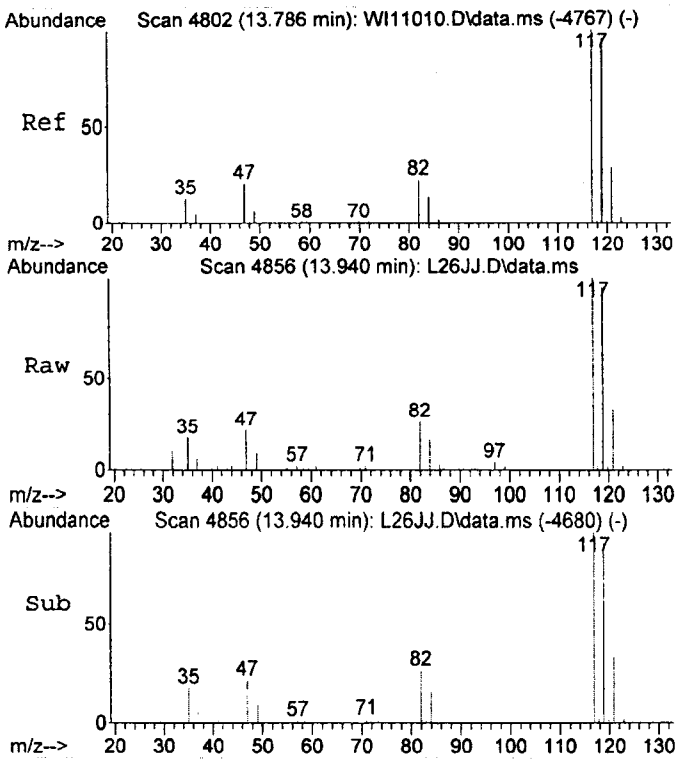
#10
1,1,1-Trichloroethane
Concen: 657.59 ng
RT: 13.54 min Scan# 4715
Delta R.T. 0.006 min
Lab File: L26JJ.D
Acq: 26 Jul 2012 5:57 pm

Tgt Ion: 97 Resp: 2923415

Ion	Ratio	Lower	Upper
97	100		
99	63.5	32.9	92.9



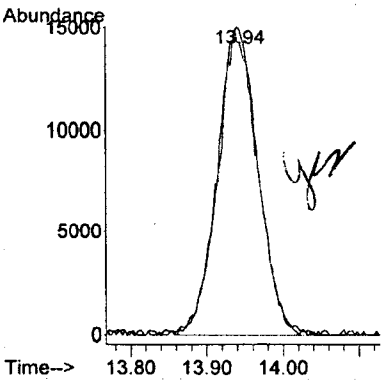
7-30-12

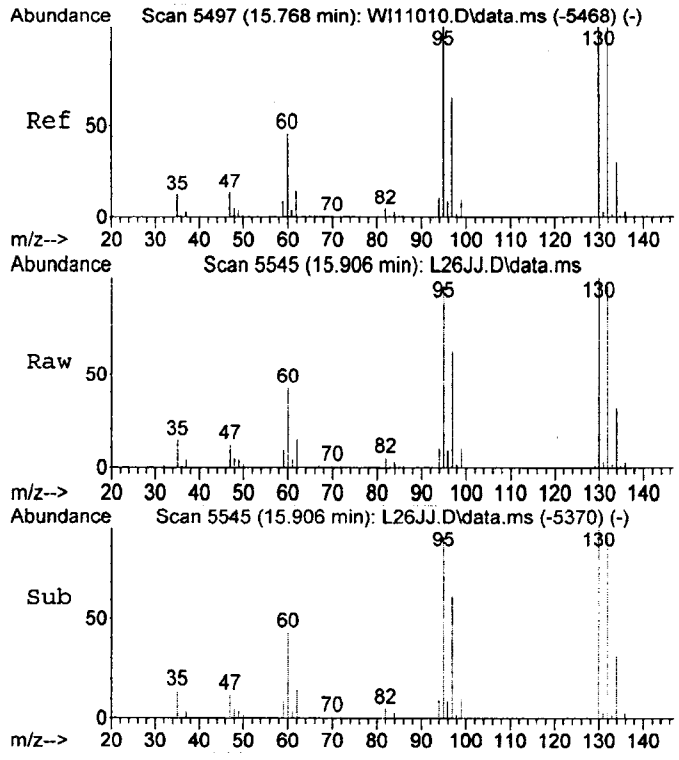


#11
Carbon Tetrachloride
Concen: 13.92 ng
RT: 13.94 min Scan# 4856
Delta R.T. 0.003 min
Lab File: L26JJ.D
Acq: 26 Jul 2012 5:57 pm

Tgt Ion:117 Resp: 55512

Ion	Ratio	Lower	Upper
117	100		
119	94.6	65.1	125.1

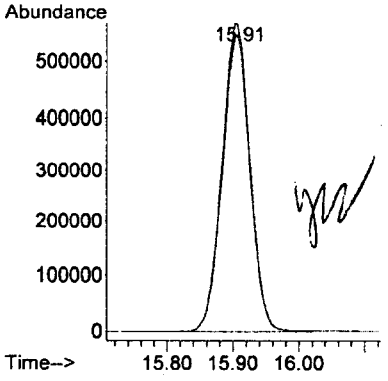




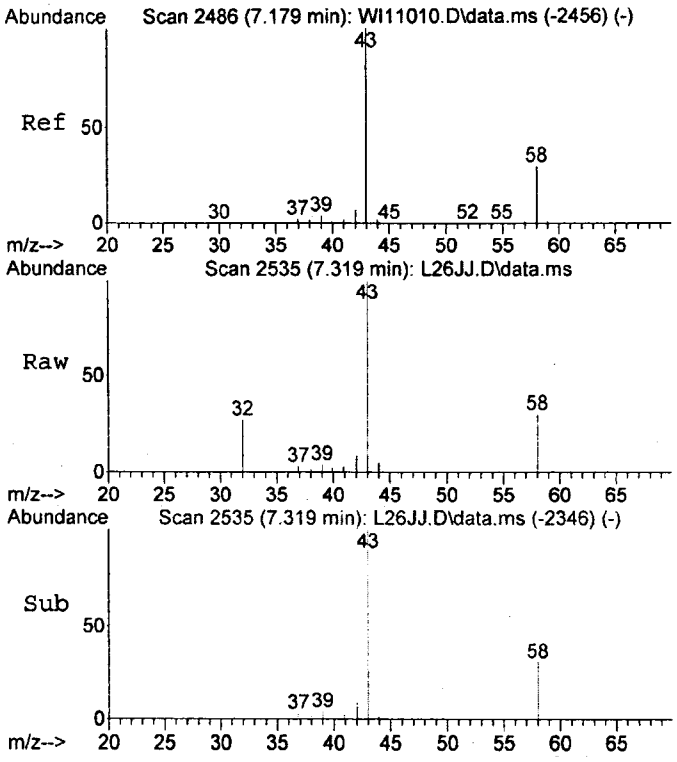
#12
Trichloroethene
Concen: 588.79 ng
RT: 15.91 min Scan# 5545
Delta R.T. -0.000 min
Lab File: L26JJ.D
Acq: 26 Jul 2012 5:57 pm

Tgt Ion:130 Resp: 1665888

Ion	Ratio	Lower	Upper
130	100		
132	96.3	71.2	131.2
95	95.8	72.7	132.7



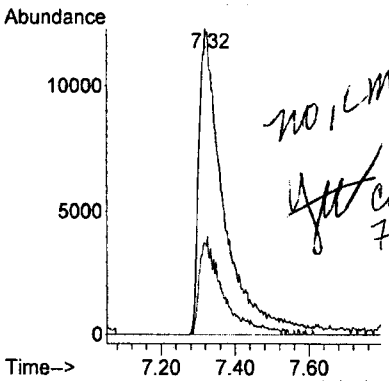
7-30-12



#15
Acetone
Concen: 8.93 ng m
RT: 7.32 min Scan# 2535
Delta R.T. 0.040 min
Lab File: L26JJ.D
Acq: 26 Jul 2012 5:57 pm

Tgt Ion: 43 Resp: 58081

Ion	Ratio	Lower	Upper
43	100		
58	14.9	0.7	60.7



no LMDL
CAE 7-30-12

CAE 7-30-12

Library Search Compound Report

Data Path : D:\ECL12029\
Data File : L26JJ.D
Acq On : 26 Jul 2012 5:57 pm
Operator :
Sample : 12201019
Misc : 29.5752X 30ML
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL

TIC Library : C:\Database\Apendix8.l
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected
****

7-30-12

ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12029\
Data File : L26JK.D
Acq On : 26 Jul 2012 6:40 pm
Operator :
Sample : 12201015
Misc : 53.6141X 25ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 30 11:00:33 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	15.07	96	4315288	473.00	ng		0.00
24) Chlorobenzene-d5	21.61	117	2942918	490.00	ng		0.00
Target Compounds							Qvalue
8) Chloroform	13.10	83	3218138	661.85	ng		100
13) Cyclohexane	13.67	56	511599	114.28	ng		90
15) Acetone	7.34	43	51048m	X7.98	ng		
18) Methanol	4.57	31	28577	14.97	ng	#	1
21) Carbon Disulfide	7.73	76	181241	16.13	ng		95

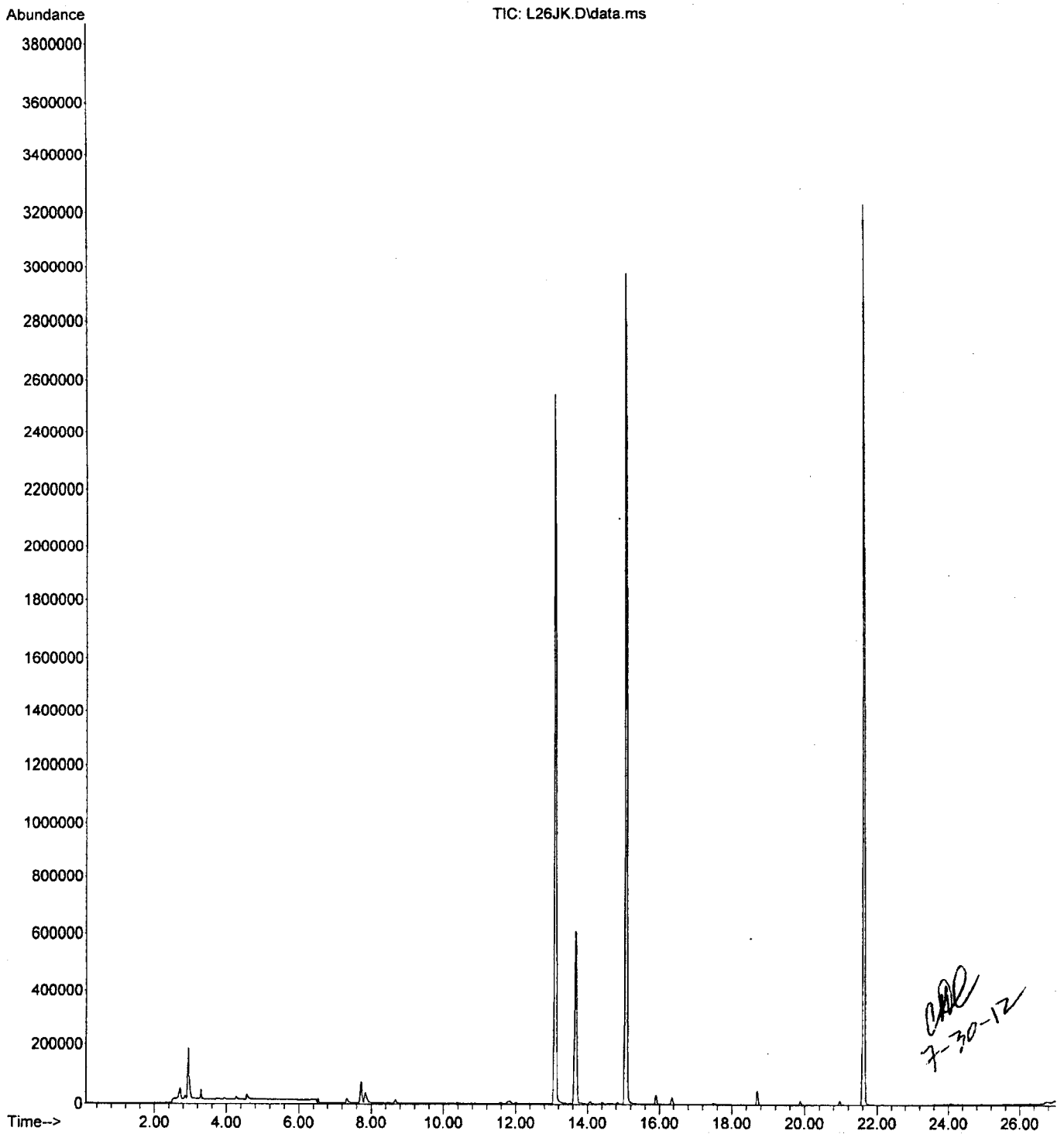
(#) = qualifier out of range (m) = manual integration (+) = signals summed

CAP 7-30-12

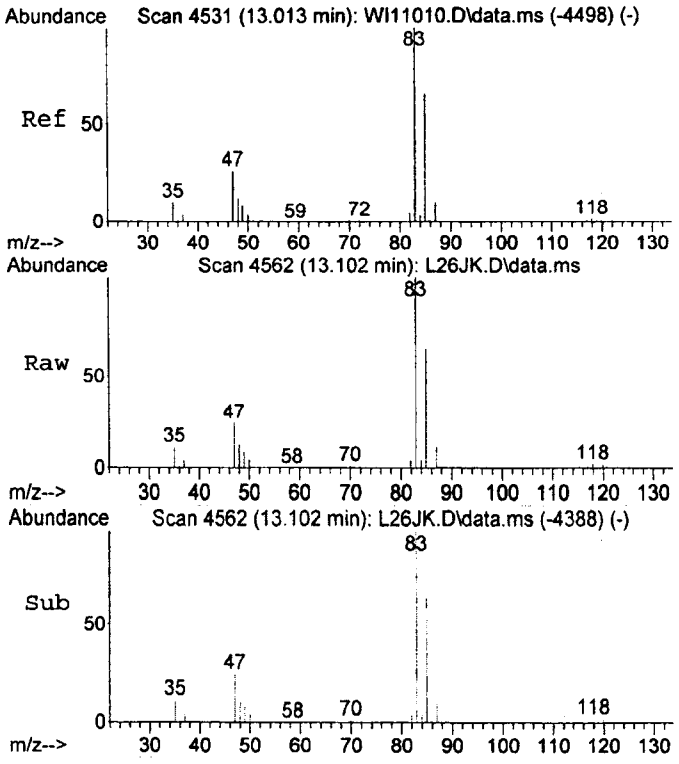
ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12029\
Data File : L26JK.D
Acq On : 26 Jul 2012 6:40 pm
Operator :
Sample : 12201015
Misc : 53.6141X 25ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 30 11:00:33 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration



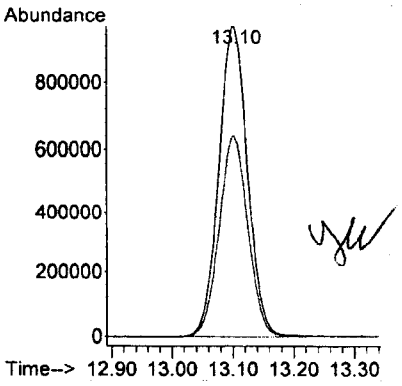
7-30-12

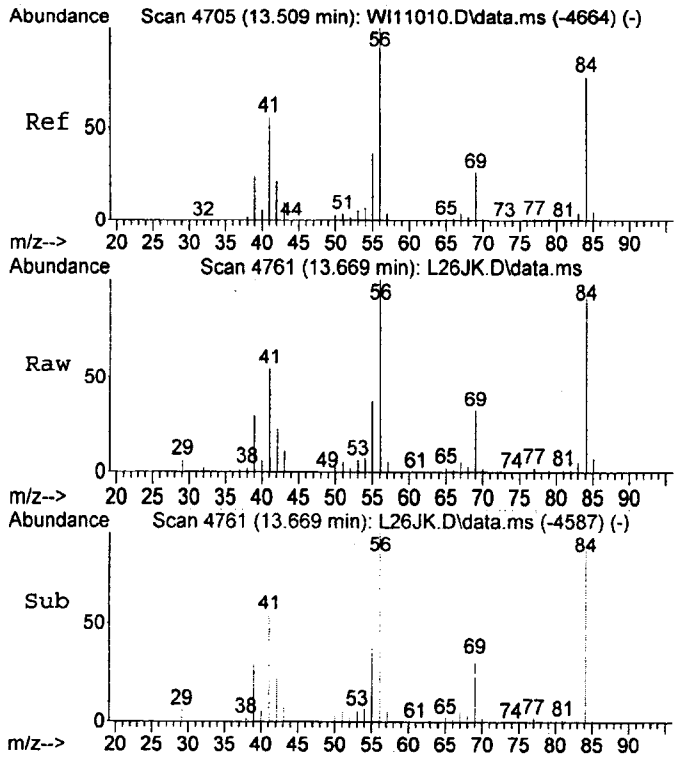


#8
Chloroform
Concen: 661.85 ng
RT: 13.10 min Scan# 4562
Delta R.T. -0.003 min
Lab File: L26JK.D
Acq: 26 Jul 2012 6:40 pm

Tgt Ion: 83 Resp: 3218138

Ion	Ratio	Lower	Upper
83	100		
85	65.0	35.3	95.3

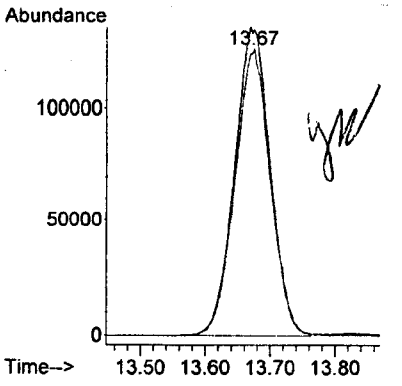




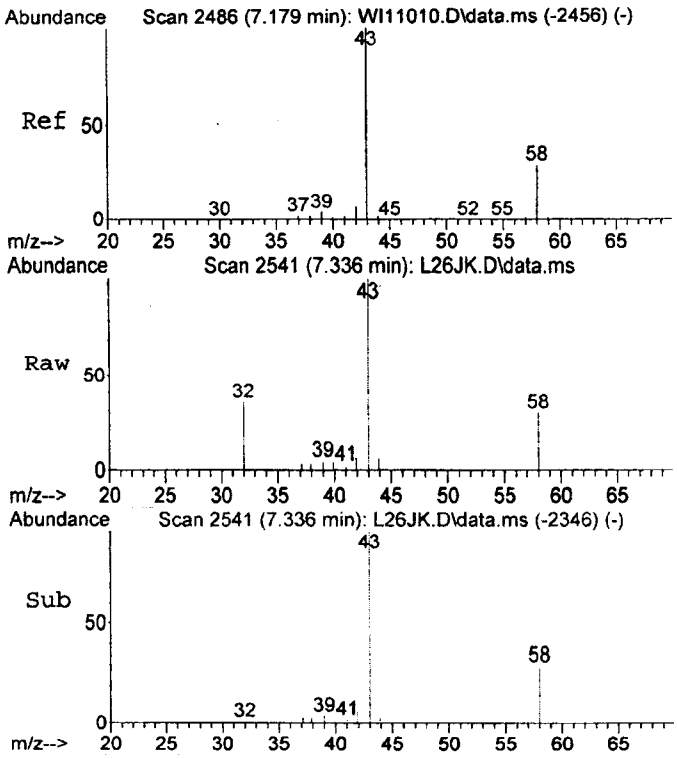
#13
Cyclohexane
Concen: 114.28 ng
RT: 13.67 min Scan# 4761
Delta R.T. -0.003 min
Lab File: L26JK.D
Acq: 26 Jul 2012 6:40 pm

Tgt Ion: 56 Resp: 511599

Ion	Ratio	Lower	Upper
56	100		
84	91.1	52.3	112.3



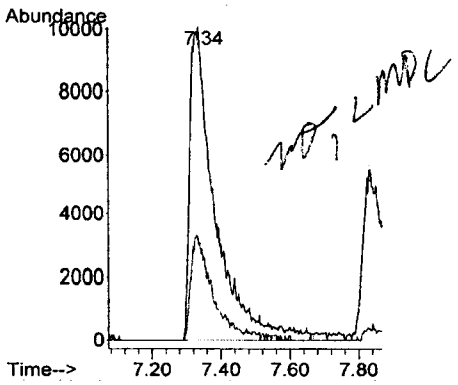
7-30-12

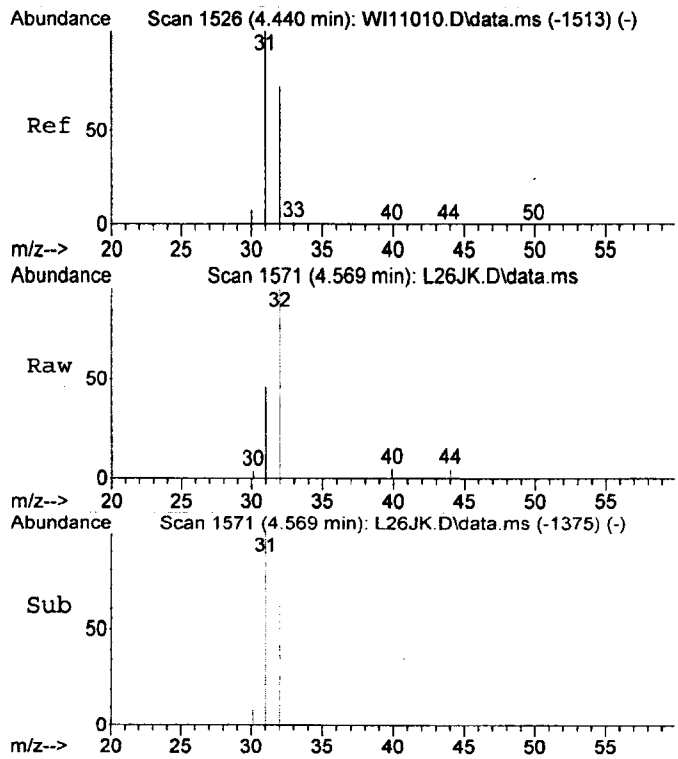


#15
Acetone
Concen: 7.98 ng m
RT: 7.34 min Scan# 2541
Delta R.T. 0.057 min
Lab File: L26JK.D
Acq: 26 Jul 2012 6:40 pm

Tgt Ion: 43 Resp: 51048

Ion	Ratio	Lower	Upper
43	100		
58	24.3	0.7	60.7

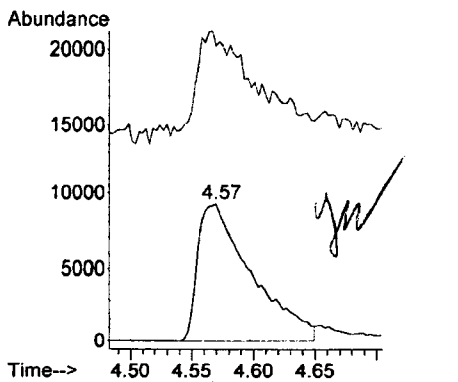




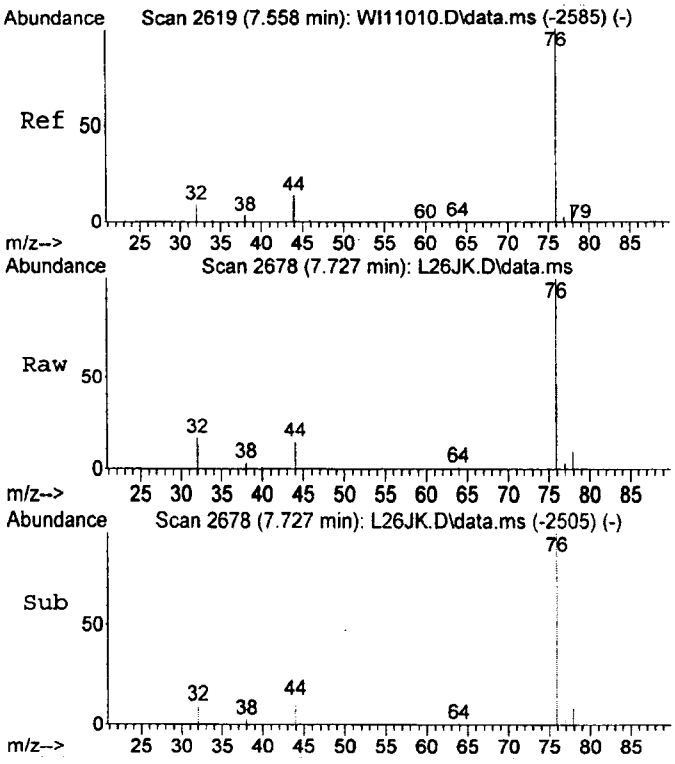
#18
Methanol
Concen: 14.97 ng
RT: 4.57 min Scan# 1571
Delta R.T. 0.060 min
Lab File: L26JK.D
Acq: 26 Jul 2012 6:40 pm

Tgt Ion: 31 Resp: 28577

Ion	Ratio	Lower	Upper
31	100		
32	218.8	40.0	100.0#



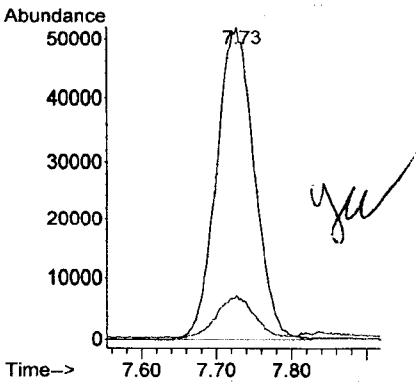
7-30-12



#21
Carbon Disulfide
Concen: 16.13 ng
RT: 7.73 min Scan# 2678
Delta R.T. -0.006 min
Lab File: L26JK.D
Acq: 26 Jul 2012 6:40 pm

Tgt Ion: 76 Resp: 181241

Ion	Ratio	Lower	Upper
76	100		
44	13.3	8.3	22.5



7-30-12

Library Search Compound Report

Data Path : D:\ECL12029\
Data File : L26JK.D
Acq On : 26 Jul 2012 6:40 pm
Operator :
Sample : 12201015
Misc : 53.6141X 25ML
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL

TIC Library : C:\Database\Apendix8.l
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected
****

CD 7-30-12

ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12029\
Data File : L26JL.D
Acq On : 26 Jul 2012 7:23 pm
Operator :
Sample : 12201016
Misc : 36.9371X 25ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 30 11:03:06 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	15.07	96	4279587	473.00	ng		0.00
24) Chlorobenzene-d5	21.60	117	2919866	490.00	ng		0.00
Target Compounds							Qvalue
3) Methylene Chloride	8.66	84	2043552	690.92	ng		88
12) Trichloroethene	15.91	130	29825	10.80	ng		91
15) Acetone	7.30	43	173091	27.29	ng		98
18) Methanol	4.57	31	33513	17.70	ng	#	1
22) 1,2-Dichloropropane	16.38	63	851411	346.51	ng		98
28) Toluene	18.70	92	83981	14.32	ng		96

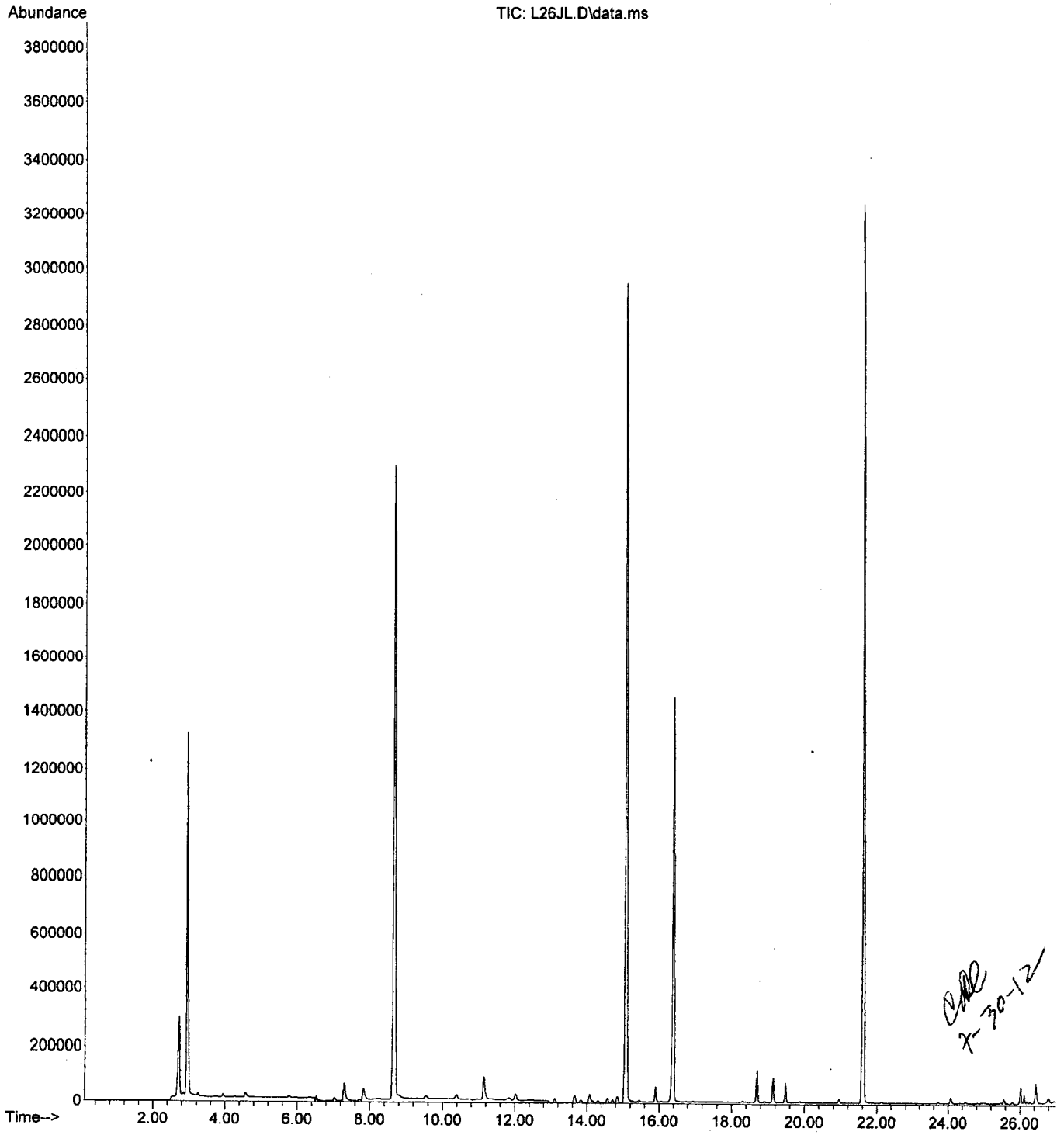
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7-30-12

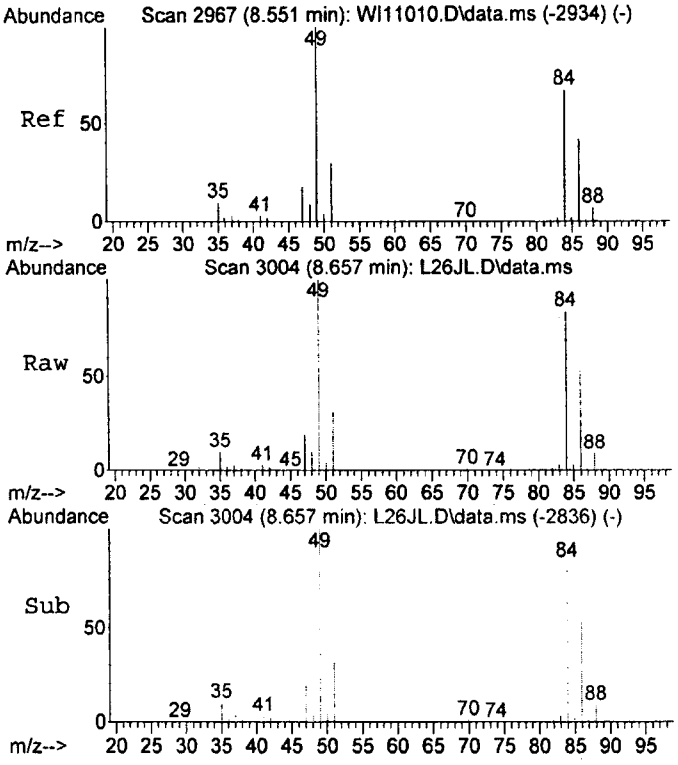
ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12029\
Data File : L26JL.D
Acq On : 26 Jul 2012 7:23 pm
Operator :
Sample : 12201016
Misc : 36.9371X 25ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 30 11:03:06 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration



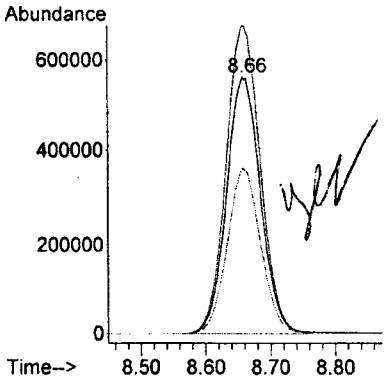
7-30-12

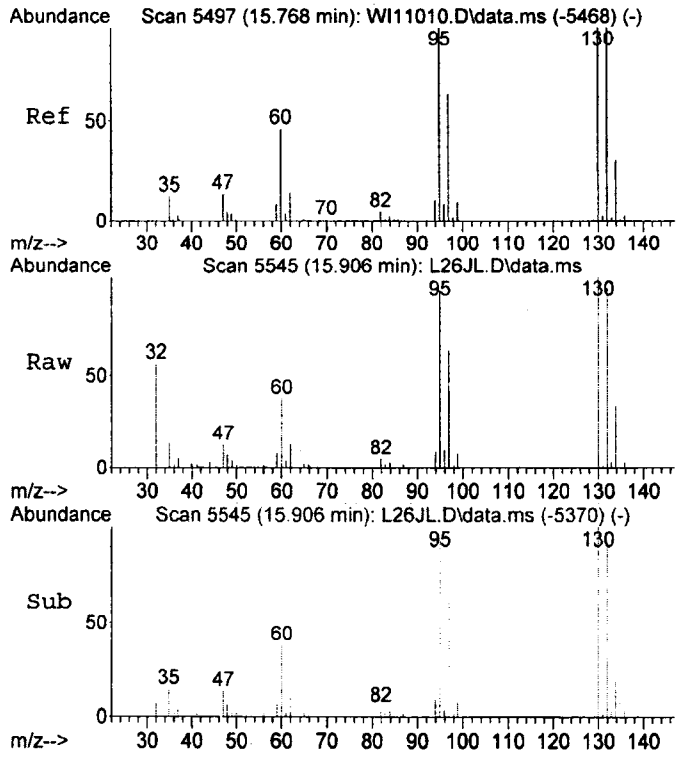


#3
Methylene Chloride
Concen: 690.92 ng
RT: 8.66 min Scan# 3004
Delta R.T. -0.020 min
Lab File: L26JL.D
Acq: 26 Jul 2012 7:23 pm

Tgt Ion: 84 Resp: 2043552

Ion	Ratio	Lower	Upper
84	100		
49	120.5	111.6	171.6
86	64.2	33.6	93.6

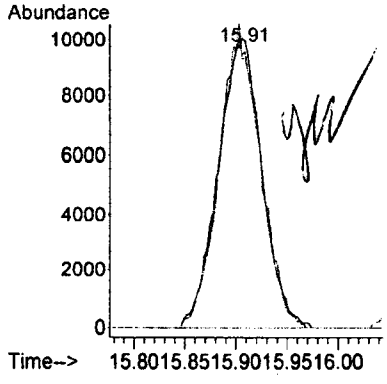




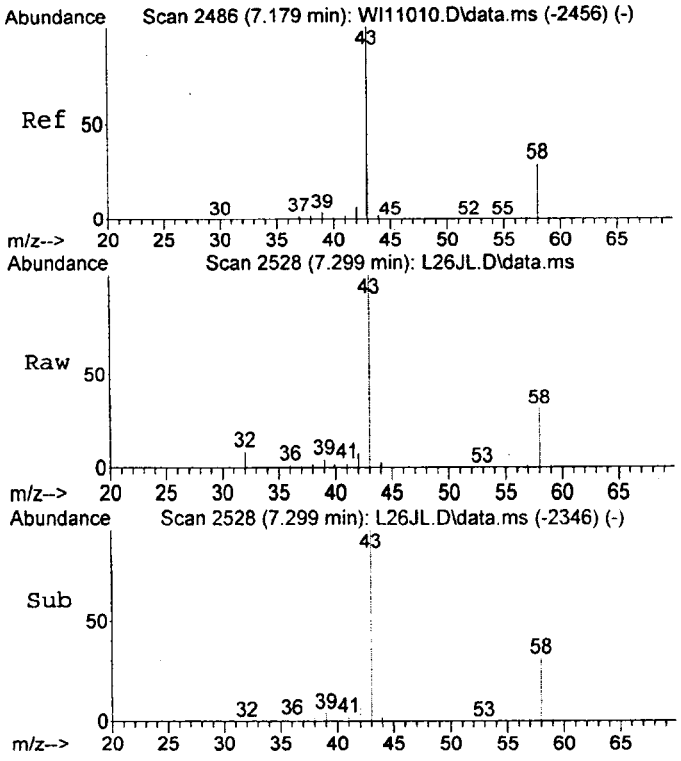
#12
Trichloroethene
Concen: 10.80 ng
RT: 15.91 min Scan# 5545
Delta R.T. -0.000 min
Lab File: L26JL.D
Acq: 26 Jul 2012 7:23 pm

Tgt Ion:130 Resp: 29825

Ion	Ratio	Lower	Upper
130	100		
132	94.0	71.2	131.2
95	92.5	72.7	132.7



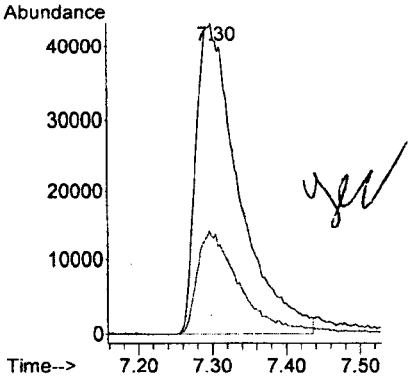
7-30-12

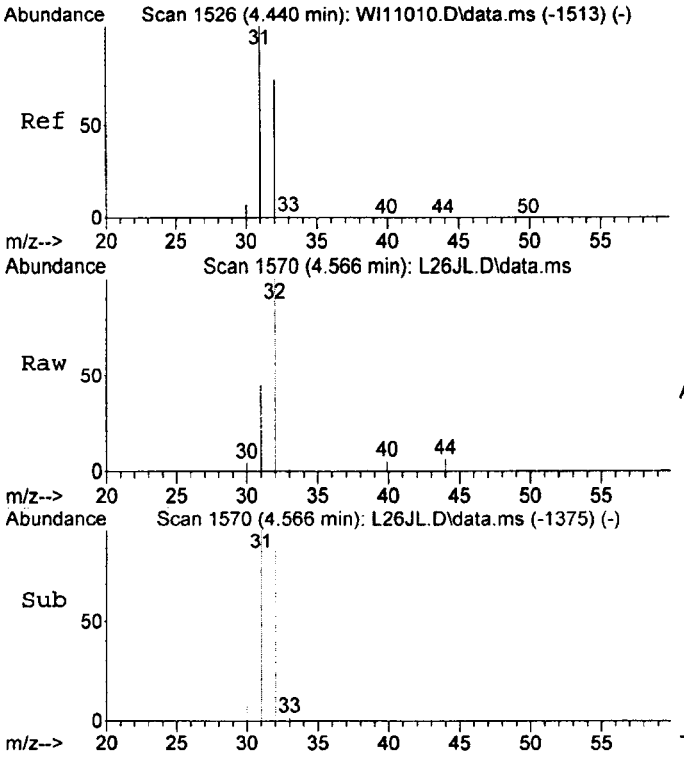


#15
Acetone
Concen: 27.29 ng
RT: 7.30 min Scan# 2528
Delta R.T. 0.020 min
Lab File: L26JL.D
Acq: 26 Jul 2012 7:23 pm

Tgt Ion: 43 Resp: 173091

Ion	Ratio	Lower	Upper
43	100		
58	29.7	0.7	60.7

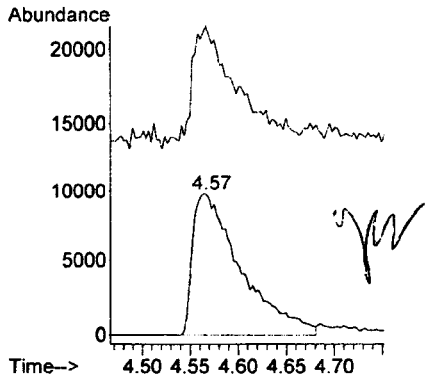




#18
Methanol
Concen: 17.70 ng
RT: 4.57 min Scan# 1570
Delta R.T. 0.057 min
Lab File: L26JL.D
Acq: 26 Jul 2012 7:23 pm

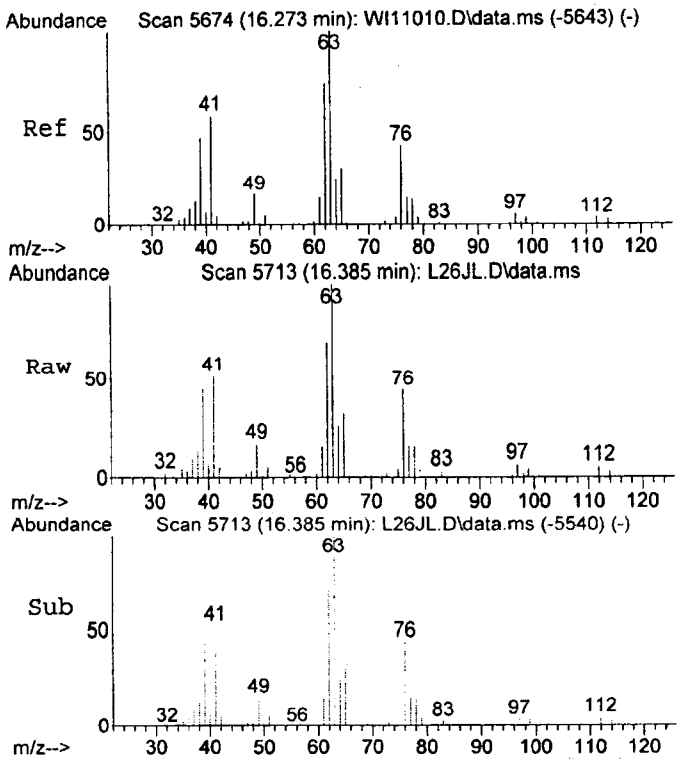
Tgt Ion: 31 Resp: 33513

Ion	Ratio	Lower	Upper
31	100		
32	221.7	40.0	100.0#



7-30-12

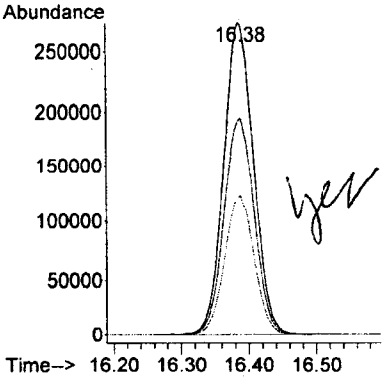
000171

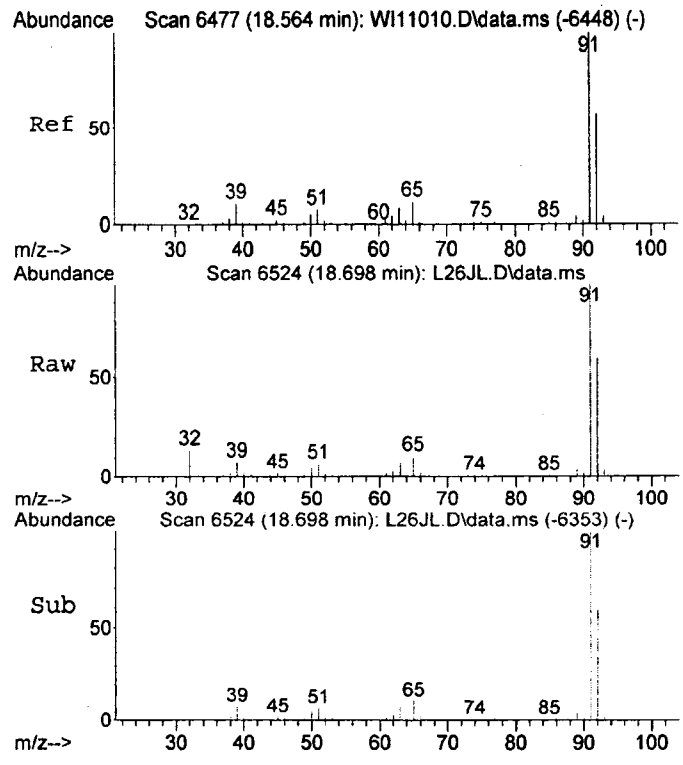


#22
1,2-Dichloropropane
Concen: 346.51 ng
RT: 16.38 min Scan# 5713
Delta R.T. -0.006 min
Lab File: L26JL.D
Acq: 26 Jul 2012 7:23 pm

Tgt Ion: 63 Resp: 851411

Ion	Ratio	Lower	Upper
63	100		
62	70.2	42.4	102.4
76	43.6	14.8	74.8

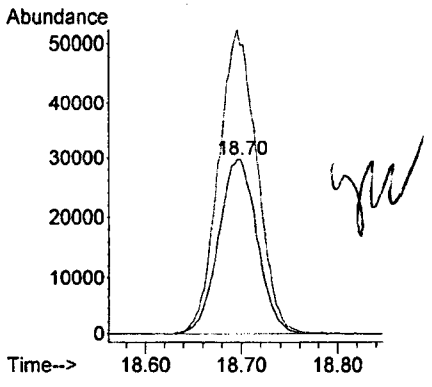




#28
Toluene
Concen: 14.32 ng
RT: 18.70 min Scan# 6524
Delta R.T. -0.012 min
Lab File: L26JL.D
Acq: 26 Jul 2012 7:23 pm

Tgt Ion: 92 Resp: 83981

Ion	Ratio	Lower	Upper
92	100		
91	167.1	142.1	202.1



000172

Library Search Compound Report

Data Path : D:\ECL12029\
Data File : L26JL.D
Acq On : 26 Jul 2012 7:23 pm
Operator :
Sample : 12201016
Misc : 36.9371X 25ML
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL

TIC Library : C:\Database\Apendix8.l
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected
****

7-30-12

ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12029\
Data File : L26JM.D
Acq On : 26 Jul 2012 8:07 pm
Operator :
Sample : 12201017
Misc : 111.7629X 30ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 30 11:05:55 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	15.07	96	4210838	473.00	ng	0.00
24) Chlorobenzene-d5	21.61	117	2891695	490.00	ng	0.00
Target Compounds						Qvalue
10) 1,1,1-Trichloroethane	13.53	97	1720332	403.12	ng	99
12) Trichloroethene	15.91	130	1829110	673.47	ng	94
15) Acetone	7.31	43	176751	28.32	ng	67
17) 1-Butanol	15.79	56	22292	9.24	ng	98
26) Tetrachloroethene	19.88	164	42323	20.07	ng	90

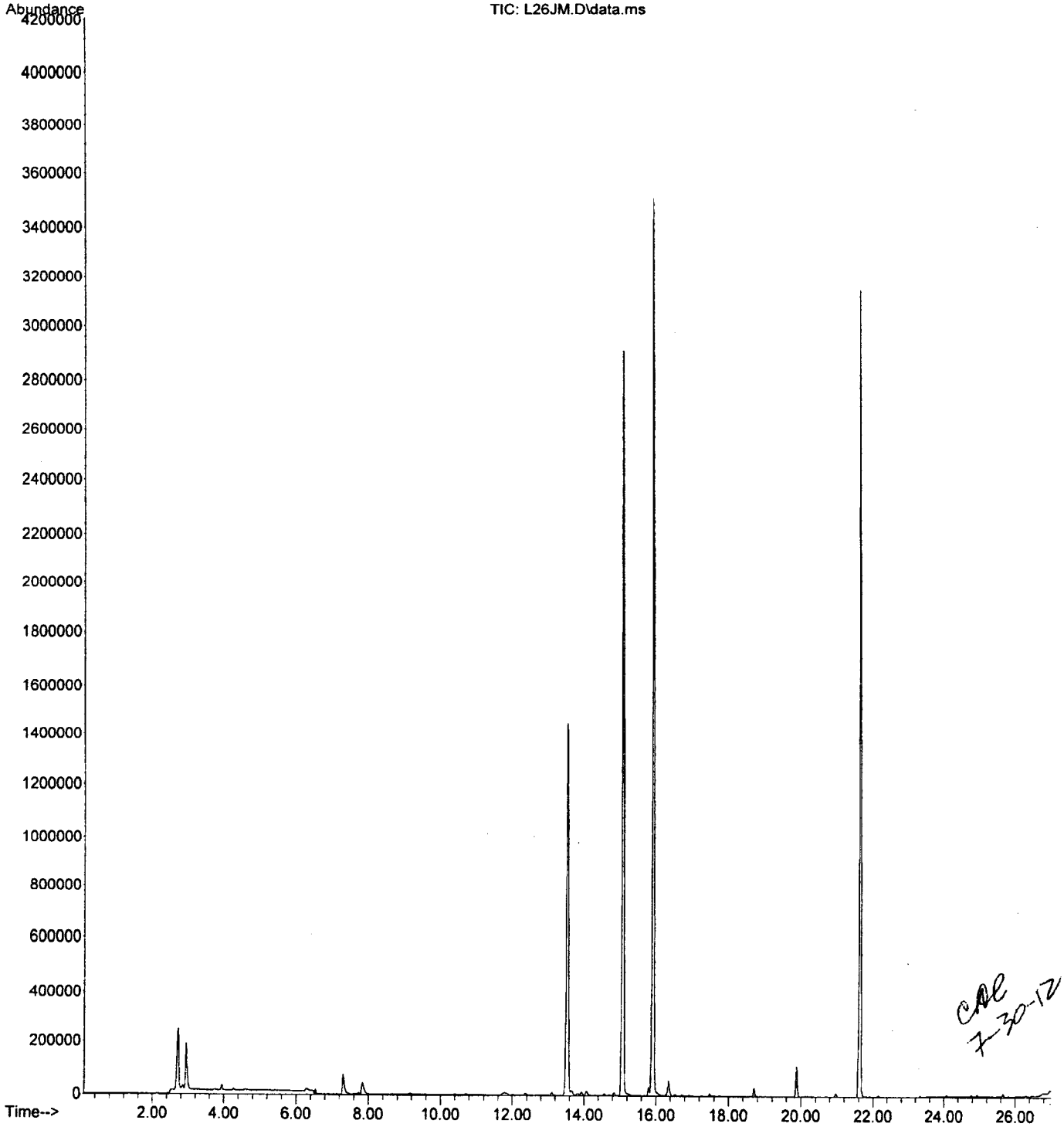
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7-30-12

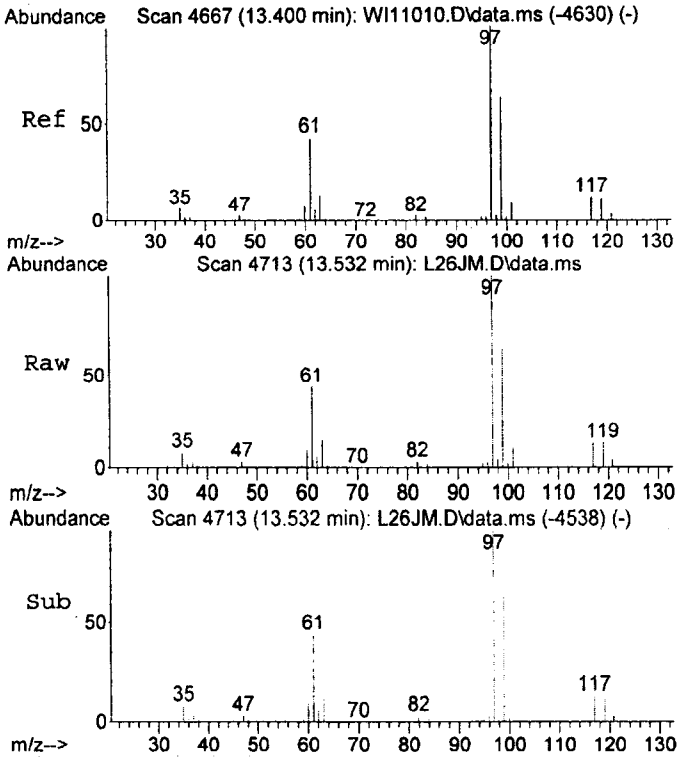
ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12029\
Data File : L26JM.D
Acq On : 26 Jul 2012 8:07 pm
Operator :
Sample : 12201017
Misc : 111.7629X 30ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 30 11:05:55 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration



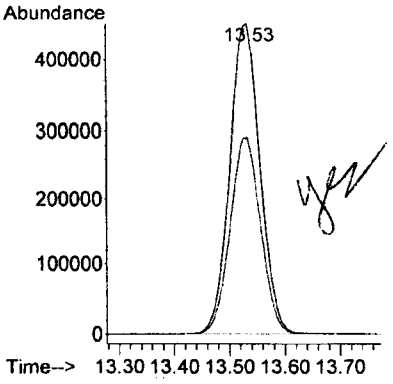
CAL 7-30-12

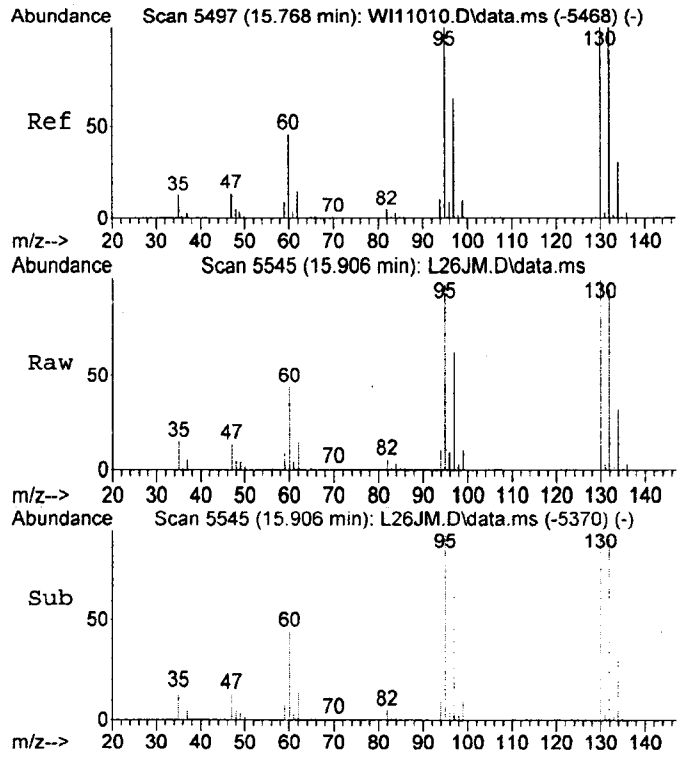


#10
1,1,1-Trichloroethane
Concen: 403.12 ng
RT: 13.53 min Scan# 4713
Delta R.T. -0.000 min
Lab File: L26JM.D
Acq: 26 Jul 2012 8:07 pm

Tgt Ion: 97 Resp: 1720332

Ion	Ratio	Lower	Upper
97	100		
99	64.0	32.9	92.9

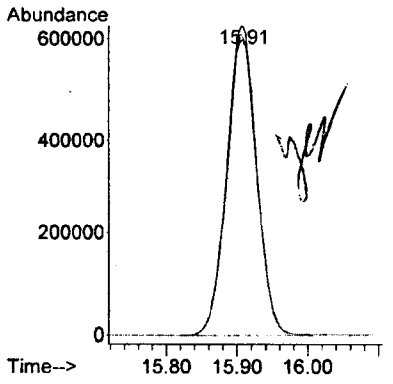




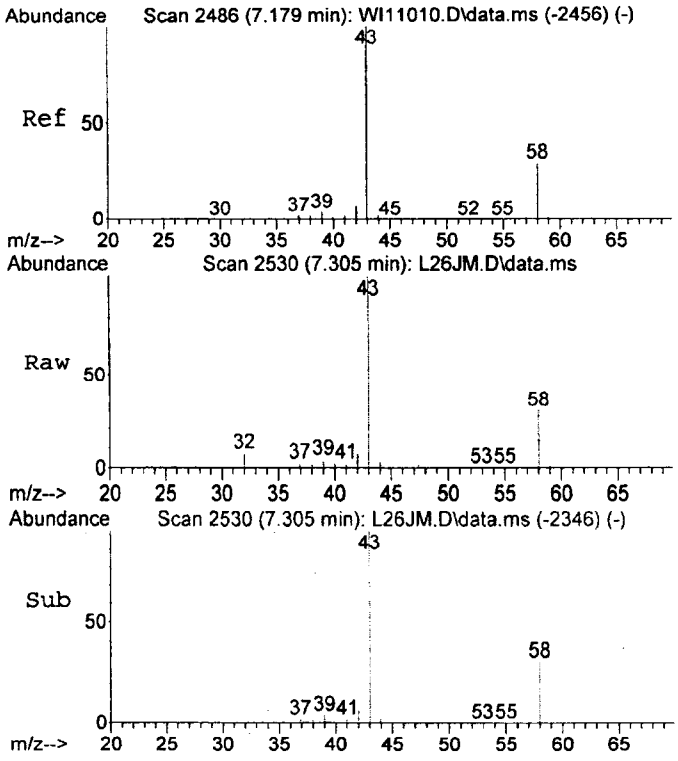
#12
Trichloroethene
Concen: 673.47 ng
RT: 15.91 min Scan# 5545
Delta R.T. -0.000 min
Lab File: L26JM.D
Acq: 26 Jul 2012 8:07 pm

Tgt Ion:130 Resp: 1829110

Ion	Ratio	Lower	Upper
130	100		
132	95.0	71.2	131.2
95	97.2	72.7	132.7



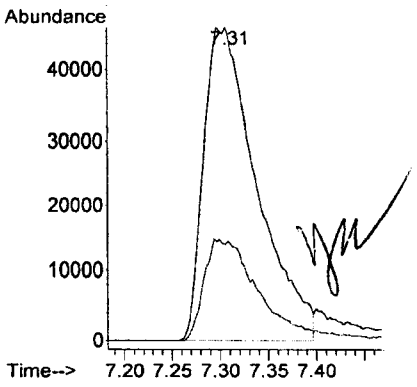
7-30-12

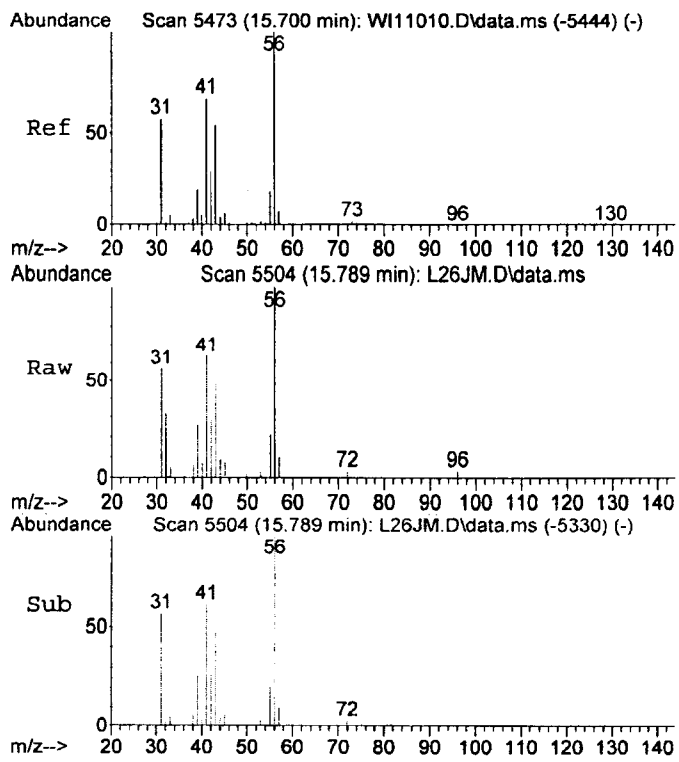


#15
Acetone
Concen: 28.32 ng
RT: 7.31 min Scan# 2530
Delta R.T. 0.026 min
Lab File: L26JM.D
Acq: 26 Jul 2012 8:07 pm

Tgt Ion: 43 Resp: 176751

Ion	Ratio	Lower	Upper
43	100		
58	12.6	0.7	60.7

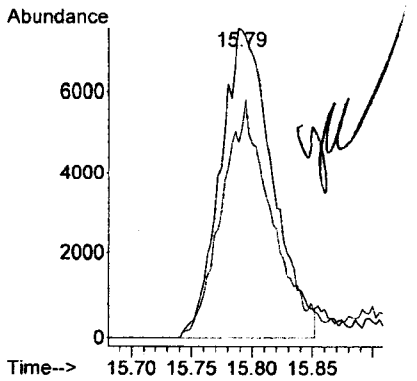




#17
1-Butanol
Concen: 9.24 ng
RT: 15.79 min Scan# 5504
Delta R.T. -0.003 min
Lab File: L26JM.D
Acq: 26 Jul 2012 8:07 pm

Tgt Ion: 56 Resp: 22292

Ion	Ratio	Lower	Upper
56	100		
41	64.0	35.3	95.3



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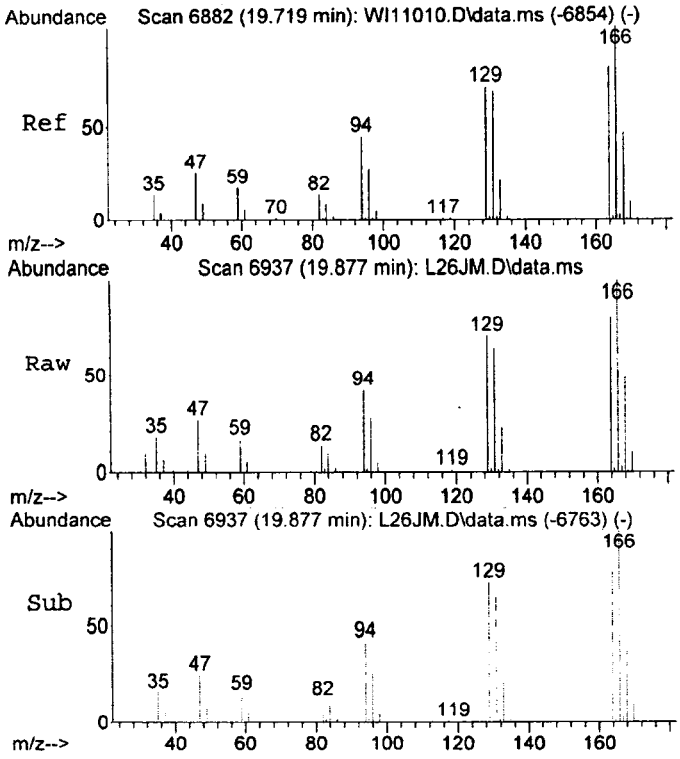
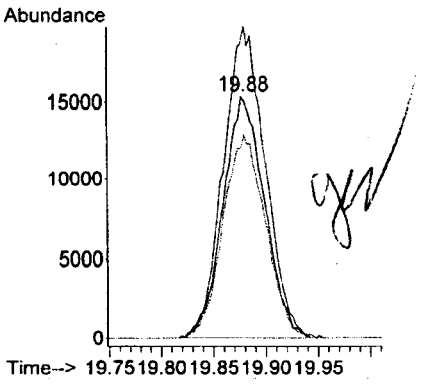


#26
Tetrachloroethene
Concen: 20.07 ng
RT: 19.88 min Scan# 6937
Delta R.T. -0.003 min
Lab File: L26JM.D
Acq: 26 Jul 2012 8:07 pm

Tgt Ion:164 Resp: 42323

Ion	Ratio	Lower	Upper
164	100		
166	118.5	95.3	155.3
131	76.8	60.6	120.6



7-30-12

Library Search Compound Report

Data Path : D:\ECL12029\
Data File : L26JM.D
Acq On : 26 Jul 2012 8:07 pm
Operator :
Sample : 12201017
Misc : 111.7629X 30ML
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL

TIC Library : C:\Database\Apendix8.1
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected
****

7-30-12

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12201017D		Field Sample ID:	IN071712EIB47D	
Analytical Batch:	ECL12029M		Sampling Batch:	INHSG1204	
Data Report:	ECL12029M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/26/2012	2050	Date Sampled:	7/17/2012	
Lab File ID:	L26JN		Date Received:	07/19/12	
Instrument ID:	GCMS-J		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	46	J
Benzene	9.6	U
Bromoform	2.9	U
Butanol	12	J
Carbon disulfide	12	U
Carbon tetrachloride	4.6	U
Chlorobenzene	6.3	U
Chloroform	6.7	U
Chloromethane	17	U
Cyclohexane	9.2	U
1,1-Dichloroethane	8.2	U
1,2-Dichloroethane	7.8	U
1,1-Dichloroethylene	8.5	U
cis-1,2-Dichloroethylene	8.3	U
trans-1,2-Dichloroethylene	8.3	U
1,2-Dichloropropane	7.3	U
Ethyl benzene	6.3	U
Ethyl ether	11	U
Methyl ethyl ketone	11	U
Methyl isobutyl ketone	7.0	U
Methylene chloride	10	U
1,1,2,2-Tetrachloroethane	4.7	U
Tetrachloroethylene	11	
Toluene	7.9	U
1,1,1-Trichloroethane	280	
Trichloroethylene	480	
Trichlorofluoromethane	6.5	U
1,1,2-Trichloro-1,2,2-trifluoroethane	4.8	U
1,3,5-Trimethylbenzene	5.8	U
1,2,4-Trimethylbenzene	6.1	U
p/m-Xylene	6.9	U
o-Xylene	6.5	U
Methanol	28	U

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12201017D		Field Sample ID:	IN071712EIB47D	
Analytical Batch:	ECL12029M		Sampling Batch:	INHSG1204	
Data Report:	ECL12029M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/26/2012	2050	Date Sampled:	7/17/2012	
Lab File ID:	L26JN		Date Received:	07/19/12	
Instrument ID:	GCMS-J		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12029\
Data File : L26JN.D
Acq On : 26 Jul 2012 8:50 pm
Operator :
Sample : 12201017D
Misc : 111.7629X 30ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 30 11:09:06 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	15.07	96	4227884	473.00	ng	0.00
24) Chlorobenzene-d5	21.62	117	2881638	490.00	ng	0.00
Target Compounds						Qvalue
10) 1,1,1-Trichloroethane	13.53	97	1763944	411.68	ng	99
12) Trichloroethene	15.91	130	1884873	691.20	ng	95
15) Acetone	7.31	43	181985	29.04	ng	97
17) 1-Butanol	15.79	56	23890	9.87	ng	94
26) Tetrachloroethene	19.87	164	42824	20.37	ng	96

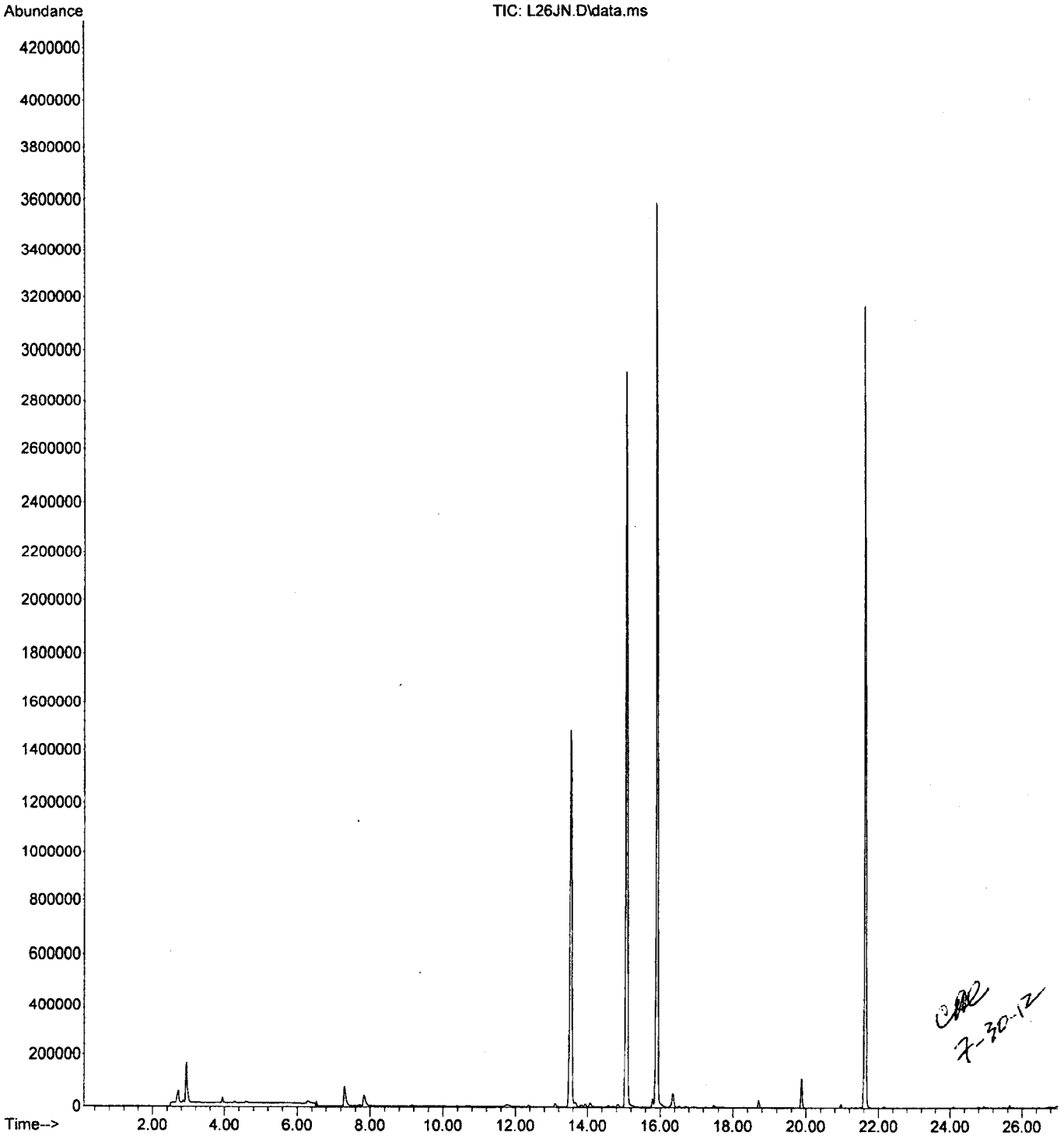
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7-30-12

ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12029\
Data File : L26JN.D
Acq On : 26 Jul 2012 8:50 pm
Operator :
Sample : 12201017D
Misc : 111.7629X 30ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 30 11:09:06 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration



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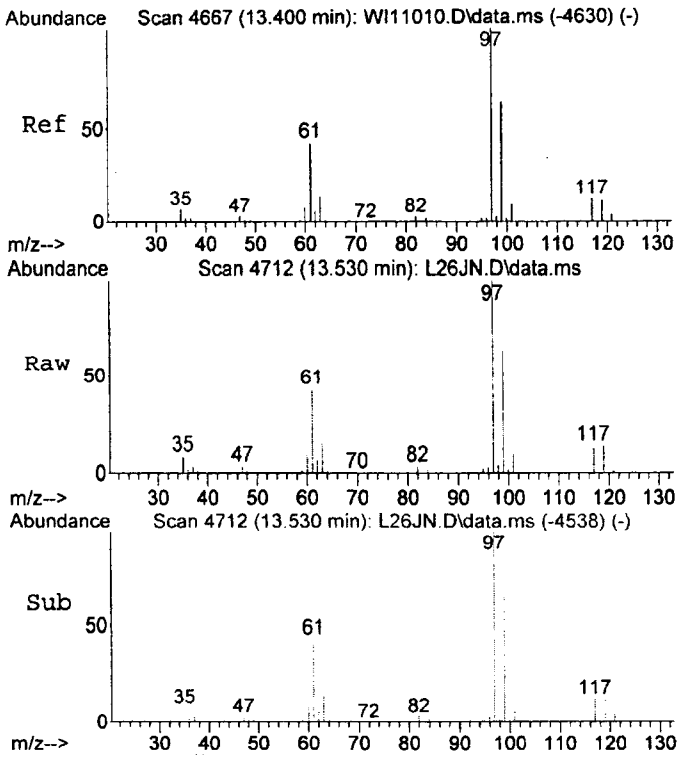
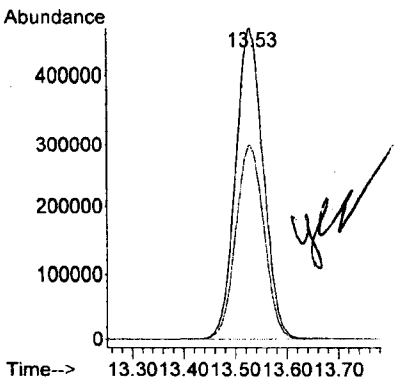
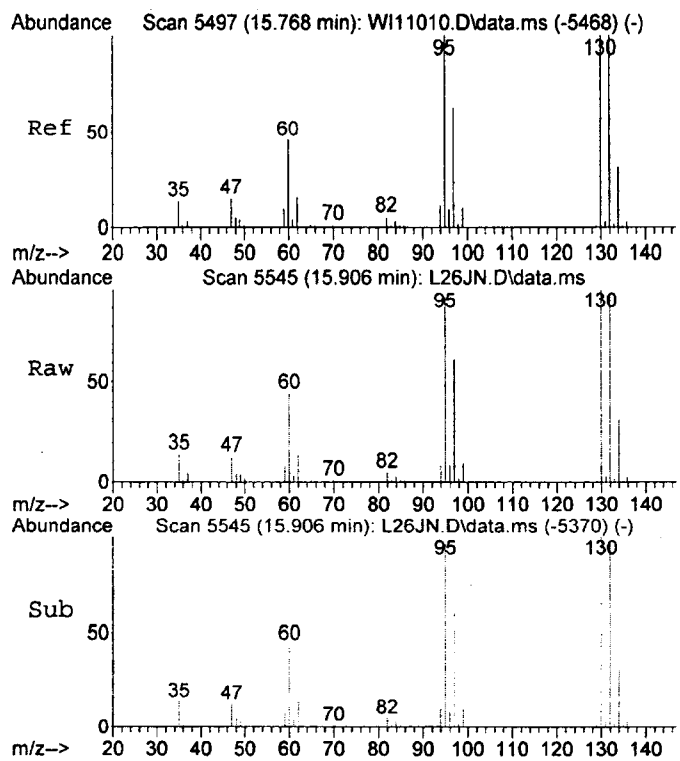


#10
1,1,1-Trichloroethane
Concen: 411.68 ng
RT: 13.53 min Scan# 4712
Delta R.T. -0.003 min
Lab File: L26JN.D
Acq: 26 Jul 2012 8:50 pm

Tgt Ion: 97 Resp: 1763944

Ion	Ratio	Lower	Upper
97	100		
99	63.8	32.9	92.9

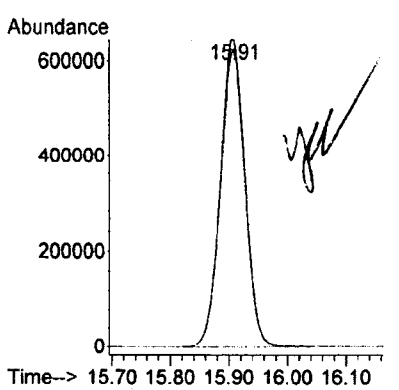




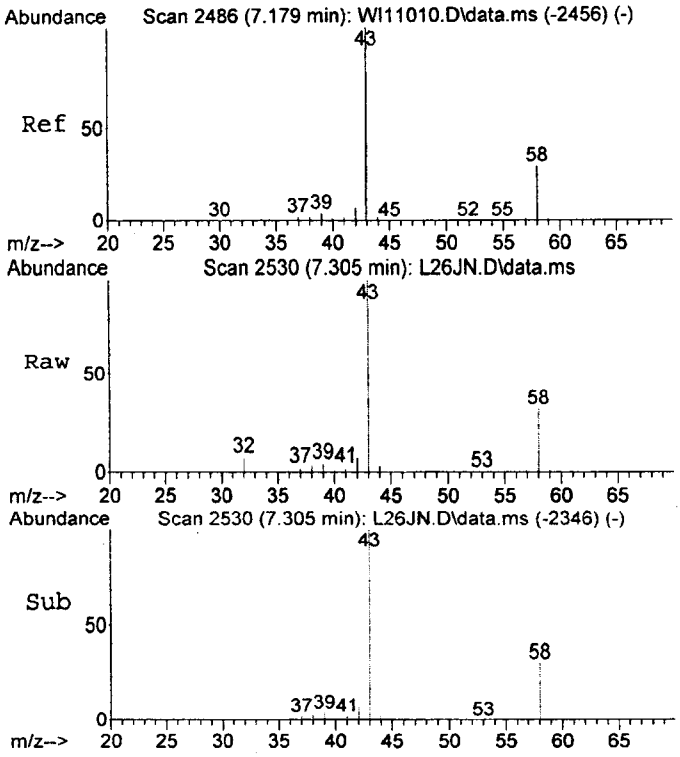
#12
Trichloroethene
Concen: 691.20 ng
RT: 15.91 min Scan# 5545
Delta R.T. -0.000 min
Lab File: L26JN.D
Acq: 26 Jul 2012 8:50 pm

Tgt Ion:130 Resp: 1884873

Ion	Ratio	Lower	Upper
130	100		
132	96.5	71.2	131.2
95	96.5	72.7	132.7



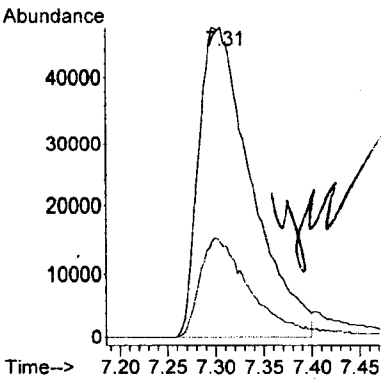
7-30-12

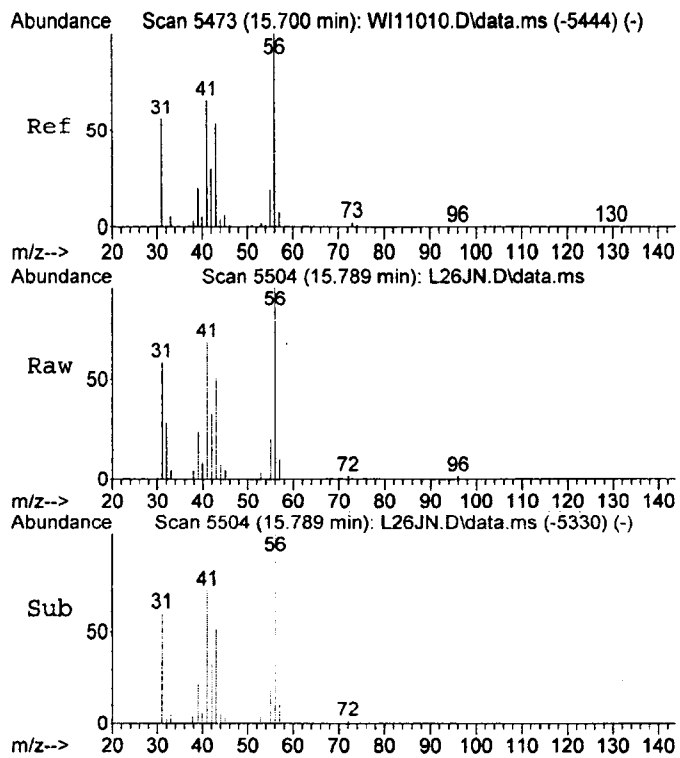


#15
Acetone
Concen: 29.04 ng
RT: 7.31 min Scan# 2530
Delta R.T. 0.026 min
Lab File: L26JN.D
Acq: 26 Jul 2012 8:50 pm

Tgt Ion: 43 Resp: 181985

Ion	Ratio	Lower	Upper
43	100		
58	32.2	0.7	60.7

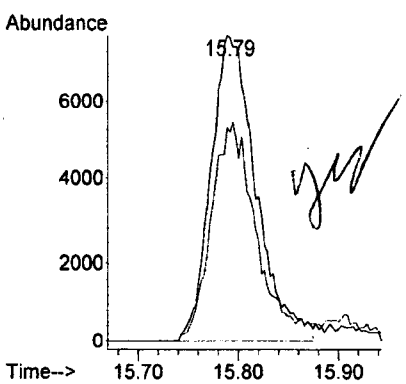




#17
1-Butanol
Concen: 9.87 ng
RT: 15.79 min Scan# 5504
Delta R.T. -0.003 min
Lab File: L26JN.D
Acq: 26 Jul 2012 8:50 pm

Tgt Ion: 56 Resp: 23890

Ion	Ratio	Lower	Upper
56	100		
41	70.4	35.3	95.3



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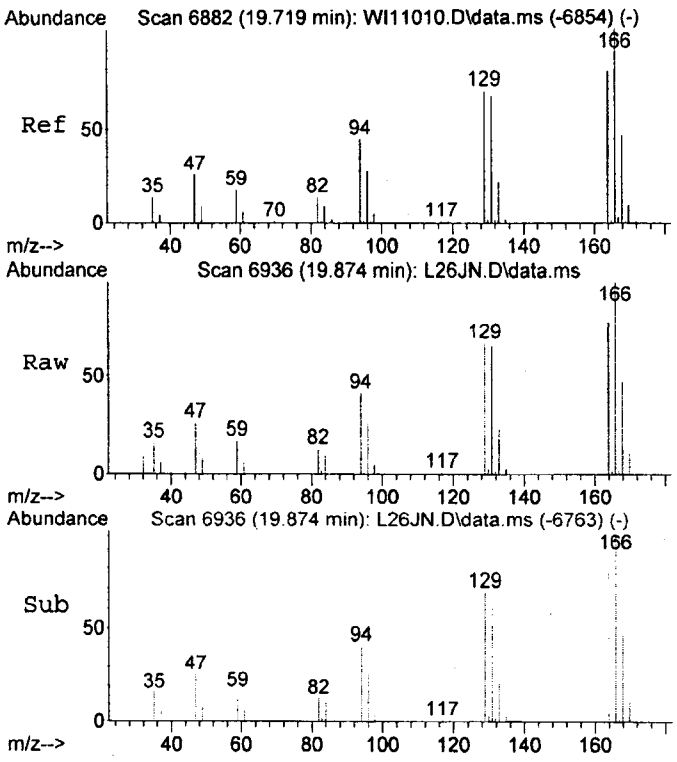
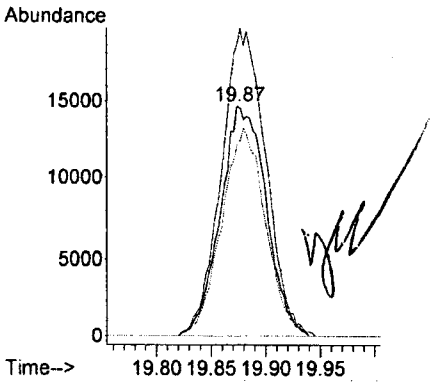


#26
Tetrachloroethene
Concen: 20.37 ng
RT: 19.87 min Scan# 6936
Delta R.T. -0.006 min
Lab File: L26JN.D
Acq: 26 Jul 2012 8:50 pm

Tgt Ion:164 Resp: 42824

Ion	Ratio	Lower	Upper
164	100		
166	125.8	95.3	155.3
131	82.7	60.6	120.6



7-30-12

Library Search Compound Report

Data Path : D:\ECL12029\
Data File : L26JN.D
Acq On : 26 Jul 2012 8:50 pm
Operator :
Sample : 12201017D
Misc : 111.7629X 30ML
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL

TIC Library : C:\Database\Apendix8.l
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected
****

7-30-12

SECTION 7.0
(Continued)

GCMS VOC RAW DATA

DATE: 7-30-12

GC/MS GAS ANALYSIS SUPPLEMENTAL DATA INPUT SHEET

DATA REPORT #:	**ECL12029M**	**METHOD:**	**CCP-TP-175**
ANALYSIS BATCH #:	**ECL12029M**	**INSTRUMENT:**	**J**
CCAL #:	**WJ12049**	**REPORT TICs:**	**YES**
REPORT GROUP(s):	**ECL12029**		

FILE #	LABORATORY SAMPLE ID	DILUTION #1	DILUTION #2	DILUTION #3	DILUTION #4	FINAL DILUTION	VOLUME INJECTED mLs	TIME ANALYZED	DATE ANALYZED
L30JA	LBMJL30	1.0000	---------	---------	---------	1.00	100	12:20	30-Jul-12
L30JB	12201013	3.6130	5.0291	31.0080	---------	563.42	25	13:03	30-Jul-12
L30JC	12201014	3.6576	4.9543	19.2900	---------	349.55	30	13:47	30-Jul-12
L30JD	12201013DL	3.6130	5.0291	31.0080	2.0026	1128.30	30	14:54	30-Jul-12
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

[redacted]

GC/MS-J USE LOG
Environmental Chemistry Laboratory
Idaho National Laboratory

CCP-TP-175 — Page UMJ-01- 004

Analyst	Date	Analytical Batch #		File ID	Lab Sample ID	Field Sample ID	Dilution Factor	Volume (mL)	Comments
[redacted]	7-26-12	ECL12029	M	L26JJ	12201019	NA	29.5752	30	Folder ECL12029 ITSD VOA-WI-26-AS-16
			M	L26JK	12201015		53.6141	25	
			M	L26JL	12201016		36.9371	25	
			M	L26JM	12201017		111.7629	30	
↓	↓	↓	M	L26JN	12201017D	↓	111.7629	30	↓
[redacted]	7-30-12	ECL12029	M	BJ12049	50ng BFB	VOA-BF-710-130711	1	36	Folder ECL12029 ITSD VOA-WI-26-AS-16
			M	WJ12049	CCP-TP-175 CCAL	VOA-WC-26-5-17	1	100	
			M	L30JA	LBM L30	LB31751L19	1	100	
			M	L30JB	12201013	NA	563.4196	25	
			M	L30JC	12201014		349.5512	30	
↓	↓	↓	M	L30JD	12201013DL	↓	1129.3042	30	↓
			M						
			M						
			M						
			M						
			M			NA			
			M						
			M						
			M						
			M						

000190

ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12029\
Data File : WJ12049.D
Acq On : 30 Jul 2012 11:36 am
Operator :
Sample : CCP-TP-1745 CCAL
Misc : 1X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 30 14:02:15 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	15.06	96	4381443	473.00	ng		0.00
24) Chlorobenzene-d5	21.60	117	3010588	490.00	ng		0.00
Target Compounds							Qvalue
2) Ethyl Ether	6.50	59	1374827	547.91	ng		97
3) Methylene Chloride	8.66	84	1657593	547.40	ng		88
4) 1,1,2-Trichlorofluoroe...	7.19	101	2000937	587.31	ng		95
5) 1,1-Dichloroethene	7.13	96	1602946	552.84	ng		94
6) 1,1-Dichloroethane	10.72	63	2934728	549.69	ng		100
7) cis-1,2-Dichloroethene	12.28	96	1681628	546.96	ng		94
8) Chloroform	13.10	83	2803895	567.95	ng		100
9) 1,2-Dichloroethane	14.44	62	2171039	540.58	ng		98
10) 1,1,1-Trichloroethane	13.53	97	2544048	572.93	ng		100
11) Carbon Tetrachloride	13.93	117	2115009	530.93	ng		99
12) Trichloroethene	15.90	130	1637188	579.33	ng		94
13) Cyclohexane	13.67	56	2396620	527.25	ng		90
14) Benzene	14.41	78	5371067	522.22	ng		98
15) Acetone	7.27	43	3639697	560.50	ng		97
16) 2-Butanone	12.33	72	1014152	521.90	ng	#	83
17) 1-Butanol	15.78	56	1212977	483.37	ng		99
18) Methanol	4.51	31	964968	497.86	ng		93
19) trans-1,2-Dichloroethene	9.51	96	1633175	531.74	ng		97
20) Chloromethane	3.74	50	2457144	516.12	ng		100
21) Carbon Disulfide	7.71	76	6441001	564.62	ng		93
22) 1,2-Dichloropropane	16.38	63	1320408	524.90	ng		99
23) Trichlorofluoromethane	5.70	101	3129903	555.89	ng		99
25) Bromoform	23.39	173	1407073	561.69	ng		100
26) Tetrachloroethene	19.87	164	1326864	604.25	ng		96
27) 1,1,2,2-Tetrachloroethane	24.32	83	2045701	547.96	ng		100
28) Toluene	18.69	92	3229440	534.06	ng		99
29) Chlorobenzene	21.67	112	3213699	507.71	ng		96
30) Ethylbenzene	21.89	106	1680940	491.67	ng		89
31) Xylene (meta & para)	22.12	106	2329939	546.71	ng		89
32) Xylene (ortho)	22.97	106	1995591	513.36	ng		87
33) 1,3,5-Trimethylbenzene	24.93	105	4693128	535.61	ng		97
34) 1,2,4-Trimethylbenzene	25.64	105	4627209	541.66	ng		96
35) 4-Methyl-2-Pentanone	18.29	43	2785297	522.45	ng		99

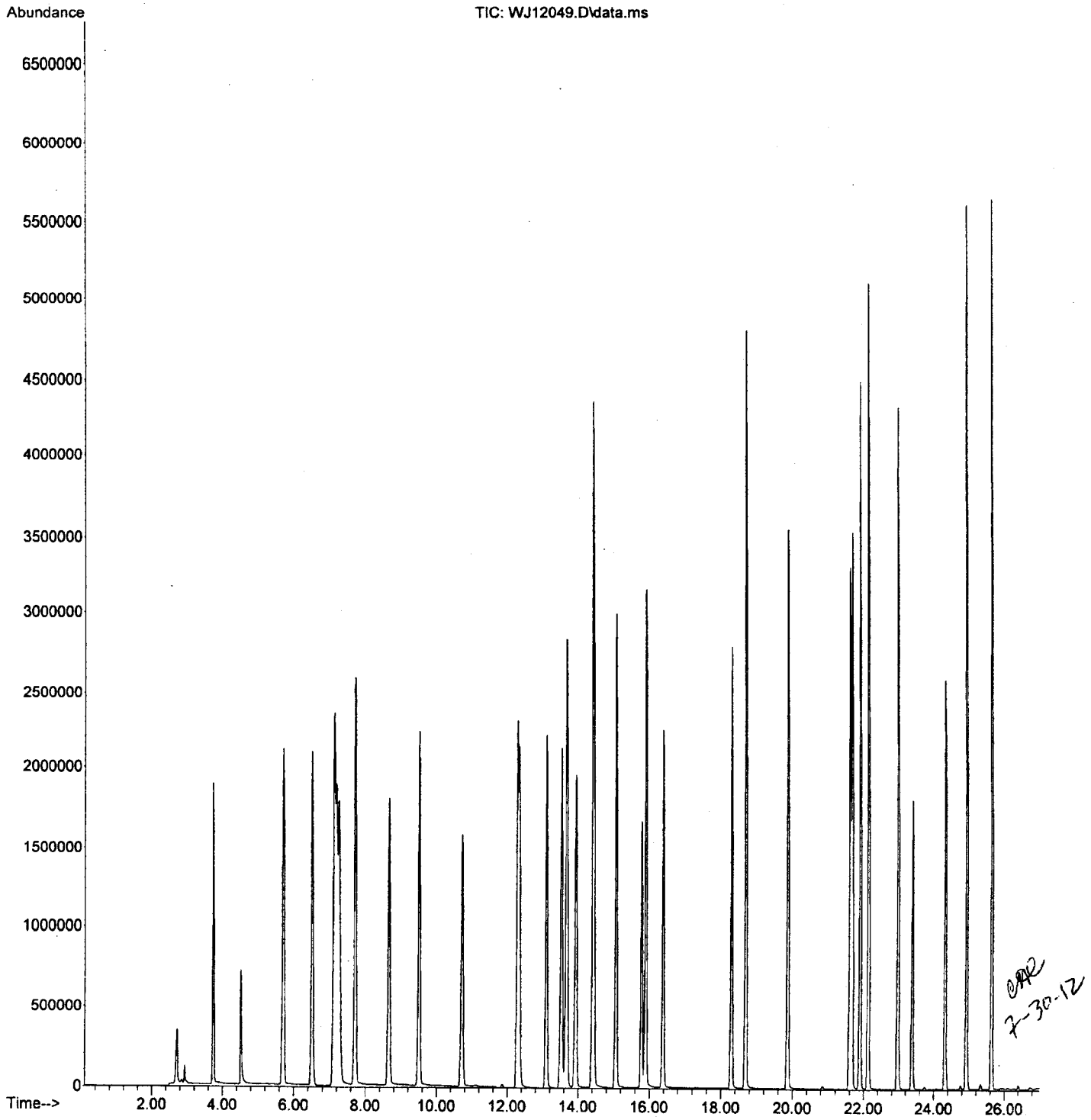
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7-30-12

ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12029\
Data File : WJ12049.D
Acq On : 30 Jul 2012 11:36 am
Operator :
Sample : CCP-TP-1745 CCAL
Misc : 1X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 30 14:02:15 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration



7-30-12

ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12029\
Data File : L30JA.D
Acq On : 30 Jul 2012 12:20 pm
Operator :
Sample : LBMJL30
Misc : LB31751L19 1X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 30 14:04:45 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	15.07	96	4292111	473.00	ng	0.00
24) Chlorobenzene-d5	21.61	117	2939507	490.00	ng	0.00
Target Compounds						Qvalue
3) Methylene Chloride	8.67	84	33384	11.25	ng	86

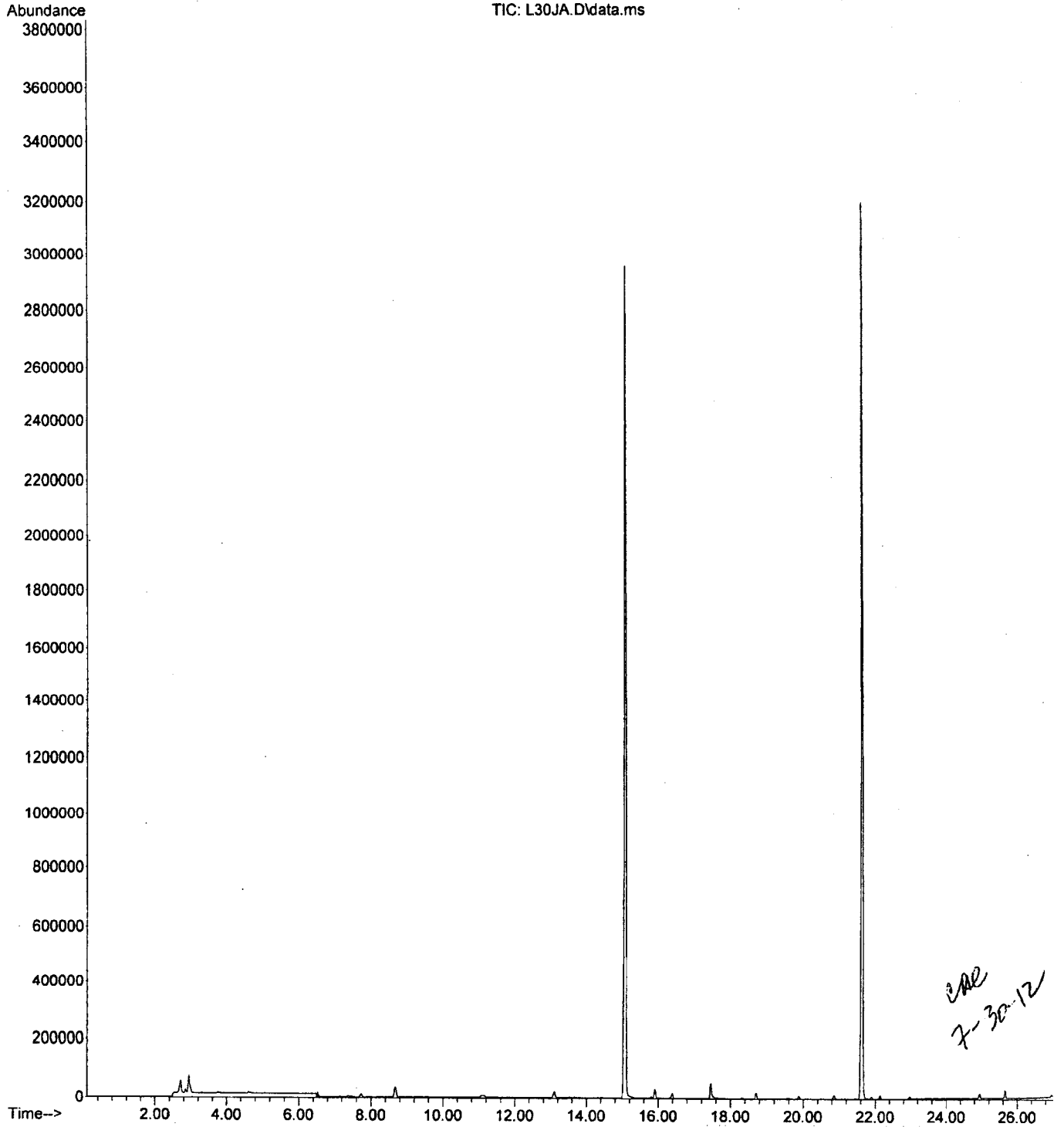
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7-30-12

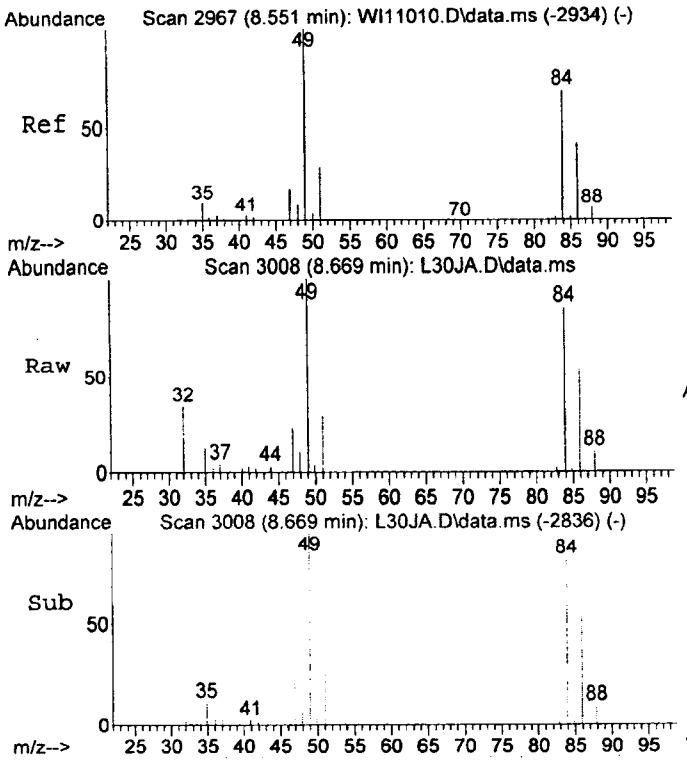
ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12029\
Data File : L30JA.D
Acq On : 30 Jul 2012 12:20 pm
Operator :
Sample : LBMJL30
Misc : LB31751L19 1X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 30 14:04:45 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration



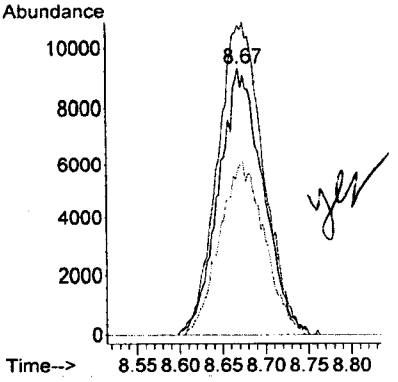
7-30-12



#3
Methylene Chloride
Concen: 11.25 ng
RT: 8.67 min Scan# 3008
Delta R.T. -0.009 min
Lab File: L30JA.D
Acq: 30 Jul 2012 12:20 pm

Tgt Ion: 84 Resp: 33384

Ion	Ratio	Lower	Upper
84	100		
49	116.5	111.6	171.6
86	62.8	33.6	93.6



cal 7-30-12

Library Search Compound Report

Data Path : D:\ECL12029\
Data File : L30JA.D
Acq On : 30 Jul 2012 12:20 pm
Operator :
Sample : LBMJL30
Misc : LB31751L19 1X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL

TIC Library : C:\Database\Apendix8.l
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected
****

CAE 7-30-12

ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12029\
Data File : L30JB.D
Acq On : 30 Jul 2012 1:03 pm
Operator :
Sample : 12201013
Misc : 563.4196X 25ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 30 14:07:13 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	15.07	96	4245551	473.00	ng		0.00
24) Chlorobenzene-d5	21.60	117	2874771	490.00	ng		0.00
Target Compounds							Qvalue
3) Methylene Chloride	8.66	84	4238943	1444.67	ng		88
15) Acetone	7.28	43	1056311	167.87	ng		99
18) Methanol	4.57	31	23076	12.29	ng	#	1
22) 1,2-Dichloropropane	16.39	63	868834	356.44	ng		99

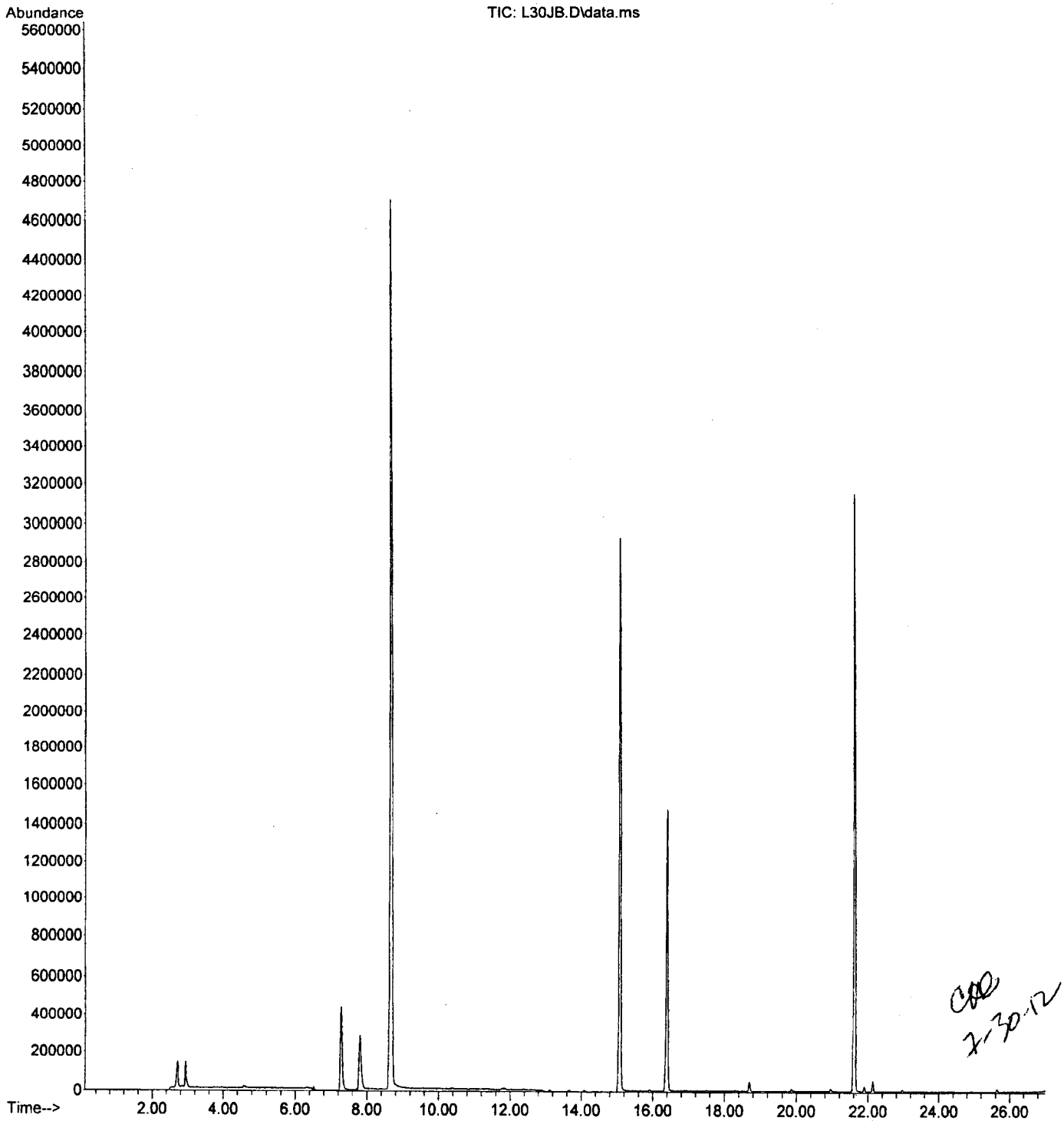
(#) = qualifier out of range (m) = manual integration (+) = signals summed

CAR 7-30-12

ECL Quantitation Report (QT Reviewed)

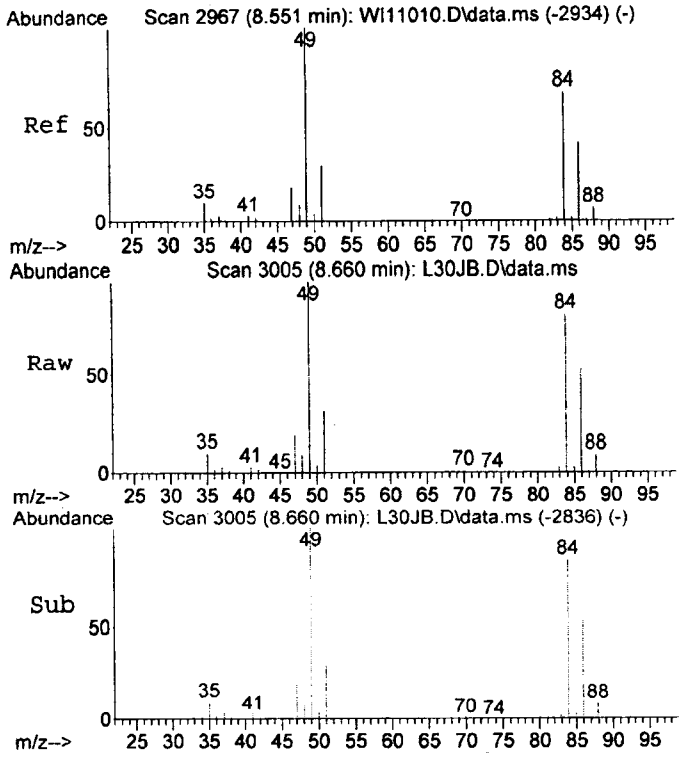
Data Path : D:\ECL12029\
Data File : L30JB.D
Acq On : 30 Jul 2012 1:03 pm
Operator :
Sample : 12201013
Misc : 563.4196X 25ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 30 14:07:13 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration



7-30-12

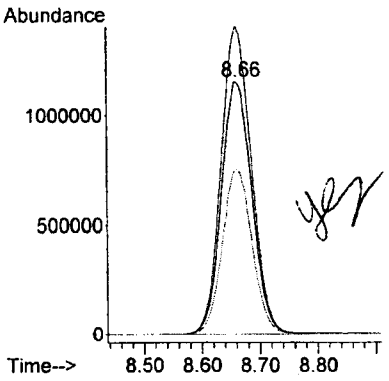
000198

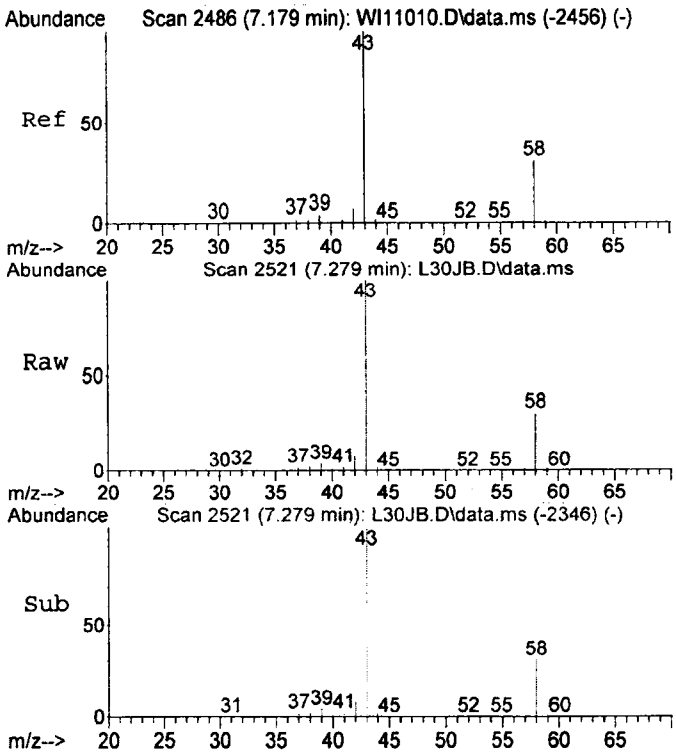


#3
Methylene Chloride
Concen: 1444.67 ng
RT: 8.66 min Scan# 3005
Delta R.T. -0.017 min
Lab File: L30JB.D
Acq: 30 Jul 2012 1:03 pm

Tgt Ion: 84 Resp: 4238943

Ion	Ratio	Lower	Upper
84	100		
49	120.7	111.6	171.6
86	64.5	33.6	93.6

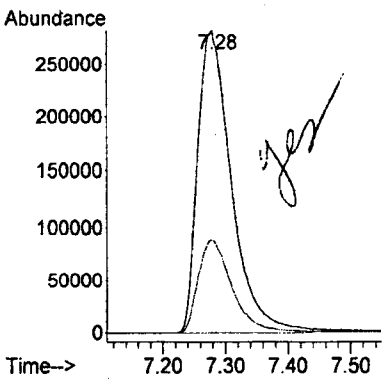




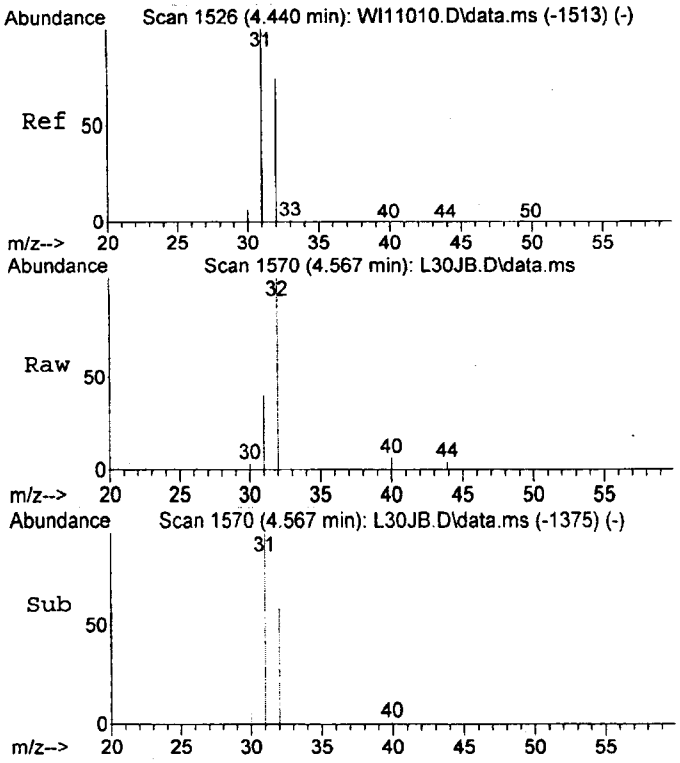
#15
Acetone
Concen: 167.87 ng
RT: 7.28 min Scan# 2521
Delta R.T. -0.000 min
Lab File: L30JB.D
Acq: 30 Jul 2012 1:03 pm

Tgt Ion: 43 Resp: 1056311

Ion	Ratio	Lower	Upper
43	100		
58	31.3	0.7	60.7



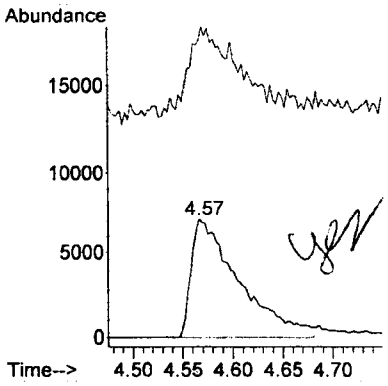
7-30-12

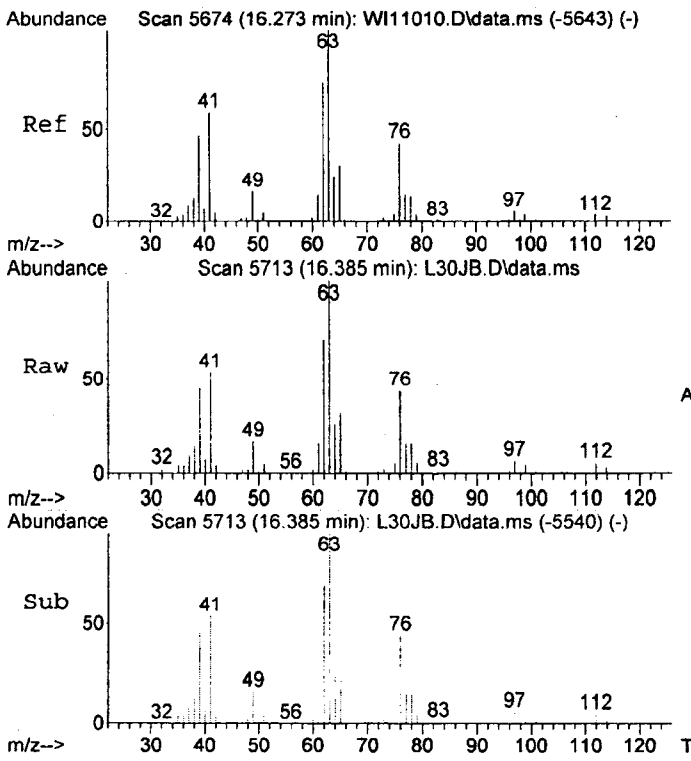


#18
Methanol
Concen: 12.29 ng
RT: 4.57 min Scan# 1570
Delta R.T. 0.057 min
Lab File: L30JB.D
Acq: 30 Jul 2012 1:03 pm

Tgt Ion: 31 Resp: 23076

Ion	Ratio	Lower	Upper
31	100		
32	249.7	40.0	100.0#

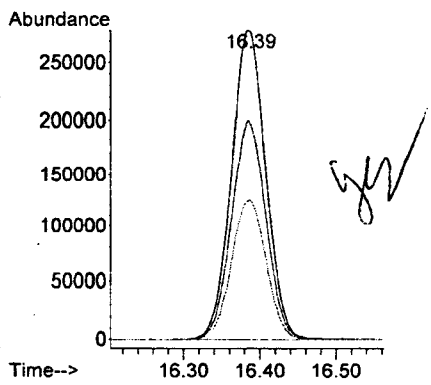




#22
1,2-Dichloropropane
Concen: 356.44 ng
RT: 16.39 min Scan# 5713
Delta R.T. -0.006 min
Lab File: L30JB.D
Acq: 30 Jul 2012 1:03 pm

Tgt Ion: 63 Resp: 868834

Ion	Ratio	Lower	Upper
63	100		
62	71.4	42.4	102.4
76	44.4	14.8	74.8



ejw 7-30-12

ECL LSC Area Percent Report

Data Path : D:\ECL12029\
Data File : L30JB.D
Acq On : 30 Jul 2012 1:03 pm
Operator :
Sample : 12201013
Misc : 563.4196X 25ML
ALS Vial : 1 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\gcms-j\WPJD006.M
Title : WPJD006 CCP-TP-175 ICAL

Signal : TIC: L30JB.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	7.279	2501	2521	2566	rBV	437975	1640115	9.50%	3.900%
2	7.804	2684	2705	2747	rBV2	277150	1183773	6.85%	2.815%
3	8.660	2972	3005	3046	rBV	4691980	17273246	100.00%	41.071%
4	15.073	5224	5253	5287	rBV2	2924811	8883023	51.43%	21.121%
5	16.385	5684	5713	5748	rBV2	1464503	4546474	26.32%	10.810%
6	21.605	7517	7543	7577	rBV2	3136546	8530375	49.38%	20.283%

Sum of corrected areas: 42057006

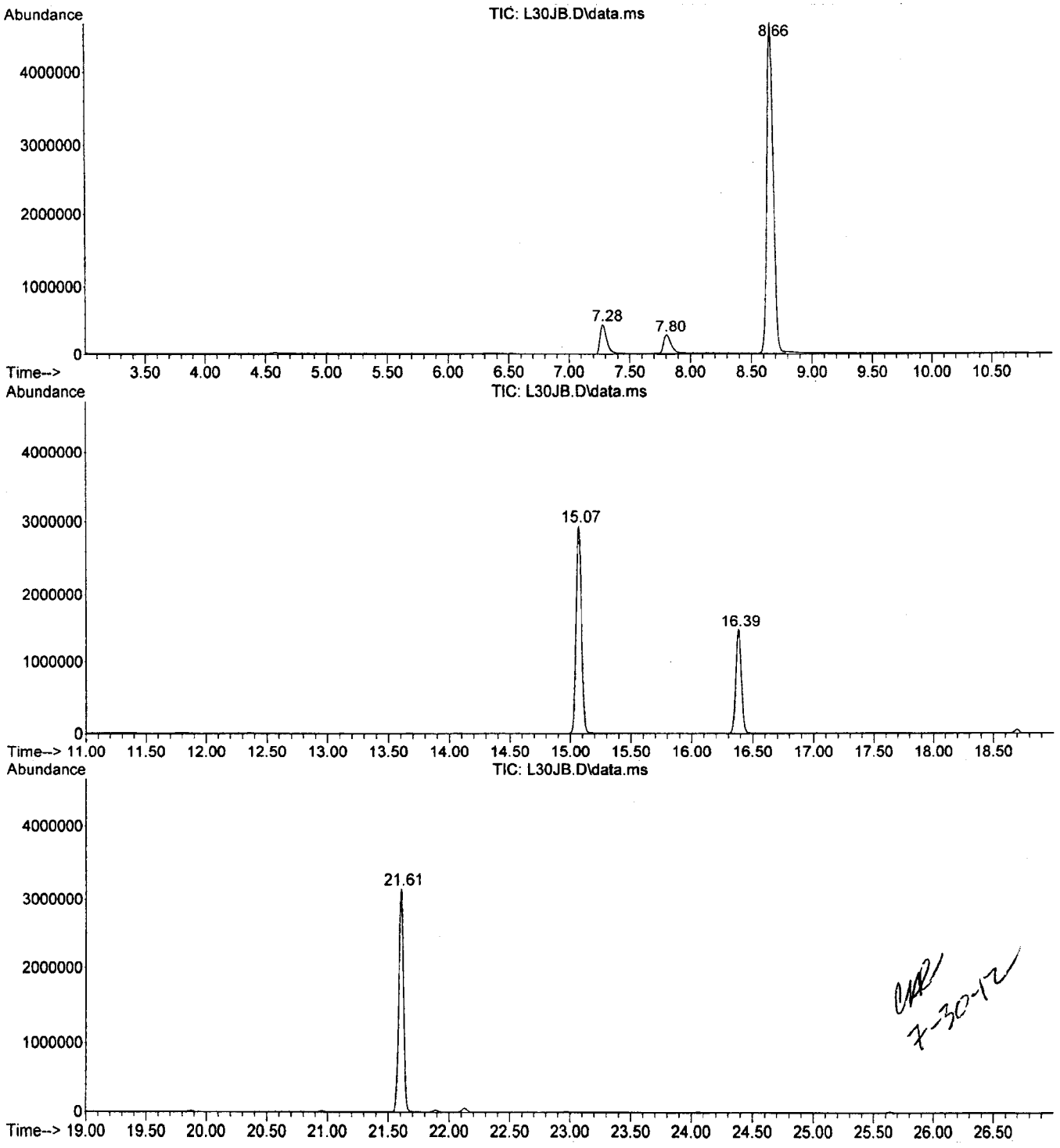
x-30-12

LSC Report - Integrated Chromatogram

Data Path : D:\ECL12029\
Data File : L30JB.D
Acq On : 30 Jul 2012 1:03 pm
Operator :
Sample : 12201013
Misc : 563.4196X 25ML
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL

TIC Library : C:\Database\Apendix8.l
TIC Integration Parameters: LSCINT.P



7-30-12

Library Search Compound Report

Data Path : D:\ECL12029\
Data File : L30JB.D
Acq On : 30 Jul 2012 1:03 pm
Operator :
Sample : 12201013
Misc : 563.4196X 25ML
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL

TIC Library : C:\Database\Apendix8.l
TIC Integration Parameters: LSCINT.P

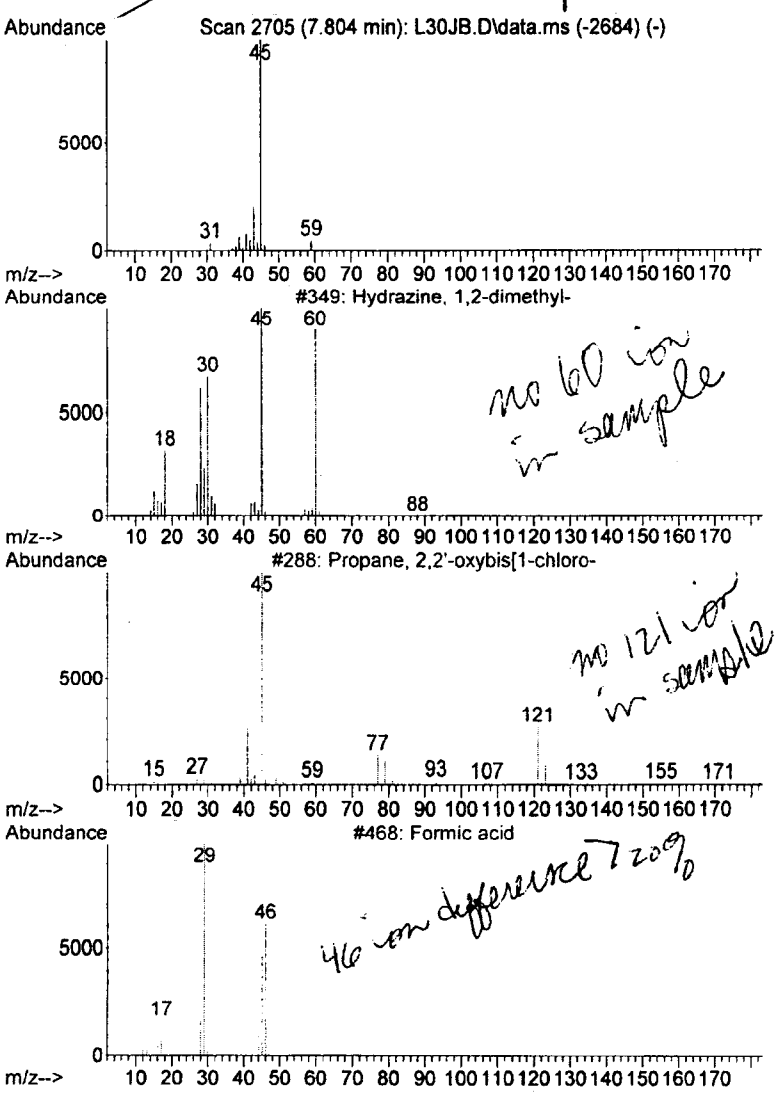
****

Peak Number 1 Hydrazine, 1,2-dimethyl- Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.80	63.03 ng	1183770	Fluorobenzene	15.07

Hit# of 4	Tentative ID	MW	MolForm	CAS#	Qual
1	Hydrazine, 1,2-dimethyl-	60	C2H8N2	000540-73-8	9
2	Propane, 2,2'-oxybis[1-chloro-	170	C6H12Cl2O	000108-60-1	2
3	Formic acid	46	CH2O2	000064-18-6	1
4	Hydrazinecarbothioamide	91	CH5N3S	000079-19-6	1

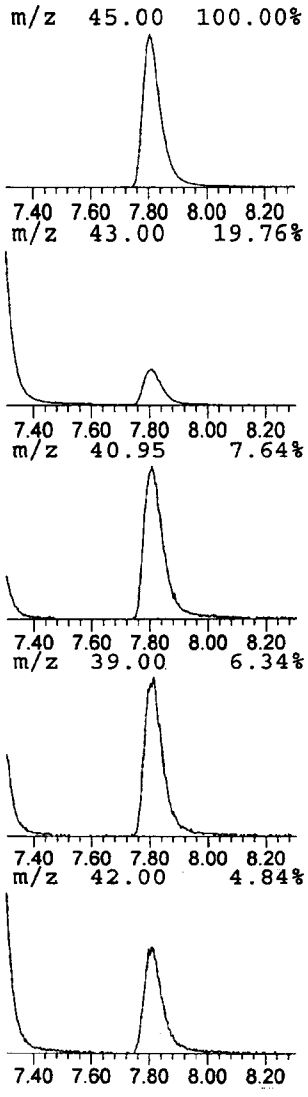
Do not report



no 60 ion in sample

no 121 ion in sample

46 on difference 7 20%



VAL 7-30-12

000203

ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12029\
Data File : L30JC.D
Acq On : 30 Jul 2012 1:47 pm
Operator :
Sample : 12201014
Misc : 349.5512X 30ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 30 14:18:40 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	15.07	96	4186915	473.00	ng	0.00
24) Chlorobenzene-d5	21.62	117	2883653	490.00	ng	0.00
Target Compounds						Qvalue
3) Methylene Chloride	8.67	84	2118360	732.07	ng	88
15) Acetone	7.29	43	422644	68.11	ng	99
22) 1,2-Dichloropropane	16.39	63	664562	276.46	ng	98

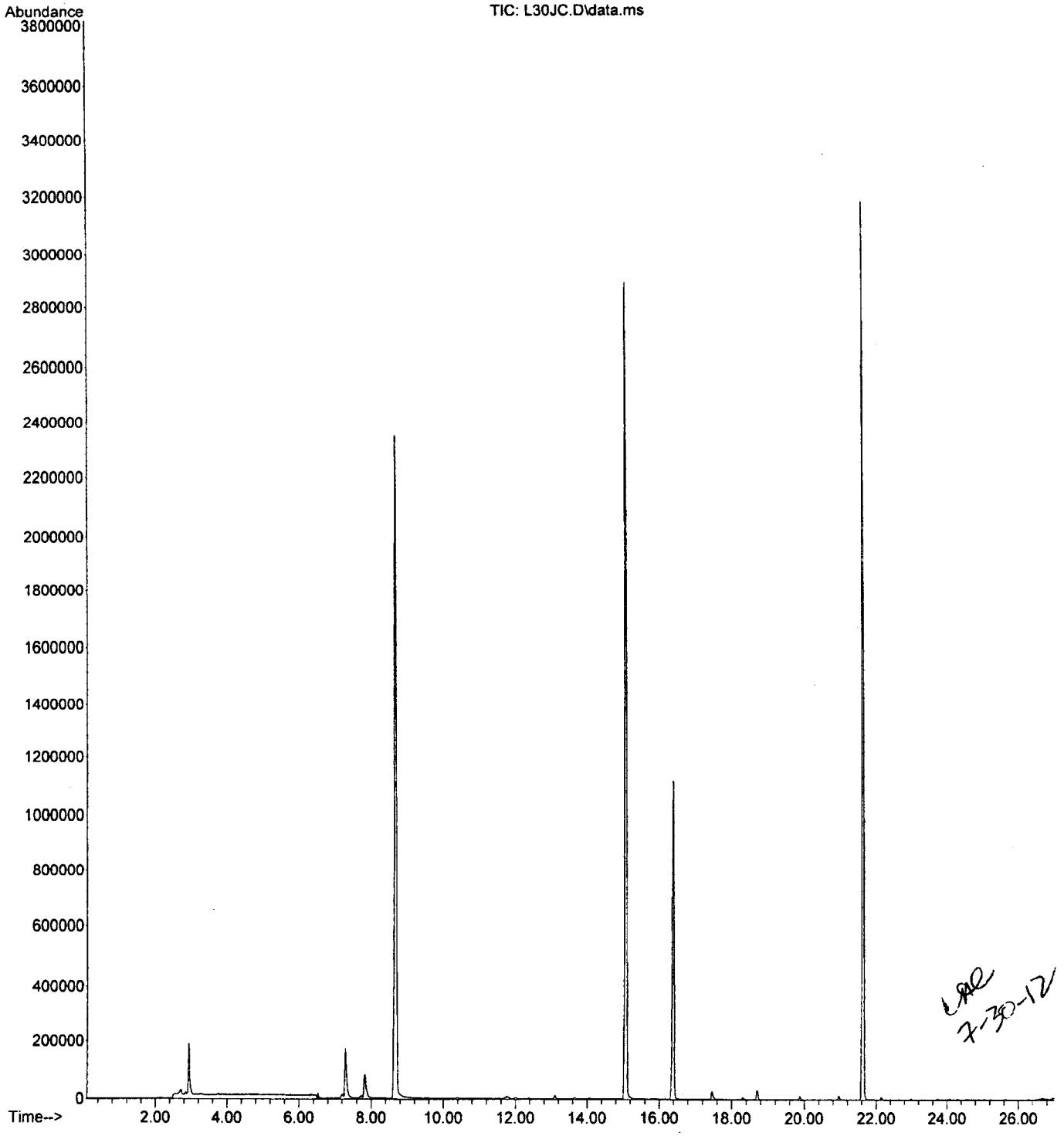
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7-30-12

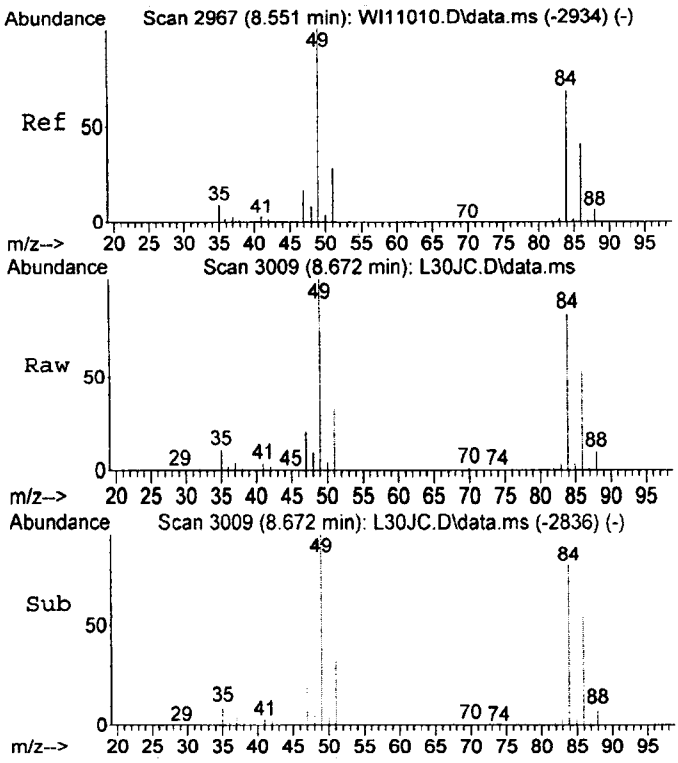
ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12029\
Data File : L30JC.D
Acq On : 30 Jul 2012 1:47 pm
Operator :
Sample : 12201014
Misc : 349.5512X 30ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 30 14:18:40 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration



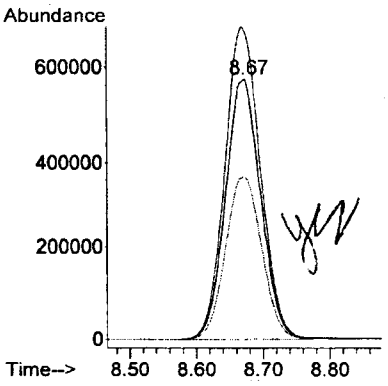
7-30-12

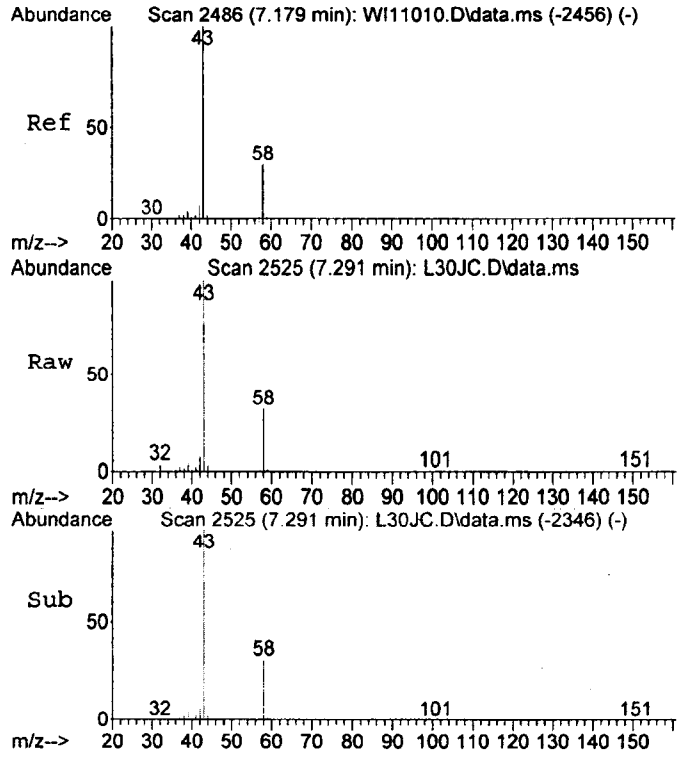


#3
Methylene Chloride
Concen: 732.07 ng
RT: 8.67 min Scan# 3009
Delta R.T. -0.006 min
Lab File: L30JC.D
Acq: 30 Jul 2012 1:47 pm

Tgt Ion: 84 Resp: 2118360

Ion	Ratio	Lower	Upper
84	100		
49	120.2	111.6	171.6
86	64.5	33.6	93.6

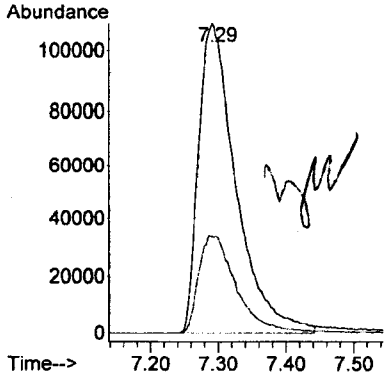




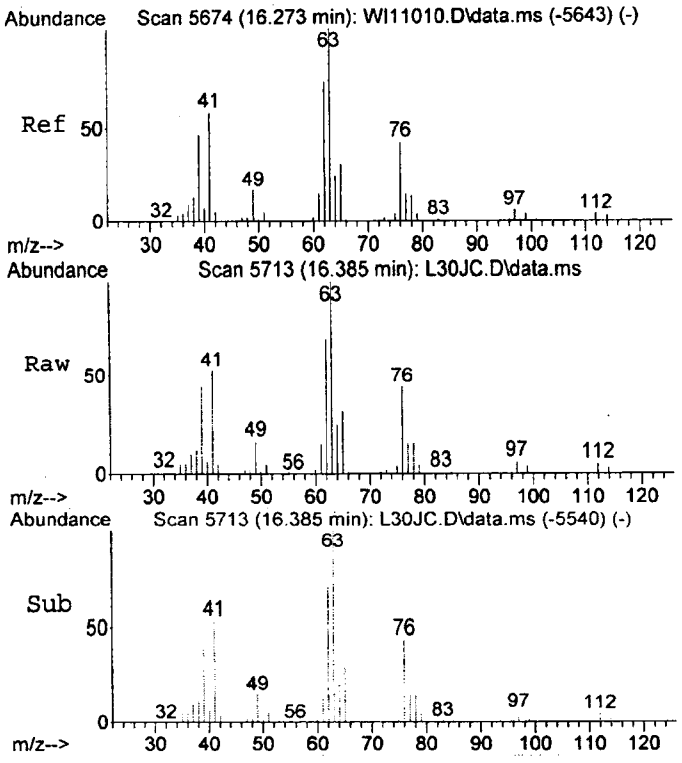
#15
Acetone
Concen: 68.11 ng
RT: 7.29 min Scan# 2525
Delta R.T. 0.011 min
Lab File: L30JC.D
Acq: 30 Jul 2012 1:47 pm

Tgt Ion: 43 Resp: 422644

Ion	Ratio	Lower	Upper
43	100		
58	31.5	0.7	60.7



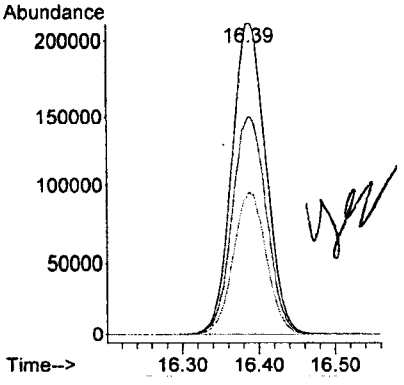
CAR 7-30-12



#22
1,2-Dichloropropane
Concen: 276.46 ng
RT: 16.39 min Scan# 5713
Delta R.T. -0.006 min
Lab File: L30JC.D
Acq: 30 Jul 2012 1:47 pm

Tgt Ion: 63 Resp: 664562

Ion	Ratio	Lower	Upper
63	100		
62	70.0	42.4	102.4
76	43.6	14.8	74.8



cal 7-30-12

Library Search Compound Report

Data Path : D:\ECL12029\
Data File : L30JC.D
Acq On : 30 Jul 2012 1:47 pm
Operator :
Sample : 12201014
Misc : 349.5512X 30ML
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL

TIC Library : C:\Database\Apendix8.l
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected
****

CAC 7-30-12

ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12029\
Data File : L30JD.D
Acq On : 30 Jul 2012 2:54 pm
Operator :
Sample : 12201013DL
Misc : 1128.3042X 30ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 30 16:24:39 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	15.07	96	4197699	473.00	ng	0.00
24) Chlorobenzene-d5	21.61	117	2861320	490.00	ng	0.00
Target Compounds						Qvalue
3) Methylene Chloride	8.67	84	2474199	852.84	ng	87
15) Acetone	7.29	43	610003	98.05	ng	99
22) 1,2-Dichloropropane	16.39	63	499826	207.39	ng	99

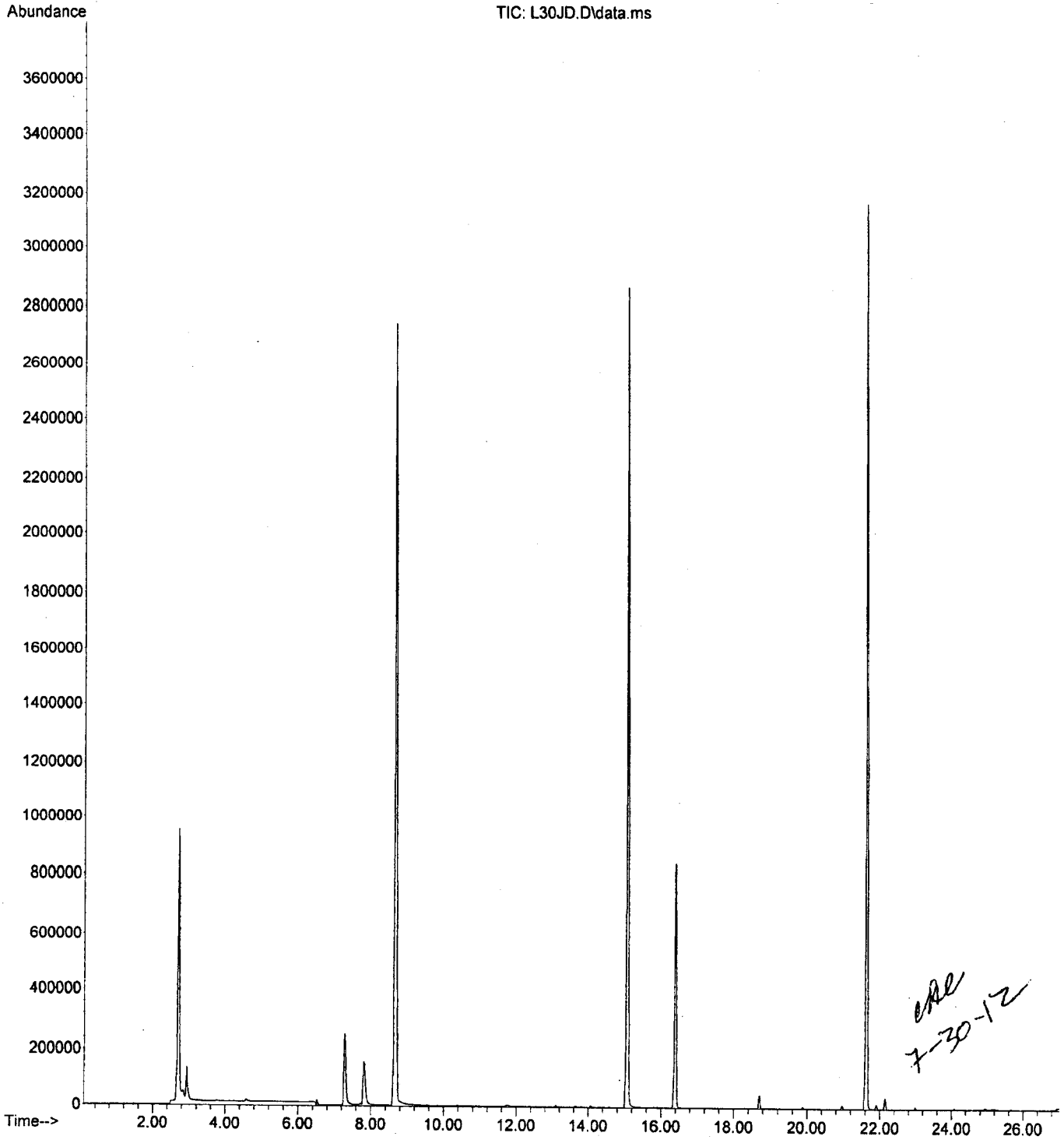
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7-30-12

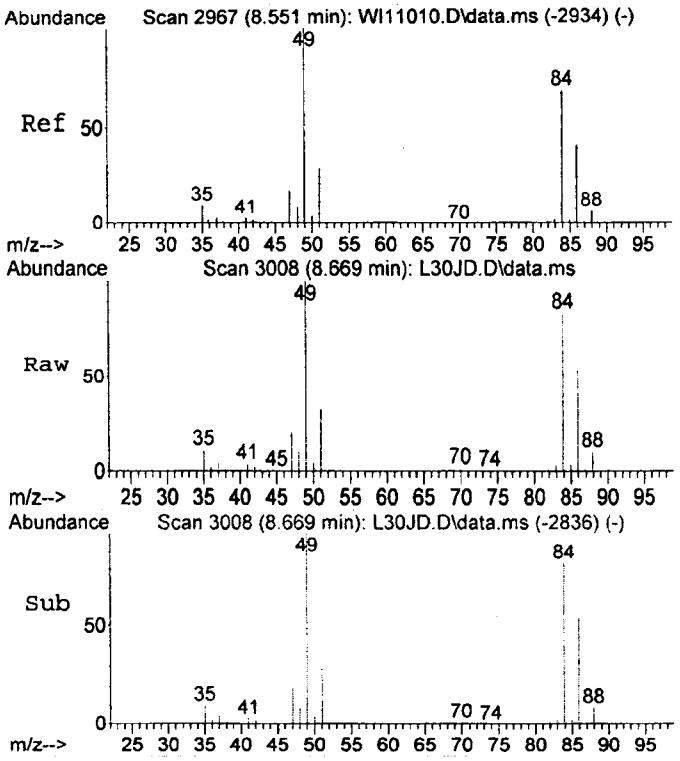
ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12029\
Data File : L30JD.D
Acq On : 30 Jul 2012 2:54 pm
Operator :
Sample : 12201013DL
Misc : 1128.3042X 30ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 30 16:24:39 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration



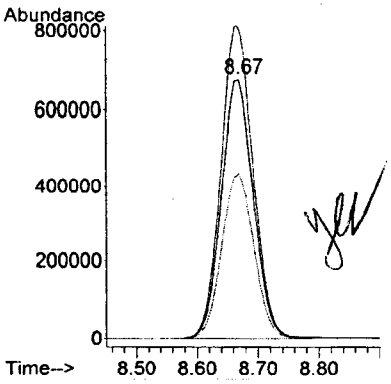
7-30-12

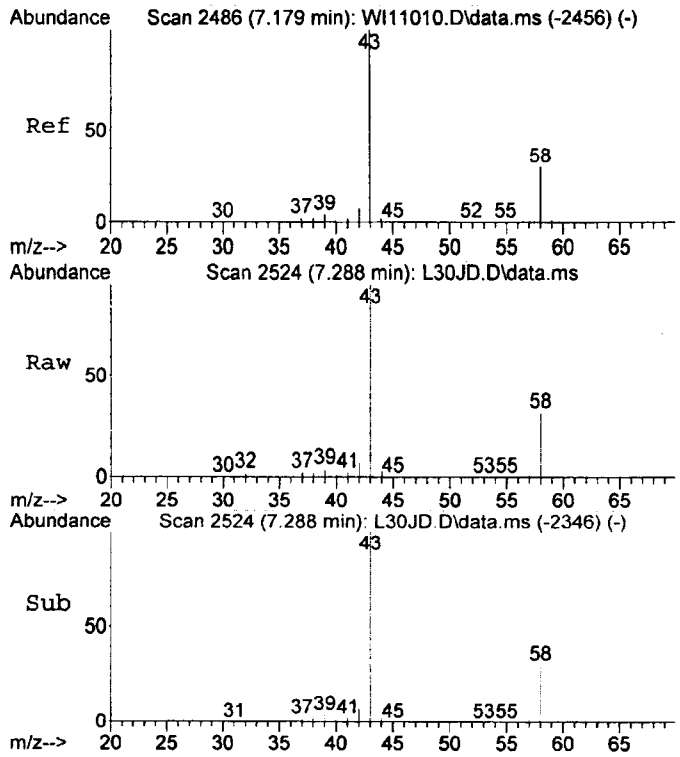


#3
Methylene Chloride
Concen: 852.84 ng
RT: 8.67 min Scan# 3008
Delta R.T. -0.009 min
Lab File: L30JD.D
Acq: 30 Jul 2012 2:54 pm

Tgt Ion: 84 Resp: 2474199

Ion	Ratio	Lower	Upper
84	100		
49	119.7	111.6	171.6
86	64.8	33.6	93.6

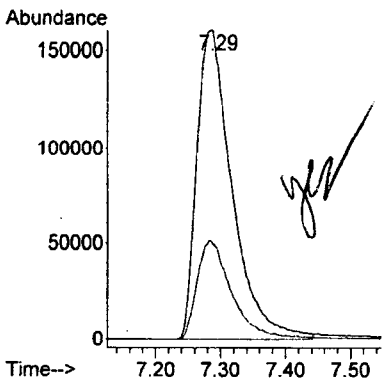




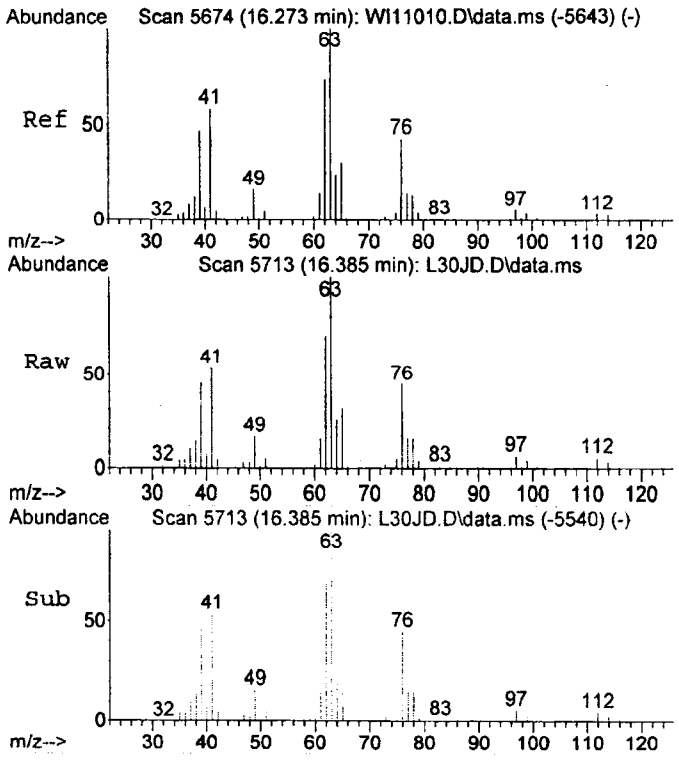
#15
Acetone
Concen: 98.05 ng
RT: 7.29 min Scan# 2524
Delta R.T. 0.009 min
Lab File: L30JD.D
Acq: 30 Jul 2012 2:54 pm

Tgt Ion: 43 Resp: 610003

Ion	Ratio	Lower	Upper
43	100		
58	31.3	0.7	60.7



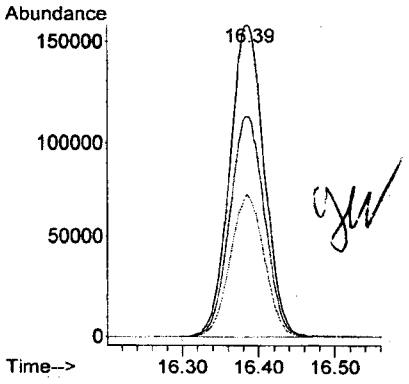
7-30-12



#22
1,2-Dichloropropane
Concen: 207.39 ng
RT: 16.39 min Scan# 5713
Delta R.T. -0.006 min
Lab File: L30JD.D
Acq: 30 Jul 2012 2:54 pm

Tgt Ion: 63 Resp: 499826

Ion	Ratio	Lower	Upper
63	100		
62	70.9	42.4	102.4
76	45.4	14.8	74.8



7-30-12

Library Search Compound Report

Data Path : D:\ECL12029\
Data File : L30JD.D
Acq On : 30 Jul 2012 2:54 pm
Operator :
Sample : 12201013DL
Misc : 1128.3042X 30ML
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL

TIC Library : C:\Database\Apendix8.1
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected
****

7-30-12

SECTION 8.0

MISCELLANEOUS SUPPORTING DATA

CALCULATION FORMULAS
GAS VOC ANALYSIS

IDAHO NATIONAL LABORATORY
ENVIRONMENTAL CHEMISTRY LABORATORY

METHOD: CCP-TP-175

$$\text{Sample Results (ppmv)} = \frac{ng * D * Rt}{V * C * MW} \qquad \text{Sample Specific MDL} = \frac{MDL * D * RT}{V * C * MW}$$

ppmv = **Parts per million volume**

C = **Correction factor for volume at STP (= to 1.00 for Modified Method Acmm-9930)**

D = **Dilution factor (result of canister pressurization) reported as number of times diluted**

ng = **Nanograms of analyte found in the sample (found on instrument quantitation report)**

Rt = **24.5 at 25°C**

MDL = **Method Detection Limit in nanograms (found on Method Detection Limit reporting form)**

MW = **Molecular Weight of analyte**

V = **Volume of sample injected onto instrument (mLs)**

Results for samples with analytes detected are calculated using the sample results (ppmv) equation. The sample specific MDL (analyte MDL corrected for sample volume, dilutions, etc.) is calculated using the sample specific MDL equation.

Revised Form Date (07/12/05)

WIPP DUPLICATE SAMPLE CALCULATIONS

Instrument J
Method CCP-TP-175

		12201017 *IN071712EIB47*				12201017D *IN071712EIB47D*					
		Instrument Filename L26JM	Date of Analysis 26-Jul-12			Instrument Filename L26JN	Date of Analysis 26-Jul-12				
Analyte	Molecular Weight	Sample Amt. Found (ng)	Injection Volume (mL)	Dilution Factor (X)	Sample Calculated Amount (ppmv)	Duplicate Amt. Found (ng)	Injection Volume (mL)	Dilution Factor (X)	Duplicate Calculated Amount (ppmv)	Sample & Duplicate Mean (ppmv)	**% RPD**
Ethyl Ether	74.12	0.00				0.00					
Methylene Chloride	84.93	0.00				0.00					
Freon 113	187.38	0.00				0.00					
1,1-Dichloroethene	96.94	0.00				0.00					
1,1-Dichloroethane	98.94	0.00				0.00					
cis-1,2-Dichloroethene	96.94	0.00				0.00					
Chloroform	119.38	0.00				0.00					
1,2-Dichloroethane	98.94	0.00				0.00					
1,1,1-Trichlorethane	133.41	403.12	30	111.76	**275.79**	411.68	30	111.76	**281.65**	278.72	**2.10**
Carbon Tetrachloride	153.82	0.00				0.00					
Trichloroethene	131.39	673.47	30	111.76	**467.83**	691.20	30	111.76	**480.15**	473.99	**2.60**
Cyclohexane	84.16	0.00				0.00					
Benzene	78.12	0.00				0.00					
Acetone	58.08	28.32	30	111.76	**44.50**	29.04	30	111.76	**45.64**	45.07	**2.51**
2-Butanone	72.11	0.00				0.00					
1-Butanol	74.12	9.24	30	111.76	**11.38**	9.87	30	111.76	**12.15**	11.77	**6.59**
Methanol	32.04	0.00				0.00					
trans-1,2-Dichloroethene	96.94	0.00				0.00					
Chloromethane	50.49	0.00				0.00					
Carbon Disulfide	76.14	0.00				0.00					
1,2-Dichloropropane	112.99	0.00				0.00					
Trichlorofluoromethane	137.37	0.00				0.00					
Bromoform	252.75	0.00				0.00					
Tetrachloroethene	165.83	20.07	30	111.76	**11.05**	20.37	30	111.76	**11.21**	11.13	**1.48**
1,1,2,2,-Tetrachloroethane	167.85	0.00				0.00					
Toluene	92.15	0.00				0.00					
Chlorobenzene	112.56	0.00				0.00					
Ethylbenzene	106.17	0.00				0.00					
p/m - Xylene	106.17	0.00				0.00					
o-Xylene	106.17	0.00				0.00					
1,3,5-Trimethylbenzene	120.20	0.00				0.00					
1,2,4-Trimethylbenzene	120.20	0.00				0.00					
4-Methyl -2- Pentanone	100.16	0.00				0.00					

WIPP LABORATORY CONTROL SAMPLE CALCULATIONS

Instrument J

Method CCP-TP-175

Lab Sample ID: **LCSMJL26**
Field Sample ID: **LCS30443SL02**
File Name : **L26JB**
Date of Analysis: **26-Jul-12**

Analyte	Molecular Weight	Sample Amt. Found (ng)	Injection Volume (mL)	Dilution Factor (X)	Calculated Value (ppmv)	True Value (ppmv)	Recovery (%)	**IN** if Between 70% & 130% (Comp.)
Methylene Chloride	84.94	843.49	40	3.5000	**21.29**	20.00	106.44	**IN**
1,1,1-Trichloroethane	133.41	751.55	40	3.5000	**12.08**	12.16	99.31	**IN**
Carbon Tetrachloride	153.82	847.32	40	3.5000	**11.81**	11.89	99.32	**IN**
Trichloroethene	131.39	774.07	40	3.5000	**12.63**	12.26	103.02	**IN**
Benzene	78.12	645.37	40	3.5000	**17.71**	20.20	87.67	**IN**
Toluene	92.15	797.68	40	3.5000	**18.56**	18.26	101.63	**IN**
4-Methyl-2 pentanone	100.16	730.10	40	3.5000	**15.63**	16.20	96.46	**IN**

"Dale A. Dover"
<Dale.Dover@amwtp.inl.gov>

07/24/2012 03:51 PM

To "Crowder, Catherine A" <Catherine.Crowder@inl.gov>
cc
bcc
Subject RE: Batch INHSG1204 Corrections

Catherine,

The tag should be 1354. The COC is correct. Please make the change. Sorry for the mistake.

Thanks,

Dale Dover
NFT Lead - Idaho
208-526-6459
208-230-2223

Contractor to Washington TRU Solutions LLC

From: Catherine A Crowder [mailto:Catherine.Crowder@inl.gov]
Sent: Tuesday, July 24, 2012 2:51 PM
To: Dale A. Dover
Subject: Batch INHSG1204 Corrections

Hi Dale,

The COC (page one) for sampling batch INHSG1204 has a start time of 1354 for sample IN071712EIB47 and the tag for this sample has a "before sample collection time" of 1355. Which is correct? Please give be permission to make the correction.

Thanks,
Catherine

GAS SAMPLE PREPARATION LOGBOOK
ENVIRONMENTAL CHEMISTRY LABORATORY

REPORT GROUP # ECL 12029 PAGE # UT2-27- 0010

SUMMA CANISTER LABORATORY SAMPLE IDENTIFICATION	SIZE (mL)	AMBIENT CONDITIONS (Torr) PRESS	AMBIENT CONDITIONS (C) TEMP	CANISTER PRESSURE (Torr) START (A)	CANISTER PRESSURE (Torr) FINAL (B)	DILUTION FACTOR (B/A)	SAMPLE PREP DATE	BY INITIALS
LABBLANK/LB31751LL9	500	645	22	25.0x10⁻³	2052.0	NA	071912	JTB
12201009	250	645	22	487.0	1800.0	3.6961	071912	JTB
12201010	250	645	22	478.5	1952.0	4.0794	071912	JTB
12201011	250	645	22	525.5	1874.0	3.5661	071912	JTB
12201012	250	645	22	463.0	1736.0	3.7495	071912	JTB
12201013	250	645	22	500.0	1806.5	3.6130	071912	JTB
12201014	250	645	22	480.5	1757.5	3.6576	071912	JTB
12201015	250	645	22	480.0	1829.5	3.8115	071912	JTB
12201016	250	645	22	490.0	1796.0	3.6653	071912	JTB
12201017	250	645	22	488.5	1784.0	3.6520	071912	JTB
12201018	250	645	22	487.5	1849.5	3.7938	071912	JTB
12201019	250	645	22	501.5	1854.0	3.6969	071912	JTB
12201020	250	645	22	501.0	1776.5	3.5459	071912	JTB
12201021	250	645	22	502.0	1822.5	3.6305	071912	JTB
12201010	250	644	21	588.0	2079.5	3.5366	072512	CAE
12201011	250	644	21	563.5	2041.0	3.6220	072512	CAE
12201012	250	644	21	357.0	1805.5	5.0574	072512	CAE
12201018	250	644	21	292.0	1809.5	6.1952	072512	CAE
12201020	250	644	21	559.5	1762.5	3.1501	072512	CAE
12201021	250	644	21	636.5	1914.5	3.0079	072512	CAE
12201015	500	644	21	135.5	1906.0	14.0664	072512	CAE
12201016	250	644	21	193.5	1950.0	10.0775	072512	CAE
12201017	500	644	21	63.0	1928.0	30.6032	072512	CAE
12201019	250	644	21	248.0	1984.0	8.0000	072512	CAE
12201014	250	643	21	405.0	2006.5	4.9543	072612	CAE
12201014	500	643	21	100.0	1929.0	19.2900	072612	CAE
12201013	250	643	21	395.0	1986.5	5.0291	072612	CAE

000219

GAS SAMPLE PREPARATION LOGBOOK
ENVIRONMENTAL CHEMISTRY LABORATORY

REPORT GROUP # ECL/2029 Continued

PAGE # UT2-27- 0122

SUMMA CANISTER LABORATORY SAMPLE IDENTIFICATION	SIZE (mL)	AMBIENT CONDITIONS (Torr) / (C)		CANISTER PRESSURE (Torr)		DILUTION FACTOR (B/A)	SAMPLE PREP DATE 072612	BY INITIALS 7-26-12
		PRESS	TEMP	START (A)	FINAL (B)			
12201013	500	643	21	62.5	1938.0	31.0080	~~072612~~	CRC
12201013	500	643	21	960.5	1923.5	2.00260	072612	CRC
				CRC				

000220

GAS SAMPLE PREPARATION LOGBOOK
ENVIRONMENTAL CHEMISTRY LABORATORY

REPORT GROUP # NA, LCS Prep.

PAGE # UT2-27- 0008

SUMMA CANISTER LABORATORY SAMPLE IDENTIFICATION	SIZE (mL)	AMBIENT CONDITIONS (Torr) / (C)		CANISTER PRESSURE (Torr)		DILUTION FACTOR (B/A)	SAMPLE PREP DATE	BY INITIALS
		PRESS	TEMP	START (A)	FINAL (B)			
LCS304435L02	6000	642	21	618.0	2163.0	3.5000	070212	CAE
				N/A				

000221

ENVIRONMENTAL CHEMISTRY LABORATORY

INTERNAL SAMPLE TRACKING FORM

RECEIVING GROUP # ECL 12-029

LAB SAMPLE ID	SAMPLE(S) REMOVED			ANALYSIS OR PROCESS	SAMPLE(S) RETURNED		
	DATE	TIME	SIGNATURE OR INITIALS		DATE	TIME	SIGNATURE OR INITIALS
1220l009-021	NA	NA	NA	Samples Received	07-19-12	1340	~~JAP~~
1220l009-021	071912	1435	~~CAE~~ CAE	Samples Prep & Analysis	073012	7 days 1800	7-30-12 CAE
1220l009-021	073012	1700	CAE	Cleaning	NA	NA	NA

000222

FORM DATE: 08/17//2009

SUPPLEMENTAL REPORTING DATA

INPUT/UPDATE RECORDS SCREEN

8/1/2012

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
12201009	IN071712EI209	No	CCP-TP-175	8/1/2012

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-J	5/8/2012	07/19/12	7/17/2012	7/26/2012 1226	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
L26JC	3.7	100	24.5	LBMJL26

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL12029M	1	INHSG1204

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
12201010	IN071712EID18	No	CCP-TP-175	8/1/2012

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-J	5/8/2012	07/19/12	7/17/2012	7/26/2012 1334	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
L26JD	14.43	25	24.5	LBMJL26

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL12029M	1	INHSG1204

000223

SUPPLEMENTAL REPORTING DATA

INPUT/UPDATE RECORDS SCREEN

8/1/2012

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
12201011	IN071712EI340	No	CCP-TP-175	8/1/2012

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-J	5/8/2012	07/19/12	7/17/2012	7/26/2012 1417	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
L26JE	12.92	25	24.5	LBMJL26

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL12029M	1	INHSG1204

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
12201012	IN071712EIC62	No	CCP-TP-175	8/1/2012

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-J	5/8/2012	07/19/12	7/17/2012	7/26/2012 1501	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
L26JF	18.96	30	24.5	LBMJL26

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL12029M	1	INHSG1204

SUPPLEMENTAL REPORTING DATA

INPUT/UPDATE RECORDS SCREEN

8/1/2012

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
12201013	IN071712EI392	No	CCP-TP-175	8/1/2012

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-J	5/8/2012	07/19/12	7/17/2012	7/30/2012 1303	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
L30JB	563.42	25	24.5	LBMJL30

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL12029M	1	INHSG1204

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
12201013DL	IN071712EI392DL	No	CCP-TP-175	8/1/2012

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-J	5/8/2012	07/19/12	7/17/2012	7/30/2012 1454	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
L30JD	1128.3	30	24.5	LBMJL30

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL12029M	1	INHSG1204

SUPPLEMENTAL REPORTING DATA

INPUT/UPDATE RECORDS SCREEN

8/1/2012

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
12201014	IN071712EID01	No	CCP-TP-175	8/1/2012

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-J	5/8/2012	07/19/12	7/17/2012	7/30/2012 1347	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
L30JC	349.55	30	24.5	LBMJL30

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL12029M	1	INHSG1204

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
12201015	IN071712EIC87	No	CCP-TP-175	8/1/2012

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-J	5/8/2012	07/19/12	7/17/2012	7/26/2012 1840	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
L26JK	53.61	25	24.5	LBMJL26

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL12029M	1	INHSG1204

SUPPLEMENTAL REPORTING DATA

INPUT/UPDATE RECORDS SCREEN

8/1/2012

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
12201016	IN071712EI558	No	CCP-TP-175	8/1/2012

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-J	5/8/2012	07/19/12	7/17/2012	7/26/2012 1923	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
L26JL	36.94	25	24.5	LBMJL26

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL12029M	1	INHSG1204

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
12201017	IN071712EIB47	No	CCP-TP-175	8/1/2012

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-J	5/8/2012	07/19/12	7/17/2012	7/26/2012 2007	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
L26JM	111.76	30	24.5	LBMJL26

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL12029M	1	INHSG1204

000227

SUPPLEMENTAL REPORTING DATA

INPUT/UPDATE RECORDS SCREEN

8/1/2012

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
12201017D	IN071712EIB47D	No	CCP-TP-175	8/1/2012

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-J	5/8/2012	07/19/12	7/17/2012	7/26/2012 2050	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
L26JN	111.76	30	24.5	LBMJL26

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL12029M	1	INHSG1204

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
12201018	IN071712EI451	No	CCP-TP-175	8/1/2012

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-J	5/8/2012	07/19/12	7/17/2012	7/26/2012 1546	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
L26JG	23.5	100	24.5	LBMJL26

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL12029M	1	INHSG1204

000228

SUPPLEMENTAL REPORTING DATA

INPUT/UPDATE RECORDS SCREEN

8/1/2012

LAB SAMPLE ID	FIELD SAMPLE ID		BLANK	METHOD	LOG DATE
12201019	IN071712EI780		No	CCP-TP-175	8/1/2012

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-J	5/8/2012	07/19/12	7/17/2012	7/26/2012 1757	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
L26JJ	29.58	30	24.5	LBMJL26

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL12029M	1	INHSG1204

LAB SAMPLE ID	FIELD SAMPLE ID		BLANK	METHOD	LOG DATE
12201020	IN071712EIB42		No	CCP-TP-175	8/1/2012

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-J	5/8/2012	07/19/12	7/17/2012	7/26/2012 1630	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
L26JH	11.17	50	24.5	LBMJL26

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL12029M	1	INHSG1204

SUPPLEMENTAL REPORTING DATA

INPUT/UPDATE RECORDS SCREEN

8/1/2012

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
12201021	IN071712EI367	No	CCP-TP-175	8/1/2012

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-J	5/8/2012	07/19/12	7/17/2012	7/26/2012 1713	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
L26JI	10.92	40	24.5	LBMJL26

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL12029M	1	INHSG1204

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
LBMJL26	LB31751L19	Yes	CCP-TP-175	8/1/2012

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-J	5/8/2012			7/26/2012 1059	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
L26JA	1	100	24.5	

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL12029M	1	

SUPPLEMENTAL REPORTING DATA

INPUT/UPDATE RECORDS SCREEN

8/1/2012

LAB SAMPLE ID	FIELD SAMPLE ID		BLANK	METHOD	LOG DATE
LBMJL30	LB31751L19		Yes	CCP-TP-175	8/1/2012

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-J	5/8/2012			7/30/2012 1220	CROWDER

DATA FILE	DILUTION FACTOR		VOLUME	RT	ASSOCIATED BLANK
L30JA	1		100	24.5	

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL12029M	1	

LAB SAMPLE ID	FIELD SAMPLE ID		BLANK	METHOD	LOG DATE
LCSMJL26	LCS30443SL02		No	CCP-TP-175	8/1/2012

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-J	5/8/2012			7/26/2012 1141	CROWDER

DATA FILE	DILUTION FACTOR		VOLUME	RT	ASSOCIATED BLANK
L26JB	3.5		40	24.5	LBMJL26

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL12029M	1	

RESULTS SUMMARY

8/1/2012

LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
12201009	CCP-TP-175	1	ECL12029M	0.06467	
12201009	CCP-TP-175	2	ECL12029M	0.11007	
12201009	CCP-TP-175	3	ECL12029M	0.10353	
12201009	CCP-TP-175	4	ECL12029M	0.04789	
12201009	CCP-TP-175	5	ECL12029M	0.08416	
12201009	CCP-TP-175	6	ECL12029M	0.08154	
12201009	CCP-TP-175	7	ECL12029M	0.08229	
12201009	CCP-TP-175	8	ECL12029M	0.06606	
12201009	CCP-TP-175	9	ECL12029M	0.07788	
12201009	CCP-TP-175	10	ECL12029M	0.06251	
12201009	CCP-TP-175	11	ECL12029M	0.04597	
12201009	CCP-TP-175	12	ECL12029M	0.06485	
12201009	CCP-TP-175	13	ECL12029M	0.09155	
12201009	CCP-TP-175	14	ECL12029M	0.09515	
12201009	CCP-TP-175	15	ECL12029M	0.07221	
12201009	CCP-TP-175	16	ECL12029M	0.02869	
12201009	CCP-TP-175	17	ECL12029M	0.04701	
12201009	CCP-TP-175	18	ECL12029M	0.04645	
12201009	CCP-TP-175	19	ECL12029M	0.07870	
12201009	CCP-TP-175	20	ECL12029M	0.06282	
12201009	CCP-TP-175	21	ECL12029M	0.06233	
12201009	CCP-TP-175	22	ECL12029M	0.06831	
12201009	CCP-TP-175	23	ECL12029M	0.06489	
12201009	CCP-TP-175	24	ECL12029M	0.05732	
12201009	CCP-TP-175	25	ECL12029M	0.06033	
12201009	CCP-TP-175	26	ECL12029M	0.08229	
12201009	CCP-TP-175	27	ECL12029M	0.16877	
12201009	CCP-TP-175	28	ECL12029M	0.11668	
12201009	CCP-TP-175	29	ECL12029M	0.14515	
12201009	CCP-TP-175	30	ECL12029M	0.10685	
12201009	CCP-TP-175	31	ECL12029M	0.09173	
12201009	CCP-TP-175	32	ECL12029M	0.06969	
12201009	CCP-TP-175	33	ECL12029M	0.28010	

RESULTS SUMMARY

8/1/2012

LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
12201010	CCP-TP-175	1	ECL12029M	1.00885	
12201010	CCP-TP-175	2	ECL12029M	1.71712	
12201010	CCP-TP-175	3	ECL12029M	129.61535	778.44
12201010	CCP-TP-175	4	ECL12029M	3.69270	48.93
12201010	CCP-TP-175	5	ECL12029M	1.31290	
12201010	CCP-TP-175	6	ECL12029M	1.27207	
12201010	CCP-TP-175	7	ECL12029M	1.28373	
12201010	CCP-TP-175	8	ECL12029M	4.93137	41.63
12201010	CCP-TP-175	9	ECL12029M	1.21490	
12201010	CCP-TP-175	10	ECL12029M	1.48505	14.01
12201010	CCP-TP-175	11	ECL12029M	2.55579	27.8
12201010	CCP-TP-175	12	ECL12029M	11.95222	111.05
12201010	CCP-TP-175	13	ECL12029M	1.42825	
12201010	CCP-TP-175	14	ECL12029M	1.48438	
12201010	CCP-TP-175	15	ECL12029M	66.09374	528.09
12201010	CCP-TP-175	16	ECL12029M	0.44760	
12201010	CCP-TP-175	17	ECL12029M	0.73338	
12201010	CCP-TP-175	18	ECL12029M	0.72455	
12201010	CCP-TP-175	19	ECL12029M	8.48944	55.32
12201010	CCP-TP-175	20	ECL12029M	0.97995	
12201010	CCP-TP-175	21	ECL12029M	0.97233	
12201010	CCP-TP-175	22	ECL12029M	1.06557	
12201010	CCP-TP-175	23	ECL12029M	1.01229	
12201010	CCP-TP-175	24	ECL12029M	0.89413	
12201010	CCP-TP-175	25	ECL12029M	0.94119	
12201010	CCP-TP-175	26	ECL12029M	1.28373	
12201010	CCP-TP-175	27	ECL12029M	2.63278	
12201010	CCP-TP-175	28	ECL12029M	4.97754	26.8
12201010	CCP-TP-175	29	ECL12029M	2.26438	
12201010	CCP-TP-175	30	ECL12029M	1.66692	
12201010	CCP-TP-175	31	ECL12029M	1.43093	
12201010	CCP-TP-175	32	ECL12029M	1.08715	
12201010	CCP-TP-175	33	ECL12029M	4.36953	

RESULTS SUMMARY

8/1/2012

LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
12201011	CCP-TP-175	1	ECL12029M	0.90328	
12201011	CCP-TP-175	2	ECL12029M	1.53743	
12201011	CCP-TP-175	3	ECL12029M	131.21968	880.18
12201011	CCP-TP-175	4	ECL12029M	3.63536	53.8
12201011	CCP-TP-175	5	ECL12029M	1.17551	
12201011	CCP-TP-175	6	ECL12029M	1.13896	
12201011	CCP-TP-175	7	ECL12029M	1.14939	
12201011	CCP-TP-175	8	ECL12029M	4.99125	47.06
12201011	CCP-TP-175	9	ECL12029M	1.08777	
12201011	CCP-TP-175	10	ECL12029M	1.62007	17.07
12201011	CCP-TP-175	11	ECL12029M	2.71720	33.01
12201011	CCP-TP-175	12	ECL12029M	12.19808	126.58
12201011	CCP-TP-175	13	ECL12029M	1.43526	9.54
12201011	CCP-TP-175	14	ECL12029M	1.32905	
12201011	CCP-TP-175	15	ECL12029M	66.72918	595.48
12201011	CCP-TP-175	16	ECL12029M	0.40076	
12201011	CCP-TP-175	17	ECL12029M	0.67725	8.87
12201011	CCP-TP-175	18	ECL12029M	0.64873	
12201011	CCP-TP-175	19	ECL12029M	8.70717	63.37
12201011	CCP-TP-175	20	ECL12029M	0.87740	
12201011	CCP-TP-175	21	ECL12029M	0.87058	
12201011	CCP-TP-175	22	ECL12029M	0.95406	
12201011	CCP-TP-175	23	ECL12029M	0.90636	
12201011	CCP-TP-175	24	ECL12029M	0.80057	
12201011	CCP-TP-175	25	ECL12029M	0.84270	
12201011	CCP-TP-175	26	ECL12029M	1.14939	
12201011	CCP-TP-175	27	ECL12029M	2.35728	
12201011	CCP-TP-175	28	ECL12029M	4.86742	29.27
12201011	CCP-TP-175	29	ECL12029M	2.02743	
12201011	CCP-TP-175	30	ECL12029M	1.49249	
12201011	CCP-TP-175	31	ECL12029M	1.28119	
12201011	CCP-TP-175	32	ECL12029M	0.97339	
12201011	CCP-TP-175	33	ECL12029M	3.91229	

RESULTS SUMMARY

8/1/2012

LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
12201012	CCP-TP-175	1	ECL12029M	1.10463	
12201012	CCP-TP-175	2	ECL12029M	1.88014	
12201012	CCP-TP-175	3	ECL12029M	1.76845	
12201012	CCP-TP-175	4	ECL12029M	2.39391	28.97
12201012	CCP-TP-175	5	ECL12029M	1.43755	
12201012	CCP-TP-175	6	ECL12029M	1.39284	
12201012	CCP-TP-175	7	ECL12029M	1.40560	
12201012	CCP-TP-175	8	ECL12029M	1.14269	8.81
12201012	CCP-TP-175	9	ECL12029M	1.33024	
12201012	CCP-TP-175	10	ECL12029M	1.93826	16.7
12201012	CCP-TP-175	11	ECL12029M	4.07283	40.46
12201012	CCP-TP-175	12	ECL12029M	3.10646	26.36
12201012	CCP-TP-175	13	ECL12029M	1.56385	
12201012	CCP-TP-175	14	ECL12029M	1.62530	
12201012	CCP-TP-175	15	ECL12029M	1.23335	
12201012	CCP-TP-175	16	ECL12029M	0.49010	
12201012	CCP-TP-175	17	ECL12029M	93.61457	1002.59
12201012	CCP-TP-175	18	ECL12029M	0.79334	
12201012	CCP-TP-175	19	ECL12029M	8.34103	49.64
12201012	CCP-TP-175	20	ECL12029M	1.07299	
12201012	CCP-TP-175	21	ECL12029M	1.06464	
12201012	CCP-TP-175	22	ECL12029M	1.16673	
12201012	CCP-TP-175	23	ECL12029M	1.10840	
12201012	CCP-TP-175	24	ECL12029M	0.97902	
12201012	CCP-TP-175	25	ECL12029M	1.03055	
12201012	CCP-TP-175	26	ECL12029M	1.40560	
12201012	CCP-TP-175	27	ECL12029M	2.88274	
12201012	CCP-TP-175	28	ECL12029M	1.99295	
12201012	CCP-TP-175	29	ECL12029M	2.47936	
12201012	CCP-TP-175	30	ECL12029M	1.82518	
12201012	CCP-TP-175	31	ECL12029M	1.56678	
12201012	CCP-TP-175	32	ECL12029M	1.19036	
12201012	CCP-TP-175	33	ECL12029M	4.78438	

RESULTS SUMMARY

8/1/2012

LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
12201013	CCP-TP-175	1	ECL12029M	39.39059	
12201013	CCP-TP-175	2	ECL12029M	67.04485	
12201013	CCP-TP-175	3	ECL12029M	9392.16828	1444.67
12201013	CCP-TP-175	4	ECL12029M	29.17227	
12201013	CCP-TP-175	5	ECL12029M	51.26227	
12201013	CCP-TP-175	6	ECL12029M	49.66797	
12201013	CCP-TP-175	7	ECL12029M	50.12311	
12201013	CCP-TP-175	8	ECL12029M	40.23889	
12201013	CCP-TP-175	9	ECL12029M	47.43570	
12201013	CCP-TP-175	10	ECL12029M	38.07657	
12201013	CCP-TP-175	11	ECL12029M	27.99885	
12201013	CCP-TP-175	12	ECL12029M	39.50244	
12201013	CCP-TP-175	13	ECL12029M	55.76626	
12201013	CCP-TP-175	14	ECL12029M	57.95754	
12201013	CCP-TP-175	15	ECL12029M	1741.82597	356.44
12201013	CCP-TP-175	16	ECL12029M	17.47661	
12201013	CCP-TP-175	17	ECL12029M	28.63477	
12201013	CCP-TP-175	18	ECL12029M	28.29016	
12201013	CCP-TP-175	19	ECL12029M	47.93503	
12201013	CCP-TP-175	20	ECL12029M	38.26210	
12201013	CCP-TP-175	21	ECL12029M	37.96465	
12201013	CCP-TP-175	22	ECL12029M	41.60509	
12201013	CCP-TP-175	23	ECL12029M	39.52484	
12201013	CCP-TP-175	24	ECL12029M	34.91142	
12201013	CCP-TP-175	25	ECL12029M	36.74886	
12201013	CCP-TP-175	26	ECL12029M	50.12311	
12201013	CCP-TP-175	27	ECL12029M	102.79709	
12201013	CCP-TP-175	28	ECL12029M	71.06758	
12201013	CCP-TP-175	29	ECL12029M	1595.89685	167.87
12201013	CCP-TP-175	30	ECL12029M	65.08513	
12201013	CCP-TP-175	31	ECL12029M	55.87071	
12201013	CCP-TP-175	32	ECL12029M	42.44776	
12201013	CCP-TP-175	33	ECL12029M	211.79598	12.29

RESULTS SUMMARY

8/1/2012

LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
12201013DL	CCP-TP-175	1	ECL12029M	65.73605	
12201013DL	CCP-TP-175	2	ECL12029M	111.88620	
12201013DL	CCP-TP-175	3	ECL12029M	9252.85710	852.84
12201013DL	CCP-TP-175	4	ECL12029M	48.68345	
12201013DL	CCP-TP-175	5	ECL12029M	85.54781	
12201013DL	CCP-TP-175	6	ECL12029M	82.88721	
12201013DL	CCP-TP-175	7	ECL12029M	83.64675	
12201013DL	CCP-TP-175	8	ECL12029M	67.15171	
12201013DL	CCP-TP-175	9	ECL12029M	79.16194	
12201013DL	CCP-TP-175	10	ECL12029M	63.54317	
12201013DL	CCP-TP-175	11	ECL12029M	46.72520	
12201013DL	CCP-TP-175	12	ECL12029M	65.92270	
12201013DL	CCP-TP-175	13	ECL12029M	93.06419	
12201013DL	CCP-TP-175	14	ECL12029M	96.72106	
12201013DL	CCP-TP-175	15	ECL12029M	1691.28665	207.39
12201013DL	CCP-TP-175	16	ECL12029M	29.16542	
12201013DL	CCP-TP-175	17	ECL12029M	47.78645	
12201013DL	CCP-TP-175	18	ECL12029M	47.21136	
12201013DL	CCP-TP-175	19	ECL12029M	79.99523	
12201013DL	CCP-TP-175	20	ECL12029M	63.85280	
12201013DL	CCP-TP-175	21	ECL12029M	63.35640	
12201013DL	CCP-TP-175	22	ECL12029M	69.43167	
12201013DL	CCP-TP-175	23	ECL12029M	65.96008	
12201013DL	CCP-TP-175	24	ECL12029M	58.26108	
12201013DL	CCP-TP-175	25	ECL12029M	61.32745	
12201013DL	CCP-TP-175	26	ECL12029M	83.64675	
12201013DL	CCP-TP-175	27	ECL12029M	171.55047	
12201013DL	CCP-TP-175	28	ECL12029M	118.59944	
12201013DL	CCP-TP-175	29	ECL12029M	1555.57304	98.05
12201013DL	CCP-TP-175	30	ECL12029M	108.61576	
12201013DL	CCP-TP-175	31	ECL12029M	93.23850	
12201013DL	CCP-TP-175	32	ECL12029M	70.83792	
12201013DL	CCP-TP-175	33	ECL12029M	284.71615	

RESULTS SUMMARY

8/1/2012

LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
12201014	CCP-TP-175	1	ECL12029M	20.36518	
12201014	CCP-TP-175	2	ECL12029M	34.66261	
12201014	CCP-TP-175	3	ECL12029M	2460.62608	732.07
12201014	CCP-TP-175	4	ECL12029M	15.08225	
12201014	CCP-TP-175	5	ECL12029M	26.50291	
12201014	CCP-TP-175	6	ECL12029M	25.67865	
12201014	CCP-TP-175	7	ECL12029M	25.91396	
12201014	CCP-TP-175	8	ECL12029M	20.80376	
12201014	CCP-TP-175	9	ECL12029M	24.52456	
12201014	CCP-TP-175	10	ECL12029M	19.68582	
12201014	CCP-TP-175	11	ECL12029M	14.47558	
12201014	CCP-TP-175	12	ECL12029M	20.42301	
12201014	CCP-TP-175	13	ECL12029M	28.83151	
12201014	CCP-TP-175	14	ECL12029M	29.96441	
12201014	CCP-TP-175	15	ECL12029M	698.46787	276.46
12201014	CCP-TP-175	16	ECL12029M	9.03552	
12201014	CCP-TP-175	17	ECL12029M	14.80435	
12201014	CCP-TP-175	18	ECL12029M	14.62619	
12201014	CCP-TP-175	19	ECL12029M	24.78271	
12201014	CCP-TP-175	20	ECL12029M	19.78175	
12201014	CCP-TP-175	21	ECL12029M	19.62796	
12201014	CCP-TP-175	22	ECL12029M	21.51009	
12201014	CCP-TP-175	23	ECL12029M	20.43459	
12201014	CCP-TP-175	24	ECL12029M	18.04942	
12201014	CCP-TP-175	25	ECL12029M	18.99939	
12201014	CCP-TP-175	26	ECL12029M	25.91396	
12201014	CCP-TP-175	27	ECL12029M	53.14674	
12201014	CCP-TP-175	28	ECL12029M	36.74238	
12201014	CCP-TP-175	29	ECL12029M	334.76374	68.11
12201014	CCP-TP-175	30	ECL12029M	33.64942	
12201014	CCP-TP-175	31	ECL12029M	28.88551	
12201014	CCP-TP-175	32	ECL12029M	21.94576	
12201014	CCP-TP-175	33	ECL12029M	88.20574	

RESULTS SUMMARY

8/1/2012

LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
12201015	CCP-TP-175	1	ECL12029M	3.74806	
12201015	CCP-TP-175	2	ECL12029M	6.37939	
12201015	CCP-TP-175	3	ECL12029M	6.00043	
12201015	CCP-TP-175	4	ECL12029M	2.77577	
12201015	CCP-TP-175	5	ECL12029M	4.87766	
12201015	CCP-TP-175	6	ECL12029M	4.72596	
12201015	CCP-TP-175	7	ECL12029M	4.76927	
12201015	CCP-TP-175	8	ECL12029M	291.27277	661.85
12201015	CCP-TP-175	9	ECL12029M	4.51356	
12201015	CCP-TP-175	10	ECL12029M	3.62302	
12201015	CCP-TP-175	11	ECL12029M	2.66412	
12201015	CCP-TP-175	12	ECL12029M	3.75870	
12201015	CCP-TP-175	13	ECL12029M	71.34054	114.28
12201015	CCP-TP-175	14	ECL12029M	5.51472	
12201015	CCP-TP-175	15	ECL12029M	4.18480	
12201015	CCP-TP-175	16	ECL12029M	1.66292	
12201015	CCP-TP-175	17	ECL12029M	2.72463	
12201015	CCP-TP-175	18	ECL12029M	2.69184	
12201015	CCP-TP-175	19	ECL12029M	4.56107	
12201015	CCP-TP-175	20	ECL12029M	3.64068	
12201015	CCP-TP-175	21	ECL12029M	3.61238	
12201015	CCP-TP-175	22	ECL12029M	3.95877	
12201015	CCP-TP-175	23	ECL12029M	3.76083	
12201015	CCP-TP-175	24	ECL12029M	3.32186	
12201015	CCP-TP-175	25	ECL12029M	3.49669	
12201015	CCP-TP-175	26	ECL12029M	4.76927	
12201015	CCP-TP-175	27	ECL12029M	9.78125	
12201015	CCP-TP-175	28	ECL12029M	11.12995	16.13
12201015	CCP-TP-175	29	ECL12029M	8.41256	
12201015	CCP-TP-175	30	ECL12029M	6.19292	
12201015	CCP-TP-175	31	ECL12029M	5.31616	
12201015	CCP-TP-175	32	ECL12029M	4.03895	
12201015	CCP-TP-175	33	ECL12029M	24.54716	14.97

RESULTS SUMMARY

8/1/2012

LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
12201016	CCP-TP-175	1	ECL12029M	2.58260	
12201016	CCP-TP-175	2	ECL12029M	4.39572	
12201016	CCP-TP-175	3	ECL12029M	294.50292	690.92
12201016	CCP-TP-175	4	ECL12029M	1.91265	
12201016	CCP-TP-175	5	ECL12029M	3.36095	
12201016	CCP-TP-175	6	ECL12029M	3.25642	
12201016	CCP-TP-175	7	ECL12029M	3.28627	
12201016	CCP-TP-175	8	ECL12029M	2.63822	
12201016	CCP-TP-175	9	ECL12029M	3.11007	
12201016	CCP-TP-175	10	ECL12029M	2.49645	
12201016	CCP-TP-175	11	ECL12029M	1.83571	
12201016	CCP-TP-175	12	ECL12029M	2.97567	10.8
12201016	CCP-TP-175	13	ECL12029M	3.65625	
12201016	CCP-TP-175	14	ECL12029M	3.79992	
12201016	CCP-TP-175	15	ECL12029M	111.01936	346.51
12201016	CCP-TP-175	16	ECL12029M	1.14583	
12201016	CCP-TP-175	17	ECL12029M	1.87741	
12201016	CCP-TP-175	18	ECL12029M	1.85481	
12201016	CCP-TP-175	19	ECL12029M	5.62562	14.32
12201016	CCP-TP-175	20	ECL12029M	2.50861	
12201016	CCP-TP-175	21	ECL12029M	2.48911	
12201016	CCP-TP-175	22	ECL12029M	2.72779	
12201016	CCP-TP-175	23	ECL12029M	2.59140	
12201016	CCP-TP-175	24	ECL12029M	2.28893	
12201016	CCP-TP-175	25	ECL12029M	2.40940	
12201016	CCP-TP-175	26	ECL12029M	3.28627	
12201016	CCP-TP-175	27	ECL12029M	6.73978	
12201016	CCP-TP-175	28	ECL12029M	4.65947	
12201016	CCP-TP-175	29	ECL12029M	17.00983	27.29
12201016	CCP-TP-175	30	ECL12029M	4.26723	
12201016	CCP-TP-175	31	ECL12029M	3.66310	
12201016	CCP-TP-175	32	ECL12029M	2.78304	
12201016	CCP-TP-175	33	ECL12029M	19.99879	17.7

RESULTS SUMMARY

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LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
12201017	CCP-TP-175	1	ECL12029M	6.51127	
12201017	CCP-TP-175	2	ECL12029M	11.08251	
12201017	CCP-TP-175	3	ECL12029M	10.42418	
12201017	CCP-TP-175	4	ECL12029M	4.82218	
12201017	CCP-TP-175	5	ECL12029M	8.47365	
12201017	CCP-TP-175	6	ECL12029M	8.21012	
12201017	CCP-TP-175	7	ECL12029M	8.28535	
12201017	CCP-TP-175	8	ECL12029M	6.65149	
12201017	CCP-TP-175	9	ECL12029M	7.84112	
12201017	CCP-TP-175	10	ECL12029M	275.78915	403.12
12201017	CCP-TP-175	11	ECL12029M	4.62821	
12201017	CCP-TP-175	12	ECL12029M	467.82903	673.47
12201017	CCP-TP-175	13	ECL12029M	9.21816	
12201017	CCP-TP-175	14	ECL12029M	9.58038	
12201017	CCP-TP-175	15	ECL12029M	7.26999	
12201017	CCP-TP-175	16	ECL12029M	2.88888	
12201017	CCP-TP-175	17	ECL12029M	11.04627	20.07
12201017	CCP-TP-175	18	ECL12029M	4.67636	
12201017	CCP-TP-175	19	ECL12029M	7.92366	
12201017	CCP-TP-175	20	ECL12029M	6.32473	
12201017	CCP-TP-175	21	ECL12029M	6.27556	
12201017	CCP-TP-175	22	ECL12029M	6.87732	
12201017	CCP-TP-175	23	ECL12029M	6.53346	
12201017	CCP-TP-175	24	ECL12029M	5.77086	
12201017	CCP-TP-175	25	ECL12029M	6.07459	
12201017	CCP-TP-175	26	ECL12029M	8.28535	
12201017	CCP-TP-175	27	ECL12029M	16.99236	
12201017	CCP-TP-175	28	ECL12029M	11.74747	
12201017	CCP-TP-175	29	ECL12029M	44.50388	28.32
12201017	CCP-TP-175	30	ECL12029M	10.75857	
12201017	CCP-TP-175	31	ECL12029M	11.37805	9.24
12201017	CCP-TP-175	32	ECL12029M	7.01661	
12201017	CCP-TP-175	33	ECL12029M	28.20161	

RESULTS SUMMARY

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LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
12201017D	CCP-TP-175	1	ECL12029M	6.51127	
12201017D	CCP-TP-175	2	ECL12029M	11.08251	
12201017D	CCP-TP-175	3	ECL12029M	10.42418	
12201017D	CCP-TP-175	4	ECL12029M	4.82218	
12201017D	CCP-TP-175	5	ECL12029M	8.47365	
12201017D	CCP-TP-175	6	ECL12029M	8.21012	
12201017D	CCP-TP-175	7	ECL12029M	8.28535	
12201017D	CCP-TP-175	8	ECL12029M	6.65149	
12201017D	CCP-TP-175	9	ECL12029M	7.84112	
12201017D	CCP-TP-175	10	ECL12029M	281.64536	411.68
12201017D	CCP-TP-175	11	ECL12029M	4.62821	
12201017D	CCP-TP-175	12	ECL12029M	480.14525	691.2
12201017D	CCP-TP-175	13	ECL12029M	9.21816	
12201017D	CCP-TP-175	14	ECL12029M	9.58038	
12201017D	CCP-TP-175	15	ECL12029M	7.26999	
12201017D	CCP-TP-175	16	ECL12029M	2.88888	
12201017D	CCP-TP-175	17	ECL12029M	11.21138	20.37
12201017D	CCP-TP-175	18	ECL12029M	4.67636	
12201017D	CCP-TP-175	19	ECL12029M	7.92366	
12201017D	CCP-TP-175	20	ECL12029M	6.32473	
12201017D	CCP-TP-175	21	ECL12029M	6.27556	
12201017D	CCP-TP-175	22	ECL12029M	6.87732	
12201017D	CCP-TP-175	23	ECL12029M	6.53346	
12201017D	CCP-TP-175	24	ECL12029M	5.77086	
12201017D	CCP-TP-175	25	ECL12029M	6.07459	
12201017D	CCP-TP-175	26	ECL12029M	8.28535	
12201017D	CCP-TP-175	27	ECL12029M	16.99236	
12201017D	CCP-TP-175	28	ECL12029M	11.74747	
12201017D	CCP-TP-175	29	ECL12029M	45.63533	29.04
12201017D	CCP-TP-175	30	ECL12029M	10.75857	
12201017D	CCP-TP-175	31	ECL12029M	12.15382	9.87
12201017D	CCP-TP-175	32	ECL12029M	7.01661	
12201017D	CCP-TP-175	33	ECL12029M	28.20161	

RESULTS SUMMARY

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LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
12201018	CCP-TP-175	1	ECL12029M	0.41074	
12201018	CCP-TP-175	2	ECL12029M	0.69910	
12201018	CCP-TP-175	3	ECL12029M	4.57658	67.51
12201018	CCP-TP-175	4	ECL12029M	0.30419	
12201018	CCP-TP-175	5	ECL12029M	0.53453	
12201018	CCP-TP-175	6	ECL12029M	0.51791	
12201018	CCP-TP-175	7	ECL12029M	0.52265	
12201018	CCP-TP-175	8	ECL12029M	0.41959	
12201018	CCP-TP-175	9	ECL12029M	0.49463	
12201018	CCP-TP-175	10	ECL12029M	0.39704	
12201018	CCP-TP-175	11	ECL12029M	4.16073	111.16
12201018	CCP-TP-175	12	ECL12029M	3.64626	83.21
12201018	CCP-TP-175	13	ECL12029M	0.58150	
12201018	CCP-TP-175	14	ECL12029M	0.60435	
12201018	CCP-TP-175	15	ECL12029M	0.61555	12.08
12201018	CCP-TP-175	16	ECL12029M	0.18224	
12201018	CCP-TP-175	17	ECL12029M	0.29859	
12201018	CCP-TP-175	18	ECL12029M	0.29499	
12201018	CCP-TP-175	19	ECL12029M	7.50318	120.09
12201018	CCP-TP-175	20	ECL12029M	0.39897	
12201018	CCP-TP-175	21	ECL12029M	0.39587	
12201018	CCP-TP-175	22	ECL12029M	0.43383	
12201018	CCP-TP-175	23	ECL12029M	0.41214	
12201018	CCP-TP-175	24	ECL12029M	0.36403	
12201018	CCP-TP-175	25	ECL12029M	0.38319	
12201018	CCP-TP-175	26	ECL12029M	0.52265	
12201018	CCP-TP-175	27	ECL12029M	1.07191	
12201018	CCP-TP-175	28	ECL12029M	0.74105	
12201018	CCP-TP-175	29	ECL12029M	9.47192	95.55
12201018	CCP-TP-175	30	ECL12029M	1.56413	19.59
12201018	CCP-TP-175	31	ECL12029M	2.27597	29.3
12201018	CCP-TP-175	32	ECL12029M	0.44262	
12201018	CCP-TP-175	33	ECL12029M	14.56806	81.07

RESULTS SUMMARY

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LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
12201019	CCP-TP-175	1	ECL12029M	1.72336	
12201019	CCP-TP-175	2	ECL12029M	2.93326	
12201019	CCP-TP-175	3	ECL12029M	2.75901	
12201019	CCP-TP-175	4	ECL12029M	1.27631	
12201019	CCP-TP-175	5	ECL12029M	2.24276	
12201019	CCP-TP-175	6	ECL12029M	2.17301	
12201019	CCP-TP-175	7	ECL12029M	2.19292	
12201019	CCP-TP-175	8	ECL12029M	1.76048	
12201019	CCP-TP-175	9	ECL12029M	2.07534	
12201019	CCP-TP-175	10	ECL12029M	119.07205	657.59
12201019	CCP-TP-175	11	ECL12029M	2.18610	13.92
12201019	CCP-TP-175	12	ECL12029M	108.25329	588.79
12201019	CCP-TP-175	13	ECL12029M	2.43981	
12201019	CCP-TP-175	14	ECL12029M	2.53568	
12201019	CCP-TP-175	15	ECL12029M	1.92418	
12201019	CCP-TP-175	16	ECL12029M	0.76461	
12201019	CCP-TP-175	17	ECL12029M	1.25279	
12201019	CCP-TP-175	18	ECL12029M	1.23771	
12201019	CCP-TP-175	19	ECL12029M	2.09719	
12201019	CCP-TP-175	20	ECL12029M	1.67399	
12201019	CCP-TP-175	21	ECL12029M	1.66098	
12201019	CCP-TP-175	22	ECL12029M	1.82025	
12201019	CCP-TP-175	23	ECL12029M	1.72924	
12201019	CCP-TP-175	24	ECL12029M	1.52740	
12201019	CCP-TP-175	25	ECL12029M	1.60779	
12201019	CCP-TP-175	26	ECL12029M	2.19292	
12201019	CCP-TP-175	27	ECL12029M	4.49744	
12201019	CCP-TP-175	28	ECL12029M	3.10925	
12201019	CCP-TP-175	29	ECL12029M	3.86811	
12201019	CCP-TP-175	30	ECL12029M	2.84752	
12201019	CCP-TP-175	31	ECL12029M	2.44438	
12201019	CCP-TP-175	32	ECL12029M	1.85712	
12201019	CCP-TP-175	33	ECL12029M	7.46424	

RESULTS SUMMARY

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LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
12201020	CCP-TP-175	1	ECL12029M	0.39047	
12201020	CCP-TP-175	2	ECL12029M	0.66459	
12201020	CCP-TP-175	3	ECL12029M	0.62511	
12201020	CCP-TP-175	4	ECL12029M	0.67328	23.05
12201020	CCP-TP-175	5	ECL12029M	0.50815	
12201020	CCP-TP-175	6	ECL12029M	1.42613	25.78
12201020	CCP-TP-175	7	ECL12029M	0.49685	
12201020	CCP-TP-175	8	ECL12029M	0.39888	
12201020	CCP-TP-175	9	ECL12029M	0.47021	
12201020	CCP-TP-175	10	ECL12029M	6.51454	158.79
12201020	CCP-TP-175	11	ECL12029M	0.27754	
12201020	CCP-TP-175	12	ECL12029M	38.02567	912.83
12201020	CCP-TP-175	13	ECL12029M	0.55279	
12201020	CCP-TP-175	14	ECL12029M	0.57451	
12201020	CCP-TP-175	15	ECL12029M	0.43597	
12201020	CCP-TP-175	16	ECL12029M	0.17324	
12201020	CCP-TP-175	17	ECL12029M	0.28385	
12201020	CCP-TP-175	18	ECL12029M	0.28043	
12201020	CCP-TP-175	19	ECL12029M	7.19696	121.17
12201020	CCP-TP-175	20	ECL12029M	0.37928	
12201020	CCP-TP-175	21	ECL12029M	0.37633	
12201020	CCP-TP-175	22	ECL12029M	0.41242	
12201020	CCP-TP-175	23	ECL12029M	0.39180	
12201020	CCP-TP-175	24	ECL12029M	0.34607	
12201020	CCP-TP-175	25	ECL12029M	0.36428	
12201020	CCP-TP-175	26	ECL12029M	0.49685	
12201020	CCP-TP-175	27	ECL12029M	1.01899	
12201020	CCP-TP-175	28	ECL12029M	0.70447	
12201020	CCP-TP-175	29	ECL12029M	5.52607	58.64
12201020	CCP-TP-175	30	ECL12029M	0.64517	
12201020	CCP-TP-175	31	ECL12029M	0.55383	
12201020	CCP-TP-175	32	ECL12029M	0.42077	
12201020	CCP-TP-175	33	ECL12029M	2.30787	13.51

RESULTS SUMMARY

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LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
12201021	CCP-TP-175	1	ECL12029M	0.47716	
12201021	CCP-TP-175	2	ECL12029M	0.81215	
12201021	CCP-TP-175	3	ECL12029M	25.81448	327.79
12201021	CCP-TP-175	4	ECL12029M	0.35338	
12201021	CCP-TP-175	5	ECL12029M	0.62097	
12201021	CCP-TP-175	6	ECL12029M	0.60165	
12201021	CCP-TP-175	7	ECL12029M	0.60717	
12201021	CCP-TP-175	8	ECL12029M	0.48743	
12201021	CCP-TP-175	9	ECL12029M	0.57461	
12201021	CCP-TP-175	10	ECL12029M	0.46124	
12201021	CCP-TP-175	11	ECL12029M	0.33916	
12201021	CCP-TP-175	12	ECL12029M	2.64659	51.99
12201021	CCP-TP-175	13	ECL12029M	1.37330	17.28
12201021	CCP-TP-175	14	ECL12029M	0.70207	
12201021	CCP-TP-175	15	ECL12029M	0.62274	10.52
12201021	CCP-TP-175	16	ECL12029M	0.21170	
12201021	CCP-TP-175	17	ECL12029M	0.34687	
12201021	CCP-TP-175	18	ECL12029M	0.34269	
12201021	CCP-TP-175	19	ECL12029M	70.07429	965.44
12201021	CCP-TP-175	20	ECL12029M	0.46349	
12201021	CCP-TP-175	21	ECL12029M	3.94116	62.56
12201021	CCP-TP-175	22	ECL12029M	25.26788	401.09
12201021	CCP-TP-175	23	ECL12029M	7.22839	114.74
12201021	CCP-TP-175	24	ECL12029M	0.42290	
12201021	CCP-TP-175	25	ECL12029M	0.52584	9.45
12201021	CCP-TP-175	26	ECL12029M	0.60717	
12201021	CCP-TP-175	27	ECL12029M	1.24523	
12201021	CCP-TP-175	28	ECL12029M	0.98650	11.23
12201021	CCP-TP-175	29	ECL12029M	2.59686	22.55
12201021	CCP-TP-175	30	ECL12029M	0.78841	
12201021	CCP-TP-175	31	ECL12029M	0.67679	
12201021	CCP-TP-175	32	ECL12029M	0.51419	
12201021	CCP-TP-175	33	ECL12029M	2.06667	

RESULTS SUMMARY

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LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
LBMJL26	CCP-TP-175	1	ECL12029M	0.01748	
LBMJL26	CCP-TP-175	2	ECL12029M	0.02975	
LBMJL26	CCP-TP-175	3	ECL12029M	0.02798	
LBMJL26	CCP-TP-175	4	ECL12029M	0.01294	
LBMJL26	CCP-TP-175	5	ECL12029M	0.02275	
LBMJL26	CCP-TP-175	6	ECL12029M	0.02204	
LBMJL26	CCP-TP-175	7	ECL12029M	0.02224	
LBMJL26	CCP-TP-175	8	ECL12029M	0.01785	
LBMJL26	CCP-TP-175	9	ECL12029M	0.02105	
LBMJL26	CCP-TP-175	10	ECL12029M	0.01690	
LBMJL26	CCP-TP-175	11	ECL12029M	0.01242	
LBMJL26	CCP-TP-175	12	ECL12029M	0.01753	
LBMJL26	CCP-TP-175	13	ECL12029M	0.02474	
LBMJL26	CCP-TP-175	14	ECL12029M	0.02572	
LBMJL26	CCP-TP-175	15	ECL12029M	0.01952	
LBMJL26	CCP-TP-175	16	ECL12029M	0.00775	
LBMJL26	CCP-TP-175	17	ECL12029M	0.01271	
LBMJL26	CCP-TP-175	18	ECL12029M	0.01255	
LBMJL26	CCP-TP-175	19	ECL12029M	0.02127	
LBMJL26	CCP-TP-175	20	ECL12029M	0.01698	
LBMJL26	CCP-TP-175	21	ECL12029M	0.01685	
LBMJL26	CCP-TP-175	22	ECL12029M	0.01846	
LBMJL26	CCP-TP-175	23	ECL12029M	0.01754	
LBMJL26	CCP-TP-175	24	ECL12029M	0.01549	
LBMJL26	CCP-TP-175	25	ECL12029M	0.01631	
LBMJL26	CCP-TP-175	26	ECL12029M	0.02224	
LBMJL26	CCP-TP-175	27	ECL12029M	0.04561	
LBMJL26	CCP-TP-175	28	ECL12029M	0.03153	
LBMJL26	CCP-TP-175	29	ECL12029M	0.03923	
LBMJL26	CCP-TP-175	30	ECL12029M	0.02888	
LBMJL26	CCP-TP-175	31	ECL12029M	0.02479	
LBMJL26	CCP-TP-175	32	ECL12029M	0.01883	
LBMJL26	CCP-TP-175	33	ECL12029M	0.07570	

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LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
LBMJL30	CCP-TP-175	1	ECL12029M	0.01748	
LBMJL30	CCP-TP-175	2	ECL12029M	0.02975	
LBMJL30	CCP-TP-175	3	ECL12029M	0.03245	11.25
LBMJL30	CCP-TP-175	4	ECL12029M	0.01294	
LBMJL30	CCP-TP-175	5	ECL12029M	0.02275	
LBMJL30	CCP-TP-175	6	ECL12029M	0.02204	
LBMJL30	CCP-TP-175	7	ECL12029M	0.02224	
LBMJL30	CCP-TP-175	8	ECL12029M	0.01785	
LBMJL30	CCP-TP-175	9	ECL12029M	0.02105	
LBMJL30	CCP-TP-175	10	ECL12029M	0.01690	
LBMJL30	CCP-TP-175	11	ECL12029M	0.01242	
LBMJL30	CCP-TP-175	12	ECL12029M	0.01753	
LBMJL30	CCP-TP-175	13	ECL12029M	0.02474	
LBMJL30	CCP-TP-175	14	ECL12029M	0.02572	
LBMJL30	CCP-TP-175	15	ECL12029M	0.01952	
LBMJL30	CCP-TP-175	16	ECL12029M	0.00775	
LBMJL30	CCP-TP-175	17	ECL12029M	0.01271	
LBMJL30	CCP-TP-175	18	ECL12029M	0.01255	
LBMJL30	CCP-TP-175	19	ECL12029M	0.02127	
LBMJL30	CCP-TP-175	20	ECL12029M	0.01698	
LBMJL30	CCP-TP-175	21	ECL12029M	0.01685	
LBMJL30	CCP-TP-175	22	ECL12029M	0.01846	
LBMJL30	CCP-TP-175	23	ECL12029M	0.01754	
LBMJL30	CCP-TP-175	24	ECL12029M	0.01549	
LBMJL30	CCP-TP-175	25	ECL12029M	0.01631	
LBMJL30	CCP-TP-175	26	ECL12029M	0.02224	
LBMJL30	CCP-TP-175	27	ECL12029M	0.04561	
LBMJL30	CCP-TP-175	28	ECL12029M	0.03153	
LBMJL30	CCP-TP-175	29	ECL12029M	0.03923	
LBMJL30	CCP-TP-175	30	ECL12029M	0.02888	
LBMJL30	CCP-TP-175	31	ECL12029M	0.02479	
LBMJL30	CCP-TP-175	32	ECL12029M	0.01883	
LBMJL30	CCP-TP-175	33	ECL12029M	0.07570	

RESULTS SUMMARY

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LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
LCSMJL26	CCP-TP-175	1	ECL12029M	0.15294	
LCSMJL26	CCP-TP-175	2	ECL12029M	0.26030	
LCSMJL26	CCP-TP-175	3	ECL12029M	21.29085	843.49
LCSMJL26	CCP-TP-175	4	ECL12029M	0.11326	
LCSMJL26	CCP-TP-175	5	ECL12029M	0.19903	
LCSMJL26	CCP-TP-175	6	ECL12029M	0.19284	
LCSMJL26	CCP-TP-175	7	ECL12029M	0.19460	
LCSMJL26	CCP-TP-175	8	ECL12029M	0.15623	
LCSMJL26	CCP-TP-175	9	ECL12029M	0.18417	
LCSMJL26	CCP-TP-175	10	ECL12029M	12.07657	751.55
LCSMJL26	CCP-TP-175	11	ECL12029M	11.80888	847.32
LCSMJL26	CCP-TP-175	12	ECL12029M	12.62967	774.07
LCSMJL26	CCP-TP-175	13	ECL12029M	0.21651	
LCSMJL26	CCP-TP-175	14	ECL12029M	17.71009	645.37
LCSMJL26	CCP-TP-175	15	ECL12029M	0.17076	
LCSMJL26	CCP-TP-175	16	ECL12029M	0.06785	
LCSMJL26	CCP-TP-175	17	ECL12029M	0.11118	
LCSMJL26	CCP-TP-175	18	ECL12029M	0.10984	
LCSMJL26	CCP-TP-175	19	ECL12029M	18.55699	797.68
LCSMJL26	CCP-TP-175	20	ECL12029M	0.14855	
LCSMJL26	CCP-TP-175	21	ECL12029M	0.14740	
LCSMJL26	CCP-TP-175	22	ECL12029M	0.16153	
LCSMJL26	CCP-TP-175	23	ECL12029M	0.15346	
LCSMJL26	CCP-TP-175	24	ECL12029M	0.13554	
LCSMJL26	CCP-TP-175	25	ECL12029M	0.14268	
LCSMJL26	CCP-TP-175	26	ECL12029M	0.19460	
LCSMJL26	CCP-TP-175	27	ECL12029M	0.39911	
LCSMJL26	CCP-TP-175	28	ECL12029M	0.27592	
LCSMJL26	CCP-TP-175	29	ECL12029M	0.34327	
LCSMJL26	CCP-TP-175	30	ECL12029M	0.25270	
LCSMJL26	CCP-TP-175	31	ECL12029M	0.21692	
LCSMJL26	CCP-TP-175	32	ECL12029M	15.62652	730.1
LCSMJL26	CCP-TP-175	33	ECL12029M	0.66239	

DIVIDER

PAGE

Attachment 9 – CCP SPM HSG Summa Sampling Project Level Validation Checklist and Summary

BDR Number: INHSG1202 **Sampling Date:** 6/25/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
1. Does the Batch Data Report (BDR) contain the batch number? **Reference Source: CCP-PO-001, Table C3-12**	X			
2. Is the BDR complete according to the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-10b**	X			
3. Does the BDR contain the BDR date? **Reference Source: CCP-PO-001, Table C3-12**	X			
4. Is the sample matrix and type included for each sample in the BDR? **Reference Source: CCP-PO-001, Table C3-12**	X			
5. Is the BDR complete as defined by the process procedures? **Reference Source: CCP-PO-001, C3-10, CCP Technical Procedures**	X			
6. List all containers that have met QAOs. **Reference Source: CCP-PO-001, Table C3-12**				Container Numbers: NRFTRUSPC023-1 NRFTRUSPC027-1 NRFTRUSPC003-1 NRFTRUSPC026-1
7. Does the BDR include the requested analyses and the name of the laboratory? **Reference Source: CCP-PO-001, Table C3-12**	X			
8. Is there a reference to or copy of any associated NCRs (if any) in the BDR? NA if no NCRs associated with the BDR. **Reference Source: CCP-PO-001, Table C3-12**			X	NO NCR'S
9. Does the BDR include the point of origin for sampling (e.g., building number, room)? **Reference Source: CCP-PO-001, Table C3-12**	X			
10. Is the sample size included in the BDR? **Reference Source: CCP-PO-001, Table C3-12**	X			
11. Does the BDR include the sample location of each container? Note: Location within container is where the sample is taken. The BDR must specify what layer of confinement was sampled (e.g., under the lid). **Reference Source: CCP-PO-001, Table C3-12**	X			

COPY

CCP RECORDS ORIGINAL
DATE REC'D 7/18/12

Attachment 9 – CCP SPM HSG Summa Sampling Project Level Validation Checklist and Summary (Continued)

BDR Number: INHSG1202	Sampling Date: 6/25/12			
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
12. Is the person collecting the sample identified in the BDR and qualified? **Reference Source: CCP-PO-001, Table C3-12**	X			
13. Does the BDR contain a chain of custody record? **Reference Source: CCP-PO-001, Table C3-12**	X			
14. Does the chain of custody form correctly identify the Waste Stream ID? **Reference Source: CCP-PO-001, Table C3-12**	X			
15. Is there a reference to sampling equipment numbers or lot numbers for disposable equipment? **Reference Source: CCP-PO-001, Table C3-12**	X			
16. Is there verification of rigid liner venting? **Reference Source: CCP-PO-001, Table C3-12**			X	NO RIGID LINER
17. Does the BDR include the operator/sampler signature and date and time of sampling for each sample? **Reference Source: CCP-PO-001, Table C3-12**	X			
18. Are there 20 samples or less (excluding QC) in the batch and all samples collected within 14 days of the first sample collected? **Reference Source: CCP-PO-001, C1-1b**	X			
19. Are the correct revisions of the procedures used and identified? **Reference Source: CCP-PO-001, Table C3-12**	X			
20. Are all data reporting forms complete with data reported properly (correct units and significant figures)? **Reference Source: CCP-PO-001, C3-10b(1)**	X			
21. Is there a cross-reference between waste container number and field sample number? **Reference Source: CCP-PO-001, C1-5**	X			
22. Have the samples been properly preserved (0-40° C)? **Reference Source: CCP-PO-001, Table C1-1**	X			

Attachment 9 – CCP SPM HSG Summa Sampling Project Level Validation Checklist and Summary (Continued)

BDR Number: INHSG1202 **Sampling Date:** 6/25/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
23. Have the samples been properly preserved (0-40° C)? **Reference Source: CCP-PO-001, Table C1-1**	X			
24. Has the correct DAC scenario and waste packaging configuration been selected? **Reference Source: CCP-PO-001, C3-2**	X			
25. Do the samples meet the required DAC equilibrium times? **Reference Source: CCP-PO-001, C3-2**	X			
26. Prior to canister use was the following performed: equipment blank, sample canister equipment cleaning and leak check, and field reference standard (or on-line control standard) performed as required? **Reference Source: CCP-PO-001, C1-1b**	X			
27. Has one field blank per batch been collected? **Reference Source: CCP-PO-001, Table C1-2**	X			
28. Has a minimum of one equipment blank been collected for the applicable cleaning batch blanks? **Reference Source: CCP-PO-001, Table C1-2**	X			
29. Has one field duplicate per batch been collected? **Reference Source: CCP-PO-001, Table C1-2**	X			
30. Has the canister pressure and ambient temperature and pressure been recorded? **Reference Source: CCP-PO-001, Table C3-12**	X			
31. Have the ambient pressure and temperature sensors been calibrated? **Reference Source: CCP-PO-001, C1-1d**	X			
32. Have all the waste containers equilibrated for a minimum of 72 hours at 18° C or higher? **Reference Source: CCP-PO-001, C1-1a**	X			
33. Is the completed, signed, and dated Independent Technical Reviewer Checklist in the BDR? **Reference Source: CCP-PO-001, Table C3-12**	X			

Attachment 9 – CCP SPM HSG Summa Sampling Project Level Validation Checklist and Summary (Continued)

BDR Number: INHSG1202 **Sampling Date:** 6/25/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
34. Is the completed, signed, and dated Independent Technical Reviewer Checklist in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, Table C3-12**	X			

Comments: NA

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

Laura Nelson	Laura Nelson	7/9/2012
SPM Printed Name	Signature	Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

Attachment 1 – HSG Sampling Batch Data Report Cover Sheet Page 1 of 1

Headspace Gas Sampling

HSG Sampling Batch Number: INHSG1202

Waste Matrix Code: S5100

Waste Container Identification Numbers

NRFTRUSPC023-1	N/A
NRFTRUSPC027-1	N/A
NRFTRUSPC003-1	N/A
NRFTRUSPC026-1	N/A
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

Comments: **Waste Stream ID's for this batch are IN-ID-NRF-SPC. No filter change out required.**

HSG Independent Technical Reviewer:

Jeri Miles
Printed Name

Jeri Miles
Signature

7/2/2012
Date

CCP RECORDS ORIGINAL
DATE REC'D 7-3-12

Attachment 2 – HSG Sampling Batch Data Report Table of Contents Page 1 of 1

Section		Page No.
1.	HSG Sampling Batch Data Report Cover Sheet (Attachment 1)	1
2.	HSG Sampling Batch Data Report Table of Contents (Attachment 2)	2
3.	Independent Technical Reviewer (ITR) Review Checklist (Attachment 3)	3
Sampling Batch Data Report Forms:		
4.	Chain of Custody/Canister Tag Forms (Attachment 1 from CCP-TP-093)	5
5.	Copy of Laboratory Canister Tags	7
6.	Cleanliness Certification for needle assemblies as applicable to the Sampling Batch Data Report (or copy of the certifications from CCP-TP-093)	13
7.	Sample Drum Data Form (Attachment 2 from CCP-TP-093)	15
8.	Copy of Sampling Port Installation Records (CCP-TP-098, Attachment 1), if applicable	N/A
9.	Copy of Drum Filter Changeout Form (Attachment 1 of CCP-TP-082), if applicable.	N/A
10.	Shipment Request Forms, if applicable.	N/A
11.	72-Hour Temperature Equilibration Plots	17
12.	Copy of NCRs, if applicable	N/A

Attachment 3 – Independent Technical Reviewer (ITR) Review Checklist

HSG Sampling Batch Number: INHSG1202

1.	Is the HSG Sampling BDR complete as specified in step 4.1.2 and are the field sampling records complete?	X			
2.	Are calculations correct for the Drum Age Criteria (DAC), temperature equilibrium time, and percent complete?	X			
3.	Did the containers meet the DAC?	X			
4.	Did the containers meet the temperature equilibrium requirement (stored at 18°C or higher for 72-hours prior to sampling)?	X			
5.	Do the temperature plots indicate the drums were stored at 18 °C (64.5 °F) or higher for 72-hours prior to sampling?	X			
5a.	Are the waste stream IDs completed correctly on the Chain of Custody (COC) Form?	X			
6.	Was a Field Duplicate collected once per batch?	X			
7.	Was a Field Reference Sample collected?		X		Not Needed
8.	Was a Field Blank collected one per batch prior to sampling containers?	X			
9.	Is the percentage of valid samples collected and submitted for analysis greater than or equal to 90 percent?	X			
10.	Is the data technically reasonable based upon the technique used?	X			
11.	Was the sampling equipment checked for leaks after sample collection?	X			
12.	Was the data generation and reduction conducted in a technically correct manner?	X			
13.	Was the data reported in proper units and with the correct number of significant figures?	X			
14.	Were the samples maintained at a temperature between 0°C - 40°C?	X			
15.	Was the equipment involved in the sampling activities in calibration (i.e., torque wrenches, ambient temperature and pressure gauges, dataloggers, ultrasonic micrometer, min/max thermometers)?	X			

Attachment 3 – Independent Technical Reviewer (ITR) Review Checklist (continued)

HSG Sampling Batch Number: INHSG1202

16.	Are there satisfactory equipment blanks, canister cleaning blanks, and needle assembly cleanliness results?	X			
17.	Has the data been reviewed for transcription errors?	X			
18.	Verify all the data is signed and dated, and the data is recorded clearly, legibly, and accurately.	X			
19.	No more than 20 waste containers are in the batch (excluding the QC samples).	X			
20.	Procedure Number: CCP-TP-093			Revision: 16	
21.	Is the procedure number and revision correct?	X			
22.	All changes to original data are lined out, initialed, and dated by the individual making the change, and a justification included. (NOTE: Original data must not be obliterated or otherwise disfigured as not to be readable. Data changes shall only be made by the individual who originally collected the data or an individual authorized to change the data.)	X			

Independent Technical Reviewer:

Jeri Miles
Printed Name

Signature

7/2/2012
Date

Attachment 1 – Chain of Custody/Canister Tag Chain of Custody # 591 Page 1 of 2

Location: Under Drum Lid	Point of Origin: CPP-659	**Sample Matrix is Gas**	Ambient Conditions
	Field Batch Number: INHSG1202		Temperature (centigrade): 25.2
			Pressure (in. Hg): 25

Site	Date	SUMMA® Canister No.	Size (mL)	TID No.	Container ID /Barcode No.	Waste Stream ID	Cleaning Batch No.	Needle Assembly Batch No.	Type SS B D F C (Note 1)	Vent Seal (Y/NA)	Start Time	End Time	Beginning Pressure (in.Hg or psig)	End Pressure (in.Hg or psig)	Sampler's Initials
IN	062512	EI684	250	0825621	N/A	N/A	429C	INHSG1201NB	B	N/A	1001	1002	25 in.Hg	1 in.Hg	
IN	062512	EI756	250	0825622	NRFTRUSPC023-1	IN-ID-NRF-SPC	429C	INHSG1102NB	D	Y	1015	1020	25 in.Hg	3 in.Hg	
IN	062512	EIC78	250	0825623	NRFTRUSPC023-1	IN-ID-NRF-SPC	429C	INHSG1102NB	D	Y	1015	1020	26 in.Hg	1 in.Hg	
IN	062512	EIB79	250	0825624	NRFTRUSPC027-1	IN-ID-NRF-SPC	429C	INHSG1201NB	SS	Y	1037	1042	25 in.Hg	1 in.Hg	
IN	062512	EIC73	250	0825625	NRFTRUSPC003-1	IN-ID-NRF-SPC	429C	INHSG1201NB	SS	Y	1055	1059	25 in.Hg	2 in.Hg	
IN	062512	EI169	250	0825626	NRFTRUSPC026-1	IN-ID-NRF-SPC	429C	INHSG1201NB	SS	Y	1115	1120	25 in.Hg	1 in.Hg	
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Note 1. Analysis required.

C - Needle Assembly Cleanliness Certification: VOC.
SS - Single Sample: VOC, H_2, CH_4
B - Field Blank: VOC
D - Duplicate: VOC, H_2, CH_4
F - Field Reference Standard: VOC

Sampler's Signature

Attachment 1 – Chain of Custody/Canister Tag (Continued) Chain of Custody # 591

Page 2 of 2

Field Batch Number: INHSG1202					
Comments: N/A		Instrument Section	M&TE ID No.	Calibration Due Date	Initials/Date
Analytical Laboratory - ECL		Pressure Meter	XC0566	8-16-2012	6-25-12
Shipping Tracking #N/A	Method of Shipping: ECL Pickup	Thermometer	XC0717	6-5-2013	6-25-12
		Min /Max Thermometer	723204 XC0552	10-12-2012 10-12-2012	6-25-12
Analysis Requested VOC		Preservation Method: 0 - 40°C			
TID Number(s) 0825627		TID Initials and date:		6-26-12	

Custody Initiated By: (Sampler Name/Organization) CCP	Date/Time 6-25-12 1002	[redacted]	
Relinquished By: (Name/Organization) CCP	Date/Time 6-26-12 1400	Received By: (Name/Organization)	Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)	Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)	Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)	Date/Time
Final Disposition By: (Name/Organization)	Date/Time	Disposition:	

900000

GAS SAMPLE CANISTER TAG

1	N	0	6	2	5	1	2	E	I	6	8	4
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSL1202 Drum Number: N/A

Sampling Organization: CCP Sample Description: FIELD BLANK

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 23	061312	1430	TBL
Cleaning Batch: 429C	M= <5.0E-2	P= 639T			
Field-	C= 25 "Hg	T= 25.2	062512	1001	MD
Before Sample Collection	M=	P= 25			
Field-	C= 1" Hg	T= 25.2	062512	1002	MD
After Sample Collection	M= ~~1 "Hg~~ 07292-12	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? (Y) / N (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	6	2	5	1	2	E	I	7	5	6
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1202 Drum Number: INRFTRUSPC023-1

Sampling Organization: CCP Sample Description: Duplicate Sample

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 23	061312	1430	TBL
Cleaning Batch: 429C	M= <5.0E-2	P= 639T			
Field-	C= 25 "Hg	T= 25.2	062512	1015	DD
Before Sample Collection	M=	P= 25			
Field-	C= 3 "Hg	T= 25.2	062512	1020	DD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	6	2	5	1	2	E	I	C	7	8
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1202 Drum Number: NRFTRUSPC023-1

Sampling Organization: CCP Sample Description: Duplicate Sample

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 23	061312	1430	TBL
Cleaning Batch: 429C	M= <5.0E-2	P= 639T			
Field-	C= 26 "Hg	T= 25.2	062512	1015	AM
Before Sample Collection	M=	P= 25			
Field-	C= 1 "Hg	T= 25.2	062512	1020	AM
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	6	2	5	1	2	E	I	B	7	9
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1202 Drum Number: NRETRUSPC027-1

Sampling Organization: CCP Sample Description: Sample

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 23	061312	1430	TBL
Cleaning Batch: 429C	M= <5.0E-2	P= 639T			
Field-	C= 25 "Hg	T= 25.2	062512	1037	DD
Before Sample Collection	M=	P= 25			
Field-	C= 1 "Hg	T= 25.2	062512	1042	DD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	6	2	5	1	2	E	I	C	7	3
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1202 Drum Number: NRFTRUSPC003-1

Sampling Organization: CCP Sample Description: Sample

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 23	061312	1430	TBL
Cleaning Batch: 429C	M= <5.0E-2	P= 639T			
Field-	C= 25 "Hg	T= 25.2	062512	1055	DD
Before Sample Collection	M=	P= 25			
Field-	C= 2 "Hg	T= 25.2	062512	1059	DD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	6	2	5	1	2	E	I	1	6	9
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHS61202 Drum Number: NRFTRUSPC026-1

Sampling Organization: CCP Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 23	061312	1430	TBL
Cleaning Batch: 429C	M= <5.0E-2	P= 639T			
Field-	C= 25 "Hg	T= 25.2	062512	1115	DD
Before Sample Collection	M=	P= 25			
Field-	C= 1 "Hg	T= 25.2	062512	1120	DD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

From: Catherine A Crowder [Catherine.Crowder@inl.gov]
Sent: Monday, March 28, 2011 1:00 PM
To: Broomfield, Barbara J.; Walters, Ed E.; charles.turner@wipp.ws
Subject: Needle Assembly Blanks

Analytical results for needle assembly equipment blanks in field batch INHSG1102NB were acceptable. Concentrations of all VOC target analytes were less than or equal to three times the MDLs listed in Table B3-2 in Permit Attachment B3.

From: Catherine A Crowder [Catherine.Crowder@inl.gov]
Sent: Tuesday, May 01, 2012 4:36 PM
To: Broomfield, Barbara J.; Poirier, Joe; charles.turner@wipp.ws
Subject: Needle Assembly Blanks

Analytical results for needle assembly equipment blanks in field batch INHSG1201NB were acceptable. Concentrations of all VOC target analytes were less than or equal to three times the MDLs listed in Table B3-2 in Permit Attachment B3.

Attachment 2 – Sample Container Data Form

Field Batch Number: INHSG1202

	Container ID	Sampling Scenario	Summary Category Group	Rigid Liner (Y/N)	Rigid Liner Lid (Y/N)	Rigid Liner Lid Hole Diameter (in.)	Number of Inner Bags	Number of Liner Bags	Filter Model No.	Number of Filters	Restrictive Hydrogen Diffusivity (m/s/mf)	Package Configuration Group No.
1	NRFTRUSPC023-1	3	S5000	N	N	N/A	0	0	NucFil-019SDS	1	3.70E-06	1
2	NRFTRUSPC027-1	3	S5000	N	N	N/A	0	0	NucFil-019SDS	1	3.70E-06	1
3	NRFTRUSPC003-1	3	S5000	N	N	N/A	0	0	NucFil-019SDS	1	3.70E-06	1
4	NRFTRUSPC026-1	3	S5000	N	N	N/A	0	0	NucFil-019SDS	1	3.70E-06	1
5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
22	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Attachment 2 – Sample Container Data Form (Continued)

Field Batch Number: INHSG1202

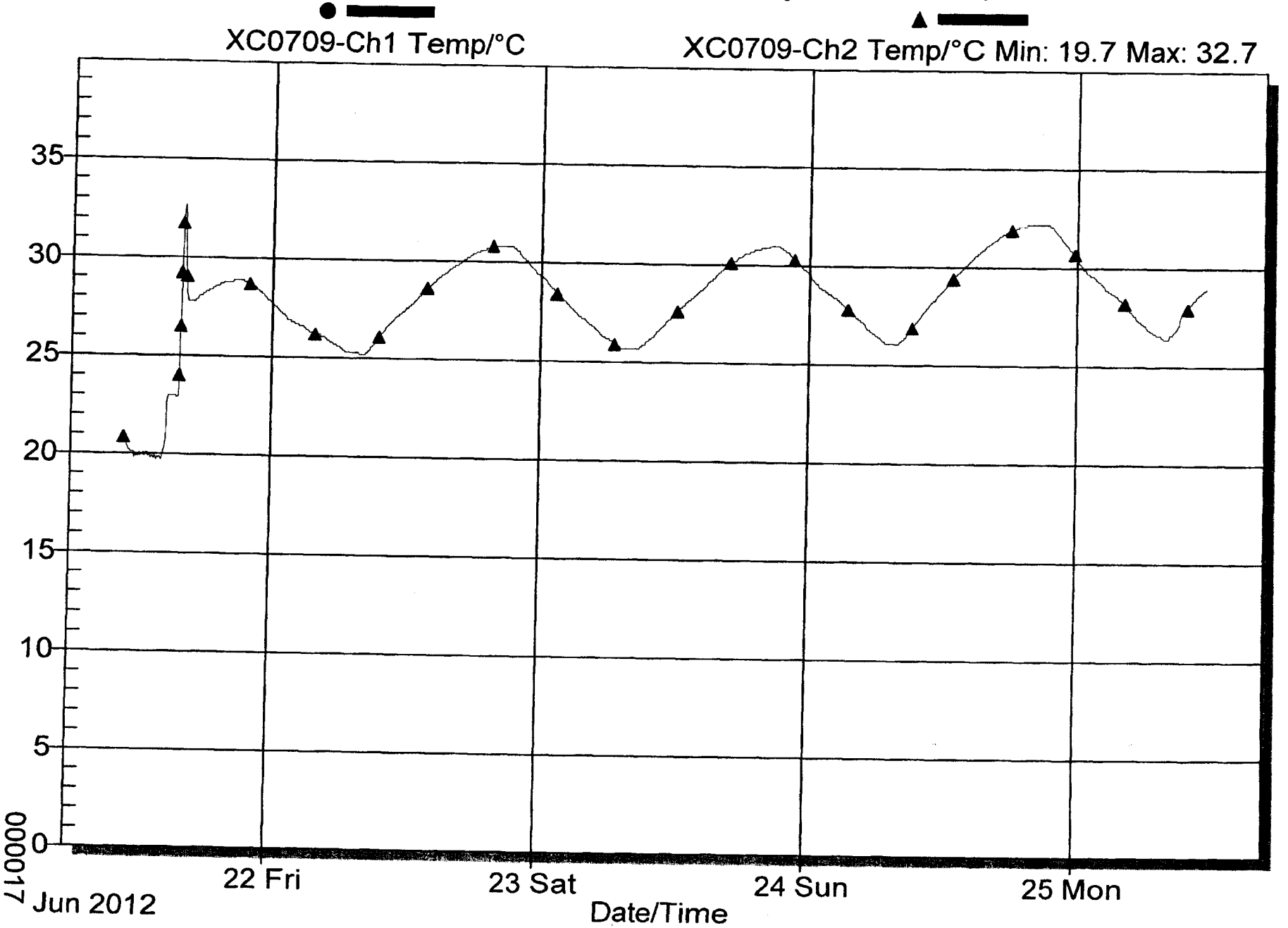
	Container ID	Closure Date	Vent Date	Permit Required Equilibrium Time (Days)	Container Age (Days)	Container Fill Factor (%)	Can This Container Be Sampled? (Y / N)	Temperature Recorder M&TE /ID No.: XC0709 12-13-12 Temperature Recorder Calibration Due Date: 72 – Hour Container Equilibrium	
								Start Date/Time	End Date/Time
1	NRFTRUSPC023-1	04/02/2012	04/02/2012	4	84	85	Y	6-21-12 1600	6-25-12 0945
2	NRFTRUSPC027-1	04/02/2012	04/02/2012	4	84	85	Y	6-21-12 1600	6-25-12 0945
3	NRFTRUSPC003-1	04/17/2012	04/17/2012	4	69	85	Y	6-21-12 1600	6-25-12 0945
4	NRFTRUSPC026-1	04/17/2012	04/17/2012	4	69	85	Y	6-21-12 1600	6-25-12 0945
5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
22	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

HSG Sampler: Dale Bowen
Print Name

Signature

06-25-12
Date

Downloaded Data - Monday, June 25, 2012



DIVIDER

PAGE

Attachment 10 – CCP SPM Summa HSG Analysis Project Level Validation Checklist and Summary

BDR Number: ECL12023M **Analysis Date:** 7-2-2012

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
1. Does the Batch Data Report (BDR) contain the batch number, laboratory name, and the date of the batch report? **Reference Source: CCP-PO-001, Table C3-13**	X			
2. Is the BDR complete according to the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-10b**	X			
3. Has a BDR Narrative been included with the BDR? **Reference Source: CCP-PO-001, Table C3-13**	X			
4. Are the correct revisions of the procedures used and identified? **Reference Source: CCP-PO-001, Table C3-13**	X			
5. List all containers that have met the QAOs. **Reference Source: CCP-PO-001, C3-10b**				Container Numbers:NRFTRUSPC023-1, NRFTRUSPC027-1, NRFTRUSPC003-1, NRFTRUSPC026-1,
6. Is there a reference to or copy of any associated NCRs (if any) in the BDR? NA if no NCRS associated with the BDR. **Reference Source: CCP-PO-001, Table C3-13**			X	
7. Is the completed, signed, and dated Independent Technical Reviewer checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, Table C3-13**	X			
8. Does the BDR include the operator's signature and analysis date? **Reference Source: CCP-PO-001, Table C3-13**	X			
9. Are there 20 laboratory samples or less in the analytical batch (excluding QC)? **Reference Source: CCP-PO-001, C3-10**	X			
10. Does the chain of custody (COC) form correctly identify the Waste Stream ID? **Reference Source: CCP-PO-001, Table C3-13**	X			
11. Does the BDR contain a complete and signed copy of the COC form? **Reference Source: CCP-PO-001, Table C3-13**	X			

COPY

CCP RECORDS ORIGINAL
DATE REC'D 7-19-12

Attachment 10 – CCP SPM Summa HSG Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: ECL12023M **Analysis Date:** 7-2-2012

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
12. Is there a cross-reference between waste container number, field sample number, and lab sample number ID; and signature release by lab personnel in the batch report? **Reference Source: CCP-PO-001, C1-5**	X			
13. Does the BDR contain gas sample canister tags for each sample that are properly filled out? **Refere nce Source: CCP-PO-001, Table C3-13**	X			
14. Have the samples been properly preserved (0-40° C)? **Reference Source: CCP-PO-001, Table C1-1**	X			
15. Does the BDR include the date and time of analysis for each sample? **Reference Source: CCP-PO-001, Table C3-13**	X			
16. Have data reporting flags been assigned properly? **Reference Source: CCP-PO-001, Table C3-13**	X			
17. Did the batch report analysis consist of all the target compounds? **Reference Source: CCP-PO-001, Table C3-2**	X			
18. Is there a minimum of one laboratory (method) blank per analytical batch with all analytes $\leq$ 3 x MDL? **Reference Source: CCP-PO-001, Table C3-3**	X			
19. Are all target analytes in field blanks and equipment blanks (if any) $\leq$ 3 x instrument MDL as listed in CCP-PO-001 Table C3-2? **Reference Source: CCP-PO-001, Table C1-3**	X			
20. Is a minimum of one laboratory control standard (LCS) analyzed per analytical batch and are the percent recoveries (%Rs) within 70-130%? **Reference Source: CCP-PO-001,Table C3-3**	X			
21. Is there a minimum of one field duplicate analyzed per sampling batch including in the analytical batch? **Reference Source: CCP-PO-001, Table C1-3**	X			

Attachment 10 – CCP SPM Summa HSG Analysis Project Level Validation Checklist and Summary (Continued)

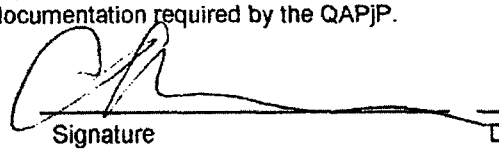
BDR Number: ECL12023M	Analysis Date: 7-2-2012			
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
22. For field sample and field duplicate results that are both > PRQL, are the relative percent differences (RPDs) ≤ 25%? **Reference Source: CCP-PO-001, Table C3-2**			X	No Target >PRQL
23. Is there a minimum of one laboratory duplicate (LD) analyzed per analytical batch? **Reference Source: CCP-PO-001, Table C3-3**	X			
24. For laboratory duplicate results that are > PRQL (or for laboratory control standard and replicate laboratory control standard results > PRQL), is the RPD ≤ 25%? **Reference Source: CCP-PO-001, Table C3-3**			X	No target > PRQL but RPD on target analytes above MDL but ≤ PRQL. RPD ≤ 25.
25. If no target analytes were present greater than the PRQL, was a replicate LCS satisfactorily performed? **Reference Source: CCP-PO-001, Table C3-3**			X	No target > PRQL but RPD on target analytes above MDL but ≤ PRQL. RPD ≤ 25.
26. Does the field reference standard (FRS) contain at least six analytes and are the %Rs within 70-130%? **Reference Source: CCP-PO-001, C1-1b and Table C1-3**			X	FRS has been successfully completed.
27. For GC/MS analyses, was the BFB tune performed at a minimum of every 12 hours and were the ion abundance criteria satisfied? **Reference Source: CCP-PO-001, Table C3-3**	X			
28. For GC/MS analyses, for the five-point initial calibration, is the %RSD for all compounds < 35%? **Reference Source: CCP-PO-001, Table C3-3**	X			
29. For GC/MS analyses, is one of the calibration standards less than the PRQL? **Reference Source: CCP-PO-001, Section C3-5**	X			
30. For GC/MS analyses, is the continuing calibration performed at a minimum frequency of every 12 hours of operation? **Reference Source: CCP-PO-001, Table C3-3**	X			

Attachment 10 – CCP SPM Summa HSG Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: ECL12023M **Analysis Date:** 7-2-2012

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
31. For GC/MS analyses, are the continuing calibration internal standard area counts between 50-200% of ICAL? **Reference Source: CCP-PO-001, Table C3-3**	X			
32. For GC/MS analyses, are non-target compounds identified as Tentatively Identified Compounds (TICs)? **Reference Source: CCP-PO-001, C-3a**	X			
33. Does the BDR contain all of the target compounds appropriate for the waste stream? **Reference Source: CCP-PO-001, Table C3-2/AK Summary Report**	X			
34. For GC/MS analyses, is the continuing calibration %D for all compounds ≤ 30% of the ICAL? **Reference Source: CCP-PO-001, Table C3-3**	X			
35. For methanol analysis by GC/FID, does the initial calibration (ICAL) have a minimum of five points, is the %R within 70-130%, and is the correlation coefficient ≥ 0.990? NA if not methanol analysis by GC/FID. **Reference Source: CCP-PO-001, Table C3-3**			X	Not methanol analysis by GC/FID
36. For methanol analysis by GC/FID, is the continuing calibration (CC) analyzed every 12 hours, is the %D ≤ 15%, is the %R within 85-115%, and is the CC retention time within the ICAL window? NA if not methanol analysis by GC/FID. **Reference Source: CCP-PO-001, Table C3-2**			X	Not methanol analysis by GC/FID
37. For methanol analysis by GC/FID, is one of the calibration standards less than the PRQL? **Reference Source: CCP-PO-001, C3-5**			X	Not methanol analysis by GC/FID
38. Are all data reporting forms complete with data reported properly (correct units and significant figures)? **Reference Source: CCP-PO-001, C3-10b**	X			
39. Has the laboratory successfully participated in the latest PDP? **Reference Source: CCP-PO-001, C3-5**	X			

Attachment 10 – CCP SPM Summa HSG Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: ECL12023M			Analysis Date: 7-2-2012	
Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
40. Has the laboratory met the 90% completeness requirement? **Reference Source: CCP-PO-001, Table C3-2**	X			
41. Does the laboratory use traceable standards? **Reference Source: CCP-PO-001, C3-5**	X			
42. Has the laboratory had acceptable demonstration of precision, accuracy, and MDLs [method performance samples] performed within the last 6 months? **Reference Source: CCP-PO-001, Table C3-3**	X			
43. Have QC designations for samples been applied as appropriate? **Reference Source: CCP-PO-001, Table C3-13**	X			
Comments: none				
The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.				
Charles Turner				7-18-2012
SPM Printed Name	Signature			Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

Idaho National Laboratory

Chemical and Radiation Measurement Department

Environmental Chemistry Laboratory

Gas Headspace Analysis Data Report

ISSUED TO:

Records Coordinator
Central Characterization Program

REPORT IDENTIFICATION:

Report Number: ECL12023M
Analysis Method: CCP-TP-175
Analyte: VOCs
Revision Number: 0
Change Number: 0
Issue Date: 07-16-2012

SUMMARY: This report provides analysis results and associated documentation for volatile organic compounds (VOCs) analyses of samples received 6/26/2012 from field batch INHSG1202.

Report Content:

Section	Content	Page #
1.0	Sample Identification Table/Analysis Request Form	0002-0003
2.0	Sample Custody Documents and Sample Tags	0004-0012
3.0	Analysis Results	0013-0026
4.0	Quality Control Measurements Results	0027-0033
5.0	Calibration Results	0034-0038
6.0	Data Review Checklists	0039-0045
7.0	GC VOC Raw Data	0046-0095
8.0	Miscellaneous Supporting Data	0096-0117

Release Authorization:

Name & Position	Signature	Date
Catherine A. Crowder ECL Group/Technical Leader	Catherine A. Crowder	7-16-12

SECTION 1.0

SAMPLE IDENTIFICATION TABLE/ ANALYSIS REQUEST FORM

ENVIRONMENTAL CHEMISTRY LABORATORY

ANALYTICAL REQUEST FORM

PAGE: 1 RECEIVING GROUP NO. ECL12023 ANALYSES REQUIRED:

FIELD SITE: INL GC-VOC: X GC-H2:

SAMPLE TYPE: GAS GC/MS: X GC-CH4:

NUMBER OF SAMPLES: 6 VTSR: 1510 06/26/12

	LAB ID.	FIELD ID.	FIELD BATCH #	FIELD COC #	CANISTER SIZE (mL)	BLANK?
1	12178001	IN062512EI684	INHSG1202	591	250	Y
2	12178002	IN062512EI756	INHSG1202	591	250	N
3	12178003	IN062512EIC78	INHSG1202	591	250	N
4	12178004	IN062512EIB79	INHSG1202	591	250	N
5	12178005	IN062512EIC73	INHSG1202	591	250	N
6	12178006	IN062512EI169	INHSG1202	591	250	N

SECTION 2.0

SAMPLE CUSTODY DOCUMENTS AND SAMPLE TAGS

Attachment 1 – Chain of Custody/Canister Tag Chain of Custody # 591 Page 1 of 2

Location: Under Drum Lid		Point of Origin: CPP-659	**Sample Matrix is Gas**	Ambient Conditions	
		Field Batch Number: INHSG1202		Temperature (centigrade): 25.2	
				Pressure (in. Hg): 25	

Site	Date	SUMMA® Canister No.	Size (mL)	TID No.	Container ID /Barcode No.	Waste Stream ID	Cleaning Batch No.	Needle Assembly Batch No.	Type SS B D F C (Note 1)	Vent Seal (Y/NA)	Start Time	End Time	Beginning Pressure (in.Hg or psig)	End Pressure (in.Hg or psig)	Sampler's Initials
IN	062512	EI684	250	0825621	N/A	N/A	429C	INHSG1201NB	B	N/A	1001	1002	25 in.Hg	1 in.Hg	
IN	062512	EI756	250	0825622	NRFTRUSPC023-1	IN-ID-NRF-SPC	429C	INHSG1102NB	D	Y	1015	1020	25 in.Hg	3 in.Hg	
IN	062512	EIC78	250	0825623	NRFTRUSPC023-1	IN-ID-NRF-SPC	429C	INHSG1102NB	D	Y	1015	1020	26 in.Hg	1 in.Hg	
IN	062512	EIB79	250	0825624	NRFTRUSPC027-1	IN-ID-NRF-SPC	429C	INHSG1201NB	SS	Y	1037	1042	25 in.Hg	1 in.Hg	
IN	062512	EIC73	250	0825625	NRFTRUSPC003-1	IN-ID-NRF-SPC	429C	INHSG1201NB	SS	Y	1055	1059	25 in.Hg	2 in.Hg	
IN	062512	EI169	250	0825626	NRFTRUSPC026-1	IN-ID-NRF-SPC	429C	INHSG1201NB	SS	Y	1115	1120	25 in.Hg	1 in.Hg	
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

N/A = Analysis required

C - Needle Assembly Cleanliness Certification: VOC
SS - Single Sample: VOC, H_2, CH_4
B - Field Blank VOC
D - Duplicate: VOC, H_2, CH_4
F - Field Reference Standard. VOC

Sampler's Signature

CCP-TP-093

Attachment 1 – Chain of Custody/Canister Tag (Continued) Chain of Custody # 591 Page 2 of 2

Field Batch Number: INHSG1202					
Comments: N/A		Instrument Section	M&TE ID No.	Calibration Due Date	Initials/Date
Analytical Laboratory - ECL		Pressure Meter	XC0566	8-16-2012	AD 6-25-12
Shipping Tracking #N/A	Method of Shipping: ECL Pickup	Thermometer	XC0717	6-5-2013	AD 6-25-12
		Min /Max Thermometer	723204 XC0552	10-12-2012 10-12-2012	AD 6-25-12
Analysis Requested VOC		Preservation Method: 0 - 40°C			
TID Number(s) 0825627		TID Initials and date: AD 6-26-12			

Custody Initiated By: (Sampler Name/Organization) CCP	Date/Time 6-25-12 1002		
Relinquished By: (Name/Organization) CCP	Date/Time 6-26-12 1400	Received By: (Name/Organization) Thomas B. Lintz INL/ECL	Date/Time 06/26/12 1510
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)	Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)	Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)	Date/Time
Final Disposition By: (Name/Organization) Cathie A. Crowder/ECL	Date/Time 070312-0400	Disposition: Cleaning	

GAS SAMPLE CANISTER TAG

1	W	0	6	2	5	1	2	E	I	6	8	4
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1202 Drum Number: N/A

Sampling Organization: CCP Sample Description: FIELD BLANK

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 23	061312	1430	TBL
Cleaning Batch: 429C	M= <5.0E-2	P= 639T			
Field-	C= 25" Hg	T= 25.2	062512	1001	AM
Before Sample Collection	M=	P= 25			
Field-	C= 1" Hg	T= 25.2	062512	1002	AM
After Sample Collection	M= ~~1" Hg~~ (inc 7.2.12)	P= 25			
Analytical Laboratory	C= 0" Hg	T= 21	062612	1545	TBL
	M=	P= 641T			

Blank Sample? (Y) / N (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	6	2	5	1	2	E	I	7	5	6
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1202 Drum Number: INRFTRUSPC023-1

Sampling Organization: CCP Sample Description: Duplicate Sample

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 23	061312	1430	TBL
Cleaning Batch: 429C	M= <5.0E-2	P= 639T			
Field-	C= 25" Hg	T= 25.2	062512	1015	AD
Before Sample Collection	M=	P= 25			
Field-	C= 3" Hg	T= 25.2	062512	1020	AD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C= 2" Hg	T= 21	062612	1547	JBT
	M=	P= 641T			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	6	2	5	1	2	E	I	C	7	8
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INH3G1202 Drum Number: NRFTRUSPC023-1

Sampling Organization: CCP Sample Description: Duplicate Sample

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 23	061312	1430	TBL
Cleaning Batch: 429C	M= <5.0E-2	P= 639T			
Field-	C= 26 "Hg	T= 25.2	062512	1015	DD
Before Sample Collection	M=	P= 25			
Field-	C= 1 "Hg	T= 25.2	062512	1020	DD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C= 1"Hg	T= 21	062612	1548	JTB
	M=	P= 641T			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	6	2	5	1	2	E	I	B	7	9
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1202 Drum Number: NRFTRUSPC027-1

Sampling Organization: CCP Sample Description: Sample

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 23	061312	1430	TBL
Cleaning Batch: 429C	M= <5.0E-2	P= 639T			
Field-	C= 25 "Hg	T= 25.2	062512	1037	DD
Before Sample Collection	M=	P= 25			
Field-	C= 1 "Hg	T= 25.2	062512	1042	DD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C= 1"Hg	T= 21	062612	1550	TBL
	M=	P= 641T			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	6	2	5	1	2	E	I	C	7	3
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1262 Drum Number: NRFTRUSPC003-1

Sampling Organization: CCP Sample Description: Sample

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 23	061312	1430	TBL
Cleaning Batch: 429C	M= <5.0E-2	P= 639T			
Field-	C= 25 "Hg	T= 25.2	062512	1055	DD
Before Sample Collection	M=	P= 25			
Field-	C= 2 "Hg	T= 25.2	062512	1059	DD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C= 2" Hg	T= 21	062612	1552	[illegible]
	M=	P= 641T			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: [signature]

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	6	2	5	1	2	E	I	1	6	9
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHS61202 Drum Number: NRFTRUSPC026-1

Sampling Organization: CCP Sample Description: Sample

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 23	061312	1430	TBL
Cleaning Batch: 429C	M= <5.0E-2	P= 639T			
Field-	C= 25 "Hg	T= 25.2	062512	1115	DD
Before Sample Collection	M=	P= 25			
Field-	C= 1 "Hg	T= 25.2	062512	1120	DD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C= 1" Hg	T= 21	062612	1554	~~DD~~ ✓
	M=	P= 641T			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

SECTION 3.0

ANALYSIS RESULTS

- DATA QUALIFIERS
- FORM 1s

DATA QUALIFIERS

IDAHO NATIONAL LABORATORY
ENVIRONMENTAL CHEMISTRY LABORATORY

Data qualifiers (flags) are as follows:

U - This flag indicates that the analyte was either not detected or found to be less than the MDL.

J - This flag is used when the data indicates the presence of a compound that meets the identification criteria and the result is $\geq$ MDL but less than the PRQL. For example, if the PRQL is 10 ppmv and if the MDL is 0.05 ppmv, and a sample analyte concentration of 0.30 ppmv is calculated, the data are reported as 0.30 J.

This flag is also used when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response compared to the closest eluting internal standard is assumed for quantitation of GC/MS analysis.

B - This flag is used when an analyte is found in the associated blank. It indicates possible/probable blank contamination and warns the data user to take appropriate action. This flag must be used for a TIC as well as for a positively identified target compound.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample is reanalyzed at a higher dilution factor, as in the "E" flag below, the suffix "DL" is appended to the sample number on the reporting form for the diluted sample, and all concentration values reported on that form are flagged with the "D" flag. This flag alerts data user that any discrepancies between the concentration reported may be due to dilution of the sample.

E - This flag identifies compounds whose concentrations exceed the calibration range of GC/MS or GC instruments for specific analysis. If one or more compounds have a response greater than full scale, the sample must be diluted and reanalyzed. All such compounds with a response greater than full scale have the concentration flagged with an "E" for the original analysis. If the dilution causes any compounds identified in the analysis to be below the calibration range in the second analysis, then the results of both analyses are reported separately. The reporting form for the diluted sample has the suffix "DL" appended to the sample number.

NOTE: For total xylenes, in GC/MS analysis, where three isomers are quantified, as two peaks, the calibration range of each peak is considered separately, e.g., a diluted analysis is not required for total zylenes unless the concentration of either peak separately exceeds the high standard.

N - This flag is used with TICs to indicate presumptive evidence of a compound's identification, based on a mass spectral library search.

Z - One or more QC samples do not meet acceptance criteria.

NR - Not Reported

Form Date (07/12/05)

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12178001		Field Sample ID:	IN062512EI684	
Analytical Batch:	ECL12023M		Sampling Batch:	INHSG1202	
Data Report:	ECL12023M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/2/2012	1241	Date Sampled:	6/25/2012	
Lab File ID:	L02JC		Date Received:	06/26/12	
Instrument ID:	GCMS-J		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	0.14	U
Benzene	0.094	U
Bromoform	0.028	U
Butanol	0.090	U
Carbon disulfide	0.11	U
Carbon tetrachloride	0.045	U
Chlorobenzene	0.062	U
Chloroform	0.065	U
Chloromethane	0.17	U
Cyclohexane	0.090	U
1,1-Dichloroethane	0.080	U
1,2-Dichloroethane	0.077	U
1,1-Dichloroethylene	0.083	U
cis-1,2-Dichloroethylene	0.081	U
trans-1,2-Dichloroethylene	0.081	U
1,2-Dichloropropane	0.071	U
Ethyl benzene	0.061	U
Ethyl ether	0.11	U
Methyl ethyl ketone	0.11	U
Methyl isobutyl ketone	0.069	U
Methylene chloride	0.10	U
1,1,2,2-Tetrachloroethane	0.046	U
Tetrachloroethylene	0.046	U
Toluene	0.077	U
1,1,1-Trichloroethane	0.061	U
Trichloroethylene	0.064	U
Trichlorofluoromethane	0.064	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.047	U
1,3,5-Trimethylbenzene	0.056	U
1,2,4-Trimethylbenzene	0.059	U
p/m-Xylene	0.067	U
o-Xylene	0.064	U
Methanol	0.28	U

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12178001		Field Sample ID:	IN062512EI684	
Analytical Batch:	ECL12023M		Sampling Batch:	INHSG1202	
Data Report:	ECL12023M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/2/2012	1241	Date Sampled:	6/25/2012	
Lab File ID:	L02JC		Date Received:	06/26/12	
Instrument ID:	GCMS-J		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12178002		Field Sample ID:	IN062512EI756	
Analytical Batch:	ECL12023M		Sampling Batch:	INHSG1202	
Data Report:	ECL12023M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/2/2012	1326	Date Sampled:	6/25/2012	
Lab File ID:	L02JD		Date Received:	06/26/12	
Instrument ID:	GCMS-J		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	24	J
Benzene	0.16	U
Bromoform	0.048	U
Butanol	0.15	U
Carbon disulfide	0.19	U
Carbon tetrachloride	0.077	U
Chlorobenzene	0.10	U
Chloroform	0.11	U
Chloromethane	0.28	U
Cyclohexane	0.15	U
1,1-Dichloroethane	0.14	U
1,2-Dichloroethane	0.13	U
1,1-Dichloroethylene	0.14	U
cis-1,2-Dichloroethylene	0.14	U
trans-1,2-Dichloroethylene	0.14	U
1,2-Dichloropropane	0.12	U
Ethyl benzene	0.10	U
Ethyl ether	0.18	U
Methyl ethyl ketone	0.18	U
Methyl isobutyl ketone	0.12	U
Methylene chloride	0.17	U
1,1,2,2-Tetrachloroethane	0.078	U
Tetrachloroethylene	0.079	U
Toluene	0.13	U
1,1,1-Trichloroethane	0.10	U
Trichloroethylene	0.11	U
Trichlorofluoromethane	0.11	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.080	U
1,3,5-Trimethylbenzene	0.096	U
1,2,4-Trimethylbenzene	0.10	U
p/m-Xylene	0.11	U
o-Xylene	0.11	U
Methanol	24	J

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12178002		Field Sample ID:	IN062512EI756	
Analytical Batch:	ECL12023M		Sampling Batch:	INHSG1202	
Data Report:	ECL12023M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/2/2012	1326	Date Sampled:	6/25/2012	
Lab File ID:	L02JD		Date Received:	06/26/12	
Instrument ID:	GCMS-J		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12178003		Field Sample ID:	IN062512EIC78	
Analytical Batch:	ECL12023M		Sampling Batch:	INHSG1202	
Data Report:	ECL12023M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/2/2012	1411	Date Sampled:	6/25/2012	
Lab File ID:	L02JE		Date Received:	06/26/12	
Instrument ID:	GCMS-J		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	23	J
Benzene	0.16	U
Bromoform	0.047	U
Butanol	0.15	U
Carbon disulfide	0.19	U
Carbon tetrachloride	0.075	U
Chlorobenzene	0.10	U
Chloroform	0.11	U
Chloromethane	0.28	U
Cyclohexane	0.15	U
1,1-Dichloroethane	0.13	U
1,2-Dichloroethane	0.13	U
1,1-Dichloroethylene	0.14	U
cis-1,2-Dichloroethylene	0.13	U
trans-1,2-Dichloroethylene	0.13	U
1,2-Dichloropropane	0.12	U
Ethyl benzene	0.10	U
Ethyl ether	0.18	U
Methyl ethyl ketone	0.18	U
Methyl isobutyl ketone	0.11	U
Methylene chloride	0.17	U
1,1,2,2-Tetrachloroethane	0.076	U
Tetrachloroethylene	0.077	U
Toluene	0.13	U
1,1,1-Trichloroethane	0.10	U
Trichloroethylene	0.11	U
Trichlorofluoromethane	0.11	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.079	U
1,3,5-Trimethylbenzene	0.094	U
1,2,4-Trimethylbenzene	0.099	U
p/m-Xylene	0.11	U
o-Xylene	0.11	U
Methanol	23	J

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12178003		Field Sample ID:	IN062512EIC78	
Analytical Batch:	ECL12023M		Sampling Batch:	INHSG1202	
Data Report:	ECL12023M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/2/2012	1411	Date Sampled:	6/25/2012	
Lab File ID:	L02JE		Date Received:	06/26/12	
Instrument ID:	GCMS-J		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12178004		Field Sample ID:	IN062512EIB79	
Analytical Batch:	ECL12023M		Sampling Batch:	INHSG1202	
Data Report:	ECL12023M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/2/2012	1457	Date Sampled:	6/25/2012	
Lab File ID:	L02JF		Date Received:	06/26/12	
Instrument ID:	GCMS-J		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	0.25	J
Benzene	0.097	U
Bromoform	0.029	U
Butanol	0.093	U
Carbon disulfide	0.12	U
Carbon tetrachloride	0.047	U
Chlorobenzene	0.064	U
Chloroform	0.067	U
Chloromethane	0.17	U
Cyclohexane	0.093	U
1,1-Dichloroethane	0.083	U
1,2-Dichloroethane	0.079	U
1,1-Dichloroethylene	0.086	U
cis-1,2-Dichloroethylene	0.084	U
trans-1,2-Dichloroethylene	0.084	U
1,2-Dichloropropane	0.073	U
Ethyl benzene	0.063	U
Ethyl ether	0.11	U
Methyl ethyl ketone	0.11	U
Methyl isobutyl ketone	0.071	U
Methylene chloride	0.11	U
1,1,2,2-Tetrachloroethane	0.047	U
Tetrachloroethylene	0.048	U
Toluene	0.080	U
1,1,1-Trichloroethane	0.064	U
Trichloroethylene	0.066	U
Trichlorofluoromethane	0.066	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.049	U
1,3,5-Trimethylbenzene	0.058	U
1,2,4-Trimethylbenzene	0.061	U
p/m-Xylene	0.069	U
o-Xylene	0.066	U
Methanol	8.6	J

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12178004		Field Sample ID:	IN062512EIB79	
Analytical Batch:	ECL12023M		Sampling Batch:	INHSG1202	
Data Report:	ECL12023M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/2/2012	1457	Date Sampled:	6/25/2012	
Lab File ID:	L02JF		Date Received:	06/26/12	
Instrument ID:	GCMS-J		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12178005		Field Sample ID:	IN062512EIC73	
Analytical Batch:	ECL12023M		Sampling Batch:	INHSG1202	
Data Report:	ECL12023M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/2/2012	1542	Date Sampled:	6/25/2012	
Lab File ID:	L02JG		Date Received:	06/26/12	
Instrument ID:	GCMS-J		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	6.7	J
Benzene	0.14	U
Bromoform	0.041	U
Butanol	0.13	U
Carbon disulfide	0.31	J
Carbon tetrachloride	0.066	U
Chlorobenzene	0.090	U
Chloroform	0.095	U
Chloromethane	0.24	U
Cyclohexane	0.13	U
1,1-Dichloroethane	0.12	U
1,2-Dichloroethane	0.11	U
1,1-Dichloroethylene	0.12	U
cis-1,2-Dichloroethylene	0.12	U
trans-1,2-Dichloroethylene	0.12	U
1,2-Dichloropropane	0.10	U
Ethyl benzene	0.090	U
Ethyl ether	0.16	U
Methyl ethyl ketone	0.15	U
Methyl isobutyl ketone	0.10	U
Methylene chloride	0.15	U
1,1,2,2-Tetrachloroethane	0.067	U
Tetrachloroethylene	0.068	U
Toluene	0.11	U
1,1,1-Trichloroethane	0.090	U
Trichloroethylene	0.093	U
Trichlorofluoromethane	0.093	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.069	U
1,3,5-Trimethylbenzene	0.083	U
1,2,4-Trimethylbenzene	0.087	U
p/m-Xylene	0.098	U
o-Xylene	0.093	U
Methanol	33	J

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12178005		Field Sample ID:	IN062512EIC73	
Analytical Batch:	ECL12023M		Sampling Batch:	INHSG1202	
Data Report:	ECL12023M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/2/2012	1542	Date Sampled:	6/25/2012	
Lab File ID:	L02JG		Date Received:	06/26/12	
Instrument ID:	GCMS-J		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12178006		Field Sample ID:	IN062512EI169	
Analytical Batch:	ECL12023M		Sampling Batch:	INHSG1202	
Data Report:	ECL12023M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/2/2012	1713	Date Sampled:	6/25/2012	
Lab File ID:	L02JI		Date Received:	06/26/12	
Instrument ID:	GCMS-J		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	0.38	J
Benzene	0.095	U
Bromoform	0.029	U
Butanol	0.092	U
Carbon disulfide	0.12	U
Carbon tetrachloride	0.046	U
Chlorobenzene	0.063	U
Chloroform	0.066	U
Chloromethane	0.17	U
Cyclohexane	0.092	U
1,1-Dichloroethane	0.082	U
1,2-Dichloroethane	0.078	U
1,1-Dichloroethylene	0.084	U
cis-1,2-Dichloroethylene	0.083	U
trans-1,2-Dichloroethylene	0.083	U
1,2-Dichloropropane	0.072	U
Ethyl benzene	0.062	U
Ethyl ether	0.11	U
Methyl ethyl ketone	0.11	U
Methyl isobutyl ketone	0.070	U
Methylene chloride	0.10	U
1,1,2,2-Tetrachloroethane	0.047	U
Tetrachloroethylene	0.047	U
Toluene	0.079	U
1,1,1-Trichloroethane	0.063	U
Trichloroethylene	0.065	U
Trichlorofluoromethane	0.065	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.048	U
1,3,5-Trimethylbenzene	0.057	U
1,2,4-Trimethylbenzene	0.060	U
p/m-Xylene	0.068	U
o-Xylene	0.065	U
Methanol	9.2	J

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12178006		Field Sample ID:	IN062512EI169	
Analytical Batch:	ECL12023M		Sampling Batch:	INHSG1202	
Data Report:	ECL12023M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/2/2012	1713	Date Sampled:	6/25/2012	
Lab File ID:	L02JI		Date Received:	06/26/12	
Instrument ID:	GCMS-J		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

SECTION 4.0

QUALITY CONTROL MEASUREMENTS RESULTS

- Laboratory Duplicate Comparison Form
- Laboratory Blank Summary Form
- Laboratory Blank Results Form
- Internal Standard Area Form
- Laboratory Control Sample Results Form

LABORATORY DUPLICATE FORM
GAS VOC ANALYSIS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Method: CCP-TP-175 Rev. 3
Instrument ID: GCMS-J

Lab Sample ID: 12178005
Field Sample ID: IN062512EIC73
Date/Time Analyzed: 7/2/2012 1542
Lab File ID: L02JG

Data Report: ECL12023M
Analytical Batch: ECL12023M

Dup Lab Sample ID: 12178005D
Dup Field Sample ID: IN062512EIC73D
Date/Time Dup Analyzed: 7/2/2012 1627
Dup Lab File ID: L02JH

COMPOUND	SAMPLE CONCENTRATION (PPMV)	FLAG(S)	DUPLICATE CONCENTRATION (PPMV)	FLAG(S)	RPD* (%)
Acetone	6.68664	J	6.69855	J	0.18
Benzene	0.14	U	0.14	U	NC
Bromoform	0.041	U	0.041	U	NC
Butanol	0.13	U	0.13	U	NC
Carbon disulfide	0.31480	J	0.31566	J	0.27
Carbon tetrachloride	0.066	U	0.066	U	NC
Chlorobenzene	0.090	U	0.090	U	NC
Chloroform	0.095	U	0.095	U	NC
Chloromethane	0.24	U	0.24	U	NC
Cyclohexane	0.13	U	0.13	U	NC
1,1-Dichloroethane	0.12	U	0.12	U	NC
1,2-Dichloroethane	0.11	U	0.11	U	NC
1,1-Dichloroethylene	0.12	U	0.12	U	NC
cis-1,2-Dichloroethylene	0.12	U	0.12	U	NC
trans-1,2-Dichloroethylene	0.12	U	0.12	U	NC
1,2-Dichloropropane	0.10	U	0.10	U	NC
Ethyl benzene	0.090	U	0.090	U	NC
Ethyl ether	0.16	U	0.16	U	NC
Methyl ethyl ketone	0.15	U	0.15	U	NC
Methyl isobutyl ketone	0.10	U	0.10	U	NC
Methylene chloride	0.15	U	0.15	U	NC
1,1,2,2-Tetrachloroethane	0.067	U	0.067	U	NC
Tetrachloroethylene	0.068	U	0.068	U	NC
Toluene	0.11	U	0.11	U	NC
1,1,1-Trichloroethane	0.090	U	0.090	U	NC
Trichloroethylene	0.093	U	0.093	U	NC
Trichlorofluoromethane	0.093	U	0.093	U	NC
1,1,2-Trichloro-1,2,2-trifluoroethane	0.069	U	0.069	U	NC
1,3,5-Trimethylbenzene	0.083	U	0.083	U	NC
1,2,4-Trimethylbenzene	0.087	U	0.087	U	NC
p/m-Xylene	0.098	U	0.098	U	NC
o-Xylene	0.093	U	0.093	U	NC
Methanol	33.26865	J	33.05759	J	0.64

NC = NOT CALCULABLE
* Specification limit <= 25% for analytes present in the sample and duplicate at concentrations greater than or equal to the PRQL

Form Rev 05-07

LABORATORY BLANK SUMMARY FORM
GAS VOC ANALYSIS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

METHOD:	CCP-TP-175	Rev. 3	ANALYTICAL BATCH:	ECL12023M
INSTRUMENT:	GCMS-J		DATA REPORT:	ECL12023M
LAB SAMPLE ID:	LBMJL02		FIELD SAMPLE ID:	LB31751U26
LAB FILE ID:	L02JA			
DATE/TIME ANALYZED:	7/2/2012	1109		

THIS LABORATORY BLANK APPLIES TO THE FOLLOWING SAMPLES:

FIELD SAMPLE ID	LAB SAMPLE ID	DATE/TIME ANALYZED
LCS30443SL02	LCSMJL02	7/2/2012 1151
IN062512EI684	12178001	7/2/2012 1241
IN062512EI756	12178002	7/2/2012 1326
IN062512EIC78	12178003	7/2/2012 1411
IN062512EIB79	12178004	7/2/2012 1457
IN062512EIC73	12178005	7/2/2012 1542
IN062512EIC73D	12178005D	7/2/2012 1627
IN062512EI169	12178006	7/2/2012 1713

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	LBMJL02		Field Sample ID:	LB31751U26	
Analytical Batch:	ECL12023M		Sampling Batch:		
Data Report:	ECL12023M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/2/2012	1109	Date Sampled:		
Lab File ID:	L02JA		Date Received:		
Instrument ID:	GCMS-J		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	0.039	U
Benzene	0.026	U
Bromoform	0.0078	U
Butanol	0.025	U
Carbon disulfide	0.032	U
Carbon tetrachloride	0.012	U
Chlorobenzene	0.017	U
Chloroform	0.018	U
Chloromethane	0.046	U
Cyclohexane	0.025	U
1,1-Dichloroethane	0.022	U
1,2-Dichloroethane	0.021	U
1,1-Dichloroethylene	0.023	U
cis-1,2-Dichloroethylene	0.022	U
trans-1,2-Dichloroethylene	0.022	U
1,2-Dichloropropane	0.020	U
Ethyl benzene	0.017	U
Ethyl ether	0.030	U
Methyl ethyl ketone	0.029	U
Methyl isobutyl ketone	0.019	U
Methylene chloride	0.028	U
1,1,2,2-Tetrachloroethane	0.013	U
Tetrachloroethylene	0.013	U
Toluene	0.021	U
1,1,1-Trichloroethane	0.017	U
Trichloroethylene	0.018	U
Trichlorofluoromethane	0.017	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.013	U
1,3,5-Trimethylbenzene	0.015	U
1,2,4-Trimethylbenzene	0.016	U
p/m-Xylene	0.018	U
o-Xylene	0.018	U
Methanol	0.076	U

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	LBMJL02		Field Sample ID:	LB31751U26	
Analytical Batch:	ECL12023M		Sampling Batch:		
Data Report:	ECL12023M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/2/2012	1109	Date Sampled:		
Lab File ID:	L02JA		Date Received:		
Instrument ID:	GCMS-J		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

Internal Standard Area Summary Report

Instrument ID : GCMS - J

Tune File : D:\ECL12023\BJ12041.D
Tune Time : 2 Jul 2012 9:45 am

Daily Calibration File : D:\ECL12023\WJ12041.D
Date Acquired : 2 Jul 2012 10:24 am

	IS1	IS2
Daily Calibration IS Areas:	4655044	3254639

File	Sample	IS1	IS2
L02JA.D	LBMJL02	4576898	3159968
L02JB.D	LCSMJL02	4575451	3199177
L02JC.D	12178001	4596516	3191693
L02JD.D	12178002	4545806	3190455
L02JE.D	12178003	4578869	3186719
L02JF.D	12178004	4527052	3193181
L02JG.D	12178005	4565718	3191090
L02JH.D	12178005D	4559265	3218189
L02JI.D	12178006	4611892	3246262

(fails) - fails 12hr time check * - fails criteria

IS1 = Fluorobenzene
IS2 = Chlorobenzene-d5

Area UPPER limit = 200 percent of IS Area
Area LOWER limit = 50 percent of IS Area

Created: Tue Jul 03 09:06:38 2012

LABORATORY CONTROL SAMPLE FORM
GAS VOC ANALYSIS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Method:	CCP-TP-175	Rev. 3	Data Report:	ECL12023M
Instrument ID:	GCMS-J		Analytical Batch:	ECL12023M

Lab Sample ID:	LCSMJL02	
Field Sample ID:	LCS30443SL02	
Date/Time Analyzed:	7/2/2012	1151
Lab File ID:	L02JB	

COMPOUND	FOUND CONCENTRATION (PPMV)	KNOWN CONCENTRATION (PPMV)	Recovery* (%)
Benzene	16.9741	20.20	84.03
Carbon tetrachloride	11.5768	11.89	97.37
Methyl isobutyl ketone	14.4842	16.20	89.41
Methylene chloride	20.2024	20.00	101.01
Toluene	17.1416	18.26	93.88
1,1,1-Trichloroethane	11.7619	12.16	96.73
Trichloroethylene	12.2307	12.26	99.76

* Recovery specification limits 70 - 130%

Form Rev 05-07

SECTION 5.0

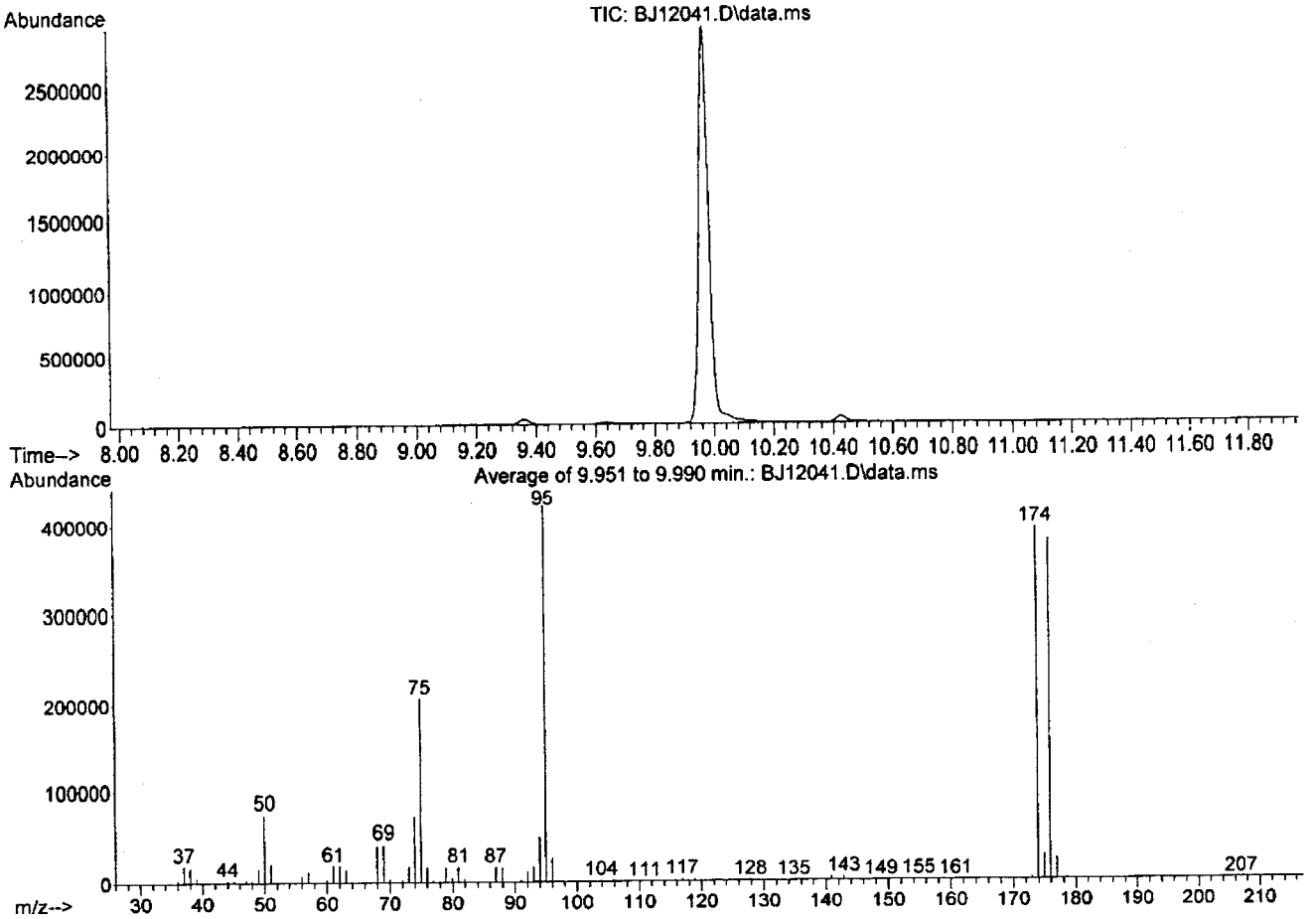
CALIBRATION RESULTS

- BFB Tune Form
- Initial Calibration Form
- Continuing Calibration Form
- MDL Reporting Form

Data Path : D:\ECL12023\
Data File : BJ12041.D
Acq On : 2 Jul 2012 9:45 am
Operator :
Sample : 50 NG BFB
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\gcms-j\WPJD006.M
Title : WPJD006 CCP-TP-175 ICAL
Last Update : Mon Jun 04 07:22:01 2012



Spectrum Information: Average of 9.951 to 9.990 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.7	75106	PASS
75	95	30	60	49.0	207612	PASS
95	95	100	100	100.0	423876	PASS
96	95	5	9	6.7	28210	PASS
173	174	0.00	2	1.0	4126	PASS
174	95	50	100	93.2	395200	PASS
175	174	5	9	7.5	29622	PASS
176	174	95	101	96.3	380442	PASS
177	176	5	9	6.6	25112	PASS

7-2-12

Response Factor Report GCMS - J

Method Path : C:\gcms-j\
Method File : WPJD006.M
Title : WPJD006 CCP-TP-175 ICAL
Last Update : Mon Jun 04 07:22:01 2012
Response Via : Initial Calibration

Calibration Files
1250=Y31JA.D 1000=Y31JB.D 750 =Y31JC.D 500 =Y31JD.D 250 =Y31JE.D 125 =Y31JF.D

		Compound	1250	1000	750	500	250	125	Avg	%RSD
1)	I	Fluorobenzene	----------ISTD----------							
2)	T	Ethyl Ether	0.281	0.274	0.271	0.268	0.264	0.267	0.271	2.23
3)	T	Methylene Chlo...	0.332	0.326	0.324	0.321	0.324	0.336	0.327	1.76
4)	T	1,1,2-Trichlor...	0.380	0.368	0.365	0.361	0.361	0.372	0.368	1.94
5)	T	1,1-Dichloroet...	0.324	0.316	0.311	0.308	0.307	0.313	0.313	1.95
6)	T	1,1-Dichloroet...	0.588	0.584	0.572	0.570	0.562	0.582	0.576	1.70
7)	T	cis-1,2-Dichlo...	0.343	0.335	0.331	0.328	0.324	0.330	0.332	1.98
8)	T	Chloroform	0.548	0.538	0.532	0.526	0.522	0.532	0.533	1.71
9)	T	1,2-Dichloroet...	0.453	0.448	0.439	0.427	0.415	0.420	0.434	3.56
10)	T	1,1,1-Trichlor...	0.494	0.486	0.480	0.474	0.465	0.478	0.479	2.03
11)	T	Carbon Tetrach...	0.447	0.438	0.429	0.424	0.418	0.423	0.430	2.51
12)	T	Trichloroethene	0.321	0.314	0.307	0.299	0.293	0.297	0.305	3.62
13)	T	Cyclohexane	0.523	0.508	0.497	0.480	0.464	0.472	0.491	4.63
14)	T	Benzene	1.179	1.148	1.127	1.085	1.053	1.069	1.110	4.42
15)	T	Acetone	0.710	0.699	0.702	0.699	0.693	0.703	0.701	0.80
16)	T	2-Butanone	0.220	0.215	0.211	0.207	0.202	0.204	0.210	3.29
17)	T	1-Butanol	0.300	0.288	0.283	0.268	0.248	0.238	0.271	8.92
18)	T	Methanol	0.213	0.209	0.211	0.214	0.203	0.205	0.209	2.11
19)	T	trans-1,2-Dich...	0.338	0.334	0.331	0.327	0.327	0.332	0.332	1.26
20)	T	Chloromethane	0.508	0.504	0.507	0.514	0.515	0.535	0.514	2.17
21)	T	Carbon Disulfide	1.258	1.238	1.233	1.213	1.214	1.233	1.232	1.33
22)	T	1,2-Dichloropr...	0.290	0.281	0.275	0.264	0.258	0.261	0.272	4.62
23)	T	Trichlorofluor...	0.617	0.606	0.602	0.599	0.601	0.621	0.608	1.51
24)	I	Chlorobenzene-d5	----------ISTD----------							
25)	T	Bromoform	0.429	0.413	0.438	0.399	0.387	0.380	0.408	5.71
26)	T	Tetrachloroethene	0.378	0.370	0.351	0.353	0.347	0.346	0.357	3.74
27)	T	1,1,2,2-Tetrac...	0.639	0.613	0.672	0.585	0.568	0.570	0.608	6.86
28)	T	Toluene	1.064	1.032	0.966	0.961	0.936	0.945	0.984	5.25
29)	T	Chlorobenzene	1.091	1.064	1.042	1.009	0.981	0.994	1.030	4.13
30)	T	Ethylbenzene	0.604	0.581	0.567	0.539	0.523	0.525	0.556	5.88
31)	T	Xylene (meta &...	0.763	0.731	0.718	0.672	0.638	0.641	0.694	7.37
32)	T	Xylene (ortho)	0.683	0.650	0.674	0.618	0.584	0.586	0.633	6.81
33)	T	1,3,5-Trimethy...	1.592	1.513	1.594	1.355	1.262	1.241	1.426	11.28
34)	T	1,2,4-Trimethy...	1.567	1.492	1.550	1.315	1.224	1.195	1.390	11.96
35)	T	4-Methyl-2-Pen...	0.955	0.925	0.866	0.850	0.815	0.795	0.868	7.14

(#) = Out of Range

Evaluate Continuing Calibration Report

Data Path : D:\ECL12023\
Data File : WJ12041.D
Acq On : 2 Jul 2012 10:24 am
Operator :
Sample : CCP-TP-175 CCAL
Misc : 1X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 02 11:56:34 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	Fluorobenzene	1.000	1.000	0.0	94	0.00
2 T	Ethyl Ether	0.271	0.259	4.4	91	-0.01
3 T	Methylene Chloride	0.327	0.317	3.1	93	-0.01
4 T	1,1,2-Trichlorofluoroethane	0.368	0.364	1.1	95	-0.02
5 T	1,1-Dichloroethene	0.313	0.306	2.2	93	-0.01
6 T	1,1-Dichloroethane	0.576	0.546	5.2	90	0.00
7 T	cis-1,2-Dichloroethene	0.332	0.321	3.3	92	0.00
8 T	Chloroform	0.533	0.513	3.8	92	0.00
9 T	1,2-Dichloroethane	0.434	0.404	6.9	89	0.00
10 T	1,1,1-Trichloroethane	0.479	0.465	2.9	92	0.00
11 T	Carbon Tetrachloride	0.430	0.424	1.4	94	0.00
12 T	Trichloroethene	0.305	0.302	1.0	95	0.00
13 T	Cyclohexane	0.491	0.458	6.7	90	0.00
14 T	Benzene	1.110	1.052	5.2	91	0.00
15 T	Acetone	0.701	0.663	5.4	89	-0.01
16 T	2-Butanone	0.210	0.199	5.2	90	0.00
17 T	1-Butanol	0.271	0.246	9.2	86	-0.01
18 T	Methanol	0.209	0.186	11.0	82	0.00
19 T	trans-1,2-Dichloroethene	0.332	0.319	3.9	92	0.00
20 T	Chloromethane	0.514	0.487	5.3	89	0.00
21 T	Carbon Disulfide	1.232	1.183	4.0	92	-0.02
22 T	1,2-Dichloropropane	0.272	0.254	6.6	90	0.00
23 T	Trichlorofluoromethane	0.608	0.603	0.8	95	0.00
24 I	Chlorobenzene-d5	1.000	1.000	0.0	98	0.00
25 T	Bromoform	0.408	0.414	-1.5	101	0.00
26 T	Tetrachloroethene	0.357	0.352	1.4	97	-0.01
27 T	1,1,2,2-Tetrachloroethane	0.608	0.556	8.6	93	0.00
28 T	Toluene	0.984	0.905	8.0	92	-0.01
29 T	Chlorobenzene	1.030	0.959	6.9	93	0.00
30 T	Ethylbenzene	0.556	0.514	7.6	93	0.00
31 T	Xylene (meta & para)	0.694	0.633	8.8	92	0.00
32 T	Xylene (ortho)	0.633	0.577	8.8	91	0.00
33 T	1,3,5-Trimethylbenzene	1.426	1.284	10.0	92	0.00
34 T	1,2,4-Trimethylbenzene	1.390	1.250	10.1	93	0.00
35 T	4-Methyl-2-Pentanone	0.868	0.762	12.2	88	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

CAR 7-2-12

MDL REPORTING FORM
GAS VOC ANALYSIS

IDAHO NATIONAL LABORATORY
ENVIRONMENTAL CHEMISTRY LABORATORY

METHOD: CCP-TP-175 Rev. 3
Instrument ID: GCMS-J

MDL Determination Date: 5/8/2012

ANALYTE	MOLECULAR WEIGHT	MDL (ng)	PRQL (ppmv)
Acetone	58.08	9.3	100
Benzene	78.12	8.2	10
Bromoform	252.75	8.0	10
Butanol	74.12	7.5	100
Carbon disulfide	76.14	9.8	10
Carbon tetrachloride	153.82	7.8	10
Chlorobenzene	112.56	7.8	10
Chloroform	119.38	8.7	10
Chloromethane	50.49	9.4	10
Cyclohexane	84.16	8.5	10
1,1-Dichloroethane	98.94	8.9	10
1,2-Dichloroethane	98.94	8.5	10
1,1-Dichloroethylene	96.94	9.0	10
cis-1,2-Dichloroethylene	96.94	8.8	10
trans-1,2-Dichloroethylene	96.94	8.8	10
1,2-Dichloropropane	112.99	9.0	10
Ethyl benzene	106.17	7.3	10
Ethyl ether	74.12	9.0	10
Methyl ethyl ketone	72.11	8.5	100
Methyl isobutyl ketone	100.16	7.7	100
Methylene chloride	84.93	9.7	10
1,1,2,2-Tetrachloroethane	167.85	8.6	10
Tetrachloroethylene	165.83	8.6	10
Toluene	92.15	8.0	10
1,1,1-Trichloroethane	133.41	9.2	10
Trichloroethylene	131.39	9.4	10
Trichlorofluoromethane	137.37	9.8	10
1,1,2-Trichloro-1,2,2-trifluoroethane	187.38	9.9	10
1,3,5-Trimethylbenzene	120.2	7.6	10
1,2,4-Trimethylbenzene	120.2	8.0	10
p/m-Xylene	106.17	8.0	10
o-Xylene	106.17	7.6	10
Methanol	32.04	9.9	100

Form Rev 05-07

SECTION 6.0

DATA REVIEW CHECKLISTS

- SAMPLE RECEIVING & CUSTODY REVIEW CHECKLIST
- DATA GENERATOR CHECKLIST
- INDEPENDENT REVIEW CHECKLIST

Environmental Chemistry Laboratory
Sample Receiving & Custody Review Checklist

Receiving Group: ECL 12023	Nonconformance Report Initiation Required? Yes or (No) NCR Number:
Reviewer Signature: Thomas B. Linto	Date: 06/26/12

Instructions: Complete one checklist per Report Group. Enter appropriate response for each question. Each "NO" response requires explanation. A "NO" response to a question may require initiation of an NCR.

REQUIREMENT	YES	NO	COMMENTS
1. FIELD CHAIN OF CUSTODY (COC)			
a. Are all field samples listed on the accompanying COC form included in the shipment?	✓		NA
b. Are all samples included in the shipment listed on the COC form?	✓		NA
c. Are all custody transfers completely documented by signatures of relinquishers and acceptors, time, and date of transfer?	✓		NA
d. Does all sample information (e.g., sample ID, sampling date and time, sample location, field batch, analytical request) listed on the COC correspond with the information on the sample tags?	✓		NA
e. Are any corrections on the COC appropriately made [a single line through the incorrect data, correct data written in (not overwritten), initialed and dated]?	✓		NA
2. SAMPLE TAGS			
a. Is each sample accompanied by a corresponding sample tag?	✓		NA
b. Do the field IDs on the sample tags correspond with those on the COC?	✓		NA
c. Does the sampling date and time correspond with the date and time on the COC?	✓		NA
d. Is the field batch number recorded on each sample tag, and does it correspond with that recorded on the COC?	✓		NA
e. Are the Sampling Organization and Sample Description fields completed?	✓		NA
f. Are ambient pressure and temperature, date and time and sampler initials recorded on each tag?	✓		NA
g. Are VOCs analyses requested as appropriate for each sample?	✓		NA
h. Are VOCs analyses requested for each field blank sample?	✓		NA
i. Did the sampler sign each sample tag?	✓		NA
j. Are any corrections on the sample tag appropriately made [a single line through the incorrect data, correct data written in (not overwritten), initialed and dated]?	✓		NA
k. Is the SUMMA® canister ID listed on the sample tag and/or COC?	✓		NA
3. ANALYSIS REQUEST FORM (ANRF)			
a. Do all field sample numbers correspond to those on the field COC?	✓		NA
b. Do the listed sample sizes correspond with the SUMMA® canisters?	✓		NA
c. Do VTSR and the Field Batch number match those on the COC?	✓		NA
d. If there is a COC number does it match the COC form number?	✓		NA
e. Are the correct analysis requests checked?	✓		NA
4. SAMPLE INTEGRITY			
a. Is a signed and dated or otherwise traceable custody seal present on the shipping container?	✓		NA
b. Is the shipping container custody seal intact and undamaged upon receipt at the laboratory?	✓		NA
c. Is the shipping container custody seal placed such that the container cannot be opened without breaking the seal?	✓		NA
d. Is a custody seal present on the valve of each sample canister?	✓		NA
e. Is the custody seal on each SUMMA® canister intact and undamaged upon receipt at the laboratory?	✓		NA
f. Is each custody seal placed such that the valve cannot be opened without breaking the seal?	✓		NA
g. Has physical integrity of all samples been preserved (such as, no dents, no missing connectors)?	✓		NA
h. Are the canister gauge pressure and ambient temperature and pressure recorded on the sample tag by ECL after canister receipt and equilibration to room temperature?	✓		NA
i. Did all of the SUMMA® canisters maintain pressure during shipment?	✓		NA
j. Does each sample have an ECL Sample ID tag corresponding to the ANRF?	✓		NA

The field sampling organization must be contacted if any discrepancies are found in the sample COC and tag documentation. This contact must be documented in writing.

TWCP SAMPLE RECEIVING & CUSTODY REVIEW
CHECKLIST ATTACHMENT

FIELD BATCH: 1206261202

LABORATORY RECEIVING GROUP: ECI 12023

Temperature Probe Identification Number: 723204

Expiration Date: 10/12/12

The temperature probe associated with the samples registered 24.3°C upon receipt at the laboratory. The minimum temperature registered by the probe during transport was 23.0°C and the maximum was 30.6°C.

Temperature Probe Identification Number: XC0552

Expiration Date: 10/12/12

The temperature probe associated with the samples registered 25.1°C upon receipt at the laboratory. The minimum temperature registered by the probe during transport was 23.3°C and the maximum was 31.5°C.

Signature of Sample Custodian: Thomas B. Linto Date: 06/26/12

Environmental Chemistry Laboratory
Data Generator Checklist

CCP-TP-175 (VOCs by GC/MS)

Analytical Batch#:	Procedure Revision:
ECL12023M	3
Analyst Signature: Caitlin A. Crowley	Analysis Date: 7-2-2012

Criteria	Yes	No	N/A	Comments
1. Samples analyzed in accordance with CCP-TP-175 requirements.	✓			NA
2. BFB tune analyzed at the beginning of the run (once every 12 hours of instrument operation), and meets acceptance criteria.	✓			NA
3. CCAL analyzed at the beginning of the run (once every 12 hours of instrument operation), and meets acceptance criteria.	✓			NA
4. LB analyzed after the CCAL, and meets acceptance criteria.	✓			NA
5. Analytical batch QC (LCS, laboratory duplicate or LCS duplicate) analyzed if appropriate, and meet acceptance criteria. [N/A if these analyses are performed on another day within the batch.]	✓			NA
6. All samples quantitated within the calibration range for all target analytes, diluted and reanalyzed, or scheduled for reanalysis within the batch.	✓			NA
7. All non-target analyte peaks having total ion areas >10% of the nearest internal standard evaluated against a NIST Appendix VIII VOC mass spectral library for tentative identification.	✓			NA
8. All TICs identified using criteria defined in CCP-TP-175.	✓			NA
9. All logbook entries completed in accordance with CCP-QP-011.	✓			NA
10. All raw data corrections made per CCP-TP-188 requirements [lined out, initialed, dated, and justified (as necessary)].	✓			NA
11. All raw data evaluated, signed/initialed and dated in indelible black ink.	✓			NA
12. Raw data reviewed for completeness and accuracy.	✓			NA

Environmental Chemistry Laboratory Independent Technical Review (ITR) Checklist

Analytical Batch:	Data Report Number:	Method : CCP-TP-175
ECL12023M	ECL12023M	

Run#	Analysis Date	Data Generator	ITR Signature	Sections Reviewed	Date of Review
1	7-2-12	Catherine Crowder	Erik Helm	1-7	7-9-12
2	NA	NA	NA	NA	NA
3	NA	NA	NA	NA	NA

Final Independent Technical Reviewer Release Signature: Erik Helm Sections Reviewed: 1-10 Date: 7/16/12

Instructions: Complete one checklist per analytical batch. If more than three instrument runs were needed to complete the batch analysis, use a second checklist. Enter the appropriate response for each question. Each "No" response requires explanation.

Requirement	Run #1		Run #2		Run #3		Comments
	Yes	No	Yes	No	Yes	No	
1. Instrument Performance Check (BFB Tune)	///	///	///	///	///	///	
a. Was a BFB tune performed each day prior to analysis of samples?	/		NA	NA	NA	NA	NA
b. Is the raw data present, and signed/initialed and dated by the analyst, for each BFB tune?	/		NA	NA	NA	NA	NA
c. Do all the BFB tunes meet CCP-TP-175 requirements [Table 2]?	/		NA	NA	NA	NA	NA
2. Continuing Calibration Verification (CCAL)	///	///	///	///	///	///	
a. Was a CCAL performed each day after the BFB tune and prior to analysis of samples?	/		NA	NA	NA	NA	NA
b. Is the raw data present, and signed/initialed and dated by the analyst, for each CCAL?	/		NA	NA	NA	NA	NA
c. Is the %D less than or equal to 30% for all target analytes?	/		NA	NA	NA	NA	NA
d. Are the retention times of the internal standards within 30 seconds of those in the associated ICAL?	/		NA	NA	NA	NA	NA
e. Are the internal standard areas within a factor of 2 (i.e., 50 to 200%) of those in the associated ICAL?	/		NA	NA	NA	NA	NA
3. Laboratory Blanks (LBs)	///	///	///	///	///	///	
a. Was a laboratory blank analyzed daily after the CCAL and prior to analysis of samples?	/		NA	NA	NA	NA	NA
b. Are all laboratory blank results ≤3 times the program-required MDLs for all target analytes ?	/		NA	NA	NA	NA	NA
4. Samples (Including LCSs, Blanks and Duplicates)	///	///	///	///	///	///	
a. Are the raw data present, and signed/initialed and dated by the analyst, for all samples listed on the Analysis Request Form, and for all associated LCSs, blanks and duplicates?	/		NA	NA	NA	NA	NA
b. Are the internal standard areas within a factor of 2 (i.e., 50% to 200%) of those in the associated CCAL?	/		NA	NA	NA	NA	NA
c. Do the sample component RRT's compare within ± 0.06 RRT units of the standard component in the continuing calibration?	/		NA	NA	NA	NA	NA
d. Are all analytes found below the MDLs marked with an "X" to the right or left of the concentration on the Quant Report and marked with "No, <MDL", initialed and dated on the following spectral data sheets?	/		NA	NA	NA	NA	NA
e. Are all positive hits identified by a "Yes", initialed and dated on the spectral data sheets?	/		NA	NA	NA	NA	NA
f. Are negative hits identified by an "X" on the Quant Report, and by "No", justified, initialed and dated on the data sheets?	/		NA	NA	NA	NA	NA
g. Were all samples analyzed within 12 hours of the daily BFB tune?	/		NA	NA	NA	NA	NA
h. In your opinion, do the sample spectra for positive hits match the reference spectra?	/		NA	NA	NA	NA	NA
i. Was a TIC search conducted on each sample, blank, duplicate and LCS in the batch, using a NIST library containing Appendix VIII VOCs?	/		NA	NA	NA	NA	NA
j. Were the TICs reviewed and identified using the guidelines defined in CCP-TP-175, initialed and dated?	/		NA	NA	NA	NA	NA
k. Were all samples having analytes detected in amounts exceeding the upper calibration range reanalyzed at a different dilution or at a lower volume?	/		NA	NA	NA	NA	NA
l. Were all dilutions factors for all samples calculated correctly?	/		NA	NA	NA	NA	NA

00004.1

Environmental Chemistry Laboratory Independent Technical Review (ITR) Checklist

Analytical Batch:	Data Report Number:	Method : CCP-TP-175
ECL1202 3.M	ECL1202 3.M	

Requirement	Yes	No	Comments
5. Initial Calibration	///	///	
a. Does the BFB tune meet CCP-TP-175 requirements [Table 2]?	/		NA
b. Are the %RSDs less than 35% for all target analytes?	/		NA
c. Is at least one of the calibration standards at a concentration below the PRQL?	/		NA
d. Are the correct ions used for quantitation?	/		NA
e. Is the ICAL raw data signed/initialed and dated by the analyst and included, or referenced, as appropriate for the report?	/		NA
f. Does the ICAL use at least 5 points (at least one below the PRQL), with %RSD < 35% for all target analytes?	///	///	
6. Laboratory Control Samples (LCSs)	/		NA
a. Was at least one unique LCS analyzed with the analytical batch?	/		NA
b. Is the LCS second-source from the ICAL standard source?	/		NA
c. Do the recoveries for all target analytes in each LCS fall between 70% and 130%?	/		NA
d. IF a duplicate LCS was analyzed, are all RPDs for all analytes greater than the PRQL ≤25%?	///	///	
7. Duplicate Sample	/		NA
a. Was at least one field sample from the analytical batch analyzed in duplicate?	/		NA
b. Do the RPDs for analytes above the PRQL meet the ≤25% precision requirement?	///	///	
8. Sample Integrity Verification	✓		NA
a. Is COC documentation complete and accurate for all reported samples?	✓		NA
b. Was physical integrity of all samples maintained?	✓		NA
c. Were all samples stored at temperatures between 0 and 40° C?	///	///	
9. Instrument, Method and Personnel Qualification Verification	✓		NA
a. Were all analyses conducted by analysts having current CCP qualification records on file?	✓		NA
b. Were acceptable demonstrations of precision, accuracy, and MDLs performed semiannually?	///	///	
10. Data Report Validation and Completeness	✓		NA
a. Are all changes to original data or forms made by a single line through of incorrect data, initialed/signed and dated by the person making the change?	✓		NA
b. Does the report contain a Cover Page with Table of Contents?	✓		NA
c. Does the report contain a Sample Number Cross-Reference Table?	✓		NA
d. Does the report contain copies of the COC and Gas Sample Canister Tags?	✓		NA
e. Are Analysis Data Sheets and TIC Analysis Data Sheets present and accurate for all samples in the analytical batch?	✓		NA
f. Are Lab Blank Summary Forms present for all lab blanks associated with the reported samples?	✓		NA
g. Are Lab Blank Results Forms present for all lab blanks associated with the reported samples?	✓		NA
h. Are BFB Tune Reports present for each continuing calibration associated with the reported samples?	✓		NA
i. Are Initial Calibration Forms present for all Initial Calibrations associated with the reported samples?	✓		NA
j. Are Continuing Calibration Forms present for each Continuing Calibration associated with the reported samples?	✓		NA
k. Are Internal Standard Area Summary Forms present for each daily calibration and associated sample analyses?	✓		NA
l. Are Lab Control Sample Forms present for each LCS associated with the reported samples?	✓		NA
m. Are Lab Duplicate Forms present for each duplicate analysis associated with the reported samples?	✓		NA
n. Does the report contain an MDL reporting form?	✓		NA
o. Does the report contain Quantitation Reports for every standard, sample, and QC sample reported?	✓		NA
p. Are Mass Spectra for all detected analytes and reported TICs present?	✓		NA
q. Are copies of Gas Transfer Manifold logs showing all sample pressurizations/dilutions included for all reported samples?	✓		NA

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Environmental Chemistry Laboratory Independent Technical Review (ITR) Checklist

Analytical Batch:	Data Report Number:	Method : CCP-TP-175
ECL12023M	ECL12023M	

Requirement	Yes	No	Comments
r. Are copies of analysis run logs for every standard, sample and QC sample present and accurate?	✓		NA
s. Are U, J, B, D, E, H, Z, and N qualifying flags correctly assigned on the reporting forms?	✓		NA
t. Are all data reporting forms completely and correctly filled out (e.g., correct batch numbers, analyst IDs, analysis times and dates, dilution factors, sample ID numbers and file IDs)?	✓		NA
u. If there were any NCRs associated with the data are copies included?	✓		NA
v. Are the analyte concentrations on the Analysis Data Sheets reported in units of ppm, and correctly rounded to 2 significant figures?	✓		NA
w. Have all data received documented data generator review and signature?	✓		NA
x. Were all calculations verified by a valid calculation program or a spot check of verified calculation programs?	✓		NA
y. Have the data been reviewed for transcription errors?	✓		NA
z. Are all pages in the data report legible and correctly paginated?	✓		NA

000043

SECTION 7.0

GCMS VOC RAW DATA

DATE: 1-2-12

GC/MS GAS ANALYSIS SUPPLEMENTAL DATA INPUT SHEET

DATA REPORT #:	**ECL12023M**	**METHOD:**	**CCP-TP-175**
ANALYSIS BATCH #:	**ECL12023M**	**INSTRUMENT:**	**J**
CCAL #:	**WJ12041**	**REPORT TICs:**	**YES**
REPORT GROUP(s):	**ECL12023**		

FILE #	LABORATORY SAMPLE ID	DILUTION #1	DILUTION #2	DILUTION #3	DILUTION #4	FINAL DILUTION	VOLUME INJECTED mLs	TIME ANALYZED	DATE ANALYZED
L02JA	LBMJL02	1.0000	---------	---------	---------	1.00	100	11:09	02-Jul-12
L02JB	LCSMJL02	3.5000	---------	---------	---------	3.50	40	11:51	02-Jul-12
L02JC	12178001	3.6372	---------	---------	---------	3.64	100	12:41	02-Jul-12
L02JD	12178002	3.7097	---------	---------	---------	3.71	60	13:26	02-Jul-12
L02JE	12178003	3.6363	---------	---------	---------	3.64	60	14:11	02-Jul-12
L02JF	12178004	3.7597	---------	---------	---------	3.76	100	14:57	02-Jul-12
L02JG	12178005	3.7317	---------	---------	---------	3.73	70	15:42	02-Jul-12
L02JH	12178005D	3.7317	---------	---------	---------	3.73	70	16:27	02-Jul-12
L02JI	12178006	3.7066	---------	---------	---------	3.71	100	17:13	02-Jul-12
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

GC/MS-J USE LOG
Environmental Chemistry Laboratory
Idaho National Laboratory

CCP-TP-175 — Page UMJ-01- [illegible]

Analyst	Date	Analytical Batch #		File ID	Lab Sample ID	Field Sample ID	Dilution Factor	Volume (mL)	Comments
CAR	6-28-12	SCREENS EQL12023	M	V28JF	12178006	NA	3.70666	5	Folder EQL12023 LTSD VOA-WC-26-5-16
		SCREENS EQL12025	M	V28JG	12180023		3.6204	5	
			M	V28JH	12180024		3.7563	5	
CAR	7-2-12	EQL12023	M	BJ12041	50ng BFB	VOA-BF-24 1.26-11	1	36	Folder EQL12023 LTSD VOA-WC-26-5-16
			M	WJ12041	CCP-TP-175 CCAL	VOA-WC-26-5-17	1	100	
			M	L02JA	LBMJL02	LB31751U26	1	100	
			M	L02JB	LCSMJL02	LCS30443SL02	3.5000	40	
			M	L02JC	12178001	NA	3.6372	100	
			M	L02JD	12178002		3.7097	60	
			M	L02JE	12178003		3.60363	60	
			M	L02JF	12178004		3.7597	100	
			M	L02JG	12178005		3.7317	70	
			M	L02JH	12178005D		3.7317	70	
			M	L02JI	12178006		3.70666	100 ~~70~~	CCAL 7-2-12
			M						
			M						
			M			NA			
			M						
			M						
			M						

000040

ECL Quantitation Report (Not Reviewed)

Data Path : D:\ECL12023\
Data File : WJ12041.D
Acq On : 2 Jul 2012 10:24 am
Operator :
Sample : CCP-TP-175 CCAL
Misc : 1X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 02 11:56:34 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	15.07	96	4655044	473.00	ng		0.00
24) Chlorobenzene-d5	21.60	117	3254639	490.00	ng		0.00
Target Compounds							Qvalue
2) Ethyl Ether	6.50	59	1412787	529.94	ng		96
3) Methylene Chloride	8.67	84	1708530	531.06	ng		88
4) 1,1,2-Trichlorofluoroe...	7.19	101	2063772	570.15	ng		95
5) 1,1-Dichloroethene	7.13	96	1644828	533.94	ng		94
6) 1,1-Dichloroethane	10.72	63	3057303	538.99	ng		99
7) cis-1,2-Dichloroethene	12.28	96	1752635	536.55	ng		95
8) Chloroform	13.10	83	2904028	553.66	ng		99
9) 1,2-Dichloroethane	14.44	62	2263060	530.37	ng		98
10) 1,1,1-Trichloroethane	13.53	97	2666162	565.14	ng		99
11) Carbon Tetrachloride	13.93	117	2224297	525.55	ng		100
12) Trichloroethene	15.90	130	1702838	567.15	ng		94
13) Cyclohexane	13.67	56	2492730	516.16	ng		90
14) Benzene	14.42	78	5578372	510.49	ng		98
15) Acetone	7.27	43	3712628	538.12	ng		97
16) 2-Butanone	12.34	72	1052217	509.66	ng	#	82
17) 1-Butanol	15.78	56	1305124	489.52	ng		98
18) Methanol	4.51	31	1039948	505.01	ng		94
19) trans-1,2-Dichloroethene	9.51	96	1691850	518.47	ng		97
20) Chloromethane	3.73	50	2500979	494.45	ng		99
21) Carbon Disulfide	7.72	76	6584069	543.24	ng		93
22) 1,2-Dichloropropane	16.38	63	1373162	513.79	ng		98
23) Trichlorofluoromethane	5.70	101	3248341	543.01	ng		100
25) Bromoform	23.39	173	1463888	540.55	ng		99
26) Tetrachloroethene	19.87	164	1374448	578.99	ng		96
27) 1,1,2,2-Tetrachloroethane	24.32	83	2106840	522.02	ng		100
28) Toluene	18.70	92	3345780	511.81	ng		99
29) Chlorobenzene	21.67	112	3336427	487.57	ng		96
30) Ethylbenzene	21.89	106	1744363	471.97	ng		87
31) Xylene (meta & para)	22.13	106	2406119	522.25	ng		88
32) Xylene (ortho)	22.97	106	2059424	490.06	ng		87
33) 1,3,5-Trimethylbenzene	24.93	105	4854115	512.44	ng		97
34) 1,2,4-Trimethylbenzene	25.64	105	4767369	516.22	ng		96
35) 4-Methyl-2-Pentanone	18.30	43	2896565	502.58	ng		100

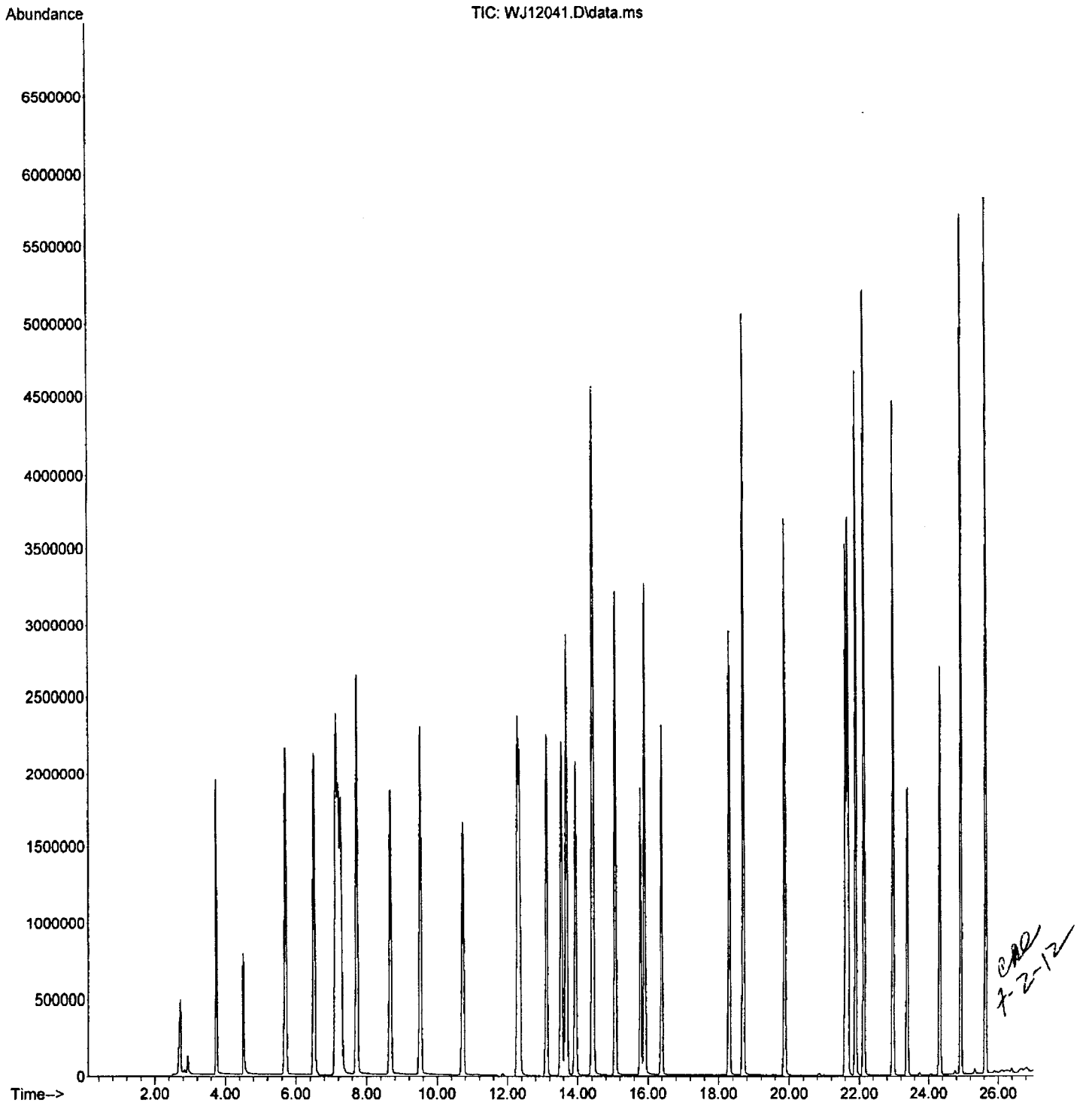
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7-2-12

ECL Quantitation Report (Not Reviewed)

Data Path : D:\ECL12023\
Data File : WJ12041.D
Acq On : 2 Jul 2012 10:24 am
Operator :
Sample : CCP-TP-175 CCAL
Misc : 1X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 02 11:56:34 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration



7-2-12

ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12023\
Data File : L02JA.D
Acq On : 2 Jul 2012 11:09 am
Operator :
Sample : LBMJL02
Misc : LB31751U26X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 02 11:53:05 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	15.07	96	4576898	473.00	ng	0.00
24) Chlorobenzene-d5	21.61	117	3159968	490.00	ng	0.00
Target Compounds						Qvalue

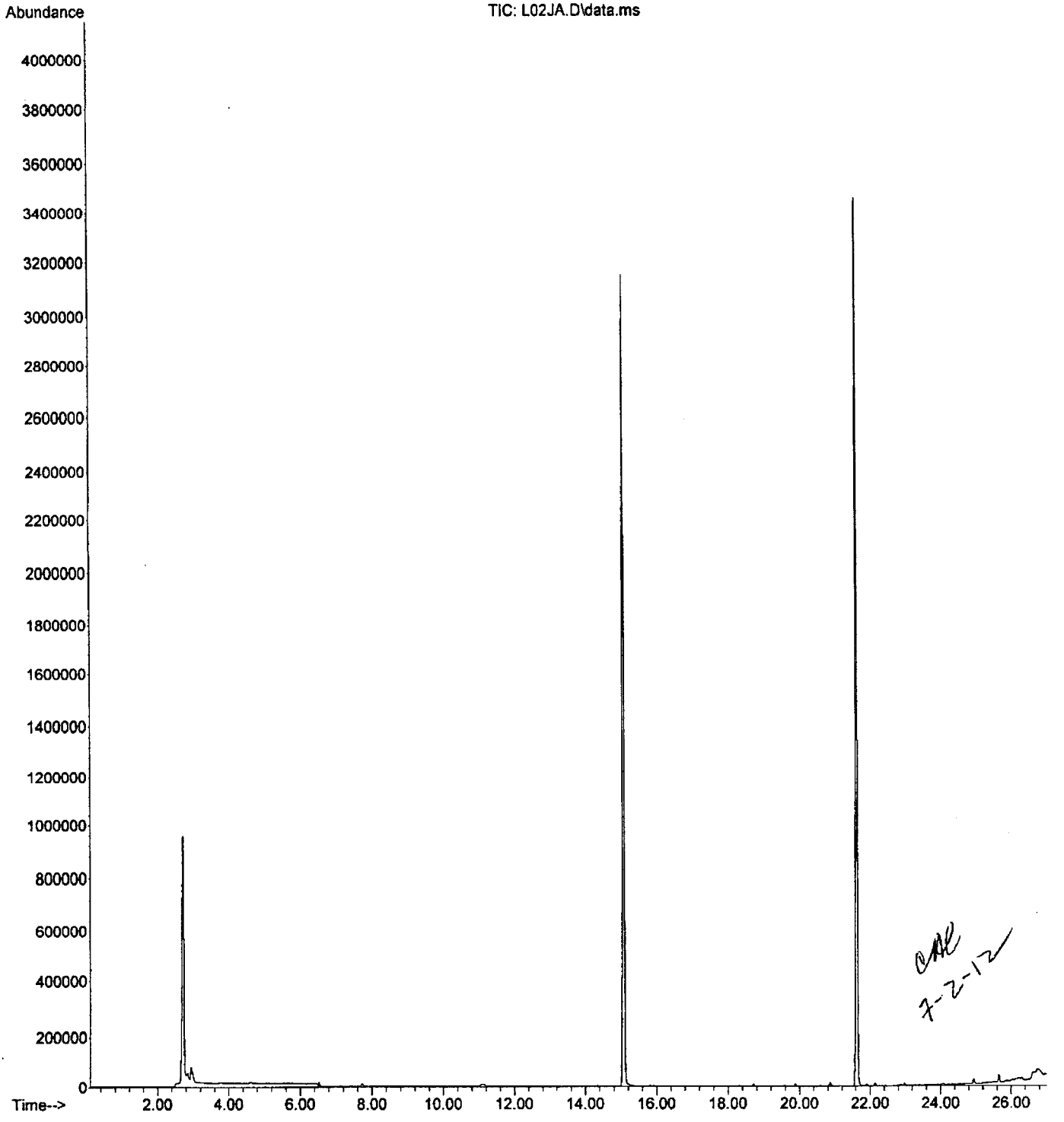
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7-2-12

ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12023\
Data File : L02JA.D
Acq On : 2 Jul 2012 11:09 am
Operator :
Sample : LBMJL02
Misc : LB31751U26X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 02 11:53:05 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration



7-2-12

Library Search Compound Report

Data Path : D:\ECL12023\
Data File : L02JA.D
Acq On : 2 Jul 2012 11:09 am
Operator :
Sample : LBMJL02
Misc : LB31751U26X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL

TIC Library : C:\Database\Apendix8.1
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected
****

7-2-12

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	LCSMJL02		Field Sample ID:	LCS30443SL02	
Analytical Batch:	ECL12023M		Sampling Batch:		
Data Report:	ECL12023M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/2/2012	1151	Date Sampled:		
Lab File ID:	L02JB		Date Received:		
Instrument ID:	GCMS-J		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	0.34	U
Benzene	17	
Bromoform	0.068	U
Butanol	0.22	U
Carbon disulfide	0.28	U
Carbon tetrachloride	12	
Chlorobenzene	0.15	U
Chloroform	0.16	U
Chloromethane	0.40	U
Cyclohexane	0.22	U
1,1-Dichloroethane	0.19	U
1,2-Dichloroethane	0.18	U
1,1-Dichloroethylene	0.20	U
cis-1,2-Dichloroethylene	0.19	U
trans-1,2-Dichloroethylene	0.19	U
1,2-Dichloropropane	0.17	U
Ethyl benzene	0.15	U
Ethyl ether	0.26	U
Methyl ethyl ketone	0.25	U
Methyl isobutyl ketone	14	J
Methylene chloride	20	
1,1,2,2-Tetrachloroethane	0.11	U
Tetrachloroethylene	0.11	U
Toluene	17	
1,1,1-Trichloroethane	12	
Trichloroethylene	12	
Trichlorofluoromethane	0.15	U
1,1;2-Trichloro-1,2,2-trifluoroethane	0.11	U
1,3,5-Trimethylbenzene	0.14	U
1,2,4-Trimethylbenzene	0.14	U
p/m-Xylene	0.16	U
o-Xylene	0.15	U
Methanol	0.66	U

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	LCSMJL02		Field Sample ID:	LCS30443SL02	
Analytical Batch:	ECL12023M		Sampling Batch:		
Data Report:	ECL12023M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/2/2012	1151	Date Sampled:		
Lab File ID:	L02JB		Date Received:		
Instrument ID:	GCMS-J		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12023\
Data File : L02JB.D
Acq On : 2 Jul 2012 11:51 am
Operator :
Sample : LCSMJL02
Misc : LCS30443SL02 3.5X 40ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 02 12:19:24 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	15.07	96	4575451	473.00	ng	0.00
24) Chlorobenzene-d5	21.62	117	3199177	490.00	ng	0.00
Target Compounds						Qvalue
3) Methylene Chloride	8.67	84	2530929	800.37	ng	88
9) 1,2-Dichloroethane	14.41	62	57619	13.74	ng	96
10) 1,1,1-Trichloroethane	13.53	97	3394143	731.97	ng	100
11) Carbon Tetrachloride	13.93	117	3455549	830.67	ng	99
12) Trichloroethene	15.91	130	2212230	749.62	ng	94
14) Benzene	14.42	78	6643582	618.55	ng	98
28) Toluene	18.71	92	4734771	736.84	ng	100
35) 4-Methyl-2-Pentanone	18.31	43	3833781	676.73	ng	100

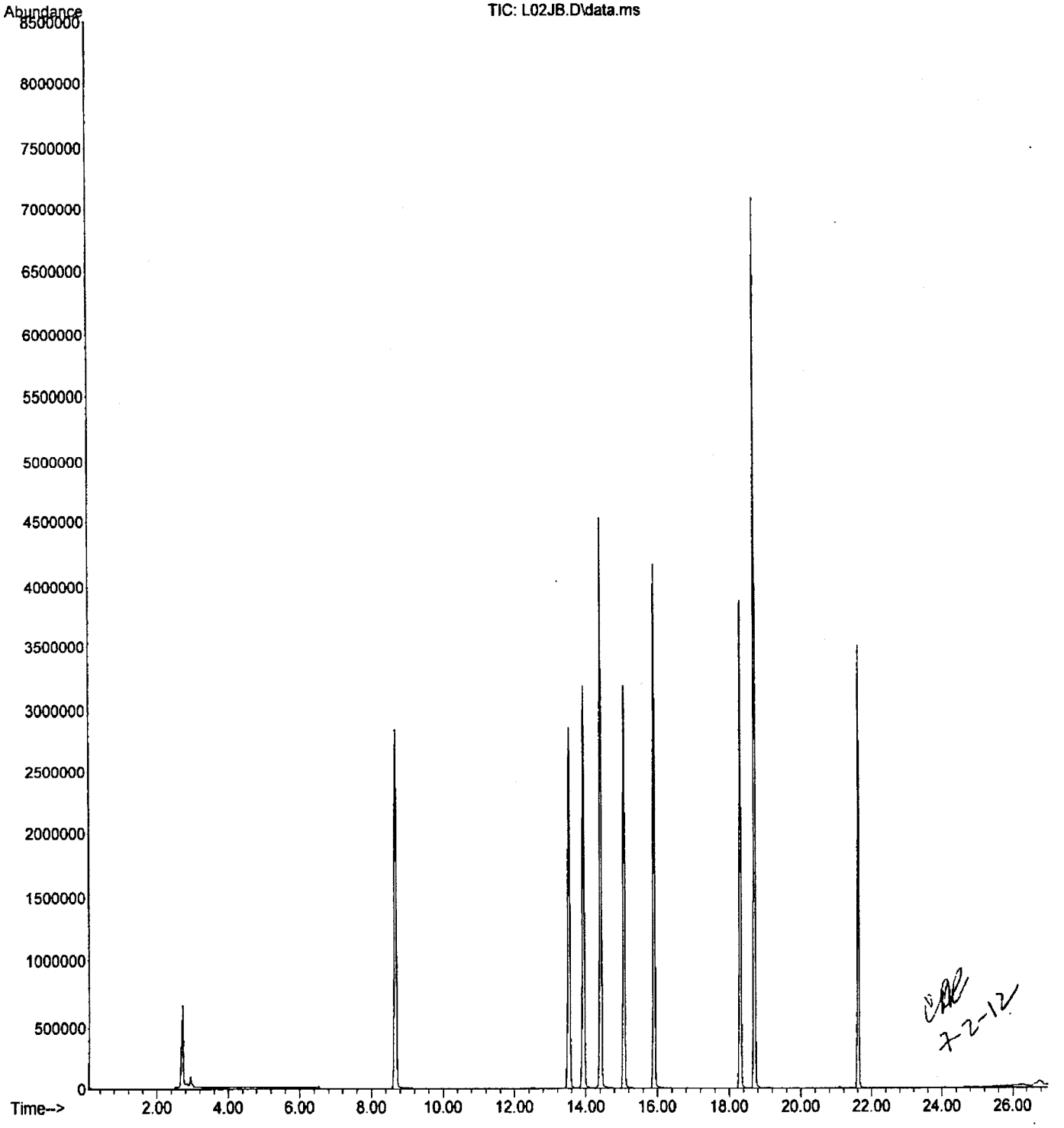
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7-2-12

ECL Quantitation Report (QT Reviewed)

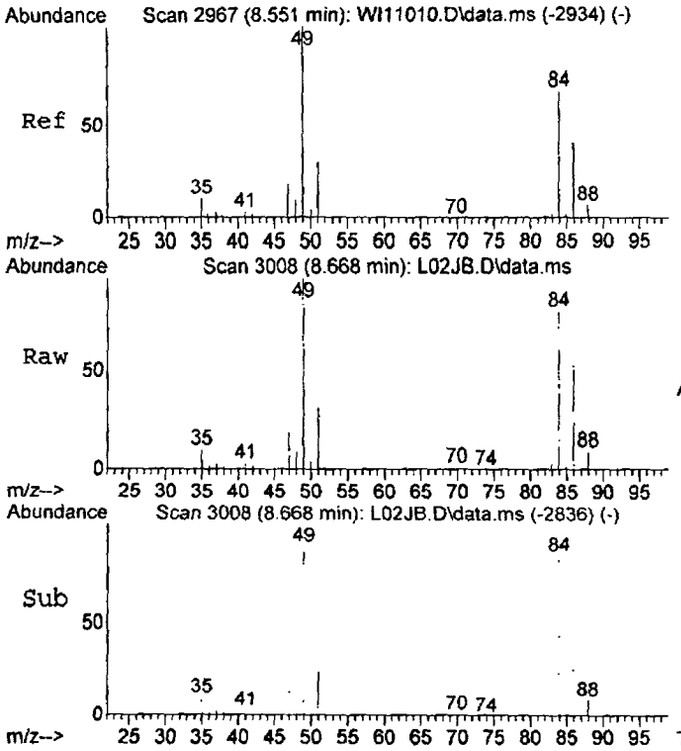
Data Path : D:\ECL12023\
Data File : L02JB.D
Acq On : 2 Jul 2012 11:51 am
Operator :
Sample : LCSMJL02
Misc : LCS30443SL02 3.5X 40ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 02 12:19:24 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration



7-2-12

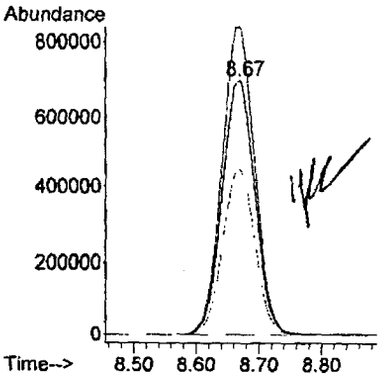
000057

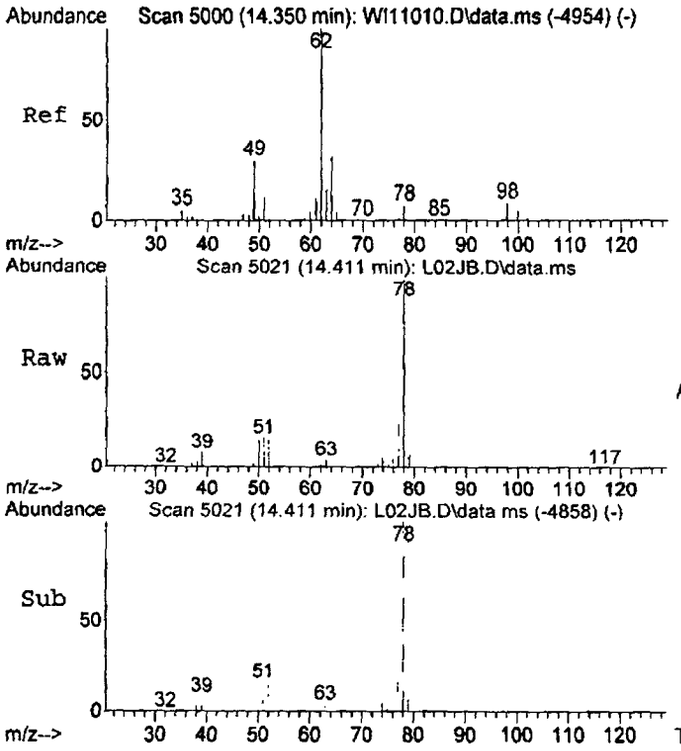


#3
Methylene Chloride
Concen: 800.37 ng
RT: 8.67 min Scan# 3008
Delta R.T. -0.009 min
Lab File: L02JB.D
Acq: 2 Jul 2012 11:51 am

Tgt Ion: 84 Resp: 2530929

Ion	Ratio	Lower	Upper
84	100		
49	120.7	111.6	171.6
86	64.6	33.6	93.6

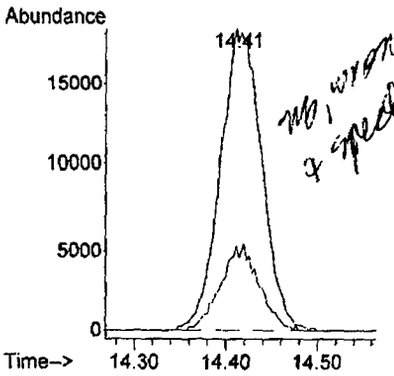




#9
1,2-Dichloroethane
Concen: 13.74 ng
RT: 14.41 min Scan# 5021
Delta R.T. -0.034 min
Lab File: L02JB.D
Acq: 2 Jul 2012 11:51 am

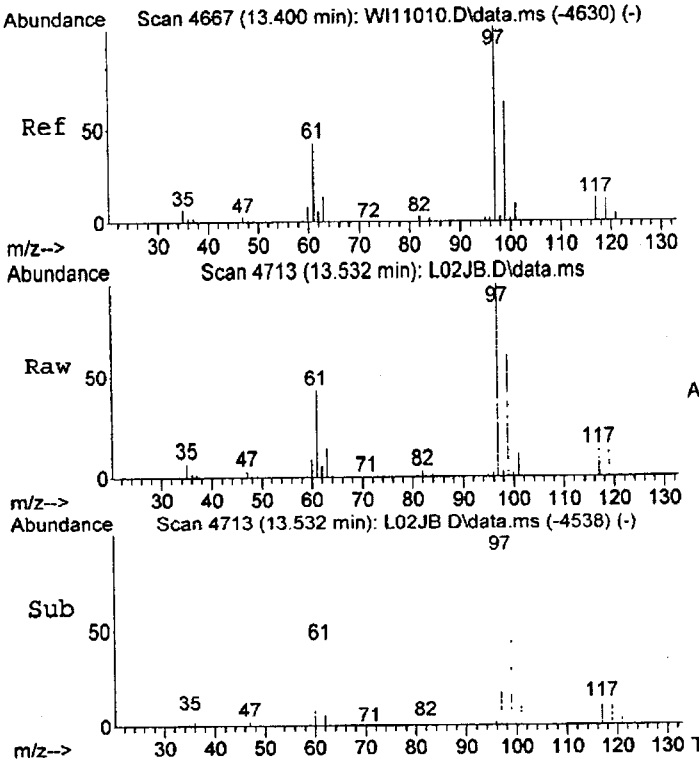
Tgt Ion: 62 Resp: 57619

Ion	Ratio	Lower	Upper
62	100		
64	28.9	1.1	61.1



wrong RT
& spectrum

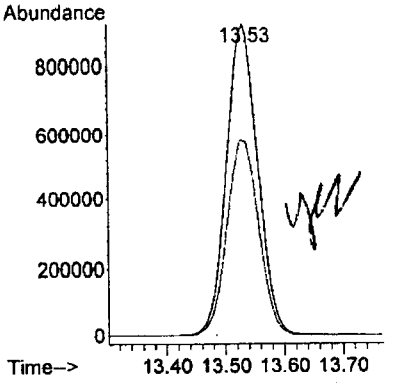
7-2-12

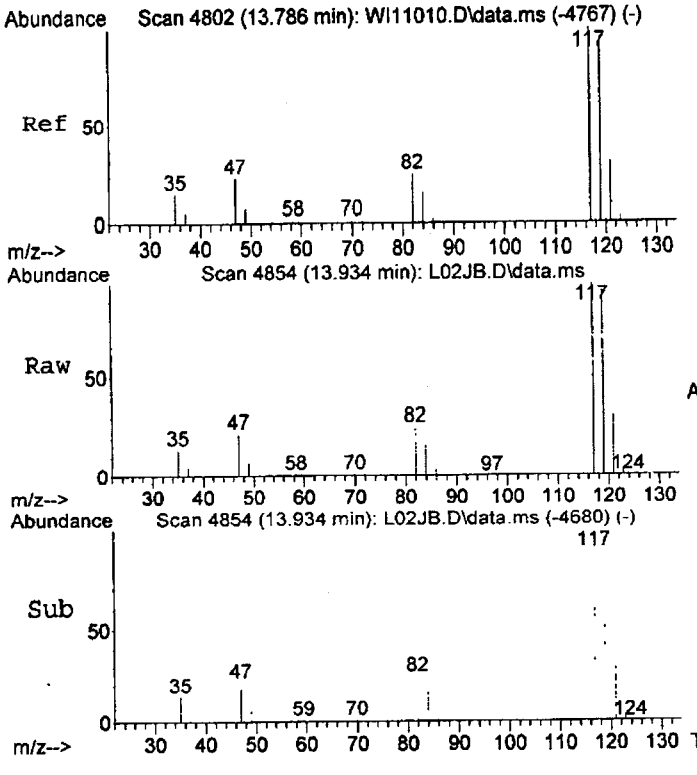


#10
1,1,1-Trichloroethane
Concen: 731.97 ng
RT: 13.53 min Scan# 4713
Delta R.T. -0.000 min
Lab File: L02JB.D
Acq: 2 Jul 2012 11:51 am

Tgt Ion: 97 Resp: 3394143

Ion	Ratio	Lower	Upper
97	100		
99	62.9	32.9	92.9

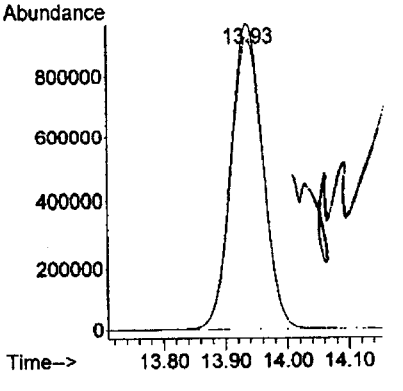




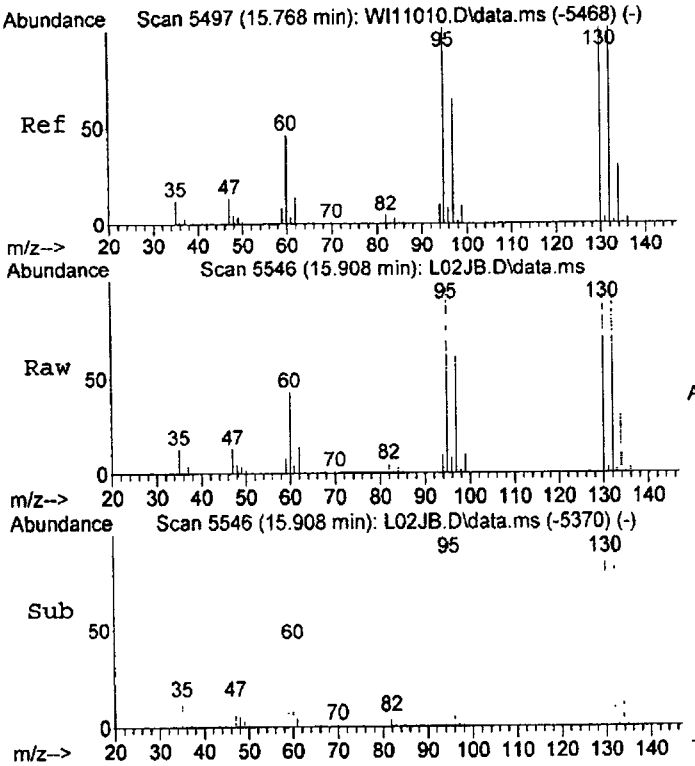
#11
Carbon Tetrachloride
Concen: 830.67 ng
RT: 13.93 min Scan# 4854
Delta R.T. -0.003 min
Lab File: L02JB.D
Acq: 2 Jul 2012 11:51 am

Tgt Ion:117 Resp: 3455549

Ion	Ratio	Lower	Upper
117	100		
119	95.7	65.1	125.1



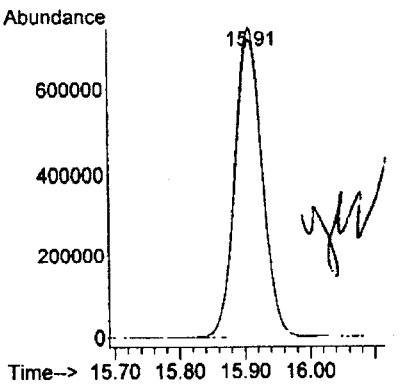
7-2-12

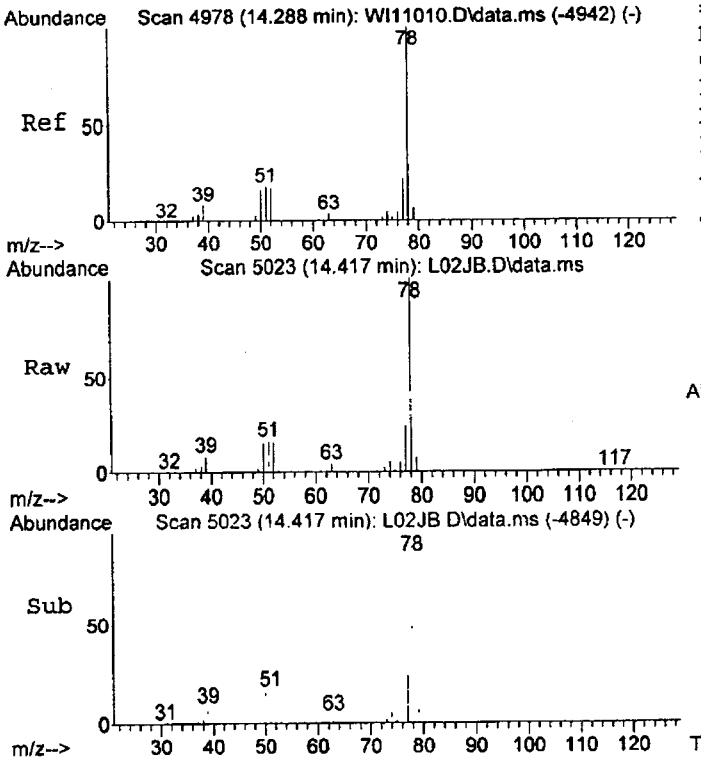


#12
Trichloroethene
Concen: 749.62 ng
RT: 15.91 min Scan# 5546
Delta R.T. 0.003 min
Lab File: L02JB.D
Acq: 2 Jul 2012 11:51 am

Tgt Ion:130 Resp: 2212230

Ion	Ratio	Lower	Upper
130	100		
132	96.2	71.2	131.2
95	96.3	72.7	132.7

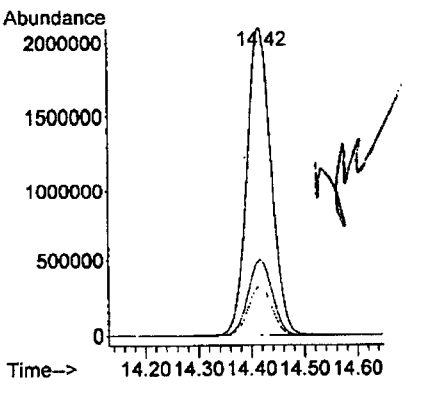




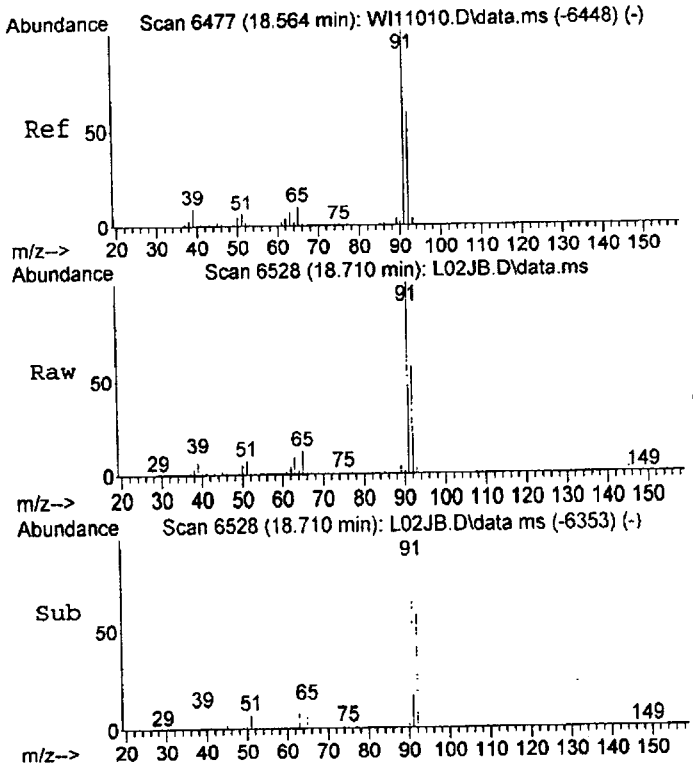
#14
Benzene
Concen: 618.55 ng
RT: 14.42 min Scan# 5023
Delta R.T. -0.003 min
Lab File: L02JB.D
Acq: 2 Jul 2012 11:51 am

Tgt Ion: 78 Resp: 6643582

Ion	Ratio	Lower	Upper
78	100		
77	24.0	0.0	53.4
52	15.1	0.0	46.9



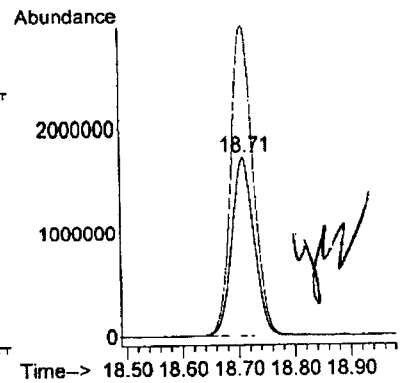
12-12

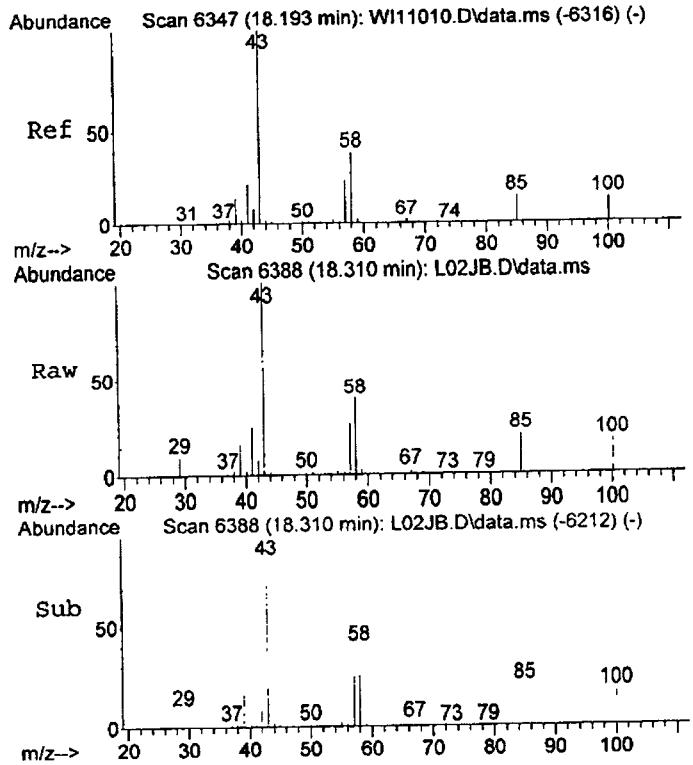


#28
Toluene
Concen: 736.84 ng
RT: 18.71 min Scan# 6528
Delta R.T. -0.000 min
Lab File: L02JB.D
Acq: 2 Jul 2012 11:51 am

Tgt Ion: 92 Resp: 4734771

Ion	Ratio	Lower	Upper
92	100		
91	171.7	142.1	202.1

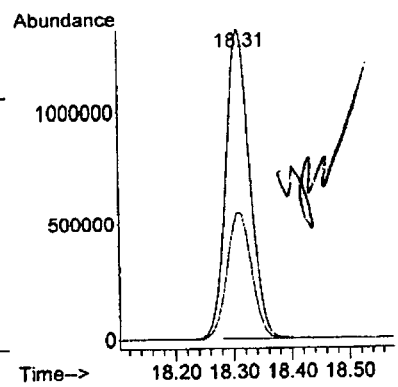




#35
4-Methyl-2-Pentanone
Concen: 676.73 ng
RT: 18.31 min Scan# 6388
Delta R.T. 0.003 min
Lab File: L02JB.D
Acq: 2 Jul 2012 11:51 am

Tgt Ion: 43 Resp: 3833781

Ion	Ratio	Lower	Upper
43	100		
58	40.4	10.3	70.3



7-2-12

Library Search Compound Report

Data Path : D:\ECL12023\
Data File : L02JB.D
Acq On : 2 Jul 2012 11:51 am
Operator :
Sample : LCSMJL02
Misc : LCS30443SL02 3.5X 40ML
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL

TIC Library : C:\Database\Apendix8.l
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected
****

7-2-12

ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12023\
Data File : L02JC.D
Acq On : 2 Jul 2012 12:41 pm
Operator :
Sample : 12178001
Misc : 3.6372X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 02 13:45:01 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	15.07	96	4596516	473.00	ng	0.00
24) Chlorobenzene-d5	21.61	117	3191693	490.00	ng	0.00
Target Compounds						Qvalue

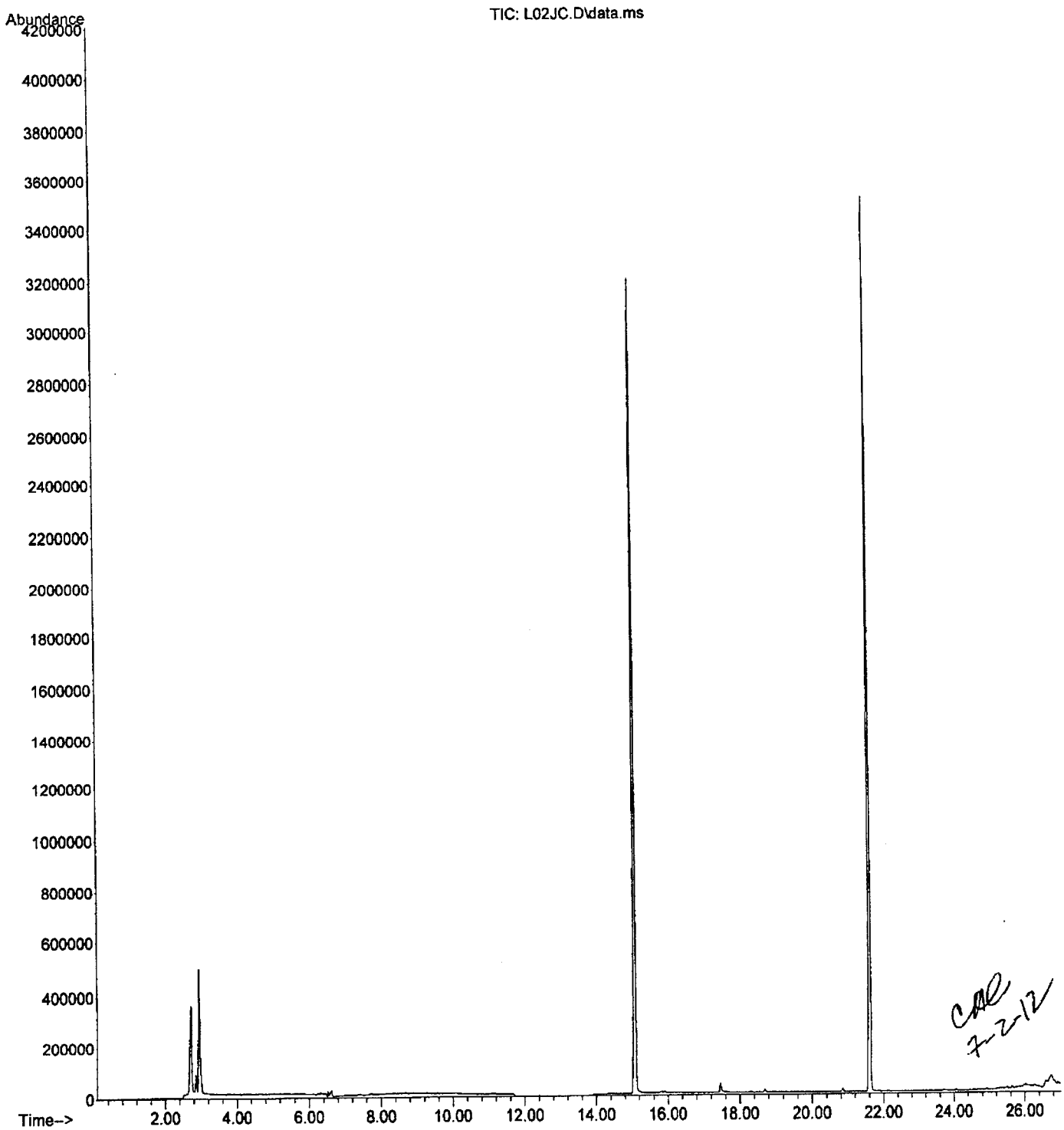
(#) = qualifier out of range (m) = manual integration (+) = signals summed

CAR 7-2-12

ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12023\
Data File : L02JC.D
Acq On : 2 Jul 2012 12:41 pm
Operator :
Sample : 12178001
Misc : 3.6372X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 02 13:45:01 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration



CAL 7-2-12

000061

Library Search Compound Report

Data Path : D:\ECL12023\
Data File : L02JC.D
Acq On : 2 Jul 2012 12:41 pm
Operator :
Sample : 12178001
Misc : 3.6372X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL

TIC Library : C:\Database\Apendix8.1
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected
****

7-2-12

ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12023\
Data File : L02JD.D
Acq On : 2 Jul 2012 1:26 pm
Operator :
Sample : 12178002
Misc : 3.7097X 60ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 02 15:18:33 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	15.07	96	4545806	473.00	ng	0.00
24) Chlorobenzene-d5	21.62	117	3190455	490.00	ng	0.00
Target Compounds						Qvalue
15) Acetone	7.28	43	6181247	917.47	ng	97
18) Methanol	4.52	31	1006433	500.48	ng	93
21) Carbon Disulfide	7.73	76	107031	9.04	ng	92

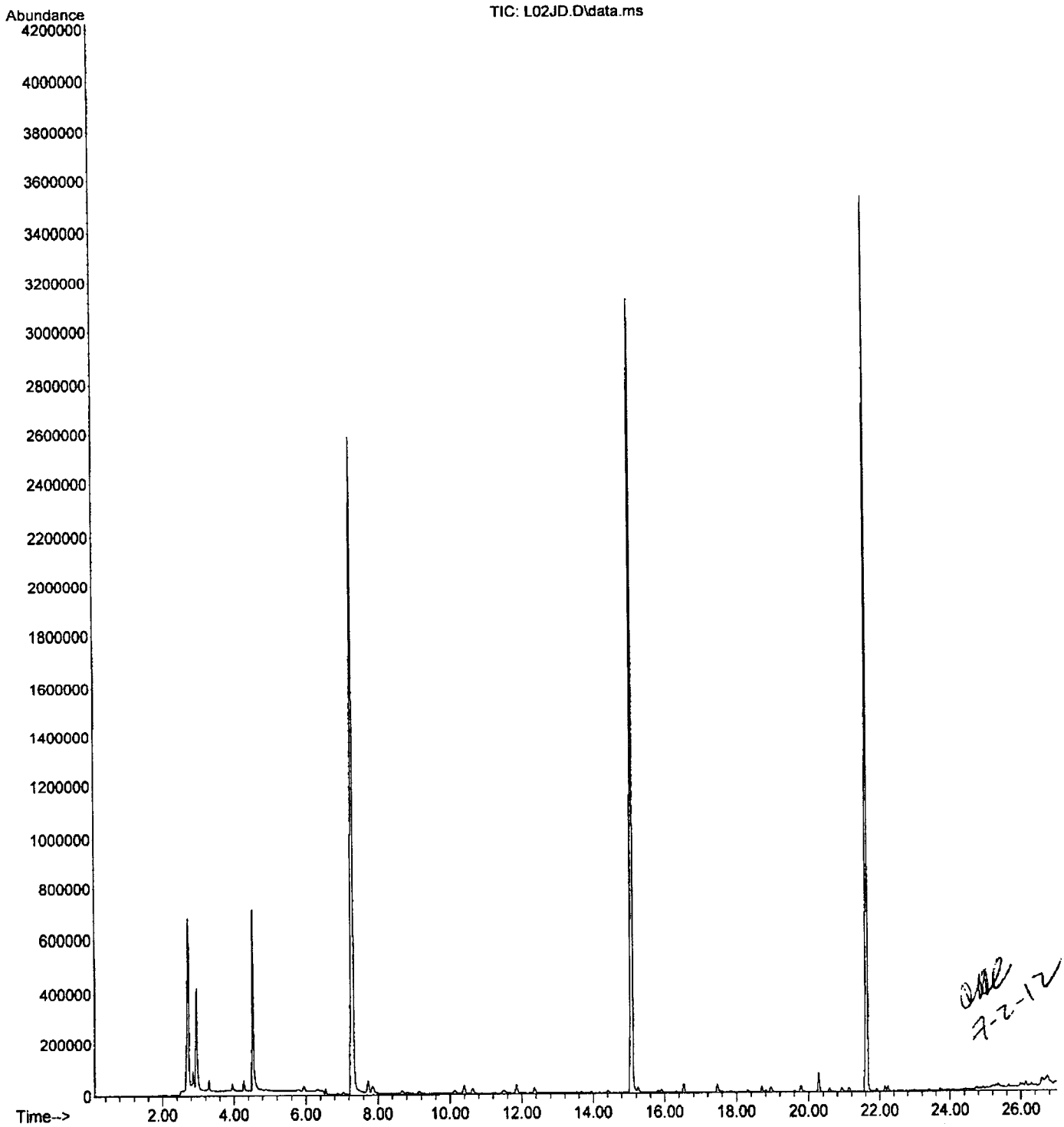
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7-2-12

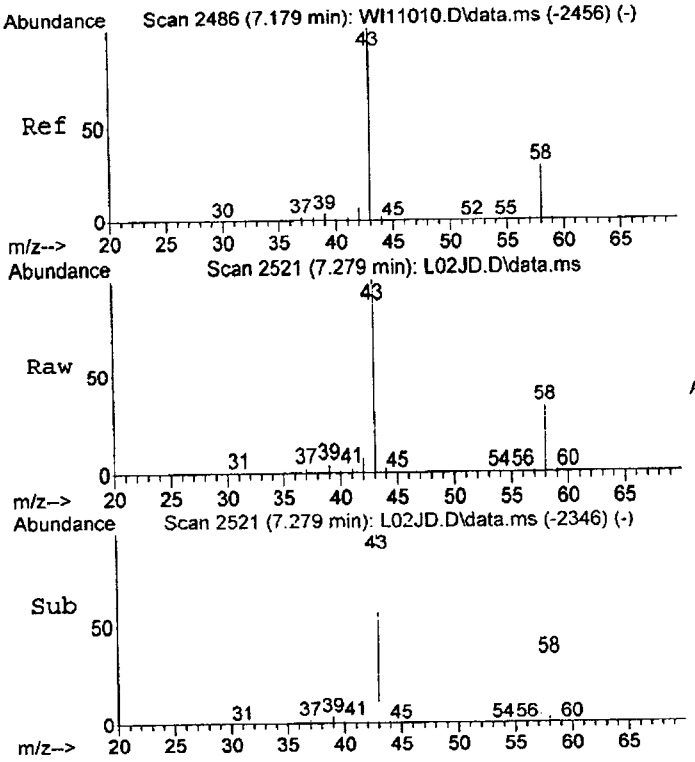
ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12023\
Data File : L02JD.D
Acq On : 2 Jul 2012 1:26 pm
Operator :
Sample : 12178002
Misc : 3.7097X 60ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 02 15:18:33 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration



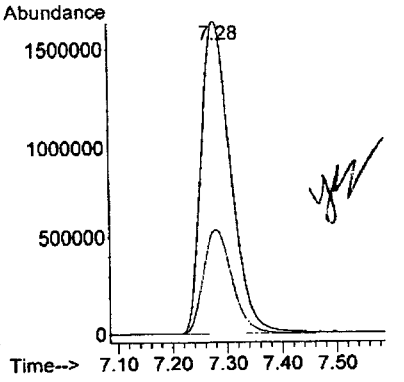
7-2-12

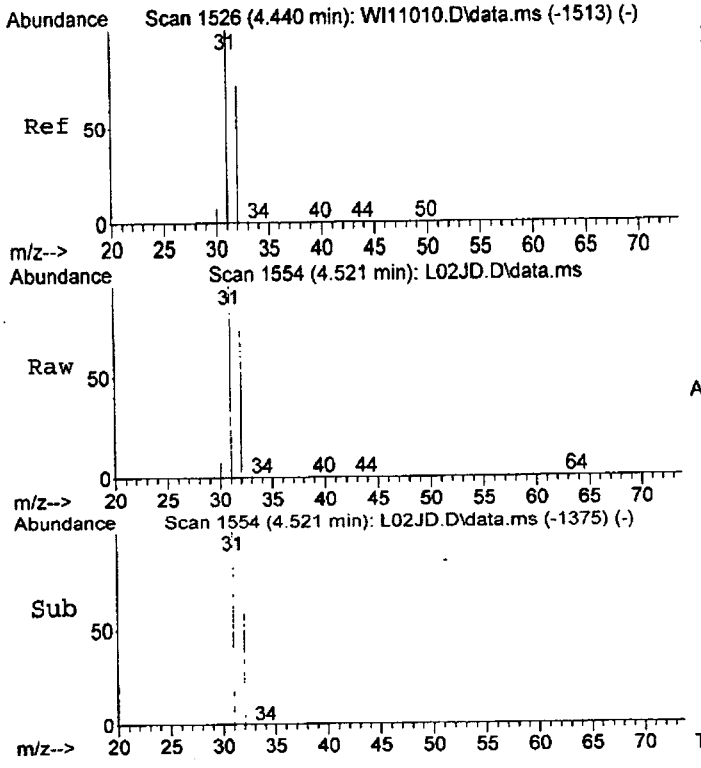


#15
Acetone
Concen: 917.47 ng
RT: 7.28 min Scan# 2521
Delta R.T. -0.000 min
Lab File: L02JD.D
Acq: 2 Jul 2012 1:26 pm

Tgt Ion: 43 Resp: 6181247

Ion	Ratio	Lower	Upper
43	100		
58	32.3	0.7	60.7

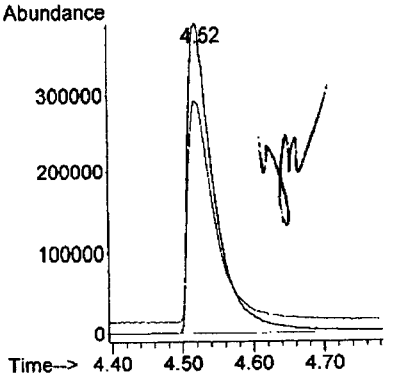




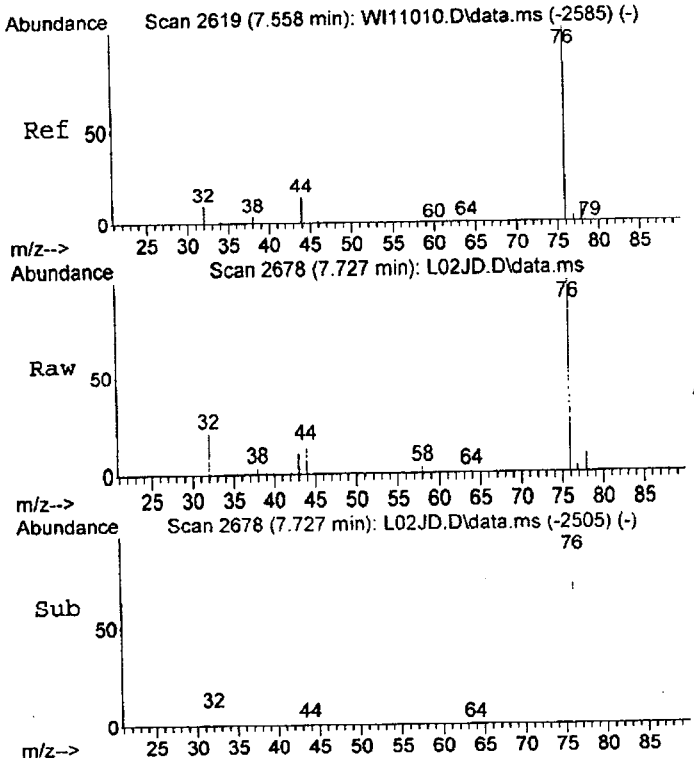
#18
Methanol
Concen: 500.48 ng
RT: 4.52 min Scan# 1554
Delta R.T. 0.011 min
Lab File: L02JD.D
Acq: 2 Jul 2012 1:26 pm

Tgt Ion: 31 Resp: 1006433

Ion	Ratio	Lower	Upper
31	100		
32	75.9	40.0	100.0



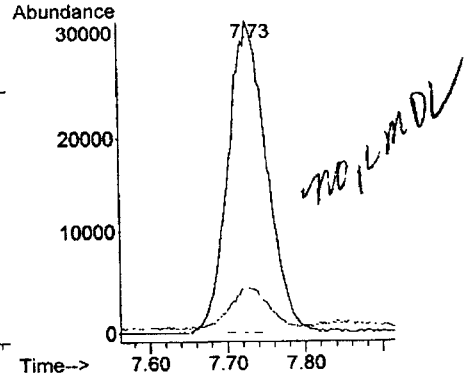
7-2-12



#21
Carbon Disulfide
Concen: 9.04 ng
RT: 7.73 min Scan# 2678
Delta R.T. -0.006 min
Lab File: L02JD.D
Acq: 2 Jul 2012 1:26 pm

Tgt Ion: 76 Resp: 107031

Ion	Ratio	Lower	Upper
76	100		
44	12.1	8.3	22.5



MDL

CME 7-2-12

Library Search Compound Report

Data Path : D:\ECL12023\
Data File : L02JD.D
Acq On : 2 Jul 2012 1:26 pm
Operator :
Sample : 12178002
Misc : 3.7097X 60ML
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL

TIC Library : C:\Database\Apendix8.1
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected
****

7-2-12

ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12023\
Data File : L02JE.D
Acq On : 2 Jul 2012 2:11 pm
Operator :
Sample : 12178003
Misc : 3.6363X 60ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 02 15:20:34 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	15.07	96	4578869	473.00	ng	0.00
24) Chlorobenzene-d5	21.61	117	3186719	490.00	ng	0.00
Target Compounds						Qvalue
15) Acetone	7.27	43	6020532	887.16	ng	97
18) Methanol	4.52	31	994607	491.03	ng	94
21) Carbon Disulfide	7.72	76	105464	8.85	ng	92

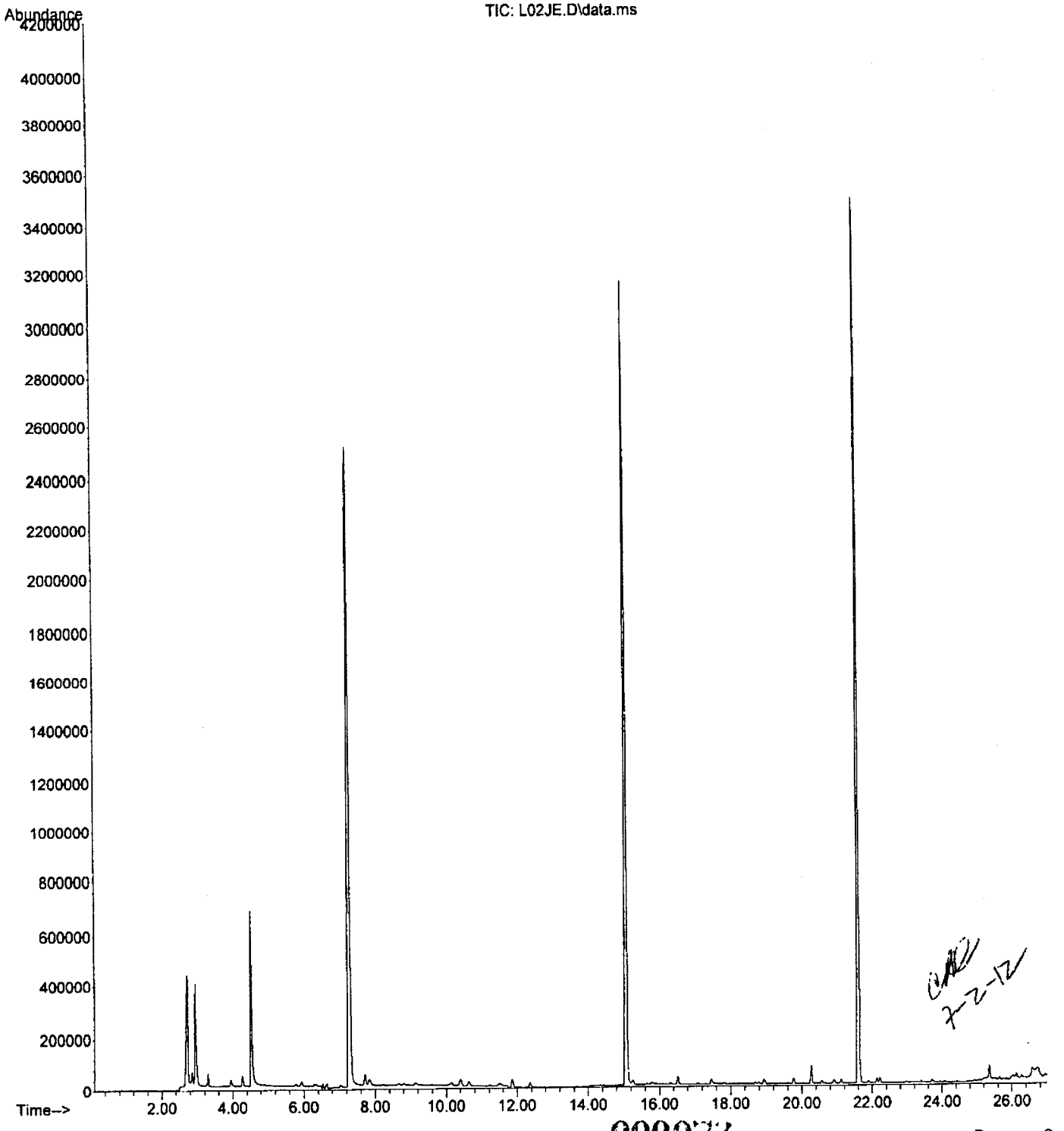
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7-2-12

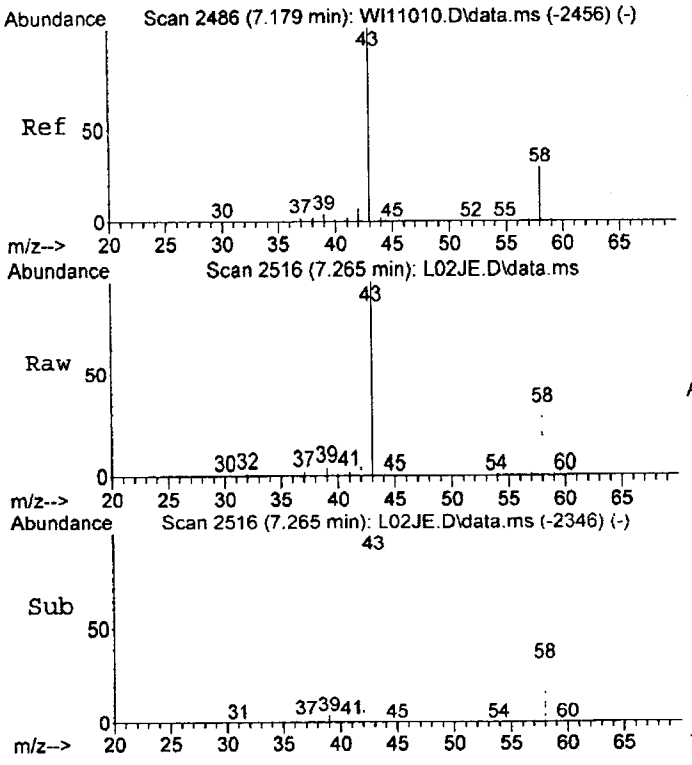
ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12023\
Data File : L02JE.D
Acq On : 2 Jul 2012 2:11 pm
Operator :
Sample : 12178003
Misc : 3.6363X 60ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 02 15:20:34 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration



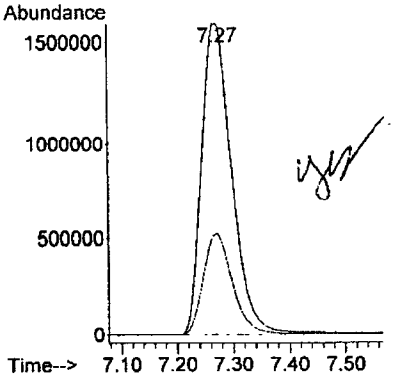
7-2-12

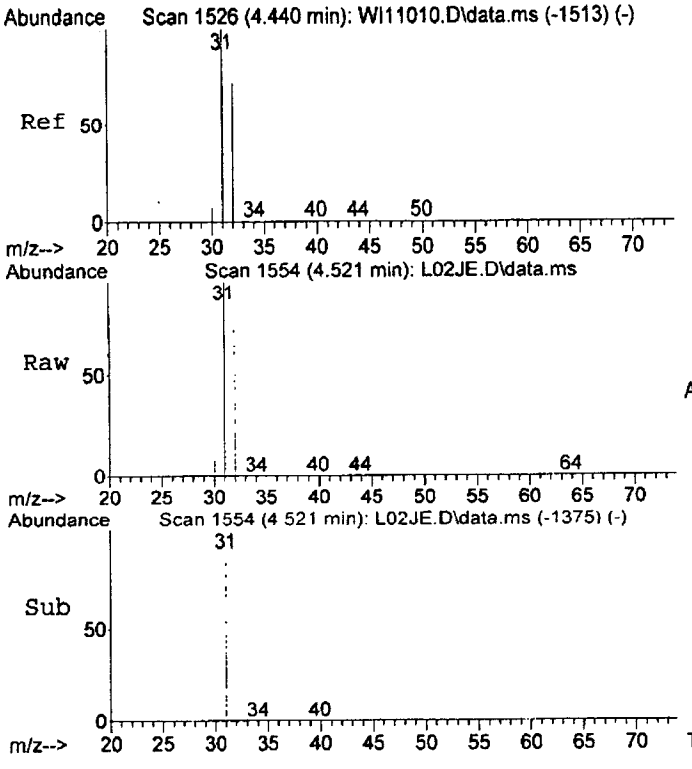


#15
Acetone
Concen: 887.16 ng
RT: 7.27 min Scan# 2516
Delta R.T. -0.014 min
Lab File: L02JE.D
Acq: 2 Jul 2012 2:11 pm

Tgt Ion: 43 Resp: 6020532

Ion	Ratio	Lower	Upper
43	100		
58	32.1	0.7	60.7

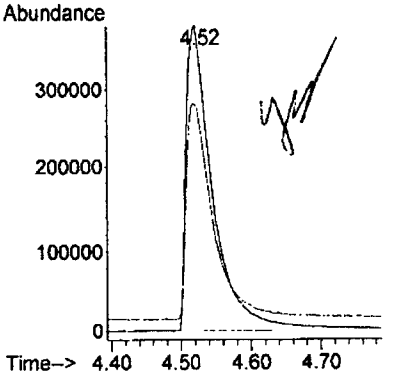




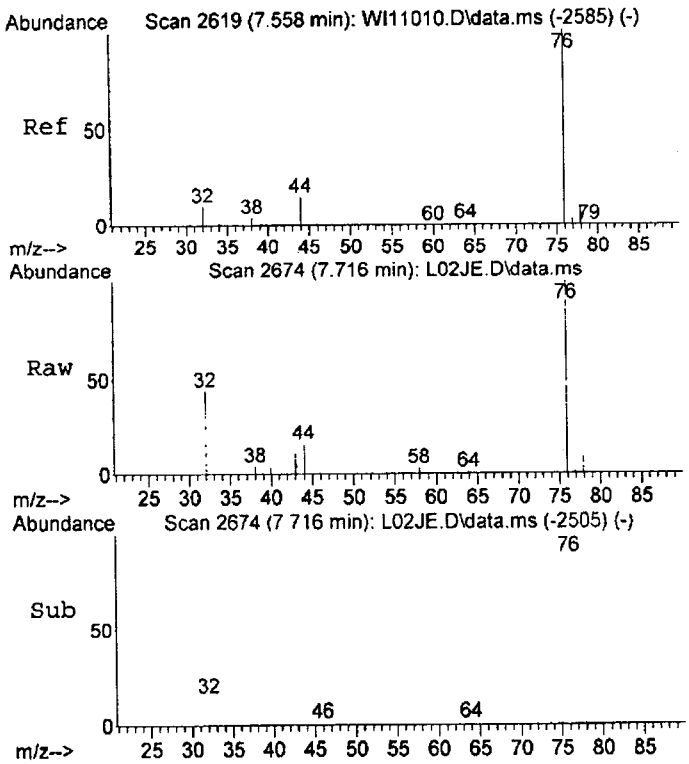
#18
Methanol
Concen: 491.03 ng
RT: 4.52 min Scan# 1554
Delta R.T. 0.011 min
Lab File: L02JE.D
Acq: 2 Jul 2012 2:11 pm

Tgt Ion: 31 Resp: 994607

Ion	Ratio	Lower	Upper
31	100		
32	74.9	40.0	100.0



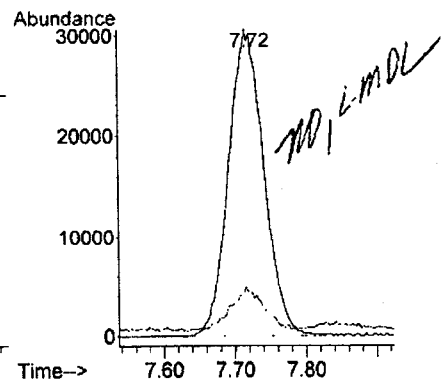
3-2-17



#21
Carbon Disulfide
Concen: 8.85 ng
RT: 7.72 min Scan# 2674
Delta R.T. -0.017 min
Lab File: L02JE.D
Acq: 2 Jul 2012 2:11 pm

Tgt Ion: 76 Resp: 105464

Ion	Ratio	Lower	Upper
76	100		
44	12.1	8.3	22.5



7-2-12
7-2-12

Library Search Compound Report

Data Path : D:\ECL12023\
Data File : L02JE.D
Acq On : 2 Jul 2012 2:11 pm
Operator :
Sample : 12178003
Misc : 3.6363X 60ML
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL

TIC Library : C:\Database\Apendix8.1
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected
****

7-2-12

ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12023\
Data File : L02JF.D
Acq On : 2 Jul 2012 2:57 pm
Operator :
Sample : 12178004
Misc : 3.7597X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 02 15:32:44 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	15.07	96	4527052	473.00	ng	0.00
24) Chlorobenzene-d5	21.62	117	3193181	490.00	ng	0.00
Target Compounds						Qvalue
15) Acetone	7.31	43	105287	15.69	ng	97
18) Methanol	4.53	31	596048	297.63	ng	87

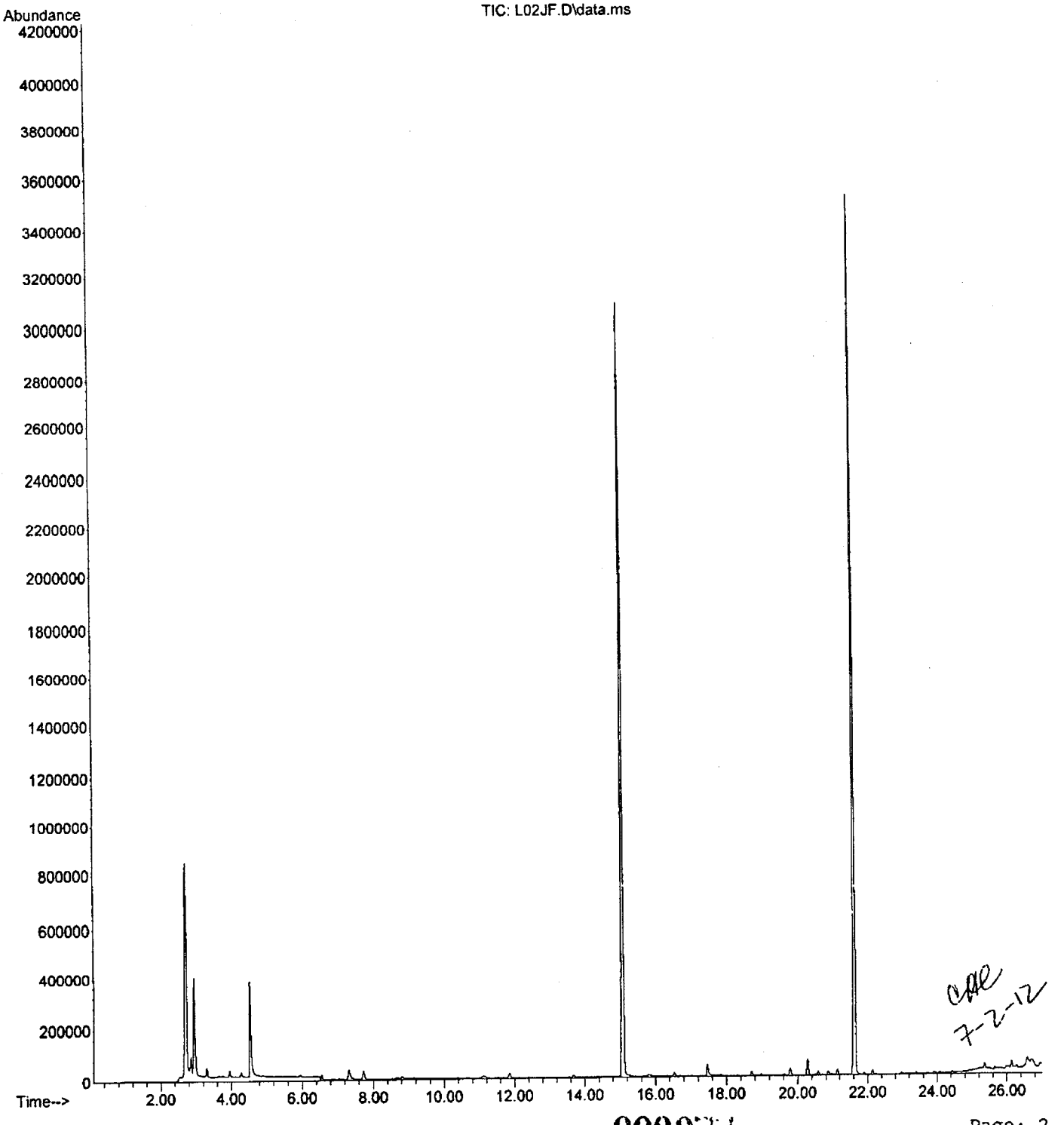
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7-2-12

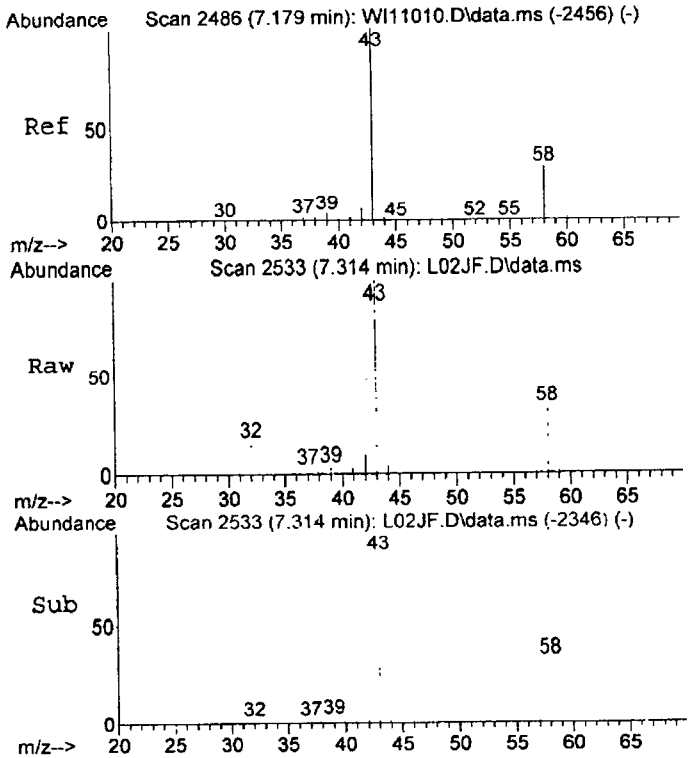
ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12023\
Data File : L02JF.D
Acq On : 2 Jul 2012 2:57 pm
Operator :
Sample : 12178004
Misc : 3.7597X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 02 15:32:44 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration



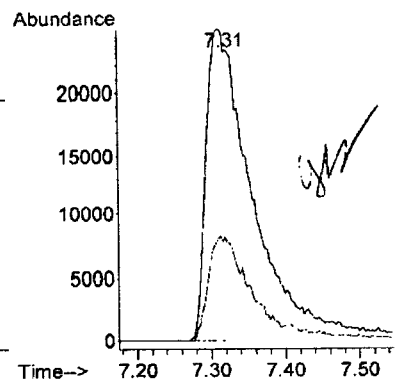
CAE 7-2-12

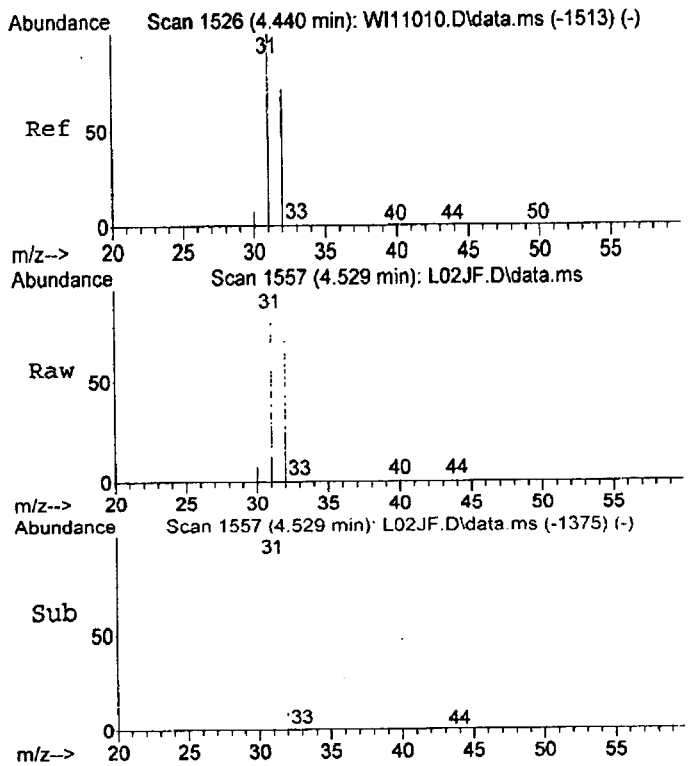


#15
Acetone
Concen: 15.69 ng
RT: 7.31 min Scan# 2533
Delta R.T. 0.034 min
Lab File: L02JF.D
Acq: 2 Jul 2012 2:57 pm

Tgt Ion: 43 Resp: 105287

Ion	Ratio	Lower	Upper
43	100		
58	29.3	0.7	60.7

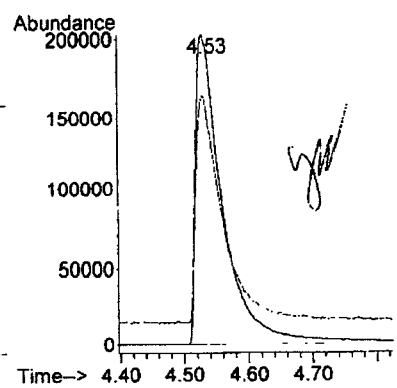




#18
Methanol
Concen: 297.63 ng
RT: 4.53 min Scan# 1557
Delta R.T. 0.020 min
Lab File: L02JF.D
Acq: 2 Jul 2012 2:57 pm

Tgt Ion: 31 Resp: 596048

Ion	Ratio	Lower	Upper
31	100		
32	81.0	40.0	100.0



7-2-12

Library Search Compound Report

Data Path : D:\ECL12023\
Data File : L02JF.D
Acq On : 2 Jul 2012 2:57 pm
Operator :
Sample : 12178004
Misc : 3.7597X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL

TIC Library : C:\Database\Apendix8.l
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected
****

7-2-12

ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12023\
Data File : L02JG.D
Acq On : 2 Jul 2012 3:42 pm
Operator :
Sample : 12178005
Misc : 3.7317X 70ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 02 17:09:57 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	15.07	96	4565718	473.00	ng	0.00
24) Chlorobenzene-d5	21.61	117	3191090	490.00	ng	0.00
						Qvalue
Target Compounds						
15) Acetone	7.27	43	2012975	297.48	ng	98
18) Methanol	4.52	31	1649092	816.49	ng	95
21) Carbon Disulfide	7.71	76	218242	18.36	ng	94

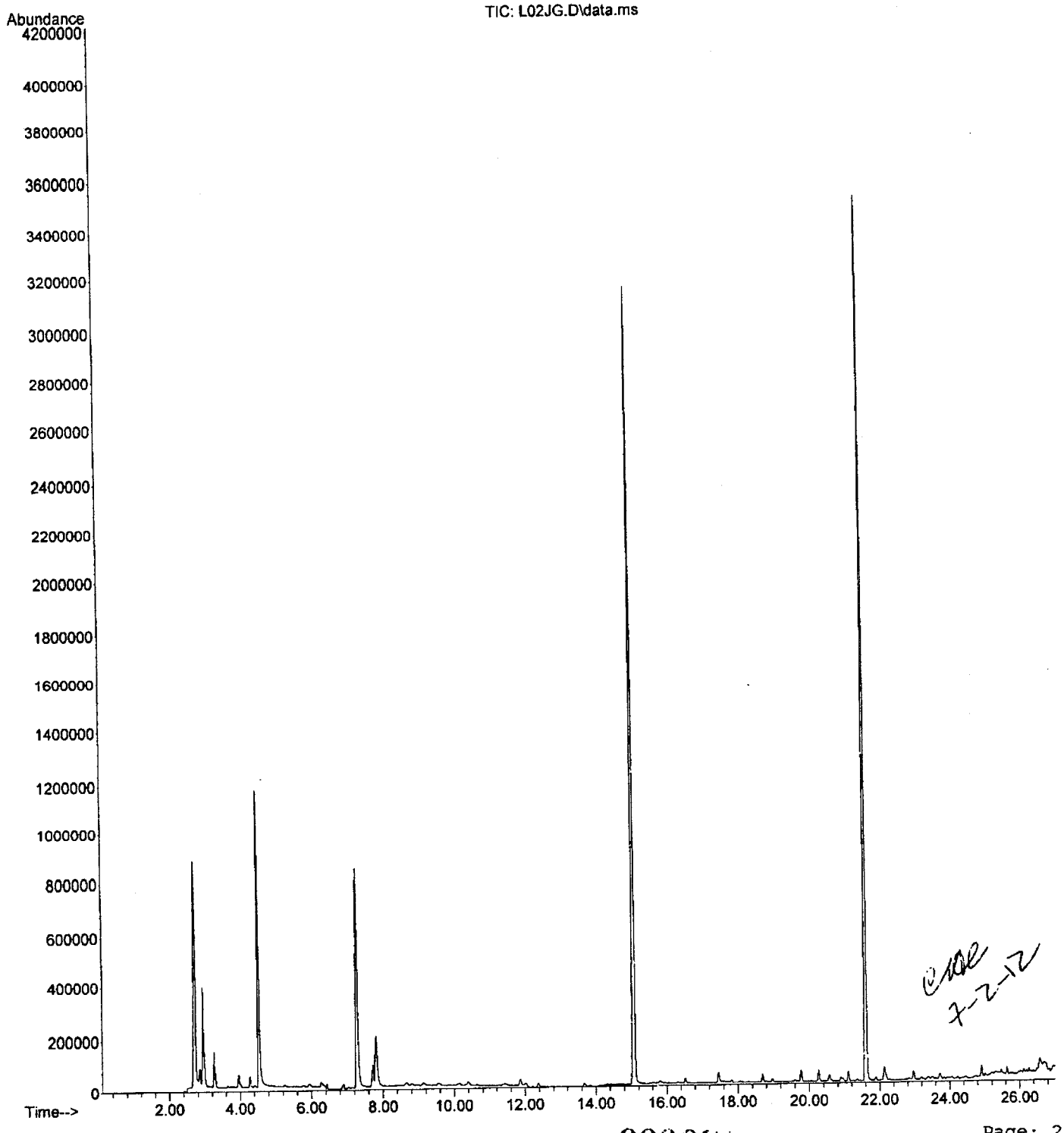
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7-2-12

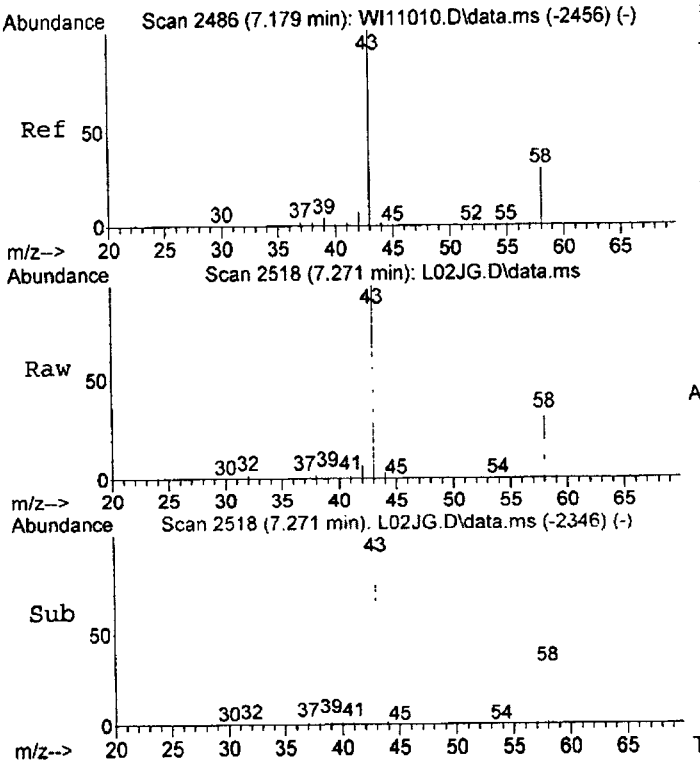
ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12023\
Data File : L02JG.D
Acq On : 2 Jul 2012 3:42 pm
Operator :
Sample : 12178005
Misc : 3.7317X 70ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 02 17:09:57 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration



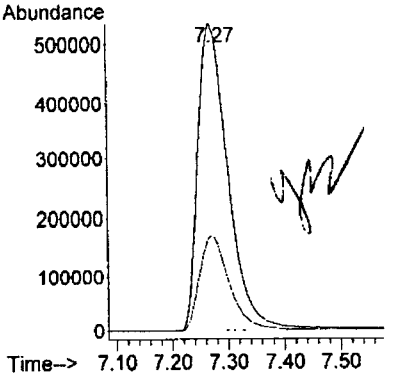
7-2-12

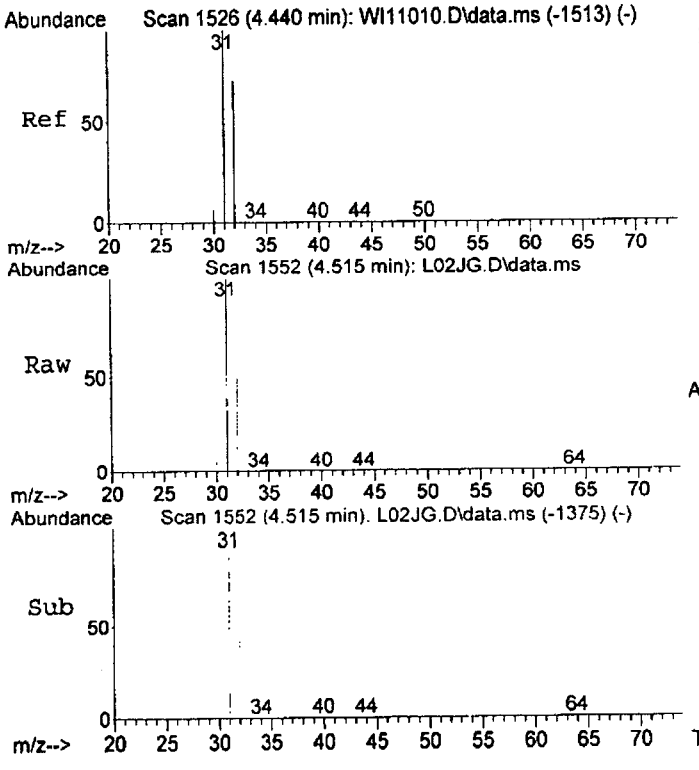


#15
Acetone
Concen: 297.48 ng
RT: 7.27 min Scan# 2518
Delta R.T. -0.009 min
Lab File: L02JG.D
Acq: 2 Jul 2012 3:42 pm

Tgt Ion: 43 Resp: 2012975

Ion	Ratio	Lower	Upper
43	100		
58	31.7	0.7	60.7

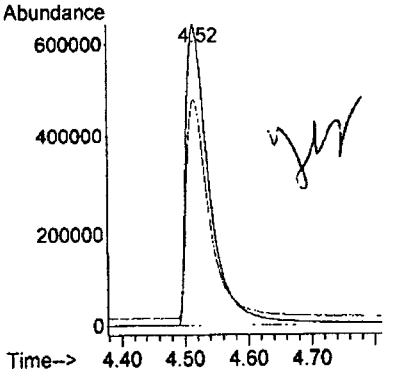




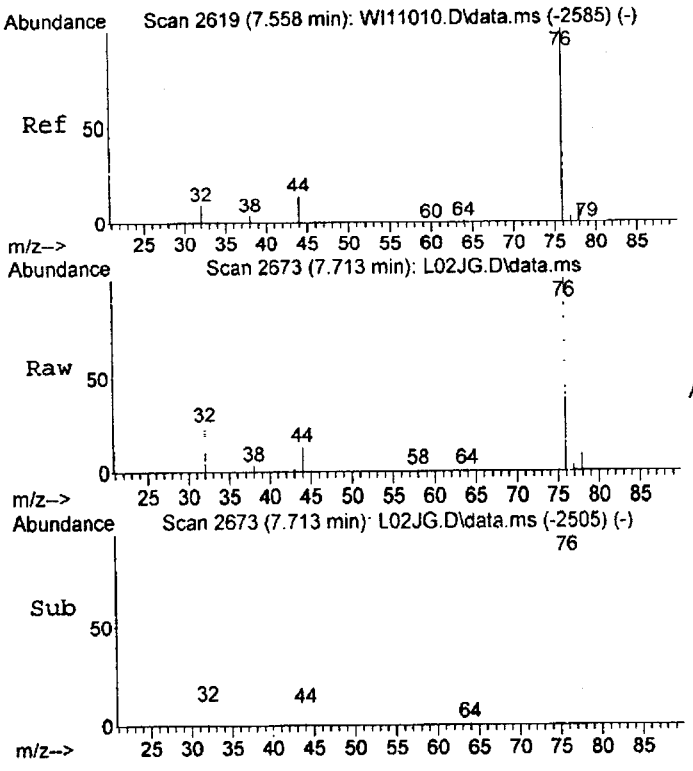
#18
Methanol
Concen: 816.49 ng
RT: 4.52 min Scan# 1552
Delta R.T. 0.005 min
Lab File: L02JG.D
Acq: 2 Jul 2012 3:42 pm

Tgt Ion: 31 Resp: 1649092

Ion	Ratio	Lower	Upper
31	100		
32	74.1	40.0	100.0



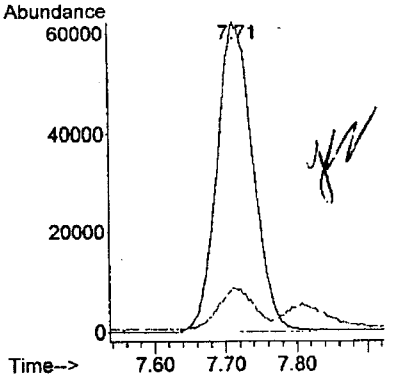
7-2-12



#21
Carbon Disulfide
Concen: 18.36 ng
RT: 7.71 min Scan# 2673
Delta R.T. -0.020 min
Lab File: L02JG.D
Acq: 2 Jul 2012 3:42 pm

Tgt Ion: 76 Resp: 218242

Ion	Ratio	Lower	Upper
76	100		
44	12.8	8.3	22.5



7-2-12

Library Search Compound Report

Data Path : D:\ECL12023\
Data File : L02JG.D
Acq On : 2 Jul 2012 3:42 pm
Operator :
Sample : 12178005
Misc : 3.7317X 70ML
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL

TIC Library : C:\Database\Apendix8.l
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected
****

7-2-12

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12178005D		Field Sample ID:	IN062512EIC73D	
Analytical Batch:	ECL12023M		Sampling Batch:	INHSG1202	
Data Report:	ECL12023M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/2/2012	1627	Date Sampled:	6/25/2012	
Lab File ID:	L02JH		Date Received:	06/26/12	
Instrument ID:	GCMS-J		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	6.7	J
Benzene	0.14	U
Bromoform	0.041	U
Butanol	0.13	U
Carbon disulfide	0.32	J
Carbon tetrachloride	0.066	U
Chlorobenzene	0.090	U
Chloroform	0.095	U
Chloromethane	0.24	U
Cyclohexane	0.13	U
1,1-Dichloroethane	0.12	U
1,2-Dichloroethane	0.11	U
1,1-Dichloroethylene	0.12	U
cis-1,2-Dichloroethylene	0.12	U
trans-1,2-Dichloroethylene	0.12	U
1,2-Dichloropropane	0.10	U
Ethyl benzene	0.090	U
Ethyl ether	0.16	U
Methyl ethyl ketone	0.15	U
Methyl isobutyl ketone	0.10	U
Methylene chloride	0.15	U
1,1,2,2-Tetrachloroethane	0.067	U
Tetrachloroethylene	0.068	U
Toluene	0.11	U
1,1,1-Trichloroethane	0.090	U
Trichloroethylene	0.093	U
Trichlorofluoromethane	0.093	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.069	U
1,3,5-Trimethylbenzene	0.083	U
1,2,4-Trimethylbenzene	0.087	U
p/m-Xylene	0.098	U
o-Xylene	0.093	U
Methanol	33	J

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12178005D		Field Sample ID:	IN062512EIC73D	
Analytical Batch:	ECL12023M		Sampling Batch:	INHSG1202	
Data Report:	ECL12023M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	7/2/2012	1627	Date Sampled:	6/25/2012	
Lab File ID:	L02JH		Date Received:	06/26/12	
Instrument ID:	GCMS-J		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12023\
Data File : L02JH.D
Acq On : 2 Jul 2012 4:27 pm
Operator :
Sample : 12178005D
Misc : 3.7317X 70ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 02 17:11:43 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	15.07	96	4559265	473.00	ng		0.00
24) Chlorobenzene-d5	21.62	117	3218189	490.00	ng		0.00
Target Compounds							Qvalue
15) Acetone	7.29	43	2013721	298.01	ng		98
18) Methanol	4.52	31	1636330	811.31	ng		94
21) Carbon Disulfide	7.72	76	218492	18.41	ng	#	79

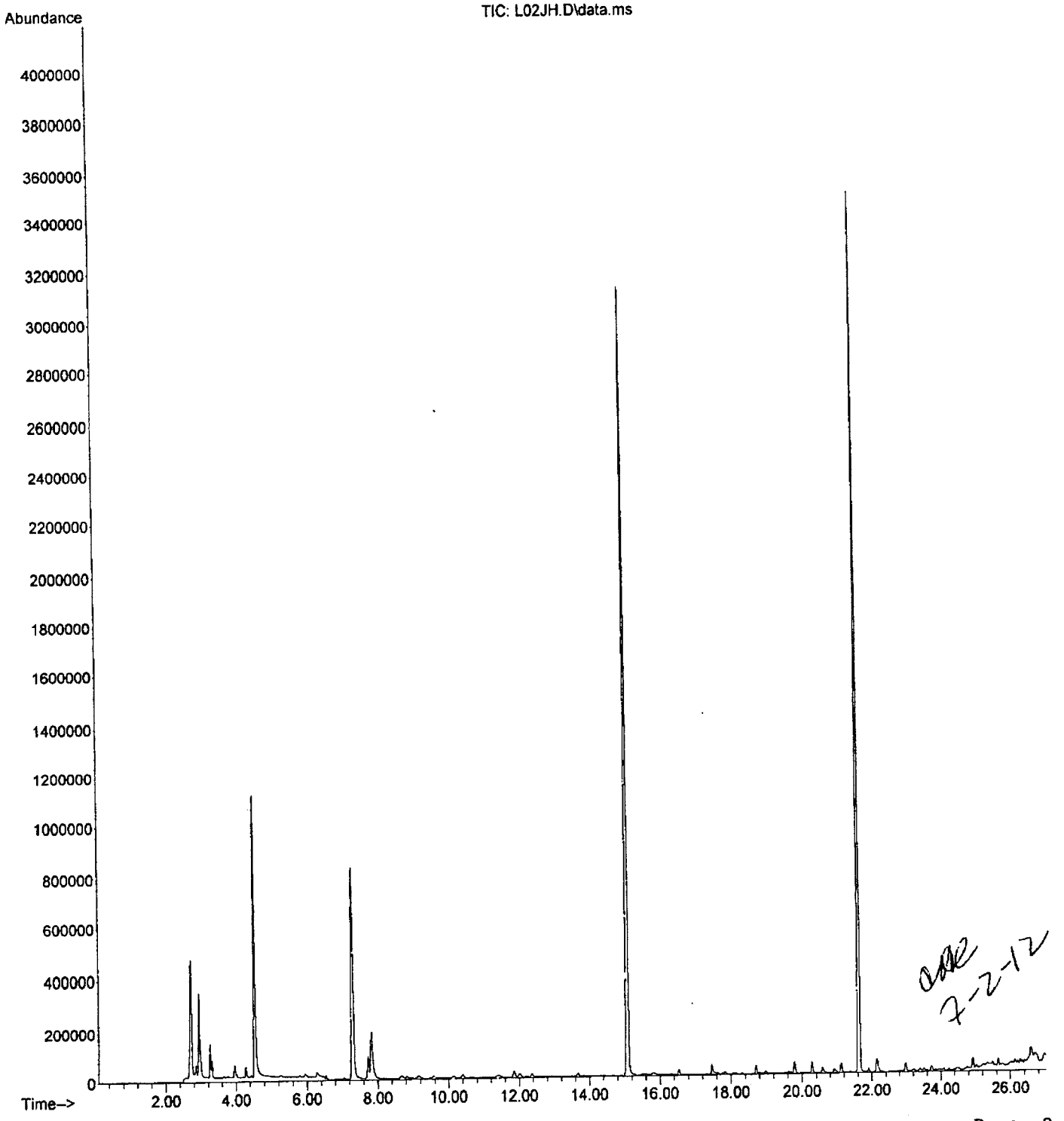
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7-2-12

ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12023\
Data File : L02JH.D
Acq On : 2 Jul 2012 4:27 pm
Operator :
Sample : 12178005D
Misc : 3.7317X 70ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 02 17:11:43 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration



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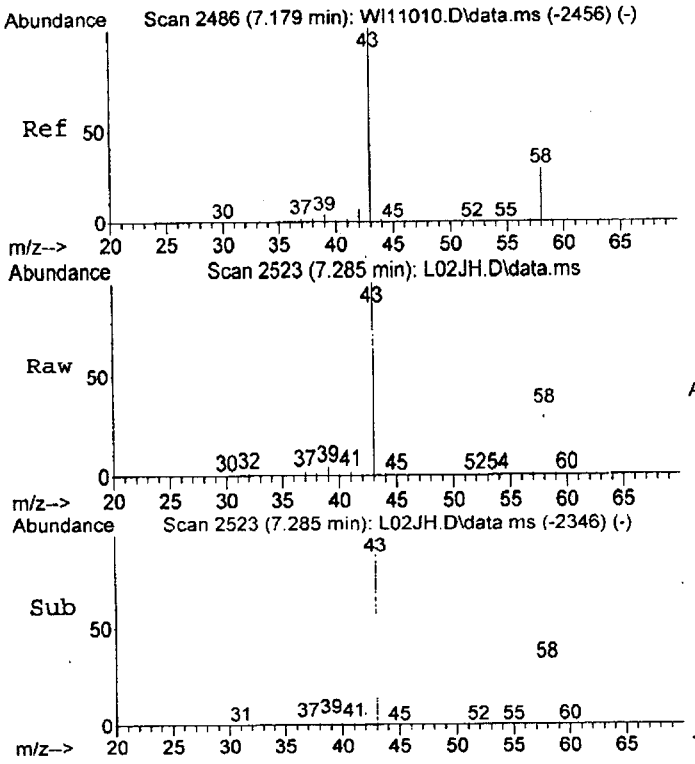
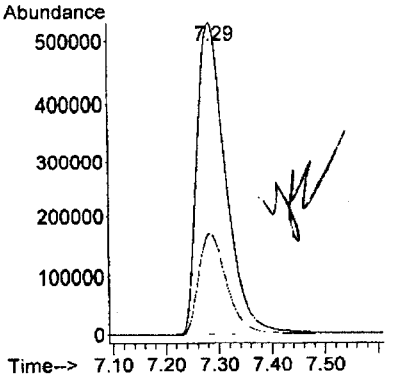
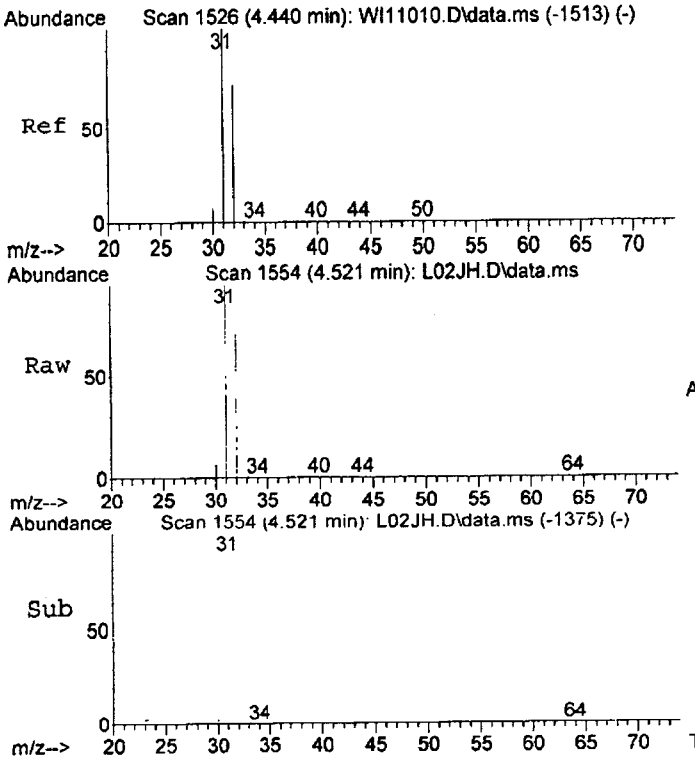


#15
Acetone
Concen: 298.01 ng
RT: 7.29 min Scan# 2523
Delta R.T. 0.006 min
Lab File: L02JH.D
Acq: 2 Jul 2012 4:27 pm

Tgt Ion: 43 Resp: 2013721

Ion	Ratio	Lower	Upper
43	100		
58	31.8	0.7	60.7

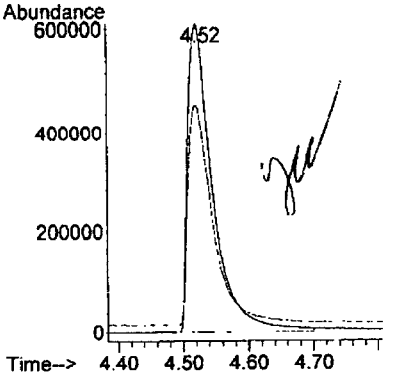




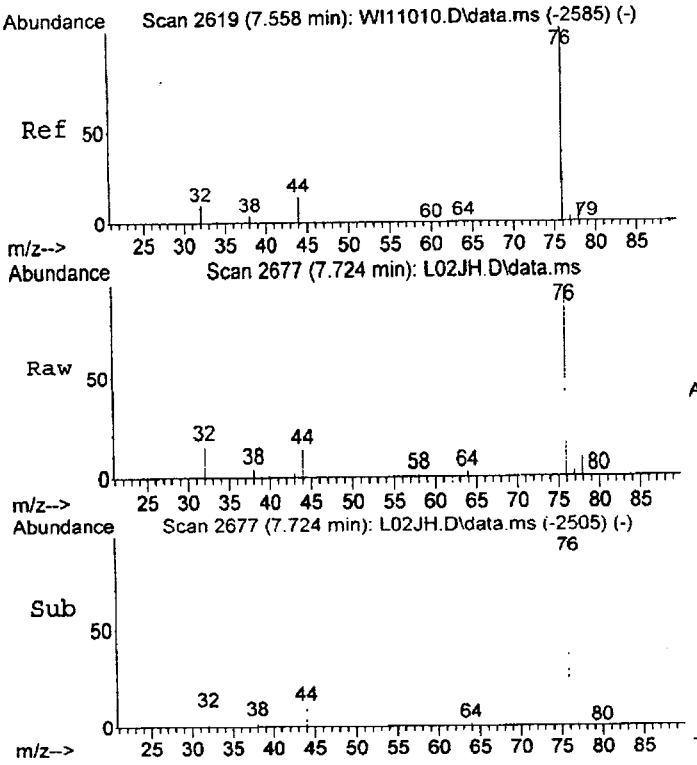
#18
Methanol
Concen: 811.31 ng
RT: 4.52 min Scan# 1554
Delta R.T. 0.011 min
Lab File: L02JH.D
Acq: 2 Jul 2012 4:27 pm

Tgt Ion: 31 Resp: 1636330

Ion	Ratio	Lower	Upper
31	100		
32	74.9	40.0	100.0



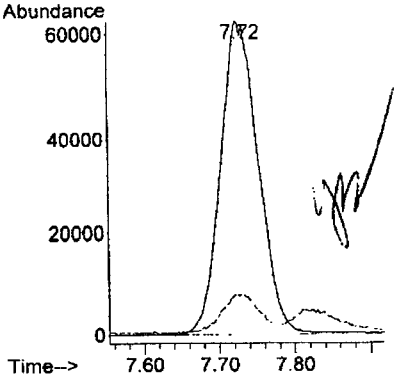
7-2-12



#21
Carbon Disulfide
Concen: 18.41 ng
RT: 7.72 min Scan# 2677
Delta R.T. -0.009 min
Lab File: L02JH.D
Acq: 2 Jul 2012 4:27 pm

Tgt Ion: 76 Resp: 218492

Ion	Ratio	Lower	Upper
76	100		
44	6.5	8.3	22.5#



Library Search Compound Report

Data Path : D:\ECL12023\
Data File : L02JH.D
Acq On : 2 Jul 2012 4:27 pm
Operator :
Sample : 12178005D
Misc : 3.7317X 70ML
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL

TIC Library : C:\Database\Apendix8.l
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected
****

7-2-12

ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12023\
Data File : L02JI.D
Acq On : 2 Jul 2012 5:13 pm
Operator :
Sample : 12178006
Misc : 3.7066X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 02 18:17:20 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	15.07	96	4611892	473.00	ng	0.00
24) Chlorobenzene-d5	21.62	117	3246262	490.00	ng	0.01
Target Compounds						Qvalue
15) Acetone	7.31	43	163963	23.99	ng	97
18) Methanol	4.53	31	658504	322.77	ng	89

(#) = qualifier out of range (m) = manual integration (+) = signals summed

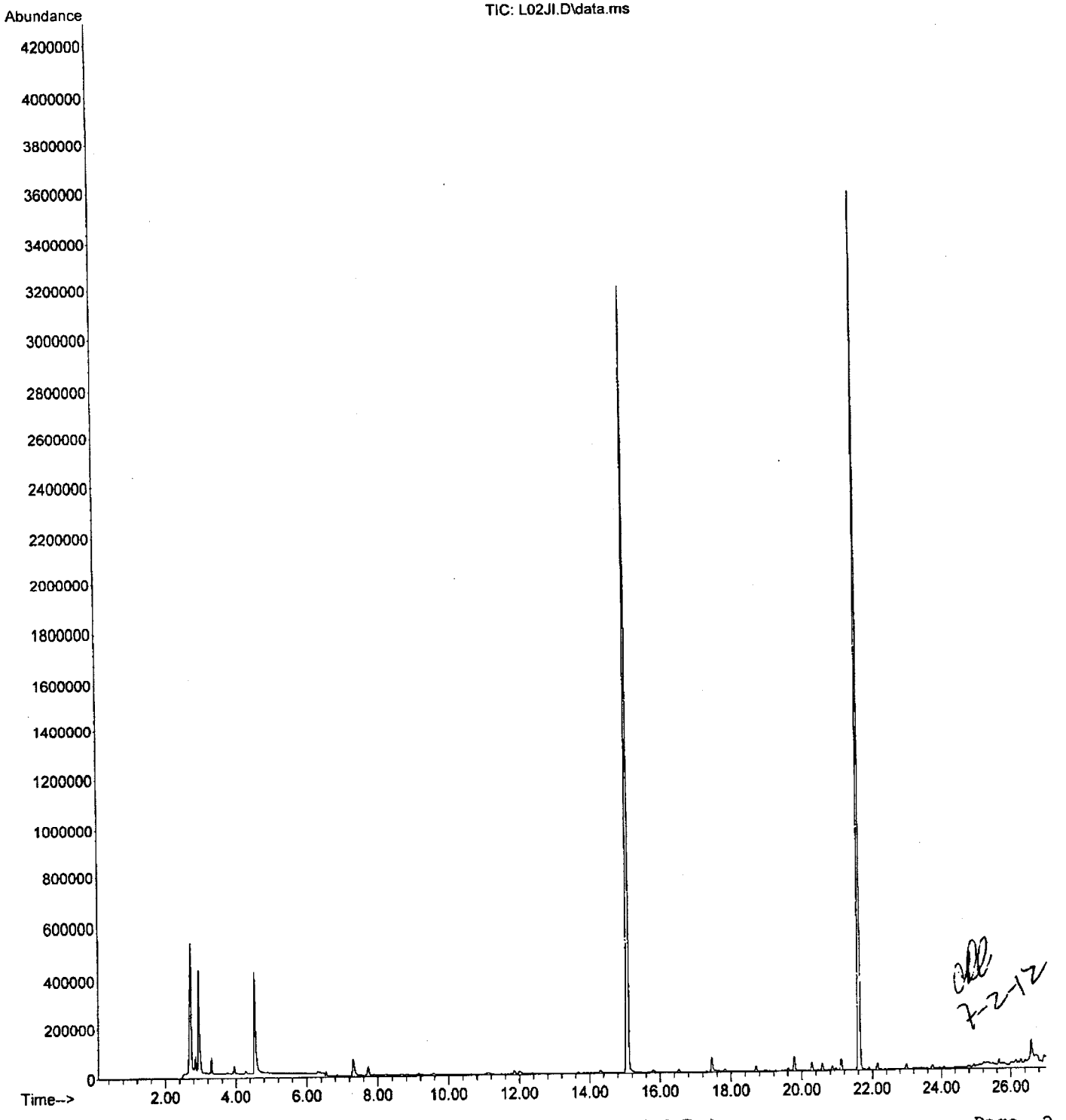
7-2-12

000092

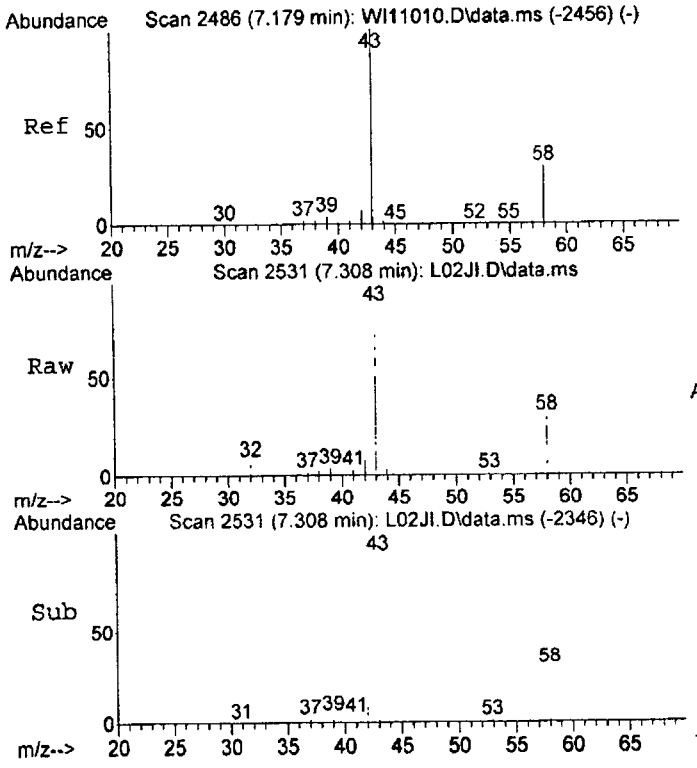
ECL Quantitation Report (QT Reviewed)

Data Path : D:\ECL12023\
Data File : L02JI.D
Acq On : 2 Jul 2012 5:13 pm
Operator :
Sample : 12178006
Misc : 3.7066X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 02 18:17:20 2012
Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL
QLast Update : Mon Jun 04 07:22:01 2012
Response via : Initial Calibration



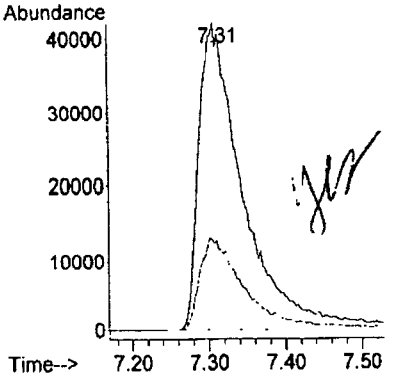
7-2-12

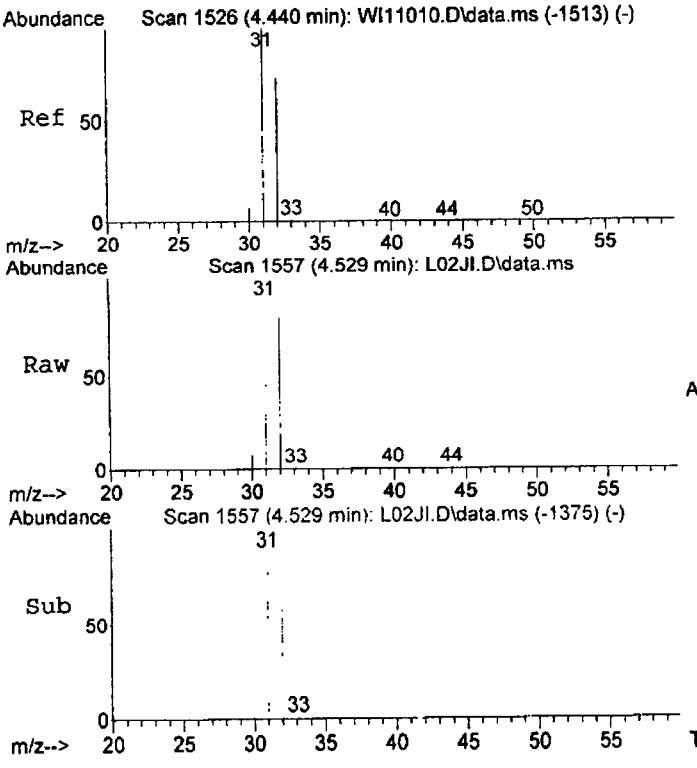


#15
Acetone
Concen: 23.99 ng
RT: 7.31 min Scan# 2531
Delta R.T. 0.028 min
Lab File: L02JI.D
Acq: 2 Jul 2012 5:13 pm

Tgt Ion: 43 Resp: 163963

Ion	Ratio	Lower	Upper
43	100		
58	29.1	0.7	60.7

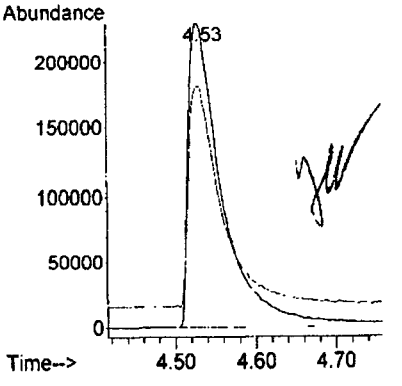




#18
Methanol
Concen: 322.77 ng
RT: 4.53 min Scan# 1557
Delta R.T. 0.020 min
Lab File: L02JI.D
Acq: 2 Jul 2012 5:13 pm

Tgt Ion: 31 Resp: 658504

Ion	Ratio	Lower	Upper
31	100		
32	79.0	40.0	100.0



7-2-12

Library Search Compound Report

Data Path : D:\ECL12023\
Data File : L02JI.D
Acq On : 2 Jul 2012 5:13 pm
Operator :
Sample : 12178006
Misc : 3.7066X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\gcms-j\WPJD006.M
Quant Title : WPJD006 CCP-TP-175 ICAL

TIC Library : C:\Database\Apendix8.1
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected
****

7-2-12

SECTION 8.0

MISCELLANEOUS SUPPORTING DATA

CALCULATION FORMULAS
GAS VOC ANALYSIS

IDAHO NATIONAL LABORATORY
ENVIRONMENTAL CHEMISTRY LABORATORY

METHOD: CCP-TP-175

$$\text{Sample Results (ppmv)} = \frac{ng * D * Rt}{V * C * MW} \qquad \text{Sample Specific MDL} = \frac{MDL * D * RT}{V * C * MW}$$

ppmv = Parts per million volume

C = Correction factor for volume at STP (= to 1.00 for Modified Method Acmm-9930)

D = Dilution factor (result of canister pressurization) reported as number of times diluted

ng = Nanograms of analyte found in the sample (found on instrument quantitation report)

Rt = 24.5 at 25°C

MDL = Method Detection Limit in nanograms (found on Method Detection Limit reporting form)

MW = Molecular Weight of analyte

V = Volume of sample injected onto instrument (mLs)

Results for samples with analytes detected are calculated using the sample results (ppmv) equation. The sample specific MDL (analyte MDL corrected for sample volume, dilutions, etc.) is calculated using the sample specific MDL equation.

WIPP DUPLICATE SAMPLE CALCULATIONS

Instrument J

Method CCP-TP-175

		12178005 *IN062512EIC73*				12178005D *IN062512EIC73D*					
		Instrument Filename	Date of Analysis			Instrument Filename	Date of Analysis				
		L02JG	02-Jul-12			L02JH	02-Jul-12				
Analyte	Molecular Weight	Sample Amt. Found (ng)	Injection Volume (mL)	Dilution Factor (X)	Sample Calculated Amount (ppmv)	Duplicate Amt. Found (ng)	Injection Volume (mL)	Dilution Factor (X)	Duplicate Calculated Amount (ppmv)	Sample & Duplicate Mean (ppmv)	**% RPD**
Ethyl Ether	74.12	0.00				0.00					
Methylene Chloride	84.93	0.00				0.00					
Freon 113	187.38	0.00				0.00					
1,1-Dichloroethene	96.94	0.00				0.00					
1,1-Dichloroethane	98.94	0.00				0.00					
cis-1,2-Dichloroethene	96.94	0.00				0.00					
Chloroform	119.38	0.00				0.00					
1,2-Dichloroethane	98.94	0.00				0.00					
1,1,1-Trichlorethane	133.41	0.00				0.00					
Carbon Tetrachloride	153.82	0.00				0.00					
Trichloroethene	131.39	0.00				0.00					
Cyclohexane	84.16	0.00				0.00					
Benzene	78.12	0.00				0.00					
Acetone	58.08	297.48	70	3.73	**6.69**	298.01	70	3.73	**6.70**	6.69	**0.18**
2-Butanone	72.11	0.00				0.00					
1-Butanol	74.12	0.00				0.00					
Methanol	32.04	816.49	70	3.73	**33.27**	811.31	70	3.73	**33.06**	33.16	**0.64**
trans-1,2-Dichloroethene	96.94	0.00				0.00					
Chloromethane	50.49	0.00				0.00					
Carbon Disulfide	76.14	18.36	70	3.73	**0.31**	18.41	70	3.73	**0.32**	0.32	**0.27**
1,2-Dichloropropane	112.99	0.00				0.00					
Trichlorofluoromethane	137.37	0.00				0.00					
Bromoform	252.75	0.00				0.00					
Tetrachloroethene	165.83	0.00				0.00					
1,1,2,2,-Tetrachloroethane	167.85	0.00				0.00					
Toluene	92.15	0.00				0.00					
Chlorobenzene	112.56	0.00				0.00					
Ethylbenzene	106.17	0.00				0.00					
p/m - Xylene	106.17	0.00				0.00					
o-Xylene	106.17	0.00				0.00					
1,3,5-Trimethylbenzene	120.20	0.00				0.00					
1,2,4-Trimethylbenzene	120.20	0.00				0.00					
4-Methyl -2- Pentanone	100.16	0.00				0.00					

WIPP LABORATORY CONTROL SAMPLE CALCULATIONS

Instrument J

Method CCP-TP-175

Lab Sample ID: **LCSMJL02**
Field Sample ID: **LCS30443SL02**
File Name : **L02JB**
Date of Analysis: **02-Jul-12**

Analyte	Molecular Weight	Sample Amt. Found (ng)	Injection Volume (mL)	Dilution Factor (X)	Calculated Value (ppmv)	True Value (ppmv)	Recovery (%)	IN if Between 70% & 130% (Comp.)
Methylene Chloride	84.94	800.37	40	3.5000	**20.20**	20.00	101.00	**IN**
1,1,1-Trichloroethane	133.41	731.97	40	3.5000	**11.76**	12.16	96.73	**IN**
Carbon Tetrachloride	153.82	830.67	40	3.5000	**11.58**	11.89	97.37	**IN**
Trichloroethene	131.39	749.62	40	3.5000	**12.23**	12.26	99.76	**IN**
Benzene	78.12	618.55	40	3.5000	**16.97**	20.20	84.03	**IN**
Toluene	92.15	736.84	40	3.5000	**17.14**	18.26	93.88	**IN**
4-Methyl-2 pentanone	100.16	676.73	40	3.5000	**14.48**	16.20	89.41	**IN**

660099

"Dale A. Dover"
<Dale.Dover@amwtp.inl.gov>

07/02/2012 03:44 PM

To "Crowder, Catherine A" <Catherine.Crowder@inl.gov>
cc
bcc
Subject Correction to INHSG1202

History: This message has been replied to.

Catherine,

Could you make a correction to one of the blue tags? IN062512EI684 has the Field – After Sample Collection as 1" Hg but it is in the wrong field. It is in "M=" field and should be in the field above ("C="). We will make the correction on our end as well.

Thanks,

Dale Dover
NFT Lead - Idaho
208-526-6459
208-230-2223

Contractor to Washington TRU Solutions LLC

GAS SAMPLE PREPARATION LOGBOOK
ENVIRONMENTAL CHEMISTRY LABORATORY

REPORT GROUP # ECL 12023

PAGE # UT2-27- 0003

SUMMA CANISTER LABORATORY SAMPLE IDENTIFICATION	SIZE (mL)	AMBIENT CONDITIONS (Torr) / (C)		CANISTER PRESSURE (Torr)		DILUTION FACTOR (B/A)	SAMPLE PREP DATE	BY INITIALS
		PRESS	TEMP	START (A)	FINAL (B)			
LABBLANK/LB31751U426	500	641	21	$<5.0 \times 10^{-2}$ T	2056.5	NA	06/26/12	[illegible]
12178001	250	641	21	521.0	1895.0	3.6372	06/26/12	[illegible]
12178002	250	641	21	472.0	1751.0	3.7097	06/26/12	[illegible]
12178003	250	641	21	526.5	1914.5	3.6363	[illegible]	[illegible]
12178004	250	641	21	491.0	1846.0	3.7597	06/26/12	[illegible]
12178005	250	641	21	484.5	1808.0	3.7317	06/26/12	[illegible]
12178006	250	641	21	484.0	1794.0	3.7066	06/26/12	[illegible]

NA
CCC 7-3-12

0003 01

GAS SAMPLE PREPARATION LOGBOOK
ENVIRONMENTAL CHEMISTRY LABORATORY

REPORT GROUP # NA, LCS Prep.

PAGE # UT2-27- 0068

SUMMA CANISTER LABORATORY SAMPLE IDENTIFICATION	SIZE (mL)	AMBIENT CONDITIONS (Torr) / (C)		CANISTER PRESSURE (Torr)		DILUTION FACTOR (B/A)	SAMPLE PREP DATE	BY INITIALS
		PRESS	TEMP	START (A)	FINAL (B)			
LCS304435L02	6000	642	21	618.0	2163.0	3.5000	070212	CAE
				NA				

0001068

ENVIRONMENTAL CHEMISTRY LABORATORY

INTERNAL SAMPLE TRACKING FORM

RECEIVING GROUP # ECL12023

LAB SAMPLE ID	SAMPLE(S) REMOVED			ANALYSIS OR PROCESS	SAMPLE(S) RETURNED		
	DATE	TIME	SIGNATURE OR INITIALS		DATE	TIME	SIGNATURE OR INITIALS
12178001-006	NA	NA	NA	Samples Received	062612	1510	JBF
12178001-006	062612	1600	JBF CAR	Samples Prep to Analysis	070312	0900	CAR
12178001-006	070312	0900	CAR	Cleanup	NA	NA	NA

000103

FORM DATE: 08/17//2009

SUPPLEMENTAL REPORTING DATA

INPUT/UPDATE RECORDS SCREEN

7/9/2012

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
12178001	IN062512EI684	No	CCP-TP-175	7/9/2012

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-J	5/8/2012	06/26/12	6/25/2012	7/2/2012 1241	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
L02JC	3.64	100	24.5	LBMJL02

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL12023M	1	INHSG1202

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
12178002	IN062512EI756	No	CCP-TP-175	7/9/2012

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-J	5/8/2012	06/26/12	6/25/2012	7/2/2012 1326	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
L02JD	3.71	60	24.5	LBMJL02

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL12023M	1	INHSG1202

00010-1

SUPPLEMENTAL REPORTING DATA

INPUT/UPDATE RECORDS SCREEN

7/9/2012

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
12178003	IN062512EIC78	No	CCP-TP-175	7/9/2012

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-J	5/8/2012	06/26/12	6/25/2012	7/2/2012 1411	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
L02JE	3.64	60	24.5	LBMJL02

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL12023M	1	INHSG1202

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
12178004	IN062512EIB79	No	CCP-TP-175	7/9/2012

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-J	5/8/2012	06/26/12	6/25/2012	7/2/2012 1457	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
L02JF	3.76	100	24.5	LBMJL02

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL12023M	1	INHSG1202

000105

SUPPLEMENTAL REPORTING DATA

INPUT/UPDATE RECORDS SCREEN

7/9/2012

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
12178005	IN062512EIC73	No	CCP-TP-175	7/9/2012

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-J	5/8/2012	06/26/12	6/25/2012	7/2/2012 1542	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
L02JG	3.73	70	24.5	LBMJL02

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL12023M	1	INHSG1202

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
12178005D	IN062512EIC73D	No	CCP-TP-175	7/9/2012

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-J	5/8/2012	06/26/12	6/25/2012	7/2/2012 1627	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
L02JH	3.73	70	24.5	LBMJL02

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL12023M	1	INHSG1202

000106

SUPPLEMENTAL REPORTING DATA

INPUT/UPDATE RECORDS SCREEN

7/9/2012

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
12178006	IN062512EI169	No	CCP-TP-175	7/9/2012

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-J	5/8/2012	06/26/12	6/25/2012	7/2/2012 1713	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
L02JI	3.71	100	24.5	LBMJL02

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL12023M	1	INHSG1202

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
LBMJL02	LB31751U26	Yes	CCP-TP-175	7/9/2012

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-J	5/8/2012			7/2/2012 1109	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
L02JA	1	100	24.5	

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL12023M	1	

000107

SUPPLEMENTAL REPORTING DATA

INPUT/UPDATE RECORDS SCREEN

7/9/2012

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
LCSMJL02	LCS30443SL02	No	CCP-TP-175	7/9/2012

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-J	5/8/2012			7/2/2012 1151	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
L02JB	3.5	40	24.5	LBMJL02

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL12023M	1	

000108

RESULTS SUMMARY

7/9/2012

LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
12178001	CCP-TP-175	1	ECL12023M	0.06362	
12178001	CCP-TP-175	2	ECL12023M	0.10829	
12178001	CCP-TP-175	3	ECL12023M	0.10185	
12178001	CCP-TP-175	4	ECL12023M	0.04712	
12178001	CCP-TP-175	5	ECL12023M	0.08280	
12178001	CCP-TP-175	6	ECL12023M	0.08022	
12178001	CCP-TP-175	7	ECL12023M	0.08096	
12178001	CCP-TP-175	8	ECL12023M	0.06499	
12178001	CCP-TP-175	9	ECL12023M	0.07662	
12178001	CCP-TP-175	10	ECL12023M	0.06150	
12178001	CCP-TP-175	11	ECL12023M	0.04522	
12178001	CCP-TP-175	12	ECL12023M	0.06380	
12178001	CCP-TP-175	13	ECL12023M	0.09007	
12178001	CCP-TP-175	14	ECL12023M	0.09361	
12178001	CCP-TP-175	15	ECL12023M	0.07103	
12178001	CCP-TP-175	16	ECL12023M	0.02823	
12178001	CCP-TP-175	17	ECL12023M	0.04625	
12178001	CCP-TP-175	18	ECL12023M	0.04569	
12178001	CCP-TP-175	19	ECL12023M	0.07742	
12178001	CCP-TP-175	20	ECL12023M	0.06180	
12178001	CCP-TP-175	21	ECL12023M	0.06132	
12178001	CCP-TP-175	22	ECL12023M	0.06720	
12178001	CCP-TP-175	23	ECL12023M	0.06384	
12178001	CCP-TP-175	24	ECL12023M	0.05639	
12178001	CCP-TP-175	25	ECL12023M	0.05935	
12178001	CCP-TP-175	26	ECL12023M	0.08096	
12178001	CCP-TP-175	27	ECL12023M	0.16603	
12178001	CCP-TP-175	28	ECL12023M	0.11478	
12178001	CCP-TP-175	29	ECL12023M	0.14280	
12178001	CCP-TP-175	30	ECL12023M	0.10512	
12178001	CCP-TP-175	31	ECL12023M	0.09024	
12178001	CCP-TP-175	32	ECL12023M	0.06856	
12178001	CCP-TP-175	33	ECL12023M	0.27556	

RESULTS SUMMARY

7/9/2012

LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
12178002	CCP-TP-175	1	ECL12023M	0.10807	
12178002	CCP-TP-175	2	ECL12023M	0.18395	
12178002	CCP-TP-175	3	ECL12023M	0.17302	
12178002	CCP-TP-175	4	ECL12023M	0.08004	
12178002	CCP-TP-175	5	ECL12023M	0.14065	
12178002	CCP-TP-175	6	ECL12023M	0.13627	
12178002	CCP-TP-175	7	ECL12023M	0.13752	
12178002	CCP-TP-175	8	ECL12023M	0.11040	
12178002	CCP-TP-175	9	ECL12023M	0.13015	
12178002	CCP-TP-175	10	ECL12023M	0.10447	
12178002	CCP-TP-175	11	ECL12023M	0.07682	
12178002	CCP-TP-175	12	ECL12023M	0.10838	
12178002	CCP-TP-175	13	ECL12023M	0.15300	
12178002	CCP-TP-175	14	ECL12023M	0.15902	
12178002	CCP-TP-175	15	ECL12023M	0.12067	
12178002	CCP-TP-175	16	ECL12023M	0.04795	
12178002	CCP-TP-175	17	ECL12023M	0.07856	
12178002	CCP-TP-175	18	ECL12023M	0.07762	
12178002	CCP-TP-175	19	ECL12023M	0.13152	
12178002	CCP-TP-175	20	ECL12023M	0.10498	
12178002	CCP-TP-175	21	ECL12023M	0.10416	
12178002	CCP-TP-175	22	ECL12023M	0.11415	
12178002	CCP-TP-175	23	ECL12023M	0.10844	
12178002	CCP-TP-175	24	ECL12023M	0.09579	
12178002	CCP-TP-175	25	ECL12023M	0.10083	
12178002	CCP-TP-175	26	ECL12023M	0.13752	
12178002	CCP-TP-175	27	ECL12023M	0.28204	
12178002	CCP-TP-175	28	ECL12023M	0.19499	
12178002	CCP-TP-175	29	ECL12023M	23.93062	917.47
12178002	CCP-TP-175	30	ECL12023M	0.17857	
12178002	CCP-TP-175	31	ECL12023M	0.15329	
12178002	CCP-TP-175	32	ECL12023M	0.11646	
12178002	CCP-TP-175	33	ECL12023M	23.66372	500.48

RESULTS SUMMARY

7/9/2012

LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
12178003	CCP-TP-175	1	ECL12023M	0.10604	
12178003	CCP-TP-175	2	ECL12023M	0.18048	
12178003	CCP-TP-175	3	ECL12023M	0.16976	
12178003	CCP-TP-175	4	ECL12023M	0.07853	
12178003	CCP-TP-175	5	ECL12023M	0.13799	
12178003	CCP-TP-175	6	ECL12023M	0.13370	
12178003	CCP-TP-175	7	ECL12023M	0.13493	
12178003	CCP-TP-175	8	ECL12023M	0.10832	
12178003	CCP-TP-175	9	ECL12023M	0.12769	
12178003	CCP-TP-175	10	ECL12023M	0.10250	
12178003	CCP-TP-175	11	ECL12023M	0.07537	
12178003	CCP-TP-175	12	ECL12023M	0.10634	
12178003	CCP-TP-175	13	ECL12023M	0.15012	
12178003	CCP-TP-175	14	ECL12023M	0.15602	
12178003	CCP-TP-175	15	ECL12023M	0.11839	
12178003	CCP-TP-175	16	ECL12023M	0.04705	
12178003	CCP-TP-175	17	ECL12023M	0.07708	
12178003	CCP-TP-175	18	ECL12023M	0.07615	
12178003	CCP-TP-175	19	ECL12023M	0.12904	
12178003	CCP-TP-175	20	ECL12023M	0.10300	
12178003	CCP-TP-175	21	ECL12023M	0.10220	
12178003	CCP-TP-175	22	ECL12023M	0.11200	
12178003	CCP-TP-175	23	ECL12023M	0.10640	
12178003	CCP-TP-175	24	ECL12023M	0.09398	
12178003	CCP-TP-175	25	ECL12023M	0.09892	
12178003	CCP-TP-175	26	ECL12023M	0.13493	
12178003	CCP-TP-175	27	ECL12023M	0.27672	
12178003	CCP-TP-175	28	ECL12023M	0.19131	
12178003	CCP-TP-175	29	ECL12023M	22.70343	887.16
12178003	CCP-TP-175	30	ECL12023M	0.17520	
12178003	CCP-TP-175	31	ECL12023M	0.15040	
12178003	CCP-TP-175	32	ECL12023M	0.11426	
12178003	CCP-TP-175	33	ECL12023M	22.77885	491.03

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RESULTS SUMMARY

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LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
12178004	CCP-TP-175	1	ECL12023M	0.06572	
12178004	CCP-TP-175	2	ECL12023M	0.11186	
12178004	CCP-TP-175	3	ECL12023M	0.10521	
12178004	CCP-TP-175	4	ECL12023M	0.04867	
12178004	CCP-TP-175	5	ECL12023M	0.08553	
12178004	CCP-TP-175	6	ECL12023M	0.08287	
12178004	CCP-TP-175	7	ECL12023M	0.08362	
12178004	CCP-TP-175	8	ECL12023M	0.06713	
12178004	CCP-TP-175	9	ECL12023M	0.07914	
12178004	CCP-TP-175	10	ECL12023M	0.06353	
12178004	CCP-TP-175	11	ECL12023M	0.04671	
12178004	CCP-TP-175	12	ECL12023M	0.06591	
12178004	CCP-TP-175	13	ECL12023M	0.09304	
12178004	CCP-TP-175	14	ECL12023M	0.09670	
12178004	CCP-TP-175	15	ECL12023M	0.07338	
12178004	CCP-TP-175	16	ECL12023M	0.02916	
12178004	CCP-TP-175	17	ECL12023M	0.04777	
12178004	CCP-TP-175	18	ECL12023M	0.04720	
12178004	CCP-TP-175	19	ECL12023M	0.07997	
12178004	CCP-TP-175	20	ECL12023M	0.06384	
12178004	CCP-TP-175	21	ECL12023M	0.06334	
12178004	CCP-TP-175	22	ECL12023M	0.06941	
12178004	CCP-TP-175	23	ECL12023M	0.06594	
12178004	CCP-TP-175	24	ECL12023M	0.05825	
12178004	CCP-TP-175	25	ECL12023M	0.06131	
12178004	CCP-TP-175	26	ECL12023M	0.08362	
12178004	CCP-TP-175	27	ECL12023M	0.17150	
12178004	CCP-TP-175	28	ECL12023M	0.11857	
12178004	CCP-TP-175	29	ECL12023M	0.24886	15.69
12178004	CCP-TP-175	30	ECL12023M	0.10859	
12178004	CCP-TP-175	31	ECL12023M	0.09321	
12178004	CCP-TP-175	32	ECL12023M	0.07082	
12178004	CCP-TP-175	33	ECL12023M	8.55733	297.63

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RESULTS SUMMARY

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LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
12178005	CCP-TP-175	1	ECL12023M	0.09313	
12178005	CCP-TP-175	2	ECL12023M	0.15852	
12178005	CCP-TP-175	3	ECL12023M	0.14910	
12178005	CCP-TP-175	4	ECL12023M	0.06897	
12178005	CCP-TP-175	5	ECL12023M	0.12120	
12178005	CCP-TP-175	6	ECL12023M	0.11743	
12178005	CCP-TP-175	7	ECL12023M	0.11851	
12178005	CCP-TP-175	8	ECL12023M	0.09514	
12178005	CCP-TP-175	9	ECL12023M	0.11216	
12178005	CCP-TP-175	10	ECL12023M	0.09003	
12178005	CCP-TP-175	11	ECL12023M	0.06620	
12178005	CCP-TP-175	12	ECL12023M	0.09340	
12178005	CCP-TP-175	13	ECL12023M	0.13185	
12178005	CCP-TP-175	14	ECL12023M	0.13703	
12178005	CCP-TP-175	15	ECL12023M	0.10399	
12178005	CCP-TP-175	16	ECL12023M	0.04132	
12178005	CCP-TP-175	17	ECL12023M	0.06770	
12178005	CCP-TP-175	18	ECL12023M	0.06689	
12178005	CCP-TP-175	19	ECL12023M	0.11334	
12178005	CCP-TP-175	20	ECL12023M	0.09047	
12178005	CCP-TP-175	21	ECL12023M	0.08976	
12178005	CCP-TP-175	22	ECL12023M	0.09837	
12178005	CCP-TP-175	23	ECL12023M	0.09345	
12178005	CCP-TP-175	24	ECL12023M	0.08254	
12178005	CCP-TP-175	25	ECL12023M	0.08689	
12178005	CCP-TP-175	26	ECL12023M	0.11851	
12178005	CCP-TP-175	27	ECL12023M	0.24305	
12178005	CCP-TP-175	28	ECL12023M	0.31480	18.36
12178005	CCP-TP-175	29	ECL12023M	6.68664	297.48
12178005	CCP-TP-175	30	ECL12023M	0.15389	
12178005	CCP-TP-175	31	ECL12023M	0.13210	
12178005	CCP-TP-175	32	ECL12023M	0.10036	
12178005	CCP-TP-175	33	ECL12023M	33.26865	816.49

RESULTS SUMMARY

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LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
12178005D	CCP-TP-175	1	ECL12023M	0.09313	
12178005D	CCP-TP-175	2	ECL12023M	0.15852	
12178005D	CCP-TP-175	3	ECL12023M	0.14910	
12178005D	CCP-TP-175	4	ECL12023M	0.06897	
12178005D	CCP-TP-175	5	ECL12023M	0.12120	
12178005D	CCP-TP-175	6	ECL12023M	0.11743	
12178005D	CCP-TP-175	7	ECL12023M	0.11851	
12178005D	CCP-TP-175	8	ECL12023M	0.09514	
12178005D	CCP-TP-175	9	ECL12023M	0.11216	
12178005D	CCP-TP-175	10	ECL12023M	0.09003	
12178005D	CCP-TP-175	11	ECL12023M	0.06620	
12178005D	CCP-TP-175	12	ECL12023M	0.09340	
12178005D	CCP-TP-175	13	ECL12023M	0.13185	
12178005D	CCP-TP-175	14	ECL12023M	0.13703	
12178005D	CCP-TP-175	15	ECL12023M	0.10399	
12178005D	CCP-TP-175	16	ECL12023M	0.04132	
12178005D	CCP-TP-175	17	ECL12023M	0.06770	
12178005D	CCP-TP-175	18	ECL12023M	0.06689	
12178005D	CCP-TP-175	19	ECL12023M	0.11334	
12178005D	CCP-TP-175	20	ECL12023M	0.09047	
12178005D	CCP-TP-175	21	ECL12023M	0.08976	
12178005D	CCP-TP-175	22	ECL12023M	0.09837	
12178005D	CCP-TP-175	23	ECL12023M	0.09345	
12178005D	CCP-TP-175	24	ECL12023M	0.08254	
12178005D	CCP-TP-175	25	ECL12023M	0.08689	
12178005D	CCP-TP-175	26	ECL12023M	0.11851	
12178005D	CCP-TP-175	27	ECL12023M	0.24305	
12178005D	CCP-TP-175	28	ECL12023M	0.31566	18.41
12178005D	CCP-TP-175	29	ECL12023M	6.69855	298.01
12178005D	CCP-TP-175	30	ECL12023M	0.15389	
12178005D	CCP-TP-175	31	ECL12023M	0.13210	
12178005D	CCP-TP-175	32	ECL12023M	0.10036	
12178005D	CCP-TP-175	33	ECL12023M	33.05759	811.31

RESULTS SUMMARY

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LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
12178006	CCP-TP-175	1	ECL12023M	0.06484	
12178006	CCP-TP-175	2	ECL12023M	0.11037	
12178006	CCP-TP-175	3	ECL12023M	0.10381	
12178006	CCP-TP-175	4	ECL12023M	0.04802	
12178006	CCP-TP-175	5	ECL12023M	0.08439	
12178006	CCP-TP-175	6	ECL12023M	0.08176	
12178006	CCP-TP-175	7	ECL12023M	0.08251	
12178006	CCP-TP-175	8	ECL12023M	0.06624	
12178006	CCP-TP-175	9	ECL12023M	0.07809	
12178006	CCP-TP-175	10	ECL12023M	0.06268	
12178006	CCP-TP-175	11	ECL12023M	0.04609	
12178006	CCP-TP-175	12	ECL12023M	0.06503	
12178006	CCP-TP-175	13	ECL12023M	0.09180	
12178006	CCP-TP-175	14	ECL12023M	0.09541	
12178006	CCP-TP-175	15	ECL12023M	0.07240	
12178006	CCP-TP-175	16	ECL12023M	0.02877	
12178006	CCP-TP-175	17	ECL12023M	0.04714	
12178006	CCP-TP-175	18	ECL12023M	0.04657	
12178006	CCP-TP-175	19	ECL12023M	0.07891	
12178006	CCP-TP-175	20	ECL12023M	0.06299	
12178006	CCP-TP-175	21	ECL12023M	0.06250	
12178006	CCP-TP-175	22	ECL12023M	0.06849	
12178006	CCP-TP-175	23	ECL12023M	0.06507	
12178006	CCP-TP-175	24	ECL12023M	0.05747	
12178006	CCP-TP-175	25	ECL12023M	0.06050	
12178006	CCP-TP-175	26	ECL12023M	0.08251	
12178006	CCP-TP-175	27	ECL12023M	0.16922	
12178006	CCP-TP-175	28	ECL12023M	0.11699	
12178006	CCP-TP-175	29	ECL12023M	0.37544	23.99
12178006	CCP-TP-175	30	ECL12023M	0.10714	
12178006	CCP-TP-175	31	ECL12023M	0.09197	
12178006	CCP-TP-175	32	ECL12023M	0.06988	
12178006	CCP-TP-175	33	ECL12023M	9.15674	322.77

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RESULTS SUMMARY

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LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
LBMJL02	CCP-TP-175	1	ECL12023M	0.01748	
LBMJL02	CCP-TP-175	2	ECL12023M	0.02975	
LBMJL02	CCP-TP-175	3	ECL12023M	0.02798	
LBMJL02	CCP-TP-175	4	ECL12023M	0.01294	
LBMJL02	CCP-TP-175	5	ECL12023M	0.02275	
LBMJL02	CCP-TP-175	6	ECL12023M	0.02204	
LBMJL02	CCP-TP-175	7	ECL12023M	0.02224	
LBMJL02	CCP-TP-175	8	ECL12023M	0.01785	
LBMJL02	CCP-TP-175	9	ECL12023M	0.02105	
LBMJL02	CCP-TP-175	10	ECL12023M	0.01690	
LBMJL02	CCP-TP-175	11	ECL12023M	0.01242	
LBMJL02	CCP-TP-175	12	ECL12023M	0.01753	
LBMJL02	CCP-TP-175	13	ECL12023M	0.02474	
LBMJL02	CCP-TP-175	14	ECL12023M	0.02572	
LBMJL02	CCP-TP-175	15	ECL12023M	0.01952	
LBMJL02	CCP-TP-175	16	ECL12023M	0.00775	
LBMJL02	CCP-TP-175	17	ECL12023M	0.01271	
LBMJL02	CCP-TP-175	18	ECL12023M	0.01255	
LBMJL02	CCP-TP-175	19	ECL12023M	0.02127	
LBMJL02	CCP-TP-175	20	ECL12023M	0.01698	
LBMJL02	CCP-TP-175	21	ECL12023M	0.01685	
LBMJL02	CCP-TP-175	22	ECL12023M	0.01846	
LBMJL02	CCP-TP-175	23	ECL12023M	0.01754	
LBMJL02	CCP-TP-175	24	ECL12023M	0.01549	
LBMJL02	CCP-TP-175	25	ECL12023M	0.01631	
LBMJL02	CCP-TP-175	26	ECL12023M	0.02224	
LBMJL02	CCP-TP-175	27	ECL12023M	0.04561	
LBMJL02	CCP-TP-175	28	ECL12023M	0.03153	
LBMJL02	CCP-TP-175	29	ECL12023M	0.03923	
LBMJL02	CCP-TP-175	30	ECL12023M	0.02888	
LBMJL02	CCP-TP-175	31	ECL12023M	0.02479	
LBMJL02	CCP-TP-175	32	ECL12023M	0.01883	
LBMJL02	CCP-TP-175	33	ECL12023M	0.07570	

RESULTS SUMMARY

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LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
LCSMJL02	CCP-TP-175	1	ECL12023M	0.15294	
LCSMJL02	CCP-TP-175	2	ECL12023M	0.26030	
LCSMJL02	CCP-TP-175	3	ECL12023M	20.20244	800.37
LCSMJL02	CCP-TP-175	4	ECL12023M	0.11326	
LCSMJL02	CCP-TP-175	5	ECL12023M	0.19903	
LCSMJL02	CCP-TP-175	6	ECL12023M	0.19284	
LCSMJL02	CCP-TP-175	7	ECL12023M	0.19460	
LCSMJL02	CCP-TP-175	8	ECL12023M	0.15623	
LCSMJL02	CCP-TP-175	9	ECL12023M	0.18417	
LCSMJL02	CCP-TP-175	10	ECL12023M	11.76194	731.97
LCSMJL02	CCP-TP-175	11	ECL12023M	11.57684	830.67
LCSMJL02	CCP-TP-175	12	ECL12023M	12.23075	749.62
LCSMJL02	CCP-TP-175	13	ECL12023M	0.21651	
LCSMJL02	CCP-TP-175	14	ECL12023M	16.97410	618.55
LCSMJL02	CCP-TP-175	15	ECL12023M	0.17076	
LCSMJL02	CCP-TP-175	16	ECL12023M	0.06785	
LCSMJL02	CCP-TP-175	17	ECL12023M	0.11118	
LCSMJL02	CCP-TP-175	18	ECL12023M	0.10984	
LCSMJL02	CCP-TP-175	19	ECL12023M	17.14163	736.84
LCSMJL02	CCP-TP-175	20	ECL12023M	0.14855	
LCSMJL02	CCP-TP-175	21	ECL12023M	0.14740	
LCSMJL02	CCP-TP-175	22	ECL12023M	0.16153	
LCSMJL02	CCP-TP-175	23	ECL12023M	0.15346	
LCSMJL02	CCP-TP-175	24	ECL12023M	0.13554	
LCSMJL02	CCP-TP-175	25	ECL12023M	0.14268	
LCSMJL02	CCP-TP-175	26	ECL12023M	0.19460	
LCSMJL02	CCP-TP-175	27	ECL12023M	0.39911	
LCSMJL02	CCP-TP-175	28	ECL12023M	0.27592	
LCSMJL02	CCP-TP-175	29	ECL12023M	0.34327	
LCSMJL02	CCP-TP-175	30	ECL12023M	0.25270	
LCSMJL02	CCP-TP-175	31	ECL12023M	0.21692	
LCSMJL02	CCP-TP-175	32	ECL12023M	14.48422	676.73
LCSMJL02	CCP-TP-175	33	ECL12023M	0.66239	

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Attachment 9 – CCP SPM HSG Summa Sampling Project Level Validation Checklist and Summary

BDR Number: INHSG1206 **Sampling Date:** 9/4/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
1. Does the Batch Data Report (BDR) contain the batch number? **Reference Source: CCP-PO-001, Table C3-12**	X			
2. Is the BDR complete according to the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-10b**	X			
3. Does the BDR contain the BDR date? **Reference Source: CCP-PO-001, Table C3-12**	X			
4. Is the sample matrix and type included for each sample in the BDR? **Reference Source: CCP-PO-001, Table C3-12**	X			
5. Is the BDR complete as defined by the process procedures? **Reference Source: CCP-PO-001, C3-10, CCP Technical Procedures**	X			
6. List all containers that have met QAOs. **Reference Source: CCP-PO-001, Table C3-12**				Container Numbers: NRFTRUSPC022-1 NRFTRUSPC005-1 NRFTRUSPC007-1 NRFTRUSPC009-1 NRFTRUSPC016-1 NRFTRUSPC018-1
7. Does the BDR include the requested analyses and the name of the laboratory? **Reference Source: CCP-PO-001, Table C3-12**	X			
8. Is there a reference to or copy of any associated NCRs (if any) in the BDR? NA if no NCRs associated with the BDR. **Reference Source: CCP-PO-001, Table C3-12**			X	NO NCR'S
9. Does the BDR include the point of origin for sampling (e.g., building number, room)? **Reference Source: CCP-PO-001, Table C3-12**	X			
10. Is the sample size included in the BDR? **Reference Source: CCP-PO-001, Table C3-12**	X			
11. Does the BDR include the sample location of each container? Note: Location within container is where the sample is taken. The BDR must specify what layer of confinement was sampled (e.g., under the lid). **Reference Source: CCP-PO-001, Table C3-12**	X			

CCP RECORDS ORIGINAL
DATE REC'D 9-12-12

Attachment 9 – CCP SPM HSG Summa Sampling Project Level Validation Checklist and Summary (Continued)

BDR Number: INHSG1206	Sampling Date: 9/4/12			
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
12. Is the person collecting the sample identified in the BDR and qualified? **Reference Source: CCP-PO-001, Table C3-12**	X			
13. Does the BDR contain a chain of custody record? **Reference Source: CCP-PO-001, Table C3-12**	X			
14. Does the chain of custody form correctly identify the Waste Stream ID? **Reference Source: CCP-PO-001, Table C3-12**	X			
15. Is there a reference to sampling equipment numbers or lot numbers for disposable equipment? **Reference Source: CCP-PO-001, Table C3-12**	X			
16. Is there verification of rigid liner venting? **Reference Source: CCP-PO-001, Table C3-12**			X	NO RIGID LINERS OR LIDS
17. Does the BDR include the operator/sampler signature and date and time of sampling for each sample? **Reference Source: CCP-PO-001, Table C3-12**	X			
18. Are there 20 samples or less (excluding QC) in the batch and all samples collected within 14 days of the first sample collected? **Reference Source: CCP-PO-001, C1-1b**	X			
19. Are the correct revisions of the procedures used and identified? **Reference Source: CCP-PO-001, Table C3-12**	X			
20. Are all data reporting forms complete with data reported properly (correct units and significant figures)? **Reference Source: CCP-PO-001, C3-10b(1)**	X			
21. Is there a cross-reference between waste container number and field sample number? **Reference Source: CCP-PO-001, C1-5**	X			
22. Have the samples been properly preserved (0-40° C)? **Reference Source: CCP-PO-001, Table C1-1**	X			

Attachment 9 – CCP SPM HSG Summa Sampling Project Level Validation Checklist and Summary (Continued)

BDR Number: INHSG1206 **Sampling Date:** 9/4/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
23. Have the samples been properly preserved (0-40° C)? **Reference Source: CCP-PO-001, Table C1-1**	X			
24. Has the correct DAC scenario and waste packaging configuration been selected? **Reference Source: CCP-PO-001, C3-2**	X			
25. Do the samples meet the required DAC equilibrium times? **Reference Source: CCP-PO-001, C3-2**	X			
26. Prior to canister use was the following performed: equipment blank, sample canister equipment cleaning and leak check, and field reference standard (or on-line control standard) performed as required? **Reference Source: CCP-PO-001, C1-1b**	X			
27. Has one field blank per batch been collected? **Reference Source: CCP-PO-001, Table C1-2**	X			
28. Has a minimum of one equipment blank been collected for the applicable cleaning batch blanks? **Reference Source: CCP-PO-001, Table C1-2**	X			
29. Has one field duplicate per batch been collected? **Reference Source: CCP-PO-001, Table C1-2**	X			
30. Has the canister pressure and ambient temperature and pressure been recorded? **Reference Source: CCP-PO-001, Table C3-12**	X			
31. Have the ambient pressure and temperature sensors been calibrated? **Reference Source: CCP-PO-001, C1-1d**	X			
32. Have all the waste containers equilibrated for a minimum of 72 hours at 18° C or higher? **Reference Source: CCP-PO-001, C1-1a**	X			
33. Is the completed, signed, and dated Independent Technical Reviewer Checklist in the BDR? **Reference Source: CCP-PO-001, Table C3-12**	X			

Attachment 9 – CCP SPM HSG Summa Sampling Project Level Validation Checklist and Summary (Continued)

BDR Number: INHSG1206 **Sampling Date:** 9/4/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
34. Is the completed, signed, and dated Independent Technical Reviewer Checklist in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, Table C3-12**	X			

Comments: NONE

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

LAUREN NELSON	Laura Nelson	9-12-12
SPM Printed Name	Signature	Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

Attachment 1 – HSG Sampling Batch Data Report Cover Sheet Page 1 of 1

Headspace Gas Sampling

HSG Sampling Batch Number: INHSG1206

Waste Matrix Code: S5100

Waste Container Identification Numbers

NRFTRUSPC022-1	N/A
NRFTRUSPC005-1	N/A
NRFTRUSPC007-1	N/A
NRFTRUSPC009-1	N/A
NRFTRUSPC016-1	N/A
NRFTRUSPC018-1	N/A
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

Comments: **Waste stream ID's for this batch are IN-ID-NRF-SPC. No filter change out required.**

HSG Independent Technical Reviewer:

Spencer Pattee		9-6-12
Printed Name	Signature	Date

9-12-12

CCP RECORDS ORIGINAL
DATE REC'D 9-11-12

001

Attachment 2 – HSG Sampling Batch Data Report Table of Contents Page 1 of 1

Section		Page No.
1.	HSG Sampling Batch Data Report Cover Sheet (Attachment 1)	1
2.	HSG Sampling Batch Data Report Table of Contents (Attachment 2)	2
3.	Independent Technical Reviewer (ITR) Review Checklist (Attachment 3)	3
Sampling Batch Data Report Forms:		
4.	Chain of Custody/Canister Tag Forms (Attachment 1 from CCP-TP-093)	5
5.	Copy of Laboratory Canister Tags	7
6.	Cleanliness Certification for needle assemblies as applicable to the Sampling Batch Data Report (or copy of the certifications from CCP-TP-093)	15
7.	Sample Drum Data Form (Attachment 2 from CCP-TP-093)	16
8.	Copy of Sampling Port Installation Records (CCP-TP-098, Attachment 1), if applicable	N/A
9.	Copy of Drum Filter Changeout Form (Attachment 1 of CCP-TP-082), if applicable.	N/A
10.	Shipment Request Forms, if applicable.	N/A
11.	72-Hour Temperature Equilibration Plots	18
12.	Copy of NCRs, if applicable	N/A

Attachment 3 – Independent Technical Reviewer (ITR) Review Checklist

HSG Sampling Batch Number: INHSG1206

Description	YES	NO	NA	
1. Is the HSG Sampling BDR complete as specified in step 4.1.2 and are the field sampling records complete?	✓			
Sampling Documentation	**YES**	**NO**	**NA**	**Comments**
2. Are calculations correct for the Drum Age Criteria (DAC), temperature equilibrium time, and percent complete?	✓			
3. Did the containers meet the DAC?	✓			
4. Did the containers meet the temperature equilibrium requirement (stored at 18°C or higher for 72-hours prior to sampling)?	✓			
5. Do the temperature plots indicate the drums were stored at 18 °C (64.5 °F) or higher for 72-hours prior to sampling?	✓			
5a. Are the waste stream IDs completed correctly on the Chain of Custody (COC) Form?	✓			
Quality Control Samples				
Precision	**YES**	**NO**	**NA**	**Comments**
6. Was a Field Duplicate collected once per batch?	✓			
Accuracy	**YES**	**NO**	**NA**	**Comments**
7. Was a Field Reference Sample collected?		✓		Not Needed
8. Was a Field Blank collected one per batch prior to sampling containers?	✓			
Completeness	**YES**	**NO**	**NA**	**Comments**
9. Is the percentage of valid samples collected and submitted for analysis greater than or equal to 90 percent?	✓			
Additional Checks	**YES**	**NO**	**NA**	**Comments**
10. Is the data technically reasonable based upon the technique used?	✓			
11. Was the sampling equipment checked for leaks after sample collection?	✓			
12. Was the data generation and reduction conducted in a technically correct manner?	✓			
13. Was the data reported in proper units and with the correct number of significant figures?	✓			
14. Were the samples maintained at a temperature between 0°C - 40°C?	✓			
15. Was the equipment involved in the sampling activities in calibration (i.e., torque wrenches, ambient temperature and pressure gauges, dataloggers, ultrasonic micrometer, min/max thermometers)?	✓			

Attachment 3 – Independent Technical Reviewer (ITR) Review Checklist (continued)

Page 2 of 2

HSG Sampling Batch Number: INHSG1206

Raw Data Collection and Management		YES	NO	NA	Comments
16.	Are there satisfactory equipment blanks, canister cleaning blanks, and needle assembly cleanliness results?	✓			
17.	Has the data been reviewed for transcription errors?	✓			
18.	Verify all the data is signed and dated, and the data is recorded clearly, legibly, and accurately.	✓			
19.	No more than 20 waste containers are in the batch (excluding the QC samples).	✓			
20.	Procedure Number: CCP-TP-093				Revision: 16
21.	Is the procedure number and revision correct?	✓			
22.	All changes to original data are lined out, initialed, and dated by the individual making the change, and a justification included. (NOTE: Original data must not be obliterated or otherwise disfigured as not to be readable. Data changes shall only be made by the individual who originally collected the data or an individual authorized to change the data.)	✓			

Independent Technical Reviewer:

Printed Name	Signature	Date
Spencer Pattee		9-6-12

9-12-12

Attachment 1 – Chain of Custody/Canister Tag Chain of Custody # 595 Page 1 of 2

Location: Under Drum Lid	Point of Origin: CPP-659	**Sample Matrix is Gas**	Ambient Conditions
	Field Batch Number: INHSG1206		Temperature (centigrade): 22.5
			Pressure (in. Hg): 25

Site	Date	SUMMA® Canister No.	Size (mL)	TID No.	Container ID /Barcode No.	Waste Stream ID	Cleaning Batch No.	Needle Assembly Batch No.	Type SS B D F C (Note 1)	Vent Seal (Y/NA)	Start Time	End Time	Beginning Pressure (in.Hg or psig)	End Pressure (in.Hg or psig)	Sampler's Initials
IN	090412	EI779	250	0825585	N/A	N/A	439C	INHSG1203NB	B	N/A	0907	0912	25 in. Hg	3 in. Hg	
IN	090412	EIB85	250	0825586	NRFTRUSPC022-1	IN-ID-NRF-SPC	439C	INHSG1203NB	D	Y	0920	0925	25 in. Hg	1 in. Hg	
IN	090412	EI504	250	0825587	NRFTRUSPC022-1	IN-ID-NRF-SPC	439C	INHSG1203NB	D	Y	0920	0925	25 in. Hg	2 in. Hg	
IN	090412	EI770	250	0825588	NRFTRUSPC005-1	IN-ID-NRF-SPC	439C	INHSG1203NB	SS	Y	0946	0951	26 in. Hg	2 in. Hg	
IN	090412	EI672	250	0825589	NRFTRUSPC007-1	IN-ID-NRF-SPC	439C	INHSG1203NB	SS	Y	1005	1010	26 in. Hg	3 in. Hg	
IN	090412	EIC22	250	0825590	NRFTRUSPC009-1	IN-ID-NRF-SPC	439C	INHSG1203NB	SS	Y	1024	1029	26 in. Hg	2 in. Hg	
IN	090412	EI291	250	0825594	NRFTRUSPC016-1	IN-ID-NRF-SPC	439C	INHSG1203NB	SS	Y	1039	1044	27 in. Hg	2 in. Hg	
IN	090412	EIB00	250	0825595	NRFTRUSPC018-1	IN-ID-NRF-SPC	439C	INHSG1203NB	SS	Y	1055	1059	26 in. Hg	0 in. Hg	
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Note 1. Analysis required:
C - Needle Assembly Cleanliness Certification: VOC.
SS - Single Sample: VOC, H_2, CH_4
B - Field Blank: VOC
D - Duplicate: VOC, H_2, CH_4
F - Field Reference Standard: VOC

Sampler's Signature:

Attachment 1 – Chain of Custody/Canister Tag (Continued) Chain of Custody # 595 Page 2 of 2

Field Batch Number: INHSG1206					
Comments: N/A		Instrument Section	M&TE ID No.	Calibration Due Date	Initials/Date
Analytical Laboratory - ECL		Pressure Meter	XC0517	~~1-31-2013~~ ~~1-13-2013~~ 09-12-12	09/04/12
Shipping Tracking # N/A	Method of Shipping ECL Pickup	Thermometer	XC0717	6-5-2013	09/04/12
		Min /Max Thermometer	XC0553 XC0689	10-12-2012 10-12-2012	09/04/12
Analysis Requested VOC		Preservation Method: 0 - 40°C			
TID Number(s) 0825596		TID Initials and date: 09/04/12			

Custody Initiated By: (Sampler Name/Organization)	Date/Time 09-04-12 0912		
Relinquished By: (Name/Organization)	Date/Time 09-05-12 0800	Received By: (Name/Organization)	Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)	Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)	Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)	Date/Time
Final Disposition By: (Name/Organization)	Date/Time	Disposition:	

GAS SAMPLE CANISTER TAG

1	N	0	9	0	4	1	2	E	I	7	7	9
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: IN1456I206 Drum Number: N/A

Sampling Organization: CCP Sample Description: FIELD BLANK

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 22	072512	1015	TBL
Cleaning Batch: 439C	M= <5.0E-2	P= 643T			
Field-	C= 25 "Hg	T= 22.5	090412	0907	DD
Before Sample Collection	M=	P= 25			
Field-	C= 3 "Hg	T= 22.5	090412	0912	DD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? (Y) / N (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: [signature]

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	9	0	4	1	2	E	I	B	8	5
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1206 Drum Number: NRFTRMSPC022-1

Sampling Organization: CCL Sample Description: DUPLICATE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 22	072512	1015	TBL
Cleaning Batch: 439C	M= <5.0E-2	P= 643T			
Field-	C= 25" Hg	T= 22.5	090412	0920	DD
Before Sample Collection	M=	P= 25			
Field-	C= 1 "Hg	T= 22.5	090412	0925	DD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

GAS SAMPLE CANISTER TAG

1	N	0	9	0	4	1	2	E	1	5	0	4
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1206 Drum Number: NRETRUSPC022-1

Sampling Organization: CCP Sample Description: DUPLICATE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 22	072512	1015	TBL
Cleaning Batch: 439C	M= <5.0E-2	P= 643T			
Field-	C= 25 "Hg	T= 22.5	090412	0920	DD
Before Sample Collection	M=	P= 25			
Field-	C= 2 "Hg	T= 22.5	090412	0925	DD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: [signature]

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	J	9	0	4	1	2	E	I	7	7	0
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1206 Drum Number: NRFTRUSPC005-1

Sampling Organization: CCP Sample Description: Sample

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 22	072512	1015	TBL
Cleaning Batch: 439C	M= <5.0E-2	P= 643T			
Field-	C= 26 "Hg	T= 22.5	090412	0946	MD
Before Sample Collection	M=	P= 25			
Field-	C= 2 "Hg	T= 22.5	090412	0951	MD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	9	0	4	1	2	E	1	6	7	2
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1206 Drum Number: AIRTRUSPC007-1

Sampling Organization: CCP Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 22	072512	1015	TBL
Cleaning Batch: 439C	M= <5.0E-2	P= 643T			
Field-	C= 26" Hg	T= 22.5	090412	1005	M
Before Sample Collection	M=	P= 25			
Field-	C= 3 " Hg	T= 22.5	090412	1010	M
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	9	0	4	1	2	E	I	C	2	2
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1206 Drum Number: NRFTNSPC0089-1

Sampling Organization: CCP Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 22	072512	1015	TBL
Cleaning Batch: 439C	M= <5.0E-2	P= 643T			
Field-	C= 26 "Hg	T= 22.5	090412	1024	DD
Before Sample Collection	M=	P= 25			
Field-	C= 2 "Hg	T= 22.5	090412	1029	DD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	9	0	4	1	2	E	I	2	9	1
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1206 Drum Number: NRITRAUSPC016-1

Sampling Organization: CCI Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 22	072512	1015	TBL
Cleaning Batch: 439C	M= <5.0E-2	P= 643T			
Field-	C= 27 "Hg	T= 22.5	090412	1039	AM
Before Sample Collection	M=	P= 25			
Field-	C= 2 "Hg	T= 22.5	090412	1044	AM
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	9	0	4	1	2	E	I	B	0	0
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site — Date — Canister ID

Batch Number: 1NHSG1206 Drum Number: AIRTRUSPC018-1

Sampling Organization: CCP Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 22	072512	1015	TBL
Cleaning Batch: 439C	M= <5.0E-2	P= 643T			
Field-	C= 26 "Hg	T= 22.5	090412	1055	MM
Before Sample Collection	M=	P= 25			
Field-	C= 0 "Hg	T= 22.5	090412	1059	MD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: [signature]

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

From: Catherine A Crowder
To: Dale A. Dover; charles.turner@wipp.ws
Subject: Needle Assembly Blanks
Date: Wednesday, July 11, 2012 3:55:40 PM

Analytical results for needle assembly equipment blanks in field batch INHSG1203NB were acceptable. Concentrations of all VOC target analytes were less than or equal to three times the MDLs listed in Table C3-2 in Permit Attachment C3.

Attachment 2 – Sample Container Data Form

Field Batch Number: INHSG1206

	Container ID	Sampling Scenario	Summary Category Group	Rigid Liner (Y/N)	Rigid Liner Lid (Y/N)	Rigid Liner Lid Hole Diameter (in.)	Number of Inner Bags	Number of Liner Bags	Filter Model No.	Number of Filters	Restrictive Hydrogen Diffusivity (m/s/mf)	Package Configuration Group No.
1	NRFTRUSPC022-1	3	S5000	N	N	N/A	0	0	NucFil-019SDS	1	3.70E-06	1
2	NRFTRUSPC005-1	3	S5000	N	N	N/A	0	0	NucFil-019SDS	1	3.70E-06	1
3	NRFTRUSPC007-1	3	S5000	N	N	N/A	0	0	NucFil-019SDS	1	3.70E-06	1
4	NRFTRUSPC009-1	3	S5000	N	N	N/A	0	0	NucFil-019SDS	1	3.70E-06	1
5	NRFTRUSPC016-1	3	S5000	N	N	N/A	0	0	NucFil-019SDS	1	3.70E-06	1
6	NRFTRUSPC018-1	3	S5000	N	N	N/A	0	0	NucFil-019SDS	1	3.70E-06	1
7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
22	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Attachment 2 – Sample Container Data Form (Continued)

Page 2 of 2

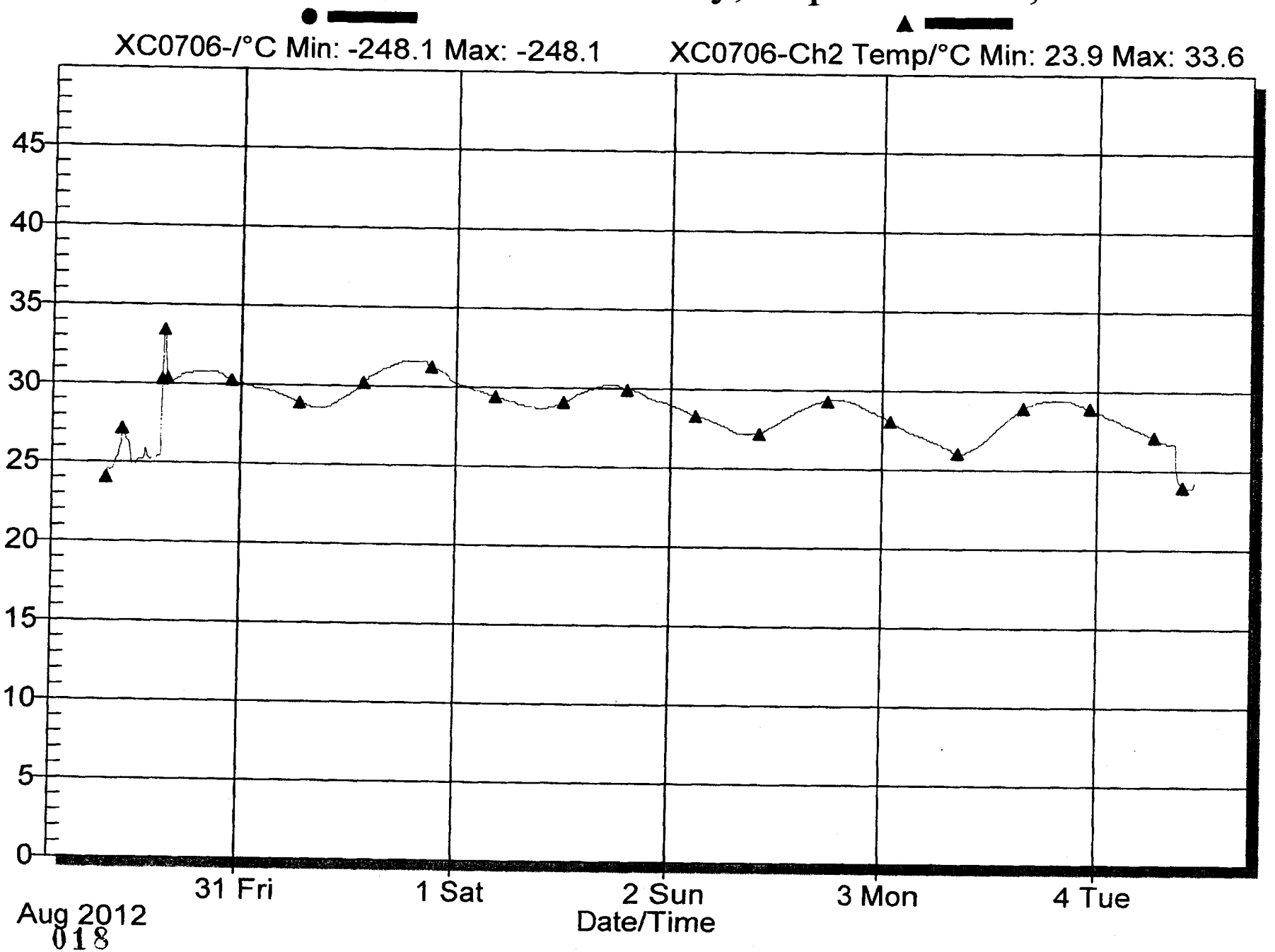
Field Batch Number: INHSG1206

	Container ID	Closure Date	Vent Date	Permit Required Equilibrium Time (Days)	Container Age (Days)	Container Fill Factor (%)	Can This Container Be Sampled? (Y / N)	Temperature Recorder M&TE /ID No.: XC0706 12-13-12 XC0712 2-13-13 Temperature Recorder Calibration Due Date: 72 – Hour Container Equilibrium	
								Start Date/Time	End Date/Time
1	NRFTRUSPC022-1	8/1/2012	8/1/2012	4	34	85	Y	8-30-12 1600	9-4-12 0845
2	NRFTRUSPC005-1	5/14/2012	5/14/2012	4	113	85	Y	8-30-12 1600	9-4-12 0845
3	NRFTRUSPC007-1	5/14/2012	5/14/2012	4	113	85	Y	8-30-12 1600	9-4-12 0845
4	NRFTRUSPC009-1	5/14/2012	5/14/2012	4	113	85	Y	8-30-12 1600	9-4-12 0845
5	NRFTRUSPC016-1	8/1/2012	8/1/2012	4	34	85	Y	8-30-12 1600	9-4-12 0845
6	NRFTRUSPC018-1	8/1/2012	8/1/2012	4	34	85	Y	8-30-12 1600	9-4-12 0845
7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
22	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

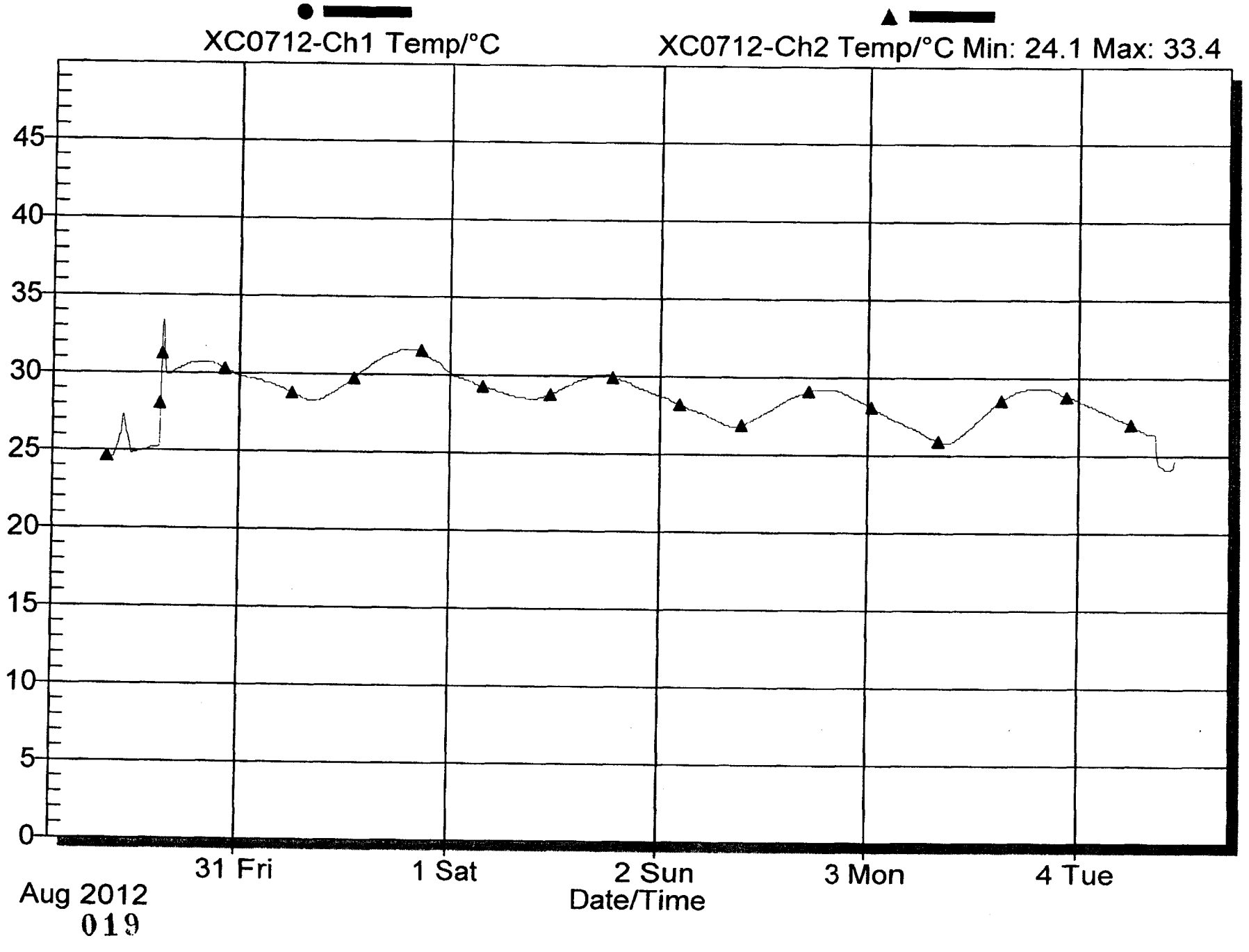
HSG Sampler: Jace Vowen _____ _____ 09-04-12
Print Name Signature Date

017

Downloaded Data - Tuesday, September 04, 2012



Downloaded Data - Tuesday, September 04, 2012



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PAGE

Attachment 10 – CCP SPM Summa HSG Analysis Project Level Validation Checklist and Summary

BDR Number: ECL12036M				Analysis Date: 9-11-2012
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
1. Does the Batch Data Report (BDR) contain the batch number, laboratory name, and the date of the batch report? **Reference Source: CCP-PO-001, Table C3-13**	X			
2. Is the BDR complete according to the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-10b**	X			
3. Has a BDR Narrative been included with the BDR? **Reference Source: CCP-PO-001, Table C3-13**	X			
4. Are the correct revisions of the procedures used and identified? **Reference Source: CCP-PO-001, Table C3-13**	X			
5. List all containers that have met the QAOs. **Reference Source: CCP-PO-001, C3-10b**				Container Numbers: NRFTRUSPC022-1, NRFTRUSPC005-1, NRFTRUSPC007-1, NRFTRUSPC009-1, NRFTRUSPC016-1, NRFTRUSPC018-1,
6. Is there a reference to or copy of any associated NCRs (if any) in the BDR? NA if no NCRS associated with the BDR. **Reference Source: CCP-PO-001, Table C3-13**			X	
7. Is the completed, signed, and dated Independent Technical Reviewer checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, Table C3-13**	X			
8. Does the BDR include the operator's signature and analysis date? **Reference Source: CCP-PO-001, Table C3-13**	X			
9. Are there 20 laboratory samples or less in the analytical batch (excluding QC)? **Reference Source: CCP-PO-001, C3-10**	X			
10. Does the chain of custody (COC) form correctly identify the Waste Stream ID? **Reference Source: CCP-PO-001, Table C3-13**	X			

COPY

CCP RECORDS ORIGINAL
DATE REC'D 9.25.12

BDR Number: ECL12036M	Analysis Date: 9-11-2012			
Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
11. Does the BDR contain a complete and signed copy of the COC form? **Reference Source: CCP-PO-001, Table C3-13**	X			

Attachment 10 – CCP SPM Summa HSG Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: ECL12036M	Analysis Date: 9-11-2012			
Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
12. Is there a cross-reference between waste container number, field sample number, and lab sample number ID; and signature release by lab personnel in the batch report? **Reference Source: CCP-PO-001, C1-5**	X			
13. Does the BDR contain gas sample canister tags for each sample that are properly filled out? **Refere nce Source: CCP-PO-001, Table C3-13**	X			
14. Have the samples been properly preserved (0-40° C)? **Reference Source: CCP-PO-001, Table C1-1**	X			
15. Does the BDR include the date and time of analysis for each sample? **Reference Source: CCP-PO-001, Table C3-13**	X			
16. Have data reporting flags been assigned properly? **Reference Source: CCP-PO-001, Table C3-13**	X			
17. Did the batch report analysis consist of all the target compounds? **Reference Source: CCP-PO-001, Table C3-2**	X			
18. Is there a minimum of one laboratory (method) blank per analytical batch with all analytes $\leq$ 3 x MDL? **Reference Source: CCP-PO-001, Table C3-3**	X			
19. Are all target analytes in field blanks and equipment blanks (if any) $\leq$ 3 x instrument MDL as listed in CCP-PO-001 Table C3-2? **Reference Source: CCP-PO-001, Table C1-3**	X			

BDR Number: ECL12036M	Analysis Date: 9-11-2012			
Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
20. Is a minimum of one laboratory control standard (LCS) analyzed per analytical batch and are the percent recoveries (%Rs) within 70-130%? **Reference Source: CCP-PO-001,Table C3-3**	X			
21. Is there a minimum of one field duplicate analyzed per sampling batch including in the analytical batch? **Reference Source: CCP-PO-001, Table C1-3**	X			

Attachment 10 – CCP SPM Summa HSG Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: ECL12036M	Analysis Date: 9-11-2012			
Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
22. For field sample and field duplicate results that are both > PRQL, are the relative percent differences (RPDs) ≤ 25%? **Reference Source: CCP-PO-001, Table C3-2**			X	NO TARGET >PRQL
23. Is there a minimum of one laboratory duplicate (LD) analyzed per analytical batch? **Reference Source: CCP-PO-001, Table C3-3**	X			
24. For laboratory duplicate results that are > PRQL (or for laboratory control standard and replicate laboratory control standard results > PRQL), is the RPD ≤ 25%? **Reference Source: CCP-PO-001, Table C3-3**			X	No target > PRQL but RPD on target analytes above MDL but ≤ PRQL. RPD ≤ 25
25. If no target analytes were present greater than the PRQL, was a replicate LCS satisfactorily performed? **Reference Source: CCP-PO-001, Table C3-3**			X	No target > PRQL but RPD on target analytes above MDL but ≤ PRQL. RPD ≤ 25
26. Does the field reference standard (FRS) contain at least six analytes and are the %Rs within 70-130%? **Reference Source: CCP-PO-001, C1-1b and Table C1-3**			X	FRS has been successfully completed.
27. For GC/MS analyses, was the BFB tune performed at a minimum of every 12 hours and were the ion abundance criteria satisfied? **Reference Source: CCP-PO-001, Table C3-3**	X			

BDR Number: ECL12036M	Analysis Date: 9-11-2012			
Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
28. For GC/MS analyses, for the five-point initial calibration, is the %RSD for all compounds < 35%? **Reference Source: CCP-PO-001, Table C3-3**	X			
29. For GC/MS analyses, is one of the calibration standards less than the PRQL? **Reference Source: CCP-PO-001, Section C3-5**	X			
30. For GC/MS analyses, is the continuing calibration performed at a minimum frequency of every 12 hours of operation? **Reference Source: CCP-PO-001, Table C3-3**	X			

Attachment 10 – CCP SPM Summa HSG Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: ECL12036M	Analysis Date: 9-11-2012			
Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
31. For GC/MS analyses, are the continuing calibration internal standard area counts between 50-200% of ICAL? **Reference Source: CCP-PO-001, Table C3-3**	X			
32. For GC/MS analyses, are non-target compounds identified as Tentatively Identified Compounds (TICs)? **Reference Source: CCP-PO-001, C-3a**	X			
33. Does the BDR contain all of the target compounds appropriate for the waste stream? **Reference Source: CCP-PO-001, Table C3-2/AK Summary Report**	X			
34. For GC/MS analyses, is the continuing calibration %D for all compounds ≤ 30% of the ICAL? **Reference Source: CCP-PO-001, Table C3-3**	X			
35. For methanol analysis by GC/FID, does the initial calibration (ICAL) have a minimum of five points, is the %R within 70-130%, and is the correlation coefficient ≥ 0.990? NA if not methanol analysis by GC/FID. **Reference Source: CCP-PO-001, Table C3-3**			X	Not methanol analysis by GC/FID

BDR Number: ECL12036M	Analysis Date: 9-11-2012			
Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
36. For methanol analysis by GC/FID, is the continuing calibration (CC) analyzed every 12 hours, is the %D ≤ 15%, is the %R within 85-115%, and is the CC retention time within the ICAL window? NA if not methanol analysis by GC/FID. **Reference Source: CCP-PO-001, Table C3-2**			X	Not methanol analysis by GC/FID
37. For methanol analysis by GC/FID, is one of the calibration standards less than the PRQL? **Reference Source: CCP-PO-001, C3-5**			X	Not methanol analysis by GC/FID
38. Are all data reporting forms complete with data reported properly (correct units and significant figures)? **Reference Source: CCP-PO-001, C3-10b**	X			
39. Has the laboratory successfully participated in the latest PDP? **Reference Source: CCP-PO-001, C3-5**	X			

Attachment 10 – CCP SPM Summa HSG Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: ECL12036M	Analysis Date: 9-11-2012			
Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
40. Has the laboratory met the 90% completeness requirement? **Reference Source: CCP-PO-001, Table C3-2**	X			
41. Does the laboratory use traceable standards? **Reference Source: CCP-PO-001, C3-5**	X			
42. Has the laboratory had acceptable demonstration of precision, accuracy, and MDLs [method performance samples] performed within the last 6 months? **Reference Source: CCP-PO-001, Table C3-3**	X			
43. Have QC designations for samples been applied as appropriate? **Reference Source: CCP-PO-001, Table C3-13**	X			
Comments: none				
The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.				

BDR Number: ECL12036M				Analysis Date: 9-11-2012
Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers

Charles Turner		9-20-2012
SPM Printed Name	Signature	Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

Idaho National Laboratory

Chemical and Radiation Measurement Department

Environmental Chemistry Laboratory

Gas Headspace Analysis Data Report

ISSUED TO:

Records Coordinator
Central Characterization Program

REPORT IDENTIFICATION:

Report Number: ECL12036M
Analysis Method: CCP-TP-175
Analyte: VOCs
Revision Number: 0
Change Number: 0
Issue Date: 09/19/2012

SUMMARY: This report provides analysis results and associated documentation for volatile organic compounds (VOCs) analyses of samples received 09/10/2012 from Field batch INHSG1206.

Report Content:

Section	Content	Page #
1.0	Sample Identification Table/Analysis Request Form	0002-0003
2.0	Sample Custody Documents and Sample Tags	0004-0014
3.0	Analysis Results	0015-0032
4.0	Quality Control Measurements Results	0033-0039
5.0	Calibration Results	0040-0044
6.0	Data Review Checklists	0045-0051
7.0	GC VOC Raw Data	0052-0116
8.0	Miscellaneous Supporting Data	0117-0141

Release Authorization:

Name & Position	Signature	Date
Catherine A. Crowder ECL Group/Technical Leader	Catherine A. Crowder	9-19-12

CCP RECORDS ORIGINAL
DATE REC'D 9-21-12

SECTION 1.0

SAMPLE IDENTIFICATION TABLE/ ANALYSIS REQUEST FORM

ENVIRONMENTAL CHEMISTRY LABORATORY

ANALYTICAL REQUEST FORM

PAGE: 1 RECEIVING GROUP NO. ECL12036 ANALYSES REQUIRED:

FIELD SITE: INL GC-VOC: X GC-H2:

SAMPLE TYPE: GAS GC/MS: X GC-CH4:

NUMBER OF SAMPLES: 8 VTSR: 0800 09/10/12

	LAB ID.	FIELD ID.	FIELD BATCH #	FIELD COC #	CANISTER SIZE (mL)	BLANK?
1	12254001	IN090412EI779	INHSG1206	595	250	Y
2	12254002	IN090412EIB85	INHSG1206	595	250	N
3	12254003	IN090412EI504	INHSG1206	595	250	N
4	12254004	IN090412EI770	INHSG1206	595	250	N
5	12254005	IN090412EI672	INHSG1206	595	250	N
6	12254006	IN090412EIC22	INHSG1206	595	250	N
7	12254007	IN090412EI291	INHSG1206	595	250	N
8	12254008	IN090412EIB00	INHSG1206	595	250	N

SECTION 2.0

SAMPLE CUSTODY DOCUMENTS AND SAMPLE TAGS

Attachment 1 – Chain of Custody/Canister Tag Chain of Custody # 595 Page 1 of 2

Location: Under Drum Lid	Point of Origin: CPP-659	**Sample Matrix is Gas**	Ambient Conditions
	Field Batch Number: INHSG1206		Temperature (centigrade): 22.5
			Pressure (in. Hg): 25

Site	Date	SUMMA® Canister No.	Size (mL)	TID No.	Container ID /Barcode No.	Waste Stream ID	Cleaning Batch No.	Needle Assembly Batch No.	Type SS B D F C (Note 1)	Vent Seal (Y/NA)	Start Time	End Time	Beginning Pressure (in.Hg or psig)	End Pressure (in.Hg or psig)	Sampler's Initials
IN	090412	EI779	250	0825585	N/A	N/A	439C	INHSG1203NB	B	N/A	0907	0912	25 in. Hg	3 in. Hg	AD
IN	090412	EIB85	250	0825586	NRFTRUSPC022-1	IN-ID-NRF-SPC	439C	INHSG1203NB	D	Y	0920	0925	25 in. Hg	1 in. Hg	AD
IN	090412	EI504	250	0825587	NRFTRUSPC022-1	IN-ID-NRF-SPC	439C	INHSG1203NB	D	Y	0920	0925	25 in. Hg	2 in. Hg	AD
IN	090412	EI770	250	0825588	NRFTRUSPC005-1	IN-ID-NRF-SPC	439C	INHSG1203NB	SS	Y	0946	0951	26 in. Hg	2 in. Hg	AD
IN	090412	EI672	250	0825589	NRFTRUSPC007-1	IN-ID-NRF-SPC	439C	INHSG1203NB	SS	Y	1005	1010	26 in. Hg	3 in. Hg	AD
IN	090412	EIC22	250	0825590	NRFTRUSPC009-1	IN-ID-NRF-SPC	439C	INHSG1203NB	SS	Y	1024	1029	26 in. Hg	2 in. Hg	AD
IN	090412	EI291	250	0825594	NRFTRUSPC016-1	IN-ID-NRF-SPC	439C	INHSG1203NB	SS	Y	1039	1044	27 in. Hg	2 in. Hg	AD
IN	090412	EIB00	250	0825595	NRFTRUSPC018-1	IN-ID-NRF-SPC	439C	INHSG1203NB	SS	Y	1055	1059	26 in. Hg	0 in. Hg	AD
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Note 1. Analysis required:
C - Needle Assembly Cleanliness Certification: VOC
SS - Single Sample: VOC, H_2, CH_4
B - Field Blank: VOC
D - Duplicate: VOC, H_2, CH_4
F - Field Reference Standard: VOC

Sampler's Signature

SPO060

Attachment 1 – Chain of Custody/Canister Tag (Continued) Chain of Custody # 595

Page 2 of 2

Field Batch Number: INHSG1206					
Comments: N/A		Instrument Section	M&TE ID No.	Calibration Due Date	Initials/Date
Analytical Laboratory - ECL		Pressure Meter	XC0517	~~3/1 CDE 9-13-12~~ 1-~~12~~2013	M 09/04/12
Shipping Tracking # N/A	Method of Shipping ECL Pickup	Thermometer	XC0717	6-5-2013	NN 09/04/12
		Min /Max Thermometer	XC0553 XC0689	10-12-2012 10-12-2012	NN 09/04/12
Analysis Requested VOC		Preservation Method: 0 - 40°C			
TID Number(s) 0825596		TID Initials and date: NN 09/04/12			

Custody Initiated By: (Sampler Name/Organization)	Date/Time 09-04-12 0912		
Relinquished By: (Name/Organization)	Date/Time 09-05-12 0800	Received By: (Name/Organization) Thomas B. Lintz INL/ECL	Date/Time 091012 0800
~~Relinquished~~ By: (Name/Organization)	Date/Time	Received By: (Name/Organization)	Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)	Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)	Date/Time
Final Disposition By: (Name/Organization) ~~TRU~~ INL Cashell-Crowder /ECL 9-12-12	Date/Time 091712 1300	Disposition: Cleaning	

900006

GAS SAMPLE CANISTER TAG

1	N	0	9	0	4	1	2	E	I	7	7	9
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: IN1456206 Drum Number: N/A

Sampling Organization: CCP Sample Description: FIELD BLANK

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 22	072512	1015	TBL
Cleaning Batch: 439C	M= <5.0E-2	P= 643T			
Field-	C= 25" Hg	T= 22.5	090412	0907	DD
Before Sample Collection	M=	P= 25			
Field-	C= 3 "Hg	T= 22.5	090412	0912	DD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C= 3"Hg	T= 22	091012	0821	JHC
	M=	P= 640T			

Blank Sample? (Y) / N (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	9	0	4	1	2	E	I	B	8	5
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1206 Drum Number: NRETRMSPLC022-1

Sampling Organization: CCI Sample Description: DUPLICATE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 22	072512	1015	TBL
Cleaning Batch: 439C	M= <5.0E-2	P= 643T			
Field-	C= 25" Hg	T= 22.5	090412	0920	DD
Before Sample Collection	M=	P= 25			
Field-	C= 1 "Hg	T= 22.5	090412	0925	DD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C= 1 "Hg	T= 22	091012	0823	JBA
	M= 0	P= 640T			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	A	9	0	4	1	2	E	I	5	0	4
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1206 Drum Number: NRFTRUSPLC022-1

Sampling Organization: CCP Sample Description: DUPLICATE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 22	072512	1015	TBL
Cleaning Batch: 439C	M= <5.0E-2	P= 643T			
Field-	C= 25 "Hg	T= 22.5	090412	0920	DD
Before Sample Collection	M=	P= 25			
Field-	C= 2 "Hg	T= 22.5	090412	0925	DD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C= 2 "Hg	T= 22	091012	0825	~~TBL~~
	M=	P= 640T			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	J	9	0	4	1	2	E	I	7	7	0
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1206 Drum Number: NRETRUSPC005-1

Sampling Organization: CCP Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 22	072512	1015	TBL
Cleaning Batch: 439C	M= <5.0E-2	P= 643T			
Field-	C= 26" Hg	T= 22.5	090412	0946	DD
Before Sample Collection	M=	P= 25			
Field-	C= 2 "Hg	T= 22.5	090412	0951	DD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C= 2"Hg	T= 22	091012	0827	DHC
	M=	P= 640T			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: [signature]

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	9	0	4	1	2	E	I	6	7	2
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1206 Drum Number: AIRTRUSPC007-1

Sampling Organization: CCP Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 22	072512	1015	TBL
Cleaning Batch: 439C	M= <5.0E-2	P= 643T			
Field-	C= 26" Hg	T= 22.5	090412	1005	M
Before Sample Collection	M=	P= 25			
Field-	C= 3 " Hg	T= 22.5	090412	1010	M
After Sample Collection	M=	P= 25			
Analytical Laboratory	C= 3" Hg	T= 22	091012	0830	JRR
	M= 0	P= 640T			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: [signature]

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	9	0	4	1	2	E	I	C	2	2
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1206 Drum Number: NRF-TRY5PC009-1

Sampling Organization: CCP Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 22	072512	1015	TBL
Cleaning Batch: 439C	M= <5.0E-2	P= 643T			
Field-	C= 26" Hg	T= 22.5	090412	1024	DD
Before Sample Collection	M=	P= 25			
Field-	C= 2" Hg	T= 22.5	090412	1029	DD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C= 2" Hg	T= 22	091012	0832	TBL
	M=	P= 640T			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	9	0	4	1	2	E	I	2	9	1
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: 1NHSG1206 Drum Number: NRCTRUSPC016-1

Sampling Organization: CCI Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 22	072512	1015	TBL
Cleaning Batch: 439C	M= <5.0E-2	P= 643T			
Field-	C= 27" Hg	T= 22.5	090412	1039	MM
Before Sample Collection	M=	P= 25			
Field-	C= 2" Hg	T= 22.5	090412	1044	MM
After Sample Collection	M=	P= 25			
Analytical Laboratory	C= 2" Hg	T= 22	091012	0834	[illegible]
	M=	P= 640T			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: [signature]

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	9	0	4	1	2	E	I	B	0	0
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1206 Drum Number: AIRTRUSPC018-1

Sampling Organization: CCA Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 22	072512	1015	TBL
Cleaning Batch: 439C	M= <5.0E-2	P= 643T			
Field-	C= 26" Hg	T= 22.5	090412	1055	MM
Before Sample Collection	M=	P= 25			
Field-	C= 0 "Hg	T= 22.5	090412	1059	MO
After Sample Collection	M=	P= 25			
Analytical Laboratory	C= 0 "Hg	T= 22	091012	0836	~~SBC~~
	M= 0	P= WOT			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: [signature]

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

SECTION 3.0

ANALYSIS RESULTS

- **DATA QUALIFIERS**
- **FORM 1s**

DATA QUALIFIERS

IDAHO NATIONAL LABORATORY
ENVIRONMENTAL CHEMISTRY LABORATORY

Data qualifiers (flags) are as follows:

U - This flag indicates that the analyte was either not detected or found to be less than the MDL.

J - This flag is used when the data indicates the presence of a compound that meets the identification criteria and the result is $\geq$ MDL but less than the PRQL. For example, if the PRQL is 10 ppmv and if the MDL is 0.05 ppmv, and a sample analyte concentration of 0.30 ppmv is calculated, the data are reported as 0.30 J.

This flag is also used when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response compared to the closest eluting internal standard is assumed for quantitation of GC/MS analysis.

B - This flag is used when an analyte is found in the associated blank. It indicates possible/probable blank contamination and warns the data user to take appropriate action. This flag must be used for a TIC as well as for a positively identified target compound.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample is reanalyzed at a higher dilution factor, as in the "E" flag below, the suffix "DL" is appended to the sample number on the reporting form for the diluted sample, and all concentration values reported on that form are flagged with the "D" flag. This flag alerts data user that any discrepancies between the concentration reported may be due to dilution of the sample.

E - This flag identifies compounds whose concentrations exceed the calibration range of GC/MS or GC instruments for specific analysis. If one or more compounds have a response greater than full scale, the sample must be diluted and reanalyzed. All such compounds with a response greater than full scale have the concentration flagged with an "E" for the original analysis. If the dilution causes any compounds identified in the analysis to be below the calibration range in the second analysis, then the results of both analyses are reported separately. The reporting form for the diluted sample has the suffix "DL" appended to the sample number.

NOTE: For total xylenes, in GC/MS analysis, where three isomers are quantified, as two peaks, the calibration range of each peak is considered separately, e.g., a diluted analysis is not required for total zylenes unless the concentration of either peak separately exceeds the high standard.

N - This flag is used with TICs to indicate presumptive evidence of a compound's identification, based on a mass spectral library search.

Z - One or more QC samples do not meet acceptance criteria.

NR - Not Reported

Form Date (07/12/05)

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12254001		Field Sample ID:	IN090412EI779	
Analytical Batch:	ECL12036M		Sampling Batch:	INHSG1206	
Data Report:	ECL12036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	9/11/2012	1213	Date Sampled:	9/4/2012	
Lab File ID:	S11IC		Date Received:	09/10/12	
Instrument ID:	GCMS-I		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	0.13	U
Benzene	0.084	U
Bromoform	0.022	U
Butanol	0.11	U
Carbon disulfide	0.10	U
Carbon tetrachloride	0.042	U
Chlorobenzene	0.058	U
Chloroform	0.055	U
Chloromethane	0.11	U
Cyclohexane	0.079	U
1,1-Dichloroethane	0.073	U
1,2-Dichloroethane	0.074	U
1,1-Dichloroethylene	0.079	U
cis-1,2-Dichloroethylene	0.084	U
trans-1,2-Dichloroethylene	0.080	U
1,2-Dichloropropane	0.062	U
Ethyl benzene	0.056	U
Ethyl ether	0.095	U
Methyl ethyl ketone	0.095	U
Methyl isobutyl ketone	0.069	U
Methylene chloride	0.091	U
1,1,2,2-Tetrachloroethane	0.041	U
Tetrachloroethylene	0.051	U
Toluene	0.065	U
1,1,1-Trichloroethane	0.045	U
Trichloroethylene	0.053	U
Trichlorofluoromethane	0.051	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.038	U
1,3,5-Trimethylbenzene	0.050	U
1,2,4-Trimethylbenzene	0.053	U
p/m-Xylene	0.055	U
o-Xylene	0.054	U
Methanol	0.29	U

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12254001		Field Sample ID:	IN090412EI779	
Analytical Batch:	ECL12036M		Sampling Batch:	INHSG1206	
Data Report:	ECL12036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	9/11/2012	1213	Date Sampled:	9/4/2012	
Lab File ID:	S11IC		Date Received:	09/10/12	
Instrument ID:	GCMS-I		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12254002		Field Sample ID:	IN090412EIB85	
Analytical Batch:	ECL12036M		Sampling Batch:	INHSG1206	
Data Report:	ECL12036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	9/11/2012	1344	Date Sampled:	9/4/2012	
Lab File ID:	S11ID		Date Received:	09/10/12	
Instrument ID:	GCMS-I		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	2.1	J
Benzene	0.081	U
Bromoform	0.021	U
Butanol	0.11	U
Carbon disulfide	0.44	J
Carbon tetrachloride	0.040	U
Chlorobenzene	0.056	U
Chloroform	0.053	U
Chloromethane	0.11	U
Cyclohexane	0.076	U
1,1-Dichloroethane	0.071	U
1,2-Dichloroethane	0.071	U
1,1-Dichloroethylene	0.076	U
cis-1,2-Dichloroethylene	0.081	U
trans-1,2-Dichloroethylene	0.077	U
1,2-Dichloropropane	0.060	U
Ethyl benzene	0.054	U
Ethyl ether	0.092	U
Methyl ethyl ketone	0.10	J
Methyl isobutyl ketone	0.066	U
Methylene chloride	0.088	U
1,1,2,2-Tetrachloroethane	0.039	U
Tetrachloroethylene	0.049	U
Toluene	0.063	U
1,1,1-Trichloroethane	0.043	U
Trichloroethylene	0.051	U
Trichlorofluoromethane	0.049	U
1,1;2-Trichloro-1,2,2-trifluoroethane	0.037	U
1,3,5-Trimethylbenzene	0.048	U
1,2,4-Trimethylbenzene	0.051	U
p/m-Xylene	0.053	U
o-Xylene	0.052	U
Methanol	24	J

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12254002		Field Sample ID:	IN090412EIB85	
Analytical Batch:	ECL12036M		Sampling Batch:	INHSG1206	
Data Report:	ECL12036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	9/11/2012	1344	Date Sampled:	9/4/2012	
Lab File ID:	S11ID		Date Received:	09/10/12	
Instrument ID:	GCMS-I		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12254003		Field Sample ID:	IN090412EI504	
Analytical Batch:	ECL12036M		Sampling Batch:	INHSG1206	
Data Report:	ECL12036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	9/11/2012	1427	Date Sampled:	9/4/2012	
Lab File ID:	S11IE		Date Received:	09/10/12	
Instrument ID:	GCMS-I		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	2.1	J
Benzene	0.083	U
Bromoform	0.022	U
Butanol	0.11	U
Carbon disulfide	0.45	J
Carbon tetrachloride	0.041	U
Chlorobenzene	0.057	U
Chloroform	0.054	U
Chloromethane	0.11	U
Cyclohexane	0.078	U
1,1-Dichloroethane	0.072	U
1,2-Dichloroethane	0.073	U
1,1-Dichloroethylene	0.077	U
cis-1,2-Dichloroethylene	0.083	U
trans-1,2-Dichloroethylene	0.078	U
1,2-Dichloropropane	0.061	U
Ethyl benzene	0.055	U
Ethyl ether	0.093	U
Methyl ethyl ketone	0.10	J
Methyl isobutyl ketone	0.067	U
Methylene chloride	0.089	U
1,1,2,2-Tetrachloroethane	0.040	U
Tetrachloroethylene	0.050	U
Toluene	0.064	U
1,1,1-Trichloroethane	0.044	U
Trichloroethylene	0.052	U
Trichlorofluoromethane	0.050	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.037	U
1,3,5-Trimethylbenzene	0.049	U
1,2,4-Trimethylbenzene	0.052	U
p/m-Xylene	0.054	U
o-Xylene	0.053	U
Methanol	24	J

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12254003		Field Sample ID:	IN090412EI504	
Analytical Batch:	ECL12036M		Sampling Batch:	INHSG1206	
Data Report:	ECL12036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	9/11/2012	1427	Date Sampled:	9/4/2012	
Lab File ID:	S11IE		Date Received:	09/10/12	
Instrument ID:	GCMS-I		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12254004		Field Sample ID:	IN090412EI770	
Analytical Batch:	ECL12036M		Sampling Batch:	INHSG1206	
Data Report:	ECL12036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	9/11/2012	1506	Date Sampled:	9/4/2012	
Lab File ID:	S11IF		Date Received:	09/10/12	
Instrument ID:	GCMS-I		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	28	J
Benzene	0.22	U
Bromoform	0.057	U
Butanol	0.29	U
Carbon disulfide	0.94	J
Carbon tetrachloride	0.11	U
Chlorobenzene	0.15	U
Chloroform	0.14	U
Chloromethane	0.29	U
Cyclohexane	0.21	U
1,1-Dichloroethane	0.19	U
1,2-Dichloroethane	0.19	U
1,1-Dichloroethylene	0.20	U
cis-1,2-Dichloroethylene	0.22	U
trans-1,2-Dichloroethylene	0.21	U
1,2-Dichloropropane	0.16	U
Ethyl benzene	0.14	U
Ethyl ether	0.25	U
Methyl ethyl ketone	0.25	U
Methyl isobutyl ketone	0.18	U
Methylene chloride	0.23	U
1,1,2,2-Tetrachloroethane	0.11	U
Tetrachloroethylene	0.13	U
Toluene	0.17	U
1,1,1-Trichloroethane	0.12	U
Trichloroethylene	0.14	U
Trichlorofluoromethane	0.13	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.099	U
1,3,5-Trimethylbenzene	0.13	U
1,2,4-Trimethylbenzene	0.14	U
p/m-Xylene	0.14	U
o-Xylene	0.14	U
Methanol	48	J

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12254004		Field Sample ID:	IN090412EI770	
Analytical Batch:	ECL12036M		Sampling Batch:	INHSG1206	
Data Report:	ECL12036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	9/11/2012	1506	Date Sampled:	9/4/2012	
Lab File ID:	S11IF		Date Received:	09/10/12	
Instrument ID:	GCMS-I		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12254005		Field Sample ID:	IN090412EI672	
Analytical Batch:	ECL12036M		Sampling Batch:	INHSG1206	
Data Report:	ECL12036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	9/11/2012	1549	Date Sampled:	9/4/2012	
Lab File ID:	S11IG		Date Received:	09/10/12	
Instrument ID:	GCMS-I		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	0.17	J
Benzene	0.082	U
Bromoform	0.021	U
Butanol	0.11	U
Carbon disulfide	1.2	J
Carbon tetrachloride	0.040	U
Chlorobenzene	0.057	U
Chloroform	0.053	U
Chloromethane	0.11	U
Cyclohexane	0.077	U
1,1-Dichloroethane	0.071	U
1,2-Dichloroethane	0.072	U
1,1-Dichloroethylene	0.076	U
cis-1,2-Dichloroethylene	0.082	U
trans-1,2-Dichloroethylene	0.077	U
1,2-Dichloropropane	0.060	U
Ethyl benzene	0.054	U
Ethyl ether	0.092	U
Methyl ethyl ketone	0.092	U
Methyl isobutyl ketone	0.066	U
Methylene chloride	0.088	U
1,1,2,2-Tetrachloroethane	0.040	U
Tetrachloroethylene	0.049	U
Toluene	0.063	U
1,1,1-Trichloroethane	0.044	U
Trichloroethylene	0.051	U
Trichlorofluoromethane	0.050	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.037	U
1,3,5-Trimethylbenzene	0.049	U
1,2,4-Trimethylbenzene	0.052	U
p/m-Xylene	0.053	U
o-Xylene	0.052	U
Methanol	7.4	J

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12254005		Field Sample ID:	IN090412EI672	
Analytical Batch:	ECL12036M		Sampling Batch:	INHSG1206	
Data Report:	ECL12036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	9/11/2012	1549	Date Sampled:	9/4/2012	
Lab File ID:	S11IG		Date Received:	09/10/12	
Instrument ID:	GCMS-I		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12254006		Field Sample ID:	IN090412EIC22	
Analytical Batch:	ECL12036M		Sampling Batch:	INHSG1206	
Data Report:	ECL12036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	9/11/2012	1629	Date Sampled:	9/4/2012	
Lab File ID:	S11IH		Date Received:	09/10/12	
Instrument ID:	GCMS-I		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	9.9	J
Benzene	0.094	U
Bromoform	0.024	U
Butanol	0.12	U
Carbon disulfide	0.85	J
Carbon tetrachloride	0.046	U
Chlorobenzene	0.065	U
Chloroform	0.061	U
Chloromethane	0.12	U
Cyclohexane	0.088	U
1,1-Dichloroethane	0.082	U
1,2-Dichloroethane	0.083	U
1,1-Dichloroethylene	0.088	U
cis-1,2-Dichloroethylene	0.094	U
trans-1,2-Dichloroethylene	0.089	U
1,2-Dichloropropane	0.070	U
Ethyl benzene	0.062	U
Ethyl ether	0.11	U
Methyl ethyl ketone	0.11	U
Methyl isobutyl ketone	0.076	U
Methylene chloride	0.10	U
1,1,2,2-Tetrachloroethane	0.046	U
Tetrachloroethylene	0.057	U
Toluene	0.073	U
1,1,1-Trichloroethane	0.050	U
Trichloroethylene	0.059	U
Trichlorofluoromethane	0.057	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.042	U
1,3,5-Trimethylbenzene	0.056	U
1,2,4-Trimethylbenzene	0.059	U
p/m-Xylene	0.061	U
o-Xylene	0.060	U
Methanol	30	J

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12254006		Field Sample ID:	IN090412EIC22	
Analytical Batch:	ECL12036M		Sampling Batch:	INHSG1206	
Data Report:	ECL12036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	9/11/2012	1629	Date Sampled:	9/4/2012	
Lab File ID:	S11IH		Date Received:	09/10/12	
Instrument ID:	GCMS-I		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12254007		Field Sample ID:	IN090412EI291	
Analytical Batch:	ECL12036M		Sampling Batch:	INHSG1206	
Data Report:	ECL12036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	9/11/2012	1711	Date Sampled:	9/4/2012	
Lab File ID:	S11II		Date Received:	09/10/12	
Instrument ID:	GCMS-I		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	17	J
Benzene	0.16	J
Bromoform	0.043	U
Butanol	0.21	U
Carbon disulfide	0.29	J
Carbon tetrachloride	0.081	U
Chlorobenzene	0.11	U
Chloroform	0.11	U
Chloromethane	0.22	U
Cyclohexane	0.15	U
1,1-Dichloroethane	0.14	U
1,2-Dichloroethane	0.14	U
1,1-Dichloroethylene	0.15	U
cis-1,2-Dichloroethylene	0.16	U
trans-1,2-Dichloroethylene	0.15	U
1,2-Dichloropropane	0.12	U
Ethyl benzene	0.11	U
Ethyl ether	0.18	U
Methyl ethyl ketone	0.18	U
Methyl isobutyl ketone	0.13	U
Methylene chloride	0.18	U
1,1,2,2-Tetrachloroethane	0.079	U
Tetrachloroethylene	0.099	U
Toluene	0.14	J
1,1,1-Trichloroethane	0.087	U
Trichloroethylene	0.10	U
Trichlorofluoromethane	0.10	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.074	U
1,3,5-Trimethylbenzene	0.097	U
1,2,4-Trimethylbenzene	0.10	U
p/m-Xylene	0.11	U
o-Xylene	0.10	U
Methanol	8.6	J

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12254007		Field Sample ID:	IN090412EI291	
Analytical Batch:	ECL12036M		Sampling Batch:	INHSG1206	
Data Report:	ECL12036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	9/11/2012	1711	Date Sampled:	9/4/2012	
Lab File ID:	S11II		Date Received:	09/10/12	
Instrument ID:	GCMS-I		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12254008		Field Sample ID:	IN090412EIB00	
Analytical Batch:	ECL12036M		Sampling Batch:	INHSG1206	
Data Report:	ECL12036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	9/11/2012	1751	Date Sampled:	9/4/2012	
Lab File ID:	S11IJ		Date Received:	09/10/12	
Instrument ID:	GCMS-I		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	17	J
Benzene	0.099	U
Bromoform	0.026	U
Butanol	0.13	U
Carbon disulfide	0.12	U
Carbon tetrachloride	0.049	U
Chlorobenzene	0.069	U
Chloroform	0.065	U
Chloromethane	0.13	U
Cyclohexane	0.093	U
1,1-Dichloroethane	0.086	U
1,2-Dichloroethane	0.087	U
1,1-Dichloroethylene	0.092	U
cis-1,2-Dichloroethylene	0.099	U
trans-1,2-Dichloroethylene	0.093	U
1,2-Dichloropropane	0.073	U
Ethyl benzene	0.065	U
Ethyl ether	0.11	U
Methyl ethyl ketone	0.51	J
Methyl isobutyl ketone	0.080	U
Methylene chloride	0.11	U
1,1,2,2-Tetrachloroethane	0.048	U
Tetrachloroethylene	0.060	U
Toluene	0.077	U
1,1,1-Trichloroethane	0.053	U
Trichloroethylene	0.062	U
Trichlorofluoromethane	0.060	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.045	U
1,3,5-Trimethylbenzene	0.059	U
1,2,4-Trimethylbenzene	0.062	U
p/m-Xylene	0.064	U
o-Xylene	0.063	U
Methanol	6.9	J

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12254008		Field Sample ID:	IN090412EIB00	
Analytical Batch:	ECL12036M		Sampling Batch:	INHSG1206	
Data Report:	ECL12036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	9/11/2012	1751	Date Sampled:	9/4/2012	
Lab File ID:	S11IJ		Date Received:	09/10/12	
Instrument ID:	GCMS-I		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

SECTION 4.0

QUALITY CONTROL MEASUREMENTS RESULTS

- Laboratory Duplicate Comparison Form
- Laboratory Blank Summary Form
- Laboratory Blank Results Form
- Internal Standard Area Form
- Laboratory Control Sample Results Form

LABORATORY DUPLICATE FORM
GAS VOC ANALYSIS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Method:	CCP-TP-175	Rev. 3	Data Report:	ECL12036M	
Instrument ID:	GCMS-I		Analytical Batch:	ECL12036M	
Lab Sample ID:	12254004		Dup Lab Sample ID:	12254004D	
Field Sample ID:	IN090412EI770		Dup Field Sample ID:	IN090412EI770D	
Date/Time Analyzed:	9/11/2012	1506	Date/Time Dup Analyzed:	9/11/2012	1831
Lab File ID:	S11IF		Dup Lab File ID:	S11IK	

COMPOUND	SAMPLE CONCENTRATION (PPMV)	FLAG(S)	DUPLICATE CONCENTRATION (PPMV)	FLAG(S)	RPD* (%)
Acetone	27.82218	J	28.19647	J	1.34
Benzene	0.22	U	0.22	U	NC
Bromoform	0.057	U	0.057	U	NC
Butanol	0.29	U	0.29	U	NC
Carbon disulfide	0.93893	J	0.94978	J	1.15
Carbon tetrachloride	0.11	U	0.11	U	NC
Chlorobenzene	0.15	U	0.15	U	NC
Chloroform	0.14	U	0.14	U	NC
Chloromethane	0.29	U	0.29	U	NC
Cyclohexane	0.21	U	0.21	U	NC
1,1-Dichloroethane	0.19	U	0.19	U	NC
1,2-Dichloroethane	0.19	U	0.19	U	NC
1,1-Dichloroethylene	0.20	U	0.20	U	NC
cis-1,2-Dichloroethylene	0.22	U	0.22	U	NC
trans-1,2-Dichloroethylene	0.21	U	0.21	U	NC
1,2-Dichloropropane	0.16	U	0.16	U	NC
Ethyl benzene	0.14	U	0.14	U	NC
Ethyl ether	0.25	U	0.25	U	NC
Methyl ethyl ketone	0.25	U	0.25	U	NC
Methyl isobutyl ketone	0.18	U	0.18	U	NC
Methylene chloride	0.23	U	0.23	U	NC
1,1,2,2-Tetrachloroethane	0.11	U	0.11	U	NC
Tetrachloroethylene	0.13	U	0.13	U	NC
Toluene	0.17	U	0.17	U	NC
1,1,1-Trichloroethane	0.12	U	0.12	U	NC
Trichloroethylene	0.14	U	0.14	U	NC
Trichlorofluoromethane	0.13	U	0.13	U	NC
1,1,2-Trichloro-1,2,2-trifluoroethane	0.099	U	0.099	U	NC
1,3,5-Trimethylbenzene	0.13	U	0.13	U	NC
1,2,4-Trimethylbenzene	0.14	U	0.14	U	NC
p/m-Xylene	0.14	U	0.14	U	NC
o-Xylene	0.14	U	0.14	U	NC
Methanol	47.70660	J	47.02963	J	1.43

NC = NOT CALCULABLE

000034

* Specification limit <= 25% for analytes present in the sample and duplicate at concentrations greater than or equal to the PRQL

Form Rev 05-07

LABORATORY BLANK SUMMARY FORM
GAS VOC ANALYSIS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

METHOD:	CCP-TP-175	Rev. 3	ANALYTICAL BATCH:	ECL12036M
INSTRUMENT:	GCMS-I		DATA REPORT:	ECL12036M
LAB SAMPLE ID:	LBMIS11		FIELD SAMPLE ID:	LB31717S10
LAB FILE ID:	S11IA			
DATE/TIME ANALYZED:	9/11/2012	1052		

THIS LABORATORY BLANK APPLIES TO THE FOLLOWING SAMPLES:

FIELD SAMPLE ID	LAB SAMPLE ID	DATE/TIME ANALYZED
LCS30443SL02	LCSMIS11	9/11/2012 1131
IN090412EI779	12254001	9/11/2012 1213
IN090412EIB85	12254002	9/11/2012 1344
IN090412EI504	12254003	9/11/2012 1427
IN090412EI770	12254004	9/11/2012 1506
IN090412EI672	12254005	9/11/2012 1549
IN090412EIC22	12254006	9/11/2012 1629
IN090412EI291	12254007	9/11/2012 1711
IN090412EIB00	12254008	9/11/2012 1751
IN090412EI770D	12254004D	9/11/2012 1831

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	LBMIS11		Field Sample ID:	LB31717S10	
Analytical Batch:	ECL12036M		Sampling Batch:		
Data Report:	ECL12036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	9/11/2012	1052	Date Sampled:		
Lab File ID:	S11IA		Date Received:		
Instrument ID:	GCMS-I		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	0.034	U
Benzene	0.022	U
Bromoform	0.0057	U
Butanol	0.029	U
Carbon disulfide	0.026	U
Carbon tetrachloride	0.011	U
Chlorobenzene	0.015	U
Chloroform	0.014	U
Chloromethane	0.029	U
Cyclohexane	0.021	U
1,1-Dichloroethane	0.019	U
1,2-Dichloroethane	0.019	U
1,1-Dichloroethylene	0.020	U
cis-1,2-Dichloroethylene	0.022	U
trans-1,2-Dichloroethylene	0.021	U
1,2-Dichloropropane	0.016	U
Ethyl benzene	0.015	U
Ethyl ether	0.025	U
Methyl ethyl ketone	0.025	U
Methyl isobutyl ketone	0.018	U
Methylene chloride	0.024	U
1,1,2,2-Tetrachloroethane	0.011	U
Tetrachloroethylene	0.013	U
Toluene	0.017	U
1,1,1-Trichloroethane	0.012	U
Trichloroethylene	0.014	U
Trichlorofluoromethane	0.013	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.0099	U
1,3,5-Trimethylbenzene	0.013	U
1,2,4-Trimethylbenzene	0.014	U
p/m-Xylene	0.014	U
o-Xylene	0.014	U
Methanol	0.076	U

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	LBMIS11		Field Sample ID:	LB31717S10	
Analytical Batch:	ECL12036M		Sampling Batch:		
Data Report:	ECL12036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	9/11/2012	1052	Date Sampled:		
Lab File ID:	S11IA		Date Received:		
Instrument ID:	GCMS-I		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

Internal Standard Area Summary Report

Instrument ID : GCMS-I

Tune File : D:\ECL12036\BI12058.D
Tune Time : 11 Sep 2012 9:13 am

Daily Calibration File : D:\ECL12036\WI12058.D
Date Acquired : 11 Sep 2012 10:09 am

	IS1	IS2
Daily Calibration IS Areas:	2014161	1434387

File	Sample	IS1	IS2
S11IA.D	LBMIS11	1918600	1355662
S11IB.D	LCSMIS11	1860183	1358908
S11IC.D	12254001	1839930	1313549
S11ID.D	12254002	1813065	1314350
S11IE.D	12254003	1833301	1322709
S11IF.D	12254004	1812567	1296124
S11IG.D	12254005	1769733	1279907
S11IH.D	12254006	1811346	1290354
S11II.D	12254007	1793294	1287272
S11IJ.D	12254008	1835468	1316950
S11IK.D	12254004D	1830816	1305706

(fails) - fails 12hr time check * - fails criteria

IS1 = Fluorobenzene
IS2 = Chlorobenzene-d5

Area UPPER limit = 200 percent of IS Area
Area LOWER limit = 50 percent of IS Area

Created: Wed Sep 12 09:09:14 2012

LABORATORY CONTROL SAMPLE FORM
GAS VOC ANALYSIS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Method:	CCP-TP-175	Rev. 3	Data Report:	ECL12036M
Instrument ID:	GCMS-I		Analytical Batch:	ECL12036M

Lab Sample ID: LCSMIS11
Field Sample ID: LCS30443SL02
Date/Time Analyzed: 9/11/2012 1131
Lab File ID: S11IB

COMPOUND	FOUND CONCENTRATION (PPMV)	KNOWN CONCENTRATION (PPMV)	Recovery* (%)
Benzene	18.1448	20.20	89.83
Carbon tetrachloride	12.0794	11.89	101.59
Methyl isobutyl ketone	15.9619	16.20	98.53
Methylene chloride	21.8840	20.00	109.42
Toluene	18.2290	18.26	99.83
1,1,1-Trichloroethane	12.5681	12.16	103.36
Trichloroethylene	12.3200	12.26	100.49

* Recovery specification limits 70 - 130%

Form Rev 05-07

SECTION 5.0

CALIBRATION RESULTS

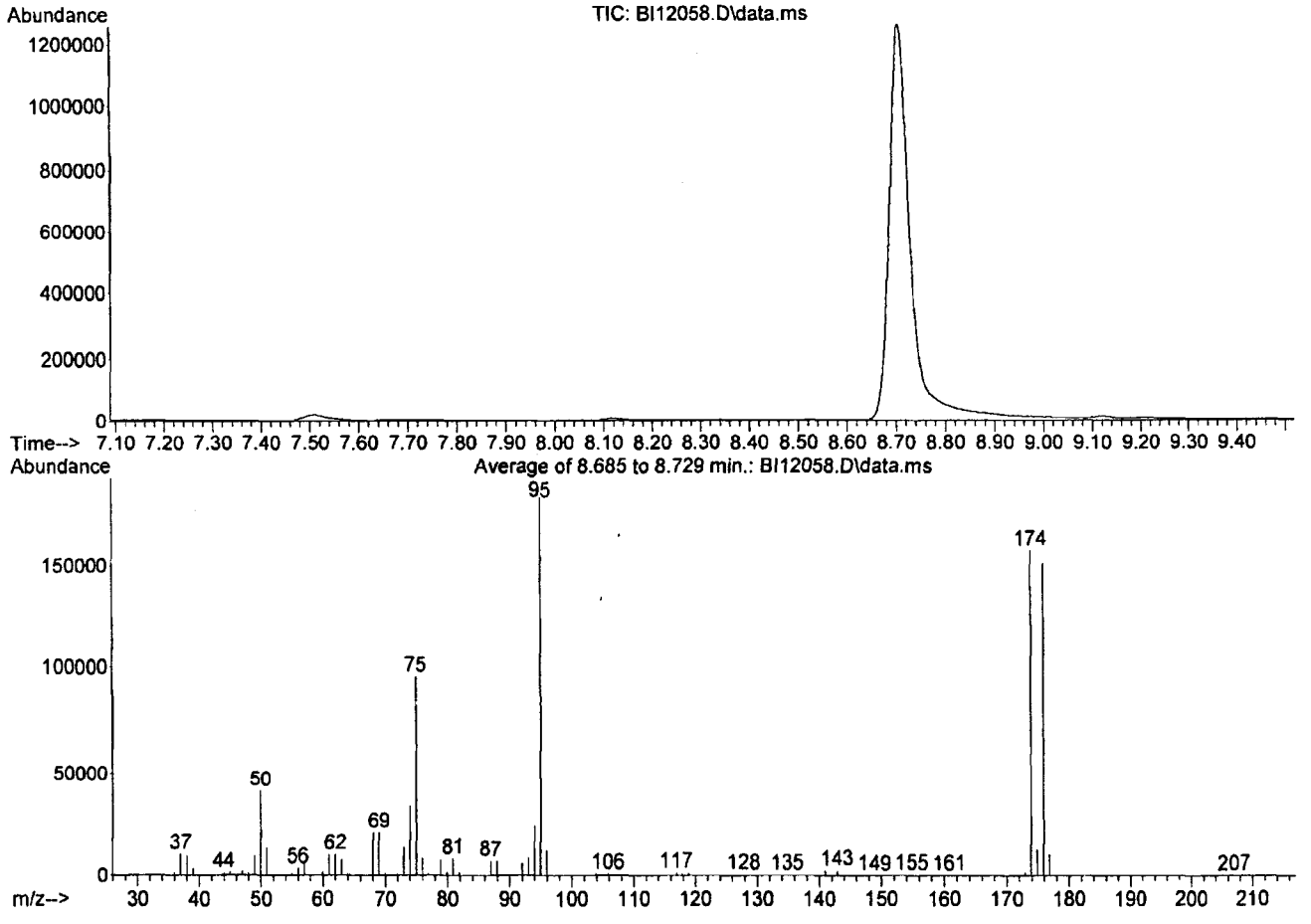
- **BFB Tune Form**
- **Initial Calibration Form**
- **Continuing Calibration Form**
- **MDL Reporting Form**

BFB

Data Path : D:\ECL12036\
Data File : BI12058.D
Acq On : 11 Sep 2012 9:13 am
Operator :
Sample : 50 NG BFB
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\GCMS-I Methods\WPID009.M
Title : WPID009 CCP-TP-175 ICAL
Last Update : Wed May 30 09:54:04 2012



Spectrum Information: Average of 8.685 to 8.729 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	22.9	41708	PASS
75	95	30	60	52.5	95492	PASS
95	95	100	100	100.0	181882	PASS
96	95	5	9	6.5	11912	PASS
173	174	0.00	2	1.1	1804	PASS
174	95	50	100	86.5	157321	PASS
175	174	5	9	7.4	11706	PASS
176	174	95	101	95.9	150918	PASS
177	176	5	9	6.5	9760	PASS

9-11-12

Response Factor Report GCMS-I

Method Path : C:\GCMS-I Methods\
Method File : WPID009.M
Title : WPID009 CCP-TP-175 ICAL
Last Update : Wed May 30 09:54:04 2012
Response Via : Initial Calibration

Calibration Files
1250=Y29IA.D 1000=Y29IB.D 750 =Y29IC.D 500 =Y29ID.D 250 =Y29IE.D 125 =Y29IF.D

		Compound	1250	1000	750	500	250	125	Avg	%RSD
1)	I	Fluorobenzene	----------ISTD----------							
2)	T	Ethyl Ether	0.260	0.255	0.251	0.254	0.254	0.264	0.256	1.88
3)	T	Methylene Chlo...	0.271	0.268	0.267	0.267	0.268	0.285	0.271	2.52
4)	T	1,1,2-Trichlor...	0.327	0.323	0.322	0.319	0.320	0.330	0.323	1.32
5)	T	1,1-Dichloroet...	0.277	0.273	0.272	0.271	0.274	0.279	0.274	1.12
6)	T	1,1-Dichloroet...	0.536	0.531	0.529	0.528	0.530	0.546	0.533	1.27
7)	T	cis-1,2-Dichlo...	0.314	0.310	0.308	0.305	0.303	0.312	0.309	1.32
8)	T	Chloroform	0.495	0.487	0.487	0.481	0.481	0.496	0.488	1.35
9)	T	1,2-Dichloroet...	0.444	0.435	0.434	0.428	0.428	0.436	0.434	1.35
10)	T	1,1,1-Trichlor...	0.467	0.460	0.458	0.452	0.455	0.467	0.460	1.32
11)	T	Carbon Tetrach...	0.446	0.439	0.435	0.429	0.429	0.438	0.436	1.48
12)	T	Trichloroethene	0.321	0.311	0.307	0.297	0.289	0.285	0.301	4.60
13)	T	Cyclohexane	0.587	0.572	0.564	0.555	0.553	0.565	0.566	2.17
14)	T	Benzene	1.095	1.070	1.054	1.034	1.022	1.041	1.053	2.51
15)	T	Acetone	0.724	0.719	0.711	0.708	0.724	0.748	0.723	1.96
16)	T	2-Butanone	0.192	0.191	0.190	0.187	0.187	0.189	0.189	1.15
17)	T	1-Butanol	0.334	0.325	0.323	0.314	0.302	0.296	0.316	4.55
18)	T	Methanol	0.209	0.203	0.199	0.197	0.193	0.198	0.200	2.74
19)	T	trans-1,2-Dich...	0.301	0.294	0.297	0.291	0.293	0.300	0.296	1.38
20)	T	Chloromethane	0.498	0.506	0.499	0.504	0.511	0.537	0.509	2.82
21)	T	Carbon Disulfide	1.054	1.029	1.035	1.043	1.045	1.063	1.045	1.18
22)	T	1,2-Dichloropr...	0.309	0.302	0.299	0.292	0.291	0.294	0.298	2.30
23)	T	Trichlorofluor...	0.532	0.529	0.530	0.527	0.533	0.548	0.533	1.39
24)	I	Chlorobenzene-d5	----------ISTD----------							
25)	T	Bromoform	0.474	0.449	0.443	0.420	0.411	0.402	0.433	6.23
26)	T	Tetrachloroethene	0.372	0.357	0.348	0.337	0.319	0.323	0.342	5.98
27)	T	1,1,2,2-Tetrac...	0.694	0.667	0.649	0.629	0.613	0.606	0.643	5.24
28)	T	Toluene	1.139	1.095	1.057	1.018	0.977	0.970	1.043	6.42
29)	T	Chlorobenzene	1.177	1.123	1.097	1.057	1.030	1.036	1.087	5.23
30)	T	Ethylbenzene	0.641	0.608	0.592	0.563	0.542	0.535	0.580	7.12
31)	T	Xylene (meta &...	0.841	0.790	0.764	0.723	0.686	0.671	0.746	8.67
32)	T	Xylene (ortho)	0.763	0.722	0.697	0.661	0.627	0.607	0.679	8.69
33)	T	1,3,5-Trimethy...	1.801	1.702	1.619	1.518	1.406	1.368	1.569	10.80
34)	T	1,2,4-Trimethy...	1.861	1.775	1.668	1.585	1.429	1.392	1.618	11.53
35)	T	4-Methyl-2-Pen...	1.231	1.199	1.173	1.159	1.151	1.148	1.177	2.74

(#) = Out of Range

Evaluate Continuing Calibration Report

Data Path : D:\ECL12036\
Data File : WI12058.D
Acq On : 11 Sep 2012 10:09 am
Operator :
Sample : CCP-TP-175 CCAL
Misc : 1X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 11 10:36:44 2012
Quant Method : C:\GCMS-I METHODS\WPID009.M
Quant Title : WPID009 CCP-TP-175 ICAL
QLast Update : Wed May 30 09:54:04 2012
Response via : Initial Calibration.

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	1.000	1.000	0.0	91	0.00
2	T	Ethyl Ether	0.256	0.263	-2.7	94	0.00
3	T	Methylene Chloride	0.271	0.275	-1.5	94	0.00
4	T	1,1,2-Trichlorofluoroethane	0.323	0.329	-1.9	94	-0.01
5	T	1,1-Dichloroethene	0.274	0.281	-2.6	94	-0.01
6	T	1,1-Dichloroethane	0.533	0.523	1.9	90	0.01
7	T	cis-1,2-Dichloroethene	0.309	0.303	1.9	91	0.02
8	T	Chloroform	0.488	0.481	1.4	91	0.01
9	T	1,2-Dichloroethane	0.434	0.422	2.8	90	0.00
10	T	1,1,1-Trichloroethane	0.460	0.454	1.3	91	0.00
11	T	Carbon Tetrachloride	0.436	0.432	0.9	92	0.00
12	T	Trichloroethene	0.301	0.297	1.3	91	0.00
13	T	Cyclohexane	0.566	0.548	3.2	90	0.00
14	T	Benzene	1.053	1.025	2.7	90	0.00
15	T	Acetone	0.723	0.731	-1.1	94	0.00
16	T	2-Butanone	0.189	0.186	1.6	91	0.02
17	T	1-Butanol	0.316	0.306	3.2	89	0.00
18	T	Methanol	0.200	0.224	-12.0	103	0.00
19	T	trans-1,2-Dichloroethene	0.296	0.297	-0.3	93	0.00
20	T	Chloromethane	0.509	0.524	-2.9	95	0.00
21	T	Carbon Disulfide	1.045	1.072	-2.6	94	-0.01
22	T	1,2-Dichloropropane	0.298	0.286	4.0	89	0.00
23	T	Trichlorofluoromethane	0.533	0.543	-1.9	94	0.00
24	I	Chlorobenzene-d5	1.000	1.000	0.0	93	0.00
25	T	Bromoform	0.433	0.428	1.2	95	-0.04
26	T	Tetrachloroethene	0.342	0.328	4.1	90	0.00
27	T	1,1,2,2-Tetrachloroethane	0.643	0.611	5.0	90	-0.04
28	T	Toluene	1.043	0.978	6.2	89	0.00
29	T	Chlorobenzene	1.087	1.031	5.2	90	0.00
30	T	Ethylbenzene	0.580	0.547	5.7	90	0.00
31	T	Xylene (meta & para)	0.746	0.706	5.4	91	-0.02
32	T	Xylene (ortho)	0.679	0.645	5.0	91	-0.03
33	T	1,3,5-Trimethylbenzene	1.569	1.484	5.4	91	-0.04
34	T	1,2,4-Trimethylbenzene	1.618	1.535	5.1	90	-0.03
35	T	4-Methyl-2-Pentanone	1.177	1.108	5.9	89	-0.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0

9-11-12

MDL REPORTING FORM
GAS VOC ANALYSIS

IDAHO NATIONAL LABORATORY
ENVIRONMENTAL CHEMISTRY LABORATORY

METHOD: CCP-TP-175 Rev. 3
Instrument ID: GCMS-I MDL Determination Date: 5/10/2012

ANALYTE	MOLECULAR WEIGHT	MDL (ng)	PRQL (ppmv)
Acetone	58.08	8.0	100
Benzene	78.12	7.0	10
Bromoform	252.75	5.9	10
Butanol	74.12	8.7	100
Carbon disulfide	76.14	8.2	10
Carbon tetrachloride	153.82	6.8	10
Chlorobenzene	112.56	7.0	10
Chloroform	119.38	7.0	10
Chloromethane	50.49	6.0	10
Cyclohexane	84.16	7.1	10
1,1-Dichloroethane	98.94	7.7	10
1,2-Dichloroethane	98.94	7.8	10
1,1-Dichloroethylene	96.94	8.1	10
cis-1,2-Dichloroethylene	96.94	8.7	10
trans-1,2-Dichloroethylene	96.94	8.2	10
1,2-Dichloropropane	112.99	7.5	10
Ethyl benzene	106.17	6.3	10
Ethyl ether	74.12	7.5	10
Methyl ethyl ketone	72.11	7.3	100
Methyl isobutyl ketone	100.16	7.3	100
Methylene chloride	84.93	8.2	10
1,1,2,2-Tetrachloroethane	167.85	7.3	10
Tetrachloroethylene	165.83	9.0	10
Toluene	92.15	6.4	10
1,1,1-Trichloroethane	133.41	6.4	10
Trichloroethylene	131.39	7.4	10
Trichlorofluoromethane	137.37	7.5	10
1,1,2-Trichloro-1,2,2-trifluoroethane	187.38	7.6	10
1,3,5-Trimethylbenzene	120.2	6.4	10
1,2,4-Trimethylbenzene	120.2	6.8	10
p/m-Xylene	106.17	6.2	10
o-Xylene	106.17	6.1	10
Methanol	32.04	9.9	100

Form Rev 05-07

SECTION 6.0

DATA REVIEW CHECKLISTS

- SAMPLE RECEIVING & CUSTODY REVIEW CHECKLIST
- DATA GENERATOR CHECKLIST
- INDEPENDENT REVIEW CHECKLIST

Environmental Chemistry Laboratory
Sample Receiving & Custody Review Checklist

Receiving Group: ECL 12036	Nonconformance Report Initiation Required? Yes or No NCR Number:
Reviewer Signature: Thomas B. Linto	Date: 09/10/12

Instructions: Complete one checklist per Report Group. Enter appropriate response for each question. Each "NO" response requires explanation. A "NO" response to a question may require initiation of an NCR.

REQUIREMENT	YES	NO	COMMENTS
1. FIELD CHAIN OF CUSTODY (COC)			
a. Are all field samples listed on the accompanying COC form included in the shipment?	✓		NA
b. Are all samples included in the shipment listed on the COC form?	✓		NA
c. Are all custody transfers completely documented by signatures of relinquishers and acceptors, time, and date of transfer?	✓		NA
d. Does all sample information (e.g., sample ID, sampling date and time, sample location, field batch, analytical request) listed on the COC correspond with the information on the sample tags?	✓		NA
e. Are any corrections on the COC appropriately made [a single line through the incorrect data, correct data written in (not overwritten), initialed and dated]?	✓		NA
2. SAMPLE TAGS			
a. Is each sample accompanied by a corresponding sample tag?	✓		NA
b. Do the field IDs on the sample tags correspond with those on the COC?	✓		NA
c. Does the sampling date and time correspond with the date and time on the COC?	✓		NA
d. Is the field batch number recorded on each sample tag, and does it correspond with that recorded on the COC?	✓		NA
e. Are the Sampling Organization and Sample Description fields completed?	✓		NA
f. Are ambient pressure and temperature, date and time and sampler initials recorded on each tag?	✓		NA
g. Are VOCs analyses requested as appropriate for each sample?	✓		NA
h. Are VOCs analyses requested for each field blank sample?	✓		NA
i. Did the sampler sign each sample tag?	✓		NA
j. Are any corrections on the sample tag appropriately made [a single line through the incorrect data, correct data written in (not overwritten), initialed and dated]?	✓		NA
k. Is the SUMMA® canister ID listed on the sample tag and/or COC?	✓		NA
3. ANALYSIS REQUEST FORM (ANRF)			
a. Do all field sample numbers correspond to those on the field COC?	✓		NA
b. Do the listed sample sizes correspond with the SUMMA® canisters?	✓		NA
c. Do VTSR and the Field Batch number match those on the COC?	✓		NA
d. If there is a COC number does it match the COC form number?	✓		NA
e. Are the correct analysis requests checked?	✓		NA
4. SAMPLE INTEGRITY			
a. Is a signed and dated or otherwise traceable custody seal present on the shipping container?	✓		NA
b. Is the shipping container custody seal intact and undamaged upon receipt at the laboratory?	✓		NA
c. Is the shipping container custody seal placed such that the container cannot be opened without breaking the seal?	✓		NA
d. Is a custody seal present on the valve of each sample canister?	✓		NA
e. Is the custody seal on each SUMMA® canister intact and undamaged upon receipt at the laboratory?	✓		NA
f. Is each custody seal placed such that the valve cannot be opened without breaking the seal?	✓		NA
g. Has physical integrity of all samples been preserved (such as, no dents, no missing connectors)?	✓		NA
h. Are the canister gauge pressure and ambient temperature and pressure recorded on the sample tag by ECL after canister receipt and equilibration to room temperature?	✓		NA
i. Did all of the SUMMA® canisters maintain pressure during shipment?	✓		NA
j. Does each sample have an ECL Sample ID tag corresponding to the ANRF?	✓		NA

The field sampling organization must be contacted if any discrepancies are found in the sample COC and tag documentation. This contact must be documented in writing.

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TWCP SAMPLE RECEIVING & CUSTODY REVIEW CHECKLIST ATTACHMENT

FIELD BATCH: INHSG1206

LABORATORY RECEIVING GROUP: ECL 12036

Temperature Probe Identification Number: XC0689

Expiration Date: 10/12/12

The temperature probe associated with the samples registered 20.4°C upon receipt at the laboratory. The minimum temperature registered by the probe during transport was 19.9°C and the maximum was 27.5°C.

Temperature Probe Identification Number: XC0553

Expiration Date: 10/12/12

The temperature probe associated with the samples registered 20.6°C upon receipt at the laboratory. The minimum temperature registered by the probe during transport was 20.2°C and the maximum was 26.6°C.

Signature of Sample Custodian: Thomas B. Lintz Date: 09/10/12

Form Date: 08/14/2006

Environmental Chemistry Laboratory
Data Generator Checklist

CCP-TP-175 (VOCs by GC/MS)

Analytical Batch#: ECL12036M	Procedure Revision: 3
Analyst Signature: Caitlin A Crowder	Analysis Date: 9-11-12

Criteria	Yes	No	N/A	Comments
1. Samples analyzed in accordance with CCP-TP-175 requirements.	✓			NA
2. BFB tune analyzed at the beginning of the run (once every 12 hours of instrument operation), and meets acceptance criteria.	✓			NA
3. CCAL analyzed at the beginning of the run (once every 12 hours of instrument operation), and meets acceptance criteria.	✓			NA
4. LB analyzed after the CCAL, and meets acceptance criteria.	✓			NA
5. Analytical batch QC (LCS, laboratory duplicate or LCS duplicate) analyzed if appropriate, and meet acceptance criteria. [N/A if these analyses are performed on another day within the batch.]	✓			NA
6. All samples quantitated within the calibration range for all target analytes, diluted and reanalyzed, or scheduled for reanalysis within the batch.	✓			NA
7. All non-target analyte peaks having total ion areas >10% of the nearest internal standard evaluated against a NIST Appendix VIII VOC mass spectral library for tentative identification.	✓			NA
8. All TICs identified using criteria defined in CCP-TP-175.	✓			NA
9. All logbook entries completed in accordance with CCP-QP-011.	✓			NA
10. All raw data corrections made per CCP-TP-188 requirements [lined out, initialed, dated, and justified (as necessary)].	✓			NA
11. All raw data evaluated, signed/initialed and dated in indelible black ink.	✓			NA
12. Raw data reviewed for completeness and accuracy.	✓			NA

Environmental Chemistry Laboratory Independent Technical Review (ITR) Checklist

Analytical Batch:	Data Report Number:	Method : CCP-TP-175
ECL12036-M	ECL12036-M	

Run#	Analysis Date	Data Generator	ITR Signature	Sections Reviewed	Date of Review
1	9-11-12	Catherine Crowder		1-7	9-13-12
2	NA	NA	NA	NA	NA
3	NA	NA	NA	NA	NA

Final Independent Technical Reviewer Release Signature: _____ Sections Reviewed: 1-10 Date: 9/17/12

Instructions: Complete one checklist per analytical batch. If more than three instrument runs were needed to complete the batch analysis, use a second checklist. Enter the appropriate response for each question. Each "No" response requires explanation.

Requirement	Run #1		Run #2		Run #3		Comments
	Yes	No	Yes	No	Yes	No	
1. Instrument Performance Check (BFB Tune)	///	///	///	///	///	///	
a. Was a BFB tune performed each day prior to analysis of samples?	/		NA	NA	NA	NA	NA
b. Is the raw data present, and signed/initialed and dated by the analyst, for each BFB tune?	/		NA	NA	NA	NA	NA
c. Do all the BFB tunes meet CCP-TP-175 requirements [Table 2]?	/		NA	NA	NA	NA	NA
2. Continuing Calibration Verification (CCAL)	///	///	///	///	///	///	
a. Was a CCAL performed each day after the BFB tune and prior to analysis of samples?	/		NA	NA	NA	NA	NA
b. Is the raw data present, and signed/initialed and dated by the analyst, for each CCAL?	/		NA	NA	NA	NA	NA
c. Is the %D less than or equal to 30% for all target analytes?	/		NA	NA	NA	NA	NA
d. Are the retention times of the internal standards within 30 seconds of those in the associated ICAL?	/		NA	NA	NA	NA	NA
e. Are the internal standard areas within a factor of 2 (i.e., 50 to 200%) of those in the associated ICAL?	/		NA	NA	NA	NA	NA
3. Laboratory Blanks (LBs)	///	///	///	///	///	///	
a. Was a laboratory blank analyzed daily after the CCAL and prior to analysis of samples?	/		NA	NA	NA	NA	NA
b. Are all laboratory blank results ≤3 times the program-required MDLs for all target analytes ?	/		NA	NA	NA	NA	NA
4. Samples (Including LCSs, Blanks and Duplicates)	///	///	///	///	///	///	
a. Are the raw data present, and signed/initialed and dated by the analyst, for all samples listed on the Analysis Request Form, and for all associated LCSs, blanks and duplicates?	/		NA	NA	NA	NA	NA
b. Are the internal standard areas within a factor of 2 (i.e., 50% to 200%) of those in the associated CCAL?	/		NA	NA	NA	NA	NA
c. Do the sample component RRT's compare within ± 0.06 RRT units of the standard component in the continuing calibration?	/		NA	NA	NA	NA	NA
d. Are all analytes found below the MDLs marked with an "X" to the right or left of the concentration on the Quant Report and marked with "No, <MDL", initialed and dated on the following spectral data sheets?	/		NA	NA	NA	NA	NA
e. Are all positive hits identified by a "Yes", initialed and dated on the spectral data sheets?	/		NA	NA	NA	NA	NA
f. Are negative hits identified by an "X" on the Quant Report, and by "No", justified, initialed and dated on the data sheets?	/		NA	NA	NA	NA	NA
g. Were all samples analyzed within 12 hours of the daily BFB tune?	/		NA	NA	NA	NA	NA
h. In your opinion, do the sample spectra for positive hits match the reference spectra?	/		NA	NA	NA	NA	NA
i. Was a TIC search conducted on each sample, blank, duplicate and LCS in the batch, using a NIST library containing Appendix VIII VOCs?	/		NA	NA	NA	NA	NA
j. Were the TICs reviewed and identified using the guidelines defined in CCP-TP-175, initialed and dated?	/		NA	NA	NA	NA	NA
k. Were all samples having analytes detected in amounts exceeding the upper calibration range reanalyzed at a different dilution or at a lower volume?	/		NA	NA	NA	NA	NA
l. Were all dilutions factors for all samples calculated correctly?	/		NA	NA	NA	NA	NA

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Environmental Chemistry Laboratory Independent Technical Review (ITR) Checklist

Analytical Batch:	Data Report Number:	Method : CCP-TP-175
ECL12036.M	ECL12036.M	

	Requirement	Yes	No	Comments
	5. Initial Calibration	///	///	
a.	Does the BFB tune meet CCP-TP-175 requirements [Table 2]?	✓		NA
b.	Are the %RSDs less than 35% for all target analytes?	✓		NA
c.	Is at least one of the calibration standards at a concentration below the PRQL?	✓		NA
d.	Are the correct ions used for quantitation?	✓		NA
e.	Is the ICAL raw data signed/initialed and dated by the analyst and included, or referenced, as appropriate for the report?	✓		NA
f.	Does the ICAL use at least 5 points (at least one below the PRQL), with %RSD < 35% for all target analytes?	✓		NA
	6. Laboratory Control Samples (LCSs)	///	///	
a.	Was at least one unique LCS analyzed with the analytical batch?	✓		NA
b.	Is the LCS second-source from the ICAL standard source?	✓		NA
c.	Do the recoveries for all target analytes in each LCS fall between 70% and 130%?	✓		NA
d.	IF a duplicate LCS was analyzed, are all RPDs for all analytes greater than the PRQL ≤25%?	✓		NA
	7. Duplicate Sample	///	///	
a.	Was at least one field sample from the analytical batch analyzed in duplicate?	✓		NA
b.	Do the RPDs for analytes above the PRQL meet the ≤25% precision requirement?	✓		NA
	8. Sample Integrity Verification	///	///	
a.	Is COC documentation complete and accurate for all reported samples?	✓		NA
b.	Was physical integrity of all samples maintained?	✓		NA
c.	Were all samples stored at temperatures between 0 and 40° C?	✓		NA
	9. Instrument, Method and Personnel Qualification Verification	///	///	
a.	Were all analyses conducted by analysts having current CCP qualification records on file?	✓		NA
b.	Were acceptable demonstrations of precision, accuracy, and MDLs performed semiannually?	✓		NA
	10. Data Report Validation and Completeness	///	///	
a.	Are all changes to original data or forms made by a single line through of incorrect data, initialed/signed and dated by the person making the change?	✓		NA
b.	Does the report contain a Cover Page with Table of Contents?	✓		NA
c.	Does the report contain a Sample Number Cross-Reference Table?	✓		NA
d.	Does the report contain copies of the COC and Gas Sample Canister Tags?	✓		NA
e.	Are Analysis Data Sheets and TIC Analysis Data Sheets present and accurate for all samples in the analytical batch?	✓		NA
f.	Are Lab Blank Summary Forms present for all lab blanks associated with the reported samples?	✓		NA
g.	Are Lab Blank Results Forms present for all lab blanks associated with the reported samples?	✓		NA
h.	Are BFB Tune Reports present for each continuing calibration associated with the reported samples?	✓		NA
i.	Are Initial Calibration Forms present for all Initial Calibrations associated with the reported samples?	✓		NA
j.	Are Continuing Calibration Forms present for each Continuing Calibration associated with the reported samples?	✓		NA
k.	Are Internal Standard Area Summary Forms present for each daily calibration and associated sample analyses?	✓		NA
l.	Are Lab Control Sample Forms present for each LCS associated with the reported samples?	✓		NA
m.	Are Lab Duplicate Forms present for each duplicate analysis associated with the reported samples?	✓		NA
n.	Does the report contain an MDL reporting form?	✓		NA
o.	Does the report contain Quantitation Reports for every standard, sample, and QC sample reported?	✓		NA
p.	Are Mass Spectra for all detected analytes and reported TICs present?	✓		NA
q.	Are copies of Gas Transfer Manifold logs showing all sample pressurizations/dilutions included for all reported samples?	✓		NA

(1)0050

Environmental Chemistry Laboratory Independent Technical Review (ITR) Checklist

Analytical Batch:	Data Report Number:	Method : CCP-TP-175
ECL12036-M	ECL12036-M	

	Requirement	Yes	No	Comments
r.	Are copies of analysis run logs for every standard, sample and QC sample present and accurate?	✓		NA
s.	Are U, J, B, D, E, H, Z, and N qualifying flags correctly assigned on the reporting forms?	✓		NA
t.	Are all data reporting forms completely and correctly filled out (e.g., correct batch numbers, analyst IDs, analysis times and dates, dilution factors, sample ID numbers and file IDs)?	✓		NA
u.	If there were any NCRs associated with the data are copies included?	✓		NA
v.	Are the analyte concentrations on the Analysis Data Sheets reported in units of ppm, and correctly rounded to 2 significant figures?	✓		NA
w.	Have all data received documented data generator review and signature?	✓		NA
x.	Were all calculations verified by a valid calculation program or a spot check of verified calculation programs?	✓		NA
y.	Have the data been reviewed for transcription errors?	✓		NA
z.	Are all pages in the data report legible and correctly paginated?	✓		NA

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SECTION 7.0

GCMS VOC RAW DATA

DATE: 9-11-12

GC/MS GAS ANALYSIS SUPPLEMENTAL DATA INPUT SHEET

DATA REPORT #:	**ECL12036M**	**METHOD:**	**CCP-TP-175**
ANALYSIS BATCH #:	**ECL12036M**	**INSTRUMENT:**	**I**
CCAL #:	**WI12058**	**REPORT TICs:**	**YES**
REPORT GROUP(s):	**ECL12036**		

FILE #	LABORATORY SAMPLE ID	DILUTION #1	DILUTION #2	DILUTION #3	DILUTION #4	FINAL DILUTION	VOLUME INJECTED mLs	TIME ANALYZED	DATE ANALYZED
S11IA	LBMIS11	1.0000	---------	---------	---------	1.00	100	10:52	11-Sep-12
S11IB	LCSMIS11	3.5000	---------	---------	---------	3.50	40	11:31	11-Sep-12
S11IC	12254001	3.8431	---------	---------	---------	3.84	100	12:13	11-Sep-12
S11ID	12254002	3.7032	---------	---------	---------	3.70	100	13:44	11-Sep-12
S11IE	12254003	3.7616	---------	---------	---------	3.76	100	14:27	11-Sep-12
S11IF	12254004	3.9740	---------	---------	---------	3.97	40	15:06	11-Sep-12
S11IG	12254005	3.7155	---------	---------	---------	3.72	100	15:49	11-Sep-12
S11IH	12254006	3.8502	---------	---------	---------	3.85	90	16:29	11-Sep-12
S11II	12254007	3.6061	2.0621	---------	---------	7.44	100	17:11	11-Sep-12
S11IJ	12254008	3.6009	---------	---------	---------	3.60	80	17:51	11-Sep-12
S11IK	12254004D	3.9740	---------	---------	---------	3.97	40	18:31	11-Sep-12
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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GC/MS-I USE LOG
Environmental Chemistry Laboratory
Idaho National Laboratory

CCP-TP-175 — Page UMI-02-

Analyst	Date	Analytical Batch #		File ID	Lab Sample ID	Field Sample ID	Dilution Factor	Volume (mL)	Comments
CAC	9-5-12	ECL12034	M	505IK	12242002	NA	10.2057	40	~~Folder~~ ECL12034 ~~ETSD~~ VOA-WI-26-9.5-16
↓	↓	↓	M	505IL	12242003	↓	10.7175	40	↓
↓	↓	↓	M	505IM	12242003D	↓	10.7175	40	↓
CAC	9-11-12	ECL12036	M	BI2058	50ng BFB	VOA-BF-26-1.36-9	1	36	Folder ECL12036 ETSD VOA-WI-26-11.5-16
↓	↓	↓	M	WI2058	CCP-TP-175CCAL	VOA-WC-26-5-17	1	100	↓
↓	↓	↓	M	S11IA	LBMIS11	LB-31717510	1	100	↓
↓	↓	↓	M	S11IB	LCSMIS11	LCS30443502	3.5000	40	↓
↓	↓	↓	M	S11IC	12254001	NA	3.8431	100	↓
↓	↓	↓	M	S11ID	12254002	↓	3.7032	100	↓
↓	↓	↓	M	S11IE	12254003	↓	3.7616	100 ± CAC	9-11-12
↓	↓	↓	M	S11IF	12254004	↓	3.9740	40	↓
↓	↓	↓	M	S11IG	12254005	↓	3.7155	100	↓
↓	↓	↓	M	S11IH	12254006	↓	VOA 9-11-12 3.8502	90	↓
↓	↓	↓	M	S11II	12254007	↓	7.4361 ~~3.1621~~ ~~3.6061~~	100 ~~90~~	CAC 9-11-12
↓	↓	↓	M	S11IJ	12254008	↓	3.6009	80	↓
↓	↓	↓	M	S11IK	12254004D	NA	3.9740	40	↓
			M		~~12254004~~ CAC 9-11-12			~~CAC~~	9-11-12
			M						
			M			NA			
			M						

4900054

Quantitation Report (QT Reviewed)

Data Path : D:\ECL12036\
Data File : WI12058.D
Acq On : 11 Sep 2012 10:09 am
Operator :
Sample : CCP-TP-175 CCAL
Misc : 1X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 11 10:36:44 2012
Quant Method : C:\GCMS-I METHODS\WPID009.M
Quant Title : WPID009 CCP-TP-175 ICAL
QLast Update : Wed May 30 09:54:04 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	14.95	96	2014161	473.00	ng		0.00
24) Chlorobenzene-d5	21.48	117	1434387	490.00	ng		0.00
Target Compounds							Qvalue
2) Ethyl Ether	6.37	59	619765	567.64	ng		92
3) Methylene Chloride	8.56	84	641302	555.66	ng		91
4) 1,1,2-Trichlorofluoroe...	7.04	101	807867	586.73	ng		99
5) 1,1-Dichloroethene	6.99	96	653048	559.39	ng		99
6) 1,1-Dichloroethane	10.62	63	1267916	558.14	ng		99
7) cis-1,2-Dichloroethene	12.19	96	714791	543.58	ng		97
8) Chloroform	13.02	83	1176594	566.47	ng		98
9) 1,2-Dichloroethane	14.36	62	1022021	552.88	ng		99
10) 1,1,1-Trichloroethane	13.40	97	1125397	574.62	ng		99
11) Carbon Tetrachloride	13.79	117	981344	528.55	ng		99
12) Trichloroethene	15.77	130	726536	566.13	ng		98
13) Cyclohexane	13.51	56	1290286	535.48	ng		88
14) Benzene	14.29	78	2350972	524.42	ng		97
15) Acetone	7.18	43	1769963	575.29	ng		98
16) 2-Butanone	12.26	72	426692	529.57	ng	#	69
17) 1-Butanol	15.70	56	702393	522.49	ng		95
18) Methanol	4.44	31	541461	636.49	ng		95
19) trans-1,2-Dichloroethene	9.38	96	681448	540.58	ng		98
20) Chloromethane	3.68	50	1162660	536.26	ng		99
21) Carbon Disulfide	7.56	76	2583125	580.59	ng		100
22) 1,2-Dichloropropane	16.27	63	668100	526.92	ng		95
23) Trichlorofluoromethane	5.59	101	1266013	557.60	ng		99
25) Bromoform	23.27	173	667501	526.05	ng		98
26) Tetrachloroethene	19.72	164	564208	562.94	ng		95
27) 1,1,2,2-Tetrachloroethane	24.22	83	1021476	542.64	ng		98
28) Toluene	18.56	92	1594433	522.35	ng		100
29) Chlorobenzene	21.54	112	1581024	497.00	ng		97
30) Ethylbenzene	21.75	106	819241	482.30	ng		96
31) Xylene (meta & para)	21.98	106	1182056	541.40	ng		93
32) Xylene (ortho)	22.83	106	1015296	510.61	ng		93
33) 1,3,5-Trimethylbenzene	24.79	105	2471870	538.28	ng		96
34) 1,2,4-Trimethylbenzene	25.51	105	2578671	544.35	ng		96
35) 4-Methyl-2-Pentanone	18.19	43	1856208	538.72	ng		95

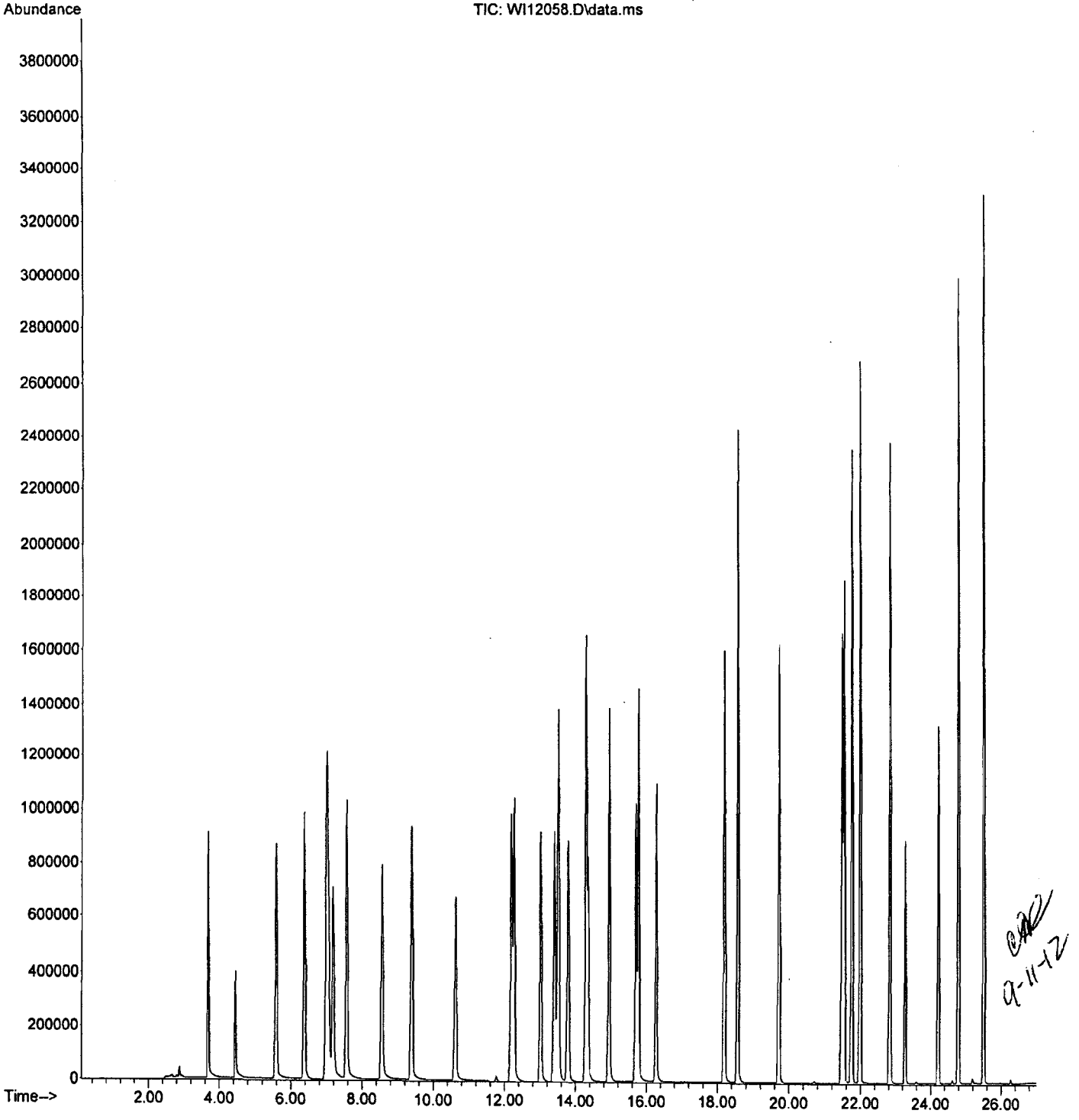
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9-11-12

Quantitation Report (QT Reviewed)

Data Path : D:\ECL12036\
Data File : WI12058.D
Acq On : 11 Sep 2012 10:09 am
Operator :
Sample : CCP-TP-175 CCAL
Misc : 1X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 11 10:36:44 2012
Quant Method : C:\GCMS-I METHODS\WPID009.M
Quant Title : WPID009 CCP-TP-175 ICAL
QLast Update : Wed May 30 09:54:04 2012
Response via : Initial Calibration



9-11-12

Quantitation Report (QT Reviewed)

Data Path : D:\ECL12036\
Data File : S11IA.D
Acq On : 11 Sep 2012 10:52 am
Operator :
Sample : LBMIS11
Misc : LB31717S10X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 11 14:08:11 2012
Quant Method : C:\GCMS-I Methods\WPID009.M
Quant Title : WPID009 CCP-TP-175 ICAL
QLast Update : Wed May 30 09:54:04 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	14.95	96	1918600	473.00	ng	0.00
24) Chlorobenzene-d5	21.49	117	1355662	490.00	ng	0.00

Target Compounds Qvalue

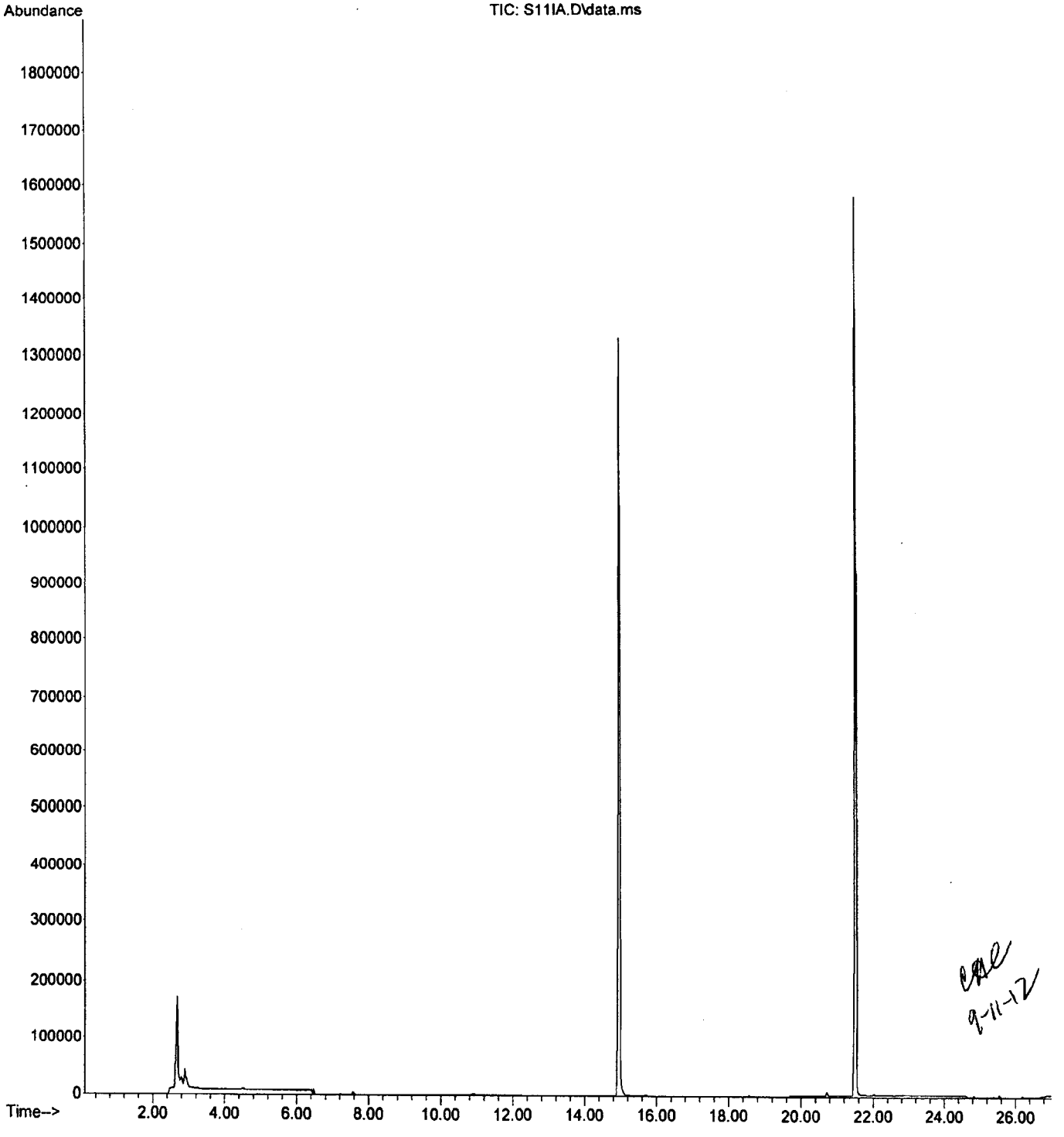
(#) = qualifier out of range (m) = manual integration (+) = signals summed

CAR 9-11-12

Quantitation Report (QT Reviewed)

Data Path : D:\ECL12036\
Data File : S11IA.D
Acq On : 11 Sep 2012 10:52 am
Operator :
Sample : LBMIS11
Misc : LB31717S10X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 11 14:08:11 2012
Quant Method : C:\GCMS-I Methods\WPID009.M
Quant Title : WPID009 CCP-TP-175 ICAL
QLast Update : Wed May 30 09:54:04 2012
Response via : Initial Calibration



9-11-12

Library Search Compound Report

Data Path : D:\ECL12036\
Data File : S11IA.D
Acq On : 11 Sep 2012 10:52 am
Operator :
Sample : LBMIS11
Misc : LB31717S10X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\GCMS-I Methods\WPID009.M
Quant Title : WPID009 CCP-TP-175 ICAL

TIC Library : C:\Database\NISTAPX8.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected
****

CAC 9-11-12

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	LCSMIS11		Field Sample ID:	LCS30443SL02	
Analytical Batch:	ECL12036M		Sampling Batch:		
Data Report:	ECL12036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	9/11/2012	1131	Date Sampled:		
Lab File ID:	S11IB		Date Received:		
Instrument ID:	GCMS-I		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	0.30	U
Benzene	18	
Bromoform	0.050	U
Butanol	0.25	U
Carbon disulfide	0.23	U
Carbon tetrachloride	12	
Chlorobenzene	0.13	U
Chloroform	0.13	U
Chloromethane	0.25	U
Cyclohexane	0.18	U
1,1-Dichloroethane	0.17	U
1,2-Dichloroethane	0.17	U
1,1-Dichloroethylene	0.18	U
cis-1,2-Dichloroethylene	0.19	U
trans-1,2-Dichloroethylene	0.18	U
1,2-Dichloropropane	0.14	U
Ethyl benzene	0.13	U
Ethyl ether	0.22	U
Methyl ethyl ketone	0.22	U
Methyl isobutyl ketone	16	J
Methylene chloride	22	
1,1,2,2-Tetrachloroethane	0.093	U
Tetrachloroethylene	0.12	U
Toluene	18	
1,1,1-Trichloroethane	13	
Trichloroethylene	12	
Trichlorofluoromethane	0.12	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.087	U
1,3,5-Trimethylbenzene	0.11	U
1,2;4-Trimethylbenzene	0.12	U
p/m-Xylene	0.13	U
o-Xylene	0.12	U
Methanol	0.66	U

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	LCSMIS11		Field Sample ID:	LCS30443SL02	
Analytical Batch:	ECL12036M		Sampling Batch:		
Data Report:	ECL12036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	9/11/2012	1131	Date Sampled:		
Lab File ID:	S11IB		Date Received:		
Instrument ID:	GCMS-I		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

Quantitation Report (QT Reviewed)

Data Path : D:\ECL12036\
Data File : S11IB.D
Acq On : 11 Sep 2012 11:31 am
Operator :
Sample : LCSMIS11
Misc : LCS30443SL02 3.5X 40ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 11 13:05:29 2012
Quant Method : C:\GCMS-I Methods\WPID009.M
Quant Title : WPID009 CCP-TP-175 ICAL
QLast Update : Wed May 30 09:54:04 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	14.98	96	1860183	473.00	ng	0.03
24) Chlorobenzene-d5	21.48	117	1358908	490.00	ng	0.00
Target Compounds						Qvalue
3) Methylene Chloride	8.56	84	924123	866.99	ng	88
9) 1,2-Dichloroethane	14.31	62	25836	X15.13	ng	91
10) 1,1,1-Trichloroethane	13.40	97	1414715	782.14	ng	97
11) Carbon Tetrachloride	13.79	117	1486205	866.73	ng	100
12) Trichloroethene	15.80	130	894962	755.09	ng	99
14) Benzene	14.31	78	2737570	661.21	ng	98
28) Toluene	18.58	92	2265956	783.58	ng	99
35) 4-Methyl-2-Pentanone	18.21	43	2434389	745.77	ng	96

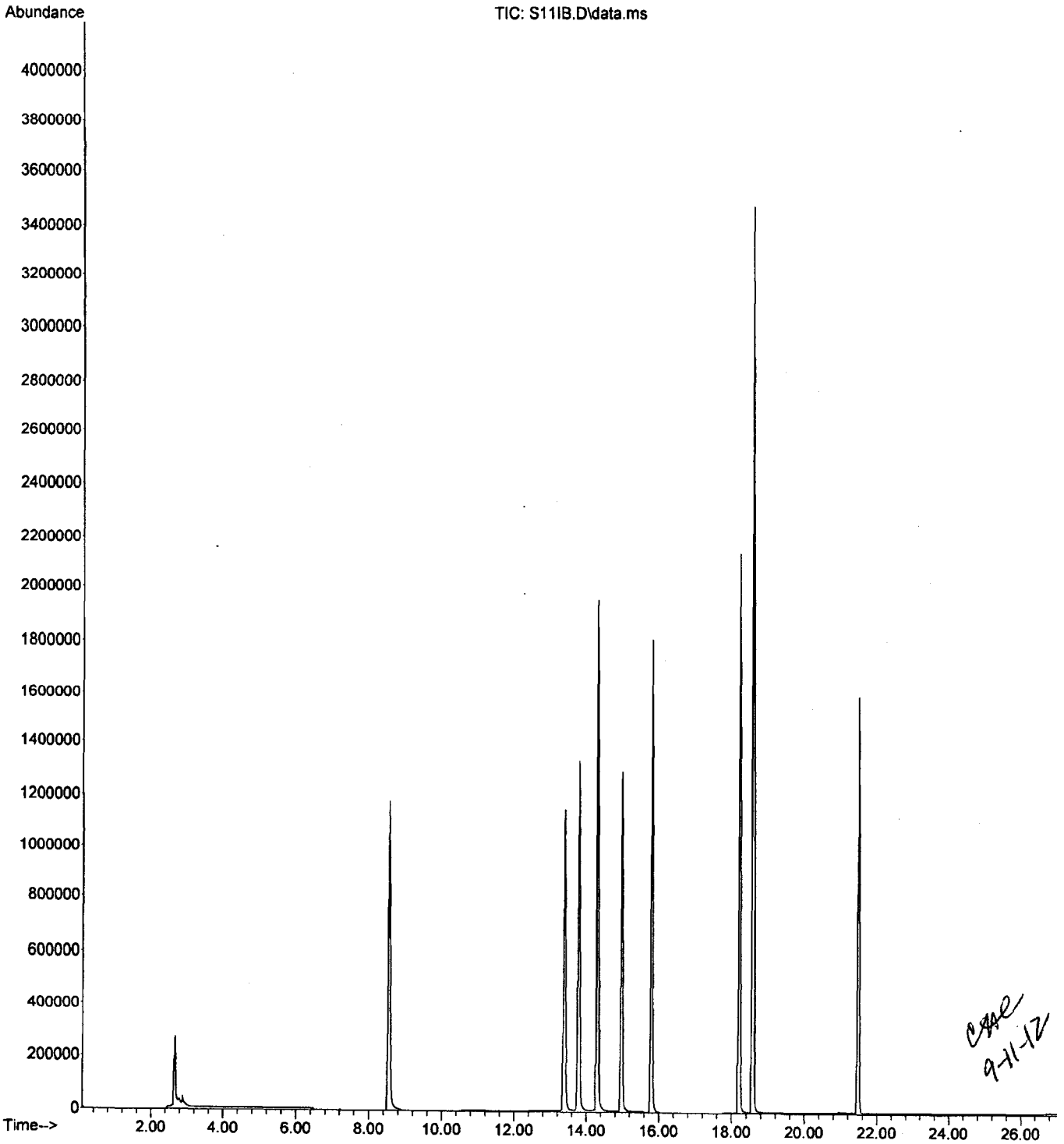
(#) = qualifier out of range (m) = manual integration (+) = signals summed

CAE 9-11-12

Quantitation Report (QT Reviewed)

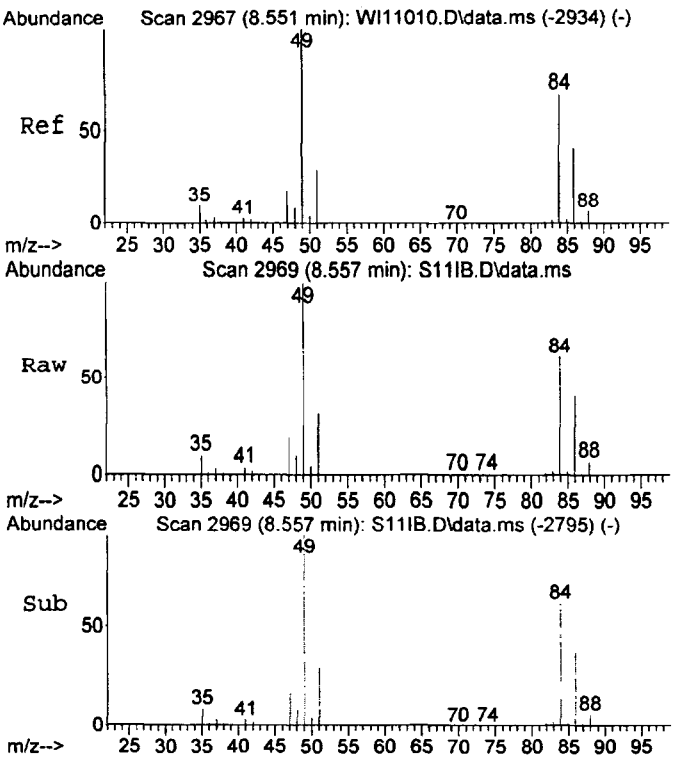
Data Path : D:\ECL12036\
Data File : S11IB.D
Acq On : 11 Sep 2012 11:31 am
Operator :
Sample : LCSMIS11
Misc : LCS30443SL02 3.5X 40ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 11 13:05:29 2012
Quant Method : C:\GCMS-I Methods\WPID009.M
Quant Title : WPID009 CCP-TP-175 ICAL
QLast Update : Wed May 30 09:54:04 2012
Response via : Initial Calibration



CAE 9-11-12

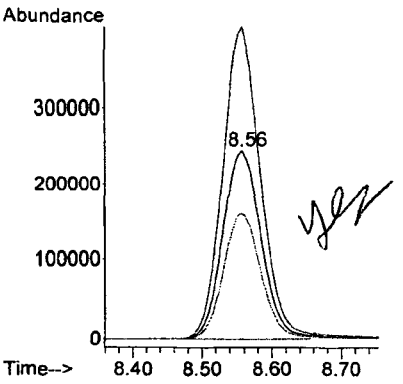
000063

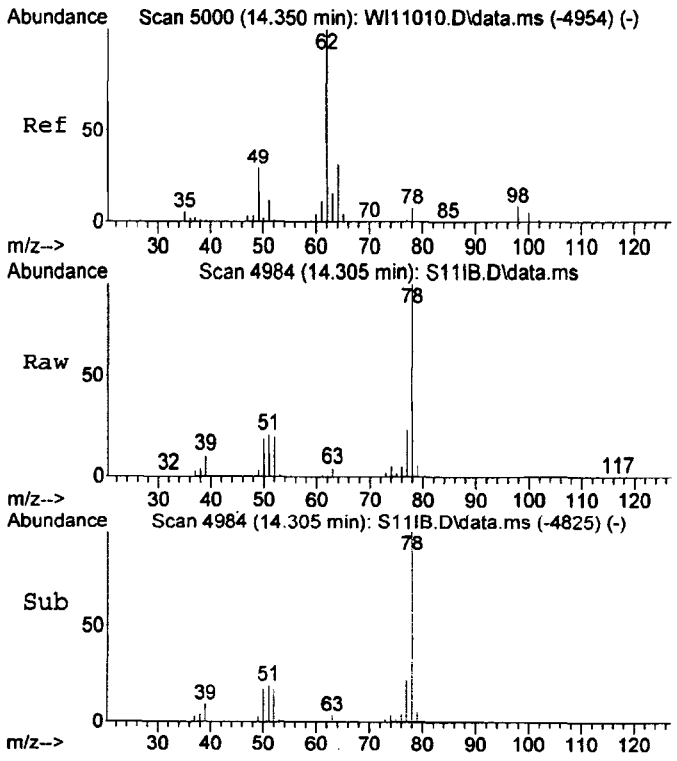


#3
Methylene Chloride
Concen: 866.99 ng
RT: 8.56 min Scan# 2969
Delta R.T. -0.002 min
Lab File: S11IB.D
Acq: 11 Sep 2012 11:31 am

Tgt Ion: 84 Resp: 924123

Ion	Ratio	Lower	Upper
84	100		
49	161.8	111.6	171.6
86	64.2	33.6	93.6

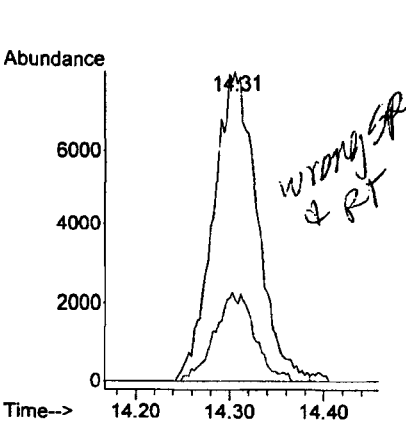




#9
1,2-Dichloroethane
Concen: 15.13 ng
RT: 14.31 min Scan# 4984
Delta R.T. -0.045 min
Lab File: S11IB.D
Acq: 11 Sep 2012 11:31 am

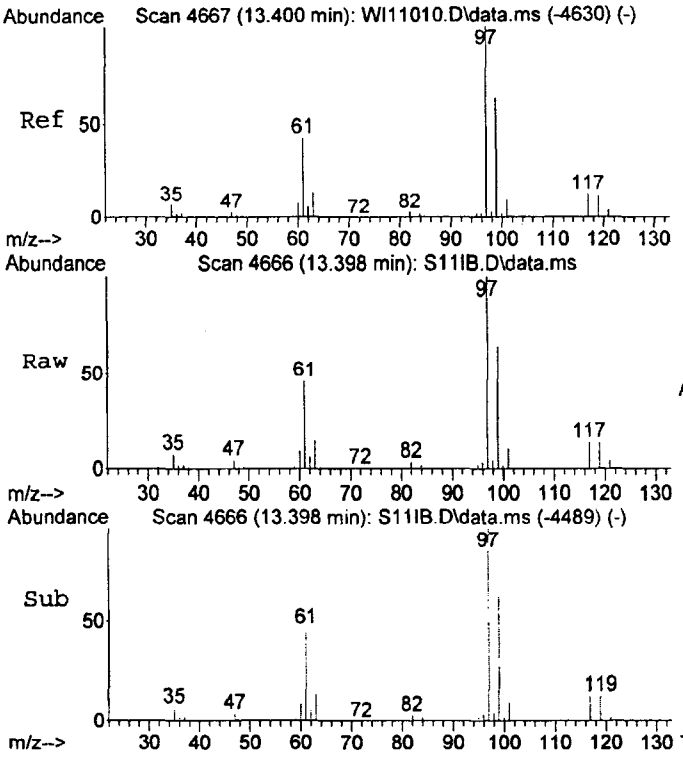
Tgt Ion: 62 Resp: 25836

Ion	Ratio	Lower	Upper
62	100		
64	26.3	1.1	61.1



wrong spectrum & RT

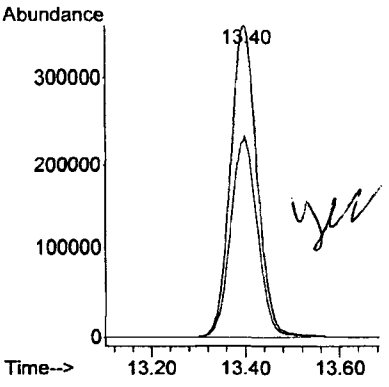
9-11-12

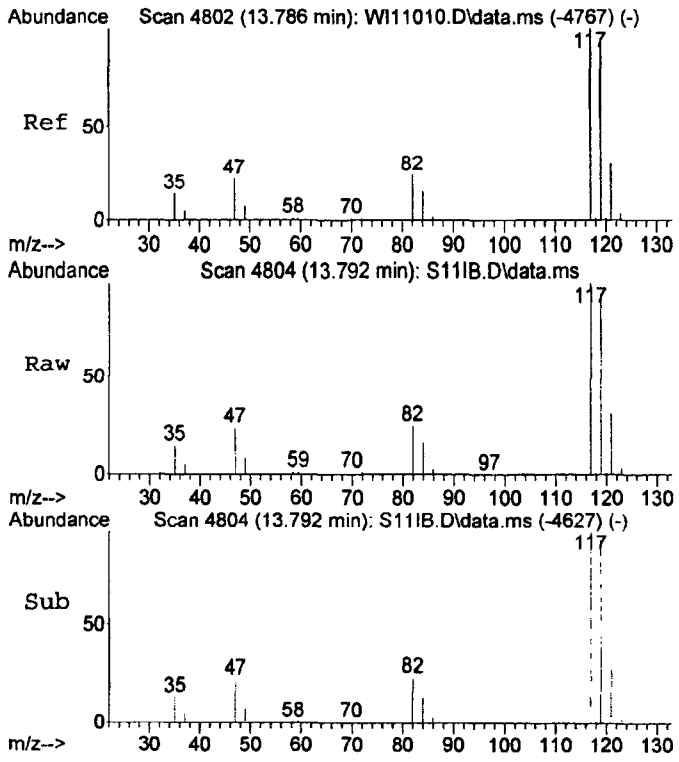


#10
1,1,1-Trichloroethane
Concen: 782.14 ng
RT: 13.40 min Scan# 4666
Delta R.T. 0.006 min
Lab File: S11IB.D
Acq: 11 Sep 2012 11:31 am

Tgt Ion: 97 Resp: 1414715

Ion	Ratio	Lower	Upper
97	100		
99	65.1	32.9	92.9

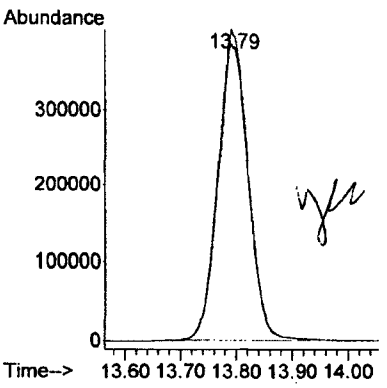




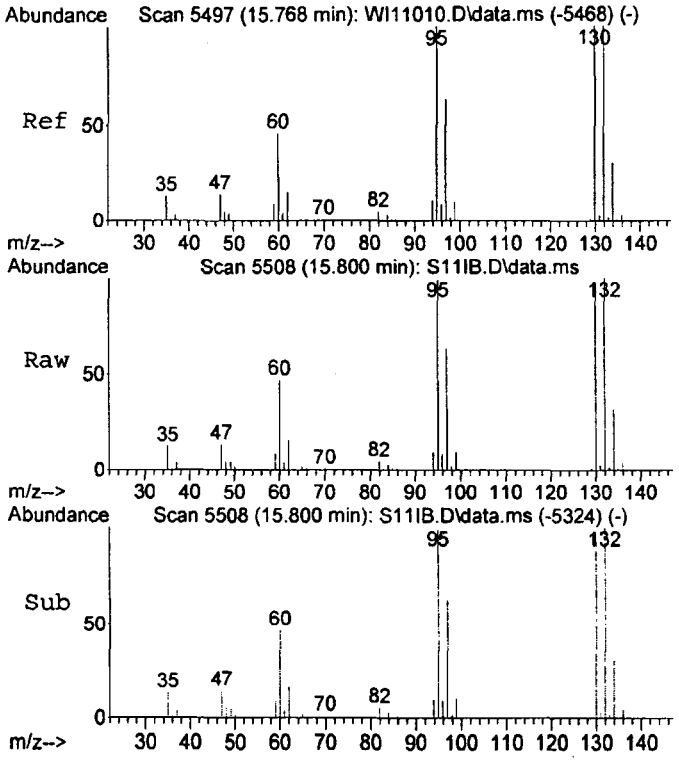
#11
Carbon Tetrachloride
Concen: 866.73 ng
RT: 13.79 min Scan# 4804
Delta R.T. 0.006 min
Lab File: S11IB.D
Acq: 11 Sep 2012 11:31 am

Tgt Ion:117 Resp: 1486205

Ion	Ratio	Lower	Upper
117	100		
119	95.4	65.1	125.1



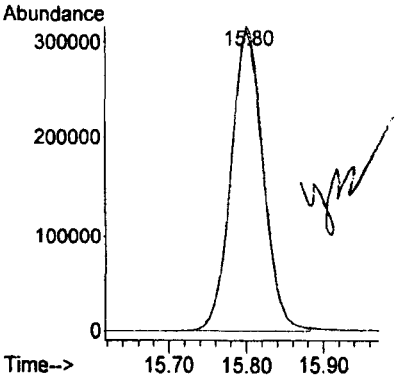
CAC 9-11-12

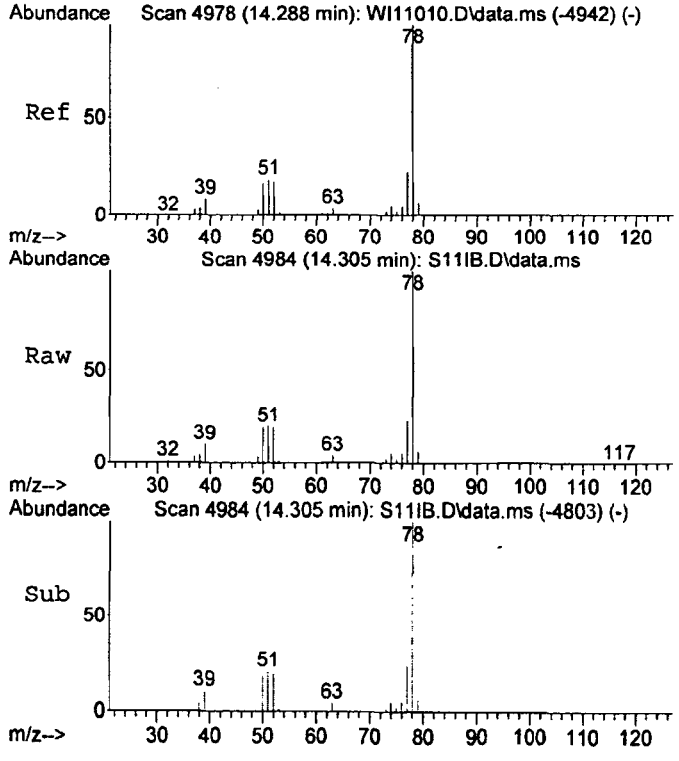


#12
Trichloroethene
Concen: 755.09 ng
RT: 15.80 min Scan# 5508
Delta R.T. 0.026 min
Lab File: S11IB.D
Acq: 11 Sep 2012 11:31 am

Tgt Ion:130 Resp: 894962

Ion	Ratio	Lower	Upper
130	100		
132	101.8	71.2	131.2
95	100.9	72.7	132.7

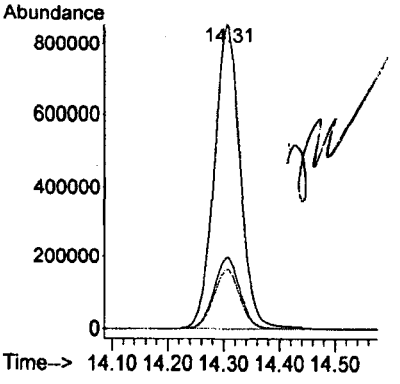




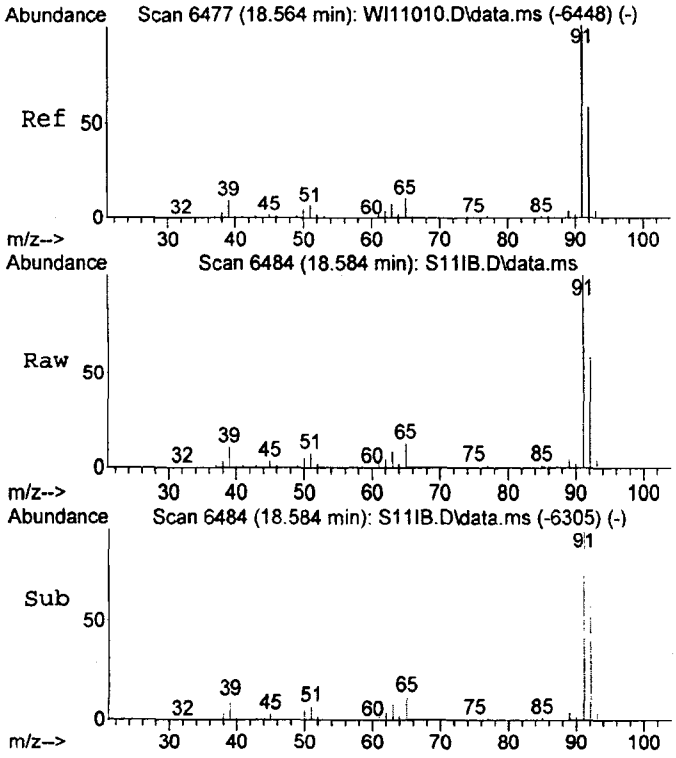
#14
Benzene
Concen: 661.21 ng
RT: 14.31 min Scan# 4984
Delta R.T. 0.018 min
Lab File: S11IB.D
Acq: 11 Sep 2012 11:31 am

Tgt Ion: 78 Resp: 2737570

Ion	Ratio	Lower	Upper
78	100		
77	23.3	0.0	53.4
52	18.9	0.0	46.9



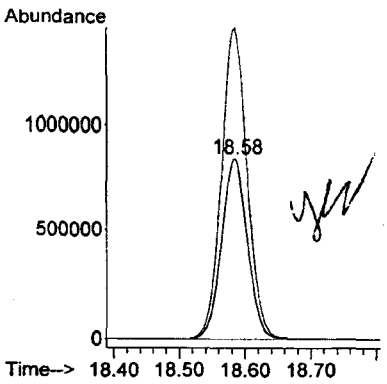
CAE 9-11-12

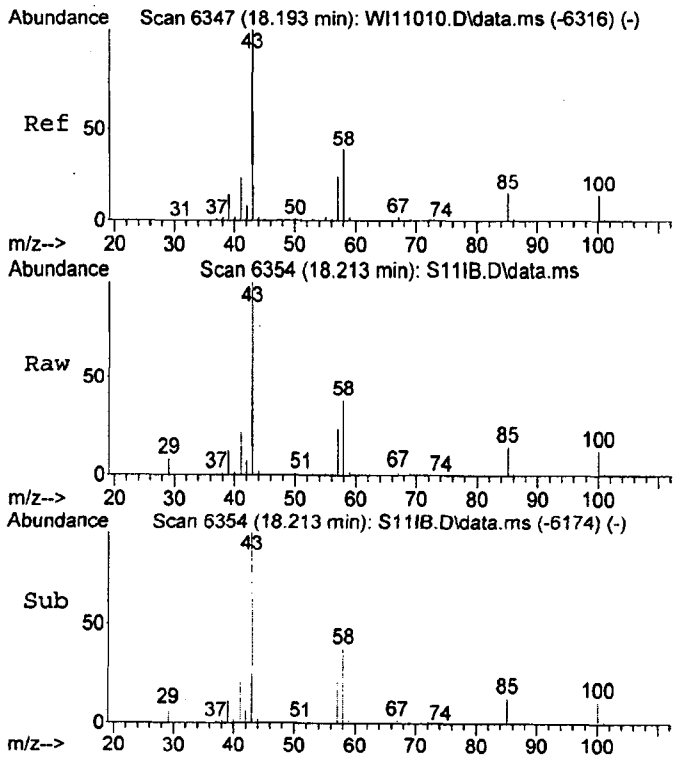


#28
Toluene
Concen: 783.58 ng
RT: 18.58 min Scan# 6484
Delta R.T. 0.012 min
Lab File: S11IB.D
Acq: 11 Sep 2012 11:31 am

Tgt Ion: 92 Resp: 2265956

Ion	Ratio	Lower	Upper
92	100		
91	170.2	142.1	202.1

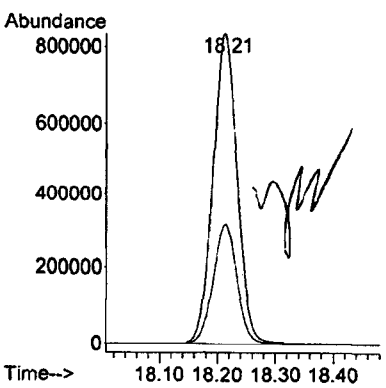




#35
4-Methyl-2-Pentanone
Concen: 745.77 ng
RT: 18.21 min Scan# 6354
Delta R.T. 0.015 min
Lab File: S11IB.D
Acq: 11 Sep 2012 11:31 am

Tgt Ion: 43 Resp: 2434389

Ion	Ratio	Lower	Upper
43	100		
58	37.7	10.3	70.3



9-11-12

Library Search Compound Report

Data Path : D:\ECL12036\
Data File : S11IB.D
Acq On : 11 Sep 2012 11:31 am
Operator :
Sample : LCSMIS11
Misc : LCS30443SL02 3.5X 40ML
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\GCMS-I Methods\WPID009.M
Quant Title : WPID009 CCP-TP-175 ICAL

TIC Library : C:\Database\NISTAPX8.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected
****

9-11-12

Quantitation Report (QT Reviewed)

Data Path : D:\ECL12036\
Data File : S11IC.D
Acq On : 11 Sep 2012 12:13 pm
Operator :
Sample : 12254001
Misc : 3.8431X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 11 14:12:02 2012
Quant Method : C:\GCMS-I Methods\WPID009.M
Quant Title : WPID009 CCP-TP-175 ICAL
QLast Update : Wed May 30 09:54:04 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	14.95	96	1839930	473.00	ng	0.00
24) Chlorobenzene-d5	21.49	117	1313549	490.00	ng	0.00

Target Compounds Qvalue

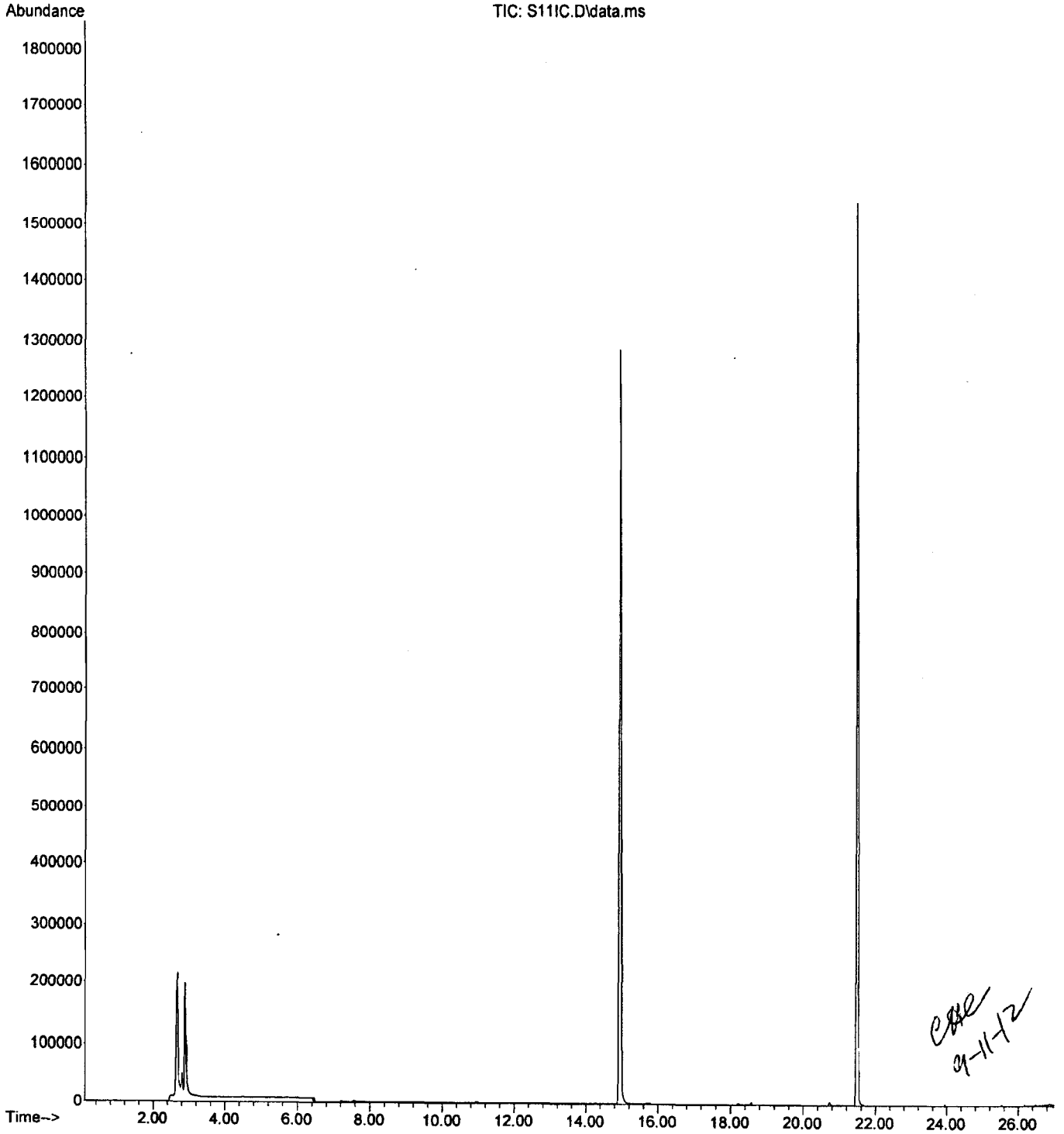
(#) = qualifier out of range (m) = manual integration (+) = signals summed

CAR 9-11-12

Quantitation Report (QT Reviewed)

Data Path : D:\ECL12036\
Data File : S11IC.D
Acq On : 11 Sep 2012 12:13 pm
Operator :
Sample : 12254001
Misc : 3.8431X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 11 14:12:02 2012
Quant Method : C:\GCMS-I Methods\WPID009.M
Quant Title : WPID009 CCP-TP-175 ICAL
QLast Update : Wed May 30 09:54:04 2012
Response via : Initial Calibration



CAE 9-11-12

Library Search Compound Report

Data Path : D:\ECL12036\
Data File : S11IC.D
Acq On : 11 Sep 2012 12:13 pm
Operator :
Sample : 12254001
Misc : 3.8431X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\GCMS-I Methods\WPID009.M
Quant Title : WPID009 CCP-TP-175 ICAL

TIC Library : C:\Database\NISTAPX8.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected
****

9-11-12

Quantitation Report (QT Reviewed)

Data Path : D:\ECL12036\
Data File : S11ID.D
Acq On : 11 Sep 2012 1:44 pm
Operator :
Sample : 12254002
Misc : 3.7032X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 11 14:15:42 2012
Quant Method : C:\GCMS-I Methods\WPID009.M
Quant Title : WPID009 CCP-TP-175 ICAL
QLast Update : Wed May 30 09:54:04 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	14.94	96	1813065	473.00	ng	0.00
24) Chlorobenzene-d5	21.49	117	1314350	490.00	ng	0.00
Target Compounds						Qvalue
15) Acetone	7.19	43	367988	132.87	ng	99
16) 2-Butanone	12.25	72	5833m	8.04	ng	
18) Methanol	4.46	31	644691	841.89	ng	92
21) Carbon Disulfide	7.57	76	148476	37.07	ng	97

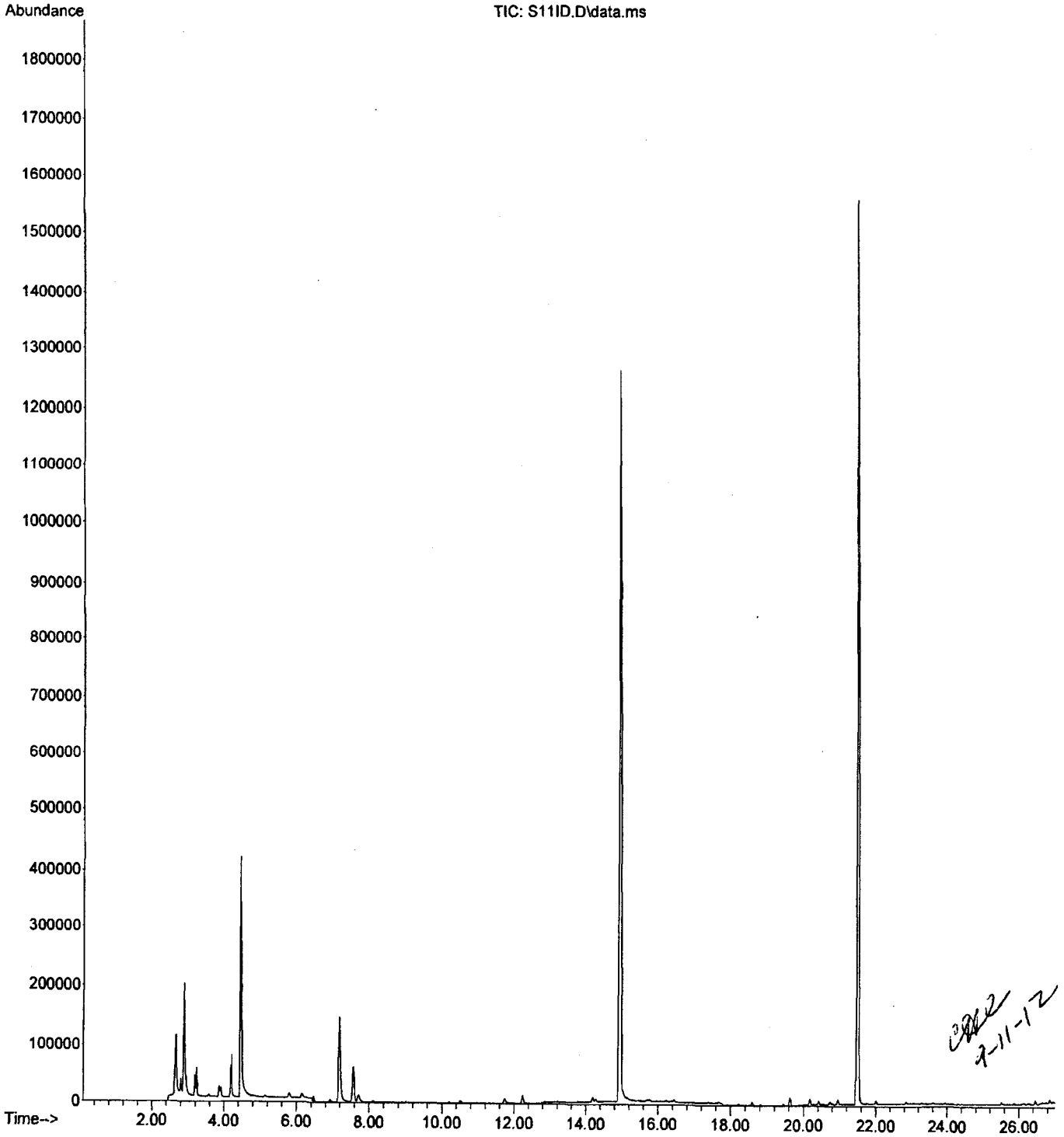
(#) = qualifier out of range (m) = manual integration (+) = signals summed

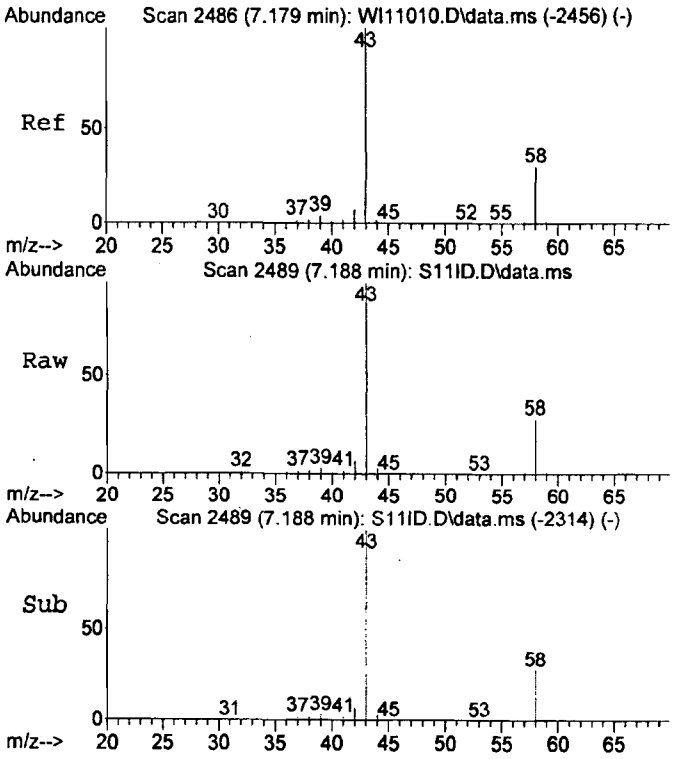
9-11-12

Quantitation Report (QT Reviewed)

Data Path : D:\ECL12036\
Data File : S11ID.D
Acq On : 11 Sep 2012 1:44 pm
Operator :
Sample : 12254002
Misc : 3.7032X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 11 14:15:42 2012
Quant Method : C:\GCMS-I Methods\WPID009.M
Quant Title : WPID009 CCP-TP-175 ICAL
QLast Update : Wed May 30 09:54:04 2012
Response via : Initial Calibration

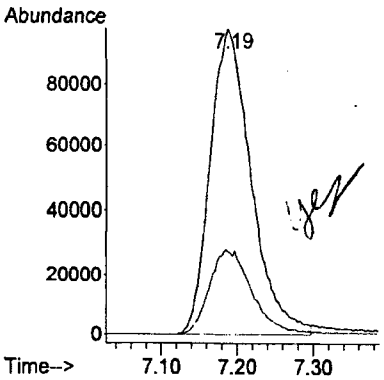


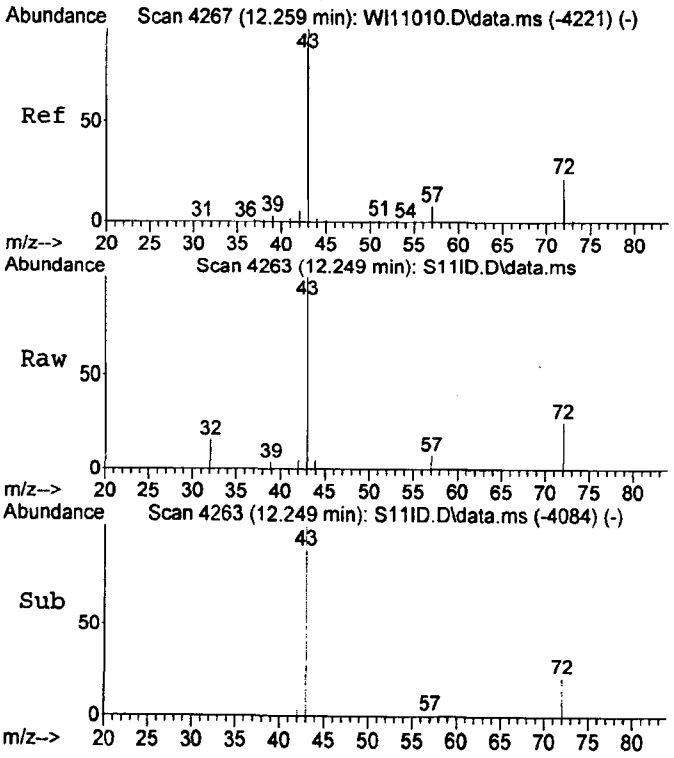


#15
Acetone
Concen: 132.87 ng
RT: 7.19 min Scan# 2489
Delta R.T. 0.001 min
Lab File: S11ID.D
Acq: 11 Sep 2012 1:44 pm

Tgt Ion: 43 Resp: 367988

Ion	Ratio	Lower	Upper
43	100		
58	29.9	0.7	60.7

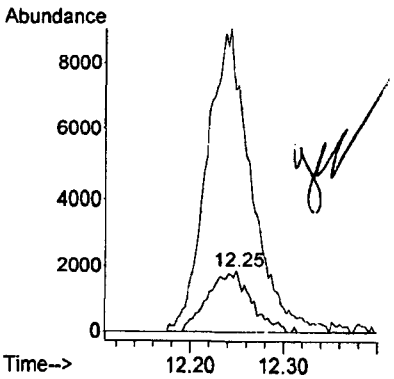




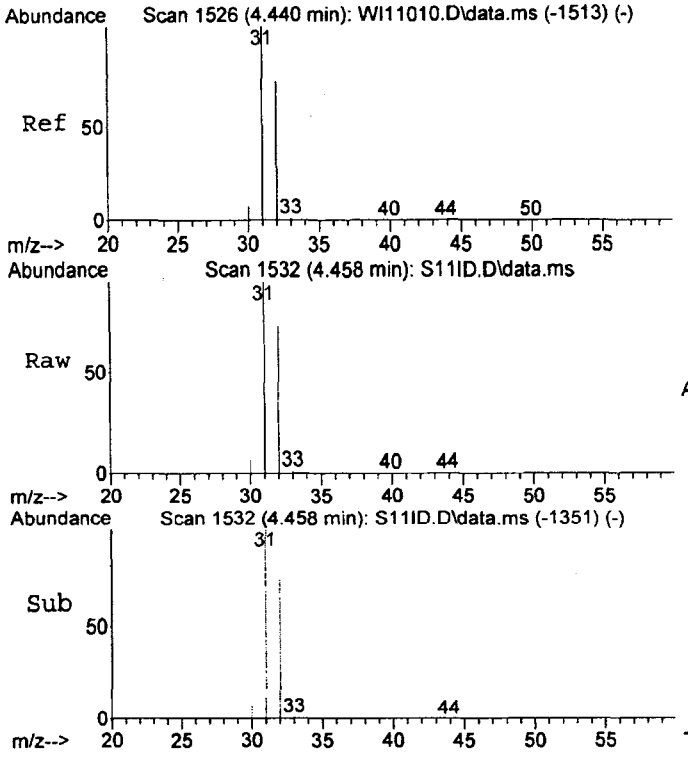
#16
2-Butanone
Concen: 8.04 ng m
RT: 12.25 min Scan# 4263
Delta R.T. 0.012 min
Lab File: S11ID.D
Acq: 11 Sep 2012 1:44 pm

Tgt Ion: 72 Resp: 5833

Ion	Ratio	Lower	Upper
72	100		
43	385.5	388.5	448.5#



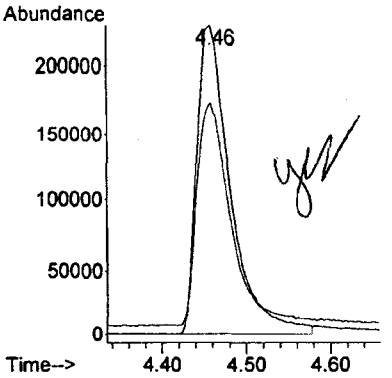
9-11-12

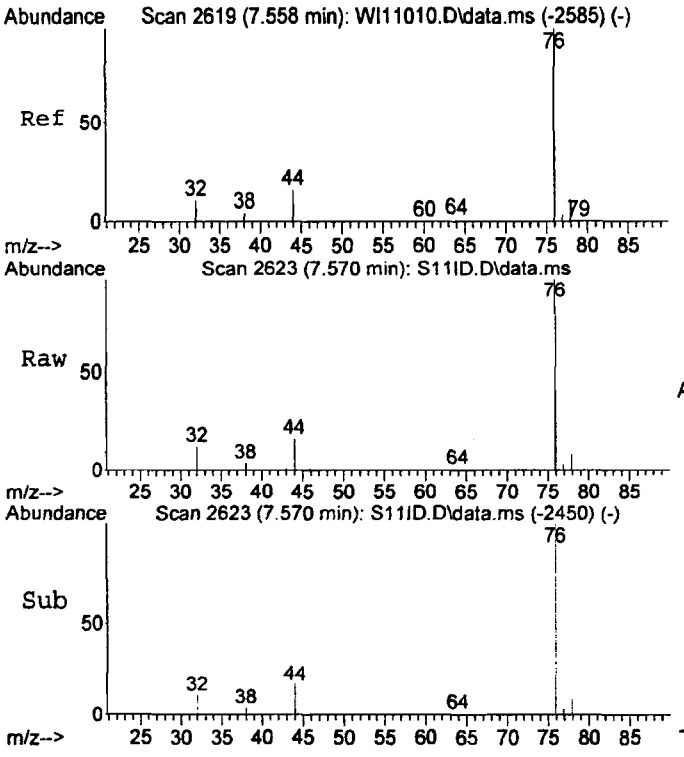


#18
Methanol
Concen: 841.89 ng
RT: 4.46 min Scan# 1532
Delta R.T. 0.018 min
Lab File: S11ID.D
Acq: 11 Sep 2012 1:44 pm

Tgt Ion: 31 Resp: 644691

Ion	Ratio	Lower	Upper
31	100		
32	76.5	40.0	100.0

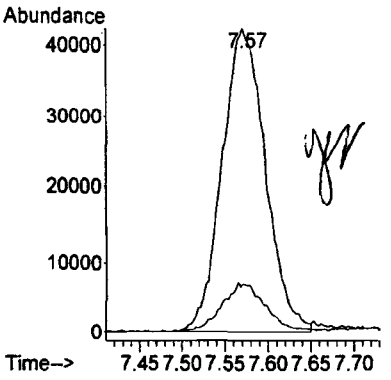




#21
Carbon Disulfide
Concen: 37.07 ng
RT: 7.57 min Scan# 2623
Delta R.T. -0.005 min
Lab File: S11ID.D
Acq: 11 Sep 2012 1:44 pm

Tgt Ion: 76 Resp: 148476

Ion	Ratio	Lower	Upper
76	100		
44	16.9	8.3	22.5



9-11-12

Library Search Compound Report

Data Path : D:\ECL12036\
Data File : S11ID.D
Acq On : 11 Sep 2012 1:44 pm
Operator :
Sample : 12254002
Misc : 3.7032X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\GCMS-I Methods\WPID009.M
Quant Title : WPID009 CCP-TP-175 ICAL

TIC Library : C:\Database\NISTAPX8.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected
****

9-11-12

Quantitation Report (QT Reviewed)

Data Path : D:\ECL12036\
Data File : S11IE.D
Acq On : 11 Sep 2012 2:27 pm
Operator :
Sample : 12254003
Misc : 3.7616X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 11 16:21:57 2012
Quant Method : C:\GCMS-I Methods\WPID009.M
Quant Title : WPID009 CCP-TP-175 ICAL
QLast Update : Wed May 30 09:54:04 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	14.94	96	1833301	473.00	ng		0.00
24) Chlorobenzene-d5	21.51	117	1322709	490.00	ng		0.03
Target Compounds							Qvalue
15) Acetone	7.19	43	379483	135.51	ng		98
16) 2-Butanone	12.26	72	5855m	7.98	ng		
18) Methanol	4.46	31	655875	847.05	ng		93
21) Carbon Disulfide	7.57	76	151448	37.40	ng	#	82

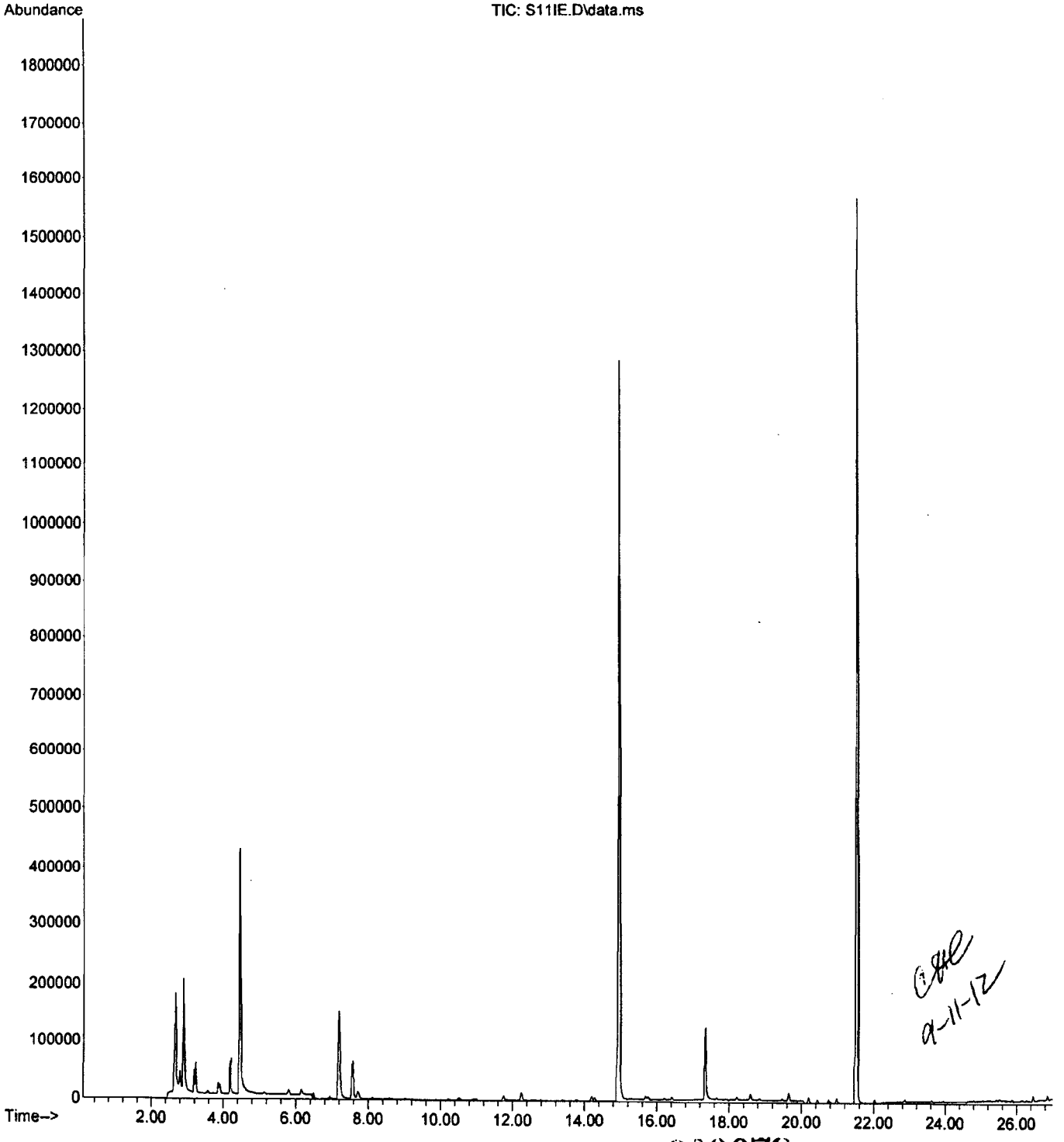
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9-11-12

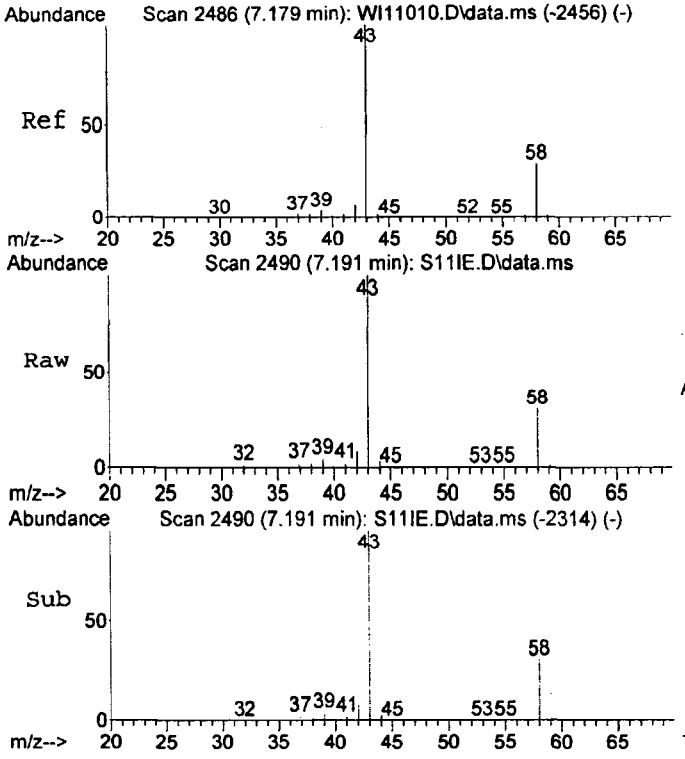
Quantitation Report (QT Reviewed)

Data Path : D:\ECL12036\
Data File : S11IE.D
Acq On : 11 Sep 2012 2:27 pm
Operator :
Sample : 12254003
Misc : 3.7616X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 11 16:21:57 2012
Quant Method : C:\GCMS-I Methods\WPID009.M
Quant Title : WPID009 CCP-TP-175 ICAL
QLast Update : Wed May 30 09:54:04 2012
Response via : Initial Calibration



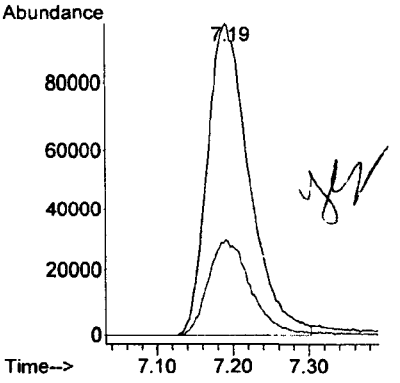
9-11-12

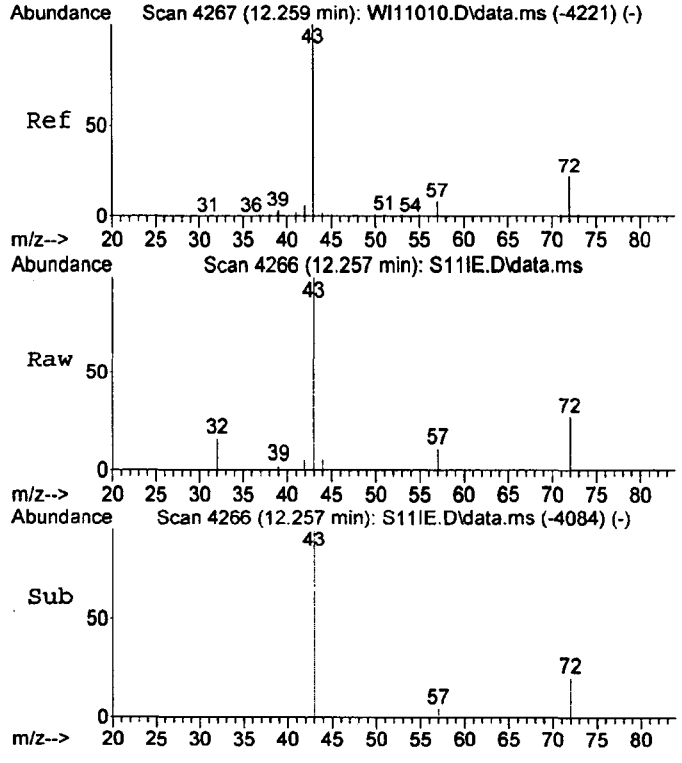


#15
Acetone
Concen: 135.51 ng
RT: 7.19 min Scan# 2490
Delta R.T. 0.003 min
Lab File: S11IE.D
Acq: 11 Sep 2012 2:27 pm

Tgt Ion: 43 Resp: 379483

Ion	Ratio	Lower	Upper
43	100		
58	29.7	0.7	60.7

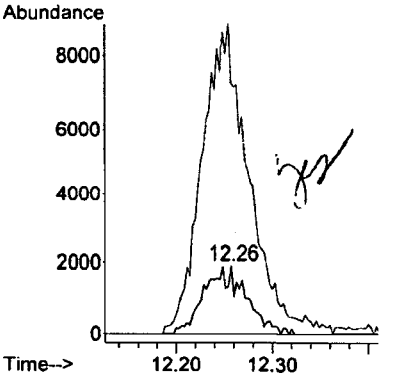




#16
2-Butanone
Concen: 7.98 ng m
RT: 12.26 min Scan# 4266
Delta R.T. 0.020 min
Lab File: S11IE.D
Acq: 11 Sep 2012 2:27 pm

Tgt Ion: 72 Resp: 5855

Ion	Ratio	Lower	Upper
72	100		
43	380.0	388.5	448.5#



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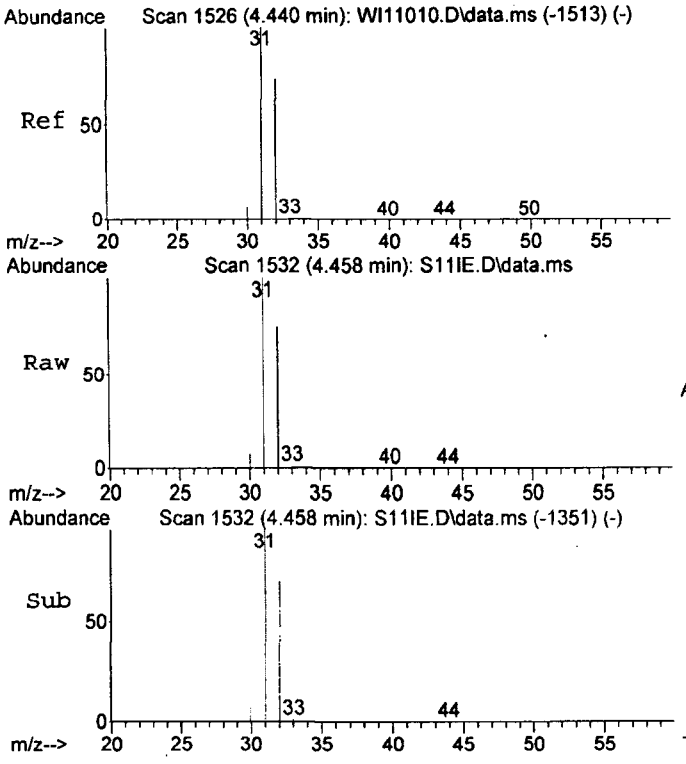
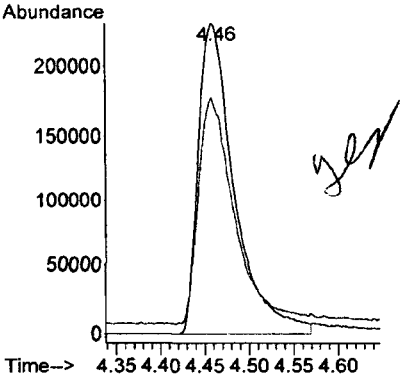
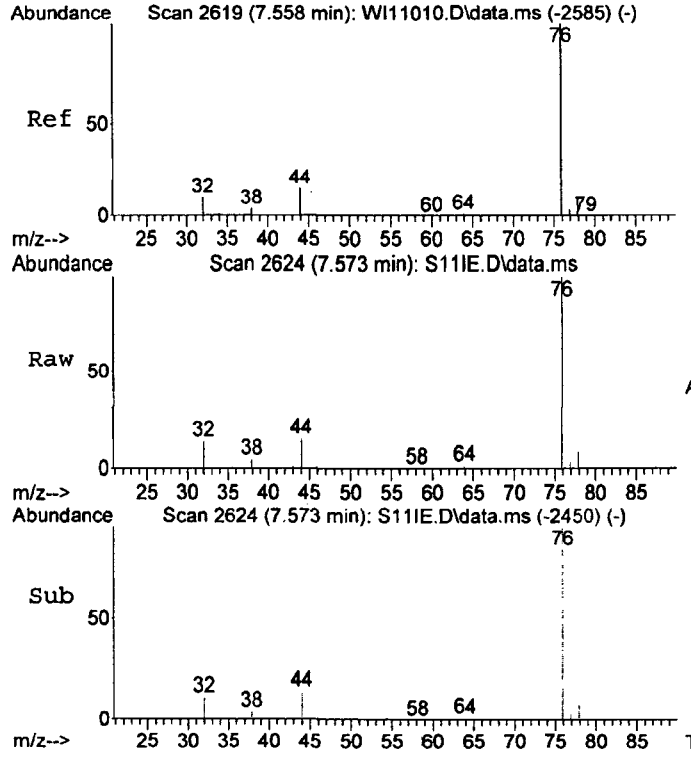


#18
Methanol
Concen: 847.05 ng
RT: 4.46 min Scan# 1532
Delta R.T. 0.018 min
Lab File: S11IE.D
Acq: 11 Sep 2012 2:27 pm

Tgt Ion: 31 Resp: 655875

Ion	Ratio	Lower	Upper
31	100		
32	75.8	40.0	100.0

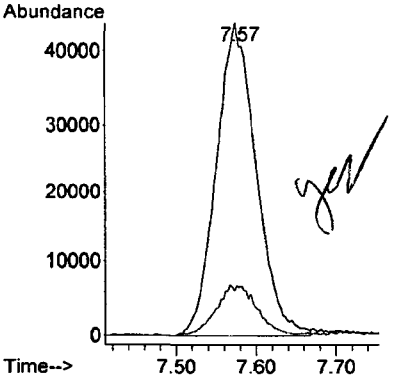




#21
Carbon Disulfide
Concen: 37.40 ng
RT: 7.57 min Scan# 2624
Delta R.T. -0.002 min
Lab File: S11IE.D
Acq: 11 Sep 2012 2:27 pm

Tgt Ion: 76 Resp: 151448

Ion	Ratio	Lower	Upper
76	100		
44	7.8	8.3	22.5#



9-11-12

Library Search Compound Report

Data Path : D:\ECL12036\
Data File : S11IE.D
Acq On : 11 Sep 2012 2:27 pm
Operator :
Sample : 12254003
Misc : 3.7616X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\GCMS-I Methods\WPID009.M
Quant Title : WPID009 CCP-TP-175 ICAL

TIC Library : C:\Database\NISTAPX8.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected
****

9-11-12

Quantitation Report (QT Reviewed)

Data Path : D:\ECL12036\
Data File : S11IF.D
Acq On : 11 Sep 2012 3:06 pm
Operator :
Sample : 12254004
Misc : 3.9740X 40ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 11 16:26:42 2012
Quant Method : C:\GCMS-I Methods\WPID009.M
Quant Title : WPID009 CCP-TP-175 ICAL
QLast Update : Wed May 30 09:54:04 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	14.94	96	1812567	473.00	ng		0.00
24) Chlorobenzene-d5	21.51	117	1296124	490.00	ng		0.02
Target Compounds							Qvalue
15) Acetone	7.18	43	1839911	664.54	ng		98
18) Methanol	4.45	31	481225	628.60	ng		95
21) Carbon Disulfide	7.57	76	117697	29.40	ng	#	81

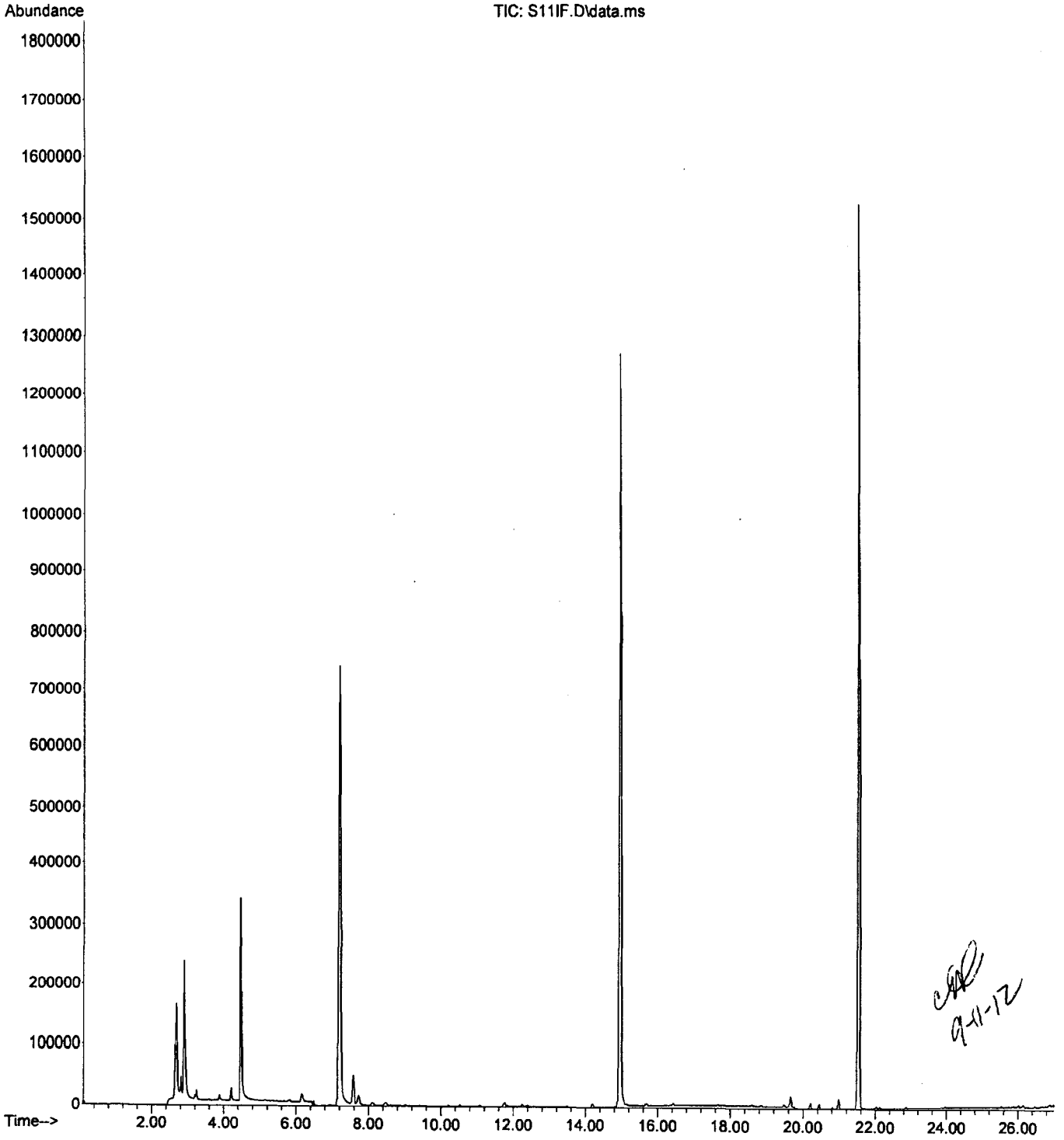
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9-11-12

Quantitation Report (QT Reviewed)

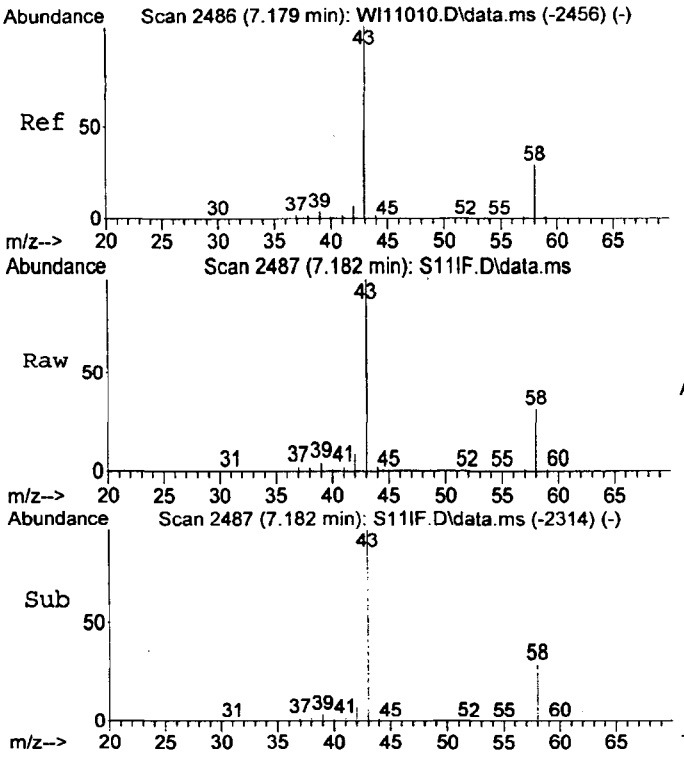
Data Path : D:\ECL12036\
Data File : S11IF.D
Acq On : 11 Sep 2012 3:06 pm
Operator :
Sample : 12254004
Misc : 3.9740X 40ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 11 16:26:42 2012
Quant Method : C:\GCMS-I Methods\WPID009.M
Quant Title : WPID009 CCP-TP-175 ICAL
QLast Update : Wed May 30 09:54:04 2012
Response via : Initial Calibration



9-11-12

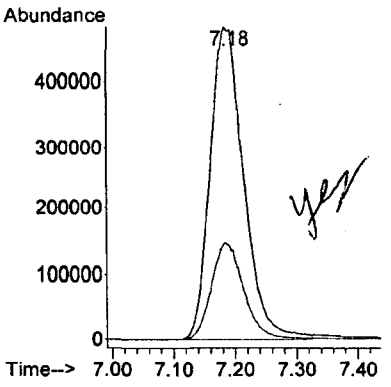
000083

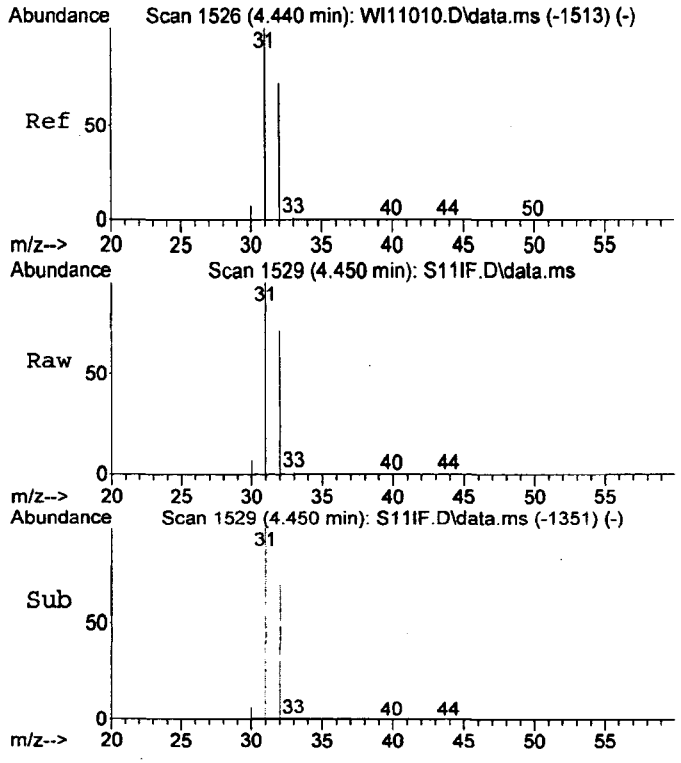


#15
Acetone
Concen: 664.54 ng
RT: 7.18 min Scan# 2487
Delta R.T. -0.005 min
Lab File: S11IF.D
Acq: 11 Sep 2012 3:06 pm

Tgt Ion: 43 Resp: 1839911

Ion	Ratio	Lower	Upper
43	100		
58	29.8	0.7	60.7

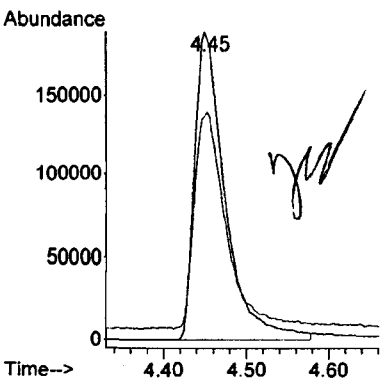




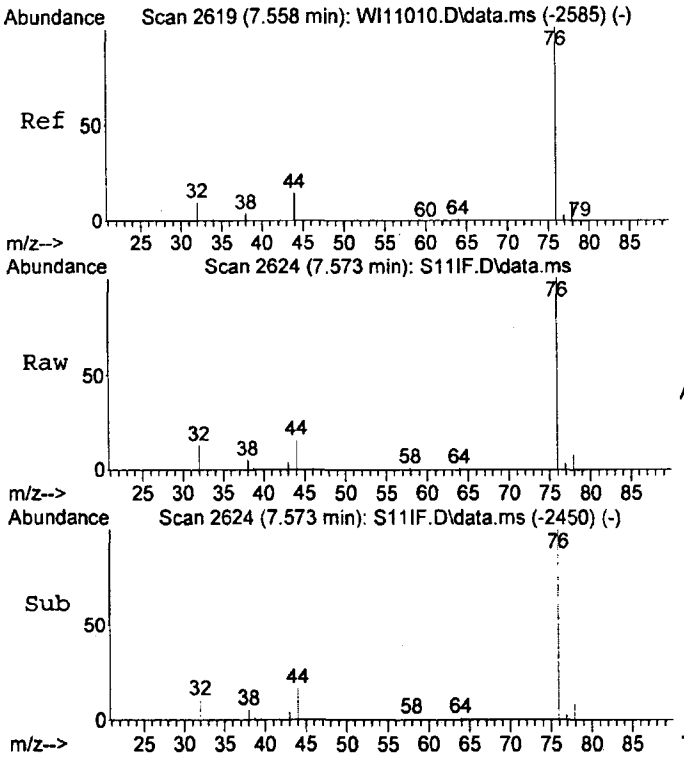
#18
Methanol
Concen: 628.60 ng
RT: 4.45 min Scan# 1529
Delta R.T. 0.009 min
Lab File: S11IF.D
Acq: 11 Sep 2012 3:06 pm

Tgt Ion: 31 Resp: 481225

Ion	Ratio	Lower	Upper
31	100		
32	73.8	40.0	100.0



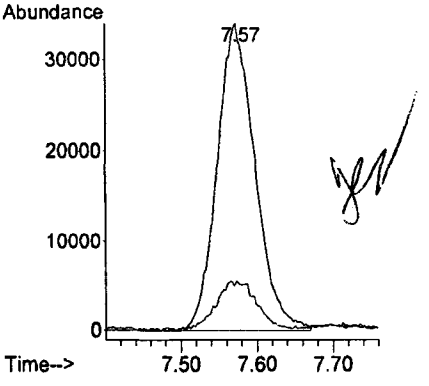
9-11-12



#21
Carbon Disulfide
Concen: 29.40 ng
RT: 7.57 min Scan# 2624
Delta R.T. -0.002 min
Lab File: S11IF.D
Acq: 11 Sep 2012 3:06 pm

Tgt Ion: 76 Resp: 117697

Ion	Ratio	Lower	Upper
76	100		
44	7.4	8.3	22.5#



9-11-12

Library Search Compound Report

Data Path : D:\ECL12036\
Data File : S11IF.D
Acq On : 11 Sep 2012 3:06 pm
Operator :
Sample : 12254004
Misc : 3.9740X 40ML
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\GCMS-I Methods\WPID009.M
Quant Title : WPID009 CCP-TP-175 ICAL

TIC Library : C:\Database\NISTAPX8.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected
****

9-11-12

Quantitation Report (QT Reviewed)

Data Path : D:\ECL12036\
Data File : S11IG.D
Acq On : 11 Sep 2012 3:49 pm
Operator :
Sample : 12254005
Misc : 3.7155X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 11 16:29:37 2012
Quant Method : C:\GCMS-I Methods\WPID009.M
Quant Title : WPID009 CCP-TP-175 ICAL
QLast Update : Wed May 30 09:54:04 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	14.95	96	1769733	473.00	ng	0.00
24) Chlorobenzene-d5	21.50	117	1279907	490.00	ng	0.01
Target Compounds						Qvalue
15) Acetone	7.20	43	29909m	11.06	ng	
18) Methanol	4.47	31	193370	258.70	ng	83
21) Carbon Disulfide	7.57	76	380908	97.44	ng	98

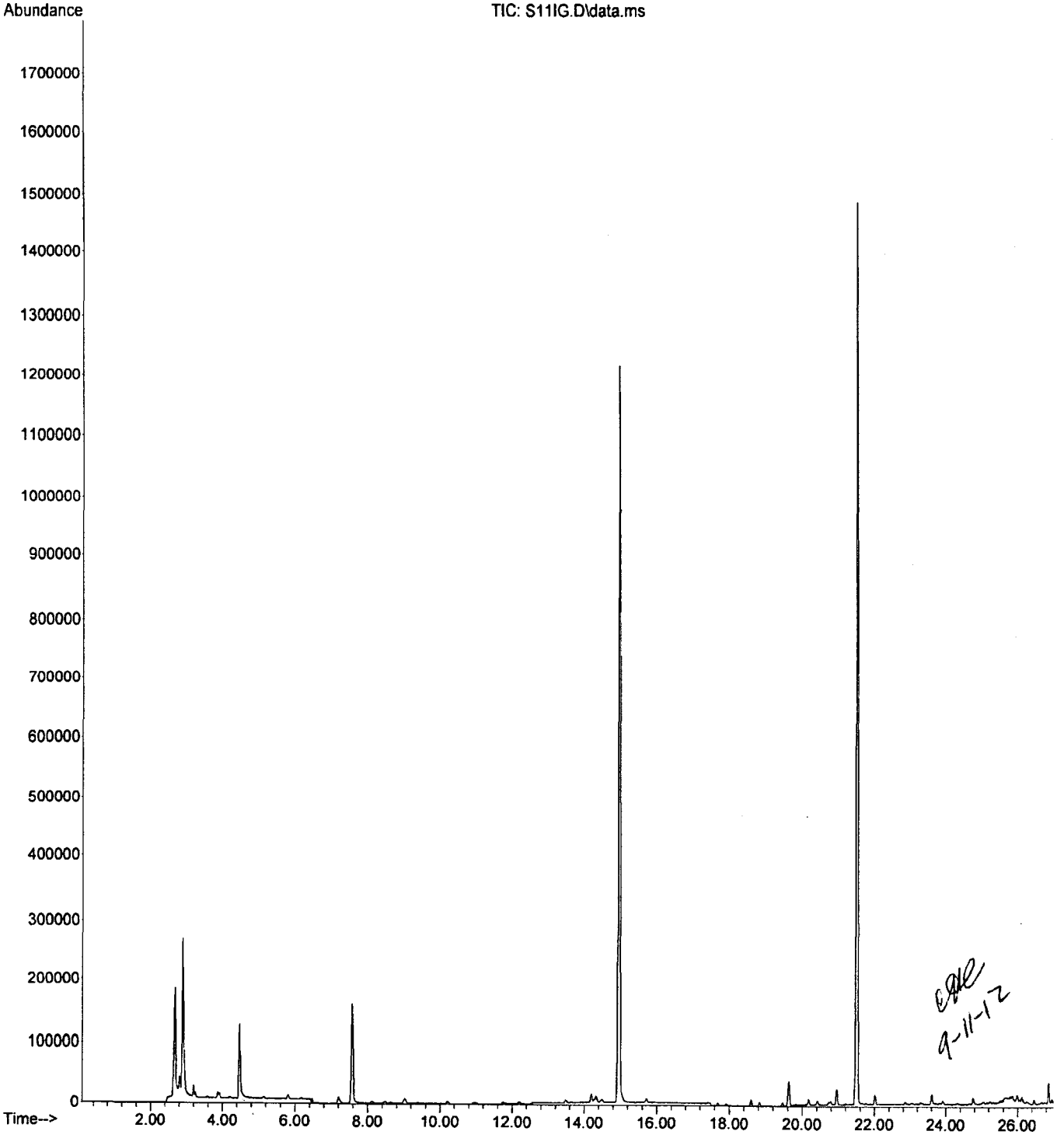
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9-11-12

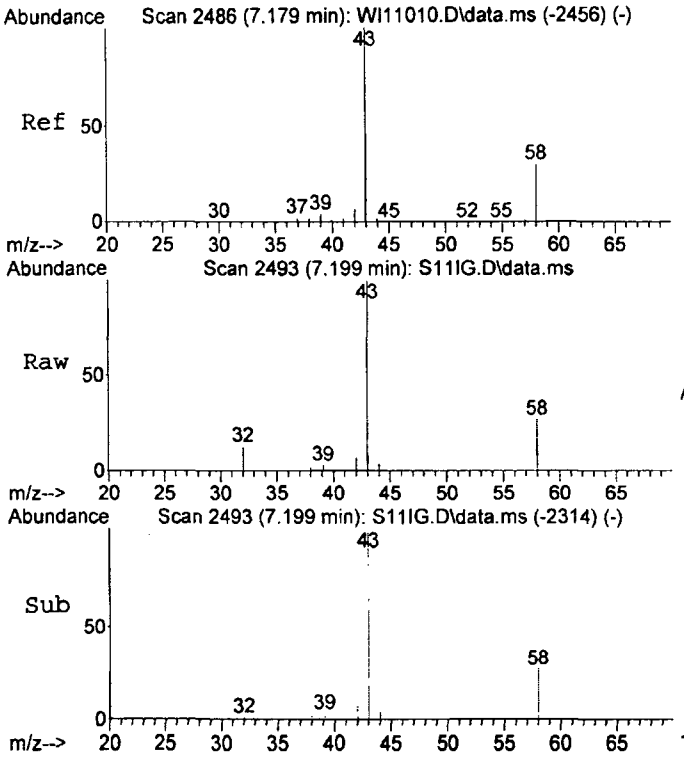
Quantitation Report (QT Reviewed)

Data Path : D:\ECL12036\
Data File : S11IG.D
Acq On : 11 Sep 2012 3:49 pm
Operator :
Sample : 12254005
Misc : 3.7155X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 11 16:29:37 2012
Quant Method : C:\GCMS-I Methods\WPID009.M
Quant Title : WPID009 CCP-TP-175 ICAL
QLast Update : Wed May 30 09:54:04 2012
Response via : Initial Calibration



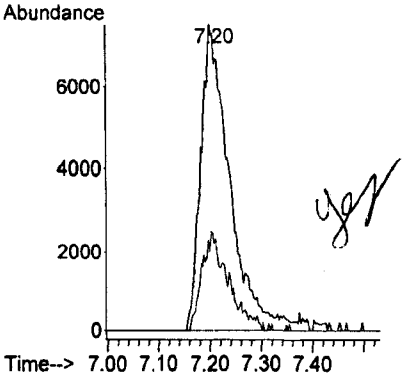
9-11-12

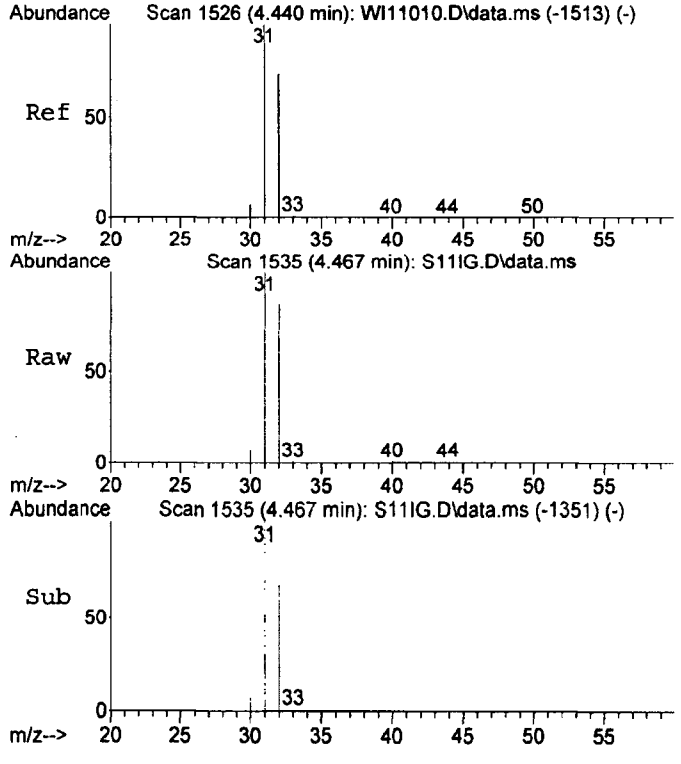


#15
Acetone
Concen: 11.06 ng m
RT: 7.20 min Scan# 2493
Delta R.T. 0.012 min
Lab File: S11IG.D
Acq: 11 Sep 2012 3:49 pm

Tgt Ion: 43 Resp: 29909

Ion	Ratio	Lower	Upper
43	100		
58	18.4	0.7	60.7

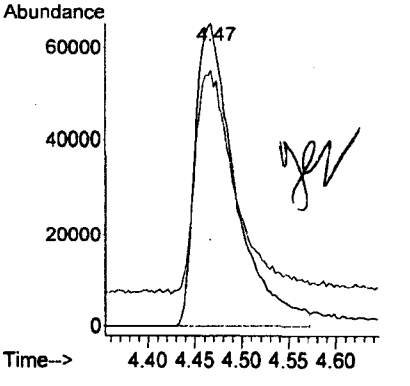




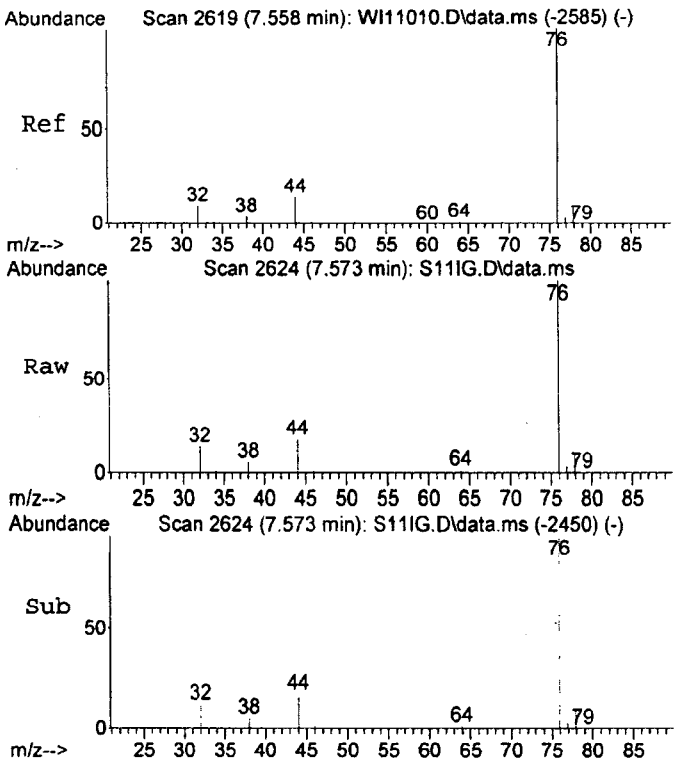
#18
Methanol
Concen: 258.70 ng
RT: 4.47 min Scan# 1535
Delta R.T. 0.026 min
Lab File: S11IG.D
Acq: 11 Sep 2012 3:49 pm

Tgt Ion: 31 Resp: 193370

Ion	Ratio	Lower	Upper
31	100		
32	83.8	40.0	100.0



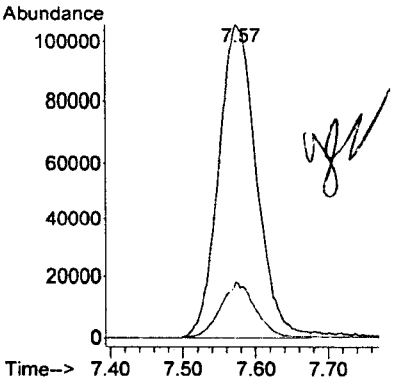
9-11-12



#21
Carbon Disulfide
Concen: 97.44 ng
RT: 7.57 min Scan# 2624
Delta R.T. -0.002 min
Lab File: S11IG.D
Acq: 11 Sep 2012 3:49 pm

Tgt Ion: 76 Resp: 380908

Ion	Ratio	Lower	Upper
76	100		
44	16.1	8.3	22.5



Library Search Compound Report

Data Path : D:\ECL12036\
Data File : S11IG.D
Acq On : 11 Sep 2012 3:49 pm
Operator :
Sample : 12254005
Misc : 3.7155X 100ML
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\GCMS-I Methods\WPID009.M
Quant Title : WPID009 CCP-TP-175 ICAL

TIC Library : C:\Database\NISTAPX8.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected
****

9-11-12

Quantitation Report (QT Reviewed)

Data Path : D:\ECL12036\
Data File : S11IH.D
Acq On : 11 Sep 2012 4:29 pm
Operator :
Sample : 12254006
Misc : 3.8502X 90ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 11 17:45:46 2012
Quant Method : C:\GCMS-I Methods\WPID009.M
Quant Title : WPID009 CCP-TP-175 ICAL
QLast Update : Wed May 30 09:54:04 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	14.95	96	1811346	473.00 ng	0.00
24) Chlorobenzene-d5	21.53	117	1290354	490.00 ng	0.04
Target Compounds					Qvalue
15) Acetone	7.19	43	1524959	551.16 ng	98
18) Methanol	4.46	31	706133	923.01 ng	94
21) Carbon Disulfide	7.58	76	246877	61.70 ng	100

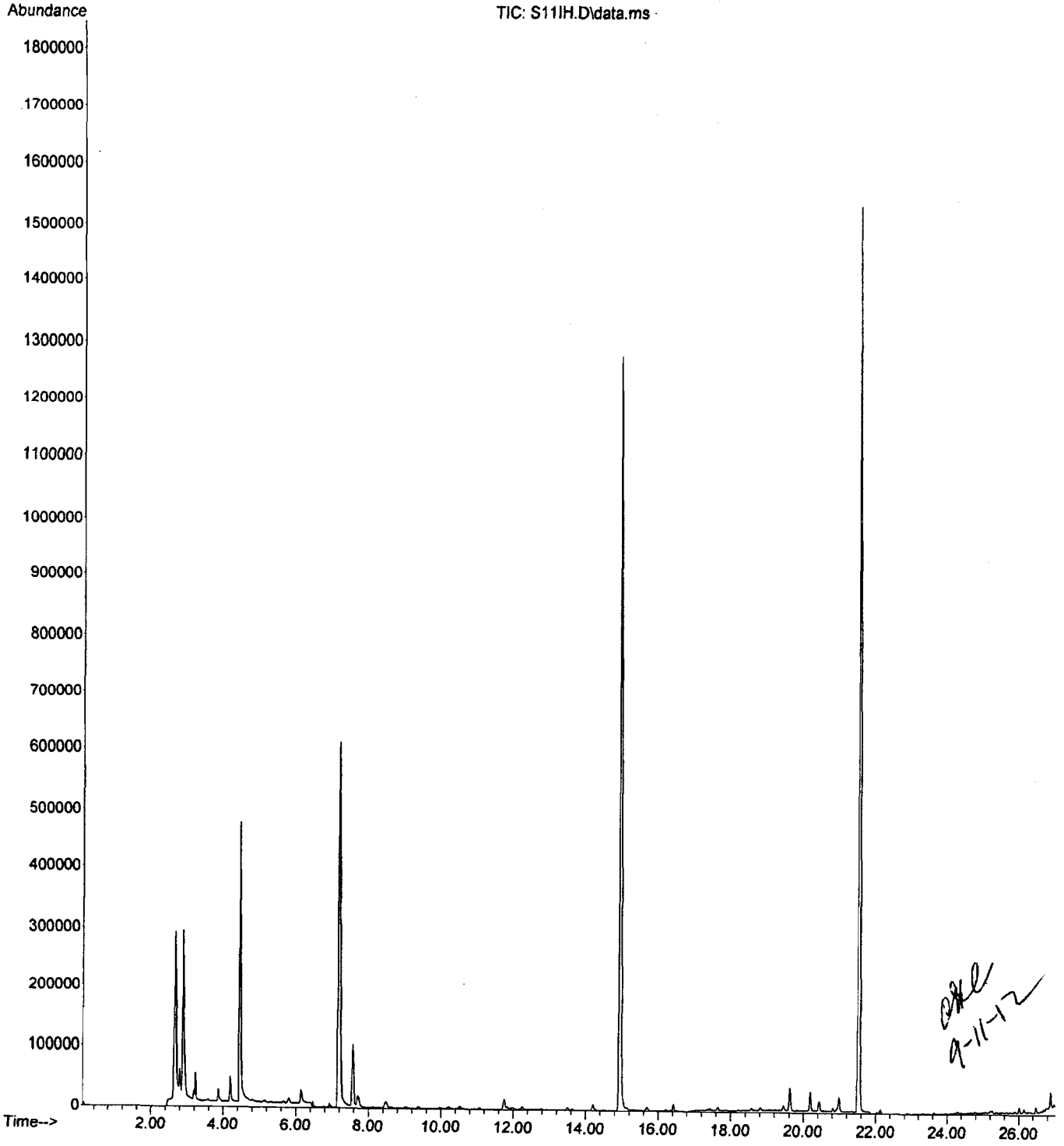
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9-11-12

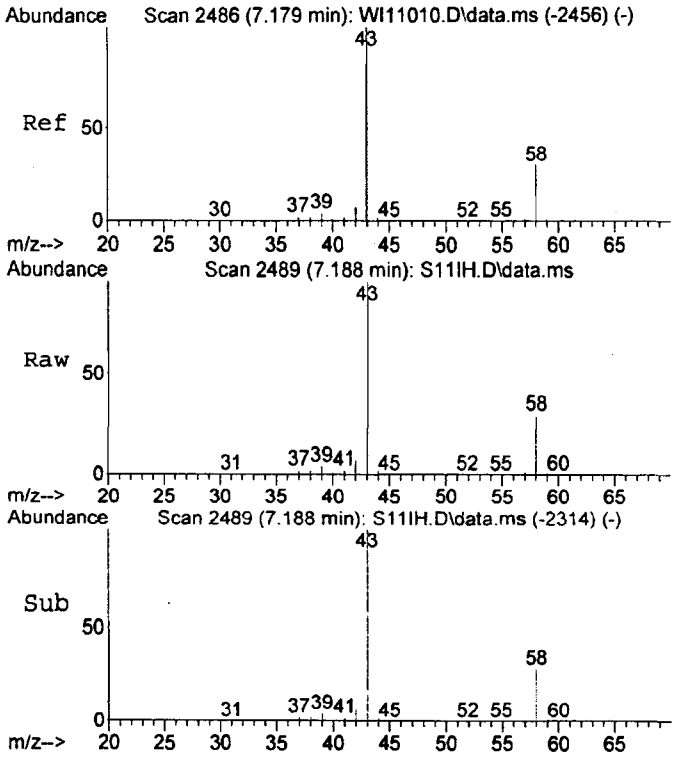
Quantitation Report (QT Reviewed)

Data Path : D:\ECL12036\
Data File : S11IH.D
Acq On : 11 Sep 2012 4:29 pm
Operator :
Sample : 12254006
Misc : 3.8502X 90ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 11 17:45:46 2012
Quant Method : C:\GCMS-I Methods\WPID009.M
Quant Title : WPID009 CCP-TP-175 ICAL
QLast Update : Wed May 30 09:54:04 2012
Response via : Initial Calibration



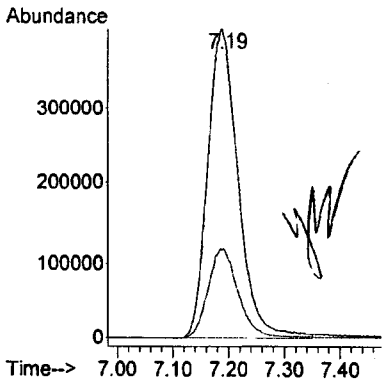
9-11-12

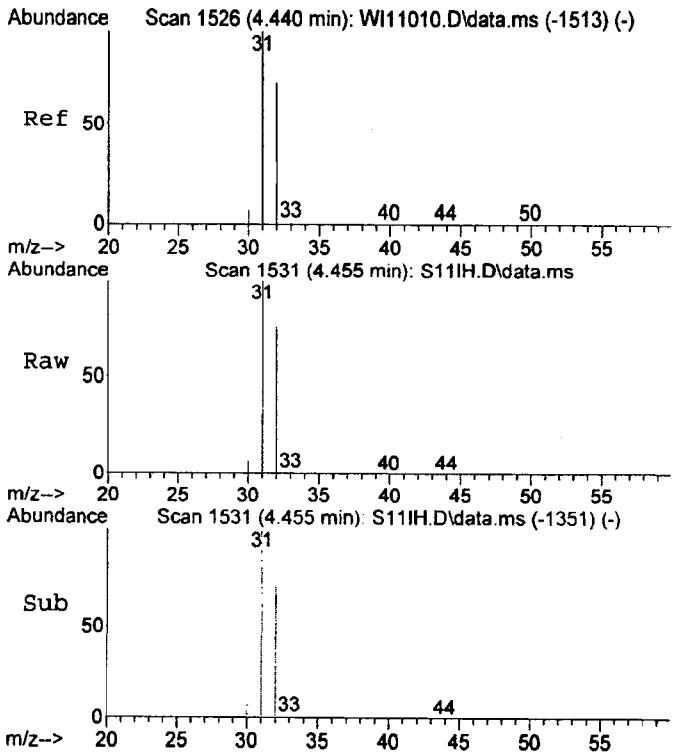


#15
Acetone
Concen: 551.16 ng
RT: 7.19 min Scan# 2489
Delta R.T. 0.001 min
Lab File: S11IH.D
Acq: 11 Sep 2012 4:29 pm

Tgt Ion: 43 Resp: 1524959

Ion	Ratio	Lower	Upper
43	100		
58	29.6	0.7	60.7

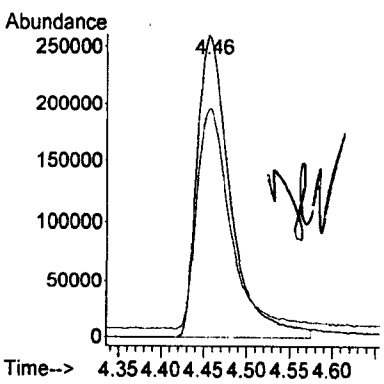




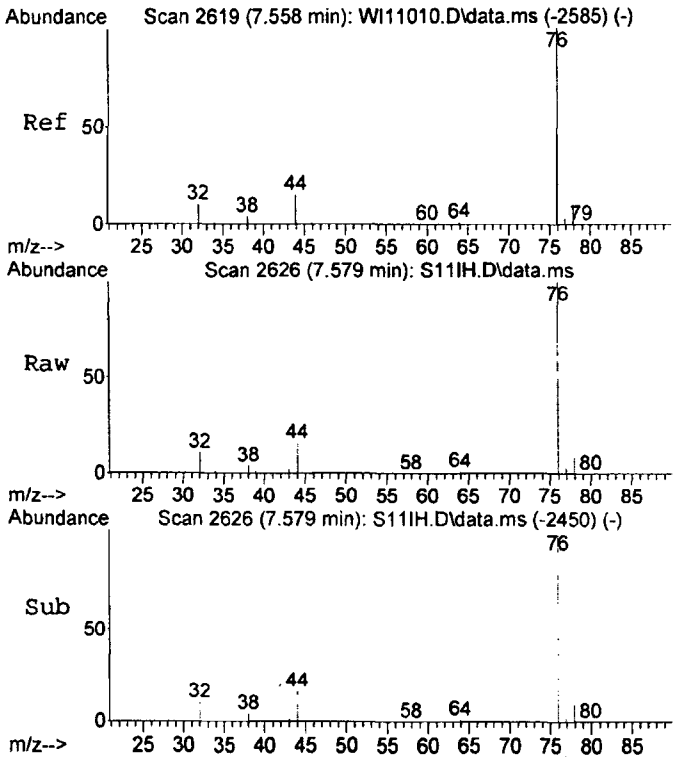
#18
Methanol
Concen: 923.01 ng
RT: 4.46 min Scan# 1531
Delta R.T. 0.015 min
Lab File: S11IH.D
Acq: 11 Sep 2012 4:29 pm

Tgt Ion: 31 Resp: 706133

Ion	Ratio	Lower	Upper
31	100		
32	75.2	40.0	100.0



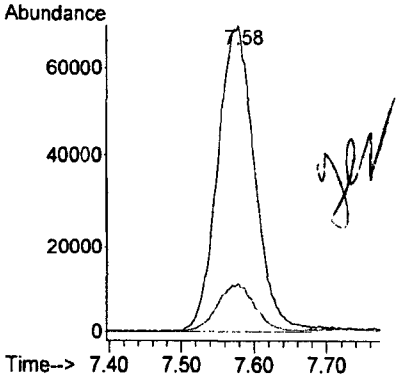
9-11-12



#21
Carbon Disulfide
Concen: 61.70 ng
RT: 7.58 min Scan# 2626
Delta R.T. 0.003 min
Lab File: S11IH.D
Acq: 11 Sep 2012 4:29 pm

Tgt Ion: 76 Resp: 246877

Ion	Ratio	Lower	Upper
76	100		
44	15.5	8.3	22.5



9-11-12

Library Search Compound Report

Data Path : D:\ECL12036\
Data File : S11IH.D
Acq On : 11 Sep 2012 4:29 pm
Operator :
Sample : 12254006
Misc : 3.8502X 90ML
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\GCMS-I Methods\WPID009.M
Quant Title : WPID009 CCP-TP-175 ICAL

TIC Library : C:\Database\NISTAPX8.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected
****

9-11-12

Quantitation Report (QT Reviewed)

Data Path : D:\ECL12036\
Data File : S11II.D
Acq On : 11 Sep 2012 5:11 pm
Operator :
Sample : 12254007 7.436 1X
Misc : ~~3.6061X~~ 100ML ane 9-12-12
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 11 17:47:32 2012
Quant Method : C:\GCMS-I Methods\WPID009.M
Quant Title : WPID009 CCP-TP-175 ICAL
QLast Update : Wed May 30 09:54:04 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	14.98	96	1793294	473.00	ng		0.03
24) Chlorobenzene-d5	21.49	117	1287272	490.00	ng		0.00
Target Compounds							Qvalue
14) Benzene	14.31	78	28030	7.02	ng		97
15) Acetone	7.19	43	1442584	526.63	ng		98
16) 2-Butanone	12.25	72	4744m	X6.61	ng		
18) Methanol	4.47	31	115096	151.96	ng		74
21) Carbon Disulfide	7.58	76	48671	12.29	ng	#	81
28) Toluene	18.58	92	19557	7.14	ng		98

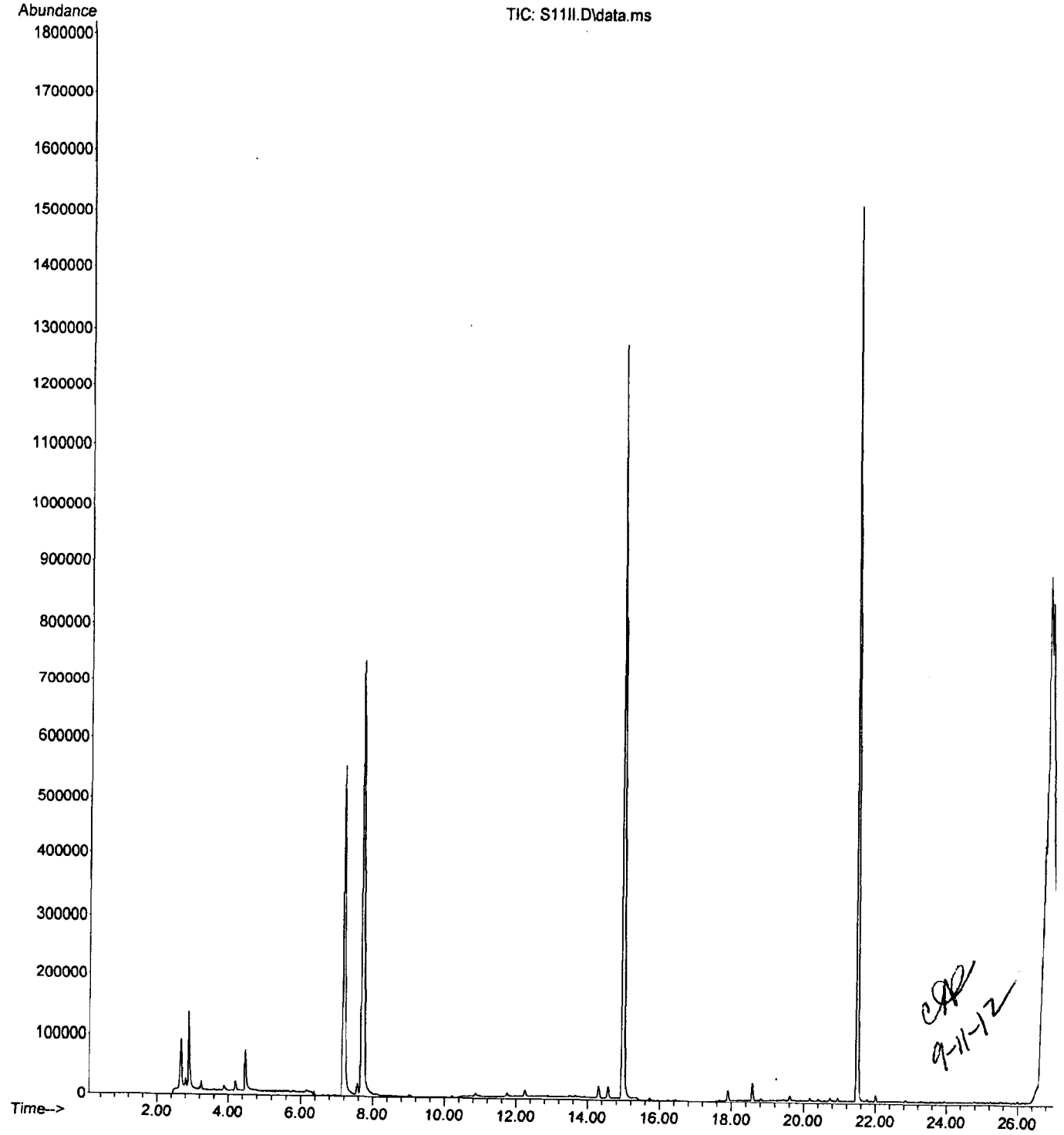
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9-11-12

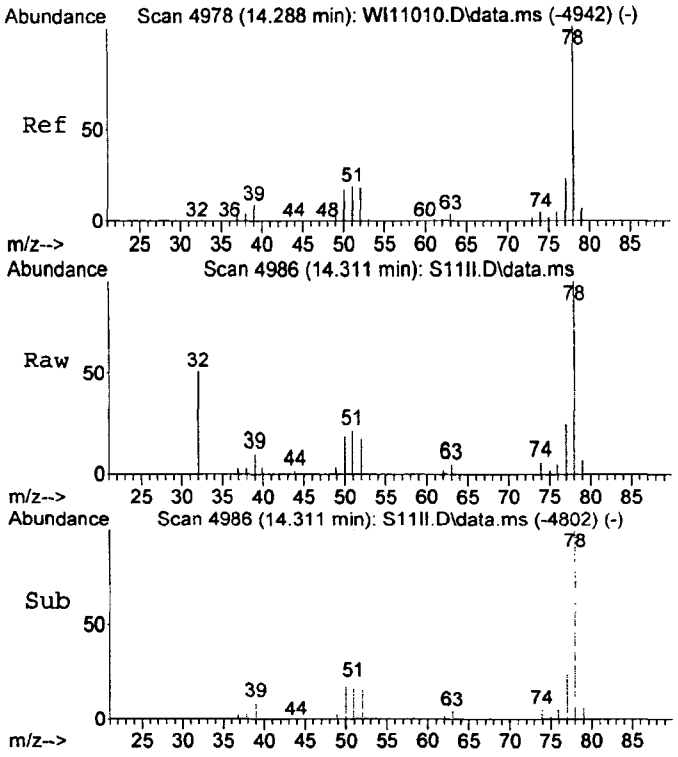
Quantitation Report (QT Reviewed)

Data Path : D:\ECL12036\
Data File : S11II.D
Acq On : 11 Sep 2012 5:11 pm
Operator :
Sample : 12254007 7.4361X
Misc : ~~3.6061X~~ 100ML CAP 9-12-12
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 11 17:47:32 2012
Quant Method : C:\GCMS-I Methods\WPID009.M
Quant Title : WPID009 CCP-TP-175 ICAL
QLast Update : Wed May 30 09:54:04 2012
Response via : Initial Calibration



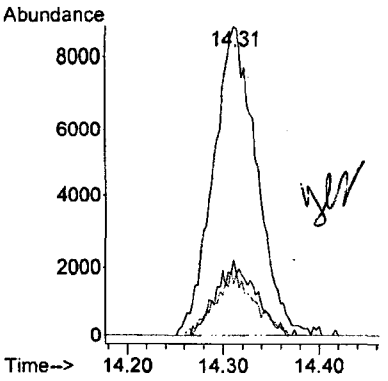
CAP 9-11-12

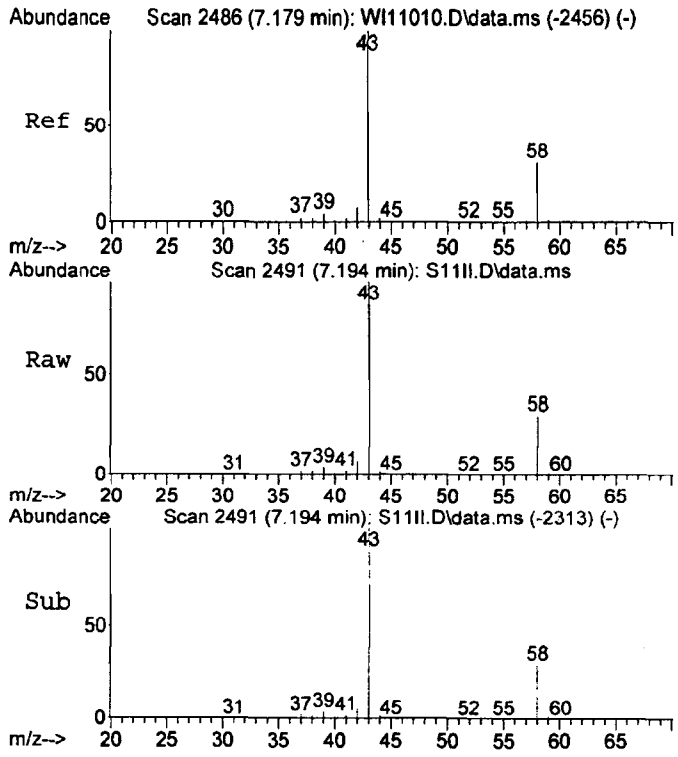


#14
Benzene
Concen: 7.02 ng
RT: 14.31 min Scan# 4986
Delta R.T. 0.023 min
Lab File: S11II.D
Acq: 11 Sep 2012 5:11 pm

Tgt Ion: 78 Resp: 28030

Ion	Ratio	Lower	Upper
78	100		
77	25.3	0.0	53.4
52	17.3	0.0	46.9

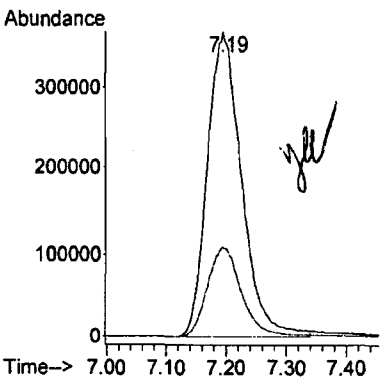




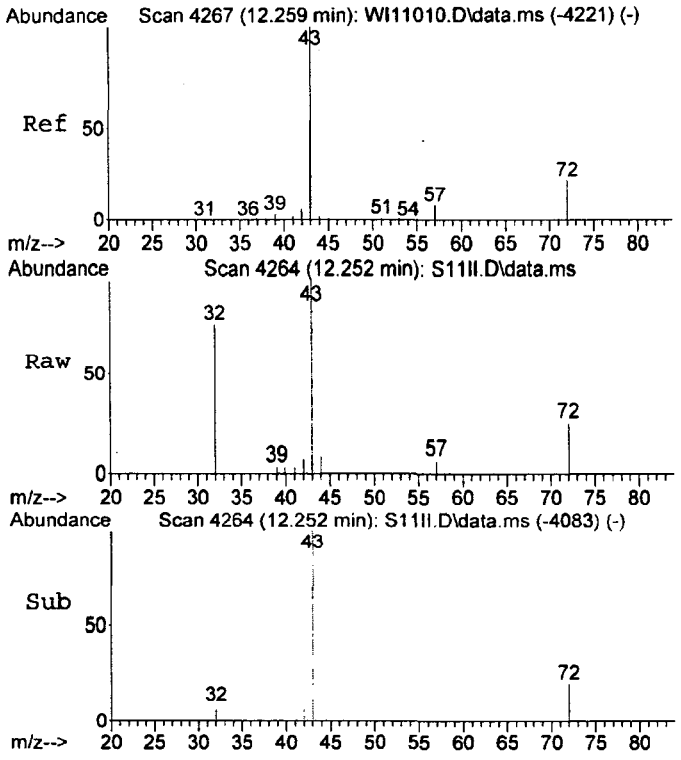
#15
Acetone
Concen: 526.63 ng
RT: 7.19 min Scan# 2491
Delta R.T. 0.006 min
Lab File: S11II.D
Acq: 11 Sep 2012 5:11 pm

Tgt Ion: 43 Resp: 1442584

Ion	Ratio	Lower	Upper
43	100		
58	29.7	0.7	60.7



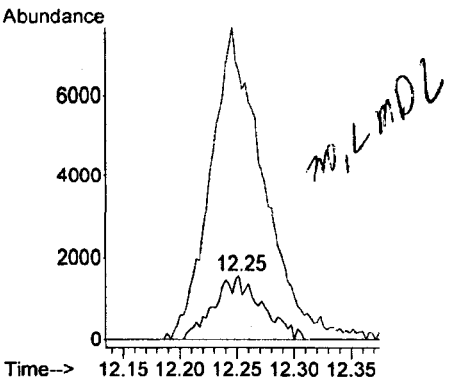
9-11-12

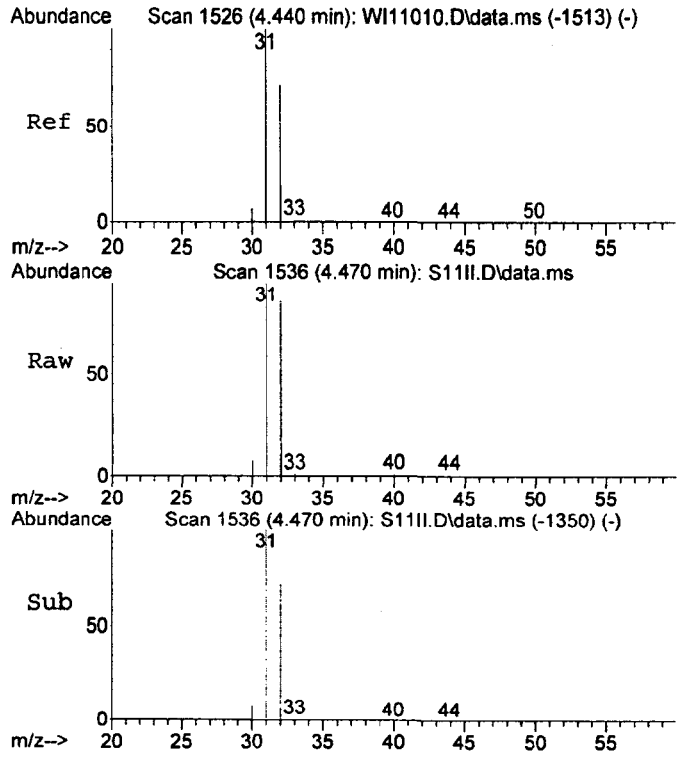


#16
2-Butanone
Concen: 6.61 ng m
RT: 12.25 min Scan# 4264
Delta R.T. 0.015 min
Lab File: S11II.D
Acq: 11 Sep 2012 5:11 pm

Tgt Ion: 72 Resp: 4744

Ion	Ratio	Lower	Upper
72	100		
43	411.1	388.5	448.5

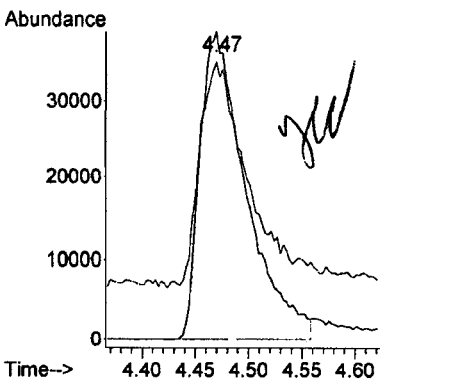




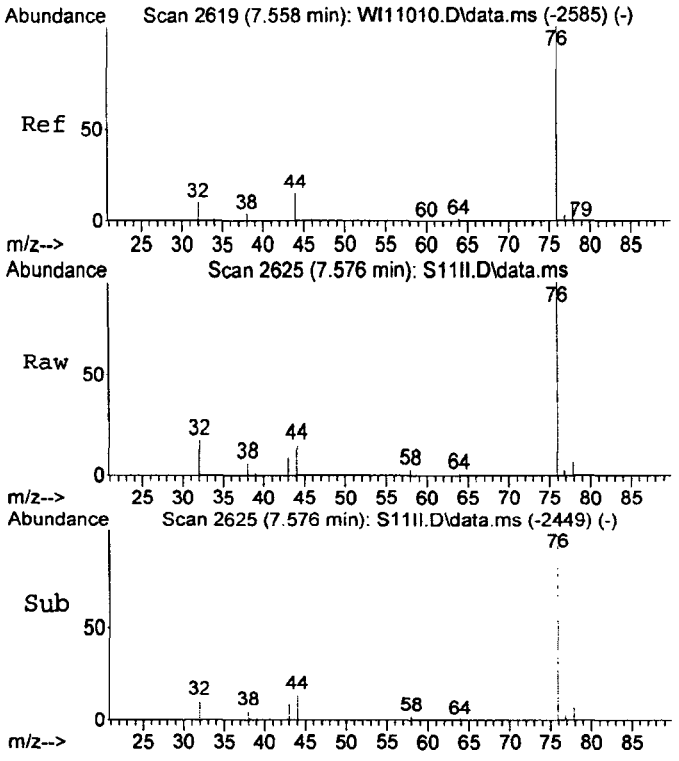
#18
Methanol
Concen: 151.96 ng
RT: 4.47 min Scan# 1536
Delta R.T. 0.029 min
Lab File: S11II.D
Acq: 11 Sep 2012 5:11 pm

Tgt Ion: 31 Resp: 115096

Ion	Ratio	Lower	Upper
31	100		
32	91.1	40.0	100.0



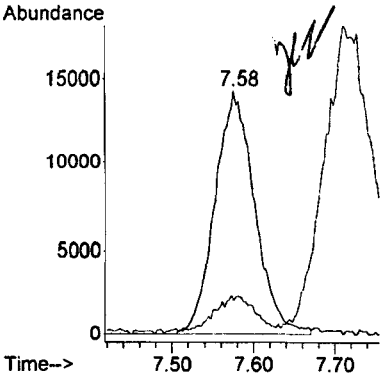
9-11-12

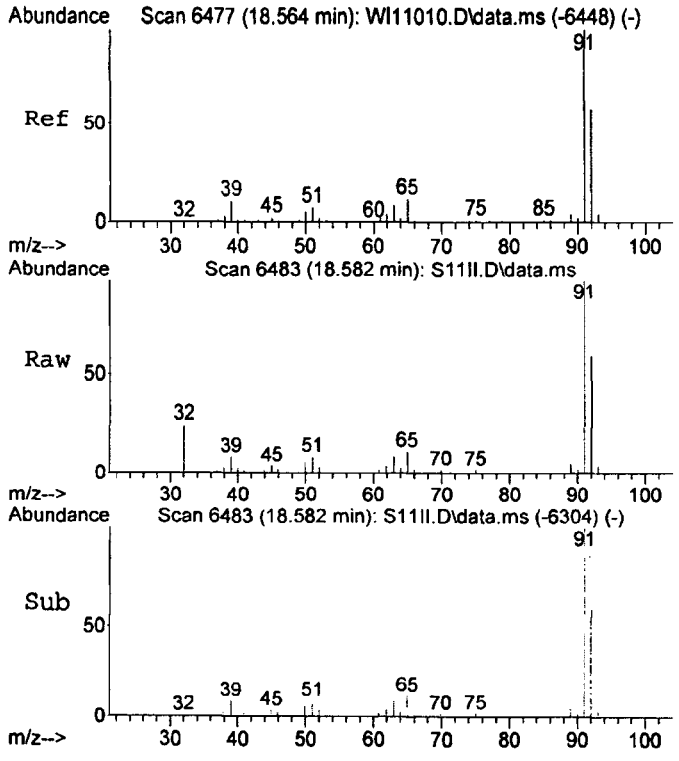


#21
Carbon Disulfide
Concen: 12.29 ng
RT: 7.58 min Scan# 2625
Delta R.T. 0.001 min
Lab File: S11II.D
Acq: 11 Sep 2012 5:11 pm

Tgt Ion: 76 Resp: 48671

Ion	Ratio	Lower	Upper
76	100		
44	7.5	8.3	22.5#

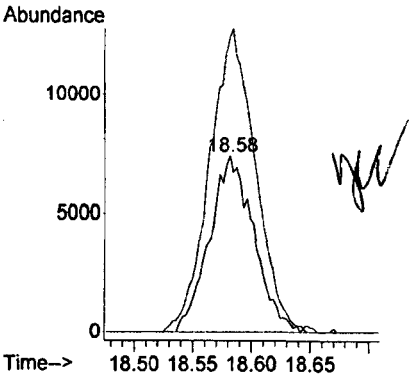




#28
Toluene
Concen: 7.14 ng
RT: 18.58 min Scan# 6483
Delta R.T. 0.009 min
Lab File: S11II.D
Acq: 11 Sep 2012 5:11 pm

Tgt Ion: 92 Resp: 19557

Ion	Ratio	Lower	Upper
92	100		
91	169.7	142.1	202.1



9-11-17

LSC Area Percent Report

Data Path : D:\ECL12036\
Data File : S11II.D
Acq On : 11 Sep 2012 5:11 pm
Operator :
Sample : 12254007 7.4361X
Misc : ~~3.6061X~~ 100ML CAE 9-12-12
ALS Vial : 1 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\GCMS-I Methods\WPID009.M
Title : WPID009 CCP-TP-175 ICAL

Signal : TIC: S11II.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.470	1524	1536	1563	rBV	68714	205355	4.98%	1.479%
2	7.194	2461	2491	2530	rBV	556709	2198482	53.32%	15.838%
3	7.582	2606	2627	2642	rBV3	18536	57053	1.38%	0.411%
4	7.716	2642	2674	2716	rBV2	732090	3215568	77.99%	23.165%
5	14.311	4970	4986	5007	rVB3	20333	61859	1.50%	0.446%
6	14.982	5194	5221	5259	rBV	1274008	3940195	95.56%	28.386%
7	18.582	6467	6483	6501	rBV3	30023	79228	1.92%	0.571%
8	21.488	7477	7502	7535	rBV	1510652	4123178	100.00%	29.704%

Sum of corrected areas: 13880918

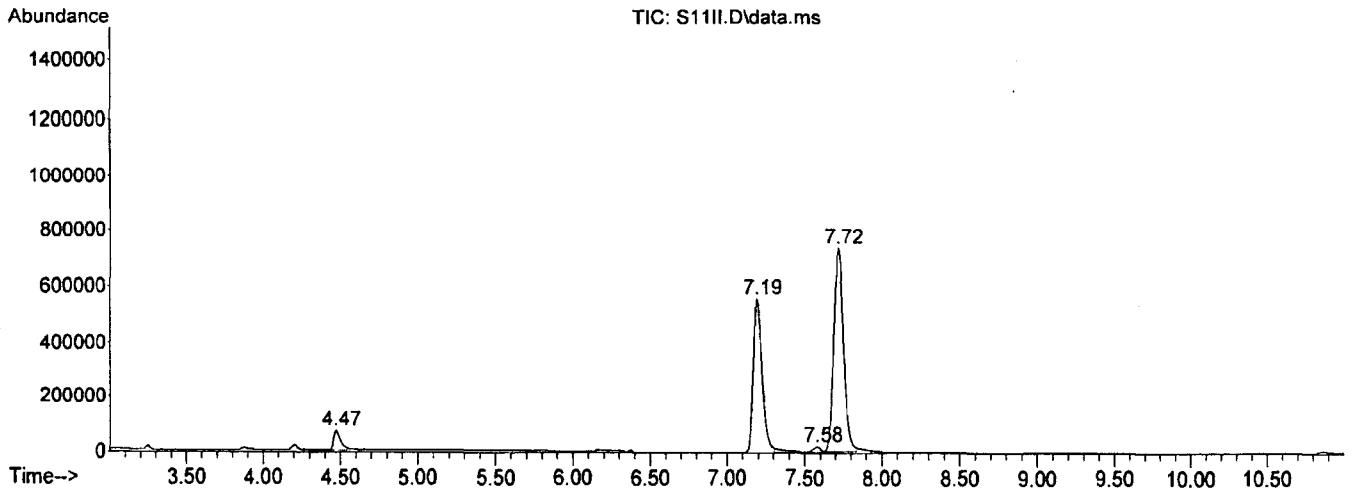
CAE 9-11-12

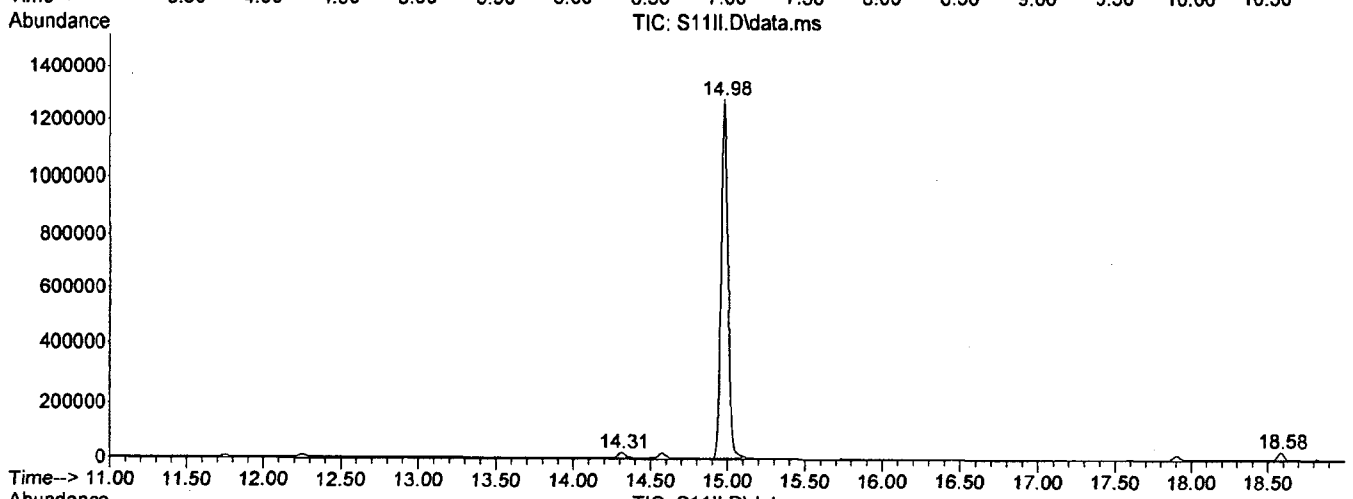
LSC Report - Integrated Chromatogram

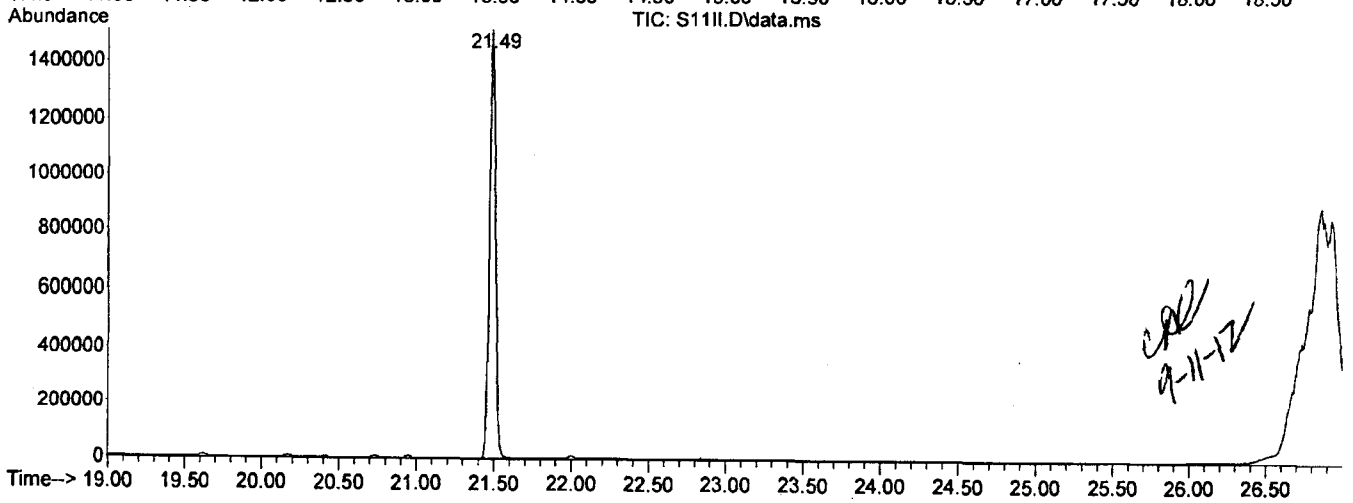
Data Path : D:\ECL12036\
Data File : S11II.D
Acq On : 11 Sep 2012 5:11 pm
Operator :
Sample : 12254007 7.4361X
Misc : ~~3.6061X~~ 100ML cae 9-12-12
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\GCMS-I Methods\WPID009.M
Quant Title : WPID009 CCP-TP-175 ICAL

TIC Library : C:\Database\NISTAPX8.L
TIC Integration Parameters: LSCINT.P







9-11-12

000103

Library Search Compound Report

Data Path : D:\ECL12036\
Data File : S11II.D
Acq On : 11 Sep 2012 5:11 pm
Operator :
Sample : 12254007 7.436\X
Misc : ~~3.6061X~~ 100ML one 9-12-12
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\GCMS-I Methods\WPID009.M
Quant Title : WPID009 CCP-TP-175 ICAL

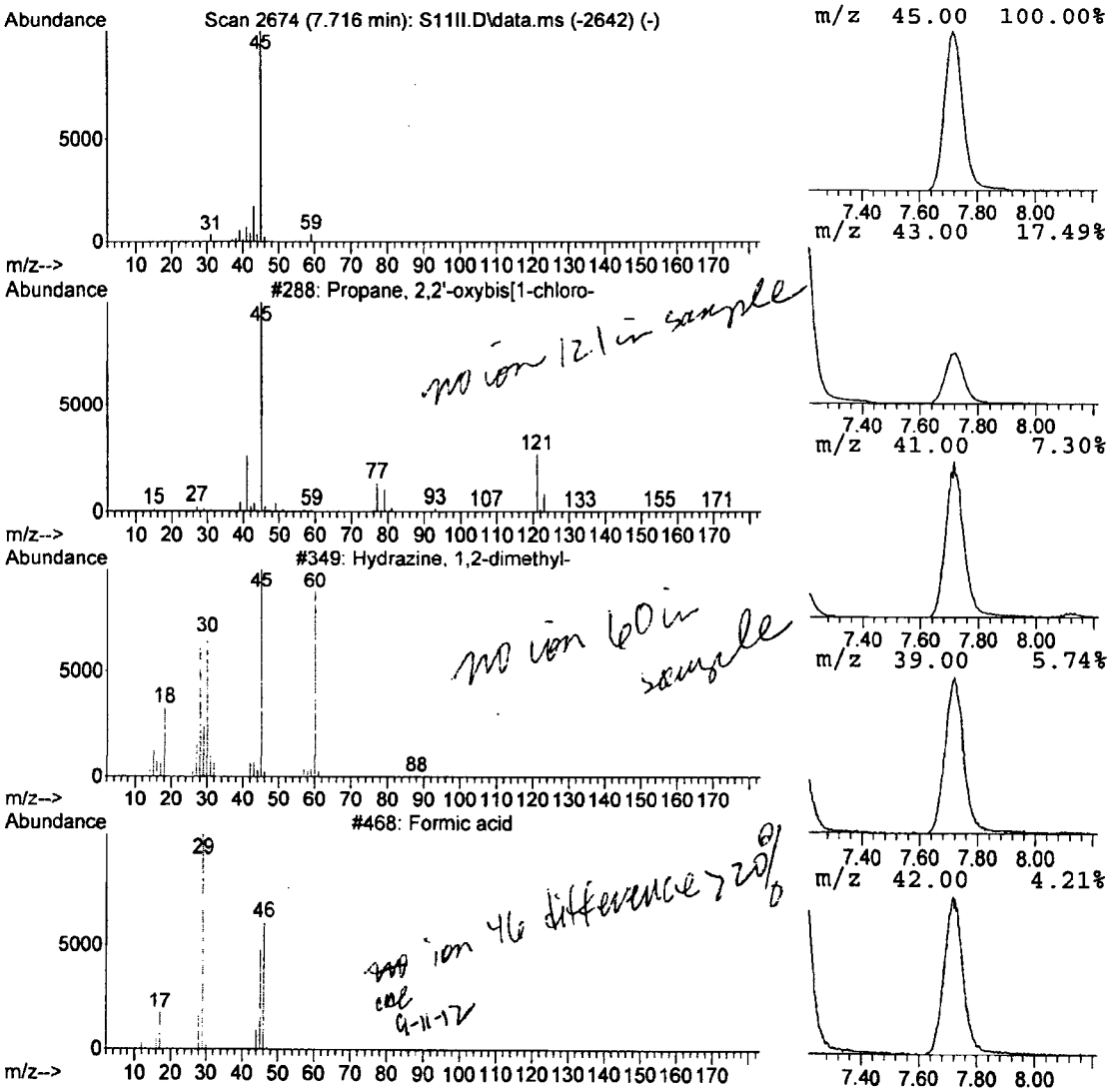
TIC Library : C:\Database\NISTAPX8.L
TIC Integration Parameters: LSCINT.P

****
Peak Number 1 Propane, 2,2'-oxybis[1-chloro- Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.72	386.01 ng	3215570	Fluorobenzene	14.98

Hit# of 4	Tentative ID	MW	MolForm	CAS#	Qual
1	Propane, 2,2'-oxybis[1-chloro-	170	C6H12Cl2O	000108-60-1	2
2	Hydrazine, 1,2-dimethyl-	60	C2H8N2	000540-73-8	1
3	Formic acid	46	CH2O2	000064-18-6	1
4	Hydrazinecarbothioamide	91	CH5N3S	000079-19-6	1

Do not report



no ion 121 in sample

no ion 60 in sample

no ion 46 difference > 20% cae 9-11-12

cae 9-11-12

000104

Quantitation Report (QT Reviewed)

Data Path : D:\ECL12036\
Data File : S11IJ.D
Acq On : 11 Sep 2012 5:51 pm
Operator :
Sample : 12254008 3.6009X
Misc : ~~7.4361X~~ 80ML ca 9-12-12
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 12 09:01:44 2012
Quant Method : C:\GCMS-I Methods\WPID009.M
Quant Title : WPID009 CCP-TP-175 ICAL
QLast Update : Wed May 30 09:54:04 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
Internal Standards						
1) Fluorobenzene	14.95	96	1835468	473.00 ng		0.00
24) Chlorobenzene-d5	21.50	117	1316950	490.00 ng		0.01
Target Compounds						Qvalue
15) Acetone	7.19	43	2477068	883.51 ng		98
16) 2-Butanone	12.25	72	24358	33.17 ng	#	80
18) Methanol	4.46	31	155169	200.16 ng		79
21) Carbon Disulfide	7.58	76	30100	X7.42 ng		84

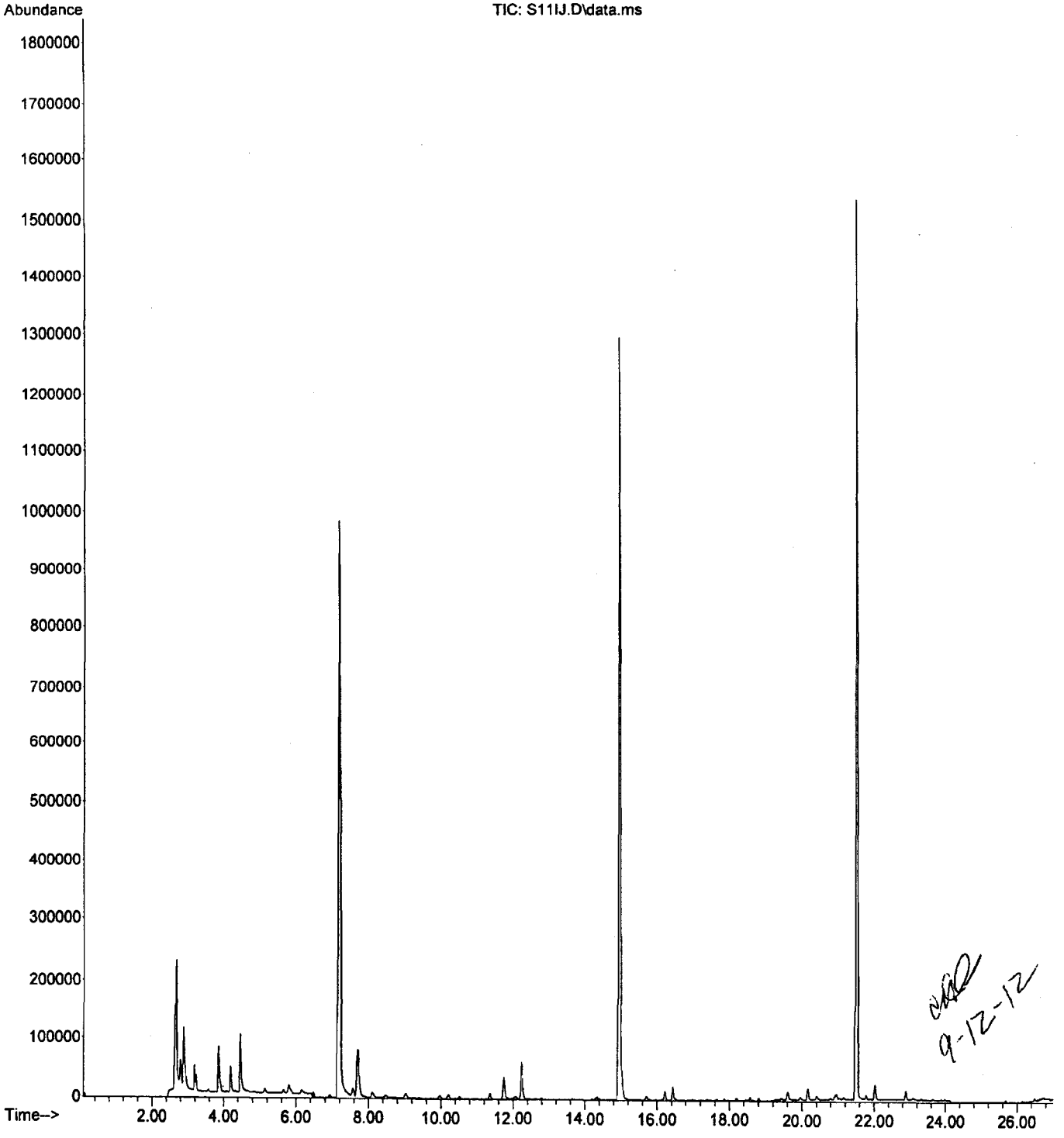
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9-12-12

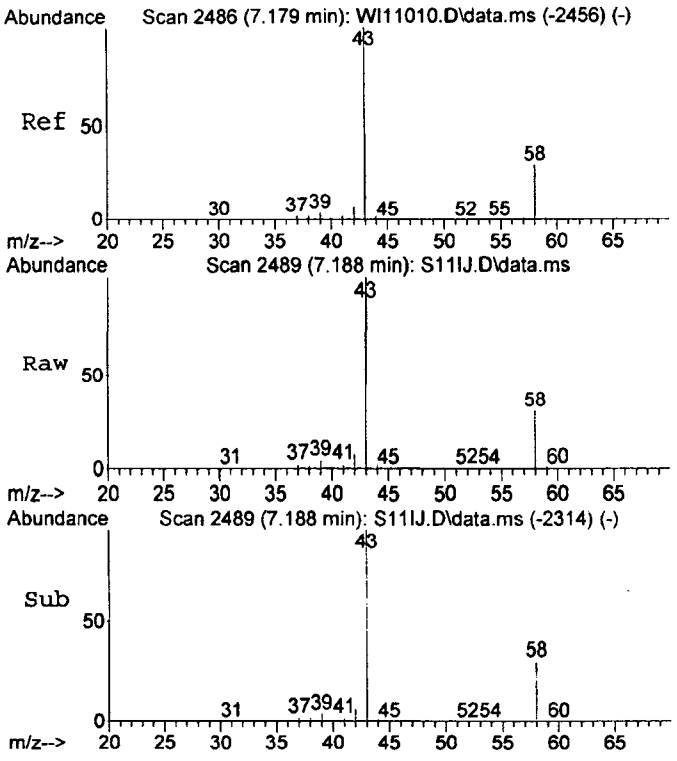
Quantitation Report (QT Reviewed)

Data Path : D:\ECL12036\
Data File : S11IJ.D
Acq On : 11 Sep 2012 5:51 pm
Operator :
Sample : 12254008 3,6009X
Misc : ~~7.4361X~~ 80ML cae 9-12-12
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 12 09:01:44 2012
Quant Method : C:\GCMS-I Methods\WPID009.M
Quant Title : WPID009 CCP-TP-175 ICAL
QLast Update : Wed May 30 09:54:04 2012
Response via : Initial Calibration



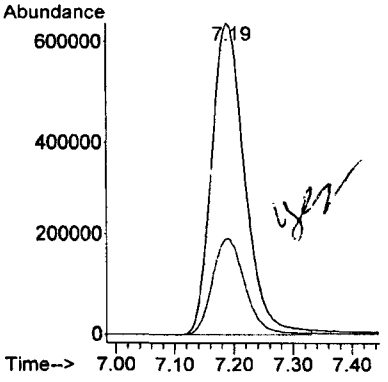
cae 9-12-12

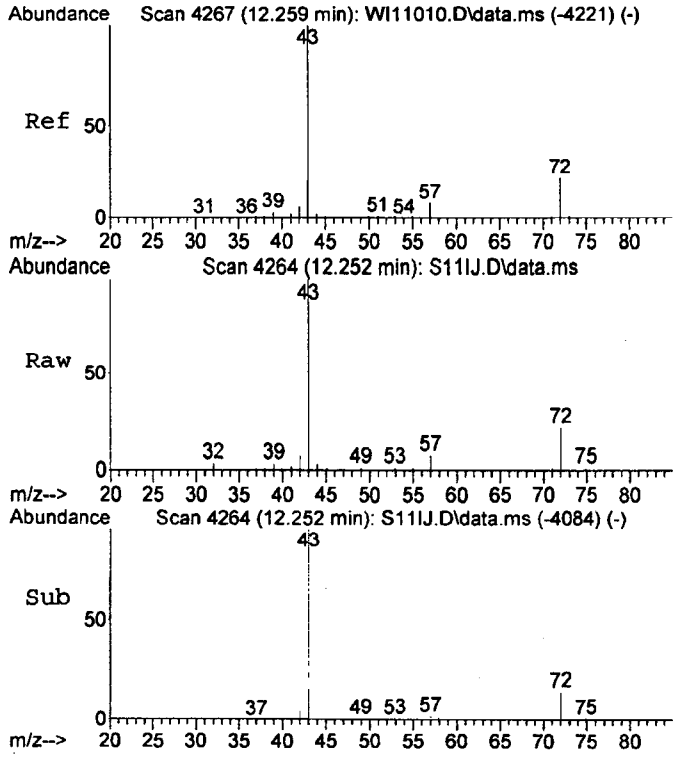


#15
Acetone
Concen: 883.51 ng
RT: 7.19 min Scan# 2489
Delta R.T. 0.001 min
Lab File: S11IJ.D
Acq: 11 Sep 2012 5:51 pm

Tgt Ion: 43 Resp: 2477068

Ion	Ratio	Lower	Upper
43	100		
58	29.6	0.7	60.7

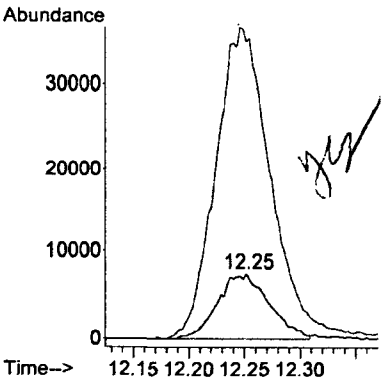




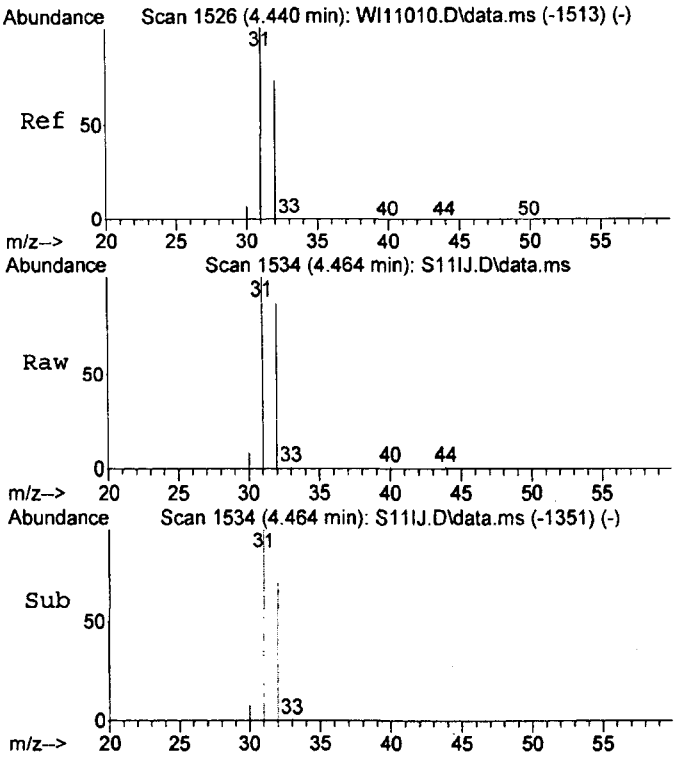
#16
2-Butanone
Concen: 33.17 ng
RT: 12.25 min Scan# 4264
Delta R.T. 0.015 min
Lab File: S11IJ.D
Acq: 11 Sep 2012 5:51 pm

Tgt Ion: 72 Resp: 24358

Ion	Ratio	Lower	Upper
72	100		
43	466.6	388.5	448.5#



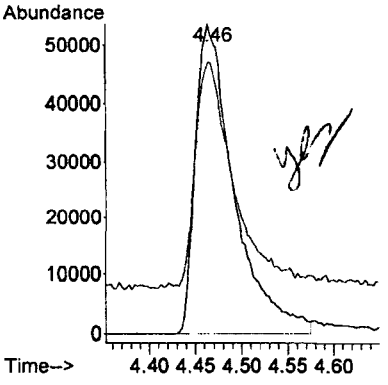
9-12-12

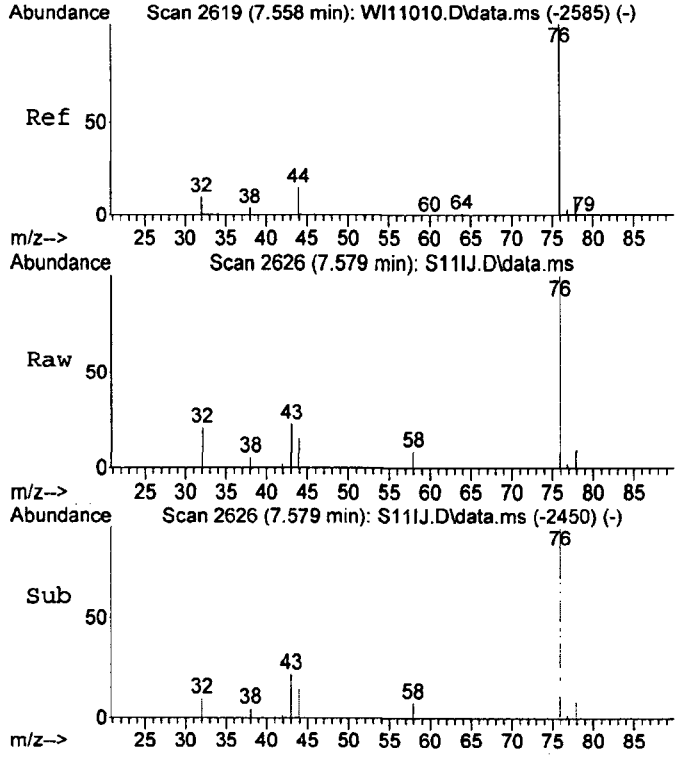


#18
Methanol
Concen: 200.16 ng
RT: 4.46 min Scan# 1534
Delta R.T. 0.023 min
Lab File: S11IJ.D
Acq: 11 Sep 2012 5:51 pm

Tgt Ion: 31 Resp: 155169

Ion	Ratio	Lower	Upper
31	100		
32	87.0	40.0	100.0

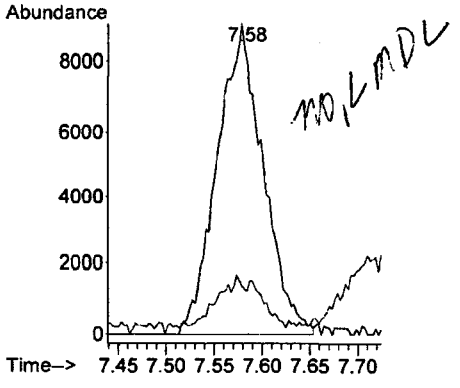




#21
Carbon Disulfide
Concen: 7.42 ng
RT: 7.58 min Scan# 2626
Delta R.T. 0.003 min
Lab File: S11IJ.D
Acq: 11 Sep 2012 5:51 pm

Tgt Ion: 76 Resp: 30100

Ion	Ratio	Lower	Upper
76	100		
44	8.7	8.3	22.5



9-12-12

Library Search Compound Report

Data Path : D:\ECL12036\
Data File : S11IJ.D
Acq On : 11 Sep 2012 5:51 pm
Operator :
Sample : 12254008 3.6009X
Misc : ~~7.4361X~~ 80ML CME 9-12-12
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\GCMS-I Methods\WPID009.M
Quant Title : WPID009 CCP-TP-175 ICAL

TIC Library : C:\Database\NISTAPX8.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected
****

CME 9-12-12

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12254004D		Field Sample ID:	IN090412EI770D	
Analytical Batch:	ECL12036M		Sampling Batch:	INHSG1206	
Data Report:	ECL12036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	9/11/2012	1831	Date Sampled:	9/4/2012	
Lab File ID:	S11IK		Date Received:	09/10/12	
Instrument ID:	GCMS-I		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	28	J
Benzene	0.22	U
Bromoform	0.057	U
Butanol	0.29	U
Carbon disulfide	0.95	J
Carbon tetrachloride	0.11	U
Chlorobenzene	0.15	U
Chloroform	0.14	U
Chloromethane	0.29	U
Cyclohexane	0.21	U
1,1-Dichloroethane	0.19	U
1,2-Dichloroethane	0.19	U
1,1-Dichloroethylene	0.20	U
cis-1,2-Dichloroethylene	0.22	U
trans-1,2-Dichloroethylene	0.21	U
1,2-Dichloropropane	0.16	U
Ethyl benzene	0.14	U
Ethyl ether	0.25	U
Methyl ethyl ketone	0.25	U
Methyl isobutyl ketone	0.18	U
Methylene chloride	0.23	U
1,1,2,2-Tetrachloroethane	0.11	U
Tetrachloroethylene	0.13	U
Toluene	0.17	U
1,1,1-Trichloroethane	0.12	U
Trichloroethylene	0.14	U
Trichlorofluoromethane	0.13	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.099	U
1,3,5-Trimethylbenzene	0.13	U
1,2,4-Trimethylbenzene	0.14	U
p/m-Xylene	0.14	U
o-Xylene	0.14	U
Methanol	47	J

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	12254004D		Field Sample ID:	IN090412EI770D	
Analytical Batch:	ECL12036M		Sampling Batch:	INHSG1206	
Data Report:	ECL12036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	9/11/2012	1831	Date Sampled:	9/4/2012	
Lab File ID:	S11IK		Date Received:	09/10/12	
Instrument ID:	GCMS-I		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

Quantitation Report (QT Reviewed)

Data Path : D:\ECL12036\
Data File : S11IK.D
Acq On : 11 Sep 2012 6:31 pm
Operator :
Sample : 12254004D
Misc : 3.9740X 40ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 12 09:03:51 2012
Quant Method : C:\GCMS-I Methods\WPID009.M
Quant Title : WPID009 CCP-TP-175 ICAL
QLast Update : Wed May 30 09:54:04 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	14.95	96	1830816	473.00	ng	0.00
24) Chlorobenzene-d5	21.50	117	1305706	490.00	ng	0.01
Target Compounds						Qvalue
15) Acetone	7.19	43	1883441	673.48	ng	98
18) Methanol	4.45	31	479172	619.68	ng	89
21) Carbon Disulfide	7.58	76	120252	29.74	ng	100

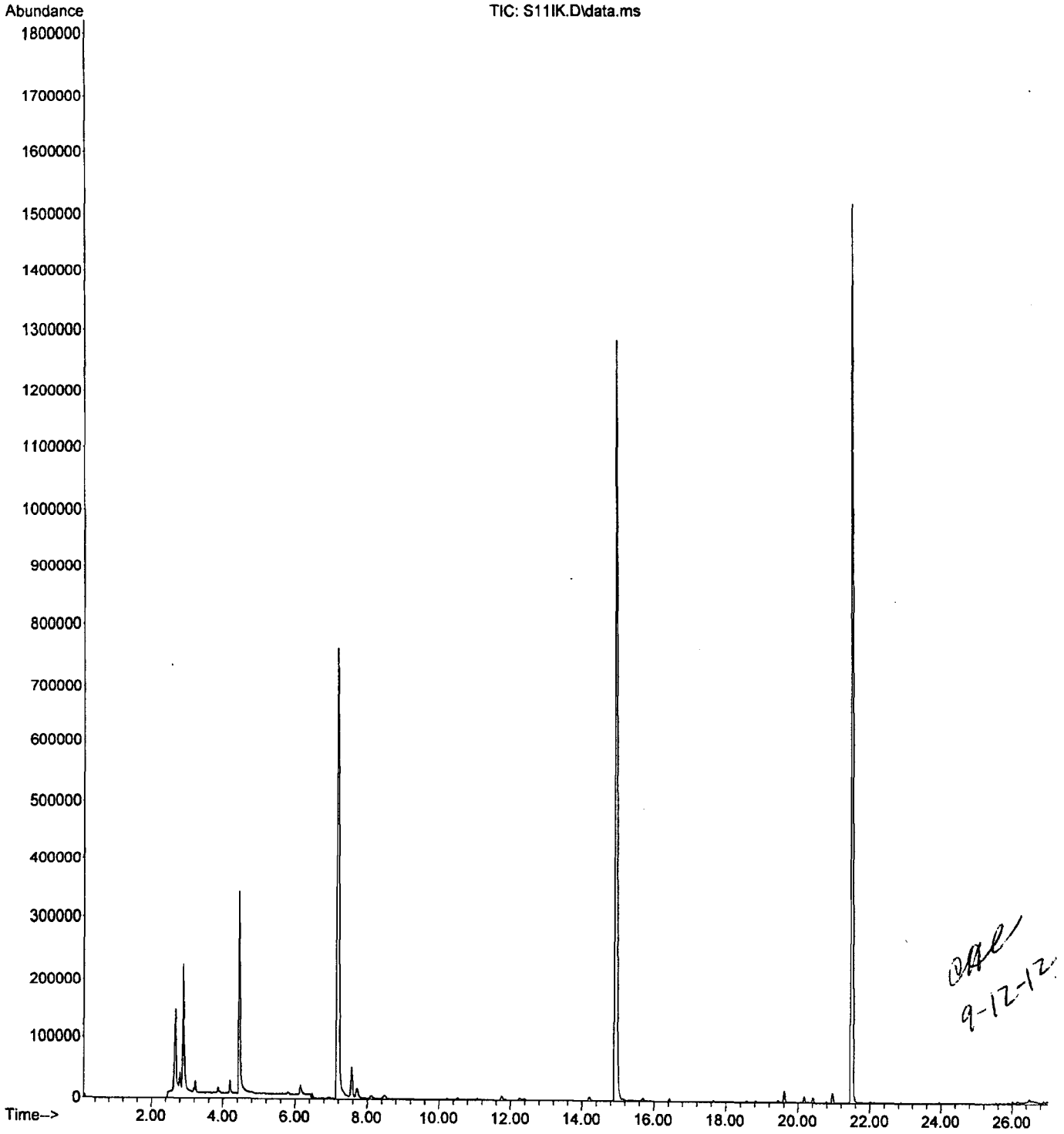
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9-12-12

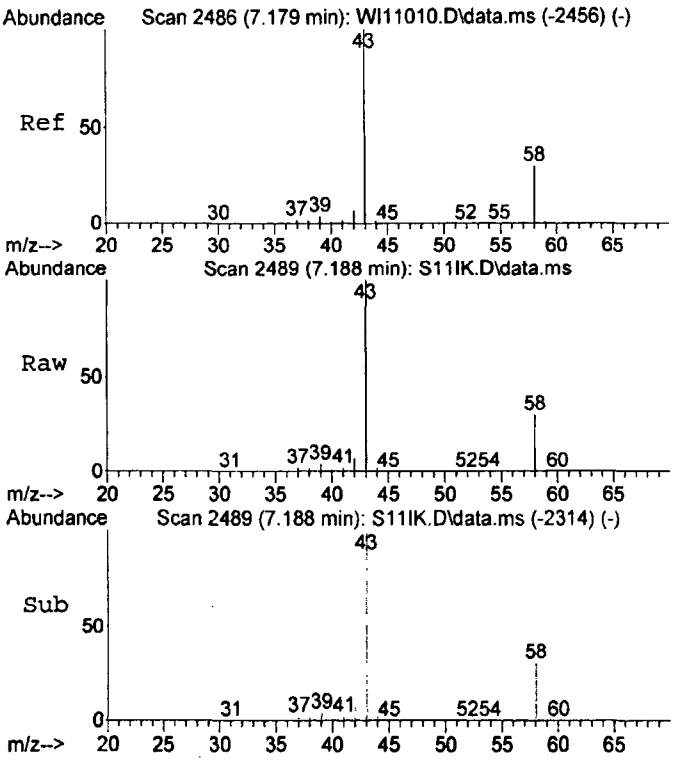
Quantitation Report (QT Reviewed)

Data Path : D:\ECL12036\
Data File : S11IK.D
Acq On : 11 Sep 2012 6:31 pm
Operator :
Sample : 12254004D
Misc : 3.9740X 40ML
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 12 09:03:51 2012
Quant Method : C:\GCMS-I Methods\WPID009.M
Quant Title : WPID009 CCP-TP-175 ICAL
QLast Update : Wed May 30 09:54:04 2012
Response via : Initial Calibration



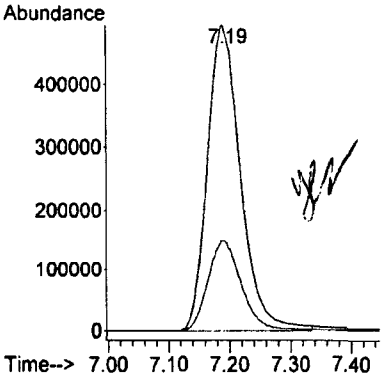
9-12-12

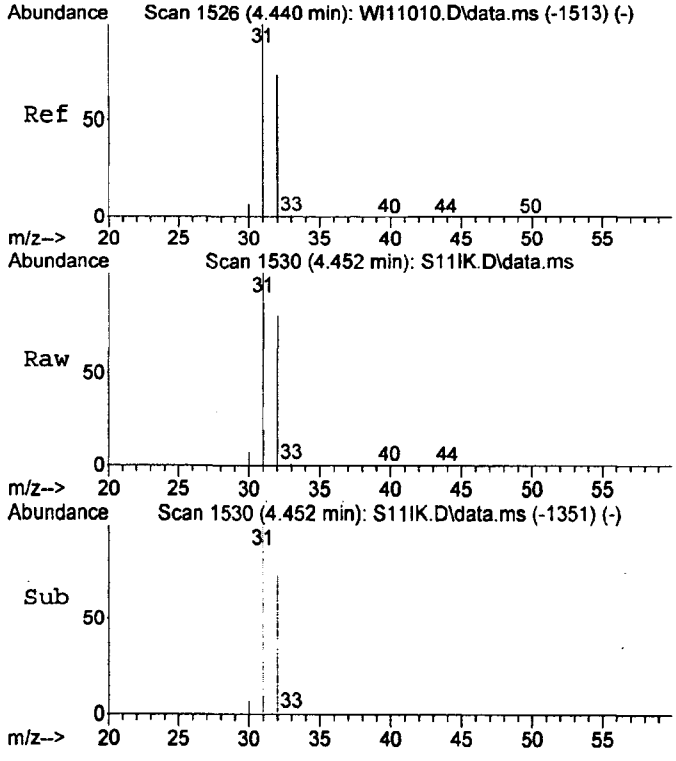


#15
Acetone
Concen: 673.48 ng
RT: 7.19 min Scan# 2489
Delta R.T. 0.001 min
Lab File: S11IK.D
Acq: 11 Sep 2012 6:31 pm

Tgt Ion: 43 Resp: 1883441

Ion	Ratio	Lower	Upper
43	100		
58	29.7	0.7	60.7

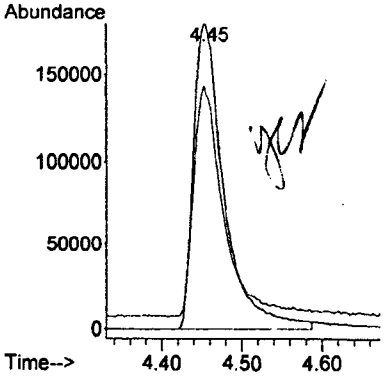




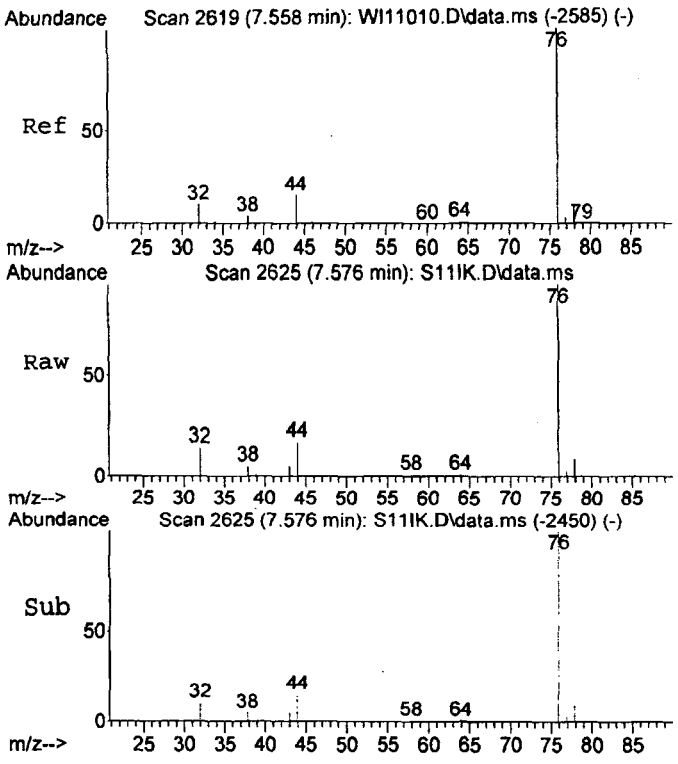
#18
Methanol
Concen: 619.68 ng
RT: 4.45 min Scan# 1530
Delta R.T. 0.012 min
Lab File: S11IK.D
Acq: 11 Sep 2012 6:31 pm

Tgt Ion: 31 Resp: 479172

Ion	Ratio	Lower	Upper
31	100		
32	79.0	40.0	100.0



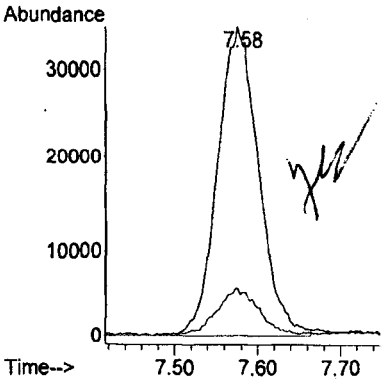
9-12-12



#21
Carbon Disulfide
Concen: 29.74 ng
RT: 7.58 min Scan# 2625
Delta R.T. 0.001 min
Lab File: S11IK.D
Acq: 11 Sep 2012 6:31 pm

Tgt Ion: 76 Resp: 120252

Ion	Ratio	Lower	Upper
76	100		
44	15.4	8.3	22.5



9-12-12

Library Search Compound Report

Data Path : D:\ECL12036\
Data File : S11IK.D
Acq On : 11 Sep 2012 6:31 pm
Operator :
Sample : 12254004D
Misc : 3.9740X 40ML
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\GCMS-I Methods\WPID009.M
Quant Title : WPID009 CCP-TP-175 ICAL

TIC Library : C:\Database\NISTAPX8.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected
****

9-12-12

SECTION 8.0

MISCELLANEOUS SUPPORTING DATA

CALCULATION FORMULAS
GAS VOC ANALYSIS

IDAHO NATIONAL LABORATORY
ENVIRONMENTAL CHEMISTRY LABORATORY

METHOD: CCP-TP-175

$$\text{Sample Results (ppmv)} = \frac{ng * D * Rt}{V * C * MW} \qquad \text{Sample Specific MDL} = \frac{MDL * D * RT}{V * C * MW}$$

ppmv = **Parts per million volume**

C = **Correction factor for volume at STP (= to 1.00 for Modified Method Acmm-9930)**

D = **Dilution factor (result of canister pressurization) reported as number of times diluted**

ng = **Nanograms of analyte found in the sample (found on instrument quantitation report)**

Rt = **24.5 at 25°C**

MDL = **Method Detection Limit in nanograms (found on Method Detection Limit reporting form)**

MW = **Molecular Weight of analyte**

V = **Volume of sample injected onto instrument (mLs)**

Results for samples with analytes detected are calculated using the sample results (ppmv) equation. The sample specific MDL (analyte MDL corrected for sample volume, dilutions, etc.) is calculated using the sample specific MDL equation.

Idaho National Laboratory

Crowder, Catherine A <catherine.crowder@inl.gov>

FW: Catherine

1 message

Poirier, Joe <Joseph.Poirier@amwtp.inl.gov> Thu, Sep 13, 2012 at 7:23 AM
To: "Crowder, Catherine A" <Catherine.Crowder@inl.gov>

Catherine,

Dale wanted me to inform you that we had to make a correction to the COC for INHSG1206.

Joe Poirier

FGA Lead - Idaho

Work: (208) 526-6459

Cell: (208) 681-2550

Contractor to Washington TRU Solutions LLC

From: Dale Dover [mailto:ddover@gmail.com]
Sent: Wednesday, September 12, 2012 4:56 PM
To: Poirier, Joe
Subject: Catherine

Joe,

Could you email Catherine about her correcting the COC for me? The expiration date on the second page for XC0517 should be 1/31/2013.

Thanks,
Dale

GAS SAMPLE PREPARATION LOGBOOK
ENVIRONMENTAL CHEMISTRY LABORATORY

REPORT GROUP # EC212036 PAGE # UT2-27- 0030

SUMMA CANISTER LABORATORY SAMPLE IDENTIFICATION	SIZE (mL)	AMBIENT CONDITIONS (Torr) PRESS	AMBIENT CONDITIONS (C) TEMP	CANISTER PRESSURE (Torr) START (A)	CANISTER PRESSURE (Torr) FINAL (B)	DILUTION FACTOR (B/A)	SAMPLE PREP DATE	BY INITIALS
LAB BLANK/LB3171710	500	640T	22	<5.0x10-2T	2038.5	N/A	091012	[illegible]
12254001	250	640T	22	487.5	1873.5	3.8431	091012	[illegible]
12254002	250	640T	22	507.0	1877.5	3.7032	091012	[illegible]
12254003	250	640T	22	495.0	1862.0	3.7616	091012	[illegible]
12254004	250	640T	22	500.5	1989.0	3.9740	091012	[illegible]
12254005	250	640T	22	481.5	1789.0	3.7155	091012	[illegible]
12254006	250	640T	22	504.0	1940.5	3.8502	091012	[illegible]
12254007	250	640T	22	523.6	1886.0	3.6061	091012	[illegible]
12254008	250	640T	22	527.5	1899.5	3.6009	091012	[illegible]
12254007	250	643	22	692.5	1428.0	2.0621	091112	CAE

9-12-12

027000120

GAS SAMPLE PREPARATION LOGBOOK
ENVIRONMENTAL CHEMISTRY LABORATORY

REPORT GROUP # NA, LCS Prep.

PAGE # UT2-27- 0008

SUMMA CANISTER LABORATORY SAMPLE IDENTIFICATION	SIZE (mL)	AMBIENT CONDITIONS (Torr) / (C)		CANISTER PRESSURE (Torr)		DILUTION FACTOR (B/A)	SAMPLE PREP DATE	BY INITIALS
		PRESS	TEMP	START (A)	FINAL (B)			
LCS304435L02	6000	642	21	618.0	2163.0	3.5000	070212	CAE
				N/A				

000121

WIPP DUPLICATE SAMPLE CALCULATIONS

Instrument I

Method CCP-TP-175

		12254004 *IN090412EI770*				12254004D *IN090412EI770D*					
		Instrument Filename: S11IF	Date of Analysis: 11-Sep-12			Instrument Filename: S11IK	Date of Analysis: 11-Sep-12				
Analyte	Molecular Weight	Sample Amt. Found (ng)	Injection Volume (mL)	Dilution Factor (X)	Sample Calculated Amount (ppmv)	Duplicate Amt. Found (ng)	Injection Volume (mL)	Dilution Factor (X)	Duplicate Calculated Amount (ppmv)	Sample & Duplicate Mean (ppmv)	**% RPD**
Ethyl Ether	74.12	0.00				0.00					
Methylene Chloride	84.93	0.00				0.00					
Freon 113	187.38	0.00				0.00					
1,1-Dichloroethene	96.94	0.00				0.00					
1,1-Dichloroethane	98.94	0.00				0.00					
cis-1,2-Dichloroethene	96.94	0.00				0.00					
Chloroform	119.38	0.00				0.00					
1,2-Dichloroethane	98.94	0.00				0.00					
1,1,1-Trichlorethane	133.41	0.00				0.00					
Carbon Tetrachloride	153.82	0.00				0.00					
Trichloroethene	131.39	0.00				0.00					
Cyclohexane	84.16	0.00				0.00					
Benzene	78.12	0.00				0.00					
Acetone	58.08	664.54	40	3.97	**27.82**	673.48	40	3.97	**28.20**	28.01	**1.34**
2-Butanone	72.11	0.00				0.00					
1-Butanol	74.12	0.00				0.00					
Methanol	32.04	628.60	40	3.97	**47.71**	619.68	40	3.97	**47.03**	47.37	**1.43**
trans-1,2-Dichloroethene	96.94	0.00				0.00					
Chloromethane	50.49	0.00				0.00					
Carbon Disulfide	76.14	29.40	40	3.97	**0.94**	29.74	40	3.97	**0.95**	0.94	**1.15**
1,2-Dichloropropane	112.99	0.00				0.00					
Trichlorofluoromethane	137.37	0.00				0.00					
Bromoform	252.75	0.00				0.00					
Tetrachloroethene	165.83	0.00				0.00					
1,1,2,2,-Tetrachloroethane	167.85	0.00				0.00					
Toluene	92.15	0.00				0.00					
Chlorobenzene	112.56	0.00				0.00					
Ethylbenzene	106.17	0.00				0.00					
p/m - Xylene	106.17	0.00				0.00					
o-Xylene	106.17	0.00				0.00					
1,3,5-Trimethylbenzene	120.20	0.00				0.00					
1,2,4-Trimethylbenzene	120.20	0.00				0.00					
4-Methyl -2- Pentanone	100.16	0.00				0.00					

WIPP LABORATORY CONTROL SAMPLE CALCULATIONS

Instrument I
Method CCP-TP-175

Lab Sample ID: **LCSMIS11**
Field Sample ID: **LCS30443SL02**
File Name : **S11IB**
Date of Analysis: **11-Sep-12**

Analyte	Molecular Weight	Sample Amt. Found (ng)	Injection Volume (mL)	Dilution Factor (X)	Calculated Value (ppmv)	True Value (ppmv)	Recovery (%)	**IN** if Between 70% & 130% (Comp.)
Methylene Chloride	84.94	866.99	40	3.5000	**21.88**	20.00	109.41	**IN**
1,1,1-Trichloroethane	133.41	782.14	40	3.5000	**12.57**	12.16	103.36	**IN**
Carbon Tetrachloride	153.82	866.73	40	3.5000	**12.08**	11.89	101.59	**IN**
Trichloroethene	131.39	755.09	40	3.5000	**12.32**	12.26	100.49	**IN**
Benzene	78.12	661.21	40	3.5000	**18.14**	20.20	89.83	**IN**
Toluene	92.15	783.58	40	3.5000	**18.23**	18.26	99.83	**IN**
4-Methyl-2 pentanone	100.16	745.77	40	3.5000	**15.96**	16.20	98.53	**IN**

C27000123

ENVIRONMENTAL CHEMISTRY LABORATORY

INTERNAL SAMPLE TRACKING FORM

RECEIVING GROUP # ECL 12036

LAB SAMPLE ID	SAMPLE(S) REMOVED			ANALYSIS OR PROCESS	SAMPLE(S) RETURNED		
	DATE	TIME	SIGNATURE OR INITIALS		DATE	TIME	SIGNATURE OR INITIALS
12254001 - 008	NA	NA	NA	Samples Received	091012	0800	JBL
12254001 - 008	091012	0900	JBL JAL	Samples Prep & Analysis	091212	1300	CAL
12254001 - 008	091212	1300	CAL	Cleaning	NA	NA	NA

001124

FORM DATE: 08/17/2009

SUPPLEMENTAL REPORTING DATA

INPUT/UPDATE RECORDS SCREEN

9/14/2012

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
12254001	IN090412EI779	No	CCP-TP-175	9/14/2012

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-I	5/10/2012	09/10/12	9/4/2012	9/11/2012 1213	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
S11IC	3.84	100	24.5	LBMIS11

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL12036M	1	INHSG1206

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
12254002	IN090412EIB85	No	CCP-TP-175	9/14/2012

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-I	5/10/2012	09/10/12	9/4/2012	9/11/2012 1344	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
S11ID	3.7	100	24.5	LBMIS11

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL12036M	1	INHSG1206

000125

SUPPLEMENTAL REPORTING DATA

INPUT/UPDATE RECORDS SCREEN

9/14/2012

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
12254003	IN090412EI504	No	CCP-TP-175	9/14/2012

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-I	5/10/2012	09/10/12	9/4/2012	9/11/2012 1427	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
S11IE	3.76	100	24.5	LBMIS11

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL12036M	1	INHSG1206

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
12254004	IN090412EI770	No	CCP-TP-175	9/14/2012

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-I	5/10/2012	09/10/12	9/4/2012	9/11/2012 1506	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
S11IF	3.97	40	24.5	LBMIS11

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL12036M	1	INHSG1206

SUPPLEMENTAL REPORTING DATA

INPUT/UPDATE RECORDS SCREEN

9/14/2012

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
12254004D	IN090412EI770D	No	CCP-TP-175	9/14/2012

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-I	5/10/2012	09/10/12	9/4/2012	9/11/2012 1831	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
S11IK	3.97	40	24.5	LBMIS11

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL12036M	1	INHSG1206

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
12254005	IN090412EI672	No	CCP-TP-175	9/14/2012

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-I	5/10/2012	09/10/12	9/4/2012	9/11/2012 1549	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
S11IG	3.72	100	24.5	LBMIS11

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL12036M	1	INHSG1206

000127

SUPPLEMENTAL REPORTING DATA

INPUT/UPDATE RECORDS SCREEN

9/14/2012

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
12254006	IN090412EIC22	No	CCP-TP-175	9/14/2012

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-I	5/10/2012	09/10/12	9/4/2012	9/11/2012 1629	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
S11IH	3.85	90	24.5	LBMIS11

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL12036M	1	INHSG1206

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
12254007	IN090412EI291	No	CCP-TP-175	9/14/2012

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-I	5/10/2012	09/10/12	9/4/2012	9/11/2012 1711	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
S11II	7.44	100	24.5	LBMIS11

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL12036M	1	INHSG1206

000128

SUPPLEMENTAL REPORTING DATA

INPUT/UPDATE RECORDS SCREEN

9/14/2012

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
12254008	IN090412EIB00	No	CCP-TP-175	9/14/2012

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-I	5/10/2012	09/10/12	9/4/2012	9/11/2012 1751	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
S11IJ	3.6	80	24.5	LBMIS11

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL12036M	1	INHSG1206

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
LBMIS11	LB31717S10	Yes	CCP-TP-175	9/14/2012

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-I	5/10/2012			9/11/2012 1052	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
S11IA	1	100	24.5	

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL12036M	1	

SUPPLEMENTAL REPORTING DATA

INPUT/UPDATE RECORDS SCREEN

9/14/2012

LAB SAMPLE ID	FIELD SAMPLE ID		BLANK	METHOD	LOG DATE
LCSMIS11	LCS30443SL02		No	CCP-TP-175	9/14/2012

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-I	5/10/2012			9/11/2012 1131	CROWDER

DATA FILE	DILUTION FACTOR		VOLUME	RT	ASSOCIATED BLANK
S11IB	3.5		40	24.5	LBMIS11

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL12036M	1	

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RESULTS SUMMARY

9/14/2012

LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
12254001	CCP-TP-175	1	ECL12036M	0.05136	
12254001	CCP-TP-175	2	ECL12036M	0.09520	
12254001	CCP-TP-175	3	ECL12036M	0.09083	
12254001	CCP-TP-175	4	ECL12036M	0.03816	
12254001	CCP-TP-175	5	ECL12036M	0.07861	
12254001	CCP-TP-175	6	ECL12036M	0.07322	
12254001	CCP-TP-175	7	ECL12036M	0.08443	
12254001	CCP-TP-175	8	ECL12036M	0.05517	
12254001	CCP-TP-175	9	ECL12036M	0.07417	
12254001	CCP-TP-175	10	ECL12036M	0.04513	
12254001	CCP-TP-175	11	ECL12036M	0.04159	
12254001	CCP-TP-175	12	ECL12036M	0.05299	
12254001	CCP-TP-175	13	ECL12036M	0.07937	
12254001	CCP-TP-175	14	ECL12036M	0.08430	
12254001	CCP-TP-175	15	ECL12036M	0.06245	
12254001	CCP-TP-175	16	ECL12036M	0.02196	
12254001	CCP-TP-175	17	ECL12036M	0.05106	
12254001	CCP-TP-175	18	ECL12036M	0.04092	
12254001	CCP-TP-175	19	ECL12036M	0.06534	
12254001	CCP-TP-175	20	ECL12036M	0.05851	
12254001	CCP-TP-175	21	ECL12036M	0.05583	
12254001	CCP-TP-175	22	ECL12036M	0.05494	
12254001	CCP-TP-175	23	ECL12036M	0.05405	
12254001	CCP-TP-175	24	ECL12036M	0.05009	
12254001	CCP-TP-175	25	ECL12036M	0.05322	
12254001	CCP-TP-175	26	ECL12036M	0.07958	
12254001	CCP-TP-175	27	ECL12036M	0.11180	
12254001	CCP-TP-175	28	ECL12036M	0.10132	
12254001	CCP-TP-175	29	ECL12036M	0.12959	
12254001	CCP-TP-175	30	ECL12036M	0.09524	
12254001	CCP-TP-175	31	ECL12036M	0.11043	
12254001	CCP-TP-175	32	ECL12036M	0.06857	
12254001	CCP-TP-175	33	ECL12036M	0.29070	

RESULTS SUMMARY

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LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
12254002	CCP-TP-175	1	ECL12036M	0.04949	
12254002	CCP-TP-175	2	ECL12036M	0.09173	
12254002	CCP-TP-175	3	ECL12036M	0.08752	
12254002	CCP-TP-175	4	ECL12036M	0.03677	
12254002	CCP-TP-175	5	ECL12036M	0.07574	
12254002	CCP-TP-175	6	ECL12036M	0.07055	
12254002	CCP-TP-175	7	ECL12036M	0.08135	
12254002	CCP-TP-175	8	ECL12036M	0.05315	
12254002	CCP-TP-175	9	ECL12036M	0.07146	
12254002	CCP-TP-175	10	ECL12036M	0.04349	
12254002	CCP-TP-175	11	ECL12036M	0.04007	
12254002	CCP-TP-175	12	ECL12036M	0.05105	
12254002	CCP-TP-175	13	ECL12036M	0.07648	
12254002	CCP-TP-175	14	ECL12036M	0.08123	
12254002	CCP-TP-175	15	ECL12036M	0.06017	
12254002	CCP-TP-175	16	ECL12036M	0.02116	
12254002	CCP-TP-175	17	ECL12036M	0.04920	
12254002	CCP-TP-175	18	ECL12036M	0.03942	
12254002	CCP-TP-175	19	ECL12036M	0.06296	
12254002	CCP-TP-175	20	ECL12036M	0.05637	
12254002	CCP-TP-175	21	ECL12036M	0.05379	
12254002	CCP-TP-175	22	ECL12036M	0.05294	
12254002	CCP-TP-175	23	ECL12036M	0.05208	
12254002	CCP-TP-175	24	ECL12036M	0.04827	
12254002	CCP-TP-175	25	ECL12036M	0.05128	
12254002	CCP-TP-175	26	ECL12036M	0.07668	
12254002	CCP-TP-175	27	ECL12036M	0.10772	
12254002	CCP-TP-175	28	ECL12036M	0.44134	37.07
12254002	CCP-TP-175	29	ECL12036M	2.07381	132.87
12254002	CCP-TP-175	30	ECL12036M	0.10107	8.04
12254002	CCP-TP-175	31	ECL12036M	0.10640	
12254002	CCP-TP-175	32	ECL12036M	0.06607	
12254002	CCP-TP-175	33	ECL12036M	23.81939	841.89

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RESULTS SUMMARY

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LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
12254003	CCP-TP-175	1	ECL12036M	0.05029	
12254003	CCP-TP-175	2	ECL12036M	0.09321	
12254003	CCP-TP-175	3	ECL12036M	0.08894	
12254003	CCP-TP-175	4	ECL12036M	0.03736	
12254003	CCP-TP-175	5	ECL12036M	0.07697	
12254003	CCP-TP-175	6	ECL12036M	0.07169	
12254003	CCP-TP-175	7	ECL12036M	0.08267	
12254003	CCP-TP-175	8	ECL12036M	0.05402	
12254003	CCP-TP-175	9	ECL12036M	0.07262	
12254003	CCP-TP-175	10	ECL12036M	0.04419	
12254003	CCP-TP-175	11	ECL12036M	0.04072	
12254003	CCP-TP-175	12	ECL12036M	0.05188	
12254003	CCP-TP-175	13	ECL12036M	0.07772	
12254003	CCP-TP-175	14	ECL12036M	0.08254	
12254003	CCP-TP-175	15	ECL12036M	0.06115	
12254003	CCP-TP-175	16	ECL12036M	0.02150	
12254003	CCP-TP-175	17	ECL12036M	0.05000	
12254003	CCP-TP-175	18	ECL12036M	0.04006	
12254003	CCP-TP-175	19	ECL12036M	0.06398	
12254003	CCP-TP-175	20	ECL12036M	0.05729	
12254003	CCP-TP-175	21	ECL12036M	0.05466	
12254003	CCP-TP-175	22	ECL12036M	0.05380	
12254003	CCP-TP-175	23	ECL12036M	0.05293	
12254003	CCP-TP-175	24	ECL12036M	0.04905	
12254003	CCP-TP-175	25	ECL12036M	0.05211	
12254003	CCP-TP-175	26	ECL12036M	0.07792	
12254003	CCP-TP-175	27	ECL12036M	0.10947	
12254003	CCP-TP-175	28	ECL12036M	0.45249	37.4
12254003	CCP-TP-175	29	ECL12036M	2.14931	135.51
12254003	CCP-TP-175	30	ECL12036M	0.10194	7.98
12254003	CCP-TP-175	31	ECL12036M	0.10813	
12254003	CCP-TP-175	32	ECL12036M	0.06714	
12254003	CCP-TP-175	33	ECL12036M	24.35401	847.05

RESULTS SUMMARY

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LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
12254004	CCP-TP-175	1	ECL12036M	0.13276	
12254004	CCP-TP-175	2	ECL12036M	0.24605	
12254004	CCP-TP-175	3	ECL12036M	0.23477	
12254004	CCP-TP-175	4	ECL12036M	0.09862	
12254004	CCP-TP-175	5	ECL12036M	0.20318	
12254004	CCP-TP-175	6	ECL12036M	0.18924	
12254004	CCP-TP-175	7	ECL12036M	0.21823	
12254004	CCP-TP-175	8	ECL12036M	0.14258	
12254004	CCP-TP-175	9	ECL12036M	0.19170	
12254004	CCP-TP-175	10	ECL12036M	0.11665	
12254004	CCP-TP-175	11	ECL12036M	0.10750	
12254004	CCP-TP-175	12	ECL12036M	0.13695	
12254004	CCP-TP-175	13	ECL12036M	0.20514	
12254004	CCP-TP-175	14	ECL12036M	0.21789	
12254004	CCP-TP-175	15	ECL12036M	0.16141	
12254004	CCP-TP-175	16	ECL12036M	0.05676	
12254004	CCP-TP-175	17	ECL12036M	0.13197	
12254004	CCP-TP-175	18	ECL12036M	0.10575	
12254004	CCP-TP-175	19	ECL12036M	0.16888	
12254004	CCP-TP-175	20	ECL12036M	0.15122	
12254004	CCP-TP-175	21	ECL12036M	0.14429	
12254004	CCP-TP-175	22	ECL12036M	0.14200	
12254004	CCP-TP-175	23	ECL12036M	0.13971	
12254004	CCP-TP-175	24	ECL12036M	0.12947	
12254004	CCP-TP-175	25	ECL12036M	0.13756	
12254004	CCP-TP-175	26	ECL12036M	0.20569	
12254004	CCP-TP-175	27	ECL12036M	0.28896	
12254004	CCP-TP-175	28	ECL12036M	0.93893	29.4
12254004	CCP-TP-175	29	ECL12036M	27.82218	664.54
12254004	CCP-TP-175	30	ECL12036M	0.24616	
12254004	CCP-TP-175	31	ECL12036M	0.28542	
12254004	CCP-TP-175	32	ECL12036M	0.17723	
12254004	CCP-TP-175	33	ECL12036M	47.70660	628.6

RESULTS SUMMARY

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LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
12254004D	CCP-TP-175	1	ECL12036M	0.13276	
12254004D	CCP-TP-175	2	ECL12036M	0.24605	
12254004D	CCP-TP-175	3	ECL12036M	0.23477	
12254004D	CCP-TP-175	4	ECL12036M	0.09862	
12254004D	CCP-TP-175	5	ECL12036M	0.20318	
12254004D	CCP-TP-175	6	ECL12036M	0.18924	
12254004D	CCP-TP-175	7	ECL12036M	0.21823	
12254004D	CCP-TP-175	8	ECL12036M	0.14258	
12254004D	CCP-TP-175	9	ECL12036M	0.19170	
12254004D	CCP-TP-175	10	ECL12036M	0.11665	
12254004D	CCP-TP-175	11	ECL12036M	0.10750	
12254004D	CCP-TP-175	12	ECL12036M	0.13695	
12254004D	CCP-TP-175	13	ECL12036M	0.20514	
12254004D	CCP-TP-175	14	ECL12036M	0.21789	
12254004D	CCP-TP-175	15	ECL12036M	0.16141	
12254004D	CCP-TP-175	16	ECL12036M	0.05676	
12254004D	CCP-TP-175	17	ECL12036M	0.13197	
12254004D	CCP-TP-175	18	ECL12036M	0.10575	
12254004D	CCP-TP-175	19	ECL12036M	0.16888	
12254004D	CCP-TP-175	20	ECL12036M	0.15122	
12254004D	CCP-TP-175	21	ECL12036M	0.14429	
12254004D	CCP-TP-175	22	ECL12036M	0.14200	
12254004D	CCP-TP-175	23	ECL12036M	0.13971	
12254004D	CCP-TP-175	24	ECL12036M	0.12947	
12254004D	CCP-TP-175	25	ECL12036M	0.13756	
12254004D	CCP-TP-175	26	ECL12036M	0.20569	
12254004D	CCP-TP-175	27	ECL12036M	0.28896	
12254004D	CCP-TP-175	28	ECL12036M	0.94978	29.74
12254004D	CCP-TP-175	29	ECL12036M	28.19647	673.48
12254004D	CCP-TP-175	30	ECL12036M	0.24616	
12254004D	CCP-TP-175	31	ECL12036M	0.28542	
12254004D	CCP-TP-175	32	ECL12036M	0.17723	
12254004D	CCP-TP-175	33	ECL12036M	47.02963	619.68

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RESULTS SUMMARY

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LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
12254005	CCP-TP-175	1	ECL12036M	0.04976	
12254005	CCP-TP-175	2	ECL12036M	0.09222	
12254005	CCP-TP-175	3	ECL12036M	0.08800	
12254005	CCP-TP-175	4	ECL12036M	0.03697	
12254005	CCP-TP-175	5	ECL12036M	0.07615	
12254005	CCP-TP-175	6	ECL12036M	0.07093	
12254005	CCP-TP-175	7	ECL12036M	0.08179	
12254005	CCP-TP-175	8	ECL12036M	0.05344	
12254005	CCP-TP-175	9	ECL12036M	0.07185	
12254005	CCP-TP-175	10	ECL12036M	0.04372	
12254005	CCP-TP-175	11	ECL12036M	0.04029	
12254005	CCP-TP-175	12	ECL12036M	0.05133	
12254005	CCP-TP-175	13	ECL12036M	0.07689	
12254005	CCP-TP-175	14	ECL12036M	0.08167	
12254005	CCP-TP-175	15	ECL12036M	0.06050	
12254005	CCP-TP-175	16	ECL12036M	0.02128	
12254005	CCP-TP-175	17	ECL12036M	0.04946	
12254005	CCP-TP-175	18	ECL12036M	0.03964	
12254005	CCP-TP-175	19	ECL12036M	0.06330	
12254005	CCP-TP-175	20	ECL12036M	0.05668	
12254005	CCP-TP-175	21	ECL12036M	0.05408	
12254005	CCP-TP-175	22	ECL12036M	0.05322	
12254005	CCP-TP-175	23	ECL12036M	0.05236	
12254005	CCP-TP-175	24	ECL12036M	0.04853	
12254005	CCP-TP-175	25	ECL12036M	0.05156	
12254005	CCP-TP-175	26	ECL12036M	0.07709	
12254005	CCP-TP-175	27	ECL12036M	0.10831	
12254005	CCP-TP-175	28	ECL12036M	1.16636	97.44
12254005	CCP-TP-175	29	ECL12036M	0.17356	11.06
12254005	CCP-TP-175	30	ECL12036M	0.09226	
12254005	CCP-TP-175	31	ECL12036M	0.10698	
12254005	CCP-TP-175	32	ECL12036M	0.06643	
12254005	CCP-TP-175	33	ECL12036M	7.35890	258.7

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RESULTS SUMMARY

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LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
12254006	CCP-TP-175	1	ECL12036M	0.05722	
12254006	CCP-TP-175	2	ECL12036M	0.10605	
12254006	CCP-TP-175	3	ECL12036M	0.10119	
12254006	CCP-TP-175	4	ECL12036M	0.04251	
12254006	CCP-TP-175	5	ECL12036M	0.08757	
12254006	CCP-TP-175	6	ECL12036M	0.08156	
12254006	CCP-TP-175	7	ECL12036M	0.09406	
12254006	CCP-TP-175	8	ECL12036M	0.06145	
12254006	CCP-TP-175	9	ECL12036M	0.08262	
12254006	CCP-TP-175	10	ECL12036M	0.05028	
12254006	CCP-TP-175	11	ECL12036M	0.04633	
12254006	CCP-TP-175	12	ECL12036M	0.05903	
12254006	CCP-TP-175	13	ECL12036M	0.08842	
12254006	CCP-TP-175	14	ECL12036M	0.09391	
12254006	CCP-TP-175	15	ECL12036M	0.06957	
12254006	CCP-TP-175	16	ECL12036M	0.02446	
12254006	CCP-TP-175	17	ECL12036M	0.05688	
12254006	CCP-TP-175	18	ECL12036M	0.04558	
12254006	CCP-TP-175	19	ECL12036M	0.07279	
12254006	CCP-TP-175	20	ECL12036M	0.06518	
12254006	CCP-TP-175	21	ECL12036M	0.06219	
12254006	CCP-TP-175	22	ECL12036M	0.06120	
12254006	CCP-TP-175	23	ECL12036M	0.06022	
12254006	CCP-TP-175	24	ECL12036M	0.05580	
12254006	CCP-TP-175	25	ECL12036M	0.05929	
12254006	CCP-TP-175	26	ECL12036M	0.08865	
12254006	CCP-TP-175	27	ECL12036M	0.12455	
12254006	CCP-TP-175	28	ECL12036M	0.84929	61.7
12254006	CCP-TP-175	29	ECL12036M	9.94570	551.16
12254006	CCP-TP-175	30	ECL12036M	0.10610	
12254006	CCP-TP-175	31	ECL12036M	0.12302	
12254006	CCP-TP-175	32	ECL12036M	0.07639	
12254006	CCP-TP-175	33	ECL12036M	30.19244	923.01

RESULTS SUMMARY

9/14/2012

LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
12254007	CCP-TP-175	1	ECL12036M	0.09952	
12254007	CCP-TP-175	2	ECL12036M	0.18444	
12254007	CCP-TP-175	3	ECL12036M	0.17599	
12254007	CCP-TP-175	4	ECL12036M	0.07393	
12254007	CCP-TP-175	5	ECL12036M	0.15231	
12254007	CCP-TP-175	6	ECL12036M	0.14186	
12254007	CCP-TP-175	7	ECL12036M	0.16359	
12254007	CCP-TP-175	8	ECL12036M	0.10688	
12254007	CCP-TP-175	9	ECL12036M	0.14370	
12254007	CCP-TP-175	10	ECL12036M	0.08744	
12254007	CCP-TP-175	11	ECL12036M	0.08058	
12254007	CCP-TP-175	12	ECL12036M	0.10266	
12254007	CCP-TP-175	13	ECL12036M	0.15378	
12254007	CCP-TP-175	14	ECL12036M	0.16380	7.02
12254007	CCP-TP-175	15	ECL12036M	0.12099	
12254007	CCP-TP-175	16	ECL12036M	0.04255	
12254007	CCP-TP-175	17	ECL12036M	0.09893	
12254007	CCP-TP-175	18	ECL12036M	0.07928	
12254007	CCP-TP-175	19	ECL12036M	0.14123	7.14
12254007	CCP-TP-175	20	ECL12036M	0.11336	
12254007	CCP-TP-175	21	ECL12036M	0.10816	
12254007	CCP-TP-175	22	ECL12036M	0.10645	
12254007	CCP-TP-175	23	ECL12036M	0.10473	
12254007	CCP-TP-175	24	ECL12036M	0.09705	
12254007	CCP-TP-175	25	ECL12036M	0.10312	
12254007	CCP-TP-175	26	ECL12036M	0.15419	
12254007	CCP-TP-175	27	ECL12036M	0.21661	
12254007	CCP-TP-175	28	ECL12036M	0.29422	12.29
12254007	CCP-TP-175	29	ECL12036M	16.52791	526.63
12254007	CCP-TP-175	30	ECL12036M	0.18453	
12254007	CCP-TP-175	31	ECL12036M	0.21396	
12254007	CCP-TP-175	32	ECL12036M	0.13285	
12254007	CCP-TP-175	33	ECL12036M	8.64521	151.96

000138

RESULTS SUMMARY

9/14/2012

LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
12254008	CCP-TP-175	1	ECL12036M	0.06019	
12254008	CCP-TP-175	2	ECL12036M	0.11156	
12254008	CCP-TP-175	3	ECL12036M	0.10645	
12254008	CCP-TP-175	4	ECL12036M	0.04472	
12254008	CCP-TP-175	5	ECL12036M	0.09212	
12254008	CCP-TP-175	6	ECL12036M	0.08580	
12254008	CCP-TP-175	7	ECL12036M	0.09895	
12254008	CCP-TP-175	8	ECL12036M	0.06465	
12254008	CCP-TP-175	9	ECL12036M	0.08692	
12254008	CCP-TP-175	10	ECL12036M	0.05289	
12254008	CCP-TP-175	11	ECL12036M	0.04874	
12254008	CCP-TP-175	12	ECL12036M	0.06209	
12254008	CCP-TP-175	13	ECL12036M	0.09301	
12254008	CCP-TP-175	14	ECL12036M	0.09879	
12254008	CCP-TP-175	15	ECL12036M	0.07318	
12254008	CCP-TP-175	16	ECL12036M	0.02574	
12254008	CCP-TP-175	17	ECL12036M	0.05984	
12254008	CCP-TP-175	18	ECL12036M	0.04795	
12254008	CCP-TP-175	19	ECL12036M	0.07657	
12254008	CCP-TP-175	20	ECL12036M	0.06856	
12254008	CCP-TP-175	21	ECL12036M	0.06542	
12254008	CCP-TP-175	22	ECL12036M	0.06438	
12254008	CCP-TP-175	23	ECL12036M	0.06334	
12254008	CCP-TP-175	24	ECL12036M	0.05870	
12254008	CCP-TP-175	25	ECL12036M	0.06237	
12254008	CCP-TP-175	26	ECL12036M	0.09326	
12254008	CCP-TP-175	27	ECL12036M	0.13102	
12254008	CCP-TP-175	28	ECL12036M	0.11874	
12254008	CCP-TP-175	29	ECL12036M	16.77117	883.51
12254008	CCP-TP-175	30	ECL12036M	0.50714	33.17
12254008	CCP-TP-175	31	ECL12036M	0.12941	
12254008	CCP-TP-175	32	ECL12036M	0.08035	
12254008	CCP-TP-175	33	ECL12036M	6.88753	200.16

RESULTS SUMMARY

9/14/2012

LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
LBMIS11	CCP-TP-175	1	ECL12036M	0.01338	
LBMIS11	CCP-TP-175	2	ECL12036M	0.02479	
LBMIS11	CCP-TP-175	3	ECL12036M	0.02365	
LBMIS11	CCP-TP-175	4	ECL12036M	0.00994	
LBMIS11	CCP-TP-175	5	ECL12036M	0.02047	
LBMIS11	CCP-TP-175	6	ECL12036M	0.01907	
LBMIS11	CCP-TP-175	7	ECL12036M	0.02199	
LBMIS11	CCP-TP-175	8	ECL12036M	0.01437	
LBMIS11	CCP-TP-175	9	ECL12036M	0.01931	
LBMIS11	CCP-TP-175	10	ECL12036M	0.01175	
LBMIS11	CCP-TP-175	11	ECL12036M	0.01083	
LBMIS11	CCP-TP-175	12	ECL12036M	0.01380	
LBMIS11	CCP-TP-175	13	ECL12036M	0.02067	
LBMIS11	CCP-TP-175	14	ECL12036M	0.02195	
LBMIS11	CCP-TP-175	15	ECL12036M	0.01626	
LBMIS11	CCP-TP-175	16	ECL12036M	0.00572	
LBMIS11	CCP-TP-175	17	ECL12036M	0.01330	
LBMIS11	CCP-TP-175	18	ECL12036M	0.01066	
LBMIS11	CCP-TP-175	19	ECL12036M	0.01702	
LBMIS11	CCP-TP-175	20	ECL12036M	0.01524	
LBMIS11	CCP-TP-175	21	ECL12036M	0.01454	
LBMIS11	CCP-TP-175	22	ECL12036M	0.01431	
LBMIS11	CCP-TP-175	23	ECL12036M	0.01408	
LBMIS11	CCP-TP-175	24	ECL12036M	0.01304	
LBMIS11	CCP-TP-175	25	ECL12036M	0.01386	
LBMIS11	CCP-TP-175	26	ECL12036M	0.02072	
LBMIS11	CCP-TP-175	27	ECL12036M	0.02911	
LBMIS11	CCP-TP-175	28	ECL12036M	0.02639	
LBMIS11	CCP-TP-175	29	ECL12036M	0.03375	
LBMIS11	CCP-TP-175	30	ECL12036M	0.02480	
LBMIS11	CCP-TP-175	31	ECL12036M	0.02876	
LBMIS11	CCP-TP-175	32	ECL12036M	0.01786	
LBMIS11	CCP-TP-175	33	ECL12036M	0.07570	

RESULTS SUMMARY

9/14/2012

LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
LCSMIS11	CCP-TP-175	1	ECL12036M	0.11704	
LCSMIS11	CCP-TP-175	2	ECL12036M	0.21692	
LCSMIS11	CCP-TP-175	3	ECL12036M	21.88402	866.99
LCSMIS11	CCP-TP-175	4	ECL12036M	0.08695	
LCSMIS11	CCP-TP-175	5	ECL12036M	0.17912	
LCSMIS11	CCP-TP-175	6	ECL12036M	0.16684	
LCSMIS11	CCP-TP-175	7	ECL12036M	0.19239	
LCSMIS11	CCP-TP-175	8	ECL12036M	0.12570	
LCSMIS11	CCP-TP-175	9	ECL12036M	0.16900	
LCSMIS11	CCP-TP-175	10	ECL12036M	12.56812	782.14
LCSMIS11	CCP-TP-175	11	ECL12036M	12.07939	866.73
LCSMIS11	CCP-TP-175	12	ECL12036M	12.32000	755.09
LCSMIS11	CCP-TP-175	13	ECL12036M	0.18085	
LCSMIS11	CCP-TP-175	14	ECL12036M	18.14476	661.21
LCSMIS11	CCP-TP-175	15	ECL12036M	0.14230	
LCSMIS11	CCP-TP-175	16	ECL12036M	0.05004	
LCSMIS11	CCP-TP-175	17	ECL12036M	0.11635	
LCSMIS11	CCP-TP-175	18	ECL12036M	0.09323	
LCSMIS11	CCP-TP-175	19	ECL12036M	18.22897	783.58
LCSMIS11	CCP-TP-175	20	ECL12036M	0.13332	
LCSMIS11	CCP-TP-175	21	ECL12036M	0.12721	
LCSMIS11	CCP-TP-175	22	ECL12036M	0.12519	
LCSMIS11	CCP-TP-175	23	ECL12036M	0.12317	
LCSMIS11	CCP-TP-175	24	ECL12036M	0.11414	
LCSMIS11	CCP-TP-175	25	ECL12036M	0.12128	
LCSMIS11	CCP-TP-175	26	ECL12036M	0.18134	
LCSMIS11	CCP-TP-175	27	ECL12036M	0.25475	
LCSMIS11	CCP-TP-175	28	ECL12036M	0.23087	
LCSMIS11	CCP-TP-175	29	ECL12036M	0.29528	
LCSMIS11	CCP-TP-175	30	ECL12036M	0.21702	
LCSMIS11	CCP-TP-175	31	ECL12036M	0.25163	
LCSMIS11	CCP-TP-175	32	ECL12036M	15.96191	745.77
LCSMIS11	CCP-TP-175	33	ECL12036M	0.66239	

Attachment 4 – CCP Radiography Site Project Manager Review Checklist

Batch Data Report No.: INLRH RTR 12012

1.	Has all the data received an independent technical review as evidenced by a completed Attachment 3 and the appropriate ITR signature?	☐NO	☑YES
2.	Are BDR contents complete and match Attachment 5?	☐NO	☑YES
3.	Is the BDR complete (appropriately completed forms for each container)?	☐NO	☑YES
4.	Have Quality Assurance Objectives (QAOs) for RTR been met? Waste Characterization Program Implementation Plan (WCPIP) • Precision – Reconciled discrepancies between RTR Operators • Accuracy – Target used to tune the image for maximum sharpness and qualified operators performed the work • Representativeness – Description of container contents • Completeness – Completed data form and recording • Comparability – Training requirements met Quality Assurance Project Plan (QAPjP) • Image test satisfactory (Minimum acceptable is five lines-pair/cm) • Replicate scan performed • Independent observation performed • ITR review complete	☐NO	☑YES

Comments:

No Nces.

I have reviewed 100 percent of the container-specific and batch data in this BDR and find it acceptable.

SPM:

Laura Nelson	Laura Nelson	9/5/12
Printed Name	Signature	Date

CCP RECORDS ORIGINAL
DATE REC'D 9.5.12

Attachment 6 – CCP Radiography Batch Data Report Cover Sheet

Batch Data Report No.: INLRHRTR12012 Date: 08/29/12

Waste Container ID Numbers	
Replicate Scan:	NRFTRUSPC022-1
Independent Observation:	NRFTRUSPC021-1
1	NRFTRUSPC022-1
2	NRFTRUSPC015-1
3	NRFTRUSPC018-1
4	NRFTRUSPC016-1
5	NRFTRUSPC000-1
6	NRFTRUSPC014-1
7	NRFTRUSPC005-1
8	NRFTRUSPC007-1
9	NRFTRUSPC009-1
10	NRFTRUSPC006-1
11	NRFTRUSPC025-1
12	NRFTRUSPC028-1
13	NRFTRUSPC021-1
14	NRFTRUSPC024-1
15	N/A
16	N/A
17	N/A
18	N/A
19	N/A
20	N/A

ITR:

JERRY BOWDEN	Jerry Bowden	08/29/12 30 8-30-12
Printed Name	Signature	Date

CCP RECORDS ORIGINAL
DATE REC'D 9-4-12

Attachment 5 – CCP Radiography Batch Data Report Table of Contents

Batch Data Report No.: INLRHRTR12012 Date: 08/29/12

Table Of Contents

Item	Description	Page No.
1	Attachment 6, CCP Radiography Batch Data Report Cover Sheet	1
2	Attachment 5, CCP Radiography Batch Data Report Table of Contents	2
3	Attachment 3, CCP Independent Technical Reviewer Checklist	3-4
4	Attachment 1, CCP RTR Measurement Control Report	5-7
5	Attachment 2(s), CCP Radiography Data Sheets	8-55
6	Copy of NCRs (N/A [Not Applicable])	N/A

Attachment 3 – CCP Radiography Independent Technical Reviewer Checklist

Batch Data Report No.: INLRHRTR12012

	Description			
1.	Data generation and reduction were conducted in a technically correct manner in accordance with the methods used?	☐ NO	☒ YES	☐ N/A
2.	Was the correct revision of the procedure used? Procedure: CCP-TP-508 Rev.: 7	☐ NO	☒ YES	☐ N/A
3.	Are there transcription errors?	☐ NO	☐ YES	☒ N/A
4.	Does the BDR include RTR for up to 20 containers?	☐ NO	☒ YES	☐ N/A
5.	Are BDR contents complete and match Attachment 5?	☐ NO	☒ YES	☐ N/A
6.	Is all the data signed and dated in reproducible ink and by the individual(s) generating it?	☐ NO	☒ YES	☐ N/A
7.	Is all data recorded clearly, legibly, and accurately?	☐ NO	☒ YES	☐ N/A
8.	Are all changes to original data lined out, initialed, and dated?	☐ NO	☐ YES	☒ N/A
9.	Were data changes made by the individual who originally collected the data or an individual authorized to change the data?	☐ NO	☐ YES	☒ N/A
10.	Does the waste match the Waste Matrix Code and waste stream description?	☐ NO	☒ YES	☐ N/A
11.	Are the RTR Operator's decisions regarding the RTR documented?	☐ NO	☒ YES	☐ N/A
12.	Is there an adequate written description of the contents of each item?	☐ NO	☒ YES	☐ N/A
13.	Was the audio/video media properly prepared and labeled?	☐ NO	☒ YES	☐ N/A
14.	Was the audio/video check performed satisfactorily and recorded on Attachment 1?	☐ NO	☒ YES	☐ N/A
15.	Was the Image Test Pattern Test performed satisfactorily and recorded on Attachment 1?	☐ NO	☒ YES	☐ N/A
16.	Was the Replicate Scan performed and recorded on an Attachment 2? (Once per batch or once per day, whichever is less frequent).	☐ NO	☒ YES	☐ N/A
17.	Was the Replicate Scan RTR Operator different from the original scan RTR Operator?	☐ NO	☒ YES	☐ N/A
18.	Did the Replicate Scan RTR Operator and the original scan RTR Operator agree on the results?	☐ NO	☒ YES	☐ N/A
19.	Was the IO performed and recorded on an Attachment 2? (Once per batch or once per day, whichever is less frequent).	☐ NO	☒ YES	☐ N/A
20.	Was the IO RTR Operator different from the original scan RTR Operator?	☐ NO	☒ YES	☐ N/A
21.	Did the IO RTR Operator and the first RTR Operator agree on the results?	☐ NO	☒ YES	☐ N/A
22.	Were the operators qualified to perform the tasks by verification of the LOQI?	☐ NO	☒ YES	☐ N/A
23.	Are the NCR(s) associated with the RTR included in the BDR?	☐ NO	☐ YES	☒ N/A

Attachment 3 – CCP Radiography Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: INLRHRTR12012

Comments:
N/A

I have reviewed 100 percent of the container-specific and batch data in this BDR and find it acceptable for SPM review.

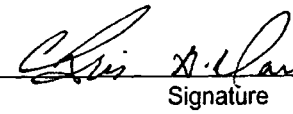
ITR:

Printed Name	Signature	Date
JERRY BOWDEN	Jerry Bowden	8-30-12

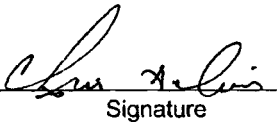
Attachment 1 – CCP RTR Measurement Control Report

CCP RTR Measurement Control Report		
Site: INL		
Batch Data Report No.: INLRHRTR12012		
Examination Date: 8-27-12		
Control Checks		
Image Test Pattern Test Lines-pair/cm: 10 (Minimum acceptable is five lines-pair/cm)	☑ SAT	☐ UNSAT
Audio/Video Media Recording System - Audio/Video Checks	☑ SAT	☐ UNSAT
Comments: N/A		
RTR Operator:		
Chris Davis 8-27-12		
Printed Name Signature Date		

Attachment 1 – CCP RTR Measurement Control Report

CCP RTR Measurement Control Report		
Site: INL		
Batch Data Report No.: INLRHRTR12012		
Examination Date: 08/28/12		
Control Checks		
Image Test Pattern Test Lines-pair/cm: 10 (Minimum acceptable is five lines-pair/cm)	☑ SAT	☐ UNSAT
Audio/Video Media Recording System - Audio/Video Checks	☑ SAT	☐ UNSAT
Comments: N/A		
RTR Operator:		
Chris Davis		08/28/12
Printed Name	Signature	Date

Attachment 1 – CCP RTR Measurement Control Report

CCP RTR Measurement Control Report		
Site: INL		
Batch Data Report No.: INLRHRTR12012		
Examination Date: 08/29/12		
Control Checks		
Image Test Pattern Test Lines-pair/cm: 8 (Minimum acceptable is five lines-pair/cm)	☑ SAT	☐ UNSAT
Audio/Video Media Recording System - Audio/Video Checks	☑ SAT	☐ UNSAT
Comments: N/A		
RTR Operator:		
Chris Davis 		08/29/12
Printed Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☐ RTR Examination ☑ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12012
Examination Date:	08/27/12
Waste Container ID:	NRFTRUSPC022-1
Audio/Video Media Number:	Primary: INLRHRTR12012 A Backup: INLRHRTR12012 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5100
Waste Stream Number:	IN-ID-NRF-SPC
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	70%, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: NRFTRUSPC022-1

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) Wire rope, hook, 30 gallon drum, sludge pan container, metal braces, metal sheeting (AM) Aluminum sludge pan (OI) Solidified material (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: NRFTRUSPC022-1

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐YES	☑NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐YES	☑NO
Does the container have observable liquid containing PCBs?	☐YES	☑NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐YES	☑NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐YES	☑NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐YES	☑NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐YES	☑NO
Is there an indication of wastes containing explosives or compressed gases?	☐YES	☑NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐YES	☑NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐YES	☑NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐YES	☑NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐YES	☑NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐YES	☑NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐YES	☑NO

Section 5: Waste Summary

Comments:
N/A

RTR Operator:
Lashell Alade — Lashell A Alade — 08/27/12
Printed Name — Signature — Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☐ RTR Examination ☐ RTR Replicate Scan ☑ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12012
Examination Date:	08/29/12
Waste Container ID:	NRFTRUSPC021-1
Audio/Video Media Number:	Primary: INLRHRTR12012 A Backup: INLRHRTR12012 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5100
Waste Stream Number:	IN-ID-NRF-SPC
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	70%, N/A, N/A

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Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: NRFTRUSPC021-1

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) Wire rope, hook, 30 gallon drum, metal braces, sludge pan container, scrap metal (AM) Sludge pan (OI) solidified material (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: NRFTRUSPC021-1

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Lashell Alade — Printed Name

Signature

08/29/12 — Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12012
Examination Date:	08/27/12
Waste Container ID:	NRFTRUSPC022-1
Audio/Video Media Number:	Primary: INLRHRTR12012 A Backup: INLRHRTR12012 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5100
Waste Stream Number:	IN-ID-NRF-SPC
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	75%, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: NRFTRUSPC022-1

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) Wire rope with metal hook, metal disc, metal container, scrap metal, metal sheeting, metal bracing, 30 gallon metal drum, wire (AM) Aluminum sludge pan (OI) Absorbent (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: NRFTRUSPC022-1

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Chris Davis		08/27/12
Printed Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12012
Examination Date:	08/27/12
Waste Container ID:	NRFTRUSPC015-1
Audio/Video Media Number:	Primary: INLRHRTR12012 A Backup: INLRHRTR12012 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5100
Waste Stream Number:	IN-ID-NRF-SPC
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	75%, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: NRFTRUSPC015-1

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) Wire rope with metal hook, metal disc, wire, metal container, scrap metal, metal bracing, 30 gallon metal drum (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: NRFTRUSPC015-1

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐YES	☑NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐YES	☑NO
Does the container have observable liquid containing PCBs?	☐YES	☑NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐YES	☑NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐YES	☑NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐YES	☑NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐YES	☑NO
Is there an indication of wastes containing explosives or compressed gases?	☐YES	☑NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐YES	☑NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐YES	☑NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐YES	☑NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐YES	☑NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐YES	☑NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐YES	☑NO

Section 5: Waste Summary

Comments:
N/A

RTR Operator:

Chris Davis — Printed Name
Signature
08/27/12 — Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12012
Examination Date:	08/27/12
Waste Container ID:	NRFTRUSPC018-1
Audio/Video Media Number:	Primary: INLRHRTR12012 A Backup: INLRHRTR12012 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5100
Waste Stream Number:	IN-ID-NRF-SPC
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	75%, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: NRFTRUSPC018-1

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) Wire rope with metal hook, metal disc, wire, metal container, scrap metal, metal bracing, 30 gallon metal drum (OI) Absorbent (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: NRFTRUSPC018-1

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Chris Davis		08/27/12
Printed Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12012
Examination Date:	08/27/12
Waste Container ID:	NRFTRUSPC016-1
Audio/Video Media Number:	Primary: INLRHRTR12012 A Backup: INLRHRTR12012 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5100
Waste Stream Number:	IN-ID-NRF-SPC
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	75%, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: NRFTRUSPC016-1

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) Wire rope with metal hook, metal disc, wire, metal container, motor, scrap metal, metal bracing, 30 gallon metal drum (OI) Absorbent (XPW) Scrap plastic, vacuum hose, vacuum cleaner body, electric cord

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: NRFTRUSPC016-1

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Chris Davis	Chris Davis	08/27/12
Printed Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12012
Examination Date:	08/28/12
Waste Container ID:	NRFTRUSPC000-1
Audio/Video Media Number:	Primary: INLRHRTR12012 A Backup: INLRHRTR12012 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5100
Waste Stream Number:	IN-ID-NRF-SPC
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	75%, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: NRFTRUSPC000-1

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) Wire rope with metal hook, metal disc, wire, metal container, metal drill bits, scrap metal, metal motor, metal lid, metal bracing, 30 gallon metal drum (OI) Absorbent (XPW) Scrap plastic, vacuum cleaner body, electrical cord

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: NRFTRUSPC000-1

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Chris Davis — Printed Name

Signature

08/28/12 — Date

Attachment 2 – CCP Radiography Data Sheet

Page 1 of 3

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12012
Examination Date:	08/28/12
Waste Container ID:	NRFTRUSPC014-1
Audio/Video Media Number:	Primary: INLRHRTR12012 A Backup: INLRHRTR12012 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5100
Waste Stream Number:	IN-ID-NRF-SPC
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	75%, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: NRFTRUSPC014-1

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) Wire rope with metal hook, metal disc, wire, metal container, metal bracing, 30 gallon metal drum (AM) Aluminum sludge pan (OI) Absorbent (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: NRFTRUSPC014-1

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Chris Davis — Printed Name

Signature

08/28/12 — Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12012
Examination Date:	08/28/12
Waste Container ID:	NRFTRUSPC005-1
Audio/Video Media Number:	Primary: INLRHRTR12012 A Backup: INLRHRTR12012 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5100
Waste Stream Number:	IN-ID-NRF-SPC
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	75%, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: NRFTRUSPC005-1

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) Wire rope with metal hook, metal disc, wire, metal container, metal bracing, 30 gallon metal drum (AM) Aluminum sludge pan (OI) Absorbent (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: NRFTRUSPC005-1

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐YES	☑NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐YES	☑NO
Does the container have observable liquid containing PCBs?	☐YES	☑NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐YES	☑NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐YES	☑NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐YES	☑NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐YES	☑NO
Is there an indication of wastes containing explosives or compressed gases?	☐YES	☑NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐YES	☑NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐YES	☑NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐YES	☑NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐YES	☑NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐YES	☑NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐YES	☑NO
Section 5: Waste Summary		
Comments: N/A		

RTR Operator:

Chris Davis — Printed Name

Chris L. Davis — Signature

08/28/12 — Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12012
Examination Date:	08/28/12
Waste Container ID:	NRFTRUSPC007-1
Audio/Video Media Number:	Primary: INLRHRTR12012 A Backup: INLRHRTR12012 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5100
Waste Stream Number:	IN-ID-NRF-SPC
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	75%, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: NRFTRUSPC007-1

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) Wire rope with metal hook, metal disc, wire, metal container, scrap metal, metal lid, metal bracing, 30 gallon metal drum (AM) Aluminum sludge pan (OI) Absorbent (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: NRFTRUSPC007-1

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:
N/A

RTR Operator:

Chris Davis — Printed Name

Signature

08/28/12 — Date

Attachment 2 – CCP Radiography Data Sheet

Page 1 of 3

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12012
Examination Date:	08/28/12
Waste Container ID:	NRFTRUSPC009-1
Audio/Video Media Number:	Primary: INLRHRTR12012 A Backup: INLRHRTR12012 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5100
Waste Stream Number:	IN-ID-NRF-SPC
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	75%, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: NRFTRUSPC009-1

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) Wire rope with metal hook, metal disc, wire, metal container, metal bracing, 30 gallon metal drum (AM) Aluminum sludge pan (OI) Absorbent (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: NRFTRUSPC009-1

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Chris Davis — Printed Name

Signature

08/28/12 — Date

Attachment 2 – CCP Radiography Data Sheet

Page 1 of 3

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12012
Examination Date:	08/28/12
Waste Container ID:	NRFTRUSPC006-1
Audio/Video Media Number:	Primary: INLRHRTR12012 A Backup: INLRHRTR12012 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5100
Waste Stream Number:	IN-ID-NRF-SPC
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	75%, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: NRFTRUSPC006-1

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) Wire rope with metal hook, metal lid, metal disc, wire, metal container, metal bracing, 30 gallon metal drum (AM) Aluminum sludge pan (OI) Absorbent (XPW) Scrap plastic, broken plastic bottle; empty

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: NRFTRUSPC006-1

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Chris Davis — Printed Name

Signature

08/28/12 — Date

Attachment 2 – CCP Radiography Data Sheet

Page 1 of 3

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12012
Examination Date:	08/29/12
Waste Container ID:	NRFTRUSPC025-1
Audio/Video Media Number:	Primary: INLRHRTR12012 A Backup: INLRHRTR12012 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5100
Waste Stream Number:	IN-ID-NRF-SPC
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	75%, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: NRFTRUSPC025-1

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) Wire rope with metal hook, metal disc, wire, metal container, metal bracing, 30 gallon metal drum (OI) Absorbent (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: NRFTRUSPC025-1

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:
N/A

RTR Operator:

Chris Davis — Printed Name

Signature

08/29/12 — Date

Attachment 2 – CCP Radiography Data Sheet

Page 1 of 3

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12012
Examination Date:	08/29/12
Waste Container ID:	NRFTRUSPC028-1
Audio/Video Media Number:	Primary: INLRHRTR12012 A Backup: INLRHRTR12012 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5100
Waste Stream Number:	IN-ID-NRF-SPC
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	75%, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: NRFTRUSPC028-1

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) Wire rope with metal hook, metal disc, wire, metal container, metal sheeting, scrap metal, metal bracing, 30 gallon metal drum (AM) Aluminum sludge pan (OI) Absorbent (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: NRFTRUSPC028-1

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Chris Davis — Printed Name

Signature

08/29/12 — Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12012
Examination Date:	08/29/12
Waste Container ID:	NRFTRUSPC021-1
Audio/Video Media Number:	Primary: INLRHRTR12012 A Backup: INLRHRTR12012 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5100
Waste Stream Number:	IN-ID-NRF-SPC
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	75%, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: NRFTRUSPC021-1

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) Wire rope with metal hook, metal disc, wire, metal container, metal lid, metal bracing, 30 gallon metal drum (AM) Aluminum sludge pan (OI) Absorbent (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: NRFTRUSPC021-1

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Chris Davis — Printed Name

Chris D. Davis — Signature

08/29/12 — Date

Attachment 2 – CCP Radiography Data Sheet

Page 1 of 3

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12012
Examination Date:	08/29/12
Waste Container ID:	NRFTRUSPC024-1
Audio/Video Media Number:	Primary: INLRHRTR12012 A Backup: INLRHRTR12012 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5100
Waste Stream Number:	IN-ID-NRF-SPC
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	75%, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: NRFTRUSPC024-1

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) Wire rope with metal hook, metal disc, wire, metal container, scrap metal, metal bracing, 30 gallon metal drum (OI) Absorbent (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: NRFTRUSPC024-1

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:
N/A

RTR Operator:

Chris Davis — Printed Name

Signature

08/29/12 — Date

DIVIDER PAGE

Attachment 4 – CCP Radiography Site Project Manager Review Checklist

Batch Data Report No.: INLRHRTR13005

1.	Has all the data received an independent technical review as evidenced by a completed Attachment 3 and the appropriate ITR signature?	☐NO	☑YES
2.	Are BDR contents complete and match Attachment 5?	☐NO	☑YES
3.	Is the BDR complete (appropriately completed forms for each container)?	☐NO	☑YES
4.	Have Quality Assurance Objectives (QAOs) for RTR been met? Waste Characterization Program Implementation Plan (WCPIP) • Precision – Reconciled discrepancies between RTR Operators • Accuracy – Target used to tune the image for maximum sharpness and qualified operators performed the work • Representativeness – Description of container contents • Completeness – Completed data form and recording • Comparability – Training requirements met Quality Assurance Project Plan (QAPjP) • Image test satisfactory (Minimum acceptable is five lines-pair/cm) • Replicate scan performed • Independent observation performed • ITR review complete	☐NO	☑YES

Comments:

~~NCR-RHINL-0430-13~~ fj 6/5/13
This NCR reference is incorrect for BDR INLRHRTR13005
fj 6/5/13

I have reviewed 100 percent of the container-specific and batch data in this BDR and find it acceptable.

SPM:

Printed Name	Signature	Date
Laura Nelson	Laura Nelson	4-1-13
Irene Joo	Irene Joo	6/5/13

NTPC RECORDS ORIGINAL
DATE REC'D 4/2/2013

Attachment 4 – CCP Radiography Site Project Manager Review Checklist

Batch Data Report No.: INLRHRTR13005

1. Has all the data received an independent technical review as evidenced by a completed Attachment 3 and the appropriate ITR signature?	☐NO	☑YES
2. Are BDR contents complete and match Attachment 5?	☐NO	☑YES
3. Is the BDR complete (appropriately completed forms for each container)?	☐NO	☑YES
4. Have Quality Assurance Objectives (QAOs) for RTR been met? Waste Characterization Program Implementation Plan (WCPIP) • Precision – Reconciled discrepancies between RTR Operators • Accuracy – Target used to tune the image for maximum sharpness and qualified operators performed the work • Representativeness – Description of container contents • Completeness – Completed data form and recording • Comparability – Training requirements met Quality Assurance Project Plan (QAPjP) • Image test satisfactory (Minimum acceptable is five lines-pair/cm) • Replicate scan performed • Independent observation performed • ITR review complete	☐NO	☑YES

Comments:

NCR-RHINL-0430-13

I have reviewed 100 percent of the container-specific and batch data in this BDR and find it acceptable.

SPM:

Laura Nelson — Printed Name

Laura Nelson — Signature

4-1-13 — Date

COPY

NTPC RECORDS ORIGINAL
DATE REC'D 4/2/2013

Attachment 6 – CCP Radiography Batch Data Report Cover Sheet

Batch Data Report No.: INLRHRTR13005 Date: 3-18-13

Waste Container ID Numbers	
Replicate Scan:	QQ-36A-1
Independent Observation:	DD-51A-1
1	~~QQ-36-1~~ ~~CH 3-28-13~~ QQ-36A-1 CH 3-28-13
2	OO-25A-1
3	FF-32A-1
4	DD-51A-1
5	N/A
6	N/A
7	N/A
8	N/A
9	N/A
10	N/A
11	N/A
12	N/A
13	N/A
14	N/A
15	N/A
16	N/A
17	N/A
18	N/A
19	N/A
20	N/A

ITR:

Chris Davis — Printed Name

Chris A. Davis — Signature

3-19-13 — Date

Chris A. Davis 3-28-13

NTPC RECORDS ORIGINAL
DATE REC'D 3-21-13

01

Attachment 5 – CCP Radiography Batch Data Report Table of Contents

Batch Data Report No.: INLRHRTR13005 Date: 3/18/13

Table Of Contents

Item	Description	Page No.
1	Attachment 6, CCP Radiography Batch Data Report Cover Sheet	1
2	Attachment 5, CCP Radiography Batch Data Report Table of Contents	2
3	Attachment 3, CCP Independent Technical Reviewer Checklist	3-4
4	Attachment 1, CCP RTR Measurement Control Report	5
5	Attachment 2(s), CCP Radiography Data Sheets	6-23
6	Copy of NCRs (N/A [Not Applicable])	N/A

Attachment 3 – CCP Radiography Independent Technical Reviewer Checklist

Batch Data Report No.: INLRHRTR13005

Description				
1.	Data generation and reduction were conducted in a technically correct manner in accordance with the methods used?	☐ NO	☑ YES	☐ N/A
2.	Was the correct revision of the procedure used? Procedure: CCP-TP-508 Rev.: 7	☐ NO	☑ YES	☐ N/A
3.	Are there transcription errors?	☐ NO	☐ YES	☑ N/A
4.	Does the BDR include RTR for up to 20 containers?	☐ NO	☑ YES	☐ N/A
5.	Are BDR contents complete and match Attachment 5?	☐ NO	☑ YES	☐ N/A
6.	Is all the data signed and dated in reproducible ink and by the individual(s) generating it?	☐ NO	☑ YES	☐ N/A
7.	Is all data recorded clearly, legibly, and accurately?	☐ NO	☑ YES	☐ N/A
8.	Are all changes to original data lined out, initialed, and dated?	☐ NO	☑ YES	☑ N/A 5-28-13
9.	Were data changes made by the individual who originally collected the data or an individual authorized to change the data?	☐ NO	☑ YES 3-28-13 3-28-13	☑ N/A 3-28-13
10.	Does the waste match the Waste Matrix Code and waste stream description?	☐ NO	☑ YES	☐ N/A
11.	Are the RTR Operator's decisions regarding the RTR documented?	☐ NO	☑ YES	☐ N/A
12.	Is there an adequate written description of the contents of each item?	☐ NO	☑ YES	☐ N/A
13.	Was the audio/video media properly prepared and labeled?	☐ NO	☑ YES	☐ N/A
14.	Was the audio/video check performed satisfactorily and recorded on Attachment 1?	☐ NO	☑ YES	☐ N/A
15.	Was the Image Test Pattern Test performed satisfactorily and recorded on Attachment 1?	☐ NO	☑ YES	☐ N/A
16.	Was the Replicate Scan performed and recorded on an Attachment 2? (Once per batch or once per day, whichever is less frequent).	☐ NO	☑ YES	☐ N/A
17.	Was the Replicate Scan RTR Operator different from the original scan RTR Operator?	☐ NO	☑ YES	☐ N/A
18.	Did the Replicate Scan RTR Operator and the original scan RTR Operator agree on the results?	☐ NO	☑ YES	☐ N/A
19.	Was the IO performed and recorded on an Attachment 2? (Once per batch or once per day, whichever is less frequent).	☐ NO	☑ YES	☐ N/A
20.	Was the IO RTR Operator different from the original scan RTR Operator?	☐ NO	☑ YES	☐ N/A
21.	Did the IO RTR Operator and the first RTR Operator agree on the results?	☐ NO	☑ YES	☐ N/A
22.	Were the operators qualified to perform the tasks by verification of the LOQI?	☐ NO	☑ YES	☐ N/A
23.	Are the NCR(s) associated with the RTR included in the BDR?	☐ NO	☐ YES	☑ N/A

Attachment 3 – CCP Radiography Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: INLRHRTR13005

Comments:
~~NIA~~ 3-28-13

I have reviewed and agree with all changes made to this BDR. 3-28-13

I have reviewed 100 percent of the container-specific and batch data in this BDR and find it acceptable for SPM review.

ITR:

Printed Name	Signature	Date
Chris Davis	Chris A. Davis	3-19-13
	Chris A. Davis	3-28-13

04

Attachment 1 – CCP RTR Measurement Control Report

CCP RTR Measurement Control Report		
Site: INL		
Batch Data Report No.: INLRHRTR13004		
Examination Date: 3/18/13		
Control Checks		
Image Test Pattern Test Lines-pair/cm: 10 (Minimum acceptable is five lines-pair/cm)	☑ SAT	☐ UNSAT
Audio/Video Media Recording System - Audio/Video Checks	☑ SAT	☐ UNSAT
Comments: N/A		
RTR Operator:		
Lashell Alade (Lashell Alade)		3/18/13
Printed Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☐ RTR Examination ☑ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR13005
Examination Date:	03/18/13
Waste Container ID:	QQ-36A-1
Audio/Video Media Number:	Primary: INLRHRTR13005 A Backup: INLRHRTR13005 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON DRUM
Waste Matrix Code:	S5400
Waste Stream Number:	ID-MFC-SOLIDS-RH
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	85% , N/A , N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: QQ-36A-1

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 30 gallon metal drum, wire rope metal hook, metal pan, wire, metal container, scrap metal, knives (OI) Absorbent, glass bottle (empty) (R) Rubber stoppers (XPW) Scrap plastic, tops of two plastic bottles

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: QQ-36A-1

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Sway Andrews — Printed Name

Sway Andrews — Signature

03/18/13 — Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☐ RTR Examination ☐ RTR Replicate Scan ☑ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR13005
Examination Date:	03/18/13
Waste Container ID:	DD-51A-1
Audio/Video Media Number:	Primary: INLRHRTR13005 A Backup: INLRHRTR13005 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON DRUM
Waste Matrix Code:	S5400
Waste Stream Number:	ID-MFC-SOLIDS-RH
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	75%, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: DD-51A-1

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) Hook and wire rope, 30 gallon steel drum, metal tray, wire (OI) Glass labware, glass bottles (empty) (R) Rubber stoppers (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: DD-51A-1

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Sway Andrews — Sway Andrews — 03/18/13

Printed Name — Signature — Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR13005
Examination Date:	03/18/13
Waste Container ID:	QQ-36A-1
Audio/Video Media Number:	Primary: INLRHRTR13005 A Backup: INLRHRTR13005 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON DRUM
Waste Matrix Code:	S5400
Waste Stream Number:	ID-MFC-SOLIDS-RH
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	85% , N/A , N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: QQ-36A-1

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) Wire rope, metal hook, 30 gallon steel drum, metal tray, scrap metal, metal tube, wire, knives (OI) Absorbent, glass bottle (R) Rubber stoppers (XPW) Scrap plastic, plastic bottles (empty)

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: QQ-36A-1

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary
Comments:
N/A

RTR Operator:

Lashell Alade — Lashell Alade — 03/18/13

Printed Name — Signature — Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR13005
Examination Date:	03/18/13
Waste Container ID:	OO-25A-1
Audio/Video Media Number:	Primary: INLRHRTR13005 A Backup: INLRHRTR13005 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON DRUM
Waste Matrix Code:	S5400
Waste Stream Number:	ID-MFC-SOLIDS-RH
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	85%, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: OO-25A-1

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) Hook and wire rope, 30 gallon steel drum, metal tray, metal tube, wire, knives, scrap metal (OI) Absorbent, glass bottle (R) Rubber stoppers (XPW) Scrap plastic, plastic bottles

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: OO-25A-1

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Lashell Alade — Printed Name

Lashell Alade — Signature

03/18/13 — Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR13005
Examination Date:	03/18/13
Waste Container ID:	FF-32A-1
Audio/Video Media Number:	Primary: INLRHRTR13005 A Backup: INLRHRTR13005 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON DRUM
Waste Matrix Code:	S5400
Waste Stream Number:	ID-MFC-SOLIDS-RH
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	85%, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Page 2 of 3

Container ID: FF-32A-1

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) Hook and wire rope, 30 gallon steel drum, metal tray, metal tube, wire (OI) Glass beaker, glass bottles (empty), absorbent (R) Rubber stoppers (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: FF-32A-1

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary
Comments:
N/A

RTR Operator:

Lashell Alade — Printed Name

Lashell Alade — Signature

03/18/13 — Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR13005
Examination Date:	03/18/13
Waste Container ID:	DD-51A-1
Audio/Video Media Number:	Primary: INLRHRTR13005 A Backup: INLRHRTR13005 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON DRUM
Waste Matrix Code:	S5400
Waste Stream Number:	ID-MFC-SOLIDS-RH
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	75%, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: DD-51A-1

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) Hook and wire rope, 30 gallon steel drum, metal tray, wire (OI) Glass labware, glass bottles (empty) (R) Rubber stoppers (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: DD-51A-1

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Lashell Alade — Printed Name

Signature

03/18/13 — Date

DIVIDER PAGE

Attachment 2 – CCP SPM Radiography Project Level Validation Checklist and Summary

BDR Number: INRTR5120004 **Examination Date:** 6/13/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
1. Is the completed, signed, and dated Independent Technical Reviewer Checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, C3-10b**	X			
2. Does the BDR contain all items addressed in the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-10b**	X			
3. Does the BDR include a listing of all the container numbers in the batch? **Reference Source: CCP-PO-001, C3-10b**	X			
4. List all containers that have met QAOs. **Reference Source: CCP-PO-001, C3-10b**				Container Numbers: 10202170,10217850 10223021,10124637
5. Does the BDR identify the current implementing procedure and revision number? **Reference Source: CCP-PO-001, Table C3-11**	X			
6. Is there a reference to or copy of any associated NCRs (if any) in the BDR? NA if no NCRs. **Reference Source: CCP-PO-001, Table C3-11**			X	No NCR's
7. Are there 20 or fewer containers in the batch? **Reference Source: CCP-PO-001, C3-10**	X			
8. Are the data properly reported (i.e., data are reported in correct units and with correct significant figures)? **Reference Source: CCP-PO-001, C3-10b**	X			
9. Is there evidence of verification that the physical form matches the Waste Matrix Code? **Reference Source: CCP-PO-001, C3-4, Table C3-11**	X			

Attachment 2 – CCP SPM Radiography Project Level Validation Checklist and Summary (Continued)

BDR Number: INRTR5120004 **Examination Date:** 6/13/12

Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
10. Is there evidence of verification that the physical form matches the waste stream description? **Reference Source: CCP-PO-001, C1-3, Table C3-11**	X			
11. Are prohibited items absent? **Reference Source: CCP-PO-001, C3-4a**	X			
12. Does observable liquid, if present, meet the criteria of the TSDF-WAC? **Reference Source: CCP-PO-001, C3-4a**	X			
13. Were discrepancies between two operators with regard to identification of waste matrix code, liquids in excess of the TSDF-WAC, or compressed gases through replicate scans and independent observations reconciled? NA if no discrepancies. **Reference Source: CCP-PO-001, C3-4a**			X	No Discrepancies
14. Are the training qualifications for all radiography personnel acceptable? **Reference Source: CCP-PO-001, C3-4a**	X			
15. Was evidence of the video/audio check included in the BDR? **Reference Source: CCP-PO-001, C3-4a**	X			
16. Was the Lines-Pair Resolution Test Check included in the BDR? **Reference Source: CCP-PO-001, C3-4a**	X			
17. Was a replicate scan performed once per day, or once per batch, whichever is LESS frequent? **Reference Source: CCP-PO-001, C1-3**	X			
18. Was an independent observation performed once per day, or once per batch, whichever is LESS frequent? **Reference Source: CCP-PO-001, C1-3**	X			

Attachment 2 – CCP SPM Radiography Project Level Validation Checklist and Summary (Continued)

BDR Number: INRTR5120004 **Examination Date:** 6/13/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
19. Were the replicate scan and independent observation performed on different waste containers? **Reference Source: CCP-PO-001, C1-3**	X			
20. Were the personnel performing the replicate scan and independent observation different from the individual who performed the original? **Reference Source: CCP-PO-001, C1-3**	X			
21. Does the BDR include an estimate of each material parameter weight in kg for each container? **Reference Source: CCP Technical Procedures**	X			
22. Does the BDR include a description of each material parameter for each container? **Reference Source: CCP-PO-001, Table C3-1**	X			
23. Is the container gross weight recorded in kilograms (kg) for each container in the BDR? **Reference Source: CCP Technical Procedures**	X			
24. Was the Scale Weight Calibration Check included in the BDR? **Reference Source: CCP Technical Procedures**			X	Weight Obtained Independent from RTR
25. Was the Scale Weight Check included in the BDR? **Reference Source: CCP Technical Procedures**			X	Weight Obtained Independent from RTR

Comments: None

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

Jim Vernon		8/7/12
SPM Printed Name	Signature	Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

Attachment 5 – CCP Radiography Batch Data Report Cover Sheet

Batch Data Report No.: INRTR5120004 Date: 6/13/12

Waste Container ID Numbers	
Replicate Scan:	10202170
Independent Observation:	10217850
1	10202170
2	10217850
3	10223021
4	10124637
5	N/A
6	N/A
7	N/A
8	N/A
9	N/A
10	N/A
11	N/A
12	N/A
13	N/A
14	N/A
15	N/A
16	N/A
17	N/A
18	N/A
19	N/A
20	N/A

Independent Technical Reviewer:

Tyson Christensen — Printed Name

Signature

6-19-12 — Date

CCP RECORDS ORIGINAL
DATE REC'D 7-2-12

Attachment 4 – CCP Radiography Batch Data Report Table of Contents and Batch Narrative

Batch Data Report No.: INRTR5120004 Date: 6/13/12

Table Of Contents

Item	Description	Page No.
1	CCP Radiography Batch Data Report Cover Sheet	1
2	CCP Radiography Batch Data Report Table Of Contents	2
3	CCP RTR Measurement Control Report	3
4	CCP Radiography Data Sheets	4-21
5	Copy of NCRs (NA, If Not Applicable)	N/A
6	CCP Independent Technical Reviewer Checklist	22-23

Batch Narrative

All Quality Checks were performed and recorded on CCP-TP-053, Rev. 11, CCP Radiography Measurement and Control Report.
The Measurement Control Report, Replicate Scan, and Independent Observation performed on this date were recorded in Batch Data Report No. INRTR5120004.

Michael Galbraith — RTR Operator

Signature

6/13/12 — Date

Attachment 1 – CCP RTR Measurement Control Report

Site ID: INL		
Batch Data Report No.: INRTR5120004		
Examination Date: 6/13/12		
Control Checks		
Video/Audio Recorded Media System Check	☑ SAT	☐ UNSAT
Image Test : 15 lines-pair/cm (Minimum acceptable is 5 lines-pair/cm or #6 Sieve is viewable)	☑ SAT	☐ UNSAT
Comments: N/A		
RTR Operator:		
Michael Galbraith		6/13/12
Printed Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☐ RTR Examination ☑ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5120004
Examination Date:	6/13/12
Waste Container ID:	10202170
Video/Audio Recorded Media Number:	INRTR5120004 A & B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 gal drum
TRUCON Code:	ID 116/216, SQ 154
Waste Matrix Code:	S5300
Waste Stream I.D.:	ID-RF S5300-A
Waste Container Weights:	Gross Wt: 83.0 kg. Tare Wt: ~~28.2~~ 31.8 kg. 6-13-12 Net Wt: ~~54.8~~ 51.1 kg. 6-13-12
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	~~No Liner~~ FIBER BOARD LINER — NO-LID 6-13-12
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	90 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10202170

Section 3: Container Inventory and Comments (Detailed descriptions)
Scrap metal, pipe flange, mechanical, metal pipe, wire, electrical equipment Absorbent Cardboard, tape rolls, wire brushes Plastic bags, coax cable, Tygon tubing, poly bottles

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	.5
Others:	2.7 TB 6-13-12
Total Packaging Weight:	TB 6-13-12 ~~28.2~~ 31.9 TB 6-13-12
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	TB 6-13-12 ~~35.8~~ 32.1 TB 6-13-12
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	4.0
Cellulosics (C):	12.0
Rubber (R):	
Plastics (waste materials) (XPM):	3.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	TB 6-13-12 ~~54.8~~ 51.1 TB 6-13-12

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10202170

Section 6: RTR Summary (Questions answered YES will be explained in the Comments block except for Question 1.)	Yes	No
Is there observable liquid?	☑	☐
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
CH or RH TRAMPAC		
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: This Replicate Scan agrees with the original scan.
500 ml. bottle, with about 20 ml. liquid.
OPERATOR CALLED CARDBOARD LINER, SHOULD HAVE BEEN FIBER BOARD LINER-NDA WD 6-13-12 6-13-12

RTR Operator:

Jerry Bowden	Jerry Bowden	6/13/12
Print Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☐ RTR Examination ☐ RTR Replicate Scan ☑ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5120004
Examination Date:	6/13/12
Waste Container ID:	10217850
Video/Audio Recorded Media Number:	INRTR5120004 A & B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	ID 116/216, SQ 154
Waste Matrix Code:	S5300
Waste Stream I.D.:	ID-RF-S5300-A
Waste Container Weights:	Gross Wt: 144.0 kg. Tare Wt: 31.9 kg. Net Wt: 112.1 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	Fiberboard liner - No Lid
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	95 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10217850

Section 3: Container Inventory and Comments (Detailed descriptions)
Scrap metal Scrap lead Absorbent Cloth, tape roll, Tyvek coveralls Plastic bags

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	.5
Others:	3.7
Total Packaging Weight:	31.9
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	1.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	0.1
Other Inorganic Materials (OI):	30.0
Cellulosics (C):	77.0
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	112.1

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10217850

Section 5: RTR Summary (Questions Answered YES will be explained in the Comments block except for Question 1)	Yes	No
Is there observable liquid?	☐	☑
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
CH or RH TRAMPAC		
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: This Independent Observation agrees with the original scan.

RTR Operator:

Jerry Bowden	Jerry Bowden	6/13/12
Print Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5120004
Examination Date:	6/13/12
Waste Container ID:	10202170
Video/Audio Recorded Media Number:	INRTR5120004 A & B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☑NO ☐YES NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	ID 116/216, SQ 154
Waste Matrix Code:	S5300
Waste Stream I.D.:	ID-RF-S5300-A
Waste Container Weights:	Gross Wt: 83.0 kg. MD 6/13/12 MD 6/13/12 Tare Wt: ~~28.2~~ 31.9 kg. Net Wt: MD 6/13/12 ~~54.8~~ 51.1 kg. MD 6/13/12
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	MD 6/13/12 ~~No Liner~~ MD 6/13/12 FIBERBOARD LINER - NO LID
Number of Layers of Confinement:	Appears to be 3 layers
Volume Utilization Percentage:	90 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10202170

Section 3: Container Inventory and Comments (Detailed descriptions)
Wire, scrap metal, metal tubing, electrical devices Absorbent Paper, tape rolls, cardboard, broom heads Plastic bags, plastic tubing, plastic containers, electrical cord, coax cable

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	.5
Others:	mm 6/13/12 3.7 mm 6/13/12
Total Packaging Weight:	31.9 ~~28.2~~ mm 6/13/12
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	mm 6-13-12 ~~46.1~~ 42.4 mm 6-13-12
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	3.5
Cellulosics (C):	3.0
Rubber (R):	
Plastics (waste materials) (XPM):	2.2
Organic Matrix (OR):	
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	mm 6-13-12 ~~54.0~~ 51.1 mm 6-13-12

Controlled Copy

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10202170

Section [illegible] – RTR Summary (Questions answered YES will be explained in the Comments block except for Question 1)	Yes	No
Is there observable liquid?	☑	☐
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
CH or RH TRAMPAC		
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: ~~N/A~~ MG 6-13-12 CALLED NO LINER ON AUDIO/VIDEO. PAPERWORK REFLECTS CORRECT PACKAGING AS A FIBERBOARD LINER. MG 6-13-12

RTR Operator:

Michael Galbraith	[signature]	6/13/12
Print Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5120004
Examination Date:	6/13/12
Waste Container ID:	10217850
Video/Audio Recorded Media Number:	INRTR5120004 A & B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	ID 116/216, SQ 154
Waste Matrix Code:	S5300
Waste Stream I.D.:	ID-RF-S5300-A
Waste Container Weights:	Gross Wt: 144.0 kg. Tare Wt: 31.9 kg. Net Wt: 112.1 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	Fiberboard liner - No Lid
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	95 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10217850

Section 3: Container Inventory and Comments (Detailed descriptions)
Scrap metal Scrap lead Absorbent Cloth, tape roll, Tyvek coveralls Plastic bags

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	.5
Others:	3.7
Total Packaging Weight:	31.9
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	1.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	0.2
Other Inorganic Materials (OI):	40.0
Cellulosics (C):	66.4
Rubber (R):	
Plastics (waste materials) (XPM):	4.5
Organic Matrix (OR):	
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	112.1

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10217850

Section 6: RTR Summary (Questions answered YES will be explained in the comments block or on an attached document)	Yes	No
Is there observable liquid?	☐	☑
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
CH or RH TRAMPAC		
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: N/A

RTR Operator:

Michael Galbraith		6/13/12
Print Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5120004
Examination Date:	6/13/12
Waste Container ID:	10223021
Video/Audio Recorded Media Number:	INRTR5120004 A & B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☑NO ☐YES NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	ID 116/216, SQ154
Waste Matrix Code:	S5300
Waste Stream I.D.:	ID-RF-S5300-A
Waste Container Weights:	Gross Wt: 107.0 kg. Tare Wt: 31.9 kg. Net Wt: 75.1 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	Fiberboard Liner - No Lid
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	100 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10223021

Section 3: Container Inventory and Comments (Detailed descriptions)
Scrap metal, knife, D cell battery Lead tape Absorbent Cloth, tape rolls, cardboard, Tyvek coveralls Respirator Plastic bags, reinforced plastic hose, plastic container

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	.5
Others:	3.7
Total Packaging Weight:	31.9
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	1.5
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	1.0
Other Inorganic Materials (OI):	25.0
Cellulosics (C):	40.1
Rubber (R):	1.5
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	75.1

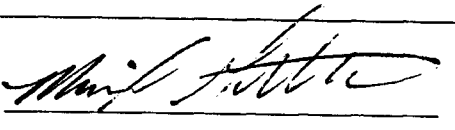
Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10223021

Section 5 RTR Summary (If any question answered YES, will be explained in the Comments block except for Question 7)	Yes	No
Is there observable liquid?	☑	☐
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
CH or RH TRAMPAC		
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: N/A

RTR Operator:

Michael Galbraith		6/13/12
Print Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5120004
Examination Date:	6/13/12
Waste Container ID:	10124637
Video/Audio Recorded Media Number:	INRTR5120004 A & B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☑NO ☐YES NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	ID 116/216, SQ154
Waste Matrix Code:	S5300
Waste Stream I.D.:	ID-RF-S5300-A
Waste Container Weights:	Gross Wt: 96.0 kg. Tare Wt: 31.9 kg. Net Wt: 64.1 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	Fiberboard Liner - No Lid
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	100 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10124637

Section 3: Container Inventory and Comments (Detailed descriptions)
Scrap metal Respirator cartridges Absorbent Cloth, tape tolls, Tyvek coveralls Rubber gloves, leaded rubber gloves Plastic bags, plastic sheeting, scrap plastic

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	.5
Others:	3.7
Total Packaging Weight:	31.9
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	1.5
Aluminum-based Metals / Alloys (AM):	0.2
Other Metals (OM):	
Other Inorganic Materials (OI):	25.8
Cellulosics (C):	21.5
Rubber (R):	10.1
Plastics (waste materials) (XPM):	5.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	64.1

Attachment 2 – CCP Radiography Data Sheet (Continued)

Page 3 of 3

Waste Container ID: 10124637

Section 10 – RTR Summary (Questions answered YES will be explained in the Comments block except for Question 10)	Yes	No
Is there observable liquid?	☐	☑
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
CH or RH TRAMPAC		
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: N/A

RTR Operator:

Michael Galbraith	[signature]	6/13/12
Print Name	Signature	Date

Attachment 3 – CCP Radiography Independent Technical Reviewer Checklist

Batch Data Report No.: INRTR5120004

1.	Data generation and reduction were conducted in a technically correct manner in accordance with the methods used?	☐NO	☑YES	☐N/A
2.	Was the correct revision of the procedure used? Procedure: CCP-TP-053 Rev.: 11	☐NO	☑YES	☐N/A
3.	Are the WMPs entered correctly?	☐NO	☑YES	☐N/A
4.	Do the estimated weights in Section 4 of Attachment 2 equal the container gross weight?	☐NO	☑YES	☐N/A
5.	Is the data reported in the proper units with the correct number of significant figures (e.g., one tenth of a kilogram)?	☐NO	☑YES	☐N/A
6.	Has the data been verified for transcription errors?	☐NO	☐YES	☑N/A
7.	Does the Testing Batch Report include radiography for up to 20 containers?	☐NO	☑YES	☐N/A
8.	BDR contents are complete and match the CCP Waste RTR Batch Data Report Table of Contents?	☐NO	☑YES	☐N/A
9.	Is all the data signed and dated in reproducible ink and by the individual(s) generating it?	☐NO	☑YES	☐N/A
10.	Is all data recorded clearly, legibly, and accurately?	☐NO	☑YES	☐N/A
11.	All changes to original data lined out, initialed and dated by the individual making the changes?	☐NO	☑YES	☐N/A
12.	Was justification made for changing the original data?	☐NO	☑YES	☐N/A
13.	Were data changes made by the individual who originally collected the data?	☐NO	☑YES	☐N/A
14.	Does the waste match the Waste Matrix Code and Waste Stream description?	☐NO	☑YES	☐N/A
15.	Are the RTR Operator's decisions regarding the Radiography documented?	☐NO	☑YES	☐N/A
16.	Is there an adequate written description of the contents of each item?	☐NO	☑YES	☐N/A
17.	Was the video/audio recording media properly prepared and labeled for each waste container?	☐NO	☑YES	☐N/A
18.	Was the video/audio recording media check performed satisfactorily and recorded on Attachment 1?	☐NO	☑YES	☐N/A

Attachment 3 – CCP Radiography Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: INRTR5120004

Description				
19.	Was the Image Test performed satisfactorily and recorded on Attachment 1?	☐ NO	☑ YES	☐ N/A
20.	Was the Replicate Scan performed and recorded on an Attachment 2? (1 per batch or 1 per day, whichever is less frequent).	☐ NO	☑ YES	☐ N/A
21.	Was the Replicate Scan RTR Operator different from the first RTR Operator?	☐ NO	☑ YES	☐ N/A
22.	Did the Replicate Scan RTR Operator and the first RTR Operator agree on the results?	☐ NO	☑ YES	☐ N/A
23.	Was the Independent Observation performed and recorded on an Attachment 2? (1 per batch or 1 per day, whichever is less frequent).	☐ NO	☑ YES	☐ N/A
24.	Was the Independent Observation RTR Operator different from the first RTR Operator?	☐ NO	☑ YES	☐ N/A
25.	Did the Independent Observation RTR Operator and the first RTR Operator agree on the results?	☐ NO	☑ YES	☐ N/A
26.	Was the data collection performed by qualified individuals?	☐ NO	☑ YES	☐ N/A
27.	Are the NCR(s) associated with the RTR examination included in the BDR?	☐ NO	☐ YES	☑ N/A
28.	QAOs (precision, accuracy, completeness, representativeness) have been met?	☐ NO	☑ YES	☐ N/A

Comments:
N/A

I have reviewed 100% of the container specific and batch data in this report and find it acceptable.

Independent Technical Reviewer:

Tyson Christensen		6/19/12
Printed Name	Signature	Date

DIVIDER

PAGE

Attachment 2 – CCP SPM Radiography Project Level Validation Checklist and Summary

BDR Number: RTR11-00132 **Examination Date:** 4/12-13/11

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
1. Is the completed, signed, and dated Independent Technical Reviewer Checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, C3-10b**	X			
2. Does the BDR contain all items addressed in the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-10b**	X			
3. Does the BDR include a listing of all the container numbers in the batch? **Reference Source: CCP-PO-001, C3-10b**	X			
4. List all containers that have met QAOs. **Reference Source: CCP-PO-001, C3-10b**				Container Numbers: 10024969,10140016, 10023865
5. Does the BDR identify the current implementing procedure and revision number? **Reference Source: CCP-PO-001, Table C3-11**	X			
6. Is there a reference to or copy of any associated NCRs (if any) in the BDR? NA if no NCRs. **Reference Source: CCP-PO-001, Table C3-11**			X	No NCRs
7. Are there 20 or fewer containers in the batch? **Reference Source: CCP-PO-001, C3-10**	X			
8. Are the data properly reported (i.e., data are reported in correct units and with correct significant figures)? **Reference Source: CCP-PO-001, C3-10b**	X			
9. Is there evidence of verification that the physical form matches the Waste Matrix Code? **Reference Source: CCP-PO-001, C3-4, Table C3-11**	X			

NTPC RECORDS ORIGINAL
DATE REC'D 2-26-13

Attachment 2 – CCP SPM Radiography Project Level Validation Checklist and Summary (Continued)

BDR Number: RTR11-00132 **Examination Date:** 4/12-13/11

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
10. Is there evidence of verification that the physical form matches the waste stream description? **Reference Source: CCP-PO-001, C1-3, Table C3-11**	X			
11. Are prohibited items absent? **Reference Source: CCP-PO-001, C3-4a**	X			
12. Does observable liquid, if present, meet the criteria of the TSDF-WAC? **Reference Source: CCP-PO-001, C3-4a**	X			
13. Were discrepancies between two operators with regard to identification of waste matrix code, liquids in excess of the TSDF-WAC, or compressed gases through replicate scans and independent observations reconciled? NA if no discrepancies. **Reference Source: CCP-PO-001, C3-4a**			X	No Discrepancies
14. Are the training qualifications for all radiography personnel acceptable? **Reference Source: CCP-PO-001, C3-4a**	X			
15. Was evidence of the video/audio check included in the BDR? **Reference Source: CCP-PO-001, C3-4a**	X			
16. Was the Lines-Pair Resolution Test Check included in the BDR? **Reference Source: CCP-PO-001, C3-4a**	X			
17. Was a replicate scan performed once per day, or once per batch, whichever is LESS frequent? **Reference Source: CCP-PO-001, C1-3**	X			
18. Was an independent observation performed once per day, or once per batch, whichever is LESS frequent? **Reference Source: CCP-PO-001, C1-3**	X			

Attachment 2 – CCP SPM Radiography Project Level Validation Checklist and Summary (Continued)

BDR Number: RTR11-00132 **Examination Date:** 4/12-13/11

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
19. Were the replicate scan and independent observation performed on different waste containers? **Reference Source: CCP-PO-001, C1-3**	X			
20. Were the personnel performing the replicate scan and independent observation different from the individual who performed the original? **Reference Source: CCP-PO-001, C1-3**	X			
21. Does the BDR include an estimate of each material parameter weight in kg for each container? **Reference Source: CCP Technical Procedures**		X		Weight reported in lbs.
22. Does the BDR include a description of each material parameter for each container? **Reference Source: CCP-PO-001, Table C3-1**	X			
23. Is the container gross weight recorded in kilograms (kg) for each container in the BDR? **Reference Source: CCP Technical Procedures**		X		Weight reported in lbs.
24. Was the Scale Weight Calibration Check included in the BDR? **Reference Source: CCP Technical Procedures**			X	Not Used
25. Was the Scale Weight Check included in the BDR? **Reference Source: CCP Technical Procedures**			X	Not Used

Comments: None

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

Steve Castro	Ste Cast	2-25-13
SPM Printed Name	Signature	Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

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Batch Report Coversheet

Date: 01-Aug-2012

Time: 14:01

Batch Type Real Time Radiography
Batch Report No. RTR11-00132
Batch Id RTR11-00132
Open Date 12-APR-11 09:51:31
Close Date 13-APR-11 10:09:08
Batch Status AP
Test Facility Idaho AMWTP
Equipment Id Z-213-106 RTR Station Right (213-106)

Container Id	IDC	Analysis Id	Date Examined	QC Type	Analysis Status	Operator	
~~10124872~~	~~MD-836~~	~~0000074339~~	~~12-APR-11 09:51:31~~	~~Original~~	~~P~~	~~DALLAS JOHNSTON~~	
10024969	RF-003	0000074340	12-APR-11 10:13:10	Original	P	DALLAS JOHNSTON	
~~10025448~~	~~RF-003~~	~~0000074341~~	~~12-APR-11 10:36:49~~	~~Original~~	~~P~~	~~DALLAS JOHNSTON~~	
~~10402291~~	~~BN-308~~	~~0000074343~~	~~12-APR-11 11:22:43~~	~~Original~~	~~P~~	~~JAY SIMONSON~~	
~~10241039~~	~~RF-337~~	~~0000074345~~	~~12-APR-11 13:06:54~~	~~Original~~	~~P~~	~~AARON ATWELL~~	
~~10102555~~	~~RF-336~~	~~0000074347~~	~~12-APR-11 13:43:14~~	~~Original~~	~~P~~	~~AARON ATWELL~~	
10023777	RF-003	0000074349	12-APR-11 15:05:32	Original	P	AARON ATWELL	
10023776	RF-003	0000074351	12-APR-11 16:29:14	Original	P	AARON ATWELL	
~~10023775~~	~~RF-003~~	~~0000074352~~	~~12-APR-11 17:02:00~~	~~Original~~	~~P~~	~~AARON ATWELL~~	
10023776	RF-003	0000074353	12-APR-11 17:34:19	Replicate / Duplicate	P	BRAD PACKHAM	
10023777	RF-003	0000074355	12-APR-11 21:06:03	RTR OIO	P	DANNY GREEN	
10072962	RF-003	0000074357	12-APR-11 21:31:55	Original	P	DANNY GREEN	
~~10023921~~	~~RF-003~~	~~0000074359~~	~~12-APR-11 22:45:27~~	~~Original~~	~~P~~	~~JAY SIMONSON~~	
~~10016121~~	~~RF-003~~	~~0000074361~~	~~12-APR-11 23:06:42~~	~~Original~~	~~P~~	~~DANNY GREEN~~	
~~10023894~~	~~RF-003~~	~~0000074365~~	~~13-APR-11 01:48:58~~	~~Original~~	~~P~~	~~KENT KEARN~~	
~~10016369~~	~~RF-003~~	~~0000074367~~	~~13-APR-11 02:19:36~~	~~Original~~	~~P~~	~~KENT KEARN~~	
~~10017897~~	~~RF-003~~	~~0000074368~~	~~13-APR-11 04:09:34~~	~~Original~~	~~P~~	~~KENT KEARN~~	
10140016	RF-003	0000074370	13-APR-11 04:29:14	Original	P	KENT KEARN	
~~10023869~~	~~RF-003~~	~~0000074371~~	~~13-APR-11 05:00:26~~	~~Original~~	~~P~~	~~KENT KEARN~~	
~~10023911~~	~~RF-003~~	~~0000074372~~	~~13-APR-11 05:23:09~~	~~Original~~	~~P~~	~~KENT KEARN~~	
~~10023778~~	~~RF-003~~	~~0000074374~~	~~13-APR-11 09:10:32~~	~~Original~~	~~P~~	~~AARON ATWELL~~	
10023865	RF-003	0000074376	13-APR-11 10:09:08	Original	P	AARON ATWELL	
~~10124872~~	~~MD-836~~	~~0000234393~~	~~16-AUG-11 16:02:06~~	~~Supplemental~~	~~P~~	~~RYAN WINN~~	

CCP RECORDS ORIGINAL
DATE REC'D 8-14-12

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Batch Report Coversheet

RTR11-00132

Date: 01-Aug-2012

Time: 14:01

**********Batch Comments**********

Written By	Date	Comment
CNOWACKI	14-APR-11 14:06:18	This batch is being validated electronically only.
KHUGHES	20-APR-11 16:54:27	(rework) Container 10402291, please enter "1 steel drum" into Waste Items by Weight and remove the "steel drum" that was entered into Packaging Materials.
KHUGHES	20-APR-11 16:54:27	(rework) Container 10023921, please enter No" into Liner Lid Deformed field.
KHUGHES	20-APR-11 16:58:42	return for rework
JSIMONSON	21-APR-11 06:39:54	Rework Complete.
KHUGHES	21-APR-11 06:47:53	rework complete and sat. waiting 200% review
JSIMONSON	21-APR-11 07:03:01	200% review of AMWTP sludge drums complete.
KHUGHES	21-APR-11 07:24:35	promote to SPM
PFETZER	22-APR-11 15:47:35	Promote.

**********RTR/VE Update (RVU) Comments**********

Written By	Date	Comment
CSIMMONS	20-AUG-11 08:47:37	This RVU was validated to MP-TRUW-8.8.
CSIMMONS	20-AUG-11 09:05:53	There is no rework for RVU drum 10124872 analysis Id 0000254593.
CSIMMONS	20-AUG-11 09:07:32	Promote RVU to SPM level.
DJJONES	23-AUG-11 10:06:02	Information only: The SCR 4140 WTS update for June 23, 2011 changed the RTR Liquid data fields. "The existing fields for 'Containerized Liquids' (Y/N &Pints) will be 'Null' and non-editable for NEW analyses generated. (NOTE: THIS WILL INCLUDE ANY ANALYSIS WITH DATA GENERATED SINCE 6/30/2010 THAT IS BEING MIGRATED TO THE NEW FIELDS."
DJJONES	23-AUG-11 10:12:42	Reviewed and approved this supplement batch at the SPM level.

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Batch Report Coversheet

Date: 01-Aug-2012

Time: 14:01

RTR11-00132

**********************Batch E-Signature History***********************

Approval ID	User ID	Signature Date	Comment
1980219	KHUGHES	20-APR-2011 16:58:42	return for rework
1980673	JSIMONSON	21-APR-2011 06:39:54	Rework Complete.
1980683	KHUGHES	21-APR-2011 07:24:35	promote to SPM
1981570	PFETZER	22-APR-2011 15:47:35	Promote.

**********************RTR/VE Update (RVU) E-Signature History***********************

Approval ID	User ID	Signature Date	Comment
2082176	CSIMMONS	20-AUG-2011 09:07:33	Promote RVU to SPM level.
2084210	DJJONES	23-AUG-2011 10:12:42	Reviewed and approved this supplement batch at the SPM level.

******* End of Batch Report Coversheet Report *******

Batch Data Report No.: RTR11-00132 Date: August 2, 2012

Table of Contents

Item		Page No.
1	Batch Report Coversheet	000001
2	Batch Data Report Table of Contents	000004
3	Imaging Quality Indicator Verification Form for RTR (Form-1578)	000005
4	RTR Analysis Report	000006
5	Replicate Comparison Report	000053
6	Copy of NCRs (NA, If Not Applicable	000055
7	Checklist Report	000056

Containers 10023776 (replicate) and 1023777 (independent observation) demonstrate compliance with the Quality Assurance Objective for precision. They are not part of the S3114 initiative.

AMWTP Advanced Mixed Waste Treatment Project	**Imaging Quality Indicator Verification Form For RTR**	Form-1578 Rev. 3 Effective Date: 12/03/10 Page 1 of 1

Implementing Document: INST-OI-12, INST-OI-81

This form documents the performance of the Imaging Quality Indicator (IQI) prior to examining drums after system startup.

RTR System Z-213- 106 (Enter 101 or 106)

Date: 04/13/11 Time: 0825

IQI Number: 04/13/11IQI106D Disk Number: 2RTR11-00079

Image Resolution: 16 lines per inch

kV: 75 mA: 2

Magnification: 0 Focus: Broad ☐ Fine ☒

(Signatures by the performer and shift supervisor confirm that the IQI has been verified via video/audio playback of the IQI from the DVD to be in compliance with INST-OI-12, Real-Time Radiography Operations (Drum), or INST-OI-81, Real-Time Radiography Operations (for WIPP Certification of Boxes), as applicable.

Signature of Performer:

Aaron Atwell
Printed Name

Signature

04/13/11
Date

Review Signature of the Shift Supervisor:

Derek Cox
Printed Name

Signature

04/13/11
Date

13/90

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RTR Analysis Report

Date: 01-Aug-2012
Time: 14:02

Batch Id RTR11-00132 **Container Id** 10124872 **Analysis Id** 0000074339

Container Type C drum, 83 Gallon **Analysis Status** Pass

RTR Date 12-APR-2011 09:51 **Gross Weight** 749.700 Lbs. **Net Weight** 585.700 Lbs.
Equipment Z-213-106 **Waste Matrix Code** S3121 **IDC** MD-836 High Level Sludge/Cement
Recording Id 2RTR11-00079 **Procedure Id** INST-OI-12 **Revision** 46 **Approval Level** SPM
Is Test Pattern Resolution Ok? Yes **Start Side** A **Replicate** No **OIO** No
Audio Visual Ok? Yes **Closure Date** 16-AUG-2011 16:02 **Operator** DJOHNSTON

Result Comment Waste consists primarily of sludge.

Package

IDC Correct Yes **Recommended IDC** **Summary Category** S3000
Idc Change Reason
Rigid Liner Present? Yes **LinerType** TYPE 1
Liner Punctured? Yes **Sharp Objects?** No
Liner Lid Present? Yes **Sharp Objects Are Protected?** Yes
Liner Lid Deformed? No **Layers Of Confinement** 0
Fill Factor 90
Bag Closure Method No Bags

Liquids

Liquid Present? No **Internal Container with Liquid** No
Internal Container with Liquid 0 pints **LA Candidate** No
Liquid Between Liner & Drum 0 pints **Containerized Liquid**
Total Liquid Amount 0 pints **Containerized Liquid Amt** 0 pints
Other Liquids 0 pints **Comment**
Prohibited Liquids Present No **Comment**

Contents-Drum or Box

	Value	Comment		Value	Comment
Lead?	No		Mercury Present?	No	
Wet Cell Batteries?	No		Explosives?	No	
Prohibited Compressed Gases?	No		PCBs Present?	No	
			PCB Mass (lbs)	0	
Non-Mixed Hazardous Waste Present?	No		Sealed Containers Over 4L?	No	

Non-Radionuclide Pyrophoric Materials Present? No
Waste exhibiting the characteristics of Ignitability, Corrosivity or Reactivity Present? No
Wastes Incompatible with backfill, seal and panel closure materials, container and packaging materials,shipping container or other wastes? No
Impenetrable Dense Objects? No

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
90 mil liner	1.000	EACH	16.000	16.000
55-GAL DRUM (17c)	1.000	EACH	59.000	59.000
1/2 Inch Plywood Spacer (Packaging)	1.000	EACH	2.400	2.400
3/4 Inch Plywood Spacer (Packaging)	1.000	EACH	3.600	3.600

Waste Items byWeight

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)

006

Batch Id RTR11-00132 **Container Id** 10124872 **Analysis Id** 0000074339

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	0.000
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	0.000
Other Inorganic Materials	0.000	0.000
Cellulosics	0.000	0.000
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	0.000
Inorganic matrix	100.000	585.700
Organic matrix	0.000	0.000
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	142.000
Plastic (packaging materials)	0.000	16.000
Cellulosics Packaging	0.000	6.000

Analysis Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
1972751	DJOHNSTON	12-APR-2011 09:51	

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RTR/VE Update Analysis Report

Date: 01-Aug-2012
Time: 14:06

Affected Batch RTR11-00132 **Container Id** 10124872 **Analysis Id** 0000254593 **Analysis Status** Passed

VE Date 16-AUG-11 16:02:06 **Procedure Id** INST-OI-34 **Gross Weight** 743.70 lbs.
Gen-IDC Id MD-836 High Level Sludge/Cement **Proc Rev** 24 FC-1 **Net Weight** 583.70 lbs.
Waste Matrix S3121 **Summary Category Group** S3000 **Equipment ID** VE NGW C FAC
Container Type C **Affected Analysis ID** 0000074339
Operator 1 RYAN WINN **Operator 2** TROY TAYLOR

General

Rigid Liner Present? Yes **Liner Punctured?** Yes **Liner Hole Size:** 20" in. **Liner Type** TYPE 1
Liner Lid Present No **Fill Factor** 90 %

Liquids

Liquids Present? No **Comment**
Liquid Between Liner and Drum 0 pints
Internal Container with Liquid 0 pints
Containerized Liquid pints
Other Liquids 0 pints
Total Liquid Amount 0 pints
Prohibited Liquids Present No
Internal Container with Liquid No
Containerized Liquid

8-2-12

Contents

Sharp Objects? No **Are Sharp Objects Protected?** Yes

	Value	Comment
Prohibited Compressed Gas Present?	No	
Explosives Present?	No	
Pyrophorics Present?	No	
Mercury Contaminated>1000PPM	No	
PCBs Present?	No	
PCB Mass (lbs)	0	
Wet Cell Batteries Present?	No	
Corrosives,Ignitables or Reactives Present?	No	
Beryllium Contaminates Present?	No	
Hazardous-Only Waste Present?	No	
Is Waste Incompatible with backfill, packaging materials, or shipping container materials?	No	
Impenetrable Dense Objects?	No	
Sealed Containers Over 4 liters?	No	

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RTR/VE Update Analysis Report

Date: 01-Aug-2012
Time: 14:06

Affected Batch RTR11-00132 **Container Id** 10124872 **Analysis Id** 0000254593

IDC Verification

Is IDC correct? Yes **Recommended IDC**

IDC Change Reason

Visual Exam Comment {Waste consists primarily of sludge. - RTR comment from rtr batch RTR11-00132} This RVU is being performed due to plywood spacers being removed. All remaining waste by weight percent is 100% inorganic matrix. REW 8/16/11

Closure

Closure Date 16-AUG-11 16:02:06 **Closure Method** No Bags

Layers Of Confinement 0 **Overpack Required?** Yes

New Steel Lid? Yes

IDC CODES

Current Container IDC Code: MD-836 **Recommended IDC Code:**

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt	Item Wt(lbs)
90 mil liner	1.000	EACH	16.000	16.000
55-GAL DRUM (17c)	1.000	EACH	59.000	59.000

Waste Items by Weight

Material Item	Quantity	Unit	Unit Wt	Item Wt(lbs)

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt	Item Wt(lbs)

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	0.000
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	0.000
Other Inorganic Materials	0.000	0.000
Cellulosics	0.000	0.000
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	0.000
Inorganic matrix	100.000	585.700
Organic matrix	0.000	0.000
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	142.000
Plastic (packaging materials)	0.000	16.000
Cellulosics Packaging	0.000	0.000

Container Filters

WDS Filter Code	Event	Event Date	Entered By	Remove	Other Filter Model	Exclude
NF036	615 - DVF	05-APR-11	CHILL	Y		

Filter Comment

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RTR/VE Update Analysis Report

Date: 01-Aug-2012

Time: 14:06

Affected Batch RTR11-00132 **Container Id** 10124872 **Analysis Id** 0000254593

E-Signature History

Esig Approval Id	User ID	E-signature Date	Comment
2079801	RWINN	16-AUG-11 16:02:09	
2079804	TTAYLOR	16-AUG-11 16:02:10	RVU

End of RTR/VE Update Analysis Report

6-2-12

Batch Id RTR11-00132 **Container Id** 10024969 **Analysis Id** 0000074340

Container Type C drum, 83 Gallon **Analysis Status** Pass

RTR Date 12-APR-2011 10:13 **Gross Weight** 538.020 Lbs. **Net Weight** 376.020 Lbs.

Equipment Z-213-106 **Waste Matrix Code** S3114 **IDC** RF-003 Organic Setups, Oil Solids

Recording Id 2RTR11-00079 **Procedure Id** INST-OI-12 **Revision** 46 **Approval Level** SPM

Is Test Pattern Resolution Ok? Yes **Start Side** A **Replicate** No **OIO** No

Audio Visual Ok? Yes **Closure Date** 29-MAR-1996 00:00 **Operator** DJOHNSTON

Result Comment Waste consists primarily of sludge.

Package

IDC Correct Yes **Recommended IDC** **Summary Category** S3000

Idc Change Reason

Rigid Liner Present? Yes **LinerType** TYPE 2

Liner Punctured? Yes **Sharp Objects?** No

Liner Lid Present? Yes **Sharp Objects Are Protected?** Yes

Liner Lid Deformed? No **Layers Of Confinement** 1

Fill Factor 90

Bag Closure Method Twisted and Taped

Liquids

Liquid Present? No **Internal Container with Liquid** No

Internal Container with Liquid 0 pints **LA Candidate** No

Liquid Between Liner & Drum 0 pints **Containerized Liquid**

Total Liquid Amount 0 pints **Containerized Liquid Amt** 0 pints

Other Liquids 0 pints **Comment**

Prohibited Liquids Present No **Comment**

Contents-Drum or Box

	Value	Comment		Value	Comment
Lead?	No		**Mercury Present?**	No	
Wet Cell Batteries?	No		**Explosives?**	No	
Prohibited Compressed Gases?	No		**PCBs Present?**	Yes - Acceptable	no liquid
			PCB Mass (lbs)	376.02	
Non-Mixed Hazardous Waste Present?	No		**Sealed Containers Over 4L?**	No	

Non-Radionuclide Pyrophoric Materials Present? No

Waste exhibiting the characteristics of Ignitability, Corrosivity or Reactivity Present? No

Wastes Incompatible with backfill, seal and panel closure materials, container and packaging materials,shipping container or other wastes? No

Impenetrable Dense Objects? No

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
90 mil liner	1.000	EACH	16.000	16.000
O-ring plastic bag	1.000	EACH	4.000	4.000
55-GAL DRUM (17c)	1.000	EACH	59.000	59.000

Waste Items byWeight

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)

Batch Id RTR11-00132 **Container Id** 10024969 **Analysis Id** 0000074340

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	0.000
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	0.000
Other Inorganic Materials	0.000	0.000
Cellulosics	0.000	0.000
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	0.000
Inorganic matrix	0.000	0.000
Organic matrix	100.000	376.020
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	142.000
Plastic (packaging materials)	0.000	20.000
Cellulosics Packaging	0.000	0.000

Analysis Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
1972769	DJOHNSTON	12-APR-2011 10:13	

AMWTP
Advanced Mixed Waste Treatment Project

AMWTP

RTR Analysis Report

Date: 01-Aug-2012
Time: 14:02

Batch Id RTR11-00132 **Container Id** 10025448 **Analysis Id** 000007434

Container Type C drum, 83 Gallon **Analysis Status** Pass

RTR Date 12-APR-2011 10:36 **Gross Weight** 568.890 Lbs. **Net Weight** 406.890 Lbs.
Equipment Z-213-106 **Waste Matrix Code** S3114 **IDC** RF-003 Organic Setups, Oil Solids
Recording Id 2RTR11-00079 **Procedure Id** INST-OI-12 **Revision** 46 **Approval Level** SPM
Is Test Pattern Resolution Ok? Yes **Start Side** A **Replicate** No **OIO** No
Audio Visual Ok? Yes **Closure Date** 29-MAR-1996 00:00 **Operator** DJOHNSTON
Result Comment Waste consists primarily of sludge.

Package

IDC Correct Yes **Recommended IDC** **Summary Category** S3000
Idc Change Reason
Rigid Liner Present? Yes **LinerType** TYPE 2
Liner Punctured? Yes **Sharp Objects?** No
Liner Lid Present? Yes **Sharp Objects Are Protected?** Yes
Liner Lid Deformed? No **Layers Of Confinement** 1
Fill Factor 75
Bag Closure Method Twisted and Taped

Liquids

Liquid Present? Yes **Internal Container with Liquid** No
Internal Container with Liquid 0 pints **LA Candidate** Yes
Liquid Between Liner & Drum 0 pints **Containerized Liquid**
Total Liquid Amount 6 pints **Containerized Liquid Amt** 0 pints
Other Liquids 6 pints **Comment** at the top of the waste.
Prohibited Liquids Present Yes **Comment** >1%,PCBs

Contents-Drum or Box

	Value	Comment		Value	Comment
Lead?	No		**Mercury Present?**	No	
Wet Cell Batteries?	No		**Explosives?**	No	
Prohibited Compressed Gases?	No		**PCBs Present?**	Yes - Prohibited	liquids
			PCB Mass (lbs)	406.89	
Non-Mixed Hazardous Waste Present?	No		**Sealed Containers Over 4L?**	No	

Non-Radionuclide Pyrophoric Materials Present? No
Waste exhibiting the characteristics of Ignitability, Corrosivity or Reactivity Present? No
Wastes Incompatible with backfill, seal and panel closure materials, container and packaging materials,shipping container or other wastes? No
Impenetrable Dense Objects? No

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
90 mil liner	1.000	EACH	16.000	16.000
O-ring plastic bag	1.000	EACH	4.000	4.000
55-GAL DRUM (17c)	1.000	EACH	59.000	59.000

Waste Items byWeight

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Liquids for Organic Matrix	6.000	PINTS	1.000	6.000

Batch Id RTR11-00132 **Container Id** 10025448 **Analysis Id** 0000074341

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	0.000
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	0.000
Other Inorganic Materials	0.000	0.000
Cellulosics	0.000	0.000
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	0.000
Inorganic matrix	0.000	0.000
Organic matrix	100.000	406.890
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	142.000
Plastic (packaging materials)	0.000	20.000
Cellulosics Packaging	0.000	0.000

Analysis Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
1972778	DJOHNSTON	12-APR-2011 10:36	

Batch Id RTR11-00132 **Container Id** 10402291 **Analysis Id** 0000074343

Container Type 85 FOR NEW DRUM - 85 **Analysis Status** Pass

RTR Date 12-APR-2011 11:22 **Gross Weight** 238.140 Lbs. **Net Weight** 151.140 Lbs.

Equipment Z-213-106 **Waste Matrix Code** S5490 **IDC** BN-508 AMWTP Newly Generated Debris

Recording Id 2RTR11-00079 **Procedure Id** INST-OI-12 **Revision** 46 **Approval Level** SPM

Is Test Pattern Resolution Ok? Yes **Start Side** A **Replicate** No **OIO** No

Audio Visual Ok? Yes **Closure Date** 05-APR-2011 12:37 **Operator** DJOHNSTON

Result Comment Waste consists primarily of metal debri in the form of pieces of drum.
Rework: Updated Silver container in Waste Parameters. JS 04/21/11.

Package

IDC Correct Yes **Recommended IDC** **Summary Category** S5000

Idc Change Reason

Rigid Liner Present? No **LinerType** NO LINER

Liner Punctured? N/A **Sharp Objects?** Yes

Liner Lid Present? No **Sharp Objects Are Protected?** Yes

Liner Lid Deformed? N/A **Layers Of Confinement** 1

Fill Factor 70

Bag Closure Method No Bags

Liquids

Liquid Present? No **Internal Container with Liquid** No

Internal Container with Liquid 0 pints **LA Candidate** No

Liquid Between Liner & Drum 0 pints **Containerized Liquid**

Total Liquid Amount 0 pints **Containerized Liquid Amt** 0 pints

Other Liquids 0 pints **Comment**

Prohibited Liquids Present No **Comment**

Contents-Drum or Box

	Value	Comment		Value	Comment
Lead?	No		**Mercury Present?**	No	
Wet Cell Batteries?	No		**Explosives?**	No	
Prohibited Compressed Gases?	No		**PCBs Present?**	No	
			PCB Mass (lbs)	0	
Non-Mixed Hazardous Waste Present?	No		**Sealed Containers Over 4L?**	Yes	steel drum

Non-Radionuclide Pyrophoric Materials Present? No

Waste exhibiting the characteristics of Ignitability, Corrosivity or Reactivity Present? No

Wastes Incompatible with backfill, seal and panel closure materials, container and packaging materials,shipping container or other wastes? No

Impenetrable Dense Objects? No

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)

Waste Items byWeight

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Silver drum	1.000	EACH	26.000	26.000
plastic waste	1.000	EACH	2.000	2.000

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)

Batch Id RTR11-00132 **Container Id** 10402291 **Analysis Id** 0000074343

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	100.000	149.140
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	0.000
Other Inorganic Materials	0.000	0.000
Cellulosics	0.000	0.000
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	2.000
Inorganic matrix	0.000	0.000
Organic matrix	0.000	0.000
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	87.000
Plastic (packaging materials)	0.000	0.000
Cellulosics Packaging	0.000	0.000

Analysis Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
1980672	JSIMONSON	21-APR-2011 06:38	Rework.
1972812	DJOHNSTON	12-APR-2011 11:22	

Batch Id RTR11-00132 **Container Id** 10241039 **Analysis Id** 0000074345

Container Type A drum, 55 Gallon Drum (17H) **Analysis Status** Pass

RTR Date 12-APR-2011 13:06 **Gross Weight** 134.505 Lbs. **Net Weight** 73.505 Lbs

Equipment Z-213-106 **Waste Matrix Code** S5300 **IDC** RF-337 Plastics, Teflon, Washables, PVC

Recording Id 2RTR11-00079 **Procedure Id** INST-OI-12 **Revision** 46 **Approval Level** SPM

Is Test Pattern Resolution Ok? Yes **Start Side** A **Replicate** No **OIO** No

Audio Visual Ok? Yes **Closure Date** 30-OCT-1971 00:00 **Operator** AATWELL

Result Comment Waste appears to be primarily paper, rags and card board.

Package

IDC Correct Yes **Recommended IDC** **Summary Category** S5000

Idc Change Reason

Rigid Liner Present? No **LinerType** NO LINER

Liner Punctured? N/A **Sharp Objects?** No

Liner Lid Present? No **Sharp Objects Are Protected?** Yes

Liner Lid Deformed? N/A **Layers Of Confinement** 2

Fill Factor 95

Bag Closure Method Twisted and Taped

Liquids

Liquid Present? No **Internal Container with Liquid** No

Internal Container with Liquid 0 pints **LA Candidate** No

Liquid Between Liner & Drum 0 pints **Containerized Liquid**

Total Liquid Amount 0 pints **Containerized Liquid Amt** 0 pints

Other Liquids 0 pints **Comment**

Prohibited Liquids Present No **Comment**

Contents-Drum or Box

	Value	Comment		Value	Comment
Lead?	No		**Mercury Present?**	No	
Wet Cell Batteries?	No		**Explosives?**	No	
Prohibited Compressed Gases?	No		**PCBs Present?**	No	
			PCB Mass (lbs)	0	
Non-Mixed Hazardous Waste Present?	No		**Sealed Containers Over 4L?**	No	

Non-Radionuclide Pyrophoric Materials Present? No

Waste exhibiting the characteristics of Ignitability, Corrosivity or Reactivity Present? No

Wastes Incompatible with backfill, seal and panel closure materials, container and packaging materials,shipping container or other wastes? No

Impenetrable Dense Objects? No

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Drum plastic bag	2.000	EACH	1.000	2.000

Waste Items byWeight

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Plastic waste	1.000	EACH	12.000	12.000
Metal debris	1.000	EACH	10.000	10.000
Cardboard liner	1.000	EACH	4.000	4.000

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Oil-Dri (404 gm/liter) 0.42 lb/pint	6.000	PINTS	0.420	2.520

Batch Id RTR11-00132 **Container Id** 10241039 **Analysis Id** 0000074345

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	10.000
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	0.000
Other Inorganic Materials	0.000	2.520
Cellulosics	100.000	48.985
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	12.000
Inorganic matrix	0.000	0.000
Organic matrix	0.000	0.000
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	59.000
Plastic (packaging materials)	0.000	2.000
Cellulosics Packaging	0.000	0.000

Analysis Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
1972859	AATWELL	12-APR-2011 13:06	

6.2.12

Batch Id RTR11-00132 **Container Id** 10102555 **Analysis Id** 0000074347

Container Type A drum, 55 Gallon Drum (17H) **Analysis Status** Pass

RTR Date 12-APR-2011 13:43 **Gross Weight** 191.835 Lbs. **Net Weight** 131.835 Lbs.

Equipment Z-213-106 **Waste Matrix Code** S5300 **IDC** RF-336 Paper and Rags-Moist

Recording Id 2RTR11-00079 **Procedure Id** INST-OI-12 **Revision** 46 **Approval Level** SPM

Is Test Pattern Resolution Ok? Yes **Start Side** A **Replicate** No **OIO** No

Audio Visual Ok? Yes **Closure Date** 19-APR-1974 00:00 **Operator** AATWELL

Result Comment Waste appears to be primarily towels, wipes and PPE.

Package

IDC Correct Yes **Recommended IDC** **Summary Category** S5000

Idc Change Reason

Rigid Liner Present? No **LinerType** NO LINER

Liner Punctured? N/A **Sharp Objects?** No

Liner Lid Present? No **Sharp Objects Are Protected?** Yes

Liner Lid Deformed? N/A **Layers Of Confinement** 1

Fill Factor 98

Bag Closure Method Twisted and Taped

Liquids

Liquid Present? Yes **Internal Container with Liquid** No

Internal Container with Liquid 0 pints **LA Candidate** No

Liquid Between Liner & Drum 0 pints **Containerized Liquid**

Total Liquid Amount .07 pints **Containerized Liquid Amt** 0 pints

Other Liquids .07 pints **Comment** Aprox .06 pints of liquid in bagging near bottom of drum, aprox .01 pints of liquid in poly bottle next to middle chine

Prohibited Liquids Present No **Comment**

Contents-Drum or Box

	Value	Comment		Value	Comment
Lead?	No		Mercury Present?	No	
Wet Cell Batteries?	No		Explosives?	No	
Prohibited Compressed Gases?	No		PCBs Present?	No	
			PCB Mass (lbs)	0	
Non-Mixed Hazardous Waste Present?	No		Sealed Containers Over 4L?	No	

Non-Radionuclide Pyrophoric Materials Present? No

Waste exhibiting the characteristics of Ignitability, Corrosivity or Reactivity Present? No

Wastes Incompatible with backfill, seal and panel closure materials, container and packaging materials,shipping container or other wastes? No

Impenetrable Dense Objects? No

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Drum plastic bag	1.000	EACH	1.000	1.000

Waste Items byWeight

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
metal debris	1.000	EACH	8.000	8.000
plastic waste	1.000	EACH	8.000	8.000
Respirators	2.000	EACH	3.000	6.000
Poly tubing	1.000	EACH	4.000	4.000
Fiber pack	1.000	EACH	6.000	6.000

8-2-12 SKJ

Batch Id RTR11-00132 **Container Id** 10102555 **Analysis Id** 0000074347

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Liquids for Other Inorganics	0.070	PINTS	1.000	0.070

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	8.000
Aluminum-based Metals/Alloys	0.000	0.900
Other metals	0.000	0.000
Other Inorganic Materials	0.000	0.070
Cellulosics	100.000	106.065
Rubber	0.000	4.800
Plastic (Waste Materials)	0.000	12.000
Inorganic matrix	0.000	0.000
Organic matrix	0.000	0.000
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	59.000
Plastic (packaging materials)	0.000	1.000
Cellulosics Packaging	0.000	0.000

Analysis Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
1972885	AATWELL	12-APR-2011 13:43	

AMWTP
Advanced Mixed Waste Treatment Project

AMWTP

RTR Analysis Report

Date: 01-Aug-2012
Time: 14:02

Batch Id RTR11-00132 **Container Id** 10023777 **Analysis Id** 0000074349

Container Type C drum, 83 Gallon **Analysis Status** Pass

RTR Date 12-APR-2011 15:05 **Gross Weight** 595.350 Lbs. **Net Weight** 433.350 Lbs.
Equipment Z-213-106 **Waste Matrix Code** S3114 **IDC** RF-003 Organic Setups, Oil Solids
Recording Id 2RTR11-00079 **Procedure Id** INST-OI-12 **Revision** 46 **Approval Level** SPM
Is Test Pattern Resolution Ok? Yes **Start Side** A **Replicate** No **OIO** No
Audio Visual Ok? Yes **Closure Date** 26-JUN-1997 00:00 **Operator** AATWELL
Result Comment Waste appears to be sludge.

Package

IDC Correct Yes **Recommended IDC** **Summary Category** S3000
Idc Change Reason
Rigid Liner Present? Yes **LinerType** TYPE 2
Liner Punctured? Yes **Sharp Objects?** No
Liner Lid Present? Yes **Sharp Objects Are Protected?** Yes
Liner Lid Deformed? No **Layers Of Confinement** 1
Fill Factor 85
Bag Closure Method Twisted and Taped

Liquids

Liquid Present? Yes **Internal Container with Liquid** No
Internal Container with Liquid 0 pints **LA Candidate** No
Liquid Between Liner & Drum 0 pints **Containerized Liquid**
Total Liquid Amount 36 pints **Containerized Liquid Amt** 0 pints
Other Liquids 36 pints **Comment** Aprox 36 pints of liquid starting just above middle chine.
Prohibited Liquids Present Yes **Comment** PCBs, >1%

Contents-Drum or Box

	Value	Comment		Value	Comment
Lead?	No		**Mercury Present?**	No	
Wet Cell Batteries?	No		**Explosives?**	No	
Prohibited Compressed Gases?	No		**PCBs Present?**	Yes - Prohibited	liquid in waste
			PCB Mass (lbs)	433.35	
Non-Mixed Hazardous Waste Present?	No		**Sealed Containers Over 4L?**	No	

Non-Radionuclide Pyrophoric Materials Present? No
Waste exhibiting the characteristics of Ignitability, Corrosivity or Reactivity Present? No
Wastes Incompatible with backfill, seal and panel closure materials, container and packaging materials,shipping container or other wastes? No
Impenetrable Dense Objects? No

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
90 mil liner	1.000	EACH	16.000	16.000
O-ring plastic bag	1.000	EACH	4.000	4.000
55-GAL DRUM (17c)	1.000	EACH	59.000	59.000

Waste Items byWeight

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Liquids for Organic Matrix	36.000	PINTS	1.000	36.000

021

Batch Id RTR11-00132 **Container Id** 10023777 **Analysis Id** 0000074349

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	0.000
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	0.000
Other Inorganic Materials	0.000	0.000
Cellulosics	0.000	0.000
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	0.000
Inorganic matrix	0.000	0.000
Organic matrix	100.000	433.350
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	142.000
Plastic (packaging materials)	0.000	20.000
Cellulosics Packaging	0.000	0.000

Analysis Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
1973005	AATWELL	12-APR-2011 15:05	

AMWTP
Advanced Mixed Waste Treatment Project

AMWTP

RTR Analysis Report

Date: 01-Aug-2012
Time: 14:02

Batch Id RTR11-00132 **Container Id** 10023776 **Analysis Id** 0000074351

Container Type C drum, 83 Gallon **Analysis Status** Pass

RTR Date 12-APR-2011 16:29 **Gross Weight** 507.150 Lbs. **Net Weight** 345.150 Lbs.
Equipment Z-213-106 **Waste Matrix Code** S3114 **IDC** RF-003 Organic Setups, Oil Solids
Recording Id 2RTR11-00079 **Procedure Id** INST-OI-12 **Revision** 46 **Approval Level** SPM
Is Test Pattern Resolution Ok? Yes **Start Side** A **Replicate** No **OIO** No
Audio Visual Ok? Yes **Closure Date** 30-JUN-1997 00:00 **Operator** AATWELL
Result Comment Waste appears to be sludge.

Package

IDC Correct Yes **Recommended IDC** **Summary Category** S3000
Idc Change Reason
Rigid Liner Present? Yes **LinerType** TYPE 2
Liner Punctured? Yes **Sharp Objects?** No
Liner Lid Present? Yes **Sharp Objects Are Protected?** Yes
Liner Lid Deformed? No **Layers Of Confinement** 1
Fill Factor 80
Bag Closure Method Twisted and Taped

Liquids

Liquid Present? Yes **Internal Container with Liquid** No
Internal Container with Liquid 0 pints **LA Candidate** Yes
Liquid Between Liner & Drum 0 pints **Containerized Liquid**
Total Liquid Amount 48 pints **Containerized Liquid Amt** 0 pints
Other Liquids 48 pints **Comment** Aprox 48 pints of liquid in the bagging on top of the waste and going down the sides
Prohibited Liquids Present Yes **Comment** PCBs, >1%

Contents-Drum or Box

	Value	Comment		Value	Comment
Lead?	No		**Mercury Present?**	No	
Wet Cell Batteries?	No		**Explosives?**	No	
Prohibited Compressed Gases?	No		**PCBs Present?**	Yes - Prohibited	Liquid in waste
			PCB Mass (lbs)	345.15	
Non-Mixed Hazardous Waste Present?	No		**Sealed Containers Over 4L?**	No	

Non-Radionuclide Pyrophoric Materials Present? No
Waste exhibiting the characteristics of Ignitability, Corrosivity or Reactivity Present? No
Wastes Incompatible with backfill, seal and panel closure materials, container and packaging materials,shipping container or other wastes? No
Impenetrable Dense Objects? No

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
90 mil liner	1.000	EACH	16.000	16.000
O-ring plastic bag	1.000	EACH	4.000	4.000
55-GAL DRUM (17c)	1.000	EACH	59.000	59.000

Waste Items byWeight

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Metal lifting attachment	1.000	EACH	10.000	10.000

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Liquids for Organic Matrix	48.000	PINTS	1.000	48.000

023

Batch Id RTR11-00132 **Container Id** 10023776 **Analysis Id** 0000074351

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	10.000
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	0.000
Other Inorganic Materials	0.000	0.000
Cellulosics	0.000	0.000
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	0.000
Inorganic matrix	0.000	0.000
Organic matrix	100.000	335.150
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	142.000
Plastic (packaging materials)	0.000	20.000
Cellulosics Packaging	0.000	0.000

Analysis Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
1973103	AATWELL	12-APR-2011 16:29	

Batch Id RTR11-00132 **Container Id** 10023775 **Analysis Id** 0000074352

Container Type C drum, 83 Gallon **Analysis Status** Pass

RTR Date 12-APR-2011 17:02 **Gross Weight** 586.530 Lbs. **Net Weight** 424.530 Lbs.

Equipment Z-213-106 **Waste Matrix Code** S3114 **IDC** RF-003 Organic Setups, Oil Solids

Recording Id 2RTR11-00079 **Procedure Id** INST-OI-12 **Revision** 46 **Approval Level** SPM

Is Test Pattern Resolution Ok? Yes **Start Side** A **Replicate** No **OIO** No

Audio Visual Ok? Yes **Closure Date** 25-JUN-1997 00:00 **Operator** AATWELL

Result Comment Waste appears to be sludge.

Package

IDC Correct Yes **Recommended IDC** **Summary Category** S3000

Idc Change Reason

Rigid Liner Present? Yes **LinerType** TYPE 2

Liner Punctured? Yes **Sharp Objects?** No

Liner Lid Present? Yes **Sharp Objects Are Protected?** Yes

Liner Lid Deformed? No **Layers Of Confinement** 1

Fill Factor 95

Bag Closure Method Twisted and Taped

Liquids

Liquid Present? Yes **Internal Container with Liquid** No

Internal Container with Liquid 0 pints **LA Candidate** No

Liquid Between Liner & Drum 0 pints **Containerized Liquid**

Total Liquid Amount 39 pints **Containerized Liquid Amt** 0 pints

Other Liquids 39 pints **Comment** Aprox 3 pints of liquid at bottom of drum, aprox 36 pints of liquid starting just above middle chine

Prohibited Liquids Present Yes **Comment** PCBs, >1%

Contents-Drum or Box

	Value	Comment		Value	Comment
Lead?	No		Mercury Present?	No	
Wet Cell Batteries?	No		Explosives?	No	
Prohibited Compressed Gases?	No		PCBs Present?	Yes - Prohibited	liquid in waste
			PCB Mass (lbs)	424.53	
Non-Mixed Hazardous Waste Present?	No		Sealed Containers Over 4L?	No	

Non-Radionuclide Pyrophoric Materials Present? No

Waste exhibiting the characteristics of Ignitability, Corrosivity or Reactivity Present? No

Wastes Incompatible with backfill, seal and panel closure materials, container and packaging materials,shipping container or other wastes? No

Impenetrable Dense Objects? No

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
90 mil liner	1.000	EACH	16.000	16.000
O-ring plastic bag	1.000	EACH	4.000	4.000
55-GAL DRUM (17c)	1.000	EACH	59.000	59.000

Waste Items byWeight

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Liquids for Organic Matrix	39.000	PINTS	1.000	39.000

Batch Id RTR11-00132 **Container Id** 10023775 **Analysis Id** 0000074352

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	0.000
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	0.000
Other Inorganic Materials	0.000	0.000
Cellulosics	0.000	0.000
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	0.000
Inorganic matrix	0.000	0.000
Organic matrix	100.000	424.530
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	142.000
Plastic (packaging materials)	0.000	20.000
Cellulosics Packaging	0.000	0.000

Analysis Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
1973147	AATWELL	12-APR-2011 17:02	

AMWTP
Advanced Mixed Waste Treatment Project

AMWTP
RTR Analysis Report

Date: 01-Aug-2012
Time: 14:02

Batch Id RTR11-00132 **Container Id** 10023776 **Analysis Id** 0000074353

Container Type C drum, 83 Gallon **Analysis Status** Pass

RTR Date 12-APR-2011 17:34 **Gross Weight** 507.150 **Lbs.** **Net Weight** 345.150 **Lbs**

Equipment Z-213-106 **Waste Matrix Code** S3114 **IDC** RF-003 Organic Setups, Oil Solids

Recording Id 2RTR11-00079 **Procedure Id** INST-OI-12 **Revision** 46 **Approval Level** SPM

Is Test Pattern Resolution Ok? Yes **Start Side** A **Replicate** Yes **OIO** No

Audio Visual Ok? Yes **Closure Date** 30-JUN-1997 00:00 **Operator** BPACKHAM

Result Comment This drum contains sludge.

Package

IDC Correct Yes **Recommended IDC** **Summary Category** S3000

Idc Change Reason

Rigid Liner Present? Yes **LinerType** TYPE 2

Liner Punctured? Yes **Sharp Objects?** No

Liner Lid Present? Yes **Sharp Objects Are Protected?** Yes

Liner Lid Deformed? No **Layers Of Confinement** 1

Fill Factor 85

Bag Closure Method Twisted and Taped

Liquids

Liquid Present? Yes **Internal Container with Liquid** No

Internal Container with Liquid 0 pints **LA Candidate** Yes

Liquid Between Liner & Drum 0 pints **Containerized Liquid**

Total Liquid Amount 40 pints **Containerized Liquid Amt** 0 pints

Other Liquids 40 pints **Comment** 40 pints of liquid in the waste from the top of waste to the bottom of the container.

Prohibited Liquids Present Yes **Comment** PCB's with liquids and liquids>1%.

Contents-Drum or Box

	Value	Comment		Value	Comment
Lead?	No		**Mercury Present?**	No	
Wet Cell Batteries?	No		**Explosives?**	No	
Prohibited Compressed Gases?	No		**PCBs Present?**	Yes - Prohibited	PCB's with liquids.
			PCB Mass (lbs)	345.15	
Non-Mixed Hazardous Waste Present?	No		**Sealed Containers Over 4L?**	No	

Non-Radionuclide Pyrophoric Materials Present? No

Waste exhibiting the characteristics of Ignitability, Corrosivity or Reactivity Present? No

Wastes Incompatible with backfill, seal and panel closure materials, container and packaging materials,shipping container or other wastes? No

Impenetrable Dense Objects? No

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
90 mil liner	1.000	EACH	16.000	16.000
O-ring plastic bag	1.000	EACH	4.000	4.000
55-GAL DRUM (17c)	1.000	EACH	59.000	59.000

Waste Items byWeight

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Lifting fixture.	1.000	EACH	10.000	10.000

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Liquids for Organic Matrix	40.000	PINTS	1.000	40.000

Batch Id RTR11-00132 **Container Id** 10023776 **Analysis Id** 0000074353

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	10.000
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	0.000
Other Inorganic Materials	0.000	0.000
Cellulosics	0.000	0.000
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	0.000
Inorganic matrix	0.000	0.000
Organic matrix	100.000	335.150
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	142.000
Plastic (packaging materials)	0.000	20.000
Cellulosics Packaging	0.000	0.000

Analysis Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
1973181	BPACKHAM	12-APR-2011 17:34	

AMWTP
Advanced Mixed Waste Treatment Project

AMWTP
RTR Analysis Report

Date: 01-Aug-2012
Time: 14:02

Batch Id RTR11-00132 **Container Id** 10023777 **Analysis Id** 0000074355

Container Type C drum, 83 Gallon **Analysis Status** Pass

RTR Date 12-APR-2011 21:06 **Gross Weight** 595.350 Lbs. **Net Weight** 433.350 Lbs.

Equipment Z-213-106 **Waste Matrix Code** S3114 **IDC** RF-003 Organic Setups, Oil Solids

Recording Id 2RTR11-00079 **Procedure Id** INST-OI-12 **Revision** 46 **Approval Level** SPM

Is Test Pattern Resolution Ok? Yes **Start Side** A **Replicate** No **OIO** Yes

Audio Visual Ok? Yes **Closure Date** 26-JUN-1997 00:00 **Operator** DGREEN

Result Comment Waste appears to consist of sludge.

Package

IDC Correct Yes **Recommended IDC** **Summary Category** S3000

Idc Change Reason

Rigid Liner Present? Yes **LinerType** TYPE 2

Liner Punctured? Yes **Sharp Objects?** No

Liner Lid Present? Yes **Sharp Objects Are Protected?** Yes

Liner Lid Deformed? No **Layers Of Confinement** 1

Fill Factor 90

Bag Closure Method Twisted and Taped

Liquids

Liquid Present? Yes **Internal Container with Liquid** No

Internal Container with Liquid 0 pints **LA Candidate** Yes

Liquid Between Liner & Drum 0 pints **Containerized Liquid**

Total Liquid Amount 32 pints **Containerized Liquid Amt** 0 pints

Other Liquids 32 pints **Comment** Liquid appears to start above the second chine & continue down the sides to the bottom approx. 32 pts total.

Prohibited Liquids Present Yes **Comment** > 1% w / PCB's

Contents-Drum or Box

	Value	Comment		Value	Comment
Lead?	No		**Mercury Present?**	No	
Wet Cell Batteries?	No		**Explosives?**	No	
Prohibited Compressed Gases?	No		**PCBs Present?**	Yes - Prohibited	PCBs with liquid
			PCB Mass (lbs)	433.35	
Non-Mixed Hazardous Waste Present?	No		**Sealed Containers Over 4L?**	No	

Non-Radionuclide Pyrophoric Materials Present? No

Waste exhibiting the characteristics of Ignitability, Corrosivity or Reactivity Present? No

Wastes Incompatible with backfill, seal and panel closure materials, container and packaging materials,shipping container or other wastes? No

Impenetrable Dense Objects? No

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
90 mil liner	1.000	EACH	16.000	16.000
O-ring plastic bag	1.000	EACH	4.000	4.000
55-GAL DRUM (17c)	1.000	EACH	59.000	59.000

Waste Items byWeight

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Liquids for Organic Matrix	32.000	PINTS	1.000	32.000

Batch Id RTR11-00132 **Container Id** 10023777 **Analysis Id** 0000074355

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	0.000
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	0.000
Other Inorganic Materials	0.000	0.000
Cellulosics	0.000	0.000
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	0.000
Inorganic matrix	0.000	0.000
Organic matrix	100.000	433.350
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	142.000
Plastic (packaging materials)	0.000	20.000
Cellulosics Packaging	0.000	0.000

RTR Independent Observation

Obsolete	Performed	User Name	Checklist	Answer
No	17-APR-2011 10:50	KHUGHES	1.Was an independent observation performed?	Yes
			2.Were all items on the recording media identified correctly in WTS?	Yes
			3.Do you agree with the operator?	No

Comment Container 10023777, observation date 04-12-11. No significant differences between original and independent observation.

Independent Observation Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
1976708	KHUGHES	17-APR-2011 10:50	valid

Analysis Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
1973264	DGREEN	12-APR-2011 21:06	

Batch Id RTR11-00132 **Container Id** 10072962 **Analysis Id** 0000074357

Container Type C drum, 83 Gallon **Analysis Status** Pass

RTR Date 12-APR-2011 21:31 **Gross Weight** 535.815 Lbs. **Net Weight** 388.815 Lbs

Equipment Z-213-106 **Waste Matrix Code** S3114 **IDC** RF-003 Organic Setups, Oil Solids

Recording Id 2RTR11-00079 **Procedure Id** INST-OI-12 **Revision** 46 **Approval Level** SPM

Is Test Pattern Resolution Ok? Yes **Start Side** A **Replicate** No **OIO** No

Audio Visual Ok? Yes **Closure Date** 29-AUG-1972 00:00 **Operator** DGREEN

Result Comment Waste appears to consist of sludge.
175 pts. oil dry between the drums.

Package

IDC Correct Yes **Recommended IDC** **Summary Category** S3000

Idc Change Reason

Rigid Liner Present? No **LinerType** NO LINER

Liner Punctured? N/A **Sharp Objects?** No

Liner Lid Present? No **Sharp Objects Are Protected?** Yes

Liner Lid Deformed? N/A **Layers Of Confinement** 2

Fill Factor 90

Bag Closure Method Twisted and Taped

Liquids

Liquid Present? No **Internal Container with Liquid** No

Internal Container with Liquid 0 pints **LA Candidate** No

Liquid Between Liner & Drum 0 pints **Containerized Liquid**

Total Liquid Amount 0 pints **Containerized Liquid Amt** 0 pints

Other Liquids 0 pints **Comment**

Prohibited Liquids Present No **Comment**

Contents-Drum or Box

	Value	Comment		Value	Comment
Lead?	No		**Mercury Present?**	No	
Wet Cell Batteries?	No		**Explosives?**	No	
Prohibited Compressed Gases?	No		**PCBs Present?**	Yes - Acceptable	No liquid
			PCB Mass (lbs)	388.82	
Non-Mixed Hazardous Waste Present?	No		**Sealed Containers Over 4L?**	No	

Non-Radionuclide Pyrophoric Materials Present? No

Waste exhibiting the characteristics of Ignitability, Corrosivity or Reactivity Present? No

Wastes Incompatible with backfill, seal and panel closure materials, container and packaging materials,shipping container or other wastes? No

Impenetrable Dense Objects? No

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Drum plastic bag	1.000	EACH	1.000	1.000
O-ring plastic bag	1.000	EACH	4.000	4.000
55-GAL DRUM (17c)	1.000	EACH	59.000	59.000

Waste Items byWeight

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Oil-Dri (404 gm/liter) 0.42 lb/pint	175.000	PINTS	0.420	73.500

Batch Id RTR11-00132 **Container Id** 10072962 **Analysis Id** 0000074357

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	0.000
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	0.000
Other Inorganic Materials	0.000	73.500
Cellulosics	0.000	0.000
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	0.000
Inorganic matrix	0.000	0.000
Organic matrix	100.000	315.315
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	142.000
Plastic (packaging materials)	0.000	5.000
Cellulosics Packaging	0.000	0.000

Analysis Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
1973273	DGREEN	12-APR-2011 21:31	

Batch Id RTR11-00132 **Container Id** 10023921 **Analysis Id** 0000074359

Container Type C drum, 83 Gallon **Analysis Status** Pass

RTR Date 12-APR-2011 22:45 **Gross Weight** 593.145 Lbs. **Net Weight** 431.145 Lbs.

Equipment Z-213-106 **Waste Matrix Code** S3114 **IDC** RF-003 Organic Setups, Oil Solids

Recording Id 2RTR11-00079 **Procedure Id** INST-OI-12 **Revision** 46 **Approval Level** SPM

Is Test Pattern Resolution Ok? Yes **Start Side** A **Replicate** No **OIO** No

Audio Visual Ok? Yes **Closure Date** 03-APR-1996 00:00 **Operator** DGREEN

Result Comment Waste appears to consist of sludge
Rework. Entered "No" in LIner IId Deformed. JS 04/21/11.

Package

IDC Correct Yes **Recommended IDC** **Summary Category** S3000

Idc Change Reason

Rigid Liner Present? Yes **LinerType** TYPE 2

Liner Punctured? Yes **Sharp Objects?** No

Liner Lid Present? Yes **Sharp Objects Are Protected?** Yes

Liner Lid Deformed? No **Layers Of Confinement** 1

Fill Factor 95

Bag Closure Method Twisted and Taped

Liquids

Liquid Present? Yes **Internal Container with Liquid** No

Internal Container with Liquid 0 pints **LA Candidate** No

Liquid Between Liner & Drum 0 pints **Containerized Liquid**

Total Liquid Amount 30 pints **Containerized Liquid Amt** 0 pints

Other Liquids 30 pints **Comment** Liquid appears to start below the second chine & continue down the sides to the bottom approx. 30 pts total.

Prohibited Liquids Present Yes **Comment** > 1% with PCBs

Contents-Drum or Box

	Value	Comment		Value	Comment
Lead?	No		**Mercury Present?**	No	
Wet Cell Batteries?	No		**Explosives?**	No	
Prohibited Compressed Gases?	No		**PCBs Present?**	Yes - Prohibited	PCBs with liquid
			PCB Mass (lbs)	431.15	
Non-Mixed Hazardous Waste Present?	No		**Sealed Containers Over 4L?**	No	

Non-Radionuclide Pyrophoric Materials Present? No

Waste exhibiting the characteristics of ignitability, Corrosivity or Reactivity Present? No

Wastes Incompatible with backfill, seal and panel closure materials, container and packaging materials,shipping container or other wastes? No

Impenetrable Dense Objects? No

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
90 mil liner	1.000	EACH	16.000	16.000
O-ring plastic bag	1.000	EACH	4.000	4.000
55-GAL DRUM (17c)	1.000	EACH	59.000	59.000

Waste Items byWeight

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Liquids for Organic Matrix	30.000	PINTS	1.000	30.000

Batch Id RTR11-00132 **Container Id** 10023921 **Analysis Id** 0000074359

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	0.000
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	0.000
Other Inorganic Materials	0.000	0.000
Cellulosics	0.000	0.000
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	0.000
Inorganic matrix	0.000	0.000
Organic matrix	100.000	431.145
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	142.000
Plastic (packaging materials)	0.000	20.000
Cellulosics Packaging	0.000	0.000

Analysis Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
1980669	JSIMONSON	21-APR-2011 06:26	Rework.
1973291	DGREEN	12-APR-2011 22:45	

Batch Id RTR11-00132 **Container Id** 10016121 **Analysis Id** 0000074361

Container Type C drum, 83 Gallon **Analysis Status** Pass

RTR Date 12-APR-2011 23:06 **Gross Weight** 535.815 Lbs. **Net Weight** 373.815 Lbs

Equipment Z-213-106 **Waste Matrix Code** S3114 **IDC** RF-003 Organic Setups, Oil Solids

Recording Id 2RTR11-00079 **Procedure Id** INST-OI-12 **Revision** 46 **Approval Level** SPM

Is Test Pattern Resolution Ok? Yes **Start Side** A **Replicate** No **OIO** No

Audio Visual Ok? Yes **Closure Date** 09-APR-1996 00:00 **Operator** DGREEN

Result Comment Waste appears to consist of sludge.

Package

IDC Correct Yes **Recommended IDC** **Summary Category** S3000

Idc Change Reason

Rigid Liner Present? Yes **LinerType** TYPE 2

Liner Punctured? Yes **Sharp Objects?** No

Liner Lid Present? Yes **Sharp Objects Are Protected?** Yes

Liner Lid Deformed? No **Layers Of Confinement** 1

Fill Factor 80

Bag Closure Method Twisted and Taped

Liquids

Liquid Present? Yes **Internal Container with Liquid** No

Internal Container with Liquid 0 pints **LA Candidate** No

Liquid Between Liner & Drum 0 pints **Containerized Liquid**

Containerized Liquid Amt 0 pints

Total Liquid Amount 16 pints

Other Liquids 16 pints **Comment** Approx. 16 pts. liquid starting near the bottom chine & penetrates down the side toward the bottom of the drum.

Prohibited Liquids Present Yes **Comment** > 1% with PCBs

Contents-Drum or Box

	Value	Comment		Value	Comment
Lead?	No		Mercury Present?	No	
Wet Cell Batteries?	No		Explosives?	No	
Prohibited Compressed Gases?	No		PCBs Present?	Yes - Prohibited	PCBs with liquid
			PCB Mass (lbs)	373.82	
Non-Mixed Hazardous Waste Present?	No		Sealed Containers Over 4L?	No	

Non-Radionuclide Pyrophoric Materials Present? No

Waste exhibiting the characteristics of Ignitability, Corrosivity or Reactivity Present? No

Wastes Incompatible with backfill, seal and panel closure materials, container and packaging materials,shipping container or other wastes? No

Impenetrable Dense Objects? No

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
90 mil liner	1.000	EACH	16.000	16.000
O-ring plastic bag	1.000	EACH	4.000	4.000
55-GAL DRUM (17c)	1.000	EACH	59.000	59.000

Waste Items byWeight

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Liquids for Organic Matrix	16.000	PINTS	1.000	16.000

Batch Id RTR11-00132 **Container Id** 10016121 **Analysis Id** 0000074361

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	0.000
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	0.000
Other Inorganic Materials	0.000	0.000
Cellulosics	0.000	0.000
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	0.000
Inorganic matrix	0.000	0.000
Organic matrix	100.000	373.815
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	142.000
Plastic (packaging materials)	0.000	20.000
Cellulosics Packaging	0.000	0.000

Analysis Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
1973299	DGREEN	12-APR-2011 23:06	

Batch Id RTR11-00132 **Container Id** 10023894 **Analysis Id** 0000074365

Container Type C drum, 83 Gallon **Analysis Status** Pass

RTR Date 13-APR-2011 01:48 **Gross Weight** 568.890 Lbs. **Net Weight** 409.890 Lbs

Equipment Z-213-106 **Waste Matrix Code** S3114 **IDC** RF-003 Organic Setups, Oil Solids

Recording Id 2RTR11-00079 **Procedure Id** INST-OI-12 **Revision** 46 **Approval Level** SPM

Is Test Pattern Resolution Ok? Yes **Start Side** A **Replicate** No **OIO** No

Audio Visual Ok? Yes **Closure Date** 03-APR-1996 00:00 **Operator** KKEARN

Result Comment Waste consists of a sludge

Package

IDC Correct Yes **Recommended IDC** **Summary Category** S3000

Idc Change Reason

Rigid Liner Present? Yes **LinerType** TYPE 2

Liner Punctured? Yes **Sharp Objects?** No

Liner Lid Present? Yes **Sharp Objects Are Protected?** Yes

Liner Lid Deformed? No **Layers Of Confinement** 1

Fill Factor 85

Bag Closure Method Twisted and Taped

Liquids

Liquid Present? Yes **Internal Container with Liquid** No

Internal Container with Liquid 0 pints **LA Candidate** Yes

Liquid Between Liner & Drum 0 pints **Containerized Liquid**

Containerized Liquid Amt 0 pints

Total Liquid Amount 12 pints

Other Liquids 12 pints **Comment** 12 pt of liquid on top and alomg the side of the waste

Prohibited Liquids Present Yes **Comment** PCBs w/ liquid

Contents-Drum or Box

	Value	Comment		Value	Comment
Lead?	No		**Mercury Present?**	No	
Wet Cell Batteries?	No		**Explosives?**	No	
Prohibited Compressed Gases?	No		**PCBs Present?**	Yes - Prohibited	liquids present
			PCB Mass (lbs)	409.89	
Non-Mixed Hazardous Waste Present?	No		**Sealed Containers Over 4L?**	No	

Non-Radionuclide Pyrophoric Materials Present? No

Waste exhibiting the characteristics of Ignitability, Corrosivity or Reactivity Present? No

Wastes Incompatible with backfill, seal and panel closure materials, container and packaging materials,shipping container or other wastes? No

Impenetrable Dense Objects? No

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
90 mil liner	1.000	EACH	16.000	16.000
Drum plastic bag	1.000	EACH	1.000	1.000
55-GAL DRUM (17c)	1.000	EACH	59.000	59.000

Waste Items byWeight

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Liquids for Organic Matrix	12.000	PINTS	1.000	12.000

Batch Id RTR11-00132 **Container Id** 10023894 **Analysis Id** 0000074365

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	0.000
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	0.000
Other Inorganic Materials	0.000	0.000
Cellulosics	0.000	0.000
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	0.000
Inorganic matrix	0.000	0.000
Organic matrix	100.000	409.890
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	142.000
Plastic (packaging materials)	0.000	17.000
Cellulosics Packaging	0.000	0.000

Analysis Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
1973351	KKEARN	13-APR-2011 01:48	

6-3-12

Batch Id RTR11-00132 **Container Id** 10016369 **Analysis Id** 0000074367

Container Type C drum, 83 Gallon **Analysis Status** Pass

RTR Date 13-APR-2011 02:19 **Gross Weight** 531.405 **Lbs.** **Net Weight** 372.405 **Lbs.**

Equipment Z-213-106 **Waste Matrix Code** S3114 **IDC** RF-003 Organic Setups, Oil Solids

Recording Id 2RTR11-00079 **Procedure Id** INST-OI-12 **Revision** 46 **Approval Level** SPM

Is Test Pattern Resolution Ok? Yes **Start Side** A **Replicate** No **OIO** No

Audio Visual Ok? Yes **Closure Date** 28-MAR-1996 00:00 **Operator** KKEARN

Result Comment Waste consists of a sludge

Package

IDC Correct Yes **Recommended IDC** **Summary Category** S3000

Idc Change Reason

Rigid Liner Present? Yes **LinerType** TYPE 2

Liner Punctured? Yes **Sharp Objects?** No

Liner Lid Present? Yes **Sharp Objects Are Protected?** Yes

Liner Lid Deformed? No **Layers Of Confinement** 1

Fill Factor 70

Bag Closure Method Twisted and Taped

Liquids

Liquid Present? Yes **Internal Container with Liquid** No

Internal Container with Liquid 0 pints **LA Candidate** No

Liquid Between Liner & Drum 0 pints **Containerized Liquid**

Containerized Liquid Amt 0 pints

Total Liquid Amount .5 pints

Other Liquids .5 pints **Comment** .5 pt of liquid at the bottom of the waste

Prohibited Liquids Present Yes **Comment** PCBs present

Contents-Drum or Box

	Value	Comment		Value	Comment
Lead?	No		**Mercury Present?**	No	
Wet Cell Batteries?	No		**Explosives?**	No	
Prohibited Compressed Gases?	No		**PCBs Present?**	Yes - Prohibited	liquids present
			PCB Mass (lbs)	372.41	
Non-Mixed Hazardous Waste Present?	No		**Sealed Containers Over 4L?**	No	

Non-Radionuclide Pyrophoric Materials Present? No

Waste exhibiting the characteristics of Ignitability, Corrosivity or Reactivity Present? No

Wastes Incompatible with backfill, seal and panel closure materials, container and packaging materials,shipping container or other wastes? No

Impenetrable Dense Objects? No

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
90 mil liner	1.000	EACH	16.000	16.000
Drum plastic bag	1.000	EACH	1.000	1.000
55-GAL DRUM (17c)	1.000	EACH	59.000	59.000

Waste Items byWeight

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Liquids for Organic Matrix	0.500	PINTS	1.000	0.500

Batch Id RTR11-00132 **Container Id** 10016369 **Analysis Id** 0000074367

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	0.000
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	0.000
Other Inorganic Materials	0.000	0.000
Cellulosics	0.000	0.000
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	0.000
Inorganic matrix	0.000	0.000
Organic matrix	100.000	372.405
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	142.000
Plastic (packaging materials)	0.000	17.000
Cellulosics Packaging	0.000	0.000

Analysis Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
1973365	KKEARN	13-APR-2011 02:19	

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RTR Analysis Report

Date: 01-Aug-2012
Time: 14:02

Batch Id RTR11-00132 **Container Id** 10017897 **Analysis Id** 0000074368

Container Type C drum, 83 Gallon **Analysis Status** Pass

RTR Date 13-APR-2011 04:09 **Gross Weight** 575.505 Lbs. **Net Weight** 416.505 Lbs.

Equipment Z-213-106 **Waste Matrix Code** S3114 **IDC** RF-003 Organic Setups, Oil Solids

Recording Id 2RTR11-00079 **Procedure Id** INST-OI-12 **Revision** 46 **Approval Level** SPM

Is Test Pattern Resolution Ok? Yes **Start Side** A **Replicate** No **OIO** No

Audio Visual Ok? Yes **Closure Date** 11-JAN-1996 00:00 **Operator** KKEARN

Result Comment Waste consists of a sludge

Package

IDC Correct Yes **Recommended IDC** **Summary Category** S3000

Idc Change Reason

Rigid Liner Present? Yes **LinerType** TYPE 2

Liner Punctured? Yes **Sharp Objects?** No

Liner Lid Present? Yes **Sharp Objects Are Protected?** Yes

Liner Lid Deformed? No **Layers Of Confinement** 1

Fill Factor 85

Bag Closure Method Twisted and Taped

Liquids

Liquid Present? Yes **Internal Container with Liquid** No

Internal Container with Liquid 0 pints **LA Candidate** No

Liquid Between Liner & Drum 0 pints **Containerized Liquid**

Total Liquid Amount 3 pints **Containerized Liquid Amt** 0 pints

Other Liquids 3 pints **Comment** 3 pt of liquid along the side of the waste

Prohibited Liquids Present Yes **Comment** PCBs w/ liquids

Contents-Drum or Box

	Value	Comment		Value	Comment
Lead?	No		**Mercury Present?**	No	
Wet Cell Batteries?	No		**Explosives?**	No	
Prohibited Compressed Gases?	No		**PCBs Present?**	Yes - Prohibited	liquids present
			PCB Mass (lbs)	416.51	
Non-Mixed Hazardous Waste Present?	No		**Sealed Containers Over 4L?**	No	

Non-Radionuclide Pyrophoric Materials Present? No

Waste exhibiting the characteristics of Ignitability, Corrosivity or Reactivity Present? No

Wastes Incompatible with backfill, seal and panel closure materials, container and packaging materials,shipping container or other wastes? No

Impenetrable Dense Objects? No

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
90 mil liner	1.000	EACH	16.000	16.000
Drum plastic bag	1.000	EACH	1.000	1.000
55-GAL DRUM (17c)	1.000	EACH	59.000	59.000

Waste Items byWeight

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Liquids for Organic Matrix	3.000	PINTS	1.000	3.000

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Advanced Mixed Waste Treatment Project

AMWTP

RTR Analysis Report

Date: 01-Aug-2012

Time: 14:02

Batch Id RTR11-00132 **Container Id** 10017897 **Analysis Id** 0000074368

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	0.000
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	0.000
Other Inorganic Materials	0.000	0.000
Cellulosics	0.000	0.000
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	0.000
Inorganic matrix	0.000	0.000
Organic matrix	100.000	415.505
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	142.000
Plastic (packaging materials)	0.000	17.000
Cellulosics Packaging	0.000	0.000

Analysis Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
1973417	KKEARN	13-APR-2011 04:11	
1973416	KKEARN	13-APR-2011 04:09	

Batch Id RTR11-00132 **Container Id** 10140016 **Analysis Id** 0000074370

Container Type C drum, 83 Gallon **Analysis Status** Pass

RTR Date 13-APR-2011 04:29 **Gross Weight** 588.735 Lbs. **Net Weight** 429.735 Lbs

Equipment Z-213-106 **Waste Matrix Code** S3114 **IDC** RF-003 Organic Setups, Oil Solids

Recording Id 2RTR11-00079 **Procedure Id** INST-OI-12 **Revision** 46 **Approval Level** SPM

Is Test Pattern Resolution Ok? Yes **Start Side** A **Replicate** No **OIO** No

Audio Visual Ok? Yes **Closure Date** 04-JAN-2007 00:00 **Operator** KKEARN

Result Comment Waste consists of a sludge

Package

IDC Correct Yes **Recommended IDC** **Summary Category** S3000

Idc Change Reason

Rigid Liner Present? Yes **LinerType** TYPE 1

Liner Punctured? Yes **Sharp Objects?** No

Liner Lid Present? No **Sharp Objects Are Protected?** Yes

Liner Lid Deformed? N/A **Layers Of Confinement** 1

Fill Factor 80

Bag Closure Method Twisted and Taped

Liquids

Liquid Present? No **Internal Container with Liquid** No

Internal Container with Liquid 0 pints **LA Candidate** No

Liquid Between Liner & Drum 0 pints **Containerized Liquid**

Total Liquid Amount 0 pints **Containerized Liquid Amt** 0 pints

Other Liquids 0 pints **Comment**

Prohibited Liquids Present No **Comment**

Contents-Drum or Box

	Value	Comment		Value	Comment
Lead?	No		**Mercury Present?**	No	
Wet Cell Batteries?	No		**Explosives?**	No	
Prohibited Compressed Gases?	No		**PCBs Present?**	Yes - Acceptable	RF-003
			PCB Mass (lbs)	429.74	
Non-Mixed Hazardous Waste Present?	No		**Sealed Containers Over 4L?**	No	

Non-Radionuclide Pyrophoric Materials Present? No

Waste exhibiting the characteristics of Ignitability, Corrosivity or Reactivity Present? No

Wastes Incompatible with backfill, seal and panel closure materials, container and packaging materials,shipping container or other wastes? No

Impenetrable Dense Objects? No

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
90 mil liner	1.000	EACH	16.000	16.000
Drum plastic bag	1.000	EACH	1.000	1.000
55-GAL DRUM (17c)	1.000	EACH	59.000	59.000

Waste Items byWeight

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)

Batch Id RTR11-00132 **Container Id** 10140016 **Analysis Id** 0000074370

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	0.000
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	0.000
Other Inorganic Materials	0.000	0.000
Cellulosics	0.000	0.000
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	0.000
Inorganic matrix	0.000	0.000
Organic matrix	100.000	429.735
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	142.000
Plastic (packaging materials)	0.000	17.000
Cellulosics Packaging	0.000	0.000

Analysis Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
1973420	KKEARN	13-APR-2011 04:29	

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RTR Analysis Report

Date: 01-Aug-2012
Time: 14:02

Batch Id RTR11-00132 **Container Id** 10023869 **Analysis Id** 0000074371

Container Type C drum, 83 Gallon **Analysis Status** Pass

RTR Date 13-APR-2011 05:00 **Gross Weight** 621.810 Lbs. **Net Weight** 462.810 Lbs
Equipment Z-213-106 **Waste Matrix Code** S3114 **IDC** RF-003 Organic Setups, Oil Solids
Recording Id 2RTR11-00079 **Procedure Id** INST-OI-12 **Revision** 46 **Approval Level** SPM
Is Test Pattern Resolution Ok? Yes **Start Side** A **Replicate** No **OIO** No
Audio Visual Ok? Yes **Closure Date** 03-APR-1996 00:00 **Operator** KKEARN
Result Comment Waste consists of a sludge

Package

IDC Correct Yes **Recommended IDC** **Summary Category** S3000
Idc Change Reason
Rigid Liner Present? Yes **LinerType** TYPE 2
Liner Punctured? Yes **Sharp Objects?** No
Liner Lid Present? Yes **Sharp Objects Are Protected?** Yes
Liner Lid Deformed? No **Layers Of Confinement** 1
Fill Factor 75
Bag Closure Method Twisted and Taped

Liquids

Liquid Present? Yes **Internal Container with Liquid** No
Internal Container with Liquid 0 pints **LA Candidate** Yes
Liquid Between Liner & Drum 0 pints **Containerized Liquid**
Total Liquid Amount 12 pints **Containerized Liquid Amt** 0 pints
Other Liquids 12 pints **Comment** 12 pt of liquid on top and along the side of the waste
Prohibited Liquids Present Yes **Comment** PCBs w/ liquid

Contents-Drum or Box

	Value	Comment		Value	Comment
Lead?	No		**Mercury Present?**	No	
Wet Cell Batteries?	No		**Explosives?**	No	
Prohibited Compressed Gases?	No		**PCBs Present?**	Yes - Prohibited	liquids present
			PCB Mass (lbs)	462.81	
Non-Mixed Hazardous Waste Present?	No		**Sealed Containers Over 4L?**	No	

Non-Radionuclide Pyrophoric Materials Present? No
Waste exhibiting the characteristics of Ignitability, Corrosivity or Reactivity Present? No
Wastes Incompatible with backfill, seal and panel closure materials, container and packaging materials,shipping container or other wastes? No
Impenetrable Dense Objects? No

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
90 mil liner	1.000	EACH	16.000	16.000
Drum plastic bag	1.000	EACH	1.000	1.000
55-GAL DRUM (17c)	1.000	EACH	59.000	59.000

Waste Items byWeight

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Liquids for Organic Matrix	12.000	PINTS	1.000	12.000

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RTR Analysis Report

Date: 01-Aug-2012

Time: 14:02

Batch Id RTR11-00132 **Container Id** 10023869 **Analysis Id** 0000074371

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	0.000
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	0.000
Other Inorganic Materials	0.000	0.000
Cellulosics	0.000	0.000
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	0.000
Inorganic matrix	0.000	0.000
Organic matrix	100.000	462.810
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	142.000
Plastic (packaging materials)	0.000	17.000
Cellulosics Packaging	0.000	0.000

Analysis Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
1973434	KKEARN	13-APR-2011 05:00	

4-7-12

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RTR Analysis Report

Date: 01-Aug-2012
Time: 14:02

Batch Id RTR11-00132 **Container Id** 10023911 **Analysis Id** 0000074372

Container Type C drum, 83 Gallon **Analysis Status** Pass

RTR Date 13-APR-2011 05:23 **Gross Weight** 520.380 Lbs. **Net Weight** 360.380 Lbs.
Equipment Z-213-106 **Waste Matrix Code** S3114 **IDC** RF-003 Organic Setups, Oil Solids
Recording Id 2RTR11-00079 **Procedure Id** INST-OI-12 **Revision** 46 **Approval Level** SPM
Is Test Pattern Resolution Ok? Yes **Start Side** A **Replicate** No **OIO** No
Audio Visual Ok? Yes **Closure Date** 05-JUN-1997 00:00 **Operator** KKEARN
Result Comment Waste consists of a sludge

Package

IDC Correct Yes **Recommended IDC** **Summary Category** S3000
Idc Change Reason
Rigid Liner Present? Yes **LinerType** TYPE 3
Liner Punctured? Yes **Sharp Objects?** No
Liner Lid Present? Yes **Sharp Objects Are Protected?** Yes
Liner Lid Deformed? No **Layers Of Confinement** 2
Fill Factor 70
Bag Closure Method Twisted and Taped

Liquids

Liquid Present? Yes **Internal Container with Liquid** No
Internal Container with Liquid 0 pints **LA Candidate** Yes
Liquid Between Liner & Drum 0 pints **Containerized Liquid**
Total Liquid Amount 12 pints **Containerized Liquid Amt** 0 pints
Other Liquids 12 pints **Comment** 12 pt of liquid on top and along the side of the waste
Prohibited Liquids Present Yes **Comment** PCBs w/ liquids

Contents-Drum or Box

	Value	Comment		Value	Comment
Lead?	No		Mercury Present?	No	
Wet Cell Batteries?	No		Explosives?	No	
Prohibited Compressed Gases?	No		PCBs Present?	Yes - Prohibited	liquids present
			PCB Mass (lbs)	360.38	
Non-Mixed Hazardous Waste Present?	No		Sealed Containers Over 4L?	No	

Non-Radionuclide Pyrophoric Materials Present? No
Waste exhibiting the characteristics of Ignitability, Corrosivity or Reactivity Present? No
Wastes Incompatible with backfill, seal and panel closure materials, container and packaging materials,shipping container or other wastes? No
Impenetrable Dense Objects? No

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
90 mil liner	1.000	EACH	16.000	16.000
Drum plastic bag	2.000	EACH	1.000	2.000
55-GAL DRUM (17c)	1.000	EACH	59.000	59.000

Waste Items byWeight

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Liquids for Organic Matrix	12.000	PINTS	1.000	12.000

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Advanced Mixed Waste Treatment Project

AMWTP

RTR Analysis Report

Date: 01-Aug-2012

Time: 14:02

Batch Id RTR11-00132 **Container Id** 10023911 **Analysis Id** 0000074372

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	0.000
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	0.000
Other Inorganic Materials	0.000	0.000
Cellulosics	0.000	0.000
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	0.000
Inorganic matrix	0.000	0.000
Organic matrix	100.000	360.380
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	142.000
Plastic (packaging materials)	0.000	18.000
Cellulosics Packaging	0.000	0.000

Analysis Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
1973442	KKEARN	13-APR-2011 05:23	

6-7-12

AMWTP
Advanced Mixed Waste Treatment Project

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RTR Analysis Report

Date: 01-Aug-2012

Time: 14:02

Batch Id RTR11-00132 **Container Id** 10023778 **Analysis Id** 0000074374

Container Type C drum, 83 Gallon **Analysis Status** Pass

RTR Date 13-APR-2011 09:10 **Gross Weight** 520.380 Lbs. **Net Weight** 358.380 Lbs

Equipment Z-213-106 **Waste Matrix Code** S3114 **IDC** RF-003 Organic Setups, Oil Solids

Recording Id 2RTR11-00079 **Procedure Id** INST-OI-12 **Revision** 46 **Approval Level** SPM

Is Test Pattern Resolution Ok? Yes **Start Side** A **Replicate** No **OIO** No

Audio Visual Ok? Yes **Closure Date** 08-JUL-1997 00:00 **Operator** AATWELL

Result Comment Waste appears to be sludge.

Package

IDC Correct Yes **Recommended IDC** **Summary Category** S3000

Idc Change Reason

Rigid Liner Present? Yes **LinerType** TYPE 2

Liner Punctured? Yes **Sharp Objects?** No

Liner Lid Present? Yes **Sharp Objects Are Protected?** Yes

Liner Lid Deformed? No **Layers Of Confinement** 1

Fill Factor 75

Bag Closure Method Twisted and Taped

Liquids

Liquid Present? Yes **Internal Container with Liquid** No

Internal Container with Liquid 0 pints **LA Candidate** No

Liquid Between Liner & Drum 0 pints **Containerized Liquid**

Total Liquid Amount 1.03 pints **Containerized Liquid Amt** 0 pints

Other Liquids 1.03 pints **Comment** Aprox .03 pints of liquid between bottom of drum and bottom chine, aprox 1 pint of liquid at bottom chine

Prohibited Liquids Present Yes **Comment** PCBs

Contents-Drum or Box

	Value	Comment		Value	Comment
Lead?	No		**Mercury Present?**	No	
Wet Cell Batteries?	No		**Explosives?**	No	
Prohibited Compressed Gases?	No		**PCBs Present?**	Yes - Prohibited	liquid in waste
			PCB Mass (lbs)	358.38	
Non-Mixed Hazardous Waste Present?	No		**Sealed Containers Over 4L?**	No	

Non-Radionuclide Pyrophoric Materials Present? No

Waste exhibiting the characteristics of Ignitability, Corrosivity or Reactivity Present? No

Wastes Incompatible with backfill, seal and panel closure materials, container and packaging materials,shipping container or other wastes? No

Impenetrable Dense Objects? No

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
90 mil liner	1.000	EACH	16.000	16.000
O-ring plastic bag	1.000	EACH	4.000	4.000
55-GAL DRUM (17c)	1.000	EACH	59.000	59.000

Waste Items byWeight

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Liquids for Organic Matrix	1.030	PINTS	1.000	1.030

Batch Id RTR11-00132 **Container Id** 10023778 **Analysis Id** 0000074374

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	0.000
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	0.000
Other Inorganic Materials	0.000	0.000
Cellulosics	0.000	0.000
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	0.000
Inorganic matrix	0.000	0.000
Organic matrix	100.000	358.380
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	142.000
Plastic (packaging materials)	0.000	20.000
Cellulosics Packaging	0.000	0.000

8-2-12 SWD

Analysis Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
1973602	AATWELL	13-APR-2011 09:10	

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RTR Analysis Report

Date: 01-Aug-2012
Time: 14:02

Batch Id RTR11-00132 **Container Id** 10023865 **Analysis Id** 0000074376

Container Type C drum, 83 Gallon **Analysis Status** Pass

RTR Date 13-APR-2011 10:09 **Gross Weight** 507.150 **Lbs.** **Net Weight** 345.150 **Lbs.**
Equipment Z-213-106 **Waste Matrix Code** S3114 **IDC** RF-003 Organic Setups, Oil Solids
Recording Id 2RTR11-00079 **Procedure Id** INST-OI-12 **Revision** 46 **Approval Level** SPM
Is Test Pattern Resolution Ok? Yes **Start Side** A **Replicate** No **OIO** No
Audio Visual Ok? Yes **Closure Date** 03-APR-1996 00:00 **Operator** AATWELL
Result Comment Waste appears to be sludge.

Package

IDC Correct Yes **Recommended IDC** **Summary Category** S3000
Idc Change Reason
Rigid Liner Present? Yes **LinerType** TYPE 2
Liner Punctured? Yes **Sharp Objects?** No
Liner Lid Present? Yes **Sharp Objects Are Protected?** Yes
Liner Lid Deformed? No **Layers Of Confinement** 1
Fill Factor 90
Bag Closure Method Twisted and Taped

Liquids

Liquid Present? No **Internal Container with Liquid** No
Internal Container with Liquid 0 pints **LA Candidate** No
Liquid Between Liner & Drum 0 pints **Containerized Liquid**
Total Liquid Amount 0 pints **Containerized Liquid Amt** 0 pints
Other Liquids 0 pints **Comment**
Prohibited Liquids Present No **Comment**

Contents-Drum or Box

	Value	Comment		Value	Comment
Lead?	No		Mercury Present?	No	
Wet Cell Batteries?	No		Explosives?	No	
Prohibited Compressed Gases?	No		PCBs Present?	Yes - Acceptable	no liquid
			PCB Mass (lbs)	345.15	
Non-Mixed Hazardous Waste Present?	No		Sealed Containers Over 4L?	No	

Non-Radionuclide Pyrophoric Materials Present? No
Waste exhibiting the characteristics of Ignitability, Corrosivity or Reactivity Present? No
Wastes Incompatible with backfill, seal and panel closure materials, container and packaging materials,shipping container or other wastes? No
Impenetrable Dense Objects? No

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
90 mil liner	1.000	EACH	16.000	16.000
O-ring plastic bag	1.000	EACH	4.000	4.000
55-GAL DRUM (17c)	1.000	EACH	59.000	59.000

Waste Items byWeight

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)

Batch Id RTR11-00132 **Container Id** 10023865 **Analysis Id** 0000074376

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	0.000
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	0.000
Other Inorganic Materials	0.000	0.000
Cellulosics	0.000	0.000
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	0.000
Inorganic matrix	0.000	0.000
Organic matrix	100.000	345.150
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	142.000
Plastic (packaging materials)	0.000	20.000
Cellulosics Packaging	0.000	0.000

Analysis Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
1973655	AATWELL	13-APR-2011 10:09	

*****End of RTR Analysis Report*****

AMWTP
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AMWTP
RTR Replicate Comparison Report

Date: 01-Aug-2012
Time: 14:06

RTR Batch Id: RTR11-00132 **Container Id:** 10023776 **Equipment Id:** Z-213-106

Container type Description: drum, 83 Gallon Gen-IDC: RF-003 Gross Weight(Lbs): 507.15

	Original Analysis		Replicate Analysis	
Analysis Id / Date:	0000074351	12-APR-2011 16:29	0000074353	12-APR-2011 17:34
Procedure /Revision:	INST-OI-12	46	INST-OI-12	46
Recording Media Id:	2RTR11-00079		2RTR11-00079	
Starting Position:	A		A	
Is Test Pattern Resolution Ok?	Y		Y	
Audio Visual Ok?	Y		Y	
Personnel Name:	AARON ATWELL		BRAD PACKHAM	
IDC Ok? / Recommended IDC:	Y		Y	
IDC Change Reason:				
Summary Category / Waste matrix Code:	S3000	S3114	S3000	S3114
Packaging				
Rigid Liner Present?	Y		Y	
Liner Type Code:	TYPE 2		TYPE 2	
Liner Punctured:	Y		Y	
Liner Lid Deformed:	N		N	
Layers Of Confinement:	1		1	
Sharp Objects?	N		N	
Sharp Objects Protected?	Y		Y	
Fill Factor(%):	80		85	
Bag Closure Method:	Twisted and Taped		Twisted and Taped	
Liner Lid Present?:	Y		Y	
Liquids: (Volume in Pints)				
Liquid Present?	Y		Y	
Internal Container with Liquid Containerized Liquid	N	Aprox 48 pints of liquid in the bagging on top of the waste and going down the sides	N	40 pints of liquid in the waste from the top of waste to the bottom of the container.
Other Liquids:	48		40	
Internal Container with Liquid Amt:				
Liquid Between Liner and Drum:	0		0	
Containerized Liquid:	0		0	
Total Liquid Amount:	48		40	
LA Candidate?	Y		Y	
Prohibited Liquids Present	Y	PCBs, >1%	Y	PCB's with liquids and liquids>1%.

Contents:	Y/N	Comments	Y/N	Comments
Sealed Containers over 4L?	N		N	
Lead Present?	N		N	
Explosives Present?	N		N	
Mercury Present?	N		N	
Wet Cell Batteries Detected?	N		N	

AMWTP
Advanced Mixed Waste Treatment Project

AMWTP

RTR Replicate Comparison Report

Date: 01-Aug-2012

Time: 14:06

RTR Batch Id: RTR11-00132 **Container Id:** 10023776 **Equipment Id:** Z-213-106

	Original Analysis		Replicate Analysis	
Prohibited Compressed Gas Present?	N		N	
PCBs Present?	Yes - Prohibited	Liquid in waste	Yes - Prohibited	PCB's with liquids.
PCB Mass (lbs)	345.15		345.15	
Non-Radionuclide Pyrophoric Materials Present?	N		N	
Waste exhibiting the characteristics of ignitability, Corrosivity or reactivity Present?	N		N	
Non-Mixed Hazardous Waste Present?	N		N	
Waste Incompatibles with backfill, Seal and panel closure materials, container and packaging material, shipping container or other wastes?	N		N	
Impenetrable Dense Objects?	No		No	
Result Comment:	Waste appears to be sludge.		This drum contains sludge.	

E-signature

Esig Approval ID	User ID	Signature Date	Comment
1976668	KHUGHES	17-APR-11	valid

----End of RTR Replicate Comparison Report-----

AMWTP
Advanced Mixed Waste Treatment Project

AMWTP

Non-Conformance Report

Date: 01-Aug-2012

Time: 14:01

*****Batch NCR(s)*****

Batch Type	RTR	Batch ID	RTR11-00132		
Trackwise Number		**Status**	**Opened Date**	**Closed Date**	

*****Container NCR(s)*****

Container ID *or related Batch ID*	Trackwise Number	Status	Opened Date	Closed Date	
~~10016121~~	~~61674~~	~~OPEN~~	~~12-APR-11~~		BLC 8-2-12
~~10016369~~	~~61678~~	~~OPEN~~	~~13-APR-11~~		BLC 8-2-12
~~10017897~~	~~61680~~	~~OPEN~~	~~13-APR-11~~		BLC 8-2-12
~~10023775~~	~~61666~~	~~OPEN~~	~~12-APR-11~~		BLC 8-2-12
~~10023776~~	~~61665~~	~~OPEN~~	~~12-APR-11~~		BLC 8-2-12
~~10023776~~	~~61668~~	~~CLOSED~~	~~12-APR-11~~	~~25-APR-11~~	BLC 8-2-12
~~10023777~~	~~61663~~	~~OPEN~~	~~12-APR-11~~		BLC 8-2-12
~~10023777~~	~~61669~~	~~CLOSED~~	~~12-APR-11~~	~~25-APR-11~~	BLC 8-2-12
~~10023778~~	~~61687~~	~~OPEN~~	~~13-APR-11~~		BLC 8-2-12
~~10023869~~	~~61682~~	~~OPEN~~	~~13-APR-11~~		BLC 8-2-12
~~10023894~~	~~61677~~	~~OPEN~~	~~13-APR-11~~		BLC 8-2-12
~~10023911~~	~~61683~~	~~OPEN~~	~~13-APR-11~~		BLC 8-2-12
~~10023921~~	~~61671~~	~~OPEN~~	~~12-APR-11~~		BLC 8-2-12
~~10023921~~	~~61970~~	~~CLOSED~~	~~22-APR-11~~	~~26-APR-11~~	BLC 8-2-12
~~10025448~~	~~61652~~	~~OPEN~~	~~12-APR-11~~		BLC 8-2-12
~~10402291~~	~~61653~~	~~CLOSED~~	~~12-APR-11~~	~~31-AUG-11~~	BLC 8-2-12
~~10402291~~	~~61655~~	~~CLOSED~~	~~12-APR-11~~	~~31-AUG-11~~	BLC 8-2-12
~~10102555~~	~~22661~~	~~CLOSED~~	~~02-JUL-06~~	~~25-APR-11~~	BLC 8-2-12

*****End of Non-Conformance Report*****

There are no NCR's associated with the Containers in this batch

BLC
8-2-12

BLC 8-2-12

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AMWTP
Advanced Mixed Waste Treatment Project

AMWTP
Checklist Report

Date: 01-Aug-2012
Time: 14:01

Batch Id RTR11-00132 **Open Date** 12-APR-11 **Close Date** 13-APR-11

Reviewer KRISANN HUGHES **Approval Level** Independent Technical Reviewer
Approval Date 20-APR-11 **Review Iteration** 1

Question Text	Answer	Requirement	Comment
1. Is the Batch Data Report (BDR) and Quality Assurance (QA) documentation complete with the following: o Real-Time Radiography (RTR) Batch Coversheet o Table of Contents (manual review only) o RTR Analysis reports o Replicate Scan o Replicate Comparison o Independent Observation o ITR checklist (Form-1412, manual review only) o Form-1491, Batch Data Report Supplemental Comment Form (manual review only) o Associated NCRs (referenced in Waste Tracking System [WTS]) o Audio/Video Recording References?	Yes		
2. Are there 20 containers or less in the batch?	Yes		
3. Was the image quality indicator (IQI) satisfactory?	Yes		
4. Does every container in the batch reference an audio/video recording?	Yes		
5. Is there a completed radiography data analysis for each container in the batch?	Yes		
6. Was each RTR Operator qualified at the time of the radiography event?	Yes		
7. Was the data generated in a technically correct manner using the correct revision of INST-OI-12, Real-Time Radiography Operations (Drum) or INST-OI-81, Real Time Radiography Operations (WIPP Certification for Boxes)?	No		see batch comments
8. Was the correct procedure and revision documented on all analysis reports?	Yes		
9. Has the E-signature History review been performed?	Yes		
10. Does the RTR operator confirm that the physical form matched the waste stream description and waste matrix code?	Yes		
11. Does the packaging weight plus the net weight equal the gross weight of the container in the estimated waste material parameters?	Yes		
12. Were all entries into the waste material items section assigned to the correct waste material parameters?	No		see batch comments
13. Has the description of rigid liners and layers of confinement been properly documented, as applicable?	Yes		
14. Was the presence or absence of prohibited items properly documented?	Yes		
15. If prohibited items were identified, have appropriate nonconformance reports (NCRs) been generated?	Yes		
16. Were the containers examined between October and April in compliance with the preheat requirements?	Yes		
17. Were all proper units and significant figures used for all reported volumes/weights?	Yes		
18. Was there a valid replicate scan performed (at least one container per day, or once per testing batch, whichever is less frequent)? o Record the container number, the replicate observation date in the comment section of this checklist. o Record any issues or concerns in the batch comment section.	Yes		Container 10023776, observation date 04-12-11. No significant differences between original and replicate exams.
19. Was there a valid Operator Independent Observation (OIO) (not the replicate) performed (at least one container	Yes		Container 10023777, observation date 04-12-11. No significant differences between original and

Batch Id RTR11-00132 **Open Date** 12-APR-11 **Close Date** 13-APR-11

Reviewer KRISANN HUGHES **Approval Level** Independent Technical Reviewer
Approval Date 20-APR-11 **Review Iteration** 1

Question Text	Answer	Requirement	Comment
per day, or once per testing batch, whichever is less frequent)? o Record the container number and the OIO date in the comment section of this checklist. o Record any issues or concerns in the batch comment section.			independent observation. Independent operator entered "Yes" in LA Candidate field. I agree with original exam, this is not an LA Candidate. Rework will not be performed.
20. Were any significant differences identified that would affect the original disposition of the replicate and OIO, or affect data quality objectives (DQOs)? If so, ensure an NCR was generated and WTS flagged.	No		
21. Were the RTR quality assurance objectives (QAOs) met? o Precision o Accuracy o Completeness o Comparability	Yes		
22. Were any NCRs generated for containers containing prohibited items, or any non-conforming conditions that failed to meet DQOs or QAOs? o If so, include the NCRs, as appropriate, in the BDR.	Yes		
23. Were the rework requirements clearly identified in WTS or on the BDR?	Yes		see batch comments

Batch Id RTR11-00132 **Open Date** 12-APR-11 **Close Date** 13-APR-11

Reviewer KRISANN HUGHES **Approval Level** Independent Technical Reviewer

Approval Date 21-APR-11 **Review Iteration** 2

Question Text	Answer	Requirement	Comment
1. Is the Batch Data Report (BDR) and Quality Assurance (QA) documentation complete with the following: o Real-Time Radiography (RTR) Batch Coversheet o Table of Contents (manual review only) o RTR Analysis reports o Replicate Scan o Replicate Comparison o Independent Observation o ITR checklist (Form-1412, manual review only) o Form-1491, Batch Data Report Supplemental Comment Form (manual review only) o Associated NCRs (referenced in Waste Tracking System [WTS]) o Audio/Video Recording References?	Yes		
2. Are there 20 containers or less in the batch?	Yes		
3. Was the image quality indicator (IQI) satisfactory?	Yes		
4. Does every container in the batch reference an audio/video recording?	Yes		
5. Is there a completed radiography data analysis for each container in the batch?	Yes		
6. Was each RTR Operator qualified at the time of the radiography event?	Yes		
7. Was the data generated in a technically correct manner using the correct revision of INST-OI-12, Real-Time Radiography Operations (Drum) or INST-OI-81, Real Time Radiography Operations (WIPP Certification for Boxes)?	Yes		
8. Was the correct procedure and revision documented on all analysis reports?	Yes		
9. Has the E-signature History review been performed?	Yes		
10. Does the RTR operator confirm that the physical form matched the waste stream description and waste matrix code?	Yes		
11. Does the packaging weight plus the net weight equal the gross weight of the container in the estimated waste material parameters?	Yes		
12. Were all entries into the waste material items section assigned to the correct waste material parameters?	Yes		
13. Has the description of rigid liners and layers of confinement been properly documented, as applicable?	Yes		
14. Was the presence or absence of prohibited items properly documented?	Yes		
15. If prohibited items were identified, have appropriate nonconformance reports (NCRs) been generated?	Yes		
16. Were the containers examined between October and April in compliance with the preheat requirements?	Yes		
17. Were all proper units and significant figures used for all reported volumes/weights?	Yes		
18. Was there a valid replicate scan performed (at least one container per day, or once per testing batch, whichever is less frequent)? o Record the container number, the replicate observation date in the comment section of this checklist. o Record any issues or concerns in the batch comment section.	Yes		Container 10023776, observation date 04-12-11. No significant differences between original and replicate exams.
19. Was there a valid Operator Independent Observation (OIO) (not the replicate) performed (at least one container	Yes		Container 10023777, observation date 04-12-11. No significant differences between original and

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Batch Id RTR11-00132 **Open Date** 12-APR-11 **Close Date** 13-APR-11

Reviewer KRISANN HUGHES **Approval Level** Independent Technical Reviewer
Approval Date 21-APR-11 **Review Iteration** 2

Question Text	Answer	Requirement	Comment
per day, or once per testing batch, whichever is less frequent)? o Record the container number and the OIO date in the comment section of this checklist. o Record any issues or concerns in the batch comment section.			independent observation. Independent operator entered "Yes" in LA Candidate field. I agree with original exam, this is not an LA Candidate. Rework will not be performed.
20. Were any significant differences identified that would affect the original disposition of the replicate and OIO, or affect data quality objectives (DQOs)? If so, ensure an NCR was generated and WTS flagged.	No		
21. Were the RTR quality assurance objectives (QAOs) met? o Precision o Accuracy o Completeness o Comparability	Yes		
22. Were any NCRs generated for containers containing prohibited items, or any non-conforming conditions that failed to meet DQOs or QAOs? o If so, include the NCRs, as appropriate, in the BDR.	Yes		
23. Were the rework requirements clearly identified in WTS or on the BDR?	Yes		rework complete

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Batch Id RTR11-00132 **Open Date** 12-APR-11 **Close Date** 13-APR-11

Reviewer PAM FETZER **Approval Level** SPM Data Validation

Approval Date 22-APR-11 **Review Iteration** 1

Question Text	Answer	Requirement	Comment
(1) Has the batch received a Data Generation Level Independent Technical Review?	Yes	MP-TRUW-8.2, C3-10b(1)	
(2) Is the Independent Technical Review checklist complete?	Yes	MP-TRUW-8.2, C3-10b(1)	
(3) When identified, were polychlorinated biphenyls (PCBs), mercury, lead, or other hazardous contaminants consistent with the waste stream acceptable knowledge (AK) Summary Report(s) and/or AK documentation?	Yes	MP-TRUW-8.2, C4-3	
(4) Are any ignitable, corrosive, or reactive wastes identified in this waste?	No	MP-TRUW-8.2, C4-3	
(5) Are the packaging configurations identified on the real-time radiography (RTR) consistent with the waste stream AK Summary Report(s) and/or AK documentation?	Yes	MP-TRUW-8.2, C4-3	
(6) Do the containers in this batch contain typical waste items consistent with waste stream AK Summary Report(s) and/or AK documentation?	Yes	MP-TRUW-8.2, C4-3	
(7) Are the Waste Matrix Codes (WMCs) and physical form descriptions consistent with AK?	Yes	MP-TRUW-8.2, C4-3	
(8) Have all AK discrepancies been resolved and have all AK Resolution checklists been approved? Reference all waste stream AK documentation used in review of this data package.	N/A	MP-TRUW-8.2, C4-3	No AK discrepancies identified. References: RPT-TRUW-05 RPT-TRUW-56 RPT-TRUW-13
(9) Have all applicable Quality Assurance Objectives (QAOs) been met, including precision, accuracy, completeness, and comparability, by using the appropriate acceptance criteria for each as specified in MP-TRUW-8.2, Quality Assurance Project Plan Section C3-4? Precision ¿ Verified prior to use by tuning precisely enough to demonstrate compliance with QAOs through viewing an image test pattern, as evidenced by a satisfactory Image Quality Indicator (IQI). ¿ Have discrepancies, if any, between radiography operators been reconciled? Accuracy ¿ Use of a target to tune the image for maximum sharpness as evidenced by a satisfactory IQI and by requiring operators to successfully identify 100% of the required items in a training container during initial and subsequent qualifications. Completeness ¿ An audio/videotape (or equivalent media) of the radiography examination and a validated radiography data form will be obtained for 100% of the retrievably stored waste container in the program for all waste containers subject to radiography. Comparability ¿ Use of standardized radiography procedures and operator qualifications.	Yes	MP-TRUW-8.2, C3-4a	
(10) Do the waste container contents match the WMC, waste stream description and identify the absence of prohibited items?	Yes	MP-TRUW-8.2, C1-3 and B3-11	
(11) If residual liquids exist in the container, is an estimate of quantity given?	Yes	MP-TRUW-8.2, C1-3	
(12) Do the individual container reports contain the (a) IDC, (b) Waste Matrix Code, (c) audio/video recording reference, (d) gross container weight, (e) waste material parameter weights, and (f) signature and date of examination?	Yes	MP-TRUW-8.2, C1-3 and C3-11a	
(13) Have the IDC, WMC, and/or waste stream for all	Yes	MP-TRUW-8.2, C1-3 and	

BLS 8-2-12
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Batch Id RTR11-00132 **Open Date** 12-APR-11 **Close Date** 13-APR-11

Reviewer PAM FETZER **Approval Level** SPM Data Validation
Approval Date 22-APR-11 **Review Iteration** 1

Question Text	Answer	Requirement	Comment
containers in the batch remained the same as originally assigned by the historical designation? If not, note the container number in the comment field and notify the Acceptable Knowledge Expert (AKE) if NCR does not exist on the WMC and IDC change.		C3-4a	
(14) Was a replicate scan performed by an independent operator on at least one container per day or once per testing batch, whichever is less frequent, by a qualified radiography operator that was not involved in the original scan of the waste container?	Yes	MP-TRUW-8.2, B1-3, C3-4a, and C3-10b(1)	
(15) Has an independent observation of one scan (not the replicate) been performed by a qualified operator that was not involved in the original scan of the waste container, at a rate of once per day or once per batch, whichever is less frequent? Record date of observation and any issues or concerns in the comment section.	Yes	MP-TRUW-8.2, C1-3 and C3-4a	Container 10023777, observation date 04-12-11. No issues identified.
(16) Did personnel having current qualifications perform all RTR examinations?	Yes	MP-TRUW-8.1, Appendix F	
(17) Verify the correct procedure and revision number were used for all containers in this batch.	Yes	MP-TRUW-8.2, C3-4a	
(18) Verify the audio and video checks were performed and are satisfactory.	Yes	MP-TRUW-8.2, C3-4a	
(19) Verify that there are 20 or fewer containers in the batch.	Yes	MP-TRUW-8.2, C1-3	
(20) Does the data for all containers within this batch meet the review, validation, and verification requirements? · Are proper units (e.g. Liters or pounds) and significant figure used? · Is the BDR complete (all pages identified in the BDR and numbered accordingly)? - RTR Batch Coversheet - Table of Contents (manual review only) - RTR Analysis reports - Replicate Scan - Replicate Comparison - Independent Observation - Form-1412, ITR checklist - Associated NCRs - Form, 1491, Batch Data Report Supplemental Comment Form, as applicable - Audio/Video Recording References	Yes	MP-TRUW-8.2, C3 10b(2)	
(21) Review all NCR(s) (open and closed). Can the batch be approved?	Yes	MP-TRUW-8.2, C3-13	
(22) Is all data associated with this BDR acceptable for signature release?	Yes	MP-TRUW-8.2, C3 10b(2)	

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AMWTP
Advanced Mixed Waste Treatment Project

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Checklist Report

Date: 01-Aug-2012

Time: 14:01

Batch Id RTR11-00132 **Open Date** 12-APR-11 **Close Date** 13-APR-11

Esignature History

Esig Approval ID	User ID	Esig Date	Approval Level	Comments
1981570	PFETZER	22-APR-11	SPM	Promote.
1980683	KHUGHES	21-APR-11	ITR	promote to SPM
1980219	KHUGHES	20-APR-11	ITR	return for rework

8-2-12
DW
DET 062

AMWTP
Advanced Mixed Waste Treatment Project

AMWTP

RTR/VE Update(RVU) Checklist Report

Date: 01-Aug-2012
Time: 14:06

Batch Id RTR11-00132 **Open Date** 12-APR-11 **Close Date** 13-APR-11

Container	10124872	**Analysis**	0000254593
Reviewer	CRAIG SIMMONS	**Approval Level**	Independent Technical Reviewer
Approval Date	20-AUG-11	**Review Iteration**	1

Question Text	Answer	Requirement	Comment
1. Is the Batch Data Report (BDR) and Quality Assurance (QA) documentation complete with the following: o Real-Time Radiography (RTR) Batch Coversheet o Table of Contents (manual review only) o RTR Analysis reports o Replicate Scan o Replicate Comparison o Independent Observation o ITR checklist (Form-1412, manual review only) o Form-1491, Batch Data Report Supplemental Comment Form (manual review only) o Associated NCRs (referenced in Waste Tracking System [WTS]) o Audio/Video Recording References?	Yes		The only documentation associated with this RTR/VE Update is the following: RTR/VE Update Analysis Report ITR checklist (Form-1412) Batch Data Report Supplemental Comment Form (Form-1491) Associated NCRs (referenced in WTS)
2. Are there 20 containers or less in the batch?	N/A		This ITR checklist is for RTR/VE Update only.
3. Was the image quality indicator (IQI) satisfactory?	N/A		This ITR checklist is for RTR/VE Update only.
4. Does every container in the batch reference an audio/video recording?	N/A		This ITR checklist is for RTR/VE Update only.
5. Is there a completed radiography data analysis for each container in the batch?	N/A		This ITR checklist is for RTR/VE Update only.
6. Was each RTR Operator qualified at the time of the radiography event?	Yes		Both VE Operators have their current qualification.
7. Was the data generated in a technically correct manner using the correct revision of INST-OI-12, Real-Time Radiography Operations (Drum) or INST-OI-81, Real Time Radiography Operations (WIPP Certification for Boxes)?	N/A		This ITR checklist is for RTR/VE Update only.
8. Was the correct procedure and revision documented on all analysis reports?	Yes		
9. Has the E-signature History review been performed?	Yes		
10. Does the RTR operator confirm that the physical form matched the waste stream description and waste matrix code?	N/A		This ITR checklist is for RTR/VE Update only.
11. Does the packaging weight plus the net weight equal the gross weight of the container in the estimated waste material parameters?	Yes		
12. Were all entries into the waste material items section assigned to the correct waste material parameters?	Yes		
13. Has the description of rigid liners and layers of confinement been properly documented, as applicable?	Yes		
14. Was the presence or absence of prohibited items properly documented?	Yes		
15. If prohibited items were identified, have appropriate nonconformance reports (NCRs) been generated?	N/A		No NCR
16. Were the containers examined between October and April in compliance with the preheat requirements?	N/A		This ITR checklist is for RTR/VE Update only.
17. Were all proper units and significant figures used for all reported volumes/weights?	Yes		
18. Was there a valid replicate scan performed (at least one container per day, or once per testing batch, whichever is less frequent)? o Record the container number, the replicate observation date in the comment section of this checklist. o Record any issues or concerns in the batch comment section.	N/A		This ITR checklist is for RTR/VE Update only.
19. Was there a valid Operator Independent Observation (OIO) (not the replicate) performed (at least one container per day, or once per testing batch, whichever is less frequent)?	N/A		This ITR checklist is for RTR/VE Update only.

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Batch Id RTR11-00132 **Open Date** 12-APR-11 **Close Date** 13-APR-11

Container	10124872	**Analysis**	0000254593
Reviewer	CRAIG SIMMONS	**Approval Level**	Independent Technical Reviewer
Approval Date	20-AUG-11	**Review Iteration**	1

Question Text	Answer	Requirement	Comment
o Record the container number and the OIO date in the comment section of this checklist. o Record any issues or concerns in the batch comment section.			
20. Were any significant differences identified that would affect the original disposition of the replicate and OIO, or affect data quality objectives (DQOs)? If so, ensure an NCR was generated and WTS flagged.	N/A		No NThis ITR checklist is for RTR/VE Update only.
21. Were the RTR quality assurance objectives (QAOs) met? o Precision o Accuracy o Completeness o Comparability	N/A		This ITR checklist is for RTR/VE Update only.
22. Were any NCRs generated for containers containing prohibited items, or any non-conforming conditions that failed to meet DQOs or QAOs? o If so, include the NCRs, as appropriate, in the BDR.	N/A		No NCR
23. Were the rework requirements clearly identified in WTS or on the BDR?	N/A		No rework was identified for this RVU.

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Batch Id RTR11-00132 **Open Date** 12-APR-11 **Close Date** 13-APR-11

Container 10124872 **Analysis** 0000254593
Reviewer DAVID JONES **Approval Level** SPM Data Validation
Approval Date 23-AUG-11 **Review Iteration** 1

Question Text	Answer	Requirement	Comment
(1) Has the batch received a Data Generation Level Independent Technical Review?	Yes	MP-TRUW-8.2, C3-10b(1)	This ITR checklist is for RTR/VE Update only. This batch was SPM review according to MP-TRUW-8.9.
(2) Is the Independent Technical Review checklist complete?	Yes	MP-TRUW-8.2, C3-10b(1)	
(3) When identified, were polychlorinated biphenyls (PCBs), mercury, lead, or other hazardous contaminants consistent with the waste stream acceptable knowledge (AK) Summary Report(s) and/or AK documentation?	N/A	MP-TRUW-8.2, C4-3	There are no additional hazardous constituents that are not already addressed in the AK.
(4) Are any ignitable, corrosive, or reactive wastes identified in this waste?	No	MP-TRUW-8.2, C4-3	
(5) Are the packaging configurations identified on the real-time radiography (RTR) consistent with the waste stream AK Summary Report(s) and/or AK documentation?	Yes	MP-TRUW-8.2, C4-3	
(6) Do the containers in this batch contain typical waste items consistent with waste stream AK Summary Report(s) and/or AK documentation?	Yes	MP-TRUW-8.2, C4-3	
(7) Are the Waste Matrix Codes (WMCs) and physical form descriptions consistent with AK?	Yes	MP-TRUW-8.2, C4-3	
(8) Have all AK discrepancies been resolved and have all AK Resolution checklists been approved? Reference all waste stream AK documentation used in review of this data package.	N/A	MP-TRUW-8.2, C4-3	No AK discrepancies were found during the RVU event. References: RPT-TRUW-05 and RPT-TRUW-56.
(9) Have all applicable Quality Assurance Objectives (QAOs) been met, including precision, accuracy, completeness, and comparability, by using the appropriate acceptance criteria for each as specified in MP-TRUW-8.2, Quality Assurance Project Plan Section C3-4? Precision ¿ Verified prior to use by tuning precisely enough to demonstrate compliance with QAOs through viewing an image test pattern, as evidenced by a satisfactory Image Quality Indicator (IQI). ¿ Have discrepancies, if any, between radiography operators been reconciled? Accuracy ¿ Use of a target to tune the image for maximum sharpness as evidenced by a satisfactory IQI and by requiring operators to successfully identify 100% of the required items in a training container during initial and subsequent qualifications. Completeness ¿ An audio/videotape (or equivalent media) of the radiography examination and a validated radiography data form will be obtained for 100% of the retrievably stored waste container in the program for all waste containers subject to radiography. Comparability ¿ Use of standardized radiography procedures and operator qualifications.	N/A	MP-TRUW-8.2, C3-4a	his ITR checklist is for RTR/VE Update only. QAOs were shown in the original RTR Batch Data Report.
(10) Do the waste container contents match the WMC, waste stream description and identify the absence of prohibited items?	Yes	MP-TRUW-8.2, C1-3 and B3-11	
(11) If residual liquids exist in the container, is an estimate of quantity given?	N/A	MP-TRUW-8.2, C1-3	No liquid is present.
(12) Do the individual container reports contain the (a) IDC, (b) Waste Matrix Code, (c) audio/video recording reference, (d) gross container weight, (e) waste material parameter weights, and (f) signature and date of examination?	Yes	MP-TRUW-8.2, C1-3 and C3-11a	Audio/video recordings are not required for an RVU.

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Batch Id RTR11-00132 **Open Date** 12-APR-11 **Close Date** 13-APR-11

Container 10124872 **Analysis** 0000254593
Reviewer DAVID JONES **Approval Level** SPM Data Validation
Approval Date 23-AUG-11 **Review Iteration** 1

Question Text	Answer	Requirement	Comment
(13) Have the IDC, WMC, and/or waste stream for all containers in the batch remained the same as originally assigned by the historical designation? If not, note the container number in the comment field and notify the Acceptable Knowledge Expert (AKE) if NCR does not exist on the WMC and IDC change.	Yes	MP-TRUW-8.2, C1-3 and C3-4a	Applicable only for the container in this RVU.
(14) Was a replicate scan performed by an independent operator on at least one container per day or once per testing batch, whichever is less frequent, by a qualified radiography operator that was not involved in the original scan of the waste container?	N/A	MP-TRUW-8.2, B1-3, C3-4a, and C3-10b(1)	Not applicable for RTR Update.
(15) Has an independent observation of one scan (not the replicate) been performed by a qualified operator that was not involved in the original scan of the waste container, at a rate of once per day or once per batch, whichever is less frequent? Record date of observation and any issues or concerns in the comment section.	N/A	MP-TRUW-8.2, C1-3 and C3-4a	Not applicable for RTR Update.
(16) Did personnel having current qualifications perform all RTR examinations?	Yes	MP-TRUW-8.1, Appendix F	The operators that performed this update were VE qualified.
(17) Verify the correct procedure and revision number were used for all containers in this batch.	Yes	MP-TRUW-8.2, C3-4a	
(18) Verify the audio and video checks were performed and are satisfactory.	N/A	MP-TRUW-8.2, C3-4a	Audio/video recordings are not required for an RVU.
(19) Verify that there are 20 or fewer containers in the batch.	Yes	MP-TRUW-8.2, C1-3	
(20) Does the data for all containers within this batch meet the review, validation, and verification requirements? · Are proper units (e.g. Liters or pounds) and significant figure used? · Is the BDR complete (all pages identified in the BDR and numbered accordingly)? - RTR Batch Coversheet - Table of Contents (manual review only) - RTR Analysis reports - Replicate Scan - Replicate Comparison - Independent Observation - Form-1412, ITR checklist - Associated NCRs - Form, 1491, Batch Data Report Supplemental Comment Form, as applicable - Audio/Video Recording References	Yes	MP-TRUW-8.2, C3 10b(2)	This checklist is for RTR Update only. All applicable data is included.
(21) Review all NCR(s) (open and closed). Can the batch be approved?	Yes	MP-TRUW-8.2, C3-13	
(22) Is all data associated with this BDR acceptable for signature release?	Yes	MP-TRUW-8.2, C3 10b(2)	

8.02-12
065 066

Batch Id RTR11-00132 **Open Date** 12-APR-11 **Close Date** 13-APR-11

Esignature History

Esig Approval ID	User ID	Esig Date	Approval Level	Comments
2084210	DJJONES	23-AUG-11	SPM	Reviewed and approved this supplement batch at the SPM level.
2082176	CSIMMONS	20-AUG-11	ITR	Promote RVU to SPM level.

GW 8-02-12

066 067

DIVIDER

PAGE

Attachment 2 – CCP SPM Radiography Project Level Validation Checklist and Summary

BDR Number: RTR11-00157 **Examination Date:** 05/01/11

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
1. Is the completed, signed, and dated Independent Technical Reviewer Checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, C3-10b**	X			
2. Does the BDR contain all items addressed in the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-10b**	X			
3. Does the BDR include a listing of all the container numbers in the batch? **Reference Source: CCP-PO-001, C3-10b**	X			
4. List all containers that have met QAOs. **Reference Source: CCP-PO-001, C3-10b**				Container Numbers: 10177838,10235227, 10190450,10191654
5. Does the BDR identify the current implementing procedure and revision number? **Reference Source: CCP-PO-001, Table C3-11**	X			
6. Is there a reference to or copy of any associated NCRs (if any) in the BDR? NA if no NCRs. **Reference Source: CCP-PO-001, Table C3-11**	X SV 5-1-13		SV 5-1-13 X	~~No NCRs~~ SV 5-1-13 G2222, G2223, G2231, G2234
7. Are there 20 or fewer containers in the batch? **Reference Source: CCP-PO-001, C3-10**	X			
8. Are the data properly reported (i.e., data are reported in correct units and with correct significant figures)? **Reference Source: CCP-PO-001, C3-10b**	X			
9. Is there evidence of verification that the physical form matches the Waste Matrix Code? **Reference Source: CCP-PO-001, C3-4, Table C3-11**	X			

COPY

NTPC RECORDS ORIGINAL
DATE REC'D 3.7.13

Attachment 2 – CCP SPM Radiography Project Level Validation Checklist and Summary (Continued)

BDR Number: RTR11-00157				Examination Date: 05/01/11
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
10. Is there evidence of verification that the physical form matches the waste stream description? **Reference Source: CCP-PO-001, C1-3, Table C3-11**	X			
11. Are prohibited items absent? **Reference Source: CCP-PO-001, C3-4a**	X			
12. Does observable liquid, if present, meet the criteria of the TSDF-WAC? **Reference Source: CCP-PO-001, C3-4a**	X			
13. Were discrepancies between two operators with regard to identification of waste matrix code, liquids in excess of the TSDF-WAC, or compressed gases through replicate scans and independent observations reconciled? NA if no discrepancies. **Reference Source: CCP-PO-001, C3-4a**			X	No Discrepancies
14. Are the training qualifications for all radiography personnel acceptable? **Reference Source: CCP-PO-001, C3-4a**	X			
15. Was evidence of the video/audio check included in the BDR? **Reference Source: CCP-PO-001, C3-4a**	X			
16. Was the Lines-Pair Resolution Test Check included in the BDR? **Reference Source: CCP-PO-001, C3-4a**	X			
17. Was a replicate scan performed once per day, or once per batch, whichever is LESS frequent? **Reference Source: CCP-PO-001, C1-3**	X			
18. Was an independent observation performed once per day, or once per batch, whichever is LESS frequent? **Reference Source: CCP-PO-001, C1-3**	X			

Attachment 2 – CCP SPM Radiography Project Level Validation Checklist and Summary (Continued)

BDR Number: RTR11-00157 **Examination Date:** 05/01/11

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
19. Were the replicate scan and independent observation performed on different waste containers? **Reference Source: CCP-PO-001, C1-3**	X			
20. Were the personnel performing the replicate scan and independent observation different from the individual who performed the original? **Reference Source: CCP-PO-001, C1-3**	X			
21. Does the BDR include an estimate of each material parameter weight in kg for each container? **Reference Source: CCP Technical Procedures**		X		Weight reported in lbs.
22. Does the BDR include a description of each material parameter for each container? **Reference Source: CCP-PO-001, Table C3-1**	X			
23. Is the container gross weight recorded in kilograms (kg) for each container in the BDR? **Reference Source: CCP Technical Procedures**		X		Weight reported in lbs.
24. Was the Scale Weight Calibration Check included in the BDR? **Reference Source: CCP Technical Procedures**			X	Not Used
25. Was the Scale Weight Check included in the BDR? **Reference Source: CCP Technical Procedures**			X	Not Used

Comments: ~~None~~ 3US-1-13 SPM 1-4 Added as Supplement 1 Information

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

Steve Castro	Steve Castro	3-5-13
SPM Printed Name	Signature	Date

Checklist is to be re-signed only when a re-review is performed.

Sia Vernon	Sia Vernon	Added SPM 1-4	5-1-13
SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

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NONCONFORMANCE REPORT

NCR 62222

Title: RTR Characterization	
Originator: Vaughn, Adaire	**Date Opened:** 05/01/11
Responsible Dept: Plant Manager	**Batch #:** RTR11-00157
Container ID: 10145329	**Tag Applied:** Yes
Characterization Problem:	
Originator Sign By: Adaire Vaughn	**Originator Sign Date:** 04/30/11

Production Comments: **Approved Remediation:** **ARP Remediation**

6 pts of liquid in the bottom of the drum.
QA comment: NCR 62223 (OIO exam) and NCR 62222 (original exam) were initiated for PCB liquid identified within the waste of container 10145329. NCR 62223 was administratively closed without further action to allow NCR 62222 to document resolution of the prohibited item. LR070511
Container is slated to be transferred to WMF-1617 Sludge Repackage Project (SRP) for Treatment/Remediation; Approved Remediation has been changed to "ARP Remediation". JBagley 4/12/2013

Performed By: Kathy Birch	**Performed Date:** 04/23/13

Waste Programs Evaluation/Verification:

This drum is comprised of CCP sludge waste and is slated for Sludge Repack Processing (SRP) at CWI. The container has been identified in IWTS for SRP, as evidence in the attached file. KLB 4/23/13

SPM Verification Complete By: Kathy Birch	**SPM Verification Complete Date:** 04/23/13
MLLW/LLW Verification Complete By:	**MLLW/LLW Verification Complete Date:**

QA Closure Comments:

QA Closure Comment: Container data identified on IWTS Ship Task SRP13-016 report has been reviewed and verified accurate in WTS for transfer to CWI for Sludge Repack Processing. The container is identified on the attached Ship Task List. No further action required. This NCR is closed. C. Robison 04-23-13

QA Add'l Action Reqd By:	**QA Add'l Action Reqd Date:**
QA Verification Complete By: Camille Robison	**QA Verification Comp Date:** 04/23/13

SPM-1

AMWTP
Advanced Mixed Waste Treatment Project

NONCONFORMANCE REPORT

WIPP DATA - RTR

NCR-62223

Title: RTR Characterization

Originator: Duncan, Jeff	**Date Opened:** 05/01/11
Responsible Dept: Plant Manager	**Batch #:** RTR11-00157
Container ID: 10145329	**Tag Applied:** Yes

Characterization Problem:

Originator Sign By: Jeff Duncan	**Originator Sign Date:** 04/30/11

Production Comments: **Approved Remediation:** **Treatment Tent**

About 10pts of liquid in bagging at the bottom of drum
This NCR was generated during characterization associated with the OIO scan for this container.

Performed By: Kenny Burnside	**Performed Date:** 05/17/11

Waste Programs Evaluation/Verification:

Container 10145329 has PCB's with liquids inside the container NCR-62223 was written per operations procedure this is an NCR on the OIO scan. NCR-62222 was written on the original and will be used for WIPP Tracking. Recommend closure of NCR-62223. kb 5/17/11

SPM Verification Complete By: George Byram	**SPM Verification Complete Date:** 07/04/11
MLLW/LLW Verification Complete By:	**MLLW/LLW Verification Complete Date:**

QA Closure Comments:

QA closure comment: NCR 62223 (OIO exam) and NCR 62222 (original exam) were initiated for PCB liquid identified within the waste of container 10145329. NCR 62223 will be administratively closed without further action to allow NCR 62222 to document resolution of the prohibited item. LR070511

QA Add'l Action Reqd By:	**QA Add'l Action Reqd Date:**
QA Verification Complete By: Lyle Ryman	**QA Verification Comp Date:** 07/05/11

SPM-2

AMWTP
Advanced Mixed Waste Treatment Project

NON-CONFORMANCE REPORT

Title: RTR Characterization	
Originator: Beebe, Conley	**Date Opened:** 05/01/11
Responsible Dept: Plant Manager	**Batch #:** RTR11-00157
Container ID: 10233274	**Tag Applied:** Yes
Characterization Problem:	
Originator Sign By: Conley Beebe	**Originator Sign Date:** 05/01/11

Production Comments: **Approved Remediation:** **ARP Remediation**

Drum 10233274 has Approx. 12 pints of liquid from the bottom of the waste to above the bottom chine.
QA comment: NCR 62231 (original exam) and NCR 62234(replicate exam) were initiated for PCB liquid identified within the waste of container 10233274. NCR 62234 was administratively closed without further processing to allow NCR 62231 to document resolution of the prohibited item. LR070511
Container is slated to be transferred to WMF-1617 Sludge Repackage Project (SRP) for Treatment/Remediation; Approved Remediation has been changed to "ARP Remediation". JBagley 4/12/2013

Performed By: Kathy Birch	**Performed Date:** 04/23/13

Waste Programs Evaluation/Verification:

This drum is comprised of CCP sludge waste and is slated for Sludge Repack Processing (SRP) at CWI. The container has been identified in IWTS for SRP, as evidence in the attached file. KLB 4/23/13

SPM Verification Complete By: Kathy Birch	**SPM Verification Complete Date:** 04/23/13
MLLW/LLW Verification Complete By:	**MLLW/LLW Verification Complete Date:**

QA Closure Comments:

QA Closure Comment: Container data identified on IWTS Ship Task SRP13-016 report has been reviewed and verified accurate in WTS for transfer to CWI for Sludge Repack Processing. The container is identified on the attached Ship Task List. No further action required. This NCR is closed. C. Robison 04-23-13

QA Add'l Action Reqd By:	**QA Add'l Action Reqd Date:**
QA Verification Complete By: Camille Robison	**QA Verification Comp Date:** 04/23/13

SPM-3

AMWTP
Advanced Mixed Waste Treatment Project

NON-CONFORMANCE REPORT

Title: RTR Characterization	
Originator: Sumners, Davey	**Date Opened:** 05/01/11
Responsible Dept: Plant Manager	**Batch #:** RTR11-00157
Container ID: 10233274	**Tag Applied:** Yes
Characterization Problem:	
Originator Sign By: Davey Sumners	**Originator Sign Date:** 05/01/11

Production Comments: **Approved Remediation:** **Treatment Tent**

Approx 12 pints of liquid in pocket at lower chime of internal 55 gal drum.

Performed By: Kenny Burnside	**Performed Date:** 05/17/11

Waste Programs Evaluation/Verification:

Container 10233274 has PCB's with liquids inside the container, NCR-62234 was written per operations procedure this is an NCR on the Replicate scan. NCR-62231 was written on the original and will be used for WIPP Tracking. Recommend closure of NCR-62234. kb 5/17/11

SPM Verification Complete By: George Byram	**SPM Verification Complete Date:** 07/04/11
MLLW/LLW Verification Complete By:	**MLLW/LLW Verification Complete Date:**

QA Closure Comments:

QA closure comment: NCR 62231 (original exam) and NCR 62234(replicate exam) were initiated for PCB liquid identified within the waste of container 10233274. NCR 62234 will be administratively closed without further processing to allow NCR 62231 to document resolution of the prohibited item. LR070511

QA Add'l Action Reqd By:	**QA Add'l Action Reqd Date:**
QA Verification Complete By: Lyle Ryman	**QA Verification Comp Date:** 07/05/11

SPM-4

AMWTP
Advanced Mixed Waste Treatment Project

AMWTP

Batch Report Coversheet

Date: 05-Feb-2013

Time: 10:09

Batch Type Real Time Radiography
Batch Report No. RTR11-00157
Batch Id RTR11-00157
Open Date 30-APR-11 23:23:17
Close Date 02-MAY-11 14:12:09
Batch Status AP
Test Facility Idaho AMWTP
Equipment Id Z-213-106 RTR Station Right (213-106)

Container Id	IDC	Analysis Id	Date Examined	QC Type	Analysis Status	Operator
10071873	RF-003	0000074935	30-APR-11 23:23:17	Original	P	ADAIRE VAUGHN
10145329	RF-003	0000074936	01-MAY-11 00:01:33	Original	P	ADAIRE VAUGHN
10145329	RF-003	0000074937	01-MAY-11 01:53:12	RTR OIO	P	JEFF DUNCAN
10177838	RF-003	0000074938	01-MAY-11 02:41:12	Original	P	JEFF DUNCAN
10065342	RF-003	0000074939	01-MAY-11 03:21:34	Original	P	CRAIG SIMMONS
10229929	RF-003	0000074940	01-MAY-11 04:25:32	Original	P	KRISANN HUGHES
10234973	RF-003	0000074942	01-MAY-11 11:28:50	Original	P	CONLEY BEEBE
10233274	RF-003	0000074944	01-MAY-11 12:05:44	Original	P	CONLEY BEEBE
10233274	RF-003	0000074948	01-MAY-11 13:39:44	Replicate / Duplicate	P	DAVEY SUMNERS
10243844	RF-003	0000074950	01-MAY-11 14:26:53	Original	P	DAVEY SUMNERS
10158395	RF-003	0000074953	01-MAY-11 15:17:46	Original	P	DAVEY SUMNERS
10240990	RF-003	0000074957	01-MAY-11 16:54:23	Original	P	DAVEY SUMNERS
10235227	RF-003	0000074959	01-MAY-11 17:44:18	Original	P	DAVEY SUMNERS
10190450	RF-003	0000074962	01-MAY-11 19:13:05	Original	P	DIANNA MOORE
10013528	RF-376	0000074963	01-MAY-11 19:57:58	Original	P	DIANNA MOORE
10191654	RF-003	0000074966	01-MAY-11 20:41:30	Original	P	DIANNA MOORE
10177737	RF-003	0000074968	01-MAY-11 22:05:06	Original	P	DIANNA MOORE
10149095	RF-330	0000074971	01-MAY-11 23:01:39	Original	P	DIANNA MOORE
10113547	RF-750	0000074973	02-MAY-11 11:33:09	Original	P	CRAIG SIMMONS
10023744	RF-336	0000074974	02-MAY-11 12:08:45	Original	P	CRAIG SIMMONS
10107175	RF-336	0000074975	02-MAY-11 13:29:46	Original	P	BILL HUGGINS
10023690	RF-320	0000074976	02-MAY-11 14:12:09	Original	P	BILL HUGGINS

CCP RECORDS ORIGINAL
DATE REC'D 2-13-13

**********Batch Comments**********

Written By	Date	Comment
CNOWACKI	05-MAY-11 14:23:11	This batch is being validated electronically only.
CNOWACKI	11-MAY-11 13:02:56	(Rework) Container # 10065342 the operator identified a large poly bottle near the bottom of the waste and identified it as a sealed container > 4 liters. There is no entry or comment for the 'Large poly bottle' in container contents and the layers of confinement need to be updated to 2. The 'Large poly bottle' entered in waste item by weight needs to be reentered as an identified layer also.
CNOWACKI	11-MAY-11 13:02:56	(Rework) Container # 10113547 the operator identified a small amount of plastic bagging on the outside of the 55 gallon drum and assigned it as 1 pound of plastic bagging in packaging. This plastic bagging is considered waste material and should be assigned to waste items by weight. Please make the necessary corrections.
CNOWACKI	11-MAY-11 13:02:56	(Rework) Container # 10023744 the operator identified a total of .13 pints of liquid in three individual internal containers; no individual containers exceeded 60ml. of liquid. Please review the internal container with liquid question and make the necessary correction.
CNOWACKI	11-MAY-11 13:06:19	Demoting to operations for rework.
CSIMMONS	11-MAY-11 13:38:51	Rework complete.
CNOWACKI	11-MAY-11 14:12:49	Rework has been performed satisfactorily by a qualified operator.
CNOWACKI	11-MAY-11 14:12:49	Promoting batch to SPM.
KBURNSIDE	12-MAY-11 14:57:45	Please review container 10229929 and update result comment as found necessary.
CNOWACKI	17-MAY-11 13:39:59	(Rework) Container # 10229929 please make the necessary comment in the result comment field.
CNOWACKI	17-MAY-11 13:42:01	Demoting to operations for rework.
KHUGHES	17-MAY-11 13:52:25	rework complete
CNOWACKI	17-MAY-11 13:54:30	Rework has been performed satisfactorily by a qualified operator.
CNOWACKI	17-MAY-11 13:54:30	Promoting batch to SPM.
KBURNSIDE	17-MAY-11 16:42:51	Reviewed and approved this batch at the SPM level.

**********Batch E-Signature History**********

Approval ID	User ID	Signature Date	Comment
2000553	CNOWACKI	11-MAY-2011 13:06:19	Demoting to operations for rework.
2000584	CSIMMONS	11-MAY-2011 13:38:51	Rework complete.
2000622	CNOWACKI	11-MAY-2011 14:12:49	Promoting batch to SPM.
2001618	KBURNSIDE	12-MAY-2011 14:57:45	Please review container 10229929 and update result comment as found necessary.
2006929	CNOWACKI	17-MAY-2011 13:42:01	Demoting to operations for rework.
2006945	KHUGHES	17-MAY-2011 13:52:25	rework complete
2006951	CNOWACKI	17-MAY-2011 13:54:30	Promoting batch to SPM.
2007114	KBURNSIDE	17-MAY-2011 16:42:51	Reviewed and approved this batch at the SPM level.

***** End of Batch Report Coversheet Report *****

Batch Data Report No.: RTR11-00157 Date: February 6, 2013

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Batch RTR11-00157

AMWTP Advanced Mixed Waste Treatment Project	**Imaging Quality Indicator Verification Form For RTR**	Form-1578 Rev. 3 Effective Date: 12/03/10 Page 1 of 1

Implementing Document: INST-OI-12, INST-OI-81

This form documents the performance of the Imaging Quality Indicator (IQI) prior to examining drums after system startup.

RTR System Z-213- 106 (Enter 101 or 106)

Date: 04/30/11 Time: 0830

IQI Number: 043011IQI106D Disk Number: 2RTR11-00095

Image Resolution: 16 lines per inch

kV: 75 mA: 1

Magnification: 0 Focus: Broad ☐ Fine ☒

(Signatures by the performer and shift supervisor confirm that the IQI has been verified via video/audio playback of the IQI from the DVD to be in compliance with INST-OI-12, Real-Time Radiography Operations (Drum), or INST-OI-81, Real-Time Radiography Operations (for WIPP Certification of Boxes), as applicable.

Signature of Performer:

Aaron Atwell
Printed Name

Signature

04/30/11
Date

Review Signature of the Shift Supervisor:

Derek Cox
Printed Name

Signature

04/30/11
Date

30/90

Batch RTR11-00157

AMWTP Advanced Mixed Waste Treatment Project	Imaging Quality Indicator Verification Form For RTR	Form-1578 Rev. 3 Effective Date: 12/03/10 Page 1 of 1

Implementing Document: INST-OI-12, INST-OI-81

This form documents the performance of the Imaging Quality Indicator (IQI) prior to examining drums after system startup.

RTR System Z-213- 106 (Enter 101 or 106)

Date: 05/01/11 Time: 1010 hrs.

IQI Number: 050111IQI106D Disk Number: 2RTR11-00096

Image Resolution: 16 lines per inch

kV: 100.0 mA: 2.0

Magnification: -0- Focus: Broad ☐ Fine ☑

(Signatures by the performer and shift supervisor confirm that the IQI has been verified via video/audio playback of the IQI from the DVD to be in compliance with INST-OI-12, Real-Time Radiography Operations (Drum), or INST-OI-81, Real-Time Radiography Operations (for WIPP Certification of Boxes), as applicable.

Signature of Performer:

Conley G. Beebe
Printed Name

Conley G. Beebe
Signature

05/01/11
Date

Review Signature of the Shift Supervisor:

Dave Becker
Printed Name

Dave Becker
Signature

05/01/11
Date

3/10

AMWTP
Advanced Mixed Waste Treatment Project

AMWTP

RTR Analysis Report

Date: 05-Feb-2013

Time: 10:10

Batch Id RTR11-00157 **Container Id** 10071873 **Analysis Id** 0000074935

Container Type C drum, 83 Gallon **Analysis Status** Pass

RTR Date 30-APR-2011 23:23 **Gross Weight** 703.395 **Lbs.** **Net Weight** 560.395 **Lbs.**

Equipment Z-213-106 **Waste Matrix Code** S3114 **IDC** RF-003 Organic Setups, Oil Solids

Recording Id 2RTR11-00096 **Procedure Id** INST-OI-12 **Revision** 46 **Approval Level** SPM

Is Test Pattern Resolution Ok? Yes **Start Side** A **Replicate** No **OIO** No

Audio Visual Ok? Yes **Closure Date** 09-AUG-1972 00:00 **Operator** AVAUGHN

Result Comment Waste appears to be an organic matrix in the form of sludge.
120 pts of oil dry between the 55 & 83 gal drums.
Corrected layers of confinement.

Package

IDC Correct Yes **Recommended IDC** **Summary Category** S3000

Idc Change Reason

Rigid Liner Present? No **LinerType** NO LINER

Liner Punctured? N/A **Sharp Objects?** No

Liner Lid Present? No **Sharp Objects Are Protected?** Yes

Liner Lid Deformed? N/A **Layers Of Confinement** 2

Fill Factor 90

Bag Closure Method Twisted and Taped

Liquids

Liquid Present? Yes **Internal Container with Liquid** Yes

Internal Container with Liquid 3 pints **LA Candidate** No

Liquid Between Liner & Drum 0 pints **Containerized Liquid**

Total Liquid Amount 6 pints **Containerized Liquid Amt** 0 pints

Other Liquids 3 pints **Comment** 3 pts of liquid in a >4L sealed container & 3 pts in the bagging in the bottom of the drum.

Prohibited Liquids Present Yes **Comment** >1%, PCBs with liquid

Contents-Drum or Box

	Value	Comment		Value	Comment
Lead?	No		**Mercury Present?**	No	
Wet Cell Batteries?	No		**Explosives?**	No	
Prohibited Compressed Gases?	No		**PCBs Present?**	Yes - Prohibited	Liquid in the waste
			PCB Mass (lbs)	560.4	
Non-Mixed Hazardous Waste Present?	No		**Sealed Containers Over 4L?**	Yes	>4L sealed container in the bottom of the waste

Non-Radionuclide Pyrophoric Materials Present? No

Waste exhibiting the characteristics of Ignitability, Corrosivity or Reactivity Present? No

Wastes Incompatible with backfill, seal and panel closure materials, container and packaging materials,shipping container or other wastes? No

Impenetrable Dense Objects? No

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Drum plastic bag	1.000	EACH	1.000	1.000
55-GAL DRUM (17c)	1.000	EACH	59.000	59.000

Waste Items byWeight

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
>4L sealed container	1.000	EACH	2.000	2.000

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Oil-Dri (404 gm/liter) 0.42 lb/pint	130.000	PINTS	0.420	54.600
Liquids for Organic Matrix	6.000	PINTS	1.000	6.000

Batch Id RTR11-00157 **Container Id** 10071873 **Analysis Id** 0000074935

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	0.000
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	0.000
Other Inorganic Materials	0.000	54.600
Cellulosics	0.000	0.000
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	2.000
Inorganic matrix	0.000	0.000
Organic matrix	100.000	503.795
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	142.000
Plastic (packaging materials)	0.000	1.000
Cellulosics Packaging	0.000	0.000

Analysis Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
1988987	AVAUGHN	01-MAY-2011 00:05	
1988971	AVAUGHN	30-APR-2011 23:23	

AMWTP
Advanced Mixed Waste Treatment Project

AMWTP
RTR Analysis Report

Date: 05-Feb-2013
Time: 10:10

Batch Id RTR11-00157 **Container Id** 10145329 **Analysis Id** 0000074936

Container Type C drum, 83 Gallon **Analysis Status** Pass

RTR Date 01-MAY-2011 00:01 **Gross Weight** 703.395 **Lbs.** **Net Weight** 560.395 **Lbs.**

Equipment Z-213-106 **Waste Matrix Code** S3114 **IDC** RF-003 Organic Setups, Oil Solids

Recording Id 2RTR11-00096 **Procedure Id** INST-OI-12 **Revision** 46 **Approval Level** SPM

Is Test Pattern Resolution Ok? Yes **Start Side** A **Replicate** No **OIO** No

Audio Visual Ok? Yes **Closure Date** **Operator** AVAUGHN

Result Comment Waste appears to be an organic matrix in the form of sludge.
10 pts of oil dry between the 55 & 83 gal drums.

Package

IDC Correct Yes **Recommended IDC** **Summary Category** S3000

Idc Change Reason

Rigid Liner Present? No **LinerType** NO LINER

Liner Punctured? N/A **Sharp Objects?** No

Liner Lid Present? No **Sharp Objects Are Protected?** Yes

Liner Lid Deformed? N/A **Layers Of Confinement** 1

Fill Factor 95

Bag Closure Method Twisted and Taped

Liquids

Liquid Present? Yes **Internal Container with Liquid** No

Internal Container with Liquid 0 pints **LA Candidate** No

Liquid Between Liner & Drum 0 pints **Containerized Liquid**

Total Liquid Amount 6 pints **Containerized Liquid Amt** 0 pints

Other Liquids 6 pints **Comment** 6 pts of liquid in the bottom of the drum.

Prohibited Liquids Present Yes **Comment** PCBs with liquid, >1%

Contents-Drum or Box

	Value	Comment		Value	Comment
Lead?	No		**Mercury Present?**	No	
Wet Cell Batteries?	No		**Explosives?**	No	
Prohibited Compressed Gases?	No		**PCBs Present?**	Yes - Prohibited	liquid in the waste
			PCB Mass (lbs)	560.4	
Non-Mixed Hazardous Waste Present?	No		**Sealed Containers Over 4L?**	No	

Non-Radionuclide Pyrophoric Materials Present? No

Waste exhibiting the characteristics of Ignitability, Corrosivity or Reactivity Present? No

Wastes Incompatible with backfill, seal and panel closure materials, container and packaging materials,shipping container or other wastes? No

Impenetrable Dense Objects? No

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Drum plastic bag	1.000	EACH	1.000	1.000
55-GAL DRUM (17c)	1.000	EACH	59.000	59.000

Waste Items byWeight

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Oil-Dri (404 gm/liter) 0.42 lb/pint	10.000	PINTS	0.420	4.200
Liquids for Organic Matrix	6.000	PINTS	1.000	6.000

Batch Id RTR11-00157 **Container Id** 10145329 **Analysis Id** 0000074936

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	0.000
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	0.000
Other Inorganic Materials	0.000	4.200
Cellulosics	0.000	0.000
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	0.000
Inorganic matrix	0.000	0.000
Organic matrix	100.000	556.195
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	142.000
Plastic (packaging materials)	0.000	1.000
Cellulosics Packaging	0.000	0.000

Analysis Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
1988984	AVAUGHN	01-MAY-2011 00:01	

AMWTP
Advanced Mixed Waste Treatment Project

AMWTP
RTR Analysis Report

Date: 05-Feb-2013
Time: 10:10

Batch Id RTR11-00157 **Container Id** 10145329 **Analysis Id** 0000074937
Container Type C drum, 83 Gallon **Analysis Status** Pass

RTR Date 01-MAY-2011 01:53 **Gross Weight** 703.395 Lbs. **Net Weight** 560.395 Lbs.
Equipment Z-213-106 **Waste Matrix Code** S3114 **IDC** RF-003 Organic Setups, Oil Solids
Recording Id 2RTR11-00096 **Procedure Id** INST-OI-12 **Revision** 46 **Approval Level** SPM
Is Test Pattern Resolution Ok? Yes **Start Side** A **Replicate** No **OIO** Yes
Audio Visual Ok? Yes **Closure Date** **Operator** JDUNCAN
Result Comment Waste appears to consist of sludge

Package

IDC Correct Yes **Recommended IDC** **Summary Category** S3000
Idc Change Reason
Rigid Liner Present? No **LinerType** NO LINER
Liner Punctured? N/A **Sharp Objects?** No
Liner Lid Present? No **Sharp Objects Are Protected?** Yes
Liner Lid Deformed? N/A **Layers Of Confinement** 1
Fill Factor 95
Bag Closure Method Twisted and Taped

Liquids

Liquid Present? Yes **Internal Container with Liquid** No
Internal Container with Liquid 0 pints **LA Candidate** No
Liquid Between Liner & Drum 0 pints **Containerized Liquid**
Total Liquid Amount 13 pints **Containerized Liquid Amt** 0 pints
Other Liquids 13 pints **Comment** About 10pts of liquid in bagging at the bottom of drum
Prohibited Liquids Present Yes **Comment** PCBs with liquid

Contents-Drum or Box

	Value	Comment		Value	Comment
Lead?	No		Mercury Present?	No	
Wet Cell Batteries?	No		Explosives?	No	
Prohibited Compressed Gases?	No		PCBs Present?	Yes - Prohibited	PCBs with liquid
			PCB Mass (lbs)	560.4	
Non-Mixed Hazardous Waste Present?	No		Sealed Containers Over 4L?	No	

Non-Radionuclide Pyrophoric Materials Present? No
Waste exhibiting the characteristics of Ignitability, Corrosivity or Reactivity Present? No
Wastes Incompatible with backfill, seal and panel closure materials, container and packaging materials,shipping container or other wastes? No
Impenetrable Dense Objects? No

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Drum plastic bag	1.000	EACH	1.000	1.000
55-GAL DRUM (17c)	1.000	EACH	59.000	59.000

Waste Items byWeight

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Oil-Dri (404 gm/liter) 0.42 lb/pint	10.000	PINTS	0.420	4.200
Liquids for Organic Matrix	13.000	PINTS	1.000	13.000

Batch Id RTR11-00157 **Container Id** 10145329 **Analysis Id** 0000074937

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	0.000
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	0.000
Other Inorganic Materials	0.000	4.200
Cellulosics	0.000	0.000
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	0.000
Inorganic matrix	0.000	0.000
Organic matrix	100.000	556.195
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	142.000
Plastic (packaging materials)	0.000	1.000
Cellulosics Packaging	0.000	0.000

RTR Independent Observation

Obsolete	Performed	User Name	Checklist	Answer
No	09-MAY-2011 07:19	CNOWACKI	1.Was an independent observation performed?	Yes
			2.Were all items on the recording media identified correctly in WTS?	Yes
			3.Do you agree with the operator?	No

Comment There were differences in assignments for waste items by volume the liquid amounts. I agree with the original operator's assignment and no rework will be performed on the OIO.

Independent Observation Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
1997973	CNOWACKI	09-MAY-2011 07:19	OIO checklist complete.

Analysis Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
1989057	JDUNCAN	01-MAY-2011 01:53	

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AMWTP

RTR Analysis Report

Date: 05-Feb-2013

Time: 10:10

Batch Id RTR11-00157 **Container Id** 10177838 **Analysis Id** 0000074938

Container Type C drum, 83 Gallon **Analysis Status** Pass

RTR Date 01-MAY-2011 02:41 **Gross Weight** 696.780 Lbs. **Net Weight** 553.780 Lbs

Equipment Z-213-106 **Waste Matrix Code** S3114 **IDC** RF-003 Organic Setups, Oil Solids

Recording Id 2RTR11-00096 **Procedure Id** INST-OI-12 **Revision** 46 **Approval Level** SPM

Is Test Pattern Resolution Ok? Yes **Start Side** A **Replicate** No **OIO** No

Audio Visual Ok? Yes **Closure Date** 22-AUG-1972 00:00 **Operator** JDUNCAN

Result Comment Waste appears to consist of sludge

Package

IDC Correct Yes **Recommended IDC** **Summary Category** S3000

Idc Change Reason

Rigid Liner Present? No **LinerType** NO LINER

Liner Punctured? N/A **Sharp Objects?** No

Liner Lid Present? No **Sharp Objects Are Protected?** Yes

Liner Lid Deformed? N/A **Layers Of Confinement** 1

Fill Factor 85

Bag Closure Method Twisted and Taped

Liquids

Liquid Present? No **Internal Container with Liquid** No

Internal Container with Liquid 0 pints **LA Candidate** No

Liquid Between Liner & Drum 0 pints **Containerized Liquid**

Total Liquid Amount 0 pints **Containerized Liquid Amt** 0 pints

Other Liquids 0 pints **Comment**

Prohibited Liquids Present No **Comment**

Contents-Drum or Box

	Value	Comment		Value	Comment
Lead?	No		**Mercury Present?**	No	
Wet Cell Batteries?	No		**Explosives?**	No	
Prohibited Compressed Gases?	No		**PCBs Present?**	Yes - Acceptable	RF-003
			PCB Mass (lbs)	553.78	
Non-Mixed Hazardous Waste Present?	No		**Sealed Containers Over 4L?**	No	

Non-Radionuclide Pyrophoric Materials Present? No

Waste exhibiting the characteristics of Ignitability, Corrosivity or Reactivity Present? No

Wastes Incompatible with backfill, seal and panel closure materials, container and packaging materials,shipping container or other wastes? No

Impenetrable Dense Objects? No

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Drum plastic bag	1.000	EACH	1.000	1.000
55-GAL DRUM (17c)	1.000	EACH	59.000	59.000

Waste Items byWeight

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Oil-Dri (404 gm/liter) 0.42 lb/pint	130.000	PINTS	0.420	54.600

Batch Id RTR11-00157 **Container Id** 10177838 **Analysis Id** 0000074938

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	0.000
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	0.000
Other Inorganic Materials	0.000	54.600
Cellulosics	0.000	0.000
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	0.000
Inorganic matrix	0.000	0.000
Organic matrix	100.000	499.180
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	142.000
Plastic (packaging materials)	0.000	1.000
Cellulosics Packaging	0.000	0.000

Analysis Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
1989068	JDUNCAN	01-MAY-2011 02:41	

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Advanced Mixed Waste Treatment Project

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RTR Analysis Report

Date: 05-Feb-2013

Time: 10:10

Batch Id RTR11-00157 **Container Id** 10065342 **Analysis Id** 0000074939

Container Type C drum, 83 Gallon **Analysis Status** Pass

RTR Date 01-MAY-2011 03:21 **Gross Weight** 659.295 Lbs. **Net Weight** 516.295 Lbs.

Equipment Z-213-106 **Waste Matrix Code** S3114 **IDC** RF-003 Organic Setups, Oil Solids

Recording Id 2RTR11-00096 **Procedure Id** INST-OI-12 **Revision** 46 **Approval Level** SPM

Is Test Pattern Resolution Ok? Yes **Start Side** A **Replicate** No **OIO** No

Audio Visual Ok? Yes **Closure Date** 31-JUL-1972 00:00 **Operator** JDUNCAN

Result Comment Waste appears to consist of sludge, also a > 4L container with 1.5pts of liquid.
Rework: Answered sealed containers over 4L question "Yes" and updated waste parameters for Large poly bottle. cjs 05/11/11

Package

IDC Correct Yes **Recommended IDC** **Summary Category** S3000

Idc Change Reason

Rigid Liner Present? No **LinerType** NO LINER

Liner Punctured? N/A **Sharp Objects?** No

Liner Lid Present? No **Sharp Objects Are Protected?** Yes

Liner Lid Deformed? N/A **Layers Of Confinement** 2

Fill Factor 90

Bag Closure Method Twisted and Taped

Liquids

Liquid Present? Yes **Internal Container with Liquid** Yes

Internal Container with Liquid 1.5 pints **LA Candidate** No

Liquid Between Liner & Drum 0 pints **Containerized Liquid**

Total Liquid Amount 1.5 pints **Containerized Liquid Amt** 0 pints

Other Liquids 0 pints **Comment** Sealed container >4L with 1.5pts liquid.

Prohibited Liquids Present Yes **Comment** > 4L sealed container,PCBs with liquid

Contents-Drum or Box

	Value	Comment		Value	Comment
Lead?	No		**Mercury Present?**	No	
Wet Cell Batteries?	No		**Explosives?**	No	
Prohibited Compressed Gases?	No		**PCBs Present?**	Yes - Prohibited	PBCs with liquid
			PCB Mass (lbs)	516.3	
Non-Mixed Hazardous Waste Present?	No		**Sealed Containers Over 4L?**	Yes	Large poly bottle.

Non-Radionuclide Pyrophoric Materials Present? No

Waste exhibiting the characteristics of Ignitability, Corrosivity or Reactivity Present? No

Wastes Incompatible with backfill, seal and panel closure materials, container and packaging materials,shipping container or other wastes? No

Impenetrable Dense Objects? No

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Drum plastic bag	1.000	EACH	1.000	1.000
55-GAL DRUM (17c)	1.000	EACH	59.000	59.000

Waste Items byWeight

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Large poly bottle	1.000	EACH	2.000	2.000

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Oil-Dri (404 gm/liter) 0.42 lb/pint	130.000	PINTS	0.420	54.600
Liquids for Organic Matrix	1.500	PINTS	1.000	1.500

Batch Id RTR11-00157 **Container Id** 10065342 **Analysis Id** 0000074939

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	0.000
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	0.000
Other Inorganic Materials	0.000	54.600
Cellulosics	0.000	0.000
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	2.000
Inorganic matrix	0.000	0.000
Organic matrix	100.000	459.695
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	142.000
Plastic (packaging materials)	0.000	1.000
Cellulosics Packaging	0.000	0.000

Analysis Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
2000581	CSIMMONS	11-MAY-2011 13:34	Rework
1989079	JDUNCAN	01-MAY-2011 03:21	

AMWTP
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AMWTP
RTR Analysis Report

Date: 05-Feb-2013
Time: 10:10

Batch Id RTR11-00157 **Container Id** 10229929 **Analysis Id** 0000074940

Container Type 7A85 85 Gallon Open Head drum, DOT 7A **Analysis Status** Pass

RTR Date 01-MAY-2011 04:25 **Gross Weight** 668.115 Lbs. **Net Weight** 512.115 Lbs.
Equipment Z-213-106 **Waste Matrix Code** S3114 **IDC** RF-003 Organic Setups, Oil Solids
Recording Id 2RTR11-00096 **Procedure Id** INST-OI-12 **Revision** 46 **Approval Level** SPM
Is Test Pattern Resolution Ok? Yes **Start Side** A **Replicate** No **OIO** No
Audio Visual Ok? Yes **Closure Date** 04-FEB-2011 00:00 **Operator** JDUNCAN

Result Comment The remaining Contents of Container appear to be sludge.
(rework) Entered waste discription in Result comment field. K.H. 05-17-11

Package

IDC Correct Yes **Recommended IDC** **Summary Category** S3000
Idc Change Reason
Rigid Liner Present? Yes **LinerType** TYPE 1
Liner Punctured? Yes **Sharp Objects?** No
Liner Lid Present? No **Sharp Objects Are Protected?** Yes
Liner Lid Deformed? N/A **Layers Of Confinement** 1
Fill Factor 85
Bag Closure Method Twisted and Taped

Liquids

Liquid Present? No **Internal Container with Liquid** No
Internal Container with Liquid 0 pints **LA Candidate** No
Liquid Between Liner & Drum 0 pints **Containerized Liquid**
Total Liquid Amount 0 pints **Containerized Liquid Amt** 0 pints
Other Liquids 0 pints **Comment**
Prohibited Liquids Present No **Comment**

Contents-Drum or Box

	Value	Comment		Value	Comment
Lead?	No		**Mercury Present?**	No	
Wet Cell Batteries?	No		**Explosives?**	No	
Prohibited Compressed Gases?	No		**PCBs Present?**	Yes - Acceptable	RF-003
			PCB Mass (lbs)	512.12	
Non-Mixed Hazardous Waste Present?	No		**Sealed Containers Over 4L?**	No	

Non-Radionuclide Pyrophoric Materials Present? No
Waste exhibiting the characteristics of Ignitability, Corrosivity or Reactivity Present? No
Wastes Incompatible with backfill, seal and panel closure materials, container and packaging materials,shipping container or other wastes? No
Impenetrable Dense Objects? No

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
90 mil liner	1.000	EACH	16.000	16.000
Drum plastic bag	1.000	EACH	1.000	1.000
55-GAL DRUM (17c)	1.000	EACH	59.000	59.000

Waste Items byWeight

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)

Batch Id RTR11-00157 **Container Id** 10229929 **Analysis Id** 0000074940

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	0.000
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	0.000
Other Inorganic Materials	0.000	0.000
Cellulosics	0.000	0.000
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	0.000
Inorganic matrix	0.000	0.000
Organic matrix	100.000	512.115
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	139.000
Plastic (packaging materials)	0.000	17.000
Cellulosics Packaging	0.000	0.000

Analysis Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
2006944	KHUGHES	17-MAY-2011 13:51	rework
1989117	JDUNCAN	01-MAY-2011 04:25	

Batch Id RTR11-00157 **Container Id** 10234973 **Analysis Id** 0000074942

Container Type C drum, 83 Gallon **Analysis Status** Pass

RTR Date 01-MAY-2011 11:28 **Gross Weight** 703.395 Lbs. **Net Weight** 560.395 Lbs

Equipment Z-213-106 **Waste Matrix Code** S3114 **IDC** RF-003 Organic Setups, Oil Solids

Recording Id 2RTR11-00096 **Procedure Id** INST-OI-12 **Revision** 46 **Approval Level** SPM

Is Test Pattern Resolution Ok? Yes **Start Side** A **Replicate** No **OIO** No

Audio Visual Ok? Yes **Closure Date** 30-JUN-2008 17:01 **Operator** CBEEBE

Result Comment The remaining waste appears to be sludge.

Package

IDC Correct Yes **Recommended IDC** **Summary Category** S3000

Idc Change Reason

Rigid Liner Present? No **LinerType** NO LINER

Liner Punctured? N/A **Sharp Objects?** No

Liner Lid Present? No **Sharp Objects Are Protected?** Yes

Liner Lid Deformed? N/A **Layers Of Confinement** 1

Fill Factor 85

Bag Closure Method Twisted and Taped

Liquids

Liquid Present? Yes **Internal Container with Liquid** No

Internal Container with Liquid 0 pints **LA Candidate** No

Liquid Between Liner & Drum 0 pints **Containerized Liquid**

Total Liquid Amount 8 pints **Containerized Liquid Amt** 0 pints

Other Liquids 8 pints **Comment** Approx. 8 pints of liquid from the bottom of the waste to just below the bottom chine.

Prohibited Liquids Present Yes **Comment** PCB waste with liquid, liquid > 1% by volume.

Contents-Drum or Box

	Value	Comment		Value	Comment
Lead?	No		**Mercury Present?**	No	
Wet Cell Batteries?	No		**Explosives?**	No	
Prohibited Compressed Gases?	No		**PCBs Present?**	Yes - Prohibited	PCB waste with liquid. RF-003
			PCB Mass (lbs)	560.4	
Non-Mixed Hazardous Waste Present?	No		**Sealed Containers Over 4L?**	No	

Non-Radionuclide Pyrophoric Materials Present? No

Waste exhibiting the characteristics of Ignitability, Corrosivity or Reactivity Present? No

Wastes Incompatible with backfill, seal and panel closure materials, container and packaging materials,shipping container or other wastes? No

Impenetrable Dense Objects? No

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Drum plastic bag	1.000	EACH	1.000	1.000
55-GAL DRUM (17c)	1.000	EACH	59.000	59.000

Waste Items byWeight

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Liquids for Organic Matrix	8.000	PINTS	1.000	8.000

Batch Id RTR11-00157 **Container Id** 10234973 **Analysis Id** 0000074942

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	0.000
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	0.000
Other Inorganic Materials	0.000	0.000
Cellulosics	0.000	0.000
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	0.000
Inorganic matrix	0.000	0.000
Organic matrix	100.000	560.395
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	142.000
Plastic (packaging materials)	0.000	1.000
Cellulosics Packaging	0.000	0.000

Analysis Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
1989245	CBEEBE	01-MAY-2011 11:28	

Batch Id RTR11-00157 **Container Id** 10233274 **Analysis Id** 0000074944

Container Type C drum, 83 Gallon **Analysis Status** Pass

RTR Date 01-MAY-2011 12:05 **Gross Weight** 703.395 **Lbs.** **Net Weight** 557.395 **Lbs.**

Equipment Z-213-106 **Waste Matrix Code** S3114 **IDC** RF-003 Organic Setups, Oil Solids

Recording Id 2RTR11-00096 **Procedure Id** INST-OI-12 **Revision** 46 **Approval Level** SPM

Is Test Pattern Resolution Ok? Yes **Start Side** A **Replicate** No **OIO** No

Audio Visual Ok? Yes **Closure Date** 11-JUN-2008 10:28 **Operator** CBEEBE

Result Comment The remaining waste appears to be sludge.

Package

IDC Correct Yes **Recommended IDC** **Summary Category** S3000

Idc Change Reason

Rigid Liner Present? No **LinerType** NO LINER

Liner Punctured? N/A **Sharp Objects?** No

Liner Lid Present? No **Sharp Objects Are Protected?** Yes

Liner Lid Deformed? N/A **Layers Of Confinement** 1

Fill Factor 85

Bag Closure Method Twisted and Taped

Liquids

Liquid Present? Yes **Internal Container with Liquid** No

Internal Container with Liquid 0 pints **LA Candidate** No

Liquid Between Liner & Drum 0 pints **Containerized Liquid**

Containerized Liquid Amt 0 pints

Total Liquid Amount 12 pints

Other Liquids 12 pints **Comment** Approx. 12 pints of liquid from the bottom of the waste to above the bottom chine.

Prohibited Liquids Present Yes **Comment** PCB waste with liquid. Liquid > 1% by volume.

Contents-Drum or Box

	Value	Comment		Value	Comment
Lead?	No		**Mercury Present?**	No	
Wet Cell Batteries?	No		**Explosives?**	No	
Prohibited Compressed Gases?	No		**PCBs Present?**	Yes - Prohibited	PCB waste with liquid. RF-003
			PCB Mass (lbs)	557.4	
Non-Mixed Hazardous Waste Present?	No		**Sealed Containers Over 4L?**	No	

Non-Radionuclide Pyrophoric Materials Present? No

Waste exhibiting the characteristics of Ignitability, Corrosivity or Reactivity Present? No

Wastes Incompatible with backfill, seal and panel closure materials, container and packaging materials,shipping container or other wastes? No

Impenetrable Dense Objects? No

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
O-ring plastic bag	1.000	EACH	4.000	4.000
55-GAL DRUM (17c)	1.000	EACH	59.000	59.000

Waste Items byWeight

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Liquids for Organic Matrix	12.000	PINTS	1.000	12.000

Batch Id RTR11-00157 **Container Id** 10233274 **Analysis Id** 0000074944

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	0.000
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	0.000
Other Inorganic Materials	0.000	0.000
Cellulosics	0.000	0.000
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	0.000
Inorganic matrix	0.000	0.000
Organic matrix	100.000	557.395
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	142.000
Plastic (packaging materials)	0.000	4.000
Cellulosics Packaging	0.000	0.000

Analysis Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
1989250	CBEEBE	01-MAY-2011 12:05	

Batch Id RTR11-00157 **Container Id** 10233274 **Analysis Id** 0000074948

Container Type C drum, 83 Gallon **Analysis Status** Pass

RTR Date 01-MAY-2011 13:39 **Gross Weight** 703.395 **Lbs.** **Net Weight** 557.395 **Lbs.**

Equipment Z-213-106 **Waste Matrix Code** S3114 **IDC** RF-003 Organic Setups, Oil Solids

Recording Id 2RTR11-00096 **Procedure Id** INST-OI-12 **Revision** 46 **Approval Level** SPM

Is Test Pattern Resolution Ok? Yes **Start Side** A **Replicate** Yes **OIO** No

Audio Visual Ok? Yes **Closure Date** 11-JUN-2008 10:28 **Operator** DSUMNERS

Result Comment Waste appears to be primarily sludge.

Package

IDC Correct Yes **Recommended IDC** **Summary Category** S3000

Idc Change Reason

Rigid Liner Present? No **LinerType** NO LINER

Liner Punctured? N/A **Sharp Objects?** No

Liner Lid Present? No **Sharp Objects Are Protected?** Yes

Liner Lid Deformed? N/A **Layers Of Confinement** 1

Fill Factor 90

Bag Closure Method Twisted and Taped

Liquids

Liquid Present? Yes **Internal Container with Liquid** No

Internal Container with Liquid 0 pints **LA Candidate** No

Liquid Between Liner & Drum 0 pints **Containerized Liquid**

Containerized Liquid Amt 0 pints

Total Liquid Amount 12 pints

Other Liquids 12 pints **Comment** approx 12 pints of liquids on side of drum at lower chime.

Prohibited Liquids Present Yes **Comment** PCB's with liquids

Contents-Drum or Box

	Value	Comment		Value	Comment
Lead?	No		**Mercury Present?**	No	
Wet Cell Batteries?	No		**Explosives?**	No	
Prohibited Compressed Gases?	No		**PCBs Present?**	Yes - Prohibited	PCB's with liquid
			PCB Mass (lbs)	557.4	
Non-Mixed Hazardous Waste Present?	No		**Sealed Containers Over 4L?**	No	

Non-Radionuclide Pyrophoric Materials Present? No

Waste exhibiting the characteristics of Ignitability, Corrosivity or Reactivity Present? No

Wastes Incompatible with backfill, seal and panel closure materials, container and packaging materials,shipping container or other wastes? No

Impenetrable Dense Objects? No

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
O-ring plastic bag	1.000	EACH	4.000	4.000
55-GAL DRUM (17c)	1.000	EACH	59.000	59.000

Waste Items byWeight

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Liquids for Organic Matrix	12.000	PINTS	1.000	12.000

Batch Id RTR11-00157 **Container Id** 10233274 **Analysis Id** 0000074948

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	0.000
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	0.000
Other Inorganic Materials	0.000	0.000
Cellulosics	0.000	0.000
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	0.000
Inorganic matrix	0.000	0.000
Organic matrix	100.000	557.395
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	142.000
Plastic (packaging materials)	0.000	4.000
Cellulosics Packaging	0.000	0.000

Analysis Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
1989328	DSUMNERS	01-MAY-2011 13:39	

Batch Id RTR11-00157 **Container Id** 10243844 **Analysis Id** 0000074950

Container Type C drum, 83 Gallon **Analysis Status** Pass

RTR Date 01-MAY-2011 14:26 **Gross Weight** 721.035 Lbs. **Net Weight** 575.035 Lbs

Equipment Z-213-106 **Waste Matrix Code** S3114 **IDC** RF-003 Organic Setups, Oil Solids

Recording Id 2RTR11-00096 **Procedure Id** INST-OI-12 **Revision** 46 **Approval Level** SPM

Is Test Pattern Resolution Ok? Yes **Start Side** A **Replicate** No **OIO** No

Audio Visual Ok? Yes **Closure Date** 14-AUG-2008 08:51 **Operator** DSUMNERS

Result Comment Waste appears to be primarily sludge.

Package

IDC Correct Yes **Recommended IDC** **Summary Category** S3000

Idc Change Reason

Rigid Liner Present? No **LinerType** NO LINER

Liner Punctured? N/A **Sharp Objects?** No

Liner Lid Present? No **Sharp Objects Are Protected?** Yes

Liner Lid Deformed? N/A **Layers Of Confinement** 1

Fill Factor 95

Bag Closure Method Twisted and Taped

Liquids

Liquid Present? Yes **Internal Container with Liquid** No

Internal Container with Liquid 0 pints **LA Candidate** No

Liquid Between Liner & Drum 0 pints **Containerized Liquid**

Total Liquid Amount 12 pints **Containerized Liquid Amt** 0 pints

Other Liquids 12 pints **Comment** Approx 12 pints below lower chime in 1" band across waste.

Prohibited Liquids Present Yes **Comment** PCB's with liquids

Contents-Drum or Box

	Value	Comment		Value	Comment
Lead?	No		**Mercury Present?**	No	
Wet Cell Batteries?	No		**Explosives?**	No	
Prohibited Compressed Gases?	No		**PCBs Present?**	Yes - Prohibited	PCB's with liquids
			PCB Mass (lbs)	575.04	
Non-Mixed Hazardous Waste Present?	No		**Sealed Containers Over 4L?**	No	

Non-Radionuclide Pyrophoric Materials Present? No

Waste exhibiting the characteristics of Ignitability, Corrosivity or Reactivity Present? No

Wastes Incompatible with backfill, seal and panel closure materials, container and packaging materials,shipping container or other wastes? No

Impenetrable Dense Objects? No

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
O-ring plastic bag	1.000	EACH	4.000	4.000
55-GAL DRUM (17c)	1.000	EACH	59.000	59.000

Waste Items byWeight

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Liquids for Organic Matrix	12.000	PINTS	1.000	12.000

Batch Id RTR11-00157 **Container Id** 10243844 **Analysis Id** 0000074950

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	0.000
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	0.000
Other Inorganic Materials	0.000	0.000
Cellulosics	0.000	0.000
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	0.000
Inorganic matrix	0.000	0.000
Organic matrix	100.000	575.035
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	142.000
Plastic (packaging materials)	0.000	4.000
Cellulosics Packaging	0.000	0.000

Analysis Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
1989336	DSUMNERS	01-MAY-2011 14:26	

Batch Id RTR11-00157 **Container Id** 10158395 **Analysis Id** 0000074953

Container Type C drum, 83 Gallon **Analysis Status** Pass

RTR Date 01-MAY-2011 15:17 **Gross Weight** 681.345 **Lbs.** **Net Weight** 519.345 **Lbs.**

Equipment Z-213-106 **Waste Matrix Code** S3114 **IDC** RF-003 Organic Setups, Oil Solids

Recording Id 2RTR11-00096 **Procedure Id** INST-OI-12 **Revision** 46 **Approval Level** SPM

Is Test Pattern Resolution Ok? Yes **Start Side** A **Replicate** No **OIO** No

Audio Visual Ok? Yes **Closure Date** 14-APR-2007 17:33 **Operator** DSUMNERS

Result Comment Waste appears to be primarily sludge.

Package

IDC Correct Yes **Recommended IDC** **Summary Category** S3000

Idc Change Reason

Rigid Liner Present? Yes **LinerType** TYPE 1

Liner Punctured? Yes **Sharp Objects?** No

Liner Lid Present? No **Sharp Objects Are Protected?** Yes

Liner Lid Deformed? N/A **Layers Of Confinement** 1

Fill Factor 85

Bag Closure Method Twisted and Taped

Liquids

Liquid Present? Yes **Internal Container with Liquid** Yes

Internal Container with Liquid 6 pints **LA Candidate** Yes

Liquid Between Liner & Drum 0 pints **Containerized Liquid**

Total Liquid Amount 18 pints **Containerized Liquid Amt** 0 pints

Other Liquids 12 pints **Comment** Approx 1 pints of liquid in 1" depth on top of waste. 1 gal poly bottle near bottom with 6 pints.

Prohibited Liquids Present Yes **Comment** PCB's with liquids

Contents-Drum or Box

	Value	Comment		Value	Comment
Lead?	No		**Mercury Present?**	No	
Wet Cell Batteries?	No		**Explosives?**	No	
Prohibited Compressed Gases?	No		**PCBs Present?**	Yes - Prohibited	PCB's with liquids
			PCB Mass (lbs)	519.35	
Non-Mixed Hazardous Waste Present?	No		**Sealed Containers Over 4L?**	No	

Non-Radionuclide Pyrophoric Materials Present? No

Waste exhibiting the characteristics of Ignitability, Corrosivity or Reactivity Present? No

Wastes Incompatible with backfill, seal and panel closure materials, container and packaging materials,shipping container or other wastes? No

Impenetrable Dense Objects? No

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
90 mil liner	1.000	EACH	16.000	16.000
O-ring plastic bag	1.000	EACH	4.000	4.000
55-GAL DRUM (17c)	1.000	EACH	59.000	59.000

Waste Items byWeight

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Poly bottles (1 gal)	1.000	EACH	1.000	1.000

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Liquids for Organic Matrix	18.000	PINTS	1.000	18.000

Batch Id RTR11-00157 **Container Id** 10158395 **Analysis Id** 0000074953

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	0.000
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	0.000
Other Inorganic Materials	0.000	0.000
Cellulosics	0.000	0.000
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	1.000
Inorganic matrix	0.000	0.000
Organic matrix	100.000	518.345
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	142.000
Plastic (packaging materials)	0.000	20.000
Cellulosics Packaging	0.000	0.000

Analysis Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
1989357	DSUMNERS	01-MAY-2011 15:17	

Batch Id RTR11-00157 **Container Id** 10240990 **Analysis Id** 0000074957

Container Type C drum, 83 Gallon **Analysis Status** Pass

RTR Date 01-MAY-2011 16:54 **Gross Weight** 676.935 **Lbs.** **Net Weight** 534.935 **Lbs**

Equipment Z-213-106 **Waste Matrix Code** S3114 **IDC** RF-003 Organic Setups, Oil Solids

Recording Id 2RTR11-00096 **Procedure Id** INST-OI-12 **Revision** 46 **Approval Level** SPM

Is Test Pattern Resolution Ok? Yes **Start Side** A **Replicate** No **OIO** No

Audio Visual Ok? Yes **Closure Date** 29-JUL-2008 09:19 **Operator** DSUMNERS

Result Comment Waste appears to be primarily sludge.

Package

IDC Correct Yes **Recommended IDC** **Summary Category** S3000

Idc Change Reason

Rigid Liner Present? No **LinerType** NO LINER

Liner Punctured? N/A **Sharp Objects?** No

Liner Lid Present? No **Sharp Objects Are Protected?** Yes

Liner Lid Deformed? N/A **Layers Of Confinement** 0

Fill Factor 90

Bag Closure Method No Bags

Liquids

Liquid Present? Yes **Internal Container with Liquid** No

Internal Container with Liquid 0 pints **LA Candidate** No

Liquid Between Liner & Drum 0 pints **Containerized Liquid**

Containerized Liquid Amt 0 pints

Total Liquid Amount .1 pints

Other Liquids .1 pints **Comment** .1 pints in pocket on side of 55 gal drum approx 7" from bottom.

Prohibited Liquids Present Yes **Comment** PCB's with liquids

Contents-Drum or Box

	Value	Comment		Value	Comment
Lead?	No		**Mercury Present?**	No	
Wet Cell Batteries?	No		**Explosives?**	No	
Prohibited Compressed Gases?	No		**PCBs Present?**	Yes - Prohibited	PCB's with liquids
			PCB Mass (lbs)	534.94	
Non-Mixed Hazardous Waste Present?	No		**Sealed Containers Over 4L?**	No	

Non-Radionuclide Pyrophoric Materials Present? No

Waste exhibiting the characteristics of Ignitability, Corrosivity or Reactivity Present? No

Wastes Incompatible with backfill, seal and panel closure materials, container and packaging materials,shipping container or other wastes? No

Impenetrable Dense Objects? No

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
55-GAL DRUM (17c)	1.000	EACH	59.000	59.000

Waste Items byWeight

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
O-ring plastic bag	1.000	EACH	4.000	4.000

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Liquids for Organic Matrix	0.100	PINTS	1.000	0.100

Batch Id RTR11-00157 **Container Id** 10240990 **Analysis Id** 0000074957

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	0.000
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	0.000
Other Inorganic Materials	0.000	0.000
Cellulosics	0.000	0.000
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	4.000
Inorganic matrix	0.000	0.000
Organic matrix	100.000	530.935
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	142.000
Plastic (packaging materials)	0.000	0.000
Cellulosics Packaging	0.000	0.000

Analysis Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
1989438	DSUMNERS	01-MAY-2011 16:54	

Batch Id RTR11-00157 **Container Id** 10235227 **Analysis Id** 0000074959

Container Type C drum, 83 Gallon **Analysis Status** Pass

RTR Date 01-MAY-2011 17:44 **Gross Weight** 687.960 **Lbs.** **Net Weight** 545.960 **Lbs**

Equipment Z-213-106 **Waste Matrix Code** S3114 **IDC** RF-003 Organic Setups, Oil Solids

Recording Id 2RTR11-00096 **Procedure Id** INST-OI-12 **Revision** 46 **Approval Level** SPM

Is Test Pattern Resolution Ok? Yes **Start Side** A **Replicate** No **OIO** No

Audio Visual Ok? Yes **Closure Date** 02-JUL-2008 09:20 **Operator** DSUMNERS

Result Comment Waste appears to be primarily sludge. This is an inverted 55 gal overpacked drum.

Package

IDC Correct Yes **Recommended IDC** **Summary Category** S3000

Idc Change Reason

Rigid Liner Present? No **LinerType** NO LINER

Liner Punctured? N/A **Sharp Objects?** No

Liner Lid Present? No **Sharp Objects Are Protected?** Yes

Liner Lid Deformed? N/A **Layers Of Confinement** 0

Fill Factor 85

Bag Closure Method No Bags

Liquids

Liquid Present? No **Internal Container with Liquid** No

Internal Container with Liquid 0 pints **LA Candidate** No

Liquid Between Liner & Drum 0 pints **Containerized Liquid**

Total Liquid Amount 0 pints **Containerized Liquid Amt** 0 pints

Other Liquids 0 pints **Comment**

Prohibited Liquids Present No **Comment**

Contents-Drum or Box

	Value	Comment		Value	Comment
Lead?	No		**Mercury Present?**	No	
Wet Cell Batteries?	No		**Explosives?**	No	
Prohibited Compressed Gases?	No		**PCBs Present?**	Yes - Acceptable	PCB's without liquids
			PCB Mass (lbs)	545.96	
Non-Mixed Hazardous Waste Present?	No		**Sealed Containers Over 4L?**	No	

Non-Radionuclide Pyrophoric Materials Present? No

Waste exhibiting the characteristics of Ignitability, Corrosivity or Reactivity Present? No

Wastes Incompatible with backfill, seal and panel closure materials, container and packaging materials,shipping container or other wastes? No

Impenetrable Dense Objects? No

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
55-GAL DRUM (17c)	1.000	EACH	59.000	59.000

Waste Items byWeight

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
O-ring plastic bag	1.000	EACH	4.000	4.000

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)

Batch Id RTR11-00157 **Container Id** 10235227 **Analysis Id** 0000074959

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	0.000
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	0.000
Other Inorganic Materials	0.000	0.000
Cellulosics	0.000	0.000
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	4.000
Inorganic matrix	0.000	0.000
Organic matrix	100.000	541.960
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	142.000
Plastic (packaging materials)	0.000	0.000
Cellulosics Packaging	0.000	0.000

Analysis Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
1989465	DSUMNERS	01-MAY-2011 17:44	

Batch Id RTR11-00157 **Container Id** 10190450 **Analysis Id** 0000074962

Container Type C drum, 83 Gallon **Analysis Status** Pass

RTR Date 01-MAY-2011 19:13 **Gross Weight** 703.395 Lbs. **Net Weight** 557.395 Lbs

Equipment Z-213-106 **Waste Matrix Code** S3114 **IDC** RF-003 Organic Setups, Oil Solids

Recording Id 2RTR11-00096 **Procedure Id** INST-OI-12 **Revision** 46 **Approval Level** SPM

Is Test Pattern Resolution Ok? Yes **Start Side** A **Replicate** No **OIO** No

Audio Visual Ok? Yes **Closure Date** 05-MAY-1972 00:00 **Operator** DMOORE

Result Comment Waste appears to be sludge.

Package

IDC Correct Yes **Recommended IDC** **Summary Category** S3000

Idc Change Reason

Rigid Liner Present? No **LinerType** NO LINER

Liner Punctured? N/A **Sharp Objects?** No

Liner Lid Present? No **Sharp Objects Are Protected?** Yes

Liner Lid Deformed? N/A **Layers Of Confinement** 1

Fill Factor 85

Bag Closure Method Twisted and Taped

Liquids

Liquid Present? No **Internal Container with Liquid** No

Internal Container with Liquid 0 pints **LA Candidate** No

Liquid Between Liner & Drum 0 pints **Containerized Liquid**

Containerized Liquid Amt 0 pints

Total Liquid Amount 0 pints

Other Liquids 0 pints **Comment**

Prohibited Liquids Present No **Comment**

Contents-Drum or Box

	Value	Comment		Value	Comment
Lead?	No		**Mercury Present?**	No	
Wet Cell Batteries?	No		**Explosives?**	No	
Prohibited Compressed Gases?	No		**PCBs Present?**	Yes - Acceptable	PCB waste without liquids.
			PCB Mass (lbs)	557.4	
Non-Mixed Hazardous Waste Present?	No		**Sealed Containers Over 4L?**	No	

Non-Radionuclide Pyrophoric Materials Present? No

Waste exhibiting the characteristics of Ignitability, Corrosivity or Reactivity Present? No

Wastes Incompatible with backfill, seal and panel closure materials, container and packaging materials,shipping container or other wastes? No

Impenetrable Dense Objects? No

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
O-ring plastic bag	1.000	EACH	4.000	4.000
55-GAL DRUM (17c)	1.000	EACH	59.000	59.000

Waste Items byWeight

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
plastic sheeting at bottom of 83	1.000	EACH	2.000	2.000

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Oil-Dri (404 gm/liter) 0.42 lb/pint	180.000	PINTS	0.420	75.600

Batch Id RTR11-00157 **Container Id** 10190450 **Analysis Id** 0000074962

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	0.000
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	0.000
Other Inorganic Materials	0.000	75.600
Cellulosics	0.000	0.000
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	2.000
Inorganic matrix	0.000	0.000
Organic matrix	100.000	479.795
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	142.000
Plastic (packaging materials)	0.000	4.000
Cellulosics Packaging	0.000	0.000

Analysis Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
1989497	DMOORE	01-MAY-2011 19:13	

Batch Id RTR11-00157 **Container Id** 10013528 **Analysis Id** 0000074963

Container Type C drum, 83 Gallon **Analysis Status** Pass

RTR Date 01-MAY-2011 19:57 **Gross Weight** 434.390 Lbs. **Net Weight** 276.390 Lbs.

Equipment Z-213-106 **Waste Matrix Code** S5410 **IDC** RF-376 Cemented Insulation and Filter Media

Recording Id 2RTR11-00096 **Procedure Id** INST-OI-12 **Revision** 46 **Approval Level** SPM

Is Test Pattern Resolution Ok? Yes **Start Side** A **Replicate** No **OIO** No

Audio Visual Ok? Yes **Closure Date** 08-DEC-1981 00:00 **Operator** DMOORE

Result Comment Remaining waste appears to be insulation and filter media.

Package

IDC Correct Yes **Recommended IDC** **Summary Category** S5000

Idc Change Reason

Rigid Liner Present? Yes **LinerType** TYPE 2

Liner Punctured? Yes **Sharp Objects?** No

Liner Lid Present? Yes **Sharp Objects Are Protected?** Yes

Liner Lid Deformed? No **Layers Of Confinement** 0

Fill Factor 85

Bag Closure Method No Bags

Liquids

Liquid Present? Yes **Internal Container with Liquid** No

Internal Container with Liquid 0 pints **LA Candidate** No

Liquid Between Liner & Drum 0 pints **Containerized Liquid**

Total Liquid Amount 21 pints **Containerized Liquid Amt** 0 pints

Other Liquids 21 pints **Comment** Liquid is at bottom of 55 gallon drum 20 pints. 7 inches below the 2 nd chine 1 pint.

Prohibited Liquids Present Yes **Comment** > 1% volume

Contents-Drum or Box

	Value	Comment		Value	Comment
Lead?	No		**Mercury Present?**	No	
Wet Cell Batteries?	No		**Explosives?**	No	
Prohibited Compressed Gases?	No		**PCBs Present?**	No	
			PCB Mass (lbs)	0	
Non-Mixed Hazardous Waste Present?	No		**Sealed Containers Over 4L?**	No	

Non-Radionuclide Pyrophoric Materials Present? No

Waste exhibiting the characteristics of Ignitability, Corrosivity or Reactivity Present? No

Wastes Incompatible with backfill, seal and panel closure materials, container and packaging materials,shipping container or other wastes? No

Impenetrable Dense Objects? No

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
90 mil liner	1.000	EACH	16.000	16.000
55-GAL DRUM (17c)	1.000	EACH	59.000	59.000

Waste Items byWeight

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
plastic bagging and tubing	1.000	EACH	12.000	12.000
metal pipe, misc metals	1.000	EACH	3.000	3.000

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Liquids for Other Inorganics	21.000	PINTS	1.000	21.000

Batch Id RTR11-00157 **Container Id** 10013528 **Analysis Id** 0000074963

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	3.000
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	0.000
Other Inorganic Materials	0.000	21.000
Cellulosics	100.000	240.390
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	12.000
Inorganic matrix	0.000	0.000
Organic matrix	0.000	0.000
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	142.000
Plastic (packaging materials)	0.000	16.000
Cellulosics Packaging	0.000	0.000

Analysis Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
1989529	DMOORE	01-MAY-2011 19:57	

Batch Id RTR11-00157 **Container Id** 10191654 **Analysis Id** 0000074966

Container Type C drum, 83 Gallon **Analysis Status** Pass

RTR Date 01-MAY-2011 20:41 **Gross Weight** 807.030 Lbs. **Net Weight** 665.030 Lbs.

Equipment Z-213-106 **Waste Matrix Code** S3114 **IDC** RF-003 Organic Setups, Oil Solids

Recording Id 2RTR11-00096 **Procedure Id** INST-OI-12 **Revision** 46 **Approval Level** SPM

Is Test Pattern Resolution Ok? Yes **Start Side** A **Replicate** No **OIO** No

Audio Visual Ok? Yes **Closure Date** 05-MAY-1972 00:00 **Operator** DMOORE

Result Comment Waste appears to be sludge.

Package

IDC Correct Yes **Recommended IDC** **Summary Category** S3000

Idc Change Reason

Rigid Liner Present? No **LinerType** NO LINER

Liner Punctured? N/A **Sharp Objects?** No

Liner Lid Present? No **Sharp Objects Are Protected?** Yes

Liner Lid Deformed? N/A **Layers Of Confinement** 0

Fill Factor 95

Bag Closure Method No Bags

Liquids

Liquid Present? No **Internal Container with Liquid** No

Internal Container with Liquid 0 pints **LA Candidate** No

Liquid Between Liner & Drum 0 pints **Containerized Liquid**

Total Liquid Amount 0 pints **Containerized Liquid Amt** 0 pints

Other Liquids 0 pints **Comment**

Prohibited Liquids Present No **Comment**

Contents-Drum or Box

	Value	Comment		Value	Comment
Lead?	No		**Mercury Present?**	No	
Wet Cell Batteries?	No		**Explosives?**	No	
Prohibited Compressed Gases?	No		**PCBs Present?**	Yes - Acceptable	PCB waste without liquids.
			PCB Mass (lbs)	665.03	
Non-Mixed Hazardous Waste Present?	No		**Sealed Containers Over 4L?**	No	

Non-Radionuclide Pyrophoric Materials Present? No

Waste exhibiting the characteristics of Ignitability, Corrosivity or Reactivity Present? No

Wastes Incompatible with backfill, seal and panel closure materials, container and packaging materials,shipping container or other wastes? No

Impenetrable Dense Objects? No

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
55-GAL DRUM (17c)	1.000	EACH	59.000	59.000

Waste Items byWeight

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
plastic sheeting, squares, straps	1.000	EACH	10.000	10.000

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Oil-Dri (404 gm/liter) 0.42 lb/pint	160.000	PINTS	0.420	67.200

Batch Id RTR11-00157 **Container Id** 10191654 **Analysis Id** 0000074966

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	0.000
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	0.000
Other Inorganic Materials	0.000	67.200
Cellulosics	0.000	0.000
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	10.000
Inorganic matrix	0.000	0.000
Organic matrix	100.000	587.830
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	142.000
Plastic (packaging materials)	0.000	0.000
Cellulosics Packaging	0.000	0.000

Analysis Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
1989540	DMOORE	01-MAY-2011 20:41	

Batch Id RTR11-00157 **Container Id** 10177737 **Analysis Id** 0000074968

Container Type C drum, 83 Gallon **Analysis Status** Pass

RTR Date 01-MAY-2011 22:05 **Gross Weight** 617.400 **Lbs.** **Net Weight** 470.400 **Lbs.**

Equipment Z-213-106 **Waste Matrix Code** S3114 **IDC** RF-003 Organic Setups, Oil Solids

Recording Id 2RTR11-00096 **Procedure Id** INST-OI-12 **Revision** 46 **Approval Level** SPM

Is Test Pattern Resolution Ok? Yes **Start Side** A **Replicate** No **OIO** No

Audio Visual Ok? Yes **Closure Date** 03-AUG-1972 00:00 **Operator** DMOORE

Result Comment Waste appears to be sludge.

Package

IDC Correct Yes **Recommended IDC** **Summary Category** S3000

Idc Change Reason

Rigid Liner Present? No **LinerType** NO LINER

Liner Punctured? N/A **Sharp Objects?** No

Liner Lid Present? No **Sharp Objects Are Protected?** Yes

Liner Lid Deformed? N/A **Layers Of Confinement** 2

Fill Factor 85

Bag Closure Method Twisted and Taped

Liquids

Liquid Present? No **Internal Container with Liquid** No

Internal Container with Liquid 0 pints **LA Candidate** No

Liquid Between Liner & Drum 0 pints **Containerized Liquid**

Total Liquid Amount 0 pints **Containerized Liquid Amt** 0 pints

Other Liquids 0 pints **Comment**

Prohibited Liquids Present No **Comment**

Contents-Drum or Box

	Value	Comment		Value	Comment
Lead?	No		**Mercury Present?**	No	
Wet Cell Batteries?	No		**Explosives?**	No	
Prohibited Compressed Gases?	No		**PCBs Present?**	Yes - Acceptable	PCB waste without liquds.
			PCB Mass (lbs)	470.4	
Non-Mixed Hazardous Waste Present?	No		**Sealed Containers Over 4L?**	No	

Non-Radionuclide Pyrophoric Materials Present? No

Waste exhibiting the characteristics of Ignitability, Corrosivity or Reactivity Present? No

Wastes Incompatible with backfill, seal and panel closure materials, container and packaging materials,shipping container or other wastes? No

Impenetrable Dense Objects? No

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Drum plastic bag	1.000	EACH	1.000	1.000
O-ring plastic bag	1.000	EACH	4.000	4.000
55-GAL DRUM (17c)	1.000	EACH	59.000	59.000

Waste Items byWeight

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
1Micron Ful-flo Filter	2.000	EACH	1.040	2.080

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Oil-Dri (404 gm/liter) 0.42 lb/pint	190.000	PINTS	0.420	79.800

Batch Id RTR11-00157 **Container Id** 10177737 **Analysis Id** 0000074968

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	0.000
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	0.000
Other Inorganic Materials	0.000	79.800
Cellulosics	0.000	0.000
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	2.080
Inorganic matrix	0.000	0.000
Organic matrix	100.000	388.520
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	142.000
Plastic (packaging materials)	0.000	5.000
Cellulosics Packaging	0.000	0.000

Analysis Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
1989598	DMOORE	01-MAY-2011 22:05	

Batch Id RTR11-00157 **Container Id** 10149095 **Analysis Id** 0000074971

Container Type C drum, 83 Gallon **Analysis Status** Pass

RTR Date 01-MAY-2011 23:01 **Gross Weight** 257.985 **Lbs.** **Net Weight** 113.985 **Lbs**

Equipment Z-213-106 **Waste Matrix Code** S5300 **IDC** RF-330 Paper and Rags-Dry

Recording Id 2RTR11-00096 **Procedure Id** INST-OI-12 **Revision** 46 **Approval Level** SPM

Is Test Pattern Resolution Ok? Yes **Start Side** A **Replicate** No **OIO** No

Audio Visual Ok? Yes **Closure Date** 08-MAR-2007 18:03 **Operator** DMOORE

Result Comment Remaining waste appears to be paper, rags, filter media.

Package

IDC Correct Yes **Recommended IDC** **Summary Category** S5000

Idc Change Reason

Rigid Liner Present? No **LinerType** NO LINER

Liner Punctured? N/A **Sharp Objects?** No

Liner Lid Present? No **Sharp Objects Are Protected?** Yes

Liner Lid Deformed? N/A **Layers Of Confinement** 2

Fill Factor 100

Bag Closure Method Twisted and Taped

Liquids

Liquid Present? No **Internal Container with Liquid** No

Internal Container with Liquid 0 pints **LA Candidate** No

Liquid Between Liner & Drum 0 pints **Containerized Liquid**

Total Liquid Amount 0 pints **Containerized Liquid Amt** 0 pints

Other Liquids 0 pints **Comment**

Prohibited Liquids Present No **Comment**

Contents-Drum or Box

	Value	Comment		Value	Comment
Lead?	No		**Mercury Present?**	No	
Wet Cell Batteries?	No		**Explosives?**	No	
Prohibited Compressed Gases?	No		**PCBs Present?**	No	
			PCB Mass (lbs)	0	
Non-Mixed Hazardous Waste Present?	No		**Sealed Containers Over 4L?**	No	

Non-Radionuclide Pyrophoric Materials Present? No

Waste exhibiting the characteristics of Ignitability, Corrosivity or Reactivity Present? No

Wastes Incompatible with backfill, seal and panel closure materials, container and packaging materials,shipping container or other wastes? No

Impenetrable Dense Objects? No

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Drum plastic bag	2.000	EACH	1.000	2.000
55-GAL DRUM (17c)	1.000	EACH	59.000	59.000

Waste Items byWeight

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Misc metals, can	1.000	EACH	3.000	3.000
D batteries	1.000	EACH	1.000	1.000
Plastic sheeting, liner lid	1.000	EACH	15.000	15.000
Cardboard liner	1.000	EACH	4.000	4.000
1/2 Gal Poly Bottle	3.000	EACH	0.460	1.380

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Oil-Dri (404 gm/liter) 0.42 lb/pint	6.000	PINTS	0.420	2.520

Batch Id RTR11-00157 **Container Id** 10149095 **Analysis Id** 0000074971

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	3.000
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	1.000
Other Inorganic Materials	0.000	2.520
Cellulosics	100.000	91.085
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	16.380
Inorganic matrix	0.000	0.000
Organic matrix	0.000	0.000
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	142.000
Plastic (packaging materials)	0.000	2.000
Cellulosics Packaging	0.000	0.000

Analysis Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
1989617	DMOORE	01-MAY-2011 23:01	

Batch Id RTR11-00157 **Container Id** 10113547 **Analysis Id** 0000074973

Container Type C drum, 83 Gallon **Analysis Status** Pass

RTR Date 02-MAY-2011 11:33 **Gross Weight** 286.650 Lbs. **Net Weight** 142.650 Lbs

Equipment Z-213-106 **Waste Matrix Code** S5490 **IDC** RF-750 Pits 11 & 12 Debris

Recording Id 2RTR11-00096 **Procedure Id** INST-OI-12 **Revision** 46 **Approval Level** SPM

Is Test Pattern Resolution Ok? Yes **Start Side** A **Replicate** No **OIO** No

Audio Visual Ok? Yes **Closure Date** 15-JAN-1975 00:00 **Operator** CTIEGS

Result Comment Remaining waste appears to contain paper and rags, PPE .
Rework: Updated waste parameters for plastic bagging. cjs 05/11/11

Package

IDC Correct Yes **Recommended IDC** **Summary Category** S5000

Idc Change Reason

Rigid Liner Present? No **LinerType** NO LINER

Liner Punctured? N/A **Sharp Objects?** Yes

Liner Lid Present? No **Sharp Objects Are Protected?** Yes

Liner Lid Deformed? N/A **Layers Of Confinement** 3

Fill Factor 98

Bag Closure Method Twisted and Taped

Liquids

Liquid Present? Yes **Internal Container with Liquid** No

Internal Container with Liquid 0 pints **LA Candidate** No

Liquid Between Liner & Drum 0 pints **Containerized Liquid**

Total Liquid Amount 2.06 pints **Containerized Liquid Amt** 0 pints

Other Liquids 2.06 pints **Comment** approx .06 pts liquid in bagging at the second chine, approx 2 pts liquid at bottom of waste.

Prohibited Liquids Present No **Comment**

Contents-Drum or Box

	Value	Comment		Value	Comment
Lead?	Yes, Acceptable	tape and tid.	**Mercury Present?**	No	
Wet Cell Batteries?	No		**Explosives?**	No	
Prohibited Compressed Gases?	No		**PCBs Present?**	No	
			PCB Mass (lbs)	0	
Non-Mixed Hazardous Waste Present?	No		**Sealed Containers Over 4L?**	No	

Non-Radionuclide Pyrophoric Materials Present? No

Waste exhibiting the characteristics of Ignitability, Corrosivity or Reactivity Present? No

Wastes Incompatible with backfill, seal and panel closure materials, container and packaging materials,shipping container or other wastes? No

Impenetrable Dense Objects? No

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Drum plastic bag	2.000	EACH	1.000	2.000
55-GAL DRUM (17c)	1.000	EACH	59.000	59.000

Waste Items byWeight

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
plastic bagging	1.000	EACH	1.000	1.000
liqght bulb	1.000	EACH	0.120	0.120
misc metals, brushed, nuts, snapes	1.000	EACH	1.000	1.000
lead pieces of tape, TID, misc..	1.000	EACH	1.000	1.000
Plastic bag for waste	4.000	EACH	0.250	1.000
30 ml Glove	1.000	EACH	0.640	0.640

Batch Id RTR11-00157 **Container Id** 10113547 **Analysis Id** 0000074973

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Oil-Dri (404 gm/liter) 0.42 lb/pint	100.000	PINTS	0.420	42.000
Liquids for Other Inorganics	2.060	PINTS	1.000	2.060

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	1.000
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	1.000
Other Inorganic Materials	0.000	44.180
Cellulosics	100.000	93.830
Rubber	0.000	0.640
Plastic (Waste Materials)	0.000	2.000
Inorganic matrix	0.000	0.000
Organic matrix	0.000	0.000
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	142.000
Plastic (packaging materials)	0.000	2.000
Cellulosics Packaging	0.000	0.000

Analysis Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
2000583	CSIMMONS	11-MAY-2011 13:38	Rework
1990180	CTIEGS	02-MAY-2011 11:36	
1990177	CTIEGS	02-MAY-2011 11:33	

AMWTP
Advanced Mixed Waste Treatment Project

AMWTP
RTR Analysis Report

Date: 05-Feb-2013
Time: 10:10

Batch Id RTR11-00157 **Container Id** 10023744 **Analysis Id** 0000074974

Container Type C drum, 83 Gallon **Analysis Status** Pass

RTR Date 02-MAY-2011 12:08 **Gross Weight** 249.165 Lbs. **Net Weight** 105.165 Lbs
Equipment Z-213-106 **Waste Matrix Code** S5300 **IDC** RF-336 Paper and Rags-Moist
Recording Id 2RTR11-00096 **Procedure Id** INST-OI-12 **Revision** 46 **Approval Level** SPM
Is Test Pattern Resolution Ok? Yes **Start Side** A **Replicate** No **OIO** No
Audio Visual Ok? Yes **Closure Date** 18-JUN-1996 00:00 **Operator** CTIEGS

Result Comment Remaining waste appears to contain paper and rags.
Rework: Updated liquids field cjs 05/11/11

Package

IDC Correct Yes **Recommended IDC** **Summary Category** S5000
Idc Change Reason
Rigid Liner Present? No **LinerType** NO LINER
Liner Punctured? N/A **Sharp Objects?** No
Liner Lid Present? No **Sharp Objects Are Protected?** Yes
Liner Lid Deformed? N/A **Layers Of Confinement** 3
Fill Factor 98
Bag Closure Method Twisted and Taped

Liquids

Liquid Present? Yes **Internal Container with Liquid** No
Internal Container with Liquid .13 pints **LA Candidate** No
Liquid Between Liner & Drum 0 pints **Containerized Liquid**
Total Liquid Amount .13 pints **Containerized Liquid Amt** 0 pints
Other Liquids 0 pints **Comment** .01 pts in bulb middle of waste, .06 pts in two locations in poly bottles at bottom of waste.
Prohibited Liquids Present No **Comment**

Contents-Drum or Box

	Value	Comment		Value	Comment
Lead?	Yes, Acceptable	lead tape toward bottom of waste.	**Mercury Present?**	No	
Wet Cell Batteries?	No		**Explosives?**	No	
Prohibited Compressed Gases?	No		**PCBs Present?**	No	
			PCB Mass (lbs)	0	
Non-Mixed Hazardous Waste Present?	No		**Sealed Containers Over 4L?**	No	

Non-Radionuclide Pyrophoric Materials Present? No
Waste exhibiting the characteristics of Ignitability, Corrosivity or Reactivity Present? No
Wastes incompatible with backfill, seal and panel closure materials, container and packaging materials,shipping container or other wastes? No
Impenetrable Dense Objects? No

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Drum plastic bag	2.000	EACH	1.000	2.000
55-GAL DRUM (17c)	1.000	EACH	59.000	59.000

Batch Id RTR11-00157 **Container Id** 10023744 **Analysis Id** 0000074974

Waste Items byWeight

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
light bulb	1.000	EACH	0.120	0.120
respirator	1.000	EACH	0.250	0.250
plastic sheeting and poly bottles	1.000	EACH	5.000	5.000
lead tape	1.000	EACH	0.120	0.120
misc metals, screws,wire.	1.000	EACH	0.500	0.500
rubber hose, gloves at top.	1.000	EACH	1.000	1.000
Cardboard liner	1.000	EACH	4.000	4.000
Plastic bag for waste	1.000	EACH	0.250	0.250
Poly bottles (1 gal)	2.000	EACH	1.000	2.000

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Oil-Dri (404 gm/liter) 0.42 lb/pint	2.000	PINTS	0.420	0.840
Liquids for Other Inorganics	0.130	PINTS	1.000	0.130

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	0.500
Aluminum-based Metals/Alloys	0.000	0.175
Other metals	0.000	0.120
Other Inorganic Materials	0.000	1.090
Cellulosics	100.000	95.030
Rubber	0.000	1.000
Plastic (Waste Materials)	0.000	7.250
Inorganic matrix	0.000	0.000
Organic matrix	0.000	0.000
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	142.000
Plastic (packaging materials)	0.000	2.000
Cellulosics Packaging	0.000	0.000

Analysis Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
2000579	CSIMMONS	11-MAY-2011 13:29	Rework
1990211	CTIEGS	02-MAY-2011 12:19	
1990207	CTIEGS	02-MAY-2011 12:08	

Batch Id RTR11-00157 **Container Id** 10107175 **Analysis Id** 0000074975

Container Type 83u 83 Gallon unmarked and non-DOT apprvd cntr **Analysis Status** Pass

RTR Date 02-MAY-2011 13:29 **Gross Weight** 352.800 Lbs. **Net Weight** 208.800 Lbs

Equipment Z-213-106 **Waste Matrix Code** S5300 **IDC** RF-336 Paper and Rags-Moist

Recording Id 2RTR11-00096 **Procedure Id** INST-OI-12 **Revision** 46 **Approval Level** SPM

Is Test Pattern Resolution Ok? Yes **Start Side** A **Replicate** No **OIO** No

Audio Visual Ok? Yes **Closure Date** 01-JUL-2006 08:02 **Operator** BHUGGINS

Result Comment The waste in this container appears to be primarily cellulosics in the fom of paper ,rags,wipes,towels and lumber.

Package

IDC Correct Yes **Recommended IDC** **Summary Category** S5000

Idc Change Reason

Rigid Liner Present? No **LinerType** NO LINER

Liner Punctured? N/A **Sharp Objects?** No

Liner Lid Present? No **Sharp Objects Are Protected?** Yes

Liner Lid Deformed? N/A **Layers Of Confinement** 2

Fill Factor 98

Bag Closure Method Twisted and Taped

Liquids

Liquid Present? No **Internal Container with Liquid** No

Internal Container with Liquid 0 pints **LA Candidate** No

Liquid Between Liner & Drum 0 pints **Containerized Liquid**

Total Liquid Amount 0 pints **Containerized Liquid Amt** 0 pints

Other Liquids 0 pints **Comment**

Prohibited Liquids Present No **Comment**

Contents-Drum or Box

	Value	Comment		Value	Comment
Lead?	Yes, Acceptable	Lead tape at mid container	**Mercury Present?**	No	
Wet Cell Batteries?	No		**Explosives?**	No	
Prohibited Compressed Gases?	No		**PCBs Present?**	No	
			PCB Mass (lbs)	0	
Non-Mixed Hazardous Waste Present?	No		**Sealed Containers Over 4L?**	No	

Non-Radionuclide Pyrophoric Materials Present? No

Waste exhibiting the characteristics of Ignitability, Corrosivity or Reactivity Present? No

Wastes Incompatible with backfill, seal and panel closure materials, container and packaging materials,shipping container or other wastes? No

Impenetrable Dense Objects? No

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Drum plastic bag	2.000	EACH	1.000	2.000
55-GAL DRUM (17c)	1.000	EACH	59.000	59.000

Waste Items byWeight

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Metal fasteners	1.000	EACH	1.000	1.000
Pipe Insulation	1.000	EACH	1.000	1.000
Lead tape	1.000	EACH	0.250	0.250
Nuts and Bolts	1.000	EACH	2.000	2.000
D-Cell batteries	11.000	EACH	0.250	2.750
Cardboard liner	1.000	EACH	4.000	4.000
1 Quart Plastic Container w/ Lid	1.000	EACH	0.140	0.140

Batch Id RTR11-00157 **Container Id** 10107175 **Analysis Id** 0000074975

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	3.000
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	3.000
Other Inorganic Materials	0.000	1.000
Cellulosics	100.000	201.660
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	0.140
Inorganic matrix	0.000	0.000
Organic matrix	0.000	0.000
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	142.000
Plastic (packaging materials)	0.000	2.000
Cellulosics Packaging	0.000	0.000

Analysis Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
1990230	BHUGGINS	02-MAY-2011 13:29	

Batch Id RTR11-00157 **Container Id** 10023690 **Analysis Id** 0000074976

Container Type C drum, 83 Gallon **Analysis Status** Pass

RTR Date 02-MAY-2011 14:12 **Gross Weight** 227.115 Lbs. **Net Weight** 67.115 Lbs

Equipment Z-213-106 **Waste Matrix Code** S5112 **IDC** RF-320 Heavy Non-special Source Metal

Recording Id 2RTR11-00096 **Procedure Id** INST-OI-12 **Revision** 46 **Approval Level** SPM

Is Test Pattern Resolution Ok? Yes **Start Side** A **Replicate** No **OIO** No

Audio Visual Ok? Yes **Closure Date** 10-JAN-1996 00:00 **Operator** BHUGGINS

Result Comment The waste in this container appears to be primarily other metals in the form of tantalum crucibles.

Package

IDC Correct Yes **Recommended IDC** **Summary Category** S5000

Idc Change Reason

Rigid Liner Present? Yes **LinerType** TYPE 1

Liner Punctured? Yes **Sharp Objects?** No

Liner Lid Present? Yes **Sharp Objects Are Protected?** Yes

Liner Lid Deformed? No **Layers Of Confinement** 3

Fill Factor 50

Bag Closure Method Twisted and Taped

Liquids

Liquid Present? Yes **Internal Container with Liquid** No

Internal Container with Liquid 0 pints **LA Candidate** No

Liquid Between Liner & Drum 0 pints **Containerized Liquid**

Total Liquid Amount .06 pints **Containerized Liquid Amt** 0 pints

Other Liquids .06 pints **Comment** 2TBSP Liquid in waste at bottom of container.

Prohibited Liquids Present No **Comment**

Contents-Drum or Box

	Value	Comment		Value	Comment
Lead?	No		**Mercury Present?**	No	
Wet Cell Batteries?	No		**Explosives?**	No	
Prohibited Compressed Gases?	No		**PCBs Present?**	No	
			PCB Mass (lbs)	0	
Non-Mixed Hazardous Waste Present?	No		**Sealed Containers Over 4L?**	No	

Non-Radionuclide Pyrophoric Materials Present? No

Waste exhibiting the characteristics of Ignitability, Corrosivity or Reactivity Present? No

Wastes Incompatible with backfill, seal and panel closure materials, container and packaging materials,shipping container or other wastes? No

Impenetrable Dense Objects? No

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
90 mil liner	1.000	EACH	16.000	16.000
Drum plastic bag	2.000	EACH	1.000	2.000
55-GAL DRUM (17c)	1.000	EACH	59.000	59.000

Waste Items byWeight

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Plastic bags for waste	1.000	EACH	2.000	2.000
Fiber pack	1.000	EACH	6.000	6.000
Plastic bag for waste	3.000	EACH	0.250	0.750

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Oil-Dri (404 gm/liter) 0.42 lb/pint	8.000	PINTS	0.420	3.360
Liquids for Other Inorganics	0.060	PINTS	1.000	0.060

Batch Id RTR11-00157 **Container Id** 10023690 **Analysis Id** 0000074976

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	0.000
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	100.000	54.945
Other Inorganic Materials	0.000	3.420
Cellulosics	0.000	6.000
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	2.750
Inorganic matrix	0.000	0.000
Organic matrix	0.000	0.000
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	142.000
Plastic (packaging materials)	0.000	18.000
Cellulosics Packaging	0.000	0.000

Analysis Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
1990280	BHUGGINS	02-MAY-2011 14:12	

----End of RTR Analysis Report----

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Advanced Mixed Waste Treatment Project

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RTR Replicate Comparison Report

Date: 05-Feb-2013

Time: 10:13

RTR Batch Id: RTR11-00157 **Container Id:** 10233274 **Equipment Id:** Z-213-106

Container type Description: **drum, 83 Gallon** Gen-IDC: **RF-003** Gross Weight(Lbs): **703.395**

	Original Analysis		Replicate Analysis	
Analysis Id / Date:	0000074944	01-MAY-2011 12:05	0000074948	01-MAY-2011 13:39
Procedure /Revision:	INST-OI-12	46	INST-OI-12	46
Recording Media Id:	2RTR11-00096		2RTR11-00096	
Starting Position:	A		A	
Is Test Pattern Resolution Ok?	Y		Y	
Audio Visual Ok?	Y		Y	
Personnel Name:	CONLEY BEEBE		DAVEY SUMNERS	
IDC Ok? / Recommended IDC:	Y		Y	
IDC Change Reason:				
Summary Category / Waste matrix Code:	S3000	S3114	S3000	S3114
Packaging				
Rigid Liner Present?	N		N	
Liner Type Code:	NO LINER		NO LINER	
Liner Punctured:	NA		NA	
Liner Lid Deformed:	NA		NA	
Layers Of Confinement:	1		1	
Sharp Objects?	N		N	
Sharp Objects Protected?	Y		Y	
Fill Factor(%):	85		90	
Bag Closure Method:	Twisted and Taped		Twisted and Taped	
Liner Lid Present?:	N		N	
Liquids: (Volume in Pints)				
Liquid Present?	Y		Y	
Internal Container with Liquid Containerized Liquid	N	Approx. 12 pints of liquid from the bottom of the waste to above the bottom chine.	N	approx 12 pints of liquids on side of drum at lower chime.
Other Liquids:	12		12	
Internal Container with Liquid Amt:				
Liquid Between Liner and Drum:	0		0	
Containerized Liquid:	0		0	
Total Liquid Amount:	12		12	
LA Candidate?	N		N	
Prohibited Liquids Present	Y	PCB waste with liquid. Liquid > 1% by volume.	Y	PCB's with liquids

Contents:	Y/N	Comments	Y/N	Comments
Sealed Containers over 4L?	N		N	
Lead Present?	N		N	
Explosives Present?	N		N	
Mercury Present?	N		N	
Wet Cell Batteries Detected?	N		N	

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RTR Replicate Comparison Report

Date: 05-Feb-2013

Time: 10:13

RTR Batch Id: RTR11-00157 **Container Id:** 10233274 **Equipment Id:** Z-213-106

	Original Analysis		Replicate Analysis	
Prohibited Compressed Gas Present?	N		N	
PCBs Present?	Yes - Prohibited	PCB waste with liquid. RF-003	Yes - Prohibited	PCB's with liquid
PCB Mass (lbs)	557.4		557.4	
Non-Radionuclide Pyrophoric Materials Present?	N		N	
Waste exhibiting the characteristics of ignitability, Corrosivity or reactivity Present?	N		N	
Non-Mixed Hazardous Waste Present?	N		N	
Waste Incompatibles with backfill, Seal and panel closure materials, container and packaging material, shipping container or other wastes?	N		N	
Impenetrable Dense Objects?	No		No	
Result Comment:	The remaining waste appears to be sludge.		Waste appears to be primarily sludge.	

----------E-signature----------

Esig Approval ID	User ID	Signature Date	Comment
1997971	CNOWACKI	09-MAY-11	Replicate comparison report e-signed.

-----End of RTR Replicate Comparison Report-----

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Non-Conformance Report

Date: 06-Feb-2013

Time: 15:08

*****Batch NCR(s)*****

Batch Type	RTR	Batch ID	RTR11-00157		
Trackwise Number		**Status**	**Opened Date**	**Closed Date**	

*****Container NCR(s)*****

Container ID *or related Batch ID*	Trackwise Number	Status	Opened Date	Closed Date
10013528	12849	CLOSED	08-MAR-05	26-MAY-11
10013528	12956	CLOSED	13-MAR-05	26-MAY-11
10013528	62252	CLOSED	01-MAY-11	26-OCT-11
10013528	7527	CLOSED	03-JUL-04	25-MAY-11
10013528	9975	CLOSED	06-SEP-04	26-MAY-11
10065342	62225	OPEN	01-MAY-11	
10065342	62226	OPEN	01-MAY-11	
10071873	62218	OPEN	30-APR-11	
10071873	62219	OPEN	30-APR-11	
10145329	62222	OPEN	01-MAY-11	
10145329	62223	CLOSED	01-MAY-11	05-JUL-11
10158395	62240	OPEN	01-MAY-11	
10233274	62231	OPEN	01-MAY-11	
10233274	62234	CLOSED	01-MAY-11	05-JUL-11
10234973	62229	OPEN	01-MAY-11	
10240990	62244	OPEN	01-MAY-11	
10243844	62236	OPEN	01-MAY-11	
10229929	61292	CLOSED	29-MAR-11	28-JUN-11

*****End of Non-Conformance Report*****

NCR's 62222 and 62231 were initiated on PCB liquids in Containers 10145329 and 1023374, respectively. Container 10145329 was selected as the OTO and 1023374 as the Replicate Drum. The QAC for both of these Containers is not affected by the identification of the prohibited PCB liquids.

BLD
2/6/13

3 BLD 2/6/13

AMWTP

NON-CONFORMANCE REPORT

WIPP DATA - RTR

NCR #: 62222

Title: RTR Characterization	
Originator: Vaughn, Adaire	**Date Opened:** 05/01/11
Tag Applied: Yes	**Responsible Dept:** Plant Manager
Container ID: 10145329	**Batch #:** RTR11-00157
Characterization Problem: PCBs WITH Liquids	

LIQUIDS IDENTIFIED

Observable Liquid shall be less than 1% by Volume of the outermost container. Equal/Greater than 1% Volume?	YES
Internal containers with more than 60 mL or 3% by Volume Observable Liquid is Prohibited. Greater than 60ML/3% Volume?	
Containers with Hazardous Waste Number (HWN) U134 assigned shall have no observable liquid. Observable liquid identified?	
Originator Sign By: Adaire Vaughn	**Originator Sign Date:** 04/30/11

Production Comments:

Approved Remediation:

6 pts of liquid in the bottom of the drum.
QA comment: NCR 62223 (OIO exam) and NCR 62222 (original exam) were initiated for PCB liquid identified within the waste of container 10145329. NCR 62223 was administratively closed without further action to allow NCR 62222 to document resolution of the prohibited item. LR070511

Performed By:	**Performed Date:**

Waste Programs Evaluation/Verification:

SPM Verification Complete By:	**SPM Verification Complete Date:**
MLLW/LLW Verification Complete By:	**MLLW/LLW Verification Complete Date:**

QA Closure Comments:

QA Add'l Action Reqd By:	**QA Add'l Action Reqd Date:**
QA Verification Complete By:	**QA Verification Comp Date:**

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NON-CONFORMANCE REPORT

WIPP DATA - RTR

NCR #: 62231

Title: RTR Characterization	
Originator: Beebe, Conley	**Date Opened:** 05/01/11
Tag Applied: Yes	**Responsible Dept:** Plant Manager
Container ID: 10233274	**Batch #:** RTR11-00157
Characterization Problem: PCBs WITH Liquids	

LIQUIDS IDENTIFIED

Observable Liquid shall be less than 1% by Volume of the outermost container. Equal/Greater than 1% Volume?	YES
Internal containers with more than 60 mL or 3% by Volume Observable Liquid Is Prohibited. Greater than 60ML/3% Volume?	
Containers with Hazardous Waste Number (HWN) U134 assigned shall have no observable liquid. Observable liquid identified?	
Originator Sign By: Conley Beebe	**Originator Sign Date:** 05/01/11

Production Comments: **Approved Remediation:**

Drum 10233274 has Approx. 12 pints of liquid from the bottom of the waste to above the bottom chine.
QA comment: NCR 62231 (original exam) and NCR 62234(replicate exam) were initiated for PCB liquid identified within the waste of container 10233274. NCR 62234 was administratively closed without further processing to allow NCR 62231 to document resolution of the prohibited item. LR070511

Performed By:	**Performed Date:**
Waste Programs Evaluation/Verification:	
SPM Verification Complete By:	**SPM Verification Complete Date:**
MLLW/LLW Verification Complete By:	**MLLW/LLW Verification Complete Date:**
QA Closure Comments:	
QA Add'l Action Reqd By:	**QA Add'l Action Reqd Date:**
QA Verification Complete By:	**QA Verification Comp Date:**

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Advanced Mixed Waste Treatment Project

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Checklist Report

Date: 05-Feb-2013
Time: 10:09

Batch Id RTR11-00157 **Open Date** 30-APR-11 **Close Date** 02-MAY-11

Reviewer CHRIS NOWACKI **Approval Level** Independent Technical Reviewer
Approval Date 11-MAY-11 **Review Iteration** 1

Question Text	Answer	Requirement	Comment
1. Is the Batch Data Report (BDR) and Quality Assurance (QA) documentation complete with the following: o Real-Time Radiography (RTR) Batch Coversheet o Table of Contents (manual review only) o RTR Analysis reports o Replicate Scan o Replicate Comparison o Independent Observation o ITR checklist (Form-1412, manual review only) o Form-1491, Batch Data Report Supplemental Comment Form (manual review only) o Associated NCRs (referenced in Waste Tracking System [WTS]) o Audio/Video Recording References?	Yes		
2. Are there 20 containers or less in the batch?	Yes		
3. Was the image quality indicator (IQI) satisfactory?	Yes		
4. Does every container in the batch reference an audio/video recording?	Yes		
5. Is there a completed radiography data analysis for each container in the batch?	Yes		
6. Was each RTR Operator qualified at the time of the radiography event?	Yes		
7. Was the data generated in a technically correct manner using the correct revision of INST-OI-12, Real-Time Radiography Operations (Drum) or INST-OI-81, Real Time Radiography Operations (WIPP Certification for Boxes)?	No		See batch comments
8. Was the correct procedure and revision documented on all analysis reports?	Yes		
9. Has the E-signature History review been performed?	Yes		
10. Does the RTR operator confirm that the physical form matched the waste stream description and waste matrix code?	Yes		
11. Does the packaging weight plus the net weight equal the gross weight of the container in the estimated waste material parameters?	Yes		
12. Were all entries into the waste material items section assigned to the correct waste material parameters?	No		See batch comments
13. Has the description of rigid liners and layers of confinement been properly documented, as applicable?	Yes		
14. Was the presence or absence of prohibited items properly documented?	No		See batch comments
15. If prohibited items were identified, have appropriate nonconformance reports (NCRs) been generated?	Yes		
16. Were the containers examined between October and April in compliance with the preheat requirements?	Yes		
17. Were all proper units and significant figures used for all reported volumes/weights?	Yes		
18. Was there a valid replicate scan performed (at least one container per day, or once per testing batch, whichever is less frequent)? o Record the container number, the replicate observation date in the comment section of this checklist. o Record any issues or concerns in the batch comment section.	Yes		On 01-MAY-2011 a qualified operator performed the Replicate analysis for batch RTR11-00157 on container 10233274. There were small differences in fill factors these differences don't affect the DQOs or disposition of this container. No other differences were noted.
19. Was there a valid Operator Independent Observation (OIO) (not the replicate) performed (at least one container	Yes		On 01-MAY-2011 a qualified operator performed the OIO analysis for batch RTR11-00157 on

Batch Id RTR11-00157 **Open Date** 30-APR-11 **Close Date** 02-MAY-11

Reviewer CHRIS NOWACKI **Approval Level** Independent Technical Reviewer
Approval Date 11-MAY-11 **Review Iteration** 1

Question Text	Answer	Requirement	Comment
per day, or once per testing batch, whichever is less frequent)? o Record the container number and the OIO date in the comment section of this checklist. o Record any issues or concerns in the batch comment section.			container 10145329. There were differences in assignments for waste items by volume the liquid amounts. I agree with the original operator's assignment and no rework will be performed on the OIO. No other differences were noted.
20. Were any significant differences identified that would affect the original disposition of the replicate and OIO, or affect data quality objectives (DQOs)? If so, ensure an NCR was generated and WTS flagged.	No		
21. Were the RTR quality assurance objectives (QAOs) met? o Precision o Accuracy o Completeness o Comparability	Yes		
22. Were any NCRs generated for containers containing prohibited items, or any non-conforming conditions that failed to meet DQOs or QAOs? o If so, include the NCRs, as appropriate, in the BDR.	Yes		
23. Were the rework requirements clearly identified in WTS or on the BDR?	Yes		

Batch Id RTR11-00157 **Open Date** 30-APR-11 **Close Date** 02-MAY-11

Reviewer CHRIS NOWACKI **Approval Level** Independent Technical Reviewer
Approval Date 11-MAY-11 **Review Iteration** 2

Question Text	Answer	Requirement	Comment
1. Is the Batch Data Report (BDR) and Quality Assurance (QA) documentation complete with the following: o Real-Time Radiography (RTR) Batch Coversheet o Table of Contents (manual review only) o RTR Analysis reports o Replicate Scan o Replicate Comparison o Independent Observation o ITR checklist (Form-1412, manual review only) o Form-1491, Batch Data Report Supplemental Comment Form (manual review only) o Associated NCRs (referenced in Waste Tracking System [WTS]) o Audio/Video Recording References?	Yes		
2. Are there 20 containers or less in the batch?	Yes		
3. Was the image quality indicator (IQI) satisfactory?	Yes		
4. Does every container in the batch reference an audio/video recording?	Yes		
5. Is there a completed radiography data analysis for each container in the batch?	Yes		
6. Was each RTR Operator qualified at the time of the radiography event?	Yes		
7. Was the data generated in a technically correct manner using the correct revision of INST-OI-12, Real-Time Radiography Operations (Drum) or INST-OI-81, Real Time Radiography Operations (WIPP Certification for Boxes)?	Yes		
8. Was the correct procedure and revision documented on all analysis reports?	Yes		
9. Has the E-signature History review been performed?	Yes		
10. Does the RTR operator confirm that the physical form matched the waste stream description and waste matrix code?	Yes		
11. Does the packaging weight plus the net weight equal the gross weight of the container in the estimated waste material parameters?	Yes		
12. Were all entries into the waste material items section assigned to the correct waste material parameters?	Yes		
13. Has the description of rigid liners and layers of confinement been properly documented, as applicable?	Yes		
14. Was the presence or absence of prohibited items properly documented?	Yes		
15. If prohibited items were identified, have appropriate nonconformance reports (NCRs) been generated?	Yes		
16. Were the containers examined between October and April in compliance with the preheat requirements?	Yes		
17. Were all proper units and significant figures used for all reported volumes/weights?	Yes		
18. Was there a valid replicate scan performed (at least one container per day, or once per testing batch, whichever is less frequent)? o Record the container number, the replicate observation date in the comment section of this checklist. o Record any issues or concerns in the batch comment section.	Yes		On 01-MAY-2011 a qualified operator performed the Replicate analysis for batch RTR11-00157 on container 10233274. There were small differences in fill factors these differences don't affect the DQOs or disposition of this container. No other differences were noted.
19. Was there a valid Operator Independent Observation (OIO) (not the replicate) performed (at least one container	Yes		On 01-MAY-2011 a qualified operator performed the OIO analysis for batch RTR11-00157 on

Batch Id RTR11-00157 **Open Date** 30-APR-11 **Close Date** 02-MAY-11

Reviewer CHRIS NOWACKI **Approval Level** Independent Technical Reviewer
Approval Date 11-MAY-11 **Review Iteration** 2

Question Text	Answer	Requirement	Comment
per day, or once per testing batch, whichever is less frequent)? o Record the container number and the OIO date in the comment section of this checklist. o Record any issues or concerns in the batch comment section.			container 10145329. There were differences in assignments for waste items by volume the liquid amounts. I agree with the original operator's assignment and no rework will be performed on the OIO. No other differences were noted.
20. Were any significant differences identified that would affect the original disposition of the replicate and OIO, or affect data quality objectives (DQOs)? If so, ensure an NCR was generated and WTS flagged.	No		
21. Were the RTR quality assurance objectives (QAOs) met? o Precision o Accuracy o Completeness o Comparability	Yes		
22. Were any NCRs generated for containers containing prohibited items, or any non-conforming conditions that failed to meet DQOs or QAOs? o If so, include the NCRs, as appropriate, in the BDR.	Yes		
23. Were the rework requirements clearly identified in WTS or on the BDR?	Yes		

Batch Id RTR11-00157 **Open Date** 30-APR-11 **Close Date** 02-MAY-11

Reviewer CHRIS NOWACKI **Approval Level** Independent Technical Reviewer

Approval Date 17-MAY-11 **Review Iteration** 3

Question Text	Answer	Requirement	Comment
1. Is the Batch Data Report (BDR) and Quality Assurance (QA) documentation complete with the following: o Real-Time Radiography (RTR) Batch Coversheet o Table of Contents (manual review only) o RTR Analysis reports o Replicate Scan o Replicate Comparison o Independent Observation o ITR checklist (Form-1412, manual review only) o Form-1491, Batch Data Report Supplemental Comment Form (manual review only) o Associated NCRs (referenced in Waste Tracking System [WTS]) o Audio/Video Recording References?	Yes		
2. Are there 20 containers or less in the batch?	Yes		
3. Was the image quality indicator (IQI) satisfactory?	Yes		
4. Does every container in the batch reference an audio/video recording?	Yes		
5. Is there a completed radiography data analysis for each container in the batch?	Yes		
6. Was each RTR Operator qualified at the time of the radiography event?	Yes		
7. Was the data generated in a technically correct manner using the correct revision of INST-OI-12, Real-Time Radiography Operations (Drum) or INST-OI-81, Real Time Radiography Operations (WIPP Certification for Boxes)?	Yes		
8. Was the correct procedure and revision documented on all analysis reports?	Yes		
9. Has the E-signature History review been performed?	Yes		
10. Does the RTR operator confirm that the physical form matched the waste stream description and waste matrix code?	Yes		
11. Does the packaging weight plus the net weight equal the gross weight of the container in the estimated waste material parameters?	Yes		
12. Were all entries into the waste material items section assigned to the correct waste material parameters?	Yes		
13. Has the description of rigid liners and layers of confinement been properly documented, as applicable?	Yes		
14. Was the presence or absence of prohibited items properly documented?	Yes		
15. If prohibited items were identified, have appropriate nonconformance reports (NCRs) been generated?	Yes		
16. Were the containers examined between October and April in compliance with the preheat requirements?	Yes		
17. Were all proper units and significant figures used for all reported volumes/weights?	Yes		
18. Was there a valid replicate scan performed (at least one container per day, or once per testing batch, whichever is less frequent)? o Record the container number, the replicate observation date in the comment section of this checklist. o Record any issues or concerns in the batch comment section.	Yes		On 01-MAY-2011 a qualified operator performed the Replicate analysis for batch RTR11-00157 on container 10233274. There were small differences in fill factors these differences don't affect the DQOs or disposition of this container. No other differences were noted.
19. Was there a valid Operator Independent Observation (OIO) (not the replicate) performed (at least one container	Yes		On 01-MAY-2011 a qualified operator performed the OIO analysis for batch RTR11-00157 on

Batch Id RTR11-00157 **Open Date** 30-APR-11 **Close Date** 02-MAY-11

Reviewer CHRIS NOWACKI **Approval Level** Independent Technical Reviewer
Approval Date 17-MAY-11 **Review Iteration** 3

Question Text	Answer	Requirement	Comment
per day, or once per testing batch, whichever is less frequent)? o Record the container number and the OIO date in the comment section of this checklist. o Record any issues or concerns in the batch comment section.			container 10145329. There were differences in assignments for waste items by volume the liquid amounts. I agree with the original operator's assignment and no rework will be performed on the OIO. No other differences were noted.
20. Were any significant differences identified that would affect the original disposition of the replicate and OIO, or affect data quality objectives (DQOs)? If so, ensure an NCR was generated and WTS flagged.	No		
21. Were the RTR quality assurance objectives (QAOs) met? o Precision o Accuracy o Completeness o Comparability	Yes		
22. Were any NCRs generated for containers containing prohibited items, or any non-conforming conditions that failed to meet DQOs or QAOs? o If so, include the NCRs, as appropriate, in the BDR.	Yes		
23. Were the rework requirements clearly identified in WTS or on the BDR?	Yes		

Batch Id RTR11-00157 **Open Date** 30-APR-11 **Close Date** 02-MAY-11

Reviewer CHRIS NOWACKI **Approval Level** Independent Technical Reviewer

Approval Date 17-MAY-11 **Review Iteration** 4

Question Text	Answer	Requirement	Comment
1. Is the Batch Data Report (BDR) and Quality Assurance (QA) documentation complete with the following: o Real-Time Radiography (RTR) Batch Coversheet o Table of Contents (manual review only) o RTR Analysis reports o Replicate Scan o Replicate Comparison o Independent Observation o ITR checklist (Form-1412, manual review only) o Form-1491, Batch Data Report Supplemental Comment Form (manual review only) o Associated NCRs (referenced in Waste Tracking System [WTS]) o Audio/Video Recording References?	Yes		
2. Are there 20 containers or less in the batch?	Yes		
3. Was the image quality indicator (IQI) satisfactory?	Yes		
4. Does every container in the batch reference an audio/video recording?	Yes		
5. Is there a completed radiography data analysis for each container in the batch?	Yes		
6. Was each RTR Operator qualified at the time of the radiography event?	Yes		
7. Was the data generated in a technically correct manner using the correct revision of INST-OI-12, Real-Time Radiography Operations (Drum) or INST-OI-81, Real Time Radiography Operations (WIPP Certification for Boxes)?	Yes		
8. Was the correct procedure and revision documented on all analysis reports?	Yes		
9. Has the E-signature History review been performed?	Yes		
10. Does the RTR operator confirm that the physical form matched the waste stream description and waste matrix code?	Yes		
11. Does the packaging weight plus the net weight equal the gross weight of the container in the estimated waste material parameters?	Yes		
12. Were all entries into the waste material items section assigned to the correct waste material parameters?	Yes		
13. Has the description of rigid liners and layers of confinement been properly documented, as applicable?	Yes		
14. Was the presence or absence of prohibited items properly documented?	Yes		
15. If prohibited items were identified, have appropriate nonconformance reports (NCRs) been generated?	Yes		
16. Were the containers examined between October and April in compliance with the preheat requirements?	Yes		
17. Were all proper units and significant figures used for all reported volumes/weights?	Yes		
18. Was there a valid replicate scan performed (at least one container per day, or once per testing batch, whichever is less frequent)? o Record the container number, the replicate observation date in the comment section of this checklist. o Record any issues or concerns in the batch comment section.	Yes		On 01-MAY-2011 a qualified operator performed the Replicate analysis for batch RTR11-00157 on container 10233274. There were small differences in fill factors these differences don't affect the DQOs or disposition of this container. No other differences were noted.
19. Was there a valid Operator Independent Observation (OIO) (not the replicate) performed (at least one container	Yes		On 01-MAY-2011 a qualified operator performed the OIO analysis for batch RTR11-00157 on

Batch Id RTR11-00157 **Open Date** 30-APR-11 **Close Date** 02-MAY-11

Reviewer CHRIS NOWACKI **Approval Level** Independent Technical Reviewer
Approval Date 17-MAY-11 **Review Iteration** 4

Question Text	Answer	Requirement	Comment
per day, or once per testing batch, whichever is less frequent)? o Record the container number and the OIO date in the comment section of this checklist. o Record any issues or concerns in the batch comment section.			container 10145329. There were differences in assignments for waste items by volume the liquid amounts. I agree with the original operator's assignment and no rework will be performed on the OIO. No other differences were noted.
20. Were any significant differences identified that would affect the original disposition of the replicate and OIO, or affect data quality objectives (DQOs)? If so, ensure an NCR was generated and WTS flagged.	No		
21. Were the RTR quality assurance objectives (QAOs) met? o Precision o Accuracy o Completeness o Comparability	Yes		
22. Were any NCRs generated for containers containing prohibited items, or any non-conforming conditions that failed to meet DQOs or QAOs? o If so, include the NCRs, as appropriate, in the BDR.	Yes		
23. Were the rework requirements clearly identified in WTS or on the BDR?	Yes		

Batch Id RTR11-00157 **Open Date** 30-APR-11 **Close Date** 02-MAY-11

Reviewer KEN BURNSIDE **Approval Level** SPM Data Validation
Approval Date 12-MAY-11 **Review Iteration** 1

Question Text	Answer	Requirement	Comment
(1) Has the batch received a Data Generation Level Independent Technical Review?	N/A	MP-TRUW-8.2, C3-10b(1)	
(2) Is the Independent Technical Review checklist complete?	N/A	MP-TRUW-8.2, C3-10b(1)	
(3) When identified, were polychlorinated biphenyls (PCBs), mercury, lead, or other hazardous contaminants consistent with the waste stream acceptable knowledge (AK) Summary Report(s) and/or AK documentation?	N/A	MP-TRUW-8.2, C4-3	
(4) Are any ignitable, corrosive, or reactive wastes identified in this waste?	N/A	MP-TRUW-8.2, C4-3	
(5) Are the packaging configurations identified on the real-time radiography (RTR) consistent with the waste stream AK Summary Report(s) and/or AK documentation?	N/A	MP-TRUW-8.2, C4-3	
(6) Do the containers in this batch contain typical waste items consistent with waste stream AK Summary Report(s) and/or AK documentation?	N/A	MP-TRUW-8.2, C4-3	
(7) Are the Waste Matrix Codes (WMCs) and physical form descriptions consistent with AK?	N/A	MP-TRUW-8.2, C4-3	
(8) Have all AK discrepancies been resolved and have all AK Resolution checklists been approved? Reference all waste stream AK documentation used in review of this data package.	N/A	MP-TRUW-8.2, C4-3	
(9) Have all applicable Quality Assurance Objectives (QAOs) been met, including precision, accuracy, completeness, and comparability, by using the appropriate acceptance criteria for each as specified in MP-TRUW-8.2, Quality Assurance Project Plan Section C3-4? Precision ¿ Verified prior to use by tuning precisely enough to demonstrate compliance with QAOs through viewing an image test pattern, as evidenced by a satisfactory Image Quality Indicator (IQI). ¿ Have discrepancies, if any, between radiography operators been reconciled? Accuracy ¿ Use of a target to tune the image for maximum sharpness as evidenced by a satisfactory IQI and by requiring operators to successfully identify 100% of the required items in a training container during initial and subsequent qualifications. Completeness ¿ An audio/videotape (or equivalent media) of the radiography examination and a validated radiography data form will be obtained for 100% of the retrievably stored waste container in the program for all waste containers subject to radiography. Comparability ¿ Use of standardized radiography procedures and operator qualifications.	N/A	MP-TRUW-8.2, C3-4a	
(10) Do the waste container contents match the WMC, waste stream description and identify the absence of prohibited items?	N/A	MP-TRUW-8.2, C1-3 and B3-11	
(11) If residual liquids exist in the container, is an estimate of quantity given?	N/A	MP-TRUW-8.2, C1-3	
(12) Do the individual container reports contain the (a) IDC, (b) Waste Matrix Code, (c) audio/video recording reference, (d) gross container weight, (e) waste material parameter weights, and (f) signature and date of examination?	N/A	MP-TRUW-8.2, C1-3 and C3-11a	
(13) Have the IDC, WMC, and/or waste stream for all	N/A	MP-TRUW-8.2, C1-3 and	

Batch Id RTR11-00157 **Open Date** 30-APR-11 **Close Date** 02-MAY-11

Reviewer KEN BURNSIDE **Approval Level** SPM Data Validation

Approval Date 12-MAY-11 **Review Iteration** 1

Question Text	Answer	Requirement	Comment
containers in the batch remained the same as originally assigned by the historical designation? If not, note the container number in the comment field and notify the Acceptable Knowledge Expert (AKE) if NCR does not exist on the WMC and IDC change.		C3-4a	
(14) Was a replicate scan performed by an independent operator on at least one container per day or once per testing batch, whichever is less frequent, by a qualified radiography operator that was not involved in the original scan of the waste container?	N/A	MP-TRUW-8.2, B1-3, C3-4a, and C3-10b(1)	
(15) Has an independent observation of one scan (not the replicate) been performed by a qualified operator that was not involved in the original scan of the waste container, at a rate of once per day or once per batch, whichever is less frequent? Record date of observation and any issues or concerns in the comment section.	N/A	MP-TRUW-8.2, C1-3 and C3-4a	
(16) Did personnel having current qualifications perform all RTR examinations?	N/A	MP-TRUW-8.1, Appendix F	
(17) Verify the correct procedure and revision number were used for all containers in this batch.	N/A	MP-TRUW-8.2, C3-4a	
(18) Verify the audio and video checks were performed and are satisfactory.	N/A	MP-TRUW-8.2, C3-4a	
(19) Verify that there are 20 or fewer containers in the batch.	N/A	MP-TRUW-8.2, C1-3	
(20) Does the data for all containers within this batch meet the review, validation, and verification requirements? · Are proper units (e.g. Liters or pounds) and significant figure used? · Is the BDR complete (all pages identified in the BDR and numbered accordingly)? - RTR Batch Coversheet - Table of Contents (manual review only) - RTR Analysis reports - Replicate Scan - Replicate Comparison - Independent Observation - Form-1412, ITR checklist - Associated NCRs - Form, 1491, Batch Data Report Supplemental Comment Form, as applicable - Audio/Video Recording References	N/A	MP-TRUW-8.2, C3 10b(2)	
(21) Review all NCR(s) (open and closed). Can the batch be approved?	N/A	MP-TRUW-8.2, C3-13	
(22) Is all data associated with this BDR acceptable for signature release?	N/A	MP-TRUW-8.2, C3 10b(2)	

Batch Id RTR11-00157 **Open Date** 30-APR-11 **Close Date** 02-MAY-11

Reviewer KEN BURNSIDE **Approval Level** SPM Data Validation

Approval Date 17-MAY-11 **Review Iteration** 2

Question Text	Answer	Requirement	Comment
(1) Has the batch received a Data Generation Level Independent Technical Review?	Yes	MP-TRUW-8.2, C3-10b(1)	
(2) Is the Independent Technical Review checklist complete?	Yes	MP-TRUW-8.2, C3-10b(1)	
(3) When identified, were polychlorinated biphenyls (PCBs), mercury, lead, or other hazardous contaminants consistent with the waste stream acceptable knowledge (AK) Summary Report(s) and/or AK documentation?	Yes	MP-TRUW-8.2, C4-3	There are no additional hazardous constituents that are not already addressed in the AK.
(4) Are any ignitable, corrosive, or reactive wastes identified in this waste?	No	MP-TRUW-8.2, C4-3	
(5) Are the packaging configurations identified on the real-time radiography (RTR) consistent with the waste stream AK Summary Report(s) and/or AK documentation?	Yes	MP-TRUW-8.2, C4-3	
(6) Do the containers in this batch contain typical waste items consistent with waste stream AK Summary Report(s) and/or AK documentation?	Yes	MP-TRUW-8.2, C4-3	
(7) Are the Waste Matrix Codes (WMCs) and physical form descriptions consistent with AK?	Yes	MP-TRUW-8.2, C4-3	
(8) Have all AK discrepancies been resolved and have all AK Resolution checklists been approved? Reference all waste stream AK documentation used in review of this data package.	N/A	MP-TRUW-8.2, C4-3	No AK discrepancies were found. References: RPT-TRUW-05, RPT-TRUW-56 and/or RPT-TRUW-13.
(9) Have all applicable Quality Assurance Objectives (QAOs) been met, including precision, accuracy, completeness, and comparability, by using the appropriate acceptance criteria for each as specified in MP-TRUW-8.2, Quality Assurance Project Plan Section C3-4? Precision ¿ Verified prior to use by tuning precisely enough to demonstrate compliance with QAOs through viewing an image test pattern, as evidenced by a satisfactory Image Quality Indicator (IQI). ¿ Have discrepancies, if any, between radiography operators been reconciled? Accuracy ¿ Use of a target to tune the image for maximum sharpness as evidenced by a satisfactory IQI and by requiring operators to successfully identify 100% of the required items in a training container during initial and subsequent qualifications. Completeness ¿ An audio/videotape (or equivalent media) of the radiography examination and a validated radiography data form will be obtained for 100% of the retrievably stored waste container in the program for all waste containers subject to radiography. Comparability ¿ Use of standardized radiography procedures and operator qualifications.	Yes	MP-TRUW-8.2, C3-4a	As evidenced by the RTR Batch Data report and the ITR Checklist.
(10) Do the waste container contents match the WMC, waste stream description and identify the absence of prohibited items?	Yes	MP-TRUW-8.2, C1-3 and B3-11	
(11) If residual liquids exist in the container, is an estimate of quantity given?	Yes	MP-TRUW-8.2, C1-3	
(12) Do the individual container reports contain the (a) IDC, (b) Waste Matrix Code, (c) audio/video recording reference, (d) gross container weight, (e) waste material parameter weights, and (f) signature and date of examination?	Yes	MP-TRUW-8.2, C1-3 and C3-11a	
(13) Have the IDC, WMC, and/or waste stream for all	Yes	MP-TRUW-8.2, C1-3 and	

Batch Id RTR11-00157 **Open Date** 30-APR-11 **Close Date** 02-MAY-11

Reviewer KEN BURNSIDE **Approval Level** SPM Data Validation

Approval Date 17-MAY-11 **Review Iteration** 2

Question Text	Answer	Requirement	Comment
containers in the batch remained the same as originally assigned by the historical designation? If not, note the container number in the comment field and notify the Acceptable Knowledge Expert (AKE) if NCR does not exist on the WMC and IDC change.		C3-4a	
(14) Was a replicate scan performed by an independent operator on at least one container per day or once per testing batch, whichever is less frequent, by a qualified radiography operator that was not involved in the original scan of the waste container?	Yes	MP-TRUW-8.2, B1-3, C3-4a, and C3-10b(1)	
(15) Has an independent observation of one scan (not the replicate) been performed by a qualified operator that was not involved in the original scan of the waste container, at a rate of once per day or once per batch, whichever is less frequent? Record date of observation and any issues or concerns in the comment section.	Yes	MP-TRUW-8.2, C1-3 and C3-4a	I/O performed on waste container 10145329 on 5/1/11. No significant differences affecting DQO's or disposition were shown between the exams.
(16) Did personnel having current qualifications perform all RTR examinations?	Yes	MP-TRUW-8.1, Appendix F	
(17) Verify the correct procedure and revision number were used for all containers in this batch.	Yes	MP-TRUW-8.2, C3-4a	
(18) Verify the audio and video checks were performed and are satisfactory.	Yes	MP-TRUW-8.2, C3-4a	Audio and video checks were performed and judged satisfactory as evidence by the RTR analysis report.
(19) Verify that there are 20 or fewer containers in the batch.	Yes	MP-TRUW-8.2, C1-3	
(20) Does the data for all containers within this batch meet the review, validation, and verification requirements? · Are proper units (e.g. Liters or pounds) and significant figure used? · Is the BDR complete (all pages identified in the BDR and numbered accordingly)? - RTR Batch Coversheet - Table of Contents (manual review only) - RTR Analysis reports - Replicate Scan - Replicate Comparison - Independent Observation - Form-1412, ITR checklist - Associated NCRs - Form, 1491, Batch Data Report Supplemental Comment Form, as applicable - Audio/Video Recording References	Yes	MP-TRUW-8.2, C3 10b(2)	
(21) Review all NCR(s) (open and closed). Can the batch be approved?	Yes	MP-TRUW-8.2, C3-13	
(22) Is all data associated with this BDR acceptable for signature release?	Yes	MP-TRUW-8.2, C3 10b(2)	

Batch Id RTR11-00157 **Open Date** 30-APR-11 **Close Date** 02-MAY-11

Esignature History

Esig Approval ID	User ID	Esig Date	Approval Level	Comments
2007114	KBURNSIDE	17-MAY-11	SPM	Reviewed and approved this batch at the SPM level.
2006951	CNOWACKI	17-MAY-11	ITR	Promoting batch to SPM.
2006929	CNOWACKI	17-MAY-11	ITR	Demoting to operations for rework.
2001618	KBURNSIDE	12-MAY-11	SPM	Please review container 10229929 and update result comment as found necessary.
2000622	CNOWACKI	11-MAY-11	ITR	Promoting batch to SPM.
2000553	CNOWACKI	11-MAY-11	ITR	Demoting to operations for rework.

GEN8

NWP
Nuclear Waste Partnership LLC
A URS-led partnership with B&W and AREVA

CP:13:01017
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: January 10, 2013

FROM: L. M. Nelson LMN — LOCATION: CCP Certification

TO: G. Smith ED — LOCATION: CCP Operations, Idaho National Laboratory

SUBJECT: FOURTH QUARTER 2012 (OCTOBER 1, 2012 THROUGH DECEMBER 31, 2012) REAL-TIME RADIOGRAPHY QUARTERLY REPEAT OF DATA GENERATION LEVEL REVIEW AT THE IDAHO NATIONAL LABORATORY- REMOTE-HANDLED

Remote-Handled (RH) Real-Time Radiography (RTR) at the Idaho National Laboratory has completed 92 days of reporting from October 1, 2012 through December 31, 2012. Container number ANLE12E, Batch Data Report (BDR) INLRHRTR12015, was randomly selected from among all the drums processed through Site Project Manger Project Level Review during this time frame. This container will be processed through the Quarterly Repeat of Data Generation Level (DGL) Review as described in CCP-TP-001, *CCP Project Level Data Validation and Verification.* The original letter will be retained in the letter correspondence file.

Please forward the mini-drum package provided to a qualified RTR operator for the completion of an Independent Technical Review for the quarterly repeat. The mini-drum package has all the pertinent information to complete the review. Not all containers included in the original BDR will be included for this review. Only the selected drum noted above must be reviewed along with any Quality Control Information.

Please perform the RTR quarterly repeat of DGL and return the mini-BDR with the naming convention "INLRHRTR12015_QTR0412" by February 11, 2013 to the Central Characterization Program Records Department.

If you have any questions, please call me at (303) 843-2269.

LMN:jmc

Attachment

cc: (without attachment) (with attachment)

I. S. Joo ED — NTP Records Custodian GSA-212

CCP RECORDS ORIGINAL
DATE REC'D 1.22.13

Attachment 1 – CCP RTR Measurement Control Report

CCP RTR Measurement Control Report		
Site: INL		
Batch Data Report No.: INLRHRTR12015		
Examination Date: 10/1/12		
Control Checks		
Image Test Pattern Test Lines-pair/cm: 10 (Minimum acceptable is five lines-pair/cm)	☑ SAT	☐ UNSAT
Audio/Video Media Recording System - Audio/Video Checks	☑ SAT	☐ UNSAT
Comments: N/A		
RTR Operator:		
Sway Andrews (Printed Name)	Sway Andrews (Signature)	10/1/12 (Date)

Attachment 1 – CCP RTR Measurement Control Report

CCP RTR Measurement Control Report		
Site: INL		
Batch Data Report No.: INLRHRTR12015		
Examination Date: 10/2/12		
Control Checks		
Image Test Pattern Test Lines-pair/cm: 10 (Minimum acceptable is five lines-pair/cm)	☑ SAT	☐ UNSAT
Audio/Video Media Recording System - Audio/Video Checks	☑ SAT	☐ UNSAT
Comments: N/A		
RTR Operator:		
Sway Andrews — Printed Name	Sway Andrews — Signature	10/2/12 — Date

10.4.12a

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☐ RTR Examination ☑ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12015
Examination Date:	10/01/12
Waste Container ID:	ANLE12F
Audio/Video Media Number:	Primary: INLRHRTR12015 A Backup: INLRHRTR12015 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 Gallon
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	10%, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE12F

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 30 gallon metal drum (OI) Fines and Met-L-X (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE12F

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐YES	☑NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐YES	☑NO
Does the container have observable liquid containing PCBs?	☐YES	☑NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐YES	☑NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐YES	☑NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐YES	☑NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐YES	☑NO
Is there an indication of wastes containing explosives or compressed gases?	☐YES	☑NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐YES	☑NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐YES	☑NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐YES	☑NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐YES	☑NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐YES	☑NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐YES	☑NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Lashelle Alade — Printed Name

Signature

10/01/12 — Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☐ RTR Examination ☐ RTR Replicate Scan ☑ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12015
Examination Date:	10/02/12
Waste Container ID:	ANLE26F
Audio/Video Media Number:	Primary: INLRHRTR12015 A Backup: INLRHRTR12015 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON DRUM
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	5%, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE26F

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 30 gallon steel drum (OI) Met-L-X and fines (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE26F

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Lashell Alade — *Printed Name*

Lashell Alade — *Signature*

10/02/12 — *Date*

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12015
Examination Date:	10/01/12
Waste Container ID:	ANLE12F
Audio/Video Media Number:	Primary: INLRHRTR12015 A Backup: INLRHRTR12015 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 Gallon
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	10%, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE12F

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 30 gallon metal drum (OI) Fines and Met-L-X (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE12F

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Sway Andrews — Sway Andrews — 10/01/12

Printed Name — Signature — Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12015
Examination Date:	10/02/12
Waste Container ID:	ANLE12E
Audio/Video Media Number:	Primary: INLRHRTR12015 A Backup: INLRHRTR12015 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	70%, N/A, N/A

10-11-12

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE12E

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 30 gallon metal drum, 1 gallon metal paint can, wire basket, scrap metal, metal bracing (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE12E

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Sway Andrews — Sway Andrews — 10/02/12

Printed Name — Signature — Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12015
Examination Date:	10/02/12
Waste Container ID:	ANLE26F
Audio/Video Media Number:	Primary: INLRHRTR12015 A Backup: INLRHRTR12015 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 Gallon
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene *Liner is vented or filtered*? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	10%, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE26F

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 30 gallon metal drum (OI) Fines and Met-L-X (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE26F

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Sway Andrews	Sway Andrews	10/02/12
Printed Name	Signature	Date

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Washington TRU Solutions LLC

CP:12:01360
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: July 16, 2012

FROM: L. M. Nelson LOCATION: Certification

TO: CCP Records Custodian GSA-212 LOCATION: Retrieval, Characterization and Transportation

SUBJECT: RESULTS OF REAL-TIME RADIOGRAPHY QUARTERLY REPEAT DATA GENERATION LEVEL DATA REVIEW: IDAHO NATIONAL LABORATORY – REMOTE-HANDLED SECOND CALENDAR QUARTER OF 2012

Procedure CCP-TP-001, *CCP Project Level Data Validation and Verification,* requires that a repeat of Data Generation Level (DGL) review, validation and verification be performed on the data for a minimum of one randomly chosen waste container each quarter. The Site Project Manager (SPM) uses this information to document that the data generation level data review is being performed according to procedures.

Inter-Office Correspondence Number CP:12:01333 was issued July 11, 2012. This memorandum identified waste container ANLE30S as the randomly-selected container for DGL repeat of Real-Time Radiography (RTR) at the Idaho National Laboratories – Remote-Handled waste for the second calendar quarter of 2012.

The mini-Batch Data Report containing ANLE30S was reviewed for the quarterly repeat on July 12, 2012. No deficiencies were identified during the review. A second RTR SPM Checklist has been completed and authenticated.

If you have any questions regarding this review, please contact me at (303) 843-2269.

LMN:yhs

cc: I. S. Quintana ED

NTPC RECORDS ORIGINAL
DATE REC'D 6/5/13

Attachment 4 – CCP Radiography Site Project Manager Review Checklist

Batch Data Report No.: INLRHRTR120006-QTR0212

1.	Has all the data received an independent technical review as evidenced by a completed Attachment 3 and the appropriate ITR signature?	☐NO	☑YES
2.	Are BDR contents complete and match Attachment 5?	☐NO	☑YES
3.	Is the BDR complete (appropriately completed forms for each container)?	☐NO	☑YES
4.	Have Quality Assurance Objectives (QAOs) for RTR been met? Waste Characterization Program Implementation Plan (WCPIP) • Precision – Reconciled discrepancies between RTR Operators • Accuracy – Target used to tune the image for maximum sharpness and qualified operators performed the work • Representativeness – Description of container contents • Completeness – Completed data form and recording • Comparability – Training requirements met Quality Assurance Project Plan (QAPjP) • Image test satisfactory (Minimum acceptable is five lines-pair/cm) • Replicate scan performed • Independent observation performed • ITR review complete	☐NO	☑YES

Comments:

No NCR's.

I have reviewed 100 percent of the container-specific and batch data in this BDR and find it acceptable.

SPM:

LAURA NELSON	Laura Nelson	7-12-12
Printed Name	Signature	Date

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CCP RECORDS ORIGINAL
DATE REC'D 7/18/12

Attachment 6 – CCP Radiography Batch Data Report Cover Sheet

Batch Data Report No.: INLRHRTR12006_QTR0212 Date: 7/12/12

Waste Container ID Numbers	
Replicate Scan:	ANLE30D
Independent Observation:	ANLE30H-1
1	ANLE30D
2	ANLE30S
3	ANLE30H-1
4	N/A
5	N/A
6	N/A
7	N/A
8	N/A
9	N/A
10	N/A
11	N/A
12	N/A
13	N/A
14	N/A
15	N/A
16	N/A
17	N/A
18	N/A
19	N/A
20	N/A

ITR:

Tyson Christensen		7/12/12
Printed Name	Signature	Date

CCP RECORDS ORIGINAL
DATE REC'D 7-12-12

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Attachment 5 – CCP Radiography Batch Data Report Table of Contents

Batch Data Report No.: INLRHRTR12006_QTR0212 Date: 7/12/12

Table of Contents

Item	Description	Page No.
1	Attachment 6, CCP Radiography Batch Data Report Cover Sheet	1
2	Attachment 5, CCP Radiography Batch Data Report Table of Contents	2
3	Attachment 3, CCP Independent Technical Reviewer Checklist	3-4
4	Attachment 1, CCP RTR Measurement Control Report	5-6
5	Attachment 2(s), CCP Radiography Data Sheets	7-21
6	Copy of NCRs (N/A [Not Applicable])	N/A

2 ₹ 7-12-12

Attachment 3 – CCP Radiography Independent Technical Reviewer Checklist

Batch Data Report No.: INLRHRTR12006_QTR0212

1.	Data generation and reduction were conducted in a technically correct manner in accordance with the methods used?	☐ NO	☑ YES	☐ N/A
2.	Was the correct revision of the procedure used? Procedure: CCP-TP-508 Rev.: 7	☐ NO	☑ YES	☐ N/A
3.	Are there transcription errors?	☐ NO	☐ YES	☑ N/A
4.	Does the BDR include RTR for up to 20 containers?	☐ NO	☑ YES	☐ N/A
5.	Are BDR contents complete and match Attachment 5?	☐ NO	☑ YES	☐ N/A
6.	Is all the data signed and dated in reproducible ink and by the individual(s) generating it?	☐ NO	☑ YES	☐ N/A
7.	Is all data recorded clearly, legibly, and accurately?	☐ NO	☑ YES	☐ N/A
8.	Are all changes to original data lined out, initialed, and dated?	☐ NO	☑ YES	☐ N/A
9.	Were data changes made by the individual who originally collected the data or an individual authorized to change the data?	☐ NO	☑ YES	☐ N/A
10.	Does the waste match the Waste Matrix Code and waste stream description?	☐ NO	☑ YES	☐ N/A
11.	Are the RTR Operator's decisions regarding the RTR documented?	☐ NO	☑ YES	☐ N/A
12.	Is there an adequate written description of the contents of each item?	☐ NO	☑ YES	☐ N/A
13.	Was the audio/video media properly prepared and labeled?	☐ NO	☑ YES	☐ N/A
14.	Was the audio/video check performed satisfactorily and recorded on Attachment 1?	☐ NO	☑ YES	☐ N/A
15.	Was the Image Test Pattern Test performed satisfactorily and recorded on Attachment 1?	☐ NO	☑ YES	☐ N/A
16.	Was the Replicate Scan performed and recorded on an Attachment 2? (Once per batch or once per day, whichever is less frequent).	☐ NO	☑ YES	☐ N/A
17.	Was the Replicate Scan RTR Operator different from the original scan RTR Operator?	☐ NO	☑ YES	☐ N/A
18.	Did the Replicate Scan RTR Operator and the original scan RTR Operator agree on the results?	☐ NO	☑ YES	☐ N/A
19.	Was the IO performed and recorded on an Attachment 2? (Once per batch or once per day, whichever is less frequent).	☐ NO	☑ YES	☐ N/A
20.	Was the IO RTR Operator different from the original scan RTR Operator?	☐ NO	☑ YES	☐ N/A
21.	Did the IO RTR Operator and the first RTR Operator agree on the results?	☐ NO	☑ YES	☐ N/A
22.	Were the operators qualified to perform the tasks by verification of the LOQI?	☐ NO	☑ YES	☐ N/A
23.	Are the NCR(s) associated with the RTR included in the BDR?	☐ NO	☐ YES	☑ N/A

Attachment 3 – CCP Radiography Independent Technical Reviewer Checklist
(Continued)

Batch Data Report No.: INLRHRTR12006_QTR0212

Comments:
N/A

I have reviewed 100 percent of the container-specific and batch data in this BDR and find it acceptable for SPM review.

ITR:

Printed Name	Signature	Date
Tyson Christensen	Tyson Christensen	7/12/12

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7-12-12

Attachment 1 – CCP RTR Measurement Control Report

CCP RTR Measurement Control Report		
Site: INL		
Batch Data Report No.: INLRHRTR12005		
Examination Date: 04-11-12		
Control Checks		
Image Test Pattern Test Lines-pair/cm: 10 (Minimum acceptable is five lines-pair/cm)	☑ SAT	☐ UNSAT
Audio/Video Media Recording System - Audio/Video Checks	☑ SAT	☐ UNSAT
Comments: N/A		
RTR Operator: Douglas D. Grover (Printed Name) — D.D. Grover (Signature) — 04-11-12 (Date)		

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5-1-12

Attachment 1 – CCP RTR Measurement Control Report

CCP RTR Measurement Control Report		
Site: INL		
Batch Data Report No.: INLRHRTR12005		
Examination Date: 04-11-12		
Control Checks		
Image Test Pattern Test Lines-pair/cm: 10 (Minimum acceptable is five lines-pair/cm)	☑ SAT	☐ UNSAT
Audio/Video Media Recording System - Audio/Video Checks	☑ SAT	☐ UNSAT
Comments:<br~~N/A~~ DDG 4-23-12 Lines pair for this data was completed in BDR INLRHRTR12005 DDG 4-23-12		
RTR Operator:		
Douglas D. Grover D.D. Grover 04-11-12		
Printed Name Signature Date		

Expanded by RCS 5/17/12

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5/17/12

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Attachment 1 – CCP RTR Measurement Control Report

CCP RTR Measurement Control Report		
Site: INL		
Batch Data Report No.: INLRHRTR12006		
Examination Date: 04-12-12		
Control Checks		
Image Test Pattern Test Lines-pair/cm: 10 (Minimum acceptable is five lines-pair/cm)	☑ SAT	☐ UNSAT
Audio/Video Media Recording System - Audio/Video Checks	☑ SAT	☐ UNSAT
Comments: N/A		
RTR Operator:		
Douglas D. Grover (Printed Name)	D.D. Grover (Signature)	04-12-12 (Date)

Attachment 2 – CCP Radiography Data Sheet

Page 1 of 3

Section 1: General Information	
☐ RTR Examination ☑ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12006
Examination Date:	04/11/12
Waste Container ID:	ANLE30D
Audio/Video Media Number:	Primary: INLRHRTR12006 A Backup: INLRHRTR12006 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 Gallon
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	5%, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE30D

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 30 Gallon metal drum (OI) Fines and Metal-X (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE30D

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐YES	☑NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐YES	☑NO
Does the container have observable liquid containing PCBs?	☐YES	☑NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐YES	☑NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐YES	☑NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐YES	☑NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐YES	☑NO
Is there an indication of wastes containing explosives or compressed gases?	☐YES	☑NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐YES	☑NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐YES	☑NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐YES	☑NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐YES	☑NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐YES	☑NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐YES	☑NO

Section 5: Waste Summary

Comments:
N/A

RTR Operator:

Sway Andrews	Sway Andrews	04/11/12
Printed Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☐ RTR Examination ☐ RTR Replicate Scan ☑ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12006
Examination Date:	04/12/12
Waste Container ID:	ANLE30H-1
Audio/Video Media Number:	Primary: INLRHRTR12006 A Backup: INLRHRTR12006 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 Gallon
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	75% N/A N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE30H-1

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM)30 gallon steel drum, 1 gallon metal paint can with lid and holes, metal pan, wire basket, pins, scrap metal, metal bracing (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE30H-1

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐YES	☑NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐YES	☑NO
Does the container have observable liquid containing PCBs?	☐YES	☑NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐YES	☑NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐YES	☑NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐YES	☑NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐YES	☑NO
Is there an indication of wastes containing explosives or compressed gases?	☐YES	☑NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐YES	☑NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐YES	☑NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐YES	☑NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐YES	☑NO
Are there sealed containers GREATER than 4 liters or heat sealed bags NOT defined in the applicable TRUCON Code?	☐YES	☑NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐YES	☑NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Sway Andrews	Sway Andrews	04/12/12
Printed Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12006
Examination Date:	04/11/12
Waste Container ID:	ANLE30D
Audio/Video Media Number:	Primary: INLRHRTR12006 A Backup: INLRHRTR12006 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 Gallon
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	5%, N/A, N/A

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Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE30D

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 30 Gallon steel drum (OI) Fines and Metal-X (XPW) Scrap plastic

14 E 7-12-12
17 E 7-12-12

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE30D

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags NOT defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Douglas D. Grover	D.D. Grover	04/11/12
Printed Name	Signature	Date

15 e 7-12-12
18 e 7-12-12

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12006
Examination Date:	04/12/12
Waste Container ID:	ANLE30S
Audio/Video Media Number:	Primary: INLRHRTR12006 A Backup: INLRHRTR12006 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 Gallon
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	75% N/A N/A

16 E 7-12-12
+9 E 7-12-12

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE30S

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 30 gallon metal drum, 1 gallon metal paint can with wire and holes, metal pan, wire basket, scrap metal, metal bracing (OI) Fines and Metal-X (XPW) Scrap plastic

17 E 7-12-12
~~20~~ E 7-12-12

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE30S

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐YES	☑NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐YES	☑NO
Does the container have observable liquid containing PCBs?	☐YES	☑NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐YES	☑NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐YES	☑NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐YES	☑NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐YES	☑NO
Is there an indication of wastes containing explosives or compressed gases?	☐YES	☑NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐YES	☑NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐YES	☑NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐YES	☑NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐YES	☑NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐YES	☑NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐YES	☑NO

Section 5: Waste Summary

Comments:
N/A

RTR Operator:

Douglas D. Grover D.D. Grover 04/12/12

Printed Name Signature Date

7-12-12
7-12-12

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12006
Examination Date:	04/12/12
Waste Container ID:	ANLE30H-1
Audio/Video Media Number:	Primary: INLRHRTR12006 A Backup: INLRHRTR12006 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 Gallon
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	75%, N/A, N/A

19 E 7-12-12
~~22~~ E 7-12-12

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE30H-1

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 1 30 gallon metal drum, 1 gallon metal paint can with wire bail and holes, metal pan, wire basket, scrap metal, metal bracing (XPW) Scrap plastic

20 E 7-12-12
~~23~~ E 7-12-12

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE30H-1

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:
N/A

RTR Operator:

Douglas D. Grover		04/12/12
Printed Name	Signature	Date

21 P 7-12-12
24 P 7-12-12

DIVIDER PAGE ONLY

Not part of page count

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

☐ Original Record ☐ Copy
☐ Fax Record
☒ Electronic Record

Attn:	Sheri Punchios	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Hwy	Company:	WTS
	MS:GSA 212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	7-12-12
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
INLRHRTR12006 _QTR0212	SPM Checklist	7-12-12	1
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted ☒	Jami Parker (Signature)	TAMI PARKER (Printed Name)	7/18/12 (Date)
Records Rejected ☐	(Signature)	(Printed Name)	(Date)

Reason for Rejection:

Re-submittal:

(Signature)	(Printed Name)	(Date)

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	3019
DESTINATION TEL #	913038432208
DESTINATION ID	DENVER
ST. TIME	07/18 13:21
TIME USE	00'16
PAGES SENT	1
RESULT	OK

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220
Telephone Number: 575-234-7523 or 575-234-7431
Fax Number: 575-234-7033

[ ] Original Record [ ] Copy
[ ] Fax Record
[x] Electronic Record

Attn:	Sheri Punchios	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Hwy	Company:	WTS
	MS:GSA 212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	7-12-12
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
INLRHRTR12006 _QTR0212	SPM Checklist	7-12-12	1
	N/A		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Fax Record [ ] Electronic Record [ ] Copy

Attn:	RH - SHERI PUNCHIOS	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	07/19/2012
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
INLRHRTR12006_QTR 0212	BATCH DATA REPORT NDE RTR RH QTR	07/12/2012	22
	N/A		

Comments

SPM CHECKLIST IS LOCATED IN CARLSBAD

(When the Record accepted line has been completed, the rest of the page below may be left blank.)

Acceptance/Rejection Signature and Date

Records Accepted [X]	Jami Parker	TAMI PARKER	7/25/12
	Signature	Printed Name	Date
Records Rejected [ ]			
	Signature	Printed Name	Date

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

```
**********************
***   TX REPORT   ***
**********************

TRANSMISSION OK

TX/RX NO                3084
DESTINATION TEL #       912085577396
DESTINATION ID          INL
ST. TIME                07/25 07:53
TIME USE                00'18
PAGES SENT                1
RESULT                  OK
```

Controlled Copy

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	RH - SHERI PUNCHIOS	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	07/19/2012
Telephone Number:	575-234-7523		

Transmittal Number	Description	Record Date	Pages
INLRHRTR12006_QTR 0212	BATCH DATA REPORT NDE RTR RH QTR	07/12/2012	22
	N/A		

Comments

SPM CHECKLIST IS LOCATED IN CARLSBAD

(When the Record accepted line has been completed, the rest of the page below may be left blank.)

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URS

CP:12:01333
UFC:5900.00

Washington TRU Solutions LLC

INTER-OFFICE CORRESPONDENCE

DATE: July 11, 2012

FROM: L. M. Nelson LOCATION: Certification

TO: G. L. Smith LOCATION: Idaho National Laboratory

SUBJECT: SECOND QUARTER 2012 (APRIL 1, 2012 THROUGH JUNE 30, 2012) REAL-TIME RADIOGRAPHY QUARTERLY REPEAT OF DATA GENERATION LEVEL REVIEW AT THE IDAHO NATIONAL LABORATORY – REMOTE-HANDLED

Remote-Handled (RH) Real-Time Radiography (RTR) at the Idaho National Laboratory has completed 91 days of reporting from April 1, 2012 through June 30, 2012. Container number ANLE30S, Batch Data Report (BDR) INLRHRTR12006, was randomly selected from among all the drums processed through Site Project Manager Project Level Review during this time frame. This container will be processed through the Quarterly Repeat of Data Generation Level (DGL) Review as described in CCP-TP-001, *CCP Project Level Data Validation and Verification*. The original letter will be retained in the letter correspondence file.

Please forward the mini-drum package provided to a qualified RTR operator for the completion of an Independent Technical Review of the quarterly repeat. The mini-drum package has all of the pertinent information to complete the review. Not all containers included in the original BDR will be included for this review. Only the selected drum noted above must be reviewed along with any Quality Control information.

Please perform the RTR quarterly repeat of DGL and return the mini-BDR with the naming convention "INLRHRTR12006_QTR0212" by August 15, 2012, to the Central Characterization Project Records Department.

If you have any questions, please call me at (303) 843-2269.

LMN:yhs

COPY

Attachment

cc: (without attachment)
I. S. Quintana ED

(with attachment)
CCP Records Custodian GSA-212

CCP RECORDS ORIGINAL
DATE REC'D 7/18/12

Attachment 1 – CCP RTR Measurement Control Report

CCP RTR Measurement Control Report		
Site: INL		
Batch Data Report No.: INLRHRTR12005		
Examination Date: 04-11-12		
Control Checks		
Image Test Pattern Test Lines-pair/cm: 10 (Minimum acceptable is five lines-pair/cm)	☑ SAT	☐ UNSAT
Audio/Video Media Recording System - Audio/Video Checks	☑ SAT	☐ UNSAT
Comments: N/A		
RTR Operator:		
Douglas D. Grover (Printed Name)	D.D. Grover (Signature)	04-11-12 (Date)

COPY

5-1-12
5
5-1-12

Attachment 1 – CCP RTR Measurement Control Report

CCP RTR Measurement Control Report		
Site: INL		
Batch Data Report No.: INLRHRTR12005		
Examination Date: 04-11-12		
Control Checks		
Image Test Pattern Test Lines-pair/cm: 10 (Minimum acceptable is five lines-pair/cm)	☑ SAT	☐ UNSAT
Audio/Video Media Recording System - Audio/Video Checks	☑ SAT	☐ UNSAT
Comments: ~~N/A~~ DDG 4-23-12 Lines pair for this data was completed in BDR INLRHRTR12005 DDG 4-23-12		
RTR Operator:		
Douglas D. Grover	D.D. Grover	04-11-12
Printed Name	Signature	Date

Expanded by ROS 5/17/12

COPY

5/17/12

5A

Attachment 1 – CCP RTR Measurement Control Report

CCP RTR Measurement Control Report		
Site: INL		
Batch Data Report No.: INLRHRTR12006		
Examination Date: 04-12-12		
Control Checks		
Image Test Pattern Test Lines-pair/cm: 10 (Minimum acceptable is five lines-pair/cm)	☑ SAT	☐ UNSAT
Audio/Video Media Recording System - Audio/Video Checks	☑ SAT	☐ UNSAT
Comments: N/A		
RTR Operator:		
Douglas D. Grover (Printed Name)	D.D. Grover (Signature)	04-12-12 (Date)

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☐ RTR Examination ☑ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12006
Examination Date:	04/11/12
Waste Container ID:	ANLE30D
Audio/Video Media Number:	Primary: INLRHRTR12006 A Backup: INLRHRTR12006 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 Gallon
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	5%, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE30D

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 30 Gallon metal drum (OI) Fines and Metal-X (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE30D

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐YES	☑NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐YES	☑NO
Does the container have observable liquid containing PCBs?	☐YES	☑NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐YES	☑NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐YES	☑NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐YES	☑NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐YES	☑NO
Is there an indication of wastes containing explosives or compressed gases?	☐YES	☑NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐YES	☑NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐YES	☑NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐YES	☑NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐YES	☑NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐YES	☑NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐YES	☑NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Sway Andrews	Sway Andrews	04/11/12
Printed Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☐ RTR Examination ☐ RTR Replicate Scan ☑ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12006
Examination Date:	04/12/12
Waste Container ID:	ANLE30H-1
Audio/Video Media Number:	Primary: INLRHRTR12006 A Backup: INLRHRTR12006 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 Gallon
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	75%, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE30H-1

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM)30 gallon steel drum, 1 gallon metal paint can with lid and holes, metal pan, wire basket, pins, scrap metal, metal bracing (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE30H-1

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐YES	☑NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐YES	☑NO
Does the container have observable liquid containing PCBs?	☐YES	☑NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐YES	☑NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐YES	☑NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐YES	☑NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐YES	☑NO
Is there an indication of wastes containing explosives or compressed gases?	☐YES	☑NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐YES	☑NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐YES	☑NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐YES	☑NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐YES	☑NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐YES	☑NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐YES	☑NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Sway Andrews	Sway Andrews	04/12/12
Printed Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12006
Examination Date:	04/11/12
Waste Container ID:	ANLE30D
Audio/Video Media Number:	Primary: INLRHRTR12006 A Backup: INLRHRTR12006 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 Gallon
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	5%, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE30D

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 30 Gallon steel drum (OI) Fines and Metal-X (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE30D

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags NOT defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO
Section 5: Waste Summary		
Comments: N/A		

RTR Operator:

Douglas D. Grover D.D. Grover 04/11/12

Printed Name Signature Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12006
Examination Date:	04/12/12
Waste Container ID:	ANLE30S
Audio/Video Media Number:	Primary: INLRHRTR12006 A Backup: INLRHRTR12006 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 Gallon
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	75%, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE30S

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 30 gallon metal drum, 1 gallon metal paint can with wire and holes, metal pan, wire basket, scrap metal, metal bracing (OI) Fines and Metal-X (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE30S

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐YES	☑NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐YES	☑NO
Does the container have observable liquid containing PCBs?	☐YES	☑NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐YES	☑NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐YES	☑NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐YES	☑NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐YES	☑NO
Is there an indication of wastes containing explosives or compressed gases?	☐YES	☑NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐YES	☑NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐YES	☑NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐YES	☑NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐YES	☑NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐YES	☑NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐YES	☑NO
Section 5: Waste Summary		
Comments: N/A		

RTR Operator:

Douglas D. Grover — Printed Name

D.D. Grover — Signature

04/12/12 — Date

Attachment 2 – CCP Radiography Data Sheet

Page 1 of 3

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12006
Examination Date:	04/12/12
Waste Container ID:	ANLE30H-1
Audio/Video Media Number:	Primary: INLRHRTR12006 A Backup: INLRHRTR12006 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 Gallon
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	75%, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE30H-1

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 1 30 gallon metal drum, 1 gallon metal paint can with wire bail and holes, metal pan, wire basket, scrap metal, metal bracing (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE30H-1

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Douglas D. Grover	D D Grover	04/12/12
Printed Name	Signature	Date

DIVIDER

PAGE

Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA

CP:13:01129
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: April 9, 2013

FROM: L. M. Nelson LMN

LOCATION: CCP Certification

TO: G. Smith ED

LOCATION: CCP Operations
Idaho National Laboratory

SUBJECT: FIRST QUARTER 2013 (JANUARY 1, 2013 THROUGH MARCH 31, 2013) REAL-TIME RADIOGRAPHY QUARTERLY REPEAT OF DATA GENERATION LEVEL REVIEW AT THE IDAHO NATIONAL LABORATORY- REMOTE-HANDLED

Remote-Handled (RH) Real-Time Radiography (RTR) at the Idaho National Laboratory has completed 90 days of reporting from January 1, 2013 through March 31, 2013. Container number FCO105C-1, Batch Data Report (BDR) INLRHRTR13004, was randomly selected from among all the drums processed through Site Project Manger Project Level Review during this time frame. This container will be processed through the Quarterly Repeat of Data Generation Level (DGL) Review as described in CCP-TP-001, *CCP Project Level Data Validation and Verification*. The original letter will be retained in the letter correspondence file.

Please forward the mini-drum package provided to a qualified RTR operator for the completion of an Independent Technical Review for the quarterly repeat. The mini-drum package has all the pertinent information to complete the review. Not all containers included in the original BDR will be included for this review. Only the selected drum noted above must be reviewed along with any Quality Control Information.

Please perform the RTR quarterly repeat of DGL and return the mini-BDR with the naming convention "INLRHRTR13004_QTR0113" by May 13, 2013 to the Central Characterization Program Records Department.

If you have any questions, please call me at (303) 843-2269.

LMN:jmc

COPY

Attachment

cc: (without attachment)

I. S. Joo ED

(with attachment)

NTP Records Custodian GSA-212

NTPC RECORDS ORIGINAL
DATE REC'D 5-3-13 AP

Attachment 1 – CCP RTR Measurement Control Report

CCP RTR Measurement Control Report		
Site: INL		
Batch Data Report No.: INLRHRTR13004		
Examination Date: 3/12/13		
Control Checks		
Image Test Pattern Test Lines-pair/cm: 10 (Minimum acceptable is five lines-pair/cm)	☑ SAT	☐ UNSAT
Audio/Video Media Recording System - Audio/Video Checks	☑ SAT	☐ UNSAT
Comments: N/A		
RTR Operator:		
Lashell Alade 3/12/13		
Printed Name Signature Date		

05

Attachment 1 – CCP RTR Measurement Control Report

CCP RTR Measurement Control Report		
Site: INL		
Batch Data Report No.: INLRHRTR13004		
Examination Date: 3/13/13		
Control Checks		
Image Test Pattern Test Lines-pair/cm: 10 (Minimum acceptable is five lines-pair/cm)	☑ SAT	☐ UNSAT
Audio/Video Media Recording System - Audio/Video Checks	☑ SAT	☐ UNSAT
Comments: N/A		
RTR Operator: Lashell Alade Lashell A Alade 3/13/13 Printed Name Signature Date		

06

Attachment 1 – CCP RTR Measurement Control Report

CCP RTR Measurement Control Report		
Site: INL		
Batch Data Report No.: INLRHRTR13004		
Examination Date: 3/18/13		
Control Checks		
Image Test Pattern Test Lines-pair/cm: 10 (Minimum acceptable is five lines-pair/cm)	☑ SAT	☐ UNSAT
Audio/Video Media Recording System - Audio/Video Checks	☑ SAT	☐ UNSAT
Comments: N/A		
RTR Operator: Lashell Alade Lashell Alade 3/18/13 Printed Name Signature Date		

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Attachment 2 – CCP Radiography Data Sheet

Page 1 of 3

Section 1: General Information	
☐ RTR Examination ☑ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR13004
Examination Date:	03/12/13
Waste Container ID:	PP-30A-1
Audio/Video Media Number:	Primary: INLRHRTR13004 A Backup: INLRHRTR13004 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5400
Waste Stream Number:	ID-HFEF-S5400-RH
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	25%, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: PP-30A-1

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 30 gallon metal drum, wire rope with metal hook, wire, metal disc (OI) Glass bottle (empty) (XPW) Scrap plastic, plastic lid

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: PP-30A-1

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:
N/A

RTR Operator:

Sway Andrews	Sway Andrews	03/12/13
Printed Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☐ RTR Examination ☐ RTR Replicate Scan ☑ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR13004
Examination Date:	03/18/13
Waste Container ID:	SN-132B
Audio/Video Media Number:	Primary: INLRHRTR13004 A Backup: INLRHRTR13004 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5400
Waste Stream Number:	ID-HFEF-S5400-RH
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	85% , N/A , N/A

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Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: SN-132B

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 30 gallon metal drum, metal filter housing, scrap metal, manipulator finger, metal pipes, metal lids (OI) Absorbent, broken glass (XPW) Scrap plastic, plastic hoses, plastic bottles (empty), plastic lids

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: SN-132B

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Sway Andrews	Sway Andrews	03/18/13
Printed Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR13004
Examination Date:	03/12/13
Waste Container ID:	PP-30A-1
Audio/Video Media Number:	Primary: INLRHRTR13004 A Backup: INLRHRTR13004 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON DRUM
Waste Matrix Code:	S5400
Waste Stream Number:	ID-HFEF-S5400-RH
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	25% N/A N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: PP-30A-1

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) Hook attached to wire rope, 30 gallon steel drum, wire, metal disc (OI) Empty glass bottle (XPW) Scrap plastic, plastic cap

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: PP-30A-1

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Lashell Alade — Printed Name

Lashell Alade — Signature

03/12/13 — Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR13004
Examination Date:	03/13/13
Waste Container ID:	FCO105C-1
Audio/Video Media Number:	Primary: INLRHRTR13004 A Backup: INLRHRTR13004 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON DRUM
Waste Matrix Code:	S5400
Waste Stream Number:	ID-HFEF-S5400-RH
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	90% N/A N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: FCO105C-1

Section 3: Waste Container Inventory and Comments (Detailed descriptions)

(IM) 30 gallon steel drum, wire rope with hook, scrap metal, metal tubes, metal lids
(XPW) Scrap plastic, plastic bottles (empty) pint size with lids

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: FCO105C-1

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Lashell Alade — Printed Name

Signature

03/13/13 — Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR13004
Examination Date:	03/18/13
Waste Container ID:	SN-132B
Audio/Video Media Number:	Primary: INLRHRTR13004 A Backup: INLRHRTR13004 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON DRUM
Waste Matrix Code:	S5400
Waste Stream Number:	ID-HFEF-S5400-RH
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	85% N/A N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: SN-132B

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 30 gallon steel drum, metal filter housing, manipulator finger, scrap metal, metal pipes (OI) Solidified material, broken glass (XPW) Scrap plastic, plastic hoses, crushed plastic bottles(empty), plastic caps

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: SN-132B

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Lashell Alade — Lashell Alade — 03/18/13

Printed Name — Signature — Date

DIVIDER

PAGE

NWP
Nuclear Waste Partnership LLC
A URS-led partnership with B&W and AREVA

CP:13:01223
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: June 5, 2013

FROM: L. M. Nelson LOCATION: CCP Certification

TO: NTP Records Custodian LOCATION: Retrieval, Characterization and Transportation

SUBJECT: RESULTS OF REAL-TIME RADIOGRAPHY QUARTERLY REPEAT DATA GENERATION LEVEL DATA REVIEW: IDAHO NATIONAL LABORATORY – REMOTE-HANDLED FIRST CALENDAR QUARTER OF 2013

Procedure CCP-TP-001, *CCP Project Level Data Validation and Verification,* requires that a repeat of Data Generation Level (DGL) review, validation and verification be performed on the data for a minimum of one randomly chosen waste container each quarter. The Site Project Manager (SPM) uses this information to document that the data generation level data review is being performed according to procedures.

Inter-Office Correspondence Number CP:13:01129 was issued April 9, 2013. This memorandum identified waste container FCO105C-1 as the randomly-selected container for DGL repeat of Real-Time Radiography (RTR) at the Idaho National Laboratory – Remote-Handled waste for the first calendar quarter of 2013.

The mini-Batch Data Report containing FCO105C-1 was reviewed for the quarterly repeat on May 2, 2013. No deficiencies were identified during the review. A second RTR SPM Checklist has been completed and authenticated.

If you have any questions regarding this review, please contact me at (303) 843-2269

LMN:jmc

cc: I. S. Joo ED

Attachment 4 – CCP Radiography Site Project Manager Review Checklist

Batch Data Report No.: INLRHRTR 13004 - QTR113

1. Has all the data received an independent technical review as evidenced by a completed Attachment 3 and the appropriate ITR signature?	☐NO	☑YES
2. Are BDR contents complete and match Attachment 5?	☐NO	☑YES
3. Is the BDR complete (appropriately completed forms for each container)?	☐NO	☑YES
4. Have Quality Assurance Objectives (QAOs) for RTR been met? Waste Characterization Program Implementation Plan (WCPIP) • Precision – Reconciled discrepancies between RTR Operators • Accuracy – Target used to tune the image for maximum sharpness and qualified operators performed the work • Representativeness – Description of container contents • Completeness – Completed data form and recording • Comparability – Training requirements met Quality Assurance Project Plan (QAPjP) • Image test satisfactory (Minimum acceptable is five lines-pair/cm) • Replicate scan performed • Independent observation performed • ITR review complete	☐NO	☑YES

Comments:

None.

I have reviewed 100 percent of the container-specific and batch data in this BDR and find it acceptable.

SPM:

LAUREN NELSON — Printed Name

Lauren Nelson — Signature

5/2/13 — Date

NTPC RECORDS ORIGINAL

DATE REC'D 5-2-13

Attachment 6 – CCP Radiography Batch Data Report Cover Sheet

Batch Data Report No.: INLRHRTR13004_QTR113 Date: 5/1/13

Waste Container ID Numbers	
Replicate Scan:	PP-30A-1
Independent Observation:	SN-132B
1	PP-30A-1
2	FCO105C-1
3	SN-132B
4	N/A
5	N/A
6	N/A
7	N/A
8	N/A
9	N/A
10	N/A
11	N/A
12	N/A
13	N/A
14	N/A
15	N/A
16	N/A
17	N/A
18	N/A
19	N/A
20	N/A

ITR:

Tyson Christensen — Printed Name

Tyson Christensen — Signature

5/1/13 — Date

NTPC RECORDS ORIGINAL
DATE REC'D 5-1-13

01

Attachment 5 – CCP Radiography Batch Data Report Table of Contents

Batch Data Report No.: INLRHRTR13004_QTR113 Date: 5/1/13

Table Of Contents

Item	Description	Page No.
1	Attachment 6, CCP Radiography Batch Data Report Cover Sheet	1
2	Attachment 5, CCP Radiography Batch Data Report Table of Contents	2
3	Attachment 3, CCP Independent Technical Reviewer Checklist	3-4
4	Attachment 1, CCP RTR Measurement Control Report	5-7
5	Attachment 2(s), CCP Radiography Data Sheets	8-22
6	Copy of NCRs (N/A [Not Applicable])	N/A

02

Attachment 3 – CCP Radiography Independent Technical Reviewer Checklist

Batch Data Report No.: INLRHRTR13004_QTR113

1.	Data generation and reduction were conducted in a technically correct manner in accordance with the methods used?	☐ NO	☑ YES	☐ N/A
2.	Was the correct revision of the procedure used? Procedure: CCP-TP-508 Rev.: 7	☐ NO	☑ YES	☐ N/A
3.	Are there transcription errors?	☐ NO	☐ YES	☑ N/A
4.	Does the BDR include RTR for up to 20 containers?	☐ NO	☑ YES	☐ N/A
5.	Are BDR contents complete and match Attachment 5?	☐ NO	☑ YES	☐ N/A
6.	Is all the data signed and dated in reproducible ink and by the individual(s) generating it?	☐ NO	☑ YES	☐ N/A
7.	Is all data recorded clearly, legibly, and accurately?	☐ NO	☑ YES	☐ N/A
8.	Are all changes to original data lined out, initialed, and dated?	☐ NO	☐ YES	☑ N/A
9.	Were data changes made by the individual who originally collected the data or an individual authorized to change the data?	☐ NO	☐ YES	☑ N/A
10.	Does the waste match the Waste Matrix Code and waste stream description?	☐ NO	☑ YES	☐ N/A
11.	Are the RTR Operator's decisions regarding the RTR documented?	☐ NO	☑ YES	☐ N/A
12.	Is there an adequate written description of the contents of each item?	☐ NO	☑ YES	☐ N/A
13.	Was the audio/video media properly prepared and labeled?	☐ NO	☑ YES	☐ N/A
14.	Was the audio/video check performed satisfactorily and recorded on Attachment 1?	☐ NO	☑ YES	☐ N/A
15.	Was the Image Test Pattern Test performed satisfactorily and recorded on Attachment 1?	☐ NO	☑ YES	☐ N/A
16.	Was the Replicate Scan performed and recorded on an Attachment 2? (Once per batch or once per day, whichever is less frequent).	☐ NO	☑ YES	☐ N/A
17.	Was the Replicate Scan RTR Operator different from the original scan RTR Operator?	☐ NO	☑ YES	☐ N/A
18.	Did the Replicate Scan RTR Operator and the original scan RTR Operator agree on the results?	☐ NO	☑ YES	☐ N/A
19.	Was the IO performed and recorded on an Attachment 2? (Once per batch or once per day, whichever is less frequent).	☐ NO	☑ YES	☐ N/A
20.	Was the IO RTR Operator different from the original scan RTR Operator?	☐ NO	☑ YES	☐ N/A
21.	Did the IO RTR Operator and the first RTR Operator agree on the results?	☐ NO	☑ YES	☐ N/A
22.	Were the operators qualified to perform the tasks by verification of the LOQI?	☐ NO	☑ YES	☐ N/A
23.	Are the NCR(s) associated with the RTR included in the BDR?	☐ NO	☐ YES	☑ N/A

Attachment 3 – CCP Radiography Independent Technical Reviewer Checklist
(Continued)

Batch Data Report No.: INLRHRTR13004_QTR113

Comments:
N/A

I have reviewed 100 percent of the container-specific and batch data in this BDR and find it acceptable for SPM review.

ITR:

Printed Name	Signature	Date
Tyson Christensen		5/1/13

04

Attachment 1 – CCP RTR Measurement Control Report

CCP RTR Measurement Control Report		
Site: INL		
Batch Data Report No.: INLRHRTR13004		
Examination Date: 3/12/13		
Control Checks		
Image Test Pattern Test Lines-pair/cm: 10 (Minimum acceptable is five lines-pair/cm)	☑ SAT	☐ UNSAT
Audio/Video Media Recording System - Audio/Video Checks	☑ SAT	☐ UNSAT
Comments: N/A		
RTR Operator:		
Lashell Alade Printed Name	 Signature	3/12/13 Date

05

Attachment 1 – CCP RTR Measurement Control Report

CCP RTR Measurement Control Report		
Site: INL		
Batch Data Report No.: INLRHRTR13004		
Examination Date: 3/13/13		
Control Checks		
Image Test Pattern Test Lines-pair/cm: 10 (Minimum acceptable is five lines-pair/cm)	☑ SAT	☐ UNSAT
Audio/Video Media Recording System - Audio/Video Checks	☑ SAT	☐ UNSAT
Comments: N/A		
RTR Operator:		
Lashell Alade Printed Name	Lashell A Alade Signature	3/13/13 Date

06

Attachment 1 – CCP RTR Measurement Control Report

CCP RTR Measurement Control Report		
Site: INL		
Batch Data Report No.: INLRHRTR13004		
Examination Date: 3/18/13		
Control Checks		
Image Test Pattern Test Lines-pair/cm: 10 (Minimum acceptable is five lines-pair/cm)	☑ SAT	☐ UNSAT
Audio/Video Media Recording System - Audio/Video Checks	☑ SAT	☐ UNSAT
Comments: N/A		
RTR Operator:		
Lashell Alade (Lashell Alade)		3/18/13
Printed Name	Signature	Date

07

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☐ RTR Examination ☑ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR13004
Examination Date:	03/12/13
Waste Container ID:	PP-30A-1
Audio/Video Media Number:	Primary: INLRHRTR13004 A Backup: INLRHRTR13004 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5400
Waste Stream Number:	ID-HFEF-S5400-RH
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	25% , N/A , N/A

08

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: PP-30A-1

Section 3: Waste Container Inventory and Comments (Detailed descriptions).

(IM) 30 gallon metal drum, wire rope with metal hook, wire, metal disc
(OI) Glass bottle (empty)
(XPW) Scrap plastic, plastic lid

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: PP-30A-1

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Sway Andrews — Sway Andrews — 03/12/13

Printed Name — Signature — Date

10

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☐ RTR Examination ☐ RTR Replicate Scan ☑ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR13004
Examination Date:	03/18/13
Waste Container ID:	SN-132B
Audio/Video Media Number:	Primary: INLRHRTR13004 A Backup: INLRHRTR13004 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5400
Waste Stream Number:	ID-HFEF-S5400-RH
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	85% N/A N/A

11

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: SN-132B

Section 3: Waste Container Inventory and Comments (Detailed descriptions) .
(IM) 30 gallon metal drum, metal filter housing, scrap metal, manipulator finger, metal pipes, metal lids (OI) Absorbent, broken glass (XPW) Scrap plastic, plastic hoses, plastic bottles (empty), plastic lids

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: SN-132B

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:
N/A

RTR Operator

Sway Andrews — Sway Andrews — 03/18/13

Printed Name — Signature — Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR13004
Examination Date:	03/12/13
Waste Container ID:	PP-30A-1
Audio/Video Media Number:	Primary: INLRHRTR13004 A Backup: INLRHRTR13004 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON DRUM
Waste Matrix Code:	S5400
Waste Stream Number:	ID-HFEF-S5400-RH
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent	85 %
Internal Can Fill Percent:	25% N/A N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: PP-30A-1

Section 3: Waste Container Inventory and Comments (Detailed descriptions)

(IM) Hook attached to wire rope, 30 gallon steel drum, wire, metal disc
(OI) Empty glass bottle
(XPW) Scrap plastic, plastic cap

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: PP-30A-1

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Lashell Alade — Lashell Alade — 03/12/13

Printed Name — Signature — Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR13004
Examination Date:	03/13/13
Waste Container ID:	FCO105C-1
Audio/Video Media Number:	Primary: INLRHRTR13004 A Backup: INLRHRTR13004 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON DRUM
Waste Matrix Code:	S5400
Waste Stream Number:	ID-HFEF-S5400-RH
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	90% N/A N/A

℄ 5-1-13
~~26~~
17
℄ 5-1-13

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: FCO105C-1

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 30 gallon steel drum, wire rope with hook, scrap metal, metal tubes, metal lids (XPW) Scrap plastic, plastic bottles (empty) pint size with lids

@ 5-1-13
27
@ 5-1-13

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: FCO105C-1

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Lashell Alade — Printed Name

Signature

03/13/13 — Date

5-1-13
28
19
5-1-13

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR13004
Examination Date:	03/18/13
Waste Container ID:	SN-132B
Audio/Video Media Number:	Primary: INLRHRTR13004 A Backup: INLRHRTR13004 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON DRUM
Waste Matrix Code:	S5400
Waste Stream Number:	ID-HFEF-S5400-RH
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	85% N/A N/A

E 5-1-13
35
20
E 5-1-13

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: SN-132B

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 30 gallon steel drum, metal filter housing, manipulator finger, scrap metal, metal pipes (OI) Solidified material, broken glass (XPW) Scrap plastic, plastic hoses, crushed plastic bottles(empty), plastic caps

E 5-1-13
36
21
E 5-1-13

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: SN-132B

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Lashell Alade — Lashell Alade — 03/18/13

Printed Name — Signature — Date

E 5-1-13

37

22

E 5-1-13

DIVIDER PAGE ONLY

Not part of page count

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523, 575-234-7431, or 575-234-7095

Fax Number: 575-234-7033

[ ] Original Record
[ ] Fax Record
[X] Electronic Record
[ ] Copy

Attn:	Austin Peralta	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Highway	Company:	NWP
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	5/2/13
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
INLRHRTR13004_ QTR113	SPM Checklist	5/2/13	1
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)

Acceptance/Rejection Signature and Date

Records Accepted [X]	Signature	Austin Peralta Printed Name	5-2-13 Date
Records Rejected [ ]	Signature	Printed Name	Date

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	4317
DESTINATION TEL #	913038432208
DESTINATION ID	DENVER
ST. TIME	05/02 12:36
TIME USE	00'15
PAGES SENT	1
RESULT	OK

Controlled Copy

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523, 575-234-7431, or 575-234-7095

Fax Number: 575-234-7033

[ ] Original Record [ ] Copy
[ ] Fax Record
[X] Electronic Record

Attn:	Austin Peralta	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Highway	Company:	NWP
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	5/2/13
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
INLRHRTR13004_QTR113	SPM Checklist	5/2/13	1
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)

Acceptance/Rejection Signature and Date

DIVIDER

PAGE

NWP
Nuclear Waste Partnership LLC
A URS-led partnership with B&W and AREVA

CP:12:01516
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: October 23, 2012

FROM: L. M. Nelson — LOCATION: CCP Certification

TO: G. Smith ED — LOCATION: CCP Operations, Idaho National Laboratory

SUBJECT: THIRD QUARTER 2012 (JULY 1, 2012 THROUGH SEPTEMBER 30, 2012) HEADSPACE GAS SAMPLING QUARTERLY REPEAT OF DATA GENERATION LEVEL REVIEW AT THE IDAHO NATIONAL LABORATORY- REMOTE-HANDLED

Remote-Handled (RH) Headspace Gas Sampling (HSG) at the Idaho National Laboratory has completed 92 days of reporting from July 1, 2012 through September 30, 2012. Container number NRFTRUSPC026-1, Batch Data Report (BDR INHSG1202, was randomly selected from among all the drums processed through Site Project Manger Project Level Review during this time frame. This container will be processed through the Quarterly Repeat of Data Generation Level (DGL) Review as described in CCP-TP-001, *CCP Project Level Data Validation and Verification*. The original letter will be retained in the letter correspondence file.

Please forward the mini-drum package provided to a qualified HSG operator for the completion of an Independent Technical Review for the quarterly repeat. The mini-drum package has all the pertinent information to complete the review. Not all containers included in the original BDR will be included for this review. Only the selected drum noted above must be reviewed along with any Quality Control Information.

Please perform the HSG quarterly repeat of DGL and return the mini-BDR with the naming convention "INHSG1202_QTR0312" by November 19, 2012 to the Central Characterization Program Records Department.

If you have any questions, please call me at (303) 843-2269.

LMN:jmc

COPY

Attachment

cc: (without attachment) (with attachment)

I. S. Quintana ED — NTP Records Custodian GSA-212

CCP RECORDS ORIGINAL
DATE 10.31.12

Attachment 1 – Chain of Custody/Canister Tag Chain of Custody # 591 Page 1 of 2

Location: Under Drum Lid	Point of Origin: CPP-659	Sample Matrix is Gas	Ambient Conditions
	Field Batch Number: INHSG1202		Temperature (centigrade): 25.2
			Pressure (in. Hg): 25

Site	Date	SUMMA® Canister No.	Size (mL)	TID No.	Container ID /Barcode No.	Waste Stream ID	Cleaning Batch No.	Needle Assembly Batch No.	Type SS B D F C (Note 1)	Vent Seal (Y/NA)	Start Time	End Time	Beginning Pressure (in.Hg or psig)	End Pressure (in.Hg or psig)	Sampler's Initials
IN	062512	EI684	250	0825621	N/A	N/A	429C	INHSG1201NB	B	N/A	1001	1002	25 in.Hg	1 in.Hg	
IN	062512	EI756	250	0825622	NRFTRUSPC023-1	IN-ID-NRF-SPC	429C	INHSG1102NB	D	Y	1015	1020	25 in.Hg	3 in.Hg	
IN	062512	EIC78	250	0825623	NRFTRUSPC023-1	IN-ID-NRF-SPC	429C	INHSG1102NB	D	Y	1015	1020	26 in.Hg	1 in.Hg	
IN	062512	EIB79	250	0825624	NRFTRUSPC027-1	IN-ID-NRF-SPC	429C	INHSG1201NB	SS	Y	1037	1042	25 in.Hg	1 in.Hg	
IN	062512	EIC73	250	0825625	NRFTRUSPC003-1	IN-ID-NRF-SPC	429C	INHSG1201NB	SS	Y	1055	1059	25 in.Hg	2 in.Hg	
IN	062512	EI169	250	0825626	NRFTRUSPC026-1	IN-ID-NRF-SPC	429C	INHSG1201NB	SS	Y	1115	1120	25 in.Hg	1 in.Hg	
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Note 1. Analysis required.

C - Needle Assembly Cleanliness Certification: VOC.
SS - Single Sample: VOC, H_2, CH_4
B - Field Blank: VOC
D - Duplicate: VOC, H_2, CH_4
F - Field Reference Standard: VOC

Sampler's Signature:

000005

Attachment 1 – Chain of Custody/Canister Tag (Continued) Chain of Custody # 591 Page 2 of 2

Field Batch Number: INHSG1202					
Comments: N/A		Instrument Section	M&TE ID No.	Calibration Due Date	Initials/Date
Analytical Laboratory - ECL		Pressure Meter	XC0566	8-16-2012	6-25-12
Shipping Tracking #N/A	Method of Shipping: ECL Pickup	Thermometer	XC0717	6-5-2013	6-25-12
		Min /Max Thermometer	723204 XC0552	10-12-2012 10-12-2012	6-25-12
Analysis Requested VOC		Preservation Method: 0 - 40°C			
TID Number(s) 0825627		TID Initials and date:		6-26-12	

Custody Initiated By: (Sampler Name/Organization) CCP	Date/Time 6-25-12 1002	[redacted]	
Relinquished By: (Name/Organization) CCP	Date/Time 6-26-12 1400	Received By: (Name/Organization)	Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)	Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)	Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)	Date/Time
Final Disposition By: (Name/Organization)	Date/Time	Disposition:	

900000

GAS SAMPLE CANISTER TAG

1	N	0	6	2	5	1	2	E	I	1	6	9
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHS61202 Drum Number: NRFTRUSPC026-1

Sampling Organization: CCP Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 23	061312	1430	TBL
Cleaning Batch: 429C	M= <5.0E-2	P= 639T			
Field-	C= 25 "Hg	T= 25.2	062512	1115	DD
Before Sample Collection	M=	P= 25			
Field-	C= 1 "Hg	T= 25.2	062512	1120	DD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

From: Catherine A Crowder [Catherine.Crowder@inl.gov]
Sent: Monday, March 28, 2011 1:00 PM
To: Broomfield, Barbara J.; Walters, Ed E.; charles.turner@wipp.ws
Subject: Needle Assembly Blanks

Analytical results for needle assembly equipment blanks in field batch INHSG1102NB were acceptable. Concentrations of all VOC target analytes were less than or equal to three times the MDLs listed in Table B3-2 in Permit Attachment B3.

From: Catherine A Crowder [Catherine.Crowder@inl.gov]
Sent: Tuesday, May 01, 2012 4:36 PM
To: Broomfield, Barbara J.; Poirier, Joe; charles.turner@wipp.ws
Subject: Needle Assembly Blanks

Analytical results for needle assembly equipment blanks in field batch INHSG1201NB were acceptable. Concentrations of all VOC target analytes were less than or equal to three times the MDLs listed in Table B3-2 in Permit Attachment B3.

Attachment 2 – Sample Container Data Form

Field Batch Number: INHSG1202

	Container ID	Sampling Scenario	Summary Category Group	Rigid Liner (Y/N)	Rigid Liner Lid (Y/N)	Rigid Liner Lid Hole Diameter (in.)	Number of Inner Bags	Number of Liner Bags	Filter Model No.	Number of Filters	Restrictive Hydrogen Diffusivity (m/s/ml)	Package Configuration Group No.
1	NRFTRUSPC023-1	3	S5000	N	N	N/A	0	0	NucFil-019SDS	1	3.70E-06	1
2	NRFTRUSPC027-1	3	S5000	N	N	N/A	0	0	NucFil-019SDS	1	3.70E-06	1
3	NRFTRUSPC003-1	3	S5000	N	N	N/A	0	0	NucFil-019SDS	1	3.70E-06	1
4	NRFTRUSPC026-1	3	S5000	N	N	N/A	0	0	NucFil-019SDS	1	3.70E-06	1
5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
22	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Attachment 2 – Sample Container Data Form (Continued)

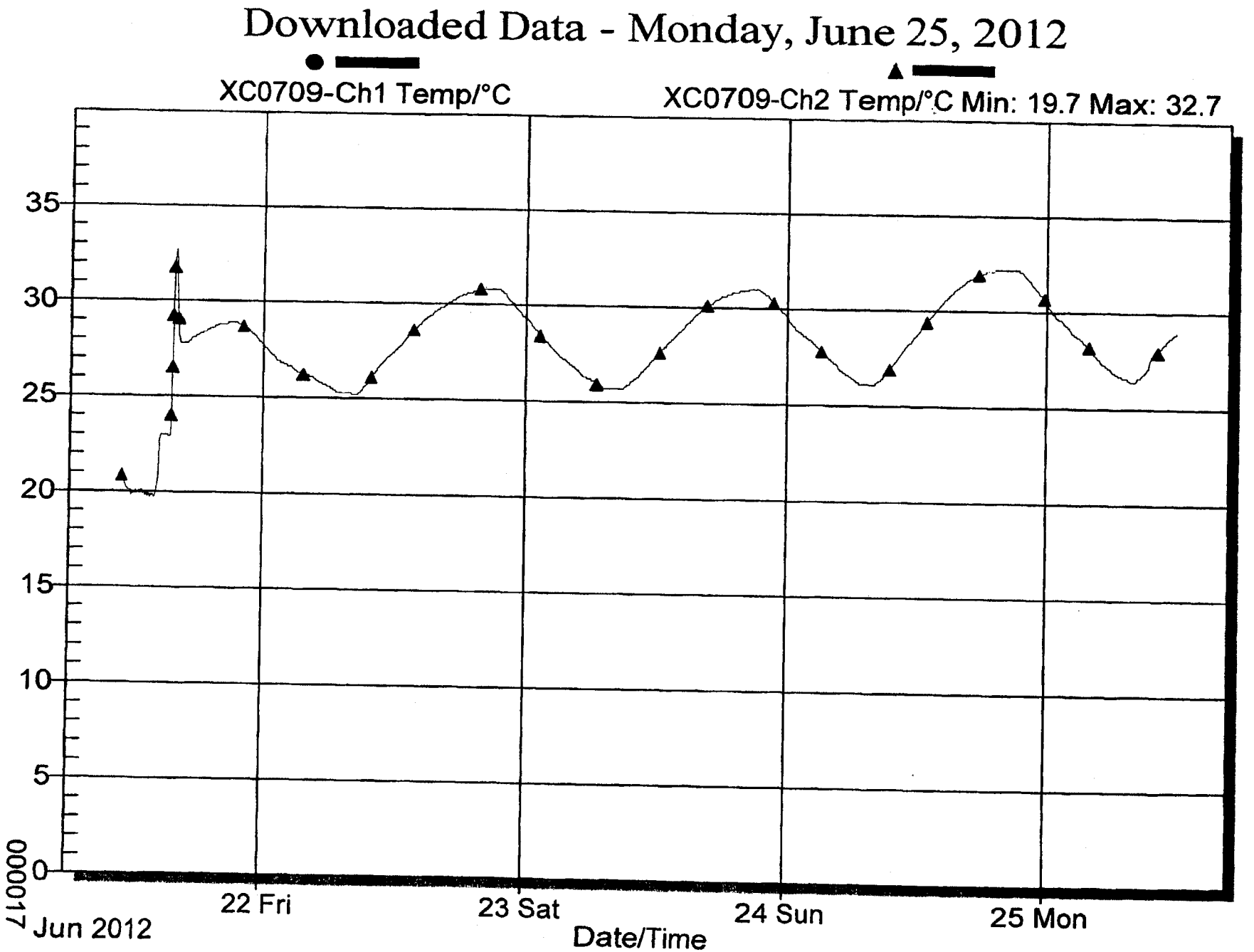
Field Batch Number: INHSG1202

	Container ID	Closure Date	Vent Date	Permit Required Equilibrium Time (Days)	Container Age (Days)	Container Fill Factor (%)	Can This Container Be Sampled? (Y / N)	Temperature Recorder M&TE /ID No.: XC0709 12-13-12 Temperature Recorder Calibration Due Date: 72 – Hour Container Equilibrium	
								Start Date/Time	End Date/Time
1	NRFTRUSPC023-1	04/02/2012	04/02/2012	4	84	85	Y	6-21-12 1600	6-25-12 0945
2	NRFTRUSPC027-1	04/02/2012	04/02/2012	4	84	85	Y	6-21-12 1600	6-25-12 0945
3	NRFTRUSPC003-1	04/17/2012	04/17/2012	4	69	85	Y	6-21-12 1600	6-25-12 0945
4	NRFTRUSPC026-1	04/17/2012	04/17/2012	4	69	85	Y	6-21-12 1600	6-25-12 0945
5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
22	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

INSG Sampler: Dale Douglas
Print Name

Signature

06-25-12
Date


Downloaded Data - Monday, June 25, 2012
XC0709-Ch1 Temp/°C
XC0709-Ch2 Temp/°C Min: 19.7 Max: 32.7
35
30
25
20
15
10
5
0
000017
Jun 2012
22 Fri
23 Sat
24 Sun
25 Mon
Date/Time

DIVIDER

PAGE

NWP
Nuclear Waste Partnership LLC
A URS-led partnership with BWW and AREVA

CP:12:01547
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: November 6, 2012

FROM: L. M. Nelson LOCATION: CCP Certification

TO: NTP Records Custodian GSA-212 LOCATION: NTP Certification

SUBJECT: RESULTS OF HEADSPACE GAS SAMPLING QUARTERLY REPEAT DATA GENERATION LEVEL DATA REVIEW: IDAHO NATIONAL LABORATORIES-REMOTE HANDLED THIRD CALENDER QUARTER OF 2012.

Procedure CCP-TP-001, *CCP Project Level Data Validation and Verification,* requires that a repeat of Data Generation Level (DGL) review, validation and verification be performed on the data for a minimum of one randomly chosen waste container each quarter. The Site Project Manager (SPM) uses this information to document that the data generation level data review is being performed according to procedures.

Inter-Office Correspondence Number CP:12:01516 was issued October 23, 2012. This memorandum identified container NRFTRUSPC026-1 as the randomly selected container for DGL repeat of Headspace Gas Sampling (HSG) at the Idaho National Laboratories-Remote-Handled waste for the third calendar quarter of 2012.

The mini Batch Data Report containing NRFTRUSPC026-1 was reviewed for the quarterly repeat on October 31, 2012. No deficiencies were identified during the review. A second HSG SPM checklist has been completed and authenticated.

If you have any questions, please call me at (303) 843-2269.

LMN:jmc

cc: M. W. Pearcy ED
I. S. Quintana ED

COPY

CCP RECORDS ORIGINAL
DATE REC'D 11-19-12

Attachment 9 – CCP SPM HSG Summa Sampling Project Level Validation Checklist and Summary

BDR Number: INHSG1202_QTR0312	Sampling Date: 6/25/12			
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
1. Does the Batch Data Report (BDR) contain the batch number? **Reference Source: CCP-PO-001, Table C3-12**	X			
2. Is the BDR complete according to the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-10b**	X			
3. Does the BDR contain the BDR date? **Reference Source: CCP-PO-001, Table C3-12**	X			
4. Is the sample matrix and type included for each sample in the BDR? **Reference Source: CCP-PO-001, Table C3-12**	X			
5. Is the BDR complete as defined by the process procedures? **Reference Source: CCP-PO-001, C3-10, CCP Technical Procedures**	X			
6. List all containers that have met QAOs. **Reference Source: CCP-PO-001, Table C3-12**				Container Numbers: NRFTRUSPC026-1 NRFTRUSPC023-1
7. Does the BDR include the requested analyses and the name of the laboratory? **Reference Source: CCP-PO-001, Table C3-12**	X			
8. Is there a reference to or copy of any associated NCRs (if any) in the BDR? NA if no NCRs associated with the BDR. **Reference Source: CCP-PO-001, Table C3-12**			X	NO NCR'S
9. Does the BDR include the point of origin for sampling (e.g., building number, room)? **Reference Source: CCP-PO-001, Table C3-12**	X			
10. Is the sample size included in the BDR? **Reference Source: CCP-PO-001, Table C3-12**	X			
11. Does the BDR include the sample location of each container? Note: Location within container is where the sample is taken. The BDR must specify what layer of confinement was sampled (e.g., under the lid). **Reference Source: CCP-PO-001, Table C3-12**	X			

CCP RECORDS ORIGINAL
DATE RECD 10-31-12

Attachment 9 – CCP SPM HSG Summa Sampling Project Level Validation Checklist and Summary (Continued)

BDR Number: INHSG1202_QTR0312	Sampling Date: 6/25/12			
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
12. Is the person collecting the sample identified in the BDR and qualified? **Reference Source: CCP-PO-001, Table C3-12**	X			
13. Does the BDR contain a chain of custody record? **Reference Source: CCP-PO-001, Table C3-12**	X			
14. Does the chain of custody form correctly identify the Waste Stream ID? **Reference Source: CCP-PO-001, Table C3-12**	X			
15. Is there a reference to sampling equipment numbers or lot numbers for disposable equipment? **Reference Source: CCP-PO-001, Table C3-12**	X			
16. Is there verification of rigid liner venting? **Reference Source: CCP-PO-001, Table C3-12**			X	NO RIGID LINERS
17. Does the BDR include the operator/sampler signature and date and time of sampling for each sample? **Reference Source: CCP-PO-001, Table C3-12**	X			
18. Are there 20 samples or less (excluding QC) in the batch and all samples collected within 14 days of the first sample collected? **Reference Source: CCP-PO-001, C1-1b**	X			
19. Are the correct revisions of the procedures used and identified? **Reference Source: CCP-PO-001, Table C3-12**	X			
20. Are all data reporting forms complete with data reported properly (correct units and significant figures)? **Reference Source: CCP-PO-001, C3-10b(1)**	X			
21. Is there a cross-reference between waste container number and field sample number? **Reference Source: CCP-PO-001, C1-5**	X			
22. Have the samples been properly preserved (0-40° C)? **Reference Source: CCP-PO-001, Table C1-1**	X			

Attachment 9 – CCP SPM HSG Summa Sampling Project Level Validation Checklist and Summary (Continued)

BDR Number: INHSG1202_QTR0312	Sampling Date: 6/25/12			
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
23. Have the samples been properly preserved (0-40° C)? **Reference Source: CCP-PO-001, Table C1-1**	X			
24. Has the correct DAC scenario and waste packaging configuration been selected? **Reference Source: CCP-PO-001, C3-2**	X			
25. Do the samples meet the required DAC equilibrium times? **Reference Source: CCP-PO-001, C3-2**	X			
26. Prior to canister use was the following performed: equipment blank, sample canister equipment cleaning and leak check, and field reference standard (or on-line control standard) performed as required? **Reference Source: CCP-PO-001, C1-1b**	X			
27. Has one field blank per batch been collected? **Reference Source: CCP-PO-001, Table C1-2**	X			
28. Has a minimum of one equipment blank been collected for the applicable cleaning batch blanks? **Reference Source: CCP-PO-001, Table C1-2**	X			
29. Has one field duplicate per batch been collected? **Reference Source: CCP-PO-001, Table C1-2**	X			
30. Has the canister pressure and ambient temperature and pressure been recorded? **Reference Source: CCP-PO-001, Table C3-12**	X			
31. Have the ambient pressure and temperature sensors been calibrated? **Reference Source: CCP-PO-001, C1-1d**	X			
32. Have all the waste containers equilibrated for a minimum of 72 hours at 18° C or higher? **Reference Source: CCP-PO-001, C1-1a**	X			
33. Is the completed, signed, and dated Independent Technical Reviewer Checklist in the BDR? **Reference Source: CCP-PO-001, Table C3-12**	X			

Attachment 9 – CCP SPM HSG Summa Sampling Project Level Validation Checklist and Summary (Continued)

BDR Number: INHSG1202_QTR0312 **Sampling Date:** 6/25/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
34. Is the completed, signed, and dated Independent Technical Reviewer Checklist in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, Table C3-12**	X			

Comments: NONE

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

LAURA NELSON	Laura Nelson	10-31-12
SPM Printed Name	Signature	Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

Attachment 1 – HSG Sampling Batch Data Report Cover Sheet

Page 1 of 1

Headspace Gas Sampling

HSG Sampling Batch Number: INHSG1202 QTR0312

Waste Matrix Code: S5000

Waste Container Identification Numbers

NRFTRUSPC023-1*	N/A
NRFTRUSPC026-1	N/A
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

Comments: This is the third Quarter 2012 Headspace Gas Sampling Quarterly repeat of data generation level review for container NRFTRUSPC026-1. The drum listed with the asterisk (*) is the Duplicate Sample container for batch INHSG1202 and is also being reviewed for proper completion of the ITR checklist.

HSG Independent Technical Reviewer:

Jeri Miles
Printed Name

Signature

10/29/2012
Date

CCP RECORDS ORIGINAL
DATE REC'D 10-30-12

Attachment 2 – HSG Sampling Batch Data Report Table of Contents

Section		Page No.
1.	HSG Sampling Batch Data Report Cover Sheet (Attachment 1)	1
2.	HSG Sampling Batch Data Report Table of Contents (Attachment 2)	2
3.	Independent Technical Reviewer (ITR) Review Checklist (Attachment 3)	3
Sampling Batch Data Report Forms:		
4.	Chain of Custody/Canister Tag Forms (Attachment 1 from CCP-TP-093)	5
5.	Copy of Laboratory Canister Tags	7
6.	Cleanliness Certification for needle assemblies as applicable to the Sampling Batch Data Report (or copy of the certifications from CCP-TP-093)	11
7.	Sample Drum Data Form (Attachment 2 from CCP-TP-093)	13
8.	Copy of Sampling Port Installation Records (CCP-TP-098, Attachment 1), if applicable	N/A
9.	Copy of Drum Filter Changeout Form (Attachment 1 of CCP-TP-082), if applicable.	N/A
10.	Shipment Request Forms, if applicable.	N/A
11.	72-Hour Temperature Equilibration Plots	15
12.	Copy of NCRs, if applicable	N/A

Attachment 3 – Independent Technical Reviewer (ITR) Review Checklist

HSG Sampling Batch Number: INHSG1202 QTR0312

Description	YES	NO	NA	
1. Is the HSG Sampling BDR complete as specified in step 4.1.2 and are the field sampling records complete?	X			
Sampling Documentation	**YES**	**NO**	**NA**	**Comments**
2. Are calculations correct for the Drum Age Criteria (DAC), temperature equilibrium time, and percent complete?	X			
3. Did the containers meet the DAC?	X			
4. Did the containers meet the temperature equilibrium requirement (stored at 18°C or higher for 72-hours prior to sampling)?	X			
5. Do the temperature plots indicate the drums were stored at 18 °C (64.5 °F) or higher for 72-hours prior to sampling?	X			
5a. Are the waste stream IDs completed correctly on the Chain of Custody (COC) Form?	X			
Quality Control Samples				
Precision	**YES**	**NO**	**NA**	**Comments**
6. Was a Field Duplicate collected once per batch?	X			
Accuracy	**YES**	**NO**	**NA**	**Comments**
7. Was a Field Reference Sample collected?		X		NOT NEEDED
8. Was a Field Blank collected one per batch prior to sampling containers?	X			
Completeness	**YES**	**NO**	**NA**	**Comments**
9. Is the percentage of valid samples collected and submitted for analysis greater than or equal to 90 percent?	X			
Additional Checks	**YES**	**NO**	**NA**	**Comments**
10. Is the data technically reasonable based upon the technique used?	X			
11. Was the sampling equipment checked for leaks after sample collection?	X			
12. Was the data generation and reduction conducted in a technically correct manner?	X			
13. Was the data reported in proper units and with the correct number of significant figures?	X			
14. Were the samples maintained at a temperature between 0°C - 40°C?	X			
15. Was the equipment involved in the sampling activities in calibration (i.e., torque wrenches, ambient temperature and pressure gauges, dataloggers, ultrasonic micrometer, min/max thermometers)?	X			

Attachment 3 – Independent Technical Reviewer (ITR) Review Checklist (continued)

HSG Sampling Batch Number: INHSG1202 QTR0312

Raw Data Collection and Management	YES	NO	NA	Comments
16. Are there satisfactory equipment blanks, canister cleaning blanks, and needle assembly cleanliness results?	X			
17. Has the data been reviewed for transcription errors?	X			
18. Verify all the data is signed and dated, and the data is recorded clearly, legibly, and accurately.	X			
19. No more than 20 waste containers are in the batch (excluding the QC samples).	X			
20. Procedure Number: CCP-TP-093 Revision: 16				
21. Is the procedure number and revision correct?	X			
22. All changes to original data are lined out, initialed, and dated by the individual making the change, and a justification included. (NOTE: Original data must not be obliterated or otherwise disfigured as not to be readable. Data changes shall only be made by the individual who originally collected the data or an individual authorized to change the data.)	X			

Independent Technical Reviewer:

Jeri Miles
Printed Name

Signature

10/29/2012
Date

Attachment 1 – Chain of Custody/Canister Tag Chain of Custody # 591 Page 1 of 2

Location: Under Drum Lid	Point of Origin: CPP-659	Sample Matrix is Gas	Ambient Conditions
	Field Batch Number: INHSG1202		Temperature (centigrade): 25.2
			Pressure (in. Hg): 25

Site	Date	SUMMA® Canister No.	Size (mL)	TID No.	Container ID /Barcode No.	Waste Stream ID	Cleaning Batch No.	Needle Assembly Batch No.	Type SS B D F C (Note 1)	Vent Seal (Y/NA)	Start Time	End Time	Beginning Pressure (in.Hg or psig)	End Pressure (in.Hg or psig)	Sampler's Initials
IN	062512	EI684	250	0825621	N/A	N/A	429C	INHSG1201NB	B	N/A	1001	1002	25 in.Hg	1 in.Hg	
IN	062512	EI756	250	0825622	NRFTRUSPC023-1	IN-ID-NRF-SPC	429C	INHSG1102NB	D	Y	1015	1020	25 in.Hg	3 in.Hg	
IN	062512	EIC76	250	0825623	NRFTRUSPC023-1	IN-ID-NRF-SPC	429C	INHSG1102NB	D	Y	1015	1020	26 in.Hg	1 in.Hg	
IN	062512	EIB79	250	0825624	NRFTRUSPC027-1	IN-ID-NRF-SPC	429C	INHSG1201NB	SS	Y	1037	1042	25 in.Hg	1 in.Hg	
IN	062512	EIC73	250	0825625	NRFTRUSPC003-1	IN-ID-NRF-SPC	429C	INHSG1201NB	SS	Y	1055	1059	25 in.Hg	2 in.Hg	
IN	062512	EI169	250	0825626	NRFTRUSPC026-1	IN-ID-NRF-SPC	429C	INHSG1201NB	SS	Y	1115	1120	25 in.Hg	1 in.Hg	
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Note 1. Analysis required.

C - Needle Assembly Cleanliness Certification: VOC.
SS - Single Sample: VOC, H_2, CH_4
B - Field Blank: VOC
D - Duplicate: VOC, H_2, CH_4
F - Field Reference Standard: VOC

Sampler's Signature

000005

000005

Attachment 1 – Chain of Custody/Canister Tag (Continued) Chain of Custody # 591 Page 2 of 2

Field Batch Number: INHSG1202					
Comments: N/A		Instrument Section	M&TE ID No.	Calibration Due Date	Initials/Date
Analytical Laboratory - ECL		Pressure Meter	XC0566	8-16-2012	6-25-12
Shipping Tracking #N/A	Method of Shipping: ECL Pickup	Thermometer	XC0717	6-5-2013	6-25-12
		Min /Max Thermometer	723204 XC0552	10-12-2012 10-12-2012	6-25-12
Analysis Requested VOC		Preservation Method: 0 - 40°C			
TID Number(s) 0825627		TID Initials and date:		6-26-12	

Custody Initiated By: (Sampler Name/Organization) CCP	Date/Time 6-25-12 1002	[redacted]	
Relinquished By: (Name/Organization) CCP	Date/Time 6-26-12 1400	Received By: (Name/Organization)	Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)	Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)	Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)	Date/Time
Final Disposition By: (Name/Organization)	Date/Time	Disposition:	

900006

900006

GAS SAMPLE CANISTER TAG

1	W	0	6	2	5	1	2	E	I	6	8	4
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSL1202 Drum Number: N/A

Sampling Organization: CCP Sample Description: FIELD BLANK

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 23	061312	1430	TBL
Cleaning Batch: 429C	M= <5.0E-2	P= 639T			
Field-	C= 25" Hg	T= 25.2	062512	1001	MM
Before Sample Collection	M=	P= 25			
Field-	C= 1" Hg	T= 25.2	062512	1002	MM
After Sample Collection	M= DO 1070292-12 Hg	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? (Y) / N (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

10/29/12

000007

000007

GAS SAMPLE CANISTER TAG

1	N	0	6	2	5	1	2	E	I	7	5	6
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1202 Drum Number: NRFTRUSPC023-1

Sampling Organization: CCP Sample Description: Duplicate Sample

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 23	061312	1430	TBL
Cleaning Batch: 429C	M= <5.0E-2	P= 639T			
Field-	C= 25" Hg	T= 25.2	062512	1015	DD
Before Sample Collection	M=	P= 25			
Field-	C= 3 "Hg	T= 25.2	062512	1020	DD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (99-05)

10/29/12

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GAS SAMPLE CANISTER TAG

1	N	0	6	2	5	1	2	E	I	C	7	8
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INH3G1202 Drum Number: NRFTRUSPC023-1

Sampling Organization: CCP Sample Description: Duplicate Sample

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 23	061312	1430	TBL
Cleaning Batch: 429C	M= <5.0E-2	P= 639T			
Field-	C= 26 "Hg	T= 25.2	062512	1015	AD
Before Sample Collection	M=	P= 25			
Field-	C= 1 "Hg	T= 25.2	062512	1020	AD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GJL 10/29/12
~~000009~~

GAS SAMPLE CANISTER TAG

1	W	0	6	2	5	1	2	E	I	1	6	9
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: IWHS1q1202 Drum Number: NRFTRUSPC 026-1

Sampling Organization: CCP Sample Description: Sample

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 23	061312	1430	TBL
Cleaning Batch: 429C	M= <5.0E-2	P= 639T			
Field-	C= 25 "Hg	T= 25.2	062512	1115	DD
Before Sample Collection	M=	P= 25			
Field-	C= 1 "Hg	T= 25.2	062512	1120	DD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev 10/9-05)

10/29/2012

~~000012~~

From: Catherine A Crowder [Catherine.Crowder@inl.gov]
Sent: Monday, March 28, 2011 1:00 PM
To: Broomfield, Barbara J.; Walters, Ed E.; charles.turner@wipp.ws
Subject: Needle Assembly Blanks

Analytical results for needle assembly equipment blanks in field batch INHSG1102NB were acceptable. Concentrations of all VOC target analytes were less than or equal to three times the MDLs listed in Table B3-2 in Permit Attachment B3.

10/29/12
~~000013~~
7/3/2012 7:30 AM
000011

From: Catherine A Crowder [Catherine.Crowder@inl.gov]
Sent: Tuesday, May 01, 2012 4:36 PM
To: Broomfield, Barbara J.; Poirier, Joe; charles.turner@wipp.ws
Subject: Needle Assembly Blanks

Analytical results for needle assembly equipment blanks in field batch INHSG1201NB were acceptable. Concentrations of all VOC target analytes were less than or equal to three times the MDLs listed in Table B3-2 in Permit Attachment B3.

10/29/12
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7/3/2012 7:30 AM

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Attachment 2 – Sample Container Data Form

Field Batch Number: INHSG1202

	Container ID	Sampling Scenario	Summary Category Group	Rigid Liner (Y/N)	Rigid Liner Lid (Y/N)	Rigid Liner Lid Hole Diameter (in.)	Number of Inner Bags	Number of Liner Bags	Filter Model No.	Number of Filters	Restrictive Hydrogen Diffusivity (m/s/m²)	Package Configuration Group No.
1	NRFTRUSPC023-1	3	S5000	N	N	N/A	0	0	NucFil-019SDS	1	3.70E-06	1
2	NRFTRUSPC027-1	3	S5000	N	N	N/A	0	0	NucFil-019SDS	1	3.70E-06	1
3	NRFTRUSPC003-1	3	S5000	N	N	N/A	0	0	NucFil-019SDS	1	3.70E-06	1
4	NRFTRUSPC026-1	3	S5000	N	N	N/A	0	0	NucFil-019SDS	1	3.70E-06	1
5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
22	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

10/29/12

000013

Attachment 2 – Sample Container Data Form (Continued)

Page 2 of 2

Field Batch Number: INHSG1202

	Container ID	Closure Date	Vent Date	Permit Required Equilibrium Time (Days)	Container Age (Days)	Container Fill Factor (%)	Can This Container Be Sampled? (Y / N)	Temperature Recorder M&TE ID No.: XC0709 12-13-12 Temperature Recorder Calibration Due Date: 72 – Hour Container Equilibrium	
								Start Date/Time	End Date/Time
1	NRFTRUSPC023-1	04/02/2012	04/02/2012	4	84	85	Y	6-21-12 1600	6-25-12 0945
2	NRFTRUSPC027-1	04/02/2012	04/02/2012	4	84	85	Y	6-21-12 1600	6-25-12 0945
3	NRFTRUSPC003-1	04/17/2012	04/17/2012	4	69	85	Y	6-21-12 1600	6-25-12 0945
4	NRFTRUSPC026-1	04/17/2012	04/17/2012	4	69	85	Y	6-21-12 1600	6-25-12 0945
5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
22	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

SG Sampler: Charles Bowen
Print Name

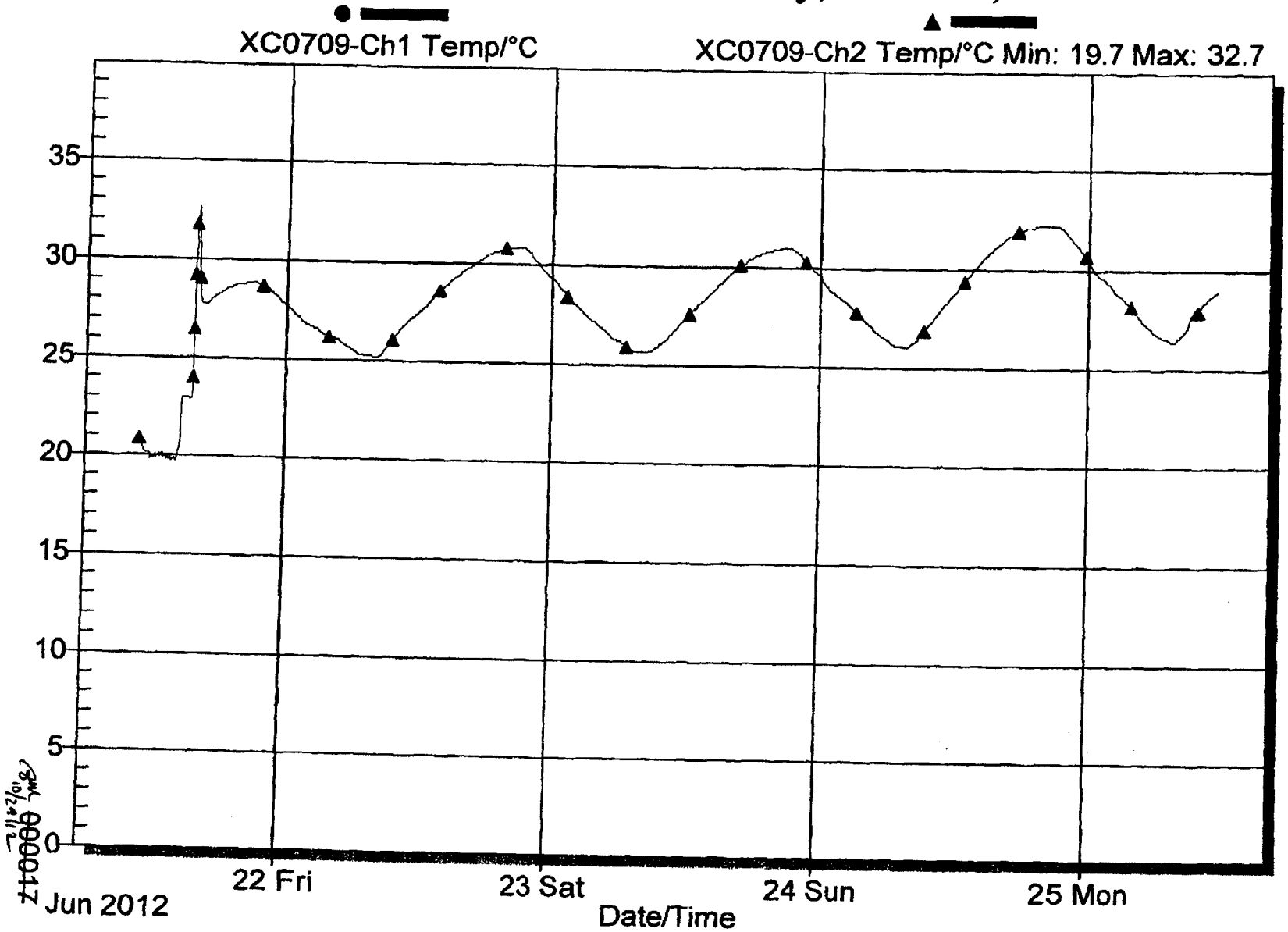
Signature

06-25-12
Date

000046

000014

Downloaded Data - Monday, June 25, 2012



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Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

	Original Record	☐ Copy
	Fax Record	
x	Electronic Record	

Attn:	Sheri Punchios /Linda Martin	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Hwy	Company:	WTS
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	10-31-12
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
INHSG1202_QTR 0312	SPM Checklist	10-31-12	4
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)

Acceptance/Rejection Signature and Date

Records Accepted ☑	Linda Martin	Linda Martin	10.31.12
	Signature	Printed Name	Date
Records Rejected ☐			
	Signature	Printed Name	Date

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	1491
DESTINATION TEL #	913038432208
DESTINATION ID	DENVER
ST. TIME	10/31 11:16
TIME USE	00'15
PAGES SENT	1
RESULT	OK

Controlled Copy

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[ ] Original Record [ ] Copy
[ ] Fax Record
[x] Electronic Record

Attn:	Sheri Punchios /Linda Martin	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Hwy	Company:	WTS
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	10-31-12
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
INHSG1202_QTR 0312	SPM Checklist	10-31-12	4
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Fax Record [ ] Electronic Record [ ] Copy

Attn:	RH – LINDA MARTIN	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	11/05/2012
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
INHSG1202_QTR0312	BATCH DATA REPORT RH HSG SAMPLING (QTR)	10/29/2012	15
	N/A		

Comments

SPM CHECKLIST LOCATED IN CARLSBAD.

(When the Record accepted line has been completed, the rest of the page below may be left blank.)

Acceptance/Rejection Signature and Date

	Signature	Printed Name	Date
Records Accepted [✓]	Linda Martin	Linda Martin	11.9.12
Records Rejected [ ]			

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	1620
DESTINATION TEL #	912085577396
DESTINATION ID	INL
ST. TIME	11/09 07:30
TIME USE	00'16
PAGES SENT	1
RESULT	OK

Controlled Copy

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad. New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	RH – LINDA MARTIN	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	11/05/2012
Telephone Number:	575-234-7523		

Document Number	Title/Description	Record Date	# of Pages
INHSG1202_QTR0312	BATCH DATA REPORT RH HSG SAMPLING (QTR)	10/29/2012	15
	N/A		

Comments

SPM CHECKLIST LOCATED IN CARLSBAD.

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Linda Martin 11/9/12

DIVIDER PAGE

NWP
Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA

CP:12:01517
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: October 23, 2012

FROM: L. M. Nelson LMN — LOCATION: CCP Certification

TO: G. Smith ED — LOCATION: CCP Operations, Idaho National Laboratory

SUBJECT: THIRD QUARTER 2012 (JULY 1, 2012 THROUGH SEPTEMBER 30, 2012) REAL-TIME RADIOGRAPHY QUARTERLY REPEAT OF DATA GENERATION LEVEL REVIEW AT THE IDAHO NATIONAL LABORATORY- REMOTE-HANDLED

Remote-Handled (RH) Real-Time Radiography (RTR) at the Idaho National Laboratory has completed 92 days of reporting from July 1, 2012 through September 30, 2012. Container number ANLE10A, Batch Data Report (BDR) INLRHRTR12013, was randomly selected from among all the drums processed through Site Project Manger Project Level Review during this time frame. This container will be processed through the Quarterly Repeat of Data Generation Level (DGL) Review as described in CCP-TP-001, *CCP Project Level Data Validation and Verification.* The original letter will be retained in the letter correspondence file.

Please forward the mini-drum package provided to a qualified RTR operator for the completion of an Independent Technical Review for the quarterly repeat. The mini-drum package has all the pertinent information to complete the review. Not all containers included in the original BDR will be included for this review. Only the selected drum noted above must be reviewed along with any Quality Control Information.

Please perform the RTR quarterly repeat of DGL and return the mini-BDR with the naming convention "INLRHRTR12013_QTR0312" by November 19, 2012 to the Central Characterization Program Records Department.

If you have any questions, please call me at (303) 843-2269.

LMN:jmc

Attachment

cc: (without attachment) (with attachment)

I. S. Quintana ED — NTP Records Custodian GSA-212

P.O. Box 2078 • Carlsbad, New Mexico USA 88221-2078
Phone: (575) 234-7200 • Fax: (575) 234-7083

DOE/CBFO Date Received: 10-31-12

Attachment 1 – CCP RTR Measurement Control Report

CCP RTR Measurement Control Report		
Site: INL		
Batch Data Report No.: INLRHRTR12013		
Examination Date: 09/12/12		
Control Checks		
Image Test Pattern Test Lines-pair/cm: 10 (Minimum acceptable is five lines-pair/cm)	☑ SAT	☐ UNSAT
Audio/Video Media Recording System - Audio/Video Checks	☑ SAT	☐ UNSAT
Comments: N/A		
RTR Operator:		
Lashell Alade (Printed Name)	Lashell Alade (Signature)	09/12/12 (Date)

05

Attachment 1 – CCP RTR Measurement Control Report

CCP RTR Measurement Control Report		
Site: INL		
Batch Data Report No.: INLRHRTR12013		
Examination Date: 9/13/12		
Control Checks		
Image Test Pattern Test Lines-pair/cm: 10 (Minimum acceptable is five lines-pair/cm)	☑ SAT	☐ UNSAT
Audio/Video Media Recording System - Audio/Video Checks	☑ SAT	☐ UNSAT
Comments: N/A		
RTR Operator:		
Lashell Alade 9/13/12		
Printed Name Signature Date		

06

Attachment 1 – CCP RTR Measurement Control Report

CCP RTR Measurement Control Report		
Site: INL		
Batch Data Report No.: INLRHRTR12013		
Examination Date: 9/14/12		
Control Checks		
Image Test Pattern Test Lines-pair/cm: 10 (Minimum acceptable is five lines-pair/cm)	☑ SAT	☐ UNSAT
Audio/Video Media Recording System - Audio/Video Checks	☑ SAT	☐ UNSAT
Comments: N/A		
RTR Operator:		
Lashell Alade 9/14/12		
Printed Name Signature Date		

07

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☐ RTR Examination ☑ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12013
Examination Date:	09/12/12
Waste Container ID:	ANLE3D
Audio/Video Media Number:	Primary: INLRHRTR12013 A Backup: INLRHRTR12013 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	70%, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE3D

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 1 gallon metal paint can, wire, metal mesh basket, scrap metal, metal rods, small metal container, metal bracing, 30 gallon metal drum (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE3D

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Chris Davis		09/12/12
Printed Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☐ RTR Examination ☐ RTR Replicate Scan ☑ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12013
Examination Date:	09/14/12
Waste Container ID:	ANLE3G
Audio/Video Media Number:	Primary: INLRHRTR12013 A Backup: INLRHRTR12013 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	10%, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE3G

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 30 Gallon metal drum (OI) Met-l-x with fines (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE3G

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary
Comments: N/A

RTR Operator:

Chris Davis — Printed Name

Signature

09/14/12 — Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12013
Examination Date:	09/12/12
Waste Container ID:	ANLE3D
Audio/Video Media Number:	Primary: INLRHRTR12013 A Backup: INLRHRTR12013 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON DRUM
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	70%, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE3D

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 30 gallon drum, paint can with lid, wire basket, scrap metal, metal rods, metal brace (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE3D

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Lashell Alade — Printed Name

Lashell Alade — Signature

09/12/12 — Date

Attachment 2 – CCP Radiography Data Sheet

Page 1 of 3

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12013
Examination Date:	09/13/12
Waste Container ID:	ANLE10A
Audio/Video Media Number:	Primary: INLRHRTR12013 A Backup: INLRHRTR12013 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON DRUM
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	90%, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE10A

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 30 gallon drum, 1 gallon paint cans with holes, scrap metal, rods, nozzles, nuts and bolts, metal tubes, metal caps, wire, C-clamp (OI) Sanding disc, glass bottles, broken glass, solidified material (XPW) Scrap plastic, electrical wire, plastic bottles

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE10A

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐YES	☑NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐YES	☑NO
Does the container have observable liquid containing PCBs?	☐YES	☑NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐YES	☑NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐YES	☑NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐YES	☑NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐YES	☑NO
Is there an indication of wastes containing explosives or compressed gases?	☐YES	☑NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐YES	☑NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐YES	☑NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐YES	☑NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐YES	☑NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐YES	☑NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐YES	☑NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Lashell Alade — Lashell Alade — 09/13/12

Printed Name — Signature — Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12013
Examination Date:	09/14/12
Waste Container ID:	ANLE3G
Audio/Video Media Number:	Primary: INLRHRTR12013 A Backup: INLRHRTR12013 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON DRUM
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	5%, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Page 2 of 3

Container ID: ANLE3G

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 30 gallon drum (OI) Met-L-X and fines (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE3G

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Lashell Alade — Printed Name

Lashell Alade — Signature

09/14/12 — Date

DIVIDER

PAGE

NWP
Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA

CP:12:01608
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: December 10, 2012

FROM: L. M. Nelson LMN — LOCATION: CCP Certification

TO: G. Smith ED — LOCATION: CCP Operations
Idaho National Laboratory

SUBJECT: RESULTS OF REAL-TIME RADIOGRAPHY QUARTERLY REPEAT DATA GENERATION LEVEL DATA REVIEW: IDAHO NATIONAL LABORATORY- REMOTE-HANDLED THIRD CALENDER QUARTER OF 2012.

Procedure CCP-TP-001, *CCP Project Level Data Validation and Verification,* requires that a repeat of Data Generation Level (DGL) review, validation and verification be performed on the data for a minimum of one randomly chosen waste container each quarter. The Site Project Manager (SPM) uses this information to document that the DGL data review is being performed according to procedures.

Inter-office Correspondence Number CP:12:01517 was issued on October 23, 2012. This memorandum identified waste container ANLE10A as the randomly selected container for DGL repeat of Real-Time Radiography (RTR) at the Idaho National Laboratories- Remote-Handled waste for the third calendar quarter of 2012.

The mini-Batch Data Report containing ANLE10A was reviewed for the quarterly repeat on November 26, 2012. No deficiencies were identified during the review. A second RTR SPM Checklist has been completed and authenticated.

If you have any questions, please call me at (303) 843-2269.

LMN:jmc

cc: I. S. Joo ED
NTP Records Custodian GSA-212

COPY

CCP RECORDS ORIGINAL
DATE REC'D 12-11-12

Attachment 4 – CCP Radiography Site Project Manager Review Checklist

Batch Data Report No.: TNLRH RTR12013-QTR0312

1.	Has all the data received an independent technical review as evidenced by a completed Attachment 3 and the appropriate ITR signature?	☐NO	☑YES
2.	Are BDR contents complete and match Attachment 5?	☐NO	☑YES
3.	Is the BDR complete (appropriately completed forms for each container)?	☐NO	☑YES
4.	Have Quality Assurance Objectives (QAOs) for RTR been met? Waste Characterization Program Implementation Plan (WCPIP) • Precision – Reconciled discrepancies between RTR Operators • Accuracy – Target used to tune the image for maximum sharpness and qualified operators performed the work • Representativeness – Description of container contents • Completeness – Completed data form and recording • Comparability – Training requirements met Quality Assurance Project Plan (QAPjP) • Image test satisfactory (Minimum acceptable is five lines-pair/cm) • Replicate scan performed • Independent observation performed • ITR review complete	☐NO	☑YES

Comments:

No NCR's

I have reviewed 100 percent of the container-specific and batch data in this BDR and find it acceptable.

SPM:

Laura Nelson	Laura Nelson	11/26/12
Printed Name	Signature	Date

CCP RECORDS ORIGINAL
DATE REC'D 11.26.12

Attachment 6 – CCP Radiography Batch Data Report Cover Sheet

Batch Data Report No.: INLRHRTR12013_QTR0312 Date: 11/20/12

Waste Container ID Numbers	
Replicate Scan:	ANLE3D
Independent Observation:	ANLE3G
1	ANLE3D
2	ANLE10A
3	ANLE3G
4	N/A
5	N/A
6	N/A
7	N/A
8	N/A
9	N/A
10	N/A
11	N/A
12	N/A
13	N/A
14	N/A
15	N/A
16	N/A
17	N/A
18	N/A
19	N/A
20	N/A

ITR:

Tyson Christensen — Printed Name

Tyson Christensen — Signature

11/20/12 — Date

CCP RECORDS ORIGINAL
DATE REC'D 11-20-12

Attachment 5 – CCP Radiography Batch Data Report Table of Contents

Batch Data Report No.: INLRHRTR12013_QTR0312 Date: 11/20/12

Table Of Contents

Item	Description	Page No.
1	Attachment 6, CCP Radiography Batch Data Report Cover Sheet	1
2	Attachment 5, CCP Radiography Batch Data Report Table of Contents	2
3	Attachment 3, CCP Independent Technical Reviewer Checklist	3-4
4	Attachment 1, CCP RTR Measurement Control Report	5-7
5	Attachment 2(s), CCP Radiography Data Sheets	8-22
6	Copy of NCRs (N/A [Not Applicable])	N/A

Attachment 3 – CCP Radiography Independent Technical Reviewer Checklist

Batch Data Report No.: INLRHRTR12013_QTR0312

Description				
1.	Data generation and reduction were conducted in a technically correct manner in accordance with the methods used?	☐ NO	☑ YES	☐ N/A
2.	Was the correct revision of the procedure used? Procedure: CCP-TP-508 Rev.: 7	☐ NO	☑ YES	☐ N/A
3.	Are there transcription errors?	☐ NO	☐ YES	☑ N/A
4.	Does the BDR include RTR for up to 20 containers?	☐ NO	☑ YES	☐ N/A
5.	Are BDR contents complete and match Attachment 5?	☐ NO	☑ YES	☐ N/A
6.	Is all the data signed and dated in reproducible ink and by the individual(s) generating it?	☐ NO	☑ YES	☐ N/A
7.	Is all data recorded clearly, legibly, and accurately?	☐ NO	☑ YES	☐ N/A
8.	Are all changes to original data lined out, initialed, and dated?	☐ NO	☐ YES	☑ N/A
9.	Were data changes made by the individual who originally collected the data or an individual authorized to change the data?	☐ NO	☐ YES	☑ N/A
10.	Does the waste match the Waste Matrix Code and waste stream description?	☐ NO	☑ YES	☑ N/A 1/26/12
11.	Are the RTR Operator's decisions regarding the RTR documented?	☐ NO	☑ YES	☐ N/A
12.	Is there an adequate written description of the contents of each item?	☐ NO	☑ YES	☐ N/A
13.	Was the audio/video media properly prepared and labeled?	☐ NO	☑ YES	☐ N/A
14.	Was the audio/video check performed satisfactorily and recorded on Attachment 1?	☐ NO	☑ YES	☐ N/A
15.	Was the Image Test Pattern Test performed satisfactorily and recorded on Attachment 1?	☐ NO	☑ YES	☐ N/A
16.	Was the Replicate Scan performed and recorded on an Attachment 2? (Once per batch or once per day, whichever is less frequent).	☐ NO	☑ YES	☐ N/A
17.	Was the Replicate Scan RTR Operator different from the original scan RTR Operator?	☐ NO	☑ YES	☐ N/A
18.	Did the Replicate Scan RTR Operator and the original scan RTR Operator agree on the results?	☐ NO	☑ YES	☐ N/A
19.	Was the IO performed and recorded on an Attachment 2? (Once per batch or once per day, whichever is less frequent).	☐ NO	☑ YES	☐ N/A
20.	Was the IO RTR Operator different from the original scan RTR Operator?	☐ NO	☑ YES	☐ N/A
21.	Did the IO RTR Operator and the first RTR Operator agree on the results?	☐ NO	☑ YES	☐ N/A
22.	Were the operators qualified to perform the tasks by verification of the LOQI?	☐ NO	☑ YES	☐ N/A
23.	Are the NCR(s) associated with the RTR included in the BDR?	☐ NO	☐ YES	☑ N/A

Attachment 3 – CCP Radiography Independent Technical Reviewer Checklist
(Continued)

Batch Data Report No.: INLRHRTR12013_QTR0312

Comments:
N/A

I have reviewed 100 percent of the container-specific and batch data in this BDR and find it acceptable for SPM review.

ITR:

Tyson Christensen		11/20/12
Printed Name	Signature	Date

Attachment 1 – CCP RTR Measurement Control Report

CCP RTR Measurement Control Report		
Site: INL		
Batch Data Report No.: INLRHRTR12013		
Examination Date: 09/12/12		
Control Checks		
Image Test Pattern Test Lines-pair/cm: 10 (Minimum acceptable is five lines-pair/cm)	☑ SAT	☐ UNSAT
Audio/Video Media Recording System - Audio/Video Checks	☑ SAT	☐ UNSAT
Comments: N/A		
RTR Operator:		
Lashell Alade (Printed Name)	Lashell Alade (Signature)	09/12/12 (Date)

05

Attachment 1 – CCP RTR Measurement Control Report

CCP RTR Measurement Control Report		
Site: INL		
Batch Data Report No.: INLRHRTR12013		
Examination Date: 9/13/12		
Control Checks		
Image Test Pattern Test Lines-pair/cm: 10 (Minimum acceptable is five lines-pair/cm)	☑ SAT	☐ UNSAT
Audio/Video Media Recording System - Audio/Video Checks	☑ SAT	☐ UNSAT
Comments: N/A		
RTR Operator:		
Lashell Alade 9/13/12		
Printed Name Signature Date		

06

Attachment 1 – CCP RTR Measurement Control Report

CCP RTR Measurement Control Report		
Site: INL		
Batch Data Report No.: INLRHRTR12013		
Examination Date: 9/14/12		
Control Checks		
Image Test Pattern Test Lines-pair/cm: 10 (Minimum acceptable is five lines-pair/cm)	☑ SAT	☐ UNSAT
Audio/Video Media Recording System - Audio/Video Checks	☑ SAT	☐ UNSAT
Comments: N/A		
RTR Operator: Lashell Alade (Printed Name) — Lashell A Coale (Signature) — 9/14/12 (Date)		

07

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☐ RTR Examination ☑ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12013
Examination Date:	09/12/12
Waste Container ID:	ANLE3D
Audio/Video Media Number:	Primary: INLRHRTR12013 A Backup: INLRHRTR12013 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	70%, N/A, N/A

08

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE3D

Section 3: Waste Container Inventory and Comments (Detailed descriptions)

(IM) 1 gallon metal paint can, wire, metal mesh basket, scrap metal, metal rods, small metal container, metal bracing, 30 gallon metal drum
(XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE3D

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags NOT defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:
N/A

RTR Operator:

Chris Davis — Printed Name

Signature

09/12/12 — Date

10

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☐ RTR Examination ☐ RTR Replicate Scan ☑ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12013
Examination Date:	09/14/12
Waste Container ID:	ANLE3G
Audio/Video Media Number:	Primary: INLRHRTR12013 A Backup: INLRHRTR12013 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	10% N/A N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE3G

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 30 Gallon metal drum (OI) Met-l-x with fines (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE3G

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags NOT defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO
Section 5: Waste Summary		
Comments: N/A		

RTR Operator:

Chris Davis — Printed Name

Signature

09/14/12 — Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12013
Examination Date:	09/12/12
Waste Container ID:	ANLE3D
Audio/Video Media Number:	Primary: INLRHRTR12013 A Backup: INLRHRTR12013 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON DRUM
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	70% N/A N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE3D

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 30 gallon drum, paint can with lid, wire basket, scrap metal, metal rods, metal brace (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE3D

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:
N/A

RTR Operator:

Lashell Alade — Lashell Alade — 09/12/12

Printed Name — Signature — Date

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Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12013
Examination Date:	09/13/12
Waste Container ID:	ANLE10A
Audio/Video Media Number:	Primary: INLRHRTR12013 A Backup: INLRHRTR12013 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON DRUM
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	90%, N/A, N/A

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47 17
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Attachment 2 – CCP Radiography Data Sheet (Continued)

Page 2 of 3

Container ID: ANLE10A

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 30 gallon drum, 1 gallon paint cans with holes, scrap metal, rods, nozzles, nuts and bolts, metal tubes, metal caps, wire, C-clamp (OI) Sanding disc, glass bottles, broken glass, solidified material (XPW) Scrap plastic, electrical wire, plastic bottles

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48 18
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Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE10A

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Lashell Alade — Lashell Alade — 09/13/12

Printed Name — Signature — Date

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49 19
e 11/2/12

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12013
Examination Date:	09/14/12
Waste Container ID:	ANLE3G
Audio/Video Media Number:	Primary: INLRHRTR12013 A Backup: INLRHRTR12013 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON DRUM
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	5%, N/A, N/A

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Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE3G

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 30 gallon drum (OI) Met-L-X and fines (XPW) Scrap plastic

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5+21
E 11/26/12

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE3G

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Lashell Alade — Lashell Alade — 09/14/12

Printed Name — Signature — Date

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52 22
E 11/20/12

DIVIDER PAGE ONLY

Not part of page count

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

	Original Record
	Fax Record
x	Electronic Record

☐ Copy

Attn:	Linda Martin	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Hwy	Company:	WTS
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	11-26-12
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
INLRHRTR12013 _QTR0312	SPM Checklist	11-26-12	1
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)

Acceptance/Rejection Signature and Date

Records Accepted ☑ Linda Martin (Signature) | Linda Martin (Printed Name) | 11-26-12 (Date)

Records Rejected ☐ _____ (Signature) | _____ (Printed Name) | _____ (Date)

Reason for Rejection:

Re-submittal: _____ (Signature) | _____ (Printed Name) | _____ (Date)

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	1830
DESTINATION TEL #	913038432208
DESTINATION ID	DENVER
ST. TIME	11/26 14:31
TIME USE	00'19
PAGES SENT	1
RESULT	OK

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[ ] Original Record [ ] Copy
[ ] Fax Record
[x] Electronic Record

Attn:	Linda Martin	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Hwy	Company:	WTS
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	11-26-12
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
INLRHRTR12013 _QTR0312	SPM Checklist	11-26-12	1
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)

Acceptance/Rejection Signature and Date

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	RH – LINDA MARTIN	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	11/26/2012
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
INLRHRTR12013_QTR0312	BATCH DATA REPORT RH RTR QTR	11/20/2012	22
	N/A		

Comments

SPM CHECKLIST LOCATED IN CARLSBAD

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [✓]	Linda Martin	Linda Martin	11-29-12
	Signature	Printed Name	Date
Records Rejected [ ]			
	Signature	Printed Name	Date

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	1944
DESTINATION TEL #	912085577396
DESTINATION ID	INL
ST. TIME	11/29 10:47
TIME USE	00'17
PAGES SENT	1
RESULT	OK

Controlled Copy

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	RH – LINDA MARTIN	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	11/26/2012
Telephone Number:	575-234-7523		

Document Number	Brief Description	Record Date	Number of Pages
INLRHRTR12013_QTR0312	BATCH DATA REPORT RH RTR QTR	11/20/2012	22
	N/A		

Comments

SPM CHECKLIST LOCATED IN CARLSBAD

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [✓] Linda Martin (Signature) Linda Martin (Printed Name) 11-29-12 (Date)

DIVIDER

PAGE

NWP
Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA

CP:13:01018
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: January 10, 2013

FROM: L. M. Nelson LMN LOCATION: CCP Certification

TO: G. Smith ED LOCATION: CCP Operations
Argonne National Laboratory-East

SUBJECT: FOURTH QUARTER 2012 (OCTOBER 1, 2012 THROUGH DECEMBER 31, 2012) VISUAL EXAMINATION QUARTERLY REPEAT OF DATA GENERATION LEVEL REVIEW AT THE IDAHO NATIONAL LABORATORY- REMOTE-HANDLED

Remote-Handled (RH) Visual Examination (VE) at the Idaho National Laboratory has completed 92 days of reporting from October 1, 2012 through December 31, 2012. Container number FF-43C, Batch Data Report (BDR) INLRHVE12001, was randomly selected from among all the drums processed through Site Project Manger Project Level Review during this time frame. This container will be processed through the Quarterly Repeat of Data Generation Level (DGL) Review as described in CCP-TP-001, *CCP Project Level Data Validation and Verification*. The original letter will be retained in the letter correspondence file.

Please forward the mini-drum package provided to a qualified VE operator for the completion of an Independent Technical Review for the quarterly repeat. The mini-drum package has all the pertinent information to complete the review. Not all containers included in the original BDR will be included for this review. Only the selected drum noted above must be reviewed along with any Quality Control Information.

Please perform the VE quarterly repeat of DGL and return the mini-BDR with the naming convention "INLRHVE12001_QTR0412" by February 11, 2013 to the Central Characterization Program Records Department.

If you have any questions, please call me at (303) 843-2269.

LMN:jmc

Attachment

COPY

cc: (without attachment) (with attachment)

I.S. Joo ED NTP Records Custodian GSA-212

CCP RECORDS ORIGINAL
DATE REC'D 1-22-13

Attachment 1 – Visual Examination Data Form

Site ID: RHINL			
Examination Date: 11/14/12	Batch Number: INLRHVE12001		
Procedure #: CCP-TP-500	Revision #: 11	Video Number: N/A	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: N/A	Recording Stop: N/A	

Initial Container ☒ N/A	Final Container ☐ N/A
Container or Package ID Number:	Container or Package ID Number: FF-43C
Container Type:	Container Type: 55 GAL DRUM
Waste Matrix Code:	Waste Matrix Code: S5110
Waste Stream:	Waste Stream: ID-EBR-S5000
	Rigid Liner: ☐Y ☒N Type: / Rigid Liner Lid: ☐ Y ☒N
	Rigid Liner Vented or Hole Size: N/A

Percent Fill: Percent Organic Waste:		Percent Fill: 90 Percent Organic Waste: 10	
Layers of Confinement:	Closure Method:	Layers of Confinement: 0	Closure Method: N/A

Comments (e.g., filter information, NCRs):
FILTER MODEL: NUCFIL- 019SDS, SERIAL NUMBER: BL-34

Waste Description:
30 GALLON DRUM # FF-43C (IM)
WIRE ROPE SLING WITH METAL HOOK (IM)
BREACHED PLASTIC SLEEVING (P)
NYLON DRUM LIFTING BAG (P)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number FF-43C

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH-72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags NOT defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:

Bret Parmer
Print Name

J Bret Parmer
Signature

11-14-12
Date

Visual Examination Operator 2:

Jeffrey Poole
Print Name

J.S. Poole
Signature

11-14-12
Date

Attachment 1 – Visual Examination Data Form

Site ID: RHINL	
Examination Date: 11/12/12	Batch Number: INLRHVE12001
Procedure #: CCP-TP-500	Revision #: 11 / Video Number:NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: N/A / Recording Stop: N/A

Initial Container ☐ N/A	Final Container ☒ N/A
Container or Package ID Number: FF-43C	Container or Package ID Number:
Container Type: 30 GAL DRUM	Container Type:
Waste Matrix Code: S5110	Waste Matrix Code:
Waste Stream: ID-EBR-S5000	Waste Stream:
	Rigid Liner: ☐Y ☐N Type: / Rigid Liner Lid: ☐ Y ☐N
	Rigid Liner Vented or Hole Size:
Percent Fill: 30 Percent Organic Waste: 0	Percent Fill: Percent Organic Waste:
Layers of Confinement: 0 / Closure Method: N/A	Layers of Confinement: / Closure Method:

Comments (e.g., filter information, NCRs): NUCFIL-019DS, SERIAL NUMBER GE-1072

Waste Description:

METAL BRICKS 4 (IM) (OM)
WIRE ROPE SLINGS 3 (IM)
DRILL BITS 3 (IM)
WIRE ROPE WITH METAL HOOK (IM)
BRACING (AM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number FF-43C

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags NOT defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	
Comments: N/A			

Visual Examination Operator 1:

Bret Parmer
Print Name

Bret Parmer
Signature

11-12-12
Date

Visual Examination Operator 2:

Jeffrey Poole
Print Name

J.S. Poole
Signature

11-12-12
Date

DIVIDER

PAGE

NWP
Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA

CP:13:01074
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: February 13, 2013

FROM: L. M. Nelson LN LOCATION: CCP Certification

TO: NTP Records Custodian GSA 212 LOCATION: CCP Operations
Argonne National Laboratory-East

SUBJECT: RESULTS OF VISUAL EXAMINATION QUARTERLY REPEAT DATA GENERATION LEVEL DATA REVIEW: IDAHO NATIONAL LABORATORY- REMOTE HANDLED FOURTH CALANDER QUARTER OF 2012

Procedure CCP-TP-001, *CCP Project Level Data Validation and Verification*, requires that a repeat of Data Generation Level (DGL) review, validation and verification be performed on the data for a minimum of one randomly chosen waste container each quarter. The Site Project Manager (SPM) uses this information to document that the data generation level data review is being performed according to procedures.

Inter-Office Correspondence Number CP:13:01018 was issued on January 10, 2013. This memorandum identified waste container FF-43C as the randomly selected container for DGL repeat of Visual Examination (VE) at the Idaho National Laboratory Remote-Handled waste for the fourth calendar quarter of 2012.

The mini-Batch Data Report containing FF-43C was reviewed for the quarterly repeat on February 12, 2013. No deficiencies were identified during the review. A second VE SPM Checklist has been completed and authenticated.

If you have any questions, please call me at (303) 843-2269.

LMN:jmc

cc: I.S. Joo ED

NTPC RECORDS ORIGINAL
DATE REC'D 2.28.13

Attachment 3 – Visual Examination Site Project Manager Checklist

Batch Data Report No.: INLRHVE12001_QTR0412

1. Has all the data received an independent technical review as evidenced by a completed checklist (Attachment 2) and the appropriate ITR signature?		☐ NO	☑ YES
2. Are BDR contents complete and match the Visual Examination Batch Data Report Table of Contents?		☐ NO	☑ YES
3. Is the BDR complete (appropriately filled in forms for each container)?		☐ NO	☑ YES
4. Have the RH Quality Assurance Objectives (QAOs) for VE been met?			
Precision – reconciled discrepancies between operators		☐ NO	☑ YES
Accuracy – trained operators		☐ NO	☑ YES
Representativeness – description of container contents		☐ NO	☑ YES
Completeness – completed data form and/or recording		☐ NO	☑ YES
Comparability – proper training and adequate AK for unopened containers		☐ NO	☑ YES
5. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☑ N/A

Comments

No NCR's.

SPM:

Laura Nelson
Printed Name

Laura Nelson
Signature

2-12-13
Date

NTPC RECORDS ORIGINAL
DATE REC'D 2-14-13

Attachment 4 – Visual Examination Batch Data Report Cover Sheet

Batch Data Report No.: INLRHVE12001_QTR0412 Date: 1-23-13

	Waste Container ID Number:
1	FF-43C
2	
3	
4	
5	
6	
7	
8	
9	
10	N A
11	
12	
13	1-23-13
14	
15	
16	
17	
18	
19	
20	

CCP RECORDS ORIGINAL
DATE REC'D 2-11-13

001

Attachment 5 – Visual Examination Batch Data Report Table of Contents

Batch Data Report No.: INLRHVE1206LQTR0412 Date: 1-23-13

Item	Description	Page No.
1	Visual Examination Batch Data Report Cover Sheet (Attachment 4)	1
2	Visual Examination Batch Data Report Table of Contents (Attachment 5)	2
3	Visual Examination Data Forms (Attachment 1)	3
4	Visual Examination Independent Technical Reviewer Checklist (Attachment 2)	7
5	Copy of NCRs (N/A [If not applicable])	N/A

Attachment 1 – Visual Examination Data Form

Site ID: RHINL	
Examination Date: 11/14/12	Batch Number: INLRHVE12001-QTR0412
Procedure #: CCP-TP-500	Revision #: 11 / Video Number: N/A
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: N/A / Recording Stop: N/A

Initial Container ☒ N/A	Final Container ☐ N/A
Container or Package ID Number:	Container or Package ID Number: FF-43C
Container Type:	Container Type: 55 GAL DRUM
Waste Matrix Code:	Waste Matrix Code: S5110
Waste Stream:	Waste Stream: ID-EBR-S5000
	Rigid Liner: ☐Y ☒N Type: / Rigid Liner Lid: ☐Y ☒N
	Rigid Liner Vented or Hole Size: N/A
Percent Fill: Percent Organic Waste:	Percent Fill: 90 Percent Organic Waste: 10
Layers of Confinement: / Closure Method:	Layers of Confinement: 0 / Closure Method: N/A

Comments (e.g., filter information, NCRs):
FILTER MODEL: NUCFIL- 019SDS, SERIAL NUMBER: BL-34

Waste Description:
30 GALLON DRUM # FF-43C (IM)
WIRE ROPE SLING WITH METAL HOOK (IM)
BREACHED PLASTIC SLEEVING (P)
NYLON DRUM LIFTING BAG (P)

1-23-13

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number FF-43C

Prohibited Items Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	
Comments: N/A			

Visual Examination Operator 1:

Bret Parmer
Print Name

J Bret Parmer
Signature

11-14-12
Date

Visual Examination Operator 2:

Jeffrey Poole
Print Name

J.S. Poole
Signature

11-14-12
Date

Attachment 1 – Visual Examination Data Form

Site ID: RHINL			
Examination Date: 11/12/12	Batch Number: INLRHVE12001-QTR0412		
Procedure #: CCP-TP-500	Revision #: 11	Video Number:NA	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: N/A	Recording Stop: N/A	
Initial Container ☐ N/A	Final Container ☒ N/A		
Container or Package ID Number: FF-43C	Container or Package ID Number:		
Container Type: 30 GAL DRUM	Container Type:		
Waste Matrix Code: S5110	Waste Matrix Code:		
Waste Stream: ID-EBR-S5000	Waste Stream:		
	Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N	
	Rigid Liner Vented or Hole Size:		
Percent Fill: 30 Percent Organic Waste: 0	Percent Fill: Percent Organic Waste:		
Layers of Confinement: 0 / Closure Method: N/A	Layers of Confinement: / Closure Method:		
Comments (e.g., filter information, NCRs): NUCFIL-019DS, SERIAL NUMBER GE-1072			

Waste Description:
METAL BRICKS 4 (IM) (OM)
WIRE ROPE SLINGS 3 (IM)
DRILL BITS 3 (IM)
WIRE ROPE WITH METAL HOOK (IM)
BRACING (AM)

GSP 1-23-13

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number FF-43C

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags NOT defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:

Bret Parmer
Print Name

J Bret Parmer
Signature

11-12-12
Date

Visual Examination Operator 2:

Jeffrey Poole
Print Name

J.S. Poole
Signature

11-12-12
Date

Controlled Copy

Attachment 2 – Visual Examination Independent Technical Reviewer Checklist

Batch Data Report No.: INLRHVE12001-QTR04/12

1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods (procedure) used?	☐ NO	☒ YES	☐ N/A
2. Was the correct revision of the operating procedure used?	☐ NO	☒ YES	☐ N/A
3. Were all the transcription errors corrected?	☐ NO	☐ YES	☒ N/A
4. Are BDR contents complete and match the Visual Examination Batch Data report Table of Contents?	☐ NO	☒ YES	☐ N/A
5. Does the BDR include VE for no more than 20 containers?	☐ NO	☒ YES	☐ N/A
6. Is all data recorded signed and dated in reproducible ink?	☐ NO	☒ YES	☐ N/A
7. Is all raw data recorded clearly, legibly, and accurately?	☐ NO	☒ YES	☐ N/A
8. Are all changes to original data lined out, initialed and dated by the individual making the changes or an individual authorized to make the change?	☐ NO	☐ YES	☒ N/A
9. Is there an adequate written description of the contents?	☐ NO	☒ YES	☐ N/A
10. Were the recording equipment checks satisfactory?	☐ NO	☐ YES	☒ N/A
11. Has each container in this BDR been evaluated for the presence of prohibited wastes?	☐ NO	☒ YES	☐ N/A
12. Has the physical waste form in each container in this BDR been evaluated against the Waste Stream Description and the Waste Matrix Code?	☐ NO	☒ YES	☐ N/A
13. Have the RH Quality Assurance Objectives (QAOs) for VE been met?	☐ NO	☒ YES	☐ N/A
Precision – reconciled discrepancies between operators or between the operator and ITR.	☐	☒	☐
Accuracy – trained operators	☐	☒	☐
Representativeness – description of container contents	☐	☒	☐
Completeness – completed data form and/or recording	☐	☒	☐
Comparability – proper training and adequate AK source documents are available for unopened containers.	☐	☒	☐
14. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☒ N/A
Comments: N/A			

Independent Technical Reviewer:

Spencer Pattee
Printed Name

Signature

2-6-13
Date

DIVIDER PAGE ONLY

Not part of page count

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[ ] Original Record [ ] Copy
[ ] Fax Record
[x] Electronic Record

Attn:	Linda Martin	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Hwy	Company:	WTS
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	2-13-13
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
INLRHVE12001_ QTR0412	SPM Checklist	2-12-13	1
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted	[x]	Linda Martin	LINDA MARTIN	2.14.13
		Signature	Printed Name	Date
Records Rejected	[ ]			
		Signature	Printed Name	Date

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	3064
DESTINATION TEL #	913038432208
DESTINATION ID	DENVER
ST. TIME	02/14 08:07
TIME USE	00'16
PAGES SENT	1
RESULT	OK

Controlled Copy

CCP-QP-008, Rev. 20
CCP Records Management

Effective Date: 08/10/2012

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220
Telephone Number: 575-234-7523 or 575-234-7431
Fax Number: 575-234-7033

[ ] Original Record
[ ] Fax Record
[x] Electronic Record
[ ] Copy

Attn:	Linda Martin	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Hwy	Company:	WTS
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	2-13-13
Telephone Number:	575-234-7523		

Document Number	Title / Description		Record Date	Total Pages
INLRHVE12001_ QTR0412	SPM Checklist		2-12-13	1
		NA		

Comments:

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

441.45
12/04/2007
Rev. 05

RADIOLOGICAL SURVEY REPORT

To be used with MCP-90, MCP-93, MCP-124, MCP-138, MCP-139, MCP-187, MCP-199 and MCP-425

Log # 1167

INSTRUMENTS		
Type	Serial #	MDA/Efficiency (dpm/100cm²)/eff(%)
Scaler	852017	78/36.6 % βγ
		15/30.5% α
AMP-100	851474	
E-600	801896	

SURVEY DATA AND LEGEND

ALL SWIPE, LARGE AREA WIPE (LAW), AND DIRECT SCAN SURVEY LOCATIONS ARE IDENTIFIED ON THE MAP. THOSE LOCATIONS WHERE ACTIVITY IS GREATER THAN OR EQUAL TO THE SPECIFIC LIMITS LISTED BELOW ARE RECORDED.

SWIPE No.	LAW No.	DIRECT SCAN No.	LOCATION OR ITEM DESCRIPTION	SWIPE / SCAN (dpm/100cm²)		LAW (dpm)	
				βγ	α	βγ	α
			Specify limits used for this survey, if applicable.	200 / NA	20 / NA		
			NA				

CA HCA	Contamination Area High Contamination Area	-x—x-	Radiological Barrier	□ = Direct Scan
RA HRA	Radiation Area High Radiation Area	ALL dose rates are in mrem/hr, unless otherwise noted. Smear count time is 1 minute unless otherwise noted.		○ = Swipe (Smear)
VHRA RMA	Very High Radiation Area Radioactive Material Area	# #@#(cm)	General Area Dose Rate Dose Rate at Distance From Source	⌊ = Large Area Wipe (LAW)
ARA RBA	Airborne Radioactivity Area Radiological Buffer Area	*# #β / #γ	Contact Dose Rate Beta Corrected (non-penetrating radiation) / Gamma Dose Rates	△ = Air Sample
FCA SCA	Fixed Contamination Area Soil Contamination Area	α β	Alpha Beta	⌂ = Tritium Swipe
URMA SOP	Underground Radioactive Material Area Step-Off Pad	γ n	Gamma Neutron	NA

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Fax Record [ ] Electronic Record [ ] Copy

Attn:	RH - LINDA MARTIN	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	02/14/2013
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
INLRHVE12001_QTR0412	BATCH DATA REPORT RH VE (QTR)	01/23/2013	7
	N/A		

Comments

SPM CHECKLIST LOCATED IN CARLSBAD

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

	Signature	Printed Name	Date
Records Accepted [✓]	Linda Martin	LINDA MARTIN	2.21.13
Records Rejected [ ]			

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	3118
DESTINATION TEL #	912085577396
DESTINATION ID	INL
ST. TIME	02/21 08:17
TIME USE	00'16
PAGES SENT	1
RESULT	OK

Controlled Copy

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	RH - LINDA MARTIN	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	02/14/2013
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
INLRHVE12001_QTR0412	BATCH DATA REPORT RH VE (QTR)	01/23/2013	7
	N/A		

Comments

SPM CHECKLIST LOCATED IN CARLSBAD

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [✓] Linda Martin (Signature) LINDA MARTIN (Printed Name) 2.21.13 (Date)

NWP
Nuclear Waste Partnership LLC
A URS-led partnership with B&W and AREVA

CP:13:01222
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: June 04, 2013

FROM: J.W. Houghton 6-4-13 LOCATION: CCP Certification

TO: NTP Records Custodian GSA-212 LOCATION: National TRU Program Certification

SUBJECT: SAMPLE SELECTION CONTAINER REPLACEMENT MEMORANDUM FOR THE SECOND RANDOM SAMPLE LOT OF WASTE STREAM ID-RF-S5300-A.

Per *CCP Random Selection of Containers for Solids and Headspace Gas Sampling and Analysis*, Procedure CCP-TP-162, this memo states the justification for the replacement of a container previously identified in memorandum CP:06:01626 issued December 22, 2006 for ID-RF-S5300-A random selection lot 2 (RS Lot 2). Random selection number 3, container 10106578, was compacted prior to sampling being able to be completed and will be replaced. The following TBD containers have not been filled and will be replaced due to the closing of the RS Lot as the Facility Permit no longer requiring HSG sampling:

RS #1 -S53-09711	RS #6 – S53-13740
RS #2 – S53-09799	RS #8 – S53-11572
RS #4 – S53-05930	RS #10 – S53-18245
RS #5 – S53-08172	

The following containers will replace those mentioned above:

RS #14 – 10088793	RS #63 – 10221733
RS #19 – 10102259	RS #73 – 10102536
RS #40 – 10202170	RS #108 – 10101976
RS #43 – 10217850	RS #121 – 10223021

If you have any questions please contact me at extension 7124.
JWH:

Cc: NWP

R. P. Kantrowitz	ED
J. Vernon	ED
S. Castro	ED
M. W. Pearcy	ED
M. L. Sensibaugh	ED

COPY

DIVIDER

PAGE

URS

Washington TRU Solutions LLC

CP:12:01234
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: May 17, 2012

FROM: I. S. Quintana LOCATION: CCP Project Management

TO: CCP Records Custodian GSA-212 LOCATION: Retrieval, Characterization and Transportation

SUBJECT: RANDOM SELECTION LOT 3 HEADSPACE GAS RANDOM SAMPLE SELECTION MEMORANDUM FOR WASTE STREAM IN-ID-NRF-SPC, LOT 3, CHARACTERIZED BY THE CENTRAL CHARACTERIZATION PROJECT AT THE IDAHO NATIONAL LABORATORY

Per procedure CCP-TP-162, *CCP Random Selection of Containers for Solids and Headspace Gas Sampling and Analysis*, this memorandum provides the attached Headspace Gas Random Selection Listing for Lot 3 of Waste Stream IN-ID-NRF-SPC, which is being characterized by the Central Characterization Project at the Idaho National Laboratory. Waste stream IN-ID-NRF-SPC consists of 93 containers of Remote Handled (RH) waste. The first 12 available containers are captured in Random Selection Lot 1. Random selection Lot 2 captured 56 containers of the 93. Ten of the remainding 25 containers have been selected to be sampled for headspace gas for the resolution of Environmental Protection Agency hazardous waste number assignment in Random Selection Lot 3.

The ten containers specifically identified for the sample to be used for the required resolution of Environmental Protection Agency hazardous waste number assignment and five contingency container listings selected for the sample if the calculated required sample size exceeds the ten primary selections or any of the primary selections fail to qualify for sampling for this waste stream are identified below and in the accompanying attachment. The attachment also identifies all potential containers within the lot and the correlation of randomly selected numbers with each container.

Headspace Gas Random Sample Selection Listing – Lot 3 – Waste Stream IN-ID-NRF-SPC					
#	Container	Rand. Nr.	#	Container	Rand. Nr.
1	23	0.0033	6	5	0.2716
2	22	0.0051	7	7	0.2754
3	27	0.1004	8	18	0.3244
4	26	0.1444	9	9	0.3439
5	16	0.1600	10	3	0.3512

COPY

CCP RECORDS ORIGINAL
DATE REC'D 5-22-12

Contingency Headspace Gas Random Sample Selection Listing – Lot 3 – Waste Stream IN-ID-NRF-SPC					
#	Container	Rand. Nr.	#	Container	Rand. Nr.
1	30	0.4504	4	11	0.5158
2	2	0.4673	5	1	0.5385
3	13	0.4942			

If further information is needed, I may be contacted at (720) 982-7174.

ISQ:yhs

Attachment

cc: WTS

T. R. Gatliffe ED
J. W. Houghton ED
L. M. Nelson ED

RES

R. R. Chavez ED

CP:12:01234
Attachment

Random Selection Lot 2
Waste Stream IN-ID-NRF-SPC

Random Selection Lot 3
Waste Stream ID: IN-ID-NRF-SPC

Container number	Container ID	Random number
1	23	0.0033
2	22	0.0051
3	27	0.1004
4	26	0.1444
5	16	0.1600
6	5	0.2716
7	7	0.2754
8	18	0.3244
9	9	0.3439
10	3	0.3512
11	30	0.4504
12	2	0.4673
13	13	0.4942
14	11	0.5158
15	1	0.5385
16	4	0.5632
17	28	0.6008
18	29	0.6391
19	00	0.6783
20	6	0.6973
21	25	0.7983
22	21	0.9207
23	24	0.9326
24	15	0.9538
25	14	0.9679

GEN10

Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA

CP:13:01033
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: January 15, 2013

FROM: J. A. Vernon

LOCATION: CCP Certification

TO: W. F. Verlanic

LOCATION: CCP Operations
Idaho National Laboratory

SUBJECT: FOURTH QUARTER 2012 (OCTOBER 1, 2012 THROUGH DECEMBER 31, 2012) HEADSPACE GAS SAMPLING QUARTERLY REPEAT OF DATA GENERATION LEVEL REVIEW AT THE IDAHO NATIONAL LABORATORY

Procedure CCP-TP-001, *CCP Project Level Data Validation and Verification*, and the Waste Analysis Plan require that a repeat of the Data Generation Level (DGL) review, validation and verification be performed by the Site Project Manager (SPM) on a quarterly basis for a minimum of one randomly chosen waste container. The repeat DGL data review, validation and verification are completed for each required characterization that was performed in the last quarter at each Host site where the Central Characterization Project performed characterization.

At this time there are no batch data reports from the Idaho National Laboratory that have been completed through DGL level review and SPM validation and verification during this quarter for Headspace Gas Sampling and Analysis. Therefore, there will be no randomly selected waste containers for the quarterly review process.

JAV:jmc

cc:	S. Castro	ED
	R. P. Kantrowitz	ED
	M. W. Pearcy	ED
	J. S. Poole	ED
	NTP Records Custodian	GSA-212

Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA

CP:13:01135
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: April 10, 2013

FROM: S. Castro — LOCATION: Central Characterization Program

TO: W. F. Verlanic ED — LOCATION: Central Characterization Program Operations - Idaho National Laboratory

SUBJECT: FIRST QUARTER 2013 (JANUARY 1, 2013 THROUGH MARCH 31, 2013) HEADSPACE GAS SAMPLING QUARTERLY REPEAT OF DATA GENERATION LEVEL REVIEW AT THE IDAHO NATIONAL LABORATORY

Procedure CCP-TP-001, *CCP Project Level Data Validation and Verification*, and the Waste Analysis Plan require that a repeat of the Data Generation Level (DGL) review, validation and verification be performed by the Site Project Manager (SPM) on a quarterly basis for a minimum of one randomly chosen waste container. The repeat DGL data review, validation and verification are completed for each required characterization that was performed in the last quarter at each Host site where the Central Characterization Project performed characterization.

At this time there are no batch data reports from the Idaho National Laboratory that have been completed through DGL level review and SPM validation and verification during this quarter for Headspace Gas Sampling and Analysis. Therefore, there will be no randomly selected waste containers for the quarterly review process.

SC:jmc

cc: R. P. Kantrowitz ED
M. W. Pearcy ED
J. A. Vernon ED
NTP Records Custodian GSA-212

URS

CP:12:01362
UFC:5900.00

Washington TRU Solutions LLC

INTER-OFFICE CORRESPONDENCE

DATE: July 13, 2012

FROM: J. A. Vernon — LOCATION: Certification

TO: W. F. Verlanic — LOCATION: Idaho National Laboratory

SUBJECT: SECOND QUARTER 2012 (APRIL 1, 2012 THROUGH JUNE 30, 2012) HEADSPACE GAS SAMPLING QUARTERLY REPEAT OF DATA GENERATION LEVEL REVIEW AT THE IDAHO NATIONAL LABORATORY

Procedure CCP-TP-001, *CCP Project Level Data Validation and Verification*, and the Waste Analysis Plan require that a repeat of the Data Generation Level (DGL) review, validation and verification be performed by the Site Project Manager (SPM) on a quarterly basis for a minimum of one randomly chosen waste container. The repeat DGL data review, validation and verification are completed for each required characterization that was performed in the last quarter at each Host site where the Central Characterization Project performed characterization.

At this time there are no batch data reports from the Idaho National Laboratory that have been completed through DGL level review and SPM validation and verification during this quarter for Headspace Gas Sampling and Analysis. Therefore, there will be no randomly selected waste containers for the quarterly review process.

JAV:yhs

cc: WTS
R. P. Kantrowitz ED
M. W. Pearcy ED
CCP Records Custodian GSA-212

CCP RECORDS ORIGINAL
DATE REC'D 7/19/12

NWP
Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA

CP:13:01032
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: January 15, 2013

FROM: J. A. Vernon — LOCATION: CCP Certification

TO: W. F. Verlanic ED — LOCATION: CCP Operations
Idaho National Laboratory

SUBJECT: FOURTH QUARTER 2012 (OCTOBER 1, 2012 THROUGH DECEMBER 31, 2012) REAL TIME RADIOGRAPHY QUARTERLY REPEAT OF DATA GENERATION LEVEL REVIEW AT THE IDAHO NATIONAL LABORATORY

Procedure CCP-TP-001, *CCP Project Level Data Validation and Verification*, and the Waste Analysis Plan require that a repeat of the Data Generation Level (DGL) review, validation and verification be performed by the Site Project Manager (SPM) on a quarterly basis for a minimum of one randomly chosen waste container. The repeat DGL data review, validation and verification are completed for each required characterization that was performed in the last quarter at each Host site where the Central Characterization Project performed characterization.

At this time there are no batch data reports from the Idaho National Laboratory that have been completed through DGL level review and SPM validation and verification during this quarter for Real Time Radiography. Therefore, there will be no randomly selected waste containers for the quarterly review process.

JAV:jmc

cc: S. Castro ED
R. P. Kantrowitz ED
M. W. Pearcy ED
J. S. Poole ED
NTP Records Custodian GSA-212

Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA

CP:13:01136
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: April 10, 2013

FROM: S. Castro LOCATION: Central Characterization Program

TO: W. F. Verlanic ED LOCATION: Central Characterization Program Operations - Idaho National Laboratory

SUBJECT: FIRST QUARTER 2013 (JANUARY 1, 2013 THROUGH MARCH 31, 2013) REAL- TIME RADIOGRAPHY QUARTERLY REPEAT OF DATA GENERATION LEVEL REVIEW AT THE IDAHO NATIONAL LABORATORY

Procedure CCP-TP-001, *CCP Project Level Data Validation and Verification*, and the Waste Analysis Plan require that a repeat of the Data Generation Level (DGL) review, validation and verification be performed by the Site Project Manager (SPM) on a quarterly basis for a minimum of one randomly chosen waste container. The repeat DGL data review, validation and verification are completed for each required characterization that was performed in the last quarter at each Host site where the Central Characterization Program performed characterization.

At this time there are no batch data reports from the Idaho National Laboratory that have been completed through DGL level review and SPM validation and verification during this quarter for Real- Time Radiography. Therefore, there will be no randomly selected waste containers for the quarterly review process.

SC:jmc

cc: R. P. Kantrowitz ED
M. W. Pearcy ED
J. A. Vernon ED
NTP Records Custodian GSA-212

DIVIDER

PAGE

Nuclear Waste Partnership LLC

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CP:12:01525
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: October 23, 2012

FROM: J. A. Vernon LOCATION: CCP Certification

TO: W. F. Verlanic ED LOCATION: CCP Operations – Idaho National Laboratory

SUBJECT: THIRD QUARTER 2012 (JULY 1, 2012 THROUGH SEPTEMBER 30, 2012) REAL-TIME RADIOGRAPHY QUARTERLY REPEAT OF DATA GENERATION LEVEL REVIEW AT THE IDAHO NATIONAL LABORATORY

Real-Time Radiography at the Idaho National Laboratory has completed 90 days of reporting from July 1, 2012 through September 30, 2012. Container number 10102536 in Batch Data Report (BDR) INRTR5120005, was randomly selected from among all the drums processed through Data Generation Level (DGL) review, validation and verification during this time frame. This container will be processed through the quarterly repeat of DGL Review as described in CCP-TP-001, *CCP Project Level Data Validation and Verification*. The original letter will be retained in the letter correspondence file.

Please assign available qualified personnel to serve as Independent Technical Reviewers in performing the review as well as preparing a Table of Contents. Not all containers included in the original BDR will be included for this review. Only the selected drum noted above must be reviewed along with any Quality Control information.

Please perform the real-time radiography quarterly repeat of DGL review, validation, and verification and return the information by November 1, 2012 to the Central Characterization Project Records Department, naming the BDR as "INRTR5120005_QTR0312".

JAV:yhs

Attachment

cc: NWP
(without attachment)
R. P. Kantrowitz ED
M. W. Pearcy ED

(with attachment)
CCP Records Custodian GSA-212

INL
F. Oney ED

CCP RECORDS ORIGINAL
DATE REC'D 10-25-12

Attachment 5 – CCP Radiography Batch Data Report Cover Sheet

Batch Data Report No.: INRTR5120005 Date: 7/3/12

Waste Container ID Number:	
Replicate Scan:	10102536
Independent Observation:	10007973
1	10007973
2	10102536
3	N/A
4	N/A
5	N/A
6	N/A
7	N/A
8	N/A
9	N/A
10	N/A
11	N/A
12	N/A
13	N/A
14	N/A
15	N/A
16	N/A
17	N/A
18	N/A
19	N/A
20	N/A

Independent Technical Reviewer:

JERRY BOWDEN 7-9-12
Printed Name Signature Date

CCP RECORDS ORIGINAL
DATE REC'D 7-9-12

Attachment 4 – CCP Radiography Batch Data Report Table of Contents and Batch Narrative

Batch Data Report No.: INRTR5120005 Date: 7/3/12

Table of Contents

Item	Description	Page No.
1	CCP Radiography Batch Data Report Cover Sheet	1
2	CCP Radiography Batch Data Report Table Of Contents	2
3	CCP RTR Measurement Control Report	3
4	CCP Radiography Data Sheets	4-15
5	Copy of NCRs (NA, If Not Applicable)	16-18
6	CCP Independent Technical Reviewer Checklist	19-20

Batch Narrative

All Quality Checks were performed and recorded on CCP-TP-053, Rev. 11, CCP Radiography Measurement and Control Report.
The Measurement Control Report, Replicate Scan, and Independent Observation performed on this date were recorded in Batch Data Report No. INRTR5120005.

Michael Galbraith — RTR Operator
Signature — 7/3/12 — Date

Attachment 1 – CCP RTR Measurement Control Report

Site ID: INL		
Batch Data Report No.: INRTR5120005		
Examination Date: 7/3/12		
Control Checks		
Video/Audio Recorded Media System Check	☑ SAT	☐ UNSAT
Image Test : 15 lines-pair/cm (Minimum acceptable is 5 lines-pair/cm or #6 Sieve is viewable)	☑ SAT	☐ UNSAT
Comments: N/A		
RTR Operator:		
Michael Galbraith	7/3/12	
Printed Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☐ RTR Examination ☑ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5120005
Examination Date:	7/3/12
Waste Container ID:	10102536
Video/Audio Recorded Media Number:	INRTR5120005 A & B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	ID 116/216, SQ 154
Waste Matrix Code:	S5300
Waste Stream I.D.:	ID-RF-S5300-A
Waste Container Weights:	Gross Wt: 79.5 kg. Tare Wt: 28.7 kg. Net Wt: 50.8 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	No Liner
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	90 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10102536

Section 6: Container Inventory and Comments (Additional descriptions)
Metal wire, saw blades, scrap metal, metal tube, open one gallon metal paint can Absorbent, light bulb, broken light bulb Tape rolls, Tyvek coveralls Plastic sheeting, plastic tube, coaxial cable

Section 7: Packaging Material and Waste Material Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	1.0
Others:	
Total Packaging Weight:	28.7
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	6.5
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	4.5
Cellulosics (C):	31.8
Rubber (R):	
Plastics (waste materials) (XPM):	8.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	50.8

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10102536

	Yes	No
Is there observable liquid?	☐	☑
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the *total volume of observable liquid in the outermost container* **GREATER** than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
CH-ONLY STREAMS		
Are there *heat-sealed bags (unvented)* GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: This Replicate Scan agrees with the original scan.

RTR Operator:

Tyson Christensen	Tyson Christensen	7/3/12
Print Name	*Signature*	*Date*

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☐ RTR Examination ☐ RTR Replicate Scan ☑ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5120005
Examination Date:	7/3/12
Waste Container ID:	10007973
Video/Audio Recorded Media Number:	INRTR5120005 A & B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☐ NO ☑ YES NCR No.: NCR-INL-0348-12 NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	ID 112/212, SQ 154
Waste Matrix Code:	S3114
Waste Stream I.D.:	ID-RF-S3114
Waste Container Weights:	Gross Wt: 253.5 kg. Tare Wt: 35.1 kg. Net Wt: 218.4 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	90mil Liner - Vented
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	85 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10007973

Section 3: Container Inventory and Comments – (Detailed description)
Scrap metal(NSW) Absorbent Plastic bag Sludge

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	7.4
Others:	
Total Packaging Weight:	35.1
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	8.0
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	0.5
Organic Matrix (OR):	209.9
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	218.4

Attachment 2 – CCP Radiography Data Sheet (Continued)

Page 3 of 3

Waste Container ID: 10007973

	Yes	No
Is there observable liquid?	☑	☐
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container GREATER than 1% of the container?	☑	☐
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric meterials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☑	☐
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
[illegible]		
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: This Independent Observation agrees with the original scan.
See NCR-INL-0348-12.

RTR Operator:

Tyson Christensen	[signature]	7/3/12
Print Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5120005
Examination Date:	7/3/12
Waste Container ID:	10102536
Video/Audio Recorded Media Number:	INRTR5120005 A & B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	ID 116/216, SQ 154
Waste Matrix Code:	S5300
Waste Stream I.D.:	ID-RF-S5300-A
Waste Container Weights:	Gross Wt: 79.5 kg. Tare Wt: 28.7 kg. Net Wt: 50.8 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	No Liner
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	90 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10102536

Section 3: Container Inventory and Comments – (Detailed description)
Wire, scrap metal, tape measure, metal can, saw blades Tape rolls, cloth, cloth coveralls, Tyvek coveralls Absorbent, light bulb Coaxial cable, plastic tubing

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	1.0
Others:	
Total Packaging Weight:	28.7
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	10.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	4.0
Cellulosics (C):	34.8
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	50.8

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10102536

	Yes	No
Is there observable liquid?	☐	☑
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
CH-TRU PAYLOAD CONTAINERS		
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: N/A

RTR Operator:

Michael Galbraith		7/3/12
Print Name	Signature	Date

Attachment 3 – CCP Radiography Independent Technical Reviewer Checklist

Batch Data Report No.: INRTR5120005

	Description			
1.	Data generation and reduction were conducted in a technically correct manner in accordance with the methods used?	☐ NO	☑ YES	☐ N/A
2.	Was the correct revision of the procedure used? Procedure: CCP-TP-053 Rev.: 11	☐ NO	☑ YES	☐ N/A
3.	Are the WMPs entered correctly?	☐ NO	☑ YES	☐ N/A
4.	Do the estimated weights in Section 4 of Attachment 2 equal the container gross weight?	☐ NO	☑ YES	☐ N/A
5.	Is the data reported in the proper units with the correct number of significant figures (e.g., one tenth of a kilogram)?	☐ NO	☑ YES	☐ N/A
6.	Has the data been verified for transcription errors?	☐ NO	☐ YES	☑ N/A
7.	Does the Testing Batch Report include radiography for up to 20 containers?	☐ NO	☑ YES	☐ N/A
8.	BDR contents are complete and match the CCP Waste RTR Batch Data Report Table of Contents?	☐ NO	☑ YES	☐ N/A
9.	Is all the data signed and dated in reproducible ink and by the individual(s) generating it?	☐ NO	☑ YES	☐ N/A
10.	Is all data recorded clearly, legibly, and accurately?	☐ NO	☑ YES	☐ N/A
11.	All changes to original data lined out, initialed and dated by the individual making the changes?	☐ NO	☐ YES	☑ N/A
12.	Was justification made for changing the original data?	☐ NO	☐ YES	☑ N/A
13.	Were data changes made by the individual who originally collected the data?	☐ NO	☐ YES	☑ N/A
14.	Does the waste match the Waste Matrix Code and Waste Stream description?	☐ NO	☑ YES	☐ N/A
15.	Are the RTR Operator's decisions regarding the Radiography documented?	☐ NO	☑ YES	☐ N/A
16.	Is there an adequate written description of the contents of each item?	☐ NO	☑ YES	☐ N/A
17.	Was the video/audio recording media properly prepared and labeled for each waste container?	☐ NO	☑ YES	☐ N/A
18.	Was the video/audio recording media check performed satisfactorily and recorded on Attachment 1?	☐ NO	☑ YES	☐ N/A

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7-9-17

Attachment 3 – CCP Radiography Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: INRTR5120005

	Description			
19.	Was the Image Test performed satisfactorily and recorded on Attachment 1?	☐ NO	☑ YES	☐ N/A
20.	Was the Replicate Scan performed and recorded on an Attachment 2? (1 per batch or 1 per day, whichever is less frequent).	☐ NO	☑ YES	☐ N/A
21.	Was the Replicate Scan RTR Operator different from the first RTR Operator?	☐ NO	☑ YES	☐ N/A
22.	Did the Replicate Scan RTR Operator and the first RTR Operator agree on the results?	☐ NO	☑ YES	☐ N/A
23.	Was the Independent Observation performed and recorded on an Attachment 2? (1 per batch or 1 per day, whichever is less frequent).	☐ NO	☑ YES	☐ N/A
24.	Was the Independent Observation RTR Operator different from the first RTR Operator?	☐ NO	☑ YES	☐ N/A
25.	Did the Independent Observation RTR Operator and the first RTR Operator agree on the results?	☐ NO	☑ YES	☐ N/A
26.	Was the data collection performed by qualified individuals?	☐ NO	☑ YES	☐ N/A
27.	Are the NCR(s) associated with the RTR examination included in the BDR?	☐ NO	☑ YES	☐ N/A
28.	QAOs (precision, accuracy, completeness, representativeness) have been met?	☐ NO	☑ YES	☐ N/A

Comments:

N/A

I have reviewed 100% of the container specific and batch data in this report and find it acceptable.

Independent Technical Reviewer:

Jerry Bowden — Jerry Bowden — 7/9/12

Printed Name — Signature — Date

20
7-9-12

DIVIDER

PAGE

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Washington TRU Solutions LLC

CP:12:01363
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: July 13, 2012

FROM: J. A. Vernon LOCATION: Certification

TO: W. F. Verlanic LOCATION: Idaho National Laboratory

SUBJECT: SECOND QUARTER 2012 (ARPIL 1, 2012 THROUGH JUNE 30, 2012) VISUAL EXAMINATION QUARTERLY REPEAT OF DATA GENERATION LEVEL REVIEW AT THE IDAHO NATIONAL LABORATORY

Visual Examination at the Idaho National Laboratory has completed 90 days of reporting from April 1, 2012 through June 30, 2012. Container number ARP70436 in Batch Data Report (BDR) IN-ARP-VE-002748, was randomly selected from among all the drums processed through Data Generation Level (DGL) review, validation and verification during this time frame. This container will be processed through the quarterly repeat of Data Generation Level (DGL) Review as described in CCP-TP-001, *CCP Project Level Data Validation and Verification*. The original letter will be retained in the letter correspondence file.

Please assign available qualified personnel to serve as Independent Technical Reviewers in performing the review as well as preparing a Table of Contents. Not all containers included in the original BDR will be included for this review. Only the selected drum noted above must be reviewed along with any Quality Control information.

Please perform the visual examination quarterly repeat of DGL review, validation, and verification and return the information by August 13, 2012 to the Central Characterization Project Records Department, naming the BDR as "IN-ARP-VE-002748_QTR0212".

JAV:yhs

Attachment

cc: WTS
(without attachment)
R. P. Kantrowitz ED
M. W. Pearcy ED

(with attachment)
CCP Records Custodian GSA-212

INL
(with attachment)
J. S. Poole ED

COPY

CCP RECORDS ORIGINAL
DATE RECD 7-23-12

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	ARP70436
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	~~S~~ DS
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location:	IN-RWMC-ARP-6
3.	Batch Number:	IN-ARP-VE-002748
4.	Examination Date:	05/07/12
5.	Procedure CCP-TP-006, Rev.:	16
6.	a. Drum Packing Station (DPS) Number:	704
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	XC0921
	c. Scale Calibration Due Date:	06/28/12
	d. Test Weight ID:	XC0490
	e. Test Weight Calibration Due Date:	04/03/13
	f. Test Weight (kgs):	5.0
	g. Scale Readout of Test Weight (kgs):	5.0
	h. Difference Between Test Weight and Scale Readout (kgs):	0.0
	i. DPS Scale Check SAT (Y):	Y
	Container Scale Check	
	j. Scale Serial/ID Number:	725493
	k. Scale Calibration Due Date:	11/07/12
	l. Test Weight ID:	722311
	m. Test Weight Calibration Due Date:	11/07/12
	n. Test Weight (kg):	224.0
	o. Scale Readout of Test Weight (kgs):	223.8
	p. Difference Between Test Weight and Scale Readout (kgs):	0.2
	q. Container Scale Check SAT (Y):	Y
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	223309
8.	Container Filter Torque Data:	
	a. Filter Torque Wrench Serial/ID Number:	726772
	b. Filter Torque Wrench Calibration Due Date:	07/04/12
	c. Filter Model No.:	NUCFIL-019DS
	d. Filter Serial No.:	HL-392
	e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
	f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:		
NOTHING ADDED TO CONTAINER VERIFIED		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70436							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.2	N/A		0.0
7				METAL	0.2	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70436							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4				9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v.	Rubber (R)			0.2	N/A		0.2
67				RUBBER	0.2	0.9 - 2.0	1.1	0.2
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w.	Plastics (waste materials) (PW)			0.0	N/A		0.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC (NSW)	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x.	Organic matrix (OR)			0.0	N/A		0.0
75		x1.	Sludge		0.0	N/A		0.0
76				N/A	N/A	1.0 - 1.5	0.0	0.0
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2.	Other (See Note a)		0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y.	Inorganic matrix (IN)			85.2	N/A		71.0
83		y1.	Sludge		85.2	N/A		71.0
84				MODERATE REDDISH ORANGE CRUMBLY SLUDGE WITH PORTLAND CEMENT AND WHITE CHUNKS	85.2	1.0 - 1.5	1.2	71.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2.	Rooster Oxides		0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3.	Other (See Note a)		0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94	z.	Soils/gravel (S)			36.0	N/A		30.0
95				SOIL	36.0	1.0 - 1.4	1.2	30.0
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa.	TOTAL			130.6	N/A		116.2
98	13. (INORGANIC SLUDGE) weight (85.2) kg was obtained by subtracting the weighed waste weight of (45.4) kg and the container net weight of (34.0) kg from the gross weight (164.6) kg of the waste container. (164.6) - (45.4) - (34.0) = (85.2) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. N/A							
101								

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70436	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70436	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	25.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	223309
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728540
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	06/26/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1458
22. Measured gross weight of loaded container, fully assembled (kgs):	164.6
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	362.9
23. Container closure date (mm/dd/yy):	05/07/12
24. Percent fill of container:	80.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	130.6
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

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Washington TRU Solutions LLC

CP:12:01390
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: August 10, 2012

FROM: J. A. Vernon LOCATION: Certification

TO: W. F. Verlanic LOCATION: Idaho National Laboratory

SUBJECT: RESULTS OF VISUAL EXAMINATION QUARTERLY REPEAT DATA GENERATION LEVEL DATA REVIEW: IDAHO NATIONAL LABORATORY SECOND CALENDAR QUARTER OF 2012

Procedure CCP-TP-001, *CCP Project Level Data Validation and Verification,* requires that a repeat of Data Generation Level (DGL) review, validation and verification be performed on the data for a minimum of one randomly chosen waste container each quarter. The Site Project Manager uses this information to document that the DGL data review is being performed according to procedures.

Inter-Office Correspondence Number CP:12:01363 was issued July 13, 2012. This memorandum identified waste container ARP70436 as the randomly-selected container for DGL repeat of visual examination at the Idaho National Laboratory for the second calendar quarter of 2012.

The mini-Batch Data Report containing ARP70436 was reviewed for the quarterly repeat on August 10, 2012. The results of these reviews indicate that the data quality remains acceptable and no discrepancies were identified. The Project Level Verification and Validation Checklist (Attachment 1 - Rev. 19 of Procedure CCP-TP-001) has been completed and authenticated.

If you have any questions regarding this review, please contact me at (575) 234-7141.

JAV:yhs

cc: R. P. Kantrowitz ED
M. W. Pearcy ED
J. S. Poole ED
CCP Records Custodian GSA-212

COPY

CCP RECORDS ORIGINAL
DATE REC'D 8-13-12

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary

BDR Number: IN-ARP-VE-002748_QTR0212 **Examination Date: 5-07-12**

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
1. Is the completed, signed and dated Independent Technical Reviewer Checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, C3-10b**	X			
2. Does the BDR contain all items addressed in the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-10b**	X			
3. Does the BDR include a listing of all container numbers in the batch? **Reference Source: CCP-PO-001, C3-10b**	X			
4. List all containers that have met QAOs. **Reference Source: CCP-PO-001, C3-10b**				Container Numbers: ARP70436
5. Is the current implementing procedure and revision number included in the BDR? **Reference Source: CCP-PO-001, C3-4, C3-10b, Table C3-11**	X			
6. Is the BDR date included? **Reference Source: CCP-PO-001, Table C3-11**	X			
7. Is there a reference to or copy of any associated NCRs (if any) in the BDR? **Reference Source: CCP-PO-001, Table C3-11**			X	No NCR's
8. Are there 20 or fewer containers in the batch? **Reference Source: CCP-PO-001 C3-10**	X			
9. Are the data properly reported (i.e., data are reported in correct units and with correct significant figures). **Reference Source: CCP-PO-001 C3-10b**	X			
10. Is there evidence of verification that the physical form matches the Waste Matrix Code? **Reference Source: CCP-PO-001, C3-4**	X			
11. Is there evidence of verification that the physical form matches the waste stream description? **Reference Source: CCP-PO-001, C1-4**	X			
12. Are prohibited items absent? **Reference Source: CCP-PO-001, C3-4**	X			

CCP RECORDS ORIGINAL
DATE REC'D 8-10-12

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-ARP-VE-002748_QTR0212 **Examination Date: 5-07-12**

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
13. Does observable liquid, if present, meet the criteria of the TSDF-WAC? **Reference Source: CCP-PO-001, C3-4b**			X	No Observable Liquid
14. Were discrepancies between the Visual Examination operator and the ITR with regards to identification of waste matrix code, liquids in excess of the TSDF-WAC, or compressed gases reconciled? NA if no discrepancies. **Reference Source: CCP-PO-001, C3-4b**			X	No Discrepancies
15. Are the training requirements met for the VE Expert and VE Operators who have signed the data forms? **Reference Source: CCP-PO-001, C1-4, C3-4**	X			
16. Is evidence of a satisfactory audio/video test included in the BDR? NA [not applicable] for VE Method for Newly Generated Waste. **Reference Source: CCP-PO-001, C1-4**			X	VE Method for Newly Generated Waste
17. If the VE was not recorded using audio/video media, does the data sheet contain the signature of two qualified operators who observed for themselves the waste being placed into the container? NA if audio/video used. **Reference Source: CCP-PO-001, C1-4**	X			
18. Are the weights/estimated weights for the 12 waste material parameters reported in kilograms (kg)? **Reference Source: CCP Technical Procedures**	X			
19. Are the descriptions for each waste material parameter included in the BDR? **Reference Source: CCP-PO-001, C1-4**	X			
20. Is the gross weight reported (in kg) for each container included in the BDR? **Reference Source: CCP Technical Procedures**	X			
21. Is the number of layers of confinement recorded? **Reference Source: CCP-PO-001, C-3d**	X			
22. Is sufficient information included in the BDR to determine the packaging configuration? **Reference Source: CCP-PO-001 C-3d**	X			

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-ARP-VE-002748_QTR0212 **Examination Date: 5-07-12**

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
23. Is the type and number of filters recorded? **Reference Source: CCP-PO-001, C-3d**	X			
24. Is the size of the rigid liner vent hole recorded to determine the appropriate DAC? NA if no liner lid. **Reference Source: CCP-PO-001, C-3d**			X	No Liner Lid
25. For Los Alamos National Laboratory (LANL) Sealed Sources, does the characterized waste container meet the definition of sealed sources per Title 10 Code of Federal Regulations (CFR) 30.4 and Title 10 CFR 835.2 (effective January 1, 2004) evidence of which is assembled as part of AK documentation? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Source
26. For LANL Sealed Sources, are sealed sources the only non-packaging items in the waste container? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Source
27. For LANL Sealed Sources, are the sealed sources a U.S. Department of Transportation (DOT) Special Form Class 7 (Radioactive Material) per Title 49 CFR 34.27 (effective January 1, 2004) and the certification of which is assembled as part of the AK documentation? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Source
28. For LANL Sealed Sources, is the integrity of each sealed source validated by documented contamination survey results to meet the requirements of Title 10 CFR 34.27 (effective January 1, 2004), and assembled as part of AK documentation? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Source

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-ARP-VE-002748_QTR0212 **Examination Date: 5-07-12**

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
29. For LANL Sealed Sources, is each sealed source a rigid sealed container less than or equal to 4 L in size or in a rigid sealed container less than or equal to 4 L? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Source
30. For LANL Sealed Sources, AK documentation does not indicate the use of volatile organic compounds (VOCs) or VOC-bearing materials as constituents of sealed sources? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Source
31. For LANL Sealed Sources, the outer casing of each sealed source is of a non VOC-bearing material which is verified using the VE technique at the time of packaging? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Source

Comments: None

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

Jim Vernon		8-10-12
SPM Printed Name	Signature	Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

Attachment 4 – CCP Waste VE Technique Batch Data Report Cover Sheet

Batch Data Report No.: IN-ARP-VE-002748_QTR0212

	Waste Container ID Number
1	ARP70436
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	L.V.
12	7-18-12 N/A
13	
14	
15	
16	
17	
18	
19	
20	

ITR:

Printed Name	Signature	Date
Spencer Pattee		7-18-12

VEE:

Printed Name	Signature	Date
LUKE GROVER		7-18-12

CCP RECORDS ORIGINAL
DATE REC'D 7-19-12

001

Attachment 3 – CCP Waste VE Technique Batch Data Report Table of Contents

Batch Data Report No.: IN-ARP-VE-002748_QTR0212 **Batch Data Report Date:** 7-18-12

Table Of Contents		
Item	Description	Page No.
1	Attachment 4, CCP Waste VE Technique Batch Data Report Cover Sheet	01
2	Attachment 3, CCP Waste VE Technique Batch Data Report Table of Contents	02
3	CCP Waste Visual Examination Technique Data Form	03
4	Attachment 2, CCP Waste VE Technique Independent Technical Reviewer Checklist	10
5	Copy of NCRs (NA, If Not Applicable)	NA

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	ARP70436
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	808
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location:	IN-RWMC-ARP-6
3.	Batch Number:	IN-ARP-VE-002748
4.	Examination Date:	05/07/12
5.	Procedure CCP-TP-006, Rev.:	16
6.	a. Drum Packing Station (DPS) Number:	704
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	XC0921
	c. Scale Calibration Due Date:	06/28/12
	d. Test Weight ID:	XC0490
	e. Test Weight Calibration Due Date:	04/03/13
	f. Test Weight (kgs):	5.0
	g. Scale Readout of Test Weight (kgs):	5.0
	h. Difference Between Test Weight and Scale Readout (kgs):	0.0
	i. DPS Scale Check SAT (Y):	Y
	Container Scale Check	
	j. Scale Serial/ID Number:	725493
	k. Scale Calibration Due Date:	11/07/12
	l. Test Weight ID:	722311
	m. Test Weight Calibration Due Date:	11/07/12
	n. Test Weight (kg):	224.0
	o. Scale Readout of Test Weight (kgs):	223.8
	p. Difference Between Test Weight and Scale Readout (kgs):	0.2
	q. Container Scale Check SAT (Y):	Y
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	223309
8.	Container Filter Torque Data:	
	a. Filter Torque Wrench Serial/ID Number:	726772
	b. Filter Torque Wrench Calibration Due Date:	07/04/12
	c. Filter Model No.:	NUCFIL-019DS
	d. Filter Serial No.:	HL-392
	e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
	f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:		
NOTHING ADDED TO CONTAINER VERIFIED		

QTR 02 12
L.N. 7-18-12

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70436							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5					0.2	N/A		0.0
6	a. Iron-based metals/alloys (IM)				0.2	8.0		0.0
7				METAL	N/A	8.0		0.0
8				N/A	0.0	N/A		0.0
9	b. Aluminum-based metals/alloys (AM)				N/A	3.0		0.0
10				N/A	N/A	3.0		0.0
11				N/A	0.0	N/A		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			N/A	11.0		0.0
14				N/A	N/A	11.0		0.0
15				N/A	0.0	N/A		0.0
16		e. Beryllium			N/A	1.8		0.0
17				N/A	N/A	1.8		0.0
18				N/A	0.0	N/A		0.0
19		f. Depleted uranium			N/A	19.1		0.0
20				N/A	N/A	19.1		0.0
21				N/A	0.0	N/A		0.0
22		g. Copper			N/A	9.0		0.0
23				N/A	N/A	9.0		0.0
24				N/A	0.0	N/A		0.0
25		h. Other (See Note a)			N/A	0.0		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A				

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70436							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
29	l.	Other inorganic materials (OI)			9.0	N/A		15.0
30		l.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		i.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		9.0	N/A		15.0
49				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				PAPER (NSW)	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70436							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4				9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.2	N/A		0.2
67				RUBBER	0.2	0.9 - 2.0	1.1	0.2
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC (NSW)	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				0.0	N/A		0.0
75		x1. Sludge			0.0	N/A		0.0
76				N/A	N/A	1.0 - 1.5	0.0	0.0
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				85.2	N/A		71.0
83		y1. Sludge			85.2	N/A		71.0
84				MODERATE REDDISH ORANGE CRUMBLY SLUDGE WITH PORTLAND CEMENT AND WHITE CHUNKS	85.2	1.0 - 1.5	1.2	71.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Rooster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				36.0	N/A		30.0
95				SOIL	36.0	1.0 - 1.4	1.2	30.0
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				130.6	N/A		116.2
98	13. (INORGANIC SLUDGE) weight (85.2) kg was obtained by subtracting the weighed waste weight of (45.4) kg and the container net weight of (34.0) kg from the gross weight (164.6) kg of the waste container. (164.6) - (45.4) - (34.0) = (85.2) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. N/A							
101								

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70436	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70436	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	25.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	223309
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728540
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	06/26/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1458
22. Measured gross weight of loaded container, fully assembled (kgs):	164.6
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	362.9
23. Container closure date (mm/dd/yy):	05/07/12
24. Percent fill of container:	80.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	130.6
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70436	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.2
31. Total volume of Solidified Organics (L):	0.0
32. Total volume of Solidified Inorganics (L):	86.0
33. Total volume of Soils/Gravel (L):	30.0
a. Total volume (L):	116.2
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	0.0%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	N/A

Section 6: Approvals

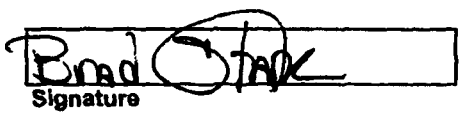
Visual Examination Operator 1:

D. JACKMAN		5-7-12
Enter Name	Signature	Date

Visual Examination Operator 2:

L. VERLANIC		5-7-12
Enter Name	Signature	Date

Visual Examination Expert:

B. STARK		5-7-12
Enter Name	Signature	Date

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist

Batch Data Report No.: IN-ARP-VE-002748-QTR0212

Description			
1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods used?	☐ NO	☒ YES	☐ NA
a. Was the description of the waste items adequate?	☐ NO	☒ YES	☐ NA
2. Was the correct revision of operating procedure used? (Attachment 1, Section 1, Line 5)	☐ NO	☒ YES	☐ NA
3. Were the following calculation spot checks performed?			
a. Attachment 1, Section 2: Verify the total waste volume in Column 12, Row aa does not exceed 208 L for a 55-gallon drum or 1456 L for an SWB and verify the estimated weights in Row aa matches the measured net weight of waste in Attachment 1, Section 4, Row 26.	☐ NO	☒ YES	☐ NA
b. Attachment 1, Section 5: Verify the total waste volume in Row 33 a., matches the total waste volume in Section 2, Column 12, Row aa.	☐ NO	☒ YES	☐ NA
c. Attachment 1, Section 1: Check hand calculations in Lines 6h and 6p, and any additional hand calculations recorded in the comments field or in Section 2, Line 13.	☐ NO	☒ YES	☐ NA
4. Is only one waste stream selected in Line 34 of Attachment 1, Section 5, and is it consistent with the values shown in Attachment 1, Section 2, Column 12?	☐ NO	☒ YES	☐ NA
5. Is the data entered in the correct units and correct number of significant figures?	☐ NO	☒ YES	☐ NA
6. Were the data reviewed for transcription errors?	☐ NO	☒ YES	☐ NA
7. Does the BDR include VE for up to 20 containers?	☐ NO	☒ YES	☐ NA
8. Are BDR contents complete and do they match, Attachment 3, CCP Waste VE Batch Data Report Table of Contents?	☐ NO	☒ YES	☐ NA
9. Was completeness verified for data entry on the CCP VE Technique Data Form for the following?			
a. Section 1	☐ NO	☒ YES	☐ NA
b. Section 2	☐ NO	☒ YES	☐ NA
c. Section 3	☐ NO	☒ YES	☐ NA
d. Section 4	☐ NO	☒ YES	☐ NA
e. Section 5	☐ NO	☒ YES	☐ NA

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: IN-AGR-VE-002748_QTR0212

Description			
10. Is all the data signed and dated in Attachment 1, Section 6, using reproducible ink, and by the individual(s) generating it?	☐ NO	☒ YES	☐ NA
11. Is all data entered clearly, legibly, and accurately?	☐ NO	☒ YES	☐ NA
12. Were discrepancies between the operators reconciled?	☐ NO	☐ YES	☒ NA
13. Are all changes to original data lined out, initialed and dated by the individual making the changes?	☐ NO	☐ YES	☒ NA
14. Were data changes made by the individual who originally collected the data or an equally qualified individual?	☐ NO	☐ YES	☒ NA
15. Was the DPS scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
16. Was the daily DPS scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
17. Was the container scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
18. Was the daily container scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
19. Was the torque wrench(es) in calibration prior to VE Technique and documented correctly?	☐ NO	☒ YES	☐ NA
20. Were NCR(s) initiated as indicated in Attachment 1, Section 1, dispositioned, and approved appropriately?	☐ NO	☐ YES	☒ NA
21. Was the correct waste stream and waste matrix code assigned?	☐ NO	☒ YES	☐ NA
22. Is there a valid VE data form for each drum in the batch?	☐ NO	☒ YES	☐ NA
23. Were the operators trained and qualified in accordance with the applicable requirements?	☐ NO	☒ YES	☐ NA

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: IN-ARP-VE-002748_QTR0212

Description			
24. Was precision maintained by reconciling any discrepancies between the operator(s) and the ITR with regard to identification of waste matrix code, liquids in excess of WIPP Hazardous Waste Facility Permit and WIPP Waste Acceptance Criteria limits and compressed gases?	☐ NO	☐ YES	☒ NA

Description

Comments:
Item 12 is N/A Due To No Discrepancies Between operators s/p 7-18-12

Items 13 & 14 are N/A Due To No Data changes Associated with This BDR s/p 7-18-12

Item 20 is N/A Due To No NCR's Associated with This BDR s/p 7-18-12

Item 24 is N/A Due To No Discrepancies Between ITR and operators s/p 7-18-12

I have reviewed 100 percent of the container-specific and batch data in this BDR and find it acceptable.

ITR:
Spencer Pattee — Printed Name
Signature
7-18-12 — Date

DIVIDER PAGE ONLY

Not part of page count

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	RECORDS CUSTODIAN	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	08/13/2012
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
IN-ARP-VE-002748_QTR0212	BATCH DATA REPORT VE (QTR)	07/18/2012	12
	N/A		

Comments

SPM CHECKLIST LOCATED IN CARLSBAD

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [X]	Shanique Jordan	Shanique Jordan	8/14/12
	Signature	Printed Name	Date
Records Rejected [ ]			
	Signature	Printed Name	Date

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	3554
DESTINATION TEL #	912085577396
DESTINATION ID	INL
ST. TIME	08/16 14:21
TIME USE	00'18
PAGES SENT	1
RESULT	OK

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	RECORDS CUSTODIAN	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	08/13/2012
Telephone Number:	575-234-7523		

Transmittal Number	Description	Date Received	Number of Records
IN-ARP-VE-002748_QTR0212	BATCH DATA REPORT VE (QTR)	07/18/2012	12
	N/A		

Comments:

SPM CHECKLIST LOCATED IN CARLSBAD

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted Shanique Jordan 8/11/12

DIVIDER

PAGE

CP:12:01373
UFC:5900.00

URS

Washington TRU Solutions LLC

INTER-OFFICE CORRESPONDENCE

DATE: July 24, 2012

FROM: J. A. Vernon LOCATION: Certification

TO: W. F. Verlanic LOCATION: Idaho National Laboratory

SUBJECT: REVISED SECOND QUARTER 2012 (APRIL 1, 2012 THROUGH JUNE 30, 2012) REAL-TIME RADIOGRAPHY QUARTERLY REPEAT OF DATA GENERATION LEVEL REVIEW AT THE IDAHO NATIONAL LABORATORY

This memorandum was issued to correct the Batch Data Report (BDR) number and supersedes Washington TRU Solutions memorandum CP:12:01364.

Real-Time Radiography at the Idaho National Laboratory has completed 90 days of reporting from April 1, 2012 through June 30, 2012. Container number 10109295 in BDR INRTR5120002, was randomly selected from among all the drums processed through Data Generation Level (DGL) review, validation and verification during this time frame. This container will be processed through the quarterly repeat of Data Generation Level (DGL) Review as described in CCP-TP-001, *CCP Project Level Data Validation and Verification*. The original letter will be retained in the letter correspondence file.

Please assign available qualified personnel to serve as Independent Technical Reviewers in performing the review as well as preparing a Table of Contents. Not all containers included in the original BDR will be included for this review. Only the selected drum noted above must be reviewed along with any Quality Control information.

Please perform the real time radiography quarterly repeat of DGL review, validation, and verification and return the information by August 13, 2012 to the Central Characterization Project Records Department, naming the BDR as "INRTR5120002_QTR0212".

JAV:yhs

Attachment

cc: WTS
(without attachment)
R. P. Kantrowitz ED
M. W. Pearcy ED

(with attachment)
CCP Records Custodian GSA-212

INL
(with attachment)
F. Oney ED

COPY

Attachment 1 – CCP RTR Measurement Control Report

Site ID: INL		
Batch Data Report No.: INRTR5120002		
Examination Date: 4/2/12		
Control Checks		
Video/Audio Recorded Media System Check	☑ SAT	☐ UNSAT
Image Test : 12 Lines Pair (Minimum acceptable is 5 lines-pair/cm or #6 Sieve is viewable)	☑ SAT	☐ UNSAT
Comments: N/A		
RTR Operator:		
Tyson Christensen	Tyson Christensen	4/2/12
Printed Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☐ RTR Examination ☑ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5120002
Examination Date:	4/2/12
Waste Container ID:	10109295
Video/Audio Recorded Media Number:	INRTR5120002 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	ID 112/212, SQ 154
Waste Matrix Code:	S3114
Waste Stream I.D.:	ID-RF-S3114
Waste Container Weights:	Gross Wt: 197.5 kg. Tare Wt: 35.1 kg. Net Wt: 162.4 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	90mil Liner - Vented
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	85 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10109295

Section 3: Container Inventory and Comments – (Special Descriptions)
Scrap metal (NSW) Absorbent Plastic bag Sludge

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	7.4
Others:	
Total Packaging Weight:	35.1
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	5.0
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	0.5
Organic Matrix (OR):	156.9
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	162.4

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10109295

[illegible]	Yes	No
Is there observable liquid?	☐	☑
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container GREATER than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
[illegible]		
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: This Replicate Scan agrees with the original scan.

RTR Operator:

Jerry Bowden	Jerry Bowden	4/2/12
Print Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☐ RTR Examination ☐ RTR Replicate Scan ☑ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5120002
Examination Date:	4/2/12
Waste Container ID:	10086874
Video/Audio Recorded Media Number:	INRTR5120002 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	ID 112/212, SQ 154
Waste Matrix Code:	S3114
Waste Stream I.D.:	ID-RF-S3114
Waste Container Weights:	Gross Wt: 279.0 kg. Tare Wt: 35.1 kg. Net Wt: 243.9 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	90mil Liner - Vented
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	100 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10086874

Section 3: Container Inventory and Comments (Detailed descriptions)
Metal wire basket Absorbent Plastic bags Sludge

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	7.4
Others:	
Total Packaging Weight:	35.1
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	1.5
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	6.0
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	1.0
Organic Matrix (OR):	235.4
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	243.9

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10086874

Section VI: RTR Summary [illegible]	Yes	No
Is there observable liquid?	☐	☑
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container GREATER than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
CH or RH TRAMPAC [illegible]		
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: This Independent Observation agrees with the original scan.

RTR Operator:

Jerry Bowden	Jerry Bowden	4/2/12
Print Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5120002
Examination Date:	4/2/12
Waste Container ID:	10109295
Video/Audio Recorded Media Number:	INRTR5120002 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☑NO ☐YES NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	ID 112/212, SQ 154
Waste Matrix Code:	S3114
Waste Stream I.D.:	ID-RF-S3114
Waste Container Weights:	Gross Wt: 197.5 kg. Tare Wt: 35.1 kg. Net Wt: 162.4 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	90mil Liner - Vented
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	90 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10109295

Section 3: Container Inventory and Comments (Additional Descriptions)
Scrap metal(NSW) Absorbent Plastic bag Sludge

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	7.4
Others:	
Total Packaging Weight:	35.1
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	7.5
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	0.5
Organic Matrix (OR):	154.4
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	162.4

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10109295

	Yes	No
Is there observable liquid?	☐	☑
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: N/A

RTR Operator:

Tyson Christensen	Tyson Christensen	4/2/12
Print Name	Signature	Date

DIVIDER

PAGE

URS

Washington TRU Solutions LLC

CP:12:01392
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: August 10, 2012

FROM: J. A. Vernon LOCATION: Certification

TO: W. F. Verlanic LOCATION: Idaho National Laboratory

SUBJECT: RESULTS OF REAL-TIME RADIOGRAPHY QUARTERLY REPEAT DATA GENERATION LEVEL DATA REVIEW IDAHO NATIONAL LABORATORY SECOND CALANDAR QUARTER OF 2012

Procedure CCP-TP-001, *CCP Project Level Data Validation and Verification,* requires that a repeat of Data Generation Level (DGL) review, validation and verification be performed on the data for a minimum of one randomly chosen waste container each quarter. The Site Project Manager uses this information to document that the DGL data review is being performed according to procedures.

Inter-Office Correspondence Number CP:12:01364 was issued July 13, 2012. This memorandum identified waste container 10109295 as the randomly-selected container for DGL repeat of real-time radiography at the Idaho National Laboratory for the second calendar quarter of 2012.

The mini-Batch Data Report containing 10109295 was reviewed for the quarterly repeat on August 10, 2012. The results of these reviews indicate that the data quality remains acceptable and no discrepancies were identified. The Project Level Verification and Validation Checklist (Attachment 2 - Rev. 19 of Procedure CCP-TP-001) has been completed and authenticated.

If you have any questions regarding this review, please contact me at (575) 234-7141.

JAV:yhs

cc: WTS

R. P. Kantrowitz	ED
M. W. Pearcy	ED
CCP Records Custodian	GSA-212

INL

F. Oney	ED

COPY

CCP RECORDS ORIGINAL
DATE REC'D 8-13-12

Attachment 2 – CCP SPM Radiography Project Level Validation Checklist and Summary

BDR Number: INRTR5120002_QTR0212				Examination Date: 4-2-12
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
1. Is the completed, signed, and dated Independent Technical Reviewer Checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, C3-10b**	X			
2. Does the BDR contain all items addressed in the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-10b**	X			
3. Does the BDR include a listing of all the container numbers in the batch? **Reference Source: CCP-PO-001, C3-10b**	X			
4. List all containers that have met QAOs. **Reference Source: CCP-PO-001, C3-10b**				Container Numbers: 10109295, 10086874
5. Does the BDR identify the current implementing procedure and revision number? **Reference Source: CCP-PO-001, Table C3-11**	X			
6. Is there a reference to or copy of any associated NCRs (if any) in the BDR? NA if no NCRs. **Reference Source: CCP-PO-001, Table C3-11**			X	No NCR's
7. Are there 20 or fewer containers in the batch? **Reference Source: CCP-PO-001, C3-10**	X			
8. Are the data properly reported (i.e., data are reported in correct units and with correct significant figures)? **Reference Source: CCP-PO-001, C3-10b**	X			
9. Is there evidence of verification that the physical form matches the Waste Matrix Code? **Reference Source: CCP-PO-001, C3-4, Table C3-11**	X			

CCP RECORDS ORIGINAL
DATE REC'D 8-10-12

Attachment 2 – CCP SPM Radiography Project Level Validation Checklist and Summary (Continued)

BDR Number: INRTR5120002_QTR0212	Examination Date: 4-2-12			
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
10. Is there evidence of verification that the physical form matches the waste stream description? **Reference Source: CCP-PO-001, C1-3, Table C3-11**	X			
11. Are prohibited items absent? **Reference Source: CCP-PO-001, C3-4a**	X			
12. Does observable liquid, if present, meet the criteria of the TSDF-WAC? **Reference Source: CCP-PO-001, C3-4a**			X	Observable liquid not present
13. Were discrepancies between two operators with regard to identification of waste matrix code, liquids in excess of the TSDF-WAC, or compressed gases through replicate scans and independent observations reconciled? NA if no discrepancies. **Reference Source: CCP-PO-001, C3-4a**			X	No discrepancies
14. Are the training qualifications for all radiography personnel acceptable? **Reference Source: CCP-PO-001, C3-4a**	X			
15. Was evidence of the video/audio check included in the BDR? **Reference Source: CCP-PO-001, C3-4a**	X			
16. Was the Lines-Pair Resolution Test Check included in the BDR? **Reference Source: CCP-PO-001, C3-4a**	X			
17. Was a replicate scan performed once per day, or once per batch, whichever is LESS frequent? **Reference Source: CCP-PO-001, C1-3**	X			
18. Was an independent observation performed once per day, or once per batch, whichever is LESS frequent? **Reference Source: CCP-PO-001, C1-3**	X			

Attachment 2 – CCP SPM Radiography Project Level Validation Checklist and Summary (Continued)

BDR Number: INRTR5120002_QTR0212	Examination Date: 4-2-12			
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
19. Were the replicate scan and independent observation performed on different waste containers? **Reference Source: CCP-PO-001, C1-3**	X			
20. Were the personnel performing the replicate scan and independent observation different from the individual who performed the original? **Reference Source: CCP-PO-001, C1-3**	X			
21. Does the BDR include an estimate of each material parameter weight in kg for each container? **Reference Source: CCP Technical Procedures**	X			
22. Does the BDR include a description of each material parameter for each container? **Reference Source: CCP-PO-001, Table C3-1**	X			
23. Is the container gross weight recorded in kilograms (kg) for each container in the BDR? **Reference Source: CCP Technical Procedures**	X			
24. Was the Scale Weight Calibration Check included in the BDR? **Reference Source: CCP Technical Procedures**			X	Weight obtained independent from RTR
25. Was the Scale Weight Check included in the BDR? **Reference Source: CCP Technical Procedures**			X	Weight obtained independent from RTR
Comments: None				
The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.				
Jim Vernon				8-10-12
SPM Printed Name	Signature			Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

Attachment 5 – CCP Radiography Batch Data Report Cover Sheet

Batch Data Report No.: INRTR5120002_QTR0212 Date: 7/25/12

Waste Container ID Numbers	
Replicate Scan:	10109295
Independent Observation:	10086874
1	10109295
2	10086874
3	N/A
4	N/A
5	N/A
6	N/A
7	N/A
8	N/A
9	N/A
10	N/A
11	N/A
12	N/A
13	N/A
14	N/A
15	N/A
16	N/A
17	N/A
18	N/A
19	N/A
20	N/A

Independent Technical Reviewer:

Fred Oney — Printed Name

Signature

7/25/12 — Date

CCP RECORDS ORIGINAL
DATE REC'D 7-26-12

A 7-25-12

Attachment 4 – CCP Radiography Batch Data Report Table of Contents and Batch Narrative

Batch Data Report No.: INRTR5120002_QTR0212 Date: 7/25/12

Table Of Contents

Item	Description	Page No.
1	CCP Radiography Batch Data Report Cover Sheet	1
2	CCP Radiography Batch Data Report Table Of Contents	2
3	CCP RTR Measurement Control Report	3
4	CCP Radiography Data Sheets	4-15
5	Copy of NCRs (NA, If Not Applicable)	N/A
6	CCP Independent Technical Reviewer Checklist	16-17

Batch Narrative

All quality checks were preformed and recorded on CCP-TP-053, rev. 11 CCP Radiography Measurement Control Report.

Tyson Christensen — RTR Operator

Tyson Christensen — Signature

7/25/12 — Date

2
fo 7-25-12

Attachment 1 – CCP RTR Measurement Control Report

Site ID: INL		
Batch Data Report No.: INRTR5120002		
Examination Date: 4/2/12		
Control Checks		
Video/Audio Recorded Media System Check	☑ SAT	☐ UNSAT
Image Test : 12 Lines Pair (Minimum acceptable is 5 lines-pair/cm or #6 Sieve is viewable)	☑ SAT	☐ UNSAT
Comments: N/A		
RTR Operator: Tyson Christensen — Printed Name Signature 4/2/12 — Date		

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☐ RTR Examination ☑ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5120002
Examination Date:	4/2/12
Waste Container ID:	10109295
Video/Audio Recorded Media Number:	INRTR5120002 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	ID 112/212, SQ 154
Waste Matrix Code:	S3114
Waste Stream I.D.:	ID-RF-S3114
Waste Container Weights:	Gross Wt: 197.5 kg. Tare Wt: 35.1 kg. Net Wt: 162.4 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	90mil Liner - Vented
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	85 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10109295

Section 3: Container Inventory and Contents - (Detailed Descriptions)
Scrap metal (NSW) Absorbent Plastic bag Sludge

Section 4: Packaging Material Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	7.4
Others:	
Total Packaging Weight:	35.1
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	5.0
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	0.5
Organic Matrix (OR):	156.9
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	162.4

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10109295

	Yes	No
Is there observable liquid?	☐	☑
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: This Replicate Scan agrees with the original scan.

RTR Operator:

Jerry Bowden	Jerry Bowden	4/2/12
Print Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: Examination Information	
☐ RTR Examination ☐ RTR Replicate Scan ☑ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5120002
Examination Date:	4/2/12
Waste Container ID:	10086874
Video/Audio Recorded Media Number:	INRTR5120002 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	ID 112/212, SQ 154
Waste Matrix Code:	S3114
Waste Stream I.D.:	ID-RF-S3114
Waste Container Weights:	Gross Wt: 279.0 kg. Tare Wt: 35.1 kg. Net Wt: 243.9 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	90mil Liner - Vented
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	100 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10086874

Section 3: Container Inventory and Comments (Detailed descriptions)
Metal wire basket Absorbent Plastic bags Sludge

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	7.4
Others:	
Total Packaging Weight:	35.1
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	1.5
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	6.0
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	1.0
Organic Matrix (OR):	235.4
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	243.9

Controlled Copy

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10086874

Section 6 RTR Summary [illegible]	Yes	No
Is there observable liquid?	☐	☑
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
CH or RH TRAMPAC [illegible]		
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: This Independent Observation agrees with the original scan.

RTR Operator:

Jerry Bowden — [signature] — 4/2/12

Print Name — Signature — Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5120002
Examination Date:	4/2/12
Waste Container ID:	10086874
Video/Audio Recorded Media Number:	INRTR5120002 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	ID 112/212, SQ 154
Waste Matrix Code:	S3114
Waste Stream I.D.:	ID-RF-S3114
Waste Container Weights:	Gross Wt: 279.0 kg. Tare Wt: 35.1 kg. Net Wt: 243.9 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	90mil Liner - Vented
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	100 %

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fo 7-25-12

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10086874

Section 3: Container Inventory and Comments (Detailed description)
Metal wire basket Absorbent Plastic bags Sludge

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP):	7.4
Others:	
Total Packaging Weight:	35.1
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	2.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	8.0
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	1.0
Organic Matrix (OR):	232.9
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	243.9

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Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10086874

	Yes	No
Is there observable liquid?	☐	☑
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: N/A

RTR Operator:

Tyson Christensen	Tyson Christensen	4/2/12
Print Name	Signature	Date

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FO 7-25-12

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5120002
Examination Date:	4/2/12
Waste Container ID:	10109295
Video/Audio Recorded Media Number:	INRTR5120002 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	ID 112/212, SQ 154
Waste Matrix Code:	S3114
Waste Stream I.D.:	ID-RF-S3114
Waste Container Weights:	Gross Wt: 197.5 kg. Tare Wt: 35.1 kg. Net Wt: 162.4 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	90mil Liner - Vented
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	90 %

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Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10109295

Section 3: Container Inventory and Comments (Detailed Descriptions)
Scrap metal(NSW) Absorbent Plastic bag Sludge

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	7.4
Others:	
Total Packaging Weight:	35.1
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	7.5
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	0.5
Organic Matrix (OR):	154.4
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	162.4

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Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10109295

	Yes	No
Is there observable liquid?	☐	☑
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: N/A

RTR Operator:

Tyson Christensen	Tyson Christensen	4/2/12
Print Name	Signature	Date

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Attachment 3 – CCP Radiography Independent Technical Reviewer Checklist

Batch Data Report No.: INRTR5120002_QTR0212

1.	Data generation and reduction were conducted in a technically correct manner in accordance with the methods used?	☐ NO	☑ YES	☐ N/A
2.	Was the correct revision of the procedure used? Procedure: CCP-TP-053 Rev.: 11	☐ NO	☑ YES	☐ N/A
3.	Are the WMPs entered correctly?	☐ NO	☑ YES	☐ N/A
4.	Do the estimated weights in Section 4 of Attachment 2 equal the container gross weight?	☐ NO	☑ YES	☐ N/A
5.	Is the data reported in the proper units with the correct number of significant figures (e.g., one tenth of a kilogram)?	☐ NO	☑ YES	☐ N/A
6.	Has the data been verified for transcription errors?	☐ NO	☐ YES	☑ N/A
7.	Does the Testing Batch Report include radiography for up to 20 containers?	☐ NO	☑ YES	☐ N/A
8.	BDR contents are complete and match the CCP Waste RTR Batch Data Report Table of Contents?	☐ NO	☑ YES	☐ N/A
9.	Is all the data signed and dated in reproducible ink and by the individual(s) generating it?	☐ NO	☑ YES	☐ N/A
10.	Is all data recorded clearly, legibly, and accurately?	☐ NO	☑ YES	☐ N/A
11.	All changes to original data lined out, initialed and dated by the individual making the changes?	☐ NO	☐ YES	☑ N/A
12.	Was justification made for changing the original data?	☐ NO	☐ YES	☑ N/A
13.	Were data changes made by the individual who originally collected the data?	☐ NO	☐ YES	☑ N/A
14.	Does the waste match the Waste Matrix Code and Waste Stream description?	☐ NO	☑ YES	☐ N/A
15.	Are the RTR Operator's decisions regarding the Radiography documented?	☐ NO	☑ YES	☐ N/A
16.	Is there an adequate written description of the contents of each item?	☐ NO	☑ YES	☐ N/A
17.	Was the video/audio recording media properly prepared and labeled for each waste container?	☐ NO	☑ YES	☐ N/A
18.	Was the video/audio recording media check performed satisfactorily and recorded on Attachment 1?	☐ NO	☑ YES	☐ N/A

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FO 7-25-12

Attachment 3 – CCP Radiography Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: INRTR5120002_QTR0212

Description				
19.	Was the Image Test performed satisfactorily and recorded on Attachment 1?	☐ NO	☑ YES	☐ N/A
20.	Was the Replicate Scan performed and recorded on an Attachment 2? (1 per batch or 1 per day, whichever is less frequent).	☐ NO	☑ YES	☐ N/A
21.	Was the Replicate Scan RTR Operator different from the first RTR Operator?	☐ NO	☑ YES	☐ N/A
22.	Did the Replicate Scan RTR Operator and the first RTR Operator agree on the results?	☐ NO	☑ YES	☐ N/A
23.	Was the Independent Observation performed and recorded on an Attachment 2? (1 per batch or 1 per day, whichever is less frequent).	☐ NO	☑ YES	☐ N/A
24.	Was the Independent Observation RTR Operator different from the first RTR Operator?	☐ NO	☑ YES	☐ N/A
25.	Did the Independent Observation RTR Operator and the first RTR Operator agree on the results?	☐ NO	☑ YES	☐ N/A
26.	Was the data collection performed by qualified individuals?	☐ NO	☑ YES	☐ N/A
27.	Are the NCR(s) associated with the RTR examination included in the BDR?	☐ NO	☐ YES	☑ N/A
28.	QAOs (precision, accuracy, completeness, representativeness) have been met?	☐ NO	☑ YES	☐ N/A

Comments:
N/A

I have reviewed 100% of the container specific and batch data in this report and find it acceptable.

Independent Technical Reviewer:
Fred Oney
Printed Name

Signature

7/25/12
Date

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fo 7-25-12

DIVIDER PAGE ONLY

Not part of page count

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	RECORDS CUSTODIAN	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	08/13/2012
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
INRTR5120002_QTR0212	BATCH DATA REPORT NDE RTR_5 (QTR)	07/25/2012	17
	N/A		

Comments

SPM CHECKLIST LOCATED IN CARLSBAD

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [X] Shanique Jordan — Signature — Shanique Jordan — Printed Name — 8-22-12 — Date

Records Rejected [ ] _____ Signature _____ Printed Name _____ Date

Reason for Rejection:

Re-submittal: _____ Signature _____ Printed Name _____ Date

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	3672
DESTINATION TEL #	912085577396
DESTINATION ID	INL
ST. TIME	08/22 14:38
TIME USE	00'16
PAGES SENT	1
RESULT	OK

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Fax Record [ ] Electronic Record [ ] Copy

Attn:	RECORDS CUSTODIAN	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	08/13/2012
Telephone Number:	575-234-7523		

Document Number	Title/Description	Record Date	Total Pages
INRTR5120002_QTR0212	BATCH DATA REPORT NDE RTR_5 (QTR)	07/25/2012	17
	N/A		

Comments

SPM CHECKLIST LOCATED IN CARLSBAD

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [X] Shanique Jordan — Signature — Shanique Jordan — Printed Name — 8-22-12 — Date

DIVIDER

PAGE

Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA

CP:13:01137
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: April 10, 2013

FROM: S. Castro — LOCATION: Central Characterization Program

TO: W. F. Verlanic ED — LOCATION: Central Characterization Program Operations - Idaho National Laboratory

SUBJECT: FIRST QUARTER 2013 (JANUARY 1, 2013 THROUGH MARCH 31, 2013) VISUAL EXAMINATION QUARTERLY REPEAT OF DATA GENERATION LEVEL REVIEW AT THE IDAHO NATIONAL LABORATORY

Visual Examination at the Idaho National Laboratory has completed 90 days of reporting from January 1, 2013 through March 31, 2013. Container number SRP12221 in Batch Data Report (BDR), IN-SRP-VE-000018, was randomly selected from among all the drums processed through Data Generation Level (DGL), review, validation and verification during this time frame. This container will be processed through the quarterly repeat of DGL Review as described in CCP-TP-001, *CCP Project Level Data Validation and Verification*. The original letter will be retained in the letter correspondence file.

Please assign available qualified personnel to serve as Independent Technical Reviewers in performing the review as well as preparing a Table of Contents. Not all containers included in the original BDR will be included for this review. Only the selected drum noted above must be reviewed along with any Quality Control information.

Please perform the visual examination quarterly repeat of DGL review, validation, and verification and return the information by May 1st, 2013 to the National TRU Program Records Department, naming the BDR as "IN-SRP-VE-000018_QTR0113".

SC:jmc

Attachment

cc: (without attachment)

R. P. Kantrowitz	ED
M. W. Pearcy	ED
J. A. Vernon	ED

(with attachment)

J. Miles	ED
J. Poole	ED
NTP Records Custodian	GSA-212

Attachment 4 – CCP Waste VE Technique Batch Data Report Cover Sheet

Batch Data Report No.: IN-SRP-VE-000018

	Waste Container ID Number
1	SRP12221
2	SRP12179
3	
4	
5	
6	
7	
8	
9	
10	NLG 1-8-13
11	
12	A
13	
14	
15	
16	
17	
18	
19	
20	

ITR:

David Jackson (Printed Name) | [signature] (Signature) | 1-15-13 (Date)

VEE:

Jeffrey Poole (Printed Name) | J.S. Poole (Signature) | 1-15-13 (Date)

001

CCP RECORDS ORIGINAL
DATE REC'D 1-16-13

Attachment 3 – CCP Waste VE Technique Batch Data Report Table of Contents

Batch Data Report No.: IN-SRP-VE-000018 **Batch Data Report Date:** 1-8-13

Table of Contents

Item	Description	Page No.
1	Attachment 4, CCP Waste VE Technique Batch Data Report Cover Sheet	1
2	Attachment 3, CCP Waste VE Technique Batch Data Report Table of Contents	2
3	CCP Waste Visual Examination Technique Data Form	3
4	Attachment 2, CCP Waste VE Technique Independent Technical Reviewer Checklist	17
5	Copy of NCRs (NA, If Not Applicable)	NA

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP12221
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	[illegible]
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000018
4. Examination Start Date:	01/08/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	501
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	XC0977
c. Scale Calibration Due Date:	07/02/13
d. Test Weight ID:	XC0490
e. Test Weight Calibration Due Date:	04/03/13
f. Test Weight (kgs):	5.0
g. Scale Readout of Test Weight (kgs):	5.0
h. Difference Between Test Weight and Scale Readout (kgs):	0.0
i. DPS Scale Check SAT (Y):	Y
Container Scale Check	
j. Scale Serial/ID Number:	725494
k. Scale Calibration Due Date:	11/21/13
l. Test Weight ID:	722311
m. Test Weight Calibration Due Date:	10/16/13
n. Test Weight (kg):	226.8
o. Scale Readout of Test Weight (kgs):	226.6
p. Difference Between Test Weight and Scale Readout (kgs):	0.2
q. Container Scale Check SAT (Y):	Y
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	231208
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12221							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density	12.Volume	
5					By Weight (kg)	(kg/L)	(L)	
6	a. Iron-based metals/alloys (IM)				0.0	N/A	0.0	
7				N/A	N/A	8.0	0.0	
8				N/A	N/A	8.0	0.0	
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A	0.0	
10				N/A	N/A	3.0	0.0	
11				N/A	N/A	3.0	0.0	
12	c. Other metals (OM)				0.0	N/A	0.0	
13		d. Lead			0.0	N/A	0.0	
14				N/A	N/A	11.0	0.0	
15				N/A	N/A	11.0	0.0	
16		e. Beryllium			0.0	N/A	0.0	
17				N/A	N/A	1.8	0.0	
18				N/A	N/A	1.8	0.0	
19		f. Depleted uranium			0.0	N/A	0.0	
20				N/A	N/A	19.1	0.0	
21				N/A	N/A	19.1	0.0	
22		g. Copper			0.0	N/A	0.0	
23				N/A	N/A	9.0	0.0	
24				N/A	N/A	9.0	0.0	
25		h. Other (See Note a)			0.0	N/A	0.0	
26				N/A	N/A	0.0	0.0	
27				N/A	N/A	0.0	0.0	
28				N/A	N/A	0.0	0.0	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12221							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4 5	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
29	L.	Other Inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.5	0.0	0.0
50				N/A	N/A	0.1 - 2.5	0.0	0.0
51		q.	Other (See Note 3)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		a.	Paper		0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		b.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.6		0.0
62				N/A	N/A	0.6		0.0
63		d.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12221							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
66	v. Rubber (R)				0.4	N/A		0.4
67				RUBBER BANDS (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68				RUBBER	0.1	0.9 - 2.0	1.1	0.1
69	w. Plastics (waste materials) (PW)				3.6	N/A		4.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				TRAY LINER, BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
72				PLASTIC TIGHTLY BOUND ON TOP	2.2	0.9		2.4
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				108.0	N/A		98.0
75		x1. Sludge			108.0	N/A		98.0
76				VERY PALE ORANGE POWDERY SLUDGE WITH CALCIUM SILICATE	108.0	1.0 - 1.5	1.2	98.0
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Rosette Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95				N/A	N/A	0.0		0.0
96				N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98				N/A	N/A	1.0 - 1.4	0.0	0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				112.0	N/A		94.4
101	13. (ORGANIC SLUDGE) weight (108.0) kg was obtained by subtracting the weighed waste weight of (4.0) kg and the container net weight of (34.0) kg from the gross weight (146.0) kg of the waste container. (146.0) - (4.0) - (34.0) = (108.0) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

006

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12221	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12221	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	32.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	231208
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	725482
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	02/12/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1445
22. Measured gross weight of loaded container, fully assembled (kgs):	146.0
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	321.9
23. Container closure date (mm/dd/yy):	01/08/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	722443
b. Filter Torque Wrench Calibration Due Date:	02/14/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	FL-1371
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	100.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	112.0
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12221	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	4.4
31. Total volume of Solidified Organics (L):	90.0
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	94.4
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	96.4%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

S. PATTEE		1-8-13
Enter Name	Signature	Date

Visual Examination Operator 2:

L. GROVER		1-8-13
Enter Name	Signature	Date

Visual Examination Expert:

B. STARK	Brad	1-8-13
Enter Name	Signature	Date

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist

Batch Data Report No.: IN-SRP-VE-000018

Description			
1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods used?	☐ NO	☒ YES	☐ NA
a. Was the description of the waste items adequate?	☐ NO	☒ YES	☐ NA
2. Was the correct revision of operating procedure used? (Attachment 1, Section 1, Line 5)	☐ NO	☒ YES	☐ NA
3. Were the following calculation spot checks performed?			
a. Attachment 1, Section 2: Verify the total waste volume in Column 12, Row aa does not exceed 208 L for a 55-gallon drum or 1456 L for an SWB and verify the estimated weights in Column 10, Row aa matches the measured net weight of waste in Attachment 1, Section 4, Row 27.	☐ NO	☒ YES	☐ NA
b. Attachment 1, Section 5: Verify the total waste volume in Row 33 a., matches the total waste volume in Section 2, Column 12, Row aa.	☐ NO	☒ YES	☐ NA
c. Attachment 1, Section 1: Check hand calculations in Lines 6h and 6p, and any additional hand calculations recorded in the comments field or in Section 2, Line 13.	☐ NO	☒ YES	☐ NA
4. Is only one waste stream selected in Line 34 of Attachment 1, Section 5, and is it consistent with the values shown in Attachment 1, Section 2, Column 12?	☐ NO	☒ YES	☐ NA
5. Is the data entered in the correct units and correct number of significant figures?	☐ NO	☒ YES	☐ NA
6. Were the data reviewed for transcription errors?	☐ NO	☒ YES	☐ NA
7. Does the BDR include VE for up to 20 containers?	☐ NO	☒ YES	☐ NA
8. Are BDR contents complete and do they match, Attachment 3, CCP Waste VE Batch Data Report Table of Contents?	☐ NO	☒ YES	☐ NA
9. Was completeness verified for data entry on the CCP VE Technique Data Form for the following?			
a. Section 1	☐ NO	☒ YES	☐ NA
b. Section 2	☐ NO	☒ YES	☐ NA
c. Section 3	☐ NO	☒ YES	☐ NA
d. Section 4	☐ NO	☒ YES	☐ NA
e. Section 5	☐ NO	☒ YES	☐ NA

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Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: IN-SRP-VE-000018

Item	Description			
10.	Is all the data signed and dated in Attachment 1, Section 6, using reproducible ink, and by the individual(s) generating it?	☐ NO	☒ YES	☐ NA
11.	Is all data entered clearly, legibly, and accurately?	☐ NO	☒ YES	☐ NA
12.	Were discrepancies between the operators reconciled?	☐ NO	☐ YES	☒ NA
13.	Are all changes to original data lined out, initialed and dated by the individual making the changes?	☐ NO	☐ YES	☒ NA
14.	Were data changes made by the individual who originally collected the data or an equally qualified individual?	☐ NO	☐ YES	☒ NA
15.	Was the DPS scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
16.	Was the daily DPS scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
17.	Was the container scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
18.	Was the daily container scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
19.	Was the torque wrench(es) in calibration prior to VE Technique and documented correctly?	☐ NO	☒ YES	☐ NA
20.	Were NCR(s) initiated as indicated in Attachment 1, Section 1, dispositioned, and approved appropriately?	☐ NO	☐ YES	☒ NA
21.	Was the correct waste stream and waste matrix code assigned?	☐ NO	☒ YES	☐ NA
22.	Is there a valid VE data form for each drum in the batch?	☐ NO	☒ YES	☐ NA
23.	Were the operators trained and qualified in accordance with the applicable requirements?	☐ NO	☒ YES	☐ NA

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Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: IN-SRP-VE-000018

Description	☐ NO	☐ YES	☒ NA
24. Was precision maintained by reconciling any discrepancies between the operator(s) and the ITR with regard to identification of waste matrix code, liquids in excess of WIPP Hazardous Waste Facility Permit and WIPP Waste Acceptance Criteria limits and compressed gases?			

Comments: N/A

I have reviewed 100 percent of the container-specific and batch data in this BDR and find it acceptable.

ITR:
David Jackman
Printed Name

Signature

1-15-13
Date

DIVIDER

PAGE

NWP
Nuclear Waste Partnership LLC
A URS-led partnership with B&W and AREVA

CP:12:01595
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: November 15, 2012

FROM: J. A. Vernon

LOCATION: CCP Certification

TO: W. F. Verlanic ED

LOCATION: CCP Operations
Idaho National Laboratory

SUBJECT: RESULTS OF REAL-TIME RADIOGRAPHY QUARTERLY REPEAT DATA GENERATION LEVEL DATA REVIEW IDAHO NATIONAL LABORATORY THIRD CALENDAR QUARTER OF 2012

Procedure CCP-TP-001, *CCP Project Level Data Validation and Verification,* requires that a repeat of Data Generation Level (DGL) review, validation and verification be performed on the data for a minimum of one randomly chosen waste container each quarter. The Site Project Manager uses this information to document that the DGL data review is being performed according to procedures.

Inter-Office Correspondence Number CP:12:01525 was issued October 23, 2012. This memorandum identified waste container 10102536 as the randomly-selected container for DGL repeat of real-time radiography at the Idaho National Laboratory for the third calendar quarter of 2012.

The mini-Batch Data Report containing 10102536 was reviewed for the quarterly repeat on November 12, 2012. The results of these reviews indicate that the data quality remains acceptable and no discrepancies were identified. The Project Level Verification and Validation Checklist (Attachment 2 - Rev. 19 of Procedure CCP-TP-001) has been completed and authenticated.

If you have any questions regarding this review, please contact me at (575) 234-7141.

JAV:jmc

cc: R. P. Kantrowitz ED
M. W. Pearcy ED
NTP Records Custodian GSA-212

CCP RECORDS ORIGINAL
DATE REC'D 12-27-12

Attachment 2 – CCP SPM Radiography Project Level Validation Checklist and Summary

BDR Number: INRTR5120005_QTR0312____ Examination Date: 7-3-12_____

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
1. Is the completed, signed, and dated Independent Technical Reviewer Checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, C3-10b**	X			
2. Does the BDR contain all items addressed in the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-10b**	X			
3. Does the BDR include a listing of all the container numbers in the batch? **Reference Source: CCP-PO-001, C3-10b**	X			
4. List all containers that have met QAOs. **Reference Source: CCP-PO-001, C3-10b**				Container Numbers: 10102536
5. Does the BDR identify the current implementing procedure and revision number? **Reference Source: CCP-PO-001, Table C3-11**	X			
6. Is there a reference to or copy of any associated NCRs (if any) in the BDR? NA if no NCRs. **Reference Source: CCP-PO-001, Table C3-11**	X			NCR-INL-0348-12 (10007973)
7. Are there 20 or fewer containers in the batch? **Reference Source: CCP-PO-001, C3-10**	X			
8. Are the data properly reported (i.e., data are reported in correct units and with correct significant figures)? **Reference Source: CCP-PO-001, C3-10b**	X			
9. Is there evidence of verification that the physical form matches the Waste Matrix Code? **Reference Source: CCP-PO-001, C3-4, Table C3-11**	X			

CCP RECORDS ORIGINAL
DATE REC'D 11-13-12

Attachment 2 – CCP SPM Radiography Project Level Validation Checklist and Summary (Continued)

BDR Number: INRTR5120005_QTR0312____ Examination Date: 7-3-12_____

Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
10. Is there evidence of verification that the physical form matches the waste stream description? **Reference Source: CCP-PO-001, C1-3, Table C3-11**	X			
11. Are prohibited items absent? **Reference Source: CCP-PO-001, C3-4a**	X			Except for rejected container
12. Does observable liquid, if present, meet the criteria of the TSDF-WAC? **Reference Source: CCP-PO-001, C3-4a**	X			Except for rejected container
13. Were discrepancies between two operators with regard to identification of waste matrix code, liquids in excess of the TSDF-WAC, or compressed gases through replicate scans and independent observations reconciled? NA if no discrepancies. **Reference Source: CCP-PO-001, C3-4a**			X	No Discrepancies
14. Are the training qualifications for all radiography personnel acceptable? **Reference Source: CCP-PO-001, C3-4a**	X			
15. Was evidence of the video/audio check included in the BDR? **Reference Source: CCP-PO-001, C3-4a**	X			
16. Was the Lines-Pair Resolution Test Check included in the BDR? **Reference Source: CCP-PO-001, C3-4a**	X			
17. Was a replicate scan performed once per day, or once per batch, whichever is LESS frequent? **Reference Source: CCP-PO-001, C1-3**	X			
18. Was an independent observation performed once per day, or once per batch, whichever is LESS frequent? **Reference Source: CCP-PO-001, C1-3**	X			

Attachment 2 – CCP SPM Radiography Project Level Validation Checklist and Summary (Continued)

BDR Number: INRTR5120005_QTR0312____ Examination Date: 7-3-12_____

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
19. Were the replicate scan and independent observation performed on different waste containers? **Reference Source: CCP-PO-001, C1-3**	X			
20. Were the personnel performing the replicate scan and independent observation different from the individual who performed the original? **Reference Source: CCP-PO-001, C1-3**	X			
21. Does the BDR include an estimate of each material parameter weight in kg for each container? **Reference Source: CCP Technical Procedures**	X			
22. Does the BDR include a description of each material parameter for each container? **Reference Source: CCP-PO-001, Table C3-1**	X			
23. Is the container gross weight recorded in kilograms (kg) for each container in the BDR? **Reference Source: CCP Technical Procedures**	X			
24. Was the Scale Weight Calibration Check included in the BDR? **Reference Source: CCP Technical Procedures**			X	Weight obtained independent from RTR
25. Was the Scale Weight Check included in the BDR? **Reference Source: CCP Technical Procedures**			X	Weight obtained independent from RTR

Comments: NCR-INL-0348-12 references BDR INRTR5120005 but was included in BDR INRTR5120005_QTR0312. No NCR's were associated with BDR INRTR5120005_QTR0312.

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

Jim Vernon		11-12-12
SPM Printed Name	Signature	Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date

SPM Printed Name	Signature	Reason	Date

Attachment 5 – CCP Radiography Batch Data Report Cover Sheet

Site ID: INL

Batch Data Report No.: INRTR5120005_QTR0312 ☑ CH ☐ RH Date: 11/6/12

Waste Container ID Numbers	
Replicate Scan:	10102536
Independent Observation:	10007973
1	10007973
2	10102536
3	N/A
4	N/A
5	N/A
6	N/A
7	N/A
8	N/A
9	N/A
10	N/A
11	N/A
12	N/A
13	N/A
14	N/A
15	N/A
16	N/A
17	N/A
18	N/A
19	N/A
20	N/A

RTR Operator: Michael Galbraith — Printed Name | Signature | 11/6/12 — Date

Independent Technical Reviewer:
Jerry Bowden — Printed Name | Signature | 11/6/12 — Date

CCP RECORDS ORIGINAL
DATE REC'D 11-6-12

Attachment 4 – CCP Radiography Batch Data Report Table of Contents and Batch Narrative

Batch Data Report No.: INRTR120005_QTR0312 Date: 11/6/12

Table Of Contents

Item	Description	Page No.
1	CCP Radiography Batch Data Report Cover Sheet	1
2	CCP Radiography Batch Data Report Table Of Contents	2
3	CCP RTR Measurement Control Report	3
4	CCP Radiography Data Sheets	4-15
5	Copy of NCRs (NA, If Not Applicable)	16-18
6	CCP Independent Technical Reviewer Checklist	19-20

Batch Narrative

All Quality Checks were performed and recorded on CCP-TP-053, Rev. 11, CCP Radiography Measurement and Control Report.
The Measurement Control Report, Replicate Scan, and Independent Observation performed on this date were recorded in Batch Data Report No. INRTR5120005.

Michael Galbraith — RTR Operator

Signature

11/6/12 — Date

Attachment 1 – CCP RTR Measurement Control Report

Site ID: INL		
Batch Data Report No.: INRTR5120005		
Examination Date: 7/3/12		
Control Checks		
Video/Audio Recorded Media System Check	☑ SAT	☐ UNSAT
Image Test : 15 lines-pair/cm (Minimum acceptable is 5 lines-pair/cm or #6 Sieve is viewable)	☑ SAT	☐ UNSAT
Comments: N/A		
RTR Operator:		
Michael Galbraith		7/3/12
Printed Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☐ RTR Examination ☑ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5120005
Examination Date:	7/3/12
Waste Container ID:	10102536
Video/Audio Recorded Media Number:	INRTR5120005 A & B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	ID 116/216, SQ 154
Waste Matrix Code:	S5300
Waste Stream I.D.:	ID-RF-S5300-A
Waste Container Weights:	Gross Wt: 79.5 kg. Tare Wt: 28.7 kg. Net Wt: 50.8 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	No Liner
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	90 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10102536

Section 3: Container Inventory Data Comments / Material Description
Metal wire, saw blades, scrap metal, metal tube, open one gallon metal paint can Absorbent, light bulb, broken light bulb Tape rolls, Tyvek coveralls Plastic sheeting, plastic tube, coaxial cable

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	1.0
Others:	
Total Packaging Weight:	28.7
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	6.5
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	4.5
Cellulosics (C):	31.8
Rubber (R):	
Plastics (waste materials) (XPM):	8.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	50.8

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10102536

[illegible]	Yes	No
Is there observable liquid?	☐	☑
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
[illegible]		
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: This Replicate Scan agrees with the original scan.

RTR Operator:

Tyson Christensen	Tyson Christensen	7/3/12
Print Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☐ RTR Examination ☐ RTR Replicate Scan ☑ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5120005
Examination Date:	7/3/12
Waste Container ID:	10007973
Video/Audio Recorded Media Number:	INRTR5120005 A & B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☐ NO ☑ YES NCR No.: NCR-INL-0348-12 NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	ID 112/212, SQ 154
Waste Matrix Code:	S3114
Waste Stream I.D.:	ID-RF-S3114
Waste Container Weights:	Gross Wt: 253.5 kg. Tare Wt: 35.1 kg. Net Wt: 218.4 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	90mil Liner - Vented
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	85 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Page 2 of 3

Waste Container ID: 10007973

Section 3: Contained By and Comments (Detailed descriptions)
Scrap metal(NSW) Absorbent Plastic bag Sludge

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	7.4
Others:	
Total Packaging Weight:	35.1
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	8.0
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	0.5
Organic Matrix (OR):	209.9
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	218.4

Attachment 2 – CCP Radiography Data Sheet (Continued)

Page 3 of 3

Waste Container ID: 10007973

	Yes	No
Is there observable liquid?	☑	☐
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container GREATER than 1% of the container?	☑	☐
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☑	☐
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
CHECK FOR CONTAINERS		
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: This Independent Observation agrees with the original scan.
See NCR-INL-0348-12.

RTR Operator:

Tyson Christensen		7/3/12
Print Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5120005
Examination Date:	7/3/12
Waste Container ID:	10007973
Video/Audio Recorded Media Number:	INRTR5120005 A & B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☐NO ☑YES NCR No.: NCR-INL-0348-12 NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	ID 112/212, SQ 154
Waste Matrix Code:	S3114
Waste Stream I.D.:	ID-RF-S3114
Waste Container Weights:	Gross Wt: 253.5 kg. Tare Wt: 35.1 kg. Net Wt: 218.4 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	90mil Liner - Vented
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	85 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10007973

Section 3: Container Inventory and Comments (Detailed descriptions)
Scrap metal Absorbent Plastic bag Sludge

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	7.4
Others:	
Total Packaging Weight:	35.1
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	0.1
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	10.0
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	0.5
Organic Matrix (OR):	207.8
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	218.4

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10007973

Section 6: RTR Summary (answer each question "Yes" will be explained in the comments block except for question 1)	Yes	No
Is there observable liquid?	☑	☐
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☑	☐
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☑	☐
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
CH or RH TRAMPAC		
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: See NCR-INL-0348-12

RTR Operator:

Michael Galbraith		7/3/12
Print Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5120005
Examination Date:	7/3/12
Waste Container ID:	10102536
Video/Audio Recorded Media Number:	INRTR5120005 A & B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	ID 116/216, SQ 154
Waste Matrix Code:	S5300
Waste Stream I.D.:	ID-RF-S5300-A
Waste Container Weights:	Gross Wt: 79.5 kg. Tare Wt: 28.7 kg. Net Wt: 50.8 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	No Liner
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	90 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10102536

Section 3: Container Inventory and Comments – Detailed Description
Wire, scrap metal, tape measure, metal can, saw blades Tape rolls, cloth, cloth coveralls, Tyvek coveralls Absorbent, light bulb Coaxial cable, plastic tubing

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	1.0
Others:	
Total Packaging Weight:	28.7
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	10.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	4.0
Cellulosics (C):	34.8
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	50.8

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10102536

[redacted]	Yes	No
Is there observable liquid?	☐	☑
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container GREATER than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
[redacted]		
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: N/A

RTR Operator:

Michael Galbraith	[signature]	7/3/12
Print Name	Signature	Date

Attachment 1 – CCP Nonconformance Report (NCR)

NCR No. NCR-INL-0348-12		Revision 0
1. Lot No./Heat No. or Serial No. (as applicable): N/A	2. Process (e.g., NDA, HSG, NDE, VE, Other): NDE	3. Batch Data Report #(s): INRTR5120005 Container #(s): 10007973
4. Order/Work Order/Job Control Number (as applicable): N/A	5. PO # (as applicable): N/A	
	6. Supplier (as applicable): N/A	

DESCRIPTION OF NONCONFORMANCE

7. (a) NCR Description: ☐ < 100 nCi/g ☒ Prohibited Item ☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☐ Other

7. (b) Description of Nonconformance Required Condition (Implementing Procedure, Revision, Section, & Text):

CCP-TP-053, Rev. 11, Section 4.4.2 [H.1] IF any hazardous waste(s) NOT identified in the AK Summary Report(s) for the waste stream being characterized OR any nonconforming/prohibited items are noted during the RTR examination, THEN perform the following:
(a) Initiate an NCR in accordance with CCP-QP-005 AND record the NCR number in Section 1 of Attachment 2.

CCP-TP-053, Rev. 11, Table 1. Prohibited Items

CCP-AK-INL-005, Rev. 4, Section 5.4.4, Prohibited Items; Since this waste stream contains greater than 50 ppm PCB's, any residual liquids identified during RTR and/or VE are assumed to contain greater than 50 ppm PCB's.

7. (c) Actual Condition

1 teaspoon PCB liquid at 26" and 10 pints (>1%) PCB liquid 16" to the bottom.

8. NCR Originator (Print name, sign, and date)	9. CCP QA Engineer or Designee Validation (Print name, sign, and date)
Michael Galbraith 7/3/12	RACHEL YOUNG 7/3/12

9a. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE
If YES or INDETERMINATE, then apply Trend Code L in Block 12.

9b. Have the CCP HOLD TAGS associated with the NCR been applied? ☒ YES ☐ NO If no is marked, provide an explanation.

10. Significant Condition? (If Yes, List CAR)	11. Recurring Condition?
☐ YES ☒ NO	☐ YES ☒ NO (If YES, List NCRs/CARs)
12. Trend Code: K	13. Responsible Manager: Jeri Miles

COPY

JB 7-9-12

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No.NCR-INL-0348-12	Revision 0
INTERIM DISPOSITION	
14. Interim Disposition (Check One) ☒ N/A (See Final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort ☐Reinspect/Retest ☐ Remediate (a) Instructions for Completion of the Interim Disposition:	
INTERIM DISPOSITION APPROVALS	
15 .Responsible Manager/Individual (Print, sign, and date)	16. CCP QA Engineer or Designee (Print, sign and date)
Additional Approvals: (Print, sign and date)	*Additional Approvals: (Print, sign and date)*
COMPLETION OF INTERIM DISPOSITION	
17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date)	
18. Interim Disposition Verified CCP QA Engineer: (Print, sign and date)	

COPY

17
7-9-12

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No.NCR-INL-0348-12	Revision 0
FINAL DISPOSITION	
19. Final Disposition (Check One) ☐ Use-As-Is ☒ Reject ☐ Repair ☐ Rework ☐ Scrap	
(a) Technical Justification (Required for Use-As-Is and Repair dispositions, Enter N/A for Reject, Scrap, or Rework dispositions.) N/A	
(b) Instructions for Completion (Required for Reject, Repair, Rework and Scrap – Enter N/A for Use-As-Is). Return to the Host site for remediation.	
(c) Corrective Actions (Actions to Prevent Recurrence – Required for Repair and Rework; Enter N/A for Use-As-Is-, Reject, and Scrap). N/A	
FINAL DISPOSITION APPROVALS	
20. Responsible Manager/Individual: (Print, sign, and date) Jeri Miles 7/3/2012	21. CCP QA Engineer or Designee: (Print, sign, and date) RACHEL YOUNG 7/3/12
Additional Approvals: (Print, sign, and date)	Additional Approvals: (Print, sign, and date)
CLOSURE	
22. Final Disposition Complete Responsible Manager/Individual: (Print, sign, and date)	
23. Attachments:	
24. (a) HOLD TAG removal has been validated and reconciled for all nonconforming items on the NCR. ☐ (b) Check if not applicable (N/A) and provide an explanation here or on a continuation sheet. ☐	
25. Final Disposition Verified – NCR Closed	CCP QA Engineer: (Print, sign, and date)

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18
7-9-12

Attachment 3 – CCP Radiography Independent Technical Reviewer Checklist

Batch Data Report No.: INRTR5120005_QTR0312

Description				
1.	Data generation and reduction were conducted in a technically correct manner in accordance with the methods used?	☐ NO	☑ YES	
2.	Was the correct revision of the procedure used? Procedure: CCP-TP-053 Rev.: 11	☐ NO	☑ YES	
3.	Are the WMPs entered correctly?	☐ NO	☑ YES	
4.	Do the estimated weights in Section 4 of Attachment 2 equal the container gross weight?	☐ NO	☑ YES	
5.	Is the data reported in the proper units with the correct number of significant figures (e.g., one tenth of a kilogram)?	☐ NO	☑ YES	
6.	Has the data been verified for transcription errors?	☐ NO	☐ YES	☑ N/A
7.	Does the Testing Batch Report include radiography for up to 20 containers?	☐ NO	☑ YES	
8.	BDR contents are complete and match the CCP Waste RTR Batch Data Report Table of Contents?	☐ NO	☑ YES	
9.	Is all the data signed and dated in reproducible ink and by the individual(s) generating it?	☐ NO	☑ YES	
10.	Is all data recorded clearly, legibly, and accurately?	☐ NO	☑ YES	
11.	All changes to original data lined out, initialed and dated by the individual making the changes?	☐ NO	☐ YES	☑ N/A
12.	Was justification made for changing the original data?	☐ NO	☐ YES	☑ N/A
13.	Were data changes made by the individual who originally collected the data?	☐ NO	☐ YES	☑ N/A
14.	Does the waste match the Waste Matrix Code and Waste Stream description?	☐ NO	☑ YES	
15.	Are the RTR Operator's decisions regarding the Radiography documented?	☐ NO	☑ YES	
16.	Is there an adequate written description of the contents of each item?	☐ NO	☑ YES	
17.	Was the video/audio recording media properly prepared and labeled for each waste container?	☐ NO	☑ YES	
18.	Was the video/audio recording media check performed satisfactorily and recorded on Attachment 1?	☐ NO	☑ YES	

Attachment 3 – CCP Radiography Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: INRTR5120005_QTR0312

Description				
19.	Was the Image Test performed satisfactorily and recorded on Attachment 1?	☐ NO	☑ YES	
20.	Was the Replicate Scan performed and recorded on an Attachment 2? (1 per batch or 1 per day, whichever is less frequent).	☐ NO	☑ YES	
21.	Was the Replicate Scan RTR Operator different from the first RTR Operator?	☐ NO	☑ YES	
22.	Did the Replicate Scan RTR Operator and the first RTR Operator agree on the results?	☐ NO	☑ YES	
23.	Was the Independent Observation performed and recorded on an Attachment 2? (1 per batch or 1 per day, whichever is less frequent).	☐ NO	☑ YES	
24.	Was the Independent Observation RTR Operator different from the first RTR Operator?	☐ NO	☑ YES	
25.	Did the Independent Observation RTR Operator and the first RTR Operator agree on the results?	☐ NO	☑ YES	
26.	Was the data collection performed by qualified individuals?	☐ NO	☑ YES	
27.	Are the NCR(s) associated with the RTR examination included in the BDR?	☐ NO	☑ YES	☐ N/A
28.	QAOs (precision, accuracy, completeness, representativeness) have been met?	☐ NO	☑ YES	

Comments: Quarterly ITR was performed with CCP-TP-053, Rev. 12, this BDR was originally completed with CCP-TP-053, Rev. 11.

I have reviewed 100% of the container specific and batch data in this report and find it acceptable.

Independent Technical Reviewer:

Jerry Bowden — Printed Name

Jerry Bowden — Signature

11/6/12 — Date

DIVIDER PAGE ONLY

Not part of page count

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	RECORDS CUSTODIAN	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	12/12/2012
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
INRTR5120005_QTR0312	BATCH DATA REPORT NDE RTR (QTR)	11/06/2012	20
	N/A		

Comments

SPM CHECKLIST LOCATED IN CARLSBAD

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [X]	Paulette Henry	**Paulette Henry**	12-17-12
	Signature	Printed Name	Date
Records Rejected [ ]			
	Signature	Printed Name	Date

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	2539
DESTINATION TEL #	912085577396
DESTINATION ID	INL
ST. TIME	12/17 14:19
TIME USE	00'16
PAGES SENT	1
RESULT	OK

Controlled Copy

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Fax Record [ ] Electronic Record [ ] Copy

Attn:	RECORDS CUSTODIAN	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	12/12/2012
Telephone Number:	575-234-7523		

INRTR5120005_QTR0312	BATCH DATA REPORT NDE RTR (QTR)	11/06/2012	20
	N/A		

Comments

SPM CHECKLIST LOCATED IN CARLSBAD

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [X] Paulette Henry (Signature) **Paulette Henry** (Printed Name) 12-17-12 (Date)

DIVIDER

PAGE

Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA

CP:13:01219
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: May 29, 2013

FROM: S. Castro S. Castro — LOCATION: Central Characterization Program Certification

TO: W. F. Verlanic ED — LOCATION: Central Characterization Program Operations - Idaho National Laboratory

SUBJECT: RESULTS OF VISUAL EXAMINATION QUARTERLY REPEAT DATA GENERATION LEVEL DATA REVIEW: IDAHO NATIONAL LABORATORY FIRST CALENDAR QUARTER OF 2013

Procedure CCP-TP-001, *CCP Project Level Data Validation and Verification*, requires that a repeat of Data Generation Level (DGL) review, validation and verification be performed on the data for a minimum of one randomly chosen waste container each quarter. The Site Project Manager uses this information to document that the DGL data review is being performed according to procedures.

Inter-Office Correspondence Number CP:13:01137 was issued April 10, 2013. This memorandum identified waste container SRP12221 as the randomly-selected container for DGL repeat of visual examination at the Idaho National Laboratory for the first calendar quarter of 2013.

The mini-Batch Data Report containing SRP12221 was reviewed for the quarterly repeat on April 23, 2013. The results of these reviews indicate that the data quality remains acceptable and no discrepancies were identified. The Project Level Verification and Validation Checklist (Attachment 1 - Rev. 20 of Procedure CCP-TP-001) has been completed and authenticated.

If you have any questions regarding this review, please contact me at Extension 7529.

SC:jmc

CC:
R. P. Kantrowitz	ED
M. W. Pearcy	ED
J. Poole	ED
J. A. Vernon	ED
NTPC Records Custodian	GSA-212

COPY

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary

BDR Number: IN-SRP-VE-000018 QTR0113 **Examination Date:** 01/8/13

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
1. Is the completed, signed and dated Independent Technical Reviewer Checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, C3-10b**	X			
2. Does the BDR contain all items addressed in the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-10b**	X			
3. Does the BDR include a listing of all container numbers in the batch? **Reference Source: CCP-PO-001, C3-10b**	X			
4. List all containers that have met QAOs. **Reference Source: CCP-PO-001, C3-10b**				Container Numbers:SRP12221
5. Is the current implementing procedure and revision number included in the BDR? **Reference Source: CCP-PO-001, C3-4, C3-10b, Table C3-11**	X			
6. Is the BDR date included? **Reference Source: CCP-PO-001, Table C3-11**	X			
7. Is there a reference to or copy of any associated NCRs (if any) in the BDR? **Reference Source: CCP-PO-001, Table C3-11**			X	No NCRs
8. Are there 20 or fewer containers in the batch? **Reference Source: CCP-PO-001 C3-10**	X			
9. Are the data properly reported (i.e., data are reported in correct units and with correct significant figures). **Reference Source: CCP-PO-001 C3-10b**	X			
10. Is there evidence of verification that the physical form matches the Waste Matrix Code? **Reference Source: CCP-PO-001, C3-4**	X			
11. Is there evidence of verification that the physical form matches the waste stream description? **Reference Source: CCP-PO-001, C1-4**	X			
12. Are prohibited items absent? **Reference Source: CCP-PO-001, C3-4**	X			

NTPC RECORDS ORIGINAL
DATE REC'D 5-28-13 RG

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-SRP-VE-000018 QTR0113 **Examination Date:** 01/8/13

Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
13. Does observable liquid, if present, meet the criteria of the TSDF-WAC? **Reference Source: CCP-PO-001, C3-4b**	X			
14. Were discrepancies between the Visual Examination operator and the ITR with regards to identification of waste matrix code, liquids in excess of the TSDF-WAC, or compressed gases reconciled? NA if no discrepancies. **Reference Source: CCP-PO-001, C3-4b**			X	No Discrepancies
15. Are the training requirements met for the VE Expert and VE Operators who have signed the data forms? **Reference Source: CCP-PO-001, C1-4, C3-4**	X			
16. Is evidence of a satisfactory audio/video test included in the BDR? NA [not applicable] for VE Method for Newly Generated Waste. **Reference Source: CCP-PO-001, C1-4**			X	Newly Generated Waste
17. If the VE was not recorded using audio/video media, does the data sheet contain the signature of two qualified operators who observed for themselves the waste being placed into the container? NA if audio/video used. **Reference Source: CCP-PO-001, C1-4**	X			
18. Are the weights/estimated weights for the 12 waste material parameters reported in kilograms (kg)? **Reference Source: CCP Technical Procedures**	X			
19. Are the descriptions for each waste material parameter included in the BDR? **Reference Source: CCP-PO-001, C1-4**	X			
20. Is the gross weight reported (in kg) for each container included in the BDR? **Reference Source: CCP Technical Procedures**	X			
21. Is the number of layers of confinement recorded? **Reference Source: CCP-PO-001, C-3d**	X			
22. Is sufficient information included in the BDR to determine the packaging configuration? **Reference Source: CCP-PO-001 C-3d**	X			

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-SRP-VE-000018 QTR0113 **Examination Date: 01/8/13**

Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
23. Is the type and number of filters recorded? **Reference Source: CCP-PO-001, C-3d**	X			
24. Is the size of the rigid liner vent hole recorded to determine the appropriate DAC? NA if no liner lid. **Reference Source: CCP-PO-001, C-3d**			X	No liner lid
25. For Los Alamos National Laboratory (LANL) Sealed Sources, does the characterized waste container meet the definition of sealed sources per Title 10 Code of Federal Regulations (CFR) 30.4 and Title 10 CFR 835.2 (effective January 1, 2004) evidence of which is assembled as part of AK documentation? **Reference Source: CCP Technical Procedures**			X	Not a sealed source
26. For LANL Sealed Sources, are sealed sources the only non-packaging items in the waste container? **Reference Source: CCP Technical Procedures**			X	Not a sealed source
27. For LANL Sealed Sources, are the sealed sources a U.S. Department of Transportation (DOT) Special Form Class 7 (Radioactive Material) per Title 49 CFR 34.27 (effective January 1, 2004) and the certification of which is assembled as part of the AK documentation? **Reference Source: CCP Technical Procedures**			X	Not a sealed source
28. For LANL Sealed Sources, is the integrity of each sealed source validated by documented contamination survey results to meet the requirements of Title 10 CFR 34.27 (effective January 1, 2004), and assembled as part of AK documentation? **Reference Source: CCP Technical Procedures**			X	Not a sealed source

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-SRP-VE-000041 QTR0113 **Examination Date:** 01/8/13

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
29. For LANL Sealed Sources, is each sealed source a rigid sealed container less than or equal to 4 L in size or in a rigid sealed container less than or equal to 4 L? **Reference Source: CCP Technical Procedures**			X	Not a sealed source
30. For LANL Sealed Sources, AK documentation does not indicate the use of volatile organic compounds (VOCs) or VOC-bearing materials as constituents of sealed sources? **Reference Source: CCP Technical Procedures**			X	Not a sealed source
31. For LANL Sealed Sources, the outer casing of each sealed source is of a non VOC-bearing material which is verified using the VE technique at the time of packaging? **Reference Source: CCP Technical Procedures**			X	Not a sealed source

Comments: None

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

Steve Castro	Steve Castro	5-28-13
SPM Printed Name	Signature	Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

Attachment 4 – CCP Waste VE Technique Batch Data Report Cover Sheet

Batch Data Report No.: IN-SRP-VE-000018_QTR0113

	Waste Container ID Number
1	SRP12221
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	N LG 4-23-13
12	A
13	
14	
15	
16	
17	
18	
19	
20	

ITR:

David Jackman		5-1-13
Printed Name	Signature	Date

VEE:

Jeffrey Poole	J.S. Poole	5-2-13
Printed Name	Signature	Date

NTPC RECORDS ORIGINAL
DATE REC'D 5-2-13

001

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Attachment 3 – CCP Waste VE Technique Batch Data Report Table of Contents

Batch Data Report No.: IN-SRP-VE-000018-QTR0113 **Batch Data Report Date:** 4-23-13

Table Of Contents		
Item	Description	Page No.
1	Attachment 4, CCP Waste VE Technique Batch Data Report Cover Sheet	1
2	Attachment 3, CCP Waste VE Technique Batch Data Report Table of Contents	2
3	CCP Waste Visual Examination Technique Data Form	3
4	Attachment 2, CCP Waste VE Technique Independent Technical Reviewer Checklist	10
5	Copy of NCRs (NA, If Not Applicable)	N/A

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP12221
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	803
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000018 QTR0113
4. Examination Start Date:	01/08/13 LG 4-23-13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	501
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	XC0977
c. Scale Calibration Due Date:	07/02/13
d. Test Weight ID:	XC0490
e. Test Weight Calibration Due Date:	04/03/13
f. Test Weight (kgs):	5.0
g. Scale Readout of Test Weight (kgs):	5.0
h. Difference Between Test Weight and Scale Readout (kgs):	0.0
i. DPS Scale Check SAT (Y):	Y
Container Scale Check	
j. Scale Serial/ID Number:	725494
k. Scale Calibration Due Date:	11/21/13
l. Test Weight ID:	722311
m. Test Weight Calibration Due Date:	10/16/13
n. Test Weight (kg):	226.8
o. Scale Readout of Test Weight (kgs):	226.6
p. Difference Between Test Weight and Scale Readout (kgs):	0.2
q. Container Scale Check SAT (Y):	Y
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	231208
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12221							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				N/A	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12221							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	i. Other Inorganic materials (OI)				0.0	N/A		0.0
30		j. Graphite			0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p. Inorganic sorbents			0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note s)			0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r. Cellulosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12221							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.4	N/A		0.4
67				RUBBER BANDS (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68				RUBBER	0.1	0.9 - 2.0	1.1	0.1
69	w. Plastics (waste materials) (PW)				3.6	N/A		4.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				TRAY LINER, BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
72				PLASTIC TIGHTLY BOUND ON TOP	2.2	0.9		2.4
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				108.0	N/A		90.0
75		x1. Sludge			108.0	N/A		90.0
76				VERY PALE ORANGE POWDERY SLUDGE WITH CALCIUM SILICATE	108.0	1.0 - 1.5	1.2	90.0
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roester Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95				N/A	N/A	0.0		0.0
96				N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98				N/A	N/A	1.0 - 1.4	0.0	0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				112.0	N/A		94.4
101	13. (ORGANIC SLUDGE) weight (108.0) kg was obtained by subtracting the weighed waste weight of (4.0) kg and the container net weight of (34.0) kg from the gross weight (146.0) kg of the waste container. (146.0) - (4.0) - (34.0) = (108.0) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

006

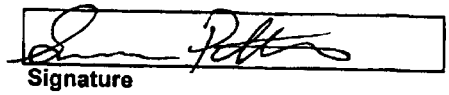
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12221	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12221	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	32.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	231208
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	725482
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	02/12/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1445
22. Measured gross weight of loaded container, fully assembled (kgs):	146.0
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	321.9
23. Container closure date (mm/dd/yy):	01/08/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	722443
b. Filter Torque Wrench Calibration Due Date:	02/14/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	FL-1371
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	100.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	112.0
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

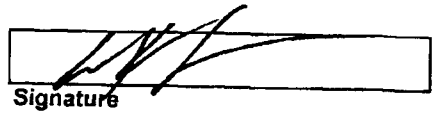
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12221	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	4.4
31. Total volume of Solidified Organics (L):	90.0
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	94.4
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	96.4%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

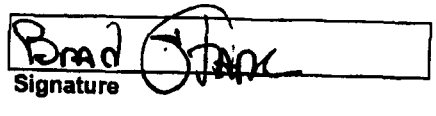
Visual Examination Operator 1:

S. PATTEE		1-8-13
Enter Name	Signature	Date

Visual Examination Operator 2:

L. GROVER		1-8-13
Enter Name	Signature	Date

Visual Examination Expert:

B. STARK		1-8-13
Enter Name	Signature	Date

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist

Batch Data Report No.: IN-SRP-VE-00018-QTR0113

Description			
1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods used?	☐ NO	☒ YES	☐ NA
a. Was the description of the waste items adequate?	☐ NO	☒ YES	☐ NA
2. Was the correct revision of operating procedure used? (Attachment 1, Section 1, Line 5)	☐ NO	☒ YES	☐ NA
3. Were the following calculation spot checks performed?			
a. Attachment 1, Section 2: Verify the total waste volume in Column 12, Row aa does not exceed 208 L for a 55-gallon drum or 1456 L for an SWB and verify the estimated weights in Column 10, Row aa matches the measured net weight of waste in Attachment 1, Section 4, Row 27.	☐ NO	☒ YES	☐ NA
b. Attachment 1, Section 5: Verify the total waste volume in Row 33 a., matches the total waste volume in Section 2, Column 12, Row aa.	☐ NO	☒ YES	☐ NA
c. Attachment 1, Section 1: Check hand calculations in Lines 6h and 6p, and any additional hand calculations recorded in the comments field or in Section 2, Line 13.	☐ NO	☒ YES	☐ NA
4. Is only one waste stream selected in Line 34 of Attachment 1, Section 5, and is it consistent with the values shown in Attachment 1, Section 2, Column 12?	☐ NO	☒ YES	☐ NA
5. Is the data entered in the correct units and correct number of significant figures?	☐ NO	☒ YES	☐ NA
6. Were the data reviewed for transcription errors?	☐ NO	☒ YES	☐ NA
7. Does the BDR include VE for up to 20 containers?	☐ NO	☒ YES	☐ NA
8. Are BDR contents complete and do they match, Attachment 3, CCP Waste VE Batch Data Report Table of Contents?	☐ NO	☒ YES	☐ NA
9. Was completeness verified for data entry on the CCP VE Technique Data Form for the following?			
a. Section 1	☐ NO	☒ YES	☐ NA
b. Section 2	☐ NO	☒ YES	☐ NA
c. Section 3	☐ NO	☒ YES	☐ NA
d. Section 4	☐ NO	☒ YES	☐ NA
e. Section 5	☐ NO	☒ YES	☐ NA

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: IN-SRP-VE-000018_QTR0113

Description			
10. Is all the data signed and dated in Attachment 1, Section 6, using reproducible ink, and by the individual(s) generating it?	☐ NO	☒ YES	☐ NA
11. Is all data entered clearly, legibly, and accurately?	☐ NO	☒ YES	☐ NA
12. Were discrepancies between the operators reconciled?	☐ NO	☐ YES	☒ NA
13. Are all changes to original data lined out, initialed and dated by the individual making the changes?	☐ NO	☒ YES	☐ NA
14. Were data changes made by the individual who originally collected the data or an equally qualified individual?	☐ NO	☒ YES	☐ NA
15. Was the DPS scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
16. Was the daily DPS scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
17. Was the container scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
18. Was the daily container scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
19. Was the torque wrench(es) in calibration prior to VE Technique and documented correctly?	☐ NO	☒ YES	☐ NA
20. Were NCR(s) initiated as indicated in Attachment 1, Section 1, dispositioned, and approved appropriately?	☐ NO	☐ YES	☒ NA
21. Was the correct waste stream and waste matrix code assigned?	☐ NO	☒ YES	☐ NA
22. Is there a valid VE data form for each drum in the batch?	☐ NO	☒ YES	☐ NA
23. Were the operators trained and qualified in accordance with the applicable requirements?	☐ NO	☒ YES	☐ NA

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Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: IN-SRP-VE-000018_QTR0113

Description			
24. Was precision maintained by reconciling any discrepancies between the operator(s) and the ITR with regard to identification of waste matrix code, liquids in excess of WIPP Hazardous Waste Facility Permit and WIPP Waste Acceptance Criteria limits and compressed gases?	☐ NO	☐ YES	☒ NA

Description
Comments: N/A

I have reviewed 100 percent of the container-specific and batch data in this BDR and find it acceptable.

ITR:

David Jackman — Printed Name

Signature

5-1-13 — Date

DIVIDER PAGE ONLY

Not part of page count

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523, 575-234-7431, or 575-234-7095

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	RECORDS CUSTODIAN	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	05/28/2013
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
IN-SRP-VE-00018_QTR0113	BATCH DATA REPORT VE (SRP) QTR	04/23/2013	12
	N/A		

Comments

SPM CHECKLIST LOCATED IN CARLSBAD

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted	[✓]	Ruthie Goff	Ruthie Goff	6.4.13
		Signature	Printed Name	Date
Records Rejected	[ ]			
		Signature	Printed Name	Date

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	2069
DESTINATION TEL #	912085577396
DESTINATION ID	INL
ST. TIME	06/04 15:35
TIME USE	00'16
PAGES SENT	1
RESULT	OK

Controlled Copy

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523, 575-234-7431, or 575-234-7095

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	RECORDS CUSTODIAN	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
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IN-SRP-VE-00018_QTR0113	BATCH DATA REPORT VE (SRP) QTR	04/23/2013	12
	N/A		

Comments

SPM CHECKLIST LOCATED IN CARLSBAD

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [signature] Ruthie Goff 1.4.13

DIVIDER

PAGE

NWP
Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA

CP:13:01028
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: January 14, 2013

FROM: J. A. Vernon

LOCATION: CCP Certification

TO: W. F. Verlanic ED

LOCATION: National TRU Program Certification
Idaho National Laboratory

SUBJECT: FOURTH QUARTER 2012 (OCTOBER 1, 2012 THROUGH DECEMBER 31, 2012) VISUAL EXAMINATION QUARTERLY REPEAT OF DATA GENERATION LEVEL REVIEW AT THE IDAHO NATIONAL LABORATORY

Visual Examination at the Idaho National Laboratory has completed 91 days of reporting from October 1, 2012 through December 31, 2012. Container number SRP12010 in Batch Data Report, BDR IN-SRP-VE-000001, was randomly selected from among all the drums processed through Data Generation Level, DGL review, validation and verification during this time frame. This container will be processed through the quarterly repeat of DGL Review as described in CCP-TP-001, *CCP Project Level Data Validation and Verification*. The original letter will be retained in the letter correspondence file.

Please assign available qualified personnel to serve as Independent Technical Reviewers in performing the review as well as preparing a Table of Contents. Not all containers included in the original BDR will be included for this review. Only the selected drum noted above must be reviewed along with any Quality Control information.

Please perform the visual examination quarterly repeat of DGL review, validation, and verification and return the information by February 1st, 2013 to the Central Characterization Project Records Department, naming the BDR as "IN-SRP-VE-000001_QTR0412".

JAV:jmc

Attachment

cc: (without attachment)

S. Castro	ED
R. P. Kantrowitz	ED
J. L. Miles	ED
M. W. Pearcy	ED

(with attachment)

J. S. Poole	ED
NTP Records Custodian	GSA-212

COPY

CCP RECORDS ORIGINAL
DATE REC'D 2-11-13

Attachment 4 – CCP Waste VE Technique Batch Data Report Cover Sheet

Batch Data Report No.: IN-SRP-VE-000001

1	SRP12000
2	SRP12010
3	SRP12001
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	N A
14	Lv. 11-30-12
15	
16	
17	
18	
19	
20	

ITR: Brad Stark 11-29-12

BRAD STARK — Printed Name; Signature; 11-26-12 — Date

VEE:

Spencer Pattee — Printed Name; Signature; 11/26/12 — Date

11-29-12

CCP RECORDS ORIGINAL
DATE REC'D 11-26-12

001

Attachment 3 – CCP Waste VE Technique Batch Data Report Table of Contents

Batch Data Report No.: ~~IN-SSC-VE-000001~~ **Batch Data Report Date:** ~~11-20-12~~

Item	Description	Page No.
1	Attachment 4, CCP Waste VE Technique Batch Data Report Cover Sheet	1
2	Attachment 3, CCP Waste VE Technique Batch Data Report Table of Contents	2
3	CCP Waste Visual Examination Technique Data Form	3
4	Attachment 2, CCP Waste VE Technique Independent Technical Reviewer Checklist	34
5	Copy of NCRs (NA, If Not Applicable) 459 11-28-12	~~N/A~~ 27

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP12010
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	JSP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000001
4. Examination Start Date:	11/20/12
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	501
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	XC0977
c. Scale Calibration Due Date:	07/02/13
d. Test Weight ID:	XC0833
e. Test Weight Calibration Due Date:	12/20/12
f. Test Weight (kgs):	5.0
g. Scale Readout of Test Weight (kgs):	5.0
h. Difference Between Test Weight and Scale Readout (kgs):	0.0
i. DPS Scale Check SAT (Y):	Y
Container Scale Check	
j. Scale Serial/ID Number:	725494
k. Scale Calibration Due Date:	05/23/13
l. Test Weight ID:	722311
m. Test Weight Calibration Due Date:	10/16/13
n. Test Weight (kg):	226.8
o. Scale Readout of Test Weight (kgs):	226.8
p. Difference Between Test Weight and Scale Readout (kgs):	0.0
q. Container Scale Check SAT (Y):	Y
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	232657
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12010							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
6	a. Iron-based metals/alloys (IM)				0.4	N/A		0.1
7				METAL	0.4	8.0		0.1
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13	d. Lead				0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16	e. Beryllium				0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19	f. Depleted uranium				0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22	g. Copper				0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25	h. Other (See Note a)				0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12010							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4				9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	l.			Other inorganic materials (Oil)				
30		j.		Graphite	9.0	N/A		15.0
31				N/A	0.0	N/A		0.0
32				N/A	N/A	2.2		0.0
33		k.		Concrete	N/A	2.2		0.0
34				N/A	0.0	N/A		0.0
35				N/A	N/A	2.3		0.0
36		l.		Glass	N/A	2.3		0.0
37				N/A	0.0	N/A		0.0
38				N/A	N/A	2.6		0.0
39		m.		Firebrick	N/A	2.0		0.0
40				N/A	0.0	N/A		0.0
41				N/A	N/A	3.0		0.0
42		n.		Ceramics	N/A	3.0		0.0
43				N/A	0.0	N/A		0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.		Sand	N/A	2.0 - 5.0	0.0	0.0
46				N/A	0.0	N/A		0.0
47				N/A	N/A	2.0		0.0
48		p.		Inorganic sorbents	N/A	2.0		0.0
49				OIL DRI ON TOP (WAIP)	9.0	N/A		15.0
50				N/A	9.0	0.1 - 2.0	0.6	15.0
51		q.		Other (See Note a)	N/A	0.1 - 2.0	0.0	0.0
52				N/A	0.0	N/A		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.			Cellulosics (C)	N/A	0.0		0.0
56		s.		Paper	0.2	N/A		0.2
57				PAPER (NSW)	0.2	N/A		0.2
58				CLOTH GLOVE	N/A	0.9		0.0
59				N/A	0.2	0.9		0.2
60		t.		Cardboard	N/A	0.9		0.0
61				N/A	0.0	N/A		0.0
62				N/A	N/A	0.8		0.0
63		u.		Wood	N/A	0.9		0.0
64				N/A	0.0	N/A		0.0
65				N/A	N/A	1.0		0.0
					N/A	1.0		0.0

012

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12010							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4				9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.3	N/A		0.3
67				RUBBER BANDS (WAIP) TIGHTLY BOUND ON TOP OF OIL DRI	0.3	0.9 - 2.0	1.1	0.3
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				2.6	N/A		2.9
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				ONE TRAY LINER, TWO BAG OUT STUBS (WAIP) TIGHTLY BOUND ON TOP OF OIL DRI	1.6	0.9		1.8
72				PLASTIC	1.0	0.9		1.1
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				105.9	N/A		88.3
75		x1. Sludge			105.9	N/A		88.3
76				PALE YELLOWISH BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE	105.9	1.0 - 1.5	1.2	88.3
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Rossler Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95				N/A	N/A	0.0		0.0
96				N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98				N/A	N/A	1.0 - 1.4	0.0	0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				118.4	N/A		106.8
101	13. (ORGANIC SLUDGE) weight (105.9) kg was obtained by subtracting the weighed waste weight of (12.5) kg and the container net weight of (34.0) kg from the gross weight (152.4) kg of the waste container. (152.4) - (12.5) - (34.0) = (105.9) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

013

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12010	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12010	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	32.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	232657
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	725482
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	02/12/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1425
22. Measured gross weight of loaded container, fully assembled (kgs):	152.4
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	336.0
23. Container closure date (mm/dd/yy):	11/20/12
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	722443
b. Filter Torque Wrench Calibration Due Date:	02/14/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	IL-430
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	NA
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	100.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	118.4
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist

Batch Data Report No.: IN-SRP-VE-000001

1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods used?	☐ NO	☑ YES	☐ NA
a. Was the description of the waste items adequate?	☐ NO	☑ YES	☐ NA
2. Was the correct revision of operating procedure used? (Attachment 1, Section 1, Line 5)	☐ NO	☑ YES	☐ NA
3. Were the following calculation spot checks performed?			
a. Attachment 1, Section 2: Verify the total waste volume in Column 12, Row aa does not exceed 208 L for a 55-gallon drum or 1456 L for an SWB and verify the estimated weights in Column 10, Row aa matches the measured net weight of waste in Attachment 1, Section 4, Row 27.	☐ NO	☑ YES	☐ NA
b. Attachment 1, Section 5: Verify the total waste volume in Row 33 a., matches the total waste volume in Section 2, Column 12, Row aa.	☐ NO	☑ YES	☐ NA
c. Attachment 1, Section 1: Check hand calculations in Lines 6h and 6p, and any additional hand calculations recorded in the comments field or in Section 2, Line 13.	☐ NO	☑ YES	☐ NA
4. Is only one waste stream selected in Line 34 of Attachment 1, Section 5, and is it consistent with the values shown in Attachment 1, Section 2, Column 12?	☐ NO	☑ YES	☐ NA
5. Is the data entered in the correct units and correct number of significant figures?	☐ NO	☑ YES	☐ NA
6. Were the data reviewed for transcription errors?	☐ NO	☑ YES	☐ NA
7. Does the BDR include VE for up to 20 containers?	☐ NO	☑ YES	☐ NA
8. Are BDR contents complete and do they match, Attachment 3, CCP Waste VE Batch Data Report Table of Contents?	☐ NO	☑ YES	☐ NA
9. Was completeness verified for data entry on the CCP VE Technique Data Form for the following?			
a. Section 1	☐ NO	☑ YES	☐ NA
b. Section 2	☐ NO	☑ YES	☐ NA
c. Section 3	☐ NO	☑ YES	☐ NA
d. Section 4	☐ NO	☑ YES	☐ NA
e. Section 5	☐ NO	☑ YES	☐ NA

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: TN-SRP-VE-00001

10. Is all the data signed and dated in Attachment 1, Section 6, using reproducible ink, and by the individual(s) generating it?	☐ NO	☑ YES	☐ NA
11. Is all data entered clearly, legibly, and accurately?	☐ NO	☑ YES	☐ NA
12. Were discrepancies between the operators reconciled?	☐ NO	☐ YES	☑ NA
13. Are all changes to original data lined out, initialed and dated by the individual making the changes?	☐ NO	☐ YES	☑ NA
14. Were data changes made by the individual who originally collected the data or an equally qualified individual?	☐ NO	☐ YES	☑ NA
15. Was the DPS scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☑ YES	☐ NA
16. Was the daily DPS scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☑ YES	☐ NA
17. Was the container scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☑ YES	☐ NA
18. Was the daily container scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☑ YES	☐ NA
19. Was the torque wrench(es) in calibration prior to VE Technique and documented correctly?	☐ NO	☑ YES	☐ NA
20. Were NCR(s) initiated as indicated in Attachment 1, Section 1, dispositioned, and approved appropriately?	☐ NO	☐ YES	☑ NA
21. Was the correct waste stream and waste matrix code assigned?	☐ NO	☑ YES	☐ NA
22. Is there a valid VE data form for each drum in the batch?	☐ NO	☑ YES	☐ NA
23. Were the operators trained and qualified in accordance with the applicable requirements?	☐ NO	☑ YES	☐ NA

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: IN-SRP-VE-00000\

24. Was precision maintained by reconciling any discrepancies between the operator(s) and the ITR with regard to identification of waste matrix code, liquids in excess of WIPP Hazardous Waste Facility Permit and WIPP Waste Acceptance Criteria limits and compressed gases?	☐ NO	☐ YES	☑ NA

Comments:

12, # 24 MARKED N/A BECAUSE THERE WERE NO DESCREPANCIES. BRS 11/26/12

~~# 13, # 14 MARKED N/A BECAUSE THERE WERE NO CHANGES MADE BRS 11/26/12~~ BRS 11-29-12

~~# 20 MARKED N/A BECAUSE THERE WAS NOT AN NCR. BRS 11/26/12~~ BRS 11-29-12 BRS 11-29-12

BRS 11-29-12

RE ITRd due to the NCR. NCR INL-1759-12 BRS 11-29-12

I have reviewed 100 percent of the container-specific and batch data in this BDR and find it acceptable.

ITR:

BRAD STARK — Printed Name

Brad Stark — Signature

11-29-12

Brad Stark

11-26-12 — Date

DIVIDER

PAGE

NWP
Nuclear Waste Partnership LLC
A URS-led partnership with B&W and AREVA

CP:13:01134
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: April 10, 2013

FROM: J. A. Vernon LOCATION: CCP Certification

TO: W. F. Verlanic ED LOCATION: CCP Operations
Idaho National Laboratory

SUBJECT: RESULTS OF VISUAL EXAMINATION QUARTERLY REPEAT DATA GENERATION LEVEL DATA REVIEW: IDAHO NATIONAL LABORATORY FOURTH CALENDAR QUARTER OF 2012

Procedure CCP-TP-001, *CCP Project Level Data Validation and Verification,* requires that a repeat of Data Generation Level (DGL) review, validation and verification be performed on the data for a minimum of one randomly chosen waste container each quarter. The Site Project Manager uses this information to document that the DGL data review is being performed according to procedures.

Inter-Office Correspondence Number CP:13:01028 was issued January 14, 2013. This memorandum identified waste container SRP12010 as the randomly-selected container for DGL repeat of visual examination at the Idaho National Laboratory for the fourth calendar quarter of 2012.

The mini-Batch Data Report containing SRP12010 was reviewed for the quarterly repeat on February 28, 2013. The results of these reviews indicate that the data quality remains acceptable and no discrepancies were identified. The Project Level Verification and Validation Checklist (Attachment 1 - Rev. 20 of Procedure CCP-TP-001) has been completed and authenticated.

If you have any questions regarding this review, please contact me at Extension 7141.

JAV:jmc

cc: NWP

S. Castro	ED
R. P. Kantrowitz	ED
J. Miles	ED
M. Pearcy	ED
J. Poole	ED
NTP Records Custodian	GSA-212

NTPC RECORDS ORIGINAL
DATE REC'D 5-2-13

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary

BDR Number: IN-SRP-VE-000001_QTR0412				Examination Date: 2-21-13
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
1. Is the completed, signed and dated Independent Technical Reviewer Checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, C3-10b**	X			
2. Does the BDR contain all items addressed in the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-10b**	X			
3. Does the BDR include a listing of all container numbers in the batch? **Reference Source: CCP-PO-001, C3-10b**	X			
4. List all containers that have met QAOs. **Reference Source: CCP-PO-001, C3-10b**				Container Numbers: SRP12010
5. Is the current implementing procedure and revision number included in the BDR? **Reference Source: CCP-PO-001, C3-4, C3-10b, Table C3-11**	X			
6. Is the BDR date included? **Reference Source: CCP-PO-001, Table C3-11**	X			
7. Is there a reference to or copy of any associated NCRs (if any) in the BDR? **Reference Source: CCP-PO-001, Table C3-11**			X	No NCR's
8. Are there 20 or fewer containers in the batch? **Reference Source: CCP-PO-001 C3-10**	X			
9. Are the data properly reported (i.e., data are reported in correct units and with correct significant figures). **Reference Source: CCP-PO-001 C3-10b**	X			
10. Is there evidence of verification that the physical form matches the Waste Matrix Code? **Reference Source: CCP-PO-001, C3-4**	X			
11. Is there evidence of verification that the physical form matches the waste stream description? **Reference Source: CCP-PO-001, C1-4**	X			
12. Are prohibited items absent? **Reference Source: CCP-PO-001, C3-4**	X			

NTPC RECORDS ORIGINAL
DATE REC'D 2-28-13

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-SRP-VE-000001_QTR0412				Examination Date: 2-21-13
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
13. Does observable liquid, if present, meet the criteria of the TSDF-WAC? **Reference Source: CCP-PO-001, C3-4b**	X			
14. Were discrepancies between the Visual Examination operator and the ITR with regards to identification of waste matrix code, liquids in excess of the TSDF-WAC, or compressed gases reconciled? NA if no discrepancies. **Reference Source: CCP-PO-001, C3-4b**			X	No Discrepancies
15. Are the training requirements met for the VE Expert and VE Operators who have signed the data forms? **Reference Source: CCP-PO-001, C1-4, C3-4**	X			
16. Is evidence of a satisfactory audio/video test included in the BDR? NA [not applicable] for VE Method for Newly Generated Waste. **Reference Source: CCP-PO-001, C1-4**			X	VE Method for Newly Generated Waste
17. If the VE was not recorded using audio/video media, does the data sheet contain the signature of two qualified operators who observed for themselves the waste being placed into the container? NA if audio/video used. **Reference Source: CCP-PO-001, C1-4**	X			
18. Are the weights/estimated weights for the 12 waste material parameters reported in kilograms (kg)? **Reference Source: CCP Technical Procedures**	X			
19. Are the descriptions for each waste material parameter included in the BDR? **Reference Source: CCP-PO-001, C1-4**	X			
20. Is the gross weight reported (in kg) for each container included in the BDR? **Reference Source: CCP Technical Procedures**	X			
21. Is the number of layers of confinement recorded? **Reference Source: CCP-PO-001, C-3d**	X			
22. Is sufficient information included in the BDR to determine the packaging configuration? **Reference Source: CCP-PO-001 C-3d**	X			

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-SRP-VE-000001_QTR0412				Examination Date: 2-21-13
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
23. Is the type and number of filters recorded? **Reference Source: CCP-PO-001, C-3d**	X			
24. Is the size of the rigid liner vent hole recorded to determine the appropriate DAC? NA if no liner lid. **Reference Source: CCP-PO-001, C-3d**			X	No Liner Lid
25. For Los Alamos National Laboratory (LANL) Sealed Sources, does the characterized waste container meet the definition of sealed sources per Title 10 Code of Federal Regulations (CFR) 30.4 and Title 10 CFR 835.2 (effective January 1, 2004) evidence of which is assembled as part of AK documentation? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Source
26. For LANL Sealed Sources, are sealed sources the only non-packaging items in the waste container? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Source
27. For LANL Sealed Sources, are the sealed sources a U.S. Department of Transportation (DOT) Special Form Class 7 (Radioactive Material) per Title 49 CFR 34.27 (effective January 1, 2004) and the certification of which is assembled as part of the AK documentation? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Source
28. For LANL Sealed Sources, is the integrity of each sealed source validated by documented contamination survey results to meet the requirements of Title 10 CFR 34.27 (effective January 1, 2004), and assembled as part of AK documentation? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Source

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-SRP-VE-000001_QTR0412				Examination Date: 2-21-13
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
29. For LANL Sealed Sources, is each sealed source a rigid sealed container less than or equal to 4 L in size or in a rigid sealed container less than or equal to 4 L? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Source
30. For LANL Sealed Sources, AK documentation does not indicate the use of volatile organic compounds (VOCs) or VOC-bearing materials as constituents of sealed sources? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Source
31. For LANL Sealed Sources, the outer casing of each sealed source is of a non VOC-bearing material which is verified using the VE technique at the time of packaging? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Source
Comments: None				
The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.				
Jim Vernon				2-28-13
SPM Printed Name	Signature			Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

Attachment 4 – CCP Waste VE Technique Batch Data Report Cover Sheet

Batch Data Report No.: IN-SRP-VE-000001_QTR0412

	Waste Container ID Number
1	SRP12010
2	
3	
4	
5	
6	
7	
8	
9	
10	N A
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

ITR:

Spencer Pattee — Printed Name | Signature | 2-21-13 — Date

VEE:

BRAD STARK — Printed Name | Signature | 2-25-13 — Date

NTPC RECORDS ORIGINAL
DATE REC'D 2-25-13

001

Attachment 3 – CCP Waste VE Technique Batch Data Report Table of Contents

Batch Data Report No.: IN-SRP-VE-000001_QTR0412 **Batch Data Report Date:** 2-21-13

Table Of Contents		
Item	Description	Page No.
1	Attachment 4, CCP Waste VE Technique Batch Data Report Cover Sheet	1
2	Attachment 3, CCP Waste VE Technique Batch Data Report Table of Contents	2
3	CCP Waste Visual Examination Technique Data Form	3
4	Attachment 2, CCP Waste VE Technique Independent Technical Reviewer Checklist	10
5	Copy of NCRs (NA, If Not Applicable)	N/A

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP12010
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SSP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000001 QTR0412
4. Examination Start Date:	11/20/12 SSP 2-21-13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	501
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	XC0977
c. Scale Calibration Due Date:	07/02/13
d. Test Weight ID:	XC0833
e. Test Weight Calibration Due Date:	12/20/12
f. Test Weight (kgs):	5.0
g. Scale Readout of Test Weight (kgs):	5.0
h. Difference Between Test Weight and Scale Readout (kgs):	0.0
i. DPS Scale Check SAT (Y):	Y
Container Scale Check	
j. Scale Serial/ID Number:	725494
k. Scale Calibration Due Date:	05/23/13
l. Test Weight ID:	722311
m. Test Weight Calibration Due Date:	10/16/13
n. Test Weight (kg):	226.8
o. Scale Readout of Test Weight (kgs):	226.8
p. Difference Between Test Weight and Scale Readout (kgs):	0.0
q. Container Scale Check SAT (Y):	Y
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	232657
Comments:	
N/A	

~~01A~~ SSP 8-21-13

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12010							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)	12.Volume (L)	
5								
6	a. Iron-based metals/alloys (IM)				0.4	N/A	0.1	
7				METAL	0.4	8.0	0.1	
8				N/A	N/A	8.0	0.0	
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A	0.0	
10				N/A	N/A	3.0	0.0	
11				N/A	N/A	3.0	0.0	
12	c. Other metals (OM)				0.0	N/A	0.0	
13		d. Lead			0.0	N/A	0.0	
14				N/A	N/A	11.0	0.0	
15				N/A	N/A	11.0	0.0	
16		e. Beryllium			0.0	N/A	0.0	
17				N/A	N/A	1.6	0.0	
18				N/A	N/A	1.6	0.0	
19		f. Depleted uranium			0.0	N/A	0.0	
20				N/A	N/A	19.1	0.0	
21				N/A	N/A	19.1	0.0	
22		g. Copper			0.0	N/A	0.0	
23				N/A	N/A	9.0	0.0	
24				N/A	N/A	9.0	0.0	
25		h. Other (See Note a)			0.0	N/A	0.0	
26				N/A	N/A	0.0	0.0	
27				N/A	N/A	0.0	0.0	
28				N/A	N/A	0.0	0.0	

~~011~~ 004 BSP 2-21-13

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12010							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	i.	Other inorganic materials (OI)			9.0	N/A		15.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		9.0	N/A		15.0
49				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.2	N/A		0.2
56		s.	Paper		0.2	N/A		0.2
57				PAPER (NSW)	N/A	0.9		0.0
58				CLOTH GLOVE	0.2	0.9		0.2
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

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005

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12010							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.3	N/A		0.3
67				RUBBER BANDS (WAIP) TIGHTLY BOUND ON TOP OF OIL DRI	0.3	0.9 - 2.0	1.1	0.3
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				2.6	N/A		2.9
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				ONE TRAY LINER, TWO BAG OUT STUBS (WAIP) TIGHTLY BOUND ON TOP OF OIL DRI	1.6	0.9		1.8
72				PLASTIC	1.0	0.9		1.1
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				105.9	N/A		88.3
75		x1. Sludge			105.9	N/A		88.3
76				PALE YELLOWISH BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE	105.9	1.0 - 1.5	1.2	88.3
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95				N/A	N/A	0.0		0.0
96				N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98				N/A	N/A	1.0 - 1.4	0.0	0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				118.4	N/A		106.8
101	13. (ORGANIC SLUDGE) weight (105.9) kg was obtained by subtracting the weighed waste weight of (12.5) kg and the container net weight of (34.0) kg from the gross weight (152.4) kg of the waste container. (152.4) - (12.5) - (34.0) = (105.9) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

006 ~~018~~ QSP 2-21-13

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12010	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

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Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12010	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	32.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	232657
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	725482
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	02/12/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1425
22. Measured gross weight of loaded container, fully assembled (kgs):	152.4
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	336.0
23. Container closure date (mm/dd/yy):	11/20/12
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	722443
b. Filter Torque Wrench Calibration Due Date:	02/14/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	IL-430
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	NA
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	100.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	118.4
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

SRP 2-21-13
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Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12010	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	3.5
31. Total volume of Solidified Organics (L):	88.3
32. Total volume of Solidified Inorganics (L):	15.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	106.8
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	89.4%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X
Section 6: Approvals	
Visual Examination Operator 1:	
L. GROVER (Enter Name)	Signature: [signature] Date: 11/20/12
Visual Examination Operator 2:	
L. VERLANIC (Enter Name)	Signature: [signature] Date: 11-20-12
Visual Examination Expert:	
J. POOLE (Enter Name)	Signature: J.S. Poole Date: 11-20-12

SP 2-21-13

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Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist

Batch Data Report No.: IN-SRP-VE-000081_QTR0412

Description			
1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods used?	☐ NO	☒ YES	☐ NA
a. Was the description of the waste items adequate?	☐ NO	☒ YES	☐ NA
2. Was the correct revision of operating procedure used? (Attachment 1, Section 1, Line 5)	☐ NO	☒ YES	☐ NA
3. Were the following calculation spot checks performed?			
a. Attachment 1, Section 2: Verify the total waste volume in Column 12, Row aa does not exceed 208 L for a 55-gallon drum or 1456 L for an SWB and verify the estimated weights in Column 10, Row aa matches the measured net weight of waste in Attachment 1, Section 4, Row 27.	☐ NO	☒ YES	☐ NA
b. Attachment 1, Section 5: Verify the total waste volume in Row 33 a., matches the total waste volume in Section 2, Column 12, Row aa.	☐ NO	☒ YES	☐ NA
c. Attachment 1, Section 1: Check hand calculations in Lines 6h and 6p, and any additional hand calculations recorded in the comments field or in Section 2, Line 13.	☐ NO	☒ YES	☐ NA
4. Is only one waste stream selected in Line 34 of Attachment 1, Section 5, and is it consistent with the values shown in Attachment 1, Section 2, Column 12?	☐ NO	☒ YES	☐ NA
5. Is the data entered in the correct units and correct number of significant figures?	☐ NO	☒ YES	☐ NA
6. Were the data reviewed for transcription errors?	☐ NO	☒ YES	☐ NA
7. Does the BDR include VE for up to 20 containers?	☐ NO	☒ YES	☐ NA
8. Are BDR contents complete and do they match, Attachment 3, CCP Waste VE Batch Data Report Table of Contents?	☐ NO	☒ YES	☐ NA
9. Was completeness verified for data entry on the CCP VE Technique Data Form for the following?			
a. Section 1	☐ NO	☒ YES	☐ NA
b. Section 2	☐ NO	☒ YES	☐ NA
c. Section 3	☐ NO	☒ YES	☐ NA
d. Section 4	☐ NO	☒ YES	☐ NA
e. Section 5	☐ NO	☒ YES	☐ NA

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: IN-SRP-VE-000001_QTR0412

Description			
10. Is all the data signed and dated in Attachment 1, Section 6, using reproducible ink, and by the individual(s) generating it?	☐ NO	☒ YES	☐ NA
11. Is all data entered clearly, legibly, and accurately?	☐ NO	☒ YES	☐ NA
12. Were discrepancies between the operators reconciled?	☐ NO	☐ YES	☒ NA
13. Are all changes to original data lined out, initialed and dated by the individual making the changes?	☐ NO	☐ YES	☒ NA
14. Were data changes made by the individual who originally collected the data or an equally qualified individual?	☐ NO	☐ YES	☒ NA
15. Was the DPS scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
16. Was the daily DPS scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
17. Was the container scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
18. Was the daily container scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
19. Was the torque wrench(es) in calibration prior to VE Technique and documented correctly?	☐ NO	☒ YES	☐ NA
20. Were NCR(s) initiated as indicated in Attachment 1, Section 1, dispositioned, and approved appropriately?	☐ NO	☐ YES	☒ NA
21. Was the correct waste stream and waste matrix code assigned?	☐ NO	☒ YES	☐ NA
22. Is there a valid VE data form for each drum in the batch?	☐ NO	☒ YES	☐ NA
23. Were the operators trained and qualified in accordance with the applicable requirements?	☐ NO	☒ YES	☐ NA

Controlled Copy

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: IN-SRP-VE-00001-QTR0412

Description			
24. Was precision maintained by reconciling any discrepancies between the operator(s) and the ITR with regard to identification of waste matrix code, liquids in excess of WIPP Hazardous Waste Facility Permit and WIPP Waste Acceptance Criteria limits and compressed gases?	☐ NO	☐ YES	☒ NA

Description

Comments: N/A

I have reviewed 100 percent of the container-specific and batch data in this BDR and find it acceptable.

ITR:

Printed Name	Signature	Date
Spencer Pattee		2-21-13

DIVIDER PAGE ONLY

Not part of page count

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523, 575-234-7431, or 575-234-7095

Fax Number: 575-234-7033

[X] Original Record
[ ] Fax Record
[ ] Electronic Record

[ ] Copy

Attn:	RECORDS CUSTODIAN	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	03/05/2013
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
IN-SRP-VE-000001_QTR0412	BATCH DATA REPORT VE SRP (QTR)	02/21/2013	12
	N/A		

Comments

SPM CHECKLIST LOCATED IN CARLSBAD

(When the Record accepted line has been completed, the rest of the page below may be left blank.)

Acceptance/Rejection Signature and Date

	Signature	Printed Name	Date
Records Accepted [X]	[signature]	Austin Jenkins	3-25-13
Records Rejected [ ]			

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	3483
DESTINATION TEL #	912085577396
DESTINATION ID	INL
ST. TIME	03/25 08:46
TIME USE	00'17
PAGES SENT	1
RESULT	OK

Controlled Copy

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523, 575-234-7431, or 575-234-7095

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	RECORDS CUSTODIAN	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	03/05/2013
Telephone Number:	575-234-7523		

Document Number(s)	Document Description	Record Date	No. of Pages
IN-SRP-VE-000001_QTR0412	BATCH DATA REPORT VE SRP (QTR)	02/21/2013	12
	N/A		

Comments:
SPM CHECKLIST LOCATED IN CARLSBAD

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [X] Austin Troutman 3-25-13

DIVIDER

PAGE

NWP
Nuclear Waste Partnership LLC
A URS-led partnership with B&W and AREVA

CP:12:01514
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: October 19, 2012

FROM: J. A. Vernon — LOCATION: CCP Certification

TO: W. F. Verlanic ED — LOCATION: CCP Operations – Idaho National Laboratory

SUBJECT: THIRD QUARTER 2012 (JULY 1, 2012 THROUGH SEPTEMBER 30, 2012) VISUAL EXAMINATION QUARTERLY REPEAT OF DATA GENERATION LEVEL REVIEW AT THE IDAHO NATIONAL LABORATORY

Visual Examination at the Idaho National Laboratory has completed 90 days of reporting from July 1, 2012 through September 30, 2012. Container number ARP70828 in Batch Data Report (BDR) IN-ARP-VE-002784, was randomly selected from among all the drums processed through Data Generation Level (DGL) review, validation and verification during this time frame. This container will be processed through the quarterly repeat of DGL review as described in CCP-TP-001, *CCP Project Level Data Validation and Verification*. The original letter will be retained in the letter correspondence file.

Please assign available qualified personnel to serve as Independent Technical Reviewers in performing the review as well as preparing a Table of Contents. Not all containers included in the original BDR will be included for this review. Only the selected drum noted above must be reviewed along with any Quality Control information.

Please perform the visual examination quarterly repeat of DGL review, validation, and verification and return the information by November 1, 2012 to the Central Characterization Project Records Department, naming the BDR as "IN-ARP-VE-002784_QTR0312".

JAV:yhs

Attachment

cc: CCP Distribution

(without attachment)

R. P. Kantrowitz	ED
V. J. Medina	ED
M. W. Pearcy	ED

(with attachment)

J. S. Poole	ED
CCP Records Custodian	GSA-212

CCP RECORDS ORIGINAL
DATE REC'D 10-25-12

Attachment 4 – CCP Waste VE Technique Batch Data Report Cover Sheet

Batch Data Report No.: IN-ARP-VE-009784

	Waste Container ID Number
1	ARP70828
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	N A
13	
14	L.V. 7-18-12
15	
16	
17	
18	
19	
20	

ITR:

Michael Haderle — Printed Name | Signature | 7-19-12 — Date

VEE:

LUKE GROVER — Printed Name | Signature | 7-19-12 — Date

CCP RECORDS ORIGINAL
DATE REC'D 7-19-12

001

Attachment 3 – CCP Waste VE Technique Batch Data Report Table of Contents

Batch Data Report No.: IN-ARP-VE-000184 **Batch Data Report Date:** 7-18-12

Table Of Contents

Item	Description	Page No.
1	Attachment 4, CCP Waste VE Technique Batch Data Report Cover Sheet	1
2	Attachment 3, CCP Waste VE Technique Batch Data Report Table of Contents	2
3	CCP Waste Visual Examination Technique Data Form	3
4	Attachment 2, CCP Waste VE Technique Independent Technical Reviewer Checklist	10
5	Copy of NCRs (NA, If Not Applicable)	N/A

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	ARP70828
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	B03
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location:	IN-RWMC-ARP-6
3. Batch Number:	IN-ARP-VE-002784
4. Examination Date:	07/18/12
5. Procedure CCP-TP-006, Rev.:	16
6. a. Drum Packing Station (DPS) Number:	701
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	XC0917
c. Scale Calibration Due Date:	06/07/13
d. Test Weight ID:	XC0834
e. Test Weight Calibration Due Date:	12/16/12
f. Test Weight (kgs):	5.0
g. Scale Readout of Test Weight (kgs):	5.0
h. Difference Between Test Weight and Scale Readout (kgs):	0.0
i. DPS Scale Check SAT (Y):	Y
Container Scale Check	
j. Scale Serial/ID Number:	729255
k. Scale Calibration Due Date:	11/07/12
l. Test Weight ID:	722311
m. Test Weight Calibration Due Date:	11/07/12
n. Test Weight (kg):	224.0
o. Scale Readout of Test Weight (kgs):	224.0
p. Difference Between Test Weight and Scale Readout (kgs):	0.0
q. Container Scale Check SAT (Y):	Y
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	223196
8. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726775
b. Filter Torque Wrench Calibration Due Date:	09/19/12
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	HL-193
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70828							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.3	N/A		0.0
7				METAL	0.3	6.0		0.0
8				N/A	N/A	6.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70828							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	i. Other Inorganic materials (OI)				9.0	N/A		15.0
30		j. Graphite			0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p. Inorganic sorbents			9.0	N/A		15.0
49				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r. Cellulosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57				PAPER (NSW)	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

005

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70828							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4				9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.0	N/A		0.0
67				N/A	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				PLASTIC (NSW)	N/A	0.9		0.0
71				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				101.5	N/A		84.6
75		x1. Sludge		Source Lt: 7-19-12	101.5	N/A		84.6
76				VERY PALE ORANGE POWDERY SLUDGE WITH CALCIUM SILICATE	101.5	1.0 - 1.5	1.2	84.6
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				11.0	N/A		8.1
83		y1. Sludge			6.0	N/A		6.7
84				MODERATE ORANGE CRUMBLY SLUDGE WITH WHITE CHUNKS	6.0	1.0 - 1.5	1.2	6.7
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Rossler Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			3.0	N/A		1.4
92				EVAPORATOR SALT	3.0	2.2		1.4
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				42.0	N/A		35.0
95				SOIL	42.0	1.0 - 1.4	1.2	35.0
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				163.8	N/A		142.7
98	13. (ORGANIC SLUDGE) weight (101.5) kg was obtained by subtracting the weighed waste weight of (62.3) kg and the container net weight of (34.0) kg from the gross weight (197.8) kg of the waste container. (197.8) - (62.3) - (34.0) = (101.5) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. REFERENCE LETTER: CP: 08:00210 / UFC: 2300.00							
101								

006

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70828	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70828	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	25.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	223196
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	720178
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	09/21/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1528
22. Measured gross weight of loaded container, fully assembled (kgs):	197.8
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	436.1
23. Container closure date (mm/dd/yy):	07/18/12
24. Percent fill of container:	80.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	163.8
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70828	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.0
31. Total volume of Solidified Organics (L):	84.6
32. Total volume of Solidified Inorganics (L):	23.1
33. Total volume of Soils/Gravel (L):	35.0
a. Total volume (L):	142.7
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	62.0%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:		
J. HEGSTED Enter Name	J.B. Hegsted Signature	7/18/12 Date
Visual Examination Operator 2:		
L. VERLANIC Enter Name	L. Verlanic Signature	7-18-12 Date
Visual Examination Expert:		
B. STARK Enter Name	Brad Stark Signature	7-18-12 Date

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist

Batch Data Report No.: IN-ARP-VE-002784

Description			
1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods used?	☐ NO	☒ YES	☐ NA
a. Was the description of the waste items adequate?	☐ NO	☒ YES	☐ NA
2. Was the correct revision of operating procedure used? (Attachment 1, Section 1, Line 5)	☐ NO	☒ YES	☐ NA
3. Were the following calculation spot checks performed?			
a. Attachment 1, Section 2: Verify the total waste volume in Column 12, Row aa does not exceed 208 L for a 55-gallon drum or 1456 L for an SWB and verify the estimated weights in Row aa matches the measured net weight of waste in Attachment 1, Section 4, Row 26.	☐ NO	☒ YES	☐ NA
b. Attachment 1, Section 5: Verify the total waste volume in Row 33 a., matches the total waste volume in Section 2, Column 12, Row aa.	☐ NO	☒ YES	☐ NA
c. Attachment 1, Section 1: Check hand calculations in Lines 6h and 6p, and any additional hand calculations recorded in the comments field or in Section 2, Line 13.	☐ NO	☒ YES	☐ NA
4. Is only one waste stream selected in Line 34 of Attachment 1, Section 5, and is it consistent with the values shown in Attachment 1, Section 2, Column 12?	☐ NO	☒ YES	☐ NA
5. Is the data entered in the correct units and correct number of significant figures?	☐ NO	☒ YES	☐ NA
6. Were the data reviewed for transcription errors?	☐ NO	☒ YES	☐ NA
7. Does the BDR include VE for up to 20 containers?	☐ NO	☒ YES	☐ NA
8. Are BDR contents complete and do they match, Attachment 3, CCP Waste VE Batch Data Report Table of Contents?	☐ NO	☒ YES	☐ NA
9. Was completeness verified for data entry on the CCP VE Technique Data Form for the following?			
a. Section 1	☐ NO	☒ YES	☐ NA
b. Section 2	☐ NO	☒ YES	☐ NA
c. Section 3	☐ NO	☒ YES	☐ NA
d. Section 4	☐ NO	☒ YES	☐ NA
e. Section 5	☐ NO	☒ YES	☐ NA

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: IN-BBP-VE-003784

Description			
10. Is all the data signed and dated in Attachment 1, Section 6, using reproducible ink, and by the individual(s) generating it?	☐ NO	☒ YES	☐ NA
11. Is all data entered clearly, legibly, and accurately?	☐ NO	☒ YES	☐ NA
12. Were discrepancies between the operators reconciled?	☐ NO	☐ YES	☒ NA
13. Are all changes to original data lined out, initialed and dated by the individual making the changes?	☐ NO	☐ YES	☒ NA
14. Were data changes made by the individual who originally collected the data or an equally qualified individual?	☐ NO	☐ YES	☒ NA
15. Was the DPS scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
16. Was the daily DPS scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
17. Was the container scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
18. Was the daily container scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
19. Was the torque wrench(es) in calibration prior to VE Technique and documented correctly?	☐ NO	☒ YES	☐ NA
20. Were NCR(s) initiated as indicated in Attachment 1, Section 1, dispositioned, and approved appropriately?	☐ NO	☐ YES	☒ NA
21. Was the correct waste stream and waste matrix code assigned?	☐ NO	☒ YES	☐ NA
22. Is there a valid VE data form for each drum in the batch?	☐ NO	☒ YES	☐ NA
23. Were the operators trained and qualified in accordance with the applicable requirements?	☐ NO	☒ YES	☐ NA

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: IN-ARP-VE-002784

Description	☐ NO	☐ YES	☒ NA
24. Was precision maintained by reconciling any discrepancies between the operator(s) and the ITR with regard to identification of waste matrix code, liquids in excess of WIPP Hazardous Waste Facility Permit and WIPP Waste Acceptance Criteria limits and compressed gases?			

Description

Comments:

#12 marked NA no discrepancies between operators. MH 7-19-12

#13 marked NA no changes were made to original data. MH 7-19-12

#14 marked NA no data changes were made. MH 7-19-12

#20 marked NA no NCR initiated. MH 7-19-12

#24 marked NA no discrepancies between operators and ITR. MH 7-19-12

I have reviewed 100 percent of the container-specific and batch data in this BDR and find it acceptable.

ITR:

Michael Haderlie — Printed Name

Signature

7-19-12 — Date

DIVIDER

PAGE

Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA

CP:12:01596
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: November 16, 2012

FROM: J. A. Vernon — LOCATION: CCP Certification

TO: W. F. Verlanic ED — LOCATION: CCP Operations
Idaho National Laboratory

SUBJECT: RESULTS OF VISUAL EXAMINATION QUARTERLY REPEAT DATA GENERATION LEVEL DATA REVIEW: IDAHO NATIONAL LABORATORY THIRD CALENDAR QUARTER OF 2012

Procedure CCP-TP-001, *CCP Project Level Data Validation and Verification,* requires that a repeat of Data Generation Level (DGL) review, validation and verification be performed on the data for a minimum of one randomly chosen waste container each quarter. The Site Project Manager uses this information to document that the DGL data review is being performed according to procedures.

Inter-Office Correspondence Number CP:12:01514 was issued October 19th, 2012. This memorandum identified waste container ARP70828 as the randomly-selected container for DGL repeat of visual examination at the Idaho National Laboratory for the third calendar quarter of 2012.

The mini-Batch Data Report containing ARP70828 was reviewed for the quarterly repeat on November 14th, 2012. The results of these reviews indicate that the data quality remains acceptable and no discrepancies were identified. The Project Level Verification and Validation Checklist (Attachment 1 - Rev. 19 of Procedure CCP-TP-001) has been completed and authenticated.

If you have any questions regarding this review, please contact me at Extension 7141.

JAV:jmc

cc: NWP

R. P. Kantrowitz ED
M. W. Pearcy ED
NTP Records Custodian GSA-212

CCP RECORDS ORIGINAL
DATE REC'D 11-28-12

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary

BDR Number: IN-ARP-VE-002784_QTR0312				Examination Date: 7-18-12
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
1. Is the completed, signed and dated Independent Technical Reviewer Checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, C3-10b**	X			
2. Does the BDR contain all items addressed in the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-10b**	X			
3. Does the BDR include a listing of all container numbers in the batch? **Reference Source: CCP-PO-001, C3-10b**	X			
4. List all containers that have met QAOs. **Reference Source: CCP-PO-001, C3-10b**				Container Numbers: ARP70828
5. Is the current implementing procedure and revision number included in the BDR? **Reference Source: CCP-PO-001, C3-4, C3-10b, Table C3-11**	X			
6. Is the BDR date included? **Reference Source: CCP-PO-001, Table C3-11**	X			
7. Is there a reference to or copy of any associated NCRs (if any) in the BDR? **Reference Source: CCP-PO-001, Table C3-11**			X	No NCR's
8. Are there 20 or fewer containers in the batch? **Reference Source: CCP-PO-001 C3-10**	X			
9. Are the data properly reported (i.e., data are reported in correct units and with correct significant figures). **Reference Source: CCP-PO-001 C3-10b**	X			
10. Is there evidence of verification that the physical form matches the Waste Matrix Code? **Reference Source: CCP-PO-001, C3-4**	X			
11. Is there evidence of verification that the physical form matches the waste stream description? **Reference Source: CCP-PO-001, C1-4**	X			
12. Are prohibited items absent? **Reference Source: CCP-PO-001, C3-4**	X			

COPY

CCP RECORDS ORIGINAL
DATE REC'D 11-15-12

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-ARP-VE-002784_QTR0312				Examination Date: 7-18-12
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
13. Does observable liquid, if present, meet the criteria of the TSDF-WAC? **Reference Source: CCP-PO-001, C3-4b**	X			
14. Were discrepancies between the Visual Examination operator and the ITR with regards to identification of waste matrix code, liquids in excess of the TSDF-WAC, or compressed gases reconciled? NA if no discrepancies. **Reference Source: CCP-PO-001, C3-4b**			X	No Discrepancies
15. Are the training requirements met for the VE Expert and VE Operators who have signed the data forms? **Reference Source: CCP-PO-001, C1-4, C3-4**	X			
16. Is evidence of a satisfactory audio/video test included in the BDR? NA [not applicable] for VE Method for Newly Generated Waste. **Reference Source: CCP-PO-001, C1-4**			X	VE method for newly generated waste
17. If the VE was not recorded using audio/video media, does the data sheet contain the signature of two qualified operators who observed for themselves the waste being placed into the container? NA if audio/video used. **Reference Source: CCP-PO-001, C1-4**	X			
18. Are the weights/estimated weights for the 12 waste material parameters reported in kilograms (kg)? **Reference Source: CCP Technical Procedures**	X			
19. Are the descriptions for each waste material parameter included in the BDR? **Reference Source: CCP-PO-001, C1-4**	X			
20. Is the gross weight reported (in kg) for each container included in the BDR? **Reference Source: CCP Technical Procedures**	X			
21. Is the number of layers of confinement recorded? **Reference Source: CCP-PO-001, C-3d**	X			
22. Is sufficient information included in the BDR to determine the packaging configuration? **Reference Source: CCP-PO-001 C-3d**	X			

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-ARP-VE-002784_QTR0312				Examination Date: 7-18-12
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
23. Is the type and number of filters recorded? **Reference Source: CCP-PO-001, C-3d**	X			
24. Is the size of the rigid liner vent hole recorded to determine the appropriate DAC? NA if no liner lid. **Reference Source: CCP-PO-001, C-3d**			X	No liner lid
25. For Los Alamos National Laboratory (LANL) Sealed Sources, does the characterized waste container meet the definition of sealed sources per Title 10 Code of Federal Regulations (CFR) 30.4 and Title 10 CFR 835.2 (effective January 1, 2004) evidence of which is assembled as part of AK documentation? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Source
26. For LANL Sealed Sources, are sealed sources the only non-packaging items in the waste container? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Source
27. For LANL Sealed Sources, are the sealed sources a U.S. Department of Transportation (DOT) Special Form Class 7 (Radioactive Material) per Title 49 CFR 34.27 (effective January 1, 2004) and the certification of which is assembled as part of the AK documentation? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Source
28. For LANL Sealed Sources, is the integrity of each sealed source validated by documented contamination survey results to meet the requirements of Title 10 CFR 34.27 (effective January 1, 2004), and assembled as part of AK documentation? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Source

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-ARP-VE-002784_QTR0312 **Examination Date: 7-18-12**

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
29. For LANL Sealed Sources, is each sealed source a rigid sealed container less than or equal to 4 L in size or in a rigid sealed container less than or equal to 4 L? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Source
30. For LANL Sealed Sources, AK documentation does not indicate the use of volatile organic compounds (VOCs) or VOC-bearing materials as constituents of sealed sources? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Source
31. For LANL Sealed Sources, the outer casing of each sealed source is of a non VOC-bearing material which is verified using the VE technique at the time of packaging? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Source

Comments: None

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

Jim Vernon		11-14-12
SPM Printed Name	Signature	Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

Attachment 4 – CCP Waste VE Technique Batch Data Report Cover Sheet

Batch Data Report No.: IN-ARP-VE-002784_QTR0312

	Waste Container ID Number
1	ARP70828
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	N A
13	L.V. 10-22-12
14	
15	
16	
17	
18	
19	
20	

ITR:

Printed Name	Signature	Date
Jodi M Stanton	Jodi M. Stanton	10/23/12
Jodi M Stanton	Jodi M. Stanton	10/22/12

VEE:

Printed Name	Signature	Date
LUKE GROVER		10/23/12

CCP RECORDS ORIGINAL
DATE REC'D 10-25-12

L.V. 10-23-12
001

Attachment 4 – CCP Waste VE Technique Batch Data Report Cover Sheet

Batch Data Report No.: IN-ARP-VE-009784

	Waste Container ID Number
1	ARP70828
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	N A
13	
14	L.V. 7-18-12
15	
16	
17	
18	
19	
20	

ITR:

Printed Name	Signature	Date
Michael Haderle		7-19-12

VEE:

Printed Name	Signature	Date
LUKE GROVER		7-19-12

CCP RECORDS ORIGINAL
DATE REC'D 7-19-12

001A
L.V. 10-23-12

Attachment 3 – CCP Waste VE Technique Batch Data Report Table of Contents

Batch Data Report No.: ~~CN-ARP-VE-002784~~ -QTR0312 **Batch Data Report Date:** 10-22-12

Table Of Contents		
Item	Description	Page No.
1	Attachment 4, CCP Waste VE Technique Batch Data Report Cover Sheet	1
2	Attachment 3, CCP Waste VE Technique Batch Data Report Table of Contents	2
3	CCP Waste Visual Examination Technique Data Form	3
4	Attachment 2, CCP Waste VE Technique Independent Technical Reviewer Checklist	10
5	Copy of NCRs (NA, If Not Applicable)	N/A

L.V. 10-23-12
002

Attachment 3 – CCP Waste VE Technique Batch Data Report Table of Contents

Batch Data Report No.: INL-ARP-VE-009784 **Batch Data Report Date:** 7-18-12

Table Of Contents

Item	Description	Page No.
1	Attachment 4, CCP Waste VE Technique Batch Data Report Cover Sheet	1
2	Attachment 3, CCP Waste VE Technique Batch Data Report Table of Contents	2
3	CCP Waste Visual Examination Technique Data Form	3
4	Attachment 2, CCP Waste VE Technique Independent Technical Reviewer Checklist	10
5	Copy of NCRs (NA, If Not Applicable)	N/A

002A
L.V. 16-33-12

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	ARP70828
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	BDS
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location:	IN-RWMC-ARP-6
3. Batch Number:	IN-ARP-VE-002784
4. Examination Date:	07/18/12
5. Procedure CCP-TP-006, Rev.:	16
6. a. Drum Packing Station (DPS) Number:	701
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	XC0917
c. Scale Calibration Due Date:	06/07/13
d. Test Weight ID:	XC0834
e. Test Weight Calibration Due Date:	12/16/12
f. Test Weight (kgs):	5.0
g. Scale Readout of Test Weight (kgs):	5.0
h. Difference Between Test Weight and Scale Readout (kgs):	0.0
i. DPS Scale Check SAT (Y):	Y
Container Scale Check	
j. Scale Serial/ID Number:	729255
k. Scale Calibration Due Date:	11/07/12
l. Test Weight ID:	722311
m. Test Weight Calibration Due Date:	11/07/12
n. Test Weight (kg):	224.0
o. Scale Readout of Test Weight (kgs):	224.0
p. Difference Between Test Weight and Scale Readout (kgs):	0.0
q. Container Scale Check SAT (Y):	Y
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	223196
8. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726775
b. Filter Torque Wrench Calibration Due Date:	09/19/12
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	HL-193
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:	
N/A	

CTRO312 L.N. 10-22-12

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70828							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)	12.Volume (L)	
5								
6	a. Iron-based metals/alloys (IM)				0.3	N/A	0.0	
7				METAL	0.3	8.0	0.0	
8				N/A	N/A	6.0	0.0	
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A	0.0	
10				N/A	N/A	3.0	0.0	
11				N/A	N/A	3.0	0.0	
12	c. Other metals (OM)				0.0	N/A	0.0	
13		d. Lead			0.0	N/A	0.0	
14				N/A	N/A	11.0	0.0	
15				N/A	N/A	11.0	0.0	
16		e. Beryllium			0.0	N/A	0.0	
17				N/A	N/A	1.8	0.0	
18				N/A	N/A	1.8	0.0	
19		f. Depleted uranium			0.0	N/A	0.0	
20				N/A	N/A	19.1	0.0	
21				N/A	N/A	19.1	0.0	
22		g. Copper			0.0	N/A	0.0	
23				N/A	N/A	9.0	0.0	
24				N/A	N/A	9.0	0.0	
25		h. Other (See Note a)			0.0	N/A	0.0	
26				N/A	N/A	0.0	0.0	
27				N/A	N/A	0.0	0.0	
28				N/A	N/A	0.0	0.0	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003

Container ID: ARP70828

Section 2: Waste Material Parameter (WMP) Estimates

9. Waste Material Parameter and Item Description	10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
l. Other Inorganic materials (OI)	9.0	N/A		15.0
j. Graphite	0.0	N/A		0.0
N/A	N/A	2.2		0.0
N/A	N/A	2.2		0.0
k. Concrete	0.0	N/A		0.0
N/A	N/A	2.3		0.0
N/A	N/A	2.3		0.0
l. Glass	0.0	N/A		0.0
N/A	N/A	2.0		0.0
N/A	N/A	2.0		0.0
m. Firebrick	0.0	N/A		0.0
N/A	N/A	3.0		0.0
N/A	N/A	3.0		0.0
n. Ceramics	0.0	N/A		0.0
N/A	N/A	2.0 - 5.0	0.0	0.0
N/A	N/A	2.0 - 5.0	0.0	0.0
o. Sand	0.0	N/A		0.0
N/A	N/A	2.0		0.0
N/A	N/A	2.0		0.0
p. Inorganic sorbents	9.0	N/A		15.0
OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.8	15.0
N/A	N/A	0.1 - 2.8	0.0	0.0
q. Other (See Note a)	0.0	N/A		0.0
N/A	N/A	0.9		0.0
N/A	N/A	0.0		0.0
N/A	N/A	0.9		0.0
r. Cellulosics (C)	0.0	N/A		0.0
s. Paper	9.0	N/A		0.0
PAPER (NSW)	N/A	0.9		0.0
N/A	N/A	0.9		0.0
N/A	N/A	0.9		0.0
t. Cardboard	0.0	N/A		0.0
N/A	N/A	0.8		0.0
N/A	N/A	0.8		0.0
u. Wood	0.0	N/A		0.0
N/A	N/A	1.0		0.0
N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70828							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4				9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.0	N/A		0.0
67				N/A	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				PLASTIC (NSW)	N/A	0.9		0.0
71				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				101.5	N/A		84.6
75		x1. Sludge		SLUDGE 13:7-18-12	101.5	N/A		84.6
76				VERY PALE ORANGE POWDERY SLUDGE WITH CALCIUM SILICATE	101.5	1.0 - 1.5	1.2	84.6
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				11.0	N/A		8.1
83		y1. Sludge			8.0	N/A		6.7
84				MODERATE ORANGE CRUMBLY SLUDGE WITH WHITE CHUNKS	8.0	1.0 - 1.5	1.2	6.7
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Rooster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			3.0	N/A		1.4
92				EVAPORATOR SALT	3.0	2.2		1.4
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				42.0	N/A		35.0
95				SOIL	42.0	1.0 - 1.4	1.2	35.0
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				163.6	N/A		142.7
98	13. (ORGANIC SLUDGE) weight (101.5) kg was obtained by subtracting the weighed waste weight of (62.3) kg and the container net weight of (34.0) kg from the gross weight (197.8) kg of the waste container. (197.8) - (62.3) - (34.0) = (101.5) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. REFERENCE LETTER: CP: 08:00210 / UFC: 2300.00							
101								

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70828	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70828	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	25.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	223196
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	720178
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	09/21/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1528
22. Measured gross weight of loaded container, fully assembled (kgs):	197.8
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	436.1
23. Container closure date (mm/dd/yy):	07/18/12
24. Percent fill of container:	80.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	163.8
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70828	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.0
31. Total volume of Solidified Organics (L):	84.6
32. Total volume of Solidified Inorganics (L):	23.1
33. Total volume of Soils/Gravel (L):	35.0
a. Total volume (L):	142.7
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	62.0%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

J. HEGSTED	J.B. Hegsted	7/18/12
Enter Name	Signature	Date

Visual Examination Operator 2:

L. VERLANIC	L. Verlanic	7-18-12
Enter Name	Signature	Date

Visual Examination Expert:

B. STARK	Brad Stark	7-18-12
Enter Name	Signature	Date

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist

Batch Data Report No.: IN-ARP-VE-002784 -GTR0313

Description			
1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods used?	☐ NO	☑ YES	☐ NA
a. Was the description of the waste items adequate?	☐ NO	☑ YES	☐ NA
2. Was the correct revision of operating procedure used? (Attachment 1, Section 1, Line 5)	☐ NO	☑ YES	☐ NA
3. Were the following calculation spot checks performed?			
a. Attachment 1, Section 2: Verify the total waste volume in Column 12, Row aa does not exceed 208 L for a 55-gallon drum or 1456 L for an SWB and verify the estimated weights in Row aa matches the measured net weight of waste in Attachment 1, Section 4, Row 26.	☐ NO	☑ YES	☐ NA
b. Attachment 1, Section 5: Verify the total waste volume in Row 33 a., matches the total waste volume in Section 2, Column 12, Row aa.	☐ NO	☑ YES	☐ NA
c. Attachment 1, Section 1: Check hand calculations in Lines 6h and 6p, and any additional hand calculations recorded in the comments field or in Section 2, Line 13.	☐ NO	☑ YES	☐ NA
4. Is only one waste stream selected in Line 34 of Attachment 1, Section 5, and is it consistent with the values shown in Attachment 1, Section 2, Column 12?	☐ NO	☑ YES	☐ NA
5. Is the data entered in the correct units and correct number of significant figures?	☐ NO	☑ YES	☐ NA
6. Were the data reviewed for transcription errors?	☐ NO	☑ YES	☐ NA
7. Does the BDR include VE for up to 20 containers?	☐ NO	☑ YES	☐ NA
8. Are BDR contents complete and do they match, Attachment 3, CCP Waste VE Batch Data Report Table of Contents?	☐ NO	☑ YES	☐ NA
9. Was completeness verified for data entry on the CCP VE Technique Data Form for the following?			
a. Section 1	☐ NO	☑ YES	☐ NA
b. Section 2	☐ NO	☑ YES	☐ NA
c. Section 3	☐ NO	☑ YES	☐ NA
d. Section 4	☐ NO	☑ YES	☐ NA
e. Section 5	☐ NO	☑ YES	☐ NA

L.V. 10-23-13
010

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist

Batch Data Report No.: IN-ARP-VE-002784

Description			
1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods used?	☐ NO	☒ YES	☐ NA
a. Was the description of the waste items adequate?	☐ NO	☒ YES	☐ NA
2. Was the correct revision of operating procedure used? (Attachment 1, Section 1, Line 5)	☐ NO	☒ YES	☐ NA
3. Were the following calculation spot checks performed?			
a. Attachment 1, Section 2: Verify the total waste volume in Column 12, Row aa does not exceed 208 L for a 55-gallon drum or 1456 L for an SWB and verify the estimated weights in Row aa matches the measured net weight of waste in Attachment 1, Section 4, Row 26.	☐ NO	☒ YES	☐ NA
b. Attachment 1, Section 5: Verify the total waste volume in Row 33 a., matches the total waste volume in Section 2, Column 12, Row aa.	☐ NO	☒ YES	☐ NA
c. Attachment 1, Section 1: Check hand calculations in Lines 6h and 6p, and any additional hand calculations recorded in the comments field or in Section 2, Line 13.	☐ NO	☒ YES	☐ NA
4. Is only one waste stream selected in Line 34 of Attachment 1, Section 5, and is it consistent with the values shown in Attachment 1, Section 2, Column 12?	☐ NO	☒ YES	☐ NA
5. Is the data entered in the correct units and correct number of significant figures?	☐ NO	☒ YES	☐ NA
6. Were the data reviewed for transcription errors?	☐ NO	☒ YES	☐ NA
7. Does the BDR include VE for up to 20 containers?	☐ NO	☒ YES	☐ NA
8. Are BDR contents complete and do they match, Attachment 3, CCP Waste VE Batch Data Report Table of Contents?	☐ NO	☒ YES	☐ NA
9. Was completeness verified for data entry on the CCP VE Technique Data Form for the following?			
a. Section 1	☐ NO	☒ YES	☐ NA
b. Section 2	☐ NO	☒ YES	☐ NA
c. Section 3	☐ NO	☒ YES	☐ NA
d. Section 4	☐ NO	☒ YES	☐ NA
e. Section 5	☐ NO	☒ YES	☐ NA

010A
L.V. 10-23-13

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: IN-ARP-VE-009784 - QTR0313

Description			
10. Is all the data signed and dated in Attachment 1, Section 6, using reproducible ink, and by the individual(s) generating it?	☐ NO	☑ YES	☐ NA
11. Is all data entered clearly, legibly, and accurately?	☐ NO	☑ YES	☐ NA
12. Were discrepancies between the operators reconciled?	☐ NO	☐ YES	☑ NA
13. Are all changes to original data lined out, initialed and dated by the individual making the changes?	☐ NO	☐ YES	☑ NA
14. Were data changes made by the individual who originally collected the data or an equally qualified individual?	☐ NO	☐ YES	☑ NA
15. Was the DPS scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☑ YES	☐ NA
16. Was the daily DPS scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☑ YES	☐ NA
17. Was the container scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☑ YES	☐ NA
18. Was the daily container scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☑ YES	☐ NA
19. Was the torque wrench(es) in calibration prior to VE Technique and documented correctly?	☐ NO	☑ YES	☐ NA
20. Were NCR(s) initiated as indicated in Attachment 1, Section 1, dispositioned, and approved appropriately?	☐ NO	☐ YES	☑ NA
21. Was the correct waste stream and waste matrix code assigned?	☐ NO	☑ YES	☐ NA
22. Is there a valid VE data form for each drum in the batch?	☐ NO	☑ YES	☐ NA
23. Were the operators trained and qualified in accordance with the applicable requirements?	☐ NO	☑ YES	☐ NA

L.V. 10-23-12
011

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: IN-BRP-VE-002784

Description			
10. Is all the data signed and dated in Attachment 1, Section 6, using reproducible ink, and by the individual(s) generating it?	☐ NO	☒ YES	☐ NA
11. Is all data entered clearly, legibly, and accurately?	☐ NO	☒ YES	☐ NA
12. Were discrepancies between the operators reconciled?	☐ NO	☐ YES	☒ NA
13. Are all changes to original data lined out, initialed and dated by the individual making the changes?	☐ NO	☐ YES	☒ NA
14. Were data changes made by the individual who originally collected the data or an equally qualified individual?	☐ NO	☐ YES	☒ NA
15. Was the DPS scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
16. Was the daily DPS scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
17. Was the container scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
18. Was the daily container scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
19. Was the torque wrench(es) in calibration prior to VE Technique and documented correctly?	☐ NO	☒ YES	☐ NA
20. Were NCR(s) initiated as indicated in Attachment 1, Section 1, dispositioned, and approved appropriately?	☐ NO	☐ YES	☒ NA
21. Was the correct waste stream and waste matrix code assigned?	☐ NO	☒ YES	☐ NA
22. Is there a valid VE data form for each drum in the batch?	☐ NO	☒ YES	☐ NA
23. Were the operators trained and qualified in accordance with the applicable requirements?	☐ NO	☒ YES	☐ NA

011A
L.N. 10-23-12

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: IN-ARP-VE-002784 - QTR0312

Description			
24. Was precision maintained by reconciling any discrepancies between the operator(s) and the ITR with regard to identification of waste matrix code, liquids in excess of WIPP Hazardous Waste Facility Permit and WIPP Waste Acceptance Criteria limits and compressed gases?	☐ NO	☐ YES	☑ NA

Description

Comments:

#12 marked NA, NO discrepancies between operators. JS 10/22/12

#13 + #14 marked NA, NO changes made to original data. JS 10/22/12

#20 marked NA, NO NCR'S initiated. JS 10/22/12

#24 marked NA, NO discrepancies between operators or ITR. JS 10/22/12

I have reviewed 100 percent of the container-specific and batch data in this BDR and find it acceptable.

ITR: Jodi M. Stanton Jodi M. Stanton 10/23/12

Printed Name Signature Date 10/22/12

L.V. 10-23-12
012

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: IN-ARP-VE-002784

Description	☐ NO	☐ YES	☒ NA
24. Was precision maintained by reconciling any discrepancies between the operator(s) and the ITR with regard to identification of waste matrix code, liquids in excess of WIPP Hazardous Waste Facility Permit and WIPP Waste Acceptance Criteria limits and compressed gases?			

Description

Comments:

#12 marked NA no discrepancies between operators. MH 7-19-12

#13 marked NA no changes were made to original data. MH 7-19-12

#14 marked NA no data changes were made. MH 7-19-12

#20 marked NA no NCR initiated. MH 7-19-12

#24 marked NA no discrepancies between operators and ITR. MH 7-19-12

I have reviewed 100 percent of the container-specific and batch data in this BDR and find it acceptable.

ITR:

Michael Haderlie — Printed Name

Signature

7-19-12 — Date

012A
L.V. 10-23-12

DIVIDER PAGE ONLY

Not part of page count

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	RECORDS CUSTODIAN	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	11/15/2012
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
IN-ARP-VE-002784_QTR0312	BATCH DATA REPORT VE (QTR)	10/22/2012	17
	N/A		

Comments

SPM CHECKLIST LOCATED IN CARLSBAD

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted	[X]	Paulette Henry (Signature)	**Paulette Henry** (Printed Name)	12-4-12 (Date)
Records Rejected	[ ]	(Signature)	(Printed Name)	(Date)

Reason for Rejection:

Re-submittal:

(Signature)	(Printed Name)	(Date)

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	2043
DESTINATION TEL #	912085577396
DESTINATION ID	INL
ST. TIME	12/04 11:10
TIME USE	00'16
PAGES SENT	1
RESULT	OK

Controlled Copy

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record
[ ] Fax Record
[ ] Electronic Record
[ ] Copy

Attn:	RECORDS CUSTODIAN	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	11/15/2012
Telephone Number:	575-234-7523		

Doc. Number	Title/Description	Record Date	Pages
IN-ARP-VE-002784_QTR0312	BATCH DATA REPORT VE (QTR)	10/22/2012	17
	N/A		

Comments

SPM CHECKLIST LOCATED IN CARLSBAD

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [X] Paulette Henry 12-4-12

DIVIDER PAGE

Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA

CP:12:01526
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: October 23, 2012

FROM: J. A. Vernon LOCATION: CCP Certification

TO: W. F. Verlanic ED LOCATION: CCP Operations – Idaho National Laboratory

SUBJECT: THIRD QUARTER 2012 (JULY 1, 2012 THROUGH SEPTEMBER 30, 2012) HEADSPACE GAS SAMPLING QUARTERLY REPEAT OF DATA GENERATION LEVEL REVIEW AT THE IDAHO NATIONAL LABORATORY

Headspace Gas Sampling at the Idaho National Laboratory has completed 90 days of reporting from July 1, 2012 through September 30, 2012. Container number 10102259 in Batch Data Report (BDR) INHSG1204 was randomly selected from among all the drums processed through Data Generation Level (DGL) review, validation and verification during this time frame. This container will be processed through the quarterly repeat of DGL review as described in CCP-TP-001, *CCP Project Level Data Validation and Verification*. The original letter will be retained in the letter correspondence file.

Please assign available qualified personnel to serve as Independent Technical Reviewers in performing the BDR review as well as preparing a Table of Contents. Not all containers included in the original BDR will be included for this review. Only the selected drum noted above must be reviewed along with any Quality Control information.

Please perform the visual examination quarterly repeat of DGL review, validation, and verification and return the information by November 1, 2012 to the Central Characterization Project Records Department, naming the BDR as "INHSG1204_QTR0312".

JAV:yhs

Attachment

cc: NWP
(without attachment)
R. P. Kantrowitz ED
M. W. Pearcy ED

(with attachment)
CCP Records Custodian GSA-212

INL
(with attachment)
J. Poier ED

CCP RECORDS ORIGINAL
DATE REC'D 10-24-12

Attachment 1 – HSG Sampling Batch Data Report Cover Sheet Page 1 of 1

Headspace Gas Sampling

HSG Sampling Batch Number: INHSG1204

Waste Matrix Code: S5300

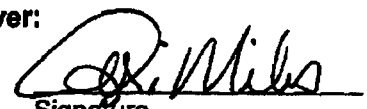
Waste Container Identification Numbers

10223021	10102536
10124637	N/A
10102259	N/A
10101976	N/A
10221733	N/A
10217850	N/A
10127573	N/A
10088793	N/A
10186445	N/A
10202170	N/A

Comments: **Waste Stream ID's for this batch are ID-RF-S5300-A. No filter change out required.**

HSG Independent Technical Reviewer:

Teri Miles — Printed Name

 — Signature

08/01/2012 — Date

CCP RECORDS ORIGINAL
DATE REC'D 8-2-12

Attachment 2 – HSG Sampling Batch Data Report Table of Contents Page 1 of 1

Section		Page No.
1.	HSG Sampling Batch Data Report Cover Sheet (Attachment 1)	1
2.	HSG Sampling Batch Data Report Table of Contents (Attachment 2)	2
3.	Independent Technical Reviewer (ITR) Review Checklist (Attachment 3)	3
Sampling Batch Data Report Forms:		
4.	Chain of Custody/Canister Tag Forms (Attachment 1 from CCP-TP-093)	5
5.	Copy of Laboratory Canister Tags	7
6.	Cleanliness Certification for needle assemblies as applicable to the Sampling Batch Data Report (or copy of the certifications from CCP-TP-093)	20
7.	Sample Drum Data Form (Attachment 2 from CCP-TP-093)	21
8.	Copy of Sampling Port Installation Records (CCP-TP-098, Attachment 1), if applicable	N/A
9.	Copy of Drum Filter Changeout Form (Attachment 1 of CCP-TP-082), if applicable.	N/A
10.	Shipment Request Forms, if applicable.	N/A
11.	72-Hour Temperature Equilibration Plots	23
12.	Copy of NCRs, if applicable	N/A

Attachment 1 – Chain of Custody/Canister Tag Chain of Custody # 593 Page 1 of 2

Location: Under Drum Lid	Point of Origin: WMF-628	Sample Matrix is Gas	Ambient Conditions
	Field Batch Number: INHSG1204		Temperature (centigrade): 26.0
			Pressure (in. Hg): 25

Site	Date	SUMMA® Canister No.	Size (mL)	TID No.	Container ID /Barcode No.	Waste Stream ID	Cleaning Batch No.	Needle Assembly Batch No.	Type SS B D F C (Note 1)	Vent Seal (Y/NA)	Start Time	End Time	Beginning Pressure (in.Hg or psig)	End Pressure (in.Hg or psig)	Sampler's Initials
IN	071712	EI209	250	0825562	N/A	N/A	436C	INHSG1203NB	B	N/A	1329	1334	25 in.Hg	2 in.Hg	
IN	071712	EID18	250	0825563	10223021	ID-RF-S5300-A	436C	INHSG1203NB	D	Y	1339	1344	25 in.Hg	2 in.Hg	
IN	071712	EI340	250	0825564	10223021	ID-RF-S5300-A	436C	INHSG1203NB	D	Y	1339	1344	25 in.Hg	0 in.Hg	
IN	071712	EIC62	250	0825565	10124637	ID-RF-S5300-A	436C	INHSG1203NB	SS	Y	1349	1354	25 in.Hg	3 in.Hg	
IN	071712	EI392	250	0825566	10102259	ID-RF-S5300-A	436C	INHSG1203NB	SS	Y	1350	1355	25 in.Hg	1 in.Hg	
IN	071712	EID01	250	0825567	10101976	ID-RF-S5300-A	429C	INHSG1203NB	SS	Y	1351	1356	25 in.Hg	3 in.Hg	
IN	071712	EIC87	250	0825568	10221733	ID-RF-S5300-A	436C	INHSG1203NB	SS	Y	1351	1356	24 in.Hg	2 in.Hg	
IN	071712	EI558	250	0825569	10217850	ID-RF-S5300-A	436C	INHSG1203NB	SS	Y	1405	1410	25 in.Hg	2 in.Hg	
IN	071712	EIB47	250	0825570	10127573	ID-RF-S5300-A	436C	INHSG1203NB	SS	Y	1354	1359	26 in.Hg	2 in.Hg	
IN	071712	EI451	250	0825571	10088793	ID-RF-S5300-A	436C	INHSG1203NB	SS	Y	1354	1359	25 in.Hg	2 in.Hg	
IN	071712	EI780	250	0825572	10186445	ID-RF-S5300-A	436C	INHSG1203NB	SS	Y	1406	1411	24 in.Hg	2 in.Hg	
IN	071712	EIB42	250	0825573	10202170	ID-RF-S5300-A	436C	INHSG1203NB	SS	Y	1407	1412	24 in.Hg	2 in.Hg	
IN	071712	EI367	250	0825574	10102536	ID-RF-S5300-A	436C	INHSG1203NB	SS	Y	1423	1428	26 in.Hg	3 in.Hg	
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Note 1: Analysis required:
C - Needle Assembly Cleanliness Certification: VOC.
SS - Single Sample: VOC, H_2, CH_4
B - Field Blank: VOC
D - Duplicate: VOC, H_2, CH_4
F - Field Reference Standard: VOC

Sampler's Signature:

Attachment 1 – Chain of Custody/Canister Tag (Continued) Chain of Custody # 593 Page 2 of 2

Field Batch Number: INHSG1204					
Comments: N/A		Instrument Section	M&TE ID No.	Calibration Due Date	Initials/Date
Analytical Laboratory - ECL		Pressure Meter	XC0566	8-16-12	7-17-12
Shipping Tracking #N/A	Method of Shipping ECL Pickup	Thermometer	XC0363	6-5-13	7-17-12
		Min /Max Thermometer	XC0553 XC0692	10-12-12 10-12-12	7-17-12
Analysis Requested VOC		Preservation Method: 0 - 40°C			
TID Number(s) 0825575		TID Initials and date: 7-18-12			

Custody Initiated By: (Sampler Name/Organization) CCP	Date/Time 7-17-12 1334		
Relinquished By: (Name/Organization) CCP	Date/Time 7-18-12 1500	Received By: (Name/Organization)	Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)	Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)	Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)	Date/Time
Final Disposition By: (Name/Organization)	Date/Time	Disposition:	

900000

GAS SAMPLE CANISTER TAG

1	N	J	7	1	7	1	2	E	I	2	0	9
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSC1204 Drum Number: ~~Field Blank~~ 00 07-17-12 N/A

Sampling Organization: CCB Sample Description: FIELD BLANK

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	070512	1330	TBL
Cleaning Batch: 436C	M= <5.0E-2	P= 640T			
Field-	C= 25" Hg	T= 28.0			
Before Sample Collection	M=	P= 25	071712	1329	DD
Field-	C= 2" Hg	T= 28.0			
After Sample Collection	M=	P= 25	071712	1334	DD
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? (Y) / N (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	7	1	7	1	2	E	I	D	1	8
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1204 Drum Number: 10223021

Sampling Organization: CCL Sample Description: DUPLICATE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	070512	1330	TBL
Cleaning Batch: 436C	M= <5.0E-2	P= 640T			
Field-	C= 25" Hg	T= 28.0	071712	1339	DD
Before Sample Collection	M=	P= 25			
Field-	C= 2" Hg	T= 28.0	071712	1344	DD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: [signature]

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-03)

GAS SAMPLE CANISTER TAG

1	N	0	7	1	7	1	2	E	I	3	4	0
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1204 Drum Number: 10223021

Sampling Organization: CCP Sample Description: DUPLICATE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	070512	1330	TBL
Cleaning Batch: 436C	M= <5.0E-2	P= 640T			
Field-	C= 25" Hg	T= 28.0	071712	1339	DO
Before Sample Collection	M=	P= 25			
Field-	C= 0" Hg	T= 28.0	071712	1344	DO
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-03)

GAS SAMPLE CANISTER TAG

1	N	0	7	1	7	1	2	E	1	3	9	2
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: 1NH561209 Drum Number: 10102259

Sampling Organization: CCL Sample Description: Sample

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	070512	1330	TBL
Cleaning Batch: 436C	M= <5.0E-2	P= 640T			
Field-	C= 25" Hg	T= 28.0	071712	1350	DD
Before Sample Collection	M=	P= 25			
Field-	C= 1" Hg	T= 28.0	071712	1355	DD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (02-05)

From: Catherine A Crowder
To: Dale A. Dower; charles.turner@wipp.ws
Subject: Needle Assembly Blanks
Date: Wednesday, July 11, 2012 3:55:40 PM

Analytical results for needle assembly equipment blanks in field batch INHSG1203NB were acceptable. Concentrations of all VOC target analytes were less than or equal to three times the MDLs listed in Table C3-2 in Permit Attachment C3.

Attachment 2 – Sample Container Data Form

Field Batch Number: INHSG1204

Container ID		Sampling Scenario	Summary Category Group	Rigid Liner (Y/N)	Rigid Liner Lid (Y/N)	Rigid Liner Lid Hole Diameter (in.)	Number of Inner Bags	Number of Liner Bags	Filter Model No.	Number of Filters	Restrictive Hydrogen Diffusivity (m/s/m)	Package Configuration Group No.
1	10223021	2	S5000	N	N	1	N/A	N/A	NucFil-020DS	1	1.90E-06	N/A
2	10124637	2	S5000	N	N	1	N/A	N/A	NucFil-020S	1	1.90E-06	N/A
3	10102259	2	S5000	N	N	1	N/A	N/A	NucFil-7DS	1	3.70E-06	N/A
4	10101976	2	S5000	N	N	1	N/A	N/A	NucFil-7DS	1	3.70E-06	N/A
5	10221733	2	S5000	N	N	1	N/A	N/A	NucFil-020DS	1	1.90E-06	N/A
6	10217850	2	S5000	N	N	1	N/A	N/A	NucFil-020DS	1	1.90E-06	N/A
7	10127573	2	S5000	Y	Y	0.3	N/A	N/A	NucFil-020	1	1.90E-06	N/A
8	10088793	3	S5000	Y	N	N/A	0	2	NucFil-019SDS	1	3.70E-06	3
9	10186445	2	S5000	Y	Y	0.3	N/A	N/A	NucFil-020DS	1	1.90E-06	N/A
10	10202170	2	S5000	N	N	1	N/A	N/A	NucFil-7DS	1	3.70E-06	N/A
11	10102536	2	S5000	N	N	1	N/A	N/A	NucFil-7DS	1	3.70E-06	N/A
12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
22	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Attachment 2 – Sample Container Data Form (Continued)

Field Batch Number: INHSG1204

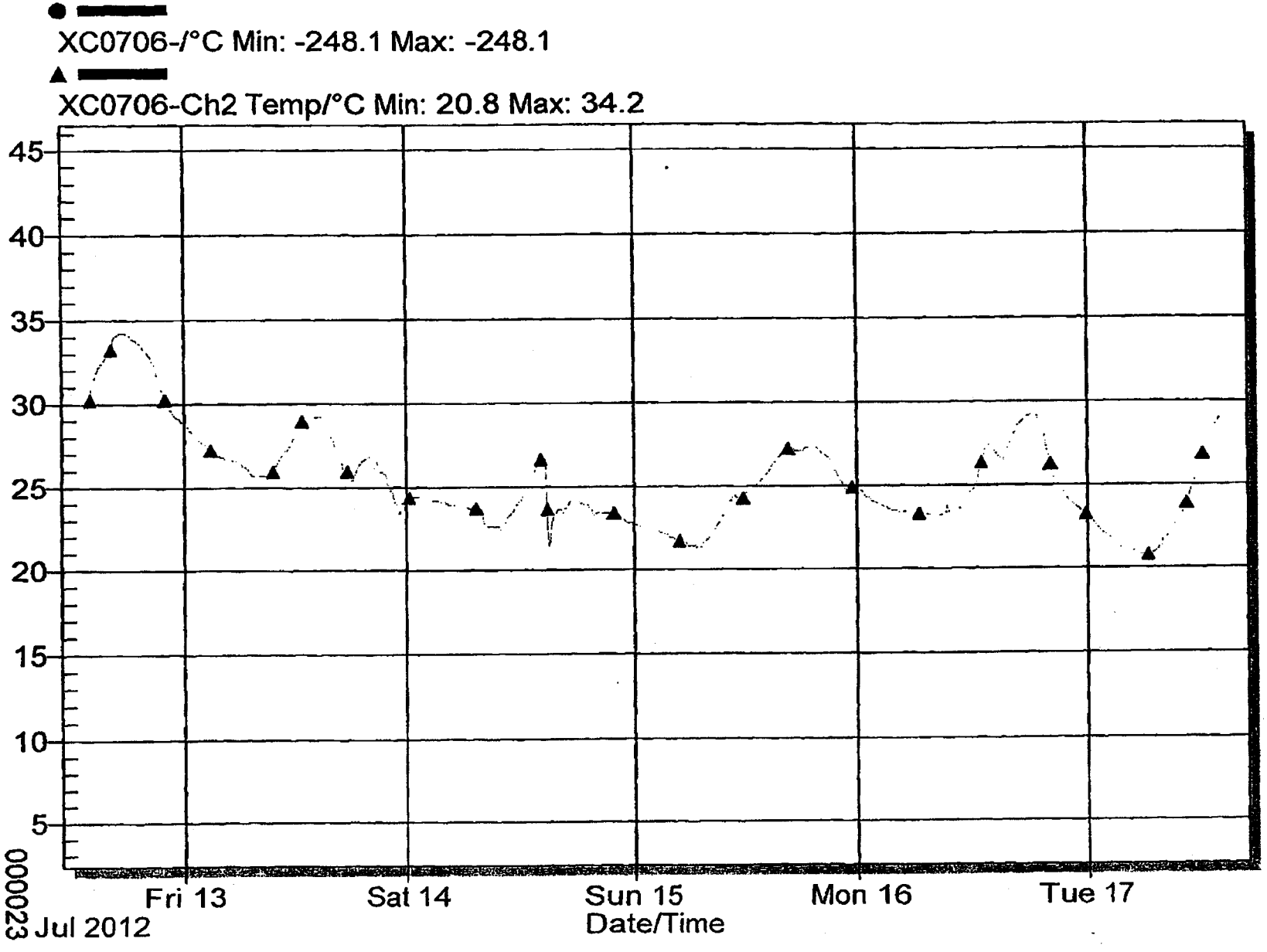
	Container ID	Closure Date	Vent Date	Permit Required Equilibrium Time (Days)	Container Age (Days)	Container Fill Factor (%)	Can This Container Be Sampled? (Y / N)	Temperature Recorder M&TE /ID No.: XC0706 12/13/12 XC0709 12/13/12 Temperature Recorder Calibration Due Date: 72 – Hour Container Equilibrium Start Date/Time	72 – Hour Container Equilibrium End Date/Time
1	10223021	3/16/72	5/23/08	12	1515	100	Y	7-12-12 1500	7-17-12 1250
2	10124637	10/14/72	12/15/06	12	2040	100	Y	7-12-12 1500	7-17-12 1250
3	10102259	12/14/73	7/25/06	11	2183	95	Y	7-12-12 1500	7-17-12 1250
4	10101976	10/2/73	7/26/06	11	2182	90	Y	7-12-12 1500	7-17-12 1250
5	10221733	1/3/72	7/11/08	12	1466	95	Y	7-12-12 1500	7-17-12 1250
6	10217850	2/11/72	5/10/08	12	1528	95	Y	7-12-12 1500	7-17-12 1250
7	10127573	10/11/72	11/16/06	29	2069	85	Y	7-12-12 1500	7-17-12 1250
8	10088793	6/29/10	6/29/10	46	748	85	Y	7-12-12 1500	7-17-12 1250
9	10186445	7/14/72	12/29/11	29	200	85	Y	7-12-12 1500	7-17-12 1250
10	10202170	4/10/72	1/5/08	11	1654	90	Y	7-12-12 1500	7-17-12 1250
11	10102536	3/4/74	7/16/06	11	2192	90	Y	7-12-12 1500	7-17-12 1250
12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
22	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

INSG Sampler: Dale Dower
Print Name

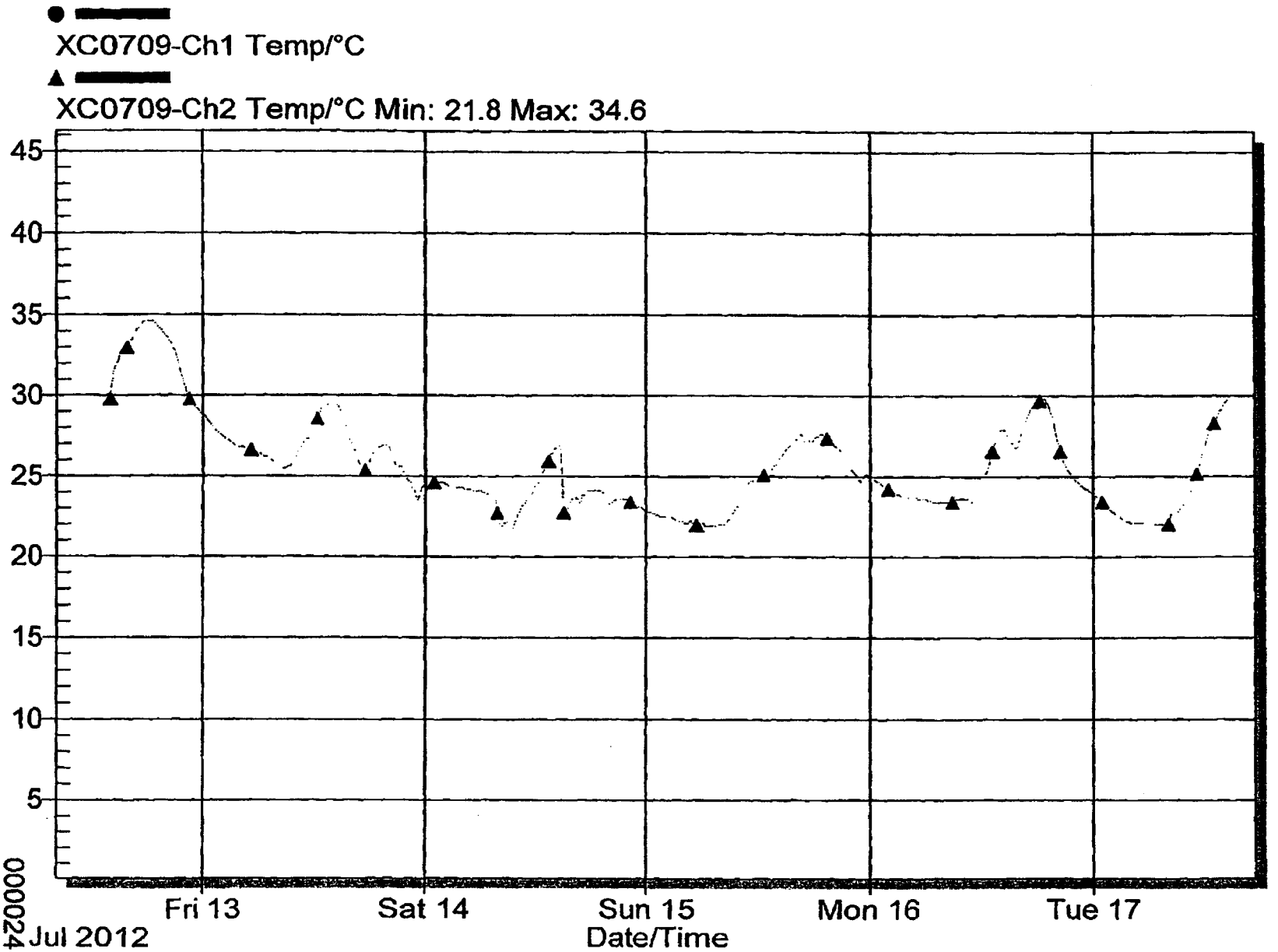
Signature

07-18-12
Date

Downloaded Data - Tuesday, July 17, 2012



Downloaded Data - Tuesday, July 17, 2012



DIVIDER

PAGE

NWP
Nuclear Waste Partnership LLC
A URS-led partnership with B&W and AREVA

CP:12:01594
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: November 15, 2012

FROM: J. A. Vernon — LOCATION: CCP Certification

TO: W. F. Verlanic ED — LOCATION: CCP Operations
Idaho National Laboratory

SUBJECT: RESULTS OF HEADSPACE GAS SAMPLING QUARTERLY REPEAT DATA GENERATION LEVEL DATA REVIEW IDAHO NATIONAL LABORATORY THIRD CALENDAR QUARTER OF 2012

Procedure CCP-TP-001, *CCP Project Level Data Validation and Verification,* requires that a repeat of Data Generation Level (DGL) review, validation and verification be performed on the data for a minimum of one randomly chosen waste container each quarter. The Site Project Manager uses this information to document that the DGL data review is being performed according to procedures.

Inter-Office Correspondence Number CP:12:01526 was issued October 23, 2012. This memorandum identified waste container 10102259 as the randomly-selected container for DGL repeat of headspace gas sampling at the Idaho National Laboratory for the third calendar quarter of 2012.

The mini-Batch Data Report containing 10102259 was reviewed for the quarterly repeat on November 12, 2012. The results of these reviews indicate that the data quality remains acceptable and no discrepancies were identified. The Project Level Verification and Validation Checklist (Attachment 9 - Rev. 19 of Procedure CCP-TP-001) has been completed and authenticated.

If you have any questions regarding this review, please contact me at Extension 7141.

JAV:jmc

cc: R. P. Kantrowitz ED
J. L. Miles ED
M. W. Pearcy ED
NTP Records Custodian GSA-212

CCP RECORDS ORIGINAL
DATE REC'D 12-27-12

Attachment 9 – CCP SPM HSG Summa Sampling Project Level Validation Checklist and Summary

BDR Number: INHSG1204_QTR0312_____ Sampling Date: 07-17-12_____

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
1. Does the Batch Data Report (BDR) contain the batch number? **Reference Source: CCP-PO-001, Table C3-12**	X			
2. Is the BDR complete according to the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-10b**	X			
3. Does the BDR contain the BDR date? **Reference Source: CCP-PO-001, Table C3-12**	X			
4. Is the sample matrix and type included for each sample in the BDR? **Reference Source: CCP-PO-001, Table C3-12**	X			
5. Is the BDR complete as defined by the process procedures? **Reference Source: CCP-PO-001, C3-10, CCP Technical Procedures**	X			
6. List all containers that have met QAOs. **Reference Source: CCP-PO-001, Table C3-12**				Container Numbers: 10223021,10102259
7. Does the BDR include the requested analyses and the name of the laboratory? **Reference Source: CCP-PO-001, Table C3-12**	X			
8. Is there a reference to or copy of any associated NCRs (if any) in the BDR? NA if no NCRs associated with the BDR. **Reference Source: CCP-PO-001, Table C3-12**			X	No NCR's were generated
9. Does the BDR include the point of origin for sampling (e.g., building number, room)? **Reference Source: CCP-PO-001, Table C3-12**	X			
10. Is the sample size included in the BDR? **Reference Source: CCP-PO-001, Table C3-12**	X			
11. Does the BDR include the sample location of each container? Note: Location within container is where the sample is taken. The BDR must specify what layer of confinement was sampled (e.g., under the lid). **Reference Source: CCP-PO-001, Table C3-12**	X			

CCP RECORDS ORIGINAL
DATE REC'D 11-13-12

Attachment 9 – CCP SPM HSG Summa Sampling Project Level Validation Checklist and Summary (Continued)

BDR Number: INHSG1204_QTR0312_____ Sampling Date: 07-17-12_____				
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
12. Is the person collecting the sample identified in the BDR and qualified? **Reference Source: CCP-PO-001, Table C3-12**	X			
13. Does the BDR contain a chain of custody record? **Reference Source: CCP-PO-001, Table C3-12**	X			
14. Does the chain of custody form correctly identify the Waste Stream ID? **Reference Source: CCP-PO-001, Table C3-12**	X			
15. Is there a reference to sampling equipment numbers or lot numbers for disposable equipment? **Reference Source: CCP-PO-001, Table C3-12**	X			
16. Is there verification of rigid liner venting? **Reference Source: CCP-PO-001, Table C3-12**	X			
17. Does the BDR include the operator/sampler signature and date and time of sampling for each sample? **Reference Source: CCP-PO-001, Table C3-12**	X			
18. Are there 20 samples or less (excluding QC) in the batch and all samples collected within 14 days of the first sample collected? **Reference Source: CCP-PO-001, C1-1b**	X			
19. Are the correct revisions of the procedures used and identified? **Reference Source: CCP-PO-001, Table C3-12**	X			
20. Are all data reporting forms complete with data reported properly (correct units and significant figures)? **Reference Source: CCP-PO-001, C3-10b(1)**	X			
21. Is there a cross-reference between waste container number and field sample number? **Reference Source: CCP-PO-001, C1-5**	X			
22. Have the samples been properly preserved (0-40° C)? **Reference Source: CCP-PO-001, Table C1-1**	X			

Attachment 9 – CCP SPM HSG Summa Sampling Project Level Validation Checklist and Summary (Continued)

BDR Number: INHSG1204_QTR0312_____ Sampling Date: 07-17-12_____				
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
23. Have the samples been properly preserved (0-40° C)? **Reference Source: CCP-PO-001, Table C1-1**	X			
24. Has the correct DAC scenario and waste packaging configuration been selected? **Reference Source: CCP-PO-001, C3-2**	X			
25. Do the samples meet the required DAC equilibrium times? **Reference Source: CCP-PO-001, C3-2**	X			
26. Prior to canister use was the following performed: equipment blank, sample canister equipment cleaning and leak check, and field reference standard (or on-line control standard) performed as required? **Reference Source: CCP-PO-001, C1-1b**	X			
27. Has one field blank per batch been collected? **Reference Source: CCP-PO-001, Table C1-2**	X			
28. Has a minimum of one equipment blank been collected for the applicable cleaning batch blanks? **Reference Source: CCP-PO-001, Table C1-2**	X			
29. Has one field duplicate per batch been collected? **Reference Source: CCP-PO-001, Table C1-2**	X			
30. Has the canister pressure and ambient temperature and pressure been recorded? **Reference Source: CCP-PO-001, Table C3-12**	X			
31. Have the ambient pressure and temperature sensors been calibrated? **Reference Source: CCP-PO-001, C1-1d**	X			
32. Have all the waste containers equilibrated for a minimum of 72 hours at 18° C or higher? **Reference Source: CCP-PO-001, C1-1a**	X			
33. Is the completed, signed, and dated Independent Technical Reviewer Checklist in the BDR? **Reference Source: CCP-PO-001, Table C3-12**	X			

Attachment 9 – CCP SPM HSG Summa Sampling Project Level Validation Checklist and Summary (Continued)

BDR Number: INHSG1204_QTR0312_____ Sampling Date: 07-17-12_____

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
34. Is the completed, signed, and dated Independent Technical Reviewer Checklist in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, Table C3-12**	X			

Comments: None

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

Jim Vernon		11-12-12
SPM Printed Name	Signature	Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

Attachment 1 – HSG Sampling Batch Data Report Cover Sheet Page 1 of 1

Headspace Gas Sampling

HSG Sampling Batch Number: INHSG1204_QTR0312

Waste Matrix Code: S5300

Waste Container Identification Numbers

10223021*	N/A
10102259	N/A
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

Comments: This is the third quarter 2012 Headspace Gas Sampling Quarterly Repeat of data generation level review for container 10102259. The drum listed with the asterisk (*) is the Duplicate Sample container for batch INHSG1204 and is also being reviewed for proper completion of checklist.

HSG Independent Technical Reviewer:

Jeri Miles
Printed Name

Signature

10/29/2012
Date

CCP RECORDS ORIGINAL
DATE REC'D 10-30-12

Attachment 2 – HSG Sampling Batch Data Report Table of Contents Page 1 of 1

Section		Page No.
1.	HSG Sampling Batch Data Report Cover Sheet (Attachment 1)	1
2.	HSG Sampling Batch Data Report Table of Contents (Attachment 2)	2
3.	Independent Technical Reviewer (ITR) Review Checklist (Attachment 3)	3
Sampling Batch Data Report Forms:		
4.	Chain of Custody/Canister Tag Forms (Attachment 1 from CCP-TP-093)	5
5.	Copy of Laboratory Canister Tags	7
6.	Cleanliness Certification for needle assemblies as applicable to the Sampling Batch Data Report (or copy of the certifications from CCP-TP-093)	11
7.	Sample Drum Data Form (Attachment 2 from CCP-TP-093)	12
8.	Copy of Sampling Port Installation Records (CCP-TP-098, Attachment 1), if applicable	N/A
9.	Copy of Drum Filter Changeout Form (Attachment 1 of CCP-TP-082), if applicable.	N/A
10.	Shipment Request Forms, if applicable.	N/A
11.	72-Hour Temperature Equilibration Plots	14
12.	Copy of NCRs, if applicable	N/A

Attachment 3 – Independent Technical Reviewer (ITR) Review Checklist

HSG Sampling Batch Number: INHSG1204_QTR0312

Description	YES	NO	NA	
1. Is the HSG Sampling BDR complete as specified in step 4.1.2 and are the field sampling records complete?	X			
Sampling Documentation	**YES**	**NO**	**NA**	**Comments**
2. Are calculations correct for the Drum Age Criteria (DAC), temperature equilibrium time, and percent complete?	X			
3. Did the containers meet the DAC?	X			
4. Did the containers meet the temperature equilibrium requirement (stored at 18°C or higher for 72-hours prior to sampling)?	X			
5. Do the temperature plots indicate the drums were stored at 18 °C (64.5 °F) or higher for 72-hours prior to sampling?	X			
5a. Are the waste stream IDs completed correctly on the Chain of Custody (COC) Form?	X			
Quality Control Samples				
Precision	**YES**	**NO**	**NA**	**Comments**
6. Was a Field Duplicate collected once per batch?	X			
Accuracy	**YES**	**NO**	**NA**	**Comments**
7. Was a Field Reference Sample collected?		X		NOT NEEDED
8. Was a Field Blank collected one per batch prior to sampling containers?	X			
Completeness	**YES**	**NO**	**NA**	**Comments**
9. Is the percentage of valid samples collected and submitted for analysis greater than or equal to 90 percent?	X			
Additional Checks	**YES**	**NO**	**NA**	**Comments**
10. Is the data technically reasonable based upon the technique used?	X			
11. Was the sampling equipment checked for leaks after sample collection?	X			
12. Was the data generation and reduction conducted in a technically correct manner?	X			
13. Was the data reported in proper units and with the correct number of significant figures?	X			
14. Were the samples maintained at a temperature between 0°C - 40°C?	X			
15. Was the equipment involved in the sampling activities in calibration (i.e., torque wrenches, ambient temperature and pressure gauges, dataloggers, ultrasonic micrometer, min/max thermometers)?	X			

Attachment 3 – Independent Technical Reviewer (ITR) Review Checklist (continued)

HSG Sampling Batch Number: INHSG1204_QTR0312

Raw Data Collection and Management	YES	NO	NA	Comments
16. Are there satisfactory equipment blanks, canister cleaning blanks, and needle assembly cleanliness results?	X			
17. Has the data been reviewed for transcription errors?	X			
18. Verify all the data is signed and dated, and the data is recorded clearly, legibly, and accurately.	X			
19. No more than 20 waste containers are in the batch (excluding the QC samples).	X			
20. Procedure Number: CCP-TP-093				Revision: 16
21. Is the procedure number and revision correct?	X			
22. All changes to original data are lined out, initialed, and dated by the individual making the change, and a justification included. (NOTE: Original data must not be obliterated or otherwise disfigured as not to be readable. Data changes shall only be made by the individual who originally collected the data or an individual authorized to change the data.)	X			

Independent Technical Reviewer:

Jeri Miles
Printed Name

Signature

10/29/2012
Date

Attachment 1 – Chain of Custody/Canister Tag Chain of Custody # 593 Page 1 of 2

Location: Under Drum Lid	Point of Origin: WMF-628	Sample Matrix is Gas	Ambient Conditions
	Field Batch Number: INHSG1204		Temperature (centigrade): 28.0
			Pressure (in. Hg): 25

Site	Date	SUMMA® Canister No.	Size (mL)	TID No.	Container ID /Barcode No.	Waste Steam ID	Cleaning Batch No.	Needle Assembly Batch No.	Type SS B D F C (Note 1)	Vent Seal (Y/N/A)	Start Time	End Time	Beginning Pressure (in.Hg or psig)	End Pressure (in.Hg or psig)	Sampler's Initials
IN	071712	EI209	250	0825562	N/A	N/A	436C	INHSG1203NB	B	N/A	1329	1334	25 in.Hg	2 in.Hg	MM
IN	071712	EID18	250	0825563	10223021	ID-RF-S5300-A	436C	INHSG1203NB	D	Y	1339	1344	25 in.Hg	2 in.Hg	MM
IN	071712	EI340	250	0825564	10223021	ID-RF-S5300-A	436C	INHSG1203NB	D	Y	1339	1344	25 in.Hg	0 in.Hg	MM
IN	071712	EIC62	250	0825565	10124637	ID-RF-S5300-A	436C	INHSG1203NB	SS	Y	1349	1354	25 in.Hg	3 in.Hg	MM
IN	071712	EI392	250	0825566	10102259	ID-RF-S5300-A	436C	INHSG1203NB	SS	Y	1350	1355	25 in.Hg	1 in.Hg	MM
IN	071712	EID01	250	0825567	10101976	ID-RF-S5300-A	429C	INHSG1203NB	SS	Y	1351	1356	26 in.Hg	3 in.Hg	MM
IN	071712	EIC87	250	0825568	10221733	ID-RF-S5300-A	436C	INHSG1203NB	SS	Y	1351	1356	24 in.Hg	2 in.Hg	MM
IN	071712	EI558	250	0825569	10217850	ID-RF-S5300-A	436C	INHSG1203NB	SS	Y	1405	1410	25 in.Hg	2 in.Hg	MM
IN	071712	EIB47	250	0825570	10127573	ID-RF-S5300-A	436C	INHSG1203NB	SS	Y	1354	1359	26 in.Hg	2 in.Hg	MM
IN	071712	EI451	250	0825571	10088793	ID-RF-S5300-A	436C	INHSG1203NB	SS	Y	1354	1359	25 in.Hg	2 in.Hg	MM
IN	071712	EI780	250	0825572	10186445	ID-RF-S5300-A	436C	INHSG1203NB	SS	Y	1406	1411	24 in.Hg	2 in.Hg	MM
IN	071712	EIB42	250	0825573	10202170	ID-RF-S5300-A	436C	INHSG1203NB	SS	Y	1407	1412	24 in.Hg	2 in.Hg	MM
IN	071712	EI367	250	0825574	10102536	ID-RF-S5300-A	436C	INHSG1203NB	SS	Y	1423	1428	26 in.Hg	3 in.Hg	MM
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Note 1. Analysis required:
C - Needle Assembly Cleanliness Certification: VOC.
SS - Single Sample: VOC, H_2, CH_4
B - Field Blank: VOC
D - Duplicate: VOC, H_2, CH_4
F - Field Reference Standard: VOC

Sampler's Signature:

000005

000005 10/29/12

Attachment 1 – Chain of Custody/Canister Tag (Continued) Chain of Custody # 593 Page 2 of 2

Field Batch Number: INHSG1204					
Comments: N/A		Instrument Section	M&TE ID No.	Calibration Due Date	Initials/Date
Analytical Laboratory - ECL		Pressure Meter	XC0566	8-16-12	7-17-12
Shipping Tracking #N/A	Method of Shipping ECL Pickup	Thermometer	XC0363	6-6-13	7-17-12
		Min /Max Thermometer	XC0553 XC0692	10-12-12 10-12-12	7-17-12
Analysis Requested VOC		Preservation Method: 0 - 40°C			
TID Number(s) 0825575		TID Initials and date: 7-18-12			

Custody Initiated By: (Sampler Name/Organization) CCP	Date/Time 7-17-12 1334		
Relinquished By: (Name/Organization) CCP	Date/Time 7-18-12 1500	Received By: (Name/Organization)	Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)	Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)	Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)	Date/Time
Final Disposition By: (Name/Organization)	Date/Time	Disposition:	

900006 7/24/12

900006

GAS SAMPLE CANISTER TAG

1	N	J	7	1	7	1	2	E	1	2	0	9
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSC1204 Drum Number: ~~Field Blank~~ 00 7-17-12 N/A

Sampling Organization: CCC Sample Description: FIELD BLANK

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	070512	1330	TBL
Cleaning Batch: 436C	M= <5.0E-2	P= 640T			
Field-	C= 25" Hg	T= 28.0	071712	1329	DD
Before Sample Collection	M=	P= 25			
Field-	C= 2" Hg	T= 28.0	071712	1334	DD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? (Y) / N (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

QM 8/28/12

~~000007~~

GAS SAMPLE CANISTER TAG

1	N	0	7	1	7	1	2	E	I	D	1	8
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site — Date — Canister ID

Batch Number: IN456120A Drum Number: 10223021

Sampling Organization: CCL Sample Description: DUPLICATE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	070512	1330	TBL
Cleaning Batch: 436C	M= <5.0E-2	P= 640T			
Field-	C= 25" Hg	T= 28.0	071712	1339	DD
Before Sample Collection	M=	P= 25			
Field-	C= 2" Hg	T= 28.0	071712	1344	DD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-03)

10/24/12

~~000008~~

GAS SAMPLE CANISTER TAG

1	N	0	7	1	7	1	2	E	I	3	4	0
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INH5G1204 Drum Number: 10223021

Sampling Organization: CCP Sample Description: DUPLICATE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	070512	1330	TBL
Cleaning Batch: 436C	M= <5.0E-2	P= 640T			
Field-	C= 25" Hg	T= 28.0	071712	1339	DD
Before Sample Collection	M=	P= 25			
Field-	C= 0" Hg	T= 28.0	071712	1344	DD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-03)

10/29/12

~~000009~~

GAS SAMPLE CANISTER TAG

1	N	0	7	1	7	1	2	E	I	3	9	2
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: 1NH5612094 Drum Number: 10102259

Sampling Organization: CCL Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	070512	1330	TBL
Cleaning Batch: 436C	M= <5.0E-2	P= 640T			
Field-	C= 25" Hg	T= 28.0			
Before Sample Collection	M=	P= 25	071712	1350	DD
Field-	C= 1" Hg	T= 28.0			
After Sample Collection	M=	P= 25	071712	1355	DD
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (02-05)

QM 10/29/12

~~000011~~

000010

From:	Catherine A Crowder
To:	Dale A. Dower; charles.turner@wipp.ws
Subject:	Needle Assembly Blanks
Date:	Wednesday, July 11, 2012 3:55:40 PM

Analytical results for needle assembly equipment blanks in field batch INHSG1203NB were acceptable. Concentrations of all VOC target analytes were less than or equal to three times the MDLs listed in Table C3-2 in Permit Attachment C3.

10/24/12

~~000020~~

Attachment 2 – Sample Container Data Form

Field Batch Number: INHSG1204

	Container ID	Sampling Scenario	Summary Category Group	Rigid Liner (Y/N)	Rigid Liner Lid (Y/N)	Rigid Liner Lid Hole Diameter (in.)	Number of Inner Bags	Number of Liner Bags	Filter Model No.	Number of Filters	Restrictive Hydrogen Diffusivity (m/s/m)	Package Configuration Group No.
1	10223021	2	S5000	N	N	1	N/A	N/A	NucFil-020DS	1	1.90E-06	N/A
2	10124637	2	S5000	N	N	1	N/A	N/A	NucFil-020S	1	1.90E-06	N/A
3	10102259	2	S5000	N	N	1	N/A	N/A	NucFil-7DS	1	3.70E-06	N/A
4	10101976	2	S5000	N	N	1	N/A	N/A	NucFil-7DS	1	3.70E-06	N/A
5	10221733	2	S5000	N	N	1	N/A	N/A	NucFil-020DS	1	1.90E-06	N/A
6	10217850	2	S5000	N	N	1	N/A	N/A	NucFil-020DS	1	1.90E-06	N/A
7	10127573	2	S5000	Y	Y	0.3	N/A	N/A	NucFil-020	1	1.90E-06	N/A
8	10088793	3	S5000	Y	N	N/A	0	2	NucFil-019SDS	1	3.70E-06	3
9	10186445	2	S5000	Y	Y	0.3	N/A	N/A	NucFil-020DS	1	1.90E-06	N/A
10	10202170	2	S5000	N	N	1	N/A	N/A	NucFil-7DS	1	3.70E-06	N/A
11	10102536	2	S5000	N	N	1	N/A	N/A	NucFil-7DS	1	3.70E-06	N/A
12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
22	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

QMA 10/24/12 000024

000012

Attachment 2 – Sample Container Data Form (Continued)

Page 2 of 2

Field Batch Number: INHSG1204

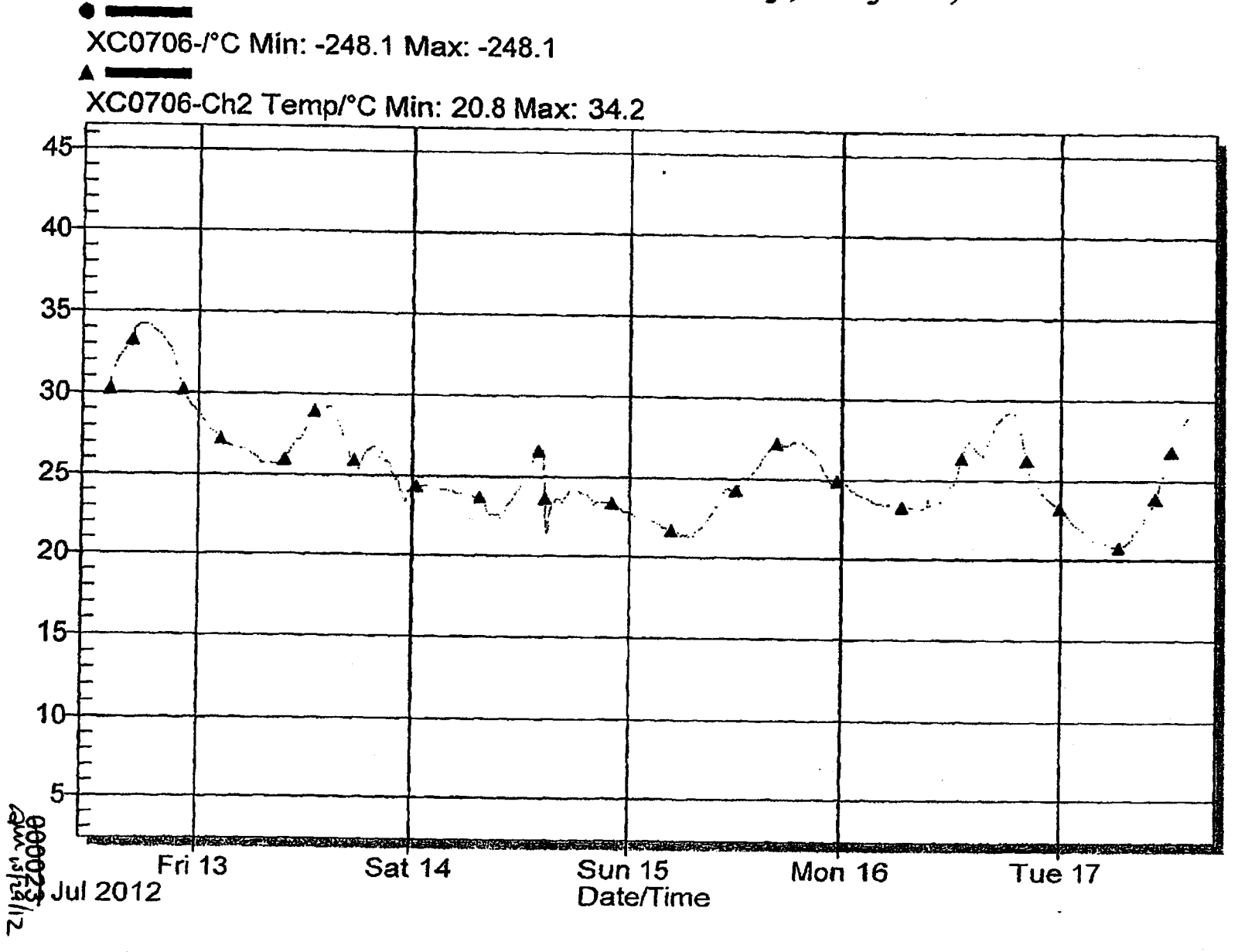
Temperature Recorder M&TE ID No.: XC0706, XC0709
Temperature Recorder Calibration Due Date: 12/13/12, 12/13/12

	Container ID	Closure Date	Vent Date	Permit Required Equilibrium Time (Days)	Container Age (Days)	Container Fill Factor (%)	Can This Container Be Sampled? (Y / N)	72 – Hour Container Equilibrium Start Date/Time	72 – Hour Container Equilibrium End Date/Time
1	10223021	3/16/72	5/23/08	12	1515	100	Y	7-12-12 1500	7-17-12 1250
2	10124637	10/14/72	12/15/06	12	2040	100	Y	7-12-12 1500	7-17-12 1250
3	10102259	12/14/73	7/25/06	11	2183	95	Y	7-12-12 1500	7-17-12 1250
4	10101976	10/2/73	7/26/06	11	2182	90	Y	7-12-12 1500	7-17-12 1250
5	10221733	1/3/72	7/11/08	12	1466	95	Y	7-12-12 1500	7-17-12 1250
6	10217850	2/11/72	5/10/08	12	1528	95	Y	7-12-12 1500	7-17-12 1250
7	10127573	10/11/72	11/16/06	29	2069	85	Y	7-12-12 1500	7-17-12 1250
8	10088793	6/29/10	6/29/10	46	748	85	Y	7-12-12 1600	7-17-12 1260
9	10186445	7/14/72	12/29/11	28	200	85	Y	7-12-12 1500	7-17-12 1250
10	10202170	4/10/72	1/5/08	11	1654	90	Y	7-12-12 1500	7-17-12 1250
11	10102536	3/4/74	7/16/06	11	2192	90	Y	7-12-12 1500	7-17-12 1250
12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
22	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

CCSG Sampler: Dale Wouder (Print Name) ______ [signature] (Signature) ______ 07-18-12 (Date)

000022 ALM 10/29/12

Downloaded Data - Tuesday, July 17, 2012



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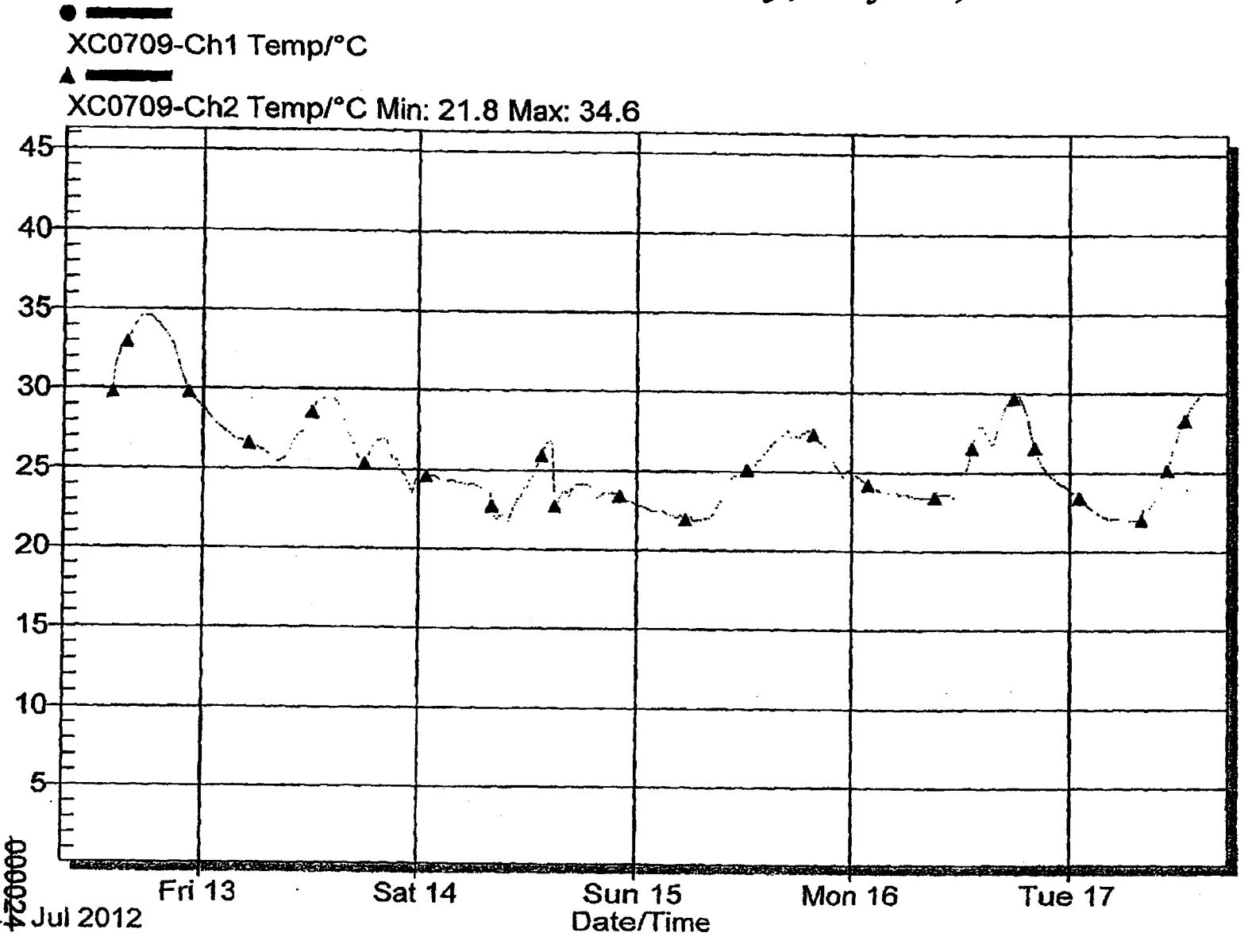

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DIVIDER PAGE ONLY

Not part of page count

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	RECORDS CUSTODIAN	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	11/19/2012
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
INHSG1204_QTR0312	BATCH DATA REPORT HSG SAMPLING (QTR)	10/29/2012	15
	N/A		

Comments

SPM CHECKLIST LOCATED IN CARLSBAD

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [X]	Paulette Henry (Signature)	Paulette Henry (Printed Name)	11-26-12 (Date)
Records Rejected [ ]	(Signature)	(Printed Name)	(Date)

Reason for Rejection:

Re-submittal:

(Signature)	(Printed Name)	(Date)

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	1818
DESTINATION TEL #	912085577396
DESTINATION ID	INL
ST. TIME	11/26 12:40
TIME USE	00'16
PAGES SENT	1
RESULT	OK

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Fax Record [ ] Electronic Record [ ] Copy

Attn:	RECORDS CUSTODIAN	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	11/19/2012
Telephone Number:	575-234-7523		

Document Number	Description	Record Date	Number of Pages
INHSG1204_QTR0312	BATCH DATA REPORT HSG SAMPLING (QTR)	10/29/2012	15
	N/A		

Comments

SPM CHECKLIST LOCATED IN CARLSBAD

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [X] Paulette Henry (Signature) Paulette Henry (Printed Name) 11-26-12 (Date)

Attachment 1 – CCP Nonconformance Report (NCR)

CCP NONCONFORMANCE REPORT (NCR)

(Use NCR Continuation, Attachment 2, if necessary)

NCR No. NCR- INL-1759-12 **Revision:** 0

1. Lot No., Heat No., or Serial No. (if applicable):	2. Process (e.g., NDA, HSG, NDE, VE, Other):	3. Batch Data Report #(s):
N/A	VE	IN-SRP-VE-000001
4. Order/Work Order/Job Control Number (if applicable):	**5. PO # (if applicable):**	**Container #(s):**
N/A	N/A	SRP12000 SRP12001
	6. Supplier (if applicable):	
	N/A	

DESCRIPTION OF NONCONFORMANCE

7a. NCR Description: ☐ < 100 nCi/g ☐ Prohibited Item ☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☑ Other

7b. Requirement(s) (Enter Implementing Procedure No., Revision, Section No., & Quoted Text):

CCP-TP-006, Rev.17 - 4.2.4 [B], "Record the description in Section 2: Waste Material Parameter and Item Description, Column 9 Rows a through z, for the corresponding WMP identified."

7c. *Actual Condition:*

Containers SRP12000 and SRP12001 have "Absorbent Mixed With Waste" entered in Section 2 - Waste Material Parameter and Item Description under Other Inorganic Materials. The correct Waste Material Parameter for Absorbent Mixed With Waste" is Organic Matrix.

7d. Have the CCP HOLD TAGS associated with this NCR been applied? ☒ YES ☐ NO **(If no is checked, explain:)**

11/28/12 LRT

8. NCR Originator:

Jim Vernon — printed name

signature

11/27/12 — date

9. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE

If YES or INDETERMINATE, enter Trend Code L in Block 10.

10. Trend Code: A

11. Responsible Manager: Jim Vernon

12. Significant Condition? ☐ YES ☒ NO **(If Yes, enter CAR No.:)**

13. Recurring Condition? ☐ YES ☒ NO **(If Yes, list NCRs and CARs:)**

14. CCP QA Engineer or CCP QA Designee validation:

Laura R Jones — printed name

Laura Lavon Jones — signature

11/27/2012 — date

COPY

CCP RECORDS ORIGINAL
DATE REC'D 12.12.12

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR- INL-1759-12 **Revision:** 0

INTERIM DISPOSITION

15a. Interim Disposition (Check Only One):

☑ N/A (See Final Disposition) ☐ Hold ☐ Conditionally Accept ☐ Conditionally Use

☐ Sort ☐ Reinspect or Retest ☐ Remediate

15b. Instructions for Completion of the Interim Disposition:

INTERIM DISPOSITION APPROVALS

16a. Responsible Manager or Individual:			16b. CCP QA Engineer or CCP QA Designee:		
printed name	signature	date	printed name	signature	date
Additional Approvals:			**Additional Approvals:**		
printed name	signature	date	printed name	signature	date

COMPLETION OF INTERIM DISPOSITION

17. Interim Disposition Complete – Responsible Manager or Individual:

printed name | signature | date

18. Interim Disposition Verified – CCP QA Engineer:

printed name | signature | date

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR- INL-1759-12 **Revision:** 0

FINAL DISPOSITION

19. **Final Disposition (Check Only One):**
☐ Use-As-Is ☐ Repair

19a. **Technical Justification – Required for Use-As-Is or Repair dispositions. (Enter "N/A" for Reject, Rework, and Scrap:)**

N/A

☐ Reject ☑ Rework ☐ Scrap

19b. **Instructions for Completion – Required for Reject, Repair, Rework, or Scrap. (Enter "N/A" for Use-As-Is:)**

1. DGL to add amount of Absorbent Mixed With Waste in Section 2 to WMP Estimate for Organic Sludge.
2. Re-calculate Container WMP weights, as applicable
3. DGL Insert NCR into BDR
4. DGL Re-Sign BDR
5. SPM to insert corrections into BDR

19c. **Corrective Actions (Actions to Prevent Recurrence – For Repair or Rework, if applicable. Enter "N/A," if not applicable, and for Use-As-Is, Reject, and Scrap):**

N/A

FINAL DISPOSITION APPROVALS

20. Responsible Manager or Individual:			21. CCP QA Engineer or CCP QA Designee:		
Jim Vernon		11/27/12	Laura P Jones	Laura Power Jones	11/27/2012
printed name	signature	date	printed name	signature	date
Additional Approvals:			**Additional Approvals:**		
printed name	signature	date	printed name	signature	date

CLOSURE

22. **Final Disposition Complete – Responsible Manager or Individual:**

Jim Vernon — 12-5-12
printed name — signature — date

23. **Attachments:** 1.- Email Documenting Reportability. 2.- Hold tag application. 3.- Basis for Closure. 4.- Hold tag removal notification

24a. **HOLD TAG removal has been verified and reconciled for all nonconforming items on the NCR.** ☑

24b. **Check if not applicable (N/A) and explain.** ☐

See Attachment 4

25. **Final Disposition Verified – NCR Closed** **CCP QA Engineer:**

Laura P Jones — Laura Power Jones — 12/12/2012
printed name — signature — date

Jones, Laura - NWP

From: Ramirez, Mike - NWP
Sent: Wednesday, November 28, 2012 7:37 AM
To: Jones, Laura - NWP
Subject: RE: New NCR-INL-1759-12

I am calling this one reportable

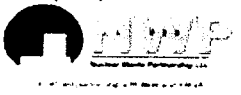
Mike Ramirez
Central Characterization Project
Nuclear Waste Partnership LLC
Contractor for the U.S. Department of Energy
(575)-234-7034

From: Jones, Laura - NWP
Sent: Tuesday, November 27, 2012 12:55 PM
To: Czyzewski, Robert - INL; Henry, Paulette; Kantrowitz, Rich - NWP; Martin, Linda - Stoller; Pearcy, Mark - NWP; Pearcy, Sheila - Stoller; Punchios, Sheri - Stoller; Verlanic, William - NWP; Vernon, Jim - NWP; Ramirez, Mike - NWP
Cc: Jones, Laura - NWP
Subject: New NCR-INL-1759-12

Robert / Bill – Please ensure that hold tag is hang and notify.
Mike / Mark – Please review for determination.
Paulette – Please post this open NCR.

Thanks,

Laura R. Jones
Quality Assurance
Nuclear Waste Partnership LLC
Contractor for the U.S. Department of Energy
Office: (575) 234-7244
Email: laura.jones@wipp.ws
Fax: (575) 234-7071



NCR - INL- 1759-12 Rev.0
Attachment 1 Page 1 of 3

Jones, Laura - NWP

From: IDC [SQLMaster@wipp.ws]
Sent: Wednesday, November 28, 2012 7:37 AM
To: Jones, Laura - NWP; Mueller, Terry - NWP; Walker, Mak (Maryann) - NWP
Subject: Project Office NCR [NCR-INL1759120] was just reviewed.

Certification Manager/Designee has just reviewed the project office NCR NCR-INL1759120 and has indicated that it [should] be reported to CBFO. IDC has already updated the NCR for you.

NCR – INL-1759-12 Rev. 0

Attachment 1 Page 2 of 3

Jones, Laura - NWP

From:	Vernon, Jim - NWP
Sent:	Wednesday, November 28, 2012 1:41 PM
To:	WIPP Notify - Special Purpose
Cc:	Verlanic, William; Pearcy, Mark - NWP; Kantrowitz, Rich - NWP; Jones, Laura - NWP; Ramirez, Mike - NWP; Cannon, Val - NWP; Fisher, AJ - NWP; Walker, Mak (Maryann) - NWP
Subject:	[ncr] 7-Day Notification NCR-INL-1759-12, Revision 0
Attachments:	NCR-INL-1759-12.pdf

The attached NCR is submitted as required by CCP-QP-004, CCP Corrective Action Management, Revision 10, Attachment 6.

- Site NCR #: NCR-INL-1759-12
- Responsible organization: CCP
- Date initiated: 11/27/12
- Individual who identified the NCR: Jim Vernon
- Deficiency: Containers SRP12000 and SRP12001 have "Absorbent Mixed With Waste" entered in Section 2 - Waste Material Parameter and Item Description under Other Inorganic Materials. The correct Waste Material Parameter for Absorbent Mixed With Waste is Organic Matrix
- Requirement Violated: CCP-TP-006, Rev.17 - 4.2.4 [B], "Record the description in Section 2: Waste Material Parameter and Item Description, Column 9 Rows a through z, for the corresponding WMP identified."
- Actions: 1. DGL to add amount of Absorbent Mixed With Waste in Section 2 to WMP Estimate for Organic Sludge.
  2. Re-calculate Container WMP weights, as applicable
  3. DGL Insert NCR into BDR
  4. DGL Re-Sign BDR
  5. SPM to insert corrections into BDR

Jim Vernon
Site Project Manager
(575)234-7141 - Work
(575)706-2981 - Cell

Nuclear Waste Partnership LLC
A URS-led partnership with B&W and AREVA

Contractor to the Department of Energy

NCR -INL-1759-12 Rev. 0
Attachment 1 Page 3 of 3

Jones, Laura - NWP

From: Poole, Jeffrey
Sent: Wednesday, November 28, 2012 12:50 PM
To: Czyzewski, Robert - INL; Jones, Laura - NWP
Subject: RE: New NCR-INL-1759-12

Laura,
The hold tags have been applied to the containers if you have any questions let me know.

Thank You
Jeffrey Poole
Visual Examination Expert
Central Characterization Program
Nuclear Waste Partnership LLC.
Contractor for the U.S. Department of Energy
Office : 208-533-0692
Cell : 208-569-0758

From: Czyzewski, Robert J. [mailto:Robert.Czyzewski@amwtp.inl.gov]
Sent: Tuesday, November 27, 2012 4:22 PM
To: Poole, Jeffrey S
Cc: Jeri.Miles@amwtp.inl.gov
Subject: FW: New NCR-INL-1759-12

Jeff:

Can you get the hold tags on and then notify Laura Jones [laura.jones@wipp.ws] that these two are tagged? I'll probably be at INTEC all day Wednesday and Thursday.

Thanks

Robert Czyzewski
QA Engineer
Nuclear Waste Partnership LLC
Contractor for the U.S. Government
(208) 526-6965; (208) 569-2752 (C)
robert.czyzewski@amwtp.inl.gov

From: Jones, Laura - NWP [mailto:laura.jones@wipp.ws]
Sent: Tuesday, November 27, 2012 12:55 PM
To: Czyzewski, Robert J.; Henry, Paulette; Kantrowitz, Rich - NWP; Martin, Linda - Stoller; Pearcy, Mark - NWP; Pearcy, Sheila - Stoller; Punchios, Sheri - Stoller; Verlanic, William - NWP; Vernon, Jim; Ramirez, Mike - NWP
Cc: Jones, Laura - NWP
Subject: New NCR-INL-1759-12

Robert / Bill – Please ensure that hold tag is hang and notify.
Mike / Mark – Please review for determination.
Paulette – Please post this open NCR.

Thanks,

Laura R. Jones

NCR -INL-1759-12 Rev.0
Attachment 2 Page 1 of 2

Quality Assurance
Nuclear Waste Partnership LLC
Contractor for the U.S. Department of Energy
Office: (575) 234-7244
Email: laura.jones@wipp.ws
Fax: (575) 234-7071

NCR – INL-A59-12 Rev. 0

Attachment 2 Page 2 of 2

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary

BDR Number: IN-SRP-VE-000001 **Examination Date:** 11/20/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
1. Is the completed, signed and dated Independent Technical Reviewer Checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, C3-10b**	X			
2. Does the BDR contain all items addressed in the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-10b**	X			
3. Does the BDR include a listing of all container numbers in the batch? **Reference Source: CCP-PO-001, C3-10b**	X			
4. List all containers that have met QAOs. **Reference Source: CCP-PO-001, C3-10b**				Container Numbers: SRP12000, SRP12001, SRP12010
5. Is the current implementing procedure and revision number included in the BDR? **Reference Source: CCP-PO-001, C3-4, C3-10b, Table C3-11**	X			
6. Is the BDR date included? **Reference Source: CCP-PO-001, Table C3-11**	X			
7. Is there a reference to or copy of any associated NCRs (if any) in the BDR? **Reference Source: CCP-PO-001, Table C3-11**	X			NCR-INL-1759-12 (SRP12000, SRP12001)
8. Are there 20 or fewer containers in the batch? **Reference Source: CCP-PO-001 C3-10**	X			
9. Are the data properly reported (i.e., data are reported in correct units and with correct significant figures). **Reference Source: CCP-PO-001 C3-10b**	X			
10. Is there evidence of verification that the physical form matches the Waste Matrix Code? **Reference Source: CCP-PO-001, C3-4**	X			
11. Is there evidence of verification that the physical form matches the waste stream description? **Reference Source: CCP-PO-001, C1-4**	X			
12. Are prohibited items absent? **Reference Source: CCP-PO-001, C3-4**	X			

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-SRP-VE-000001			Examination Date: 11/20/12	
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
13. Does observable liquid, if present, meet the criteria of the TSDF-WAC? **Reference Source: CCP-PO-001, C3-4b**	X			
14. Were discrepancies between the Visual Examination operator and the ITR with regards to identification of waste matrix code, liquids in excess of the TSDF-WAC, or compressed gases reconciled? NA if no discrepancies. **Reference Source: CCP-PO-001, C3-4b**			X	No Discrepancies
15. Are the training requirements met for the VE Expert and VE Operators who have signed the data forms? **Reference Source: CCP-PO-001, C1-4, C3-4**	X			
16. Is evidence of a satisfactory audio/video test included in the BDR? NA [not applicable] for VE Method for Newly Generated Waste. **Reference Source: CCP-PO-001, C1-4**			X	VE for Newly Generated Waste
17. If the VE was not recorded using audio/video media, does the data sheet contain the signature of two qualified operators who observed for themselves the waste being placed into the container? NA if audio/video used. **Reference Source: CCP-PO-001, C1-4**	X			
18. Are the weights/estimated weights for the 12 waste material parameters reported in kilograms (kg)? **Reference Source: CCP Technical Procedures**	X			
19. Are the descriptions for each waste material parameter included in the BDR? **Reference Source: CCP-PO-001, C1-4**	X			
20. Is the gross weight reported (in kg) for each container included in the BDR? **Reference Source: CCP Technical Procedures**	X			
21. Is the number of layers of confinement recorded? **Reference Source: CCP-PO-001, C-3d**	X			
22. Is sufficient information included in the BDR to determine the packaging configuration? **Reference Source: CCP-PO-001 C-3d**	X			

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-SRP-VE-000001 **Examination Date:** 11/20/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
23. Is the type and number of filters recorded? **Reference Source: CCP-PO-001, C-3d**	X			
24. Is the size of the rigid liner vent hole recorded to determine the appropriate DAC? NA if no liner lid. **Reference Source: CCP-PO-001, C-3d**			X	No Liner Lids
25. For Los Alamos National Laboratory (LANL) Sealed Sources, does the characterized waste container meet the definition of sealed sources per Title 10 Code of Federal Regulations (CFR) 30.4 and Title 10 CFR 835.2 (effective January 1, 2004) evidence of which is assembled as part of AK documentation? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Sources
26. For LANL Sealed Sources, are sealed sources the only non-packaging items in the waste container? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Sources
27. For LANL Sealed Sources, are the sealed sources a U.S. Department of Transportation (DOT) Special Form Class 7 (Radioactive Material) per Title 49 CFR 34.27 (effective January 1, 2004) and the certification of which is assembled as part of the AK documentation? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Sources
28. For LANL Sealed Sources, is the integrity of each sealed source validated by documented contamination survey results to meet the requirements of Title 10 CFR 34.27 (effective January 1, 2004), and assembled as part of AK documentation? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Sources

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-SRP-VE-000001 **Examination Date:** 11/20/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
29. For LANL Sealed Sources, is each sealed source a rigid sealed container less than or equal to 4 L in size or in a rigid sealed container less than or equal to 4 L? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Sources
30. For LANL Sealed Sources, AK documentation does not indicate the use of volatile organic compounds (VOCs) or VOC-bearing materials as constituents of sealed sources? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Sources
31. For LANL Sealed Sources, the outer casing of each sealed source is of a non VOC-bearing material which is verified using the VE technique at the time of packaging? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Sources

Comments: None

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

Jim Vernon		11/30/12
SPM Printed Name	Signature	Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date

SPM Printed Name	Signature	Reason	Date

Attachment 4 – CCP Waste VE Technique Batch Data Report Cover Sheet

Batch Data Report No.: IN-SRP-VE-000001

1	SRP12000
2	SRP12010
3	SRP12001
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	N A
14	LV. 11-20-12
15	
16	
17	
18	
19	
20	

ITR: Brad Stark 11-29-12

BRAD STARK (Printed Name) Brad Stark (Signature) 11-26-12 (Date)

VEE:

Spencer Pattee (Printed Name) Spencer Pattee (Signature) 11/26/12 (Date)

Spencer Pattee 11-29-12

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Attachment 3 Page 5 of 24

CCP RECORDS ORIGINAL
DATE REC'D 11-26-12

001

Attachment 3 – CCP Waste VE Technique Batch Data Report Table of Contents

Batch Data Report No.: INL-CCP-VE-000001 **Batch Data Report Date:** 11-20-12

Item	Description	Page No.
1	Attachment 4, CCP Waste VE Technique Batch Data Report Cover Sheet	1
2	Attachment 3, CCP Waste VE Technique Batch Data Report Table of Contents	2
3	CCP Waste Visual Examination Technique Data Form	3
4	Attachment 2, CCP Waste VE Technique Independent Technical Reviewer Checklist	24
5	Copy of NCRs (NA, If Not Applicable) 759 11-28-12	~~N/A~~ 27

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Attachment 3 Page 6 of 24

002

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12000							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	j.	Other Inorganic materials (OI)			9.0	N/A		15.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		9.0	N/A		15.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				WOOD (NSW)	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

005
SP 11-28-12

NCR - INL-1759-12 Rev. 0
Attachment 3 Page 7 of 24

	A	B	C	D	G	H	I	J
1				Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003				
2	Container ID:			SRP12000				
3				**Section 2: Waste Material Parameter (WMP) Estimates**				
4				9. Waste Material Parameter and Item Description	10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
29	k.	Other inorganic materials (Oi)			18.0	N/A		30.0
30		l.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		18.0	N/A		30.0
49				ABSORBENT MIXED WITH WASTE	9.0	0.1 - 2.8	0.6	15.0
50				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.9		0.0
62				N/A	N/A	0.9		0.0
63		u.	Wood		0.0	N/A		0.0
64				WOOD (NSW)	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

SUPERCEDED GSP 11-28-12

GSP 11-28-12

GSP 11-28-12

NCR TNL-1759-12 Rev. 0

Attachment 3 Page 8 of 24

	A	S	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12000							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.3	N/A		0.3
67	RUBBER BANDS (WAIP)				0.3	0.8 - 2.0	1.1	0.3
68	N/A				N/A	0.8 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				4.4	N/A		4.9
70	2 BAG OUT STUBS AND 1 TRAY LINER TIGHTLY BOUND ON TOP (WAIP)				1.6	0.9		1.8
71	PLASTIC TIGHTLY BOUND ON TOP				2.8	0.9		3.1
72	NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED				N/A	0.9		0.0
73	N/A				N/A	0.9		0.0
74	x. Organic matrix (OR)				95.1	N/A		79.3
75	x1. Sludge				95.1	N/A		79.3
76	LIGHT OLIVE GRAY PUTTY LIKE SLUDGE WITH CALCIUM SILICATE				95.1	1.0 - 1.5	1.2	79.3
77	N/A				N/A	1.0 - 1.5	0.0	0.0
78	N/A				N/A	1.0 - 1.5	0.0	0.0
79	x2. Other (See Note a)				0.0	N/A		0.0
80	N/A				N/A	0.0		0.0
81	N/A				N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83	y1. Sludge				0.0	N/A		0.0
84	N/A				N/A	1.0 - 1.5	0.0	0.0
85	N/A				N/A	1.0 - 1.5	0.0	0.0
86	N/A				N/A	1.0 - 1.5	0.0	0.0
87	y2. Roaster Oxides				0.0	N/A		0.0
88	N/A				N/A	1.5 - 4.0	0.0	0.0
89	N/A				N/A	1.5 - 4.0	0.0	0.0
90	N/A				N/A	1.5 - 4.0	0.0	0.0
91	y3. Salt				0.0	N/A		0.0
92	N/A				N/A	0.0		0.0
93	N/A				N/A	0.0		0.0
94	y4. Other (See Note a)				0.0	N/A		0.0
95	N/A				N/A	0.0		0.0
96	N/A				N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98	N/A				N/A	1.0 - 1.4	0.0	0.0
99	N/A				N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				108.8	N/A		99.5
101	13. (ORGANIC SLUDGE) weight (95.1) kg was obtained by subtracting the weighed waste weight of (13.7) kg and the container net weight of (34.0) kg from the gross weight (142.8) kg of the waste container. (142.8) - (13.7) - (34.0) = (95.1) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

006 SRP 11-28-12

	A	B	C	D	G	H	I	J
1				Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003				
2	Container ID:			SRP12000				
3				**Section 2: Waste Material Parameter (WMP) Estimates**				
4				9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v.			Rubber (R)	0.3	N/A		0.3
67				RUBBER BANDS (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w.			Plastics (waste materials) (PW)	4.4	N/A		4.9
70				2 BAG OUT STUBS AND 1 TRAY LINER TIGHTLY BOUND ON TOP (WAIP)	1.6	0.9		1.8
71				PLASTIC TIGHTLY BOUND ON TOP	2.8	0.9		3.1
72				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x.			Organic matrix (OR)	86.1	N/A		71.8
75		x1.		Sludge	86.1	N/A		71.8
76				LIGHT OLIVE GRAY PUTTY LIKE SLUDGE WITH CALCIUM SILICATE	86.1	1.0 - 1.5	1.2	71.8
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2.		Other (See Note a)	0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y.			Inorganic matrix (IN)	0.0	N/A		0.0
83		y1.		Sludge	0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2.		Roaster Oxides	0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3.		Salt	0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94		y4.		Other (See Note a)	0.0	N/A		0.0
95				N/A	N/A	0.0		0.0
96				N/A	N/A	0.0		0.0
97	z.			Soils/gravel (S)	0.0	N/A		0.0
98				N/A	N/A	1.0 - 1.4	0.0	0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa.			TOTAL	108.8	N/A		107.0
101				13. (ORGANIC SLUDGE) weight (86.1) kg was obtained by subtracting the weighed waste weight of (22.7) kg and the container net weight of (34.0) kg from the gross weight (142.8) kg of the waste container. (142.8) - (22.7) - (34.0) = (86.1) kg				
102				a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, *engineering handbook, or other technical publication. Cite reference(s) below.*				
103				b. N/A				
104								

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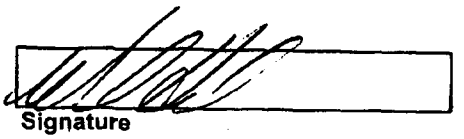
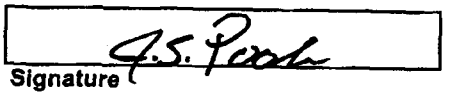
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12000	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	5.2
31. Total volume of Solidified Organics (L):	79.3
32. Total volume of Solidified Inorganics (L):	15.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	99.5
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	87.4%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:		
M. HADERLIE Enter Name	 Signature	11-28-12 Date
Visual Examination Operator 2:		
D. JACKMAN Enter Name	 Signature	11-28-12 Date
Visual Examination Expert:		
J. POOLE Enter Name	 Signature	11-28-12 Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12000	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	5.2
31. Total volume of Solidified Organics (L):	71.8
32. Total volume of Solidified Inorganics (L):	30.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	107.0
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	79.1%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:		
M. HADERLIE (Enter Name)	Signature	11-20-12 (Date)
Visual Examination Operator 2:		
D. JACKMAN (Enter Name)	Signature	11-20-12 (Date)
Visual Examination Expert:		
J. POOLE (Enter Name)	Signature J.S. Poole	11-20-12 (Date)

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	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12001							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	l.	Other inorganic materials (Oi)			9.0	N/A		15.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		9.0	N/A		15.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

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	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12001							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	i.	Other inorganic materials (Oi)			15.0	N/A		25.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 6.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		15.0	N/A		25.0
49				ABSORBENT MIXED WITH WASTE	6.0	0.1 - 2.8	0.6	10.0
50				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

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	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12001							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
66	v. Rubber (R)				0.3	N/A		0.3
67				RUBBER BANDS (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				7.5	N/A		6.4
70				1 TRAY LINER AND 2 BAG OUT STUBS TIGHTLY BOUND ON TOP OF OIL DRI (WAIP)	1.6	0.9		1.8
71				PLASTIC TIGHTLY BOUND ON TOP OF OIL DRI	5.9	0.9		6.6
72				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				106.4	N/A		88.7
75		x1. Sludge			106.4	N/A		88.7
76				LIGHT OLIVE GRAY PUTTY LIKE SLUDGE WITH CALCIUM SILICATE	106.4	1.0 - 1.5	1.2	88.7
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95				N/A	N/A	0.0		0.0
96				N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98				N/A	N/A	1.0 - 1.4	0.0	0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				123.2	N/A		112.4
101	13. (ORGANIC SLUDGE) weight (106.4) kg was obtained by subtracting the weighed waste weight of (16.8) kg and the container net weight of (34.0) kg from the gross weight (157.2) kg of the waste container. (157.2) - (16.8) - (34.0) = (106.4) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

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Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003

Container ID: SRP12001

Section 2: Waste Material Parameter (WMP) Estimates

9. Waste Material Parameter and Item Description	10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
v. Rubber (R)	0.3	N/A		0.3
RUBBER BANDS (WAIP)	0.3	0.9 - 2.0	1.1	0.3
N/A	N/A	0.9 - 2.0	0.0	0.0
w. Plastics (waste materials) (PW)	7.5	N/A		8.4
1 TRAY LINER AND 2 BAG OUT STUBS TIGHTLY BOUND ON TOP OF OIL DRI (WAIP)	1.6	0.9		1.8
PLASTIC TIGHTLY BOUND ON TOP OF OIL DRI	5.9	0.9		6.6
NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
N/A	N/A	0.9		0.0
x. Organic matrix (OR)	100.4	N/A		83.7
x1. Sludge	100.4	N/A		83.7
LIGHT OLIVE GRAY PUTTY LIKE SLUDGE WITH CALCIUM SILICATE	100.4	1.0 - 1.5	1.2	83.7
N/A	N/A	1.0 - 1.5	0.0	0.0
N/A	N/A	1.0 - 1.5	0.0	0.0
x2. Other (See Note a)	0.0	N/A		0.0
N/A	N/A	0.0		0.0
N/A	N/A	0.0		0.0
y. Inorganic matrix (IN)	0.0	N/A		0.0
y1. Sludge	0.0	N/A		0.0
N/A	N/A	1.0 - 1.5	0.0	0.0
N/A	N/A	1.0 - 1.5	0.0	0.0
N/A	N/A	1.0 - 1.5	0.0	0.0
y2. Roaster Oxides	0.0	N/A		0.0
N/A	N/A	1.5 - 4.0	0.0	0.0
N/A	N/A	1.5 - 4.0	0.0	0.0
N/A	N/A	1.5 - 4.0	0.0	0.0
y3. Salt	0.0	N/A		0.0
N/A	N/A	0.0		0.0
N/A	N/A	0.0		0.0
y4. Other (See Note a)	0.0	N/A		0.0
N/A	N/A	0.0		0.0
N/A	N/A	0.0		0.0
z. Soils/gravel (S)	0.0	N/A		0.0
N/A	N/A	1.0 - 1.4	0.0	0.0
N/A	N/A	1.0 - 1.4	0.0	0.0
aa. TOTAL	123.2	N/A		117.4

13. (ORGANIC SLUDGE) weight (100.4) kg was obtained by subtracting the weighed waste weight of (22.8) kg and the container net weight of (34.0) kg from the gross weight (157.2) kg of the waste container. (157.2) - (22.8) - (34.0) = (100.4) kg

a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.

b. N/A

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Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12001	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	8.7
31. Total volume of Solidified Organics (L):	88.7
32. Total volume of Solidified Inorganics (L):	15.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	112.4
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	86.4%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:		
D. JACKMAN Enter Name	Signature	11-28-12 Date
Visual Examination Operator 2:		
M. HADERLIE Enter Name	Signature	11-28-12 Date
Visual Examination Expert:		
J. POOLE Enter Name	Signature	11-28-12 Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12001	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	8.7
31. Total volume of Solidified Organics (L):	83.7
32. Total volume of Solidified Inorganics (L):	25.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	117.4
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	81.5%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

D. JACKMAN		11-20-12
Enter Name	Signature	Date

Visual Examination Operator 2:

M. HADERLIE		11-20-12
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE	E.S. Poole	11-20-12
Enter Name	Signature	Date

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Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist

Batch Data Report No.: IN-SRP-VE-000001

1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods used?	☐ NO	☑ YES	☐ NA
a. Was the description of the waste items adequate?	☐ NO	☑ YES	☐ NA
2. Was the correct revision of operating procedure used? (Attachment 1, Section 1, Line 5)	☐ NO	☑ YES	☐ NA
3. Were the following calculation spot checks performed?			
a. Attachment 1, Section 2: Verify the total waste volume in Column 12, Row aa does not exceed 208 L for a 55-gallon drum or 1456 L for an SWB and verify the estimated weights in Column 10, Row aa matches the measured net weight of waste in Attachment 1, Section 4, Row 27.	☐ NO	☑ YES	☐ NA
b. Attachment 1, Section 5: Verify the total waste volume in Row 33 a., matches the total waste volume in Section 2, Column 12, Row aa.	☐ NO	☑ YES	☐ NA
c. Attachment 1, Section 1: Check hand calculations in Lines 6h and 6p, and any additional hand calculations recorded in the comments field or in Section 2, Line 13.	☐ NO	☑ YES	☐ NA
4. Is only one waste stream selected in Line 34 of Attachment 1, Section 5, and is it consistent with the values shown in Attachment 1, Section 2, Column 12?	☐ NO	☑ YES	☐ NA
5. Is the data entered in the correct units and correct number of significant figures?	☐ NO	☑ YES	☐ NA
6. Were the data reviewed for transcription errors?	☐ NO	☑ YES	☐ NA
7. Does the BDR include VE for up to 20 containers?	☐ NO	☑ YES	☐ NA
8. Are BDR contents complete and do they match, Attachment 3, CCP Waste VE Batch Data Report Table of Contents?	☐ NO	☑ YES	☐ NA
9. Was completeness verified for data entry on the CCP VE Technique Data Form for the following?			
a. Section 1	☐ NO	☑ YES	☐ NA
b. Section 2	☐ NO	☑ YES	☐ NA
c. Section 3	☐ NO	☑ YES	☐ NA
d. Section 4	☐ NO	☑ YES	☐ NA
e. Section 5	☐ NO	☑ YES	☐ NA

NCR – INL-1759-12 (Rev. 0) Attachment 3 Page 19 of 24

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: IN-SRP-VE-00000\

10. Is all the data signed and dated in Attachment 1, Section 6, using reproducible ink, and by the individual(s) generating it?	☐ NO	☑ YES	☐ NA
11. Is all data entered clearly, legibly, and accurately?	☐ NO	☑ YES	☐ NA
12. Were discrepancies between the operators reconciled?	☐ NO	☐ YES	☑ NA
13. Are all changes to original data lined out, initialed and dated by the individual making the changes?	☐ NO	☐ YES	☑ NA
14. Were data changes made by the individual who originally collected the data or an equally qualified individual?	☐ NO	☐ YES	☑ NA
15. Was the DPS scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☑ YES	☐ NA
16. Was the daily DPS scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☑ YES	☐ NA
17. Was the container scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☑ YES	☐ NA
18. Was the daily container scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☑ YES	☐ NA
19. Was the torque wrench(es) in calibration prior to VE Technique and documented correctly?	☐ NO	☑ YES	☐ NA
20. Were NCR(s) initiated as indicated in Attachment 1, Section 1, dispositioned, and approved appropriately?	☐ NO	☐ YES	☑ NA
21. Was the correct waste stream and waste matrix code assigned?	☐ NO	☑ YES	☐ NA
22. Is there a valid VE data form for each drum in the batch?	☐ NO	☑ YES	☐ NA
23. Were the operators trained and qualified in accordance with the applicable requirements?	☐ NO	☑ YES	☐ NA

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: IN-SRP-VE-00000\

24. Was precision maintained by reconciling any discrepancies between the operator(s) and the ITR with regard to identification of waste matrix code, liquids in excess of WIPP Hazardous Waste Facility Permit and WIPP Waste Acceptance Criteria limits and compressed gases?	☐ NO	☐ YES	☑ NA

Comments:

12, # 24 marked N/A because there were no discrepancies. BRS 11/26/12

~~# 13, # 14 marked N/A because there were no changes made BRS 11/26/12~~ BRS 11-29-12

~~# 20 marked N/A because there was not an NCR. BRS 11/26/12~~ BRS 11-29-12 BRS 11-29-12

BRS 11-29-12

RE ITRd due to the NCR. NCR INL-1759-12 BRS 11-29-12

I have reviewed 100 percent of the container-specific and batch data in this BDR and find it acceptable.

ITR: BRAD STARK (Printed Name) Brad Stark (Signature) 11-26-12 (Date) 11-29-12

NCR – INL-1759-12 Rev. 0

Attachment 3 Page 21 of 24

Attachment 1 – CCP Nonconformance Report (NCR)

CCP NONCONFORMANCE REPORT (NCR)

(Use NCR Continuation, Attachment 2, if necessary)

NCR No. NCR- INL-1759-12 **Revision:** 0

1. Lot No., Heat No., or Serial No. (if applicable): N/A	**2. Process (e.g., NDA, HSG, NDE, VE, Other):** VE	**3. Batch Data Report #(s):** IN-SRP-VE-000001
4. Order/Work Order/Job Control Number (if applicable): N/A	**5. PO # (if applicable):** N/A	**Container #(s):** SRP12000 SRP12001
	6. Supplier (if applicable): N/A	

DESCRIPTION OF NONCONFORMANCE

7a. NCR Description: ☐ < 100 nCi/g ☐ Prohibited Item ☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WMS/WDS ☑ Other

7b. Requirement(s) (Enter Implementing Procedure No., Revision, Section No., & Quoted Text):
CCP-TP-006, Rev.17 - 4.2.4 [B], "Record the description in Section 2: Waste Material Parameter and Item Description, Column 9 Rows a through z, for the corresponding WMP identified."

7c. Actual Condition:
Containers SRP12000 and SRP12001 have "Absorbent Mixed With Waste" entered in Section 2 - Waste Material Parameter and Item Description under Other Inorganic Materials. The correct Waste Material Parameter for Absorbent Mixed With Waste" is Organic Matrix.

7d. Have the CCP HOLD TAGS associated with this NCR been applied? ☒ YES ☐ NO **(If no is checked, explain:)**
11/28/12 LRT

8. NCR Originator:
Jim Vernon (printed name) — signature — 11/27/12 (date)

9. Does the identified condition have the potential to impact AK?
If YES or INDETERMINATE, enter Trend Code L in Block 10. ☐ YES ☒ NO ☐ INDETERMINATE

10. Trend Code: A

11. Responsible Manager: Jim Vernon

12. Significant Condition? ☐ YES ☒ NO **(If Yes, enter CAR No.:)**

13. Recurring Condition? ☐ YES ☒ NO **(If Yes, list NCRs and CARs:)**

14. CCP QA Engineer or CCP QA Designee validation:
Laura R. Jones (printed name) — Laura Lavon Jones (signature) — 11/27/2012 (date)

NCR - INL-1759-12 Rev. 0
Attachment 3 Page 22 of 24

027
SSP 11-28-12

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR- INL-1759-12 **Revision:** 0

INTERIM DISPOSITION

15a. Interim Disposition (Check Only One):

☑ N/A (See Final Disposition) ☐ Hold ☐ Conditionally Accept ☐ Conditionally Use

☐ Sort ☐ Reinspect or Retest ☐ Remediate

15b. Instructions for Completion of the Interim Disposition:

INTERIM DISPOSITION APPROVALS

16a. Responsible Manager or Individual:			16b. CCP QA Engineer or CCP QA Designee:		
printed name	signature	date	printed name	signature	date
Additional Approvals:			Additional Approvals:		
printed name	signature	date	printed name	signature	date

COMPLETION OF INTERIM DISPOSITION

17. Interim Disposition Complete – Responsible Manager or Individual:

printed name signature date

18. Interim Disposition Verified – CCP QA Engineer:

printed name signature date

NCR – INL-1759-12 Rev. 0

Attachment 3 Page 23 of 24

028
GSP 11-28-12

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR- INL-1759-12 **Revision:** 0

FINAL DISPOSITION

19. Final Disposition (Check Only One):
☐ Use-As-Is ☐ Repair

19a. Technical Justification – Required for Use-As-Is or Repair dispositions. (Enter "N/A" for Reject, Rework, and Scrap:)

N/A

☐ Reject ☑ Rework ☐ Scrap

19b. Instructions for Completion – Required for Reject, Repair, Rework, or Scrap. (Enter "N/A" for Use-As-Is:)

1. DGL to add amount of Absorbent Mixed With Waste in Section 2 to WMP Estimate for Organic Sludge.
2. Re-calculate Container WMP weights, as applicable
3. DGL Insert NCR into BDR
4. DGL Re-Sign BDR
5. SPM to insert corrections into BDR

19c. Corrective Actions (Actions to Prevent Recurrence – For Repair or Rework, if applicable. Enter "N/A," if not applicable, and for Use-As-Is, Reject, and Scrap):

N/A

FINAL DISPOSITION APPROVALS

20. Responsible Manager or Individual:			21. CCP QA Engineer or CCP QA Designee:		
Jim Vernon		11/27/12	Laura L Jones	Laura Lee Jones	11/27/2012
printed name	signature	date	printed name	signature	date
Additional Approvals:			Additional Approvals:		
printed name	signature	date	printed name	signature	date

CLOSURE

22. Final Disposition Complete – Responsible Manager or Individual:

printed name signature date

23. Attachments:

24a. HOLD TAG removal has been verified and reconciled for all nonconforming items on the NCR. ☐
24b. Check if not applicable (N/A) and explain. ☐

25. Final Disposition Verified – NCR Closed CCP QA Engineer:

printed name signature date

NCR – INL-1759-12 Rev. 0

Attachment 3 Page 24 of 24

029
95P 11-28-12

Jones, Laura - NWP

From: Czyzewski, Robert - INL
Sent: Tuesday, December 11, 2012 1:20 PM
To: Jones, Laura - NWP

Laura:

The hold tags on SRP12000 and SRP12001 for NCR INL-1759-12 have been removed.

Robert Czyzewski
QA Engineer
Nuclear Waste Partnership LLC
Contractor for the U.S. Government
(208) 526-6965; (208) 569-2752 (C)
robert.czyzewski@amwtp.inl.gov

NCR -INL-1759-12 Rev. 0
Attachment 4 Page 1 of 1

DIVIDER

PAGE

Attachment 1 – CCP Nonconformance Report (NCR)

CCP NONCONFORMANCE REPORT (NCR)

(Use NCR Continuation, Attachment 2, if necessary)

NCR No. NCR-INL-0418-12 **Revision:** 1

1. Lot No., Heat No., or Serial No. (if applicable):	2. Process (e.g., NDA, HSG, NDE, VE, Other):	3. Batch Data Report #(s):
N/A	RTR	INRTR5050041
4. Order/Work Order/Job Control Number (if applicable):	5. PO # (if applicable):	Container #(s):
N/A	N/A	10029197
	6. Supplier (if applicable):	
	N/A	

DESCRIPTION OF NONCONFORMANCE

7a. NCR Description: ☐ < 100 nCi/g ☐ Prohibited Item ☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☒ Other

7b. Requirement(s) (Enter Implementing Procedure No., Revision, Section No., & Quoted Text):

CCP-PO-001, Rev. 20 Section C1-3 "A video and audio recording is made of the waste container scan and is maintained as a Non-Permanent Record."

7c. Actual Condition:

The RTR video recording for container 10029197 is incomplete. The nonconforming condition in this NCR was discovered during an extent-of-condition review conducted in response to CAR-INL-0001-12.

Revision 1: Change instructions in final disposition.

7d. Have the CCP HOLD TAGS associated with this NCR been applied? ☐ YES ☐ NO (If no is checked, explain:)

8. NCR Originator:

Carolina Soaterna (printed name) — Carolina Soaterna (signature) — 5/29/13 (date)

9. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE

If YES or INDETERMINATE, enter Trend Code L in Block 10.

10. Trend Code: H

11. Responsible Manager: Jim Vernon

12. Significant Condition? ☒ YES ☐ NO (If Yes, enter CAR No.:) CAR-INL-0001-12

13. Recurring Condition? ☒ YES ☐ NO (If Yes, list NCRs and CARs:) NCR-INL-0396-12 Rev.0

14. CCP QA Engineer or CCP QA Designee validation:

Laura Jones (printed name) — Laura Rausch Jones (signature) — 05/29/2013 (date)

COPY

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL-0418-12 **Revision: 1**

INTERIM DISPOSITION

15a. Interim Disposition (Check Only One):

☒ N/A (See Final Disposition) ☐ Hold ☐ Conditionally Accept ☐ Conditionally Use

☐ Sort ☐ Reinspect or Retest ☐ Remediate

15b. Instructions for Completion of the Interim Disposition:

N/A

INTERIM DISPOSITION APPROVALS

16a. Responsible Manager or Individual:			16b. CCP QA Engineer or CCP QA Designee:		
printed name	signature	date	printed name	signature	date
Additional Approvals:			**Additional Approvals:**		
printed name	signature	date	printed name	signature	date

COMPLETION OF INTERIM DISPOSITION

17. Interim Disposition Complete – Responsible Manager or Individual:

printed name signature date

18. Interim Disposition Verified – CCP QA Engineer:

printed name signature date

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL-0418-12 **Revision: 1**

FINAL DISPOSITION

19. Final Disposition (Check Only One):
☐ Use-As-Is ☐ Repair

19a. Technical Justification – Required for Use-As-Is or Repair dispositions. (Enter "N/A" for Reject, Rework, and Scrap:)

N/A

☒ Reject ☐ Rework ☐ Scrap

19b. Instructions for Completion – Required for Reject, Repair, Rework, or Scrap. (Enter "N/A" for Use-As-Is:)

Return to INL

19c. Corrective Actions (Actions to Prevent Recurrence – For Repair or Rework, if applicable. Enter "N/A," if not applicable, and for Use-As-Is, Reject, and Scrap):

N/A

FINAL DISPOSITION APPROVALS

20. Responsible Manager or Individual:			21. CCP QA Engineer or CCP QA Designee:		
Jim Vernon	[signature]	5-29-13	Laura Jones	Laura Lauren Jones	05/29/13
printed name	signature	date	printed name	signature	date
Additional Approvals:			Additional Approvals:		
printed name	signature	date	printed name	signature	date

CLOSURE

22. Final Disposition Complete – Responsible Manager or Individual:

printed name signature date

23. Attachments: 1.- Email Documenting Reportability.

24a. HOLD TAG removal has been verified and reconciled for all nonconforming items on the NCR. ☐

24b. Check if not applicable (N/A) and explain. ☐

25. Final Disposition Verified – NCR Closed CCP QA Engineer:

printed name signature date

Jones, Laura - NWP

From: IDC [SQLMaster@wipp.ws]
Sent: Thursday, May 30, 2013 6:53 AM
To: Jones, Laura - NWP; Mueller, Terry - NWP; Walker, Mak (Maryann) - NWP; Morrison, Jim - NWP
Subject: Project Office NCR [NCR-INL0418121] was just reviewed.

Certification Manager/Designee has just reviewed the project office NCR NCR-INL0418121 and has indicated that it [should NOT] be reported to CBFO. IDC has already updated the NCR for you.

NCR - INL-0418-12 Rev. 1

Attachment 1 Page 1 of 1

Attachment 1 – CCP Nonconformance Report (NCR)

NCR No. NCR-INL- 0418-12	Revision 0	
1. Lot No./Heat No. or Serial No. (as applicable): N/A	2. Process (e.g., NDA, HSG, NDE, VE, Other): RTR	3. Batch Data Report #(s): INRTR5050041
4. Order/Work Order/Job Control Number (as applicable): N/A	5. PO # (as applicable): N/A	Container #(s): 10029197
	6. Supplier (as applicable): N/A	

DESCRIPTION OF NONCONFORMANCE

7. (a) NCR Description: ☐ < 100 nCi/g ☐ Prohibited Item ☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☒ Other

7. (b) Description of Nonconformance Required Condition (Implementing Procedure, Revision, Section, & Text):

CCP-PO-001, Rev. 20 Section C1-3 "A video and audio recording is made of the waste container scan and is maintained as a Non-Permanent Record."

7. (c) Actual Condition

"The RTR video recording for container 10029197 is incomplete. The nonconforming condition in this NCR was discovered during an extent-of-condition review conducted in response to CAR-INL-0001-12."

8. NCR Originator (Print name, sign, and date)	9. CCP QA Engineer or Designee Validation (Print name, sign, and date)
Jim Vernon 5-3-12	Laura R. Jones 05/03/12

9a. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE
If YES or INDETERMINATE, then apply Trend Code L in Block 12.

9b. Have the CCP HOLD TAGS associated with the NCR been applied? ☐ YES ☐ NO If no is marked, provide an explanation.

10. Significant Condition? (If Yes, List CAR)	11. Recurring Condition?
05/03/12 LRS ☒ YES ☐ NO CAR-INL-0001-12.	☑ YES ☒ NO (If YES, List NCRs/CARs) 05/03/12 LRS NCR-INL-0396-12 Rev.0 05/13/12 LRS
12. Trend Code: H	13. Responsible Manager: Jim Vernon

SUPERSEDED BY REV 1 05/29/2013 LA

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL- 0418-12 Revision 0	
INTERIM DISPOSITION	
14. Interim Disposition (Check One) ☒ N/A (See Final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort ☐ Reinspect/Retest ☐ Remediate (a) Instructions for Completion of the Interim Disposition:	
INTERIM DISPOSITION APPROVALS	
15 .Responsible Manager/Individual (Print, sign, and date)	16. CCP QA Engineer or Designee (Print, sign and date)
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
COMPLETION OF INTERIM DISPOSITION	
17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date)	
18. Interim Disposition Verified CCP QA Engineer: (Print, sign and date)	

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL- 0418-12 Revision 0

FINAL DISPOSITION

19. Final Disposition (Check One)
☐ Use-As-Is ☒ Reject ☐ Repair ☐ Rework ☐ Scrap

(a) Technical Justification (Required for Use-As-Is and Repair dispositions, Enter N/A for Reject, Scrap, or Rework dispositions.)
N/A

(b) Instructions for Completion (Required for Reject, Repair, Rework and Scrap – Enter N/A for Use-As-Is).
Reject container from BDR. Process container through another RTR and provide data in another batch.

(c) Corrective Actions (Actions to Prevent Recurrence – Required for Repair and Rework; Enter N/A for Use-As-Is-, Reject, and Scrap).
N/A

FINAL DISPOSITION APPROVALS

20. Responsible Manager/Individual: (Print, sign, and date)	21. CCP QA Engineer or Designee: (Print, sign, and date)
Jim Vernon 5-3-12	Laura R. Jones 05/03/12
Additional Approvals: (Print, sign, and date)	Additional Approvals: (Print, sign, and date)

CLOSURE

22. Final Disposition Complete Responsible Manager/Individual: (Print, sign, and date)

23. Attachments: 1.- Email Documenting Repatability. 2.- Hold tag application notification

24. (a) HOLD TAG removal has been validated and reconciled for all nonconforming items on the NCR. ☐
(b) Check if not applicable (N/A) and provide an explanation here or on a continuation sheet. ☐

25. Final Disposition Verified – NCR Closed CCP QA Engineer: (Print, sign, and date)

Jones, Laura - WTS

From: Pearcy, Mark - WTS
Sent: Thursday, May 03, 2012 3:31 PM
To: Jones, Laura - WTS
Cc: Vernon, Jim - WTS
Subject: RE: New NCR-INL-0418-12

Reportable

Jim,
Please make the notification to WIPP notify.

Mark Pearcy
Central Characterization Project
Washington TRU Solutions LLC
Contractor for the U.S. Department of Energy
575-234-7394 (W)
575-706-0094 (C)

From: Jones, Laura - WTS
Sent: Thursday, May 03, 2012 3:17 PM
To: Kantrowitz, Rich - WTS; Keathley, Suzanne - Stoller; Pearcy, Mark - WTS; Pearcy, Sheila - Stoller; Verlanic, William - WTS; Vernon, Jim - WTS; Young, Rachel - WTS; Yturralde, Jewell - Stoller
Cc: Gomez, Chris - WTS; Jones, Laura - WTS
Subject: New NCR-INL-0418-12

Rachel / Bill – Please ensure that hold tag is applied and send notification when this is completed.
Mark – Please review for notification purposes.
Suzanne – Please post this open NCR.

Thanks,

Laura R. Jones
Quality Assurance
Washington TRU Solutions, LLC
Contractor for the U.S. Department of Energy
Office: (575) 234-7244
Email: laura.jones@wipp.ws
Fax: (575) 234-7071

Jones, Laura - WTS

From: Vernon, Jim - WTS
Sent: Friday, May 04, 2012 11:30 AM
To: WIPP Notify - Special Purpose
Cc: Pearcy, Mark - WTS; Jones, Laura - WTS; Kantrowitz, Rich - WTS; Broomfield, Barbara - INL; Gomez, Chris - WTS; Cannon, Val - WTS; Fisher, AJ - WTS
Subject: [ncr] 7-Day Notification NCR-INL-0418-12, Revision 0
Attachments: NCR-INL-0418-12.pdf

The attached NCR is submitted as required by CCP-QP-004, CCP Corrective Action Management, Revision 10, Attachment 6.

- Site NCR #: NCR-INL-0418-12
- Responsible organization: CCP
- Date initiated: 5/3/12
- Individual who identified the NCR: Jim Vernon
- Deficiency: "The RTR video recording for container 10029197 is incomplete. The nonconforming condition in this NCR was discovered during an extent-of-condition review conducted in response to CAR-INL-0001-12."
- Requirement Violated: CCP-PO-001, Rev. 20 Section C1-3 "A video and audio recording is made of the waste container scan and is maintained as a Non-Permanent Record."
- Actions: Reject container from BDR. Process container through another RTR and provide data in another batch.

Date closed, if applicable: Not closed.

Jim Vernon
Washington TRU Solutions
Contractor to the Department of Energy
Site Project Manager
575-234-7141 - Work
575-706-2981 - Cell

NCR - INL-0418-12 Rev. 0
Attachment 1 Page 2 of 2

Jones, Laura - WTS

From: Young, Rachel S. [Rachel.Young@amwtp.inl.gov]
Sent: Thursday, May 03, 2012 3:49 PM
To: Jones, Laura - WTS
Subject: RE: New NCR-INL-0418-12

Hi Laura,
The container 10029197 on NCR-INL-0418-12 is currently inaccessible to apply the hold tag.

Thanks,
Rachel Young
CCP Quality Assurance
INL
208-526-6969
younrs@amwtp.inl.gov
Washington TRU Solutions LLC
Contractor for the U.S. Department of Energy

From: Jones, Laura - WTS [mailto:laura.jones@wipp.ws]
Sent: Thursday, May 03, 2012 3:17 PM
To: Kantrowitz, Rich - WTS; Keathley, Suzanne - Stoller; Pearcy, Mark - WTS; Pearcy, Sheila - Stoller; Verlanic, William - WTS; Vernon, Jim; Young, Rachel - WTS; Yturralde, Jewell - Stoller
Cc: Gomez, Chris - WTS; Jones, Laura - WTS
Subject: New NCR-INL-0418-12

Rachel / Bill – Please ensure that hold tag is applied and send notification when this is completed.
Mark – Please review for notification purposes.
Suzanne – Please post this open NCR.

Thanks,

Laura R. Jones
Quality Assurance
Washington TRU Solutions, LLC
Contractor for the U.S. Department of Energy
Office: (575) 234-7244
Email: laura.jones@wipp.ws
Fax: (575) 234-7071

NCR – INL-0418-12 Rev. 0
Attachment 2 Page 1 of 1

DIVIDER

PAGE

Attachment 1 – CCP Nonconformance Report (NCR)

NCR No. NCR-INL- 0396-12	Revision 1	
1. Lot No./Heat No. or Serial No. (as applicable): N/A	2. Process (e.g., NDA, HSG, NDE, VE, Other): RTR	3. Batch Data Report #(s): INRTR5060253
4. Order/Work Order/Job Control Number (as applicable): N/A	5. PO # (as applicable): N/A	Container #(s): 10101901
	6. Supplier (as applicable): N/A	

DESCRIPTION OF NONCONFORMANCE

7. (a) NCR Description: ☐ < 100 nCi/g ☐ Prohibited Item ☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☒ Other

7. (b) Description of Nonconformance Required Condition (Implementing Procedure, Revision, Section, & Text):

CCP-PO-001, Rev. 20 Section C-3c Radiography and Visual Examination "The CCP performs radiography or VE of 100 percent of CH-TRU waste containers in waste streams except for those waste streams for which the DOE approves a Scenario 1 or Scenario 2 Determination Request."

7. (c) Actual Condition

During Confirmation it was discovered the RTR scan of this drum was incomplete. It was verified in CCP Records the copy of the RTR recording for this drum is incomplete and that no other recording for the container 10101901 exists.

Reason for Revision: Clarify justification to allow use of AMWTP RTR as evidence for Instructions for completion.

8. NCR Originator (Print name, sign, and date) Jim Vernon 5-3-12	9. CCP QA Engineer or Designee Validation (Print name, sign, and date) Laura Romero 05/03/2012
9a. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE If YES or INDETERMINATE, then apply Trend Code L in Block 12.	
9b. Have the CCP HOLD TAGS associated with the NCR been applied? ☐ YES ☒ NO If no is marked, provide an explanation. Container currently inaccessible to apply hold tag. 05/03/12 LRT	
10. Significant Condition? (If Yes, List CAR) as 5/3/12 ☒ YES ☐ NO CAR-INL-0001-12 NRT	11. Recurring Condition? ☐ YES ☒ NO (If YES, List NCRs/CARs)
12. Trend Code: H	13. Responsible Manager: Jim Vernon

CCP RECORDS ORIGINAL
DATE REC'D 5-4-12

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL- 0396-12	Revision 1
INTERIM DISPOSITION	
14. Interim Disposition (Check One) ☒ N/A (See Final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort ☐ Reinspect/Retest ☐ Remediate (a) Instructions for Completion of the Interim Disposition:	
INTERIM DISPOSITION APPROVALS	
15 .Responsible Manager/Individual (Print, sign, and date)	16. CCP QA Engineer or Designee (Print, sign and date)
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
COMPLETION OF INTERIM DISPOSITION	
17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date)	
18. Interim Disposition Verified CCP QA Engineer: (Print, sign and date)	

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL- 0396-12 Revision 1

FINAL DISPOSITION

19. Final Disposition (Check One)
☐ Use-As-Is ☒ Reject ☐ Repair ☐ Rework ☐ Scrap

(a) Technical Justification (Required for Use-As-Is and Repair dispositions, Enter N/A for Reject, Scrap, or Rework dispositions.)
N/A

(b) Instructions for Completion (Required for Reject, Repair, Rework and Scrap – Enter N/A for Use-As-Is).
Reject container from BDR. Process container through another RTR and provide data in another batch per CCP-PO-024, Rev 11 CCP/INL Interface Document section 4.13.2

(c) Corrective Actions (Actions to Prevent Recurrence – Required for Repair and Rework; Enter N/A for Use-As-Is-, Reject, and Scrap).
N/A

FINAL DISPOSITION APPROVALS

20. Responsible Manager/Individual: (Print, sign, and date)	21. CCP QA Engineer or Designee: (Print, sign, and date)
Jim Vernon 5-3-12	Laura R. Jones 05/03/2012
Additional Approvals: (Print, sign, and date)	Additional Approvals: (Print, sign, and date)

CLOSURE

22. Final Disposition Complete Responsible Manager/Individual: (Print, sign, and date)
Jim Vernon 5-3-12

23. Attachments: 1 and 2.- Email notification to CBFO. 3.- Hold tag information 4.- Basis for closure Rev. 1 5.- Hold tag removal Rev. 1 05/03/12 LR

24. (a) HOLD TAG removal has been validated and reconciled for all nonconforming items on the NCR. ☑
(b) Check if not applicable (N/A) and provide an explanation here or on a continuation sheet. ☐

Please refer to Attachment. 5.
05/03/12 LR

25. Final Disposition Verified – NCR Closed	CCP QA Engineer: (Print, sign, and date)
Laura R. Jones	Laura Ramon Jones 05/03/2012

AMWTP
Advanced Mixed Waste Treatment Project

AMWTP
RTR Analysis Report

Date: 01-May-2012
Time: 09:18

Batch Id RTR10-00118 **Container Id** 10101901 **Analysis Id** 0000067281

Container Type A drum, 55 Gallon Drum (1711) **Analysis Status** Pass

RTR Date 18-JUN-2010 14:34 **Gross Weight** 213.885 Lbs. **Net Weight** 133.885 Lbs.
Equipment Z-213-106 **Waste Matrix Code** S5300 **IDC** RF-337 Plastics, Teflon, Washables, PVC
Recording Id 2RTR10-00084 **Procedure Id** INST-OI-12 **Revision** 43 FC-3 **Approval Level** SPM
Is Test Pattern Resolution Ok? Yes **Start Side** A **Replicate** No **OIO** No
Audio Visual Ok? Yes **Closure Date** 11-JUN-1974 00:00 **Operator** JCUMMINGS

Result Comment Contents of this drum is primarily plastic debris.
Rework: Corrected drum bag in waste parameters. cjs 01/07/11

Package

IDC Correct Yes **Recommended IDC** **Summary Category** S5000
Idc Change Reason
Rigid Liner Present? Yes **LinerType** TYPE 1
Liner Punctured? Yes **Sharp Objects?** No
Liner Lid Present? Yes **Sharp Objects Are Protected?** Yes
Liner Lid Deformed? No **Layers Of Confinement** 4
Fill Factor 65
Bag Closure Method Twisted and Taped

Liquids

Liquid Present? No **Internal Container with Liquid** No
Internal Container with Liquid 0 pints **LA Candidate** No
Liquid Between Liner & Drum 0 pints **Containerized Liquid** No
Total Liquid Amount 0 pints **Containerized Liquid Amt** 0 pints
Other Liquids 0 pints **Comment**
Prohibited Liquids Present No **Comment**

Contents-Drum or Box

	Value	Comment		Value	Comment
Lead?	No		Mercury Present?	No	
Wet Cell Batteries?	No		Explosives?	No	
Prohibited Compressed Gases?	No		PCBs Present?	No	
			PCB Mass (lbs)	0	
Non-Mixed Hazardous Waste Present?	No		Sealed Containers Over 4L?	No	

Non-Radionuclide Pyrophoric Materials Present? No
Waste exhibiting the characteristics of Ignitability, Corrosivity or Reactivity Present? No
Wastes Incompatible with backfill, seal and panel closure materials, container and packaging materials,shipping container or other wastes? No
Impenetrable Dense Objects? No

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
90 mil liner	1.000	EACH	16.000	16.000
Drum plastic bag	1.000	EACH	1.000	1.000
O-ring plastic bag	1.000	EACH	4.000	4.000

Waste Items byWeight

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
floor sweepings	1.000	EACH	5.000	5.000
misc. metal	1.000	EACH	5.000	5.000
Plastic bag for waste	1.000	EACH	0.250	0.250
Drum Bag	1.000	EACH	1.000	1.000

NCR -INL-0396-12 Rev. 1
Attachment 4 Page 1 of 6

AMWTP
Advanced Mixed Waste Treatment Project

AMWTP

RTR Analysis Report

Date: 01-May-2012

Time: 09:18

Batch Id RTR10-00118 **Container Id** 10101901 **Analysis Id** 0000067281

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt(lbs)	Item Wt(lbs)
Oil-Dri (404 gm/liter) 0.42 lb/pint	7.000	PINTS	0.420	2.940

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	5.000
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	0.000
Other Inorganic Materials	0.000	2.940
Cellulosics	0.000	0.000
Rubber	0.000	0.000
Plastic (Waste Materials)	100.000	120.945
Inorganic matrix	0.000	0.000
Organic matrix	0.000	0.000
Soils/gravel	0.000	5.000
Steel (packaging materials)	0.000	59.000
Plastic (packaging materials)	0.000	21.000
Cellulosics Packaging	0.000	0.000

Analysis Esignature History

Esig Approval Id	User Id	Esignature Date	Comment
1891861	CSIMMONS	07-JAN-2011 15:37	Rework
1742940	JCUMMINGS	18-JUN-2010 14:34	

NCR - INL-0396-12 Rev. 1

Attachment 4 Page 2 of 6

Attachment 2 – CCP SPM Radiography Project Level Validation Checklist and Summary

BDR Number: RTR10-00118 **Examination Date:** 6/18/10

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
1. Is the completed, signed, and dated Independent Technical Reviewer Checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, C3-10b**	X			NCR – INL-0396-12 Rev. 1 Attachment 4 Page 3 of 6
2. Does the BDR contain all items addressed in the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-10b**	X			
3. Does the BDR include a listing of all the container numbers in the batch? **Reference Source: CCP-PO-001, C3-10b**	X			
4. List all containers that have met QAOs. **Reference Source: CCP-PO-001, C3-10b**				Container Numbers: 10101901
5. Does the BDR identify the current implementing procedure and revision number? **Reference Source: CCP-PO-001, Table C3-11**	X			
6. Is there a reference to or copy of any associated NCRs (if any) in the BDR? NA if no NCRs. **Reference Source: CCP-PO-001, Table C3-11**			X	No NCR's
7. Are there 20 or fewer containers in the batch? **Reference Source: CCP-PO-001, C3-10**	X			
8. Are the data properly reported (i.e., data are reported in correct units and with correct significant figures)? **Reference Source: CCP-PO-001, C3-10b**	X			
9. Is there evidence of verification that the physical form matches the Waste Matrix Code? **Reference Source: CCP-PO-001, C3-4, Table C3-11**	X			

CCP RECORDS ORIGINAL
DATE REC'D 5/02/12

Attachment 2 – CCP SPM Radiography Project Level Validation Checklist and Summary (Continued)

BDR Number: RTR10-00118 **Examination Date:** 6/18/10

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
10. Is there evidence of verification that the physical form matches the waste stream description? **Reference Source: CCP-PO-001, C1-3, Table C3-11**	X			
11. Are prohibited items absent? **Reference Source: CCP-PO-001, C3-4a**	X			
12. Does observable liquid, if present, meet the criteria of the TSDF-WAC? **Reference Source: CCP-PO-001, C3-4a**			X	Liquid Not Present
13. Were discrepancies between two operators with regard to identification of waste matrix code, liquids in excess of the TSDF-WAC, or compressed gases through replicate scans and independent observations reconciled? NA if no discrepancies. **Reference Source: CCP-PO-001, C3-4a**			X	No Discrepancies NCR INL-0396-12 Rev. 1 Attachment 4 Page 4 of 6
14. Are the training qualifications for all radiography personnel acceptable? **Reference Source: CCP-PO-001, C3-4a**	X			
15. Was evidence of the video/audio check included in the BDR? **Reference Source: CCP-PO-001, C3-4a**	X			
16. Was the Lines-Pair Resolution Test Check included in the BDR? **Reference Source: CCP-PO-001, C3-4a**	X			
17. Was a replicate scan performed once per day, or once per batch, whichever is LESS frequent? **Reference Source: CCP-PO-001, C1-3**	X			
18. Was an independent observation performed once per day, or once per batch, whichever is LESS frequent? **Reference Source: CCP-PO-001, C1-3**	X			

Attachment 2 – CCP SPM Radiography Project Level Validation Checklist and Summary (Continued)

BDR Number: RTR10-00118 **Examination Date:** 6/18/10

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
19. Were the replicate scan and independent observation performed on different waste containers? **Reference Source: CCP-PO-001, C1-3**	X			
20. Were the personnel performing the replicate scan and independent observation different from the individual who performed the original? **Reference Source: CCP-PO-001, C1-3**	X			NCR -INL-0396-12 Rev. 1 Attachment 4 Page 5 of 6
21. Does the BDR include an estimate of each material parameter weight in kg for each container? **Reference Source: CCP Technical Procedures**		X		Weights reported in lbs
22. Does the BDR include a description of each material parameter for each container? **Reference Source: CCP-PO-001, Table C3-1**	X			
23. Is the container gross weight recorded in kilograms (kg) for each container in the BDR? **Reference Source: CCP Technical Procedures**		X		Gross Weight recorded in lbs
24. Was the Scale Weight Calibration Check included in the BDR? **Reference Source: CCP Technical Procedures**			X	Weight Obtained Independently of RTR
25. Was the Scale Weight Check included in the BDR? **Reference Source: CCP Technical Procedures**			X	Weight Obtained Independently of RTR

Comments: None

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

Jim Vernon		5-2-12
SPM Printed Name	Signature	Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

4.12 Acceptable Knowledge (AK)

4.12.1 CCP records personnel will maintain the auditable AK record necessary to support the AK Summary Report in accordance with the WIPP-WAP and QAPD.

4.12.2 CCP AK personnel will perform and document the AK collection and reporting, per CCP-TP-005, *CCP Acceptable Knowledge Documentation*. CCP shall submit the AK Summary Report for Host site review and concurrence. As warranted, the Host site STR/Designee will provide written comments. Upon satisfactory disposition of comments, the Host site STR/Designee will provide written concurrence of the AK Summary Report.

4.12.3 Host site AK personnel and CCP personnel will work in conjunction with one another in the AK compilation, discrepancy resolution, or AK reassessment of source documents.

4.13 Data Validation and Reconciliation

4.13.1 CCP, using CCP-trained Host site personnel, will provide data generation level (DGL) validated data packages for VE Technique in accordance with CCP-TP-006; solid and soil sampling (as required) in accordance with CCP-TP-008; and FGA in accordance with DOE/WIPP-06-3345. CCP will provide DGL validated data packages for NDE, NDA, HSG, and GGT in accordance with the approved CCP procedures governing these processes.

4.13.2 Wherever CCP has obtained the services of another DOE-CBFO-certified TRU Waste Program, that program will provide DGL BDRs to CCP in accordance with their own programmatic documents.

4.13.3 CCP will provide data generation and/or project level validated data packages for NDE, NDA, VE, FGA, GGT, HSG sampling and analysis, and homogeneous solid and soil/gravel sampling and analysis in accordance with CCP-TP-001, *CCP Project Level Data Validation and Verification*.

4.13.4 The CCP SPM and AKE will perform data reconciliation with applicable data quality objectives (DQOs) using CCP-TP-002, *CCP Reconciliation of DQOs and Reporting Characterization Data*.

NCR – INL-0396-12 Rev. 1
Attachment 4 Page 6 of 6

Jones, Laura - WTS

From: Young, Rachel S. [Rachel.Young@amwtp.inl.gov]
Sent: Thursday, May 03, 2012 3:45 PM
To: Jones, Laura - WTS
Subject: RE: Hold tag removal NCR-INL-0396-12-1

Hi Laura,
The hold tag for NCR-INL-0396-12 has been removed.

Rachel Young
CCP Quality Assurance
INL
208-526-6969
younrs@amwtp.inl.gov
Washington TRU Solutions LLC
Contractor for the U.S. Department of Energy

From: Jones, Laura - WTS [mailto:laura.jones@wipp.ws]
Sent: Thursday, May 03, 2012 3:40 PM
To: Young, Rachel - WTS
Cc: Verlanic, William - WTS
Subject: Hold tag removal NCR-INL-0396-12-1

Rachel:

Container Number 10101901 for NCR-INL-0396-12-1 has been resolved at the project office, please remove hold tag and send notification when this is completed.

Thanks,

Laura R. Jones
Quality Assurance
Washington TRU Solutions, LLC
Contractor for the U.S. Department of Energy
Office: (575) 234-7244
Email: laura.jones@wipp.ws
Fax: (575) 234-7071

NCR - INL-0396-12 Rev. 1
Attachment 5 Page 1 of 1

DIVIDER

PAGE

Attachment 1 – CCP Nonconformance Report (NCR)

NCR No. NCR-INL- 0396-12		Revision 0
1. Lot No./Heat No. or Serial No. (as applicable): N/A	2. Process (e.g., NDA, HSG, NDE, VE, Other): RTR	3. Batch Data Report #(s): INRTR5060253
4. Order/Work Order/Job Control Number (as applicable): N/A	5. PO # (as applicable): N/A	Container #(s): 10101901
	6. Supplier (as applicable): N/A	

DESCRIPTION OF NONCONFORMANCE

7. (a) NCR Description: ☐ < 100 nCi/g ☐ Prohibited Item ☑ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☒ Other

7. (b) Description of Nonconformance Required Condition (Implementing Procedure, Revision, Section, & Text):

CCP-PO-001, Rev. 20 Section C-3c Radiography and Visual Examination "The CCP performs radiography or VE of 100 percent of CH-TRU waste containers in waste streams except for those waste streams for which the DOE approves a Scenario 1 or Scenario 2 Determination Request."

7. (c) Actual Condition

During Confirmation it was discovered the RTR scan of this drum was incomplete. It was verified in CCP Records the copy of the RTR recording for this drum is incomplete and that no other recording for the container 10101901 exists.

8. NCR Originator (Print name, sign, and date) Barbara Broomfield 4/30/12	9. CCP QA Engineer or Designee Validation (Print name, sign, and date) Rachel Young 4/30/12
9a. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE If YES or INDETERMINATE, then apply Trend Code L in Block 12.	
9b. Have the CCP HOLD TAGS associated with the NCR been applied? ☐ YES ☒ NO If no is marked, provide an explanation. Container currently innaccessible to apply the hold Tag 05/03/12	
10. Significant Condition? (If Yes, List CAR) 5/3/12 ☒ YES ☐ NO CAR-WL-0001-12	11. Recurring Condition? ☐ YES ☒ NO (If YES, List NCRs/CARs)
12. Trend Code: H	13. Responsible Manager: Bill Verlanic

SUPERSEDED BY REV 1 05/03/2012 LA

CCP RECORDS ORIGINAL
DATE REC'D 5-4-12

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL-0396-12	Revision 0
INTERIM DISPOSITION	
14. Interim Disposition (Check One) ☒ N/A (See Final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort ☐ Reinspect/Retest ☐ Remediate (a) Instructions for Completion of the Interim Disposition:	
INTERIM DISPOSITION APPROVALS	
15 .Responsible Manager/Individual (Print, sign, and date)	16. CCP QA Engineer or Designee (Print, sign and date)
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
COMPLETION OF INTERIM DISPOSITION	
17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date)	
18. Interim Disposition Verified CCP QA Engineer: (Print, sign and date)	

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL-0396-12	Revision 0
FINAL DISPOSITION	
19. Final Disposition (Check One) ☐ Use-As-Is ☒ Reject ☐ Repair ☐ Rework ☐ Scrap	
(a) Technical Justification (Required for Use-As-Is and Repair dispositions, Enter N/A for Reject, Scrap, or Rework dispositions.) N/A	
(b) Instructions for Completion (Required for Reject, Repair, Rework and Scrap – Enter N/A for Use-As-Is). Reject container from BDR. Process container through another RTR and provide data in another batch.	
(c) Corrective Actions (Actions to Prevent Recurrence – Required for Repair and Rework; Enter N/A for Use-As-Is-, Reject, and Scrap). N/A	
FINAL DISPOSITION APPROVALS	
20. Responsible Manager/Individual: (Print, sign, and date) Bill Verlanic 4-30-12	21. CCP QA Engineer or Designee: (Print, sign, and date) RACHEL YOUNG 4/30/12
Additional Approvals: (Print, sign, and date)	Additional Approvals: (Print, sign, and date)
CLOSURE	
22. Final Disposition Complete Responsible Manager/Individual: (Print, sign, and date)	
23. Attachments:	
24. (a) HOLD TAG removal has been validated and reconciled for all nonconforming items on the NCR. ☐ (b) Check if not applicable (N/A) and provide an explanation here or on a continuation sheet. ☐	
25. Final Disposition Verified – NCR Closed	CCP QA Engineer: (Print, sign, and date)

Jones, Laura - WTS

From: Pearcy, Mark - WTS
Sent: Wednesday, May 02, 2012 1:00 PM
To: Young, Rachel S.
Cc: Jones, Laura - WTS; Vernon, Jim - WTS
Subject: RE: NCR-INL-0396-12

This is reportable
Rachel,
A revision has not made it to my desk and I don't want to wait any longer for it. We will report the NCR as Rev 0.

Jim,
Please make the notification to WIPP Notify.

Mark Pearcy
Central Characterization Project
Washington TRU Solutions LLC
Contractor for the U.S. Department of Energy
575-234-7394 (W)
575-706-0094 (C)

From: Young, Rachel S. [mailto:Rachel.Young@amwtp.inl.gov]
Sent: Monday, April 30, 2012 3:30 PM
To: Pearcy, Mark - WTS
Cc: Jones, Laura - WTS; Broomfield, Barbara - WTS; Walker, Mak (Maryann) - WTS
Subject: NCR-INL-0396-12

Mark,
Please review for notification purposes.

Thanks
Rachel Young
CCP Quality Assurance
INL
208-526-6969
younrs@amwtp.inl.gov
Washington TRU Solutions LLC
Contractor for the U.S. Department of Energy

Jones, Laura - WTS

From: Vernon, Jim - WTS
Sent: Wednesday, May 02, 2012 2:37 PM
To: WIPP Notify - Special Purpose
Cc: Pearcy, Mark - WTS; Jones, Laura - WTS; Kantrowitz, Rich - WTS; Broomfield, Barbara - INL; Gomez, Chris - WTS; Cannon, Val - WTS; Fisher, AJ - WTS
Subject: [ncr] 7-Day Notification NCR-INL-0396-12, Revision 0

The attached NCR is submitted as required by CCP-QP-004, CCP Corrective Action Management, Revision 10, Attachment 6.

- Site NCR #: NCR-INL-0396-12
- Responsible organization: CCP
- Date initiated: 4/30/12
- Individual who identified the NCR: Barbara Broomfield
- Deficiency: During Confirmation it was discovered the RTR scan of this drum was incomplete. It was verified in CCP Records the copy of the RTR recording for this drum in incomplete and that no other recording for the container 10101901 exists
- Requirement Violated: CCP-PO-001, Rev 20 Section C-3c Radiography and Visual Examination "The CCP performs radiography or VE of 100 percent of CH-TRU waste containers in waste streams except for those waste streams for which the DOE approves a Scenario 1 or Scenario 2 Determination Request."
- Actions: Reject container from BDR. Process container through another RTR and provide data in another batch.

Date closed, if applicable: Not closed.

Jim Vernon
Washington TRU Solutions
Contractor to the Department of Energy
Site Project Manager
575-234-7141 - Work
575-706-2981 - Cell

Jones, Laura - WTS

From: Young, Rachel S. [Rachel.Young@amwtp.inl.gov]
Sent: Wednesday, May 02, 2012 3:34 PM
To: Jones, Laura - WTS
Subject: NCR-INL-0396-12

Hi Laura,
The container 10101901, listed on NCR-INL-0396-12, is currently inaccessible to apply the hold tag.

Thanks,
Rachel Young
CCP Quality Assurance
INL
208-526-6969
younrs@amwtp.inl.gov
Washington TRU Solutions LLC
Contractor for the U.S. Department of Energy

DIVIDER

PAGE

Attachment 1 – CCP Nonconformance Report (NCR)

NCR No. NCR-INL-0437-12	Revision 0	
1. Lot No./Heat No. or Serial No. (as applicable): N/A	2. Process (e.g., NDA, HSG, NDE, VE, Other): NDE	3. Batch Data Report #(s): INRTR5070114
4. Order/Work Order/Job Control Number (as applicable): N/A	5. PO # (as applicable): N/A	Container #(s): 10093556
	6. Supplier (as applicable): N/A	

DESCRIPTION OF NONCONFORMANCE

7. (a) NCR Description: ☐ < 100 nCi/g ☒ Prohibited Item ☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☐ Other

7. (b) Description of Nonconformance Required Condition (Implementing Procedure, Revision, Section, & Text):

Section C-3c of CCP-PO-001, Revision 20, states "That is, if radiography and/or VE indicate that the waste does not match the waste stream description produced by AK characterization, a nonconformance report (NCR) is completed and the inconsistency resolved as specified in Section C4 (Q5), and the NCR will be dispositioned as specified in Section C3-13."

7. (c) Actual Condition

Leaded rubber gloves were identified during RTR. Lead is not allowed in the ID-RF-S3114 waste stream.

8. NCR Originator (Print name, sign, and date)	9. CCP QA Engineer or Designee Validation (Print name, sign, and date)
Jim Vernon 8-27-12	Laura R. Jones 08/27/2012 Laura Romero Jones

9a. Does the identified condition have the potential to impact AK? ☒ YES ☐ NO ☐ INDETERMINATE
If YES or INDETERMINATE, then apply Trend Code L in Block 12.

9b. Have the CCP HOLD TAGS associated with the NCR been applied? ☐ YES ☐ NO If no is marked, provide an explanation.

10. Significant Condition? (If Yes, List CAR)	11. Recurring Condition? ☐ YES ☒ NO (If YES, List NCRs/CARs)
☐ YES ☒ NO	
12. Trend Code: L	13. Responsible Manager: Jim Vernon

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL-0437-12	Revision 0
INTERIM DISPOSITION	
14. Interim Disposition (Check One) ☐ N/A (See Final Disposition) ☒ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort ☐ Reinspect/Retest ☐ Remediate (a) Instructions for Completion of the Interim Disposition: AKE is to perform an AK re-evaluation in accordance with CCP-TP-005.	
INTERIM DISPOSITION APPROVALS	
15 .Responsible Manager/Individual (Print, sign, and date) Jim Vernon 8-27-12	16. CCP QA Engineer or Designee (Print, sign and date) Laura R. Jones 08/27/2012 Laura Ramona Jones
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
COMPLETION OF INTERIM DISPOSITION	
17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date)	
18. Interim Disposition Verified CCP QA Engineer: (Print, sign and date)	

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL-0437-12	Revision 0
FINAL DISPOSITION	
19. Final Disposition (Check One) ☐ Use-As-Is ☐ Reject ☐ Repair ☐ Rework ☐ Scrap (a) Technical Justification (Required for Use-As-Is and Repair dispositions, Enter N/A for Reject, Scrap, or Rework dispositions.)	
(b) Instructions for Completion (Required for Reject, Repair, Rework and Scrap – Enter N/A for Use-As-Is).	
(c) Corrective Actions (Actions to Prevent Recurrence – Required for Repair and Rework; Enter N/A for Use-As-Is-, Reject, and Scrap).	
FINAL DISPOSITION APPROVALS	
20. Responsible Manager/Individual: (Print, sign, and date)	21. CCP QA Engineer or Designee: (Print, sign, and date)
Additional Approvals: (Print, sign, and date)	Additional Approvals: (Print, sign, and date)
CLOSURE	
22. Final Disposition Complete Responsible Manager/Individual: (Print, sign, and date)	
23. Attachments:	
24. (a) HOLD TAG removal has been validated and reconciled for all nonconforming items on the NCR. ☐ (b) Check if not applicable (N/A) and provide an explanation here or on a continuation sheet. ☐	
25. Final Disposition Verified – NCR Closed	CCP QA Engineer: (Print, sign, and date)

Jones, Laura - WTS

From: Pearcy, Mark - WTS
Sent: Tuesday, August 28, 2012 7:53 AM
To: Jones, Laura - WTS
Cc: Vernon, Jim - WTS
Subject: RE: New NCR-INL-0437-12

This is reportable

Jim,
Please make the notification to WIPP notify.

Mark Pearcy
Central Characterization Project
Washington TRU Solutions LLC
Contractor for the U.S. Department of Energy
575-234-7394 (W)
575-499-7339 (C)

From: Jones, Laura - WTS
Sent: Monday, August 27, 2012 4:07 PM
To: Jordan, Shanique - Stoller; Kantrowitz, Rich - WTS; Pearcy, Mark - WTS; Pearcy, Sheila - Stoller; Punchios, Sheri - Stoller; Ramirez, Mike - WTS; Verlanic, William - WTS; Vernon, Jim - WTS; Czyzewski, Robert - INL
Cc: Jones, Laura - WTS
Subject: New NCR-INL-0437-12

Robert / Bill – Please ensure that hold tag is hang and send notification when this is complete.
Mark – Please review for notification purposes.
Shanique – Please post this open NCR.

Thanks,

Laura R. Jones
Quality Assurance
Washington TRU Solutions, LLC
Contractor for the U.S. Department of Energy
Office: (575) 234-7244
Email: laura.jones@wipp.ws
Fax: (575) 234-7071

Jones, Laura - WTS

From: IDC [SQLMaster@wipp.ws]
Sent: Tuesday, August 28, 2012 7:53 AM
To: Jones, Laura - WTS; Mueller, Terry - WTS; Walker, Mak (Maryann) - WTS
Subject: Project Office NCR [NCR-INL0437120] was just reviewed.

Certification Manager/Designee has just reviewed the project office NCR NCR-INL0437120 and has indicated that it [should] be reported to CBFO. IDC has already updated the NCR for you.

Jones, Laura - WTS

From:	Vernon, Jim - WTS
Sent:	Tuesday, August 28, 2012 8:42 AM
To:	WIPP Notify - Special Purpose
Cc:	Pearcy, Mark - WTS; Jones, Laura - WTS; Kantrowitz, Rich - WTS; Cannon, Val - WTS; Fisher, AJ - WTS; Walker, Mak (Maryann) - WTS
Subject:	[ncr] 7-Day Notification NCR-INL-0437-12, Revision 0
Attachments:	NCR-INL-0437-12.pdf

The attached NCR is submitted as required by CCP-QP-004, CCP Corrective Action Management, Revision 10, Attachment 6.

- Site NCR #: NCR-INL-0437-12
- Responsible organization: CCP
- Date initiated: 8/27/12
- Individual who identified the NCR: Jim Vernon
- Deficiency: Leaded rubber gloves were identified during RTR. Lead is not allowed in the ID-RF-S3114 waste stream.
- Requirement Violated: Section C-3c of CCP-PO-001, Revision 20, states "That is, if radiography and/or VE indicate that the waste does not match the waste stream description produced by AK characterization, a nonconformance report (NCR) is completed and the inconsistency resolved as specified in Section C4 (Q5), and the NCR will be dispositioned as specified in Section C3-13."
- Actions: AKE is to perform an AK re-evaluation in accordance with CCP-TP-005

Date closed, if applicable: Not closed.

Jim Vernon
Washington TRU Solutions
Contractor to the Department of Energy
Site Project Manager
575-234-7141 - Work
575-706-2981 - Cell

Jones, Laura - WTS

From: Czyzewski, Robert J. [Robert.Czyzewski@amwtp.inl.gov]
Sent: Tuesday, August 28, 2012 7:40 AM
To: Jones, Laura - WTS
Subject: NCR Tag Placements

Laura:

I have placed an NCR tag on ARP 14454 for NCR INL-0434-12. I could not hand a tag on 10093556 for NCR INL-0437-12 since it is inaccessible in the stack. I'll put the tag for 10093556 as an orphan and periodically check if the drum is moved and made accessible.

Robert Czyzewski
QA Engineer
Wastington TRU Solutions, LLC
Contractor for the U.S. Government
(208) 526-6969; (208) 569-2752 (C)
robert.czyzewski@amwtp.inl.gov

NCR ID	NCR Originator	Init Date	Used?
NCR-INL0327130	Connie Hernandez	1/28/2013 0:00	Checked
NCR-INL0328130	Connie Hernandez	1/24/2013 0:00	Checked
NCR-INL0329130	Jim Vernon	1/17/2013 0:00	Checked
NCR-INL0330130	Steve Castro	1/29/2013 0:00	Checked
NCR-INL0331130	Steve Castro	1/29/2013 0:00	Checked
NCR-INL0332130	Carolina Soaterna	1/30/2013 0:00	Checked
NCR-INL0333130	Carolina Soaterna	1/30/2013 0:00	Checked
NCR-INL0334130	Jim Vernon	2/11/2013 0:00	Checked
NCR-INL0335130	Jim Vernon	3/13/2013 0:00	Checked
NCR-INL0336130	Brandye Pyeatt	3/21/2013 0:00	Checked
NCR-INL0337130	Jim Vernon	4/8/2013 0:00	Checked
NCR-INL0338130	Joshua Houghton	5/2/2013 0:00	Checked
NCR-INL0339130	Carolina Soaterna	5/2/2013 0:00	Checked
NCR-INL0340130	Carolina Soaterna	5/7/2013 0:00	Checked
NCR-INL0341130	Carolina Soaterna	5/8/2013 0:00	Checked
NCR-INL0342130			Unchecked
NCR-INL0343130	Jim Vernon	5/24/2013 0:00	Checked
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NCR-INL0391120	Barbara Broomfield	2/1/2012 0:00	Checked
NCR-INL0392120	Barbara Broomfield	2/1/2012 0:00	Checked

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Project Level NCR Log - INL/CCP
CH

NCR-INL0393120	Barbara Broomfield	2/7/2012 0:00	Checked
NCR-INL0394120	Barbara Broomfield	2/7/2012 0:00	Checked
NCR-INL0395120	Jim Vernon	4/11/2012 0:00	Checked
NCR-INL0396120	Barbara Broomfield	4/30/2012 0:00	Checked
NCR-INL0397120	Vincent Medina	6/19/2012 0:00	Checked
NCR-INL0398120	Vincent Medina	6/20/2012 0:00	Checked
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NCR-INL0400120	John Rovansek	1/4/2012 0:00	Checked
NCR-INL0401120	Jim Vernon	1/11/2012 0:00	Checked
NCR-INL0402120	Jim Vernon	1/16/2012 0:00	Checked
NCR-INL0403120	Najib Sharif	2/2/2012 0:00	Checked
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NCR-INL0405120	Connie Hernandez	2/29/2012 0:00	Checked
NCR-INL0406120	Mike Ramirez	2/22/2012 0:00	Checked
NCR-INL0407120	Mike Ramirez	2/27/2012 0:00	Checked
NCR-INL0408120	Jim Vernon	3/1/2012 0:00	Checked
NCR-INL0409120	Najib Sharif	3/8/2012 0:00	Checked
NCR-INL0410120	Jim Vernon	3/12/2012 0:00	Checked
NCR-INL0411120	Connie Hernandez	3/13/2012 0:00	Checked
NCR-INL0412120	Jim Vernon	3/20/2012 0:00	Checked
NCR-INL0413120	Jim Vernon	3/27/2012 0:00	Checked
NCR-INL0414120	Mike Ramirez	4/2/2012 0:00	Checked
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NCR-INL0416120	Jim Vernon	4/9/2012 0:00	Checked
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NCR-INL0419120	Barbara Broomfield	5/8/2012 0:00	Checked
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NCR-INL0421120	Barbara Broomfield	5/8/2012 0:00	Checked
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NCR-INL0423120	Jim Vernon	5/18/2012 0:00	Checked
NCR-INL0424120	Jim Vernon	5/21/2012 0:00	Checked
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NCR-INL0426120	Carolina Soaterna	6/6/2012 0:00	Checked
NCR-INL0427120	Jim Vernon	6/19/2012 0:00	Checked
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NCR-INL0431120	Roger Whiteaker	7/31/2012 0:00	Checked
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NCR-INL0435120	Jim Vernon	8/24/2012 0:00	Checked
NCR-INL0436120	Steve Castro	8/24/2012 0:00	Checked
NCR-INL0437120	Jim Vernon	8/27/2012 0:00	Checked
NCR-INL0438120	Steve Castro	8/29/2012 0:00	Checked

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NCR-INL0440120	Jim Vernon	12/20/2012 0:00	Checked
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PAGE

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NCR-INL0064130	Mary Griffith	4/9/2013 0:00	Checked
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NCR-INL0066130	Crary Davis	5/14/2013 0:00	Checked
NCR-INL0067130	Sharon Cummins	5/15/2013 0:00	Checked
NCR-INL0068130	Preston Abbott	5/20/2013 0:00	Checked
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NCR-INL0332120	Richard Jagielski	1/23/2012 0:00	Checked
NCR-INL0333120	Jenifer Law	1/26/2012 0:00	Checked
NCR-INL0334120	Richard Jagielski	2/6/2012 0:00	Checked
NCR-INL0335120	Jeff Poole	2/7/2012 0:00	Checked
NCR-INL0336120	Ted Carlson	2/23/2012 0:00	Checked
NCR-INL0337120	Rachel Young	2/29/2012 0:00	Checked
NCR-INL0338120	Dale Dover	3/1/2012 0:00	Checked
NCR-INL0339120	Heather Elwood	3/12/2012 0:00	Checked
NCR-INL0340120	Tyson Christensen	4/2/2012 0:00	Checked
NCR-INL0341120	Tyson Christensen	4/2/2012 0:00	Checked
NCR-INL0342120	Tyson Christensen	4/2/2012 0:00	Checked
NCR-INL0343120	Tyson Christensen	4/2/2012 0:00	Checked
NCR-INL0344120	Michael Galbraith	4/11/2012 0:00	Checked
NCR-INL0345120	Sharon Cummins	5/8/2012 0:00	Checked
NCR-INL0346120	S. Corey Boland	6/19/2012 0:00	Checked
NCR-INL0347120	Crary Davis	6/21/2012 0:00	Checked
NCR-INL0348120	Michael Galbraith	7/3/2012 0:00	Checked
NCR-INL0349120	Brent Dial	7/17/2012 0:00	Checked
NCR-INL0350120	Brent Dial	7/23/2012 0:00	Checked
NCR-INL0351120	Brent Dial	7/31/2012 0:00	Checked
NCR-INL0352120	Brent Dial	8/1/2012 0:00	Checked
NCR-INL0353120	Rick Green	8/14/2012 0:00	Checked
NCR-INL0354120	Crary Davis	8/20/2012 0:00	Checked
NCR-INL0355120	Robert Czyzewski	8/20/2012 0:00	Checked
NCR-INL0356120	Sharon Cummins	8/22/2012 0:00	Checked
NCR-INL0357120	Crary Davis	8/22/2012 0:00	Checked
NCR-INL0358120	Brent Dial	8/23/2012 0:00	Checked
NCR-INL0359120	David Brasier	8/29/2012 0:00	Checked
NCR-INL0360120	Brent Dial	9/10/2012 0:00	Checked
NCR-INL0361120	Brent Dial	9/11/2012 0:00	Checked
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NCR-INL0363120	Brent Dial	9/13/2012 0:00	Checked
NCR-INL0364120	Michael Galbraith	9/13/2012 0:00	Checked
NCR-INL0365120	Michael Galbraith	11/5/2012 0:00	Checked

NCR-INL0366120	Rick Green	11/7/2012 0:00	Checked
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NCR-INL0967120			Unchecked
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NCR-INL1246120			Unchecked

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NCR ID	NCR Originator	Init Date	Used?
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NCR-RHINL0124120	Dave Pinnock	4/30/2012 0:00	Checked
NCR-RHINL0125120	Sway Andrews	5/2/2012 0:00	Checked
NCR-RHINL0126120	Dave Pinnock	9/11/2012 0:00	Checked
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NCR LOG - DGL RH INL/CCP

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NCR ID	NCR Originator	Init Date	Used?
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NCR-RHINL0425130	Laura Nelson	1/24/2013 0:00	Checked
NCR-RHINL0426130	Laura Nelson	1/21/2013 0:00	Checked
NCR-RHINL0427130	Creta Kirkes	1/29/2013 0:00	Checked
NCR-RHINL0428130	Laura Nelson	2/12/2013 0:00	Checked
NCR-RHINL0429130	Laura Nelson	3/11/2013 0:00	Checked
NCR-RHINL0430130	Laura Nelson	3/26/2013 0:00	Checked
NCR-RHINL0431130	Laura Nelson	5/1/2013 0:00	Checked
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NCR-RHINL0443130			Unchecked
NCR-RHINL0444130			Unchecked
NCR-RHINL0492120	Laura Nelson	1/18/2012 0:00	Checked
NCR-RHINL0493120	Laura Nelson	1/23/2012 0:00	Checked
NCR-RHINL0494120	Laura Nelson	2/27/2012 0:00	Checked
NCR-RHINL0495120	Laura Nelson	4/30/2012 0:00	Checked
NCR-RHINL0496120	Laura Nelson	8/20/2012 0:00	Checked
NCR-RHINL0497120	Laura Nelson	10/10/2012 0:00	Checked
NCR-RHINL0498120	Laura Nelson	10/10/2012 0:00	Checked
NCR-RHINL0499120	Laura Nelson	10/10/2012 0:00	Checked
NCR-RHINL0500120	Laura Nelson	10/18/2012 0:00	Checked
NCR-RHINL0501120	Laura Nelson	10/18/2012 0:00	Checked
NCR-RHINL0502120	Robert Czyzewski	10/30/2012 0:00	Checked
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NCR-RHINL0506120			Unchecked
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NCR-RHINL0511120			Unchecked
NCR-RHINL1596120			Unchecked
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NCR-RHINL1598120			Unchecked
NCR-RHINL1599120			Unchecked

COPY

NCR Log RHINL/CCP Project Level

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NCR-RHINL1603120			Unchecked
NCR-RHINL1604120			Unchecked
NCR-RHINL1605120			Unchecked
NCR-RHINL1606120			Unchecked

Attachment 1 – CCP Nonconformance Report (NCR)

NCR No. NCR-INL-0346-12	Revision 0	
1. Lot No./Heat No. or Serial No. (as applicable): N/A	2. Process (e.g., NDA, HSG, NDE, VE, Other): NDA	3. Batch Data Report #(s): N/A
4. Order/Work Order/Job Control Number (as applicable): N/A	5. PO # (as applicable): N/A	Container #(s): N/A
	6. Supplier (as applicable): N/A	

DESCRIPTION OF NONCONFORMANCE

7. (a) NCR Description: ☐ < 100 nCi/g ☐ Prohibited Item ☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☒ Other

7. (b) Description of Nonconformance Required Condition (Implementing Procedure, Revision, Section, & Text): CCP-PO-002 Rev. 26 Section A.4.2 subsection titled *Instrument Performance Measurements* states: ....Performance checks shall include efficiency checks (when applicable), matrix correction checks and, for spectrometric instruments, peak position and resolution checks.

7. (c) Actual Condition

The HENC gamma detector cannot meet the resolution requirements associated with established Daily Performance Check (DPC) Quality Control limits for the DET1 129 keV peak FWHM parameter.

8. NCR Originator (Print name, sign, and date)	9. CCP QA Engineer or Designee Validation (Print name, sign, and date)
S. Corey Boland, S. Corey Boland 6-19-12	Rachel Young 6/21/12

9a. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE
If YES or INDETERMINATE, then apply Trend Code L in Block 12.

9b. Have the CCP HOLD TAGS associated with the NCR been applied? ☐ YES ☒ NO If no is marked, provide an explanation.
No hold tags applied since no BDR was open and no waste drums were processed.

10. Significant Condition? (If Yes, List CAR) ☐ YES ☒ NO	11. Recurring Condition? ☐ YES ☒ NO (If YES, List NCRs/CARs)
12. Trend Code: K	13. Responsible Manager: Bill Verlanic

COPY

CCP RECORDS ORIGINAL
DATE REC'D 1-11-13

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL-0346-12	Revision 0

INTERIM DISPOSITION

14. Interim Disposition (Check One)

☐ N/A (See Final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use

☐ Sort ☒ Reinspect/Retest ☐ Remediate

(a) Instructions for Completion of the Interim Disposition:

Perform detector replacement, repositioning, repair, trouble shooting, and any additional measurements as necessary as directed by an NDA Expert Analyst (EA) or technical support.

INTERIM DISPOSITION APPROVALS

15 .Responsible Manager/Individual (Print, sign, and date)	16. CCP QA Engineer or Designee (Print, sign and date)
Bill Verlanic 6/21/12	Rachel Young 6/21/12
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)

*** COMPLETION OF INTERIM DISPOSITION**

17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date)
Bill Verlanic 1-16-13

18. Interim Disposition Verified CCP QA Engineer: (Print, sign and date)
R Czyzewski 1/16/13

* Gamma ray detector was replaced. See Attachment 1 of this NCR. - R Czyzewski 1/16/13.

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL-0346-12	Revision 0
FINAL DISPOSITION	
19. Final Disposition (Check One) ☑ Use-As-Is ☐ Reject ☐ Repair ☐ Rework ☐ Scrap	
(a) Technical Justification (Required for Use-As-Is and Repair dispositions, Enter N/A for Reject, Scrap, or Rework dispositions.) HENC-3 RELEASED TO ANOTHER PROGRAM IN CCP. UNIT WAS SHIPPED OFF SITE AS IS.	
(b) Instructions for Completion (Required for Reject, Repair, Rework and Scrap – Enter N/A for Use-As-Is). N/A	
(c) Corrective Actions (Actions to Prevent Recurrence – Required for Repair and Rework; Enter N/A for Use-As-Is-, Reject, and Scrap). N/A	
FINAL DISPOSITION APPROVALS	
20. Responsible Manager/Individual: (Print, sign, and date) Bill Voreance 1-16-13	21. CCP QA Engineer or Designee: (Print, sign, and date) R. Czyzewski 1/16/13
Additional Approvals: (Print, sign, and date)	Additional Approvals: (Print, sign, and date)
CLOSURE	
22. Final Disposition Complete Responsible Manager/Individual: (Print, sign, and date) Bill Voreance 1-16-13	
23. Attachments: 1. Page 1 of Calibration Report 2. Bill of Lading for HENC-3	
24. (a) HOLD TAG removal has been validated and reconciled for all nonconforming items on the NCR. ☐ (b) Check if not applicable (N/A) and provide an explanation here or on a continuation sheet. ☒ See block 9b.	
25. Final Disposition Verified – NCR Closed R. Czyzewski	CCP QA Engineer: (Print, sign, and date) R Czyzewski 1/16/13

CCP HENC Gamma Spectrometer Calibration Verification

David Brasier
Expert Analyst
Canberra Industries **Date:** 7/30/12

Introduction

Following a facility power outage occurring on 4/18/12, efforts to optimize gamma ray detector gain and resolution were performed as resources were available until 5/22/12. At this time it was determined that the gamma ray detector could not meet resolution performance requirements. At the request of CCP Management and in accordance with NCR-INL-0346-12, gamma ray detector replacement was initiated on 6/19/12. Gamma ray detector model # BE3825, SN-08058163 was replaced with gamma ray detector model # BE3825, SN-8490, thus a like-for-like replacement.

The HENC neutron counter was originally calibrated at the factory, and the calibration was confirmed using Pu sources as described in a report CCP-LLNL-NDA-001, entitled *"CCP HENC Calibration and Validation Plan and Report"* (5/2004). The neutron counter was not affected by replacement of the gamma ray detector. This document does not discuss neutron calibration, confirmation, and verification.

Gamma Spectrometer calibration verification has been determined as follows:

Energy and Peak Shape Calibration

Following detector installation, Energy and Peak Shape calibrations were performed using the line sources, listed in Table 3, loaded into the plastic foam matrix as described in Figure 1 below. The two signal chains (i.e. Segment and Isotopic) were calibrated independently.

In accordance with CCP-TP-108, *Calibrating the CCP High Efficiency Neutron Counter Using NDA 2000*, spectral gain for the quantitative analysis ("Segment") signal chain was adjusted to 0.125 ± 0.001 keV/channel over 16k channels or an energy range of approximately 0 to 2000 keV. The isotopic analysis ("Isotopic") signal chain was adjusted to 0.075 ± 0.001 keV/channel over 16k channels, or an energy range of approximately 0 to 1200 keV. Both signal chains were also adjusted to optimize peak width (full width at half maximum, or FWHM) and to minimize peak tailing.

After the instrument adjustments were completed, calibration constants for energy and peak shape were determined using the Genie 2000 software. The calibration constants, a through h, are used in Equations 1, 2, and 3 as shown:

$$E = a + b * CH + c * CH^2 + d * CH^3 \quad (1)$$

$$FWHM = e + f * E^{1/2} \quad (2)$$

NCR -INL-0346-12, rev. 0

Attachment 1 Page 1 of 1

CCP RECORDS ORIGINAL
DATE REC'D 7-31-12

December 10, 2012 **BILL OF LADING – SHORT FORM – NOT NEGOTIABLE** Page 1 of 1

SHIP FROM	**Bill of Lading Number:**
AMWTP Hwy 20 and VanBuren St. Scoilville, ID 83415	BAR CODE SPACE
SHIP TO	**Carrier Name:**
Maloy Mobile Storage Inc. 535 Comanche Rd. NE Albuquerque NM 87107 505-344-6123	Trailer number: Serial number(s):
THIRD PARTY FREIGHT CHARGES BILL TO	**SCAC:**
MCS 4110 Ellison St. NE Albuquerque, NM 87109	Pro Number: BAR CODE SPACE
Special Instructions: Contacts at Shipping- Preston Abbott, cell 208-569-0743 **Contacts at Receiving-Eric Pennala 505-321-0579. (CANNOT RECEIVE ON SATURDAY OR SUNDAY)**	**Freight Charge Terms** (Freight charges are prepaid unless marked otherwise): Prepaid ☐ Collect ☐ 3rd Party x ☐ Master bill of lading with attached underlying bills of lading.

CUSTOMER ORDER INFORMATION

Customer Order No.	# of Packages	Weight	Pallet/Slip (circle one)		Additional Shipper Information
12 ft wide x 40ft-6inlong x 9fthigh Instrument Container (HENC-3)	1	36K	Y	N	
			Y	N	
			Y	N	
			Y	N	
Grand Total	1	36,000			

CARRIER INFORMATION

Handling Unit		Package					LTL Only	
Qty	Type	Qty	Type	Weight	HM (X)	**Commodity Description** Commodities requiring special or additional care or attention in handling or stowing must be so marked and packaged as to ensure safe transportation with ordinary care. See Section 2(e) of NMFC Item 360	NMFC No.	Class
1				36,000		Instrumentation/Inspection Modular Container 12' x 40'		

Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property as follows: "The agreed or declared value of the property is specifically stated by the shipper to be not exceeding _____ per _____."

COD Amount: $ _____

Fee terms: Collect ☐ Prepaid ☐ Customer check acceptable ☐

Note: Liability limitation for loss or damage in this shipment may be applicable. See 49 USC § 14706(c)(1)(A) and (B).

Received, subject to individually determined rates or contracts that have been agreed upon in writing between the carrier and shipper, if applicable, otherwise to the rates, classifications, and rules that have been established by the carrier and are available to the shipper, on request, and to all applicable state and federal regulations.

The carrier shall not make delivery of this shipment without payment of charges and all other lawful fees.

Shipper Signature

Shipper Signature/Date

12/11/12

This is to certify that the above named materials are properly classified, packaged, marked, and labeled, and are in proper condition for transportation according to the applicable regulations of the DOT.

Trailer Loaded:
x By shipper
☐ By driver

Freight Counted:
x By shipper
☐ By driver/pallets said to contain
☐ By driver/pieces

Carrier Signature/Pickup Date

Carrier acknowledges receipt of packages and required placards. Carrier certifies emergency response information was made available and/or carrier has the DOT emergency response guidebook or equivalent documentation in the vehicle. Property described above is received in good order, except as noted.

ob

NCR -INL-0346-12 rev 0

Attachment 2 Page 1 of 1

DIVIDER PAGE ONLY

Not part of page count

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	RECORDS CUSTODIAN	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	01/17/2013
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
NCR-INL-0346-12	NONCONFORMANCE REPORT (NCR) CLOSED	01/16/2013	5
	N/A		

Comments

N/A

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [X]	Paulette Henry	**Paulette Henry**	1-21-13
	Signature	Printed Name	Date
Records Rejected [ ]			
	Signature	Printed Name	Date

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	2861
DESTINATION TEL #	912085577396
DESTINATION ID	INL
ST. TIME	01/21 15:16
TIME USE	00'17
PAGES SENT	1
RESULT	OK

Controlled Copy

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Fax Record [ ] Electronic Record [ ] Copy

Attn:	RECORDS CUSTODIAN	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	01/17/2013
Telephone Number:	575-234-7523		

Document Number	Title/Description	Record Date	Total Pages
NCR-INL-0346-12	NONCONFORMANCE REPORT (NCR) CLOSED	01/16/2013	5
	N/A		

Comments

N/A

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [X] Paulette Henry (Signature) **Paulette Henry** (Printed Name) 1-21-13 (Date)

DIVIDER PAGE

Controlled Copy

Attachment 1 – CCP Nonconformance Report (NCR)

NCR No. NCR-INL-0349-12	Revision **0**	
1. Lot No./Heat No. or Serial No. (as applicable): N/A	2. Process (e.g., NDA, HSG, NDE, VE, Other): NDA	3. Batch Data Report #(s): N/A Container #(s): N/A
4. Order/Work Order/Job Control Number (as applicable): N/A	5. PO # (as applicable): N/A 6. Supplier (as applicable): N/A	

DESCRIPTION OF NONCONFORMANCE

7. (a) NCR Description. ☐ < 100 nCi/g ☐ Prohibited Item ☐ E-Flag
☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☒ Other

7. (b) Description of Nonconformance Required Condition (Implementing Procedure, Revision, Section, & Text):
CCP-TP-115, Rev. 4 Section 4.5.6 **IF** any of the values on the QA Last Results Report indicate a preset "Ab" (Above) or "Be" (Below) boundary flag, or an "Ac" (Action) flag, **THEN** perform the following:
[A] STOP WORK, **AND** notify the NDA LO and VPM.
[B] Note the problem in the NDA Operational Logbook.
[C] Evaluate the nature of the failure, consulting with an NDA EA, as necessary, **AND** determine if an NCR is required.
[E] **IF** an NCR is required, **THEN** initiate an NCR in accordance with CCP-QP-005.
[F] DO **NOT** resume operations until a corrective action plan is complete **AND** calibration verification check as described in the above note above is performed.
NOTE: Calibration verification check is accomplished by completing two consecutive successful Daily Performance Check measurements.

7. (c) Actual Condition

SGRS opening Daily Performance Check (DPC) DETA2 129keV Peak FWHM parameter reported an "Ab" or Above flag.

8. NCR Originator (Print name, sign, and date)	9. CCP QA Engineer or Designee Validation (Print name, sign, and date)
Brent Dial Brent Dial 07/17/12	Crary Davis, Crary Davis 7-17-12

9a. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE.
If YES or INDETERMINATE, then apply Trend Code L in Block 12.

9b. Have the CCP HOLD TAGS associated with the NCR been applied? ☐ YES ☒ NO If no is marked, provide an explanation.
Since the flag occurred on the opening DPC, no BDR was open therefore no waste drums were assayed.

10. Significant Condition? (If Yes, List CAR) ☐ YES ☒ NO	11. Recurring Condition? ☐ YES ☒ NO (If YES, List NCRs/CARs)
12. Trend Code: K	13. Responsible Manager: Teri Miles

COPY

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL-0349-12	Revision 0

INTERIM DISPOSITION

14. Interim Disposition (Check One)

☐ N/A (See Final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use

☐ Sort ☒ Reinspect/Retest ☐ Remediate

(a) Instructions for Completion of the Interim Disposition:

1. Perform detector and dewar repositioning, trouble shooting, diagnostic measurements, repair, replacement, or any additional measurements as necessary as directed by an NDA Expert Analyst (EA) or technical support.

INTERIM DISPOSITION APPROVALS

15. Responsible Manager/Individual (Print, sign, and date)	16. CCP QA Engineer or Designee (Print, sign and date)
Jeri Miles 7/17/12	Laura R. Jones 7/17/12
Additional Approvals: (Print, sign and date) Brent Dial 07/17/12	Additional Approvals: (Print, sign and date)

COMPLETION OF INTERIM DISPOSITION

17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date) Jeri Miles 07/18/12

18. Interim Disposition Verified CCP QA Engineer: (Print, sign and date) Laura R. Jones 07/18/12

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL-0349-12 Revision 0

FINAL DISPOSITION

19. Final Disposition (Check One)
☐ Use-As-Is ☐ Reject ☐ Repair ☒ Rework ☐ Scrap

(a) Technical Justification (Required for Use-As-Is and Repair dispositions, Enter N/A for Reject, Scrap, or Rework dispositions.)
N/A

(b) Instructions for Completion (Required for Reject, Repair, Rework and Scrap – Enter N/A for Use-As-Is).
To return the system to service the following steps will occur:
1. Perform a calibration verification check per CCP-TP-115.
2. An NDA EA will review the DPC data, and once the data is shown satisfactory, the system may be returned to service pending CCP management approval.

(c) Corrective Actions (Actions to Prevent Recurrence – Required for Repair and Rework; Enter N/A for Use-As-Is-, Reject, and Scrap).
None needed.

FINAL DISPOSITION APPROVALS

20. Responsible Manager/Individual: (Print, sign, and date) Jeri Miles Jeri Miles 7/18/12

21. CCP QA Engineer or Designee: (Print, sign, and date) Laura L. Jones 07/18/12 Laura Lowen Jones

Additional Approvals: (Print, sign, and date) Craig Davis, Cog Dev 7-18-12

Additional Approvals: (Print, sign, and date)

CLOSURE

22. Final Disposition Complete Responsible Manager/Individual: (Print, sign, and date) Dick Verbica 7-18-12

23. Attachments: 1-SGRS DET 2 "Ab" Hug. Email dated 18 July 2012.
2 - Basis for Closure. 07/18/12 LLJ

24. (a) HOLD TAG removal has been validated and reconciled for all nonconforming items on the NCR. ☐
(b) Check if not applicable (N/A) and provide an explanation here or on a continuation sheet. ☑

Please refer to Section 9b.
07/18/12 LLJ

25. Final Disposition Verified – NCR Closed CCP QA Engineer: (Print, sign, and date) 07/18/2012
Laura L. Jones Laura Lowen Jones

Jones, Laura - WTS

From: Verlanic, Bill [William.Verlanic@amwtp.inl.gov]
Sent: Wednesday, July 18, 2012 8:43 AM
To: Jones, Laura - WTS; Miles, Jeri L.
Subject: FW: NCR-INL-0349-12 for SGRS DET2 "Ab" flag on 7-17-12
Attachments: NCR-INL-0349-12 DETA2 129 keV FWHM Above flag on 7-17-12.doc; NCR-INL-0349-12 7-18-12.pdf

Attached is the objective evidence for the interim disposition.

Thank You
Bill Verlanic
Project Manager Idaho
Central Characterization Project
URS Washington TRU Solutions LLC.
Contractor for the U.S. Department of Energy
Office: 208-526-6468
Cell: 208-690-0789

From: BRASIER David [mailto:David.Brasier@canberra.com]
Sent: Wednesday, July 18, 2012 8:20 AM
To: joseph.wachter@wipp.ws; Dickes, Neil - WTS; Verlanic, Bill; Miles, Jeri L.
Cc: Davis, Crary; DAVIS William C.; Dial, Brent; DIAL Brent (CANBERRA); MORALES Bart; ABBOTT Preston
Subject: NCR-INL-0349-12 for SGRS DET2 "Ab" flag on 7-17-12

On 7/17/12, the SGRS system reported an Above or "Ab" flag on the opening Daily Performance Check (DPC) DETA2 129 keV Full Width at Half Max (FWHM) parameter. The reported value was 0.864 where the boundary limit is 0.845. A thorough investigation was performed on the gain, resolution, efficiency, peak area, and peak area uncertainty for all segments, including the Summed Segment, and revealed that the 129 keV FWHM "Ab" flag in segment 2 was due to a poor peak fit during the peak fitting routine which resulted in an over estimation of the low side tailing. A reanalysis of the DETA2 data produced a FWHM well below the established boundary. In addition, the Summed Segment resolution remained unchanged at 0.74 on the report containing the DETA2 flag and after reanalysis. Two DPC measurements were performed as part of the interim disposition, and the DETA2 resolution reported for the measurements were 0.721 and 0.790, which is well below the boundary limit and is acceptable.

The activities of the interim disposition are complete. Based on the findings, I would recommend that we proceed to the final disposition of NCR-INL-0349-12 (attached) and that a calibration verification check be performed per CCP-TP-115 in order to return the SGRS system back to service.

David Brasier
Expert Analyst
Canberra Industries
Contractor to Washington TRU Solutions LLC
Office: 208-227-9473
Cell: 208-521-0636
david.brasier@canberra.com

NCR – INL-0349-12 Rev. 0
Attachment 1 Page 1 of 1

Jones, Laura - WTS

From: Verlanic, Bill [William.Verlanic@amwtp.inl.gov]
Sent: Wednesday, July 18, 2012 2:14 PM
To: Jones, Laura - WTS
Cc: Miles, Jeri L.
Subject: FW: NCR-INL-0349-12 for SGRS DET2 "Ab" flag on 7-17-12
Attachments: NCR-INL-0349-12 DETA2 129 keV FWHM Above flag on 7-17-12.doc; NCR-CCP-0349-12 Final 7-18-12.pdf

Your objective evidence to close out the NCR is below. Attached is the signed off copy for final disposition. Please let me know when you have verified for closure.

Thank You
Bill Verlanic
Project Manager Idaho
Central Characterization Project
URS Washington TRU Solutions LLC.
Contractor for the U.S. Department of Energy
Office: 208-526-6468
Cell: 208-690-0789

From: BRASIER David [mailto:David.Brasier@canberra.com]
Sent: Wednesday, July 18, 2012 2:02 PM
To: joseph.wachter@wipp.ws; Dickes, Neil - WTS; Verlanic, Bill; Miles, Jeri L.
Cc: DAVIS William C.; Davis, Crary; DIAL Brent (CANBERRA); Dial, Brent; MORALES Bart; ABBOTT Preston
Subject: FW: NCR-INL-0349-12 for SGRS DET2 "Ab" flag on 7-17-12

I have reviewed the 2 successful DPC calibration verifications sequence numbers 29019 and 29020 run in accordance with CCP-TP-115 following the DPC DETA2 129keV FWHM "Ab" flag on 7/17/12. No issues or flags were associated with the 2 successful DPC assays. Per the final disposition of NCR-INL-0349-12, I would recommend returning the SGRS system back to service with CCP management's concurrence. Since the "Ab" flag occurred on an opening DPC there were no waste drums affected.

David Brasier
Expert Analyst
Canberra Industries
Contractor to Washington TRU Solutions LLC
Office: 208-227-9473
Cell: 208-521-0636
david.brasier@canberra.com

NCR -INL-0349-12 Rev. 0
Attachment 2 Page 1 of 2

From: BRASIER David
Sent: Wednesday, July 18, 2012 8:20 AM
To: 'joseph.wachter@wipp.ws'; 'Dickes, Neil - WTS'; 'Verlanic, Bill'; 'jeri.miles@amwtp.inl.gov'
Cc: 'william.davis@amwtp.inl.gov'; DAVIS William C.; 'brent.dial@amwtp.inl.gov'; DIAL Brent (CANBERRA); MORALES Bart; ABBOTT Preston
Subject: NCR-INL-0349-12 for SGRS DET2 "Ab" flag on 7-17-12

On 7/17/12, the SGRS system reported an Above or "Ab" flag on the opening Daily Performance Check (DPC) DETA2 129 keV Full Width at Half Max (FWHM) parameter. The reported value was 0.864 where the boundary limit is 0.845. A thorough investigation was performed on the gain, resolution, efficiency, peak area, and peak area uncertainty for all segments, including the Summed Segment, and revealed that the 129 keV FWHM "Ab" flag in segment 2 was due to a poor peak fit during the peak fitting routine which resulted in an over estimation of the low side tailing. A reanalysis of the DETA2 data produced a FWHM well below the established boundary. In addition, the Summed Segment resolution remained unchanged at 0.74 on the report containing the DETA2 flag and after reanalysis. Two DPC measurements were

performed as part of the interim disposition, and the DETA2 resolution reported for the measurements were 0.721 and 0.790, which is well below the boundary limit and is acceptable.

The activities of the interim disposition are complete. Based on the findings, I would recommend that we proceed to the final disposition of NCR-INL-0349-12 (attached) and that a calibration verification check be performed per CCP-TP-115 in order to return the SGRS system back to service.

David Brasier
Expert Analyst
Canberra Industries
Contractor to Washington TRU Solutions LLC
Office: 208-227-9473
Cell: 208-521-0636
david.brasier@canberra.com

[redacted]

Fax

To: Laura Jones From: Jer. Miles

Fax: 575-234-7071 Date: 7/17/12

Phone: Pages: 4 (including cover sheet)

Re: NCR-INL-0345-12 CC:

☐ Urgent ☐ For Review ☐ Please Comment ☐ Please Reply ☐ Please Recycle

•Comments:

DIVIDER

PAGE

Attachment 1 – CCP Nonconformance Report (NCR)

NCR No. NCR-INL-0353-12		Revision 0
1. Lot No./Heat No. or Serial No. (as applicable): N / A	2. Process (e.g., NDA, HSG, NDE, VE, Other): NDA	3. Batch Data Report #(s): N /A
4. Order/Work Order/Job Control Number (as applicable): AMWTP WORK ORDER # 423257	5. PO # (as applicable): N /A	Container #(s): N /A
	6. Supplier (as applicable): N /A	

DESCRIPTION OF NONCONFORMANCE

7. (a) NCR Description: ☐ < 100 nCi/g ☐ Prohibited Item ☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☒ Other

7. (b) Description of Nonconformance, Required Condition (Implementing Procedure, Revision, Section, & Text):
CCP-TP-146, REV 7, SEC 3.1.4
NDA OPERATOR NOTIFIES NDA LO AND VPM OF OUT OF SPECIFICATION OPERATING CONDITIONS.

7. (c) Actual Condition : On 8/1/2012 SHENC operated and ran a series of Weekly Interfering Matrix runs, 6 neutron runs and 6 Gamma runs. All Quality Control measurements were within limits. SHENC did not operate on 8/2/2012. On Monday 8/6/2012 SHENC was operating. The Gamma Background QC measurement started at 0743. Upon completion of the Background run it was observed that the Gross Area was 0,(zero), which is not a normal condition, AMWTP System Engineers were called and during their investigation it was discovered the Gamma Detector was shut off(red light on the detector head) and frosted. This could not be seen during the walk down because the detector is encased. All indications on the DSPECjr and the Maestro MCB Properties pull down menu showed the High Voltage was on and the detector was working. During the investigation process the SHENC EA called and informed the SHENC operator the gamma runs for the WIM runs on 8/2/2012 were showing no gamma activity. The Gamma detector shut itself down just after the QC's for that day were complete and with limits.

8. NCR Originator (Print name, sign, and date)	9. CCP QA Engineer or Designee Validation (Print name, sign, and date)
Rick Green 8/14/2012	Laura R. Jones 08/14/2012

9a. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE
If YES or INDETERMINATE, then apply Trend Code L in Block 12.

9b. Have the CCP HOLD TAGS associated with the NCR been applied? ☐ YES ☒ NO If no is marked, provide an explanation. No SWB's or drums were impacted.

10. Significant Condition? (If Yes, List CAR)	11. Recurring Condition?
☐ YES ☒ NO	☐ YES ☒ NO (If YES, List NCRs/CARs)
12. Trend Code: H	13. Responsible Manager: Bill Verlanic

COPY

CCP RECORDS ORIGINAL
DATE REC'D 9-18-12

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL-0353-12	Revision 0
INTERIM DISPOSITION	
14. Interim Disposition (Check One) ☐ N/A (See Final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort ☒ Reinspect/Retest ☐ Remediate (a) Instructions for Completion of the Interim Disposition: Perform detector replacement, repositioning, repair, trouble shooting, and any additional measurements as necessary as directed by an NDA Expert Analyst (EA) or technical support.	
***INTERIM DISPOSITION APPROVALS** RJC 9/11/12	
15. Responsible Manager/Individual (Print, sign, and date) Bill Vercaire 8/15/12	16. CCP QA Engineer or Designee (Print, sign and date) Laura R. Jones 8/16/12 Laura Romero Jones
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
***COMPLETION OF INTERIM DISPOSITION**	
17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date) Bill Vercaire 9/11/12	
18. Interim Disposition Verified CCP QA Engineer: (Print, sign and date) R. Czyzewski 9/11/12	

*See Attachment 1 RJC 9/18/12

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL-0353-12 Revision 0

FINAL DISPOSITION

19. Final Disposition (Check One)
☐ Use-As-Is ☐ Reject ☐ Repair ☒ Rework ☐ Scrap

(a) Technical Justification (Required for Use-As-Is and Repair dispositions, Enter N/A for Reject, Scrap, or Rework dispositions.)

(b) Instructions for Completion (Required for Reject, Repair, Rework and Scrap – Enter N/A for Use-As-Is).
1. Perform a Calibration Verification per CCP-TP-170 Rev.2 using Three Daily QC Measurements from the Neutron and Gamma Systems.

2. An NDA EA will review the Daily QC Data and once the data is shown satisfactory, the SHENC may be returned to service.

(c) Corrective Actions (Actions to Prevent Recurrence – Required for Repair and Rework; Enter N/A for Use-As-Is-, Reject, and Scrap).

None needed.

FINAL DISPOSITION APPROVALS

20. Responsible Manager/Individual: (Print, sign, and date)	21. CCP QA Engineer or Designee: (Print, sign, and date)
Bill Verlanic 9/11/12	R. Czyzewski 9/11/12
Additional Approvals: (Print, sign, and date)	Additional Approvals: (Print, sign, and date)

***CLOSURE**

22. Final Disposition Complete Responsible Manager/Individual: (Print, sign, and date)
Bill Verlanic 9/13/12 9/17/12

23. Attachments: Att. 1 West to Verlanic, 9/11/12 @ 1:06 PM
Att. 2 West to Wachter, 9/13/12 @ 9:28 AM, 9 Pages
Att. 3 Dickes to West, 9/17/12 @ 10:11 AM, 1 Page RJC 9/17/12

24. (a) HOLD TAG removal has been validated and reconciled for all nonconforming items on the NCR. ☐
(b) Check if not applicable (N/A) and provide an explanation here or on a continuation sheet. ☒
No Hold Tag applied. Unit was declared Out-of-Service on 8/6/12 and will be put back in service per CONOPS requirements by the VPM.
-RJC 9/11/12

25. Final Disposition Verified – NCR Closed CCP QA Engineer: (Print, sign, and date)
Robert Czyzewski 9/13/12
9/17/12

*See Attachment 2
Resigned on basis of addition of Attachment 3 on 9/17/12
-R Czyzewski 9/17/12

Czyzewski, Robert J.

From: Verlanic, Bill
Sent: Tuesday, September 11, 2012 1:44 PM
To: Czyzewski, Robert J.
Subject: FW: INL SuperHENC Status

Documentation for SHENC interim.

Thank You
Bill Verlanic
Project Manager Idaho
Central Characterization Project
URS Washington TRU Solutions LLC.
Contractor for the U.S. Department of Energy
Office: 208-526-6468
Cell: 208-690-0789

From: John West [mailto:jwest@pscnda.com]
Sent: Tuesday, September 11, 2012 1:06 PM
To: Verlanic, Bill
Cc: Green, Rick A.; Michael Maul; ABBOTT Preston
Subject: INL SuperHENC Status

To: Bill Verlanic

After replacement of the gamma detector and the collar on the liquid nitrogen dewar on the INL SuperHENC, the daily background check and the daily QC check were completed on the gamma system at 11:56 AM September 11, 2012. I have reviewed the raw data and concluded that the gamma system is functioning properly. All of the criteria for our daily QC checks are within the established parameters. As per our procedures, the final disposition of the NCR requires that we perform a Calibration Verification consisting of 3 measurements each on the neutron and gamma portions of the INL SuperHENC. We are requesting the Site to grant the authority to proceed with the Calibration Verification measurements as defined in Procedure CCP-TP-170 Rev 2, to facilitate evaluation of the data and the disposition of the NCR.

John West

John West
MCS EA
Contractor to WTS

Cell: 303-349-0309

NCR -INL-0353-12 Rev. 0

Attachment 1 Page 1 of 1

Czyzewski, Robert J.

From: Verlanic, Bill
Sent: Thursday, September 13, 2012 9:36 AM
To: Czyzewski, Robert J.
Subject: FW: INL SuperHENC Calibration Verification Report
Attachments: CCP-SHENC-12-002 Cal Ver Report .pdf

FYI. For closure of the SHENC NCR.

Thank You
Bill Verlanic
Project Manager Idaho
Central Characterization Project
URS Washington TRU Solutions LLC.
Contractor for the U.S. Department of Energy
Office: 208-526-6468
Cell: 208-690-0789

From: John West [mailto:jwest@pscnda.com]
Sent: Thursday, September 13, 2012 9:28 AM
To: Wachter, Joseph; neil.dickes@wipp.ws
Cc: Verlanic, Bill; Green, Rick A.
Subject: INL SuperHENC Calibration Verification Report

To all:

Attached is the Calibration Verification Report for the INL SuperHENC, CCP-SHENC-12-002. The Calibration Verification was conducted in accordance with CCP-TP-170 Rev 2, following replacement of the gamma detector and the cryostat collar on the liquid nitrogen dewar. As indicated in the Report, the Verification met all of the requirements specified in CCP-TP-170 Rev 2 in accordance with CCP-PO-002 Rev 26. This report is intended to serve as the technical documentation for the closeout of NCR-INL-0353-12 R0 and return of the instrument to operational status.

John West

John West
INL SuperHENC EA
MCS
Contractor to WTS

Cell: 303-349-0309

NCR INL-0353-12 Rev 0

Attachment 2 Page 1 of 9

INL SuperHENC Calibration Verification

Revision 0

September 12, 2012

Submitted by: J. M. West Date: 9/13/2012

Record of Revision

Revision Number	Date Approved	Description of Revision
0	September 13, 2012	Initial Issue

NCR INL-0353-12 Rev 0

Attachment 2 Page 2 of 9

Introduction

This report documents the fulfillment of the requirements laid out in the Waste Isolation Pilot Plant Waste Acceptance Criteria, for the Central Characterization Project's Idaho National Laboratory (INL) SuperHENC platform located in Building 610 at the Advanced Mixed Waste Treatment Project (AMWTP) facility. This report documents the calibration verification activities conducted in response to:

- Gamma detector failure on August 1, 2012

On August 1, 2012, the Subject Matter Expert (SME) completed all of the daily QC measurements in accordance with Sections 4.5-4.9 of CCP-TP-146. All of the specified QC parameters were within required ranges specified in the Procedure. The SME then conducted 6 replicate measurements of a single Weekly Interfering Matrix (WIM) configuration. No production assays were performed on August 1, 2012. The data from the daily QC measurements and the 6 WIM assays were forwarded to the NDA EA for analysis.

On Friday, August 3, 2012, the NDA EA determined that the raw gamma data for the 6 WIM measurements conducted on August 1, 2012 did not have any gamma peaks. The NDA notified the SME that the gamma data from the 6 WIM assays indicated that the gamma system appeared to be non-functional and that the 6 WIM assays were rejected.

On Monday, August 6, 2012, the SME conducted the daily background check measurement on the gamma system. The SME determined the gross background count was 0, indicating a non-functional gamma system. NCR-INL-0353-12 R0 was issued, and system repair was referred to AMWTP.

On August 14, 2012, AMWTP replaced the gamma detector. After filling the liquid nitrogen dewar, it was determined that the cryostat collar at the top of the dewar was leaking and needed to be replaced. The collar was replaced on September 11, 2012. The daily QC checks were performed on September 11, 2012 and met all of the required criteria. The Calibration Verification measurements as specified in CCP-TP-170 Rev 2 for return of the System to operational status per NCR-INL-0353-12 R0 were performed on September 12, 2012.

Calibration Verification Data

Although the instrument failure involved only the gamma system, the calibration verification was conducted for both the neutron and gamma systems. To verify the calibration of the neutron system, three verification runs were made using the "empty" SWB with Standards CEP 003, CEP 004, CEP 005 and CEP 006 loaded in positions J 0", J 9", O 0", and O 9" respectively. The results for the neutron verification measurements are presented in Table 1. The gamma energy calibration was verified by conducting three replicate measurements with the Eu-152 source. The results for the gamma measurements are presented in Table 2.

NCR INL-0353-12 Rev. 0

Attachment 2 Page 3 of 9

Run #	Date of Measurement	Decayed Pu Tag Mass (g)	Decayed Pu240e Tag Mass (g)	Measured Total Pu240e Mass (g)	%R
1	9/12/12	7.980	0.4841	0.521	107.62
2	9/12/12	7.980	0.4841	0.516	106.59
3	9/12/12	7.980	0.4841	0.516	106.59
Average				0.518	106.93
%RSD				0.60%	

Table 1. Results for the neutron calibration verification performed on SuperHENC on September 12, 2012.

Run #	Date of Measurement	HPGe Detector 344.3 keV Channel Lower Bound	HPGe Detector 344.3 keV Channel Upper Bound	Measured 344.3 keV Centroid Channel	344.3 keV Peak Upper Bound FWHM	Measured 344.3 keV Peak FWHM
1	9/12/12	1375	1380	1376.46	1.5	1.16
2	9/12/12	1375	1380	1376.45	1.5	1.13
3	9/12/12	1375	1380	1376.52	1.5	1.18

Table 2. Results for the gamma energy and FWHM performed on SuperHENC on September 12, 2012.

Conclusions

In accordance with Section 4.5 of CCP-TP-170 Rev 2, the neutron calibration verification measurement results have been evaluated using the calibration confirmation criteria specified in CCP-PO-002 Rev 26. The data are within the required 6.6% RSD value for three replicate measurements and within the required +/- 30% accuracy limits as shown in Table 1. The gamma energy calibration replicates were evaluated against the requirements for the gamma daily source check, which include a specified range for the 344.3 keV centroid and a specified upper bound full-width-half-maximum (FWHM) for the 344.3 keV peak. The three replicate gamma measurements met the specified criteria as shown in Table 2.

NCR INL-0353-12 Rev. 0

Attachment 2 Page 4 of 9

Appendix – Source Certificates

Los Alamos National Laboratory

Certificate of Content and Traceability

Department of Energy/Idaho National Engineering and Environmental Laboratory
Working Reference Material # CEP003

PuO_2-AmO_2-Diatomaceous Earth

This Working Reference Material (WRM) contains high purity plutonium dioxide and americium dioxide dispersed in diatomaceous earth. Quantitative information and uncertainties on the nuclear content of this WRM are listed below. Complete information regarding the Pu and Am content, Pu isotopic ratios, chemical composition, elemental impurities, containment, and WRM fabrication procedure is described in the NDA CEP WRM Production Plan, LACP-98-155, and in files retained at the Idaho National Engineering and Environmental Laboratory by the Lockheed Martin Idaho Technology Co. Transuranic Waste Department and at the Los Alamos National Laboratory Analytical Chemistry Group.

NUCLEAR MATERIAL CONTENT

The nuclear material content and total alpha activity for this WRM are listed below. Also listed are overall uncertainty estimates at 95% confidence intervals (CI) for each component.

Component	Quantity or Value	95 % CI
PuO_2 in WRM	2.26382 g	±0.00236 g[a]
Pu Assay	0.87804 g Pu/g PuO_2	±0.00036 g[b]
Pu in WRM	1.98772 g	±0.00207 g[c]
AmO_2 in WRM[d]	0.06610 g	±0.00027 g[e]
Am Assay1[f]	1069.5 µg Am/g PuO_2	±2.8 µg[g]
Am Assay2[h]	0.78727 g Am/g AmO_2	±0.00352 g[i]
Am in WRM[j]	0.05416 g	±0.00021 g[k]
Isotopic Weight Fraction		
^{238}Pu	0.000143	±0.000018[l]
^{239}Pu	0.937811	±0.000028[l]
^{240}Pu	0.059448	±0.000010[l]
^{241}Pu	0.002038	±0.000019[l]
^{242}Pu	0.000560	±0.000003[l]
Total α Activity in WRM	333.45 mCi	±0.75 mCi[m]
	1.23E+10 Bq	±2.78E+07 Bq[m]

All values decay corrected to 6/1/97.

Bill J. McKerley, Group Leader
Analytical Chemistry, NMT-1

Robert S. Marshall, Project Manager
NDA CEP WRM Production

NCR INL-0353-12 Rev. 0

Attachment 2 Page 6 of 9

Los Alamos National Laboratory

Certificate of Content and Traceability

Department of Energy/Idaho National Engineering and Environmental Laboratory
Working Reference Material # CEP004

PuO_2-AmO_2-Diatomaceous Earth

This Working Reference Material (WRM) contains high purity plutonium dioxide and americium dioxide dispersed in diatomaceous earth. Quantitative information and uncertainties on the nuclear content of this WRM are listed below. Complete information regarding the Pu and Am content, Pu isotopic ratios, chemical composition, elemental impurities, containment, and WRM fabrication procedure is described in the NDA CEP WRM Production Plan, LACP-98-155, and in files retained at the Idaho National Engineering and Environmental Laboratory by the Lockheed Martin Idaho Technology Co. Transuranic Waste Department and at the Los Alamos National Laboratory Analytical Chemistry Group.

NUCLEAR MATERIAL CONTENT

The nuclear material content and total alpha activity for this WRM are listed below. Also listed are overall uncertainty estimates at 95% confidence intervals (CI) for each component.

Component	Quantity or Value	95 % CI
PuO_2 in WRM	2.28761 g	±0.00232 g[a]
Pu Assay	0.87804 g Pu/g PuO_2	±0.00036 g[b]
Pu in WRM	2.00861 g	±0.00204 g[c]
AmO_2 in WRM[d]	0.06680 g	±0.00027 g[e]
Am Assay1[f]	1069.5 µg Am/g PuO_2	±2.8 µg[g]
Am Assay2[h]	0.78727 g Am/g AmO_2	±0.00352 g[i]
Am in WRM[j]	0.05474 g	±0.00022 g[k]
Isotopic Weight Fraction		
^{238}Pu	0.000143	±0.000018[l]
^{239}Pu	0.937811	±0.000028[l]
^{240}Pu	0.059448	±0.000010[l]
^{241}Pu	0.002038	±0.000019[l]
^{242}Pu	0.000560	±0.000003[l]
Total α Activity in WRM	336.98 mCi	±0.76 mCi[m]
	1.25E+10 Bq	±2.80E+07 Bq[m]

All values decay corrected to 6/1/97.

Bill J. McKerley, Group Leader
Analytical Chemistry, NMT-1

Robert S. Marshall, Project Manager
NDA CEP WRM Production

NCR INL-0353-12 Rev. 0

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Los Alamos National Laboratory

Certificate of Content and Traceability

Department of Energy/Idaho National Engineering and Environmental Laboratory
Working Reference Material # CEP005

PuO_2-AmO_2-Diatomaceous Earth

This Working Reference Material (WRM) contains high purity plutonium dioxide and americium dioxide dispersed in diatomaceous earth. Quantitative information and uncertainties on the nuclear content of this WRM are listed below. Complete information regarding the Pu and Am content, Pu isotopic ratios, chemical composition, elemental impurities, containment, and WRM fabrication procedure is described in the NDA CEP WRM Production Plan, LACP-98-155, and in files retained at the Idaho National Engineering and Environmental Laboratory by the Lockheed Martin Idaho Technology Co. Transuranic Waste Department and at the Los Alamos National Laboratory Analytical Chemistry Group.

NUCLEAR MATERIAL CONTENT

The nuclear material content and total alpha activity for this WRM are listed below. Also listed are overall uncertainty estimates at 95% confidence intervals (CI) for each component.

Component	Quantity or Value	95 % CI
PuO_2 in WRM	2.26968 g	±0.00231 g[a]
Pu Assay	0.87804 g Pu/g PuO_2	±0.00036 g[b]
Pu in WRM	1.99287 g	±0.00203 g[c]
AmO_2 in WRM[d]	0.11446 g	±0.00046 g[e]
Am Assay1[f]	1069.5 µg Am/g PuO_2	±2.8 µg[g]
Am Assay2[h]	0.78727 g Am/g AmO_2	±0.00352 g[i]
Am in WRM[j]	0.09224 g	±0.00037 g[k]
Isotopic Weight Fraction		
^{238}Pu	0.000143	±0.000018[l]
^{239}Pu	0.937811	±0.000028[l]
^{240}Pu	0.059448	±0.000010[l]
^{241}Pu	0.002038	±0.000019[l]
^{242}Pu	0.000560	±0.000003[l]
Total α Activity in WRM	464.61 mCi	±1.26 mCi[m]
	1.72E+10 Bq	±4.67E+07 Bq[m]

All values decay corrected to 6/1/97.

Bill J. McKerley, Group Leader
Analytical Chemistry, NMT-1

Robert S. Marshall, Project Manager
NDA CEP WRM Production

NCR INL-0353-12 Rev 0

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Los Alamos National Laboratory

Certificate of Content and Traceability

Department of Energy/Idaho National Engineering and Environmental Laboratory
Working Reference Material # CEP006

PuO_2-AmO_2-Diatomaceous Earth

This Working Reference Material (WRM) contains high purity plutonium dioxide and americium dioxide dispersed in diatomaceous earth. Quantitative information and uncertainties on the nuclear content of this WRM are listed below. Complete information regarding the Pu and Am content, Pu isotopic ratios, chemical composition, elemental impurities, containment, and WRM fabrication procedure is described in the NDA CEP WRM Production Plan, LACP-98-155, and in files retained at the Idaho National Engineering and Environmental Laboratory by the Lockheed Martin Idaho Technology Co. Transuranic Waste Department and at the Los Alamos National Laboratory Analytical Chemistry Group.

NUCLEAR MATERIAL CONTENT

The nuclear material content and total alpha activity for this WRM are listed below. Also listed are overall uncertainty estimates at 95% confidence intervals (CI) for each component.

Component	Quantity or Value	95 % CI
PuO_2 in WRM	2.26754 g	±0.00229 g[a]
Pu Assay	0.87804 g Pu/g PuO_2	±0.00036 g[b]
Pu in WRM	1.99099 g	±0.00201 g[c]
AmO_2 in WRM[d]	0.11573 g	±0.00046 g[e]
Am Assay1[f]	1069.5 µg Am/g PuO_2	±2.8 µg[g]
Am Assay2[h]	0.78727 g Am/g AmO_2	±0.00352 g[i]
Am in WRM[j]	0.09324 g	±0.00037 g[k]
Isotopic Weight Fraction		
^{238}Pu	0.000143	±0.000018[l]
^{239}Pu	0.937811	±0.000028[l]
^{240}Pu	0.059448	±0.000010[l]
^{241}Pu	0.002038	±0.000019[l]
^{242}Pu	0.000560	±0.000003[l]
Total α Activity in WRM	467.88 mCi	±1.28 mCi[m]
	1.73E+10 Bq	±4.72E+07 Bq[m]

All values decay corrected to 6/1/97.

Bill J. McKerley, Group Leader
Analytical Chemistry, NMT-1

Robert S. Marshall, Project Manager
NDA CEP WRM Production

NCR INL-0353-12 Rev. 0

Attachment 2 Page 9 of 9

Czyzewski, Robert J.

From: Verlanic, Bill
Sent: Monday, September 17, 2012 10:12 AM
To: Czyzewski, Robert J.
Subject: FW: INL SuperHENC Calibration Verification Report

For final close out of NCR.

Thank You
Bill Verlanic
Project Manager Idaho
Central Characterization Project
URS Washington TRU Solutions LLC.
Contractor for the U.S. Department of Energy
Office: 208-526-6468
Cell: 208-690-0789

From: Dickes, Neil - WTS [mailto:neil.dickes@wipp.ws]
Sent: Monday, September 17, 2012 10:11 AM
To: John West; ABBOTT Preston; Wachter, Joseph; Verlanic, Bill; WACHTER Joe (CANBERRA); Green, Rick A.
Cc: WACHTER Joe (CANBERRA) (joe.wachter@canberra.com)
Subject: RE: INL SuperHENC Calibration Verification Report

Having reviewed the SHENC Cal. Ver. Report, I recommend that the unit be placed back into service at the VPM's discursion. If you have any questions please contact me.

Thank You

Neil Dickes
CCP NDA Support/Nuclear Engineer
Washington TRU Solutions
Contractor for the Department of Energy
Email: neil.dickes@wipp.ws
Office: (575) 234-7539
Cell: (512) 417-2274

From: John West [mailto:jwest@pscnda.com]
Sent: Thursday, September 13, 2012 10:34 AM
To: ABBOTT Preston; Wachter, Joseph; William.Verlanic@amwtp.inl.gov; WACHTER Joe (CANBERRA); Dickes, Neil - WTS; Green, Rick A.
Subject: RE: INL SuperHENC Calibration Verification Report

To all:

I have made the editorial change recommended by Preston Abbott: (Change "NDA" to "NDA EA" in para 3 page 2). The edited file is attached. It is my understanding that the original has not been submitted to CCP records at INL. Therefore, the modified report will be submitted to Records as Rev 0.

John West

NCR INL-0353-12 Rev 0

Attachment 3 Page 1 of 1

DIVIDER PAGE ONLY

Not part of page count

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Fax Record [ ] Electronic Record [ ] Copy

Attn:	RECORDS CUSTODIAN	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	09/18/2012
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
NCR-INL-0353-12	NONCONFORMANCE REPORT (CLOSED)	09/17/2012	14
	N/A		

Comments

N/A

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

	Signature	Printed Name	Date
Records Accepted [X]	Sheri Punchios	SHERI PUNCHIOS	9-26-12
Records Rejected [ ]			

Reason for Rejection:

	Signature	Printed Name	Date
Re-submittal:			

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	4695
DESTINATION TEL #	912085577396
DESTINATION ID	INL
ST. TIME	09/26 08:01
TIME USE	00'16
PAGES SENT	1
RESULT	OK

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	RECORDS CUSTODIAN	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	09/18/2012
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
NCR-INL-0353-12	NONCONFORMANCE REPORT (CLOSED)	09/17/2012	14
	N/A		

Comments
N/A

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [X] Sheri Punchios (Signature) SHERI PUNCHIOS (Printed Name) 9-26-12 (Date)

DIVIDER

PAGE

Attachment 1 – CCP Nonconformance Report (NCR)

NCR No. NCR-INL-0357-12	Revision 0	
1. Lot No./Heat No. or Serial No. (as applicable): **N/A**	2. Process (e.g., NDA, HSG, NDE, VE, Other): **NDA**	3. Batch Data Report #(s): **INNDAS120026**
4. Order/Work Order/Job Control Number (as applicable): **N/A**	5. PO # (as applicable): **N/A**	Container #(s): **ARP71060**
	6. Supplier (as applicable): **N/A**	

DESCRIPTION OF NONCONFORMANCE

7. (a) NCR Description: ☒ < 100 nCi/g ☐ Prohibited Item ☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☐ Other

7. (b) Description of Nonconformance Required Condition (Implementing Procedure, Revision, Section, & Text):

CCP-INL-05-003 Action #3: Nonconformance Reports WILL be generated for an assay result indicating that a Newly Generated waste container from ARP has a TRU Alpha Concentration less than 100 nCi/g

7. (c) Actual Condition

TRU Alpha Activity Concentration <100 nCi/g

8. NCR Originator (Print name, sign, and date)	9. CCP QA Engineer or Designee Validation (Print name, sign, and date)
Sharon Cummins 8/22/12	Crary Davis, Cary Davis 8-22-12

9a. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE
If YES or INDETERMINATE, then apply Trend Code L in Block 12.

9b. Have the CCP HOLD TAGS associated with the NCR been applied? ☒ YES ☐ NO If no is marked, provide an explanation.

10. Significant Condition? (If Yes, List CAR) ☐ YES ☒ NO	11. Recurring Condition? ☐ YES ☒ NO (If YES, List NCRs/CARs)
12. Trend Code: **K**	13. Responsible Manager: Bill Uerlanic

COPY

CCP RECORDS ORIGINAL
DATE REC'D 9-4-12

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL-0357-12	Revision 0
INTERIM DISPOSITION	
14. Interim Disposition (Check One) ☒ N/A (See Final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort ☐ Reinspect/Retest ☐ Remediate (a) Instructions for Completion of the Interim Disposition:	
INTERIM DISPOSITION APPROVALS	
15 .Responsible Manager/Individual (Print, sign, and date)	16. CCP QA Engineer or Designee (Print, sign and date)
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
COMPLETION OF INTERIM DISPOSITION	
17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date)	
18. Interim Disposition Verified CCP QA Engineer: (Print, sign and date)	

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL-0357-12 Revision 0

FINAL DISPOSITION

19. Final Disposition (Check One)
☐ Use-As-Is ☒ Reject ☐ Repair ☐ Rework ☐ Scrap

(a) Technical Justification (Required for Use-As-Is and Repair dispositions, Enter N/A for Reject, Scrap, or Rework dispositions.) N/A

(b) Instructions for Completion (Required for Reject, Repair, Rework and Scrap – Enter N/A for Use-As-Is).
Reject from the BDR. Move the container to WMF-610 and re-assay on WAGS.

(c) Corrective Actions (Actions to Prevent Recurrence – Required for Repair and Rework; Enter N/A for Use-As-Is-, Reject, and Scrap). N/A

FINAL DISPOSITION APPROVALS

20. Responsible Manager/Individual: (Print, sign, and date)	21. CCP QA Engineer or Designee: (Print, sign, and date)
Bill Vercanic 8/22/12	Cindy Davis, Cindy Davis 8-22-12
Additional Approvals: (Print, sign, and date)	Additional Approvals: (Print, sign, and date)

CLOSURE

22. Final Disposition Complete Responsible Manager/Individual: (Print, sign, and date)
Bill Vercanic 8/28/12

23. Attachments:
None RJC 9/18/12

24. (a) HOLD TAG removal has been validated and reconciled for all nonconforming items on the NCR. ☒
(b) Check if not applicable (N/A) and provide an explanation here or on a continuation sheet. ☐

25. Final Disposition Verified – NCR Closed	CCP QA Engineer: (Print, sign, and date)
R Czyzewski	R Gygard 8/28/12

ARP71060 was rejected from ~~BDG~~ BDR INNDAS120026 and re-assayed as part of INNDAW120071 on 8/22/12. NCR tag was removed.
-R Gygard 8/22/12

DIVIDER PAGE ONLY

Not part of page count

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Fax Record [ ] Electronic Record [ ] Copy

Attn:	RECORDS CUSTODIAN	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	09/04/2012
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
NCR-INL-0357-12	NONCONFORMANCE REPORT (NCR) CLOSED	08/28/2012	3
	N/A		

Comments

N/A

(When the Record accepted line has been completed, the rest of the page below may be left blank.)

Acceptance/Rejection Signature and Date

Records Accepted [X]	Sheri Punchios (Signature)	SHERI PUNCHIOS (Printed Name)	9-18-12 (Date)
Records Rejected [ ]	(Signature)	(Printed Name)	(Date)

Reason for Rejection:

Re-submittal:	(Signature)	(Printed Name)	(Date)

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	4472
DESTINATION TEL #	912085577396
DESTINATION ID	INL
ST. TIME	09/18 15:29
TIME USE	00'17
PAGES SENT	1
RESULT	OK

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	RECORDS CUSTODIAN	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	09/04/2012
Telephone Number:	575-234-7523		

Document Number	Title/Description	Record Date	Total Pages
NCR-INL-0357-12	NONCONFORMANCE REPORT (NCR) CLOSED	08/28/2012	3
	N/A		

Comments

N/A

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [X] Sheri Punchios (Signature) SHERI PUNCHIOS (Printed Name) 9-18-12 (Date)

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	RECORDS CUSTODIAN	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	09/18/2012
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
NCR-INL-0357-12	NONCONFORMANCE REPORT (CLOSED) (CORRECTION) PAGE 3	08/28/2012	1
	N/A		

Comments

ORIGINAL LOCATED IN CARLSBAD

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [X]	Sheri Punchios	SHERI PUNCHIOS	9-18-12
	Signature	Printed Name	Date
Records Rejected [ ]			
	Signature	Printed Name	Date

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	4473
DESTINATION TEL #	912085577396
DESTINATION ID	INL
ST. TIME	09/18 15:30
TIME USE	00'16
PAGES SENT	1
RESULT	OK

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220
Telephone Number: 575-234-7523 or 575-234-7431
Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	RECORDS CUSTODIAN	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	09/18/2012
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
NCR-INL-0357-12	NONCONFORMANCE REPORT (CLOSED) (CORRECTION) PAGE 3	08/28/2012	1
	N/A		

Comments
ORIGINAL LOCATED IN CARLSBAD

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

SHERI PUNCHIOS

DIVIDER

PAGE

Attachment 1 – CCP Nonconformance Report (NCR)

CCP NONCONFORMANCE REPORT (NCR)

(Use NCR Continuation, Attachment 2, if necessary)

NCR No. NCR-INL-0368-12 **Revision :** 0

1. Lot No., Heat No., or Serial No. (if applicable):	2. Process (e.g., NDA, HSG, NDE, VE, Other):	3. Batch Data Report #(s):
N/A	NDA	N/A
4. Order/Work Order/Job Control Number (if applicable): N/A	5. PO # (if applicable): N/A	Container #(s): N/A
	6. Supplier (if applicable): N/A	

DESCRIPTION OF NONCONFORMANCE

7a. NCR Description: ☐ < 100 nCi/g ☐ Prohibited Item ☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☒ Other

7b. Requirement(s) (Enter Implementing Procedure No., Revision, Section No., & Quoted Text):

CCP-TP-019, Rev. 5 Section 4.5.8 **IF** any of the values on the QA Last Results Report indicate a preset "Ab" (Above) or "Be" (Below) boundary flag, or an "Ac" (Action) flag, **THEN** perform the following:
[A] STOP WORK, **AND** notify the NDA LO and VPM.
[B] Note the problem in the NDA Operational Logbook.
[C] Evaluate the nature of the failure, consulting with an EA as necessary, **AND** determine if an NCR is required.
[D] **IF** an NCR is **NOT** required, **THEN** instruct the NDA Operator to mitigate the problem, note the resolution in the NDA Operational Logbook, **AND** repeat the QC Daily Performance Check.
[E] **IF** an NCR is required, **THEN** initiate an NCR in accordance with CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*. DO **NOT** resume operations until a corrective action plan is complete, **AND** calibration verification, as described in the NOTE above, is performed.
NOTE: Calibration verification is accomplished by completing two consecutive successful Daily Performance Check measurements.

7c. Actual Condition:

WAGS Opening Daily Performance Check DET3NB 414 keV FWHM parameter failed at "Ab" or Above level.

7d. Have the CCP HOLD TAGS associated with this NCR been applied? ☐ YES ☒ NO **(If no is checked, explain:)**

No containers were processed.

8. NCR Originator:

Rick Green (printed name) | (signature) | 11/28/12 (date)

9. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE

If YES or INDETERMINATE, enter Trend Code L in Block 10.

COPY

CCP RECORDS ORIGINAL
DATE REC'D 12-4-12

10. Trend Code: K	11. Responsible Manager: Bill Verlanic
12. Significant Condition? ☐ YES ☒ NO (If Yes, enter CAR No.:)	13. Recurring Condition? ☐ YES ☒ NO (If Yes, list NCRs and CARs:)
14. CCP QA Engineer or CCP QA Designee validation: Craig Davis (printed name) Craig Davis (signature) 11-28-12 (date)	

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL-0368-12 **Revision:** 0

INTERIM DISPOSITION

15a. Interim Disposition (Check Only One):

☐ N/A (See Final Disposition) ☐ Hold ☐ Conditionally Accept ☐ Conditionally Use

☐ Sort ☒ Reinspect or Retest ☐ Remediate

15b. Instructions for Completion of the Interim Disposition:

Perform the following as necessary: detector replacement, repositioning, repair, trouble shooting, and/or any additional measurements as directed by an NDA Expert Analyst (EA) or technical support.

INTERIM DISPOSITION APPROVALS

16a. Responsible Manager or Individual:			16b. CCP QA Engineer or CCP QA Designee:		
Brent Vorhauer	[signature]	11-28-12	Casey Davis	[signature]	11-28-12
printed name	signature	date	printed name	signature	date
Additional Approvals:			**Additional Approvals:**		
printed name	signature	date	printed name	signature	date

COMPLETION OF INTERIM DISPOSITION

17. Interim Disposition Complete – Responsible Manager or Individual:

Brent Vorhauer [signature] 11-29-12

printed name signature date

18. Interim Disposition Verified – CCP QA Engineer:

R. Czyzewski [signature] 11/29/12

printed name signature date

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL-0368-12 **Revision: 0**

FINAL DISPOSITION

19. Final Disposition (Check Only One):
☐ Use-As-Is ☐ Repair

19a. Technical Justification – Required for Use-As-Is or Repair dispositions. (Enter "N/A" for Reject, Rework, and Scrap:)
N/A

☐ Reject ☒ Rework ☐ Scrap

19b. Instructions for Completion – Required for Reject, Repair, Rework, or Scrap. (Enter "N/A" for Use-As-Is:)
To return the system to service the following will occur:
1. Replace power supply of DET3NB DSA per AMWTP Work Control.
2. Perform calibration verification per CCP-TP-010.
3. An NDA EA will review the DPC data and once the data is shown satisfactory, the system may be returned to service.

19c. Corrective Actions (Actions to Prevent Recurrence – For Repair or Rework, if applicable. Enter "N/A," if not applicable, and for Use-As-Is, Reject, and Scrap):
None needed.

FINAL DISPOSITION APPROVALS

20. Responsible Manager or Individual:			21. CCP QA Engineer or CCP QA Designee:		
Bill Verlanic		11-29-12	RCzyzewski		11/29/12
printed name	signature	date	printed name	signature	date
Additional Approvals:			Additional Approvals:		
printed name	signature	date	printed name	signature	date

* CLOSURE

22. Final Disposition Complete – Responsible Manager or Individual:
Bill Verlanic 12-3-12
printed name signature date

23. Attachments:
Att. 1 e-mail Morales to Verlanic and Dickes, 11/29/12, 1:34 PM
Att. 2 e-mail Morales to Verlanic, Dickes and Boland, 12/3/12, 7:19 AM

24a. HOLD TAG removal has been verified and reconciled for all nonconforming items on the NCR. ☐

24b. Check if not applicable (N/A) and explain. ☒ No Hold Tag; no containers or BDR affected.

25. Final Disposition Verified – NCR Closed CCP QA Engineer:
Robert Czyzewski 12/3/12
printed name signature date

* See Attachment #2 RJC 12/4/12

Verlanic, Bill

From: MORALES Bart [Bart.Morales@canberra.com]
Sent: Thursday, November 29, 2012 1:34 PM
To: Verlanic, Bill; Dickes, Neil
Cc: ABBOTT Preston; DAVIS William C.; Boland, Steven C.; BRASIER David
Subject: RE: Correction to last e-mail (WAGS Above flag for DPC 414 keV FWHM Detector 3NB)

Lesson 1- Don't hurry!

This is what the last e-mail should have said.

Bart

Bill and Neil,

On 11/28/12 , the WAGS system reported an Above flag on the Daily Performance Check (DPC) DET3NB 414 keV Full Width at Half Max (FWHM) parameter. During the troubleshooting investigation, it was determined that the power supply for the detector's DSA 1000 was injecting noise into the system causing the high FWHM. I recommend that the DSA 1000 power supply be replaced and that a calibration verification be performed per CCP-TP-010 in order to return the WAGS system back to service.

Feel free to call if you have any questions.

Bart Morales
Expert Analyst
Canberra Industries
Contractor to Washington TRU Solutions LLC
Office: 303-705-9254
Cell: 208-351-0108
bart.morales@canberra.com

NCR - INL-0368-12 Rev. 0

Attachment 1 Page 1 of 1

Verlanic, Bill

From: MORALES Bart [Bart.Morales@canberra.com]
Sent: Monday, December 03, 2012 7:19 AM
To: Verlanic, Bill; Dickes, Neil; Boland, Steven C.
Cc: ABBOTT Preston; DAVIS William C.; BRASIER David
Subject: FW: WAGS resolution for "Ab" 414 keV FWHM flag

Following the "Ab" boundary flag on 11/28/12 for the 414 keV centroid boundary limit on WAGS DET3NB, the power supply for the detector's DSA 1000 was replaced. The cause, interim and final dispositions are documented in NCR-INL-0368-12. In accordance with CCP-TP-010, a calibration verification check was performed by completing two consecutive successful Daily Performance Check measurements. The data from Daily Performance Check sequence numbers 21248 and 21249 was reviewed and it is determined that the WAGS unit is acceptable to be placed back into service with CCPs concurrence.

Bart Morales
Expert Analyst
Canberra Industries
Contractor to Washington TRU Solutions LLC
Office: 303-705-9254
Cell: 208-351-0108
bart.morales@canberra.com

NCR - INL-0368-12, Rev. 0

Attachment 2 Page 1 of 1

DIVIDER PAGE ONLY

Not part of page count

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	RECORDS CUSTODIAN	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	12/04/2012
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
NCR-INL-0368-12	NONCONFORMANCE REPORT (NCR) CLOSED	12/03/2012	6
	N/A		

Comments

N/A

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [X]	Paulette Henry (Signature)	Paulette Henry (Printed Name)	12-12-12 (Date)
Records Rejected [ ]	Signature	Printed Name	Date

Reason for Rejection:

Re-submittal:	Signature	Printed Name	Date

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	2206
DESTINATION TEL #	912085577396
DESTINATION ID	INL
ST. TIME	12/06 16:02
TIME USE	00'17
PAGES SENT	1
RESULT	OK

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	RECORDS CUSTODIAN	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	12/04/2012
Telephone Number:	575-234-7523		

Document Number	Title/Description	Record Date	Total Pages
NCR-INL-0368-12	NONCONFORMANCE REPORT (NCR) CLOSED	12/03/2012	6
	N/A		

Comments

N/A

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [X] Paulette Henry (Signature) | Paulette Henry (Printed Name) | 12-6-12 (Date)

DIVIDER

PAGE

Attachment 1 – CCP Nonconformance Report (NCR)

NCR No.NCR-INL-0428-12		Revision 0
1. Lot No./Heat No. or Serial No. (as applicable): N/A	2. Process (e.g., NDA, HSG, NDE, VE, Other): FGA	3. Batch Data Report #(s): IN12FG5049 Container #(s): ARP70406
4. Order/Work Order/Job Control Number (as applicable): N/A	5. PO # (as applicable): N/A	
	6. Supplier (as applicable): N/A	

DESCRIPTION OF NONCONFORMANCE

7. (a) NCR Description: ☐ < 100 nCi/g ☐ Prohibited Item ☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☒ Other

7. (b) Description of Nonconformance Required Condition (Implementing Procedure, Revision, Section, & Text):

CCP-TP-030, Rev 29, Section 4.4.9 "IF the methane concentration is greater than or equal to 1,250 parts per million (ppm), THEN the container is NOT eligible for certification."

7. (c) Actual Condition

The methane concentration is greater than 1,250 ppm.

8. NCR Originator (Print name, sign, and date)	9. CCP QA Engineer or Designee Validation (Print name, sign, and date)
Jim Vernon 6-21-12	Laura R. Jones 06/21/2012 Laura Romero Jones

9a. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE
If YES or INDETERMINATE, then apply Trend Code L in Block 12.

9b. Have the CCP HOLD TAGS associated with the NCR been applied? ☒ YES ☐ NO If no is marked, provide an explanation. 06/20/12 NA

10. Significant Condition? (If Yes, List CAR)	11. Recurring Condition?
☐ YES ☒ NO	☐ YES ☒ NO (If YES, List NCRs/CARs)
12. Trend Code: K	13. Responsible Manager: Jim Vernon

CCP RECORDS ORIGINAL
DATE REC'D 1-28-13

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No.NCR-INL-0428-12	Revision 0
INTERIM DISPOSITION	
14. Interim Disposition (Check One) ☒ N/A (See Final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort ☐Reinspect/Retest ☐ Remediate (a) Instructions for Completion of the Interim Disposition:	
INTERIM DISPOSITION APPROVALS	
15 .Responsible Manager/Individual (Print, sign, and date)	16. CCP QA Engineer or Designee (Print, sign and date)
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
COMPLETION OF INTERIM DISPOSITION	
17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date)	
18. Interim Disposition Verified CCP QA Engineer: (Print, sign and date)	

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL-0428-12 Revision 0

FINAL DISPOSITION

19. Final Disposition (Check One)
☐ Use-As-Is ☒ Reject ☐ Repair ☐ Rework ☐ Scrap

(a) Technical Justification (Required for Use-As-Is and Repair dispositions, Enter N/A for Reject, Scrap, or Rework dispositions.) N/A

(b) Instructions for Completion (Required for Reject, Repair, Rework and Scrap – Enter N/A for Use-As-Is).
1. Remove from Lot both hard-copy and electronic copy, if applicable
2. Resample Container

(c) Corrective Actions (Actions to Prevent Recurrence – Required for Repair and Rework; Enter N/A for Use-As-Is-, Reject, and Scrap). N/A

FINAL DISPOSITION APPROVALS

20. Responsible Manager/Individual: (Print, sign, and date)	21. CCP QA Engineer or Designee: (Print, sign, and date)
Jim Vernon 6-21-12	Laura R. Jones 06/21/12
Additional Approvals: (Print, sign, and date)	Additional Approvals: (Print, sign, and date)

CLOSURE

22. Final Disposition Complete Responsible Manager/Individual: (Print, sign, and date)
Richard Kantrowitz 1/23/13

23. Attachments: 1 – Basis for close out 2. Email Documenting Reportability. 3. Tag application notification 4. Hold tag removal notification

24. (a) HOLD TAG removal has been validated and reconciled for all nonconforming items on the NCR. ☑
(b) Check if not applicable (N/A) and provide an explanation here or on a continuation sheet. ☐

See Attachment 4.

25. Final Disposition Verified – NCR Closed	CCP QA Engineer: (Print, sign, and date)
Laura R. Jones	Laura Rae Jones 01/24/13

Attachment 2 – CCP Nonconformance Report (NCR) Continuation Sheet

NCR No. NCR-INL-0428-12 Revision 0 Attachment # 1 Page 1 of 1
Continuation from Section Number: NA BASIS FOR CLOSURE: Container Number ARP70406 was re-sample in BDR IN13FG10001.

Jones, Laura - WTS

From: Pearcy, Mark - WTS
Sent: Friday, June 22, 2012 9:13 AM
To: Jones, Laura - WTS
Subject: RE: New NCR-INL-0428-12

Not reportable

Mark Pearcy
Central Characterization Project
Washington TRU Solutions LLC
Contractor for the U.S. Department of Energy
575-234-7394 (W)
575-706-0094 (C)

From: Jones, Laura - WTS
Sent: Thursday, June 21, 2012 4:37 PM
To: Jordan, Shanique - Stoller; Kantrowitz, Rich - WTS; Pearcy, Mark - WTS; Pearcy, Sheila - Stoller; Punchios, Sheri - Stoller; Ramirez, Mike - WTS; Verlanic, William - WTS; Vernon, Jim - WTS; Young, Rachel - WTS
Cc: Jones, Laura - WTS
Subject: New NCR-INL-0428-12

Rachel / Bill - Please ensure that hold tags are hang and send notification when this is completed.
Mark / Mike – Please review for notification purposes.
Shanique – Please post this open NCR.

Thanks,

Laura R. Jones
Quality Assurance
Washington TRU Solutions, LLC
Contractor for the U.S. Department of Energy
Office: (575) 234-7244
Email: laura.jones@wipp.ws
Fax: (575) 234-7071

NCR - INL-0428-12 Rev.0

Attachment 2 Page 1 of 2

Jones, Laura - WTS

From: IDC [SQLMaster@wipp.ws]
Sent: Friday, June 22, 2012 9:13 AM
To: Jones, Laura - WTS; Gomez, Chris - WTS; Mueller, Terry - WTS; Walker, Mak (Maryann) - WTS; Morrison, Jim - WTS; McGinnis, Ray - WTS
Subject: Project Office NCR [NCR-INL0428120] was just reviewed.

Certification Manager/Designee has just reviewed the project office NCR NCR-INL0428120 and has indicated that it [should NOT] be reported to CBFO. IDC has already updated the NCR for you.

NCR - INL-0428-12 Rev.0

Attachment 2 Page 2 of 2

Jones, Laura - WTS

From: Czyzewski, Robert - INL
Sent: Monday, August 20, 2012 8:51 AM
To: Jones, Laura - WTS
Subject: RE: New NCR-INL-0428-12

Laura:

I verified this morning that there is an NCR tag on this drum.

Robert Czyzewski
QA Engineer
Washington TRU Solutions, LLC
Contractor for the U.S. Government
(208) 526-6969; (208) 569-2752 (C)
robert.czyzewski@amwtp.inl.gov

From: Jones, Laura - WTS [mailto:laura.jones@wipp.ws]
Sent: Friday, August 17, 2012 2:00 PM
To: Czyzewski, Robert J.
Subject: FW: New NCR-INL-0428-12

Robert:
Please read below.... Container was inaccessible. Would you please check on this tag?

Thanks,

Laura R. Jones
Quality Assurance
Washington TRU Solutions, LLC
Contractor for the U.S. Department of Energy
Office: (575) 234-7244
Email: laura.jones@wipp.ws
Fax: (575) 234-7071

From: Young, Rachel S. [mailto:Rachel.Young@amwtp.inl.gov]
Sent: Monday, June 25, 2012 8:52 AM
To: Jones, Laura - WTS
Subject: RE: New NCR-INL-0428-12

Hi Laura,
The container on NCR-INL-0428-12 is currently inaccessible to apply the hold tag.

Thanks,
Rachel Young
CCP Quality Assurance
INL
208-526-6969
younrs@amwtp.inl.gov
Washington TRU Solutions LLC

NCR – INL-0428-R Rev.0
Attachment 3 Page 1 of 2

Contractor for the U.S. Department of Energy

From: Jones, Laura - WTS [mailto:laura.jones@wipp.ws]
Sent: Thursday, June 21, 2012 4:37 PM
To: Jordan, Shanique - Stoller; Kantrowitz, Rich - WTS; Pearcy, Mark - WTS; Pearcy, Sheila - Stoller; Punchios, Sheri - Stoller; Ramirez, Mike - WTS; Verlanic, William - WTS; Vernon, Jim; Young, Rachel - WTS
Cc: Jones, Laura - WTS
Subject: New NCR-INL-0428-12

Rachel / Bill - Please ensure that hold tags are hang and send notification when this is completed.
Mark / Mike – Please review for notification purposes.
Shanique – Please post this open NCR.

Thanks,

Laura R. Jones
Quality Assurance
Washington TRU Solutions, LLC
Contractor for the U.S. Department of Energy
Office: (575) 234-7244
Email: laura.jones@wipp.ws
Fax: (575) 234-7071

Jones, Laura - NWP

From: Czyzewski, Robert - INL
Sent: Thursday, January 24, 2013 11:00 AM
To: Jones, Laura - NWP
Subject: RE: Hold tag to be pulled NCR-INL-0428-12

Laura:

The hold tag for NCR-INL-0428-12 has been removed from waste container ARP70406

Robert Czyzewski
QA Engineer
Nuclear Waste Partnership LLC
Contractor for the U.S. Government
(208) 526-6965; (208) 569-2752 (C)
robert.czyzewski@amwtp.inl.gov

From: Jones, Laura - NWP [mailto:laura.jones@wipp.ws]
Sent: Wednesday, January 23, 2013 4:15 PM
To: Czyzewski, Robert J.; Klingler, Larry - NWP
Cc: Walker, Mak (Maryann) - NWP; Mueller, Terry - NWP; Vernon, Jim
Subject: Hold tag to be pulled NCR-INL-0428-12

Robert / Larry – Container below has been resolved at the project office please pull hold tag and notify when this is complete to close NCR.

BDR ID	Container ID	Reason Code	Reason	NCR
IN12FG5049	ARP70406	Resolved	Container Number ARP70406 was re-sample in BDR IN13FG10001.	NCR-INL-0428-12

Thanks,

Laura R. Jones
Quality Assurance
Nuclear Waste Partnership LLC
Contractor for the U.S. Department of Energy
Office: (575) 234-7244
Email: laura.jones@wipp.ws
Fax: (575) 234-7071

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Attachment 4 Page 1 of 1

DIVIDER PAGE

Attachment 1 – CCP Nonconformance Report (NCR)

NCR No. NCR-INL-0430-12		Revision 0
1. Lot No./Heat No. or Serial No. (as applicable): N/A	2. Process (e.g., NDA, HSG, NDE, VE, Other): VE	3. Batch Data Report #(s): IN-ARP-VE-002782
4. Order/Work Order/Job Control Number (as applicable): N/A	5. PO # (as applicable): N/A	Container #(s): ARP70799
	6. Supplier (as applicable): N/A	

DESCRIPTION OF NONCONFORMANCE

7. (a) NCR Description: ☐ < 100 nCi/g ☐ Prohibited Item ☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☒ Other

7. (b) Description of Nonconformance Required Condition (Implementing Procedure, Revision, Section, & Text):
CCP-TP-006 rev 16
Section 4.2.4 [C.3]
IF a material is identified that is **NOT** listed in Section 2,
THEN record description of item as Other in Column 9, lines h, q, x2, **AND/OR** y3, as appropriate.
(a) Estimate the weight of the item, **AND** enter in Section 2, Column 10.
(b) Enter a density in Column 11, **AND** provide an associated technical reference source for density value in Section 2, Line 13b.

7. (c) Actual Condition

The associated technical reference source for the density value of the Evaporator salt is not listed in Line 13b of the VE data sheet for drum ARP70799

8. NCR Originator (Print name, sign, and date) Vincent Medina 7-25-12	9. CCP QA Engineer or Designee Validation (Print name, sign, and date) Laura R. Jones 07/25/12
9a. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE If YES or INDETERMINATE, then apply Trend Code L in Block 12.	
9b. Have the CCP HOLD TAGS associated with the NCR been applied? ☒ YES ☐ NO If no is marked, provide an explanation. 07/26/12 LRJ	
10. Significant Condition? (If Yes, List CAR) ☐ YES ☒ NO	11. Recurring Condition? ☐ YES ☒ NO (If YES, List NCRs/CARs)
12. Trend Code: A	13. Responsible Manager: Jim Vernon

COPY

CCP RECORDS ORIGINAL
DATE REC'D 11-13-12

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL-0430-12	Revision 0
INTERIM DISPOSITION	
14. Interim Disposition (Check One) ☒ N/A (See Final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort ☐ Reinspect/Retest ☐ Remediate (a) Instructions for Completion of the Interim Disposition:	
INTERIM DISPOSITION APPROVALS	
15 .Responsible Manager/Individual (Print, sign, and date)	16. CCP QA Engineer or Designee (Print, sign and date)
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
COMPLETION OF INTERIM DISPOSITION	
17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date)	
18. Interim Disposition Verified CCP QA Engineer: (Print, sign and date)	

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL-0430-12 Revision 0

FINAL DISPOSITION

19. Final Disposition (Check One)
☐ Use-As-Is ☐ Reject ☐ Repair ☒ Rework ☐ Scrap

(a) Technical Justification (Required for Use-As-Is and Repair dispositions, Enter N/A for Reject, Scrap, or Rework dispositions.)
N/A

(b) Instructions for Completion (Required for Reject, Repair, Rework and Scrap – Enter N/A for Use-As-Is).
1. DGL to make corrections to BDR
2. ITR to resign BDR
3. SPM to insert corrections into BDR

(c) Corrective Actions (Actions to Prevent Recurrence – Required for Repair and Rework; Enter N/A for Use-As-Is-, Reject, and Scrap).
N/A

FINAL DISPOSITION APPROVALS

20. Responsible Manager/Individual: (Print, sign, and date)	21. CCP QA Engineer or Designee: (Print, sign, and date)
Jim Vernon 7-26-12	Laura R. Jones 07/26/12 Laura Ramon Jones
Additional Approvals: (Print, sign, and date)	Additional Approvals: (Print, sign, and date)

CLOSURE

22. Final Disposition Complete Responsible Manager/Individual: (Print, sign, and date)
Jim Vernon 11-7-12

23. Attachments: 1. Email Documenting Reportability. 2. Hold tag application. 3. Basis for closure. 4. SPM Re-Review 5. Hold Tag removal.

24. (a) HOLD TAG removal has been validated and reconciled for all nonconforming items on the NCR. ☑
(b) Check if not applicable (N/A) and provide an explanation here or on a continuation sheet. ☐

See Attachment. 5.

25. Final Disposition Verified – NCR Closed	CCP QA Engineer: (Print, sign, and date)
Laura R. Jones	Laura Ramon Jones 11/08/2012

Jones, Laura - NWP

From: IDC [SQLMaster@wipp.ws]
Sent: Thursday, July 26, 2012 11:11 AM
To: Jones, Laura - WTS; Mueller, Terry - WTS; Walker, Mak (Maryann) - WTS; Morrison, Jim - WTS; McGinnis, Ray - WTS
Subject: Project Office NCR [NCR-INL0430120] was just reviewed.

Certification Manager/Designee has just reviewed the project office NCR NCR-INL0430120 and has indicated that it [should NOT] be reported to CBFO. IDC has already updated the NCR for you.

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Attachment 1 Page 1 of 1

Jones, Laura - WTS

From: Czyzewski, Robert - INL
Sent: Thursday, July 26, 2012 12:24 PM
To: Jones, Laura - WTS
Subject: Tag hung on ARP70799

Laura:

The NCR tag has been hung on ARP70799 for NCR-INL-0430-12

Robert Czyzewski
QA Engineer
Wastington TRU Solutions, LLC
Contractor for the U.S. Government
(208) 526-6969; (208) 569-2752 (C)
robert.czyzewski@amwtp.inl.gov

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Attachment 2 Page 1 of 1

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	ARP70799
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	LG
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location:	IN-RWMC-ARP-6
3. Batch Number:	IN-ARP-VE-002782
4. Examination Date:	07/16/12
5. Procedure CCP-TP-006, Rev.:	16
6. a. Drum Packing Station (DPS) Number:	701
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	223196
8. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726775
b. Filter Torque Wrench Calibration Due Date:	09/19/12
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	HL-191
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70799							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)		11. Density (kg/L)	12.Volume (L)
5								
6	a. Iron-based metals/alloys (IM)				0.2		N/A	0.0
7				METAL	0.2		8.0	0.0
8				N/A	N/A		8.0	0.0
9	b. Aluminum-based metals/alloys (AM)				0.0		N/A	0.0
10				N/A	N/A		3.0	0.0
11				N/A	N/A		3.0	0.0
12	c. Other metals (OM)				0.0		N/A	0.0
13		d. Lead			0.0		N/A	0.0
14				N/A	N/A		11.0	0.0
15				N/A	N/A		11.0	0.0
16		e. Beryllium			0.0		N/A	0.0
17				N/A	N/A		1.8	0.0
18				N/A	N/A		1.8	0.0
19		f. Depleted uranium			0.0		N/A	0.0
20				N/A	N/A		19.1	0.0
21				N/A	N/A		19.1	0.0
22		g. Copper			0.0		N/A	0.0
23				N/A	N/A		9.0	0.0
24				N/A	N/A		9.0	0.0
25		h. Other (See Note a)			0.0		N/A	0.0
26				N/A	N/A		0.0	0.0
27				N/A	N/A		0.0	0.0
28				N/A	N/A		0.0	0.0

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	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70799							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	l. Other inorganic materials (OI)				9.0	N/A		15.0
30		j. Graphite			0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p. Inorganic sorbents			9.0	N/A		15.0
49				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r. Cellulosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57				PAPER (NSW)	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

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	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70799							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4				9. Waste Material Parameter and Item Description	10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
66	v.	Rubber (R)			0.0	N/A		0.0
67				N/A	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w.	Plastics (waste materials) (PW)			0.0	N/A		0.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC (NSW)	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x.	Organic matrix (OR)			10.0	N/A		8.3
75		x1. Sludge			10.0	N/A		8.3
76				VERY PALE ORANGE POWDERY SLUDGE WITH CALCIUM SILICATE	10.0	1.0 - 1.5	1.2	8.3
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y.	Inorganic matrix (IN)			112.8	N/A		93.9
83		y1. Sludge			112.6	N/A		93.8
84				LIGHT BROWN CRUMBLY SLUDGE WITH PORTLAND CEMENT	112.6	1.0 - 1.5	1.2	93.8
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.2	N/A		0.1
92				EVAPORATOR SALT	0.2	2.2		0.1
93				N/A	N/A	0.0		0.0
94	z.	Soils/gravel (S)			14.0	N/A		11.7
95				SOIL	14.0	1.0 - 1.4	1.2	11.7
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa.	TOTAL			146.0	N/A		128.9
98	13. (INORGANIC SLUDGE) weight (112.6) kg was obtained by subtracting the weighed waste weight of (33.4) kg and the container net weight of (34.0) kg from the gross weight (180.0) kg of the waste container. (180.0) - (33.4) - (34.0) = (112.6) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. ~~N/A~~ MH 7-26-12 REFERENCE LETTER: CP:08: 00210 /UFC: 2300.00 MH 7-26-12							
101								

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Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70799	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

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Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70799	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	24.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	223196
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	720178
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	09/21/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1414
22. Measured gross weight of loaded container, fully assembled (kgs):	180.0
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	396.8
23. Container closure date (mm/dd/yy):	07/16/12
24. Percent fill of container:	75.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	146.0
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

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Attachment 3 Page 6 of 10

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70799	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.0
31. Total volume of Solidified Organics (L):	8.3
32. Total volume of Solidified Inorganics (L):	108.9
33. Total volume of Soils/Gravel (L):	11.7
a. Total volume (L):	128.9
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	6.8%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:		7-26-12
D. JACKMAN		7-16-12
Enter Name	Signature	Date
Visual Examination Operator 2:		7-26-12
M. HADERLIE		7-16-12
Enter Name	Signature	Date
Visual Examination Expert:		7/26/12
L. GROVER		7-16-12
Enter Name	Signature	Date

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Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist

Batch Data Report No.: INL-ARP-VE-002782

Description			
1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods used?	☐ NO	☒ YES	☐ NA
a. Was the description of the waste items adequate?	☐ NO	☒ YES	☐ NA
2. Was the correct revision of operating procedure used? (Attachment 1, Section 1, Line 5)	☐ NO	☒ YES	☐ NA
3. Were the following calculation spot checks performed?			
a. Attachment 1, Section 2: Verify the total waste volume in Column 12, Row aa does not exceed 208 L for a 55-gallon drum or 1456 L for an SWB and verify the estimated weights in Row aa matches the measured net weight of waste in Attachment 1, Section 4, Row 26.	☐ NO	☒ YES	☐ NA
b. Attachment 1, Section 5: Verify the total waste volume in Row 33 a., matches the total waste volume in Section 2, Column 12, Row aa.	☐ NO	☒ YES	☐ NA
c. Attachment 1, Section 1: Check hand calculations in Lines 6h and 6p, and any additional hand calculations recorded in the comments field or in Section 2, Line 13.	☐ NO	☒ YES	☐ NA
4. Is only one waste stream selected in Line 34 of Attachment 1, Section 5, and is it consistent with the values shown in Attachment 1, Section 2, Column 12?	☐ NO	☒ YES	☐ NA
5. Is the data entered in the correct units and correct number of significant figures?	☐ NO	☒ YES	☐ NA
6. Were the data reviewed for transcription errors?	☐ NO	☒ YES	☐ NA
7. Does the BDR include VE for up to 20 containers?	☐ NO	☒ YES	☐ NA
8. Are BDR contents complete and do they match, Attachment 3, CCP Waste VE Batch Data Report Table of Contents?	☐ NO	☒ YES	☐ NA
9. Was completeness verified for data entry on the CCP VE Technique Data Form for the following?			
a. Section 1	☐ NO	☒ YES	☐ NA
b. Section 2	☐ NO	☒ YES	☐ NA
c. Section 3	☐ NO	☒ YES	☐ NA
d. Section 4	☐ NO	☒ YES	☐ NA
e. Section 5	☐ NO	☒ YES	☐ NA

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: INL-ARP-VE-00 2782

Description			
10. Is all the data signed and dated in Attachment 1, Section 6, using reproducible ink, and by the individual(s) generating it?	☐ NO	☒ YES	☐ NA
11. Is all data entered clearly, legibly, and accurately?	☐ NO	☒ YES	☐ NA
12. Were discrepancies between the operators reconciled?	☐ NO	☐ YES	☒ NA
13. Are all changes to original data lined out, initialed and dated by the individual making the changes?	☐ NO	☒ YES	☐ NA
14. Were data changes made by the individual who originally collected the data or an equally qualified individual?	☐ NO	☒ YES	☐ NA
15. Was the DPS scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
16. Was the daily DPS scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
17. Was the container scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
18. Was the daily container scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
19. Was the torque wrench(es) in calibration prior to VE Technique and documented correctly?	☐ NO	☒ YES	☐ NA
20. Were NCR(s) initiated as indicated in Attachment 1, Section 1, dispositioned, and approved appropriately?	☐ NO	☒ YES	~~☒ NA~~ TSP 7-26-12
21. Was the correct waste stream and waste matrix code assigned?	☐ NO	☒ YES	☐ NA
22. Is there a valid VE data form for each drum in the batch?	☐ NO	☒ YES	☐ NA
23. Were the operators trained and qualified in accordance with the applicable requirements?	☐ NO	☒ YES	☐ NA

11/06/12

NCR = INL-0430-12 Rev.0

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: INL-ARP-VE-002782

Description	☐ NO	☐ YES	☒ NA
24. Was precision maintained by reconciling any discrepancies between the operator(s) and the ITR with regard to identification of waste matrix code, liquids in excess of WIPP Hazardous Waste Facility Permit and WIPP Waste Acceptance Criteria limits and compressed gases?			

Description

Comments:

Item # 12 NO discrepancies between operators. QSP 7-17-12

~~Item #20 NO NCR's initiated. QSP 7-17-12~~ QSP 7-26-12

Item #24 NO discrepancies between operators and the ITR. QSP 7-17-12

Re-Reviewed Batch Data Report QSP 7-26-12

I have reviewed 100 percent of the container-specific and batch data in this BDR and find it acceptable.

ITR:		
Jeffrey Poole	J.S. Poole	7-26-12
Printed Name	Signature	Date

NCR INL-0430-12 Rev 0

Attachment 3 Page 10 of 16

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary

BDR Number: IN-ARP-VE-002782 **Examination Date:** 7-16-12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
1. Is the completed, signed and dated Independent Technical Reviewer Checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, C3-10b**	X			
2. Does the BDR contain all items addressed in the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-10b**	X			
3. Does the BDR include a listing of all container numbers in the batch? **Reference Source: CCP-PO-001, C3-10b**	X			
4. List all containers that have met QAOs. **Reference Source: CCP-PO-001, C3-10b**				Container Numbers: ARP70865, ARP70737, ARP70736, ARP70864, ARP70716, ARP70839, ARP70819, ARP70863, ARP70796, ARP70738, ARP70829, ARP70827, ARP70822, ARP70826, ARP70799, ARP70793, ARP70798, ARP70840, ARP70850, ARP70795
5. Is the current implementing procedure and revision number included in the BDR? **Reference Source: CCP-PO-001, C3-4, C3-10b, Table C3-11**	X			
6. Is the BDR date included? **Reference Source: CCP-PO-001, Table C3-11**	X			
7. Is there a reference to or copy of any associated NCRs (if any) in the BDR? **Reference Source: CCP-PO-001, Table C3-11**	X			NCR-INL-0430-12
8. Are there 20 or fewer containers in the batch? **Reference Source: CCP-PO-001 C3-10**	X			
9. Are the data properly reported (i.e., data are reported in correct units and with correct significant figures). **Reference Source: CCP-PO-001 C3-10b**	X			
10. Is there evidence of verification that the physical form matches the Waste Matrix Code? **Reference Source: CCP-PO-001, C3-4**	X			

CCP RECORDS ORIGINAL
DATE REC'D 7-26-12

BDR Number: IN-ARP-VE-002782				Examination Date: 7-16-12
11. Is there evidence of verification that the physical form matches the waste stream description? **Reference Source: CCP-PO-001, C1-4**	X			
12. Are prohibited items absent? **Reference Source: CCP-PO-001, C3-4**	X			

NCR-INL-0430-12 Rev. 0
Attachment 4 Page 2 of 5

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-ARP-VE-002782 **Examination Date:** 7-16-12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
13. Does observable liquid, if present, meet the criteria of the TSDF-WAC? **Reference Source: CCP-PO-001, C3-4b**			X	No liquids present
14. Were discrepancies between the Visual Examination operator and the ITR with regards to identification of waste matrix code, liquids in excess of the TSDF-WAC, or compressed gases reconciled? NA if no discrepancies. **Reference Source: CCP-PO-001, C3-4b**			X	No discrepancies
15. Are the training requirements met for the VE Expert and VE Operators who have signed the data forms? **Reference Source: CCP-PO-001, C1-4, C3-4**	X			
16. Is evidence of a satisfactory audio/video test included in the BDR? NA [not applicable] for VE Method for Newly Generated Waste. **Reference Source: CCP-PO-001, C1-4**			X	VE of newly generated waste
17. If the VE was not recorded using audio/video media, does the data sheet contain the signature of two qualified operators who observed for themselves the waste being placed into the container? NA if audio/video used. **Reference Source: CCP-PO-001, C1-4**	X			
18. Are the weights/estimated weights for the 12 waste material parameters reported in kilograms (kg)? **Reference Source: CCP Technical Procedures**	X			
19. Are the descriptions for each waste material parameter included in the BDR? **Reference Source: CCP-PO-001, C1-4**	X			
20. Is the gross weight reported (in kg) for each container included in the BDR? **Reference Source: CCP Technical Procedures**	X			
21. Is the number of layers of confinement recorded? **Reference Source: CCP-PO-001, C-3d**	X			
22. Is sufficient information included in the BDR to determine the packaging configuration? **Reference Source: CCP-PO-001 C-3d**	X			

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-ARP-VE-002782				Examination Date: 7-16-12
Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
23. Is the type and number of filters recorded? **Reference Source: CCP-PO-001, C-3d**	X			
24. Is the size of the rigid liner vent hole recorded to determine the appropriate DAC? NA if no liner lid. **Reference Source: CCP-PO-001, C-3d**			X	No liner lid present
25. For Los Alamos National Laboratory (LANL) Sealed Sources, does the characterized waste container meet the definition of sealed sources per Title 10 Code of Federal Regulations (CFR) 30.4 and Title 10 CFR 835.2 (effective January 1, 2004) evidence of which is assembled as part of AK documentation? **Reference Source: CCP Technical Procedures**			X	No LANL sealed sources
26. For LANL Sealed Sources, are sealed sources the only non-packaging items in the waste container? **Reference Source: CCP Technical Procedures**			X	No LANL sealed sources
27. For LANL Sealed Sources, are the sealed sources a U.S. Department of Transportation (DOT) Special Form Class 7 (Radioactive Material) per Title 49 CFR 34.27 (effective January 1, 2004) and the certification of which is assembled as part of the AK documentation? **Reference Source: CCP Technical Procedures**			X	No LANL sealed sources
28. For LANL Sealed Sources, is the integrity of each sealed source validated by documented contamination survey results to meet the requirements of Title 10 CFR 34.27 (effective January 1, 2004), and assembled as part of AK documentation? **Reference Source: CCP Technical Procedures**			X	No LANL sealed sources

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-ARP-VE-002782 **Examination Date:** 7-16-12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
29. For LANL Sealed Sources, is each sealed source a rigid sealed container less than or equal to 4 L in size or in a rigid sealed container less than or equal to 4 L? **Reference Source: CCP Technical Procedures**			X	No LANL sealed sources
30. For LANL Sealed Sources, AK documentation does not indicate the use of volatile organic compounds (VOCs) or VOC-bearing materials as constituents of sealed sources? **Reference Source: CCP Technical Procedures**			X	No LANL sealed sources
31. For LANL Sealed Sources, the outer casing of each sealed source is of a non VOC-bearing material which is verified using the VE technique at the time of packaging? **Reference Source: CCP Technical Procedures**			X	No LANL sealed sources

Comments: N/A

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

SPM Printed Name	Signature	Date
Vincent Medina		7-26-12

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date

Jones, Laura - NWP

From: Czyzewski, Robert - INL
Sent: Thursday, November 08, 2012 8:43 AM
To: Jones, Laura - NWP
Subject: RE: Hold tag removal NCR-INL-0430-12-0

Laura:

I have removed the Hold Tag from ARP70799

Robert Czyzewski
QA Engineer
Nuclear Waste Partnership LLC
Contractor for the U.S. Government
(208) 526-6965; (208) 569-2752 (C)
robert.czyzewski@amwtp.inl.gov

From: Jones, Laura - NWP [mailto:laura.jones@wipp.ws]
Sent: Wednesday, November 07, 2012 3:49 PM
To: Czyzewski, Robert J.
Subject: Hold tag removal NCR-INL-0430-12-0

Robert: Container below has been resolved please pull tag and notify.

IN-ARP-VE-002782	ARP70799	Resolved	BDR corrected, ITR and SPM re-reviewed.	Vernon, Jim

Thanks,

Laura R. Jones
Quality Assurance
Nuclear Waste Partnership LLC
Contractor for the U.S. Department of Energy
Office: (575) 234-7244
Email: laura.jones@wipp.ws
Fax: (575) 234-7071

NCR-INL-0430-12 Rev. 0
Attachment 5 Page 1 of 1

DIVIDER

PAGE

Attachment 1 – CCP Nonconformance Report (NCR)

NCR No. NCR-INL-0433-12	Revision 1	
1. Lot No./Heat No. or Serial No. (as applicable): N/A	2. Process (e.g., NDA, HSG, NDE, VE, Other): VE	3. Batch Data Report #(s): IN-ARP-VE-002789
4. Order/Work Order/Job Control Number (as applicable): N/A	5. PO # (as applicable): N/A	Container #(s): N/A
	6. Supplier (as applicable): N/A	

DESCRIPTION OF NONCONFORMANCE

7. (a) NCR Description: ☐ < 100 nCi/g ☐ Prohibited Item ☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☒ Other

7. (b) Description of Nonconformance Required Condition (Implementing Procedure, Revision, Section, & Text):
CCP-TP-006, Rev 16, Section 4.6 "If any item on Attachment 2 is marked NO, and NCR will be initiated, if the condition CAN NOT be mitigated, in accordance with CCP-QP-005, AND only as a single NCR that identifies all deficiencies. If any item in Attachment 2 is marked NA, an explanation shall be provided in the comments block."

7. (c) Actual Condition
CCP-TP-006, Rev 16, Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist, Question #13 and #14 are answered Yes with a comment stating, "There are no data changes." The BDR contains no data changes, so this question should be answered N/A

Reason for Revision: After discussion with DGL, it was noted that a data change had been made to the BDR. The ITR correctly identified the data change and answered questions #13 and #14 appropriately. However, the ITR made a comment on the ITR checklist that there are no data changes. This comment is incorrect and needs to be changed.

8. NCR Originator (Print name, sign, and date)	9. CCP QA Engineer or Designee Validation (Print name, sign, and date)
Jim Vernon 8-8-12	Laura R. Jones 08/08/12 Laura Romero Jone

9a. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE
If YES or INDETERMINATE, then apply Trend Code L in Block 12.

9b. Have the CCP HOLD TAGS associated with the NCR been applied? ☐ YES ☒ NO If no is marked, provide an explanation. No Containers are associated with this NCR. 08/08/12 LRS

10. Significant Condition? (If Yes, List CAR)	11. Recurring Condition?
☐ YES ☒ NO	☐ YES ☒ NO (If YES, List NCRs/CARs)
12. Trend Code: A	13. Responsible Manager: Jim Vernon

COPY

CCP RECORDS ORIGINAL
DATE REC'D 8-29-12

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL-0433-12	Revision 1
INTERIM DISPOSITION	
14. Interim Disposition (Check One) ☒ N/A (See Final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort ☐ Reinspect/Retest ☐ Remediate (a) Instructions for Completion of the Interim Disposition:	
INTERIM DISPOSITION APPROVALS	
15 .Responsible Manager/Individual (Print, sign, and date)	16. CCP QA Engineer or Designee (Print, sign and date)
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
COMPLETION OF INTERIM DISPOSITION	
17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date)	
18. Interim Disposition Verified CCP QA Engineer: (Print, sign and date)	

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL-0433-12 Revision 1

FINAL DISPOSITION

19. Final Disposition (Check One)
☐ Use-As-Is ☐ Reject ☐ Repair ☒ Rework ☐ Scrap

(a) Technical Justification (Required for Use-As-Is and Repair dispositions, Enter N/A for Reject, Scrap, or Rework dispositions.) N/A

(b) Instructions for Completion (Required for Reject, Repair, Rework and Scrap – Enter N/A for Use-As-Is).
1. DGL to correct ITR checklist
2. DGL to insert NCR into BDR
3. DGL to re-sign BDR
4. SPM to insert changes into BDR.

(c) Corrective Actions (Actions to Prevent Recurrence – Required for Repair and Rework; Enter N/A for Use-As-Is-, Reject, and Scrap). None applicable

FINAL DISPOSITION APPROVALS

20. Responsible Manager/Individual: (Print, sign, and date)	21. CCP QA Engineer or Designee: (Print, sign, and date)
Jim Vernon 8-8-12	Laura R. Jones 08/08/2012
Additional Approvals: (Print, sign, and date)	Additional Approvals: (Print, sign, and date)

CLOSURE

22. Final Disposition Complete Responsible Manager/Individual: (Print, sign, and date)
Jim Vernon 8-27-12

23. Attachments: 1. Email Documenting Reportability 2. Basis for closure 3. SPM Checklist (Basis for closure)

24. (a) HOLD TAG removal has been validated and reconciled for all nonconforming items on the NCR. ☐
(b) Check if not applicable (N/A) and provide an explanation here or on a continuation sheet. ☒

See Section 9b
08/28/12 LRJ

25. Final Disposition Verified – NCR Closed
Laura R. Jones

CCP QA Engineer: (Print, sign, and date)
Laura Ramon Jones 08/28/2012

Jones, Laura - WTS

From: Pearcy, Mark - WTS
Sent: Tuesday, August 07, 2012 3:57 PM
To: Jones, Laura - WTS
Subject: RE: New NCR-INL-0433-12

Not reportable

Mark Pearcy
Central Characterization Project
Washington TRU Solutions LLC
Contractor for the U.S. Department of Energy
575-234-7394 (W)
575-499-7339 (C)

From: Jones, Laura - WTS
Sent: Tuesday, August 07, 2012 3:10 PM
To: Jordan, Shanique - Stoller; Kantrowitz, Rich - WTS; Pearcy, Mark - WTS; Pearcy, Sheila - Stoller; Punchios, Sheri - Stoller; Ramirez, Mike - WTS; Verlanic, William - WTS; Vernon, Jim - WTS; Castro, Steve - WTS
Cc: Jones, Laura - WTS
Subject: New NCR-INL-0433-12

Robert / Bill – For your information
Mark – Please review for notification purposes.
Shanique – Please post this open NCR.

Thanks,

Laura R. Jones
Quality Assurance
Washington TRU Solutions, LLC
Contractor for the U.S. Department of Energy
Office: (575) 234-7244
Email: laura.jones@wipp.ws
Fax: (575) 234-7071

NCR -INL-0433-12 Rev. 1
Attachment 1 Page 1 of 3

Jones, Laura - WTS

From: IDC [SQLMaster@wipp.ws]
Sent: Tuesday, August 07, 2012 3:57 PM
To: Jones, Laura - WTS; Mueller, Terry - WTS; Walker, Mak (Maryann) - WTS; Morrison, Jim - WTS; McGinnis, Ray - WTS
Subject: Project Office NCR [NCR-INL0433120] was just reviewed.

Certification Manager/Designee has just reviewed the project office NCR NCR-INL0433120 and has indicated that it [should NOT] be reported to CBFO. IDC has already updated the NCR for you.

NCR INL-0433-12 Rev. 1
Attachment 1 Page 2 of 3

Jones, Laura - WTS

From: IDC [SQLMaster@wipp.ws]
Sent: Friday, August 10, 2012 2:46 PM
To: Jones, Laura - WTS; Mueller, Terry - WTS; Walker, Mak (Maryann) - WTS
Subject: Project Office NCR [NCR-INL0433121] was just reviewed.

Certification Manager/Designee has just reviewed the project office NCR NCR-INL0433121 and has indicated that it [should NOT] be reported to CBFO. IDC has already updated the NCR for you.

NCR - INL-0433-12 Rev. 1
Attachment 1 Page 3 of 3

Attachment 3 – CCP Waste VE Technique Batch Data Report Table of Contents

Batch Data Report No.: IN-ARP-VE-002789 **Batch Data Report Date:** 7/30/12

Table Of Contents

Item	Description	Page No.
1	Attachment 4, CCP Waste VE Technique Batch Data Report Cover Sheet	1
2	Attachment 3, CCP Waste VE Technique Batch Data Report Table of Contents	2
3	CCP Waste Visual Examination Technique Data Form	3
4	Attachment 2, CCP Waste VE Technique Independent Technical Reviewer Checklist	136
5	Copy of NCRs (NA, If Not Applicable) 139	~~N/A~~

TSP 8-21-12

NCR-INL-0433-12 Rev.0

Attachment 2 Page 1 of 10

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist

Batch Data Report No.: INL-ARP-VE-002789

Description			
1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods used?	☐ NO	☒ YES	☐ NA
a. Was the description of the waste items adequate?	☐ NO	☒ YES	☐ NA
2. Was the correct revision of operating procedure used? (Attachment 1, Section 1, Line 5)	☐ NO	☒ YES	☐ NA
3. Were the following calculation spot checks performed?			
a. Attachment 1, Section 2: Verify the total waste volume in Column 12, Row aa does not exceed 208 L for a 55-gallon drum or 1456 L for an SWB and verify the estimated weights in Row aa matches the measured net weight of waste in Attachment 1, Section 4, Row 26.	☐ NO	☒ YES	☐ NA
b. Attachment 1, Section 5: Verify the total waste volume in Row 33 a., matches the total waste volume in Section 2, Column 12, Row aa.	☐ NO	☒ YES	☐ NA
c. Attachment 1, Section 1: Check hand calculations in Lines 6h and 6p, and any additional hand calculations recorded in the comments field or in Section 2, Line 13.	☐ NO	☒ YES	☐ NA
4. Is only one waste stream selected in Line 34 of Attachment 1, Section 5, and is it consistent with the values shown in Attachment 1, Section 2, Column 12?	☐ NO	☒ YES	☐ NA
5. Is the data entered in the correct units and correct number of significant figures?	☐ NO	☒ YES	☐ NA
6. Were the data reviewed for transcription errors?	☐ NO	☒ YES	☐ NA
7. Does the BDR include VE for up to 20 containers?	☐ NO	☒ YES	☐ NA
8. Are BDR contents complete and do they match, Attachment 3, CCP Waste VE Batch Data Report Table of Contents?	☐ NO	☒ YES	☐ NA
9. Was completeness verified for data entry on the CCP VE Technique Data Form for the following?			
a. Section 1	☐ NO	☒ YES	☐ NA
b. Section 2	☐ NO	☒ YES	☐ NA
c. Section 3	☐ NO	☒ YES	☐ NA
d. Section 4	☐ NO	☒ YES	☐ NA
e. Section 5	☐ NO	☒ YES	☐ NA

136

NCR INL-0433-12 Rev. 0

Attachment 2 Page 2 of 10

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: INL-WRP-VE-002789

Description			
10. Is all the data signed and dated in Attachment 1, Section 6, using reproducible ink, and by the individual(s) generating it?	☐ NO	☒ YES	☐ NA
11. Is all data entered clearly, legibly, and accurately?	☐ NO	☒ YES	☐ NA
12. Were discrepancies between the operators reconciled?	☐ NO	☐ YES	☒ NA
13. Are all changes to original data lined out, initialed and dated by the individual making the changes?	☐ NO	☒ YES	~~☒ NA~~ JSH 7/31/12
14. Were data changes made by the individual who originally collected the data or an equally qualified individual?	☐ NO	☒ YES	~~☒ NA~~ JSH 7/31/12
15. Was the DPS scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
16. Was the daily DPS scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
17. Was the container scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
18. Was the daily container scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
19. Was the torque wrench(es) in calibration prior to VE Technique and documented correctly?	☐ NO	☒ YES	☐ NA
20. Were NCR(s) initiated as indicated in Attachment 1, Section 1, dispositioned, and approved appropriately?	☐ NO	☒ YES	~~☒ NA~~ JSH 8/21/12
21. Was the correct waste stream and waste matrix code assigned?	☐ NO	☒ YES	☐ NA
22. Is there a valid VE data form for each drum in the batch?	☐ NO	☒ YES	☐ NA
23. Were the operators trained and qualified in accordance with the applicable requirements?	☐ NO	☒ YES	☐ NA

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: IN-ARP-VE-002789

Description	☐ NO	☐ YES	☒ NA
24. Was precision maintained by reconciling any discrepancies between the operator(s) and the ITR with regard to identification of waste matrix code, liquids in excess of WIPP Hazardous Waste Facility Permit and WIPP Waste Acceptance Criteria limits and compressed gases?			

Description

Comments:

ITEMS 12 & 24 THERE ARE NO DISCREPANCIES JBH 7/31/12

~~ITEMS 13 & 14 THERE ARE NO DATA CHANGES. JBH 7/31/12~~ JBH 8/21/12

~~ITEM 20 THERE ARE NO NCR's. JBH 7/31/12~~ JBH 8/21/12

I have reviewed 100 percent of the container-specific and batch data in this BDR and find it acceptable.

ITR:		
JOHN HEGSTED	J.B. Hegsted	8/21/12
Printed Name	Signature	7/31/12 Date

NCR -INL-0433-12 Rev. 0

Attachment 2 Page 4 of 10

Attachment 1 – CCP Nonconformance Report (NCR)

NCR No. NCR-INL-0433-12	Revision 1	
1. Lot No./Heat No. or Serial No. (as applicable): N/A	2. Process (e.g., NDA, HSG, NDE, VE, Other): VE	3. Batch Data Report #(s): IN-ARP-VF-002789
4. Order/Work Order/Job Control Number (as applicable): N/A	5. PO # (as applicable): N/A 6. Supplier (as applicable): N/A	Container #(s): N/A

DESCRIPTION OF NONCONFORMANCE

7. (a) NCR Description: ☐ < 100 nCi/g ☐ Prohibited Item ☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☒ Other

7. (b) Description of Nonconformance Required Condition (Implementing Procedure, Revision, Section, & Text):
CCP-TP-006, Rev 16, Section 4.6 "If any item on Attachment 2 is marked NO, and NCR will be initiated, if the condition CAN NOT be mitigated, in accordance with CCP-QP-005, AND only as a single NCR that identifies all deficiencies. If any item in Attachment 2 is marked NA, an explanation shall be provided in the comments block."

7. (c) Actual Condition
CCP-TP-006, Rev 16, Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist, Question #13 and #14 are answered Yes with a comment stating, "There are no data changes." The BDR contains no data changes, so this question should be answered N/A

Reason for Revision: After discussion with DGL, it was noted that a data change had been made to the BDR. The ITR correctly identified the data change and answered questions #13 and #14 appropriately. However, the ITR made a comment on the ITR checklist that there are no data changes. This comment is incorrect and needs to be changed.

8. NCR Originator (Print name, sign, and date)	9. CCP QA Engineer or Designee Validation (Print name, sign, and date)
Jim Vernon 8-8-12	Laura R. Jones 08/08/12 Laura Romero Jones

9a. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE
If YES or INDETERMINATE, then apply Trend Code L in Block 12.

9b. Have the CCP HOLD TAGS associated with the NCR been applied? ☐ YES ☒ NO If no is marked, provide an explanation. No containers are associated with this NCR. 08/08/12 LRS

10. Significant Condition? (If Yes, List CAR)	11. Recurring Condition?
☐ YES ☒ NO	☐ YES ☒ NO (If YES, List NCRs/CARs)
12. Trend Code: A	13. Responsible Manager: Jim Vernon

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL-0433-12	Revision 1
INTERIM DISPOSITION	
14. Interim Disposition (Check One) ☒ N/A (See Final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort ☐ Reinspect/Retest ☐ Remediate (a) Instructions for Completion of the Interim Disposition:	
INTERIM DISPOSITION APPROVALS	
15 .Responsible Manager/Individual (Print, sign, and date)	16. CCP QA Engineer or Designee (Print, sign and date)
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
COMPLETION OF INTERIM DISPOSITION	
17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date)	
18. Interim Disposition Verified CCP QA Engineer: (Print, sign and date)	

NCR -INL-0433-12 Rev. 0

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QSP 8-21-12

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL-0433-12 Revision 1

FINAL DISPOSITION

19. Final Disposition (Check One)
☐ Use-As-Is ☐ Reject ☐ Repair ☒ Rework ☐ Scrap

(a) Technical Justification (Required for Use-As-Is and Repair dispositions, Enter N/A for Reject, Scrap, or Rework dispositions.) N/A

(b) Instructions for Completion (Required for Reject, Repair, Rework and Scrap – Enter N/A for Use-As-Is).
1. DGL to correct ITR checklist
2. DGL to insert NCR into BDR
3. DGL to re-sign BDR
4. SPM to insert changes into BDR.

(c) Corrective Actions (Actions to Prevent Recurrence – Required for Repair and Rework; Enter N/A for Use-As-Is-, Reject, and Scrap). None applicable

FINAL DISPOSITION APPROVALS

20. Responsible Manager/Individual: (Print, sign, and date)	21. CCP QA Engineer or Designee: (Print, sign, and date)
Jim Vernon 8-8-12	Laura R. Jones 08/08/2012
Additional Approvals: (Print, sign, and date)	Additional Approvals: (Print, sign, and date)

CLOSURE

22. Final Disposition Complete Responsible Manager/Individual: (Print, sign, and date)

23. Attachments:

24. (a) HOLD TAG removal has been validated and reconciled for all nonconforming items on the NCR. ☐
(b) Check if not applicable (N/A) and provide an explanation here or on a continuation sheet. ☐

25. Final Disposition Verified – NCR Closed CCP QA Engineer: (Print, sign, and date)

NCR – INL-0433-12 Rev. 0
Attachment 2 Page 7 of 10

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ASP 8-21-12

Attachment 1 – CCP Nonconformance Report (NCR)

NCR No. NCR-INL-0433-12		Revision 0
1. Lot No./Heat No. or Serial No. (as applicable): N/A	2. Process (e.g., NDA, HSG, NDE, VE, Other): VE	3. Batch Data Report #(s): IN-ARP-VE-002789
4. Order/Work Order/Job Control Number (as applicable): N/A	5. PO # (as applicable): N/A	Container #(s): N/A
	6. Supplier (as applicable): N/A	

DESCRIPTION OF NONCONFORMANCE

7. (a) NCR Description: ☐ < 100 nCi/g ☐ Prohibited Item ☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☒ Other

7. (b) Description of Nonconformance Required Condition (Implementing Procedure, Revision, Section, & Text): CCP-TP-006, Rev 16, Section 4.6 "If any item on Attachment 2 is marked NO, and NCR will be initiated, if the condition CAN NOT be mitigated, in accordance with CCP-QP-005, AND only as a single NCR that identifies all deficiencies. If any item in Attachment 2 is marked NA, an explanation shall be provided in the comments block."

7. (c) Actual Condition
CCP-TP-006, Rev 16, Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist, Question #13 and #14 are answered Yes with a comment stating, "There are no data changes." The BDR contains no data changes ~~in the BDR~~, so this question should be answered N/A
JV 8-7-12

8. NCR Originator (Print name, sign, and date)	9. CCP QA Engineer or Designee Validation (Print name, sign, and date)
Jim Vernon 8-7-12	Laura R. Jones 08/07/12 Laura Rowen Jones

9a. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE
If YES or INDETERMINATE, then apply Trend Code L in Block 12.

9b. Have the CCP HOLD TAGS associated with the NCR been applied? ☐ YES ☒ NO If no is marked, provide an explanation. No containers are associated with this NCR. 08/07/2012 LRJ

10. Significant Condition? (If Yes, List CAR)	11. Recurring Condition?
☐ YES ☒ NO	☐ YES ☒ NO (If YES, List NCRs/CARs)
12. Trend Code: A	13. Responsible Manager: Jim Vernon

SUPERSEDED BY REV 1 08/08/2012 LRJ

NCR – IN2-0433-12 Rev. 0
Attachment 2 Page 8 of 16

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Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL-0433-12	Revision 0
INTERIM DISPOSITION	
14. Interim Disposition (Check One) ☒ N/A (See Final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort ☐ Reinspect/Retest ☐ Remediate (a) Instructions for Completion of the Interim Disposition:	
INTERIM DISPOSITION APPROVALS	
15 .Responsible Manager/Individual (Print, sign, and date)	16. CCP QA Engineer or Designee (Print, sign and date)
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
COMPLETION OF INTERIM DISPOSITION	
17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date)	
18. Interim Disposition Verified CCP QA Engineer: (Print, sign and date)	

NCR INL-0433-12 Rev. 0
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BSP 8-21-12

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL-0433-12 Revision 0

FINAL DISPOSITION

19. Final Disposition (Check One)
☐ Use-As-Is ☐ Reject ☐ Repair ☒ Rework ☐ Scrap

(a) Technical Justification (Required for Use-As-Is and Repair dispositions, Enter N/A for Reject, Scrap, or Rework dispositions.) N/A

(b) Instructions for Completion (Required for Reject, Repair, Rework and Scrap – Enter N/A for Use-As-Is).
1. DGL to correct ITR checklist
2. DGL to insert NCR into BDR
3. DGL to re-sign BDR
4. SPM to insert changes into BDR.

(c) Corrective Actions (Actions to Prevent Recurrence – Required for Repair and Rework; Enter N/A for Use-As-Is-, Reject, and Scrap). None applicable NA 08/07/12 LRJ

FINAL DISPOSITION APPROVALS

20. Responsible Manager/Individual: (Print, sign, and date)	21. CCP QA Engineer or Designee: (Print, sign, and date)
Jim Vernon 8.7.12	Laura R. Jones 08/07/2012 Laura Romeo Jones
Additional Approvals: (Print, sign, and date)	Additional Approvals: (Print, sign, and date)

CLOSURE

22. Final Disposition Complete Responsible Manager/Individual: (Print, sign, and date)

23. Attachments:

24. (a) HOLD TAG removal has been validated and reconciled for all nonconforming items on the NCR. ☐
(b) Check if not applicable (N/A) and provide an explanation here or on a continuation sheet. ☐

25. Final Disposition Verified – NCR Closed CCP QA Engineer: (Print, sign, and date)

NCR INL-0433-12 Rev. 0
Attachment 2 Page 10 of 10

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8-21-12

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary

BDR Number: IN-ARP-VE-002789 **Examination Date:** 07/30/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
1. Is the completed, signed and dated Independent Technical Reviewer Checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, C3-10b**	X			
2. Does the BDR contain all items addressed in the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-10b**	X			
3. Does the BDR include a listing of all container numbers in the batch? **Reference Source: CCP-PO-001, C3-10b**	X			
4. List all containers that have met QAOs. **Reference Source: CCP-PO-001, C3-10b**				Container Numbers: ARP70859, ARP70869, ARP70882, ARP70885 ARP70886, ARP70888, ARP70892 ARP70897, ARP70898, ARP70901 ARP70904, ARP70920, ARP70925 ARP70926, ARP70929, ARP70931 ARP70932, ARP70933, ARP70936
5. Is the current implementing procedure and revision number included in the BDR? **Reference Source: CCP-PO-001, C3-4, C3-10b, Table C3-11**	X			
6. Is the BDR date included? **Reference Source: CCP-PO-001, Table C3-11**	X			
7. Is there a reference to or copy of any associated NCRs (if any) in the BDR? **Reference Source: CCP-PO-001, Table C3-11**	X			NCR-INL-0433-12
8. Are there 20 or fewer containers in the batch? **Reference Source: CCP-PO-001 C3-10**	X			
9. Are the data properly reported (i.e., data are reported in correct units and with correct significant figures). **Reference Source: CCP-PO-001 C3-10b**	X			
10. Is there evidence of verification that the physical form matches the Waste Matrix Code? **Reference Source: CCP-PO-001, C3-4**	X			
11. Is there evidence of verification that the physical form matches the waste stream description? **Reference Source: CCP-PO-001, C1-4**	X			
12. Are prohibited items absent? **Reference Source: CCP-PO-001, C3-4**	X			

CCP RECORDS ORIGINAL
DATE REC'D 8-23-12

Left Blank SC 8-23-12

NCR - INL-0433-12 Rev 0

Attachment 3 Page 2 of 5

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-ARP-VE-002789 **Examination Date:** 07/30/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
13. Does observable liquid, if present, meet the criteria of the TSDF-WAC? **Reference Source: CCP-PO-001, C3-4b**	X			
14. Were discrepancies between the Visual Examination operator and the ITR with regards to identification of waste matrix code, liquids in excess of the TSDF-WAC, or compressed gases reconciled? NA if no discrepancies. **Reference Source: CCP-PO-001, C3-4b**			X	No discrepancies
15. Are the training requirements met for the VE Expert and VE Operators who have signed the data forms? **Reference Source: CCP-PO-001, C1-4, C3-4**	X			
16. Is evidence of a satisfactory audio/video test included in the BDR? NA [not applicable] for VE Method for Newly Generated Waste. **Reference Source: CCP-PO-001, C1-4**			X	Newly Generated Waste
17. If the VE was not recorded using audio/video media, does the data sheet contain the signature of two qualified operators who observed for themselves the waste being placed into the container? NA if audio/video used. **Reference Source: CCP-PO-001, C1-4**	X			
18. Are the weights/estimated weights for the 12 waste material parameters reported in kilograms (kg)? **Reference Source: CCP Technical Procedures**	X			
19. Are the descriptions for each waste material parameter included in the BDR? **Reference Source: CCP-PO-001, C1-4**	X			
20. Is the gross weight reported (in kg) for each container included in the BDR? **Reference Source: CCP Technical Procedures**	X			
21. Is the number of layers of confinement recorded? **Reference Source: CCP-PO-001, C-3d**	X			
22. Is sufficient information included in the BDR to determine the packaging configuration? **Reference Source: CCP-PO-001 C-3d**	X			

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-ARP-VE-002789 **Examination Date:** 07/30/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
23. Is the type and number of filters recorded? **Reference Source: CCP-PO-001, C-3d**	X			
24. Is the size of the rigid liner vent hole recorded to determine the appropriate DAC? NA if no liner lid. **Reference Source: CCP-PO-001, C-3d**			X	No liner lid
25. For Los Alamos National Laboratory (LANL) Sealed Sources, does the characterized waste container meet the definition of sealed sources per Title 10 Code of Federal Regulations (CFR) 30.4 and Title 10 CFR 835.2 (effective January 1, 2004) evidence of which is assembled as part of AK documentation? **Reference Source: CCP Technical Procedures**			X	Not from LANL
26. For LANL Sealed Sources, are sealed sources the only non-packaging items in the waste container? **Reference Source: CCP Technical Procedures**			X	Not from LANL
27. For LANL Sealed Sources, are the sealed sources a U.S. Department of Transportation (DOT) Special Form Class 7 (Radioactive Material) per Title 49 CFR 34.27 (effective January 1, 2004) and the certification of which is assembled as part of the AK documentation? **Reference Source: CCP Technical Procedures**			X	Not from LANL
28. For LANL Sealed Sources, is the integrity of each sealed source validated by documented contamination survey results to meet the requirements of Title 10 CFR 34.27 (effective January 1, 2004), and assembled as part of AK documentation? **Reference Source: CCP Technical Procedures**			X	Not from LANL

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-ARP-VE-002789 **Examination Date:** 07/30/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
29. For LANL Sealed Sources, is each sealed source a rigid sealed container less than or equal to 4 L in size or in a rigid sealed container less than or equal to 4 L? **Reference Source: CCP Technical Procedures**			X	Not from LANL
30. For LANL Sealed Sources, AK documentation does not indicate the use of volatile organic compounds (VOCs) or VOC-bearing materials as constituents of sealed sources? **Reference Source: CCP Technical Procedures**			X	Not from LANL
31. For LANL Sealed Sources, the outer casing of each sealed source is of a non VOC-bearing material which is verified using the VE technique at the time of packaging? **Reference Source: CCP Technical Procedures**			X	Not from LANL

Comments:None

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

Steve Castro	Steve Castro	08-22-2012
SPM Printed Name	Signature	Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

NCR INL-0433-12 Rev.0

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DIVIDER

PAGE

Attachment 1 – CCP Nonconformance Report (NCR)

NCR No. NCR-INL-0434-12		Revision 1
1. Lot No./Heat No. or Serial No. (as applicable): N/A	2. Process (e.g., NDA, HSG, NDE, VE, Other): NDA	3. Batch Data Report #(s): INNDAB12004
4. Order/Work Order/Job Control Number (as applicable): N/A	5. PO # (as applicable): N/A	Container #(s): ARP14454
	6. Supplier (as applicable): N/A	

DESCRIPTION OF NONCONFORMANCE

7. (a) NCR Description: ☐ < 100 nCi/g ☐ Prohibited Item ☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☒ Other

7. (b) Description of Nonconformance Required Condition (Implementing Procedure, Revision, Section, & Text):

CCP-TP-001 Rev 19 "CCP Project Level Data Validation and Verification" , Attachment 3 "CCP SPM Nondestructive Assay Project Level Validation Checklist and Summary", Question 14.

14. Is the correct Waste Matrix Code referenced in the BDR?

7. (c) Actual Condition

In the Narrative section of the BDR the waste stream is incorrectly identified as ID-SWB-DEBRIS instead of ID-SDA-Debris and therefore the Waste Matrix Code can't be verified correct by the SPM.

Reason for Revision: Change final disposition instructions

8. NCR Originator (Print name, sign, and date)	9. CCP QA Engineer or Designee Validation (Print name, sign, and date)
Jim Vernon 8-28-12	Laura R. Jones 08/28/12 Laura Ramon Jones

9a. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE
If YES or INDETERMINATE, then apply Trend Code L in Block 12.

9b. Have the CCP HOLD TAGS associated with the NCR been applied? ☒ YES ☐ NO If no is marked, provide an explanation. 08/28/12 LRJ

10. Significant Condition? (If Yes, List CAR) ☐ YES ☒ NO	11. Recurring Condition? ☐ YES ☒ NO (If YES, List NCRs/CARs)
12. Trend Code: A	13. Responsible Manager: Jim Vernon

COPY

CCP RECORDS ORIGINAL
DATE REC'D 9-10-12

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL-0434-12	Revision 1
INTERIM DISPOSITION	
14. Interim Disposition (Check One) ☒ N/A (See Final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort ☐Reinspect/Retest ☐ Remediate (a) Instructions for Completion of the Interim Disposition:	
INTERIM DISPOSITION APPROVALS	
15 .Responsible Manager/Individual (Print, sign, and date)	16. CCP QA Engineer or Designee (Print, sign and date)
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
COMPLETION OF INTERIM DISPOSITION	
17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date)	
18. Interim Disposition Verified CCP QA Engineer: (Print, sign and date)	

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL-0434-12 Revision 1

FINAL DISPOSITION

19. Final Disposition (Check One)
☐ Use-As-Is ☐ Reject ☐ Repair ☒ Rework ☐ Scrap

(a) Technical Justification (Required for Use-As-Is and Repair dispositions, Enter N/A for Reject, Scrap, or Rework dispositions.)
N/A

(b) Instructions for Completion (Required for Reject, Repair, Rework and Scrap – Enter N/A for Use-As-Is).

1. Remove from lot if applicable
2. DGL to correct BDR
3. DGL to insert NCR, re-sign BDR
4. SPM to insert changes into BDR if applicable

(c) Corrective Actions (Actions to Prevent Recurrence – Required for Repair and Rework; Enter N/A for Use-As-Is-, Reject, and Scrap).
None

FINAL DISPOSITION APPROVALS

20. Responsible Manager/Individual: (Print, sign, and date) Jim Vernon 8-28-12	21. CCP QA Engineer or Designee: (Print, sign, and date) Laura R. Jones 08/28/12 Laura Romero Jones
Additional Approvals: (Print, sign, and date)	Additional Approvals: (Print, sign, and date)

CLOSURE

22. Final Disposition Complete Responsible Manager/Individual: (Print, sign, and date)
Jim Vernon 9-10-12

23. Attachments: 1.- Email Documenting Reportability 2.- Hold tag application notification 3.- Basis for closure 4.- Hold tag removal

24. (a) HOLD TAG removal has been validated and reconciled for all nonconforming items on the NCR. ☑
(b) Check if not applicable (N/A) and provide an explanation here or on a continuation sheet. ☐

See Attachment 4.

25. Final Disposition Verified – NCR Closed	CCP QA Engineer: (Print, sign, and date)
Laura R. Jones	Laura Romero Jones 09/10/2012

Jones, Laura - WTS

From: Pearcy, Mark - WTS
Sent: Wednesday, August 29, 2012 7:20 AM
To: Jones, Laura - WTS
Subject: RE: Revised NCR-INL-0434-12-1

Not reportable

Mark Pearcy
Central Characterization Project
Washington TRU Solutions LLC
Contractor for the U.S. Department of Energy
575-234-7394 (W)
575-499-7339 (C)

From: Jones, Laura - WTS
Sent: Tuesday, August 28, 2012 11:27 AM
To: Jordan, Shanique - Stoller; Kantrowitz, Rich - WTS; Pearcy, Mark - WTS; Pearcy, Sheila - Stoller; Punchios, Sheri - Stoller; Ramirez, Mike - WTS; Verlanic, William - WTS; Vernon, Jim - WTS; Young, Rachel - WTS; Czyzewski, Robert - INL
Cc: Jones, Laura - WTS
Subject: Revised NCR-INL-0434-12-1

Robert / Bill – For your information.
Mark – Please review for notification purposes. (Item 3 of final disposition corrected).
Shanique – Please post this open revised NCR.

Thanks,

Laura R. Jones
Quality Assurance
Washington TRU Solutions, LLC
Contractor for the U.S. Department of Energy
Office: (575) 234-7244
Email: laura.jones@wipp.ws
Fax: (575) 234-7071

NCR – INL-0434-12 Rev. 1
Attachment 1 Page 1 of 4

Jones, Laura - WTS

From: IDC [SQLMaster@wipp.ws]
Sent: Wednesday, August 29, 2012 7:20 AM
To: Jones, Laura - WTS; Mueller, Terry - WTS; Walker, Mak (Maryann) - WTS
Subject: Project Office NCR [NCR-INL0434121] was just reviewed.

Certification Manager/Designee has just reviewed the project office NCR NCR-INL0434121 and has indicated that it [should NOT] be reported to CBFO. IDC has already updated the NCR for you.

NCR -INL-0434-12 Rev 1
Attachment 1 Page 2 of 4

Jones, Laura - WTS

From: Pearcy, Mark - WTS
Sent: Tuesday, August 21, 2012 12:48 PM
To: Jones, Laura - WTS
Subject: RE: New NCR-INL-0434-12

Not reportable

Mark Pearcy
Central Characterization Project
Washington TRU Solutions LLC
Contractor for the U.S. Department of Energy
575-234-7394 (W)
575-499-7339 (C)

From: Jones, Laura - WTS
Sent: Tuesday, August 21, 2012 10:30 AM
To: Jordan, Shanique - Stoller; Kantrowitz, Rich - WTS; Pearcy, Mark - WTS; Pearcy, Sheila - Stoller; Punchios, Sheri - Stoller; Verlanic, William - WTS; Vernon, Jim - WTS; Young, Rachel - WTS; Miles, Jeri - WTS
Cc: Jones, Laura - WTS
Subject: New NCR-INL-0434-12

Robert / Bill – For your information
Mark – Please review for notification purposes.
Shanique – Please post this open NCR.

Thanks,

Laura R. Jones
Quality Assurance
Washington TRU Solutions, LLC
Contractor for the U.S. Department of Energy
Office: (575) 234-7244
Email: laura.jones@wipp.ws
Fax: (575) 234-7071

Jones, Laura - WTS

From: IDC [SQLMaster@wipp.ws]
Sent: Tuesday, August 21, 2012 12:48 PM
To: Jones, Laura - WTS; Mueller, Terry - WTS; Walker, Mak (Maryann) - WTS
Subject: Project Office NCR [NCR-INL0434120] was just reviewed.

Certification Manager/Designee has just reviewed the project office NCR NCR-INL0434120 and has indicated that it [should NOT] be reported to CBFO. IDC has already updated the NCR for you.

NCR-INL-0434-12 Rev. 1
Attachment 1 Page 4 of 4

Jones, Laura - WTS

From: Czyzewski, Robert J. [Robert.Czyzewski@amwtp.inl.gov]
Sent: Tuesday, August 28, 2012 7:40 AM
To: Jones, Laura - WTS
Subject: NCR Tag Placements

Laura:

I have placed an NCR tag on ARP 14454 for NCR INL-0434-12. I could not hand a tag on 10093556 for NCR INL-0437-12 since it is inaccessible in the stack. I'll put the tag for 10093556 as an orphan and periodically check if the drum is moved and made accessible.

Robert Czyzewski
QA Engineer
Washington TRU Solutions, LLC
Contractor for the U.S. Government
(208) 526-6969; (208) 569-2752 (C)
robert.czyzewski@amwtp.inl.gov

NCR - INL-0434-12 Rev. 1
Attachment 2 Page 1 of 1

Attachment 3 – CCP SPM Nondestructive Assay Project Level Validation Checklist and Summary

BDR Number: INNDAB12004 **Examination Date:** 6-28-12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
1. Are the background measurements performed and recorded daily and included in the BDR? **Reference Source: CCP-PO-002, Attachment 1, A.4.2**	X			
2. Is the efficiency/energy calibration and resolution check performed and recorded daily and included in the BDR? **Reference Source: CCP-PO-002, Attachment 1, A.4.2**	X			
3. Were the performance checks and backgrounds done prior to the analysis of the samples? **Reference Source: CCP-PO-002, Attachment 1, A.4.2**	X			
4. Are the required QC checks specified on the ITR checklist within acceptable limits? **Reference Source: CCP-PO-002, Attachment 1, A.4.2**	X			
5. Is the matrix drum performed at least once per operational week? **Reference Source: CCP-PO-002, Attachment 1, A.4.2**	X			
6. List all containers that have met all QC criteria thresholds. **Reference Source: CCP-PO-002, Attachment 1, A.5.2**				Containers: ARP14454
7. Is there evidence of participation in the PDP program or any relevant approved comparison program? **Reference Source: CCP-PO-002, Attachment 1, A.4.1**	X			
8. Are the personnel training records acceptable? **Reference Source: CCP-PO-002, Attachment 1, A.4.1**	X			
9. Is a standard cover sheet included in the BDR? **Reference Source: CCP Technical Procedures**	X			
10. Is there reference to or copy of associated NCRs included in the BDR? NA if no NCRs associated with BDR. **Reference Source: CCP-QP-005**	X			NCR-INL-0434-12

CCP RECORDS ORIGINAL
DATE REC'D 8-28-12

Attachment 3 – CCP SPM Nondestructive Assay Project Level Validation Checklist and Summary (Continued)

BDR Number: INNDAB12004 **Examination Date:** 6-28-12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
11. Is the method used for radioassay identified by the implementing procedure(s) and revision number(s) referenced for each container in the BDR? **Reference Source: CCP Technical Procedures**	X			
12. Is the current software revision number correct for each container in the BDR? **Reference Source: CCP-QP-022**	X			
13. Is the completed, signed, and dated Independent Technical Reviewer Checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-002, Attachment 1, A.5.1**	X			NCR INL-0434-12 Rev 1 Attachment 3 Page 2 of 8
14. Is the correct Waste Matrix Code referenced in the BDR? **Reference Source: CCP Technical Procedures**	X			
15. Is the method of expressing TMU specified in the BDR? **Reference Source: CCP-PO-002, 3.3.1**	X			
16. Does the instrument performing TRU/low-level waste measurement have an LLD of 100 nCi/g or less? **Reference Source: CCP-PO-002, Attachment 1, A.3**	X			
17. Are the ten WIPP tracked radionuclides of 241Am, 238Pu, 239Pu, 240Pu, 242Pu, 233U, 234U, 238U, 90Sr, 137Cs estimated activities and masses, including their associated TMU reported on each radioassay data sheet? **Reference Source: CCP-PO-002, 3.3.1**	X			
18. Is 235U (in order to calculate FGE) reported as present or absent on each radioassay data sheet? **Reference Source: CCP-PO-002, Attachment 1, A.3**	X			
19. If 235U is reported as present, is 234U reported as present? NA, if 235U is not present. **Reference Source: CCP Technical Procedures**			X	No 235 present
20. Is the TRU alpha activity concentration and associated TMU reported for each container in the BDR? **Reference Source: CCP-PO-002, 3.3.1**	X			

Attachment 3 – CCP SPM Nondestructive Assay Project Level Validation Checklist and Summary (Continued)

BDR Number: INNDAB12004 **Examination Date:** 6-28-12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
21. Is the TRU alpha activity concentration limit of >100 nCi/g met for containers in the BDR? **Reference Source: CCP-PO-002, 3.3.3**	X			
22. Is the Total Pu239 FGE (g) and associated TMU reported for each container in the BDR? **Reference Source: CCP-PO-002, 3.3.1**	X			
23. Is the FGE plus two times the TMU less than or equal to the limits for containers in this BDR? 200 FGE for 55-gal drums/325 FGE for SWBs. Note: TMU equals one standard deviation. **Reference Source: CCP-PO-002, Table A-3**	X			NCR-IWL-0434-12 Rev. 1 Attachment 3 Page 3 of 8
24. Is the decay heat reported for each container in the BDR? **Reference Source: CCP-PO-002, 3.3.1**	X			
25. Are all the appropriate QC forms (background, efficiency checks, control charts, and matrix drum) included in the BDR? **Reference Source: CCP-PO-002, Attachment 1, A.5.2**	X			
26. Is the name of the testing facility included in the BDR? **Reference Source: CCP-PO-002, Attachment 1, A.5.2**	X			
27. Is the batch number included in the BDR? **Reference Source: CCP-PO-002, Attachment 1, A.5.2**	X			
28. Is a listing of all container numbers in the BDR? **Reference Source: CCP-PO-002, Attachment 1, A.5.2**	X			
29. Does the BDR contain a BDR Table of Contents? **Reference Source: CCP-PO-002, Attachment 1, A.5.2**	X			
30. Are the testing report data sheets including the waste container number for each container included in the BDR? **Reference Source: CCP-PO-002, Attachment 1, A.5.2**	X			
31. Is the title "Radioassay Data Sheet" included for each container in the BDR? **Reference Source: CCP-PO-002, Attachment 1, A.5.2**	X			

Attachment 3 – CCP SPM Nondestructive Assay Project Level Validation Checklist and Summary (Continued)

BDR Number: INNDAB12004 **Examination Date:** 6-28-12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
32. Is the date of radioassay included for each container in the BDR? **Reference Source: CCP-PO-002, Attachment 1, A.5.2**	X			
33. Is the operator and reviewer signature release and date included for each container in the BDR? **Reference Source: CCP-PO-002, Attachment 1, A.5.2**	X			
34. Is the total Pu239 equivalent activity (Ci) reported for each container in the BDR? **Reference Source: CCP-PO-002, Attachment 1, A.5.2**	X			
35. Are the NDA net weights within 5% of the NDE net weight or the VE net weight, whichever is applicable, for each container in the BDR? **Reference Source: CCP Technical Procedures**	X			
Comments: Supplemental Information added to BDR as SPM-1, 2, 3				
The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.				
Vincent Medina / Vincent Medina / 8-28-12				
SPM Printed Name / Signature / Date				

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

NCR -INL0434-12Rev.1

Attachment 3 Page 4 of 8

Attachment 1 – CCP Nonconformance Report (NCR)

NCR No. NCR-INL-0434-12	Revision 1	
1. Lot No./Heat No. or Serial No. (as applicable): N/A	2. Process (e.g., NDA, HSG, NDE, VE, Other): NDA	3. Batch Data Report #(s): INNDAB12004
4. Order/Work Order/Job Control Number (as applicable): N/A	5. PO # (as applicable): N/A	Container #(s): ARP14454
	6. Supplier (as applicable): N/A	

DESCRIPTION OF NONCONFORMANCE

7. (a) NCR Description: ☐ < 100 nCi/g ☐ Prohibited Item ☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☒ Other

7. (b) Description of Nonconformance Required Condition (Implementing Procedure, Revision, Section, & Text):

CCP-TP-001 Rev 19 "CCP Project Level Data Validation and Verification" , Attachment 3 "CCP SPM Nondestructive Assay Project Level Validation Checklist and Summary", Question 14.

14. Is the correct Waste Matrix Code referenced in the BDR?

7. (c) Actual Condition

In the Narrative section of the BDR the waste stream is incorrectly identified as ID-SWB-DEBRIS instead of ID-SDA-Debris and therefore the Waste Matrix Code can't be verified correct by the SPM.

Reason for Revision: Change final disposition instructions

8. NCR Originator (Print name, sign, and date)	9. CCP QA Engineer or Designee Validation (Print name, sign, and date)
Jim Vernon 8-28-12	Laura L. Jones 08/28/12 Laura Lemmons Jones

9a. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE
If YES or INDETERMINATE, then apply Trend Code L in Block 12.

9b. Have the CCP HOLD TAGS associated with the NCR been applied? ☒ YES ☐ NO If no is marked, provide an explanation. 08/28/12 LRJ

10. Significant Condition? (If Yes, List CAR)	11. Recurring Condition?
☐ YES ☒ NO	☐ YES ☒ NO (If YES, List NCRs/CARs)
12. Trend Code: A	13. Responsible Manager: Jim Vernon

NCR – INL-0434-12 Rev. 1

Attachment 3 Page 5 of 8

SPM-1

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL-0434-12 Revision 1	
INTERIM DISPOSITION	
14. Interim Disposition (Check One) ☒ N/A (See Final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort ☐ Reinspect/Retest ☐ Remediate (a) Instructions for Completion of the Interim Disposition:	
INTERIM DISPOSITION APPROVALS	
15 .Responsible Manager/Individual (Print, sign, and date)	16. CCP QA Engineer or Designee (Print, sign and date)
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
COMPLETION OF INTERIM DISPOSITION	
17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date)	
18. Interim Disposition Verified CCP QA Engineer: (Print, sign and date)	

NCR -INL-0434-12 Rev. 1
Attachment 3 Page 6 of 8

SPM-2

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL-0434-12 Revision 1	
FINAL DISPOSITION	
19. Final Disposition (Check One) ☐ Use-As-Is ☐ Reject ☐ Repair ☒ Rework ☐ Scrap	
(a) Technical Justification (Required for Use-As-Is and Repair dispositions, Enter N/A for Reject, Scrap, or Rework dispositions.) N/A	
(b) Instructions for Completion (Required for Reject, Repair, Rework and Scrap – Enter N/A for Use-As-Is). 1. Remove from lot if applicable 2. DGL to correct BDR 3. DGL to insert NCR, re-sign BDR 4. SPM to insert changes into BDR if applicable	
(c) Corrective Actions (Actions to Prevent Recurrence – Required for Repair and Rework; Enter N/A for Use-As-Is-, Reject, and Scrap). None	
FINAL DISPOSITION APPROVALS	
20. Responsible Manager/Individual: (Print, sign, and date) Jim Vernon 8-28-12	21. CCP QA Engineer or Designee: (Print, sign, and date) Laura R. Jones 08/28/12 Laura Romero Jones
Additional Approvals: (Print, sign, and date)	Additional Approvals: (Print, sign, and date)
CLOSURE	
22. Final Disposition Complete Responsible Manager/Individual: (Print, sign, and date)	
23. Attachments:	
24. (a) HOLD TAG removal has been validated and reconciled for all nonconforming items on the NCR. ☐ (b) Check if not applicable (N/A) and provide an explanation here or on a continuation sheet. ☐	
25. Final Disposition Verified – NCR Closed	CCP QA Engineer: (Print, sign, and date)

NCR INL-0434-12 Rev. 1
Attachment 3 Page 7 of 8

SPM-3

Attachment 3 – NDA Batch Data Report Narrative Summary

NDA Batch #: **INNDAB12004**

Date: 6/28/2012

Quality Control Summary: All daily measurement control checks, ambient background, daily working standard, and performance checks, were within established limits. The Weekly Interfering Matrix (WIM) was run on 6/25/2012. No statistical trends were observed for this measurement control period. No measurement control problems were observed for this measurement testing batch.

Nonconformance: N/A

NDA Independent Technical Reviewer Comments: The SWB in this batch is within the qualified range for the SuperHENC. No additional radionuclides were reported by the Expert Analyst (EA) in the measurement. The WIM was completed on 6/25/2012. The AK Set selected by the EA indicates the Waste Stream for that container. AK default isotopics and scaling factors for Waste Stream ID-~~SWB~~-DEBRIS verified to exactly match BN-550 isotopics per the EA's attachement 5. SDA 6/27/12 RG

Printed Name: Rick Green

Signature and Date: R Green / 7/02/2012

R Green 8/27/2012

NCR - INL-0434-12 Rev. 1

Attachment 3 Page 8 of 8

03

Jones, Laura - WTS

From: Czyzewski, Robert - INL
Sent: Wednesday, September 05, 2012 11:39 AM
To: Jones, Laura - WTS
Subject: NCR Tags removed /placed

Laura:

I have removed NCR Tag from ARP14454 for NCR INL-0434-12

I have hung NCR Tag on Waste Container ARP71080 for NCR INL-0438-12

Robert Czyzewski
QA Engineer
Wastington TRU Solutions, LLC
Contractor for the U.S. Government
(208) 526-6969; (208) 569-2752 (C)
robert.czyzewski@amwtp.inl.gov

NCR – INL-0434-12 Rev. 1
Attachment 4 Page 1 of 1

Attachment 1 – CCP Nonconformance Report (NCR)

NCR No. NCR-INL-0434-12	Revision 0	
1. Lot No./Heat No. or Serial No. (as applicable): N/A	2. Process (e.g., NDA, HSG, NDE, VE, Other): NDA	3. Batch Data Report #(s): INNDAB12004
4. Order/Work Order/Job Control Number (as applicable): N/A	5. PO # (as applicable): N/A	Container #(s): ARP14454
	6. Supplier (as applicable): N/A	

DESCRIPTION OF NONCONFORMANCE

7. (a) NCR Description: ☐ < 100 nCi/g ☐ Prohibited Item ☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☒ Other

7. (b) Description of Nonconformance Required Condition (Implementing Procedure, Revision, Section, & Text):

CCP-TP-001 Rev 19 "CCP Project Level Data Validation and Verification" , Attachment 3 "CCP SPM Nondestructive Assay Project Level Validation Checklist and Summary", Question 14.

14. Is the correct Waste Matrix Code referenced in the BDR?

7. (c) Actual Condition

In the Narrative section of the BDR the waste stream is incorrectly identified as ID-SWB-DEBRIS instead of ID-SDA-Debris and therefore the Waste Matrix Code can't be verified correct by the SPM.

8. NCR Originator (Print name, sign, and date)	9. CCP QA Engineer or Designee Validation (Print name, sign, and date)
Vincent Medina Vincent Medina 8-16-12	Laura R. Jones 08/16/12 Laura Ronnow Jones

9a. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE
If YES or INDETERMINATE, then apply Trend Code L in Block 12.

9b. Have the CCP HOLD TAGS associated with the NCR been applied? ☒ YES ☐ NO If no is marked, provide an explanation.
08/28/12 HCS

10. Significant Condition? (If Yes, List CAR) ☐ YES ☒ NO	11. Recurring Condition? ☐ YES ☒ NO (If YES, List NCRs/CARs)
12. Trend Code: A	13. Responsible Manager: Jim Vernon

SUPERSEDED BY REV 1 08/28/12 LG

CCP RECORDS ORIGINAL
DATE REC'D 9-10-12

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL-0434-12 Revision 0	
INTERIM DISPOSITION	
14. Interim Disposition (Check One) ☒ N/A (See Final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort ☐ Reinspect/Retest ☐ Remediate (a) Instructions for Completion of the Interim Disposition:	
INTERIM DISPOSITION APPROVALS	
15 .Responsible Manager/Individual (Print, sign, and date)	16. CCP QA Engineer or Designee (Print, sign and date)
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
COMPLETION OF INTERIM DISPOSITION	
17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date)	
18. Interim Disposition Verified CCP QA Engineer: (Print, sign and date)	

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL-0434-12 Revision 0

FINAL DISPOSITION

19. Final Disposition (Check One)
☐ Use-As-Is ☐ Reject ☐ Repair ☒ Rework ☐ Scrap

(a) Technical Justification (Required for Use-As-Is and Repair dispositions, Enter N/A for Reject, Scrap, or Rework dispositions.)
N/A

(b) Instructions for Completion (Required for Reject, Repair, Rework and Scrap – Enter N/A for Use-As-Is).

1. Remove from lot if applicable
2. DGL to correct BDR
3. DGL to insert NCR, re-sign NCR
4. SPM to insert changes into BDR

(c) Corrective Actions (Actions to Prevent Recurrence – Required for Repair and Rework; Enter N/A for Use-As-Is-, Reject, and Scrap).
None

FINAL DISPOSITION APPROVALS

20. Responsible Manager/Individual: (Print, sign, and date) Jim Vernon 8-21-12	21. CCP QA Engineer or Designee: (Print, sign, and date) Laura R. Jones 08/21/12 Laura Romero Jones
Additional Approvals: (Print, sign, and date)	Additional Approvals: (Print, sign, and date)

CLOSURE

22. Final Disposition Complete Responsible Manager/Individual: (Print, sign, and date)

23. Attachments:

24. (a) HOLD TAG removal has been validated and reconciled for all nonconforming items on the NCR. ☐
(b) Check if not applicable (N/A) and provide an explanation here or on a continuation sheet. ☐

25. Final Disposition Verified – NCR Closed CCP QA Engineer: (Print, sign, and date)

DIVIDER

PAGE

Attachment 1 – CCP Nonconformance Report (NCR)

NCR No. NCR-INL-0438-12	Revision 0	
1. Lot No./Heat No. or Serial No. (as applicable): N/A	2. Process (e.g., NDA, HSG, NDE, VE, Other): FGA	3. Batch Data Report #(s): IN12FG5088 Container #(s): ARP71080
4. Order/Work Order/Job Control Number (as applicable): N/A	5. PO # (as applicable): N/A	
	6. Supplier (as applicable): N/A	

DESCRIPTION OF NONCONFORMANCE

7. (a) NCR Description: ☐ < 100 nCi/g ☐ Prohibited Item ☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☒ Other

7. (b) Description of Nonconformance Required Condition (Implementing Procedure, Revision, Section, & Text):

CCP-TP-030, Rev 30, Section 4.4.9 "IF the methane concentrations is greater than or equal to 1,250 ppm, THEN the container is NOT eligible for certification."

7. (c) Actual Condition

The methane concentration is greater than 1,250 ppm.

8. NCR Originator (Print name, sign, and date)	9. CCP QA Engineer or Designee Validation (Print name, sign, and date)
Steve Castro Steve Castro 8/29/12	T. MUELLER T Mueller 8-29-12

9a. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE
If YES or INDETERMINATE, then apply Trend Code L in Block 12.

9b. Have the CCP HOLD TAGS associated with the NCR been applied? ☒ YES ☐ NO If no is marked, provide an explanation.

09/06/2012 KK

10. Significant Condition? (If Yes, List CAR)	11. Recurring Condition?
☐ YES ☒ NO	☐ YES ☒ NO (If YES, List NCRs/CARs)
12. Trend Code: K	13. Responsible Manager: Jim Vernon

COPY

NTPC RECORDS ORIGINAL
DATE REC'D 4-29-13

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No.NCR-INL-0438-12 Revision 0	
INTERIM DISPOSITION	
14. Interim Disposition (Check One) ☒ N/A (See Final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort ☐Reinspect/Retest ☐ Remediate (a) Instructions for Completion of the Interim Disposition:	
INTERIM DISPOSITION APPROVALS	
15 .Responsible Manager/Individual (Print, sign, and date) Jim Vernon	16. CCP QA Engineer or Designee (Print, sign and date)
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
COMPLETION OF INTERIM DISPOSITION	
17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date)	
18. Interim Disposition Verified CCP QA Engineer: (Print, sign and date)	

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL-0438-12 Revision 0

FINAL DISPOSITION

19. Final Disposition (Check One)
☐ Use-As-Is ☒ Reject ☐ Repair ☐ Rework ☐ Scrap

(a) Technical Justification (Required for Use-As-Is and Repair dispositions, Enter N/A for Reject, Scrap, or Rework dispositions.) N/A

(b) Instructions for Completion (Required for Reject, Repair, Rework and Scrap – Enter N/A for Use-As-Is).
1. Remove from Lot both hard-copy and electronic copy, if applicable
2. Resample Container

(c) Corrective Actions (Actions to Prevent Recurrence – Required for Repair and Rework; Enter N/A for Use-As-Is-, Reject, and Scrap). None needed

FINAL DISPOSITION APPROVALS

20. Responsible Manager/Individual: (Print, sign, and date)	21. CCP QA Engineer or Designee: (Print, sign, and date)
Jim Vernon 8-29-12	T. MUELLER 8.29.12
Additional Approvals: (Print, sign, and date)	Additional Approvals: (Print, sign, and date)

CLOSURE

22. Final Disposition Complete Responsible Manager/Individual: (Print, sign, and date)
Jim Vernon 4-23-13

23. Attachments: 1- Email Documenting Reportability 2.- Hold tag application notification 3.- Bases for closure. 4.- Hold tag removal notification

24. (a) HOLD TAG removal has been validated and reconciled for all nonconforming items on the NCR. ☑
(b) Check if not applicable (N/A) and provide an explanation here or on a continuation sheet. ☐

See Attachment 4.

25. Final Disposition Verified – NCR Closed
Laura R. Jones

CCP QA Engineer: (Print, sign, and date)
Laura Romero Jones 04/25/2013

This container was re-sampled in BDR IN13FC10001 on 1-9-13
Jim Vernon 4-23-13

Mueller, Terry - WTS

From: Pearcy, Mark - WTS
Sent: Thursday, August 30, 2012 9:34 AM
To: Mueller, Terry - WTS
Subject: RE: NCR-INL-0438-12

Not reportable

Mark Pearcy
Central Characterization Project
Washington TRU Solutions LLC
Contractor for the U.S. Department of Energy
575-234-7394 (W)
575-499-7339 (C)

From: Mueller, Terry - WTS
Sent: Wednesday, August 29, 2012 3:16 PM
To: Pearcy, Mark - WTS; Punchios, Sheri - Stoller; Verlanic, William - WTS
Cc: Castro, Steve - WTS; Vernon, Jim - WTS
Subject: NCR-INL-0438-12

Robert, Bill – Please apply hold tag as needed.
Mark – Please review for notification purposes.
Sheri – Please post this open NCR.

Thanks!

Terry L. Mueller
WTS QA
Washington TRU Solutions, LLC
Contractor to the Department of Energy
MS GS-103
work (575)-234-7016
fax (575)-234-7042

"Memoirs of an Amnesiac"—Oscar Levant's autobiography

04/23/12
NCR = 0 INL-0438-12 Rev. 0
Attachment 1 Page 1 of 2

Jones, Laura - WTS

From: IDC [SQLMaster@wipp.ws]
Sent: Thursday, August 30, 2012 9:34 AM
To: Jones, Laura - WTS; Mueller, Terry - WTS; Walker, Mak (Maryann) - WTS
Subject: Project Office NCR [NCR-INL0438120] was just reviewed.

Certification Manager/Designee has just reviewed the project office NCR NCR-INL0438120 and has indicated that it [should NOT] be reported to CBFO. IDC has already updated the NCR for you.

NCR - INL-0438-12 Rev. 0
Attachment 1 Page 2 of 2

Jones, Laura - WTS

From: Czyzewski, Robert - INL
Sent: Wednesday, September 05, 2012 11:39 AM
To: Jones, Laura - WTS
Subject: NCR Tags removed /placed

Laura:

I have removed NCR Tag from ARP14454 for NCR INL-0434-12

I have hung NCR Tag on Waste Container ARP71080 for NCR INL-0438-12

Robert Czyzewski
QA Engineer
Wastington TRU Solutions, LLC
Contractor for the U.S. Government
(208) 526-6969; (208) 569-2752 (C)
robert.czyzewski@amwtp.inl.gov

NCR -INL-0438-12 Rev. 0
Attachment 2 Page 1 of 1

Attachment 2 – CCP Nonconformance Report (NCR) Continuation Sheet

NCR No. NCR-INL-0438-12 Revision 0 Attachment # 3 Page 1 of 1
Continuation from Section Number: NA BASIS FOR CLOSURE: Container Number ARP71080 was re-run in BDR IN13FG10001.

Jones, Laura - NWP

From: Klingler, Larry D. [Larry.Klingler@amwtp.inl.gov]
Sent: Wednesday, April 24, 2013 3:51 PM
To: Jones, Laura - NWP
Subject: RE: Hold tags to be pulled.

I have pulled the hold tags for these containers.

Larry Klingler
Quality Assurance Engineer
Nuclear Waste Partnership, LLC
Contractor for the U.S. Department of Energy
Office: 208-526-6969
Email: larry.klingler@amwtp.inl.gov

From: Jones, Laura - NWP [mailto:laura.jones@wipp.ws]
Sent: Tuesday, April 23, 2013 2:55 PM
To: Klingler, Larry D.; Verlanic, William - NWP
Cc: Vernon, Jim
Subject: Hold tags to be pulled.

Larry / Bill – Containers below have been resolved at the project office please remove hold tags and notify when this is completed to close NCRs.

IN12FG5088	ARP71080	Resolved	Container was re-run in BDR IN13FG10001. NCR-INL-0438-12
IN12FG6023	ARP70420	Resolved	Container was re-run in BDR IN13FG10001. NCR-INL-0426-12
IN12FG5054	ARP70507	Resolved	Container was re-run in BDR IN13FG10001. NCR-INL-0399-12
IN12FG9014	ARP70670	Resolved	Container was re-run in BDR IN13FG10001. NCR-INL-0431-12
IN12FG5090	ARP71138	Resolved	Container was re-run in BDR IN13FG10001. NCR-INL-1756-12

Thanks,

Laura R. Jones
Quality Assurance NCR Coordinator
Nuclear Waste Partnership LLC
Contractor for the U.S. Department of Energy
Office: (575) 234-7244
Email: laura.jones@wipp.ws
Fax: (575) 234-7071

NCR-INL– 0438-12 Rev. 0
Attachment 4 Page 1 of 1

DIVIDER PAGE

Attachment 1 – CCP Nonconformance Report (NCR)

CCP NONCONFORMANCE REPORT (NCR)

(Use NCR Continuation, Attachment 2, if necessary)

NCR No. NCR-INL-0062-13 **Revision:** 0

1. Lot No., Heat No., or Serial No. (if applicable): Cylinder No. XA3312	2. Process (e.g., NDA, HSG, NDE, VE, Other): FGA	3. Batch Data Report #(s): N/A
4. Order/Work Order/Job Control Number (if applicable): N/A	5. PO # (if applicable): PO501258	Container #(s): N/A
	6. Supplier (if applicable): Air Liquide America Specialty Gases	

DESCRIPTION OF NONCONFORMANCE

7a. NCR Description: ☐ < 100 nCi/g ☐ Prohibited Item ☐ E-Flag ☒ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☐ Other

7b. Requirement(s) (Enter Implementing Procedure No., Revision, Section No., & Quoted Text): **PO, Line Item #1 for Liquid Nitrogen 99.999% requires less than 1.0 ppm O2; less than .5 ppm THC and less than 1.0 ppm water**

7c. Actual Condition: **The Certificate of Accuracy for the delivered cylinder of Nitrogen listed water as a conforming impurity but did not list oxygen or THC.**

7d. Have the CCP HOLD TAGS associated with this NCR been applied? ☒ YES ☐ NO (If no is checked, explain:)

8. NCR Originator:

Larry Klingler (printed name) Larry D. Klingler (signature) 1/21/13 (date)

9. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE
If YES or INDETERMINATE, enter Trend Code L in Block 10.

10. Trend Code: F

11. Responsible Manager: Charlie Turner

12. Significant Condition? ☐ YES ☒ NO (If Yes, enter CAR No.:)

13. Recurring Condition? ☐ YES ☒ NO (If Yes, list NCRs and CARs:)

14. CCP QA Engineer or CCP QA Designee validation:

R Czyzewski (printed name) R Czyzewski (signature) 1/21/13 (date)

CCP RECORDS ORIGINAL
DATE REC'D 1-21-13

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL-0062-13 **Revision: 0**

INTERIM DISPOSITION

15a. Interim Disposition (Check Only One):

☒ N/A (See Final Disposition) ☐ Hold ☐ Conditionally Accept ☐ Conditionally Use

☐ Sort ☐ Reinspect or Retest ☐ Remediate

15b. Instructions for Completion of the Interim Disposition:

INTERIM DISPOSITION APPROVALS

16a. Responsible Manager or Individual:			**16b. CCP QA Engineer or CCP QA Designee:**		
printed name	signature	date	printed name	signature	date
Additional Approvals:			**Additional Approvals:**		
printed name	signature	date	printed name	signature	date

COMPLETION OF INTERIM DISPOSITION

17. Interim Disposition Complete – Responsible Manager or Individual:

printed name signature date

18. Interim Disposition Verified – CCP QA Engineer:

printed name signature date

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR- INL-0062-13 **Revision:** 0

FINAL DISPOSITION

19. Final Disposition (Check Only One):
☐ Use-As-Is ☐ Repair

19a. Technical Justification – Required for Use-As-Is or Repair dispositions. (Enter "N/A" for Reject, Rework, and Scrap:)

N/A

☐ Reject ☒ Rework ☐ Scrap

19b. Instructions for Completion – Required for Reject, Repair, Rework, or Scrap. (Enter "N/A" for Use-As-Is:)

Supplier to correct the Certificate of Accuracy to reflect the oxygen and THC impurities quantities.

19c. Corrective Actions (Actions to Prevent Recurrence – For Repair or Rework, if applicable. Enter "N/A," if not applicable, and for Use-As-Is, Reject, and Scrap): Charles Turner was contacted and he notified Cheryl Pearson of Air Liquid. The supplier failed to list the oxygen and THC levels and the supplier QA failed to detect the error.

FINAL DISPOSITION APPROVALS

20. Responsible Manager or Individual:			21. CCP QA Engineer or CCP QA Designee:		
Bill Verrannic		1-21-13	R. Czyzewski	R Czyzewski	1/21/13
printed name	signature	date	printed name	signature	date
Additional Approvals:			Additional Approvals:		
printed name	signature	date	printed name	signature	date

CLOSURE

22. Final Disposition Complete – Responsible Manager or Individual:

Bill Verrannic — 1-21-13
printed name / signature / date

23. Attachments: Corrected Certificate of Analysis.

24a. HOLD TAG removal has been verified and reconciled for all nonconforming items on the NCR. ☒

24b. Check if not applicable (N/A) and explain. ☐

25. Final Disposition Verified – NCR Closed CCP QA Engineer:

R. Czyzewski — R Czyzewski — 1/21/13
printed name / signature / date

DIVIDER

PAGE

Attachment 1 – CCP Nonconformance Report (NCR)

CCP NONCONFORMANCE REPORT (NCR)

(Use NCR Continuation, Attachment 2, if necessary)

NCR No. NCR- INL-0066-13 **Revision:** 0

1. Lot No., Heat No., or Serial No. (if applicable):	2. Process (e.g., NDA, HSG, NDE, VE, Other):	3. Batch Data Report #(s):
N/A	NDA	See Attachment 1
4. Order/Work Order/Job Control Number (if applicable): N/A	5. PO # (if applicable): N/A	Container #(s): See Attachment 1
	6. Supplier (if applicable): N/A	

DESCRIPTION OF NONCONFORMANCE

7a. NCR Description: ☐ < 100 nCi/g ☐ Prohibited Item ☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☒ Other

7b. Requirement(s) (Enter Implementing Procedure No., Revision, Section No., & Quoted Text):
CCP-TP-019 Rev. 6 Section 4.5.8 **IF** any of the values on the QA Last Results Report indicate a preset "Ab" (Above) or "Be" (Below) boundary flag, or an "Ac" (Action) flag, **THEN** perform the following:
[A] STOP WORK, **AND** notify the NDA LO and the VPM
[B] Note the problem in the NDA operational logbook
[C] Evaluate the nature of the failure, consulting with an EA as necessary, **AND** determine if an NCR is required
[E] **IF** an NCR is required, **THEN** initiate an NCR in accordance with CCP-QP-005, **DO NOT** resume operations until a corrective action plan is complete **AND** calibration verification, as described in the NOTE above, is performed.
NOTE: Calibration verification is accomplished by completing two consecutive successful Daily Performance Check measurements.

7c. Actual Condition:
WAGS closing Daily Performance Check DPC Pu-239 Transmission mass parameter failed at "Ac" or Action level.

7d. Have the CCP HOLD TAGS associated with this NCR been applied? ☐ YES ☒ NO **(If no is checked, explain:)**
Hold tags will ONLY be applied if data is suspect after EA review.

8. NCR Originator:
Sharon Cummins (printed name) [signature] 5/14/13 (date)

9. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE
If YES or INDETERMINATE, enter Trend Code L in Block 10.

10. Trend Code: K

11. Responsible Manager: Teri Miles

12. Significant Condition? ☐ YES ☒ NO **(If Yes, enter CAR No.:)**

13. Recurring Condition? ☐ YES ☒ NO **(If Yes, list NCRs and CARs:)**

14. CCP QA Engineer or CCP QA Designee validation:
Crary Davis (printed name) [signature] 5/14/13 (date)

COPY

NTPC RECORDS ORIGINAL
DATE REC'D 5-20-13

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR- INL-0066-13 **Revision:** 0

INTERIM DISPOSITION

15a. Interim Disposition (Check Only One):

☐ N/A (See Final Disposition) ☐ Hold ☐ Conditionally Accept ☐ Conditionally Use

☐ Sort ☒ Reinspect or Retest ☐ Remediate

15b. Instructions for Completion of the Interim Disposition:

Perform the following as necessary: detector replacement, repositioning, repair, trouble shooting, and/or any additional measurements as directed by an NDA Expert Analyst (EA) or technical support.

INTERIM DISPOSITION APPROVALS

16a. Responsible Manager or Individual:			16b. CCP QA Engineer or CCP QA Designee:		
Jeri Miles	Jeri Miles	5/14/2013	Larry Klingler	Larry Klingler	5/14/13
printed name	signature	date	printed name	signature	date
Additional Approvals:			**Additional Approvals:**		
Casey Davis	Casey Davis	5-14-13			
printed name	signature	date	printed name	signature	date

COMPLETION OF INTERIM DISPOSITION

17. Interim Disposition Complete – Responsible Manager or Individual:

Jeri Miles (printed name) Jeri Miles (signature) 05/14/2013 (date)

18. Interim Disposition Verified – CCP QA Engineer:

Larry Klingler (printed name) Larry Klingler (signature) 5/14/13 (date)

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR- INL-0066-13 **Revision: 0**

FINAL DISPOSITION

19. Final Disposition (Check Only One):
☐ Use-As-Is ☐ Repair

19a. Technical Justification – Required for Use-As-Is or Repair dispositions. (Enter "N/A" for Reject, Rework, and Scrap:)
N/A

☐ Reject ☒ Rework ☐ Scrap

19b. Instructions for Completion – Required for Reject, Repair, Rework, or Scrap. (Enter "N/A" for Use-As-Is:)
1. Perform a calibration verification per CCP-TP-019.
2. An NDA EA will review the DPC data and the data associated with the BDR listed in block 3 and once the data is shown satisfactory, the system may be returned to service.

19c. Corrective Actions (Actions to Prevent Recurrence – For Repair or Rework, if applicable. Enter "N/A," if not applicable, and for Use-As-Is, Reject, and Scrap):
N/A

FINAL DISPOSITION APPROVALS

20. Responsible Manager or Individual:			21. CCP QA Engineer or CCP QA Designee:		
Jeri Miles	Jeri Miles	05/14/2013	Larry Klingler	Larry D Klingler	5/14/13
printed name	signature	date	printed name	signature	date
Additional Approvals:			**Additional Approvals:**		
Crary Davis	Crary Davis	5-14-13			
printed name	signature	date	printed name	signature	date

CLOSURE

22. Final Disposition Complete – Responsible Manager or Individual:
Bill Vercruise — printed name; signature; 5/15/13 — date

23. Attachments:
Attachment #1 BDR Container IDs
Attachment #2 NDA EA Email for Data Review
Attachment #3 NDA EA Email Recommended Activities
Attachment #4 NDA EA Email Data Review - Place WAGS Back in Service

24a. HOLD TAG removal has been verified and reconciled for all nonconforming items on the NCR. ☐
24b. Check if not applicable (N/A) and explain. ☒
Hold Tag not required after NDA EA Review.

25. Final Disposition Verified – NCR Closed CCP QA Engineer:
Larry Klingler — printed name; Larry D Klingler — signature; 5/15/13 — date

From: MORALES Bart
Sent: Tuesday, May 14, 2013 10:29 AM
To: ABBOTT Preston; DAVIS William C.
Cc: 'Vernon, Jim - NWP'
Subject: RE: WAGS Daily Performance Check Failure

To all,
I have reviewed the data from the DPC failure and made the following observation: Since this is a transmission related failure there was a need to look at all three segments and all the components that may have affected the final results.
The first component was the actual transmission though the drum at the three Ba-133 gamma energies lines used for the transmission correction. Comparison of the transmission corrections of the DPC that failed to the DPC that passed shows that there was slight difference between the transmission corrections in Segment 1 from 356 keV and up.
The second component is the peak fitting for each of the Pu-239 peaks used to quantify the Pu-239 in the drum. In the case of the DPC that failed, the peak area for 3 of the 4 peaks used was higher in Segment 1 than the peak areas in Segment 1 for the good DPC. This increase in peak area caused 3 of the gamma lines to quantify at a slightly higher gram value than usual for Segment 1.
This takes us to component 3. The self-absorption correction. Because of the elevated peak areas in Segment 1 and the difference between the 129 keV peak area and the 414 keV peak area, the final result for Segment 1 was corrected to 4.61 grams. Whereas the good DPC was corrected to 4.19 grams.
Typically the transmission correction, peak fit and self-absorption correction will be such that the effects of one will offset the other. In this case, all of them were additive, producing a higher gram value for Segment 1 then was statistically expected.
I also reviewed the pulser centroid, system gain, resolution and efficiency and all were within their established parameters.
I recommend at this time that two diagnostic DPC measurements be performed and evaluated to determine if this was a statistical anomaly.

Bart Morales
NDA Expert Analyst
CANBERRA
1333 W. 120th Ave. Suite 208
Westminster, CO. 80234
office: (303) 920-2561
mobile: (208) 351-0108
e-mail: bart.morales@canberra.com
Nuclear Measurement Solutions for Safety Security and the Environment

NCR - INL - 0066 - 13
Attachment 2 Page 1 of 1

From: MORALES Bart
Sent: Tuesday, May 14, 2013 2:31 PM
To: WACHTER Joe (CANBERRA); ABBOTT Preston; 'Dickes, Neil - NWP'; 'William.Davis@amwtp.inl.gov'
Cc: 'Vernon, Jim - NWP'; 'Miles, Jeri L'; 'Broomfield, Barbara - NWP'
Subject: RE: WAGS Daily Performance Check Failure - NCR-INL-0066-13

To all,
On 5/14/13, the WAGS system reported an Action or "Ac" flag on the closing Daily Performance Check (DPC) Pu-239 Transmission corrected mass parameter. The reported value was 3.3966 sigma high. A thorough investigation was performed on the gain, resolution, efficiency, peak area, peak area uncertainty, peak rates, pulser centroid, and the self-absorption correction (SAC) for all segments, including the Summed Segment and the Sum of Segments results. It was discovered that Segment 1 (detector 3NB) had a slightly lower than normal transmission for the 356 keV Ba-133 peak. Also peak areas for 3 of the 4 peaks used in the SAC routine caused Segment 1 data to be over-corrected by approximately 0.42 grams. All segments combined resulted in an over-reporting of Pu-239. This value is small compared to an expected mean of 7.635 grams of Pu-239, but with a small standard deviation of 0.102 grams caused the reported Pu-239 mass value to fall outside of the 3 sigma range. All DPC values gathered this year for the Pu-239 transmission corrected mass were compared, and the currently established mean and standard deviation are adequate for this population. The 2 sigma outliers are well within statistical expectations and are well represented above and below the 2 sigma threshold. The two diagnostic DPC measurements (Seq. 22418 and 22419) were evaluated and the inability to reproduce the condition would indicate the failure can be attributed to an statistical anomaly.

The activities of the interim disposition are complete. Based on the findings, I would recommend that we proceed to the final disposition of NCR-INL-0066-13 (attached) and that a calibration verification be performed per CCP-TP-019 in order to return the WAGS system back to service.

Bart Morales
NDA Expert Analyst
CANBERRA
1333 W. 120th Ave. Suite 208
Westminster, CO. 80234
office: (303) 920-2561
mobile: (208) 351-0108
e-mail: bart.morales@canberra.com
Nuclear Measurement Solutions for Safety Security and the Environment

NCR -INL-0066-13
Attachment 3 Page 1 of 1

Verlanic, Bill

From: ABBOTT Preston [Preston.Abbott@canberra.com]
Sent: Wednesday, May 15, 2013 9:30 AM
To: Verlanic, Bill
Subject: FW: WAGS Daily Performance Check Failure - NCR-INL-0066-13

FYI

Preston Abbott
Manager of NDA Services - Idaho
CANBERRA
1070 Riverwalk Drive, Suite 150 | Idaho Falls, ID 83401
office: (208) 227-9471
mobile: (208) 569-0743
fax: (208) 227-9479
e-mail: preston.abbott@canberra.com
Nuclear Measurement Solutions for Safety Security and the Environment

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From: MORALES Bart
Sent: Wednesday, May 15, 2013 9:26 AM
To: ABBOTT Preston; WACHTER Joe (CANBERRA); 'Dickes, Neil - NWP'; 'William.Davis@amwtp.inl.gov'
Cc: 'Vernon, Jim - NWP'; 'Miles, Jeri L'; 'Broomfield, Barbara - NWP'
Subject: RE: WAGS Daily Performance Check Failure - NCR-INL-0066-13

Correction to last e-mail. It is NCR-INL-0066-13 and not NCR-INL-0366-13.
Fat finger syndrome.

Bart Morales
NDA Expert Analyst
CANBERRA
1333 W. 120th Ave. Suite 208
Westminster, CO. 80234
office: (303) 920-2561
mobile: (208) 351-0108
e-mail: bart.morales@canberra.com
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NCR - INL - 0066 - 13
Attachment 4 Page 1 of 2

From: MORALES Bart
Sent: Wednesday, May 15, 2013 9:21 AM
To: ABBOTT Preston; WACHTER Joe (CANBERRA); 'Dickes, Neil - NWP'; 'William.Davis@amwtp.inl.gov'
Cc: 'Vernon, Jim - NWP'; 'Miles, Jeri L'; 'Broomfield, Barbara - NWP'
Subject: RE: WAGS Daily Performance Check Failure - NCR-INL-0066-13

Per the final disposition of NCR-INL-0366-13, calibration verification was performed by completing two consecutive successful Daily Performance Check measurements sequence numbers 22420 and 22421. The data from Daily Performance Checks were reviewed and found acceptable. The data associated with the BDR listed on the NCR has been reviewed and is not affected. I would recommend that the WAGS be placed back into service.

Bart Morales
NDA Expert Analyst
CANBERRA
1333 W. 120th Ave. Suite 208
Westminster, CO. 80234
office: (303) 920-2561
mobile: (208) 351-0108
e-mail: bart.morales@canberra.com
Nuclear Measurement Solutions for Safety Security and the Environment

NCR -INL-0066-13

Attachment 4 Page 2 of 2

Attachment 1 – CCP Nonconformance Report (NCR)

CCP NONCONFORMANCE REPORT (NCR)

(Use NCR Continuation, Attachment 2, if necessary)

NCR No. NCR- INL-0329-13 **Revision:** 0

1. Lot No., Heat No., or Serial No. (if applicable):	2. Process (e.g., NDA, HSG, NDE, VE, Other):	3. Batch Data Report #(s):
N/A	FGA	IN13FG10003
4. Order/Work Order/Job Control Number (if applicable):	**5. PO # (if applicable):**	**Container #(s):**
N/A	N/A	N/A
	6. Supplier (if applicable): N/A	

DESCRIPTION OF NONCONFORMANCE

7a. NCR Description: ☐ < 100 nCi/g ☐ Prohibited Item ☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☑ Other

7b. Requirement(s) (Enter Implementing Procedure No., Revision, Section No., & Quoted Text):

DOE/WIPP 06-3345, Waste Isolation Pilot Plant Flammable Gas Analysis, Revision 4, 4.4.3[AA] Enter the following on Attachment 2: [AA.3] Waste Container ID.

7c. Actual Condition:

Container SRP12164 was not listed on the Attachment 2 – Flammable Gas Analysis Daily Run Sheet

7d. Have the CCP HOLD TAGS associated with this NCR been applied? ☐ YES ☒ NO **(If no is checked, explain:)**

No containers are associated with this NCR. 01/28/13 LAT

8. NCR Originator:

Steve Castro — Steve Castro — 1-17-13

printed name — signature — date

9. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE

If YES or INDETERMINATE, enter Trend Code L in Block 10.

10. Trend Code: A

11. Responsible Manager: Jim Vernon

12. Significant Condition? ☐ YES ☒ NO **(If Yes, enter CAR No.:)**

13. Recurring Condition? ☐ YES ☑ NO **(If Yes, list NCRs and CARs:)**

14. CCP QA Engineer or CCP QA Designee validation:

Laura Jones — Laura Romero Jones — 1/17/13

printed name — signature — date

COPY

CCP RECORDS ORIGINAL
DATE REC'D 1-28-13

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR- INL-0329-13 **Revision:** 0

INTERIM DISPOSITION

15a. Interim Disposition (Check Only One):

☑ N/A (See Final Disposition) ☐ Hold ☐ Conditionally Accept ☐ Conditionally Use

☐ Sort ☐ Reinspect or Retest ☐ Remediate

15b. Instructions for Completion of the Interim Disposition:

INTERIM DISPOSITION APPROVALS

16a. Responsible Manager or Individual:			**16b. CCP QA Engineer or CCP QA Designee:**		
printed name	signature	date	printed name	signature	date
Additional Approvals:			**Additional Approvals:**		
printed name	signature	date	printed name	signature	date

COMPLETION OF INTERIM DISPOSITION

17. Interim Disposition Complete – Responsible Manager or Individual:

printed name signature date

18. Interim Disposition Verified – CCP QA Engineer:

printed name signature date

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR- INL-0329-13 **Revision:** 0

FINAL DISPOSITION

19. Final Disposition (Check Only One):
☐ Use-As-Is ☐ Repair

19a. Technical Justification – Required for Use-As-Is or Repair dispositions. (Enter "N/A" for Reject, Rework, and Scrap:)

N/A

☐ Reject ☑ Rework ☐ Scrap

19b. Instructions for Completion – Required for Reject, Repair, Rework, or Scrap. (Enter "N/A" for Use-As-Is:)

1. DGL to correct BDR
2. ITR to re-sign BDR
3. Insert NCR into BDR

19c. Corrective Actions (Actions to Prevent Recurrence – For Repair or Rework, if applicable. Enter "N/A," if not applicable, and for Use-As-Is, Reject, and Scrap):

N/A

FINAL DISPOSITION APPROVALS

20. Responsible Manager or Individual:			21. CCP QA Engineer or CCP QA Designee:		
Jim Vernon		1-17-13	Laura R Jones	Laura Rawson Jones	01/17/13
printed name	signature	date	printed name	signature	date
Additional Approvals:			Additional Approvals:		
printed name	signature	date	printed name	signature	date

CLOSURE

22. Final Disposition Complete – Responsible Manager or Individual:

Jim Vernon — printed name
signature
1-28-13 — date

23. Attachments: 1- Email Documenting Reportability.
2- Basis for Closure

24a. HOLD TAG removal has been verified and reconciled for all nonconforming items on the NCR. ☐

24b. Check if not applicable (N/A) and explain. ☒

See Section 7d.

25. Final Disposition Verified – NCR Closed — CCP QA Engineer:

Laura R Jones — printed name
Laura Rawson Jones — signature
01/28/2013 — date

Jones, Laura - NWP

From: Pearcy, Mark - NWP
Sent: Monday, January 21, 2013 9:35 AM
To: Jones, Laura - NWP
Subject: RE: New NCR-INL-0329-13

Not reportable

Mark Pearcy
Central Characterization Program
Nuclear Waste Partnership LLC
Contractor for the U.S. Department of Energy
575-234-7394 (W)
575-499-7339 (C)

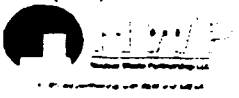
A URS-led partnership with B&W and AREVA

From: Jones, Laura - NWP
Sent: Friday, January 18, 2013 9:45 AM
To: Czyzewski, Robert - INL; Henry, Paulette; Kantrowitz, Rich - NWP; Martin, Linda - Stoller; Pearcy, Mark - NWP; Pearcy, Sheila - Stoller; Punchios, Sheri - Stoller; Verlanic, William - NWP; Vernon, Jim - NWP; Castro, Steve - NWP; Klingler, Larry - NWP
Cc: Jones, Laura - NWP
Subject: New NCR-INL-0329-13

Robert / Bill / Larry – Please ensure that hold tag is hang and send notification when this is completed.
Mark – Please review for notification purposes.
Paulette – Please post this open NCR.

Thanks,

Laura R. Jones
Quality Assurance
Nuclear Waste Partnership LLC
Contractor for the U.S. Department of Energy
Office: (575) 234-7244
Email: laura.jones@wipp.ws
Fax: (575) 234-7071



NCR - INL-0329-13 Rev. 0

Attachment 1 Page 1 of 2

Jones, Laura - NWP

From: IDC [SQLMaster@wipp.ws]
Sent: Monday, January 21, 2013 9:35 AM
To: Jones, Laura - NWP; Mueller, Terry - NWP; Walker, Mak (Maryann) - NWP; Morrison, Jim - NWP
Subject: Project Office NCR [NCR-INL0329130] was just reviewed.

Certification Manager/Designee has just reviewed the project office NCR NCR-INL0329130 and has indicated that it [should NOT] be reported to CBFO. IDC has already updated the NCR for you.

NCR - INL-0329-13 Rev. 0
Attachment 1 Page 2 of 2

Attachment 7 – Data Report Cover Page

SCO 1049 Add 4 - Win XP SP3/Win 7 SP1
Excel 2003/2007/2010

COVER PAGE

BDR Number: **IN13FG10003**

ICAL BDR Number: **IN12FG10021_ICAL**

Site: **INL**

MDL BDR Number: **IN11FG10002_MDL**

Sample Date: **1/15/2013**

NCR Number (if applicable): **NCR-INL-0329-13**

☑ **CH**
☐ **RH**

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Sample Container Data Form (Attachment 1)	31
Flammable Gas Analysis Daily Run Sheet (Attachment 2)	35
Sample Dilution Worksheet (Attachment 3), if applicable	N/A
Quantitation Report	36
Copy of NCR, if applicable	60
Copy or original Attachment 6	N/A

Comments: SRP 55 gallon drums.

NCR – INL-0329-13 Rev. 0

Attachment 2 Page 1 of 6

Eddy R Walters
Operator Printed Name

Signature

1-22-13
Date

Dave Wilson
ITR Printed Name

Signature

01-22-13
Date

CCP RECORDS ORIGINAL
DATE REC'D 1-23-13

Attachment 7 – Data Report Cover Page

SCO 1049 Add 4 - Win XP SP3/Win 7 SP1
Excel 2003/2007/2010

COVER PAGE

BDR Number: **IN13FG10003**

ICAL BDR Number: **IN12FG10021_ICAL**

Site: **INL**

MDL BDR Number: **IN11FG10002_MDL**

Sample Date: **1/15/2013**

NCR Number (if applicable): **N/A**

☑ **CH**
☐ **RH**

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Flammable Gas Analysis Form (Attachment 4)	7
Sample Container Data Form (Attachment 1)	31
Flammable Gas Analysis Daily Run Sheet (Attachment 2)	35
Sample Dilution Worksheet (Attachment 3), if applicable	N/A
Quantitation Report	36
Copy of NCR, if applicable	N/A
Copy or original Attachment 6	N/A

Comments: SRP 55 gallon drums.

NCR -INL-0329-13 Rev.0

Attachment 2 Page 2 of 6

01-22-13

Eddy R Walters
Operator Printed Name

Eddy R Walters
Signature

1-16-13
Date

Dale Worthington
ITR Printed Name

01-22-13

Signature

01-16-13
Date

SUPERSEDED

CCP RECORDS ORIGINAL
DATE REC'D 1-17-13

000001A

01-22-13

Attachment 8 - ITR Checklist

SCO 1049 Add 4 - Win XP SP3/Win 7 SP1
Excel 2003/2007/2010

Batch Data Report Number: IN13FG10003

REQUIREMENT	Yes	No	N/A	COMMENT
1. Did BFB Tune check meet acceptance criteria of Table 2?	X			
2. Did CCV meet acceptance criteria for each compound less than or equal to 30 %D?	X			
3. Were the TICs correctly identified and reported?	X			None Flammable
4. Were there any NCRs and is a copy included in the BDR?	X			NCR-INL-0329-13
5. Is determination correct for the Drum Age Criteria (DAC) in Attachment 1?	X			
6. Were the peaks integrated correctly?	X			Manual Integration Required
7. Was the correct ICAL used to quantitate the data?	X			IN12FG10021
8. For CCV are the IS responses within 50-200 percent of the IS response for current mid ICAL standard?	X			
9. For each sample are the IS responses within 50-200 percent of the IS response for current CCV?	X			
10. For each sample are the IS RT <0.5 min from the RT of the current CCV?	X			
11. Are all Flammable Gas Analysis Form(s) attached for all drums reported on Attachment 2?	X			
12. Are the appropriate data qualifier flags assigned to each drum sample?	X			
13. Does the concentration reported on the Quantitation Report (excluding diluted samples) match what is reported on Attachment 4?	X			
14. If a sample is diluted was the dilution calculated correctly?			X	No Dilutions
15. Were the correct MDL used on Attachment 4?	X			IN11FG10002

Independent Technical Reviewer:

Printed Name _____ Signature _____ Date 01-22-13

NCR - INL-0329-13 Rev. 0

Attachment 2 Page 3 of 6

Attachment 8 - ITR Checklist

SCO 1049 Add 4 - Win XP SP3/Win 7 SP1
Excel 2003/2007/2010

Batch Data Report Number: IN13FG10003

REQUIREMENT	Yes	No	N/A	COMMENT
1. Did BFB Tune check meet acceptance criteria of Table 2?	X			
2. Did CCV meet acceptance criteria for each compound less than or equal to 30 %D?	X			
3. Were the TICs correctly identified and reported?	X			**None Flammable**
4. *Were there any NCRs and is a copy included in the BDR?*			X	**No NCRs**
5. Is determination correct for the Drum Age Criteria (DAC) in Attachment 1?	X			
6. Were the peaks integrated correctly?	X			**Manual Integration Required**
7. Was the correct ICAL used to quantitate the data?	X			**IN12FG10021**
8. For CCV are the IS responses within 50-200 percent of the IS response for current mid ICAL standard?	X			
9. For each sample are the IS responses within 50-200 percent of the IS response for current CCV?	X			
10. For each sample are the IS RT <0.5 min from the RT of the current CCV?	X			
11. Are all Flammable Gas Analysis Form(s) attached for all drums reported on Attachment 2?	X			
12. Are the appropriate data qualifier flags assigned to each drum sample?	X			
13. Does the concentration reported on the Quantitation Report (excluding diluted samples) match what is reported on Attachment 4?	X			
14. If a sample is diluted was the dilution calculated correctly?			X	**No Dilutions**
15. Were the correct MDL used on Attachment 4?	X			**IN11FG10002**

Independent Technical Reviewer:

Dale Wuer (signature) 01-16-13

Printed Name Signature Date

DJ 01-22-13

NCR - INL-0329-13 Rev.0

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SUPERSEDED DJ 01-22-13

DJ 01-22-13

000002A

Attachment 2 – Flammable Gas Analysis Daily Run Sheet

SCO 1049 Add 4 - Win XP SP3/Win 7 SP1
Excel 2003/2007/2010

BDR Number : IN13FG10003

Date: 1/15/2013

Analysis Type	Laboratory File Name	Waste Container ID	DF	Sample/Standard Pressure (Torr)	Operator Initials
BFB	BC130115.d	N/A	N/A	N/A	ERW
CCV	CC130115.d	N/A	0.5	780	ERW
Sample	SRP12166.d	SRP12166	N/A	785	ERW
Sample	SRP12085.d	SRP12085	N/A	782	ERW
Sample	SRP12111.d	SRP12111	N/A	785	ERW
Sample	SRP12098.d	SRP12098	N/A	774	ERW
Sample	SRP12044.d	SRP12044	N/A	782	ERW
Sample	SRP12164.d	SRP12164	N/A	779	ERW
Sample	SRP12069.d	SRP12069	N/A	780	ERW
Sample	SRP12090.d	SRP12090	N/A	782	ERW
Sample	SRP12102.d	SRP12102	N/A	777	ERW
Sample	SRP12167.d	SRP12167	N/A	775	ERW
Sample	SRP12082.d	SRP12082	N/A	779	ERW
Sample	SRP12065.d	SRP12065	N/A	785	ERW
Sample	SRP12071.d	SRP12071	N/A	783	ERW
Sample	SRP12159.d	SRP12159	N/A	784	ERW
Sample	SRP12122.d	SRP12122	N/A	775	ERW
Sample	SRP12097.d	SRP12097	N/A	779	ERW
Sample	SRP12157.d	SRP12157	N/A	780	ERW
Sample	SRP12150.d	SRP12150	N/A	781	ERW
Sample	SRP12168.d	SRP12168	N/A	779	ERW
Sample	SRP12172.d	SRP12172	N/A	774	ERW
Sample	SRP12084.d	SRP12084	N/A	778	ERW
Sample	SRP12104.d	SRP12104	N/A	773	ERW
Sample	SRP12093.d	SRP12093	N/A	775	ERW
Sample	SRP12158.d	SRP12158	N/A	780	ERW

Attachment 2 – Flammable Gas Analysis Daily Run Sheet

SCO 1049 Add 4 - Win XP SP3/Win 7 SP1
Excel 2003/2007/2010

BDR Number : IN13FG10003

Date: 1/15/2013

Analysis Type	Laboratory File Name	Waste Container ID	DF	Sample/Standard Pressure (Torr)	Operator Initials
BFB	BC130115.d	N/A	N/A	N/A	ERW
CCV	CC130115.d	N/A	0.5	780	ERW
Sample	SRP12166.d	SRP12166	N/A	785	ERW
Sample	SRP12085.d	SRP12085	N/A	782	ERW
Sample	SRP12111.d	SRP12111	N/A	785	ERW
Sample	SRP12098.d	SRP12098	N/A	774	ERW
Sample	SRP12044.d	SRP12044	N/A	782	ERW
Sample	SRP12069.d	SRP12069	N/A	780	ERW
Sample	SRP12090.d	SRP12090	N/A	782	ERW
Sample	SRP12102.d	SRP12102	N/A	777	ERW
Sample	SRP12167.d	SRP12167	N/A	775	ERW
Sample	SRP12082.d	SRP12082	N/A	779	ERW
Sample	SRP12065.d	SRP12065	N/A	785	ERW
Sample	SRP12071.d	SRP12071	N/A	783	ERW
Sample	SRP12159.d	SRP12159	N/A	784	ERW
Sample	SRP12122.d	SRP12122	N/A	775	ERW
Sample	SRP12097.d	SRP12097	N/A	779	ERW
Sample	SRP12157.d	SRP12157	N/A	780	ERW
Sample	SRP12150.d	SRP12150	N/A	781	ERW
Sample	SRP12168.d	SRP12168	N/A	779	ERW
Sample	SRP12172.d	SRP12172	N/A	774	ERW
Sample	SRP12084.d	SRP12084	N/A	778	ERW
Sample	SRP12104.d	SRP12104	N/A	773	ERW
Sample	SRP12093.d	SRP12093	N/A	775	ERW
Sample	SRP12158.d	SRP12158	N/A	780	ERW

DD 01-22-13

NCR – INL-0329-13 Rev. 0 SUPERSEDED DD 01.22.13

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DD 01.22.13

000035A

DIVIDER

PAGE

Attachment 1 – CCP Nonconformance Report (NCR)

CCP NONCONFORMANCE REPORT (NCR)

(Use NCR Continuation, Attachment 2, if necessary)

NCR No. NCR-INL-0336-13 **Revision: 0**

1. Lot No., Heat No., or Serial No. (if applicable):	2. Process (e.g., NDA, HSG, NDE, VE, Other):	3. Batch Data Report #(s):
NA	VE	IN-SRP-VE-000083
4. Order/Work Order/Job Control Number (if applicable): NA	5. PO # (if applicable): NA	Container #(s): N/A
	6. Supplier (if applicable): NA	

DESCRIPTION OF NONCONFORMANCE

7a. NCR Description: ☐ < 100 nCi/g ☐ Prohibited Item ☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☒ Other

7b. Requirement(s) (Enter Implementing Procedure No., Revision, Section No., & Quoted Text):
CCP-TP-006, Rev. 17 – 4.6.1 "Review the BDR to the criteria in Attachment 2, AND document on Attachment 2."

7c. Actual Condition:
Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist Questions 13 and 14 were marked NA rather than yes.

7d. Have the CCP HOLD TAGS associated with this NCR been applied? ☐ YES ☒ NO (If no is checked, explain:)
No containers are associated with this NCR.

8. NCR Originator:
Brandye Pyeatt (printed name) Brandye Pyeatt (signature) 3/21/13 (date)

9. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE
If YES or INDETERMINATE, enter Trend Code L in Block 10.

10. Trend Code: A	11. Responsible Manager: Jim Vernon
12. Significant Condition? ☐ YES ☒ NO (If Yes, enter CAR No.:)	13. Recurring Condition? ☐ YES ☒ NO (If Yes, list NCRs and CARs:)

14. CCP QA Engineer or CCP QA Designee validation:
Laura Jones (printed name) Laura Lauren Jones (signature) 03/21/13 (date)

COPY

NTPC RECORDS ORIGINAL
DATE REC'D 5.7.13

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL-0336-13 **Revision: 0**

INTERIM DISPOSITION

15a. Interim Disposition (Check Only One):

☒ N/A (See Final Disposition) ☐ Hold ☐ Conditionally Accept ☐ Conditionally Use

☐ Sort ☐ Reinspect or Retest ☐ Remediate

15b. Instructions for Completion of the Interim Disposition:

INTERIM DISPOSITION APPROVALS

16a. Responsible Manager or Individual:			**16b. CCP QA Engineer or CCP QA Designee:**		
printed name	signature	date	printed name	signature	date
Additional Approvals:			**Additional Approvals:**		
printed name	signature	date	printed name	signature	date

COMPLETION OF INTERIM DISPOSITION

17. Interim Disposition Complete – Responsible Manager or Individual:

printed name signature date

18. Interim Disposition Verified – CCP QA Engineer:

printed name signature date

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL-0336-13 **Revision: 0**

FINAL DISPOSITION

19. Final Disposition (Check Only One):
☐ Use-As-Is ☐ Repair

19a. Technical Justification – Required for Use-As-Is or Repair dispositions. (Enter "N/A" for Reject, Rework, and Scrap:)

NA

☐ Reject ☒ Rework ☐ Scrap

19b. Instructions for Completion – Required for Reject, Repair, Rework, or Scrap. (Enter "N/A" for Use-As-Is:)

1. Correct ITR Checklist Questions 13 and 14 from N/A to yes
2. Insert NCR into BDR
3. Resign BDR

19c. Corrective Actions (Actions to Prevent Recurrence – For Repair or Rework, if applicable. Enter "N/A," if not applicable, and for Use-As-Is, Reject, and Scrap):

NA

FINAL DISPOSITION APPROVALS

20. Responsible Manager or Individual:			21. CCP QA Engineer or CCP QA Designee:		
Jim Vernon		3-21-13	Laura Jones	Laura Ramen Jones	03/21/13
printed name	signature	date	printed name	signature	date
Additional Approvals:			Additional Approvals:		
printed name	signature	date	printed name	signature	date

CLOSURE

22. Final Disposition Complete – Responsible Manager or Individual

Jim Vernon | | 4-2-13
printed name | signature | date

23. Attachments: 1- Email Documenting Reportability.
2- Basis for NCR Closure.

24a. HOLD TAG removal has been verified and reconciled for all nonconforming items on the NCR. ☐

24b. Check if not applicable (N/A) and explain. ☑

See Section 7d.

25. Final Disposition Verified – NCR Closed — CCP QA Engineer:

Laura R Jones | Laura Ramen Jones | 04/02/2013
printed name | signature | date

Jones, Laura - NWP

From: IDC [SQLMaster@wipp.ws]
Sent: Thursday, March 21, 2013 8:26 AM
To: Jones, Laura - NWP; Mueller, Terry - NWP; Walker, Mak (Maryann) - NWP; Morrison, Jim - NWP
Subject: Project Office NCR [NCR-INL0336130] was just reviewed.

Certification Manager/Designee has just reviewed the project office NCR NCR-INL0336130 and has indicated that it [should NOT] be reported to CBFO. IDC has already updated the NCR for you.

NCR - INL-0336-13 Rev.0

Attachment 1 Page 1 of 1

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: IN-SRP-VE-000083

Description			
10. Is all the data signed and dated in Attachment 1, Section 6, using reproducible ink, and by the individual(s) generating it?	☐ NO	☒ YES	☐ NA
11. Is all data entered clearly, legibly, and accurately?	☐ NO	☒ YES	☐ NA
12. Were discrepancies between the operators reconciled?	☐ NO	☐ YES	☒ NA
13. Are all changes to original data lined out, initialed and dated by the individual making the changes?	☐ NO	☐ YES	☒ NA
14. Were data changes made by the individual who originally collected the data or an equally qualified individual?	☐ NO	☐ YES	☒ NA
15. Was the DPS scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
16. Was the daily DPS scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
17. Was the container scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
18. Was the daily container scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
19. Was the torque wrench(es) in calibration prior to VE Technique and documented correctly?	☐ NO	☒ YES	☐ NA
20. Were NCR(s) initiated as indicated in Attachment 1, Section 1, dispositioned, and approved appropriately?	☐ NO	☐ YES	☒ NA
21. Was the correct waste stream and waste matrix code assigned?	☐ NO	☒ YES	☐ NA
22. Is there a valid VE data form for each drum in the batch?	☐ NO	☒ YES	☐ NA
23. Were the operators trained and qualified in accordance with the applicable requirements?	☐ NO	☒ YES	☐ NA

NCR – INL-0336-12 Rev. 0

Attachment 2 Page 1 of 9

Attachment 4 – CCP Waste VE Technique Batch Data Report Cover Sheet

Batch Data Report No.: IN-SRP-VE-000083

	Waste Container ID Number
1	SRP13112
2	SRP13099
3	SRP13121
4	SRP13134
5	SRP13032
6	SRP13119
7	SRP13122
8	SRP13128
9	SRP13130
10	SRP13131
11	SRP13129
12	SRP13140
13	SRP13136
14	SRP13127
15	SRP13125
16	SRP13126
17	SRP13145
18	SRP13124
19	SRP13142
20	SRP13149

ITR:	LeAnn Verlanic	3-28-13
LeAnn Verlanic	LeAnn Verlanic	3-27-13
Printed Name	Signature	Date
	LeAnn Verlanic	3-12-13
VEE:		3/28/13
LUKE GROVER		3/12/13
Printed Name	Signature	Date

NCR – IN2-0336-13 Rev. 0

Attachment 2 Page 2 of 9

NTPC RECORDS ORIGINAL
DATE REC'D 3-13-13

001

Attachment 3 – CCP Waste VE Technique Batch Data Report Table of Contents

Batch Data Report No.: EW-SRP-VE- 000083 **Batch Data Report Date:** 3/11/13

Table Of Contents		
Item	Description	Page No.
1	Attachment 4, CCP Waste VE Technique Batch Data Report Cover Sheet	1
2	Attachment 3, CCP Waste VE Technique Batch Data Report Table of Contents	2
3	CCP Waste Visual Examination Technique Data Form	3
4	Attachment 2, CCP Waste VE Technique Independent Technical Reviewer Checklist	143
5	Copy of NCRs (NA, If Not Applicable)	Lv. 3-27-13 ~~N/A~~ 146

NCR – INL-0336-13 Rev. 0
Attachment 2 Page 3 of 9

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist

Batch Data Report No.: INL-SRP-VE-000083

Description			
1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods used?	☐ NO	☒ YES	☐ NA
a. Was the description of the waste items adequate?	☐ NO	☒ YES	☐ NA
2. Was the correct revision of operating procedure used? (Attachment 1, Section 1, Line 5)	☐ NO	☒ YES	☐ NA
3. Were the following calculation spot checks performed?			
a. Attachment 1, Section 2: Verify the total waste volume in Column 12, Row aa does not exceed 208 L for a 55-gallon drum or 1456 L for an SWB and verify the estimated weights in Column 10, Row aa matches the measured net weight of waste in Attachment 1, Section 4, Row 27.	☐ NO	☒ YES	☐ NA
b. Attachment 1, Section 5: Verify the total waste volume in Row 33 a., matches the total waste volume in Section 2, Column 12, Row aa.	☐ NO	☒ YES	☐ NA
c. Attachment 1, Section 1: Check hand calculations in Lines 6h and 6p, and any additional hand calculations recorded in the comments field or in Section 2, Line 13.	☐ NO	☒ YES	☐ NA
4. Is only one waste stream selected in Line 34 of Attachment 1, Section 5, and is it consistent with the values shown in Attachment 1, Section 2, Column 12?	☐ NO	☒ YES	☐ NA
5. Is the data entered in the correct units and correct number of significant figures?	☐ NO	☒ YES	☐ NA
6. Were the data reviewed for transcription errors?	☐ NO	☒ YES	☐ NA
7. Does the BDR include VE for up to 20 containers?	☐ NO	☒ YES	☐ NA
8. Are BDR contents complete and do they match, Attachment 3, CCP Waste VE Batch Data Report Table of Contents?	☐ NO	☒ YES	☐ NA
9. Was completeness verified for data entry on the CCP VE Technique Data Form for the following?			
a. Section 1	☐ NO	☒ YES	☐ NA
b. Section 2	☐ NO	☒ YES	☐ NA
c. Section 3	☐ NO	☒ YES	☐ NA
d. Section 4	☐ NO	☒ YES	☐ NA
e. Section 5	☐ NO	☒ YES	☐ NA

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: IN-SRP-VE-000083

Description			
10. Is all the data signed and dated in Attachment 1, Section 6, using reproducible ink, and by the individual(s) generating it?	☐ NO	☒ YES	☐ NA
11. Is all data entered clearly, legibly, and accurately?	☐ NO	☒ YES	☐ NA
12. Were discrepancies between the operators reconciled?	☐ NO	☐ YES	☒ NA
13. Are all changes to original data lined out, initialed and dated by the individual making the changes?	☐ NO	☒ YES	~~☒ NA~~ L.V 3-28-13
14. Were data changes made by the individual who originally collected the data or an equally qualified individual?	☐ NO	☒ YES	~~☒ NA~~ L.V 3-28-13
15. Was the DPS scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
16. Was the daily DPS scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
17. Was the container scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
18. Was the daily container scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
19. Was the torque wrench(es) in calibration prior to VE Technique and documented correctly?	☐ NO	☒ YES	☐ NA
20. Were NCR(s) initiated as indicated in Attachment 1, Section 1, dispositioned, and approved appropriately?	☐ NO	☒ YES	~~☐ NA~~ L.V 3-28-13
21. Was the correct waste stream and waste matrix code assigned?	☐ NO	☒ YES	☐ NA
22. Is there a valid VE data form for each drum in the batch?	☐ NO	☒ YES	☐ NA
23. Were the operators trained and qualified in accordance with the applicable requirements?	☐ NO	☒ YES	☐ NA

04/02/13 LVS
NCR – STWL-0336-13 Rev. 0

Attachment 2 Page 5 of 9

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: IN-SRP-VE-000083

Description			
24. Was precision maintained by reconciling any discrepancies between the operator(s) and the ITR with regard to identification of waste matrix code, liquids in excess of WIPP Hazardous Waste Facility Permit and WIPP Waste Acceptance Criteria limits and compressed gases?	☐ NO	☐ YES	☒ NA

Description

Comments: ~~N/A~~ L.V. 3-27-13
Re ITRed because of NCR.

I have reviewed 100 percent of the container-specific and batch data in this BDR and find it acceptable.

ITR:		
	LeAnn Vedanic	3-28-13
LeAnn Verkanic	LeAnn Vedanic	3-27-13
Printed Name	Signature	Date
	LeAnn Vedanic	3-12-13

NCR – TNL-0336-13 Rev. 0
Attachment 2 Page 6 of 9

Attachment 1 – CCP Nonconformance Report (NCR)

CCP NONCONFORMANCE REPORT (NCR)

(Use NCR Continuation, Attachment 2, if necessary)

NCR No. NCR-INL-0336-13 **Revision: 0**

1. Lot No., Heat No., or Serial No. (if applicable):	2. Process (e.g., NDA, HSG, NDE, VE, Other):	3. Batch Data Report #(s):
NA	VE	IN-SRP-VE-000083
4. Order/Work Order/Job Control Number (if applicable): NA	5. PO # (if applicable): NA	Container #(s): N/A
	6. Supplier (if applicable): NA	

DESCRIPTION OF NONCONFORMANCE

7a. NCR Description: ☐ < 100 nCi/g ☐ Prohibited Item ☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☒ Other

7b. Requirement(s) (Enter Implementing Procedure No., Revision, Section No., & Quoted Text):
CCP-TP-006, Rev. 17 – 4.6.1 "Review the BDR to the criteria in Attachment 2, AND document on Attachment 2."

7c. Actual Condition:
Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist Questions 13 and 14 were marked NA rather than yes.

7d. Have the CCP HOLD TAGS associated with this NCR been applied? ☐ YES ☒ NO (If no is checked, explain:)
No containers are associated with this NCR.

8. NCR Originator:
Brandye Pyeatt (printed name) Brandye Pyeatt (signature) 3/21/13 (date)

9. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE
If YES or INDETERMINATE, enter Trend Code L in Block 10.

10. Trend Code: A	11. Responsible Manager: Jim Vernon
12. Significant Condition? ☐ YES ☒ NO (If Yes, enter CAR No.:)	13. Recurring Condition? ☐ YES ☒ NO (If Yes, list NCRs and CARs:)

14. CCP QA Engineer or CCP QA Designee validation:
Laura Jones (printed name) Laura Lauren Jones (signature) 03/21/13 (date)

NCR – INL-0336-13 Rev. 0 146

Attachment 2 Page 7 of 9

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL-0336-13 **Revision:** 0

INTERIM DISPOSITION

15a. Interim Disposition (Check Only One):

☒ N/A (See Final Disposition) ☐ Hold ☐ Conditionally Accept ☐ Conditionally Use

☐ Sort ☐ Reinspect or Retest ☐ Remediate

15b. Instructions for Completion of the Interim Disposition:

INTERIM DISPOSITION APPROVALS

16a. Responsible Manager or Individual:			16b. CCP QA Engineer or CCP QA Designee:		
printed name	signature	date	printed name	signature	date
Additional Approvals:			Additional Approvals:		
printed name	signature	date	printed name	signature	date

COMPLETION OF INTERIM DISPOSITION

17. Interim Disposition Complete – Responsible Manager or Individual:

printed name signature date

18. Interim Disposition Verified – CCP QA Engineer:

printed name signature date

NCR - INL-0336-13 Rev. 0 147

Attachment 2 Page 8 of 9

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL-0336-13 **Revision: 0**

FINAL DISPOSITION

19. Final Disposition (Check Only One):
☐ Use-As-Is ☐ Repair

19a. Technical Justification – Required for Use-As-Is or Repair dispositions. (Enter "N/A" for Reject, Rework, and Scrap:)

NA

☐ Reject ☒ Rework ☐ Scrap

19b. Instructions for Completion – Required for Reject, Repair, Rework, or Scrap. (Enter "N/A" for Use-As-Is:)

1. Correct ITR Checklist Questions 13 and 14 from N/A to yes
2. Insert NCR into BDR
3. Resign BDR

19c. Corrective Actions (Actions to Prevent Recurrence – For Repair or Rework, if applicable. Enter "N/A," if not applicable, and for Use-As-Is, Reject, and Scrap):

NA

FINAL DISPOSITION APPROVALS

20. Responsible Manager or Individual:			21. CCP QA Engineer or CCP QA Designee:		
Jim Vernon		3-21-13	Laura Jones	Laura Raines Jones	03/21/13
printed name	signature	date	printed name	signature	date
Additional Approvals:			Additional Approvals:		
printed name	signature	date	printed name	signature	date

CLOSURE

22. Final Disposition Complete – Responsible Manager or Individual:

printed name signature date

23. Attachments:

24a. HOLD TAG removal has been verified and reconciled for all nonconforming items on the NCR. ☐
24b. Check if not applicable (N/A) and explain. ☐

25. Final Disposition Verified – NCR Closed CCP QA Engineer:

printed name signature date

NCR – INL-0336-13 Rev. 0 48
Attachment 2 Page 9 of 9

DIVIDER PAGE

Attachment 1 – CCP Nonconformance Report (NCR)

NCR No. NCR-RHINL-0125-12	Revision 1	
1. Lot No./Heat No. or Serial No. (as applicable): N/A	2. Process (e.g., NDA, HSG, NDE, VE, Other): RH DTC	3. Batch Data Report #(s): INLRHDTC12008
4. Order/Work Order/Job Control Number (as applicable): N/A	5. PO # (as applicable): N/A	Container #(s): NRFTRUSPC002-1
	6. Supplier (as applicable): N/A	

DESCRIPTION OF NONCONFORMANCE

7. (a) NCR Description: ☒ < 100 nCi/g ☐ Prohibited Item ☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☐ Other

7. (b) Description of Nonconformance Required Condition (Implementing Procedure, Revision, Section, & Text): CCP-TP-504, Rev.12 Section 4.3 Step [E] If TRu Alpha Activity Concentration is less than or equal to 100 nanocuries per gram (nCi/g), THEN initiate an NCR in accordance with CCP-QP-005.

7. (c) Actual Condition

TRU Alpha Activity Concentration <100 nCi/g

Reason for Revision: Per NCR-RHINL-0496-12, the container was recalculated using the correct scaling factors in the revised conversion record and was no longer less than 100 nCi/g; therefore, the description in block 7 (a) is no longer deemed valid.

8. NCR Originator (Print name, sign, and date)	9. CCP QA Engineer or Designee Validation (Print name, sign, and date)
Mary Carroll Mary Carroll 9/12/12	Laura R. Jones 09/13/12 Laura Raven Jones

9a. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE
If YES or INDETERMINATE, then apply Trend Code L in Block 12.

9b. Have the CCP HOLD TAGS associated with the NCR been applied? ☐ YES ☒ NO If no is marked, provide an explanation. Due to ALARA considerations, NCR tagging will not be applied for this NCR. Administrative control will be applied through container entry in the CCP Data Center. In addition, a listing of containers has been posted on the CCP sftp site, identifying those containers where NCR tagging is not being applied due to ALARA. Container information for this NCR has been included in the listing, which is to alert Mobile Loading Unit personnel as a second control mechanism for non-tagged containers. The current listing has been posted to the sftp site.

10. Significant Condition? (If Yes, List CAR) ☐ YES ☒ NO	11. Recurring Condition? ☐ YES ☒ NO (If YES, List NCRs/CARs)
12. Trend Code: K	13. Responsible Manager: Irene Quintana

COPY

CCP RECORDS ORIGINAL
DATE REC'D 9-18-12

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-RHINL-0125-12	Revision 1
INTERIM DISPOSITION	
14. Interim Disposition (Check One) ☒ N/A (See Final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort ☐ Reinspect/Retest ☐ Remediate (a) Instructions for Completion of the Interim Disposition:	
INTERIM DISPOSITION APPROVALS	
15 .Responsible Manager/Individual (Print, sign, and date)	16. CCP QA Engineer or Designee (Print, sign and date)
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
COMPLETION OF INTERIM DISPOSITION	
17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date)	
18. Interim Disposition Verified CCP QA Engineer: (Print, sign and date)	

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-RHINL-0125-12 Revision 1

FINAL DISPOSITION

19. Final Disposition (Check One)
☒ Use-As-Is ☐ Reject ☐ Repair ☐ Rework ☐ Scrap

(a) Technical Justification (Required for Use-As-Is and Repair dispositions. Enter N/A for Reject, Scrap, or Rework dispositions.)
The container was recalculated under corrected conversion record, as per NCR-RHINL-0496-12, and was no longer found to be less than 100 nCi/g.

(b) Instructions for Completion (Required for Reject, Repair, Rework and Scrap – Enter N/A for Use-As-Is).
N/A

(c) Corrective Actions (Actions to Prevent Recurrence – Required for Repair and Rework; Enter N/A for Use-As-Is, Reject, and Scrap).
N/A

FINAL DISPOSITION APPROVALS

20. Responsible Manager/Individual: (Print, sign, and date)	21. CCP QA Engineer or Designee: (Print, sign, and date)
Irene Quintana 9/13/12	Laura R. Jones 09/13/12
Additional Approvals: (Print, sign, and date)	Additional Approvals: (Print, sign, and date)

CLOSURE

22. Final Disposition Complete Responsible Manager/Individual: (Print, sign, and date)
Irene Quintana 9/13/12

23. Attachments: N/A

24. (a) HOLD TAG removal has been validated and reconciled for all nonconforming items on the NCR. ☐
(b) Check if not applicable (N/A) and provide an explanation here or on a continuation sheet. ☒

See Section 9b.

25. Final Disposition Verified – NCR Closed
Laura R Jones

CCP QA Engineer: (Print, sign, and date)
Laura Ramos Jones 09/13/2012

Attachment 1 – CCP Nonconformance Report (NCR)

NCR No. NCR-RHINL-0125-12	Revision 0	
1. Lot No./Heat No. or Serial No. (as applicable): N/A	2. Process (e.g., NDA, HSG, NDE, VE, Other): RH DTC	3. Batch Data Report #(s): INLRHDTC12008
4. Order/Work Order/Job Control Number (as applicable): N/A	5. PO # (as applicable): N/A	Container #(s): NRFTRUSPC002-1
	6. Supplier (as applicable): N/A	

SUPERSEDED BY REV 1 09/13/12 LPL

DESCRIPTION OF NONCONFORMANCE

7. (a) NCR Description: ☒ < 100 nCi/g ☐ Prohibited Item ☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☐ Other

7. (b) Description of Nonconformance Required Condition (Implementing Procedure, Revision, Section, & Text): CCP-TP-504, Rev.12 Section 4.3 Step [E] If TRu Alpha Activity Concentration is less than or equal to 100 nanocuries per gram (nCi/g), THEN initiate an NCR in accordance with CCP-QP-005.

7. (c) Actual Condition

TRU Alpha Activity Concentration <100 nCi/g

8. NCR Originator (Print name, sign, and date) Sway Andrews Sway Andrews 5.2.12	9. CCP QA Engineer or Designee Validation (Print name, sign, and date) S. Corey Boland S. Corey Boland 5-2-12

9a. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE If YES or INDETERMINATE, then apply Trend Code L in Block 12.

9b. Have the CCP HOLD TAGS associated with the NCR been applied? ☐ YES ☒ NO If no is marked, provide an explanation. Due to ALARA considerations, NCR tagging will not be applied for this NCR. Administrative control will be applied through container entry in the CCP Data Center. In addition, a listing of containers has been posted on the CCP sftp site, identifying those containers where NCR tagging is not being applied due to ALARA. Container information for this NCR has been included in the listing, which is to alert Mobile Loading Unit personnel as a second control mechanism for non-tagged containers. The current listing has been posted to the sftp site.

10. Significant Condition? (If Yes, List CAR) ☐ YES ☒ NO	11. Recurring Condition? ☐ YES ☒ NO (If YES, List NCRs/CARs)
12. Trend Code: K	13. Responsible Manager: Irene Quintana

CCP RECORDS ORIGINAL
DATE REC'D 9-18-12

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-RHINL-0125-12 Revision 0	
INTERIM DISPOSITION	
14. Interim Disposition (Check One) ☒ N/A (See Final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort ☐ Reinspect/Retest ☐ Remediate (a) Instructions for Completion of the Interim Disposition:	
INTERIM DISPOSITION APPROVALS	
15 .Responsible Manager/Individual (Print, sign, and date)	16. CCP QA Engineer or Designee (Print, sign and date)
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
COMPLETION OF INTERIM DISPOSITION	
17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date)	
18. Interim Disposition Verified CCP QA Engineer: (Print, sign and date)	

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-RHINL-0125-12 Revision **0**

FINAL DISPOSITION

19. Final Disposition (Check One)
☐ Use-As-Is ☒ Reject ☐ Repair ☐ Rework ☐ Scrap

(a) Technical Justification (Required for Use-As-Is and Repair dispositions, Enter N/A for Reject, Scrap, or Rework dispositions.)
N/A

(b) Instructions for Completion (Required for Reject, Repair, Rework and Scrap – Enter N/A for Use-As-Is).
Return to host site.

(c) Corrective Actions (Actions to Prevent Recurrence – Required for Repair and Rework; Enter N/A for Use-As-Is, Reject, and Scrap).
N/A

FINAL DISPOSITION APPROVALS

20. Responsible Manager/Individual: (Print, sign, and date)	21. CCP QA Engineer or Designee: (Print, sign, and date)
5/2/12 Irene Quintana	T. MUELLER Tmueller 5/3/12
Additional Approvals: (Print, sign, and date)	Additional Approvals: (Print, sign, and date)

CLOSURE

22. Final Disposition Complete Responsible Manager/Individual: (Print, sign, and date)

23. Attachments: 1- Email Documenting Reportability. 09/13/12 LRS

24. (a) HOLD TAG removal has been validated and reconciled for all nonconforming items on the NCR. ☐
(b) Check if not applicable (N/A) and provide an explanation here or on a continuation sheet. ☐

25. Final Disposition Verified – NCR Closed CCP QA Engineer: (Print, sign, and date)

Mueller, Terry - WTS

From: Pearcy, Mark - WTS
Sent: Thursday, May 03, 2012 7:32 AM
To: Mueller, Terry - WTS
Cc: Jones, Laura - WTS
Subject: RE: NCR-RHINL-0125-12

Not reportable

Mark Pearcy
Central Characterization Project
Washington TRU Solutions LLC
Contractor for the U.S. Department of Energy
575-234-7394 (W)
575-706-0094 (C)

From: Mueller, Terry - WTS
Sent: Thursday, May 03, 2012 7:14 AM
To: Pearcy, Mark - WTS; Punchios, Sheri - Stoller
Cc: Quintana, Irene - WTS; Jones, Laura - WTS
Subject: FW: NCR-RHINL-0125-12

Irene - FYI
Mark - please review for notification purposes
Sheri - please post this open NCR

Thanks!
Terry L. Mueller
WTS QA
Washington TRU Solutions, LLC
Contractor to the Department of Energy
MS GSA-103
***work* (575)-234-7016**
***fax* (575)-234-7042**

-----Original Message-----
From: Jones, Laura - WTS
Sent: Wednesday, May 02, 2012 4:35 PM
To: Mueller, Terry - WTS
Subject: FW: NCR-RHINL-0125-12

I am sorry I sent it to your personal email.

-----Original Message-----
From: Jones, Laura - WTS
Sent: Wednesday, May 02, 2012 4:34 PM
To: 'tmueller@mywdo.com'
Subject: FW: NCR-RHINL-0125-12

NCR - RHINL-0125-12 Rev. 0
Attachment 1 Page 1 of 1

Terry:

Would you please process this one, I am really busy.
Thank you, I will appreciate it.

DIVIDER

PAGE

Attachment 1 – CCP Nonconformance Report (NCR)

NCR No. NCR-RHINL-0496-12		Revision 0
1. Lot No./Heat No. or Serial No. (as applicable): NA	2. Process (e.g., NDA, HSG, NDE, VE, Other): RH DTC	3. Batch Data Report #(s): See Attachment 1
4. Order/Work Order/Job Control Number (as applicable): NA	5. PO # (as applicable): NA	Container #(s): See Attachment 1
	6. Supplier (as applicable): NA	

DESCRIPTION OF NONCONFORMANCE

7. (a) NCR Description: ☐ < 100 nCi/g ☐ Prohibited Item ☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☒ Other

7. (b) Description of Nonconformance Required Condition (Implementing Procedure, Revision, Section, & Text):
CCP-TP-504 Revision 12, Section 4.4.10 states in part, "Verify that the BDR is complete and Accurate"

7. (c) Actual Condition

The Waste Container Dose to Curie Conversion Record for the containers on Attachment 1 was incorrectly calling up Scaling Factors for these particular containers.

8. NCR Originator (Print name, sign, and date)	9. CCP QA Engineer or Designee Validation (Print name, sign, and date)
Laura Nelson Laura Nelson 8/20/12	Laura R. Jones 08/21/2012 Laura Romero-Jones

9a. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE
If YES or INDETERMINATE, then apply Trend Code L in Block 12.

9b. Have the CCP HOLD TAGS associated with the NCR been applied? ☐ YES ☒ NO If no is marked, provide an explanation. Due to ALARA considerations, NCR tagging will not be applied for this NCR, Administrative control will be applied through container entry in the CCP Data Center. In addition a listing of containers has been posted on the CCP sftp site identifying those containers where NCR tagging is not being applied. Container information for this NCR has been included in the listing, which is to alert Mobile Loading Unit personnel as a second control mechanism for non-tagged containers. The current listing has been posted to the sftp site.

10. Significant Condition? (If Yes, List CAR)	11. Recurring Condition?
☐ YES ☒ NO	☐ YES ☒ NO (If YES, List NCRs/CARs)
12. Trend Code: A	13. Responsible Manager: Laura Nelson

COPY

CCP RECORDS ORIGINAL
DATE REC'D 9.19.12

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No.NCR-RHINL-0496-12 Revision 0	
INTERIM DISPOSITION	
14. Interim Disposition (Check One) ☒ N/A (See Final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort ☐ Reinspect/Retest ☐ Remediate (a) Instructions for Completion of the Interim Disposition:	
INTERIM DISPOSITION APPROVALS	
15 .Responsible Manager/Individual (Print, sign, and date)	16. CCP QA Engineer or Designee (Print, sign and date)
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
COMPLETION OF INTERIM DISPOSITION	
17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date)	
18. Interim Disposition Verified CCP QA Engineer: (Print, sign and date)	

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No.NCR-RHINL-0496-12 Revision 0

FINAL DISPOSITION

19. Final Disposition (Check One)
☐ Use-As-Is ☐ Reject ☐ Repair ☒ Rework ☐ Scrap

(a) Technical Justification (Required for Use-As-Is and Repair dispositions, Enter N/A for Reject, Scrap, or Rework dispositions.)
NA

(b) Instructions for Completion (Required for Reject, Repair, Rework and Scrap – Enter N/A for Use-As-Is).
1. Correct the Dose to Curie Conversion Record
2. Approve the corrected Spreadsheet through CCP-QP-022 process.
3. Recalculate the Conversion Records for the containers listed on Attachment 1
4. Insert the corrected Conversion Records into the appropriate BDR's listed on Attachment 1
5. Have the ITR review the corrected data and Re-Sign ITR Checklist
6. Have the SPM review the corrected data and Re-sign the SPM Checklist.

(c) Corrective Actions (Actions to Prevent Recurrence – Required for Repair and Rework; Enter N/A for Use-As-Is, Reject, and Scrap).
None needed.

FINAL DISPOSITION APPROVALS

20. Responsible Manager/Individual: (Print, sign, and date)	21. CCP QA Engineer or Designee: (Print, sign, and date)
Laura Nelson Laura Nelson 08/21/12	Laura R. Jones 08/21/12 Laura Ramon Jones
Additional Approvals: (Print, sign, and date)	Additional Approvals: (Print, sign, and date)

CLOSURE

22. Final Disposition Complete Responsible Manager/Individual: (Print, sign, and date)
LAURA NELSON Laura Nelson 9-18-12

23. Attachments: Attachment 1: ~~Container~~/BDR listing Attachment 2: BDR Data/SCO
3 - Email Documenting Reportability.

24. (a) HOLD TAG removal has been validated and reconciled for all nonconforming items on the NCR. ☐
(b) Check if not applicable (N/A) and provide an explanation here or on a continuation sheet. ☒
See 9b.

25. Final Disposition Verified – NCR Closed	CCP QA Engineer: (Print, sign, and date)
Laura R. Jones	09/19/2012 Laura Ramon Jones

BDR	Drums
INLRHDTC12006	NRFTRUSPC011-1
INLRHDTC12006	NRFTRUSPC013-1
INLRHDTC12006	NRFTRUSPC029-1
INLRHDTC12006	NRFTRUSPC030-1
INLRHDTC12006	NRFTRUSPC027-1
INLRHDTC12006	NRFTRUSPC023-1
INLRHDTC12008	NRFTRUSPC001-1
INLRHDTC12008	NRFTRUSPC002-1
INLRHDTC12008	NRFTRUSPC004-1
INLRHDTC12008	NRFTRUSPC003-1
INLRHDTC12008	NRFTRUSPC026-1

09/19/12 LAS

Attachment 2 – Software Change Order (Continued)

SCO #: 1874 Addendum #4 Page 2 of 2

16. Testing ☒ Yes ☐ No Software Review Action Items ☐ Yes ☒ No

Installation Test	☐ Yes	☒ No	Regression Test	☐ Yes	☒ No
Alternate Test Method	☐ Yes	☒ No	Integration Test	☐ Yes	☒ No
Functionality Test	☒ Yes	☐ No	Hand Calculations	☐ Yes	☒ No

Any modification to development documentation as a result of testing activities must be identified by an SCO addendum.

Jane Vance	8/30/12	NA	
SD Print Name/Sign	Date	Tester Print Name/Sign	Date
Jane Quintana	8/30/12	NA	
Tester Print Name/Sign	Date	Tester Print Name/Sign	Date

If used for additional installation of the same software and version as target original SCO, list the software name, version; operating system, version; and hardware manufacturer, model number and serial number.

16. Installation/Removal

Software	NRF SRC DTC	Software Version	4	Software Development Date (Applicable within COTS only)	8/30/12 ☐ N/A
Application	Microsoft Excel	Application Version	2003, 2007, 2010		
Database	NA	Database Version	NA		
Operating System (OS)	Microsoft Windows XP Professional	OS Version	2002 and 2003		
Hardware Mfr	NA	Hardware Model #	NA	Hardware Serial #	NA

Jane Vance 8/30/12
SD Print Name/Sign Date

17. Operational Use Approval and Document Validation

Jane Vance	8/30/12	Laura Nelson	9-11-12		
SD Print Name/Sign	Date	SPM Print Name/Sign	Date		
Scott Burns/SBS	09/11/2012				
SCME Print Name/Sign	Date				

NCR-EH INL-0496-12 rev.0
Attachment 2 page 1 of 13

This spreadsheet calculates the radionuclide mass and activity content of a 55-gal drum based on the measured 1-meter dose rate and the drum weight. The bold cells are the required input for the DTC calculations.

Waste Container Dose-to-Curie Conversion Record

SCO 1140 ID-HFEF-S5400-RH Lot 4A Version 1 Addendum 1 Michrosoft Excel 2003 and 2007; Microsoft Windows XP Professional 2002 and 2003

Operating Procedure	CCP-TP-504	Revision:	
CCP Characterization Date			
Waste Stream Designation	ID-HFEF-S5400-RH		
Container Number			
Parent Canister/Cask # & Lot #		Lot 4A	
Repackaging Configuration	No 90-mil	rigid liner	
Container Gross Weight		kg	
Estimate Fill Percentages		%	
Container Net Weight	-45.3	kg	
Measured Container Dose Rate			
Quadrant #1		mR/hr	
Quadrant #2		mR/hr	
Quadrant #3		mR/hr	
Quadrant #4		mR/hr	
Calculated Average Dose Rate	#DIV/0!	mR/hr	
Average Dose Rate - Background	#DIV/0!	mR/hr	

Lot 4A HFEF Canister Liners		
Dose-Rate Fraction		Uncertainty
Cs-137		
Co-60		

Background Dose Rate: mR/hr

Nuclide	Cs-137 Scaling Factors	Activity (Ci)	Grams	FGE	PECi	Watts	Percent Uncertainty	Uncertainty in Curies	Uncertainty in Grams
U-233	6.09E-05	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
U-234	9.17E-05	#DIV/0!	#DIV/0!	#DIV/0!	0.00E+00	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
U-235	8.35E-06	#DIV/0!	#DIV/0!	#DIV/0!	0.00E+00	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
U-236	8.92E-06	#DIV/0!	#DIV/0!	#DIV/0!	0.00E+00	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
U-238	1.33E-06	#DIV/0!	#DIV/0!	#DIV/0!	0.00E+00	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Pu-238	1.26E-02	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Pu-239	2.56E-02	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Pu-240	1.01E-02	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Pu-241	2.06E-01	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Pu-242	4.66E-06	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Am-241	1.03E-02	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Cm-244	4.53E-03	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Cs-137	1.00E+00	#DIV/0!	#DIV/0!	#DIV/0!	0.00E+00	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Ba-137m	9.46E-01	#DIV/0!	#DIV/0!	#DIV/0!	0.00E+00	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Sr-90	8.44E-01	#DIV/0!	#DIV/0!	#DIV/0!	0.00E+00	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Y-90	8.44E-01	#DIV/0!	#DIV/0!	#DIV/0!	0.00E+00	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Co-60	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00E+00	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Totals		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!			

	Value	1σ Unc.	Units
TRU Alpha Activity Concentration:	#DIV/0!	#DIV/0!	nCi/g
TRU Alpha Activity:	#DIV/0!	#DIV/0!	Ci
Total Pu-239 Equivalent Activity:	#DIV/0!	#DIV/0!	Ci
Total Pu-239 Fissile Gram Equiv.:	#DIV/0!	#DIV/0!	g
Total Decay Heat:	#DIV/0!	#DIV/0!	W
Volume Activity:	#DIV/0!	#DIV/0!	Ci/L

Originator: _____ (Print Name): _____

Signed: _____ Date: _____

NCL-RTINL-0494-12 rev.0
Attachment 2 page 2 of 23

Attachment 8 – SPM Checklist

BDR Number: INLRHDTC12D010

Description of Criteria Reviewed	Criteria Met (Check One)
The Independent Technical Review has been completed and signed.	☑ YES ☐ NO
The results are technically reasonable.	☑ YES ☐ NO
The data have been checked for transcription errors.	☑ YES ☐ NO
Instrument calibration is satisfactory. (Accuracy)	☑ YES ☐ NO
Instrument source check is satisfactory.	☑ YES ☐ NO
Dose rate duplicate RPD ≤40%.	☑ YES ☐ NO
The highest dose rate was at least three times the measured background for each container not rejected by an NCR.	☑ YES ☐ NO
The correct revision of the procedure was used.	☑ YES ☐ NO
The BDR is complete (i.e., contains the forms listed in the table of contents) for this point of generation.	☑ YES ☐ NO
Data meet all applicable Quality Assurance Objectives (QAOs).	☑ YES ☐ NO
Any NCRs generated are contained in the testing BDR.	☑ YES ☐ NO ☐ N/A
Comments: NCR-RHINL-0124-12 NCR-RHINL-0496-12 MP 9-17-12	
SPM Approval	
LAURA NELSON (Printed Name) / Laura Nelson (Signature)	5/9/12 (Date)
MARK PEARCY / Mark Pearcy	9-17-12

NCR-RHINL-0496-12 rev.0
Attachment 2 page 3 of 23

CCP RECORDS ORIGINAL
DATE REC'D 5/10/12

Attachment 6 – Batch Data Report Narrative Summary

BDR Number: INLRHDTC12006

BDR Date: 04-30-2012

Quality Control Summary:

All quality control measurements are within acceptable limits.

Nonconformance:

NCR-RHINL-0124-12
NCR-RHINL-0496-12 cc 9-11-12

Comments:

~~NONE~~ cc 9-11-12
BDR updated to Incorporate ~~Incorporate~~ cc 9-11-12 corrected spreadsheet.

Printed Name: S. Corey Boland

Signature and Date: S. Corey Boland / 4-30-12

I have reviewed and agree with all changes made to this BDR Craig Davis Craig D— 9-11-12

NCR-RHINL-0496-12 rev.0
Attachment 2 page 4 of 23

Attachment 6 – Batch Data Report Narrative Summary

BDR Number: INLRHDTC12006

BDR Date: 04-30-2012

Quality Control Summary:

All quality control measurements are within acceptable limits.

Nonconformance:

NCR-RHINL-0124-12

Comments:

NONE

Printed Name: S. Corey Boland

Signature and Date: S. Corey Boland / 4-30-12

NCR-RHINL-0496-12 rev. 0
Attachment 2 page 5 of 23

SUPERCEDED by Page 3
MP 9-17-12

MP
9-17-12
7A

Attachment 7 – ITR Checklist

BDR Number: INLRHDTC12006

Description of Criteria Reviewed	Criteria Met (Check One)
ITR Checklist	
The BDR contains no more than 20 containers.	☒ YES ☐ NO
There is a container data sheet present for each of the containers listed on the BDR cover sheet and measurement control sheet(s) that covers the range of dates for each of the container data sheets.	☒ YES ☐ NO
The container data sheets and associated measurement control sheets are complete and contain:	
• Instrument calibration is satisfactory. (Accuracy)	☒ YES ☐ NO
• Instrument battery check is satisfactory.	☒ YES ☐ NO
• Instrument source check is satisfactory.	☒ YES ☐ NO
• The highest measured dose rate is at least three times greater than the measured background for each container not rejected by an NCR.	☒ YES ☐ NO
• The correct revision of the procedure was used.	☒ YES ☐ NO
• The Operator signed and dated each sheet, as applicable.	☒ YES ☐ NO
• Duplicate dose rate RPD ≤40%. (Precision)	☒ YES ☐ NO
The Quality Assurance Objectives have all been met.	☒ YES ☐ NO
Data generation and reduction were conducted in a technically correct manner in accordance with the methods used (procedure with revision).	☒ YES ☐ NO
Calculations have been verified by a valid calculation program, a spot check of verified calculation programs, and/or 100 percent check of all hand calculations.	☒ YES ☐ NO
The dose rates on the container data sheets are technically reasonable and reported in the proper units and correct number of significant figures.	☒ YES ☐ NO
The data has been checked for transcription errors between the container data sheets and the conversion records.	☒ YES ☐ NO
The conversion records are complete and show:	
• Total TRU activity concentration is greater than 100 nanoCuries per gram (nCi/g).	☒ YES ☒ NO BAP 4-30-12
• Operator printed name, signature, and date.	☒ YES ☐ NO

NCR-RHINL-04910-D rev.0
Attachment 2 page 6 of 23

Attachment 7 – ITR Checklist (Continued)

BDR Number: INLRHDTC12006

Description of Criteria Reviewed	Criteria Met (Check One)
The results shown on the conversion records are technically reasonable and reported in the proper units and correct number of significant figures.	☒YES ☐NO
The BDR is complete (i.e., contains the forms listed in the table of contents) for this point of generation.	☒YES ☐NO
Any NCRs generated are contained in the testing BDR.	☒YES ☐N/A
Comments: NCR # NCR-RHINL-0124-12 NCR# NCR-RHINL-0496-12 CAL 9-11-12	
ITR Approval Chris Davis — Printed Name Chris D. Davis — Signature 4-30-12 — Date	

I have reviewed and agree with all ~~changed~~ CAL 9-11-12 changes made to this BDR.

Chris G. Davis Chris D. Davis 9-11-12

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Attachment 7 – ITR Checklist (Continued)

BDR Number: INLRHDTC12006

Description of Criteria Reviewed	Criteria Met (Check One)
The results shown on the conversion records are technically reasonable and reported in the proper units and correct number of significant figures.	☒YES ☐NO
The BDR is complete (i.e., contains the forms listed in the table of contents) for this point of generation.	☒YES ☐NO
Any NCRs generated are contained in the testing BDR.	☒YES ☐N/A
Comments: NCR # NCR-RHINL-01 24-12	
ITR Approval Chris Davis [signature] 4-30-12 Printed Name Signature Date	

SUPERCEDED by page 5
MP 9-17-12

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MP
9-17-12
5A

Waste Container Dose-to-Curie Conversion Record

SCO 1074 NRF SPC DTC Rev. 4 Addendum 4 Microsoft Excel 2003, 2007, 2010; Microsoft Windows XP Professional 2002 and 2003

Operating Procedure	CCP-TP-504 REV12		
Date of Survey	4/25/2012		
Waste Stream Designation	IN-ID-NRF-SPC		
Container Number	[redacted] NRFR08PC0115		
Container Gross Weight	[redacted] kg		
Container Net Weight	37.5 kg		
Measured Container Dose Rate		Background	
Quadrant #1	[redacted] mR/hr	0.012	mR/hr
Quadrant #2	[redacted] mR/hr		
Quadrant #3	35.3 mR/hr		
Quadrant #4	[redacted] mR/hr		
Calculated Average Dose Rate	34 mR/hr		

Nuclide	Curie Scaling Factors	Activity (Ci)	Grams	FGE	PECi	Watts	Uncertainty	Uncertainty in Curies	Uncertainty in Grams
Th-228	4.26E-06	9.61E-07	1.18E-09	0.00E+00	0.00E+00	3.21E-08	103.7%	1.02E-06	1.23E-09
U-232	4.15E-06	9.56E-07	4.43E-06	0.00E+00	0.00E+00	3.07E-08	103.7%	9.91E-07	4.59E-06
U-233	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	101.8%	0.00E+00	0.00E+00
U-234	1.52E-04	3.50E-05	5.54E-03	0.00E+00	0.00E+00	1.01E-06	99.5%	3.49E-05	5.52E-03
U-235	6.00E-06	1.38E-06	6.32E-01	4.06E-01	0.00E+00	3.82E-08	99.4%	1.38E-06	6.28E-01
U-238	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	109.5%	0.00E+00	0.00E+00
Pu-238	8.16E-02	1.88E-02	1.09E-03	1.23E-04	1.71E-02	6.23E-04	100.7%	1.90E-02	1.10E-03
Pu-239	1.72E-04	3.98E-05	6.32E-04	6.32E-04	3.96E-05	1.23E-06	101.6%	4.04E-05	6.42E-04
Pu-240	6.93E-05	1.60E-05	6.95E-05	1.56E-06	1.60E-05	4.97E-07	101.9%	1.63E-05	7.08E-05
Pu-241	5.84E-03	1.17E-03	1.13E-05	2.53E-05	2.30E-05	3.73E-08	102.8%	1.20E-03	1.16E-05
Pu-242	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	106.3%	0.00E+00	0.00E+00
Am-241	7.53E-04	1.98E-04	5.70E-05	1.07E-06	1.98E-04	6.62E-06	102.9%	2.04E-04	5.87E-05
Cs-137	1.00E+00	2.16E-01	2.45E-03	0.00E+00	0.00E+00	2.39E-04	27.8%	6.00E-02	6.82E-04
Ba-137m	9.46E-01	2.04E-01	3.79E-10	0.00E+00	0.00E+00	8.04E-04	27.8%	5.68E-02	1.06E-10
Sr-90	2.13E+00	4.57E-01	3.31E-03	0.00E+00	0.00E+00	5.30E-04	78.9%	3.61E-01	2.61E-03
Y-90	2.13E+00	4.57E-01	8.41E-07	0.00E+00	0.00E+00	2.53E-03	78.9%	3.61E-01	6.63E-07
Eu-154	2.44E-02	4.48E-03	1.68E-05	0.00E+00	0.00E+00	4.01E-05	79.6%	3.57E-03	1.34E-05
Totals		1.36E+00	6.45E-01	4.07E-01	1.74E-02	4.78E-03			

	Value	(one Sigma)	
TRU Alpha Activity Concentration	5.09E+02	4.74E+02	nCi/g
TRU Alpha Activity	1.91E-02	1.77E-02	Ci
Total Pu-239 Equiv Activity	1.74E-02	1.61E-02	Ci
Total Pu-239 Fissile Gram Equiv	4.07E-01	3.78E-01	g
Total Decay Heat	4.78E-03	2.80E-03	W
Volume Activity	1.20E-02	7.35E-03	Ci/L

Originator [redacted] (Print Name)

Signed [redacted] Date 9-11-12

NCR-RTINL-0496-D rev.C
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Waste Container Dose-to-Curie Conversion Record

SCO 1074 NRF SPC DTC Rev. 4 Addendum 4 Microsoft Excel 2003, 2007, 2010; Microsoft Windows XP Professional 2002 and 2003

Operating Procedure	CCP-TP-504 REV12
Date of Survey	4/25/2012
Waste Stream Designation	IN-ID-NRF-SPC
Container Number	SPC 13
Container Gross Weight	83.8 kg
Container Net Weight	39.7 kg
Measured Container Dose Rate	
Quadrant #1	85.6 mR/hr
Quadrant #2	122 mR/hr
Quadrant #3	109 mR/hr
Quadrant #4	96.3 mR/hr
Calculated Average Dose Rate	106 mR/hr
Background	0.015 mR/hr

Nuclide	Curie Scaling Factors	Activity (Ci)	Grams	FGE	PECi	Watts	Uncertainty	Uncertainty in Curies	Uncertainty in Grams
Th-228	4.26E-06	3.08E-06	3.72E-09	0.00E+00	0.00E+00	1.01E-07	103.7%	3.20E-06	3.86E-09
U-232	4.15E-06	3.01E-06	1.39E-07	0.00E+00	0.00E+00	9.64E-08	103.7%	3.12E-06	1.44E-07
U-233	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	101.8%	0.00E+00	0.00E+00
U-234	1.52E-04	1.10E-04	1.74E-02	0.00E+00	0.00E+00	3.17E-06	99.5%	1.10E-04	1.73E-02
U-235	6.00E-06	4.35E-06	1.99E+00	1.28E+00	0.00E+00	1.20E-07	99.4%	4.32E-06	1.97E+00
U-238	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	109.5%	0.00E+00	0.00E+00
Pu-238	8.16E-02	5.91E-02	3.42E-03	3.86E-04	5.38E-02	1.96E-03	100.7%	5.96E-02	3.44E-03
Pu-239	1.72E-04	1.25E-04	1.99E-03	1.99E-03	1.25E-04	3.87E-06	101.6%	1.27E-04	2.02E-03
Pu-240	6.93E-05	5.02E-05	2.18E-04	4.91E-06	5.02E-05	1.56E-06	101.9%	5.12E-05	2.22E-04
Pu-241	5.84E-03	3.68E-03	3.54E-05	7.96E-05	7.22E-05	1.17E-07	102.8%	3.78E-03	3.64E-05
Pu-242	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	106.3%	0.00E+00	0.00E+00
Am-241	7.53E-04	5.70E-04	1.64E-04	3.07E-06	5.70E-04	1.91E-05	102.9%	5.86E-04	1.69E-04
Cs-137	1.00E+00	6.78E-01	7.70E-03	0.00E+00	0.00E+00	7.50E-04	27.8%	1.89E-01	2.14E-03
Ba-137m	9.46E-01	6.41E-01	1.19E-09	0.00E+00	0.00E+00	2.53E-03	27.8%	1.78E-01	3.32E-10
Sr-90	2.13E+00	1.44E+00	1.04E-02	0.00E+00	0.00E+00	1.67E-03	78.9%	1.13E+00	8.22E-03
Y-90	2.13E+00	1.44E+00	2.64E-06	0.00E+00	0.00E+00	7.96E-03	78.9%	1.13E+00	2.08E-06
Eu-154	2.44E-02	1.41E-02	5.28E-05	0.00E+00	0.00E+00	1.26E-04	79.6%	1.12E-02	4.20E-05
Totals		4.27E+00	2.03E+00	1.28E+00	5.46E-02	1.50E-02			

	Value	(one Sigma)	
TRU Alpha Activity Concentration	1.51E+03	1.41E+03	nCi/g
TRU Alpha Activity	5.99E-02	5.58E-02	Ci
Total Pu-239 Equiv Activity	5.46E-02	5.07E-02	CI
Total Pu-239 Fissile Gram Equiv	1.28E+00	1.19E+00	g
Total Decay Heat	1.50E-02	8.82E-03	W
Volume Activity	3.76E-02	2.31E-02	CI/L

Originator David Pawlowski (Print Name)

Signed David Pawlowski Date 9-11-12

NCE-EWMC-04960-12 rev.0
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Waste Container Dose-to-Curie Conversion Record

SCO 1074 NRF SPC DTC Rev. 4 Addendum 4 Microsoft Excel 2003, 2007, 2010; Microsoft Windows XP Professional 2002 and 2003

Operating Procedure	CCP-TP-504 REV12		
Date of Survey	[redacted]		
Waste Stream Designation	IN-ID-NRF-SPC		
Container Number	SPC 29	NRFTRUSPC029-1	
Container Gross Weight	71.6 kg		
Container Net Weight	27.5 kg		
Measured Container Dose Rate		Background	
Quadrant #1	[redacted] mR/hr	0.016 mR/hr	
Quadrant #2	[redacted] mR/hr		
Quadrant #3	[redacted] mR/hr		
Quadrant #4	[redacted] mR/hr		
Calculated Average Dose Rate	43 mR/hr		

Nuclide	Curie Scaling Factors	Activity (Ci)	Grams	FGE	PECI	Watts	Uncertainty	Uncertainty in Curies	Uncertainty in Grams
Th-228	4.26E-06	1.25E-06	1.51E-09	0.00E+00	0.00E+00	4.09E-08	103.7%	1.30E-06	1.57E-09
U-232	4.16E-06	1.22E-06	5.65E-08	0.00E+00	0.00E+00	3.91E-08	103.7%	1.26E-06	5.86E-08
U-233	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	101.8%	0.00E+00	0.00E+00
U-234	1.52E-04	4.47E-05	7.07E-03	0.00E+00	0.00E+00	1.29E-06	99.5%	4.45E-05	7.04E-03
U-235	6.00E-06	1.77E-06	8.06E-01	5.18E-01	0.00E+00	4.87E-08	99.4%	1.76E-06	8.02E-01
U-238	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	109.5%	0.00E+00	0.00E+00
Pu-238	8.16E-02	2.40E-02	1.39E-03	1.57E-04	2.18E-02	7.95E-04	100.7%	2.42E-02	1.40E-03
Pu-239	1.72E-04	5.07E-05	8.07E-04	8.07E-04	5.07E-05	1.57E-06	101.6%	5.15E-05	8.19E-04
Pu-240	6.93E-05	2.04E-05	8.86E-05	1.99E-06	2.04E-05	6.35E-07	101.9%	2.08E-05	9.03E-05
Pu-241	5.84E-03	1.49E-03	1.44E-05	3.23E-05	2.93E-05	4.75E-08	102.8%	1.54E-03	1.48E-05
Pu-242	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	108.3%	0.00E+00	0.00E+00
Am-241	7.53E-04	2.46E-04	7.08E-05	1.32E-06	2.46E-04	8.22E-06	102.9%	2.53E-04	7.29E-05
Cs-137	1.00E+00	2.75E-01	3.13E-03	0.00E+00	0.00E+00	3.05E-04	27.8%	7.66E-02	8.70E-04
Ba-137m	9.46E-01	2.60E-01	4.84E-10	0.00E+00	0.00E+00	1.03E-03	27.8%	7.24E-02	1.35E-10
Sr-90	2.13E+00	5.84E-01	4.23E-03	0.00E+00	0.00E+00	6.77E-04	78.9%	4.60E-01	3.34E-03
Y-90	2.13E+00	5.84E-01	1.07E-06	0.00E+00	0.00E+00	3.23E-03	78.9%	4.60E-01	8.46E-07
Eu-154	2.44E-02	5.72E-03	2.14E-05	0.00E+00	0.00E+00	5.12E-05	79.6%	4.55E-03	1.70E-05
Totals		1.73E+00	8.23E-01	5.19E-01	2.22E-02	6.09E-03			

	Value	(one Sigma)	
TRU Alpha Activity Concentration	8.85E+02	8.24E+02	nCi/g
TRU Alpha Activity	2.43E-02	2.26E-02	Ci
Total Pu-239 Equiv Activity	2.22E-02	2.06E-02	Ci
Total Pu-239 Fissile Gram Equiv	5.19E-01	4.82E-01	g
Total Decay Heat	6.09E-03	3.58E-03	W
Volume Activity	1.53E-02	9.37E-03	Ci/L

Originator David Pomocik (Print Name)

Signed [signature] Date 9-11-12

NCR-RHINL-0494-12 rev 0
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Waste Container Dose-to-Curie Conversion Record

SCO 1074 NRF SPC DTC Rev. 4 Addendum 4 Microsoft Excel 2003, 2007, 2010; Microsoft Windows XP Professional 2002 and 2003

Operating Procedure	CCP-TP-504 REV 12	
Date of Survey	4/25/2012	
Waste Stream Designation	IN-ID-NRF-SPC	
Container Number	SPC 30	NRFTRUSPC030-1
Container Gross Weight	69.6 kg	
Container Net Weight	25.5 kg	
Measured Container Dose Rate		Background
Quadrant #1	117 mR/hr	0.015 mR/hr
Quadrant #2	143 mR/hr	
Quadrant #3	143 mR/hr	
Quadrant #4	119 mR/hr	
Calculated Average Dose Rate	129 mR/hr	

Nuclide	Curie Scaling Factors	Activity (Ci)	Grams	FGE	PECI	Watts	Uncertainty	Uncertainty in Curies	Uncertainty in Grams
Th-228	4.26E-06	3.78E-06	4.56E-09	0.00E+00	0.00E+00	1.24E-07	103.7%	3.92E-06	4.73E-09
U-232	4.15E-06	3.68E-06	1.70E-07	0.00E+00	0.00E+00	1.18E-07	103.7%	3.82E-06	1.77E-07
U-233	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	101.8%	0.00E+00	0.00E+00
U-234	1.52E-04	1.35E-04	2.13E-02	0.00E+00	0.00E+00	3.69E-06	99.5%	1.34E-04	2.12E-02
U-235	6.00E-06	5.33E-06	2.43E+00	1.56E+00	0.00E+00	1.47E-07	99.4%	5.30E-06	2.42E+00
U-238	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	109.5%	0.00E+00	0.00E+00
Pu-238	8.16E-02	7.24E-02	4.19E-03	4.73E-04	6.58E-02	2.40E-03	100.7%	7.30E-02	4.22E-03
Pu-239	1.72E-04	1.53E-04	2.43E-03	2.43E-03	1.53E-04	4.75E-06	101.6%	1.56E-04	2.47E-03
Pu-240	6.93E-05	6.16E-05	2.67E-04	6.02E-06	6.15E-05	1.92E-06	101.9%	6.27E-05	2.72E-04
Pu-241	5.84E-03	4.51E-03	4.33E-05	9.75E-05	8.84E-05	1.43E-07	102.6%	4.63E-03	4.45E-05
Pu-242	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	108.3%	0.00E+00	0.00E+00
Am-241	7.53E-04	6.93E-04	2.00E-04	3.73E-06	6.93E-04	2.32E-05	102.9%	7.13E-04	2.05E-04
Cs-137	1.00E+00	8.30E-01	9.44E-03	0.00E+00	0.00E+00	9.19E-04	27.8%	2.31E-01	2.63E-03
Ba-137m	9.46E-01	7.86E-01	1.46E-09	0.00E+00	0.00E+00	3.10E-03	27.8%	2.19E-01	4.06E-10
Sr-90	2.13E+00	1.76E+00	1.28E-02	0.00E+00	0.00E+00	2.04E-03	78.9%	1.39E+00	1.01E-02
Y-90	2.13E+00	1.76E+00	3.24E-06	0.00E+00	0.00E+00	9.74E-03	78.9%	1.39E+00	2.55E-06
Eu-154	2.44E-02	1.73E-02	6.46E-05	0.00E+00	0.00E+00	1.54E-04	79.6%	1.37E-02	5.14E-05
Totals		5.23E+00	2.48E+00	1.57E+00	6.68E-02	1.84E-02			

	Value	(one Sigma)	
TRU Alpha Activity Concentration	2.88E+03	2.68E+03	nCi/g
TRU Alpha Activity	7.33E-02	6.83E-02	Ci
Total Pu-239 Equiv Activity	6.68E-02	6.21E-02	Ci
Total Pu-239 Fissile Gram Equiv	1.57E+00	1.46E+00	g
Total Decay Heat	1.84E-02	1.06E-02	W
Volume Activity	4.61E-02	2.83E-02	Ci/L

Originator David Pinaroic (Print Name)

Signed [signature] Date 9-11-12

NCR-EH-NL 04900-12 rev. 0
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Waste Container Dose-to-Curie Conversion Record

SCO 1074 NRF SPC DTC Rev. 4 Addendum 4 Microsoft Excel 2003, 2007, 2010; Microsoft Windows XP Professional 2002 and 2003

Operating Procedure	CCP-TP-504 REV10	
Date of Survey	4/25/2012	
Waste Stream Designation	IN-ID-NRF-SPC	
Container Number	SPC-27 NRFTRUSPC027-1	
Container Gross Weight	668 kg	
Container Net Weight	25.5 kg	
Measured Container Dose Rate		Background
Quadrant #1	13.6 mR/hr	0.018 mR/hr
Quadrant #2	13.6 mR/hr	
Quadrant #3	13.3 mR/hr	
Quadrant #4	12.7 mR/hr	
Calculated Average Dose Rate	13 mR/hr	

Nuclide	Curie Scaling Factors	Activity (Ci)	Grams	FGE	PECI	Watts	Uncertainty	Uncertainty in Curies	Uncertainty in Grams
Th-228	2.02E-02	1.89E-03	2.28E-06	0.00E+00	0.00E+00	6.18E-05	103.6%	1.96E-03	2.36E-06
U-232	1.97E-02	1.84E-03	8.51E-05	0.00E+00	0.00E+00	5.89E-05	103.6%	1.90E-03	8.82E-05
U-233	1.16E-02	1.09E-03	1.12E-01	1.00E-01	2.79E-04	3.17E-06	101.7%	1.11E-03	1.13E-01
U-234	8.74E-04	8.17E-05	1.29E-02	0.00E+00	0.00E+00	2.35E-06	99.5%	8.13E-05	1.29E-02
U-235	3.28E-06	3.06E-07	1.40E-01	8.99E-02	0.00E+00	8.44E-09	99.4%	3.04E-07	1.39E-01
U-238	2.52E-08	2.35E-09	6.91E-03	0.00E+00	0.00E+00	5.98E-11	109.5%	2.57E-09	7.57E-03
Pu-238	9.36E-03	8.74E-04	5.05E-05	5.71E-06	7.95E-04	2.90E-05	100.7%	8.81E-04	5.09E-05
Pu-239	3.07E-04	2.87E-05	4.56E-04	4.56E-04	2.87E-05	8.89E-07	101.6%	2.91E-05	4.63E-04
Pu-240	6.97E-05	6.51E-06	2.83E-05	6.37E-07	6.51E-06	2.03E-07	101.8%	6.63E-06	2.88E-05
Pu-241	5.78E-03	5.51E-04	5.29E-06	1.19E-05	1.08E-05	1.75E-08	102.7%	5.66E-04	5.44E-06
Pu-242	9.31E-08	8.69E-09	2.19E-06	1.64E-08	7.90E-09	2.56E-10	108.3%	9.41E-09	2.37E-06
Am-241	7.24E-04	9.63E-05	2.78E-05	5.19E-07	9.63E-05	3.22E-06	102.8%	9.91E-05	2.86E-05
Cs-137	1.00E+00	8.74E-02	9.93E-04	0.00E+00	0.00E+00	9.68E-05	27.7%	2.42E-02	2.75E-04
Ba-137m	9.46E-01	8.27E-02	1.54E-10	0.00E+00	0.00E+00	3.26E-04	27.7%	2.29E-02	4.26E-11
Sr-90	2.27E+00	1.98E-01	1.43E-03	0.00E+00	0.00E+00	2.29E-04	78.8%	1.56E-01	1.13E-03
Y-90	2.27E+00	1.98E-01	3.63E-07	0.00E+00	0.00E+00	1.09E-03	78.8%	1.56E-01	2.86E-07
Eu-154	1.30E-02	9.64E-04	3.61E-06	0.00E+00	0.00E+00	8.63E-06	79.5%	7.67E-04	2.87E-06
Totals		5.73E-01	2.74E-01	1.91E-01	1.22E-03	1.94E-03			

	Value	(one Sigma)	
TRU Alpha Activity Concentration	3.95E+01	3.27E+01	nCi/g
TRU Alpha Activity	1.01E-03	8.34E-04	Ci
Total Pu-239 Equiv Activity	1.22E-03	8.27E-04	Ci
Total Pu-239 Fissile Gram Equiv	1.91E-01	1.32E-01	g
Total Decay Heat	1.94E-03	1.17E-03	W
Volume Activity	5.04E-03	3.13E-03	Ci/L

Originator David Pinnick (Print Name)

Signed _____ Date 9-11-12

NCR-RHINL-04960-12 rev 0
Attachment 2 page 13 of 23

Waste Container Dose-to-Curie Conversion Record

SCO 1074 NRF SPC DTC Rev. 4 Addendum 4 Microsoft Excel 2003, 2007, 2010; Microsoft Windows XP Professional 2002 and 2003

Operating Procedure	CCP-TP-604 REV12		
Date of Survey	[redacted]		
Waste Stream Designation	IN-ID-NRF-SPC		
Container Number	[redacted]		
Container Gross Weight	[redacted] kg		
Container Net Weight	29.5 kg		
Measured Container Dose Rate		Background	
Quadrant #1	28.5 mR/hr	0.012	mR/hr
Quadrant #2	29.1 mR/hr		
Quadrant #3	27.7 mR/hr		
Quadrant #4	26.3 mR/hr		
Calculated Average Dose Rate	28 mR/hr		

Nuclide	Curie Scaling Factors	Activity (Ci)	Grams	FGE	PECI	Watts	Uncertainty	Uncertainty in Curies	Uncertainty in Grams
Th-228	1.61E-02	3.14E-03	3.79E-06	0.00E+00	0.00E+00	1.03E-04	103.6%	3.26E-03	3.93E-06
U-232	1.57E-02	3.05E-03	1.41E-04	0.00E+00	0.00E+00	9.80E-05	103.6%	3.17E-03	1.47E-04
U-233	9.28E-03	1.81E-03	1.85E-01	1.87E-01	4.64E-04	5.26E-05	101.7%	1.84E-03	1.89E-01
U-234	7.05E-04	1.38E-04	2.18E-02	0.00E+00	0.00E+00	3.96E-06	99.5%	1.37E-04	2.16E-02
U-235	4.55E-06	8.87E-07	4.05E-01	2.60E-01	0.00E+00	2.45E-08	99.4%	8.81E-07	4.02E-01
U-238	3.49E-06	6.81E-09	2.00E-02	0.00E+00	0.00E+00	1.73E-10	109.5%	7.46E-09	2.19E-02
Pu-238	1.29E-02	2.51E-03	1.45E-04	1.64E-05	2.29E-03	8.33E-05	100.7%	2.53E-03	1.46E-04
Pu-239	4.26E-04	8.31E-05	1.32E-03	1.32E-03	8.31E-05	2.57E-06	101.6%	8.44E-05	1.34E-03
Pu-240	9.67E-05	1.89E-05	8.20E-06	1.85E-06	1.89E-05	5.87E-07	101.8%	1.92E-05	8.35E-05
Pu-241	9.41E-03	1.60E-03	1.53E-05	3.45E-05	3.13E-05	5.08E-08	102.7%	1.64E-03	1.58E-05
Pu-242	1.29E-07	2.52E-08	6.35E-06	4.76E-08	2.29E-08	7.43E-10	108.3%	2.73E-08	6.87E-06
Am-241	1.00E-03	2.36E-04	6.80E-05	1.27E-06	2.36E-04	7.88E-06	102.8%	2.43E-04	6.99E-05
Cs-137	1.00E+00	1.82E-01	2.07E-03	0.00E+00	0.00E+00	2.02E-04	27.7%	5.05E-02	5.74E-04
Ba-137m	9.46E-01	1.73E-01	3.21E-10	0.00E+00	0.00E+00	6.80E-04	27.7%	4.78E-02	8.89E-11
Sr-90	2.25E+00	4.08E-01	2.96E-03	0.00E+00	0.00E+00	4.73E-04	78.8%	3.22E-01	2.33E-03
Y-90	2.25E+00	4.08E-01	7.50E-07	0.00E+00	0.00E+00	2.26E-03	78.8%	3.22E-01	5.92E-07
Eu-154	1.31E-02	2.03E-03	7.59E-06	0.00E+00	0.00E+00	1.81E-05	79.5%	1.61E-03	6.04E-06
Totals		1.19E+00	6.39E-01	4.29E-01	3.12E-03	3.98E-03			

	Value	(one Sigma)	
TRU Alpha Activity Concentration	9.67E+01	8.14E+01	nCi/g
TRU Alpha Activity	2.85E-03	2.40E-03	Ci
Total Pu-239 Equiv Activity	3.12E-03	2.27E-03	Ci
Total Pu-239 Fissile Gram Equiv	4.29E-01	3.00E-01	g
Total Decay Heat	3.98E-03	2.41E-03	W
Volume Activity	1.05E-02	6.48E-03	Ci/L

Originator David Pinnock (Print Name)

Signed [signature] Date 9-11-12

NCE-BHINL-0496-12 rev. 0
Attachment 2 pg 14 of 23

Attachment 8 – SPM Checklist

BDR Number: INL-RH-DTC-12008

Description of Criteria Reviewed	Criteria Met (Check One)
The Independent Technical Review has been completed and signed.	☑ YES ☐ NO
The results are technically reasonable.	☑ YES ☐ NO
The data have been checked for transcription errors.	☑ YES ☐ NO
Instrument calibration is satisfactory. (Accuracy)	☑ YES ☐ NO
Instrument source check is satisfactory.	☑ YES ☐ NO
Dose rate duplicate RPD ≤40%.	☑ YES ☐ NO
The highest dose rate was at least three times the measured background for each container not rejected by an NCR.	☑ YES ☐ NO
The correct revision of the procedure was used.	☑ YES ☐ NO
The BDR is complete (i.e., contains the forms listed in the table of contents) for this point of generation.	☑ YES ☐ NO
Data meet all applicable Quality Assurance Objectives (QAOs).	☑ YES ☐ NO
Any NCRs generated are contained in the testing BDR.	☑ YES ☐ NO ☐ N/A
Comments: NCR-RH-INL-0125-12	
SPM Approval LAURA NELSON (Printed Name) / Laura Nelson (Signature) / 5/8/2012 (Date)	

Revised due to addition of NCR-RH-INL-0496-12 Michael Valentine 9/17/12

NCR-RH-INL-0496-12 rev.0
Attachment 2 page 15 of 23

CCP RECORDS ORIGINAL
DATE REC'D 5-10-12

Attachment 6 – Batch Data Report Narrative Summary

BDR Number: INLRHDTC12008

BDR Date: 05-03-12

Quality Control Summary:

All quality control measurements are within acceptable limits

Nonconformance:

NCR-RHINL-0125-12
NCR-RHINL-0496-12 cal 9-13-12 Cmy Davis Cmy Davis 9-13-12

Comments:

~~None~~ cal 9-13-12
BDR updated to include corrected spreadsheet.

Printed Name: Brent Dial

Signature and Date: Brent Dial 05/03/12

I have reviewed and agree with all changes to the BDR Cmy Davis, Cmy Davis 9-13-12

NCR-RHINL-0496-D rev. 0
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Attachment 7 – ITR Checklist

BDR Number: INLRHDTC12008

Description of Criteria Reviewed	Criteria Met (Check One)
ITR Checklist	
The BDR contains no more than 20 containers.	☒ YES ☐ NO
There is a container data sheet present for each of the containers listed on the BDR cover sheet and measurement control sheet(s) that covers the range of dates for each of the container data sheets.	☒ YES ☐ NO
The container data sheets and associated measurement control sheets are complete and contain: • Instrument calibration is satisfactory. (Accuracy) • Instrument battery check is satisfactory. • Instrument source check is satisfactory. • The highest measured dose rate is at least three times greater than the measured background for each container not rejected by an NCR. • The correct revision of the procedure was used. • The Operator signed and dated each sheet, as applicable. • Duplicate dose rate RPD ≤40%. (Precision)	☒ YES ☐ NO ☒ YES ☐ NO ☒ YES ☐ NO ☒ YES ☐ NO ☒ YES ☐ NO ☒ YES ☐ NO ☒ YES ☐ NO
The Quality Assurance Objectives have all been met.	☒ YES ☐ NO
Data generation and reduction were conducted in a technically correct manner in accordance with the methods used (procedure with revision).	☒ YES ☐ NO
Calculations have been verified by a valid calculation program, a spot check of verified calculation programs, and/or 100 percent check of all hand calculations.	☒ YES ☐ NO
The dose rates on the container data sheets are technically reasonable and reported in the proper units and correct number of significant figures.	☒ YES ☐ NO
The data has been checked for transcription errors between the container data sheets and the conversion records.	☒ YES ☐ NO
The conversion records are complete and show: • Total TRU activity concentration is greater than 100 nanoCuries per gram (nCi/g). • Operator printed name, signature, and date.	☒ YES ☐ NO ☒ YES ☐ NO

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Attachment 7 – ITR Checklist (Continued)

BDR Number: INLRHDTC12008

Description of Criteria Reviewed	Criteria Met (Check One)
The results shown on the conversion records are technically reasonable and reported in the proper units and correct number of significant figures.	☒YES ☐NO
The BDR is complete (i.e., contains the forms listed in the table of contents) for this point of generation.	☒YES ☐NO
Any NCRs generated are contained in the testing BDR.	☒YES ☐N/A
Comments: NCR # NCR-RHINL-0125-12 NCR # NCR-RHINL-0496-12 9-11-12	
ITR Approval D. D. Grover — 5-2-12 Printed Name / Signature / Date	

I have reviewed and agree with all changes made to this BDR.

Chris G. Davis 9-11-12

I have reviewed and agree with all changes made to this BDR.

Chris G. Davis 9-13-12

NCR-RHINL-0496-12 rev.0
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Waste Container Dose-to-Curie Conversion Record

SCO 1074 NRF SPC DTC Rev. 4 Addendum 4 Microsoft Excel 2003, 2007, 2010; Microsoft Windows XP Professional 2002 and 2003

Operating Procedure	CCP-TP-604 [redacted]
Date of Survey	[redacted]
Waste Stream Designation	IN-ID-NRF-SPC
Container Number	[redacted]
Container Gross Weight	[redacted] kg
Container Net Weight	39.1 kg
Measured Container Dose Rate	
Quadrant #1	[redacted] mR/hr
Quadrant #2	[redacted] mR/hr
Quadrant #3	[redacted] mR/hr
Quadrant #4	[redacted] mR/hr
Calculated Average Dose Rate	47 mR/hr

Background [redacted] mR/hr

Nuclide	Curie Scaling Factors	Activity (Ci)	Grams	FGE	PECi	Watts	Uncertainty	Uncertainty in Curies	Uncertainty in Grams
Th-228	4.26E-06	1.37E-06	1.65E-09	0.00E+00	0.00E+00	4.47E-06	103.7%	1.42E-06	1.71E-09
U-232	4.15E-06	1.33E-06	6.16E-08	0.00E+00	0.00E+00	4.27E-06	103.7%	1.38E-06	6.39E-08
U-233	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	101.8%	0.00E+00	0.00E+00
U-234	1.52E-04	4.88E-05	7.72E-03	0.00E+00	0.00E+00	1.41E-05	99.5%	4.85E-05	7.68E-03
U-235	6.09E-06	1.93E-06	5.50E-01	5.66E-01	0.00E+00	5.32E-06	99.4%	1.92E-06	8.75E-01
U-238	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	109.5%	0.00E+00	0.00E+00
Pu-238	8.16E-02	2.62E-02	1.51E-03	1.71E-04	2.38E-02	8.88E-04	100.7%	2.64E-02	1.53E-03
Pu-239	1.72E-04	5.54E-05	8.80E-04	8.80E-04	5.54E-05	1.72E-06	101.5%	5.63E-05	8.94E-04
Pu-240	6.93E-06	2.22E-06	9.67E-05	2.18E-06	2.22E-06	6.93E-07	101.9%	2.27E-06	9.86E-05
Pu-241	5.84E-03	1.63E-03	1.57E-05	3.62E-05	3.19E-06	5.18E-08	102.6%	1.67E-03	1.61E-05
Pu-242	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	106.3%	0.00E+00	0.00E+00
Am-241	7.53E-04	2.66E-04	7.67E-06	1.43E-06	2.66E-04	8.90E-06	102.9%	2.74E-04	7.89E-05
Cs-137	1.00E+00	3.00E-01	3.41E-03	0.00E+00	0.00E+00	3.32E-04	27.8%	8.35E-02	9.49E-04
Ba-137m	9.46E-01	2.84E-01	5.26E-10	0.00E+00	0.00E+00	1.12E-03	27.8%	7.90E-02	1.47E-10
Sr-90	2.13E+00	6.37E-01	4.61E-03	0.00E+00	0.00E+00	7.38E-04	78.9%	5.02E-01	3.64E-03
Y-90	2.13E+00	6.37E-01	1.17E-06	0.00E+00	0.00E+00	3.52E-03	78.9%	5.02E-01	9.23E-07
Eu-154	2.44E-02	8.23E-03	2.33E-05	0.00E+00	0.00E+00	6.58E-06	79.6%	4.96E-03	1.88E-05
Totals		1.89E+00	8.98E-01	5.67E-01	2.42E-02	6.65E-03			

	Value	(one Sigma)	
TRU Alpha Activity Concentration	6.79E+02	6.32E+02	nCi/g
TRU Alpha Activity	2.65E-02	2.47E-02	Ci
Total Pu-239 Equiv Activity	2.42E-02	2.25E-02	Ci
Total Pu-239 Fissile Gram Equiv	5.67E-01	5.26E-01	g
Total Decay Heat	6.65E-03	3.90E-03	W
Volume Activity	1.67E-02	1.02E-02	Ci/L

Originator [redacted] (Print Name)

Signed [redacted] Date 9-11-12

NCR-RHINL-0494-12 rev. 0
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Waste Container Dose-to-Curie Conversion Record

SCO 1074 NRF SPC DTC Rev. 4 Addendum 4 Microsoft Excel 2003, 2007, 2010; Microsoft Windows XP Professional 2002 and 2003

Operating Procedure	CCP-TP-504 REV 2
Date of Survey	[redacted]
Waste Stream Designation	IN-ID-NRF-SPC
Container Number	[redacted]
Container Gross Weight	[redacted] kg
Container Net Weight	28.9 kg
Measured Container Dose Rate	
Quadrant #1	[redacted] mR/hr
Quadrant #2	[redacted] mR/hr
Quadrant #3	[redacted] mR/hr
Quadrant #4	[redacted] mR/hr
Calculated Average Dose Rate	58 mR/hr

Background: 0.014 mR/hr

Nuclide	Curie Scaling Factors	Activity (Ci)	Grams	FGE	PECi	Watts	Uncertainty	Uncertainty in Curies	Uncertainty in Grams
Th-228	4.26E-06	1.69E-06	2.04E-09	0.00E+00	0.00E+00	5.53E-08	103.7%	1.75E-06	2.11E-09
U-232	4.15E-06	1.65E-06	7.63E-08	0.00E+00	0.00E+00	5.29E-08	103.7%	1.71E-06	7.91E-08
U-233	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	101.8%	0.00E+00	0.00E+00
U-234	1.52E-04	6.04E-05	9.55E-03	0.00E+00	0.00E+00	1.74E-06	99.5%	6.01E-05	9.50E-03
U-235	6.08E-06	2.38E-06	1.08E+00	7.00E-01	0.00E+00	6.58E-08	99.4%	2.37E-06	1.08E+00
U-238	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	109.5%	0.00E+00	0.00E+00
Pu-238	8.16E-02	3.24E-02	1.87E-03	2.12E-04	2.98E-02	1.07E-03	100.7%	3.26E-02	1.89E-03
Pu-239	1.72E-04	6.85E-05	1.09E-03	1.09E-03	6.85E-05	2.12E-06	101.6%	6.96E-05	1.11E-03
Pu-240	6.93E-05	2.75E-05	1.20E-04	2.69E-06	2.75E-05	8.57E-07	101.9%	2.80E-05	1.22E-04
Pu-241	5.84E-03	2.02E-03	1.94E-05	4.35E-05	3.96E-05	6.41E-06	102.8%	2.07E-03	1.99E-05
Pu-242	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	108.3%	0.00E+00	0.00E+00
Am-241	7.53E-04	3.24E-04	9.32E-05	1.74E-06	3.24E-04	1.06E-06	102.9%	3.33E-04	9.59E-05
Cs-137	1.00E+00	3.71E-01	4.22E-03	0.00E+00	0.00E+00	4.11E-04	27.8%	1.03E-01	1.17E-03
Ba-137m	9.46E-01	3.51E-01	6.53E-10	0.00E+00	0.00E+00	1.39E-03	27.8%	9.77E-02	1.82E-10
Sr-90	2.13E+00	7.88E-01	5.71E-03	0.00E+00	0.00E+00	9.13E-04	78.9%	6.21E-01	4.60E-03
Y-90	2.13E+00	7.88E-01	1.45E-06	0.00E+00	0.00E+00	4.36E-03	78.9%	6.21E-01	1.14E-06
Eu-154	2.44E-02	7.71E-03	2.89E-06	0.00E+00	0.00E+00	6.90E-06	79.6%	6.13E-03	2.30E-05
Totals		2.34E+00	1.11E+00	7.01E-01	2.99E-02	8.23E-03			

	Value	(one Sigma)	
TRU Alpha Activity Concentration	1.14E+03	1.06E+03	nCi/g
TRU Alpha Activity	3.28E-02	3.06E-02	Ci
Total Pu-239 Equiv Activity	2.99E-02	2.78E-02	Ci
Total Pu-239 Fissile Gram Equiv	7.01E-01	6.51E-01	g
Total Decay Heat	8.23E-03	4.83E-03	W
Volume Activity	2.06E-02	1.27E-02	Ci/L

Originator David Pennock (Print Name)

Signed [signature] Date 9-11-12

NCL-RHINL-0496-D rev. 0
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Waste Container Dose-to-Curie Conversion Record

SCO 1074 NRF SPC DTC Rev. 4 Addendum 4 Microsoft Excel 2003, 2007, 2010; Microsoft Windows XP Professional 2002 and 2003

Operating Procedure	CCP-TP-604 REV.12		
Date of Survey	[redacted]		
Waste Stream Designation	IN-ID-NRF-SPC		
Container Number	[redacted]		
Container Gross Weight	[redacted] kg		
Container Net Weight	35.3 kg		
Measured Container Dose Rate		Background	
Quadrant #1	[redacted] mR/hr	0.012	mR/hr
Quadrant #2	[redacted] mR/hr		
Quadrant #3	[redacted] mR/hr		
Quadrant #4	[redacted] mR/hr		
Calculated Average Dose Rate	57 mR/hr		

Nuclide	Curie Scaling Factors	Activity (Ci)	Grams	FGE	PECI	Watts	Uncertainty	Uncertainty in Curies	Uncertainty in Grams
Th-229	4.26E-06	1.66E-06	2.00E-09	0.00E+00	0.00E+00	5.42E-08	103.7%	1.72E-06	2.07E-09
U-232	4.15E-06	1.62E-06	7.48E-08	0.00E+00	0.00E+00	5.18E-08	103.7%	1.67E-06	7.75E-08
U-233	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	101.8%	0.00E+00	0.00E+00
U-234	1.52E-04	5.92E-05	9.37E-03	0.00E+00	0.00E+00	1.70E-06	99.5%	5.89E-05	9.32E-03
U-235	6.00E-06	2.34E-06	1.07E+00	6.86E-01	0.00E+00	6.46E-08	99.4%	2.32E-06	1.06E+00
U-238	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	109.5%	0.00E+00	0.00E+00
Pu-238	8.18E-02	3.18E-02	1.84E-03	2.06E-04	2.69E-02	1.05E-03	100.7%	3.20E-02	1.85E-03
Pu-239	1.72E-04	6.72E-05	1.07E-03	1.07E-03	6.72E-05	2.08E-06	101.6%	6.82E-05	1.09E-03
Pu-240	6.93E-05	2.70E-05	1.17E-04	2.84E-06	2.70E-05	8.40E-07	101.9%	2.75E-05	1.20E-04
Pu-241	5.84E-03	1.98E-03	1.90E-05	4.28E-05	3.88E-05	6.29E-08	102.8%	2.03E-03	1.95E-05
Pu-242	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	108.3%	0.00E+00	0.00E+00
Am-241	7.53E-04	3.18E-04	9.18E-05	1.71E-06	3.18E-04	1.06E-05	102.9%	3.27E-04	9.42E-05
Cs-137	1.00E+00	3.64E-01	4.14E-03	0.00E+00	0.00E+00	4.03E-04	27.8%	1.01E-01	1.15E-03
Ba-137m	9.46E-01	3.46E-01	6.41E-10	0.00E+00	0.00E+00	1.36E-03	27.8%	9.58E-02	1.78E-10
Sr-90	2.13E+00	7.72E-01	5.60E-03	0.00E+00	0.00E+00	8.96E-04	78.9%	6.09E-01	4.42E-03
Y-90	2.13E+00	7.72E-01	1.42E-06	0.00E+00	0.00E+00	4.27E-03	78.9%	6.09E-01	1.12E-06
Eu-154	2.44E-02	7.56E-03	2.63E-06	0.00E+00	0.00E+00	6.77E-06	79.6%	6.02E-03	2.25E-06
Totals		2.30E+00	1.09E+00	6.86E-01	2.93E-02	8.07E-03			

	Value	(one Sigma)	
TRU Alpha Activity Concentration	9.12E+02	8.49E+02	nCi/g
TRU Alpha Activity	3.22E-02	3.00E-02	Ci
Total Pu-239 Equiv Activity	2.83E-02	2.73E-02	Ci
Total Pu-239 Fissile Gram Equiv	6.86E-01	6.38E-01	g
Total Decay Heat	8.07E-03	4.74E-03	W
Volume Activity	2.02E-02	1.24E-02	Ci/L

Originator [redacted] (Print Name)

Signed [redacted] Date 9-11-12

NCR RHINL-0496-12 rev. 0
Attachment 2 page 21 of 23

Waste Container Dose-to-Curie Conversion Record

SCO 1074 NRF SPC DTC Rev. 4 Addendum 4 Microsoft Excel 2003, 2007, 2010; Microsoft Windows XP Professional 2002 and 2003

Operating Procedure	CCP-TP-504 REV12		
Date of Survey	8/2012		
Waste Stream Designation	IN-ID-NRF-SPC		
Container Number	SPC3	NRF-TRUPC003.1	
Container Gross Weight	83.5 kg		
Container Net Weight	39.5 kg		
Measured Container Dose Rate		Background	
Quadrant #1	44.2 mR/hr	0.014 mR/hr	
Quadrant #2	45.3 mR/hr		
Quadrant #3	45.1 mR/hr		
Quadrant #4	45.2 mR/hr		
Calculated Average Dose Rate	45 mR/hr		

Nuclide	Curie Scaling Factors	Activity (Ci)	Grams	FGE	PECI	Watts	Uncertainty	Uncertainty in Curies	Uncertainty in Grams
Th-228	4.26E-06	1.30E-06	1.57E-09	0.00E+00	0.00E+00	4.26E-06	103.7%	1.35E-06	1.63E-09
U-232	4.15E-06	1.27E-06	5.87E-06	0.00E+00	0.00E+00	4.06E-06	103.7%	1.31E-06	6.08E-06
U-233	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	101.8%	0.00E+00	0.00E+00
U-234	1.52E-04	4.64E-05	7.36E-03	0.00E+00	0.00E+00	1.34E-06	99.5%	4.62E-05	7.31E-03
U-235	6.66E-06	1.83E-06	8.37E-01	5.38E-01	0.00E+00	5.06E-06	99.4%	1.82E-06	8.32E-01
U-238	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	109.5%	0.00E+00	0.00E+00
Pu-238	8.16E-02	2.49E-02	1.44E-03	1.83E-04	2.27E-02	8.26E-04	100.7%	2.51E-02	1.45E-03
Pu-239	1.72E-04	5.27E-05	8.37E-04	8.37E-04	5.27E-05	1.63E-06	101.6%	5.35E-05	8.51E-04
Pu-240	6.93E-06	2.12E-05	9.20E-05	2.07E-06	2.12E-05	6.59E-07	101.9%	2.16E-05	9.37E-05
Pu-241	5.84E-03	1.55E-03	1.49E-05	3.35E-06	3.04E-05	4.93E-06	102.8%	1.59E-03	1.53E-05
Pu-242	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	108.3%	0.00E+00	0.00E+00
Am-241	7.63E-04	2.64E-04	7.33E-05	1.37E-06	2.64E-04	8.51E-06	102.9%	2.82E-04	7.54E-05
Cs-137	1.00E+00	2.88E-01	3.25E-03	0.00E+00	0.00E+00	3.16E-04	27.8%	7.95E-02	9.03E-04
Ba-137m	9.46E-01	2.70E-01	5.02E-10	0.00E+00	0.00E+00	1.07E-03	27.8%	7.52E-02	1.40E-10
Sr-90	2.13E+00	6.06E-01	4.39E-03	0.00E+00	0.00E+00	7.02E-04	78.9%	4.78E-01	3.46E-03
Y-90	2.13E+00	6.06E-01	1.11E-06	0.00E+00	0.00E+00	3.35E-03	78.9%	4.78E-01	8.78E-07
Eu-154	2.44E-02	5.93E-03	2.22E-05	0.00E+00	0.00E+00	5.31E-06	79.8%	4.72E-03	1.77E-05
Totals		1.80E+00	8.56E-01	5.38E-01	2.90E-02	6.33E-03			

	Value	(one Sigma)	
TRU Alpha Activity Concentration	6.40E+02	5.95E+02	nCi/g
TRU Alpha Activity	2.52E-02	2.35E-02	Ci
Total Pu-239 Equiv Activity	2.30E-02	2.14E-02	Ci
Total Pu-239 Fissile Gram Equiv	5.39E-01	5.01E-01	g
Total Decay Heat	6.33E-03	3.71E-03	W
Volume Activity	1.59E-02	9.73E-03	Ci/L

Originator David Pimentel (Print Name)

Signed [signature] Date 9-11-12

NCR-RHINL-0496-12 rev. 0
Attachment 2 page 22 of 23

Waste Container Dose-to-Curie Conversion Record

SCO 1074 NRF SPC DTC Rev. 4 Addendum 4 Microsoft Excel 2003, 2007, 2010; Microsoft Windows XP Professional 2002 and 2003

Operating Procedure	CCP-TP-504 REV 2
Date of Survey	[redacted]
Waste Stream Designation	IN-ID-NRF-SPC
Container Number	[redacted]
Container Gross Weight	[redacted] kg
Container Net Weight	24.9 kg

Measured Container Dose Rate

		Background
Quadrant #1	[redacted] mR/hr	[redacted] mR/hr
Quadrant #2	[redacted] mR/hr	
Quadrant #3	[redacted] mR/hr	
Quadrant #4	[redacted] mR/hr	

Calculated Average Dose Rate 205 mR/hr

Nuclide	Curie Scaling Factors	Activity (Ci)	Grams	FGE	PECi	Watts	Uncertainty	Uncertainty in Curies	Uncertainty in Grams
Th-228	1.25E-05	1.59E-05	1.92E-08	0.00E+00	0.00E+00	5.19E-07	104.1%	1.65E-05	1.99E-08
U-232	1.21E-05	1.55E-05	7.15E-07	0.00E+00	0.00E+00	4.99E-07	104.1%	1.61E-05	7.44E-07
U-233	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	102.2%	0.00E+00	0.00E+00
U-234	1.08E-04	1.38E-04	2.19E-02	0.00E+00	0.00E+00	3.98E-06	99.9%	1.38E-04	2.18E-02
U-235	4.62E-06	5.89E-06	2.69E+00	1.73E+00	0.00E+00	1.62E-07	99.8%	5.88E-06	2.69E+00
U-238	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	109.9%	0.00E+00	0.00E+00
Pu-238	8.71E-01	1.11E+00	6.42E-02	7.26E-03	1.01E+00	3.68E-02	101.2%	1.12E+00	6.50E-02
Pu-239	1.47E-03	1.88E-03	2.98E-02	2.98E-02	1.88E-03	6.82E-05	102.0%	1.92E-03	3.04E-02
Pu-240	2.90E-04	3.70E-04	1.61E-03	3.62E-05	3.70E-04	1.15E-05	102.3%	3.78E-04	1.64E-03
Pu-241	9.69E-02	9.63E-02	9.28E-04	2.08E-03	1.89E-03	3.07E-06	103.2%	9.94E-02	9.56E-04
Pu-242	3.13E-06	3.99E-06	1.01E-03	7.54E-06	3.63E-06	1.18E-07	108.7%	4.34E-06	1.09E-03
Am-241	9.47E-03	1.24E-02	3.56E-03	6.69E-05	1.24E-02	4.15E-04	103.3%	1.28E-02	3.68E-03
Cs-137	1.00E+00	1.19E+00	1.36E-02	0.00E+00	0.00E+00	1.32E-03	29.3%	3.49E-01	3.97E-03
Ba-137m	9.46E-01	1.13E+00	2.10E-09	0.00E+00	0.00E+00	4.46E-03	29.3%	3.30E-01	6.14E-10
Sr-90	2.12E+00	2.52E+00	1.83E-02	0.00E+00	0.00E+00	2.92E-03	79.4%	2.00E+00	1.45E-02
Y-90	2.12E+00	2.52E+00	4.63E-06	0.00E+00	0.00E+00	1.39E-02	79.4%	2.00E+00	3.68E-06
Eu-154	8.25E-02	8.36E-02	3.13E-04	0.00E+00	0.00E+00	7.49E-04	80.1%	6.70E-02	2.51E-04
Totals		8.67E+00	2.85E+00	1.77E+00	1.03E+00	6.07E-02			

	Value	(one Sigma)	
TRU Alpha Activity Concentration	4.53E+04	4.23E+04	nCi/g
TRU Alpha Activity	1.13E+00	1.05E+00	Ci
Total Pu-239 Equiv Activity	1.03E+00	9.57E-01	Ci
Total Pu-239 Fissile Gram Equiv	1.77E+00	1.62E+00	g
Total Decay Heat	6.07E-02	3.98E-02	W
Volume Activity	7.64E-02	4.33E-02	Ci/L

Originator David Pinnock (Print Name)

Signed [signature] Date 7-11-12

NCR-RHINL-D4916-B rev.0
Attachment 2 page 23 of 23

IC

Jones, Laura - WTS

From: Pearcy, Mark - WTS
Sent: Wednesday, August 22, 2012 9:09 AM
To: Jones, Laura - WTS
Subject: RE: New NCR-RHINL-0496-12

Not reportable

Mark Pearcy
Central Characterization Project
Washington TRU Solutions LLC
Contractor for the U.S. Department of Energy
575-234-7394 (W)
575-499-7339 (C)

From: Jones, Laura - WTS
Sent: Tuesday, August 21, 2012 12:40 PM
To: Quintana, Irene - WTS; Nelson, Laura - WTS; Reeves, Ron - WTS; Pearcy, Sheila - Stoller; Pearcy, Mark - WTS; Ramirez, Mike - WTS; Punchios, Sheri - Stoller
Cc: Jones, Laura - WTS
Subject: New NCR-RHINL-0496-12

Laura / Irene / Ron – For your information
Mark – Please review for notification purposes.
Sheri – Please post this open NCR.

Thanks,

Laura R. Jones
Quality Assurance
Washington TRU Solutions, LLC
Contractor for the U.S. Department of Energy
Office: (575) 234-7244
Email: laura.jones@wipp.ws
Fax: (575) 234-7071

NCR – RHINL-0496-12 Rev.0
Attachment 3 Page 1 of 1

DIVIDER

PAGE

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Attachment 1 – CCP Nonconformance Report (NCR)

CCP NONCONFORMANCE REPORT (NCR)

10/30/12 LRT (Use NCR Continuation, Attachment 2, if necessary)

NCR No. NCR-RH-INL-0502-12 **Revision:** 0

1. Lot No., Heat No., or Serial No. (if applicable): HM-868 thru HM-1017 (NFT019DS Filters); IL-3105 thru IL-3125; JL-1 thru JL-90; KL-501 thru KL-622; IM-1174 thru IM-1222; and JM-1 thru JM-118 (NFT019SDS Filters)	2. Process (e.g., NDA, HSG, NDE, VE, Other): ~~Procurement~~ 10/30/12 LRT NA	3. Batch Data Report #(s): N/A
4. Order/Work Order/Job Control Number (if applicable): N/A	5. PO # (if applicable): PO 416725 and PO 416726	Container #(s): N/A
	6. Supplier (if applicable): Nuclear Filter Technology	

DESCRIPTION OF NONCONFORMANCE

7a. NCR Description: ☐ < 100 nCi/g ☐ Prohibited Item ☐ E-Flag ☒ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☐ Other

7b. Requirement(s) (Enter Implementing Procedure No., Revision, Section No., & Quoted Text):

PO-505, "Remote Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC", revision 1, Section 2.4. See attachment 1 for text of requirements.

7c. Actual Condition: Purchase Orders specify that filters meet the requirements of TRAMPAC Section 2.5 criteria. Consequently the Certificates of Conformance for these filters certify that the filters are approved to the requirements of TRAMPAC, Section 2.5. The filters were procured for use in Remote Handled Waste characterization and shipping. Section 2.4 of the RH TRAMPAC is the applicable requirement for filters used in the Remote Handling Characterization/shipping processes.

7d. Have the CCP HOLD TAGS associated with this NCR been applied? ☒ YES ☐ NO (If no is checked, explain:)

8. NCR Originator:

Robert Czyzewski (printed name) R Czyzewski (signature) 10/30/12 (date)

9. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE

If YES or INDETERMINATE, enter Trend Code L in Block 10.

10. Trend Code: A

11. Responsible Manager: Irene Quintana

12. Significant Condition? ☐ YES ☒ NO (If Yes, enter CAR No.:)

13. Recurring Condition? ☐ YES ☒ NO (If Yes, list NCRs and CARs:) CAR-RH-INL-0001-12

COPY

DATE ISSUED 10-31-12

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10/30/12 LMT

NCR No. NCR-RH-INL-0502-12	Revision: 0

14. CCP QA Engineer or CCP QA Designee validation:

Laura R. Jones Laura Ramon Jones 10/30/2012

printed name signature date

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-RHINL-0502-12 **Revision:** 0

INTERIM DISPOSITION

15a. Interim Disposition (Check Only One):

☒ N/A (See Final Disposition) ☐ Hold ☐ Conditionally Accept ☐ Conditionally Use

☐ Sort ☐ Reinspect or Retest ☐ Remediate

15b. Instructions for Completion of the Interim Disposition:

INTERIM DISPOSITION APPROVALS

16a. Responsible Manager or Individual:			**16b. CCP QA Engineer or CCP QA Designee:**		
printed name	signature	date	printed name	signature	date
Additional Approvals:			**Additional Approvals:**		
printed name	signature	date	printed name	signature	date

COMPLETION OF INTERIM DISPOSITION

17. Interim Disposition Complete – Responsible Manager or Individual:

printed name signature date

18. Interim Disposition Verified – CCP QA Engineer:

printed name signature date

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR- RHINL-0502-12 **Revision:** 0

FINAL DISPOSITION

19. Final Disposition (Check Only One):
☒ Use-As-Is ☐ Repair

19a. Technical Justification – Required for Use-As-Is or Repair dispositions. (Enter "N/A" for Reject, Rework, and Scrap:)
Filters procured meet the diffusivity requirements specified Table 2.4-1 of CCP-PO-505. CAR-RHINL-0001-12 is initiated for the procurement process not referencing the RH TRAMPAC section 2.4, Filter Vents.

☐ Reject ☐ Rework ☐ Scrap

19b. Instructions for Completion – Required for Reject, Repair, Rework, or Scrap. (Enter "N/A" for Use-As-Is:)
NA

19c. Corrective Actions (Actions to Prevent Recurrence – For Repair or Rework, if applicable. Enter "N/A," if not applicable, and for Use-As-Is, Reject, and Scrap):

NA

FINAL DISPOSITION APPROVALS

20. Responsible Manager or Individual:			21. CCP QA Engineer or CCP QA Designee:		
MIKE RAMIREZ (printed name)	Mike Ramirez (signature)	10-30-12 (date)	T. MUELLER (printed name)	T Mueller (signature)	10-30-12 (date)
Additional Approvals:			Additional Approvals:		
printed name	signature	date	printed name	signature	date

CLOSURE

22. Final Disposition Complete – Responsible Manager or Individual:

MIKE RAMIREZ (printed name) Mike Ramirez (signature) 10-30-12 (date)

23. Attachments: 1 – Block 76 Requirement
2 - Supplier's COCs
3 - Transportation Packaging's email
4 - Hold tag Email

24a. HOLD TAG removal has been verified and reconciled for all nonconforming items on the NCR. ☒

24b. Check if not applicable (N/A) and explain. ☐

25. Final Disposition Verified – NCR Closed CCP QA Engineer:

T. MUELLER (printed name) T Mueller (signature) 10-30-12 (date)

Scales used to determine the weights of payload contents/components are calibrated and maintained in accordance with National Institute of Science and Technology (NIST) Handbook 44 in accordance with CCP-QP-016, *CCP Control of Measuring, Testing, and Data Collection Equipment*, the error is known, and a record of the calibration is maintained. The weight and the associated error of each RH-TRU waste canister are recorded in the PTCD (see Section 6.2). The CCP WCO enters the weight information into the WWIS/WDS in accordance with CCP-TP-530.

The CCP TCO reviews this information and verifies compliance with the weight restrictions by signing the PTCD. The WWIS/WDS performs edit/limit checks that further ensure that the reported weight plus uncertainty does not exceed applicable limits.

2.3 Container Marking

2.3.1 Requirements

Each payload container shall be labeled with a unique container identification number.

2.3.2 Methods of Compliance and Verification

Compliance shall be by one, or a combination of, the following methods:

- Visual inspection of each payload container
- Administrative and procurement controls.

The unique container identification number/label shall be recorded in the PTCD (see Section 6.2).

The CCP TCO performs the following activities in accordance with CCP-TP-507. Each payload container is inspected to ensure that a unique container identification label is affixed to the RH-TRU waste canister. For each payload container, the CCP TCO verifies that the container number listed in the PTCD matches the container number listed on the label.

10/30/12 LRS

2.4 Filter Vents

NCR -RH-INL-0502-12 Rev 0

Attachment 1 Page 1 of 3

2.4.1 Requirements

The RH-TRU waste canister and any inner containers shall be vented. The RH-TRU waste canister shall have one or more filter

vents or equivalent venting mechanisms to meet the minimum specifications of Table 2.4-1, Minimum Filter Vent Specifications, and this section. Any equivalent venting mechanisms shall meet the minimum total hydrogen diffusivity per container specified in Table 2.4-1. The release rates of hydrogen for any inner containers and other inner confinement layers shall be accounted for as described in Appendix 2.5, Compliance Methodology for Gas Generation Requirements, of the *RH-TRU Payload Appendices*.

Table 2.4-1. Minimum Filter Vent Specifications

Container Type	Minimum Filter Vent Specifications		
	Total Flow Rate (ml/min of air, STP, at 1 inch of water)[1]	Efficiency (percent)	Total Hydrogen Diffusivity (m/s/mf at 25°C)[2,3]
Fixed Lid Canister (high diffusivity)	70	>99.5	9.34E-5
Fixed Lid Canister	70	>99.5	1.48E-5
Removable Lid Canister[4]	70	>99.5	1.48E-5
NS15 Neutron Shielded Canister	70	>99.5	1.48E-5
NS30 Neutron Shielded Canister	70	>99.5	1.48E-5

[1]Filters tested at a different pressure gradient shall have a proportional flow rate (e.g., 35 ml/min at 1 inch of water = 1 L/min at 1 psi).
[2]Total hydrogen diffusivity may be achieved through the use of multiple filter vents.
[3]Filters exceeding these specifications may be used to decrease the resistance to hydrogen release in accordance with the logic outlined in Appendix 2.5 of the *RH-TRU Payload Appendices*.
[4]Removable lid canisters with loosely placed lids, no gasket, and without filters shall demonstrate that the hydrogen diffusivity as a result of leakage is greater than or equal to 1.48E-5 m/s/mf at 25°C.

ml/min = Milliliter(s) per minute
m/s/mf = Moles per second per mole fraction
STP = Standard temperature and pressure
L/min = Liter(s) per minute
psi = Pounds per square inch
°C = Degrees Celsius

Filter vents for the RH-TRU waste canister shall be legibly marked to ensure both (1) identification of the supplier and (2) date of manufacture, lot number, or unique serial number.

The filter vent housing and element for the RH-TRU waste canister shall have an operating temperature range from -40 °C to +70°C (-40 degrees Fahrenheit [°F] to +158°F). The filter vent threads shall be compatible with the bung in the container or shall be self-tapping.

2.4.2 Methods of Compliance and Verification

Compliance is by one, or a combination of, the following methods:

- Administrative and procurement controls demonstrating that filter vents have been procured to the specifications of Section 2.4.1.
- Visual inspection to the specifications of Section 2.4.1.
- Measurement by sampling of filter characteristics to the specifications of Section 2.4.1.

If measurement by sampling is selected as the compliance method, the test methods used to determine the compliance of filter vents or equivalent venting mechanisms with the minimum performance-based requirements specified in Table 2.4-1 and this section are directed by procedures under a QA Program.

CCP only uses filters on RH-TRU waste containers that have been approved by DOE-CBFO. All filters used comply with the specification described in Table 2.4-1 and are procured in accordance with CCP-QP-015.

CCP personnel perform the following activites in accordance with CCP-TP-507 and CCP-QP-005. CCP personnel visually verify that the filter vent, if present, has been installed properly. If a filter vent is not installed, an acceptable filter vent is procured and installed. The visual inspection also identifies the filter manufacturer and the model number. The CCP TCO verifies properly installed filters and compares filter number to the requirements of Table 2.4-1. In the event of a payload container that does not meet filter requirements, the container is segregated and a Nonconformance Report is generated. The container will not be shipped until the approved filter(s) are installed.

2.5 Residual Liquids

2.5.1 Requirements

Liquid waste is prohibited in the payload container except for residual amounts in well-drained containers. The total volume of residual liquid in the payload container shall be less than 1 percent (volume) of the payload container.

10/30/12 LRS
NCR - RH-INL-0502-12 Rev 0
Attachment 1 Page 3 of 3

NFT
741 Corporate Circle, Suite R
Golden, Colorado 80401
Phone: 303.384.9785
Fax: 303.384.9579
NFTINC.com

Certificate of Conformance

for

NucFil-019DS Filter with O-Ring

NFT, Hereby certifies that the NucFil-019DS Carbon Filters referenced herein were fabricated and tested in accordance with:

Specification: **NFT-019DS Rev. 5** Drawing: **05190004 Rev.12**

We further certify that:

- NFT's Quality program is compliant with ASME NQA-1 requirements.
- Items furnished under this purchase are new, genuine (not counterfeit) and match the quality, test reports, markings and or fitness for use required by the purchase order.
- Filter housings are 304 Stainless Steel. (See accompanying sub-tier CMTR's)
- The Filter is a Proprietary Carbon-Bonded-Carbon media material.
- All filters supplied were individually tested and exhibit ≥ 99.97% removal of 0.3 to 0.5 micron particles using DOP smoke at specified flow rate. (See filter test data)
- All filters supplied were individually tested and exhibit an airflow capacity of 200 ml/min, at ≤ 1.0" water gauge pressure differential across the filter. (See filter test data)
- Hydrogen diffusivity has been measured at ≥ 1.85E –05 Mol/sec/Mol Frac. at 25°C using qualified test procedure PS 26.
- Filters are approved to the requirements of TRAMPAC, Section 2.5.
- When filters are properly installed, they meet the requirements of DOT Type 7A. (Test Data is on file)

This certification Includes:

Purchase Order #: ***WIPP1-PO416725***
Quantity: ***150***
Date of Manufacture: ***08/12***
Serial I.D.: ***HM-868 thru HM-1017***

10-4-12
Q.A. Manager / Date

Certificate of Conformance is prepared per procedure PS51.

NCR - RHWL-0502-12 R0

Attachment 2 Page 1 of 2

NFT
741 Corporate Circle, Suite R
Golden, Colorado 80401
Phone: 303.384.9785
Fax: 303.384.9579
NFTINC.com

Certificate of Conformance

for

NucFil-019SDS Filter Assembly

NFT, hereby certifies that the NucFil-019SDS Sintered Stainless Steel Filters referenced herein were fabricated and tested in accordance with:

Specification: **NFT019SDS Rev. 3 and Rev. 4** Drawing: **06190000 Rev. 5 and Rev.6 (Redline)** ✓

We further certify that:

- NFT's Quality program is compliant with ASME NQA-1 requirements.
- NFT Specification NFT019SDS revision 3 and 4 are compliant to the WTS PO requirements per NFT Engineering Evaluation EE12-001-R1. This change does not affect the functionality of the product.
- NFT Drawing 06190000 revision 5 is equivalent to revision 6. Only component parts numbers have been updated and does not affect the funtionality of the product.
- Items furnished under this purchase are new, genuine (not counterfeit) and match the quality, test reports, markings and or fitness for use required by the purchase order.
- Filter housings are 304 Stainless Steel. (See accompanying sub-tier CMTR's)
- The filter media is Sintered 316 Stainless Steel. (See accompanying sub-tier CMTR's)
- All filters supplied were individually tested and exhibit ≥ 99.97% removal of 0.3 to 0.5 micron particles using DOP smoke at specified flow rate. (See filter test data)
- All filters supplied were individually tested and exhibit an airflow capacity of 60 ml/min, at ≤ 1.0" water gauge pressure differential across the filter. (See filter test data)
- Hydrogen diffusivity has been measured at ≥ 1.85E−05 Mol/sec/Mol Frac. using qualified test procedure PS 26.
- Filters are approved to the requirements of TRAMPAC, Section 2.5. ✓
- When filters are properly installed, they meet the requirements of DOT Type 7A. (Test Data is on file)
- Items listed conform in all respects to the purchase orders requirements.

This certification Includes:

Purchase Order #: *WIPP1-PO416726* ✓
Quantity: *300* ✓
Date of Manufacture: *09/11, 10/11, 11/11, 09/12, 10/12*
Serial I.D.: *IL-3105 thru IL-3125* ✓
JL-1 thru JL-90 ✓
KL-501 thru KL-522 ✓
IM-1174 thru IM-1222 ✓
JM-1 thru JM-118 ✓

10-19-12 ✓
Q.A. Manager / Date

Certificate of Conformance is prepared per procedure PS 51.

NCR– RHINL-0502-12 R0

Attachment 2 Page 2 of 2

PO# WIPP1-PO416726
Serial ID: Various
Page 6 of 81

Mueller, Terry - NWP

From: McGonagill, Steve - NWP
Sent: Tuesday, October 30, 2012 3:35 PM
To: Cannon, Val - NWP
Cc: Mueller, Terry - NWP; Pearcy, Mark - NWP; Sellmer, Todd - NWP
Subject: CCP NCR -RHINL-0502-12 (Filter Vents)

Val,

Transportation Packaging has performed a review of the subject NCR and concur w/ the use-as-is disposition as long as an **019DS filter is used for the RH application** and NOT the 019SDS filter.

If we can be of further assistance please let us know.

Thanks,

Steve V. McGonagill
Engineering (CH/RH CE)
Transportation Packaging
Nuclear Waste Partnership LLC
Contractor to the U.S. Department of Energy
575-234-7120

NCR – RHINL-0502-12 R0

Revision 3 Page 1 of 1

Mueller, Terry - NWP

From: Czyzewski, Robert J. [Robert.Czyzewski@amwtp.inl.gov]
Sent: Tuesday, October 30, 2012 4:02 PM
To: Mueller, Terry - NWP
Subject: RE: CCP NCR -RHINL-0502-12 (Filter Vents)

Terry:

The hold tags have been pulled.

Robert Czyzewski
QA Engineer
Nuclear Waste Partnership LLC
Contractor for the U.S. Government
(208) 526-6965; (208) 569-2752 (C)
robert.czyzewski@amwtp.inl.gov

From: Mueller, Terry - NWP [mailto:terry.mueller@wipp.ws]
Sent: Tuesday, October 30, 2012 3:43 PM
To: Czyzewski, Robert J.
Subject: FW: CCP NCR -RHINL-0502-12 (Filter Vents)
Importance: High

From: Mueller, Terry - NWP
Sent: Tuesday, October 30, 2012 3:42 PM
To: 'Czyzewski, Robert - INL'
Subject: FW: CCP NCR -RHINL-0502-12 (Filter Vents)
Importance: High

The NCR is ready for closing – please remove hold tags and confirm.

Thanks!

TERRY L. MUELLER
Assurance Programs
Nuclear Waste Partnership, LLC
Contractor to the Department of Energy
MS GS-103
work (575)-234-7016
fax (575)-234-7042

From: McGonagill, Steve - NWP
Sent: Tuesday, October 30, 2012 3:35 PM
To: Cannon, Val - NWP
Cc: Mueller, Terry - NWP; Pearcy, Mark - NWP; Sellmer, Todd - NWP
Subject: CCP NCR -RHINL-0502-12 (Filter Vents)

Val,

Transportation Packaging has performed a review of the subject NCR and concur w/ the use-as-is disposition as long as an **019DS filter is used for the RH application** and NOT the 019SDS filter.

If we can be of further assistance please let us know.

NCR- RHINL-0502-12 R0

Attachment 4 Page 1 of 2

Thanks,

Steve V. McGonagill
Engineering (CH/RH CE)
Transportation Packaging
Nuclear Waste Partnership LLC
Contractor to the U.S. Department of Energy
575-234-7120

NCR -RHWL-0602-12120

Attachment 4 Page 2 of 2

CCP-TP-002 Rev. 25
Effective Date: 2/11/13
CCP Reconciliation of DQO's and Reporting Characterization Data

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

GEN14

Waste Stream: # ID-RF-S3114 Lot # 88

Container ID Number	Historical Container ID	NDA BDR	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Overpack Required	LTO	Transportation Headspace Gas BDR					GGT BDR
										Sample	Analysis				
SRP12000	N/A	INNDAW120079	N/A	IN-SRP-VE-000001	N/A	N/A	N/A	Yes	LTO 2	IN13FG5002	N/A	N/A	N/A	N/A	
SRP12002	N/A	INNDAW120083	N/A	IN-SRP-VE-000002	N/A	N/A	N/A	Yes	LTO 2	IN13FG5006	N/A	N/A	N/A	N/A	
SRP12004	N/A	INNDAW120078	N/A	IN-SRP-VE-000002	N/A	N/A	N/A	Yes	LTO 2	IN13FG5004	N/A	N/A	N/A	N/A	
SRP12006	N/A	INNDAW130003	N/A	IN-SRP-VE-000010	N/A	N/A	N/A	Yes	LTO 2	IN13FG9001	N/A	N/A	N/A	N/A	
SRP12007	N/A	INNDAW120078	N/A	IN-SRP-VE-000002	N/A	N/A	N/A	Yes	LTO 2	IN13FG5004	N/A	N/A	N/A	N/A	
SRP12008	N/A	INNDAW120078	N/A	IN-SRP-VE-000002	N/A	N/A	N/A	Yes	LTO 2	IN13FG5004	N/A	N/A	N/A	N/A	
SRP12009	N/A	INNDAW120083	N/A	IN-SRP-VE-000002	N/A	N/A	N/A	Yes	LTO 2	IN13FG5002	N/A	N/A	N/A	N/A	
SRP12010	N/A	INNDAW120081	N/A	IN-SRP-VE-000001	N/A	N/A	N/A	Yes	LTO 2	IN13FG5002	N/A	N/A	N/A	N/A	
SRP12011	N/A	INNDAW120083	N/A	IN-SRP-VE-000004	N/A	N/A	N/A	Yes	LTO 2	IN13FG5006	N/A	N/A	N/A	N/A	
SRP12012	N/A	INNDAW120082	N/A	IN-SRP-VE-000003	N/A	N/A	N/A	Yes	LTO 2	IN13FG5002	N/A	N/A	N/A	N/A	
SRP12013	N/A	INNDAW120078	N/A	IN-SRP-VE-000003	N/A	N/A	N/A	Yes	LTO 2	IN13FG5004	N/A	N/A	N/A	N/A	
SRP12015	N/A	INNDAW120079	N/A	IN-SRP-VE-000004	N/A	N/A	N/A	Yes	LTO 2	IN13FG5004	N/A	N/A	N/A	N/A	
SRP12016	N/A	INNDAW120080	N/A	IN-SRP-VE-000003	N/A	N/A	N/A	Yes	LTO 2	IN13FG5004	N/A	N/A	N/A	N/A	
SRP12017	N/A	INNDAW120078	N/A	IN-SRP-VE-000003	N/A	N/A	Yes	Yes	LTO 2	IN13FG5004	N/A	N/A	N/A	N/A	
SRP12018	N/A	INNDAW120083	N/A	IN-SRP-VE-000002	N/A	N/A	N/A	Yes	LTO 2	IN13FG5006	N/A	N/A	N/A	N/A	
SRP12019	N/A	INNDAW120080	N/A	IN-SRP-VE-000003	N/A	N/A	Yes	Yes	LTO 2	IN13FG5004	N/A	N/A	N/A	N/A	
SRP12020	N/A	INNDAW120079	N/A	IN-SRP-VE-000003	N/A	N/A	Yes	Yes	LTO 2	IN13FG5002	N/A	N/A	N/A	N/A	
SRP12021	N/A	INNDAW120079	N/A	IN-SRP-VE-000003	N/A	N/A	N/A	Yes	LTO 2	IN13FG5002	N/A	N/A	N/A	N/A	
SRP12022	N/A	INNDAW120080	N/A	IN-SRP-VE-000003	N/A	N/A	N/A	Yes	LTO 2	IN13FG5004	N/A	N/A	N/A	N/A	
SRP12023	N/A	INNDAW120081	N/A	IN-SRP-VE-000003	N/A	N/A	N/A	Yes	LTO 2	IN13FG5004	N/A	N/A	N/A	N/A	
SRP12024	N/A	INNDAW120078	N/A	IN-SRP-VE-000003	N/A	N/A	Yes	Yes	LTO 2	IN13FG5004	N/A	N/A	N/A	N/A	
SRP12025	N/A	INNDAW120083	N/A	IN-SRP-VE-000003	N/A	N/A	Yes	Yes	LTO 2	IN13FG5006	N/A	N/A	N/A	N/A	
SRP12026	N/A	INNDAW120082	N/A	IN-SRP-VE-000003	N/A	N/A	N/A	Yes	LTO 2	IN13FG5002	N/A	N/A	N/A	N/A	
SRP12027	N/A	INNDAW120080	N/A	IN-SRP-VE-000003	N/A	N/A	N/A	Yes	LTO 2	IN13FG5004	N/A	N/A	N/A	N/A	
SRP12028	N/A	INNDAW120078	N/A	IN-SRP-VE-000003	N/A	N/A	N/A	Yes	LTO 2	IN13FG5004	N/A	N/A	N/A	N/A	
SRP12029	N/A	INNDAW120080	N/A	IN-SRP-VE-000004	N/A	N/A	Yes	Yes	LTO 2	IN13FG5004	N/A	N/A	N/A	N/A	
SRP12030	N/A	INNDAW120080	N/A	IN-SRP-VE-000003	N/A	N/A	N/A	Yes	LTO 2	IN13FG5004	N/A	N/A	N/A	N/A	
SRP12031	N/A	INNDAW120083	N/A	IN-SRP-VE-000005	N/A	N/A	N/A	Yes	LTO 2	IN13FG5006	N/A	N/A	N/A	N/A	
SRP12032	N/A	INNDAW120079	N/A	IN-SRP-VE-000005	N/A	N/A	N/A	Yes	LTO 2	IN13FG5004	N/A	N/A	N/A	N/A	
SRP12033	N/A	INNDAW120079	N/A	IN-SRP-VE-000004	N/A	N/A	N/A	Yes	LTO 2	IN13FG5002	N/A	N/A	N/A	N/A	
SRP12034	N/A	INNDAW120078	N/A	IN-SRP-VE-000004	N/A	N/A	Yes	Yes	LTO 2	IN13FG5004	N/A	N/A	N/A	N/A	
SRP12035	N/A	INNDAW120079	N/A	IN-SRP-VE-000005	N/A	N/A	N/A	Yes	LTO 2	IN13FG5002	N/A	N/A	N/A	N/A	
SRP12037	N/A	INNDAW120079	N/A	IN-SRP-VE-000004	N/A	N/A	N/A	Yes	LTO 2	IN13FG5002	N/A	N/A	N/A	N/A	
SRP12038	N/A	INNDAW120078	N/A	IN-SRP-VE-000005	N/A	N/A	N/A	Yes	LTO 2	IN13FG5004	N/A	N/A	N/A	N/A	
SRP12039	N/A	INNDAW120078	N/A	IN-SRP-VE-000004	N/A	N/A	N/A	Yes	LTO 2	IN13FG5002	N/A	N/A	N/A	N/A	
SRP12040	N/A	INNDAW120080	N/A	IN-SRP-VE-000005	N/A	N/A	Yes	Yes	LTO 2	IN13FG5004	N/A	N/A	N/A	N/A	
SRP12041	N/A	INNDAW120079	N/A	IN-SRP-VE-000004	N/A	N/A	Yes	Yes	LTO 2	IN13FG5002	N/A	N/A	N/A	N/A	
SRP12042	N/A	INNDAW120079	N/A	IN-SRP-VE-000004	N/A	N/A	Yes	Yes	LTO 2	IN13FG5002	N/A	N/A	N/A	N/A	
SRP12043	N/A	INNDAW120080	N/A	IN-SRP-VE-000004	N/A	N/A	Yes	Yes	LTO 2	IN13FG5004	N/A	N/A	N/A	N/A	
SRP12044	N/A	INNDAW130004	N/A	IN-SRP-VE-000006	N/A	N/A	N/A	Yes	LTO 2	IN13FG10003	N/A	N/A	N/A	N/A	
SRP12045	N/A	INNDAW120082	N/A	IN-SRP-VE-000005	N/A	N/A	Yes	Yes	LTO 2	IN13FG5002	N/A	N/A	N/A	N/A	
SRP12046	N/A	INNDAW120083	N/A	IN-SRP-VE-000004	N/A	N/A	Yes	Yes	LTO 2	IN13FG5006	N/A	N/A	N/A	N/A	
SRP12047	N/A	INNDAW120082	N/A	IN-SRP-VE-000004	N/A	N/A	Yes	Yes	LTO 2	IN13FG5002	N/A	N/A	N/A	N/A	
SRP12048	N/A	INNDAW120082	N/A	IN-SRP-VE-000005	N/A	N/A	Yes	Yes	LTO 2	IN13FG5002	N/A	N/A	N/A	N/A	
SRP12049	N/A	INNDAW120079	N/A	IN-SRP-VE-000004	N/A	N/A	N/A	Yes	LTO 2	IN13FG5002	N/A	N/A	N/A	N/A	
SRP12050	N/A	INNDAW120079	N/A	IN-SRP-VE-000004	N/A	N/A	Yes	Yes	LTO 2	IN13FG5002	N/A	N/A	N/A	N/A	
SRP12051	N/A	INNDAW120080	N/A	IN-SRP-VE-000005	N/A	N/A	N/A	Yes	LTO 2	IN13FG5004	N/A	N/A	N/A	N/A	
SRP12052	N/A	INNDAW120078	N/A	IN-SRP-VE-000005	N/A	N/A	Yes	Yes	LTO 2	IN13FG5002	N/A	N/A	N/A	N/A	
SRP12053	N/A	INNDAW120082	N/A	IN-SRP-VE-000007	N/A	N/A	N/A	Yes	LTO 2	IN13FG5002	N/A	N/A	N/A	N/A	
SRP12054	N/A	INNDAW120080	N/A	IN-SRP-VE-000007	N/A	N/A	N/A	Yes	LTO 2	IN13FG5004	N/A	N/A	N/A	N/A	
SRP12055	N/A	INNDAW120083	N/A	IN-SRP-VE-000007	N/A	N/A	N/A	Yes	LTO 2	IN13FG5002	N/A	N/A	N/A	N/A	
SRP12057	N/A	INNDAW120082	N/A	IN-SRP-VE-000007	N/A	N/A	Yes	Yes	LTO 2	IN13FG5002	N/A	N/A	N/A	N/A	
SRP12059	N/A	INNDAW120082	N/A	IN-SRP-VE-000007	N/A	N/A	N/A	Yes	LTO 2	IN13FG5002	N/A	N/A	N/A	N/A	
SRP12060	N/A	INNDAW120083	N/A	IN-SRP-VE-000005	N/A	N/A	N/A	Yes	LTO 2	IN13FG5002	N/A	N/A	N/A	N/A	
SRP12061	N/A	INNDAW120078	N/A	IN-SRP-VE-000005	N/A	N/A	Yes	Yes	LTO 2	IN13FG5004	N/A	N/A	N/A	N/A	
SRP12062	N/A	INNDAW120079	N/A	IN-SRP-VE-000005	N/A	N/A	Yes	Yes	LTO 2	IN13FG5002	N/A	N/A	N/A	N/A	
SRP12063	N/A	INNDAW120082	N/A	IN-SRP-VE-000005	N/A	N/A	Yes	Yes	LTO 2	IN13FG5002	N/A	N/A	N/A	N/A	
SRP12064	N/A	INNDAW120083	N/A	IN-SRP-VE-000005	N/A	N/A	Yes	Yes	LTO 2	IN13FG5002	N/A	N/A	N/A	N/A	

CCP-TP-002 Rev. 25
Effective Date: 2/11/13
CCP Reconciliation of DQO's and Reporting Characterization Data

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-RF-S3114

Lot # 88

Container ID Number	Historical Container ID	NDA BDR	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Overpack Required	LTO	Transportation Headspace Gas BDR					GGT BDR
										Sample	Analysis				
SRP12065	N/A	INNDAW130004	N/A	IN-SRP-VE-000006	N/A	N/A	N/A	Yes	LTO 2	IN13FG10003	N/A	N/A	N/A	N/A	
SRP12066	N/A	INNDAW120083	N/A	IN-SRP-VE-000005	N/A	N/A	Yes	Yes	LTO 2	IN13FG5006	N/A	N/A	N/A	N/A	
SRP12067	N/A	INNDAW130003	N/A	IN-SRP-VE-000006	N/A	N/A	N/A	Yes	LTO 2	IN13FG9001	N/A	N/A	N/A	N/A	
SRP12068	N/A	INNDAW130004	N/A	IN-SRP-VE-000006	N/A	N/A	Yes	Yes	LTO 2	IN13FG9001	N/A	N/A	N/A	N/A	
SRP12069	N/A	INNDAW130004	N/A	IN-SRP-VE-000006	N/A	N/A	Yes	Yes	LTO 2	IN13FG10003	N/A	N/A	N/A	N/A	
SRP12070	N/A	INNDAW120081	N/A	IN-SRP-VE-000007	N/A	N/A	Yes	Yes	LTO 2	IN13FG5002	N/A	N/A	N/A	N/A	
SRP12071	N/A	INNDAW130001	N/A	IN-SRP-VE-000008	N/A	N/A	N/A	Yes	LTO 2	IN13FG10003	N/A	N/A	N/A	N/A	
SRP12072	N/A	INNDAW120081	N/A	IN-SRP-VE-000007	N/A	N/A	N/A	Yes	LTO 2	IN13FG5004	N/A	N/A	N/A	N/A	
SRP12073	N/A	INNDAW120080	N/A	IN-SRP-VE-000007	N/A	N/A	N/A	Yes	LTO 2	IN13FG5004	N/A	N/A	N/A	N/A	
SRP12074	N/A	INNDAW120078	N/A	IN-SRP-VE-000007	N/A	N/A	N/A	Yes	LTO 2	IN13FG5004	N/A	N/A	N/A	N/A	
SRP12075	N/A	INNDAW120083	N/A	IN-SRP-VE-000007	N/A	N/A	N/A	Yes	LTO 2	IN13FG5006	N/A	N/A	N/A	N/A	
SRP12076	N/A	INNDAW120080	N/A	IN-SRP-VE-000007	N/A	N/A	N/A	Yes	LTO 2	IN13FG5004	N/A	N/A	N/A	N/A	
SRP12077	N/A	INNDAW120078	N/A	IN-SRP-VE-000007	N/A	N/A	N/A	Yes	LTO 2	IN13FG5004	N/A	N/A	N/A	N/A	
SRP12078	N/A	INNDAW120080	N/A	IN-SRP-VE-000007	N/A	N/A	N/A	Yes	LTO 2	IN13FG5004	N/A	N/A	N/A	N/A	
SRP12079	N/A	INNDAW120080	N/A	IN-SRP-VE-000007	N/A	N/A	N/A	Yes	LTO 2	IN13FG5004	N/A	N/A	N/A	N/A	
SRP12080	N/A	INNDAW120082	N/A	IN-SRP-VE-000007	N/A	N/A	N/A	Yes	LTO 2	IN13FG5002	N/A	N/A	N/A	N/A	
SRP12081	N/A	INNDAW120081	N/A	IN-SRP-VE-000007	N/A	N/A	N/A	Yes	LTO 2	IN13FG5004	N/A	N/A	N/A	N/A	
SRP12082	N/A	INNDAW130002	N/A	IN-SRP-VE-000010	N/A	N/A	Yes	Yes	LTO 2	IN13FG10003	N/A	N/A	N/A	N/A	
SRP12083	N/A	INNDAW130002	N/A	IN-SRP-VE-000010	N/A	N/A	Yes	Yes	LTO 2	IN13FG9001	N/A	N/A	N/A	N/A	
SRP12084	N/A	INNDAW130001	N/A	IN-SRP-VE-000010	N/A	N/A	Yes	Yes	LTO 2	IN13FG10003	N/A	N/A	N/A	N/A	
SRP12085	N/A	INNDAW130004	N/A	IN-SRP-VE-000011	N/A	N/A	Yes	Yes	LTO 2	IN13FG10003	N/A	N/A	N/A	N/A	
SRP12086	N/A	INNDAW130004	N/A	IN-SRP-VE-000011	N/A	N/A	Yes	Yes	LTO 2	IN13FG9001	N/A	N/A	N/A	N/A	

Signature of Site Project Manager

Jim Vernon
Printed Name

3/13/2013
Date

CBS-006

DIVIDER

PAGE

Kirkes, Creta - NWP

From: Mueller, Terry - NWP
Sent: Tuesday, April 09, 2013 7:33 AM
To: Dominguez, Lena - NWP; Pettus, Helen - NWP; Soaterna, Carolina - NWP; Valenzuela, Bobbie - NWP
Cc: Walker, Mak (Maryann) - NWP; Jones, Laura - NWP
Subject: FW: NCR/CAR check for ID-RF-S3114 Lot 88
Attachments: NCR_BDR_CONTAINER_CHECK_INL ID-RF-S3114 Lot 88.xls

There are no NCR or CAR dispositions that impact the acceptability of these containers, alternate container IDs, and associated BDRs for certification and shipping as listed on the attached. This check was verified independently.

Thanks!

Terry L. Mueller
Assurance Programs
MS GS-103
work (575)-234-7016
fax (575)-234-7042

Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA
Contractor to the Department of Energy

From: Pettus, Helen - NWP
Sent: Tuesday, April 09, 2013 7:02 AM
To: Gomez, Chris - NWP; Jones, Laura - NWP; Kantrowitz, Rich - NWP; Klingler, Larry - NWP; Mueller, Terry - NWP; Walker, Mak (Maryann) - NWP
Cc: Dominguez, Lena - NWP
Subject: NCR/CAR check for ID-RF-S3114 Lot 88

Please do an NCR/CAR check for ID-RF-S3114 Lot 88.

Thanks,

Helen Pettus
Central Characterization Program
Nuclear Waste Partnership LLC
Contractor for the U.S. Department of Energy
Waste Isolation Pilot Plant
575-234-7696 (W)
helen.pettus@wipp.ws

INL AK TRACKING SPREADSHEET (Vent and Closure Dates)

CONTAINERID	CONTAINER TYPE	WASTE STREAM	WASTE MATRIX CODE	CLOSURE DATE	VENT DATE
10017513	55G	ID-RF-S3150-A	S3150	8/25/1987	12/24/2001
SRP12038	55G	ID-RF-S3114	S3114	11/29/2012	11/29/2012

Waste Isolation Pilot Plant
Container Data Report

Report Statistics

Report Version:	**2.2**
WDS Instance:	**prd05.wipp.carlsbad.nm.us**
Generated on:	**June 02, 2013 04:47 PM**
Generated by:	**KIRKES, CRETA**
Total Pages:	**9**

Selection Criteria

Container Number:	**SRP12038**

Container: SRP12038
Type: 19 - 55 gal TBO Solid/Vit Damaged

Extended Status: APPROVED CERT IN APPROVED CERT OVERPACK EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 04/09/2013
Waste Handling Code: CH
Disposal Date: 05/21/2013

Current Location Site:	WI
Generator Site:	RF
Destination Site ID:	WI
Certification Program ID:	C8
Shipping Program ID:	BN
Overpack Container:	BN10489113
Overpack Type:	TEN DRUM OVERPACK
Overpack Status:	CERTIFICATION DATA APPROVED

Neutron Dose Rate (mrem/hr):	0.5
Beta Gamma Dose Rate (mrem/hr):	0.1
Total Dose Rate (mrem/hr):	0.6

FGE (g):	9.62E-02
FGE Uncertainty (g):	2.83E-02
Gross Weight (kg):	136.40
Gross Weight Uncert (kg):	2.30
Decay Heat (W):	3.72E-04
Decay Heat Uncertainty (W):	7.44E-05

Shipment Data

Payload ID: **96882** Assembly ID: IN129078 Payload Complete? Y
Shipment Number: IN130072 Send Date: 05/14/2013 Receipt Date: 05/15/2013
Shipment Status: SHIPMENT RECEIVED AT DESTINATION

Emplacement Location

Panel: 6 Room: 3
Row: 109 Column: 3 Height: B

Certification Data Values

Waste Stream Profile Code:	ID-RF-S3114
Waste Type Code:	MTRU
IDC Code:	003
Waste Matrix Code:	S3114
WAC Revision Number:	7.3
Fill Factor (%):	90.00
Waste Stream BIR ID:	IN-ID-RF-S3114
Waste Stream MWIR ID:	NONE

TRU Alpha Activity (Ci):	1.16E-02
TRU Alpha Activity Uncertainty (Ci):	2.33E-03
TRU Alpha Activity Concentration (Ci/g):	1.14E-07
PU-239 Equivalent Activity (PE-Ci):	1.18E-02
Alpha Surface Contamination (dpm/cm^2):	19.0
Beta/Gamma Surface Contamination (dpm/cm^2):	199.0

Transportation Data Values

Closure Date:	11/29/2012
Vent Date:	11/29/2012
Process Knowledge?	N
TRUCON Code:	ID212V
Shipping Category:	4099990020
Aspiration Method:	T

Shipment Purpose:	DISPOSAL
Machine Compacted?	N
Liner Exists?	Y
Liner Hole Size(mm):	
Liner Lid Present?	N
Layers of Packaging	1
Aqueous Material?	N

Gas Generation Data Values

Measured FGGR (mol/s)	Measured TGRR (mol/s)	Truncated FGGR Test (Y/N)	Truncated FGGR Test Period (days)
1.81E-07	1.02E-06	Y	10

Container: SRP12038
Type: 19 - 55 gal TBO Solid/Vit Damaged

Current Status

Extended Status: APPROVED CERT IN APPROVED CERT OVERPACK EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 04/09/2013
Waste Handling Code: CH
Disposal Date: 05/21/2013

PCB Waste?	Y
PCB Mass (kg):	102.4
PCB Concentration (ppm):	
PCB Out of Service Date:	11/29/2012
Be Present?	Y
Be <= 1% by weight?	Y
Be mass <= 100kg?	Y
Separation OK?	
Packing Fraction (compaction level):	non-compacted

Filters

Filter Model Number	Filter Diffusivity (mol/s/ml)	Quantity	Install Date
NF019D	1.85E-05	1	11/29/2012

Certification Comments

PCB REMEDIATION WASTE

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
AM-241	4.110E-03	1.440E-03	1.184E-03	4.235E-04
CS-137	<LLD	<LLD	<LLD	<LLD
NP-237	9.370E-08	2.940E-08	1.314E-04	4.208E-05
PU-238	1.670E-04	8.030E-05	9.653E-06	4.736E-06
PU-239	6.030E-03	1.780E-03	9.587E-02	2.888E-02
PU-240	1.340E-03	4.110E-04	5.826E-03	1.823E-03
PU-241	9.620E-03	3.350E-03	9.250E-05	3.287E-05
PU-242	1.740E-07	1.030E-07	4.383E-05	2.647E-05
SR-90	<LLD	<LLD	<LLD	<LLD
U-233	<LLD	<LLD	<LLD	<LLD
U-234	<LLD	<LLD	<LLD	<LLD

Container: SRP12038
Type: 19 - 55 gal TBO Solid/Vit Damaged

Extended Status: APPROVED CERT IN APPROVED CERT OVERPACK EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 04/09/2013
Waste Handling Code: CH
Disposal Date: 05/21/2013

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
U-235	.000E00	.000E00	.000E00	.000E00
U-238	<LLD	<LLD	<LLD	<LLD

Samples

Labor Code	Sample ID	Sample Type Code	Sample Type Description	Sample Date	Layer Sampled
C8	H-SRP12038	HGHM-T	HEADSPACE GAS HYDROGEN AND METHANE	01/08/2013	0

Unique Samples

CAS Number	Analyte Description	Concentration (ppm)	Analysis Date	Analysis Method	Reporting Flags
1333-74-0	HYDROGEN	92.85	01/08/2013	14HG5	NA
74-82-8	METHANE	202.11	01/08/2013	14HG5	U

Labor Code	Sample ID	Sample Type Code	Sample Type Description	Sample Date	Layer Sampled
C8	SRP12038	HGVO-T	HEADSPACE GAS VOC	01/08/2013	0

Unique Samples

CAS Number	Analyte Description	Concentration (ppm)	Analysis Date	Analysis Method	Reporting Flags
100-41-4	ETHYL BENZENE	0.87	01/08/2013	14HG5	U
107-06-2	1,2-DICHLOROETHANE	1.22	01/08/2013	14HG5	U
108-10-1	METHYL ISOBUTYL KETONE	1.88	01/08/2013	14HG5	U
108-67-8	1,3,5-TRIMETHYLBENZENE	0.99	01/08/2013	14HG5	U
108-88-3	TOLUENE	2.24	01/08/2013	14HG5	NA
108-90-7	CHLOROBENZENE	0.63	01/08/2013	14HG5	U

Container: SRP12038
Type: 19 - 55 gal TBO Solid/Vit Damaged

Extended Status: APPROVED CERT IN APPROVED CERT OVERPACK EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Waste Handling Code: CH
Certification Date: 04/09/2013
Disposal Date: 05/21/2013

Samples

Labor Code	Sample ID	Sample Type Code	Sample Type Description	Sample Date	Layer Sampled
C8	SRP12038	HGVO-T	HEADSPACE GAS VOC	01/08/2013	0

Unique Samples

CAS Number	Analyte Description	Concentration (ppm)	Analysis Date	Analysis Method	Reporting Flags
108383/106423	M,P-XYLENE	0.42	01/08/2013	14HG5	U
110-82-7	CYCLOHEXANE	1.79	01/08/2013	14HG5	U
156-59-2	CIS-1,2-DICHLOROETHYLENE	4.31	01/08/2013	14HG5	NA
60-29-7	ETHYL ETHER	0.77	01/08/2013	14HG5	U
67-56-1	METHANOL	12.64	01/08/2013	14HG5	U
67-64-1	ACETONE	4.88	01/08/2013	14HG5	U
71-36-3	BUTANOL	0.76	01/08/2013	14HG5	U
71-43-2	BENZENE	0.39	01/08/2013	14HG5	NA
75-34-3	1,1-DICHLOROETHANE	0.94	01/08/2013	14HG5	U
75-35-4	1,1-DICHLOROETHYLENE	11.06	01/08/2013	14HG5	NA
78-93-3	METHYL ETHYL KETONE	1.8	01/08/2013	14HG5	U
95-47-6	O-XYLENE	0.54	01/08/2013	14HG5	U
95-63-6	1,2,4-TRIMETHYLBENZENE	1.23	01/08/2013	14HG5	U

Material Parameters

Material Parameter	Description	Weight (kg)
4	OTHER INORGANIC MATERIALS	9.00
7	RUBBER	0.30

Container: SRP12038
Type: 19 - 55 gal TBO Solid/Vit Damaged

Extended Status: APPROVED CERT IN APPROVED CERT OVERPACK EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 04/09/2013
Waste Handling Code: CH
Disposal Date: 05/21/2013

Material Parameters

Material Parameter	Description	Weight (kg)
8	PLASTICS	3.50
10	SOLIDIFIED ORGANIC MATERIAL	89.60
13	STEEL CONTAINER MATERIALS	28.60
14	PLASTIC/LINERS CONTAINER MATERIALS	5.40
	Waste Weight:	102.40
	Packaging Weight:	34.00
	Total Material Weight:	136.40

Hazardous Codes

Hazardous Code	Description
D008	LEAD
D022	CHLOROFORM
D026	CRESOL
D027	1,4-DICHLOROBENZENE
D028	1,2-DICHLOROETHANE
D029	1,1-DICHLOROETHYLENE
D030	2,4-DINITROTOLUENE
D032	HEXACHLOROBENZENE
D034	HEXACHLOROETHANE
D036	NITROBENZENE
D037	PENTACHLOROPHENOL
F001	SPENT HALOGENATED SOLVENTS

Container: SRP12038
Type: 19 - 55 gal TBO Solid/Vit Damaged

Current Status
Extended Status: APPROVED CERT IN APPROVED CERT OVERPACK EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Waste Handling Code: CH
Certification Date: 04/09/2013
Disposal Date: 05/21/2013

Hazardous Codes

Hazardous Code	Description
F002	SPENT HALOGENATED SOLVENTS
F005	SPENT NON-HALOGENATED SOLVENTS

Assay Methods

Labor Code	Assay Method	Description	Assay Date
C8	14WAGS1	WASTE ASSAY GAMMA SPECTROMETER (WAGS)	12/10/2012

Non-Destructive Examination (NDE)

Labor Code	NDE Method	Description	Examination Date
C8	14VE1	VISUAL EXAMINATION: ARP PACKAGING STATIONS	11/29/2012

Edit Limit Check Results

Evaluation Date: 04/09/2013 13:39:04 Overall Status: PASS

Evaluation Code	Status	Return Code	Detailed Description
DI_CERT_ALL	PASS		
DI_CERT_BE	PASS		
DI_CERT_CERT	PASS		
DI_CERT_CHARZ	PASS		
DI_CERT_ED	PASS		
DI_CERT_EPA	PASS		
DI_CERT_PCB	PASS		
DI_CERT_PERC	PASS		
DI_CERT_TRAMPAC	PASS		

Container: SRP12038
Type: 19 - 55 gal TBO Solid/Vit Damaged

Extended Status: APPROVED CERT IN APPROVED CERT OVERPACK EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Waste Handling Code: CH
Certification Date: 04/09/2013
Disposal Date: 05/21/2013

Edit Limit Check Results

Evaluation Date: 04/09/2013 13:39:04 Overall Status: PASS

Evaluation Code	Status
DSA	PASS
WAC	PASS
WAP_CERT	PASS

TRAMPAC Evaluation Results

Evaluation Date: 04/09/2013 13:39:05 Overall Status: PASS

Evaluation Code	Status	Return Code	Detailed Description
CE_ACT	PASS		
CE_ALL	PASS		
CE_ASP	PASS		
CE_DDH	PASS		
CE_FGE	PASS		
CE_FIL	PASS		
CE_GVE	PASS		
CE_RDR	PASS		
CE_TRU	PASS		
CE_WGT	PASS		

Container: SRP12038
Type: 19 - 55 gal TBO Solid/Vit Damaged

Extended Status: APPROVED CERT IN APPROVED CERT OVERPACK EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 04/09/2013
Waste Handling Code: CH
Disposal Date: 05/21/2013

TRAMPAC Evaluation Results

Evaluation Date: 04/09/2013 13:39:05 Overall Status: PASS

Details

Matrix Depleted Shipping Category:		Compliance Method:	TESTING
Decay Heat Limit (w):		FGE Limit (g):	200
FGGR (mol/s):	1.81E-7	FGGR Limit (mol/s):	2.5E-7
Volume Model:		Required Aspiration Time (days):	
Total Headspace VOCs (ppm):	49.36		
Packaging Configuration:	PE_ASSIGNED	DAC Scenario:	
Closure Time (days):		Minimum Closure Time Applied (days):	
Sample-Vent Time (days):	40	Min Sample-Vent Time Applied (days):	5
TFGVC in ICL (mol fr):		MLEL (mol fr):	0.05

History

Event Date/Time	Event Description	Reason
04/09/2013 08:09:50	INSERT DATA INTO THE DATABASE	
04/09/2013 08:09:50	SUCCESSFUL SUBMISSION FOR CERT	
04/09/2013 08:10:59	APPROVED FOR CERT	
04/09/2013 13:38:49	RESET TO PRESUBMITTAL CERT	Change TRUCON Code
04/09/2013 13:39:05	SUCCESSFUL SUBMISSION FOR CERT	
04/09/2013 13:41:46	APPROVED FOR CERT	
05/06/2013 07:18:05	ASSIGNED TO OVERPACK	

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	WDS Master Template.xls Rev. 7 Addendum #7, SCO #1065 Excel 2003/2007 Microsoft Windows XP	Units	data					comments					initial	date
2	Shipper Site ID		BN	Location ID	Dest Program ID	Shipping Purpose				SRP12038			HP/LD	03/05/13
3	Waste Stream Profile		ID-RF-S3114	IN	WI	D							HP/LD	03/05/13
4	Container Number		SRP12038										HP/LD	03/05/13
5	Container Type		tbo damaged S/V	drum, swb, tdop, etc., see WWIS labels for valid types.					U-235 FEM	U-235 FEM Uncert	FGGR Flag	FGGR Test Period	HP/LD	03/05/13
6	WAC Rev #		7.3						NULL	NULL	Y	10	HP/LD	03/05/13
7								Be mass<=100 kg	Be <= 1%	Be Present	Aqueous Material	Compacted Wst		
8	Cert Site		C8					Y	Y	Y	N	N	HP/LD	03/05/13
9	Cert Date		4-9-13											
10	Waste Handling Code		CH	CH, RH									HP/LD	03/05/13
11	Waste Type Code		MTRU	TRU, MTRU									HP/LD	03/05/13
12	Waste Stream BIR ID		IN-ID-RF-S3114										HP/LD	03/05/13
13	Waste Stream MWIR ID		NONE										HP/LD	03/05/13
14	Generator Site ID		RF										HP/LD	03/05/13
15	IDC Code		003										HP/LD	03/05/13
16	Matrix Code		S3114										HP/LD	03/05/13
17	Trucon Code	MR	ID212V	V									HP/LD	03/05/13
18	Shipping Category	4-9-13	4099990078	20		Likely FGGR error								
19	Tru Alpha Act	Ci	1.16E-02			1.165E-02							HP/LD	03/05/13
20	Tru Alpha Act Uncert	1sigma Ci	2.33E-03	1.626E-02	Tru Alpha Act + 2sigma (Ci)								HP/LD	03/05/13
21	Tru Alpha Act Conc	nCi/g	1.14E+02			1.14E+02							HP/LD	03/05/13
22			2.28E+01	1.596E+02	Tru Alpha Act Conc + 2sigma (Ci)			Drum Weight	28.6				HP/LD	03/05/13
23	Pu239 Fiss Gm Eq	g	9.62E-02			9.623E-02		Liner Weight	5.4				HP/LD	03/05/13
24	Pu239 Fiss Gm Eq Uncert	1sigma g	2.83E-02	1.528E-01	Pu239 Fiss Gm Eq + 2sigma (Ci)								HP/LD	03/05/13
25	Pu239 Eq Act	Ci	1.18E-02			1.182E-02							HP/LD	03/05/13
26	Decay Heat	watts	3.72E-04			3.719E-04							HP/LD	03/05/13
27	Decay Heat Uncert	1sigma watts	7.44E-05	4.46E-04	Decay Heat + 1sigma (watts)								HP/LD	03/05/13
28	Layers of Packaging	MR	01										HP/LD	03/05/13
29	Fill Factor	4-9-13	90	percentage	Liner Lid Present	N							HP/LD	03/05/13
30	Liner Type		1	1 = plastic drum liner									HP/LD	03/05/13
31	Liner Punctured		Y		Liner Hole Size	478							HP/LD	03/05/13
32	PCB Conc		NULL		(mm)		PCB Waste	PCB Mass (kg)	Out of Service				HP/LD	03/05/13
33	Closure Date		11/29/2012	Watt-years	Waste Gen Date		Y	102.4	11/29/2012				HP/LD	03/05/13
34	Vent Date		11/29/2012	0.000	NULL								HP/LD	03/05/13
35	Filter Install Date		11/29/2012				Filter Reduction Date	NULL					HP/LD	03/05/13
36	Filter Manufacturer		NFT				Reduced Filter Model	NULL					HP/LD	03/05/13
37													HP/LD	03/05/13
38	Filter Model Number		NF019D										HP/LD	03/05/13
39	Number of Filters Installed		1										HP/LD	03/05/13
40	Aspiration Method ID		T										HP/LD	03/05/13
41	Gas Gen Rate		1.02E-06	1.020E-06	<<Gas Gen Rate Calculated.									
42	Hydrogen/Methane Gen Rate		1.810E-07											
43	Gas Gen Comp Date		2/7/2011		Waste (kg)	Packaging (kg)	Total (kg)							
44	Gross Weight	kg	136.4		102.4	34.0	136.4						HP/LD	03/05/13
45	Gross Weight Uncert	1sigma kg	2.3										HP/LD	03/05/13
46	Alpha Surf Cont	dpm/100 cm^2	19										HP/LD	03/05/13
47	Beta/Gamma Surf Cont	dpm/100 cm^2	199										HP/LD	03/05/13
48	Neutron Dose Rate	mrem/hr	0.5										HP/LD	03/05/13
49	Beta/Gamma Dose Rate	mrem/hr	0.1										HP/LD	03/05/13
50	Radionuclide		SR-90	CS-137	U-233	U-234	U-235	NP-237	PU-238	U-238	PU-239	PU-240	HP/LD	03/05/13
51	Activity	Ci	-1.00E+00	-1.00E+00	-1.00E+00	-1.00E+00	0.00E+00	9.37E-08	1.67E-04	-1.00E+00	6.03E-03	1.34E-03	HP/LD	03/05/13
52	Activity Uncert	1sigma Ci	-1.00E+00	-1.00E+00	-1.00E+00	-1.00E+00	0.00E+00	2.94E-08	8.03E-05	-1.00E+00	1.78E-03	4.11E-04	HP/LD	03/05/13
53	Mass	grams	-1.00E+00	-1.00E+00	-1.00E+00	-1.00E+00	0.00E+00	1.31E-04	9.65E-06	-1.00E+00	9.59E-02	5.83E-03		
54	Mass Uncert	1sigma grams	-1.00E+00	-1.00E+00	-1.00E+00	-1.00E+00	0.00E+00	4.21E-05	4.74E-06	-1.00E+00	2.89E-02	1.82E-03		
55	calc Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.37E-08	1.67E-04	0.00E+00	6.03E-03	1.34E-03		
56	calc Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.15E-04	1.63E+00	0.00E+00	5.89E+01	1.31E+01		
57	calc Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.37E-08	1.67E-04	0.00E+00	6.03E-03	1.34E-03		
58	calc Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.15E-04	1.63E+00	0.00E+00	5.89E+01	1.31E+01		

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
59	calc Pu239 FGE	g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.97E-06	1.09E-06	0.00E+00	9.59E-02	1.31E-04		
60	calc Pu239 Eq Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.37E-08	1.52E-04	0.00E+00	6.03E-03	1.34E-03		
61	calc Decay Heat	watts	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.75E-09	5.53E-06	0.00E+00	1.87E-04	4.17E-05		
62	uncert Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.00E-08	8.19E-05	0.00E+00	1.82E-03	4.19E-04		
63	uncert Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.93E-04	8.00E-01	0.00E+00	1.77E+01	4.10E+00		
64	uncert Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.00E-08	8.19E-05	0.00E+00	1.82E-03	4.19E-04		
65	uncert Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.93E-04	8.00E-01	0.00E+00	1.77E+01	4.10E+00		
66	uncert Pu239 FGE	g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.31E-07	5.35E-07	0.00E+00	2.89E-02	4.10E-05		
67	uncert Pu239 Eq Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.94E-08	7.30E-05	0.00E+00	1.78E-03	4.11E-04		
68	uncert Decay Heat	watts	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.79E-10	2.71E-06	0.00E+00	5.63E-05	1.31E-05		
69	Shipping Calcs	2.19E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E-05	3.09E-02	0.00E+00	1.11E+00	2.48E-01		
70	49CFR173.433f		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.41%	0.00%	50.93%	11.38%		
71	Radionuclide		AM-241	PU-241	PU-242								HP/LD	03/05/13
72	Activity	Ci	4.11E-03	9.62E-03	1.74E-07								HP/LD	03/05/13
73	Activity Uncert	1sigma Ci	1.44E-03	3.35E-03	1.03E-07								HP/LD	03/05/13
74	Mass	grams	1.18E-03	9.25E-05	4.38E-05	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
75	Mass Uncert	1sigma grams	4.23E-04	3.29E-05	2.65E-05	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
76	calc Tru Alpha Act	Ci	4.11E-03	0.00E+00	1.74E-07	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
77	calc Tru Alpha Act Conc	nCi/g	4.01E+01	0.00E+00	1.70E-03	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
78	calc Act	Ci	4.11E-03	9.62E-03	1.74E-07	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
79	calc Act Conc	nCi/g	4.01E+01	9.39E+01	1.70E-03	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
80	calc Pu239 FGE	g	2.21E-05	2.08E-04	3.29E-07	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
81	calc Pu239 Eq Act	Ci	4.11E-03	1.89E-04	1.58E-07	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
82	calc Decay Heat	watts	1.37E-04	3.06E-07	5.13E-09	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
83	uncert Tru Alpha Act	Ci	1.47E-03	0.00E+00	1.05E-07	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
84	uncert Tru Alpha Act Conc	nCi/g	1.43E+01	0.00E+00	1.03E-03	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
85	uncert Act	Ci	1.47E-03	3.42E-03	1.05E-07	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
86	uncert Act Conc	nCi/g	1.43E+01	3.34E+01	1.03E-03	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
87	uncert Pu239 FGE	g	7.92E-06	7.40E-05	1.99E-07	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
88	uncert Pu239 Eq Act	Ci	1.44E-03	6.57E-05	9.36E-08	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
89	uncert Decay Heat	watts	4.91E-05	1.09E-07	3.10E-09	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
90	Shipping Calcs		7.60E-01	3.56E-02	3.22E-05	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
91	49CFR173.433f		34.71%	1.63%	0.00%	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
92	Waste Material Parameter		OI	R	PW	OS							HP/LD	03/05/13
93	Wgt of Mat Parms	kg	9	0.3	3.5	89.6							HP/LD	03/05/13
94	Radio Assay Method		14WAGS1	PAN, FRAM, TGS, HENC									HP/LD	03/05/13
95	Data Package Number		INNDAW120078										HP/LD	03/05/13
96	Assay Date		12/10/2012										HP/LD	03/05/13
97	Charz Method ID		14VE1	RTRM, VISUAL									HP/LD	03/05/13
98	Data Package Number		IN-SRP-VE-000005										HP/LD	03/05/13
99	Charz Method Date		11/29/2012										HP/LD	03/05/13
100	Haz Codes		D008	D022	D026	D027	D028	D029	D030	D032	D034	D036	HP/LD	03/05/13
101	Haz Codes		D037	F001	F002	F005							HP/LD	03/05/13
102	Haz Codes													
103	Haz Codes													
104	Sample ID	Headspace Gas H/M	H-SRP12038										HP/LD	03/05/13
105	Sample Type		HGHM-T	HGHM									HP/LD	03/05/13
106	Layer No. Sampled		0		294.9#								HP/LD	03/05/13
107	Date Sampled		1/8/2013			Sample Site							HP/LD	03/05/13
108	Method ID		14HG5	DTP-1.2-041		C8							HP/LD	03/05/13
109	Data Package Number		IN13FG5004										HP/LD	03/05/13
110	CAS #		1333-74-0	74-82-8										
111	Analyte		HYDROGEN	METHANE									HP/LD	03/05/13
112	Concentration				92.85	202.11							HP/LD	03/05/13
113	units	%vol			PPMV	PPMV							HP/LD	03/05/13
114	Date Analyzed		01/08/13	1/8/2013		2.5%= 2.32							HP/LD	03/05/13
115	B Detectable Flag													
116	D Detectable Flag													
117	E Detectable Flag													
118	J Detectable Flag													
119	U Detectable Flag			U									HP/LD	03/05/13
120	NA Detectable Flag		NA											
121	Methanol Sample ID		14HG5											
122	Sample ID	Headspace Gas VOC	SRP12038										HP/LD	03/05/13
123	Sample Type		HGVO-T	HGVO									HP/LD	03/05/13
124	Layer No. Sampled		0			SARP-Flammable VOCs (ppmv)	33.68						HP/LD	03/05/13
125	Date Sampled		1/8/2013										HP/LD	03/05/13
126	Method ID		14HG5	DTP-1.2-041									HP/LD	03/05/13
127	Data Package Number		IN13FG5004										HP/LD	03/05/13

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Windows XP

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
128														
129	CAS #		67-56-1	60-29-7	75-35-4	67-64-1	75-34-3	156-59-2	78-93-3	110-82-7			HP/LD	03/05/13
130	Analyte		Methanol	Ethyl ether	1,1-Dichloroethylene	Acetone	1,1-Dichloroethane	cis-1,2-Dichloroethylene	Methyl ethyl ketone	Cyclohexane				
131	Concentration		12.64	0.77	11.06	4.88	0.94	4.31	1.80	1.79			HP/LD	03/05/13
132	units	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv			HP/LD	03/05/13
133	Date Analyzed		1/8/2013	1/8/2013	1/8/2013	1/8/2013	1/8/2013	1/8/2013	1/8/2013	1/8/2013			HP/LD	03/05/13
134	B Detectable Flag													
135	D Detectable Flag													
136	E Detectable Flag													
137	J Detectable Flag													
138	U Detectable Flag		U	U		U	U		U	U			HP/LD	03/05/13
139	NA Detectable Flag				NA			NA						
140	SARP-Flammable Calc		6.32	0.385	11.06	2.44	0.47	4.31	0.9	0.895				
141	CAS #		71-43-2	107-06-2	71-36-3	108-10-1	108-88-3	108-90-7	100-41-4	108383/106423			HP/LD	03/05/13
142	Analyte		Benzene	1,2-Dichloroethane	Butanol	Methyl isobutyl ketone	Toluene	Chlorobenzene	Ethyl benzene	m-Xylene/p-Xylene				
143	Concentration		0.39	1.22	0.76	1.88	2.24	0.63	0.87	0.42			HP/LD	03/05/13
144	units	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv			HP/LD	03/05/13
145	Date Analyzed		1/8/2013	1/8/2013	1/8/2013	1/8/2013	1/8/2013	1/8/2013	1/8/2013	1/8/2013			HP/LD	03/05/13
146	B Detectable Flag													
147	D Detectable Flag													
148	E Detectable Flag													
149	J Detectable Flag													
150	U Detectable Flag			U	U	U		U	U	U			HP/LD	03/05/13
151	NA Detectable Flag		NA				NA							
152	SARP-Flammable Calc		0.39	0.61	0.38	0.94	2.24	0.315	0.435	0.21				
153	CAS #		95-47-6	108-67-8	95-63-6								HP/LD	03/05/13
154	Analyte		o-Xylene	1,3,5-Trimethylbenzen	1,2,4-Trimethylbenzen	NULL	NULL	NULL	NULL	NULL				
155	Concentration		0.54	0.99	1.23								HP/LD	03/05/13
156	units	ppmv	ppmv	ppmv	ppmv								HP/LD	03/05/13
157	Date Analyzed		1/8/2013	1/8/2013	1/8/2013	NULL	NULL	NULL	NULL	NULL			HP/LD	03/05/13
158	B Detectable Flag													
159	D Detectable Flag													
160	E Detectable Flag													
161	J Detectable Flag													
162	U Detectable Flag		U	U	U								HP/LD	03/05/13
163	NA Detectable Flag					NA	NA	NA	NA	NA				
164	SARP-Flammable Calc		0.27	0.495	0.615	NULL	NULL	NULL	NULL	NULL				
165	CAS #													
166	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
167	Concentration													
168	units	ppmv												
169	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
170	B Detectable Flag													
171	D Detectable Flag													
172	E Detectable Flag													
173	J Detectable Flag													
174	U Detectable Flag													
175	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
176	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
177	CAS #													
178	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
179	Concentration													
180	units	ppmv												
181	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
182	B Detectable Flag													
183	D Detectable Flag													
184	E Detectable Flag										WDS Master Template.xls Rev. 7			
185	J Detectable Flag										Addendum #7, SCO #1065			
186	U Detectable Flag										Excel 2003/2007 Microsoft			
187	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA	Windows XP			
188	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
189			type	comment										
190	Comment	1	GEN	PCB REMEDIATION WASTE									HP/LD	03/05/13
191	Comment													
192	Comment													
193	Comment													
194	Comment													
195	Comment													
196	Comment													
197	Comment													
198	Comment													
199	Comment													
200														
201			Requirements Met?											
202	Free liquids <1% by volume		YES											
203	No non-rad. pyrophorics		YES											
204	Chemical compatability		YES											
205	No explosives		YES											
206	No corrosives		YES											
207	No pressurized containers		YES											
208	No sealed Containers >4 liters		YES											
209	Liner punctured/ filtered		YES											
210	Flammable VOCs <500ppmv		Yes											
211	Container is in Approved Waste Stream Profile Form?	ID-RF-S3114	YES											
212	Can it be established through Process Knowledge that the concentration of flammable VOCs present in the headspace of the container is <= 500 ppm?.		NO											
213														
214														
215														
216														
217														
218														
219														
220														
221														
222														
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234														
235														

Mike Ramirez
CCP Certification Official

4-9-13
Date

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Attachment 4 – Flammable Gas Analysis Form

SCO 1049 Add 4 - Win XP SP3/Win 7 SP1
Excel 2003/2007/2010

Waste Container ID: **SRP12038**

BDR Number: **IN13FG5004**

Sampling Date: **1/8/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	92.85	
74-82-8	Methane	202.11	U
67-56-1	Methanol	12.64	U
60-29-7	Ethyl Ether	0.77	U
75-35-4	1,1-Dichloroethylene	11.06	
67-64-1	Acetone	4.88	U
75-34-3	1,1-Dichloroethane	0.94	U
156-59-2	cis-1,2-Dichloroethene	4.31	
78-93-3	Methyl ethyl ketone	1.80	U
110-82-7	Cyclohexane	1.79	U
71-43-2	Benzene	0.39	
107-06-2	1,2-Dichloroethane	1.22	U
71-36-3	1-Butanol	0.76	U
108-10-1	Methyl isobutyl ketone	1.88	U
108-88-3	Toluene	2.24	
108-90-7	Chlorobenzene	0.63	U
100-41-4	Ethylbenzene	0.87	U
108-38-3/106-42-3	m- and p-Xylene	0.42	U
95-47-6	o-Xylene	0.54	U
108-67-8	1,3,5-Trimethylbenzene	0.99	U
95-63-6	1,2,4-Trimethylbenzene	1.23	U

CAS Number	IDENTIFIED TIC COMPOUND	Est. Amount ppmv
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

BDR Number: IN13FG5004

Waste Container ID		8 Filter Model Number	9 Hydrogen Diffusivity of Filter (mol/s/mf)	10 Package Configuration Group Number	11 Closure Date	12 Vent Date	13 Required DAC Value (in days)	14 Drum Age (in days)	15 Can this container be sampled?
1	SRP12019	NucFil-019DS	1.85E-05	N/A	11/27/2012	11/27/2012	5	42	Y
2	SRP12027	NucFil-019DS	1.85E-05	N/A	11/27/2012	11/27/2012	5	42	Y
3	SRP12073	NucFil-019DS	1.85E-05	N/A	12/4/2012	12/4/2012	5	35	Y
4	SRP12022	NucFil-019DS	1.85E-05	N/A	11/27/2012	11/27/2012	5	42	Y
5	SRP12074	NucFil-019DS	1.85E-05	N/A	12/4/2012	12/4/2012	5	35	Y
6	SRP12028	NucFil-019DS	1.85E-05	N/A	11/27/2012	11/27/2012	5	42	Y
7	SRP12030	NucFil-019DS	1.85E-05	N/A	11/27/2012	11/27/2012	5	42	Y
8	SRP12076	NucFil-019DS	1.85E-05	N/A	12/4/2012	12/4/2012	5	35	Y
9	SRP12054	NucFil-019DS	1.85E-05	N/A	12/4/2012	12/4/2012	5	35	Y
10	SRP12017	NucFil-019DS	1.85E-05	N/A	11/27/2012	11/27/2012	5	42	Y
11	SRP12013	NucFil-019DS	1.85E-05	N/A	11/27/2012	11/27/2012	5	42	Y
12	SRP12015	NucFil-019DS	1.85E-05	N/A	11/28/2012	11/28/2012	5	41	Y
13	SRP12004	NucFil-019DS	1.85E-05	N/A	11/26/2012	11/26/2012	5	43	Y
14	SRP12029	NucFil-019DS	1.85E-05	N/A	11/28/2012	11/28/2012	5	41	Y
15	SRP12038	NucFil-019DS	1.85E-05	N/A	11/29/2012	11/29/2012	5	40	Y
16	SRP12034	NucFil-019DS	1.85E-05	N/A	11/28/2012	11/28/2012	5	41	Y
17	SRP12051	NucFil-019DS	1.85E-05	N/A	11/29/2012	11/29/2012	5	40	Y
18	SRP12043	NucFil-019DS	1.85E-05	N/A	11/28/2012	11/28/2012	5	41	Y
19	SRP12078	NucFil-019DS	1.85E-05	N/A	12/4/2012	12/4/2012	5	35	Y
20	SRP12007	NucFil-019DS	1.85E-05	N/A	11/26/2012	11/26/2012	5	43	Y

Operator: Aaron deBruyn Kops
Printed Name

Aaron deBruyn Kops
Signature

1-8-13
Date

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NDA 2000 Assay Report

********** Item Information **********

Item ID:	SRP12038		Count Sequence Number:	21264	
Operator:	AQ2\Operator				
Assay Start:	12/10/2012 11:54:30 AM				
Description 1:	INNDAW120078				
Description 2:	S3114				
Location:					
Comment:					
Matrix Type:	Default				
Container Type:	55 Gallon Drum				
Weight:	Gross:	102.0 kg	Net:	102.0 kg	
Container:	Volume:	208.0 l	Full:	90.0 %	
Density:		0.550 kg /l			

********** System Configuration **********

Counter:	WMF-610 AQ2
Count Type:	Assay - Solids/Soil
Collimator/Geometry Setting:	Default - 0

Errors quoted at 1.000 sigma

21 6

********** Radioassay Data Sheet **********

Engine Version: TMU Gamma 1.5

Count Sequence Number:	21264	Batch Number:	INNDAW120078
Assay Instrument:	WMF-610 AQ2	Location:	INL
Analysis Method:	CCP-TP-019 Rev 5	Software Version:	NDA 2000 V.4.0
Item ID:	SRP12038	Analysis Date:	12/10/2012

NID identified fiducial nuclide Pu-239
Source of isotopics: DECLARED

Net Weight	102000.0 g		
Pu mass	1.02E-001	+- 2.84E-002	g
TRU Alpha Activity	1.16E-002	+- 2.33E-003	Ci
TRU Activity Concentration	1.14E+002	+- 2.28E+001	nCi/g
Pu-239 Equivalent Activity	1.18E-002	+- 2.33E-003	Ci
Pu-239 FGE	9.62E-002	+- 2.83E-002	g
Decay heat	3.72E-004	+- 7.44E-005	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.18E-008
U233	<LLD	<LLD	0.00E+000	2.46E-004
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.48E-008
NP237	1.31E-004	9.37E-008	2.94E-008	3.48E-008
PU238	9.63E-006	1.67E-004	8.03E-005	1.14E-005
U238	<LLD	<LLD	0.00E+000	1.39E-006
PU239	9.58E-002	6.03E-003	1.78E-003	4.11E-004
PU240	5.82E-003	1.34E-003	4.11E-004	9.13E-005
AM241	1.18E-003	4.11E-003	1.44E-003	6.51E-006
PU241	9.26E-005	9.62E-003	3.35E-003	6.57E-004
PU242	4.38E-005	1.74E-007	1.03E-007	0.00E+000

Errors quoted at 1.000 sigma

Operator: Mary Carroll for C. Davis Date: 12/11/12

ITR: [signature] Date: 12/12/12

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21
12/12/12

Automated Independent Technical Review

Counter ID: WMF-610 AQ2
Container ID: SRP12038
Waste Matrix Code: S3114
Sequence Number: 21264

Count Type: Assay - Solids/Soil
Assay Date: 12/10/2012

MGA Analysis:
Results are marked as invalid.

DISPOSITION: High uncertainty for Pu-238 and Pu-241 in the MGA results and The measured and declared isotopics are inconsistent. Reanalyzed using DECLARED WG Pu isotopics. Results acceptable.

Gamma Analysis:
Analysis Status: No errors.

DISPOSITION: OK.

Miscellaneous:

DISPOSITION: OK.

Expert Review by: Bart B. Marak Date: 12/11/12

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP12038
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	LG
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000005
4. Examination Start Date:	11/29/12
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	504
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	220656
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12038							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				N/A	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12038							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	i. Other inorganic materials (OI)				9.0	N/A		15.0
30		j. Graphite			0.0	N/A		0.0
31			N/A		N/A	2.2		0.0
32			N/A		N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34			N/A		N/A	2.3		0.0
35			N/A		N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37			N/A		N/A	2.0		0.0
38			N/A		N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40			N/A		N/A	3.0		0.0
41			N/A		N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43			N/A		N/A	2.0 - 5.0	0.0	0.0
44			N/A		N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46			N/A		N/A	2.0		0.0
47			N/A		N/A	2.0		0.0
48		p. Inorganic sorbents			9.0	N/A		15.0
49			OIL-DRI ON TOP (WAIP)		9.0	0.1 - 2.8	0.6	15.0
50			N/A		N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52			N/A		N/A	0.0		0.0
53			N/A		N/A	0.0		0.0
54			N/A		N/A	0.0		0.0
55	r. Cellulosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57			N/A		N/A	0.9		0.0
58			N/A		N/A	0.9		0.0
59			N/A		N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61			N/A		N/A	0.8		0.0
62			N/A		N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64			N/A		N/A	1.0		0.0
65			N/A		N/A	1.0		0.0

	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003					
2	Container ID: SRP12038					
3	Section 2: Waste Material Parameter (WMP) Estimates					
4	9. Waste Material Parameter and Item Description		10. WMP Estimate	11. Density		12.Volume
5			By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)		0.3	N/A		0.3
67		RUBBER BANDS (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68		N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)		3.5	N/A		3.9
70		NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71		TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP OF OIL-DRI (WAIP)	1.4	0.9		1.6
72		PLASTIC TIGHTLY BOUND ON TOP OF OIL-DRI	2.1	0.9		2.3
73		N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)		89.6	N/A		74.7
75	x1. Sludge		89.6	N/A		74.7
76		OLIVE GRAY PUTTY LIKE SLUDGE WITH CALCIUM SILICATE	89.6	1.0 - 1.5	1.2	74.7
77		N/A	N/A	1.0 - 1.5	0.0	0.0
78		N/A	N/A	1.0 - 1.5	0.0	0.0
79	x2. Other (See Note a)		0.0	N/A		0.0
80		N/A	N/A	0.0		0.0
81		N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)		0.0	N/A		0.0
83	y1. Sludge		0.0	N/A		0.0
84		N/A	N/A	1.0 - 1.5	0.0	0.0
85		N/A	N/A	1.0 - 1.5	0.0	0.0
86		N/A	N/A	1.0 - 1.5	0.0	0.0
87	y2. Roaster Oxides		0.0	N/A		0.0
88		N/A	N/A	1.5 - 4.0	0.0	0.0
89		N/A	N/A	1.5 - 4.0	0.0	0.0
90		N/A	N/A	1.5 - 4.0	0.0	0.0
91	y3. Salt		0.0	N/A		0.0
92		N/A	N/A	0.0		0.0
93		N/A	N/A	0.0		0.0
94	y4. Other (See Note a)		0.0	N/A		0.0
95		N/A	N/A	0.0		0.0
96		N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)		0.0	N/A		0.0
98		N/A	N/A	1.0 - 1.4	0.0	0.0
99		N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL		102.4	N/A		93.9
101	13. (ORGANIC SLUDGE) weight (89.6) kg was obtained by subtracting the weighed waste weight of (12.8) kg and the container net weight of (34.0) kg from the gross weight (136.4) kg of the waste container. (136.4) - (12.8) - (34.0) = (89.6) kg					
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.					
103	b.	N/A				
104						

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12038	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12038	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	29.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	220656
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	724667
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	01/18/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1058
22. Measured gross weight of loaded container, fully assembled (kgs):	136.4
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	300.7
23. Container closure date (mm/dd/yy):	11/29/12
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	728706
b. Filter Torque Wrench Calibration Due Date:	02/01/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	EK-1762
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	90.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	102.4
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12038	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	4.2
31. Total volume of Solidified Organics (L):	74.7
32. Total volume of Solidified Inorganics (L):	15.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	93.9
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	87.5%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

L. VERLANIC	S. Verlanic	11-29-12
Enter Name	Signature	Date

Visual Examination Operator 2:

J. POOLE	J.S. Poole	11-29-12
Enter Name	Signature	Date

Visual Examination Expert:

L. GROVER		11/29/12
Enter Name	Signature	Date

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Attachment 1 – TDOP Loading Form

TDOP Inspection

TDOP Serial Number: 100931
TDOP Bar Code Number: BN10489113
Filter Model Number: N4CFIL-012/N4CFIL-019SDS
(Filter) Torque Wrench S/Ns: MTE 619 Cal Due Date: 10-05-13
(Lid Screws) Torque Wrench S/Ns: MTE 464 Cal Due Date: 02-01-14

Filter Serial Number	Installation Date
1. CK-229	05-03-13
2. GM-2306	05-03-13
3. GM-2307	05-03-13
4.	
5.	
6.	
7. NA	NA
8.	
9.	
10.	

Filters torqued: _____ Initials
Pipe plugs installed flush with body flange: _____ Initials

TDOP Loading

		Completed By Initial	Verified By Initial
Drum #s (Lower Tier)	SRP12259		
	SRP12074		
	SRP12246		
	SRP12060		
	SRP12067		
Drum #s (Upper Tier)	SRP12295		
	SRP12038		
	SRP12013		
	SRP12267		
	SRP12298		

TDOPs Loaded by:
Print Name BART JONES Sign _____ Date 05-03-13

TDOPs Verified by:
Print Name Jake Archibald Sign _____ Date 05/03/13

TDOP Lid Installation

Lid Screws (36) torqued to 50-55 ft-lbs in the sequence as specified in step 4.2.6[M] through 4.2.6[O] _____ Initials

Completed By: (Print, Sign, Date) BART JONES / _____ / 05-03-13

Sealing Area Visual Inspection Completed By: (Print, Sign, Date) BART JONES / _____ / 05-03-13

Supervisor/FLM Review By: (Print, Sign, Date) Mel Murdock / _____ / 05/03/13

AMWTP Advanced Mixed Waste Treatment Project

Radiological Survey Report and Map

Form-1129
Rev. 7
Effective: 05/02/12

Implementing Document: INST-RS&C-6.22.1

Survey ID #: S130 0 8 1 3
Purpose: TDOP
Building/Location: 635 General area
AMOW ☒ **PTW** ☐ **#:** N-0779
Date: 05/03/13 **Time:** 1055

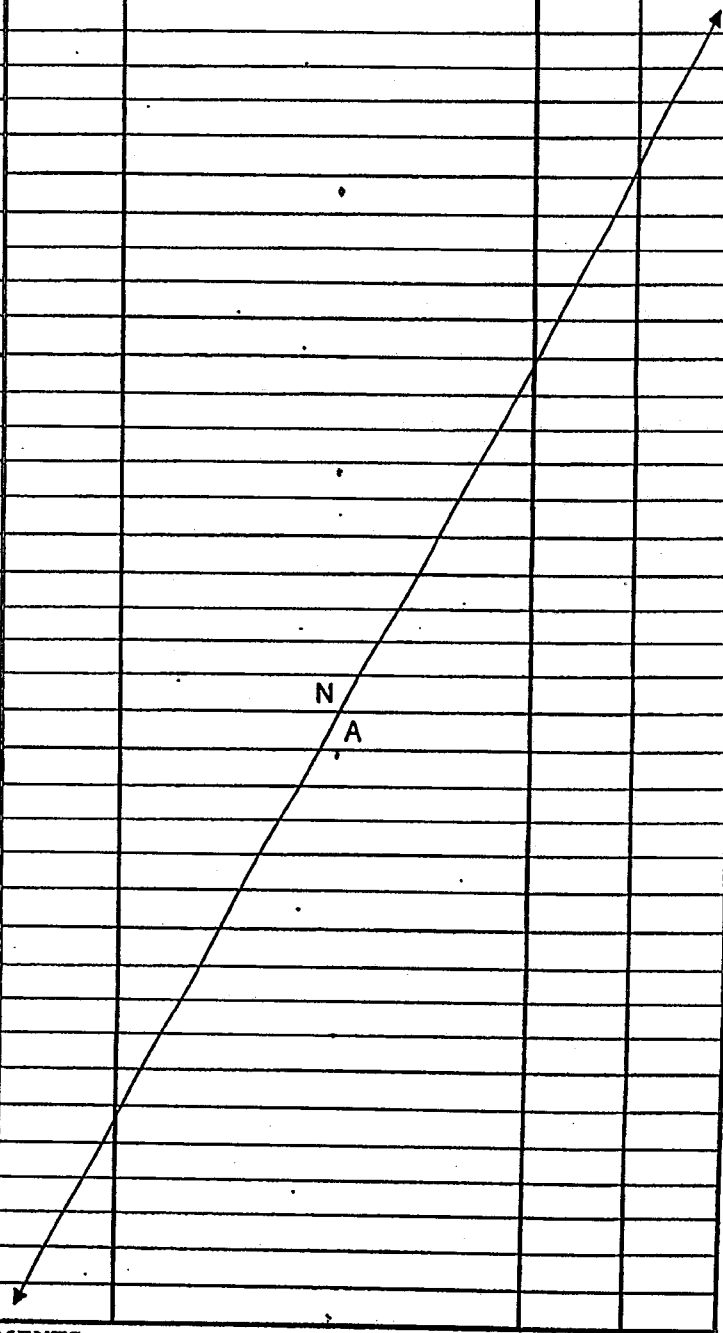
(Print Name)	(Signature)	(S #)
N/A	N/A	N/A
C.Gregersen		104508
N/A	N/A	N/A

INSTRUMENT DATA

Model:	3030			Model:	RO20		
Serial #:	852301			Serial #:	853199		
Cal. Due:	08/16/13			Cal. Due:	02/06/14		
Eff: α	32.2	β	36.0	Eff: α	N/A	β	N/A
Bkgd: α	0	β	128	Bkgd: α	N/A	β	N/A
mda: α	15	β	99	mda: α	N/A	β	N/A
MDDR:	N/A			MDDR:	0.1		
Model:	3030			Model:	ASP2e		
Serial #:	851944			Serial #:	851642		
Cal. Due:	03/20/14			Cal. Due:	12/04/13		
Eff: α	31.2	β	34.4	Eff: α	N/A	β	N/A
Bkgd: α	0	β	154	Bkgd: α	N/A	β	N/A
mda: α	16	β	102	mda: α	N/A	β	N/A
MDDR:	N/A			MDDR:	0.1 / 2.0		
Model:	3030			Model:	N/A		
Serial #:	851698			Serial #:	N/A		
Cal. Due:	09/12/13			Cal. Due:	N/A		
Eff: α	32.1	β	34.0	Eff: α	N/A	β	N/A
Bkgd: α	0	β	180	Bkgd: α	N/A	β	N/A
mda: α	15	β	102	mda: α	N/A	β	N/A
MDDR:	N/A			MDDR:	N/A		

General Notes:
Radiation surveys are performed at 30 cm from known source and recorded in **mrem/hr** unless otherwise noted. Swipes and direct scan results are recorded in **dpm/100 cm²**, if area surveyed is **<100 cm²**, results shall be recorded in **dpm/area**. Large area wipe survey results are recorded in **dpm/wipe** unless otherwise noted.

#	Location/Description	α	β
1 - 10	Swipes see map	< 20	< 200



COMMENTS:

BN 10489113
Swipes and dose rate surveys performed on top, bottom and sides of TDOP.
Survey points typical on TDOP.

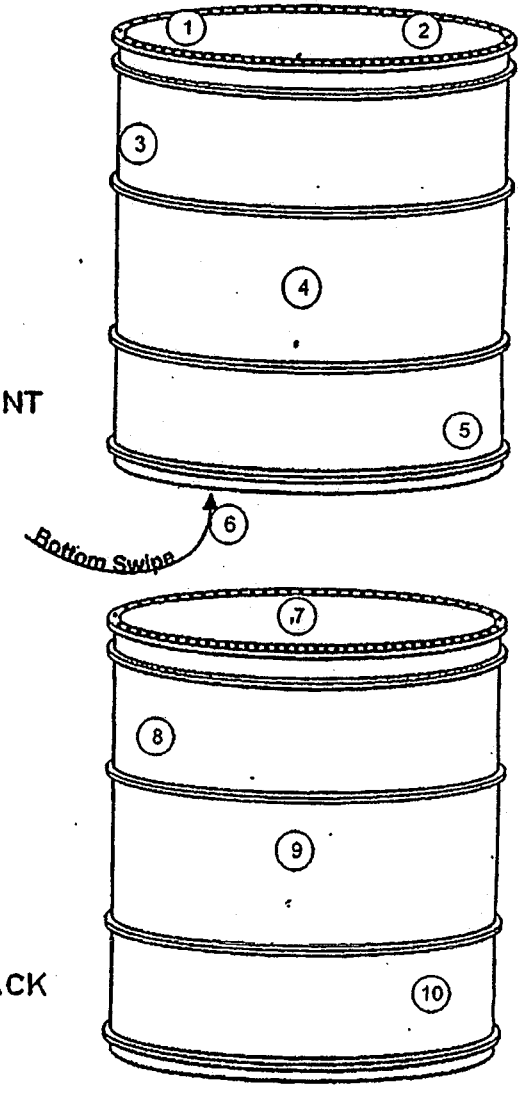
Reviewed by: _____ **Date:** 05/04/2013

Drawing Showing Survey Points

TEN DRUM OVERPACK

TDOP BN #
BN 1048 9113

Contact γ	Contact η	Contact Total
0.1	2	2.1
30 cm γ	**30 cm η**	**30 cm Total**
0.1	2	2.1
1 Meter γ	**1 Meter η**	**1 Meter Total**
0.1	2	2.1



Trupact # _____ **Payload #** _____ **Shipping #** _____

CA	Contamination Area	α	Alpha	x-x-x	Radiological Barrier (Specify)
HCA	High Contamination Area	β	Beta	L	Large Area Wipe
RA	Radiation Area	γ	Gamma	SOP	Step Off Pad
HRA	High Radiation Area	η	Neutron	☐	Direct Scan
RMA	Radioactive Material Area	O	Swipes	#/#	Gamma Over Neutron Dose Rate
ARA	Airborne Radioactivity Area	*	On Contact	#β	Beta Dose Rate
RBA	Radiation Buffer Area	Δ	Air Sampler Location	c	Contamination
CBA	Contamination Buffer Area			Other	

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Waste Isolation Pilot Plant
Overpack Data Report

Report Statistics

Report Version:	**2.2**
WDS Instance:	**prd05.wipp.carlsbad.nm.us**
Generated on:	**May 28, 2013 03:08 PM**
Generated by:	**KIRKES, CRETA**
Total Pages:	**7**

Selection Criteria

Container Number: **BN10489113**

Container: BN10489113
Type: 3 - TDOP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 05/06/2013
Waste Handling Code: CH
Disposal Date: 05/21/2013

Current Location Site: WI
Generator Site: RF
Destination Site ID: WI

Certification Program ID: C8
Shipping Program ID: BN

Neutron Dose Rate (mrem/hr): 2.0
Beta Gamma Dose Rate (mrem/hr): 0.1
Total Dose Rate (mrem/hr): 2.1

FGE (g): 4.313E00
FGE Uncertainty (g): 5.527E-01

Gross Weight (kg): 2156.38
Gross Weight Uncert (kg): 39.23

Decay Heat (W): 1.282E-02
Decay Heat Uncertainty (W): 1.147E-03

Shipment Data

Payload ID: **96882** Assembly ID: IN129078 Payload Complete? Y
Shipment Number: IN130072 Send Date: 05/14/2013 Receipt Date: 05/15/2013
Shipment Status: SHIPMENT RECEIVED AT DESTINATION

Emplacement Location

Panel: 6 Room: 3
Row: 109 Column: 3 Height: B

Certification Data Values

Waste Stream Profile Code: ID-RF-S3114
Waste Type Code: MTRU
IDC Code: 003
Waste Matrix Code: S3114
WAC Revision Number: 7.4
Fill Factor (%): 38.50

Transportation Data Values

Closure Date: 05/03/2013
Vent Date: 05/03/2013
Shipment Purpose: DISPOSAL
Machine Compacted? N

TRU Alpha Activity (Ci): 4.067E-01
TRU Alpha Activity Uncertainty (Ci): 3.681E-02
TRU Alpha Activity Concentration (Ci/g): 3.89E-07
PU-239 Equivalent Activity (PE-Ci): 4.142E-01
Alpha Surface Contamination (dpm/cm^2): 19.0
Beta/Gamma Surface Contamination (dpm/cm^2): 199.0

Filters

Filter Model Number	Filter Diffusivity (mol/s/ml)	Quantity	Install Date

Container: BN10489113
Type: 3 - TDOP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 05/06/2013

Waste Handling Code: CH
Disposal Date: 05/21/2013

PCB Waste? Y
PCB Mass (kg): 1045.4
PCB Concentration (ppm):
PCB Out of Service Date: 11/27/2012
Be Present? Y
Be <= 1% by weight? Y

Separation OK?
Governing Packing Fraction (compaction level): non-compacted

Filters

Filter Model Number	Filter Diffusivity (mol/s/ml)	Quantity	Install Date
NF012	1.9E-06	1	05/03/2013
NF19SD	1.85E-05	2	05/03/2013

Certification Comments

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
AM-241	7.129E-02	8.955E-03	2.054E-02	2.633E-03
CS-137	<LLD	<LLD	<LLD	<LLD
NP-237	1.333E-06	3.009E-07	1.869E-03	4.306E-04
PU-238	9.666E-03	1.806E-03	5.587E-04	1.065E-04
PU-239	2.665E-01	3.478E-02	4.237E00	5.643E-01
PU-240	5.906E-02	7.778E-03	2.568E-01	3.451E-02
PU-241	4.494E-01	5.972E-02	4.321E-03	5.859E-04
PU-242	5.560E-06	8.187E-07	1.401E-03	2.104E-04
SR-90	<LLD	<LLD	<LLD	<LLD
U-233	<LLD	<LLD	<LLD	<LLD
U-234	5.780E-06	1.986E-06	9.146E-04	3.206E-04

Container: BN10489113
Type: 3 - TDOP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 05/06/2013

Waste Handling Code: CH
Disposal Date: 05/21/2013

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
U-235	1.826E-07	3.654E-08	8.338E-02	1.702E-02
U-238	6.030E-06	1.371E-06	1.774E01	4.115E00

Material Parameters

Material Parameter	Description	Weight (kg)
1	IRON BASE METAL ALLOYS	286.00
4	OTHER INORGANIC MATERIALS	45.00
6	CELLULOSICS	0.80
7	RUBBER	3.00
8	PLASTICS	78.30
10	SOLIDIFIED ORGANIC MATERIAL	972.30
13	STEEL CONTAINER MATERIALS	770.98
	Waste Weight:	1385.40
	Packaging Weight:	770.98
	Total Material Weight:	2156.38

Hazardous Codes

Hazardous Code	Description
D008	LEAD
D022	CHLOROFORM
D026	CRESOL
D027	1,4-DICHLOROBENZENE

Container: BN10489113
Type: 3 - TDOP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 05/06/2013

Waste Handling Code: CH
Disposal Date: 05/21/2013

Hazardous Codes

Hazardous Code	Description
D028	1,2-DICHLOROETHANE
D029	1,1-DICHLOROETHYLENE
D030	2,4-DINITROTOLUENE
D032	HEXACHLOROBENZENE
D034	HEXACHLOROETHANE
D036	NITROBENZENE
D037	PENTACHLOROPHENOL
F001	SPENT HALOGENATED SOLVENTS
F002	SPENT HALOGENATED SOLVENTS
F005	SPENT NON-HALOGENATED SOLVENTS

Edit Limit Check Results

Evaluation Date: 05/06/2013 07:17:56 Overall Status: PASS

Evaluation Code	Status	Return Code	Detailed Description
DI_CERT_ALL	PASS		
DI_CERT_BE	PASS		
DI_CERT_CERT	PASS		
DI_CERT_CHARZ	PASS		
DI_CERT_ED	PASS		
DI_CERT_EPA	PASS		
DI_CERT_PCB	PASS		

Container: BN10489113
Type: 3 - TDOP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 05/06/2013

Waste Handling Code: CH
Disposal Date: 05/21/2013

Edit Limit Check Results

Evaluation Date: 05/06/2013 07:17:56 Overall Status: PASS

Evaluation Code	Status
DI_CERT_PERC	PASS
DI_CERT_TRAMPAC	PASS
DSA	PASS
WAC	PASS
WAP_CERT	PASS

TRAMPAC Evaluation Results

Evaluation Date: 05/06/2013 07:18:04 Overall Status: PASS

Evaluation Code	Status	Return Code	Detailed Description
OP_ALL	PASS		
OP_CFG	PASS		
OP_DDH	PASS		
OP_FGE	PASS		
OP_FIL	PASS		
OP_GVE	PASS		
OP_RDR	PASS		
OP_SHIP			
OP_TGRR	PASS		
OP_WGT	PASS		

Inner Containers

Container Number	Type Code	TRUCON Code	Shipping Category	Shipping Period	Gross Weight + Error	FGE + 2x Error	Waste Stream
SRP12013	19 - 55 gal TBO Solid/Vit Damaged	ID212V	4099990020	10	137.70	1.408E-1	ID-RF-S3114

Container: BN10489113
Type: 3 - TDOP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 05/06/2013

Waste Handling Code: CH
Disposal Date: 05/21/2013

Inner Containers

Container Number	Type Code	TRUCON Code	Shipping Category	Shipping Period	Gross Weight + Error	FGE + 2x Error	Waste Stream
SRP12038	19 - 55 gal TBO Solid/Vit Damaged	ID212V	4099990020	10	138.70	1.528E-1	ID-RF-S3114
SRP12060	19 - 55 gal TBO Solid/Vit Damaged	ID212V	4099990020	10	140.10	5.96E-1	ID-RF-S3114
SRP12067	19 - 55 gal TBO Solid/Vit Damaged	ID212V	4099990020	10	140.10	1.391E0	ID-RF-S3114
SRP12074	19 - 55 gal TBO Solid/Vit Damaged	ID212V	4099990020	10	148.10	6.57E-1	ID-RF-S3114
SRP12246	18 - 55 gal TBO Solid/Vitrified	ID212V	4099990020	10	143.30	2.13E0	ID-RF-S3114
SRP12259	18 - 55 gal TBO Solid/Vitrified	ID212V	4099990020	10	148.50	1.096E0	ID-RF-S3114
SRP12267	18 - 55 gal TBO Solid/Vitrified	ID212V	4099990020	10	136.70	2.28E-1	ID-RF-S3114
SRP12295	18 - 55 gal TBO Solid/Vitrified	ID212V	4099990020	10	139.50	3.252E-1	ID-RF-S3114
SRP12298	18 - 55 gal TBO Solid/Vitrified	ID212V	4099990020	10	135.70	2.44E-1	ID-RF-S3114

History

Event Date/Time	Event Description	Reason
05/06/2013 07:18:05	SUCCESSFUL SUBMISSION FOR CERT	
05/06/2013 07:50:19	APPROVED FOR CERT	
05/06/2013 09:00:25	ASSIGNED TO PAYLOAD	

DIVIDER PAGE

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-RF-S3150-A

Lot # 19

Container ID Number	Historical Container ID	NDA BDR	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Transportation Headspace Gas BDR				GGT BDR
								Sample	Analysis			
10005811	NA	INNDAS050052	INRTR2050067	NA	NA	NA	Yes	IN08FG1045	NA	NA	NA	NA
10016757	NA	INNDAS050117	INRTR2050160	NA	NA	NA	Yes	IN07FG1036	NA	NA	NA	NA
10016788	NA	INNDAW110134	INRTR5110091	NA	NA	NA	Yes	IN11FG10003	NA	NA	NA	NA
10017145	NA	INNDAS050170	INRTR5050082	NA	NA	NA	Yes	IN07FG1265	NA	NA	NA	NA
10017490	NA	INNDAW110142	INRTR5110094	NA	NA	NA	Yes	IN11FG9065	NA	NA	NA	NA
10017513	NA	INNDAW110134	INRTR5110091	NA	NA	NA	Yes	IN11FG10003	NA	NA	NA	NA
10017678	NA	INNDAW110134	INRTR5110091	NA	NA	NA	Yes	IN11FG9065	NA	NA	NA	NA
10017882	NA	INNDAW100216	INRTR5100087	NA	NA	NA	Yes	IN11FG6020	NA	NA	NA	NA
10018683	NA	INNDAW110159	INRTR5110099	NA	NA	NA	Yes	IN11FG9062	NA	NA	NA	NA
10018684	NA	INNDAW110159	INRTR5110099	NA	NA	NA	Yes	IN11FG9062	NA	NA	NA	NA
10018912	NA	INNDAW110142	INRTR5110094	NA	NA	NA	Yes	IN11FG10003	NA	NA	NA	NA
10308665	NA	INNDAW100171	INRTR5100057	NA	NA	NA	Yes	IN11FG6006	NA	NA	NA	NA

Signature of Site Project Manager

John Rovansek
Printed Name

12/6/2011
Date

CIS 805

Kirkes, Creta - NWP

From: Mueller, Terry - WTS
Sent: Tuesday, January 17, 2012 1:01 PM
To: Dominguez, Lena - WTS; Larson, David - WTS; Pettus, Helen - WTS; Sandate, Yoli - WTS; Soaterna, Carolina - WTS; Underwood, Luann - WTS; Valenzuela, Bobbie; Whiteaker, Roger - WTS
Cc: Gomez, Chris - WTS; Walker, Mak (Maryann) - WTS; Jones, Laura - WTS
Subject: FW: NCR/CAR Request for INL ID-RF-S3150-A LOT 19
Attachments: NCR_BDR_CONTAINER_CHECK_INL ID-RF-S3150-A Lot 19.xls

There are no NCR or CAR dispositions that impact the acceptability of these drums, alternate drum IDs, and associated BDRs for certification and shipping as listed on the attached. This check was verified independently.

Thanks!

Terry L. Mueller
WTS QA
Washington TRU Solutions, LLC
Contractor to the Department of Energy
MS GSA-103
***work* (575)-234-7016**
***fax* (575)-234-7042**

From: Sandate, Yoli - WTS
Sent: Tuesday, January 17, 2012 12:36 PM
To: Mueller, Terry - WTS; Gomez, Chris - WTS; Jones, Laura - WTS; Kantrowitz, Rich - WTS; Walker, Mak (Maryann) - WTS; Mireles, Jessica - WTS
Subject: NCR/CAR Request for INL ID-RF-S3150-A LOT 19

Please do an NCR/CAR check for INL ID-RF-S3150-A LOT 19

Thanks

Yoli Sandate
CCP/Certification
Retrieval, Characterization and Transportation
Washington TRU Solutions LLC
Contractor to the U.S. Department of Energy
Carlsbad, NM 88220
(575) 234-7520
Fax: 234-7056
yoli.sandate@wipp.ws

INL AK TRACKING SPREADSHEET (Vent and Closure Dates)

CONTAINERID	CONTAINER TYPE	WASTE STREAM	WASTE MATRIX CODE	CLOSURE DATE	VENT DATE
10017513	55G	ID-RF-S3150-A	S3150	8/25/1987	12/24/2001
SRP12038	55G	ID-RF-S3114	S3114	11/29/2012	11/29/2012

DIVIDER

PAGE

Waste Isolation Pilot Plant
Container Data Report

Report Statistics

Report Version:	**2.2**
WDS Instance:	**prd05.wipp.carlsbad.nm.us**
Generated on:	**June 04, 2013 02:32 PM**
Generated by:	**KIRKES, CRETA**
Total Pages:	**9**

Selection Criteria

Container Number: **10017513**

Container: 10017513
Type: 18 - 55 gal TBO Solid/Vitrified

Extended Status: APPROVED CERT IN APPROVED CERT OVERPACK EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 01/17/2012
Waste Handling Code: CH
Disposal Date: 07/28/2012

Current Location Site: WI
Generator Site: RF
Destination Site ID: WI

Certification Program ID: C8
Shipping Program ID: BN

Neutron Dose Rate (mrem/hr): 0.0
Beta Gamma Dose Rate (mrem/hr): 0.1
Total Dose Rate (mrem/hr): 0.1

FGE (g): 2.759E00
FGE Uncertainty (g): 1.191E00

Gross Weight (kg): 237.00
Gross Weight Uncert (kg): 2.30

Decay Heat (W): 7.785E-03
Decay Heat Uncertainty (W): 2.417E-03

Overpack Container: BN10441819
Overpack Type: TEN DRUM OVERPACK
Overpack Status: CERTIFICATION DATA APPROVED

Shipment Data

Payload ID: **96164** Assembly ID: IN116526 Payload Complete? Y
Shipment Number: IN120192 Send Date: 07/21/2012 Receipt Date: 07/22/2012
Shipment Status: SHIPMENT RECEIVED AT DESTINATION

Emplacement Location

Panel: 6 Room: 5
Row: 118 Column: 4 Height: B

Certification Data Values

Waste Stream Profile Code: ID-RF-S3150-A
Waste Type Code: MTRU
IDC Code: NONE
Waste Matrix Code: S3150
WAC Revision Number: 7.2
Fill Factor (%): 85.00
Waste Stream BIR ID: ID-W164.153
Waste Stream MWIR ID: NONE

TRU Alpha Activity (Ci): 2.48E-01
TRU Alpha Activity Uncertainty (Ci): 7.782E-02
TRU Alpha Activity Concentration (Ci/g): 1.228E-06
PU-239 Equivalent Activity (PE-Ci): 2.534E-01
Alpha Surface Contamination (dpm/cm^2): 19.0
Beta/Gamma Surface Contamination (dpm/cm^2): 199.0

Transportation Data Values

Closure Date: 08/25/1987
Vent Date: 12/24/2001
Process Knowledge? N

TRUCON Code: ID212K
Shipping Category: 4099990110
Aspiration Method: T

Shipment Purpose: DISPOSAL
Machine Compacted? N
Liner Exists? Y
Liner Hole Size(mm): 7.62
Liner Lid Present? Y
Layers of Packaging 2
Aqueous Material? N

Gas Generation Data Values

Measured FGGR (mol/s)	Measured TGRR (mol/s)	Truncated FGGR Test (Y/N)	Truncated FGGR Test Period (days)
3.14E-08	1.88E-06	Y	10

Container: 10017513
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Container Status: CERTIFICATION DATA APPROVED
Certification Date: 01/17/2012
Waste Handling Code: CH
Disposal Date: 07/28/2012

PCB Waste? N
PCB Mass (kg):
PCB Concentration (ppm):
PCB Out of Service Date:
Be Present? Y
Be <= 1% by weight? Y
Be mass <= 100kg? Y
Separation OK?
Packing Fraction (compaction level): non-compacted

Filters

Filter Model Number	Filter Diffusivity (mol/s/ml)	Quantity	Install Date
NF020	1.9E-06	1	12/24/2001

Certification Comments

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
AM-241	2.319E-02	1.018E-02	6.682E-03	2.993E-03
CS-137	<LLD	<LLD	<LLD	<LLD
NP-237	5.657E-07	2.708E-07	7.934E-04	3.876E-04
PU-238	1.134E-02	5.122E-03	6.554E-04	3.021E-04
PU-239	1.728E-01	7.492E-02	2.747E00	1.215E00
PU-240	4.065E-02	1.769E-02	1.767E-01	7.848E-02
PU-241	3.302E-01	1.439E-01	3.175E-03	1.412E-03
PU-242	3.005E-06	1.352E-06	7.569E-04	3.474E-04
SR-90	<LLD	<LLD	<LLD	<LLD
U-233	<LLD	<LLD	<LLD	<LLD
U-234	<LLD	<LLD	<LLD	<LLD

Container: 10017513
Type: 18 - 55 gal TBO Solid/Vitrified

Extended Status: APPROVED CERT IN APPROVED CERT OVERPACK EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 01/17/2012
Waste Handling Code: CH
Disposal Date: 07/28/2012

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
U-235	.000E00	.000E00	.000E00	.000E00
U-238	<LLD	<LLD	<LLD	<LLD

Samples

Labor Code	Sample ID	Sample Type Code	Sample Type Description	Sample Date	Layer Sampled
C8	10017513	HGVO-T	HEADSPACE GAS VOC	09/14/2011	0

Unique Samples

CAS Number	Analyte Description	Concentration (ppm)	Analysis Date	Analysis Method	Reporting Flags
100-41-4	ETHYL BENZENE	0.83	09/14/2011	14HG2	U
107-06-2	1,2-DICHLOROETHANE	0.29	09/14/2011	14HG2	U
108-10-1	METHYL ISOBUTYL KETONE	1.42	09/14/2011	14HG2	U
108-67-8	1,3,5-TRIMETHYLBENZENE	1.39	09/14/2011	14HG2	U
108-88-3	TOLUENE	0.81	09/14/2011	14HG2	U
108-90-7	CHLOROBENZENE	0.85	09/14/2011	14HG2	U
108383/106423	M,P-XYLENE	0.49	09/14/2011	14HG2	U
110-82-7	CYCLOHEXANE	0.94	09/14/2011	14HG2	U
156-59-2	CIS-1,2-DICHLOROETHYLENE	0.11	09/14/2011	14HG2	U
60-29-7	ETHYL ETHER	0.3	09/14/2011	14HG2	U
67-56-1	METHANOL	132.12	09/14/2011	14HG2	NA
67-64-1	ACETONE	13.6	09/14/2011	14HG2	NA
71-36-3	BUTANOL	0.89	09/14/2011	14HG2	U

Container: 10017513
Type: 18 - 55 gal TBO Solid/Vitrified

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Certification Date: 01/17/2012
Waste Handling Code: CH
Disposal Date: 07/28/2012

Samples

Labor Code	Sample ID	Sample Type Code	Sample Type Description	Sample Date	Layer Sampled
C8	10017513	HGVO-T	HEADSPACE GAS VOC	09/14/2011	0

Unique Samples

CAS Number	Analyte Description	Concentration (ppm)	Analysis Date	Analysis Method	Reporting Flags
71-43-2	BENZENE	0.13	09/14/2011	14HG2	U
75-34-3	1,1-DICHLOROETHANE	0.76	09/14/2011	14HG2	U
75-35-4	1,1-DICHLOROETHYLENE	0.36	09/14/2011	14HG2	U
78-93-3	METHYL ETHYL KETONE	1.16	09/14/2011	14HG2	U
95-47-6	O-XYLENE	0.72	09/14/2011	14HG2	U
95-63-6	1,2,4-TRIMETHYLBENZENE	1.52	09/14/2011	14HG2	U

Labor Code	Sample ID	Sample Type Code	Sample Type Description	Sample Date	Layer Sampled
C8	H-10017513	HGHM-T	HEADSPACE GAS HYDROGEN AND METHANE	09/14/2011	0

Unique Samples

CAS Number	Analyte Description	Concentration (ppm)	Analysis Date	Analysis Method	Reporting Flags
1333-74-0	HYDROGEN	291.2	09/14/2011	14HG2	NA
74-82-8	METHANE	92.95	09/14/2011	14HG2	U

Material Parameters

Material Parameter	Description	Weight (kg)
4	OTHER INORGANIC MATERIALS	7.00

Container: 10017513
Type: 18 - 55 gal TBO Solid/Vitrified

Extended Status: APPROVED CERT IN APPROVED CERT OVERPACK EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 01/17/2012
Waste Handling Code: CH
Disposal Date: 07/28/2012

Material Parameters

Material Parameter	Description	Weight (kg)
8	PLASTICS	1.00
10	SOLIDIFIED ORGANIC MATERIAL	193.90
13	STEEL CONTAINER MATERIALS	27.70
14	PLASTIC/LINERS CONTAINER MATERIALS	7.40
	Waste Weight:	201.90
	Packaging Weight:	35.10
	Total Material Weight:	237.00

Hazardous Codes

Hazardous Code	Description
D022	CHLOROFORM
D028	1,2-DICHLOROETHANE
D029	1,1-DICHLOROETHYLENE
D030	2,4-DINITROTOLUENE
D032	HEXACHLOROBENZENE
D034	HEXACHLOROETHANE
D036	NITROBENZENE
D043	VINYL CHLORIDE
F001	SPENT HALOGENATED SOLVENTS
F002	SPENT HALOGENATED SOLVENTS
F005	SPENT NON-HALOGENATED SOLVENTS

Container: 10017513
Type: 18 - 55 gal TBO Solid/Vitrified

Extended Status: APPROVED CERT IN APPROVED CERT OVERPACK EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 01/17/2012
Waste Handling Code: CH
Disposal Date: 07/28/2012

Assay Methods

Labor Code	Assay Method	Description	Assay Date
C8	14WAGS1	WASTE ASSAY GAMMA SPECTROMETER (WAGS)	08/09/2011

Non-Destructive Examination (NDE)

Labor Code	NDE Method	Description	Examination Date
C8	14RR2	RTR-5: MCS MOBILE RTR	08/08/2011

Edit Limit Check Results

Evaluation Date: 01/23/2012 09:40:05 Overall Status: PASS

Evaluation Code	Status	Return Code	Detailed Description
DI_CERT_ALL	PASS		
DI_CERT_BE	PASS		
DI_CERT_CERT	PASS		
DI_CERT_CHARZ	PASS		
DI_CERT_ED	PASS		
DI_CERT_EPA	PASS		
DI_CERT_PCB	PASS		
DI_CERT_PERC	PASS		
DI_CERT_TRAMPAC	PASS		
DSA	PASS		
WAC	PASS		
WAP_CERT	PASS		

Container: 10017513
Type: 18 - 55 gal TBO Solid/Vitrified

Extended Status: APPROVED CERT IN APPROVED CERT OVERPACK EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 01/17/2012
Waste Handling Code: CH
Disposal Date: 07/28/2012

TRAMPAC Evaluation Results

Evaluation Date: 01/23/2012 09:40:12 Overall Status: PASS

Evaluation Code	Status	Return Code	Detailed Description
CE_ACT	PASS		
CE_ALL	PASS		
CE_ASP	PASS		
CE_DDH	PASS		
CE_FGE	PASS		
CE_FIL	PASS		
CE_GVE	PASS		
CE_RDR	PASS		
CE_TRU	PASS		
CE_WGT	PASS		

Details

Matrix Depleted Shipping Category:		Compliance Method:	TESTING
Decay Heat Limit (w):		FGE Limit (g):	200
FGGR (mol/s):	3.14E-8	FGGR Limit (mol/s):	4.545454545454546E-8
Volume Model:		Required Aspiration Time (days):	
Total Headspace VOCs (ppm):	158.69		
Packaging Configuration:	COMMON_PACKAGING 3	DAC Scenario:	2
Closure Time (days):	5235	Minimum Closure Time Applied (days):	127
Sample-Vent Time (days):	3551	Min Sample-Vent Time Applied (days):	36
TFGVC in ICL (mol fr):		MLEL (mol fr):	0.05

History

Event Date/Time	Event Description	Reason
01/18/2012 10:49:10	INSERT DATA INTO THE DATABASE	

Container: 10017513
Type: 18 - 55 gal TBO Solid/Vitrified

Extended Status: APPROVED CERT IN APPROVED CERT OVERPACK EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 01/17/2012
Waste Handling Code: CH
Disposal Date: 07/28/2012

History

Event Date/Time	Event Description	Reason
01/18/2012 10:49:10	SUCCESSFUL SUBMISSION FOR CERT	
01/18/2012 10:50:19	APPROVED FOR CERT	
01/23/2012 09:39:56	RESET TO PRESUBMITTAL CERT	Change container type
01/23/2012 09:40:12	SUCCESSFUL SUBMISSION FOR CERT	
01/23/2012 09:41:30	APPROVED FOR CERT	
07/05/2012 14:35:14	ASSIGNED TO OVERPACK	
07/05/2012 14:36:01	ASSIGNED TO OVERPACK	
07/05/2012 14:36:20	ASSIGNED TO OVERPACK	
07/13/2012 11:57:31	ASSIGNED TO OVERPACK	

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	**WDS Master Template.xls Rev. 5 Addendum #5, SCO #1065 Excel 2003/2007 Microsoft Windows XP**	**Units**	**data**					**comments**					**initial**	**date**
2	Shipper Site ID	gb 1-17-12	BN	Location ID	Dest Program ID	Shipping Purpose				**10017513**			YS/LD	12/08/11
3	Waste Stream Profile		ID-RF-S3150-A	IN	WI	D							YS/LD	12/08/11
4	Container Number		10017513										YS/LD	12/08/11
5	Container Type	tbo good SW	drum	drum, swb, tdop, etc., see WWIS labels for valid types.					U-235 FEM	U-235 FEM Uncert	FGGR Flag	FGGR Test Period	YS/LD	12/08/11
6	WAC Rev #		7.2						NULL	NULL	Y	10	YS/LD	12/08/11
7								Be <=100 kg	Be <= 1%	Be Present	Aqueous Material	Compacted Wst		
8	Cert Site		C8					Y	Y	Y	N	N	YS/LD	12/08/11
9	Cert Date		1-17-12											
10	Waste Handling Code		CH	CH, RH									YS/LD	12/08/11
11	Waste Type Code		MTRU	TRU, MTRU									YS/LD	12/08/11
12	Waste Stream BIR ID		ID-W164.153										YS/LD	12/08/11
13	Waste Stream MWIR ID		NONE										YS/LD	12/08/11
14	Generator Site ID		RF										YS/LD	12/08/11
15	IDC Code		NONE										YS/LD	12/08/11
16	Matrix Code		S3150										YS/LD	12/08/11
17	Trucon Code		ID212K										YS/LD	12/08/11
18	Shipping Category		4099990110	> 0.012 Watt-years									YS/LD	12/08/11
19	Tru Alpha Act	Ci	2.48E-01		2.480E-01									
20	Tru Alpha Act Uncert	1sigma Ci	7.78E-02	4.036E-01	Tru Alpha Act + 2sigma (Ci)								YS/LD	12/08/11
21	Tru Alpha Act Conc	nCi/g	1.23E+03		1.23E+03								YS/LD	12/08/11
22			3.85E+02	1.998E+03	Tru Alpha Act Conc + 2sigma (Ci)			Drum Weight	27.7				YS/LD	12/08/11
23	Pu239 Fiss Gm Eq	g	2.76E+00		2.759E+00			Liner Weight	7.4				YS/LD	12/08/11
24	Pu239 Fiss Gm Eq Uncert	1sigma g	1.19E+00	5.141E+00	Pu239 Fiss Gm Eq + 2sigma (Ci)								YS/LD	12/08/11
25	Pu239 Eq Act	Ci	2.53E-01		2.534E-01								YS/LD	12/08/11
26	Decay Heat	watts	7.78E-03		7.784E-03								YS/LD	12/08/11
27	Decay Heat Uncert	1sigma watts	2.42E-03	1.02E-02	Decay Heat + 1sigma (watts)								YS/LD	12/08/11
28	Layers of Packaging		2										YS/LD	12/08/11
29	Fill Factor		85	percentage	Liner Lid Present	Y							YS/LD	12/08/11
30	Liner Type		1	1 = plastic drum liner									YS/LD	12/08/11
31	Liner Punctured		Y		Liner Hole Size (mm)	7.62							YS/LD	12/08/11
32	PCB Conc		NULL				PCB Waste	PCB Mass (kg)	Out of Service				YS/LD	12/08/11
33	Closure Date		8/25/1987	Watt-years	Waste Gen Date		N	NULL	NULL				YS/LD	12/08/11
34	Vent Date		12/24/2001	0.189	NULL								YS/LD	12/08/11
35	Filter Install Date		12/24/2001										YS/LD	12/08/11
36	Filter Manufacturer		NFT					Filter Reduction Date	NULL				YS/LD	12/08/11
37								Reduced Filter Model	NULL				YS/LD	12/08/11
38	Filter Model Number		NF020										YS/LD	12/08/11
39	Number of Filters Installed		1										YS/LD	12/08/11
40	Aspiration Method ID		T										YS/LD	12/08/11
41	Gas Gen Rate		1.88E-06	1.880E-06	**<<Gas Gen Rate Calculated.**									
42	Hydrogen/Methane Gen Rate		3.140E-08											
43	Gas Gen Comp Date		4/13/2006		Waste (kg)	Packaging (kg)	Total (kg)							
44	Gross Weight	kg	237		201.9	35.1	237.0						YS/LD	12/08/11
45	Gross Weight Uncert	1sigma kg	2.3										YS/LD	12/08/11
46	Alpha Surf Cont	dpm/100 cm^2	19										YS/LD	12/08/11
47	Beta/Gamma Surf Cont	dpm/100 cm^2	199										YS/LD	12/08/11
48	Neutron Dose Rate	mrem/hr	0										YS/LD	12/08/11
49	Beta/Gamma Dose Rate	mrem/hr	0.1										YS/LD	12/08/11
50	Radionuclide		SR-90	CS-137	U-233	U-234	U-235	NP-237	PU-238	U-238	PU-239	PU-240	YS/LD	12/08/11
51	Activity	Ci	-1.00E+00	-1.00E+00	-1.00E+00	-1.00E+00	0.00E+00	5.66E-07	1.13E-02	-1.00E+00	1.73E-01	4.06E-02	YS/LD	12/08/11
52	Activity Uncert	1sigma Ci	-1.00E+00	-1.00E+00	-1.00E+00	-1.00E+00	0.00E+00	2.71E-07	5.12E-03	-1.00E+00	7.49E-02	1.77E-02	YS/LD	12/08/11
53	Mass	grams	-1.00E+00	-1.00E+00	-1.00E+00	-1.00E+00	0.00E+00	7.93E-04	6.55E-04	-1.00E+00	2.75E+00	1.77E-01		
54	Mass Uncert	1sigma grams	-1.00E+00	-1.00E+00	-1.00E+00	-1.00E+00	0.00E+00	3.88E-04	3.02E-04	-1.00E+00	1.22E+00	7.85E-02		
55	calc Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.66E-07	1.13E-02	0.00E+00	1.73E-01	4.06E-02		
56	calc Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-03	5.62E+01	0.00E+00	8.56E+02	2.01E+02		
57	calc Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.66E-07	1.13E-02	0.00E+00	1.73E-01	4.06E-02		
58	calc Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-03	5.62E+01	0.00E+00	8.56E+02	2.01E+02		

COPY

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
59	calc Pu239 FGE	g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.19E-05	7.41E-05	0.00E+00	2.75E+00	3.98E-03		
60	calc Pu239 Eq Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.66E-07	1.03E-02	0.00E+00	1.73E-01	4.06E-02		
61	calc Decay Heat	watts	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.66E-08	3.76E-04	0.00E+00	5.36E-03	1.27E-03		
62	uncert Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.76E-07	5.23E-03	0.00E+00	7.64E-02	1.81E-02		
63	uncert Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-03	2.59E+01	0.00E+00	3.79E+02	8.94E+01		
64	uncert Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.76E-07	5.23E-03	0.00E+00	7.64E-02	1.81E-02		
65	uncert Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-03	2.59E+01	0.00E+00	3.79E+02	8.94E+01		
66	uncert Pu239 FGE	g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.81E-06	3.41E-05	0.00E+00	1.22E+00	1.77E-03		
67	uncert Pu239 Eq Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.71E-07	4.66E-03	0.00E+00	7.49E-02	1.77E-02		
68	uncert Decay Heat	watts	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.10E-09	1.73E-04	0.00E+00	2.37E-03	5.62E-04		
69	Shipping Calcs	4.71E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-04	2.10E+00	0.00E+00	3.19E+01	7.51E+00		
70	49CFR173.433f		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.45%	0.00%	67.88%	15.96%		
71	Radionuclide		AM-241	PU-241	PU-242									
72	Activity	Ci	2.32E-02	3.30E-01	3.00E-06								YS/LD	12/08/11
73	Activity Uncert	1sigma Ci	1.02E-02	1.44E-01	1.35E-06								YS/LD	12/08/11
74	Mass	grams	6.68E-03	3.17E-03	7.57E-04	NULL	NULL	NULL	NULL	NULL	NULL	NULL	YS/LD	12/08/11
75	Mass Uncert	1sigma grams	2.99E-03	1.41E-03	3.47E-04	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
76	calc Tru Alpha Act	Ci	2.32E-02	0.00E+00	3.00E-06	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
77	calc Tru Alpha Act Conc	nCi/g	1.15E+02	0.00E+00	1.49E-02	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
78	calc Act	Ci	2.32E-02	3.30E-01	3.00E-06	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
79	calc Act Conc	nCi/g	1.15E+02	1.64E+03	1.49E-02	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
80	calc Pu239 FGE	g	1.25E-04	7.14E-03	5.68E-06	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
81	calc Pu239 Eq Act	Ci	2.32E-02	6.47E-03	2.73E-06	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
82	calc Decay Heat	watts	7.75E-04	1.05E-05	8.86E-08	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
83	uncert Tru Alpha Act	Ci	1.04E-02	0.00E+00	1.38E-06	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
84	uncert Tru Alpha Act Conc	nCi/g	5.14E+01	0.00E+00	6.83E-03	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
85	uncert Act	Ci	1.04E-02	1.47E-01	1.38E-06	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
86	uncert Act Conc	nCi/g	5.14E+01	7.27E+02	6.83E-03	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
87	uncert Pu239 FGE	g	5.60E-05	3.18E-03	2.61E-06	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
88	uncert Pu239 Eq Act	Ci	1.02E-02	2.82E-03	1.23E-06	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
89	uncert Decay Heat	watts	3.47E-04	4.67E-06	4.06E-08	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
90	Shipping Calcs		4.29E+00	1.22E+00	5.55E-04	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
91	49CFR173.433f		9.11%	2.60%	0.00%	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
92	Waste Material Parameter		OI	PW	OS									
93	Wgt of Mat Parms	kg	7	1	193.9								YS/LD	12/08/11
94	Radio Assay Method		14WAGS1	PAN, FRAM, TGS, HENC									YS/LD	12/08/11
95	Data Package Number		INNDAW110134										YS/LD	12/08/11
96	Assay Date		8/9/2011										YS/LD	12/08/11
97	Charz Method ID		14RR2	RTRM, VISUAL									YS/LD	12/08/11
98	Data Package Number		INRTR5110091										YS/LD	12/08/11
99	Charz Method Date		8/8/2011										YS/LD	12/08/11
100	Haz Codes		D022	D028	D029	D030	D032	D034	D036	D043	F001	F002	YS/LD	12/08/11
101	Haz Codes		F005										YS/LD	12/08/11
102	Haz Codes													
103	Haz Codes													
104	Sample ID	Headspace Gas H/M	[illegible]											
105	Sample Type		HGHM-T	HGHM									YS/LD	12/08/11
106	Layer No. Sampled		0		384.15								YS/LD	12/08/11
107	Date Sampled		9/14/2011	2 90 1-18-12		Sample Site							YS/LD	12/08/11
108	Method ID		14HG10	DTP-1.2-041		C8							YS/LD	12/08/11
109	Data Package Number		IN11FG10003										YS/LD	12/08/11
110	CAS #		1333-74-0	74-82-8										
111	Analyte		HYDROGEN	METHANE									YS/LD	12/08/11
112	Concentration				291.2	92.95							YS/LD	12/08/11
113	units	%vol			PPMV	PPMV							YS/LD	12/08/11
114	Date Analyzed		09/14/11	[illegible]		2.5%= 7.28							YS/LD	12/08/11
115	B Detectable Flag													
116	D Detectable Flag													
117	E Detectable Flag													
118	J Detectable Flag													
119	U Detectable Flag			U										
120	NA Detectable Flag		NA										YS/LD	12/08/11
121	Methanol Sample ID		14HG10											
122	Sample ID	Headspace Gas VOC	10017513											
123	Sample Type		HGVO-T	HGVO									YS/LD	12/08/11
124	Layer No. Sampled		0										YS/LD	12/08/11
125	Date Sampled		[illegible]			SARP-Flammable VOCs (ppmv)	152.205						YS/LD	12/08/11
126	Method ID		14HG10	DTP-1.2-041									YS/LD	12/08/11
127	Data Package Number		IN11FG10003										YS/LD	12/08/11

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N
128														
129	CAS #		67-56-1	60-29-7	75-35-4	67-64-1	75-34-3	156-59-2	78-93-3	110-82-7				
130	Analyte		Methanol	Ethyl ether	1,1-Dichloroethylene	Acetone	1,1-Dichloroethane	cis-1,2-Dichloroethylene	Methyl ethyl ketone	Cyclohexane			YS/LD	12/08/11
131	Concentration		132.12	0.30	0.36	13.60	0.76	0.11	1.16	0.94			YS/LD	12/08/11
132	units	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv			YS/LD	12/08/11
133	Date Analyzed		9/14/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011			YS/LD	12/08/11
134	B Detectable Flag													
135	D Detectable Flag													
136	E Detectable Flag													
137	J Detectable Flag													
138	U Detectable Flag			U	U		U	U	U	U			YS/LD	12/08/11
139	NA Detectable Flag		NA			NA								
140	SARP-Flammable Calc		132.12	0.15	0.18	13.6	0.38	0.055	0.58	0.47				
141	CAS #		71-43-2	107-06-2	71-36-3	108-10-1	108-88-3	108-90-7	100-41-4	108383/106423			YS/LD	12/08/11
142	Analyte		Benzene	1,2-Dichloroethane	Butanol	Methyl isobutyl ketone	Toluene	Chlorobenzene	Ethyl benzene	m-Xylene/p-Xylene				
143	Concentration		0.13	0.29	0.89	1.42	0.81	0.85	0.83	0.49			YS/LD	12/08/11
144	units	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv			YS/LD	12/08/11
145	Date Analyzed		9/14/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011			YS/LD	12/08/11
146	B Detectable Flag													
147	D Detectable Flag													
148	E Detectable Flag													
149	J Detectable Flag													
150	U Detectable Flag		U	U	U	U	U	U	U	U			YS/LD	12/08/11
151	NA Detectable Flag													
152	SARP-Flammable Calc		0.065	0.145	0.445	0.71	0.405	0.425	0.415	0.245				
153	CAS #		95-47-6	108-67-8	95-63-6								YS/LD	12/08/11
154	Analyte		o-Xylene	1,3,5-Trimethylbenzen	1,2,4-Trimethylbenzen	NULL	NULL	NULL	NULL	NULL				
155	Concentration		0.72	1.39	1.52								YS/LD	12/08/11
156	units	ppmv	ppmv	ppmv	ppmv								YS/LD	12/08/11
157	Date Analyzed		9/14/2011	9/14/2011	9/14/2011	NULL	NULL	NULL	NULL	NULL			YS/LD	12/08/11
158	B Detectable Flag													
159	D Detectable Flag													
160	E Detectable Flag													
161	J Detectable Flag													
162	U Detectable Flag		U	U	U								YS/LD	12/08/11
163	NA Detectable Flag					NA	NA	NA	NA	NA				
164	SARP-Flammable Calc		0.36	0.695	0.76	NULL	NULL	NULL	NULL	NULL				
165	CAS #													
166	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
167	Concentration													
168	units	ppmv												
169	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
170	B Detectable Flag													
171	D Detectable Flag													
172	E Detectable Flag													
173	J Detectable Flag													
174	U Detectable Flag													
175	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
176	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
177	CAS #													
178	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
179	Concentration													
180	units	ppmv												
181	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
182	B Detectable Flag													
183	D Detectable Flag													
184	E Detectable Flag										WDS Master Template.xls Rev. 5			
185	J Detectable Flag										Addendum #5, SCO #1065			
186	U Detectable Flag										Excel 2003/2007 Microsoft			
187	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA	Windows XP			
188	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				

	A	B	C	D
189			type	comment
190	Comment			
191	Comment			
192	Comment			
193	Comment			
194	Comment			
195	Comment			
196	Comment			
197	Comment			
198	Comment			
199	Comment			
200				
201			Requirements Met?	
202	Free liquids <1% by volume		YES	
203	No non-rad. pyrophorics		YES	
204	Chemical compatability		YES	
205	No explosives		YES	
206	No corrosives		YES	
207	No pressurized containers		YES	
208	No sealed Containers >4 liters		YES	
209	Liner punctured/ filtered		YES	
210	Flammable VOCs <500ppmv		Yes	
211	Container is in Approved Waste Stream Profile Form?	ID-RF-S3150-A	YES	
212	Can it be established through Process Knowledge that the concentration of flammable VOCs present in the headspace of the container is <= 500 ppm?.		NO	
213				
214				
215				
216				
217				
218				
219				
220	CCP Certification Official			Date 1-17-12
221				
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Attachment 4 – Flammable Gas Analysis Form SCO 1049 Addendum 2 Windows XP SP3 - Excel 2003

Waste Container ID: **10017513**

BDR Number: **IN11FG10003**

Sampling Date: **9/14/2011**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	291.20	
74-82-8	Methane	92.95	U
67-56-1	Methanol	132.12	
60-29-7	Ethyl Ether	0.30	U
75-35-4	1,1-Dichloroethylene	0.36	U
67-64-1	Acetone	13.60	
75-34-3	1,1-Dichloroethane	0.76	U
156-59-2	cis-1,2-Dichloroethene	0.11	U
78-93-3	Methyl ethyl ketone	1.16	U
110-82-7	Cyclohexane	0.94	U
71-43-2	Benzene	0.13	U
107-06-2	1,2-Dichloroethane	0.29	U
71-36-3	1-Butanol	0.89	U
108-10-1	Methyl isobutyl ketone	1.42	U
108-88-3	Toluene	0.81	U
108-90-7	Chlorobenzene	0.85	U
100-41-4	Ethylbenzene	0.83	U
108-38-3/106-42-3	m- and p-Xylene	0.49	U
95-47-6	o-Xylene	0.72	U
108-67-8	1,3,5-Trimethylbenzene	1.39	U
95-63-6	1,2,4-Trimethylbenzene	1.52	U

CAS Number	IDENTIFIED TIC COMPOUND	Est. Amount ppmv
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

BDR Number: IN11FG10003

Waste Container ID		8 Filter Model Number	9 Hydrogen Diffusivity of Filter (mol/s/mf)	10 Package Configuration Group Number	11 Closure Date	12 Vent Date	13 Required DAC Value (in days)	14 Drum Age (in days)	15 Can this container be sampled?
1	10242723	NucFil-020DS	1.90E-06	N/A	1/17/1972	8/22/2008	36	1118	Y
2	10133090	NucFil-020	1.90E-06	N/A	8/20/1975	12/27/2006	36	1722	Y
3	10333575	NucFil-7DS	3.70E-06	N/A	10/11/1971	1/19/2010	18	603	Y
4	10413854	NucFil-019SDS	1.85E-05	1	7/18/2011	7/18/2011	4	58	Y
5	10022326	NucFil-019SDS	1.85E-05	1	9/20/2009	9/20/2009	4	724	Y
6	10414921	NucFil-019SDS	1.85E-05	1	7/25/2011	7/25/2011	4	51	Y
7	10007871	NucFil-019SDS	1.85E-05	1	6/30/2011	6/30/2011	4	76	Y
8	10415084	NucFil-019SDS	1.85E-05	1	8/2/2011	8/2/2011	4	43	Y
9	10018912	NucFil-020	1.90E-06	N/A	6/5/2004	1/6/2005	22	2442	Y
10	10045831	NucFil-019SDS	1.85E-05	1	7/3/2011	7/3/2011	4	73	Y
11	10413148	NucFil-019SDS	1.85E-05	1	7/9/2011	7/9/2011	4	67	Y
12	10416068	NucFil-019SDS	1.85E-05	1	8/2/2011	8/2/2011	4	43	Y
13	10416154	NucFil-019SDS	1.85E-05	1	8/3/2011	8/3/2011	4	42	Y
14	10017513	NucFil-020	1.90E-06	N/A	8/25/1987	12/24/2001	36	3551	Y
15	10016788	NucFil-019SDS	1.85E-05	1	11/7/2009	11/7/2009	4	676	Y
16	10414812	NucFil-019SDS	1.85E-05	1	7/24/2011	7/24/2011	4	52	Y
17	10414780	NucFil-019SDS	1.85E-05	1	7/24/2011	7/24/2011	4	52	Y
18	10414411	NucFil-019SDS	1.85E-05	1	7/21/2011	7/21/2011	4	55	Y
19	10413165	NucFil-019SDS	1.85E-05	1	7/9/2011	7/9/2011	4	67	Y
20	10414923	NucFil-019SDS	1.85E-05	1	7/25/2011	7/25/2011	4	51	Y

Operator: Richard Jagielski
Printed Name

Signature

9/14/11
Date

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NDA 2000 Assay Report

********** Item Information **********

Item ID:	10017513	Count Sequence Number:	19281
Operator:	AQ2\Operator		
Assay Start:	8/9/2011 12:25:25 PM		
Description 1:	INNDAW110134		
Description 2:	S3150		
Location:			
Comment:			
Matrix Type:	Default		
Container Type:	55 Gallon Drum		
Weight:	Gross: 202.0 kg	Net:	202.0 kg
Container:	Volume: 208.0 l	Full:	85.0 %
Density:	1.140 kg /l		

********** System Configuration **********

Counter:	WMF-610 AQ2
Count Type:	Assay - Solids/Soil
Collimator/Geometry Setting:	Default - 0

Errors quoted at 1.000 sigma

********** Radioassay Data Sheet **********

Engine Version: TMU Gamma 1.5

Count Sequence Number:	19281	Batch Number:	INNDAW110134
Assay Instrument:	WMF-610 AQ2	Location:	INL
Analysis Method:	CCP-TP-019 Rev 5	Software Version:	NDA 2000 V.4.0
Item ID:	10017513	Analysis Date:	8/9/2011

NID identified fiducial nuclide Pu-239
Source of isotopics: MEASURED

Net Weight	202000.0 g		
Pu mass	2.93E+000 +-	1.19E+000	g
TRU Alpha Activity	2.48E-001 +-	7.78E-002	Ci
TRU Activity Concentration	1.23E+003 +-	3.85E+002	nCi/g
Pu-239 Equivalent Activity	2.53E-001 +-	7.78E-002	Ci
Pu-239 FGE	2.76E+000 +-	1.19E+000	g
Decay heat	7.78E-003 +-	2.42E-003	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	2.05E-008
U233	<LLD	<LLD	0.00E+000	1.40E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.27E-007
NP237	7.92E-004	5.66E-007	2.71E-007	8.75E-009
PU238	6.55E-004	1.13E-002	5.12E-003	1.75E-004
U238	<LLD	<LLD	0.00E+000	1.45E-006
PU239	2.75E+000	1.73E-001	7.49E-002	2.67E-003
PU240	1.77E-001	4.06E-002	1.77E-002	6.29E-004
AM241	6.68E-003	2.32E-002	1.02E-002	2.58E-005
PU241	3.18E-003	3.30E-001	1.44E-001	5.11E-003
PU242	7.57E-004	3.00E-006	1.35E-006	0.00E+000

Errors quoted at 1.000 sigma

Operator: Jim Law for H. Elwood Date: 8/10/11

ITR: Kristina Colby Date: 8/11/11

Automated Independent Technical Review

Counter ID: WMF-610 AQ2 Count Type: Assay - Solids/Soil
Container ID: 10017513 Assay Date: 8/9/2011
Waste Matrix Code: S3150
Sequence Number: 19281

MGA Analysis:

DISPOSITION: MGA Analysis acceptable using MEASURED isotopics.

Gamma Analysis:

Analysis Status: No errors.
Spectrum Validity Check engine has suggested data review.

DISPOSITION: Gamma Analysis acceptable using MEASURED isotopics.
Spectrum Validity Check engine warning due to Peak Fit Test failed: chi-square exceeds limit of 3.0 in Summed Segment. Used IPF to refit multiple gamma peaks over range of spectra. Reanalyzed Entire Count. All Multiplets containing Fiducial peaks now have chi-square values <3.0

Miscellaneous:

DISPOSITION: NO U-235 identified in gamma spectra.
NO U-238 identified in gamma spectra.

Expert Review by: _____ Date: 8-10-2011

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Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5110091
Examination Date:	8/8/11
Waste Container ID:	10017513
Video/Audio Recorded Media Number:	INRTR5110091 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	ID 112/212, SQ 154
Waste Matrix Code:	S3150
Waste Stream I.D.:	ID-RF-S3150-A
Waste Container Weights:	Gross Wt: 237.0 kg. Tare Wt: 35.1 kg. Net Wt: 201.9 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	90mil Liner - Vented
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	85 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10017513

Section 3: Container Inventory and Comments (Detailed descriptions)
Absorbent Plastic bags Sludge

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	7.4
Others:	
Total Packaging Weight:	35.1
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	7.0
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	1.0
Organic Matrix (OR):	193.9
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	201.9

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10017513

Section 5: RTR Summary (Questions answered "YES" will be explained in the Comments block, except for Question 1.)	Yes	No
Is there observable liquid?	☐	☑
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
CH or RH TRAMPAC		
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: N/A

RTR Operator:

Tyson Christensen	Tyson Christensen	8/8/11
Print Name	Signature	Date

DIVIDER PAGE

Attachment 1 – TDOP Loading Form Page 1 of 1

TDOP Inspection

TDOP Serial Number: 100977
TDOP Bar Code Number: BN10441819
Filter Model Number: Nucfil-019505/Nucfil-012
(Filter) Torque Wrench S/Ns: MTE-446 Cal Due Date: 01/15/13
(Lid Screws) Torque Wrench S/Ns: MTE-464 Cal Due Date: 01/15/13

Filter Serial Number	Installation Date
1. FL-2043	07/12/12
2. FL-2038	07/12/12
3. EK-342	07/12/12
4.	
5.	
6.	
7.	
8.	
9.	
10.	

Filters torqued: JB Initials
Pipe plugs installed flush with body flange: JB Initials

TDOP Loading

		Completed By Initial	Verified By Initial
Drum #s (Lower Tier)	100185 94 ✓	JB	
	100186 84 ✓	JB	
	100186 95 ✓	JB	
	100183 20 ✓	JB	
	100167 66 ✓	JB	
Drum #s (Upper Tier)	BN100171 32 ✓	JB	
	100175 13 ✓	JB	
	100174 90 ✓	JB	
Arrange ←	BN10449293	JB	
	BN10449298	JB	

TDOPs Loaded by:
Print Name John Baker Sign JB Date 07/12/12

TDOPs Verified by:
Print Name Bart Jones Sign Bart Jones Date 07-12-12

TDOP Lid Installation

Lid Screws (36) torqued to 50-55 ft-lbs in the sequence as specified in step 4.2.6[M] through 4.2.6[O] JB Initials

Completed By: (Print, Sign, Date) John Baker, JB, 07/12/12
Sealing Area Visual Inspection Completed By: (Print, Sign, Date) John Baker, JB, 07/12/12
Supervisor/FLM Review By: (Print, Sign, Date) Mel Murdock, Mel Murdock, 07/13/12

AMWTP Advanced Mixed Waste Treatment Project

Radiological Survey Report and Map

Form-1129
Rev. 7
Effective: 05/02/12

Implementing Document: INST-RS&C-6.22.1

Survey ID #: S120 / 993
Purpose: TDOP
Building/Location: 635 General area
AMOW ☒ **PTW** ☐ **#:** N-0707
Date: 07/12/12 **Time:** 1655

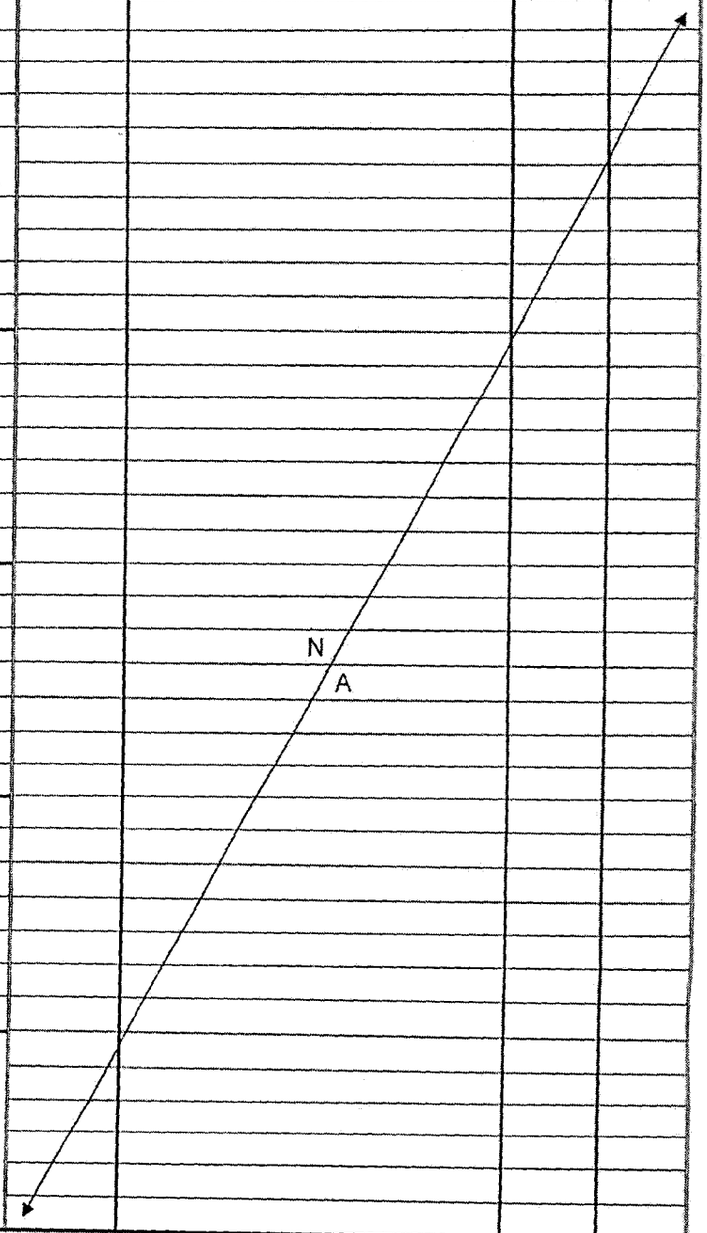
(Print Name)	(Signature)	(S #)
N/A	N/A	N/A
C.Gregersen		104508
N/A	N/A	N/A

INSTRUMENT DATA

Model:	3030			Model:	RO20		
Serial #:	853071			Serial #:	852287		
Cal. Due:	09/08/12			Cal. Due:	04/23/13		
Eff: α	34.2	β	35.7	Eff: α	N/A	β	N/A
Bkgd: α	1	β	145	Bkgd: α	N/A	β	N/A
mda: α	15	β	101	mda: α	N/A	β	N/A
MDDR:	N/A			MDDR:	0.1		
Model:	3030			Model:	ASP2e		
Serial #:	852296			Serial #:	851642		
Cal. Due:	03/29/13			Cal. Due:	08/18/12		
Eff: α	33.8	β	34.1	Eff: α	N/A	β	N/A
Bkgd: α	1	β	161	Bkgd: α	N/A	β	N/A
mda: α	15	β	102	mda: α	N/A	β	N/A
MDDR:	N/A			MDDR:	0.1 / 2.0		
Model:	3030			Model:	N/A		
Serial #:	851631			Serial #:	N/A		
Cal. Due:	09/29/12			Cal. Due:	N/A		
Eff: α	32.0	β	33.6	Eff: α	N/A	β	N/A
Bkgd: α	0	β	148	Bkgd: α	N/A	β	N/A
mda: α	15	β	104	mda: α	N/A	β	N/A
MDDR:	N/A			MDDR:	N/A		

General Notes:
Radiation surveys are performed at 30 cm from known source and recorded in **mrem/hr** unless otherwise noted. Swipes and direct scan results are recorded in **dpm/100 cm²**, if area surveyed is **<100 cm²**, results shall be recorded in **dpm/area**. Large area wipe survey results are recorded in **dpm/wipe** unless otherwise noted.

#	Location/Description	α	β
1 - 10	Swipes see map	< 20	< 200



COMMENTS:
BN 10441819
Swipes and dose rate surveys performed on top, bottom and sides of TDOP.

Reviewed by: Debra L. Faucher **Date:** 7-13-12

AMWTP Advanced Mixed Waste Treatment Project	Radiological Survey Report and Map	Form-1129 Rev. 7 Effective: 05/02/12 Page 2 of 2

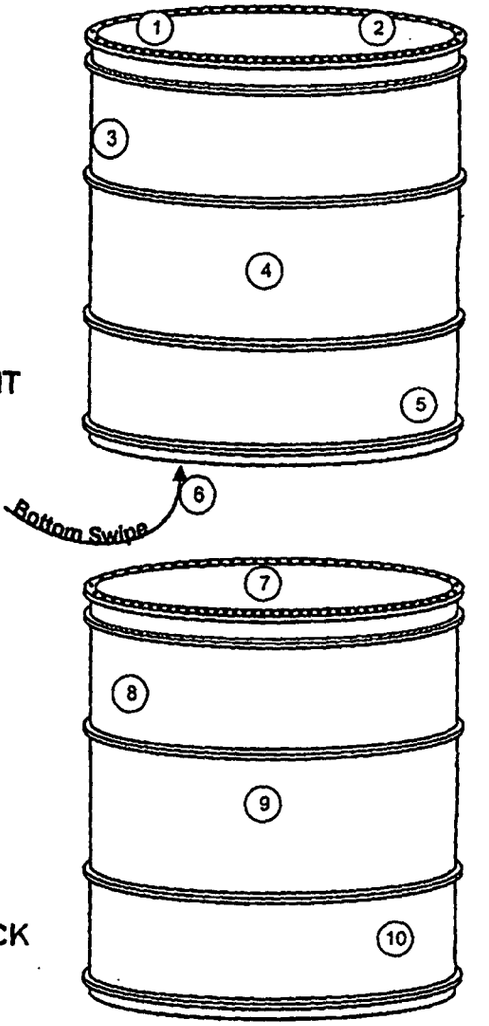
Implementing Document: INST-RS&C-6.22.1

Drawing Showing Survey Points

TEN DRUM OVERPACK

TDOP BN #
BN 10441819

Contact γ	Contact η	Contact Total
0.1	2	2.1
30 cm γ	**30 cm η**	**30 cm Total**
0.1	2	2.1
1 Meter γ	**1 Meter η**	**1 Meter Total**
0.1	2	2.1



Trupact # _____ **Payload #** _____ **Shipping #** _____

CA	Contamination Area	α	Alpha	**x-x-x**	Radiological Barrier (Specify)
HCA	High Contamination Area	β	Beta	**L**	Large Area Wipe
RA	Radiation Area	γ	Gamma	SOP	Step Off Pad
HRA	High Radiation Area	η	Neutron	□	Direct Scan
RMA	Radioactive Material Area	O	Swipes	**#/#**	Gamma Over Neutron Dose Rate
ARA	Airborne Radioactivity Area	*	On Contact	**#β**	Beta Dose Rate
RBA	Radiation Buffer Area	Δ	Air Sampler Location	**c**	Contamination
CBA	Contamination Buffer Area			Other	

DIVIDER

PAGE

Waste Isolation Pilot Plant
Overpack Data Report

Report Statistics

Report Version:	**2.2**
WDS Instance:	**prd05.wipp.carlsbad.nm.us**
Generated on:	**May 28, 2013 03:04 PM**
Generated by:	**KIRKES, CRETA**
Total Pages:	**7**

Selection Criteria

Container Number:	**BN10441819**

Container: BN10441819
Type: 3 - TDOP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 07/13/2012

Waste Handling Code: CH
Disposal Date: 07/28/2012

Current Location Site: WI
Generator Site: RF
Destination Site ID: WI

Certification Program ID: C8
Shipping Program ID: BN

Neutron Dose Rate (mrem/hr): 2.0
Beta Gamma Dose Rate (mrem/hr): 0.1
Total Dose Rate (mrem/hr): 2.1

FGE (g): 1.245E01
FGE Uncertainty (g): 2.014E00

Gross Weight (kg): 2842.18
Gross Weight Uncert (kg): 39.15

Decay Heat (W): 3.332E-02
Decay Heat Uncertainty (W): 4.078E-03

Shipment Data

Payload ID: **96164** Assembly ID: IN116526 Payload Complete? Y
Shipment Number: IN120192 Send Date: 07/21/2012 Receipt Date: 07/22/2012
Shipment Status: SHIPMENT RECEIVED AT DESTINATION

Emplacement Location

Panel: 6 Room: 5
Row: 118 Column: 4 Height: B

Certification Data Values

Waste Stream Profile Code: ID-RF-S3150-A
Waste Type Code: MTRU
IDC Code: NONE
Waste Matrix Code: S3150
WAC Revision Number: 7.2
Fill Factor (%): 33.13

Transportation Data Values

Closure Date: 07/12/2012
Vent Date: 07/12/2012
Shipment Purpose: DISPOSAL
Machine Compacted? N

TRU Alpha Activity (Ci): 1.062E00
TRU Alpha Activity Uncertainty (Ci): 1.313E-01
TRU Alpha Activity Concentration (Ci/g): 6.125E-07
PU-239 Equivalent Activity (PE-Ci): 1.091E00
Alpha Surface Contamination (dpm/cm^2): 19.0
Beta/Gamma Surface Contamination (dpm/cm^2): 199.0

Filters

Filter Model Number	Filter Diffusivity (mol/s/ml)	Quantity	Install Date

Container: BN10441819
Type: 3 - TDOP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 07/13/2012
Waste Handling Code: CH
Disposal Date: 07/28/2012

PCB Waste? N
PCB Mass (kg):
PCB Concentration (ppm): 0.0
PCB Out of Service Date:
Be Present? Y
Be <= 1% by weight? Y

Separation OK?
Governing Packing Fraction (compaction level): non-compacted

Filters

Filter Model Number	Filter Diffusivity (mol/s/ml)	Quantity	Install Date
NF012	1.9E-06	1	07/12/2012
NF19SD	1.85E-05	2	07/12/2012

Certification Comments

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
AM-241	1.178E-01	1.899E-02	3.396E-02	5.585E-03
CS-137	8.842E-08	3.059E-08	1.005E-09	3.547E-10
NP-237	3.468E-06	8.321E-07	4.864E-03	1.191E-03
PU-238	2.841E-02	7.087E-03	1.642E-03	4.180E-04
PU-239	7.694E-01	1.267E-01	1.223E01	2.055E00
PU-240	1.459E-01	2.781E-02	6.343E-01	1.234E-01
PU-241	1.499E00	2.479E-01	1.441E-02	2.432E-03
PU-242	1.168E-05	2.148E-06	2.942E-03	5.521E-04
SR-90	9.725E-08	5.980E-08	7.047E-10	4.422E-10
U-233	<LLD	<LLD	<LLD	<LLD
U-234	1.793E-05	7.387E-06	2.836E-03	1.193E-03

Container: BN10441819
Type: 3 - TDOP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 07/13/2012

Waste Handling Code: CH
Disposal Date: 07/28/2012

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
U-235	5.661E-07	1.857E-07	2.585E-01	8.653E-02
U-238	<LLD	<LLD	<LLD	<LLD

Material Parameters

Material Parameter	Description	Weight (kg)
1	IRON BASE METAL ALLOYS	219.70
4	OTHER INORGANIC MATERIALS	37.00
8	PLASTICS	69.00
10	SOLIDIFIED ORGANIC MATERIAL	1688.90
13	STEEL CONTAINER MATERIALS	828.18
	Waste Weight:	2014.60
	Packaging Weight:	828.18
	Total Material Weight:	2842.78

Hazardous Codes

Hazardous Code	Description
D022	CHLOROFORM
D028	1,2-DICHLOROETHANE
D029	1,1-DICHLOROETHYLENE
D030	2,4-DINITROTOLUENE
D032	HEXACHLOROBENZENE
D034	HEXACHLOROETHANE

Container: BN10441819
Type: 3 - TDOP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 07/13/2012
Waste Handling Code: CH
Disposal Date: 07/28/2012

Hazardous Codes

Hazardous Code	Description
D036	NITROBENZENE
D043	VINYL CHLORIDE
F001	SPENT HALOGENATED SOLVENTS
F002	SPENT HALOGENATED SOLVENTS
F005	SPENT NON-HALOGENATED SOLVENTS

Edit Limit Check Results

Evaluation Date: 07/13/2012 11:57:31 Overall Status: PASS

Evaluation Code	Status	Return Code	Detailed Description
DI_CERT_ALL	PASS		
DI_CERT_BE	PASS		
DI_CERT_CERT	PASS		
DI_CERT_CHARZ	PASS		
DI_CERT_ED	PASS		
DI_CERT_EPA	PASS		
DI_CERT_PCB	PASS		
DI_CERT_PERC	PASS		
DI_CERT_TRAMPAC	PASS		
DSA	PASS		
WAC	PASS		
WAP_CERT	PASS		

Container: BN10441819
Type: 3 - TDOP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 07/13/2012
Waste Handling Code: CH
Disposal Date: 07/28/2012

TRAMPAC Evaluation Results

Evaluation Date: 07/13/2012 11:57:37 Overall Status: PASS

Evaluation Code	Status
OP_ALL	PASS
OP_CFG	PASS
OP_DDH	PASS
OP_FGE	PASS
OP_FIL	PASS
OP_GVE	PASS
OP_RDR	PASS
OP_SHIP	
OP_TGRR	PASS
OP_WGT	PASS

Return Code	Detailed Description
OP_GVE_MIX	Overpack has inner containers with mixed shipping categories - assignment of governing decay heat limit, FGGR limit, and shipping category is not applicable.

Inner Containers

Container Number	Type Code	TRUCON Code	Shipping Category	Shipping Period	Gross Weight + Error	FGE + 2x Error	Waste Stream
10016766	16 - 55 gal TBO	ID212K	4099990110	10	254.80	3.436E0	ID-RF-S3150-A
10017490	18 - 55 gal TBO Solid/Vitrified	ID212K	4099990110	10	228.80	1.889E0	ID-RF-S3150-A
10017513	18 - 55 gal TBO Solid/Vitrified	ID212K	4099990110	10	239.30	5.141E0	ID-RF-S3150-A
10018320	16 - 55 gal TBO	ID212K	4099990084	10	261.80	1.583E0	ID-RF-S3150-A
10018594	16 - 55 gal TBO	ID212K	4099990084	10	274.80	1.656E0	ID-RF-S3150-A
10018684	18 - 55 gal TBO Solid/Vitrified	ID212K	4099990110	10	268.30	4.707E0	ID-RF-S3150-A
10018695	16 - 55 gal TBO	ID212K	4099990110	10	263.30	2.027E0	ID-RF-S3150-A
BN10017132	19 - 55 gal TBO Solid/Vit Damaged	ID212K	4099990063	10	241.30	2.07E0	ID-RF-S3150-A

Container: BN10441819
Type: 3 - TDOP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 07/13/2012
Waste Handling Code: CH
Disposal Date: 07/28/2012

History

Event Date/Time	Event Description	Reason
07/05/2012 14:35:14	INSERT DATA INTO THE DATABASE	
07/13/2012 11:57:39	SUCCESSFUL SUBMISSION FOR CERT	
07/13/2012 12:54:17	ASSIGNED TO PAYLOAD	
07/13/2012 14:23:50	APPROVED FOR CERT	

DIVIDER

PAGE

Waste Isolation Pilot Plant
Container Data Report

Report Statistics

Report Version:	**2.2**
WDS Instance:	**prd05.wipp.carlsbad.nm.us**
Generated on:	**June 06, 2013 02:41 PM**
Generated by:	**KIRKES, CRETA**
Total Pages:	**10**

Selection Criteria

Container Number:	**ARP70624**

Container: ARP70624
Type: 18 - 55 gal TBO Solid/Vitrified

Extended Status: APPROVED CERT IN APPROVED CERT OVERPACK EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/29/2012
Waste Handling Code: CH
Disposal Date: 09/19/2012

Current Location Site: WI
Generator Site: BN
Destination Site ID: WI

Certification Program ID: C8
Shipping Program ID: BN

Overpack Container: BN10436061
Overpack Type: STANDARD WASTE BOX
Overpack Status: CERTIFICATION DATA APPROVED

Neutron Dose Rate (mrem/hr): 2.0
Beta Gamma Dose Rate (mrem/hr): 0.1
Total Dose Rate (mrem/hr): 2.1

FGE (g): 1.05E-01
FGE Uncertainty (g): 3.02E-02

Gross Weight (kg): 137.40
Gross Weight Uncert (kg): 2.30

Decay Heat (W): 4.9E-04
Decay Heat Uncertainty (W): 1.85E-04

Shipment Data

Payload ID: **96307** Assembly ID: IN119322 Payload Complete? Y
Shipment Number: IN120232 Send Date: 09/13/2012 Receipt Date: 09/14/2012
Shipment Status: SHIPMENT RECEIVED AT DESTINATION

Emplacement Location

Panel: 6 Room: 4
Row: 23 Column: 5 Height: M

Certification Data Values

Waste Stream Profile Code: ID-SDA-SLUDGE
Waste Type Code: MTRU
IDC Code: 003
Waste Matrix Code: S3900
WAC Revision Number: 7.2
Fill Factor (%): 60.00
Waste Stream BIR ID: INIDSDASLUDGE
Waste Stream MWIR ID: NONE

TRU Alpha Activity (Ci): 1.48E-02
TRU Alpha Activity Uncertainty (Ci): 5.54E-03
TRU Alpha Activity Concentration (Ci/g): 1.44E-07
PU-239 Equivalent Activity (PE-Ci): 1.49E-02
Alpha Surface Contamination (dpm/cm^2): 19.0
Beta/Gamma Surface Contamination (dpm/cm^2): 199.0

Transportation Data Values

Closure Date: 06/20/2012
Vent Date: 06/20/2012
Process Knowledge? N

TRUCON Code: ID112V
Shipping Category: 4099990028
Aspiration Method: T

Shipment Purpose: DISPOSAL
Machine Compacted? N
Liner Exists? Y
Liner Hole Size(mm):
Liner Lid Present? N
Layers of Packaging 1
Aqueous Material? N

Gas Generation Data Values

Measured FGGR (mol/s)	Measured TGRR (mol/s)	Truncated FGGR Test (Y/N)	Truncated FGGR Test Period (days)
1.16E-07	1.37E-06	Y	10

Container: ARP70624
Type: 18 - 55 gal TBO Solid/Vitrified

Extended Status: APPROVED CERT IN APPROVED CERT OVERPACK EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Waste Handling Code: CH
Certification Date: 08/29/2012
Disposal Date: 09/19/2012

PCB Waste?	Y
PCB Mass (kg):	103.4
PCB Concentration (ppm):	
PCB Out of Service Date:	06/20/2012
Be Present?	Y
Be <= 1% by weight?	Y
Be mass <= 100kg?	Y
Separation OK?	
Packing Fraction (compaction level):	non-compacted

Filters

Filter Model Number	Filter Diffusivity (mol/s/ml)	Quantity	Install Date
NF019D	1.85E-05	1	06/20/2012

Certification Comments

PCB REMEDIATION WASTE

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
AM-241	1.220E-02	5.460E-03	3.516E-03	1.606E-03
CS-137	3.350E-08	2.130E-08	3.807E-10	2.470E-10
NP-237	2.330E-07	8.890E-08	3.268E-04	1.272E-04
PU-238	5.840E-05	3.420E-05	3.376E-06	2.017E-06
PU-239	2.110E-03	9.340E-04	3.355E-02	1.515E-02
PU-240	4.680E-04	2.110E-04	2.035E-03	9.361E-04
PU-241	3.430E-03	1.650E-03	3.298E-05	1.619E-05
PU-242	6.080E-08	4.110E-08	1.531E-05	1.056E-05
SR-90	3.690E-08	2.350E-08	2.674E-10	1.738E-10
U-233	<LLD	<LLD	<LLD	<LLD
U-234	7.660E-06	4.730E-06	1.212E-03	7.637E-04

Container: ARP70624
Type: 18 - 55 gal TBO Solid/Vitrified

Extended Status: APPROVED CERT IN APPROVED CERT OVERPACK EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Waste Handling Code: CH
Certification Date: 08/29/2012
Disposal Date: 09/19/2012

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
U-235	2.420E-07	8.930E-08	1.105E-01	4.161E-02
U-238	2.860E-05	1.050E-05	8.412E01	3.151E01

Samples

Labor Code	Sample ID	Sample Type Code	Sample Type Description	Sample Date	Layer Sampled
C8	ARP70624	HGVO-T	HEADSPACE GAS VOC	07/25/2012	0

Unique Samples

CAS Number	Analyte Description	Concentration (ppm)	Analysis Date	Analysis Method	Reporting Flags
100-41-4	ETHYL BENZENE	0.87	07/25/2012	14HG5	U
107-06-2	1,2-DICHLOROETHANE	1.22	07/25/2012	14HG5	U
108-10-1	METHYL ISOBUTYL KETONE	1.88	07/25/2012	14HG5	U
108-67-8	1,3,5-TRIMETHYLBENZENE	0.99	07/25/2012	14HG5	U
108-88-3	TOLUENE	2.48	07/25/2012	14HG5	NA
108-90-7	CHLOROBENZENE	0.63	07/25/2012	14HG5	U
108383/106423	M,P-XYLENE	0.42	07/25/2012	14HG5	U
110-82-7	CYCLOHEXANE	1.79	07/25/2012	14HG5	U
156-59-2	CIS-1,2-DICHLOROETHYLENE	0.2	07/25/2012	14HG5	U
60-29-7	ETHYL ETHER	0.77	07/25/2012	14HG5	U
67-56-1	METHANOL	12.64	07/25/2012	14HG5	U
67-64-1	ACETONE	4.88	07/25/2012	14HG5	U
71-36-3	BUTANOL	0.76	07/25/2012	14HG5	U

Container: ARP70624
Type: 18 - 55 gal TBO Solid/Vitrified

Extended Status: APPROVED CERT IN APPROVED CERT OVERPACK EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/29/2012
Waste Handling Code: CH
Disposal Date: 09/19/2012

Samples

Labor Code	Sample ID	Sample Type Code	Sample Type Description	Sample Date	Layer Sampled
C8	ARP70624	HGVO-T	HEADSPACE GAS VOC	07/25/2012	0

Unique Samples

CAS Number	Analyte Description	Concentration (ppm)	Analysis Date	Analysis Method	Reporting Flags
71-43-2	BENZENE	0.31	07/25/2012	14HG5	U
75-34-3	1,1-DICHLOROETHANE	0.94	07/25/2012	14HG5	U
75-35-4	1,1-DICHLOROETHYLENE	1.21	07/25/2012	14HG5	U
78-93-3	METHYL ETHYL KETONE	1.8	07/25/2012	14HG5	U
95-47-6	O-XYLENE	0.54	07/25/2012	14HG5	U
95-63-6	1,2,4-TRIMETHYLBENZENE	1.23	07/25/2012	14HG5	U

Labor Code	Sample ID	Sample Type Code	Sample Type Description	Sample Date	Layer Sampled
C8	H-ARP70624	HGHM-T	HEADSPACE GAS HYDROGEN AND METHANE	07/25/2012	0

Unique Samples

CAS Number	Analyte Description	Concentration (ppm)	Analysis Date	Analysis Method	Reporting Flags
1333-74-0	HYDROGEN	80.83	07/25/2012	14HG5	U
74-82-8	METHANE	202.11	07/25/2012	14HG5	U

Material Parameters

Material Parameter	Description	Weight (kg)
4	OTHER INORGANIC MATERIALS	9.00

Container: ARP70624
Type: 18 - 55 gal TBO Solid/Vitrified

Current Status

Extended Status: APPROVED CERT IN APPROVED CERT OVERPACK EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/29/2012
Waste Handling Code: CH
Disposal Date: 09/19/2012

Material Parameters

Material Parameter	Description	Weight (kg)
9	SOLIDIFIED INORGANIC MATERIAL	8.00
10	SOLIDIFIED ORGANIC MATERIAL	64.40
12	SOILS	22.00
13	STEEL CONTAINER MATERIALS	28.60
14	PLASTIC/LINERS CONTAINER MATERIALS	5.40
	Waste Weight:	103.40
	Packaging Weight:	34.00
	Total Material Weight:	137.40

Hazardous Codes

Hazardous Code	Description
D004	ARSENIC
D005	BARIUM
D006	CADMIUM
D007	CHROMIUM
D008	LEAD
D009	MERCURY
D010	SELENIUM
D011	SILVER
D022	CHLOROFORM
D027	1,4-DICHLOROBENZENE
D028	1,2-DICHLOROETHANE

Container: ARP70624
Type: 18 - 55 gal TBO Solid/Vitrified

Extended Status: APPROVED CERT IN APPROVED CERT OVERPACK EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Waste Handling Code: CH
Certification Date: 08/29/2012
Disposal Date: 09/19/2012

Hazardous Codes

Hazardous Code	Description
D029	1,1-DICHLOROETHYLENE
D030	2,4-DINITROTOLUENE
D032	HEXACHLOROBENZENE
D033	HEXACHLOROBUTADIENE
D034	HEXACHLOROETHANE
D037	PENTACHLOROPHENOL
D038	PYRIDINE
D043	VINYL CHLORIDE
F001	SPENT HALOGENATED SOLVENTS
F002	SPENT HALOGENATED SOLVENTS
F004	SPENT NONHALOGENATED SOLVENTS
F005	SPENT NON-HALOGENATED SOLVENTS
F006	WASTEWATER TREATMENT SLUDGE
F007	SPENT CYANIDE PLATING BATH
F009	SPENT STRIPPING SOLUTION
P098	POTASSIUM CYANIDE
P106	SODIUM CYANIDE

Assay Methods

Labor Code	Assay Method	Description	Assay Date
C8	14WAGS1	WASTE ASSAY GAMMA SPECTROMETER (WAGS)	07/09/2012

Container: ARP70624
Type: 18 - 55 gal TBO Solid/Vitrified

Extended Status: APPROVED CERT IN APPROVED CERT OVERPACK EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Waste Handling Code: CH
Certification Date: 08/29/2012
Disposal Date: 09/19/2012

Non-Destructive Examination (NDE)

Labor Code	NDE Method	Description	Examination Date
C8	14VE1	VISUAL EXAMINATION: ARP PACKAGING STATIONS	06/20/2012

Edit Limit Check Results

Evaluation Date: 08/30/2012 13:57:33 Overall Status: PASS

Evaluation Code	Status	Return Code	Detailed Description
DI_CERT_ALL	PASS		
DI_CERT_BE	PASS		
DI_CERT_CERT	PASS		
DI_CERT_CHARZ	PASS		
DI_CERT_ED	PASS		
DI_CERT_EPA	PASS		
DI_CERT_PCB	PASS		
DI_CERT_PERC	PASS		
DI_CERT_TRAMPAC	PASS		
DSA	PASS		
WAC	PASS		
WAP_CERT	PASS		

TRAMPAC Evaluation Results

Evaluation Date: 08/30/2012 13:57:34 Overall Status: PASS

Evaluation Code	Status	Return Code	Detailed Description
CE_ACT	PASS		
CE_ALL	PASS		
CE_ASP	PASS		
CE_DDH	PASS		

Container: ARP70624
Type: 18 - 55 gal TBO Solid/Vitrified

Extended Status: APPROVED CERT IN APPROVED CERT OVERPACK EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/29/2012
Waste Handling Code: CH
Disposal Date: 09/19/2012

TRAMPAC Evaluation Results

Evaluation Date: 08/30/2012 13:57:34 Overall Status: PASS

Evaluation Code	Status
CE_FGE	PASS
CE_FIL	PASS
CE_GVE	PASS
CE_RDR	PASS
CE_TRU	PASS
CE_WGT	PASS

Details

Matrix Depleted Shipping Category:		Compliance Method:	TESTING
Decay Heat Limit (w):		FGE Limit (g):	200
FGGR (mol/s):	1.16E-7	FGGR Limit (mol/s):	1.7857142857142858E-7
Volume Model:		Required Aspiration Time (days):	
Total Headspace VOCs (ppm):	35.56		
Packaging Configuration:	PE_ASSIGNED	DAC Scenario:	
Closure Time (days):		Minimum Closure Time Applied (days):	
Sample-Vent Time (days):	35	Min Sample-Vent Time Applied (days):	5
TFGVC in ICL (mol fr):		MLEL (mol fr):	0.05

History

Event Date/Time	Event Description	Reason
08/29/2012 09:04:31	INSERT DATA INTO THE DATABASE	
08/29/2012 09:04:31	SUCCESSFUL SUBMISSION FOR CERT	
08/29/2012 09:35:45	APPROVED FOR CERT	
08/30/2012 13:53:06	RESET TO PRESUBMITTAL CERT	Change TRUCON Code

Container: ARP70624
Type: 18 - 55 gal TBO Solid/Vitrified

Current Status
Extended Status: APPROVED CERT IN APPROVED CERT OVERPACK EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/29/2012
Waste Handling Code: CH
Disposal Date: 09/19/2012

History

Event Date/Time	Event Description	Reason
08/30/2012 13:53:23	SUCCESSFUL SUBMISSION FOR CERT	
08/30/2012 13:57:23	RESET TO PRESUBMITTAL CERT	Container Type
08/30/2012 13:57:34	SUCCESSFUL SUBMISSION FOR CERT	
08/30/2012 14:02:29	ASSIGNED TO OVERPACK	
08/30/2012 14:02:50	ASSIGNED TO OVERPACK	
08/30/2012 14:18:47	APPROVED FOR CERT	
09/07/2012 13:37:59	ASSIGNED TO OVERPACK	

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CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-SDA-SLUDGE Lot # 323

Container ID Number	Historical Container ID	NDA BDR	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Overpack Required	Transportation Headspace Gas BDR					GGT BDR
									Sample	Analysis				
ARP70574	N/A	INNDAW120051	N/A	IN-ARP-VE-002768	N/A	N/A	N/A	No	IN12FG5071	N/A	N/A	N/A	N/A	N/A
ARP70591	N/A	INNDAW120051	N/A	IN-ARP-VE-002769	N/A	N/A	N/A	No	IN12FG5071	N/A	N/A	N/A	N/A	N/A
ARP70602	N/A	INNDAW120052	N/A	IN-ARP-VE-002768	N/A	N/A	N/A	No	IN12FG5071	N/A	N/A	N/A	N/A	N/A
ARP70607	N/A	INNDAW120051	N/A	IN-ARP-VE-002767	N/A	N/A	N/A	No	IN12FG5071	N/A	N/A	N/A	N/A	N/A
ARP70612	N/A	INNDAW120051	N/A	IN-ARP-VE-002768	N/A	N/A	N/A	No	IN12FG5071	N/A	N/A	N/A	N/A	N/A
ARP70615	N/A	INNDAW120051	N/A	IN-ARP-VE-002768	N/A	N/A	N/A	No	IN12FG5071	N/A	N/A	N/A	N/A	N/A
ARP70619	N/A	INNDAW120051	N/A	IN-ARP-VE-002771	N/A	N/A	N/A	No	IN12FG5071	N/A	N/A	N/A	N/A	N/A
ARP70624	N/A	INNDAW120053	N/A	IN-ARP-VE-002769	N/A	N/A	N/A	No	IN12FG5071	N/A	N/A	N/A	N/A	N/A
ARP70627	N/A	INNDAW120053	N/A	IN-ARP-VE-002771	N/A	N/A	N/A	No	IN12FG5071	N/A	N/A	N/A	N/A	N/A
ARP70639	N/A	INNDAW120052	N/A	IN-ARP-VE-002766	N/A	N/A	N/A	No	IN12FG5071	N/A	N/A	N/A	N/A	N/A
ARP70640	N/A	INNDAW120051	N/A	IN-ARP-VE-002767	N/A	N/A	N/A	No	IN12FG5071	N/A	N/A	N/A	N/A	N/A
ARP70641	N/A	INNDAW120051	N/A	IN-ARP-VE-002767	N/A	N/A	N/A	No	IN12FG5071	N/A	N/A	N/A	N/A	N/A
ARP70649	N/A	INNDAS120018	N/A	IN-ARP-VE-002774	N/A	N/A	N/A	No	IN12FG5071	N/A	N/A	N/A	N/A	N/A
ARP70650	N/A	INNDAW120059	N/A	IN-ARP-VE-002772	N/A	N/A	N/A	No	IN12FG5071	N/A	N/A	N/A	N/A	N/A
ARP70651	N/A	INNDAW120052	N/A	IN-ARP-VE-002767	N/A	N/A	N/A	No	IN12FG5071	N/A	N/A	N/A	N/A	N/A
ARP70660	N/A	INNDAW120051	N/A	IN-ARP-VE-002768	N/A	N/A	N/A	No	IN12FG5071	N/A	N/A	N/A	N/A	N/A
ARP70680	N/A	INNDAW120051	N/A	IN-ARP-VE-002770	N/A	N/A	N/A	No	IN12FG5071	N/A	N/A	N/A	N/A	N/A
ARP70683	N/A	INNDAW120051	N/A	IN-ARP-VE-002769	N/A	N/A	N/A	No	IN12FG5071	N/A	N/A	N/A	N/A	N/A
ARP70691	N/A	INNDAW120053	N/A	IN-ARP-VE-002769	N/A	N/A	N/A	No	IN12FG5071	N/A	N/A	N/A	N/A	N/A
ARP70693	N/A	INNDAW120059	N/A	IN-ARP-VE-002776	N/A	N/A	N/A	No	IN12FG5071	N/A	N/A	N/A	N/A	N/A
ARP70696	N/A	INNDAW120051	N/A	IN-ARP-VE-002771	N/A	N/A	N/A	No	IN12FG5071	N/A	N/A	N/A	N/A	N/A
ARP70699	N/A	INNDAS120017	N/A	IN-ARP-VE-002776	N/A	N/A	N/A	No	IN12FG5071	N/A	N/A	N/A	N/A	N/A
ARP70703	N/A	INNDAS120018	N/A	IN-ARP-VE-002775	N/A	N/A	N/A	No	IN12FG5071	N/A	N/A	N/A	N/A	N/A
ARP70710	N/A	INNDAS120018	N/A	IN-ARP-VE-002772	N/A	N/A	N/A	No	IN12FG5071	N/A	N/A	N/A	N/A	N/A
ARP70719	N/A	INNDAW120059	N/A	IN-ARP-VE-002772	N/A	N/A	N/A	No	IN12FG5071	N/A	N/A	N/A	N/A	N/A
ARP70731	N/A	INNDAS120017	N/A	IN-ARP-VE-002774	N/A	N/A	N/A	No	IN12FG5071	N/A	N/A	N/A	N/A	N/A
ARP70752	N/A	INNDAW120051	N/A	IN-ARP-VE-002771	N/A	N/A	N/A	No	IN12FG5071	N/A	N/A	N/A	N/A	N/A
ARP70802	N/A	INNDAW120057	N/A	IN-ARP-VE-002778	N/A	N/A	N/A	No	IN12FG5071	N/A	N/A	N/A	N/A	N/A

Roger Whiteaker
Signature of Site Project Manager

Roger Whiteaker
Printed Name

8/1/2012
Date

CTS 005

Kirkes, Creta - NWP

From: Mueller, Terry - WTS
Sent: Friday, August 24, 2012 2:55 PM
To: Dominguez, Lena - WTS; Larson, David - WTS; Pettus, Helen - WTS; Soaterna, Carolina - WTS; Valenzuela, Bobbie
Cc: Walker, Mak (Maryann) - WTS; Jones, Laura - WTS; Waldram, Veronica - WTS
Subject: FW: NCR/CAR check for ID-SDA-SLUDGE lot 323
Attachments: NCR_BDR_CONTAINER_CHECK_INL ID-SDA-SLUDGE Lot 323.xls

There are no NCR or CAR dispositions that impact the acceptability of these drums, alternate drum IDs, and associated BDRs for certification and shipping as listed on the attached. This check was verified independently.

Thanks!

Terry L. Mueller
WTS QA
Washington TRU Solutions, LLC
Contractor to the Department of Energy
MS GSA-103
***work* (575)-234-7016**
***fax* (575)-234-7042**

From: Soaterna, Carolina - WTS
Sent: Friday, August 24, 2012 2:51 PM
To: Mueller, Terry - WTS; Jones, Laura - WTS; Kantrowitz, Rich - WTS; Walker, Mak (Maryann) - WTS
Subject: NCR/CAR check for ID-SDA-SLUDGE lot 323

Please do an NCR/CAR check for ID-SDA-SLUDGE lot 323.

Thanks,

Carolina Soaterna
Central Characterization Project
Washington TRU Solutions, LLC
Contractor for the U.S. Department of Energy
carolina.soaterna@wipp.ws
(575) 234-7445

INL CH AK TRACKING SPREADSHEET (Vent & Closure Dates)

CONTAINERID	WASTESTREAM	WASTE_MATRIX_CODE	CLOSUREDATE	VENTDATE
ARP70624	ID-SDA-SLUDGE	S3900	6/20/2012	6/20/2013

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Attachment 4 – Flammable Gas Analysis Form

SCO 1049 Addendum 3 Windows XP SP3
Excel 2003/2007

Waste Container ID: **ARP70624**

BDR Number: **IN12FG5071**

Sampling Date: **7/25/2012**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	80.83	U
74-82-8	Methane	202.11	U
67-56-1	Methanol	12.64	U
60-29-7	Ethyl Ether	0.77	U
75-35-4	1,1-Dichloroethylene	1.21	U
67-64-1	Acetone	4.88	U
75-34-3	1,1-Dichloroethane	0.94	U
156-59-2	cis-1,2-Dichloroethene	0.20	U
78-93-3	Methyl ethyl ketone	1.80	U
110-82-7	Cyclohexane	1.79	U
71-43-2	Benzene	0.31	U
107-06-2	1,2-Dichloroethane	1.22	U
71-36-3	1-Butanol	0.76	U
108-10-1	Methyl isobutyl ketone	1.88	U
108-88-3	Toluene	2.48	
108-90-7	Chlorobenzene	0.63	U
100-41-4	Ethylbenzene	0.87	U
108-38-3/106-42-3	m- and p-Xylene	0.42	U
95-47-6	o-Xylene	0.54	U
108-67-8	1,3,5-Trimethylbenzene	0.99	U
95-63-6	1,2,4-Trimethylbenzene	1.23	U

CAS Number	IDENTIFIED TIC COMPOUND	Est. Amount ppmv
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

BDR Number: IN12FG5071

Waste Container ID		8 Filter Model Number	9 Hydrogen Diffusivity of Filter (mol/s/mf)	10 Package Configuration Group Number	11 Closure Date	12 Vent Date	13 Required DAC Value (in days)	14 Drum Age (in days)	15 Can this container be sampled?
1	ARP70731	NucFil-019DS	1.85E-05	N/A	7/2/2012	7/2/2012	5	23	Y
2	ARP70699	NucFil-019DS	1.85E-05	N/A	7/9/2012	7/9/2012	5	16	Y
3	ARP70719	NucFil-019DS	1.85E-05	N/A	6/26/2012	6/26/2012	5	29	Y
4	ARP70693	NucFil-019DS	1.85E-05	N/A	7/9/2012	7/9/2012	5	16	Y
5	ARP70650	NucFil-019DS	1.85E-05	N/A	6/26/2012	6/26/2012	5	29	Y
6	ARP70727	NucFil-019DS	1.85E-05	N/A	7/9/2012	7/9/2012	5	16	Y
7	ARP70802	NucFil-019DS	1.85E-05	N/A	7/10/2012	7/10/2012	5	15	Y
8	ARP70649	NucFil-019DS	1.85E-05	N/A	7/2/2012	7/2/2012	5	23	Y
9	ARP70703	NucFil-019DS	1.85E-05	N/A	7/3/2012	7/3/2012	5	22	Y
10	ARP70710	NucFil-019DS	1.85E-05	N/A	6/26/2012	6/26/2012	5	29	Y
11	ARP70602	NucFil-019DS	1.85E-05	N/A	6/19/2012	6/19/2012	5	36	Y
12	ARP70651	NucFil-019DS	1.85E-05	N/A	6/18/2012	6/18/2012	5	37	Y
13	ARP70691	NucFil-019DS	1.85E-05	N/A	6/20/2012	6/20/2012	5	35	Y
14	ARP70624	NucFil-019DS	1.85E-05	N/A	6/20/2012	6/20/2012	5	35	Y
15	ARP70627	NucFil-019DS	1.85E-05	N/A	6/25/2012	6/25/2012	5	30	Y
16	ARP70639	NucFil-019DS	1.85E-05	N/A	6/18/2012	6/18/2012	5	37	Y
17	ARP70615	NucFil-019DS	1.85E-05	N/A	6/19/2012	6/19/2012	5	36	Y
18	ARP70696	NucFil-019DS	1.85E-05	N/A	6/25/2012	6/25/2012	5	30	Y
19	ARP70752	NucFil-019DS	1.85E-05	N/A	6/25/2012	6/25/2012	5	30	Y
20	ARP70680	NucFil-019DS	1.85E-05	N/A	6/20/2012	6/20/2012	5	35	Y

Operator: Aaron deBruyn Kops — Printed Name

Aaron deBruyn Kops — Signature

7-25-12 — Date

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NDA 2000 Assay Report

Item Information

Item ID:	ARP70624	Count Sequence Number:	20851
Operator:	AQ2\Operator		
Assay Start:	7/9/2012 10:00:56 AM		
Description 1:	INNDAW120053		
Description 2:	S3900		
Location:			
Comment:			
Matrix Type:	Default		
Container Type:	55 Gallon Drum		
Weight:	Gross: 103.0 kg	Net:	103.0 kg
Container:	Volume: 208.0 l	Full:	60.0 %
Density:	0.830 kg /l		

System Configuration

Counter:	WMF-610 AQ2
Count Type:	Assay - Solids/Soil
Collimator/Geometry Setting:	Default - 0

Errors quoted at 1.000 sigma

********** Radioassay Data Sheet **********

Engine Version: TMU Gamma 1.5

Count Sequence Number: 20851 Batch Number: INNDAW120053
Assay Instrument: WMF-610 AQ2 Location: INL
Analysis Method: CCP-TP-019 Rev 5 Software Version: NDA 2000 V.4.0
Item ID: ARP70624 Analysis Date: 7/9/2012

NID identified fiducial nuclide Pu-239
Source of isotopics: DECLARED

Net Weight	103000.0 g		
Pu mass	3.56E-002 +-	1.49E-002	g
TRU Alpha Activity	1.48E-002 +-	5.54E-003	Ci
TRU Activity Concentration	1.44E+002 +-	5.38E+001	nCi/g
Pu-239 Equivalent Activity	1.49E-002 +-	5.54E-003	Ci
Pu-239 FGE	1.05E-001 +-	3.02E-002	g
Decay heat	4.90E-004 +-	1.85E-004	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	2.67E-010	3.69E-008	2.35E-008	0.00E+000
CS137	3.82E-010	3.35E-008	2.13E-008	3.04E-008
U233	<LLD	<LLD	0.00E+000	4.85E-004
U234	1.21E-003	7.66E-006	4.73E-006	0.00E+000
U235	1.11E-001	2.42E-007	8.93E-008	5.55E-008
NP237	3.27E-004	2.33E-007	8.89E-008	8.46E-008
PU238	3.38E-006	5.84E-005	3.42E-005	1.60E-005
U238	8.42E+001	2.86E-005	1.05E-005	3.65E-006
PU239	3.35E-002	2.11E-003	9.34E-004	5.77E-004
PU240	2.04E-003	4.68E-004	2.11E-004	1.28E-004
AM241	3.51E-003	1.22E-002	5.46E-003	1.29E-005
PU241	3.30E-005	3.43E-003	1.65E-003	9.40E-004
PU242	1.53E-005	6.08E-008	4.11E-008	0.00E+000

Errors quoted at 1.000 sigma

Operator: Brent Arial Date: 07/09/12

ITR: Mary Carroll Date: 7/17/12

Automated Independent Technical Review

Counter ID: WMF-610 AQ2 Count Type: Assay - Solids/Soil
Container ID: ARP70624 Assay Date: 7/9/2012
Waste Matrix Code: S3900
Sequence Number: 20851

MGA Analysis:
Results are marked as invalid.

DISPOSITION: MGA failure due to low Pu content in the drum. Use DECLARED WG Pu isotopics.

Gamma Analysis:
Analysis Status: No errors.
Pu-239/Np-237 ratio is less than the lower limit of 125.00

DISPOSITION: Low Pu239/Np237 ratio acceptable.

Miscellaneous:

DISPOSITION: OK.

Expert Review by: Bart B. Marak Date: 7/17/12

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Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	ARP70624
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location:	IN-RWMC-ARP-6
3. Batch Number:	IN-ARP-VE-002769
4. Examination Date:	06/20/12
5. Procedure CCP-TP-006, Rev.:	16
6. a. Drum Packing Station (DPS) Number:	702
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	223309
8. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	728624
b. Filter Torque Wrench Calibration Due Date:	08/03/12
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	HL-356
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70624							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				METAL (NSW)	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70624							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
29	i. Other inorganic materials (OI)				9.0	N/A		15.0
30		j. Graphite			0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p. Inorganic sorbents			9.0	N/A		15.0
49				OIL-DRI TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r. Cellulosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70624							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.0	N/A		0.0
67				N/A	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC (NSW)	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				64.4	N/A		53.7
75		x1. Sludge			64.4	N/A		53.7
76				VERY PALE ORANGE POWDERY SLUDGE WITH CALCIUM SILICATE	64.4	1.0 - 1.5	1.2	53.7
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				8.0	N/A		4.8
83		y1. Sludge			3.0	N/A		2.5
84				MODERATE REDDISH ORANGE CRUMBLY SLUDGE	3.0	1.0 - 1.5	1.2	2.5
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			5.0	N/A		2.3
92				EVAPORATOR SALT	5.0	2.2		2.3
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				22.0	N/A		18.3
95				SOIL	22.0	1.0 - 1.4	1.2	18.3
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				103.4	N/A		91.8
98	13. (ORGANIC SLUDGE) weight (64.4) kg was obtained by subtracting the weighed waste weight of (39.0) kg and the container net weight of (34.0) kg from the gross weight (137.4) kg of the waste container. (137.4) - (39.0) - (34.0) = (64.4) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. REFERENCE LETTER: CP:08:00210 / UFC:2300.00							
101								

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70624	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70624	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	19.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	223309
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	724667
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	07/09/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1424
22. Measured gross weight of loaded container, fully assembled (kgs):	137.4
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	302.9
23. Container closure date (mm/dd/yy):	06/20/12
24. Percent fill of container:	60.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	103.4
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70624	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.0
31. Total volume of Solidified Organics (L):	53.7
32. Total volume of Solidified Inorganics (L):	19.8
33. Total volume of Soils/Gravel (L):	18.3
a. Total volume (L):	91.8
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	62.3%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

J. HEGSTED	J B Hegsted	6/20/12
Enter Name	Signature	Date

Visual Examination Operator 2:

J. STANTON	Jodi M Stanton	6/20/12
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		6-20-12
Enter Name	Signature	Date

DIVIDER

PAGE

Waste Isolation Pilot Plant
Overpack Data Report

Report Statistics

Report Version:	**2.2**
WDS Instance:	**prd05.wipp.carlsbad.nm.us**
Generated on:	**June 06, 2013 01:33 PM**
Generated by:	**KIRKES, CRETA**
Total Pages:	**8**

Selection Criteria

Container Number: **BN10436061**

Container: BN10436061
Type: 14 - SWB OP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 09/07/2012
Waste Handling Code: CH
Disposal Date: 09/19/2012

Current Location Site: WI
Generator Site: BN
Destination Site ID: WI

Certification Program ID: C8
Shipping Program ID: BN

Neutron Dose Rate (mrem/hr): 2.0
Beta Gamma Dose Rate (mrem/hr): 0.1
Total Dose Rate (mrem/hr): 2.1

FGE (g): 1.108E00
FGE Uncertainty (g): 1.718E-01

Gross Weight (kg): 951.10
Gross Weight Uncert (kg): 15.23

Decay Heat (W): 6.91E-03
Decay Heat Uncertainty (W): 1.256E-03

Shipment Data

Payload ID: **96307** Assembly ID: IN119322 Payload Complete? Y
Shipment Number: IN120232 Send Date: 09/13/2012 Receipt Date: 09/14/2012
Shipment Status: SHIPMENT RECEIVED AT DESTINATION

Emplacement Location

Panel: 6 Room: 4
Row: 23 Column: 5 Height: M

Certification Data Values

Waste Stream Profile Code: ID-SDA-SLUDGE
Waste Type Code: MTRU
IDC Code: 003
Waste Matrix Code: S3900
WAC Revision Number: 7.2
Fill Factor (%): 34.63

Transportation Data Values

Closure Date: 09/06/2012
Vent Date: 09/06/2012
Shipment Purpose: DISPOSAL
Machine Compacted? N

TRU Alpha Activity (Ci): 2.086E-01
TRU Alpha Activity Uncertainty (Ci): 3.763E-02
TRU Alpha Activity Concentration (Ci/g): 3.975E-07
PU-239 Equivalent Activity (PE-Ci): 2.094E-01
Alpha Surface Contamination (dpm/cm^2): 19.0
Beta/Gamma Surface Contamination (dpm/cm^2): 199.0

Filters

Filter Model Number	Filter Diffusivity (mol/s/ml)	Quantity	Install Date

Container: BN10436061
Type: 14 - SWB OP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 09/07/2012
Waste Handling Code: CH
Disposal Date: 09/19/2012

PCB Waste? Y
PCB Mass (kg): 524.8
PCB Concentration (ppm):
PCB Out of Service Date: 04/05/2012
Be Present? Y
Be <= 1% by weight? Y

Separation OK?
Governing Packing Fraction (compaction level): non-compacted

Filters

Filter Model Number	Filter Diffusivity (mol/s/ml)	Quantity	Install Date
NF19SD	1.85E-05	2	09/06/2012

Certification Comments

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
AM-241	1.795E-01	3.733E-02	5.173E-02	1.098E-02
CS-137	4.522E-07	1.326E-07	5.139E-09	1.537E-09
NP-237	2.751E-06	5.321E-07	3.858E-03	7.615E-04
PU-238	6.494E-04	1.861E-04	3.754E-05	1.098E-05
PU-239	2.337E-02	4.704E-03	3.715E-01	7.632E-02
PU-240	5.188E-03	1.070E-03	2.256E-02	4.747E-03
PU-241	3.843E-02	8.608E-03	3.695E-04	8.446E-05
PU-242	6.738E-07	2.293E-07	1.697E-04	5.895E-05
SR-90	4.969E-07	1.450E-07	3.601E-09	1.072E-09
U-233	<LLD	<LLD	<LLD	<LLD
U-234	7.916E-05	2.816E-05	1.253E-02	4.546E-03

Container: BN10436061
Type: 14 - SWB OP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 09/07/2012
Waste Handling Code: CH
Disposal Date: 09/19/2012

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
U-235	2.505E-06	5.257E-07	1.144E00	2.449E-01
U-238	3.081E-04	6.386E-05	9.062E02	1.917E02

Material Parameters

Material Parameter	Description	Weight (kg)
1	IRON BASE METAL ALLOYS	115.40
4	OTHER INORGANIC MATERIALS	36.00
7	RUBBER	0.30
8	PLASTICS	21.60
9	SOLIDIFIED INORGANIC MATERIAL	254.00
10	SOLIDIFIED ORGANIC MATERIAL	167.50
12	SOILS	66.00
13	STEEL CONTAINER MATERIALS	290.30
	Waste Weight:	660.80
	Packaging Weight:	290.30
	Total Material Weight:	951.10

Hazardous Codes

Hazardous Code	Description
D004	ARSENIC
D005	BARIUM
D006	CADMIUM

Container: BN10436061
Type: 14 - SWB OP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 09/07/2012
Waste Handling Code: CH
Disposal Date: 09/19/2012

Hazardous Codes

Hazardous Code	Description
D007	CHROMIUM
D008	LEAD
D009	MERCURY
D010	SELENIUM
D011	SILVER
D022	CHLOROFORM
D027	1,4-DICHLOROBENZENE
D028	1,2-DICHLOROETHANE
D029	1,1-DICHLOROETHYLENE
D030	2,4-DINITROTOLUENE
D032	HEXACHLOROBENZENE
D033	HEXACHLOROBUTADIENE
D034	HEXACHLOROETHANE
D037	PENTACHLOROPHENOL
D038	PYRIDINE
D043	VINYL CHLORIDE
F001	SPENT HALOGENATED SOLVENTS
F002	SPENT HALOGENATED SOLVENTS
F004	SPENT NONHALOGENATED SOLVENTS
F005	SPENT NON-HALOGENATED SOLVENTS
F006	WASTEWATER TREATMENT SLUDGE

Container: BN10436061
Type: 14 - SWB OP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 09/07/2012

Waste Handling Code: CH
Disposal Date: 09/19/2012

Hazardous Codes

Hazardous Code	Description
F007	SPENT CYANIDE PLATING BATH
F009	SPENT STRIPPING SOLUTION
P098	POTASSIUM CYANIDE
P106	SODIUM CYANIDE

Edit Limit Check Results

Evaluation Date: 09/07/2012 13:37:59 Overall Status: PASS

Evaluation Code	Status	Return Code	Detailed Description
DI_CERT_ALL	PASS		
DI_CERT_BE	PASS		
DI_CERT_CERT	PASS		
DI_CERT_CHARZ	PASS		
DI_CERT_ED	PASS		
DI_CERT_EPA	PASS		
DI_CERT_PCB	PASS		
DI_CERT_PERC	PASS		
DI_CERT_TRAMPAC	PASS		
DSA	PASS		
WAC	PASS		
WAP_CERT	PASS		

Container: BN10436061
Type: 14 - SWB OP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 09/07/2012
Waste Handling Code: CH
Disposal Date: 09/19/2012

TRAMPAC Evaluation Results

Evaluation Date: 09/07/2012 13:38:02 Overall Status: PASS

Evaluation Code	Status
OP_ALL	PASS
OP_CFG	PASS
OP_DDH	PASS
OP_FGE	PASS
OP_FIL	PASS
OP_GVE	PASS
OP_RDR	PASS
OP_SHIP	
OP_TGRR	PASS
OP_WGT	PASS

Return Code	Detailed Description
OP_GVE_MIX	Overpack has inner containers with mixed shipping categories - assignment of governing decay heat limit, FGGR limit, and shipping category is not applicable.

Inner Containers

Container Number	Type Code	TRUCON Code	Shipping Category	Shipping Period	Gross Weight + Error	FGE + 2x Error	Waste Stream
ARP70156	19 - 55 gal TBO Solid/Vit Damaged	ID112V	4099990028	10	148.70	4.504E-1	ID-SDA-SLUDGE
ARP70397	19 - 55 gal TBO Solid/Vit Damaged	ID111S	1001600083	60	177.70	7.25E-1	ID-SDA-SLUDGE
ARP70469	19 - 55 gal TBO Solid/Vit Damaged	ID111S	1001600083	60	203.90	3.838E-1	ID-SDA-SLUDGE
→ ARP70624	18 - 55 gal TBO Solid/Vitrified	ID112V	4099990028	10	139.70	1.654E-1	ID-SDA-SLUDGE

History

Event Date/Time	Event Description	Reason
08/30/2012 14:02:29	INSERT DATA INTO THE DATABASE	
09/07/2012 13:38:03	SUCCESSFUL SUBMISSION FOR CERT	

Container: BN10436061
Type: 14 - SWB OP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 09/07/2012
Waste Handling Code: CH
Disposal Date: 09/19/2012

History

Event Date/Time	Event Description	Reason
09/07/2012 13:55:28	ASSIGNED TO PAYLOAD	
09/07/2012 14:38:56	APPROVED FOR CERT	

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	WDS Master Template.xls Rev. 6 Addendum #6, SCO #1065 Excel 2003/2007 Microsoft Windows XP	Units	data				comments						Initial	date
2	Shipper Site ID		BN	Location ID	Dest Program ID	Shipping Purpose				ARP70624			LD/BV	08/02/12
3	Waste Stream Profile		ID-SDA-SLUDGE	IN	WI	D							LD/BV	08/02/12
4	Container Number		ARP70624										LD/BV	08/02/12
5	Container Type		drum	drum, swb, tdop, etc., see WWIS labels for valid types.					U-235 FEM	U-235 FEM Uncert	FGGR Flag	FGGR Test Period	LD/BV	08/02/12
6	WAC Rev #		7.2						NULL	NULL	Y	10	LD/BV	08/02/12
7								Be mass<=100 kg	Be <= 1%	Be Present	Aqueous Material	Compacted Wst		
8	Cert Site		C8					Y	Y	Y	N	N	LD/BV	08/02/12
9	Cert Date		8-29-12											
10	Waste Handling Code		CH	CH, RH									LD/BV	08/02/12
11	Waste Type Code		MTRU	TRU, MTRU									LD/BV	08/02/12
12	Waste Stream BIR ID		INIDSDASLUDGE										LD/BV	08/02/12
13	Waste Stream MWIR ID		NONE										LD/BV	08/02/12
14	Generator Site ID		BN										LD/BV	08/02/12
15	IDC Code		003										LD/BV	08/02/12
16	Matrix Code		S3900										LD/BV	08/02/12
17	Trucon Code		ID112V										LD/BV	08/02/12
18	Shipping Category		4099990020											
19	Tru Alpha Act	Ci	1.48E-02		1.484E-02								LD/BV	08/02/12
20	Tru Alpha Act Uncert	1sigma Ci	5.54E-03	2.588E-02	Tru Alpha Act + 2sigma (Ci)								LD/BV	08/02/12
21	Tru Alpha Act Conc	nCi/g	1.44E+02		1.43E+02								LD/BV	08/02/12
22			5.38E+01	2.516E+02	Tru Alpha Act Conc + 2sigma (Ci)			Drum Weight	28.6				LD/BV	08/02/12
23	Pu239 Fiss Gm Eq	g	1.05E-01		1.048E-01			Liner Weight	5.4				LD/BV	08/02/12
24	Pu239 Fiss Gm Eq Uncert	1sigma g	3.02E-02	1.654E-01	Pu239 Fiss Gm Eq + 2sigma (Ci)								LD/BV	08/02/12
25	Pu239 Eq Act	Ci	1.49E-02		1.490E-02								LD/BV	08/02/12
26	Decay Heat	watts	4.90E-04		4.908E-04								LD/BV	08/02/12
27	Decay Heat Uncert	1sigma watts	1.85E-04	6.75E-04	Decay Heat + 1sigma (watts)								LD/BV	08/02/12
28	Layers of Packaging		1										LD/BV	08/02/12
29	Fill Factor		60	percentage	Liner Lid Present	N							LD/BV	08/02/12
30	Liner Type		1	1 = plastic drum liner									LD/BV	08/02/12
31	Liner Punctured		Y		Liner Hole Size	478							LD/BV	08/02/12
32	PCB Conc		NULL		(mm)			PCB Waste	PCB Mass (kg)	Out of Service			LD/BV	08/02/12
33	Closure Date		6/20/2012	Watt-years	Waste Gen Date			Y	103.4	6/20/2012			LD/BV	08/02/12
34	Vent Date		6/20/2012	0.000	NULL								LD/BV	08/02/12
35	Filter Install Date		6/20/2012				Filter Reduction Date		NULL				LD/BV	08/02/12
36	Filter Manufacturer		NFT				Reduced Filter Model		NULL				LD/BV	08/02/12
37													LD/BV	08/02/12
38	Filter Model Number		NF019D										LD/BV	08/02/12
39	Number of Filters Installed		1										LD/BV	08/02/12
40	Aspiration Method ID		T										LD/BV	08/02/12
41	Gas Gen Rate		1.37E-06	1.370E-06	<<Gas Gen Rate Calculated.									
42	Hydrogen/Methane Gen Rate		1.160E-07											
43	Gas Gen Comp Date		8/8/2008		Waste (kg)	Packaging (kg)	Total (kg)							
44	Gross Weight	kg	137.4		103.4	34.0	137.4						LD/BV	08/02/12
45	Gross Weight Uncert	1sigma kg	2.3										LD/BV	08/02/12
46	Alpha Surf Cont	dpm/100 cm^2	19										LD/BV	08/02/12
47	Beta/Gamma Surf Cont	dpm/100 cm^2	199										LD/BV	08/02/12
48	Neutron Dose Rate	mrem/hr	2										LD/BV	08/02/12
49	Beta/Gamma Dose Rate	mrem/hr	0.1										LD/BV	08/02/12
50	Radionuclide		SR-90	CS-137	U-233	U-234	U-235	NP-237	PU-238	U-238	PU-239	PU-240	LD/BV	08/02/12
51	Activity	Ci	3.69E-08	3.35E-08	-1.00E+00	7.66E-06	2.42E-07	2.33E-07	5.84E-05	2.86E-05	2.11E-03	4.68E-04	LD/BV	08/02/12
52	Activity Uncert	1sigma Ci	2.35E-08	2.13E-08	-1.00E+00	4.73E-06	8.93E-08	8.89E-08	3.42E-05	1.05E-05	9.34E-04	2.11E-04	LD/BV	08/02/12
53	Mass	grams	2.67E-10	3.81E-10	-1.00E+00	1.21E-03	1.11E-01	3.27E-04	3.38E-06	8.41E+01	3.35E-02	2.03E-03		
54	Mass Uncert	1sigma grams	1.74E-10	2.47E-10	-1.00E+00	7.84E-04	4.16E-02	1.27E-04	2.02E-06	3.15E+01	1.52E-02	9.36E-04		
55	calc Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.33E-07	5.84E-05	0.00E+00	2.11E-03	4.68E-04		
56	calc Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.25E-03	5.65E-01	0.00E+00	2.04E+01	4.53E+00		
57	calc Act	Ci	3.69E-08	3.35E-08	0.00E+00	7.66E-06	2.42E-07	2.33E-07	5.84E-05	2.86E-05	2.11E-03	4.68E-04		
58	calc Act Conc	nCi/g	3.57E-01	3.24E-01	0.00E+00	7.41E-02	2.34E-03	2.25E-03	5.65E-01	2.77E-01	2.04E+01	4.53E+00		

COPY

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
59	calc Pu239 FGE	g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.11E-02	4.90E-06	3.81E-07	0.00E+00	3.35E-02	4.58E-05		
60	calc Pu239 Eq Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.33E-07	5.31E-05	0.00E+00	2.11E-03	4.68E-04		
61	calc Decay Heat	watts	4.28E-11	3.71E-11	0.00E+00	2.21E-07	6.67E-09	6.83E-09	1.93E-06	7.25E-07	6.54E-05	1.46E-05		
62	uncert Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.07E-08	3.49E-05	0.00E+00	9.53E-04	2.15E-04		
63	uncert Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.77E-04	3.38E-01	0.00E+00	9.22E+00	2.08E+00		
64	uncert Act	Ci	2.40E-08	2.17E-08	0.00E+00	4.83E-06	9.11E-08	9.07E-08	3.49E-05	1.07E-05	9.53E-04	2.15E-04		
65	uncert Act Conc	nCi/g	2.32E-04	2.10E-04	0.00E+00	4.67E-02	8.81E-04	8.77E-04	3.38E-01	1.04E-01	9.22E+00	2.08E+00		
66	uncert Pu239 FGE	g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E-02	1.91E-06	2.28E-07	0.00E+00	1.52E-02	2.11E-05		
67	uncert Pu239 Eq Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.89E-08	3.11E-05	0.00E+00	9.34E-04	2.11E-04		
68	uncert Decay Heat	watts	2.78E-11	2.41E-11	0.00E+00	1.39E-07	2.51E-09	2.66E-09	1.16E-06	2.72E-07	2.95E-05	6.70E-06		
69	Shipping Calcs	2.76E+00	1.37E-08	2.48E-09	0.00E+00	2.84E-04	0.00E+00	4.31E-05	1.08E-02	0.00E+00	3.90E-01	8.65E-02		
70	49CFR173.433(		0.00%	0.00%	0.00%	0.01%	0.00%	0.00%	0.39%	0.00%	14.15%	3.14%		
71	Radionuclide		AM-241	PU-241	PU-242								LD/BV	08/02/12
72	Activity	Ci	1.22E-02	3.43E-03	6.08E-08								LD/BV	08/02/12
73	Activity Uncert	1sigma Ci	5.46E-03	1.65E-03	4.11E-08								LD/BV	08/02/12
74	Mass	grams	3.52E-03	3.30E-05	1.53E-05	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
75	Mass Uncert	1sigma grams	1.61E-03	1.62E-05	1.06E-05	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
76	calc Tru Alpha Act	Ci	1.22E-02	0.00E+00	6.08E-08	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
77	calc Tru Alpha Act Conc	nCi/g	1.16E+02	0.00E+00	5.88E-04	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
78	calc Act	Ci	1.22E-02	3.43E-03	6.08E-08	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
79	calc Act Conc	nCi/g	1.18E+02	3.32E+01	5.88E-04	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
80	calc Pu239 FGE	g	6.57E-05	7.42E-05	1.15E-07	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
81	calc Pu239 Eq Act	Ci	1.22E-02	6.73E-05	5.53E-08	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
82	calc Decay Heat	watts	4.08E-04	1.09E-07	1.79E-09	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
83	uncert Tru Alpha Act	Ci	5.57E-03	0.00E+00	4.19E-08	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
84	uncert Tru Alpha Act Conc	nCi/g	5.39E+01	0.00E+00	4.06E-04	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
85	uncert Act	Ci	5.57E-03	1.68E-03	4.19E-08	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
86	uncert Act Conc	nCi/g	5.39E+01	1.63E+01	4.06E-04	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
87	uncert Pu239 FGE	g	3.00E-05	3.64E-05	7.92E-08	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
88	uncert Pu239 Eq Act	Ci	5.46E-03	3.24E-05	3.74E-08	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
89	uncert Decay Heat	watts	1.86E-04	5.36E-08	1.24E-09	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
90	Shipping Calcs		2.26E+00	1.27E-02	1.12E-05	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
91	49CFR173.433(		81.84%	0.45%	0.00%	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
92	Waste Material Parameter		OI	OS	IS	S							LD/BV	08/02/12
93	Wgt of Mat Parms	kg	9	64.4	8	22							LD/BV	08/02/12
94	Radio Assay Method		14WAGS1	PAN, FRAM, TGS, HENC									LD/BV	08/02/12
95	Data Package Number		INNDAW120053										LD/BV	08/02/12
96	Assay Date		7/9/2012										LD/BV	08/02/12
97	Charz Method ID		14VE1	RTRM, VISUAL									LD/BV	08/02/12
98	Data Package Number		IN-ARP-VE-002769										LD/BV	08/02/12
99	Charz Method Date		6/20/2012										LD/BV	08/02/12
100	Haz Codes		D004	D005	D006	D007	D008	D009	D010	D011	D022	D027	LD/BV	08/02/12
101	Haz Codes		D028	D029	D030	D032	D033	D034	D037	D038	D043	F001	LD/BV	08/02/12
102	Haz Codes		F002	F004	F005	F006	F007	F009	P098	P106				
103	Haz Codes													
104	Sample ID	Headspace Gas H/M	H-ARP70624										LD/BV	08/02/12
105	Sample Type		HGHM-T	HGHM									LD/BV	08/02/12
106	Layer No. Sampled		0		282.94								LD/BV	08/02/12
107	Date Sampled		7/25/2012			Sample Site							LD/BV	08/02/12
108	Method ID		14HG5	DTP-1.2-041		C8							LD/BV	08/02/12
109	Data Package Number		IN12FG5071										LD/BV	08/02/12
110	CAS #		1333-74-0	74-82-8										
111	Analyte		HYDROGEN	METHANE									LD/BV	08/02/12
112	Concentration				80.83	202.11							LD/BV	08/02/12
113	units	%vol			PPMV	PPMV							LD/BV	08/02/12
114	Date Analyzed		07/25/12	7/25/2012		2.5%= 2.02							LD/BV	08/02/12
115	B Detectable Flag													
116	D Detectable Flag													
117	E Detectable Flag													
118	J Detectable Flag													
119	U Detectable Flag		U	U									LD/BV	08/02/12
120	NA Detectable Flag													
121	Methanol Sample ID		14HG5											
122	Sample ID	Headspace Gas VOC	ARP70624										LD/BV	08/02/12
123	Sample Type		HGVO-T	HGVO									LD/BV	08/02/12
124	Layer No. Sampled		0			SARP-Flammable VOCs (ppmv)	19.02						LD/BV	08/02/12
125	Date Sampled		7/25/2012										LD/BV	08/02/12
126	Method ID		14HG5	DTP-1.2-041									LD/BV	08/02/12
127	Data Package Number		IN12FG5071										LD/BV	08/02/12

WDS Master Template.xls Rev. 6
Addendum #6, SCO #1065
Excel 2003/2007 Microsoft
Windows XP

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
189			type	comment										
190	Comment	1	GEN	PCB REMEDIATION WASTE									LD/BV	08/02/12
191	Comment													
192	Comment													
193	Comment													
194	Comment													
195	Comment													
196	Comment													
197	Comment													
198	Comment													
199	Comment													
200														
201			Requirements Met?											
202	Free liquids <1% by volume		YES											
203	No non-rad. pyrophorics		YES											
204	Chemical compatability		YES											
205	No explosives		YES											
206	No corrosives		YES											
207	No pressurized containers		YES											
208	No sealed Containers >4 liters		YES											
209	Liner punctured/ filtered		YES											
210	Flammable VOCs <500ppmv													
211	Container is in Approved Waste Stream Profile Form?	ID-SDA-SLUDGE	YES											
212	Can it be established through Process Knowledge that the concentration of flammable VOCs present in the headspace of the container is <= 500 ppm?.		NO											
213														
214														
215														
216														
217														
218														
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234														
235														

CCP Certification Official

8-29-12
Date

WDS Master Template.xls Rev. 6
Addendum #8, SCO #1065
Excel 2003/2007 Microsoft Windows XP

DIVIDER

PAGE

WDS
WASTE DATA SYSTEM

Waste Isolation Pilot Plant
Container Data Report

Report Statistics

Report Version:	**2.2**
WDS Instance:	**prd05.wipp.carlsbad.nm.us**
Generated on:	**June 06, 2013 02:52 PM**
Generated by:	**RAMIREZ, MICHAEL**
Total Pages:	**9**

Selection Criteria

Container Number:	**SRP12570**

Container: SRP12570
Type: 18 - 55 gal TBO Solid/Vitrified

Current Status
Extended Status: APPROVED CERT IN PRESUB CERT OVERPACK
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 05/03/2013
Waste Handling Code: CH
Disposal Date:

Current Location Site: IN
Generator Site: RF
Destination Site ID: WI

Certification Program ID: C8
Shipping Program ID: BN

Neutron Dose Rate (mrem/hr): 0.5
Beta Gamma Dose Rate (mrem/hr): 0.1
Total Dose Rate (mrem/hr): 0.6

FGE (g): 5.06E-03
FGE Uncertainty (g): 1.95E-03

Gross Weight (kg): 171.80
Gross Weight Uncert (kg): 2.30

Decay Heat (W): 1.42E-05
Decay Heat Uncertainty (W): 3.95E-06

Overpack Container: BN10489992
Overpack Type: TEN DRUM OVERPACK
Overpack Status: PRESUBMITTAL TO CERTIFICATION

Certification Data Values

Waste Stream Profile Code: ID-RF-S3114
Waste Type Code: MTRU
IDC Code: 003
Waste Matrix Code: S3114
WAC Revision Number: 7.4
Fill Factor (%): 100.00
Waste Stream BIR ID: IN-ID-RF-S3114
Waste Stream MWIR ID: NONE

TRU Alpha Activity (Ci): 4.52E-04
TRU Alpha Activity Uncertainty (Ci): 1.27E-04
TRU Alpha Activity Concentration (Ci/g): 3.27E-09
PU-239 Equivalent Activity (PE-Ci): 4.61E-04
Alpha Surface Contamination (dpm/cm^2): 19.0
Beta/Gamma Surface Contamination (dpm/cm^2): 199.0

Transportation Data Values

Closure Date: 02/05/2013
Vent Date: 02/05/2013
Process Knowledge? N

TRUCON Code: ID212V
Shipping Category: 4099990020
Aspiration Method: T

Shipment Purpose: DISPOSAL
Machine Compacted? N
Liner Exists? Y
Liner Hole Size(mm):
Liner Lid Present? N
Layers of Packaging 1
Aqueous Material? N

Gas Generation Data Values

Measured FGGR (mol/s)	Measured TGRR (mol/s)	Truncated FGGR Test (Y/N)	Truncated FGGR Test Period (days)
1.81E-07	1.02E-06	Y	10

Filters

Filter Model Number	Filter Diffusivity (mol/s/ml)	Quantity	Install Date
NF019D	1.85E-05	1	02/05/2013

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Waste Handling Code: CH
Disposal Date:

PCB Waste?	Y
PCB Mass (kg):	137.8
PCB Concentration (ppm):	
PCB Out of Service Date:	02/05/2013
Be Present?	Y
Be <= 1% by weight?	Y
Be mass <= 100kg?	Y
Separation OK?	
Packing Fraction (compaction level):	non-compacted

Certification Comments

PCB REMEDIATION WASTE

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
AM-241	5.550E-05	1.800E-05	1.599E-05	5.293E-06
CS-137	<LLD	<LLD	<LLD	<LLD
NP-237	.000E00	.000E00	.000E00	.000E00
PU-238	8.750E-06	4.750E-06	5.058E-07	2.802E-07
PU-239	3.170E-04	1.230E-04	5.040E-03	1.995E-03
PU-240	7.040E-05	2.780E-05	3.061E-04	1.233E-04
PU-241	5.020E-04	2.150E-04	4.827E-06	2.110E-06
PU-242	9.150E-09	5.860E-09	2.305E-06	1.506E-06
SR-90	<LLD	<LLD	<LLD	<LLD
U-233	<LLD	<LLD	<LLD	<LLD
U-234	<LLD	<LLD	<LLD	<LLD

Container: SRP12570
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Current Status
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Certification Date: 05/03/2013
Waste Handling Code: CH
Disposal Date:

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
U-235	.000E00	.000E00	.000E00	.000E00
U-238	<LLD	<LLD	<LLD	<LLD

Samples

Labor Code	Sample ID	Sample Type Code	Sample Type Description	Sample Date	Layer Sampled
C8	H-SRP12570	HGHM-T	HEADSPACE GAS HYDROGEN AND METHANE	02/20/2013	0

Unique Samples

CAS Number	Analyte Description	Concentration (ppm)	Analysis Date	Analysis Method	Reporting Flags
1333-74-0	HYDROGEN	159.09	02/20/2013	14HG10	NA
74-82-8	METHANE	92.95	02/20/2013	14HG10	U

Labor Code	Sample ID	Sample Type Code	Sample Type Description	Sample Date	Layer Sampled
C8	SRP12570	HGVO-T	HEADSPACE GAS VOC	02/20/2013	0

Unique Samples

CAS Number	Analyte Description	Concentration (ppm)	Analysis Date	Analysis Method	Reporting Flags
100-41-4	ETHYL BENZENE	0.83	02/20/2013	14HG10	U
107-06-2	1,2-DICHLOROETHANE	0.29	02/20/2013	14HG10	U
108-10-1	METHYL ISOBUTYL KETONE	1.42	02/20/2013	14HG10	U
108-67-8	1,3,5-TRIMETHYLBENZENE	1.39	02/20/2013	14HG10	U
108-88-3	TOLUENE	4.22	02/20/2013	14HG10	NA
108-90-7	CHLOROBENZENE	0.85	02/20/2013	14HG10	U

Container: SRP12570
Type: 18 - 55 gal TBO Solid/Vitrified

Current Status
Extended Status: APPROVED CERT IN PRESUB CERT OVERPACK
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 05/03/2013
Waste Handling Code: CH
Disposal Date:

Samples

Labor Code	Sample ID	Sample Type Code	Sample Type Description	Sample Date	Layer Sampled
C8	SRP12570	HGVO-T	HEADSPACE GAS VOC	02/20/2013	0

Unique Samples

CAS Number	Analyte Description	Concentration (ppm)	Analysis Date	Analysis Method	Reporting Flags
108383/106423	M,P-XYLENE	0.49	02/20/2013	14HG10	U
110-82-7	CYCLOHEXANE	0.94	02/20/2013	14HG10	U
156-59-2	CIS-1,2-DICHLOROETHYLENE	0.11	02/20/2013	14HG10	U
60-29-7	ETHYL ETHER	0.3	02/20/2013	14HG10	U
67-56-1	METHANOL	9.46	02/20/2013	14HG10	U
67-64-1	ACETONE	1.48	02/20/2013	14HG10	U
71-36-3	BUTANOL	0.89	02/20/2013	14HG10	U
71-43-2	BENZENE	0.13	02/20/2013	14HG10	U
75-34-3	1,1-DICHLOROETHANE	0.76	02/20/2013	14HG10	U
75-35-4	1,1-DICHLOROETHYLENE	0.36	02/20/2013	14HG10	U
78-93-3	METHYL ETHYL KETONE	1.16	02/20/2013	14HG10	U
95-47-6	O-XYLENE	0.72	02/20/2013	14HG10	U
95-63-6	1,2,4-TRIMETHYLBENZENE	1.52	02/20/2013	14HG10	U

Material Parameters

Material Parameter	Description	Weight (kg)
7	RUBBER	0.30
8	PLASTICS	7.00

Container: SRP12570
Type: 18 - 55 gal TBO Solid/Vitrified

Current Status
Extended Status: APPROVED CERT IN PRESUB CERT OVERPACK
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 05/03/2013
Waste Handling Code: CH
Disposal Date:

Material Parameters

Material Parameter	Description	Weight (kg)
10	SOLIDIFIED ORGANIC MATERIAL	130.50
13	STEEL CONTAINER MATERIALS	28.60
14	PLASTIC/LINERS CONTAINER MATERIALS	5.40
	Waste Weight:	137.80
	Packaging Weight:	34.00
	Total Material Weight:	171.80

Hazardous Codes

Hazardous Code	Description
D008	LEAD
D022	CHLOROFORM
D026	CRESOL
D027	1,4-DICHLOROBENZENE
D028	1,2-DICHLOROETHANE
D029	1,1-DICHLOROETHYLENE
D030	2,4-DINITROTOLUENE
D032	HEXACHLOROBENZENE
D034	HEXACHLOROETHANE
D036	NITROBENZENE
D037	PENTACHLOROPHENOL
F001	SPENT HALOGENATED SOLVENTS
F002	SPENT HALOGENATED SOLVENTS

Container: SRP12570
Type: 18 - 55 gal TBO Solid/Vitrified

Current Status
Extended Status: APPROVED CERT IN PRESUB CERT OVERPACK
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 05/03/2013
Waste Handling Code: CH
Disposal Date:

Hazardous Codes

Hazardous Code	Description
F005	SPENT NON-HALOGENATED SOLVENTS

Assay Methods

Labor Code	Assay Method	Description	Assay Date
C8	14WAGS1	WASTE ASSAY GAMMA SPECTROMETER (WAGS)	02/13/2013

Non-Destructive Examination (NDE)

Labor Code	NDE Method	Description	Examination Date
C8	14VE1	VISUAL EXAMINATION: ARP PACKAGING STATIONS	02/05/2013

Edit Limit Check Results

Evaluation Date: 05/03/2013 12:33:40 Overall Status: PASS

Evaluation Code	Status	Return Code	Detailed Description
DI_CERT_ALL	PASS		
DI_CERT_BE	PASS		
DI_CERT_CERT	PASS		
DI_CERT_CHARZ	PASS		
DI_CERT_ED	PASS		
DI_CERT_EPA	PASS		
DI_CERT_PCB	PASS		
DI_CERT_PERC	PASS		
DI_CERT_TRAMPAC	PASS		
DSA	PASS		

Container: SRP12570
Type: 18 - 55 gal TBO Solid/Vitrified

Current Status:
Extended Status: APPROVED CERT IN PRESUB CERT OVERPACK
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 05/03/2013
Waste Handling Code: CH
Disposal Date:

Edit Limit Check Results
Evaluation Date: 05/03/2013 12:33:40 Overall Status: PASS

Evaluation Code	Status
WAC	PASS
WAP_CERT	PASS

TRAMPAC Evaluation Results
Evaluation Date: 05/03/2013 12:33:41 Overall Status: PASS

Evaluation Code	Status	Return Code	Detailed Description
CE_ACT	PASS		
CE_ALL	PASS		
CE_ASP	PASS		
CE_DDH	PASS		
CE_FGE	PASS		
CE_FIL	PASS		
CE_GVE	PASS		
CE_RDR	PASS		
CE_TRU	PASS		
CE_WGT	PASS		

Container: SRP12570
Type: 18 - 55 gal TBO Solid/Vitrified

Current Status

Extended Status: APPROVED CERT IN PRESUB CERT OVERPACK
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 05/03/2013
Waste Handling Code: CH
Disposal Date:

TRAMPAC Evaluation Results

Evaluation Date: 05/03/2013 12:33:41 Overall Status: PASS

Details

Matrix Depleted Shipping Category:		Compliance Method:	TESTING
Decay Heat Limit (w):		FGE Limit (g):	200
FGGR (mol/s):	1.81E-7	FGGR Limit (mol/s):	2.5E-7
Volume Model:		Required Aspiration Time (days):	
Total Headspace VOCs (ppm):	27.32		
Packaging Configuration:	PE_ASSIGNED	DAC Scenario:	
Closure Time (days):		Minimum Closure Time Applied (days):	
Sample-Vent Time (days):	15	Min Sample-Vent Time Applied (days):	5
TFGVC in ICL (mol fr):		MLEL (mol fr):	0.05

History

Event Date/Time	Event Description	Reason
05/03/2013 12:33:42	INSERT DATA INTO THE DATABASE	
05/03/2013 12:33:42	SUCCESSFUL SUBMISSION FOR CERT	
05/03/2013 12:52:13	APPROVED FOR CERT	

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-RF-S3114 Lot # 99

Container ID Number	Inner Container ID	NDA BDR	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Overpack Required	LTO	Transportation Headspace Gas BDR					GGT BDR
										Sample	Analysis				
SRP12509	N/A	INNDAW130025	N/A	IN-SRP-VE-000041	N/A	N/A	N/A	Yes	LTO 2	IN13FG9011	N/A	N/A	N/A	N/A	N/A
SRP12510	N/A	INNDAW130024	N/A	IN-SRP-VE-000043	N/A	N/A	Yes	Yes	LTO 2	IN13FG6005	N/A	N/A	N/A	N/A	N/A
SRP12512	N/A	INNDAW130021	N/A	IN-SRP-VE-000041	N/A	N/A	Yes	Yes	LTO 2	IN13FG9010	N/A	N/A	N/A	N/A	N/A
SRP12515	N/A	INNDAW130025	N/A	IN-SRP-VE-000041	N/A	N/A	N/A	Yes	LTO 2	IN13FG9011	N/A	N/A	N/A	N/A	N/A
SRP12517	N/A	INNDAW130021	N/A	IN-SRP-VE-000041	N/A	N/A	N/A	Yes	LTO 2	IN13FG9010	N/A	N/A	N/A	N/A	N/A
SRP12518	N/A	INNDAW130021	N/A	IN-SRP-VE-000041	N/A	N/A	Yes	Yes	LTO 2	IN13FG9010	N/A	N/A	N/A	N/A	N/A
SRP12519	N/A	INNDAW130026	N/A	IN-SRP-VE-000044	N/A	N/A	N/A	Yes	LTO 2	IN13FG6005	N/A	N/A	N/A	N/A	N/A
SRP12520	N/A	INNDAW130023	N/A	IN-SRP-VE-000043	N/A	N/A	N/A	Yes	LTO 2	IN13FG9011	N/A	N/A	N/A	N/A	N/A
SRP12521	N/A	INNDAW130023	N/A	IN-SRP-VE-000044	N/A	N/A	N/A	Yes	LTO 2	IN13FG6005	N/A	N/A	N/A	N/A	N/A
SRP12525	N/A	INNDAW130023	N/A	IN-SRP-VE-000044	N/A	N/A	N/A	Yes	LTO 2	IN13FG6005	N/A	N/A	N/A	N/A	N/A
SRP12527	N/A	INNDAW130022	N/A	IN-SRP-VE-000041	N/A	N/A	Yes	Yes	LTO 2	IN13FG10009	N/A	N/A	N/A	N/A	N/A
SRP12528	N/A	INNDAW130023	N/A	IN-SRP-VE-000041	N/A	N/A	N/A	Yes	LTO 2	IN13FG6005	N/A	N/A	N/A	N/A	N/A
SRP12529	N/A	INNDAW130025	N/A	IN-SRP-VE-000041	N/A	N/A	Yes	Yes	LTO 2	IN13FG9011	N/A	N/A	N/A	N/A	N/A
SRP12530	N/A	INNDAW130023	N/A	IN-SRP-VE-000041	N/A	N/A	Yes	Yes	LTO 2	IN13FG6005	N/A	N/A	N/A	N/A	N/A
SRP12533	N/A	INNDAW130025	N/A	IN-SRP-VE-000041	N/A	N/A	N/A	Yes	LTO 2	IN13FG9011	N/A	N/A	N/A	N/A	N/A
SRP12535	N/A	INNDAW130023	N/A	IN-SRP-VE-000041	N/A	N/A	N/A	Yes	LTO 2	IN13FG6005	N/A	N/A	N/A	N/A	N/A
SRP12536	N/A	INNDAW130022	N/A	IN-SRP-VE-000041	N/A	N/A	N/A	Yes	LTO 2	IN13FG10009	N/A	N/A	N/A	N/A	N/A
SRP12538	N/A	INNDAW130022	N/A	IN-SRP-VE-000041	N/A	N/A	N/A	Yes	LTO 2	IN13FG10009	N/A	N/A	N/A	N/A	N/A
SRP12539	N/A	INNDAW130023	N/A	IN-SRP-VE-000043	N/A	N/A	N/A	Yes	LTO 2	IN13FG6005	N/A	N/A	N/A	N/A	N/A
SRP12542	N/A	INNDAW130025	N/A	IN-SRP-VE-000043	N/A	N/A	N/A	Yes	LTO 2	IN13FG9011	N/A	N/A	N/A	N/A	N/A
SRP12543	N/A	INNDAW130024	N/A	IN-SRP-VE-000043	N/A	N/A	N/A	Yes	LTO 2	IN13FG6005	N/A	N/A	N/A	N/A	N/A
SRP12544	N/A	INNDAW130022	N/A	IN-SRP-VE-000044	N/A	N/A	N/A	Yes	LTO 2	IN13FG10009	N/A	N/A	N/A	N/A	N/A
SRP12545	N/A	INNDAW130037	N/A	IN-SRP-VE-000048	N/A	N/A	N/A	Yes	LTO 2	IN13FG6012	N/A	N/A	N/A	N/A	N/A
SRP12548	N/A	INNDAW130024	N/A	IN-SRP-VE-000045	N/A	N/A	Yes	Yes	LTO 2	IN13FG9011	N/A	N/A	N/A	N/A	N/A
SRP12549	N/A	INNDAW130023	N/A	IN-SRP-VE-000045	N/A	N/A	N/A	Yes	LTO 2	IN13FG9011	N/A	N/A	N/A	N/A	N/A
SRP12551	N/A	INNDAW130043	N/A	IN-SRP-VE-000048	N/A	N/A	N/A	Yes	LTO 2	IN13FG6016	N/A	N/A	N/A	N/A	N/A
SRP12552	N/A	INNDAW130023	N/A	IN-SRP-VE-000043	N/A	N/A	N/A	Yes	LTO 2	IN13FG6005	N/A	N/A	N/A	N/A	N/A
SRP12553	N/A	INNDAW130024	N/A	IN-SRP-VE-000043	N/A	N/A	N/A	Yes	LTO 2	IN13FG9011	N/A	N/A	N/A	N/A	N/A
SRP12554	N/A	INNDAW130025	N/A	IN-SRP-VE-000043	N/A	N/A	N/A	Yes	LTO 2	IN13FG9011	N/A	N/A	N/A	N/A	N/A
SRP12555	N/A	INNDAW130036	N/A	IN-SRP-VE-000048	N/A	N/A	Yes	Yes	LTO 2	IN13FG6012	N/A	N/A	N/A	N/A	N/A
SRP12557	N/A	INNDAW130037	N/A	IN-SRP-VE-000048	N/A	N/A	N/A	Yes	LTO 2	IN13FG6012	N/A	N/A	N/A	N/A	N/A
SRP12558	N/A	INNDAW130037	N/A	IN-SRP-VE-000048	N/A	N/A	N/A	Yes	LTO 2	IN13FG6012	N/A	N/A	N/A	N/A	N/A
SRP12559	N/A	INNDAW130043	N/A	IN-SRP-VE-000047	N/A	N/A	Yes	Yes	LTO 2	IN13FG6016	N/A	N/A	N/A	N/A	N/A
SRP12562	N/A	INNDAW130043	N/A	IN-SRP-VE-000047	N/A	N/A	N/A	Yes	LTO 2	IN13FG6016	N/A	N/A	N/A	N/A	N/A
SRP12563	N/A	INNDAW130036	N/A	IN-SRP-VE-000048	N/A	N/A	Yes	Yes	LTO 2	IN13FG6012	N/A	N/A	N/A	N/A	N/A
SRP12564	N/A	INNDAW130037	N/A	IN-SRP-VE-000048	N/A	N/A	Yes	Yes	LTO 2	IN13FG6012	N/A	N/A	N/A	N/A	N/A
SRP12565	N/A	INNDAW130025	N/A	IN-SRP-VE-000044	N/A	N/A	N/A	Yes	LTO 2	IN13FG9011	N/A	N/A	N/A	N/A	N/A
SRP12566	N/A	INNDAW130037	N/A	IN-SRP-VE-000047	N/A	N/A	N/A	Yes	LTO 2	IN13FG6012	N/A	N/A	N/A	N/A	N/A
SRP12568	N/A	INNDAW130024	N/A	IN-SRP-VE-000045	N/A	N/A	N/A	Yes	LTO 2	IN13FG9011	N/A	N/A	N/A	N/A	N/A
SRP12569	N/A	INNDAW130025	N/A	IN-SRP-VE-000045	N/A	N/A	N/A	Yes	LTO 2	IN13FG9011	N/A	N/A	N/A	N/A	N/A
SRP12570	N/A	INNDAW130022	N/A	IN-SRP-VE-000046	N/A	N/A	Yes	Yes	LTO 2	IN13FG10009	N/A	N/A	N/A	N/A	N/A
SRP12571	N/A	INNDAW130025	N/A	IN-SRP-VE-000045	N/A	N/A	Yes	Yes	LTO 2	IN13FG9011	N/A	N/A	N/A	N/A	N/A
SRP12572	N/A	INNDAW130022	N/A	IN-SRP-VE-000043	N/A	N/A	N/A	Yes	LTO 2	IN13FG10009	N/A	N/A	N/A	N/A	N/A
SRP12573	N/A	INNDAW130026	N/A	IN-SRP-VE-000045	N/A	N/A	Yes	Yes	LTO 2	IN13FG6005	N/A	N/A	N/A	N/A	N/A
SRP12574	N/A	INNDAW130024	N/A	IN-SRP-VE-000044	N/A	N/A	N/A	Yes	LTO 2	IN13FG9011	N/A	N/A	N/A	N/A	N/A
SRP12575	N/A	INNDAW130025	N/A	IN-SRP-VE-000046	N/A	N/A	Yes	Yes	LTO 2	IN13FG9011	N/A	N/A	N/A	N/A	N/A
SRP12576	N/A	INNDAW130026	N/A	IN-SRP-VE-000046	N/A	N/A	N/A	Yes	LTO 2	IN13FG6005	N/A	N/A	N/A	N/A	N/A
SRP12577	N/A	INNDAW130026	N/A	IN-SRP-VE-000046	N/A	N/A	Yes	Yes	LTO 2	IN13FG6005	N/A	N/A	N/A	N/A	N/A
SRP12578	N/A	INNDAW130026	N/A	IN-SRP-VE-000045	N/A	N/A	Yes	Yes	LTO 2	IN13FG6005	N/A	N/A	N/A	N/A	N/A
SRP12579	N/A	INNDAW130026	N/A	IN-SRP-VE-000045	N/A	N/A	Yes	Yes	LTO 2	IN13FG6011	N/A	N/A	N/A	N/A	N/A
SRP12580	N/A	INNDAW130026	N/A	IN-SRP-VE-000045	N/A	N/A	N/A	Yes	LTO 2	IN13FG6005	N/A	N/A	N/A	N/A	N/A
SRP12581	N/A	INNDAW130023	N/A	IN-SRP-VE-000045	N/A	N/A	Yes	Yes	LTO 2	IN13FG9011	N/A	N/A	N/A	N/A	N/A
SRP12582	N/A	INNDAW130025	N/A	IN-SRP-VE-000045	N/A	N/A	Yes	Yes	LTO 2	IN13FG9011	N/A	N/A	N/A	N/A	N/A
SRP12583	N/A	INNDAW130025	N/A	IN-SRP-VE-000046	N/A	N/A	N/A	Yes	LTO 2	IN13FG9011	N/A	N/A	N/A	N/A	N/A
SRP12584	N/A	INNDAW130026	N/A	IN-SRP-VE-000046	N/A	N/A	N/A	Yes	LTO 2	IN13FG6011	N/A	N/A	N/A	N/A	N/A
SRP12585	N/A	INNDAW130023	N/A	IN-SRP-VE-000045	N/A	N/A	N/A	Yes	LTO 2	IN13FG9011	N/A	N/A	N/A	N/A	N/A
SRP12586	N/A	INNDAW130027	N/A	IN-SRP-VE-000045	N/A	N/A	N/A	Yes	LTO 2	IN13FG6011	N/A	N/A	N/A	N/A	N/A
SRP12587	N/A	INNDAW130026	N/A	IN-SRP-VE-000045	N/A	N/A	N/A	Yes	LTO 2	IN13FG6005	N/A	N/A	N/A	N/A	N/A

CCP-TP-002 Rev. 25
Effective Date: 2/11/13
CCP Reconciliation of DQO's and Reporting Characterization Data

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-RF-S3114

Lot # 99

Container ID Number	Inner Container ID	NDA BDR	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Overpack Required	LTO	Transportation Headspace Gas BDR					GGT BDR
										Sample	Analysis				
SRP12588	N/A	INNDAW130024	N/A	IN-SRP-VE-000045	N/A	N/A	Yes	Yes	LTO 2	IN13FG9011	N/A	N/A	N/A	N/A	N/A
SRP12589	N/A	INNDAW130022	N/A	IN-SRP-VE-000045	N/A	N/A	Yes	Yes	LTO 2	IN13FG10009	N/A	N/A	N/A	N/A	N/A
SRP12590	N/A	INNDAW130024	N/A	IN-SRP-VE-000046	N/A	N/A	Yes	Yes	LTO 2	IN13FG9011	N/A	N/A	N/A	N/A	N/A
SRP12591	N/A	INNDAW130026	N/A	IN-SRP-VE-000046	N/A	N/A	N/A	Yes	LTO 2	IN13FG6005	N/A	N/A	N/A	N/A	N/A
SRP12592	N/A	INNDAW130023	N/A	IN-SRP-VE-000045	N/A	N/A	Yes	Yes	LTO 2	IN13FG9011	N/A	N/A	N/A	N/A	N/A
SRP12593	N/A	INNDAW130026	N/A	IN-SRP-VE-000046	N/A	N/A	N/A	Yes	LTO 2	IN13FG6005	N/A	N/A	N/A	N/A	N/A
SRP12594	N/A	INNDAW130022	N/A	IN-SRP-VE-000045	N/A	N/A	N/A	Yes	LTO 2	IN13FG10009	N/A	N/A	N/A	N/A	N/A
SRP12595	N/A	INNDAW130043	N/A	IN-SRP-VE-000045	N/A	N/A	N/A	Yes	LTO 2	IN13FG6016	N/A	N/A	N/A	N/A	N/A
SRP12597	N/A	INNDAW130037	N/A	IN-SRP-VE-000048	N/A	N/A	Yes	Yes	LTO 2	IN13FG6012	N/A	N/A	N/A	N/A	N/A
SRP12602	N/A	INNDAW130043	N/A	IN-SRP-VE-000047	N/A	N/A	N/A	Yes	LTO 2	IN13FG6016	N/A	N/A	N/A	N/A	N/A
SRP12603	N/A	INNDAW130036	N/A	IN-SRP-VE-000047	N/A	N/A	Yes	Yes	LTO 2	IN13FG6012	N/A	N/A	N/A	N/A	N/A
SRP12604	N/A	INNDAW130037	N/A	IN-SRP-VE-000048	N/A	N/A	N/A	Yes	LTO 2	IN13FG6013	N/A	N/A	N/A	N/A	N/A
SRP12606	N/A	INNDAW130037	N/A	IN-SRP-VE-000047	N/A	N/A	N/A	Yes	LTO 2	IN13FG6012	N/A	N/A	N/A	N/A	N/A
SRP12607	N/A	INNDAW130043	N/A	IN-SRP-VE-000047	N/A	N/A	Yes	Yes	LTO 2	IN13FG6016	N/A	N/A	N/A	N/A	N/A
SRP12608	N/A	INNDAW130028	N/A	IN-SRP-VE-000051	N/A	N/A	Yes	Yes	LTO 2	IN13FG6011	N/A	N/A	N/A	N/A	N/A
SRP12609	N/A	INNDAW130032	N/A	IN-SRP-VE-000051	N/A	N/A	N/A	Yes	LTO 2	IN13FG5017	N/A	N/A	N/A	N/A	N/A
SRP12610	N/A	INNDAW130033	N/A	IN-SRP-VE-000049	N/A	N/A	N/A	Yes	LTO 2	IN13FG6014	N/A	N/A	N/A	N/A	N/A
SRP12611	N/A	INNDAW130029	N/A	IN-SRP-VE-000049	N/A	N/A	Yes	Yes	LTO 2	IN13FG6006	N/A	N/A	N/A	N/A	N/A
SRP12612	N/A	INNDAW130043	N/A	IN-SRP-VE-000047	N/A	N/A	N/A	Yes	LTO 2	IN13FG6016	N/A	N/A	N/A	N/A	N/A
SRP12614	N/A	INNDAW130043	N/A	IN-SRP-VE-000047	N/A	N/A	N/A	Yes	LTO 2	IN13FG6016	N/A	N/A	N/A	N/A	N/A
SRP12615	N/A	INNDAW130037	N/A	IN-SRP-VE-000050	N/A	N/A	Yes	Yes	LTO 2	IN13FG6012	N/A	N/A	N/A	N/A	N/A
SRP12616	N/A	INNDAW130029	N/A	IN-SRP-VE-000049	N/A	N/A	N/A	Yes	LTO 2	IN13FG6006	N/A	N/A	N/A	N/A	N/A

Signature of Site Project Manager

Jim Vernon
Printed Name

4/23/2013
Date

CCS-SEC

DIVIDER

PAGE

INL CH AK TRACKING SPREADSHEET (Vent & Closure Dates)

CONTAINERID	WASTESTREAM	WASTE_MATRIX_CODE	CLOSUREDATE	VENTDATE
SRP12570	ID-RF-S3114	S3114	2/5/2013	2/5/2013

Kirkes, Creta - NWP

From: Mueller, Terry - NWP
Sent: Tuesday, April 30, 2013 8:43 AM
To: Dominguez, Lena - NWP; Pettus, Helen - NWP; Soaterna, Carolina - NWP; Valenzuela, Bobbie - NWP
Cc: Jones, Laura - NWP
Subject: FW: NCR/CAR Request INL 3114 Lot 99
Attachments: NCR_BDR_CONTAINER_CHECK_INL 3114 Lot 99.xls

There are no NCR or CAR dispositions that impact the acceptability of these containers, alternate container IDs, and associated BDRs for certification and shipping as listed on the attached. This check was verified independently.

Thanks!

TERRY L. MUELLER
Assurance Programs
MS GS-103
work (575)-234-7016
fax (575)-234-7042

Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA
Contractor to the Department of Energy

From: Dominguez, Lena - NWP
Sent: Tuesday, April 30, 2013 8:31 AM
To: Mueller, Terry - NWP; Jones, Laura - NWP; Kantrowitz, Rich - NWP; Gomez, Chris - NWP; Klingler, Larry - NWP
Subject: NCR/CAR Request INL 3114 Lot 99

Please do an NCR/CAR check for INL 3114 Lot 99.

Thanks,

Lena Dominguez
Central Characterization Project
Nuclear Waste Partnership LLC
Contractor for the U. S. Department of Energy
575-234-7537

DIVIDER

PAGE

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	WDS Master Template.xls Rev. 8 Addendum #8, SCO #1065 Excel 2003/2007 Microsoft Windows XP	Units	data				comments						initial	date
2	Shipper Site ID		BN	Location ID	Dest Program ID	Shipping Purpose				SRP12570			LD/HP	05/01/13
3	Waste Stream Profile		ID-RF-S3114	IN	WI	D							LD/HP	05/01/13
4	Container Number		SRP12570										LD/HP	05/01/13
5	Container Type		bo good S/V	drum, swb, tdop, etc., see WWIS labels for valid types.					U-235 FEM	U-235 FEM Uncert	FGGR Flag	FGGR Test Period	LD/HP	05/01/13
6	WAC Rev #		7.4						NULL	NULL	Y	10	LD/HP	05/01/13
7								Be mass<=100 kg	Be <= 1%	Be Present	Aqueous Material	Compacted Wst		
8	Cert Site		C8					Y	Y	Y	N	N	LD/HP	05/01/13
9	Cert Date		5/3/13											
10	Waste Handling Code		CH	CH, RH									LD/HP	05/01/13
11	Waste Type Code		MTRU	TRU, MTRU									LD/HP	05/01/13
12	Waste Stream BIR ID		IN-ID-RF-S3114										LD/HP	05/01/13
13	Waste Stream MWIR ID		NONE										LD/HP	05/01/13
14	Generator Site ID		RF										LD/HP	05/01/13
15	IDC Code		003										LD/HP	05/01/13
16	Matrix Code		S3114										LD/HP	05/01/13
17	Trucon Code		ID212V										LD/HP	05/01/13
18	Shipping Category		4099990020		Possible FGGR error									
19	Tru Alpha Act	Ci	4.52E-04		4.517E-04								LD/HP	05/01/13
20	Tru Alpha Act Uncert	1sigma Ci	1.27E-04	7.060E-04	Tru Alpha Act + 2sigma (Ci)								LD/HP	05/01/13
21	Tru Alpha Act Conc	nCi/g	3.27E+00		3.28E+00								LD/HP	05/01/13
22			9.20E-01	5.110E+00	Tru Alpha Act Conc + 2sigma (Ci)			Drum Weight	28.6				LD/HP	05/01/13
23	Pu239 Fiss Gm Eq	g	5.06E-03		5.058E-03			Liner Weight	5.4				LD/HP	05/01/13
24	Pu239 Fiss Gm Eq Uncert	1sigma g	1.95E-03	8.960E-03	Pu239 Fiss Gm Eq + 2sigma (Ci)								LD/HP	05/01/13
25	Pu239 Eq Act	Ci	4.61E-04		4.607E-04								LD/HP	05/01/13
26	Decay Heat	watts	1.42E-05		1.418E-05								LD/HP	05/01/13
27	Decay Heat Uncert	1sigma watts	3.95E-06	1.82E-05	Decay Heat + 1sigma (watts)								LD/HP	05/01/13
28	Layers of Packaging		1										LD/HP	05/01/13
29	Fill Factor		100	percentage	Liner Lid Present	N							LD/HP	05/01/13
30	Liner Type		1	1 = plastic drum liner									LD/HP	05/01/13
31	Liner Punctured		Y		Liner Hole Size (mm)	478							LD/HP	05/01/13
32	PCB Conc		NULL				PCB Waste	PCB Mass (kg)	Out of Service				LD/HP	05/01/13
33	Closure Date		2/5/2013	Watt-years	Waste Gen Date		Y	137.8	2/5/2013				LD/HP	05/01/13
34	Vent Date		2/5/2013	0.000	NULL								LD/HP	05/01/13
35	Filter Install Date		2/5/2013				Filter Reduction Date	NULL					LD/HP	05/01/13
36	Filter Manufacturer		NFT				Reduced Filter Model	NULL					LD/HP	05/01/13
37													LD/HP	05/01/13
38	Filter Model Number		NF019D										LD/HP	05/01/13
39	Number of Filters Installed		1										LD/HP	05/01/13
40	Aspiration Method ID		T										LD/HP	05/01/13
41	Gas Gen Rate		1.02E-06	1.020E-06	<<Gas Gen Rate Calculated.									
42	Hydrogen/Methane Gen Rate		1.810E-07											
43	Gas Gen Comp Date		2/7/2011		Waste (kg)	Packaging (kg)	Total (kg)							
44	Gross Weight	kg	171.8		137.8	34.0	171.8						LD/HP	05/01/13
45	Gross Weight Uncert	1sigma kg	2.3										LD/HP	05/01/13
46	Alpha Surf Cont	dpm/100 cm^2	19										LD/HP	05/01/13
47	Beta/Gamma Surf Cont	dpm/100 cm^2	599										LD/HP	05/01/13
48	Neutron Dose Rate	mrem/hr	0.5										LD/HP	05/01/13
49	Beta/Gamma Dose Rate	mrem/hr	0.1										LD/HP	05/01/13
50	Radionuclide		SR-90	CS-137	U-233	U-234	U-235	NP-237	PU-238	U-238	PU-239	PU-240	LD/HP	05/01/13
51	Activity	Ci	-1.00E+00	-1.00E+00	-1.00E+00	-1.00E+00	0.00E+00	0.00E+00	8.75E-06	-1.00E+00	3.17E-04	7.04E-05	LD/HP	05/01/13
52	Activity Uncert	1sigma Ci	-1.00E+00	-1.00E+00	-1.00E+00	-1.00E+00	0.00E+00	0.00E+00	4.75E-06	-1.00E+00	1.23E-04	2.78E-05	LD/HP	05/01/13
53	Mass	grams	-1.00E+00	-1.00E+00	-1.00E+00	-1.00E+00	0.00E+00	0.00E+00	5.06E-07	-1.00E+00	5.04E-03	3.06E-04		
54	Mass Uncert	1sigma grams	-1.00E+00	-1.00E+00	-1.00E+00	-1.00E+00	0.00E+00	0.00E+00	2.80E-07	-1.00E+00	2.00E-03	1.23E-04		
55	calc Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.75E-06	0.00E+00	3.17E-04	7.04E-05		
56	calc Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.35E-02	0.00E+00	2.30E+00	5.11E-01		
57	calc Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.75E-06	0.00E+00	3.17E-04	7.04E-05		
58	calc Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.35E-02	0.00E+00	2.30E+00	5.11E-01		

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
59	calc Pu239 FGE	g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.72E-08	0.00E+00	5.04E-03	6.89E-06		
60	calc Pu239 Eq Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.95E-06	0.00E+00	3.17E-04	7.04E-05		
61	calc Decay Heat	watts	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.90E-07	0.00E+00	9.83E-06	2.19E-06		
62	uncert Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.85E-06	0.00E+00	1.26E-04	2.84E-05		
63	uncert Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.52E-02	0.00E+00	9.11E-01	2.06E-01		
64	uncert Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.85E-06	0.00E+00	1.26E-04	2.84E-05		
65	uncert Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.52E-02	0.00E+00	9.11E-01	2.06E-01		
66	uncert Pu239 FGE	g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.17E-08	0.00E+00	2.00E-03	2.78E-06		
67	uncert Pu239 Eq Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.32E-06	0.00E+00	1.23E-04	2.78E-05		
68	uncert Decay Heat	watts	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.81E-07	0.00E+00	3.89E-06	8.83E-07		
69	Shipping Calcs	8.53E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.62E-03	0.00E+00	5.86E-02	1.30E-02		
70	49CFR173.433%		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.90%	0.00%	68.66%	15.25%		
71	Radionuclide		AM-241	PU-241	PU-242								LD/HP	05/01/13
72	Activity	Ci	5.55E-05	5.02E-04	9.15E-09								LD/HP	05/01/13
73	Activity Uncert	1sigma Ci	1.80E-05	2.15E-04	5.86E-09								LD/HP	05/01/13
74	Mass	grams	1.60E-05	4.83E-06	2.30E-06	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
75	Mass Uncert	1sigma grams	5.29E-06	2.11E-06	1.51E-06	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
76	calc Tru Alpha Act	Ci	5.55E-05	0.00E+00	9.15E-09	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
77	calc Tru Alpha Act Conc	nCi/g	4.03E-01	0.00E+00	6.64E-05	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
78	calc Act	Ci	5.55E-05	5.02E-04	9.15E-09	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
79	calc Act Conc	nCi/g	4.03E-01	3.64E+00	6.64E-05	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
80	calc Pu239 FGE	g	2.99E-07	1.09E-05	1.73E-08	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
81	calc Pu239 Eq Act	Ci	5.55E-05	9.84E-06	8.32E-09	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
82	calc Decay Heat	watts	1.86E-06	1.60E-08	2.70E-10	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
83	uncert Tru Alpha Act	Ci	1.84E-05	0.00E+00	5.98E-09	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
84	uncert Tru Alpha Act Conc	nCi/g	1.33E-01	0.00E+00	4.34E-05	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
85	uncert Act	Ci	1.84E-05	2.19E-04	5.98E-09	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
86	uncert Act Conc	nCi/g	1.33E-01	1.59E+00	4.34E-05	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
87	uncert Pu239 FGE	g	9.90E-08	4.75E-06	1.13E-08	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
88	uncert Pu239 Eq Act	Ci	1.80E-05	4.22E-06	5.33E-09	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
89	uncert Decay Heat	watts	6.14E-07	6.98E-09	1.76E-10	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
90	Shipping Calcs		1.03E-02	1.86E-03	1.69E-06	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
91	49CFR173.433%		12.02%	2.18%	0.99%	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
92	Waste Material Parameter		R	PW	Os								LD/HP	05/01/13
93	Wgt of Mat Parms	kg	0.3	7	130.5								LD/HP	05/01/13
94	Radio Assay Method		14WAGS1	PAN, FRAM, TGS, HENC									LD/HP	05/01/13
95	Data Package Number		INNDAW130022										LD/HP	05/01/13
96	Assay Date		2/13/2013										LD/HP	05/01/13
97	Charz Method ID		14VE1	RTRM, VISUAL									LD/HP	05/01/13
98	Data Package Number		IN-SRP-VE-000046										LD/HP	05/01/13
99	Charz Method Date		2/5/2013										LD/HP	05/01/13
100	Haz Codes		D008	D022	D026	D027	D028	D029	D030	D032	D034	D036	LD/HP	05/01/13
101	Haz Codes		D037	F001	F002	F005							LD/HP	05/01/13
102	Haz Codes													
103	Haz Codes													
104	Sample ID	Headspace Gas H/M	H-SRP12570										LD/HP	05/01/13
105	Sample Type		HGHM-T	HGHM									LD/HP	05/01/13
106	Layer No. Sampled		0		252.04								LD/HP	05/01/13
107	Date Sampled		2/20/2013	10 BP 5/13/13		Sample Site							LD/HP	05/01/13
108	Method ID		14HG2	DTP-1.2-041		C8							LD/HP	05/01/13
109	Data Package Number		IN13FG10009										LD/HP	05/01/13
110	CAS #		1333-74-0	74-82-8										
111	Analyte		HYDROGEN	METHANE									LD/HP	05/01/13
112	Concentration				159.09	92.95							LD/HP	05/01/13
113	Units	%vol			PPMV	PPMV							LD/HP	05/01/13
114	Date Analyzed		02/20/13	2/20/2013		2.5%= 3.98							LD/HP	05/01/13
115	B Detectable Flag													
116	D Detectable Flag													
117	E Detectable Flag													
118	J Detectable Flag													
119	U Detectable Flag			U									LD/HP	05/01/13
120	NA Detectable Flag		NA											
121	Methane Sample ID		14HG2	10 BP 5/13/13										
122	Sample ID	Headspace Gas VOC	SRP12570											
123	Sample Type		HGVO-T	HGVO									LD/HP	05/01/13
124	Layer No. Sampled		0			SARP-Flammable VOCs (ppmv)	15.77						LD/HP	05/01/13
125	Date Sampled		2/20/2013	10 BP 5/13/13									LD/HP	05/01/13
126	Method ID		14HG2	DTP-1.2-041									LD/HP	05/01/13
127	Data Package Number		IN13FG10009										LD/HP	05/01/13

WDS Master Template.xls Rev. 8
Addendum #8, SCO #1065
Excel 2003/2007 Microsoft
Windows XP

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	WDS Master Template.xls Rev. 6 Addendum #6, SCO #1065 Excel 2003/2007 Microsoft Windows XP	Units	data				comments						Initial	date
2	Shipper Site ID		BN	Location ID	Dest Program ID	Shipping Purpose				ARP70624			LD/BV	08/02/12
3	Waste Stream Profile		ID-SDA-SLUDGE	IN	WI	D							LD/BV	08/02/12
4	Container Number		ARP70624										LD/BV	08/02/12
5	Container Type		drum	drum, swb, tdop, etc., see WWIS labels for valid types.					U-235 FEM	U-235 FEM Uncert	FGGR Flag	FGGR Test Period	LD/BV	08/02/12
6	WAC Rev #		7.2						NULL	NULL	Y	10	LD/BV	08/02/12
7								Be mass<=100 kg	Be <= 1%	Be Present	Aqueous Material	Compacted Wst		
8	Cert Site		C8					Y	Y	Y	N	N	LD/BV	08/02/12
9	Cert Date		8-29-12											
10	Waste Handling Code		CH	CH, RH									LD/BV	08/02/12
11	Waste Type Code		MTRU	TRU, MTRU									LD/BV	08/02/12
12	Waste Stream BIR ID		INIDSDASLUDGE										LD/BV	08/02/12
13	Waste Stream MWIR ID		NONE										LD/BV	08/02/12
14	Generator Site ID		BN										LD/BV	08/02/12
15	IDC Code		003										LD/BV	08/02/12
16	Matrix Code		S3900										LD/BV	08/02/12
17	Trucon Code		ID112V										LD/BV	08/02/12
18	Shipping Category		4099990020											
19	Tru Alpha Act	Ci	1.48E-02		1.484E-02								LD/BV	08/02/12
20	Tru Alpha Act Uncert	1sigma Ci	5.54E-03	2.588E-02	Tru Alpha Act + 2sigma (Ci)								LD/BV	08/02/12
21	Tru Alpha Act Conc	nCi/g	1.44E+02		1.43E+02								LD/BV	08/02/12
22			5.38E+01	2.516E+02	Tru Alpha Act Conc + 2sigma (Ci)			Drum Weight	28.6				LD/BV	08/02/12
23	Pu239 Fiss Gm Eq	g	1.05E-01		1.048E-01			Liner Weight	5.4				LD/BV	08/02/12
24	Pu239 Fiss Gm Eq Uncert	1sigma g	3.02E-02	1.654E-01	Pu239 Fiss Gm Eq + 2sigma (Ci)								LD/BV	08/02/12
25	Pu239 Eq Act	Ci	1.49E-02		1.490E-02								LD/BV	08/02/12
26	Decay Heat	watts	4.90E-04		4.908E-04								LD/BV	08/02/12
27	Decay Heat Uncert	1sigma watts	1.85E-04	6.75E-04	Decay Heat + 1sigma (watts)								LD/BV	08/02/12
28	Layers of Packaging		1										LD/BV	08/02/12
29	Fill Factor		60	percentage	Liner Lid Present	N							LD/BV	08/02/12
30	Liner Type		1	1 = plastic drum liner									LD/BV	08/02/12
31	Liner Punctured		Y		Liner Hole Size	478							LD/BV	08/02/12
32	PCB Conc		NULL		(mm)			PCB Waste	PCB Mass (kg)	Out of Service			LD/BV	08/02/12
33	Closure Date		6/20/2012	Watt-years	Waste Gen Date			Y	103.4	6/20/2012			LD/BV	08/02/12
34	Vent Date		6/20/2012	0.000	NULL								LD/BV	08/02/12
35	Filter Install Date		6/20/2012				Filter Reduction Date		NULL				LD/BV	08/02/12
36	Filter Manufacturer		NFT				Reduced Filter Model		NULL				LD/BV	08/02/12
37													LD/BV	08/02/12
38	Filter Model Number		NF019D										LD/BV	08/02/12
39	Number of Filters Installed		1										LD/BV	08/02/12
40	Aspiration Method ID		T										LD/BV	08/02/12
41	Gas Gen Rate		1.37E-06	1.370E-06	<<Gas Gen Rate Calculated.									
42	Hydrogen/Methane Gen Rate		1.160E-07											
43	Gas Gen Comp Date		8/8/2008		Waste (kg)	Packaging (kg)	Total (kg)							
44	Gross Weight	kg	137.4		103.4	34.0	137.4						LD/BV	08/02/12
45	Gross Weight Uncert	1sigma kg	2.3										LD/BV	08/02/12
46	Alpha Surf Cont	dpm/100 cm^2	19										LD/BV	08/02/12
47	Beta/Gamma Surf Cont	dpm/100 cm^2	199										LD/BV	08/02/12
48	Neutron Dose Rate	mrem/hr	2										LD/BV	08/02/12
49	Beta/Gamma Dose Rate	mrem/hr	0.1										LD/BV	08/02/12
50	Radionuclide		SR-90	CS-137	U-233	U-234	U-235	NP-237	PU-238	U-238	PU-239	PU-240	LD/BV	08/02/12
51	Activity	Ci	3.69E-08	3.35E-08	-1.00E+00	7.66E-06	2.42E-07	2.33E-07	5.84E-05	2.86E-05	2.11E-03	4.68E-04	LD/BV	08/02/12
52	Activity Uncert	1sigma Ci	2.35E-08	2.13E-08	-1.00E+00	4.73E-06	8.93E-08	8.89E-08	3.42E-05	1.05E-05	9.34E-04	2.11E-04	LD/BV	08/02/12
53	Mass	grams	2.67E-10	3.81E-10	-1.00E+00	1.21E-03	1.11E-01	3.27E-04	3.38E-06	8.41E+01	3.35E-02	2.03E-03		
54	Mass Uncert	1sigma grams	1.74E-10	2.47E-10	-1.00E+00	7.84E-04	4.16E-02	1.27E-04	2.02E-06	3.15E+01	1.52E-02	9.36E-04		
55	calc Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.33E-07	5.84E-05	0.00E+00	2.11E-03	4.68E-04		
56	calc Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.25E-03	5.65E-01	0.00E+00	2.04E+01	4.53E+00		
57	calc Act	Ci	3.69E-08	3.35E-08	0.00E+00	7.66E-06	2.42E-07	2.33E-07	5.84E-05	2.86E-05	2.11E-03	4.68E-04		
58	calc Act Conc	nCi/g	3.57E-01	3.24E-01	0.00E+00	7.41E-02	2.34E-03	2.25E-03	5.65E-01	2.77E-01	2.04E+01	4.53E+00		

COPY

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
59	calc Pu239 FGE	g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.11E-02	4.90E-06	3.81E-07	0.00E+00	3.35E-02	4.58E-05		
60	calc Pu239 Eq Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.33E-07	5.31E-05	0.00E+00	2.11E-03	4.68E-04		
61	calc Decay Heat	watts	4.28E-11	3.71E-11	0.00E+00	2.21E-07	6.67E-09	6.83E-09	1.93E-06	7.25E-07	6.54E-05	1.46E-05		
62	uncert Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.07E-08	3.49E-05	0.00E+00	9.53E-04	2.15E-04		
63	uncert Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.77E-04	3.38E-01	0.00E+00	9.22E+00	2.08E+00		
64	uncert Act	Ci	2.40E-08	2.17E-08	0.00E+00	4.83E-06	9.11E-08	9.07E-08	3.49E-05	1.07E-05	9.53E-04	2.15E-04		
65	uncert Act Conc	nCi/g	2.32E-04	2.10E-04	0.00E+00	4.67E-02	8.81E-04	8.77E-04	3.38E-01	1.04E-01	9.22E+00	2.08E+00		
66	uncert Pu239 FGE	g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E-02	1.91E-06	2.28E-07	0.00E+00	1.52E-02	2.11E-05		
67	uncert Pu239 Eq Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.89E-08	3.11E-05	0.00E+00	9.34E-04	2.11E-04		
68	uncert Decay Heat	watts	2.78E-11	2.41E-11	0.00E+00	1.39E-07	2.51E-09	2.66E-09	1.16E-06	2.72E-07	2.95E-05	6.70E-06		
69	Shipping Calcs	2.76E+00	1.37E-08	2.48E-09	0.00E+00	2.84E-04	0.00E+00	4.31E-05	1.08E-02	0.00E+00	3.90E-01	8.65E-02		
70	49CFR173.433(		0.00%	0.00%	0.00%	0.01%	0.00%	0.00%	0.39%	0.00%	14.15%	3.14%		
71	Radionuclide		AM-241	PU-241	PU-242								LD/BV	08/02/12
72	Activity	Ci	1.22E-02	3.43E-03	6.08E-08								LD/BV	08/02/12
73	Activity Uncert	1sigma Ci	5.46E-03	1.65E-03	4.11E-08								LD/BV	08/02/12
74	Mass	grams	3.52E-03	3.30E-05	1.53E-05	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
75	Mass Uncert	1sigma grams	1.61E-03	1.62E-05	1.06E-05	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
76	calc Tru Alpha Act	Ci	1.22E-02	0.00E+00	6.08E-08	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
77	calc Tru Alpha Act Conc	nCi/g	1.16E+02	0.00E+00	5.88E-04	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
78	calc Act	Ci	1.22E-02	3.43E-03	6.08E-08	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
79	calc Act Conc	nCi/g	1.18E+02	3.32E+01	5.88E-04	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
80	calc Pu239 FGE	g	6.57E-05	7.42E-05	1.15E-07	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
81	calc Pu239 Eq Act	Ci	1.22E-02	6.73E-05	5.53E-08	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
82	calc Decay Heat	watts	4.08E-04	1.09E-07	1.79E-09	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
83	uncert Tru Alpha Act	Ci	5.57E-03	0.00E+00	4.19E-08	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
84	uncert Tru Alpha Act Conc	nCi/g	5.39E+01	0.00E+00	4.06E-04	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
85	uncert Act	Ci	5.57E-03	1.68E-03	4.19E-08	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
86	uncert Act Conc	nCi/g	5.39E+01	1.63E+01	4.06E-04	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
87	uncert Pu239 FGE	g	3.00E-05	3.64E-05	7.92E-08	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
88	uncert Pu239 Eq Act	Ci	5.46E-03	3.24E-05	3.74E-08	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
89	uncert Decay Heat	watts	1.86E-04	5.36E-08	1.24E-09	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
90	Shipping Calcs		2.26E+00	1.27E-02	1.12E-05	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
91	49CFR173.433(		81.84%	0.45%	0.00%	NULL	NULL	NULL	NULL	NULL	NULL	NULL		
92	Waste Material Parameter		OI	OS	IS	S							LD/BV	08/02/12
93	Wgt of Mat Parms	kg	9	64.4	8	22							LD/BV	08/02/12
94	Radio Assay Method		14WAGS1	PAN, FRAM, TGS, HENC									LD/BV	08/02/12
95	Data Package Number		INNDAW120053										LD/BV	08/02/12
96	Assay Date		7/9/2012										LD/BV	08/02/12
97	Charz Method ID		14VE1	RTRM, VISUAL									LD/BV	08/02/12
98	Data Package Number		IN-ARP-VE-002769										LD/BV	08/02/12
99	Charz Method Date		6/20/2012										LD/BV	08/02/12
100	Haz Codes		D004	D005	D006	D007	D008	D009	D010	D011	D022	D027	LD/BV	08/02/12
101	Haz Codes		D028	D029	D030	D032	D033	D034	D037	D038	D043	F001	LD/BV	08/02/12
102	Haz Codes		F002	F004	F005	F006	F007	F009	P098	P106				
103	Haz Codes													
104	Sample ID	Headspace Gas H/M	H-ARP70624										LD/BV	08/02/12
105	Sample Type		HGHM-T	HGHM									LD/BV	08/02/12
106	Layer No. Sampled		0		282.94								LD/BV	08/02/12
107	Date Sampled		7/25/2012			Sample Site							LD/BV	08/02/12
108	Method ID		14HG5	DTP-1.2-041		C8							LD/BV	08/02/12
109	Data Package Number		IN12FG5071										LD/BV	08/02/12
110	CAS #		1333-74-0	74-82-8										
111	Analyte		HYDROGEN	METHANE									LD/BV	08/02/12
112	Concentration				80.83	202.11							LD/BV	08/02/12
113	units	%vol			PPMV	PPMV							LD/BV	08/02/12
114	Date Analyzed		07/25/12	7/25/2012		2.5%= 2.02							LD/BV	08/02/12
115	B Detectable Flag													
116	D Detectable Flag													
117	E Detectable Flag													
118	J Detectable Flag													
119	U Detectable Flag		U	U									LD/BV	08/02/12
120	NA Detectable Flag													
121	Methanol Sample ID		14HG5											
122	Sample ID	Headspace Gas VOC	ARP70624										LD/BV	08/02/12
123	Sample Type		HGVO-T	HGVO									LD/BV	08/02/12
124	Layer No. Sampled		0			SARP-Flammable VOCs (ppmv)	19.02						LD/BV	08/02/12
125	Date Sampled		7/25/2012										LD/BV	08/02/12
126	Method ID		14HG5	DTP-1.2-041									LD/BV	08/02/12
127	Data Package Number		IN12FG5071										LD/BV	08/02/12

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N
128														
129	CAS #		67-56-1	60-29-7	75-35-4	67-64-1	75-34-3	156-59-2	78-93-3	110-82-7			LD/BV	08/02/12
130	Analyte		Methanol	Ethyl ether	1,1-Dichloroethylene	Acetone	Dichloroethane	cis-1,2-Dichloroethylene	Methyl ethyl ketone	Cyclohexane				
131	Concentration		12.64	0.77	1.21	4.88	0.94	0.20	1.80	1.79			LD/BV	08/02/12
132	units	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv			LD/BV	08/02/12
133	Date Analyzed		7/25/2012	7/25/2012	7/25/2012	7/25/2012	7/25/2012	7/25/2012	7/25/2012	7/25/2012			LD/BV	08/02/12
134	B Detectable Flag													
135	D Detectable Flag													
136	E Detectable Flag													
137	J Detectable Flag													
138	U Detectable Flag		U	U	U	U	U	U	U	U			LD/BV	08/02/12
139	NA Detectable Flag													
140	SARP-Flammable Calc		6.32	0.385	0.605	2.44	0.47	0.1	0.9	0.896				
141	CAS #		71-43-2	107-06-2	71-36-3	108-10-1	108-88-3	108-90-7	100-41-4	108383/106423			LD/BV	08/02/12
142	Analyte		Benzene	1,2-Dichloroethane	Butanol	Methyl isobutyl ketone	Toluene	Chlorobenzene	Ethyl benzene	m-Xylene/p-Xylene				
143	Concentration		0.31	1.22	0.76	1.88	2.48	0.63	0.87	0.42			LD/BV	08/02/12
144	units	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv			LD/BV	08/02/12
145	Date Analyzed		7/25/2012	7/25/2012	7/25/2012	7/25/2012	7/25/2012	7/25/2012	7/25/2012	7/25/2012			LD/BV	08/02/12
146	B Detectable Flag													
147	D Detectable Flag													
148	E Detectable Flag													
149	J Detectable Flag													
150	U Detectable Flag		U	U	U	U		U	U	U			LD/BV	08/02/12
151	NA Detectable Flag						NA							
152	SARP-Flammable Calc		0.155	0.61	0.38	0.94	2.48	0.315	0.435	0.21				
153	CAS #		95-47-6	108-67-8	95-63-6								LD/BV	08/02/12
154	Analyte		o-Xylene	1,3,5-Trimethylbenzen	1,2,4-Trimethylbenzen	NULL	NULL	NULL	NULL	NULL				
155	Concentration		0.54	0.99	1.23								LD/BV	08/02/12
156	units	ppmv	ppmv	ppmv	ppmv								LD/BV	08/02/12
157	Date Analyzed		7/25/2012	7/25/2012	7/25/2012	NULL	NULL	NULL	NULL	NULL			LD/BV	08/02/12
158	B Detectable Flag													
159	D Detectable Flag													
160	E Detectable Flag													
161	J Detectable Flag													
162	U Detectable Flag		U	U	U								LD/BV	08/02/12
163	NA Detectable Flag					NA	NA	NA	NA	NA				
164	SARP-Flammable Calc		0.27	0.495	0.615	NULL	NULL	NULL	NULL	NULL				
165	CAS #													
166	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
167	Concentration													
168	units	ppmv												
169	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
170	B Detectable Flag													
171	D Detectable Flag													
172	E Detectable Flag													
173	J Detectable Flag													
174	U Detectable Flag													
175	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
176	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
177	CAS #													
178	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
179	Concentration													
180	units	ppmv												
181	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
182	B Detectable Flag													
183	D Detectable Flag													
184	E Detectable Flag													
185	J Detectable Flag													
186	U Detectable Flag													
187	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
188	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N
189			type	comment										
190	Comment	1	GEN	PCB REMEDIATION WASTE									LD/BV	08/02/12
191	Comment													
192	Comment													
193	Comment													
194	Comment													
195	Comment													
196	Comment													
197	Comment													
198	Comment													
199	Comment													
200														
201			Requirements Met?											
202	Free liquids <1% by volume		YES											
203	No non-rad. pyrophorics		YES											
204	Chemical compatability		YES											
205	No explosives		YES											
206	No corrosives		YES											
207	No pressurized containers		YES											
208	No sealed Containers >4 liters		YES											
209	Liner punctured/ filtered		YES											
210	Flammable VOCs <500ppmv													
211	Container is in Approved Waste Stream Profile Form?	ID-SDA-SLUDGE	YES											
212	Can it be established through Process Knowledge that the concentration of flammable VOCs present in the headspace of the container is <= 500 ppm?.		NO											
213														
214														
215														
216														
217														
218														
219														
220														
221														
222														
223														
224														
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233														
234														
235														

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8-29-12
Date

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Addendum #8, SCO #1065
Excel 2003/2007 Microsoft Windows XP

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
128														
129	CAS #		67-56-1	60-29-7	75-35-4	67-64-1	75-34-3	156-59-2	78-93-3	110-82-7			LD/HP	05/01/13
130	Analyte		Methanol	Ethyl ether	1,1-Dichloroethylene	Acetone	1,1-Dichloroethane	cis-1,2-Dichloroethylene	Methyl ethyl ketone	Cyclohexane				
131	Concentration		9.46	0.30	0.36	1.48	0.76	0.11	1.16	0.94			LD/HP	05/01/13
132	units	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv			LD/HP	05/01/13
133	Date Analyzed		2/20/2013	2/20/2013	2/20/2013	2/20/2013	2/20/2013	2/20/2013	2/20/2013	2/20/2013			LD/HP	05/01/13
134	B Detectable Flag													
135	D Detectable Flag													
136	E Detectable Flag													
137	J Detectable Flag													
138	U Detectable Flag		U	U	U	U	U	U	U	U			LD/HP	05/01/13
139	NA Detectable Flag													
140	SARP-Flammable Calc		4.73	0.15	0.18	0.74	0.38	0.055	0.58	0.47				
141	CAS #		71-43-2	107-06-2	71-36-3	108-10-1	108-88-3	108-90-7	100-41-4	108383/106423			LD/HP	05/01/13
142	Analyte		Benzene	1,2-Dichloroethane	Butanol	Methyl isobutyl ketone	Toluene	Chlorobenzene	Ethyl benzene	m-Xylene/p-Xylene				
143	Concentration		0.13	0.29	0.89	1.42	4.22	0.85	0.83	0.49			LD/HP	05/01/13
144	units	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv			LD/HP	05/01/13
145	Date Analyzed		2/20/2013	2/20/2013	2/20/2013	2/20/2013	2/20/2013	2/20/2013	2/20/2013	2/20/2013			LD/HP	05/01/13
146	B Detectable Flag													
147	D Detectable Flag													
148	E Detectable Flag													
149	J Detectable Flag													
150	U Detectable Flag		U	U	U	U		U	U	U			LD/HP	05/01/13
151	NA Detectable Flag						NA							
152	SARP-Flammable Calc		0.065	0.145	0.445	0.71	4.22	0.425	0.415	0.245				
153	CAS #		95-47-6	108-67-8	95-63-6								LD/HP	05/01/13
154	Analyte		o-Xylene	1,3,5-Trimethylbenzen	1,2,4-Trimethylbenzen	NULL	NULL	NULL	NULL	NULL				
155	Concentration		0.72	1.39	1.52								LD/HP	05/01/13
156	units	ppmv	ppmv	ppmv	ppmv								LD/HP	05/01/13
157	Date Analyzed		2/20/2013	2/20/2013	2/20/2013	NULL	NULL	NULL	NULL	NULL			LD/HP	05/01/13
158	B Detectable Flag													
159	D Detectable Flag													
160	E Detectable Flag													
161	J Detectable Flag													
162	U Detectable Flag		U	U	U								LD/HP	05/01/13
163	NA Detectable Flag					NA	NA	NA	NA	NA				
164	SARP-Flammable Calc		0.36	0.695	0.76	NULL	NULL	NULL	NULL	NULL				
165	CAS #													
166	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
167	Concentration													
168	units	ppmv												
169	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
170	B Detectable Flag													
171	D Detectable Flag													
172	E Detectable Flag													
173	J Detectable Flag													
174	U Detectable Flag													
175	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
176	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
177	CAS #													
178	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
179	Concentration													
180	units	ppmv												
181	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
182	B Detectable Flag													
183	D Detectable Flag													
184	E Detectable Flag													
185	J Detectable Flag													
186	U Detectable Flag													
187	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
188	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				

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Windows XP

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
189			type	comment										
190	Comment	1	GEN	PCB REMEDIATION WASTE										
191	Comment												LD/HP	05/01/13
192	Comment													
193	Comment													
194	Comment													
195	Comment													
196	Comment													
197	Comment													
198	Comment													
199	Comment													
200														
201			Requirements Met?											
202	Free liquids <1% by volume		YES											
203	No non-rad. pyrophorics		YES											
204	Chemical compatability		YES											
205	No explosives		YES											
206	No corrosives		YES											
207	No pressurized containers		YES											
208	No sealed Containers >4 liters		YES											
209	Liner punctured/ filtered		YES											
210	Flammable VOCs <500ppmv													
211	Container is in Approved Waste Stream Profile Form?	ID-RF-S3114	YES											
212	Can it be established through Process Knowledge that the concentration of flammable VOCs present in the headspace of the container is <= 500 ppm?.		NO											
213														
214														
215														
216														
217														
218														
219														
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221														
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235														

B. Pyeatt
CCP Certification Official

5/3/13
Date

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DIVIDER

PAGE

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP12570
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000046
4. Examination Start Date:	02/05/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	504
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	220178
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12570							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)	12.Volume (L)	
5								
6	a. Iron-based metals/alloys (IM)				0.0	N/A	0.0	
7				N/A	N/A	8.0	0.0	
8				N/A	N/A	8.0	0.0	
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A	0.0	
10				N/A	N/A	3.0	0.0	
11				N/A	N/A	3.0	0.0	
12	c. Other metals (OM)				0.0	N/A	0.0	
13		d. Lead			0.0	N/A	0.0	
14				N/A	N/A	11.0	0.0	
15				N/A	N/A	11.0	0.0	
16		e. Beryllium			0.0	N/A	0.0	
17				N/A	N/A	1.8	0.0	
18				N/A	N/A	1.8	0.0	
19		f. Depleted uranium			0.0	N/A	0.0	
20				N/A	N/A	19.1	0.0	
21				N/A	N/A	19.1	0.0	
22		g. Copper			0.0	N/A	0.0	
23				N/A	N/A	9.0	0.0	
24				N/A	N/A	9.0	0.0	
25		h. Other (See Note a)			0.0	N/A	0.0	
26				N/A	N/A	0.0	0.0	
27				N/A	N/A	0.0	0.0	
28				N/A	N/A	0.0	0.0	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12570							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	i.	Other inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				PAPER (NSW)	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003

Container ID: SRP12570

Section 2: Waste Material Parameter (WMP) Estimates

9. Waste Material Parameter and Item Description	10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
v. Rubber (R)	0.3	N/A		0.3
RUBBER BANDS TIGHTLY BOUND ON TOP (WAIP)	0.3	0.9 - 2.0	1.1	0.3
N/A	N/A	0.9 - 2.0	0.0	0.0
w. Plastics (waste materials) (PW)	7.0	N/A		7.8
PLASTIC TIGHTLY BOUND ON TOP	5.6	0.9		6.2
1 TRAY LINER AND 1 BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
N/A	N/A	0.9		0.0
x. Organic matrix (OR)	130.5	N/A		108.8
x1. Sludge	130.5	N/A		108.8
OLIVE GRAY PUTTY LIKE SLUDGE WITH CALCIUM SILICATE	130.5	1.0 - 1.5	1.2	108.8
N/A	N/A	1.0 - 1.5	0.0	0.0
N/A	N/A	1.0 - 1.5	0.0	0.0
x2. Other (See Note a)	0.0	N/A		0.0
N/A	N/A	0.0		0.0
N/A	N/A	0.0		0.0
y. Inorganic matrix (IN)	0.0	N/A		0.0
y1. Sludge	0.0	N/A		0.0
N/A	N/A	1.0 - 1.5	0.0	0.0
N/A	N/A	1.0 - 1.5	0.0	0.0
N/A	N/A	1.0 - 1.5	0.0	0.0
y2. Roaster Oxides	0.0	N/A		0.0
N/A	N/A	1.5 - 4.0	0.0	0.0
N/A	N/A	1.5 - 4.0	0.0	0.0
N/A	N/A	1.5 - 4.0	0.0	0.0
y3. Salt	0.0	N/A		0.0
N/A	N/A	0.0		0.0
N/A	N/A	0.0		0.0
y4. Other (See Note a)	0.0	N/A		0.0
N/A	N/A	0.0		0.0
N/A	N/A	0.0		0.0
z. Soils/gravel (S)	0.0	N/A		0.0
N/A	N/A	1.0 - 1.4	0.0	0.0
N/A	N/A	1.0 - 1.4	0.0	0.0
aa. TOTAL	137.8	N/A		116.9

13. (ORGANIC SLUDGE) weight (130.5) kg was obtained by subtracting the weighed waste weight of (7.3) kg and the container net weight of (34.0) kg from the gross weight (171.8) kg of the waste container. (171.8) - (7.3) - (34.0) = (130.5) kg

a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.

b. N/A

041

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12570	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12570	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	32.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	220178
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728541
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	02/20/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1329
22. Measured gross weight of loaded container, fully assembled (kgs):	171.8
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	378.7
23. Container closure date (mm/dd/yy):	02/05/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	724694
b. Filter Torque Wrench Calibration Due Date:	04/15/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	FL-596
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	100.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	137.8
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12570	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	8.1
31. Total volume of Solidified Organics (L):	108.8
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	116.9
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	94.7%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

L. MUNTEAN	L. Muntean	2/5/13
Enter Name	Signature	Date

Visual Examination Operator 2:

J. STANTON	J. M. Stanton	2/5/13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE	S. Pattee	2-5-13
Enter Name	Signature	Date

DIVIDER

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NDA 2000 Assay Report

Item Information

Item ID:	SRP12570	Count Sequence Number:	21698
Operator:	AQ2\Operator		
Assay Start:	2/13/2013 11:55:17 AM		
Description 1:	INNDAW130022		
Description 2:	S3114		
Location:			
Comment:			
Matrix Type:	Default		
Container Type:	55 Gallon Drum		
Weight:	Gross: 138.0 kg	Net:	138.0 kg
Container:	Volume: 208.0 l	Full:	100.0 %
Density:	0.660 kg /l		

System Configuration

Counter:	WMF-610 AQ2
Count Type:	Assay - Solids/Soil
Collimator/Geometry Setting:	Default - 0

Errors quoted at 1.000 sigma

********** Radioassay Data Sheet **********

Engine Version: TMU Gamma 1.5

Count Sequence Number: 21698 Batch Number: INNDAW130022
Assay Instrument: WMF-610 AQ2 Location: INL
Analysis Method: CCP-TP-019 Rev 5 Software Version: NDA 2000 V.4.0
Item ID: SRP12570 Analysis Date: 2/13/2013

NID identified fiducial nuclide Pu-239
Source of isotopics: DECLARED

Net Weight	138000.0 g	
Pu mass	5.35E-003 +-	1.95E-003 g
TRU Alpha Activity	4.52E-004 +-	1.27E-004 Ci
TRU Activity Concentration	3.27E+000 +-	9.20E-001 nCi/g
Pu-239 Equivalent Activity	4.61E-004 +-	1.27E-004 Ci
Pu-239 FGE	5.06E-003 +-	1.95E-003 g
Decay heat	1.42E-005 +-	3.95E-006 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.01E-008
U233	<LLD	<LLD	0.00E+000	1.35E-004
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.58E-008
NP237	0.00E+000	0.00E+000	0.00E+000	2.13E-008
PU238	5.06E-007	8.75E-006	4.75E-006	6.05E-006
U238	<LLD	<LLD	0.00E+000	1.29E-006
PU239	5.04E-003	3.17E-004	1.23E-004	2.19E-004
PU240	3.06E-004	7.04E-005	2.78E-005	4.86E-005
AM241	1.60E-005	5.55E-005	1.80E-005	1.10E-006
PU241	4.83E-006	5.02E-004	2.15E-004	3.47E-004
PU242	2.30E-006	9.15E-009	5.86E-009	0.00E+000

Errors quoted at 1.000 sigma

Operator: Brent Brad Date: 02/13/13

ITR: [signature] Date: ~~2/25/15~~ 2/25/13 2/25/13

Automated Independent Technical Review

Counter ID: WMF-610 AQ2
Container ID: SRP12570
Waste Matrix Code: S3114
Sequence Number: 21698

Count Type: Assay - Solids/Soil
Assay Date: 2/13/2013

MGA Analysis:
Results are marked as invalid.

DISPOSITION: MGA failure due to low Pu content in the drum. Use DECLARED WG Pu isotopics.

Gamma Analysis:
Analysis Status: No errors.

DISPOSITION: OK

Miscellaneous:

DISPOSITION: TRU activity concentration < 100 nCi/g.

Expert Review by: _____ Date: 2/14/13

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Attachment 4 – Flammable Gas Analysis Form

SCO 1049 Add 4 - Win XP SP3/Win 7 SP1
Excel 2003/2007/2010

Waste Container ID: **SRP12570**

BDR Number: **IN13FG10009**

Sampling Date: **2/20/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	159.09	
74-82-8	Methane	92.95	U
67-56-1	Methanol	9.46	U
60-29-7	Ethyl Ether	0.30	U
75-35-4	1,1-Dichloroethylene	0.36	U
67-64-1	Acetone	1.48	U
75-34-3	1,1-Dichloroethane	0.76	U
156-59-2	cis-1,2-Dichloroethene	0.11	U
78-93-3	Methyl ethyl ketone	1.16	U
110-82-7	Cyclohexane	0.94	U
71-43-2	Benzene	0.13	U
107-06-2	1,2-Dichloroethane	0.29	U
71-36-3	1-Butanol	0.89	U
108-10-1	Methyl isobutyl ketone	1.42	U
108-88-3	Toluene	4.22	
108-90-7	Chlorobenzene	0.85	U
100-41-4	Ethylbenzene	0.83	U
108-38-3/106-42-3	m- and p-Xylene	0.49	U
95-47-6	o-Xylene	0.72	U
108-67-8	1,3,5-Trimethylbenzene	1.39	U
95-63-6	1,2,4-Trimethylbenzene	1.52	U

CAS Number	IDENTIFIED TIC COMPOUND	Est. Amount ppmv
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

BDR Number: IN13FG10009

Waste Container ID		8 Filter Model Number	9 Hydrogen Diffusivity of Filter (mol/s/mf)	10 Package Configuration Group Number	11 Closure Date	12 Vent Date	13 Required DAC Value (in days)	14 Drum Age (in days)	15 Can this container be sampled?
1	SRP12536	NucFil-019DS	1.85E-05	N/A	2/1/2013	2/1/2013	5	19	Y
2	SRP12572	NucFil-019DS	1.85E-05	N/A	2/4/2013	2/4/2013	5	16	Y
3	SRP12540	NucFil-019DS	1.85E-05	N/A	2/1/2013	2/1/2013	5	19	Y
4	SRP12527	NucFil-019DS	1.85E-05	N/A	2/1/2013	2/1/2013	5	19	Y
5	SRP12422	NucFil-019DS	1.85E-05	N/A	1/31/2013	1/31/2013	5	20	Y
6	SRP12538	NucFil-019DS	1.85E-05	N/A	2/1/2013	2/1/2013	5	19	Y
7	SRP12570	NucFil-019DS	1.85E-05	N/A	2/5/2013	2/5/2013	5	15	Y
8	SRP12544	NucFil-019DS	1.85E-05	N/A	2/4/2013	2/4/2013	5	16	Y
9	SRP12459	NucFil-019DS	1.85E-05	N/A	2/4/2013	2/4/2013	5	16	Y
10	SRP12531	NucFil-019DS	1.85E-05	N/A	2/1/2013	2/1/2013	5	19	Y
11	SRP12418	NucFil-019DS	1.85E-05	N/A	2/4/2013	2/4/2013	5	16	Y
12	SRP12507	NucFil-019DS	1.85E-05	N/A	2/1/2013	2/1/2013	5	19	Y
13	SRP12594	NucFil-019DS	1.85E-05	N/A	2/5/2013	2/5/2013	5	15	Y
14	SRP12589	NucFil-019DS	1.85E-05	N/A	2/5/2013	2/5/2013	5	15	Y
15	SRP12405	NucFil-019DS	1.85E-05	N/A	1/30/2013	1/30/2013	5	21	Y
16	SRP12421	NucFil-019DS	1.85E-05	N/A	1/31/2013	1/31/2013	5	20	Y
17	SRP12465	NucFil-019DS	1.85E-05	N/A	1/28/2013	1/28/2013	5	23	Y
18	SRP12324	NucFil-019DS	1.85E-05	N/A	1/24/2013	1/24/2013	5	27	Y
19	SRP12434	NucFil-019DS	1.85E-05	N/A	1/29/2013	1/29/2013	5	22	Y
20	SRP12425	NucFil-019DS	1.85E-05	N/A	1/28/2013	1/28/2013	5	23	Y

Operator: DALE V. LOVER
Printed Name

Signature

02.20.13
Date

000041

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Waste Isolation Pilot Plant
Overpack Data Report

Report Statistics

Report Version:	**2.2**
WDS Instance:	**prd05.wipp.carlsbad.nm.us**
Generated on:	**June 06, 2013 02:53 PM**
Generated by:	**RAMIREZ, MICHAEL**
Total Pages:	**7**

Selection Criteria

Container Number:	**BN10489992**

Container: BN10489992
Type: 3 - TDOP

Current Status
Extended Status: PRESUB CERT
Container Status: PRESUBMITTAL TO CERTIFICATION
Certification Date:
Waste Handling Code: CH
Disposal Date:

Current Location Site: IN
Generator Site: RF
Destination Site ID: WI

Certification Program ID: C8
Shipping Program ID: BN

Neutron Dose Rate (mrem/hr):
Beta Gamma Dose Rate (mrem/hr):
Total Dose Rate (mrem/hr):

FGE (g): 2.579E00
FGE Uncertainty (g): 4.703E-01

Gross Weight (kg): 2577.18
Gross Weight Uncert (kg): 39.23

Decay Heat (W): 7.098E-03
Decay Heat Uncertainty (W): 9.556E-04

Certification Data Values

Waste Stream Profile Code: ID-RF-S3114
Waste Type Code: MTRU
IDC Code: 003
Waste Matrix Code: S3114
WAC Revision Number: 7.4
Fill Factor (%): 44.80

Transportation Data Values

Closure Date:
Vent Date:

Shipment Purpose: DISPOSAL
Machine Compacted? N

TRU Alpha Activity (Ci): 2.261E-01
TRU Alpha Activity Uncertainty (Ci): 3.075E-02
TRU Alpha Activity Concentration (Ci/g): 1.542E-07
PU-239 Equivalent Activity (PE-Ci): 2.301E-01
Alpha Surface Contamination (dpm/cm^2): 19.0
Beta/Gamma Surface Contamination (dpm/cm^2): 199.0

Filters

Filter Model Number	Filter Diffusivity (mol/s/ml)	Quantity	Install Date
NF012	1.9E-06	1	05/06/2013
NF19SD	1.85E-05	2	05/06/2013

Container: BN10489992
Type: 3 - TDOP

Current Status:
Extended Status: PRESUB CERT
Container Status: PRESUBMITTAL TO CERTIFICATION
Certification Date:
Waste Handling Code: CH
Disposal Date:

PCB Waste? Y
PCB Mass (kg): 1466.2
PCB Concentration (ppm):
PCB Out of Service Date: 01/16/2013
Be Present? Y
Be <= 1% by weight? Y

Separation OK?
Governing Packing Fraction (compaction level): non-compacted

Certification Comments

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
AM-241	2.659E-02	5.200E-03	7.664E-03	1.529E-03
CS-137	<LLD	<LLD	<LLD	<LLD
NP-237	6.587E-07	1.607E-07	9.238E-04	2.300E-04
PU-238	5.487E-03	1.467E-03	3.172E-04	8.652E-05
PU-239	1.609E-01	2.953E-02	2.558E00	4.791E-01
PU-240	3.294E-02	6.426E-03	1.432E-01	2.851E-02
PU-241	2.337E-01	4.889E-02	2.248E-03	4.797E-04
PU-242	2.602E-06	5.112E-07	6.553E-04	1.314E-04
SR-90	<LLD	<LLD	<LLD	<LLD
U-233	<LLD	<LLD	<LLD	<LLD
U-234	1.301E-06	6.264E-07	2.059E-04	1.011E-04

Container: BN10489992
Type: 3 - TDOP

Current Status
Extended Status: PRESUB CERT
Container Status: PRESUBMITTAL TO CERTIFICATION
Certification Date:
Waste Handling Code: CH
Disposal Date:

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
U-235	3.160E-08	1.120E-08	1.443E-02	5.219E-03
U-238	1.610E-06	6.130E-07	4.735E00	1.840E00

Material Parameters

Material Parameter	Description	Weight (kg)
1	IRON BASE METAL ALLOYS	286.30
6	CELLULOSICS	0.40
7	RUBBER	2.70
8	PLASTICS	92.50
10	SOLIDIFIED ORGANIC MATERIAL	1424.30
13	STEEL CONTAINER MATERIALS	770.98
	Waste Weight:	1806.20
	Packaging Weight:	770.98
	Total Material Weight:	2577.18

Hazardous Codes

Hazardous Code	Description
D008	LEAD
D022	CHLOROFORM
D026	CRESOL
D027	1,4-DICHLOROBENZENE
D028	1,2-DICHLOROETHANE

Container: BN10489992
Type: 3 - TDOP

Current Status

Extended Status: PRESUB CERT
Container Status: PRESUBMITTAL TO CERTIFICATION
Certification Date:
Waste Handling Code: CH
Disposal Date:

Hazardous Codes

Hazardous Code	Description
D029	1,1-DICHLOROETHYLENE
D030	2,4-DINITROTOLUENE
D032	HEXACHLOROBENZENE
D034	HEXACHLOROETHANE
D036	NITROBENZENE
D037	PENTACHLOROPHENOL
F001	SPENT HALOGENATED SOLVENTS
F002	SPENT HALOGENATED SOLVENTS
F005	SPENT NON-HALOGENATED SOLVENTS

Edit Limit Check Results

Evaluation Date: 05/06/2013 15:47:32 Overall Status: FAIL

Evaluation Code	Status
DI_CERT_ALL	FAIL
DI_CERT_BE	PASS
DI_CERT_CERT	FAIL
DI_CERT_CHARZ	PASS
DI_CERT_ED	PASS
DI_CERT_EPA	PASS
DI_CERT_PCB	PASS
DI_CERT_PERC	PASS

Return Code	Detailed Description
DI_CERT_CDE	THE CERTIFICATION DATE IS BEFORE ONE OR MORE REPORTED CONTAINER DATES.
DI_TRAMPAC_CDN	THE CLOSURE DATE IS NULL.
DI_TRAMPAC_VDN	THE VENT DATE IS NULL.
WAC_ALL_BGD	THE BETA/GAMMA DOSE EQUIVALENT RATE IS NULL.
WAC_ALL_CDN	THE CERTIFICATION DATE IS NULL.
WAC_ALL_NDR	THE NEUTRON DOSE EQUIVALENT RATE IS NULL.
WAP_CERT_BGN	THE BETA/GAMMA DOSE EQUIVALENT RATE IS NULL.

Container: BN10489992
Type: 3 - TDOP

Current Status

Extended Status: PRESUB CERT
Container Status: PRESUBMITTAL TO CERTIFICATION
Certification Date:
Waste Handling Code: CH
Disposal Date:

Edit Limit Check Results

Evaluation Date: 05/06/2013 15:47:32 Overall Status: FAIL

Evaluation Code	Status
DI_CERT_TRAMPAC	FAIL
DSA	PASS
WAC	FAIL
WAP_CERT	FAIL

Return Code	Detailed Description
WAP_CERT_CDN	THE CERTIFICATION DATE IS NULL.
WAP_CERT_CLN	THE CLOSURE DATE IS NULL.
WAP_CERT_NDN	THE NEUTRON DOSE EQUIVALENT RATE IS NULL.

TRAMPAC Evaluation Results

Evaluation Date: 05/06/2013 15:47:39 Overall Status: FAIL

Evaluation Code	Status
OP_ALL	FAIL
OP_CFG	PASS
OP_DDH	PASS
OP_FGE	PASS
OP_FIL	PASS
OP_GVE	PASS
OP_RDR	FAIL
OP_SHIP	
OP_TGRR	PASS
OP_WGT	PASS

Return Code	Detailed Description
OP_RDR_REL	Overpack external surface radiation dose rate exceeds the radiation dose rate limit.

Inner Containers

Container Number	Type Code	TRUCON Code	Shipping Category	Shipping Period	Gross Weight + Error	FGE + 2x Error	Waste Stream
SRP12242	18 - 55 gal TBO Solid/Vitrified	ID212V	4099990020	10	177.10	2.342E-2	ID-RF-S3114
SRP12418	18 - 55 gal TBO Solid/Vitrified	ID212V	4099990020	10	183.10	1.165E-1	ID-RF-S3114

Container: BN10469992
Type: 3 - TDOP

Current Status
Extended Status: PRESUB CERT
Container Status: PRESUBMITTAL TO CERTIFICATION
Certification Date:
Waste Handling Code: CH
Disposal Date:

Inner Containers

Container Number	Type Code	TRUCON Code	Shipping Category	Shipping Period	Gross Weight + Error	FGE + 2x Error	Waste Stream
SRP12425	18 - 55 gal TBO Solid/Vitrified	ID212V	4099990020	10	178.90	4.404E-1	ID-RF-S3114
SRP12459	18 - 55 gal TBO Solid/Vitrified	ID212V	4099990020	10	184.90	4.696E-1	ID-RF-S3114
SRP12465	18 - 55 gal TBO Solid/Vitrified	ID212V	4099990020	10	197.30	2.776E-2	ID-RF-S3114
SRP12502	18 - 55 gal TBO Solid/Vitrified	ID212V	4099990020	10	179.70	5.6E-1	ID-RF-S3114
SRP12570	18 - 55 gal TBO Solid/Vitrified	ID212V	4099990020	10	174.10	8.96E-3	ID-RF-S3114
SRP12572	18 - 55 gal TBO Solid/Vitrified	ID212V	4099990020	10	195.70	1.958E0	ID-RF-S3114
SRP12589	18 - 55 gal TBO Solid/Vitrified	ID212V	4099990020	10	178.90	6.92E-2	ID-RF-S3114
SRP12594	18 - 55 gal TBO Solid/Vitrified	ID212V	4099990020	10	179.50	7.02E-1	ID-RF-S3114

History

Event Date/Time	Event Description	Reason
05/06/2013 15:46:44	INSERT DATA INTO THE DATABASE	

GEN15

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-ANLE-S5000 Lot # 32

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
ANLE3E	NA	NA	INLRHRTR12013	N/A	N/A	N/A		NA	NA	NA	
ANLE3A	NA	NA	INLRHRTR12013	N/A	N/A	N/A		NA	NA	NA	
ANLE8A	NA	NA	INLRHRTR12013	N/A	N/A	N/A		NA	NA	NA	
ANLE6B	NA	NA	INLRHRTR12013	N/A	N/A	N/A		NA	NA	NA	
ANLE10B	NA	NA	INLRHRTR12013	N/A	N/A	N/A		NA	NA	NA	
ANLE10D	NA	NA	INLRHRTR12013	N/A	N/A	N/A		NA	NA	NA	
ANLE10A	NA	NA	INLRHRTR12013	N/A	N/A	N/A		NA	NA	NA	
ANLE3G	NA	NA	INLRHRTR12013	N/A	N/A	N/A		NA	NA	NA	
ANLE5A	NA	NA	INLRHRTR12013	N/A	N/A	N/A		NA	NA	NA	
ANLE5B	NA	NA	INLRHRTR12013	N/A	N/A	N/A		NA	NA	NA	
ANLE3B	NA	NA	INLRHRTR12014	N/A	N/A	N/A		NA	NA	NA	
ANLE6F	NA	NA	INLRHRTR12014	N/A	N/A	N/A		NA	NA	NA	
ANLE10C	NA	NA	INLRHRTR12014	N/A	N/A	N/A		NA	NA	NA	
ANLE10G	NA	NA	INLRHRTR12014	N/A	N/A	N/A		NA	NA	NA	
ANLE5F	NA	NA	INLRHRTR12014	N/A	N/A	N/A		NA	NA	NA	
ANLE7E	NA	NA	INLRHRTR12014	N/A	N/A	N/A		NA	NA	NA	
ANLE7D	NA	NA	INLRHRTR12014	N/A	N/A	N/A		NA	NA	NA	
ANLE28F	NA	NA	INLRHRTR12014	N/A	N/A	N/A		NA	NA	NA	
ANLE28E	NA	NA	INLRHRTR12014	NA	NA	NA		NA	NA	NA	
ANLE28B	NA	NA	INLRHRTR12014	N/A	N/A	N/A		NA	NA	NA	
ANLE7B	NA	NA	INLRHRTR12014	N/A	N/A	N/A		NA	NA	NA	
ANLE7A	NA	NA	INLRHRTR12014	N/A	N/A	N/A		NA	NA	NA	
ANLE7G	NA	NA	INLRHRTR12014	N/A	N/A	N/A		NA	NA	NA	
ANLE12F	NA	NA	INLRHRTR12015	N/A	N/A	N/A		NA	NA	NA	
ANLE12A	NA	NA	INLRHRTR12015	N/A	N/A	N/A		NA	NA	NA	
ANLE12C	NA	NA	INLRHRTR12015	N/A	N/A	N/A		NA	NA	NA	
ANLE28G	NA	NA	INLRHRTR12015	N/A	N/A	N/A		NA	NA	NA	
ANLE28D	NA	NA	INLRHRTR12015	N/A	N/A	N/A		NA	NA	NA	
ANLE28C	NA	NA	INLRHRTR12015	N/A	N/A	N/A		NA	NA	NA	

CIS-004

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-ANLE-S5000

Lot # 32

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
ANLE28H	NA	NA	INLRHRTR12015	N/A	N/A	N/A		NA	NA	NA	
ANLE12E	NA	NA	INLRHRTR12015	N/A	N/A	N/A		NA	NA	NA	
ANLE12D	NA	NA	INLRHRTR12015	N/A	N/A	N/A		NA	NA	NA	
ANLE26A	NA	NA	INLRHRTR12015	N/A	N/A	N/A		NA	NA	NA	
ANLE12G	NA	NA	INLRHRTR12015	N/A	N/A	N/A		NA	NA	NA	
ANLE26F	NA	NA	INLRHRTR12015	N/A	N/A	N/A		NA	NA	NA	
ANLE12B	NA	NA	INLRHRTR12015	N/A	N/A	N/A		NA	NA	NA	
ANLE7F	NA	NA	INLRHRTR12016	N/A	N/A	N/A		NA	NA	NA	
ANLE27F	NA	NA	INLRHRTR12016	N/A	N/A	N/A		NA	NA	NA	
ANLE36E	NA	NA	INLRHRTR12016	N/A	N/A	N/A		NA	NA	NA	
ANLE27A	NA	NA	INLRHRTR12016	N/A	N/A	N/A		NA	NA	NA	
ANLE36F	NA	NA	INLRHRTR12016	N/A	N/A	N/A		NA	NA	NA	
ANLE10E	NA	NA	INLRHRTR12013	N/A	N/A	N/A		NA	NA	NA	

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

10-23-12
Date

CIS.005

Soaterna, Carolina - NWP

From: Jones, Laura - NWP
Sent: Friday, October 26, 2012 8:25 AM
To: Underwood, Luann - NWP; Kantrowitz, Rich - NWP; Pettus, Helen - NWP
Cc: Soaterna, Carolina - NWP; Walker, Mak (Maryann) - NWP; Mueller, Terry - NWP
Subject: RE: NCR/CAR Check for INL RH/AK 500 ID-ANLE-S5000/WS S5000 Lot 32 – CHZ Lot 2
Attachments: Copy of NCR_BDR_CONTAINER_CHECK_INL RH-AK 500 ID-ANLE-S5000-WS S5000 Lot 32 – CHZ Lot 2..xls

There are no NCR or CAR dispositions that impact the acceptability of these drums, alternate drum IDs, and associated BDRs for certification and shipping as listed on the attached. This check was verified independently.

Thanks,

Laura R. Jones
Quality Assurance
Nuclear Waste Partnership LLC
Contractor for the U.S. Department of Energy
Office: (575) 234-7244
Email: laura.jones@wipp.ws
Fax: (575) 234-7071

10/26/12

From: Underwood, Luann - NWP
Sent: Friday, October 26, 2012 6:42 AM
To: Jones, Laura - NWP; Kantrowitz, Rich - NWP
Cc: Soaterna, Carolina - NWP
Subject: NCR/CAR Check for INL RH/AK 500 ID-ANLE-S5000/WS S5000 Lot 32 – CHZ Lot 2

Please do a NCR/CAR check on INL RH/AK 500 ID-ANLE-S5000/WS S5000 Lot 32 – CHZ Lot 2.

Thanks,

Luann Underwood, WCA
Central Characterization Program
Nuclear Waste Partnership LLC
Contractor for the U.S. Department of Energy
(575) 234-7505
luann.underwood@wipp.ws

AK Tracking Spreadsheet (Vent/Closure Dates)						
CONTAINERID	WASTESTREAM	VENTDATE	CLOSUREDATE	WDS_STATUS	DISPOSAL_DATE	COMMENT
ANLE26A	ID-ANLE-S5000	8/7/2012	8/7/2012	EMPLACED_CNTR	12/27/2012 15:41	Hist ID: ANLE26; Hist Closure Date: 6/28/1978
ANLE3A	ID-ANLE-S5000	6/20/2012	6/20/2012	EMPLACED_CNTR	12/27/2012 15:41	Hist ID: ANLE3; Hist Closure Date: 5/9/1975
ANLE3E	ID-ANLE-S5000	6/21/2012	6/21/2012	EMPLACED_CNTR	12/27/2012 15:41	Hist ID: ANLE3; Hist Closure Date: 5/9/1975

DIVIDER

PAGE

WDS
WASTE DATA SYSTEM

Waste Isolation Pilot Plant
Container Data Report

Report Statistics

Report Version:	**2.2**
WDS Instance:	**prd05.wipp.carlsbad.nm.us**
Generated on:	**June 02, 2013 05:12 PM**
Generated by:	**KIRKES, CRETA**
Total Pages:	**6**

Selection Criteria

Container Number: **ANLE3E**

Container: ANLE3E
Type: 39 - RH 55 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 10/26/2012
Waste Handling Code: RH
Disposal Date: 12/27/2012

Current Location Site: WI
Generator Site: AE
Destination Site ID: WI

Certification Program ID: C9
Shipping Program ID: C9

Overpack Container: ID0308
Overpack Type: REMOVABLE-LID 72-B CANISTER
Overpack Status: CERTIFICATION DATA APPROVED

Neutron Dose Rate (mrem/hr): 0.0
Beta Gamma Dose Rate (mrem/hr): 730.5
Total Dose Rate (mrem/hr): 730.5

FGE (g): 7.84E00
FGE Uncertainty (g): 4.21E00

Gross Weight (kg): 47.20
Gross Weight Uncert (kg): 0.50

Decay Heat (W): 4.49E-02
Decay Heat Uncertainty (W): 1.86E-02

Shipment Data

Payload ID: **ID0308** Assembly ID: IN122929 Payload Complete? Y
Shipment Number: INR12044 Send Date: 11/29/2012 Receipt Date: 12/01/2012
Shipment Status: SHIPMENT RECEIVED AT DESTINATION

Emplacement Location

Panel: 6 Room: 2 Borehole: 076

Certification Data Values

Waste Stream Profile Code: ID-ANLE-S5000
Waste Type Code: MTRU
IDC Code: 001
Waste Matrix Code: S5400
WAC Revision Number: 7.2
Fill Factor (%): 85.00
Waste Stream BIR ID: IN-AE-AGHC-01
Waste Stream MWIR ID: NONE

TRU Alpha Activity (Ci): 3.5E-01
TRU Alpha Activity Uncertainty (Ci): 1.62E-01
TRU Alpha Activity Concentration (Ci/g): 8.71E-05
PU-239 Equivalent Activity (PE-Ci): 3.61E-01
Alpha Surface Contamination (dpm/cm^2): 0.0
Beta/Gamma Surface Contamination (dpm/cm^2): 0.0

Transportation Data Values

Closure Date: 06/21/2012
Vent Date: 06/21/2012
Process Knowledge? Y
Waste Gen Date:
Content Code: ID325U
U-235 FEM (g):
U-235 FEM Uncert (g):
Be chemically/ mechanically bound: N

Shipment Purpose: DISPOSAL
Machine Compacted? N
Liner Exists? N
Liner Hole Size(mm):
Liner Lid Present?
Layers of Packaging 1
Aqueous Material? N

Gas Generation Data Values

Measured FGGR (mol/s)	Measured TGRR (mol/s)	Truncated FGGR Test (Y/N)	Truncated FGGR Test Period (days)

Container: ANLE3E
Type: 39 - RH 55 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 10/26/2012
Waste Handling Code: RH
Disposal Date: 12/27/2012

PCB Waste?	N
PCB Mass (kg):	
PCB Concentration (ppm):	
PCB Out of Service Date:	
Be Present?	Y
Be <= 1% by weight?	Y
Be mass <= 100kg?	Y
Separation OK?	Y
Packing Fraction (compaction level):	non-compacted

Filters

Filter Model Number	Filter Diffusivity (mol/s/ml)	Quantity	Install Date
NF19SD	1.85E-05	1	06/21/2012

Certification Comments

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
AM-241	1.340E-01	7.620E-02	3.862E-02	2.196E-02
BA-137M	6.010E00	2.240E00	1.117E-08	4.164E-09
CM-244	9.090E-04	9.850E-04	1.111E-05	1.204E-05
CS-137	6.360E00	2.370E00	7.227E-02	2.693E-02
EU-154	1.450E-03	6.600E-04	5.431E-06	2.472E-06
PU-238	1.410E-02	6.720E-03	8.150E-04	3.884E-04
PU-239	1.350E-01	7.210E-02	2.146E00	1.146E00
PU-240	6.720E-02	3.150E-02	2.922E-01	1.370E-01
PU-241	6.030E-01	3.550E-01	5.798E-03	3.413E-03
PU-242	2.600E-05	1.430E-05	6.549E-03	3.602E-03
SR-90	4.200E-01	1.650E-01	3.043E-03	1.196E-03
U-233	4.870E-09	2.930E-09	4.990E-07	3.002E-07

Container: ANLE3E
Type: 39 - RH 55 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 10/26/2012
Waste Handling Code: RH
Disposal Date: 12/27/2012

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
U-234	5.680E-04	3.110E-04	8.987E-02	4.921E-02
U-235	1.930E-05	1.040E-05	8.813E00	4.749E00
U-238	2.500E-06	1.220E-06	7.353E00	3.588E00
Y-90	4.200E-01	1.650E-01	7.721E-07	3.033E-07

Material Parameters

Material Parameter	Description	Weight (kg)
8	PLASTICS	4.00
13	STEEL CONTAINER MATERIALS	43.18

Waste Weight:	4.00
Packaging Weight:	43.18
Total Material Weight:	47.18

Hazardous Codes

Hazardous Code	Description
D004	ARSENIC
D005	BARIUM
D006	CADMIUM
D007	CHROMIUM
D008	LEAD
D009	MERCURY
D010	SELENIUM

Container: ANLE3E
Type: 39 - RH 55 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 10/26/2012
Waste Handling Code: RH
Disposal Date: 12/27/2012

Hazardous Codes

Hazardous Code	Description
D011	SILVER
D019	CARBON TETRACHLORIDE
D028	1,2-DICHLOROETHANE
D029	1,1-DICHLOROETHYLENE
F002	SPENT HALOGENATED SOLVENTS
F005	SPENT NON-HALOGENATED SOLVENTS

Assay Methods

Labor Code	Assay Method	Description	Assay Date
C9	14DTC1	DOSE-TO-CURIE	09/12/2012

Non-Destructive Examination (NDE)

Labor Code	NDE Method	Description	Examination Date
C9	14RRH1	REAL-TIME RADIOGRAPHY SYSTEM (RTR-RTR-0659)	09/12/2012

Edit Limit Check Results

Evaluation Date: 10/26/2012 13:13:06 Overall Status: PASS

Evaluation Code	Status	Return Code	Detailed Description
DI_CERT_ALL	PASS		
DI_CERT_BE	PASS		
DI_CERT_CERT	PASS		
DI_CERT_CHARZ	PASS		
DI_CERT_ED	PASS		

Container: ANLE3E
Type: 39 - RH 55 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 10/26/2012
Waste Handling Code: RH
Disposal Date: 12/27/2012

Edit Limit Check Results

Evaluation Date: 10/26/2012 13:13:06 Overall Status: PASS

Evaluation Code	Status
DI_CERT_EPA	PASS
DI_CERT_PCB	PASS
DI_CERT_PERC	PASS
DI_CERT_TRAMPAC	PASS
DSA	PASS
WAC	PASS
WAP_CERT	PASS

TRAMPAC Evaluation Results

Evaluation Date: Overall Status:

Evaluation Code	Status	Return Code	Detailed Description

History

Event Date/Time	Event Description	Reason
10/26/2012 13:13:06	INSERT DATA INTO THE DATABASE	
10/26/2012 13:13:06	SUCCESSFUL SUBMISSION FOR CERT	
10/26/2012 13:15:51	APPROVED FOR CERT	
11/13/2012 13:26:09	ASSIGNED TO OVERPACK	

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	**RH WDS Master Template.xls Rev. 4 Addendum #4, SCO #1066 Excel 2003/2007 Microsoft Windows XP**	**Units**	**data**										**initial**	**date**
2	Shipper Site ID		C9	Location ID	Dest Program ID	Shipping Purpose				comments				
3	Waste Stream Profile		ID-ANLE-S5000	IN	WI	D					ANLE3E		HP/CS	10/26/12
4	Container Number		ANLE3E										HP/CS	10/26/12
5	Container Type		RH drum-55 tbo	drum, swb, tdop, etc., see WWIS labels for valid types.									HP/CS	10/26/12
6	WAC Rev #		7.2	0					U-235 FEM	U-235 FEM Uncert	FGGR Flag	FGGR Test Period	HP/CS	10/26/12
7	WAC Ex. #								NULL	NULL	NULL	NULL	HP/CS	10/26/12
8	Cert Site		C9				Be <=100 kg	Be <= 1%	Be Present	Aqueous Material	Be Chem/Mech Boun	Compacted Wst		
9	Cert Date		10/26/2012 ~~10/25/2012~~	CE 10/26/12			Y	Y	Y	N	N	N	HP/CS	10/26/12
10	Waste Handling Code		RH	CH, RH										
11	Waste Type Code		MTRU	TRU, MTRU										
12	Waste Stream BIR ID		IN-AE-AGHC-01										HP/CS	10/26/12
13	Waste Stream MWIR ID		NONE										HP/CS	10/26/12
14	Generator Site ID		AE	default to 0 for TRU			p(CI):	choose	1sigma	2sigma	95%CI		HP/CS	10/26/12
15	IDC Code		001				0.6827	1sigma	1.0000	0.5000	0.5102		HP/CS	10/26/12
16	Matrix Code		S5400				0.9545	2sigma	2.0000	1.0000	1.0204		HP/CS	10/26/12
17	Trucon Code		ID 325 VL				0.9500	95%CI	1.9600	0.9800	1.0000		HP/CS	10/26/12
18	Shipping Category												HP/CS	10/26/12
19	Tru Alpha Act	Ci	3.50E-01	3.503E-01			WWIS Req'd CI:	1sigma	1.0000	0.5000	0.5102		HP/CS	10/26/12
20	Tru Alpha Act Uncert	1sigma Ci	1.62E-01	6.740E-01	Tru Alpha Act + 2sigma (Ci)		Fraction of MDL Reported on HGAS		1.0000					
21	Tru Alpha Act Conc	nCi/g	8.71E+04	8.76E+04									HP/CS	10/26/12
22	Tru Alpha Act Conc Uncert	1sigma nCi/g	4.02E+04	1.675E+05	Tru Alpha Act Conc + 2sigma (Ci)								HP/CS	10/26/12
23	Pu239 Fiss Gm Eq	g	7.84E+00	7.833E+00									HP/CS	10/26/12
24	Pu239 Fiss Gm Eq Uncert	1sigma g	4.21E+00	1.626E+01	Pu239 Fiss Gm Eq + 2sigma (Ci)								HP/CS	10/26/12
25	Pu239 Eq Act	Ci	3.61E-01	3.613E-01									HP/CS	10/26/12
26	Decay Heat	watts	4.49E-02	4.484E-02									HP/CS	10/26/12
27	Decay Heat Uncert	1sigma watts	1.86E-02	6.35E-02	Decay Heat + 1sigma (watts)								HP/CS	10/26/12
28	Layers of Packaging		1										HP/CS	10/26/12
29	Fill Factor		85	percentage	Liner Lid Present								HP/CS	10/26/12
30	Liner Type			1 = plastic drum liner										
31	Liner Punctured				Liner Hole Size		(mm)						HP/CS	10/26/12
32	PCB Conc		NULL				PCB Waste	PCB Mass (kg)	Out of Service				HP/CS	10/26/12
33	Closure Date		6/21/2012	Watt-years	Waste Gen Date		N	NULL	NULL				HP/CS	10/26/12
34	Vent Date		6/21/2012	0.0016									HP/CS	10/26/12
35	Filter Install Date		6/21/2012										HP/CS	10/26/12
36	Filter Manufacturer		NFT										HP/CS	10/26/12
37	Filter Serial Number(s)												HP/CS	10/26/12
38	Filter Model Number	NF012,NF013,NF020,NF9026	NF19SD										HP/CS	10/26/12
39	Number of Filters Installed		1										HP/CS	10/26/12
40	Aspiration Method ID		3										HP/CS	10/26/12
41	Gas Gen Rate			#VALUE!	<<Gas Gen Rate Calculated.		Avagdro's Number:	6.022142E+23	NIST				HP/CS	10/26/12
42	Hydrogen/Methane Gen Rate						Electron Charge	1.602176E-19	V NIST					
43	Gas Gen Comp Date													
44	Gross Weight	kg	47.200		Waste (kg)	Packaging (kg)	Total (kg)							
45	Gross Weight Uncert	1sigma kg	0.5		4.0	43.18	47.18							
46	Alpha Surf Cont	dpm/100 cm^2	0		max. reported	mda							HP/CS	10/26/12
47	Beta/Gamma Surf Cont	dpm/100 cm^2	0		0		Minimum Detectable Activity						HP/CS	10/26/12
48	Neutron Dose Rate	mrem/hr	0		0		Minimum Detectable Activity						HP/CS	10/26/12
49	Beta/Gamma Dose Rate	mrem/hr	730.5		0		Minimum Detectable Activity						HP/CS	10/26/12
50	Radionuclide		U-233	U-234	730.5		Minimum Detectable Activity						HP/CS	10/26/12
51	Activity	Ci	4.87E-09	5.68E-04	U-235	U-238	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Am-241	HP/CS	10/26/12
52	Activity Uncert	1sigma Ci	2.93E-09	3.11E-04	1.93E-05	2.50E-06	1.41E-02	1.35E-01	6.72E-02	6.03E-01	2.60E-05	1.34E-01	HP/CS	10/26/12
53	Mass	grams	4.99E-07	8.99E-02	1.04E-05	1.22E-06	6.72E-03	7.21E-02	3.15E-02	3.55E-01	1.43E-05	7.62E-02	HP/CS	10/26/12
54	Mass Uncert	1sigma grams	3.00E-07	4.92E-02	8.81E+00	7.35E+00	8.15E-04	2.15E+00	2.92E-01	5.80E-03	6.55E-03	3.86E-02	HP/CS	10/26/12
55	calc Tru Alpha Act	Ci	0.00E+00	0.00E+00	4.75E+00	3.59E+00	3.88E-04	1.15E+00	1.37E-01	3.41E-03	3.60E-03	2.20E-02		
56	calc Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.41E-02	1.35E-01	6.72E-02	0.00E+00	2.60E-05	1.34E-01		
57	calc Act	Ci	4.87E-09	5.68E-04	0.00E+00	0.00E+00	3.53E+03	3.38E+04	1.68E+04	0.00E+00	6.50E+00	3.35E+04		
58	calc Act Conc	nCi/g	1.22E-03	1.42E+02	1.93E-05	2.50E-06	1.41E-02	1.35E-01	6.72E-02	6.03E-01	2.60E-05	1.34E-01		
					4.83E+00	6.25E-01	3.53E+03	3.38E+04	1.68E+04	1.51E+05	6.50E+00	8.35E+03		

Shipping Calcs
Total TBq 5.25E-01
Fraction 2.26E-02
Highway Route Control? No

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
59	calc Pu239 FGE	g	4.49E-07	0.00E+00	5.67E+00	0.00E+00	9.21E-05	2.15E+00	6.57E-03	1.30E-02	4.91E-05	7.22E-04		
60	calc Pu239 Eq Act	Ci	1.25E-09	0.00E+00	0.00E+00	0.00E+00	1.28E-02	1.35E-01	6.72E-02	1.18E-02	2.36E-05	1.34E-01		
61	calc Decay Heat	watts	1.42E-10	1.64E-05	5.32E-07	6.34E-08	4.67E-04	4.19E-03	2.09E-03	1.92E-05	7.66E-07	4.48E-03		
62	uncert Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.72E-03	7.21E-02	3.15E-02	0.00E+00	1.43E-05	7.62E-02		
63	uncert Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.68E+03	1.80E+04	7.88E+03	0.00E+00	3.58E+00	1.91E+04		
64	uncert Act	Ci	2.93E-09	3.11E-04	1.04E-05	1.22E-06	6.72E-03	7.21E-02	3.15E-02	3.55E-01	1.43E-05	7.62E-02		
65	uncert Act Conc	nCi/g	7.33E-04	7.78E+01	2.60E+00	3.05E-01	1.68E+03	1.80E+04	7.88E+03	8.88E+04	3.58E+00	1.91E+04		
66	uncert Pu239 FGE	g	2.70E-07	0.00E+00	3.05E+00	0.00E+00	4.39E-05	1.15E+00	3.08E-03	7.68E-03	2.70E-05	4.11E-04		
67	uncert Pu239 Eq Act	Ci	7.51E-10	0.00E+00	0.00E+00	0.00E+00	6.11E-03	7.21E-02	3.15E-02	6.96E-03	1.30E-05	7.62E-02		
68	uncert Decay Heat	watts	8.53E-11	8.96E-06	2.87E-07	3.09E-08	2.23E-04	2.24E-03	9.81E-04	1.13E-05	4.21E-07	2.55E-03		
69	Shipping Calcs	6.78E+01	1.80E-07	2.10E-02	0.00E+00	0.00E+00	2.61E+00	2.50E+01	1.24E+01	2.23E+00	4.81E-03	2.48E+01		
70	49CFR173.433f		0.00%	0.03%	0.00%	0.00%	3.84%	36.81%	18.32%	3.29%	0.01%	36.53%		
71	Radionuclide		Cm-244	Cs-137	Ba-137m	Sr-90	Y-90	Eu-154						
72	Activity	Ci	9.09E-04	6.36E+00	6.01E+00	4.20E-01	4.20E-01	1.45E-03					HP/CS	10/26/12
73	Activity Uncert	1sigma Ci	9.85E-04	2.37E+00	2.24E+00	1.65E-01	1.65E-01	6.60E-04					HP/CS	10/26/12
74	Mass	grams	1.11E-05	7.23E-02	1.12E-08	3.04E-03	7.72E-07	5.43E-06	NULL	NULL	NULL	NULL	HP/CS	10/26/12
75	Mass Uncert	1sigma grams	1.20E-05	2.69E-02	4.16E-09	1.20E-03	3.03E-07	2.47E-06	NULL	NULL	NULL	NULL		
76	calc Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL		
77	calc Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL		
78	calc Act	Ci	9.09E-04	6.36E+00	6.01E+00	4.20E-01	4.20E-01	1.45E-03	NULL	NULL	NULL	NULL		
79	calc Act Conc	nCi/g	2.27E+02	1.59E+06	1.50E+06	1.05E+05	1.05E+05	3.63E+02	NULL	NULL	NULL	NULL		
80	calc Pu239 FGE	g	1.00E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL		
81	calc Pu239 Eq Act	Ci	4.78E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL		
82	calc Decay Heat	watts	3.18E-05	7.04E-03	2.37E-02	4.87E-04	2.32E-03	1.30E-05	NULL	NULL	NULL	NULL		
83	uncert Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL		
84	uncert Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL		
85	uncert Act	Ci	9.85E-04	2.37E+00	2.24E+00	1.65E-01	1.65E-01	6.60E-04	NULL	NULL	NULL	NULL		
86	uncert Act Conc	nCi/g	2.46E+02	5.93E+05	5.60E+05	4.13E+04	4.13E+04	1.65E+02	NULL	NULL	NULL	NULL		
87	uncert Pu239 FGE	g	1.08E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL		
88	uncert Pu239 Eq Act	Ci	5.18E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL		
89	uncert Decay Heat	watts	3.44E-05	2.62E-03	8.83E-03	1.91E-04	9.13E-04	5.91E-06	NULL	NULL	NULL	NULL		
90	Shipping Calcs		8.42E-02	4.71E-01	0.00E+00	1.56E-01	7.76E-02	1.07E-04	NULL	NULL	NULL	NULL		
91	49CFR173.433f		0.12%	0.69%	0.00%	0.23%	0.11%	0.00%	NULL	NULL	NULL	NULL		
92	Waste Material Parameter		PW											
93	Wgt of Mat Parms (kg or lbs)	kg	4										HP/CS	10/26/12
94	Radio Assay Method		14DTC1										HP/CS	10/26/12
95	Data Package Number		INLRHDTC12011										HP/CS	10/26/12
96	Assay Date		9/12/2012										HP/CS	10/26/12
97	Charz Method ID		14RRH1										HP/CS	10/26/12
98	Data Package Number		INLRHRTR12013										HP/CS	10/26/12
99	Charz Method Date		9/12/2012										HP/CS	10/26/12
100	Haz Codes		D004	D005	D006	D007	D008	D009	D010	D011	D019	D028	HP/CS	10/26/12
101	Haz Codes		D029	F002	F005								HP/CS	10/26/12
102	Haz Codes												HP/CS	10/26/12
103	Haz Codes													
104	Sample ID	Headspace Gas H/M	NULL	HGHM										
105	Sample Type												HP/CS	10/26/12
106	Layer No. Sampled			0									HP/CS	10/26/12
107	Date Sampled												HP/CS	10/26/12
108	Method ID			DTP-1.2-041									HP/CS	10/26/12
109	Data Package Number												HP/CS	10/26/12
110	CAS #		NULL	NULL									HP/CS	10/26/12
111	Analyte													
112	Concentration												HP/CS	10/26/12
113	units	%vol											HP/CS	10/26/12
114	Date Analyzed			NULL									HP/CS	10/26/12
115	B Detectable Flag												HP/CS	10/26/12
116	D Detectable Flag													
117	E Detectable Flag													
118	J Detectable Flag													
119	U Detectable Flag													
120	NA Detectable Flag		NA	NA									HP/CS	10/26/12
121														
122	Sample ID	Headspace Gas VOC		HGVO										
123	Sample Type												HP/CS	10/26/12
124	Layer No. Sampled												HP/CS	10/26/12
125	Date Sampled												HP/CS	10/26/12

kg
lbs 10.4536
kg 10.0000

Sample Site

SARP-Flammable VOCs (ppmv) 0

RH WDS Master Template.xls Rev. 4
Addendum #4, SCO #1066
Excel 2003/2007 Microsoft Windows XP

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
126	Method ID			DTP-1.2-041									HP/CS	10/26/12
127	Data Package Number												HP/CS	10/26/12
128	Methanol Method ID													
129	CAS #												HP/CS	10/26/12
130	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
131	Concentration													
132	units	ppmv												
133	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			HP/CS	10/26/12
134	B Detectable Flag												HP/CS	10/26/12
135	D Detectable Flag												HP/CS	10/26/12
136	E Detectable Flag													
137	J Detectable Flag													
138	U Detectable Flag													
139	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
140	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			HP/CS	10/26/12
141	CAS #													
142	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			HP/CS	10/26/12
143	Concentration													
144	units	ppmv												
145	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			HP/CS	10/26/12
146	B Detectable Flag												HP/CS	10/26/12
147	D Detectable Flag												HP/CS	10/26/12
148	E Detectable Flag													
149	J Detectable Flag													
150	U Detectable Flag													
151	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
152	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			HP/CS	10/26/12
153	CAS #													
154	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			HP/CS	10/26/12
155	Concentration													
156	units	ppmv												
157	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			HP/CS	10/26/12
158	B Detectable Flag												HP/CS	10/26/12
159	D Detectable Flag												HP/CS	10/26/12
160	E Detectable Flag													
161	J Detectable Flag													
162	U Detectable Flag													
163	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
164	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			HP/CS	10/26/12
165	CAS #													
166	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			HP/CS	10/26/12
167	Concentration													
168	units	ppmv												
169	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			HP/CS	10/26/12
170	B Detectable Flag												HP/CS	10/26/12
171	D Detectable Flag												HP/CS	10/26/12
172	E Detectable Flag													
173	J Detectable Flag													
174	U Detectable Flag													
175	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
176	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			HP/CS	10/26/12
177	CAS #													
178	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
179	Concentration													
180	units	ppmv												
181	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
182	B Detectable Flag													
183	D Detectable Flag													
184	E Detectable Flag													
185	J Detectable Flag										RH WDS Master Template.xls Rev. 4			
186	U Detectable Flag										Addendum #4, SCO #1066			
187	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA	Excel 2003/2007 Microsoft Windows XP			

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
188	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
189			type	comment										
190	Comment													
191	Comment													
192	Comment													
193	Comment													
194	Comment													
195	Comment													
196	Comment													
197	Comment													
198	Comment													
199	Comment													
200														
201			Requirements Met?											
202	Free liquids <1% by volume		YES											
203	No non-rad. pyrophorics		YES											
204	Chemical compatability		YES											
205	No explosives		YES											
206	No corrosives		YES											
207	No pressurized containers		YES											
208	No sealed Containers >4 liters		YES											
209	Liner punctured/ filtered		YES											
210	Flammable VOCs <500ppmv		YES											
211	Container is in Approved Waste Stream Profile Form?	ID-ANLE-S5000	YES											
212	Can it be established through Process Knowledge that the concentration of flammable VOCs present in the headspace of the container is <= 500 ppm?.		YES											
213														
214														
215														
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Creta Kuhles
CCP Certification Official

10-26-2012
10-25-2012
Date

Lot #

CK 10/26/12

RH WDS Master Template.xls Rev. 4
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Excel 2003/2007 Microsoft Windows XP

DIVIDER

PAGE

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12013
Examination Date:	09/12/12
Waste Container ID:	ANLE3E
Audio/Video Media Number:	Primary: INLRHRTR12013 A Backup: INLRHRTR12013 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON DRUM
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	70%, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE3E

Page 2 of 3

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 30 gallon drum, 1 gallon paint can, mesh basket, rods, scrap metal, wire, metal brace, locking ring (XPW) Scrap plastic

DIVIDER PAGE

Attachment 2 – Container Data Sheet

BDR Number: INLRHDTC12011

Date:	9-12-12
Container No.:	ANLE3E
Probe Position:	55 Gallon
Instrument No.:	020555
Probe No.:	XC0674
Measured Background Dose Rate (mR/hr):	.027
Gross Weight (kg):	47.2
Dose Rate 1 (mR/hr):	30.8
Dose Rate 2 (mR/hr):	39.7
Dose Rate 3 (mR/hr):	30.4
Dose Rate 4 (mR/hr):	35.1
Highest measured dose rate is greater than three times the measured background.	(YES) NO

Chris G. Davis — Printed Name

Chris A. Davis — Signature

9-12-12 — Date

12011

Waste Container Dose-to-Curie Conversion Record

SCO 1180 DTC for ID-ANLE-S5000 Addendum 2 Revision 2 Microsoft Excel 2003, 2007, 2010; Microsoft Windows XP Professional 2002 and 2003

Operating Procedure	CCP-TP-504 REV 13
Date of Survey	9/12/2012
Waste Stream Designation	ID-ANLE-S5000
Drum ID	ANLE8E
Canister Number	3
Container Gross Weight	47.2 kg
Container Net Weight	4.0 kg
Measured Container Dose Rate	
Quadrant #1	30.8 mR/hr
Quadrant #2	39.7 mR/hr
Quadrant #3	30.4 mR/hr
Quadrant #4	35.1 mR/hr
Calculated Average Dose Rate	34.0 mR/hr
Cs-137 Dose Rate Fraction (OSPREY)	100 %
Waste Type	Fins

Background: 0.027 mR/hr

Nuclide	Curie Scaling Factors	Activity (Ci)	Grams	FGE	PECi	Watts	Uncertainty	Uncertainty in Curies	Uncertainty in Grams
U-233	7.23E-09	4.67E-09	4.99E-07	4.49E-07	1.25E-09	1.42E-10	60.2%	2.93E-09	3.00E-07
U-234	8.43E-04	5.68E-04	8.99E-02	0.00E+00	0.00E+00	1.64E-05	54.8%	3.11E-04	4.93E-02
U-235	2.87E-05	1.93E-05	8.62E+00	5.67E+00	0.00E+00	5.33E-07	54.1%	1.04E-05	4.77E+00
U-238	3.71E-06	2.50E-06	7.36E+00	0.00E+00	0.00E+00	6.34E-08	48.8%	1.22E-06	3.59E+00
Pu-238	2.10E-02	1.41E-02	8.17E-04	9.23E-05	1.29E-02	4.68E-04	47.5%	6.72E-03	3.88E-04
Pu-239	2.01E-01	1.35E-01	2.15E+00	2.15E+00	1.35E-01	4.19E-03	53.3%	7.21E-02	1.15E+00
Pu-240	9.98E-02	6.72E-02	2.92E-01	6.58E-03	6.72E-02	2.09E-03	46.8%	3.15E-02	1.37E-01
Pu-241	1.01E+00	6.03E-01	5.80E-03	1.30E-02	1.18E-02	1.92E-05	58.8%	3.55E-01	3.41E-03
Pu-242	3.85E-05	2.60E-05	6.54E-03	4.90E-05	2.36E-05	7.65E-07	55.0%	1.43E-05	3.59E-03
Am-241	1.68E-01	1.34E-01	3.85E-02	7.20E-04	1.34E-01	4.47E-03	57.0%	7.62E-02	2.19E-02
Cm-244	1.49E-03	9.09E-04	1.11E-05	1.00E-06	4.78E-04	3.18E-05	108.3%	9.85E-04	1.20E-05
Cs-137	1.00E+01	6.36E+00	7.22E-02	0.00E+00	0.00E+00	7.04E-03	37.3%	2.37E+00	2.69E-02
Ba-137m	9.46E+00	6.01E+00	1.12E-08	0.00E+00	0.00E+00	2.37E-02	37.3%	2.24E+00	4.17E-09
Sr-90	6.63E-01	4.20E-01	3.05E-03	0.00E+00	0.00E+00	4.87E-04	39.4%	1.65E-01	1.20E-03
Y-90	6.63E-01	4.20E-01	7.73E-07	0.00E+00	0.00E+00	2.33E-03	39.4%	1.65E-01	3.04E-07
Eu-154	2.63E-03	1.45E-03	5.45E-06	0.00E+00	0.00E+00	1.30E-05	45.4%	6.60E-04	2.47E-06
Totals		1.42E+01	1.88E+01	7.84E+00	3.61E-01	4.49E-02			

	Value	(one Sigma)	
TRU Alpha Activity Concentration	8.71E+04	4.02E+04	nCi/g
TRU Alpha Activity	3.50E-01	1.62E-01	Ci
Total Pu-239 Equiv Activity	3.61E-01	1.66E-01	Ci
Total Pu-239 Fissile Gram Equiv	7.84E+00	4.21E+00	g
Total Decay Heat	4.49E-02	1.86E-02	W
Volume Activity	1.20E-01	4.70E-02	Ci/L

Originator Chris Davis (Print Name)

Signed Chris A. Davis Date 9-24-12

DIVIDER PAGE

RADIOLOGICAL SURVEY REPORT

To be used with MCP-90, MCP-93, MCP-124, MCP-138, MCP-139, MCP-187, MCP-199 and MCP-425

441.45
12/04/2007
Rev. 05

BLDG.: CPP 659
AREA/ROOM: 302/306
RWP #: 31011103-02
LOG #: WM-INTE# 1365
DATE: 09/12/12
TIME: 1535

☐ ROUTINE
☒ NON ROUTINE (SPECIFY) ☐ FOLLOW UP

JOB DESCRIPTION

COMMENTS: RH-TRU gamma/neutron radiation survey. Gamma and neutron contact dose rates are calculated using EDF-10217 Rev 0 conversion factors from the 1 meter dose rate. These were the radiological conditions at time of survey.

RCT: G.D. Hinckley/ GD Hinckley
PRINT/SIGNATURE

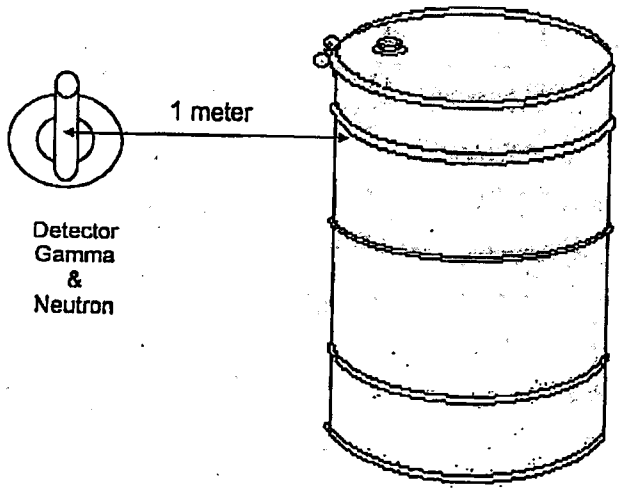
REVIEWED BY: A. Sargis/ Amy Sargis
PRINT/SIGNATURE

Drum # ANLE3E

ORIGINAL - RED
COPY - BLACK

30 Gal-Drum I/S 55 Gal Drum

Gamma/Thermo FH40G Ion Chamber: 18.4
Neutron/REM Detector: 10.5



Per EDF-10217 Rev 0 Conversion Factors used to calculate contact values are: 1 meter reading multiplied by the appropriate variable above.

Gamma

Gamma Conversion Factor: 18.4

Neutron

Neutron Conversion Factor: 10.5

Location of Drum	Dose Rate in mr/hr at 1 Meter	Dose Rate in mr/hr at Contact	Location of Drum	Dose Rate in mr/hr at 1 Meter	Dose Rate in* mr/hr at Contact
0 degrees	30.5	561.2	0 degrees	0	n/a
90 degrees	39.7	730.5	90 degrees	0	n/a
180 degrees	30.4	559.4	180 degrees	0	n/a
270 degrees	35.1	645.8	270 degrees	0	n/a

*Note: If neutron reading is <1.0 mr / hr at 1 m, then no calculation to contact was made.
*Note: Based off package configuration (30 gal drum inside a 55 gal drum) - no contact β survey was performed.

FRM-880
03/14/12
Rev. 9
Page 10 of 14
Used with TPR-7298 or TPR-7857

RH TRU CONTAINER REPACKAGING DATASHEET (RECOVERABLE FISSILE)

PAGE ____ OF ____

Drum #: ANLE3E (from TRU Programs)

30 gal drum:

30 gal. drum filter model #: NUCFIL-0195 CI-521

Waste items present:

1. Fuel pins/ Fuel like pieces (pellets, granules, etc.) Yes ☒ No ☐
2. Other: Yes ☐ No ☒

Describe: sample tubes with screw on caps, caps removed pellets inside, fuel like pieces. hollow and solid tubes

Water immersion test — Date performed ____

Video # (A) see back page of anle3c — Immersion start time See details

Reaction observed? Yes ☐ No ☒ — Reaction start time -na-

The reaction has slowed to a stream of discrete individual bubbles that are not connected.
Time: (A) — 1162 grams of recoverable material, this weight includes immersion basket — 10 minute waiting period time (A)

30 minute ambient air exposure criteria met per TPR-7857? Yes ☒ No ☐

Ignitable/Reactive material present? Yes ☐ No ☒

Additional items added during repack activity:

		Tare Wt. (lbs.)
1. Fuel Pin Transfer Container assembly (Pin basket, 1 gallon can, spider & retention ring)	Yes ☒ No ☐	9.5
2. 30-gallon drum lift bag:	Yes ☑ No ☐	1.5
3. Wire Rope & Hook:	Yes ☐ No ☑	1.5
4. Plastic sleeve (speed loader):	Yes ☐ No ☑	2.0
5. Immersion filter paper – dried per TPR-7857	Yes ☒ No ☐	N/A
6. Drum into which dried filter and solids (if any) Placed into ANLE3E		

Additional comments/waste description: there were seven 1400 grams water immersions, they were then consolidated into three recoverable drums. back page of anle3c has the times, dates, and reaction data.

55 gal drum:

55 gal. filter model #: NUCFIL-0195DS — filter serial number: CI-1138

30-gallon drum bag breached — Initial: NA — Date: NA

55 gal. drum lid locking ring installed: — Date: 6-21-12 — Time: 1006

Placed in position 3 — into TRU-ISC 0022

Operator: Daniel R Christensen (Print Name) — Daniel R Christensen (Signature) — 6-21-2012 (Date)

Operations Management has reviewed the data for the container in this section and the information is correct and complete.

Operations Management Signature: R.A. BARGA (Print Name) — R.A. Barga (Signature) — 6/21/12 (Date)

DIVIDER

PAGE

Waste Isolation Pilot Plant
Container Data Report

Report Statistics

Report Version:	**2.2**
WDS Instance:	**prd05.wipp.carlsbad.nm.us**
Generated on:	**June 02, 2013 05:11 PM**
Generated by:	**KIRKES, CRETA**
Total Pages:	**6**

Selection Criteria

Container Number: **ANLE3A**

Container: ANLE3A
Type: 39 - RH 55 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 10/26/2012
Waste Handling Code: RH
Disposal Date: 12/27/2012

Current Location Site: WI
Generator Site: AE
Destination Site ID: WI

Certification Program ID: C9
Shipping Program ID: C9

Overpack Container: ID0308
Overpack Type: REMOVABLE-LID 72-B CANISTER
Overpack Status: CERTIFICATION DATA APPROVED

Neutron Dose Rate (mrem/hr): 0.0
Beta Gamma Dose Rate (mrem/hr): 3172.0
Total Dose Rate (mrem/hr): 3172.0

FGE (g): 7.77E00
FGE Uncertainty (g): 2.94E00

Gross Weight (kg): 66.40
Gross Weight Uncert (kg): 0.50

Decay Heat (W): 1.78E-02
Decay Heat Uncertainty (W): 5.66E-03

Shipment Data

Payload ID: **ID0308** Assembly ID: IN122929 Payload Complete? Y
Shipment Number: INR12044 Send Date: 11/29/2012 Receipt Date: 12/01/2012
Shipment Status: SHIPMENT RECEIVED AT DESTINATION

Emplacement Location

Panel: 6 Room: 2 Borehole: 076

Certification Data Values

Waste Stream Profile Code: ID-ANLE-S5000
Waste Type Code: MTRU
IDC Code: 001
Waste Matrix Code: S5400
WAC Revision Number: 7.2
Fill Factor (%): 75.00
Waste Stream BIR ID: IN-AE-AGHC-01
Waste Stream MWIR ID: NONE

TRU Alpha Activity (Ci): 3.45E-01
TRU Alpha Activity Uncertainty (Ci): 1.28E-01
TRU Alpha Activity Concentration (Ci/g): 1.55E-05
PU-239 Equivalent Activity (PE-Ci): 3.53E-01
Alpha Surface Contamination (dpm/cm^2): 0.0
Beta/Gamma Surface Contamination (dpm/cm^2): 0.0

Transportation Data Values

Closure Date: 06/20/2012
Vent Date: 06/20/2012
Process Knowledge? Y
Waste Gen Date:
Content Code: ID325U
U-235 FEM (g):
U-235 FEM Uncert (g):
Be chemically/ mechanically bound: N

Shipment Purpose: DISPOSAL
Machine Compacted? N
Liner Exists? N
Liner Hole Size(mm):
Liner Lid Present?
Layers of Packaging 1
Aqueous Material? N

Gas Generation Data Values

Measured FGGR (mol/s)	Measured TGRR (mol/s)	Truncated FGGR Test (Y/N)	Truncated FGGR Test Period (days)

Container: ANLE3A
Type: 39 - RH 55 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 10/26/2012
Waste Handling Code: RH
Disposal Date: 12/27/2012

PCB Waste?	N
PCB Mass (kg):	
PCB Concentration (ppm):	
PCB Out of Service Date:	
Be Present?	Y
Be <= 1% by weight?	Y
Be mass <= 100kg?	Y
Separation OK?	Y
Packing Fraction (compaction level):	non-compacted

Filters

Filter Model Number	Filter Diffusivity (mol/s/ml)	Quantity	Install Date
NF19SD	1.85E-05	1	06/20/2012

Certification Comments

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
AM-241	8.460E-02	3.300E-02	2.438E-02	9.510E-03
BA-137M	6.770E-01	1.960E-01	1.258E-09	3.643E-10
CM-244	7.980E-04	1.060E-03	9.756E-06	1.296E-05
CS-137	7.160E-01	2.110E-01	8.136E-03	2.398E-03
EU-154	1.040E-03	3.000E-04	3.895E-06	1.124E-06
PU-238	1.890E-02	7.330E-03	1.092E-03	4.237E-04
PU-239	1.650E-01	6.610E-02	2.623E00	1.051E00
PU-240	7.660E-02	2.810E-02	3.330E-01	1.222E-01
PU-241	4.370E-01	1.750E-01	4.202E-03	1.683E-03
PU-242	1.680E-05	7.200E-06	4.232E-03	1.814E-03
SR-90	4.900E-01	2.410E-01	3.551E-03	1.746E-03
U-233	8.380E-06	1.390E-05	8.586E-04	1.424E-03

Container: ANLE3A
Type: 39 - RH 55 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 10/26/2012
Waste Handling Code: RH
Disposal Date: 12/27/2012

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
U-234	4.830E-04	1.860E-04	7.642E-02	2.943E-02
U-235	1.750E-05	6.800E-06	7.991E00	3.105E00
U-238	3.270E-06	1.320E-06	9.618E00	3.882E00
Y-90	4.900E-01	1.450E-01	9.007E-07	2.665E-07

Material Parameters

Material Parameter	Description	Weight (kg)
8	PLASTICS	22.30
13	STEEL CONTAINER MATERIALS	44.10
	Waste Weight:	22.30
	Packaging Weight:	44.10
	Total Material Weight:	66.40

Hazardous Codes

Hazardous Code	Description
D004	ARSENIC
D005	BARIUM
D006	CADMIUM
D007	CHROMIUM
D008	LEAD
D009	MERCURY
D010	SELENIUM

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Hazardous Codes

Hazardous Code	Description
D011	SILVER
D019	CARBON TETRACHLORIDE
D028	1,2-DICHLOROETHANE
D029	1,1-DICHLOROETHYLENE
F002	SPENT HALOGENATED SOLVENTS
F005	SPENT NON-HALOGENATED SOLVENTS

Assay Methods

Labor Code	Assay Method	Description	Assay Date
C9	14DTC1	DOSE-TO-CURIE	09/12/2012

Non-Destructive Examination (NDE)

Labor Code	NDE Method	Description	Examination Date
C9	14RRH1	REAL-TIME RADIOGRAPHY SYSTEM (RTR-RTR-0659)	09/12/2012

Edit Limit Check Results

Evaluation Date: 10/26/2012 13:13:05 Overall Status: PASS

Evaluation Code	Status	Return Code	Detailed Description
DI_CERT_ALL	PASS		
DI_CERT_BE	PASS		
DI_CERT_CERT	PASS		
DI_CERT_CHARZ	PASS		
DI_CERT_ED	PASS		

Container: ANLE3A
Type: 39 - RH 55 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 10/26/2012
Waste Handling Code: RH
Disposal Date: 12/27/2012

Edit Limit Check Results

Evaluation Date: 10/26/2012 13:13:05 Overall Status: PASS

Evaluation Code	Status
DI_CERT_EPA	PASS
DI_CERT_PCB	PASS
DI_CERT_PERC	PASS
DI_CERT_TRAMPAC	PASS
DSA	PASS
WAC	PASS
WAP_CERT	PASS

TRAMPAC Evaluation Results

Evaluation Date: Overall Status:

Evaluation Code	Status	Return Code	Detailed Description

History

Event Date/Time	Event Description	Reason
10/26/2012 13:13:05	INSERT DATA INTO THE DATABASE	
10/26/2012 13:13:05	SUCCESSFUL SUBMISSION FOR CERT	
10/26/2012 13:15:51	APPROVED FOR CERT	
11/13/2012 13:26:09	ASSIGNED TO OVERPACK	

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	RH WDS Master Template.xls Rev. 4 Addendum #4, SCO #1066 Excel 2003/2007 Microsoft Windows XP	Units	data	comments									Initial	date
2	Shipper Site ID		C9	Location ID	Dest Program ID	Shipping Purpose					ANLE3A		HP/LU	10/26/12
3	Waste Stream Profile		ID-ANLE-S5000	IN	WI	D							HP/LU	10/26/12
4	Container Number		ANLE3A										HP/LU	10/26/12
5	Container Type		RH drum-55 tbo	drum, swb, tdop, etc., see WWIS labels for valid types					U-235 FEM	U-235 FEM Uncert	FGGR Flag	FGGR Test Period	HP/LU	10/26/12
6	WAC Rev #		7.2	D					NULL	NULL	NULL	NULL	HP/LU	10/26/12
7	WAC Ex. #						Be <=100 kg	Be <= 1%	Be Present	Aqueous Material	Be Chem/Mech Bound	Compacted Wst		
8	Cert Site		C9				Y	Y	Y	N	N	N	HP/LU	10/26/12
9	Cert Date	10/26/2012	10/25/2012	10/26/12 CK										
10	Waste Handling Code		RH	CH, RH									HP/LU	10/26/12
11	Waste Type Code		MTRU	TRU, MTRU									HP/LU	10/26/12
12	Waste Stream BIR ID		IN-AE-AGHC-01				p(Cl):	choose	1sigma	2sigma	95%CI		HP/LU	10/26/12
13	Waste Stream MWIR ID		NONE	default to 0 for TRU			0.6827	1sigma	1.0000	0.5000	0.5102		HP/LU	10/26/12
14	Generator Site ID		AE				0.9545	2sigma	2.0000	1.0000	1.0204		HP/LU	10/26/12
15	IDC Code		001				0.9500	95%CI	1.9600	0.9800	1.0000		HP/LU	10/26/12
16	Matrix Code		S5400										HP/LU	10/26/12
17	Trucon Code		ID335U										HP/LU	10/26/12
18	Shipping Category						WWIS Req'd Cl:	1sigma	1.0000	0.5000	0.5102			
19	Tru Alpha Act	Ci	3.45E-01		3.451E-01		Fraction of MDL Reported on HGAS		1.0000				HP/LU	10/26/12
20	Tru Alpha Act Uncert	1sigma Ci	1.28E-01	6.010E-01	Tru Alpha Act + 2sigma (Ci)								HP/LU	10/26/12
21	Tru Alpha Act Conc	nCi/g	1.55E+04		1.55E+04								HP/LU	10/26/12
22	Tru Alpha Act Conc Uncert	1sigma nCi/g	5.74E+03	2.698E+04	Tru Alpha Act Conc + 2sigma (Ci)								HP/LU	10/26/12
23	Pu239 Fiss Gm Eq	g	7.77E+00		7.780E+00								HP/LU	10/26/12
24	Pu239 Fiss Gm Eq Uncert	1sigma g	2.94E+00	1.365E+01	Pu239 Fiss Gm Eq + 2sigma (Ci)								HP/LU	10/26/12
25	Pu239 Eq Act	Ci	3.53E-01		3.524E-01								HP/LU	10/26/12
26	Decay Heat	watts	1.78E-02		1.776E-02								HP/LU	10/26/12
27	Decay Heat Uncert	1sigma watts	5.66E-03	2.35E-02	Decay Heat + 1sigma (watts)								HP/LU	10/26/12
28	Layers of Packaging		1										HP/LU	10/26/12
29	Fill Factor		75 80 CK 10/26/12	percentage	Liner Lid Present								HP/LU	10/26/12
30	Liner Type			1 = plastic drum liner									HP/LU	10/26/12
31	Liner Punctured				Liner Hole Size		(mm)						HP/LU	10/26/12
32	PCB Conc		NULL				PCB Waste	PCB Mass (kg)	Out of Service				HP/LU	10/26/12
33	Closure Date		6/20/2012	Watt-years	Waste Gen Date		N	NULL	NULL				HP/LU	10/26/12
34	Vent Date		6/20/2012	0.006									HP/LU	10/26/12
35	Filter Install Date		6/20/2012										HP/LU	10/26/12
36	Filter Manufacturer		NFT										HP/LU	10/26/12
37	Filter Serial Number(s)												HP/LU	10/26/12
38	Filter Model Number	NF012,NF013,NF020,NF9026	NF19SD										HP/LU	10/26/12
39	Number of Filters Installed		1										HP/LU	10/26/12
40	Aspiration Method ID		3										HP/LU	10/26/12
41	Gas Gen Rate			#VALUE!	<<Gas Gen Rate Calculated.		Avagdro's Number:	6.022142E+23	NIST					
42	Hydrogen/Methane Gen Rate						Electron Charge	1.602176E-19	V NIST					
43	Gas Gen Comp Date				Waste (kg)	Packaging (kg)	Total (kg)							
44	Gross Weight	kg	66.400		22.3	44.10	66.40						HP/LU	10/26/12
45	Gross Weight Uncert	1sigma kg	0.5		max. reported	mda							HP/LU	10/26/12
46	Alpha Surf Cont	dpm/100 cm^2	0		0		Minimum Detectable Activity		Shipping Calcs				HP/LU	10/26/12
47	Beta/Gamma Surf Cont	dpm/100 cm^2	0		0		Minimum Detectable Activity		Total TBq	1.17E-01			HP/LU	10/26/12
48	Neutron Dose Rate	mrem/hr	0		0		Minimum Detectable Activity		Fraction	2.19E-02			HP/LU	10/26/12
49	Beta/Gamma Dose Rate	mrem/hr	3172		3172		Minimum Detectable Activity		Highway Route Control?	No			HP/LU	10/26/12
50	Radionuclide		U-233	U-234	U-235	U-238	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Am-241	HP/LU	10/26/12
51	Activity	Ci	8.38E-06	4.83E-04	1.75E-05	3.27E-06	1.89E-02	1.65E-01	7.66E-02	4.37E-01	1.68E-05	8.46E-02	HP/LU	10/26/12
52	Activity Uncert	1sigma Ci	1.39E-05	1.86E-04	6.60E-06	1.32E-06	7.33E-03	6.61E-02	2.81E-02	1.75E-01	7.20E-06	3.30E-02	HP/LU	10/26/12
53	Mass	grams	8.59E-04	7.64E-02	7.99E+00	9.62E+00	1.09E-03	2.62E+00	3.33E-01	4.20E-03	4.23E-03	2.44E-02		
54	Mass Uncert	1sigma grams	1.42E-03	2.94E-02	3.11E+00	3.88E+00	4.24E-04	1.05E+00	1.22E-01	1.68E-03	1.81E-03	9.51E-03		
55	calc Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.89E-02	1.65E-01	7.66E-02	0.00E+00	1.68E-05	8.46E-02		
56	calc Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.48E+02	7.40E+03	3.43E+03	0.00E+00	7.53E-01	3.79E+03		
57	calc Act	Ci	8.38E-06	4.83E-04	1.75E-05	3.27E-06	1.89E-02	1.65E-01	7.66E-02	4.37E-01	1.68E-05	8.46E-02		
58	calc Act Conc	nCi/g	3.76E-01	2.17E+01	7.85E-01	1.47E-01	8.48E+02	7.40E+03	3.43E+03	1.96E+04	7.53E-01	3.79E+03		

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
59	calc Pu239 FGE	g	7.73E-04	0.00E+00	5.14E+00	0.00E+00	1.23E-04	2.62E+00	7.49E-03	9.45E-03	3.17E-05	4.56E-04		
60	calc Pu239 Eq Act	Ci	2.15E-06	0.00E+00	0.00E+00	0.00E+00	1.72E-02	1.65E-01	7.66E-02	8.57E-03	1.53E-05	8.46E-02		
61	calc Decay Heat	watts	2.44E-07	1.39E-05	4.83E-07	8.29E-08	6.26E-04	5.12E-03	2.38E-03	1.39E-05	4.95E-07	2.83E-03		
62	uncert Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.33E-03	6.61E-02	2.81E-02	0.00E+00	7.20E-06	3.30E-02		
63	uncert Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.29E+02	2.96E+03	1.26E+03	0.00E+00	3.23E-01	1.48E+03		
64	uncert Act	Ci	1.39E-05	1.86E-04	6.80E-06	1.32E-06	7.33E-03	6.61E-02	2.81E-02	1.75E-01	7.20E-06	3.30E-02		
65	uncert Act Conc	nCi/g	6.23E-01	8.34E+00	3.05E-01	5.92E-02	3.29E+02	2.96E+03	1.26E+03	7.85E+03	3.23E-01	1.48E+03		
66	uncert Pu239 FGE	g	1.28E-03	0.00E+00	2.00E+00	0.00E+00	4.79E-05	1.05E+00	2.75E-03	3.79E-03	1.36E-05	1.78E-04		
67	uncert Pu239 Eq Act	Ci	3.56E-06	0.00E+00	0.00E+00	0.00E+00	6.66E-03	6.61E-02	2.81E-02	3.43E-03	6.55E-06	3.30E-02		
68	uncert Decay Heat	watts	4.04E-07	5.36E-06	1.88E-07	3.35E-08	2.43E-04	2.05E-03	8.75E-04	5.57E-06	2.12E-07	1.10E-03		
69	Shipping Calcs	6.58E+01	3.10E-04	1.79E-02	0.00E+00	0.00E+00	3.49E+00	3.05E+01	1.42E+01	1.62E+00	3.11E-03	1.56E+01		
70	49CFR173.433f		0.00%	0.03%	0.00%	0.00%	5.31%	46.33%	21.51%	2.46%	0.00%	23.76%		
71	Radionuclide		Cm-244	Cs-137	Ba-137m	Sr-90	Y-90	Eu-154					HP/LU	10/26/12
72	Activity	Ci	7.98E-04	7.16E-01	6.77E-01	4.90E-01	4.90E-01	1.04E-03					HP/LU	10/26/12
73	Activity Uncert	1sigma Ci	1.06E-03	2.11E-01	1.96E-01	2.41E-01	1.45E-01	3.00E-04					HP/LU	10/26/12
74	Mass	grams	9.76E-06	8.14E-03	1.26E-09	3.55E-03	9.01E-07	3.90E-06	NULL	NULL	NULL	NULL		
75	Mass Uncert	1sigma grams	1.30E-05	2.40E-03	3.64E-10	1.75E-03	2.67E-07	1.12E-06	NULL	NULL	NULL	NULL		
76	calc Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL		
77	calc Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL		
78	calc Act	Ci	7.98E-04	7.16E-01	6.77E-01	4.90E-01	4.90E-01	1.04E-03	NULL	NULL	NULL	NULL		
79	calc Act Conc	nCi/g	3.58E+01	3.21E+04	3.04E+04	2.20E+04	2.20E+04	4.66E+01	NULL	NULL	NULL	NULL		
80	calc Pu239 FGE	g	8.78E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL		
81	calc Pu239 Eq Act	Ci	4.20E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL		
82	calc Decay Heat	watts	2.79E-05	7.92E-04	2.67E-03	5.68E-04	2.71E-03	9.31E-06	NULL	NULL	NULL	NULL		
83	uncert Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL		
84	uncert Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL		
85	uncert Act	Ci	1.06E-03	2.11E-01	1.96E-01	2.41E-01	1.45E-01	3.00E-04	NULL	NULL	NULL	NULL		
86	uncert Act Conc	nCi/g	4.75E+01	9.46E+03	8.79E+03	1.08E+04	6.50E+03	1.35E+01	NULL	NULL	NULL	NULL		
87	uncert Pu239 FGE	g	1.17E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL		
88	uncert Pu239 Eq Act	Ci	5.58E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL		
89	uncert Decay Heat	watts	3.71E-05	2.34E-04	7.72E-04	2.79E-04	8.02E-04	2.69E-06	NULL	NULL	NULL	NULL		
90	Shipping Calcs		7.39E-02	5.30E-02	0.00E+00	1.61E-01	9.08E-02	7.70E-05	NULL	NULL	NULL	NULL		
91	49CFR173.433f		0.11%	0.08%	0.00%	0.28%	0.14%	0.00%	NULL	NULL	NULL	NULL		
92	Waste Material Parameter		PW										HP/LU	10/26/12
93	Wgt of Mat Parms (kg or lbs)	kg	22.3										HP/LU	10/26/12
94	Radio Assay Method		14DTC1										HP/LU	10/26/12
95	Data Package Number		INLRHDTC12011										HP/LU	10/26/12
96	Assay Date		9/12/2012										HP/LU	10/26/12
97	Charz Method ID		14RRH1										HP/LU	10/26/12
98	Data Package Number		INLRHRTR12013										HP/LU	10/26/12
99	Charz Method Date		9/12/2012										HP/LU	10/26/12
100	Haz Codes		D004	D005	D006	D007	D008	D009	D010	D011	D019	D028	HP/LU	10/26/12
101	Haz Codes		D029	F002	F005								HP/LU	10/26/12
102	Haz Codes													
103	Haz Codes													
104	Sample ID	Headspace Gas H/M	NULL	HGHM									HP/LU	10/26/12
105	Sample Type												HP/LU	10/26/12
106	Layer No. Sampled			0									HP/LU	10/26/12
107	Date Sampled												HP/LU	10/26/12
108	Method ID			DTP-1.2-041									HP/LU	10/26/12
109	Data Package Number												HP/LU	10/26/12
110	CAS #		NULL	NULL										
111	Analyte												HP/LU	10/26/12
112	Concentration												HP/LU	10/26/12
113	units	%vol											HP/LU	10/26/12
114	Date Analyzed			NULL									HP/LU	10/26/12
115	B Detectable Flag													
116	D Detectable Flag													
117	E Detectable Flag													
118	J Detectable Flag													
119	U Detectable Flag												HP/LU	10/26/12
120	NA Detectable Flag		NA											
121														
122	Sample ID	Headspace Gas VOC											HP/LU	10/26/12
123	Sample Type			HGVO									HP/LU	10/26/12
124	Layer No. Sampled												HP/LU	10/26/12
125	Date Sampled												HP/LU	10/26/12

kg
lbs 0.4536
kg 1.0000

Sample Site

SARP-Flammable VOCs (ppmv)

RH WDS Master Template.xls Rev. 4
Addendum #4, SCO #1066
Excel 2003/2007 Microsoft Windows XP

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
126	Method ID			DTP-1.2-041									HP/LU	10/26/12
127	Data Package Number												HP/LU	10/26/12
128	Methanol Method ID													
129	CAS #												HP/LU	10/26/12
130	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
131	Concentration												HP/LU	10/26/12
132	units	ppmv											HP/LU	10/26/12
133	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			HP/LU	10/26/12
134	B Detectable Flag													
135	D Detectable Flag													
136	E Detectable Flag													
137	J Detectable Flag													
138	U Detectable Flag												HP/LU	10/26/12
139	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
140	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
141	CAS #												HP/LU	10/26/12
142	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
143	Concentration												HP/LU	10/26/12
144	units	ppmv											HP/LU	10/26/12
145	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			HP/LU	10/26/12
146	B Detectable Flag													
147	D Detectable Flag													
148	E Detectable Flag													
149	J Detectable Flag													
150	U Detectable Flag												HP/LU	10/26/12
151	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
152	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
153	CAS #												HP/LU	10/26/12
154	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
155	Concentration												HP/LU	10/26/12
156	units	ppmv											HP/LU	10/26/12
157	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			HP/LU	10/26/12
158	B Detectable Flag													
159	D Detectable Flag													
160	E Detectable Flag													
161	J Detectable Flag													
162	U Detectable Flag												HP/LU	10/26/12
163	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
164	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
165	CAS #												HP/LU	10/26/12
166	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
167	Concentration												HP/LU	10/26/12
168	units	ppmv											HP/LU	10/26/12
169	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			HP/LU	10/26/12
170	B Detectable Flag													
171	D Detectable Flag													
172	E Detectable Flag													
173	J Detectable Flag													
174	U Detectable Flag												HP/LU	10/26/12
175	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
176	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
177	CAS #													
178	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
179	Concentration													
180	units	ppmv												
181	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
182	B Detectable Flag													
183	D Detectable Flag													
184	E Detectable Flag													
185	J Detectable Flag													
186	U Detectable Flag													
187	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				

RH WDS Master Template.xls Rev. 4
Addendum #4, SCO #1066
Excel 2003/2007 Microsoft Windows XP

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
188	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
189			type	comment										
190	Comment													
191	Comment													
192	Comment													
193	Comment													
194	Comment													
195	Comment													
196	Comment													
197	Comment													
198	Comment													
199	Comment													
200														
201														

			Requirements Met?
202	Free liquids <1% by volume		YES
203	No non-rad. pyrophorics		YES
204	Chemical compatability		YES
205	No explosives		YES
206	No corrosives		YES
207	No pressurized containers		YES
208	No sealed Containers >4 liters		YES
209	Liner punctured/ filtered		YES
210	Flammable VOCs <500ppmv		YES
211	Container is in Approved Waste Stream Profile Form?	ID-ANLE-S5000	YES
212	Can it be established through Process Knowledge that the concentration of flammable VOCs present in the headspace of the container is <= 500 ppm?.		YES

213–236

Creta Kuykes
CCP Certification Official

10-26-2012
Date

Lot #

CK 10/26/12

RH WDS Master Template.xls Rev. 4
Addendum #4, SCO #1066
Excel 2003/2007 Microsoft Windows XP

DIVIDER

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Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12013
Examination Date:	09/12/12
Waste Container ID:	ANLE3A
Audio/Video Media Number:	Primary: INLRHRTR12013 A Backup: INLRHRTR12013 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON DRUM
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	75% N/A N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE3A

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 30 gallon drum, 1 gallon paint cans with puncture holes, metal tubing, bolts, metal paint can lids, metal caps, scrap metal (OI) Solidified material, glass bottle (XPW) Scrap plastic, electrical wire, plastic tubing

DIVIDER

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Attachment 2 – Container Data Sheet

BDR Number: INLRHDTC12011

Date:	9-12-12
Container No.:	ANLE3A
Probe Position:	55 Gallon
Instrument No.:	020555
Probe No.:	XC0674
Measured Background Dose Rate (mR/hr):	.028
Gross Weight (kg):	66.4
Dose Rate 1 (mR/hr):	105
Dose Rate 2 (mR/hr):	105
Dose Rate 3 (mR/hr):	113
Dose Rate 4 (mR/hr):	122
Highest measured dose rate is greater than three times the measured background.	(YES) NO

Chris G Davis — Printed Name

Signature

9-12-12 — Date

12011

Waste Container Dose-to-Curie Conversion Record

SCO1141 DTC for ID-ANLE-S5000 - Debris Rev.2 Addendum 2 Microsoft Windows XP Professional 2002 and 2003; Microsoft Excel 2003, 2007, 2010

Operating Procedure	CCP-TP-504 REV 13	
Date of Survey	9/12/2012	
Waste Stream Designation	ID-ANLE-S5000	
Drum ID	ANLE3A	
Container Gross Weight	664	kg
Container Net Weight	22.3	kg
Fill Percentage	75	%
Measured Container Dose Rate		
Quadrant #1	105	mR/hr
Quadrant #2	105	mR/hr
Quadrant #3	113	mR/hr
Quadrant #4	122	mR/hr
Average Dose Rate Minus Background	111.2	mR/hr
Cs-137 Dose Rate Fraction (OSPREY)	100	%
Background	0.028	mR/hr

Nuclide	Curie Scaling Factors	Activity (Ci)	Grams	FGE	PECI	Watts	Uncertainty	Uncertainty in Curies	Uncertainty in Grams
U-233	1.10E-05	8.38E-06	8.59E-04	7.73E-04	2.15E-06	2.44E-07	165.3%	1.39E-05	1.42E-03
U-234	6.36E-04	4.83E-04	7.64E-02	0.00E+00	0.00E+00	1.39E-05	38.5%	1.86E-04	2.94E-02
U-235	2.30E-05	1.75E-05	7.97E+00	5.13E+00	0.00E+00	4.81E-07	39.0%	6.80E-06	3.11E+00
U-238	4.32E-06	3.27E-06	9.63E+00	0.00E+00	0.00E+00	8.30E-08	40.3%	1.32E-06	3.88E+00
Pu-238	2.50E-02	1.89E-02	1.10E-03	1.24E-04	1.72E-02	6.28E-04	38.7%	7.33E-03	4.24E-04
Pu-239	2.18E-01	1.65E-01	2.63E+00	2.63E+00	1.65E-01	5.12E-03	40.0%	6.61E-02	1.05E+00
Pu-240	1.01E-01	7.66E-02	3.33E-01	7.49E-03	7.66E-02	2.38E-03	36.7%	2.81E-02	1.22E-01
Pu-241	6.50E-01	4.37E-01	4.20E-03	9.44E-03	8.56E-03	1.39E-05	40.2%	1.75E-01	1.69E-03
Pu-242	2.21E-05	1.68E-05	4.22E-03	3.17E-05	1.52E-05	4.94E-07	42.9%	7.20E-06	1.81E-03
Am-241	9.46E-02	8.46E-02	2.44E-02	4.56E-04	8.46E-02	2.83E-03	39.0%	3.30E-02	9.51E-03
Cm-244	1.16E-03	7.98E-04	9.75E-06	8.78E-07	4.20E-04	2.79E-05	132.3%	1.06E-03	1.29E-05
Cs-137	1.00E+00	7.16E-01	8.14E-03	0.00E+00	0.00E+00	7.92E-04	29.5%	2.11E-01	2.40E-03
Ba-137m	9.46E-01	6.77E-01	1.26E-09	0.00E+00	0.00E+00	2.67E-03	28.9%	1.96E-01	3.64E-10
Sr-90	6.87E-01	4.90E-01	3.55E-03	0.00E+00	0.00E+00	5.68E-04	49.2%	2.41E-01	1.75E-03
Y-90	6.87E-01	4.90E-01	9.01E-07	0.00E+00	0.00E+00	2.71E-03	29.5%	1.45E-01	2.66E-07
Eu-154	1.67E-03	1.04E-03	3.89E-06	0.00E+00	0.00E+00	9.30E-06	28.9%	3.00E-04	1.12E-06
Totals		3.16E+00	2.07E+01	7.77E+00	3.53E-01	1.78E-02			

	Value	(one Sigma)	
TRU Alpha Activity Concentration	1.55E+04	5.74E+03	nCi/g
TRU Alpha Activity	3.45E-01	1.28E-01	Ci
Total Pu-239 Equiv Activity	3.53E-01	1.30E-01	Ci
Total Pu-239 Fissile Gram Equiv	7.77E+00	2.94E+00	g
Total Decay Heat	1.78E-02	5.66E-03	W
Volume Activity	2.78E-02	8.19E-03	Ci/L

Originator Chris Davis (Print Name)

Signed [signature] Date 9-24-12

RADIOLOGICAL SURVEY REPORT

To be used with MCP-90, MCP-93, MCP-124, MCP-138, MCP-139, MCP-187, MCP-199 and MCP-425

441.45
12/04/2007
Rev. 05

BLDG.: CPP 659
AREA/ROOM: 302/306
RWP #: 31011103-02
LOG #: WM-INTE# 1365
DATE: 09/12/12
TIME: 15:55

☐ ROUTINE
☒ NON ROUTINE (SPECIFY) ☐ FOLLOW UP

JOB DESCRIPTION

COMMENTS: RH-TRU gamma/neutron radiation survey. Gamma and neutron contact dose rates are calculated using EDF-10217 Rev 0 conversion factors from the 1 meter dose rate. These were the radiological conditions at time of survey.

RCT: G.D. Hinckley/ G D Hinckley
PRINT/SIGNATURE

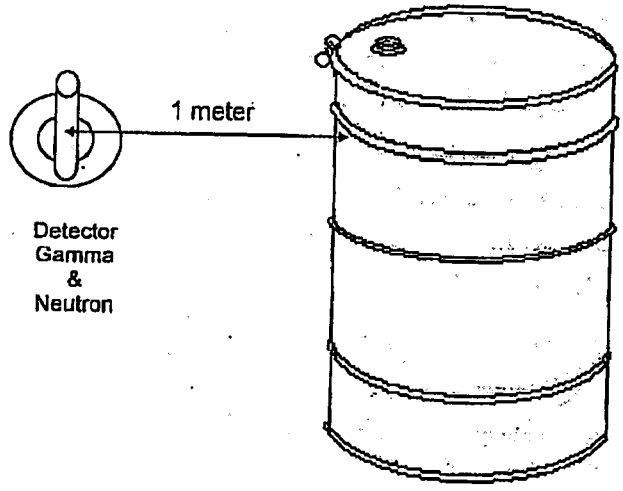
REVIEWED BY: A. Sargis/ Arnyr Sargis
PRINT/SIGNATURE

Drum # ANLE3A

ORIGINAL - RED
COPY - BLACK

30 Gal-Drum I/S 55 Gal Drum

Gamma/Thermo FH40G Ion Chamber: 26.0
Neutron/REM Detector: 13.8



Per EDF-10217 Rev 0 Conversion Factors used to calculate contact values are: 1 meter reading multiplied by the appropriate variable above.

Gamma
Gamma Conversion Factor: 26.0

Neutron
Neutron Conversion Factor: 13.8

Location of Drum	Dose Rate in mr/hr at 1 Meter	Dose Rate in mr/hr at Contact	Location of Drum	Dose Rate in mr/hr at 1 Meter	Dose Rate in* mr/hr at Contact
0 degrees	105	2730.0	0 degrees	0	n/a
90 degrees	105	2730.0	90 degrees	0	n/a
180 degrees	113	2938.0	180 degrees	0	n/a
270 degrees	122	3172.0	270 degrees	0	n/a

*Note: If neutron reading is <1.0 mr / hr at 1 m, then no calculation to contact was made.
*Note: Based off package configuration (30 gal drum inside a 55 gal drum) - no contact β survey was performed.

FRM-880
03/14/12
Rev. 9
Page 6 of 14
Used with TPR-7298 or TPR-7857

RH TRU CONTAINER REPACKAGING DATASHEET (DEBRIS)

PAGE ____OF____

Drum #: ANLE3A (from TRU Programs)

30 gal drum:

30 gal. drum filter model #: NUCFIL-019AS CL-576

Waste items present:

1. Irradiated structural (all metals)	Yes ☒	No ☐
2. Combustibles	Yes ☒	No ☐
3. Sludge	Yes ☐	No ☒
4. Other:	Yes ☒	No ☐

Describe: irradiated structural materials, bolts, solid base type tool, glass bottles w/o lids, metal lid (small), electrical wiring, thermal wrapped conduits, base tubing, sanding disks, bottle lids, plastic, paper, & punched paint cans, &

30 minute ambient air exposure Criteria met per TPR-7857?	Yes ☒	No ☐
Ignitable/Reactive Material present?	Yes ☐	No ☒

Additional items added during repack activity:			Tare Wt. (lbs.)
1. 30-gallon drum lift bag:	Yes ☑	No ☐	1.5
2. Wire Rope & Hook:	Yes ☐	No ☑	1.5
3. Plastic sleeve (speed loader):	Yes ☐	No ☑	2.0

Additional comments/waste description: paint can lids, structural materials from can #19

55 gal drum:

55 gal. filter model #: NUCFIL-019SAS ✓ filter serial number: CL-1109

30 gal. drum bag breached Initial: KA Date: 6-21-12

55 gal. drum lid locking ring installed: Date: 6-21-12 Time: 1522

Placed in position 4 into TRU-ISC 0022

Operator: K. A. Braga (Print Name) (Signature) 6-21-12 (Date)

Operations Management has reviewed the data for the container in this section and the information is correct and complete.

Operations Management Signature: R. A. BRAGA (Print Name) R. A. Braga (Signature) 6/21/12 (Date)

DIVIDER

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Waste Isolation Pilot Plant
Container Data Report

Report Statistics

Report Version:	**2.2**
WDS Instance:	**prd05.wipp.carlsbad.nm.us**
Generated on:	**June 02, 2013 05:19 PM**
Generated by:	**KIRKES, CRETA**
Total Pages:	**6**

Selection Criteria

Container Number: **ANLE26A**

Container: ANLE26A
Type: 39 - RH 55 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 10/26/2012
Waste Handling Code: RH
Disposal Date: 12/27/2012

Current Location Site: WI
Generator Site: AE
Destination Site ID: WI

Neutron Dose Rate (mrem/hr): 0.0
Beta Gamma Dose Rate (mrem/hr): 3822.0
Total Dose Rate (mrem/hr): 3822.0

FGE (g): 8.11E00
FGE Uncertainty (g): 2.97E00

Certification Program ID: C9
Shipping Program ID: C9

Gross Weight (kg): 53.80
Gross Weight Uncert (kg): 0.50

Overpack Container: ID0308
Overpack Type: REMOVABLE-LID 72-B CANISTER
Overpack Status: CERTIFICATION DATA APPROVED

Decay Heat (W): 1.85E-02
Decay Heat Uncertainty (W): 5.64E-03

Shipment Data

Payload ID: **ID0308** Assembly ID: IN122929 Payload Complete? Y
Shipment Number: INR12044 Send Date: 11/29/2012 Receipt Date: 12/01/2012
Shipment Status: SHIPMENT RECEIVED AT DESTINATION

Emplacement Location
Panel: 6 Room: 2 Borehole: 076

Certification Data Values

Waste Stream Profile Code: ID-ANLE-S5000
Waste Type Code: MTRU
IDC Code: 001
Waste Matrix Code: S5400
WAC Revision Number: 7.2
Fill Factor (%): 95.00
Waste Stream BIR ID: IN-AE-AGHC-01
Waste Stream MWIR ID: NONE

TRU Alpha Activity (Ci): 3.61E-01
TRU Alpha Activity Uncertainty (Ci): 1.29E-01
TRU Alpha Activity Concentration (Ci/g): 3.72E-05
PU-239 Equivalent Activity (PE-Ci): 3.68E-01
Alpha Surface Contamination (dpm/cm^2): 0.0
Beta/Gamma Surface Contamination (dpm/cm^2): 0.0

Transportation Data Values

Closure Date: 08/07/2012
Vent Date: 08/07/2012
Process Knowledge? Y
Waste Gen Date:
Content Code: ID325U
U-235 FEM (g):
U-235 FEM Uncert (g):
Be chemically/ mechanically bound: N

Shipment Purpose: DISPOSAL
Machine Compacted? N
Liner Exists? N
Liner Hole Size(mm):
Liner Lid Present?
Layers of Packaging 1
Aqueous Material? N

Gas Generation Data Values

Measured FGGR (mol/s)	Measured TGRR (mol/s)	Truncated FGGR Test (Y/N)	Truncated FGGR Test Period (days)

Container: ANLE26A
Type: 39 - RH 55 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 10/26/2012
Waste Handling Code: RH
Disposal Date: 12/27/2012

PCB Waste?	N
PCB Mass (kg):	
PCB Concentration (ppm):	
PCB Out of Service Date:	
Be Present?	Y
Be <= 1% by weight?	Y
Be mass <= 100kg?	Y
Separation OK?	Y
Packing Fraction (compaction level):	non-compacted

Filters

Filter Model Number	Filter Diffusivity (mol/s/ml)	Quantity	Install Date
NF19SD	1.85E-05	1	08/07/2012

Certification Comments

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
AM-241	8.840E-02	3.350E-02	2.548E-02	9.654E-03
BA-137M	7.060E-01	1.930E-01	1.312E-09	3.587E-10
CM-244	8.310E-04	1.100E-03	1.016E-05	1.345E-05
CS-137	7.460E-01	2.090E-01	8.477E-03	2.375E-03
EU-154	1.080E-03	2.950E-04	4.045E-06	1.105E-06
PU-238	1.980E-02	7.420E-03	1.145E-03	4.289E-04
PU-239	1.720E-01	6.710E-02	2.734E00	1.067E00
PU-240	7.990E-02	2.840E-02	3.474E-01	1.235E-01
PU-241	4.540E-01	1.770E-01	4.365E-03	1.702E-03
PU-242	1.750E-05	7.330E-06	4.408E-03	1.846E-03
SR-90	5.110E-01	2.470E-01	3.703E-03	1.790E-03
U-233	8.750E-06	1.440E-05	8.965E-04	1.475E-03

Container: ANLE26A
Type: 39 - RH 55 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 10/26/2012
Waste Handling Code: RH
Disposal Date: 12/27/2012

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
U-234	5.040E-04	1.880E-04	7.975E-02	2.975E-02
U-235	1.820E-05	6.890E-06	8.311E00	3.146E00
U-238	3.420E-06	1.340E-06	1.006E01	3.941E00
Y-90	5.110E-01	1.430E-01	9.393E-07	2.629E-07

Material Parameters

Material Parameter	Description	Weight (kg)
8	PLASTICS	9.70
13	STEEL CONTAINER MATERIALS	44.10
	Waste Weight:	9.70
	Packaging Weight:	44.10
	Total Material Weight:	53.80

Hazardous Codes

Hazardous Code	Description
D004	ARSENIC
D005	BARIUM
D006	CADMIUM
D007	CHROMIUM
D008	LEAD
D009	MERCURY
D010	SELENIUM

Container: ANLE26A
Type: 39 - RH 55 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 10/26/2012
Waste Handling Code: RH
Disposal Date: 12/27/2012

Hazardous Codes

Hazardous Code	Description
D011	SILVER
D019	CARBON TETRACHLORIDE
D028	1,2-DICHLOROETHANE
D029	1,1-DICHLOROETHYLENE
F002	SPENT HALOGENATED SOLVENTS
F005	SPENT NON-HALOGENATED SOLVENTS

Assay Methods

Labor Code	Assay Method	Description	Assay Date
C9	14DTC1	DOSE-TO-CURIE	10/02/2012

Non-Destructive Examination (NDE)

Labor Code	NDE Method	Description	Examination Date
C9	14RRH1	REAL-TIME RADIOGRAPHY SYSTEM (RTR-RTR-0659)	10/02/2012

Edit Limit Check Results

Evaluation Date: 10/26/2012 13:42:56 Overall Status: PASS

Evaluation Code	Status	Return Code	Detailed Description
DI_CERT_ALL	PASS		
DI_CERT_BE	PASS		
DI_CERT_CERT	PASS		
DI_CERT_CHARZ	PASS		
DI_CERT_ED	PASS		

Container: ANLE26A
Type: 39 - RH 55 gal TBO

Current Status
Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 10/26/2012
Waste Handling Code: RH
Disposal Date: 12/27/2012

Edit Limit Check Results
Evaluation Date: 10/26/2012 13:42:56 Overall Status: PASS

Evaluation Code	Status
DI_CERT_EPA	PASS
DI_CERT_PCB	PASS
DI_CERT_PERC	PASS
DI_CERT_TRAMPAC	PASS
DSA	PASS
WAC	PASS
WAP_CERT	PASS

TRAMPAC Evaluation Results
Evaluation Date: Overall Status:

Evaluation Code	Status	Return Code	Detailed Description

History

Event Date/Time	Event Description	Reason
10/26/2012 13:42:56	INSERT DATA INTO THE DATABASE	
10/26/2012 13:42:56	SUCCESSFUL SUBMISSION FOR CERT	
10/26/2012 13:52:05	APPROVED FOR CERT	
11/13/2012 13:26:09	ASSIGNED TO OVERPACK	

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	RH WDS Master Template.xls Rev. 4 Addendum #4, SCO #1068 Excel 2003/2007 Microsoft Windows XP	Units	data	comments									Initial	date
2	Shipper Site ID		C9	Location ID	Dest Program ID	Shipping Purpose					ANLE26A		CK/LU	10/26/12
3	Waste Stream Profile		ID-ANLE-S5000	IN	W	D							CK/LU	10/26/12
4	Container Number		ANLE26A										CK/LU	10/26/12
5	Container Type		RH drum-55 tbo	drum, swb, tdop, etc., see WWIS labels for valid types					U-235 FEM	U-235 FEM Uncert	FGGR Flag	FGGR Test Period	CK/LU	10/26/12
6	WAC Rev #		7.2	0					NULL	NULL	NULL	NULL	CK/LU	10/26/12
7	WAC Ex. #						Be <=100 kg	Be <= 1%	Be Present	Aqueous Material	Be Chem/Mech Bound	Compacted Wst		
8	Cert Site		C9				Y	Y	Y	N	N	N	CK/LU	10/26/12
9	Cert Date		10/26/2012											
10	Waste Handling Code		RH	CH, RH									CK/LU	10/26/12
11	Waste Type Code		MTRU	TRU, MTRU									CK/LU	10/26/12
12	Waste Stream BIR ID		IN-AE-AGHC-01				p(CI):	choose	1sigma	2sigma	95%CI		CK/LU	10/26/12
13	Waste Stream MWIR ID		NONE	default to 0 for TRU			0.6827	1sigma	1.0000	0.5000	0.5102		CK/LU	10/26/12
14	Generator Site ID		AE				0.9545	2sigma	2.0000	1.0000	1.0204		CK/LU	10/26/12
15	IDC Code		001				0.9500	95%CI	1.9600	0.9800	1.0000		CK/LU	10/26/12
16	Matrix Code		S5400										CK/LU	10/26/12
17	Trucon Code		TD325U										CK/LU	10/26/12
18	Shipping Category						WWIS Req'd CI:	1sigma	1.0000	0.5000	0.5102			
19	Tru Alpha Act	CI	3.61E-01		3.601E-01		Fraction of MDL Reported on HGAS		1.0000				CK/LU	10/26/12
20	Tru Alpha Act Uncert	1sigma CI	1.29E-01	6.190E-01	Tru Alpha Act + 2sigma (CI)								CK/LU	10/26/12
21	Tru Alpha Act Conc	nCi/g	3.72E+04		3.71E+04								CK/LU	10/26/12
22	Tru Alpha Act Conc Uncert	1sigma nCi/g	1.33E+04	6.380E+04	Tru Alpha Act Conc + 2sigma (CI)								CK/LU	10/26/12
23	Pu239 Fiss Gm Eq	g	8.11E+00		8.097E+00								CK/LU	10/26/12
24	Pu239 Fiss Gm Eq Uncert	1sigma g	2.97E+00	1.405E+01	Pu239 Fiss Gm Eq + 2sigma (CI)								CK/LU	10/26/12
25	Pu239 Eq Act	CI	3.68E-01		3.677E-01								CK/LU	10/26/12
26	Decay Heat	watts	1.85E-02		1.853E-02								CK/LU	10/26/12
27	Decay Heat Uncert	1sigma watts	5.64E-03	2.41E-02	Decay Heat + 1sigma (watts)								CK/LU	10/26/12
28	Layers of Packaging		1										CK/LU	10/26/12
29	Fill Factor		98	percentage	Liner Lid Present								CK/LU	10/26/12
30	Liner Type			1 = plastic drum liner									CK/LU	10/26/12
31	Liner Punctured				Liner Hole Size		(mm)						CK/LU	10/26/12
32	PCB Conc		NULL				PCB Waste	PCB Mass (kg)	Out of Service				CK/LU	10/26/12
33	Closure Date		8/7/2012	Watt-years	Waste Gen Date		N	NULL	NULL				CK/LU	10/26/12
34	Vent Date		8/7/2012	0.004									CK/LU	10/26/12
35	Filter Install Date		8/7/2012										CK/LU	10/26/12
36	Filter Manufacturer		NFT										CK/LU	10/26/12
37	Filter Serial Number(s)												CK/LU	10/26/12
38	Filter Model Number	NF012,NF013,NF020,NF9026	NF19SD										CK/LU	10/26/12
39	Number of Filters Installed		1										CK/LU	10/26/12
40	Aspiration Method ID		3										CK/LU	10/26/12
41	Gas Gen Rate			#VALUE!	<<Gas Gen Rate Calculated.		Avagdro's Number:	6.022142E+23	NIST					
42	Hydrogen/Methane Gen Rate						Electron Charge	1.602176E-19	V NIST					
43	Gas Gen Comp Date				Waste (kg)	Packaging (kg)	Total (kg)							
44	Gross Weight	kg	53.800	[illegible]	9.7	44.10	53.80						CK/LU	10/26/12
45	Gross Weight Uncert	1sigma kg	0.5		max. reported	mda							CK/LU	10/26/12
46	Alpha Surf Cont	dpm/100 cm^2	0		0		Minimum Detectable Activity		Shipping Calcs				CK/LU	10/26/12
47	Beta/Gamma Surf Cont	dpm/100 cm^2	0		0		Minimum Detectable Activity			Total TBq	1.22E-01		CK/LU	10/26/12
48	Neutron Dose Rate	mrem/hr	0		0		Minimum Detectable Activity			Fraction	2.29E-02		CK/LU	10/26/12
49	Beta/Gamma Dose Rate	mrem/hr	[illegible] 3622	[illegible]	3822		Minimum Detectable Activity			Highway Route Control?	No		CK/LU	10/26/12
50	Radionuclide		U-233	U-234	U-235	U-238	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Am-241	CK/LU	10/26/12
51	Activity	CI	8.75E-06	5.04E-04	1.82E-05	3.42E-06	1.98E-02	1.72E-01	7.99E-02	4.54E-01	1.75E-05	8.84E-02	CK/LU	10/26/12
52	Activity Uncert	1sigma CI	1.44E-05	1.88E-04	6.89E-06	1.34E-06	7.42E-03	6.71E-02	2.84E-02	1.77E-01	7.33E-06	3.35E-02	CK/LU	10/26/12
53	Mass	grams	8.97E-04	7.97E-02	8.31E+00	1.01E+01	1.14E-03	2.73E+00	3.47E-01	4.37E-03	4.41E-03	2.55E-02		
54	Mass Uncert	1sigma grams	1.48E-03	2.97E-02	3.15E+00	3.94E+00	4.29E-04	1.07E+00	1.23E-01	1.70E-03	1.65E-03	9.65E-03		
55	calc Tru Alpha Act	CI	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.98E-02	1.72E-01	7.99E-02	0.00E+00	1.75E-05	8.84E-02		
56	calc Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.04E+03	1.77E+04	8.24E+03	0.00E+00	1.80E+00	9.11E+03		
57	calc Act	CI	8.75E-06	5.04E-04	1.82E-05	3.42E-06	1.98E-02	1.72E-01	7.99E-02	4.54E-01	1.75E-05	8.84E-02		
58	calc Act Conc	nCi/g	9.02E-01	5.20E+01	1.88E+00	3.53E-01	2.04E+03	1.77E+04	8.24E+03	4.68E+04	1.80E+00	9.11E+03		

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
59	calc Pu239 FGE	g	8.07E-04	0.00E+00	5.84E+00	0.00E+00	1.29E-04	2.73E+00	7.82E-03	9.82E-03	3.31E-05	4.76E-04		
60	calc Pu239 Eq Act	Ci	2.24E-06	0.00E+00	0.00E+00	0.00E+00	1.80E-02	1.72E-01	7.99E-02	8.90E-03	1.59E-05	8.84E-02		
61	calc Decay Heat	watts	2.55E-07	1.45E-05	5.02E-07	8.67E-08	6.56E-04	5.33E-03	2.49E-03	1.44E-05	5.16E-07	2.96E-03		
62	uncert Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.42E-03	6.71E-02	2.84E-02	0.00E+00	7.33E-06	3.35E-02		
63	uncert Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.65E+02	6.92E+03	2.93E+03	0.00E+00	7.56E-01	3.45E+03		
64	uncert Act	Ci	1.44E-05	1.88E-04	6.89E-06	1.34E-06	7.42E-03	6.71E-02	2.84E-02	1.77E-01	7.33E-06	3.35E-02		
65	uncert Act Conc	nCi/g	1.48E+00	1.94E+01	7.10E-01	1.38E-01	7.65E+02	6.92E+03	2.93E+03	1.82E+04	7.56E-01	3.45E+03		
66	uncert Pu239 FGE	g	1.33E-03	0.00E+00	2.02E+00	0.00E+00	4.85E-05	1.07E+00	2.78E-03	3.83E-03	1.38E-05	1.81E-04		
67	uncert Pu239 Eq Act	Ci	3.69E-06	0.00E+00	0.00E+00	0.00E+00	6.75E-03	6.71E-02	2.84E-02	3.47E-03	6.66E-06	3.35E-02		
68	uncert Decay Heat	watts	4.19E-07	5.41E-06	1.90E-07	3.40E-08	2.46E-04	2.08E-03	8.84E-04	5.63E-06	2.16E-07	1.12E-03		
69	Shipping Calcs	6.87E+01	3.24E-04	1.87E-02	0.00E+00	0.00E+00	3.66E+00	3.18E+01	1.48E+01	1.68E+00	3.23E-03	1.63E+01		
70	49CFR173.433f		0.00%	0.03%	0.00%	0.00%	5.33%	46.29%	21.50%	2.45%	0.00%	23.79%		
71	Radionuclide		Cm-244	Cs-137	Ba-137m	Sr-90	Y-90	Eu-154					CK/LU	10/26/12
72	Activity	Ci	8.31E-04	7.46E-01	7.06E-01	5.11E-01	5.11E-01	1.08E-03					CK/LU	10/26/12
73	Activity Uncert	1sigma Ci	1.10E-03	2.09E-01	1.93E-01	2.47E-01	1.43E-01	2.95E-04					CK/LU	10/26/12
74	Mass	grams	1.02E-05	8.48E-03	1.31E-09	3.70E-03	9.39E-07	4.04E-06	NULL	NULL	NULL	NULL		
75	Mass Uncert	1sigma grams	1.34E-05	2.38E-03	3.59E-10	1.79E-03	2.63E-07	1.10E-06	NULL	NULL	NULL	NULL		
76	calc Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL		
77	calc Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL		
78	calc Act	Ci	8.31E-04	7.46E-01	7.06E-01	5.11E-01	5.11E-01	1.08E-03	NULL	NULL	NULL	NULL		
79	calc Act Conc	nCi/g	8.57E+01	7.69E+04	7.28E+04	5.27E+04	5.27E+04	1.11E+02	NULL	NULL	NULL	NULL		
80	calc Pu239 FGE	g	9.14E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL		
81	calc Pu239 Eq Act	Ci	4.37E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL		
82	calc Decay Heat	watts	2.91E-05	8.26E-04	2.78E-03	5.92E-04	2.83E-03	9.67E-06	NULL	NULL	NULL	NULL		
83	uncert Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL		
84	uncert Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL		
85	uncert Act	Ci	1.10E-03	2.09E-01	1.93E-01	2.47E-01	1.43E-01	2.95E-04	NULL	NULL	NULL	NULL		
86	uncert Act Conc	nCi/g	1.13E+02	2.15E+04	1.99E+04	2.55E+04	1.47E+04	3.04E+01	NULL	NULL	NULL	NULL		
87	uncert Pu239 FGE	g	1.21E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL		
88	uncert Pu239 Eq Act	Ci	5.79E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL		
89	uncert Decay Heat	watts	3.85E-05	2.31E-04	7.61E-04	2.86E-04	7.91E-04	2.64E-06	NULL	NULL	NULL	NULL		
90	Shipping Calcs		7.69E-02	5.53E-02	0.00E+00	1.89E-01	9.45E-02	8.00E-05	NULL	NULL	NULL	NULL		
91	49CFR173.433f		0.11%	0.08%	0.00%	0.28%	0.14%	0.00%	NULL	NULL	NULL	NULL		
92	Waste Material Parameter		PW										CK/LU	10/26/12
93	Wgt of Mat Parms (kg or lbs)	kg	9.7										CK/LU	10/26/12
94	Radio Assay Method		14DTC1										CK/LU	10/26/12
95	Data Package Number		INRHDTC12013										CK/LU	10/26/12
96	Assay Date		10/2/2012										CK/LU	10/26/12
97	Charz Method ID		14RRH1										CK/LU	10/26/12
98	Data Package Number		INLRHRTR12015										CK/LU	10/26/12
99	Charz Method Date		10/2/2012										CK/LU	10/26/12
100	Haz Codes		D004	D005	D006	D007	D008	D009	D010	D011	D019	D028	CK/LU	10/26/12
101	Haz Codes		D029	F002	F005								CK/LU	10/26/12
102	Haz Codes													
103	Haz Codes													
104	Sample ID	Headspace Gas H/M	NULL										CK/LU	10/26/12
105	Sample Type			HGHM									CK/LU	10/26/12
106	Layer No. Sampled				0								CK/LU	10/26/12
107	Date Sampled					Sample Site							CK/LU	10/26/12
108	Method ID			DTP-1.2-041									CK/LU	10/26/12
109	Data Package Number												CK/LU	10/26/12
110	CAS #		NULL	NULL										
111	Analyte												CK/LU	10/26/12
112	Concentration												CK/LU	10/26/12
113	units	%vol											CK/LU	10/26/12
114	Date Analyzed			NULL									CK/LU	10/26/12
115	B Detectable Flag													
116	D Detectable Flag													
117	E Detectable Flag													
118	J Detectable Flag													
119	U Detectable Flag												CK/LU	10/26/12
120	NA Detectable Flag		NA	NA										
121														
122	Sample ID	Headspace Gas VOC											CK/LU	10/26/12
123	Sample Type			HGVO									CK/LU	10/26/12
124	Layer No. Sampled					SARP-Flammable VOCs (ppmv)		0					CK/LU	10/26/12
125	Date Sampled												CK/LU	10/26/12

kg

lbs 0.4536

kg 1.0000

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N
126	Method ID			DTP-1.2-041									CK/LU	10/26/12
127	Data Package Number												CK/LU	10/26/12
128	Methanol Method ID													
129	CAS #												CK/LU	10/26/12
130	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
131	Concentration												CK/LU	10/26/12
132	units	ppmv											CK/LU	10/26/12
133	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			CK/LU	10/26/12
134	B Detectable Flag													
135	D Detectable Flag													
136	E Detectable Flag													
137	J Detectable Flag													
138	U Detectable Flag												CK/LU	10/26/12
139	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
140	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
141	CAS #												CK/LU	10/26/12
142	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
143	Concentration												CK/LU	10/26/12
144	units	ppmv											CK/LU	10/26/12
145	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			CK/LU	10/26/12
146	B Detectable Flag													
147	D Detectable Flag													
148	E Detectable Flag													
149	J Detectable Flag													
150	U Detectable Flag												CK/LU	10/26/12
151	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
152	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
163	CAS #												CK/LU	10/26/12
154	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
155	Concentration												CK/LU	10/26/12
156	units	ppmv											CK/LU	10/26/12
157	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			CK/LU	10/26/12
158	B Detectable Flag													
159	D Detectable Flag													
160	E Detectable Flag													
161	J Detectable Flag													
162	U Detectable Flag												CK/LU	10/26/12
163	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
164	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
165	CAS #												CK/LU	10/26/12
166	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
167	Concentration												CK/LU	10/26/12
168	units	ppmv											CK/LU	10/26/12
169	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			CK/LU	10/26/12
170	B Detectable Flag													
171	D Detectable Flag													
172	E Detectable Flag													
173	J Detectable Flag													
174	U Detectable Flag												CK/LU	10/26/12
175	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
176	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
177	CAS #													
178	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
179	Concentration													
180	units	ppmv												
181	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
182	B Detectable Flag													
183	D Detectable Flag													
184	E Detectable Flag													
185	J Detectable Flag													
186	U Detectable Flag													
187	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N
188	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL					
189			type	comment										
190	Comment													
191	Comment													
192	Comment													
193	Comment													
194	Comment													
195	Comment													
196	Comment													
197	Comment													
198	Comment													
199	Comment													
200														
201			Requirements Met?											
202	Free liquids <1% by volume		YES											
203	No non-rad. pyrophorics		YES											
204	Chemical compatability		YES											
205	No explosives		YES											
206	No corrosives		YES											
207	No pressurized containers		YES											
208	No sealed Containers >4 liters		YES											
209	Liner punctured/ filtered		YES											
210	Flammable VOCs <500ppmv		YES											
211	Container is in Approved Waste Stream Profile Form?	ID-ANLE-S5000	YES											
212	Can it be established through Process Knowledge that the concentration of flammable VOCs present in the headspace of the container is <= 500 ppm?.		YES											
213														
214														
215														
216														
217														
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Creta Kirkes
CCP Certification Official

10-26-2012
Date

Lot #

RH WDS Master Template.xls Rev. 4
Addendum #4, SCO #1066
Excel 2003/2007 Microsoft Windows XP

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Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12015
Examination Date:	10/02/12
Waste Container ID:	ANLE26A
Audio/Video Media Number:	Primary: INLRHRTR12015 A Backup: INLRHRTR12015 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 Gallon
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	95% N/A N/A

43
10-4-12 ak

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE26A

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 30 gallon metal drum, 1 gallon metal paint cans, scrap metal, metal wire, metal lids (OI) 1 gallon glass bottles empty no lids, absorbent, glass labware (XPW) Scrap plastic, plastic bottle

DIVIDER

PAGE

Attachment 2 – Container Data Sheet

BDR Number: INLRHDTC12013

Date:	10-2-12
Container No.:	ANLE26A
Probe Position:	55 gallon
Instrument No.:	020555
Probe No.:	XC0674
Measured Background Dose Rate (mR/hr):	.021
Gross Weight (kg):	53.8
Dose Rate 1 (mR/hr):	122
Dose Rate 2 (mR/hr):	135
Dose Rate 3 (mR/hr):	147
Dose Rate 4 (mR/hr):	132
Highest measured dose rate is greater than three times the measured background.	(YES) NO

Lashell Blade — Lashell Blade — 10-2-12

Printed Name — Signature — Date

12013

Waste Container Dose-to-Curie Conversion Record

SCO1141 DTC for ID-ANLE-S5000 - Debris Rev.2 Addendum 2 Microsoft Windows XP Professional 2002 and 2003; Microsoft Excel 2003, 2007, 2010

Operating Procedure	CCP-TP-504	Rev.13	
Date of Survey	10/2/2012		
Waste Stream Designation	ID-ANLE-S5000		
Drum ID	ANLE26A		
Container Gross Weight	53.8	kg	
Container Net Weight	9.7	kg	
Fill Percentage	95	%	
Measured Container Dose Rate			Background
Quadrant #1	122	mR/hr	0.021 mR/hr
Quadrant #2	135	mR/hr	
Quadrant #3	147	mR/hr	
Quadrant #4	132	mR/hr	
Average Dose Rate Minus Background	134.0	mR/hr	
Cs-137 Dose Rate Fraction (OSPREY)	96.8	%	

Nuclide	Curie Scaling Factors	Activity (Ci)	Grams	FGE	PECi	Watts	Uncertainty	Uncertainty in Curies	Uncertainty in Grams
U-233	1.10E-05	8.75E-06	8.96E-04	8.07E-04	2.24E-06	2.55E-07	165.1%	1.44E-05	1.48E-03
U-234	6.36E-04	5.04E-04	7.97E-02	0.00E+00	0.00E+00	1.45E-05	37.3%	1.88E-04	2.97E-02
U-235	2.30E-05	1.82E-05	8.32E+00	5.35E+00	0.00E+00	5.02E-07	37.8%	6.89E-06	3.15E+00
U-238	4.32E-06	3.42E-06	1.00E+01	0.00E+00	0.00E+00	8.66E-08	39.2%	1.34E-06	3.94E+00
Pu-238	2.50E-02	1.98E-02	1.14E-03	1.29E-04	1.80E-02	6.55E-04	37.5%	7.42E-03	4.29E-04
Pu-239	2.18E-01	1.72E-01	2.74E+00	2.74E+00	1.72E-01	5.35E-03	38.9%	6.71E-02	1.07E+00
Pu-240	1.01E-01	7.99E-02	3.48E-01	7.82E-03	7.99E-02	2.49E-03	35.5%	2.84E-02	1.23E-01
Pu-241	6.50E-01	4.54E-01	4.37E-03	9.83E-03	8.91E-03	1.45E-05	39.1%	1.77E-01	1.71E-03
Pu-242	2.21E-05	1.75E-05	4.41E-03	3.31E-05	1.59E-05	5.16E-07	41.9%	7.33E-06	1.85E-03
Am-241	9.46E-02	8.84E-02	2.55E-02	4.76E-04	8.84E-02	2.96E-03	37.9%	3.35E-02	9.65E-03
Cm-244	1.16E-03	8.31E-04	1.02E-05	9.14E-07	4.37E-04	2.90E-05	132.0%	1.10E-03	1.34E-05
Cs-137	1.00E+00	7.46E-01	8.48E-03	0.00E+00	0.00E+00	8.26E-04	28.0%	2.09E-01	2.37E-03
Ba-137m	9.46E-01	7.06E-01	1.31E-09	0.00E+00	0.00E+00	2.78E-03	27.3%	1.93E-01	3.59E-10
Sr-90	6.87E-01	5.11E-01	3.70E-03	0.00E+00	0.00E+00	5.92E-04	48.3%	2.47E-01	1.79E-03
Y-90	6.87E-01	5.11E-01	9.39E-07	0.00E+00	0.00E+00	2.83E-03	28.0%	1.43E-01	2.63E-07
Eu-154	1.67E-03	1.08E-03	4.04E-06	0.00E+00	0.00E+00	9.66E-06	27.3%	2.95E-04	1.11E-06
Totals		3.29E+00	2.16E+01	8.11E+00	3.68E-01	1.85E-02			

	Value	(one Sigma)	
TRU Alpha Activity Concentration	3.72E+04	1.33E+04	nCi/g
TRU Alpha Activity	3.61E-01	1.29E-01	Ci
Total Pu-239 Equiv Activity	3.68E-01	1.32E-01	Ci
Total Pu-239 Fissile Gram Equiv	8.11E+00	2.97E+00	g
Total Decay Heat	1.85E-02	5.64E-03	W
Volume Activity	2.90E-02	8.09E-03	Ci/L

Originator Lashell Alade (Print Name)

Signed Lashell Alade Date 10-8-12

DIVIDER

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RADIOLOGICAL SURVEY REPORT

To be used with MCP-90, MCP-93, MCP-124, MCP-136, MCP-139, MCP-187, MCP-199 and MCP-425

441.45
12/04/2007
Rev. 05

BLDG.: CPP 659
AREA/ROOM: 302/306
RWP #: 31011103-02
LOG #: WM-INTE# 1498
DATE: 10/02/12
TIME: 10:25

☐ ROUTINE JOB DESCRIPTION
☒ NON ROUTINE (SPECIFY) ☐ FOLLOW UP
COMMENTS: RH-TRU gamma/neutron radiation survey. Gamma and neutron contact dose rates are calculated using EDF-10217 Rev 0 conversion factors from the 1 meter dose rate. These were the radiological conditions at time of survey.

RCT: Mark L. Dorn / Mark L. Dorn
PRINT/SIGNATURE

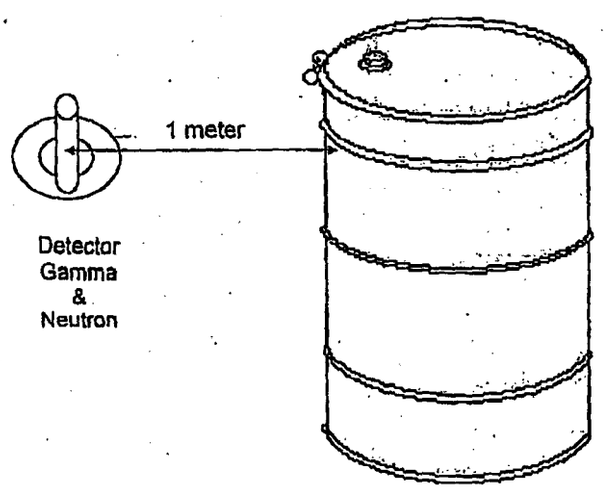
REVIEWED BY: A. Sargis/ Amy Sargis
PRINT/SIGNATURE

Drum # ANLE26A

ORIGINAL - RED
COPY - BLACK

30 Gal-Drum I/S 55 Gal Drum

Gamma/Thermo FH40G Ion Chamber: 26.0
Neutron/REM Detector: 13.8



Per EDF-10217 Rev 0 Conversion Factors used to calculate contact values are: 1 meter reading multiplied by the appropriate variable above.

Gamma
Gamma Conversion Factor: 26.0

Neutron
Neutron Conversion Factor: 13.8

Location of Drum	Dose Rate in mr/hr at 1 Meter	Dose Rate in mr/hr at Contact	Location of Drum	Dose Rate in mr/hr at 1 Meter	Dose Rate in* mr/hr at Contact
0 degrees	122	3172.0	0 degrees	0	n/a
90 degrees	135	3510.0	90 degrees	0	n/a
180 degrees	147	3822.0	180 degrees	0	n/a
270 degrees	132	3432.0	270 degrees	0	n/a

*Note: If neutron reading is <1.0 mr / hr at 1 m, then no calculation to contact was made.
*Note: Based off package configuration (30 gal drum inside a 55 gal drum) - no contact β survey was performed.

FRM-880
03/14/12
Rev. 9
Page 6 of 13
Used with TPR-7298 or TPR-7857

RH TRU CONTAINER REPACKAGING DATASHEET (DEBRIS)

PAGE ____ OF ____

Drum #: ANLE26A (from TRU Programs)

30 gal drum:

30 gal. drum filter model #: NUCFIL-0190S CI-524

Waste Items present:

1. Irradiated structural (all metals)	Yes ☒	No ☐
2. Combustibles	Yes ☐	No ☒
3. Sludge	Yes ☑	No ☐
4. Other:	Yes ☑	No ☐

Describe: grinding papers, dried sludge, glass bottles w/o lids, plastic bottles w/o lids, wire, lids, & punched paint cans, & lids

30 minute ambient air exposure Criteria met per TPR-7857?	Yes ☑	No ☐
Ignitable/Reactive Material present?	Yes ☐	No ☒

Additional items added during repack activity:

			Tare Wt. (lbs.)
1. 30-gallon drum lift bag:	Yes ☑	No ☐	1.5
2. Wire Rope & Hook:	Yes ☐	No ☑	1.5
3. Plastic sleeve (speed loader):	Yes ☐	No ☑	2.0

Additional comments/waste description:

55 gal drum:

55 gal. filter model #: NUCFIL-0190S filter serial number: CL-1165

30 gal. drum bag breached Initial: LA Date: LA

55 gal. drum lid locking ring installed: Date: 8-7-12 Time: 1332

Placed in position 3 into TRU-ISC DU411

Operator: Bethany Massé Print Name — Signature — 080912 Date

Operations Management has reviewed the data for the container in this section and the information is correct and complete.

Operations Management Signature: K Pierce Print Name — Signature — 8-9-12 Date

Generated: 10/26/2012 14:15

Canister #: ID0308

Canister Gross Weight + Error

710.27 kg
1,566.16 lbs

Canister Content Code/Governing Shipping Period (days): ID325U / 60

Canister Filters

Filter Model	Quantity
NF019D	1

Inner Containers

Container Number	Gross (kg)	Wgt+Err (lbs)	PCB Waste?	Be Present?	Total Dose Rate (mrem/hr)	Content Code	Waste Stream Profile	Filter Model	Qty
ANLE3A	66.9	147.51	N	Y	3172	ID325U	ID-ANLE-S5000	NF19SD	1
ANLE26A	54.3	119.73	N	Y	3822	ID325U	ID-ANLE-S5000	NF19SD	1
ANLE3E	47.7	105.18	N	Y	730.5	ID325U	ID-ANLE-S5000	NF19SD	1

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Attachment 1 – RLC Loading Form Page 1 of 1

RLC Inspection

RLC Canister ID: IDO299
RLC Serial Number: 070109

	Filter Type Number	Filter Serial Numbers	Date Filter Installed
1	NUCFIL-0190S	OJ-1610	8-9-12
2	N/A	N/A	N/A
3			
4			

Pintle Cap Screws
Torque Wrench Serial Number: N/A Cal Due Date: N/A

Filters/Pipe Plugs
Torque Wrench Serial Number: XC0694 Cal Due Date: 10-19-2012

Maintenance/Inspections Complete
Canister Loading Operator
Printed Name Craig L Brammer Signature Craig L Brammer Date 8-9-12

Dunnage Container is empty? YES ☐ NO ☐ NA ☑
Dunnage Container is dry? YES ☐ NO ☐ NA ☑
Dunnage Container vent port plug removed? YES ☐ NO ☐ NA ☑
Dunnage Container Weight in pounds (lbs): N/A

RH Waste Container Numbers	Operator Initials	Peer Verifier Initials
N153C	KT	
IDAWANL850013C	KT	
IDAWANL810002C	KT	

Peer Verifier – Waste containers loaded into RLC match RH Waste Container Numbers listed above.
Printed Name Chris Davis Signature Chris Davis Date 8-13-12

RLC Closure Date: 8-13-12

Gross Weight in pounds (lbs): 490
Load Cell Serial Number: XC0523 Calibration Due Date: 3/2/2013

Canister Loading Operator
Printed Name Kallena Torres Signature Kallena Torres Date 8-13-12

Supervisor
Printed Name Cody Remsburg Signature Cody Remsburg Date 8-13-12

441.45
12/04/2007
Rev. 05

RADIOLOGICAL SURVEY REPORT

To be used with MCP-90, MCP-93, MCP-124, MCP-138, MCP-139, MCP-187, MCP-199 and MCP-425

Log # 1167

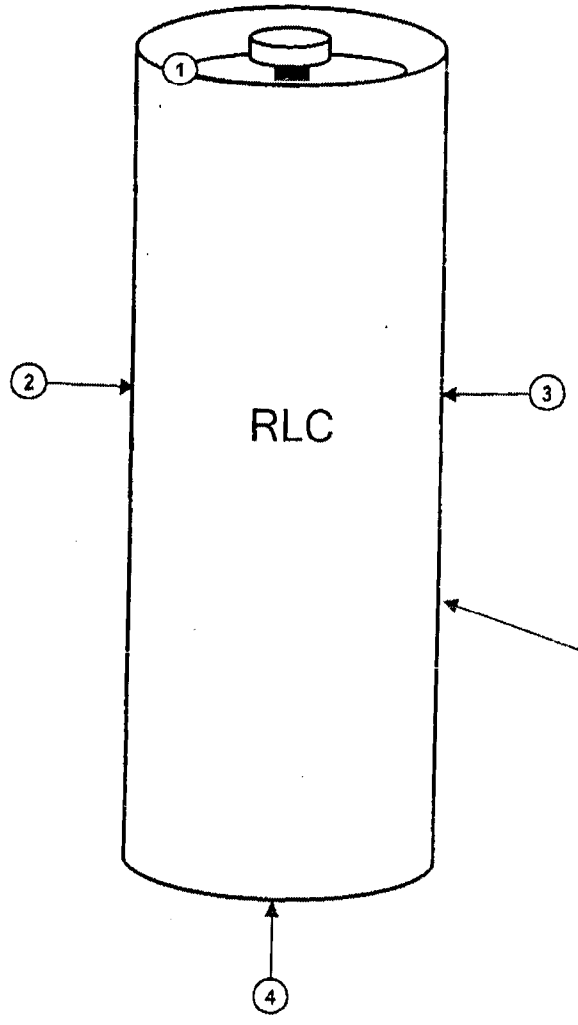
BLDG.: CPP 659	☐ ROUTINE **JOB DESCRIPTION**
AREA/ROOM: CMA	☒ NON ROUTINE (SPECIFY) ☐ FOLLOW UP
RWP #: 31011104-02	COMMENTS: Survey of loaded RLC. Survey points are approximate in location. Survey performed of accessible areas. No Neutron Radiation detected.
LOG #: 1167	
DATE: 08/13/12	
TIME: 0900	

RCT: G.D. Hinckley/ GD Hinckley
PRINT / SIGNATURE

REVIEWED BY: A Sargio / Amy Sargio
PRINT / SIGNATURE

RLC # ID0299

ORIGINAL - RED
COPY - BLACK



Highest dose rate encountered behind temporary shielding during drum moves was 0.3 mR/hr γ.

RADIOLOGICAL SURVEY REPORT

To be used with MCP-90, MCP-93, MCP-124, MCP-138, MCP-139, MCP-187, MCP-199 and MCP-425

Log # 1167

INSTRUMENTS		
Type	Serial #	MDA/Efficiency (dpm/100cm²)/eff(%)
Scaler	852017	78/36.6 % βγ
		15/30.5% α
AMP-100	851474	
E-600	801896	

SURVEY DATA AND LEGEND

ALL SWIPE, LARGE AREA WIPE (LAW), AND DIRECT SCAN SURVEY LOCATIONS ARE IDENTIFIED ON THE MAP. THOSE LOCATIONS WHERE ACTIVITY IS GREATER THAN OR EQUAL TO THE SPECIFIC LIMITS LISTED BELOW ARE RECORDED.

SWIPE No.	LAW No.	DIRECT SCAN No.	LOCATION OR ITEM DESCRIPTION	SWIPE / SCAN (dpm/100cm²)		LAW (dpm)	
				βγ	α	βγ	α
			Specify limits used for this survey, if applicable.	200 / NA	20 / NA		
			NA				

CA HCA	Contamination Area High Contamination Area	-x—x-	Radiological Barrier	□ = Direct Scan
RA HRA	Radiation Area High Radiation Area	ALL dose rates are in mrem/hr, unless otherwise noted. Smear count time is 1 minute unless otherwise noted.		○ = Swipe (Smear)
VHRA RMA	Very High Radiation Area Radioactive Material Area	# #@#(cm)	General Area Dose Rate Dose Rate at Distance From Source	L = Large Area Wipe (LAW)
ARA RBA	Airborne Radioactivity Area Radiological Buffer Area	*# #β / #γ	Contact Dose Rate Beta Corrected (non-penetrating radiation) / Gamma Dose Rates	△ = Air Sample
FCA SCA	Fixed Contamination Area Soil Contamination Area	α β	Alpha Beta	⌂ = Tritium Swipe
URMA SOP	Underground Radioactive Material Area Step-Off Pad	γ n	Gamma Neutron	NA

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Waste Isolation Pilot Plant
Canister Data Report

Report Statistics

Report Version:	**2.2**
WDS Instance:	**prd05.wipp.carlsbad.nm.us**
Generated on:	**May 28, 2013 01:35 PM**
Generated by:	**KIRKES, CRETA**
Total Pages:	**7**

Selection Criteria

Container Number: **ID0308**

Container: ID0308
Type: 11 - 72-B Removable Lid OP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 11/13/2012
Waste Handling Code: RH
Disposal Date: 12/27/2012

Current Location Site: WI
Generator Site: AE
Destination Site ID: WI

Certification Program ID: C9
Shipping Program ID: C9

Neutron Dose Rate (mrem/hr): 0.0
Beta Gamma Dose Rate (mrem/hr): 2000.0
Total Dose Rate (mrem/hr): 2000.0

FGE (g): 2.372E01
FGE Uncertainty (g): 5.932E00

Gross Weight (kg): 684.41
Gross Weight Uncert (kg): 25.86

Decay Heat (W): 8.12E-02
Decay Heat Uncertainty (W): 2.024E-02

Shipment Data

Payload ID: **ID0308** Assembly ID: IN122929 Payload Complete? Y
Shipment Number: INR12044 Send Date: 11/29/2012 Receipt Date: 12/01/2012
Shipment Status: SHIPMENT RECEIVED AT DESTINATION

Emplacement Location
Panel: 6 Room: 2 Borehole: 076

Certification Data Values

Waste Stream Profile Code: ID-ANLE-S5000
Waste Type Code: MTRU
IDC Code: 001
Waste Matrix Code: S5400
WAC Revision Number: 7.2
Fill Factor (%): 60.17

TRU Alpha Activity (Ci): 1.056E00
TRU Alpha Activity Uncertainty (Ci): 2.435E-01
TRU Alpha Activity Concentration (Ci/g): 2.933E-05
PU-239 Equivalent Activity (PE-Ci): 1.082E00
Alpha Surface Contamination (dpm/cm^2): 19.0
Beta/Gamma Surface Contamination (dpm/cm^2): 199.0

Transportation Data Values

Closure Date: 11/08/2012
Vent Date: 11/08/2012
Shipment Purpose: DISPOSAL
Machine Compacted? N

Waste Gen Date:
Content Code: ID325U
U-235 FEM (g):
U-235 FEM Uncert (g):
Be chemically/ mechanically bound:

Filters

Filter Model Number	Filter Diffusivity (mol/s/ml)	Quantity	Install Date

Container: ID0308
Type: 11 - 72-B Removable Lid OP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 11/13/2012
Waste Handling Code: RH
Disposal Date: 12/27/2012

PCB Waste? N
PCB Mass (kg):
PCB Concentration (ppm):
PCB Out of Service Date:
Be Present? Y
Be <= 1% by weight? Y

Governing Packing Fraction (compaction level): non-compacted

Filters

Filter Model Number	Filter Diffusivity (mol/s/ml)	Quantity	Install Date
NF019D	1.85E-05	1	11/08/2012

Certification Comments

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
AM-241	3.070E-01	8.954E-02	8.847E-02	2.580E-02
BA-137M	7.393E00	2.257E00	1.374E-08	4.195E-09
CM-244	2.538E-03	1.818E-03	3.103E-05	2.222E-05
CS-137	7.822E00	2.389E00	8.889E-02	2.714E-02
EU-154	3.570E-03	7.827E-04	1.337E-05	2.931E-06
PU-238	5.280E-02	1.241E-02	3.052E-03	7.172E-04
PU-239	4.720E-01	1.186E-01	7.504E00	1.886E00
PU-240	2.237E-01	5.088E-02	9.726E-01	2.212E-01
PU-241	1.494E00	4.336E-01	1.437E-02	4.169E-03
PU-242	6.030E-05	1.761E-05	1.519E-02	4.435E-03
SR-90	1.421E00	3.825E-01	1.030E-02	2.772E-03
U-233	1.713E-05	2.001E-05	1.756E-03	2.051E-03

Container: ID0308
Type: 11 - 72-B Removable Lid OP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 11/13/2012

Waste Handling Code: RH
Disposal Date: 12/27/2012

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
U-234	1.555E-03	4.082E-04	2.460E-01	6.460E-02
U-235	5.500E-05	1.421E-05	2.511E01	6.488E00
U-238	9.190E-06	2.242E-06	2.703E01	6.594E00
Y-90	1.421E00	2.621E-01	2.612E-06	4.818E-07

Material Parameters

Material Parameter	Description	Weight (kg)
1	IRON BASE METAL ALLOYS	131.38
8	PLASTICS	36.00
13	STEEL CONTAINER MATERIALS	517.01

Waste Weight:	167.38
Packaging Weight:	517.01
Total Material Weight:	684.39

Hazardous Codes

Hazardous Code	Description
D004	ARSENIC
D005	BARIUM
D006	CADMIUM
D007	CHROMIUM
D008	LEAD
D009	MERCURY

Container: ID0308
Type: 11 - 72-B Removable Lid OP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 11/13/2012

Waste Handling Code: RH
Disposal Date: 12/27/2012

Hazardous Codes

Hazardous Code	Description
D010	SELENIUM
D011	SILVER
D019	CARBON TETRACHLORIDE
D028	1,2-DICHLOROETHANE
D029	1,1-DICHLOROETHYLENE
F002	SPENT HALOGENATED SOLVENTS
F005	SPENT NON-HALOGENATED SOLVENTS

Edit Limit Check Results

Evaluation Date: 11/13/2012 13:26:07 Overall Status: PASS

Evaluation Code	Status	Return Code	Detailed Description
DI_CERT_ALL	PASS		
DI_CERT_BE	PASS		
DI_CERT_CERT	PASS		
DI_CERT_CHARZ	PASS		
DI_CERT_ED	PASS		
DI_CERT_EPA	PASS		
DI_CERT_PCB	PASS		
DI_CERT_PERC	PASS		
DI_CERT_TRAMPAC	PASS		
DSA	PASS		
WAC	PASS		

Container: ID0308
Type: 11 - 72-B Removable Lid OP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 11/13/2012
Waste Handling Code: RH
Disposal Date: 12/27/2012

Edit Limit Check Results

Evaluation Date: 11/13/2012 13:26:07 Overall Status: PASS

Evaluation Code	Status
WAP_CERT	PASS

TRAMPAC Evaluation Results

Evaluation Date: 11/13/2012 13:26:07 Overall Status: PASS

Evaluation Code	Status	Return Code	Detailed Description
CANISTER_72B_ALL	PASS		
CANISTER_72B_ASP	PASS		
CANISTER_72B_CONT	PASS		
CANISTER_72B_FIL	PASS		
CANISTER_72B_GVE	PASS		
CANISTER_72B_NUC	PASS		
CANISTER_72B_PDH	PASS		
CANISTER_72B_RDR	PASS		
CANISTER_72B_WGT	PASS		

Inner Containers

Container Number	Type Code	Content Code	Gross Weight + Error	FGE + 2x Error	Waste Stream
ANLE26A	39 - RH 55 gal TBO	ID325U	54.30	1.405E01	ID-ANLE-S5000
ANLE3A	39 - RH 55 gal TBO	ID325U	66.90	1.365E01	ID-ANLE-S5000
ANLE3E	39 - RH 55 gal TBO	ID325U	47.70	1.626E01	ID-ANLE-S5000

History

Event Date/Time	Event Description	Reason

Container: ID0308
Type: 11 - 72-B Removable Lid OP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 11/13/2012
Waste Handling Code: RH
Disposal Date: 12/27/2012

History

Event Date/Time	Event Description	Reason
10/26/2012 14:06:48	INSERT DATA INTO THE DATABASE	
11/13/2012 13:26:09	SUCCESSFUL SUBMISSION FOR CERT	
11/13/2012 13:26:20	APPROVED FOR CERT	
11/13/2012 13:37:40	ASSIGNED TO PAYLOAD	

DIVIDER

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CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-HFEF-S5400-RH

Lot # 21

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			Transportation BDR
								Sample	Analysis		
IDAWANL810002C	N/A	NA	INLRHRTR12001	N/A	N/A	N/A		NA	NA	NA	NA
IDAWANL850013C	N/A	NA	INLRHRTR12001	N/A	N/A	N/A		NA	NA	NA	NA
N153C	N/A	NA	INLRHRTR12001	N/A	N/A	N/A		NA	NA	NA	NA

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

8/16/2012
Date

Hoo-SR1-004

Kirkes, Creta - NWP

From: Mueller, Terry - WTS
Sent: Wednesday, August 08, 2012 7:11 AM
To: Dominguez, Lena - WTS; Larson, David - WTS; Pettus, Helen - WTS; Soaterna, Carolina - WTS; Valenzuela, Bobbie
Cc: Walker, Mak (Maryann) - WTS; Jones, Laura - WTS
Subject: FW: NCR/CAR check for ID-HFEF-S5400-RH Lot 21
Attachments: NCR_BDR_CONTAINER_CHECK_INL ID-HFEF-S5400-RH Lot 21_2nd.xls

There are no NCR or CAR dispositions that impact the acceptability of these drums, alternate drum IDs, and associated BDRs for certification and shipping as listed on the attached. This check was verified independently.

Thanks!

Terry L. Mueller
WTS QA
Washington TRU Solutions, LLC
Contractor to the Department of Energy
MS GSA-103
***work* (575)-234-7016**
***fax* (575)-234-7042**

From: Pettus, Helen - WTS
Sent: Wednesday, August 08, 2012 6:44 AM
To: Jones, Laura - WTS; Kantrowitz, Rich - WTS; Mueller, Terry - WTS; Walker, Mak (Maryann) - WTS
Subject: NCR/CAR check for ID-HFEF-S5400-RH Lot 21

Please do an NCR/CAR check for ID-HFEF-S5400-RH Lot 21.

Thanks,

Helen Pettus
Central Characterization Project
Washington TRU Solutions LLC
Contractor for the U.S. Department of Energy
575-234-7696 (W)
helen.pettus@wipp.ws

INL RH AK TRACKING SPREADSHEET (Vent and Closure Dates)

CONTAINER ID	WASTE STREAM	WASTE MATRIX CODE	VENT DATE	CLOSURE DATE
IDAWANL850013C	ID-HFEF-S5400-RH	S5400	3/23/2011	3/23/2011
IDAWANL810002C	ID-HFEF-S5400-RH	S5400	3/23/2011	3/23/2011
N153C	ID-HFEF-S5400-RH	S5400	3/23/2011	3/23/2011

DIVIDER

PAGE

Waste Isolation Pilot Plant
Container Data Report

Report Statistics

Report Version:	**2.2**
WDS Instance:	**prd05.wipp.carlsbad.nm.us**
Generated on:	**May 30, 2013 01:52 PM**
Generated by:	**KIRKES, CRETA**
Total Pages:	**7**

Selection Criteria

Container Number:	**IDAWANL810002C**

Container: IDAWANL810002C
Type: 39 - RH 55 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/08/2012
Waste Handling Code: RH
Disposal Date: 09/13/2012

Current Location Site: WI
Generator Site: AE
Destination Site ID: WI

Neutron Dose Rate (mrem/hr): 1.0
Beta Gamma Dose Rate (mrem/hr): 3132.0
Total Dose Rate (mrem/hr): 3133.0

FGE (g): 2.57E00
FGE Uncertainty (g): 1.75E00

Gross Weight (kg): 54.40
Gross Weight Uncert (kg): 0.50

Certification Program ID: C9
Shipping Program ID: C9

Overpack Container: ID0299
Overpack Type: REMOVABLE-LID 72-B CANISTER
Overpack Status: CERTIFICATION DATA APPROVED

Decay Heat (W): 1.12E-02
Decay Heat Uncertainty (W): 1.73E-03

Shipment Data

Payload ID: **ID0299** Assembly ID: IN118172 Payload Complete? Y
Shipment Number: INR12021 Send Date: 09/05/2012 Receipt Date: 09/06/2012
Shipment Status: SHIPMENT RECEIVED AT DESTINATION

Emplacement Location
Panel: 6 Room: 2 Borehole: 017

Certification Data Values

Waste Stream Profile Code: ID-HFEF-S5400-RH
Waste Type Code: MTRU
IDC Code: NONE
Waste Matrix Code: S5400
WAC Revision Number: 7.2
Fill Factor (%): 75.00
Waste Stream BIR ID: NONE
Waste Stream MWIR ID: IN-ID-INL-152

TRU Alpha Activity (Ci): 6.92E-02
TRU Alpha Activity Uncertainty (Ci): 3.29E-02
TRU Alpha Activity Concentration (Ci/g): 7.58E-06
PU-239 Equivalent Activity (PE-Ci): 7.15E-02
Alpha Surface Contamination (dpm/cm^2): 0.0
Beta/Gamma Surface Contamination (dpm/cm^2): 0.0

Transportation Data Values

Closure Date: 03/23/2011
Vent Date: 03/23/2011
Process Knowledge? Y
Waste Gen Date:
Content Code: ID321H
U-235 FEM (g):
U-235 FEM Uncert (g):
Be chemically/ mechanically bound: N

Shipment Purpose: DISPOSAL
Machine Compacted? N
Liner Exists? N
Liner Hole Size(mm):
Liner Lid Present?
Layers of Packaging 1
Aqueous Material? N

Gas Generation Data Values

Measured FGGR (mol/s)	Measured TGRR (mol/s)	Truncated FGGR Test (Y/N)	Truncated FGGR Test Period (days)

Container: IDAWANL810002C
Type: 39 - RH 55 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/08/2012
Waste Handling Code: RH
Disposal Date: 09/13/2012

PCB Waste? N
PCB Mass (kg):
PCB Concentration (ppm):
PCB Out of Service Date:
Be Present? Y
Be <= 1% by weight? Y
Be mass <= 100kg? Y
Separation OK? Y
Packing Fraction (compaction level): non-compacted

Filters

Filter Model Number	Filter Diffusivity (mol/s/ml)	Quantity	Install Date
NF019D	1.85E-05	1	03/23/2011

Certification Comments

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
AM-241	2.780E-02	2.700E-04	8.012E-03	7.781E-05
BA-137M	8.110E-01	3.230E-03	1.507E-09	6.004E-12
CS-137	8.570E-01	3.410E-03	9.739E-03	3.875E-05
PU-238	8.870E-03	1.170E-04	5.127E-04	6.763E-06
PU-239	2.330E-02	1.980E-04	3.704E-01	3.148E-03
PU-240	9.220E-03	8.300E-05	4.009E-02	3.609E-04
PU-241	1.570E-01	1.490E-03	1.510E-03	1.433E-05
PU-242	3.710E-06	2.980E-08	9.345E-04	7.506E-06
SR-90	7.250E-01	4.940E-03	5.254E-03	3.580E-05
U-233	5.860E-05	8.300E-07	6.004E-03	8.504E-05
U-234	7.500E-05	6.160E-07	1.187E-02	9.747E-05
U-235	7.460E-06	4.700E-08	3.406E00	2.146E-02

Container: IDAWANL810002C
Type: 39 - RH 55 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/08/2012
Waste Handling Code: RH
Disposal Date: 09/13/2012

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
U-238	9.680E-07	7.410E-09	2.847E00	2.179E-02
Y-90	7.250E-01	4.940E-03	1.333E-06	9.081E-09

Material Parameters

Material Parameter	Description	Weight (kg)
8	PLASTICS	9.13
13	STEEL CONTAINER MATERIALS	45.30

Waste Weight:	9.13
Packaging Weight:	45.30
Total Material Weight:	54.43

Hazardous Codes

Hazardous Code	Description
D004	ARSENIC
D005	BARIUM
D006	CADMIUM
D007	CHROMIUM
D008	LEAD
D009	MERCURY
D010	SELENIUM
D011	SILVER
D018	BENZENE

Container: IDAWANL810002C
Type: 39 - RH 55 gal TBO

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Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/08/2012
Waste Handling Code: RH
Disposal Date: 09/13/2012

Hazardous Codes

Hazardous Code	Description
D019	CARBON TETRACHLORIDE
D022	CHLOROFORM
D038	PYRIDINE
F002	SPENT HALOGENATED SOLVENTS
F005	SPENT NON-HALOGENATED SOLVENTS

Assay Methods

Labor Code	Assay Method	Description	Assay Date
C9	14DTC1	DOSE-TO-CURIE	01/25/2012

Non-Destructive Examination (NDE)

Labor Code	NDE Method	Description	Examination Date
C9	14RRH1	REAL-TIME RADIOGRAPHY SYSTEM (RTR-RTR-0659)	01/25/2012

Edit Limit Check Results

Evaluation Date: 08/08/2012 17:32:57 Overall Status: PASS

Evaluation Code	Status	Return Code	Detailed Description
DI_CERT_ALL	PASS		
DI_CERT_BE	PASS		
DI_CERT_CERT	PASS		
DI_CERT_CHARZ	PASS		
DI_CERT_ED	PASS		
DI_CERT_EPA	PASS		

Container: IDAWANL810002C
Type: 39 - RH 55 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/08/2012
Waste Handling Code: RH
Disposal Date: 09/13/2012

Edit Limit Check Results

Evaluation Date: 08/08/2012 17:32:57 Overall Status: PASS

Evaluation Code	Status
DI_CERT_PCB	PASS
DI_CERT_PERC	PASS
DI_CERT_TRAMPAC	PASS
DSA	PASS
WAC	PASS
WAP_CERT	PASS

TRAMPAC Evaluation Results

Evaluation Date: Overall Status:

Evaluation Code	Status	Return Code	Detailed Description

History

Event Date/Time	Event Description	Reason
08/08/2012 17:32:57	INSERT DATA INTO THE DATABASE	
08/08/2012 17:32:57	SUCCESSFUL SUBMISSION FOR CERT	
08/08/2012 17:37:56	ASSIGNED TO OVERPACK	
08/08/2012 17:40:03	ASSIGNED TO OVERPACK	
08/08/2012 17:40:17	ASSIGNED TO OVERPACK	
08/09/2012 06:52:42	APPROVED FOR CERT	
08/14/2012 15:49:53	ASSIGNED TO OVERPACK	

Container: IDAWANL810002C
Type: 39 - RH 55 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/08/2012
Waste Handling Code: RH
Disposal Date: 09/13/2012

History

Event Date/Time	Event Description	Reason
08/14/2012 15:50:03	ASSIGNED TO OVERPACK	

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	RH WDS Master Template.xls Rev. 4 Addendum #4, SCO #1066 Excel 2003/2007 Microsoft Windows XP	Units	data			comments							Initial	date
2	Shipper Site ID			Location ID	Dest Program ID	Shipping Purpose								
3	Waste Stream Profile	ID-	[redacted]						IDAWANL810002C				CK/HP	08/01/12
4	Container Number		IDAWANL810002C										CK/HP	08/01/12
5	Container Type		[redacted]	drum, swb, tdop, etc., see WWIS labels for valid types.									CK/HP	08/01/12
6	WAC Rev #		[redacted]	0					U-235 FEM	U-235 FEM Uncert	FGGR Flag	FGGR Test Period	CK/HP	08/01/12
7	WAC Ex. #		[redacted]						NULL	NULL	NULL	NULL	CK/HP	08/01/12
8	Cert Site		[redacted]				Be <=100 kg	Be <= 1%	Be Present	Aqueous Material	Be Chem/Mech Bound	Compacted Wst		
9	Cert Date		[redacted]				Y	Y	Y	N	NULL	N	CK/HP	08/01/12
10	Waste Handling Code		[redacted]	CH, RH										
11	Waste Type Code		[redacted]	TRU, MTRU									CK/HP	08/01/12
12	Waste Stream BIR ID		[redacted]										CK/HP	08/01/12
13	Waste Stream MWIR ID		[redacted]										CK/HP	08/01/12
14	Generator Site ID		[redacted]	default to 0 for TRU			p(CI):	choose	1sigma	2sigma	95%CI		CK/HP	08/01/12
15	IDC Code		[redacted]				0.6827	1sigma	1.0000	0.5000	0.5102		CK/HP	08/01/12
16	Matrix Code		[redacted]				0.9545	2sigma	2.0000	1.0000	1.0204		CK/HP	08/01/12
17	Trucon Code		[redacted]				0.9500	95%CI	1.9600	0.9800	1.0000		CK/HP	08/01/12
18	Shipping Category		[redacted]										CK/HP	08/01/12
19	Tru Alpha Act	CI	5.92E-02	6.919E-02				WWIS Req'd CI:	1sigma	1.0000	0.5000	0.5102	CK/HP	08/01/12
20	Tru Alpha Act Uncert	1sigma CI	2.00E-02	1.350E-01	Tru Alpha Act + 2sigma (Ci)			Fraction of MDL Reported on HGAS		1.0000				
21	Tru Alpha Act Conc	nCi/g	4.63E+00	7.58E+03									CK/HP	08/01/12
22	Tru Alpha Act Conc Uncert	1sigma nCi/g	2.61E+00	1.480E+04	Tru Alpha Act Conc + 2sigma (Ci)								CK/HP	08/01/12
23	Pu239 Fiss Gm Eq	g	2.57E+00	2.571E+00									CK/HP	08/01/12
24	Pu239 Fiss Gm Eq Uncert	1sigma g	7.75E+00	6.070E+00	Pu239 Fiss Gm Eq + 2sigma (Ci)								CK/HP	08/01/12
25	Pu239 Eq Act	CI	7.15E-02	7.148E-02									CK/HP	08/01/12
26	Decay Heat	watts	1.12E-02	1.124E-02									CK/HP	08/01/12
27	Decay Heat Uncert	1sigma watts	1.75E-03	1.29E-02	Decay Heat + 1sigma (watts)								CK/HP	08/01/12
28	Layers of Packaging		1										CK/HP	08/01/12
29	Fill Factor		75	percentage	Liner Lid Present								CK/HP	08/01/12
30	Liner Type		1	1 = plastic drum liner										
31	Liner Punctured		0		Liner Hole Size	(mm)							CK/HP	08/01/12
32	PCB Conc		0				PCB Waste	PCB Mass (kg)	Out of Service				CK/HP	08/01/12
33	Closure Date		8/23/2011				N	NULL	NULL				CK/HP	08/01/12
34	Vent Date		8/23/2011	Watt-years	Waste Gen Date								CK/HP	08/01/12
35	Filter Install Date		[redacted]	[redacted]									CK/HP	08/01/12
36	Filter Manufacturer		NFT										CK/HP	08/01/12
37	Filter Serial Number(s)		[redacted]										CK/HP	08/01/12
38	Filter Model Number	NF012,NF013,NF020,NF9026	NF019D										CK/HP	08/01/12
39	Number of Filters Installed		1										CK/HP	08/01/12
40	Aspiration Method ID		[redacted]										CK/HP	08/01/12
41	Gas Gen Rate		[redacted]										CK/HP	08/01/12
42	Hydrogen/Methane Gen Rate		[redacted]	#VALUE!	<<Gas Gen Rate Calculated.		Avagdro's Number:	6.022142E+23	NIST					
43	Gas Gen Comp Date		[redacted]				Electron Charge	1.602176E-19	V NIST					
44	Gross Weight	kg	54.100		Waste (kg)	Packaging (kg)	Total (kg)							
45	Gross Weight Uncert	1sigma kg	0.5		[redacted]	45.30	56.43							
46	Alpha Surf Cont	dpm/100 cm^2	[redacted]		max. reported	mda							CK/HP	08/01/12
47	Beta/Gamma Surf Cont	dpm/100 cm^2	[redacted]		0		Minimum Detectable Activity						CK/HP	08/01/12
48	Neutron Dose Rate	mrem/hr	[redacted]		0		Minimum Detectable Activity						CK/HP	08/01/12
49	Beta/Gamma Dose Rate	mrem/hr	[redacted]		1		Minimum Detectable Activity						CK/HP	08/01/12
50	Radionuclide		U-233	U-234	U-235	U-238	Minimum Detectable Activity						CK/HP	08/01/12
51	Activity	Ci	5.86E-05	7.50E-05	7.46E-06	9.68E-07	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Am-241	CK/HP	08/01/12
52	Activity Uncert	1sigma Ci	8.30E-07	6.16E-07	4.70E-08	7.41E-09	8.87E-03	2.33E-02	9.22E-03	1.57E-01	3.71E-06	2.78E-02	CK/HP	08/01/12
53	Mass	grams	6.00E-03	1.19E-02	3.41E+00	2.85E+00	1.17E-04	1.98E-04	8.30E-05	1.49E-03	2.98E-08	2.70E-04	CK/HP	08/01/12
54	Mass Uncert	1sigma grams	8.50E-05	9.75E-05	2.15E-02	2.18E-02	5.13E-04	3.70E-01	4.01E-02	1.51E-03	9.35E-04	8.01E-03		
55	calc Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.76E-06	3.15E-03	3.61E-04	1.43E-05	7.51E-06	7.78E-05		
56	calc Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.87E-03	2.33E-02	9.22E-03	0.00E+00	3.71E-06	2.78E-02		
57	calc Act	Ci	5.86E-05	7.50E-05	7.46E-06	0.00E+00	9.72E+02	2.55E+03	1.01E+03	0.00E+00	4.06E-01	3.04E+03		
58	calc Act Conc	nCi/g	6.42E+00	8.21E+00	8.17E-01	9.68E-07	8.87E-03	2.33E-02	9.22E-03	1.57E-01	3.71E-06	2.78E-02		
						1.06E-01	9.72E+02	2.55E+03	1.01E+03	1.72E+04	4.06E-01	3.04E+03		

Shipping Calcs
Total TBq 1.24E-01
Fraction 4.61E-03
Highway Route Control? No

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
59	Shipping Calcs	g	5.40E-03	0.00E+00	2.19E+00	0.00E+00	5.79E-05	3.70E-01	9.02E-04	3.40E-03	7.01E-06	1.50E-04		
60	calc Pu239 Eq Act	Ci	1.50E-05	0.00E+00	0.00E+00	0.00E+00	8.06E-03	2.33E-02	9.22E-03	3.08E-03	3.37E-06	2.78E-02		
61	calc Decay Heat	watts	1.71E-06	2.16E-06	2.06E-07	2.45E-08	2.94E-04	7.22E-04	2.87E-04	5.00E-06	1.09E-07	9.29E-04		
62	uncert Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-04	1.98E-04	8.30E-05	0.00E+00	2.98E-08	2.70E-04		
63	uncert Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E+01	2.17E+01	9.09E+00	0.00E+00	3.26E-03	2.96E+01		
64	uncert Act	Ci	8.30E-07	6.16E-07	4.70E-08	7.41E-09	1.17E-04	1.98E-04	8.30E-05	1.49E-03	2.98E-08	2.70E-04		
65	uncert Act Conc	nCi/g	9.09E-02	6.75E-02	5.15E-03	8.12E-04	1.28E+01	2.17E+01	9.09E+00	1.63E+02	3.26E-03	2.96E+01		
66	uncert Pu239 FGE	g	7.65E-05	0.00E+00	1.38E-02	0.00E+00	7.64E-07	3.15E-03	8.12E-06	3.22E-05	5.63E-08	1.46E-06		
67	uncert Pu239 Eq Act	Ci	2.13E-07	0.00E+00	0.00E+00	0.00E+00	1.06E-04	1.98E-04	8.30E-05	2.92E-05	2.71E-08	2.70E-04		
68	uncert Decay Heat	watts	2.42E-08	1.77E-08	1.30E-09	1.88E-10	3.88E-06	6.14E-06	2.58E-06	4.74E-08	8.78E-10	9.03E-06		
69	Shipping Calcs	1.38E+01	2.17E-03	2.78E-03	0.00E+00	0.00E+00	1.64E+00	4.31E+00	1.70E+00	5.81E-01	6.86E-04	5.14E+00		
70	49CFR173.433f		0.02%	0.02%	0.00%	0.00%	11.84%	31.11%	12.31%	4.20%	0.00%	37.12%		
71	Radionuclide		Cs-137	Ba-137m	Sr-90	Y-90								
72	Activity	Ci	8.57E-01	8.11E-01	7.25E-01	7.25E-01							CK/HP	08/01/12
73	Activity Uncert	1sigma Ci	3.41E-03	3.23E-03	4.94E-03	4.94E-03							CK/HP	08/01/12
74	Mass	grams	9.74E-03	1.51E-09	5.25E-03	1.33E-06	NULL	NULL	NULL	NULL	NULL	NULL	CK/HP	08/01/12
75	Mass Uncert	1sigma grams	3.88E-05	6.00E-12	3.58E-05	9.08E-09	NULL	NULL	NULL	NULL	NULL	NULL		
76	calc Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
77	calc Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
78	calc Act	Ci	8.57E-01	8.11E-01	7.25E-01	7.25E-01	NULL	NULL	NULL	NULL	NULL	NULL		
79	calc Act Conc	nCi/g	9.39E+04	8.88E+04	7.94E+04	7.94E+04	NULL	NULL	NULL	NULL	NULL	NULL		
80	calc Pu239 FGE	g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
81	calc Pu239 Eq Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
82	calc Decay Heat	watts	9.49E-04	3.20E-03	8.41E-04	4.01E-03	NULL	NULL	NULL	NULL	NULL	NULL		
83	uncert Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
84	uncert Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
85	uncert Act	Ci	3.41E-03	3.23E-03	4.94E-03	4.94E-03	NULL	NULL	NULL	NULL	NULL	NULL		
86	uncert Act Conc	nCi/g	3.73E+02	3.54E+02	5.41E+02	5.41E+02	NULL	NULL	NULL	NULL	NULL	NULL		
87	uncert Pu239 FGE	g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
88	uncert Pu239 Eq Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
89	uncert Decay Heat	watts	3.77E-06	1.27E-05	5.73E-06	2.73E-05	NULL	NULL	NULL	NULL	NULL	NULL		
90	Shipping Calcs		6.35E-02	0.00E+00	2.69E-01	1.34E-01	NULL	NULL	NULL	NULL	NULL	NULL		
91	49CFR173.433f		0.46%	0.00%	1.94%	0.97%	NULL	NULL	NULL	NULL	NULL	NULL		
92	Waste Material Parameter		PW											
93	Wgt of Mat Parms (kg or lbs)	kg	9.13										CK/HP	08/01/12
94	Radio Assay Method		[illegible]										CK/HP	08/01/12
95	Data Package Number		[illegible]										CK/HP	08/01/12
96	Assay Date		[illegible]										CK/HP	08/01/12
97	Charz Method ID		[illegible]										CK/HP	08/01/12
98	Data Package Number		[illegible]										CK/HP	08/01/12
99	Charz Method Date		[illegible]										CK/HP	08/01/12
100	Haz Codes		D004	D005	D006	D007	D008	D009	D010	D011	D018	D019	CK/HP	08/01/12
101	Haz Codes		D022	D038	F002	F005							CK/HP	08/01/12
102	Haz Codes												CK/HP	08/01/12
103	Haz Codes													
104	Sample ID	Headspace Gas H/M	[illegible]											
105	Sample Type		[illegible]	HGHM									CK/HP	08/01/12
106	Layer No. Sampled		[illegible]	[illegible]									CK/HP	08/01/12
107	Date Sampled		[illegible]										CK/HP	08/01/12
108	Method ID		[illegible]	DTP-1.2-041									CK/HP	08/01/12
109	Data Package Number		[illegible]										CK/HP	08/01/12
110	CAS #		[illegible]										CK/HP	08/01/12
111	Analyte		[illegible]											
112	Concentration		[illegible]										CK/HP	08/01/12
113	units	%vol	[illegible]										CK/HP	08/01/12
114	Date Analyzed		[illegible]	[illegible]									CK/HP	08/01/12
115	B Detectable Flag		[illegible]										CK/HP	08/01/12
116	D Detectable Flag		[illegible]											
117	E Detectable Flag		[illegible]											
118	J Detectable Flag		[illegible]											
119	U Detectable Flag		[illegible]											
120	NA Detectable Flag		[illegible]	[illegible]									CK/HP	08/01/12
121														
122	Sample ID	Headspace Gas VOC	[illegible]											
123	Sample Type		[illegible]	HGVO									CK/HP	08/01/12
124	Layer No. Sampled		[illegible]										CK/HP	08/01/12
125	Date Sampled		[illegible]										CK/HP	08/01/12

kg
lbs 0.4536
kg 1.0000

Sample Site

SARP-Flammable VOCs (ppmv) 0

RH WDS Master Template.xls Rev. 4
Addendum #4, SCO #1066
Excel 2003/2007 Microsoft Windows XP

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
126	Method ID			DTP-1.2-041									CK/HP	08/01/12
127	Data Package Number												CK/HP	08/01/12
128	Methanol Method ID													
129	CAS #												CK/HP	08/01/12
130	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
131	Concentration												CK/HP	08/01/12
132	units	ppmv											CK/HP	08/01/12
133	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			CK/HP	08/01/12
134	B Detectable Flag													
135	D Detectable Flag													
136	E Detectable Flag													
137	J Detectable Flag													
138	U Detectable Flag												CK/HP	08/01/12
139	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
140	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
141	CAS #												CK/HP	08/01/12
142	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
143	Concentration												CK/HP	08/01/12
144	units	ppmv											CK/HP	08/01/12
145	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			CK/HP	08/01/12
146	B Detectable Flag													
147	D Detectable Flag													
148	E Detectable Flag													
149	J Detectable Flag													
150	U Detectable Flag												CK/HP	08/01/12
151	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
152	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
153	CAS #												CK/HP	08/01/12
154	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
155	Concentration												CK/HP	08/01/12
156	units	ppmv											CK/HP	08/01/12
157	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			CK/HP	08/01/12
158	B Detectable Flag													
159	D Detectable Flag													
160	E Detectable Flag													
161	J Detectable Flag													
162	U Detectable Flag												CK/HP	08/01/12
163	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
164	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
165	CAS #												CK/HP	08/01/12
166	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
167	Concentration												CK/HP	08/01/12
168	units	ppmv											CK/HP	08/01/12
169	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			CK/HP	08/01/12
170	B Detectable Flag													
171	D Detectable Flag													
172	E Detectable Flag													
173	J Detectable Flag													
174	U Detectable Flag												CK/HP	08/01/12
175	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
176	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
177	CAS #													
178	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
179	Concentration													
180	units	ppmv												
181	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
182	B Detectable Flag													
183	D Detectable Flag													
184	E Detectable Flag													
185	J Detectable Flag													
186	U Detectable Flag													
187	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N
188	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
189			type	comment										
190	Comment													
191	Comment													
192	Comment													
193	Comment													
194	Comment													
195	Comment													
196	Comment													
197	Comment													
198	Comment													
199	Comment													
200														
201														
202	Free liquids <1% by volume		YES											
203	No non-rad. pyrophorics		YES											
204	Chemical compatability		YES											
205	No explosives		YES											
206	No corrosives		YES											
207	No pressurized containers		YES											
208	No sealed Containers >4 liters		YES											
209	Liner punctured/ filtered		YES											
210	Flammable VOCs <500ppmv		YES											
211	Container is in Approved Waste Stream Profile Form?	ID-HFEF-S5400-RH	YET											
212	Can it be established through Process Knowledge that the concentration of flammable VOCs present in the headspace of the container is <= 500 ppm?.		YET											
213														
214														
215														
216														
217														
218														
219														
220														
221														
222														
223														
224														
225														
226														
227														
228														
229														
230														
231														
232														
233														
234														
235														
236														

Requirements Met?

Creta Knowles
CCP Certification Official

8-8-2012
Date

Lot #

RH WDS Master Template.xls Rev. 4
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Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12001
Examination Date:	01/25/12
Waste Container ID:	IDAWANL810002C
Audio/Video Media Number:	Primary: INLRHRTR12001 A Backup: INLRHRTR12001 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5400
Waste Stream Number:	ID-HFEF-S5400-RH
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	1 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	75, N/A, N/A

gl
2-2-12
10 H

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: IDAWANL810002C

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 30 Gallon drum, metal tube, scrap metal (OI) Absorbent (XPW) Scrap plastic

2-2-12

This spreadsheet calculates the radionuclide mass and activity content of a 55-gal drum based on the measured 1-meter dose rate and the drum weight. The bold cells are the required input for the DTC calculations.

Waste Container Dose-to-Curie Conversion Record

ID-HFEF-S5400-RH DTC Spreadsheet Rev. 3 SCO 1071 Addendum 3 Microsoft Excel 2003 and 2007; Microsoft Windows XP Professional Versions 2002 and 2003

Operating Procedure	CCP-TP-504	Revision: [redacted]
CCP Characterization Date	[redacted]	
Waste Stream Designation	ID-HFEF-S5400-RH	
Container Number	[redacted]	
Parent Canister/Cask # & Lot #	[redacted]	Lot 1A
Repackaging Configuration	No 90-mil rigid liner	
Container Gross Weight	[redacted]	kg
Estimate Fill Percentages	[redacted]	%
Container Net Weight	9.13	kg
Background Dose Rate	[redacted]	mR/hr
Measured Container Dose Rate		
Quadrant #1	[redacted]	mR/hr
Quadrant #2	[redacted]	mR/hr
Quadrant #3	[redacted]	mR/hr
Quadrant #4	[redacted]	mR/hr
Calculated Average Dose Rate	169.75	mR/hr
Avgerage Net Dose Rate	169.735	mR/hr

Nuclide	Curie Scaling Factors	Activity (Ci)	Grams	FGE	PECI	Watts	Percent Uncertainty	Uncertainty in Curies	Uncertainty in Grams
U-233	6.83E-05	5.86E-05	6.00E-03	5.40E-03	1.50E-05	1.70E-06	141.7%	8.30E-07	8.50E-05
U-234	8.75E-05	7.50E-05	1.19E-02	0.00E+00	0.00E+00	2.16E-06	82.2%	6.16E-07	9.75E-05
U-235	8.70E-06	7.46E-06	3.40E+00	2.19E+00	0.00E+00	2.06E-07	63.1%	4.70E-08	2.15E-02
U-238	1.13E-06	9.68E-07	2.85E+00	0.00E+00	0.00E+00	2.46E-08	76.5%	7.41E-09	2.18E-02
Pu-238	1.03E-02	8.87E-03	5.13E-04	5.79E-05	8.06E-03	2.94E-04	132.1%	1.17E-04	6.77E-06
Pu-239	2.72E-02	2.33E-02	3.71E-01	3.71E-01	2.33E-02	7.23E-04	84.8%	1.98E-04	3.14E-03
Pu-240	1.08E-02	9.22E-03	4.01E-02	9.02E-04	9.22E-03	2.87E-04	90.1%	8.30E-05	3.61E-04
Pu-241	1.84E-01	1.57E-01	1.51E-03	3.41E-03	3.09E-03	5.01E-06	94.4%	1.49E-03	1.43E-05
Pu-242	4.33E-06	3.71E-06	9.35E-04	7.01E-06	3.37E-06	1.09E-07	80.4%	2.98E-06	7.52E-06
Am-241	3.24E-02	2.78E-02	8.01E-03	1.50E-04	2.78E-02	9.28E-04	97.1%	2.70E-04	7.78E-05
Cs-137	1.00E+00	8.57E-01	9.74E-03	0.00E+00	0.00E+00	9.49E-04	39.8%	3.41E-03	3.88E-05
Ba-137m	9.46E-01	8.11E-01	1.51E-09	0.00E+00	0.00E+00	3.20E-03	39.8%	3.23E-03	6.00E-12
Sr-90	8.45E-01	7.25E-01	5.25E-03	0.00E+00	0.00E+00	8.40E-04	68.2%	4.94E-03	3.58E-05
Y-90	8.45E-01	7.25E-01	1.33E-06	0.00E+00	0.00E+00	4.01E-03	68.2%	4.94E-03	9.09E-09
Totals		3.34E+00	6.71E+00	2.57E+00	7.15E-02	1.12E-02			

	Value	Uncert. 1σ	Units
TRU Alpha Activity Concentration:	7.58E+03	3.61E+03	nCi/g
TRU Alpha Activity:	6.92E-02	3.29E-02	Ci
Total Pu-239 Equivalent Activity:	7.15E-02	3.34E-02	Ci
Total Pu-239 Fissile Gram Equiv.:	2.57E+00	1.75E+00	g
Total Decay Heat:	1.12E-02	1.73E-03	W
Volume Activity:	1.61E-02	8.63E-03	Ci/L

Originator: David Pinnock (Print Name):

Signed: [signature] Date: 4-4-12

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RADIOLOGICAL SURVEY REPORT

To be used with MCP-90, MCP-93, MCP-124, MCP-138, MCP-139, MCP-187, MCP-199 and MCP-425

441.45
12/04/2007
Rev. 05

BLDG.: CPP 659
AREA/ROOM: 302/306
RWP #: 31010663 01
LOG #: 116
DATE: 1-25-2012
TIME: 1030

☐ ROUTINE **JOB DESCRIPTION**
☒ NON ROUTINE (SPECIFY) ☐ FOLLOW UP
COMMENTS: RH-TRU gamma/neutron radiation survey. Gamma and neutron contact dose rates are calculated using EDF-9763 (Lot 1B & 4A) conversion factors from the 1 meter dose rate.

RCT: _____ PRINT/SIGNATURE

REVIEWED BY: A. Sargis / Anna Sargis PRINT/SIGNATURE

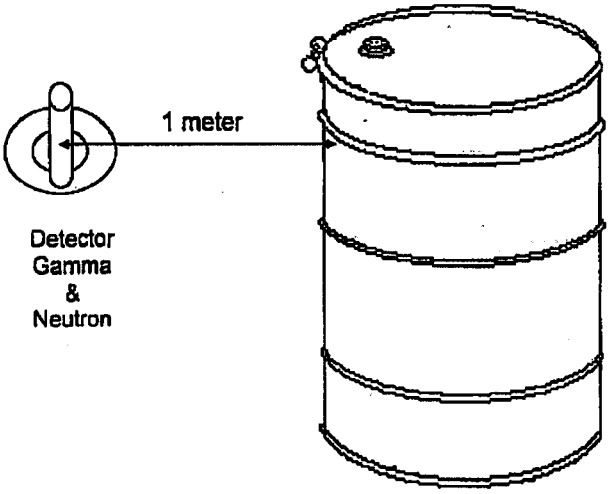
Drum # IDAWANL810002C

ORIGINAL - RED
COPY - BLACK

30 Gal-Drum I/S 55 Gal Drum

Gamma/Thermo FH40G Ion Chamber: 18.0

Neutron/REM Detector: 10.5



Per EDF-9763 (Lot 1B & 4A) Conversion Factors used to calculate contact values are: 1 meter reading multiplied by the appropriate variable above.

Gamma Conversion Factor: 18.0

Neutron Conversion Factor: 10.5

Location of Drum	Dose Rate in mr/hr at 1 Meter	Dose Rate in mr/hr at Contact	Location of Drum	Dose Rate in mr/hr at 1 Meter	Dose Rate in* mr/hr at Contact
0 degrees	167	3006.0	0 degrees	<1	<1
90 degrees	167	3006.0	90 degrees	<1	<1
180 degrees	174	3132.0	180 degrees	<1	<1
270 degrees	171	3078.0	270 degrees	<1	<1

*Note: If neutron reading is <1.0 mr / hr at 1 m, then no calculation to contact was made.
*Note: Based off package configuration (30 gal drum inside a 55 gal drum) - no contact β survey was performed.

RADIOLOGICAL SURVEY REPORT

To be used with MCP-90, MCP-93, MCP-124, MCP-138, MCP-139, MCP-187, MCP-199 and MCP-425

441.45
12/04/2007
Rev. 05

SURVEY DATA AND LEGEND

ALL SWIPE, LARGE AREA WIPE (LAW), AND DIRECT SCAN SURVEY LOCATIONS ARE IDENTIFIED ON THE MAP. THOSE LOCATIONS WHERE ACTIVITY IS GREATER THAN OR EQUAL TO THE SPECIFIC LIMITS LISTED BELOW ARE RECORDED.

INSTRUMENTS		
Type	Serial #	MDA/Efficiency (dpm/100cm²)/eff(%)
FH-40G Inst.	020558	NA
FHZ612 Probe	XCO674	NA
E600-NRD	801852	

SWIPE No.	LAW No.	DIRECT SCAN No.	LOCATION OR ITEM DESCRIPTION	SWIPE/SCAN (dpm/100cm²)		LAW (dpm)	
				βγ	α	βγ	α
			Specify limits used for this survey, if applicable.	NA	NA		
			See map				

CA HCA	Contamination Area High Contamination Area	-x—x-	Radiological Barrier	□ =	Direct Scan
RA HRA	Radiation Area High Radiation Area	ALL dose rates are in mrem/hr, unless otherwise noted. Smear Count time is for 1 minute unless otherwise noted.		○ =	Swipe (Smear)
VHRA RMA	Very High Radiation Area Radioactive Material Area	# #@#(cm)	General Area Dose Rate Dose Rate at Distance From Source	L =	Large Area Wipe (LAW)
ARA RBA	Airborne Radioactivity Area Radiological Buffer Area	*# #β / #γ	Contact Dose Rate Beta Corrected (non-penetrating radiation) / Gamma Dose Rates	△ =	Air Sample
FCA SCA	Fixed Contamination Area Soil Contamination Area	α β	Alpha Beta	⌂ =	Tritium Swipe
URMA SOP	Underground Radioactive Material Area Step-Off Pad	γ n	Gamma Neutron		

RH TRU CONTAINER REPACKAGING DATASHEET

3b. Drum #: IDAWANL810002B B (from TRU Programs)

30 gal drum:

30 gal. drum filter model #: NUCFIL 0190S

55 gal drum: 3/23/11

55 gal filter model #: NUCFIL-0195DS filter serial number: GK-154

30 gal. drum bag breached Initial: NA Date: NA

55 gal. drum lid locking ring installed: Date: 3/23/11 Time: 10:11

Placed in position 1 into TRU-ISC 0145

Operator: _____ _____ _____
Print Name Signature Date

Operations Management has reviewed the data for the container in this section and the information is correct and complete.

Operations Management Signature: K S h K S h 3/23/11
Print Name Signature Date

3C. Drum #: IDAWANL810002C B (from TRU Programs)

30 gal drum: ~~45 Gal drum~~ 3/23/11

30 gal. drum filter model #: NUCFIL-0190S

55 gal drum: NUCFIL-0195DS

55 gal filter model #: _____ filter serial number: GK-154

30 gal. drum bag breached Initial: NA Date: NA

55 gal. drum lid locking ring installed: Date: 3/23/11 Time: 10:11

Placed in position 1 into TRU-ISC 0145

Operator: James Biscroft _____ 3/23/11
Print Name Signature Date

Operations Management has reviewed the data for the container in this section and the information is correct and complete.

Operations Management Signature: Kurt Smith _____ 3/23/11
Print Name Signature Date

This work was started under REV 6 and completed under REV 7
This drum contains a HFEE inner container it is empty
~~5 lbs~~ 3/23/11

3/23/11 KS

DIVIDER

PAGE

WDS
WASTE DATA SYSTEM

Waste Isolation Pilot Plant
Container Data Report

Report Statistics

Report Version:	**2.2**
WDS Instance:	**prd05.wipp.carlsbad.nm.us**
Generated on:	**May 30, 2013 02:06 PM**
Generated by:	**KIRKES, CRETA**
Total Pages:	**7**

Selection Criteria

Container Number: **IDAWANL850013C**

Container: IDAWANL850013C
Type: 39 - RH 55 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/08/2012
Waste Handling Code: RH
Disposal Date: 09/13/2012

Current Location Site: WI
Generator Site: AE
Destination Site ID: WI

Certification Program ID: C9
Shipping Program ID: C9

Neutron Dose Rate (mrem/hr): 1.0
Beta Gamma Dose Rate (mrem/hr): 5184.0
Total Dose Rate (mrem/hr): 5185.0

FGE (g): 3.75E00
FGE Uncertainty (g): 2.55E00

Gross Weight (kg): 55.20
Gross Weight Uncert (kg): 0.50

Decay Heat (W): 1.64E-02
Decay Heat Uncertainty (W): 2.53E-03

Overpack Container: ID0299
Overpack Type: REMOVABLE-LID 72-B CANISTER
Overpack Status: CERTIFICATION DATA APPROVED

Shipment Data

Payload ID: **ID0299** Assembly ID: IN118172 Payload Complete? Y
Shipment Number: INR12021 Send Date: 09/05/2012 Receipt Date: 09/06/2012
Shipment Status: SHIPMENT RECEIVED AT DESTINATION

Emplacement Location

Panel: 6 Room: 2 Borehole: 017

Certification Data Values

Waste Stream Profile Code: ID-HFEF-S5400-RH
Waste Type Code: MTRU
IDC Code: NONE
Waste Matrix Code: S5400
WAC Revision Number: 7.2
Fill Factor (%): 75.00
Waste Stream BIR ID: NONE
Waste Stream MWIR ID: IN-ID-INL-152

TRU Alpha Activity (Ci): 1.01E-01
TRU Alpha Activity Uncertainty (Ci): 4.81E-02
TRU Alpha Activity Concentration (Ci/g): 1.02E-05
PU-239 Equivalent Activity (PE-Ci): 1.04E-01
Alpha Surface Contamination (dpm/cm^2): 0.0
Beta/Gamma Surface Contamination (dpm/cm^2): 0.0

Transportation Data Values

Closure Date: 03/23/2011
Vent Date: 03/23/2011
Process Knowledge? Y
Waste Gen Date:
Content Code: ID321H
U-235 FEM (g):
U-235 FEM Uncert (g):
Be chemically/ mechanically bound: N

Shipment Purpose: DISPOSAL
Machine Compacted? N
Liner Exists? N
Liner Hole Size(mm):
Liner Lid Present?
Layers of Packaging 1
Aqueous Material? N

Gas Generation Data Values

Measured FGGR (mol/s)	Measured TGRR (mol/s)	Truncated FGGR Test (Y/N)	Truncated FGGR Test Period (days)

Container: IDAWANL850013C
Type: 39 - RH 55 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/08/2012
Waste Handling Code: RH
Disposal Date: 09/13/2012

PCB Waste?	N
PCB Mass (kg):	
PCB Concentration (ppm):	
PCB Out of Service Date:	
Be Present?	Y
Be <= 1% by weight?	Y
Be mass <= 100kg?	Y
Separation OK?	Y
Packing Fraction (compaction level):	non-compacted

Filters

Filter Model Number	Filter Diffusivity (mol/s/ml)	Quantity	Install Date
NF019D	1.85E-05	1	03/23/2011

Certification Comments

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
AM-241	4.060E-02	3.940E-04	1.170E-02	1.135E-04
BA-137M	1.180E00	4.710E-03	2.193E-09	8.755E-12
CS-137	1.250E00	4.980E-03	1.420E-02	5.659E-05
PU-238	1.290E-02	1.710E-04	7.457E-04	9.884E-06
PU-239	3.400E-02	2.880E-04	5.405E-01	4.579E-03
PU-240	1.350E-02	1.210E-04	5.870E-02	5.261E-04
PU-241	2.300E-01	2.170E-03	2.212E-03	2.087E-05
PU-242	5.410E-06	4.350E-08	1.363E-03	1.096E-05
SR-90	1.060E00	7.210E-03	7.681E-03	5.225E-05
U-233	8.550E-05	1.210E-06	8.760E-03	1.240E-04
U-234	1.090E-04	8.990E-07	1.725E-02	1.422E-04
U-235	1.090E-05	6.860E-08	4.977E00	3.132E-02

Container: IDAWANL850013C
Type: 39 - RH 55 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/08/2012
Waste Handling Code: RH
Disposal Date: 09/13/2012

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
U-238	1.410E-06	1.080E-08	4.147E00	3.176E-02
Y-90	1.060E00	7.210E-03	1.949E-06	1.325E-08

Material Parameters

Material Parameter	Description	Weight (kg)
8	PLASTICS	9.93
13	STEEL CONTAINER MATERIALS	45.30

Waste Weight:	9.93
Packaging Weight:	45.30
Total Material Weight:	55.23

Hazardous Codes

Hazardous Code	Description
D004	ARSENIC
D005	BARIUM
D006	CADMIUM
D007	CHROMIUM
D008	LEAD
D009	MERCURY
D010	SELENIUM
D011	SILVER
D018	BENZENE

Container: IDAWANL850013C
Type: 39 - RH 55 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/08/2012
Waste Handling Code: RH
Disposal Date: 09/13/2012

Hazardous Codes

Hazardous Code	Description
D019	CARBON TETRACHLORIDE
D022	CHLOROFORM
D038	PYRIDINE
F002	SPENT HALOGENATED SOLVENTS
F005	SPENT NON-HALOGENATED SOLVENTS

Assay Methods

Labor Code	Assay Method	Description	Assay Date
C9	14DTC1	DOSE-TO-CURIE	01/25/2012

Non-Destructive Examination (NDE)

Labor Code	NDE Method	Description	Examination Date
C9	14RRH1	REAL-TIME RADIOGRAPHY SYSTEM (RTR-RTR-0659)	01/25/2012

Edit Limit Check Results

Evaluation Date: 08/08/2012 17:32:58 Overall Status: PASS

Evaluation Code	Status	Return Code	Detailed Description
DI_CERT_ALL	PASS		
DI_CERT_BE	PASS		
DI_CERT_CERT	PASS		
DI_CERT_CHARZ	PASS		
DI_CERT_ED	PASS		
DI_CERT_EPA	PASS		

Container: IDAWANL850013C
Type: 39 - RH 55 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/08/2012
Waste Handling Code: RH
Disposal Date: 09/13/2012

Edit Limit Check Results

Evaluation Date: 08/08/2012 17:32:58 Overall Status: PASS

Evaluation Code	Status
DI_CERT_PCB	PASS
DI_CERT_PERC	PASS
DI_CERT_TRAMPAC	PASS
DSA	PASS
WAC	PASS
WAP_CERT	PASS

TRAMPAC Evaluation Results

Evaluation Date: Overall Status:

Evaluation Code	Status	Return Code	Detailed Description

History

Event Date/Time	Event Description	Reason
08/08/2012 17:32:58	INSERT DATA INTO THE DATABASE	
08/08/2012 17:32:58	SUCCESSFUL SUBMISSION FOR CERT	
08/08/2012 17:37:56	ASSIGNED TO OVERPACK	
08/08/2012 17:40:03	ASSIGNED TO OVERPACK	
08/08/2012 17:40:17	ASSIGNED TO OVERPACK	
08/09/2012 06:52:43	APPROVED FOR CERT	
08/14/2012 15:49:53	ASSIGNED TO OVERPACK	

Container: IDAWANL850013C
Type: 39 - RH 55 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/08/2012
Waste Handling Code: RH
Disposal Date: 09/13/2012

History

Event Date/Time	Event Description	Reason
08/14/2012 15:50:03	ASSIGNED TO OVERPACK	

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	RH WDS Master Template.xls Rev. 4 Addendum #4, SCO #1066 Excel 2003/2007 Microsoft Windows XP	Units	data										initial	date
2	Shipper Site ID			Location ID	Dest Program ID	Shipping Purpose	comments							
3	Waste Stream Profile	ID-	[illegible]									IDAWANL850013C	CK/HP	08/01/12
4	Container Number		IDAWANL850013C										CK/HP	08/01/12
5	Container Type		RH-drum-55 (tp)	drum, swb, tdop, etc., see WWIS labels for valid types.									CK/HP	08/01/12
6	WAC Rev #		2.0										CK/HP	08/01/12
7	WAC Ex. #		8/8/2012						U-235 FEM	U-235 FEM Uncert	FGGR Flag	FGGR Test Period	CK/HP	08/01/12
8	Cert Site		63						NULL	NULL	NULL	NULL	CK/HP	08/01/12
9	Cert Date						Be <=100 kg	Be <= 1%	Be Present	Aqueous Material	Be Chem/Mech Boun	Compacted Wst		
10	Waste Handling Code						Y	Y	Y	N	NULL	N	CK/HP	08/01/12
11	Waste Type Code		RH	CH, RH										
12	Waste Stream BIR ID		MTRU	TRU, MTRU									CK/HP	08/01/12
13	Waste Stream MWIR ID		NONE										CK/HP	08/01/12
14	Generator Site ID		INEL.INL.152				p(CI):	choose	1sigma	2sigma	95%CI		CK/HP	08/01/12
15	IDC Code		AE	default to 0 for TRU			0.6827	1sigma	1.0000	0.5000	0.5102		CK/HP	08/01/12
16	Matrix Code		NONE				0.9545	2sigma	2.0000	1.0000	1.0204		CK/HP	08/01/12
17	Trucon Code		55400				0.9500	95%CI	1.9600	0.9800	1.0000		CK/HP	08/01/12
18	Shipping Category		ID82PU										CK/HP	08/01/12
19	Tru Alpha Act	CI	1.01E-01					WWIS Req'd CI:	1sigma	1.0000	0.5000	0.5102	CK/HP	08/01/12
20	Tru Alpha Act Uncert	1sigma CI	4.81E-02	1.010E-01				Fraction of MDL Reported on HGAS		1.0000				
21	Tru Alpha Act Conc	nCi/g	1.02E+04	1.972E-01	Tru Alpha Act + 2sigma (Ci)								CK/HP	08/01/12
22	Tru Alpha Act Conc Uncert	1sigma nCi/g	4.86E+03	1.02E+04									CK/HP	08/01/12
23	Pu239 Fiss Gm Eq	g	3.75E+00	1.988E+04	Tru Alpha Act Conc + 2sigma (Ci)								CK/HP	08/01/12
24	Pu239 Fiss Gm Eq Uncert	1sigma g	2.55E+00	3.755E+00									CK/HP	08/01/12
25	Pu239 Eq Act	CI	8.85E+00	8.850E+00	Pu239 Fiss Gm Eq + 2sigma (Ci)								CK/HP	08/01/12
26	Decay Heat	watts	1.04E-01	1.044E-01									CK/HP	08/01/12
27	Decay Heat Uncert	1sigma watts	2.53E-03	1.640E-02									CK/HP	08/01/12
28	Layers of Packaging		1	1.89E-02	Decay Heat + 1sigma (watts)								CK/HP	08/01/12
29	Fill Factor		75										CK/HP	08/01/12
30	Liner Type													
31	Liner Punctured			percentage	Liner Lid Present								CK/HP	08/01/12
32	PCB Conc			1 = plastic drum liner									CK/HP	08/01/12
33	Closure Date		3/23/2001		Liner Hole Size	(mm)							CK/HP	08/01/12
34	Vent Date		6/28/2011				PCB Waste	PCB Mass (kg)	Out of Service				CK/HP	08/01/12
35	Filter Install Date			Watt-years	Waste Gen Date		N						CK/HP	08/01/12
36	Filter Manufacturer			0.622									CK/HP	08/01/12
37	Filter Serial Number(s)		NEI										CK/HP	08/01/12
38	Filter Model Number	NF012,NF013,NF020,NF9026	NF019D										CK/HP	08/01/12
39	Number of Filters Installed		1										CK/HP	08/01/12
40	Aspiration Method ID												CK/HP	08/01/12
41	Gas Gen Rate												CK/HP	08/01/12
42	Hydrogen/Methane Gen Rate			#VALUE!	<<Gas Gen Rate Calculated.		Avagdro's Number:	6.022142E+23	NIST				CK/HP	08/01/12
43	Gas Gen Comp Date						Electron Charge	1.602176E-19	V NIST					
44	Gross Weight	kg	55.20		Waste (kg)	Packaging (kg)	Total (kg)							
45	Gross Weight Uncert	1sigma kg	0.5		9.9	45.30	55.23							
46	Alpha Surf Cont	dpm/100 cm^2			max. reported	mda							CK/HP	08/01/12
47	Beta/Gamma Surf Cont	dpm/100 cm^2			0		Minimum Detectable Activity						CK/HP	08/01/12
48	Neutron Dose Rate	mrem/hr			0		Minimum Detectable Activity						CK/HP	08/01/12
49	Beta/Gamma Dose Rate	mrem/hr			1		Minimum Detectable Activity						CK/HP	08/01/12
50	Radionuclide				5184		Minimum Detectable Activity						CK/HP	08/01/12
51	Activity		U-233	U-234	U-235	U-238	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Am-241	CK/HP	08/01/12
52	Activity Uncert	Ci	8.55E-05	1.09E-04	1.09E-05	1.41E-06	1.29E-02	3.40E-02	1.35E-02	2.30E-01	5.41E-06	4.06E-02	CK/HP	08/01/12
53	Mass	1sigma Ci	1.21E-06	8.99E-07	6.86E-08	1.08E-08	1.71E-04	2.88E-04	1.21E-04	2.17E-03	4.35E-08	3.94E-04	CK/HP	08/01/12
54	Mass Uncert	grams	8.76E-03	1.72E-02	4.98E+00	4.15E+00	7.46E-04	5.41E-01	5.87E-02	2.21E-03	1.36E-03	1.17E-02		
55	calc Tru Alpha Act	1sigma grams	1.24E-04	1.42E-04	3.13E-02	3.18E-02	9.88E-06	4.58E-03	5.26E-04	2.09E-05	1.10E-05	1.14E-04		
56	calc Tru Alpha Act Conc	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-02	3.40E-02	1.35E-02	0.00E+00	5.41E-06	4.06E-02		
57	calc Act	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E+03	3.42E+03	1.36E+03	0.00E+00	5.45E-01	4.09E+03		
58	calc Act Conc	Ci	8.55E-05	1.09E-04	1.09E-05	1.41E-06	1.29E-02	3.40E-02	1.35E-02	2.30E-01	5.41E-06	4.06E-02		
		nCi/g	8.61E+00	1.10E+01	1.10E+00	1.42E-01	1.30E+03	3.42E+03	1.36E+03	2.32E+04	5.45E-01	4.09E+03		

Shipping Calcs
Total TBq 1.81E-01
Fraction 6.74E-03
Highway Route Control? No

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
59	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
60	calc Pu239 Eq Act	Ci	2.19E-05	0.00E+00	0.00E+00	0.00E+00	1.17E-02	3.40E-02	1.35E-02	4.51E-03	4.92E-06	4.06E-02		
61	calc Decay Heat	watts	2.49E-06	3.14E-06	3.01E-07	3.57E-08	4.27E-04	1.05E-03	4.20E-04	7.32E-06	1.59E-07	1.36E-03		
62	uncert Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.71E-04	2.88E-04	1.21E-04	0.00E+00	4.35E-08	3.94E-04		
63	uncert Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.72E+01	2.90E+01	1.22E+01	0.00E+00	4.38E-03	3.97E+01		
64	uncert Act	Ci	1.21E-06	8.99E-07	6.86E-08	1.08E-08	1.71E-04	2.88E-04	1.21E-04	2.17E-03	4.35E-08	3.94E-04		
65	uncert Act Conc	nCi/g	1.22E-01	9.05E-02	6.91E-03	1.09E-03	1.72E+01	2.90E+01	1.22E+01	2.19E+02	4.38E-03	3.97E+01		
66	uncert Pu239 FGE	g	1.12E-04	0.00E+00	2.01E-02	0.00E+00	1.12E-06	4.58E-03	1.18E-05	4.69E-05	8.22E-08	2.12E-06		
67	uncert Pu239 Eq Act	Ci	3.10E-07	0.00E+00	0.00E+00	0.00E+00	1.55E-04	2.88E-04	1.21E-04	4.25E-05	3.95E-08	3.94E-04		
68	uncert Decay Heat	watts	3.52E-08	2.59E-08	1.89E-09	2.74E-10	5.66E-06	8.93E-06	3.77E-06	6.91E-08	1.28E-09	1.32E-05		
69	Shipping Calcs	2.02E+01	3.17E-03	4.04E-03	0.00E+00	0.00E+00	2.38E+00	6.28E+00	2.50E+00	8.52E-01	1.00E-03	7.50E+00		
70	49CFR173.433f		0.02%	0.02%	0.00%	0.00%	11.80%	31.10%	12.35%	4.21%	0.00%	37.13%		
71	Radionuclide		Cs-137	Ba-137m	Sr-90	Y-90								
72	Activity	Ci	1.25E+00	1.18E+00	1.06E+00	1.06E+00							CK/HP	08/01/12
73	Activity Uncert	1sigma Ci	4.98E-03	4.71E-03	7.21E-03	7.21E-03							CK/HP	08/01/12
74	Mass	grams	1.42E-02	2.19E-09	7.68E-03	1.95E-06	NULL	NULL	NULL	NULL	NULL	NULL	CK/HP	08/01/12
75	Mass Uncert	1sigma grams	5.66E-05	8.75E-12	5.22E-05	1.33E-08	NULL	NULL	NULL	NULL	NULL	NULL		
76	calc Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
77	calc Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
78	calc Act	Ci	1.25E+00	1.18E+00	1.06E+00	1.06E+00	NULL	NULL	NULL	NULL	NULL	NULL		
79	calc Act Conc	nCi/g	1.26E+05	1.19E+05	1.07E+05	1.07E+05	NULL	NULL	NULL	NULL	NULL	NULL		
80	calc Pu239 FGE	g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
81	calc Pu239 Eq Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
82	calc Decay Heat	watts	1.38E-03	4.65E-03	1.23E-03	5.87E-03	NULL	NULL	NULL	NULL	NULL	NULL		
83	uncert Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
84	uncert Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
85	uncert Act	Ci	4.98E-03	4.71E-03	7.21E-03	7.21E-03	NULL	NULL	NULL	NULL	NULL	NULL		
86	uncert Act Conc	nCi/g	5.02E+02	4.74E+02	7.26E+02	7.26E+02	NULL	NULL	NULL	NULL	NULL	NULL		
87	uncert Pu239 FGE	g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
88	uncert Pu239 Eq Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
89	uncert Decay Heat	watts	5.51E-06	1.86E-05	8.36E-06	3.99E-05	NULL	NULL	NULL	NULL	NULL	NULL		
90	Shipping Calcs		9.26E-02	0.00E+00	3.93E-01	1.96E-01	NULL	NULL	NULL	NULL	NULL	NULL		
91	49CFR173.433f		0.46%	0.00%	1.94%	0.97%	NULL	NULL	NULL	NULL	NULL	NULL		
92	Waste Material Parameter		PW											
93	Wgt of Mat Parms (kg or lbs)	kg	9.93											
94	Radio Assay Method		[illegible]										CK/HP	08/01/12
95	Data Package Number		[illegible]										CK/HP	08/01/12
96	Assay Date		[illegible]										CK/HP	08/01/12
97	Charz Method ID		[illegible]										CK/HP	08/01/12
98	Data Package Number		[illegible]										CK/HP	08/01/12
99	Charz Method Date		[illegible]										CK/HP	08/01/12
100	Haz Codes		D004	D005	D006	D007	D008	D009	D010	D011	D018	D019	CK/HP	08/01/12
101	Haz Codes		D022	D038	F002	F005							CK/HP	08/01/12
102	Haz Codes												CK/HP	08/01/12
103	Haz Codes													
104	Sample ID	Headspace Gas H/M	[illegible]											
105	Sample Type		[illegible]	HGHM										
106	Layer No. Sampled		[illegible]	[illegible]									CK/HP	08/01/12
107	Date Sampled		[illegible]	[illegible]									CK/HP	08/01/12
108	Method ID		[illegible]	DTP-1.2-041									CK/HP	08/01/12
109	Data Package Number		[illegible]										CK/HP	08/01/12
110	CAS #		[illegible]	[illegible]									CK/HP	08/01/12
111	Analyte		[illegible]	[illegible]									CK/HP	08/01/12
112	Concentration		[illegible]	[illegible]										
113	units	%vol	[illegible]	[illegible]									CK/HP	08/01/12
114	Date Analyzed		[illegible]	[illegible]									CK/HP	08/01/12
115	B Detectable Flag		[illegible]	[illegible]									CK/HP	08/01/12
116	D Detectable Flag		[illegible]	[illegible]									CK/HP	08/01/12
117	E Detectable Flag		[illegible]	[illegible]										
118	J Detectable Flag		[illegible]	[illegible]										
119	U Detectable Flag		[illegible]	[illegible]										
120	NA Detectable Flag		[illegible]	NA										
121													CK/HP	08/01/12
122	Sample ID	Headspace Gas VOC	[illegible]											
123	Sample Type		[illegible]	HGVO										
124	Layer No. Sampled		[illegible]										CK/HP	08/01/12
125	Date Sampled		[illegible]										CK/HP	08/01/12

kg
lbs 0.4536
kg 1.0000

Sample Site

SARP-Flammable VOCs (ppmv) 0

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N
126	Method ID			DTP-1,2-041									CK/HP	08/01/12
127	Data Package Number												CK/HP	08/01/12
128	Methanol Method ID													
129	CAS #												CK/HP	08/01/12
130	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
131	Concentration												CK/HP	08/01/12
132	units	ppmv											CK/HP	08/01/12
133	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			CK/HP	08/01/12
134	B Detectable Flag													
135	D Detectable Flag													
136	E Detectable Flag													
137	J Detectable Flag													
138	U Detectable Flag												CK/HP	08/01/12
139	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
140	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
141	CAS #												CK/HP	08/01/12
142	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
143	Concentration												CK/HP	08/01/12
144	units	ppmv											CK/HP	08/01/12
145	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			CK/HP	08/01/12
146	B Detectable Flag													
147	D Detectable Flag													
148	E Detectable Flag													
149	J Detectable Flag													
150	U Detectable Flag												CK/HP	08/01/12
151	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
152	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
153	CAS #												CK/HP	08/01/12
154	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
155	Concentration												CK/HP	08/01/12
156	units	ppmv											CK/HP	08/01/12
157	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			CK/HP	08/01/12
158	B Detectable Flag													
159	D Detectable Flag													
160	E Detectable Flag													
161	J Detectable Flag													
162	U Detectable Flag												CK/HP	08/01/12
163	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
164	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
165	CAS #												CK/HP	08/01/12
166	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
167	Concentration												CK/HP	08/01/12
168	units	ppmv											CK/HP	08/01/12
169	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			CK/HP	08/01/12
170	B Detectable Flag													
171	D Detectable Flag													
172	E Detectable Flag													
173	J Detectable Flag													
174	U Detectable Flag												CK/HP	08/01/12
175	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
176	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
177	CAS #													
178	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
179	Concentration													
180	units	ppmv												
181	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
182	B Detectable Flag													
183	D Detectable Flag													
184	E Detectable Flag													
185	J Detectable Flag													
186	U Detectable Flag													
187	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N
188	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
189			type	comment										
190	Comment													
191	Comment													
192	Comment													
193	Comment													
194	Comment													
195	Comment													
196	Comment													
197	Comment													
198	Comment													
199	Comment													
200														
201			Requirements Met?											
202	Free liquids <1% by volume		YES											
203	No non-rad. pyrophorics		YES											
204	Chemical compatability		YES											
205	No explosives		YES											
206	No corrosives		YES											
207	No pressurized containers		YES											
208	No sealed Containers >4 liters		YES											
209	Liner punctured/ filtered		YES											
210	Flammable VOCs <500ppmv		YES											
211	Container is in Approved Waste Stream Profile Form?	ID-HFEF-S5400-RH	YET											
212	Can it be established through Process Knowledge that the concentration of flammable VOCs present in the headspace of the container is <= 500 ppm?.		YET											
213														
214														
215														
216														
217														
218														
219														
220														
221														
222														
223														
224														
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228														
230														
231														
232														
233														
234														
235														
236														

Creta Knuckles
CCP Certification Official

8-8-2012
Date

Lot #

RH WDS Master Template.xls Rev 4
Addendum #4, SCO #1066
Excel 2003/2007 Microsoft Windows XP

DIVIDER

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Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12001
Examination Date:	01/25/12
Waste Container ID:	IDAWANL850013C
Audio/Video Media Number:	Primary: INLRHRTR12001 A Backup: INLRHRTR12001 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5400
Waste Stream Number:	ID-HFEF-S5400-RH
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	1 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	75, N/A, N/A

GP
2-2-12

7

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: IDAWANL850013C

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 30 Gallon drum, metal tube, scrap metal (XPW) Scrap plastic, plastic caps

2-2-12

8 9

This spreadsheet calculates the radionuclide mass and activity content of a 55-gal drum based on the measured 1-meter dose rate and the drum weight. The bold cells are the required input for the DTC calculations.

Waste Container Dose-to-Curie Conversion Record

ID-HFEF-S5400-RH DTC Spreadsheet Rev. 3 SCO 1071 Addendum 3 Microsoft Excel 2003 and 2007; Microsoft Windows XP Professional Versions 2002 and 2003

Operating Procedure	CCP-TP-504	Revision: [redacted]
CCP Characterization Date	[redacted]	
Waste Stream Designation	ID-HFEF-S5400-RH	
Container Number	[redacted]	
Parent Canister/Cask # & Lot #	[redacted]	Lot 1A
Repackaging Configuration	No 90-mil rigid liner	
Container Gross Weight	[redacted]	kg
Estimate Fill Percentages	[redacted]	%
Container Net Weight	9.93	kg
Background Dose Rate	[redacted]	mR/hr
Measured Container Dose Rate		
Quadrant #1	[redacted]	mR/hr
Quadrant #2	[redacted]	mR/hr
Quadrant #3	[redacted]	mR/hr
Quadrant #4	[redacted]	mR/hr
Calculated Average Dose Rate	246.5	mR/hr
Avgerage Net Dose Rate	246.484	mR/hr

Nuclide	Curie Scaling Factors	Activity (Ci)	Grams	FGE	PECi	Watts	Percent Uncertainty	Uncertainty in Curies	Uncertainty in Grams
U-233	8.83E-05	8.55E-05	8.76E-03	7.88E-03	2.19E-05	2.49E-06	141.7%	1.21E-06	1.24E-04
U-234	8.75E-06	1.09E-04	1.73E-02	0.00E+00	0.00E+00	3.15E-06	82.2%	8.99E-07	1.42E-04
U-235	8.70E-06	1.09E-05	4.97E+00	3.19E+00	0.00E+00	3.00E-07	63.1%	6.86E-08	3.13E-02
U-238	1.13E-06	1.41E-06	4.16E+00	0.00E+00	0.00E+00	3.58E-08	76.5%	1.08E-08	3.18E-02
Pu-238	1.03E-02	1.28E-02	7.48E-04	8.45E-05	1.18E-02	4.29E-04	132.1%	1.71E-04	9.88E-06
Pu-239	2.72E-02	3.40E-02	5.41E-01	5.41E-01	3.40E-02	1.05E-03	84.8%	2.88E-04	4.59E-03
Pu-240	1.08E-02	1.35E-02	5.85E-02	1.32E-03	1.35E-02	4.19E-04	90.1%	1.21E-04	5.27E-04
Pu-241	1.84E-01	2.30E-01	2.21E-03	4.97E-03	4.50E-03	7.31E-06	94.4%	2.17E-03	2.08E-05
Pu-242	4.33E-05	5.41E-06	1.36E-03	1.02E-05	4.92E-06	1.60E-07	80.4%	4.35E-08	1.10E-05
Am-241	3.24E-02	4.06E-02	1.17E-02	2.19E-04	4.06E-02	1.36E-03	97.1%	3.94E-04	1.13E-04
Cs-137	1.00E+00	1.25E+00	1.42E-02	0.00E+00	0.00E+00	1.38E-03	39.8%	4.98E-03	5.66E-05
Ba-137m	9.46E-01	1.18E+00	2.20E-09	0.00E+00	0.00E+00	4.66E-03	39.8%	4.71E-03	8.78E-12
Sr-90	8.46E-01	1.06E+00	7.86E-03	0.00E+00	0.00E+00	1.23E-03	68.2%	7.21E-03	5.23E-05
Y-90	8.46E-01	1.06E+00	1.94E-06	0.00E+00	0.00E+00	5.85E-03	68.2%	7.21E-03	1.33E-08
Totals		4.88E+00	9.79E+00	3.75E+00	1.04E-01	1.64E-02			

	Value	Uncert. 1σ	Units
TRU Alpha Activity Concentration:	1.02E+04	4.84E+03	nCi/g
TRU Alpha Activity:	1.01E-01	4.81E-02	Ci
Total Pu-239 Equivalent Activity:	1.04E-01	4.87E-02	Ci
Total Pu-239 Fissile Gram Equiv.:	3.75E+00	2.55E+00	g
Total Decay Heat:	1.64E-02	2.53E-03	W
Volume Activity:	2.35E-02	1.28E-02	Ci/L

Originator: David Peacock (Print Name):

Signed: [signature] Date: 4-4-12

DIVIDER

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RADIOLOGICAL SURVEY REPORT

To be used with MCP-90, MCP-93, MCP-124, MCP-138, MCP-139, MCP-187, MCP-199 and MCP-425

441.45
12/04/2007
Rev. 05

BLDG.: CPP 659
AREA/ROOM: 302/306
RWP #: 31011103 01
LOG #: 116
DATE: 1-25-2012
TIME: 1000

☐ ROUTINE
☒ NON ROUTINE (SPECIFY) ☐ FOLLOW UP

JOB DESCRIPTION

COMMENTS: RH-TRU gamma/neutron radiation survey. Gamma and neutron contact dose rates are calculated using EDF-9763 (Lot 1B & 4A) conversion factors from the 1 meter dose rate.

RCT: JH// PRINT/SIGNATURE

REVIEWED BY: ASargis/Amy Sargis PRINT/SIGNATURE

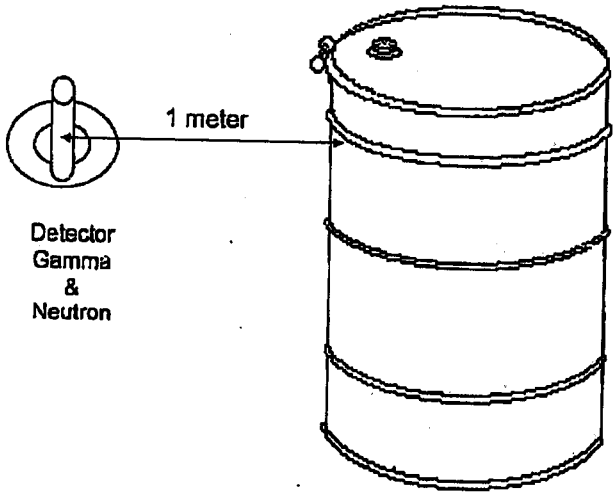
Drum # IDAWANL850013C

ORIGINAL - RED
COPY - BLACK

30 Gal-Drum I/S 55 Gal Drum

Gamma/Thermo FH40G Ion Chamber: 18.0

Neutron/REM Detector: 10.5



Per EDF-9763 (Lot 1B & 4A) Conversion Factors used to calculate contact values are: 1 meter reading multiplied by the appropriate variable above.

Gamma Conversion Factor: 18.0

Neutron Conversion Factor: 10.5

Location of Drum	Dose Rate in mr/hr at 1 Meter	Dose Rate in mr/hr at Contact	Location of Drum	Dose Rate in mr/hr at 1 Meter	Dose Rate in* mr/hr at Contact
0 degrees	288	5184.0	0 degrees	<1	<1
90 degrees	266	4788.0	90 degrees	<1	<1
180 degrees	246	4428.0	180 degrees	<1	<1
270 degrees	216	3888.0	270 degrees	<1	<1

*Note: If neutron reading is <1.0 mr / hr at 1 m, then no calculation to contact was made.
*Note: Based off package configuration (30 gal drum inside a 55 gal drum) - no contact β survey was performed.

RADIOLOGICAL SURVEY REPORT

To be used with MCP-90, MCP-93, MCP-124, MCP-138, MCP-139, MCP-187, MCP-199 and MCP-425

441.45
12/04/2007
Rev. 05

SURVEY DATA AND LEGEND

ALL SWIPE, LARGE AREA WIPE (LAW), AND DIRECT SCAN SURVEY LOCATIONS ARE IDENTIFIED ON THE MAP.. THOSE LOCATIONS WHERE ACTIVITY IS GREATER THAN OR EQUAL TO THE SPECIFIC LIMITS LISTED BELOW ARE RECORDED.

INSTRUMENTS		
Type	Serial #	MDA/Efficiency (dpm/100cm²)/eff(%)
FH-40G Inst.	020558	NA
FHZ612 Probe	XCO675	NA
E600-NRD	801852	

SWIPE No.	LAW No.	DIRECT SCAN No.	LOCATION OR ITEM DESCRIPTION	SWIPE/SCAN (dpm/100cm²)		LAW (dpm)	
				βγ	α	βγ	α
			Specify limits used for this survey, if applicable.	NA	NA		
			See map				

CA HCA	Contamination Area High Contamination Area	-x—x-	Radiological Barrier	□ = Direct Scan
RA HRA	Radiation Area High Radiation Area	ALL dose rates are in mrem/hr, unless otherwise noted. Smear Count time is for 1 minute unless otherwise noted.		○ = Swipe (Smear)
VHRA RMA	Very High Radiation Area Radioactive Material Area	# #@#(cm)	General Area Dose Rate Dose Rate at Distance From Source	L = Large Area Wipe (LAW)
ARA RBA	Airborne Radioactivity Area Radiological Buffer Area	*# #β / #γ	Contact Dose Rate Beta Corrected (non-penetrating radiation) / Gamma Dose Rates	△ = Air Sample
FCA SCA	Fixed Contamination Area Soil Contamination Area	α β	Alpha Beta	⌂ = Tritium Swipe
URMA SOP	Underground Radioactive Material Area Step-Off Pad	γ n	Gamma Neutron	

RH TRU CONTAINER REPACKAGING DATASHEET

3b. Drum #: IDAWANL850013B B (from TRU Programs)

30 gal drum:

30 gal. drum filter model #: NUCFIL-0190S- 3/23/11

55 gal drum:

55 gal filter model #: NUCFIL-C195DS filter serial number: GK-165

30 gal. drum bag breached Initial: NA KS Date: NA KS

55 gal. drum lid locking ring installed: Date: 3/23/11 Time: 1316

Placed in position 4 into TRU-ISC 0145

Operator: _____ _____ _____
Print Name Signature Date

Operations Management has reviewed the data for the container in this section and the information is correct and complete.

Operations Management Signature: _____ _____ _____
Print Name Signature Date

3C. Drum #: IDAWANL850013C B (from TRU Programs)

30 gal drum: 1

30 gal. drum filter model #: NUCFIL-0190S

55 gal drum: NUCFIL-C195DS

55 gal filter model #: _____ filter serial number: GK-165

30 gal. drum bag breached Initial: NA KS Date: NA KS

55 gal. drum lid locking ring installed: Date: 3/23/11 Time: 1316

Placed in position 4 into TRU-ISC 0145

Operator: JAMES BISCHOFF _____ 3/23/11
Print Name Signature Date

Operations Management has reviewed the data for the container in this section and the information is correct and complete.

Operations Management Signature: KCH _____ 3/23/11
Print Name Signature Date

This Drum was completed under REV 7 and started under REV 6. This Drum contains an HFEF empty inner canister 5 KS 3/23/11 KS 3/23/11

DIVIDER

PAGE

WDS
WASTE DATA SYSTEM

Waste Isolation Pilot Plant
Container Data Report

Report Statistics

Report Version:	**2.2**
WDS Instance:	**prd05.wipp.carlsbad.nm.us**
Generated on:	**May 30, 2013 02:05 PM**
Generated by:	**KIRKES, CRETA**
Total Pages:	**7**

Selection Criteria

Container Number:	**N153C**

Container: N153C
Type: 39 - RH 55 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/08/2012
Waste Handling Code: RH
Disposal Date: 09/13/2012

Current Location Site: WI
Generator Site: AE
Destination Site ID: WI

Neutron Dose Rate (mrem/hr): 1.0
Beta Gamma Dose Rate (mrem/hr): 5562.0
Total Dose Rate (mrem/hr): 5563.0

FGE (g): 5.15E00
FGE Uncertainty (g): 2.74E00

Certification Program ID: C9
Shipping Program ID: C9

Gross Weight (kg): 54.40
Gross Weight Uncert (kg): 0.50

Overpack Container: ID0299
Overpack Type: REMOVABLE-LID 72-B CANISTER
Overpack Status: CERTIFICATION DATA APPROVED

Decay Heat (W): 2.13E-02
Decay Heat Uncertainty (W): 9.23E-03

Shipment Data

Payload ID: **ID0299** Assembly ID: IN118172 Payload Complete? Y
Shipment Number: INR12021 Send Date: 09/05/2012 Receipt Date: 09/06/2012
Shipment Status: SHIPMENT RECEIVED AT DESTINATION

Emplacement Location
Panel: 6 Room: 2 Borehole: 017

Certification Data Values

Waste Stream Profile Code: ID-HFEF-S5400-RH
Waste Type Code: MTRU
IDC Code: NONE
Waste Matrix Code: S5400
WAC Revision Number: 7.2
Fill Factor (%): 85.00
Waste Stream BIR ID: NONE
Waste Stream MWIR ID: IN-ID-INL-152

TRU Alpha Activity (Ci): 1.01E-01
TRU Alpha Activity Uncertainty (Ci): 5.96E-02
TRU Alpha Activity Concentration (Ci/g): 9.85E-06
PU-239 Equivalent Activity (PE-Ci): 1.07E-01
Alpha Surface Contamination (dpm/cm^2): 0.0
Beta/Gamma Surface Contamination (dpm/cm^2): 0.0

Transportation Data Values

Closure Date: 03/23/2011
Vent Date: 03/23/2011
Process Knowledge? Y
Waste Gen Date:
Content Code: ID321H
U-235 FEM (g):
U-235 FEM Uncert (g):
Be chemically/ mechanically bound: N

Shipment Purpose: DISPOSAL
Machine Compacted? N
Liner Exists? N
Liner Hole Size(mm):
Liner Lid Present?
Layers of Packaging 1
Aqueous Material? N

Gas Generation Data Values

Measured FGGR (mol/s)	Measured TGRR (mol/s)	Truncated FGGR Test (Y/N)	Truncated FGGR Test Period (days)

Container: N153C
Type: 39 - RH 55 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/08/2012
Waste Handling Code: RH
Disposal Date: 09/13/2012

PCB Waste?	N
PCB Mass (kg):	
PCB Concentration (ppm):	
PCB Out of Service Date:	
Be Present?	Y
Be <= 1% by weight?	Y
Be mass <= 100kg?	Y
Separation OK?	Y
Packing Fraction (compaction level):	non-compacted

Filters

Filter Model Number	Filter Diffusivity (mol/s/ml)	Quantity	Install Date
NF019D	1.85E-05	1	03/23/2011

Certification Comments

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
AM-241	1.850E-02	1.740E-04	5.331E-03	5.014E-05
BA-137M	1.620E00	5.030E-03	3.011E-09	9.349E-12
CO-60	1.660E-03	5.930E-06	1.456E-06	5.202E-09
CS-137	1.720E00	5.320E-03	1.955E-02	6.045E-05
PU-238	1.780E-02	2.450E-04	1.029E-03	1.416E-05
PU-239	4.670E-02	3.740E-04	7.424E-01	5.946E-03
PU-240	1.850E-02	1.610E-04	8.043E-02	7.000E-04
PU-241	3.530E-01	3.200E-03	3.394E-03	3.077E-05
PU-242	7.430E-06	5.420E-08	1.872E-03	1.365E-05
SR-90	1.450E00	8.230E-03	1.051E-02	5.964E-05
U-233	1.170E-04	1.760E-06	1.199E-02	1.803E-04
U-234	1.500E-04	1.140E-06	2.373E-02	1.804E-04

Container: N153C
Type: 39 - RH 55 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/08/2012
Waste Handling Code: RH
Disposal Date: 09/13/2012

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
U-235	1.490E-05	7.330E-08	6.804E00	3.347E-02
U-238	1.940E-06	1.270E-08	5.706E00	3.735E-02
Y-90	1.450E00	8.230E-03	2.665E-06	1.513E-08

Material Parameters

Material Parameter	Description	Weight (kg)
8	PLASTICS	10.30
13	STEEL CONTAINER MATERIALS	45.30
	Waste Weight:	10.30
	Packaging Weight:	45.30
	Total Material Weight:	55.60

Hazardous Codes

Hazardous Code	Description
D004	ARSENIC
D005	BARIUM
D006	CADMIUM
D007	CHROMIUM
D008	LEAD
D009	MERCURY
D010	SELENIUM
D011	SILVER

Container: N153C
Type: 39 - RH 55 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/08/2012
Waste Handling Code: RH
Disposal Date: 09/13/2012

Hazardous Codes

Hazardous Code	Description
D018	BENZENE
D019	CARBON TETRACHLORIDE
D022	CHLOROFORM
D038	PYRIDINE
F002	SPENT HALOGENATED SOLVENTS
F005	SPENT NON-HALOGENATED SOLVENTS

Assay Methods

Labor Code	Assay Method	Description	Assay Date
C9	14DTC1	DOSE-TO-CURIE	01/25/2012

Non-Destructive Examination (NDE)

Labor Code	NDE Method	Description	Examination Date
C9	14RRH1	REAL-TIME RADIOGRAPHY SYSTEM (RTR-RTR-0659)	01/25/2012

Edit Limit Check Results

Evaluation Date: 08/08/2012 17:32:58 Overall Status: PASS

Evaluation Code	Status	Return Code	Detailed Description
DI_CERT_ALL	PASS		
DI_CERT_BE	PASS		
DI_CERT_CERT	PASS		
DI_CERT_CHARZ	PASS		
DI_CERT_ED	PASS		

Container: N153C
Type: 39 - RH 55 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/08/2012
Waste Handling Code: RH
Disposal Date: 09/13/2012

Edit Limit Check Results
Evaluation Date: 08/08/2012 17:32:58 Overall Status: PASS

Evaluation Code	Status
DI_CERT_EPA	PASS
DI_CERT_PCB	PASS
DI_CERT_PERC	PASS
DI_CERT_TRAMPAC	PASS
DSA	PASS
WAC	PASS
WAP_CERT	PASS

TRAMPAC Evaluation Results
Evaluation Date: Overall Status:

Evaluation Code	Status	Return Code	Detailed Description

History

Event Date/Time	Event Description	Reason
08/08/2012 17:32:59	INSERT DATA INTO THE DATABASE	
08/08/2012 17:32:59	SUCCESSFUL SUBMISSION FOR CERT	
08/08/2012 17:37:56	ASSIGNED TO OVERPACK	
08/08/2012 17:40:03	ASSIGNED TO OVERPACK	
08/08/2012 17:40:17	ASSIGNED TO OVERPACK	
08/09/2012 06:52:43	APPROVED FOR CERT	

Container: N153C
Type: 39 - RH 55 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/08/2012
Waste Handling Code: RH
Disposal Date: 09/13/2012

History

Event Date/Time	Event Description	Reason
08/14/2012 15:49:53	ASSIGNED TO OVERPACK	
08/14/2012 15:50:03	ASSIGNED TO OVERPACK	

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	RH WDS Master Template.xls Rev. 4 Addendum #4, SCO #1066 Excel 2003/2007 Microsoft Windows XP	Units	data			comments							Initial	date
2	Shipper Site ID			Location ID	Dest Program ID	Shipping Purpose					N153C			
3	Waste Stream Profile		ID-HFEF-SS400-RH										CK/HP	08/01/12
4	Container Number		N153C										CK/HP	08/01/12
5	Container Type		RH drum-55-tbo	drum, swb, tdop, etc., see WWIS labels for valid types.									CK/HP	08/01/12
6	WAC Rev #		7.2	0					U-235 FEM	U-235 FEM Uncert	FGGR Flag	FGGR Test Period	CK/HP	08/01/12
7	WAC Ex. #								NULL	NULL	NULL	NULL	CK/HP	08/01/12
8	Cert Site		C9				Be <=100 kg	Be <= 1%	Be Present	Aqueous Material	Be Chem/Mech Bound	Compacted Wst		
9	Cert Date		8/8/2012				Y	Y	Y	N	NULL	N	CK/HP	08/01/12
10	Waste Handling Code		RH	CH, RH										
11	Waste Type Code		MTRU	TRU, MTRU									CK/HP	08/01/12
12	Waste Stream BIR ID		NONE										CK/HP	08/01/12
13	Waste Stream MWIR ID		IN-ID-INL-152				p(CI):	choose	1sigma	2sigma	95%CI		CK/HP	08/01/12
14	Generator Site ID		AE	default to 0 for TRU			0.6827	1sigma	1.0000	0.5000	0.5102		CK/HP	08/01/12
15	IDC Code		NONE				0.9545	2sigma	2.0000	1.0000	1.0204		CK/HP	08/01/12
16	Matrix Code		S5400				0.9500	95%CI	1.9600	0.9800	1.0000		CK/HP	08/01/12
17	Trucon Code		ID321H										CK/HP	08/01/12
18	Shipping Category												CK/HP	08/01/12
19	Tru Alpha Act	Ci	1.01E-01	1.015E-01			WWIS Req'd CI:	1sigma	1.0000	0.5000	0.5102			
20	Tru Alpha Act Uncert	1sigma Ci	5.98E-02	2.202E-01	Tru Alpha Act + 2sigma (Ci)		Fraction of MDL Reported on HGAS		1.0000				CK/HP	08/01/12
21	Tru Alpha Act Conc	nCi/g	9.85E+03	9.86E+03									CK/HP	08/01/12
22	Tru Alpha Act Conc Uncert	1sigma nCi/g	5.79E+03	2.143E+04	Tru Alpha Act Conc + 2sigma (Ci)								CK/HP	08/01/12
23	Pu239 Fiss Gm Eq	g	5.15E+00	5.138E+00									CK/HP	08/01/12
24	Pu239 Fiss Gm Eq Uncert	1sigma g	2.74E+00	1.063E+01	Pu239 Fiss Gm Eq + 2sigma (Ci)								CK/HP	08/01/12
25	Pu239 Eq Act	Ci	1.07E-01	1.068E-01									CK/HP	08/01/12
26	Decay Heat	watts	2.03E-02	2.127E-02									CK/HP	08/01/12
27	Decay Heat Uncert	1sigma watts	9.23E-03	3.05E-02	Decay Heat + 1sigma (watts)								CK/HP	08/01/12
28	Layers of Packaging		1										CK/HP	08/01/12
29	Fill Factor		85 %	CK 8/8/12	Liner Lid									
30	Liner Type			percentage	Present								CK/HP	08/01/12
31	Liner Punctured			1 = plastic drum liner									CK/HP	08/01/12
32	PCB Conc				Liner Hole Size	(mm)							CK/HP	08/01/12
33	Closure Date		3/23/2011	Watt-years	Waste Gen Date		PCB Waste	PCB Mass (kg)	Out of Service				CK/HP	08/01/12
34	Vent Date		3/23/2011	0.028			N						CK/HP	08/01/12
35	Filter Install Date												CK/HP	08/01/12
36	Filter Manufacturer		NPT										CK/HP	08/01/12
37	Filter Serial Number(s)												CK/HP	08/01/12
38	Filter Model Number	NF012,NF013,NF020,NF9026	NF019D										CK/HP	08/01/12
39	Number of Filters Installed		1										CK/HP	08/01/12
40	Aspiration Method ID		3										CK/HP	08/01/12
41	Gas Gen Rate			#VALUE!	<<Gas Gen Rate Calculated.		Avagdro's Number:	6.022142E+23	NIST					
42	Hydrogen/Methane Gen Rate						Electron Charge	1.602176E-19	V NIST					
43	Gas Gen Comp Date													
44	Gross Weight	kg	54.400			Waste (kg)	Packaging (kg)	Total (kg)						
45	Gross Weight Uncert	1sigma kg	0.5			10.3	45.30	55.60						
46	Alpha Surf Cont	dpm/100 cm^2	0			max. reported	mda							
47	Beta/Gamma Surf Cont	dpm/100 cm^2	0			0		Minimum Detectable Activity						
48	Neutron Dose Rate	mrem/hr	0			0		Minimum Detectable Activity						
49	Beta/Gamma Dose Rate	mrem/hr	3432			1	CK 8/8/12	Minimum Detectable Activity						
50	Radionuclide					5562 3432		Minimum Detectable Activity						
51	Activity		U-233	U-234	U-235	U-238	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Am-241	CK/HP	08/01/12
52	Activity Uncert	Ci	1.17E-04	1.50E-04	1.49E-05	1.94E-06	1.78E-02	4.67E-02	1.85E-02	3.53E-01	7.43E-06	1.85E-02	CK/HP	08/01/12
53	Mass	1sigma Ci	1.76E-06	1.14E-06	7.33E-08	1.27E-08	2.45E-04	3.74E-04	1.61E-04	3.20E-03	5.42E-08	1.74E-04	CK/HP	08/01/12
54	Mass Uncert	grams	1.20E-02	2.37E-02	6.80E+00	5.71E+00	1.03E-03	7.42E-01	8.04E-02	3.39E-03	1.87E-03	5.33E-03	CK/HP	08/01/12
55	calc Tru Alpha Act	1sigma grams	1.80E-04	1.80E-04	3.35E-02	3.74E-02	1.42E-05	5.95E-03	7.00E-04	3.08E-05	1.37E-05	5.01E-06		
56	calc Tru Alpha Act Conc	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.78E-02	4.67E-02	1.85E-02	0.00E+00	7.43E-06	1.85E-02		
57	calc Act	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E+03	4.53E+03	1.80E+03	0.00E+00	7.21E-01	1.80E+03		
58	calc Act/Conc	Ci	1.17E-04	1.50E-04	1.49E-05	1.94E-06	1.78E-02	4.67E-02	1.85E-02	3.53E-01	7.43E-06	1.85E-02		
		nCi/g	1.44E+01	1.46E+01	1.45E+00	1.88E-01	1.73E+03	4.53E+03	1.80E+03	3.43E+04	7.21E-01	1.80E+03		

Shipping Calcs
Total TBq 2.48E-01
Fraction 7.00E-03
Highway Route Control? No

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
59	calc Pu239 FGE	g	1.08E-02	0.00E+00	4.37E+00	0.00E+00	1.16E-04	7.42E-01	1.81E-03	7.64E-03	1.40E-05	9.97E-05		
60	calc Pu239 Eq Act	Ci	3.00E-05	0.00E+00	0.00E+00	0.00E+00	1.62E-02	4.67E-02	1.85E-02	6.92E-03	6.75E-06	1.85E-02		
61	calc Decay Heat	watts	3.40E-06	4.32E-06	4.11E-07	4.92E-08	5.90E-04	1.45E-03	5.76E-04	1.12E-05	2.19E-07	6.18E-04		
62	uncert Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.45E-04	3.74E-04	1.61E-04	0.00E+00	5.42E-08	1.74E-04		
63	uncert Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.38E+01	3.63E+01	1.56E+01	0.00E+00	5.26E-03	1.69E+01		
64	uncert Act	Ci	1.76E-06	1.14E-06	7.33E-08	1.27E-08	2.45E-04	3.74E-04	1.61E-04	3.20E-03	5.42E-08	1.74E-04		
65	uncert Act Conc	nCi/g	1.71E-01	1.11E-01	7.12E-03	1.23E-03	2.38E+01	3.63E+01	1.56E+01	3.11E+02	5.26E-03	1.69E+01		
66	uncert Pu239 FGE	g	1.62E-04	0.00E+00	2.15E-02	0.00E+00	1.60E-06	5.95E-03	1.58E-05	6.92E-05	1.02E-07	9.38E-07		
67	uncert Pu239 Eq Act	Ci	4.51E-07	0.00E+00	0.00E+00	0.00E+00	2.23E-04	3.74E-04	1.61E-04	6.27E-05	4.93E-08	1.74E-04		
68	uncert Decay Heat	watts	5.12E-08	3.28E-08	2.02E-09	3.22E-10	8.11E-06	1.16E-05	5.01E-06	1.02E-07	1.60E-09	5.82E-06		
69	Shipping Calcs	2.10E+01	4.33E-03	5.56E-03	0.00E+00	0.00E+00	3.29E+00	8.63E+00	3.42E+00	1.31E+00	1.37E-03	3.42E+00		
70	49CFR173.433f		0.02%	0.03%	0.00%	0.00%	15.66%	41.08%	16.27%	6.22%	0.01%	16.27%		
71	Radionuclide		Cs-137	Ba-137m	Sr-90	Y-90	Co-60							
72	Activity	Ci	1.72E+00	1.62E+00	1.45E+00	1.45E+00	1.66E-03						CK/HP	08/01/12
73	Activity Uncert	1sigma Ci	5.32E-03	5.03E-03	8.23E-03	8.23E-03	5.93E-06						CK/HP	08/01/12
74	Mass	grams	1.95E-02	3.01E-09	1.05E-02	2.67E-06	1.46E-06	NULL	NULL	NULL	NULL	NULL	CK/HP	08/01/12
75	Mass Uncert	1sigma grams	6.05E-05	9.35E-12	5.96E-05	1.51E-08	5.20E-09	NULL	NULL	NULL	NULL	NULL		
76	calc Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL		
77	calc Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL		
78	calc Act	Ci	1.72E+00	1.62E+00	1.45E+00	1.45E+00	1.66E-03	NULL	NULL	NULL	NULL	NULL		
79	calc Act Conc	nCi/g	1.67E+05	1.57E+05	1.41E+05	1.41E+05	1.61E+02	NULL	NULL	NULL	NULL	NULL		
80	calc Pu239 FGE	g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL		
81	calc Pu239 Eq Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL		
82	calc Decay Heat	watts	1.90E-03	6.38E-03	1.68E-03	8.02E-03	2.56E-05	NULL	NULL	NULL	NULL	NULL		
83	uncert Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL		
84	uncert Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL		
85	uncert Act	Ci	5.32E-03	5.03E-03	8.23E-03	8.23E-03	5.93E-06	NULL	NULL	NULL	NULL	NULL		
86	uncert Act Conc	nCi/g	5.17E+02	4.88E+02	7.99E+02	7.99E+02	5.76E-01	NULL	NULL	NULL	NULL	NULL		
87	uncert Pu239 FGE	g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL		
88	uncert Pu239 Eq Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL		
89	uncert Decay Heat	watts	5.89E-06	1.98E-05	9.54E-06	4.55E-05	9.16E-08	NULL	NULL	NULL	NULL	NULL		
90	Shipping Calcs		1.27E-01	0.00E+00	5.37E-01	2.68E-01	1.54E-04	NULL	NULL	NULL	NULL	NULL		
91	49CFR173.433f		0.61%	0.00%	2.56%	1.28%	0.00%	NULL	NULL	NULL	NULL	NULL		
92	Waste Material Parameter		PW											
93	Wgt of Mat Parms (kg or lbs)	kg	10.3											
94	Radio Assay Method		PANTEX										CK/HP	08/01/12
95	Data Package Number		JNLRHDTG12001										CK/HP	08/01/12
96	Assay Date		1/29/2012										CK/HP	08/01/12
97	Charz Method ID		PMRR-01										CK/HP	08/01/12
98	Data Package Number		JNLRHRTR12001										CK/HP	08/01/12
99	Charz Method Date		1/26/2012										CK/HP	08/01/12
100	Haz Codes		D004	D005	D006	D007	D008	D009	D010	D011	D018	D019	CK/HP	08/01/12
101	Haz Codes		D022	D038	F002	F005							CK/HP	08/01/12
102	Haz Codes												CK/HP	08/01/12
103	Haz Codes													
104	Sample ID	Headspace Gas H/M		HGHM									CK/HP	08/01/12
105	Sample Type												CK/HP	08/01/12
106	Layer No. Sampled			0									CK/HP	08/01/12
107	Date Sampled												CK/HP	08/01/12
108	Method ID			DTP-1.2-041									CK/HP	08/01/12
109	Data Package Number												CK/HP	08/01/12
110	CAS #												CK/HP	08/01/12
111	Analyte												CK/HP	08/01/12
112	Concentration													
113	units	%vol											CK/HP	08/01/12
114	Date Analyzed												CK/HP	08/01/12
115	B Detectable Flag												CK/HP	08/01/12
116	D Detectable Flag												CK/HP	08/01/12
117	E Detectable Flag													
118	J Detectable Flag													
119	U Detectable Flag													
120	NA Detectable Flag			NA									CK/HP	08/01/12
121														
122	Sample ID	Headspace Gas VOC											CK/HP	08/01/12
123	Sample Type			HGVO										
124	Layer No. Sampled												CK/HP	08/01/12
125	Date Sampled												CK/HP	08/01/12

kg
lbs 0.14638
kg 0.6000

Sample Site

SARP-Flammable VOCs (ppmv) 0

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Addendum #4, SCO #1066
Excel 2003/2007 Microsoft Windows XP

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
126	Method ID			DTP-1.2-041									CK/HP	08/01/12
127	Data Package Number												CK/HP	08/01/12
128	Methanol Method ID													
129	CAS #												CK/HP	08/01/12
130	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
131	Concentration												CK/HP	08/01/12
132	units	ppmv											CK/HP	08/01/12
133	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			CK/HP	08/01/12
134	B Detectable Flag													
135	D Detectable Flag													
136	E Detectable Flag													
137	J Detectable Flag													
138	U Detectable Flag												CK/HP	08/01/12
139	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
140	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
141	CAS #												CK/HP	08/01/12
142	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
143	Concentration												CK/HP	08/01/12
144	units	ppmv											CK/HP	08/01/12
145	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			CK/HP	08/01/12
146	B Detectable Flag													
147	D Detectable Flag													
148	E Detectable Flag													
149	J Detectable Flag													
150	U Detectable Flag												CK/HP	08/01/12
151	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
152	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
153	CAS #												CK/HP	08/01/12
154	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
155	Concentration												CK/HP	08/01/12
156	units	ppmv											CK/HP	08/01/12
157	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			CK/HP	08/01/12
158	B Detectable Flag													
159	D Detectable Flag													
160	E Detectable Flag													
161	J Detectable Flag													
162	U Detectable Flag												CK/HP	08/01/12
163	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
164	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
165	CAS #												CK/HP	08/01/12
166	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
167	Concentration												CK/HP	08/01/12
168	units	ppmv											CK/HP	08/01/12
169	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			CK/HP	08/01/12
170	B Detectable Flag													
171	D Detectable Flag													
172	E Detectable Flag													
173	J Detectable Flag													
174	U Detectable Flag												CK/HP	08/01/12
175	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
176	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
177	CAS #													
178	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
179	Concentration													
180	units	ppmv												
181	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
182	B Detectable Flag													
183	D Detectable Flag										RH WDS Master Template.xls Rev. 4			
184	E Detectable Flag										Addendum #4, SCO #1066			
185	J Detectable Flag										Excel 2003/2007 Microsoft Windows			
186	U Detectable Flag										XP			
187	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
188	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
189			type	comment										
190	Comment													
191	Comment													
192	Comment													
193	Comment													
194	Comment													
195	Comment													
196	Comment													
197	Comment													
198	Comment													
199	Comment													
200														
201			Requirements Met?											
202	Free liquids <1% by volume		YES											
203	No non-rad. pyrophorics		YES											
204	Chemical compatability		YES											
205	No explosives		YES											
206	No corrosives		YES											
207	No pressurized containers		YES											
208	No sealed Containers >4 liters		YES											
209	Liner punctured/ filtered		YES											
210	Flammable VOCs <500ppmv		YES											
211	Container is in Approved Waste Stream Profile Form?	ID-HFEF-S5400-RH	YET											
212	Can it be established through Process Knowledge that the concentration of flammable VOCs present in the headspace of the container is <= 500 ppm?.		YET											
213														
214														
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236														

Creta Knuckles
CCP Certification Official

8-8-2012
Date

Lot #

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Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12001
Examination Date:	01/25/12
Waste Container ID:	N153C
Audio/Video Media Number:	Primary: INLRHRTR12001 A Backup: INLRHRTR12001 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5400
Waste Stream Number:	ID-HFEF-S5400-RH
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	1 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	85, N/A, N/A

QP
2-2-12
13 14

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: N153C

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 30 Gallon drum, metal tube, floor sweepings (XPW) Scrap plastic

QP
2-2-12
14 15

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Waste Container Dose-to-Curie Conversion Record

SCO 1105 HFEF Lot 1B, Rev. 4 Addendum 4, Microsoft Excel 2003 and 2007, Microsoft Windows XP Professional 2002, 2003, 2010

Operating Procedure	CCP-TP-504	Revision: 12
CCP Characterization Date	1/25/2012	
Waste Stream Designation	ID-HFEF-S5400-RH	
Container Number	N153C	
Parent Canister/Cask #	N153	
Container Gross Weight	54.40	kg
Estimate Fill Percentages	85	%
Container Net Weight	10.30	kg
Measured Container Dose Rate		
Quadrant #1	268.0	mR/hr
Quadrant #2	309.0	mR/hr
Quadrant #3	285.0	mR/hr
Quadrant #4	243.0	mR/hr
Background	0.0	mR/hr
Calculated Average Dose Rate	278.2	mR/hr

Lot 1B HFEF Canister Liners		
Dose-Rate Fraction		Uncertainty
Cs-137	97.6%	15.1%
Co-60	0.3%	17.6%

Need to input background 0.017

Nuclide	Cs-137 Scaling Factors	Activity (Ci)	Grams	FGE	PECi	Watts	Percent Uncertainty	Uncertainty in Curies	Uncertainty in Grams
U-233	6.83E-05	1.17E-04	1.20E-02	1.08E-02	3.01E-05	3.41E-06	150.1%	1.76E-06	1.80E-04
U-234	8.75E-05	1.50E-04	2.38E-02	0.00E+00	0.00E+00	4.32E-06	75.7%	1.14E-06	1.80E-04
U-235	8.70E-06	1.49E-05	6.82E+00	4.39E+00	0.00E+00	4.12E-07	49.1%	7.33E-08	3.35E-02
U-238	1.13E-06	1.94E-06	5.71E+00	0.00E+00	0.00E+00	4.92E-08	65.5%	1.27E-08	3.74E-02
Pu-238	1.03E-02	1.76E-02	1.03E-03	1.16E-04	1.62E-02	5.88E-04	137.8%	2.45E-04	1.42E-05
Pu-239	2.72E-02	4.67E-02	7.43E-01	7.43E-01	4.67E-02	1.45E-03	80.1%	3.74E-04	5.95E-03
Pu-240	1.08E-02	1.85E-02	8.03E-02	1.81E-03	1.85E-02	5.75E-04	87.0%	1.61E-04	6.99E-04
Pu-241	2.05E-01	3.53E-01	3.39E-03	7.63E-03	6.91E-03	1.12E-05	90.7%	3.20E-03	3.08E-05
Pu-242	4.33E-06	7.43E-06	1.87E-03	1.40E-05	6.76E-06	2.19E-07	72.9%	5.42E-08	1.37E-05
Am-241	1.08E-02	1.85E-02	5.34E-03	9.98E-05	1.85E-02	6.19E-04	94.2%	1.74E-04	5.03E-05
Cs-137	1.00E+00	1.72E+00	1.95E-02	0.00E+00	0.00E+00	1.90E-03	31.0%	5.32E-03	6.05E-05
Ba-137m	9.46E-01	1.62E+00	3.02E-09	0.00E+00	0.00E+00	6.40E-03	31.0%	5.03E-03	9.36E-12
Sr-90	8.45E-01	1.45E+00	1.05E-02	0.00E+00	0.00E+00	1.68E-03	56.7%	8.23E-03	5.96E-05
Y-90	8.45E-01	1.45E+00	2.67E-06	0.00E+00	0.00E+00	8.03E-03	56.7%	8.23E-03	1.51E-08
Co-60	9.66E-04	1.66E-03	1.46E-06	0.00E+00	0.00E+00	2.56E-05	35.7%	5.93E-06	5.20E-09
Totals		6.70E+00	1.34E+01	5.15E+00	1.07E-01	2.13E-02			

	Value	1σ Unc.	Units
TRU Alpha Activity Concentration:	9.85E+03	5.79E+03	nCi/g
TRU Alpha Activity:	1.01E-01	5.96E-02	Ci
Total Pu-239 Equivalent Activity:	1.07E-01	6.00E-02	Ci
Total Pu-239 Fissile Gram Equiv.:	5.15E+00	2.74E+00	g
Total Decay Heat:	2.13E-02	9.23E-03	W
Volume Activity:	3.22E-02	1.38E-02	Ci/L

Originator: David Pinnick (Print Name): N/A

Signed: David Pinnick Date: 7-11-12

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RADIOLOGICAL SURVEY REPORT

To be used with MCP-90, MCP-93, MCP-124, MCP-138, MCP-139, MCP-187, MCP-199 and MCP-425

441.45
12/04/2007
Rev. 05

ORIGINAL - RED
COPY - BLACK

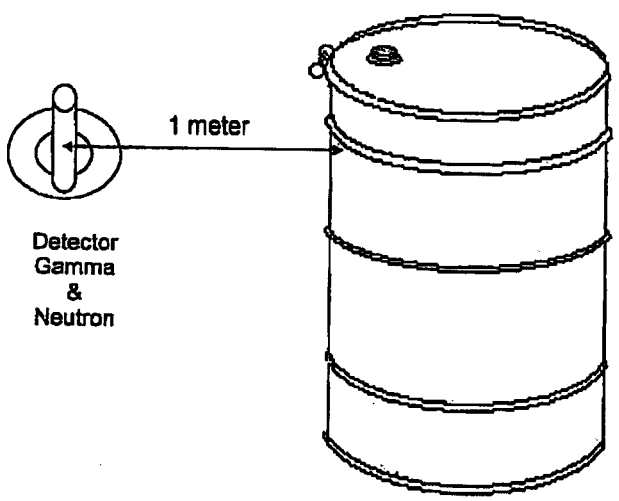
BLDG.:	CPP 659
AREA/ROOM:	302/306
RWP #:	31011103 01
LOG #:	116
DATE:	1-25-2012
TIME:	1300

☐ ROUTINE JOB DESCRIPTION
☒ NON ROUTINE (SPECIFY) ☐ FOLLOW UP
COMMENTS: RH-TRU gamma/neutron radiation survey. Gamma and neutron contact dose rates are calculated using EDF-9763 (Lot 1B & 4A) conversion factors from the 1 meter dose rate.

RCT: JHd
PRINT/SIGNATURE

REVIEWED BY: A Sargis | Amy Sargis
PRINT/SIGNATURE

Drum # N153C



30 Gal-Drum I/S 55 Gal Drum

Gamma/Thermo FH40G Ion Chamber: 18.0

Neutron/REM Detector: 10.5

Per EDF-9763 (Lot 1B & 4A) Conversion Factors used to calculate contact values are: 1 meter reading multiplied by the appropriate variable above.

Gamma Conversion Factor: 18.0

Neutron Conversion Factor: 10.5

Location of Drum	Dose Rate in mr/hr at 1 Meter	Dose Rate in mr/hr at Contact	Location of Drum	Dose Rate in mr/hr at 1 Meter	Dose Rate in* mr/hr at Contact
0 degrees	266	4788.0	0 degrees	<1	<1
90 degrees	309	5562.0	90 degrees	<1	<1
180 degrees	295	5310.0	180 degrees	<1	<1
270 degrees	243	4374.0	270 degrees	<1	<1

*Note: If neutron reading is <1.0 mr / hr at 1 m, then no calculation to contact was made.
*Note: Based off package configuration (30 gal drum inside a 55 gal drum) - no contact β survey was performed.

RADIOLOGICAL SURVEY REPORT

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SURVEY DATA AND LEGEND

ALL SWIPE, LARGE AREA WIPE (LAW), AND DIRECT SCAN SURVEY LOCATIONS ARE IDENTIFIED ON THE MAP. THOSE LOCATIONS WHERE ACTIVITY IS GREATER THAN OR EQUAL TO THE SPECIFIC LIMITS LISTED BELOW ARE RECORDED.

INSTRUMENTS		
Type	Serial #	MDA/Efficiency (dpm/100cm²)/eff(%)
FH-40G Inst.	020558	NA
FHZ612 Probe	XCO675	NA
E600-NRD	801852	

SWIPE No.	LAW No.	DIRECT SCAN No.	LOCATION OR ITEM DESCRIPTION	SWIPE/SCAN (dpm/100cm²)		LAW (dpm)	
				βγ	α	βγ	α
			Specify limits used for this survey, if applicable.	NA	NA		
			See map				

CA HCA	Contamination Area High Contamination Area	-x—x-	Radiological Barrier		□ = Direct Scan
RA HRA	Radiation Area High Radiation Area	ALL dose rates are in mrem/hr, unless otherwise noted. Smear Count time is for 1 minute unless otherwise noted.			○ = Swipe (Smear)
VHRA RMA	Very High Radiation Area Radioactive Material Area	# #@#(cm)	General Area Dose Rate Dose Rate at Distance From Source		L = Large Area Wipe (LAW)
ARA RBA	Airborne Radioactivity Area Radiological Buffer Area	*# #β / #γ	Contact Dose Rate Beta Corrected (non-penetrating radiation) / Gamma Dose Rates		△ = Air Sample
FCA SCA	Fixed Contaminatidn Area Soil Contamination Area	α β	Alpha Beta		⬡ = Tritium Swipe
URMA SOP	Underground Radioactive Material Area Step-Off Pad	γ n	Gamma Neutron		

RH TRU CONTAINER REPACKAGING DATASHEET

3b. Drum #: N153B B (from TRU Programs)

30 gal drum:
30 gal. drum filter model #:

55 gal drum:			
55 gal filter model #:		filter serial number:	
30 gal. drum bag breached	Initial:		Date:
55 gal. drum lid locking ring installed:	Date:		Time:
Placed in position		into TRU-ISC	
Operator:	Print Name	Signature	Date

Operations Management has reviewed the data for the container in this section and the information is correct and complete.

Operations Management Signature:	Print Name	Signature	Date

3C. Drum #: N153C B (from TRU Programs)

30 gal drum:
30 gal. drum filter model #: NUCFIL-019DS

55 gal drum: KS 3/23/11 NUCFIL-019SDS			
55 gal filter model #: NUCFIL 019SDS		filter serial number: GK-164	
30 gal. drum bag breached	Initial: N/A KS		Date: NA KS
55 gal. drum lid locking ring installed:	Date: 3/23/11		Time: 1358
Placed in position 2		into TRU-ISC 0145	
Operator: Kelly Hogg	Print Name	Signature	Date 3-23-11

Operations Management has reviewed the data for the container in this section and the information is correct and complete.

Operations Management Signature:	Print Name K Smith	Signature K Smith	Date 3/23/11

This drum contains a empty HFET inner container

This form was completed under a new REV to this form REV 7 KS 3/23/11

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Generated: 8/8/2012 17:41

Canister #: ID0299

Canister Gross Weight + Error

706.87 kg
1,558.66 lbs

Canister Content Code/Governing Shipping Period (days): ID321H / 60

Canister Filters

Filter Model	Quantity
NF019D	1

Inner Containers

Container Number	Gross (kg)	Wgt+Err (lbs)	PCB Waste?	Be Present?	Total Dose Rate (mrem/hr)	Content Code	Waste Stream Profile	Filter Model	Qty
IDAWANL850013C	55.7	122.82	N	Y	5185	ID321H	ID-HFEF-S5400-RH	NF019D	1
IDAWANL810002C	54.9	121.05	N	Y	3133	ID321H	ID-HFEF-S5400-RH	NF019D	1
N153C	54.9	121.05	N	Y	5563	ID321H	ID-HFEF-S5400-RH	NF019D	1

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Attachment 1 – RLC Loading Form

RLC Inspection

RLC Canister ID: ID0308

RLC Serial Number: 090088

	Filter Type Number	Filter Serial Numbers	Date Filter Installed
1	NUCFIL-0190S	DJ-1621	11-8-12
2			
3	N A	N A	N A
4			

Pintle Cap Screws

Torque Wrench Serial Number: N/A Cal Due Date: N/A

Filters/Pipe Plugs

Torque Wrench Serial Number: XC0694 Cal Due Date: 1-31-2013

Maintenance/Inspections Complete

Canister Loading Operator

Printed Name Chris G. Davis Signature [signature] Date 11-8-12

Dunnage Container is empty? YES ☐ NO ☐ NA ☒

Dunnage Container is dry? YES ☐ NO ☐ NA ☒

Dunnage Container vent port plug removed? YES ☐ NO ☐ NA ☒

Dunnage Container Weight in pounds (lbs): NA

RH Waste Container Numbers	Operator Initials	Peer Verifier Initials
ANLE 26A	VQ	CAB
ANLE ~~3A~~ VQ 11-12-12 3A	VQ	CAB
ANLE 3E	VQ	CAB

Peer Verifier – Waste containers loaded into RLC match RH Waste Container Numbers listed above.

Printed Name Craig A Bramlett Signature [signature] Date 11-12-12

RLC Closure Date: 11-12-12

Gross Weight in pounds (lbs): 1510

Load Cell Serial Number: XC0523 Calibration Due Date: 3/2/2013

Canister Loading Operator

Printed Name Vaughn Quinn Signature [signature] Date 11-12-12

Supervisor

Printed Name J. Dickens Signature [signature] Date 11-12-12

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RADIOLOGICAL SURVEY REPORT

To be used with MCP-90, MCP-93, MCP-124, MCP-138, MCP-139, MCP-187, MCP-199 and MCP-425

Log # 1709

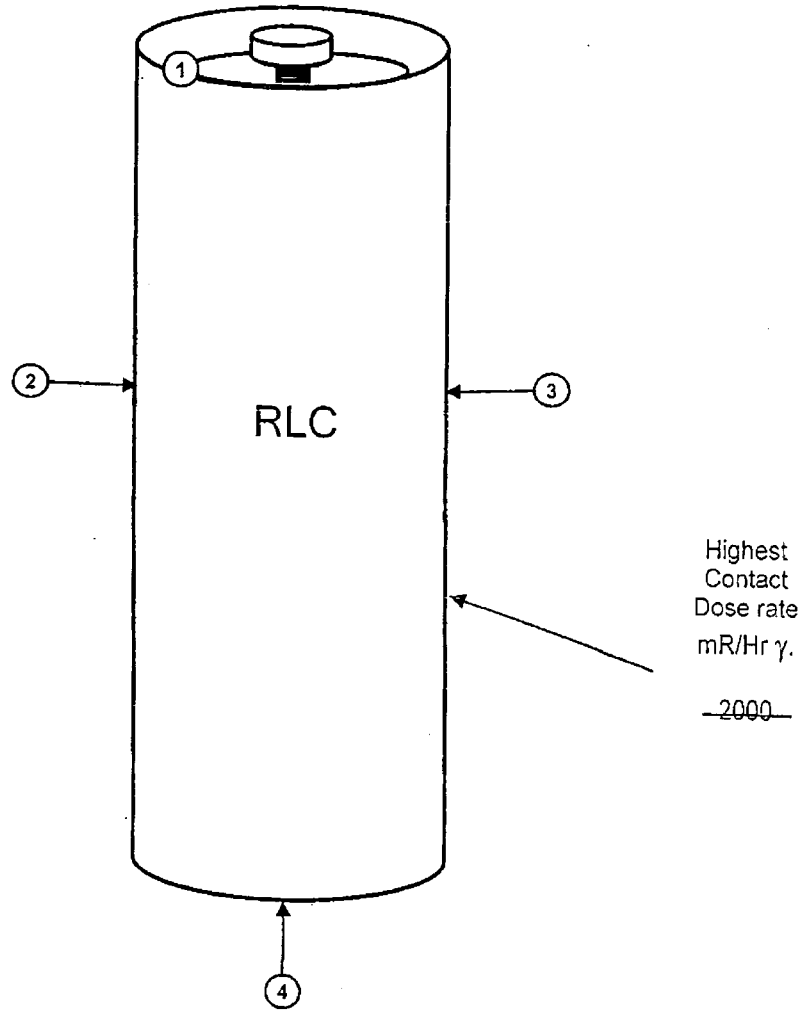
BLDG.: CPP 659	☐ ROUTINE **JOB DESCRIPTION**
AREA/ROOM: CMA	☒ NON ROUTINE (SPECIFY) ☐ FOLLOW UP
RWP #: 31011104-02	COMMENTS: Survey of loaded RLC. Survey points are approximate in location. Survey performed of accessible areas. No Neutron Radiation detected.
LOG #: 1709	
DATE: 11/12/2012	
TIME: 11:00	

RCT: Brent Heer / Brent Heer
PRINT / SIGNATURE

REVIEWED BY: A. Sargis/ Amy Sargis
PRINT / SIGNATURE

RLC # ID0308

ORIGINAL - RED
COPY - BLACK



Highest dose rate encountered behind temporary shielding during drum moves was 1.0 mR/hr γ.

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RADIOLOGICAL SURVEY REPORT

To be used with MCP-90, MCP-93, MCP-124, MCP-138, MCP-139, MCP-187, MCP-199 and MCP-425

Log # 1709

INSTRUMENTS		
Type	Serial #	MDA/Efficiency (dpm/100cm²)/eff(%)
LUD 3 B	802545	NA/10 %
LUD 3 A	802448	NA / 10 %
Scaler	851299	84 /35.8 % βγ
		15 / 30.5 % α
Ext 2000W	801550	
E-600	850956	

SURVEY DATA AND LEGEND

ALL SWIPE, LARGE AREA WIPE (LAW), AND DIRECT SCAN SURVEY LOCATIONS ARE IDENTIFIED ON THE MAP. THOSE LOCATIONS WHERE ACTIVITY IS GREATER THAN OR EQUAL TO THE SPECIFIC LIMITS LISTED BELOW ARE RECORDED.

SWIPE No.	LAW No.	DIRECT SCAN No.	LOCATION OR ITEM DESCRIPTION	SWIPE / SCAN (dpm/100cm²)		LAW (dpm)	
				βγ	α	βγ	α
			Specify limits used for this survey, if applicable.	200 / NA	20 / NA		
			NA				

CA HCA	Contamination Area High Contamination Area	-x—x-	Radiological Barrier	□ = Direct Scan
RA HRA	Radiation Area High Radiation Area	ALL dose rates are in mrem/hr, unless otherwise noted. Smear count time is 1 minute unless otherwise noted.		○ = Swipe (Smear)
VHRA RMA	Very High Radiation Area Radioactive Material Area	# #@#(cm)	General Area Dose Rate Dose Rate at Distance From Source	L = Large Area Wipe (LAW)
ARA RBA	Airborne Radioactivity Area Radiological Buffer Area	*# #β / #γ	Contact Dose Rate Beta Corrected (non-penetrating radiation) / Gamma Dose Rates	△ = Air Sample
FCA SCA	Fixed Contamination Area Soil Contamination Area	α β	Alpha Beta	⌂ = Tritium Swipe
URMA SOP	Underground Radioactive Material Area Step-Off Pad	γ n	Gamma Neutron	NA

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Waste Isolation Pilot Plant
Canister Data Report

Report Statistics

Report Version:	**2.2**
WDS Instance:	**prd05.wipp.carlsbad.nm.us**
Generated on:	**May 30, 2013 02:04 PM**
Generated by:	**KIRKES, CRETA**
Total Pages:	**7**

Selection Criteria

Container Number: **ID0299**

Container: ID0299
Type: 11 - 72-B Removable Lid OP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/14/2012
Waste Handling Code: RH
Disposal Date: 09/13/2012

Current Location Site: WI
Generator Site: AE
Destination Site ID: WI

Certification Program ID: C9
Shipping Program ID: C9

Neutron Dose Rate (mrem/hr): 0.0
Beta Gamma Dose Rate (mrem/hr): 1800.0
Total Dose Rate (mrem/hr): 1800.0

FGE (g): 1.147E01
FGE Uncertainty (g): 4.132E00

Gross Weight (kg): 681.01
Gross Weight Uncert (kg): 25.86

Decay Heat (W): 4.89E-02
Decay Heat Uncertainty (W): 9.726E-03

Shipment Data

Payload ID: **ID0299** Assembly ID: IN118172 Payload Complete? Y
Shipment Number: INR12021 Send Date: 09/05/2012 Receipt Date: 09/06/2012
Shipment Status: SHIPMENT RECEIVED AT DESTINATION

Emplacement Location

Panel: 6 Room: 2 Borehole: 017

Certification Data Values

Waste Stream Profile Code: ID-HFEF-S5400-RH
Waste Type Code: MTRU
IDC Code: NONE
Waste Matrix Code: S5400
WAC Revision Number: 7.2
Fill Factor (%): 55.45

TRU Alpha Activity (Ci): 2.712E-01
TRU Alpha Activity Uncertainty (Ci): 8.336E-02
TRU Alpha Activity Concentration (Ci/g): 9.237E-06
PU-239 Equivalent Activity (PE-Ci): 2.825E-01
Alpha Surface Contamination (dpm/cm^2): 19.0
Beta/Gamma Surface Contamination (dpm/cm^2): 199.0

Transportation Data Values

Closure Date: 08/13/2012
Vent Date: 08/13/2012
Shipment Purpose: DISPOSAL
Machine Compacted? N

Waste Gen Date:
Content Code: ID321H
U-235 FEM (g):
U-235 FEM Uncert (g):
Be chemically/ mechanically bound:

Filters

Filter Model Number	Filter Diffusivity (mol/s/ml)	Quantity	Install Date

Container: ID0299
Type: 11 - 72-B Removable Lid OP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/14/2012
Waste Handling Code: RH
Disposal Date: 09/13/2012

PCB Waste? N
PCB Mass (kg):
PCB Concentration (ppm):
PCB Out of Service Date:
Be Present? Y
Be <= 1% by weight? Y

Governing Packing Fraction (compaction level): non-compacted

Filters

Filter Model Number	Filter Diffusivity (mol/s/ml)	Quantity	Install Date
NF019D	1.85E-05	1	08/13/2012

Certification Comments

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
AM-241	8.690E-02	5.083E-04	2.504E-02	1.465E-04
BA-137M	3.611E00	7.610E-03	6.712E-09	1.415E-11
CO-60	1.660E-03	5.930E-06	1.456E-06	5.202E-09
CS-137	3.827E00	8.046E-03	4.349E-02	9.143E-05
PU-238	3.957E-02	3.209E-04	2.287E-03	1.855E-05
PU-239	1.040E-01	5.119E-04	1.653E00	8.138E-03
PU-240	4.122E-02	2.178E-04	1.792E-01	9.471E-04
PU-241	7.400E-01	4.144E-03	7.115E-03	3.984E-05
PU-242	1.655E-05	7.562E-08	4.169E-03	1.905E-05
SR-90	3.235E00	1.201E-02	2.344E-02	8.699E-05
U-233	2.611E-04	2.291E-06	2.675E-02	2.348E-04
U-234	3.340E-04	1.577E-06	5.285E-02	2.495E-04

Container: ID0299
Type: 11 - 72-B Removable Lid OP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/14/2012

Waste Handling Code: RH
Disposal Date: 09/13/2012

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
U-235	3.326E-05	1.109E-07	1.519E01	5.062E-02
U-238	4.318E-06	1.824E-08	1.270E01	5.366E-02
Y-90	3.235E00	1.201E-02	5.947E-06	2.207E-08

Material Parameters

Material Parameter	Description	Weight (kg)
1	IRON BASE METAL ALLOYS	135.90
8	PLASTICS	29.36
13	STEEL CONTAINER MATERIALS	517.01
	Waste Weight:	165.26
	Packaging Weight:	517.01
	Total Material Weight:	682.27

Hazardous Codes

Hazardous Code	Description
D004	ARSENIC
D005	BARIUM
D006	CADMIUM
D007	CHROMIUM
D008	LEAD
D009	MERCURY
D010	SELENIUM

Container: ID0299
Type: 11 - 72-B Removable Lid OP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/14/2012
Waste Handling Code: RH
Disposal Date: 09/13/2012

Hazardous Codes

Hazardous Code	Description
D011	SILVER
D018	BENZENE
D019	CARBON TETRACHLORIDE
D022	CHLOROFORM
D038	PYRIDINE
F002	SPENT HALOGENATED SOLVENTS
F005	SPENT NON-HALOGENATED SOLVENTS

Edit Limit Check Results
Evaluation Date: 08/14/2012 15:50:04 Overall Status: PASS

Evaluation Code	Status	Return Code	Detailed Description
DI_CERT_ALL	PASS		
DI_CERT_BE	PASS		
DI_CERT_CERT	PASS		
DI_CERT_CHARZ	PASS		
DI_CERT_ED	PASS		
DI_CERT_EPA	PASS		
DI_CERT_PCB	PASS		
DI_CERT_PERC	PASS		
DI_CERT_TRAMPAC	PASS		
DSA	PASS		
WAC	PASS		

Container: ID0299
Type: 11 - 72-B Removable Lid OP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/14/2012

Waste Handling Code: RH
Disposal Date: 09/13/2012

Edit Limit Check Results

Evaluation Date: 08/14/2012 15:50:04 Overall Status: PASS

Evaluation Code	Status
WAP_CERT	PASS

TRAMPAC Evaluation Results

Evaluation Date: 08/14/2012 15:50:04 Overall Status: PASS

Evaluation Code	Status	Return Code	Detailed Description
CANISTER_72B_ALL	PASS		
CANISTER_72B_ASP	PASS		
CANISTER_72B_CONT	PASS		
CANISTER_72B_FIL	PASS		
CANISTER_72B_GVE	PASS		
CANISTER_72B_NUC	PASS		
CANISTER_72B_PDH	PASS		
CANISTER_72B_RDR	PASS		
CANISTER_72B_WGT	PASS		

Inner Containers

Container Number	Type Code	Content Code	Gross Weight + Error	FGE + 2x Error	Waste Stream
IDAWANL810002C	39 - RH 55 gal TBO	ID321H	54.90	6.07E00	ID-HFEF-S5400-RH
IDAWANL850013C	39 - RH 55 gal TBO	ID321H	55.70	8.85E00	ID-HFEF-S5400-RH
N153C	39 - RH 55 gal TBO	ID321H	54.90	1.063E01	ID-HFEF-S5400-RH

History

Event Date/Time	Event Description	Reason

Container: ID0299
Type: 11 - 72-B Removable Lid OP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/14/2012
Waste Handling Code: RH
Disposal Date: 09/13/2012

History

Event Date/Time	Event Description	Reason
08/08/2012 17:37:56	INSERT DATA INTO THE DATABASE	
08/14/2012 15:50:06	SUCCESSFUL SUBMISSION FOR CERT	
08/14/2012 16:59:38	APPROVED FOR CERT	
08/15/2012 06:31:14	ASSIGNED TO PAYLOAD	

Working Copy

Waste Isolation Pilot Plant RECORDS INVENTORY AND DISPOSITION SCHEDULE (RIDS)	1. ☐DOE X Contractor	2. Page 1 of 78

3. Organization Unit (Creating or Custodial Unit) Washington TRU Solutions (WTS)/Retrieval, Characterization, and Transportation (RCT)/Central Characterization Project (CCP)/Contact Handled (CH) for All Sites 4021 National Parks Highway GSA 212 Carlsbad, New Mexico 88220	4. Date 7/16/2012

5. Signatures (of Appropriate Personnel)

COPY

Prepared By	Sheila Pearcy/CCP Lead Records Custodian	Sheila Pearcy 8/1/12 Date	N/A Records Liaison Officer	Date
Approved By	D.K. Ploetz CCP Manager	A.J. Fisher for D.K. Ploetz 8/1/12 Date	Records Officer Approval	Michael Fox 8/2/12 Michael Fox Date

6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
1	**CCP TRAINING DOCUMENTATION FILES** Documentation pertaining to the training and qualification of CCP Personnel.			

Waste Isolation Pilot Plant RECORDS INVENTORY AND DISPOSITION SCHEDULE (RIDS)	1. ☐DOE X Contractor	2. Page 2 of 78

6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
1a	<u>CCP CH Employee Individual Training/Qualification Documentation</u> Contractor employee individual folders that contain item 1.29.1a records AND also contain: attendance/completion records of training courses or sessions that include subjects dealing with hazardous materials directly applicable to the employee's job or position. Documents the training and qualification and requalification of CCP CH Personnel. May include but not limited to the following: appointment letters; qualification letters; correspondence; On-the-Job (OJT) records; completed exams; completed qualification cards; certificates of completion; test drum data sheets; training drum evaluation data sheets; resumes; and Waste Acceptance Plan (WAP) briefings. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **PRIVACY** **Quality Assurance (QA) Records/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alphabetically Inclusive Dates: 2000 to Present Location: CCP Records – Skeen Whitlock Building (SWB) and/or Waste Isolation Pilot Plant (WIPP) Records Archive (WRA)	ADM 1.29.1.b	Cut off at the time of separation or transfer of the employee. Screen out and destroy all item 1.29.1a(4) records. Transfer folders with remaining documents to the local Federal Records Center. Destroy 75 years after cutoff.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

Waste Isolation Pilot Plant RECORDS INVENTORY AND DISPOSITION SCHEDULE (RIDS)	1. ☐DOE X Contractor	2. Page 3 of 78

6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
1b	Employee Individual Medical Examination Contractor employee individual folders that contain only pass/fail and restrictions results of medical examinations. Documentation pertaining to the eye examinations performed on the Nondestructive Examination (NDE), Helium Leak Detector (HLD), and Pressure Change Leak Testing (PCLT) personnel on an annual basis. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **EPIDEMIOLOGICAL** **PRIVACY** **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alphabetically Inclusive Dates: 2000 to Present Location: CCP Records – SWB and/or WRA	ADM 1.29.1.a(4)	Cut off at the time of separation or transfer of the employee. Screen out and destroy all item 1.29.1a(4) records. Transfer folders with remaining documents to the local Federal Records Center. Destroy 4 years after cutoff.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

Waste Isolation Pilot Plant RECORDS INVENTORY AND DISPOSITION SCHEDULE (RIDS)	1. ☐DOE X Contractor	2. Page 4 of 78

6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
1c	<u>CCP Test Drum Audio/Video Media of Test Drum Qualification</u> Contractor employee individual folders that contain item 1.29.1a records AND also contain: attendance/completion records of training courses or sessions that include subjects dealing with hazardous materials directly applicable to the employee's job or position. Documents CCP audio/video media of qualification test performed by NDE personnel. This audio/video media of qualification test is performed by NDE personnel and is the second piece of the qualification. It supports the documentation captured on the supporting hard copy record(s). May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **PRIVACY** **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Audio/Video Tape or DVD (Primary and Backup) Filing Order: Alpha-Numeric Inclusive Dates: 2000 to Present Location: CCP Records - SWB and/or WRA	ADM 1.29.1.b	Cut off at the time of separation or transfer of the employee. Screen out and destroy all item 1.29.1a(4) records. Transfer folders with remaining documents to the local Federal Records Center. Destroy 75 years after cutoff.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

Waste Isolation Pilot Plant RECORDS INVENTORY AND DISPOSITION SCHEDULE (RIDS)	1. ☐DOE X Contractor	2. Page 5 of 78

6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
1d	CCP NDE Test Drum Inventories Documentation pertaining to the assembly of NDE test and training drums which are used to qualify radiography operators per CCP-PO-001, CCP Transuranic (TRU) Waste Characterization QA Project Plan (QAPjP) and CCP-QP-002, CCP Qualification and Training Plan. The drum assembly is representative of the Waste Matrix Codes (WMCS) for Waste Stream Profile Forms. CCP NDE Test Drum Inventory Sheet has the Test Drum Identification Number, Date, Summary Category Group, if it has a plastic liner and the contents of the drum. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Chronologically Inclusive Dates: 2000 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending National Archives and Records Administration (NARA) Approval.	UNSCHEDULED - Do Not Destroy -	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
2	**QA SUMMARY REPORTING, ASSESSMENT/AUDIT, AND SURVEILLANCE DOCUMENTATION** QA documentation pertaining to the reporting, assessment/audit, and surveillance activities of the CCP QA program. Includes the identification, classification, control, and correction of conditions adverse to quality and nonconforming items, activities, and processes associated with the CCP – all sites.			

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2 a	CCP CH Nonconformance Reports (NCRs) Audit and investigative case files and reports that pertain to environmental, health, and safety topics, cases or concerns. NCRs created for the CCP CH sites which document the process for identifying, documenting, controlling, evaluating, and dispositioning nonconforming items. May include Carlsbad Field Office (CBFO) notifications and supporting documentation such as copies of applicable procedures, etc. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2000 to Present Location: CCP Records - SWB and/or WRA	ADM 22.4	Cut off upon completion of audit or investigation. Destroy when 75 years old.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
2 b	NCR Log Reconciliation Report NCR Log Reconciliation Report documents and verifies that all NCR numbers at the end of each calendar year are reconciled against the Master Log and in the Nonconformance Report Module (NCRM). Includes as attachment the information from NCR logs. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Chronologically Inclusive Dates: 2004 to Present Location: CCP Records – SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
2 c	CCP Corrective Action Reports (CARs) Audit and investigative case files and reports that pertain to environmental, health, and safety topics, cases or concerns. CARs created for All CH Sites which document the process for identifying, documenting, controlling, evaluating, dispositioning, and verifying completion of corrective actions for conditions adverse to quality related to failures, malfunctions, deficiencies, and technical inadequacies. May include but not limited to supporting documentation such as copies of applicable procedures and/or Deficiency Evaluation Form if applicable. May also include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2000 to Present Location: CCP Records - SWB and/or WRA	ADM 22.4	Cut off upon completion of audit or investigation. Destroy when 75 years old.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
2 d	CCP CAR Logs Indexes, lists, registers, and other finding aids used only to provide access to records authorized for destruction. CAR log is a document that is used to assign unique CAR numbers. It identifies the numbers assigned for both issued and voided CARs. The numbering system helps to identify the individual CAR number, facility and facility designee number and the calendar year issued. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2000 to Present Location: CCP Records - SWB and/or WRA	ADM 23.9	Destroy or delete with the related records.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
2 e	CCP Surveillance Program Documentation Audit and investigative case files and reports that pertain to environmental, health, and safety topics, cases or concerns. Documentation pertaining to the planning, performing, documenting, and reporting independent surveillances of TRU CCP all sites waste characterization activities. Includes surveillance plan formats, surveillance reports and surveillance checklists. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2000 to Present Location: CCP Records - SWB and/or WRA	ADM 22.4	Cut off upon completion of audit or investigation. Destroy when 75 years old.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
2 f	Surveillance Log Indexes, lists, registers, and other finding aids used only to provide access to records authorized for destruction. Surveillance log is a document that is used to assign unique surveillance numbers. The numbering system helps to identify the individual surveillance number, facility and facility designee number and the calendar year issued. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Chronological Inclusive Dates: 2000 to Present Location: CCP Records - SWB and/or WRA	ADM 23.9	Destroy or delete with the related records.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
2 g	QA Trend Reports Audit and investigative case files and reports that pertain to environmental, health, and safety topics, cases or concerns. QA Trend Reports document trending and analyses of item characteristics and reliability, process implementation, and other quality-related information. It is used to identify items, services, activities, and processes that need improvements. **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Chronological Inclusive Dates: 2001 to Present Location: CCP Records - SWB and/or WRA	ADM 22.4	Cut off upon completion of audit or investigation. Destroy when 75 years old.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
3	**TEST PLAN/PROCEDURE DOCUMENTATION** Test plan/procedure documentation provides the method for test control of items that are considered to impact the quality of the characterization, certification, packaging, or transportation of waste for the CCP. The documents address requirements and responsibilities for testing activities performed to ensure items related to CCP activities meet established design, performance, and quality requirements. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Chronological Inclusive Dates: 2003 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
4	**CCP CH TRU SOFTWARE QA (SQA) Documentation** Database system development records and documentation records which support the maintenance and operation of tracking systems. CCP CH TRU SQA documentation pertains to the development, procurement, maintenance, and use of computer software that is important to the waste characterization and certification for the CCP CH. Includes but not limited to the following documentation for: Exempt Software; Commercial Off the Shelf (COTS) Software; Application within COTS; Qualified Supplier Software; Non-Qualified Supplier Software; and CCP Software. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Site and Alphabetically by Software Name Inclusive Dates: 2000 to Present Location: CCP Records – SWB and/or WRA	ENV 1.g(3)(b)	Destroy or delete upon authorized deletion of related system.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
5	**OPERATION LOGBOOKS** Logbooks listing significant action, daily surveillances and maintenance activities occurring during normal operations of applicable facility. Logbooks, log sheets (data record sheets) which are used for CCP personnel to document technical work processes and that are obtained during gathering activities. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/ Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2000 to Present Location: CCP Records - SWB and/or WRA	ENV 1.e(6)	Destroy when 75 years old.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
6	**CCP CH NONDESTRUCTIVE ASSAY (NDA) DOCUMENTATION** NDA is a series of measurement techniques that are applied to nuclear fuel and nuclear weapons materials. The techniques measure radiation induced or emitted spontaneously from the nuclear material. The measurements are nondestructive in that they do not alter the physical or chemical state of the material.			

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
6 a	CCP CH NDA Batch Data Reports (BDRs) NDA BDRs are the documentation that pertains to a series of measurement techniques that are applied to nuclear fuel and nuclear weapons materials. The techniques measure radiation induced or emitted spontaneously from the nuclear material. The measurements are nondestructive in that they do not alter the physical or chemical state of the material. The documentation in each BDR is from data generation level through the project level Verification & Validation (V&V) and includes Project Level Checklists. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2000 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
6 b	CCP CH NDA – Analytical Raw Data Analytical raw data generated during the NDA process on the systems software. It is captured on CDs and a primary and back up CD is created. This includes the Radioassay Raw Data Sheet Information. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Electronic – CDs Filing Order: Alpha-Numeric Inclusive Dates: 2000 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED - Do Not Destroy -	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
6 c	NDA Total Measurement Uncertainty (TMU) Reports TMU reports estimate the potential error in measurements taken by an assay system on a waste container within the waste stream. An NDA measurement of a waste container may deviate from the true value as a result of bias, random error, or a combination of the two. The TMU is composed of bias and random errors and is typically expressed as an interval extending below and above the measured value. TMU is used to determine whether the radioactivity of individual waste containers may exceed specific criteria. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2000 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
6 d	NDA Calibration Verification and Calibration and Validation Reports NDA Calibration and Validation Reports document the results of qualification testing of the Mobile Assay System for all CH sites. New active and passive calibrations are described together with results of testing using uranium, californium and plutonium sources. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates 2000 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED - Do Not Destroy -	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
6 e	NDA Six-Month Interfering Matrix Reports Reports documenting waste management activities for required compliance reports, dumpster violations, dangerous waste reports, and decay heat reports. The Six Month Summary of Weekly Interfering Matrix Report documents the requirements of the CH TRU Waste Acceptance Criteria (WAC) for the WIPP. It demonstrates that over the past six-month period, the operating range of the assay system has been tested in each applicable surrogate waste matrix and the instrument performance has been acceptable. The report is done every six months. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **EPIDEMIOLOGICAL** **QA Record/Nonpermanent/Validated by authorized signature and date** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2000 to Present Location: CCP Records - SWB and/or WRA	ENV 1.d.10(c)	Destroy 5 years after final closure of facility.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
6 f	NDA Hardware and Software Settings Form(s) NDA Hardware and Software Settings Form are used to document the hardware and software settings for the Drum Waste Assay System. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Chronological Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
6 g	NDA Performance Demonstration Plan (PDP) Documentation Waste management reports documenting waste management activities including hazardous waste reports, hazardous substance reports, waste characterization reports and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)/Resource Conservation and Recovery Act (RCRA) unit reports. Documentation pertaining to the CCP NDA PDP is to demonstrate the capability of each participating measurement facility to meet the data quality objectives stated in Department of Energy (DOE)/WIPP-02-3122, CH TRU WAC for the WIPP for assay of TRU waste. The PDP is used by CBFO to assess and approve characterization services for TRU waste. This is an annual requirement. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric for Cycle Inclusive Dates : 2000 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
6 h	Detector Dewar Fill Log Operating logbooks listing significant action, daily surveillances and maintenance activities occurring during normal operations of applicable facility. Detector Dewar Fill Log is used to document each time that the detector dewar is filled with Liquid Nitrogen (LN) as required. Fill date, initials of operator and comments if applicable are noted on the log. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized initials and date.** Media Type: Hard Copy Filing Order: Chronologically Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	ENV 1.e.6	Destroy when 75 years old.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
6 i	Mobile Imaging Passive Action Neutron (IPAN)/Gamma Energy Assay (GEA) Maintenance Checklist Operating logbooks listing significant action, daily surveillances and maintenance activities occurring during normal operations of applicable facility. Maintenance record CCP mobile IPAN/GEA Checklist is used to document weekly and/or monthly maintenance checks on the IPAN/GEA system which performs the NDA process. No longer generated at this time. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Equipment and Date Inclusive Dates: 2001 to 2006 Location: CCP Records - SWB and/or WRA	ENV 1.e.6	Destroy when 75 years old.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
7	**CCP CH NDE** NDE (Radiography) is a nondestructive qualitative and quantitative technique that involves x-ray scanning of waste containers to identify and verify waste container contents. NDE is used to examine every waste container to verify its physical form. It can detect prohibited items. NDE is also used to confirm that the physical form of the waste matches its waste stream description.			

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
7 a	CCP CH NDE BDRs CCP NDE BDRs processed on the Real Time Radiography (RTR) systems. NDE (Radiography) is a nondestructive qualitative and quantitative technique that involves x-ray scanning of waste containers to identify and verify waste container contents. NDE is used to examine every waste container to verify its physical form. It can detect prohibited items. NDE is also used to confirm that the physical form of the waste matches its waste stream description. BDR may include but not limited to the following: Cover Sheet, Batch Narrative, Independent Technical Review (ITR) Checklist, Independent Technical Supervisor (TS) Checklist, Radiography Data Sheet, Measurement Control Report, copies of NCR(s) if applicable and Site Project Manager (SPM) Checklists. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2000 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
7 b	Audio/Visual Media of The Radiography Scans Audio/Visual Media captured on DVDs while performing NDE of CH TRU waste containers using the RTR system. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date on supporting BDR.** Media Type: Audio/Visual VHS Tapes or DVDs Filing Order: Alpha-Numeric Inclusive Dates: 2001 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
7 c	CCP Radiography System Safety Checks CCP Radiography System Safety checks or Pre-Operational Checklists are completed during the actions for startup, daily operational safety checks, operations, and shutdown of RTR System that is used to perform RTR. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Chronological Inclusive Dates: 2001 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
7 d	NDE Fast Scanning Documentation NDE fast scanning documentation is done to screen candidate containers to determine if they qualify for the extensive formal certification process. Screening is defined as a preliminary check to determine if a drum contains obvious prohibited items such as free liquids. This process is not used to certify waste. Includes both the RTR Measurement Control Report and the RTR Drum Quick Screening Log Sheet. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). Media Type: Hard Copy Filing Order: Chronological Inclusive Dates: 2001 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
7 e	RTR Batch Weight Records CCP RTR Batch Weight Record is used to document the drum numbers, gross weight, tare weight, net weight, and percent fill of each drum being processed in a BDR in the NDE operations. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2002 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
7 f	CCP CH NDE Quarterly Reports Environmental monitoring reports provided to identify the progress on the environmental monitoring plans or on other related subjects. NDE quarterly reports pertain to the quarterly review performed on randomly selected data completed through SPM review, within the last 3 months time frame. The reports give information regarding the report of data generation level review, V&V performed on a minimum of one randomly chosen waste container each quarter. The SPM uses this information to document that the data generation level data review is being performed according to procedures. This includes the request and results correspondence. **QA Record/Lifetime/Validated by authorized signature and date on memorandum.** Media Type: Hard Copy Filing Order: Chronological and Quarter Number Inclusive Dates: 2001 to Present Location: CCP Records - SWB and/or WRA	ENV 1.d.8.a	Destroy when 75 years old. Cutoff when reports are superseded, obsolete, or canceled.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
8	**HEADSPACE GAS (HSG) BDRs** HSG BDRs are combined information derived from the HSG sampling process and preliminary sampling preparation activities, or from the HSG analytical process and post-analytical activities. Each BDR is for a batch of up to 20 HSG samples and may also include QA/Quality Control (QC) samples analytical only.			

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
8 a	<u>CCP HSG BDRs – Online</u> CCP HSG Sampling and analytical BDRs are derived from the HSG sampling or analytical processes and include preliminary sampling preparation activities (sampling only) or follow-up data processing activities for the Online system. CCP HSG BDRs are for combined information of analytical data from the analysis of TRU-mixed waste for a batch of up to 20 HSG or homogenous waste samples. These BDRs may include but are not limited to the following: Cover page, Table of Contents, Case Narrative, Operator's Checklist, ITR Checklist, TS Checklist, Form 1A Volatile Organic Analysis Data Sheet, Form 1A Duplicate Volatile Organic Analysis Data Sheet, Form 1E Volatile Organic Analysis Data Sheet Tentatively Identified Compounds (TIC), Form 3A On-line Control Sample (OCS) Accuracy Form, Form 3A Duplicate OCS Accuracy Form, Form 3B OCS/OCS Duplicate Precision Form, Form 3C Sample/Sample Duplicate Precision Form, Form 4A Volatile Organic Method Blank Summary, Form 5A Volatile Instrument Performance Check Bromofluorobenzene (BDB), Form 6A Volatile Organic Initial Calibration (ICAL) Data, Form 7A Volatile Organic Continuing Calibration Check, Form 8A Volatile Organic Internal Standard Report Area and Retention Time (RT) Summary, CCP HSG Drum Age Criteria (DAC) Form, Temperature Log, Freezer Temperature Data Log, and SPM Project Level Checklists. No longer generating new online data. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2001 to 2007 Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
8 b	CCP HSG ICAL Documentation ICAL documentation pertaining to both Gas Analysis and Solid Analysis processes in an analysis of analytical standards for series of different specified concentrations; used to define the linearity and dynamic range of instruments. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2000 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
8 c	CCP HSG Method Detection Limits (MDL) Documentation MDL documentation for both Gas Analysis and Solids Analysis processes which documents the data defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the value is above zero. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2000 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
8 d	CCP HSG Method Performance Documentation (MPD) These data packages consist of documentation generated during transport and receipt of field samples, sample movement in the laboratory, preparation for analysis, laboratory analyses output, raw and processed data, analytical results, reanalysis, QC sample results and instrument calibration data, plus a summary of final results for each batch. CCP HSG MPD is an analytical method that demonstrates through documented system and instrument tests, and participation in the HSG instrument tests and HGS PDP analysis of blind samples. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2000 to Present Location: CCP Records - SWB and/or WRA	ENV 5.c.1	Destroy in 75 years.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
8 e	CCP Needle Blank Documentation These records consist of control records pertaining to work performed in analytical laboratories. Documentation pertains to the process of taking 10 percent of the needles and performing a check to assure cleanliness. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Chronological Inclusive Dates: 2004 to Present Location: CCP Records - SWB and/or WRA	ENV 5.d	Destroy when 10 years old.	Retain in CCP Records. Destroy when 10 years old. Screen and purge annually.
8 f	CCP Equipment Blanks Documentation These records consist of control records pertaining to work performed in analytical laboratories. Documentation pertains to the process of taking 10 percent of the equipment and performing a check to assure cleanliness. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Chronological Inclusive Dates: 2004 to Present Location: CCP Records - SWB and/or WRA	ENV 5.d	Destroy when 10 years old.	Retain in CCP Records. Destroy when 10 years old. Screen and purge annually.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
8 g	HSG – Analytical Raw Data Analytical raw data generated during the HSG process on the Online System software. It is captured on CDs - primary and backup CD is created. **QA Record/Nonpermanent/Validated by authorized signature/initial and date.** Media Type: CD Filing Order: Alpha-Numeric Inclusive Dates: 2000 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
8 h	Container Filter Change Out Forms Container Filter Change Out Forms are used to document when a filter is replaced on a characterization drum. It identifies the container number, filter install date, filter model number, filter manufacturer date, filter serial number, filter torque value, and calibration information of torque wrench used to perform replacement. This form used to be called Drum Filter Change Out Form. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2000 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
8 i	CCP CH HSG BDRs – Summa Sampling CCP CH HSG – Summa BDRs are reports that document the manual sampling of HSG in TRU waste containers. The sampling is done using a side port needle attached to a SUMMA canister. After sampling the canisters are sealed and prepared for shipment/transport to a laboratory for analysis. The BDR may include but is not limited to the following: Cover Sheet, Table of Contents, ITR Checklist, TS Review Checklist, Facility Quality Assurance Officer (FQAO) Review Checklist, 72-Hour Temperature Equilibration Plots, copies of NCRs if applicable, Chain of Custody/Canister Tag, Sample Drum Data Form, Shipment Request (or equivalent), and SPM Project Level Checklist. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2004 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
8 j	<u>CCP CH Analysis of Gas Samples BDRs – Environmental Chemistry Laboratory (ECL)</u> CCP CH Analysis of Gas Samples BDRs are reports that document the analysis of gas samples of Volatile Organic Compound (VOC) in HSG samples contained in SUMMA® canisters. May include but not limited to the following: Data Report cover page and Table of Contents, Sample Identification Table/Analysis Request Form, Sample Custody Documents and Sample Tags, Sample Results, QA Measurement Results, Calibration Results, and Data Review Checklists and SPM Project Level Checklist. This includes BDRs for external sites such as Hanford and Advanced Mixed Waste TRU Program (AMWTP). May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2004 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
8 k	<u>CCP CH Analysis of Gas Samples BDRs – Raw Data Supporting Data Packages – ECL</u> CCP CH Analysis of Gas Samples BDRs raw data supporting data packages that document the analysis of gas samples of VOC HSG samples contained in SUMMA® canisters. These packages may contain but are not limited to the following: Raw Data/Instrument Printouts and copies of applicable pages of logbooks. This includes supporting documents to BDRs for external sites such as Hanford and AMWTP. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2004 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
8 1	CCP CH HSG Quarterly Reports Environmental monitoring reports provided to identify the progress on the environmental monitoring plans or on other related subjects. HSG quarterly reports pertain to the quarterly review performed on randomly selected data completed through SPM review, within the last 3 months time frame. The reports give information regarding the repeat of data generation level review, V&V performed on a minimum of one randomly chosen waste container each quarter. The SPM uses this information to document that the data generation level data review is being performed according to procedures. This includes the request and results correspondence. **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Chronological and Quarter Inclusive Dates: 2001 to Present Location: CCP Records - SWB and/or WRA	ENV 1.d.8.a	Destroy when 75 years old. Cutoff when reports are superseded, obsolete, or canceled.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
8 m	HSG PDP Documentation Hazardous waste reports, hazardous substance reports, waste characterization reports, CERCLA/RCRA unit reports. Documentation pertaining to the CCP HSG PDP is to demonstrate the capability of each participating measurement facility to meet the data quality objectives stated in DOE/WIPP-02-3122, CH TRU WAC for the WIPP for assay of TRU waste. The PDP is used by CBFO to assess and approve characterization services for TRU waste. This is an annual requirement. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: PDP Number and Process Inclusive Dates: 2000 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
8 n	HSG Random Sample Selection Memorandums HSG Random Sample Memorandums document the random selection for HSG sampling and analysis. It includes at a minimum a memorandum identifying the random selection with attached HSG Random Sample Selection Listing. **QA Record/Nonpermanent/Validated by authorized signature and date on memorandum.** Media Type: Hard Copy Filing Order: Chronological Inclusive Dates: 2001 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
9	**FLAMMABLE GAS ANALYSIS (FGA) DOCUMENTATION** FGA documentation pertains to the process to establish the concentration of flammable gas/ VOCs, hydrogen and methane in a waste container intended for shipment.			
9 a	FGA BDRs FGA BDRs are generated at all CH sites to establish the concentration of flammable gas/VOCs, hydrogen, and methane in a waste container intended for shipment. Procedure used is DOE/WIPP-06-3345. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2005 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
9 b	CCP FGA ICAL Documentation CCP FGA ICAL documentation is an analysis of analytical standards for series of different specified concentrations; used to define the linearity and dynamic range of the response of the mass spectrometer or electron capture detector to the target compounds. Procedure used is DOE/WIPP-06-3345. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2005 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
9 c	CCP FGA MDL Documentation CCP FGA MDL documentation pertains to and is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the value is above zero. Procedure used is DOE/WIPP-06-3345. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2005 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
10	**SOLIDS SAMPLING BDRs** Documentation pertaining to the process of Solids Sampling which is the random sample collection and sample data collection.			
10 a	Solids Sampling BDRs Documentation pertaining to the process of Solids Sampling which is the random sample collection and sample data collection. The BDR may include but is not limited to the following: Sample Tracking Form, Sample Chain-of-Custody Form, Sampling ITR Checklist, Sampling TS Review Checklist, Sampling FQAO Review Checklist, Sampling BDR – Table of Contents, Solids Sampling BDR – Cover Sheet, Copy of CCP Waste Visual Examination (VE) Technique Data Form, Copy of NCR(s) if applicable, Temperature Data Logger Sheets, Certification of Cleanliness for Sampling Equipment, and V&V Checklists. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2004 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
10 b	Solids Analysis BDRs – Analytical Laboratories Department (ALD) Data packages consisting of documentation generated during transport and receipt of field samples, sample movement in the laboratory, preparation for analysis, laboratory analyses output, raw and processed data, analytical results, reanalysis, QC sample results and instrument calibration data, plus a summary of final results for each batch. CCP CH Analysis of Solid Sample BDRs are reports that document the analysis of solid samples of VOC, non-halogenated volatile compounds (NHVOC), semi-volatile compounds (SVOC), and Metals. May include but not limited to the following: Data Report, Cover Page, Table of Contents, Sample Custody Documents, Sample Results, QC Results, Calibration Results, Data Review Checklists and SPM Project Level Checklist. This includes BDRs for external sites. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2004 to Present Location: CCP Records - SWB and/or WRA	ENV 5.c.1	Destroy in 75 years.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
10 c	CCP Solid Analysis BDRs – Raw Data Supporting Data Package (ALD) CCP CH Solid Analysis BDRs raw data supporting data packages that document the analysis of VOC, NHVOC, SVOC and Metals in solid analysis. These packages may contain but are not limited to the following: Raw Data/Instrument Printouts, copies of applicable pages of Digestion Record and copies of applicable pages of logbooks. This is supporting documents to all solids analysis BDRs for external sites such as Hanford and AMWTP. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2004 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
10 d	Solids Sampling Random Selection Memorandum Solids Sampling Random Selection Memorandums document the random selection for solids sampling and analysis. It includes at a minimum a memorandum identifying the random selection with attached Solids Random Sample List/Waste Stream Container List. **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Chronological Inclusive Dates: 2004 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
10 e	Instrument Detection Limit (IDL) Determination Files IDL determination files pertain to the documentation of the detection limits of the equipment. It is performed every six months. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Chronological Inclusive Dates: 2007 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
10 f	Interelement Interference Correction Factor (IECF) Determination Files IECF determination files document that Inductively Coupled Plasma (ICP) wavelengths of the metal is used to determine the concentration of metals. Metals have several wavelengths and overlap/interfere with other metals; therefore a correction factor must be determined. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Chronological Inclusive Dates: 2007 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
10 g	Documented Linear Range (DLR) Determination Files DLR Determination Files pertain to the concentration of the high calibration standard and are applicable only for a specific analyte, instrument, and set of operating conditions. A DLR may be used for up to six months after its determination date. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Chronological Inclusive Dates: 2007 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
10 h	Completed Chain-of-Custody Forms Data packages consisting of documentation generated during transport and receipt of field samples, sample movement in the laboratory, preparation for analysis, laboratory analyses output, raw and processed data, analytical results, reanalysis, QC sample results and instrument calibration data, plus a summary of final results for each batch. Chain-of-Custody Forms which have been completed document all transfers of sample custody from collection to disposal. The form contains at a minimum, the sample numbers, the date and times of transfers, and the signatures of the relinquishing and accepting parties. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2007 to Present Location: CCP Records - SWB and/or WRA	ENV 5.c.1	Destroy in 75 years.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
10 i	Solid PDP Documentation Hazardous waste reports, hazardous substance reports, waste characterization reports, CERCLA/RCRA unit reports. Documentation pertaining to the CCP solid PDP is to demonstrate the capability of each participating measurement facility to meet the data quality objectives stated in DOE/CBFO-95-1077 Performance Program Plan for RCRA Constituent Analysis of Solidified Waste. The PDP is used by CBFO to assess and approve characterization services for TRU waste. This is an annual requirement. Procedure used is DOE/CBFO-95-1077. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: PDP Number and Process Inclusive Dates: 2004 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
11	**PRECISION and ACCURACY (P&A) DEMONSTRATION FILES** P&A Demonstration Files pertain to the demonstration of the method performance before analyzing any samples. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Chronological Inclusive Dates: 2004 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
12	**RT WINDOW DETERMINATION FILES** The RT window is crucial to the identification of target compounds. The window is determined by using +/- three times the standard deviation of the mean RT. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2007 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
13	**GAS GENERATION TESTING (GGT) DOCUMENTATION** Documentation on the GGT which is used to collect off-gases generated from a waste drum, and to analyze the Hydrogen/Methane (H_2/CH_4) generation rate and the total gas generation of the drum.			

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
13 a	GGT BDRs GGT BDRs are data compiled to generate characterization data and data reviews on the GGT process of collecting off-gases generated from the waste drums being processed through the characterization process. Includes Cover Sheet, Table of Contents, Case Narrative, Continuing Calibration Verification (CCV) Report, Sample Duplicate Report, Blank Report, Drum Data Sheets, Gas Generation Testing Program (GGTP), ITR Form, Raw Data, GGTP Drum Selection and Batching, GGTP Isolation Checklist, Copy of NCRs – if applicable, and the SPM Checklist Form. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2005 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
13 b	GGT Hydrogen ICAL GGT ICAL is documentation of analysis of analytical standards for series of different specified concentrations; used to define the linearity and dynamic range of the response of the mass spectrometer or electron capture detector to the target compounds. Includes but not limited to the following: Raw Data printouts and Calibration Report. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2005 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
13 c	<u>GGT MDL Documentation</u> GGT MDL is documentation that pertains and is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the value is above zero. Includes but is not limited to the following: Raw Data print outs and Determination of MDLs, Corresponding %R and %RSD form Attachment 1. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2005 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
13 d	<u>GGT CCP Unified Flammable Gas Test Procedure (UFGTP) Reports</u> GGT CCP UFGTP Report pertains to whether a test category payload container demonstrates compliance with the fg/voc limits. The long-term objective of the UFGTP is to improve waste shipability for specific populations of waste arriving at more realistic gas generation rates based on the results of measurement and testing. Includes the following: Cover page, Long-Term Objective Population Identification Report or equivalent, Long-Term Objective Subpopulation Selection Report or equivalent, Long-Term Objective Subpopulation Data Compilation Report or equivalent, Long-Term Objective Subpopulation Data Evaluation Report or equivalent, and Long-term Objective Summary Report. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2005 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
14	**<u>VE BDRs</u>** VE constitutes opening a container and physically examining its contents and verifying its physical form. VE is also used to confirm that the physical form of the waste matches its waste stream description. Removal of prohibited items can be performed in this process.			

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
14 a	CCP CH VE BDRs CCP CH VE BDRs is documentation regarding the process of opening a container and physically examining its contents and verifying its physical form. VE is also used to confirm that the physical form of the waste matches its waste stream description. Removal of prohibited items can be performed in this process. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2000 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
14 b	Audio/Visual Recording Tapes or DVDs of VE Audio/Visual recordings created while performing VE of CH TRU waste containers. These Audio/Visual recordings are matched to an associated VE BDR. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date on associated BDR.** Media Type: Audio/Visual Tapes and DVDs Filing Order: Alpha-Numeric Inclusive Dates: 2000 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
14 c	Prohibited Items Removal Checklist Prohibited Items Removal Checklist is a form utilized to document the removal of prohibited items found in characterization drums. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Date Inclusive Dates: 2003 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
14 d	Remediation Data Forms Remediation Data Forms used during the CCP Standardized Prohibited Item Remediation process performed in CCP-TP-036. This is a VE activity. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2005 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
14 e	CCP CH VE Quarterly Reports Environmental monitoring reports provided to identify the progress on the environmental monitoring plans or on other related subjects. VE quarterly reports pertain to the quarterly review performed on randomly selected data completed through SPM review, within the last 3 months. The reports give information regarding the repeat of data generation level review, V&V performed on a minimum of one randomly chosen waste container each quarter. The SPM uses this information to document that the data generation level data review is being performed according to procedures. This includes the request and results correspondence. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature and date on memorandum.** Media Type: Hard Copy Filing Order: Chronological and Quarter Inclusive Dates: 2001 to Present Location: CCP Records - SWB and/or WRA	ENV 1.d(8)(a)	Destroy when 75 years old. Cutoff when reports are superseded, obsolete, or canceled.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
15	**CCP ACCEPTABLE KNOWLEDGE (AK) DOCUMENTATION** AK documentation supports the knowledge used for waste characterization, which is based on the materials and processes used to generate waste. AK includes information about the physical form of the waste, the base materials composing the waste (especially hazardous and radioactive materials) and the process that generated the waste. AK is used to define waste streams, assign summary categories, assign United States Environmental Protection Agency (EPA) hazardous waste numbers, estimate the weight fraction of cellulose, plastic, and rubber (CPR), and estimated isotopic ratios.			

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
15 a	CCP CH AK Documentation AK documentation is compiled, reviewed, evaluated, confirmed and reported. It supports the related AK Summary Report. The following documentation may include but is not limited to: AK Documentation Checklist; Record of Communication; AK Source Document Summary - Attachments 3- may included attached CCP generated source documents – prior to 11/01/2010 the Attachment 3's included as attachment both the site generated and CCP generated source documents; AK Source Document Reference List; Hazardous Constituents Waste Form(s); Waste Form, Waste Material Parameters, Prohibited Items and Packaging Forms with Waste Material Parameter Evaluation Memorandum; Radionuclides Forms – may include Nondestructive Assay (NDA) Memorandum; Waste Containers List – may have additional Memorandums as addendums to the Attachment 8; Acceptable Knowledge Re-evaluation Checklist; AK Source Document Discrepancy Resolution – includes AK Source Document Source Summary Forms as attachments; CCP Waste Stream Characterization Checklist; CCP TRU Waste Correlation and Surrogate Summary Form; AK Sufficiency Determination Request - memorandum and SPM notifications (emails, letters, memorandums, etc.), as applicable. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature/initial and date.** Media Type: Hard Copy Filing Order: Site and AK Report or AK Library and/or Waste Stream Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
15 b	AK Historical Source Documents AK historical source documents are external records that have been generated by the waste generating sites. Copies are collected and submitted to support the listing of AK source documents referenced in the correlating AK Summary Report. They may be categorized as follows: Correspondence; Documents; Miscellaneous; Procedures and Published Documents; Discrepancy Resolution; and Unpublished Documents. These records must be maintained in parallel to the correlating AK Document Summaries and CCP source documents. Media Type: Electronic - PDF files, databases, video Filing Order: Site, AK Report or AK Library Inclusive Dates: November 2010 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer with related AK Record Set. Transfer to the WRA within one year for storage and retention.
15 c	Reconciliation with Data Objective Reports Reconciliation with Data Objective Reports includes the Data Reconciliation and Reporting Routing Sheet, Reconciliation with Data Objective, WIPP Waste Stream Profile, and Characterization Information Summary. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Site, AK Report and Waste Stream Inclusive Dates: 2001 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
15 d	HSG Summary Data Report HSG Summary Data Report includes the Correlation of Container ID Numbers to HSG Sample ID Number Form, UCL_{90} Evaluation Form, Data Evaluation Narrative, Waste Stream Lot TIC and SPM Narrative. It may also include the Radiography/VE Comparison Report (with copy of trending chart) and Miscertification Rate Calculations. **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Site AK Report and Waste Stream Inclusive Dates: 2001 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
15 e	Solids Summary Data Reports Solids Summary Data Report include but are not limited to the Inter-Office Correspondence, Correlation of Container ID Numbers to Solid Sample ID Numbers, CCP Totals analysis VOC UCL_{90} Evaluation Form, CCP Totals Analysis SVOC, UCL_{90} Evaluation Form, CCP Totals Analysis Metals UCL_{90} Evaluation Form, CCP Data Evaluation Narrative (VOC), CCP Data Evaluation Narrative (SVOC), CCP Data Evaluation Narrative (Metals), Waste Stream Lot TIC and SPM Evaluation Narrative. **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Site and Waste Stream Inclusive Dates: 2004 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
15 f	Miscertification Rate Calculations Miscertification Rate Calculations documentation pertains to data from the VE that is used to determine the percentage of miscertified waste containers from radiographic examination. The miscertification rate is used to calculate the number of waste containers that shall be visually examined. The site-specific miscertification rate is applied to each Summary Category Group. The site-specific miscertification rate is reassessed annually. **This is no longer performed in the program since the permit change of November 16, 2006.** **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Site and Waste Stream Inclusive Dates: 2001 to 2006 Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
15 g	VE Random Selections VE random selection documentation pertains to a statistically selected portion of the certified waste containers that will be opened and visually examined as a QC check on the radiographic examination of waste containers. Data obtained from VE is used to verify the matrix parameter category, waste material parameter weights, and absence of prohibited items determined by radiography. Random selection is reassessed annually. **This is no longer performed in the program since the permit change of November 16, 2006.** **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Site and Waste Stream Inclusive Dates: 2001 to 2006 Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
15 h	<u>AK Summary Reports</u> Hazardous waste reports, hazardous substance reports, waste characterization reports, CERCLA/RCRA unit reports. AK Summary Reports are documentation which supports the knowledge used for waste characterization, which is based on the materials and processes used to generate a waste. AK reports include information about the physical form of the waste, the base materials composing the waste (especially hazardous and radioactive materials) and the process that generated the waste. AK reports define waste streams, assign summary categories, assign EPA hazardous waste numbers, estimate the weight fraction of CPR, and estimated isotopic ratios. May include but is not limited to the following record: Final document; Documentation that demonstrates approval by designated individuals; Comments and comment resolution (attachments, Document Review Resolution (DRR), emails, letter, etc.); Document revision requests (i.e., initial markup) and DOE/CBFO submittal email within five days of project level review. **QA Report/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Site and Waste Stream Inclusive Dates: 2000 to Present Location: CCP Records - SWB and/or WRA	ENV 1.d.10.a	Permanent. Cutoff when waste is disposed of. Transfer to NARA 25 years after cutoff.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
15 i	AK Accuracy Report AK Accuracy Reports document that the AK accuracy is evaluated either on a lot or waste stream basis. The report documents the results of the evaluation for containers in a waste stream. It may include but is not limited to Inter-Office Correspondence with attached CCP AK Accuracy Report and CCP Correlation of Container Identification Numbers to BDR Numbers. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Site, AK Report and Waste Stream Inclusive Dates: 2000 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
15 j	CCP CH AK Container Tracking Spreadsheet Waste management system which tracks waste from creation through transportation, processing, storage; and reporting tracking records. AK Container Tracking Spreadsheet is a spreadsheet that identifies the following minimum criterion for each container listed in the waste stream: Container ID, Waste Stream ID, generation date, vent date, change reason, new closure date, new vent date, container type. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Electronic Filing Order: N/A Inclusive Dates: 2000 to Present Location: CCP Records - SWB and/or WRA	ENV 1.g(3)(a)	Delete or destroy when related records are destroyed, or 75 years from creation, whichever occurs later.	Print out after completion of waste stream shipment to WIPP. Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
16	**WASTE DATA SYSTEM (WDS) FORMERLY WIPP WASTE INFORMATION SYSTEM (WWIS) DOCUMENTATION** The WDS is an on-line database system used to document information pertaining to waste, including but not limited to waste container characterization and certification data, produce reports, record shipment configuration details, disposal locations and disposal dates.			

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
16 a	CCP WDS Documentation CCP WDS packages are created during the process of entering data into the WDS and reporting data on TRU waste. The WDS is a database system that requires input from waste generator sites for shipment of TRU waste payload containers and payload assemblies that are intended for disposal at WIPP. CCP represents the generator sites as the generator and provides input to WDS on behalf of generator sites. These CCP WDS packages contain, but are not limited to, spreadsheets, reports, and correspondence associated with data CCP submits to WDS electronically. **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Site and Batch Number Inclusive Dates: 2001 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
16 b	Overpack Loading Forms Documentation pertaining to 55 gallon drums that are overpacked in ten-drum overpack (TDOP)'s and standard waste boxes. Forms include information such as container ID's, surface dose rates, and filter information. Data from these forms is required for data input into WDS. The forms are the TDOP Loading form and the standard waste boxes Loading Form. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Site and Batch Number Inclusive Dates: 2001 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
16 c	Radiological Surveys Radiological Surveys are performed to document levels of radiation, contamination conditions of the containers going through the characterization process for CCP CH. These are external records generated by the generator sites. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Drum or Rad Survey Number Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

Waste Isolation Pilot Plant RECORDS INVENTORY AND DISPOSITION SCHEDULE (RIDS)	1. ☐DOE X Contractor	2. Page 67 of 78

6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
17	**CCP TRANSPORTATION DOCUMENTATION** Transuranic shipment records includes records prepared by the waste generator and other related documentation. CCP transportation packages created during the preparation and transport of drums for burial at the WIPP. May include but not limited to: Payload Container Transportation Certification Document, Uniform Hazardous Waste Manifest, Public Burden Statement, Straight Bill of Lading – Short Form, Land Disposal Restriction Exemption Notification, Dunnage Certification Statement, Container Integrity Checklist, and Varian Porta-Test Leak Detector Calibration Record. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **EPIDEMIOLOGICAL** **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2001 to Present Location: CCP Records - SWB and/or WRA	ENV 2.d(4)	Destroy after 5 years.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
18	**CCP PROCEDURES, PLANS and REPORTS** CCP Procedures, plans, and reports document record packages may include but is not limited to the following record: Final document; Documentation that demonstrates approval by designated individuals; Comments and comment resolution (attachments, DRR, emails, letter, etc.); Document revision requests (i.e., initial markup) and DOE/CBFO submittal email within five days of project level review. This line item is separate from AK Summary Reports. **QA Record/Nonpermanent/Validated by authorized signature and date for hard copy file and login and password of authorized personnel.** Media Type: Hard Copy/Electronic Filing Order: Alpha-Numeric Inclusive Dates: 2000 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
19	**CONFIGURATION MANAGEMENT DOCUMENTATION for EQUIPMENT** Configuration management documentation for equipment pertains to the control and oversight of all CCP Mobile Characterization Equipment (MCE) and transportation equipment.			

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
19 a	Measuring and Test Equipment (M&TE) Documentation M&TE pertains to documents that ensures equipment used for inspection and testing are properly controlled, calibrated, and maintained. This includes but is not limited to the following: Notice of Deficiency, Manufacturer's Certificate of Calibrations, Calibration Interval Documentation, Exemptions and Temporary Extensions and Evaluations/Impact Studies using Out-of-Tolerance Evaluations, as applicable. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Equipment and Date Inclusive Dates: 2000 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
19 b	<u>EPA Tier 1 and Tier 2 Documentation</u> Tier 1 and Tier 2 documentation pertains to the characterization change authorization of the EPA approved waste characterization processes for NDA and VE. Tier changes are documented by memorandum which is the notification of the required change to the waste characterization process. May include various documents. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by appropriate authorized signature and date.** Media Type: Hard Copy Filing Order: Chronological Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
19 c	Radioactive Sources Certificates of Compliance Radioactive Material Packing and Shipping Records include the Certificates of Compliance. Certificates of Compliance for radioactive sources used to calibrate the NDA systems or when performing a function where a source is required to be used in the process. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **EPIDEMIOLOGICAL** **QA Record/Nonpermanent/Validated by Manufacturer's signature and date.** Media Type: Hard Copy Filing Order: Equipment and Date Inclusive Dates: 2001 to Present Location: CCP Records - SWB and/or WRA	ADM 18.48	Destroy 5 years after Certificate of Compliance has terminated, unless information is received indicating that renewed use is definitely anticipated.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
20	**CCP CH PROCUREMENT RECORDS** Procurement records generated in the acquisition of goods and non-personnel services.			

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
20 a	CCP CH Procurement Documentation CCP procurement records that were generated in the acquisition of goods and non-personnel services for CH generator sites. Includes but not limited to the following: Purchase Requisitions/Change Notices; Purchase Orders/Change Notices; Statements of Work; Specifications/Drawings; Qualified Suppliers List (QSL) and attachments; Approval/Variation Requests, and copies of the QA Grading Level Determination Checklist. This is for Quality Level 1 and 2 procurement only. This is held by WTS until completion. **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Purchase Order Number Inclusive Dates: 2000 to Present Location: CCP Records - SWB and/or WRA and WTS Procurement	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
20 b	CCP CH Receipt Inspection Verification Sheets (RIVS) RIVS and supporting documentation (certificates of analysis/conformance/compliance, calibration certificates, etc.) pertaining to quality source and receipt activities in support of the CCP CH's waste characterization mission. This was named Source Receipt Inspection Verification Sheets (SRIVS) but is now called as titled above (RIVS). May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric - Purchase Order Inclusive Dates: 2002 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
21	**STANDING ORDERS** Documentation that is a means for management to communicate short-term direction to operators and the documented quarterly review of standing orders. Information such as special operations, data collection, potting process parameters and other similar short-term matters may be included in standing orders. Standing orders are not used to deviate from procedures but supplement procedures until the procedure can be revised. Includes Standing Order Log. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2000 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in office until completion of characterization process for each site. Transmit to CCP Records to be maintained until no longer needed to support audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
22	**OPERATOR AIDS** Documentation that is used to provide information useful to operators in performing their duties and the semi-annual review of operator aids are still necessary and current. Operator aids may be in many forms such as the latest revision pages out of procedures, handwritten notes, and information tags. Operator aids are viewed as a convenience to the operator, not administrative/technical requirements and or direction. Operator aids that are assigned unique numbers may supplement approved procedures, but shall not be used in lieu of approved procedures. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2000 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in office until completion of characterization process for each site. Transmit to CCP Records to be maintained until no longer needed to support audits. Transfer to the WRA within one year for storage and retention.
23	**CONTAINER MANAGEMENT DOCUMENTATION** Container management documentation pertains to the CCP management control and tracking of TRU waste containers during the characterization process.			

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
23 a	<u>CCP Daily Container Management Forms</u> Documentation which helps in the CCP management, control and tracking of TRU waste containers during the characterization process. Daily Container Management Forms pertain to the inspection of a TRU waste container to determine if the drum can be safety handled and whether repackaging will be required prior to CCP waste characterization or shipment. These forms may have different titles such as Container Inspection Reports, Container Integrity Reports and Daily Production Reports. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Chronologically Inclusive Dates: 2000 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
23 b	CCP Scale Calibration Check and Container Weight Information Documentation used to perform a check on the scale used during handling of the drum to acquire the weight of each drum to be processed through the characterization process. Also captures the drums weight and who performed the task. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Chronologically Inclusive Dates: 2001 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
23 c	CCP Container Travelers CCP Container Travelers are a form that shows the management, control and tracking of waste containers during the characterization process. Form shows the container ID number, waste stream, weight, external temperature and the initials and dates of various NDE, NDA, HSG, VE and GGT personnel. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2004 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval.	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
24	**WEEKLY CONDUCT of OPERATIONS – WALK-DOWN CHECKLIST** Records which notify or support worker protection and safety. Weekly Conduct of Operations – Walk-Down Checklists are performed on a weekly basis to provide a walk-down of the equipment and area around the equipment. Documents general safety, housekeeping, procedures, radiological controls, basic and conduct of operations. This is done for all characterization equipment at the Idaho National Laboratory (INL) Site. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **EPIDEMIOLOGICAL** **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Chronological Inclusive Dates: February 2008 to Present Location: CCP Records - SWB and/or WRA	ENV 1.b(5)(a)	Destroy after 5 years.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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Waste Isolation Pilot Plant RECORDS INVENTORY AND DISPOSITION SCHEDULE (RIDS)	1. ☐DOE X Contractor	2. Page 1 of 47

3. Organization Unit (Creating or Custodial Unit)	4. Date
Washington TRU Solutions (WTS)/Retrieval, Characterization, and Transportation (RCT)/Central Characterization Project (CCP)/Remote Handled (RH) for All Sites **4021 National Parks Highway, GSA 212** **Carlsbad, New Mexico 88220**	07/09/2012

COPY

5. Signatures (of Appropriate Personnel)

Prepared By	Sheila Pearcy – Lead Records Custodian	7/19/12 Date	N/A Records Liaison Officer		Date
Approved By	D.K. Ploetz CCP Manager	7/19/12 Date	Records Officer Approval	Michael Fox	7/23/12 Date

6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
1	**CCP RH TRAINING DOCUMENTATION FILES** Documentation pertaining to the training and qualification of CCP RH Personnel.			

Waste Isolation Pilot Plant RECORDS INVENTORY AND DISPOSITION SCHEDULE (RIDS)	1. ☐DOE X Contractor	2. Page 2 of 47

6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
1(a)	<u>CCP RH Employee Individual Training/Qualification Documentation</u> Contractor employee individual folders that contain item 29.1.a records AND also contain: attendance/completion records of training courses or sessions that include subjects dealing with hazardous materials directly applicable to the employee's job or position. Documents the training and qualification and re-qualification of CCP RH Personnel. May include but not limited to the following: appointment letters; qualification letters; correspondence; On-the-Job (OJT) records; completed exams; completed qualification cards; certificates of completion; test drum data sheets; training drum evaluation data sheets; resumes; and Waste Acceptance Plan (WAP) briefings. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **PRIVACY** **Quality Assurance (QA) Records/Nonpermanent/ Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alphabetically Inclusive Dates: 2005 to Present Location: CCP Records – Skeen Whitlock Building (SWB) and/or Waste Isolation Pilot Plant (WIPP) Records Archive (WRA)	ADM 1.29.1.b	Cut off at the time of separation or transfer of the employee. Screen out and destroy all item 1.29.1.a.(4) records. Transfer folders with remaining documents to the local Federal Records Center. Destroy 75 years after cutoff.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
1(b)	Employee Individual Medical Examination Contractor employee individual training folders containing ONLY the following, results of medical examinations (only pass/fail and restrictions); balance of results are to be retained in the medical file. Documentation pertaining to the eye examinations performed on the Nondestructive Examination (NDE), Helium Leak Detector (HLD), and Pressure Change Leak Testing (PCLT) personnel on an annual basis. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **EPIDEMIOLOGICAL** **PRIVACY** **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alphabetically Inclusive Dates: 2005 to Present Location: CCP Records – SWB and/or WRA	ADM 1.29.1.a.4	Cut off at the time of separation or transfer of the employee. Screen out and destroy all item 1.29.1a(4) records. Transfer folders with remaining documents to the local Federal Records Center. Destroy 4 years after cutoff.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
1(c)	CCP Test Drum Audio/Video Media of Test Drum Qualification Contractor employee individual folders that contain item 29.1.a records AND also contain: attendance/completion records of training courses or sessions that include subjects dealing with hazardous materials directly applicable to the employee's job or position. Contains CCP audio/video media of qualification test performed by NDE personnel. This audio/video media of qualification test is performed by NDE personnel and is the second piece of the qualification. It supports the documentation captured on the supporting hard copy record(s). May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **PRIVACY** **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Audio/Video Tape or DVD (Primary and Backup) Filing Order: Alpha-Numeric Inclusive Dates: 2005 to Present Location: CCP Records - SWB and/or WRA	ADM 1.29.1.b	Cut off at the time of separation or transfer of the employee. Screen out and destroy all item 1.29.1a(4) records. Transfer folders with remaining documents to the local Federal Records Center. Destroy 75 years after cutoff.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
1(d)	CCP NDE Test Drum Inventories Documentation pertaining to the assembly of NDE test and training drums which are used to qualify radiography operators per CCP-PO-001, CCP Transuranic (TRU) Waste Characterization QA Project Plan (QAPjP) and CCP-QP-002, CCP Qualification and Training Plan. The drum assembly is representative of the Waste Matrix Codes (WMCs) for Waste Stream Profile Forms. CCP NDE Test Drum Inventory Sheet has the Test Drum Identification Number, Date, Summary Category Group, if it has a plastic liner and the contents of the drum. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Chronologically Inclusive Dates: 2005 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending National Archives and Records Administration (NARA) Approval	UNSCHEDULED - Do Not Destroy -	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
2	**CCP RH CORRECTIVE ACTION MANAGEMENT DOCUMENTATION** Documentation pertaining to the identification, classification, control, and correction of conditions adverse to quality and nonconforming items, activities, and processes associated with the CCP RH – All Sites.			

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
2(a)	CCP RH Nonconformance Reports (NCRs) Audit and investigative case files and reports that pertain to environmental, health, and safety topics, cases or concerns. NCRs created for the CCP RH sites which document the process for identifying, documenting, controlling, evaluating, and dispositioning nonconforming items. May include Carlsbad Field Office (CBFO) notifications and supporting documentation such as copies of applicable procedures, etc. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	ADM 22.4	Cutoff upon completion of audit or investigation. Destroy when 75 years old.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
2(b)	NCR Log Reconciliation Report NCR Log Reconciliation Report documents and verifies that all NCR numbers at the end of each calendar year are reconciled against the Master Log and in the Nonconformance Report Module (NCRM). Includes as attachment the information from NCR logs. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Chronologically Inclusive Dates: 2005 to Present Location: CCP Records – SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process or when no longer needed in project files to support daily functions or audits. Transfer to the WRA for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
2(c)	CCP RH Corrective Action Reports (CARs) Audit and investigative case files and reports that pertain to environmental, health, and safety topics, cases or concerns. CCP RH CARs created for all RH sites which document the process for identifying, documenting, controlling, evaluating, dispositioning, and verifying completion of corrective actions for conditions adverse to quality related failures, malfunctions, deficiencies, and technical inadequacies. May include supporting documentation such as copies of applicable procedures and/or Deficiency Evaluation Form if applicable, Corrective Action Plan and CBFO Notifications. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	ADM 22.4	Cut off upon completion of audit or investigation. Destroy when 75 years old.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
2(d)	CCP RH CAR Log Indexes, lists, registers, and other finding aids used only to provide access to records authorized for destruction. CAR log is a document that is used to assign unique CAR numbers. It identifies the numbers assigned for both issued and voided CARs. The numbering system helps to identify the individual CAR number, facility and facility designee number and the calendar year issued. **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy/Electronic Filing Order: Chronologically Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	ADM 23.9	Destroy or delete with the related records.	Print out at the end of each calendar year. Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
2(e)	<u>CCP RH Trend Reports</u> Audit and investigative case files and reports that pertain to environmental, health, and safety topics, cases or concerns. CCP RH Trend Reports are a review and evaluation of NCRs and CARs generated during the designated reporting period. Reports show negative trends such as quantities of NCRs or CARs generated by site, quantities and types of NCRs/CARs by process, identification of types of nonconformance by process, and programmatic noncompliance by trend codes. **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Chronologically Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	ADM 22.4	Cut off upon completion of audit or investigation. Destroy when 75 years old.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
3	**CCP RH OPERATION LOGBOOKS** Logbooks listing significant action, daily surveillances and maintenance activities occurring during normal operations of applicable facility. Operational Logbooks are used for CCP RH personnel to document technical work processes and daily activities during characterization activities. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	ENV 1.e.6	Destroy when 75 years old.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
4	**CCP QA SUMMARY REPORTING, ASSESSMENT/AUDIT, AND SURVEILLANCE DOCUMENTATION** QA documentation pertaining to the reporting, assessment/audit, and surveillance activities of the CCP RH QA program.			

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4(a)	<u>CCP RH Surveillance Program Documentation</u> Audit and investigative case files and reports that pertain to environmental, health, and safety topics, cases, or concerns. Documentation pertaining to the planning, performing, documenting, and reporting independent surveillances of TRU CCP RH waste characterization activities. Includes surveillance plan formats, surveillance reports, and surveillance checklists. May include supporting documentation. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	ADM 22.4	Cut off upon completion of audit or investigation. Destroy when 75 years old.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
4(b)	CCP RH Surveillance Log Indexes, lists, registers, and other finding aids used only to provide access to records authorized for destruction, EXCLUDING records containing abstracts or other information that can be used as an information source apart from the related records. CCP RH Surveillance log is a document that is used to assign unique surveillance numbers. The numbering system helps to identify the individual surveillance number, facility and facility designee number and the calendar year issued. **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy/Electronic Filing Order: Chronologically Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	ADM 23.9	Destroy or delete with the related records.	Print out at the end of each calendar year. Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
5	**CCP RH TRU SOFTWARE QA (SQA) Documentation** Database system development records and documentation records which support the maintenance and operation of tracking systems. CCP RH TRU SQA documentation pertains to the development, procurement, maintenance, and use of computer software that is important to the waste characterization and certification for the CCP RH. Includes but not limited to the following documentation for: Exempt Software, Commercial Off the Shelf (COTS) Software, Application within COTS, Qualified Supplier Software, Non-Qualified Supplier Software, CCP Software. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Site and Alphabetically by Software Name Inclusive Dates: 2006 to Present Location: CCP Records – SWB and/or WRA	ENV 1.g(3)(b)	Destroy or delete upon authorized deletion of related system.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
6	**CCP RH VISUAL EXAMINATION (VE) BATCH DATA REPORTS (BDR)** VE constitutes opening a container and physically examining its contents and verifying its physical form. VE is also used to confirm that the physical form of the waste matches its waste stream description. Removal of prohibited items can be performed in this process.			

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6(a)	<u>CCP RH VE BDRs</u> CCP RH VE BDRs document the physical form of the waste and absence of prohibited items and is performed at the time the waste is actually being placed into the waste container or of video media. BDRs will include but not limited to the following: VE Data Form(s), VE Independent Technical Reviewer (ITR) Checklist, VE Site Project Manager (SPM) Checklist, VE BDR Cover Sheet, VE BDR Table of Contents, and copy of NCR if applicable. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
6(b)	<u>CCP RH Audio/Visual Recording DVD for VE</u> Audio/visual recorded DVDs created for previously packaged waste. VE review is performed using this historical audio/visual media. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Audio/Visual DVDs Filing Order: Alpha-Numeric Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
6(c)	CCP RH VE Quarterly Reports Environmental monitoring reports provided to identify the progress on the environmental monitoring plans or on other related subjects. VE quarterly reports pertain to the quarterly review performed on randomly selected data completed through SPM review, within the last 3 months. The reports give information regarding the repeat of data generation level review, Validation & Verification (V&V) performed on a minimum of one randomly chosen waste container each quarter. The SPM uses this information to document that the data generation level data review is being performed according to procedures. This includes the request and results correspondence. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature on memorandum.** Media Type: Hard Copy Filing Order: Chronological and Quarter Number Inclusive Dates: 2007 to Present Location: CCP Records - SWB and/or WRA	ENV 1.d(8)(a)	Destroy when 75 years old. Cutoff when reports are superseded, obsolete, or canceled.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
7	**CCP RH DOSE-to-CURIE (DTC) DOCUMENTATION** DTC Process is used to determine the total TRU activity concentrations and the individual isotopic activity in containers of RH TRU waste. Various calibrated probes are used to determine the gamma dose rate.			

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
7(a)	<u>CCP RH Waste DTC BDR</u> CCP RH Waste DTC BDRs are assembled data that is generated during the process and compiled to create a BDR package. The BDR includes the following: Measurement Control Report, Container Data Sheet(s), Waste Container DTC Conversion Record(s), Cover Sheet, Table of Contents, Narrative Summary, ITR Checklist, SPM Checklist and copy of NCRs if applicable. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
7(b)	<u>CCP RH Waste Container DTC Conversion Record</u> CCP RH Waste Container DTC Conversion Record is the electronic file created during the DTC process. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date on associated BDR.** Media Type: Electronic – CD Filing Order: Alpha-Numeric Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
8	**CCP RH SAMPLING and ANALYSIS OF GAS SAMPLES BDRs** CCP RH Sampling and Analysis of Gas Samples BDRs are reports that document the analysis of gas samples of Volatile Organic Compounds (VOCs) in Headspace Gas (HSG) samples contained in SUMMA® canisters.			
8(a)	CCP RH Analysis of Gas Samples BDRs CCP RH Analysis of Gas Samples BDRs are reports that document the analysis of gas samples of VOCs in HSG samples contained in SUMMA® canisters. May include but not limited to the following: Data Report Cover page and Table of Contents, Sample Identification Table/Analysis Request Form, Sample Custody Documents and Sample Tags, Sample Results, Quality Control (QC) Measurement Results, Calibration Results, and Data Review Checklists and SPM Project Level Checklist. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
8(b)	CCP RH HSG BDRs – Summa Sampling CCP HSG – Summa BDRs that are processed both at data generation level through Project Level V&V in the HSG-Summa Sampling process. May include but not limited to the following: Cover Sheet, Table of Contents, HSG ITR Checklist, HSG Technical Supervisor (TS) Review checklist, HSG Facility QA Officer Review Checklist, 72-hour Temperature Equilibration Plots, Chain-of-Custody/Canister Tag, Sample Drum Data Form, Shipment Request Form (or equivalent), and copy of NCR(s) if applicable. Also includes SPM Checklists. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: March 2004 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
8(c)	CCP RH HSG Transportation BDRs CCP RH HSG Transportation BDRs pertain to the process that implements the process to establish the concentration of flammable gas/VOCs, hydrogen, and methane in a waste container intended for shipment in the TRU Package Transporter-II, (TRUPACT-II) or HalfPACT Packaging. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Ccpy Filing Order: Alpha-Numeric Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
8(d)	CCP RH HSG Transportation Initial Calibration (ICAL) This document which is the ICAL report for the process that implements the process to establish the concentration of flammable VOCs, hydrogen and methane in a waste container intended for shipment in the TRUPACT-II or HalfPACT packaging. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
8(e)	CCP RH HSG Transportation Method Determination Level (MDL) Reports MDL Reports is documentation that supports the process that describes and implements the process to establish the concentration of flammable gas/VOCs, hydrogen and methane in a waste container intended for shipment in the TRUPACT-II or HalfPACT packaging. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
8(f)	CCP RH HSG Random Sample Selection Memorandums HSG Random Selection Memorandum document the random selection for HSG sampling and analysis. It includes at a minimum a memorandum identifying the random selection with attached HSG Random Sample Selection Listing. **QA Record/Nonpermanent/Validated by authorized signature/initial and date.** Media Type: Hard Copy Filing Order: Chronological and Waste Stream Number Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
8(g)	<u>CCP RH HSG Quarterly Reports</u> Environmental monitoring reports provided to identify the progress on the environmental monitoring plans or on other related subjects. HSG quarterly reports pertain to the quarterly review performed on HSG data. The reports give information regarding the repeat of data generation level review. V&V performed on a minimum of one randomly chosen waste container each quarter. The SPM uses this information to document that the data generation level data review is being performed according to procedures. This includes the request and results correspondence. **QA Record/Lifetime/Validated by authorized signature/initial and date.** Media Type: Hard Copy Filing Order: Chronological Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	ENV 1.d(8)(a)	Destroy when 75 years old. Cutoff when reports are superseded, obsolete, or canceled.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
9	**FIELD REFERENCE STANDARD (FRS) MEMORANDUM** FRS Memorandum is collected to assess the accuracy with which the sampling equipment collects the VOC into SUMMA canisters. The FRS is collected with the first sampling event at a newly certified site and analyzed. The FRS shall contain a minimum of six analytes at concentrations within a range of 10 to 100 ppmv greater than the MDL for each compound. **QA Record/Lifetime/Validated by authorized signature/initial and date.** Media Type: Hard Copy Filing Order: Chronological Inclusive Dates: 2008 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
10	**SOLIDS SAMPLING BDRs** Documentation pertaining to the process of Solids Sampling which is the random sample collection and sample data collection.			

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10(a)	Solids Sampling BDRs Documentation pertaining to the process of Solids Sampling which is the random sample collection and sample data collection. The BDR may include but is not limited to the following: Sample Tracking Form, Sample Chain-of-Custody Form, Sampling ITR Checklist, Sampling TS Review Checklist, Sampling Facility QA Officer (FQAO) Review Checklist, Sampling BDR – Table of Contents, Solids Sampling BDR – Cover Sheet, Copy of CCP Waste VE Technique Data Form, Copy of NCR(s) if applicable, Temperature Data Logger Sheets, Certification of Cleanliness for Sampling Equipment, and V&V checklists. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2008 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
10(b)	Solids Analysis BDRs – Analytical Laboratories Department (ALD) Analytical laboratory data packages consisting of documentation generated during transport and receipt of field samples, sample movement in the laboratory, preparation for analysis, laboratory analyses output, raw and processed data, analytical results, reanalysis, QC sample results and instrument calibration data, plus a summary of final results for each batch. CCP RH Analysis of Solid Sample BDRs are reports that document the analysis of solid samples of VOC, non-halogenated volatile compounds (NHVOC), semi-volatile compounds (SVOC), Metals, Actinides; Gamma; Inductively-Coupled Plasma Mass Spectrometry (ICP-MS), Liquid Scintillation Counting (LSC); Radiochemistry Analysis; and Radiostrontium. May include but not limited to the following: Data Report, Cover Page, Table of Contents, Sample Custody Documents, Sample Results, QC Results, Calibration Results, Data Review Checklists and SPM Project Level Checklist. May also include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2008 to Present Location: CCP Records - SWB and/or WRA	ENV 5.c.1	Destroy in 75 years.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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10(c)	<u>CCP Solid Analysis BDRs – Raw Data Supporting Data Package</u> CCP RH Solid Analysis BDRs raw data supporting data packages that document the analysis of VOC, NHVOC, SVOC and metals in solid analysis. These packages may contain but are not limited to the following: Raw Data/Instrument Printouts, copies of applicable pages of Digestion Record and copies of applicable pages of logbooks. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2008 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
10(d)	<u>Solids Sampling Random Selection Memorandum</u> Solids Sampling Random Selection Memorandums document the random selection for solids sampling and analysis. It includes at a minimum a memorandum identifying the random selection with attached Solids Random Sample List/Waste Stream Container List. **QA Record/Nonpermanent/Validated by authorized signature/initial and date.** Media Type: Hard Copy Filing Order: Chronological Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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10(e)	Completed Chain-of-Custody Forms These data packages consist of documentation generated during transport and receipt of field samples, sample movement in the laboratory, preparation for analysis, laboratory analyses output, raw and processed data, analytical results, reanalysis, quality control sample results and instrument calibration data, plus a summary of final results for each batch. Chain-of-Custody Forms which have been completed document all transfers of sample custody from collection to disposal. The form contains at a minimum, the sample numbers, the date and times of transfers, and the signatures of the relinquishing and accepting parties. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2008 to Present Location: CCP Records - SWB and/or WRA	ENV 5.c.1	Destroy in 75 years.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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11	**CCP RH ACCEPTABLE KNOWLEDGE (AK) DOCUMENTATION** AK Documentation supports the knowledge used for waste characterization, which is based on the materials and processes used to generate a waste. AK includes information about the physical form of the waste, the base materials composing the waste (especially hazardous and radioactive materials) and the process that generated the waste. AK is used to define waste streams, assign summary categories, assign United States Environmental Protection Agency (EPA) hazardous waste numbers, estimate the weight fraction of cellulose, plastic, and rubber (CPR), and estimated isotopic ratios.			

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
11(a)	CCP RH AK Documentation AK documentation is compiled, reviewed, evaluated, confirmed and reported. It supports the related AK Summary Report. The following documentation may include but is not limited to: AK Documentation Checklist; Record of Communication; AK Source Document Summary - Attachments 3's- may included attached CCP generated source documents – prior to 11/01/2010 the Attachment 3's included as attachment both the site generated and CCP generated source documents; AK Source Document Reference List; Hazardous Constituents Waste Form(s); Waste Form, Waste Material Parameters, Prohibited Items and Packaging Forms with Waste Material Parameter Evaluation Memorandum; Radionuclides Forms – may include Nondestructive Assay (NDA) Memorandum; Waste Containers List – may have additional Memorandums as addendums to the Attachment 8; Acceptable Knowledge Re-evaluation Checklist; AK Source Document Discrepancy Resolution – includes AK Source Document Source Summary Forms as attachments; CCP Waste Stream Characterization Checklist; CCP TRU Waste Correlation and Surrogate Summary Form; AK Sufficiency Determination Request - memorandum and SPM notifications (emails, letters, memorandums, etc.), as applicable. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature/initial and date.** Media Type: Hard Copy Filing Order: By Site and AK Report or AK Library Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

Waste Isolation Pilot Plant RECORDS INVENTORY AND DISPOSITION SCHEDULE (RIDS)	1. ☐DOE X Contractor	2. Page 30 of 47

6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
11(b)	<u>AK Historical Source Documents</u> AK historical source documents are external records that have been generated by the waste generating sites. Copies are collected and submitted to support the listing of AK source documents referenced in the correlating AK Summary Report. They may be categorized as follows: Correspondence; Documents; Miscellaneous; Procedures and Published Documents; Discrepancy Resolution; and Unpublished Documents. These records must be maintained in parallel to the correlating AK Document Summaries and CCP source documents. Media Type: Electronic - PDF files, databases, video Filing Order: Site, AK Report or AK Library –Alpha-numeric Inclusive Dates: 1957 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer with related AK Record Set. Transfer to the WRA within one year for storage and retention.

Waste Isolation Pilot Plant RECORDS INVENTORY AND DISPOSITION SCHEDULE (RIDS)	1. ☐DOE X Contractor	2. Page 31 of 47

6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
11(c)	<u>CCP RH AK Summary Reports</u> Hazardous waste reports, hazardous substance reports, waste characterization reports, Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)/Resource Conservation and Recovery Act (RCRA) unit reports. CCP RH AK Summary Reports are documentation which supports the knowledge used for waste characterization, which is based on the materials and processes used to generate a waste. AK reports include information about the physical form of the waste, the base materials composing the waste (especially hazardous and radioactive materials) and the process that generated the waste. AK reports define waste streams, assign summary categories, assign EPA hazardous waste numbers, estimate the weight fraction of CPR, and estimated isotopic ratios. May include but is not limited to the following: Documentation that demonstrates approval by designated individuals; Comments and comment resolution (attachments, Document Review Resolution (DRR), emails, letter, etc.); Document revision requests (i.e., initial markup) and DOE/CBFO submittal email within five days of project level review. **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	ENV 1.d(10)(a)	Permanent. Cutoff when waste is disposed of. Transfer to NARA 25 years after cutoff.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
11(d)	AK Accuracy Report AK Accuracy Reports document that the AK accuracy is evaluated either on a lot or waste stream basis. The report documents the results of the evaluation for container in a waste stream. It may include but is not limited to Inter-Office Correspondence with attached CCP AK Accuracy Report and CCP Correlation of Containers Identification Numbers to BDR Numbers. **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Site, AK Report and Waste Stream Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
11(e)	CCP RH AK QA Equivalency Demonstration Report CCP AK QA Equivalency Demonstration Report is a document that shows the decision process, the criteria for qualifying data through this method, and the criteria used for qualifying the data to demonstrate QA Equivalency. This report ensures RH TRU waste characterization information generated under a historic QA program complies with the applicable Data Quality Objectives (DQOs) and programmatic requirements specified in the RH TRU Waste Characterization Program Implementation Plan (WCPIP). This includes a procedures matrix providing a cross walk that identified the generator site plans and procedures that implement the applicable requirements of the QA Program Document (QAPD). May include but is not limited to the following records: Documentation that demonstrates approval by designated individuals; Comments and comment resolution (attachments, DRR, emails, letter, etc.); Document revision requests (i.e., initial markup) DOE/CBFO submittal email within five days of project level review; and Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2007 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

Waste Isolation Pilot Plant RECORDS INVENTORY AND DISPOSITION SCHEDULE (RIDS)	1. ☐DOE X Contractor	2. Page 34 of 47

6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
11(f)	<u>CCP RH AK Characterization Reconciliation Report (CRR)</u> CCP AK CRR is a report that provides the methodology for data reconciliation with the DQOs provided in the WCPIP, following data V&V by the SPM. The reconciliation is performed at the waste stream or waste stream lot level. It includes the following: RH CRR Container Data Work Sheet 1, RH CRR Container Data Sheet 2, RH CRR DQOs, RH CRR QA Objectives (QAOs), RH CRR Cover Sheet, RH CRR Construction Sheet, RH CRR SPM/AKE Comment Sheet, and summary of Radiological Results by Container. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Site, AK Summary Report and Lot Number Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
11(g)	CCP RH Reconciliation with Data Objective Reports Reconciliation with Data Objective Reports includes the Data Reconciliation and Reporting Routing Sheet, Reconciliation with Data Objective, WIPP Waste Stream Profile, and Characterization Information Summary. **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Site, AK Summary Report, Waste Stream Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
11(h)	CCP RH HSG Summary Data Report HSG Summary Data Report includes the Correlation of Container ID Numbers to HSG Sample ID Number Form, UCL_{90} Evaluation Form, Data Evaluation Narrative, Waste Steam Lot Tentatively Identified Compounds, and SPM Narrative. It may also include the Radiography/VE Comparison Report (with copy of trending chart). **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Site, AK Summary Report, Waste Stream Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
11(i)	<u>CCP RH AK Container Tracking Spreadsheet</u> Any electronic or manual system that tracks and produces records of wastes, from cradle to grave, from generator, storage or transported locations, including laboratory processing. AK Container Tracking Spreadsheet is a spreadsheet that identifies the following minimum criterion for each container listed in the waste stream: Container ID, Waste Stream ID, generation date, vent date, change reason, new closure date, new vent date, container type. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Electronic/Hard Copy Filing Order: Site Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	ENV 1.g(3)(a)	Delete or destroy when related records are destroyed, or 75 years from creation, whichever occurs later.	Print out after completion of waste stream shipment to WIPP. Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
12	**CCP PROCEDURES, PLANS, AND REPORTS** CCP Procedures, plans, and reports document record packages may include but is not limited to the following record: Documentation that demonstrates approval by designated individuals; Comments and comment resolution (attachments, DRR, emails, letter, etc.); Document revision requests (i.e., initial markup) and DOE/CBFO submittal email within five days of project level review. This line item is separate from AK Summary Reports and the AK QA Equivalency Demonstration Reports. **QA Record/Nonpermanent/Validated by authorized signature and date for hard copy file and login and password of authorized personnel.** Media Type: Hard Copy Filing Order: Alpha-Numeric - Procedure Numbers Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
13	**CCP RH PROCUREMENT RECORDS** Procurement records generated in the acquisition of goods and non-personnel services.			

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
13(a)	<u>CCP RH Procurement Documentation</u> CCP procurement records that were generated in the acquisition of goods and non-personnel services for RH generator sites. Includes but not limited to the following: Purchase Requisitions/Change Notices; Purchase Orders/Change Notices; Statements of Work; Specifications/Drawings: Qualified Suppliers List (QSL) and attachments; Approval/Variation Requests, and copies of the QA Grading Level Determination Checklist. This is for Quality Level 1 and 2 procurements only. **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Purchase Order Number Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA and WTS Procurement	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
13(b)	CCP RH Receipt Inspection Verification Sheets (RIVS) RIVS and supporting documentation (certificates of analysis/conformance/compliance, calibration certificates, etc.) pertaining to quality source and receipt activities in support of the CCP RH's waste characterization mission. This was named Source Receipt Inspection Verification Sheets (SRIVS) but is now called as titled above – RIVS. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric by Purchase Order Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
14	**STANDING ORDERS for RH Sites** Documentation that is a means in which management communicates short-term direction to operators and the documented quarterly review of standing orders. Information such as special operations, data collection, plotting process parameters and other similar short-term matters may be included in standing orders. Standing orders are not used to deviate from procedures but supplement procedures until the procedure can be revised. Includes Standing Order Log. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized initial/signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in office until completion of characterization process for each site. Transmit to CCP Records to be maintained until no longer needed to support audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
15	**CCP RH OPERATOR AIDS** Documentation that is used to provide information useful to operators in performing their duties and the semi-annual reviews that operator aids are still necessary and current. Operator aids may be in many forms such as the latest revision of pages out of procedures, hand written notes, and information tags. Operator aids are viewed as a convenience to the operator, not administrative/technical requirements and/or direction. Operator aids assigned unique numbers may supplement approved procedures, but shall not be used in lieu of approved procedures. **QA Record/Nonpermanent/Validated by authorized initial/signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in office until completion of characterization process for each site. Transmit to CCP Records to be maintained until no longer needed to support audits. Transfer to the WRA within one year for storage and retention.
16	**CCP RH WASTE DATA SYSTEM (WDS) FORMERLY WIPP WASTE INFORMATION SYSTEM (WWIS) and TRANSPORTATION DOCUMENTATION** The WDS is an on-line database system used to document information pertaining to waste, including but not limited to waste container characterization and certification data, produce reports, record shipment configuration details, disposal locations and disposal dates. Transportation documentation is the transportation packages created during the preparation and transport of drums for burial at the WIPP.			

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
16(a)	CCP RH WDS Documentation The WDS is an on-line database system used to document information pertaining to the waste, including but not limited to waste container characterization and certification data, produce reports, record shipment configuration details, disposal locations and disposal dates. CCP RH WDS package is created during the process entering data into the WDS and reporting data on TRU waste. The WDS is a database system that requires input from waste generator sites for shipment of TRU waste payload containers and payload assemblies that are intended for disposal at WIPP. CCP represents all RH sites as the generator and provides input to WDS on behalf of all RH sites. The CCP RH WDS packages contain, but are not limited to spreadsheets, reports, and correspondence associated with data CCP submits to WDS electronically. **QA Record/Lifetime/Validated by authorized initial/signature and date.** Media Type: Hard Copy Filing Order: Site and WDS Batch Number Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
16(b)	Radiological Surveys Radiological Surveys are performed to document levels of radiation, contamination conditions of the containers going through the characterization process for CCP RH. These are external records generated by the generator sites. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Rad Survey Number Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
16(c)	Removable Lid Canister (RLC) Loading Forms RLC Loading Forms are completed during the process of loading RH containers into the RLC for shipment in the RH-TRU- 72-B Cask for the CCP. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Canister Number Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
17	**TRANSPORTATION DOCUMENTATION** TRU shipment records includes records prepared by the waste generator and other related documentation. CCP RH transportation packages created during the preparation and transport of drums for burial at the WIPP. May include but not limited to: Payload Container Transportation Certification Document, Uniform Hazardous Waste Manifest, Public burden Statement, Straight Bill of Lading – Short Form, Land Disposal Restriction Exemption Notification, Dunnage Certification Statement, Container Integrity Checklist and Leak Test Report. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **EPIDEMIOLOGICAL** **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric by Shipment Number Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	ENV 2.d(4)	Destroy after 5 years.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
18	**CONFIGURATION MANAGEMENT DOCUMENTATION for EQUIPMENT** Configuration Management documentation for equipment pertains to the control and oversight of CCP Mobile Characterization Equipment (MCE) and transportation equipment.			

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
18(a)	Measuring and Test Equipment (M&TE) Documentation M&TE pertains to documents that ensure equipment used for inspection and testing are properly controlled, calibrated, and maintained. This includes but is not limited to the following: notice of Deficiency, Manufacturer's Certificate of Calibrations, Calibration Interval Documentation, Exemptions and Temporary Extensions and Evaluations/Impact Studies using Out-of-Tolerance Evaluations, as applicable. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Equipment and date Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
18(b)	<u>EPA Tier 1 and Tier 2 Documentation</u> Tier 1 and Tier 2 documentation pertains to the characterization change authorization of the EPA approved waste characterization processes for NDA and VE. Tier changes are documented by memorandum which is the notification of the required change to the waste characterization process. May include various supporting documents. **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Chronclogical Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
19	**CONTAINER FILTER INSTALLATION FORMS & DRUM INFORMATION SHEETS** Container Filter Installation Forms and Drum Information Sheets are generated and completed by the host site at Argonne National Laboratory – East (ANL-E). Container Filter Installation Forms provide container numbers, filter information, Equipment Serial Number and Calibration Due Date. The Drum Information Sheet provides drum numbers, radiation readings, filter information, lid information, and storage cask numbers. **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Chronological Inclusive Dates: 2007 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

CCP - Idaho National Laboratory (INL)
List of Qualified Individuals
5/31/2013 9:11 AM

	Name	Position	CCP Next Training Due Date	Host Site Next Training Due Date
VE	Barr, Gerard	Operator/ITR	02/2015	08/28/13
	Cummins, Ronald	Operator/ITR	01/2015	08/21/13
	Grover, Luke	Operator/ITR **Expert** **SME/OJT**	10/2013	09/04/13
	Haderlie, Mike	Operator/ITR	05/2015	08/30/13
	Hulse, Jackie	Operator/ITR	01/2015	07/26/13
	Jackman, David	Operator/ITR	03/2015	08/30/13
	Muntean, Lori	Operator/ITR	01/2015	08/28/13
	Pattee, Spencer Troy	Operator/ITR **Expert** **SME/OJT** NCR "K" Code Designee	05/2015	09/04/13
	Poole, Jeff	Operator/ITR **Expert** **SME/OJT** NCR "K" Code Designee	02/2014	09/04/13
	Stanton, Jodi	Operator/ITR	10/2013	08/30/13
	Stark, Bradley	Operator/ITR **Expert** **SME/OJT** NCR "K" Code Designee	03/2014	**06/05/13**
	Verlanic, LeAnn	Operator/ITR	10/2013	07/26/13

	Name	Position	CCP Next Training Due Date	Host Site Next Training Due Date
Solid Sampling	Haderlie, Mike	Operator/ITR	02/2014	08/30/13
	Poole, Jeff	Operator/ITR **SME/OJT** NCR "K" Code Designee	02/2014	09/04/13
	Stark, Bradley	Operator/ITR **SME/OJT** NCR "K" Code Designee	03/2014	**06/05/13**
	Verlanic, Leann	Operator/ITR	02/2014	07/26/13

CCP - Idaho National Laboratory (INL)
List of Qualified Individuals
5/31/2013 9:11 AM

	Name	Position	CCP Next Training Due Date	Host Site Next Training Due Date
SuperHENC	Carroll (Griffith), Mary	Operator/ITR NCR "K" Code Designee	04/2014	03/21/14
	Cummins, Sharon	Operator/ITR **SME/OJT**	10/2013	05/02/14
	Davis, W. Crary	Operator/ITR NCR "K" Code Designee	05/2014	07/12/13
	Dial, Brent	Operator/ITR NCR "K" Code Designee	04/2015	09/06/13
	Simpson, Alan	Expert Analyst	N/A	N/A
	West, John	Expert Analyst	N/A	N/A

	Name	Position	CCP Next Training Due Date	Host Site Next Training Due Date
NDA SGRS	Abbott, Preston	Operator/ITR **SME/OJT**	05/2015	01/22/14
	Brasier, David	Operator/ITR **SME/OJT** Expert Analyst NCR "K" Code Designee	04/2015	10/10/13
	Carroll (Griffith), Mary	Operator/ITR NCR "K" Code Designee	07/2013	03/21/14
	Ceo, Robert (Bob)	Expert Analyst	N/A	N/A
	Cummins, Sharon	Operator/ITR	06/2014	05/02/14
	Davis, W. Crary	Operator/ITR **SME/OJT** NCR "K" Code Designee	07/2014	07/12/13
	Dial, Brent	Operator/ITR NCR "K" Code Designee	10/2013	09/06/13
	Morales, Bart	Expert Analyst	N/A	N/A
	Southworth, Tim	Expert Analyst	N/A	N/A

CCP - Idaho National Laboratory (INL)
List of Qualified Individuals
5/31/2013 9:11 AM

	Name	Position	CCP Next Training Due Date	Host Site Next Training Due Date
NDA WAGS	**Abbott, Preston**	Operator/ITR **SME/OJT**	05/2015	01/22/14
	Brasier, David	Operator/ITR **SME/OJT** Expert Analyst NCR "K" Code Designee	04/2015	10/10/13
	Carroll (Griffith), Mary	Operator/ITR NCR "K" Code Designee	07/2013	03/21/14
	Ceo, Robert (Bob)	Expert Analyst	N/A	N/A
	Cummins, Sharon	Operator/ITR	04/2014	05/02/14
	Davis, W. Crary	Operator/ITR **SME/OJT** NCR "K" Code Designee	07/2014	07/12/13
	Dial, Brent	Operator/ITR NCR "K" Code Designee	10/2013	09/06/13
	Morales, Bart	Expert Analyst	N/A	N/A
	Southworth, Tim	Expert Analyst	N/A	N/A

	Name	Position	CCP Next Training Due Date	Host Site Next Training Due Date
HSG	**Jagielski, Richard**	Operator/ITR **SME/OJT**	12/2013	Cannot perform operations until site training is complete.
	Miles, Jeri	Operator/ITR	12/2013	05/02/14
	Poirier, Joseph	Operator/ITR **SME/OJT**	02/2015	10/10/13
	Walters, Eddy	Operator/ITR **SME/OJT** NCR "K" Code Designee	12/2013	11/26/13

CCP - Idaho National Laboratory (INL)
List of Qualified Individuals
5/31/2013 9:11 AM

	Name	Position	CCP Next Training Due Date	Host Site Next Training Due Date
GGT	De Bruyn Kops, Aaron	Operator/ITR **SME/OJT** NCR "K" Code Designee	01/2014	**06/21/13**
	Dover, Dale	Operator/ITR **SME/OJT** NCR "K" Code Designee	11/2013	07/09/13
	Miles, Jeri	Operator/ITR	10/2013	05/02/14
	Poirier, Joe	Operator/ITR	02/2014	10/10/13
	Walker, Laura	Operator/ITR	03/2015	07/19/13

	Name	Position	CCP Next Training Due Date	Host Site Next Training Due Date
FGA	De Bruyn Kops, Aaron	Operator/ITR NCR "K" Code Designee	03/2014	**06/21/13**
	Dover, Dale	Operator/ITR **SME/OJT** NCR "K" Code Designee	03/2014	07/09/13
	Jagielski, Richard	Operator/ITR **SME/OJT**	07/2014	Cannot perform operations until site training is complete.
	Miles, Jeri	Operator/ITR	05/2015	05/02/14
	Poirier, Joe	Operator/ITR **SME/OJT**	02/2015	10/10/13
	Walker, Laura	Operator/ITR	05/2015	07/19/13
	Walters, Eddy	Operator/ITR NCR "K" Code Designee	04/2015	11/26/13

	Name	Position	CCP Next Training Due Date	Host Site Next Training Due Date
Filter Change-Out	De Bruyn Kops, Aaron	Operator	01/2014	**06/21/13**
	Dover, Dale	Operator **SME/OJT**	**06/2013**	07/09/13
	Jagielski, Richard	Operator	05/2015	Cannot perform operations until site training is complete.
	Miles, Jeri	Operator	12/2013	05/02/14
	Poirier, Joe	Operator **SME/OJT**	05/2015	10/10/13
	Walker, Laura	Operator	03/2015	07/19/13
	Walters, Eddy	Operator **SME/OJT**	04/2015	11/26/13

INL NDE Personnel Waste Streams Qualified List

5/31/2013 9:11 AM

		ID-SDA-DEBRIS	ID-SDA-SLUDGE	ID-SDA-SOIL	ID-RF-S5126	ID-RF-S5300-A	ID-RF-S3114	ID-RF-S3150-A	ID-RF-S5100-A
VE	Barr, Gerard	X	X	X			X	X	
	Cummins, Ronald	X	X	X			X	X	
	Grover, Luke	X	X	X			X	X	
	Haderlie, Mike	X	X	X			X	X	
	Hulse, Jackie	X	X	X			X	X	
	Jackman, David	X	X	X			X	X	
	Muntean, Lori	X	X	X			X	X	
	Pattee, Spencer	X	X	X			X	X	
	Poole, Jeff	X	X	X			X	X	
	Stanton, Jodi	X	X	X			X	X	
	Stark, Brad	X	X	X			X	X	
	Verlanic, Leann	X	X	X			X	X	

RH Program - INL
List of Qualified Individuals
5/7/2013 9:43 AM

	Name	Position	CCP Next Training Due Date	Host Site Next Training Due Date
VE	Davis, Chris	Operator/ITR	01/2015	01/31/14
	Parmer, Bret	Operator/ITR	01/2015	01/23/14
	Pattee, Spencer Troy	Operator/ITR (Includes Gravimetric) **SME/OJT - Expert** NCR "K" Code Designee	07/2013	06/14/13
	Poole, Jeff	Operator/ITR (Includes Gravimetric) **SME/OJT - Expert** NCR "K" Code Designee	02/2014	12/16/13

	Name	Position	CCP Next Training Due Date	Host Site Next Training Due Date
Waste Sampling	Brammer, Craig	Operator/ITR	08/2014	12/12/13
	Davis, Chris	Operator/ITR	08/2014	06/21/13
	Parmer, Bret	Operator/ITR	11/2014	07/14/13
	Pattee, Spencer Troy	Operator/ITR **SME/OJT** NCR "K" Code Designee	01/2014	01/27/14
	Poole, Jeff	Operator/ITR **SME/OJT** NCR "K" Code Designee	12/2013	12/16/13
	Quinn, Vaughn	Operator/ITR	11/2014	10/11/13
	Root, Wes	Operator/ITR **SME/OJT**	03/2014	Cannot perform operations until site training is complete.

	Name	Position	CCP Next Training Due Date	Host Site Next Training Due Date
RTR	Andrews, Sway	Operator/ITR	Eye Exam – 11/2013 Requal – 02/2014 SNT-TC-1A – 04/16/2016 Training Cont. – 07/2013	11/30/13
	Christensen, Tyson	Operator/ITR **SME/OJT** NCR "K" Code Designee	Eye Exam – 01/2014 Requal – 07/2013 SNT-TC-1A –03/26/2016 Training Cont. – 10/2013	07/31/13
	Davis, Chris	Operator/ITR	Eye Exam – 11/2013 Requal – 10/2013 SNT-TC-1A – 04/16/2016 Training Cont. – 11/2013	07/20/13

RH Program - INL
List of Qualified Individuals
5/7/2013 9:43 AM

	Name	Position	CCP Next Training Due Date	Host Site Next Training Due Date
HSG	Jagielski, Richard	Operator/ITR **SME/OJT**	12/2013	Cannot perform operations until site training is complete.
	Miles, Jeri	Operator/ITR	12/2013	Cannot perform operations until site training is complete.
	Poirier, Joseph	Operator/ITR **SME/OJT**	02/2015	08/16/13
	Walters, Eddy	Operator/ITR **SME/OJT** NCR "K" Code Designee	12/2013	11/20/13

	Name	Position	CCP Next Training Due Date	Host Site Next Training Due Date
FGA	Dover, Dale	Operator/ITR **SME/OJT** NCR "K" Code Designee	03/2014	10/15/13
	Poirier, Joseph	Operator/ITR **SME/OJT**	02/2015	08/16/13
	Walters, Eddy	Operator/ITR NCR "K" Code Designee	04/2015	11/20/13

	Name	Position	CCP Next Training Due Date	Host Site Next Training Due Date
DTC	Alade, Lashell	Operator/ITR	06/2013	06/30/13
	Andrews, Sway	Operator/ITR	05/2014	01/13/14
	Carroll (Griffith), Mary	Operator/ITR **SME/OJT** NCR "K" Code Designee	04/2014	06/18/13
	Davis, Chris	Operator/ITR	04/2014	01/13/14
	Davis, W. Crary	Operator/ITR NCR "K" Code Designee	09/2014	02/01/14
	Dial, Brent	Operator/ITR **SME/OJT** NCR "K" Code Designee	04/2014	09/13/13
	Pattee, Spencer Troy	Operator/ITR NCR "K" Code Designee	03/2014	02/01/14
	Pinnock, Dave	Operator/ITR	08/2013	08/31/13

RH Program - INL
List of Qualified Individuals
5/7/2013 9:43 AM

	Name	Position	CCP Next Training Due Date	Host Site Next Training Due Date
OSPREY System	Brasier, David	Expert Analyst	N/A	N/A
	Carroll (Griffith), Mary	Operator/ITR **SME/OJT** NCR "K" Code Designee	08/2014	06/18/13
	Davis, W. Crary	Operator/ITR NCR "K" Code Designee	10/2014	02/01/14
	Dial, Brent	Operator/ITR **SME/OJT** NCR "K" Code Designee	04/2014	09/13/13
	Morales, Bart	Expert Analyst	N/A	N/A

	Name	Position	CCP Next Training Due Date	Host Site Next Training Due Date
INL Transportation Personnel	Bastar, James	Canister Loading Operator	03/2015	01/13/14
	Brammer, Craig	Canister Loading Operator	06/2014	01/13/14
	Davis, Chris	Canister Loading Operator	05/2014	01/13/14
	Parmer, Bret	Canister Loading Operator	02/2015	01/12/14
	Quinn, Vaughn	Canister Loading Operator	03/2015	01/12/14
	Torres, Kallena	Canister Loading Operator	02/2015	01/03/14

RH INL NDE Personnel Waste Streams Qualified List

5/7/2013 9:43 AM

		ID-ANLE-S5000	ID-ANLE-S5000-RP	ID-EBR-S5000	ID-HFEF-S5400-RH	ID-INTEC-RH	ID-MFC-S5400-RH	ID-MFC-SOLID-RH	ID-RTC-S3000	ID-RTC-S5300	IN-ID-BTO-030	IN-ID-NRF-153	IN-ID-NRF-SPC	ID-HFEF-S5000-RP	ID-RF-S5100-RH	ID-RF-S5100-RH	ID-RF-S5410-RH
RTR	Andrews, Sway	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Christensen, Tyson	X	X	X	X		X	X			X	X	X	X	X	X	X
	Davis, Chris (VE also)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
VE	Davis, Chris (RTR also)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Parmer, Bret	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X
	Pattee, Spencer	X		X	X		X	X			X	X			X	X	X
	Poole, Jeff	X	X	X	X	X	X	X	X		X				X	X	X

Central Characterization Project
Effective Date: 4/28/2011

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Waste Certification Assistant (WCA) Qualification Card

Name: Lena Dominguez	**Badge Number:** [redacted]
Email Address: [redacted]	

Education/Experience

Resume documenting education and experience on file with Central Characterization Project (CCP) Training.	Michele Bullett 6/13/11 CCP Training — Date

Job Specific Training

Qualification Limit	There is no qualification limit for this position. This qualification is a one-time-only requirement. Upon completion of this qualification card, the Trainee is qualified to perform Waste Certification Assistant (WCA) duties. Unsatisfactory performance will result in disqualification by the CCP Manager Responsible for Training. The candidate must successfully complete the entire CCP qualification card to reestablish qualification.
Requalification Requirements	Not required. See above statement.

Indoctrination

Initial/Indoctrination Reading:

1. DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant (Sections 3 and 4)*
2. DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*
3. DOE/CBFO-09-3427, *Waste Data System User's Manual*
4. CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC) (Sections 1, 5.1, and 5.2)*
5. CCP-PO-050, *CCP TRUPACT-III TRU Waste Authorized Methods for Payload Control (CCP TRUPACT-III TRAMPAC)*
6. CCP-PO-401, *CCP Contact-Handled Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC) for Interstate Shipments (Sections 1, 5.1, and 5.2)*
7. CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC) (Sections 1 and 5)*
8. CCP-QP-008, *CCP Records Management*
9. CCP-TP-030, *CCP TRU Waste Certification and WWIS WDS Data Entry*
10. CCP-TP-404, *CCP Contact-Handled Transuranic Waste Certification and Data Entry for Interstate Shipments*
11. CCP-TP-530, *CCP RH TRU Waste Certification and WWIS WDS Data Entry*

I have read the listed initial indoctrination reading and understand my responsibilities as applicable to the above procedures.	Lena Dominguez 5-18-11 Trainee Signature — Date

Waste Certification Assistant (WCA)
Qualification Card

Name: Lena Dominguez	**Badge Number:** [redacted]
Email Address: [redacted]	

Additional Training Requirements		
WAP QAPjP Briefing and Test	CCP Training	Date: 5/20/11
WCA written exam 96% grade (80% or better)	CCP Training	Date: 5/20/11
WWIS/WDS briefing (Provided by WWIS/WDS organization)	WWIS/WDS	Date: 5/18/11

	On-the-Job Training (OJT) Knowledge Requirements	**Subject Matter Expert (SME)/OJT Signature/Date**
	1. Describe where data is found for each required field in the spreadsheet.	Logan Whitaker 5/11/18
	2. Describe why there are different WWIS/WDS Data Entry Spreadsheets and when they are used.	Logan Whitaker 5/18/11
	3. Describe the function of the WWIS/WDS data entry spreadsheet	Logan Whitaker 5/18/11
	4. Describe the responsibilities for validation of the spreadsheet entries.	Logan Whitaker 5/18/11
	5. Describe where the TRU Waste Content Codes are located and its relevance.	Logan Whitaker 5/18/11
	6. Describe where the Shipping Category is found and its relevance.	Logan Whitaker 5/18/11
	7. List the records that must be maintained to satisfy the WAP.	Logan Whitaker 5/18/11

Waste Certification Assistant (WCA)
Qualification Card

Name: Lena Dominguez	**Badge Number:** [redacted]
Email Address: [redacted]	

	8. List the procedures we use to process CH, RH, and SQS containers.	Logan Whitaker 5/18/11
	9. Describe the methods for entering data into the WWIS/WDS.	Logan Whitaker 5/18/11
	10. What required checks and or signatures must be obtained before entering a drum into WWIS/WDS?	Logan Whitaker 5/18/11
	11. Describe the difference between entering data into the characterization module versus the certification module.	Logan Whitaker 5/18/11
OJT Practical Requirements		**SME/OJT Signature/Date**
	1. Demonstrate the gathering of data and assembly of a complete data package for spreadsheet entry.	Logan Whitaker 5/18/11
	2. Demonstrate selecting the appropriate WWIS/WDS Data Entry Spreadsheet.	Logan Whitaker 5/18/11
	3. Demonstrate the ability to identify specific instruments and their associated method IDs.	Logan Whitaker 5/18/11
	4. Demonstrate the proper entry of data into the spreadsheet.	Logan Whitaker 5/18/11
	5. Demonstrate the ability to transfer data from the WWIS/WDS temp table to WWIS/WDS.	Logan Whitaker 5/18/11
	6. Demonstrate manual entry of certification data into WWIS/WDS.	Logan Whitaker 5/18/11
	7. Demonstrate proficiency in accessing and using WWIS/WDS.	Logan Whitaker 5/18/11
	8. Demonstrate the documentation for data validation.	Logan Whitaker 5/18/11

Waste Certification Assistant (WCA)
Qualification Card

Name: Lena Dominguez	**Badge Number:** [redacted]
Email Address: [redacted]	

	9. Demonstrate the assembly of the records package.	Roger Whiteaker 5/18/11

Approvals	
I have completed formal training and received on-the-job training for this position. I fully understand my responsibilities as a WCA.	Lena Dominguez Lena Dominguez 5-18-11 Trainee *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of a WCA. *(Validation by the SME OJT instructor(s) involved in the training of this individual)*	ROGER WHITEAKER Roger Whiteaker 5/18/11 SME/OJT Instructor *(printed name and signature)* Date
	N/A SME OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of a WCA.	Richard Kantrowitz 5/19/11 CCP Lead or Alternate Site Project Manager (SPM) *(printed name and signature)* Date

Approved for Content & Format: **Roger Whiteaker (Approval on file)** **4/28/2011**
WCA SME *(printed name and signature)* Date

Approved for Content: **Richard Kantrowitz (Approval on file)** **4/28/2011**
CCP Lead or Alternate SPM *(printed name and signature)* Date

Approved for Use: **AJ Fisher (Approval on file)** **4/28/2011**
CCP Manager Responsible for Training Date
(printed name and signature)

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Waste Certification Assistant (WCA) Qualification Card

Name: Helen Pettus	Badge Number: [redacted]
Email Address: [redacted]	

Education/Experience

Resume documenting education and experience on file with Central Characterization Project (CCP) Training.	5/20/11 CCP Training — Date

Job Specific Training

Qualification Limit	There is no qualification limit for this position. This qualification is a one-time-only requirement. Upon completion of this qualification card, the Trainee is qualified to perform Waste Certification Assistant (WCA) duties. Unsatisfactory performance will result in disqualification by the CCP Manager Responsible for Training. The candidate must successfully complete the entire CCP qualification card to reestablish qualification.
Requalification Requirements	Not required. See above statement.

Indoctrination

Initial/Indoctrination Reading:

1. DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant (Sections 3 and 4)*
2. DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*
3. DOE/CBFO-09-3427, *Waste Data System User's Manual*
4. CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC) (Sections 1, 5.1, and 5.2)*
5. CCP-PO-050, *CCP TRUPACT-III TRU Waste Authorized Methods for Payload Control (CCP TRUPACT-III TRAMPAC)*
6. CCP-PO-401, *CCP Contact-Handled Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC) for Intersite Shipments (Sections 1, 5.1, and 5.2)*
7. CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC) (Sections 1 and 5)*
8. CCP-QP-008, *CCP Records Management*
9. CCP-TP-030, *CCP TRU Waste Certification and WWIS/WDS Data Entry*
10. CCP-TP-404, *CCP Contact-Handled Transuranic Waste Certification and Data Entry for Intersite Shipments*
11. CCP-TP-530, *CCP RH TRU Waste Certification and WWIS/WDS Data Entry*

I have read the listed initial/indoctrination reading and understand my responsibilities as applicable to the above procedures.	Helen M Pettus 5/18/11 Trainee Signature — Date

Waste Certification Assistant (WCA) Qualification Card

Name: Helen Pettus	Badge Number: [redacted]
Email Address: [redacted]	

Additional Training Requirements		
WAP/QAPjP Briefing and Test	CCP Training	5/20/11 Date
WCA written exam 96% grade (80% or better)	CCP Training	5/20/11 Date
WWIS/WDS briefing (Provided by WWIS/WDS organization)	WWIS/WDS	5/12/11 Date

On-the-Job Training (OJT) Knowledge Requirements		Subject Matter Expert (SME)/OJT Signature/Date
	1. Describe where data is found for each required field in the spreadsheet.	Logan Whitaker 5/18/11
	2. Describe why there are different WWIS/WDS Data Entry Spreadsheets and when they are used.	Logan Whitaker 5/18/11
	3. Describe the function of the WWIS/WDS data entry spreadsheet	Logan Whitaker 5/18/11
	4. Describe the responsibilities for validation of the spreadsheet entries.	Logan Whitaker 5/18/11 ~~5/18/11~~ Rev 7/13/11
	5. Describe where the TRU Waste Content Codes are located and its relevance.	Logan Whitaker 5/18/11
	6. Describe where the Shipping Category is found and its relevance.	Logan Whitaker 5/18/11
	7. List the records that must be maintained to satisfy the WAP.	Logan Whitaker 5/18/11

Waste Certification Assistant (WCA) Qualification Card

Name: Helen Pettus	Badge Number: [redacted]
Email Address: [redacted]	

	8. List the procedures we use to process CH, RH, and SQS containers.	Roger Whitaker 5/18/11
	9. Describe the methods for entering data into the WWIS/WDS.	Roger Whitaker 5/18/11
	10. What required checks and/or signatures must be obtained before entering a drum into WWIS/WDS?	Roger Whitaker 5/18/11
	11. Describe the difference between entering data into the characterization module versus the certification module.	Roger Whitaker 5/18/11
OJT Practical Requirements		**SME/OJT Signature/Date**
	1. Demonstrate the gathering of data and assembly of a complete data package for spreadsheet entry.	Roger Whitaker 5/18/11
	2. Demonstrate selecting the appropriate WWIS/WDS Data Entry Spreadsheet.	Roger Whitaker 5/18/11
	3. Demonstrate the ability to identify specific instruments and their associated method IDs.	Roger Whitaker 5/18/11
	4. Demonstrate the proper entry of data into the spreadsheet.	Roger Whitaker 5/18/11 5/18/11 AN 5/18/11
	5. Demonstrate the ability to transfer data from the WWIS/WDS temp table to WWIS/WDS.	Roger Whitaker 5/18/11
	6. Demonstrate manual entry of certification data into WWIS/WDS.	Roger Whitaker 5/18/11
	7. Demonstrate proficiency in accessing and using WWIS/WDS.	Roger Whitaker 5/18/11
	8. Demonstrate the documentation for data validation.	Roger Whitaker 5/18/11

Waste Certification Assistant (WCA)
Qualification Card

Name: Helen Pettus	**Badge Number:** [redacted]
Email Address: [redacted]	

	9. Demonstrate the assembly of the records package.	Roger Whitaker 5/18/11

Approvals	
I have completed formal training and received on-the-job training for this position. I fully understand my responsibilities as a WCA.	HELEN M. PETTUS Helen M. Pettus 5/18/11 Trainee *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of a WCA. *(Validation by the SME/OJT instructor(s) involved in the training of this individual).*	ROGER WHITEAKER Roger Whitaker 5/18/11 SME/OJT Instructor *(printed name and signature)* Date
	N/A SME/OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of a WCA.	Richard Kantrowitz 5/19/11 CCP Lead or Alternate Site Project Manager (SPM) *(printed name and signature)* Date

Approved for Content & Format: **Roger Whiteaker (Approval on file)** **4/28/2011**
WCA SME *(printed name and signature)* Date

Approved for Content: **Richard Kantrowitz (Approval on file)** **4/28/2011**
CCP Lead or Alternate SPM *(printed name and signature)* Date

Approved for Use: **AJ Fisher (Approval on file)** **4/28/2011**
CCP Manager Responsible for Training *(printed name and signature)* Date

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Contact Handled (CH)
Site Project Manager (SPM)
Qualification Card

Name: Carolina Soaterna	**Badge Number:** [redacted]
Email Address: [redacted]	

Education/Experience	
Resume documenting education and experience on file with Central Characterization Project (CCP) Training.	5/31/11 CCP Training — Date

Job Specific Training	
Qualification Limit	There is no qualification limit for this position. This qualification is a one-time-only requirement. Upon completion of this core qualification card, the Trainee is qualified to perform Site Project Manager (SPM) duties for Contact Handled (CH) Waste. Unsatisfactory performance will result in disqualification. If unsatisfactory performance is determined, the qualification card and on-the-job training (OJT) process must be completed to re-establish qualification.
Requalification Requirements	Not required. See above statement.

Indoctrination	
	Initial/Indoctrination Reading: 1. CCP-CM-001, *CCP Equipment Change Authorization and Documentation* 2. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan* 3. CCP-PO-002, *CCP Transuranic Waste Certification Plan* 4. CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)* 5. CCP-PO-008, *CCP Quality Assurance Interface with the WTS Quality Assurance Program* 6. CCP-QP-002, *CCP Training and Qualification Plan* 7. CCP-QP-004, *CCP Corrective Action Management* 8. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control* 9. CCP-QP-006, *CCP Corrective Action Reporting and Control* 10. CCP-QP-008, *CCP Records Management* 11. CCP-QP-010, *CCP Document Preparation, Approval, and Control* 12. CCP-QP-011, *CCP Laboratory Logbooks* 13. CCP-QP-014, *CCP Quality Assurance Trend Analysis and Reporting* 14. CCP-QP-015, *CCP Procurement* 15. CCP-QP-016, *CCP Control of Measuring and Testing Equipment* 16. CCP-QP-018, *CCP Management Assessment* 17. CCP-QP-019, *CCP Quality Assurance Reporting to Management* 18. CCP-QP-022, *CCP Software Quality Assurance Plan* 19. CCP-QP-027, *CCP Test Control* 20. CCP-QP-028, *CCP Records Filing, Inventorying, Scheduling, and Dispositioning* 21. CCP-TP-001, *CCP Project Level Data Validation and Verification*

Contact Handled (CH)
Site Project Manager (SPM)
Qualification Card

Name: Carolina Soaterna	Badge Number: [redacted]
Email Address: [redacted]	

	22. CCP-TP-002, *CCP Reconciliation of DQOs and Reporting Characterization Data* 23. CCP-TP-003, *CCP Data Analysis for S3000, S4000, and S5000 Characterization* 24. CCP-TP-005, *CCP Acceptable Knowledge Documentation* 25. CCP-TP-030, *CCP TRU Waste Certification and WWIS/WDS Data Entry* 26. CCP-TP-056, *CCP HSG Performance Demonstration Plan* 27. CCP-TP-058, *CCP NDA Performance Demonstration Program*
I have read the listed initial/indoctrination reading and understand my responsibilities as applicable to the procedures above.	Carolina Soaterna 5/31/11 Trainee Date

Document	Additional Training Requirements	
	1. WAP/QAPjP Briefing and Test 12/9/9	Michele Billett 5/31/11 CCP Training Date
	2. Hazardous Waste Identification Self-Paced Module 5/31/11	Michele Billett 5/31/11 CCP Training Date
	3. Visual Examination (VE) TRU Waste Characterization Briefing, CCP-VE-101	Michele Billett 5/31/11 CCP Training Date
	4. Real-Time Radiography TRU Waste Characterization Briefing, CCP-RTR-101	Michele Billett 5/31/11 CCP Training Date

Contact Handled (CH)
Site Project Manager (SPM)
Qualification Card

Name: Carolina Soaterna **Badge Number:** [redacted]

Email Address: [redacted]

Formal Training	OJT Knowledge Requirements	Subject Matter Expert (SME) Signature/Date
CCP-PO-001	1. Define the term "prohibited item" and give five examples of prohibited items.	[redacted] 5/31/11
	2. Identify the document allowing WIPP to receive and store TRU-mixed waste.	[redacted] 5/31/11
	3. Identify and describe the four major methods used by CCP to characterize TRU waste.	[redacted] 5/31/11
	4. State three (3) instances when an NCR is required for Real-Time Radiography (RTR).	[redacted] 5/31/11
	5. State when an NCR is written for Visual Examination (VE).	[redacted] 5/31/11
	6. State when an NCR is written for Headspace Gas (HSG).	[redacted] 5/31/11
	7. State the difference between a "Z" qualifier and a "J" qualifier.	[redacted] 5/31/11
	8. State when a "B" qualifier is used.	[redacted] 5/31/11
	9. State when a replicate waste drum is run in RTR.	[redacted] 5/31/11
CCP-PO-002	10. State when an NCR is written for Non-Destructive Assay (NDA).	[redacted] 5/31/11
	11. State which document is the driver for NDA.	[redacted] 5/31/11
	12. Describe the information to look for in an NDA control chart during a V&V review of an NDA batch data report (BDR).	[redacted] 5/31/11

Contact Handled (CH)
Site Project Manager (SPM)
Qualification Card

Name: Carolina Soaterna **Badge Number:** [redacted]

Email Address: [redacted]

CCP-QP-005	13. State one major purpose for the nonconformance control program.	5/31/11
	14. Identify who can initiate a non-conformance report (NCR).	5/31/11
CCP-TP-005	15. Define the term "acceptable knowledge" and state one use/purpose for acceptable knowledge.	5/31/11
	16. State where acceptable knowledge information is documented.	5/31/11
	17. Discuss the AK sufficiency elements.	5/31/11
	18. Discuss the components of statistical sampling.	5/31/11
	19. Discuss the components of solids and soils sampling and analysis.	5/31/11
	20. Discuss the components of the NCR and CAR process.	5/31/11
Formal Training	**OJT Practical Requirements**	**SME Signature/Date**
CCP-TP-001	1. Demonstrate proficiency in the review of headspace gas batch data (BDR) reports.[1]	5/25/11
	2. Demonstrate proficiency in the review of non-destructive examination (NDE) BDRs.[1]	5/25/11
	3. Demonstrate proficiency in the review of non-destructive assay (NDA) BDRs.[1]	5/25/11
	4. Demonstrate proficiency in the review of visual examination (VE) BDRs.[1]	5/25/11
CCP-TP-002	5. Discuss the components of a Characterization Information Summary (CIS).	5/31/11

[1] Proficiency will be demonstrated after the completion of BDR reviews in each discipline under the supervision of a qualified SPM SME.

Contact Handled (CH)
Site Project Manager (SPM)
Qualification Card

Name: Carolina Soaterna	Badge Number: [redacted]
Email Address: [redacted]	

Approvals	
I have completed formal training and received OJT for this position. I fully understand my responsibilities as a SPM.	Carolina Soaterna Carolina Soaterna 5/31/11 Trainee *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of a SPM. *(Validation by the SME/OJT instructor(s) involved in the training of this individual).*	Adela M Garcia Adela M Garcia 5/31/2011 SME/OJT Instructor *(printed name and signature)* Date Richard Kantrowitz Richard Kantrowitz 5/31/11 SME/OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of a SPM.	Mark Pearcy Mark Pearcy 5/31/11 CCP Lead or Alternate SPM *(printed name and signature)* Date

Approved for Content & Format: Approval on file — SPM SME *(printed name and signature)* — 8/10/2010 Date

Approved for Content: Approval on file — CCP Lead or Alternate SPM *(printed name and signature)* — 8/10/2010 Date

Approved for Use: Approval on file — CCP Manager Responsible for Training *(printed name and signature)* — 8/10/2010 Date

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Contact Handled (CH)
Site Project Manager (SPM)
Qualification Card

Name: Roger Whiteaker
Email Address: [redacted]

Education/Experience	
Resume documenting education and experience on file with Central Characterization Project (CCP) Training.	Michele Bartlett 4/9/12 CCP Training Date

Job Specific Training	
Qualification Limit	There is no qualification limit for this position. This qualification is a one-time-only requirement. Upon completion of this core qualification card, the Trainee is qualified to perform Site Project Manager (SPM) duties for Contact Handled (CH) Waste. Additionally, once this qualification card is complete, the SPM will be qualified to perform SPM reviews of Headspace Gas (HSG) batch data reports, regardless of the radiological determination of the waste. Unsatisfactory performance will result in disqualification. If unsatisfactory performance is determined, the complete qualification card, including the On-the-Job Training (OJT) portions, must be completed to re-establish qualification.
Requalification Requirements	Not required. See above statement.

Indoctrination

Initial/Indoctrination Reading:

1. CCP-CM-001, *CCP Equipment Change Authorization and Documentation*
2. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
3. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
4. CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)*
5. CCP-PO-008, *CCP Quality Assurance Interface with the WTS Quality Assurance Program*
6. CCP-PO-050, *CCP TRUPACT-III TRU Waste Authorized Methods for Payload Control (CCP TRUPACT-III TRAMPAC)*
7. CCP-QP-002, *CCP Training and Qualification Plan*
8. CCP-QP-004, *CCP Corrective Action Management*
9. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
10. CCP-QP-006, *CCP Corrective Action Reporting and Control*
11. CCP-QP-008, *CCP Records Management*
12. CCP-QP-010, *CCP Document Preparation, Approval, and Control*
13. CCP-QP-011, *CCP Laboratory Logbooks*
14. CCP-QP-014, *CCP Quality Assurance Trend Analysis and Reporting*
15. CCP-QP-015, *CCP Procurement*
16. CCP-QP-016, *CCP Control of Measuring and Testing Equipment*
17. CCP-QP-018, *CCP Management Assessment*
18. CCP-QP-019, *CCP Quality Assurance Reporting to Management*

Contact Handled (CH)
Site Project Manager (SPM)
Qualification Card

Name: Roger Whiteaker

Email Address: [redacted]

	19. CCP-QP-022, *CCP Software Quality Assurance Plan* 20. CCP-QP-027, *CCP Test Control* 21. CCP-QP-028, *CCP Records Filing, Inventorying, Scheduling, and Dispositioning* 22. CCP-TP-001, *CCP Project Level Data Validation and Verification* 23. CCP-TP-002, *CCP Reconciliation of DQOs and Reporting Characterization Data* 24. CCP-TP-003, *CCP Data Analysis for S3000, S4000, and S5000 Characterization* 25. CCP-TP-005, *CCP Acceptable Knowledge Documentation* 26. CCP-TP-030, *CCP CH TRU Waste Certification and WWIS/WDS Data Entry* 27. CCP-TP-056, *CCP HSG Performance Demonstration Plan* 28. CCP-TP-058, *CCP NDA Performance Demonstration Program*
I have read the listed initial/indoctrination reading and understand my responsibilities as applicable to the procedures above.	Roger Whiteaker 4/2/2012 Trainee Date

Document	Additional Training Requirements	
	1. WAP/QAPjP Briefing and Test	Michele Billett 4/9/12 CCP Training Date
	2. Hazardous Waste Identification (Self-Paced Module)	Michele Billett 4/4/12 CCP Training Date
	3. CCP-VE-101 - Visual Examination (VE) TRU Waste Characterization Briefing	Michele Billett 4/9/12 CCP Training Date
	4. CCP-RTR-101 - Real-Time Radiography (RTR) TRU Waste Characterization Briefing	Michele Billett 4/9/12 CCP Training Date

Formal Training	OJT Knowledge Requirements	Subject Matter Expert (SME)/OJT Signature/Date
CCP-PO-001	1. Define the term "prohibited item" and give five examples of prohibited items.	Adele M Cantu 4/12/12
	2. Identify the document allowing WIPP to receive and store TRU-mixed waste.	Adele M Cantu 4/12/12
	3. Identify and describe the four major methods used by CCP to characterize TRU waste.	Adele M Cantu 4/12/12
	4. State three (3) instances when an NCR is required for Real-Time Radiography (RTR).	Adele M Cantu 4/12/12

Contact Handled (CH)
Site Project Manager (SPM)
Qualification Card

Name: Roger Whiteaker

Email Address: [redacted]

	5. State when an NCR is written for Visual Examination (VE).	Adela M Canter 4/12/12
	6. State when an NCR is written for Headspace Gas (HSG).	Adela M Canter 4/12/12
	7. State the difference between a "Z" qualifier and a "J" qualifier.	Adela M Canter 4/12/12
	8. State when a "B" qualifier is used.	Adela M Canter 4/12/12
	9. State when a replicate waste drum is run in RTR.	Adela M Canter 4/12/12
CCP-PO-002	10. State when an NCR is written for Non-Destructive Assay (NDA).	4-23-12
	11. State which document is the driver for NDA.	4-23-12
	12. Describe the information to look for in an NDA control chart during a V&V review of an NDA batch data report (BDR).	4-23-12
CCP-QP-005	13. State one major purpose for the nonconformance control program.	4-23-12
	14. Identify who can initiate a non-conformance report (NCR).	Adela M Canter 4/12/12
CCP-TP-005	15. Define the term "acceptable knowledge" and state one use/purpose for acceptable knowledge.	4-23-12
	16. State where acceptable knowledge information is documented.	4-23-12
	17. Discuss the AK sufficiency elements.	4-23-12
	18. Discuss the components of statistical sampling.	5/3/12
	19. Discuss the components of solids and soils sampling and analysis.	5/3/12
	20. Discuss the components of the NCR and CAR process.	4-23-12

Contact Handled (CH)
Site Project Manager (SPM)
Qualification Card

Name: Roger Whiteaker

Email Address: [redacted]

Formal Training	OJT Practical Requirements	SME/OJT Signature/Date
CCP-TP-001	1. Demonstrate proficiency in the review of headspace gas batch data (BDR) reports.[1]	Robert M Cantin 4/12/12
	2. Demonstrate proficiency in the review of non-destructive examination (NDE) BDRs.[1]	Robert M Cantin 4/12/12
	3. Demonstrate proficiency in the review of non-destructive assay (NDA) BDRs.[1]	4-23-12
	4. Demonstrate proficiency in the review of visual examination (VE) BDRs.[1]	Robert M Cantin 4/12/12
CCP-TP-002	5. Discuss the components of a Characterization Information Summary (CIS).	5/3/12

[1] Proficiency will be demonstrated after the completion of BDR reviews in each discipline under the supervision of a qualified SPM SME.

Contact Handled (CH) Site Project Manager (SPM) Qualification Card

Name: Roger Whiteaker

Email Address: [redacted]

Approvals	
I have completed formal training and received OJT for this position. I fully understand my responsibilities as a CH SPM.	Roger Whiteaker ROGER WHITEAKER 5/3/2012 Trainee *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of a CH SPM. *(Validation by the SME/OJT instructor(s) involved in the training of this individual).*	Adela M. Conti ADELA M. CONTI 5/3/12 SME/OJT Instructor *(printed name and signature)* Date Richard Kantrowitz 5/3/12 Jim Vienna 5-3-12 SME/OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of a CH SPM.	Mark Pearcy Mark Pearcy 5/3/12 CCP Lead or Alternate SPM *(printed name and signature)* Date

Approved for Content & Format: **Richard Kantrowitz (Approval on File)** — SME/OJT — **02/27/12** Date

Approved for Content: **Mark Pearcy (Approval on File)** — CCP Lead or Alternate SPM — **02/27/12** Date

Approved for Use: **A.J. Fisher (Approval on File)** — CCP Manager Responsible for Training — **02/27/12** Date

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Site Project Manager (SPM) Qualification Card

Name: Barbara Bloomfield (CB 11/8/04)	Badge #: [redacted]

The requirements of this document are the result of an evaluation as described in CCP-QP-002, *CCP Training and Qualification Plan.*

Education / Experience

Trainee has been selected for this position based on his/her education, prior-experience, additional certifications, training, etc. as documented in the CCP Training Files.	CCP Program Manager 9/7/04 Date

Job Specific Training

Qualification Limit	There is no qualification limit for this position. This qualification is a one-time-only requirement. **Qualification is valid for the site(s) with completed addendum(s) attached with this card ONLY.** Trainee may qualify for additional sites as necessary by completing the appropriate addendum(s).	
Requalification Requirements	There are no requalification requirements for this position. If performance in this position is interrupted due to reassignment, then cognizant manager will determine if requalification is required at time position is resumed.	
Indoctrination	WAP/QAPjP Briefing 10/11/04	CCP Training 10/11/04 Date

Required Reading:

Note: Site-specific required reading will be completed on applicable addendum(s) for the site assigned (e.g. SPM-01A, *Savannah River Site*; SPM-01B, *Nevada Test Site;* etc.).

1. NM4890139088, *Waste Isolation Pilot Plant Hazardous Waste Facility Permit, Attachments B-B6*
2. DOE/WIPP-02-3122, *Contact-Handled Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant (Sections 3.0 and 4.0)*
3. DOE/CBFO-94-1012, *U.S. Department of Energy Carlsbad Field Office Quality Assurance Program Document*
4. DOE/CBFO-01-3107, *Performance Demonstration Program Management Plan*
5. DOE/CBFO-01-1005, *Performance Demonstration Program Plan for Nondestructive Assay of Drummed Wastses for the TRU Waste Characterization Program*
6. DOE/CAO-95-1076, *Performance Demonstration Program Plan for Analysis of Simulated Headspace Gases*
7. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
8. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
9. CCP-PO-003, *CCP TRUPACT-II Authorized Methods for Payload Control (TRAMPAC)*
10. CCP-PO-005, *CCP Conduct of Operations*
11. CCP-PO-008, *CCP Quality Assurance Administrative Program*
12. CCP-QP-002, *CCP Training and Qualification Plan*

Site Project Manager (SPM) Qualification Card

Name: Barbara Bloomfield r CB 11/2/04	Badge #: [redacted]

13. CCP-QP-004, *CCP Corrective Action Management*
14. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
15. CCP-QP-006, *CCP Corrective Action Reporting and Control*
16. CCP-QP-008, *CCP Records Management*
17. CCP-QP-009, *CCP Work Control Process*
18. CCP-QP-010, *CCP Document Preparation, Approval and Control*
19. CCP-QP-011, *CCP Notebooks & Logbooks*
20. CCP-QP-015, *CCP Procurement*
21. CCP-QP-016, *CCP Control of Measuring, Testing, and Data Collection Equipment*
22. CCP-QP-018, *CCP Management Assessment*
23. CCP-QP-019, *CCP Quality Assurance Reporting to Management*
24. CCP-QP-021, *CCP Surveillance Program*
25. CCP-QP-022, *CCP TRU Software Quality Assurance*
26. CCP-QP-023, *CCP Handling, Storage, and Shipping*
27. CCP-QP-027, *CCP Test Control*
28. CCP-QP-028, *CCP Records Filing, Inventorying, Scheduling, and Dispositioning*
29. CCP-QP-030, *CCP Written Practice for the Qualification of CCP Helium Leak Detection Personnel*
30. CCP-TP-001, *CCP Project Level Data Validation and Verification*
31. CCP-TP-002, *CCP Reconciliation of DQOs and Reporting Characterization Data*
32. CCP-TP-003, *CCP Sampling Design andData Analysis for RCRA Characterization*
33. CCP-TP-005, *CCP Acceptable Knowledge Documentation*
34. CCP-TP-028, *CCP Radiographic Test and Training Drum Requirements*
35. CCP-TP-030, *CCP TRU Waste Certification and WWIS Data Entry*
36. CCP-TP-056, *CCP HSG Performance Demonstration Plan*
37. CCP-TP-058, *CCP NDA Performance Demonstration Plan*

I have read the listed required reading and understand my responsibilities as applicable to procedures above.	Trainee Signature 10/28/04 Date
Training has received site-specific addendum(s).	CCP Training 11-1-04 Date

* Site-specific addendum for INEEL has not been developed. All applicable addendums will be completed as required. AA 11-1-04

Site Project Manager (SPM) Qualification Card

Name: Barbara Bloomfield 06/19/04	Badge #: [redacted]

Formal Training	Training Requirements	
	Training	Date Completed
	1. Hazardous Waste Code Assignments Briefing [1]	10/11/04 Cindi Becky
	2. NCR/CAR Briefing [1]	10/11/04
	CCP Training has received evidence of the completion of the formal training above.	CCP Training 11-1-04 Date
	On-the-Job Training Practical Requirements	SME/OJT Instructor Signature / Date
	1. Demonstrate proficiency in the review of Headspace Gas Batch Data Reports (BDR's).[2]	10/29/04
	2. Demonstrate proficiency in the review of Non-destructive Examination (NDE) BDR's.[2]	10/29/04
	3. Demonstrate proficiency in the review of Non-destructive Assay (NDA) BDR's.[2]	Mark Pearcy 10/29/04
	4. Demonstrate proficiency in the review of Visual Examination (VE) BDR's.[2]	10/28/04
	5. Demonstrate proficiency in the review of Homogeneous Solids Sampling and Analysis.[3]	10/28/04

Site Project Manager (SPM) Qualification Card

Name: Barbara Bloomfield R BB 11/2/04	Badge #: [redacted]
Approvals	
I have completed required reading and formal/informal training for my job position. I fully understand my responsibilities as an **Site Project Manager (SPM) for the site(s) with completed addendum(s) attached with this card.**	Trainee Signature 10/29/04 Date
I approve this employee to perform the duties of **Site Project Manager (SPM) for the site(s) with completed addendum(s) attached with this card.**	CCP Program Manager 11/02/04 Date
Each SME/OJT Instructor involved in the trainee validation of this OJT shall print and sign their name on the following blanks.	Paul C. Cramer — Printed Name / SME / OJT Signature
	MARK PEARCY Mark Pearcy — Printed Name / SME / OJT Signature
	ADELA M. CANTU Adela M Cantu — Printed Name / SME / OJT Signature
This qualification card has been reviewed for completeness and signature verification by CCP Training.	CCP Training 11-2-04 Date

[1] Documentation in training file.
[2] Proficiency will be demonstrated after the completion of BDR reviews in each discipline under the supervision of a qualified SPM.
[3] Proficiency for Solids Sampling and Analysis will be demonstrated and documented on SPM-01a, Attachment 1 - On-the-Job Training (OJT) for Homogeneous Solids Sampling and Analysis.

Approved for format:	D. Freeze (Original Signature on File)	06/14/04
	CCP Training	Date
Approved for content:	S. Rose (Original Signature on File)	06/14/04
	CCP Site Project Manager	Date
Approved for use:	J. R. Stroble (Original Signature on File)	06/14/04
	Cognizant Manager	Date

Site Project Manager (SPM) Qualification Card

Attachment 1 - On-the-Job Training (OJT) for Homogeneous Solids Sampling and Analysis

Name: Barbara Broomfield	Badge #: [redacted]

On-the-Job Training (OJT) Requirements

6. Complete at least one homogeneous solids Batch Data Report (BDR) **under the supervision** of the Subject Matter Expert (SME) and demonstrate proficiency in an **independent review** of at least one homogenous solids Batch Data Report (BDR) in the following areas:*

   a. Solids Coring
   g. Metals analysis
   h. Volatile analysis
   d. Semi-volatile analysis
   e. Non-halogenated Volatile analysis
   f. PCB analysis

* SME may require the review of more than one BDR as he/she deems necessary to ensure comprehension of subject matter.

Supervised OJT	BDR Number	Date of Review	SME Approval Signature
Solids Coring	WCS-0310	10/25/04	
		N/A	
Metals Analysis	ALD03025M	10/25/04	
		N/A	
Volatile Analysis	ALD03021V	10/25/04	
		N/A	
Semi-Volatile Analysis	ALD03021S	10/25/04	
		N/A	
Non-halogenated Volatile Analysis	ALD03025N	10/25/04	
		N/A	
~~PCB Analysis~~ MGC HSG Summa	ECL03113M	10/25/04	
	ECL03113G	10/26/04	
	ECL03113C	10/26/04	

Site Project Manager (SPM) Qualification Card

Attachment 1 - On-the-Job Training (OJT) for Homogeneous Solids Sampling and Analysis (Continued)

Independent Review	BDR Number	Date of Review	SME Approval Signature
Solids Coring	WCS-0309	10/27/04	
		N/A	
Metals Analysis	ALD03024M	10/26/04	
		N/A	
Volatile Analysis	ALD03022V	10/26/04	
		N/A	
Semi-Volatile Analysis	ALD030225	10/26/04	
		N/A	
Non-halogenated Volatile Analysis	ALD03024N	10/26/04	
		N/A	
~~PCB Analysis~~*			
		N/A	

* This Test is no longer required for training purposes. 10/26/04

Site Project Manager
Qualification card

Addendum G - Idaho National Laboratory (INL)

Name: Barbara Broomfield	**Badge:** [redacted]
Indoctrination	**Required reading (latest version):**
	1. All acceptable knowledge summary reports, including revisions
	2. CCP-PO-024, *CCP/BBWI Interface Document*
	3. CCP-TP-068, *CCP Container Management at INL*
I have read the listed required reading and understand my responsibilities as applicable to procedures above.	Trainee signature 1/28/05 Date

Approved for format:

Rebecca Walker (original signature on file) 4-27-05
CCP Training Date

Approved for content:

Mark Pearcy (original signature on file) 4-27-05
CCP Site Project Manager Date

Approved for use:

David Haar (original signature on file) 4-27-05
Cognizant Manager Date

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Site Project Manager (SPM) Qualification Card

Name: Vince Medina | **Badge number:** [redacted]

Email address: [redacted]

The requirements of this document are the result of an evaluation as described in CCP-QP-002, *CCP Training and Qualification Plan.*

Education / Experience

Trainee has been selected for this position based on their education, prior-experience, additional certifications, training, etc., as documented in the CCP training files.

Mark Pearcy 10/3/07
CCP Program Manager | Date

Job specific training

Qualification limit	There is no qualification limit for this position. This qualification is a one-time-only requirement. **Qualification is valid for the site(s) with completed addenda.** Trainee may qualify for additional sites as necessary by completing the appropriate addenda.
Requalification requirements	There are no requalification requirements for this position. If performance in this position is interrupted, then cognizant manager will determine if requalification is required at time position is resumed.

Indoctrination

1.	WAP/QAPjP briefing and test 10/3/07	Alyca Atwood 10/3/07 — CCP Training / Date
2.	Hazardous Waste Code Assignments briefing and test	Rebecca Wolke 10.3.07 — CCP Training / Date
3.	Solid and Soils Sampling and Analysis for Site Project Managers (SPM)briefing	Christine Gamma 10/3/07; Thomas P. Gatliffe 10/3/07 TPG 10/3/07 — Site Project Manager / Date
4.	NCR / CAR briefing (Provided by CCP/QA organization)	Christine Gamma 10/3/7 — CCP/QA organization / Date
5.	Statistical sampling briefing	Thomas P. Gatliffe 10/3/07 — Site Project Manager / Date

Required reading:

Note: Site-specific required reading will be completed on applicable addenda for the site assigned (e.g., SPM-01a, *Savannah River Site*; SPM-01b, *Nevada Test Site;* etc.).

1. WP 08.NT.03, *Waste Stream Profile form*
2. CCP-CM-001, *CCP Equipment Change Authorization and Documentation*
3. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
4. CCP-PO-002, *CCP Transuranic Waste Certification Plan*

Site Project Manager (SPM)
Qualification Card

Name: Vince Medina **Badge number:** [redacted]

Email address: [redacted]

5. CCP-PO-003, *CCP TRUPACT-II Authorized Methods for Payload Control (TRAMPAC)*
6. CCP-PO-005, *CCP Conduct of Operations*
7. CCP-PO-008, *CCP Quality Assurance Interface with the WTS Quality Assurance Program*
8. CCP-QP-002, *CCP Training and Qualification Plan*
9. CCP-QP-004, *CCP Corrective Action Management*
10. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
11. CCP-QP-006, *CCP Corrective Action Reporting and Control*
12. CCP-QP-008, *CCP Records Management*
13. CCP-QP-010, *CCP Document Preparation, Approval and Control*
14. CCP-QP-011, *CCP Notebooks & Logbooks*
15. CCP-QP-015, *CCP Procurement*
16. CCP-QP-016, *CCP Control of Measuring, Testing, and Data Collection Equipment*
17. CCP-QP-018, *CCP Management Assessment*
18. CCP-QP-021, *CCP Surveillance Program*
19. CCP-QP-022, *CCP TRU Software Quality Assurance*
20. CCP-QP-023, *CCP Handling, Storage, and Shipping*
21. CCP-QP-027, *CCP Test Control*
22. CCP-QP-028, *CCP Records Filing, Inventory, Scheduling, and Dispositioning*
23. CCP-QP-030, *CCP Written Practice for the Qualification of CCP Helium Leak Detection*
24. CCP-TP-001, *CCP Project Level Data Validation and Verification*
25. CCP-TP-002, *CCP Reconciliation of DQOs and Reporting Characterization Data*
26. CCP-TP-003, *CCP Sampling Design and Data Analysis for RCRA Characterization*
27. CCP-TP-005, *CCP Acceptable Knowledge Documentation*
28. CCP-TP-028, *CCP Radiographic Test and Training Drum Requirements*
29. CCP-TP-030, *CCP TRU Waste Certification and WWIS Data Entry*
30. CCP-TP-056, *CCP HSG Performance Demonstration Plan*
31. CCP-TP-058, *CCP NDA Performance Demonstration Plan*

Site Project Manager (SPM)
Qualification Card

Name: Vince Medina	Badge number: [redacted]
Email address: [redacted]	

	32. CCP-TP-160, *CCP Random Selection of Containers for Headspace Gas Sampling and Analysis*	
	I have read the listed required reading and understand my responsibilities as applicable to procedures above	07-22-08 Trainee signature Date
Formal training	**On-the-job training knowledge requirements**	**SME signature / date**
	1. Define the term "acceptable knowledge" and state one use/purpose for acceptable knowledge.	10-4-07
	2. State where acceptable knowledge information is documented.	10-4-07
	3. Define the term "prohibited item" and give two examples of prohibited items.	10-4-07
	4. Identify the document that permits WIPP to receive and store hazardous mixed TRU waste.	10-4-07
	5. Identify the four major methods used by CCP to characterize TRU waste and briefly describe each method.	10-4-07
	6. State one major purpose for the nonconformance control program.	10-4-07
	7. Identify who can initiate a non-conformance report (NCR).	10-4-07
	8. State three (3) instances when an NCR is required for non-destructive examination (NDE).	10-4-07
	9. State when an NCR is written for non-destructive assay (NDA).	10-4-07
	10. State which document is the driver for NDA.	10-4-07
	11. State when an NCR is written for visual examination (VE).	10-14-07

Site Project Manager (SPM)
Qualification Card

Name: Vince Medina **Badge number:** [redacted]

Email address: [redacted]

	12. State when an NCR is written for headspace gas (HSG).	10-4-07
	13. Describe the information to look for in an NDA control chart during V & V review of an NDA batch data report.	10-4-07
	14. State the difference between a "Z" qualifier and a "J" qualifier.	11-11-08
	15. State when a "B" qualifier is used.	11-11-08
	16. State when a duplicate waste drum is run.	10-4-07
	17. State when an OCS duplicate waste drum is run.	11-11-08
	On-the-job training practical requirements	**SME signature / date**
	1. Demonstrate proficiency in the review of headspace gas batch data (BDR) reports.[2]	11-11-08
	2. Demonstrate proficiency in the review of non-destructive examination (NDE) BDRs.[2]	073008
	3. Demonstrate proficiency in the review of non-destructive assay (NDA) BDRs.[2]	073008
	4. Demonstrate proficiency in the review of visual examination (VE) BDRs.[2]	073008

Site Project Manager (SPM) Qualification Card

Name: Vince Medina	Badge number: [redacted]
Email address: [redacted]	

Approvals

I have completed required reading and formal training, and received on-the-job training for my job position. I fully understand my responsibilities as **Site Project Manager**.	Trainee signature — Date: *12/15/10 AM 10/15/10
I approve this employee to perform the duties of **Site Project Manager.**	R.A. Billett — Cognizant Manager — Date: 11/20/08 (VM 07-22-08)
Each SME/OJT instructor involved in the trainee validation of this OJT will print and sign their name in the respective blanks.	Craig Simmons — SME/OJT Instructor's printed name and signature CM Gomez Chris Vence Medina — SME/OJT Instructor's printed name and signature
This qualification card has been reviewed for completeness and signature verification by CCP Training.	Alyca Attwood 11/20/08 — CCP Training — Date

1 Documentation in training file.
2 Proficiency will be demonstrated after the completion of BDR reviews in each discipline under the supervision of a qualified SPM.

Approved for format:
Rebecca Walker (original signature on file) — CCP Training — **11-15-06** Date

Approved for content:
Mark Pearcy (original signature on file) — CCP Site Project Manager — **11-15-06** Date

Approved for use:
D. K. Ploetz (original signature on file) — Cognizant Manager — **11-15-06** Date

* Date inadvertently left off when individual made a correction on the date at time of qualification.
AM 12/15/10

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Central Characterization Project
Effective Date: 02/23/2009

Site Project Manager (SPM) Qualification Card

Name: Laura Nelson **Badge Number:** [redacted]

Email Address: [redacted]

The requirements of this document are the result of an evaluation as described in CCP-QP-002, *CCP Training and Qualification Plan.*

Education / Experience

Trainee has been selected for this position based on their education, prior-experience, additional certifications, training, etc., as documented in the CCP training files.	Mark Pearcy Mark Pearcy 4-8-10 CCP Program Manager Date

Job Specific Training

Qualification Limit	There is no qualification limit for this position. This qualification is a one-time-only requirement. Upon completion of this core qualification card, the Trainee is qualified to perform SPM duties. Site specific qualification (i.e., BDR review) is valid for the site(s) with completed addenda. * see below Unsatisfactory performance will result in disqualification. If unsatisfactory performance is determined, the qualification card and OJT process must be completed to re-establish qualification.
Requalification Requirements	Not required. See above statement.

Indoctrination

WAP/QAPjP Briefing and Test 4/1/10	Michele Bitlett 6/24/10 CCP Training Date
Hazardous Waste Code Assignments Briefing and Test 4/1/10	Michele Bitlett 6/21/10 CCP Training Date
Solid and Soils Sampling and Analysis for Site Project Managers (SPM) Briefing	Michael Walraline 5/12/10 Site Project Manager Date
NCR / CAR Briefing (Provided by CCP/QA Organization)	Kristine Kinney 4/8/10 CCP/QA Organization Date
Statistical Sampling Briefing	4/9/10 Site Project Manager Date

Trainee started qualification prior to revision of Qualcard. Based on new process defined in CCP-QP-002 addendum are no longer applicable and the trainee is a qualified SPM. Larry Tarte 6/21/10

Site Project Manager (SPM) Qualification Card

Name: Laura Nelson **Badge Number:** [redacted]

Email Address: [redacted]

Contact-Handled Waste VE and RTR Training	Larry Porter Larry Porter 6/4/10 Site Project Manager Date
Incompatibles Determination Training Module	Michael Wadsworth Michael Wadsworth 5/12/10 Site Project Manager Date

Required Reading:

1. WP 08.NT.03, *Waste Stream Profile form*
2. CCP-CM-001, *CCP Equipment Change Authorization and Documentation*
3. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
4. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
5. CCP-PO-003, *CCP TRUPACT-II Authorized Methods for Payload Control (TRAMPAC)*
6. CCP-PO-005, *CCP Conduct of Operations*
7. CCP-PO-008, *CCP Quality Assurance Interface with the WTS Quality Assurance Program*
8. CCP-QP-002, *CCP Training and Qualification Plan*
9. CCP-QP-004, *CCP Corrective Action Management*
10. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
11. CCP-QP-006, *CCP Corrective Action Reporting and Control*
12. CCP-QP-008, *CCP Records Management*
13. CCP-QP-010, *CCP Document Preparation, Approval and Control*
14. CCP-QP-011, *CCP Notebooks & Logbooks*
15. CCP-QP-015, *CCP Procurement*
16. CCP-QP-016, *CCP Control of Measuring, Testing, and Data Collection Equipment*
17. CCP-QP-018, *CCP Management Assessment*
18. CCP-QP-022, *CCP TRU Software Quality Assurance*
19. CCP-QP-023, *CCP Handling, Storage, and Shipping*
20. CCP-QP-027, *CCP Test Control*
21. CCP-QP-028, *CCP Records Filing, Inventory, Scheduling, and Dispositioning*
22. CCP-QP-030, *CCP Written Practice for the Qualification of CCP Helium Leak Detection*
23. CCP-TP-001, *CCP Project Level Data Validation and Verification*
24. CCP-TP-002, *CCP Reconciliation of DQOs and Reporting Characterization Data*
25. CCP-TP-003, *CCP Sampling Design and Data Analysis for RCRA Characterization*
26. CCP-TP-005, *CCP Acceptable Knowledge Documentation*
27. CCP-TP-028, *CCP Radiographic Test and Training Drum Requirements*
28. CCP-TP-030, *CCP TRU Waste Certification and WWIS Data Entry*
29. CCP-TP-056, *CCP HSG Performance Demonstration Plan*
30. CCP-TP-058, *CCP NDA Performance Demonstration Plan*
31. CCP-TP-160, *CCP Random Selection of Containers for Headspace Gas Sampling and Analysis*

Site Project Manager (SPM)
Qualification Card

Name: Laura Nelson **Badge Number:** [redacted]

Email Address: [redacted]

I have read the listed required reading and understand my responsibilities as applicable to the procedures above.	Laura Nelson 4/8/2010 Trainee Signature Date
CCP-PO-005 - Conduct of Operations Comprehensive Exam 4-5-10	Michele Billett 6/21/10 CCP Training Date

Formal Training	On-the-job Training Knowledge Requirements	SME Signature / Date
CCP-PO-001	1. Define the term "prohibited item" and give two examples of prohibited items.	4/9/2010
	2. Identify the document that permits WIPP to receive and store hazardous mixed TRU waste.	4/9/2010
	3. Identify the four major methods used by CCP to characterize TRU waste and briefly describe each method.	4/9/2010
	4. State three (3) instances when an NCR is required for non-destructive examination (NDE).	4/9/2010
	5. State when an NCR is written for visual examination (VE).	4/9/2010
	6. State when an NCR is written for headspace gas (HSG).	4/9/2010
	7. State the difference between a "Z" qualifier and a "J" qualifier.	4/9/2010
	8. State when a "B" qualifier is used.	4/9/2010
	9. Describe the definition of VE of record according to New Mexico Environment Department (NMED). Provide an example.	4/9/2010
	10. State when a duplicate waste drum is run.	4/9/2010

Site Project Manager (SPM)
Qualification Card

Name: Laura Nelson | **Badge Number:** [redacted]

Email Address: [redacted]

CCP-PO-002	11. State when an NCR is written for non-destructive assay (NDA).	4/9/2010
	12. State which document is the driver for NDA.	4/9/2010
	13. Describe the information to look for in an NDA control chart during V & V review of an NDA batch data report.	6/14/10
CCP-QP-005	14. State one major purpose for the nonconformance control program.	6/14/10
	15. Identify who can initiate a non-conformance report (NCR).	4/9/2010
CCP-TP-005	16. Define the term "acceptable knowledge" and state one use/purpose for acceptable knowledge.	4/9/2010
	17. State where acceptable knowledge information is documented.	4/9/2010
	18. Discuss the AK sufficiency elements.	6/15/10
	On-the-job Training Practical Requirements	**SME Signature / Date**
CCP-TP-001	1. Demonstrate proficiency in the review of headspace gas batch data (BDR) reports.[2]	6/14/10
	2. Demonstrate proficiency in the review of non-destructive examination (NDE) BDRs.[2]	6/15/10
	3. Demonstrate proficiency in the review of non-destructive assay (NDA) BDRs.[2]	6/14/10
	4. Demonstrate proficiency in the review of visual examination (VE) BDRs.[2]	6/15/10
CCP-TP-002	5. Complete a Characterization Information Summary (CIS).	6/17/10

[2] Proficiency will be demonstrated after the completion of BDR reviews in each discipline under the supervision of a qualified SPM

Site Project Manager (SPM)
Qualification Card

Name: Laura Nelson **Badge Number:** [redacted]

Email Address: [redacted]

Approvals	
I have completed formal training and received on-the-job training for this position. I fully understand my responsibilities as an SPM.	6-21-10 Laura Nelson 6/21/10 Trainee *(printed name and signature)* Date
Validation by the SME/OJT instructor(s) involved in the training of this individual.	Craig Simmons 6/21/10 SME/OJT Instructor *(printed name and signature)* Date Michael Wladkowski 6/15/10 SME/OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of an SPM.	Hikari J. Neely 6-21-10 CCP Site Project Manager *(printed name and signature)* Date Michael C. Sansborough 6-21-10 ~~6-20-10~~ ~~6-20-10~~ MS 6-24-10 CCP Program Manager *(printed name and signature)* Date
This qualification card has been reviewed for completeness and signature verification by CCP Training.	Larry Porter 6-21-10 CCP Training *(printed name and signature)* Date

Approved for Format: **Alyca Atwood** *(original signature on file)* **02-23-09**
CCP Training Date

Approved for Content: **Craig Simmons** *(original signature on file)* **02-23-09**
CCP Site Project Manager Date

Approved for Use: **R. A. Billett** *(original signature on file)* **02-23-09**
CCP Program Manager Date

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Site Project Manager (SPM) Qualification Card

Name: Jim Vernon **Badge Number:** [redacted]

Email Address: [redacted]

The requirements of this document are the result of an evaluation as described in CCP-QP-002, *CCP Training and Qualification Plan.*

Education / Experience

Trainee has been selected for this position based on their education, prior-experience, additional certifications, training, etc., as documented in the CCP training files.	Mark Pearcy CCP Program Manager	5/13/09 Date

Job Specific Training

Qualification Limit	There is no qualification limit for this position. This qualification is a one-time-only requirement. Upon completion of this core qualification card, the Trainee is qualified to perform SPM duties. Site specific qualification (i.e., BDR review) is valid for the site(s) with completed addenda. Unsatisfactory performance will result in disqualification. If unsatisfactory performance is determined, the qualification card and OJT process must be completed to re-establish qualification.
Requalification Requirements	Not required. See above statement.

Indoctrination

1. WAP/QAPjP Briefing and Test	Alyca Atwood CCP Training	5/26/09 Date
2. Hazardous Waste Code Assignments Briefing and Test	Alyca Atwood CCP Training	5/26/09 Date
3. Solid and Soils Sampling and Analysis for Site Project Managers (SPM) Briefing	 Site Project Manager	5/13/09 Date
4. NCR / CAR Briefing (Provided by CCP/QA Organization)	 CCP/QA Organization	5/26/09 Date
5. Statistical Sampling Briefing TP - 162	 Site Project Manager	5/28/09 Date

Site Project Manager (SPM) Qualification Card

Name: Jim Vernon **Badge Number:** [redacted]

Email Address: [redacted]

6. Contact-Handled Waste VE and RTR Training	Site Project Manager	Date: 5/13/09
7. Incompatibles Determination Training Module	Site Project Manager	Date: 5/13/09

Required Reading:

1. WP 08.NT.03, *Waste Stream Profile form*
2. CCP-CM-001, *CCP Equipment Change Authorization and Documentation*
3. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
4. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
5. CCP-PO-003, *CCP TRUPACT-II Authorized Methods for Payload Control (TRAMPAC)*
6. CCP-PO-005, *CCP Conduct of Operations*
7. CCP-PO-008, *CCP Quality Assurance Interface with the WTS Quality Assurance Program*
8. CCP-QP-002, *CCP Training and Qualification Plan*
9. CCP-QP-004, *CCP Corrective Action Management*
10. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
11. CCP-QP-006, *CCP Corrective Action Reporting and Control*
12. CCP-QP-008, *CCP Records Management*
13. CCP-QP-010, *CCP Document Preparation, Approval and Control*
14. CCP-QP-011, *CCP Notebooks & Logbooks*
15. CCP-QP-015, *CCP Procurement*
16. CCP-QP-016, *CCP Control of Measuring, Testing, and Data Collection Equipment*
17. CCP-QP-018, *CCP Management Assessment*
18. CCP-QP-022, *CCP TRU Software Quality Assurance*
19. CCP-QP-023, *CCP Handling, Storage, and Shipping*
20. CCP-QP-027, *CCP Test Control*
21. CCP-QP-028, *CCP Records Filing, Inventory, Scheduling, and Dispositioning*
22. CCP-QP-030, *CCP Written Practice for the Qualification of CCP Helium Leak Detection*
23. CCP-TP-001, *CCP Project Level Data Validation and Verification*
24. CCP-TP-002, *CCP Reconciliation of DQOs and Reporting Characterization Data*
25. CCP-TP-003, *CCP Sampling Design and Data Analysis for RCRA Characterization*
26. CCP-TP-005, *CCP Acceptable Knowledge Documentation*
27. CCP-TP-028, *CCP Radiographic Test and Training Drum Requirements*
28. CCP-TP-030, *CCP TRU Waste Certification and WWIS Data Entry*
29. CCP-TP-056, *CCP HSG Performance Demonstration Plan*
30. CCP-TP-058, *CCP NDA Performance Demonstration Plan*
31. CCP-TP-160, *CCP Random Selection of Containers for Headspace Gas Sampling and Analysis*

Site Project Manager (SPM) Qualification Card

Name: Jim Vernon **Badge Number:** [redacted]

Email Address: [redacted]

I have read the listed required reading and understand my responsibilities as applicable to the procedures above.	Trainee Signature — Date: 3-20-09
CCP-PO-005 - Conduct of Operations Comprehensive Exam	CCP Training — Date: 5/26/09

Formal Training	On-the-job Training Knowledge Requirements	SME Signature / Date
CCP-PO-001	1. Define the term "prohibited item" and give two examples of prohibited items.	5/13/09
	2. Identify the document that permits WIPP to receive and store hazardous mixed TRU waste.	5/13/09
	3. Identify the four major methods used by CCP to characterize TRU waste and briefly describe each method.	5/13/09
	4. State three (3) instances when an NCR is required for non-destructive examination (NDE).	5/13/09
	5. State when an NCR is written for visual examination (VE).	5/13/09
	6. State when an NCR is written for headspace gas (HSG).	5/13/09
	7. State the difference between a "Z" qualifier and a "J" qualifier.	5/13/09
	8. State when a "B" qualifier is used.	5/13/09
	9. Describe the definition of VE of record according to New Mexico Environment Department (NMED). Provide an example.	5/13/09
	10. State when a duplicate waste drum is run.	5/13/09

Site Project Manager (SPM) Qualification Card

Name: Jim Vernon **Badge Number:** [redacted]

Email Address: [redacted]

CCP-PO-002	11. State when an NCR is written for non-destructive assay (NDA).	5/13/09
	12. State which document is the driver for NDA.	5/13/09
	13. Describe the information to look for in an NDA control chart during V & V review of an NDA batch data report.	5/13/09
CCP-QP-005	14. State one major purpose for the nonconformance control program.	5/13/09
	15. Identify who can initiate a non-conformance report (NCR).	5/13/09
CCP-TP-005	16. Define the term "acceptable knowledge" and state one use/purpose for acceptable knowledge.	5/13/09
	17. State where acceptable knowledge information is documented.	5/13/09
	18. Discuss the AK sufficiency elements.	5/13/09
	On-the-job Training Practical Requirements	**SME Signature / Date**
CCP-TP-001	1. Demonstrate proficiency in the review of headspace gas batch data (BDR) reports.[2]	5/26/09
	2. Demonstrate proficiency in the review of non-destructive examination (NDE) BDRs.[2]	6/9/09
	3. Demonstrate proficiency in the review of non-destructive assay (NDA) BDRs.[2]	6/2/09
	4. Demonstrate proficiency in the review of visual examination (VE) BDRs.[2]	6/9/09
CCP-TP-002	5. Complete a Characterization Information Summary (CIS).	6/11/09

Site Project Manager (SPM) Qualification Card

Name: Jim Vernon **Badge Number:** [redacted]

Email Address: [redacted]

Approvals	
I have completed formal training and received on-the-job training for this position. I fully understand my responsibilities as an SPM.	* Jim Vernon AM 12/15/10 — 6-11-09 Trainee *(printed name and signature)* — Date
Validation by the SME/OJT instructor(s) involved in the training of this individual.	Michael Valentine — 5/13/09 SME/OJT Instructor *(printed name and signature)* — Date Adele M Garner IV — 5/26/09 SME/OJT Instructor *(printed name and signature)* — Date
I approve this employee to perform the duties of an SPM.	Mark Pearcy — 6/11/09 CCP Site Project Manager *(printed name and signature)* — Date Mark Pearcy — 6/11/09 CCP Program Manager *(printed name and signature)* — Date
This qualification card has been reviewed for completeness and signature verification by CCP Training.	A. Atwood — 6/11/09 CCP Training *(printed name and signature)* — Date

Approved for Format: **Alyca Atwood** *(original signature on file)* — **02-23-09**
CCP Training — Date

Approved for Content: **Craig Simmons** *(original signature on file)* — **02-23-09**
CCP Site Project Manager — Date

Approved for Use: **R. A. Billett** *(original signature on file)* — **02-23-09**
CCP Program Manager — Date

* Printed name inadvertently left off at time of qualification. AM 12/15/10

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Contact Handled (CH)
Site Project Manager (SPM)
Qualification Card

Name:	Steve Castro
Email Address:	[redacted]

Education/Experience	
Resume documenting education and experience on file with Central Characterization Project (CCP) Training.	Michele Billett 8/1/12 CCP Training Date

Job Specific Training	
Qualification Limit	There is no qualification limit for this position. This qualification is a one-time-only requirement. Upon completion of this core qualification card, the Trainee is qualified to perform Site Project Manager (SPM) duties for Contact Handled (CH) Waste. Additionally, once this qualification card is complete, the SPM will be qualified to perform SPM reviews of Headspace Gas (HSG) batch data reports, regardless of the radiological determination of the waste. Unsatisfactory performance will result in disqualification. If unsatisfactory performance is determined, the complete qualification card, including the On-the-Job Training (OJT) portions, must be completed to re-establish qualification.
Requalification Requirements	Not required. See above statement.

Indoctrination	
	Initial/Indoctrination Reading: 1. CCP-CM-001, *CCP Equipment Change Authorization and Documentation* 2. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan* 3. CCP-PO-002, *CCP Transuranic Waste Certification Plan* 4. CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)* 5. CCP-PO-008, *CCP Quality Assurance Interface with the WTS Quality Assurance Program* 6. CCP-PO-050, *CCP TRUPACT-III TRU Waste Authorized Methods for Payload Control (CCP TRUPACT-III TRAMPAC)* 7. CCP-QP-002, *CCP Training and Qualification Plan* 8. CCP-QP-004, *CCP Corrective Action Management* 9. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control* 10. CCP-QP-006, *CCP Corrective Action Reporting and Control* 11. CCP-QP-008, *CCP Records Management* 12. CCP-QP-010, *CCP Document Preparation, Approval, and Control* 13. CCP-QP-011, *CCP Laboratory Logbooks* 14. CCP-QP-014, *CCP Quality Assurance Trend Analysis and Reporting* 15. CCP-QP-015, *CCP Procurement* 16. CCP-QP-016, *CCP Control of Measuring and Testing Equipment* 17. CCP-QP-018, *CCP Management Assessment* 18. CCP-QP-019, *CCP Quality Assurance Reporting to Management*

Contact Handled (CH)
Site Project Manager (SPM)
Qualification Card

Name: Steve Castro

Email Address: [redacted]

	19. CCP-QP-022, *CCP Software Quality Assurance Plan* 20. CCP-QP-027, *CCP Test Control* 21. CCP-QP-028, *CCP Records Filing, Inventorying, Scheduling, and Dispositioning* 22. CCP-TP-001, *CCP Project Level Data Validation and Verification* 23. CCP-TP-002, *CCP Reconciliation of DQOs and Reporting Characterization Data* 24. CCP-TP-003, *CCP Data Analysis for S3000, S4000, and S5000 Characterization* 25. CCP-TP-005, *CCP Acceptable Knowledge Documentation* 26. CCP-TP-030, *CCP CH TRU Waste Certification and WWIS/WDS Data Entry* 27. CCP-TP-056, *CCP HSG Performance Demonstration Plan* 28. CCP-TP-058, *CCP NDA Performance Demonstration Program*
I have read the listed initial/indoctrination reading and understand my responsibilities as applicable to the procedures above.	Steve Castro 8/1/12 Trainee Date

Document	Additional Training Requirements	
	1. WAP/QAPjP Briefing and Test	Michele Billett 8/1/12 CCP Training Date
	2. Hazardous Waste Identification (Self-Paced Module)	Michele Billett 8/1/12 CCP Training Date
	3. CCP-VE-101 - Visual Examination (VE) TRU Waste Characterization Briefing	Michele Billett 8/1/12 CCP Training Date
	4. CCP-RTR-101 - Real-Time Radiography (RTR) TRU Waste Characterization Briefing	Michele Billett 8/1/12 CCP Training Date

Formal Training	OJT Knowledge Requirements	Subject Matter Expert (SME)/OJT Signature/Date
CCP-PO-001	1. Define the term "prohibited item" and give five examples of prohibited items.	7/18/12
	2. Identify the document allowing WIPP to receive and store TRU-mixed waste.	7/18/12
	3. Identify and describe the four major methods used by CCP to characterize TRU waste.	7/18/12
	4. State three (3) instances when an NCR is required for Real-Time Radiography (RTR).	7/18/12

Contact Handled (CH)
Site Project Manager (SPM)
Qualification Card

Name: Steve Castro
Email Address: [redacted]

CCP-PO-002	5. State when an NCR is written for Visual Examination (VE).	7/18/12
	6. State when an NCR is written for Headspace Gas (HSG).	7/18/12
	7. State the difference between a "Z" qualifier and a "J" qualifier.	7/18/12
	8. State when a "B" qualifier is used.	7/18/12
	9. State when a replicate waste drum is run in RTR.	7/18/12
	10. State when an NCR is written for Non-Destructive Assay (NDA).	7/18/12
	11. State which document is the driver for NDA.	7/18/12
	12. Describe the information to look for in an NDA control chart during a V&V review of an NDA batch data report (BDR).	7/18/12
CCP-QP-005	13. State one major purpose for the nonconformance control program.	7/18/12
	14. Identify who can initiate a non-conformance report (NCR).	7/18/12
CCP-TP-005	15. Define the term "acceptable knowledge" and state one use/purpose for acceptable knowledge.	7/18/12
	16. State where acceptable knowledge information is documented.	7/18/12
	17. Discuss the AK sufficiency elements.	7/18/12
	18. Discuss the components of statistical sampling.	7/18/12
	19. Discuss the components of solids and soils sampling and analysis.	7/18/12
	20. Discuss the components of the NCR and CAR process.	7/18/12

Contact Handled (CH)
Site Project Manager (SPM)
Qualification Card

Name: Steve Castro

Email Address: [redacted]

Formal Training	OJT Practical Requirements	SME/OJT Signature/Date
CCP-TP-001	1. Demonstrate proficiency in the review of headspace gas batch data (BDR) reports.[1]	7/18/12
	2. Demonstrate proficiency in the review of non-destructive examination (NDE) BDRs.[1]	8/1/12
	3. Demonstrate proficiency in the review of non-destructive assay (NDA) BDRs.[1]	25 July 12
	4. Demonstrate proficiency in the review of visual examination (VE) BDRs.[1]	7-18-12
CCP-TP-002	5. Discuss the components of a Characterization Information Summary (CIS).	8-1-12

amc 7/17/12

[1] Proficiency will be demonstrated after the completion of BDR reviews in each discipline under the supervision of a qualified SPM SME

Contact Handled (CH)
Site Project Manager (SPM)
Qualification Card

Name: Steve Castro

Email Address: [redacted]

Approvals	
I have completed formal training and received OJT for this position. I fully understand my responsibilities as a CH SPM.	Steve Castro Steve Castro 8/1/12 Trainee *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of a CH SPM. *(Validation by the SME/OJT instructor(s) involved in the training of this individual).*	Richard Kantrowitz 8/1/12 David W Moody David W Moody 1 Aug 12 SME/OJT Instructor *(printed name and signature)* Date Jim Vernon 8-1-12 Adela M Cantu Adela M Cantu 8-6-12 SME/OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of a CH SPM.	Mark Pearcy Mark Pearcy 8/6/12 CCP Lead or Alternate SPM *(printed name and signature)* Date

Approved for Content & Format: **Richard Kantrowitz (Approval on File)** **02/27/12**
SME/OJT Date

Approved for Content: **Mark Pearcy (Approval on File)** Mark MP 8/6/12 **02/27/12**
CCP Lead or Alternate SPM Date

Approved for Use: **A.J. Fisher (Approval on File)** **02/27/12**
CCP Manager Responsible for Training Date

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Remote Handled (RH)
Site Project Manager (SPM)
Qualification Card

Name: Laura Nelson	**Badge Number:** [redacted]
Email Address: [redacted]	

Education/Experience

Resume documenting education and experience on file with Central Characterization Project (CCP) Training.	Michele Bigbett 6/22/10 CCP Training — Date

Job Specific Training

Qualification Limit	There is no qualification limit for this position. This qualification is a one-time-only requirement. Upon completion of this core qualification card, the Trainee is qualified to perform Site Project Manager (SPM) duties for Remote Handled Waste. Unsatisfactory performance will result in disqualification. If unsatisfactory performance is determined, the qualification card and on-the-job training (OJT) process must be completed to re-establish qualification.
Requalification Requirements	Not required. See above statement.

Indoctrination

Initial/Indoctrination Reading:

1. DOE / WIPP 02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan (WCPIP)*
2. CCP-CM-001, *CCP Equipment Change Authorization and Documentation*
3. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
4. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
5. CCP-PO-008, *CCP Quality Assurance Interface with the WTS Quality Assurance Program*
6. CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC)*
7. CCP-QP-002, *CCP Training and Qualification Plan*
8. CCP-QP-004, *CCP Corrective Action Management*
9. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
10. CCP-QP-006, *CCP Corrective Action Reporting and Control*
11. CCP-QP-008, *CCP Records Management*
12. CCP-QP-010, *CCP Document Preparation, Approval and Control*
13. CCP-QP-011, *CCP Laboratory Logbooks*
14. CCP-QP-015, *CCP Procurement*
15. CCP-QP-016, *CCP Control of Measuring and Testing Equipment*
16. CCP-QP-018, *CCP Management Assessment*
17. CCP-QP-022, *CCP Software Quality Assurance Plan*
18. CCP-QP-023, *CCP Handling, Storage, and Shipping*
19. CCP-QP-027, *CCP Test Control*
20. CCP-QP-028, *CCP Records Filing, Inventorying, Scheduling, and Dispositioning*

Remote Handled (RH)
Site Project Manager (SPM)
Qualification Card

Name: Laura Nelson | **Badge Number:** [redacted]

Email Address: [redacted]

21. CCP-QP-030, *CCP Written Practice for the Qualification of CCP Helium Leak Detection Personnel*
22. CCP-QP-036, *CCP Qualification of Acceptable Knowledge for Remote-Handled Transuranic Waste Through a Quality Assurance Equivalency Demonstration*
23. CCP-TP-001, *CCP Project Level Data Validation and Verification*
24. CCP-TP-002, *CCP Reconciliation of DQOs and Reporting Characterization Data*
25. CCP-TP-003, *CCP Data Analysis for S3000, S4000, and S5000 Characterization*
26. CCP-TP-005, *CCP Acceptable Knowledge Documentation*
27. CCP-TP-028, *CCP Radiographic Test and Training Drum Construction*
28. CCP-TP-056, *CCP HSG Performance Demonstration Plan*
29. CCP-TP-058, *CCP NDA Performance Demonstration Program*
30. CCP-TP-162, *CCP Random Selection of Containers for Solids and Headspace Gas Sampling and Analysis*
31. CCP-TP-163, *CCP Standard Waste Visual Examination*
32. CCP-TP-500, *CCP Remote-Handled Waste Visual Examination*
33. CCP-TP-504, *CCP Dose-to-Curie Survey Procedure for Remote-Handled Transuranic Waste*
34. CCP-TP-506, *CCP Preparation of the Remote-Handled Transuranic Waste Acceptable Knowledge Characterization Reconciliation Report*
35. CCP-TP-508, *CCP Standard Real-Time Radiography Inspection Procedure*
36. CCP-TP-509, *CCP Remote-Handled Transuranic Container Tracking*
37. CCP-TP-510, *CCP Remote-Handled Radiography Test and Training Drum Requirements*
38. CCP-TP-511, *CCP Peer Review*
39. CCP-TP-512, *CCP Remote-Handled Waste Sampling*
40. CCP-TP-530, *CCP RH TRU Waste Certification and WWIS Data Entry*

I have read the listed initial/indoctrination reading and understand my responsibilities as applicable to the procedures above.

Laura Nelson — Trainee Signature — 6/21/10 — Date

Document	Additional Training Requirements		
CCP-PO-001	1. WAP/QAPjP Briefing and Test 4/1/10	Michele Bilett — CCP Training	6/21/10 — Date
	2. Hazardous Waste Number Assignments Briefing and Test 4/1/10	Michele Bilett — CCP Training	6/21/10 — Date
	3. Solid and Soils Sampling and Analysis for Site Project Managers (SPM) Briefing	Hunter J. Neary — CCP SPM	6-22-10 — Date

Remote Handled (RH)
Site Project Manager (SPM)
Qualification Card

Name: Laura Nelson **Badge Number:** [redacted]

Email Address: [redacted]

	4. Statistical Sampling Briefing	Thomas R Tafoya 6/22/10 CCP SPM Date
	5. NCR/CAR Briefing (Provided by CCP/QA Organization)	Christine Kilgore 6/22/10 CCP/QA Organization Date
CCP-VE-101	6. Visual Examination (VE) TRU Waste Characterization Briefing	Larry Porter Larry Porter 6/22/10 CCP SPM Date
CCP-RTR-101	7. Real-Time Radiography TRU Waste Characterization Briefing.	Larry Porter Larry Porter 6/22/10 CCP SPM Date
	8. Incompatibles Determination Training Module	Larry Porter Larry Porter 6/22/10 CCP SPM Date

Formal Training	OJT Knowledge Requirements	Subject Matter Expert (SME) Signature/Date
DOE/WIPP 02-3214	1. Define Environmental Protection Agency's (EPA) definition of Visual Examination (VE) of record. Provide an example.	Irene Price 6/17/10
	2. Explain how CCP-TP-500 satisfies the EPA and New Mexico Environmental Department (NMED) criteria.	Irene Price 6/17/10
	3. State the Data Quality Objectives (DQO) and Quality Assurance Objectives (QAO) for each characterization method (e.g., Dose-to-Curie, VE).	Irene Price 6/17/10
	4. State the purpose of CCP-TP-506.	Irene Price 6/17/10
CCP-PO-001	5. Define the term "prohibited item" and give two examples of prohibited items.	Irene Price 6/17/10
	6. Identify the document allowing WIPP to receive and store TRU-mixed waste.	Irene Price 6/17/10

Remote Handled (RH)
Site Project Manager (SPM)
Qualification Card

Name: Laura Nelson **Badge Number:** [redacted]

Email Address: [redacted]

	7. Identify and describe the four major methods used by CCP to characterize TRU waste.	Laura Nelson 6/17/10
	8. State three (3) instances when a nonconformance report (NCR) is required for Real-Time Radiography (RTR).	Laura Nelson 6/17/10
	9. State when an NCR is written for VE.	Laura Nelson 6/17/10
	10. State when an NCR is written for Headspace Gas (HSG) Sampling and Analysis.	Laura Nelson 6/17/10
	11. State the difference between a "Z" qualifier and a "J" qualifier.	Laura Nelson 6/17/10
	12. State when a "B" qualifier is used.	Laura Nelson 6/17/10
	13. State when a replicate waste drum is run in RTR.	Laura Nelson 6/17/10
CCP-PO-002	14. State which sites are authorized to ship PCB waste.	Laura Nelson 6/17/10
	15. State the maximum allowed curies per liter activity level (averaged over the volume of the canister).	Laura Nelson 6/17/10
	16. State if machine-compacted waste is allowed to ship to the Waste Isolation Pilot Plant (WIPP).	Laura Nelson 6/17/10
CCP-QP-005	17. State one major purpose for the nonconformance control program.	Laura Nelson 6/17/10
	18. Identify who can initiate an NCR.	Laura Nelson 6/17/10
CCP-QP-008	19. List the responsibilities of record generators.	Laura Nelson 6/17/10

Remote Handled (RH)
Site Project Manager (SPM)
Qualification Card

Name: Laura Nelson		Badge Number: [redacted]
Email Address: [redacted]		
	20. State the storage and control requirements for CCP records.	Laura Nelson 6/17/10
	21. Explain the process and proper method to make corrections or revisions to CCP records.	Laura Nelson 6/17/10
CCP-QP-010	22. State the importance of using approved documents.	Laura Nelson 6/17/10
	23. State when to verify a document revision.	Laura Nelson 6/17/10
CCP-PO-505	24. Discuss the differences in the transportation requirement for RH-TRU 72-B and CNS 10-160B versus the TRUPACT-II.	Laura Nelson 6/17/10
CCP-TP-511	25. State the peer review requirements.	Laura Nelson 6/17/10
CCP-TP-512	26. Discuss the QAOs for radiochemistry and ICP-MS batch data report (BDR).	Laura Nelson 6/17/10
Formal Training	**OJT Practical Requirements**	**SME Signature/Date**
CCP-TP-002	1. Demonstrate proficiency of characterization information summary reports.	Laura Nelson 6/17/10
CCP-TP-500	2. Demonstrate proficiency in review of the RH visual examination BDRs.	Laura Nelson 6/17/10
CCP-TP-504	3. Demonstrate proficiency in the review of "Dose-to-Curie" BDR.	Laura Nelson 6/17/10
CCP-TP-506	4. Complete a Characterization Reconciliation Report (CRR).	Laura Nelson 6/17/10

Remote Handled (RH)
Site Project Manager (SPM)
Qualification Card

Name: Laura Nelson **Badge Number:** [redacted]

Email Address: [redacted]

CCP-TP-508	5. Demonstrate proficiency in review of the RH Real-time Radiography (RTR) BDRs.	6/17/10
	6. Demonstrate the verification of a container meeting the applicable content code limit.	6/17/10
CCP-TP-512	7. Demonstrate proficiency in the review of "Remote-Handled Waste Sample" BDR.	6/17/10

Remote Handled (RH)
Site Project Manager (SPM)
Qualification Card

Name: Laura Nelson **Badge Number:** [redacted]

Email Address: [redacted]

Approvals	
I have completed formal training and received on-the-job training for this position. I fully understand my responsibilities as a RH SPM.	LAURA NELSON Laura Nelson 6/22/10 Trainee *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of a RH SPM. *(Signature validation by the SME/OJT instructor(s) involved in the training of this individual)*	Irene Quintana Irene Quintana 6/21/10 SME/OJT Instructor *(printed name and signature)* Date N/A SME/OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of a RH SPM.	LQ 4/20/11 * Irene Quintana Irene Quintana 6/21/10 CCP Lead or Alternate SPM *(printed name and signature)* Date

Approved for Content & Format: **Approval on file** **6/17/2010**
RH SPM SME *(printed name and signature)* Date

Approved for Content: **Approval on file** **6/17/2010**
CCP Lead or Alternate SPM *(printed name and signature)* Date

Approved for Use: **Approval on file** **6/17/2010**
CCP Manager Responsible for Training *(printed name and signature)* Date

* Briefings under the additional Training Requirement was performed 6/22/10. The CCP Lead or alternate SPM date of 6/21/10 was recorded inadvertently. LQ 4/22/11

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Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: Spencer Troy Pattee

Education/Experience	
Resume documenting education and experience on file with National TRU Program Certification (NTPC) Training.	Cheryl Arrigo 05-22-13 NTPC Training — Date

Job Specific Training

☐ **Initial Qualification** ☑ **Requalification** ☐ **Full Requalification**

Qualification Limit	**This qualification is valid for two (2) years.** If necessary, additional training may be required by the Site Project Manager (SPM) or the Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the Manager Responsible for Training. The candidate must successfully complete the entire qualification card to reestablish qualification. Qualification is valid for this site and process only.
Requalification Requirements	Items required for requalification are identified by text.

Indoctrination
(Required at Initial Qualification and Full Requalification)

Initial/Indoctrination Reading:

1. CCP-HSP-014, *Health and Safety Program Implementation for CCP*
2. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
3. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
4. CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)*
5. CCP-QP-002, *CCP Training and Qualification Plan*
6. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
7. CCP-QP-008, *CCP Records Management*
8. CCP-QP-010, *CCP Document Preparation, Approval, and Control*
9. CCP-QP-016, *CCP Control of Measuring and Testing Equipment*
10. CCP-QP-022, *CCP Software Quality Assurance Plan*
11. CCP-QP-023, *CCP Handling, Storage, and Shipping*
12. CCP-QP-029, *CCP Corrective Action Management*
13. CCP-TP-006, *CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste*

I have read the listed Initial/Indoctrination Reading and understand my responsibilities as applicable to the procedures above.	N/A Trainee — Date

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: Spencer Troy Pattee

Additional Training Requirements	
1. WAP/QAPjP Briefing and Test *(One-time Requirement)*	Cheryl Mingo 05-22-13 NTPC Training — Date
2. CCP-VE-101, *Visual Examination (VE) TRU Waste Characterization Briefing* *(Always Required)*	Cheryl Mingo 05-22-13 NTPC Training — Date
3. VE Comprehensive Exam *(Always Required)*	Cheryl Mingo 05-22-13 NTPC Training — Date

Formal Training	On-the-Job Training (OJT) Knowledge Requirements *(Required at Initial Qualification and Full Requalification)*	Visual Examination Expert (VEE) Subject Matter Expert (SME)/OJT Signature/Date
CCP-PO-001	1. List the Quality Assurance objectives validated by VE.	
CCP-QP-002	2. State the purpose of the List of Qualified Individuals (LOQI).	
CCP-QP-005	3. State when a nonconformance report (NCR) should be prepared and who is responsible to initiate it.	
	4. Describe how nonconforming items are documented.	
	5. Describe how nonconforming items are controlled to prevent their use.	N A
	6. State who has the responsibility to validate the NCR once initiated.	
	7. Describe how to revise an NCR.	QSP 5-22-13
	8. Describe how to void an NCR.	
CCP-QP-029	9. Describe the purpose of the corrective action report (CAR) process.	
	10. State the person responsible for originating a CAR.	
	11. Describe how corrective actions are documented.	
	12. State who has the responsibility to validate the CAR once initiated.	

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: Spencer Troy Pattee

	13. Describe actions personnel may take when conditions adverse to quality are discovered.	
CCP-QP-008	14. List the responsibilities of record generators.	
	15. State the storage and control requirements for Records.	
	16. Explain the process and proper method to make corrections or revisions to Records.	
CCP-QP-010	17. State the importance of using approved documents.	
	18. State when to verify a document revision.	
CCP-TP-006/ CCP-VE-101 Briefing	19. Explain how to confirm the electronic .xls data sheet on the sftp site.	
	20. Explain the purpose of VE.	N A
	21. State the requirements of the VE Operators in performing VE.	
	22. Describe where to obtain the tare weight of a waste container.	
	23. What must the VE Operators concur on during the performance of VE?	
	24. What actions are taken if the VE Operators do not concur?	
	25. Discuss the difference in performing VE on debris waste versus homogeneous waste.	
	26. Discuss the difference in identification of soils versus homogeneous waste.	
	27. Define how often calibration due dates should be checked on certified equipment.	
	28. State how to verify the calibration of M&TE used in VE.	
	29. State individual responsible for verifying the calibration of M&TE.	
	30. Describe what is done with an out-of-calibration piece of M&TE.	
	31. Discuss the requirements for packaging of sharp or heavy objects.	

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: Spencer Troy Pattee

CCP-TP-006	32. Describe how to obtain the net weight of a waste container.	
	33. Define "layers of confinement".	
	34. State how often a scale operational check is performed.	
	35. State the Waste Material Parameters (WMPs).	
	36. Define the following WMP acronyms: a. IN d. S b. OR e. R c. PW	
	37. Describe the actions taken if prohibited items are found.	
	38. State five (5) examples of prohibited items.	
	39. Describe how a non-transparent container is handled when liquid is suspected.	N A
	40. State the acceptable liquid limits in a characterized container.	
	41. Discuss the process of absorbing liquids that may be processed at the host facility.	
	42. Discuss how unvented heat-sealed bags are handled during processing of prohibited items.	
	43. Describe the conditions that would generate an NCR during the VE process.	
	44. State three (3) examples of potentially "unsafe" packages/items that may be encountered.	
	45. State who decides whether to open a package/item and why it may be necessary.	
	46. Describe the information that should be recorded when describing waste items.	
	47. Describe the unit of measurement for weights to be recorded during VE.	
	48. Describe the unit of measurement that the final weights are converted to in the VE Data Sheet.	
	49. State how to determine the weight of a material using historically derived waste weights.	

QSP 5-22-13

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: Spencer Troy Pattee

CCP-TP-006	50. Define WAIP.	
	51. Describe how to determine Volume Utilization Percentage (VUP).	
	52. Define the increments in which the VUP are recorded.	
	53. Explain who is allowed to make data changes in data sheets.	
	54. State the criteria for the rigid liner/liner bag to be considered vented.	
	55. Describe the authorized methods of closure of a liner bag.	
	56. Explain how to obtain a closure time and why it is important.	
	57. State how to determine the torque value for the ring bolt.	
	58. State how to determine the torque value for the filter.	N A
	59. Define waste matrix codes.	
	60. Describe waste stream descriptions.	
	61. State the number of waste containers allowed per Batch Data Report (BDR).	
	62. Describe the information contained in a BDR per CCP-TP-006.	
	63. Explain the responsibilities and functions of the Independent Technical Reviewer (ITR).	
	64. State who cannot complete the ITR checklist in a testing batch.	
	65. Describe what constitutes a completed BDR.	
	66. State the differences and similarities between targeted and TRU waste.	
	67. State what waste is currently approved for standard waste boxes (SWB).	
	68. State how containers are tracked within the characterization process.	

QP 5-22-13

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: Spencer Troy Pattee

	69. Define how many digits in a BDR number.			N A
	70. State the number of digits that are in a drum number.			
	71. Describe the waste matrix codes that could be assigned once VE is complete.			
	72. Define the waste stream descriptions assigned to the Accelerated Retrieval Project (ARP) and the Sludge Repackaging Project (SRP).			
	73. Define the responsibilities of the VEE.			
Formal Training	**OJT Practical Requirements[1]** *(This section must be performed in the presence of a VEE) (Always Required)*			**VEE SME/OJT Signature/Date**
CCP-TP-006	1. Verify scale calibration check.	(P)	S	Q.S. Poole 5-21-13
	2. Obtain the net weight for the waste container.	(P)	S	Q.S. Poole 5-21-13
	3. Estimate the VUP.	(P)	S	Q.S. Poole 5-21-13
	4. Determine the WMP.	(P)	S	Q.S. Poole 5-21-13
	5. Describe WMP on the VE Data Sheet.	(P)	S	Q.S. Poole 5-21-13
	6. Obtain weight of each WMP.	(P)	S	Q.S. Poole 5-21-13
	7. Determine layers of confinement.	(P)	S	Q.S. Poole 5-21-13
	8. Identify and process prohibited items.	P	(S)	Q.S. Poole 5-21-13
	9. Obtain waste container gross weight.	(P)	S	Q.S. Poole 5-21-13
	10. Complete data sheets.	(P)	S	Q.S. Poole 5-21-13
	11. Complete ITR checklist.	(P)	S	Q.S. Poole 5-20-13
	12. Maintain VE logbooks.	(P)	S	Q.S. Poole 5-22-13
	13. Compile a batch data report BDR.	P	(S)	Q.S. Poole 5-21-13

[1] For simulated steps that involve the recording of information, the steps can be satisfied by the trainee's ability to identify the specific location in the correct record form where actual data would be entered, and explain where the information would be obtained. *All required calculations will actually be performed.* for simulations, representative data will be used in lieu of actual data. Circle "P" if actually performed or "S" if requirement was simulated.

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: Spencer Troy Pattee

Approvals	
I have completed formal training and received OJT for this position. I fully understand my responsibilities as a VE Operator/ITR at INL.	Spencer R Pattee — Trainee Signature *(printed name and signature)* — 5-22-13 Date
I have monitored the training of this individual and believe they are ready to perform the duties of a VE Operator/ITR at INL. *(Validation by the VEE SME/OJT instructor(s) involved in the training of this individual)*	Jeffrey Poole — VEE SME/OJT Instructor *(printed name and signature)* — 5-22-13 Date
	N/A — VEE SME/OJT Instructor *(printed name and signature)* — Date
I approve this employee to perform the duties of a VE Operator/ITR at INL.	Jim Vernon — SPM *(printed name and signature)* — 5-22-13 Date

Approved for Content & Format: **Jeffrey Poole *(Approval on File)*** — SME/OJT — **02/28/2013** Date

Approved for Applicability, Content & Format: **Andrew Stallings *(Approval on File)*** — Cognizant Engineer — **02/28/2013** Date

Approved for Content: **Jim Vernon *(Approval on File)*** — SPM — **02/28/2013** Date

Approved for Applicability, Content, Format, & Use: **A.J. Fisher *(Approval on File)*** — Manager Responsible for Training — **02/28/2013** Date

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Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: Jeff Poole	**Badge Number:** [redacted]
Email Address: [redacted]	

Job Specific Training	
☐ **Initial Qualification**	☒ **Requalification**
Qualification Limit	**This qualification is valid for two (2) years.** If necessary, additional training may be required by the CCP Lead Site Project Manager (SPM) or the CCP Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the CCP Manager responsible for Training. The candidate must successfully complete the entire CCP qualification card to reestablish qualification. Qualification is valid for this site and process only.
Requalification Requirements	Items required for requalification are identified by text.

Indoctrination
(Required at initial qualification, or in the event of requalification after disqualification only.)

Initial/Indoctrination Reading:

1. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
2. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
3. CCP-PO-003, *CCP TRUPACT-II Authorized Methods for Payload Control (TRAMPAC)*
4. CCP-QP-002, *CCP Training and Qualification Plan*
5. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
6. CCP-QP-006, *CCP Corrective Action Reporting and Control*
7. CCP-QP-008, *CCP Records Management*
8. CCP-QP-010, *CCP Document Preparation Approval and Control*
9. CCP-QP-016, *CCP Control of Measuring, Testing, and Equipment*
10. CCP-QP-022, *CCP Software Quality Assurance Plan*
11. CCP-QP-023, *CCP Handling, Storage, and Shipping*
12. CCP-TP-006, *CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved from Pits*

I have read the listed initial/indoctrination reading and understand my responsibilities as applicable to the procedures above.	N/A	
	Trainee	Date

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: Jeff Poole	**Badge Number:** [redacted]
Email Address: [redacted]	

Additional Training Requirements	
1. WAP/QAPjP Briefing and Test. *(One-time requirement)*	Michele Billett 1/17/12 CCP Training Date
2. Visual Examination (VE) TRU Waste Characterization Briefing. *(Required at each requalification)*	Michele Billett 2/1/12 CCP Training Date
3. CCP VE Comprehensive Exam (score 80% or higher) administered by CCP Training. *(To be administered at initial and each requalification)*	Michele Billett 1/17/12 CCP Training Date

Formal Training	On-the-Job Training (OJT) Knowledge Requirements *(Required at initial qualification, or in the event of requalification after disqualification only)*	Visual Examination Expert (VEE) Subject Matter Expert (SME)/OJT Signature/Date
CCP-PO-001	1. List the Quality Assurance objectives validated by VE.	
CCP-QP-002	2. State the purpose of the List of Qualified Individuals (LOQI).	
CCP-QP-005	3. State when a nonconformance report (NCR) should be prepared and who is responsible to initiate it.	
	4. Describe how nonconforming items are documented.	
	5. Describe how nonconforming items are controlled to prevent their use.	
	6. State who has the responsibility to validate the NCR once initiated.	N A
	7. Describe how to revise an NCR.	
	8. Describe how to void an NCR.	
CCP-QP-006	9. Describe the purpose of the corrective action report (CAR) process.	
	10. State the person responsible for originating a CAR.	
	11. Describe how corrective actions are documented.	
	12. State who has the responsibility to validate the CAR once initiated.	

TQP 1-16-12

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: Jeff Poole | **Badge Number:** [redacted]

Email Address: [redacted]

	13. Describe actions CCP personnel may take when conditions adverse to quality are discovered.	
CCP-QP-008	14. List the responsibilities of record generators.	
	15. State the storage and control requirements for CCP records.	
	16. Explain the process and proper method to make corrections or revisions to CCP records.	
CCP-QP-010	17. State the importance of using approved documents.	
	18. State when to verify a document revision.	
CCP-TP-006/ CCP-VE-101 Briefing	19. Explain how to confirm the electronic .xls data sheet on the ftp site.	
	20. Explain the purpose of Visual Examination (VE) of Newly Generated TRU Waste.	N A
	21. State the requirements of the VE Operators in performing VE.	
	22. Describe where to obtain the tare weight of a waste container.	
	23. What must the VE Operators concur on during the performance of VE?	
	24. What actions are taken if the VE Operators do not concur?	
	25. Discuss the difference in performing VE on debris waste versus homogeneous waste.	
	26. Define how often calibration due dates should be checked on certified equipment.	
	27. State how to verify the calibration of M&TE used in VE Newly Generated TRU Waste.	
	28. State individual responsible for verifying the calibration of M&TE.	
	29. Describe what is done with an out-of-calibration piece of M&TE.	
	30. Discuss the requirements for packaging of sharp or heavy objects.	
	31. Describe how to obtain the net weight of a waste container.	
	32. Define "layers of confinement".	

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: Jeff Poole	**Badge Number:** [redacted]
Email Address: [redacted]	

CCP-TP-006	33. State how often a scale operational check is performed.	
	34. State the Waste Material Parameters (WMPs).	
	35. Define the following WMP acronyms: a. IN b. OR c. PW d. S e. R	
	36. Describe the actions taken if prohibited items are found.	
	37. State five (5) examples of prohibited items.	
	38. Describe how a non-transparent container is handled when liquid is suspected.	
	39. State the acceptable liquid limits in a characterized container.	N/A
	40. Discuss the process of absorbing liquids that may be processed at the host facility.	
	41. Discuss how unvented heat-sealed bags are handled during processing of prohibited items.	
	42. Describe the conditions that would generate an NCR during the VE process.	
	43. State three (3) examples of potentially "unsafe" packages/items that may be encountered.	
	44. State who decides whether to open a package/item and why it may be necessary.	
	45. Describe the information that should be recorded when describing waste items.	
	46. Describe the unit of measurement for weights to be recorded during VE.	
	47. Describe the unit of measurement that the final weights are converted to in the VE Data Sheet.	
	48. State how to determine the weight of a material using historically derived waste weights.	
	49. Define WAIP.	
CCP-TP-006	50. Describe how to determine Volume Utilization Percentage (VUP).	

[redacted] 1-15-12

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: Jeff Poole | **Badge Number:** [redacted]

Email Address: [redacted]

CCP-TP-006	51. Define the increments in which the VUP are recorded.	
	52. Explain who is allowed to make data changes in data sheets.	
	53. State the criteria for the rigid liner/liner bag to be considered vented.	
	54. Describe the authorized methods of closure of a liner bag.	
	55. Explain how to obtain a closure time and why it is important.	
	56. State how to determine the torque value for the ring bolt.	
	57. State how to determine the torque value for the filter.	
	58. Define waste matrix codes.	N/A
	59. Describe waste stream descriptions.	
	60. State the number of waste containers allowed per Batch Data Report (BDR).	ASD 1-16-12
	61. Describe the information contained in a BDR per CCP-TP-006.	
	62. Explain the responsibilities and functions of the Independent Technical Reviewer (ITR).	
	63. State who cannot complete the ITR checklist in a testing batch.	
	64. Describe what constitutes a completed BDR.	
	65. State the differences and similarities between targeted and TRU waste.	
	66. State what waste is currently approved for standard waste boxes (SWB).	
	67. State how containers are tracked within the CCP process.	
	68. Define how many digits in a BDR number.	
	69. State the number of digits that are in a drum number.	
	70. State the three (3) waste matrix codes that could be assigned once VE is completed.	

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: Jeff Poole | **Badge Number:** [redacted]

Email Address: [redacted]

	71. Define the waste stream description assigned to the ARP.			N/A
	72. Define the responsibilities of the VEE.			459 1-16-12
Formal Training	**OJT Practical Requirements[1]** *(Required at initial qualification and at requalification) (This section must be performed in the presence of a VEE for initial and requalification)*			**VEE SME/OJT Signature/Date**
CCP-TP-006	1. Verify scale calibration check.	P	(S)	1-16-12
	2. Obtain the net weight for the waste container.	P	(S)	1-16-12
	3. Estimate the VUP.	P	(S)	1-16-12
	4. Determine the WMP.	P	(S)	1-16-12
	5. Describe WMP on the VE Data Sheet.	P	(S)	1-16-12
	6. Obtain weight of each WMP.	P	(S)	1-16-12
	7. Determine layers of confinement.	P	(S)	1-16-12
	8. Identify and process prohibited items.	P	(S)	1-16-12
	9. Obtain waste container gross weight.	P	(S)	1-16-12
	10. Complete data sheets.	P	(S)	1-16-12
	11. Complete ITR checklist.	P	(S)	1-16-12
	12. Maintain VE logbooks.	P	(S)	1-16-12
	13. Compile a batch data report BDR.	P	(S)	1-16-12

[1] For simulated steps that involve the recording of information, the steps can be satisfied by the trainee's ability to identify the specific location in the correct record form where actual data would be entered, and explain where the information would be obtained. All required calculations will actually be performed: for simulations, representative data will be used in lieu of actual data. Circle "P" if actually performed or "S" if requirement was simulated.

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: Jeff Poole	**Badge Number:** [redacted]
Email Address: [redacted]	

Approvals	
I have completed formal training and received OJT for this position. I fully understand my responsibilities as a VE Operator/ITR for Newly Generated TRU Waste Retrieved from the Pits.	Jeffrey Poole J.S. Poole 1-16-12 Trainee Signature *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of a VE Operator/ITR for Newly Generated TRU Waste Retrieved from the Pits. *(Validation by the SME/OJT instructor(s) involved in the training of this individual)*	Spencer Potter 1-16-12 VEE SME/OJT Instructor *(printed name and signature)* Date
	N/A VEE SME/OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of a VE Operator/ITR for Newly Generated TRU Waste Retrieved from the Pits.	Jim Vernon 2-1-12 CCP Lead or Alternate SPM *(printed name and signature)* Date

Approved for Content & Format: **Jeffrey Poole (Approval on file)** **9/26/2011**
VEE SME/OJT Date

Approved for Content & Format: **Andrew Stallings (Approval on file)** **9/26/2011**
Cognizant Engineer Date

Approved for Content: **Jim Vernon (Approval on file)** **9/26/2011**
CCP Lead or Alternate SPM Date

Approved for Use: **AJ Fisher (Approval on file)** **9/26/2011**
CCP Manager Responsible for Training Date

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: Jeff Poole | **Badge Number:** [redacted]

Email Address: [redacted]

Site: INL

List of Applicable Waste Streams ***(based on applicable Acceptable Knowledge Reports read):****	
N A	
ASD 1-16-12	

**For use with Initial and Additional Sites (To be completed for each site the trainee is qualifying for)*

I have read the applicable Acceptable Knowledge Reports for this site. I understand my responsibilities regarding the waste streams listed above.

Jeffrey Poole J.S. Poole 1-16-12

Trainee *(Printed Name and Signature)* Date

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Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: Brad Stark	**Badge Number:** [redacted]
Email Address: [redacted]	

Job Specific Training	
☐ **Initial Qualification**	☒ **Requalification**
Qualification Limit	**This qualification is valid for two (2) years.** If necessary, additional training may be required by the CCP Lead Site Project Manager (SPM) or the CCP Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the CCP Manager responsible for Training. The candidate must successfully complete the entire CCP qualification card to reestablish qualification. Qualification is valid for this site and process only.
Requalification Requirements	Items required for requalification are identified by text.

Indoctrination

(Required at initial qualification, or in the event of requalification after disqualification only.)

Initial/Indoctrination Reading:

1. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
2. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
3. CCP-PO-003, *CCP TRUPACT-II Authorized Methods for Payload Control (TRAMPAC)*
4. CCP-QP-002, *CCP Training and Qualification Plan*
5. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
6. CCP-QP-006, *CCP Corrective Action Reporting and Control*
7. CCP-QP-008, *CCP Records Management*
8. CCP-QP-010, *CCP Document Preparation Approval and Control*
9. CCP-QP-016, *CCP Control of Measuring, Testing, and Equipment*
10. CCP-QP-022, *CCP Software Quality Assurance Plan*
11. CCP-QP-023, *CCP Handling, Storage, and Shipping*
12. CCP-TP-006, *CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved from Pits*

I have read the listed initial/indoctrination reading and understand my responsibilities as applicable to the procedures above.	Brad Stark Trainee	3/1/2012 Date

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: Brad Stark	**Badge Number:** [redacted]
Email Address: [redacted]	

Additional Training Requirements	
1. WAP/QAPjP Briefing and Test. *(One-time requirement)*	3/20/12 CCP Training Date
2. Visual Examination (VE) TRU Waste Characterization Briefing. *(Required at each requalification)*	3/20/12 CCP Training Date
3. CCP VE Comprehensive Exam (score 80% or higher) administered by CCP Training. *(To be administered at initial and each requalification)*	3/20/12 CCP Training Date

Formal Training	On-the-Job Training (OJT) Knowledge Requirements *(Required at initial qualification, or in the event of requalification after disqualification only)*	Visual Examination Expert (VEE) Subject Matter Expert (SME)/OJT Signature/Date
CCP-PO-001	1. List the Quality Assurance objectives validated by VE.	N/A
CCP-QP-002	2. State the purpose of the List of Qualified Individuals (LOQI).	N/A
CCP-QP-005	3. State when a nonconformance report (NCR) should be prepared and who is responsible to initiate it.	N/A
	4. Describe how nonconforming items are documented.	N/A
	5. Describe how nonconforming items are controlled to prevent their use.	N/A
	6. State who has the responsibility to validate the NCR once initiated.	N/A
	7. Describe how to revise an NCR.	N/A
	8. Describe how to void an NCR.	N/A
CCP-QP-006	9. Describe the purpose of the corrective action report (CAR) process.	N/A
	10. State the person responsible for originating a CAR.	N/A
	11. Describe how corrective actions are documented.	N/A
	12. State who has the responsibility to validate the CAR once initiated.	N/A

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: Brad Stark	**Badge Number:** [redacted]
Email Address: [redacted]	

CCP-QP-008	13. Describe actions CCP personnel may take when conditions adverse to quality are discovered.	N/A
	14. List the responsibilities of record generators.	N/A
	15. State the storage and control requirements for CCP records.	N/A
	16. Explain the process and proper method to make corrections or revisions to CCP records.	N/A
CCP-QP-010	17. State the importance of using approved documents.	N/A
	18. State when to verify a document revision.	N/A
CCP-TP-006/ CCP-VE-101 Briefing	19. Explain how to confirm the electronic .xls data sheet on the ftp site.	N/A
	20. Explain the purpose of Visual Examination (VE) of Newly Generated TRU Waste.	N/A
	21. State the requirements of the VE Operators in performing VE.	N/A
	22. Describe where to obtain the tare weight of a waste container.	N/A
	23. What must the VE Operators concur on during the performance of VE?	N/A
	24. What actions are taken if the VE Operators do not concur?	N/A
	25. Discuss the difference in performing VE on debris waste versus homogeneous waste.	N/A
	26. Define how often calibration due dates should be checked on certified equipment.	N/A
	27. State how to verify the calibration of M&TE used in VE Newly Generated TRU Waste.	N/A
	28. State individual responsible for verifying the calibration of M&TE.	N/A
	29. Describe what is done with an out-of-calibration piece of M&TE.	N/A
	30. Discuss the requirements for packaging of sharp or heavy objects.	N/A
	31. Describe how to obtain the net weight of a waste container.	N/A
	32. Define "layers of confinement".	N/A

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: Brad Stark	Badge Number: [redacted]
Email Address: [redacted]	

CCP-TP-006	33. State how often a scale operational check is performed.	N/A
	34. State the Waste Material Parameters (WMPs).	N/A
	35. Define the following WMP acronyms: a. IN b. OR c. PW d. S e. R	N/A
	36. Describe the actions taken if prohibited items are found.	N/A
	37. State five (5) examples of prohibited items.	N/A
	38. Describe how a non-transparent container is handled when liquid is suspected.	N/A
	39. State the acceptable liquid limits in a characterized container.	N/A
	40. Discuss the process of absorbing liquids that may be processed at the host facility.	N/A
	41. Discuss how unvented heat-sealed bags are handled during processing of prohibited items.	N/A
	42. Describe the conditions that would generate an NCR during the VE process.	N/A
	43. State three (3) examples of potentially "unsafe" packages/items that may be encountered.	N/A
	44. State who decides whether to open a package/item and why it may be necessary.	N/A
	45. Describe the information that should be recorded when describing waste items.	N/A
	46. Describe the unit of measurement for weights to be recorded during VE.	N/A
	47. Describe the unit of measurement that the final weights are converted to in the VE Data Sheet.	N/A
	48. State how to determine the weight of a material using historically derived waste weights.	N/A
	49. Define WAIP.	N/A
CCP-TP-006	50. Describe how to determine Volume Utilization Percentage (VUP).	N/A

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: Brad Stark	**Badge Number:** [redacted]
Email Address: [redacted]	

CCP-TP-006	51. Define the increments in which the VUP are recorded.	N/A
	52. Explain who is allowed to make data changes in data sheets.	N/A
	53. State the criteria for the rigid liner/liner bag to be considered vented.	N/A
	54. Describe the authorized methods of closure of a liner bag.	N/A
	55. Explain how to obtain a closure time and why it is important.	N/A
	56. State how to determine the torque value for the ring bolt.	N/A
	57. State how to determine the torque value for the filter.	N/A
	58. Define waste matrix codes.	N/A
	59. Describe waste stream descriptions.	N/A
	60. State the number of waste containers allowed per Batch Data Report (BDR).	N/A
	61. Describe the information contained in a BDR per CCP-TP-006.	N/A
	62. Explain the responsibilities and functions of the Independent Technical Reviewer (ITR).	N/A
	63. State who cannot complete the ITR checklist in a testing batch.	N/A
	64. Describe what constitutes a completed BDR.	N/A
	65. State the differences and similarities between targeted and TRU waste.	N/A
	66. State what waste is currently approved for standard waste boxes (SWB).	N/A
	67. State how containers are tracked within the CCP process.	N/A
	68. Define how many digits in a BDR number.	N/A
	69. State the number of digits that are in a drum number.	N/A
	70. State the three (3) waste matrix codes that could be assigned once VE is completed.	N/A

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: Brad Stark	**Badge Number:** [redacted]
Email Address: [redacted]	

	71. Define the waste stream description assigned to the ARP.			N/A
	72. Define the responsibilities of the VEE.			N/A
Formal Training	**OJT Practical Requirements**[1] *(Required at initial qualification and at requalification) (This section must be performed in the presence of a VEE for initial and requalification)*			**VEE SME/OJT Signature/Date**
CCP-TP-006	1. Verify scale calibration check.	(P)	S	T.S. Poole 3-12-12
	2. Obtain the net weight for the waste container.	(P)	S	T.S. Poole 3-12-12
	3. Estimate the VUP.	(P)	S	T.S. Poole 3-12-12
	4. Determine the WMP.	(P)	S	T.S. Poole 3-12-12
	5. Describe WMP on the VE Data Sheet.	(P)	S	T.S. Poole 3-12-12
	6. Obtain weight of each WMP.	(P)	S	T.S. Poole 3-12-12
	7. Determine layers of confinement.	(P)	S	T.S. Poole 3-12-12
	8. Identify and process prohibited items.	P	(S)	T.S. Poole 3-12-12
	9. Obtain waste container gross weight.	(P)	S	T.S. Poole 3-12-12
	10. Complete data sheets.	(P)	S	T.S. Poole 3-12-12
	11. Complete ITR checklist.	P	(S)	T.S. Poole 3-12-12
	12. Maintain VE logbooks.	(P)	S	T.S. Poole 3-12-12
	13. Compile a batch data report BDR.	P	(S)	T.S. Poole 3-12-12

[1] For simulated steps that involve the recording of information, the steps can be satisfied by the trainee's ability to identify the specific location in the correct record form where actual data would be entered, and explain where the information would be obtained. All required calculations will actually be performed: for simulations, representative data will be used in lieu of actual data. Circle "P" if actually performed or "S" if requirement was simulated.

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: Brad Stark	**Badge Number:** [redacted]
Email Address: [redacted]	

Approvals	
I have completed formal training and received OJT for this position. I fully understand my responsibilities as a VE Operator/ITR for Newly Generated TRU Waste Retrieved from the Pits.	Brad Stark Brad Stark 3-19-12 Trainee Signature *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of a VE Operator/ITR for Newly Generated TRU Waste Retrieved from the Pits. *(Validation by the SME/OJT instructor(s) involved in the training of this individual)*	Jeffrey Poole J.S. Poole 3-13-12 VEE SME/OJT Instructor *(printed name and signature)* Date
	N/A VEE SME/OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of a VE Operator/ITR for Newly Generated TRU Waste Retrieved from the Pits.	Barbara Broomfield 3/19/12 CCP Lead or Alternate SPM *(printed name and signature)* Date

Approved for Content & Format: **Jeffrey Poole (Approval on file)** **9/26/2011**
VEE SME/OJT — Date

Approved for Content & Format: **Andrew Stallings (Approval on file)** **9/26/2011**
Cognizant Engineer — Date

Approved for Content: **Jim Vernon (Approval on file)** **9/26/2011**
CCP Lead or Alternate SPM — Date

Approved for Use: **AJ Fisher (Approval on file)** **9/26/2011**
CCP Manager Responsible for Training — Date

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: Brad Stark	**Badge Number:** [redacted]
Email Address: [redacted]	

Site: INL

List of Applicable Waste Streams ***(based on applicable Acceptable Knowledge Reports read):****

	N A

**For use with Initial and Additional Sites (To be completed for each site the trainee is qualifying for)*

I have read the applicable Acceptable Knowledge Reports for this site. I understand my responsibilities regarding the waste streams listed above.

N/A
Trainee *(Printed Name and Signature)* Date

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Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: Jodi Stanton	**Badge Number:** [redacted]
Email Address: [redacted]	

Job Specific Training

☐ **Initial Qualification** ☒ **Requalification**

Qualification Limit	**This qualification is valid for two (2) years.** If necessary, additional training may be required by the CCP Lead Site Project Manager (SPM) or the CCP Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the CCP Manager responsible for Training. The candidate must successfully complete the entire CCP qualification card to reestablish qualification. Qualification is valid for this site and process only.
Requalification Requirements	Items required for requalification are identified by text.

Indoctrination

(Required at initial qualification, or in the event of requalification after disqualification only.)

Initial/Indoctrination Reading:

1. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
2. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
3. CCP-PO-003, *CCP TRUPACT-II Authorized Methods for Payload Control (TRAMPAC)*
4. CCP-QP-002, *CCP Training and Qualification Plan*
5. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
6. CCP-QP-006, *CCP Corrective Action Reporting and Control*
7. CCP-QP-008, *CCP Records Management*
8. CCP-QP-010, *CCP Document Preparation Approval and Control*
9. CCP-QP-016, *CCP Control of Measuring, Testing, and Equipment*
10. CCP-QP-022, *CCP Software Quality Assurance Plan*
11. CCP-QP-023, *CCP Handling, Storage, and Shipping*
12. CCP-TP-006, *CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved from Pits*

I have read the listed initial/indoctrination reading and understand my responsibilities as applicable to the procedures above.	N/A Trainee — Date

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) Qualification Card

Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: Jodi Stanton	**Badge Number:** [redacted]
Email Address: [redacted]	

Additional Training Requirements	
1. WAP/QAPjP Briefing and Test. *(One-time requirement)*	CCP Training 10/11/11 Date
2. Visual Examination (VE) TRU Waste Characterization Briefing. *(Required at each requalification)*	CCP Training 10/11/11 Date
3. CCP VE Comprehensive Exam (score 80% or higher) administered by CCP Training. *(To be administered at initial and each requalification)*	CCP Training 10/11/11 Date

Formal Training	**On-the-Job Training (OJT) Knowledge Requirements** *(Required at initial qualification, or in the event of requalification after disqualification only)*	**Visual Examination Expert (VEE) Subject Matter Expert (SME)/OJT Signature/Date**
CCP-PO-001	1. List the Quality Assurance objectives validated by VE.	S.S. Poole 10-4-11
CCP-QP-002	2. State the purpose of the List of Qualified Individuals (LOQI).	S.S. Poole 10-4-11
CCP-QP-005	3. State when a nonconformance report (NCR) should be prepared and who is responsible to initiate it.	S.S. Poole 10-4-11
	4. Describe how nonconforming items are documented.	S.S. Poole 10-4-11
	5. Describe how nonconforming items are controlled to prevent their use.	S.S. Poole 10-4-11
	6. State who has the responsibility to validate the NCR once initiated.	S.S. Poole 10-4-11
	7. Describe how to revise an NCR.	S.S. Poole 10-4-11
	8. Describe how to void an NCR.	S.S. Poole 10-4-11
CCP-QP-006	9. Describe the purpose of the corrective action report (CAR) process.	S.S. Poole 10-4-11
	10. State the person responsible for originating a CAR.	S.S. Poole 10-4-11
	11. Describe how corrective actions are documented.	S.S. Poole 10-4-11
	12. State who has the responsibility to validate the CAR once initiated.	S.S. Poole 10-4-11

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: Jodi Stanton	**Badge Number:** [redacted]
Email Address: [redacted]	

	13. Describe actions CCP personnel may take when conditions adverse to quality are discovered.	T.S. Poole 10-4-11
CCP-QP-008	14. List the responsibilities of record generators.	T.S. Poole 10-4-11
	15. State the storage and control requirements for CCP records.	T.S. Poole 10-4-11
	16. Explain the process and proper method to make corrections or revisions to CCP records.	T.S. Poole 10-4-11
CCP-QP-010	17. State the importance of using approved documents.	T.S. Poole 10-4-11
	18. State when to verify a document revision.	T.S. Poole 10-4-11
CCP-TP-006/ CCP-VE-101 Briefing	19. Explain how to confirm the electronic .xls data sheet on the ftp site.	T.S. Poole 10-4-11
	20. Explain the purpose of Visual Examination (VE) of Newly Generated TRU Waste.	T.S. Poole 10-4-11
	21. State the requirements of the VE Operators in performing VE.	T.S. Poole 10-4-11
	22. Describe where to obtain the tare weight of a waste container.	T.S. Poole 10-4-11
	23. What must the VE Operators concur on during the performance of VE?	T.S. Poole 10-4-11
	24. What actions are taken if the VE Operators do not concur?	T.S. Poole 10-4-11
	25. Discuss the difference in performing VE on debris waste versus homogeneous waste.	T.S. Poole 10-4-11
	26. Define how often calibration due dates should be checked on certified equipment.	T.S. Poole 10-4-11
	27. State how to verify the calibration of M&TE used in VE Newly Generated TRU Waste.	T.S. Poole 10-4-11
	28. State individual responsible for verifying the calibration of M&TE.	T.S. Poole 10-4-11
	29. Describe what is done with an out-of-calibration piece of M&TE.	T.S. Poole 10-4-11
	30. Discuss the requirements for packaging of sharp or heavy objects.	T.S. Poole 10-4-11
	31. Describe how to obtain the net weight of a waste container.	T.S. Poole 10-4-11
	32. Define "layers of confinement".	T.S. Poole 10-4-11

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: Jodi Stanton | **Badge Number:** [redacted]

Email Address: [redacted]

CCP-TP-006	33. State how often a scale operational check is performed.	9.5. Poole 10-4-11
	34. State the Waste Material Parameters (WMPs).	9.5. Poole 10-4-11
	35. Define the following WMP acronyms: a.I N b. OR c.P W d. S e.R	9.5. Poole 10-4-11
	36. Describe the actions taken if prohibited items are found.	9.5. Poole 10-4-11
	37. State five (5) examples of prohibited items.	9.5. Poole 10-4-11
	38. Describe how a non-transparent container is handled when liquid is suspected.	9.5. Poole 10-4-11
	39. State the acceptable liquid limits in a characterized container.	9.5. Poole 10-4-11
	40. Discuss the process of absorbing liquids that may be processed at the host facility.	9.5. Poole 10-4-11
	41. Discuss how unvented heat-sealed bags are handled during processing of prohibited items.	9.5 Poole 10-4-11
	42. Describe the conditions that would generate an NCR during the VE process.	9.5. Poole 10-4-11
	43. State three (3) examples of potentially "unsafe" packages/items that may be encountered.	9.5. Poole 10-4-11
	44. State who decides whether to open a package/item and why it may be necessary.	9.5. Poole 10-4-11
	45. Describe the information that should be recorded when describing waste items.	9.5. Poole 10-4-11
	46. Describe the unit of measurement for weights to be recorded during VE.	9.5. Poole 10-4-11
	47. Describe the unit of measurement that the final weights are converted to in the VE Data Sheet.	9.5. Poole 10-4-11
	48. State how to determine the weight of a material using historically derived waste weights.	9.5. Poole 10-4-11
	49. Define WAIP.	9.5. Poole 10-4-11
CCP-TP-006	50. Describe how to determine Volume Utilization Percentage (VUP).	9.5. Poole 10-4-11

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: Jodi Stanton | **Badge Number:** [redacted]
Email Address: [redacted]

CCP-TP-006	51. Define the increments in which the VUP are recorded.	95. Poole 10-5-11
	52. Explain who is allowed to make data changes in data sheets.	95. Poole 10-5-11
	53. State the criteria for the rigid liner/liner bag to be considered vented.	95. Poole 10-5-11
	54. Describe the authorized methods of closure of a liner bag.	95. Poole 10-5-11
	55. Explain how to obtain a closure time and why it is important.	95. Poole 10-5-11
	56. State how to determine the torque value for the ring bolt.	95. Poole 10-5-11
	57. State how to determine the torque value for the filter.	95. Poole 10-5-11
	58. Define waste matrix codes.	95. Poole 10-5-11
	59. Describe waste stream descriptions.	95. Poole 10-5-11
	60. State the number of waste containers allowed per Batch Data Report (BDR).	95. Poole 10-5-11
	61. Describe the information contained in a BDR per CCP-TP-006.	95. Poole 10-5-11
	62. Explain the responsibilities and functions of the Independent Technical Reviewer (ITR).	95. Poole 10-5-11
	63. State who cannot complete the ITR checklist in a testing batch.	95. Poole 10-5-11
	64. Describe what constitutes a completed BDR.	95. Poole 10-5-11
	65. State the differences and similarities between targeted and TRU waste.	95. Poole 10-5-11
	66. State what waste is currently approved for standard waste boxes (SWB).	95. Poole 10-5-11
	67. State how containers are tracked within the CCP process.	95. Poole 10-5-11
	68. Define how many digits in a BDR number.	95. Poole 10-5-11
	69. State the number of digits that are in a drum number.	95. Poole 10-5-11
	70. State the three (3) waste matrix codes that could be assigned once VE is completed.	95. Poole 10-5-11

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: Jodi Stanton	**Badge Number:** [redacted]
Email Address: [redacted]	

	71. Define the waste stream description assigned to the ARP.			T.S. Poole 10-5-11
	72. Define the responsibilities of the VEE.			T.S. Poole 10-5-11
Formal Training	**OJT Practical Requirements**[1] *(Required at initial qualification and at requalification) (This section must be performed in the presence of a VEE for initial and requalification)*			**VEE SME/OJT Signature/Date**
CCP-TP-006	1. Verify scale calibration check.	(P)	S	T.S. Poole 9-29-11
	2. Obtain the net weight for the waste container.	(P)	S	T.S. Poole 9-29-11
	3. Estimate the VUP.	(P)	S	T.S. Poole 9-29-11
	4. Determine the WMP.	(P)	S	T.S. Poole 9-29-11
	5. Describe WMP on the VE Data Sheet.	(P)	S	T.S. Poole 9-29-11
	6. Obtain weight of each WMP.	(P)	S	T.S. Poole 9-29-11
	7. Determine layers of confinement.	(P)	S	T.S. Poole 9-29-11
	8. Identify and process prohibited items.	P	(S)	T.S. Poole 9-29-11
	9. Obtain waste container gross weight.	(P)	S	T.S. Poole 9-29-11
	10. Complete data sheets.	(P)	S	T.S. Poole 9-29-11
	11. Complete ITR checklist.	(P)	S	T.S. Poole 10-4-11
	12. Maintain VE logbooks.	P	(S)	T.S. Poole 9-29-11
	13. Compile a batch data report BDR.	(P)	S	T.S. Poole 9-27-11

[1] For simulated steps that involve the recording of information, the steps can be satisfied by the trainee's ability to identify the specific location in the correct record form where actual data would be entered, and explain where the information would be obtained. All required calculations will actually be performed for simulations, representative data will be used in lieu of actual data. Circle "P" if actually performed or "S" if requirement was simulated.

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: Jodi Stanton	**Badge Number:** [redacted]
Email Address: [redacted]	

	Approvals
I have completed formal training and received OJT for this position. I fully understand my responsibilities as a VE Operator/ITR for Newly Generated TRU Waste Retrieved from the Pits.	Jodi M. Stanton 10/10/11 Trainee Signature *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of a VE Operator/ITR for Newly Generated TRU Waste Retrieved from the Pits. *(Validation by the SME/OJT instructor(s) involved in the training of this individual)*	Jeffrey Poole J.S. Poole 10-10-11 VEE SME/OJT Instructor *(printed name and signature)* Date N/A VEE SME/OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of a VE Operator/ITR for Newly Generated TRU Waste Retrieved from the Pits.	Jim Vernon 10-11-11 CCP Lead or Alternate SPM *(printed name and signature)* Date

Approved for Content & Format:	**Jeffrey Poole (Approval on file)** VEE SME/OJT	**9/26/2011** Date
Approved for Content & Format:	**Andrew Stallings (Approval on file)** Cognizant Engineer	**9/26/2011** Date
Approved for Content:	**Jim Vernon (Approval on file)** CCP Lead or Alternate SPM	**9/26/2011** Date
Approved for Use:	**AJ Fisher (Approval on file)** CCP Manager Responsible for Training	**9/26/2011** Date

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: Jodi Stanton	**Badge Number:** [redacted]
Email Address: [redacted]	

Site: INL

List of Applicable Waste Streams *(based on applicable Acceptable Knowledge Reports read):**	
	N
	A

**For use with Initial and Additional Sites (To be completed for each site the trainee is qualifying for)*

I have read the applicable Acceptable Knowledge Reports for this site. I understand my responsibilities regarding the waste streams listed above.

Jodi M. Stanton Jodi M Stanton — Trainee *(Printed Name and Signature)*

10/10/11 — Date

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Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: David Jackman

Education/Experience	
Resume documenting education and experience on file with National TRU Program Certification (NTPC) Training.	Cheryl Almaguer 03-26-13 NTPC Training — Date

Job Specific Training

☐ **Initial Qualification** ☑ **Requalification** ☐ **Full Requalification**

Qualification Limit	**This qualification is valid for two (2) years.** If necessary, additional training may be required by the Site Project Manager (SPM) or the Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the Manager Responsible for Training. The candidate must successfully complete the entire qualification card to reestablish qualification. Qualification is valid for this site and process only.
Requalification Requirements	Items required for requalification are identified by text.

Indoctrination
(Required at Initial Qualification and Full Requalification)

Initial/Indoctrination Reading:

1. CCP-HSP-014, *Health and Safety Program Implementation for CCP*
2. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
3. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
4. CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)*
5. CCP-QP-002, *CCP Training and Qualification Plan*
6. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
7. CCP-QP-008, *CCP Records Management*
8. CCP-QP-010, *CCP Document Preparation, Approval, and Control*
9. CCP-QP-016, *CCP Control of Measuring and Testing Equipment*
10. CCP-QP-022, *CCP Software Quality Assurance Plan*
11. CCP-QP-023, *CCP Handling, Storage, and Shipping*
12. CCP-QP-029, *CCP Corrective Action Management*
13. CCP-TP-006, *CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste*

I have read the listed Initial/Indoctrination Reading and understand my responsibilities as applicable to the procedures above.	N/A Trainee — Date

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: David Jackman

Additional Training Requirements	
1. WAP/QAPjP Briefing and Test *(One-time Requirement)*	Cheryl Mingo 03-26-13 NTPC Training — Date
2. CCP-VE-101, *Visual Examination (VE) TRU Waste Characterization Briefing (Always Required)*	Cheryl Mingo 03-26-13 NTPC Training — Date
3. VE Comprehensive Exam *(Always Required)*	Cheryl Mingo 03-26-13 NTPC Training — Date

Formal Training	On-the-Job Training (OJT) Knowledge Requirements *(Required at Initial Qualification and Full Requalification)*	Visual Examination Expert (VEE) Subject Matter Expert (SME)/OJT Signature/Date
CCP-PO-001	1. List the Quality Assurance objectives validated by VE.	N/A
CCP-QP-002	2. State the purpose of the List of Qualified Individuals (LOQI).	N/A
CCP-QP-005	3. State when a nonconformance report (NCR) should be prepared and who is responsible to initiate it.	N/A
	4. Describe how nonconforming items are documented.	N/A
	5. Describe how nonconforming items are controlled to prevent their use.	N/A
	6. State who has the responsibility to validate the NCR once initiated.	N/A
	7. Describe how to revise an NCR.	N/A
	8. Describe how to void an NCR.	N/A
CCP-QP-029	9. Describe the purpose of the corrective action report (CAR) process.	N/A
	10. State the person responsible for originating a CAR.	N/A
	11. Describe how corrective actions are documented.	N/A
	12. State who has the responsibility to validate the CAR once initiated.	N/A

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: David Jackman

	13. Describe actions personnel may take when conditions adverse to quality are discovered.	N/A
CCP-QP-008	14. List the responsibilities of record generators.	N/A
	15. State the storage and control requirements for Records.	N/A
	16. Explain the process and proper method to make corrections or revisions to Records.	N/A
CCP-QP-010	17. State the importance of using approved documents.	N/A
	18. State when to verify a document revision.	N/A
CCP-TP-006/ CCP-VE-101 Briefing	19. Explain how to confirm the electronic .xls data sheet on the sftp site.	N/A
	20. Explain the purpose of VE.	N/A
	21. State the requirements of the VE Operators in performing VE.	N/A
	22. Describe where to obtain the tare weight of a waste container.	N/A
	23. What must the VE Operators concur on during the performance of VE?	N/A
	24. What actions are taken if the VE Operators do not concur?	N/A
	25. Discuss the difference in performing VE on debris waste versus homogeneous waste.	N/A
	26. Discuss the difference in identification of soils versus homogeneous waste.	N/A
	27. Define how often calibration due dates should be checked on certified equipment.	N/A
	28. State how to verify the calibration of M&TE used in VE.	N/A
	29. State individual responsible for verifying the calibration of M&TE.	N/A
	30. Describe what is done with an out-of-calibration piece of M&TE.	N/A
	31. Discuss the requirements for packaging of sharp or heavy objects.	N/A

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: David Jackman

CCP-TP-006	32. Describe how to obtain the net weight of a waste container.	N/A
	33. Define "layers of confinement".	N/A
	34. State how often a scale operational check is performed.	N/A
	35. State the Waste Material Parameters (WMPs).	N/A
	36. Define the following WMP acronyms: a. IN d. S b. OR e. R c. PW	N/A
	37. Describe the actions taken if prohibited items are found.	N/A
	38. State five (5) examples of prohibited items.	N/A
	39. Describe how a non-transparent container is handled when liquid is suspected.	N/A
	40. State the acceptable liquid limits in a characterized container.	N/A
	41. Discuss the process of absorbing liquids that may be processed at the host facility.	N/A
	42. Discuss how unvented heat-sealed bags are handled during processing of prohibited items.	N/A
	43. Describe the conditions that would generate an NCR during the VE process.	N/A
	44. State three (3) examples of potentially "unsafe" packages/items that may be encountered.	N/A
	45. State who decides whether to open a package/item and why it may be necessary.	N/A
	46. Describe the information that should be recorded when describing waste items.	N/A
	47. Describe the unit of measurement for weights to be recorded during VE.	N/A
	48. Describe the unit of measurement that the final weights are converted to in the VE Data Sheet.	N/A
	49. State how to determine the weight of a material using historically derived waste weights.	N/A

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: David Jackman

CCP-TP-006	50. Define WAIP.	N/A
	51. Describe how to determine Volume Utilization Percentage (VUP).	N/A
	52. Define the increments in which the VUP are recorded.	N/A
	53. Explain who is allowed to make data changes in data sheets.	N/A
	54. State the criteria for the rigid liner/liner bag to be considered vented.	N/A
	55. Describe the authorized methods of closure of a liner bag.	N/A
	56. Explain how to obtain a closure time and why it is important.	N/A
	57. State how to determine the torque value for the ring bolt.	N/A
	58. State how to determine the torque value for the filter.	N/A
	59. Define waste matrix codes.	N/A
	60. Describe waste stream descriptions.	N/A
	61. State the number of waste containers allowed per Batch Data Report (BDR).	N/A
	62. Describe the information contained in a BDR per CCP-TP-006.	N/A
	63. Explain the responsibilities and functions of the Independent Technical Reviewer (ITR).	N/A
	64. State who cannot complete the ITR checklist in a testing batch.	N/A
	65. Describe what constitutes a completed BDR.	N/A
	66. State the differences and similarities between targeted and TRU waste.	N/A
	67. State what waste is currently approved for standard waste boxes (SWB).	N/A
	68. State how containers are tracked within the characterization process.	N/A

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: David Jackman

	69. Define how many digits in a BDR number.			N/A
	70. State the number of digits that are in a drum number.			N/A
	71. Describe the waste matrix codes that could be assigned once VE is complete.			N/A
	72. Define the waste stream descriptions assigned to the Accelerated Retrieval Project (ARP) and the Sludge Repackaging Project (SRP).			N/A
	73. Define the responsibilities of the VEE.			N/A
Formal Training	**OJT Practical Requirements[1]** *(This section must be performed in the presence of a VEE) (Always Required)*			**VEE SME/OJT Signature/Date**
CCP-TP-006	1. Verify scale calibration check.	(P)	S	T.S. Pack 3-20-13
	2. Obtain the net weight for the waste container.	(P)	S	T.S. Pack 3-20-13
	3. Estimate the VUP.	(P)	S	T.S. Pack 3-20-13
	4. Determine the WMP.	(P)	S	T.S. Pack 3-20-13
	5. Describe WMP on the VE Data Sheet.	(P)	S	T.S. Pack 3-20-13
	6. Obtain weight of each WMP.	(P)	S	T.S. Pack 3-20-13
	7. Determine layers of confinement.	(P)	S	T.S. Pack 3-20-13
	8. Identify and process prohibited items.	P	(S)	T.S. Pack 3-20-13
	9. Obtain waste container gross weight.	(P)	S	T.S. Pack 3-20-13
	10. Complete data sheets.	(P)	S	T.S. Pack 3-20-13
	11. Complete ITR checklist.	(P)	S	Brad Stahl 3-21-13
	12. Maintain VE logbooks.	P	(S)	T.S. Pack 3-20-13
	13. Compile a batch data report BDR.	(P)	S	T.S. Pack 3-20-13

[1] For simulated steps that involve the recording of information, the steps can be satisfied by the trainee's ability to identify the specific location in the correct record form where actual data would be entered, and explain where the information would be obtained. All required calculations will actually be performed: for simulations, representative data will be used in lieu of actual data. Circle "P" if actually performed or "S" if requirement was simulated.

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) at Idaho National Laboratory (INL) Qualification Card

Name: David Jackman

Approvals	
I have completed formal training and received OJT for this position. I fully understand my responsibilities as a VE Operator/ITR at INL.	David Jackman 3-26-13 Trainee Signature *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of a VE Operator/ITR at INL. *(Validation by the VEE SME/OJT instructor(s) involved in the training of this individual)*	Jeffrey Poole J.S. Poole 3-26-13 VEE SME/OJT Instructor *(printed name and signature)* Date BRAD STARK 3-26-13 ~~3-26-13~~ BAS 3-26-13 VEE SME/OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of a VE Operator/ITR at INL.	Richard Kantrowitz 3/26/13 SPM *(printed name and signature)* Date

Approved for Content & Format: **Jeffrey Poole *(Approval on File)*** **02/28/2013**
SME/OJT Date

Approved for Applicability, Content & Format: **Andrew Stallings *(Approval on File)*** **02/28/2013**
Cognizant Engineer Date

Approved for Content: **Jim Vernon *(Approval on File)*** **02/28/2013**
SPM Date

Approved for Applicability, Content, Format, & Use: **A.J. Fisher *(Approval on File)*** **02/28/2013**
Manager Responsible for Training Date

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Central Characterization Project **Effective Date: 9/26/2011**	**VE-PIT-01, Rev. 2** **Page 1 of 8**

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: LeAnn Verlanic	**Badge Number:** [redacted]
Email Address: [redacted]	

Job Specific Training	
☐ **Initial Qualification**	☒ **Requalification**
Qualification Limit	**This qualification is valid for two (2) years.** If necessary, additional training may be required by the CCP Lead Site Project Manager (SPM) or the CCP Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the CCP Manager responsible for Training. The candidate must successfully complete the entire CCP qualification card to reestablish qualification. Qualification is valid for this site and process only.
Requalification Requirements	Items required for requalification are identified by text.

Indoctrination
(Required at initial qualification, or in the event of requalification after disqualification only.)

Initial/Indoctrination Reading:

1. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
2. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
3. CCP-PO-003, *CCP TRUPACT-II Authorized Methods for Payload Control (TRAMPAC)*
4. CCP-QP-002, *CCP Training and Qualification Plan*
5. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
6. CCP-QP-006, *CCP Corrective Action Reporting and Control*
7. CCP-QP-008, *CCP Records Management*
8. CCP-QP-010, *CCP Document Preparation Approval and Control*
9. CCP-QP-016, *CCP Control of Measuring, Testing, and Equipment*
10. CCP-QP-022, *CCP Software Quality Assurance Plan*
11. CCP-QP-023, *CCP Handling, Storage, and Shipping*
12. CCP-TP-006, *CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved from Pits*

I have read the listed initial/indoctrination reading and understand my responsibilities as applicable to the procedures above.	LeAnn Verlanic 9-26-11 Trainee Date

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: LeAnn Verlanic	**Badge Number:** [redacted]
Email Address: [redacted]	

Additional Training Requirements	
1. WAP/QAPjP Briefing and Test. *(One-time requirement)*	CCP Training — Date: 10/17/11
2. Visual Examination (VE) TRU Waste Characterization Briefing. *(Required at each requalification)*	CCP Training — Date: 10/17/11
3. CCP VE Comprehensive Exam (score 80% or higher) administered by CCP Training. *(To be administered at initial and each requalification)*	CCP Training — Date: 10/17/11

Formal Training	**On-the-Job Training (OJT) Knowledge Requirements** *(Required at initial qualification, or in the event of requalification after disqualification only)*	**Visual Examination Expert (VEE) Subject Matter Expert (SME)/OJT Signature/Date**
CCP-PO-001	1. List the Quality Assurance objectives validated by VE.	Brad Stark 10-5-11
CCP-QP-002	2. State the purpose of the List of Qualified Individuals (LOQI).	Brad Stark 10-5-11
CCP-QP-005	3. State when a nonconformance report (NCR) should be prepared and who is responsible to initiate it.	Brad Stark 10-5-11
	4. Describe how nonconforming items are documented.	Brad Stark 10.5.11
	5. Describe how nonconforming items are controlled to prevent their use.	Brad Stark 10.5.11
	6. State who has the responsibility to validate the NCR once initiated.	Brad Stark 10.5.11
	7. Describe how to revise an NCR.	Brad Stark 10.5.11
	8. Describe how to void an NCR.	Brad Stark 10.5.11
CCP-QP-006	9. Describe the purpose of the corrective action report (CAR) process.	Brad Stark 10.5.11
	10. State the person responsible for originating a CAR.	Brad Stark 10.5.11
	11. Describe how corrective actions are documented.	Brad Stark 10.5.11
	12. State who has the responsibility to validate the CAR once initiated.	Brad Stark 10.5.11

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: LeAnn Verlanic	**Badge Number:** [redacted]
Email Address: [redacted]	

	13. Describe actions CCP personnel may take when conditions adverse to quality are discovered.	Brad Stark	10-5-11
CCP-QP-008	14. List the responsibilities of record generators.	Brad Stark	10-5-11
	15. State the storage and control requirements for CCP records.	Brad Stark	10-5-11
	16. Explain the process and proper method to make corrections or revisions to CCP records.	Brad Stark	10-5-11
CCP-QP-010	17. State the importance of using approved documents.	Brad Stark	10-5-11
	18. State when to verify a document revision.	Brad Stark	10-5-11
CCP-TP-006/ CCP-VE-101 Briefing	19. Explain how to confirm the electronic .xls data sheet on the ftp site.	Brad Stark	10-5-11
	20. Explain the purpose of Visual Examination (VE) of Newly Generated TRU Waste.	Brad Stark	10-5-11
	21. State the requirements of the VE Operators in performing VE.	Brad Stark	10-5-11
	22. Describe where to obtain the tare weight of a waste container.	Brad Stark	10-5-11
	23. What must the VE Operators concur on during the performance of VE?	Brad Stark	10-5-11
	24. What actions are taken if the VE Operators do not concur?	Brad Stark	10-5-11
	25. Discuss the difference in performing VE on debris waste versus homogeneous waste.	Brad Stark	10-5-11
	26. Define how often calibration due dates should be checked on certified equipment.	Brad Stark	10-5-11
	27. State how to verify the calibration of M&TE used in VE Newly Generated TRU Waste.	Brad Stark	10-5-11
	28. State individual responsible for verifying the calibration of M&TE.	Brad Stark	10-5-11
	29. Describe what is done with an out-of-calibration piece of M&TE.	Brad Stark	10-5-11
	30. Discuss the requirements for packaging of sharp or heavy objects.	Brad Stark	10-5-11
	31. Describe how to obtain the net weight of a waste container.	Brad Stark	10-5-11
	32. Define "layers of confinement".	Brad Stark	10-5-11

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: LeAnn Verlanic	**Badge Number:** [redacted]
Email Address: [redacted]	

CCP-TP-006	33. State how often a scale operational check is performed.	9.5. Poole 10-6-11
	34. State the Waste Material Parameters (WMPs).	9.5. Poole 10-6-11
	35. Define the following WMP acronyms: a. IN b. OR c. PW d. S e. R	9.5. Poole 10-6-11
	36. Describe the actions taken if prohibited items are found.	9.5. Poole 10-6-11
	37. State five (5) examples of prohibited items.	9.5. Poole 10-6-11
	38. Describe how a non-transparent container is handled when liquid is suspected.	9.5. Poole 10-6-11
	39. State the acceptable liquid limits in a characterized container.	9.5. Poole 10-6-11
	40. Discuss the process of absorbing liquids that may be processed at the host facility.	9.5. Poole 10-6-11
	41. Discuss how unvented heat-sealed bags are handled during processing of prohibited items.	9.5. Poole 10-6-11
	42. Describe the conditions that would generate an NCR during the VE process.	9.5 Poole 10-6-11
	43. State three (3) examples of potentially "unsafe" packages/items that may be encountered.	9.5. Poole 10-6-11
	44. State who decides whether to open a package/item and why it may be necessary.	9.5 Poole 10-6-11
	45. Describe the information that should be recorded when describing waste items.	9.5 Poole 10-6-11
	46. Describe the unit of measurement for weights to be recorded during VE.	9.5. Poole 10-6-11
	47. Describe the unit of measurement that the final weights are converted to in the VE Data Sheet.	9.5. Poole 10-6-11
	48. State how to determine the weight of a material using historically derived waste weights.	9.5. Poole 10-6-11
	49. Define WAIP.	9.5. Poole 10-6-11
CCP-TP-006	50. Describe how to determine Volume Utilization Percentage (VUP).	9.5. Poole 10-6-11

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: LeAnn Verlanic	**Badge Number:** [redacted]
Email Address: [redacted]	

CCP-TP-006	51. Define the increments in which the VUP are recorded.	9.5. Poole 10-6-11
	52. Explain who is allowed to make data changes in data sheets.	9.5. Poole 10-6-11
	53. State the criteria for the rigid liner/liner bag to be considered vented.	9.5. Poole 10-6-11
	54. Describe the authorized methods of closure of a liner bag.	9.5. Poole 10-5-11
	55. Explain how to obtain a closure time and why it is important.	9.5. Poole 10-6-11
	56. State how to determine the torque value for the ring bolt.	9.5. Poole 10-6-11
	57. State how to determine the torque value for the filter.	9.5. Poole 10-6-11
	58. Define waste matrix codes.	9.5. Poole 10-5-11
	59. Describe waste stream descriptions.	9.5. Poole 10-5-11
	60. State the number of waste containers allowed per Batch Data Report (BDR).	9.5. Poole 10-5-11
	61. Describe the information contained in a BDR per CCP-TP-006.	9.5. Poole 10-5-11
	62. Explain the responsibilities and functions of the Independent Technical Reviewer (ITR).	9.5. Poole 10-5-11
	63. State who cannot complete the ITR checklist in a testing batch.	9.5. Poole 10-5-11
	64. Describe what constitutes a completed BDR.	9.5. Poole 10-5-11
	65. State the differences and similarities between targeted and TRU waste.	9.5. Poole 10-5-11
	66. State what waste is currently approved for standard waste boxes (SWB).	9.5. Poole 10-5-11
	67. State how containers are tracked within the CCP process.	9.5. Poole 10-5-11
	68. Define how many digits in a BDR number.	9.5. Poole 10-5-11
	69. State the number of digits that are in a drum number.	9.5. Poole 10-5-11
	70. State the three (3) waste matrix codes that could be assigned once VE is completed.	9.5. Poole 10-5-11

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: LeAnn Verlanic	**Badge Number:** [redacted]
Email Address: [redacted]	

	71. Define the waste stream description assigned to the ARP.			Q.S. Poole 10-5-11
	72. Define the responsibilities of the VEE.			Q.S. Poole 10-5-11
Formal Training	**OJT Practical Requirements**[1] *(Required at initial qualification and at requalification) (This section must be performed in the presence of a VEE for initial and requalification)*			**VEE SME/OJT Signature/Date**
CCP-TP-006	1. Verify scale calibration check.	(P)	S	Q.S. Poole 9-29-11
	2. Obtain the net weight for the waste container.	(P)	S	Q.S. Poole 9-29-11
	3. Estimate the VUP.	(P)	S	Q.S. Poole 10-3-11
	4. Determine the WMP.	(P)	S	Q.S. Poole 10-3-11
	5. Describe WMP on the VE Data Sheet.	(P)	S	Q.S. Poole 10-3-11
	6. Obtain weight of each WMP.	(P)	S	Q.S. Poole 10-3-11
	7. Determine layers of confinement.	(P)	S	Q.S. Poole 10-3-11
	8. Identify and process prohibited items.	P	(S)	Q.S. Poole 10-3-11
	9. Obtain waste container gross weight.	(P)	S	Q.S. Poole 10-3-11
	10. Complete data sheets.	(P)	S	Q.S. Poole 10-3-11
	11. Complete ITR checklist.	(P)	S	Q.S. Poole 10-6-11
	12. Maintain VE logbooks.	P	(S)	Q.S. Poole 9-29-11
	13. Compile a batch data report BDR.	(P)	S	Q.S. Poole 9-28-11

[1] For simulated steps that involve the recording of information, the steps can be satisfied by the trainee's ability to identify the specific location in the correct record form where actual data would be entered, and explain where the information would be obtained. All required calculations will actually be performed: for simulations, representative data will be used in lieu of actual data. Circle "P" if actually performed or "S" if requirement was simulated.

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: LeAnn Verlanic	**Badge Number:** [redacted]
Email Address: [redacted]	

Approvals	
I have completed formal training and received OJT for this position. I fully understand my responsibilities as a VE Operator/ITR for Newly Generated TRU Waste Retrieved from the Pits.	LeAnn Verlanic LeAnn Verlanic 10-10-11 Trainee Signature *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of a VE Operator/ITR for Newly Generated TRU Waste Retrieved from the Pits. *(Validation by the SME/OJT instructor(s) involved in the training of this individual)*	Jeffrey Poole J.S. Poole 10-10-11 VEE SME/OJT Instructor *(printed name and signature)* Date
	Brad Sharp [signature] 10/17/11 VEE SME/OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of a VE Operator/ITR for Newly Generated TRU Waste Retrieved from the Pits.	Jim Vernon [signature] 10-17-11 CCP Lead or Alternate SPM *(printed name and signature)* Date

Approved for Content & Format: **Jeffrey Poole (Approval on file)** **9/26/2011**
VEE SME/OJT Date

Approved for Content & Format: **Andrew Stallings (Approval on file)** **9/26/2011**
Cognizant Engineer Date

Approved for Content: **Jim Vernon (Approval on file)** **9/26/2011**
CCP Lead or Alternate SPM Date

Approved for Use: **AJ Fisher (Approval on file)** **9/26/2011**
CCP Manager Responsible for Training Date

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: LeAnn Verlanic	**Badge Number:** [redacted]
Email Address: [redacted]	

Site: INL

List of Applicable Waste Streams ***(based on applicable Acceptable Knowledge Reports read):****	
	N
	A

**For use with Initial and Additional Sites (To be completed for each site the trainee is qualifying for)*

I have read the applicable Acceptable Knowledge Reports for this site. I understand my responsibilities regarding the waste streams listed above.

LeAnn Verlanic LeAnn Verlanic 10-10-11

Trainee *(Printed Name and Signature)* Date

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PAGE

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National TRU Program Certification (NTPC)	VE-PIT-01, Rev. 4
Effective Date: 11/01/2012	Page 1 of 7

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste*

Name: Jackie Hulse

Education/Experience	
Resume documenting education and experience on file with National TRU Program Certification (NTPC) Training.	Michele Bellett 1/17/13 NTPC Training / Date

Job Specific Training

☐ **Initial Qualification** ☐ **Requalification** ☑ **Full Requalification**

Qualification Limit	**This qualification is valid for two (2) years.** If necessary, additional training may be required by the Site Project Manager (SPM) or the Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the Manager Responsible for Training. The candidate must successfully complete the entire qualification card to reestablish qualification. Qualification is valid for this site and process only.
Requalification Requirements	Items required for requalification are identified by text.

Indoctrination
(Required at Initial Qualification and Full Requalification)

Initial/Indoctrination Reading:

1. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
2. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
3. CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)*
4. CCP-QP-002, *CCP Training and Qualification Plan*
5. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
6. CCP-QP-006, *CCP Corrective Action Reporting and Control*
7. CCP-QP-008, *CCP Records Management*
8. CCP-QP-010, *CCP Document Preparation, Approval, and Control*
9. CCP-QP-016, *CCP Control of Measuring and Testing Equipment*
10. CCP-QP-022, *CCP Software Quality Assurance Plan*
11. CCP-QP-023, *CCP Handling, Storage, and Shipping*
12. CCP-TP-006, *CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste*

I have read the listed Initial/Indoctrination Reading and understand my responsibilities as applicable to the procedures above.	[signature] 1/8/13 Trainee / Date

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste*

Name: Jackie Hulse

Additional Training Requirements	
1. WAP/QAPjP Briefing and Test *(One-time Requirement)*	Michele Billett 1/17/13 NTPC Training Date
2. CCP-VE-101, *Visual Examination (VE) TRU Waste Characterization Briefing (Always Required)*	Michele Billett 1/17/13 NTPC Training Date
3. CCP VE Comprehensive Exam *(Always Required)*	Michele Billett 1/17/13 NTPC Training Date

Formal Training	On-the-Job Training (OJT) Knowledge Requirements *(Required at Initial Qualification and Full Requalification)*	Visual Examination Expert (VEE) Subject Matter Expert (SME)/OJT Signature/Date
CCP-PO-001	1. List the Quality Assurance objectives validated by VE.	1-8-13
CCP-QP-002	2. State the purpose of the List of Qualified Individuals (LOQI).	1-8-13
CCP-QP-005	3. State when a nonconformance report (NCR) should be prepared and who is responsible to initiate it.	1-8-13
	4. Describe how nonconforming items are documented.	1-8-13
	5. Describe how nonconforming items are controlled to prevent their use.	1-8-13
	6. State who has the responsibility to validate the NCR once initiated.	1-8-13
	7. Describe how to revise an NCR.	1-8-13
	8. Describe how to void an NCR.	1-8-13
CCP-QP-006	9. Describe the purpose of the corrective action report (CAR) process.	1-8-13
	10. State the person responsible for originating a CAR.	1-8-13
	11. Describe how corrective actions are documented.	1-8-13
	12. State who has the responsibility to validate the CAR once initiated.	1-8-13

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste*

Name: Jackie Hulse

	13. Describe actions NTPC personnel may take when conditions adverse to quality are discovered.	1-8-13
CCP-QP-008	14. List the responsibilities of record generators.	1-8-13
	15. State the storage and control requirements for NTPC Records.	1-8-13
	16. Explain the process and proper method to make corrections or revisions to NTPC Records.	1-8-13
CCP-QP-010	17. State the importance of using approved documents.	1-8-13
	18. State when to verify a document revision.	1-8-13
CCP-TP-006/ CCP-VE-101 Briefing	19. Explain how to confirm the electronic .xls data sheet on the sftp site.	1-8-13
	20. Explain the purpose of Visual Examination (VE) of Newly Generated TRU Waste.	1-8-13
	21. State the requirements of the VE Operators in performing VE.	1-8-13
	22. Describe where to obtain the tare weight of a waste container.	1-8-13
	23. What must the VE Operators concur on during the performance of VE?	1-8-13
	24. What actions are taken if the VE Operators do not concur?	1-8-13
	25. Discuss the difference in performing VE on debris waste versus homogeneous waste.	1-8-13
	26. Discuss the difference in identification of soils versus homogeneous waste.	1-8-13
	27. Define how often calibration due dates should be checked on certified equipment.	1-8-13
	28. State how to verify the calibration of M&TE used in VE Newly Generated TRU Waste.	1-8-13
	29. State individual responsible for verifying the calibration of M&TE.	1-8-13
	30. Describe what is done with an out-of-calibration piece of M&TE.	1-8-13
	31. Discuss the requirements for packaging of sharp or heavy objects.	1-8-13

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste*

Name: Jackie Hulse

CCP-TP-006	32. Describe how to obtain the net weight of a waste container.	[signature] 1-8-13
	33. Define "layers of confinement".	[signature] 1-8-13
	34. State how often a scale operational check is performed.	[signature] 1-8-13
	35. State the Waste Material Parameters (WMPs).	[signature] 1-8-13
	36. Define the following WMP acronyms: a. IN b. OR c. PW d. S e. R	[signature] 1-8-13
	37. Describe the actions taken if prohibited items are found.	C.S. Poole 1-9-13
	38. State five (5) examples of prohibited items.	C.S. Poole 1-9-13
	39. Describe how a non-transparent container is handled when liquid is suspected.	C.S. Poole 1-9-13
	40. State the acceptable liquid limits in a characterized container.	C.S. Poole 1-9-13
	41. Discuss the process of absorbing liquids that may be processed at the host facility.	C.S. Poole 1-9-13
	42. Discuss how unvented heat-sealed bags are handled during processing of prohibited items.	C.S. Poole 1-9-13
	43. Describe the conditions that would generate an NCR during the VE process.	C.S. Poole 1-9-13
	44. State three (3) examples of potentially "unsafe" packages/items that may be encountered.	C.S. Poole 1-9-13
	45. State who decides whether to open a package/item and why it may be necessary.	C.S. Poole 1-9-13
	46. Describe the information that should be recorded when describing waste items.	C.S. Poole 1-9-13
	47. Describe the unit of measurement for weights to be recorded during VE.	C.S. Poole 1-9-13
	48. Describe the unit of measurement that the final weights are converted to in the VE Data Sheet.	C.S. Poole 1-9-13
	49. State how to determine the weight of a material using historically derived waste weights.	C.S. Poole 1-9-13

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste*

Name: Jackie Hulse

CCP-TP-006	50. Define WAIP.	Q.S. Poole 1-9-13
	51. Describe how to determine Volume Utilization Percentage (VUP).	Q.S. Poole 1-9-13
	52. Define the increments in which the VUP are recorded.	Q.S. Poole 1-9-13
	53. Explain who is allowed to make data changes in data sheets.	Q.S. Poole 1-9-13
	54. State the criteria for the rigid liner/liner bag to be considered vented.	Q.S. Poole 1-9-13
	55. Describe the authorized methods of closure of a liner bag.	Q.S. Poole 1-9-13
	56. Explain how to obtain a closure time and why it is important.	Q.S. Poole 1-9-13
	57. State how to determine the torque value for the ring bolt.	Q.S. Poole 1-9-13
	58. State how to determine the torque value for the filter.	Q.S. Poole 1-9-13
	59. Define waste matrix codes.	Q.S. Poole 1-9-13
	60. Describe waste stream descriptions.	Q.S. Poole 1-9-13
	61. State the number of waste containers allowed per Batch Data Report (BDR).	Q.S. Poole 1-9-13
	62. Describe the information contained in a BDR per CCP-TP-006.	Q.S. Poole 1-9-13
	63. Explain the responsibilities and functions of the Independent Technical Reviewer (ITR).	Q.S. Poole 1-9-13
	64. State who cannot complete the ITR checklist in a testing batch.	Q.S. Poole 1-9-13
	65. Describe what constitutes a completed BDR.	Q.S. Poole 1-9-13
	66. State the differences and similarities between targeted and TRU waste.	Q.S. Poole 1-9-13
	67. State what waste is currently approved for standard waste boxes (SWB).	Q.S. Poole 1-9-13
	68. State how containers are tracked within the NTPC process.	Q.S. Poole 1-9-13
	69. Define how many digits in a BDR number.	Q.S. Poole 1-9-13

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste*

Name: Jackie Hulse

	70. State the number of digits that are in a drum number.			Q.S. Poole 1-9-13
	71. State the three (3) waste matrix codes that could be assigned once VE is completed.			Q.S. Poole 1-9-13
	72. Define the waste stream description assigned to the ARP.			Q.S. Poole 1-9-13
	73. Define the responsibilities of the VEE.			Q.S. Poole 1-9-13
Formal Training	**OJT Practical Requirements[1]** *(This section must be performed in the presence of a VEE) (Always Required)*			**VEE SME/OJT Signature/Date**
CCP-TP-006	1. Verify scale calibration check.	P	(S)	Q.S. Poole 1-9-13
	2. Obtain the net weight for the waste container.	P	(S)	Q.S. Poole 1-9-13
	3. Estimate the VUP.	P	(S)	Q.S. Poole 1-9-13
	4. Determine the WMP.	(P)	S	01-16-13
	5. Describe WMP on the VE Data Sheet.	(P)	S	01-16-13
	6. Obtain weight of each WMP.	(P)	S	01-16-13
	7. Determine layers of confinement.	P	(S)	Q.S. Poole 1-9-13
	8. Identify and process prohibited items.	P	(S)	Q.S. Poole 1-9-13
	9. Obtain waste container gross weight.	P	(S)	Q.S. Poole 1-9-13
	10. Complete data sheets.	(P)	S	01-16-13
	11. Complete ITR checklist.	(P)	S	Brad Thek 1-15-13
	12. Maintain VE logbooks.	P	(S)	Q.S. Poole 1-9-13
	13. Compile a batch data report BDR.	P	(S)	Q.S. Poole 1-9-13

[1] For simulated steps that involve the recording of information, the steps can be satisfied by the trainee's ability to identify the specific location in the correct record form where actual data would be entered, and explain where the information would be obtained. All required calculations will actually be performed: for simulations, representative data will be used in lieu of actual data. Circle "P" if actually performed or "S" if requirement was simulated.

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste*

Name: Jackie Hulse

Approvals	
I have completed formal training and received OJT for this position. I fully understand my responsibilities as a VE Operator/ITR for Newly Generated TRU Waste Retrieved from the Pits.	Jackie Hulse 1/17/13 Trainee Signature *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of a VE Operator/ITR for Newly Generated TRU Waste Retrieved from the Pits. *(Validation by the VEE SME/OJT instructor(s) involved in the training of this individual)*	Spencer Pittee 1-17-13 VEE SME/OJT Instructor *(printed name and signature)* Date LUKE GROVER 1-21-13 BRAD STARK 1-21-13 Jeffrey Poole 1-17-13 VEE SME/OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of a VE Operator/ITR for Newly Generated TRU Waste Retrieved from the Pits.	Richard Kantrowitz 1/21/13 SPM *(printed name and signature)* Date

Approved for Content & Format: **Jeffrey Poole *(Approval on File)*** **11/01/2012**
SME/OJT Date

Approved for Applicability, Content & Format: **Andrew Stallings *(Approval on File)*** **11/01/2012**
Cognizant Engineer Date

Approved for Content: **Jim Vernon *(Approval on File)*** **11/01/2012**
SPM Date

Approved for Applicability, Content, Format, & Use: **A.J. Fisher *(Approval on File)*** **11/01/2012**
Manager Responsible for Training Date

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National TRU Program Certification
Effective Date: 02/28/2013

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) at Idaho National Laboratory (INL) Qualification Card

Name: Michael Haderlie

Education/Experience	
Resume documenting education and experience on file with National TRU Program Certification (NTPC) Training.	Cheryl Almy 05-29-13 NTPC Training / Date

Job Specific Training

☐ **Initial Qualification** ☑ **Requalification** ☐ **Full Requalification**

Qualification Limit	**This qualification is valid for two (2) years.** If necessary, additional training may be required by the Site Project Manager (SPM) or the Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the Manager Responsible for Training. The candidate must successfully complete the entire qualification card to reestablish qualification. Qualification is valid for this site and process only.
Requalification Requirements	Items required for requalification are identified by text.

Indoctrination
(Required at Initial Qualification and Full Requalification)

Initial/Indoctrination Reading:

1. CCP-HSP-014, *Health and Safety Program Implementation for CCP*
2. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
3. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
4. CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)*
5. CCP-QP-002, *CCP Training and Qualification Plan*
6. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
7. CCP-QP-008, *CCP Records Management*
8. CCP-QP-010, *CCP Document Preparation, Approval, and Control*
9. CCP-QP-016, *CCP Control of Measuring and Testing Equipment*
10. CCP-QP-022, *CCP Software Quality Assurance Plan*
11. CCP-QP-023, *CCP Handling, Storage, and Shipping*
12. CCP-QP-029, *CCP Corrective Action Management*
13. CCP-TP-006, *CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste*

I have read the listed Initial/Indoctrination Reading and understand my responsibilities as applicable to the procedures above.	N/A Trainee / Date

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: Michael Haderlie

Additional Training Requirements	
1. WAP/QAPjP Briefing and Test *(One-time Requirement)*	Cheryl Munjo 05-29-13 NTPC Training — Date
2. CCP-VE-101, *Visual Examination (VE) TRU Waste Characterization Briefing* *(Always Required)*	Cheryl Munjo 05-29-13 NTPC Training — Date
3. VE Comprehensive Exam *(Always Required)*	Cheryl Munjo 05-29-13 NTPC Training — Date

Formal Training	On-the-Job Training (OJT) Knowledge Requirements *(Required at Initial Qualification and Full Requalification)*	Visual Examination Expert (VEE) Subject Matter Expert (SME)/OJT Signature/Date
CCP-PO-001	1. List the Quality Assurance objectives validated by VE.	
CCP-QP-002	2. State the purpose of the List of Qualified Individuals (LOQI).	
CCP-QP-005	3. State when a nonconformance report (NCR) should be prepared and who is responsible to initiate it.	
	4. Describe how nonconforming items are documented.	
	5. Describe how nonconforming items are controlled to prevent their use.	N A
	6. State who has the responsibility to validate the NCR once initiated.	
	7. Describe how to revise an NCR.	ASP 5-23-13
	8. Describe how to void an NCR.	
CCP-QP-029	9. Describe the purpose of the corrective action report (CAR) process.	
	10. State the person responsible for originating a CAR.	
	11. Describe how corrective actions are documented.	
	12. State who has the responsibility to validate the CAR once initiated.	

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: Michael Haderlie

	13. Describe actions personnel may take when conditions adverse to quality are discovered.	
CCP-QP-008	14. List the responsibilities of record generators.	
	15. State the storage and control requirements for Records.	
	16. Explain the process and proper method to make corrections or revisions to Records.	
CCP-QP-010	17. State the importance of using approved documents.	
	18. State when to verify a document revision.	
CCP-TP-006/ CCP-VE-101 Briefing	19. Explain how to confirm the electronic .xls data sheet on the sftp site.	
	20. Explain the purpose of VE.	N A
	21. State the requirements of the VE Operators in performing VE.	
	22. Describe where to obtain the tare weight of a waste container.	
	23. What must the VE Operators concur on during the performance of VE?	
	24. What actions are taken if the VE Operators do not concur?	
	25. Discuss the difference in performing VE on debris waste versus homogeneous waste.	
	26. Discuss the difference in identification of soils versus homogeneous waste.	
	27. Define how often calibration due dates should be checked on certified equipment.	
	28. State how to verify the calibration of M&TE used in VE.	
	29. State individual responsible for verifying the calibration of M&TE.	
	30. Describe what is done with an out-of-calibration piece of M&TE.	
	31. Discuss the requirements for packaging of sharp or heavy objects.	

ASP 5-23-13

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: Michael Haderlie

CCP-TP-006	32. Describe how to obtain the net weight of a waste container.	
	33. Define "layers of confinement".	
	34. State how often a scale operational check is performed.	
	35. State the Waste Material Parameters (WMPs).	
	36. Define the following WMP acronyms: a. IN d. S b. OR e. R c. PW	
	37. Describe the actions taken if prohibited items are found.	
	38. State five (5) examples of prohibited items.	N A
	39. Describe how a non-transparent container is handled when liquid is suspected.	
	40. State the acceptable liquid limits in a characterized container.	
	41. Discuss the process of absorbing liquids that may be processed at the host facility.	
	42. Discuss how unvented heat-sealed bags are handled during processing of prohibited items.	
	43. Describe the conditions that would generate an NCR during the VE process.	
	44. State three (3) examples of potentially "unsafe" packages/items that may be encountered.	
	45. State who decides whether to open a package/item and why it may be necessary.	
	46. Describe the information that should be recorded when describing waste items.	
	47. Describe the unit of measurement for weights to be recorded during VE.	
	48. Describe the unit of measurement that the final weights are converted to in the VE Data Sheet.	
	49. State how to determine the weight of a material using historically derived waste weights.	

MH 5-23-13

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: Michael Haderlie

CCP-TP-006	50. Define WAIP.	
	51. Describe how to determine Volume Utilization Percentage (VUP).	
	52. Define the increments in which the VUP are recorded.	
	53. Explain who is allowed to make data changes in data sheets.	
	54. State the criteria for the rigid liner/liner bag to be considered vented.	
	55. Describe the authorized methods of closure of a liner bag.	
	56. Explain how to obtain a closure time and why it is important.	
	57. State how to determine the torque value for the ring bolt.	N A
	58. State how to determine the torque value for the filter.	
	59. Define waste matrix codes.	
	60. Describe waste stream descriptions.	
	61. State the number of waste containers allowed per Batch Data Report (BDR).	
	62. Describe the information contained in a BDR per CCP-TP-006.	
	63. Explain the responsibilities and functions of the Independent Technical Reviewer (ITR).	
	64. State who cannot complete the ITR checklist in a testing batch.	
	65. Describe what constitutes a completed BDR.	
	66. State the differences and similarities between targeted and TRU waste.	
	67. State what waste is currently approved for standard waste boxes (SWB).	
	68. State how containers are tracked within the characterization process.	

5-23-13

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: Michael Haderlie

	69. Define how many digits in a BDR number.			N A
	70. State the number of digits that are in a drum number.			
	71. Describe the waste matrix codes that could be assigned once VE is complete.			
	72. Define the waste stream descriptions assigned to the Accelerated Retrieval Project (ARP) and the Sludge Repackaging Project (SRP).			ARP SRP 5-23-13
	73. Define the responsibilities of the VEE.			
Formal Training	**OJT Practical Requirements**[1] *(This section must be performed in the presence of a VEE) (Always Required)*			**VEE SME/OJT Signature/Date**
CCP-TP-006	1. Verify scale calibration check.	(P)	S	Q.S. Poole 5-23-13
	2. Obtain the net weight for the waste container.	(P)	S	Q.S. Poole 5-23-13
	3. Estimate the VUP.	(P)	S	Q.S. Poole 5-23-13
	4. Determine the WMP.	(P)	S	Q.S. Poole 5-23-13
	5. Describe WMP on the VE Data Sheet.	(P)	S	Q.S. Poole 5-23-13
	6. Obtain weight of each WMP.	(P)	S	Q.S. Poole 5-23-13
	7. Determine layers of confinement.	(P)	S	Q.S. Poole 5-23-13
	8. Identify and process prohibited items.	P	(S)	Q.S. Poole 5-23-13
	9. Obtain waste container gross weight.	(P)	S	Q.S. Poole 5-23-13
	10. Complete data sheets.	(P)	S	Q.S. Poole 5-23-13
	11. Complete ITR checklist.	P	(S)	Q.S. Poole 5-23-13
	12. Maintain VE logbooks.	P	(S)	Q.S. Poole 5-23-13
	13. Compile a batch data report BDR.	(P)	S	Q.S. Poole 5-23-13

[1] For simulated steps that involve the recording of information, the steps can be satisfied by the trainee's ability to identify the specific location in the correct record form where actual data would be entered, and explain where the information would be obtained. All required calculations will actually be performed; for simulations, representative data will be used in lieu of actual data. Circle "P" if actually performed or "S" if requirement was simulated.

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: Michael Haderlie

Approvals	
I have completed formal training and received OJT for this position. I fully understand my responsibilities as a VE Operator/ITR at INL.	Michael Haderlie 5-23-13 Trainee Signature *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of a VE Operator/ITR at INL. *(Validation by the VEE SME/OJT instructor(s) involved in the training of this individual)*	Jeffrey Poole JS Poole 5-23-13 VEE SME/OJT Instructor *(printed name and signature)* Date N/A VEE SME/OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of a VE Operator/ITR at INL.	Jim Vernon 5-29-13 SPM *(printed name and signature)* Date

Approved for Content & Format: **Jeffrey Poole *(Approval on File)*** **02/28/2013**
SME/OJT Date

Approved for Applicability, Content & Format: **Andrew Stallings *(Approval on File)*** **02/28/2013**
Cognizant Engineer Date

Approved for Content: **Jim Vernon *(Approval on File)*** **02/28/2013**
SPM Date

Approved for Applicability, Content, Format, & Use: **A.J. Fisher *(Approval on File)*** **02/28/2013**
Manager Responsible for Training Date

COPY

Central Characterization Project
Effective Date: 08/06/2010

VE-PIT-01, Rev. 1

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: John Hegsted | **Badge Number:** [redacted]

Email Address: [redacted]

Job Specific Training

☐ **Initial Qualification** ☑ **Requalification**

Qualification Limit	**This qualification is valid for two (2) years.** If necessary, additional training may be required by the CCP Lead Site Project Manager (SPM) or the CCP Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the CCP Manager responsible for Training. The candidate must successfully complete the entire CCP qualification card to reestablish qualification. Qualification is valid for this site and process only.
Requalification Requirements	Items required for requalification are identified by text.

Indoctrination

(Required at initial qualification, or in the event of requalification after disqualification only.)

Initial/Indoctrination Reading:

1. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
2. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
3. CCP-PO-003, *CCP TRUPACT-II Authorized Methods for Payload Control (TRAMPAC)*
4. CCP-QP-002, *CCP Training and Qualification Plan*
5. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
6. CCP-QP-006, *CCP Corrective Action Reporting and Control*
7. CCP-QP-008, *CCP Records Management*
8. CCP-QP-010, *CCP Document Preparation Approval and Control*
9. CCP-QP-016, *CCP Control of Measuring, Testing, and Equipment*
10. CCP-QP-022, *CCP Software Quality Assurance Plan*
11. CCP-QP-023, *CCP Handling, Storage, and Shipping*
12. CCP-TP-006, *CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved from Pits*

I have read the listed initial/indoctrination reading and understand my responsibilities as applicable to the procedures above.

J B Hegsted
Trainee

11/10/10
Date

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: John Hegsted	**Badge Number:** [redacted]
Email Address: [redacted]	

Additional Training Requirements	
1. WAP/QAPjP Briefing and Test. *(One-time requirement)* 9/9/04	CCP Training 11/23/10 Date
2. Visual Examination (VE) TRU Waste Characterization Briefing. *(Required at each requalification)* 12/2/10	Michele Billett 12/2/10 CCP Training Date
3. CCP VE Comprehensive Exam (score 80% or higher) administered by CCP Training. *(To be administered at each requalification.)* 12/2/10	Michele Billett 12/2/10 CCP Training Date

Formal Training	On-the-Job Training (OJT) Knowledge Requirements *(Required at initial qualification, or in the event of requalification after disqualification only.)*	Visual Examination Expert (VEE) Subject Matter Expert (SME) Signature/Date
CCP-PO-001	1. List the Quality Assurance objectives validated by VE.	Brad Stark 11-10-10
CCP-QP-002	2. State the purpose of the List of Qualified Individuals (LOQI).	Brad Stark 11-10-10
CCP-QP-005	3. State when a nonconformance report (NCR) should be prepared and who is responsible to initiate it.	Brad Stark 11-10-10
	4. Describe how nonconforming items are documented.	Brad Stark 11-10-10
	5. Describe how nonconforming items are controlled to prevent their use.	Brad Stark 11-10-10
	6. State who has the responsibility to validate the NCR once initiated.	Brad Stark 11-10-10
	7. Describe how to revise an NCR.	Brad Stark 11-10-10
	8. Describe how to void an NCR.	Brad Stark 11-10-10
CCP-QP-006	9. Describe the purpose of the corrective action report (CAR) process.	Brad Stark 11-10-10
	10. State the person responsible for originating a CAR.	Brad Stark 11-10-10
	11. Describe how corrective actions are documented.	Brad Stark 11-10-10
	12. State who has the responsibility to validate the CAR once initiated.	Brad Stark 11-10-10

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: John Hegsted **Badge Number:** [redacted]

Email Address: [redacted]

CCP-QP-008	13. Describe actions CCP personnel may take when conditions adverse to quality are discovered.	Brad Stack	11-10-10
	14. List the responsibilities of record generators.	Brad Stack	11-10-10
	15. State the storage and control requirements for CCP records.	Brad Stack	11-10-10
	16. Explain the process and proper method to make corrections or revisions to CCP records.	Brad Stack	11-10-10
CCP-QP-010	17. State the importance of using approved documents.	Brad Stack	11-10-10
	18. State when to verify a document revision.	Brad Stack	11-10-10
CCP-TP-006/ CCP-VE-101 Briefing	19. Explain how to confirm the electronic .xls data sheet on the ftp site.	Brad Stack	11-10-10
	20. Explain the purpose of Visual Examination (VE) of Newly Generated TRU Waste.	Brad Stack	11-10-10
	21. State the requirements of the VE Operators in performing VE.	Brad Stack	11-10-10
	22. Describe where to obtain the tare weight of a waste container.	Brad Stack	11-10-10
	23. What must the VE Operators concur on during the performance of VE?	Brad Stack	11-10-10
	24. What actions are taken if the VE Operators do not concur?	Brad Stack	11-10-10
	25. Discuss the difference in performing VE on debris waste versus homogeneous waste.	Brad Stack	11-10-10
	26. Define how often calibration due dates should be checked on certified equipment.	Brad Stack	11-10-10
	27. State how to verify the calibration of M&TE used in VE Newly Generated TRU Waste.	Brad Stack	11-10-10
	28. State individual responsible for verifying the calibration of M&TE.	Brad Stack	11-10-10
	29. Describe what is done with an out-of-calibration piece of M&TE.	Brad Stack	11-10-10
	30. Discuss the requirements for packaging of sharp or heavy objects.	Brad Stack	11-10-10
	31. Describe how to obtain the net weight of a waste container.	Brad Stack	11-10-10
	32. Define "layers of confinement".	Brad Stack	11-10-10

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: John Hegsted **Badge Number:** [redacted]

Email Address: [redacted]

CCP-TP-006	33. State how often a scale operational check is performed.	Brad Stark	11-17-10
	34. State the Waste Material Parameters (WMPs).	Brad Stark	11-17-10
	35. Define the following WMP acronyms: a. IN b. OR c. PW d. S e. R	Brad Stark	11-17-10
	36. Describe the actions taken if prohibited items are found.	Brad Stark	11-17-10
	37. State five (5) examples of prohibited items.	Brad Stark	11-17-10
	38. Describe how a non-transparent container is handled when liquid is suspected.	Brad Stark	11-17-10
	39. State the acceptable liquid limits in a characterized container.	Brad Stark	11-17-10
	40. Discuss the process of absorbing liquids that may be processed at the host facility.	Brad Stark	11-17-10
	41. Discuss how unvented heat-sealed bags are handled during processing of prohibited items.	Brad Stark	11-17-10
	42. Describe the conditions that would generate an NCR during the VE process.	Brad Stark	11-17-10
	43. State three (3) examples of potentially "unsafe" packages/items that may be encountered.	Brad Stark	11-17-10
	44. State who decides whether to open a package/item and why it may be necessary.	Brad Stark	11-17-10
	45. Describe the information that should be recorded when describing waste items.	Brad Stark	11-17-10
	46. Describe the unit of measurement for weights to be recorded during VE.	Brad Stark	11-17-10
	47. Describe the unit of measurement that the final weights are converted to in the VE Data Sheet.	Brad Stark	11-17-10
	48. State how to determine the weight of a material using historically derived waste weights.	Brad Stark	11-17-10
	49. Define WAIP.	Brad Stark	11-17-10
CCP-TP-006	50. Describe how to determine Volume Utilization Percentage (VUP).	Brad Stark	11-17-10

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: John Hegsted **Badge Number:** [redacted]

Email Address: [redacted]

CCP-TP-006	51.	Define the increments in which the VUP are recorded.	Brad Stark 11-17-10
	52.	Explain who is allowed to make data changes in data sheets.	Brad Stark 11-17-10
	53.	State the criteria for the rigid liner/liner bag to be considered vented.	Brad Stark 11-17-10
	54.	Describe the authorized methods of closure of a liner bag.	Brad Stark 11-17-10
	55.	Explain how to obtain a closure time and why it is important.	Brad Stark 11-17-10
	56.	State how to determine the torque value for the ring bolt.	Brad Stark 11-17-10
	57.	State how to determine the torque value for the filter.	Brad Stark 11-17-10
	58.	Define waste matrix codes.	Brad Stark 11-17-10
	59.	Describe waste stream descriptions.	Brad Stark 11-17-10
	60.	State the number of waste containers allowed per Batch Data Report (BDR).	Brad Stark 11-17-10
	61.	Describe the information contained in a BDR per CCP-TP-006.	Brad Stark 11-17-10
	62.	Explain the responsibilities and functions of the Independent Technical Reviewer (ITR).	Brad Stark 11-17-10
	63.	State who cannot complete the ITR checklist in a testing batch.	Brad Stark 11-17-10
	64.	Describe what constitutes a completed BDR.	Brad Stark 11-17-10
	65.	State the differences and similarities between targeted and TRU waste.	Brad Stark 11-17-10
	66.	State what waste is currently approved for standard waste boxes (SWB).	Brad Stark 11-17-10
	67.	State how containers are tracked within the CCP process.	Brad Stark 11-17-10
	68.	Define how many digits in a BDR number.	Brad Stark 11-17-10
	69.	State the number of digits that are in a drum number.	Brad Stark 11-17-10
	70.	State the three (3) waste matrix codes that could be assigned once VE is completed.	Brad Stark 11-17-10

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: John Hegsted **Badge Number:** [redacted]
Email Address: [redacted]

	71. Define the waste stream description assigned to the ARP.			Brad Stark 11-17-10
	72. Define the responsibilities of the VEE.			Brad Stark 11-17-10
Formal Training	**OJT Practical Requirements**[1] *(This section must be performed in the presence of a VEE for initial and requalification)*			**VEE SME/OJT Signature/Date**
CCP-TP-006	1. Verify scale calibration check.	(P)	S	Brad Stark 11-17-10
	2. Obtain the net weight for the waste container.	(P)	S	Brad Stark 11-17-10
	3. Estimate the VUP.	(P)	S	Brad Stark 11-17-10
	4. Determine the WMP.	(P)	S	Brad Stark 11-17-10
	5. Describe WMP on the VE Data Sheet.	(P)	S	Brad Stark 11-17-10
	6. Obtain weight of each WMP.	(P)	S	Brad Stark 11-17-10
	7. Determine layers of confinement.	(P)	S	Brad Stark 11-17-10
	8. Identify and process prohibited items.	(P)	S	Brad Stark 11-17-10
	9. Obtain waste container gross weight.	(P)	S	Brad Stark 11-17-10
	10. Complete data sheets.	(P)	S	Brad Stark 11-17-10
	11. Complete ITR checklist.	P	(S)	Brad Stark 11-17-10
	12. Maintain VE logbooks.	P	(S)	Brad Stark 11-17-10
	13. Compile a batch data report BDR.	P	(S)	Brad Stark 11-17-10

[1] Actual performance of this requirement may not be possible at the time of qualification. Simulation of this requirement is acceptable where the option is given on the qualification card. Circle "P" if actually performed or "S" if requirement was simulated.

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: John Hegsted	**Badge Number:** [redacted]
Email Address: [redacted]	

Approvals	
I have completed formal training and received on-the-job training for this position. I fully understand my responsibilities as a VE Operator/ITR for Newly Generated TRU Waste Retrieved from the Pits.	J.B. Hegsted J.B. HEGSTED 11/17/10 Trainee Signature *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of a VE Operator/ITR for Newly Generated TRU Waste Retrieved from the Pits. *(Validation by the SME/OJT instructor(s) involved in the training of this individual.)*	Brad Stark Brad Stark 11-17-10 CCP VEE SME/OJT Instructor *(printed name and signature)* Date N/A CCP VEE SME/OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of a VE Operator/ITR for Newly Generated TRU Waste Retrieved from the Pits.	Barbara Brownfield 11/22/10 CCP Lead or Alternate SPM *(printed name and signature)* Date

Approved for Content & Format: Approval on file RM 11/22/10 8/6/2010 RM 11/22/10
~~Brad Stark Brad Stark 11-17-10~~
VEE SME *(printed name and signature)* Date

Approved for Content & Format: Approval on file RM 11/22/10 8/6/2010 RM 11/22/10
Cognizant Engineer *(printed name and signature)* Date

Approved for Content: Approval on file RM 11/22/10 8/6/2010 RM 11/22/10
CCP Lead or Alternate SPM *(printed name and signature)* Date

Approved for Use: Approval on file RM 11/22/10 8/6/2010 RM 11/22/10
CCP Manager Responsible for Training *(printed name and signature)* Date

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: John Hegsted | **Badge Number:** [redacted]

Email Address: [redacted]

Site: INL

Acceptable Knowledge Briefings Received *(Listed by Waste Stream)*:*	
	N A
	BLB
	11-17-10

**For use with Initial and Additional Sites (To be completed for each site the trainee is qualifying for).*

I have received and understand the listed AK Briefings: J.B. HEGSTED J.B. Hegsted 11/17/10

Trainee *(Printed Name and Signature)* Date

DIVIDER PAGE

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CCP ATTENDANCE SHEET

COURSE NAME: CCP-AK-INL-005 Rev 7 DATE: 10-1-12

LOCATION: Telecon

	NAME (PRINT NAME)	TITLE/POSITION	SIGNATURE
1.	MICHAEL GALBRAITH	RTR	
2.	JERRY BOWDEN	RTR	
3.		N/A	
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			

Jim Vernon
Instructor Name (Print)

Signature

10-1-12
Date

COPY

CCP ATTENDANCE SHEET

COURSE NAME: CCP-AK-INL-005 Rev 7 DATE: 10-1-12

LOCATION: Telecon

	NAME (PRINT NAME)	TITLE/POSITION	SIGNATURE
1.	MIKE HADERLIE	VE	
2.	David Jackman	VE	
3.	JOHN HIESTER	VE	
4.	Lefka Veclanic	VE	
5.	Jodi M. Stanton	VE	
6.	Spencer Puttee	VEE	
7.	JEFFREY POOKE	VEE	
8.	Jeri Miles	VPM	
9.	LUKE GROVER	VEE	
10.			
11.		AL 10/1/12	
12.			

Jim Vernon
Instructor Name (Print)

Signature

10/1/12
Date

COPY

CCP ATTENDANCE SHEET

COURSE NAME: CCP-AK-INL-005 Rev 7

DATE: ~~10-1-12~~ 10-8-12 & 10-5-12

LOCATION: Telecon

	NAME (PRINT NAME)	TITLE/POSITION	SIGNATURE
1.	Brad Stark	VEE	
2.			
3.			
4.			
5.			
6.			
7.		N/A	
8.			
9.			
10.			
11.			
12.			

Sim Vernon
Instructor Name (Print)

Signature

10-8-12
Date

COPY

CCP ATTENDANCE SHEET

COURSE NAME: CCP-AK-INL-005 Rev 7 AK Briefing DATE: 1-8-13

LOCATION: Telecon

	NAME (PRINT NAME)	TITLE/POSITION	SIGNATURE
1.	Michael Galbraith	VE	
2.	Ron Cummins	VE	
3.	Lori Muntean	VE	Lori Muntean
4.	Jackie Hulse	VE	
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			

Jim Vernon
Instructor Name (Print)

Signature

1-8-13
Date

COPY

CCP ATTENDANCE SHEET

COURSE NAME: CCP-AK-INL-005 Rev 7 AK Briefing DATE: 2-12-13

LOCATION: Telecon

	NAME (PRINT NAME)	TITLE/POSITION	SIGNATURE
1.	GERARD BARR	VE	Gerard Barr
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			

Jim Vernon
Instructor Name (Print)

Signature

2-22-13
Date

DIVIDER

PAGE

COPY

CCP ATTENDANCE SHEET

COURSE NAME: CCP-AK-INL-008 Rev 8 Briefing (S SV 2-28-13) DATE: 2-28-13

LOCATION: Telecon

	NAME (PRINT NAME)	TITLE/POSITION	SIGNATURE
1.	Jackie Hulse	VE	
2.	LeAnn Veclanic	VE	
3.	Bill Veclanic	P.M.	
4.	David Jackman	VE	
5.	Ron Cummings	VE	
6.	GERARD BARR	VE	
7.	MICHAEL HADERLIE	VE	
8.	Jeri Miles	VPM	
9.			
10.			A
11.		N	
12.			

Jim Vernon — Instructor Name (Print)

Signature

2-28-13 — Date

COPY

CCP ATTENDANCE SHEET

COURSE NAME: CCP-AK-INL-00~~8~~ S SV 2-28-13 Rev 8 Briefing DATE: 2-28-13

LOCATION: Telecon

	NAME (PRINT NAME)	TITLE/POSITION	SIGNATURE
1.	BRAD STARK	VEE	Brad Stark
2.	LUKE GROVER	VEE	
3.	Spencer Pattee	VEE	
4.	Jeff Poole	VEE	J.S. Poole
5.	Lori Muntean	VE	Lori Muntean
6.	Jodi M. Stanton	VE	Jodi M. Stanton
7.			
8.			
9.			
10.		N	A
11.			
12.			

Jim Vernon — Instructor Name (Print)

Signature

2-28-13 — Date

DIVIDER

PAGE

COPY

Washington
TRU Solutions LLC

CP:06:01161
UFC:3420.00

INTER-OFFICE CORRESPONDENCE

DATE: March 27, 2006

FROM: B. J. Broomfield BJB 3/27/06

LOCATION: Retrieval, Characterization & Transportation

TO: R. J. Walker

LOCATION: Retrieval, Characterization & Transportation

SUBJECT: APPOINTMENT LETTER FOR MR. J. POOLE AS CENTRAL CHARACTERIZATION PROJECT VISUAL EXAMINATION EXPERT AND VISUAL EXAMINATION OPERATOR/INDEPENDENT TECHNICAL REVIEWER/TECHNICAL SUPERVISOR/ FACILITY QUALITY ASSURANCE OFFICER FOR THE ACCELERATED RETRIEVAL PROJECT AT THE IDAHO NATIONAL LABORATORY

Mr. J. Poole has been appointed to the position of Central Characterization Project (CCP) Visual Examination Expert (VEE) and Visual Examination (VE) operator/Independent Technical Reviewer (ITR)/Technical Supervisor (TS)/Facility Quality Assurance Officer (FQAO) for the Idaho National Laboratory (INL) Accelerated Retrieval Project.

I have reviewed the training and education documentation for Mr. Poole and conclude he has the knowledge and expertise to be appointed VEE and VE operator/ITR/TS/FQAO for CCP INL.

This appointment letter is required for Mr. Poole to satisfy his CCP Expert Analyst qualifications per CCP-QP-002.

BJB:jm

SPM appointment for VEE

Billett, Michele - Stoller

From: Vernon, Jim - WTS
Sent: Monday, July 18, 2011 3:20 PM
To: Martin, Ryan - Stoller; Billett, Michele - Stoller
Subject: FW: SME Appointments - Luke Grover and Spencer Pattee

To be clear I wish to appoint Luke and Spencer as VE SME's.

Jim Vernon
Washington TRU Solutions
Contractor to the Department of Energy
Site Project Manager
575-234-7141 (Work)
575-706-2981 (Cell)

From: Vernon, Jim - WTS
Sent: Monday, July 18, 2011 3:18 PM
To: Martin, Ryan - Stoller
Cc: Billett, Michele - Stoller; Verlanic, William; Carlson, Ted - WTS; Fisher, AJ - WTS; Sensibaugh, Mike - WTS
Subject: SME Appointments - Luke Grover and Spencer Pattee

Ryan,

Please appoint Luke Grover and Spencer Pattee as VE SME's. I have reviewed the training history for Luke and Spencer and feel that they will be adequate SME's.

Please call with any questions.

Jim Vernon
Washington TRU Solutions
Contractor to the Department of Energy
Site Project Manager
575-234-7141 - Work
575-706-2981 - Cell

Billett, Michele - Stoller

From: Billett, Bob
Sent: Monday, August 31, 2009 6:26 PM
To: Atwood, Alyca - Stoller; Billett, Michele - Stoller
Cc: Pearcy, Mark; Walentine, Michael; Verlanic, William; 'Salas, Paula V'; Poole, Jeffrey - CCP Hanford; 'Stark, Bradley R'; 'Troy.Pattee@icp.doe.gov'
Subject: Amendment to CCP INL VEE Appointments

Alyca/Michele,

Jeff Poole, Brad Stark, Paula Salas, and Troy Pattee had been previously appointed as VEEs for the CCP INL Project. I am amending that appointment to state that Jeff, Brad, Paula, and Troy are appointed as VEEs for the CCP INL project at the Accelerated Retrieval Project (ARP). This appointment includes all retrieval areas and airlocks. This is currently a CH waste process. Please place a copy of this Email in the applicable training records with the original appointment.

Thanks!

Bob Billett
CCP Operations Manager
Office (575) 234-7682
Cell (865) 816-4202

Washington TRU Solutions LLC

COPY

CP:07:01065
UFC:2300.00

INTER-OFFICE CORRESPONDENCE

DATE: March 1, 2007

FROM: B. J. Broomfield — LOCATION: Retrieval, Characterization & Transportation

(Original signature on file)

TO: R. J. Walker ED — LOCATION: Retrieval, Characterization & Transportation

SUBJECT: APPOINTMENT LETTER FOR MR. BRADLEY STARK AS CENTRAL CHARACTERIZATION PROJECT VISUAL EXAMINATION EXPERT AND VISUAL EXAMINATION OPERATOR/INDEPENDENT TECHNICAL REVIEWER FOR THE ACCELERATED RETRIEVAL PROJECT AT THE IDAHO NATIONAL LABORATORY

Mr. Bradley Stark has been appointed the position of Central Characterization Project (CCP) visual examination expert (VEE) and visual examination (VE) operator/Independent Technical Reviewer (ITR) for the Idaho National Laboratory (INL) Accelerated Retrieval Project.

I have reviewed the training and education documentation for Mr. Stark and conclude he has the knowledge and expertise to be appointed VEE and VE operator/ITR for CCP INL.

This appointment letter is required for Mr. Stark to satisfy his CCP Expert Analyst qualifications per CCP-QP-002.

BJB:jm

cc: B. Stark ED

COPY

Atwood, Alyca - Triumph Tech

From: Romo, Abraham [Abraham.Romo@icp.doe.gov]
Sent: Tuesday, April 24, 2007 3:05 PM
To: Atwood, Alyca - Triumph Tech
Subject: FW: Brad Stark SME/OJT qual

Here is what I sent you.

Abraham L. Romo
CCP VPM

From: Romo, Abraham
Sent: Tuesday, November 28, 2006 2:23 PM
To: Atwood, Alyca - Triumph Tech [mailto:Alyca.Atwood@wipp.ws]
Subject: Brad Stark SME/OJT qual

Alyca,

I have determined Brad Stark to be the next SME/OJT for the ARP Project here at INL. Brad has been designated by me to be a VE Lead and I am working with Barbara Broomfield to obtain his VE Expert Qual as well. The reason I have made this decision is cause of his work, knowledge and experience in the VE world out here at ARP. I think he holds is more then capable of performing the task required to be a SME/OJT. What I am needing is the SME/OJT study guide in and test for Brad Stark. Can you please help me in this.

Thanks,

Abraham L. Romo
Cell (208) 206-9300
Work (208) 526-6237
CCP VPM

COPY

January 21, 2009
CCP Training

SUBJECT: APPOINTMENT LETTER FOR MR. SPENCER TROY PATTEE AS A CENTRAL CHARACTERIZATION PROJECT (CCP) VISUAL EXAMINATION EXPERT (VEE) FOR THE IDAHO NATIONAL LABORATORY ADVANCED RETRIEVAL PROJECT (ARP) AT RWMC

In accordance with CCP-QP-002, Rev. 27, CCP Training and Qualification Plan, Section 3.3.2, 4.2.6 [C], 4.3.1, and Attachment 1, I have determined that Mr. Spencer Troy Pattee has met all the requirements to be appointed as a Visual Examination Expert (VEE). This determination was further based upon the individual's sustained superior performance and demonstrated leadership ability over the past 2 years, as observed by myself, and the CCP Vendor Project Manager (VPM) at ARP.

Please initiate, as applicable, any additional CCP Specific training for this individual.
Mr. Pattee will not be considered a Qualified Visual Examination Expert until all applicable / required CCP training has been completed and is on file at the CCP Project Office.

Very respectfully,

Charles A. Stepzinski
CCP PM @ INL
(208) 526-6468

COPY

10/15/2008
CCP Training

Washington TRU Solutions
4021 National Parks Highway
Mailstop GSA-103
Carlsbad, NM 88220

Subject: Letter for Jeff Poole for the position of Remote Handled (RH) – Visual Examination Expert (VEE).

I have determined Jeff Poole meets the prerequisites in accordance with CCP Transuranic Waste Characterization Quality Assurance Project Plan (CCP QAPjP; CCP-PO-001) Section B4-1, for the position of RH-VEE SME/OJT. This determination was based on his previous experience and training.

Mr. Poole has more than 25 years experience working in DOE TRU and LLW programs. Mr. Poole has been performing VE for CCP for 3.5 years and was appointed as a CCP Contact Handled – VEE SME/OJT ~ 2 years ago. Resume is on file with CCP Training.

Please initiate, as applicable, the CCP-specific training. Mr. Poole will not be considered qualified until all applicable/required training is completed and is on file at the CCP Project Office.

Sincerely,

Michael L. Sensibaugh
CCP RH/SQS Program Manager

Irene Quintana
RH Site Project Manager

COPY

Billett, Michele - Stoller

From: Porter, Larry
Sent: Thursday, May 14, 2009 9:42 AM
To: Atwood, Alyca - Stoller; Billett, Michele - Stoller
Cc: Billett, Bob
Subject: Appointment of Jeff Poole as SME/OJT for VE at Hanford

I am appointing Jeff Poole to be the VE SME/OJT at Hanford. This appointment is based on Jeff's extensive knowledge in performing VE at Rocky Flats, and the Idaho National Laboratory (both CH and RH) and knowledge of the CCP Program from his work at INL. Please send Jeff the required training material to complete his training.

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PAGE

Billett, Michele - Stoller

From: Quintana, Irene - WTS
Sent: Thursday, November 11, 2010 10:26 AM
To: Billett, Michele - Stoller; Martin, Ryan - Stoller
Cc: Hinojos, Felicia - Stoller
Subject: Amendment to CCP INL RH VEE Appointment - Jeff Poole

Jeff Poole has been previously appointed as VEEs for the CCP INL RH Project. I am amending that appointment to state that Jeff is appointed as VEEs for the CCP INL RH project at INTEC in building CPP-659. This is currently a RH waste process. Please place a copy of this Email in the applicable training records with the original appointment.

Thank you,

Irene Quintana
RH SPM
Washington TRU Solutions, LLC.
Contractor to the Department of Energy
720-982-7174
575-499-4579
irene.quintana@wipp.ws

From: Billett, Michele - Stoller
Sent: Thu 11/11/2010 10:18 AM
To: Quintana, Irene - WTS
Subject: FW: Amendment to CCP INL RH VEE Appointments

Irene,

Could you handle this for me? I need the RH SPM...

Thank you,

Michele Billett

CCP Training Coordinator

S.M. Stoller Corporation

Contractor to Washington TRU Solutions, LLC

575-234-7323

From: Billett, Michele - Stoller
Sent: Thursday, November 11, 2010 9:22 AM
To: Sensibaugh, Mike - WTS
Cc: Hinojos, Felicia - Stoller; Martin, Ryan - Stoller
Subject: FW: Amendment to CCP INL RH VEE Appointments

Mike,

Could you please write a similar email to the one below for Jeff Poole? I need it before the audit next week.

Thank you,

Michele Billett

CCP Training Coordinator

S.M. Stoller Corporation

Contractor to Washington TRU Solutions, LLC

575-234-7323

From: Billett, Bob
Sent: Tuesday, September 01, 2009 2:42 PM
To: Atwood, Alyca - Stoller; Billett, Michele - Stoller
Cc: Sensibaugh, Mike; Quintana, Irene; 'Salas, Paula V'; 'Troy.Pattee@icp.doe.gov'; 'Miles, Shane'; Mojica, Tommy
Subject: Amendment to CCP INL RH VEE Appointments

Alyca/Michele,

Paula Salas, Troy Pattee, Shane Miles, and Tommy Mojica had been previously appointed as VEEs for the CCP INL RH Project. I am amending that appointment to state that Paula, Troy, Shane, and Tommy are appointed as VEEs for the CCP INL RH project at INTEC in building CPP-659. This is currently a RH waste process. Please place a copy of this Email in the applicable training records with the original appointment.

Thanks!

Bob Billett

CCP Operations Manager

Office (575) 234-7682

Cell (865) 816-4202

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Central Characterization Project
Effective Date: 10/5/2011

RH-VE-01, Rev. 4
Page 1 of 6

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Jeff Poole | **Badge Number:** [redacted]

Email Address: [redacted]

Job Specific Training

☐ **Initial Qualification** ☒ **Requalification**

Qualification Limit	**This qualification is valid for two (2) years.** If necessary, additional training may be required by the CCP Lead Site Project Manager (SPM) or the CCP Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the CCP Manager Responsible for Training. The candidate must successfully complete the entire CCP qualification card to reestablish qualification.
Requalification Requirements	Items required for requalification are identified by text.

Indoctrination

(Required at initial qualification, or in the event of requalification after disqualification only.)

Initial/Indoctrination Reading:

1. DOE/WIPP 02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*
2. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
3. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
4. CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*
5. CCP-QP-002, *CCP Training and Qualification Plan*
6. CCP-QP-004, *CCP Corrective Action Management*
7. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
8. CCP-QP-006, *CCP Corrective Action Reporting and Control*
9. CCP-QP-008, *CCP Records Management*
10. CCP-QP-010, *CCP Document Preparation Approval and Control*
11. CCP-QP-016, *CCP Control of Measuring, Testing, and Data Collection Equipment*
12. CCP-QP-023, *CCP Handling, Storage, and Shipping*
13. CCP-TP-163, *CCP Standard VE of Records*
14. CCP-TP-500, *CCP Remote-Handled Waste Visual Examination*
15. CCP-TP-513, *CCP Procedure for Radiological Documentation Package for Dimensional or Gravimetric Radiological Characterization for Remote-Handled Transuranic Waste*

I have read the listed initial/indoctrination reading and understand my responsibilities as applicable to the procedures above.

N/A

Trainee | Date

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Jeff Poole	**Badge Number:** [redacted]
Email Address: [redacted]	

Additional Training Requirements	
1. WAP/QAPjP Briefing and Test. *(One-time requirement)*	Michele Billett 2/1/12 CCP Training Date
2. Visual Examination (VE) TRU Waste Characterization Briefing for Contact-Handled (CH) & Remote-Handled (RH) Waste *(Required at initial and each requalification)*	Michele Billett 2/1/12 CCP Training Date
3. CCP VE Comprehensive Exam (score 80% or higher) administered by CCP Training. *(To be administered at initial and each requalification)*	Michele Billett 2/1/12 CCP Training Date

Formal Training	**On-the-Job Training (OJT) Knowledge Requirements** *(Required at initial qualification or in the event of requalification after disqualification only)*	**Visual Examination Expert (VEE) Subject Matter Expert (SME)/OJT Signature/Date**
CCP-PO-001	1. List the VE Quality Assurance Objectives (QAOs) per the WAP.	
	2. List the VE Data Quality Objectives (DQOs) per the WAP.	
DOE/WIPP 02-3214	3. List the VE QAOs per the PIP.	
	4. List the VE DQOs per the PIP.	
CCP-QP-002	5. State the purpose of the List of Qualified Individuals (LOQI).	
CCP-QP-005	6. State when a nonconformance report (NCR) should be prepared and who is responsible to initiate it.	N A
	7. Describe how nonconforming items are documented.	
	8. Describe how nonconforming items are controlled to prevent their use.	
	9. State who has the responsibility to validate the NCR once initiated.	
	10. Describe how to revise a NCR.	
	11. Describe how to void a NCR.	

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Jeff Poole | **Badge Number:** [redacted]

Email Address: [redacted]

CCP-QP-006	12. Describe the purpose of the corrective action report (CAR) process.	
	13. State the person responsible for originating a CAR.	
	14. Describe how corrective actions are documented.	
	15. State who has the responsibility to validate the CAR once initiated.	
	16. Describe actions CCP personnel may take when conditions adverse to quality are discovered.	
CCP-QP-008	17. List the responsibilities of record generators.	
	18. State the storage and control requirements for CCP records.	
	19. Explain the process and proper method to make corrections or revisions to CCP records.	
CCP-QP-010	20. State the importance of using approved documents.	N A
	21. State when to verify a document revision.	
CCP-QP-016	22. List the Measuring & Testing Equipment (M&TE) items used during VE.	N/A
CCP-TP-500/ CCP-VE-101 Briefing	23. Explain the purpose of VE and the roles and responsibilities of the VE Operator.	1-19-12
	24. Identify who is responsible for overall direction and implementation of the VE of that facility.	
	25. Define the two phases of VE technique for remote-handled waste.	
	26. State the number of waste containers allowed per Batch Data Report (BDR).	
	27. Define "layers of confinement."	
	28. State the authorized methods to close a liner bag.	
	29. State the action to be taken if a condition adverse to quality arises.	
	30. State the waste material parameters (WMP).	

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
for Remote-Handled (RH) Waste
Qualification Card

Name: Jeff Poole	**Badge Number:** [redacted]
Email Address: [redacted]	

	31. Describe the information that should be recorded when describing waste items.			
	32. State five (5) examples of prohibited items.			
	33. Describe how a non-transparent container is handled when liquid is suspected.			N/A
	34. State the acceptable liquid limits in a characterized container.			
	35. Explain the responsibilities and functions of the Independent Technical Review (ITR).			JP 1-19-12
	36. Define layers of confinement.			
	37. Describe how to determine Volume Utilization Percentage (VUP).			
	38. State the allowable fill percent increments.			
Formal Training	**OJT Practical Requirements[1]** *(Required at initial qualification and at requalification) (This section must be performed in the presence of a VEE for initial and requalification)*			**VEE SME/OJT Signature/Date**
CCP-TP-500	1. Prepare the recording equipment. *(This activity is at the discretion of the SME Instructor)*	P	S	N/A
	2. Complete CCP-TP-500 Attachment 1.	P	(S)	[signature] 1-19-12
	3. Prepare a BDR.	P	(S)	[signature] 1-19-12
	4. Determine the VUP.	P	(S)	[signature] 1-19-12
	5. Complete an ITR.	P	(S)	[signature] 1-19-12
	6. Determine Waste Material Parameter (WMP).	P	(S)	[signature] 1-19-12
	7. Verify the physical form of the waste matches the waste stream ID.	P	(S)	[signature] 1-19-12
CCP-TP-513	8. Perform a dimensional or gravimetric measurement and determine the measurement acceptability[2].	P	(S)	[signature] 1-19-12

[1] For simulated steps that involve the recording of information, the steps can be satisfied by the trainee's ability to identify the specific location in the correct record form where actual data would be entered, and explain where the information would be obtained. All required calculations will actually be performed: for simulations, representative data will be used in lieu of actual data. Circle "P" if actually performed or "S" if requirement was simulated.

[2] Procedure CCP-TP-513 is not applicable at all sites. The OJT Practical Requirement for this procedure is only required if the procedure is invoked.

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Jeff Poole	**Badge Number:** [redacted]
Email Address: [redacted]	

Approvals	
I have completed formal training and received OJT for this position. I fully understand my responsibilities as a RH VE Operator/ITR.	Jeffrey Poole J.S. Poole 1-19-12 Trainee *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of a RH VE Operator/ITR. *(Validation by the RH VEE SME/OJT instructor(s) involved in the training of this individual).*	Spencer Pattee 1-19-12 RH VEE SME/OJT Instructor *(printed name and signature)* Date
	N/A RH VEE SME/OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of a RH VE Operator/ITR.	Irene Quintana 1/23/12 CCP Lead or Alternate RH SPM *(printed name and signature)* Date

Approved for Content & Format: **Wes Root (Approval on file)** — RH VEE SME/OJT — **10/5/11** Date

Approved for Content & Format: **Andrew Stallings (Approval on file)** — Cognizant Engineer — **10/5/11** Date

Approved for Content: **Irene Quintana (Approval on file)** — CCP Lead or Alternate RH SPM — **10/5/11** Date

Approved for Use: **AJ Fisher (Approval on file)** — CCP Manager Responsible for Training — **10/5/11** Date

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
for Remote-Handled (RH) Waste
Qualification Card

Name: Jeff Poole **Badge Number:** [redacted]

Email Address: [redacted]

Site: INL

List of Applicable Waste Streams ***(based on applicable Acceptable Knowledge Reports read):****

N A

RSD 1-19-12

**For use with Initial and Additional Sites (To be completed for each site the trainee is qualifying for)*

I have read the applicable Acceptable Knowledge Reports for this site. I understand my responsibilities regarding the waste streams listed above.

Jeffrey Poole J. Poole 1-19-12

Trainee *(Printed Name and Signature)* Date

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Central Characterization Project (CCP)
Effective Date: 09/18/2012

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Bret Parmer

Education/Experience

Resume documenting education and experience on file with Central Characterization Project (CCP) Training.	Cheryl Munyon 01-15-13 CCP Training — Date

Job Specific Training

☐ **Initial Qualification** ☑ **Requalification** ☐ **Full Requalification**

Qualification Limit	**This qualification is valid for two (2) years.** If necessary, additional training may be required by the CCP Site Project Manager (SPM) or the CCP Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the CCP Manager Responsible for Training. The candidate must successfully complete the entire CCP qualification card to reestablish qualification.
Requalification Requirements	Items required for requalification are identified by text.

Indoctrination

(Required at Initial Qualification and Full Requalification)

Initial/Indoctrination Reading:

1. DOE/WIPP 02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*
2. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
3. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
4. CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC)*
5. CCP-QP-002, *CCP Training and Qualification Plan*
6. CCP-QP-004, *CCP Corrective Action Management*
7. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
8. CCP-QP-006, *CCP Corrective Action Reporting and Control*
9. CCP-QP-008, *CCP Records Management*
10. CCP-QP-010, *CCP Document Preparation, Approval, and Control*
11. CCP-QP-016, *CCP Control of Measuring and Testing Equipment*
12. CCP-QP-023, *CCP Handling, Storage, and Shipping*
13. CCP-TP-163, *CCP Evaluation of Waste Packaging Records for Visual Examination of Records*
14. CCP-TP-500, *CCP Remote-Handled Waste Visual Examination*
15. CCP-TP-513, *CCP Procedure for Dimensional or Gravimetric Measurements for Radiological Characterization of Remote-Handled Transuranic Waste*

I have read the listed Initial/Indoctrination Reading and understand my responsibilities as applicable to the procedures above.	N/A Trainee — Date

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
for Remote-Handled (RH) Waste
Qualification Card

Name: Bret Parmer

Additional Training Requirements	
1. WAP/QAPjP Briefing and Test *(One-time Requirement)*	Cheryl Munoz / CCP Training — 01-15-13 / Date
2. CCP-VE-101, *Visual Examination (VE) TRU Waste Characterization Briefing (Always Required)*	Cheryl Munoz / CCP Training — 01-15-13 / Date
3. CCP VE Comprehensive Exam *(Always Required)*	Cheryl Munoz / CCP Training — 01-15-13 / Date

Formal Training	On-the-Job Training (OJT) Knowledge Requirements *(Required at Initial Qualification and Full Requalification)*	Visual Examination Expert (VEE) Subject Matter Expert (SME)/OJT Signature/Date
CCP-PO-001	1. List the VE Quality Assurance Objectives (QAOs) per the WAP.	
	2. List the VE Data Quality Objectives (DQOs) per the WAP.	
DOE/WIPP 02-3214	3. List the VE QAOs per the PIP.	
	4. List the VE DQOs per the PIP.	
CCP-QP-002	5. State the purpose of the List of Qualified Individuals (LOQI).	N/A
CCP-QP-005	6. State when a nonconformance report (NCR) should be prepared and who is responsible to initiate it.	BP 1-9-13
	7. Describe how nonconforming items are documented.	
	8. Describe how nonconforming items are controlled to prevent their use.	
	9. State who has the responsibility to validate the NCR once initiated.	
	10. Describe how to revise a NCR.	
	11. Describe how to void a NCR.	
CCP-QP-006	12. Describe the purpose of the corrective action report (CAR) process.	

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
for Remote-Handled (RH) Waste
Qualification Card

Name: Bret Parmer

	13. State the person responsible for originating a CAR.	
	14. Describe how corrective actions are documented.	
	15. State who has the responsibility to validate the CAR once initiated.	
	16. Describe actions CCP personnel may take when conditions adverse to quality are discovered.	
CCP-QP-008	17. List the responsibilities of record generators.	
	18. State the storage and control requirements for CCP records.	
	19. Explain the process and proper method to make corrections or revisions to CCP records.	
CCP-QP-010	20. State the importance of using approved documents.	
	21. State when to verify a document revision.	N A
CCP-QP-016	22. List the Measuring & Testing Equipment (M&TE) items used during VE.	
CCP-TP-500/ CCP-VE-101 Briefing	23. Explain the purpose of VE and the roles and responsibilities of the VE Operator.	1-9-13 CCP
	24. Identify who is responsible for overall direction and implementation of the VE of that facility.	
	25. Define the two phases of VE technique for remote-handled waste.	
	26. State the number of waste containers allowed per Batch Data Report (BDR).	
	27. Define "layers of confinement."	
	28. State the authorized methods to close a liner bag.	
	29. State the action to be taken if a condition adverse to quality arises.	
	30. State the waste material parameters (WMP).	
	31. Describe the information that should be recorded when describing waste items.	
	32. State five (5) examples of prohibited items.	

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
for Remote-Handled (RH) Waste
Qualification Card

Name: Bret Parmer

	33. Describe how a non-transparent container is handled when liquid is suspected.			
	34. State the acceptable liquid limits in a characterized container.			
	35. Explain the responsibilities and functions of the Independent Technical Review (ITR).			N A
	36. Define layers of confinement.			BDP 1-9-13
	37. Describe how to determine Volume Utilization Percentage (VUP).			
	38. State the allowable fill percent increments.			
Formal Training	**OJT Practical Requirements[1]** *(This section must be performed in the presence of a VEE) (Always Required)*			**VEE SME/OJT Signature/Date**
CCP-TP-500	1. Prepare the recording equipment. *(This activity is at the discretion of the SME instructor)*	P	(S)	T.S. Poole 1-9-13
	2. Complete CCP-TP-500 Attachment 1.	P	(S)	T.S. Poole 1-9-13
	3. Prepare a BDR.	P	(S)	T.S. Poole 1-9-13
	4. Determine the VUP.	P	(S)	T.S. Poole 1-9-13
	5. Complete an ITR.	P	(S)	T.S. Poole 1-9-13
	6. Determine Waste Material Parameter (WMP).	P	(S)	T.S. Poole 1-9-13
	7. Verify the physical form of the waste matches the waste stream ID.	P	(S)	T.S. Poole 1-9-13
CCP-TP-513	8. Perform a dimensional or gravimetric measurement and determine the measurement acceptability[2].	P	S	N/A

[1] For simulated steps that involve the recording of information, the steps can be satisfied by the trainee's ability to identify the specific location in the correct record form where actual data would be entered, and explain where the information would be obtained. All required calculations will actually be performed: for simulations, representative data will be used in lieu of actual data. Circle "P" if actually performed or "S" if requirement was simulated.

[2] Procedure CCP-TP-513 is not applicable at all sites. The OJT Practical Requirement for this procedure is only required if the procedure is invoked.

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Bret Parmer

Approvals	
I have completed formal training and received OJT for this position. I fully understand my responsibilities as a RH VE Operator/ITR.	J. Bret Parmer J. Bret Parmer 1-14-13 Trainee *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of a RH VE Operator/ITR. *(Validation by the RH VEE SME/OJT instructor(s) involved in the training of this individual).*	Jeffrey Rook J.S. Rook 1-15-13 RH VEE SME/OJT Instructor *(printed name and signature)* Date N/A RH VEE SME/OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of a RH VE Operator/ITR.	Lauren Nelson Lauren Nelson 1-15-13 CCP SPM *(printed name and signature)* Date

Approved for Content & Format: **Wes Root** *(Approval on File)* **09/18/2012**
SME/OJT Date

Approved for Applicability, Content & Format: **Andrew Stallings** *(Approval on File)* **09/18/2012**
Cognizant Engineer Date

Approved for Content: **Irene Quintana** *(Approval on File)* **09/18/2012**
CCP SPM Date

Approved for Applicability, Content, Format, & Use: **A.J. Fisher** *(Approval on File)* **09/18/2012**
CCP Manager Responsible for Training Date

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Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Spencer Troy Pattee	Badge Number: [redacted]
Email Address: [redacted]	

Job Specific Training	
☐ Initial Qualification	☒ Requalification
Qualification Limit	**This qualification is valid for two (2) years.** If necessary, additional training may be required by the CCP Lead Site Project Manager (SPM) or the CCP Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the CCP Manager responsible for Training. The candidate must successfully complete the entire CCP qualification card to reestablish qualification.
Requalification Requirements	Items required for requalification are identified by text.

Indoctrination

(Required at initial qualification, or in the event of requalification after disqualification only.)

Initial/Indoctrination Reading:

1. DOE/WIPP 02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*
2. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
3. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
4. CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*
5. CCP-QP-002, *CCP Training and Qualification Plan*
6. CCP-QP-004, *CCP Corrective Action Management*
7. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
8. CCP-QP-006, *CCP Corrective Action Reporting and Control*
9. CCP-QP-008, *CCP Records Management*
10. CCP-QP-010, *CCP Document Preparation Approval and Control*
11. CCP-QP-016, *CCP Control of Measuring, Testing, and Data Collection Equipment*
12. CCP-QP-023, *CCP Handling, Storage, and Shipping*
13. CCP-TP-163, *CCP Standard VE of Records*
14. CCP-TP-500, *CCP Remote-Handled Waste Visual Examination*
15. CCP-TP-513, *CCP Procedure for Radiological Documentation Package for Dimensional or Gravimetric Radiological Characterization for Remote-Handled Transuranic Waste*

I have read the listed initial/indoctrination reading and understand my responsibilities as applicable to the procedures above.	Spencer Pattee [signature] 7-18-11
	Trainee — Date

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
for Remote-Handled (RH) Waste
Qualification Card

Name: Spencer Troy Pattee	Badge Number: [redacted]
Email Address: [redacted]	

Additional Training Requirements		
1. WAP/QAPjP Briefing and Test. *(One-time requirement)* 8/25/10	Michele Billett 7/22/11 CCP Training Date	
2. Visual Examination (VE) TRU Waste Characterization Briefing for Contact-Handled (CH) & Remote-Handled (RH) Waste *(Required at each requalification)* 7/14/11	Michele Billett 7/22/11 CCP Training Date	
3. CCP RH VE Comprehensive Exam (score 80% or higher) administered by CCP Training. *(To be administered at each requalification.)*	Michele Billett 7/22/11 CCP Training Date	

Formal Training	On-the-Job Training (OJT) Knowledge Requirements *(Required at initial qualification or in the event of requalification after disqualification only.)*	Visual Examination Expert (VEE)/ Subject Matter Expert (SME) Signature/Date
CCP-PO-001	1. List the VE Quality Assurance Objectives (QAOs) per the WAP.	F. Wesley Root 7-18-11
	2. List the VE Data Quality Objectives (DQOs) per the WAP.	F. Wesley Root 7-18-11
DOE/WIPP 02-3214	3. List the VE QAOs per the PIP.	F. Wesley Root 7-18-11
	4. List the VE DQOs per the PIP.	F. Wesley Root 7-18-11
CCP-QP-002	5. State the purpose of the List of Qualified Individuals (LOQI).	F. Wesley Root 7-19-11
CCP-QP-005	6. State when a nonconformance report (NCR) should be prepared and who is responsible to initiate it.	F. Wesley Root 7-19-11
	7. Describe how nonconforming items are documented.	F. Wesley Root 7-19-11
	8. Describe how nonconforming items are controlled to prevent their use.	F. Wesley Root 7-19-11
	9. State who has the responsibility to validate the NCR once initiated.	F. Wesley Root 7-19-11
	10. Describe how to revise a NCR.	F. Wesley Root 7-19-11
	11. Describe how to void a NCR.	F. Wesley Root 7-19-11

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
for Remote-Handled (RH) Waste
Qualification Card

Name: Spencer Troy Pattee	Badge Number: [redacted]
Email Address: [redacted]	

CCP-QP-006	12. Describe the purpose of the corrective action report (CAR) process.	J. Wesley Root 7-19-11
	13. State the person responsible for originating a CAR.	J. Wesley Root 7-19-11
	14. Describe how corrective actions are documented.	J. Wesley Root 7-19-11
	15. State who has the responsibility to validate the CAR once initiated.	J. Wesley Root 7-19-11
	16. Describe actions CCP personnel may take when conditions adverse to quality are discovered.	J. Wesley Root 7-19-11
CCP-QP-008	17. List the responsibilities of record generators.	J. Wesley Root 7-19-11
	18. State the storage and control requirements for CCP records.	J. Wesley Root 7-19-11
	19. Explain the process and proper method to make corrections or revisions to CCP records.	J. Wesley Root 7-19-11
CCP-QP-010	20. State the importance of using approved documents.	J. Wesley Root 7-19-11
	21. State when to verify a document revision.	J. Wesley Root 7-19-11
CCP-QP-016	22. List the Measuring & Testing Equipment (M&TE) items used during VE.	J. Wesley Root 7-19-11
CCP-TP-500/ CCP-VE-101 Briefing	23. Explain the purpose of VE and the roles and responsibilities of the VE Operator.	J. Wesley Root 7-19-11
	24. Identify who is responsible for overall direction and implementation of the VE of that facility.	J. Wesley Root 7-19-11
	25. Define the two phases of VE technique for remote-handled waste.	J. Wesley Root 7-19-11
	26. State the number of waste containers allowed per Batch Data Report (BDR).	J. Wesley Root 7-19-11
	27. Define "layers of confinement."	J. Wesley Root 7-19-11
	28. State the authorized methods to close a liner bag.	J. Wesley Root 7-19-11
	29. State the action to be taken if a condition adverse to quality arises.	J. Wesley Root 7-19-11
	30. State the waste material parameters (WMP).	J. Wesley Root 7-19-11

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
for Remote-Handled (RH) Waste
Qualification Card

Name: Spencer Troy Pattee	Badge Number: [redacted]
Email Address: [redacted]	

	31. Describe the information that should be recorded when describing waste items.			T. Wesley Root 7-18-11
	32. State five (5) examples of prohibited items.			T. Wesley Root 7-18-11
	33. Describe how a non-transparent container is handled when liquid is suspected.			T. Wesley Root 7-19-11
	34. State the acceptable liquid limits in a characterized container.			T. Wesley Root 7-19-11
	35. Explain the responsibilities and functions of the Independent Technical Review (ITR).			T. Wesley Root 7-19-11
	36. Define layers of confinement.			T. Wesley Root 7-18-11
	37. Describe how to determine Volume Utilization Percentage (VUP).			T. Wesley Root 7-18-11
	38. State the allowable fill percent increments.			T. Wesley Root 7-18-11
Formal Training	**OJT Practical Requirements[1]** *(This section must be performed in the presence of a VEE for initial and requalification)*			**VEE/SME Signature/Date**
CCP-TP-500	1. Prepare the recording equipment. *(This activity is at the discretion of the SME instructor.)*	P	(S)	T. Wesley Root 7-18-11
	2. Complete CCP-TP-500 Attachment 1.	(P)	S	T. Wesley Root 7-18-11
	3. Prepare a BDR.	(P)	S	T. Wesley Root 7-21-11
	4. Determine the VUP.	(P)	S	T. Wesley Root 7-18-11
	5. Complete an ITR.	(P)	S	T. Wesley Root 7-19-11
	6. Determine Waste Material Parameter (WMP).	(P)	S	T. Wesley Root 7-18-11
	7. Verify the physical form of the waste matches the waste stream ID.	(P)	S	T. Wesley Root 7-18-11
CCP-TP-513	8. Perform a dimensional or gravimetric measurement and determine the measurement acceptability[2].	(P)	S	T. Wesley Root 7-18-11

[1] Actual performance of this requirement may not be possible at the time of qualification. Simulation of this requirement is acceptable where the option is given on the qualification card. Circle "P" if actually performed or "S" if requirement was simulated.
[2] Procedure CCP-TP-513 is not applicable at all sites. The OJT Practical Requirement for this procedure is only required if the procedure is invoked.

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
for Remote-Handled (RH) Waste
Qualification Card

Name: Spencer Troy Pattee	**Badge Number:** [redacted]
Email Address: [redacted]	

Approvals	
I have completed formal training and received on-the-job training for this position. I fully understand my responsibilities as a RH VE Operator/ITR.	Spencer Pattee 7-21-11 Trainee *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of a RH VE Operator/ITR. *(Validation by the RH VEE SME/OJT instructor(s) involved in the training of this individual)*	F. Wesley Root F. Wesley Root 7-21-11 RH VEE SME/OJT Instructor *(printed name and signature)* Date
	N/A RH VEE SME/OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of a RH VE Operator/ITR.	Mark Pearcy Mark Pearcy 7/22/11 CCP Lead or Alternate RH SPM *(printed name and signature)* Date

Approved for Content & Format: **Wes Root (Approval on File)** **12-13-2010**
RH VEE Subject Matter Expert *(printed name and signature)* Date

Approved for Content & Format: **Larry Porter (Approval on File)** **12-13-2010**
Cognizant Engineer *(printed name and signature)* Date

Approved for Content: **Irene Quintana (Approval on File)** **12-13-2010**
CCP Lead or Alternate RH SPM *(printed name and signature)* Date

Approved for Use: **A.J. Fisher (Approval on File)** **12-13-2010**
CCP Manager Responsible for Training *(printed name and signature)* Date

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
for Remote-Handled (RH) Waste
Qualification Card

Name: Spencer Troy Pattee	Badge Number: [redacted]
Email Address: [redacted]	

Site: Argonne National Laboratory (ANL-E)

Acceptable Knowledge Briefings Received *(Listed by Waste Stream)*:*	
WR 7-21-11	

*For use with Initial and Additional Sites (To be completed for each site the trainee is qualifying for).

I have received and understand the listed AK Briefings: Spencer Pattee [signature] 7-21-11

Trainee *(Printed Name and Signature)* Date

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
for Remote-Handled (RH) Waste
Qualification Card

Name: Spencer Troy Pattee	**Badge Number:** [redacted]
Email Address: [redacted]	

Site: INL

Acceptable Knowledge Briefings Received ***(Listed by Waste Stream)*****:***	
N	
A	
	Sp
	6-14-11

**For use with Initial and Additional Sites (To be completed for each site the trainee is qualifying for).*

I have received and understand the listed AK Briefings: Spencer Pattee Spencer Pattee 6-14-11

Trainee *(Printed Name and Signature)* Date

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
for Remote-Handled (RH) Waste
Qualification Card

Name: Spencer Pattee	**Badge Number:** [redacted]
Email Address: [redacted]	

Site: SANDIA National Lab

Acceptable Knowledge Briefings Received *(Listed by Waste Stream)*:*	
N	
A	
	SP
	7-12-11

**For use with Initial and Additional Sites (To be completed for each site the trainee is qualifying for).*

I have received and understand the listed AK Briefings: Spencer Pattee — 7-12-11

Trainee *(Printed Name and Signature)* — Date

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
for Remote-Handled (RH) Waste
Qualification Card

Name: Spencer Pattee	**Badge Number:** [redacted]
Email Address: [redacted]	

Site: ANLE

Acceptable Knowledge Briefings Received *(Listed by Waste Stream):**	

For use with Initial and Additional Sites (To be completed for each site the trainee is qualifying for).

I have received and understand the listed AK Briefings: Spencer Pattee [signature] 7-12-11
Trainee *(Printed Name and Signature)* Date

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Central Characterization Project
Effective Date: 11/30/11

Headspace Gas (HSG)
Operator/Independent Technical Reviewer (ITR)
Qualification Card

Name: Jeri Miles | **Badge Number:** [redacted]

Email Address: [redacted]

Education/Experience

CCP-QP-002 does not identify any education/experience requirements for the position. A resume is on file with Central Characterization Project (CCP) Training.	CCP Training — Date: 12/1/11

Job Specific Training

☑ Initial Qualification ☐ Requalification

Qualification Limit	**This qualification is valid for two (2) years.** If necessary, additional training may be required by the CCP Lead Site Project Manager (SPM) or the CCP Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the CCP Manager responsible for Training. The candidate must successfully complete the entire CCP qualification card to reestablish qualification.
Requalification Requirements	Items required for requalification are identified by text.

Indoctrination

(Required at initial qualification, or in the event of requalification after disqualification only)

Initial/Indoctrination Reading:

1. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
2. CCP-QP-002, *CCP Training and Qualification Plan*
3. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
4. CCP-QP-006, *CCP Corrective Action Reporting and Control*
5. CCP-QP-008, *CCP Records Management*
6. CCP-QP-010, *CCP Document Preparation, Approval and Control*
7. CCP-QP-016, *CCP Control of Measuring, Testing and Equipment*
8. CCP-QP-023, *CCP Handling, Storage and Shipping*
9. CCP-TP-093, *CCP Sampling of TRU Waste Containers*
10. CCP-TP-106, *CCP Headspace Gas Sampling Batch Data Report Preparation*

I have read the listed initial/indoctrination reading and understand my responsibilities as applicable to the procedures above.

Trainee Signature: Jeri Miles — Date: 12/1/2011

Headspace Gas (HSG)
Operator/Independent Technical Reviewer (ITR)
Qualification Card

Name: Jeri Miles	Badge Number: [redacted]
Email Address: [redacted]	

Additional Training Requirements		
1. WAP/QAPjP Briefing and Test. *(One-time requirement)*	CCP Training	12/1/11 Date

Formal Training	On-the-Job Training (OJT) Knowledge Requirements *(Required at initial qualification, or in the event of requalification after disqualification only)*	Subject Matter Expert (SME)/OJT Signature/Date
CCP-PO-001	1. List the Quality Assurance objectives validated by HSG.	Eddy R Walt 12-1-11
CCP-QP-002	2. State the purpose of the List of Qualified Individuals (LOQI).	Eddy R Walt 12-1-11
CCP-QP-005	3. State when a nonconformance report (NCR) should be prepared and who is responsible to initiate it.	Eddy R Walt 12-1-11 ~~12-1-11~~ 12-1-11
	4. Describe how nonconforming items are documented.	Eddy R Walt 12-1-11
	5. Describe how nonconforming items are controlled to prevent their use.	Eddy R Walt 12-1-11
	6. State who has the responsibility to validate the NCR once initiated.	Eddy R Walt 12-1-11
CCP-QP-006	7. Describe the purpose of the corrective action report (CAR) process.	Eddy R Walt 12-1-11
	8. State who has the responsibility for originating a CAR.	Eddy R Walt 12-1-11
	9. Describe how corrective actions are documented.	Eddy R Walt 12-1-11
	10. State who has the responsibility to validate the CAR once initiated.	Eddy R Walt 12-1-11
	11. Describe actions CCP personnel may take when conditions adverse to quality are discovered.	Eddy R Walt 12-1-11
CCP-QP-008	12. List the responsibilities of record generators.	Eddy R Walt 12-1-11

Headspace Gas (HSG)
Operator/Independent Technical Reviewer (ITR)
Qualification Card

Name: Jeri Miles **Badge Number:** [redacted]

Email Address: [redacted]

	13. State the storage and control requirements for CCP records.	Eddy R Walt 12-1-11
	14. Explain the process and proper method to make corrections or revisions to CCP Records.	Eddy R Walt 12-1-11
CCP-QP-010	15. State the importance of using approved documents.	Eddy R Walt 12-1-11
	16. State when to verify a document revision.	Eddy R Walt 12-1-11
CCP-QP-016	17. List the Measuring & Testing Equipment (M&TE) items that are used during headspace gas (HSG) sampling operations.	Eddy R Walt 12-1-11
CCP-TP-093	18. Describe where the field blank samples should be collected.	Eddy R Walt 12-1-11
	19. Explain the possible hazards associated with the sampling process.	Eddy R Walt 12-1-11
	20. Describe how to verify the drum age criteria (DAC).	Eddy R Walt 12-1-11
	21. State the required time and temperature to ensure the waste containers have equilibrated.	Eddy R Walt 12-1-11
	22. State the number of components in a single unit needle assembly.	Eddy R Walt 12-1-11
	23. State the number of components of a duplicate unit needle assembly.	Eddy R Walt 12-1-11
	24. Explain the need for a cleanliness certification for the needle assembly.	Eddy R Walt 12-1-11
	25. Explain how to perform a leak check of the needle assembly and why it is necessary.	Eddy R Walt 12-1-11
	26. State the evacuation requirements of the sample canisters and what is done if requirements aren't met.	Eddy R Walt 12-1-11
	27. State the actions taken if a needle assembly does not have a filter gasket.	Eddy R Walt 12-1-11
	28. Explain how to prevent damage to the needle and needle assembly while performing sampling activities.	Eddy R Walt 12-1-11

Headspace Gas (HSG)
Operator/Independent Technical Reviewer (ITR)
Qualification Card

Name: Jeri Miles	Badge Number: [redacted]
Email Address: [redacted]	

CCP-TP-106	29. State the initial and final pressure requirements for SUMMA canisters when sampling.	Eddy R Walt 12-1-11
	30. State the maximum time allowed for canisters to reach equilibrium when sampling.	Eddy R Walt 12-1-11
	31. Explain the actions taken if the canister pressure does not reach equilibrium.	Eddy R Walt 12-1-11
	32. State when a field reference sample (FRS) is collected.	Eddy R Walt 12-1-11
	33. Explain the proper disposition of used needle assemblies.	Eddy R Walt 12-1-11
	34. Explain the need for a chain of custody and tamper indication device (TID).	Eddy R Walt 12-1-11
	35. Define Independent Technical Reviewer (ITR) and its purpose.	Eddy R Walt 12-1-11
	36. Describe your involvement in data generation level non-conformance reports (NCRs) according to CCP-QP-005.	Eddy R Walt 12-1-11
Formal Training	**OJT Practical Requirements** *(Required at initial qualification and at requalification)*	**SME/OJT Signature/Date**
CCP-TP-093	1. Perform pre-requisite actions.	Eddy R Walt 12-1-11
	2. Verify presence of acceptable waste container filter or port.	Eddy R Walt 12-1-11
	3. Verify waste container has been vented properly.	Eddy R Walt 12-1-11
	4. Record waste container data on Attachment 2.	Eddy R Walt 12-1-11
	5. Assemble single unit needle.	Eddy R Walt 12-1-11
	6. Assemble duplicate unit needle.	Eddy R Walt 12-1-11

Headspace Gas (HSG)
Operator/Independent Technical Reviewer (ITR)
Qualification Card

Name: Jeri Miles	Badge Number: [redacted]
Email Address: [redacted]	

CCP-TP-106	7. Prepare canister/needle assembly for cleanliness certification.	Eddy R Walt 12-1-11
	8. Record needle assembly information on Attachment 1.	Eddy R Walt 12-1-11
	9. Perform leak check of needle assembly.	Eddy R Walt 12-1-11
	10. Perform needle assembly cleanliness certification sample (equipment blank).	Eddy R Walt 12-1-11
	11. Attach needle assembly to canister.	Eddy R Walt 12-1-11
	12. Collect equipment blank sample.	Eddy R Walt 12-1-11
	13. Collect field blank sample.	Eddy R Walt 12-1-11
	14. Collect gas sample from waste container.	Eddy R Walt 12-1-11
	15. Collect duplicate gas sample from waste container.	Eddy R Walt 12-1-11
	16. Complete Attachment 1.	Eddy R Walt 12-1-11
	17. Perform packaging of canisters for transport.	Eddy R Walt 12-1-11
	18. Assemble batch data report (BDR).	Eddy R Walt 12-1-11
	19. Perform ITR.	Eddy R Walt 12-1-11

Headspace Gas (HSG) Operator/Independent Technical Reviewer (ITR) Qualification Card

Name: Jeri Miles	**Badge Number:** [redacted]
Email Address: [redacted]	

Approvals		
I have completed formal training and received OJT for this position. I fully understand my responsibilities as an HSG Operator/ITR.	Jeri Miles Jeri Miles Trainee *(printed name and signature)*	12/1/2011 Date
I have monitored the training of this individual and believe they are ready to perform the duties of an HSG Operator/ITR. *(Validation by the SME/OJT instructor(s) involved in the training of this individual).*	Eddie Walters Eddie Walters SME/OJT Instructor *(printed name and signature)*	12-1-11 Date
	N/A SME/OJT Instructor *(printed name and signature)*	Date
I approve this employee to perform the duties of an HSG Operator/ITR.	Barbara Broomfield CCP Lead or Alternate SPM *(printed name and signature)*	12/01/11 Date

Approved for Content & Format: **Joe Poirier (Approval on file)** — HSG SME — **11/30/11** Date

Approved for Content & Format: **Charlie Turner (Approval on file)** — Cognizant Engineer — **11/30/11** Date

Approved for Content: **Charlie Turner (Approval on file)** — CCP Lead or Alternate SPM — **11/30/11** Date

Approved for Use: **AJ Fisher (Approval on file)** — CCP Manager Responsible for Training — **11/30/11** Date

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Headspace Gas (HSG) Operator/Independent Technical Reviewer (ITR) Qualification Card

Name: Spencer Pattee	Badge Number: [redacted]
Email Address: [redacted]	

Education/Experience	
Resume documenting education and experience on file with Central Characterization Project (CCP) Training.	11/4/10 CCP Training — Date

Job Specific Training

☒ Initial Qualification ☐ Requalification

Qualification Limit	**This qualification is valid for two (2) years.** If necessary, additional training may be required by the CCP Lead Site Project Manager (SPM) or the CCP Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the CCP Manager responsible for Training. The candidate must successfully complete the entire CCP qualification card to reestablish qualification.
Requalification Requirements	The On-the-Job Training (OJT) Knowledge Requirements do not need to be completed for requalification.

Indoctrination

(Required at initial qualification, or in the event of requalification after disqualification only)

Initial/Indoctrination Reading:

1. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
2. CCP-QP-002, *CCP Training and Qualification Plan*
3. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
4. CCP-QP-006, *CCP Corrective Action Reporting and Control*
5. CCP-QP-008, *CCP Records Management*
6. CCP-QP-010, *CCP Document Preparation, Approval and Control*
7. CCP-QP-016, *CCP Control of Measuring, Testing and Equipment*
8. CCP-QP-022, *CCP TRU Software Quality Assurance*
9. CCP-QP-023, *CCP Handling, Storage and Shipping*
10. CCP-TP-093, *CCP Sampling of TRU Waste Containers*
11. CCP-TP-106, *CCP Headspace Gas Sampling Batch Data Report Preparation*

I have read the listed initial/indoctrination reading and understand my responsibilities as applicable to the procedures above.	10/18/10 Trainee Signature — Date

Headspace Gas (HSG)
Operator/Independent Technical Reviewer (ITR)
Qualification Card

Name: Spencer Pattee | **Badge Number:** [redacted]

Email Address: [redacted]

Additional Training Requirements

1. WAP/QAPjP Briefing and Test. *(One-time requirement)*	[signature]	11/4/10
	CCP Training	Date

Formal Training	OJT Knowledge Requirements *(Required at initial qualification, or in the event of requalification after disqualification only.)*	Subject Matter Expert (SME) Signature/Date
CCP-PO-001	1. List the Quality Assurance objectives validated by HSG.	[signature] 10/9/10
CCP-QP-002	2. State the purpose of the List of Qualified Individuals (LOQI).	[signature] 10/9/10
CCP-QP-005	3. State when a nonconformance report (NCR) should be prepared and who is responsible to initiate it.	[signature] 10/9/10
	4. Describe how nonconforming items are documented.	[signature] 10/9/10
	5. Describe how nonconforming items are controlled to prevent their use.	[signature] 10/9/10
	6. State who has the responsibility to validate the NCR once initiated.	[signature] 10/9/10
CCP-QP-006	7. Describe the purpose of the corrective action report (CAR) process.	[signature] 10/9/10
	8. State who has the responsibility for originating a CAR.	[signature] 10/9/10
	9. Describe how corrective actions are documented.	[signature] 10/9/10
	10. State who has the responsibility to validate the CAR once initiated.	[signature] 10/9/10
	11. Describe actions CCP personnel may take when conditions adverse to quality are discovered.	[signature] 10/9/10
CCP-QP-008	12. List the responsibilities of record generators.	[signature] 10/9/10

Headspace Gas (HSG)
Operator/Independent Technical Reviewer (ITR)
Qualification Card

Name: Spencer Pattee **Badge Number:** [redacted]

Email Address: [redacted]

	13. State the storage and control requirements for CCP records.	101910
	14. Explain the process and proper method to make corrections or revisions to CCP Records.	101910
CCP-QP-010	15. State the importance of using approved documents.	101910
	16. State when to verify a document revision.	101910
CCP-QP-016	17. List the Measuring & Testing Equipment (M&TE) items that are used during headspace gas (HSG) sampling operations.	101910
CCP-QP-022	18. Describe the process for making changes to equipment computer software.	101910
CCP-TP-093	19. Describe where the field blank samples should be collected.	101910
	20. Explain the possible hazards associated with the sampling process.	102010
	21. Describe how to verify the drum age criteria (DAC).	102010
	22. State the required time and temperature to ensure the waste containers have equilibrated.	102010
	23. State the number of components in a single unit needle assembly.	102010
	24. State the number of components of a duplicate unit needle assembly.	102010
	25. Explain the need for a cleanliness certification for the needle assembly.	102010
	26. Explain how to perform a leak check of the needle assembly and why it is necessary.	102010
	27. State the evacuation requirements of the sample canisters and what is done if requirements aren't met.	102010
	28. State the actions taken if a needle assembly does not have a filter gasket.	102010

Headspace Gas (HSG)
Operator/Independent Technical Reviewer (ITR)
Qualification Card

Name: Spencer Pattee	Badge Number: [redacted]
Email Address: [redacted]	

CCP-TP-106	29. Explain how to prevent damage to the needle and needle assembly while performing sampling activities.	102010
	30. State the initial and final pressure requirements for SUMMA canisters when sampling.	102010
	31. State the maximum time allowed for canisters to reach equilibrium when sampling.	102010
	32. Explain the actions taken if the canister pressure does not reach equilibrium.	102010
	33. State when a field reference sample (FRS) is collected.	102010
	34. Explain the proper disposition of used needle assemblies.	102010
	35. Explain the need for a chain of custody and tamper indication device (TID).	102010
	36. Define Independent Technical Reviewer (ITR) and its purpose.	102010
	37. Describe your involvement in data generation level non-conformance reports (NCRs) according to CCP-QP-005.	102010
Formal Training	**OJT Practical Requirements** *(Required at initial qualification and at requalification)*	**SME Signature/Date**
CCP-TP-093	1. Perform pre-requisite actions.	102110
	2. Verify presence of acceptable waste container filter or port.	102110
	3. Verify waste container has been vented properly.	102110
	4. Record waste container data on Attachment 2.	102110
	5. Assemble single unit needle.	102110

Headspace Gas (HSG)
Operator/Independent Technical Reviewer (ITR)
Qualification Card

Name: Spencer Pattee	Badge Number: [redacted]
Email Address: [redacted]	

CCP-TP-106	6. Assemble duplicate unit needle.	10/2/10
	7. Prepare canister/needle assembly for cleanliness certification.	10/2/10
	8. Record needle assembly information on Attachment 1.	10/2/10
	9. Perform leak check of needle assembly.	10/2/10
	10. Perform needle assembly cleanliness certification sample (equipment blank).	10/2/10
	11. Attach needle assembly to canister.	10/2/10
	12. Collect equipment blank sample.	10/2/10
	13. Collect field blank sample.	10/2/10
	14. Collect field reference sample.	10/2/10
	15. Collect gas sample from waste container.	10/2/10
	16. Collect duplicate gas sample from waste container.	10/2/10
	17. Complete Attachment 1.	10/2/10
	18. Perform packaging of canisters for transport.	10/2/10
	19. Assemble batch data report (BDR).	10/2/10
	20. Perform ITR.	10/2/10

Headspace Gas (HSG) Operator/Independent Technical Reviewer (ITR) Qualification Card

Name: Spencer Pattee	Badge Number: [redacted]
Email Address: [redacted]	

Approvals	
I have completed formal training and received on-the-job training for this position. I fully understand my responsibilities as an HSG Operator/ITR.	Spencer Pattee 11/04/10 Trainee *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of an HSG Operator/ITR. *(Validation by the SME/OJT instructor(s) involved in the training of this individual).*	11/04/10 SME/OJT Instructor *(printed name and signature)* Date
	N/A SME/OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of an HSG Operator/ITR.	11/4/10 CCP Lead or Alternate SPM *(printed name and signature)* Date

Approved for Content & Format: **Approval on file** **6/17/2010**
HSG SME *(printed name and signature)* Date

Approved for Content & Format: **Approval on file** **6/17/2010**
Cognizant Engineer *(printed name and signature)* Date

Approved for Content: **Approval on file** **6/17/2010**
CCP Lead or Alternate SPM *(printed name and signature)* Date

Approved for Use: **Approval on file** **6/17/2010**
CCP Manager Responsible for Training *(printed name and signature)* Date

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National TRU Program Certification
Effective Date: 04/29/2013

Acceptable Knowledge Expert (AKE) Qualification Card

Name: David Ams

Education / Experience	
Resume documenting education and experience on file with National TRU Program Certification (NTPC) Training.	Cheryl Ahmad 04-30-13 NTPC Training — Date

Job Specific Training	
Qualification Limit	There is no qualification time limit for this position. It is a one-time only requirement. Upon completion of this qualification card, the Trainee is qualified to perform all Acceptable Knowledge Expert (AKE) duties, including the development of acceptable knowledge reports. If necessary, additional training may be required by the Site Project Manager (SPM) or the Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the Manager Responsible for Training. The candidate must successfully complete the entire qualification card to re-establish qualification.
Requalification Requirements	Not required. See above statement.

Indoctrination	
WAP/QAPjP Briefing & Exam	Cheryl Ahmad 04-30-13 NTPC Training — Date

Initial/Indoctrination Reading:

1. NM4890139088, *Waste Isolation Pilot Plant Hazardous Waste Facility Permit*
2. DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant*
3. DOE/WIPP 02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*
4. DOE/CBFO-94-1012, *U.S. Department of Energy Carlsbad Field Office Quality Assurance Program Document*
5. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
6. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
7. CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)*
8. CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC)*
9. CCP-QP-002, *CCP Training and Qualification Plan*
10. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
11. CCP-QP-008, *CCP Records Management*
12. CCP-QP-010, *CCP Document Preparation, Approval, and Control*
13. CCP-QP-029, *CCP Corrective Action Management*
14. CCP-QP-036, *CCP Qualification of Acceptable Knowledge for Remote-Handled Transuranic Waste Through a Quality Assurance Equivalency Demonstration*
15. CCP-TP-001, *CCP Project Level Data Validation and Verification*

Acceptable Knowledge Expert (AKE) Qualification Card

Name: David Ams

16. CCP-TP-002, *CCP Reconciliation of DQOs and Reporting Characterization Data*
17. CCP-TP-005, *CCP Acceptable Knowledge Documentation*
18. CCP-TP-506, *CCP Preparation of the Remote-Handled Transuranic Waste Acceptable Knowledge Characterization Reconciliation Report*

I have read the listed Initial/Indoctrination Reading and understand my responsibilities as applicable to the procedures above.	Trainee Signature — Date: 4-29-13

Formal Training Requirements	
RCRA Training Documentation	NTPC Training — Date: 04-30-13

Approvals	
I have completed formal training and received OJT for this position. I fully understand my responsibilities as an AKE.	Trainee *(printed name and signature)*: David Ams — Date: 4-29-13
This individual has shown proficiency in the implementation of the requirements for the preparation of Acceptable Knowledge Summary Reports as required by CCP-TP-005.	Cognizant Engineer *(printed name and signature)*: Lisa Watson — Date: 4-29-13
I approve this employee to perform the duties of an AKE.	SPM *(printed name and signature)*: Richard Kantrowitz — Date: 4/30/13

Approved for Applicability, Content & Format: **Trey Greenwood *(Approval on File)*** — Cognizant Engineer — **04/29/2013** Date

Approved for Content: **Richard Kantrowitz *(Approval on File)*** — SPM — **04/29/2013** Date

Approved for Applicability, Content, Format, & Use: **A.J. Fisher *(Approval on File)*** — Manager Responsible for Training — **04/29/2013** Date

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Acceptable Knowledge Expert (AKE) Qualification Card

Name: Travis Smith	Badge Number: [redacted]
Email Address: [redacted]	

Education / Experience	
Resume documenting education and experience on file with Central Characterization Project (CCP) Training.	Michele Billett 6/9/11 CCP Training Date

Job Specific Training	
Qualification Limit	There is no qualification time limit for this position. It is a one-time only requirement. Upon completion of this qualification card, the Trainee is qualified to perform all Acceptable Knowledge Expert duties, including the development of acceptable knowledge reports. If necessary, additional training may be required by the CCP Lead Site Project Manager (SPM) or the CCP Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the CCP Manager Responsible for Training. The candidate must successfully complete the entire CCP qualification card to re-establish qualification.
Requalification Requirements	Not required. See above statement.

Indoctrination	
WAP/QAPjP Briefing and Test.	Michele Billett 6/9/11 CCP Training Date

Initial/Indoctrination Reading:

1. NM4890139088, *Waste Isolation Pilot Plant Hazardous Waste Facility Permit*
2. DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant*
3. DOE/WIPP 02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*
4. DOE/CBFO-94-1012, *U.S. Department of Energy Carlsbad Field Office Quality Assurance Program Document*
5. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
6. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
7. CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)*
8. CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC)*
9. CCP-QP-004, *CCP Corrective Action Management*
10. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
11. CCP-QP-006, *CCP Corrective Action Reporting and Control*
12. CCP-QP-008, *CCP Records Management*
13. CCP-QP-036, *CCP Qualification of Acceptable Knowledge for Remote-Handled Transuranic Waste Through a Quality Assurance Equivalency Demonstration*

Acceptable Knowledge Expert (AKE) Qualification Card

Name: Travis Smith	**Badge Number:** [redacted]
Email Address: [redacted]	

	14. CCP-TP-001, *CCP Project Level Data Validation and Verification* 15. CCP-TP-002, *CCP Reconciliation of DQOs and Reporting Characterization Data* 16. CCP-TP-005, *CCP Acceptable Knowledge Documentation* 17. CCP-TP-506, *CCP Preparation of the Remote-Handled Transuranic Waste Acceptable Knowledge Characterization Reconciliation Report*
I have read the listed initial/indoctrination reading and understand my responsibilities as applicable to the procedures above.	Trainee Signature 6/8/2011 Date

Formal Training Requirements	
RCRA Training Documentation	Michele Billett 6/9/11 CCP Training Date

Approvals	
I have completed formal training and received on-the-job training for this position. I fully understand my responsibilities as an AKE.	TRAVIS SMITH 6/8/2011 Trainee *(printed name and signature)* Date
This individual has shown proficiency in the implementation of the requirements for the preparation of Acceptable Knowledge Summary Reports as required by CCP-TP-005.	6/16/11 AK Cognizant Manager *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of an AKE. I approve this employee to perform the duties of an AKE.	LAURA NELSON 6-16-11 CCP Site Project Manager *(printed name and signature)* Date

Approved for Content & Format: **Trey Greenwood (Approval on File)** **06/08/2011**
Cognizant Engineer Date

Approved for Content: **Richard Kantrowitz (Approval on File)** **06/08/2011**
CCP Lead or Alternate SPM Date

Approved for Use: **A.J. Fisher (Approval on File)** **06/08/2011**
CCP Manager Responsible for Training Date

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Acceptable Knowledge Expert (AKE) Qualification Card

Name: Scott Smith	Badge Number: [redacted]
Email Address: [redacted]	

Education / Experience	
Resume documenting education and experience on file with Central Characterization Project (CCP) Training.	Michele Billett 6/9/11 CCP Training Date

Job Specific Training	
Qualification Limit	There is no qualification time limit for this position. It is a one-time only requirement. Upon completion of this qualification card, the Trainee is qualified to perform all Acceptable Knowledge Expert duties, including the development of acceptable knowledge reports. If necessary, additional training may be required by the CCP Lead Site Project Manager (SPM) or the CCP Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the CCP Manager Responsible for Training. The candidate must successfully complete the entire CCP qualification card to re-establish qualification.
Requalification Requirements	Not required. See above statement.

Indoctrination	
WAP/QAPjP Briefing and Test.	Michele Billett 6/9/11 CCP Training Date

Initial/Indoctrination Reading:

1. NM4890139088, *Waste Isolation Pilot Plant Hazardous Waste Facility Permit*
2. DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant*
3. DOE/WIPP 02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*
4. DOE/CBFO-94-1012, *U.S. Department of Energy Carlsbad Field Office Quality Assurance Program Document*
5. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
6. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
7. CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)*
8. CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC)*
9. CCP-QP-004, *CCP Corrective Action Management*
10. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
11. CCP-QP-006, *CCP Corrective Action Reporting and Control*
12. CCP-QP-008, *CCP Records Management*
13. CCP-QP-036, *CCP Qualification of Acceptable Knowledge for Remote-Handled Transuranic Waste Through a Quality Assurance Equivalency Demonstration*

Acceptable Knowledge Expert (AKE) Qualification Card

Name: Scott Smith	Badge Number: [redacted]
Email Address: [redacted]	

	14. CCP-TP-001, *CCP Project Level Data Validation and Verification* 15. CCP-TP-002, *CCP Reconciliation of DQOs and Reporting Characterization Data* 16. CCP-TP-005, *CCP Acceptable Knowledge Documentation* 17. CCP-TP-506, *CCP Preparation of the Remote-Handled Transuranic Waste Acceptable Knowledge Characterization Reconciliation Report*
I have read the listed initial/indoctrination reading and understand my responsibilities as applicable to the procedures above.	Trainee Signature — Date: 6/9/2011

Formal Training Requirements	
RCRA Training Documentation	CCP Training — Michele Billett — Date: 6/16/11

Approvals	
I have completed formal training and received on-the-job training for this position. I fully understand my responsibilities as an AKE.	Trainee *(printed name and signature)* — Scott Smith — Date: 6/9/2011
This individual has shown proficiency in the implementation of the requirements for the preparation of Acceptable Knowledge Summary Reports as required by CCP-TP-005.	AK Cognizant Manager *(printed name and signature)* — Trey Greenwood — Date: 6/21/2011
I have monitored the training of this individual and believe they are ready to perform the duties of an AKE. I approve this employee to perform the duties of an AKE.	CCP Site Project Manager *(printed name and signature)* — LAURA NELSON — Date: 6/22/2011

Approved for Content & Format: **Trey Greenwood (Approval on File)** — **06/08/2011**
Cognizant Engineer — Date

Approved for Content: **Richard Kantrowitz (Approval on File)** — **06/08/2011**
CCP Lead or Alternate SPM — Date

Approved for Use: **A.J. Fisher (Approval on File)** — **06/08/2011**
CCP Manager Responsible for Training — Date

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Central Characterization Project Effective Date: 06/08/2011	AKE-01, Rev. 7 Page 1 of 2

Acceptable Knowledge Expert (AKE)
Qualification Card

Name: Lisa Price-Watson	**Badge Number:** [redacted]
Email Address: [redacted]	

Education / Experience	
Resume documenting education and experience on file with Central Characterization Project (CCP) Training.	Michele Billett 6/9/11 CCP Training — Date

Job Specific Training	
Qualification Limit	There is no qualification time limit for this position. It is a one-time only requirement. Upon completion of this qualification card, the Trainee is qualified to perform all Acceptable Knowledge Expert duties, including the development of acceptable knowledge reports. If necessary, additional training may be required by the CCP Lead Site Project Manager (SPM) or the CCP Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the CCP Manager Responsible for Training. The candidate must successfully complete the entire CCP qualification card to re-establish qualification.
Requalification Requirements	Not required. See above statement.

Indoctrination	
WAP/QAPjP Briefing and Test. 11/15/02	Michele Billett 6/9/11 CCP Training — Date

Initial/Indoctrination Reading:

1. NM4890139088, *Waste Isolation Pilot Plant Hazardous Waste Facility Permit*
2. DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant*
3. DOE/WIPP 02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*
4. DOE/CBFO-94-1012, *U.S. Department of Energy Carlsbad Field Office Quality Assurance Program Document*
5. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
6. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
7. CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)*
8. CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC)*
9. CCP-QP-004, *CCP Corrective Action Management*
10. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
11. CCP-QP-006, *CCP Corrective Action Reporting and Control*
12. CCP-QP-008, *CCP Records Management*
13. CCP-QP-036, *CCP Qualification of Acceptable Knowledge for Remote-Handled Transuranic Waste Through a Quality Assurance Equivalency Demonstration*

Acceptable Knowledge Expert (AKE) Qualification Card

Name: Lisa Price-Watson	**Badge Number:** [redacted]
Email Address: [redacted]	

	14. CCP-TP-001, *CCP Project Level Data Validation and Verification* 15. CCP-TP-002, *CCP Reconciliation of DQOs and Reporting Characterization Data* 16. CCP-TP-005, *CCP Acceptable Knowledge Documentation* 17. CCP-TP-506, *CCP Preparation of the Remote-Handled Transuranic Waste Acceptable Knowledge Characterization Reconciliation Report*
I have read the listed initial/indoctrination reading and understand my responsibilities as applicable to the procedures above.	Lisa Watson 6-8-11 Trainee Signature Date

Formal Training Requirements	
RCRA Training Documentation	Michele Billett 6/9/11 CCP Training Date

Approvals	
I have completed formal training and received on-the-job training for this position. I fully understand my responsibilities as an AKE.	Lisa Watson Lisa Watson 6-8-11 Trainee *(printed name and signature)* Date
This individual has shown proficiency in the implementation of the requirements for the preparation of Acceptable Knowledge Summary Reports as required by CCP-TP-005.	Trey Greenwood 6/16/11 AK Cognizant Manager *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of an AKE. I approve this employee to perform the duties of an AKE.	LAURA NELSON Laura Nelson 6-16-11 CCP Site Project Manager *(printed name and signature)* Date

Approved for Content & Format: **Trey Greenwood (Approval on File)** **06/08/2011**
Cognizant Engineer Date

Approved for Content: **Richard Kantrowitz (Approval on File)** **06/08/2011**
CCP Lead or Alternate SPM Date

Approved for Use: **A.J. Fisher (Approval on File)** **06/08/2011**
CCP Manager Responsible for Training Date

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Acceptable Knowledge Expert (AKE) Qualification Card

Name: Kevin Peters	Badge Number: [redacted]
Email Address: [redacted]	

Education / Experience	
Resume documenting education and experience on file with Central Characterization Project (CCP) Training.	Michele Billett 6/8/11 CCP Training Date

Job Specific Training	
Qualification Limit	There is no qualification time limit for this position. It is a one-time only requirement. Upon completion of this qualification card, the Trainee is qualified to perform all Acceptable Knowledge Expert duties, including the development of acceptable knowledge reports. If necessary, additional training may be required by the CCP Lead Site Project Manager (SPM) or the CCP Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the CCP Manager Responsible for Training. The candidate must successfully complete the entire CCP qualification card to re-establish qualification.
Requalification Requirements	Not required. See above statement.

Indoctrination	
WAP/QAPjP Briefing and Test. 8/6/03	Michele Billett 6/8/11 CCP Training Date
	Initial/Indoctrination Reading: 1. NM4890139088, *Waste Isolation Pilot Plant Hazardous Waste Facility Permit* 2. DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant* 3. DOE/WIPP 02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan* 4. DOE/CBFO-94-1012, *U.S. Department of Energy Carlsbad Field Office Quality Assurance Program Document* 5. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan* 6. CCP-PO-002, *CCP Transuranic Waste Certification Plan* 7. CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)* 8. CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC)* 9. CCP-QP-004, *CCP Corrective Action Management* 10. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control* 11. CCP-QP-006, *CCP Corrective Action Reporting and Control* 12. CCP-QP-008, *CCP Records Management* 13. CCP-QP-036, *CCP Qualification of Acceptable Knowledge for Remote-Handled Transuranic Waste Through a Quality Assurance Equivalency Demonstration*

Acceptable Knowledge Expert (AKE) Qualification Card

Name: Kevin Peters	**Badge Number:** [redacted]
Email Address: [redacted]	

	14. CCP-TP-001, *CCP Project Level Data Validation and Verification* 15. CCP-TP-002, *CCP Reconciliation of DQOs and Reporting Characterization Data* 16. CCP-TP-005, *CCP Acceptable Knowledge Documentation* 17. CCP-TP-506, *CCP Preparation of the Remote-Handled Transuranic Waste Acceptable Knowledge Characterization Reconciliation Report*
I have read the listed initial/indoctrination reading and understand my responsibilities as applicable to the procedures above.	Trainee Signature — Date: 6/8/2011

Formal Training Requirements	
RCRA Training Documentation	Michele Billett — CCP Training — Date: 6/8/11

Approvals	
I have completed formal training and received on-the-job training for this position. I fully understand my responsibilities as an AKE.	Kevin P. Peters — Trainee *(printed name and signature)* — Date: 6/8/2011
This individual has shown proficiency in the implementation of the requirements for the preparation of Acceptable Knowledge Summary Reports as required by CCP-TP-005.	Trey Greenwood — AK Cognizant Manager *(printed name and signature)* — Date: 6/16/11
I have monitored the training of this individual and believe they are ready to perform the duties of an AKE. I approve this employee to perform the duties of an AKE.	LAUREN NELSON Laura Nelson — CCP Site Project Manager *(printed name and signature)* — Date: 6-16-11

Approved for Content & Format: **Trey Greenwood (Approval on File)** — Cognizant Engineer — **06/08/2011** Date

Approved for Content: **Richard Kantrowitz (Approval on File)** — CCP Lead or Alternate SPM — **06/08/2011** Date

Approved for Use: **A.J. Fisher (Approval on File)** — CCP Manager Responsible for Training — **06/08/2011** Date

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Acceptable Knowledge Expert (AKE) Qualification Card

Name: Carrie Johnson	Badge Number: [redacted]
Email Address: [redacted]	

Education / Experience	
Resume documenting education and experience on file with Central Characterization Project (CCP) Training.	Michele Billett 6/9/11 CCP Training Date

Job Specific Training	
Qualification Limit	There is no qualification time limit for this position. It is a one-time only requirement. Upon completion of this qualification card, the Trainee is qualified to perform all Acceptable Knowledge Expert duties, including the development of acceptable knowledge reports. If necessary, additional training may be required by the CCP Lead Site Project Manager (SPM) or the CCP Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the CCP Manager Responsible for Training. The candidate must successfully complete the entire CCP qualification card to re-establish qualification.
Requalification Requirements	Not required. See above statement.

Indoctrination	
WAP/QAPjP Briefing and Test. 3/10/08	Michele Billett 6/9/11 CCP Training Date

Initial/Indoctrination Reading:

1. NM4890139088, *Waste Isolation Pilot Plant Hazardous Waste Facility Permit*
2. DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant*
3. DOE/WIPP 02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*
4. DOE/CBFO-94-1012, *U.S. Department of Energy Carlsbad Field Office Quality Assurance Program Document*
5. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
6. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
7. CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)*
8. CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC)*
9. CCP-QP-004, *CCP Corrective Action Management*
10. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
11. CCP-QP-006, *CCP Corrective Action Reporting and Control*
12. CCP-QP-008, *CCP Records Management*
13. CCP-QP-036, *CCP Qualification of Acceptable Knowledge for Remote-Handled Transuranic Waste Through a Quality Assurance Equivalency Demonstration*

Acceptable Knowledge Expert (AKE) Qualification Card

Name: Carrie Johnson **Badge Number:** [redacted]

Email Address: [redacted]

	14. CCP-TP-001, *CCP Project Level Data Validation and Verification* 15. CCP-TP-002, *CCP Reconciliation of DQOs and Reporting Characterization Data* 16. CCP-TP-005, *CCP Acceptable Knowledge Documentation* 17. CCP-TP-506, *CCP Preparation of the Remote-Handled Transuranic Waste Acceptable Knowledge Characterization Reconciliation Report*
I have read the listed initial/indoctrination reading and understand my responsibilities as applicable to the procedures above.	Carrie Johnson 6/8/2011 Trainee Signature Date

Formal Training Requirements	
RCRA Training Documentation	Michele Billett 6/9/11 CCP Training Date

Approvals	
I have completed formal training and received on-the-job training for this position. I fully understand my responsibilities as an AKE.	Carrie J. Johnson Carrie Johnson 6/8/2011 Trainee *(printed name and signature)* Date
This individual has shown proficiency in the implementation of the requirements for the preparation of Acceptable Knowledge Summary Reports as required by CCP-TP-005.	6/16/11 AK Cognizant Manager *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of an AKE. I approve this employee to perform the duties of an AKE.	LAURA Nelson Laura Nelson 6/16/11 CCP Site Project Manager *(printed name and signature)* Date

Approved for Content & Format: **Trey Greenwood (Approval on File)** **06/08/2011**
Cognizant Engineer Date

Approved for Content: **Richard Kantrowitz (Approval on File)** **06/08/2011**
CCP Lead or Alternate SPM Date

Approved for Use: **A.J. Fisher (Approval on File)** **06/08/2011**
CCP Manager Responsible for Training Date

GEN22

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
ID4890008952	1	(208) 526-1515	001499913 JJK

GENERATOR

5. Generator's Name and Mailing Address

Idaho National Laboratory, U.S. Department of Energy, 1580 Sawtelle Street, MS-9226, Idaho Falls, ID 83402

Generator's Phone: ~~(208) 533-3377~~ (865) 482-8670

Generator's Site Address (if different than mailing address)

Idaho National Laboratory
Scoville, ID
83415

6. Transporter 1 Company Name

Visionary Solutions, LLC

U.S. EPA ID Number

TX# V30 TR# RH009

7. Transporter 2 Company Name

U.S. EPA ID Number

NMR000013086

TX#
TR#

8. Designated Facility Name and Site Address

Waste Isolation Pilot Project
30 Miles East of Carlsbad on JAL Highway
Eddy County, NM 88221

Facility's Phone: (575) 234-8457

U.S. EPA ID Number

NM4890139088

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
RQ	1. (1.) UN3329, Waste Radioactive material, Type B(M) package, fissile, 7, Pu-239 Pu-240 Am-241 Cs-137 Pu-236, solid oxide 1.25E+01 TBq,	1	CM	1456	P	F005 F002 D009 D008 D006 D005
	2. Radioactive Yellow-III TI=1.1, CSI=0.0, RH72-B Cask, USA/9212/B(M)F-96, BC-ID0335					
	3.					
	4.					

14. Special Handling Instructions and Additional Information

Return signed original within 30 days to CWI for U.S. DOE, Attn: Dan Haley, MS 9226. Prepared under Contract No. DE-AC07-05ID14516. Shipment No. INR13028. ERG 165. Cask 00-02. Weight 38,793 lbs. EXCLUSIVE USE SHIPMENT.

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Cynthia Mahlum

Signature: Cynthia Mahlum

Month 05 Day 30 Year 13

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: John A Cox

Signature: John A Cox

Month 05 Day 30 Year 13

Transporter 2 Printed/Typed Name

Signature

Month Day Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator)

Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name

Signature

Month Day Year

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

GEN23

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	ID4890008952	1	(208) 526-1515	001499914 JJK

GENERATOR

5. Generator's Name and Mailing Address
Idaho National Laboratory, U.S. Department of Energy, 1580 Sawtelle Street, MS-9226, Idaho Falls, ID 83402
Generator's Phone: (208) 533-3377

Generator's Site Address (if different than mailing address)
Idaho National Laboratory
Scoville, ID
83415

6. Transporter 1 Company Name
Visionary Solutions, LLC
(865) 482-8670
TR# V29 RH010

U.S. EPA ID Number
NMR000013086

7. Transporter 2 Company Name
TR#

U.S. EPA ID Number

8. Designated Facility Name and Site Address
Waste Isolation Pilot Project
30 Miles East of Carlsbad on JAL Highway
Eddy County, NM 88221
Facility's Phone: (575) 234-8457

U.S. EPA ID Number
NM4890139088

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
RQ	1 (1.) UN3329, Waste Radioactive material, Type B(M) package, fissile, 7, Am-241 Cs-137 Pu-239 Pu-240 Pu-238 Sr-90, solid oxide 1.348E+01	1	CM	1457	P	F005 D008	F002 D006	D009 D005
	2 TBq, Radioactive Yellow-III TI=1.1, CSI=0.0, RH72-B Cask, USA/9212/B(M)F-96, BC-ID0336							
	3.							
	4.							

14. Special Handling Instructions and Additional Information
Return signed original within 30 days to CWI for U.S. DOE, Attn: Dan Haley, MS 9226. Prepared under Contract No. DE-AC07-05ID14516. Shipment No. INR13029. ERG 165. Cask 00-03. Weight 38,351 lbs. EXCLUSIVE USE SHIPMENT.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Cynthia Mahlum
Signature: Cynthia Mahlum
Month 06 Day 04 Year 13

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S.
Transporter signature (for exports only):
Port of entry/exit:
Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: THOMAS NAVARETTE
Signature
Month 06 Day 04 Year 13
Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
18b. Alternate Facility (or Generator)
Manifest Reference Number:
U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name
Signature
Month Day Year

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

GEN24

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	ID4890008952	1	(575) 885-6883	001600734 GBF

GENERATOR

5. Generator's Name and Mailing Address
IDAHO NATIONAL LABORATORY FOR U.S. DEPT. OF ENERGY
850 ENERGY DRIVE
IDAHO FALLS ID 83401
Generator's Phone: (208)557-6607

Generator's Site Address (if different than mailing address)
AMWTP
HIGHWAY 20 AND VAN BUREN BLVD
SCOVILLE ID 83415

6. Transporter 1 Company Name
CAST SPECIALTY TRANSPORTATION INC.
U.S. EPA ID Number: COR000206722

7. Transporter 2 Company Name
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
NUCLEAR WASTE PARTNERSHIP, LLC, FOR U.S DOE
30 MILES E. OF CARLSBAD ON JAL HIGHWAY
EDDY COUNTY NM 88221
Facility's Phone: (575)234-8457
U.S. EPA ID Number: NM4890139088

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
RQ	1. UN3328, WASTE RADIOACTIVE MATERIAL, TYPE B(U) PACKAGE, FISSILE, 7, PU-239, PU-240, PU-241, SOLID, OXIDE, 0.02506 TBq, RADIOACTIVE YELLOW-II, T.I. 0.2, C.S.I. 0.0, USA/9218/B(U)F-96, TRUPACT# 198	1	CM	2400	K	F001	F002	F005
						D006	D007	D008
RQ	2. UN3328, WASTE RADIOACTIVE MATERIAL, TYPE B(U) PACKAGE, FISSILE, 7, PU-239, PU-240, AM-241, SOLID, OXIDE, 2.129 TBq, RADIOACTIVE YELLOW-II, T.I. 0.2, C.S.I. 0.0, USA/9218/B(U)F-96, TRUPACT# 137	1	CM	1668	K	F001	F002	F005
						D004	D005	D008
RQ	3. UN3328, WASTE RADIOACTIVE MATERIAL, TYPE B(U) PACKAGE, FISSILE, 7, AM-241, PU-239, SOLID, OXIDE, 1.623 TBq, RADIOACTIVE YELLOW-II, T.I. 0.2, C.S.I. 0.0, USA/9218/B(U)F-96, TRUPACT# 179	1	CM	1298	K	F001	F002	F005
						D004	D005	D008
	4.							

14. Special Handling Instructions and Additional Information
RETURN SIGNED ORIGINALS WITHIN 30 DAYS TO GENERATOR ATTN: RACHELLE HUBLER
REF. SHIPMENT # IN130094 TRACTOR C35 TRAILER - 340
GROSS WEIGHT IN LBS: TP# 198 = 17,993 TP# 137 = 16,838 TP# 179 = 16,132
PREPARED UNDER CONTRACT # DE-EM0001467 ERI PROVIDER - WIPP CMR

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: S.R. DANCE
Signature: S.R. Dance
Month 06 Day 04 Year 13

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S
Transporter signature (for exports only):
Port of entry/exit:
Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Brad Steinman
Signature: Brad Steinman
Month 06 Day 04 Year 13
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name
Signature
Month Day Year

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

GEN25

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	ID4890008952	1	(575) 885-6883	001600736 GBF

GENERATOR

5. Generator's Name and Mailing Address
IDAHO NATIONAL LABORATORY FOR U.S. DEPT. OF ENERGY
850 ENERGY DRIVE
IDAHO FALLS ID 83401
Generator's Phone: (208)557-6607

Generator's Site Address (if different than mailing address)
AMWTP
HIGHWAY 20 AND VAN BUREN BLVD
SCOVILLE ID 83415

6. Transporter 1 Company Name
CAST SPECIALTY TRANSPORTATION INC.
U.S. EPA ID Number: COR000206722

7. Transporter 2 Company Name
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
NUCLEAR WASTE PARTNERSHIP, LLC, FOR THE U.S. DOE
30 MILES E. OF CARLSBAD ON JAL HIGHWAY
EDDY COUNTY NM 88221
Facility's Phone: (575)234-8457
U.S. EPA ID Number: NM4890139088

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
RQ	1. UN3328, WASTE RADIOACTIVE MATERIAL, TYPE B(U) PACKAGE, FISSILE, 7, PU-239, AM-241, PU-240, PU-238, SOLID, OXIDE, 0.02494 TBq, RADIOACTIVE YELLOW-II, T.I. 0.2, C.S.I. 0.0, USA/9218/B(U)F-96, TRUPACT# 140	1	CM	2444	K	F001	F002	F005
						D006	D007	D008
RQ	2. UN3328, WASTE RADIOACTIVE MATERIAL, TYPE B(U) PACKAGE, FISSILE, 7, PU-239, AM-241, SOLID, OXIDE, 0.1055 TBq, RADIOACTIVE YELLOW-II, T.I. 0.2, C.S.I. 0.0, USA/9218/B(U)F-96, TRUPACT# 146	1	CM	2379	K	F001	F002	F005
						D004	D005	D008
RQ	3. UN3328, WASTE RADIOACTIVE MATERIAL, TYPE B(U) PACKAGE, FISSILE, 7, PU-239, AM-241, PU-240, SOLID, OXIDE, 0.01008 TBq, RADIOACTIVE YELLOW-II, T.I. 0.2, C.S.I. 0.0, USA/9279/B(U)F-96, TRUPACT# 512	1	CM	1370	K	F001	F002	F005
						D006	D007	D008
	4.							

14. Special Handling Instructions and Additional Information
RETURN SIGNED ORIGINALS WITHIN 30 DAYS TO GENERATOR ATTN: RACHELLE HUBLER
REF. SHIPMENT # IN130096 TRACTOR - C32 TRAILER - 359
GROSS WEIGHT IN LBS: TP# 140 = 17,909 TP# 146 = 17,656 TP# 512 = 13,844
PREPARED UNDER CONTRACT # DE-EM0001467
ERI PROVIDER - WIPP CMR

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: S.R. DANCE
Signature: S.R. Dance
Month Day Year: 06 05 13

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: DALE EAKIN
Signature: Dale Eakin
Month Day Year: 06 05 13

Transporter 2 Printed/Typed Name:
Signature:
Month Day Year:

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name:
Signature:
Month Day Year:

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

AK1

Controlled
Copy

CCP-AK-INL-025

Central Characterization Project
Acceptable Knowledge Summary Report
For

Idaho National Laboratory

Argonne Contact-Handled Transuranic Waste
From Facility Maintenance and Laboratory Operations

Waste Streams:
ID-AECHDM
ID-AECHHM

Revision 1

December 16, 2011

Mike Ramirez
Printed Name
APPROVED FOR USE

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
0	10/21/2011	Initial issue.
1	12/16/2011	Revised to correct acceptable knowledge (AK) source document information in Section 9.0; add additional information relating to beryllium in waste stream ID-AECHHM (DR3004); add TRUCON Codes ID132 and ID232 to waste stream ID-AECHHM; make minor editorial changes; and clarify radiological characterization for waste streams ID-AECHDM and ID-AECHHM following preparation of the nondestructive assay (NDA) memoranda for these streams (C3004).

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LIST OF ACRONYMS AND ABBREVIATIONS

ACL	Analytical Chemistry Laboratory
AEC	Atomic Energy Commission
AGHCF	Alpha Gamma Hot Cell Facility
AK	acceptable knowledge
AMWTP	Advanced Mixed Waste Treatment Project
ANL-W	Argonne National Laboratory-West
ATR	Advanced Test Reactor
ATWIR	Annual Transuranic Waste Inventory Report
CBFO	DOE Carlsbad Field Office
CCP	Central Characterization Project
CFR	Code of Federal Regulations
CH	contact-handled
CHM	Chemistry Division
Ci	curie
CMT	Chemical Technology Division
D&D	decontamination and decommissioning
DOE	U.S. Department of Energy
DOT	U.S. Department of Transportation
EBR	Experimental Breeder Reactor
EBWR	Experimental Boiling Water Reactor
EPA	U.S. Environmental Protection Agency
ERDA	Energy Research and Development Administration
FFTF	Fast Flux Test Facility
FUSRAP	Formerly Used Sites Remedial Action Program
HEPA	high efficiency particulate air
HWN	hazardous waste number
ICF	Inertial Confinement Fusion
IFR	Integral Fast Reactor
INL	Idaho National Laboratory
LANL	Los Alamos National Laboratory
LLNL	Lawrence Livermore National Laboratory
LMFBR	Liquid Metal Fast Breeder Reactor
mrem/hr	millirems per hour
MTR	Materials Test Reactor
NBL	New Brunswick Laboratory
nCi/g	nanocuries per gram
NDA	nondestructive assay
NDE	nondestructive examination
NNSA	U.S. National Nuclear Security Administration
NRC	U.S. Nuclear Regulatory Commission
NWPA	*Nuclear Waste Policy Act of 1982*
ORNL	Oak Ridge National Laboratory

LIST OF ACRONYMS AND ABBREVIATIONS (Continued)

PCB	polychlorinated biphenyl
PIE	Post-Irradiation Examination
PPE	personnel protective equipment
QA	quality assurance
RERTR	Reduced Enrichment Research and Test Reactor
RTR	real-time radiography
RWMC	Radioactive Waste Management Complex
RH	remote-handled
SDI	Strategic Defense Initiative
SDIO	Strategic Defense Initiative Organization
SREX	strontium extraction
SRS	Savannah River Site
TREAT	Transient Reactor Test Facility
TRU	transuranic
TSA	Transuranic Storage Area
TRUCON	TRUPACT-II Content Code
TRUPACT-II	Transuranic Package Transporter-II
TRUEX	TRU Extraction
TSCA	Toxic Substances Control Act
WIPP	Waste Isolation Pilot Plant
WIPP-WAC	*Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant*
WIPP-WAP	*Waste Isolation Pilot Plant Hazardous Waste Facility Permit, Waste Analysis Plan*
WMO	Waste Management Operations Department
WMS	Waste Management System
WMTS	Waste Management Technical Support
WMP	waste material parameter
WWIS/WDS	WIPP Waste Information System/Waste Data System
ZPPR	Zero Power Plutonium (or Physics) Reactor

1.0 EXECUTIVE SUMMARY

This acceptable knowledge (AK) summary report has been prepared for the Central Characterization Project (CCP) for contact-handled (CH) transuranic (TRU) waste generated at Argonne, historically known as the Argonne National Laboratory – East, located approximately 25 miles southwest of downtown Chicago, in Dupage County, Illinois. This CH TRU waste has been shipped to the Advanced Mixed Waste Treatment Project (AMWTP) located at the Idaho National Laboratory (INL). The waste will be stored and characterized at the Radioactive Waste Management Complex (RWMC) Transuranic Storage Area (TSA) at INL.

The *Waste Isolation Pilot Plant Hazardous Waste Facility Permit, Waste Analysis Plan* (WIPP-WAP) (Reference 1) AK requirements are addressed in CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan* (Reference 2). The Waste Isolation Pilot Plant (WIPP) waste acceptance criteria AK requirements are addressed in CCP-PO-002, *CCP Transuranic Waste Certification Plan* (Reference 3). Additionally, this report provides the AK information required by CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)* (Reference 4).

The CCP is tasked with certification of TRU waste for transportation to and disposal at the WIPP. This report was developed in accordance with CCP-TP-005, *CCP Acceptable Knowledge Documentation* (Reference 5), describes how AK is collected, reviewed, and managed by the CCP. The CCP is responsible for collection, review, and management of AK documentation in accordance with CCP-TP-005 and reviews and approves this AK Summary Report and maintains this document as a CCP quality assurance (QA) record. The CCP maintains responsibility for this AK summary report and all CCP-TP-005 generated forms and records as quality assurance QA records. In addition, CCP maintains a copy of the "historical source documents" as non-QA records.

The waste streams described in this report consist of a debris (ID-AECHDM) and a homogeneous (ID-AECHHM) waste stream generated at Argonne during the processing of site waste originating from laboratory and the associated maintenance operations at Argonne. This report addresses containers originally included in Argonne waste streams described in CCP-AK-ANLE-001, *Central Characterization Project Acceptable Knowledge Summary Report for Argonne National Laboratory – East Contact-Handled TRU Waste Facility Maintenance and Laboratory Operations* (Reference 6) and approved Waste Stream Profile Forms for waste streams AECHDM and AECHHM (References 7 and 8).

This AK summary report, along with referenced supporting documents, provides a defensible and auditable record of AK for the waste streams from Argonne. The references and AK source documents used to prepare this report are listed in

Sections 8.0 and 9.0. The source documents cited throughout this report are identified by alphanumeric designations corresponding to a unique Source Document Tracking Number as described in Section 3.0.

This AK summary report includes information relating to the mission, process operations, waste identification, characterization, and waste management practices at Argonne. Information contained in this report was obtained from numerous sources, including facility safety basis documentation, historical document archives, generator and storage facility waste records and documents, and interviews with cognizant personnel.

2.0 WASTE STREAM IDENTIFICATION SUMMARY

Generation Location:

Argonne
9700 South Cass Avenue
Argonne, Illinois 60439
U.S. Environmental Protection Agency (EPA) Identification Number: IL3890008946

Current Storage and Characterization/Certification Location:

Idaho National Laboratory
Radioactive Waste Management Complex
EPA Identification Number: ID4890008952

Facility Where TRU Waste Was Generated At Argonne:

The primary facilities and divisions that generated this waste stream are: Building 200 (Chemistry Division [CHM] and Chemical Technology Division [CMT]), Building 205 (CMT), Building 212 (Energy Technology and its predecessor divisions), Building 306 (Waste Management Operations Department [WMO]), Buildings 315/316 (Reactor Research and Development), and Building 350 (New Brunswick Laboratory [NBL]). Minor quantities of waste have also been generated at Buildings 40, 202, 203, 206, 211, 222, 223, 330, 331, 333, 362, 369, 378, 391, 398, and 815. Waste from these buildings has been commingled with waste from the primary facilities in existing containers.

Facility Mission:

Argonne is a multi-disciplinary research laboratory that performs work in basic and applied science in the areas of engineering, energy technology, chemistry, physics, materials, biomedicine, and environmental studies. Argonne grew from the initial experiments performed at the University of Chicago in 1941 to produce plutonium for nuclear weapons. Officially founded in 1946 as the first national laboratory, Argonne has been instrumental in the development of nuclear reactors and associated systems, materials, fuel elements, and components for use in both civilian and defense programs. This work included key participation in the development of essentially all the domestic nuclear reactor systems in use today for isotope production, power generation, and naval submarine propulsion, as well as experimental or proposed applications for weapons destruction, defense waste management, defense security and safeguards, and space propulsion. The NBL, located on the Argonne campus, serves as the technical extension of the U.S. Department of Energy (DOE) Office of Safeguards and Security in the areas of nuclear material control and accountability, safeguards, and nonproliferation.

2.1 Waste Stream ID-AECHDM

Summary Category Group: S5000 – Debris Waste

Waste Matrix Code Group: Heterogeneous Debris Waste

Waste Matrix Code: S5400 – Heterogeneous Debris

Transuranic Package Transporter-II (TRUPACT-II) Content Code (TRUCON) (Reference 9): AE116, AE216, ID127, ID227, SQ125, SQ133, SQ225, SQ233

2010 Annual Transuranic Waste Inventory Report (ATWIR) Identification Number (Reference 10): AE-T001

Maximum Layers of Confinement: Maximum of two layers

Waste Stream Description:

Waste stream ID-AECHDM consists of repackaged mixed heterogeneous debris generated during laboratory and maintenance operations at Argonne. The debris waste consists primarily of organic and inorganic laboratory debris. This waste stream also contains the debris items generated during the processing of homogenous waste stream ID-AECHHM during the solidification of liquid wastes, including the empty containers, decontamination materials, personnel protective equipment (PPE), and any other debris materials generated by this operation. Waste stream ID-AECHDM also contains lesser amounts (less than 50 percent in any container) of homogeneous organic and inorganic materials from laboratory operations, including absorbent, neutralization, and solidification agents. In addition, as much as 20 pounds of precautionary absorbent (e.g., Aquaset) have been added to the containers. Absorbent pads (Quicksolid pads) have also been used during the packaging of containers. Lesser amounts of soil and gravel materials were also noted during the packaging of containers in this waste stream. Drums containing more than 50 percent by volume of homogeneous solids were excluded from this waste stream and included in homogeneous waste stream ID-AECHHM. Refer to Section 5.4.1 for specific details about the physical composition of this waste stream.

The two prevalent radionuclides by mass are U-238 and Pu-239, and the two prevalent radionuclides by activity are Pu-241 and Pu-239. Refer to Section 5.4.2 for detailed waste stream radiological characterization information.

The EPA hazardous waste numbers (HWNs) assigned to this waste stream are D004, D005, D006, D007, D008, D009, D010, D011, D019, D027, D028, D029, D030, D037,

F002, F004, and F005. Refer to Section 5.4.3 for the waste stream chemical content evaluation.

Prohibited items present in the debris containers repackaged into this waste stream originally included compressed gases (aerosol cans), liquids, and sealed containers greater than 4 liters. As described in Section 5.4.4, WMO operations have remediated or removed all prohibited items during repackaging operations in accordance with WMO procedures and work plans associated with the repacking of this debris waste stream. CCP reviewed the Argonne video and audio records in accordance with CCP-TP-402, *CCP Nondestructive Examination Data Validation for Transportation* (Reference 11), to ensure the absence of prohibited items in the waste stream.

As described in Section 5.5, waste stream ID-AECHDM is packaged in U.S. Department of Transportation (DOT) 7A, Type A, 55-gallon open head drums. A combination of vented drum liner bags, inner waste bags, and/or fiberboard liners (without the lid) were used during packaging of debris waste. The primary packaging configuration consists of 10 pounds of absorbent (e.g., Aquaset) added to the bottom of the 55-gallon drum. A polyethylene drum liner bag, with a NucFil Bag Vent (NucFil-036 R DA PU) installed, was then placed into the drum and an additional 10 pounds of absorbent was placed in the bag. Absorbent pads have also been used during the packaging of containers. Debris waste was then either directly loaded into the liner or bags of waste were placed into the liner bag. All bags were closed using a twist and tape or fold and tape method.

Waste stream ID-AECHDM meets the WIPP-WAP waste stream definition. The waste stream consists of waste materials that have common physical form, that contain similar hazardous constituents, and that are generated from a single process or activity (Argonne laboratory research and associated maintenance operations). Refer to Section 4.5.3.

2.2 Waste Stream ID-AECHHM

Summary Category Group:	S3000 – Homogeneous Solids
Waste Matrix Code Group:	Solidified Inorganics and Organics
Waste Matrix Code:	S3110
TRUCON Code (Reference 9):	AE111, AE211, SQ211, SQ111, ID132, ID232 (Inorganic) AE129, AE229, SQ113, SQ213 (Organic)
2010 ATWIR Identification Number (Reference 10):	AE-T003
Maximum Layers of Confinement:	Maximum of two layers

Waste Stream Description:

Waste stream ID-AECHHM consists of mixed homogeneous solids generated during the neutralization and solidification of aqueous and organic liquids originating from Argonne laboratory and maintenance operations. Various absorbent and solidifying agents were used to immobilize these liquids. Waste stream ID-AECHHM also contains lesser amounts (less than 50 percent in any container) of debris, including materials resulting from the reassignment of these containers originally assigned to waste stream ID-AECHDM. In addition, as much as 20 pounds of precautionary absorbent (e.g., Aquaset) have been added to the containers. Refer to Section 6.4.1 for specific details about the physical composition of this waste stream.

The two prevalent radionuclides by mass are U-238 and Pu-239, and the two prevalent radionuclides by activity are Pu-240 and Pu-241. Refer to Section 6.4.2 for detailed waste stream radiological characterization information.

The EPA HWNs assigned to this waste stream are D004, D005, D006, D007, D008, D009, D010, D011, D019, D027, D028, D029, D030, D037, F002, F004, and F005. Refer to Section 6.4.3 for the waste stream chemical content evaluation.

Prohibited items present in the containers repackaged into this waste stream originally included containerized liquids, including ignitable and corrosive chemicals. As described in Section 6.4.4, WMO operations have remediated or removed all prohibited items during repackaging operations in accordance with WMO procedures and work plans associated with the repacking of this homogeneous waste stream. CCP reviewed the Argonne video and audio records in accordance with CCP-TP-402 (Reference 11), to ensure the absence of prohibited items in the waste stream.

As described in Section 6.5, waste stream ID-AECHDM is packaged in DOT 7A, Type A, 55-gallon open head drums. The primary packaging configuration consists of ten pounds of absorbent (e.g., Aquaset) added to the bottom of the 55-gallon drum. A polyethylene drum liner bag, with a NucFil Bag Vent (NucFil-036 R DA PU) installed, was then placed into the drum and an additional ten pounds of absorbent was placed in the bag. Batches of solidified liquids in one-gallon cans (4 layers of 7 cans) without lids were then loaded into the liner bag with a rigid cardboard cylinder in the center of the drum. The liner bag was then closed over the cans using a twist and tape or fold and tape method.

Homogeneous waste was also directly loaded into the 55-gallon drum. Like the drums containing cans, these drums are lined with a drum liner bag with ten pounds of absorbent in the bag and ten pounds of absorbent between the bag and the drum. A 90-mil polyethylene rigid liner is then placed into the lined drum. The homogeneous solids were then layered into the container with additional layers of absorbent and then the liner bag was closed over the rigid liner (without lid) using a twist and tape or fold and tape method. Debris waste materials and the feed containers were included in these drums.

It should be noted that drums containing debris originally assigned to debris waste stream ID-AECHDM were determined to exceed 50 percent homogeneous solids and reassigned to waste stream ID-AECHHM (Reference DR3002). For this reason, these drums were packaged in the configuration for debris drums described in Section 5.5.

Waste stream ID-AECHHM meets the WIPP-WAP waste stream definition. The waste stream consists of waste materials that have common physical form, that contain similar hazardous constituents, and that are generated from a single process or activity (Argonne laboratory research and associated maintenance operations). Refer to Section 4.5.3.

3.0 ACCEPTABLE KNOWLEDGE DATA AND INFORMATION

TRU waste destined for disposal at the WIPP must be characterized prior to shipment. Development of knowledge of the waste materials and processes that generate and control the waste is required to provide a clear and convincing argument about the characteristics of each waste stream. The AK characterization documented herein complies with the requirements of the WIPP-WAP (Reference 1) and was developed in accordance with of CCP-PO-001 (Reference 2), and CCP-TP-005 (Reference 5).

This report has been prepared by CCP for CH TRU debris and homogeneous waste generated at Argonne to be shipped to the AMWTP. The waste described in this report consists of repackaged waste that originated from Argonne research and development laboratory operations generated primarily during maintenance and waste management at the site. The primary sources of AK collected consist of the AK documentation originally compiled for CCP-AK-ANLE-001 (Reference 6) during the 2002 to 2003 timeframe for certified CH waste streams AECHDM and AECHHM shipped directly to the WIPP in 2003. This AK included sources of information relating to the facility's history, configuration, equipment, process operations, and waste management practices. Information was collected from numerous sources, including facility safety basis documentation records, historical document archive records, generator and storage facility waste records and documents, and interviews with cognizant personnel. These TRU waste streams were generated from 1985 to 2002. These original source documents listed in Section 9.0 of this AK Summary Report and cited throughout the report, are identified by alphanumeric designations corresponding to the Source Document Tracking Number using the following convention:

AE-X-#

Where: AE = Argonne National Laboratory–East

X = **P**ublished Document or Controlled Database
Unpublished Data
Internal Procedure or Note
Correspondence
Discrepancy

\# = A unique document tracking number.

Beginning in 2006, additional AK collection was conducted to support the characterization of remote-handled (RH) TRU waste generated during Argonne research and development activities associated primarily with irradiated materials examination in hot cell facilities in three of the primary TRU waste generating buildings described in this report (Buildings 200, 205, and 212). These hot cell operations generated RH waste shipped to WIPP from Argonne and INL described in AK summary reports CCP-AK-ANLE-500 and CCP-AK-INL-500 (References 12 and 13). Because these operations were identified as generators of CH waste, this additional AK

documentation has been combined with the original sources of AK collected to update the characterization of the CH waste streams described in this report. The AK sources referenced within this report originally collected as AK for RH waste characterization are designated by alphanumeric designations (i.e., C001, P001, U001, and DR001) corresponding to the Source Document Tracking Number using the following convention:

- C – Correspondence (i.e., memoranda, letters, e-mail, interviews)
- DR – AK Discrepancy Reports
- P – Published Sources (i.e., reports, controlled procedures)
- U – Unpublished Data (i.e., data bases, analytical data, draft reports)

This convention has also been applied to assigning Source Document Tracking Numbers to the additional documentation collected to support the waste stream characterization associated specifically with waste streams ID-AECHDM and ID-AECHHM (container documentation, packaging procedures, etc.) shipped to AMWTP.

4.0 REQUIRED PROGRAM INFORMATION

This section provides the mandatory TRU waste program information required by the WIPP-WAP for waste streams ID-AECHDM and ID-AECHHM. This section provides a description of the facilities and operations associated with the generation of the Argonne CH waste. Included is a description of Argonne, summary of the mission, defense determination, a discussion of the operations associated with the generation of CH TRU waste, a description of the Argonne TRU waste management programs, and descriptions of INL waste management facilities and programs as they relate to these waste streams.

4.1 Facility Location

4.1.1 Argonne

As shown in Figure 1, Location of Argonne, Argonne is located approximately 25 miles southwest of downtown Chicago, in Dupage County, Illinois (Reference AE-P-090). Figure 2, Primary TRU Waste Facilities at Argonne, shows the primary TRU waste facilities at Argonne. These primary facilities include the buildings responsible for the vast majority of TRU waste generation and buildings or areas used for TRU waste treatment or storage. Figure 2 was compiled using information from numerous sources, including the *RCRA Part B Permit Issued to the Department of Energy Argonne National Laboratory–East Facility* (References AE-P-009 and AE-P-010), the related RCRA Permit Applications (References AE-P-006, AE-P-007, AE-P-008, AE-U-1, and AE-U-2), current and previous versions of the Argonne *Waste Handling Procedures Manual* and information contained in WMO's Waste Management System controlled database (WMS), and other sources (References 6, AE-I-195, AE-P-005, AE-P-011 through AE-P-020, AE-P-054, U3001, U3003, U3004, and U3005). Table 1, Identification of Primary TRU Waste Generating and Storage Facilities at Argonne, lists these primary facilities by building or area number and name, and includes the specific operating entities within the building or area (if applicable). The primary waste generating facilities were as follows:

- Building 200 (References 6, 13, AE-C-004, AE-C-013, U3001, U3003, U3004, and U3005)
- Building 205 (References 6, 12, AE-C-004, AE-I-050, AE-P-054, U3001, U3003, U3004, and U3005)
- Building 212 (References 6, 12, 13, AE-C-003, AE-I-002, AE-I-007, AE-I-008, AE-I-010, AE-I-014, AE-I-015, AE-I-016, AE-I-077, AE-I-089, AE-I-096, AE-P-002, AE-P-003, AE-P-005, AE-P-104, U3001, U3003, U3004, and U3005)
- Building 306 (References 6, U3001, U3003, U3004, and U3005)
- Buildings 315/316 (References 6, U3001, U3003, U3004, and U3005)

- Building 350 (References 6, AE-C-003, AE-I-054, AE-I-112, AE-I-115, AE-P-044, AE-P-045, U3001, U3003, U3004, and U3005)

In addition to these primary facilities, a very minor portion of the TRU waste at Argonne was generated at several other buildings, including: Buildings 40, 202, 203, 206, 211, 222, 223, 330, 331, 333, 362, 369, 378, 391, 398, and 815. TRU waste from these buildings has been commingled with waste from the primary facilities in existing containers (References 6, AE-C-006, AE-C-025, U3001, U3003, U3004, and U3005). The waste was repackaged by WMO in Building 306 (References AE-C-025, AE-I-188, P3001, P3002, P3003, and P3004).

Table 1. Identification of Primary TRU Waste Generating and Storage Facilities at Argonne

Facility Identification	Facility Name	Operating Entity	Responsible Organization	TRU Waste Operation
Building 200	Chemistry	M-Wing	Chemistry Division	Generator
		Analytical Chemistry Laboratory (F-Wing, K-Wing, and N-Wing)	Chemical Technology Division	Generator
Building 205	Chemical Technology	Chemical Technology (G-Wing and K-Wing)	Chemical Technology Division	Generator
Building 212	Energy Technology	Plutonium Facility (D-Wing)	Energy Technology Division	Generator
		Fuels Technology (F-Wing)	Chemical Technology Division	Generator
Building 306	Waste Management Operations	Various Treatment and Storage Units and Waste Management Operations Department Office	Waste Management Operations Department	Treatment, Storage, Management Operations
Buildings 315/316	Reactor Research and Development	Various Research and Development Facilities	Reactor Research and Development Group	Generator
Building 350	New Brunswick Laboratory	New Brunswick Laboratory	Department of Energy	Generator

Source: AE-C-027, AE-P-009, AE-P-010, AE-P-028, AE-P-044, AE-P-054, AE-P-090, and AE-P-106

4.1.2 Idaho National Laboratory

The INL encompasses approximately 890 square miles (569,135 acres), on the northern edge of the Eastern Snake River Plain in Southeastern Idaho. Located approximately 32 miles west of Idaho Falls, Idaho, and formerly named the National Reactor Testing Station, the INL was established in 1949 as a site where the DOE could safely build, test, and operate various types of nuclear facilities. The INL has also

served as a storage facility for TRU, low-level, and high-level waste since 1952. A map of the INL showing the location of these facilities is presented in Figure 3, Location of the INL Radioactive Waste Management Complex (Reference 14).

4.2 Facility Description, Site Operations, and Mission

4.2.1 Argonne

Argonne is a multi-disciplinary research laboratory that performs work in basic and applied science in the areas of engineering, energy technology, chemistry, physics, materials, biomedicine, and environmental studies (References AE-P-027 and AE-P-090). Argonne grew from the initial experiments performed at the University of Chicago in 1941 to produce plutonium for nuclear weapons (Reference AE-P-028). Argonne has been operated by the University of Chicago for DOE, and its predecessor agencies (Atomic Energy Commission [AEC], Energy Research and Development Administration [ERDA]), since its inception (Reference AE-P-028). The AEC and ERDA had dual civilian and military missions related to research and development, as described in enabling legislation, the Atomic Energy Act of 1954 (Reference AE-P-022).

Officially founded in 1946 as the first national laboratory, Argonne has been instrumental in the development of nuclear reactors and associated systems, materials, fuel elements, and components for use in both civilian and defense programs (Reference AE-P-027). This work included key participation in the development of essentially all the domestic nuclear reactor systems in use today for isotope production, power generation, and naval submarine propulsion, as well as experimental or proposed applications for weapons destruction, defense waste management, defense security and safeguards, and space propulsion (References AE-P-027, AE-P-028, AE-P-042, AE-P-043, AE-P-047, AE-P-049, AE-P-051, AE-P-052, AE-P-053, and AE-P-071 through AE-P-085). As is often the case, systems developed for one purpose find application for other purposes. Because of this, many of the reactor systems developed by Argonne, or research reactors operated by Argonne, have had dual civilian and defense roles.

Some of the key reactor systems developed by Argonne have been the series of breeder reactors, including the Experimental Breeder Reactor (EBR)-I and -II, the Liquid Metal Fast Breeder Reactor (LMFBR), and the Integral Fast Reactor (IFR) (References AE-P-027, AE-P-028, AE-P-039, AE-P-040, and AE-P-071 through AE-P-085). Efforts on the EBR led to development of the LMFBR, which, in turn, led to development of the IFR. The initial concept of a breeder reactor was to provide plutonium for weapons production (Reference AE-P-041). However, metal-cooled fast breeder reactors later became the cornerstone of commercial reactor research and development. In the 1970s, the federal government shut down the commercial breeder reactor program due to concerns about nuclear proliferation (References AE-P-040 and AE-P-043). To address these concerns, Argonne developed the concept of the IFR. The IFR was a system with unique attributes that promoted nuclear nonproliferation and enhanced nuclear materials security and safeguards (References AE-P-049, AE-P-050,

and AE-P-051). These attributes included a highly radioactive product and an easily secured facility. Because fast reactors can burn plutonium as fuel, both the LMFBR and the IFR have been promoted as a way to address defense-related waste management problems and to dispose of excess plutonium from weapons dismantlement (References AE-P-042, AE-P-043, AE-P-047, AE-P-048, and AE-P-050).

Argonne also supported the Naval Nuclear Proof-of-Breeding Program by processing and analyzing spent fuel from the Navy's Shippingport reactor (Reference AE-P-113). The Proof-of-Breeding Program was conducted for the Bettis Atomic Power Laboratory to demonstrate the concept of breeding uranium-233 from thorium-232 in a light water breeder reactor. From the mid-1950s to the mid-1960s, Argonne operated the Experimental Boiling Water Reactor (EBWR) (Reference AE-P-027). The EBWR operated using primarily plutonium fuel to generate electricity and demonstrated the concept of recycling plutonium, potentially from defense applications, into fuel for power generation. Argonne was also a key contributor in the development and testing of the Reduced Enrichment Research and Test Reactor (RERTR), which investigated the feasibility of operating research and test reactors with low-enriched uranium fuel (Reference AE-P-071). This program was undertaken to improve the proliferation resistance of nuclear fuels used in research and test reactors throughout the world. In addition, Argonne was assigned a major role in the engineering and evaluation of DOE's New Production Reactor Program (Reference AE-P-082). This program was focused on the development and siting of reactors to produce tritium for the nation's nuclear weapons.

Argonne has played a major role in the development of ceramic fuels for use in nuclear space propulsion (References AE-P-052, AE-P-053, AE-P-077 through AE-P-085). Argonne was instrumental in developing cermet fuels in the 1960s and 1980s for space propulsion applications that included the Multimegawatt Space Power Reactor and the Strategic Defense Initiative (SDI). As part of the space propulsion program, the LMFBR was identified as a way to address waste management issues.

Argonne has been instrumental in the development of waste management processes to address defense radioactive and mixed waste. The TRU extraction (TRUEX) and strontium extraction (SREX) processes were developed and refined at Argonne and have direct application to the Hanford tank wastes (References AE-P-107 through AE-P-112). The Argonne research staff has supported the monitoring of waste isolation in geologic repositories, isotope separation studies, waste management source term monitoring, by-product recovery from nuclear wastes, and options for actinide-contaminated waste.

Argonne has supported the Yucca Mountain Project through the development and evaluation of borosilicate waste forms for disposal of defense and commercial reactor fuel (References AE-P-054 through AE-P-067). Certain studies were conducted using spent fuel from the Hanford N-reactor. Additional waste management support has included gas generation studies for "ceramicrete" to address Rocky Flats residues and ash, evaluation of ceramic waste forms for disposal of weapons plutonium, evaluation of

vitrified waste forms for Hanford tank waste, and actinide solubility studies in WIPP brine.

In 1978, the RERTR Program was established by the DOE at Argonne to minimize the use of highly-enriched uranium in civil nuclear programs. RERTR is a nuclear nonproliferation program currently administered by the U.S. National Nuclear Security Administration (NNSA) in coordination with the Department of State, the Arms Control and Disarmament Agency, and the U.S. Nuclear Regulatory Commission (NRC). The primary mission of this international program is to develop the technology required for use of low-enrichment uranium for use in test and research reactors to reduce the amount of highly-enriched uranium available for weapons production. Numerous fuel samples fabricated at the Argonne National Laboratory-West (ANL-W) in Idaho and irradiated in reactors including the Advanced Test Reactor (ATR) and examined at Argonne (References C073, C124, C157, P010, P029, P373, P374, P375, P520, P551, P575, P583, P599, P606, P607, P815, P816, P817, P822, P826, P827, P829, P2032, P2033, P2034, U003, U007, U076, and U830).

The NBL is located on the Argonne property, but is operated directly by DOE-Chicago. NBL is the Government's Nuclear Material Measurements and Standards Laboratory and is responsible for performing measurements and providing reference materials to support the country's defense and energy programs (References AE-P-044 and AE-P-045). NBL serves in response to the DOE mandate to assure the safeguarding of nuclear materials. NBL serves as the technical extension of the DOE Office of Safeguards and Security in the areas of nuclear material control and accountability, safeguards, and nonproliferation.

Although Argonne has historically been a leader in the development of nuclear reactors for civilian purposes, it has maintained an uninterrupted involvement in defense programs (References AE-P-022 through AE-P-028 and AE-P-071 through AE-P-089). These programs are described in annual "Institutional Reports" and have included naval reactors, nuclear nonproliferation (especially RERTR), defense waste management (TRUEX, actinide recycling), defense nuclear materials production (TRUEX, New Production Reactor), defense verification and control, defense nuclear materials security and safeguards, the Formerly Used Sites Remedial Action Program (FUSRAP), Inertial Confinement Fusion (ICF), and the related heavy ion fusion program. Argonne has also historically performed work for, or in conjunction with, many defense-related clients and federal entities, including: the Bettis Atomic Power Laboratory; the Hanford Site; Idaho National Engineering and Environmental Laboratory; Los Alamos National Laboratory (LANL); Lawrence Livermore National Laboratory (LLNL); Oak Ridge National Laboratory (ORNL); Sandia National Laboratory; the Savannah River Site (SRS); the Yucca Mountain Project; and the Department of Defense (References AE-P-115 through AE-P-123).

The research described above generated TRU waste in several Argonne facilities. These facilities were and are involved in various aspects of the primary missions of Argonne: basic and applied science, and research and development

(Reference AE-P-027). TRU waste was generated primarily through facility maintenance operations and, to a lesser extent, through laboratory operations. The TRU waste generating facilities and operations are described below.

As shown in Table 1, and discussed in Section 4.1.1, there are six primary facilities where TRU waste was generated at Argonne: Buildings 200, 205, 212, 306, 315/316, and 350. Building 200 housed two different generator entities, CHM and the Analytical Chemistry Laboratory (ACL) operated by the CMT. Building 212 housed two generator entities, both operated by the Energy Technology Division. Based on the information contained in the WMS, the following facilities and divisions have been identified as generators of TRU waste (References 6, 12, and 13).

Building 200 - Chemistry Division

CHM is headquartered in Building 200 and its primary mission is to support development of future energy technologies in fusion, fission, and solar energy (References AE-P-107 and AE-P-108). In addition to this, many of the CHM programs and projects have supported waste management efforts at DOE facilities throughout the complex (References AE-P-107 through AE-P-112, and AE-P-125). They have also supported investigation into radioactive waste forms, specifically borosilicate glass.

Building 200 was first constructed in 1951 with common areas and six operations wings (A through F) (References AE-C-015, AE-C-016, and AE-U-5). In 1962, Building 200 was modified with the addition of K- and M-Wings. CHM performs all of its radioactive work in the M-Wing. Operations performed in the other Building 200 wings is described below. M-Wing is set up as three different areas: the cold labs used for materials preparation for research, the hot labs used for work with radioactive materials, and the hot cells, used for work with high-gamma radiation materials. The hot labs in M-Wing consist of numerous laboratories, each set up with unique equipment (e.g., a spectrophotometer) and related ancillary equipment (e.g., hoods, drains, chemical handling equipment). Because of the unique nature of the equipment in each laboratory, a particular research project may use any or all laboratories depending on the type of work involved. The M-Wing hot cells were designed as either kilocurie or megacurie cells and are located on two separate floors. The cells are set up with workstations that consist of viewing windows and master-slave manipulators and appropriate support facilities. Aside from some limited cobalt irradiation work, the hot cells have not been used since CMT conducted the Proof-of-Breeding Project in this facility in the mid-1980s (References C353, C354, P616, and U339).

CHM developed the TRUEX and related SREX processes to recover TRU radionuclides and strontium, respectively, from radioactive wastes (References AE-P-107 through AE-P-112). Both the TRUEX and SREX processes had direct application to the tank waste at Hanford. CHM also developed a process using thermally unstable complexants to enhance the TRUEX process and provide a wider applicability to radioactive waste and spent nuclear fuel processing. Other key DOE programs that CHM has supported include monitoring waste isolation, isotope separation, waste

management source term monitoring, development of a new ion exchange resin to address alpha-emitting mixed waste, by-product recovery from nuclear waste, and disposal options for actinide-contaminated waste. CHM is currently being funded directly by the DOE Defense Programs office for research and development in radiation damage to borosilicate glass, waste minimization during decontamination and decommissioning (D&D) projects, long-term performance of stored radioactive waste glass forms, immobilization of actinides in high-level waste, and radionuclide behavior in alkaline tank wastes.

Buildings 200 and 205 - Chemical Technology Division

CMT is headquartered in Building 205 (Reference AE-P-054). The facilities involved with TRU waste generation are the G- and K-Wing laboratories, which were designed for experimental work with radioactive materials. The ACL is operated by CMT in three locations: Building 200 (F-, K-, and N-Wings), Building 203 (A-Wing), and Building 205 (G- and K-Wings) (Reference AE-C-004). Based on information contained in the WMS, no TRU waste was generated from CMT's operations in Building 203 (References 6, 12, and 13).

The main part of Building 205 was completed in 1949 and included the G-Wing; the K-Wing and other portions of the building were added between 1956 and 1958 (Reference AE-P-054). The building is irregularly shaped with numerous wings and a high bay area, and varying levels depending on the portion or wing of the building. In general, laboratories and operating facilities are located on the ground floor and in basements, with offices on upper floors. Under certain portions of the building is a service floor that houses utilities and storage areas. There are seven G-Wing laboratories, all with negative pressure gloveboxes and/or hoods for work with gram quantities of plutonium and other transuranics. The laboratories contain various types of analytical and pilot-scale equipment, which changes based on the types of work being performed. The overriding design criterion for the 260,000 square foot building was to allow Argonne to conduct various experiments, including programs supporting process development for the treatment of radioactive materials and waste forms from the nuclear fuel cycle. With this in mind, facilities were designed to accommodate radiation fields and the unique handling requirements associated with both pre- and post-irradiated nuclear fuel. K-Wing is situated on the ground floor of the CMT building and consists of three hot cells (referred to as the Senior Cave), a manipulator room for the hot cells (operating area), a support area including isolation rooms behind the hot cells, and a combination workshop manipulator preparation area (service area) (References C2002, C2003, C2004, C2005, C2006, C2007, P2000, P2016, and P2018).

ACL occupies space in three areas of Building 200, which is managed by CHM (Reference AE-C-013). These areas include 11 laboratories in F-Wing, a laboratory in N-Wing, and four laboratories in K-Wing. Operations in the F-Wing area had previously been located in B-Wing of Building 200, but were moved to F-Wing during a

Building 200 rehabilitation project in 1992. The ACL laboratories are set up for chemical preparation of analytical samples from a variety of Argonne programs, and for instrumental analysis of the prepared samples to determine inorganic constituents or isotopic composition. The laboratories contain various types of analytical chemistry instruments, including mass spectrometers, inductively-coupled plasma spectrometers, atomic absorption spectrophotometers, and elemental analyzers.

Founded in 1947 as the Chemical Engineering Division, the name was changed to the Chemical Technology Division in 1982 to better reflect its more diversified activities (Reference AE-P-057). Originally, the division's only mission was to develop processes for recovery of spent nuclear fuels. Over the years, the division's mission expanded to include research and development in a wide variety of chemistry and related applications, including fuel cells, radioactive waste management, environmental chemistry, geochemistry, and operation of the ACL. Today, CMT's primary mission is the safe application of chemical and engineering disciplines and techniques to process design and development in areas that are energy related, or are related to other parts of the DOE charter such as nuclear energy, waste management, environmental restoration and remediation, production and transformation of nuclear and other materials, and energy utilization (Reference AE-P-124).

CMT has been involved in numerous reactor and waste management programs during the 1980s and 1990s (References AE-I-028 through AE-I-031, AE-I-038, AE-I-039, AE-I-040, AE-I-044, AE-I-046, AE-I-048, AE-I-049, AE-I-050, AE-I-052, AE-I-054, AE-I-055, AE-I-070, AE-I-071, AE-I-073, AE-I-165, and AE-P-054 through AE-P-067). Reactor program involvement included work on the IFR fuel cycle, fuel treatment studies using Hanford N-reactor fuel, and Proof-of-Breeding studies for naval nuclear reactors. Waste management program support included studies for the Defense Waste Processing Facility at SRS in support of the Yucca Mountain Project; radiolytic gas generation studies for ceramicrete waste forms; fabricating, characterizing, and testing ceramic waste forms for weapons plutonium disposal; testing of vitrified waste forms for application to the Hanford tank wastes; developing final flowsheets for the TRUEX process using NBL waste and for application to Hanford wastes; and plutonium recovery from defense waste (scrap and residues) in cooperation with LLNL and SRS. CMT has also provided direct support to the WIPP program for actinide solubility in brine studies.

Building 212 - Energy Technology Division

Building 212 was built in the late 1950s and started operations in the early 1960s as the "Fuels Technology Center" under the direction of the Metallurgy Division (References AE-P-005 and AE-P-037). The Metallurgy Division has undergone many name changes and reorganizations since the 1960s but has always operated out of Building 212 (Reference AE-P-028). The sequence of names for this division is as follows:

Metallurgy Division (1946)

Materials Science Division (1969)
Materials Science and Technology Division (1982)
Materials Components and Technology Division (1986)
Energy Technology Division (1994)

The overriding design criterion for Building 212 was to allow Argonne to carry on research programs pertinent to the advancement of reactor technology, with a particular emphasis on the use of plutonium as fuel (Reference AE-P-037). With this in mind, Building 212 facilities were designed to accommodate radiation fields and the unique handling requirements associated with plutonium.

Building 212 is laid out in eight wings (A through H), primarily to limit the extent of contamination due to accidental release or fire (Reference AE-P-037). D-Wing was identified as the "Plutonium Physical Metallurgy Laboratory" and was equipped to perform various metallurgical operations, including: metallography, welding, materials processing, x-ray diffraction, melting/casting, machining, heat treatment, and passivation (References AE-P-037 and AE-P-038). D-Wing consisted of two stories, a service tunnel, and a fan loft, with gloveboxes located on the ground floor and second floor. There were two rows of laboratory rooms separated by a service corridor. Gloveboxes were designed as freestanding, independent units or as glovebox trains, with a nitrogen atmosphere. Various types of equipment were placed inside the gloveboxes to support D-Wing operations (e.g., hydraulic press, tools, lathes, furnaces, hot plates). The D-Wing plutonium laboratories were shut down in the late 1980s and decommissioned in two campaigns in the late 1980s and mid-1990s (References AE-C-011 and AE-P-005).

Specific research and development programs that were conducted by the Metallurgy Division included fast reactors, breeder reactors, ceramic fuels (including CERMET fuels), thorium-uranium-plutonium alloy fuels, fuel cells, fusion reactors, Zero Power Reactors, LMFBRs, IFRs, Gas-Cooled Fast Reactors, and SDI (References AE-P-029 through AE-P-036). Specific programs that were conducted in D-Wing include: breeder reactors (e.g., EBR, LMFBR, and IFR), CERMET fuels, SDI, and plutonium passivation for the entire laboratory (References AE-C-003 and AE-I-001 through AE-I-017).

The Alpha Gamma Hot Cell Facility (AGHCF) in the F-Wing of the building was built in the late 1950s and started operations in the early 1960s as the "Fuels Technology Center" under the direction of the Metallurgy Division. The facilities were designed to accommodate radiation fields and the unique handling requirements associated with plutonium (References P002, P027, and P380). The AGHCF was capable of in-depth post-irradiation examinations of fuel elements, fuel, cladding, and structural materials, and small test components. A shielded microscope was connected to the cell by a nitrogen pneumatic transfer system. The shielded gloveboxes were used for preparing small specimens of fuel for electron microscopy, or other tests, and for density measurements on claddings (References C138, C335, P002, P004, P378, and P380). During early operations, the AGHCF was used primarily for the Post-Irradiation Examination (PIE) metallographic studies of fuel and structural materials. As the

emphasis in reactor development programs changed, additional equipment and techniques were developed to supply the information required in these new areas of interest. Specifically, this included information relating to the behavior of advanced ceramic fuel materials, such as the mixed carbides and mixed oxides of uranium and plutonium. Fuel materials received and examined by the AGCHF originated from ANL-W reactors including the EBR-II, Transient Reactor Test Facility (TREAT), Fast Flux Text Facility (FFTF), Materials Test Reactor (MTR), and ATR test and research reactor facilities. Other test materials were also received from SRS, Hanford, (ORNL), and LANL operations (References C016, C046, C074, C082, C108, C138, C155, C157, C812, C2005, C2007, C2011, C2022, C2023, C2024, P002, P013, P061, P329, P520, P532, P606, P607, P815, P816, P817, P822, P826, P827, P829, P2032, P2033, P2034, U045, U076, U1003, and U2002).

Buildings 315/316 – Reactor Research and Development Group

Although a relatively minor generator compared to the other facilities described in this section, Buildings 315 and 316 did generate TRU waste (Reference 6). Buildings 315/316 housed a reactor research and development group from the early 1950s through the mid 1980s (Reference AE-C-027). The buildings acted as a self-contained facility for design, mock-up, and construction of bench scale models of various reactor systems. Reactor systems designed and evaluated at these buildings included the Navy propulsion Nautilus reactor, the Zero Power series of reactors and the series of fast reactors developed by Argonne. Fast reactors included the IFR, the Fast Breeder Reactor, and the LMFBR.

Building 306 - Waste Management Organization

Building 306 is used by the WMO for waste treatment and repackaging operations, as well as waste storage. The waste being repackaged by WMO originated from numerous TRU waste generating operations conducted in several facilities at Argonne and was transferred to the WMO for processing. Liquid wastes are neutralized (as necessary), sampled, and solidified before being placed into receiving drums. All prohibited items are identified at this time and either segregated or remediated prior to packaging. As part of these operations, WMO has and continues to routinely commingle waste from various Argonne primary waste generators, including Buildings 200, 205, 212, 315/316, and 350, as well as small quantities of waste from minor waste generating buildings. Commingling of liquid waste during the neutralization and solidification/absorption operations is especially common since this type of waste is normally received in small quantities (e.g., milliliter quantities up to several gallons). In addition, WMO is commingling and consolidating debris waste received in small quantities into single containers (e.g., 55-gallon drums) (References AE-C-025, AE-I-188, AE-I-195, P3002, U3001, U3003, U3004, and U3005).

Building 350 - New Brunswick Laboratory

Building 350 was built in the late 1950s and became operational in 1959 as the Plutonium Fuel Fabrication Facility under the direction of the Metallurgy Division (Reference AE-P-037). It was modified in 1975 to accommodate NBL operations, at which time the plutonium operations section of NBL was moved to Argonne from New Brunswick, New Jersey (References AE-P-044 and AE-P-045). A three-story addition was built to accommodate the uranium and general chemistry operations sections, which moved in 1977. Nine plutonium laboratories are located in the original structure, eight of which contain gloveboxes and related analytical equipment to perform plutonium measurements and separations. The ninth laboratory is a cold facility that is used for chemical preparation. There are 41 rooms in the uranium and general chemistry section, which are equipped as needed to support chemical preparation, sample preparation, wet chemistry, analysis, spectrometry, packaging, storage, and support functions.

NBL is dedicated to analytical chemistry and measurement science of materials (primarily plutonium and uranium) critical to the nation's defense and energy programs (Reference AE-P-045). NBL's activities involve measuring the elemental and isotopic composition of nuclear materials either to characterize and certify reference materials or to define the fissile materials content of samples taken by government inspectors for safeguards inventory verification purposes. NBL is also involved with developing or improving methods for the elemental and isotopic measurement of nuclear materials, and evaluating the performance of other nuclear laboratories through comparison programs or onsite inspections. Analyses of nuclear materials, ranging from high-purity metals or alloys to low-purity scrap, are conducted using a variety of methods. Analytical methods include reduction-oxidation titrimetry, controlled-potential and constant-current coulometry, mass spectrometry, isotope-dilution mass spectrometry, and x-ray and gamma ray spectrometry.

Other Generator Buildings

A minor portion of the total inventory of TRU waste at Argonne was generated or managed at several other buildings, including: Buildings 40, 202, 203, 206, 211, 222, 223, 330, 331, 333, 362, 369, 378, 391, 398, and 815. TRU waste from these buildings has been commingled with waste from the primary facilities in existing drums. Based on a review of the AK record relating to TRU waste generation at Argonne, these facilities would have generated waste in support of the programs described above resulting in a minimal amount of laboratory waste similar in physical form and radiological and chemical contamination (References 6, AE-C-006, AE-C-024, AE-C-025, AE-I-188, AE-P-006, AE-P-007, U3001, U3003, U3004, and U3005).

4.2.2 Idaho National Laboratory

At present, INL supports the engineering and operations efforts of DOE and other federal agencies in areas of nuclear safety research, reactor development, reactor

operations and training, nuclear defense materials production, waste management technology development, and energy technology and conservation programs. Strict security is maintained for all INL facilities in accordance with the INL's nuclear and defense missions. The RWMC was established at INL in 1952 to accommodate the radioactive waste generated by site laboratory operations. The INL TSA is a 58-acre area in the eastern section of the RWMC dedicated to the storage of TRU waste received at the RWMC after 1970. A map showing the RWMC and TSA storage areas is provided in Figure 4, Radioactive Waste Management Complex Map (Reference 14).

4.3 Defense Waste, Spent Nuclear Fuel, and High-Level Waste

4.3.1 Defense Waste Assessment

The DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant* (WIPP-WAC) (Reference 15) requires generator sites to use AK to determine if the TRU waste streams to be disposed at WIPP meet the definition of TRU "defense" waste. Based on guidance from the DOE, a TRU waste is eligible for disposal at WIPP if it has been generated in whole or part by one of the *atomic energy defense activities* listed in section 10101(3) of 42 U.S.C. 10101, *Nuclear Waste Policy Act of 1982* (NWPA) (Reference 16). Table 2, Correlation of Defense Activities to TRU Waste Generating Programs, correlates these defense activities to Argonne TRU waste generating programs described in the preceding discussion regarding the laboratory's mission (References 6, 12, 13, and AE-P-129).

All the waste addressed in this AK Summary Report has been evaluated and determined to have originated from, or commingled with, waste from the Argonne defense-related programs listed in Table 2. This evaluation was conducted by examining information for waste containers with respect to generator building and correlating this to the programs and activities that were conducted in those buildings. While certain TRU waste items may not have been generated directly from defense activities, it was determined that defense-related programs and activities were conducted in the primary generator buildings during the entire time that TRU waste was generated. Therefore, all of the TRU waste was generated directly from defense programs or was commingled with waste generated by defense programs. Commingling of waste occurred at Argonne because waste was often generated in small volumes (i.e., less than 55 gallons) and numerous waste items were placed together in the same container either at the generator building or at the WMO. As part of these operations, WMO routinely has and continues to commingle waste from various Argonne primary waste generators, including Buildings 200, 205, 212, 315/316, and 350, as well as small quantities of waste from minor waste generating Buildings 40, 202, 203, 206, 211, 222, 223, 330, 333, 362, 369, 378, 391, 398, and 815. In addition, the WMO manages waste for the entire laboratory and their operating procedures did not require segregation of waste items based on defense or non-defense origin (References 6, 12, 13, AE-I-188, U3003, and U3004).

Table 2. Correlation of Defense Activities to TRU Waste Generating Programs

Defense Activity	Argonne Program	Program Location
Naval reactors development	Reactor research and development	212, 315/316
	DOE Naval Reactors Program support	315/316
	Proof-of-Breeding Program	200
Weapons activities, including inertial confinement fusion	CERMET fuels	212
	Strategic Defense Initiative	212
	Multimegawatt Space Power Reactor	212
	Inertial Confinement Fusion	Site Mission
	Heavy ion fusion program	Site Mission
Verification and control technology	New Brunswick Laboratory	350
Defense nuclear materials production	Breeder Reactors	212
	New Production Reactors	Site Mission
	TRU extraction	200, 205
Defense nuclear waste and materials by-products management	TRU extraction/strontium extraction	200, 205
	Liquid Metal Fast Breeder Reactor /Integral Fast Reactor	212, 315/316
	Formerly Used Sites Remedial Action Program	Site Mission
	Waste isolation monitoring	Site Mission
	Waste source term monitoring	200
	Isotope separation	200
	Nuclear waste by-product recovery	200
	Yucca Mountain Project support	200
	WIPP actinide/brine solubility studies	205
	Waste form performance (ceramicrete, glass, ceramics, vitrification)	205
		200, 205
	TRU waste treatment and repackaging from Buildings 200, 205, 212, 315/316, and 350	350
Defense nuclear materials security and safeguards and security investigations	Integral Fast Reactor	205, 315/316
	Reduced Enrichment Research/Test Reactor	Site Mission
	New Brunswick Laboratory	350
Defense research and development	Reactor research and development	212, 315/316
	Breeder reactors	212, 315/316
	New Production Reactors	Site Mission
	Strategic Defense Initiative	212
	Multimegawatt Space Power Reactor	212

As described in 4.2.1, Argonne has provided ongoing support in the development of reactor technology development. The United States has historically operated and continues to operate reactors used for the development of nuclear energy technology. Additionally, these reactors have been utilized to produce radioisotopes for medical, industrial, and military purposes; to generate neutron environments for scientific research; and to conduct irradiation experiments in support of the government's defense, space, fusion, and advanced reactor programs. Collectively referred to as test and research reactors, these facilities have been typically operated by private contractors for the DOE. Mixed oxide, carbide, and alloy fuels for, or tests in, the DOE breeder reactor research and testing program were manufactured with plutonium obtained primarily from DOE production reactors at the Hanford and SRS sites.

DOE test and research reactor facilities include the ANL-W EBR-II, Zero Power Plutonium (or Physics) Reactor (ZPPR), ATR, TREAT, and Hanford FFTF. The ANL-W, Argonne, and LANL hot cell facilities have played a major role in the examination of fuel specimens generated by this program and the AK documentation verifies the ongoing receipt, examination, and management of mixed oxides, carbide, and alloy fuels at the Argonne hot cell facilities (References C046, C074, C124, C301, C302, C304, C330, C812, P002, P394, P520, P585, P586, P815, U009, U040, U076, and U307).

In 1967 the AEC initiated the LMFBR Program for developing and demonstrating fast breeder reactor technology for safe, reliable, and economical energy production. Critical to this demonstration program was the design, development, and construction or modification of facilities capable of manufacturing, testing, and examining these reactor materials. The first challenge was the procurement and development of domestic commercial capabilities to manufacture mixed oxide fuel to support the plans for future commercial reactors. To this end, the AEC awarded contracts to Kerr-McGee and NUMEC (a division of Babcock and Wilcox), to manufacture mixed oxide fuel pins for this program. Between 1968 and 1979, Kerr-McGee and NUMEC produced mixed plutonium-uranium fuels for the LMFBR Program (References C331, P016, P394, and P587).

The ANL-W EBR-II and Hanford FFTF reactors were the most important facilities in the LMFBR Program. The FFTF was constructed to produce higher neutron flux and testing capabilities than produced by EBR-II. The FFTF's unique capability allowed for closed-loop testing of a variety of fuels, control materials, and structural materials in a controlled fast neutron flux environment approximating that required for the development of fast breeder commercial power generation. Ongoing examination with LMFBR mixed fuel specimens originating from NUMEC, FFTF, and EBR-II have been conducted in the Argonne hot cell facilities. These hot cell facilities continue to manage mixed fuel specimens received at Argonne between 1965 and 1995 (References C124, C138, C305, C330, C812, C2007, P394, P586, U007, U011, U012, U040, U076, U307, and U1003).

During its ten years of operation (1982-1992), the FFTF supported a variety of experiments associated with industrial, nuclear energy (domestic and international), nuclear defense, and medical research and development. Several projects were identified having defense applications, including a series of tests to evaluate tritium production by the irradiation of lithium oxide targets. This joint venture with Canada and Japan assessed tritium production from these proposed breeder materials in a fusion facility. The Multiple Isotope Production project generated physics data on plutonium-238 isotope production and also demonstrated the capability of the FFTF to produce more than 20 other isotopes for defense, medical, and industrial programs. In 1992, defense missions proposed for the FFTF included large-scale tritium production projects, continued defense isotope production, waste burn experiments, and defense nuclear waste transmutation (References C331 and P587).

EBR-II supported ongoing defense experiments conducted throughout the 30-year operating life of the reactor (1964-1994). In 1968-1969, the reactor was converted to a fast-reactor irradiation test facility. Test fuels and materials were placed in the core assemblies identical to those holding the driver fuel assemblies. In addition to supporting the LMFBR Program, numerous experiments were conducted for defense applications, including support of the Bettis Atomic Power Laboratory dedicated to supporting the Naval Nuclear Propulsion Program. Other defense program experiments conducted at EBR-II included radiation of thermionic elements and tritium production test materials. During its final year, experiments included a cooperative effort between LANL and LLNL to demonstrate disposition of weapons plutonium in a fast reactor (Reference P599).

The EBR-II, TREAT, ZPPR, and FFTF reactors also supported the irradiation of experimental fuel pins manufactured at LANL as part of the SP-100 Fuel Pin Irradiation Testing program during the late 1980s and early 1990s. This program, initiated in 1983, was jointly funded by National Aeronautics and Space Administration, DOE, and the Strategic Defense Initiative Organization (SDIO). The SDIO (better known as the "Star Wars" program) was established to pursue technology in the development of a viable and comprehensive ballistic missile defense program. The SP-100 program's objective was to verify and validate the design of a compact, fast-spectrum nuclear reactor fuel for a broad range of national defense-related space applications. Even though the primary mission of the DOE test and research reactors was focused on the development of commercial energy technology, the reactors had an underlying defense mission and ongoing defense research and development experiments were conducted in these facilities (References C068, C074, C329, C330, C331, C812, C2005, C2007, C2011, C2022, C2023, C2024, P584, P588, P2032, P2033, P2034, U067, U068, and U330).

In 1978, the RERTR Program was established by the DOE at Argonne to minimize the use of highly-enriched uranium in civil nuclear programs. RERTR is a nuclear nonproliferation program currently administered by the NNSA in coordination with the Department of State, the Arms Control and Disarmament Agency, and the NRC. The primary mission of this international program is to develop the technology required for use of low-enrichment uranium for use in test and research reactors to reduce the amount of highly-enriched uranium available for weapons production. Numerous fuel samples fabricated at ANL-W and irradiated in reactors including the ATR have been received and examined at Argonne (References C073, C124, C157, P010, P029, P373, P374, P375, P520, P551, P575, P583, P599, P606, P607, P815, P816, P817, P822, P826, P827, P829, P2032, P2033, P2034, U003, U007, U076, and U830).

Argonne also received IFR plutonium-uranium-zirconium metallic alloy fuel specimens from the EBR-II, TREAT, and FFTF facilities. The IFR mission included goals to improve nuclear power with respect to safety, waste management, fuel efficiency, and proliferation resistance fuels. Like RERTR, the IFR Program supported the DOE nonproliferation mission by creating a closed loop reactor system making it unnecessary

to move fuel on or off the reactor site during the 30 to 40 year life cycle of the plant. The IFR Program began in 1983 and ran through September 30, 1994 (References P008, P010, P017, P603, P2032, P2033, P2034, and U003).

In addition to the defense support described above, the following defense related experiments were supported by Argonne (References 16, C006, C011, C068, C092, C103, C124, C152, C305, C335, P028, P320, P325, P329, P389, P520, P585, P599, P815, P819, P821, P2029, P2030, U001, U003, U007, U023, U040, U045, U076, U307, U1003, U2002, and U2004):

- Hanford research involving the examination of N-Reactor fuel to obtain data relating to corrosion characteristics and corrosion rates of the fuel and cladding. This research was needed to support the design, transportation, and interim storage of fuels, in addition to addressing questions related to behavior of fuels during staging and stabilization.

- Naval Research Laboratory research involving the examination of specimens from the Knolls Atomic Power Laboratory and Bettis Atomic Power Laboratory irradiated in the ATR. Experiments included the examination of blanket fuel plates and auger analysis of irradiated corrosion samples. The ATR is the principal irradiation facility for the development of naval reactor fuels and materials.

- Support of the LWBR to develop technology to significantly improve the utilization of the Nation's fuel resources by combining the established commercial Pressurized Water Reactor technology with a thorium/uranium-233 oxide binary fuel system. This program was conducted under the technical direction of the Naval Reactors Program.

- Gulf General Atomic has been listed as a sponsor for defense-related programs at ANL-W that have sent fuel specimens to Argonne. Specifically, oxide fuel designated G1-7 received was listed as defense-related by an ANL-W defense determination.

- Lithium containing specimens (IRIS, LILAC, and LILY) irradiated at the ATR to generate tritium as part of classified defense research and development activities (naval reactor development and defense nuclear materials security).

In addition to combining waste materials during the ongoing destructive examination of materials from different programs, fuel dust generated during cutting, grinding, and polishing activities would remain in the hot cell examination area contaminating hot cell surfaces and equipment. This contamination would remain in the area to commingle with wastes generated during subsequent examinations. Separation of contamination from destructively examined specimens was not and is not a possibility due to various factors such as the open atmospheric conditions within the cell, contamination of handling equipment including manipulator arms, the nature of ongoing work being in the

hot cell, and continuing management of historical fuel specimens. As a result of the WMO waste management practices and analytical nature of the operations conducted in these areas, segregation of cross-contaminated non-defense waste from defense-related waste was not conducted and is not feasible. Therefore, waste streams ID-AECHDM and ID-AECHHM are eligible for disposal at WIPP as a commingled defense waste stream generated "in part" by the atomic energy defense activities described in this section (References C001, C004, C007, C036, C125, C301, C302, C303, C304, C305, P001, P002, P025, P394, P396, P414, P469, P532, P557, P3001, P3002, P3003, and P3004, U001, U013, and U307).

4.3.2 Spent Nuclear Fuel and High-Level Waste Assessment

Public Law 102-579, *WIPP Land Withdrawal Act* (Reference 17) prohibits the disposal of spent nuclear fuel and high-level waste as defined by the NWPA (Reference 16) at WIPP. According to the NWPA, spent nuclear fuel is "fuel that has been withdrawn from a nuclear reactor following irradiation, the constituent elements of which have not been separated by reprocessing." DOE M 435.1, *The DOE Radioactive Waste Management Manual* (Reference 18) expands on this definition to clarify that "Test specimens of fissionable material irradiated for research and development only, and not production of power or plutonium, may be classified as waste, and managed in accordance with the requirements of this Order when it is technically infeasible, cost prohibitive, or would increase worker exposure to separate the remaining test specimens from other contaminated material." These CH waste streams do not contain the intact irradiated fuel pin test specimens that were managed separately from the hot cell waste. Additionally, these streams do not contain test residues, test materials, and the resultant test fragments from the fuel pin test specimens, including irradiated pin fragments and dispersed particulate (fines and dust) that are managed as RH waste (References 6, 12, 13, U3003, and U3004).

High-level waste is defined by the NWPA as "the highly radioactive material resulting from the reprocessing of spent nuclear fuel, including liquid waste produced directly in reprocessing and any solid material derived from such liquid waste that contains fission products in sufficient concentrations, and other highly radioactive material that the Commission, consistent with existing law, determines by rule requires permanent isolation." Even though reprocessing research associated with UREX separations was performed in the K-Wing of Building 205, these research laboratory operations were not production operations involving the separation or reprocessing of constituent elements from reactor fuel and the CH waste does not include the high level fission products. Therefore, the waste associated with these operations is not high-level waste and is eligible for disposal at WIPP as RH TRU waste (References 6, 12, 13, U3003, and U3004).

4.4 Description of Waste Generating Processes

4.4.1 Argonne Laboratory Operations

As described in Section 4.2.1, Argonne is a multi-disciplinary research laboratory that performs work in support of numerous areas of basic and applied sciences; including engineering, energy technology, chemistry, physics, materials, biomedicine, and environmental studies. Waste streams ID-AECHDM and ID-AECHHM consist of debris and homogeneous waste repackaged by the WMO in Building 306 generated during Argonne maintenance and waste management operations originating from numerous facilities on site over decades of research and development support in the laboratories and hot cells in these facilities. Due to the generally short-term and research and development nature of these numerous and ongoing TRU waste generating operations, development of a comprehensive description of all of these historic operations and processes is not feasible. However, extensive research relating to the general operations conducted in these buildings was performed to allow for adequate physical, radiological, and chemical characterization of these waste streams during the repackaging of these waste materials described below and presented in Section 5.0 and 6.0. Tables 1 and 2 provide a summary of processes and responsibilities associated with the operations conducted at Argonne. Table 7, Argonne TRU Waste Operations Chemical Identification and Use Summary, provides a comprehensive list of chemicals and materials utilized during operations conducted in the Argonne facilities involved in TRU waste generation.

Facility maintenance operations may include routine or one-time operations to repair or replace equipment or to clean out facilities. They may also encompass D&D activities, facility modification activities, or daily maintenance activities. Debris waste was generated during maintenance operations at various facilities (References 6, 12, 13, U3001, U3003, U3004, and U3005). Generators of this waste include CMT in Buildings 200 and 205; CHM in Building 200; the Energy Technology Division in Building 212; the Reactor Research and Development Group in Buildings 315/316; and NBL in Building 350.

Due to the number and nature of the research and development projects performed at the Argonne site, development of a comprehensive process flow diagram was not feasible; however, the physical, chemical, and radiological properties of waste items was assessed to assure that these items were consistent with the activities that were determined to generate TRU waste materials at Argonne.

4.4.1 Argonne Waste Repackaging Process

The waste repackaging operations generating waste streams ID-AECHDM and ID-AECHHM for shipment to AMWTP were conducted by the Argonne WMO in the A160 hood (debris sorting and packaging) and A126 hood (liquid immobilization and packaging) in Building 306. These operations were conducted in accordance with WMO procedures and work plans and all packaging operations were video and audio

recorded to verify and document the physical form of the waste, waste stream description, and absence of prohibited items (References C3003, P3001, P3002, P3003, and P3004).

As described above, the waste being repackaged by WMO originated from numerous TRU waste generating operations conducted in several facilities at Argonne and was transferred to the WMO for processing in a variety of containers ranging from less than a liter to 55-gallon drums, with a majority of the containers being less than five gallons. Debris waste was removed from these original "feed" containers and inspected before being placed into the payload container. As described below, liquid waste was neutralized (as necessary), sampled, and solidified before being placed in the receiving drums. As described in Sections 5.4.4 and 6.4.4 all prohibited items were identified at this time and either segregated or remediated prior to packaging. Additionally, 20 pounds of absorbent were typically added between the drum and liners and in the liner to absorb any condensation that may accumulate after packaging. A waste material parameter (WMP) weight estimate and a description of each waste item placed into the receiving container was documented on the Waste Container Packaging forms (References C3003, P3001, P3002, P3003, P3004, and U3004).

CH TRU liquid wastes were bulked, neutralized (if necessary), and solidified for shipment to AMWTP. The organic liquids consisted primarily of extraction solvents (e.g., tributyl phosphate, dodecane, crown ether, ethyl hexanol, kerosene). Organic liquids were typically solidified using Petroset II-G. Aqueous liquids were typically solidified with Aquaset II-G. Multi-phase liquids were separated prior to solidification to ensure proper immobilization. Bench-scale bulking of these wastes was performed for volumes too small for operation of the bulking tub or the reactor tank. For larger volumes, up to approximately 13 gallons, bulking and neutralization was performed using a bulking tub. For liquid volumes greater than 13 gallons, but less than 120 gallons, bulking and neutralization were performed in a reactor tank (References C3003, P3004, U3004, and U3005).

For the neutralization of corrosive liquids, a WMO Waste Specialist completed additional Calculation Data Sheets, as needed. These data sheets include the chemical requirements for neutralization and solidification. Before treatment, each waste container was transferred to Room A-134 and examined for leaks or other damage and to conduct radiation and contamination surveys. The waste containers were then transferred to the treatment hood in Room A-126. Bulking of wastes was conducted and magnesium hydroxide slurry (60 percent) was added to the bulked waste to neutralize the acidity and increase the pH to the range of 7 to 10. Liquids with a pH greater than 9 were neutralized with acid. Before neutralization, a sample was taken for radiochemical analysis. The waste liquids were solidified in-situ in 1-gallon cans or immobilized in trays and placed directly in 55-gal drums. The absorbent to waste ratio is 1.0 gram Aquaset II-G per 1 milliliter waste or 8.3 pounds of absorbent to one gallon of waste. Sections 5.5 and 6.5 describe the waste packaging configuration for waste streams ID-AECHDM and ID-AECHHM, respectively (References C3003, P3001, P3002, P3003, and P3004).

4.5 TRU Waste Management

Argonne generated waste streams ID-AECHDM and ID-AECHHM under an established and controlled waste management program. This program is defined by a series of procedures that were implemented by the Argonne waste generators and WMO. The following sections describe the waste management operations and procedures associated with TRU waste streams. Sections 5.5 and 6.5 provide a description of the packaging operations and the configuration of the drums included in these waste streams.

To ensure the Argonne waste met INL Waste Acceptance Criteria, a waste profile was completed and approved prior to shipment. The waste described in this report was transferred from Argonne to INL in September 2011. The waste is stored at the RWMC TSA, where WIPP characterization activities are conducted under CCP QA procedures prior to shipment to WIPP, including real-time radiography (RTR), visual examination, nondestructive assay (NDA), solid sampling, and headspace gas sampling. Since repackaging of the Argonne waste is not expected, additional INL waste management processes are not expected to be implemented.

4.5.1 Types of Quantity of TRU Waste Generated

Waste stream ID-AECHDM consists of 40 drums of predominantly organic and inorganic debris. Sections 5.2 and 5.4 provide the waste stream volume and type of waste materials included in the waste stream, respectively.

Waste stream ID-AECHHM consists of 30 drums of predominantly solidified organic and inorganic liquids. Sections 6.2 and 6.4 provide the waste stream volume and type of waste materials included in the waste stream, respectively.

The waste stream described by this report is characterized as TRU mixed waste under RCRA. The specific containers in this waste stream are provided in the Waste Containers List.

4.5.2 Waste Identification, Categorization, and Delineation

The Argonne Waste Acceptance Criteria is described in the *Waste Handling Procedures Manual* (Reference AE-P-011). Although NBL is operated separately from Argonne by DOE, internal documents require NBL to follow the requirements of the *Argonne Waste Handling Procedures Manual* (References AE-I-160 and AE-P-105). The manual states that waste generators have the primary responsibility for compliance with the Argonne Waste Acceptance Criteria, including characterizing their waste by completing the WMO-195 and WMO-195A forms. Each WMO-195 form has a unique identification number/barcode that is used for waste tracking. The barcode label must be affixed to the container of TRU waste represented on the WMO-195 form

(References AE-P-011, AE-P-095, and U3003). The manual requires training for all TRU waste generators in waste generation planning, segregation, container management, and characterization (Reference AE-P-011).

The WMO-195 form requires the following information be provided for TRU waste (Reference AE-P-011):

- Generator location (division, building, room, program)
- Approved container type
- Radionuclide content and the method of determination
- For liquid waste: the amount, pH, and flashpoint
- Waste contents (physical contents and chemical makeup, as applicable)
- Dose rate
- Special materials accountability information
- Generator certification of accuracy and completeness

The WMO relies primarily on waste generators to characterize their waste based on process knowledge, as documented on the WMO-195 and WMO-195A forms (Reference AE-P-011). During review and approval of the forms, a waste specialist in the Waste Management Technical Support (WMTS) Group verifies whether or not waste is TRU and hazardous (i.e., mixed), based on the information provided by the generator for radionuclides, radionuclide determination method, liquid waste, and waste contents (References AE-C-006 and AE-P-095). If the waste is indicated as TRU on the forms, a review of the radionuclide listing and quantity is performed to verify that TRU concentration exceeds 100 nanocuries per gram (nCi/g) of waste. If the waste is not indicated as TRU, a review of the radionuclide listing is performed to determine if TRU isotopes are present. If TRU isotopes are present, the WMTS Group may arrange for a TRU determination to be performed by WMO. This is accomplished by weighing the waste container and then calculating the concentration of TRU isotopes in the waste. TRU calculations performed by WMO are documented on the WMO-195 form. WMO makes the TRU determination from the information provided by generators on the WMO-195 forms with the understanding that actual assay results may vary considerably. Because of this, WMO may manage waste as TRU even if the WMO-195 forms indicate activity concentrations ~ 10 nCi/g. If the waste is managed as TRU, then it is also labeled as TRU. If, for any reason, waste is segregated from the TRU waste stream and managed as low-level waste, it is not re-integrated into the TRU waste stream for disposal at WIPP (Reference AE-C-043).

The WMTS Group also reviews the information provided by the generator concerning the nature of liquid waste and waste contents (Reference AE-P-095). Based on this information, they determine whether or not the waste is hazardous (i.e., mixed) and indicate the appropriate hazardous waste numbers on the WMO-195 form. They may also enter the appropriate waste stream category in the WMS (References AE-C-005 and AE-P-095).

In the event that an "uncharacterized material" is discovered, WMO staff assists in determining the nature of the material (Reference AE-P-011). An attempt is made to characterize the material using process knowledge. However, if adequate process knowledge does not exist to complete the required WMO-195 and WMO-195A forms, the material is characterized using radiation measurements, nondestructive analysis, nondestructive examination (NDE), and sampling and analysis, as needed (Reference AE-C-006). The results are documented on the WMO-195 and WMO-195A forms and the information is entered into the WMS (References AE-P-095, U3003, and U3004).

The *Waste Handling Procedures Manual* requires that waste generators segregate TRU waste from other types of waste (e.g., low-level waste) (Reference AE-P-011). TRU waste must be placed only in approved and properly labeled containers. All containers used to accumulate or package TRU waste must bear the "TRU label," as provided in the *Waste Handling Procedures Manual.*

The WMO Operations Section is responsible for picking up TRU waste from the generator (Reference AE-P-011). As part of this process, operators verify that the waste containers match the description provided by the generator on the WMO-195 form (i.e., barcode, container type, location) (References AE-P-011 and AE-P-095). TRU waste is identified and administratively segregated in the WMS so that it can be properly tracked (References 6, U3001, U3003, U3004, and U3005). TRU waste is also clearly labeled in storage so that it can be physically identified and segregated (References AE-P-011 and AE-P-095).

WMO routinely treats and repackages TRU waste to provide more efficient packaging and to meet WIPP-WAC requirements. The most common treatment methods employed by WMO are liquid waste neutralization and solidification/absorption and solid waste compaction. Machine compacted waste is prohibited in waste packaged for final disposition at WIPP, as described in Section 6.4.4, Prohibited Items. As part of these operations, WMO routinely commingles waste from different Argonne generators. Commingling of liquid waste during the neutralization and solidification/absorption operations is especially common since this type of waste is normally received in small quantities (e.g., milliliter quantities up to several gallons). In addition, WMO may commingle and consolidate debris waste received in small quantities into single containers (e.g., 55-gallon drums). All waste treatment and repackaging activities are documented on the WMO-195 form and the information is entered into the WMS (References 6, AE-I-156, AE-I-188, AE-P-095, P3001, P3002, P3003, and P3004).

WMO also treats or repackages waste to address or remove WIPP-prohibited items or nonconforming waste packaging, as needed. This may include venting sealed containers or heat-sealed inner layers of confinement and repackaging waste from temporary bins or temporary drums into other containers for final disposal. These activities are also documented on the WMO-195 forms and the information is entered into the WMS (References AE-I-156, AE-P-095, U3003, and U3004).

CH waste streams ID-AECHDM and ID-AECHHM to be shipped to AMWTP are repackaged in accordance with WMO-DOC-6, *Packaging CH-TRU Waste for Shipment to Idaho National Laboratory (INL) and Final Disposition at the Waste Isolation Pilot Plant (WIPP)* (Reference P3001) and specific waste processing and packaging procedures (References P3002, P3003, and P3004). These procedures generate the container-specific documentation for each repackaged container to be shipped to INL utilizing the data from the original container documentation from the WMO-195 forms in conjunction with the waste packaging, processing (e.g., neutralization and solidification), and analytical data generated by the WMO during repackaging operations. A Waste Container Packaging Form was generated for each container shipped to AMWTP.

4.5.3 Correlation of Waste Streams Generated from the Same Building and Process

The CH TRU waste originally generated at Argonne and shipped to WIPP consisted of 373 55-gallon drums of debris (waste stream AECHDM) and 55 55-gallon drums of homogeneous solids (waste stream AECHHM). These streams were packaged and shipped to WIPP during the 2000 to 2003 time frame. Waste streams ID-AECHDM and ID-AECHHM consist of correlating waste type materials not repackaged during the initial campaign (e.g., organic liquids) and additional waste materials generated and repackaged after the initial campaign for drums sent directly to WIPP (References 6, 7, and 8).

In addition to CH TRU waste generated at Argonne, RH TRU debris waste streams originating from Buildings 200, 205, and 212 hot cell operations have been certified and shipped to WIPP from Argonne (waste stream AECHDM) and INL (waste stream ID-ANLE-S500). These waste streams are described in AK Summary Reports CCP-AK-ANLE-500 and CCP-AK-INL-500, respectively (References 12 and 13)

Because of the way in which TRU waste has been managed at Argonne, it is not practical to segregate waste streams by generator building. The WMO routinely commingled waste from numerous generators in a single drum for efficient storage. This is due to the fact that waste is often generated in quantities much less than 55-gallons. Because liquid waste from laboratory operations was solidified at Building 306 to generate the homogeneous solids waste stream, debris waste streams from these laboratories may be correlated to the homogeneous waste stream due to the secondary debris from solidification operations was included in the debris waste containers.

The Argonne records have been reviewed for each container to verify the physical composition and origin of each repackaged waste container. It is assumed that all the waste items in these streams have been generated through facility maintenance and laboratory operations described in this report. Therefore, it has been determined that every container included in the most current Waste Containers List for each waste stream meets the WIPP-WAP definition of waste material that is similar in material, physical form, and hazardous constituents generated from a single process or from an activity (historic laboratory and associated maintenance waste management).

Waste stream ID-AECHDM can be correlated to the ATWIR Identification Number AE-T001 and waste stream ID-AECHHM to ATWIR Identification Number AE-T003 (Reference 10).

4.5.4 Waste Certification Procedures

The WMO at Argonne operates under an established waste management program that addresses the identification, characterization (using process knowledge), treatment, packaging, and storage of TRU waste. This program is described in the *Argonne Waste Handling Procedures Manual* and was established in 1982. It has undergone numerous revisions since its inception to address new and changing waste characterization requirements. This program, in its current and previous forms, was used to manage all of the TRU waste in storage at Argonne. Even though the specific waste management practices and associated documentation has varied over time, general waste generator responsibilities include the following (References AE-P-011 through AE-P-020 and P055):

- Keeping the amount of radioactive wastes to a minimum by early planning.
- Maintaining knowledge of waste handling procedures.
- Planning for proper waste production, discussing any unique or large quantities of this waste with the WMO Manager, and informing Health Physics, Special Materials Group, and WMO of waste that was "non-routine" in nature.
- Segregating wastes by separating TRU waste from non-TRU waste.
- Placing radioactive wastes into acceptable receptacles to assure segregation requirements were met.
- Providing information about the waste as requested on the appropriate waste packaging forms.
- Arranging with WMO to load shipping containers.
- Requesting radiation surveys of filled receptacles by contacting Health Physics.
- Managing filled waste receptacles as required by Health Physics to confirm that no materials were added once the Waste Disposal Requisition documentation had been completed.
- Labeling of waste containers with the Waste Disposal Requisition serial number.

The Argonne waste management program is governed by an established QA program as described in the *Quality Assurance Plan for ANL-E Waste Management Department* (Reference AE-P-092). The WMO uses a graded approach to determine applicable QA

requirements. The current QA Plan addresses applicable aspects of 10 Code of Federal Regulations (CFR) 830.120, "*Quality Assurance*" (Reference 19). Earlier versions of the QA Plan addressed applicable aspects of 10 CFR 830.120 (as DOE Order 5700.6C) or *Quality Assurance Program Requirements for Nuclear Facilities* (Reference 20), and was first established in 1984 (References AE-P-093 and AE-P-094). This QA program, in its current and previous forms, was used to manage all of the TRU waste in storage at Argonne.

The Argonne waste management program is implemented by a set of standard operating procedures included in the *Waste Management Operating Procedures Manual*, which was first established in 1991 (References AE-P-095 through AE-P-103). Prior to that time, waste management operators relied on the description of the waste management program contained in the Waste Handling Procedures Manual. Implementation of the program is documented on the WMO-195 form, "WMO-195 Radioactive and Mixed Waste Disposal Requisition" (or previous versions of this form) for all of the TRU waste in storage at the site (References AE-I-156 and U3003).

In the CCP program under which the subject waste streams will be certified for shipment to WIPP, CCP-TP-005 (Reference 5) directs compilation of AK. CCP certifies TRU waste under the program described in CCP-PO-002 (Reference 3).

5.0 REQUIRED WASTE STREAM INFORMATION: ID-AECHDM

This section presents the mandatory TRU waste stream specific information required by the WIPP-WAP for waste stream ID-AECHDM. The area of generation, waste stream volume, period of generation, prohibited items, waste packaging, and the physical, chemical, and radiological composition of the waste stream are described.

5.1 Area and Building of Generation

Waste stream ID-AECHDM consists of debris waste repackaged by WMO in Building 306 originated from Argonne laboratory and maintenance operations described in Section 4.0. Review of the container-specific records was performed to verify the generation location for each drum shipped to AMWTP (References U3003 and U3004).

5.2 Waste Stream Volume and Period of Generation

Waste stream ID-AECHDM is mixed heterogeneous debris consisting of repackaged waste from laboratory and maintenance operations at Argonne packaged by the WMO in Building 306. Table 3, Waste Stream ID-AECHDM Volume, identifies the containers in the waste stream shipped to INL (Reference U3005).

The 55-gallon drums in waste stream ID-AECHDM were packaged beginning in July 2010 through September 2011. The historic Argonne laboratory waste contained in the feed containers repackaged during the CH repackaging campaign were received by the WMO as early as January 1989 (References U3003 and U3004).

Table 3. Waste Stream ID-AECHDM Volume

	Containers	Volume (cubic meters)
ID-AECHDM Inventory	40 55-gallon drums	8.0

The current inventory of drums verified to be eligible for shipment to WIPP is included in the Waste Containers List for waste stream ID-AECHDM.

5.3 Area and Building of Generation

Historic process operations, waste management operations, and the buildings were TRU wastes were generated at Argonne is described in Section 4.0. Packaging of the TRU waste stream ID-AECHDM in Building 306 is described in Section 5.5.

5.4 Types of Wastes Generated

This section describes the waste materials based on process inputs and outputs, waste matrix code assignment, waste material parameter weight estimates, radionuclide

contaminants, hazardous waste determinations, and prohibited items for waste stream ID-AECHDM.

5.4.1 Materials Related to Physical Form

Waste stream ID-AECHDM consists of repackaged mixed heterogeneous debris generated during laboratory and maintenance operations at Argonne. The debris waste consists primarily of organic and inorganic laboratory debris. Based on a review of the feed container and final 55-gallon drum packaging documentation drums, in waste stream ID-AECHDM may include the following waste materials (References 6, C3003, P3001, U3001, U3003, and U3004):

- **Metal** materials include the following: aluminum, stainless steel, and iron items; cans, lids, trays, wire, targets, disks, gauges, pipe, fittings, valves, bolts, clips, screws, tubing, tools (e.g., forceps, vise, tweezers, scissors, pliers, razor knives, and saw blades), screens, planchettes, foil, columns, racks, unistruts, and pressure cookers.

- **Other metal** materials include the following: copper, lead, brass items; pipe, tubing, fittings, sheeting, shot, and boxes.

- **Other inorganic materials** include the following: glass and ceramic items; bottles, jars, labware (e.g., pipettes, vials, flasks, beakers, and test tubes), crucibles (magnesium and beryllium oxide), leaded glass panes, and insulation (fiber glass and asbestos).

- **Cellulosic** materials include the following: paper, cardboard, cloth, and wood items; rags, towels, filters, cartons, boxes, PPE (e.g., suits and booties), lab coats, gloves (leather), and handles (wood).

- **Rubber** items include: gloves, tubing, o-rings, stoppers, cords, and gaskets.

- **Plastic** items include: bottles, lids, labware (vials, pipettes, and syringes), tubes, PPE (e.g., gloves, filter cartridges, tape), bags, sheeting, epoxy sample/source mounts, and rope (nylon).

In addition, the following specific waste items were identified during the review of the container documentation; smoke detectors, circuit boards, alkaline batteries, strippable paint, pumps, electric motors, high efficiency particulate air (HEPA) hood filters, floor sweepings, mercury and incandescent light bulbs, and light fixtures. The waste stream also contains secondary debris waste items generated during the repackaging of TRU waste, including the processing of homogenous waste stream ID-AECHHM during the solidification of liquid wastes, including empty containers, decontamination materials (rags), PPE, and any other debris materials generated by this operation (References U3003 and U3004).

In addition to the debris materials described above, waste stream ID-AECHDM also contains lesser amounts (less than 50 percent in any container) of homogeneous organic and inorganic materials from laboratory operations. Clay and vermiculite based absorbents were used during the neutralization and evaporation of acids, etchants, and solutions in the laboratories. Solidification agents such as Portland cement, Acid Bond, Aquaset, Petroset, or Petrobond may have been used to immobilize some liquids. In addition, as much as 20 pounds of precautionary absorbent (e.g., Aquaset) have been added to the containers. Absorbent pads (Quicksolid pads) have also been used during the packaging of containers. Lesser amounts of soil and gravel materials were also noted during the packaging of containers in this waste stream. Drums containing more than 50 percent by volume of homogeneous solids were excluded from this waste stream and assigned to waste stream ID-AECHHM (References 6, C3003, DR3002, P3001, U3001, U3003, U3004, and U3005).

5.4.1.1 Waste Matrix Code

Based on the evaluation of the materials contained in historic CH debris waste, Argonne waste management practices, and current container documentation, waste stream ID-AECHDM is comprised of greater than 50 percent heterogeneous inorganic and organic debris. Therefore, Waste Matrix Code S5400, Heterogeneous Debris, is assigned to the waste stream. Although the waste stream, as a whole, is comprised of more than 50 percent heterogeneous debris, any drum may include nearly any percentage of the waste material parameters listed in Table 4, Waste Material Parameter Estimates for ID-AECHDM, except that no individual drum contains greater than 50 percent homogeneous solids (References 21, C3002, DR3002, and U3004).

5.4.1.2 Waste Material Parameters

The WMP weight estimates for waste stream ID-AECHDM were derived using the certified data for the 373 drums of debris packaged and sent to WIPP in waste stream AECHDM during the 2000 to 2003 time frame. The WMPs for the waste stream were estimated by using the characterization data from AECHDM contained in the WIPP Waste Information System/Waste Data System (WWIS/WDS). Average, minimum, and maximum WMP weight percentages were calculated using the WWIS/WDS data, and the results of this analysis are presented in Table 4 (Reference C3002).

Table 4. Waste Material Parameter Estimates for ID-AECHDM

WMP Description	Average Weight Percent	Weight Percent Range
Iron-based Metals/Alloys	51.1%	0.0% - 90.5%
Aluminum-based Metals/Alloys	0.9%	0.0% - 47.5%
Other Metals/Alloys	4.1%	0.0% - 46.0%
Inorganic Matrix	1.8%	0.0% - 82.3%
Organic Matrix	<0.01%	0.0% - 76.2%
Other Inorganic Materials	4.3%	0.0% - 85.5%
Cellulosics	3.7%	0.0% - 60.0%
Plastic (waste materials)	26.7%	0.0% - 100%
Rubber	7.3%	0.0% - 83.5%
Soils/Gravel	0.1%	0.0% - 22.2%
Total Inorganic Waste Average	**62.3%**	
Total Organic Waste Average	**37.7%**	

5.4.2 Radiological Characterization of Waste Stream ID-AECHDM

Radiological information is reported by generators on waste requisition forms and may include information on inner containers within a waste drum. The information may be based on (References 6 and AE-I-156):

1) Process knowledge and percent recovery.
2) Radioactive analysis of the waste.
3) Waste container log-book records.
4) Surface dose rate calculations.
5) Conservative suspect-contamination estimates.
6) Other methods (explained by the generator).

The radiological information from the waste requisitions was summarized in the WMS. This information was reviewed for waste stream AECHDM and is presented in CCP-AK-ANLE-001 (Reference 6). AECHDM is the corresponding waste stream certified and shipped to WIPP by the previous CCP TRU Waste Certification Program at Argonne. The generator reported radiological data associated with waste stream AECHDM are assumed to be representative of waste stream ID-AECHDM for the purposes of this report.

Information for individual waste containers was used to summarize radiological properties for the waste stream because this waste resulted from numerous experiments and research and development activities rather than from long-term, ongoing, production-related waste generating processes. Argonne did not employ waste identification or categorization schemes relevant to the isotopic composition of the waste. Argonne requires waste generators to report the isotopic composition of their waste on waste requisitions (References AE-P-011 through AE-P-020). Based on information reported by generators on waste requisitions and later entered into the WMS for containers in the previous waste stream AECHDM, the isotopic composition of

the waste is described in this section (References AE-I-156, AE-I-195, AE-I-201, U3002, U3003, and U3005). There are no physical or chemical aspects of this waste stream that could affect the isotopic distribution. The waste was generated by facility maintenance operations and underwent standard waste management practices and packaging. The waste was not treated after generation in a manner that would affect isotopic distribution. The information contained in the WMS was used directly, and no numerical adjustments were made to the data to derive isotopic composition.

The Argonne WMO relies on waste generators to characterize their waste based on process knowledge, as documented on the WMO-195 and WMO-195A forms (Reference AE-P-011). During review and approval of the forms, a waste specialist at WMO verifies whether or not a waste is TRU based on generator information (References AE-C-006 and AE-P-095). If the waste is indicated as TRU on the forms, a review of the radionuclide listing and quantity is performed to verify that TRU concentration exceeds 100 nCi/g of waste. If the waste is not indicated as TRU, a review of the radionuclide listing is performed to determine if TRU isotopes are present (Reference AE-C-043).

The radiological information in the WMS was summarized to determine relative prevalence of radionuclides, based on how often radionuclides were reported by waste generators (Reference AE-I-201). The results of this evaluation are presented as a percentage of the total radionuclides reported for the waste stream. That is, a percentage was calculated that reflects the number of times a radionuclide was individually reported on waste requisitions for the entire waste stream, compared to the total radionuclides reported for the waste stream. For the ten key radionuclides listed in the WIPP-WAC, the following prevalence (rounded to the nearest 0.5 percent) was found:

Am-241	12.5%
Cs-137	3.5%
Pu-238	4.5%
Pu-239	15.0%
Pu-240	9.0%
Pu-242	2.0%
Sr-90	1.0%
U-233	1.0%
U-234	1.0%
U-238	5.5%

Other significant radionuclides for this waste stream based on generator reported data, defined as those radionuclides reported as one percent (rounded to the nearest 0.5 percent) or more of the total, are as follows:

Am-243	4.0%
Cf-249	1.0%
Cm-243	1.5%
Co-60	1.5%
Eu-152	1.5%
Np-237	8.0%
Pa-233	1.0%
Pu-241	7.0%
Ra-226	1.0%
U-235	4.0%

5.4.2.1 Evaluation of Assay Data Related to ID-AECHDM

In addition to generator reported radionuclide data, certified assay data (CCP NDA characterization results) for 373 containers from the previously certified waste stream AECHDM were used to establish relative radionuclide weight and activity for waste stream ID-AECHDM. To determine isotopic ratios, the gram value for each individual radionuclide was summed over the waste stream and then divided by the total radiological mass in the waste stream. This value was converted to a percentage and is presented as the "Total Radionuclide Weight%" on Table 5, Radionuclide Distribution for Waste Stream ID-AECHDM. In the same way, a calculation was performed for "Total Radionuclide Curie%" using the sum of activities for each radionuclide over the original waste stream. The "Radionuclide Weight% Range for Individual Containers" was determined by summing the total radiological mass in each container and calculating the weight percent of each radionuclide in each container. To determine the range, the maximum and minimum were determined by reviewing the container-by-container assay results for the original waste stream. The same process was applied to determine the "Total Radionuclide Curie% Range for Individual Containers" (Reference U3002).

Table 5. Radionuclide Distribution for Waste Stream ID-AECHDM

Radio-nuclide	Container with Reported Radio-nuclide	Total Radio-nuclide Weight %[1,5]	Radionuclide Weight% Range for Individual Containers[3,5]	Total Radio-nuclide Ci%[2,5]	Radionuclide Ci% Range for Individual Containers[4,5]	Expected in Waste Stream (Yes/No)
WIPP Required Radionuclides						
Am-241	342	0.01%	0% - 99.67%	11.49%	0% - 100.00%	Yes
Pu-238	219	Trace	0% - 6.61%	16.63%	0% - 94.87%	Yes
Pu-239	342	**1.16%**	0% - 100.00%	**21.87%**	0% - 100.00%	Yes
Pu-240	260	0.25%	0% - 70.88%	17.25%	0% - 76.96%	Yes
Pu-242	269	0.01%	0% - 84.21%	0.01%	0% - 26.19%	Yes
U-233	1	Trace	0% - 0.09%	0.01%	0% - 69.15%	Yes
U-234	106	0.01%	0% - 0.33%	0.02%	0% - 57.18%	Yes
U-238	143	**97.68%**	0% - 99.97%	0.01%	0% - 41.90%	Yes
Sr-90	249	Trace	0% - 7.60%	0.33%	0% - 49.53%	Yes
Cs-134	73	Trace	0% - 0.07%	Trace	0% - 6.07%	Yes
Additional Radionuclides						
Ac-228	83	Trace	0% - Trace	Trace	0% - 0.43%	Yes
Ag-110m	1	Trace	0% - Trace	Trace	0% - 5.21%	Yes
Am-243	271	Trace	0% - 85.82%	0.27%	0% - 98.20%	Yes
Bi-212	65	Trace	0% - Trace	Trace	0% - 0.16%	Yes
Bi-213	12	Trace	0% - Trace	Trace	0% - 0.20%	Yes
Bi-214	111	Trace	0% - 0.01%	0.97%	0% - 100.00%	Yes
Cd-109	1	Trace	0% - Trace	0.01%	0% - 20.58%	Yes
Cf-249	115	Trace	0% - 98.33%	0.02%	0% - 91.79%	Yes
Cf-252	15	Trace	0% - 0.48%	Trace	0% - 11.01%	Yes
Cm-243	273	Trace	0% - 1.67%	0.11%	0% - 40.21%	Yes
Cm-244	3	Trace	0% - 2.92%	0.01%	0% - 90.13%	Yes
Co-60	102	Trace	0% - 0.08%	0.06%	0% - 55.55%	Yes
Cs-137	249	Trace	0% - 11.41%	0.32%	0% - 47.39%	Yes
Eu-152	49	Trace	0% - 9.55%	0.09%	0% - 96.87%	Yes
Eu-154	61	Trace	0% - 3.50%	Trace	0% - 39.27%	Yes
Fr-221	3	Trace	0% - Trace	0.02%	0% - 39.59%	Yes
K-40	47	0.16%	0% - 100.00%	Trace	0% - 38.32%	Yes
Mn-54	1	Trace	0% - Trace	Trace	0% - 5.78%	Yes
Na-22	108	Trace	0% - Trace	0.01%	0% - 50.18%	Yes
Np-237	332	0.11%	0% - 100.00%	0.02%	0% - 93.28%	Yes
Np-239	1	Trace	0% - Trace	Trace	0% - 0.12%	Yes
Pb-212	75	Trace	0% - Trace	Trace	0% - 0.06%	Yes
Pb-214	4	Trace	0% - Trace	0.82%	0% - 39.05%	Yes
Pu-241	12	Trace	0% - 0.26%	**29.64%**	0% - 87.44%	Yes
Ra-226	9	Trace	0% - Trace	Trace	0% - 3.27%	Yes
Sb-125	5	Trace	0% - Trace	Trace	0% - 0.03%	Yes
Th-229	13	Trace	0% - 0.08%	Trace	0% - 0.64%	Yes
Tl-208	160	Trace	0% - Trace	Trace	0% - 6.83%	Yes
U-235	174	0.61%	0% - 98.92%	Trace	0% - 0.98%	Yes
Zn-65	1	Trace	0% - Trace	Trace	0% - 2.17%	Yes

1. This listing indicates the total weight percent of each radionuclide over the waste stream.

2. This listing indicates the total activity (curie) percent of each radionuclide over the waste stream.
3. This listing is the weight percent range of each radionuclide on a container-by-container basis. Radionuclide with "0" listed as the lower range indicate that at least one container did not report that radionuclide.
4. This listing is the Ci%range of each radionuclide on a container-by-container basis.
5. "Trace" indicates <0.01 percent for that radionuclide.

To augment the evaluation of certified assay data from the previously certified waste stream AECHDM, non-certified assay data from containers in waste stream ID-AECHDM were evaluated to confirm the relative radionuclide mass and activity for waste stream ID-AECHDM. These assay measurements were obtained from the 40 containers in waste stream ID-AECHDM prior to shipment of these containers from Argonne to the AMWTP. Table 6, Radionuclide Distribution of Non-Certified Data for Waste Stream ID-AECHDM, summarizes the radionuclides identified in the non-certified data of the 40 containers. Table 6 was constructed using the same calculations that were used to construct Table 5, as described in this section above (Reference U3006).

Table 6. Radionuclide Distribution of Non-Certified Data for Waste Stream ID-AECHDM

Radio-nuclide	Containers with Reported Radio-nuclide	Total Radio-nuclide Weight %[1, 5]	Radionuclide Weight% Range for Individual Containers[3,5]	Total Radio-nuclide Curie%[2, 5]	Radionuclide Curie% Range for Individual Containers[4,5]	Expected in Waste Stream (Yes/No)
WIPP Required Radionuclides						
Am-241	40	0.02%	Trace - 54.27%	6.60%	Trace - 87.35%	Yes
Pu-238	36	Trace	0% - 0.04%	2.34%	0% - 3.53%	Yes
Pu-239	39	**3.81%**	0% - 97.28%	**22.50%**	0% - 35.66%	Yes
Pu-240	39	0.34%	0% - 53.49%	7.33%	0% - 45.43%	Yes
Pu-242	36	Trace	0% - 0.13%	Trace	0% - Trace	Yes
U-233	0	0%	0% - 0%	0%	0% - 0%	Yes
U-234	6	Trace	0% - 0.90%	Trace	0% - 0.06%	Yes
U-238	5	**95.24%**	0% - 99.85%	Trace	0% - 0.98%	Yes
Sr-90	37	Trace	0% - 0.10%	0.08%	0% - 13.09%	Yes
Cs-137	37	Trace	0% - 0.16%	0.09%	0% - 13.78%	Yes
Additional Radionuclides						
Am-243	16	Trace	0% - 17.32%	0.02%	0% - 12.11%	Yes
Co-60	2	Trace	0% - Trace	Trace	0% - 0.04%	Yes
Cf-249	14	Trace	0% - 1.43%	0.02%	0% - 20.49%	Yes
Cm-243	14	Trace	0% - Trace	Trace	0% - 1.16%	Yes
Cm-244	2	Trace	0% - 0.03%	0.70%	0% - 11.33%	Yes
Cs-134	3	Trace	0% - Trace	Trace	0% - 0.03%	Yes
Eu-154	8	Trace	0% - Trace	Trace	0% - 1.90%	Yes
Np-237	27	0.09%	0% - 71.25%	Trace	0% - 0.41%	Yes
Pu-241	39	Trace	0% - 0.29%	**60.28%**	0% - 73.83%	Yes
Ra-226	3	Trace	0% - 0.19%	Trace	0% - 0.66%	Yes
Th-229	1	Trace	0% - Trace	Trace	0% - Trace	Yes
U-235	6	0.48%	0% - 56.22%	Trace	0% - Trace	Yes

1. This listing indicates the total weight percent of each radionuclide over the waste stream.
2. This listing indicates the total activity (curie) percent of each radionuclide over the waste stream.
3. This listing is the weight percent range of each radionuclide on a container-by-container basis. Radionuclide with "0" listed as the lower range indicates that a t least one container did not report that radionuclide.
4. This listing is the curie percent range of each radionuclide on a container-by-container basis.
5. "Trace" indicates <0.01 percent for that radionuclide.

5.4.2.2 Prevalent Radionuclides for ID-AECHDM

Based on the evaluation presented in Table 5 and Table 6 above, the two prevalent radionuclides in waste stream ID-AECHDM by mass are U-238 and Pu-239, and the two prevalent radionuclides by activity are Pu-241 and Pu-239 (References U3002 and U3006).

5.4.2.3 Use of Radionuclide Isotopic Ratios for ID-AECHDM

For waste containers where direct measurement does not yield useable isotopic ratio information, AK may be used to supplement direct measurement data in accordance with the WIPP-WAC (Reference 15). The specific use and confirmation of AK related to assay measurements of containers in this waste stream is documented in the memorandum written and jointly approved by the AK expert and NDA Expert Analyst (Reference C3004).

5.4.3 Chemical Content Identification – Hazardous Constituents

This section describes the characterization rationale for assignment of EPA HWNs to waste stream ID-AECHDM. The EPA HWNs assigned to this waste stream are summarized in Table 7, Waste Stream ID-AECHDM Hazardous Waste Characterization Summary.

Table 7. Waste Stream ID-AECHDM Hazardous Waste Characterization Summary

EPA Hazardous Waste Number	Constituent
Toxicity Characteristic Metals	
D004	Arsenic
D005	Barium
D006	Cadmium
D007	Chromium
D008	Lead
D009	Mercury
D010	Selenium
D011	Silver
Toxicity Characteristic Organics	
D019	Carbon tetrachloride
D027	1,4-Dichlorobenzene
D028	1,2-Dichloroethane
D029	1,1-Dichloroethylene
D030	2,4-Dinitrotoluene
D037	Pentachlorophenol
F-Listed Organic Solvents	
F002	1,1,1-Trichloroethane
F002	1,1,2-trichloro-1,2,2-trifluoroethane (Freon TA)
F002	Tetrachloroethylene
F002	Chlorobenzene
F002	Methylene chloride
F002	Trichloroethylene
F004	Nitrobenzene
F005	Benzene
F005	Isobutanol
F005	Methyl ethyl ketone
F005	Toluene

The following sections describe the characterization rationale for the assignment of EPA HWNs to waste stream ID-AECHDM (Reference 22). The assignment of HWNs was based primarily on the original research conducted and AK documentation collected by CCP during the 2002 to 2003 time frame to characterize CH waste streams AECHDM and AECHHM described in AK Summary Report CCP-AK-ANLE-001(Reference 6). This information was augmented by the additional AK documentation collected to support the characterization of RH TRU waste generated during Argonne research and

development activities associated primarily with irradiated materials examination in hot cell facilities in three of the primary TRU waste generating buildings described in this report (Buildings 200, 205, and 212). These hot cell operations generated RH waste currently being shipped to WIPP from Argonne and the Idaho National Laboratory (References 12 and 13). Because these operations were identified as generators of CH waste, this additional AK documentation has been combined with the original sources of AK collected and the assignment of HWNs updated to reflect current CCP HWN assignment conventions. Table 7 includes a comprehensive list of the chemicals associated with TRU waste generating operations based on this evaluation. Notable changes to the HWNs assigned originally to AECHDM, include (Reference DR3001):

- Removal of HWN F003 for solvents listed solely for ignitability in the liquid state.
- Removal of HWN for F001 listed solvents, because large-scale degreasing operations were not conducted in Argonne laboratory operations.
- Addition of HWN D019 and removal of F001 for carbon tetrachloride.
- Removal of HWN D021 (chlorobenzene) and assignment of more specific F002 HWN.
- Addition of D010 for selenium assigned to solidified wastes, because the secondary wastes from the solidification operations would be included in the debris waste stream.
- Addition of HWN D029 for 1,1-dichlorobenzene identified as a potential contaminant during subsequent RH waste characterization.
- Addition of HWN F002 for tetrachloroethylene identified as a potential contaminant during subsequent RH waste characterization.
- Addition of HWN F005 for isobutanol identified as a potential contaminant during subsequent RH waste characterization.

Based on a review of the Argonne container documentation and historic waste management practices, feed containers originally containing waste materials packaged into the waste stream ID-AECHDM drums were historically managed and continue to be managed as hazardous waste (References U3003 and U3004).

Table 8. Argonne TRU Waste Operations Chemical Identification and Use Summary

Chemical/Material	Use/Description	AK Source	EPA HWNs
α, α'-dibromo-p-xylene	Reagent.	AE-I-186	NA
1-decanol	Organic solvent.	AE-I-181, AE-I-182, AE-I-193	NA
1-octanol	Organic solvent.	AE-I-181, AE-I-182, AE-I-193	NA
1,1,1-trichloroethane	Manipulator arm maintenance and cleaning. Cell cleaning solvent. Ingredient of Hyprez lubricant (10-30%)	AE-C-022, AE-I-008, AE-I-011, AE-I-149, AE-I-150, C012, C066, C137, C147, P327,P389, P416, U065, U072, U321	F002
1,1-dichloroethylene	Metallurgical reagent	C147	D029
1,1,2-trichloro-1,2, 2-trifluoroethane (Freon TA)	Used in the Analytical Chemical Laboratory in cold traps and sample preparation.	AE-D-011, AE-I-032, AE-I-124, AE-I-192	F002
1,2-dichloroethane	Metallurgical reagent and organic solvent.	AE-D-012, AE-I-131, C147	D028
1-(2,2,3,3-tetrafluoropropoxy)-3-(4-sec-butylphenoxy)-2-propanol	Cs-7SB modifier.	C2008, P2028	NA
1,2,4-trichlorobenzene	Spiking solution.	AE-I-148	NA
1,2,4-trimethylbenzene	Waste reagent liquid.	U3001	NA
1,4-bifluorobenzene	Standard solution.	AE-I-131	NA
1,4-dichlorobenzene	Spiking solution.	AE-D-012, AE-I-148	D027
1,4-dioxane	Ingredient of Hyprez lubricant (0-1%).	AE-C-022, AE-I-008, AE-I-011, C012, C029, C066, P389, U072, U321	NA
2-chlorophenol	Spiking solution.	AE-I-148	NA
2-ethylhexanol	Organic solvent /contactor cleaning.	C2008, C2009, P2010, P2011, P2013, U2004, U2008, U2009, U2010	NA
2-fluorobiphenyl	Spiking solution.	AE-I-148	NA
2-fluorophenol	Spiking solution.	AE-I-148	NA
2,4-dinitrotoluene	Spiking solution.	AE-D-012, AE-I-148	D030
2,4,6-tribromophenol	Spiking solution.	AE-I-148	NA
4-bromofluorobenzene	Used for tuning GC/MS.	AE-i-131	NA
4-chloro-3-methylphenol	Spiking solution.	AE-I-148	NA
4-nitrophenol	Spiking solution.	AE-I-148	NA
Acenaphthene	Spiking solution.	AE-I-148	NA
Acetic acid	Metallography etchant acid. Electropolishing and etchant acid. Scrub solution. pH control. Degradation product of acetohydroxamic acid.	AE-I-149, C066, C118, C2008, P062, P326, P521, P2022	NA
Acetohydroxamic acid	Pu and Np complexing agent, Np oxidation agent	C2008, P2022, P2023, P2024, P2026, P2028, U2004	NA
Acetone	Metallographic specimen and cell cleaning. Electron microscopy sample preparation. Ingredient in Krylon Spray. Ingredient in Freon TA. Building 205 chemical inventory. Used as a solvent, a reagent, and for cleaning glassware.	AE-C-019, AE-C-022, AE-D-011, AE-I-006, AE-I-015, AE-I-022, AE-I-037, AE-I-057, AE-I-058, AE-I-060, AE-I-061, AE-I-068, AE-I-069, AE-I-078, AE-I-084, AE-I-098, AE-I-107, AE-I-110, AE-I-124, AE-I-126, AE-I-134, AE-I-135, AE-I-147, AE-I-151, AE-I-192, AE-P-044, AE-P-045, AE-P-054, C029, C066, C137, C147, P061, P304, P327, P333, P416, P505, P507, P552, U066, U072, U321	NA
Acetyl cellulose	Electron microscopy sample preparation.	P061	NA
Acid Bond A660 (Acid Bond)	Chemical Sorbent.	C2008, P2010, P2013	NA
Aliquat-336	Quaternary ammonium salt used in solvent extraction	AE-C-023, AE-I-126, AE-I-192	NA
Alumina (aluminum oxide)	Metallurgical sample polishing compound. Mock fuel material in LOCA experiments. Product of UAlx fuel exposed to water. Crucible material.	AE-I-010, AE-I-011, AE-I-047, AE-I-079, AE-I-135, AE-I-195, C025, C137, P509, P2007, U072	NA

Table 8. Argonne TRU Waste Operations Chemical Identification and Use Summary (Continued)

Chemical/Material	Use/Description	AK Source	EPA HWNs
Aluminum	Present in leachate solution. Foil. Block-heater material. Alloy.	AE-I-050, AE-I-079, AE-I-195, AE-P-044, C2007	NA
Aluminum chloride	Reagent.	AE-I-186	NA
Aluminum hydroxide	Identified in waste material.	AE-I-051, AE-I-195	NA
Aluminum nitrate	Reagent.	AE-I-126, AE-I-135, AE-I-192, AE-I-195	NA
Aluminum silicate	Present in leachate solution.	P2003	NA
Ammonia	Lithium passivation reagent.	C066	NA
Ammonium acetate	Stripping agent. pH control.	AE-I-149, P2022	NA
Ammonium bioxalate	Eluent.	AE-I-134, AE-I-135	NA
Ammonium carbonate	Reagent used to produce ammonium salt of Cyanex 301.	P2022, P2028	NA
Ammonium hydroxide	pH control. Neutralization agent. Precipitation agent.	AE-C-023, AE-I-060, AE-I-124, AE-I-126, AE-I-134, AE-I-135, AE-I-140, AE-I-149, AE-I-151, AE-I-192, P2022, P2024, P2027	NA
Ammonium molybdate	Catalyst.	AE-I-035, AE-I-036, U3003	NA
Ammonium molybdophosphate	Column used to remove Cs.	AE-I-195, P2024	NA
Ammonium nitrate	Feed solution. Reagent. Scrubbing solution.	AE-I-117, AE-I-126, AE-I-150, AE-I-192, P2022	NA
Ammonium oxalate	Complexing agent for Pu and Np NPEX strip solution. Precipitation agent. Plating solution.	AE-I-124, AE-I-134, AE-I-135, AE-I-147, AE-I-149, C2008, P2010, P2011, P2013, P2028, U2004, U3003	NA
Ammonium thiocyanate	Reagent.	AE-I-124, AE-I-134, AE-I-135, AE-I-192	NA
Antimony	Contaminant.	AE-I-034, AE-I-036, AE-I-195	NA
Aquaset II-G	Liquid waste immobilization agent.	AE-I-195, AE-P-101, P2010, P3002, P3003, U3003	NA
Arsenazo III	Reagent.	AE-I-184, AE-I-195	D004
Arsenic	Contaminant of HEPA filters and clay absorbent. Present in acidic solutions.	AE-I-184, AE-I-195, C014, P412, U083, U3003	D004
Asbestos	Insulating materials and Transite waste.	AE-I-195, AE-P-095, AE-P-096, U015, U017, U018, U019, U021	NA
Ascorbic acid	Titrant solution. Reducing agent.	AE-I-134, AE-I-135	NA
Bakelite	Waste material.	AE-C-022	NA
Barium	Contaminant of HEPA filters, clay absorbent, and fluorescent bulbs. Present in dissolved fuel. Component of UREX+1a feed. Reagent.	AE-I-126, AE-I-149, AE-I-150, AE-I-192, AE-I-195, AE-I-199, C035, C116, C160, P412, P416, P2017, P2021, P2022, P2023, P2028, U083, U084, U3003	D005
Barium chromate	Waste product	AE-I-149, AE-I-150	D005 D007
Barium chloride	Molten salt solvent	AE-I-028, AE-I-047, AE-I-126	D005
Barium nitrate	Barium carrier	AE-I-149, AE-I-150	D005
Benzene	Laboratory reagent Refluxing solvent for ammonium carbonate and Cyanex 301. Standard solution. Solvent.	AE-D-011, AE-I-131, AE-I-187, AE-I-192, AE-P-044, C147, P2022, U066	F005
Beryllium	Beryllium containing samples.	AE-I-195, C066, C335, P407	NA
Beryllium oxide	Crucible material.	AE-I-050, DR3003, DR3004, U3003	NA
Beta-uranophane	Corrosion product of spent UO^2 fuel reacted with groundwater.	P2001, P2002, P2004	NA
Bicarbonate salts	Present in leachate solution.	AE-I-069, AE-I-195, P2003, P2020, P2030	NA
Bis(2-ethylhexoxy) phosphinic acid (HDEHP)	Extraction agent.	AE-I-184, C2008, P2024, P2026, P2027, U3001, U3003	NA
Bismuth	Waste material.	AE-I-195	NA
Boehmite ($Al^2O^3*H^2O$)	Aluminum oxide scaling that forms on U-Al fuel reacted with water.	P2007	NA
Boric acid	Zinc-Zircaloy interactions specimen preparation.	AE-I-195, P548	NA

Table 8. Argonne TRU Waste Operations Chemical Identification and Use Summary (Continued)

Chemical/Material	Use/Description	AK Source	EPA HWNs
Boron	Present in leachate solution.	P2020	NA
Bromine	Reagent.	AE-I-186, AE-I-187	NA
Bromochloromethane	Standard solution.	AE-I-131	NA
Butyl cellusolve	Microstructural exam etchant reagent. Ingredient of Krylon Spray.	P505, U072	NA
Cadmium	Contaminant of HEPA filters and pelletized clay. Component of neutron shielding, batteries, photography solutions, and other metal alloys. Component of UREX+1a feed. Dosimeter component.	AE-I-028, AE-I-038, AE-I-047, AE-I-050, AE-I-195, AE-P-070, AE-P-095, AE-P-099, C020, C066, C094, C116, C160, P412, P416, P2017, P2021, P2022, P2028, U015, U017, U072, U083, U3003	D006
Cadmium chloride	Pu oxidizing agent.	AE-I-028, AE-I-038, AE-I-047, AE-I-050	D006
Calcite	Present in leachate solution.	P2003	NA
Calcium	Reductant.	AE-I-050	NA
Calcium chloride	Molten salt solvent.	AE-I-028	NA
Calcium salts	Present in leachate solution.	P2003, P2004, P2020, P2029, P2030	NA
Calcium silicate	Present in leachate solution.	P2003, P2020	NA
Calcium hydroxide	Soda lime used to neutralize acidic solutions.	P578	NA
Calixarene	Extraction agent	C2008, P2028	NA
Camphor	Coating solution	AE-I-015	NA
Carbon (activated carbon/charcoal/graphite)	Graphite felt, paint, crucibles, containers, and hardware covers. Sorbent. DRA water treatment unit filter media. AGHCP exhaust filtration media.	AE-I-032, AE-I-050, AE-I-054, AE-I-131, AE-I-195, C025, C137, C158, P546, P556, P557, P578, P604, U015, U017, U018, U019, U021, U041, U073	NA
Carbon tetrachloride	Immersion density measurements. Metallographic specimen and cell cleaning solvent. Extraction solvent.	AE-C-019, AE-D-005, AE-D-011, AE-I-030, AE-I-031, AE-I-034, AE-I-186, AE-I-193, C066, C081, C137, C147, P416	D019
Cement, concrete	Waste material.	AE-I-195	NA
Cerium	Reagent and waste material.	AE-I-036, AE-I-195	NA
ChemOil-Away	Sorbent.	AE-I-195	NA
Chloride salts	Present in leachate solution. Electrolyte solutions.	AE-I-035, AE-I-079, AE-I-126, AE-I-186, AE-I-192, AE-I-195, P2020, P2029, P2030	NA
Chlorinated cobalt dicarbollide (CCD)	Extraction agent.	P2022, P2023, P2024, P2026	NA
Chlorobenzene	Standard solution.	AE-D-012, AE-I-131	F002
Chlorophosphonazo	Hardness indicator solution.	AE-I-195	NA
Chromic acid	Metallography etchant acid.	C066, C137, C147, U006	D007
Chromium	Component of chromic acid etchant, fuel, stainless steel cladding, chromium plated measuring tapes, chromic oxide polishing abrasive, pelletized clay and HEPA filters. Present in leachate solution.	AE-I-010, AE-I-011, AE-I-034, AE-I-035, AE-I-051, AE-I-052, AE-I-084, AE-I-106, AE-I-109, AE-I-149, AE-I-150, AE-I-195, AE-I-199, AE-P-044, AE-P-095, AE-P-099, C066, C116, C137, C160, P412, P490, P2003, P2021, P2023, U006, U068, U069, U070, U072, U074, U083, U084, U3003	D007
Citric acid	Metallography etchant acid.	AE-I-195, C066, C137, P062	NA
Clay and vermiculite absorbents (Oil Dri)	Absorption of neutralized etchants and alcohol solutions from passivation of reactive materials (i.e., Na and NaK). Crucible material.	AE-C-038, AE-I-042, AE-I-079, AE-I-195, C013, C026, C029, C066, C106, C115, C116, C130, C147, C333, P001, P006, P009, P551, P578, P604, U002, U004, U015, U017, U018, U019, U021, U041, U332, U3003	NA
Copper nitrate	Waste material.	AE-I-195	NA
Crown ether [4,4'(5')-di-(tert-butylcyclohexo)-18-crown-6]	Extraction agent.	AE-I-054, AE-I-181, AE-I-182, AE-I-183, AE-I-193, AE-I-195, P2028, U3003	NA
Cyanex 301 (bis (2,4,4-Trimethylpentyl dithiophosphinic acid)	Organic solvent.	C2008, P2022	NA

Table 8. Argonne TRU Waste Operations Chemical Identification and Use Summary (Continued)

Chemical/Material	Use/Description	AK Source	EPA HWNs
Cyclohexane	Organic solvent.	AE-C-019, AE-D-005, AE-I-034	NA
Di(2-ethylhexyl) phosphoric acid (D2EHPA)	Extraction agent. Liquid waste inventory	C2008, U3001	NA
Diallyl phthalate	Waste material.	AE-C-022	NA
Diammonium Diethylene triamine pentaacetate	Stripping agent.	P2022	NA
Diamond paste/powder	Metallurgical sample polishing compound.	AE-C-022, AE-I-008, AE-I-011, AE-I-048, AE-I-052, C137, C2006, P062, P604	NA
Diamyl amylphosphonate	Reagent.	AE-I-054, AE-I-181, AE-I-182, AE-I-183, AE-I-193	NA
Diethylenetriamine pentaacetic acid (DTPA)	Complexing agent.	C2008, P2010, P2011, P2012, P2013, P2022, P2023, P2024, P2026, P2027, P2028, U2004, U3001, U3003	NA
Dimethyl ether	Reagent.	AE-D-005, AE-I-019	NA
Diphosphonic acids	Reagents.	AE-I-184, AE-I-193	NA
Dodecane (n-dodecane)	Organic solvent. Standard solution. Liquid waste inventory.	AE-C-026, AE-I-044, AE-I-054, AE-I-131, AE-I-181, AE-I-182, AE-I-193, C2008, P2010, P2011, P2012, P2013, P2018, P2022, P2023, P2024, P2026, P2027, P2028, U2004, U3001, U3003	NA
Dri-rite	Desiccant.	AE-I-195	NA
Disodium hydrogen phosphate	Waste material.	AE-I-195	NA
Eichrom TRU SPEC	Column resin.	P2017	NA
Epoxy resin	Used to mount fuel samples. Secondary container.	AE-C-022, AE-I-046, P2004, P2005, P2012, P2019	NA
Ethanol (ethyl alcohol/alcohol)	Metallurgical sample cleaning and etching. Cell decontamination cleaning solvent. Ingredient of Permatex gasket adhesive. Na, NaK, and lithium passivation reagent. Waste material. Solvent.	AE-C-022, AE-I-008, AE-I-010, AE-I-011, AE-I-048, AE-I-052, AE-I-079, AE-I-124, AE-I-126, AE-I-134, AE-I-135, AE-I-147, AE-I-151, AE-I-192, AE-P-044, C008, C011, C029, C039, C066, C137, C147, C316, C2008, P001, P062, P329, P416, P480, P540, P552, P566, P568, P604, P2018, U004, U066, U072, U321	NA
Ethyl acetate	Extraction agent.	AE-D-011, AE-I-140	NA
Ethyl benzene	Component of Krylon Spray. Standard.	AE-D-011, AE-I-131, AE-I-192, P410, U072	NA
Ethylenediamine tetraacetate (EDTA)	Complexing agent. U hand soap component.	AE-P-044, P2017	NA
Ethylene glycol	Metallurgical sample etching. Furnace coolant. Ingredient of Krylon Spray and mounting wax. Waste material.	AE-I-010, AE-I-011, AE-I-079, P062, P516, U072	NA
Ethyl ether	Metallurgical sample preparation. Cell cleaning solvent. Washing solution.	AE-D-011, AE-I-149, AE-I-150, AE-P-045, C066, C147	NA
Ethyl hexanol	Extraction solvent.	C3001, U3003	NA
Ethyl violet	Indicator in soda-lime/soda carbonate neutralization filter media.	P578	NA
Europium oxide	Reagent.	AE-I-193	NA
Ferric chloride	Reagent.	AE-C-019, AE-D-005	NA
Ferric hydroxide	Waste product	AE-I-135	NA
Ferric nitrate	Oxidizing agent. Liquid waste inventory.	AE-I-044, AE-I-149, AE-I-150, U3001	NA
Ferrous ammonium sulfate hydrate	Reducing agent.	AE-I-135	NA

Table 8. Argonne TRU Waste Operations Chemical Identification and Use Summary (Continued)

Chemical/Material	Use/Description	AK Source	EPA HWNs
Fluoride salts	Present in leachate solution. Reagents.	AE-I-126, AE-I-151, AE-I-195, P2020, P2029, P2030	NA
Fluorinert – FC-43	Clear non-toxic fluorinated electric liquid used in immersion density measurement of cladding samples.	C128, U072	NA
Fluoroboric acid	Waste constituent.	AE-I-048	NA
Fluran	Pyrophosphate fluorescence reagent.	AE-C-023, AE-I-192	NA
Formaldehyde	Preservative for animal remains.	AE-P-095, AE-P-099,	NA
Formate salts	Present in leachate solution.	P2003, P2020	NA
Formic acid	Solvent.	AE-I-134, AE-I-135, AE-I-192	NA
Gadolinium oxide (gadolinium burnable poison)	UO^2 fuel pellet dopant.	P2000, P2021, P2022, P2023	NA
Gold	Dosimeter component. Electrode. Foil.	AE-I-035, AE-I-040, AE-I-195	NA
Grease	Radiation-resistant grease.	AE-I-195	NA
Guanidine carbonate (Guanidinium carbonate)	Oxygen scavenger.	C2008, P2010, P2011, P2013, P2022, P2023, P2026, U2004	NA
Heptane	Metallurgical sample cleaning. Ingredient of Krylon Spray.	C066, C128, C147, P031, P410, P416, P604, U321	NA
Hexadecane	Extraction solvent.	AE-I-131	NA
Hexane	Metallurgical reagent and component of Krylon Spray.	P410, P416, U072	NA
Hydranal Solvent and Titrant	Methanol based extraction reagents.	U3003	NA
Hydrazine	Reagent.	AE-C-026	NA
Hydrobromic acid	Dissolution agent	P2017, P2024	NA
Hydrochloric acid	Metallography etchant acid. Clean shielding windows.	AE-C-020, AE-I-004, AE-I-009, AE-I-035, AE-I-037, AE-I-044, AE-I-045, AE-I-046, AE-I-053, AE-I-054, AE-I-058, AE-I-059, AE-I-069, AE-I-079, AE-I-124, AE-I-126, AE-I-134, AE-I-135, AE-I-140, AE-I-147, AE-I-151, AE-I-192, AE-I-195, AE-P-044, C066, C137, C344, P034, P344, P475, P521, P602, P2009, P2017, P2021, P2022, P2030, U304, U321, U3003	NA
Hydrofluoric acid	Metallography etchant acid. Reagent for cleaning cladding for mechanical testing. Building 205 chemical inventory. Dissolution agent. Liquid waste inventory.	AE-C-020, AE-I-001, AE-I-004, AE-I-005, AE-I-009, AE-I-010, AE-I-011, AE-I-019, AE-I-021, AE-I-023, AE-I-030, AE-I-031, AE-I-034, AE-I-036, AE-I-037, AE-I-041, AE-I-044, AE-I-045, AE-I-053, AE-I-057, AE-I-059, AE-I-061, AE-I-062, AE-I-065, AE-I-066, AE-I-067, AE-I-068, AE-I-069, AE-I-084, AE-I-098, AE-I-121, AE-I-124, AE-I-126, AE-I-134, AE-I-135, AE-I-140, AE-I-142, AE-I-143, AE-I-151, AE-I-191, AE-I-192, AE-P-044, AE-P-054, C066, C137, C357, C2008, P062, P344, P503, P507, P521, P554, P572, P578, P602, P2009, P2017, P2021, P2024, P2025, P2026, P2028, P2030, U030, U304, U321, U2004, U3001, U3003	NA
Hydrogen peroxide	Reagent for cleaning cladding for mechanical testing. Radiolysis product. Oxidizing agent. Used to destroy resin.	AE-I-054, AE-I-069, AE-I-099, AE-I-103, AE-I-132, AE-I-135, AE-I-141, AE-I-142, AE-I-151, AE-I-195, AE-P-044, P503, P507, P551, P554, P572, P574, P578, P2001, P2002, P2026, U321	NA
Hydroxylamine	Degradation product of acetohydroxamic acid. PUREX reagent.	AE-C-026, P2022	NA
Hydroxylamine hydrochloride	Additive to zinc bromide shielding window solution.	P380, P486	NA

Table 8. Argonne TRU Waste Operations Chemical Identification and Use Summary (Continued)

Chemical/Material	Use/Description	AK Source	EPA HWNs
Hydroxylamine nitrate	Degradation product of acetohydroxamic acid.	P2028	NA
Hyprex	Petroleum distillate based lubricant containing 1, 4-dioxane (0-1%) and 1,1,1-trichloroethane (10-30%) used for specimen cleaning.	C012, C029, C066, P062, P069, P389, U072, U321	F002
Iodine	Carrier.	AE-I-054	NA
Iodomethane	Reagent.	AE-I-186	NA
Iron sulfamate	Stabilizer for Pu and Np (IV) oxidation state	C2008, P2024, P2026	NA
Iron(II) sulfate (ferrous sulfate)	Degradation product. Coprecipitation agent. Reducing agent.	AE-C-023, AE-I-034, AE-I-036, AE-I-053, AE-I-084, AE-I-126, AE-I-151, AE-I-192, AE-I-195, AE-P-009, C2008	NA
Iron (III) sulfate (ferric sulfate)	Coprecipitation agent.	AE-P-009	NA
Isobutanol	Metallurgical reagent – cleaning solvent.	C147, P416	F005
Isopar-L	Kerosene solvent.	AE-I-195, C2008, P2010, P2028, U2004, U3003	NA
Isopropyl alcohol	Ingredient of Permatex gasket adhesive and Krylon Spray. Metallurgical reagent – degreaser. Solvent.	AE-I-056, P416, U072	NA
Kerosene	Microprobe sample preparation. Purex solvent.	AE-C-026, C029, U066	NA
Krylon Spray	Used to fix contamination on face of HEPA filters.	P410, U072	NA
Lactate buffer (Ammonium Lactate/Lactic Acid)	pH control. TRUEX strip solution.	C2008, P2010, P2011, P2013, P2022, P2024, P2026, P2027, P2028, U2004, U3001, U3003	NA
Lactic acid	Metallurgical etchant.	AE-I-010, AE-I-011	NA
Lanthanum oxide	Reagent.	AE-I-124, U3003	NA
Lauryl nitrile	Waste extraction solvent reagent.	U3003	NA
Lead	Component of manipulator weights, metal scrap, leaded glass, shielding, leaded gloves and aprons, blocks, shot, lead wool, lead-bismuth epoxy, paint, lead solder (electronics), flashlight batteries, lead-acid batteries, sodium vapor lamps, and HEPA filter contaminant. Reference Material. Present in leachate solution.	AE-C-032, AE-C-035, AE-C-036, AE-C-037, AE-D-004, AE-I-030, AE-I-195, AE-I-199, AE-P-095, AE-P-099, C013, C029, C066, C088, C091, C137, C143, C147, C148, C333, C341, P023, P038, P039, P380, P412, P416, P484, P485, P487, P489, P490, P521, P536, P537, P557, P2003, P2017, U004, U006, U015, U017, U018, U019, U021, U041, U072, U083, U332, U3003	D008
Light bulbs	Broken fluorescent and mercury lamps.	AE-I-195, P392, P416, U015, U017, U018, U019, U021	D009
Lithium aluminum hydride	Reagent.	AE-I-187	NA
Lithium chloride	Molten salt solvent.	AE-C-024, AE-I-028, AE-I-047, U3003	NA
Lithium metal	Coolant removed from fuel pins and cladding. Low-oxygen vanadium alloy testing reagent. Alloy. Reducing agent.	AE-C-024, AE-I-038, AE-I-047, AE-I-050, AE-I-195, C066, P412, P540	NA
Lithium salts	Present in leachate solution. Waste Material.	AE-I-079, AE-I-195, P2020, U3001, U3003	NA
Magnesium	Molten salt solvent. Reductant. Alloy.	AE-I-027, AE-I-050	NA
Magnesium salts	Present in water leachant.	P2004, P2029, P2030	NA
Magnesium hydroxide	Neutralization agent. Waste material.	AE-I-195, P2010, P2013, P3002, P3003	NA
Magnesium nitrate	Waste material.	AE-I-195	NA
Magnesium oxide	Crucible material. Waste Material.	AE-I-079, AE-I-195	NA
Mercury	Component of mercury vapor lights, fluorescent lights, batteries, barometers, thermometers, prinometers (density testing), electrodes, and switches. Used in fuel immersion density testing.	AE-D-004, AE-I-006, AE-I-029, AE-I-034, AE-I-078, AE-I-084, AE-I-107, AE-I-195, AE-I-199, AE-P-044, AE-P-095, AE-P-096, AE-P-099, C013, C035, C066, C137, C143, C147, C356, P070, P412, P416, P2011, U015, U017, U018, U019, U021, U022, U041, U083, U085, U3003	D009
Metal-X	Fire suppression agent.	P492, P540	NA

Table 8. Argonne TRU Waste Operations Chemical Identification and Use Summary (Continued)

Chemical/Material	Use/Description	AK Source	EPA HWNs
Metaschoepite (UO^3*$2H^2O$)	Corrosion product of spent UO^2 fuel reacted with groundwater.	P2004	NA
Methanesulfonic acid	Reagent.	AE-I-186, AE-I-187	NA
Methanol	Metallurgical sample preparation. Cell cleaning solvent. Building 205 chemical inventory. Solvent. Extraction solvent reagent in Hydranal solvent.	AE-C-019, AE-D-011, AE-I-060, AE-I-128, AE-I-131, AE-I-148, AE-I-191, AE-I-192, AE-P-044, AE-P-054, C066, C106, C137, C147, C316, P416, P505, P2017, P2018, U322, U3003	NA
Methylene chloride	Solvent. Rinse. Extraction solvent.	AE-D-011, AE-I-130, AE-I-148, AE-I-192	F002
Methyl ethyl ketone (MEK)	Building 205 chemical inventory. Solvent.	AE-D-011, AE-I-128, AE-I-192, AE-P-044, P2018	F005
Methyl isobutyl ketone	Solvent.	AE-D-011, AE-P-054	NA
Molybdenum trioxide	Molybdenum carrier.	AE-I-054	NA
n-bromosuccinimide	Reagent.	AE-I-186	NA
n-butyl alcohol	Metallurgical sample preparation and cleaning solvent. Na and NaK passivation reagent.	C013, C066, C137, C147, P061, P412, P416	NA
N-nitroso-di-n-propylamine	Spiking solution.	AE-C-023, AE-I-148	NA
n-nonane	Standard solution.	AE-I-131	NA
Neodymium oxide	Standard.	P2017	NA
Nickel	Present in leachate solution.	P2003	NA
Nitrate salts	Present in leachate solution.	AE-I-051, AE-I-195, P2003, P2020, P2029, P2030	NA
Nitrite salts	Present in leachate solution.	AE-I-051, AE-P-095, AE-P-099, P2003, P2020	NA
Nitric acid	Metallography etchant and defueling acid. Reagent for cleaning cladding for mechanical testing. Building 205 chemical inventory. Dissolution agent. Liquid waste inventory.	AE-C-020, AE-C-026, AE-I-003, AE-I-004, AE-I-005, AE-I-006, AE-I-009, AE-I-010, AE-I-011, AE-I-018, AE-I-019, AE-I-030, AE-I-034, AE-I-035, AE-I-036, AE-I-037, AE-I-041, AE-I-043, AE-I-044, AE-I-045, AE-I-046, AE-I-049, AE-I-051, AE-I-053, AE-I-054, AE-I-056, AE-I-057, AE-I-058, AE-I-059, AE-I-060, AE-I-061, AE-I-069, AE-I-084, AE-I-098, AE-I-107, AE-I-110, AE-I-124, AE-I-126, AE-I-134, AE-I-135, AE-I-140, AE-I-147, AE-I-149, AE-I-151, AE-I-192, AE-I-195, AE-P-044, AE-P-054, C137, C357, C2004, C2005, C2008, C2009, P031, P062, P329, P331, P344, P387, P503, P507, P551, P554, P556, P566, P572, P574, P578, P602, P2008, P2009, P2010, P2011, P2012, P2013, P2016, P2017, P2018, P2020, P2021, P2022, P2023, P2024, P2025, P2026, P2027, P2028, P2029, P2030, U304, U321, U2002, U2004, U2010, U3001, U3003	NA
Nitrobenzene	Spiking solution. Reagent.	AE-D-011, AE-I-148, AE-I-186	F004
Octyl(phenyl)-N,N-diisobutylcarbamoyl methyl phosphine oxide (CMPO)	Extraction agent. Liquid waste inventory.	AE-I-030, AE-I-044, AE-I-051, AE-I-054, AE-I-181, AE-I-183, AE-I-193, C2008, P2022, P2024, P2026, P2028, U3001, U3003	NA
Oil	Lubricant for gear motor.	AE-I-195	NA
Oil Dri	Sorbent.	AE-I-195	NA
Orthophosphoric acid	Supporting electrolyte solution.	AE-I-034, AE-I-035, AE-I-036, AE-I-084	NA
Oxalate salts	Present in leachate solution. Scrub solution.	P2003, P2024	NA

Table 8. Argonne TRU Waste Operations Chemical Identification and Use Summary (Continued)

Chemical/Material	Use/Description	AK Source	EPA HWNs
Oxalic acid	Metallography etchant acid. Complexes zirconium. Waste solution.	AE-I-010, AE-I-044, AE-I-056, AE-I-124, AE-I-126, AE-I-134, AE-I-151, AE-I-192, AE-I-195, C066, C118, C137, C2008, P062, P386, P2010, P2011, P2022, P2023, P2024, P2026, P2028, U3003	NA
Pentachlorophenol	Spiking solution	AE-D-012, AE-I-148	D037
Perchlorate salts	Reagents.	AE-I-184, AE-I-193	NA
Perchloric acid	Electropolishing acid. Dissolution agent.	AE-I-034, AE-I-036, AE-I-046, AE-I-084, AE-I-117, AE-I-121, AE-I-126, AE-I-141, AE-I-142, AE-I-184, AE-I-192, AE-I-193, AE-P-044, P521, P2017, U3003, U3004	NA
Pertechnetic acid	Reagent.	P2026	NA
Petro Bond A610	Chemical sorbent.	P2010, U3003	NA
Petroset II-G	Chemical sorbent.	AE-P-095, AE-P-101, P2010, P2013	NA
Phenol	Spiking solution.	AE-I-148, AE-I-192	NA
Phenyl trifluoromethyl sulfone (FS-13)	Solvent	P2010, P2011, P2022, P2023, P2026, U2004	NA
Phosphoric acid	Metallography etchant and electropolishing acid. Building 205 chemical inventory. Dissolution agent. Liquid waste inventory.	AE-I-010, AE-I-011, AE-I-034, AE-I-035, AE-I-036, AE-I-054, AE-I-084, AE-I-098, AE-I-195, AE-P-054, C066, C137, P062, P521, P551, P574, P2018, U321, U3001	NA
Phosphorous acid	Plutonium analysis residue solutions.	AE-I-044	NA
Phosphorous trichloride	Reagent	AE-I-186, AE-I-187, AE-I-193	NA
Photo Flo	Photographic solution in AGHCF.	U072, U322	NA
Phthalate	Waste material	AE-I-195	NA
Plaster of Paris (calcium sulfate hemihydrate)	Solidification agent.	AE-I-079	NA
Platinum	Labware material. Electrode material.	AE-I-022, AE-I-034, AE-I-035, AE-I-037, AE-I-042, AE-I-045, AE-I-060, AE-I-068, AE-I-084, AE-I-098, AE-I-124, AE-I-126, AE-I-151, AE-I-192	NA
Polychlorobiphenyls	Component of ballasts, capacitors, and transformers located outside of the cells.	AE-P-095, AE-P-096, C066, C137, C143, P618	NA
Polyethylene glycol (PEG)	Organic solvent.	AE-I-135, AE-I-195, C2008, P2022, P2023, P2026	NA
Potassium	Waste material.	AE-I-195	NA
Potassium bisulfate (sulfate)	Hydrogen charging solution reagent for auger fracture specimens.	AE-I-126, P521	NA
Potassium carbonate	Cleaning solution.	AE-I-022, AE-I-037, AE-I-058	NA
Potassium chloride	Molten salt solvent.	AE-I-009, AE-I-018, AE-I-028, AE-I-047	NA
Potassium dichromate	Titrant. Test for orthophosphoric acid. Oxidizing agent. Used to oxidize antimony impurity to Sb(V).	AE-C-019, AE-I-034, AE-I-035, AE-I-084, AE-I-106, AE-I-109, AE-I-195	D007
Potassium hexachlorouthenate	Ruthenium carrier.	AE-I-054	NA
Potassium hydroxide	Neutralize acidic etchant and fuel dissolution solutions (soda lime).	AE-I-060, AE-I-124, AE-I-126, AE-I-134, AE-I-135, AE-I-192, P578	NA
Potassium iodide	Reagent.	AE-I-046, AE-I-056	NA
Potassium metabisulfate	Precipitation agent	AE-I-126	NA
Potassium oxalate	Used to complex zirconium. Electrolyte solution.	AE-I-126, AE-I-192, C2008	NA
Potassium permanganate	Decontamination solution. Reagent. Liquid waste inventory. Manganese carrier.	AE-I-034, AE-I-035, AE-I-036, AE-I-054, U3001	NA
Potassium peroxydisulfate (Potassium persulfate)	Tc-99m oxidizing agent.	AE-I-151	NA
Potassium salts	Waste material.	AE-I-009, AE-I-051, AE-I-126, AE-I-192, AE-I-195	NA

Table 8. Argonne TRU Waste Operations Chemical Identification and Use Summary (Continued)

Chemical/Material	Use/Description	AK Source	EPA HWNs
Potassium sulfate	Reagent.	AE-I-126	NA
Propane	Building 205 chemical inventory.	AE-P-044	NA
Pyrene	Spiking solution.	AE-I-148	NA
Pyridyl(azo) resorcinol	Reagent.	AE-I-184	NA
Pyrofoam	Fire-resistant sealer.	AE-I-195	NA
QuickStick	Mounting wax used in Bakelite metallographic mount preparation.	C2006, P552, U072	NA
Radiac	Decontamination solution.	AE-P-044	NA
Radsorb	Polymer-based sorbent.	AE-C-038, AE-I-195	NA
Rathenium nitrate	Waste material.	U3001	NA
REACT	Hydrochloric acid-based cleaning solution used to clean manipulators.	P472, U072	NA
Reillex HPQ resin	Anion-exchange resin.	P2023, P2026	NA
Resin (AG-1-X8, AG 1-X8, Bio-Rad AGMP, Bio-Rad Poly-Prep, Diphonix, Dowex, Koldmount, Sr Resin SPS, TRU Resin SPS, TEVA Resin SPS, XAD-7, etc.)	DRA water treatment unit filter media. In-cell vacuum air sweeper filters (Zeolyte). Used in chemical separations. Support material.	AE-I-011, AE-I-046, AE-I-053, AE-I-069, AE-I-124, AE-I-126, AE-I-134, AE-I-135, AE-I-140, AE-I-147, AE-I-181, AE-I-183, AE-I-192, AE-I-193, AE-I-195, C026, P546, P2017, U015, U017, U018, U019, U021, U041, U072, U073	NA
Rhodium trichloride	Rhodium carrier.	AE-I-054	NA
Rongalite (sodium formaldehyde sulfoxylate)	Reducing agent.	AE-I-135	NA
Ruthenium nitrate	Waste solution contaminant.	U3003	NA
Schoepite (hydrated/dehydrated)	Corrosion product of spent UO^2 fuel reacted with groundwater.	P2001, P2002, P2003, P2004, P2007, P2020, P2030	NA
Selenium	Irradiation experiment reagent. Contaminant of HEPA filter media. Component of UREX+1a feed.	AE-I-195, P412, P2028, U006, U083, U3003	D010
Sky Blue	Cell and glovebox window cleaning detergent.	P487, U072, U321	NA
Silica	Component of a ground water surrogate. Present in leachate solution.	C2004, C2005, P2003, P2020, P2029, P2030	NA
Silicic acid	Naturally-occurring fuel leachate reactant.	P2002	NA
Silicon	Present in water leachant.	P2002, P2003, P2004, P2020	NA
Silicon carbide	Abrasive on paper used to grind down fuel specimens. Boiling chips.	AE-I-010, AE-I-011, AE-I-042, AE-I-126, C2006, P2029	NA
Silicone	Sealant.	AE-I-195	NA
Silver	Component of silver nitrate etchant, mounting epoxy, containers, solder (electronics), photographic film and chemicals, and HEPA filter contaminant and screw eyes. Component of UREX+1a feed. Foil.	AE-C-017, AE-C-022, AE-I-040, AE-I-195, C020, C029, C066, C137, C147, P061, P062, P068, P410, P412, P416, P507, P539, P2017, P2021, P2028, U006, U072, U083, U3003	D011
Silver iodide	Waste material	AE-I-195	D011
Silver nitrate	Metallography etchant reagent for Zircaloy metals. Chloride ion test agent. Chloride detection.	AE-C-022, AE-I-044, AE-I-054, C066, C137, P062, P539, P2026, U006, U321, U3001	D011
Simple Green	Detergent used to clean hot cells.	C2008, U072	NA
Soddyite	Corrosion product of spent UO^2 fuel reacted with groundwater.	P2004, P2020	NA
Sodium arsenite	Hydrogen charging solution reagent for auger fracture specimens.	P521	D004
Sodium bicarbonate (baking soda)	Component of a ground water surrogate. Neutralization agent.	AE-I-051, AE-I-079, C2004, C2005	NA

Table 8. Argonne TRU Waste Operations Chemical Identification and Use Summary (Continued)

Chemical/Material	Use/Description	AK Source	EPA HWNs
Sodium bisulfate	Hydrogen charging solution reagent for auger fracture specimens. Cleaning solution. Buffer.	AE-I-034, AE-I-043, AE-I-060, AE-I-061, AE-I-068, AE-I-124, AE-I-126, AE-I-134, AE-I-135, AE-I-192, P521	NA
Sodium boltwoodite	The major alteration product of UO^2 leached with water containing sodium and silicon.	P2002, P2004	NA
Sodium carbonate	Neutralize acidic etchant and fuel dissolution solutions. U hand soap component. pH control Used to wash PUREX solvent.	AE-C-026, AE-I-044, AE-I-045, AE-I-056, AE-I-061, AE-I-079, AE-I-149, AE-P-044, C066, C147, P551, P578	NA
Sodium chromate	Precipitation agent.	AE-I-149, AE-I-150	D007
Sodium chloride	Molten salt solvent. Standard.	AE-I-028, AE-I-029	NA
Sodium hydride	Reagent.	AE-I-186	NA
Sodium hydroxide	Neutralize acidic etchant and fuel dissolution solutions (soda lime). pH control. Solvent. Used to wash PUREX solvent. Autoradiography film etching. Precipitation agent. Liquid waste inventory.	AE-C-026, AE-I-046, AE-I-054, AE-I-126, AE-I-135, AE-I-149, AE-I-151, AE-I-184, AE-I-192, AE-I-195, AE-P-009, C066, C147, C2008, P061, P578, U3001	NA
Sodium lauryl sulfate	Hand soap ingredient.	AE-P-044	NA
Sodium metal	Component of fuel pins, generated during sectioning.	AE-I-186, AE-I-187, C008, C009, C011, C013, C029, C147, C375, P001, P006, P009, P032, P060, P412, P617, P620, P621, U002, U004	NA
Sodium nitrate	Liquid waste inventory solution.	U3001	NA
Sodium nitrite	Used to ensure tetravalent state for Np and Pu.	AE-I-126, AE-I-192, AE-I-195, P2022	NA
Sodium perchlorate	Reagent.	AE-I-184	NA
Sodium phosphate	Reagent.	AE-I-126	NA
Sodium-potassium alloy	Component of fuel pins, generated during sectioning.	C023, C029, C039, C066, C147, P001, P032, P060, P412, U002	NA
Sodium salts	Resulting from Na and NaK passivation absorbed on mineral (clay) absorbents. Present in water leachant.	AE-I-051, AE-I-124, AE-I-192, AE-I-195, C013, P617, P2002, P2004, P2029, P2030, U3001, U3003	NA
Sodium sulfate	Buffer. Filtration material.	AE-I-060, AE-I-126, AE-I-134, AE-I-135, AE-I-148	NA
Solidification Agents	Liquid solidification agents may include Portland cement, Acid Bond, No-Char, Aquaset, or Petroset.	AE-C-006, AE-C-024, P032, P412, P3002, P3003, U3001, U3003	NA
Stergo	Absorbent polymer	AE-I-195	NA
Strippable paint / paint chips	Used to decontaminate cell surfaces and equipment.	AE-I-195, AE-P-095, AE-P-099, P489	NA
Strip-X	Paint stripping agent.	AE-I-079	NA
Strontium nitrate	Strontium carrier	AE-I-134, AE-I-147, AE-I-149, AE-I-150	NA
Sulfamic acid	Stabilizes Np(VI) oxidation state and destroys nitrite. Oxidizing agent.	AE-I-009, AE-I-018, AE-I-034, AE-I-036, AE-I-084, AE-I-195, C2008, P2026, P2028	NA
Sulfate salts	Present in leachate solution. Waste materials.	AE-I-126, AE-I-195, P2020, P2029, P2030	NA
Sulfur	Dosimeter component.	AE-I-195	NA
Sulfuric acid (Oil 0f Vitriol)	Metallography etchant and electropolishing acid. Cleaning solution. Dissolution agent. Liquid waste inventory.	AE-C-020, AE-I-009, AE-I-018, AE-I-035, AE-I-036, AE-I-043, AE-I-044, AE-I-053, AE-I-054, AE-I-056, AE-I-057, AE-I-068, AE-I-078, AE-I-084, AE-I-107, AE-I-126, AE-I-148, AE-I-151, AE-I-192, AE-I-195, C066, C137, C2008, P031, P505, P521, U3001	NA
Sulfurous acid	Dissolution agent.	AE-I-068	NA
Terphenyl	Spiking solution.	AE-I-148	NA
Tetrachloroethylene (perchlorethylene)	Manipulator arm maintenance and cleaning. Cell cleaning solvent. Test solvent.	AE-C-022, AE-I-044, C066, C137, C147, C2009, P416, U066, U2007, U2008, U2009, U2010	F002
Tetrahydrofuran-2,3,4, 5-tetracarboxylic acid	Reagent.	AE-I-054, AE-I-134, AE-I-135, AE-I-184, AE-I-193	NA

Table 8. Argonne TRU Waste Operations Chemical Identification and Use Summary (Continued)

Chemical/Material	Use/Description	AK Source	EPA HWNs
Thorium nitrate	Reagent.	AE-I-146	NA
Titanium	Present in leachate solution.	P2003	NA
Toluene	Manipulator arm maintenance and cleaning. Metallographic specimen and cell cleaning solvent. Component of Krylon Spray. Solvent.	AE-C-022, AE-I-131, AE-I-181, AE-I-184, AE-I-193, AE-P-044, AE-P-054, C012, C066, C137, C147, P062, P410, P416, P2018, U066, U072, U321	F005
Tri-n-octylamine	Organic solvent.	C2008, P2028	NA
Tributyl phosphate (TBP)	Complexing agent. Extraction agent. Liquid waste inventory.	AE-C-026, AE-I-030, AE-I-034, AE-I-044, AE-I-054, AE-I-151, AE-I-181, AE-I-182, AE-I-183, AE-I-193, AE-I-195, C2008, P2010, P2011, P2012, P2013, P2022, P2023, P2024, P2026, P2028, U2007, U3001, U3003	NA
Trichloroethylene	Cleaning solvent.	AE-D-011, AE-I-031, AE-I-032	F002
Triethanolamine	Soluble oil component.	AE-C-019	NA
Trifluoroacetic acid	Reagent.	AE-I-187, AE-I-193	NA
Ultima Gold XP	Scintellation cocktail.	AE-C-023, U3001, U3003	NA
Uranium carbide	Product of spent fuel oxide with water under oxidizing conditions.	C2005, P2007	NA
Uranium trihydride (uranium hydride)	Product of metallic uranium reacted with water.	C2005, P2007	NA
Uranyl nitrate	Feed stock.	AE-C-026, AE-I-044, AE-I-098, AE-I-117, P2026, P2028	NA
Uranyl oxide hydrate	Product of spent fuel oxide with water under oxidizing. conditions.	P2001	NA
Uranyl silicates	Product of spent fuel and silica-containing water.	P2001, P2004	NA
Uranyl sulfate	Waste material.	AE-I-195	NA
Uraplex	Uranium complexing agent.	AE-C-023	NA
Vanadium (salts or acids)	Reagents.	AE-I-034, AE-I-195, C2008, P2023, P2024	NA
Vanadyl nitrate	Oxidizing agent for Np.	P2028	NA
Vanadium pentoxide	Catalyst.	AE-I-135	NA
Vanadyl sulfate	Catalyst for U(IV) titration by potassium dichromate.	AE-C-019, AE-I-034, AE-I-035, AE-I-084	NA
Xylene	Metallography mount and lens cleaner. Cell cleaning solvent. Ingredient of Krylon Spray. Solvent. Standard.	AE-D-011, AE-I-054, AE-I-126, AE-I-131, AE-I-140, AE-I-151, AE-I-181, AE-I-192, AE-I-193, AE-P-044, AE-P-045, AE-P-054, C029, C066, C137, C147, P410, P416, U072, U3001	NA
Yttria (yttrium oxide)	Waste material.	AE-I-195	NA
Zeolite	Waste material.	AE-I-195, U3003	NA
Zinc	Reference material. Present in leachate solution. Alloy.	AE-I-050, AE-I-195, P2003, P2017	NA
Zinc bromide	Salt shielding solution in hot cell windows.	P031, P034, P486	NA
Zinc nitrate	Waste material	AE-I-195	NA
Zircaloy	Fuel cladding material. Component of sectioning dust and fines (swarf).	C066, C137, C2005, P001, P032, P062, P304, P372, P396, P412, P548, P557, P568, P580, P1002, P2001, P2002, P2003, P2007, P2021, P2030, U006	NA
Zirconia	Grinding/Milling media.	AE-I-195, P2029	NA
Zirconium and zirconium salts	Present in leachate solution. Waste material.	AE-I-050, AE-I-052, AE-I-195, P2021, P2022, P2023, P2024, P2025, P2026, U3001, U3003	NA

5.4.3.1 F-Listed Constituents

Based on review of AK relative to chemicals used or present in Argonne laboratory and maintenance operations, waste stream ID-AECHDM may contain or be mixed with F-listed hazardous wastes from non-specific sources listed in Title 40 CFR 261.31 (Reference 22). As shown in Table 8, F002, F004, and F005 listed solvents were used in these operations. F003 constituents, including acetone, methyl isobutyl ketone, n-butyl alcohol, xylene, ethyl acetate, ethyl benzene, ethyl ether, and methanol are listed solely because these solvents are ignitable in the liquid form. The waste stream does not exhibit the characteristic of ignitability because it is not liquid; therefore, F003 is not assigned. Although several F001-listed solvents were identified in the AK record (i.e., 1,1,1-trichloroethane, 1,1,2-trichloro-1,2,2-trifluoroethane, carbon tetrachloride, methlyene chloride, tetrachloroethylene, and trichloroethylene), EPA has provided a regulatory clarification that the F001 listing is only appropriate when the listed solvents are used in a "large-scale" degreasing operation such as cold cleaning or vapor degreasing on an industrial scale (Reference 23). Argonne laboratory and maintenance operations did not conduct large-scale degreasing operations, and therefore, EPA HWN F001 is not assigned to this waste stream. Waste stream ID-AECHDM is assigned F-listed EPA HWNs F002, F004, and F005 for the listed chemicals identified in Tables 7 and 8 (Reference DR3001).

5.4.3.2 Toxicity Characteristic Constituents

Based on review of AK relative to chemicals used or present in Argonne laboratory and maintenance operations, waste stream ID-AECHDM may be contaminated with toxicity characteristic compounds as defined in 40 CFR 261.24 (Reference 22). Where a constituent has been identified and there is no or limited quantitative data available to demonstrate that the concentration of a constituent is below regulatory threshold levels, the applicable EPA HWN is applied to the waste stream (Reference 5).

The waste stream contains or is contaminated with toxicity characteristic metals. Based on the references identified in Table 8, EPA HWNs D004 (arsenic), D005 (barium), D006 (cadmium), D007 (chromium), D008 (lead), D009 (mercury), D010 (selenium), and D011(silver) are assigned to waste stream ID-AECHDM (Reference DR3001).

The AK sources identified the use of organic toxicity characteristic compounds including 1,1-dichloroethylene (D029), 1,2-dichloroethane (D028), 1,4-dichlorobenzene (D027), 2,4-dinitrotoluene (D030), benzene (D018), carbon tetrachloride (D019), chlorobenzene (D021), methyl ethyl ketone (D035), nitrobenzene (D036), pentachlorophenol (D037), and tetrachloroethylene (D039). Benzene, chlorobenzene, methyl ethyl ketone, nitrobenzene, and tetrachloroethylene are identified as F-listed solvents. Because the more specific F-listed EPA HWNs have been assigned for these compounds, assignment of the corresponding toxicity characteristic HWNs (D018, D021, D035, D036, and D039) is not necessary. Therefore the applicable HWNs D019, D027, D028, D029, D030, and D037 are assigned to waste stream ID-AECHDM (Reference DR3001).

Methoxychlor (D014) is listed as a reagent in a calibration solution for extract cleanup by Gel Permeation Chromatography. This calibration solution was prepared only once during the development of a standard operating procedure. The procedure was developed but never used, because there was never a need for cleanup. Furthermore, the instrument was in a non-radiological area, and as a result, radioactive samples would not have been run through the instrument. Any calibration solution, therefore, would have been disposed of as hazardous waste and not as radioactive hazardous waste. Therefore, the HWN D014 does not apply to waste stream ID-AECHDM (Reference 6, AE-C-042, AE-D-012, AE-I-054, and AE-I-192).

5.4.3.3 P-, U-, and K-Listed Wastes

Based on a review of AK documentation, waste stream ID-AECHDM does not contain and is not mixed with a discarded commercial chemical product, an off-specification commercial chemical product, or a container residue or spill residue thereof, as defined in 40 CFR 261.33 (Reference 22). WMO procedure WMO-DOC-6, requires unused chemicals identified during waste repackaging operations to be removed from the waste and disposed of as low-level waste. P- and U-listed reagents, including hydrofluoric acid (U134), were used in Argonne operations; however, no pure product or unused chemicals would have been disposed of in TRU waste containers. No listed chemicals were identified in the container-specific documentation and no records indicate that waste contains material originating from spill cleanup of listed chemicals (e.g., incident report). The only sources of beryllium identified in the AK record were samples being analyzed for beryllium and beryllium oxide crucibles used in an electrorefining furnace in the G-118 laboratory in Building 205. Based on the physical form of the samples introduced into the waste generating processes, the waste stream will not meet the definition of P015 waste. With the exception of one container (RW48192), beryllium is not expected to be present in more than trace quantities and will not exceed one percent, by weight, in payload containers. Debris originating from G-118 containing approximately 2 kilograms of beryllium oxide crucible pieces was packaged into drum RW48192 and exceeds one percent by weight. Waste stream ID-AECHDM is therefore not assigned a P- or U-listed HWN (References AE-I-050, DR3001, DR3003, P3001, U3003, and U3004).

The material in this waste stream is not a hazardous waste from any of the sources specified in 40 CFR 261.32 (Reference 22). Waste stream ID-AECHDM is therefore not assigned a K-listed HWN.

5.4.3.4 Ignitables, Corrosives, and Reactives

Chemicals used during historic Argonne laboratory operations may exhibit the characteristic of ignitability, corrosivity, and/or reactivity in their pure form. Based on the review of the Argonne waste management practices and container documentation, no ignitable, corrosive, or reactive materials were disposed of in the waste stream in a liquid or unused form or without being reacted, neutralized, and/or immobilized. Any unused chemicals would have been segregated during packaging and disposed of as low-level waste (References P3001, U3003, and U3004).

Ignitability

The debris materials in this waste stream do not meet the definition of ignitability as defined in 40 CFR 261.21 (Reference 22). Ignitable organic liquids were used in Argonne laboratory operations and immobilized during repackaging operations in accordance with WMO procedures and work plans. The waste may be contaminated with oxidizers (e.g., nitrates, perchlorates) that were used in Argonne operations, but should be present only in residual quantities (i.e., low concentrations in aqueous solutions). Therefore, the waste does not meet the definition of an oxidizer and will not cause a fire through friction, absorption of moisture, or spontaneous chemical change. All the solidified liquids were immobilized and all residual liquids were absorbed and verified in accordance with WMO procedure WMO-DOC-6. Any unused chemicals identified during waste repackaging operations have been removed from this waste stream and disposed of as low-level waste. To ensure the final waste form does not exhibit the characteristic of ignitability, free liquids (regardless of quantity) and compressed gases were managed as prohibited items when identified during waste packaging. The materials in this waste stream are therefore not ignitable D001 wastes (References 11, P3001, U3003, and U3004).

Corrosivity

The debris materials in this waste stream do not meet the definition of corrosivity as defined in 40 CFR 261.22 (Reference 22). As required by WMO procedures and work plans, all corrosive liquids (acidic and basic solutions) have been isolated, neutralized, and immobilized. To ensure that the final waste form does not exhibit the characteristic of corrosivity, liquids (regardless of quantity) have been managed as prohibited items when identified during WMO repackaging operations and verified by CCP in accordance with CCP-TP-402. The materials in this waste stream are therefore not corrosive D002 wastes (References 11, 25, P3001, P3002, P3003, P3004, U3003, and U3004).

Reactivity

The debris materials in this waste stream do not meet the definition of reactivity as defined in 40 CFR 261.23 (Reference 22). The materials are stable and will not undergo violent chemical change. The materials will not react violently with water, form potentially explosive mixtures with water, or generate toxic gases, vapors, or fumes when mixed with water. The material will not readily detonate or undergo explosive decomposition. All the solidified liquids were immobilized and all residual liquids were absorbed and verified in accordance with WMO procedure WMO-DOC-6. Any unused chemicals identified during waste repackaging operations have been removed from this waste stream and disposed of as low-level waste. Other reactive materials, including cyanides, sulfides, and explosives, were not identified in the materials included in this waste stream. The materials in this waste stream are therefore not reactive D003 wastes (References P3001, U3003, and U3004).

5.4.3.5 Polychlorinated Biphenyls (PCBs)

Based on the review of AK, no sources for polychlorinated biphenyl (PCB) compounds (e.g., hydraulic oils, fluids) or other PCB containing equipment (e.g., transformers, ballasts, capacitors) were identified in waste stream ID-AECHDM. Therefore, this waste stream is not regulated as a Toxic Substances Control Act (TSCA) waste under 40 CFR 761(Reference 24).

5.4.4 Prohibited Items

Containers in waste stream ID-AECHDM were packaged in accordance with WMO-DOC-6 (Reference P3001). Implementation of this procedure assured the absence or correct management of the following prohibited items:

- Internal shielding or deliberate waste placement to provide shielding for high radiation items (surface dose rate of container cannot be greater than 200 millirems per hour [mrem/hr] on contact).
- Machine compacted waste (waste whose volume has been reduced by mechanical compaction process).
- Liquids.
- Unvented containers larger than 4 liters.
- Nonradioactive pyrophoric materials that may ignite spontaneously in air or that emit sparks when scratched or struck, especially with materials such as steel. A flammable solid that, under transport conditions, might cause fires through friction or retained heat or that can be ignited readily and, when ignited, burns vigorously and persistently so as to create a serious transportation hazard. Included in the pyrophorics definition are spontaneously combustible materials, water reactive materials, and oxidizers. Examples of nonradioactive pyrophorics are organic peroxides, sodium metal, and chlorates.
- Radioactive pyrophorics greater than one percent by weight.
- Non-mixed hazardous waste.
- Waste exhibiting RCRA characteristics of ignitability, corrosivity, or reactivity.
- Explosives.
- Compressed gases.
- Waste that has been managed as high-level waste.
- Classified shapes and/or composition without prior approval from the DOE Carlsbad Field Office (CBFO).

As described in Section 4.4.1, all liquids encountered during WMO repackaging operations were immobilized prior to packaging. Liquids determined to be corrosive

were neutralized prior to immobilization. Containers of unused chemical products were segregated during the WMO sorting operations and disposed of as low-level waste. Samples were taken of solidified liquids, as necessary, and analyzed using EPA paint filter liquids test method 9095B to assure that free liquids did not form following solidification (Reference 25). In addition, precautionary amounts of absorbents were added between the drum and liners and in the drum liners to absorb residual liquids that may result from dewatering or condensation (see Section 5.5). In addition, the following steps were taken to assure the absence of liquids in the containers (References P3001, P3002, P3003, and P3004):

- Aerosol cans were cut in half prior to placing in the receiving drum.
- Empty containers were turned upside down. Absorbent was added to any empty container so that liquid was no longer observed prior to packaging.
- Piping was held in an inclined position to demonstrate the absence of liquid.
- Valves on pipes were opened.
- Mechanical equipment with reservoirs or other components that may contain liquids (e.g., pump housings, gear boxes, oil sumps, etc.) had the plugs removed and verified that the equipment has been completely drained.
- Tubing and hoses was cut into approximately one foot sections to demonstrate the absence of liquids.

All of these activities were performed to ensure that they were visible to the camera recording the packaging operation and described in detail for the audio narration.

In addition to assuring the absence of the prohibited items described above, WMO blocked, braced, or suitably packaged sharp or heavy objects in the waste as necessary to provide puncture protection for the container. These protective measures were described for the audio narration during packaging.

CCP reviewed the Argonne video and audio records in accordance with CCP-TP-402 for the drums in the waste stream. Therefore, the waste stream does not include the prohibited items identified above or DOT Class 1 explosives, oxidizers, and forbidden materials identified in 49 CFR 173.21
(References 11 and 26).

It should be noted, that due to Argonne's waste management practice of prohibiting any amount of liquid during packaging, prohibited amounts of liquids are not expected in the containers in this waste stream. However, RTR will be performed by CCP to assure that prohibited amounts of liquids have not formed in the drums due to dewatering or condensation, in accordance with CCP-PO-001 (Reference 2).

5.5 Waste Packaging

Waste stream ID-AECHDM is packaged in DOT 7A, Type A, 55-gallon open head drums. A combination of vented drum liner bags, inner waste bags, and/or fiberboard liners (without the lid) were used during packaging of debris waste. The primary packaging configuration consists of ten pounds of absorbent (e.g., Aquaset) added to the bottom of the 55-gallon drum. A polyethylene drum liner bag, with a NucFil Bag Vent (NucFil-036 R DA PU) installed, was then placed into the drum and an additional ten pounds of absorbent was placed in the bag. Absorbent pads (Quicksolid pads) have also been used during the packaging of containers. Debris waste was then either directly loaded into the liner or bags of waste were placed into the liner bag. All bags were closed using a twist and tape or fold and tape method (References C3003, P3001, and U3004).

5.5.1 Container Filter Vents

All closed inner bags and liner bags are fitted with a filter with a minimum hydrogen diffusivity value of 1.075E-05 mol/s/mol fraction (e.g., NucFil Bag Vent). All 55-gallon drums are fitted with a filter vent with an integral sample port septum (NucFil-019DS).

5.5.2 Layers of Confinement

As described above, no drum will have more than two layers of confinement consisting primarily of two vented closed (twist and tape or fold and tape) bags verified during waste packaging (References C3001, P3001, and U3004).

6.0 REQUIRED WASTE STREAM INFORMATION: ID-AECHHM

This section presents the mandatory TRU waste stream specific information required by the WIPP-WAP for waste stream ID-AECHHM. The area of generation, waste stream volume, period of generation, prohibited items, waste packaging, and the physical, chemical, and radiological composition of the waste stream are described.

6.1 Area and Building of Generation

Waste stream ID-AECHHM consists of immobilized liquid waste processed and repackaged by WMO in Building 306 originated from Argonne laboratory and maintenance operations described in Section 4.0. Review of the container-specific records was performed to verify the generation location for each drum to be shipped to WIPP (References U3003 and U3004).

6.2 Waste Stream Volume and Period of Generation

Waste stream ID-AECHHM is mixed homogeneous waste consisting of immobilized and repackaged waste from laboratory and maintenance operations at Argonne packaged by the WMO in Building 306. Table 9, Waste Stream ID-AECHHM Volume, identifies the containers in the waste stream shipped to INL (References U3005).

The 55-gallon drums in waste stream ID-AECHHM were packaged beginning in May 2010 through May 2011. The historic Argonne laboratory waste contained in the feed containers repackaged during the CH repackaging campaign were received by the WMO as early as January 1989 (References U3003 and U3004).

Table 9. Waste Stream ID-AECHHM Volume

	Containers	Volume (cubic meters)
ID-AECHHM Inventory	30 55-gallon drums	6.0

The current inventory of drums verified to be eligible for shipment to WIPP is included in the Waste Containers List for waste stream ID-AECHHM.

6.3 Area and Building of Generation

Historic process operations, waste management operations, and the buildings where TRU wastes were generated at Argonne is described in Section 4.0. Packaging of the TRU waste stream ID-AECHHM in Building 306 is described in Section 6.5.

6.4 Type of Wastes Generated

This section describes the waste materials based on process inputs and outputs, waste matrix code assignment, waste material parameter weight estimates, radionuclide

contaminants, hazardous waste determinations, and prohibited items for waste stream ID-AECHHM.

6.4.1 Materials Related to Physical Form

Waste stream ID-AECHHM consists of mixed homogeneous solids generated during the neutralization and solidification of aqueous and organic liquids originating from Argonne laboratory and maintenance operations. The primary materials used to absorb/solidify these liquids in the WMO operation include Aquaset II-G for aqueous liquids and Petroset II-G for the organic liquids. Clay and vermiculite based absorbents may also be present from the neutralization and evaporation of acids, etchants, and solutions in the laboratories or previous WMO activities. Solidification agents such as Portland cement, Acid Bond, Nochar, or Petrobond may have been used to immobilize some liquids. In addition, as much as 20 pounds of precautionary absorbent (e.g., Aquaset) have been added to the drums. This waste stream also contains metal cans used during the solidification of batches of liquids and lesser amounts of debris materials described in Section 5.4.1 (References 6, C3003, DR3002, P3001, P3002, P3003, U3003, and U3004).

6.4.1.1 Waste Matrix Code

Based on the evaluation of the materials contained in this waste stream and WMO waste solidification operations, ID-AECHHM is comprised of solidified organic and aqueous liquids in metal cans or directly loaded in lined 55-gallon drums. Waste Matrix Codes S3110, Inorganic Particulates, and S3150 – Solidified Homogeneous Solids were originally applied to waste stream AECHHM; based on current CCP conventions for assignment of Waste Matrix Codes 3110 is appropriate and includes more specific code S3114 assigned for absorbed organic liquids. For this reason, Waste Matrix Code 3110 is the most appropriate code and assigned to this waste stream (References 6 and C3002).

6.4.1.2 Waste Material Parameters

Based on data obtained from WWIS/WDS database all of the containers in waste stream AECHHM sent to WIPP contained 100 percent WMP inorganic matrix. This waste stream only contained solidified aqueous liquids and did not include the organic liquids to be included in waste stream ID-AECHHM described in this report. In an effort to estimate the relative amounts of solidified organic liquids (WMP organic matrix) and solidified aqueous liquids (WMP inorganic matrix) generated during WMO solidification operations, the liquids present in the inventory to be solidified were evaluated. Based on this evaluation, it was determined that approximately ten percent of the liquids were organic and 90 percent of the liquids were aqueous. Table 10, Waste Material Parameter Estimates for ID-AECHHM, provides the results of this evaluation (References 6 and C3002). It should be noted that this evaluation does not include the metal inner cans used during the solidification of the liquids or the inclusion of debris containers originally assigned to debris waste stream ID-AECHDM. For this reason,

waste stream could contain lesser amounts of any of the debris materials described in Section 5.4.1 (Reference DR3002).

Table 10. Waste Material Parameter Estimates for ID-AECHHM

WMP Description	Average Weight Percent	Weight Percent Range
Inorganic Matrix	89.1%	0.0% - 100%
Organic Matrix	10.9%	0.0% - 100%

6.4.2 Radiological Characterization of Waste Stream ID-AECHHM

Radiological information is reported by generators on waste requisition forms and may include information on inner containers within a waste drum. The information may be based on (References 6 and AE-I-156):

1) Process knowledge and percent recovery.
2) Radioactive analysis of the waste.
3) Waste container logbook records.
4) Surface dose rate calculations.
5) Conservative suspect-contamination estimates.
6) Other methods (explained by the generator).

The radiological information from the waste requisitions was summarized in the WMS. This information was reviewed for waste stream AECHHM and is presented in CCP-AK-ANLE-001 (Reference 6). AECHHM is the corresponding homogeneous waste stream certified and shipped to WIPP by the previous CCP TRU Waste Certification Program at Argonne. The generator reported radiological data associated with the previously certified waste stream AECHHM are assumed to be representative of waste stream ID-AECHHM for the purposes of this report.

Information for individual waste containers was used to summarize radiological properties for the waste stream because this waste resulted from numerous experiments and research and development activities rather than from long-term, ongoing, production-related waste generating processes. Argonne did not employ waste identification or categorization schemes relevant to the isotopic composition of the waste. Argonne requires waste generators to report the isotopic composition of their waste on waste requisitions (References AE-P-011 through AE-P-020). Based on information reported by generators on waste requisitions and later entered into the WMS for containers in the previous waste stream AECHHM, the isotopic composition of the waste is described in this section (References AE-I-156, AE-I-195, and AE-I-201). There are no physical or chemical aspects of this waste stream that could affect the isotopic distribution. The waste was generated by facility maintenance operations and underwent standard waste management practices and packaging. The waste was not treated after generation in a manner that would affect isotopic distribution.

The information contained in the WMS was used directly to derive isotopic composition. No numerical adjustments were made to the data to derive isotopic composition.

The Argonne WMO relies on waste generators to characterize their waste based on process knowledge, as documented on the WMO-195 and WMO-195A forms (Reference AE-P-011). During review and approval of the forms, a waste specialist at WMO verifies whether or not a waste is TRU based on generator information (References AE-C-006 and AE-P-095). If the waste is indicated as TRU on the forms, a review of the radionuclide listing and quantity is performed to verify that TRU concentration exceeds 100 nCi/g of waste. If the waste is not indicated as TRU, a review of the radionuclide listing is performed to determine if TRU isotopes are present (Reference AE-C-043).

The radiological information in the WMS was summarized to determine relative prevalence of radionuclides, based on how often radionuclides were reported by waste generators (Reference AE-I-201). The results of this evaluation are presented as a percentage of the total radionuclides reported for the waste stream. That is, a percentage was calculated that reflects the number of times a radionuclide was individually reported on waste requisitions for the entire waste stream, compared to the total radionuclides reported for the waste stream. For the ten key radionuclides listed in the CH-WAC, the following prevalence (rounded to the nearest 0.5 percent) was found:

Am-241	14.0%
Cs-137	5.0%
Pu-238	2.0%
Pu-239	19.0%
Pu-240	13.5%
Pu-242	2.5%
Sr-90	0.5%
U-233	1.0%
U-234	1.5%
U-238	13.5%

Other significant radionuclides for this waste stream based on generator reported data, defined as those radionuclides reported as one percent (rounded to the nearest 0.5 percent) or more of the total, are as follows:

Co-60	1.5%
Np-237	2.5%
Pu-241	6.0%
Ra-226	1.0%
Th-232	1.0%
U-235	8.0%

6.4.2.1 Evaluation of Radiological Data Related to ID-AECHHM

In addition to generator reported radionuclide data, certified assay data (CCP NDA characterization results) for 55 containers from the previously certified homogeneous waste stream AECHHM were used to establish relative radionuclide weight and activity for waste stream ID-AECHHM. To determine isotopic ratios, the gram value for each individual radionuclide was summed over the waste stream and then divided by the total radiological mass in the waste stream. This value was converted to a percentage and is presented as the "Total Radionuclide Weight%" on the following Table 11, Radionuclide Distribution for Waste Stream ID-AECHHM. In the same way, a calculation was performed for "Total Radionuclide Curie%" using the sum of activities for each radionuclide over the original waste stream. The "Radionuclide Weight% Range for Individual Containers" was determined by summing the total radiological mass in each container and calculating the weight percent of each radionuclide in each container. To determine the range, the maximum and minimum were determined by reviewing the container-by-container assay results for the original waste stream. The same process was applied to determine the "Total Radionuclide Curie% Range for Individual Containers" (Reference U3002). Every radionuclide listed in Table 11 is expected in waste stream ID-AECHHM, including U-233.

Table 11. Radionuclide Distribution for Waste Stream ID-AECHHM

Radio-nuclide	Container with Reported Radio-nuclide	Total Radio-nuclide Weight %[1,5]	Radionuclide Weight% Range for Individual Containers[3,5]	Total Radio-nuclide Ci %[2,5]	Radionuclide Ci% Range for Individual Containers[4,5]	Expected in Waste Stream (Yes/No)
WIPP Required Radionuclides						
Am-241	55	0.05%	Trace - 4.65%	19.00%	11.67% - 75.01%	Yes
Pu-238	50	Trace	0% - 0.02%	5.93%	0% - 9.25%	Yes
Pu-239	55	**7.91%**	0.09% - 71.11%	**53.62%**	8.23% - 66.29%	Yes
Pu-240	54	0.86%	0% - 15.63%	**21.41%**	0% - 28.16%	Yes
Pu-242	54	0.01%	0% - 2.34%	Trace	0% - 0.04%	Yes
U-233	0	Trace	0% - 0.00%	0.00%	0% - 0.00%	Yes
U-234	41	0.01%	0% - 0.17%	0.01%	0% - 0.20%	Yes
U-238	53	**90.32%**	0% - 99.89%	Trace	0% - 0.18%	Yes
Sr-90	51	Trace	0% - Trace	Trace	0% - 0.19%	Yes
Cs-137	51	Trace	0% - Trace	Trace	0% - 0.19%	Yes
Additional Radionuclides						
Ac-228	6	Trace	0% - 0.00%	Trace	0% - Trace	Yes
Am-243	52	Trace	0% - 0.01%	0.01%	0% - 0.11%	Yes
Bi-212	30	Trace	0% - Trace	Trace	0% - Trace	Yes
Bi-213	2	Trace	0% - Trace	Trace	0% - Trace	Yes
Bi-214	13	Trace	0% - Trace	Trace	0% - Trace	Yes
Cf-249	2	Trace	0% - Trace	Trace	0% - Trace	Yes
Cm-243	31	Trace	0% - Trace	Trace	0% - 0.52%	Yes
Co-60	8	Trace	0% - Trace	0.01%	0% - 4.51%	Yes
Eu-152	27	Trace	0% - Trace	Trace	0% - Trace	Yes
Eu-154	1	Trace	0% - Trace	Trace	0% - Trace	Yes
K-40	49	0.24%	0% - 90.79%	Trace	0% - 0.06%	Yes
Na-22	23	Trace	0% - Trace	Trace	0% - Trace	Yes
Np-237	53	0.03%	0% - 3.95%	Trace	0% - 0.02%	Yes
Pb-212	33	Trace	0% - Trace	Trace	0% - Trace	Yes
Th-229	2	Trace	0% - Trace	Trace	0% - 0.01%	Yes
Tl-208	45	Trace	0% - Trace	Trace	0% - Trace	Yes
T-l209	3	Trace	0% - Trace	Trace	0% - Trace	Yes
U-235	40	0.57%	0% - 45.24%	Trace	0% - Trace	Yes

1. This listing indicates the total weight percent of each radionuclide over the waste stream.
2. This listing indicates the total activity (curie) percent of each radionuclide over the waste stream.
3. This listing is the weight percent range of each radionuclide on a container-by-container basis. Radionuclides with "0" listed as the lower range indicate that at least one container did not report that radionuclide.
4. This listing is the Ci percent range of each radionuclide on a container-by-container basis.
5. "Trace" indicates <0.01 percent for that radionuclide.

To augment the evaluation of certified assay data from the previously certified waste stream AECHHM, non-certified assay data from containers in waste stream ID-AECHHM were evaluated for the relative radionuclide weight and activity for waste stream ID-AECHHM. Available data was obtained for the 30 containers in waste stream

ID-AECHHM reported prior to shipment of these containers from Argonne to the AMWTP. Table 12, Radionuclide Distribution of Non-Certified Data for Waste Stream ID-AECHHM, summarizes the radionuclides identified in the non-certified data of the 30 containers Several additional radionuclides expected in the waste stream based on the non-certified assay data from the 30 containers are identified in Table 12. Table 12 was constructed using the same calculations that were used to construct Table 11, as described in this section above (Reference U3006).

Table 12. Radionuclide Distribution of Non-Certified Data for Waste Stream ID-AECHHM

Radio-nuclide	Container with Reported Radio-nuclide	Total Radio-nuclide Weight %[1,5]	Radionuclide Weight% Range for Individual Containers[3,5]	Total Radio-nuclide Curie%[2,5]	Radionuclide Curie% Range for Individual Containers[4,5]	Expected Present (Yes/No)
WIPP Required Radionuclides						
Am-241	30	0.01%	Trace - 0.45%	1.83%	0.01% - 21.99%	Yes
Pu-238	30	0.01%	Trace - 0.17%	7.01%	0.26% - 56.99%	Yes
Pu-239	30	**2.87%**	0.10% - 92.68%	7.14%	0.46% - 38.00%	Yes
Pu-240	30	1.27%	0.05% - 13.87%	**11.56%**	0.05% - 58.47%	Yes
Pu-242	10	0.06%	0% - 0.81%	Trace	0% - 0.28%	Yes
U-233	23	1.27%	0% - 11.31%	0.49%	0% - 8.90%	Yes
U-234	5	Trace	0% - 1.18%	Trace	0% - Trace	Yes
U-238	24	**86.62%**	0% - 98.66%	Trace	0% - 0.05%	Yes
Sr-90	6	Trace	0% - Trace	Trace	0% - 0.40%	Yes
Cs-137	29	Trace	0% - Trace	0.11%	0% - 0.61%	Yes
Additional Radionuclides						
Ac-227	1	Trace	0% - Trace	Trace	0% - Trace	Yes
Am-243	3	Trace	0% - 0.09%	Trace	0% - 0.07%	Yes
Be-7	2	Trace	0% - Trace	Trace	0% - Trace	Yes
Bi-207	1	Trace	0% - Trace	Trace	0% - Trace	Yes
Bi-212	3	Trace	0% - Trace	Trace	0% - Trace	Yes
Bi-214	12	Trace	0% - Trace	Trace	0% - Trace	Yes
Cf-252	1	Trace	0% - Trace	0.08%	0% - 0.18%	Yes
Cm-243	5	Trace	0% - Trace	Trace	0% - 0.10%	Yes
Cm-244	2	Trace	0% - 0.40%	Trace	0% - 85.09%	Yes
Co-60	7	Trace	0% - Trace	Trace	0% - Trace	Yes
Cs-134	2	Trace	0% - Trace	Trace	0% - Trace	Yes
Eu-150	6	Trace	0% - Trace	Trace	0% - Trace	Yes
Eu-152	7	Trace	0% - Trace	Trace	0% - 0.01%	Yes
Eu-154	23	Trace	0% - Trace	0.02%	0% - 0.28%	Yes
Eu-155	2	Trace	0% - Trace	Trace	0% - 0.04%	Yes
K-40	21	4.72%	0% - 43.46%	Trace	0% - Trace	Yes
Na-22	5	Trace	0% - Trace	Trace	0% - Trace	Yes

Table 12. Radionuclide Distribution of Non-Certified Data for Waste Stream ID-AECHHM Continued)

Radio-nuclide	Container with Reported Radio-nuclide	Total Radio-nuclide Weight %[1,5]	Radionuclide Weight% Range for Individual Containers[3,5]	Total Radio-nuclide Curie%[2,5]	Radionuclide Curie% Range for Individual Containers[4,5]	Expected Present (Yes/No)
Additional Radionuclides						
Np-237	27	0.16%	0% - 25.85%	Trace	0% - 0.02%	Yes
Pb-212	6	Trace	0% - Trace	Trace	0% - Trace	Yes
Pb-214	1	Trace	0% - Trace	Trace	0% - Trace	Yes
Pu-241	25	0.02%	0% - 4.48%	**71.73%**	0% - 99.00%	Yes
Ra-226	1	Trace	0% - Trace	Trace	0% - Trace	Yes
Th-229	1	Trace	0% - Trace	Trace	0% - Trace	Yes
Th-230	5	Trace	0% - Trace	Trace	0% - Trace	Yes
Th-232	6	1.73%	0% - 35.73%	Trace	0% - Trace	Yes
Th-234	4	Trace	0% - Trace	Trace	0% - Trace	Yes
U-232	2	Trace	0% - Trace	Trace	0% - Trace	Yes
U-235	25	1.26%	0% - 73.56%	Trace	0% - Trace	Yes

1. This listing indicates the total weight percent of each radionuclide over the waste stream.
2. This listing indicates the total activity (curie) percent of each radionuclide over the waste stream.
3. This listing is the weight percent range of each radionuclide on a container-by-container basis. Radionuclides with "0" listed as the lower range indicate that at least one container did not report that radionuclide.
4. This listing is the curie percent range of each radionuclide on a container-by-container basis.
5. "Trace" indicates <0.01 percent for that radionuclide.

6.4.2.2 Prevalent Radionuclides for ID-AECHHM

Based on further review of the data presented in Table 12, and based on communication with NDA Expert Analyst who performed the analysis of the 30 containers in waste stream ID-AECHHM, Be-7 and K-40 were identified from background and should not have been reported in this waste. Based on this information and on the balance of the data in Table 12, the two prevalent radionuclides by mass are U-238 and Pu-239, and the two prevalent radionuclides by activity are Pu-240 and Pu-241. Although U-238 is the most prevalent radionuclide by mass in the waste stream as a whole, U-238 was not identified in all containers and will not be the prevalent radionuclide in all containers (References C3004 and U3006).

6.4.2.3 Use of Radionuclide Isotopic Ratios for ID-AECHHM

For waste containers where direct measurement does not yield useable isotopic ratio information, AK may be used to supplement direct measurement data in accordance with the WIPP-WAC (Reference 15). The specific use and confirmation of AK related to assay measurements of containers in this waste stream is documented in the

memorandum written and jointly approved by the AK Expert and NDA Expert Analyst (Reference C3004).

6.4.3 Chemical Content Identification – Hazardous Constituents

This section describes the characterization rationale for assignment of EPA HWNs to waste stream ID-AECHHM. The EPA HWNs assigned to this waste stream are summarized in Table 13, Waste Stream ID-AECHHM Hazardous Waste Characterization Summary.

Table 13. Waste Stream ID-AECHHM Hazardous Waste Characterization Summary

EPA Hazardous Waste Number	Constituent
Toxicity Characteristic Metals	
D004	Arsenic
D005	Barium
D006	Cadmium
D007	Chromium
D008	Lead
D009	Mercury
D010	Selenium
D011	Silver
Toxicity Characteristic Organics	
D019	Carbon tetrachloride
D027	1,4-Dichlorobenzene
D028	1,2-Dichloroethane
D029	1,1-Dichloroethylene
D030	2,4-Dinitrotoluene
D037	Pentachlorophenol
F-Listed Organic Solvents	
F002	1,1,1-Trichloroethane
F002	1,1,2-trichloro-1,2,2-trifluoroethane (Freon TA)
F002	Tetrachloroethylene
F002	Chlorobenzene
F002	Methylene chloride
F002	Trichloroethylene
F004	Nitrobenzene
F005	Benzene
F005	Isobutanol

Table 13. Waste Stream ID-AECHHM Hazardous Waste Characterization Summary (Continued)

EPA Hazardous Waste Number	Constituent
F005	Methyl ethyl ketone
F005	Toluene

The following sections describe the characterization rationale for the assignment of EPA HWNs to waste stream ID-AECHHM (Reference 22). The assignment of HWNs was based primarily on the original research conducted and AK documentation collected by CCP during the 2002 to 2003 time frame to characterize CH waste streams AECHDM and AECHHM described in AK Summary Report CCP-AK-ANLE-001 (Reference 6). This information was augmented by the additional AK documentation collected to support the characterization of RH TRU waste generated during Argonne research and development activities associated primarily with irradiated materials examination in hot cell facilities in three of the primary TRU waste generating buildings described in this report (Buildings 200, 205, and 212). These hot cell operations generated RH waste currently being shipped to WIPP from Argonne and the INL (References 12 and 13). Because these operations were identified as generators of CH waste, this additional AK documentation has been combined with the original sources of AK collected and the assignment of HWNs updated to reflect current CCP HWN assignment conventions. Table 8 includes a comprehensive list of the chemicals associated with TRU waste generating operations based on this evaluation. Notable changes to the HWNs assigned originally to AECHHM, include (Reference DR3001):

- Removal of HWN F003 for solvents listed solely for ignitability in the liquid state.
- Removal of HWN for F001 listed solvents, because large-scale degreasing operations were not conducted in Argonne laboratory operations.
- Removal of HWNs D018 (benzene), D021 (chlorobenzene), D035 (methyl ethyl ketone), and D036 (nitrobenzene), and assignment of more specific F-listed HWN for these solvents.
- Addition of HWN D029 for 1,1-dichlorobenzene identified as a potential contaminant during subsequent RH waste characterization.
- Addition of HWN F002 for tetrachloroethylene and trichloroethylene identified as a potential contaminants of CH debris and during subsequent RH waste characterization.
- Addition of HWN F005 for isobutanol identified as a potential contaminant during subsequent RH waste characterization.

6.4.3.1 F-Listed Constituents

Based on review of AK relative to chemicals used or present in Argonne laboratory and maintenance operations, waste stream ID-AECHHM may contain or be mixed with F-listed hazardous wastes from non-specific sources listed in Title 40 CFR 261.31 (Reference 22). As shown in Table 8, F002, F004, and F005 listed solvents were used in these operations. F003 constituents, including acetone, methyl isobutyl ketone, n-butyl alcohol, xylene, ethyl acetate, ethyl benzene, ethyl ether, and methanol are listed solely because these solvents are ignitable in the liquid form. The waste stream does not exhibit the characteristic of ignitability because it is not liquid; therefore, F003 is not assigned. Although several F001-listed solvents were identified in the AK record (i.e., 1,1,1-trichloroethane, 1,1,2-trichloro-1,2,2-trifluoroethane, carbon tetrachloride, methlyene chloride, tetrachloroethylene, and trichloroethylene), EPA has provided a regulatory clarification that the F001 listing is only appropriate when the listed solvents are used in a "large-scale" degreasing operation such as cold cleaning or vapor degreasing on an industrial scale (Reference 22). Argonne laboratory and maintenance operations did not conduct large-scale degreasing operations, and therefore, EPA HWN F001 is not assigned to this waste stream. Waste stream ID-AECHHM is assigned F-listed EPA HWNs F002, F004, and F005 for the listed chemicals identified in Table 13 (Reference DR3001).

6.4.3.2 Toxicity Characteristic Constituents

Based on review of AK relative to chemicals used or present in Argonne laboratory and maintenance operations, waste stream ID-AECHHM may be contaminated with toxicity characteristic compounds as defined in 40 CFR 261.24 (Reference 22). Where a constituent has been identified and there is no or limited quantitative data available to demonstrate that the concentration of a constituent is below regulatory threshold levels, the applicable EPA HWN is applied to the waste stream (Reference 5).

The waste stream contains or is contaminated with toxicity characteristic metals. Based on the references identified in Table 8, EPA HWNs D004, D005, D006, D007, D008, D009, D010, and D011 are assigned to waste stream ID-AECHHM (Reference DR3001).

The AK sources identified the use of organic toxicity characteristic compounds including 1,1-dichloroethylene (D029), 1,2-dichloroethane (D028), 1,4-dichlorobenzene (D027), 2,4-dinitrotoluene (D030), benzene (D018), carbon tetrachloride (D019), chlorobenzene (D021), methyl ethyl ketone (D035), nitrobenzene (D036), pentachlorophenol (D037), and tetrachloroethylene (D039). Benzene, chlorobenzene, methyl ethyl ketone, nitrobenzene, and tetrachloroethylene are identified as F-listed solvents. Because the more specific F-listed EPA HWNs have been assigned for these compounds, assignment of the corresponding toxicity characteristic HWNs (D018, D021, D035, D036, and D039) is not necessary. Therefore HWNs D019, D027, D028, D029, D030, and D037 are assigned to waste stream ID-AECHHM (Reference DR3001).

Methoxychlor (D014) is listed as a reagent in a calibration solution for extract cleanup by Gel Permeation Chromatography. This calibration solution was prepared only once during the development of a standard operating procedure. The procedure was developed but never used, because there was never a need for cleanup. Furthermore, the instrument was in a non-radiological area, and as a result, radioactive samples would not have been run through the instrument. Any calibration solution, therefore, would have been disposed of as hazardous waste and not as radioactive hazardous waste. Therefore, the HWN D014 does not apply to waste stream ID-AECHHM (Reference 6, AE-C-042, AE-D-012, AE-I-054, and AE-I-192).

6.4.3.3 P-, U-, and K-Listed Wastes

Based on a review of AK documentation, waste stream ID-AECHHM does not contain and is not mixed with a discarded commercial chemical product, an off-specification commercial chemical product, or a container residue or spill residue thereof, as defined in 40 CFR 261.33 (Reference 22). WMO procedure WMO-DOC-6, requires unused chemicals identified during waste repackaging operations to be removed from the waste and disposed of as low-level waste. P- and U-listed reagents, including hydrofluoric acid (U134), were used in Argonne operations; however, no pure product or unused chemicals would have been disposed of in TRU waste containers. No listed chemicals were identified in the container-specific documentation and no records indicate that waste contains material originating from spill cleanup of listed chemicals (e.g., incident report). The only sources of beryllium identified in the AK record were samples being analyzed for beryllium and beryllium oxide crucibles used in an electrorefining furnace in the G-118 laboratory in Building 205. Based on the physical form of the samples introduced into the waste generating processes, the waste stream will not meet the definition of P015 waste. With the exception of one container (RW48190), beryllium is not expected to be present in more than trace quantities and will not exceed one percent, by weight, in payload containers. Beryllium oxide in a bag of waste originating from the G-Wing in Building 205 packaged into drum RW48192 was estimated to exceed one percent by weight in the container. Waste stream ID-AECHHM is therefore not assigned a P- or U-listed HWN (References AE-I-050, DR3001, DR3002, DR3003, DR3004, P3001, P3002, P3003, U3003, and U3004).

The material in this waste stream is not a hazardous waste from any of the sources specified in 40 CFR 261.32 (Reference 22). Waste stream ID-AECHHM is therefore not assigned a K-listed HWN.

6.4.3.4 Ignitables, Corrosives, and Reactives

Chemicals used during historic Argonne laboratory operations may exhibit the characteristic of ignitability, corrosivity, and/or reactivity in their pure form. Based on the review of the Argonne waste management practices and container documentation, no ignitable, corrosive, or reactive materials were disposed of in the waste stream in a liquid or unused form or without being reacted, neutralized, and/or immobilized. Any

unused chemicals would have been segregated during packaging and disposed of as low-level waste (References P3001, P3002, P3003, P3004, U3003, and U3004).

Ignitability

The homogeneous materials in this waste stream do not meet the definition of ignitability as defined in 40 CFR 261.21 (Reference 22). Ignitable organic liquids were used in Argonne laboratory operations and immobilized during repackaging operations in accordance with WMO procedures and work plans. To ensure that the final waste form does not exhibit the characteristic of ignitability, liquids (regardless of quantity) have been managed as prohibited items when identified during WMO repackaging operations and verified by CCP in accordance with CCP-TP-402. Additionally, the liquids solidification operations perform paint filter liquids test (SW-846 method 9095B) to assure no free liquids are present in the final waste form. The waste may be contaminated with oxidizers (e.g., nitrates, perchlorates) that were used in Argonne operations, but present only in residual quantities (i.e., low concentrations in aqueous solutions). Therefore, the waste does not meet the definition of an oxidizer and will not cause a fire through friction, absorption of moisture, or spontaneous chemical change. The materials in this waste stream are therefore not ignitable D001 wastes (References 11, 25, P3001, P3002, P3003, P3004, U3003, and U3004).

Corrosivity

The homogeneous materials in this waste stream do not meet the definition of corrosivity as defined in 40 CFR 261.22 (Reference 22). As required by WMO procedures and work plans all corrosive liquids (acidic and basic solutions) have been isolated neutralized and immobilized. To ensure that the final waste form does not exhibit the characteristic of corrosivity, liquids (regardless of quantity) have been managed as prohibited items when identified during WMO repackaging operations and verified by CCP in accordance with CCP-TP-402. Additionally, the liquids solidification operations perform paint filter liquids test (SW-846 method 9095B) to assure no free liquids are present in the final waste form. The materials in this waste stream are therefore not corrosive D002 wastes (References 11, 25, P3001, P3002, P3003, P3004, U3003, and U3004).

Reactivity

The homogeneous materials in this waste stream do not meet the definition of reactivity as defined in 40 CFR 261.23 (Reference 22). The materials are stable and will not undergo violent chemical change. The materials will not react violently with water, form potentially explosive mixtures with water, or generate toxic gases, vapors, or fumes when mixed with water. The materials will not readily detonate or undergo explosive decomposition. All the solidified liquids in this waste stream were immobilized and all residual liquids were absorbed and verified in accordance with WMO procedure WMO-DOC-6. Other reactive materials, including cyanides, sulfides, and explosives, were not identified in the materials included in this waste stream. The materials in this

waste stream are therefore not reactive D003 wastes (References P3001, P3002, P3003, P3004, U3003, and U3004).

6.4.3.5 Polychlorinated Biphenyls (PCBs)

Based on the review of AK, no sources for PCB compounds (e.g., hydraulic oils, fluids) or other PCB containing equipment (e.g., transformers, ballasts, capacitors) were identified in waste stream ID-AECHHM. Therefore, this waste stream is not regulated as a TSCA waste under 40 CFR 761 (Reference 24).

6.4.4 Prohibited Items

Containers in waste stream ID-AECHHM were packaged in accordance with WMO-DOC-6 (Reference P3001). Implementation of this procedure assured the absence or correct management of the following prohibited items:

- Internal shielding or deliberate waste placement to provide shielding for high radiation items (surface dose rate of container cannot be greater than 200 mrem/hr on contact).
- Machine compacted waste (waste whose volume has been reduced by mechanical compaction process).
- Liquids.
- Unvented containers larger than 4 liters.
- Nonradioactive pyrophoric materials that may ignite spontaneously in air or that emit sparks when scratched or struck, especially with materials such as steel. A flammable solid that, under transport conditions, might cause fires through friction or retained heat or that can be ignited readily and, when ignited, burns vigorously and persistently so as to create a serious transportation hazards. Included in the pyrophorics definition are spontaneously combustible materials, water reactive materials, and oxidizers. Examples of nonradioactive pyrophorics are organic peroxides, sodium metal, and chlorates.
- Radioactive pyrophorics greater than 1 percent by weight.
- Non-mixed hazardous waste.
- Waste exhibiting RCRA characteristics of ignitability, corrosivity, or reactivity.
- Explosives.
- Compressed gases.
- Waste that has been managed as high-level waste.
- Classified shapes and/or composition without prior approval from CBFO.

WMO procedures required that all liquids were immobilized prior to packaging. Liquids determined to be corrosive were neutralized prior to immobilization. Containers of unused chemical products were segregated during the WMO sorting operations and disposed of as low-level waste. Samples were be taken of solidified liquids and analyzed using EPA paint filter liquids test method 9095B to assure that free liquids did not form following solidification (Reference 25). In addition, precautionary amounts of absorbents were added between the drum and liners and in the drum liners to absorb residual liquids that may result from dewatering or condensation (see Section 6.5). In addition, homogeneous solids directly loaded in to 55-gallon drums were packaged with layers of absorbent added during packaging.

All of these activities were performed to ensure that they were visible to the camera recording the packaging operation and described in detail for the audio narration.

In addition to assuring the absence of the prohibited items described above, WMO blocked, braced, or suitably packaged sharp or heavy objects in the waste as necessary to provide puncture protection for the container. These protective measures were described for the audio narration during packaging.

CCP reviewed the Argonne video and audio records in accordance with CCP-TP-402 for the drums in the waste stream. Therefore, the waste stream does not include the prohibited items identified above or DOT Class 1 explosives, oxidizers, and forbidden materials identified in 49 CFR 173.21 (References 11 and 26).

It should be noted, that due to Argonne's waste management practice of prohibiting any amount of liquid during packaging, prohibited amounts of liquids are not expected in the containers in this waste stream. However, RTR will be performed by CCP to assure that prohibited amounts of liquids have not formed in the drums due to dewatering or condensation, in accordance with CCP-PO-001 (Reference 2).

6.5 Waste Packaging

CH waste stream ID-AECHHM containers shipped to the AMWTP were repackaged in accordance with WMO-DOC-6 (Reference P3001) and specific waste processing and packaging procedures (References C3001, P3002, P3003, and P3004).

The payload container for Argonne homogeneous waste is a DOT 7A, Type A, 55-gallon open head drum. The primary packaging configuration consists of ten pounds of absorbent (e.g., Aquaset) added to the bottom of the 55-gallon drum. A polyethylene drum liner bag, with a NucFil Bag Vent (NucFil-036 R DA PU) installed, was then placed into the drum and an additional 10 pounds of absorbent was placed in the bag. Batches of solidified liquids in one-gallon cans (4 layers of 7 cans) without lids were then loaded into the liner bag with a rigid cardboard cylinder in the center of the drum. The liner bag was then closed over the cans using a twist and tape or fold and tape method (References C3003, P3002, P3003, and U3004).

Homogeneous waste was directly loaded into one of the 55-gallon drums (RW48197). Like the drums containing cans, this drum was lined with a drum liner bag with ten pounds of absorbent in the bag and ten pounds of absorbent between the bag and the drum. A 90-mil polyethylene rigid liner then placed into the lined drum. The homogeneous solids were layered into the container with additional layers of absorbent until approximately 85 percent full. The remainder of the drum was filled with debris and then the liner bag was closed over the rigid liner (without lid) using a twist and tape or fold and tape method.

It should be noted that two drums (RW48078 and RW48190) containing debris originally assigned to debris waste stream ID-AECHDM were determined to exceed 50 percent homogeneous solids and reassigned to waste stream ID-AECHHM (Reference DR3002). For this reason, these drums were packaged in the configuration for debris drums described in Section 5.5.

6.5.1 Container Filter Vents

All closed inner bags and liner bags are fitted with a filter with a minimum hydrogen diffusivity value of 1.075E-05 mol/s/mol fraction (e.g., NucFil Bag Vent). All 55-gallon drums are fitted with a filter vent with an integral sample port septum (NucFil-019DS).

6.5.2 Layers of Confinement

As described above, each drum of homogeneous waste typically contain one layer of confinement (closed liner bag) and no drum will contain more than two layers of confinement. It should be noted that in drums containing 28 one-gallon cans, the liner bag cannot be closed completely using the fold and tape method; this configuration would result in no layers of confinement in these drums (References C3001 and P3001).

7.0 CONTAINER SPECIFIC INFORMATION

The original WMO-195 Radioactive and Mixed Waste Disposal Requisitions were reviewed for the repackaged waste containers included in waste streams ID-AECHDM and ID-AECHHM (Reference U3003). In addition, the Waste Container Packaging Form prepared in accordance with WMO-DOC-6 (Reference P3001) were reviewed and maintained for each repackaged waste container (Reference U3004). The containers evaluation and included in waste streams ID-AECHDM and ID-AECHHM are identified in the Waste Containers List prepared in accordance with CCP-TP-005 (Reference 5).

8.0 REFERENCES

1. *Waste Isolation Pilot Plant Hazardous Waste Facility Permit, Waste Analysis Plan,* New Mexico Environment Department, Santa Fe, New Mexico

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9.0 AK SOURCE DOCUMENTS

Source Document Tracking Number	Title
AE-C-003	Historic Operations in Building 212, D-Wing
AE-C-004	Record of Communication; Analytical Chemistry Laboratory Operations and Locations
AE-C-005	Discussion with Jim Wescott and Dan McNamee; ANL-E Waste Stream Designations
AE-C-006	Discussion with Cindy Rock; Waste Management Operations
AE-C-011	Two D&D Projects in Building 212, D-wing
AE-C-013	Discussion with Don Graczyk; ACL Facility Descriptions for Bldg 200
AE-C-015	Discussion with Seth Snyder and Al Youngs; Chemistry Division operations in Building 200, M-Wing and general description of Building 200
AE-C-016	Cave Area Description (for Building 200)
AE-C-017	Communication with Terri Bray; Nonmixed RH TRU drums from the AGHCF
AE-C-019	Chemical Usage at NBL for plutonium and uranium analysis - Conversation with Alma Stiffin and Iris Frank
AE-C-020	Content of radionuclide solutions – Conversation with Alma Stiffen and Jan Muller
AE-C-022	Correspondence with Terri Bray re: Chemical Usage in the AGHCF
AE-C-023	Interview w/ Fred Martino concerning chemicals listed in ACL procedures
AE-C-024	Email communications between G. Lasswell and D. Hecker and D. McNamee concerning details for certain waste requisitions and containers
AE-C-025	Conversation with Dan Hecker: Disposition of drums from Buildings other than 200, 205, 212, and 350.
AE-C-026	Information concerning chemicals listed in CHM Safety Reviews
AE-C-027	Operations in Building 315
AE-C-032	NCR-ANLE-0019-02
AE-C-035	NCR-ANLE-0074-02
AE-C-036	NCR-ANLE-0111-02
AE-C-037	NCR-ANLE-0110-02
AE-C-038	E-mail from Jim Frego to Ben Gutierrez
AE-C-042	Record of Communication re: Use of Methoxychlor in Extract Cleanup by Gel Permeation Chromatography (GPC)
AE-C-043	Correspondence with Dan Hecker regarding TRU waste stream management
AE-D-004	Discrepancy; Hazardous Constituents
AE-D-005	Resolution of NBL chemical usage and chemicals present in AE-CH-H-M waste stream
AE-D-011	Source Document Discrepancy Resolution
AE-D-012	Source Document Discrepancy Resolution
AE-I-001	Separation of Plutonium by Mini Anion-Exchange
AE-I-002	IFR Fuels Work
AE-I-003	Determination of the Isotopic Composition of Plutonium By Thermal Ionization Mass Spectrometry
AE-I-004	Dissolution of Plutonium Containing Materials Using Sealed Reflux

Source Document Tracking Number	Title
AE-I-005	Determination Of Weight Loss of Plutonium Oxide on Heating
AE-I-006	Determination of Specific Gravity and Density of Plutonium Solutions
AE-I-007	IFR Fuels Development
AE-I-008	IFR Fuel Interdiffusion Studies (Dayananda) Test Capsule Evaluation
AE-I-009	Determination of Plutonium by Controlled Potential Coulometry
AE-I-010	Memo from A.G. Hins to IFR Distribution "Diffusion Couple Studies - As Received Materials Structures" with internal report "Metallographic Examination of As-Received Clad and Fuel Materials for IFR Diffusion Studies," by J A Zic
AE-I-011	Clad/Fuel Diffusion Studies - As Received U-Pu-Zr Materials
AE-I-012	SDI Cermet Fuel Fab -Glovebox Facility
AE-I-013	Field Work Proposal - Multi-megawatt Nuclear Space Power Systems; Reactor Fuels - Cermet Development
AE-I-014	Bi-Monthly Report on Cermet Fuels - April/May 1987; Process Integration and Verification
AE-I-015	Sequence of Events for Camphor Coating Studies of UN Powder
AE-I-016	Fissile Scrap Passivation, Activity 41603
AE-I-017	Passivation Report
AE-I-018	Determination of Plutonium Using Automated Controlled-Potential Coulometry
AE-I-019	Dissolution of Pu-Containing Materials Using Acid Digestion
AE-I-021	Purification of Neptunium by Anion Exchange Separation
AE-I-022	Electrolytic Cleaning of Pu Metal
AE-I-023	Filing Method of Cleaning Pu Metal
AE-I-027	Liquid-Liquid, Packed Column Countercurrent Extractor for Pu Extraction from U-Pu-Fe
AE-I-028	Safety Review - Plutonium Experiment in G-118
AE-I-029	Trip Report Visit to LANL and Rocky Flats Analytical Laboratory
AE-I-030	Safety Review - Proposed Experiment - Alpha Radiolysis of TRUEX-CCl4 with 241Am
AE-I-031	Safety Review-PFP Waste Demonstration Run in G-117
AE-I-032	Safety Review of Facilities for the Determination of Hydrogen, Oxygen, and Nitrogen in Plutonium-Bearing Metals, Alloys, Oxides, Carbides, and Some Metal Compounds; Building 205, Room G102
AE-I-034	Determination of Uranium by Ferrous Reduction in Phosphoric Acid and Titration with Dichromate (NBL Titrimetric Method)
AE-I-035	Determination of Uranium by Automated Constant Current Coulometry
AE-I-036	Determination of Uranium by Ferrous Reduction in Phosphoric Acid and Titration with Cerium (IV).
AE-I-037	Preparation of Plutonium Blind Standard Solution and Aliquants
AE-I-038	Safety Review - Pu Extraction Experiments In G118
AE-I-039	Safety Review of ICP/AES for Analysis of Radioactive Samples
AE-I-040	Safety Review Alpha Particle Irradiation of Plastic Materials
AE-I-041	Dissolution of Plutonium-Containing Materials Using Acid Digestion
AE-I-042	Safety Review of Remote Preparation of Radioactive Glass Samples in the Senior Cave

Source Document Tracking Number	Title
AE-I-043	Dissolution of Plutonium-Containing Materials Using Sodium Bisulfate Fusion
AE-I-044	Safety Review for Processing NBL Waste Solutions in G-134 and G-117
AE-I-045	Dissolution of Plutonium-Containing Materials Using Sodium Carbonate Fusion
AE-I-046	Safety Review for the Gas Generation Studies in Support of the WIPP
AE-I-047	Safety Review Stripping Salt Previously Used in the Box 1 Electrorefiner in G-118
AE-I-048	Safety Review for Furnace Demonstration Test in Building 205, G-109
AE-I-049	CMT Division Separation Science and Technology Section - January 1992
AE-I-050	Revised Criticality Hazards Control Statement for IFR Fuels Reprocessing Laboratory G-118 Located in Building 205
AE-I-051	Safety Review for Sealing and Opening Vials Irradiated with 60Co Irradiation Facilities – Building 205, Room X-109
AE-I-052	Safety Review for CM-1725-10 VT Furnace Operations in Building 205, G109 Pu Glovebox
AE-I-053	Purification of Plutonium by Anion Exchange Separation (Mini-Column)
AE-I-054	CMT Division Separation Science and Technology Section
AE-I-055	IFR Fuel Processing Program Monthly Report - December 1993
AE-I-056	CMT Division Separation Science and Technology Section - July 1994
AE-I-057	Preparation of Weight Aliquants of Plutonium Solutions
AE-I-058	Electrolytic Cleaning and Dissolution of Plutonium Metal
AE-I-059	Cleaning by Filing and Dissolution of Plutonium Metal
AE-I-060	Electrodeposition of Plutonium and other Alpha-Active Actinides
AE-I-061	Dissolution of Uranium Metal Samples
AE-I-062	Dissolution of Uranium Oxides in Powder or Pellet Form
AE-I-065	Dissolution of Uranium-Aluminum and Uranium-Aluminum-Silicon Alloys
AE-I-066	Dissolution of Uranium-Containing Scrap and Ash Samples Using Acid Leaching
AE-I-067	Dissolution of Uranium-Containing Materials Using Sodium Carbonate
AE-I-068	Dissolution of Pre-Product and Product Materials
AE-I-069	Purification of Uranium and Plutonium by Anion Exchange for Mass or Alpha Spectrometric Analysis
AE-I-070	Safety Review for Unsaturated Testing of Uranium Metal Spent Fuel in Building 205 Senior Cave and K-116 Facilities
AE-I-071	Safety Review of Tests with Samples of Spent Fuel in Building 205, K-104 (Senior Cave) and, in K-116, Sampling of Leachate Solutions from the Tests
AE-I-073	PCT Testing of Pu-Containing Glass-Bonded Sodalite in Building 205, Labs G-109 and G-133
AE-I-077	Packaging Procedures
AE-I-078	Manual Determination of the Density and Specific Gravity of Uranium-and Plutonium-Containing Solutions
AE-I-079	Data Sheets
AE-I-084	Determination of Uranium by the New Brunswick Laboratory High Precision Titrimetric Method-Gravimetric Version

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AE-I-089	Bagout and Packaging of Lead from Glove boxes
AE-I-096	Transfer of TRU drums to CP-5 for storage
AE-I-098	Determination of Uranium by the Ignition (Gravimetric) Method
AE-I-099	Determination of Micro- to Sub-microgram Quantities of Uranium Using Laser-Induced Kinetic Phosphorimetry
AE-I-103	Determination of Uranium and Plutonium Using Dilution Mass Spectrometry
AE-I-106	Preparation of Standard Potassium Dichromate Titrant
AE-I-107	Preparation of Uranium Standard Solutions
AE-I-109	Preparation and Standardization of Potassium Dichromate Titrant
AE-I-110	Preparation of Uranium Spike Solution for Isotope Dilution Mass Spectrometry Analysis
AE-I-112	The Removal and Cleaning of the UF6 Mass Spectrometer Inlet System Cold Traps
AE-I-115	Operation of the Buehler Abrasive Cutter for Cutting Uranium Metals of Less Than 3% U-235 Enrichment
AE-I-117	Purification of Uranium for Mass Spectrometric Analysis
AE-I-121	Determination of Uranium in Solids, Sediments, and Sludges
AE-I-124	Sample Preparation and Separation of Pu, Th, and Am from Solid (Soils, Sediments, Sweepings) and Liquid (Waters, Milk) Environmental Samples for Analysis by Alpha-Spectrometry
AE-I-126	Standard Operating Procedure: Sample Preparation by Total Dissolution and Separation of Thorium, Plutonium, and Americium from Solid Environmental Samples for Analysis by Alpha-Spectrometry
AE-I-128	Standard Operating Procedure Gross Alpha and Beta Radioactivity
AE-I-130	Standard Operating Procedure: Cleaning of Mixed Waste Glassware
AE-I-131	Standard Operating Procedure: Volatile Organic Analysis for Mixed Waste
AE-I-132	Standard Operating Procedure: Gross Alpha/Beta Analysis of Soil and Sediment Samples by High-Pressure Microwave Digestion
AE-I-134	Standard Operating Procedure: Separation of Plutonium, Thorium, Americium, and Uranium from Environmental Samples Utilizing Extraction Chromatography and Anion Exchange Chromatography
AE-I-135	Standard Operating Procedure: Preconcentration and Determination of Actinides in Soil Samples Using Diphonix TM Resin and a NaOH Total Dissolution
AE-I-140	Standard Operating Procedure Sample Preparation and Separation of Plutonium, Americium, Uranium, and Strontium from Air Filters
AE-I-141	Standard Operating Procedure: Determination of Uranium in Soils, Sediments, and Sludges by Kinetic Phosphorimetry
AE-I-142	Standard Operating Procedure: Determination of Uranium in Waters by Kinetic Phosphorimetry
AE-I-143	Standard Operating Procedure: Determination of Uranium in Rocky Flats Soils, Sediments, and Sludges by Kinetic Phosphorimetry

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AE-I-146	Standard Operating Procedure: Radium-226 and Radium-228 Determination in Water and Soil Samples Using NaI Detector and Least Squares Processing of Data
AE-I-147	Standard Operating Procedure: Determination of Strontium in Environmental Samples Utilizing Extraction Chromatography
AE-I-148	Standard Operating Procedure: Sample Preparation for Semivolatiles in Liquid Mixed Waste Using Liquid-Liquid Extraction
AE-I-149	Standard Operating Procedure: Determination of Strontium in Environmental Water Samples
AE-I-150	Standard Operating Procedure: Determination of Strontium in Environmental Soils and Vegetations
AE-I-151	Standard Operating Procedure: Determination of Technetium-99 in Environmental Samples
AE-I-156	Waste Requisition Process
AE-I-160	Waste Disposal Requisition Process
AE-I-165	Transfer Request to Building 205 of Waste Pails: 288636: 289722, 289777: 288570: 289771
AE-I-181	Basic and Applied Studies in Liquid-Liquid Extraction, Ion Exchange, and Extraction Chromatography
AE-I-182	Novel Liquid-Liquid Extraction and Extraction Chromatographic Systems for the Separation and Preconcentration of Radionuclides
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AE-I-184	Characterization of New Chelating Agents
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AE-I-193	Evaluation of Chemicals used by the Chemistry Division
AE-I-195	Waste Stream Worksheets
AE-I-199	Attachment 12 - Acceptable Knowledge Reevaluation Checklist, CCP-TP-005, Rev.6
AE-I-201	Radiological properties worksheets
AE-P-002	Building 212 Glove Box Decontamination & Decommissioning Project, Glove Box Detailed Description Document
AE-P-003	Building 212 D Wing Glove Box Project, Project Management Plan, Quality Assurance Plan
AE-P-005	Decontamination and Decommissioning of 61 Plutonium Gloveboxes in D-Wing, Building 212, Argonne National Laboratory-East: Final Project Report
AE-P-006	Revision II (Final) to the Argonne National Laboratory - East RCRA Part B Permit Application IL3 890 008 946
AE-P-007	Addendum to the Revision II to the Argonne National Laboratory - East RCRA Part B Permit Application IL3 890 008 946 (Addendum 1)

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AE-P-008	Update and Modification of the Argonne National Laboratory - East (ANL-E) Resource Conservation and Recovery Act Part B Permit Application
AE-P-009	RCRA Part B Permit Issued to Department of Energy Argonne National Laboratory - East Facility
AE-P-010	RCRA Part B Permit issued to DOE ANL-E Facility, Modification 1
AE-P-011	Waste Handling Procedures Manual
AE-P-012	Waste Handling Procedures Manual (Chapter 1-4 and Section II)
AE-P-013	Waste Management Handling Procedures Manual; Sections 11-13, Radioactive Wastes
AE-P-014	Waste Management Handling Procedures Manual; Section 4, Waste Acceptance Quality Assurance Criteria
AE-P-015	Radioactive Wastes - Radioactive Solid and Liquid Waste Containment, Special Treatment, and Segregation Requirements
AE-P-016	Waste Management Handling Procedures Manual; Appendix A, Radioactive Waste Disposal Requisitions
AE-P-017	Waste Management Handling Procedures Manual, Sections 11,12,14, 15, and Appendix A
AE-P-018	Waste Management Handling Procedures Manual, Sections 4, 11-15, Appendices A, C-D
AE-P-019	Waste Management Handling Procedures Manual, Radioactive Wastes sections 11, 12, 13, 14, 15, Appendices A, C, D
AE-P-020	Waste Management Handling Procedures Manual, Appendix V, Waste Analysis Plan
AE-P-022	Basic Research in the Mission Agencies
AE-P-023	FY 1995 Budget - Atomic Energy Defense Activities
AE-P-024	Naval Reactors, Arms Control Office of Intelligence, Questions and Answers.
AE-P-025	U.S. Nuclear Weapons Research, Development, Testing, and Production, and Naval Nuclear Propulsion Facilities
AE-P-026	Department of Energy FY'99 Congressional Budget Table
AE-P-027	Frontiers: Research Highlights 1946-1996
AE-P-028	A Brief History of Materials R&D at Argonne National Laboratory from the Met Lab to Circa 1995
AE-P-029	Materials and components Technology Division Research Summary - 1987
AE-P-030	Materials and Technology Division Annual Review - 1983
AE-P-031	Materials Science and Technology Division Annual Review-1982
AE-P-032	Annual Progress Report for 1965 Metallurgy Division
AE-P-033	Annual Progress Report for 1964 Metallurgy Division
AE-P-034	Annual Report for 1963 Metallurgy Division
AE-P-035	Annual Report for 1962 Metallurgy Division
AE-P-036	Annual Report for 1961 Metallurgy Division
AE-P-037	Annual Report for 1958 Metallurgy Division
AE-P-038	Criticality Hazards Control Building 212, Wing D, Special Facility FD12, Materials Science Division
AE-P-039	Unofficial Experiment Breeder Reactor-II (EBR-II)

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AE-P-040	Metal Cooled Reactors
AE-P-041	Liquid Metal Fast Breeder; Right Answer, Wrong Question
AE-P-042	Application of Advanced Liquid Metal Reactors to the Destruction of Radioactive Wastes
AE-P-043	The Liquid metal Fast Breeder Reactor: Promises and Uncertainties
AE-P-044	Safety Analysis Report - New Brunswick Laboratory
AE-P-045	Draft Safety Analysis Report - New Brunswick Laboratory
AE-P-047	The Integral Fast Reactor - A Practical Approach to Waste Management
AE-P-048	Management of Transuranics Using the Integral Fast Reactor (IFR) Fuel Cycle
AE-P-049	Safeguards Operations in the Integral Fast Reactor Fuel Cycle
AE-P-050	Integral Fast Reactor
AE-P-051	Proliferation Resistance of the Fuel Cycle for the Integral Fast Reactor
AE-P-052	Spacelift 2025: The Supporting Pillar for Space Superiority
AE-P-053	Nuclear Thermal Propulsion
AE-P-054	Safety Analysis Report Building 205 G-Wing and K-Wing Laboratories
AE-P-055	Chemical Technology Division Annual Technical Report 1997
AE-P-056	Chemical Technology Division Annual Technical Report 1998
AE-P-057	Chemical Technology Division Annual Technical Report 1982
AE-P-058	Chemical Technology Division Annual Technical Report 1983
AE-P-059	Chemical Technology Division Annual Technical Report 1984
AE-P-060	Chemical Technology Division Annual Technical Report 1987
AE-P-061	Chemical Technology Division Annual Technical Report 1989
AE-P-062	Chemical Technology Division Annual Technical Report 1986
AE-P-063	Chemical Technology Division Annual Technical Report 1990
AE-P-064	Chemical Technology Division Annual Technical Report 1991
AE-P-065	Chemical Technology Division Annual Technical Report 1992
AE-P-066	Chemical Technology Division Annual Technical Report 1993
AE-P-067	Chemical Technology Division Annual Technical Report 1995
AE-P-070	Transuranic Waste Baseline Inventory Report
AE-P-071	Institutional PLAN FY 1980-FY 1985
AE-P-072	Institutional Plan August 1980
AE-P-073	Institutional Plan FY 1983 - FY 1988
AE-P-074	Institutional Plan FY 1984-FY 1989
AE-P-075	Institutional Plan FY 1985-1990
AE-P-076	Institutional Plan FY 1986 - FY 1991
AE-P-077	Institutional Plan FY 1987 - FY 1992
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AE-P-079	Institutional Plan FY 1989 - FY 1994
AE-P-080	Institutional Plan FY 1990 - FY 1995
AE-P-081	Institutional Plan FY 1991 - FY 1996
AE-P-082	Institutional Plan FY 1992 - FY 1997
AE-P-083	Institutional Plan (FY 1993 - FY 1998)
AE-P-084	Institutional Plan FY 1994 - FY 1999

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AE-P-085	Institutional Plan FY 1995 - FY 2000
AE-P-086	Institutional Plan
AE-P-087	Institutional Plan (FY 1998 - FY 2003)
AE-P-088	Institutional Plan (1999-2004)
AE-P-089	Institutional Plan FY 2000-FY 2005
AE-P-090	Argonne National Laboratory - East Site and Location Map
AE-P-092	Quality Assurance Plan for ANL-E Waste Management Department
AE-P-093	Quality Assurance Plan for ANL-E Waste Management Department
AE-P-094	Quality Assurance Plan for ANL Waste Management Department
AE-P-095	Waste Operations Operating Manual
AE-P-096	Container Management Practices (Chapter 2.12 of Waste Management Operating Procedures Manual)
AE-P-097	Waste Management Operating Procedures Manual; Historic Chapter 4.5
AE-P-098	Waste Management Operating Procedures Manual; Historic Chapter 4.8
AE-P-099	Waste Management Operating Procedures Manual: historic Addendum 4 B
AE-P-100	Waste Management Operating Procedures Manual, Historic Attachment 9.1A
AE-P-101	Waste Management Operating Procedures Manual: Historic Chapter 9.12
AE-P-102	Waste Management Operating Procedures Manual; Historic Chapter 9.15
AE-P-103	Waste Management Operating Procedures Manual; Historic Chapter 12.1
AE-P-104	Building 212 D-Wing Glove Box D&D Project Plan
AE-P-105	New Brunswick Laboratory ESH Manual, Chapter V, Section I, "Waste Management"
AE-P-106	Alpha-Gamma Hot Cell Facility (AGHCF) Safety Analysis Report
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AE-P-108	Surveys of Research in the Chemistry Division- 1990
AE-P-109	Surveys of Research in the Chemistry Division - 1992
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AE-P-111	Chemical Sciences KC-03 Program Budget -Fiscal Years 1997, 1988, and 1999
AE-P-112	Environmental Management (Defense Funds) Field Work Proposals - Fiscal Years 2000, 2001, and 2002
AE-P-113	Final Report for the Light Water Breeder Reactor Proof-of-Breeding Analytical Support Project
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AE-P-116	Bettis Atomic Power Laboratory
AE-P-117	History; INEEL
AE-P-118	SRS Mission and Vision
AE-P-119	About Sandia
AE-P-120	Los Alamos National Laboratory Mission
AE-P-121	Oak Ridge National Laboratory; About ORNL
AE-P-122	Creating the Laboratory's Future (LLNL)
AE-P-123	Hanford; Welcome to Hanford
AE-P-124	Chemical Technology Division; Vision, Mission, and Management Philosophy of CMT
AE-P-125	Chemistry Division; Strategic Research at the Frontiers of Chemistry

Source Document Tracking Number	Title
AE-P-129	Defense Waste Guidance
AE-U-1	RCRA Part A Application for ANL-E
AE-U-2	Hazardous Waste Permit Application Part A (for ANL-E)
AE-U-5	General Description of Building 200
C001	Fax to Larry Neimark re: Defense versus Non-Defense Waste
C004	Intra-Laboratory Memo to R. S. Wisner, HFEF re: Estimates of Total AGHCF Inventory for Future Shipments to ANL-W
C006	Interview with Larry Neimark re: AGHCF samples, applicable programs, defense relationship to materials, and commingling of waste
C007	Correspondence to L. A. Neimark, Manager, IP Section re: Assessment of Nuclear Materials Inventory, Fissile Inventory Records and Handling Procedures in FF12
C008	Intra-Laboratory Memo to J.V. Natale, SPM re: TRU Scrap Shipment No. 4, SPM-43 No. CZC-168
C009	Intra-Laboratory Memo to W. D. Jackson, MCT/ANL-E, re: Fissile Scrap and Irradiated Structural Materials Waste Shipments from ANL-E to ANL-W for retrievable Storage in the RSWF
C011	Intra-Laboratory Memo to D. A. Donahue, MCT, re: Work Plan for the Examination of LILY-1 and LILY-1A Specimens
C012	Intra-Laboratory Memo to Operations Personnel re: Facility Nitrogen Purge Change and Storage of Flammable Liquids
C013	Correspondence to Mr. E. M. King, Oak Ridge National Laboratory re: Radioactive Waste
C014	Correspondence to A. Cohen re: Process and Procedure with all and WMO for Sampling 1st Stage HEPA Filters. Description-8'x8'x3' w/ 5/8' Wood Frame Ultra Aire – MSA
C016	Intra-Laboratory Memo to C. E. Crouthamel, CMT, and M. J. Steindler, CMT re: LWR Hot-Cell Capability at ANL-E: The D-200 M-Wing Situation
C020	Intra-Laboratory Memo to Environmental Compliance Representatives re: Photo Processing Solutions – Waste Characterization
C023	Intra-Laboratory Memo to M. J. Ryan, SEC re: Potentially Hazardous Materials in "Operational Clean Sweep"
C025	Correspondence to D. A. Donahue re: Transfer of Special Materials from G-118 Glovebox 3 to Building 212 Caves
C026	Intra-Laboratory Memo to Melanie Tompkins re: Annual Forecast for Waste Management Operations-94
C029	Letter re: Survey of Waste Streams in Building 212
C035	Intra-Laboratory Memo to Distribution re: Management of Broken Fluorescent Lamps
C036	Letter to Sheldon Meyers, re: Disposition of TRU from LWR Program: Documentation of Agreements Reached in August 15, 1980 Meeting
C039	Intra-Laboratory Memo to L. A. Neimark re: Procedure for Disposal of "Clean Sweep" Pyrophoric Waste
C046	Intra-Laboratory Memo to D. C. Parzyck re: DOE request for Information Regarding Materials Not Classified as Waste

Source Document Tracking Number	Title
C066	Record of Communication with Bill Kettman and Dennis Donahue, AGHCF re: AGHCF Operations and Waste Packaging
C068	Correspondence to Craig R. Tyler, Lockheed Martin Idaho Technologies Co. re: ANL Transuranic Waste - Definition as Defense Waste
C073	Letter to Ms. Trisha Dedik, Director, International Policy and Analysis Division, NN-42, U.S. Department of Energy re: Transmittal of ANL Quarterly Reports
C074	Letter to Mr. Hilary Rauch, Manager, U.S. Department of Energy re: "TREAT Experiment Program"
C081	Intra-Laboratory Memo to Larry Neimark, ET re: Use of Carbon Tetrachloride in Alpha Gamma Hot Cell Facility (AGHCF) Experiments
C082	Fax to Ray Lang, DOE-CH re: ANL-E fuel Pins
C088	Correspondence to Mr. W. M. Heileson, Waste Generator Interface, EG&G Idaho, Inc. re: Content of ANL-E RHTRU Drums Stored at INEL
C091	Correspondence to W. Mahlon Heilson, Waste Management, RWMC Technical Support, EG&G Idaho, Inc. re: Lead in Remote Handled Transuranic Waste Stored at Idaho National Engineering Laboratory (INEL)
C092	Intra-Laboratory Memo to J. L. Hooper, DOE (ARG) re: Experimental Fuel Segments in the AGHCF
C094	Correspondence to L.Neimark, Materials & Components Technology re: Metallographic Samples
C103	Intra-Laboratory Memo to C. A. DeLorenzo, OOS re: Safety Analysis for Handling Tritium-containing Compounds in the AGHCF
C106	Email to Whitworth, Julia re: Exploding Drum at ANL
C108	Correspondence to Mr. J. T. Case, U.S. Department of Energy, Idaho Field Office re: Strategy Plan for Long-term Management and Storage of Remote-handled (RH) Transuranic (TRU) Waste - TLC-224-92
C115	Intra-Laboratory Memo to W. H. Kline, Waste Management Coordinator re: Waste Packaging Criteria, Transuranic Waste, Idaho National Engineering Laboratory, Revision 1, IDO-10074
C116	Fax to M. Heileson re: Pelletized Clay
C118	Intra-Laboratory Memo to A. C. Smith, PFS re: Chemical Forms in AGHCF Transuranic Wastes
C124	Fax to Mark Wyco and Larry Neimark, ANL-E re: Request for ANL-E to Identify Items of ANL-W Origin
C125	Intra-Laboratory Memo to Steve Gehl, MSD re: Burnup on LWR Samples
C128	Intra-Laboratory Memo to Distribution re: Revised Procedure for Determining Specimen Density by Immersion, Operations Manual Section 7.21
C130	Intra-Laboratory Memo to Waste Handling Procedures Manual Holders re: Packaging of Intermediate Level* Radioactive Waste for Disposal (Liquids)
C137	Email to Douglas W. Parker re: RH TRU Waste
C138	Intra-Laboratory Memo to Distribution re: Hot-cell Survey
C143	FAX to Cheryl Schulz re: Information on AGHCF Mercury Vapor Lamps and Lighting Fixtures

Source Document Tracking Number	Title
C147	Letter to Mr. John M. Schaffer, Project Director, RWMC Completion Project, Bechtel BWXT Idaho, LLC re: Additional Information to Complete Actions Associated with Preexisting Condition (PEC) 316 - Argonne National Laboratory-East (ANL-E) Transuranic Waste
C148	Interview of Terri Bray, ANL-E AGHCF Manager re: Lead Solder and First Stage HEPA Filters
C152	Intra-Laboratory Memo to D.A. Donahue, MCT/IPS re: Work Plan for the Examination of LILAC Target No.19 for Battelle Pacific Northwest Laboratories
C155	Intra-Laboratory Memo to D. A. Donahue MCT re: Work Plan for the Preparation of Specimens for NPR Tests MA-2, -3, and -4
C157	Intra-Laboratory Memo to L. Neimark MCT re: Test Specification and Operating Procedure for NPR Tests ALCL-1 and -2.
C158	Inter-Laboratory Memo to ANL-E Environmental Compliance Representatives re: Illinois Environmental Protection Agency (EPA) Air Pollution Control Permit Applications
C160	Fax Memo to Mahlon Heileson, LITCO/RWMC re: Underlying Hazardous Constituents Waste Stream ANL212951004T
C301	Memo from T. Bray to Document File: Shipment of EBR-II Fuel to ANL-W
C302	Memo from L. A. Neimark to Distribution. Subject: Revision 1 to the Work Plan for the Preparation of Fuel Rods for Return Shipment to Idaho, HFS-015-00-00, December 8, 2004.
C303	Handwritten memo dated 10/21/1994. Subject: Change postings in to Areas I, III, IV to reconcile books to SPM - attached logbooks for Area I FGE, and Area III FGE
C304	Memo from T. S. Bray to OO Holders. Subject: New Pu Equivalent Mass Limits for Area IV
C305	Memo from R. J. Page and A. Miron to T. S. Bray. Subject: Inventory and Dose Estimates for Radionuclides Stored in the Alpha-Gamma Hot Cells Facility. Report attached.
C316	Memo from Omesh Chopra to Distribution. Subject: Laboratory ALARA Committee Review of the Work Plan for Unloading and Transferring Irradiated Stainless Steel Mechanical Test Specimens
C329	Memorandum to CCP Central Records: Evaluation of FFTF Fuel History and Defense Experiments
C330	Memorandum to Ines Triay, Acting Manager, CBFO: Determination and Findings, Defense Origin of Nuclear Waste, Kerr-McGee Waste
C331	Memorandum to CCP Central Records: Evaluation of Kerr-McGee Fuel Production and FFTF History
C333	Memo to CCP Central Records: Assessment of Waste material Parameters (WMPs) for Waste Stream AERHDM
C335	CCP Review Comments and Resolutions for Draft A, Rev. 0, CCP-AK-ANLE-500
C341	IT Shaw Discrepancy Report R4 - RH TRU Waste from ANL-E- AGHCF, Re: Possible Presence of Lead in Waste

Source Document Tracking Number	Title
C344	IT Shaw Discrepancy Report R7 for RH TRU Waste from ANL-E- AGHCF, Re: Waste Generated in K-Cells
C353	Discussions with Seth Snyder and Al Youngs; Chemistry Division Operations in Building 200, M-Wing and General Description of Building 200
C354	Miscellaneous Cave Area Description (for Building 200) from Tory Steed
C356	Letter to C.E. Johnson; Monthly Report on EXXON/EPRI Program RP 306 for November 1978
C357	Letter to N.D. Dudey and C.E. Crouthamel (EXXON); Management Summary and Milestone Report for October 1978
C375	Intra-Laboratory Memo; Minutes of September 9,1980 about Sb-125 Releases From Cell K-2, M-Wing, Building 200
C812	Memo from T. S. Bray & R. V. Strain to M. Goldberg, Characterization of N-Reactor Fuel Samples
C2002	Memo to Dr. Frank Y. Fradin Safety Analysis Report (SAR) Revision 02 and Technical Safety Requirements (TSRs) Revision 01 for the Argonne National Laboratory - East (ANL-E) Building 205 G & K Wing Laboratories
C2003	Memo from Robert C. Wunderlich to Dr. Hermann A. Grunder regarding Approval of the Safety Analysis Report (SAR) Revision 04 and the Technical Safety Requirements Revision 03 for Building 205 G-Wing and K-Wing Laboratories
C2004	Safety Review for Unsaturated Testing of Uranium Metal Spent Fuel in Bldg. 205 Senior Cave and K-116 Facilities
C2005	Safety Review of Tests with Samples of Spent Fuel in Bldg. 205, K-104 (Senior Cave) and, in K-116, Sampling of Leachate Solutions from the Tests
C2006	Work Plan for the Preparation of Unirradiated Al-clad Specimens for CMT
C2007	Work Plan for the Preparation of Specimens from the Characterization of Pins UW02010 (A/G 498A) and UW08036 (A/G 498B)
C2008	Interview of D Pancake, D Hodge, J Emery, L Maggos, and J Mackin regarding Waste Handling Practices, use of chemicals, time periods of waste generation for K-Wing hot cells, Bldg. 205
C2009	Communication from Laura E. Maggos regarding 205 K-Wing - contactor cleaning solutions
C2011	ANL Memo to R.J. Page re: Estimating Mass and Radioactivity for EBR-2 Element Segments Stored in Building 212 - More Numbers
C2022	ANL Memo to R.J. Page re: Pu-241/Am-241 Cooling Effects for EBR-2 Element T473
C2023	ANL Memo to R.J. Page re: Estimating Mass and Radioactivity for FFTF Element Segments Stored in Building 212 - More Numbers
C2024	ANL Memo to R.J. Page re: Estimating Mass and Radioactivity for EBR-2 and PFR Element Segments from the TREAT Facility Stored in Building 212 - More Numbers
C3001	Email from David Adkins re: CH-TRU Waste Packaging and Bag Closure
C3002	Evaluation of Waste Material Parameter Weights for Waste Streams AECHDM-PK and AECHHM-PK

Source Document Tracking Number	Title
C3003	Interview and Follow-up Correspondence with Robert Schulten: Packaging of Waste Streams AECHDM-PK and AECHHM-PK
C3004	Default Plutonium Distributions in Waste Streams ID-AECHDM and ID-AECHHM
DR3001	Resolution of Discrepancies Associated with the Assignment of EPA HWNs to Waste Streams AECHDM-PK and AECHHM-PK
DR3002	Resolution of Discrepancies Associated with the Assignment of Containers RW48078 and RW48190 to Waste Stream AECHDM-PK
DR3003	Resolution of Discrepancies Associated with Beryllium Oxide Crucible Pieces in Container RW48192
DR3004	Resolutions of Discrepancies Associated with Beryllium Oxide in Container RW48190
P001	AGHCF Operations Manual
P002	Central Characterization Project Acceptable Knowledge Summary Report for Argonne National Laboratory-East Contact-Handled TRU Waste Facility Maintenance and Laboratory Operations
P004	Safety Analysis Report for the Alpha-Gamma Hot Cell Facility
P006	Safety Analysis for Twenty Year Retrievable Storage of Intermediate Gamma Level Transuranic Waste
P008	ANL-W History - Reactors (IFR)
P009	TRU-RH Waste Certification Plan for Waste Management Operations
P010	Argonne News-About the People and Programs of Argonne National Laboratory
P013	Frontiers: Research Highlights 1946-1996
P016	Liquid Metal Fast Breeder: Right Answer, Wrong Question
P017	1992 Congressional Hearings Intelligence and Security: Naval Reactors, Arms Control, Office of Intelligence, 03/11/1992, Question and Answer
P023	Argonne National Laboratory-East Remote Handled Waste
P025	Argonne National Laboratory-East, Transuranic Waste Acceptable Knowledge Report
P027	Preliminary Engineering Proposal on Alpha-Gamma Hot Laboratory for Fuels Technology Center, Argonne National Laboratory
P028	Presentation to DOE Office of Nuclear Safety re: Alpha-Gamma Hot Cell Facility (AGHCF)
P029	Engineering Test Plan for the Irradiation Testing of U3Si Dispersion Fuels: Reduced Enrichment Research and Test Reactor Program
P031	Alpha-Gamma Hot Cell Facility (AGHCF) Safety Analysis Report
P032	Procedure for Sorting Remote-Handled TRU Waste (30-Gallon Intermediate-Level Waste)
P034	AGHCF Operations Manual: 15.6 Procedure for Acid Cleaning a Zinc-Bromide Shielding Window
P038	AGHCF Operations Manual: 15.13 Procedure for Installing a Modified D-301 Window Tank in a Type A Window Cavity
P039	AGHCF Operations Manual: 15.15 Procedure for Installing Lead Shielding Around a Tank Insert in an AGHCF Window Cavity
P055	Waste Handling Procedures
P060	AGHCF Operations Manual: 7.0 Standard Examination Procedures

Source Document Tracking Number	Title
P061	Examination Techniques for High Burnup U-Pu Elements for Fast Breeder Reactors
P062	AGHCF Operations Manual: 7.15 Preparation of Metallographic Specimens
P068	AGHCF Operations Manual: 7.14 Mounting Metallographic Specimens
P069	AGHCF Operations Manual: 7.13 Fuel Element Sectioning
P070	AGHCF Operations Manual: 7.21 Specimen Density by Immersion
P304	Work Plan for Oxidizing Zircaloy Cladding Samples for the Zn-Zircaloy Interaction Study
P320	Management Plan for Irradiation Performance Section Facilities, Energy Technology Division
P325	Functional Requirements for Hydrogen-Charged Materials to be Used as Standards for Hydrogen Content Determination
P326	Work Plan for Determining the Effectiveness of Defueling a Short Cladding Segment from High Burnup In-cell LOCA Test Sample ICL#2 in Room-Temperature Nitric Acid
P327	Procedure for Thinning Gauge Sections of Tensile Specimens after Tensile Tests
P329	Feasibility Study for Defueling Irradiated Cladding Using Non-Volatile Methods
P331	Work Plan for Preparation of Samples for LECO Hydrogen or Oxygen Analysis
P333	Procedure for the Steam Oxidation Tests at High Temperature at Unirradiated Advanced Cladding Alloys M5, E110, ZIRLO, and ZRY-4 Cladding within the Out-of-Cell LOCA Integral Test Apparatus Memo to M.C. Billone and T.S. Bray
P344	Analysis of Spent Nuclear Fuel Sample A/G 574B2 (Limerick Reactor) to Determine Selected Isotopes and Estimate Fuel Burnup
P372	Review of Zirconium-Zircaloy Pyrophoricity
P373	Metallographic Analysis of irradiated RERTR-3 Fuel Test Specimens
P374	The RERTR Program: A Status Report
P375	Progress of the RERTR Program in 1999
P378	Argonne National Laboratory-East Building 212 Energy Technology Division Alpha-Gamma Hot Cell Facility Preliminary Decontamination and Decommissioning Plan
P380	Alpha-Gamma Hot Cell Facility (AGHCF) Safety Analysis Report
P386	CRIEPI Posttensile SEM Fractography
P387	Prep of Creep Samples
P389	AGHCF Supplemental Instructions for IRIS-11
P392	Procedures for Conducting Tests in the Whole-Pin furnace System (IPS-2-04-00)
P394	Work Plan for the Preparation of Fuel Rods for Return Shipment to Idaho
P396	AGHCF Special Nuclear material Inventory Management Plan
P407	Criticality Control
P410	Changing a Final HEPA Filter in the Main Exhaust
P412	Remote Handled Transuranic Waste Sorting and Packaging
P414	Estimation of Activity in Waste Containers
P416	Chemical and Other Regulated Waste Management
P469	Changing an In-line Filter in a Radioactive Gas Collective System

Source Document Tracking Number	Title
P472	Manipulator Movement, Cleaning and Repair
P475	Acid-Clean Windows
P480	Painting a Drained Shielding Window Cavity
P484	Installing a Type A "Tank-in-a-Tank" Window Assembly
P485	Procedure for Installing Lead Shielding Around a Tank Insert in an AGHCF Window Cavity
P486	Hydroxylamine Hydrochloride Addition to Zinc Bromide Solution
P487	Installation of Lead-Glass Glovebox Window Panes
P489	Work Plan for Decontaminating the CTA after the Completion of the ANL/JNC Tensile Testing
P490	Work Plan for Diameter Measurements of Irradiated V-alloy Creep Specimens from the HFIR-2J Experiment
P492	Procedure for Cutting Uranium Metal or Uranium Alloys on the South Bay Diamond Bandsaw in the South Hood, Room F-206
P503	Work Plan for Microstructural Examination on V-4Cr-4Ti Rods for Making Creep Tube Supplemental Instruction 252 for Rod/Specimen A/G 625A 1 through 14 Memo to IPS Document File
P505	Work Plan for the Heat Treatment and Microstructural Examination on V-4Cr-4Ti Rods for Making Creep Tubing Memo to IPS Document File
P507	Photography and Met of Weld Samples, Supplemental Instruction 252 for Rod/Specimen A/G 625A 1 through 14 in accordance with IPS-327-00-00
P509	Work Plan for the LOCA Mock-up - Phase 1Memo to NRC Program File
P516	Replacement of the WPF Furnace Memo to IPS Document File
P520	PIE of RERTR-3
P521	Work Plan for Assessment of Auger Analyzer: Examination of NERI Stainless Steel Samples
P532	Complete Axial Specimen Preparation for Rod/Specimen ID: 592C2C, 592C14C Surry According to IPS-382-00-00
P536	Decontamination and Transfer of A/G 587 Tensile Specimens to Clean Vials Memo to IPS Document File
P537	Revised Work Plan for Unloading and Transferring Irradiated Stainless Steel Mechanical Test Specimens to Cell 2 of the IML
P539	Work Plan for Examination and Testing of Limerick Rod F9, Mid Segment, A/G 574C
P540	Work Plan for Preparation of Low-Oxygen Vanadium Alloy Test Specimens
P546	Work Plan for Conducting Melt Dissolution Tests on Al-clad Fuels and Supplemental Instruction 184
P548	Work Plan for Conducting the Zn-Zircaloy Interaction Tests
P551	Work Plan for the Examination of Fuel Plates from the RERTR-4 Experiment in ATR; Work Plan for Cutting H. B. Robinson Rod Sections and Loading into Shipping Tubes, and Supplemental Instruction 153
P552	Oxygen Pickup by LECO Oxygen Determinator for the LOCA Zry-2 Test #6 and Work Plan for Preparing Samples for Oxygen Analyses from Zry Cladding after Steam Oxidation Test at High Temperature

Source Document Tracking Number	Title
P554	Work Plan for the Initial Characterization and Sectioning of H. B. Robinson Rod RA1 8235 (A/G 611) and Supplemental Instruction 328
P556	Work Plan for Cutting Axial Tensile Specimens from Surry Cladding with the EDM in Cell 3 of the IML Memo to IPS Document File and Supplemental Instruction 260
P557	Load Train Assembly and Testing Procedure for Axial Tensile Testing of Surry Cladding, and Supplemental Instruction 338, Rev. 1 Memo to IPS Document File
P566	Work Plan for Characterization of Surry Rod G6 (A/G 592)
P568	Pre-oxidized Zry for TC Welding Practice, Supplemental Instruction 294 for Rod/Specimen Unirradiated 0.48" Zry cladding in accordance with IPS-395-00-00
P572	Optical Metallography Test Weld, Supplemental Instruction 262 for Rod/Specimen A/G 625D5
P574	Procedure for the Repair of the Driver Screw Mechanism of AGHC Shield Door Number 2, Supplemental Instruction 354
P575	Work Plan for the Examination of Fuel Plates from the RERTR-4 Experiment in ATR, Revision 1
P578	General Work Plan for Preparing Segments of Fuel Cladding for Programmatic Investigations and Supplemental Instruction 303
P580	In-cell LOCA Integral Test with unirradiated Zry-2, Supplemental Instructions 357 for Rod/Specimen 12" long unirradiated Zry-2, A/G 581C41 in accordance with IPS-409-01-03
P583	Roadmap for SP-100 Fuel Pin Irradiation Testing
P584	U.S. Department of Energy - The Secretary's Annual Report to Congress 1992-1993
P585	Safety issues at the DOE Test and Research Reactors, A Report to the U.S. Department of Energy
P586	Report to Congress - The Liquid Metal Fast Breeder Reacto Program - Past, Present, and Future
P587	Program Scoping Plan for the Fast Flux Test Facility, A Nuclear Science and Irradiation Services User Facility
P588	An Overview of the Argonne National Laboratory Fast Critical Experiments 1963-1990
P599	The Defense Programs Origin of Transuranic waste at Argonne National Laboratory-West
P602	Analysis of Three Mile Island and Quad Cities Spent Nuclear Fuel Samples
P603	Validation of the Rebus-3/RCT Methodologies for EBR-II Core-Follow Analysis
P604	Criticality Hazards Control Statement, Alpha-Gamma Hot Cell Facility, Special Facility FF12, and Addendum 1, Use of a Safe Vac Vacuum Cleaner in Alpha-Gamma Hot Cell Facility Areas 1 and 3
P606	Status and Progress of the RERTR Program in the Year 2000
P607	Initial Assessment of Radiation Behavior of Very-High-Density Low-Enriched-Uranium Fuels
P616	Decontamination of Hot Cells K-1, K-3, M-1, M-3, and A-1, M-Wing, Building 200: Project Final Report Argonne National Laboratory-East

Source Document Tracking Number	Title
P617	Criticality Hazards Control Statement for Special Facility MF200-KW
P618	Quality Assurance Plan for RAS Loop Disassembly Facility, D-200, M- Wing, K-1 Cell
P620	Posttest Examination Plan for the L6 Experiment
P621	Posttest Examination Plan for the L7 Experiment
P815	Paper: Initial Assessment of Radiation Behavior of Very-High-Density Low-Enriched-Uranium Fuels
P816	IPS-269-04-01, Metallography on an Additional RERTR-1 Microplate, A/G 549V
P817	Additional Micro-Examination of Samples from the RERTR Program
P819	IPS-306-00-00, Work Plan for the Characterization of N-Reactor Fuel Specimens (A/G 562)
P821	Metallographic Examination of Damaged N Reactor Spent Nuclear Fuel Element SFEC5,4378 ANL ID 41179
P822	IPS-338-00-00, Work Plan for the Examination of Fuel Nano-Plates from the RERTR-3 Experiment in ATR ANL ID 6811
P826	Revised Work Plan for the Examination of Fuel Plates from the RERTR-5 Experiment in ATR ANL DOC ID 27225
P827	Recent Observations at the Postirradiation Examination of Low-Enriched U-Mo Miniplates Irradiated to High Burnup ANL DOC ID 29331
P829	Revised Work Plan for the Examination of Fuel Plates from the RERTR-4 Experiment in ATR ANL DOC ID 27220
P1002	Design, Operation, and Performance Data for High Burnup PWR Fuel from the H.B. Robinson Plant for Use in the NRC Experimental Program at Argonne National Laboratory
P2000	Facility Hazard Category 2 Threshold Ratio Values for the K-Wing Nuclear Facility in Building 205
P2001	Retention of Neptunium in Uranyl Alteration Phases Formed During Spent Fuel Corrosion
P2002	Corrosion Mechanisms of Spent Fuel Under Oxidizing Conditions
P2003	Elements Present in Leach Solutions from Unsaturated Spent Fuel Tests
P2004	Oxidative Corrosion of Spent UO2 Fuel in Vapor and Dripping Groundwater at 90C
P2005	Corroded Spent Nuclear Fuel Examined with EELS
P2007	Corrosion Testing of Spent Nuclear Fuel Performed at Argonne National Laboratory for Repository Acceptance
P2008	I-129 Release Fractions in Unsaturated Tests with Fast-Flux MOX Fuels
P2009	Measurement Techniques in Dry-Powdered Processing of Spent Nuclear Fuels
P2010	Nuclear Operations Deactivation, Decommissioning, and Demolition Program: Activity-Specific Safety Analysis for Building 205 K-Wing Hot Cell Liquid Processing
P2011	Nuclear Operations Deactivation, Decommissioning, and Demolition Program: Appendix B: Building 205 K-Wing Hot Cell Deactivation Project Plan
P2012	"Nuclear Operations Deactivation, Decommissioning, and Demolition Program: Activity-Specific Safety Analysis for Building 205 K-Wing Cell A & B Material Sorting, Size Reduction, and Transfer

Source Document Tracking Number	Title
P2013	NUCLEAR OPERATIONS DIVISION WORK CLEARANCE PERMIT: 205 K-Wing Hot Cell Liquids Processing
P2016	Basis of Interim Operations for Building 205 K-Wing Deactivation
P2017	Determination of actinide and fission-product isotopes in very-high-burnup spent nuclear fuel
P2018	Safety Analysis Report Building 205 G-Wing and K-Wing Laboratories
P2019	Test Plan for the Characterization of an Approved Testing Material Mixed Oxide Fuel
P2020	Colloidal Products and Actinide in Leachate from Spent Nuclear Fuel
P2021	The Dissolution and Analyses of the Dissolver Solution, Undissolved Residue, and Cladding from Big Rock Point Irradiated Nuclear Fuel
P2022	Results of the UREX+ Spent Fuel Demonstration
P2023	Results of the UREX+2 Spent Fuel Demonstration
P2024	Results of the 2005 UREX+1a Spent Fuel Demonstration
P2025	2006 UREX+1a Spent Fuel Demonstration: Preliminary Results from Fuel Dissolution and UREX Feed Adjustment
P2026	Results of the 2006 UREX+1a Spent Fuel Demonstration
P2027	Results of the 2007 TALSPEAK Spent Fuel Demonstration
P2028	Preliminary Results of the UREX+3a Spent Fuel Demonstration
P2029	Aqueous Dissolution of Urania-Thoria Nuclear Fuel
P2030	Advanced Proliferation Resistant, Lower Cost, Uranium-Thorium Dioxide Fuels for Light Water Reactors Nuclear Energy Research Initiative Project 99-0153 Progress Report for Work through September, 2002 12th Quarterly Report and 3rd Annual Report
P2032	Building 212 Alpha Gamma Hot Cell Facility Deactivation Project Plan with Appendix 1, 2 and 3
P2033	Revised Estimate of the Radioactive Inventory in the AGHCF
P2034	Fuels for Sodium-Cooled Fast Reactors: US Perspective; article in Journal of Nuclear Materials
P3001	Packaging CH-TRU Waste for Shipment to Idaho National Laboratory (INL) and Final Disposition at the Waste Isolation Pilot Plant (WIPP)
P3002	Solidification and Packaging CH-TRU Liquid Waste for Shipment to Idaho National Laboratory (INL) and Final Disposition at the Waste Isolation Pilot Plant (WIPP); Bulking Tub Neutralization and Solidification
P3003	Solidification and Packaging CH-TRU Liquid Waste for Shipment to Idaho National Laboratory and Final Disposition at the Waste Isolation Pilot Plant; Bench Scale Neutralization and Solidification
P3004	Project-Specific Sampling and Analysis Plan (PSAP) Containerized Waste Material DQO and SAP Instructions; CH TRU Liquids Bulking/Neutralization/Solidification Project
U001	AGHCF Position Statement Regarding Defense Versus Non-Defense TRU Waste
U002	Draft Proposal For: Alpha-Gamma Hot Cell Facility Waste Management Plan
U003	Argonne National Laboratory-West Mission Description
U004	Remote-Handled Waste Content Codes Assessed

Source Document Tracking Number	Title
U006	Summary of Purchasing Requisitions Received from T. Bray: Heavy Metals Usage Identified by IT That May Be in the RH-TRU Waste Stream
U007	Material Control Sheets for A/G numbers 1 through 510 and some attached paperwork
U009	Transuranic Waste at Argonne National Laboratory-West: Meeting the Waste Acceptance Criteria for the TRU Repository
U011	Project Process Flow Diagram: Fuel Elements from EBR-II and FFTF
U012	Basic Project and Anticipated Benefits
U013	Waste Stream Fissile Content
U015	RH-TRU 1995, Book 5, Drums 798 to 809.
U017	RH-TRU 1994, Book 8, Drums 778 to 797
U018	RH-TRU 1993, Book 7, Drums 748 to 777
U019	RH-TRU 1991-1992, Book 6, Drums 728 to 737
U021	RH-TRU 1990, Book 4, Drums 687 to 727
U022	RH-TRU 1985-1987, Book 3, Drums 617 to 686
U023	Fuel Shipments into AGHCF 1993-1995
U030	Liquid Waste Disposal Requisition
U040	Spreadsheet Correlating Number Quota with Quota Title and Number Project
U041	Videotape Logs
U045	Material Receipt and SPM Data for AG# 285
U065	Hand written Notes: One titled "Decon & Repair Procedures for Cleaning and Repairing a Manipulator"
U066	Addendum Criticality Safety Training Quiz 7/17 or 7/21/75
U067	Information on Fuel Elements T678 and T680
U068	Information on Fuel Elements DP-15, DP-17, DP-27, DP-32, DP-21, DP-24. DP-29, DP-45, and DP-61
U069	Information on Fuel Elements UBA-15, UBB-23, UCA-37, UCD-45, UCE-47
U070	Information on Fuel Element WT-185
U072	Benzene, et. Al MSDSs
U073	Combustible Waste Contents (52 cans)
U074	X425 Data Package Addendum
U076	AGHCF Fissile Inventory Management System Database
U083	HEPA Filters
U084	Report of Analytical Results
U085	Procedure for Determining Fuel Pellet Density Using a Mercury Prinometer (handwritten)
U304	Isotopic Analysis of High burn-up Spent Nuclear Fuel
U307	Report 105 - Custodian Batch Balance (Pure)
U321	Area 1 Hydrogenous Liquid Inventory (Limit 3L plus fluids sealed in equipment)
U322	Hydrogenous Liquid in Cell Area I
U330	West Valley Demonstration Project Transuranic Waste Defense Waste Determination
U332	Waste Requisitions - WMO-195, Radioactive and Mixed Waste Disposal Requisitions

Source Document Tracking Number	Title
U339	General Description of Building 200 Provided by Al Young
U830	RERTR-3 Postirradiation Examination Plan at the Alpha-Gamma Hot Cell Facility; transmitted by memo from S. L. Hayes to R. V. Strain ANL ID 6808
U1003	Argonne Special Material Receipt and Transfer Documentation by A/G Number
U2002	CMT Nuclear Materials Inventory Database - detail report with ratios and FGEs
U2004	Material in K-Wing 07-29-09 Spreadsheet
U2007	RW85461 WMO-195 Radioactive and Mixed Waste Disposal Requisition
U2008	RW85462 WMO-195 Radioactive and Mixed Waste Disposal Requisition
U2009	RW85463 WMO-195 Radioactive and Mixed Waste Disposal Requisition
U2010	Contactor Cleaning Procedure
U3001	CH TRU Project Inventory to be Repackaged
U3002	WDS Query and Compilation of Radiological Data for Waste Streams AECHDM and AECHHM
U3003	Historic WMO-195 Waste Requisitions for containers repackaged into Waste streams AECHDM-PK and AECHHM-PK
U3004	Waste Streams AECHDM-PK and AECHHM-PK Waste Container Packaging Forms and Supporting Documentation
U3005	WMS Query for Repackaged CH Waste Streams AECHDM-PK and AECHHM-PK
U3006	Radionuclide Data for Waste Streams ID-AECHDM and ID-AECHHM

Figure 1. Location of Argonne

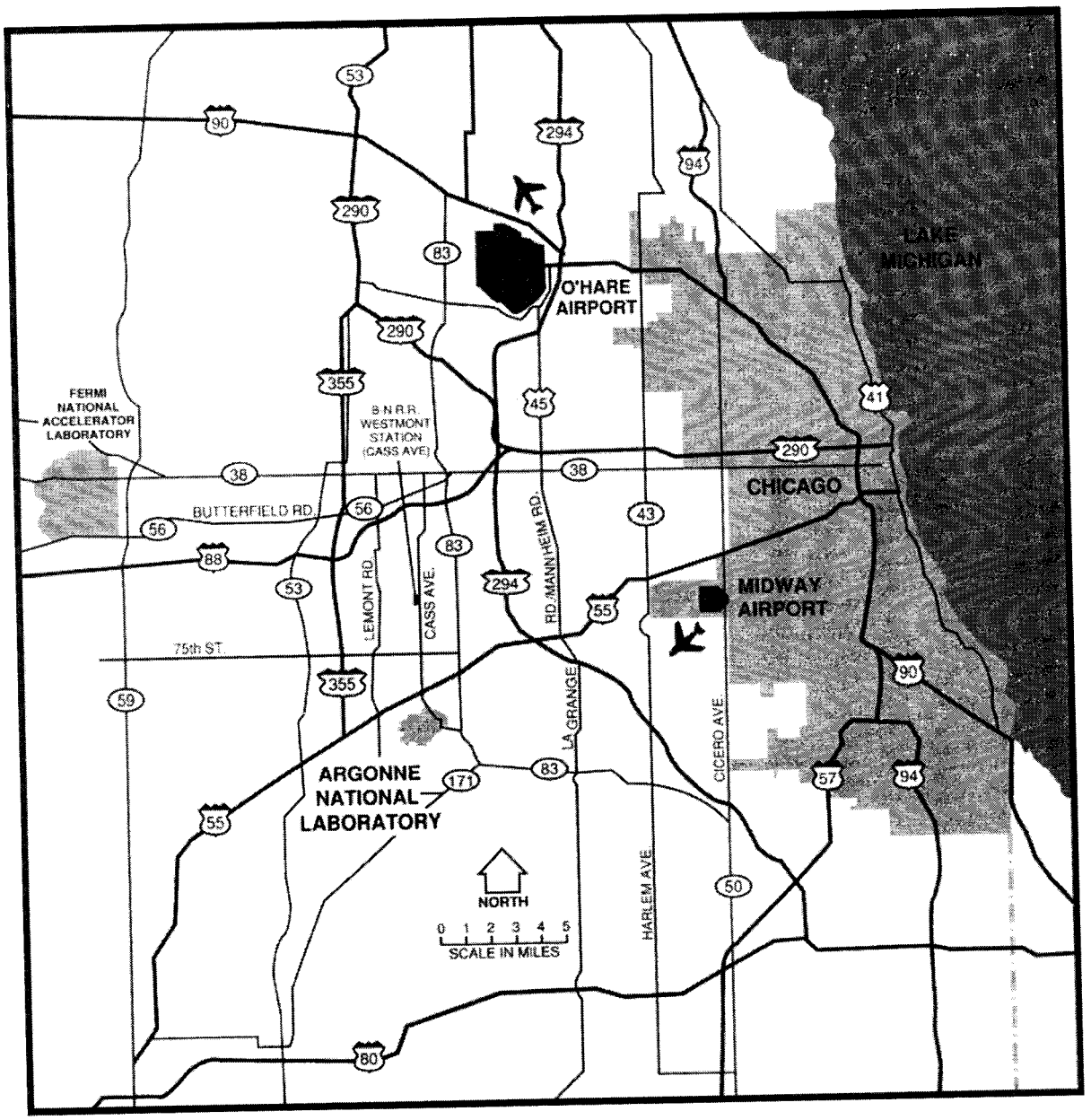


Figure 2. Primary TRU Waste Facilities at Argonne

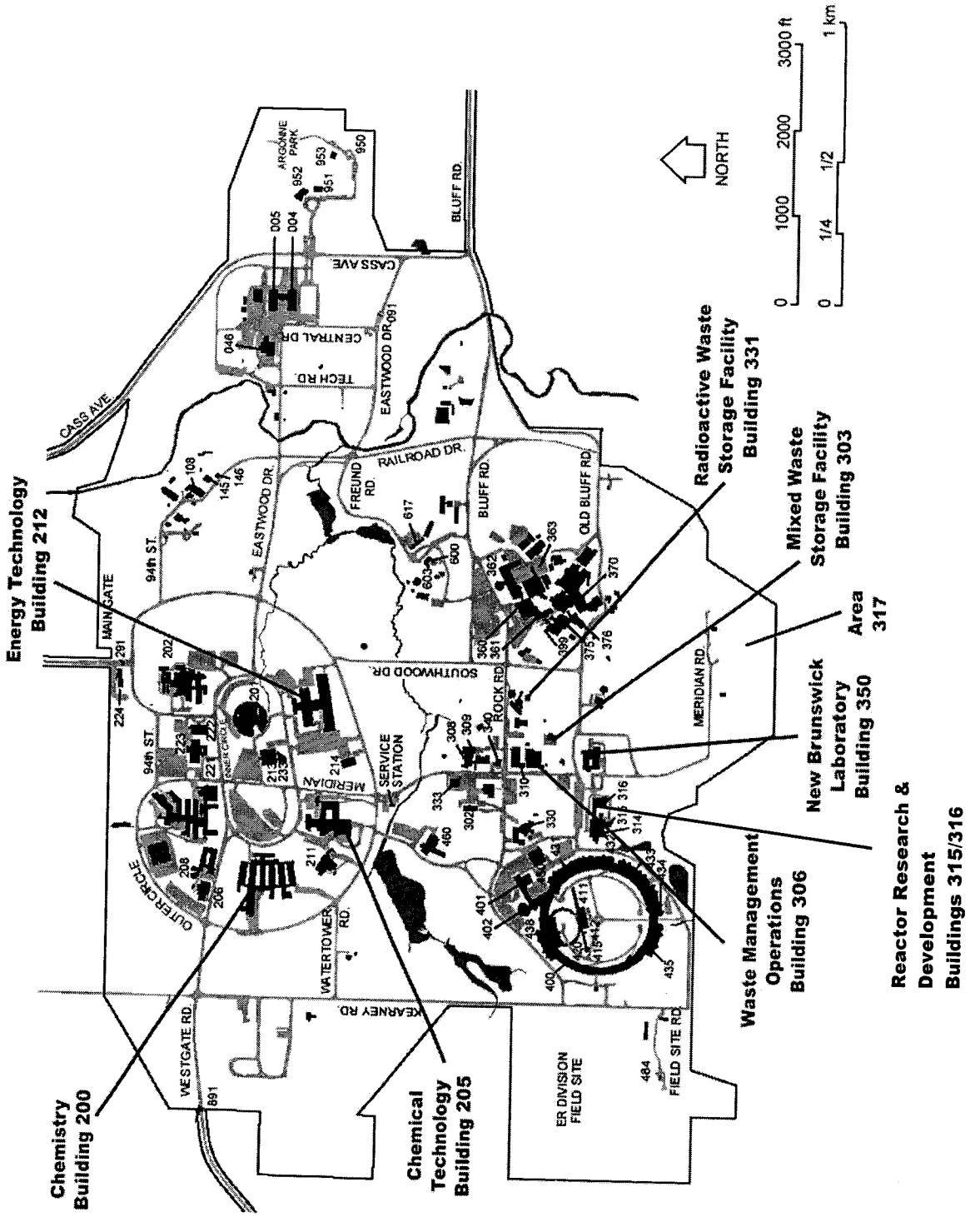


Figure 3. Location of the INL Radioactive Waste Management Complex

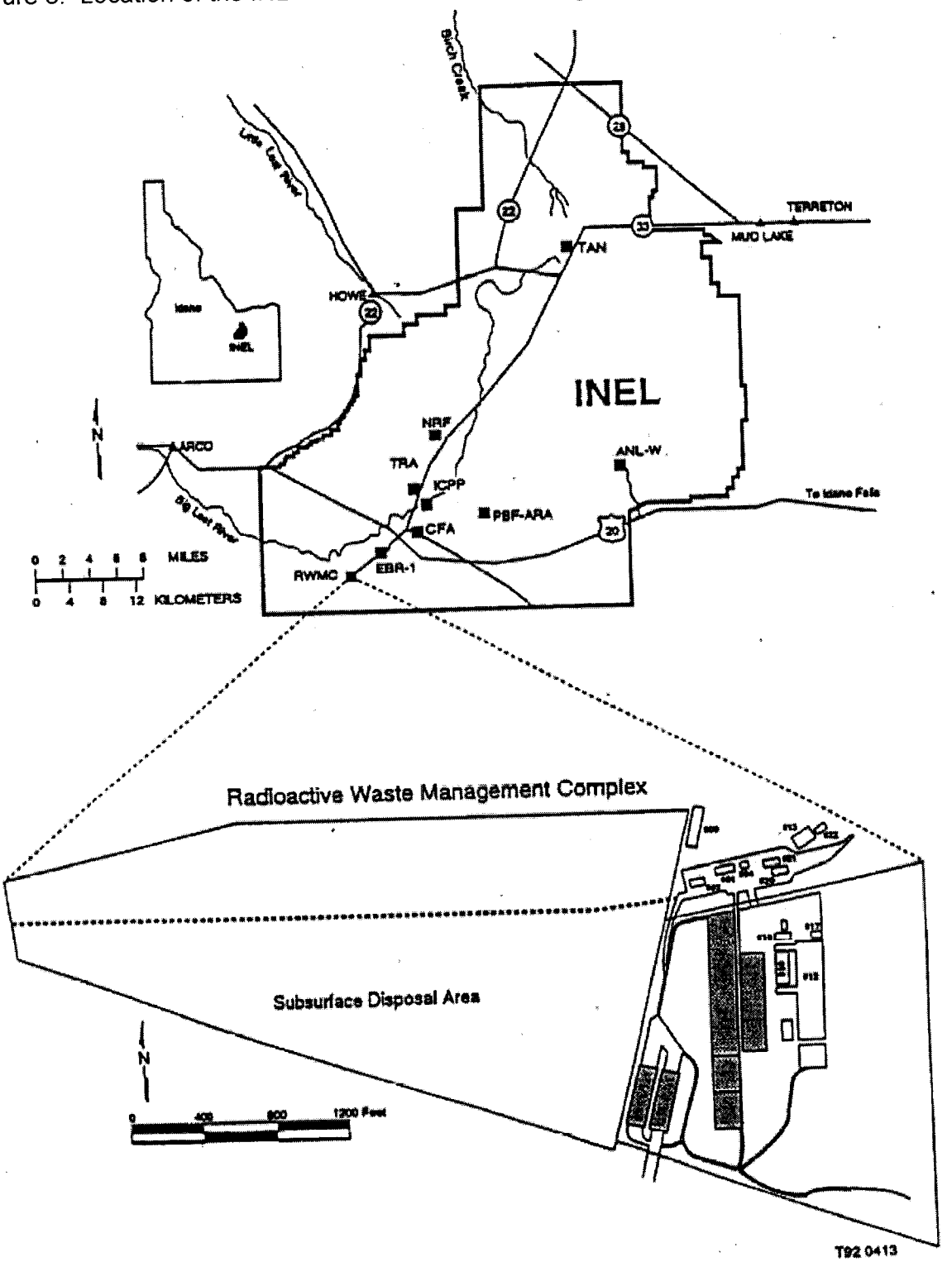
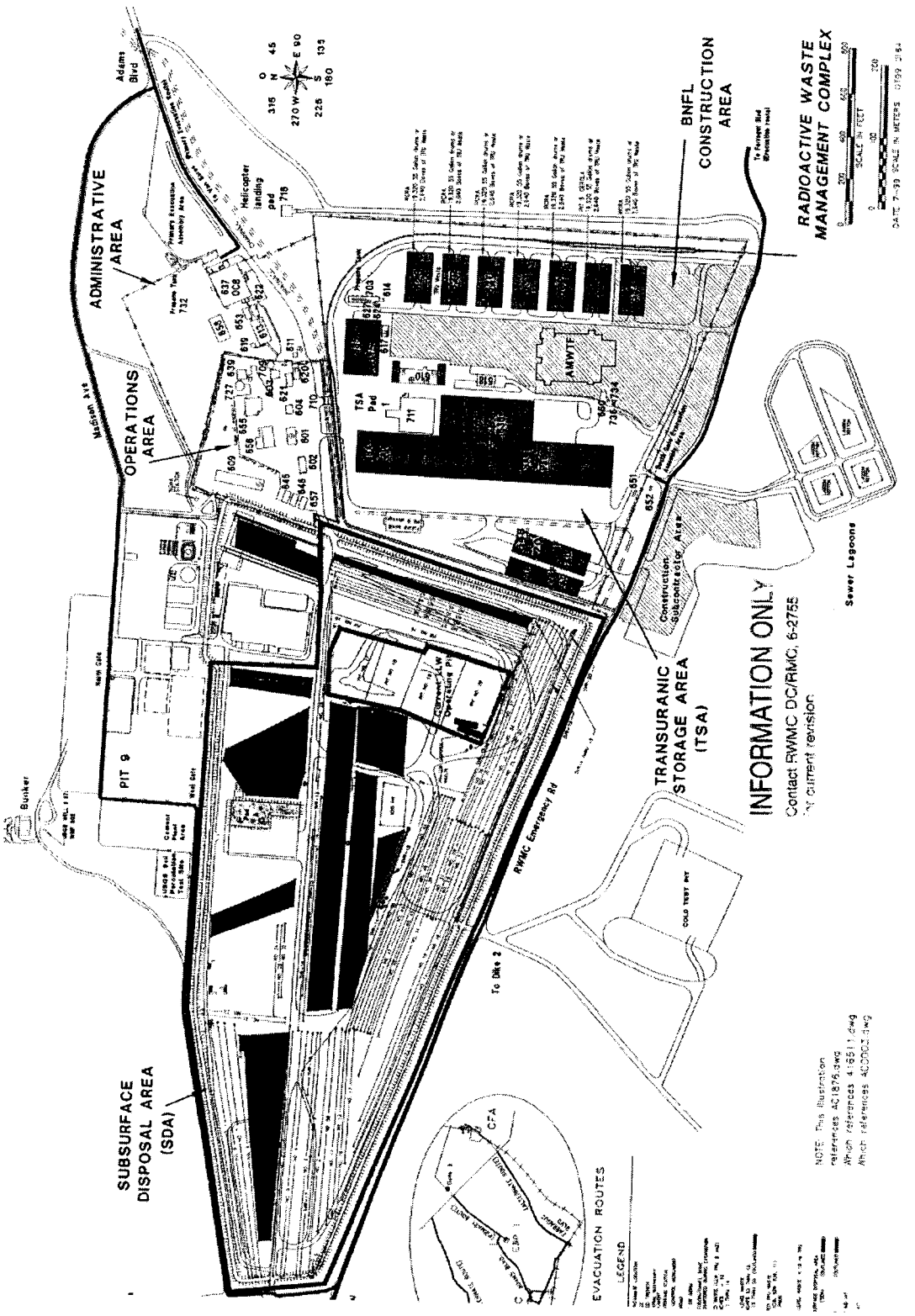


Figure 4. Radioactive Waste Management Complex Map



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CCP-AK-INL-005

Central Characterization Program
Acceptable Knowledge Summary Report
For

Rocky Flats Immobilized Organic Liquids
Stored at the Idaho National Laboratory

Waste Streams: ID-RF-S3114 and ID-RF-S3150-A

REVISION 8

February 28, 2013

Mike Ramirez

Printed Name

APPROVED FOR USE

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
0	06/13/2005	Initial issue.
1	01/04/2006	1. Clarified that there are only 2 layers of confinement in ID-RF-S3150-A even if more than 2 horsetails are present. 2. Updated waste stream volumes. 3. Added chlorobenzene to Tables 4-2 and 6-5, and added a paragraph in Section 6.4.3.3 explaining why D021 (chlorobenzene) was not assigned. 4. Revised Tables 5-4 and 6-4 to include relative weight percentages of each radionuclide. 5. Since IDC 003 drums with any amount of liquid are returned to the host site, the last paragraph in Section 5.4.4 is not necessary and was deleted. 6. Added plastic ties as a possible drum bag closure method to ID-RF-S3114. 7. Other editorial changes and corrections. 8. Added plastic waste to the waste stream description and waste material parameters. 9. Removed EPA hazardous waste number D043 from ID-RF-S3114 and D027 from ID-RF-S3150-A.

RECORD OF REVISION (Continued)

Revision Number	Date Approved	Description of Revision
2	11/16//2006	1. Added a summary of waste material parameter weight percentages for both waste streams. 2. Added TRUCON Code SQ 154 to both waste streams. 3. Deleted footnote in Section 2.2 (CAR 06-025) 4. Updated waste stream volumes and generation dates for both waste streams to reflect the inventory of waste containers that have been retrieved from the TSA at AMWT. 5. Added trichlorofluoromethane as an F001- and F002-listed constituent to ID-RF-3114 based on an AK re-evaluation. 6. Added a paragraph describing the removal of EPA hazardous waste number D043 from ID- RF-S3114. 7. Added a paragraph describing the removal of EPA hazardous waste number D027 from ID- RF-S3150-A. 8. Moved two drums with significant quantities of uranium from ID-RF-S3150-A to ID-RF-S3114 based on an AK re-evaluation. 9. Made other editorial corrections and changes.

RECORD OF REVISION (Continued)

Revision Number	Date Approved	Description of Revision
3	07/31/2008	1. Updated waste stream volumes and generation dates for Waste Stream ID-RF-S3114 to reflect the inventory of waste containers that have been retrieved from the Transuranic Storage Area (TSA) at Advanced Mixed Waste Treatment Project (AMWTP). 2. Revised Ignitibility and Corrosivity discussions for both waste streams to include more extensive descriptions of potential ignitable or corrosive liquids in the waste. 3. Added prohibited quantities of liquids as a prohibited item for Waste Stream ID-RF-S3150-A. 4. Updated Transuranic Waste Baseline Inventory Report reference to 2004 version. 5. Other editorial changes as required.
4	10/20/2009	1. Updated to add description of liquid remediation operations conducted by Advanced Mixed Waste Treatment Project (AMWTP) to Sections 4.3, 5.3, 5.5, 6.3, and 6.5 2. Added reference to Discrepancy Reports D013 and D014. 3. Other editorial changes as necessary.
5	08/24/2011	1. Updated to add description of liquid remediation operations conducted by Advanced Mixed Waste Treatment Project (AMWTP) to Sections 4.3, 5.3, 5.5, 6.3, and 6.5. 2. Revised to address permit modification changes in the November 30, 2010 *Waste Isolation Pilot Plant Hazardous Waste Facility Permit, Waste Analysis Plan* (WIPP-WAP). 3. Other miscellaneous changes incorporated as necessary. 4. Approximately 250 drums retrieved from Pits 11 and 12 in the Subsurface Disposal Area (SDA) were added to waste stream ID-RF-S3114.

RECORD OF REVISION (Continued)

Revision Number	Date Approved	Description of Revision
6	08/15/2012	1. Added 85-gallon drum packaging configuration. 2. Updated waste stream description and waste stream ID-RF-S3114 Waste Material Parameter estimates based on additional radiography and visual examination data. 3. Incorporated changes necessary to address concerns identified in the 2012 Idaho National Laboratory recertification audit. 4. Other miscellaneous changes incorporated as necessary.
7	09/28/2012	1. Revised Sections 4.3, 5.3, 5.4, 5.5, 6.3, 6.4, and 6.5 to add description of waste repackaging operations conducted by the Sludge Repackage Project (SRP) in the Accelerated Retrieval Area-V (ARP-V) enclosure. 2. Other miscellaneous changes incorporated as necessary.
8	02/28/2013	1. Revised to add United States Environmental Protection Agency (EPA) hazardous waste number (HWN) D008 to both waste streams. 2. Other miscellaneous changes incorporated as necessary.

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LIST OF ACRONYMS AND ABBREVIATIONS

AEC	U.S. Atomic Energy Commission
AK	acceptable knowledge
AMWTF	Advanced Mixed Waste Treatment Facility
AMWTP	Advanced Mixed Waste Treatment Project
ATWIR	*Annual Transuranic Waste Inventory Report*
ARP-V	Accelerated Retrieval Project-V
CAS	Chemical Abstract Service
CCP	Central Characterization Program
CFR	Code of Federal Regulations
CH	contact-handled
Ci	Curie
DOE	U.S. Department of Energy
DTF	Drum Treatment Facility
EPA	U.S. Environmental Protection Agency
HEPA	high-efficiency particulate air
HWN	Hazardous Waste Number
IDC	Item Description Code
INL	Idaho National Laboratory
m^3	cubic meters
MBA	material balance account
MDL	method detection limit
mg/kg	milligrams per kilogram
nCi	nano-curie
NDA	nondestructive assay
NGS	neutrons/gram/second
NWPA	*Nuclear Waste Policy Act*
OASIS	Organic and Sludge Immobilization System
PCB	polychlorinated biphenyl
ppm	parts-per-million
PRQL	program required quantitation limit
PVC	polyvinyl chloride
QA	quality assurance
R&D	Research and Development
RCRA	Resource Conservation and Recovery Act
RTL	regulatory threshold limit

LIST OF ACRONYMS AND ABBREVIATIONS (Continued)

RTR	real-time radiography
RWMC	Radioactive Waste Management Complex
SRP	Sludge Repackage Project
SVOC	semi-volatile organic compound
TIC	tentatively identified compound
TRU	Transuranic
TRUCON	TRUPACT-II Content Code
TSA	Transuranic Storage Area
TSCA	Toxic Substances Control Act
TWBIR	*Transuranic Waste Baseline Inventory Report*
UCL_{90}	90-percent Upper Confidence Limit
VE	visual examination
wt%	weight percent
WIPP	Waste Isolation Pilot Plant
WIPP-WAC	*Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant*
WIPP-WAP	*Waste Isolation Pilot Plant Hazardous Waste Facility Permit, Waste Analysis Plan*
WWIS	WIPP Waste Information System

1.0 EXECUTIVE SUMMARY

This acceptable knowledge (AK) Summary Report has been prepared for the Central Characterization Program (CCP) for contact-handled (CH) transuranic (TRU) immobilized organic liquid waste (waste streams ID-RF-S3114 and ID-RF-S3150-A) generated at the Rocky Flats Environmental Technology Site (formerly Rocky Flats Plant) in Golden, Colorado, and transferred to the Idaho National Laboratory (INL). The waste is stored at Radioactive Waste Management Complex (RWMC) Transuranic Storage Area (TSA) at the INL. This report was prepared in accordance with CCP-TP-005, *CCP Acceptable Knowledge Documentation* (Reference 1), to implement the AK requirements of *Waste Isolation Pilot Plant Hazardous Waste Facility Permit, Waste Analysis Plan* (WIPP-WAP) (Reference 2); and DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant* (WIPP-WAC) (Reference 3).

The WIPP-WAP AK requirements are addressed in CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan* (Reference 5). The WIPP-WAC AK requirements are addressed in CCP-PO-002, *CCP Transuranic Waste Certification Plan* (Reference 9). Additionally, this report provides the AK information required by CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)* (Reference 11).

The CCP is tasked with certification of CH TRU waste for transportation to and disposal at the Waste Isolation Pilot Plant (WIPP). This document was developed in accordance with procedure CCP-TP-005 (Reference 1), that directs how AK is collected, reviewed, and managed by the CCP. The CCP is responsible for AK development in accordance with CCP-TP-005 and reviews and approves this AK Summary Report. CCP maintains responsibility for this AK Summary Report and all CCP-TP-005 generated forms and records as quality assurance (QA) records. In addition, CCP maintains a copy of the "historical source documents" as non-QA records.

This AK Summary Report, along with referenced supporting documents, provides a defensible and auditable record of AK for immobilized organic liquid waste streams ID-RF-S3114 and ID-RF-S3150-A from the Building 774. The references and AK source documents used to prepare this report are listed in Sections 8.0 and 9.0. The source documents cited throughout this report are identified by alphanumeric designations corresponding to a unique Source Document Tracking Number (i.e., C001, D001, M001, P001, and U001).

This AK Summary Report includes information relating to Rocky Flats history, process operations, and waste management practices. Information contained in this report was obtained from numerous sources, including historical document archives, generator and storage facility waste records and documents, and interviews with cognizant personnel. Additionally, AK generated by the Rocky Flats, the 3,100 cubic meters (m^3) Project at INL, and the Advanced Mixed Waste Treatment Project (AMWTP) at INL, TRU waste certification programs for immobilized organic liquid wastes were compiled and incorporated into the CCP AK record for waste streams ID-RF-S3114 and

ID-RF-S3150-A. This AK Summary Report includes original source documentation, AK reports, waste stream profiles, and confirmation data generated for Rocky Flats immobilized organic liquid wastes assessed by these programs.

This AK Summary Report and supporting source documentation provide the mandatory waste program and waste stream-specific information required by the WIPP-WAP (Reference 2). The AK sources referenced within this report by alphanumeric designators (i.e., C001, M001, P001, and U001) correspond to a unique CCP Source Document Tracking Number as defined in Section 3.0.

2.0 WASTE STREAM IDENTIFICATION SUMMARY

Site Where TRU Waste Was Generated and Stored

Generation Location:
Rocky Flats Environmental Technology Site
10808 Highway 93
Golden CO, 80402
U.S. Environmental Protection Agency (EPA) ID No. CO7890010526

Storage Location:
INL RWMC
EPA ID No. ID4890008952

Facility Where TRU Waste Was Generated

This waste was generated at Rocky Flats in Building 774. Refer to Section 4.1.2.

Facility Mission

Rocky Flats had two primary missions: the production of triggers for nuclear weapons, and the processing of retired weapons for plutonium recovery. The triggers, also known as pits, were the first-stage fission bombs used to initiate the second-stage fusion reaction in hydrogen bombs. Plutonium metal was recovered from retired warheads and manufacturing residues for reuse (Refer to Section 4.2).

Table 2-1. Immobilized Organic Liquids Waste Stream Summary

Waste Stream Number	EPA Hazardous Waste Numbers (HWN)	IDC/Description
ID-RF-S3114	D008, D022, D026, D027, D028, D029, D030, D032, D034, D036, D037, F001, F002, F005	003, Organic Setups
ID-RF-S3150-A	D008, D022, D028, D029, D030, D032, D034, D036, D043, F001, F002, F005	700, OASIS Waste
		801, Solidified Organics

2.1 Waste Stream ID-RF-S3114

Summary Category Group: S3000 – Homogeneous Solids

Waste Matrix Code Group: Solidified Organics

Waste Matrix Code: S3114, Absorbed Organic Liquids

TRUPACT-II Content (TRUCON) Code: ID 112/ID 212

Waste Stream Annual Transuranic Waste Inventory Report (ATWIR) ID: IN-ID-RF-S3114

Layers of Confinement: Maximum of two (2) layers

Waste Stream Description:

This waste consists of various organic liquids that were transferred to Building 774 where they were immobilized using Micro-cel E® (a synthetic calcium silicate) to form a grease or paste-like material. The organic liquids were primarily a mixture of oils and chlorinated solvents. Small amounts of Oil-Dri® were sometimes added to the mixture as well. This waste is assigned Item Description Code (IDC) 003, Organic Setups. Small quantities of soil and debris may be present including aluminum, cloth, leather, latex, and Silver Shield gloves, knives, cutters, drum filters, paper, wood, plastic bottles, plastic sleeving, bags, bag stubs, aprons, rubber bands and O-rings, glovebox gloves, high-efficiency particulate air (HEPA) filters, empty cans, graphite, glass, tile, metal liner baskets, lead items (e.g., lead tape, scrap lead, leaded rubber gloves, and lead seals), metal tools, and tray liners (Refer to Section 5.4.1).

Based on generator reported radionuclides, the two predominant isotopes by mass are uranium-238 and plutonium-239. A discussion relating to the radiological characterization of this stream is provided in Section 5.4.2.

Prohibited items potentially in this waste stream are sealed containers greater than four liters, and prohibited liquids (Refer to Section 5.4.4).

Organic setups may be packaged in different configurations. There may be various combinations of rigid liners, polyethylene round bottom drum liners, polyethylene drum bags, and polyvinyl chloride (PVC) O-ring bags used to prepare 55-gallon drums for shipment. Generally, Oil-Dri® was placed in the bottom of the rigid liner, if present, the round bottom liner or drum bag, and the O-ring bag. Organic setup (IDC 003) waste was then placed in the O-ring bag. When a drum was full, the drum liners were twisted and taped closed, the lid was secured with a bolted ring, and a tamper indicating device was attached to the drum. Plastic ties ("zip-ties") have also been used to seal the plastic drum bags. Hydrogen diffusion rate testing of this supplemental sealing device indicates that it is an acceptable closure method. Absorbent material Oil-Dri® or vermiculite may have been added to the top of the sealed drum bag, or used to fill the space between the outer, sealed polyethylene drum bag and the top of the 90-mil rigid liner.

Based on a review of several waste packaging and inspection procedures, the original drum and rigid liner lids were not vented, nor did the rigid liner lid contain a vent hole when the waste was shipped from the Rocky Flats to INL. As the drums are retrieved for characterization, they are vented and aspirated to ensure equilibration of any gases that may accumulated in the closed container. The maximum number of confinement layers, however, is expected to be two. The rigid liner must be vented and, therefore is not considered a layer of confinement.

Drums processed in the AMWTP Drum Treatment Facility (DTF) have the rigid liner lids cut out or removed or holes cut and confinement layer bag closures and/or plastic ties cut. Horsetails (i.e., twist and tape bag closure) cut during these operations may be placed on top of the waste. Drums processed in the Advanced Mixed Waste Treatment Facility (AMWTF) will have a rigid liner without a lid and one layer of confinement. Repackaged drums from the Sludge Repackage Project (SRP) will have a rigid liner without a lid and one layer of confinement consisting of a filtered liner bag. Certified 85- or 83-gallon drums containing vented 55-gallon drums with, a rigid liner without a lid, or a punctured rigid liner or with no rigid liner present. A maximum of one layer of confinement due to the TRUCON code used to certify the 85- or 83-gallon drum (Refer to Section 5.5).

Waste stream ID-RF-S3114 meets the WIPP-WAP waste stream definition. The waste stream consists of waste materials that have common physical form, that contain similar hazardous constituents, and that are generated from a single process or activity.

2.2 Waste Stream ID-RF-S3150-A

Summary Category Group:	S3000 – Homogeneous Solids
Waste Matrix Code Group:	Solidified Organics
Waste Matrix Code:	S3150, Solidified Homogeneous Solids
TRUCON Code:	ID 112/ID 212
ATWIR ID:	IN-ID-RF-S3150-A
Layers of Confinement:	Maximum of two (2) layers

Waste Stream Description:

This waste consists of various organic liquids immobilized into a solid monolith by the Organic and Sludge Immobilization System (OASIS) in Building 774. Oil and chlorinated solvent mixtures were the primary liquids treated by OASIS. The organic liquids were immobilized by mixing with water, ENVIROSTONE® emulsifier, accelerator, and gypsum cement. The emulsifier was a polyethylene glycol ether, and the accelerator contained gypsum and potassium sulfate. This waste may also include small amounts of metal and plastic wastes. This waste is assigned IDC 700, OASIS Waste, and IDC 801, Solidified Organics – Building 774. Repackaged solidified organics may also contain Oil Dri® and small quantities of sludge contaminated debris from reprocessing such as tray liners, plastic sheeting, bags, bag stubs, rubber bands, glovebox gloves, lead items (e.g., leaded rubber aprons), HEPA filters, and metal tools (Refer to Section 6.4.1).

Based on generator reported radionuclides, the two predominant isotopes by mass are plutonium-239 or uranium-238. A discussion relating to the radiological characterization of this stream is provided in Section 6.4.2.

Prohibited items potentially in this waste stream are sealed containers greater than four liters, and prohibited liquids (Refer to Section 6.4.4).

Solidified organics may be packaged in different configurations. There may be various combinations of rigid liner and polyethylene round bottom drum liners, polyethylene drum bags, and PVC O-ring bags. When a drum was full, the drum liners were twisted and taped closed, the lid was secured with a bolted ring, and a tamper indicating device was attached to the drum. Vermiculite and/or Oil-Dri® may have been added or used to fill the space between the outer, sealed polyethylene drum bag and the top of the 90-mil rigid liner. The quantity of absorbent varied and some drums may contain no absorbent.

Based on a review of several waste packaging and inspection procedures, the drum and rigid liner lids were not vented, nor did the rigid liner lid contain a vent hole when the waste was shipped from Rocky Flats to INL. As the drums are retrieved for characterization, they are vented and aspirated to ensure equilibration of any gases that may have accumulated in the closed container. The maximum number of confinement layers however is expected to be two. The rigid liner must be vented and therefore is not considered a layer of confinement.

In some instances, a drum may appear to contain three horsetails (i.e., twist and tape bag closure) because in addition to the two plastic bags that were twisted and taped closed, a bag stub remaining from a previous bag cut was put on top of the waste in the subsequent run. In some cases, only two horsetails may be present because two or three bag stubs were collected in the glovebox before adding them to the top of the waste. This resulted in some drums with what may appear to be four or five horsetails (two plastic bags that were twisted and taped closed plus two or three bag stubs). When the OASIS process first started, sometimes there were problems with the agitator tearing into the inner plastic bag. In this instance, another plastic bag was put around the waste. There will be very few drums like this because the problem was quickly fixed by attaching Tygon tubing to a vacuum pump and inserting the tubing between the rigid liner and the polyethylene drum liner bag which kept the agitator from contacting the plastic bag. With any of these conditions, only the two plastic bags that were twisted and taped closed are considered layers of confinement.

Drums processed in the AMWTP DTF have the rigid liner lids cut out or removed or holes cut and confinement layer bag closures and/or plastic ties cut. Horsetails (i.e., twist and tape bag closure) cut during these operations may be placed on top of the waste.

Repackaged drums from the SRP will have a rigid liner without a lid and one layer of confinement consisting of a filtered liner bag (Refer to Section 6.5).

Waste stream ID-RF-S3150-A meets the WIPP-WAP waste stream definition. The waste stream consists of waste materials that have common physical form, that contain similar hazardous constituents, and that are generated from a single process or activity.

3.0 ACCEPTABLE KNOWLEDGE DATA AND INFORMATION

TRU waste destined for disposal at the WIPP must be characterized prior to shipment. The WIPP-WAP (Reference 2) requires the use of knowledge of the materials and processes that generate and control the waste to provide a clear and convincing argument about the characteristics of each waste stream. The AK characterization documented herein complies with the requirements of the WIPP-WAP and was developed in accordance with CCP-PO-001 (Reference 5), and CCP-TP-005 (Reference 1).

This AK Summary Report includes information relating to the facility's history, process operations, and waste management practices related to management and certification of the immobilized organic liquid waste streams ID-RF-S3114 and ID-RF-S3150-A. Information contained in this report was obtained from numerous sources, including historical reports, standard operating procedures, waste inventory information, historical confirmation results (visual examination [VE], real-time radiography [RTR], and headspace gas data), interviews with cognizant personnel, and waste packaging and shipping documentation. The references and AK sources used to prepare this report are listed in Section 8.0. The AK sources referenced within this report by an alphanumeric designator (i.e., C001, M001, P001, and U001) correspond to the Source Document Tracking Number using the following convention:

- C – Correspondence (e.g., interview notes)
- D – Discrepancy reports
- M - Miscellaneous
- P – Published documentation
- U – Unpublished documents and databases

4.0 REQUIRED PROGRAM INFORMATION

This section provides the waste management program information required by the WIPP-WAP (Reference 2). Included are a brief history of Rocky Flats, a summary of the missions, a discussion of the operations associated with the generation of TRU immobilized organic liquid wastes, and descriptions of the TRU waste management programs at both Rocky Flats and INL. Attachment 1, Acceptable Knowledge Documentation Checklist, for each waste stream (created in accordance with procedure CCP-TP-005) provides a list of TRU waste management program information required to be developed as part of the AK record (Reference 1). This section satisfies those requirements.

4.1 Facility Location and Description

4.1.1 Facility Location

Rocky Flats Environmental Technology Site (formerly Rocky Flats Plant) is located in northern Jefferson County, Colorado, approximately 16 miles northwest of downtown Denver. The 6,550 acre government-owned and contractor-operated facility was part of the nationwide nuclear weapons production complex. A map of the plant highlighting Building 774 which generated immobilized organic liquid TRU waste is provided in Figure 1, Rocky Flats Environmental Technology Site Map, at the end of this report (References P004 and P053).

The drums of immobilized organic liquid waste from Rocky Flats are stored at the INL RWMC located approximately 51 miles west of Idaho Falls, Idaho. The TSA is a 58-acre area in the eastern section of the RWMC dedicated to the storage of TRU waste received at the RWMC after 1970. TRU waste received from Rocky Flats was placed in retrievable storage on asphalt pads and covered with earth. More recently, waste in drums and boxes was stored in metal buildings called storage modules. Maps showing the location of the RWMC and TSAs are provided in Figure 2, Location of the INL Radioactive Waste Management Complex and Figure 3, Radioactive Waste Management Complex Map (References P508 and P509).

4.1.2 Facility Description

Ground breaking for the first permanent buildings at Rocky Flats began in 1951. By 1954, approximately 700,000 square feet of building space had been completed. As the plant operations expanded, as much as 1.6 million square feet were occupied by manufacturing, chemical processing, plutonium recovery, and waste treatment operations. Plutonium operations were located primarily in the 384 acre high-security area (Reference P053).

Building 774, Liquid Waste Processing Facility – When Building 774 was built in 1953, its primary purpose was to treat radioactive aqueous waste from Building 771. In 1965, the Building 774 Grease Plant began processing organic liquid wastes generated from plutonium machining and other operations. The Grease Plant shut down in 1985 and was replaced by a new treatment process called the Organic and Sludge Immobilization System, or OASIS (References P052 and P053).

4.2 Mission

Rocky Flats had two primary missions during the period of operations from 1952 through 1990: the production of triggers for nuclear weapons, and the processing of retired weapons for plutonium recovery. The triggers, also known as pits, were the first-stage fission bombs used to initiate the second-stage fusion reaction in hydrogen bombs. Plutonium (Pu) metal was recovered from retired warheads and manufacturing residues and was also imported from the Hanford Reservation in Washington State and the Savannah River Plant in South Carolina (References P004 and P053).

In general, the plant's primary mission changed little from 1952 until 1990 when plutonium operations were suspended. In the early 1960s, the U.S. Atomic Energy Commission (AEC) implemented the single mission concept to reduce redundant operations between AEC facilities. At that time, Rocky Flats became the primary manufacturer for nuclear weapons triggers. With the exception of periodic refinements, only three trigger configurations were manufactured at the plant. The first two trigger designs were solid units manufactured primarily of uranium, similar to the devices used during World War II. In 1957, the trigger design was changed to sealed hollow spheres which were manufactured with much less uranium and more plutonium. This design change resulted in lighter, smaller, and more powerful weapons (Reference P053).

The general design of the trigger has not changed dramatically since 1958, although modifications to the relative amounts of metals, dimensions, and other features of the parts were modified over the years. The plant also supported weapons development programs responsible for fabricating, testing, and assembling parts with new geometries or metal compositions. Because of the plant's metal manufacturing capabilities, Rocky Flats often fabricated other weapons parts, including components made of stainless steel and beryllium (Reference P053).

4.2.1 Defense Waste Assessment

The WIPP-WAC (Reference 3) requires generator sites to use AK to determine if the TRU waste streams to be disposed at WIPP meet the definition of TRU "defense" waste. Based on guidance from the U.S. Department of Energy (DOE), a TRU waste is eligible for disposal at WIPP if it has been generated in whole or part by one of the atomic energy defense activities listed in Section 10101(3) of the *Nuclear Waste Policy Act of 1982* (NWPA) (Reference 6). As previously described, the atomic energy defense activity that applies to the TRU wastes generated by Rocky Flats is weapons activities.

4.2.2 Spent Nuclear Fuel and High-Level Waste Assessment

The *Waste Isolation Pilot Plant Land Withdrawal Act* bans the disposal of spent nuclear fuel and high-level waste, as defined by the NWPA, at WIPP. According to the NWPA, spent nuclear fuel is "fuel that has been withdrawn from a nuclear reactor following irradiation, the constituent elements of which have not been separated by reprocessing." High-level waste is defined by the NWPA as "the highly radioactive material resulting from the reprocessing of spent nuclear fuel, including liquid waste produced directly in reprocessing and any solid material derived from such liquid waste that contains fission products in sufficient concentrations, and other highly radioactive material that the Commission, consistent with existing law, determines by rule requires permanent isolation (References 6 and 14)."

Rocky Flats did not have a reactor, and the waste does not contain irradiated fuel elements withdrawn from a reactor (References P004 and P053). Therefore, the waste is not spent nuclear fuel or high-level waste and is eligible for disposal at WIPP (References 3 and 6).

4.3 Description of Waste Generating Process

Organic liquid wastes from numerous buildings on site were transferred to Building 774 for treatment. The liquids were then treated as described in the following sections.

4.3.1 Organic Liquid Waste Generation

The organic liquids were transferred to Building 774 by pipeline or in containers. The organic liquids originated in Buildings 334, 371, 443, 444, 447, 559, 707, 776, 777, 778, 779, 865, 881, 883, and 991 (References U040 and U043). In about 1985, organic wastes were segregated into either low-level or TRU tank systems. Prior to this, low-level and TRU liquids were collected together (Reference U040).

Waste oils and solvents were generated primarily in Buildings 707 and 777. A cutting oil, usually Texaco Regal® A (a nonhazardous oil similar to Regal® R&O 32), flowed onto a part during machining (References P052, P077, and P518). After machining, the part was rinsed to remove residual oil. Various solvents were used to rinse machined parts and degrease tools. These included carbon tetrachloride, 1,1,2-trichloro-1,2,2-trifluoroethane, 1,1,1-trichloroethane, trichloroethylene, and tetrachloroethylene. Ultrasonic cleaner baths using 1,1,1-trichloroethane were used to clean parts. Metal turnings and scrap were cleaned in carbon tetrachloride baths before forming the turnings into briquettes (References P052, P053, and P077).

Trichloroethylene was replaced by 1,1,1-trichloroethane for vapor degreasing of plutonium parts beginning around 1973. By the end of 1974, trichloroethylene remained in use in only one plutonium operation, and by February 1975, was used only in research and analytical activities (Reference P023). Since 1985, the solidified organic waste was derived almost exclusively from Buildings 707 and 777 (Reference U040).

A logbook was used in Building 774 to record the types of organic waste and generation source of the liquids that made up the immobilized organic liquids wastes. The date of treatment, generation location, waste description, and volume of waste were entered in the logbook. A description of the organic liquids and the buildings from which they originated are presented in Table 4-1, Organic Liquid Wastes Identified in Building 774 Logbooks (References U040 and U043). Information in parentheses does not appear in the logbook but is provided as clarification.

Table 4-1. Organic Liquid Wastes Identified in Building 774 Logbooks

Building	Organic Liquid Waste Description
334	Waste oil, PCBs (polychlorinated biphenyls), Zyglo (Zyglo is a dye penetrant compound containing fluoranthene, petroleum distillates, and kerosene) (Reference P142)
371	Oil
443	Oil
444	Oil, trichlor (assumed to be 1,1,1-trichloroethane), Freon
447	Oil
559	Pump oil, oil, toluene/H_3 (assumed to be tritium), silicon oil, organic waste (xylene/DHDECMP [dihexyl-n,n-diethylcarbamoyl methylphosphonate]) (References C032 and C086)
707	Oil samples, hydraulic oil
771	Oil, etch solution, Freon oil, oil/CCl_4, mixed organics, halocarbon oil, TBP (assumed to be tributyl phosphate), organic extract, Chlorothene (Chlorothene is a trade name for 1,1,1-trichloroethane)
776	Engine oil, tube oil, lathe cutting oil
777	Coolant oil/CCl_4, perc (assumed to be tetrachloroethylene), trichloroethylene
778	Oil, Pydraul oil (Pydraul products are hydraulic oils containing triphenyl phosphate, trialkylphenyl phosphates, and alkyl aryl phosphates) (Reference P091)
779	Hydraulic oil, equipment oil, H_3 (assumed to be tritium)/toluene, Freon
865	Beryllium waste oil
881	Oil, machine coolant, perchlor (assumed to be tetrachloroethylene), waste cocktail (assumed to be scintillation cocktail), Varsol oil (Varsol is a trade name petroleum solvent containing primarily saturated hydrocarbons and less than 2 percent toluene, xylene, and ethyl benzene) (Reference P084)
883	Oil, cooling solvent, D-38 (depleted uranium) oil, oil and perk (assumed to be tetrachloroethylene)
991	Coolant, band saw coolant

In addition to information obtained from treatment logbooks, other sources of information were reviewed to identify potential organic chemicals treated in Building 774. This information is presented in Table 4-2, Organic Liquid Wastes Generation.

Table 4-2. Organic Liquid Wastes Generation

Chemical	Use
1,1,1-Trichloroethane	Plutonium fabrication (References P060, P079, and P520) Research and development (References P079 and P520) Analytical laboratory reagent (References P053 and P076) Metallography laboratory (Reference P520)
1,1,2-Trichloro-1,2,2-triflouroethane (Freon TF)	Plutonium fabrication (References P060 and P079) Depleted uranium fabrication (Reference P520) Beryllium fabrication (Reference P520) Stainless-steel fabrication (Reference P520) Research and development (Reference P520) Analytical laboratory reagent (References P052 and P076)
1,1-Dichloroethylene	Analytical laboratory reagent (Reference P052)
1,2-Dichloroethane	Analytical laboratory reagent (Reference P052)
2-Ethoxyethanol	Analytical laboratory reagent (Reference P052)
Acetone	Plutonium fabrication (Reference P520) Beryllium fabrication (Reference P520) Research and development (Reference P062) Analytical laboratory reagent (References P052 and P076)
Benzene	Plutonium fabrication (Reference P053) Analytical laboratory reagent (References P053 and P076)
Carbon disulfide	Analytical laboratory reagent (Reference P076)
Carbon tetrachloride	Plutonium fabrication (References P060 and P520) Analytical laboratory reagent (References P053 and P076)
Chloroform	Analytical laboratory reagent (References P053 and P076) Research and development (Reference P052)
Chlorobenzene	Analytical laboratory reagent (Reference P081)
Cyclohexane	Analytical laboratory reagent (Reference P081)
Decane	Analytical laboratory reagent (Reference P076)
Dodecane	Analytical laboratory reagent (Reference P076)
Ethanol	Plutonium fabrication (Reference P520) Beryllium fabrication (Reference P520) Research and development (References P062 and P520) Metallography laboratory (Reference P520)

Table 4-2. Organic Liquid Wastes Generation (Continued)

Chemical	Use
Ethyl benzene	Depleted uranium fabrication (Reference P052) Research and development (Reference P052) Analytical laboratory reagent (Reference P052)
Ethyl ether	Analytical laboratory reagent (Reference P076)
Hexadecane	Analytical laboratory reagent (Reference P076)
Hexane	Analytical laboratory reagent (References P076 and P520)
Isooctane	Analytical laboratory reagent (Reference P076)
Isopropanol	Beryllium fabrication (Reference P520) Analytical laboratory reagent (References P052 and P076)
Methanol	Research and development (Reference P062) Analytical laboratory reagent (References P052 and P076)
Methyl ethyl ketone	Research and development (References P052 and P062) Analytical laboratory reagent (Reference P052)
Methylene chloride	Research and development (References P052 and P062) Analytical laboratory reagent (References P053 and P076)
Naphthalene	Analytical laboratory reagent (Reference P076)
Nitrobenzene	Analytical laboratory reagent; non-solvent use (Reference P052)
Oil	Plutonium fabrication (References P060, P078, and P079) Depleted uranium fabrication (Reference P520) Equipment lubrication (References P061, P077, P078, P082, and P520) Hydraulic equipment (References P060, P061, P078, and P079)
Petroleum ether	Analytical laboratory reagent (Reference P076)
Tetrachloroethylene	Plutonium fabrication (Reference P520) Depleted uranium fabrication (Reference P053) Stainless-steel fabrication (Reference P520) Analytical laboratory reagent (References P052 and P053)
Toluene	Analytical laboratory reagent (References P052 and P076)
Trichloroethylene	Plutonium fabrication (References P023 and, P052) Beryllium and uranium fabrication (Reference P053) Stainless-steel fabrication (Reference P520) Analytical laboratory reagent (References P053 and P076) Decontamination solvent (Reference P053)
Xylene	Analytical laboratory reagent (References P052 and P076)

4.3.2 Organic Liquid Waste Treatment

In 1965, the Building 774 Grease Plant began processing organic liquid wastes generated from plutonium machining and other operations. In this process, the organic liquids were processed through an extruder with a synthetic calcium silicate called Micro-cel E® to form a grease or paste-like material (References P002, P024, and P517). A more detailed description of this process is provided in Section 5.3.

Although the calcium silicate was thought to produce an acceptable waste form, it was later determined to cause problems with water desorption. Beginning in 1983, the suitability of various other solidification media were investigated using simulated TRU organic waste (i.e., non-radioactive). The media investigation included ENVIROSTONE® gypsum cement, Type I Portland cement, Portland cement with Oil-Dri® clay absorbent, gypsum cement with Portland cement, and gypsum cement with clay absorbent. Evaluation of the various solidification media was based on suitability for immobilizing organic wastes, waste loading efficiency, required set time, production of a free-standing monolithic solid containing no free liquid, and the estimated cost of production-scale operation. ENVIROSTONE® gypsum cement proved most applicable to the organic wastes handled by the Building 774 Liquid Waste Processing Facility (References P002, P519, and U010).

The Grease Plant shut down in 1985 and was replaced by the new ENVIROSTONE® process called the OASIS. In this process, the liquids were immobilized by mixing with water, and ENVIROSTONE® emulsifier, accelerator, and gypsum cement to produce a solid monolith (References P016, P052, and P053). A more detailed description of this process is provided in Section 6.3.

4.3.3 Waste Repackaging and Liquid Waste Remediation

Drums of solidified organic waste containing liquids are remediated and or repackaged in the AMWTP DTF, located in Building WMF-628; the AMWTF), Building WMF-676; or the SRP. In the DTF drums are processed to remove liquids as necessary by liquid absorption with Aquaset-IIG or Micro-cel E® or shaker table operations. As part of the processing, the rigid liner lids are cut out or removed and all layers of confinement are breached. Rigid liner lids may be replaced provided vent holes are visible by RTR. Other operations conducted may include drum rigid liner removal and repackaging, replacing drum lids, and over packing or un-over packing 55-gallon drums in 83- or 85-gallon drums (References C515, P535, and P536).

Drums repackaged in the AMWTF will be characterized by VE to remove prohibited items including liquids through absorption as necessary with Micro-cel E® (References C518 and P536).

Drums repackaged in the SRP will be characterized by VE in the Accelerated Retrieval Project-V (ARP-V) enclosure to breach layers of confinement, segregate prohibited items, and remove liquids as necessary with granular absorbent such as Oil Dri® (References C522, P542, P543, P544, and P545).

4.4 TRU Waste Management

Waste materials contaminated with TRU radionuclides were generated during the fabrication, assembly, and processing of nuclear weapons components. The term "transuranic" refers to the man-made actinide elements with atomic numbers greater than uranium (atomic number 92). Plutonium and americium are the primary TRU actinides encountered in DOE weapons facilities, including Rocky Flats (Reference P020). Since the mid 1980s, the DOE has defined TRU waste as materials contaminated with greater than or equal to 100 nanocuries (nCi) of alpha-emitting TRU radionuclides with a half-life greater than 20 years per gram (g) of waste.

After containers were assayed, they were sent to Building 776 for inspection. Containers would undergo a physical inspection that included content verification, free liquid detection, and a waste packaging conformance check. Rejected waste packages were returned to the generator for corrective action (References P014 and P043). As a final quality assurance verification, RTR was performed on each container to verify correct contents and the absence of free liquids (Reference P001).

4.4.1 Types and Quantity of TRU Waste Generated

Waste streams ID-RF-S3114 and ID-RF-S3150-A are characterized under the Resource Conservation and Recovery Act (RCRA) as hazardous waste. These wastes have been historically managed at Rocky Flats and INL as mixed waste. The physical, radiological, and chemical characteristics of these wastes are presented in Sections 5.4 and 6.4. The approximate number of 55-gallon drums by IDC in each waste stream is provided in Table 4-3, Waste Stream Volumes (References C521, D005, P515, P539, and U092).

Table 4-3. Waste Stream Volumes

Waste Stream Number	Item Description Code	Number of 55-Gallon Drums
ID-RF-S3114	003	9,879[1]
ID-RF-S3150-A	700	60
	801	798

1. This includes 836 drums overpacked in 85-gallon drums to be certified and shipped to WIPP in the 85-gallon drums.

4.4.2 Correlation of Waste Streams Generated from the Same Building and Process

The WIPP-WAP defines a waste stream as waste materials that have common physical form, that contain similar hazardous constituents, and that are generated from a single process or activity. Although IDCs 003, 700, and 801 were generated by organic liquid waste treatment operations in Building 774, the treatment process that produced IDC 003 was different from that of IDCs 700 and 801 resulting in two distinctly different waste forms. Therefore, two separate waste streams were delineated. The delineation of these waste forms as two separate waste streams is consistent with the Rocky Flats, AMWTP, and 3,100 m^3 TRU Waste Programs for the same IDCs (References P507,

P516, P521, P522, and U099). CAO-95-1121, Revision 3, *Transuranic Waste Baseline Inventory Report* (TWBIR) and ATWIR Identification Numbers assigned to this waste are identified in Table 4-4, ATWIR Identification Numbers.

Table 4-4. ATWIR Identification Numbers

Waste Stream Number	1995 TWBIR (Reference 7)	2012 ATWIR (Reference 8)
ID-RF-S3114	IN-W167.149, IN-W167.926, IN-W309.609, IN-W309.610	IN-ID-RF-S3114
ID-RF-S3150-A	IN-W164.153, IN-W164.1060	IN-ID-RF-S3150-A

Container specific AK information has been reviewed for every drum in waste streams ID-RF-3114 and ID-RF-S3150-A to verify the physical composition (i.e., verify the assigned IDC) and area of generation (container prefix) assuring that each container was generated by the Rocky Flats operations described in this report. Each container evaluated will be incorporated into the most current *AK Containers List* (refer to Section 7.0).

4.5 Waste Identification and Categorization Schemes

When waste was initially packaged, it was segregated by the type of waste matrix and identified by an IDC. IDCs are a series of three-digit numbers used to identify nuclear material forms or process materials (References P004 and P063). The IDCs assigned to the waste in this waste stream are as follows (Reference P507):

- IDC 003, Organic Setups
- IDC 700, OASIS Waste
- IDC 801, Solidified Organics – Building 774

Refer to Sections 5.4.1 and 6.4.1 for a more detailed description of these IDCs.

Once a drum was full, a prefix and serial number were assigned by nuclear material accountability personnel. The prefix corresponds to a material balance account (MBA) used to control the transfer of nuclear material. The MBA can be correlated to an area within a particular building. The prefix is identified by the middle part of the container number (i.e., 0743 is the prefix for drum number IDRF074311598). The last five digits of the drum number are the serial numbers that indicate the sequence in which drums were packaged within a given prefix (References C170, C184, P090, P502, P505, U059, and U069).

Organic setups or "grease" historically generated prior to the development of IDC 003 (prior to 1971) are categorized as "743 series sludge" or "743 grease" (References C516, P532, and P537). Drums of the pre-IDC 003 grease assigned IDC RF-743 are considered part of the ID-RF-S3114 waste stream. These RF-743 drums were retrieved from Pits 11 and 12 in the subsurface disposal area (SDA) (References C518, P536, and P539).

4.6 Waste Certification Procedures

In the CCP program under which the subject waste streams will be certified for shipment to WIPP, CCP-TP-005 (Reference 1), directs compilation and confirmation of AK. CCP certifies TRU waste under the program described in CCP-PO-002 (Reference 9).

5.0 REQUIRED WASTE STREAM INFORMATION – WASTE STREAM ID-RF-S3114

This section presents the mandatory AK for waste stream ID-RF-S3114 required by the WIPP-WAP (Reference 2). Attachment 1 for this waste stream (created in accordance with procedure CCP-TP-005) provides a list of TRU waste stream information required to be developed as part of the AK record (Reference 1).

5.1 Area and Building of Generation

Waste stream ID-RF-S3114 was generated by the Grease Plant in Building 774 (References P090, P502, P505, U059, U069, and U505).

5.2 Waste Stream Volume and Period of Generation

The volume and generation date range for the drums that have been evaluated for inclusion in waste stream ID-RF-S3114, as well as the projected volumes, are presented in Table 5-1a, Waste Stream ID-RF-S3114 Volume and Generation Dates (References C517, C521, M001, P515, P539, and U092). The specific container numbers are provided in the *AK Container List* (refer to Section 7.0).

Table 5-1a. Waste Stream ID-RF-S3114 Volume and Generation Dates

Item Description Code	Current Volume		Future Projections	
	Number of 55-Gallon Drums[2]	Generation Date Range	Number of 55-Gallon Drums[1]	Total[2]
003	7,440	6/1968 – 4/1998	2,439	9,879

1. These drums are either in accessible storage without filter vents or remain in retrievable storage on pads under earthen cover.
2. The current volume and total volume includes 836 drums overpacked in 85-gallon drums to be certified and shipped to WIPP in the 85-gallon drums (Reference C521).

The Grease Plant shut down in 1985 and was replaced by the OASIS process. Waste stored at the TSA with closure dates later than 1986 are the result of waste characterization activities, such as VE or repackaging (References P052 and P507).

5.3 Waste Generating Activities

Waste stream ID-RF-S3114 consists of immobilized organic liquids produced in the Grease Plant. In this process, the organic liquids were processed through an extruder with Micro-cel E®, a synthetic calcium silicate (References P002 and P517). Small amounts of Oil-Dri® absorbent were sometimes added to the mixture as well (Reference P024). The amounts of materials added to the mixture were not metered; however, the operator would adjust the composition if the outgoing mixture did not have a paste-like consistency. The mixture would then drop into a PVC O-ring bag contained in a 55-gallon drum (Reference P016). The composition of organic setups was approximately 30-gallons of liquid organic waste to 100 pounds of Micro-cel E®

(Reference P024). The Grease Plant is illustrated in Figure 4, Grease Plant (Reference P052).

As described in Section 4.3.3 drums in this waste stream are remediated in the AMWTP DTF, AMWTF, or SRP. The drums are processed in the DTF to breach layers of confinement, segregate prohibited items, and remove liquids as necessary by liquid absorption and/ or shaker table operations. Other operations conducted may include rigid liner removal and repackaging, and drum over packing and un-over packing. Secondary waste items, such as leather, latex, and Silver Shield gloves, knives, cutters, drum filters, and plastic sleeving and aprons, may be packaged in the remediated drums (References C515, P535, and P536).

Drums repackaged in the AMWTF and SRP will be characterized by VE to breach layers of confinement, segregate prohibited items, and remove liquids as necessary by absorption (References C518, C522, P536, P542, P543, and P544). Incidental spills of waste material during SRP reprocessing activities will be collected with small quantities of surrounding soil and included with the sludge (References P542, P543, and P546).

5.4 Type of Wastes Generated

This section describes the process inputs, Waste Matrix Code assignment, radionuclide contaminants, and hazardous waste determinations for waste stream ID-RF-S3114.

5.4.1 Material Input Related to Physical Form

Waste stream ID-RF-S3114 consists of organic liquids that have been mixed with an absorbent material. The following is a description of this waste:

IDC 003, Organic Setups: This waste consists of various organic liquids that were transferred to Building 774 where they were immobilized using Micro-cel E® (a synthetic calcium silicate) to form a grease or paste-like material (References P002, P024, and P517). The organic liquids were primarily oil and chlorinated solvent mixtures (References P016, P024, P052, and P518). Small amounts of Oil-Dri® were sometimes added to the mixture as well (References P024, P542, P543, and P544). Sludge repackaged in the SRP may also include small quantities of solidified decontamination solution and soil. Equipment in the ARP-V enclosure may be decontaminated with water and Simple Green prior to maintenance and the resulting liquid absorbed with Oil- Dri® and added to the sludge (Reference C522). Incidental spills of waste material during reprocessing activities will be collected with small quantities of surrounding soil and included with the sludge (References P542, P543, and P546). Small quantities of debris may be present including aluminum, cloth, leather, latex, and Silver Shield gloves, knives, cutters, drum filters, paper, wood, plastic bottles, plastic sleeving, bags, bag stubs, aprons, rubber bands and O-rings, glovebox gloves, HEPA filters, empty cans, graphite, glass, tile, metal liner baskets, lead items (e.g., lead tape, scrap lead, leaded rubber gloves, and lead seals), metal tools, and tray liners (References C515, D023, D024, P024, P535, P536, P542, P543, P544, U517, U518, U519 and U520).

5.4.1.1 Waste Matrix Code

As described in Section 5.4.1, this waste stream is comprised of organic liquids that have been mixed with an absorbent material. Therefore, Waste Matrix Code S3114, Absorbed Organic Liquids, is applied to waste stream ID-RF-S3114. The definition of this Waste Matrix Code is provided in DOE/LLW-217, *DOE Waste Treatability Group Guidance* (Reference 10). This category includes waste that is at least 50 percent, by volume, inorganic particulate absorbent with absorbed organic liquids (Reference D004).

5.4.1.2 Waste Material Parameters

The predominant waste material parameters associated with waste stream ID-RF-S3114 are:

- Organic matrix (absorbent and organic liquid mixture)
- Other inorganic materials (Oil-Dri® or vermiculite)[1]
- Steel (packaging materials)
- Plastic (packaging materials)
- Cellulosics (paper and wood)

To estimate the waste material parameter weight percentages for waste stream ID-RF-S3114, data were obtained from CCP, AMWTP, and the WIPP Waste Information System (WWIS) database as of October 3, 2006. The CCP and AMWTP data were derived from RTR and VE of Rocky Flats absorbed organic liquid wastes by the CCP and AMWTP TRU waste certification programs at INL. The WWIS data were derived from RTR and VE of Rocky Flats absorbed organic liquid wastes by the Rocky Flats TRU waste certification program.

The number of containers from the Rocky Flats TRU waste certification program that were evaluated is 11. The number of containers from the CCP and AMWTP TRU waste certification programs that were evaluated is 2,932. The current volume of waste stream ID-RF-S3114 is 7,440 containers. Therefore, these 2,932 containers represent 39 percent of the current CCP waste stream volume. The original closure dates for the 7,440 containers in this waste stream range from October 1969 to September 1988. There are more than 2,000 containers in the waste stream generated before August 1975, but only 17 containers generated after February 1986. Although the evaluation is based on a relatively small percentage of the waste stream, the Grease Plant was a waste treatment process that produced a consistent sludge-like material, and that process did not change during this time period. It is not expected that the waste generated prior to 1975 would be dissimilar to the wastes that have undergone RTR and VE. Therefore, the WWIS data for these 2,943 containers are representative of waste stream ID-RF-S3114 as a whole.

[1] Additional absorbents (e.g., Oil-Dri® or vermiculite) were sometimes added on top and bottom of the waste inside and outside the plastic bag. These absorbents may not be distinguishable from the organic matrix.

A statistical analysis of the data was performed, the results of which are presented in Table 5-1b, Waste Stream ID-RF-S3114 Waste Material Parameter Weights. This evaluation is documented in a memorandum (included with Attachment 6) as required by CCP-TP-005 (Reference 1).

Table 5-1b. Waste Stream ID-RF-S3114 Waste Material Parameter Weights

Waste Material Parameter	Average Weight Percent	Weight Percent Range
Iron-Based Metals/Alloys	0. 53%	0.0 – 17.22%
Aluminum-Based Metals/Alloys	<0.01%	0.0 – 0.01%
Other Metals	<0.01%	0.0 – 2.44%
Other Inorganic Materials	1.96%	0.0 – 7.28%
Cellulosics	0.02%	0.0 – 9.95%
Plastics (waste materials)	0. 84%	0.0 – 5.06%
Rubber	<0.01%	0.0 – 8.36%
Organic Matrix	96.58%	75.65 – 100%
Inorganic Matrix	0.0%	0.0 – 0.0%
Soils/Gravels	<0.01%	0.0 – <0.01%
Total Inorganic Waste Average	**2.49%**	
Total Organic Waste Average	**97.51%**	

5.4.2 Radiological Characterization

Historical assay values for waste drums were obtained from radiochemical analyses of batch treatments or analysis results of individual bottles and drums that were received for processing. Average values were usually assigned to waste drums (References P016 and P024). Documented assay results and treatment logbook descriptions for this waste indicate the presence of plutonium, americium-241, tritium, uranium-235, and uranium-238 (References P016, P024, P033, and U040).

TRU waste oils and solvents were generated primarily in Buildings 707 and 777. Radionuclide contamination in waste from Building 707 primarily consisted of weapons-grade plutonium from fabrication operations (References P052 and P053). Building 777 performed disassembly of site-return parts and fabrication operations (References C184, P052, and P079). Waste from fabrication operations will be contaminated with weapons-grade plutonium and enriched uranium. Wastes generated by disassembly operations will be contaminated with site-return plutonium (higher americium-241 decay product) and enriched uranium (References C184 and P079). Tritium may also be present from disassembly and subsequent processing of site-return components (Reference P053). The isotopic compositions of weapons-grade plutonium and enriched uranium are presented in Section 5.4.2.2.

Waste oils or solvents contaminated with depleted uranium were generated from fabrication operations in Buildings 444, 447, 865, and 883 (Reference P053). The isotopic composition of depleted uranium is presented in Section 5.4.2.2.

Research and Development (R&D) and analytical support operations also generated waste oils and solvents (References U040 and U043). In addition to supporting production operations, these R&D and analytical activities used several other radioisotopes that may be present in trace quantities, including (References C134, C137, C154, C159, C171, C185, P053, P164, P167, P178, P179, P180, P181, P182, P183, P184, P185, P186, P187, P188, P189, P190, P191, P192, P193, P194, P195, P196, P197, P198, P199, P200, P201, P202, P507, and U064):

- Americium-240, -241, -243
- Californium-252
- Curium-244
- Neptunium-237
- Plutonium-238, -241, -242 (non-weapons-grade material)
- Plutonium (12 weight percent [wt%] Plutonium-238 and ~6 wt% Plutonium-240)
- Plutonium-Low neutrons/gram/second (NGS) (97.7 wt% Plutonium-239 and 2.2 wt% Plutonium-240)
- Thorium-228
- Uranium-232, -233, -235, -236, -238

5.4.2.1 Estimated Radionuclide Quantities

During the INL 3,100 m^3 Project, containers of IDC 003 were assayed for radionuclide content. Table 5-2, Radioassay Data for IDC 003 from the INL 3,100 m^3 Project, contains a summary of these radioassay data (Reference P507).

Table 5-2. Radioassay Data for IDC 003 from the INL 3,100 m^3 Project

Radionuclide/Calculation	Average	Range		Events
		Low[1]	High	
Americium-241 (g)	5.367E-03	-2.458E-04	2.616E-01	152
Plutonium-238 (g)	1.776E-04	-1.212E-05	1.123E-03	152
Plutonium-239 (g)	1.361E+00	-1.086E-01	7.032E+00	152
Plutonium-240 (g)	8.367E-02	-6.603E-03	4.394E-01	152
Plutonium-241 (g)	2.317E-03	-1.997E-04	1.234E-02	152
Plutonium-242 (g)	5.202E-04	-4.963E-05	3.066E-03	152
Uranium-233 (g)	3.430E-02	3.430E-02	3.430E-02	1
Uranium-234 (g)	2.585E-04	-4.622E-06	5.926E-03	48
Uranium-235 (g)	1.341E-01	-3.477E-02	3.023E+00	66
Uranium-238 (g)	7.027E+01	2.988E-02	8.058E+02	21
Plutonium Equivalent Curies (Ci)	1.263E-01	-9.391E-03	1.146E+00	152
Plutonium Fissile Gram Equivalents (g)	1.427E+00	-1.092E-01	7.066E+00	152
TRU Alpha Activity Concentration (nCi/g)	7.751E+02	-5.440E+01	6.287E+03	152

1. Table 5-2 values are listed directly from the AK source documents. The negative low values are from deficient NDA data results. The assays were outside the system's capabilities; however, since this table summarizes the data the values were left in for completeness (Reference P507).

As can be seen in the above table, uranium-238 may be present in less than 15 percent of the drums but will be in relatively large quantities in those few drums.

5.4.2.2 Use of Radionuclide Isotopic Ratios

The primary radionuclides processed at Rocky Flats included weapons-grade plutonium, enriched uranium, and depleted uranium. The approximate isotopic compositions of these materials are presented in Table 5-3, Isotopic Compositions of Rocky Flats Plutonium and Uranium (References C039, C130, P069, P152, P161, P166, P169, P210, P227, and U064).

Table 5-3. Isotopic Compositions of Rocky Flats Plutonium and Uranium

Weapons-Grade Plutonium	Enriched Uranium	Depleted Uranium
Plutonium-238 0.01 – 0.05%	Uranium-234 0.1 – 1.02%	Uranium-234 0.0006%
Plutonium-239 92.8 – 94.4%	Uranium-235 90 – 94%	Uranium-235 0.2 – 0.3%
Plutonium-240 4.85 – 6.5%	Uranium-236 0.4 – 0.5%	Uranium-238 99.7 – 99.8%
Plutonium-241* 0.3 – 1.0%	Uranium-238 5.3 – 5.5%	
Plutonium-242 0.005 – 0.60%		

* Includes americium-241 daughter product.

For waste containers where direct measurement does not yield useable isotopic ratio information, AK may be used to supplement direct measurement data in accordance with the WIPP-WAC (Reference 3). The specific ratios that may be used, and the use and confirmation of AK related to WIPP-certified assay measurements of containers in this waste stream, is documented in the nondestructive assay (NDA) Memorandum.

There are certain radionuclides (i.e., uranium-234, plutonium-242, and strontium-90) that cannot be measured by NDA equipment. Uranium-234 will be calculated based on ratios with detected uranium isotopes. Determination of plutonium-242 will be based on its mass fraction in weapons-grade plutonium. Although plutonium-242 was used in R&D and special order work, these activities were small in comparison of the weapons-grade stream. And the specific drums, if any, that include waste contaminated with this plutonium-242 are not known.

Fission products, including cesium-137 and strontium-90, were not expected components of any of the Rocky Flats TRU waste streams. Cs-137 was not detected during radioassay by the INL 3,100 m^3 Project. Sr-90, because its presence was predicated on the presence of Cs-137 (as a fission product), has never been reported for any of the Rocky Flats wastes analyzed to date (Reference P507). The AMWTP had previously written an AK Discrepancy Resolution to add cesium-137 and strontium-90 to Rocky Flats waste streams. However, physicists from Rocky Flats and the AMWTP completed a review of spectra for several waste streams and concluded that Cs-137 and Sr-90 were not present in those wastes in detectable quantities and were reported due to an interference with Am-241 (References C502 and D009). It is the position of the CCP that the reported Cs-137 values cannot always be clearly dismissed as being due to the presence of Am-241. Therefore, CCP will continue to report the presence of Cs-137 by application of their routine analysis methods for nondestructive assay (Reference D009).

Based on previous assay data and other information, a summary of the potential radionuclides in waste stream ID-RF-S3114 has been compiled and provided in Table 5-4, Summary of Radionuclides in Waste Stream ID-RF-S3114. To determine isotopic ratios for waste stream ID-RF-S3114 as a whole, the average gram values for each radionuclide from the 3,100 m^3 Project data were first multiplied by the number of events to obtain the total gram value for each individual radionuclide. These totals were then divided by the total mass of all radioactive constituents in the waste stream and converted to a percentage. These results are listed as "Relative Weight %." As shown in Table 5-4, the two most prevalent radionuclides are U-238 and Pu-239. Radiological AK will be confirmed by the method specified in the NDA Memorandum as required by CCP-TP-005 (Reference 1).

Table 5-4. Summary of Radionuclides in Waste Stream ID-RF-S3114

Radionuclide	Average Weight (g)	Events	Total Weight (g)	Relative Weight %	Expected Present
WIPP Required Radionuclides					
Americium-241	5.37E-03	152	8.16E-01	0.05%	Yes
Plutonium-238	1.78E-04	152	2.70E-02	<0.01%	Yes
Plutonium-239	1.36E+00	152	2.07E+02	12.13%	Yes
Plutonium-240	8.37E-02	152	1.27E+01	0.75%	Yes
Plutonium-242	5.20E-04	152	7.91E-02	<0.01%	Yes
Uranium-233	3.43E-02	1	3.43E-02	<0.01%	Yes
Uranium-234	2.59E-04	48	1.24E-02	<0.01%	Yes
Uranium-238	7.03E+01	21	1.48E+03	86.53%	Yes
Cesium-137	N/A	N/A	N/A	N/A	Yes
Strontium-90	N/A	N/A	N/A	N/A	Yes
Other Measured Radionuclides					
Plutonium-241	2.32E-03	152	3.52E-01	0.02%	Yes
Uranium-235	1.34E-01	66	8.85E+00	0.52%	Yes
Other Potentially Present Radionuclides					
Americium-240	Californium-252	Neptunium-237	Thorium-228	Uranium-232	
Americium-243	Curium-244	Tritium (H-3)		Uranium-236	

5.4.2.3 TRU Alpha Activity Concentration

Prior to 1982, TRU waste was defined as containing greater than 10 nCi/g TRU alpha contamination. In 1982, the DOE redefined TRU waste as materials contaminated with greater than or equal to 100 nCi/g TRU alpha. Much of the TRU wastes (based on these definitions) were shipped to the INL. This entire population has been managed as TRU waste since receipt at the INL (Reference P513). Based on historical assay data from the waste generator, the percentage of IDC 003 drums above 100 nCi/g is 36 percent, and the percentage of the drums below 100 nCi/g is 64 percent (Reference P512). Each payload container shipped to WIPP will be certified in accordance with CCP-PO-002 (Reference 9) as containing more than 100 nCi/g of alpha emitting isotopes with half-lives greater than 20 years.

5.4.3 Chemical Content Identification – Hazardous Constituents

Available AK documentation was reviewed for waste stream ID-RF-S3114 to identify organic chemical usage and potentially hazardous organic liquids that may have been treated in Building 774. The primary solvents treated in Building 774 were carbon tetrachloride, 1,1,1-trichloroethane, and 1,1,2-trichloro-1,2,2-trifluoroethane, which is supported by past sampling and analysis (References P052, P077, P507, and P520). Numerous other organic liquids were also identified as previously shown in Tables 4-1 and 4-2. Table 5-5, EPA Hazardous Waste Numbers for Waste Stream

ID-RF-S3114 summarizes the potential hazardous chemical contaminants and associated EPA HWNs applicable to this waste stream.

Table 5-5. EPA Hazardous Waste Numbers for Waste Stream ID-RF-S3114

EPA Hazardous Waste Number	Constituent
Toxicity Characteristic Metals	
D008	Lead
Toxicity Characteristic Organic Compounds	
D022	Chloroform
D026	Cresol
D027	1,4-Dichlorobenzene
D028	1,2-Dichloroethane
D029	1,1-Dichloroethylene
D030	2,4-Dinitrotoluene
D032	Hexachlorobenzene
D034	Hexachloroethane
D036	Nitrobenzene
D037	Pentachlorophenol
F-Listed Organic Solvents	
F001	Carbon tetrachloride
F001 and F002	1,1,1-Trichloroethane
F001 and F002	Trichlorofluoromethane
F002	1,1,2-Trichloro-1,2,2-trifluorethane (Freon 113)
F002	1,2-Dichlorobenzene (ortho-dichlorobenzene)
F002	Methylene chloride
F002	Tetrachloroethylene
F002	Trichloroethylene
F005	2-Ethoxyethanol
F005	Benzene
F005	Carbon disulfide
F005	Methyl ethyl ketone
F005	Pyridine
F005	Toluene

The waste described in this report has been historically managed in accordance with INL waste management practices in compliance with the requirements imposed by the Idaho Department of Environment Quality. As indicated in Section 4.4, this waste has been historically managed as TRU mixed waste. In addition, this waste stream has been characterized by several different TRU waste programs. For this reason, the

assignment of EPA HWNs to waste stream ID-RF-S3114 considered the EPA HWNs assigned by these programs in addition to the review of the AK record described in this section (References C522, D005, P052, P507, and P521).

5.4.3.1 Toxicity Characteristic Metals

Waste stream ID-RF-S3114 exhibits the characteristic of toxicity for metal compounds as defined in Title 40 of the Code of Federal Regulations (CFR), Part 261, Subpart C (40 CFR 261.24) (Reference 15). EPA hazardous waste codes for metals were assigned to organic liquid wastes that may have been treated in Building 774, but have never been assigned to organic setups (IDC 003). Analysis of the organic setups waste conducted by the Rocky Flats and INL 3100 m^3 TRU Waste Programs demonstrates that the 90-percent Upper Confidence Limit (UCL_{90}) does not exceed the regulatory threshold limit (RTL) for any of the RCRA-regulated metals (References P507, P521, and U098). However, lead items (D008), such as lead tape, scrap lead, leaded rubber gloves, and lead seals, have been identified by RTR in some of the drums in this waste stream. Therefore, EPA HWN D008 is also assigned to waste stream ID-RF-S3114 (Reference D024).

5.4.3.2 Toxicity Characteristic Organics

Waste stream ID-RF-S3114 exhibits the characteristic of toxicity for organic compounds as defined in 40 CFR 261, Subpart C (40 CFR 261.24). As shown in Tables 4-1 and 4-2, chloroform (D022); 1,2-dichloroethane (D028); 1,1-dichloroethylene (D029); and nitrobenzene (D036) were identified as potential organic constituents in organic setups waste. Therefore, EPA HWNs D022, D028, D029, and D036 are assigned to waste stream ID-RF-S3114 (Reference D005).

Homogeneous solids sampling and analysis of organic setups was previously conducted by both the Rocky Flats and INL 3,100 m^3 TRU Waste Programs. Based on the analytical data from one or both programs, the UCL_{90} exceeded the RTL for carbon tetrachloride (D019/F001), chloroform (D022), 1,2-dichloroethane (D028), 1,1-dichloroethylene (D029), tetrachloroethylene (D039/F002), and trichloroethylene (D040/F002) in the organic setups waste, confirming AK. In addition, the UCL_{90} for hexachloroethane (D034) exceeded the RTL in both Rocky Flats and INL 3,100 m^3 data. Therefore, EPA HWN D034 is also assigned to waste stream ID-RF-S3114 (References P507, P521, and U098).

Although carbon tetrachloride, tetrachloroethylene, and trichloroethylene are present in this waste above the RTL, these compounds were used as solvents (i.e., for cleaning and degreasing); and therefore, the F-listed EPA HWN is applied. The toxicity characteristic EPA HWNs are not assigned (refer to Section 5.4.3.3).

During the analytical data review of the "non-detect" observations for homogeneous solids data, Rocky Flats determined that the method detection limit (MDL) exceeded the program required quantification limit (PRQL) for cresols (D026), 1,4-dichlorobenzene (D027), 2,4-dinitrotoluene (D030), hexachlorobenzene (D032), nitrobenzene (D036),

and pentachlorophenol (D037) due to dilution. The dilution was due to high hydrocarbon content in the waste matrix that caused difficulties in analysis per the required methodology. Subsequent review of the solid sampling data and reconsideration of process knowledge confirms that cresols, 1,4-dichlorobenzene, 2,4-dinitrotoluene, hexachlorobenzene, and pentachlorophenol were not expected contaminants in this waste stream (potential sources for nitrobenzene have been identified as previously described). Where a constituent has been identified and there is no or limited quantitative data available to demonstrate that the concentration of a constituent is below regulatory threshold levels, the applicable EPA HWN is applied to the waste stream. Therefore, EPA HWNs D026, D027, D030, D032, and D037 are also assigned to waste stream ID-RF-S3114 (Reference P521).

Headspace gas sampling and analysis of organic setups was also conducted by the Rocky Flats and INL 3,100 m^3 TRU Waste Programs. Based on the analytical data from one or both programs, the UCL_{90} exceeded the PRQL for carbon tetrachloride (D019/F001), chloroform (D022), and 1,1-dichloroethylene (D029) in the organic setups waste, confirming AK (References P507 and P521).

Organic laboratory solutions containing vinyl chloride were generated at Rocky Flats, but these laboratory operations did not use vinyl chloride until after TRU waste shipments to INL ceased. For this reason, EPA HWN D043 has been removed from waste stream ID-RF-S3114 (Reference D005).

5.4.3.3 F-Listed Constituents

Waste stream ID-RF-S3114 was derived from the treatment of hazardous wastes from non-specific sources as listed in 40 CFR 261, Subpart D (40 CFR 261.31). As shown in Tables 4-1 and 4-2, carbon tetrachloride, 1,1,1-trichloroethane, 1,1,2-trichloro-1,2,2-trifluorethane, methylene chloride, tetrachloroethylene, trichloroethylene, 2-ethoxyethanol, benzene, carbon disulfide, methyl ethyl ketone, and toluene were used for their solvent properties, and therefore meet the definition of an F-listed waste. Therefore, EPA HWNs F001, F002, and F005 are assigned to waste stream ID-RF-S3114 (Reference D005).

Homogeneous solids sampling and analysis of organic setups was previously conducted by both the Rocky Flats and INL 3,100 m^3 TRU Waste Programs. Based on the analytical data from one or both programs, the UCL_{90} exceeded the RTL for 1,1,1-trichloroethane, 1,1,2-trichloro-1,2,2-trifluorethane, carbon tetrachloride, tetrachloroethylene, and trichloroethylene in the organic setups waste, confirming AK (References P507, P521, and U098).

Pyridine (F005) was detected in several samples of organic setups from the INL 3,100 m^3 Project, and although the UCL_{90} for pyridine is below the RTL, the maximum concentration of pyridine was well above the RTL (References P507 and U098). Pyridine was not specifically identified as a contaminant of organic setups waste by AK; however, it was used at Rocky Flats as a solvent in analytical laboratory operations (Reference P076). For that reason, EPA HWN F005 for pyridine is included in waste stream ID-RF-S3114.

During the analytical data review of the "non-detect" observations for homogeneous solids data, Rocky Flats determined that the MDL exceeded the PRQL for 1,2-dichlorobenzene (F002) due to dilution. The dilution was due to high hydrocarbon content in the waste matrix that caused difficulties in analysis per the required methodology. Review of the Rocky Flats solid sampling data and reconsideration of process knowledge confirms that 1,2-dichlorobenzene was not an expected contaminant in this waste stream. Where a constituent has been identified and there is no or limited quantitative data available to demonstrate that the concentration of a constituent is below regulatory threshold levels, the applicable EPA HWN is applied to the waste stream. Therefore, EPA HWN F002 for 1,2-dichlorobenzene is included in waste stream ID-RF-S3114 (Reference P521).

Headspace gas sampling and analysis of organic setups was also conducted by the Rocky Flats and INL 3,100 m^3 TRU Waste Programs. Based on the analytical data from one or both programs, the UCL_{90} exceeded the PRQL for 1,1,1-trichloroethane, 1,1,2-trichloro-1,2,2-trifluorethane, carbon tetrachloride, and methylene chloride in the organic setups waste, confirming AK (References P507 and P521).

Based on headspace gas results for waste stream ID-RF-S3114, trichlorofluoromethane is present as a tentatively identified compound. This compound is a component of Kester Residue Remover – Formula 5211, and was identified as an F001-listed constituent in combustibles and plastics. Therefore, trichlorofluoromethane will be added as an F001- and F002-listed constituent to this waste stream (Reference P540).

As shown in Tables 4-1 and 4-2, the flammable F003-listed solvents, acetone, ethyl benzene, ethyl ether, methanol, and xylene were used at Rocky Flats and are potential contaminants of the organic setups waste. Homogeneous solids and/or headspace gas data from the Rocky Flats and/or INL 3,100 m^3 TRU Waste Programs detected acetone, butanol, methanol, and xylene in the organic setups waste. However, F003-listed solvents are listed solely for ignitability, and this waste stream does not exhibit the characteristic of ignitability because the solvents are not in liquid form. Therefore, this waste stream is not an F003-listed hazardous waste (References P052, P077, P507, and P521).

Nitrobenzene, an F004-listed constituent, was used for its solvent properties at Rocky Flats in 1967; however, this pre-dates the containers in this waste stream. Other documentation also identifies nitrobenzene as potentially present in IDC 003, but its specific use was not identified (References C517, D022, P052, and P538). Therefore,

this waste stream is assigned EPA HWN D036 as described in Section 5.4.3.2 and is not an F004-listed hazardous waste.

5.4.3.4 U-, P-, and K-Listed Wastes

There is no documentation indicating that waste stream ID-RF-S3114 contains discarded commercial chemical products, off-specification species, container residues, or spill residues thereof (References P052, P077, P507, P521, and U099). This waste stream is therefore not a P- or U-listed hazardous waste as defined in 40 CFR 261, Subpart D (40 CFR 261.33).

Beryllium is regulated as a P-listed waste, but only as the commercial chemical product beryllium powder. Most of the beryllium used on site, primarily in Buildings 444 and 883, was in the form of metal (not powder). The exception is experimental work in Building 865 that involved pressing of the powder into shapes; however, only beryllium-contaminated oil from Building 865 was solidified (refer to Table 4-1). Therefore, waste stream ID-RF-S3114 is not a P015-listed waste (References P052 and P053).

Beryllium may be present in the organic setups waste but only in particulate form as a trace contaminant. Analysis conducted by Rocky Flats shows that the UCL_{90} for beryllium in IDC 003 is 3.4 milligrams per kilogram (mg/kg) (Reference P521). Therefore, beryllium concentrations will be less than one percent by weight of the waste in each drum and less than 18.14 kilograms in any payload container, including ten drum overpacks.

The constituent 1,2-benzenedicarboxylic acid, bis (2-ethylhexyl) ester (Chemical Abstract Service [CAS] No. 117-81-7), also known as bis (2-ethylhexyl) phthalate, was detected as a tentatively identified compound (TIC) in Rocky Flats semi-volatile organic compound (SVOC) analysis of IDCs 003 and 801. An evaluation to compare the TIC identification with AK was performed by Rocky Flats to determine if this TIC is a U-listed hazardous waste in this waste stream. This evaluation (which included the onsite use of bis [2-ethylhexyl] phthalate for filter testing and in vacuum pump oil) determined that this constituent was not present as an unused commercial chemical product. There is no evidence that bis (2-ethylhexyl) phthalate used on site for filter testing would have contributed to this waste stream; however, AK does indicate that the vacuum pump oil used in mass spectrometers in Buildings 707 and 777 may have been composed of this constituent and this oil may have been disposed of in the oil/solvent mixture feed to the Grease Plant process, but not as an unused product. Bis (2-ethylhexyl) phthalate is also a common plasticizer used in plastic, including the plastic bags/packaging used to package this waste. Accordingly, this waste stream is not a U028-listed hazardous waste (Reference P521).

Hydrofluoric acid was not identified as a potential chemical input to the waste stream, and therefore, waste stream ID-RF-S3114 is not a U134-listed waste.

Waste stream ID-RF-S3114 does not contain hazardous waste from the specific sources in 40 CFR 261.32 and therefore is not a K-listed waste.

5.4.3.5 Ignitables, Corrosives, and Reactives

Ignitability

The materials in this waste stream do not meet the definition of ignitability as defined in 40 CFR 261.21. The materials are not liquid and absorbents were added to wastes having the potential of generating free liquids (i.e., dewatering of wastes) (References P015, P024, P501, and P503). However, RTR and VE identified drums of organic setup waste (IDC 003) containing free liquid (Reference P015). Liquid wastes treated (refer to Section 4.3.1) included alcohols and acetone so the possibility exists that the liquids are ignitable. Refer to Tables 4-1 and 4-2 for a more complete listing of organic liquids treated in Building 774 (Reference P015). The waste is not capable of causing fire through friction, absorption of moisture, or spontaneous chemical change (References P012, P016, P024, and P501). The materials are not compressed gases, nor do the wastes contain compressed gases, and the waste is not an oxidizer (References P012, P013, P015, P016, P022, P024, and P501). Waste stream ID-RF-S3114 is therefore not an ignitable waste (D001).

RTR and/or VE are performed to ensure no amount of liquid is present in the IDC 003 waste, and to verify the absence of ignitable compressed gases. Any drum that contains any amount of liquid or compressed gas cylinders will be segregated from the waste stream during confirmation and will not be eligible for disposal at WIPP until further characterization and/or processing is conducted. The basis for not allowing residual liquids in this waste stream is described in Section 5.4.4.

Corrosivity

The materials in this waste stream do not meet the definition of corrosivity as defined in 40 CFR 261.22. The materials are not liquids but the waste may contain some free liquids (Reference P015). Absorbents were added to wastes having the potential of generating free liquids (i.e., dewatering of wastes) (References P015, P024, P501, and P503). VE identified drums of organic setup waste (IDC 003) containing free liquid (Reference P015). The liquids potentially consist of any of the organic liquids identified in Tables 4-1 and 4-2 which are not corrosive. However, hydrochloric acid may also be present. The hydrochloric acid is formed from the radiolytic and/or chemical decay of chlorinated hydrocarbons, such as carbon tetrachloride, in the presence of moisture (References C514 and P534).

RTR and/or VE are performed to ensure no amount of liquid is present in the IDC 003 waste. Any drum that contains any amount of liquid will be segregated from the waste stream during confirmation and will not be eligible for disposal at WIPP until further characterization and/or processing is conducted. The basis for not allowing residual liquids in this waste stream is described in Section 5.4.4. Waste stream ID-RF-S3114 is, therefore, not a corrosive waste (D002).

Reactivity

The materials in this waste stream do not meet the definition of reactivity as defined in 40 CFR 261.23. The materials are stable and will not undergo violent chemical change. The materials will not react violently with water, form potentially explosive mixtures with water, or generate toxic gases, vapors, or fumes when mixed with water. The materials do not contain cyanides or sulfides and are not capable of detonation or explosive reaction. The materials are not explosive, nor do the drums contain any explosives (References P012, P013, P015, P016, P022, and P024). Explosives were not handled or used around radioactive material. Waste stream ID-RF-S3114 is therefore not a reactive waste (D003).

RTR and/or VE are performed to ensure the waste does not contain explosive materials. Any drum suspected of containing explosives will be segregated from the waste stream during confirmation and will not be eligible for disposal at the WIPP until further characterization and/or processing is conducted.

5.4.3.6 Polychlorinated Biphenyls (PCBs)

Waste stream ID-RF-S3114 contains greater than 50 parts-per-million (ppm) polychlorinated biphenyls (PCBs) and is regulated as a Toxic Substances Control Act (TSCA) waste under 40 CFR 761. Based on written communications with the EPA, this waste is categorized as PCB Remediation Waste (References C505, C506, C519, C520, and P546).

From 1962 to 1977, radioactively-contaminated oils containing PCBs (e.g., vacuum pump and hydraulic press oils) were solidified with calcium silicate (i.e., Micro-cel E®) and shipped to INL for disposal. According to a Building 774 treatment logbook that dates back to mid-1976, there are two instances (8/27/76 and 1/26/78) of PCB contaminated oils from Building 334 being processed (References C207, P024, and U040).

In 1977, preparations were started by Rocky Flats to retrofill several transformers known to contain a total of nearly 10,000 gallons of PCB fluid. The fluids were to be taken to Building 774 for solidification and disposal as radioactive waste. When the EPA regulations for PCBs were first published May 31, 1979, approximately 894 gallons of PCB fluids had been drained, leaving a total of 8,601 gallons. In June 1979, all action to solidify the PCB fluids was suspended by DOE pending approval by the EPA of a disposal method. These transformer oils were eventually incinerated off site and were never solidified (Reference C207).

However, sampling events at Rocky Flats in late-1984 and July 1985 identified several mineral oil-filled transformers that were not previously identified as containing PCB fluid. No documentation has been identified that indicates the PCB-contaminated mineral oil was investigated by Rocky Flats. Therefore, IDC 003 waste generated after 1977 and up to the 1985 sampling event are suspect for PCB contamination (Reference C207).

Sampling and analysis of organic setups (IDC 003) was conducted by the INL 3,100 m^3 Project. Analytical results for IDC 003 solid samples collected from waste generated through 1984 had a UCL_{90} exceeding 50 ppm PCBs (References P507 and U099).

5.4.4 Prohibited Items

Prohibited items potentially in this waste stream based on VE and RTR are sealed containers greater than four liters and liquids.

Based on a review of several waste packaging and inspection procedures, the drum and rigid liner lids were not vented, nor did the rigid liner lid contain a vent hole when the waste was shipped from Rocky Flats to INL (References P008, P026, P063, P064, P501, P502, P503, and P505). As the drums are retrieved for characterization, they are vented and aspirated to ensure equilibration of any gases that may have accumulated in the closed container (Reference 11).

Three drums in this waste stream were found to contain predominantly (greater than 50 volume percent) debris materials during characterization activities. This is not consistent with the physical form of the waste stream and the drums were segregated and removed from the waste stream (References D013 and D014).

Since this waste stream contains greater than 50 ppm PCBs, any residual liquids including containerized liquids, identified during RTR and/or VE are assumed to contain greater than 50 ppm PCBs. Residual liquids containing PCBs are prohibited by the WIPP-WAC (Reference 3, P024, and U519). Therefore, any amount of liquid in a drum of IDC 003 must be segregated from the waste stream during confirmation and will not be eligible for disposal at the WIPP.

5.5 Waste Packaging

Depending on waste packaging requirements at the time, several combinations of bags and liners were used to prepare 55-gallon drums for shipment. From 1970 to 1972, waste drums were lined with two polyethylene drum bags. About four pounds of Oil-Dri® was placed in the bottom of the drum and in the bottom of each drum bag. Organic setup (IDC 003) waste was then placed in the drum. Use of the 90-mil rigid polyethylene liner began in 1972. The rigid liner was placed in each drum and lined with one polyethylene round bottom drum liner or a polyethylene drum bag. A PVC O-ring bag and a polyethylene bag were used if the drum was attached to the glovebox. The polyethylene drum bag was not required from a packaging standpoint but would aid in contamination control. About four pounds of Oil-Dri® was placed in the bottom of the rigid liner, the round bottom liner or drum bag, and the O-ring bag. The organic setup waste (IDC 003) was then placed in the O-ring bag. When a drum was full, the drum liners were twisted and taped closed, the lid was secured with a bolted ring, and a tamper indicating device was attached to the drum (References P012, P016, P024, P063, P064, and P503). Plastic ties ("zip-ties") have also been used to seal the plastic drum bags. Hydrogen diffusion rate testing of this supplemental sealing device

indicates that it is an acceptable closure method in accordance with Appendix 3.8 of the *CH-TRU Payload Appendices* (References 13, C510, and P524).

Prior to 1972, absorbent material Oil-Dri® may have been added to the top of the sealed drum bag, which contained the organic setup waste (IDC 003). Since approximately 1972, after drums were inspected, one to two quarts of Oil-Dri® was placed on the top of the outer, sealed polyethylene drum bag. This procedure changed in February 1982 when vermiculite was used to fill the space between the outer, sealed polyethylene drum bag and the top of the 90-mil rigid liner. The quantity of vermiculite varied from 3-12 pounds according to the amount of waste contained in each drum (Reference P024).

Waste repackaged in the AMWTF or the SRP are placed directly in prepared 55-gallon drums. Prepared drums are lined with a rigid liner and a plastic drum bag, or filtered drum bag in the SRP. After loading, the drum bags are twisted and taped closed and the drums closed with filtered drum lids (References P536, P542, and P543).

A small portion of the waste stream will be certified and shipped to WIPP in 85-gallon or 83-gallon drums. These drums each contain one 55-gallon drum lined with a rigid liner and drum liner bag (Reference C521). The 55-gallon drum may be contained in an overpack bag. These open top, woven nylon fabric bags are used to lift 55-gallon drums into overpack drums (References M003 and M004).

5.5.1 Filter Vents

Based on a review of several waste packaging and inspection procedures, the drum and rigid liner lids were not vented, nor did the rigid liner lid contain a vent hole when the waste was shipped from Rocky Flats to INL. Carbon composite filter vents were not used until the late 1980s (References C057, P008, P026, P063, P064, P501, P502, P503, P504, and P505). As the drums are retrieved for characterization, they are vented and aspirated to ensure equilibration of any gases that may have accumulated in the closed container.

Certified 85- or 83-gallon drums contain vented 55-gallon drums. The 55-gallon drums may be inverted. To ensure the inner drums are vented, the 55-gallon drum lids and rigid liners are vented through the overpack drum using a long punch. This ensures both layers of confinement are vented (References C521 and P541).

5.5.2 Layers of Confinement

Based on the discussion in Section 5.5, several packaging configurations are possible. There may be various combinations of polyethylene round bottom drum liners, polyethylene drum bags, and PVC O-ring bags. The maximum number of confinement layers, however, is expected to be two. The rigid liner must be vented and, therefore, is not considered a layer of confinement.

Drums processed in the AMWTP DTF have the rigid liner lids cut out or removed or holes cut and confinement layer bag closures and/or plastic ties cut. Horsetails (i.e., twist and tape bag closure) cut during these operations may be placed on top of the waste (References C515 and P535).

Drums processed in the AMWTF will have a rigid liner without a lid and one layer of confinement (Reference P536).

Repackaged drums from the SRP will have a rigid liner without a lid and one layer of confinement consisting of a filtered liner bag (References P542, P543, and P547).

Certified 85- or 83-gallon drums containing vented 55-gallon drums with a rigid liner without a lid, or a punctured rigid liner or with no rigid liner present. A maximum of one layer of confinement due to the TRUCON code used to certify the 85- or 83-gallon drum (Reference C521).

6.0 REQUIRED WASTE STREAM INFORMATION – WASTE STREAM ID-RF-S3150-A

This section presents the mandatory AK for waste stream ID-RF-S3150-A required by Attachment B4 of the WIPP-WAP (Reference 2). Attachment 1 for this waste stream (created in accordance with procedure CCP-TP-005) provides a list of TRU waste stream information required to be developed as part of the AK record (Reference 1).

6.1 Area and Building of Generation

Waste stream ID-RF-S3150-A was generated by the OASIS in Building 774 (References P090, P502, P505, U059, U069, and U505).

6.2 Waste Stream Volume and Period of Generation

The volume and generation date range by IDC for the drums that have been evaluated for inclusion in waste stream ID-RF-S3150-A are presented in Table 6-1a, Waste Stream ID-RF-S3150-A Volume and Generation Dates (References P515 and U092). The specific container numbers are provided in the *AK Container List* (refer to Section 7.0).

Table 6-1a. Waste Stream ID-RF-S3150-A Volume and Generation Dates

Item Description Code	Current Volume		Future Projections[1]	Total
	Number of 55-Gallon Drums	Generation Date Range	Number of 55-Gallon Drums	
700	57	3/1986 – 5/1986	3	60
801	797	2/1986 – 11/1998	1	798
				858

1. These drums are in 85-gallon overpacks and are not currently included in this waste stream.

The waste inventory at the TSA was only generated through 1988 because shipments from Rocky Flats to INL ceased at that time. Waste stored at the TSA with closure dates later than 1988 are the result of waste characterization activities, such as VE or repackaging (Reference P507).

6.3 Waste Generating Activities

Solidified organics (IDCs 700 and 801) were produced by the OASIS process, which began operating in November 1985. IDC 700 was assigned to the waste generated by the experimental prototype OASIS process in Building 774 that would later generate IDC 801 (References P016, P052, and P077).

OASIS was a batch type process generating one drum per run. Waste oil and solvent mixtures were pumped into a PVC O-ring bag inside a 55-gallon drum attached to the bottom of the OASIS glovebox. ENVIROSTONE® emulsifier and water were then added to the mix. An agitator was lowered into the drum and run for two minutes.

ENVIROSTONE® gypsum cement was then added to the mix for approximately two minutes. A 90-second mix time allowed dispersement of cement throughout the matrix. Mix time was kept to a minimum because of the fast initial set time resulting from addition of ENVIROSTONE® accelerator. The accelerator was added to the gypsum cement in the cement transfer station before transport into cement storage bins. Figure 5, Organic and Sludge Immobilization System, illustrates the OASIS process (References P002, P016, P052, P077, and P089).

The typical composition of solidified organic waste is 170 pounds of organic liquid waste, 250 pounds of gypsum cement, 25 pounds of emulsifier, 10 pounds of accelerator, and 42 pounds of water (Reference U010).

As described in Section 4.3.3, drums in this waste stream are remediated and/or repackaged in the AMWTP DTF or the SRP. The drums are processed to breach layers of confinement, segregate prohibited items, and remove liquids as necessary by liquid absorption. Other operations conducted may include rigid liner removal and repackaging, and drum over packing and un-over packing. Secondary waste items, such as leather, latex, and Silver Shield gloves, knives, cutters, drum filters, aspirator/siphon pumps, and plastic sleeving and aprons, may be packaged in the remediated drums (References C515 and P535).

Drums repackaged in the SRP will be characterized by VE to breach layers of confinement, segregate prohibited items, and remove liquids as necessary by absorption (References C522, P542, P543, and P544).

6.4 Type of Wastes Generated

This section describes the process inputs, Waste Matrix Code assignment, radionuclide contaminants, and hazardous waste determinations for waste stream ID-RF-S3150-A.

6.4.1 Material Input Related to Physical Form

Waste stream ID-RF-S3150-A consists of solidified organic liquids. The following is a description of this waste.

IDC 700, OASIS Waste: This waste consists of various organic liquids cemented to form a solid monolith. IDC 700 was assigned to the waste generated by the experimental prototype OASIS process in Building 774 that would later generate IDC 801. The organic liquids solidified as well as the solidifying agents are the same for both IDCs 700 and 801 (Reference P016). See the description for IDC 801 for more information about this waste.

IDC 801, Solidified Organics – Building 774: This waste consists of various organic liquids immobilized into a solid monolith in the OASIS process in Building 774. Oils and chlorinated solvents were the primary liquids treated by the OASIS process (References P016, P052, P077, and P518). The organic liquids were immobilized by mixing with water, ENVIROSTONE® emulsifier, accelerator, and gypsum cement. The

emulsifier was a polyethylene glycol ether, and the accelerator contained gypsum and potassium sulfate (Reference P066). Based on RTR by the INL 3,100 m^3 Project, some IDC 801 drums will contain small amount of metal (Reference P507). This waste may also contain plastic bag stubs remaining from previous bag cuts that were placed on top of the waste in subsequent runs (Reference C511).

Repackaged solidified organics may also contain Oil-Dri® and small quantities of sludge contaminated debris from reprocessing such as tray liners, leather, latex, and Silver Shield gloves, knives, cutters, drum filters, aspirator/siphon pumps, plastic sleeving, aprons, sheeting, bags, bag stubs, rubber bands, glovebox gloves, lead items (e.g., leaded rubber aprons), HEPA filters, and metal tools (References C511, C515, D025, P535, P542, P543, and P544). Sludge repackaged in the SRP may also include small quantities of solidified decontamination solution and soil. Equipment in the ARP-V enclosure may be decontaminated with water and Simple Green prior to maintenance and the resulting liquid solidified with Oil-Dri® and added to the sludge (Reference C522). Incidental spills of waste material during reprocessing activities will be collected with small quantities of surrounding soil and included with the sludge (References P542, P543, and P546).

6.4.1.1 Waste Matrix Code

As described in Section 6.4.1, this waste stream is comprised of organic liquid wastes that have been mixed with water and solidification agents to form a solid monolith. Therefore, Waste Matrix Code S3150, Solidified Homogeneous Solids, is applied to waste stream ID-RF-S3150-A. The definition of this Waste Matrix Code is provided in the (Reference 10). This category includes waste that is at least 50 percent, by volume, solidified waste forms such as a particulate or sludge that has been immobilized with cement and cured into a solidified form (Reference D004).

6.4.1.2 Waste Material Parameters

The waste material parameters associated with waste stream ID-RF-S3150-A are:

- Organic matrix (solidification agents, water, and organic liquid mixture)
- Other inorganic materials (Oil-Dri® or vermiculite)[2]
- Plastic (waste materials)
- Iron-based metals (small quantities of metal items)
- Steel (packaging materials)
- Plastic (packaging materials)

To estimate the waste material parameter weight percentages for waste stream

[2] Additional absorbents (e.g., Oil-Dri® or vermiculite) were sometimes added on top and bottom of the waste inside and outside the plastic bag. These absorbents may not be distinguishable from the organic matrix.

ID-RF-S3150-A, data were obtained from the WWIS database as of October 3, 2006. The WWIS data were derived from RTR and VE of Rocky Flats solidified organics waste by the CCP TRU waste certification program at INL and the Rocky Flats TRU waste certification program.

The number of containers from the Rocky Flats TRU waste certification program that were evaluated is 499. The number of containers from the CCP TRU waste certification program that were evaluated is 516. The current volume of waste stream ID-RF-S3150-A is 854 containers. Therefore, these 516 containers represent 60 percent of the current CCP waste stream volume. The original closure dates for the 854 containers in this waste stream range from February 1986 to September 1988. The closure dates for the drums in WWIS for the CCP waste stream also range from February 1986 to September 1988. Therefore, the WWIS data for these 1,015 containers are representative of waste stream ID-RF-S3150-A as a whole. A statistical analysis of the data were performed using the WWIS data, the results of which are presented in Table 6-1b, Waste Stream ID-RF-S3150-A Waste Material Parameter Weights. This evaluation is documented in a memorandum (included with Attachment 6) as required by CCP-TP-005 (Reference 1).

Table 6-1b. Waste Stream ID-RF-S3150-A Waste Material Parameter Weights

Waste Material Parameter	Average Weight Percent	Weight Percent Range
Iron-Based Metals/Alloys	<0.01%	0.0 – 0.44%
Aluminum-Based Metals/Alloys	0.0%	0.0 – 0.0%
Other Metals	≤0.01%	0.0 - <0.01%
Other Inorganic Materials	0.32%	0.0 – 3.09%
Cellulosics	<0.01%	0.0 – 2.79%
Plastics (waste materials)	0.32%	0.0 – 3.53%
Rubber	<0.01%	0.0 -2.15%
Organic Matrix	99.35%	99.35 – 100%
Inorganic Matrix	0.0%	0.0 – 0.0%
Soils/Gravels	<0.01%	0.0 - <0.01%
Total Inorganic Waste Average	**0.32%**	
Total Organic Waste Average	**99.67%**	

6.4.2 Radiological Characterization

Historical assay values for waste drums were obtained from radiochemical analyses of batch treatments or analysis results of individual bottles and drums that were received for processing. Average values were usually assigned to waste drums (References P016 and P024). Documented assay results and treatment log book descriptions for this waste indicate the presence of plutonium, americium-241, tritium, uranium-235, and uranium-238 (References P016, P024, P033, and U040).

TRU waste oils and solvents were generated primarily in Buildings 707 and 777. Radionuclide contamination in waste from Building 707 primarily consisted of weapons-grade plutonium from fabrication operations (References P052 and P053). Building 777 performed disassembly of site-return parts and fabrication operations (References C184, P052, and P079). Waste from fabrication operations will be contaminated with weapons-grade plutonium and enriched uranium. Wastes generated by disassembly operations will be contaminated with site-return plutonium (higher americium-241 decay product) and enriched uranium (References C184 and P079). Tritium may also be present from disassembly and subsequent processing of site-return components (References P053). The isotopic compositions of weapons-grade plutonium and enriched uranium are presented in Section 6.4.2.2.

Most of the waste oils or solvents contaminated with depleted uranium were generated from fabrication operations in Buildings 444, 447, 865, and 883 (Reference P053). However, these oils have been segregated from TRU oils since 1985, and therefore, were not processed by the OASIS. There is documentation however that indicates waste oil 238 (assumed to be uranium-238) from Building 771 was introduced into solidified organic waste in 1986. There were also organic liquids processed by the OASIS that originated in other facilities that potentially included depleted uranium, such as Buildings 559 and 881 (Reference U040). Therefore, there is a potential for depleted uranium contamination in the solidified organics waste. The isotopic composition of depleted uranium is presented in Section 6.4.2.2.

R&D and analytical support operations also generated waste oils and solvents (References U040 and U043). In addition to supporting production operations, these R&D and analytical activities used several other radioisotopes that may be present in trace quantities, including (References C134, C137, C154, C159, C171, C185, P053, P164, P167, P178, P179, P180, P181, P182, P183, P184, P185, P186, P187, P188, P189, P190, P191, P192, P193, P194, P195, P196, P197, P198, P199, P200, P201, P202, P507, and U064):

- Americium-240, -241, -243
- Californium-252
- Curium-244
- Neptunium-237
- Plutonium-238, -241, -242 (non-weapons-grade material)
- Plutonium (12 wt% Plutonium-238 and ~6 wt% Plutonium-240)
- Plutonium-Low NGS (97.7 wt% Plutonium-239 and 2.2 wt% Plutonium-240)
- Thorium-228
- Uranium-232, -233, -235, -236, -238

CCP radioassay identified two drums of IDC 801 with large quantities of uranium. Based on historical liquid waste segregation practices (i.e., plutonium from uranium) as well as the weight and fill percent of these drums compared to typical IDC 003 waste, it is believed that these drums are misidentified. These two drums will be moved to waste stream ID-RF-S3114 (refer to Acceptable Knowledge Re-evaluation Checklist, 1/6/06 and 1/9/06).

6.4.2.1 Estimated Radionuclide Quantities

During the INL 3,100 m^3 Project, containers of IDC 700 and 801 were assayed for radionuclide content. Table 6-2, Radioassay Data for IDC 700 and 801 from the INL 3,100 m^3 Project, contains a summary of these radioassay data (Reference P507).

Table 6-2. Radioassay Data for IDC 700 and 801 from the INL 3,100 m^3 Project

Radionuclide/Calculation	Average	Range		Events
		Low	High	
Americium-241 (g)	1.178E-02	5.282E-04	1.485E-01	65
Plutonium-238 (g)	6.141E-04	2.536E-05	7.972E-03	65
Plutonium-239 (g)	4.989E+00	2.272E-01	7.141E+01	65
Plutonium-240 (g)	3.054E-01	1.382E-02	4.343E+00	65
Plutonium-241 (g)	8.760E-03	4.178E-04	1.313E-01	65
Plutonium-242 (g)	2.053E-03	1.039E-04	3.265E-02	65
Uranium-233 (g)	2.120E-02	2.120E-02	2.120E-02	1
Uranium-234 (g)	3.390E-04	2.269E-05	5.892E-03	33
Uranium-235 (g)	2.728E-01	2.110E-02	5.481E+00	39
Uranium-238 (g)	4.411E+01	4.437E+00	9.516E+01	3
Plutonium Equivalent Curies (Ci)	4.346E-01	1.970E-02	6.131E+00	65
Plutonium Fissile Gram Equivalents (g)	5.179E+00	2.284E-01	7.332E+01	65
TRU Alpha Activity Concentration (nCi/g)	2.133E+03	8.900E+01	3.195E+04	65

As can be seen in the above table, uranium-238 may be present in less than five percent of the drums but will be in relatively large quantities in those few drums.

6.4.2.2 Use of Radionuclide Isotopic Ratios

The primary radionuclides processed at Rocky Flats included weapons-grade plutonium, enriched uranium, and depleted uranium. The approximate isotopic compositions of these materials are presented in Table 6-3, Isotopic Compositions of Rocky Flats Plutonium and Uranium (References C039, C130, P069, P152, P161, P166, P169, P210, P227, and U064).

Table 6-3. Isotopic Compositions of Rocky Flats Plutonium and Uranium

Weapons-Grade Plutonium	Enriched Uranium	Depleted Uranium
Plutonium-238 0.01 – 0.05%	Uranium-234 0.1 – 1.02%	Uranium-234 0.0006%
Plutonium-239 92.8 – 94.4%	Uranium-235 90 – 94%	Uranium-235 0.2 – 0.3%
Plutonium-240 4.85 – 6.5%	Uranium-236 0.4 – 0.5%	Uranium-238 99.7 – 99.8%
Plutonium-241* 0.3 – 1.0%	Uranium-238 5.3 – 5.5%	
Plutonium-242 0.005 – 0.60%		

* Includes americium-241 daughter product.

For waste containers where direct measurement does not yield useable isotopic ratio information, AK may be used to supplement direct measurement data in accordance with the WIPP-WAC (Reference 3). The specific ratios that may be used, and the use and confirmation of AK related to WIPP-certified assay measurements of containers in this waste stream, is documented in the NDA Memorandum.

There are certain radionuclides (i.e., uranium-234, plutonium-242, and strontium-90) that cannot be measured by NDA equipment. Uranium-234 will be calculated based on ratios with detected uranium isotopes. Determination of plutonium-242 will be based on its mass fraction in weapons grade plutonium. Although plutonium-242 was used in R&D and special order work, these activities were small in comparison of the weapons-grade stream. And the specific drums, if any, that include waste contaminated with this plutonium-242 are not known.

Fission products, including cesium-137 and strontium-90, were not expected components of any of the Rockly Flats TRU waste streams. Cs-137 was not detected during radioassay by the INL 3,100 m^3 Project. Sr-90, because its presence was predicated on the presence of Cs-137 (as a fission product), has never been reported for any of the Rocky Flats wastes analyzed to date (Reference P507). The AMWTP had previously written an AK Discrepancy Resolution to add cesium-137 and strontium-90 to Rocky Flats waste streams. However, physicists from Rocky Flats and the AMWTP completed a review of spectra for several waste streams and concluded that Cs-137 and Sr-90 were not present in those wastes in detectable quantities and were reported due to an interference with Am-241 (References C502 and D009). It is the position of the CCP that the reported Cs-137 values cannot always be clearly dismissed as being due to the presence of Am-241. Therefore, CCP will continue to report the presence of Cs-137 by application of their routine analysis methods for nondestructive assay (Reference D009).

Based on previous assay data and other information, a summary of the potential radionuclides in waste stream ID-RF-S3150-A has been compiled and provided in Table 6-4, Summary of Radionuclides in Waste Stream ID-RF-S3150-A. To determine isotopic ratios for waste stream ID-RF-S3150-A as a whole, the average gram values for each radionuclide from the 3,100 m^3 Project data were first multiplied by the number of events to obtain the total gram value for each individual radionuclide. These totals

were then divided by the total mass of all radioactive constituents in the waste stream and converted to a percentage. These results are listed as "Relative Weight %." As shown in Table 6-4, the two most prevalent radionuclides are Pu-239 and U-238. Radiological AK will be confirmed by the method specified in the NDA Memorandum as required by CCP-TP-005 (Reference 1).

Table 6-4. Summary of Radionuclides in Waste Stream ID-RF-S3150-A

Radionuclide	Average Weight (g)	Events	Total Weight (g)	Relative Weight %	Expected Present
WIPP Required Radionuclides					
Americium-241	1.18E-02	65	7.66E-01	0.16%	Yes
Plutonium-238	6.14E-04	65	3.99E-02	0.01%	Yes
Plutonium-239	4.99E+00	65	3.24E+02	**66.36%**	Yes
Plutonium-240	3.05E-01	65	1.99E+01	4.06%	Yes
Plutonium-242	2.05E-03	65	1.33E-01	0.03%	Yes
Uranium-233	2.12E-02	1	2.12E-02	<0.01%	Yes
Uranium-234	3.39E-04	33	1.12E-02	<0.01%	Yes
Uranium-238	4.41E+01	3	1.32E+02	**27.08%**	Yes
Cesium-137	N/A	N/A	N/A	N/A	Yes
Strontium-90	N/A	N/A	N/A	N/A	Yes
Other Measured Radionuclides					
Plutonium-241	8.76E-03	65	5.69E-01	0.12%	Yes
Uranium-235	2.73E-01	39	1.06E+01	2.18%	Yes
Other Potentially Present Radionuclides					
Americium-240	Californium-252	Neptunium-237	Thorium-228	Uranium-232	
Americium-243	Curium-244	Tritium (H-3)		Uranium-236	

6.4.2.3 TRU Alpha Activity Concentration

Prior to 1982, TRU waste was defined as containing greater than 10 nCi/g TRU alpha contamination. In 1982, the DOE redefined TRU waste as materials contaminated with greater than or equal to 100 nCi/g TRU alpha. Much of the TRU wastes (based on these definitions) were shipped to the INL. IDC 700 and 801 wastes were all generated after 1982 and have been managed as TRU waste since receipt at the INL. Based on historical assay data from the waste generator, the percentage of this waste stream above 100 nCi/g is 93.1 percent, and the percentage of this waste stream below 100 nCi/g is 6.9 percent (Reference P513). Each payload container shipped to WIPP will be certified in accordance with CCP-PO-002 (Reference 9) as containing more than 100 nCi/g of alpha emitting isotopes with half-lives greater than 20 years.

6.4.3 Chemical Content Identification – Hazardous Constituents

Available AK documentation was reviewed for waste stream ID-RF-S3150 to identify organic chemical usage and potentially hazardous organic liquids that may have been treated in Building 774. The primary solvents treated in Building 774 were carbon tetrachloride; 1,1,1-trichloroethane; and 1,1,2-trichloro-1,2,2-trifluoroethane, which is supported by past sampling and analysis (References P052, P077, P507, and P520). Numerous other organic liquids were also identified as previously shown in Tables 4-1 and 4-2. Table 6-5, EPA Hazardous Waste Numbers for Waste Stream ID-RF-S3150-A, summarizes the potential hazardous chemical contaminants and associated EPA HWNs applicable to this waste stream.

Table 6-5. EPA Hazardous Waste Numbers for Waste Stream ID-RF-S3150-A

EPA Hazardous Waste Number	Constituent
Toxicity Characteristic Metals	
D008	Lead
Toxicity Characteristic Organic Compounds	
D022	Chloroform
D028	1,2-Dichloroethane
D029	1,1-Dichloroethylene
D030	2,4-Dintrotoluene
D032	Hexachlorobenzene
D034	Hexachloroethane
D036	Nitrobenzene
D043	Vinyl chloride
F-Listed Organic Solvents	
F001	Carbon tetrachloride
F001 and F002	1,1,1-Trichloroethane
F002	1,1,2-Trichloro-1,2,2-trifluorethane (Freon 113)
F002	Chlorobenzene
F002	Methylene chloride
F002	Tetrachloroethylene
F002	Trichloroethylene
F005	2-Ethoxyethanol
F005	Benzene
F005	Carbon disulfide
F005	Methyl ethyl ketone
F005	Toluene

The waste described in this report has been historically managed in accordance with INL waste management practices in compliance with the requirements imposed by the Idaho Department of Environment Quality. As indicated in Section 4.4, this waste has been historically managed as TRU mixed waste. In addition, this waste stream has been characterized by several different TRU waste programs. For this reason, the assignment of EPA HWNs to waste stream ID-RF-S3150-A considered the EPA HWNs assigned by these programs in addition to the review of the AK record described in this section (References D005, P052, P077, P507, P522, and U099).

6.4.3.1 Toxicity Characteristic Metals

Waste stream ID-RF-S3150-A exhibits the characteristic of toxicity for metal compounds as defined in 40 CFR 261.24. EPA hazardous waste codes for metals were assigned to organic liquid wastes that may have been treated in Building 774, but have never been assigned to solidified organics (IDCs 700 and 801). Analysis of the solidified organics waste conducted by the Rocky Flats and INL 3,100 m^3 TRU Waste Programs demonstrates that the UCL_{90} does not exceed the RTL for any of the RCRA-regulated metals (References P507, P522, and U099). However, lead items (D008), such as leaded rubber aprons have been identified by RTR in some of the drums in this waste stream. Therefore, EPA HWN D008 is also assigned to waste stream ID-RF-S3150-A (Reference D025).

6.4.3.2 Toxicity Characteristic Organics

Waste stream ID-RF-S3150-A exhibits the characteristic of toxicity for organic compounds as defined in 40 CFR 261.24. As shown in Tables 4-1 and 4-2, chloroform (D022); 1,2-dichloroethane (D028); 1,1-dichloroethylene (D029); and nitrobenzene (D036) were identified as potential organic constituents in solidified organics waste. Therefore, EPA hazardous waste numbers D022, D028, D029, and D036, are assigned to waste stream ID-RF-S3150-A (Reference D005).

Although nitrobenzene (D036) is also an F004-listed constituent, solvent use has not been identified (References C517, D022, P052, P507, and P538).

Homogeneous solids sampling and analysis of solidified organics waste was previously conducted by both the Rocky Flats and INL 3,100 m^3 TRU Waste Programs. Based on the analytical data from one or both programs, the UCL_{90} exceeded the RTL for carbon tetrachloride (D019/F001), chloroform (D022), 1,1-dichloroethylene (D029), nitrobenzene (D036), and tetrachloroethylene (D039/F002) in the solidified organics waste, confirming AK. In addition, the UCL_{90} for hexachloroethane (D034) exceeded the RTL in the Rocky Flats data. Therefore, EPA HWND034 is also assigned to waste stream ID-RF-S3150-A (References P507, P522, and U099).

Although carbon tetrachloride and tetrachloroethylene are present in this waste above the RTL, these compounds were used as solvents (i.e., for cleaning and degreasing), and therefore, the F-listed EPA HWN is applied. The toxicity characteristic EPA HWNs are not assigned (Refer to Section 6.4.3.3).

During the analytical data review of the "non-detect" observations for homogeneous solids data, both the Rocky Flats and INL 3,100 m^3 Project determined that the MDL exceeded the PRQL for 2,4-dinitrotoluene (D030) and hexachlorobenzene (D032) due to dilution. The dilution was due to high hydrocarbon content in the waste matrix that caused difficulties in analysis per the required methodology. Subsequent review of the solid sampling data and reconsideration of process knowledge confirms that 2,4-dinitrotoluene and hexachlorobenzene were not expected contaminants in this waste stream. Where a constituent has been identified and there is no or limited quantitative data available to demonstrate that the concentration of a constituent is below regulatory threshold levels, the applicable EPA HWN is applied to the waste stream. Therefore, EPA HWNs D030 and D032 are also assigned to waste stream ID-RF-S3150-A (References P522 and U099). This same problem occurred with the INL 3,100 m^3 Project analytical data review for hexachloroethane (D034), nitrobenzene (D036), and vinyl chloride (D043); therefore, these EPA HWNs are assigned to this waste stream (Reference U099).

Headspace gas sampling and analysis of solidified organics waste was also conducted by the Rocky Flats and INL 3,100 m^3 TRU Waste Programs. Based on the analytical data from one or both programs, the UCL_{90} exceeded the PRQL for carbon tetrachloride (D019/F001), chloroform (D022), 1,2-dichloroethane (D028), and 1,1-dichloroethylene (D029) in the solidified organics waste, confirming AK (References P507, P522 and U099).

Organic laboratory solutions containing 1,4-dichlorobenzene were generated at Rocky Flats, but these laboratory operations did not use 1,4-dichlorobenzene until after TRU waste shipments to INL ceased. For this reason, EPA HWN D027 has been removed from waste stream ID-RF-S3150-A (Reference D005).

6.4.3.3 F-Listed Constituents

Waste stream ID-RF-S3150-A was derived from the treatment of hazardous wastes from non-specific sources as listed in 40 CFR 261.31. As shown in Tables 4-1 and 4-2, carbon tetrachloride, 1,1,1-trichloroethane, 1,1,2-trichloro-1,2,2-trifluorethane, methylene chloride, tetrachloroethylene, trichloroethylene, 2-ethoxyethanol, benzene, carbon disulfide, methyl ethyl ketone, and toluene were used for their solvent properties, and therefore meet the definition of an F-listed waste. Therefore, EPA HWNs F001, F002, and F005 are assigned to waste stream ID-RF-S3150-A (Reference D005).

Homogeneous solids sampling and analysis of solidified organics waste was previously conducted by both the Rocky Flats and INL 3,100 m^3 TRU Waste Programs. Based on the analytical data from one or both programs, the UCL_{90} exceeded the RTL for 1,1,1-trichloroethane, 1,1,2-trichloro-1,2,2-trifluorethane, carbon tetrachloride, and tetrachloroethylene in the solidified organics waste, confirming AK (References P507, P522, and U099).

Headspace gas sampling and analysis of solidified organics waste was also conducted by the Rocky Flats and INL 3,100 m^3 TRU Waste Programs. Based on the analytical data from one or both programs, the UCL_{90} exceeded the PRQL for 1,1,1-trichloroethane, 1,1,2-trichloro-1,2,2-trifluorethane, carbon tetrachloride, and methylene chloride in the solidified organics waste, confirming AK (References P507, P522, and U099).

EPA HWN D021 (chlorobenzene) was assigned to the INL 3,100 m^3 Project solidified organics waste stream because during the analytical data review of the "non-detect" observations for headspace gas data, it was determined that the MDL exceeded the PRQL for chlorobenzene (Reference U099). However, chlorobenzene is also an F002-listed hazardous waste and has been used in analytical laboratory operations as a solvent (Reference P081). Therefore, the more specific EPA HWN F002 for chlorobenzene is assigned to this waste stream.

As shown in Tables 4-1 and 4-2, the flammable F003-listed solvents acetone, ethyl benzene, ethyl ether, methanol, and xylene were used at Rocky Flats and are potential contaminants of the solidified organics waste. Homogeneous solids and/or headspace gas data from the Rocky Flats and/or INL 3,100 m^3 TRU Waste Programs detected acetone and methanol in the solidified organics waste. However, F003-listed solvents are listed solely for ignitability, and this waste stream does not exhibit the characteristic of ignitability because the solvents are not in liquid form. Therefore, this waste stream is not an F003-listed hazardous waste (References P052, P077, P507, P521, and U099).

Nitrobenzene, an F004-listed constituent, was used at Rocky Flats but not for its solvent properties (References C517, D022, P052, and P538). Therefore, this waste stream is not an F004-listed hazardous waste.

6.4.3.4 U-, P-, and K-Listed Wastes

There is no documentation indicating that waste stream ID-RF-S3150-A contains discarded commercial chemical products, off-specification species, container residues, or spill residues thereof (References P052, P077, P507, P522, and U099). This waste stream is therefore not a P- or U-listed hazardous waste as defined in 40 CFR 261, Subpart D (40 CFR 261.33).

Beryllium is regulated as a P-listed waste, but only as the commercial chemical product beryllium powder. Most of the beryllium used on site, primarily in Buildings 444 and 883, was in the form of metal (not powder). The exception is experimental work in Building 865 that involved pressing of the powder into shapes; however, only beryllium-contaminated oil from Building 865 was solidified (refer to Table 4-1). Therefore, waste stream ID-RF-S3150-A is not a P015-listed waste (References P052 and P053).

Beryllium may be present in solidified organics waste but only in particulate form as a trace contaminant. Analysis conducted by the INL 3,100 m^3 Project indicates that the UCL_{90} for beryllium in this waste is 0.296 mg/kg. Analysis performed by the Rocky Flats TRU Waste Program shows that the UCL_{90} for beryllium in this waste is 0.1 mg/kg (References P522 and U099). Therefore, beryllium concentrations will be less than one percent by weight of the waste in each drum and less than 18.14 kilograms in any payload container, including ten drum overpacks.

The constituent 1,2-benzenedicarboxylic acid, bis (2-ethylhexyl) ester (CAS No. 117-81-7), also known as bis (2-ethylhexyl) phthalate, was detected as a TIC in Rocky Flats SVOC analysis of IDCs 003 and 801. An evaluation to compare the TIC identification with AK was performed by Rocky Flats to determine if this TIC is a U-listed hazardous waste in this waste stream. This evaluation (which included the onsite use of bis [2-ethylhexyl] phthalate for filter testing and in vacuum pump oil) determined that this constituent was not present as an unused commercial chemical product. There is no evidence that bis (2-ethylhexyl) phthalate used on site for filter testing would have contributed to this waste stream; however, AK does indicate that the vacuum pump oil used in mass spectrometers in Buildings 707 and 777 may have been composed of this constituent and this oil may have been disposed of in the oil/solvent mixture feed to the Grease Plant process, but not as an unused product. Bis (2-ethylhexyl) phthalate is also a common plasticizer used in plastic, including the plastic bags/packaging used to package this waste. Accordingly, this waste stream is not a U028-listed hazardous waste (Reference P522).

The constituent 1,4-dioxane (CAS No. 123-91-1) was detected as a TIC in Rocky Flats headspace gas analysis of IDC 801. An evaluation to compare the TIC identification with AK was performed by Rocky Flats to determine if this TIC is a U-listed hazardous waste in the waste stream. This evaluation revealed that 1,4-dioxane was added by the manufacturer to chlorinate solvents, particularly 1,1,1-trichloroethane, as a stabilizer and corrosion inhibitor; however, there is no indication that 1,4-dioxane is present as an unused commercial chemical product. Accordingly, this waste stream is not a U108-listed hazardous waste (Reference P522).

Hydrofluoric acid was not identified as a potential chemical input to the waste stream, and therefore, waste stream ID-RF-S3150-A is not a U134-listed waste.

Waste stream ID-RF-S3150-A does not contain hazardous waste from the specific sources in 40 CFR 261.32 and therefore is not a K-listed waste.

6.4.3.5 Ignitables, Corrosives, and Reactives

Ignitability

The materials in this waste stream do not meet the definition of ignitability as defined in 40 CFR 261.21. The materials are not liquid, and absorbents were added to wastes having the potential of generating free liquids (i.e., dewatering of wastes) (Reference P501). The waste is not capable of causing fire through friction, absorption

of moisture, or spontaneous chemical change (References P012, P016, and P501). The materials are not compressed gases, nor do the wastes contain compressed gases, and the waste is not an oxidizer (References P012, P013, P015, P016, P022, and P501).

RTR and VE identified drums of solidified organics containing liquid wastes (References D019, P507, and U099). Since oils and chlorinated solvents (e.g., carbon tetrachloride, 1,1,1-trichloroethane) were the predominant liquid wastes treated (Refer to Section 4.3.1), the liquids discovered during RTR and/or VE are not likely ignitable. However, solvents such as alcohols and acetone were also treated so the possibility exists that the liquids are ignitable. Refer to Tables 4-1 and 4-2 for a more complete listing of organic liquids treated in Building 774. RTR and/or VE are performed to ensure liquids do not exceed the amount allowed by the WIPP-WAP and to verify the absence of compresses gases. Any drum that contains liquids in excess of the amount allowed by the WIPP-WAP or compressed gases will be segregated from the waste stream during confirmation and will not be eligible for disposal at WIPP until further characterization and/or processing is conducted. Waste stream ID-RF-S3150-A is, therefore, not an ignitable waste (D001).

Corrosivity

The materials in this waste stream do not meet the definition of corrosivity as defined in 40 CFR 261.22. The materials are not liquid, and absorbents were added to wastes having the potential of generating free liquids (i.e., dewatering of wastes) (Reference P501).

RTR and VE identified drums of solidified organics containing liquid wastes (References D019, P507, P534, U099). The liquids potentially consist of any of the organic liquids identified in Tables 4-1 and 4-2 which are not corrosive. However, hydrochloric acid may also be present. The hydrochloric acid is formed from the radiolytic and/or chemical decay of chlorinated hydrocarbons, such as carbon tetrachloride, in the presence of moisture (Reference P534). RTR and/or VE are performed to ensure liquids do not exceed the amount allowed by the WIPP-WAP. Any drum that contains liquids in excess of the amount allowed by the WIPP-WAP will be segregated from the waste stream during confirmation and will not be eligible for disposal at WIPP until further characterization and/or processing is conducted. Waste stream ID-RF-S3150-A is therefore not a corrosive waste (D002).

Reactivity

The materials in this waste stream do not meet the definition of reactivity as defined in 40 CFR 261.23. The materials are stable and will not undergo violent chemical change. The materials will not react violently with water, form potentially explosive mixtures with water, or generate toxic gases, vapors, or fumes when mixed with water. The materials do not contain cyanides or sulfides, and are not capable of detonation or explosive reaction. The materials are not explosive, nor do the drums contain any explosives (References P012, P013, P015, P016, and P022). Explosives were not handled or

used around radioactive material. Waste stream ID-RF-S3150-A is, therefore, not a reactive waste (D003).

RTR and/or VE are performed to ensure the waste does not contain explosive materials. Any drum suspected of containing explosives will be segregated from the waste stream during confirmation and will not be eligible for disposal at the WIPP until further characterization and/or processing is conducted.

6.4.3.6 Polychlorinated Biphenyls

Waste stream ID-RF-S3150-A is not regulated as a TSCA waste under 40 CFR 761. Treatment of PCB-contaminated oils in Building 774 did occur prior to 1985; however, solidified organic wastes (IDCs 700 and 801) were not generated until February 1986 (also refer to Section 5.4.3.6). Therefore, PCB-containing fluids would not have been processed by the OASIS (References C207, P507, and U099).

6.4.4 Prohibited Items

Prohibited items potentially in this waste stream based on VE and RTR are sealed containers greater than four liters and free liquids.

Based on a review of several waste packaging and inspection procedures, the drum and rigid liner lids were not vented, nor did the rigid liner lid contain a vent hole when the waste was shipped from Rocky Flats to INL (References P008, P026, P063, P064, P501, P502, P503, and P505). As the drums are retrieved for characterization, they are vented and aspirated to ensure equilibration of any gases that may have accumulated in the closed container (Reference 11).

Prohibited quantities of residual liquids have been identified by VE or RTR in drums of solidified organics. These drums will be segregated and the liquids removed or immobilized prior to re-characterization and certification for shipment to the WIPP (Reference D019).

6.5 Waste Packaging

Depending on waste packaging requirements at the time, several combinations of bags and liners were used to prepare 55-gallon drums for shipment. A rigid liner was placed in each drum and lined with one polyethylene round bottom drum liner or a polyethylene drum bag. A PVC O-ring bag and a polyethylene bag were used if the drum was attached to the glovebox. The polyethylene drum bag was not required from a packaging standpoint but would aid in contamination control. When a drum was full, the drum liners were twisted and taped closed, the lid was secured with a bolted ring, and a tamper indicating device was attached to the drum (References P002, P012, P016, P063, P064, and P501). During the INL 3100 m^3 Project, several combinations of drum bags, poly bags, and O-ring bags used as packaging were identified for thenIDC 700 and IDC 801 wastes (Reference U099).

Since February 1982, vermiculite was used to fill the space between the outer, sealed polyethylene drum bag and the top of the 90-mil rigid liner. The quantity of vermiculite varied from 3-12 pounds according to the amount of waste contained in each drum (Reference P024). During the INL 3,100 m^3 Project, it was determined during RTR examinations of IDC 700 and IDC 801 wastes that quantities of absorbent can vary significantly from expected quantities, and some drums may contain no absorbent. In addition, both Oil-Dri® and vermiculite may have been used (Reference U099).

Waste repackaged in the SRP are placed directly in prepared 55-gallon drums. Prepared drums are lined with a rigid liner and a filtered plastic drum bag. After loading, the drum bags are twist and taped closed and the drums closed with filtered drum lids (References P542 and P543).

6.5.1 Filter Vents

Based on a review of several waste packaging and inspection procedures, the drum and rigid liner lids were not vented, nor did the rigid liner lid contain a vent hole when the waste was shipped from Rocky Flats to INL. Carbon composite filter vents were not used until the late 1980s (References C057, P008, P026, P063, P064, P501, P502, P503, P504, and P505). As the drums are retrieved for characterization, they are vented and aspirated to ensure equilibration of any gases that may have accumulated in the closed container.

6.5.2 Layers of Confinement

Based on the discussion in Section 6.5, several packaging configurations are possible. There may be various combinations of polyethylene round bottom drum liners, polyethylene drum bags, and PVC O-ring bags. The maximum number of confinement layers however is expected to be two. The rigid liner must be vented and therefore is not considered a layer of confinement.

In some instances, a drum may appear to contain three horsetails (i.e., twist and tape bag closure) because in addition to the two plastic bags that were twisted and taped closed, a bag stub remaining from a previous bag cut was put on top of the waste in the subsequent run. In some cases, only two horsetails may be present because two or three bag stubs were collected in the glovebox before adding them to the top of the waste. This resulted in some drums with what may appear to be four or five horsetails (two plastic bags that were twisted and taped closed plus two or three bag stubs). When the OASIS process first started, sometimes there were problems with the agitator tearing into the inner plastic bag. In this instance, another plastic bag was put around the waste. There will be very few drums like this because the problem was quickly fixed by attaching Tygon tubing to a vacuum pump and inserting the tubing between the rigid liner and the polyethylene drum liner bag which kept the agitator from contacting the plastic bag. With any of these conditions, only the two plastic bags that were twisted and taped closed are considered layers of confinement (Reference C511).
Drums processed in the AMWTP DTF have the rigid liner lids cut out or removed or holes cut and confinement layer bag closures and/or plastic ties cut. Horsetails

(i.e., twist and tape bag closure) cut during these operations may be placed on top of the waste (References C515 and P535).

Repackaged drums from the SRP will have a rigid liner without a lid and one layer of confinement consisting of a filtered liner bag (References P542, P543, and P547).

7.0 CONTAINER SPECIFIC INFORMATION

Container specific information for immobilized organic liquid waste drums in waste streams ID-RF-S3114 and ID-RF-S3150-A has been provided to the CCP by the AMWTP. This information originated from the Waste Tracking System database. The data have been compiled and included in the *AK Containers List* which is maintained as a quality record as required by procedure CCP-TP-005 (Reference 1). The information includes:

- Container ID
- Historical Container ID
- IDC
- Generation Date
- Vent Date

8.0 REFERENCE INFORMATION

1. CCP-TP-005, *CCP Acceptable Knowledge Documentation*, Carlsbad, New Mexico, Nuclear Waste Partnership, LLC.

2. *Waste Isolation Pilot Plant Hazardous Waste Facility Permit, Waste Analysis Plan,* New Mexico Environment Department, Santa Fe, New Mexico

3. DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant*, Carlsbad, New Mexico, U.S. Department of Energy

4. DOE/WIPP 01-3194, *CH-TRU Waste Content Codes (CH-TRUCON)*, U.S. Department of Energy

5. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*, Carlsbad, New Mexico, Nuclear Waste Partnership, LLC.

6. 42 U.S.C 10101, *The Nuclear Waste Policy Act of 1982*

7. CAO-95-1121, Revision 3, *Transuranic Waste Baseline Inventory Report*, U.S. Department of Energy Carlsbad, 1995

8. DOE/TRU-12-3425, *Annual Transuranic Waste Inventory Report – 2012,* Carlsbad, New Mexico, U.S. DOE

9. CCP-PO-002, *CCP Transuranic Waste Certification Plan*, Carlsbad, New Mexico, Nuclear Waste Partnership, LLC.

10. DOE/LLW-217, *DOE Waste Treatability Group Guidance*, Idaho Falls, Idaho, INEL-Lockheed Idaho Technologies

11. CCP-PO-003, *CCP Transuranic Authorized Methods For Payload Control (CCP CH-TRAMPAC)*, Carlsbad, New Mexico, Nuclear Waste Partnership, LLC.

12. McCoy's RCRA Compliance CD. 2004 Edition. McCoy and Associates, Inc. Golden, Colorado

13. *CH-TRU Payload Appendices,* Waste Isolation Pilot Plant

14. Public Law 102-579, *The Waste Isolation Pilot Plant Land Withdrawal Act* (as amended)

15. 40 CFR Part 261, *Identification and Listing of Hazardous Waste*, U.S. EPA

9.0 AK Source Documents

Source Document Number	Title
C032	External letter from J. K. Paynter to J. N. Davis, Idaho National Engineering Laboratory Data Package Information Change for Drum D40197-0743-18283
C039	Internal Correspondence from J. K. Paynter to B. C. Barrett
C057	Drum, gasket, liner usage at RFP compiled by Larry Bearly
C086	Memorandum from Jeff Paynter to Pamela of IT Corporation. Use of the Complexing Agent DHDECMP
C130	Fax from Steve Cunningham, Rocky Flats, to Jeff Paynter
C134	Interview Record and associated documentation of several former Rocky Flats employees
C137	Interview Record of E. Putzier and E. Vejvoda by D. Herrick and J. Lamb
C154	Interview Record of W. V. Conner by T Widner and D. Lamb
C159	Interview Record of R. Hoffman by D. Herrick and J. Lamb
C170	Telecon between Al Morgan of Rocky Flats (retired) and Jeff Harrison
C171	Telecon between Bill Connor of Kaiser-Hill LATO and Jeff Harrison
C184	Interview Record of Al Morgan by Jeff Harrison
C185	Telecon between Bill Connor of LAPO and Jeff Harrison
C207	Summary of Review of PCB AK Sources
C502	Letter from John A. Ciucci to Joseph A. Legare. Resolution of Cesium-137 AK Discrepancy Between Rocky Flats Environmental Technology Site and Idaho National Engineering and Environmental Laboratory
C505	Letter from Cynthia Zvonar, Department of Energy Carlsbad Field Office, to Lou E. Roberts, Environmental Protection Agency
C506	Letter from John H. Smith, Environmental Protection Agency, to Lynne Smith, Department of Energy WIPP Office Director, EM-23
C510	E-mail Correspondence from Murthy Devarakonda to Michael Rivera. Subject: IDC 003 Packaging
C511	Record of Communication with Mark Crocker. Subject: OASIS Waste Packaging
C514	Email from Mike Rivera to Kathy Leonard, "WMF-633 ARP Drums"
C515	Email from Whitney St Michel to Barbara Broomfield, Vince Medina, Bill Verlanic, "RF-003 Treated Drums"
C516	Letter to Vincent C. Vespe, "Request for Approval - Shipments of Radioactive Waste in 55-Gallon Steel Drums"
C517	Earliest Pack Date for Rocky Flats Waste Retrieved From Pits 11 and 12
C518	Email from Jason P. Lance to Jim Vernon, "RF-743 Summary"

Source Document Number	Title
C519	Letter from Scott Raish, AMWTP, to Dave Wessman, U.S. DOE Idaho, "Toxic Substances Control Act Application for a Risk-Based Disposal Approval to Process Radiologically Contaminated Liquids Containing Polychlorinated Biphenyls-SCR-003-07
C520	Letter from Michael Bussell, U.S. EPA, to David Wessman, U.S. DOE Idaho, "Approval of the (TSCA) RBDA Application for Management of Transuranic PCB Remediation Waste at AMWTP Facility
C521	Memorandum to CCP Records: Waste Stream Volume Adjustment for Waste Stream ID-RF-S3114, Rocky Flats Organic Setups Waste, Shipped in 85-Gallon Drums
C522	Internal Memo re: Evaluation of Chemicals Used in the Sludge Repackage Project for Waste Streams ID-RF-S3114 and ID-RF-S3150-A, Rocky Flats Absorbed and Solidfied Organic Liquids Waste
D004	Discrepancy Resolution for Waste Matrix Code Assignments for Waste Streams ID-RF-S3114 and ID-RF-S3150-A
D005	Discrepancy Resolution for EPA Hazardous Waste Number Assignments for Waste Streams ID-RF-S3114 and ID-RF-S3150-A, Rev. 1
D009	Discrepancy Resolution for Cs-137 and Sr-90 in Rocky Flats TRU Waster
D013	Discrepancy Resolution. Incorrect Waste Matrix Code
D014	Discrepancy Resolution. Incorrect Waste Matrix Code
D019	Discrepancy Resolution. Liquids Identified During Characterization
D022	Discrepancy Resolution. Solvent Use of Nitrobenzene
D023	Graphite in Waste
D024	Discrepancy Resolution. Addition of EPA Hazardous Waste Number D008 to Waste Stream ID-RF-S3114.
D025	Discrepancy Resolution. Addition of EPA Hazardous Waste Number D008 to Waste Stream ID-RF-S3150-A.
M001	Memorandum to CCP Records: Addition of Containers to Waste Stream ID-RF-S3114
M003	RTR Analysis Report
M004	Material Safety Data Sheet for Fabric
P001	TRU Waste Compliance Program for WIPP-WAC (U)
P002	Organic and Sludge Immobilization System
P004	Rocky Flats Plant Waste Management Site Plan
P008	Packaging and Handling Line- and Nonline-Generated Materials (U)

Source Document Number	Title
P012	TRUPACT-II Content Codes (TRUCON)
P013	EG&G Sampling Program Results FY1987
P014	TRU Waste Certification Program for WIPP-WAC (U)
P015	TRU Waste Sampling Program: Volume I-Waste Characterization
P016	Idaho National Engineering Laboratory Code Assessment of the Rocky Flats Transuranic Waste
P020	Characteristics of Transuranic Waste at Department of Energy Sites
P022	EG&G Sampling Program Results FY1989
P023	(Task 5 Draft Report) Estimating Historical Emissions from Rocky Flats (Partial)
P024	Content Code Assessments for INEL Contact-Handled Stored Transuranic Wastes
P026	Transuranic Solid Waste Inspection (U)
P033	Summary of Transuranic Waste Characterization Programs at the INEL (1979-Present)
P043	TRU Waste Compliance Program for WIPP-WAC (U)
P052	Backlog Waste Reassessment Baseline Book
P053	(Tasks 3&4 Final Draft Report) Reconstruction of Historical Rocky Flats Operations and Identification of Release Points
P060	Waste Stream and Residue Identification and Characterization Building 707
P061	Waste Stream and Residue Identification and Characterization Building 771
P062	Waste Stream and Residue Identification and Characterization Building 779
P063	Packaging Wastes for Shipment Offsite (U)
P064	Waste Packaging Requirements
P066	Material Safety Data Sheets for Envirostone Accelerator, Envirostone Emulsifier, and Envirostone Gypsum Cement
P069	Nuclear Materials Control Elements printout. SAN Database Report
P076	Waste Stream and Residue Identification and Characterization Building 559
P077	Waste Stream Residue Identification and Characterization Building 774
P078	Waste Stream Residue Identification and Characterization Building 776
P079	Waste Stream Residue Identification and Characterization Building 777
P081	Waste Stream Residue Identification and Characterization Building 371
P082	Waste Stream Residue Identification and Characterization Building 374
P084	Material Safety Data Sheet for Varsol 1
P089	Waste Systems Progress Report March 1984 through February 1985

Source Document Number	Title
P090	History of Rocky Flats Waste Streams
P091	Materials Hazards Manual
P142	Material Safety Data Sheet for ZL-22A Zyglo Penetrant
P152	Plutonium Metal Feed Specification for Use in the Weapons Program. Volume 1
P161	Dose Reconstruction Project Task 5
P164	A History of The Rocky Flats Plutonium/Actinide Recovery Plant 1952-1991
P166	Rocky Flats Risk Assessment Guide
P167	Neptunium Processing at the Rocky Flats Plant
P169	Plutonium Isotopic Ratios at Rocky Flats
P178	Research and Development Quarterly Progress Report. October, November, and December 1968
P179	Research and Development Quarterly Progress Report. April, May, and June 1969
P180	Research and Development Quarterly Progress Report. July, August, and September 1969
P181	Research and Development Quarterly Progress Report. January, February, and March 1970; Chemistry
P182	Research and Development Quarterly Progress Report. April, May, and June 1970; Chemistry
P183	Research and Development Quarterly Progress Report. July, August, and September 1970; Chemistry
P184	Research and Development Quarterly Progress Report. October, November, and December 1970; Chemistry
P185	Research and Development Quarterly Progress Report. January, February, and March 1971; Chemistry
P186	Research and Development Quarterly Progress Report. April, May, and June 1971; Chemistry
P187	Research and Development Quarterly Progress Report. July, August, and September 1971
P188	Research and Ecology Annual Report. Chemistry Research and Development
P189	Research and Ecology Semi-Annual Progress Report January – June 1972
P190	Research and Ecology Semi-Annual Progress Report. Chemistry Research and Development. July through December 1972
P191	Research and Ecology Semi-Annual Progress Report. Chemistry Research and Development. January-June 1973
P192	Research and Ecology Semi-Annual Progress Report. Chemistry Research and Development. July-December 1973

Source Document Number	Title
P193	Research and Development Semi-Annual Progress Report for July through December 1974; Chemistry
P194	Research and Development Semi-Annual Progress Report for January through June 1975
P195	Research and Development Semi-Annual Progress Report for January through June 1977
P196	Chemistry Research and Development Annual Progress Report November 1, 1979 through October 31, 1980
P197	Chemistry Research and Development Annual Progress Report November 1, 1980 to September 30, 1981
P198	Chemistry Research and Development Annual Progress Report. October 1, 1981 to September 30, 1982
P199	Chemistry Research and Development Annual Progress Report October 1, 1982 to September 30, 1983
P200	Chemistry Research and Development Annual Progress Report October 1, 1983 to September 30, 1984
P201	Chemistry Research and Development Annual Progress Report October 1, 1984 through September 30, 1985
P202	Chemistry R&D Monthly Progress Report
P210	Default Plutonium Mass Fractions for Rocky Flats Plant Waste
P227	Plutonium Mass Fractions Derived from SGRS Data
P501	Packaging Waste for Shipment Offsite
P502	Packaging and Handling Plutonium Wastes and Residues
P503	Packaging Wastes for Shipment Off-Site
P504	Packaging Waste for Shipment Offsite
P505	Procedure for Packaging and Handling Pu Waste and Residue Drums
P507	Acceptable Knowledge Document for INEEL Stored Transuranic Waste – Rocky Flats Plant Waste
P508	Radioactive Waste Management Complex Map Drawing
P509	Radioactive Waste Management Complex – Idaho Completion Project
P512	Waste Description Information for Transuranically Contaminated Wastes Stored at Idaho National Engineering Laboratory.
P513	Determination of Radioisotopic Content In TRU Waste Based on Acceptable Knowledge.
P515	Estimated Earthen and Geofabric Covered TRU Waste Inventory in the TSA at Radioactive Waste Management Complex (RWMC)

Source Document Number	Title
P516	Advanced Mixed Waste Treatment Project Waste Stream Designations
P517	Material Safety Data Sheet, Micro-Cel® E (All Grades)
P518	Material Safety Data Sheets for Various Texaco Oils and Shell Vitrea M Oil
P519	Waste Systems Progress Report March 1983 through February 1984
P520	Building Histories for Building 371, 444, 447, 460, 707, 771, 776/777, 881, 883, and 991 Historical Release Report (HRR)
P521	Rocky Flats Environmental Technology Site WIPP Waste Stream Profile Form, TRM Solidified Organic Waste
P522	Rocky Flats Environmental Technology Site WIPP Waste Stream Profile Form, TRM Solidified Organic Waste
P524	Determination of H2 Diffusion Rates through Various Closures on TRU Waste Bag-Out Bags
P532	Summary of Rocky Flats Waste Buried in the Subsurface Disposal Area
P534	Shipment And Disposal Of Solidified Organic Waste (Waste Type IV) TO The Waste Isolation Pilot Plant (WIPP), Presented at WM'06 Conference, February 26-March 2, 2006, Tucson, AZ.
P535	Drum Treatment Facility Operations
P536	Visual Examination of S3000 Waste in the Facility
P537	Subsurface Disposal Area (SDA) Waste Identification (1952-1970 Emphasis)
P538	Colorimetric Determination of Iron in Plutonium Metal Using a Nitrobenzene Extraction Technique
P539	Acceptable Knowledge Document for INL Stored Transuranic Waste – Rocky Flats Plant
P540	Acceptable Knowledge Re-evaluation Checklist, CCP-TP-005, Attachment 10, 3/28/06
P541	WMF-615 Filter Insertion Operations
P542	SRP DPS Waste Packaging
P543	SRP RA V Waste Processing
P544	WMF-1617 SRP-Support Systems
P545	RWMC Waste Handling and Overpacking
P546	Risk-Based Disposal Approval Application for Management of Polychlorinated Biphenyl (PCB) Remediation Waste Contaminated with Transuranic Radioisotopes at the Idaho Cleanup Project (ICP) Accelerated Retrieval Project V (ARP V) Facility
P547	RWMC-55 Gallon Drum Assembly

Source Document Number	Title
U010	OASIS Solidification and Off Gas Analysis
U040	Building 774 Low Level Organic and TRU-Waste Organic Waste Log Book.
U043	Building 774 Set Up Log Book
U059	Drum Prefix Numbers and Corresponding Material Balance Areas
U064	Radioactive Materials Associated with Rocky Flats
U069	Drum Prefix Issue Dates Log Book
U092	Inventory values as generated by TRIPS Change Request (TCR) 1821
U098	Preliminary data for the IDC 003 waste stream
U099	Draft Waste Stream Profile Form – Solidified Organics and Supporting Documentation
U505	Rocky Flats Prefix History Timeline
U517	Advanced Mixed Waste Treatment Project (AMWTP) Visual Examination (VE) Data Sheets
U518	Advanced Mixed Waste Treatment Project (AMWTP) Glove Box Glove Specifications
U519	Excerpts of CCP Nonconformance Reports (NCRs) for Prohibited Liquids
U520	Att 1 – CCP Waste Visual Examination Technique Data Form SCO#798 Addendum 5 Windows XP 2002 MX Excel 2003

Figure 1. Rocky Flats Environmental Technology Site Map

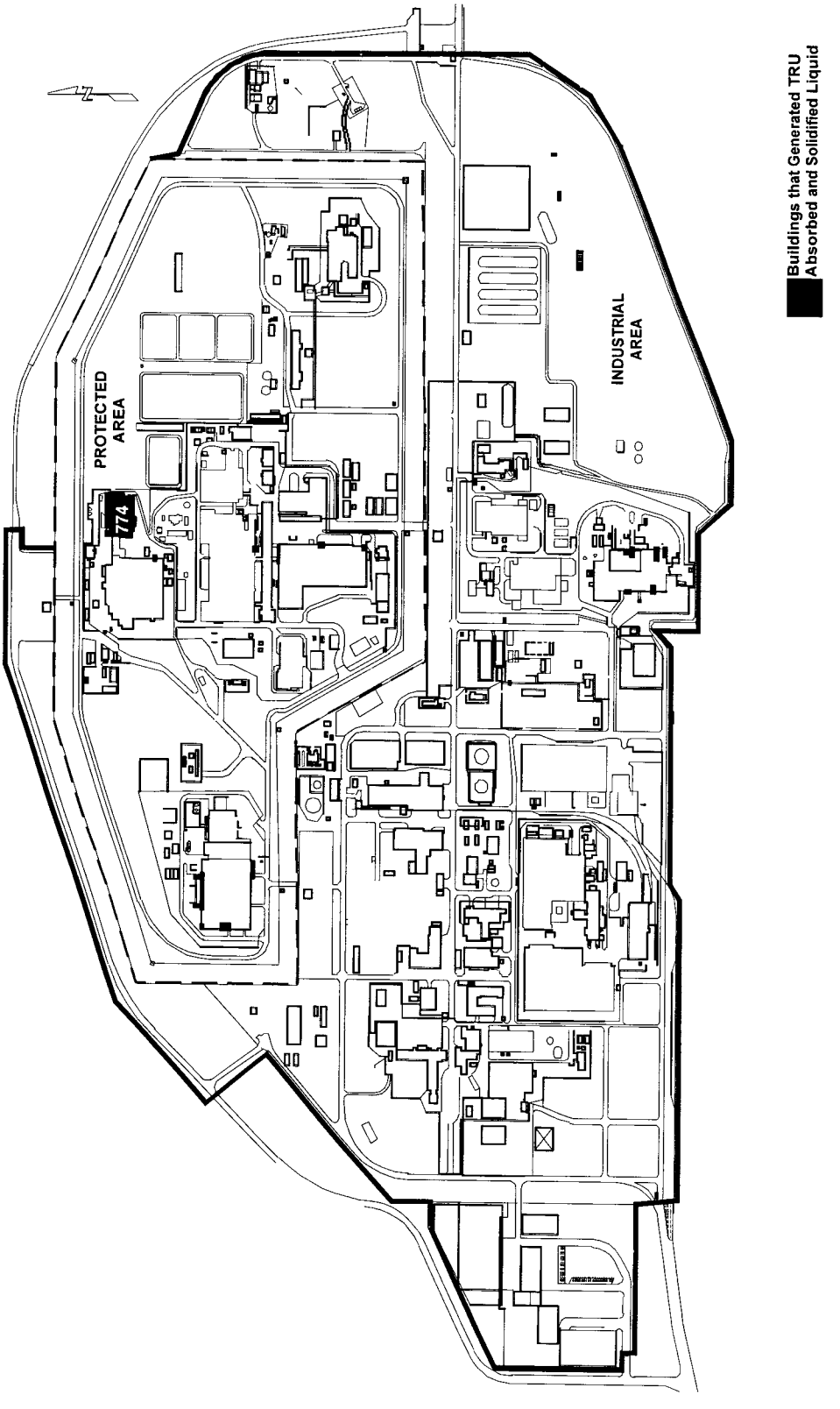


Figure 2. Location of the INL Radioactive Waste Management Complex

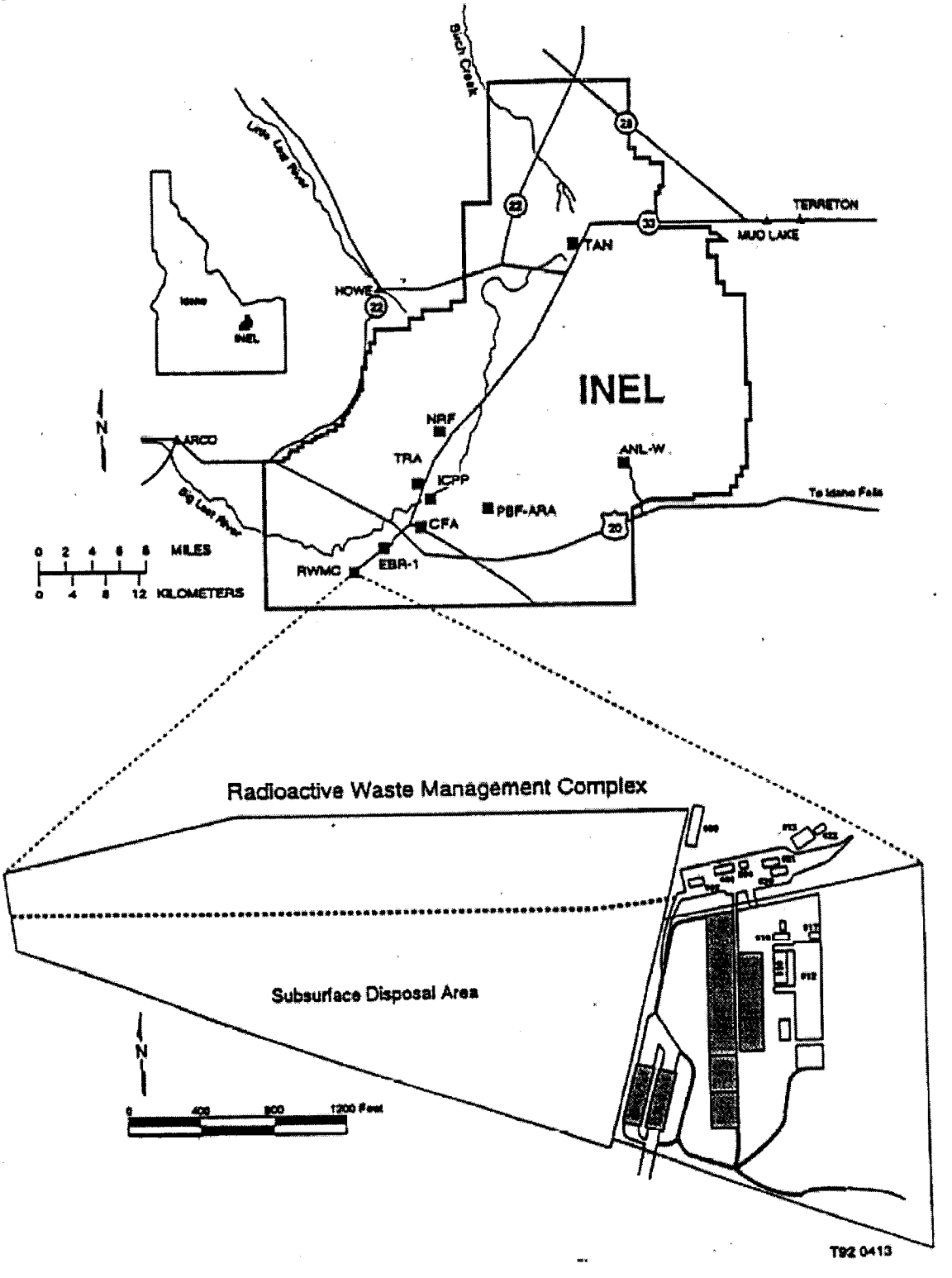


Figure 3. Radioactive Waste Management Complex Map

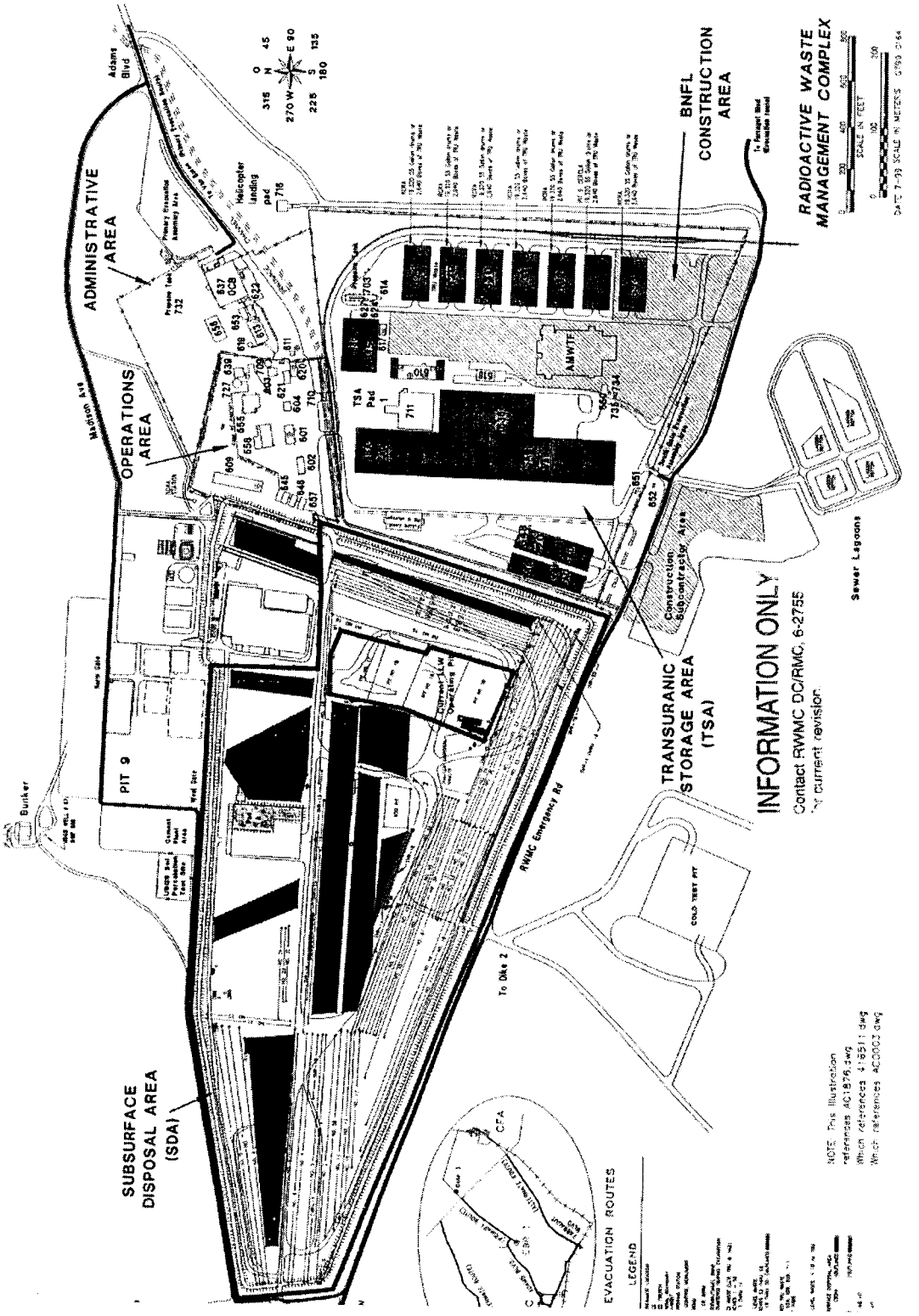


Figure 4. Grease Plant

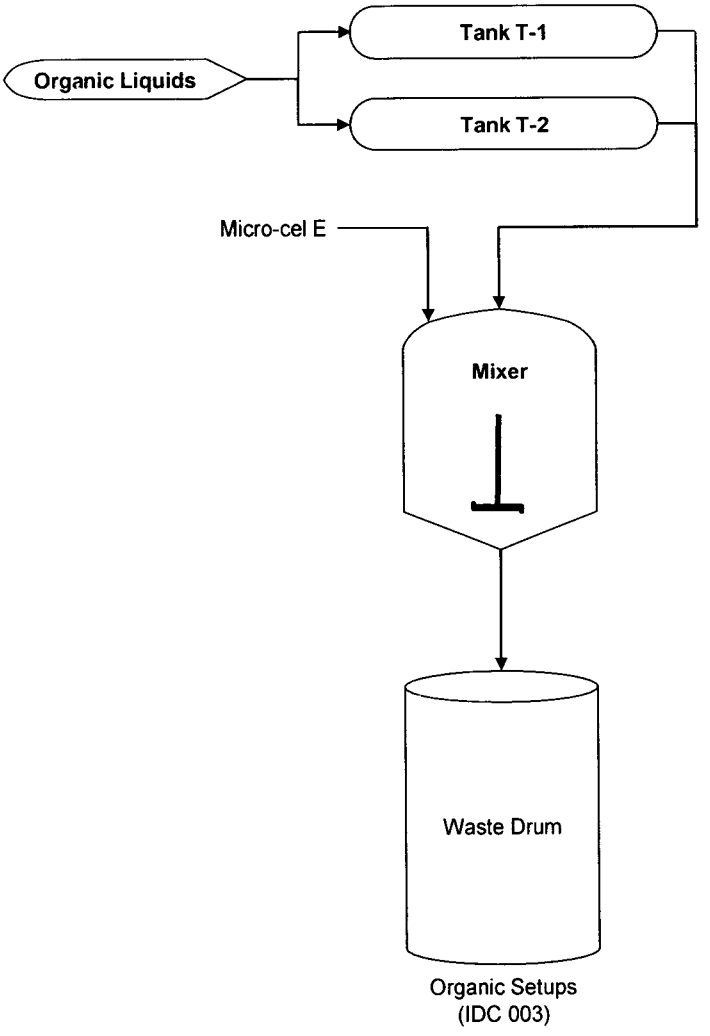
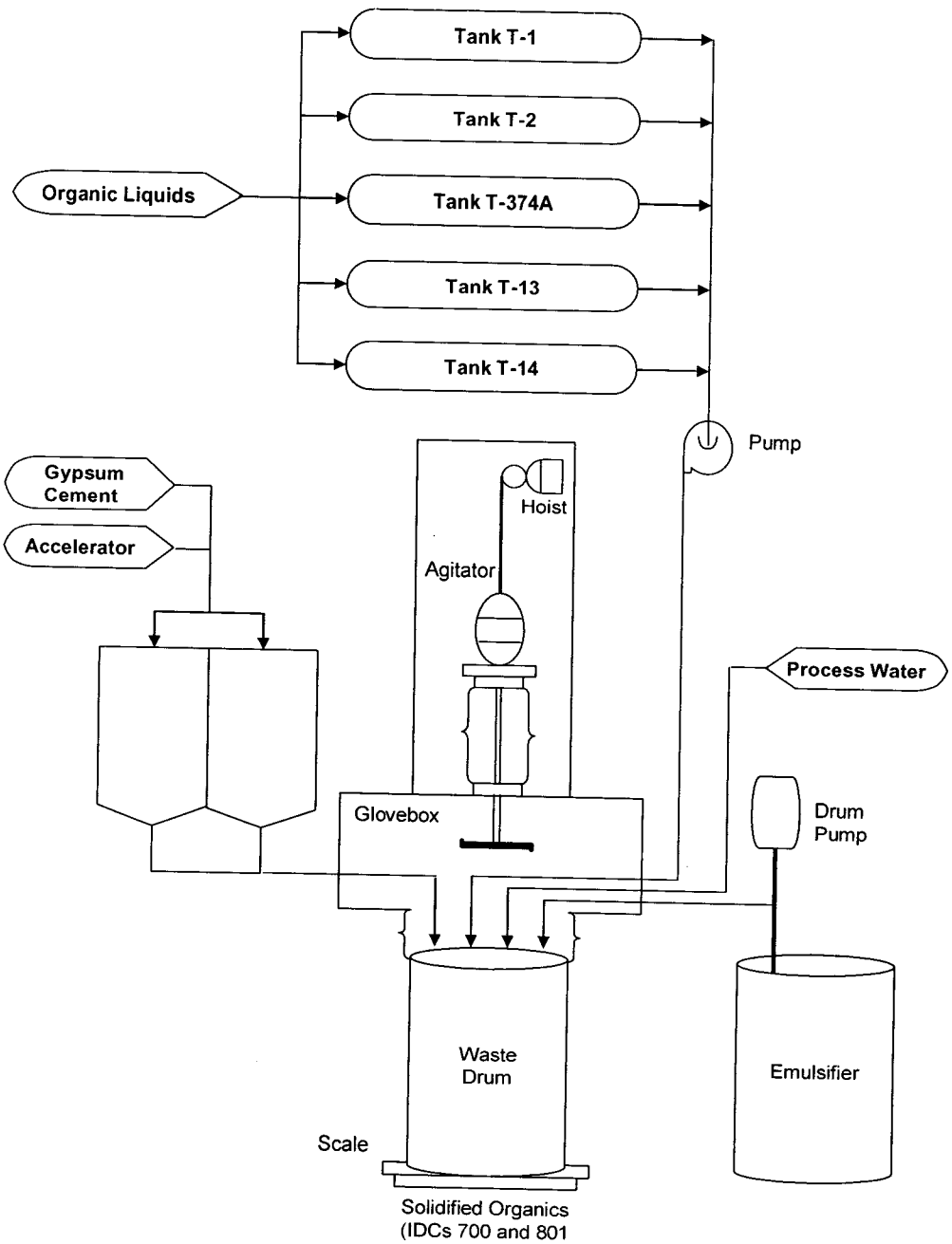


Figure 5. Organic and Sludge Immobilization System



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CCP-AK-INL-001

Central Characterization Project
Acceptable Knowledge Summary Report
For

Waste Retrieved from Designated Areas within the Subsurface Disposal Area at the Idaho National Laboratory

Transuranic Waste Streams
ID-SDA-DEBRIS
ID-SDA-SLUDGE
ID-SDA-SOIL

Revision 11

December 2, 2011

Mike Ramirez

Printed Name

APPROVED FOR USE

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
0	11/18/2004	Initial issue.
1	04/15/2005	1. In the Executive Summary, the term "Area 1" has been clarified. 2. Based on the actual placement of the tent enclosure and the inclusion of 20 foot buffer areas on each end of the retrieval area, several additional disposal records needed to be evaluated. Based on this evaluation, additional generators and waste types were added. Volumes of waste disposed were also modified but based only on the actual placement of the enclosure; the buffer areas were not included. 3. Additional details included for Rocky Flats enriched uranium, beryllium, and waste treatment operations. 4. In Section 4.5, added a paragraph for the generation of secondary waste (e.g., filters) from the retrieval operation itself. 5. In Section 4.6.1, clarified the methodology for determining the waste generators that disposed of waste in the retrieval area. 6. In Section 5.4.2, additional information on beryllium disposal was added. 7. Added EPA hazardous waste numbers D006, D007, D008, D011, D027, D028, D030, D032, D034, D038, and D043 to all waste streams. 8. Additional references were added in Section 8.0. 9. Numerous other editorial changes and corrections were made.

RECORD OF REVISION (Continued)

Revision Number	Date Approved	Description of Revision
2	03/20/2006	1. Added another ½-acre area referred to as the ARP-II retrieval area which includes portions of Pits 4 and 6. As a result, waste volumes were revised and several generation areas/buildings, waste items, radionuclides, chemical constituents (including the addition of United States Environmental Protection Agency (EPA) Code D033) were added. Additional references were also added in Section 8.0. 2. Added TRUCON Codes for each waste stream. 3. Additional details were added to several of the existing generation facility discussions. 4. Added a new paragraph in Section 4.5 describing spills from excavating equipment. 5. Added a new paragraph in Section 5.4.1 describing the basis for limited gas generation testing. 6. Revised beryllium discussion Section 5.4.2. 7. Revised weapons-grade plutonium mass fractions to be consistent with Nondestructive Assay (NDA) Memo. 8. Added photographs of waste retrieval and packaging activities. 9. Revised polychlorinated biphenyl (PCB) discussion in Section 5.6.6. 10. Numerous other editorial changes, clarifications, and corrections were made.
3	11/16/2006	1. Added EPA hazardous waste number D037 to all waste streams as indicated in Section 5.6.3. 2. Added packaging configuration information for 4,4-methylene-bis, 2-chloroaniline to Section 5.6.4. 3. Added discussion regarding November 21, 2005 roaster oxide fire and lessons learned to ignitability evaluation in Section 5.6.5. 4. Corrected waste excavation discussion in Section 4.5 to indicate intact retrieved drums will not be transferred to the drum packaging stations. 5. Revised to reference the Accelerated Retrieval Project Waste Identification, Segregation/Sorting and Disposition Operator Guide for waste material photographs.

RECORD OF REVISION (Continued)

Revision Number	Date Approved	Description of Revision
		6. Revised retrieval areas to include additional areas identified as Contract Area 1A, 2A, 6A, 6B, and 6C. 7. Added/updated list of references.
4	01/29/2007	1. Updated Section 5.4.2 to include beryllium contaminated waste description for additional Contract Areas 1A, 2A, 6A, 6B, and 6C. 2. Added an evaluation of waste material parameter weight percentages to Section 5.4.4. 3. Added information to Sections 5.6.5 and 5.7 regarding process controls for prohibited items.
5	08/31/2007	1. Added language to Sections 4.5 and 5.8 regarding the use of the bottom discharge tray liner and the addition of absorbent during waste packaging. 2. Updated Transuranic Waste Baseline Inventory Report (TWBIR) identification numbers. 3. Revised parenthetical descriptions for TRUCON codes for each waste stream. 4. Removed reference to Building 865. This building was not constructed until 1970 and is not identified as a generating facility for waste in the Retrieval Areas. 5. Deleted text in Section 5.4.1 describing the basis for limited gas generation testing. 6. Other miscellaneous editorial changes as necessary.
6	02/07/2008	1. Added Durasoil® dust suppressant to Section 4.5 and Soiltac® and Durasoil® to Table 5.5. 2. Updated waste stream volumes and generation dates in Section 5.2. 3. Modified Section 5.7 to clarify and enhance the discussion on repackaging of liquid-containing sludge waste drums. 4. Other miscellaneous editorial changes as necessary.
7	10/27/2008	1. Revised Retrieval Area to add ARP-III in place of Contract Areas 6A, 6B, and 6C and removed information related to Contract Areas 1A and 2A (Pits 1 and 2). 2. Changed 742 series sludge to targeted waste form.

RECORD OF REVISION (Continued)

Revision Number	Date Approved	Description of Revision
		3. Updated waste stream volumes and generation dates in Section 5.2 based on current and total projected volumes for the entire ARP (i.e., the total 5.69 acre retrieval area of the Subsurface Disposal Area (SDA). 4. Revised Ignitibility and Corrosivity discussions to include reference to potential ignitable or corrosive liquids in the waste. 5. Added U.S. Environmental Protection Agency (EPA) hazardous waste numbers P098 and P106 to all waste streams as indicated in Section 5.6.4. 6. Other editorial changes as required.
8	09/08/2009	1. Revised Retrieval Area to add ARP-IV (Pit 5). This includes adding INL generator CFA-674, updating Tables 4-1 and 5-1B, Sections 5.4.4, and 5.5 including Tables 5-1D, 5-1E, 5-1F, 5-2, 5-3, and 5-4. 2. Updated waste stream volumes and generation dates in Section 5.2 based on current container volumes. 3. Conservatively determined ARP-II Waste Stream ID-SDA-SOIL is PCB waste. 4. Added description of secondary waste generated from packaging correction operations in Section 5.7. 5. Other editorial changes as required.
9	09/08/2010	1. Revised Retreival Area to add ARP-V (Pit 9 and GEM waste). This includes adding INL generator CFA-665, updating Tables 4-1 and 5-1B, AND Sections 4.5.1, 5.4.4, and 5.5, including. Tables 5-2, 5-3, and 5-4. 2. Updated waste stream volumes and generation dates in Section 5.2 based on current container volumes, including Table 5-1A. 3. Added SP-400 and Windex to Table 5-5. 4. Revised Ignitabilty discussion to include reference to the potential presence of evaporator salts (745-series sludge) in the waste. 5. Other editoral changes as required.
10	02/16/2011	1. Revised Retrieval Area to add Accelerated Retrieval Project , Phase VI (ARP-VI)

RECORD OF REVISION (Continued)

Revision Number	Date Approved	Description of Revision
		(additional area in Pit 4). This includes updating Tables 4-1, Estimate of Buried Waste Volumes in Retrieval Area, and 5-1B, Specific Waste Items Buried in the Retrieval Area, and Sections 4.5.1, 5.4.4, and 5.5, including Tables 5-2, Relative Mass of Radionuclides in Buried Waste Categories in the Retrieval Area, 5-3, Relative Activity of Radionuclides in Buried Waste Categories in the Retrieval Area, and 5-4, Relative Mass and Activity of Radionuclides in the Retrieval Area. 2. Updated waste stream volumes and generation dates in Section 5.2 based on current container volumes, including Table 5-1A, Waste Stream Volumes and Generation Dates. 3. Other editorial changes, as required.
11	12/02/2011	1. Revised Retrieval Area to add Accelerated Retrieval Project, Phase VII (ARP-VII) (new area in Pit 10). This includes updating Tables 4-1, Estimate of Buried Waste Volumes in Retrieval Area, and 5-1B, Specific Waste Items Buried in the Retrieval Area, and Sections 4.5.1, 5.4.4, and 5.5, including Tables 5-2, Relative Mass of Radionuclides in Buried Waste Categories in the Retrieval Area, 5-3, Relative Activity of Radionuclides in Buried Waste Categories in the Retrieval Area, and 5-4, Relative Mass and Activity of Radionuclides in the Retrieval Area. 2. Updated waste stream volumes and generation dates in Section 5.2 based on current container volumes, including Table 5-1A, Waste Stream Volumes and Generation Dates. 3. Addition of a new RFP generating facility Building 887. 4. Other editorial changes, as needed.

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LIST OF ACRONYMS AND ABBREVIATIONS

AEC	Atomic Energy Commission
AFSR	Argonne Fast Source Reactor
AK	Acceptable Knowledge
AMWTP	Advanced Mixed Waste Treatment Plant
ANL-E	Argonne National Laboratory – East
ANL-W	Argonne National Laboratory – West
ANP	Aircraft Nuclear Propulsion
ARA	Auxiliary Reactor Area
ARMF	Advanced Reactivity Measurements Facility
ARP	Accelerated Retrieval Project
ARP-I	Accelerated Retrieval Project, Phase I
ARP-II	Accelerated Retrieval Project, Phase II
ARP-III	Accelerated Retrieval Project, Phase III
ARP – IV	Accelerated Retrieval Project, Phase IV
ARP-V	Accelerated Retrieval Project, Phase V
ARP-VI	Accelerated Retrieval Project, Phase VI
ATI	Rockwell Atomics International Division
ATR	Advanced Test Reactor
ATRC	Advanced Test Reactor Critical
ATRX	Advanced Test Reactor Complex (formerly TRA)
ATWIR	Annual Transuranic Waste Inventory Report
BORAX	Boiling Water Reactor Experiments
BLM	Bureau of Land Management
CCP	Central Characterization Project
CEL	Chemical Engineering Laboratory
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFA	Central Facilities Area
CFR	Code of Federal Regulations
CH	Contact-Handled
CPP	Chemical Processing Plant
CSM	Colorado School of Medicine
CSMRF	Colorado School of Mines Research Foundation
CVAA	Cold Vapor Atomic Absorption
CWS	Chemical Warfare Service
DPS	Drum Packaging Station

LIST OF ACRONYMS AND ABBREVIATIONS (CONTINUED)

DOE	U.S. Department of Energy
DOE-ID	U.S. Department of Energy-Idaho
DOR	Direct Oxide Reduction
DRI	Denver Research Institute
DU	Depleted Uranium
EBOR	Experimental Beryllium Oxide Reactor
ECF	Expended Core Facility
EFL	Experimental Fuels Laboratory
EBR-I	Experimental Breeder Reactor - I
EBR-II	Experimental Breeder Reactor - II
EDTA	Ethylenediaminetetraacetic acid
EPA	U.S. Environmental Protection Agency
ETR	Engineering Test Reactor
ETRC	Engineering Test Reactor Critical
EU	Enriched Uranium
FCF	Fuel Conditioning Facility, formerly Fuel Cycle Facility
FRAN	Nuclear Effects Reactor
ft	feet
ft^3	Cubic feet
GCRE	Gas-Cooled Reactor Experiment
GEM	Glovebox Excavator Method Project
HEPA	High Efficiency Particulate Air
HFEF/S	Hot Fuel Examination Facility/South
HLW	High-Level Waste
HTRE	Heat Transfer Reactor Experiment
HVAC	Heating, Ventilation and Air Conditioning
HWFP	Hazardous Waste Facility Permit (Issued to Waste Isolation Pilot Plant)
HWN	Hazardous Waste Number
ICP	Idaho Cleanup Project
ID	Idaho
IDC	Item Description Code
IET	Initial Engineering Test
INL	Idaho National Laboratory
INTEC	Idaho Nuclear Technology and Engineering Center
L&O	Laboratory and Office Building

LIST OF ACRONYMS AND ABBREVIATIONS (CONTINUED)

LANL	Los Alamos National Laboratory
LLNL	Lawrence Livermore National Laboratory
LLW	Low-Level Waste
LPT	Low Power Test
LRL	Lawrence Radiation Laboratory
m^3	Cubic meter
MAP	mixed activation products
MEK	methyl ethyl ketone
MFC	Materials and Fuel Complex
MFP	mixed fission products
ML-1	Mobile Low-Power Reactor No. 1
mrem/hr	millirems per hour
MSE	Molten Salt Extraction
MTR	Materials Test Reactor
MTRU	Mixed Transuranic
NaK	Sodium-potassium
NDA	non-destructive assay
NMAC	New Mexico Administrative Code
NRF	Naval Reactors Facility
NRP	Naval Reactors Program
NTS	Nevada Test Site
NWPA	Nuclear Waste Policy Act
OMRE	Organic Modified Reactor Experiment
PBF	Power Burst Facility
PCBs	Polychlorinated biphenyls
PER	Power Excursion Reactor
PGS	Packaging Glovebox System (in the GEM Project)
PM-2A	Portable Medium Nuclear Power Plant
ppm	parts per million
PVC	Polyvinyl Chloride
R&D	Research and Development
RAF	Remote Analytical Facility
RAL	Remote Analytical Laboratory
RCRA	Resource Conservation and Recovery Act

LIST OF ACRONYMS AND ABBREVIATIONS (CONTINUED)

RCS	Retrieval Confinement Structure (in the GEM Project)
RESL	Radiological and Environmental Sciences Laboratory
RMF	Reactivity Measurements Facility
RML	Radioactive Materials Laboratory
RFP	Rocky Flats Plant
RO	Roaster Oxide
RSWF	Radioactive Scrap Waste Facility
RTL	Regulatory Threshold Limit
RTR	Real-time radiography
RWMC	Radioactive Waste Management Complex
SCMS	Sodium Components Maintenance Shop
SDA	Subsurface Disposal Area
SL-1	Stationary Low-Power Reactor No. 1
SOM	School of Medicine (University of Colorado School of Medicine)
SPERT	Special Power Excursion Reactor Tests
SRE	Sodium Reactor Experiment
SRS	Savannah River Site
SNAP	Systems for Nuclear Auxiliary Power
SNAPTRAN	Systems for Nuclear Auxiliary Power Transient
SSFL	Santa Susana Field Laboratories
STEP	Safety Test Engineering Program
STPF	Shielded Test Pool Facility
SS&C	sand, slag and crucible
SVOC	Semivolatile Organic Compound
SWB	Standard waste box
TAN	Test Area North
TICs	Tentatively Identified Compound
TRA	Test Reactor Area
TREAT	Transient Reactor Test Facility
TRU	Transuranic
TRUCON	TRUPACT-II Content Code
TSCA	Toxic Substance Control Act
TSF	Technical Support Facility
UCL_{90}	90-percent upper confidence limit
USDI	United State Department of the Interior

LIST OF ACRONYMS AND ABBREVIATIONS (CONTINUED)

USGS	United States Geological Survey
VE	Visual Examination
VOCs	Volatile Organic Compounds
WCF-1	Waste Calcining Facility
WES	Weather Enclosure Structure (in the GEM Project)
WILD	Waste Inventory Location Database
WIPP	Waste Isolation Pilot Plant
WIPP-WAC	Waste Isolation Pilot Plant Waste Analaysis Criteria
WIPP-WAP	WIPP HWFP Waste Analysis Plan
WR	War Reserve
wt%	Weight percent
ZPR-III	Zero Power Reactor – III
ZPPR	Zero Power Plutonium (Physics) Reactor

1.0 EXECUTIVE SUMMARY

This Acceptable Knowledge (AK) Summary Report has been prepared for the Central Characterization Project (CCP) for Contact-Handled (CH) transuranic (TRU) waste historically generated at Rocky Flats Plant (RFP), the Idaho National Laboratory (INL) (formerly the Idaho National Engineering and Environmental Laboratory), and other small quantity generators. The term "retrieval area" used throughout this report refers to waste buried in portions of Pits 4, 5, 6, 9, and 10 designated as Accelerated Retrieval Project (ARP), Phase I (ARP-I), Phase II (ARP-II), Phase III (ARP-III), Phase IV (ARP-IV), Phase V (ARP-V), Phase VI (ARP-VI), and Phase VII (ARP-VII) of the Subsurface Disposal Area (SDA) at INL and is being retrieved and packaged for disposal. The "retrieval area" described in this report will be expanded in the future as other areas in the SDA are excavated.

The ARP-I area consists of a ½-acre area in the eastern end of Pit 4. The ARP-II area is an additional ½-acre area encompassing the far eastern portion of Pit 4 and the far western end of the adjacent Pit 6. The ARP-III area consists of an additional approximately ½-acre area of Pit 6 adjacent to the ARP-II area. The ARP-IV area consists of an approximately 0.8-acre area of Pit 5. The ARP-V area consists of an approximately 0.6-acre area of Pit 9, including waste excavated during the Glovebox Excavator Method (GEM) Project. The ARP-VI area consists of an additional 0.4-acre area of Pit 4 west of ARP-I. The ARP-VII area consists of an approximately 0.27-acre area of Pit 10. These areas contain relatively large amounts of TRU or other contaminated materials that will be removed and packaged by the Idaho Cleanup Project (ICP). The waste forms targeted for retrieval are described in Sections 4.7.1 and 5.4.1.

The retrieval areas were selected by the U.S. Department of Energy-Idaho (DOE-ID) with agreement from the U.S. Environmental Protection Agency (EPA) Region 10 and the Idaho Department of Environmental Quality. This AK Summary Report presents the required characterization information for the mixed waste streams ID-SDA-DEBRIS, ID-SDA-SLUDGE, and ID-SDA-SOIL.

The CCP is tasked with certification of CH-TRU waste for transportation to and disposal at the Waste Isolation Pilot Plant (WIPP). The procedure CCP-TP-005, *CCP Acceptable Knowledge Documentation* (Reference 1), describes how AK is compiled and confirmed by the CCP. The CCP is responsible for collection, review, and management of AK documentation in accordance with CCP-TP-005 and reviews and approves this AK Summary Report. CCP maintains responsibility for this AK Summary Report and all CCP-TP-005 generated forms and records as quality assurance (QA) records (Reference 15). In addition, CCP maintains a copy of the "historical source documents" as non-QA records.

This document, along with the referenced supporting documentation, provides a defensible and auditable record of AK for the characterization of waste generated by historical operations and current retrieval and packaging activities. The references and AK sources used to prepare this report are listed in Section 8.0.

This AK report includes information relating to facility histories and process operations. Information contained in this report was obtained from numerous sources, including facility safety basis documentation, facility procedures, generator and storage facility waste records, and interviews with cognizant personnel.

This report complies with the requirements of Section C4, "Acceptable Knowledge," of the *Hazardous Waste Facility Permit Issued to Waste Isolation Pilot Plant (HWFP)* (Reference 2) and provides an auditable record that satisfies WIPP criteria for AK. This document and supporting references provide the mandatory waste management program and waste stream-specific AK information for the TRU waste buried in the retrieval area from March 1964 through November 1968.

2.0 WASTE STREAM IDENTIFICATION SUMMARY

Site Where TRU Waste Is Generated and Stored:

Generation Location:

INL Radioactive Waste
Management Complex (RWMC)
U. S. EPA ID No. ID4890008952

Facilities Where Waste Was Historically Generated:

The RFP, INL, and other off-site facilities and buildings that historically generated waste in the retrieval area that will be exhumed and packaged for disposal at WIPP are as follows:

Rocky Flats Plant

- Buildings 122, 123, 331, 334, 441, 444, 447, 551, 559, 771, 774, 776, 777, 779, 881, 883, 886, 887, 889, and 991, and the solar evaporation ponds.

Idaho National Laboratory

- Argonne National Laboratory-West (ANL-W) Buildings 601 and 767
- Auxiliary Reactor Area (ARA) Buildings 602, 616, and 626
- Central Facilities Area (CFA) Buildings 601, 633, 646, 654, 665, 674, 687, and 690
- Idaho Chemical Processing Plant (CPP) Buildings 601 and 630
- Naval Reactors Facility (NRF) Buildings 601, 617, and 618
- Power Excursion Reactor (PER) Building 601
- Test Area North (TAN) Buildings 607 and 633
- Test Reactor Area (TRA) Buildings 603, 642, 653, and 661

Other Off-Site Facilities

- Rockwell Atomics International Division (ATI) (Canoga Park, California)
- Denver Research Institute (DRI) (Denver, Colorado)
- United States Geological Survey (USGS) (Denver, Colorado)
- Colorado School of Medicine (CSM or School of Medicine [SOM]) (Denver, Colorado)

- Colorado School of Mines Research Foundation (CSMRF) (Golden, Colorado)
- United States Department of the Interior (USDI)

Facility Mission:

Rocky Flats Plant had two primary missions during the period of operations from 1952 through 1990: the production of triggers for nuclear weapons, and the processing of retired weapons for plutonium recovery and reuse (refer to Section 4.1.1).

The general missions of the INL facilities were reactor research (e.g., breeder reactor, military reactors, and commercial reactors), reactor fuel reprocessing, and metallurgical and laboratory support (refer to Section 4.1.2).

Other off-site facilities missions (refer to Section 4.1.3) were as follows:

- Rockwell ATI conducted research and development (R&D), design, construction, and testing of nuclear reactors and associated systems.
- The CSM or SOM is the medical school associated with the University of Colorado that conducted various biomedical research activities with radionuclides.
- The CSMRF was a research institute conducting research for the Defense Atomic Support Agency in support of Project Roller Coaster.
- DRI was a chemistry laboratory affiliated with the University of Denver that used small amounts of radioactive material and beryllium oxide in chemistry classes.
- The USGS office in the Denver Federal Center operated a small nuclear reactor used to determine the age and chemical makeup of rocks and minerals. The USGS also evaluated the effects of underground nuclear explosions at the Atomic Energy Commission's (AECs) Nevada Test Site (NTS); that program was expanded to study the geologic and hydrogeologic conditions affecting the peaceful uses of atomic energy and the disposal of radioactive wastes.
- The USDI encompasses several organizations including the USGS, the Bureau of Land Management (BLM), the Bureau of Reclamation, the Bureau of Mines, the Bureau of Indian Affairs, the Interstate Commerce Commission, the National Parks Service, Territorial Oversight, and the United States Fish and Wildlife Service.

Waste Stream ID-SDA-SLUDGE

Summary Category Group:	S3000
Waste Matrix Code Group:	Solidified Inorganics and Solidified Organics[1]
Waste Matrix Code:	S3900
TRUPACT-II Content (TRUCON) Code:	ID 111 (≥ 95 weight percent [wt%] inorganic sludge)
(Reference 13) :	ID 112 (≥ 5 wt% 743-series sludge) ID 122 (< 5 wt% organic solids) ID 127 (≥ 5 wt% organic solids) SQ 154 (high wattage)
Waste Type Code:	MTRU (Mixed TRU)
Waste Stream Annual Transuranic Waste Inventory Report (ATWIR) Identification (Reference 12):	IN-ID-SDA-SLUDGE
Layers of Confinement:	Maximum of one layer of confinement (filtered liner bag)
EPA Hazardous Waste Numbers:	D004, D005, D006, D007, D008, D009, D010, D011, D022, D027, D028, D029, D030, D032, D033, D034, D037, D038, D043, F001, F002, F004, F005, F006, F007, F009, P098, and P106[2]

Waste Stream Description: This waste stream is predominantly homogeneous solids targeted for retrieval. The targeted homogenous wastes are inorganic and organic sludges from RFP Building 774 and roaster oxide (RO) from RFP. Non-targeted homogeneous solids include INL sewage sludge and other RFP sludges. Other types of waste in this waste stream may include rags, paper, plastic, rubber, wood, filters, glass, graphite, metal, equipment, and concrete, as well as interstitial soils. Additional details are provided in Section 5.4.

As described in Section 4.7.1, waste stream ID-SDA-SLUDGE meets the WIPP-WAP waste stream definition. The waste materials that comprise this waste stream have a common physical form, contain similar hazardous constituents, and were generated from a single process or activity and are, therefore, a single waste stream.

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[1] This waste stream includes individual containers consisting primarily of 743-series organic sludge and primarily 741- and 742-series inorganic sludge therefore, both the Solidified Inorganics and Solidified Organics Waste Matrix Code Groups are assigned (refer to Section 4.7.1).
[2] Added EPA hazardous waste numbers P098 and P106 to all waste streams as indicated in Section 5.6.4.

Waste Stream ID-SDA-SOIL

Summary Category Group:	S4000
Waste Matrix Code Group:	Soils
Waste Matrix Code:	S4200
TRUCON Code (Reference 13):	ID 112 (≥ 5 wt% 743-series sludge) ID 122 (< 5 wt% organic solids) ID 127 (≥ 5 wt% organic solids) SQ 154 (high wattage)
Waste Type Code:	MTRU (Mixed TRU)
Waste Stream ATWIR Identification (Reference 12):	IN-ID-SDA-SOIL
Layers of Confinement:	Maximum of one layer of confinement (filtered liner bag)
EPA Hazardous Waste Numbers:	D004, D005, D006, D007, D008, D009, D010, D011, D022, D027, D028, D029, D030, D032, D033, D034, D037, D038, D043, F001, F002, F004, F005, F006, F007, F009, P098, and P106[1]

Waste Stream Description: This waste stream is predominantly interstitial soils from the retrieval area. Soils are not targeted wastes; however, there may be containers packaged with targeted waste forms but the predominant waste is soil. Other types of waste in this waste stream may include rags, paper, plastic, rubber, wood, filters, glass, graphite, metal, equipment, and concrete, as well as roaster oxide and inorganic and organic sludges. Additional details are provided in Section 5.4.

As described in Section 4.7.1, waste stream ID-SDA-SOIL meets the WIPP-WAP waste stream definition. The waste materials that comprise this waste stream have a common physical form, contain similar hazardous constituents, and were generated from a single process or activity and are, therefore, a single waste stream.

[1] Added EPA hazardous waste numbers P098 and P106 to all waste streams as indicated in Section 5.6.4.

Waste Stream ID-SDA-DEBRIS

Summary Category Group:	S5000
Waste Matrix Code Group:	Heterogeneous Debris
Waste Matrix Code:	S5400
TRUCON Code (Reference 13):	ID 112 (≥ 5 wt% 743-series sludge) ID 119 (Standard Waste Box [SWB] only) ID 122 (< 5 wt% organic solids) ID 127 (≥ 5 wt% organic solids) SQ 154 (high wattage)
Waste Type Code:	MTRU (Mixed TRU)
Waste Stream ATWIR Identification (Reference 12):	IN-ID-SDA-DEBRIS
Layers of Confinement:	Maximum of one layer of confinement (filtered liner bag)
EPA Hazardous Waste Numbers:	D004, D005, D006, D007, D008, D009, D010, D011, D022, D027, D028, D029, D030, D032, D033, D034, D037, D038, D043, F001, F002, F004, F005, F006, F007, F009, P098, and P106[1]

Waste Stream Description: This waste stream is predominantly heterogeneous debris waste items targeted for retrieval. The targeted debris wastes are filters, primarily high efficiency particulate air (HEPA) filters, and graphite from RFP. Other types of waste in this waste stream may include rags, paper, plastic, rubber, wood, glass, metal, equipment, concrete, roaster oxide, inorganic and organic sludges, as well as interstitial soils. Additional details are provided in Section 5.4.

As described in Section 4.7.1, waste stream ID-SDA-DEBRIS meets the WIPP-WAP waste stream definition. The waste materials that comprise this waste stream have a common physical form, contain similar hazardous constituents, and were generated from a single process or activity and are, therefore, a single waste stream.

[1] Added EPA hazardous waste numbers P098 and P106 to all waste streams as indicated in Section 5.6.4.

3.0 ACCEPTABLE KNOWLEDGE DATA AND INFORMATION

TRU waste destined for disposal at the WIPP must be characterized prior to shipment. The *WIPP HWFP Waste Analysis Plan* (WIPP-WAP) (Reference 2) permits use of knowledge of the materials and processes that generate and control the waste, provided a clear and convincing argument about the characteristics of the waste is achieved. The AK characterization documented herein complies with the requirements of the WIPP-WAP and was developed in accordance with Section C4 of CCP-PO-001, *CCP TRU Waste Characterization Quality Assurance Project Plan* (Reference 3), and CCP-TP-005 (Reference 1).

This waste was characterized using AK from a variety of sources, including standard operating procedures, safety analysis reports, waste packaging and treatment logbooks, research and project reports, site databases, correspondence and interviews with site personnel, analytical data, and Material Safety Data Sheets. The AK source documents that were previously collected for the *Historical Background Report for Rocky Flats Plant Waste Shipped to the INEEL and Buried in the SDA from 1954 through 1971* (Reference 11) are the primary sources of AK for RFP used in this AK Summary Report.

The AK sources referenced within this report by alphanumeric designations (i.e., C001, D001, P001, and U001), correspond to the Source Document Tracking Number using the following convention:

- C – Correspondence
- D – Discrepancy Resolution Reports
- P – Published documents
- U – Unpublished Documents

4.0 REQUIRED PROGRAM INFORMATION

This section provides the waste management program information required by Attachment C4 of the WIPP HWFP (Reference 2). Included are brief histories of the waste generating facilities, summaries of the missions, discussions of the operations associated with the generation of TRU waste, and descriptions of the TRU waste management program associated with the retrieval of this waste. All of the TRU waste management program information required to be developed as part of the AK record in accordance with CCP-TP-005 (Reference 1) was collected for these waste streams and summarized in this Section.

4.1 Historical Facility Location, Description, and Mission

Historical facility locations, descriptions, and missions for RFP and INL generating facilities are provided in Sections 4.1.1 and 4.1.2. Other generating facilities are discussed in Section 4.1.3. The basis for the identification of specific waste generating facilities and buildings is provided in Section 4.6.1.

4.1.1 Rocky Flats Plant (RFP) Facilities

The RFP is located in northern Jefferson County, Colorado, approximately 16 miles northwest of Denver. The 6,550 acre government-owned and contractor-operated facility was part of the nationwide nuclear weapons production complex. Ground-breaking for the first permanent buildings for the plant began in 1951. By 1954, approximately 700,000 square feet of building space had been completed. As the plant operations expanded, as much as 1.6 million square feet were occupied by manufacturing, chemical processing, plutonium recovery, and waste treatment operations. Plutonium operations were located primarily in the 384 acre high-security area (Protected Area). A map of the RFP, circa 1970, is provided in Figure 1, Map of Rocky Flats Plant (Circa 1970) (Reference RF-P085).

The plant had two primary missions during the period of operations from 1952 through 1990: the production of triggers for nuclear weapons, and the processing of retired weapons for plutonium recovery. The triggers, also known as pits, were the first-stage fission bombs used to initiate the second-stage fusion reaction in hydrogen bombs (Reference RF-P085). Plutonium metal was recovered from retired warheads and manufacturing residues, and was also imported from the Hanford Reservation in Washington State and the Savannah River Site (SRS) in South Carolina. Weapons parts were manufactured from plutonium, uranium, beryllium, stainless steel, and various other metals (Reference RF-P085).

In general, the plant's primary mission changed little from 1952 until 1990 when plutonium operations were suspended. In the early 1960s, the DOE implemented the single mission concept to reduce redundant operations between DOE facilities. At that time, RFP became the primary manufacturer for nuclear weapon triggers. With the exception of periodic refinements, only three trigger configurations were manufactured at the plant. The first two trigger designs were solid units manufactured primarily of uranium, similar to the devices

used during World War II. In 1957, the trigger design was changed to sealed hollow spheres which were manufactured with much less uranium and more plutonium. This design change resulted in lighter, smaller, and more powerful weapons (Reference RF-P085).

The general design of the trigger has not changed dramatically since 1958, although modifications to the relative amounts of metals, dimensions, and other features of the parts were modified over the years. The plant also supported weapons development programs responsible for fabricating, testing, and assembling parts with new geometries or metal compositions (Reference RF-P085).

4.1.2 Idaho National Laboratory Facilities

The INL is a DOE facility, located 32 miles west of Idaho Falls, Idaho, that occupies 890 square miles of the northeastern portion of the Eastern Idaho Snake River Plain. INL facilities that contributed waste disposed of in the retrieval area include: ANL-W, ARA, CFA, CPP, NRF, PER area, TAN, and TRA (now called the Advanced Test Reactor Complex [ATRX]). The RWMC also generated waste. A map of the INL showing the location of these facilities is presented in Figure 2, Map of INL (References ID-P091, ID-P103, ID-P249, ID-P369, ID-P396, ID-P421, ID-P422, ID-P426, and ID-U292).

4.1.2.1 Argonne National Laboratory-West

ANL-W (now called the Materials and Fuels Complex [MFC]) was an extension of Argonne National Laboratory-East (ANL-E), an AEC research laboratory operated by the University of Chicago. The ANL-E-operated facilities were located at the sites of Experimental Breeder Reactor-I (EBR-I), Boiling Water Reactor Experiment (BORAX) I-V, Argonne Fast Source Reactor (AFSR), and Zero Power Reactor No. 3 (ZPR-III) facilities. ANL-W facilities were built at the current site of the Transient Reactor Test (TREAT) Facility sometime prior to 1959. Since 1959 with the operation of the TREAT, ANL-W has been the primary center in the United States for testing and demonstrating nuclear energy technology and experiments. The mission at ANL-W emphasizes technologies associated with nuclear fuel, including advanced methods for fuel reprocessing, improving fuel efficiency, and testing fuel performance (References ID-P091, ID-P118, and ANL-W-P003).

ANL-W consisted of the following major complexes: (1) the Experimental Breeder Reactor-II (EBR-II); (2) the TREAT; (3) the Fuel Cycle (or Conditioning) Facility (FCF); the Zero Power Plutonium (or Physics) Reactor (ZPPR), and (4) the Laboratory and Office building (L&O). Support facilities include the Sodium Components Maintenance Shop (SCMS), built in 1960 (References ID-P091, ID-P118, ANL-W-P003, and ARA-P008).

EBR-II (Building ANL-W-767) was designed to demonstrate a complete operational breeder reactor power plant with on-site reprocessing of metallic fuel (in the Fuel Cycle Facility, ANL-W-765) and the feasibility of a central power station; demonstrations were successfully carried out from September 1961 to September 1994. EBR-II consisted of a sodium-cooled, un-moderated heterogeneous fast breeder reactor, an intermediate closed loop of secondary sodium, and a steam plant that produced electrical power

through a conventional turbine generator. The EBR-II was also used to provide electrical power for INL (References ID-P091, ID-P118, ANL-W-P001, and ANL-W-P003).

The TREAT reactor was a uranium oxide-fueled, graphite-moderated, air-cooled reactor. It was designed to produce short, controlled bursts of nuclear energy to simulate accident conditions leading to nuclear fuel damage. The reactor became operational in February 1959 and was shut down in April 1994. Tests at TREAT provided data on fuel cladding damage, fuel motion, coolant channel blockages, molten fuel/coolant interactions, and potential explosive forces during an accident (References ID-P091, ID-P118, and ANL-W-P003).

The Fuel Cycle Facility (FCF), which was renamed the Hot Fuel Examination Facility (HFEF) in 1969 (renamed HFEF/South in 1972 when HFEF/North was built) and is now known as the Fuel Conditioning Facility (FCF), became operational in 1964 and was used to demonstrate pyrometallurgical reprocessing for EBR-II fuel during the first few years of operation. A remotely operated production line was used for processing and refabricating spent EBR-II fuel and returning it to the reactor. After successfully demonstrating this process in 1969, this mission was discontinued, and the facility was used to examine irradiated fuels and material experiments from EBR-II and TREAT and to provide other reactor support services such as spent fuel transfer to CPP. FCF consists of two hot cells: one with an air atmosphere and the other with an inert argon-gas atmosphere. There are 23 hot cell work stations around the outside perimeter of the FCF hot cells and four active work stations in the center work space of the argon cell (References ID-P091, ID-P118, ANL-W-P001, and ANL-W-P003).

The ZPPR, originally the Zero Power Plutonium Reactor, is a split-table critical facility and did not become operational until April, 1969 (References ANL-W-P003 and ID-P118).

Within the L&O Building are the analytical laboratory, which consists of hot cells, chemistry laboratories, and the Experimental Fuels Laboratory (EFL). The analytical laboratory provides chemistry support for ANL-W in the areas of environmental compliance, fuel chemistry, sodium/water chemistry, and waste classification analysis. The facility includes six analytical hot cells and both generalized and specialized chemical laboratories. The EFL is used in the development and fabrication of prototype metallic nuclear fuels. A low-level liquid evaporation process took place in the basement of the L&O Building until 1983 (References ID-P091, ID-P118, and ANL-W-P003).

Wastes received at the SDA include a shipment from ANL-W-601. RWMC records indicate that radioactive waste was received from 1953 to 1968 from ANL-W-601, which included EBR-I, BORAX I-V, AFSR, and ZPR-III. All solid wastes destined for the RWMC produced at EBR-I, AFSR, BORAX I–V, and ZPR-III for the years 1960 to 1969 were reported as being combined with the waste from ANL-W prior to shipment to the RWMC (References ANL-W-P003, ARA-U003, and ID-P118).

4.1.2.2 Idaho Chemical Processing Plant

CPP (now called the Idaho Nuclear Technology and Engineering Complex [INTEC]), stored and processed spent nuclear fuel from university and test reactors from all over the world, from commercial power plants, from most of the reactors at INL, and from U.S. Department of Defense projects. The primary purpose of the CPP was to recover U-235 from expended military and test reactor fuel, as well as fuel materials from small-scale special experimental projects (References ARA-P008, ID-P091, ID-P118, INTEC-C001, and INTEC-P001).

The Fuel Processing Facility (CPP-601/602), which began operating in 1953, reprocessed highly enriched spent nuclear fuel by dissolving the fuel assemblies in nitric and hydrofluoric acids and then processing the liquid in a solvent extraction system that used tributyl phosphate, hexone, and nitric acid to recover the uranium. The liquid wastes from this process were stored in the Tank Farm and eventually processed through the Waste Calcining Facility (WCF-1), built in 1963, to convert the liquid into a solid form for dry storage in stainless steel bins at CPP. A decontamination facility in CPP-601 provided support for cleaning tools and equipment for CPP and other INL facilities. The Remote Analytical Facility (RAF) performed remote examination of hazardous and radioactive materials in support of CPP and INL operations (References ARA-P008, ID-P091, ID-P118, INTEC-C001, and INTEC-P001).

The facility originally included a storage pool, housed in a separate building (CPP-603, CPP Fuel Storage Facility), to store the fuel under water until a processing campaign was underway. Miscellaneous laboratories, water treatment, evaporator facilities and support facilities, including CPP-630, were also a part of the complex. Analytical laboratories assayed fuels and other materials to ensure reprocessing was efficient. Still other facilities provided customized reprocessing of special fuels (References ARA-P008, ID-P091, ID-P118, INTEC-C001, and INTEC-P001).

4.1.2.3 Naval Reactors Facility (NRF)

The NRF consists of three prototype reactor facilities, the Expended Core Facility (ECF), and various support facilities. The basic mission for all three prototypes plants was to test propulsion plant design, to train naval personnel in preparation for duty on nuclear-powered vessels, and for R&D for future reactor design (Reference ID-P214).

The NRF was established in 1950 when construction began on the prototype power plant for the U.S. Navy's first nuclear-powered submarine, the USS Nautilus. This prototype plant, later named S1W (NRF-601), or the Submarine Thermal Reactor Mark I Prototype, began operation in 1953 (References ARA-P008, ID-P091, ID-P214, ID-U292, NRF-U004, and TAN-P052).

Prototype plant A1W, or the Large Ship Reactor Prototypes (3A and 3B) (NRF-617), began operations in 1958. This was the first nuclear-powered surface ship prototype and consisted of two pressurized-water reactors powering one ship propeller shaft through a single-geared turbine propulsion unit and was built as a prototype for the

aircraft carrier USS Enterprise (References ARA-P008, ID-P091, ID-P214, ID-U292, NRF-U004, and TAN-P052).

Prototype Plant S5G or the Submarine Reactor Plant Prototype (NRF-633) began operation in 1965. The S5G was a prototype for the USS Narwhal submarine and was built inside a submarine hull section. The prototype had the capability of operating in either forced circulation or natural circulation mode (References ID-P091, ID-P214, ID-U292, and TAN-P052).

The ECF (NRF-618), built at NRF in 1958, was designed to receive irradiated naval reactor fuel, spent fuel from the various prototype plants, and spent fuel from commercial reactors, and naval fuel test specimens that have been irradiated in other reactors, such as the Advanced Test Reactor (ATR) in the TRA. After receipt, personnel in the ECF removed excess structural material from fuel elements, performed examinations on the fuel elements, and transferred the fuel elements to the CPP for reprocessing. The original facility consisted of a water pit and a shielded cell (hot cell) with a connecting transfer canal. The ECF was modified as necessary to accomplish the expanding mission of the facility, including the addition of three more water pits, several hot cells, and other capabilities dictated by the nature of the work performed. The fuels are remotely handled under water in the ECF water pits. The water serves as a transparent shielding medium in which a number of procedures can be carried out, including disassembling, cutting, sawing, milling, and visually examining various parts of the fuel elements. The hot cells are used when a dry environment is required (References ARA-P008, ID-P091, ID-P214, and ID-U292).

4.1.2.4 Test Area North (TAN)

TAN was a joint program of the U.S. Air Force and the AEC designed and constructed in the early 1950s to support the General Electric Aircraft Nuclear Propulsion (ANP) Program, the mission of which was to test the concept of the nuclear-powered turbojet airplane. For a nine-year period, until the program was canceled by the U.S. Congress in 1961, the program tested three versions of a full-scale nuclear reactor, known as the Heat Transfer Reactor Experiment (HTRE) Reactor #1, #2, and #3, which was used to power J47 turbojet engines. TAN areas consisted of: the Technical Support Facilities (TSF) Area, which included the TAN Assembly and Maintenance Building and Hot Shop (TAN-607), the TAN Hot Cell Annex (TAN-633), and other miscellaneous facilities; the Initial Engineering Test (IET) Facility, where the Systems for Nuclear Auxiliary Power Transient (SNAPTRAN) program tests were performed under the Safety Test Engineering Program (STEP) approximately one mile from the TSF area; and the Water Reactor Research Test Facility, which included the Low Power Test (LPT) facility, the Shielded Test Pool Facility (STPF) and the Experimental Beryllium Oxide Reactor (EBOR) (References ARA-U003, ID-P091, ID-P118, TAN-P004, TAN-P005, TAN-P028, and TAN-U106).

The IET Facility (TAN-620) consisted of an underground building and a test pad covered with a moveable aluminum building where railroad flatcar-mounted reactor experiments, including those involving the HTRE reactor assemblies and the SNAPTRAN space power

reactors, were performed. A total of 26 IET runs were performed involving the three HTRE reactor assemblies. The SNAPTRAN experiments were performed under the STEP. The LPT was composed of two shielded test cells where critical experiment data was obtained on reactor mock-ups to assist in the design of future reactors. The IET and the TAN Hot Shop (TAN-607) were connected by a double set of rail tracks that allowed the reactor assemblies to be moved back and forth using a shielded locomotive for the fitting of the J47 turbojet engines to the HTRE reactor assemblies, for maintenance, and for examination and disassembly of the HTRE and SNAP reactors (References ARA-P008, ID-P091, ID-P118, TAN-P004, and TAN-P005).

The TAN Hot Shop (TAN-607) was a large hot cell into which the HTRE reactor assemblies, SNAP reactors, the Mobile Low-Power Reactor No. 1 (ML-1) reactor, the Stationary Low-Power Reactor No. 1 (SL-1) reactor, the Portable Medium Nuclear Power Plant (PM-2A) reactor and other large pieces of equipment could be moved for repair, assembly, and disassembly. In addition to the Hot Shop, TAN-607 also contained: the Radioactive Materials Laboratory (RML), a remote handling area used for study, observation, and analysis of small radioactive objects; the High Bay Cold Assembly Shop where normal non-radioactive work could be performed; sandblast and decontamination rooms; welding, machine, and valve shops; an electric shop; a photo lab; the Radiography Facility, used for the nondestructive examination of metal welds, parts, or equipment; and the Warm Shop where test assemblies with minor activity or contamination could be stored and worked on (References ARA-P008, ARA-U003, ID-P091, ID-P118, TAN-P004, TAN-P005, and TAN-P058).

TAN-633, the TAN Hot Cell Annex, was built for examining individual irradiated fuel pieces or other irradiated specimens (References ARA-P008, ARA-U003, ID-P091, ID-P118, TAN-P004, and TAN-P005).

From July 1962 until the 1970s, the TAN Hot Shop (TAN-607) and Hot Cell Annex (TAN-633), with four exceptions, were devoted principally to miscellaneous minor examinations and tests for Test Reactor Area and the Power Burst Facility. The four exceptions involved: examining the two reactor cores included in the SNAPTRAN destructive tests that were conducted in 1964 and 1966; the final disassembly and examination of the ML-1 reactor core in 1965; and the testing and examination of the PM-2A reactor vessel (from a decommissioned Army reactor in Greenland) in 1967 (References ARA-P008, ARA-U003, ID-P091, TAN-P004, TAN-P005, and TAN-P058).

4.1.2.5 Test Reactor Area (TRA)

The major facilities at TRA (now called the ATRX) are the test reactors: Materials Test Reactor ([MTR] [TRA-603]), operating from 1952 to 1970; Engineering Test Reactor (ETR [TRA-642]), operating from 1957 to 1981; and ATR (TRA-670), operating from 1969 to the present. In addition to the test reactors and their support facilities, the following facilities and laboratories have been or are currently operating at TRA (References ARA-U003, ID-P091, and ID-P118):

- TRA hot cells (1954 to present)
- RML (1952 to present)
- Nuclear physics laboratories (1953 to present)
- Physics Laboratories (1952 to present)
- Engineering Test Reactor Critical (ETRC) (1957 through 1980)
- Reactivity Measurements Facility (RMF) (1956 through 1960)
- Advanced Reactivity Measurement Facility-I and -II (ARMF-I and -II) (1960 through 1992)
- Gamma Facility
- Metallurgical Laboratories
- Hydraulics Test Facility
- Nuclear Materials Inspection Storage Facility
- Maintenance and Craft Shops

The Radiochemistry Laboratories, which began operations in 1952, are in the MTR west wing. They are used to support the RML and to perform independent R&D work. Investigators study ways to produce and purify medical radioisotopes and the effect of radiation on hazardous waste. Laboratories 109 through 112 were used primarily for chemistry analysis of reactor primary systems and loop coolants. The south extension to the MTR Wing is the Alpha Laboratories, designed for the safe handling of several radionuclides, including U-233, Pu-239, Am-241, and Cf-252 (Reference ID-P118).

All of the TRA reactors have used highly enriched uranium (EU) (i.e., 93 percent U-235) as their nuclear fuel. The fuel is contained in fuel element assemblies that are composed of multiple fuel plates. The central core of each fuel plate contains a matrix of uranium and aluminum, and the core is covered by an outer layer of pure aluminum. Reactor cores are cooled and neutron-moderated with water. The MTR, ETR, ATR, Advance Test Reactor Critical (ATRC), and ETRC have beryllium reflectors surrounding or adjacent to the reactor cores, while the RMF and ARMF-I and II had water reflectors surrounding the reactor cores. The beryllium was replaced every seven to 10 years; therefore, a large quantity of beryllium has been disposed of at the RWMC (Reference ID-P091).

The major role of a test reactor is to test the physical, chemical, and nuclear properties of materials during and after exposure to highly intense neutron/gamma fields. Experiments are placed in the reactor core or in the reflector adjacent to the reactor core. The size of

the experiments varies from a small irradiation capsule to a major irradiation loop. The standard loop experiment consists of a pressurized water piping system with its own cleanup system, and it is designed to provide the controlled physical and chemical conditions for the test region. Typical conditions that are monitored and controlled include the temperature, pressure, and pH of the experiment coolant. The major sponsors of the test reactors have been and continue to be the Bettis Atomic Power Laboratory and the Knolls Atomic Power Laboratory, funded by the Naval Reactors Program (NRP) of DOE and its predecessor agencies. Experiments from these users are designed or specified by the sponsor. After completing the irradiation, the test internals are generally transferred to the sponsor's facilities for disassembly and examination or to the TRA hot cells (Reference ID-P091).

4.1.2.6 Other INL Generating Facilities

Other INL generators (i.e., ARA, CFA, PER, and the RWMC) were minor contributors to the waste disposed of in the SDA (Reference ID-P091).

- The ARA consisted of four main areas: ARA-I, ARA-II, ARA-III, and ARA-IV. These areas were collectively called the Army Reactor Area until 1965, when the Army's programs at the INL were phased out, and the name was changed to the Auxiliary Reactor Area. ARA-I was built in 1957 to support the reactor program for the SL-1 at ARA-II. ARA-I building ARA-626 included a Hot Cell facility and a laboratory with hoods and metallurgical equipment to support reactor and other radiological experimental work. It operated from the early 1960s through the late 1990s with periods of inactivity. ARA-II was built in 1958 to house the Argonne Low Power Reactor. This reactor was renamed SL-1 in 1959. SL-1 suffered a catastrophic failure in January of 1961. The reactor, pressure vessel, and core were taken to the TAN Hot Shop (TAN-607) for examination in November 1961; most of the other debris, including the reactor building, was buried near ARA-II. After 18 months of cleanup activities, the remaining buildings at ARA-II were converted to offices and welding shops. ARA-602, which originally included a chemistry laboratory, was partially decontaminated after the SL-1 accident and housed a welding research facility. Later, the facility became the Support Facilities building used for administrative and engineering offices in support of the Power Burst Facility (PBF) in the PER area until the mid 1970s. ARA-III was built in 1959 to house and support the Army Gas-Cooled Reactor Experiment (GCRE), deactivated in 1962. In 1963, ARA-III was modified to support the ML-1 then located in Building ARA-616 at ARA-IV. The ML-1 was moved from ARA-IV and installed in ARA-III in 1964. ML-1 operated until 1965 when it was shut down and taken to the TAN Hot Shop for disassembly and examination. The shielding skid and other components from this reactor are included in waste shipped to the RWMC from TAN. After deactivation of the Army's reactor program in 1966, ARA-III was used primarily as a component and instrumentation laboratory for the testing and evaluation of items to be used later in nuclear reactor experiments. ARA-IV was built in 1961 to test the ML-1, which operated there until early 1964 when it was moved to ARA-III. From 1967 to 1970, ARA-616 in ARA-IV also contained a small pulsed reactor called the Nuclear Effects Reactor (FRAN), when it was removed to Lawrence Radiation Laboratory

(References ANL-W-P006, ARA-P004, ARA-P008, ARA-P015, ARA-P018, ARA-P019, ARA-P026, ARA-U002, ARA-U003, ID-P091, ID-P115, ID-P118, and ID-U298).

- The CFA provided support services including transportation, a laundry, sewage treatment plants, large shops, a Materials Testing Laboratory, A Health Services Laboratory, and radiation monitoring. Some of the facilities in use at CFA were built in the 1940s and 1950s to support and house Naval Gunnery Range personnel. These facilities have been modified continually over the last 40 years to meet the changing needs of the INL. During the time period that the retrieval area accepted waste, the buildings that the waste was shipped from were used for the following purposes: CFA-601 housed a Warehouse for chemical storage and offices for the Property Management group and a Sewage Treatment Plant; CFA-633 contained the Health Physics Instrument Laboratory, the Health Services Laboratory, a Chemical Engineering Laboratory, and an Instrument Development Laboratory; in this timeframe, CFA-646 was in the process of being phased out as the AEC Ecology Laboratory, replaced by CFA-690; CFA-654 housed the Multi-craft Shop (including Maintenance, Paint, and Lead Shops) and a Sewage Treatment Plant; CFA-665 was the Vehicle Maintenance Terminal and Automotive Repair Shop; CFA-674 was used from 1953 to 1969 as a Chemical Engineering Laboratory (CEL); CFA-687 contained a Lead Shop; and CFA-690 housed the AEC Health and Safety Division Chemical Analysis Laboratory (References ANL-W-P006, ARA-P008, ARA-U003, CFA-P001, CFA-U007, ID-C103, ID-P088, ID-P091, and ID-P118).

- The PER area originally contained four reactors constructed for the Special Power Excursion Reactor Tests (SPERT) experiments. Four SPERT (I-IV) reactors were built beginning in the late 1950s as part of an early investigation involving reactor transient behavior tests and safety studies on water-moderated, enriched-fuel reactor systems: SPERT I operated from June 1955 until 1964. Building PER-601 (later PBF-601), located approximately ½ mile from the SPERT I reactor was originally the Control Facility for SPERT I and was later used as part of the control complex for the PBF which began operations in 1972. SPERT II operated from March 1960 until October 1964. After shutdown of the reactor, the facility was used primarily for storage. SPERT-III operated from December 1958 until June 1968. SPERT-IV operated from July, 1962, until August, 1970 (References ARA-P008, ARA-U003, ID-P091, ID-P115, ID-P118, PER-P004, PER-P006, PER-P008, PER-P009, PER-P012, PER-P030, PER-P037, PER-P039, and PER-P045).

- The RWMC was established at the INL in 1952 to accommodate the radioactive waste generated by laboratory operations. Minimal amounts of waste were generated directly by the RWMC and disposed of in the SDA. The waste consisted primarily of effluents from the decontamination of shipping and transportation equipment (Reference ID-P091).

- ICP Analytical Laboratories originally consisted of the laboratories in INTEC CCP-602/630 and are currently located in RWMC WMF-TR-14, Modular Analytical

Laboratory. The mission of the INTEC/RWMC Laboratories is to provide analytical chemistry support for the certification of TRU waste disposal at WIPP. These chemical characterization services are provided for CH and remote-handled TRU waste samples (References ID-P402 and ID-P403).

- The GEM Project retrieved approximately 60 cubic meters of buried waste from a small area in the southwest end of Pit 9 at the SDA. GEM waste forms are analogous to those in the ARP in terms of form and time spent buried. The retrieved waste zone material was inspected, categorized, sampled and packaged into 55- and 85-gallon drums (References ID-P377, ID-P399, and ID-U355).

- CH2M WG Idaho, LLC (CWI) repackages ARP waste stream ID-SDA-SLUDGE at INTEC building CPP-653 (INTEC PCC [packaging configuration correction]) in support of compliant characterization and packaging of waste for disposal at the WIPP. The WIPP directed CWI to repack the ARP sludge wastes for those previously packaged drums of sludge where the tray liner was used. The tray liner forms a void space that could result in the non-compliant condition of liquid separation and accumulation in the void space. From the current population of waste, it is estimated that more than 1,700 (55-gallon drums and 85-gallon overpack drums) containers of waste will require repackaging. These actions necessitate opening the existing package, waste content removal, and subsequent repackaging for ultimate disposition at WIPP (References ID-C109, ID-P373, ID-P424, INTEC-P098, and ID-P214).

4.1.3 Other Off-Site Facilities

Off-site generators (other than the RFP) consisted of private sources (e.g., universities, hospitals, and research institutes), the military, commercial and government generators that shipped waste to the SDA. In the 1960s, the RWMC was designated by the AEC, predecessor agency to DOE, as a national disposal site for licensees that generated Low-Level Waste (LLW) (Reference ID-P091). Receipt of waste from private sources ceased in September, 1963, when commercial burial sites became available for contaminated waste from private industry (Reference ID-P218). However, the RWMC continued to receive some offsite waste from government-sponsored commercial projects through 1969 (Reference ID-U298).

About 91 cubic meters (m^3) of waste from ATI was buried in unidentified locations in the SDA. Of the 91 m^3, about 19 m^3 was shipped in 1966 and 1.81 m^3 was shipped in 1968 and could, therefore, be in the retrieval area (References ID-U297 and ID-U298). ATI, located in Canoga Park, California, conducted R&D, design, construction, and testing of several nuclear reactors and associated systems, including the series of Systems for Nuclear Auxiliary Power (SNAP) reactors used in the SNAPTRAN program at TAN, the Sodium Reactor Experiment (SRE) (Santa Susana, California), the Hallam reactor (Hallam, Nebraska), the Piqua reactor (Piqua, Ohio), and the Organic Moderated Reactor Experiment (OMRE) reactor (east of the CFA site at INL) (References ARA-P008, ARA-U003, ID-P091, ID-P112, ID-P113, and ID-P114).

Five additional facilities in Colorado generated waste in the retrieval area: the CSM (or SOM), CSMRF, USGS, the USDI and the DRI. Waste from these facilities was transferred to RFP and then to the SDA for burial (References RF-P085, RF-P562, RF-U115, RF-U400, RF-U421, and RF-U1315).

- The CSM (or SOM) is the medical school associated with the University of Colorado that conducted various biomedical research activities using radionuclides.

- The CSMRF conducted classified research for the Defense Atomic Support Agency of Tonopah, Nevada, in support of Project Roller Coaster in 1963 and 1964. The purpose of the research was to determine the distribution of special nuclear materials in various soil size fractions if a high explosive detonation occurs, including possible reactions between special nuclear materials and the mineralogical constituents of the various size fractions.

- The USGS office in the Denver Federal Center is the headquarters for the Central Region of the United States. It operates a small nuclear reactor at the Denver Federal Center, used to determine the age and chemical makeup of rocks and minerals. Also, beginning in 1956, the USGS began evaluation of the effects of underground nuclear explosions at the NTS; that program was expanded to study the geologic and hydrogeologic conditions affecting the peaceful uses of atomic energy and the disposal of radioactive wastes.

- The USDI encompasses several organizations including: the USGS, the BLM, the Bureau of Reclamation, the Bureau of Mines, the Bureau of Indian Affairs, the Interstate Commerce Commission, the National Parks Service, Territorial Oversight (including the Marshall Islands), and the U.S. Fish and Wildlife Service. It is not known what project or organization within the USDI generated the waste trans-shipped to INL, but only two drums are included in the retrieval area. This waste is not targeted for retrieval.

- The DRI, a laboratory affiliated with the University of Denver, sent small amounts of radioactive material and beryllium oxide used in chemistry classes in the 1950s after the classes were discontinued (References RF-C065, RF-C100, RF-C105, RF-C162, RF-P085, RF-P418, RF-P562, RF-U115, RF-U400, RF-U421, and RH-U1315).

4.2 Location, Description, and Mission of the Subsurface Disposal Area Retrieval Project

The RWMC is located in the southwestern portion of the INL. The SDA is a 97-acre area located within the RWMC. The SDA consists of 58 trenches, 20 pits, 21 rows of soil vaults, Pad A, and the Acid Pit, where waste disposal activities occurred. The first trench was opened in 1952. Pits were also excavated, starting in 1957, because of the large sizes of some waste items and the increased space efficiency of pit disposal (References ID-P091, ID-P103, ID-P108, ID-P249, ID-P275, ID-P368, ID-P369, ID-P396, ID-P421, ID-P422, and ID-P426).

Waste buried at the SDA presents a potential risk to the Snake River Plain Aquifer through subsurface vapor phase and aqueous transport of contaminants. For this reason, the DOE-ID has elected to retrieve waste from selected areas containing comparatively high amounts of buried TRU waste under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (42 United States Code § 9601 et seq.) National Contingency Plan (40 *Code of Federal Regulations* [CFR] 300) non-time-critical removal action process. This AK Summary Report currently addresses: 1) the ARP-I retrieval area, a ½- acre area within Pit 4; 2) the ARP-II retrieval area, an additional ½-acre adjacent to the ARP-I retrieval area encompassing portions of Pit 4 and 6; 3) the ARP-III retrieval area, an additional approximately ½-acre adjacent to the ARP-II retrieval area encompassing part of Pit 6; 4) the ARP-IV retrieval area, an approximately 0.8-arce area of Pit 5; 5) the ARP-V retrieval area, an approximately 0.6-arce area of Pit 9; 6) the ARP-VI retrieval area, an approximately 0.4-acre area adjacent to ARP-I in the mid-section of Pit 4; and 7) the ARP-VII retrival area, an approximately 0.27-acre area of Pit 10. The east wall of the existing ARP-I retrieval enclosure will not be removed, thus the waste underlying this common wall will not be accessible for excavation until after removal of the ARP-I and ARP-II retrieval enclosures. The above areas contain relatively large amounts of TRU or other contaminated materials that will be removed and packaged by the ICP. The retrieval areas were selected by DOE-ID with agreement from the EPA and the Idaho Department of Environmental Quality (References ID-P100, ID-P101, ID-P104, ID-P105, ID-P124, ID-P218, ID-P221, ID-P275, ID-P368, ID-P369, ID-P396, ID-P421, ID-P422, ID-P426, and ID-U351).

Pit 4 was open to receive waste from January 1963 through September 1967. The ARP-I retrieval area contains waste shipments from RFP buried from July 1966 to March 1967 and from INL generators from December 1965 to February 1967. The ARP-VI retrieval area contains waste shipments from RFP buried from March 1964 to March 1965 and from INL generators buried from August 1964 to September 1965. Pit 5 was open to receive waste from June 1963 to December 1966. The ARP-IV retreival area contains waste shipments from RFP buried from May 1964 to December 1966 and from INL generators buried from May 1964 to December 1966. Pit 6 was opened later, receiving waste from May 1967 through October 1968. The ARP-II and ARP-III retrieval areas contain waste shipments from RFP buried from July 1964 to September 1968 and from INL generators buried from December 1964 to September 1967. Pit 9 was open to receive waste from November 1967 through June 1969. The ARP-V retrieval area contains waste shipments from RFP buried from February 1968 to September 1968 and from INL generators buried from November 1967 to September 1968. Pit 10 was open to receive waste from July 1968 through July 1971. The ARP-VII retrieval area contains waste shipments from RFP buried from July 1968 to November 1968 (References ID-P092, ID-U343, ID-U344, ID-U345, ID-U349, ID-P422, ID-U353, INTEC-P002, RF-U1306, RF-U1307, RF-U1308, RF-U1313, and RF-U1315).

Pit 4 is located in the approximate center of the SDA and shares a common boundary on the west side of Pit 6. Pit 5 is an irregular shaped pit located north of Pits 4 and 6. Pit 9 is located on the east of Pit 5, is to the northeast of Pit 6, and shares a common boundary on the south side of Pit 7. Pit 10 is located to the south of Pits 4 and 6 and west of Pit 11. Pit 4 has a surface area of 107,082 square feet; Pit 5 surface area is 66,952 square feet.

Pit 6 is approximately half the size of Pit 4 and has a surface area of 54,984 square feet, and Pit 9 has a surface area of 43,802 square feet. Pit 10 has a surface area of 112,015 square feet. The total volume of Pit 4 is estimated at 1,600,000 cubic feet (including the overburden); the volume of Pit 5 is approximately 797,000 cubic feet; the total volume of Pit 6 is estimated at 780,000 cubic feet (including the overburden), and the volume of Pit 9 is approximately 342,416 cubic feet. The volume of Pit 10 is estimated at approximately 1,052,941 cubic feet. Maps showing the location of the ARP-I, ARP-II, ARP-III, ARP-IV, ARP-V, ARP-VI, and ARP-VII retrieval areas and the enclosures as well as the storage location for the retrieved waste are shown in Figure 3A, Map of the SDA and the ARP-I, ARP-II, ARP-III, and ARP-IV Retrieval Areas; Figure 3B, Map of the SDA and the ARP-V Retrieval Area; Figure 3C, Map of the SDA and the ARP-VI Retrieval Area; Figure 3D, Map of the SDA and ARP-VII Retrieval Area; Figure 4A, Retrieval Enclosure and Waste Storage Enclosure; and Figure 4B, Map Showing the ARP Areas (References ID-P092, ID-P101, ID-P109, ID-P218, ID-P368, ID-P369, ID-P421, ID-P422, ID-P426, ID-U113, ID-U115, and ID-U297).

4.3 Defense Waste, Spent Nuclear Fuel, and High-Level Waste Assessments

4.3.1 Defense Waste Assessment

DOE/WIPP-02-3122, *Contact Handled Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant,* (WIPP-WAC), (Reference 5), requires generator sites to use AK to determine if the TRU waste streams to be disposed at WIPP meet the definition of TRU "defense" waste. Based on guidance from the DOE, a TRU waste is eligible for disposal at WIPP if it has been generated in whole or part by one of the *atomic energy defense activities* listed in Section 10101(3) of the 42 U.S.C. 10101, *Nuclear Waste Policy Act of 1982* (NWPA) (References 6 and 8).

As described in Section 4.1.1, the atomic energy defense activity that applies to wastes generated at RFP is weapons activities (References RF-C244, RF-C290, and RF-C292). An assessment of the defense-nature of the waste historically generated at the INL facilities and other off-site facilities is not necessary, as most of the waste in the retrieval areas is from RFP, and all of the targeted waste is from RFP (targeted wastes are described in Sections 4.7.1 and 5.4.1). However, defense activities conducted in the INL facilities included U.S. Army, U.S. Navy, and space reactor development. Regardless of whether non-RFP waste is from non-defense activities, much of the wastes are commingled due to lack of container integrity and would not be feasible to segregate from RFP waste (Reference ID-P109).

4.3.2 Spent Nuclear Fuel and High-Level Waste Assessment

The WIPP Land Withdrawal Act (Reference 7) prohibits the disposal of spent nuclear fuel and high-level waste, as defined by the NWPA (Reference 8), at WIPP. According to the NWPA, spent nuclear fuel is "fuel that has been withdrawn from a nuclear reactor following irradiation, the constituent elements of which have not been separated by reprocessing." The DOE Radioactive Waste Management Manual (Reference 14) expands on this definition to clarify that "Test specimens of fissionable material irradiated for research and

development only, and not production of power or plutonium, may be classified as waste, and managed in accordance with the requirements of this Order when it is technically infeasible, cost prohibitive, or would increase worker exposure to separate the remaining test specimens from other contaminated material." High-level waste (HLW) is defined by the NWPA as "the highly radioactive material resulting from the reprocessing of spent nuclear fuel, including liquid waste produced directly in reprocessing and any solid material derived from such liquid waste that contains fission products in sufficient concentrations, and other highly radioactive material that the Commission, consistent with existing law, determines by rule requires permanent isolation."

Based on the review of AK documentation, spent nuclear fuel (i.e., intact fuel elements) may have been buried in Pit 4, but not in the retrieval area. Spent nuclear fuel is not a targeted waste and will be segregated if encountered during retrieval operations. The Fuel Processing Facility (CPP-601) reprocessed highly enriched spent nuclear fuel to recover the uranium. High-level wastes generated by this facility were acidic liquids that were transferred to the Tank Farm, and were not buried in the SDA. Waste from CPP-601 buried in the retrieval area consists of dirt, masonry waste (e.g., concrete, sand, gravel), and debris waste (e.g., rags, paper, wood, metal, pump heads), and is not HLW (References 6, 7, 14, ID-C105, ID-P091, INTEC-C001, INTEC-P001, and INTEC-U001).

The FCF became operational in 1964 and was used to demonstrate pyrometallurgical irradiated fuel reprocessing for spent EBR-II fuel from September 1964 to early 1969. After successfully demonstrating the process, this mission was discontinued; the facility was refurbished and was used to examine irradiated fuels and material experiments from EBR-II and TREAT and to provide other reactor support services such as spent fuel transfer to CPP (References ANL-W-P001, ANL-W-P003, ID-P091, and ID-P118). Wastes received in the retrieval areas from ANL-W include shipments from ANL-W-601 (including EBR-I, BORAX I-V, AFSR, and ZPR-II) and ANL-W-767 (EBR-II). Wastes received from ANL-W-601 include empty boxes and pallets, iron, wood, and canvas. Wastes received from ANL-W-767 include contaminated equipment, a metal shear station packaged in a lead-lined wooden box, plastic, paper, glass, wood, and steel and iron machine parts packaged in a lead-lined wooden box. FCF high-level waste and later HFEF high-level waste, was packaged in sealed metal containers and stored in carbon-steel-lined holes in the Radioactive Scrap and Waste Facility (RSWF), near the EBR-II area. Therefore, wastes from ANL-W included in the ARP retrieval areas are not HLW (References ANL-W-P003, ANL-W-P006, ANL-W-P008, ARA-U003, ID-P118, ID-U103, ID-U326, ID-U327, and ID-U344).

4.4 Historical Waste Generating Processes

The historical processes that generated waste buried in the retrieval area; and the process of excavating, examining, and packaging the waste for eventual shipment and disposal at WIPP are described in this section. The waste buried in the retrieval area was generated by several facilities at the INL but was primarily generated at RFP. The radioactive isotopes used in these operations are listed in Section 5.5. Chemicals used in these operations are listed in Section 5.6.

4.4.1 Rocky Flats Plant

This section describes the RFP operations associated with the generation of the radioactive waste inventory in the retrieval area. Although the retrieval is a targeted retrieval effort for specific waste materials, other waste materials will also be recovered and mixed with the targeted waste materials. For this reason, it is important to describe the range of operations that generated the wastes that may be encountered. As a result, the following sections provide an overall description of the processes that took place at RFP prior to approximately 1968. These activities include plutonium, EU, depleted uranium (DU), and beryllium operations, final assembly, laboratory, R&D and special order operations, waste treatment, and maintenance and utility operations. Non-routine events including fires, renovations, and decommissioning also generated TRU waste.

4.4.1.1 Plutonium Operations

TRU wastes generated at the RFP were primarily associated with operations that manufactured, recovered, and treated plutonium metal and plutonium containing materials. Plutonium operations were conducted in Buildings 771, 776, and 777.

Plutonium Component Production

Plutonium production consists of operations directly associated with the manufacturing of plutonium metal parts including casting, rolling, forming, machining, inspection, and assembly processes. Building 771, originally C Plant, housed plutonium production operations at RFP startup. Production facilities were expanded in 1957, when the primary plutonium fabrication and component assembly functions moved to Buildings 776 and 777. Production operations changed slightly to accommodate plutonium technological changes and weapon designs, which resulted in more rolling, forming, and machining of plutonium than was required in the first years of production. Original plutonium parts were cast from molten metal using graphite molds, then machined to final configuration.

Following expansion and design changes in 1957, plutonium parts were primarily produced by a wrought process. The wrought process involved casting of plutonium ingots in graphite molds. The ingots were then rolled into sheets and parts cut from the sheet then annealed, formed, milled and machined into final configuration. Support operations included gloveboxes for graphite mold handling and plutonium scrap briquetting which pressed plutonium scrap from stamping and machining operations into a brick or 'puck' which was returned to the foundry for recasting (References RF-C180, RF-C184, RF-P047, RF-P084, RF-P085, RF-P091, RF-P260, RF-P262, RF-P264, RF-P562, RF-U115, and RF-U157).

Plutonium Recovery and Purification

The primary objective of plutonium recovery operations was the recovery of plutonium from site-return parts as well as from RFP scrap, waste materials and residues, and liquid effluent streams. The final product of this recovery effort was high-purity plutonium metal for use in foundry operations with the secondary objective of recovery and purification of

americium-241, present in the plutonium feed stream from site returns and stockpiled plutonium (References RF-P047, RF-P084, RF-P085, RF-P091, RF-P260, RF-P262, and RF-P264).

Plutonium recovery operations were primarily conducted in Building 771. The recovery system in Building 771 was composed of essentially two processes termed the fast cycle (fast recycle or fast side) processes and slow cycle (slow recycle or slow side) processes. The feed to the fast cycle processes were residues of high concentrations of plutonium such as casting skull, impure metal, plutonium oxide, and site-return plutonium metal. The heel by-product (un-dissolved solids) was recycled back through the dissolution process. The materials were dissolved using nitric and/or hydrofluoric acids in the dissolution steps, the resulting solution was precipitated to convert the plutonium to solid plutonium peroxide, which in turn was heated (calcined) to change it to plutonium oxide, a powder that was often called "green cake." The plutonium oxide was then reacted with anhydrous hydrogen fluoride vapor to convert it to plutonium tetrafluoride, "pink cake." In the thermite reduction process, the plutonium tetrafluoride was then reduced by reaction with calcium metal and iodine to convert it to plutonium metal. The final product "button" was sent to the foundry as feedstock (References RF-P084, RF-P085, RF-P091, RF-P099, RF-P108, and RF-P116).

Slow cycle recovery operations involved different types of material processing depending on the nature of the residues to be handled. Metal contaminated with plutonium was processed through a metal leach process where nitric acid was used to leach the plutonium from the metal. All combustible residues were incinerated to reduce the bulk of the materials and convert the plutonium to an oxide form. Graphite molds were mechanically cleaned or 'scarfed' to remove the outer layer of material containing any plutonium. The incinerator ash, graphite and graphite scarfings, sand, slag, & crucible (SS&C), insulation, tantalum, glass, and filter sludge were leached with nitric-hydrofluoric acid mixture. Glovebox gloves, plenum filters, and glovebox filters were rinsed with dilute nitric acid. Liquid effluents from these operations were processed through cation exchange, then anion exchange, and then sent to the plutonium peroxide precipitation stage as described for fast cycle recovery. Solid slow cycle residue materials, such as incinerator ash and graphite scarfings, were processed through dissolution, then anion exchange prior to precipitation. These operations remained the same, with the exception of anion exchange. Prior to 1958, plutonium from liquids fed to the slow cycle process was separated by solvent extraction with tributyl phosphate rather than anion exchange (References RF-P084, RF-P085, RF-P091, RF-P099, RF-P103, RF-P108, RF-P116, RF-P262, RF-P264, and RF-U157).

Americium recovery began in 1954 on a laboratory scale with continued process development. Liquid effluent from the plutonium recovery peroxide step was processed by ammonium thiocyanate ion exchange to further recover plutonium and separate and purify americium. Plutonium rich solutions from this process were sent to the slow cycle plutonium recovery operations. Americium rich solutions were precipitated with oxalic acid and calcined to americium oxide (References RF-P073, RF-P084, RF-P085, RF-P091, RF-P260, RF-P264, RF-P562, and RF-U115).

Between 1962 and 1965, expansion and changes occurred to some of the processes to increase productivity. The original batch method of chemical reprocessing was changed to continuous processing and additional processing capacity, including an additional americium recovery line, and additional dissolution lines, filtrate recovery, batching, calcinations, and fluorination operations were all added (References RF-P084, RF-P085, RF-P091, RF-P099, RF-P108, RF-P116, RF-U157, RF-P262, and RF-P264).

Pyrochemical operations were developed in Buildings 771 and 776 starting in the early 1960s and put into production in Building 776. An in-situ electrorefining process was developed in which non-specification plutonium metal was electrorefined through the oxidization of a chloride salt mixture to produce purified plutonium and americium rich salt. Production-scale electrorefining in Building 776 began in 1966 (References RF-P084, RF-P262, RF-P264, and RF-U141).

Direct Oxide Reduction (DOR) research at RFP began in 1967. DOR produced plutonium metal from plutonium oxide without aqueous processing. It involved batch processing plutonium oxide feed through a high temperature calciner with calcium metal and chloride salt to remove moisture and drive off volatiles. The resulting plutonium button was sent to the foundry, if pure, or sent to electrorefining for additional refining (Reference RF-P084).

Beginning in 1967, molten salt extraction (MSE) was initiated in Building 776 for the removal of americium from plutonium from site return parts. Non-specification plutonium metal was heated with oxidant (magnesium chloride) and solvent chloride salts (sodium chloride and potassium chloride) producing a purified plutonium button and a contaminated chloride salt. The button was sent either to the foundry, if pure, or to electrorefining for additional refining. The salts from the MSE process were dissolved in water, precipitated with ammonium thiocyanate, the precipitate dissolved in nitric acid, and fed to the americium recovery process in Building 771 (References RF-P084, RF-P085, RF-P091, RF-P099, RF-P108, RF-P116, RF-P262, RF-P264, and RF-U157).

4.4.1.2 Enriched Uranium Operations

Originally located in Building 881, or B Plant, EU operations included production chemistry, foundry operations, fabrication, inspection, parts cleaning, EU recovery, and scrap material recycling.

Enriched Uranium Component Production

Similar to plutonium production, EU parts were originally cast as solid pieces of uranium, which were machined to final configuration. Following the changes in weapon design in 1957, parts were fabricated from milling and machining uranium from cast ingots. Following fabrication, uranium parts were assembled with plutonium, stainless steel, and DU components in Final Assembly conducted in D Plant (now known as Building 991 – see Section 4.4.1.5 below) (References RF-P085, RF-P084, RF-P105, RF-P247, RF-P562, and RF-U115).

In addition to Building 881, the "B"-side of Building 883 was also used to conduct EU component operations. As a result of the weapons design change and the additional

required fabrication effort, Building 883 was constructed (starting operations in 1957) to handle uranium rolling and forming operations. Process operations included parts and ingot casting, cleaning and heating materials prior to shaping, rolling the metal into sheets, cutting part blanks, forming, machining, and milling into required shapes, and cleaning after shaping. As described for plutonium production, EU scraps from cutting and machining operations were briquetted, and the pucks returned to the foundry for recasting. Building 887, a two-level structure located just south of Building 881 and built in 1953, was designed as a waste collection and transfer facility which stored process waste and laundry water in tanks until the waste could be transferred to Building 774 for treatment. A sanitary lift station was also located in the building (References RF-P025, RF-P064, RF-P084, RF-P247, RF-P562, and RF-U115).

Enriched Uranium Recovery

Enriched uranium recovery operations began in Building 881 within months after startup of fabrication operations. These operations were similar to plutonium recovery operations consisting of "fast" and "slow" recycle processes. Feed to the fast recycle process consisted of relatively pure materials such as uranyl nitrate solution, skull material from foundry operations, and chips from machining operations. Solid materials were processed by air oxidation on a hotplate followed by dissolution in nitric acid to form uranyl nitrate solution. The solution was precipitated with hydrogen peroxide to a hydroxide which was calcined in a furnace to an oxide, then converted to uranium tetrafluoride using hydrogen fluoride gas and reduced to uranium metal using calcium metal and iodine (References RF-P064, RF-P084, RF-P105, and RF-P260).

Slow recycle recovery handled relatively impure materials with lower uranium content which required more extensive processing. Combustible materials were incinerated. Solid materials such as SS&C from foundry operations and incinerator ash were milled to pea size and sent to dissolution. At the end of the dissolution trough, the acid slurry passed through a rotary filter. The solids scraped from the filters were assayed for uranium content; solids above discard limits were reprocessed through larger equipment. Solids below discard limits were disposed as "discard mud." Dissolution liquid effluent was processed by solvent extraction with dibutyl carbitol producing a concentrated uranyl nitrate solution which was fed to the precipitation step as described for fast recycle. Primary raffinate from solvent extraction was originally set up using cement in Building 774. Later, when production increased, raffinate was sent to the solar evaporation ponds (References RF-C133, RF-P064, RF-P084, RF-P105, RF-P260, RF-P264, RF-P562, RF-U115, and RF-U127).

After 1960, site-return parts were processed for recovery. These operations included an "oralloy leaching" operation in which EU parts were leached with nitric acid to remove residual plutonium surface contamination. Some amount of uranium was also removed by the leaching process. The resulting solutions were precipitated and converted to an oxide, and the oxide sent to Building 771 for plutonium recovery. After leaching, the uranium parts were size reduced in a press and processed for recovery (Reference RF-P084). Enriched uranium component operations in Buildings 881 and 883 were removed from the plant between 1964 and 1966, along with the uranium recovery operations, following a

change in RFP mission in 1964; these operations were performed at the Oak Ridge National Laboratory. However, even after these operations left RFP, the plant still received site returns which contained EU components. The oralloy leaching process continued operation in Building 881, however, after leaching, the uranium parts were sent to Oak Ridge for reprocessing. Oralloy leaching operations were relocated to Building 771 between 1973 and 1975 (References RF-P064, RF-P085, RF-P084, RF-P247, RF-P260, RF-P562, and RF-U115).

4.4.1.3 Depleted Uranium Operations

Depleted uranium operations were conducted in Plant A, including Buildings 444, 447, and the "A"-side of 883. Operations began in 1952 in Building 444 including casting, machining, heat treating, coating, plating, cleaning, and inspection. These operations were similar to those described previously for plutonium and EU fabrication. Rolling and forming was conducted in Building 883 from the late 1950s (References RF-P084, RF-P085, RF-P247, RF-P562, and RF-U115).

In Building 883, DU ingots from Building 444 were rolled and formed into parts. To make the metal malleable for rolling the ingots were placed in a furnace and/or heated eutectic salt bath, rolled to sheet form, and the sheets annealed in a second salt bath. The parts were cut from the sheet for forming, then returned to Building 444 for final machining. Turnings and other DU residue materials were returned to Building 444 for recasting or conversion to roaster oxide in Building 447 for disposal (References RF-P084, RF-P085, RF-P247, RF-P562, and RF-U115).

Building 447 operations included limited equipment to support Building 444 operations comprised of assembly-related processes such as non-destructive testing, grit blasting and lapping, electron beam welding, electrochemical milling, heat treatment, and vacuum arc melting related to the manufacture of depleted uranium, beryllium, and other non-nuclear components. Parts and assemblies were received from Buildings 444 and 883 for cleaning, assembly, and inspection. Depleted uranium chips, turnings, and fines from machine operations in Buildings 444 and 883 were sent to Building 447 for processing in the chip roaster. Operations conducted in Building 447 related to waste management included roasting depleted uranium chips and turnings, cementation activities for some wastes, and shipping and receiving. It appears that most of the wastes generated in Building 447, including roaster oxide, were identified on the disposal records as originating in Building 444 (References RF-P084, RF-P247, RF-P562, RF-U115, and RF-U400). During the 1960s, several DU alloys were used in fabrication operations. The two main alloys were niobium and titanium. Aluminum, copper, and lead were used as substitutes for DU in casting and back-machining operations (References RF-C123, RF-P562, and RF-U115).

Building 444 also housed the Carbon Shop which prepared graphite molds for the entire site. Graphite molds and crucibles used in the depleted uranium foundry and production operations were manually cleaned using wire brushes and other hand tools (Reference RF-P084).

In addition to DU operations, coating and plating operations were performed on non-nuclear parts such as stainless steel, copper, chromium, and cadmium. Plating operations utilized cyanide plating solutions. Cadmium and chromium plated materials were machined and the turnings were included in contaminated waste (References RF-C123, RF-P084, RF-P562, and RF-U115).

4.4.1.4 Beryllium Operations

Beryllium operations were primarily conducted in buildings containing depleted and/or EU operations. Some beryllium operations, such as machining, were segregated from uranium operations; however waste from other operations was commingled. Commingled waste containers were identified as beryllium waste. Therefore, a description of these operations is included in this document (References RF-C123 and RF-U151).

Production of beryllium components began in 1957 and consisted of machining and inspection of beryllium forms from off-site vendors. A wrought beryllium process was developed in 1962 to recycle scrap into cast forms available for machining (References RF-P084, RF-P562, and RF-U115).

Beryllium R&D began in 1954 using powder-metallurgy blocks of beryllium produced at RFP or received from off-site. Beryllium production and fabrication began in 1957 and was primarily conducted in Buildings 444, 881, and 883. Shapes continued to be produced by machining from a solid, powder-metallurgy block of beryllium. Production of pressed-powder beryllium blocks was performed at RFP in addition to receiving blocks from off-site vendors. The sintering procedure, plus the toxicity and reactivity of the starting powder, related to the high cost of the finished product. Beginning in 1961, RFP was involved in the conversion of commercial-grade, S-200 scrap beryllium, originally produced by powder-metallurgy technique, into ingot sheet and usable shapes (wrought ingot process) as an economical savings program. Ingots were cast in Building 444 and encapsulated in stainless steel cans. Beginning in 1967, steel encapsulation was performed in Building 881. In Buildings 881 and 883 the cans were heated, rolled into a sheet, and the steel container materials cut away. The steel was originally disposed, but later was cleaned of beryllium and sold as scrap. The beryllium sheet was further rolled bare, as needed. The finished beryllium sheet was acid etched and heat treated to remove cracks and thin the material, and the shapes were then cut and formed into parts. The formed beryllium parts were returned to Building 444 for final machining (References RF-C123, RF-P064, RF-P080, RF-P084, RF-P244, RF-P562, RF-U115, RF-U237, and RF-U404).

Components were handled and assembled into configurations by personnel in Buildings 776 and 777. Small scale machining and disassembly of stockpile returned pits in B777 generated beryllium contaminated waste (References RF-P562, RF-U115, and RF-U404).

4.4.1.5 Final Assembly

The original final assembly building was the "D Plant," now known as Building 991. The original final assembly operations are reported to have used a small amount of acetone or trichloroethylene solvent to wipe-down components and the finished product. Final assembly of the early concept design products was apparently a relatively simple operation; however, the later hollow-core design required more operations and greater controls. As a result of the additional requirements associated with the hollow-core design, Building 777 was put into service to provide necessary support. The operations involved in final assembly of the hollow-core design included drilling, welding, brazing, turning and polishing DU, EU, beryllium and plutonium parts (References RF-P085, RF-P084, RF-P562, RF-U115, and RF-U151).

4.4.1.6 Laboratory Operations

The laboratories in Buildings 559, 771, and 881 supported production operations at the site. The primary function of the laboratories was to provide sampling and analysis support for production activities. In addition, the laboratories supported recovery, purification, and liquid waste treatment operations.

Building 559 housed the Plutonium Analytical Laboratory, constructed in 1967. With increased R&D support provided by the laboratories in Buildings 771 and 881, this laboratory was built to accommodate analytical support for increased plutonium production. Building 559 became the primary analytical laboratory for plutonium analyses including incoming plutonium site returns and feed material, plutonium from recovery, plutonium from production casting operations, and plutonium alloys. Analyses performed were for plutonium purity, identification of impurities in the plutonium and the alloys, and the concentration of various alloy materials used with plutonium. Material forms analyzed included metal, liquid, and oxide (RF-P085, RF-P094, RF-P562, and RF-U115).

Building 771 housed analytical and chemical standards laboratories. Samples were analyzed for plutonium, americium, uranium, neptunium, and other radioactive isotopes, as well as soluble residues in various solvents and solvent mixtures. Analyses were also performed on samples of plutonium received from buttons after thermite reduction, from R&D groups in Building 771 to identify the isotopic composition and any impurities, and samples of recovery and waste treatment effluents. The chemical standards laboratory prepared control sample standards for the analytical laboratory in Building 771. The analytical laboratory provided analytical support for plutonium operations (References RF-P084, RF-U117, RF-U212, and RF-U404).

Similar to Building 771, the Building 881 analytical and chemical standards laboratories primarily provided support for uranium operations and general site analytical support. Building 881 analytical laboratory operations included wet chemical analysis and emission spectrographic analysis (References RF-P084, RF-P562, RF-U115, RF-U151, and RF-U404).

Building 123 was a health physics laboratory which carried out bioassays and engaged in low level radiological studies. Specific activities included analyses of personnel dosimeters

and airborne sample analyses, including stack samples and general room air samples. These efforts generated a few drums per year of combustible waste which was shipped to INL (References RF-P085, RF-P181, RF-P562, and RF-U115). Refer to Table 5-5, Chemical Contaminants in Waste Buried in the Retrieval Area, for chemicals used in RFP laboratories.

Building 441 contained a general analytical laboratory, including a spectrochemical laboratory and chemical stockroom, which supported the depleted uranium and beryllium operations and general site chemical analyses. Prior to the completion of Building 123, the Health Physics laboratory was located in Building 441. The building also contained a few metal working machines to handle special metallurgical needs for depleted uranium and beryllium. Early non-destructive analysis, which required film negative processing, was also performed in Building 441. The laboratory operation was relocated to Building 881 in 1966; the laboratory equipment was stripped out and the laboratory area converted to office space for plant engineering. The beryllium machining operations continued into the 1970s (References RF-C032, RF-P084, RF-P085, RF-P093, RF-P562, RF-U043, RF-U061, RF-U112, RF-U115, RF-U151, and RF-U409).

4.4.1.7 Research and Development and Special Order Work

R&D included activities related to production, recovery, and purification as well as "special order" work, or work involving materials processed separately. Building 779, which was built in 1965, housed much of the R&D operations at the plant. Other areas at the plant supporting R&D included Buildings 331, 771, 776, 777, 881, and 886.

Research and Development

R&D related to uranium and beryllium casting and fabrication equipment and methods was conducted in a temporary development facility in Building 331. A special project involving natural thorium was also conducted in the building utilizing temporary facilities. This work was primarily casting, rolling, and fabrication. The thorium scrap was returned to Oak Ridge (References RF-P065, RF-P085, RF-P562, RF-U038, RF-U046, RF-U115, and RF-U151).

Several R&D activities were conducted in Building 771. Plutonium metallurgy operations consisted of casting, heat-treating using oil, rolling, forming, forging, sizing, swaging, vapor degreasing using trichloroethylene, electro-etching in various acids (e.g., hydrochloric, nitric, oxalic, phosphoric), and mechanical and electro-polishing using nitric acid, hydrochloric acid, ethylene glycol, and alumina. Supporting operations included metallography, x-ray diffraction, tensile testing, density measurements, and powder metallurgy. Manufacturing R&D operations included recovery of plutonium from electrorefining salts and crucible residues and metal and plutonium chloride salt leaching. Product R&D activities included experiments with various materials to determine their suitability for use in the plutonium areas and glovebox operations list. Plutonium Chemistry Technology in Building 771 supported and developed improved methods for recovering, separating, and purifying actinides from acidic streams (References RF-P018, RF-P084, RF-P137, RF-P187, RF-P218, RF-P241, RF-P250, RF-U117, RF-U139, RF-U201, RF-U202, RF-U203, RF-U210, RF-U212, and RF-U217).

In 1964, an incident occurred involving an explosion between plutonium and carbon tetrachloride in Building 776 during a briquetting operation. This incident resulted in R&D projects that examined the interaction of plutonium with a variety of solvents, including carbon tetrachloride, trichloroethylene, 1,1,1-trichloroethane, and 1,1,2-trichloro-1,2,2-trifluoroethane (References RF-P084, RF-P085, RF-P102, and RF-P187).

The purpose of Building 779 R&D was to gain more knowledge of the chemistry and metallurgy of plutonium and its interactions with other materials which might be used in plutonium operations. Other activities in Building 779 included developing improvements to the manufacturing process and finding new ways to recover plutonium and associated actinides. Another function was to develop a better understanding of the aging and shelf-life limitations of RFP products. Most of the materials used and wastes generated in this facility were the same as those in the production and recovery buildings, as much of the work conducted involved improvement of existing processes. Operations included parts and tool machining and fabrication, tensile testing, casting dynamics, electron microscopy, x-ray analyses, hardness testing, etching, dimensional dynamics, plutonium hydriding, joining and welding, and dimensional inspection (References RF-P040, RF-P085, RF-U151, RF-U152, and RF-U208).

R&D work conducted in Building 881 between 1966 and 1983 included inertial fusion activities to machine specialty micro-parts for weapons and energy generation research. Inertial fusion technology involves the conversion of the energy from focused accelerated ions to generate electrical energy. Large and small parts were machined, the small parts were plated with gold, and the parts were assembled (Reference RF-P084).

Nuclear criticality experiments were conducted in Building 886 (commissioned in 1965) pertinent to RFP EU and plutonium operations. These experiments involved liquid, powder, and solid forms of fissionable materials including (References RF-P060, RF-P110, RF-P112, RF-P245, RF-P247, RF-P562, and RF-U115):

- Plutonium and EU metal shapes
- Plutonium and EU metal shapes in solutions
- Plutonium and EU metal, oxide, or solution units in storage arrays
- Boron steel plates and borosilicate Raschig rings in aqueous solutions of plutonium and EU
- Plutonium and EU solution measurements in complex geometries

Beryllium R&D including welding and coating was conducted in Building 991 starting in 1964 (References RF-P084 and RF-U404).

Special Order Work

A number of special projects were conducted in Building 444 in support of R&D including:

- Lithium salt machining similar to DU machining in 1961-1963
- ZPPR element fabrication by alloying uranium and molybdenum in 1967-1968
- Cadmium was rolled and formed like beryllium in R&D operations (Reference RF-P084)

Other ZPPR work was conducted in the 700 Buildings. Plutonium from the United Kingdom was alloyed with uranium and molybdenum in Building 771. The fuel plates were clad with stainless steel in Buildings 776 and 777 (References RF-P084 and RF-P085).

Special order work was performed for Los Alamos Scientific Laboratory, now Los Alamos National Laboratory (LANL), and Lawrence Radiation Laboratory (LRL), now Lawrence Livermore National Laboratory (LLNL) and Lawrence Berkeley National Laboratory (both were known as LRL), in support of nuclear device diagnostics following test shots at the NTS. Radionuclide tracers consisting of Np-237, Cm-244, Ce, Pu-242, Pu-238, Am-241, and U-233 were fabricated in the 1960s (References RF-P562 and RF-U115).

Np-237 and U-233 were the prevalent tracer materials used. The trace material was added to plutonium, DU, or EU metal in minor quantities to form an alloy. The alloy was used as part of a feed ingot and cast into a part ingot which was rolled, formed, and machined to the final part configuration (References RF-P064, RF-P084, RF-P562, and RF-U115). Np-237, U-233, and Cm-244 were received at RFP as oxides and were converted to metal for casting purposes. Recovery of neptunium residues was also conducted similar to plutonium or uranium recovery operations. Thorium containing components were also fabricated for a short period in the late 1950s to early 1960s with the scrap residues shipped to the SRS or Oak Ridge National Laboratory (References RF-P064, RF-P084, RF-P260, RF-P263, RF-P264, RF-P562, and RF-U115).

Other special order work was conducted in Building 881 between 1953 and 1966 and included recovery of unirradiated fuel rods and cadmium plating of uranium parts. Several thousand rejected beryllium-coated uranium fuel rods were processed by dissolution in nitric acid. Uranium artillery pieces were coated with cadmium and machined (Reference RF-P084).

Lithium metal fabrication was conducted in Buildings 777 and 881. The lithium was pressed and machined in Building 777 and also handled in Building 881 (Reference RF-P084).

4.4.1.8 Waste Treatment

Waste processing at RFP treated both liquid and solid process wastes. The majority of waste from waste treatment operations shipped to INL was from liquid waste treatment conducted in Building 774.

Liquid Waste Treatment

When Building 774 was constructed in 1952, its primary purpose was to support Building 771 by treating its radioactive liquid wastes for disposal. Secondarily, it treated radioactive and/or chemically contaminated liquid waste from the rest of the RFP. Liquid waste treatment operations have had relatively few process changes over the years. The original processes in Building 774 included First Stage Precipitation and Second Stage Precipitation and the Solar Evaporation Ponds. Later additions include Organic Liquid Waste Treatment (Grease Plant), Special Setups (Bottle Box), and the Evaporator and Double-Drum Dryer (References RF-P047, RF-P098, RF-P108, RF-P260, RF-P261, RF-P264, and RF-U111).

The aqueous liquid waste treatment process was divided into two separate areas or "stages." The first stage received and treated only plutonium and americium contaminated aqueous liquid wastes by neutralization (lime and sodium or potassium hydroxide), precipitation (ferric sulfate and calcium chloride or magnesium sulfate), flocculation (Purifloc nonhazardous polyacrylamide coagulation agent), clarification, and filtration. The sludge from precipitation and flocculation was fed to the vacuum drum filter for de-watering and drumming for off-site disposal. The second stage received and treated enriched and depleted uranium contaminated aqueous liquid wastes, in addition to treated plutonium and americium contaminated wastes from the first stage. Similar to first stage operations, these liquids were made basic when necessary, then processed by precipitation and flocculation. Liquid effluent was recycled back to the process, sent to the evaporation ponds, or discharged from the site. Solids were filtered and drummed for off-site disposal (References ID-C101, RF-C132, RF-P047, RF-P085, RF-P098, RF-P260, RF-P264, RF-P562, RF-U110, and RF-U115).

Aqueous wastes not compatible with either first or second stage processes were isolated and processed in Special Setups where they were solidified with dry magnesia and Portland cements in 55-gallon drums (References RF-P047, RF-P085, RF-P098, RF-P260, RF-P264, RF-P562, and RF-U115).

Construction of asphalt-lined solar evaporation pond No. 2A (later designated 207A) was completed in August 1956. It was designed to hold acidic nitrate wastes, primarily Building 881 raffinate. Continued growth in the production of nitrate wastes, plus less than anticipated solar evaporation, necessitated the construction of a second asphalt lined pond in June 1960; No. 2B (later designated 207B). This pond was designed in three compartments (North, Center, and South) and basic wastes were stored here. Based on radionuclide, hexavalent chromium, fluoride, and nitrate content, the following wastes were transferred to these ponds: treated wastes from Building 774; untreated liquid waste from Building 776 photo laboratory; untreated laundry and laboratory wastes from Buildings 123, 441, 442, 444, 559, 771, 776, and 881; and untreated plant process waters from Buildings 444, 881, and 883. These wastes included waste hypo solution from radiography (until recycled off-site) and hard to treat wastes such as the Building 881 raffinate, scrubber water, and other miscellaneous wastes (References RF-C012, RF-C080, RF-C133, RF-C156, RF-C415, RF-C417, RF-C446, RF-C447, RF-P047, RF-P064, RF-U052, RF-U059, RF-U061, RF-U095, RF-U111, RF-U126, RF-U127, and RF-U420).

In addition to the above process wastes, these ponds are known to have received wastes such as uranium and beryllium-contaminated liquid waste from Coors Porcelain Company, sanitary sewage sludge, aluminum metal contaminated with depleted uranium, lithium metal, sodium nitrate, ferric chloride, lithium chloride, sulfuric acid, ammonium persulfate, hydrochloric acid, nitric acid, hexavalent chromium, and cyanide solutions. Solvents and other organics were not routinely discharged to the ponds because it was felt that organics would lead to algae growth which would diminish solar evaporation; however, low concentrations of solvents may have been present as minor constituents in other aqueous wastes that were transferred to the ponds. These ponds remained in use until the 1980s (References RF-C235, RF-U033, RF-U126, RF-U127, and RF-U420).

Installed in 1966 and in service beginning in 1967, an evaporator and double-drum dryer began to treat liquids that had accumulated in the solar evaporation ponds. The distillate and other materials that evolved from the evaporator were untreated and discharged to the atmosphere. The evaporator bottoms were transferred to the double-drum steam-heated dryer where the remaining water was evaporated, leaving a film of dry salts baked on the rotating drum surfaces. The dust scrubber system pulled any fumes off the dryer and the scrubbing solution was also processed through the evaporator. The salt on the drums was scraped off using a knife-blade arrangement. The dried salts, containing less than 10 weight percent water, were collected in 55-gallon drums for shipment off-site and were identified as 745-sludge. Due to the limited capacity of the evaporator, wastes continued to be stored in the solar evaporation ponds. This evaporator was taken out of service in 1979 (RF-C149, RF-C415, RF-P047, RF-P085, RF-P098, RF-P108, RF-P260, RF-P261, RF-P264, RF-P562, RF-U110, RF-U115, RF-U126, RF-U127, RF-U172, and RF-U419).

Plutonium and uranium machining used large quantities of lathe coolant made up of solvents and oil and large quantities of solvents used for cleaning and degreasing (primarily Texaco Regal oil [paraffinic base oil containing 2, 6-diterbutyl-4-methyl phenol], carbon tetrachloride, 1,1,1-trichloroethane, and trichloroethylene). Treatment methods were developed to handle these large quantities of liquid. In 1954 distillation of depleted uranium-contaminated machining coolant was implemented in Building 444. Still bottoms were either burned or buried on-site while condensate was transferred to Building 774 for treatment. Solvent stills in Building 881 were operated from 1958 to 1962 to recycle spent solvents and oils. A still and centrifuge for treatment of plutonium contaminated solvents and oils from Buildings 776 and 777 were installed and a distillation process developed in Building 771 from 1958 to 1960. These operations were not as successful as anticipated and, eventually, the organic liquids were simply treated by filtration and processed in the "Grease Plant" (References ID-C101, RF-C117, RF-C147, RF-C207, RF-C416, RF-P084, RF-P085, RF-P097, RF-P108, RF-P119, RF-P260, RF-P261, RF-P264, RF-P562, RF-U115, RF-U123, RF-U133, and RF-U254).

In 1965, the "Grease Plant" began processing backlog and newly generated organic liquid wastes. Contaminated lathe coolant and other organic solvents, primarily from plutonium and EU machining operations, were transferred at a controlled rate into a continuous self-cleaning mixer/processor. The organic liquids were blended with calcium silicate in a mixer and extruded into lined 55-gallon drums.

This waste was identified as organic setups or 743-sludge (References RF-C117, RF-P047, RF-P085, RF-P097, RF-P108, RF-P119, RF-P260, RF-P261, RF-P264, RF-P562, and RF-U115).

Solid Waste Treatment

Solid waste treatment operations were conducted for plutonium and uranium recovery, or to render the final waste form suitable for transportation and disposal. Waste treatment operations relative to recovery were conducted in Buildings 771, 776, 881, and 883 as previously addressed.

Solid waste treatment of depleted uranium and beryllium waste was conducted in Building 447. Starting in 1956, pyrophoric uranium chips, fines turnings, chunks, and casting skulls from DU and DU-alloy fabrication operations were roasted in a furnace to an oxide form. The uranium materials were rinsed with hot water to remove excess oils and coolants, and then fed to the entry chute of the roaster. Ignited on initial feed, the chips passed down and across a four-tier grate system into a 30-gallon drum. The roaster operated continuously with the exception of 1959 through 1961 during which time the roaster was relocated from Room 409 to 502 and a new air filtration system added. The new filtration system did not function properly resulting in an eight-month halt in roaster operations. During this period, potential feed materials were stored on-site in 55- and 30-gallon drums, which were disposed in RFP trenches (References RF-C416, RF-P084, RF-P247, RF-P402, RF-P403, RF-P562, and RF-U115).

Composite chips containing DU, stainless steel, and aluminum turnings and fines from Building 444 machining operations were cemented in Building 447. The chips were mixed with Portland cement and layered with pure cement in un-lined drums (References RF-C010, RF-C045, RF-P084, RF-P562, and RF-U115).

4.4.1.9 Routine Maintenance and Utilities

Routine maintenance at RFP consisted of a variety of activities supporting plant operations including utilities, filter testing and replacement, removal and replacement of obsolete equipment, and change-out of oils, coolants, and Raschig rings. Most of the buildings contained maintenance operations for the building and peripheral areas. Utility operations included the up-keep of the heating, ventilation and air conditioning (HVAC), fume scrubbers, and process vacuum systems. The Filter Testing group was responsible for in-place testing of plenum HEPA filters (References RF-P085, RF-P562, and RF-U115).

Building 334 was the primary maintenance facility and included both offices and shops. Activities included: electrical work, carpentry, sheet metal work, pipe fitting, HVAC, glass shop, machining, welding, instrument shop (i.e. Standards Lab), and uranium spraying. Wastes such as used oils, hydraulic fluids, and coolants were put in appropriate containers and then processed through waste operations for disposition. In the 1960s, several pieces of equipment from buildings 444 and 881 were installed here. Upon removal of this equipment in the 1980s, radiological contamination was found in and under the machinery.

Some specialty uranium machining work was also performed here (References RF-U151 and RF-P065).

4.4.1.10 Non-Routine Operations

Non-routine operations included strip-out operations, renovation, and activities associated with fires and other incidents. Strip-out of glovebox lines, process piping, valves, and associated systems were performed to remediate radioactive contamination from these incidents as well as for renovation or decommissioning of operations.

Fires were a continual accident hazard when working with pyrophoric materials such as plutonium and uranium. Over 600 fires occurred between January 1955 and December 1974. Of these, more than half occurred within plutonium processing areas of the plant with emissions contained by the glovebox and building filtration systems (References RF-P047, RF-P084, RF-P085, RF-P107, RF-P562, and RF-U115).

A large plutonium casting residue fire occurred in the Building 771 development laboratory (Room 180) on September 11 and 12, 1957, which seriously contaminated the metals laboratory and most of the building. Decontamination of the building, except Room 180, took approximately three months. Room 180 was fully decontaminated by 1960. The exhaust filters were modified to provide improved filter seals and repair heat stress damage after the fire (References RF-P047, RF-P085, RF-P091, RF-P108, and RF-P265).

In 1964 the "Campbell incident" occurred involving an explosion between plutonium and carbon tetrachloride in Building 776 during a briquetting operation. In 1965 a glovebox drain line fire occurred during maintenance on a plugged oil coolant drain line in Building 776/777. An explosion occurred in November 1965 during an air lock operation in Building 771 resulting in significant contamination of multiple rooms. These incidents spread contamination inside of the building requiring decontamination. Laboratory renovations appear to have also been in progress when the explosion occurred. In addition, production foundry facilities in Building 776 were rearranged and expanded in 1967 as part of the Part V expansion program (References RF-C407, RF-P084, RF-P085, and RF-U403).

EU operations in Building 881 were terminated in 1964. The cleanout of EU material continued for several more years. Building 889 was constructed in 1966 for the purpose of decontaminating Building 881 process and machining equipment contaminated with highly enriched uranium. The building was also used for decontamination and waste reduction operations involving beryllium and depleted uranium contaminated equipment and wastes. In November 1969, small items from the Building 776/777 fire contaminated with plutonium were also decontaminated in Building 889. Steam cleaning was used to decontaminate surplus equipment prior to reuse onsite or sale offsite, with liquid wastes being transferred to Building 774 or the solar evaporation ponds (References RF-C185, RF-C186, RF-C432, RF-P025, RF-P247, RF-P562, RF-U115, and RF-U128).

4.4.1.11 Miscellaneous Operations

Building 122 was the medical facility which performed routine physicals and treated industrial injuries, including performing first aid, taking x-rays, performing minor surgical treatment, and providing ambulatory activities. The personnel decontamination center handled plutonium and highly enriched uranium personnel contamination cases. Building 122 also housed the internal dosimetry center, also known as the body or lung counter, which measured radioactive material in the body (References RF-C407, RF-C430, RF-P413, RF-P417, RF-P562, and RF-U115).

Building 551 was operated by the General Stores group to provide warehousing for equipment, materials, chemicals, and supplies. An addition added onto the north end of the building in the 1960s included a metal fabrication and service shop and a large equipment and tool crib. The General Stores group stored scrap metal awaiting sale near Building 551, including iron, aluminum, and copper. From time to time, uranium chips were found in the scrap metal piles due to the cross contamination of machining equipment in Building 444. The General Stores group also stored drums of scrap beryllium awaiting sale off-site near the building. Occasionally, chemicals stored and received in the building leaked or were spilled. The non-destructive testing group performed tests on beryllium parts in Building 551 beginning in 1968 (References RF-C225, RF-C230, RF-C445, RF-P042, RF-P168, RF-P417, RF-U033, RF-P562, and RF-U115).

4.4.2 Idaho National Laboratory (INL)

This section describes the INL operations associated with the generation of the waste inventory in the retrieval area.

4.4.2.1 Argonne National Laboratory-West (ANL-W)

Solid radioactive waste generated at ANL-W (now the MFC) was primarily associated with irradiated experimental fuel subassemblies and capsules from EBR-I, EBR-II and, to a lesser degree, TREAT. After irradiation in ANL-W reactors, the subassemblies and capsules were conveyed to appropriate facilities for dismantling, sampling, and examination. If they were not contaminated with sodium (the coolant used in both EBR-I and EBR-II), these reactor pieces and parts were shipped to the RWMC as remote-handled waste. Sodium-contaminated reactor parts were stored in the RSWF at ANL-W (References ID-P091, ID-P118, and ANL-W-P003).

Various types of radioactive wastes were generated during routine reactor and hot cell operations, maintenance activities, and cleanup and decontamination processes at ANL-W. Activities that generated waste included (References ID-P091 and ANL-W-P003):

- General plant operation, maintenance, decontamination, and monitoring activities produced "dry active waste." Major generators of ANL-W dry active waste were EBR-II (ANL-W-767), TREAT, FCF, and the analytical laboratory.

- Hot cell operations at FCF. Most of this waste was stored in the RSWF, but some was sent to the RWMC.

- Hot cell operations at ANL-W. Most of this waste was stored in the RSWF, but some was sent to the RWMC.

- Large pieces of excess or demolished equipment from ANL-W radiological control areas were shipped to the RWMC on a non-routine basis.

- Concreted evaporator bottoms were generated at the central liquids processing area in the basement of the analytical laboratory from the evaporation of radioactive liquids received from FCF and TREAT.

- All solid wastes produced at EBR-I, BORAX I – V, the AFSR, and ZPR-III (collectively, ANL-W-601) for the years 1960 to 1969 were reported as being combined with the waste from ANL-W prior to shipment to the RWMC (Reference ARA-U003).

4.4.2.2 Idaho Chemical Process Plant

There are seven major CPP facilities (now INTEC) that sent waste to the SDA. The waste in the retrieval area is from two of these facilities:

- Fuel Processing Facility (CPP-601)

- Support Facility (CPP-630)

The Fuel Processing Facility (CPP-601) began operating in 1953. Its primary function was to reprocess highly enriched spent nuclear fuel. To reprocess the fuel, it was dissolved in both inorganic and organic solvents to recover the uranium. The processing equipment in CPP-601 was inside 29 heavily-shielded cells. The inorganic solvents used included nitric and hydrofluoric acids; organic solvents included tributyl phosphate and hexone. A substantial fraction of the high-level waste generated by this facility was an acidic liquid, which was then transferred to the Tank Farm before being processed into a stable calcined form in the WCF-1 built in 1963. Acidic liquid decontamination waste (also called "sodium-bearing waste") was generated at the CPP-601 facility and subsequently sent to the Tank Farm for temporary storage (References ARA-P008, ID-P091, ID-P118, INTEC-C001, and INTEC-P001).

During its operating history, a number of different fuels were reprocessed in CPP-601, including aluminum alloy-clad fuel, zirconium alloy-clad fuel, and graphite fuel. These fuels originated from several facilities at the INL as well as other off-site facilities in the DOE complex. Processed aluminum alloy fuels originated mainly from TRA, though some were received from the SPERT II and IV reactors. Zirconium alloy fuels originated from NRF. Significant amounts of Vycor glass molds from ANL-W were also reprocessed.

Graphite fuel from the Nuclear Rocket Program (ROVER) was reprocessed in custom-designed CPP-601 facilities or interconnected facilities (References INTEC-P001, PER-P012, and PER-P030).

A decontamination facility in CPP-601 provided support for cleaning tools and equipment for CPP and other INL facilities. Items such as water pit gates, cooling pumps, vehicles, etc., were decontaminated in this facility. The decontamination facility was also used as a morgue and autopsy facility following the SL-1 accident. The RAF, now the Remote Analytical Laboratory (RAL), also located in CPP-601, was used for remote examinations of hazardous and radioactive materials in support of CPP and INL operations. The RAF handled, processed, analyzed, and experimented on hazardous and radioactive materials of all types (INTEC-U001, ID-P118, and ID-U103).

Miscellaneous laboratories, water treatment, evaporator facilities and support facilities, including Support Facility CPP-630, were also a part of the complex. Analytical laboratories assayed fuels and other materials to ensure reprocessing was efficient. Other interconnected facilities provided final reprocessing steps (including uranium denitration and packaging for final offsite shipment). Still other facilities provided customized reprocessing of special fuels (References ID-P091 and INTEC-U001).

4.4.2.3 Naval Reactors Facility (NRF)

There are four major NRF facilities that sent waste to the SDA. The waste in the retrieval area is from three of these facilities:

- The Submarine Thermal Reactor Mark I Prototype, S1W (NRF-601)
- The Large Ship Reactor Prototypes, (3A and 3 B), A1W (NRF-617)
- ECF (NRF-618)

The basic mission for the prototype plants was to test propulsion plant design, to train naval personnel in preparation for duty on nuclear-powered vessels, and R&D for future reactor design (Reference ID-P091, ID-P214, and NRF-C031).

The Submarine Thermal Reactor Mark I Prototype, S1W (NRF-601)

Low-level waste was generated by S1W as a result of activities such as reactor coolant sampling, maintenance, repair, and refueling. In addition to the wastes listed above, top hat shielding adds to the non-compactable component of the waste streams. A review of disposal records did not show any specific pieces or parts of S1W prototype or USS Nautilus fuel having been buried in the retrieval areas, either from S1W or the ECF (References ID-P091, ID-P214, ID-U103, ID-U292, NRF-C031, and TAN-P052).

Large Ship Reactor Prototypes (3A and 3B), A1W (NRF-617)

Low-level waste was generated by the A1W as a result of activities such as reactor coolant sampling, maintenance, operation of the oil-water separation equipment, repair, and refueling. Empty oil drums from the oil-water separation system add to the non-compactable component of the waste streams. Until 1965, the oil waste generated by the oil-water separator in A1W was collected in 55-gallon drums and disposed to the RWMC. Liquid oil in the drums was typically emptied into the liquid pits at the RWMC and the drums disposed in one of the solid waste pits. After 1965, a reusable tank was normally used that allowed the oil to be discharged directly into the liquid pits (References ARA-P008, ID-P091, ID-P214, ID-U103, ID-U292, and TAN-P052).

Expended Core Facility (NRF-618)

The ECF, built in 1958, was designed to receive irradiated naval reactor fuel, commercial reactor fuel, reactor fuel from the various prototype plants, and naval fuel test specimens that have been irradiated in other reactors, such as the ATR in TRA. ECF personnel remove excess structural material (consisting of irradiated stainless steel, aluminum, Inconel, and/or Zircaloy) from the fuel elements, perform examinations on the fuel elements, and transfer the fuel elements to CPP for reprocessing. The ECF also received spent commercial reactor fuel, which included enriched uranium Seed fuel and natural uranium Blanket fuel, from the Shippingport Atomic Power Station (see below) between 1960 and 1968. The fuels are remotely handled under water in the ECF water pits. The water serves as a transparent shielding medium in which a number of procedures can be carried out, including disassembling, cutting, sawing, milling, and visually examining various parts of the fuel elements. Some procedures requiring a dry environment are carried out in hot cells at ECF. Examination of spent fuel at the ECF can involve the testing of small pieces that are removed from the fuel. These examinations may involve destructive evaluation, such as chemical dissolution and measurement of the amount of individual radionuclides in the pieces, resulting in waste containing small amounts of irradiated fuel materials. Most of the waste is in solid form, consisting of pieces of individual rods or pieces of bundles of rods. The balance of the inventory is fuel material dissolved in nitric and hydrofluoric acids for testing and analyses conducted at the ECF and then absorbed in vermiculite prior to disposal. LLW was generated at ECF as a result of fuel examination work (References ID-P091, ID-P214, ID-U292, ID-U103, NRF-C031, and TAN-P052).

The majority of both the radioactivity (curies) and the volume of waste that has been transferred from the NRF to the RWMC has come from ECF. Most of the radioactivity emerging from ECF is in highly corrosion-resistant metal structural materials removed from fuel assemblies during preparation for storage, examination, and reprocessing. This material was loaded into disposable thin metal containers which in turn, fit into large shielded shipping casks. These casks are then taken to the RWMC, where the thin metal containers were removed and buried (References ID-P091, ID-P214, and NRF-C031). The Shippingport Atomic Power Station (in Shippingport, Pennsylvania), a pressurized water reactor, was the Nation's first commercial nuclear power reactor with initial

operation in December, 1957. The reactor was shut down in 1974 for conversion to a light-water breeder reactor and operation resumed in 1977. Final shutdown was in 1982 and decommissioning and dismantlement was completed in 1989. The first two reactor cores (PWR-1 and PWR-2) were "Seed and Blanket" type cores (References ID-P214 and ID-P117). All Shippingport core highly enriched uranium Seed fuel, highly enriched uranium test assemblies, and natural uranium Blanket fuel were shipped to the ECF following various refuelings and defuelings. The enriched uranium was processed through the CPP; some remained in storage at the ECF and some was sent to various non-INL facilities for testing. Most (2/3) of the natural uranium from the Blanket assemblies was shipped to the Hanford REDOX plant; some remained in storage at the ECF and some was sent to non-INL facilities for testing. Most items involving irradiated natural uranium fuel material shipped from the ECF to the RWMC were disposed in trenches. Unirradiated natural uranium subassemblies, fuel rods, and fuel specimens and solid pieces and chips of zirconium were also shipped from the ECF to the RWMC for disposal in trenches (Reference ID-P214).

All shipments of natural uranium test assemblies and second core fuel to the ECF occurred after a change in the AEC burial requirements occurred in 1970; therefore, there is no concern that any fuel materials from these assemblies in the possession of the ECF were disposed at the RWMC (Reference ID-P214).

4.4.2.4 Test Area North (TAN)

Most of the waste produced at TAN was a result of the specific test and evaluation programs discussed previously. The decontamination, disassembly, evaluation, and discarding of the components of the tests generated a wide variety of debris waste (see reactor debris in Table 5-1B, Specific Waste Items Buried in the Retrieval Area) (References ID-P091 and TAN-P005).

From December 1955, when nuclear testing of the HTRE-1 engine commenced at the IET Facility, until after 1983, the majority of activity in the waste generated at TAN was shipped from the TAN Hot Shop (TAN-607) or the Hot Cell Annex (TAN-633) to the RWMC. The experiments and test assemblies were disassembled and examined at these facilities (References ID-P091, TAN-P004, and TAN-P005).

During the IET #3 and #4 tests in HTRE-1, because of the rigorous test requirements and the uncertainties with respect to fuel and fuel-clad design, problems developed that led to the melting of the fuel cladding and fuel. The radioactivity produced in the cladding and the fuel contaminated the duct to the stack at the IET Facility and the turbojet engine internals. These tests were the near-sole source of radioactive waste sent from TAN to the RWMC from December 1955 to February 1957, when testing with the HTRE-2 commenced (References ID-P091 and TAN-P005).

During testing of the HTRE-2 and HTRE-3 inserts, insignificant fuel and fuel-clad melting occurred in the driver core, but fuel, beryllium oxide, and fission products were released from the insert configuration to contaminate the reactor and turbojet engine internals and the duct. This contamination and the discarded insert materials were the sources for the

primary waste streams from TAN from March 1957 until the end of the ANP Program in 1961 (References ID-P091 and TAN-P005).

During testing of the HTRE-2 and HTRE-3 inserts, the hot cells in the Hot Cell Annex (TAN-633) became the dominant source of waste from TAN. During this testing period, the HTRE was brought back to the Hot Shop (TAN-607); the insert was removed from the reactor and taken to the hot cells for examination. After the examination was completed, the samples and specimens were discarded (References ID-P091, ID-P118, and TAN-P005).

Information about the disposal of the insert material is uncertain based on discussions with personnel previously employed with the ANP Program. A check with personnel at CPP indicated that no CPP records existed to show that ceramic fuels had been received or were being stored at CPP. In addition, the only fuel to be processed at CPP, other than metallic fuel, was the graphite ROVER (nuclear rocket propulsion program) fuel.

To date, no ceramic fuel has been processed at CPP, and therefore, ceramic fuel would not have been disposed of in the SDA from the CPP (References ID-P091 and TAN-P005).

From May 1961 until July 1962, the TAN Hot Shop (TAN-607) examined the SL-1 core and reactor vessel. Discarded reactor parts and reactor structural material constituted the majority of the TAN Hot Shop waste stream from May 1961 until August 1962. A 38-ton shielded cask containing mixed fission products from the SL-1 reactor was shipped from TAN-633 to the RWMC in 1963 and is located in the ARP-II portion of the retrieval area within Pit 4 (References ID-P091, ID-P221, ID-U103, and TAN-P005).

The SNAPTRAN tests, performed at the IET Facility, were criticality-destruct type tests that purposely destroyed the nuclear core of two reactors designed for space power. The reactors used in the tests were constructed by ATI at Canoga Park, California, which also provided the fuel, sodium-potassium (NaK), when used, and the beryllium. The first test, in April 1964, simulated a water immersion accident during launch of the power plant. The test configuration used approximately seven pounds of NaK as coolant and six beryllium inserts in the reactor but had no external beryllium reflector. The second SNAPTRAN destructive test, conducted in January 1966, destroyed the core in open air with the same type of destructive criticality event as in the 1964 test. This test configuration contained significantly more beryllium than the first test, but no NaK. In addition to the six internal beryllium inserts, this reactor included a large external beryllium reflector and four beryllium control drums. Complete destruction of the reactor was observed from over a mile away and pieces of burning fuel and reactor debris were scattered over the test pad and surrounding area. The internal beryllium inserts in both tests amounted to about 5,500 grams, and the four beryllium control drums and external beryllium reflector of the second test added an additional 11,000 grams of beryllium. The SNAP reactors were transported between the IET Facility and the TAN Hot Shop (TAN-607) before and after the destructive tests and the waste from these tests was shipped to the RWMC from either TAN-607 or TAN-633. Following the first SNAPTRAN

destructive test, essentially all of the material (i.e., the environmental tank, the reactor vessel, the internal beryllium reflector inserts), including about one percent of the core fuel, was sent to the RWMC for disposal. Following the second SNAPTRAN destructive test, all of the core structural material, the beryllium inserts, the beryllium reflector, the beryllium drums, the tank, and a maximum of about four percent of the fuel were eventually sent to the RWMC for disposal. The reclaimed fuel for both tests was sent to CPP for reprocessing (References ID-P091, ID-P118, TAN-P005, TAN-P069, TAN-P070, TAN-P071, and TAN-P076).

During and between the times of the two SNAPTRAN destructive tests, the ML-1 and PM-2A reactor vessel examinations were performed at TAN facilities. These examinations resulted in many metallurgical samples and scrap materials being discarded from the RML and hot cell facilities. Reactor skids, shielding, fixtures, and other parts associated with these systems, not discarded from the RML and hot cells, were discarded from the Hot Shop (References ARA-U003, ID-P091, TAN-P004, and TAN-P005).

4.4.2.5 Test Reactor Area (TRA)

The major facilities at TRA (now the ATRX) are the test reactors: MTR (TRA-603), ETR (TRA-642), and ATR (TRA-670). The MTR (TRA-603) had a top head that was removable to provide access to the reactor core for refueling and experiment handling. Most irradiated material was removed from the reactor tank through an underwater discharge mechanism to the storage canal. The storage canal was filled with demineralized water under which spent fuel, irradiated samples, and radioactive equipment were stored. The MTR operated until 1970, when it was placed on inactive status, though dismantlement did not begin until 1975 (References ARA-P008, ID-P091, and ID-P118).

The ETR (TRA-642) provided more high-flux testing space, more stable flux, and a greater variety of flux levels than the MTR could provide, as well as "through the core" facilities for experiments. Several experiment loop facilities were designed to test the fuels for the ANP Program and for the Navy fuel development program. The main experimental facilities of the ETR consisted of high-pressure water loops. These loops could pump as much as 100 gallons/minute of high-pressure, high-temperature water past experimental fuel assemblies located in special facilities passing through the reactor core. These loops permitted testing of fuel and other reactor components under a wide range of operating conditions up to and exceeding the experimental fuel failure point. The ETR was placed on standby status in 1981 (References ARA-P008 and ID-P118).

The craft and maintenance shops in TRA-653 performed maintenance and craft work in the Test Reactor Area. Wastes included contaminated dirt, contaminated concrete, and dry radioactive waste possibly contaminated with solvents such as methylene chloride, carbon tetrachloride, and ligroin (References ARA-U003 and ID-P091).

The radiochemistry and physics laboratories at TRA handled small quantities of radioactive materials as part of their research. The hot cell and the californium cell in the alpha wing (TRA-661) are possible exceptions. Originally, the alpha wing hot cell was constructed to fabricate radioactive targets for the MTR cross-section measurements program. Physics

experiments in the MTR were generally devoted to measuring neutron cross-sections and nuclear decay properties of radioactive material. In the early 1960s, the neutron cross-section measurements were extended to target materials such as the radionuclides of protactinium, plutonium, curium, and promethium. To support these measurements, the alpha wing of the MTR was constructed. In this wing, samples irradiated in the MTR were radiochemically processed to produce target materials for cross-section measurements. When the program ceased, the gloveboxes and hot cell liners from the alpha wing were sent to the RWMC. Since then, the radiochemistry programs have used the alpha wing hot cell to separate transuranics and other research efforts. The californium cell contained microgram amounts of Cf-252 used to produce nanocurie amounts of fission products for nuclear decay measurements. The alpha wing solid waste has a higher concentration of alpha-emitters from the decay of TRU nuclides. The remainder of the radiochemistry and physics laboratories generated wastes similar in content to reactor plant waste. Wastes from this generator include a glovebox contaminated with protactinium-231 oxide (References ARA-P008, ARA-U003, ID-P091, and ID-P118).

The TRA Hot Cells are the second largest generator of waste at TRA and began operation in 1954. The Hot Cells consist of three separate cells with a common operating corridor. Operators handle, photograph, mill, measure, and weigh radioactive samples. The work in the cells has involved all types of samples including irradiated fuel, transuranics, and isotope production material. In addition to experiments in the test reactors, the TRA Hot Cells have been used to process experiments performed outside TRA. These include the severe fuel damage experiments performed at the PBF and fuel samples from the damaged Three Mile Island-2 reactor. The PBF and Three Mile Island-2 fuel contains low-EU (approximately four percent U-235 by mass). The radionuclide distributions in these fuels are different from those in the test reactor fuels. In addition, because of the Zircaloy cladding, the activation products are different from activation products generated by test reactors. Almost all items removed from the hot cells are considered to be radioactive. If there is no further need for these items, they are designated as radioactive waste (References ID-P091and ID-P118).

The MTR, ETR, and ATR use bypass demineralizers to maintain water purity and proper chemical conditions required for reactor cooling water. Each system had two cation exchange resin tanks and two anion tanks. The reactor coolant contained very little dissolved solids, consequently, the cation resins had a relatively long life and a disposable type resin was used. The anion beds, however, were regenerated with a sodium hydroxide solution every three or four weeks. A resin bed that had degraded to the point it cannot maintain reactor water purity, was flushed to a shielded container and drained. The spent resin was then shipped to the RWMC (Reference ARA-P008).

All experimental water loops used nonregenerable resin in their bypass demineralizers. The demineralizer maintained the desired loop water chemical composition during the test runs. The tests consisted of irradiation of experimental fuel under very severe conditions, and many of the elements had deliberate cladding defects; so curie content of the loop resin was relatively high – on the order of 500 Curies for the 1 cubic feet (ft^3) of resin. Both mixed activation products (MAP) and mixed fission products (MFP) were retained in the resin. These resins were also flushed from the loop into shielded containers for shipment

to the RWMC. In addition to fuel leakage, there could also be leakage of radioactivity from the fueled experiments. This primarily contaminated the experiment coolant and cleanup system, and it secondarily contaminated the main reactor coolant.

When these experiments were disassembled the irradiated components and associated handling equipment and materials were contaminated and became waste (References ARA-P008 and ID-P091).

Most of the waste generated at TRA was associated with the operations of the test reactors and the examination of irradiated experiment assemblies in the TRA hot cells. Most of this waste contains radioactive fission products produced in the nuclear fuel and radionuclides produced by neutron activation. The nuclear fuel-produced radioactivity is typically designated as MFP; however, some activation products are associated with certain fuels. Neutron activation products are typically designated as MAP. The actual distribution of specific nuclides in either MFP or MAP depends on the reactor fuel and the process that generated the waste (Reference ID-P091).

The irradiated fuel is stored in the reactor canal for a limited time, then sent as intact assemblies to CPP for processing; however, in some instances, fuel elements are disassembled in the TRA hot cells or in the storage canal. The end sections are cut from fuel elements before shipment, stored in the canal, then transported for disposal to the RWMC. These canal wastes, which are highly irradiated metal, do not represent a large volume of solid waste. Surplus irradiated "experiment" components and reactor components are handled similarly. The waste from the TRA canals is transported in a specially designed shielded box mounted on a flatbed truck. Loading of the waste into the shielded container is conducted underwater and unloading and discharge of the container at the RWMC are accomplished remotely. Because most of the reactor fuel is processed at CPP, the bulk of the fission product activity ends up in CPP waste; only a minor component of that activity is left at TRA. This component is the result of fission products leaking through the reactor fuel cladding into the reactor coolant. The fission products then can potentially contaminate all items that come in contact with the coolant. This includes materials inside the reactor vessel and pipes, pumps, and cleanup systems associated with the primary coolant (References ARA-P008 and ID-P091).

The HEPA filters in the reactor and hot cell ventilation systems also contain some of the fission products produced in the reactor fuel and fueled experiments. Although the reactors are water-cooled, there have been experiments in which the coolant has been gaseous. The HEPA filters from these experiments were contaminated and eventually sent to the RMWC. For example, a gaseous coolant experiment was performed for the ANP Program in the MTR during the 1950s (Reference ID-P091).

Activation products are produced when neutrons are captured or otherwise interact to produce radionuclides. Neutron interactions can occur in the reactor fuel, and the radionuclides are carried along with the fission products. Neutrons can also interact with reactor and experiment structural components, resulting in radionuclides becoming fixed contamination in those components and also through corrosion in the reactor or experiment coolant. In the coolant system, the radionuclides can potentially contaminate the same

items as the fission products. Therefore, for radioactive waste generated by test reactor operations and support activities, there will be a mixture of fission products and activation products (Reference ID-P091).

In addition to fission products and activation products, TRU radionuclides are produced in the reactor. These radionuclides are produced by multiple neutron capture events, combined with beta and alpha decay. In the early days of the MTR, several experiments were designed to generate these nuclides for research purposes. However, that effort was very small in terms of waste generation and was virtually completed by the mid-1950s. From that point on, the test reactors were used to produce minor amounts of TRU radionuclides, generally in the micro-curie range. Most TRU radionuclides not bound in reactor fuel were brought to the INL from offsite producers (Reference ID-P091).

4.4.2.6 Other INL Generating Facilities

The other generators predominantly disposed of scrap metals and combustible materials that were radiologically contaminated. A variety of processes were identified that generated minor volumes of waste sent to the SDA (Reference ID-P091).

Auxiliary Reactor Area (ARA)

Waste from ARA consisted primarily of radioactive contaminants from the short-term production and operation of the Army GCRE, the ML-1 reactor (Building ARA-616), the SL-1 reactor, the ARA-I Hot Cells Facility (ARA-626), and the ARA-II radiochemistry laboratory (ARA-602). Solvents, thinners, acids, and mineral oils were routinely used. However, all available information indicates that the nonradiological contaminants from ARA were not disposed of in the SDA. Waste within the retrieval area is from ARA-I, specifically ARA-626; a Hot Cell facility and laboratory with hoods and metallurgical equipment to support reactor and other radiological experimental work. The Hot Cell facility was involved with the recovery of debris from the SL-1 excursion accident and associated reactor and fuels experiments. The hot cells and laboratory were involved in a wide variety of activities from low-level alpha experiments to work with irradiated reactor samples exposed to core fluxes, including melted and destroyed fuel assemblies from reactor tests. The retrieval area also contains waste from ARA-II, specifically ARA-602, originally a chemistry laboratory prior to being contaminated during the SL-1 incident. This facility was only partially decontaminated prior to being converted to a welding training facility and later to the Support Facilities building used for administrative and engineering offices for the PBF in the PER area until the mid 1970s. The retrieval area also includes waste from ARA-616 from a time when it was a part of the GCRE program and housed the ML-1 reactor. Radioactive waste from ARA typically includes scrap metal, contaminated combustibles, scrap wood, paper, rubber, concrete, and plastics. Nonradiological contaminants from ARA were not routinely disposed of in the SDA (References ANL-W-P006, ARA-P004, ARA-P008, ARA-P015, ARA-P018, ARA-P019, ARA-U002, ARA-U003, and ID-P091).

Central Facilities Area

Waste from CFA in the retrieval area is from several facilities, including CFA-646, the AEC Ecology Laboratory; CFA-690, the AEC Health and Safety Division Chemical Analysis Laboratory (later the Radiological and Environmental Sciences Laboratory [RESL]) where analytical chemistry was done on bioassay samples, naturally occurring radionuclides, and other special projects; CFA-665, the Vehicle Maintenance Terminal and Automotive Repair Shop, used to store and repair vehicles used across the INL; CFA-674, the CEL, used to conduct calcine experiments on simulated nuclear waste; CFA-687, Lead Shop; other laboratory facilities including CFA-633, Health Physics Instrument Laboratory, a calibration facility used for radiological instrumentation standardization using Cf-252 neutron sources, and alpha, beta, and gamma sources for health physics instrumentation calibrations; and CFA-601 and CFA-654, the sewage treatment facilities. Radioactive waste from CFA typically includes contaminated combustibles, obsolete laboratory equipment, scrap metal, sewage sludge, parts of vehicles, and nuclear radiation sources. Nonradiological contaminants from CFA were not routinely disposed of in the SDA (References ANL-W-P006 ARA-U003, CFA-P001, CFA-U007, ID-C103, ID-P091, ID-P118, and ID-U103).

Power Excursion Reactor Area

The PER area contributed radioactive waste to the SDA from operations associated with the four SPERT reactors and the modification of the SPERT I area during construction of the PBF reactor. This waste consisted primarily of metals, combustibles, and core and loop components. Minor volumes of nonradiological waste (solvents, resins, cleaning solutions, and acids) were included with waste shipments to the SDA. See Table 5-5 for chemicals used in PER operations. Wastes in the retrieval area were generated in building PER-601, the Control Facility for SPERT I and later for the PBF (References ARA-U003, ID-P091, PER-P004, PER-P010, and PER-P011).

Radioactive Waste Management Complex

Waste from the RWMC was generated over a seven-year period and consists primarily of radiologically contaminated effluent and materials (combustibles, soil, and plastic) associated with decontamination processes at the RWMC (Reference ID-P091).

INTEC-602/630 and RWMC WMF-TR-14 Modular Analytical Laboratory

Laboratory wastes (including unaltered sample material) from INTEC/RWMC laboratory support operations are generated from analyzing the soil and homogeneous solid samples collected by ARP or ARP waste but do not include unaltered sample material or laboratory waste generated in support of characterizing waste streams or samples submitted by other generators. The processes that generate the wastes are the same for both INTEC and RWMC. The analyses required for TRU waste certification are volatile organic compound (VOC) analysis, semivolatile organic compound (SVOC) analysis, nonhalogenated volatile organic compound analysis, trace metal analysis by inductively coupled plasma, atomic emission spectrometry (ICP-AES) cold vapor atomic absorption (CVAA), and

radiochemical analyses (which may include gamma and alpha spectrometry, liquid scintillation counting, gas-flow proportional counting, and inductively-coupled plasma-mass spectrometry (References ID-P402, ID-P403, ID-P406, ID-P407, ID-P408, ID-P409, ID-P410, ID-P411, and ID-P412). Controls are in place to prevent the inclusion of samples and analytical waste from other generators and to prevent unused commercial chemical products, off-specification species, residues, and spill material thereof from entering containers of ARP lab waste. In addition, samples submitted from other generators and the resulting sample residues/extracts and associated laboratory debris waste will not be commingled with ARP submitted samples, sample residues/extracts, and laboratory-generated debris waste. Analyses of the samples of ARP waste are performed according to CCP analytical laboratory procedures. Minimal amounts of waste are generated from the INTEC/RWMC laboratories and all waste generated is fully characterized and solidified before being placed into the waste container. Non-ARP unaltered samples and laboratory-derived waste are returned to the generator. The waste processes have not changed over time and are not expected to change. Because these containers have unaltered ARP samples and ARP sample residue (possibly containing absorbent), the drums will be repackaged, segregated according to predominant material into the ARP waste streams (e.g., soil, sludge, or debris), and characterized by visual examination (VE) (References ID-P402, ID-P403, ID-P404, ID-U376, and ID-U377).

Glovebox Excavator Method (GEM) Project

In spring 2004, the GEM Project retrieved approximately 60 cubic meters of buried waste from a small area in the southwest end Pit 9 at the SDA (Reference ID-P399).

A fan-shaped area with a 20-foot radius and the angular extent of 145 degrees defined the GEM project area. The project retrieval system consisted of the Weather Enclosure Structure (WES), the Retrieval Confinement Structure (RCS), the Packaging Glovebox System (PGS), a standard excavator, ventilation system, and other supporting equipment. The PGS consisted of three rectangular gloveboxes attached in fan fashion to the RCS. Retrieval, packaging, and sampling of Pit 9 materials occurred within the RCS and PGS facilities. Overburden was removed to a specified depth (three to five feet) and then the excavator arm (contained within the RCS) excavated a semicircular swath of waste zone material. Rail-mounted primary and auxiliary steel PGS transfer carts, each fitted with a custom-made liner capable of transporting about 3 cubic feet of loose material or one intact drum, serviced each glovebox. The retrieved waste zone material was placed into the lined transfer carts by the excavator bucket, where it was scanned for radioactivity. Waste exceeding 200 millirems per hour (mRem/hour) was returned to the Pit. The carts transported waste zone materials inside the PGS gloveboxes where the material was inspected, categorized, and sampled. A record was maintained of the waste processed and the waste zone materials were segregated into two basic waste streams: sludge/soil and combustible/metal debris. Any free liquids found were sampled (to determine polychlorinated biphenyl [PCB] concentration), solidified with absorbent material, and disposed with the surrounding waste. Each of the three gloveboxes were equipped with three drum bag-out stations for packaging material into 55- and 85-gallon drums (References ID-C113, ID-P377, ID-P380, ID-P399, and RF-P356).

GEM waste forms are analogous to those in the ARP in terms of form and time spent buried (References ID-P399 and ID-U355).

The GEM project was not required to remove all materials from the waste zone. Unexpected materials such as compressed gas cylinders, containers of nonradiological materials that are pyrophoric (such as zirconium), laboratory-generated waste (i.e., multiple containers of lab waste consolidated in a drum), and containerized unknowns were left in the Pit. Before removal from the excavation, a nonsparking tool attached to the excavator punctured intact drums. Unexpected materials that could exceed the excavator design handling weight of 1,000 pounds and that could not be sized with the excavator to less than 1,000 pounds were not removed from the excavation. Intact drums that may exceed the glovebox design basis drop weight of 350 pounds and that could not be sized with the excavator to less than 350 pounds were not processed through the gloveboxes. Materials weighing less than these design-basis weights but that could not be sized to fit in a 55- or 85-gallon drum were not processed through the gloveboxes. The excavator operator, using readings from a pressure indicator, checked the weight of materials during lifts. Sizing of materials took place in a drum-sizing tray, when needed (Reference ID-P380).

Drums of GEM Project waste will be repackaged, segregated according to predominant material into the ARP waste streams (e.g., soil, sludge, or debris) and characterized by VE (Reference ID-C114).

INTEC CPP-653, ARP Sludge Repackaging

Waste repackaging is performed in the repack tent of CPP-653, which provides containment of contamination during repackaging. Drums from waste stream ID-SDA-SLUDGE to be repackaged include a tray liner and/or without absorbent and will be repackaged to meet the new packaging configuration. Repackaging will involve removal of the waste and tray liner, replacement of the sludge directly into the rigid liner, and the addition of granular absorbent, such as the clay based absorbent Oil Dri®. By repackaging the waste in this manner all of the ID-SDA-SLUDGE drums will have the same packaging configuration, with the only difference being that the repackaged drums will have the tray liner rolled up and placed on the top of the waste, when possible. Repackaged ID-SDA-SLUDGE is characterized by radiography. The original VE data will then be used in conjunction with radiography to estimate the organic and inorganic sludge composition of the repackaged waste. In addition, secondary waste consisting of small quantities of sludge contaminated debris such as tray liners, plastic sheeting, rubber bands, glovebox gloves, HEPA filters, duct work, and metal tools are generated from this operation. This debris waste is packaged and the waste containers are added to the debris waste stream, ID-SDA-DEBRIS. They are then characterized by radiography (References ID-C109, ID-D003, ID-P122, ID-P269, ID-P373, ID-P424, ID-U356, and INTEC-P214).

4.4.3 Other Off-Site Generating Facilities

As discussed in Section 4.1.3, off-site educational institutions, private companies, and other federal agencies shipped waste to RFP for disposal. The RFP would accept this waste and trans-ship it to INL RWMC SDA. For the retrieval area, there have been five Colorado-based waste generators identified. These are the CSM, CSMRF, USGS, USDI, and the DRI.

The CSM (or SOM) waste included animal carcasses preserved with formaldehyde, wrapped air-tight in polyethylene and other general wastes packaged in open head 55-gallon drums. The radionuclide contaminants were not identified. It is assumed that radioisotopes were used as tracers in animal studies performed at the CSM. Common tracers used in medical research are carbon-14, tritium (H-3), and potassium-40. Additional nuclides that may also have been researched at that time are some of the actinides; Pu-239, U-235, Am-241, and neptunium-237 based on radioisotopic constituents in biomedical wastes shipped from LLNL to INL (References RF-C080, RF-C100, RF-C246, RF-P085, RF-P562, RF-U115, RF-U400, RF-U421, and RF-U1315).

The CSMRF waste was generated from classified research for the Defense Atomic Support Agency in support of Project Roller Coaster. Four 55-gallon steel drums (two in 1964) of plutonium contaminated wastes from this project were packaged and sent to the INL for disposal. Dry waste, such as the unused portions of 25 post-shot soil samples, contaminated paper, sample trays, glassware, and an unknown number of beakers were packaged in two drums. The other two drums contained solutions comprised of water, small amounts of detergent, and acetone used to clean sampling equipment. These solutions were containerized and treated with large amounts of flocculent for several weeks, but it is not indicated whether they were solidified. The total plutonium content of all four drums was 2.6 micrograms (References RF-C065, RF-C073, RF-C080, RF-C105, RF-C162, RF-P085, RF-P562, RF-U115, RF-U400, and RF-U421).

The USGS office in the Denver Federal Center is the headquarters for the Central Region of the United States. The USGS operates a small nuclear reactor at the Denver Federal Center, used to determine the age and chemical makeup of rocks and minerals. Beginning in 1956, the USGS began evaluation of the effects of underground nuclear explosions at the NTS; samples may have been analyzed at the USGS laboratory in Denver. The USGS wastes consist of several drums that contain radioactive materials associated with these activities (References RF-C080, RF-P085, RF-P418, RF-P562, RF-U115, RF-U400, RF-U421, and RF-U1315).

The USDI consists of a number of entities that may have been involved in the generation of the waste trans-shipped through RFP. It is possible that this waste originated at the USGS and was marked as USDI during packaging (the USGS is part of the USDI). The waste consists of two drums containing radioactive materials from an unknown activity (References RF-P085, RF-P562, RF-U115, and RF-U421). This waste is not targeted for retrieval.

The DRI, a laboratory affiliated with the University of Denver, sent several drums of radioactive material and beryllium oxide used in chemistry classes in the 1950s after the classes were discontinued (References RF-C080, RF-P085, RF-P582, RF-U115, RF-U400, and RF-U421).

Rockwell ATI is the only other non-RFP, non-INL facility that has been identified that may have generated waste buried in the retrieval area (References ID-U297 and ID-U298). ATI, located in Canoga Park, California, conducted R&D, design, construction, and testing of several nuclear reactors and associated systems. A majority of the waste received at the INL from this generator was from operations associated with the SNAP and SRE reactors. The SNAP reactors were fueled with hydrided uranium-zirconium alloy and were NaK-cooled. The SRE cores were fueled, either by thorium-uranium alloy or unalloyed uranium, and were also NaK-cooled. Other reactors included the Hallam reactor that was fueled by uranium-molybdenum or uranium carbide and was sodium-cooled, and the Piqua reactor that was fueled with a uranium-molybdenum alloy and cooled with an organic mixture of terphenyls, and the OMRE reactor that was also cooled with an organic mixture of terphenyls (References ARA-P008, ARA-U003, and ID-P091).

The SRE thermal reactor, located at the Santa Susana Field Laboratories (SSFL) in Ventura County, California, operated from April 1957 through February 15, 1964. From 1964 to 1976, the reactor was in a protective storage mode with routine surveillance. Decontamination began in 1976 and was completed in 1982. Between 1959 and 1965, two SNAP space-type compact experimental reactors were tested in Building 010 at the SSFL. The first was a 50-kilowatt SNAP-2 reactor and the second was a 600-kilowatt SNAP-8 reactor. In 1974, the SNAP-8 facility was declared excess and a decommissioning program began in 1976 that provided for the complete removal of all radioactive materials remaining from the operation of the SNAP reactors. The Hallam reactor was constructed near the town of Hallam, Nebraska, between 1958 and 1962, as an experimental nuclear power plant for the AEC. In 1964, after the AEC obtained the data needed from the reactor, it was decommissioned. Between 1967 and 1969, the reactor was dismantled. The Piqua Nuclear Power Facility operated as a demonstration project by the AEC between 1963 and 1966. Between 1967 and 1969, the Piqua reactor was decommissioned and dismantled. At that time, the reactor fuel coolant and most of the radioactive materials were removed from the site (References ARA-P008, ARA-U003, ID-P112, ID-P113, and ID-P114).

4.5 Waste Excavation, Examination, and Packaging

This section provides a description of the retrieval and packaging process that generates these waste streams. The objective of the ARP is to perform a targeted retrieval of certain RFP waste types that are highly contaminated with TRU radionuclides, uranium, and volatile organic compounds (VOCs). The targeted waste types are listed in Section 4.7.1 and are described in detail in Section 5.4.1. Figures illustrating the retrieval and packaging of the wastes are presented in Figure 5, Cut Out of Retrieval Enclosure, Figure 6A, Drum Packaging Station, Figure 6B, Drum Packaging Station Equipped for Drums and SWBs, Figure 7, Excavator Removing Soil Overburden in ARP-I, Figure 8,

Drum Packaging Station Containing Inorganic Sludge, and Figure 9, Hoisting Inorganic Sludge for Packaging into a Drum (References ID-P101, ID-P109, ID-P384, and ID-U305).

Initially, 2–5 feet of clean overburden soil will be removed as part of construction before starting the non-time-critical removal action operational activities. The remaining 2 feet of overburden will be removed as the first phase of operations and will be piled or returned directly to the pit. This layer of soil is expected to be non-TRU and will provide a stable working surface for retrieval operations (Reference ID-P109).

The waste-zone material will be retrieved using excavators. Operators in personal protective equipment will operate one or two excavators to exhume and place approximately one 55-gallon drum load of waste material from the retrieval area into trays for subsequent examination in the airlock enclosures. The excavator and forklift cabs will be provided with a HEPA-filtered, forced-air system to provide additional protection for the operator. Personnel access to the Retrieval Enclosure will be limited during excavation activities, but there may be other individuals in personal protective equipment allowed inside, such as radiological control technicians.

The excavator will operate primarily above grade. The pit is expected to be approximately 17–20 feet deep, and the walls will be sloped to maintain an angle of repose of approximately one to one. Dust suppression is used during the retrieval process as conditions warrant.

This activity includes addition of localized water or non-hazardous dust suppressants such as Soiltac® or Durasoil® (References ID-P109, ID-P119, ID-P253, and ID-P288).

Excavators retrieve waste and place it in a lined waste-handling tray. If the tray contents are exclusively non-targeted waste, the waste will be returned to the pit. If any targeted waste is present in the tray, operators perform functions supporting transfer of the waste to WIPP (e.g., removal of prohibited items if observed) inside a drum packaging station. The tray liner and all of its contents are then hoisted, as shown in Figure 9, and loaded into a new drum or SWB. If the waste is predominantly sludge, the liner is opened and the waste is released directly into the new waste container (packaging details are provided in Section 5.8). The drum or SWB is then removed from the loading port, closed, and transferred from the area (References ID-C109, ID-P109, ID-P119, ID-P122, ID-P269, ID-P384, ID-P423, ID-P427, ID-P431, and ID-U305).

Intact drums discovered during the exhumation process are vented with a shrouded non-sparking venting tool prior to removal from the pit. Drums are opened and if targeted, the waste is placed into trays for examination in the airlock enclosures (References ID-P250 and ID-P253).

Retrieved waste materials that do not satisfy the WIPP-WAC will be characterized and evaluated for alternate disposal. Depending upon waste stream characteristics, treatment of these materials may be required. In particular, it is expected that some portion of the materials will require treatment to reduce the VOC concentrations of the materials before returning materials to the pit or other alternate disposal (Reference ID-P109).

TRU waste may also be generated from the retrieval operation itself. Waste items may include used parts, hand tools, equipment, decontamination and maintenance waste (e.g., wipes and protective clothings), HEPA filters, and roughing filters (Reference ID-P109). These TRU waste items will be included in containers with the waste retrieved from the pit. Retrieval enclosure facility filters, as part of the maintenance program, will be packaged in SWBs or 55-gallon drums (Reference ID-P420).

During waste exhumation operations, the retrieval area has been contaminated by several spills. The spills were the result of leaks from the excavating equipment and consisted of synthetic hydraulic fluid (polyether polyol and polymers) and engine coolant (water and ethylene glycol). In some instances, immediate cleanup of the contaminated soil was not possible due to the location of the releases inside of the retrieval enclosure (References ID-C101 and ID-C202). These spills do not impact the hazardous waste determinations.

4.6 Waste Identification and Categorization

The retrieval area was selected based partially on the types of waste buried in this area. This section describes the physical waste forms, as well as the basis for determining the areas and buildings that generated waste buried in this area.

4.6.1 Identification of Areas and Buildings of Generation

The RFP buildings that generated the waste in the retrieval area were determined from the "Waste Disposal" forms (References RF-U400, RF-U421, RF-U1306, RF-U1307, RF-U1308, RF-U1313, and RF-U1315). These forms list the specific containers on each shipment. The first two or three digits of the container number correspond to the generation building (References RF-P562 and RF-U115). For example:

- Container number 71-22059 was generated in Building 771
- Container number 743-1872 is organic sludge generated in Building 774 (743 also relates to physical form as described in Section 5.4.1)

This information was entered into the Waste Inventory Location Database (WILD) at INL. A query of WILD was done to determine the specific buildings that generated waste in the retrieval area (References ID-U292 and ID-U304). In addition, the actual disposal records were also reviewed (References ARA-U007, CFA-U007, ID-U100, INTEC-U001, ID-U103, ID-U343, ID-U344, ID-U345, ID-U349, ID-U351, ID-U353, NRF-C031, RF-U400, RF-U421, RF-U1306, RF-U1307, RF-U1308, RF-U1313, and RF-U1315).

The determination of the specific INL generating facility and building is based on the shipment identification number. The first part of the designator is generally a three-letter code representing the name of the major generator. The second part is generally a three-digit code representing the building number where the waste originated. For example, shipment TAN607SR002/21/67800 represents waste from Building 607 at TAN

(References ID-P091, ID-U292, ID-U304, ID-U334, ID-U335, ID-U336, ID-U337, ID-U343, ID-U344, ID-U345, and ID-U349).

The waste disposal records indicate the approximate location of the waste within the SDA according to distances from a particular monument. These locations were entered into the WILD. Due to possible inaccuracies of the monument locations in the SDA, the WILD query includes all shipments intersected or tangent to the boundary of the retrieval area. Process information related to the facilities and buildings that generated waste buried in these shipments was evaluated to ensure that the physical, radiological, and chemical characteristics of the waste were identified (References ARA-U007, CFA-U007, ID-U100, ID-U103, ID-U304, ID-U343, ID-U344, ID-U345, ID-U349, ID-U351, ID-U353, INTEC-U001, NRF-C031, RF-U400, RF-U421, RF-U1306, RF-U1307, RF-U1308, RF-U1313, and RF-U1315).

4.6.2 Identification of Physical Form

The designated retrieval area was selected because it contains high concentrations of TRU waste and also contains significant volumes of other targeted waste materials, including VOCs and depleted uranium. The area was selected based partially on disposal records of the distribution of waste in the pits (References ID-P109 and ID-U351).

The volumes and locations of targeted waste materials were determined based on information obtained from the disposal records. Information provided on the Solid Radioactive Waste Disposal Order and Shipment Data forms (Form ID-110A) includes a general description of the contents and packaging of the shipment. For example:

- 15 55-gallon drums containing paper, rags, plastic glass, scrap metal, etc.
- 60 55-gallon drums containing series 74 sludges

An additional "Waste Disposal" form completed by RFP lists the specific containers in each shipment. The "Type" is provided on a container basis, although this information is sometimes incomplete. The waste types are identified below. A list of specific waste items is provided in Section 5.4 (References ID-P103, ID-P249, ID-P396, ID-P421, ID-P422, ID-P426, ID-U351, ID-U353, RF-C032, RF-C045, RF-C124, RF-C129, RF-P562, RF-U026, RF-U095, RF-U115, RF-U292, RF-U400, RF-U421, RF-U1306, RF-U1307, RF-U1308, RF-U1313, and RF-U1315):

- Type I – Combustibles (e.g., paper, rags, clothing, wood, plastic).
- Type II – Filter paper used to filter machine coolant and other process liquids.
- Type III – Chemical Warfare Service (CWS) filters utilized in building ventilation systems, and HEPA filters which replaced CWS filters.
- Type IV – Sludges primarily from co-precipitation treatment of aqueous liquids in Building 774, but also from equipment clean-outs in other buildings. The

Building 774 sludges are further categorized based on the first three digits of the container number.

741 – First-Stage Sludge
742 – Second-Stage Sludge
743 – Organic Setups ("74A" was initially used in 1966)
744 – Special Setups
745 – Evaporator Salts
746 – Empty Drums (contaminated with oils and solvents) (1967 – 1969)
746 – Hot Waste (Types I and V) (after 1969)

In addition to the sludges from Building 774, the Type IV designation was occasionally used in other areas, including Building 444, Building 771, Building 776, Building 881, Building 883, and the solar evaporation ponds. Building 881 "discard mud" is generally listed on disposal records as Waste Type "IV M." Salts and sand removed from the solar evaporation pond No. 2B during this time is listed on disposal records under a building number of "2B" with a waste type of IV. Tank cleanout, laundry lint (Building 776), and eutectic salts used in Buildings 444, 881, and 883 may be included as waste Type IV (References ID-U304, ID-U343, RF-U400, RF-U421, RF-U1306, RF-U1307, and RF-U1315).

- Type V – Non-combustibles (e.g., glass, scrap metal, ceramics, graphite, firebrick, equipment, empty drums). May also include soil and concrete.

- Types VI and VII – In addition to Type IV, organic setups have been identified as Types VI and VII.

- Type Be – Beryllium and beryllium oxide machining chips, turnings, and fines as well as debris contaminated with beryllium. Disposal records may indicate "Be" alone or associated with another waste type (e.g., Be-V).

- Type RO – Roaster Oxide is depleted uranium chips, turning, and fines that have been thermally stabilized (self-sustained combustion) to an oxide.

In addition to the above type codes, Buildings 444 and 447 developed their own identification codes for waste segregation. The codes identified on the disposal records for waste in the retrieval area include the following (References RF-C045, RF-C120, RF-P562, and RF-U1306):

- Code A – Filter paper, Waste Type II.
- Code B – Coolant still bottoms, Waste Type VI.
- Code C – Metal fire brick, Waste Type V.
- Code D – Paper, rags, wood, Waste Type I.
- Code F – Graphite, Waste Type V.
- Code K – Process waste filter sludge, Waste Type IV.

- Code M – Cyanide cement, Waste Type V.
- Code N – Miscellaneous solid, Waste Type V.

These codes were used separately or in conjunction with the waste type codes and, based on the review of "Waste Disposal" forms, were only used for shipments prior to 1965.

4.7 TRU Waste Management

From 1952 to 1970, radioactive waste, including TRU waste, was buried in pits, trenches, and soil vault rows excavated at the SDA. In 1970, the AEC issued a policy requiring the segregation of waste contaminated with TRU radionuclides and the storage of that waste on aboveground asphalt pads in retrievable containers. As a result, the shallow burial of TRU waste ended in 1970 (References ID-P091 and ID-P109).

The Pits were open to accept waste as follows: Pit 4 from January 1963 through September 1967; Pit 5 from June 1963 through December 1966; Pit 6 from May 1967 though October 1968; Pit 9 from November 1967 through June 1969; and Pit 10 from July 1968 through July 1971. Based on the disposal practices at the time, containerized waste primarily from RFP was initially stacked in the pits. In November 1963, this practice was changed, and containers were dumped into the pits rather than stacked. Later, the containers were both stacked and dumped, depending on manpower availability. Based on the above information, the containers in the retrieval area may be stacked or may have been dumped (References ID-P092, ID-P109, ID-P178, ID-P218, ID-P368, ID-P421, and INTEC-P002).

Retrieval activities involve the exhumation and characterization of a variety of waste forms that result in packaged containers requiring interim storage in CERCLA storage areas located in the SDA. VE will be performed during packaging to verify absence of prohibited items, determine the contents and waste material parameter weights, and assign to an appropriate waste stream. Once the retrieved waste has been containerized and the container sealed, the container will be clearly labeled to identify waste stream, weighed, and transferred to storage. The containers then await further characterization by CCP (Reference ID-P109).

4.7.1 Types and Quantity of TRU Waste Generated

Approximately 638,651 cubic feet of the 686,951 cubic feet of waste buried in the retrieval area is from RFP. The number of containers estimated to be generated during retrieval operations is provided in Section 5.2. The types of RFP and non-RFP wastes expected in the retrieval area are listed in Table 4-1, Estimate of Buried Waste Volumes in the Retrieval Areas (Reference ID-U351).

Table 4-1. Estimate of Buried Waste Volumes in the Retrieval Areas

Waste Type	Volume (ft^3)							Targeted Waste
	ARP-I	ARP-II	ARP-III	ARP-IV	ARP-V	ARP-VI	ARP-VII	N/A
RFP First-Stage Sludge (741-Series)	6,453	4,352	2,345	7,830	3,186	3,335	0	Yes
RFP Second-Stage Sludge (742-Series)	5,211	6,690	1,775	8,505	1,431	3.906	3,348	Yes
RFP Organic Setups (743-Series)	5,076	26,652	10,711	243	8,397	0	4,698	Yes
RFP Special Setups (744-Series)	686	1,856	483	0	308	0	873	No
RFP Evaporator Salt (745-Series)	0	4,803	3,628	0	1,948	0	6,104	No
RFP Miscellaneous Sludge	7	15	43	282	692	177	7	No
RFP Beryllium	629	192	76	3,453	37	2,236	66	No
RFP Roaster Oxide	729	976	245	1,080	54	482	405	Yes
RFP Graphite	1,350	0	2	945	0	0	0	Yes
RFP Filters	12,393	4,079	2,450	6,831	4,914	1,370	0	Yes
RFP Line Generated Waste [a]	543	1,139	904	18	989	0	0	No
RFP Combustible Debris [b]	19,456	25,136	14,289	67,219	21,515	48,102	6,028	No
RFP Non-Combustible Debris	42,753	32,056	40,798	79,001	38,351	13,389	5,916	No
Non-RFP Sludge	1,272	67	0	98	67	0	0	No
Non-RFP Combustible Debris	4,352	50	0	6,210	475	80	14	No
Non-RFP Non-Combustible Debris	13,940	2,174	73	13,011	6,247	170	0	No
Total	**114,850**	**110,237**	**77,821**	**194,726**	**88,611**	**73,247**	**27,459**	

[a] Line-generated waste may contain combustible and non-combustible wastes. The non-combustible waste may contain graphite. The graphite portion of this waste stream is targeted.

[b] RFP Combustible debris may contain liquid cartridge filters (i.e. Ful-Flo filters), vacuum pump filters, oil filters, R-6 filter pads, and roughing filters. The filter portion of this waste is targeted.

The WIPP-WAP defines a waste stream as waste materials that have a common physical form, that contain similar hazardous constituents, and that are generated from a single process or activity (Reference 2). Retrieval activities involve the exhumation and characterization of waste materials that result in packaged containers requiring storage in the SDA. VE is performed during packaging to assign the waste materials to the appropriate waste stream. The subject waste streams are newly generated and could potentially include wastes of the same physical, chemical, and radiological composition, but are categorized into the separate waste streams during packaging based on the predominant summary category group (i.e., debris, soil, and homogeneous solids) in each payload container (Reference ID-P109). Therefore, the waste containers generated during packaging meet the WIPP-WAP waste stream definitions.

4.7.2 Correlation of Waste Streams Generated from the Same Building and Process

The three waste streams delineated in this AK Summary Report could potentially include wastes of the same physical, chemical, and radiological composition, but are categorized into waste streams during packaging based on the predominant summary category group (i.e., debris, soil, and homogeneous solids) in each payload container. For example, the debris waste stream will be predominantly filters and graphite as well as some non-targeted waste such as combustible and metal debris, but may also contain lesser amounts of sludge and soil. RFP wastes, such as combustibles and metals, will be indistinguishable from similar non-RFP wastes because much of the wastes are commingled due to lack of container integrity (Reference ID-P109).

4.8 Waste Certification Procedures

AK compilation and assembly, comparison of characterization data to AK, and re-evaluation of AK is conducted under the CCP in accordance with CCP-TP-005 (Reference 1). CCP certifies TRU waste under the program described in CCP-PO-002, *CCP Transuranic Waste Certification Plan* (Reference 9).

5.0 Required Waste Stream Information

This section presents the mandatory waste stream AK required by Attachment C4 of the WIPP HWFP (Reference 2).

5.1 Area and Building of Generation

The primary generator of the waste buried in the retrieval area was RFP. The RFP buildings identified from waste disposal records include Buildings 122, 123, 331, 334, 441, 444, 447, 551, 559, 771, 774, 776, 777, 779, 881, 883, 886, 887, 889, and 991. Pond 2B (solar evaporation pond) was also identified on disposal records (References ID-U304, RF-U400, RF-U421, RF-U1306, RF-U1307, RF-U1308, RF-U1313, and RF-U1315).

Several INL facilities also generated waste in the retrieval area (References ID-U292, ID-U304, ID-U100, ID-U103, ID-U343, ID-U344, ID-U345, and ID-349). The INL facilities and buildings include:

- ANL-W Buildings 601 and 767
- ARA Buildings 602, 616, and 626
- CFA Buildings 601, 633, 646, 654, 665, 674, 687, and 690
- CPP Buildings 601 and 630
- NRF Buildings 601, 617, and 618
- PER Building 601
- TAN Buildings 607 and 633
- TRA Buildings 603, 642, 653, and 661 (602 is identified on the waste disposal records, but the correct building is 603)

A small amount of waste was also generated by ATI, CSM (or SOM), CSMRF, DRI, USDI, and USGS. The ATI waste is from the Rockwell facility in Canoga Park, California (References ANL-W-P009 and ID-U297). The exact disposal location for the ATI waste could not be determined, but may have been buried in the retrieval area (see Section 4.1.3). The CSM (SOM) is the University of Colorado School of Medicine, and the CSMRF was a Colorado School of Mines affiliate. The DRI was a University of Denver affiliate, USDI is the United States Department of the Interior, and the USGS office in the Denver Federal Center is the headquarters for the Central Region of the United States. Wastes from CSM, CSMRF, DRI, USDI, and USGS were transferred to RFP and then shipped to INL for burial and are included in the retrieval area (References RF-C105, RF-C150, RF-C151, RF-P085, RF-P562, RF-U115, RF-U400, RF-U421, RF-U1313, and RF-U1315).

5.2 Waste Stream Volume and Period of Generation

Approximately 690,000 cubic feet (~93,878 55-drum equivalents) of waste was originally buried in the retrieval areas. The waste disposal records provide the dates in which the

waste was buried but not the actual date the container was filled and closed. The waste was generated prior to the last burial date, which was November 8, 1968 (References ID-P221, ID-P275, ID-U292, ID-U304, ID-U343, ID-U344, ID-U345, ID-U351, RF-U400, RF-U421, RF-U1306, RF-1307, RF-U1308, RF-U1313, and RF-U1315).

Waste retrieval and packaging operations began in Fiscal Year 2005. The volume and closure dates for each waste stream generated from retrieval and packaging operations, as well as projected volumes, are presented in Table 5-1A, Waste Stream Volumes and Generation Dates (References ID-C106, ID-C108, ID-P109, and ID-U351). The projected volumes are based on the retrieval and packaging of targeted waste for the entire ARP (i.e., the total 5.69 acre area of the SDA). This includes the current retrieval area described in Section 1.0 as well as additional ARP areas to be incorporated into subsequent revisions of this report. In addition, the projected volumes for the debris, sludge, and soil waste streams have been increased to include the 50 drums of GEM waste, 27 drums of secondary debris waste, and 17 drums of lab waste. The specific container numbers are provided in the *CCP Waste Container List* (see Section 7.0).

Table 5-1A. Waste Stream Volumes and Generation Dates

Waste Stream	Current Volume		Future Projections
	Number of Containers	Closure Dates	
ID-SDA-SLUDGE	20,380 55-Gallon Drums	Jan. 2005 – September 2011	12,563 55-Gallon Drums
ID-SDA-SOIL	3,405 55-Gallon Drums	Jan. 2005 – September 2011	2,819 55-Gallon Drums
ID-SDA-DEBRIS	2,095 55-Gallon Drums	Feb. 2005 – September 2011	214 55-Gallon Drums and 40 SWBs

5.3 Waste Generating Activities

The waste buried in the retrieval area was originally generated primarily from the production of nuclear weapons at RFP. In general, waste from the INL facilities was historically generated from test reactors operations including fuel development, fuel reprocessing, and a variety of testing activities. This waste is being retrieved from the pits for subsequent disposal at WIPP. More detailed descriptions of the historical waste generating activities and retrieval operations are provided in Sections 4.4 and 4.5, respectively.

5.4 Material Inputs Related to Physical Form

Based on information derived from disposal records, the waste buried in the retrieval area is generally described as rags, paper, plastic, rubber, wood, filters, glass, graphite, metal, equipment, concrete, dirt, sludges, and absorbed organic liquids (References ARA-U007, CFA-U007, ID-U100, ID-U103, ID-U343, ID-U344, ID-U345, ID-U349, INTEC-U001, NRF-C031, RF-U400, RF-U421, RF-U1306, RF-U1307, RF-U1308, RF-U1313, and

RF-U1315). The waste also contains interstitial soils placed among and atop the waste during burial and granular absorbent, such as Oil Dri, that is added to prepared containers in the drum packaging station (References ID-P109, ID-P122, ID-P269, ID-P276, ID-P423, ID-P427, and ID-P431). Table 5-1B, Specific Waste Items Buried in the Retrieval Area, lists specific items that may be buried in the retrieval area, many of which will potentially be included in the waste streams.

Table 5-1B. Specific Waste Items Buried in the Retrieval Area

Waste Items	References
Aerosol cans and compressed gas cylinders	RF-C045, RF-P047
Animal carcasses and excreta, meat contaminated with botulism	RF-C064, RF-C162, RF-P047
Asbestos blankets and gloves	RF-C123, RF-P562, RF-U115
Benelex and Plexiglas	ID-C113, RF-P047
Beryllium metal (e.g., chips, skull, casting, and turnings coated with oil), beryllium-copper alloy, beryllium foil, beryllium oxide, beryllium powder, Lockalloy® (beryllium-aluminum), nickel-plated beryllium, and beryllium reflectors	ARA-P008, CFA-U007, ID-P091, ID-U297, ID-U298, RF-C045, RF-C095, RF-C123, RF-U404, RF-047, RF-P160, RF-P164, RF-P167, RF-P216, RF-P244, RF-P251, RF-P261, RF-P266, RF-404, RF-U152, RF-U235, RF-400, RF-U421, RF-U1306, RF-U1307, RF- U1308, RF-U1313, RF-U1315, TAN-C006
Building renovation waste (e.g., ceiling tiles, doors, partitions, sheetrock, structural steel)	INTEC-U001, RF-U403, RF-P047, RF-P404, RF-U403, RF-U1308
Cemented composite chips	RF-C010, RF-C021
Clean-up and decontamination materials	ARA-P008, ID-C113, ID-U400, NRF-C031
Combustibles (e.g., blotter paper, booties, butcher paper, carbide grinding paper, cardboard, cellulose fiber, cheesecloth, cotton clothing, cotton gloves, cotton rags, cotton towels, emery cloth, empty adhesive tubes, Kim wipes, laundry lint, leather gloves, leather straps, masking tape, metcloth, nylon cloth, packing paper, paper tape, paperboard, personal protective equipment, rags, rope, sandpaper, silicon carbide paper, smear papers, straw, skull caps, stripped paint, surgical gloves, terry cloth, writing paper, weeds, wipes)	ARA-P008, ARA-U007, CFA-U007, ID-C113, ID-P402, ID-U298, ID-U344, ID-U356, ID-U377, ID-U400, INTEC- C001, INTEC-U001, NRF-U001, RF-C010, RF-C025, RF-C028, RF-C044, RF-C045, RF-C064, RF-C110, RF-C120, RF-C123, RF-C124, RF-C132, RF-C140, RF-C236, RF-C404, RF-P047, RF-P084, RF-P085, RF-P104, RF-P108, RF-P164, RF-P188, RF-P261, RF-P404, RF-P562, RF-U115, RF-U201, RF-U400, RF-U403, RF- U421, RF-U1306, RF-U1307, RF- U1308, RF-U1313, RF-U1315

Table 5-1B. Specific Waste Items Buried in the Retrieval Area (Continued)

Waste Items	References
Electrical instruments/components (e.g., mercury batteries, DP cells, electrical cords, electronic equipment, heat detectors, light ballasts, light fixtures, NiCad batteries, office equipment, recorder, thermocouples, transmitter, turbine actuator)	ARA-P008, CFA-U007, CFA-U007, ID-U356, ID-U400, NRF-031, RF-C045, RF-P047, RF-U403
Equipment (e.g., balances, cutting machine base for NaK capsules, discarded analytical equipment, drain traps, drill presses, furnaces, grinding wheels and motors, heat exchangers, heat treating furnaces, jigs, fiberglass tanks, flanges, fume hoods, guillotine gate, lathes, Moyno pump, General Mills mechanical arm with outer shroud and gear train for telescoping hoist, grappler instrument subassembly, column platform support, BISA storage racks, 15-ton Savannah River shipping cask, neutron source shipping cask, chemical hoods, pump heads, plastic tanks, steel tanks, trolley hoist, valves, valve fittings, bench test equipment, actuator parts)	ID-C113, ID-U298, ID-P103, ID-U103, ID-U343, ID-U345, INTEC-C001, NRF-C031, RF-C044, RF-C045, RF-C132, RF-C140, RF-C236, RF-P047, RF-P104, RF-P108, RF-P261, RF-P404, RF-U403, RF-U1307, RF-U1308, RF-U1315
Filters (e.g., glovebox HEPA filters, glovebox and plenum CWS and HEPA filters [fiberglass and paper with asbestos], filter paper, filter media, liquid cartridge filters, vacuum pump filters, oil filters, R-6 filter pads, roughing filters)	ARA-P008, NRF-U004, ID-C113, ID-P109, ID-P402, ID-U298, ID-U356, ID-U377, INTEC-C001, RF-C010, RF-C025, RF-C037, RF-C038, RF-C044, RF-C045, RF-C095, RF-C117, RF-C110, RF-C120, RF-C124, RF-C132, RF-C140, RF-C236, RF-P047, RF-P084, RF-P085, RF-P107, RF-P108, RF-P138, RF-P164, RF-P261, RF-P266, RF-P400, RF-P401, RF-P402, RF-P403, RF-P404, RF-P562, RF-U115, RF-U400, RF-U421, RF-U1306, RF-U1307, RF-U1308, RF-U1315, PER-C009, PER-P041
Furniture (e.g., laboratory benches, cabinets, chairs, desks, tables)	RF-P047
Glass, broken glass, and ceramics (e.g., bottles, camera lens, containers, dissolver pots, crucibles, fluorescent and incandescent light bulbs, mercury vapor lamps, ion exchange columns, jars, leaded glass glovebox windows, lab packs, labware such as beakers and flasks, Raschig rings, tubing)	ARA-P008, CFA-U007, ID-C113, ID-P402, ID-U298, ID-U377, ID-U400, INTEC-C001, RF-C044, RF--C045, RF-C064, RF-C124, RF-C132, RF-C140, RF-C236, RF-C404, RF-P047, RF-P085, RF-P104, RF-P261, RF-P405, RF-U1307
Glovebox floor sweepings	RF-P084, RF-P085
Graphite blocks, molds, crucibles, chunks, electrodes, pieces, fragments, granules, powdered, and fines	ID-C113, ID-U400, RF-C010, RF-C025, RF-C044, RF-C045, RF-C110, RF-C114, RF-C120, RF-C123, RF-C404, RF-P047, RF-P084, RF-P104, RF-P108, RF-P261, RF-P404, RF-U400, RF-U421, RF-U1306, RF-U1307,

Table 5-1B. Specific Waste Items Buried in the Retrieval Area (Continued)

Waste Items	References
	RF-U1308, RF-U1315
Hardware (e.g., bolts, nuts)	ARA-P008, ID-C113, ID-U345, ID-U400
Heavy metal (e.g., lead bricks, lead liners, lead sheets, lead shielding, lead slag, lead turnings, mercury [in bottles], nickel, platinum [crucibles, fritter filters, turnings, and liners for Monel boats], powdered metal [tantalum, tungsten, molybdenum], tantalum [molds, crucibles, sputter targets, stirrers, funnels, stirring rods, and pieces], tungsten pieces, uranium slab, vanadium, zirconium [scrap, plates, chips, turnings, and fines], zirconium oxide mold coating)	ARA-P008, CFA-U007, ID-U298, ID-U344, ID-U345, INTEC-C001, INTEC-U001, NRF-C031, NRF-U004, RF-C025, RF-C045, RF-C123, RF-C124, RF-C404, RF-P047, RF-P084, RF-P108, RF-P404, RF-P405, RF-U152, RF-U206, RF-U1306, RF-U1307, TAN-C004
Inorganic sludge (e.g., first-stage sludge [741-series], second-stage sludge [742-series], special setups [744-series], evaporator salts [745-series sludge], salt and sand from solar evaporation pond No. 2B, "discard mud" from Building 881 enriched uranium dissolution, laundry lint from Building 776, spent eutectic bath uranium oxide sludge from Buildings 444, 881, and 883), unaltered samples and unused samples.	ID-C113, ID-P402, ID-P403, ID-U298, ID-U400, ID-U344, ID-U376, ID-U377, NRF- C031, RF-C018, RF-C045, RF-C055, RF-C060, RF-C080, RF-C108, RF-C109, RF-C110, RF-C114, RF-C124, RF-C132, RF-C137, RF-C139, RF-C140, RF-C149, RF-C236, RF-C404, RF-P047, RF-P085, RF-P098, RF-P108, RF-P260, RF-P261, RF-P262, RF-P263, RF-P562, RF-U026, RF-U095, RF-U110, RF-U115, RF-U126, RF-U127, RF-U288, RF-U400, RF-U421, RF-U1306, RF-U1307, RF-U1308, RF-U1313, RF-U1315
Insulation (may contain asbestos)	ID-U344, INTEC-C001, RF-C025, RF- C045, RF-C404, RF-P099, RF-P104
Ion exchange resin (may be cemented or un-cemented)	ARA-P008, ID-U298, NRF-U004, RF-C025, RF-C045, RF-C120, RF-C404, RF-P047, RF-P104, RF-P562, RF-U115,

Table 5-1B. Specific Waste Items Buried in the Retrieval Area (Continued)

Waste Items	References
Light metal (e.g., aluminum foil, aluminum, banding clamps, bed of pickup, cadmium plating residue, cadmium turnings, chromium plating residue, chromium turnings, collection tank, conduit, copper electrical wiring, copper molds, copper turnings, cubicle piping and metal, drum lids, drum remnants, drum rings, ducting, empty drums, fixtures and tools, iron rails, gloveboxes, grates, grills, inserts liners, metal assemblies, metal sample containers, metal shavings, metal strips, metal work platform, mild steel plate, Monel, nickel plating residue, paint cans, pipe, rack inserts, selenium, sheet metal, slag wool, spiral metal, stainless steel beryllium can pieces, stainless steel trays, steel stand, steel wool, tailgate, thallium, ventilation ducts, waste cans, zinc coatings)	ANL-W-U003, ARA-P008, ARA-U007, CFA-U007, ID-C113, ID-U103, ID-U345, INTEC-C001, INTEC-U001, NRF-C031, RF-C025, RF-C044, RF-C045, RF-C055, RF-060, RF-C114, RF-C117, RF-C120, RF-C123, RF-C124, RF-P047, RF-P075, RF-P076, RF-P084, RF-P085, ID-P103, RF-P107, RF-P108, RF-P167, RF-P261, RF-P404, RF-P405, RF-P562, RF-U115, RF-U124, RF-U403, RF-U1306, RF-U1307, RF-U1308, RF-U1315, TAN-U001
Soils and masonry (e.g., asphalt, cement filled barrels, cinderblocks, concrete, diatomaceous earth, dirt, gravel, lava rocks, Oil-Dri, rocks, sand, sandblasting grit [aluminum oxide], soil, and pavement)	ARA-P008, CFA-U007, ID-C113, ID-U103, ID-U400, ID-U344, ID-U345, ID, U349, INTEC-C001, INTEC-U001, NRF-C031, RF-P047, RF-P108, RF-P261, RF-U1308, TAN-C002
Organic sludge (e.g., Organic Setups [74A- and 743-series]) unaltered samples and unused samples.	ID-C113, ID-P402, ID-P403, ID-U298, ID-U376, ID-U377, RF-C045, RF-C055, RF-C060, RF-C114, RF-C116, RF-C117, RF-C118, RF-C137, RF-C139, RF-C234, RF-C404, RF-P047, RF-P085, RF-P098, RF-P108, RF-P260, RF-P261, RF-P262, RF-P263, RF-P400, RF-P404, RF-P562, RF-U026, RF-U095, RF-U110, RF-U115, RF-U288, RF-U400, RF-U421, RF-U1306, RF-U1307, RF-U1308, RF-U1313, RF-U1315
Plastics (e.g., bags, bottles, containers, sheets, sheeting, filter cloth, gloveboxes, glove rings, hoses, jars, latex gloves, liners, o-ring bags, pipes, personal protective equipment, pigtails, plastic blocks/bricks, plastic flashlight bodies, plastic pieces, plastic shavings, plastic flashlight sheathing, plastic tape, poly shavings, polyvinyl chloride (PVC) hoods, PVC rain suits, scraps, shoe covers, shredded plastic, rings, tanks, Teflon, tray liners, Tygon tubing, Tyvek suits, valves, vinyl tape, visqueen, zip ties, vials, and filters)	ARA-P008, ARA-U007, CFA-U007, ID-C113, ID-P402, ID-U377, ID-U400, ID-U344, ID-U356, INTEC-C001, INTEC-U001, NRF-C031, RF-C028, RF-C044, RF-C045, RF-P261, RF-P404, RF-U1307, RF-U1308, RF-U1315, TAN-C001
Precious metals (e.g., gold, platinum, silver, silver turnings, titanium)	RF-P075, RF-P084, RF-P160, RF-P184, RF-P404

Table 5-1B. Specific Waste Items Buried in the Retrieval Area (Continued)

Waste Items	References
Reactor debris (e.g., ANP refueling jig, contaminated sludge, control drums, beryllium reflectors, core loop, fuel end boxes and pieces, fuel fragments, irradiated experiments, irradiated capsules, irradiated fuel element pieces, irradiated metals, irradiated reactor components, metal "punchings" [SL-1 reactor], ML-1 reactor skid and shielding, piping from reactors, SL-1 reactor debris, 38 ton cask containing mixed fission products from SL-1, support fixtures, PM-2A equipment on skids, synthetic sapphire-coupled optical pyrometer, corrosion products in a steel tank, mixed fission waste materials in barrels, upper grid plate, WAPD equipment and materials, Zircaloy cladding, SNAP reactor shield plug, solid lithium hydride reactor shield, top hat shielding)	ARA-P008, ID-P091, ID-U103, ID-U292, ID-U297, ID-U298, ID-U345, INTEC-C001, NRF-U004, PER-C009, PER-P046, TAN-C002, TAN-U001
Refractory materials (e.g., fire brick [aluminum oxide] and cemented fire brick, Oil-Dri® [crystalline silica and Fullers Earth], crucibles [aluminum silicate], sand blast material [aluminum oxide])	RF-C021, RF-C047, RF-C108, RF-C110, RF-C120, RF-C123, RF-P047, RF-P099, RF-P107
Residues from recovery (e.g., calcium fluoride slag; incinerator ash; leached ash; leach heel; magnesium oxide sand and crucibles; and sand, slag, and crucible heel)	ID-C113, RF-C025, RF-C045, RF-C108, RF-C236, RF-C404, RF-P047, RF-P084, RF-P104, RF-P108, RF-P142
Roaster oxide (depleted uranium calcined to an oxide)	ID-U400, RF-C021, RF-C045, RF-C108, RF-C129, RF-C403, RF-P047, RF-P402, RF-P403, RF-P562, RF-U115, RF-U400, RF-U421, RF-U1306, RF-U1307, RF-U1308, RF-U1313
Rubber (e.g., butyl gloves, ear plugs, gaskets, gloves, hoses leaded and non-leaded gloves, leaded aprons, o-rings, stoppers, surgeon's gloves, tubing, rubber bands, rubber gloves)	CFA-U007, ID-C113, ID-U400, ID-U344, ID-U356, INTEC-C001, RF-C044, RF-C132, RF-P047, RF-P104, RF-P108, RF-P188, RF-P261
Sewage sludge	ARA-P008, CFA-U007, TAN-U001
Solidified and absorbed solutions (e.g., caustic organic solutions, cyanide cement, tank bottom residues [referred to as Crud in NRF-618,] evaporator bottoms absorbed in vermiculite, sludges, fixed organic solutions, lab waste immobilized in concrete or plaster [cemented liquids] or vermiculite, low-level waste oil residue in drums, bottom slurry from evaporator tanks, solids mixed with Fullers earth/cement and celite, sodium cyanide solutions, sodium hydroxide solutions, TRU solutions absorbed in vermiculite or diatomaceous earth) absorbed analytical and sample residue, absorbed standard preps, and absorbed lab performance certification sampling residue.	ANL-W-P010, ARA-P008, ARA-U007, ID-P402, ID-U238, ID-U298, ID-U345, ID-U377, CFA-U007, ID-U103, ID-U344, INTEC-C001, INTEC-P002, NRF-U004, RF-C070, RF-C110, RF-C120, RF-U1306, RF-U1307
Sources (e.g., Pu-Be neutron sources, Co-60 sources)	ID-P091, RF-C101, RF-P047, RF-U026, RF-U1306

Table 5-1B. Specific Waste Items Buried in the Retrieval Area (Continued)

Waste Items	References
Tools (e.g., broken drills, chisels, chucks, files, grabber tool, hand tools, knives, metal probe puller, saw blades, taps, tool bits, tension setting tools)	ARA-P008, ID-C113, ID-U356, ID-U400, RF-C132, RF-C140, RF-C236, RF-P085, RF-P261, RF-U287
Wood (e.g., 2 x 4s, boxes, mockups, pallets, plywood, scaffolding, scraps, and other lumber, sagebrush, roots twigs)	ARA-U007, CFA-U007, ID-C113, ID-U103, ID-U344, ID-U345, INTEC-C001, INTEC-U001, NRF-C031, RF-C064, RF-C404, RF-U400, RF-U421, RF-U1307, RF-U1308

5.4.1 Targeted Waste Types

To achieve the targeted retrieval objectives, the retrieval activities will focus primarily on removal of the waste types described below. These waste types are targeted for retrieval because they contain a significant portion of the contaminants of concern, which include VOCs, uranium, and TRU radionuclides including plutonium. By targeting 743-series sludge and roaster oxide waste, it is expected that most of the VOC and uranium inventory in the pit will be removed. In addition, approximately 90 percent of the curies associated with the RFP TRU waste types are contained within the 741-series sludge, graphite, and contaminated HEPA filters. Combined, all targeted waste types contain a large portion of contaminants of concern in approximately 20 percent of the ARP-I area waste volume and approximately 24 percent of the ARP-II area waste volume (Reference ID-P103, ID-P215, and ID-P221).

An example of inorganic sludge that has been retrieved is shown in Figure 8. Additional photographs of the targeted waste types are provided in GDE-318, SDA Targeted and Non-Targeted Waste Identification Operator Guide (Reference ID-P239). An evaluation was done to address the potential parameters for discriminating between first/second-stage inorganic sludges and organic setups waste. Color and packaging were found to be useful visual discriminators while texture was not an effective discriminator (Reference ID-P216). Statistical comparisons of historical analytical data indicate that concentrations of several organic constituents are significantly different (two orders of magnitude) between first/second-stage inorganic sludges and organic setups waste (Reference RF-P569).

First-Stage Sludge (741-Series Sludge): This waste consists of sludge from first-stage treatment operations in RFP Building 774. If americium loading was high, the drum was lined in 1/8-in.-thick lead sheet. The sludge may appear as red adobe clay with white chunks, or red adobe clay only. Dry Portland cement was placed on the bottom of the drum and on top of the sludge, and may also have been added in alternating layers within the sludge. The cement layers may appear similar to fractured concrete. Surgical rubber gloves and leaded gloves may have been added to the sludge (References ID-P103, ID-P239, ID-P249, ID-P396, ID-P421, ID-P422, ID-P426, ID-U292, ID-U305, RF-C132, RF-C197, RF-C243, RF-P047, RF-P085, RF-P090, RF-P098, RF-P108, RF-P260,

RF-P261, RF-P262, RF-P263, RF-U019, RF-U110, RF-U288, RF-U400, RF-U421, RF-U1306, RF-U1307, RF-U1308, and RF-U1315).

Second-Stage Sludge (742-Series Sludge): This waste consists primarily of sludge from second-stage treatment operations in RFP Building 774 and is visually indistinguishable from the 741-series sludge. Portland cement was placed on the bottom of the drum and on top of the sludge, and may also have been added in alternating layers within the sludge. Other items that may have been added to the sludge include electric motors, mercury and lithium batteries, potassium cyanide pellets, bottles of americium solution, radioactive sources (including cobalt-60), returned Building 774 samples, contaminated KW, oil-carbon tetrachloride, Building 771 sludge, Building 883 scrubber salt, small amounts of mercury in pint bottles, and other bottles of chemical wastes. The 742-series designator may also have been used for sludge and sand from equipment and tank cleanouts in other buildings and for Building 776 laundry lint packaged in Building 774. This waste also includes general trash, dirt, gravel, and trash from "03 Pad" (903 pad) which is usually listed as Type I & V instead of Type IV. In January 1968, 11 drums are listed in the 742-series Sludge Drums logbook as "LLD", possibly an indication of lead-lined drums. Second stage sludge was added as a targeted waste type starting July 1, 2008. This change occurred after completion of ARP-I and during excavation of the ARP-II area (References ID-P103, ID-P124, ID-P239, ID-P249, ID-P396, ID-P421, ID-P422, ID-P426, ID-U305, RF-C045, RF-C149, RF-C400, RF-P047, RF-P049, RF-P085, RF-P108, RF-P119, RF-P260, RF-P261, RF-P262, RF-P263, RF-P266, RF-P562, RF-U026, RF-U115, RF-U125, RF-U288, RF-U400, RF-U421, RF-U1306, RF-U1307, RF-U1308, RF-U1313, RF-U1315, and TAN-U002).

Organic Setups (74A- or 743-Series Sludge): This waste is composed primarily of Shell Vitrea and Texaco Regal oils; carbon tetrachloride; 1,1,1-trichloroethane, tetrachloroethylene, and trichloroethylene blended with calcium silicate. Calcium silicate and/or Oil-Dri® were added to the drum bag prior to filling, and on top of the waste prior to drum bag closure. As generated, the waste had a crumbly, putty-like consistency (References ID-P103, ID-P239, ID-P249, ID-P396, ID-P421, ID-P422, ID-P426, ID-U292, ID-U298, RF-C114, RF-C124, RF-C132, RF-C140, RF-C197, RF-P047, RF-P085, RF-P098, RF-P108, RF-P260, RF-P261, RF-P262, RF-P562, RF-U019, RF-U026, RF-U095, RF-U110, RF-U115, RF-U288, RF-U400, RF-U421, RF-U1306, RF-U1307, RF-U1308, and RF-U1313).

Roaster Oxide: This waste is depleted uranium oxide produced by the thermal stabilization of chips and fines to lessen the pyrophoric nature of the material. The chips and fines were produced during the machining of depleted uranium metal. This waste form may be approximately three to four millimeters in diameter and varies in texture from relatively fine grained to a more coarse-grained material. Roaster oxide was usually packaged in bulk, partially filling 30-gallon drums. The 30-gallon drums were overpacked into 55-gallon drums for transport (roaster oxide was not packaged in plastic bags), with vermiculite or other such substance used as filler material between the 30- and 55-gallon drums. Due to the residual heat in the roaster oxide when it was placed into the 30-gallon drum, the pieces of oxide may have become fused forming a large chunk of material in the drum. This waste category may also include items such as pieces of depleted uranium

metal, tooling, work gloves, and other items contaminated with depleted uranium (References ID-P103, ID-P239, ID-P249, ID-P396, ID-P421, ID-P422, ID-P426, ID-U292, RF-C021, RF-C113, RF-C129, RF-P047, RF-P085, RF-P098, RF-P261, RF-P265, RF-P402, RF-P403, RF-P562, RF-P563, RF-U115, RF-U400, RF-U421, RF-U1306, RF-U1307, RF-U1308, RF-U1313, and RF-U1315).

Roaster oxide is not TRU waste, but due to the possible lack of container integrity, segregation of the nearly 450 drums of this material (which represents less than one percent of the waste inventory in the retrieval area) from other waste during retrieval operations may not be feasible (Reference ID-P109). Waste removed from the retrieval area and packaged into new drums, including roaster oxide commingled with other waste will undergo nondestructive assay (NDA) to determine if the waste is TRU waste. Payload containers that are less than 100 nanocuries per gram TRU alpha are not eligible for WIPP disposal.

Graphite: This waste is graphite molds, crucibles, cores, electrodes, and other pieces of graphite. Large pieces of graphite were typically double-bagged in plastic before being packaged in drums. Smaller pieces of graphite were typically placed in 1-gallon polyethylene bottles before being bagged and packaged in drums. Graphite was mechanically scraped to remove excess plutonium producing fines and small pieces (1/4-in. to 1-in.). The graphite waste may also include molds, crucibles, and pieces generated in the non-plutonium areas of RFP (References ID-P103, ID-P239, ID-P249, ID-P396, ID-P421, ID-P422, ID-P426, ID-U400, RF-C010, RF-C025, RF-C044, RF-C045, RF-C110, RF-C114, RF-C120, RF-C123, RF-C243, RF-C404, RF-P047, RF-P084, RF-P104, RF-P108, RF-P261, RF-P562, RF-U115, RF-P404, RF-U400, RF-U421, RF-U1306, RF-U1307, and RF-U1308).

Filters: This waste consists primarily of CWS and HEPA filters from ventilation intake and exhaust filter plenums. This waste also includes filter paper, liquid cartridge filters (i.e., Ful-Flo filters), vacuum pump filters, oil filters, R-6 filter pads, and roughing filters. This waste consists primarily of 24 × 24 × 12-in. filters from ventilation exhaust filter plenums, but may also include various other sizes of plenum filters. The waste also includes intake and exhaust glovebox filters that are 8 x 8 x 6-in. Filters are 4- to 12-in. thick. Two types of filter media were used: cellulose-asbestos and fiberglass. Filter frames are constructed of either fire-retardant plywood or particleboard. Filter media may also be present without the frame. Portland cement was added to a wooden crate if it contained damp filters contaminated with nitric and hydrofluoric acids. The waste may also contain metal canister filters that were used for respiratory protection. Smaller filters were double-bagged and were often packaged in 55-gallon drums or wooden waste crates. Each plenum filter is assumed to have been double-bagged, placed in its original shipping carton for disposal, or placed in a wooden box with a few other filters for disposal (References ID-P103, ID-P239, ID-P249, ID-P396, ID-P421, ID-P422, ID-P426, RF-C010, RF-C037, RF-C038, RF-C040, RF-C041, RF-C095, RF-C236, RF-P021, RF-P164, RF-P562, RF-U115, RF-U400, RF-U421, RF-U1306, RF-U1307, RF-U1308, and RF-U1315).

5.4.2 Non-Targeted Waste Types

During the retrieval of the targeted waste types, non-targeted waste types, with the exception of 744-series sludge, may inadvertently be removed and packaged with the targeted materials. Representative photographs of the non-targeted waste types are provided in GDE-318, SDA Targeted and Non-Targeted Waste Identification, Operator Guide (References ID-C101, ID-P239, and ID-P249).

Special Setups (744-Series Sludge): This waste consists of liquids solidified with Portland and magnesia cements in a 55-gallon drum, double-lined with plastic bags. Bottled liquids were emptied into the drum containing the cement. After mixing dry Portland cement was added on top of the cemented liquid waste. The empty bottles were segregated and not included with the solidified waste. The liquids were treated separately because of the plutonium-complexing or corrosive nature of the wastes.

As retrieved, the waste will appear similar to an off-white concrete monolith retaining the shape of the drum. Prior to 1967 when the 744-series was initiated, this waste was identified as 741- or 742-series sludge (or 74R- in the case of RFP Building 881 raffinates that were solidified). This waste may also include KW solution (nonhazardous chelating agent), laboratory waste, hydrochloric acid (neutralized before set-up), cyanide waste, set-up uranium-233 waste, machine cleaner, miscellaneous chemicals (not individually listed), machine oil, and scrubber salts. These solid monoliths will be readily identifiable and will not be included in the final waste streams (References ID-P103, ID-P239, ID-P396, ID-P421, ID-P422, ID-P426, RF-C133, RF-C197, RF-P047, RF-P260, RF-P261, RF-P262, RF-P562, RF-U026, RF-U115, RF-U400, RF-U421, RF-U1306, RF-U1307, RF-U1308, and RF-U1313).

This waste also includes approximately 10- to 20-gallons of the resin hardening agent 4,4-methylene-bis, 2-chloroaniline which was mixed with cement in cylindrical plastic or cardboard 'ice cream' cartons, double bagged and placed in several drums as 744-series sludge. This packaging configuration is also readily identifiable and will not be brought into the drum packaging stations and not included in the final waste streams (References ID-C107, ID-P103, and RF-P047).

Evaporator Salts (745-Series Sludge): This waste consists of dried salts, containing less than 10 percent water, by weight, from evaporator operations in RFP Building 774. These salts were a dry, granular waste form, and were packaged in plastic-lined 55-gallon drums. No cement was used (References ID-P396, ID-P421, ID-P422, ID-P426, RF-C149, RF-P047, RF-P085, RF-P098, RF-P108, RF-P260, RF-P261, RF-P264, RF-P562, RF-U110, RF-U115, RF-U126, RF-U127, RF-U421, RF-U1306, RF-U1307, RF-U1308, and RF-U1313).

Building 881 Discard Mud: In RFP Building 881, impure oralloy-bearing materials were crushed and leached in nitric acid, and the leached materials were filtered. Below discard-level insoluble residues that remained from the leaching process, and solids that collected on the filters were described as "discard mud" and disposed as Waste

Type "IV M" sludge (References RF-P064, RF-P562, RF-U115, RF-U400, RF-U1307, RF-U1308, and RF-U1315).

Pond 2B Sludge: In late 1963, liquid waste in Pond No. 2A, plus an addition of 50 percent liquid caustic to neutralize the waste, was transferred to Pond No. 2B to enable the repair of Pond No. 2A. The liquid wastes in Pond No. 2B North and Center sections were pumped back to Pond No. 2A in mid-1964 (after repairs to Pond No. 2A were completed) to allow inspection of the liner of Pond No. 2B in these sections. This waste consists of the salts, sand, and dirt remaining after the liquid was removed as well as sand and dirt blown into the pond over time. The waste was placed in 55-gallon drums (References RF-C080, RF-U127, RF-U400, and RF-U1315).

Other RFP Sludges: A small amount of sludge was also generated from RFP Buildings 444, 771, 776, 881, and 883. The source of this material may be filtration, tank cleanouts, laundry lint (from Building 776), or heat treatment of uranium metal in a heated salt bath in Buildings 444, 881, and 883 (References RF-C045, RF-P084, RF-P085, RF-P247, RF-P562, RF-U115, RF-U400, RF-U421, RF-U1306, RF-U1307, RF-U1308, RF-U1313, and RF-U1315).

INL Sludge: These sludges were sewage sludges from sewage treatment plants CFA 601 and CFA 654. There were three shipments of dried sewage sludge totaling approximately 1,300 cubic feet. These sludges are expected to have a texture similar to loamy soil (Reference ID-P103).

Combustibles: Combustible wastes generated from RFP and non-RFP facilities include various paper, cloth, plastic, rubber, and wood items. Combustibles generated in RFP Building 774 were listed in the various sludge logbooks as 742-, 743-, and 744-series with waste types "I & V." Specific waste items are provided in Table 5-1 (References ID-P103, ID-P396, ID-P421, ID-P422, ID-P426, INTEC-C001, RF-C044, RF-C045, RF-C104, RF-C236, RF-P047, RF-P108, RF-P164, RF-P261, RF-P562, RF-U026, RF-U115, RF-U400, RF-U421, RF-U1306, RF-U1307, RF-U1308, RF-U1313, and RF-U1315).

Non-Combustibles: Non-combustible wastes generated from RFP and non-RFP facilities include various metal, glass, ceramic, and masonry items as well as sand, gravel, and dirt. Non-combustibles generated in RFP Building 774 were listed in the various sludge logbooks as 742-, 743-, 744-series with waste types "I & V." Specific waste items are provided in Table 5-1 (References ID-P103, ID-P396, ID-P421, ID-P422, ID-P426, ID-U292, INTEC-C001, RF-C044, RF-C045, RF-C095, RF-C104, RF-C236, RF-P047, RF-P108, RF-P164, RF-P261, RF-P562, RF-U026, RF-U115, RF-U400, RF-U421, RF-U1306, RF-U1307, RF-U1308, RF-U1313, and RF-U1315).

Beryllium-Contaminated Wastes: Drums containing waste beryllium metal or beryllium oxide may be encountered. The metal and oxide could include metal castings and rejected parts, casting skulls, turnings, chips, and grinding fines from machining operations. Beryllium may also be present from the periodic replacement of reactor reflection shields and inserts and from these items disposed after destructive testing of reactors. Other waste materials can be contaminated with beryllium. These wastes may include

742-sludge, 743-sludge, combustible debris and non-combustible debris (e.g., graphite molds and crucibles from Building 444). The presence of beryllium would not be visually recognizable in wastes that are beryllium-contaminated (References ARA-P008, CFA-U007, ID-P091, RF-C045, RF-C095, RF-C107, RF-C123, RF-C129, RF-U404, RF-P047, RF-P080, RF-P160, RF-P164, RF-P167, RF-P216, RF-P244, RF-P251, RF-P261, RF-P266, RF-P404, RF-U151, RF-U152, RF-U170, RF-U235, RF-U286, RF-U400, RF-U421, RF-U1306, RF-U1307, RF-U1308, RF-U1313, RF-U1315, TAN-C006, TAN-P069, TAN-P070, TAN-P071, and TAN-P076).

Because beryllium metal and beryllium oxide are not targeted for retrieval, payload containers will likely contain very little beryllium. The beryllium will be present as a contaminant of sludges and debris waste items such as HEPA filters and graphite. Based on the evaluation of analytical data from the 3,100 Cubic Meter Project confirmation of similar sludges generated in RFP Building 774, and from Pit 9 retrieval activities, beryllium does not exceed one percent. Beryllium concentrations in 82 samples of RFP Building 774 wastewater treatment sludges from the 3,100 Cubic Meter Project range from 1.1 to 3,400 milligrams/kilograms (0.34 percent). Analysis of 87 samples of soils/sludges from Pit 9 retrieval activities indicates beryllium concentrations between 0.89 and 170 milligrams/kilograms (0.017 percent) (References RF-P090, RF-P406, and RF-U405).

Beryllium debris from INL facilities (e.g., reactor reflection shields and inserts) may have been disposed in the retrieval area; however, disposal records do not specifically identify the presence of beryllium (References ARA-P008, CFA-U007, ID-P091, ID-U100, ID-U103, ID-U343, ID-U353, and TAN-C006). Disposal records for RFP shipments containing beryllium waste are identified by the waste type code "Be," "Be I," "Be III," and "Be V" (References RF-U400, RF-U421, RF-U1306, RF-U1307, RF-U1308, RF-U1313, and RF-U1315). Type Be with no roman numeral designator is assumed to be drums filled with beryllium metal or beryllium oxide (e.g., chips, turnings, casting skulls). Type Be V is beryllium-contaminated noncombustibles which is comprised of debris wastes (e.g., graphite) but may also include beryllium metal and beryllium oxide since these materials are noncombustible. The ARP-I, ARP-II, ARP-III, ARP-IV, ARP-V, ARP-VI, and ARP-VII retrieval areas combined contain less than one percent, by weight, Type Be, Type Be-I, and Type Be-V wastes. This is based on the total weight of the buried waste and does not include interstitial soils (References ID-U101, ID-U104, ID-U109, ID-U111, ID-U112, ID-U114, and ID-U116). Drums filled with beryllium metal or beryllium oxide are identified during preliminary waste screening in the retrieval area and because these materials are not targeted for retrieval, they are not transferred into the drum packaging station (Reference RF-P570).

The Type Be V waste may include noncombustible debris such as graphite molds and crucibles from beryllium casting in Building 444 and stainless steel from the canning and de-canning operations in Building 883. Graphite wastes generated at RFP from plutonium casting are targeted for retrieval. Graphite molds and crucibles were also generated at RFP from casting of beryllium. Although the beryllium-contaminated graphite does not contain plutonium, VE cannot distinguish between the graphite generated from these operations. Graphite molds and crucibles were coated with a water solution of beryllium

oxide and beryllium sulfate (containing about 16 percent, by weight, beryllium) to prevent the molten beryllium from reacting with the graphite (References RF-C017, RF-C040, RF-P080, RF-P167, RF-P244, RF-P562, and RF-U424). When a mold coating failed, beryllium would adhere to the surface of the graphite. Occasionally a mold coating would fail to the point where the molten beryllium would produce a hole in the graphite. The molten metal would puddle in the bottom of the furnace through the hole in the graphite mold. Cleanup would include the beryllium melt, furnace fire brick, graphite, and all of the cleanup materials. These materials were consolidated into their own drums or boxes and kept separate from other waste materials (References RF-C123 and RF-P562). Newly packaged drums containing graphite waste will contain only trace quantities (less than one weight percent) of beryllium (Reference RF-U424). However, if a drum or box containing cleanup materials from a mold failure is encountered, the newly packaged drum containing this waste will contain greater than one weight percent beryllium, unless the beryllium melt is not brought into the drum packaging station.

Type Be I is beryllium-contaminated combustibles (e.g., paper, rags, etc.), which are not targeted for retrieval, but small amounts may be inadvertently commingled with targeted wastes. Newly packaged drums or SWBs containing targeted waste and beryllium-contaminated combustibles will contain only trace quantities (less than one weight percent) of beryllium.

HEPA filters from plutonium areas at RFP are targeted for retrieval. Beryllium-contaminated HEPA filters (identified as Type Be III waste), which serviced the RFP Building 444 beryllium machining area, were also disposed in the SDA. Although the beryllium-contaminated filters do not contain plutonium, VE cannot distinguish between the filters generated from these operations. There is only one crate of filters identified as Type Be III in the ARP-I area and none in the ARP-II, ARP-III, ARP-IV, ARP-V, ARP-VI, and VII Areas (References ID-U101, ID-U104, ID-U353, RF-U400, RF-U421, RF-U1306, RF-U1307, RF-U1308, RF-U1313, and RF-U1315). Filter loading information was not found for the Building 444 beryllium filters. There is information, however, on filter loading in HEPA filters from the plutonium areas at RFP. An evaluation was done to assess the amount of beryllium in the Building 444 filters using data from plutonium-contaminated HEPA filters. As part of the evaluation, several variables were considered including the weight of a used filter, the amount of plutonium in a used filter, and the form of the beryllium in the filter (i.e., beryllium metal, oxide, or carbide). Based on this evaluation, the beryllium present in a single 2-feet x 2-feet x 1-foot HEPA filter from Building 444 is estimated to be less than one weight percent (References RF-C038, RF-C040, RF-C041, RF-P021, RF-P022, RF-P057, RF-P062, RF-P084, RF-P085, RF-P164, RF-P240, RF-P562, RF-U115, and RF-U425).

5.4.3 Waste Matrix Code

The three waste streams delineated in this AK Summary Report could potentially include wastes of the same physical composition but are categorized into waste streams based on the predominant summary category group (i.e., debris, soil, and homogenous solids) observed during packaging (References ID-C106 and ID-P109).

Waste Stream ID-SDA-SLUDGE

Waste stream ID-SDA-SLUDGE is predominantly wastewater treatment sludge, absorbed organic liquids (organic setups), and roaster oxide by volume. The waste water treatment sludge targeted for retrieval is first-stage and second-stage sludge. The balance of this waste is absorbent added during VE, soil and debris (see Table 5-1). Therefore, Waste Matrix Code S3900, Unknown/Other Homogeneous Solids, is applied to this waste stream. This category includes waste that is predominantly homogeneous solids as described in the DOE Waste Treatability Group Guidance (Reference 4).

Waste Stream ID-SDA-SOIL

Waste stream ID-SDA-SOIL is predominantly soil by volume with the balance being absorbent added during VE, homogenous solids (i.e., roaster oxide, sludges and absorbed liquids) and debris (see Table 5-1). Soil is not a targeted waste form but the possibility exists for the retrieved waste to contain targeted waste but the predominant component is soil. Therefore, Waste Matrix Code S4200, Soil/Debris, is applied to this waste stream. This category includes waste that is predominantly soil, sand, silt, rock, or gravel with rock and gravel volumes totaling less than 50 percent as described in DOE/LLW-217, *DOE Waste Treatability Group Guidance* (Reference 4).

Waste Stream ID-SDA-DEBRIS

Waste stream ID-SDA-DEBRIS is predominantly debris waste by volume. The waste forms targeted for retrieval are filters and graphite. Numerous other organic and inorganic debris waste items (see Table 5-1) will also be retrieved in the process. The balance of this waste is absorbent added during VE, homogenous solids (i.e., roaster oxide, sludges and absorbed liquids) and soil. Therefore, Waste Matrix Code S5400, Heterogeneous Debris, is applied to this waste stream. This category includes waste that is at least 50 percent by volume debris materials that do not meet the criteria for assignment as either an Inorganic Debris (S5100) or Organic Debris (S5300) as described in the DOE Waste Treatability Group Guidance (Reference 4).

5.4.4 Waste Material Parameters

5.4.4.1 Correlation of Waste Types to Waste Material Parameters

To determine the waste material parameter weight percentages, the waste types first need to be correlated to the appropriate waste material parameter. Table 5-1C, Correlation of Waste Types to Waste Material Parameters, summarizes this correlation followed by the basis for this correlation.

Table 5-1C. Correlation of Waste Types to Waste Material Parameters

Waste Type	Waste Material Parameter
741-Sludge and 742-Sludge	Inorganic Matrix
Roaster Oxide	Inorganic Matrix
743-Sludge	Organic Matrix
Graphite	Other Inorganic Material
Filters (Type II Filter Paper)	Cellulosics
Filters (Type III CWS and HEPA Filters with Wood Frames)	Cellulosics
Filters (Type III CWS and HEPA Filters with Metal Frames)	Iron-based Metals

- 741-Sludge and 742-Sludge – These sludge wastes were derived from the treatment of aqueous liquids. Portland cement was also added to the sludge. This waste is assigned waste material parameter "inorganic matrix" which is defined in the WIPP-WAP as sludge or aqueous-based liquids that are solidified with cement or other solidification agents, and includes wastewater treatment sludge.

- Roaster Oxide – RO consists of pure depleted uranium metal machine turnings that have been converted to an oxide in a roaster. Like the 741- and 742-sludges, RO has been classified as a homogeneous waste. For this reason, the waste material parameter "inorganic matrix" is assigned to this waste.

- 743-Sludge – This sludge was derived from the treatment of oils and organic solvents into a solid by mixing with a synthetic calcium silicate. This waste is assigned waste material parameter "organic matrix" which is defined in the WIPP-WAP as cemented organic resins, and solidified organic liquids and sludges.

- Graphite – Graphite is one of the allotropes of carbon. This waste is assigned waste material parameter "other inorganic material" which is defined in the WIPP-WAP as nonmetallic inorganic waste including concrete, glass, firebrick, ceramics, sand, and inorganic sorbents.

- Filters – Filter wastes include Type II and Type III wastes. Type II waste is filter paper used to filter machine coolant and other process liquids. These filters are assigned waste material parameter "cellulosics" which is defined in the WIPP-WAP as materials generally derived from high-polymer plant carbohydrates, such as paper, cardboard, wood, and cloth.

  Type III waste is CWS filters utilized in building ventilation systems, and HEPA filters which eventually replaced CWS filters. The standard CWS-6 type filter consisted of a wooden frame, cellulose-asbestos medium, and Kraft paper separators and were about 95 percent combustible (Reference RF-P021). Following the September 1957 fire in Building 771, all buildings began replacing the CWS-6 type filter with a fire-resistant filter, with the exception of the old part of Building 881 (Reference RF-U057). These new filters consisted of a wooden frame, fiberglass or fiberglass-asbestos medium, and asbestos paper or aluminum

separators (References RF-P062, RF-P425, RF-P427, and RF-P562). Therefore, with the exception of Building 881, filters shipped to the SDA prior to about 1959 are likely the 95 percent combustible filters. Building 881 continued the use of CWS filters because the chemical atmospheres involved with the EU recovery operations required a filter rejuvenation system, and the fiberglass filters did not work with this system (Reference RF-P021). Building 881 EU operations began phasing out in 1964, and most of the EU operations had ceased by 1966 (Reference RF-P084). Closeout of EU operations and processes was completed in 1967 (Reference RF-P105). Seventeen wood boxes containing filters from Building 881 were shipped to the SDA in early-1967 and are located in the ARP-I and ARP-II retrieval areas (Reference ID-U353). These filters are likely the 95 percent combustible filters from strip-out of the old Building 881 filter plenum. The filters from other buildings in ARP-I, ARP-II, ARP-III, ARP-IV, ARP-V, ARP-VI, and ARP-VII should be the newer fire-resistant filters. The fire-resistant filters had wooden frames with the frame comprising the majority of the total filter weight (Reference RF-C050). For this reason, the waste material parameter "cellulosics" is also assigned to the CWS and HEPA filters with wooden frames.

One exception is the filters from the Building 771 incinerator plenum. Because of the high-temperature application, these filters consisted of a cadmium-plated steel frame, fiberglass-asbestos medium, and aluminum separators. The first bank of 12 HEPA filters had to be replaced about twice a week due to soot plugging (Reference RF-P107). Therefore, any filters with a metal frame are assigned the waste material parameter "iron-based metals" because, like the wood frame filters, the metal frame will comprise the majority of the total filter weight (Reference RF-C050).

5.4.4.2 Estimate of Waste Material Parameter Weight Percentages

To estimate waste material parameter weight percentages for waste streams ID-SDA-SLUDGE, ID-SDA-SOIL, and ID-SDA-DEBRIS, data from two sources were evaluated; the WILD database and CCP VE batch data reports. The WILD data evaluated consists of the weights of graphite, filters, RO, 741-sludge, 742-sludge, and 743-sludge targeted for retrieval and in the entire ARP (i.e., 5.69 acre area of the SDA). CCP VE batch data reports were evaluated for approximately 11,500 drums that had been generated from ARP-I and the portions of ARP-II and ARP-III that have been retrieved and packaged through December 31, 2008 (Reference ID-U329). This evaluation is documented in a memorandum (included with Attachment 6) as required by CCP-TP-005 (Reference 1).

As of December 2008, VE Data has been compiled for 8,750 drums in waste stream ID-SDA-SLUDGE, 2,067 drums in waste stream ID-SDA-SOIL, and 738 drums in waste stream ID-SDA-DEBRIS (Reference ID-U329). This data includes drums that have assayed as low level and been removed from the waste streams. Waste Stream ID-SDA-SOIL consists of drums that contain less than 50 percent, by volume, targeted debris and/or sludge wastes with the balance being interstitial soil removed during excavation. WILD data cannot be used to estimate the waste material parameters in this waste stream. The estimated weight percentages for the soil waste stream are based

solely on VE data. These data will be representative of the soil waste stream as a whole; however, this will be verified as the waste stream will undergo 100 percent VE. The results of this evaluation for Waste Stream ID-SDA-SOIL are presented in Table 5-1D, Waste Stream ID-SDA-SOIL Waste Material Parameters.

WILD includes gross weights and container types (Reference ID-U351 and ID-U353). Based on assumed tare weights for the various container types, net weights were calculated for graphite, filters, RO, 741-sludge, 742-sludge, and 743-sludge. The weight percent graphite versus filters was calculated as was the weight percent organic sludge (743-sludge) versus inorganic sludge (RO, 741-sludge, and 742-sludge).

Debris

- 35.3 wt% graphite and 64.7 wt% filters (all retrieval areas combined)

Sludge

- 64.8 wt% inorganic sludge and 35.2 wt% organic sludge (all retrieval areas combined)

Since the VE data include only waste from ARP-I and portions of ARP-II and ARP-III that had been retrieved and packaged, a combination of the VE data and the WILD data were evaluated to estimate the waste material parameters weight percentages for Waste Streams ID-SDA-SLUDGE and ID-SDA-DEBRIS. There are a few waste material parameters (associated with non-targeted waste) that have not been identified during VE to date. It is expected that less than one weight percent of these materials will be present.

For Waste Stream ID-SDA-SLUDGE, the estimated weight percentages of organic matrix (743-sludge), 70.4 wt%, and inorganic matrix (741-sludge, 742-sludge, RO), 23.5 wt%, from the VE data were subtracted from 100 and then divided by two with a result of 3.0 weight percent. This result was subtracted from the organic sludge and inorganic sludge weight percentages calculated from the WILD data. The other waste material parameter weight percentages from the VE were determined to be less than one weight percent with the exception of other inorganic materials, 5.7 wt%. The results of this evaluation for Waste Stream ID-SDA-SLUDGE are presented in Table 5-1E, Waste Stream ID-SDA-SLUDGE Waste Material Parameters.

For Waste Stream ID-SDA-DEBRIS, the estimated weight percentages of other inorganic material (graphite), 59.0 wt%, and cellulosics (filters), 35.4 wt%, from the VE data were subtracted from 100 and then divided by two with a result of 2.8 weight percent. This result was subtracted from the graphite and filter weight percentages calculated from the WILD data. The other waste material parameter weight percentages from the VE were determined to be less than one weight percent with the exception of plastic, 3.3 wt%, and soil/gravel, 1.3 wt%. The results of this evaluation for Waste Stream ID-SDA-DEBRIS are presented in Table 5-1F, Waste Stream ID-SDA-DEBRIS Waste Material Parameters.

Table 5-1D. Waste Stream ID-SDA-SOIL Waste Material Parameters

Waste Material Parameter	Weight Percent
Aluminum-based Metals/Alloys	<1.0%
Iron-based Metals/Alloys	<1.0%
Other Metals/Alloys	<1.0%
Other Inorganic Materials	2.8%
Cellulosics	1.8%
Rubber	<1.0%
Plastics (waste materials)	<1.0%
Organic Matrix	<1.0%
Inorganic Matrix	<1.0%
Soil/Gravel	93.4%

Table 5-1E. Waste Stream ID-SDA-SLUDGE Waste Material Parameters

Waste Material Parameter	Weight Percent
Aluminum-based Metals/Alloys	<1.0%
Iron-based Metals/Alloys	<1.0%
Other Metals/Alloys	<1.0%
Other Inorganic Materials	5.7%
Cellulosics	<1.0%
Rubber	<1.0%
Plastics (waste materials)	<1.0%
Organic Matrix	32.2%
Inorganic Matrix	61.8%
Soil/Gravel	<1.0%

Table 5-1F. Waste Stream ID-SDA-DEBRIS Waste Material Parameters

Waste Material Parameter	Weight Percent
Aluminum-based Metals/Alloys	<1.0%
Iron-based Metals/Alloys	<1.0%
Other Metals/Alloys	<1.0%
Other Inorganic Materials	32.5%
Cellulosics	61.9%
Rubber	<1.0%
Plastics (waste materials)	3.3%
Organic Matrix	<1.0%
Inorganic Matrix	<1.0%
Soil/Gravel	1.3%

5.5 Radiological Characterization

It has been estimated that approximately 95 percent of the radioactive waste generated at RFP resulted from plutonium processing and a majority of the remaining 5 percent was generated during processing of depleted uranium (Reference RF-P271). The principal radionuclides contained in RFP waste are those identified in weapons-grade plutonium, DU and EU. Due to decay of Pu-241, Am-241 is expected in any RFP wastes containing plutonium. In waste containing chemically separated materials from the purification of plutonium, Am-241 can be present in considerably higher relative concentrations than would be expected from ingrowth alone (References ID-P105, RF-P090, RF-P269, RF-P562, and RF-U115). Isotopic compositions (weight percent) of weapons-grade plutonium, DU, and highly EU from RFP varied slightly from year to year. The default mass isotopic compositions that will be used for these waste streams are as follows:

Weapons-Grade Plutonium

- Pu-238 0.0105%
- Pu-239 94.06%
- Pu-240 5.72%
- Pu-241 0.173%
- Pu-242 0.043%

Depleted Uranium

- U-238 99.78%
- U-236 0.006%
- U-235 0.215%
- U-234 0.001%

Highly Enriched Uranium

- U-238 5.37%
- U-236 0.44%
- U-235 93.17%
- U-234 1.02%

The primary data available for the wastes buried in the retrieval area are the "Waste Disposal" forms (References NRF-C031, ID-U100, ID-U103, ID-U343, ID-U344, ID-U345, ID-U353, INTEC-U001, TAN-U001, CFA-U007, ARA-U007, ANL-W-U003, and RF-U400, RF-U421, RF-U1306, RF-U1307, RF-U1308, RF-U1313, and RF-U1315). The Waste Disposal forms do not provide data that quantify specific radioactive components present in the waste. However, radiological information from other historic databases and reports was combined with burial locations from the Waste Disposal forms in the WILD. Additionally, available source documents have been reviewed to identify radioactive materials buried in the retrieval area that originated from the generating facilities listed in Section 5.1. A comprehensive list of identified radionuclides potentially present in Waste Streams ID-SDA-DEBRIS, ID-SDA-SLUDGE and ID-SDA-SOIL is presented in Table 5-4,

Relative Mass and Activity of Radionuclides in the Retrieval Area. A detailed radiological evaluation is documented in an NDA Memorandum (completed in accordance with procedure CCP-TP-005, Attachment 7 [Reference 1]).

5.5.1 Estimated Radionuclide Quantities

The radiological estimates for ARP-I had previously been based primarily on EDF-4591 which summarizes various radiological data from other projects that were considered representative of the ARP-I waste inventory (References ID-P105, ID-P110, and RF-P267). However, radiological information from historic databases and reports has been combined with burial locations and waste types in WILD. A data set was taken from WILD on November 29, 2004, to serve as the source term inventory for the Operable Unit 7-13/14 (SDA pits and trenches) remedial investigation/baseline risk assessment and feasibility study (Reference ID-P237). Based on a data query of WILD for the current retrieval area, the relative masses and activities for each radionuclide were calculated and are presented in Table 5-2, Relative Mass of Radionuclides in Buried Waste Categories in the Retrieval Area and Table 5-3, Relative Activity of Radionuclides in Buried Waste Categories in the Retrieval Area. These tables identify the predominant radionuclides by buried waste category and therefore do not directly correlate to the final waste streams as retrieved and packaged due to commingling of the waste. Table 5-4 provides a rollup of radionuclide quantity estimates for all waste identified in the current retrieval area. These data are not decayed (Reference ID-U313).

Table 5-2. Relative Mass of Radionuclides in Buried Waste Categories in the Retrieval Area

Nuclides[1]	Graphite (Targeted)	Filters (Targeted)	741 Sludge (Targeted)	743 Sludge (Targeted)	Roaster Oxide (Targeted)	RFP 742 Sludge (Targeted)	RFP 744 Sludge	RFP 745 Sludge	RFP Other Sludge	RFP Combustible & Non-Combustible	Non-RFP Waste*
Am-241[2]	0.07%	0.34%	0.16%					2.89%		0.06%	<0.01%
Pu-238	0.01%	0.01%	<0.01%	0.01%			0.01%	0.01%		<0.01%	<0.01%
Pu-239	89.66%	91.27%	0.43%	93.82%			93.88%	95.20%		3.81%	<0.01%
Pu-240	5.50%	5.59%	0.03%	5.75%			5.75%	1.59%		0.23%	<0.01%
Pu-241	0.32%	0.27%	<0.01%	0.34%			0.34%	<0.01%		0.01%	<0.01%
Pu-242	0.01%	0.02%	<0.01%	0.09%		<0.01%	0.02%	0.31%	100.0%	<0.01%	<0.01%
U-233						<0.01%				<0.01%	<0.01%
U-234	0.02%	0.14%			<0.01%					0.03%	0.01%
U-235	4.29%	2.20%			<0.01%					6.16%	0.76%
U-236	0.12%	0.14%			<0.01%					0.08%	<0.01%
U-238		0.02%	99.39%		>99%	>99%				89.61%	99.22%
Cs-137											<0.01%
Ni-59											<0.01%
Ni-63											<0.01%
Sr-90											<0.01%
Tc-99											<0.01%
Th-232											<0.01%

Notes: 1. Other radionuclides with values less than 0.01% are not listed.
2. These data are not decay corrected so Am-241 values will be higher than reported due to decay of Pu-241.

Table 5-3. Relative Activity of Radionuclides in Buried Waste Categories in the Retrieval Area

Nuclides[1]	Graphite (Targeted)	Filters (Targeted)	741 Sludge (Targeted)	743 Sludge (Targeted)	Roaster Oxide (Targeted)	RFP 742 Sludge (Targeted)	RFP 744 Sludge	RFP 745 Sludge	RFP Other Sludge	RFP Combustible & Non-combustible	Non-RFP Waste*
Am-241[2]	0. 63%	3.32%	73.52%					60.39%		10.19%	<0.01%
Pu-238	0.42%	0.39%	0.11%	0.42%			0.42%	1.11%		0.38%	0.03%
Pu-239	13.73%	15.95%	3.66%	13.81%			13.81%	36.11%		12.76%	0.04%
Pu-240	3.08%	3.57%	0.82%	3.09%			3.09%	2.21%		2.87%	<0.01%
Pu-241	82.15%	76.76%	21.89%	82.67%			82.68%	0.17%		73.79%	0.11%
Pu-242		<0.01%	<0.01%	<0.01%		0.39%	<0.01%	0.01%	100.0%	<0.01%	<0.01%
U-233						0.19%				<0.01%	<0.01%
U-234	<0.01%	<0.01%			<0.12%					0.01%	0.01%
U-235	<0.01%	<0.01%			<0.03%					<0.01%	<0.01%
U-236	<0.01%	<0.01%			<0.01%					<0.01%	<0.01%
U-238		<0.01%	<0.01%		99.84%	99.42%				<0.01%	0.01%
C-14											0.02%
Ce-144											13.64%
Co-60											36.27%
Cs-134											2.10%
Cs-137											9.67%
Eu-154											0.22%
H-3											0.04%
Ni-59											0.04%
Ni-63											7.98%
Pm-147											9.74%
Sr-90											20.08%

Note: 1. Other radionuclides with values less than 0.01% are not listed.
2. These data are not decay corrected so AM-241 values will be higher than reported due to decay of Pu-241.

Table 5-4. Relative Mass and Activity of Radionuclides in the Retrieval Area

Radionuclide	Average Weight Percent[1]	Average Activity Percent[1]
Required Radionuclides		
Am-241[3]	0.01%	39.02%
Pu-238	Trace	0.26%
Pu-239	0.17%	8.68%
Pu-240	0.01%	1.95%
Pu-242	Trace	Trace
U-233	Trace	Trace
U-234	Trace	Trace
U-238	99.63%	0.03%
Cs-137	Trace	0.03%
Sr-90	Trace	0.06%
Other Potential Radionuclides Greater Than or equal to 0.01 % in Mass or Activity		
Ce-144	Trace	0.04%
Co-60	Trace	0.10%
Cs-134	Trace	0.01%
Ni-63	Trace	0.02%
Pm-147	Trace	0.03%
Pu-241	Trace	49.78%
U-235	0.18%	Trace

Other Potential Radionuclides Less Than 0.01% in Mass and Activity[2]

Ac-225	Bi-212	Cm-248	I-131	Pa-231	Po-214	Ru-103	Th-234
Ac-227	Bi-213	Co-58	I-133	Pa-233	Po-215	Ru-106	Tl-207
Ac-228	Bi-214	Cr-51	K-40	Pa-234	Po-216	Sb-125	Tl-208
Ag-110	C-14	Eu-152	Kr-85	Pa-234m	Po-218	Sc-46	Tl-209
Am-242	Ce-141	Eu-154	La-140	Pb-209	Pr-144	Sn-119m	U-232
Am-243	Cf-250	Eu-155	Mn-54	Pb-210	Pu-244	Sr-85	U-236
At-217	Cf-252	Fe-55	Mn-56	Pb-211	Ra-223	Ta-182	U-237
Ba-130	Cl-36	Fe-59	Nb-94	Pb-212	Ra-224	Tc-99	Y-90
Ba-133	Cm-242	Fr-221	Nb-95	Pb-214	Ra-225	Th-227	Zn-65
Ba-137m	Cm-243	Fr-223	Nb-95m	Pm-141	Ra-226	Th-228	Zr-95
Ba-140	Cm-244	Gd-148	Ni-59	Po-210	Ra-228	Th-229	
Be-10	Cm-245	H-3	Ni-61	Po-211	Rn-219	Th-230	
Bi-210	Cm-246	Hf-181	Np-237	Po-212	Rn-220	Th-231	
Bi-211	Cm-247	I-129	P-32	Po-213	Rn-222	Th-232	

Notes:
1. Trace equals less than 0.01%
2. Some isotopes are identified only as decay products and are likely present only in extremely low concentrations.
3. These data are not decay corrected so Am-241 values will be higher than reported due to decay of Pu-241.

References: ANL-W-P003, ANL-W-P009, ID-P105, ID-P091, ID-U297, ID-U313, ID-D001, ID-U307, INTEC-P001, NRF-C031, RF-P057, RF-P063, RF-P084, RF-P085, RF-P181, RF-P260, RF-P562, and RF-U115.

5.5.2 Estimated Predominant Isotopes and 95 percent Total Activity

Radionuclide estimates derived from waste similar to the inventory identified in the retrieval area are summarized in Table 5-4. From the table, U-238 and U-235 are the predominant isotopes by mass (Pu-239 is the third most prevalent isotope). Similarly, over 99 percent of the activity in Waste Streams ID-SDA-DEBRIS, ID-SDA-SLUDGE and ID-SDA-SOIL is from Am-241, Pu-239, Pu-240, and Pu-241.

The distribution in Table 5-4 applies to all three waste streams and is based on a roll-up of all of the buried waste, including the RFP targeted waste and RFP non-targeted waste, as well as the non-RFP non-targeted waste. This is because the three waste streams are delineated based on the predominant material category (i.e., debris, soil, and homogeneous solids) but could potentially include wastes from each of these categories (e.g., the debris waste stream will be predominantly filters and graphite, but may contain small amounts of sludge, soil, and other non-targeted wastes). For this reason, it has been assumed that the three waste streams are similar in radiological composition. A more accurate radionuclide distribution would be based on what is actually retrieved and packaged and known to be TRU waste. However, there are four major variables that make this difficult: 1) The waste being retrieved and packaged includes the Rocky Flats targeted waste with the possibility of small amounts of non-targeted wastes inadvertently commingled with targeted wastes. There is not a reasonable basis for estimating the amount of non-targeted waste that will be packaged into new containers and the total radionuclide contribution from these nontargeted wastes. 2) There are some graphite and HEPA filters with only uranium contamination but they are visually indistinguishable from the plutonium-contaminated graphite and HEPA filters. These wastes may not be TRU waste, but because they are visually indistinguishable, it is assumed that they will be retrieved and packaged. Drums with these uranium-contaminated wastes could be rejected by NDA depending on the presence of other TRU waste inadvertently commingled with them. 3) The amount of uranium in 741-sludge may be less than previously thought, but U-238 is still estimated to be the most prevalent, by mass. 4) Roaster oxide is pure depleted uranium and is not TRU waste. Intact drums of roaster oxide that are retrieved and re-packaged will not be shipped to WIPP but there is a potential that roaster oxide may be inadvertently commingled with enough other TRU waste so that a newly packaged drum assays as TRU waste (Reference ID-D002).

These variables could potentially affect the two most prevalent radionuclides in the waste streams. Based on certified assay by CCP of more than 24,000 drums the two most prevalent radionuclides, by mass, in each of the three waste streams are U-238 and Pu-239. This is consistent with the radiogical source term data for ARP-I, ARP-II, and ARP-III. With the addition of ARP-IV, ARP-V, ARP-VI, and ARP-VII source term data, the second and third most prevalent radionuclides by mass (U-235 and Pu-239) were present in almost equal concentrations, with U-235 becoming the second most prevalent radionuclide. As indicated in Table 5-4, Pu-239 and U-235 are present in almost equal concentrations. It should also be noted that U-238 and U-235 are identified as the prevelant isotopes for some of the individual drums and individual shipping lots for the drums identified above (References ID-D002 and ID-U313).

5.5.3 Use of Radionuclide Isotopic Ratios

For waste containers where direct measurement does not yield useable isotopic ratio information, AK may be used to supplement direct measurement data in accordance with the WIPP-WAC (Reference 3). The ratios that may be used, and the specific use and confirmation of AK related to WIPP-certified assay measurements of containers in these waste streams, is documented in the NDA memorandum written in accordance with the requirements of step 4.4.17 of CCP-TP-005 (Reference 1).

5.6 Chemical Content Identification – Hazardous Constituents

Waste disposal at the SDA ceased in 1970 when the AEC directed that all waste contaminated with TRU radioisotopes be segregated in a readily retrievable manner from other types of radioactive waste. In August 1987, DOE and the EPA entered into a Consent Order and Compliance Agreement requiring DOE to conduct an initial assessment of all solid and hazardous waste disposal units at the INL and set up a process for conducting any necessary corrective actions. The DOE, EPA, and Idaho Department of Environmental Quality (IDEQ) entered into the "Federal Facility Agreement and Consent Order for the Idaho National Engineering Laboratory" (FFA/CO) in December 1991. The FFA/CO, in part, established the framework for developing, prioritizing, implementing, and monitoring appropriate response actions at INL in accordance with the CERCLA, RCRA, and Hazardous Waste Management Act (HWMA). In addition, the DOE had made other commitments to the State of Idaho and the EPA in a 1995 Settlement Agreement that was renegotiated and amended in 2008. The final agreement required DOE to exhume targeted waste from a defined area of the SDA of 5.69 acres. The "Agreement to Implement U.S. District Court Order Dated May 25, 2006" fully implements the 1995 Settlement Agreement relating to buried TRU waste in the SDA and set the Targeted Waste to those outlined in this AK Summary Report (References ID-P091, ID-P104, ID-P108, ID-P109, and ID-P124).

The subject waste streams are newly generated and are being managed in accordance with the generator site requirements and in compliance with the requirements of the IDEQ. EPA hazardous waste numbers (HWNs) were assigned to each waste stream based on a review of available AK documentation to identify chemical usage and potentially hazardous materials that may have been contained in the waste buried in the retrieval area. AK was collected from a variety of sources, including historical waste characterization documents and data, historical waste generator chemical inventories, waste shipping records, technical reports, material data safety sheets, and generator interviews. The information reviewed included AK documentation from both RFP and non-RFP generators. This information was reviewed to compile a list of chemicals and products that may have been introduced into the historic waste materials. This list was further evaluated and supplemental information was collected as necessary to attempt to answer the following questions for each chemical identified (Reference ID-C101):

- How was the chemical historically used (R&D minor reagent versus major production chemical)?

- When was the chemical used?
- What was the likely final disposition for the chemical (e.g., waste treatment sludges, debris, unused reagent)?
- What is the expected final form of the chemical (e.g., liquid, sludge, powder, fines, turnings)?
- Based on the review of the inventory, is the chemical contained in targeted waste?
- How did the generators' manage potentially hazardous materials?
- Can potentially reactive, corrosive, and ignitable materials be identified and segregated during waste retrieval and confirmation activities?

This evaluation was compiled into a comprehensive chemical evaluation and Resource Conservation and Recovery Act (RCRA) hazards analysis incorporated into the AK record (Reference ID-C101). Based on this evaluation, the list of chemicals presented in Table 5-5 represent the chemicals that potentially contaminate the waste materials contained in the retrieval area, including the specific RFP and non-RFP source and usage, as applicable. Due to the commingling of the waste materials during the retrieval operations, the same EPA HWNs are assigned to Waste Streams ID-SDA-DEBRIS, ID-SDA-SLUDGE and ID-SDA-SOIL. Table 5-6, EPA Hazardous Waste Numbers for Waste Streams ID-SDA-DEBRIS, ID-SDA-SLUDGE and ID-SDA-SOIL, provides the EPA HWNs assigned. Sections 5.6.1 through 5.6.6 provide the justification for the assignment of these EPA HWNs. Section 5.6.6 describes the sources of PCBs in the waste.

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area

Chemical/Compound	Use/Source	Area/Building
(1,2-Cyclohexylene dinitrilo) tetra-acetic acid	Used in the Laboratory. Component of TISAB used in the Laboratory.	RFP: 771
1,1,1,2-Tetrachloroethane	Used in the Laboratories.	INL: CPP
1,1,1-Trichloroethane	Used for plutonium and uranium components cleaning throughout RFP. Used as a solvent in Laboratory operations. Used in R&D operations. Used in the Coating Laboratory. Inadvertently used as a replacement for carbon tetrachloride in plutonium machining operations for a short time in 1967, use stopped due to flammability issues (full use started in 1972). Used in Product Physical Chemistry and in Chemistry Technology. Component of Zyglo ZP9 and Zyglo ZC7 used in NDT. Component of Dowclene EC and CSM-320 used in Product R&D. Component of Chlorothene Industrial, Chloeothene NU, Chlorothene VG, and Tri-Ethane used in Product R&D and in Chemistry R&D. Chlorothene NU used to rinse the drums on 903 Pad prior to disposal. Component of Petrochem Microfinish and Tap Magic cutting fluid used in Metallurgical operations. Component of Nicrobraz Cement 200, 300, 300R, 400, 500, and 600 tested in the R&D Laboratory. Used in vapor degreasing in the Equipment and Repair building. Used as a solvent and degreaser in the Laboratories. Used in the vapor degreaser in the Equipment and Repair building. Used in the Laboratories as a degreaser and solvent. Used at the SPERT I reactor building. Component of Chlorothene Industrial used as a cleaning solvent in the Hot Cells.	RFP: 123, 441, 444, 559, 771, 776, 779, 881 INL: CFA, CPP, PER, TRA INTEC/RWMC Laboratories
1,1,1-Trichloro-trifluoroethane	Used to degrease depleted uranium after quenching.	RFP: 444

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon TF)	Used to degrease depleted uranium after quenching. Used to ultrasonically clean beryllium-copper alloy parts prior to electroplating. Used for beryllium density measurements. Used as a solvent in the Laboratories. Used to test tantalum crucibles for cracks and leaks. Used in the density balance. Used in Manufacturing Fabrication. Used in Nuclear Joining, Plutonium Physical Metallurgy, and in Product Physical Chemistry. Used in Inertial Confinement Fusion parts manufacture.	RFP: 444, 447, 559, 707, 771, 776, 777, 779, 881, 883 INL: INTEC/RWMC Laboratories
1,1,2-Trichloroethane	Detected during environmental sampling. Used in the Laboratory.	INL: ARA
1,1,2,2-Tetrachloroethane	Used in the Laboratory.	INL: INTEC/RWMC Laboratories
1,1,2,3,3,3-Hexafluoro-1-propene	Component of Viton used as a glovebox gasket material.	RFP: 559, 707, 771, 774, 776, 777, 779, 991
1,1-Biphenyl	Component of Dowtherm A which may be similar to Dowtherm used as heat transfer medium.	INL: TRA
1,1-Dichloroethane	Used in the Laboratory	INL: INTEC/RWMC Laboratories
1,1-Dichloroethylene	Noted as a possible radiolysis product of 1,1,1-trichloroethane. Potentially present in organic setups. Used in the Laboratory in spike solutions	RFP: RFP, 774 INL: INTEC/RWMC Laboratories
1,1-Difluoroethane	Component of Viton used as a glovebox gasket material.	RFP: 559, 707, 771, 774, 776, 777, 779, 991
1,2,4-Trimethylbenzene	Component of Varsol® 1 solvent. Component of Amercoat 78HB and Amercoat 78HB Cure, used in coating studies.	RFP INL: TAN
1,2,4,5-Tetrachlorobenzene	Used in the Laboratories.	INL: CPP
1,2-Butylene oxide	Component of Alk-Tri used throughout RFP. Component of Chlorothene VG used in Product R&D and in Chemistry R&D. Component of Dowclene EC used in Product R&D. Component of Neu-Tri used to clean concrete, in plutonium Metallurgical R&D, in Product R&D, and in the Laboratories. Component of Tap Magic cutting fluid used in Metallurgical operations.	RFP: 444, 771, RFP

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
1,2-Dichlorobenzene	Used as a solvent in the Laboratories. Synonym for Dowtherm E which may be similar to Dowtherm used as a heat transfer medium. Used in the Laboratory.	RFP: 559, 881 INL: TRA INTEC/RWMC Laboratories
1,2-Dichloroethane	Used as a solvent in the Laboratories. Used in the Laboratories in standards and surrogates.	RFP: 559, 771, 881 INL: INTEC/RWMC Laboratories
1,2-Dichloroethane-d_4	Used in the Laboratory in standards, surrogates, and spiking solutions.	INL: INTEC/RWMC Labortoratories
1,2-Dichloroethylene	Used in the Laboratories.	INL: CPP INTEC/RWMC Laboratories
trans-1,2-Dichloroethylene	Used in the Laboratory.	INL: INTEC/RWMC Laboratories
1,2-Dichloropropane	Used in the Laboratories.	INL: CPP INTEC/RWMC Laboratories
1,2-Dichloropropylene	Used in the Laboratories.	INL: CPP
1,3,5,7-Cyclooctatetraene	Used in R&D operations.	RFP: 771, 779
1,4-Dichlorobenzene	Potentially present in organic setups. Used in the Laboratory in base/neutral matrix spike solutions.	RFP: 774 INL: INTEC/RWMC Laboratories
1,4-Dichlorobenzene-d_4	Used in the Laboratory in stock internal standard solutions.	INL: INTEC/RWMC Laboratories
1,4-Difluorobenzene	Used in the Laboratory in stock internal standard solutions.	INL: INTEC/RWMC Laboratories
1,4-Difuorobenzene-d_4	Used in the Laboratory.	INL: INTEC/RWMC Laboratories
1-Methyl-2-propanol	Component of Ram GS-3 used as a gasket sealant.	RFP: 444
1-Phenyl-3-pyrazolidinone	Component of Kodak Industrex Developer Replenisher used in NDT.	RFP: 444, 883
2-Fluorobiphenyl	Used in the Laboratory to surrogate solutions.	INL: INTEC/RWMC Laboratories

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
2-Fluorophenol	Used in the Laboratory to surrogate solutions.	INL: INTEC/RWMC Laboratories
2,2,2-Trifluoroethanol	Used in Physical Metallurgy.	RFP: 991
2,2,4-Trimethylpentane	Used in the Laboratory.	RFP: 771
2,4-Dinitrophenol	Used in the Laboratory in system performance check compounds.	INL: INTEC/RWMC Laboratories
2,4-Dinitrotoluene	Potentially present in organic setups. Used in the Laboratories in base/neutral matrix spike solutions.	RFP: 774 INL: INTEC/RWMC Laboratories
2,4,6-Tribromophenol	Used in the Laboratory in surrogate solutions.	INL: INTEC/RWMC Laboratory
2,6-Diterbutyl-4-methylphenol	Component of Texaco Regal A Oil, used throughout RFP.	RFP
2,6-Ditertbutyl-p-cresol	Component of BP Dielectric 200 Fluid used in Electric Discharge Machining.	RFP: 444
2-Bromo-2-nitro-1, 3-propanediol	Used in the Laboratory. Component of Yellow 77 Wire Pulling Lubricant.	RFP: 771, 779
2-Butoxyethanol	Used as a solvent in the Metallurgical Laboratory. Used as a solvent in Physical Metallurgy. Component of Freon TB-1 used in R&D, in Nuclear Joining, in Plutonium Physical Metallurgy, and in Product Physical Chemistry. Component of Formula 409 cleaner used in decontamination operations. Also evaluated in R&D operations. Component of Oakite 202 used to clean beryllium shapes. Component of Prime used in an R&D operations. Component of Amocool Soluble Oil tested in the R&D Laboratory.	RFP: 444, 447, 771, 776, 777, 881, 991
2-Ethoxyethanol	Used in Plutonium Metallurgical R&D.	RFP: 771
2-Ethylhexanoic acid diester with tetraethylene glycol	Component of Loctitie Pipe Sealant.	RFP: 444
2-Ethylhexanol	Used in Enriched Uranium Recovery R&D.	RFP: 881
2-Imidazolidinethione	Used in the Laboratories.	INL: CPP
2-Nitropropane	Used in the Laboratories.	INL: CPP
2-Phenylphenol	Component of Winterphene disinfectant used to kill bacteria in machining coolant.	RFP: 881

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
2-Picoline	Used in the Laboratories.	INL: CPP
3-Methylcyclohexanol	Used in Physical Metallurgy.	RFP: 991
4-Bromofluorobenzene	Used in the Laboratory in standards, surrogates, and spiking solutions.	INL: INTEC/RWMC Laboratories
4-([2,4-Dihydroxy phenyl] azo) benzenesulfonic acid	Used in the Laboratory.	RFP: 771
4,4'-DDT	Used in the Laboratory in stock tuning solutions.	INL: INTEC/RWMC Laboratories
4,4-Methylene-bis (2-chloroaniline)	Chemical is MOCA resin hardener. A component of Create-A-Mold 3D Molding Compound.	RFP: 444 and/or 881
4-Methyl-2-pentanol	Component of Dow Corning 557 Silicone Dry Film Lubricant, used in Assembly Testing.	RFP: 444
9D-178 amine	Used in enriched uranium R&D.	RFP: 881
Acenaphthalene	Detected during environmental sampling.	INL: ARA
Acenaphthene-d_{10}	Used in the Laboratory in stock internal standard solutions.	INL: INTEC/RWMC Laboratories
Acetaldehyde	Component of GE Antifoam 60 used in Peroxide Precipitation.	RFP: 771
Acetamide	Used as a solvent in the Metallurgical Laboratory.	RFP: 444
Acetic Acid	Used for pickling depleted and enriched uranium. Used in depleted and enriched uranium Metallurgical Operations. Used in Plutonium Metallurgical R&D. Used in R&D operations. Component of Nitradd used in stainless steel work. Component of Kodak Industrex Fixer and Replenisher and Developer Replenisher used in NDT. Component of Zircoa Bond 6, tested for R&D.	RFP: 123, 444, 771, 779, 881
Acetic acid, glacial	Used in R&D operations.	RFP: 771, 779
Acetic anhydride	Used in R&D operations.	RFP: 771, 779

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Acetone	Used as a solvent in the Laboratories. Common paint thinner and stripper constituent. Used as a solvent for cleaning depleted and enriched uranium and beryllium parts. Used in the Metallurgical Laboratory. Used to clean beryllium-copper alloy parts prior to electroplating. Used in plutonium parts cleaning. Used in Assembly Operations. Used in Nuclear Joining. Used in Chemistry Technology. Used in plutonium Metallurgical R&D. Used in beryllium part Assembly, Welding, and Brazing. Component of Hollingshead Cocoon 333 used as a strippable paint and contamination covering on equipment. Component of Glyptal 1511N Thinner and Glyptal Red Insulating Enamel used in NDT. Used as a solvent and for degreasing. Trans-shipped waste (CSMRF).	RFP: 123, 125, 441, 444, 559, 771, 774, 776, 777, 779, 881, 991 INL: ARA, CPP, PER, TAN, TRA, INTEC/RWMC Laboratories Trans-shipped: CSMRF
Acetonitrile	Used as a solvent in the Metallurgical Laboratory. Used in the Laboratories.	RFP: 444 INL: CPP
Acetophenone	Used as a solvent in the Metallurgical Laboratory. Used in the Laboratories.	RFP: 444 INL: CPP
Acetylacetonate	Used in R&D chemistry studies.	RFP: 771, 779
Acetylene tetrabromide	Used as a solvent in the Metallurgical Laboratory. Used as float-sink separation process media in conjunction with Beryllium work.	RFP: 444
Acid Bond 660 (NoChar A660)	Comprised of trade secrect materials, nonhazardous. Used in the Laboratory to absorb acidic aqueous and inorganic matrices.	INL: INTEC/RWMC Laboratories
Acid Orange 7	Component of Kerful, used in R&D studies.	RFP: 779
Acrylamide	Used in the Laboratories.	INL: CPP
Acrylamide sodium acrylate copolymer with trideceth-6	Component of Yellow 77 Wire Pulling Lubricant.	RFP: 779
Acrylic acid	Used in the Laboratories.	INL: CPP
Acrylic enamel paint	Used in the Equipment and Repair building.	INL: CFA
Acrylic thinner	Used in the Equipment and Repair building.	INL: CFA
Acrylonitrile	Used as a solvent in the Metallurgical Laboratory. Used in the Laboratories.	RFP: 444 INL: CPP

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Activated carbon	Used for adsorption in First and Second Stage Precipitation from 1954 to at least 1964. Used in R&D operations. Used in the Fluoride Volatility Plant and in filters for the fluorinator (National Carbon grade 60). Used in diffusion traps for trapping oil. Used in fume traps and AEC filters for removal of iodine in the air stream for the fuel melt refining process. At ML-1, used in carbon traps in the process gas loop.	RFP: 771, 774, 779 INL: ANL-W, ARA
Alcohol (not specific)	Used in the Laboratories. Used in the Metallurgical Laboratory in sample preparation.	RFP: 123, 444, 559, 771, 881 INL: CPP, TAN
Aliphatic amine	Component of Amercoat 78HB Cure used in coating studies.	INL: TAN
Aliphatic polyamine	Component of Amercoat 78HB Cure used in coating studies.	INL: TAN
Alkali phosphates	Used as a detergent to clean beryllium-copper alloy parts prior to electroplating.	RFP: 444
Alkaline permanganate	Decontamination solution used at the BORAX III, IV, and V reactors.	INL: ANL-W
Alkoxylated diamine	Component of Long Life 6100 used in Metallurgical Operations.	RFP: 444
Alkyd resin	Component of Lubri Bond A used in Shipping and Receiving.	RFP: 991
Alkyl benzene	Component of BP Dielectric 200 Fluid used in Electric Discharge Machining.	RFP: 444
Alkyl dimethylbenzyl ammonium chloride	Component of HTH Algae Inhibitor used in the process cooling water system. Used briefly as a reagent in 1st and 2nd Stage Precipitation. Component of Mogul AG-471 used in Plutonium Recovery.	RFP: 444, 559, 771, 774, 883
Alkyl dimethyldichlorobenzyl ammonium chloride	Component of HTH "Mustard" Algaecide, used in the process cooling water system.	RFP: 444, 559, 883
Alkyl polyether alcohol	Component of Radiacwash used for decontamination.	INL: TAN
Alkylaryl phosphate	Component of Zyglo Penetrant ZL-22 which may be similar to Zyglo 22 tested in the R&D Laboratory.	RFP: 771, 779, 881
Alkylaryl phosphate ester	Component of Zyglo Penetrant ZL-22 which may be similar to Zyglo 22 tested in the R&D Laboratory.	RFP: 771, 779, 881
Alkylaryl sulfonate	Component of Triple C Cleaner used for cleaning drums in Shipping and Receiving. Component of Bon Ami used as a detergent to clean beryllium-copper alloy parts prior to electroplating.	RFP: 444, 779, 991

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Alkylated aromatics	Component of Dowtherm Q which may be similar to Dowtherm used as a heat transfer medium.	INL: TRA
Allyl alcohol	Used in the Laboratories.	INL: CPP
Aluminosilicate fibers	Component of Fiberfrax insulation.	RFP: 776
Aluminum chloride	Used in the Laboratory. Used in R&D operations.	RFP: 559, 771, 779
Aluminum fines/powder	Used in the Coatings Facility. Used in the Thermogravametric Analysis. Used in the Laboratory.	RFP: 779 INL: INTEC/RWMC Laboratories
Aluminum hydroxide	Component of Devran 232 used in coating studies.	INL: TAN
Aluminum metal	Cast into ingots for processing into parts. Used in Physical Metallurgy. Composited with depleted uranium. Processed through electrochemical milling with stainless steel, brass, copper, tungsten, beryllium, and depleted uranium. Used in the fabrication of Pu-242. Used as a substrate in the Coatings facility. Used in Nuclear Joining with beryllium. Used in Manufacturing. Used in coating experiments with thorium. Used as a coating on boron nitride. Used in the separators in CWS/HEPA incinerator plenum filters. Scrap metal storage (contaminated on occasion). Used in the clad of simulated fuel elements processed to recover the natural uranium and through the calciner.	RFP: 331, 444, 447, 551, 771, 779, 881, 883 INL: CFA, CPP, TRA
Aluminum nitrate	Used in Anion Exchange and in Neptunium Anion Exchange and in Dissolution as a complexing agent. Used in R&D operations. Used in Enriched Uranium Recovery operations. Used in the ML-1 reactor development. Used in the processing of simulated fuel (natural uranium) in the calciner. Used in the Laboratories. Used in dissolution operations. Used by Chemical Engineering.	RFP: 771, 779, 881 INL: ARA, CFA, CPP
Aluminum nitride-silicon carbide	Used in the ceramic manufacture.	RFP: 705
Aluminum oleate	Component of Anchorlube G-771 used as a cutting fluid.	RFP: 881

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Aluminum oxide	Used as incinerator and foundry firebrick and in stopper rods in the beryllium foundry. Used as a grit blasting component. Used in electropolishing. Used in dissolution vessels in R&D. Used in the wash coating of beryllium billets prior to canning. Used in the calciner during the recovery of natural uranium from simulated fuel elements. Used as cladding for some of the HTRE ceramic fuel inserts. Component of LECO crucibles used during analysis of carbon in plutonium. Component of Scotch-Brite pads, tested in the R&D Laboratory. Used in oil absorbers air systems.	RFP: 444, 447, 559, 771, 777, 779, 881, 883 INL: CFA, CPP, TAN, TRA
Aluminum silicate	Crucibles used by Manufacturing Technical. Component of LECO crucibles. Component of filter aid used in potassium hydroxide precipitation (Am recovery).	RFP: 771
Aluminum-silicon alloy	Used as a filler alloy in beryllium braze welding.	RFP: 444
Aluminum sulfate	Component of Kodak Fixer and Kodak Industrex Fixer and Replenisher used in NDT operations.	RFP: 444, 883
Aluminum-cadmium alloy	Produced in the Foundry for an unknown purpose.	RFP: 444
American Industrial Oil No. 15	Used in lathe coolant flammability studies. Used as a light oil for hydraulic pump units on numerically controlled machine tools; interchangeable with Texaco Regal A oil.	RFP: 776, 779
Amine compound	Component of Devran 669 used in coating studies.	INL: TAN
Ammonia, anhydrous liquid	Used in the Laboratory. Used in R&D operations. Component of Formula A Paint Remover and glass cleaners.	RFP: 123, 771, 779, 881
Ammonia gas	Used in the precipitation of enriched uranium during OY Leach process (uncontained gas).	RFP: 881
Ammonium bicarbonate	Component of Turco 4324 used in R&D studies.	RFP: 779

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Ammonium bifluoride	Used in Metallurgical Operations. Used in beryllium sheet etching R&D. Component of Turco Nitradd additive used in stainless steel operations. Component of Enthone Activator used in beryllium shape coating. Used in ML-1 reactor development.	RFP: 444, 881 INL: ARA
Ammonium carbonate	Used in Depleted Uranium chip processing. Used in Enriched Uranium R&D.	RFP: 444, 881
Ammonium chloride	Used in Electrocoating with uranium oxide. Used in R&D operations. Used in the Laboratory. Used as a flux in zinc baths for coating thorium. Used in the electroless plating of thorium.	RFP: 331, 444, 771, 779, 881 INL: ANL-W
Ammonium chromate	Used in the Laboratories.	RFP: 559, 771, 881
Ammonium fluoride	Used in the Analytical Laboratory. Component of Derustit SS-3 used in beryllium and depleted uranium R&D.	RFP: 771, 883
Ammonium hydroxide	Used in the Laboratories. Used in plating operations. Used in Depleted Uranium chip processing. Used in Metallurgical Operations. Used in enriched uranium R&D. Used in U-233 Recovery Operations. Used in plutonium R&D operations. Used in Methods Development. Used in Chemistry Technology. Component of Noxon metal polish used for cleaning beryllium. Component of Formula A Paint Remover. Used in the operation of the BORAX III, IV, and V reactors. Used in the processing of EBR-I Core II meltdown material.	RFP: 123, 441, 444, 559, 771, 779, 881 INL: ANL-W, CPP INTEC/RWMC Laboratories
Ammonium molybdate	Used to test for silica in demineralized water.	INL: TRA
Ammonium nitrate	Used in Chemistry Technology. Present on the surface of CWS/HEPA filters from B771 and B881. Used in the operation of the BORAX III, IV, and V reactors. Component of dynamite used as a poison propellant in tests for the HTRE reactors.	RFP: 771, 779, 881 INL: ANL-W, TAN

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Ammonium oxalate	Bottle of this chemical found in a debris drum during excavation. Component of Turco 4521 used for decontamination.	INL: SDA, TAN
Ammonium persulfate	Used in the Metallurgical Laboratory. Used in R&D operations.	RFP: 444, 771, 779
Ammonium purpurate acid	Used to determine the content of nickel in nickel plating baths.	RFP: 444
Ammonium sulfate	Used in the Peroxide Precipitation. Used in Process Chemical Technology.	RFP: 771, 779
Ammonium thiocyanate	Used in the Laboratory. Used in the Americium Recovery process. Used in R&D operations.	RFP: 123, 771, 779
Ammonium thiosulfate	Component of Kodak Fixer and Kodak Industrex Fixer and Replenisher used in NDT operations.	RFP: 444, 883
Ammonium vanadate	Used in the Laboratories.	INL: CPP
Amorphous silica	Component of RTV20.01 which may be similar to RTV20, tested in the R&D Laboratory.	RFP: 771, 779, 881
Aniline	Used as a solvent in the Metallurgical Laboratory. Used in the Laboratories.	RFP: 444 INL: CPP
Anisole	Used as a solvent in the Metallurgical Laboratory.	RFP: 444
Anthophyllite	Component of Devran 232 Converter used in coating studies.	INL: TAN
Antigorite	Component of Devran 232 Converter used in coating studies.	INL: TAN
Antimony	Used in the Laboratory.	INL INTEC/RWMC Laboratories
Aqua Regia	Used in metallographic preparation. Used in the Laboratory.	INL: TAN INTEC/RWMC Laboratories
Aromatic petroleum solvent	Component of Cee-Bee solvent used for parts cleaning.	RFP: 444, 771
Arsenic metal	Component of SEL-REX BDT 510 Make Up and SEL-REX BDT Brightener, used in Inertial Confinement Fusion. Used in the Laboratories. Source documents do not indicate usage.	RFP: 123, 881 INL: ARA, TAN
Arsenic powder	Used in the Laboratory.	INL: INTEC/RWMC Laboratories
Arsenic trioxide	Used in the Laboratories as a standard.	INL: CPP
Arsenious oxide	Used as a primary standard in the Laboratories.	RFP: 559, 771
Ascarite	Listed in an inventory from the Warehouse.	RFP: 551

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Ascorbic acid	Used as a reducing agent in neptunium recovery. Used in R&D operations. Used in the Laboratory.	RFP: 559, 771, 779
Atrazine 80%	Used to control weeds; should not be in the waste stream .	RFP
Auramine	Used in the Laboratories.	INL: CPP
Barium carbonate	RWMC – Found in environmental sampling.	RWMC
Barium chloride	Used in the Laboratories.	RFP: 441, 881
Barium fluoride	RWMC – Found in environmental sampling.	RWMC
Barium, not specific	Present in leaded glass.	RFP
Barium powder	Used in the Laboratory. Used in the Metallurgical Laboratory. A fission product in pin decanning and melt refining. Found during environmental and radionuclide sampling.	RFP: 123, 441, 444, 559, 771, 881 INL: ANL-W, ARA, TAN INTEC/RWMC Laboratories
Barium sulfate	Component of Spot 'N Glaze Putty. Component of Fluorel used in glovebox gaskets. Component of Amercoat 66 used in coating studies.	RFP: 559, 707, 771, 774, 776, 777, 779, 881, 991 INL: TAN
Benzaldehyde	Used as a solvent in the Metallurgical Laboratory.	RFP: 444
Benzene	Used as a solvent in the Metallurgical Laboratory. Used in ultrasonic testing of components. Used in R&D operations. Used as a Laboratory reagent. Used in paints and thinners throughout RFP. Component of Devran 232, Devran 232 Converter, and Devran 4170 Converter, used in coating studies. Used in the Laboratory in spike solutions.	RFP: 444, 771, 777, 881 INL: CPP, TAN INTEC/RWMC Laboratories
Benzenesulfonyl chloride	Used in the Laboratories.	INL: CPP
Benzidine	Used in the Laboratory in stock tuning solutions.	INL: INTEC/RWMC Laboratories
Benzyl alcohol	Component of Amercoat 78HB Cure and Devran 4170 Converter used in coating studies.	INL: TAN
Benzyl chloride	Used in the Laboratories.	INL: CPP
Benzyl triphenyl phosphonium bisphenol AF salt	Component of Fluorel used in glovebox gaskets.	RFP: 559, 707, 771, 774, 776, 777, 779, 991
Benzylamine	Used as a solvent in the Metallurgical Laboratory.	RFP: 444

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Beryllium metal	Used in casting, forging, heat treating, rolling, forming, plating, briquetting, grit blasting, machining, shaping, coating, brazing, lapping, grit blasting, plating disassembly, tensile testing, assembly, disassembly, and processing. Used in R&D operations. Used in the Laboratories. Clothing was laundered. Used in Material Analysis. Destructive and Non-Destructive testing. Part V leach, mechanical testing, and metallography. Enclosed in stainless steel; removed from stainless steel envelope (canning/decanning). Final assembly and vapor deposition. Used in ML-1 reactor development. Beryllium-contaminated liquid absorbed in vermiculite. Processed in fuel recovery. Used as reflectors in reactors. Used in non-INL reactor development.	RFP: 331, 441, 442, 444, 447, 448, 707, 771, 776, 777, 779, 881, 883, 991 INL: ARA, CFA. CPP, TAN, TRA Off-Site shipments: Rockwell International Atomics International Division (ATI)
Beryllium oxide	Used as standards in Laboratory. Used in R&D processes. Used in ceramics manufacture. Used as a mold wash for the graphite crucibles in the beryllium foundry. Special recovery project involving beryllium oxide-coated uranium fuel rods. Waste containing beryllium oxide was trans-shipped to INL through RFP. Used in melt refining ceramics from EBR-II. Used in the fuel elements for ML-1. Mixed with uranium oxide, used in most of the fuel elements for the ceramic fuel inserts for the HTRE reactors. In capsule irradiated in ETR and later ATR.	RFP: 123, 331, 334, 441, 444, 559, 705, 771, 881, 883 Trans-Shipped: Coors Porcelain, Denver Research Institute INL: ANL-W, ARA, TAN, TRA
Beryllium powder	Used in standards in the Laboratory. Used in the sintering process. Used in ceramics manufacture.	RFP: 123, 334, 441, 444, 559, 705, 771, 881 INL: INTEC/RWMC Laboratories
Beryllium sulfate	Used to coat graphite molds in the beryllium foundry.	RFP: 444
Beryllium-copper alloy	Used in the production of War Reserve (WR) parts.	RFP: 444
Biphenyl (Ethylated)	Component of Dowtherm A which may be similar to Dowtherm used as a heat transfer medium.	INL: TRA

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
bis(2-ethylhexyl) phthalate	Used for testing CWS/HEPA filters. Detected during environmental sampling of the underground tanks. Component of Octoil Vacuum Pump Fluid, used at RFP. Identified as a tentatively identified compound (TIC) in greater than 25% of the solid samples in the ID-SDA-SOIL waste stream. Used in the Laboratory.	RFP: RFP INL: ARA, TAN INTEC/RWMC Laboratories
Bisphenol A-diglycidyl ether epoxy resin (Araldite 6004)	Component of Devcon Aluminum Putty F Resin tested in the R&D Laboratory.	RFP: 771, 779, 881
Bisphenol A-epichlorohydrin epoxy resin	Component of Devcon Aluminum Putty F Resin tested in the R&D Laboratory.	RFP: 771, 779, 881
bis(tri-n-butyltin)oxide	Component of Mogul AG-471 used for an unknown purpose.	RFP: 771
Bismuth nitrate	Used in the Laboratory.	RFP: 881
Bismuth oxide	Used as a standard in the Laboratory.	RFP: 771
Bismuth powder	Used as a standard in the Laboratory.	RFP: 771
Bisphenol AF	Component of Fluorel used in glovebox gaskets.	RFP: 559, 707, 771, 774, 776, 777, 779, 991
bis-phenol A fumarate resin	Component of Loctite Pipe Sealant.	RFP: 444
Boric acid	Used in Metallurgical Operations. Used by the Technical Staff to electroplate thorium. Component of Kodak Fixer used in NDT operations. Used in the operation of the BORAX III, IV, and V reactors. Used as a neutron poison. Used in the calciner while processing simulated natural uranium fuel elements. Added to the feed for the Waste Calcining Facility. Used in reactor component testing.	RFP: 444, 881, 883 INL: ANL-W, ARA, CFA, CPP, PER
Boron	Used in ML-1 reactor instrumentation. Used as neutron poison in reactors. Component of fuel in ETR experiments. Used as burnable poison in ATR fuel elements.	INL: ARA, PER, TRA
Boron carbide	Used in ceramic manufacture. Used in control blades in reactors. Component of fuel elements irradiated in ETR and examined in the TRA Hot Cells.	RFP: 705 INL: PER, TRA
Boron nitride	Used as a substrate in Physical Metallurgy. Used as the sample holder in crucible tests.	RFP: 444, 771, 779, 881
Boron powder	Included on an excess chemical list.	RFP: 779
Boron trioxide	Used in R&D operations.	RFP: 771, 779

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Boron-aluminum alloy	Used as a neutron poison in reactors. Used in the control blades in reactors.	INL: PER, TRA
Brass metal	Used in Physical Metallurgy. Used in parts manufacturing. Processed through electrochemical milling with stainless steel, tungsten, copper, aluminum, beryllium, and depleted uranium. Used throughout RFP in building plumbing, lighting, rivets, screws, springs, equipment tags, etc.	RFP: 444, 447, 771, RFP
Bromine	Used in R&D operations. Used in beryllium laboratory analysis.	RFP: 444, 559, 771, 779, 881
Bromobenzene	Used by NDT for float-sink tests and ultrasonic tests for plutonium and uranium.	RFP: 441, 444, 447, 776, 779, 881, 883, 991
Bromochloromethane	Used in the Laboratory in standards and surrogates.	INL: INTEC/RWMC Laboratories
Bromoform	Used in the Laboratories. Found in environmental sampling.	INL: CPP, ARA
Bromophenol Blue	Component of Oakite 12 used in NDT.	RFP: 444, 447, 991
Bromthymol Blue	Used in the Laboratory as an indicator.	INL: INEC/RWMC Laboratories
Butanol	Used in the Laboratories. Used to react contaminated lithium chips through 1968. Used to clean glovebox windows. Component of Dychem Steel Blue and Dychem dye penetrant used for parts inspection. Component of Glyptal Clear Insulating Varnish and Glyptal Red Insulating Enamel used in NDT. Component of Triethane used in Product and Chemistry R&D. Component of Devran 669, Plasite 7155, and Chemfast 547 used in coating studies.	RFP: 444, 559, 705, 707, 771, 776, 777, 779, 881 INL: CPP, TAN INTEC/RWMC Laboratories
Butyl acetate	Component of Dychem Steel Blue dye penetrant and Remover and Thinner used for parts inspection. Component of Amercoat 450HS paint. Component of Spot 'N Glaze Putty.	RFP: 444, 881
Butyl Carbitol®	Used as a solvent in the Metallurgical Laboratory. Component of Oakite Aluminum Cleaner NST and Oakite 202 used for ultrasonic cleaning of beryllium parts. Component of Oakite 204 used in R&D operations.	RFP: 444, 447, 779

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Butyl lactate	Used in Physical Metallurgy.	RFP: 991
Butylamine	Used as a solvent in the Metallurgical Laboratory.	RFP: 444
Butyraldehyde	Used as a solvent in the Metallurgical Laboratory.	RFP: 444
C7-C10 saturated hydrocarbons	Component of Varsol 1. Source documents do not specify building or indicate a use.	RFP
C. I. Solvent Red 64	Component of DP-50 Dye Penetrant (Dubl-Chek), used in parts inspection.	RFP: 444
Cadmium cyanide	Used in the Coatings Laboratory.	RFP: 444
Cadmium metal	Used in enriched and depleted uranium plating. Cast, rolled, shaped, machined, baking, flame sprayed, and alloyed. Used in the Ceramics Laboratory. The inside of the final WR product shipping containers were covered with cadmium. Used in cyanide plating of thorium. Used in Special Order work and in R&D operations. Plating on steel CWS/HEPA filter frames used in the Incinerator plenum. Included on an excess chemical list. Used in pin decanning. Melt-refining contaminant. Used as a neutron poison in reactors. Used to plate containers for transporting reactor and fuel components following destructive SNAPTRAN tests. Used in control rods and for shielding in reactors and fuel storage facilities.	RFP: 444, 771, 777, 779, 881, 883, 991 INL: ANL-W, PER, TAN, TRA
Cadmium nitrate	Used in Laboratory. Used in plating and coating. Used in the Ceramics Laboratory.	RFP: 123, 444, 559, 705, 771, 881, 991
Cadmium oxide	Used in Laboratory. Used in plating and coating. Used in the Ceramics Laboratory.	RFP: 123, 444, 559, 705, 771, 881, 991
Cadmium powder	Used in the Laboratory and in standards. Used in the Ceramics Laboratory. Used in baking.	RFP: 123, 559, 705, 771, 777, 881 INL: INTEC/RWMC Laboratories
Cadmium salts, non-specific	Used as a neutron poison in plutonium and enriched uranium dissolution. Used as a neutron poison in bottles of aqueous waste in storage.	RFP: 771, 776, 881, 884

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Calcium carbonate	Used in the Laboratories in the formulation of calcium master standards. Component of Portland cement. Component of Scotch Brite Pads, tested in the R&D Laboratory.	RFP: 441, 559, 771, 779, 881, RFP
Calcium chloride	Used in R&D operations. Used in americium thermite reductions. Used as a reagent in First and Second stage processing. Used in DOR and in Chemistry Technology.	RFP: 771, 774, 779
Calcium chromate	Used in the Laboratories.	INL: CPP
Calcium fluoride	Used to coat graphite molds in the beryllium and plutonium foundries. Used in dissolution and produced in all thermite reduction operations. Pyrochemical reagent salt. Used in R&D operations. Used in R&D work for Plutonium Metal Reduction Technology. Used by Instrumentation and Special Projects.	RFP: 444, 707, 771, 776, 779, 881
Calcium hydroxide	Used to neutralize mop, sink, and miscellaneous water. Used to neutralize acids and acidic wastes.	RFP: 444, 774
Calcium hypochlorite	Used in the Metallurgical Laboratory. Used in the process cooling water system.	RFP: 444
Calcium indicator	Used to determine calcium hardness in cooling tower makeup water.	INL: TRA
Calcium metal	Used in DOR as a reductant. Used in the Fluoride Volatility Process. Used in Thermite Reduction. Used in Plutonium Metal Reduction Technology.	RFP: 771, 779, 881
Calcium nitrate	Used as an etching solution. Used in R&D operations.	RFP: 444, 771
Calcium oxide	Used for neutralization of acids. Used in beryllium billet wash prior to canning. Used in Direct Oxide Reduction. Component of Metco 201, tested in the R&D Laboratory.	RFP: 771, 774, 779, 881
Calcium powder	Used in the Laboratory.	INL: INTEC/RWMC Laboratories

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Calcium silicate	Used in the Organic Setups process. Used to absorb oil sludge in the bottom of the 55-gallon drums from 903 Pad and from plutonium production buildings.	RFP: 774, 903 Pad
Calcium-lead alloy	Alloy prepared for use in WR parts production.	RFP: 444, 881
Calcium-lithium alloy	Used in the DOR as a reductant. Used in studies for the recovery of plutonium and americium from molten salt residues.	RFP: 779
Calcium-zinc alloy	Used in the DOR as a reductant.	RFP: 779
Carbon black	Component of Bakelite used to mount metallographic samples.	RFP: 444
Carbon dioxide	Component of Aero-Gel used in R&D operation.	RFP: 779
Carbon disulfide	Used as a solvent in the Laboratories. Detected in headspace gas sampling.	RFP: 123, 559, 771, 881 INL: CPP INTEC/RWMC Laboratories
Carbon tetrachloride	Used as a solvent in the Laboratories. Used as a lubricant in metallographic sample preparation. Used in neptunium metal degreasing. Used in R&D operations. Used in plutonium machining and fabrication and in glovebox cleaning. Used in Chemistry Technology and Plutonium Physical Metallurgy. Carbon Tetrachloride mixed with cutting and machining oils processed in B774 (Grease Plant). Used as a solvent. Used in the Laboratories. Used in the Chemical Laboratory.	RFP: 123, 441, 559, 707, 771, 776, 777, 779, 881 INL: ANL-W, CPP, TAN, PER INTEC/RWMC Laboratories
Carburizing compound (contains cyanide)	Inventory list in the Warehouse.	RFP: 551
Castor oil	Component of Celvacene grease used in depleted uranium processing.	RFP: 444
CB+ aromatics	Component of Varsol 1. Use or building not specified.	RFP: unknown
Cellulose acetate butyrate	Component of Celvacene grease used in depleted uranium processing.	RFP: 444
Ceramic, not specific	Used in Electrorefining.	RFP: 776, 779
Ceric sulfate	Used in the Laboratory for plutonium titration. Used in the Laboratory for uranium titration.	RFP: 123, 441, 559, 771, 881

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Cerium metal	Used in Special Order work. Used as a coating on boron nitride.	RFP: 771, 776, 779, 881
Cerium monosulfide	Used in ceramics manufacturing.	RFP: 705
Cerium powder	Used in the Coatings facility.	RFP: 779
Cesium chloride	Used in R&D operations.	RFP: 771, 779
Cesium, not specific	Present in a mixture with mercury, unknown use.	RFP: 779
Chlordane 46 percent	Used to control the population of black widows. Use was not allowed indoors. Should not be present in the waste stream.	RFP
Chlorinated paraffin	Component of Amercoat 33 paint. Used in the Hot Cell and Laboratory.	RFP: all INL: ARA
Chlorinated paraffin oil	Component of Texaco Transultex 210 cutting and grinding oil used in machining. Component of Texaco Cold Forming Fluid used in R&D studies.	RFP: 779, 881
Chlorine trifluoride	Used in the Laboratory.	RFP: 881
Chlorine, anhydrous liquid	Used in R&D operations. Used in cleaning fluid used in the MTR Building.	RFP: 771, 779 INL: TRA
Chloroacetic acid	Used in the Laboratory. Component of Cee Bee solvent used for parts cleaning.	RFP: 123, 444
Chlorobenzene	Used in the Laboratories.	RFP: 771 INL: CPP
Chlorobenzene-d_5	Used in the Laboratory in standards and surrogates	INL: INTEC/RWMC Laboratories
Chlorodiphenyl	Used in R&D operations.	RFP: 779
Chloroform	Used in depleted uranium parts cleaning and inspection. Used as a solvent in the Laboratories. Used in Chemistry Technology. Used by carpenters throughout RFP to join Plexiglas®. Degradation product of polyethylene.	RFP: 444, 559, 771, 779, 881, 883 INL: ANL-W, CPP
Chloromethane	Used in the Laboratory.	INL: INTEC/RWMC Laboratories
Chromate inhibitor	Component of Kathene used in air drying system.	RFP: 776, 777
Chromates, not specific	Component of Portland cement. Present in the process cooling water systems.	RFP

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Chromic Acid	Used in vibratory polishing for beryllium and in plating. Used in Plutonium Metallurgical R&D. Used in beryllium etching. Used in stainless steel decontamination studies (beryllium and depleted uranium). Used in polishing metallurgical samples. Used in Neptunium Recovery operations. Used in cleanout of the dissolvers used in Neptunium Recovery operations.	RFP: 444, 771, 883 INL: ARA, CPP
Chromium chloride	Used in the Laboratory.	RFP: 559
Chromium metal	Used in plating. Used in Non-Destructive Testing (NDT). Used in Chemistry Technology and Physical Metallurgy. Present in some paints. Used at the BORAX III, IV, and V reactors. Used in the L2C-1 insert cartridge tested for the ANP. Used in fuel cladding material. Used in some of the fuel elements for the HTRE reactors. Mixed with uranium oxide in some of the fuel elements for the HTRE reactors. Included in samples irradiated in ETR.	RFP: 444, 771, 779 INL: ANL-W, ARA, CPP, TAN, TRA
Chromium nitrate	Used in the Laboratory.	RFP: 559
Chromium oxide	Used in the Laboratory.	RFP: 559
Chromium potassium sulfate	Used in the Laboratory.	RFP: 559
Chromium powder	Used in the Laboratory. Used in the Ceramics Laboratory. On an excess chemicals list.	RFP: 123, 441, 559, 705, 771, 779, 881 INL: INTEC/RWMC Laboratories
Chromium sulfate	Used in the Laboratory.	RFP: 559
Chromium trioxide (chromic acid, solid)	Used in Metallurgical Operations.	RFP: 444, 881
Chrysene-d_{12}	Used in the Laboratory in stock internal standard solutions.	INL: INTEC/RWMC Laboratories
Citric acid	Used in the Enriched Uranium Recovery process. Sometimes used for americium recovery. Used in the operation of the BORAX III, IV, and V reactors. Component of Radiacwash used for decontamination.	RFP: 771, 881 INL: ANL-W, TAN

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Coal dust	Component of Bakelite used to mount metallographic samples.	RFP: 444
Coal Tar	Component of Amercoat 78HB used in coating studies.	INL: TAN
Coal tar distillate solvent	Component of Zyglo Penetrant ZL-22 which may be similar to Zyglo 22 tested in the R&D Laboratory.	RFP: 771, 779, 881
Cobalt metal	Present on an excess chemicals list. Used during reactor tests at SPERT IV. Used as flux monitors in the MTR.	RFP: 779 INL: PER, TRA
Cobalt nitrate	Used in the Laboratory as a standard.	RFP: 771
Cobalt powder	Used as a standard in the Laboratory. Mixed with tungsten in ceramic manufacture.	RFP: 705, 771
Color pigment	Component of Phenoline 302 Part A used in coating studies.	INL: TAN
Copper-aluminum alloy	Evaluated as cladding material for test reactors.	INL: TRA
Copper cyanide	Used in the copper strike when electroplating beryllium-copper alloy parts.	RFP: 444
Copper metal	Cast into ingots and used as molds in the vacuum arc melt furnaces. Used in Physical Metallurgy. Used in plating. Processed through electrochemical milling with stainless steel, brass, tungsten, aluminum, beryllium, and depleted uranium. Used in gaskets on the plutonium and enriched uranium reduction furnaces. Used in pit components in Assembly Operations. Used in R&D operations. Used in the Coating facility. Used in brazing operations. Used in coating experiments with thorium and in cyanide plating of thorium. Used for piping and wiring.	RFP: 331, 444, 447, 771, 777, 779, 881
Copper sulfate	Used in Nuclear Joining and in the Coating Facility. Used in beryllium etching R&D. Used in Metallurgical Operations. Used in the Laboratory. Component of Marbles used in metallographic preparation. Used in reactor vessel cleaning.	RFP: 779, 881 INL: TAN, PER
Copper triethanolamine complex	Component of HTH "Mustard" Algaecide used process cooling water.	RFP: 444, 559, 883

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Cresol (-p, -o, -m) (2-Methylphenol, 3-Methylphenol 4-Methylphenol)	Detected during environmental sampling.	INL: ARA, TAN
Crystalline silica	Component of Portland cement.	RFP
Cumene hydroperoxide	Component of Loctite Pipe Sealant.	RFP: 444
Curium metal	Used in laboratory operations. Used in R&D and Special Order work. Handled in Hot Cells.	RFP: 123, 771, 776, 881 INL: TRA
Curium dioxide	Received for conversion to curium-244 metal and mixed with plutonium in Special Order work.	RFP: 771
Cyanide compounds, not specific	Salts were set up with cement and shipped to INL.	RFP
Cyanide plating solution, not specific	On a Warehouse inventory. Used in plating activities. Used in the Metallurgical Laboratory. Used in copper and chromium plating.	RFP: 444, 551, 881
Cyanide salts, not specific	Used in heat-treating baths in the Precision Shop.	RFP: 444
Cyanide solutions, not specific	Source document mentions cyanide solutions in conjunction with an unnamed process. Source document mentions cyanide solution treatment and cementation from an unnamed process.	RFP: 444, 881
Cyanide standards	Used in the Laboratory.	RFP: 881
Cycloaliphatic polyamine	Component of Amercoat 78HB Cure used in coating studies.	INL: TAN
Cyclohexane	Used in the Laboratory as a solvent. Used in R&D operations.	RFP: 771 INL: CPP
Cyclohexanone	Used in the Laboratories as a solvent.	INL: CPP
Cyclohexylamine	Component of Formula 409 cleaner used in decontamination operations. Formula 409 evaluated in R&D operations.	RFP: 776, 777, 779
Cyclotrimethylene trinitramine	Component of C-3 explosive used as a poison propellant in tests for the HTRE reactors.	INL: TAN
Decafluorotriphenyl phosphine (DFTPP)	Used in the Laboratory in stock tuning solutions.	INL: INTEC/RWMC Laboratories
Depleted uranium alloy, not specific	Used in weapons production.	RFP: 444
Depleted uranium, Finely divided, and uranium powder	Several fires involving finely divided uranium in ducting. Used in R&D operations.	RFP: 444, 771, 779

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Depleted uranium metal	Used in briquetting, casting, forging, machining, parts manufacturing, rolling, turning, and processing. Used in the Laboratories. Used in R&D operations. Possibility that unoxidized uranium may be present in the CWS/HEPA filters and graphite. Waste may contain depleted uranium blanket material from EBR-I and Shippingport. Present in items processed in the Hot Cells.	RFP: 123, 334, 441, 444, 447, 705, 779, 881, 883 INL: ANL-W, CPP, NRF, TRA
Depleted uranium metal, highly enriched	Used in Special Order work.	RFP: 881
Depleted uranium-molybdenum alloy	Used in weapons production. Used in the ZPPR project.	RFP: 444, 447, 776, 777, 881
Depleted uranium-molybdenum-niobium alloy	Prepared in Metallurgical R&D.	RFP: 444
Depleted uranium-molybdenum-titanium alloy	Used in weapons production.	RFP: 444
Depleted uranium-molybdenum-zirconium alloy	Used in Special Projects.	RFP: 444
Depleted uranium-neptunium alloy	Prepared in the Metallurgical Laboratory.	RFP: 444
Depleted uranium-niobium alloy	Used in weapons production. Processed through the vacuum arc melt furnace.	RFP: 444, 447, 777, 881, 883
Depleted uranium-niobium-titanium	Used in weapons production.	RFP: 444
Depleted uranium-niobium-zirconium alloy	Used in weapons production.	RFP: 444
Depleted uranium oxide: includes oxides of depleted uranium alloys	Processed through the chip roaster to form "Roaster Oxide."	RFP: 444, 447
Depleted uranium-titanium alloy	Used in weapons production.	RFP: 444, 447, 881, 883
Deuterium oxide	Used as a moderator in some items processed in the Hot Cells.	INL: TRA
Di-2-ethylhexyl phosphoric acid	Used in enriched uranium R&D.	RFP: 881
Di-t-Butoxydiacetoxysilane	Component of RTV20.01 which may be similar to RTV20, tested in the R&D Laboratory.	RFP 771, 779, 881
Diacetone alcohol	Used in Physical Metallurgy.	RFP: 991
Diallyl phthalate	Used to mount metallorgraphic samples.	RFP: 444
Diammonium citrate	Component of decontamination solution B used in MTR and ETR.	INL: TRA

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Di-aryl compound	Component of Dowtherm G which may be similar to Dowtherm used as heat transfer medium in reactors.	INL: TRA
Diatomaceous earth; filter aid; Diatomite	Used to coat the vacuum drum filters for 741- and 742-sludge. Used to coat the drum filters in the Dissolution and Precipitation processes. Used to coat the filters in Enriched Uranium Recovery. Filtration systems in the fuel storage basins. Absorbed radioactive spills or solidified small volumes of radioactive organic liquids. Diatomaceous earth and sand were used as a filter media in the water pit clarity systems.	RFP: 771, 774, 881 INL: CPP, NRF
Diazodinitrophenol	Used as an internal fuse in the HTRE reactors for the ANP program (tests performed at SPERT I).	INL: PER
Dibutyl Carbitol®	Used in Enriched Uranium Solvent Extraction. Used in Special Recovery's Enriched Uranium Solvent Extraction process.	RFP: 771, 881
Dibutyl-N diethylcarbamoyl phosphonate-N	Used in the Laboratories.	RFP: 123
Dibutyl phthalate	Used in the Laboratories.	INL: CPP
Dicalcium silicate	Component of Portland cement.	RFP
Dicesium hexachloroplutonate	Used in R&D Operations. Used in the Pyrochemical Technology Support Laboratory. Used in Molten Salt Extraction (1986/87).	RFP: 776, 779
Dicesium plutonium hexachloride	Used in early plutonium Electrorefining. Used in R&D chemistry studies.	RFP: 771, 776, 779
Dichlorodifluoromethane	Used in the production of parts for Inertial Fusion. Component of Molykote 557 Lubricant used in assembly testing. Component of Magnaglo and Dubl-Chek.	RFP: 444, 881
Diesel fuel	Component of Release 1 VOC spilled in the SDA and cleaned up during excavation.	INL: SDA
Diethanolamine	Component of Long Life 6100 used in Metallurgical operations. Component of Johnson's TL-131 used in Metallurgical operations. Component of Vantrol used in Metallurgical operations.	RFP: 444
Diethyl ether	Used as a solvent in the Metallurgical Laboratory. Component of Chlorothene VG used Product R&D and in Chemistry R&D.	RFP: 444, 771

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Diethyl formamide	Used as a solvent in the Metallurgical Laboratory.	RFP: 444
Diethyl phthalate	Found in environmental sampling.	INL: ARA
Diethylbenzene	Component of Dowtherm J used as a heat transfer fluid.	INL: TRA
Diethylene ether	Used as a solvent in the Metallurgical Laboratory. Component of Clorothene VG and Dowclene EC used in Product R&D. Component of Zyglo ZC-7 used in NDT. Component of Triethane used in Product R&D and in Chemistry R&D. Used as an inhibitor (2.5% [w/w]) in 1,1,1-trichloroethane. Used in the Laboratories. Component of Nicrobraz Cement 400 tested in the R&D Laboratory.	RFP: 444, 771, 779, 881, RFP INL: CPP
Diethylene glycol	Component of Kodak Developer used in NDT operations. Component of Formula 409 cleaner used in decontamination operations. Formula 409 used in R&D operations. Component of Cat® ELC (Extended Life Coolant) Premix 50/50 and Cat® ELC (Extended Life Coolant) Premix 60/40, spilled in the SDA and cleaned up during excavation.	RFP: 444, 776, 777 INL: SDA
Diethylenetriamine	Component of Phenoline 302 Part B used in coating studies.	INL: TAN
Diethylenetriamine-pentaacetate	Given to workers exposed to airborne and injected plutonium. Blood, urine, and fecal samples were analyzed. Given to rats and dogs that were part of the DMSO study undertaken by CSU and RFP. Analysis of fecal material and body parts was performed.	RFP: 122,123
Diglyme bis (2-methoxyethyl) ether	Used in Physical Metallurgy. Used in solvent replacement testing.	RFP: 991
Dihexyl diethylcabonyl methylene phosphonate	Used in Americium extraction chromatography (not performed until the 1980s).	RFP: 771
Dihexylhexylphosphine oxide	Used in enriched uranium R&D operations.	RFP: 881
Dihydrogen phosphate	Component of Nickel Tungsten Plating Solution used for plating.	RFP: 771, 776, 777, 779
Dimethoxymethane	Component of Tap Magic cutting fluid used in Metallurgical operations.	RFP: 444

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Dimethyl polysiloxane	Component of GE Antifoam 60 used in peroxide precipitation. Component of RTV21 which may be similar to RTV20, tested in the R&D Laboratory. Component of RTV20.01 which may be similar to RTV20, tested in the R&D Laboratory.	RFP: 771, 779, 881
Dimethyl dichlorosilane	Used as a Laboratory reagent.	RFP: 881
Dimethyl formamide	Used in plating baths. Used as a solvent in the Metallurgical Laboratory.	RFP: 444
Dimethyl phthalate	Used in the Laboratories.	INL: CPP
Dimethyl silicone fluid	Component of Molykote 557 Lubricant used in assembly testing.	RFP: 444
Dimethyl sulfate	Used in the Laboratories.	INL: CPP
Dimethyl sulfoxide	Used in DMSO studies performed jointly with CSU. Used as a solvent in the Metallurgical Laboratory. Used in plating baths. Used in R&D operations.	RFP: 123, 444, 771, 779
Dimethyl, methylhydrogen siloxane	Component of Silastic E-RTV Rubber Curing Agent used in NDT.	RFP: 881
Dimethyl, phenylmethyl siloxane, trimethyl terminated	Component of Dow Corning 550 Fluid used in baths to cool uranium parts after heat treating and used in plutonium rolling mills.	RFP: 776, 779, 883
Dimethylamine	Used in Chemistry Technology.	RFP: 779
Dimethylglyoxime	Used to remove excess nickel in the Ni-DTPA complex when analyzing the rate of excretion of DTPA.	RFP: 123
Di-n-butyl phthalate	Detected during environmental sampling.	INL: TAN
Dipentene	Component of Oakite Penetrant used in NDT. Component of Kerful, used in R&D operations.	RFP: 444, 447, 779
Diphenyl	Component of Dowtherm A used as a heat transfer fluid.	INL: TRA
Diphenylamine	Used in the Laboratory.	INL: INTEC/RWMC Laboratories
Diphenylethane	Component of Dowtherm Q which may be similar to Dowtherm used as a heat transfer medium.	INL: TRA
Diphenyl oxide	Component of Dowtherm A and Dowtherm LF used as a heat transfer fluid.	INL: TRA
Dipropyl ether	Used as a solvent in the Metallurgical Laboratory.	RFP: 444
α-α′ Dipyridyl	Used in Laboratory operations.	RFP: 559, 771
Disocium aspartate	Used in voltammetric studies of neptunium.	RFP: 771
Disodium hydrogen phosphate	Component of Turco 4324 used in R&D operations.	RFP: 779

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Distilled tall oil fatty acids	Component of Release 1 VOC spilled in the SDA and cleaned up during excavation.	INL: SDA
Dithioloxalic acid	Used to destroy the Ni-DTPA complex when analyzing the rate of excretion of DTPA.	RFP: 123
Divinylbenzene styrene, chloromethyl trimethylamine	Component of Dowex Marathon 11 Anion Exchange Resin, used in plutonium recovery.	RFP: 771
Dodecane	Used in Special Recovery to recover enriched uranium in a Solvent Extraction process. Used in Physical Metallurgy.	RFP: 771, 991
Durasoil®	Dust suppressant applied to soil during pit excavation	INL: SDA
Ethylenediaminetetraacetic acid (EDTA) (Versenes)	Used in a solution to determine the nickel concentration in beryllium nickel plating baths. Used in the Laboratories. Component of Varsol solvent used in Metallurgical operations and for sample preparation for x-ray analysis, tensile testing, and plutonium metallurgy. Component of Johnson's TL-131 used in Metallurgical operations. Component of Formula 409 cleaner, used in decontamination operations. Component of Triple C Spray Cleaner used to clean drums. Formula 409 evaluated in R&D operations. A component of the cleaning agent "KW" (a mixture of Versene® [trade name EDTA], Igepal, citric acid, and water), used throughout RFP for decontamination purposes. Component of Radiacwash used for decontamination.	RFP: 123, 441, 444, 559, 771, 774, 776, 777, 779, 881, 991 INL: TAN INTEC/RWMC Laboratories
Enriched uranium	Used in casting, rolling, forming, fabrication, machining, Oralloy leaching, and recovery, Used in R&D operations. Used in the Laboratories. Used in radioactive spiked solutions used in the Laboratory. Contaminated machining equipment installed in B334. May have been cast and machined in small quantities in B444. Recovered from reactor fuel elements and from fuel processing residues.	RFP: 123, 334, 444, 779, 881, 883 INL: ANL-W, CPP, TRA
Enriched uranium metal, highly	Used to fabricate diagnostic standard disks.	RFP: 881
Enriched uranium metal, low	Used as test fuel at MTR.	INL: TRA

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Epoxy glues and adhesives	Used for tabbing beryllium parts. Used in Special Projects. Used in Metallurgical operations. Used in the Inertial Fusion project and in the Special Weapons Project. Epoxy glues used throughout the plant site.	RFP: 447, 771, 881, RFP
Epoxy resin	Component of Amercoat 78HB and Amercoat 66, used in coating studies. Component of Devran 232, Devran 669 Converter, and Devran 4170 used in coating studies. Used in Hot Cell sample preparation.	INL: TAN, TRA
Erbium nitrate	Used to coat non-nuclear parts.	RFP: 444
Erbium oxide	Used to coat stainless steel molds used to form plutonium ingots.	RFP: 707, 776, 777
Essential oils	Component of Loctite Pipe Sealant.	RFP: 444
Ethanol	Used for personnel decontamination. Used in the Laboratories. Used to clean beryllium parts. Used in final polishing, in etching, and Assembly operations. Used in the Metallurgical Laboratory. Used in the ball milling of refractory material to form powders. Used by the Calibration Laboratory to clean precision gauges prior to measurements. Used in 1954 in peroxide precipitation. Used in the Metallographic Laboratory. Used in Nuclear Joining and in Product Physical Chemistry. Used in Special Projects. Component of Noxon metal polish, used for beryllium cleaning. Component of Dychem Penetrant, Dychem Steel Blue Penetrant, and Dychem Remover used in parts inspection. Used in the SPERT I reactor building. Used as a degreaser. Component of Plasite 7155, used in coating studies. Used as an inhibitor in chloroform.	RFP: 122, 123, 441, 444, 559, 705, 707, 771, 776, 777, 779, 881 INL: CPP, PER, TAN, TRA
Ethanolamine	Used as a solvent in the Metallurgical Laboratory. Component of Cimcool used as a coolant for depleted uranium machining.	RFP: 444
Ether, not specific	Used in Laboratory operations	RFP: 123, 771

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Ethoxylated nonylphene	Component of Zyglo Developer ZP-9 used in NDT.	RFP: 444
Ethoxylated tallow amine	Component of Yellow 77 Wire Pulling Lubricant	RFP: 779
Ethyl acetamide	Used as a solvent in the Metallurgical Laboratory.	RFP: 444
Ethyl acrylate	Used in the Laboratories.	INL: CPP
Ethyl benzene	Component of paints, thinners, and strippers. Component of Spot 'N Glaze Putty. Component of Amercoat 66 used in coating studies. Component of Devran 232 and Devran Converter used in coating studies. Component of Phenoline 302 Part A and Part B used in coating studies. Used in the Laboratory.	RFP: RFP, 881 INL: TAN INTEC/RWMC Laboratories
Ethyl ether	Used in the Laboratory.	INL: INTEC/RWMC Laboratories
Ethyl methacrylate	Used in the Laboratories.	INL: CPP
Ethyl silicate	Component of RTV21 which may be similar to RTV20 tested in the R&D Laboratory.	RFP: 771, 779, 881
Ethylene dibromide	Used as a solvent in the Laboratories.	RFP: 559, 771, 881
Ethylene glycol	Used by RFP maintenance and Utilities. Used in beryllium nickel plating. Used as a solvent in the Metallurgical Laboratory. Used in metallographic sample preparation. Used by maintenance throughout RFP. Used in electropolishing throughout RFP. Component of Texaco Soluble D metal working oil. Component of Stay-Clean Soldering Flux used in R&D operations. Component of Aero-Gel used in R&D operations. Component of Cat® ELC (Extended Life Coolant) Premix 50/50 and Cat® ELC (Extended Life Coolant) Premix 60/40 spilled in the SDA and cleaned up during excavation activities.	RFP: 123, 444, 771, 779, 881 INL: SDA
Ethylene glycol butyl ether	Component of hydraulic fluids. Used in vinyl and acrylic paints and varnishes, enamel and spray lacquers. Component of Altrex detergent, used in reactor cleaning at SPERT II.	RFP INL: PER
Ethylene glycol dinitrate	Component of dynamite used as a poison propellant in tests for the HTRE reactors.	INL: TAN
Ethylene glycol monomethyl ether	Used in the Laboratories. Used in R&D operations.	RFP: 123, 441, 559, 771, 779, 881

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Ethylene oxide	With Freon as a carrier used to disinfect respirators. Component of Igepal CO 430 and Igepal CO 530, used in "KW" detergent. Component of Formula 409 cleaner used in decontamination operations. Formula 409 evaluated in R&D operations.	RFP: 776, 777, 778, 779
Ethylstyrene copolymer, chloromethyl trimethylamine	Component of Dowex Marathon 11 Anion exchange resin, used in plutonium recovery.	RFP: 771
Ethyltriacetoxysilane	Component of RTV20.01 which may be similar to RTV20, tested in the R&D Laboratory.	RFP: 771, 779, 881
Eutectic salt baths, not specific	Used to heat-treat (healing, annealing, etc.) depleted uranium and alloys, enriched uranium, and beryllium prior to and during rolling and forming.	RFP: 883
Explosive plasticizer	Component of C-3 explosive used as a poison propellant in tests for the HTRE reactors.	INL: TAN
Fatty soap	Component of Triple C Spray Cleaner used for cleaning drums during shipping and receiving. Component of Fiske Fibercool used for an unknown purpose. Component of Texaco Soluble Oil CX metal working oil used for machining depleted uranium.	RFP: 444, 779, 991
Ferric chloride	Used in R&D operations. Used in tests to determine an improved method of liquid waste treatment.	RFP: 771, 774, 779
Ferric nitrate	Used to precipitate enriched uranium from Incinerator scrubber water.	RFP: 881
Ferric sulfate	Large quantities of this chemical were used in First and Second Stage precipitation in B774. Used in R&D operations. Used in preparation of neptunium oxide.	RFP: 771, 774, 779
Ferrite powder	Used in Waste Treatment R&D.	RFP: 779
Ferroin solution (ortho-phenanthroline-ferrous complex)	Used in the Laboratories for plutonium titration.	RFP: 559, 771
Ferrous sulfamate	Used in anion exchange. Used in neptunium anion exchange.	RFP: 771
Ferrous sulfate	Used in neptunium recovery as a reducing agent. Used until 1959 in the First and Second Stage Precipitation. Used in R&D operations.	RFP: 771, 774, 779
Flocculating agents, not specific	Used in First and Second Stage precipitation.	RFP: 774

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Fluoranthene	Used in the Laboratory.	INL: INTEC/RWMC Laboratories
Fluoranthrene	Detected during environmental sampling. Used in the Laboratories.	INL: ARA, CPP
Fluorene	Detected during environmental sampling.	INL: ARA
Fluorescent dyestuff	Component of Zyglo Penetrant ZL-22 and Zyglo Penetrex ZL 22A which may be similar to Zyglo 22 tested in the R&D Laboratory.	RFP: 771, 779, 881
Fluoride ion	Component of Ox-Out used for cleaning.	RFP: 883
Fluorinated hydrocarbons	Component of Zyglo Developer ZP-9 used in NDT.	RFP: 444
Fluosilicic acid	Formed in Anion Exchange.	RFP: 444, 771
Formaldehyde	Component of Bakelite used to mount metallographic samples. Used in the Laboratories.	RFP: 444, 559 INL: CPP
Formamide	Used as a solvent in the Metallurgical Laboratory.	RFP: 444
Formic acid	Component of Cee Bee solvent used for parts cleaning. Component of Formula A Paint Remover used throughout RFP. Used in the Laboratories.	RFP: 123, 444, 559, 771, RFP INL: CPP
Furfural	Component of Bakelite used to mount metallographic samples. Used in the Laboratories.	RFP: 444 INL: CPP
Freon, not specific	Used throughout RFP. Used in Non-Destructive Testing. Used in degreasing.	RFP: 444, 771, RFP
Gallium metal	Laboratories tested plutonium-gallium ingots for purity. Used in plutonium fabrication operations. Processed through Recovery Operations and Waste Treatment Operations. Used in R&D operations. Used in the Pyrochemical Support Laboratory.	RFP: 559, 707, 771, 774, 776, 777, 779
Gelatin	Used in dissolution operations.	INL: CPP
Glycerol	Used as an electrolyte in etching and in the Metallurgical Laboratory. Used in the preparation of metallurgical samples.	RFP: 444, 771
Glyceryl monolaurate	Binding agent of Benelex® used in the plutonium buildings as shielding.	RFP: 707, 771, 774, 776, 777, 779
Glycol methylene ether	Component of Triethane used in Product and Chemistry R&D.	RFP: 771

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Gold metal	Used in plating and alloying. Used in cladding on various parts of the hydrofluorinator. Used in the Coating facility. Used in ML-1 testing. Samples placed in the core of SPERT II. Plated the bottom of the SNAPTRAN-1 and SNAPTRAN-2 reactor vessels.	RFP: 444, 771, 779, 881 INL: ARA, PER, TAN, TRA
Graphite	Used to make casting molds and crucibles, rods, and plungers. Used in the Laboratories for electrodes, drying beds, and buffer material. Used in crucibles and molds for casting enriched uranium. Colloidal graphite used with asbestos as a lubricant when drawing beryllium. Dies, plungers, and spacers used in the formation of refractory containers. Component of Lubri Bond A used in Shipping and Receiving. Melt refining and oxidation molds and crucibles. ROVER fuel elements were graphite. Elements were burned and the ash was dissolved using nitric acid. Used in experiments irradiated in the MTR and ETR.	RFP: 444, 707, 771, 776, 777, 881, 883, 991 INL: ANL-W, CFA, CPP, TRA
Graphite, powdered	Used as a fire suppression material. Used to make standards. Produced in the MTR.	RFP: 123, 441, 444, 559, 771, 881 INL: TRA
Gypsum	Absorbed liquid.	INL: CPP
Hafnium	Used in reactor structural materials as well as experimental fuel elements and samples.	INL: TRA
Hafnium powder	Used in the Ceramics Laboratory.	RFP: 705
Hastelloy-C	Used in the semi-continuous molten salt extraction units.	RFP: 776, 779
Hastelloy-N	Used in experiments irradiated in ETR.	INL: TRA
Heat-treatment salts, not specific	Used to heat-treat (heating, annealing, etc.) depleted uranium and alloys, enriched uranium, beryllium, and other metals prior to and during rolling and forming.	RFP: 444, 881, 883
Hexachlorobenzene	Used in the Laboratories. Potentially present in organic setups.	INL: CPP INTEC/RWMC Laboratories RFP: 774

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Hexachlorobutadiene	Used in the Laboratories. Identified as a tentatively identified compound (TIC) in greater than 25% of the solid samples in the ID-SDA-SOIL waste stream.	INL: CPP
Hexachloroethane	Used in the Laboratories. Potentially present in organic setups.	INL: CPP INTEC/RWMC Laboratories RFP: 774
Hexamethyldisilaxane, silica reaction product	Component of Locatite Pipe Sealant.	RFP: 444
Hexane	Used in the Laboratory Used in Physical Metallurgy.	RFP: 771, 991 INL: INTEC/RWMC Laboratories
Hexanol	Used in Physical Metallurgy.	RFP: 991
Hexavalent chromium	Component of Turco 4502 used as a decontamination solution. Ingredient in a proprietary corrosion inhibitor, Betz-E-194, used in cooling water at the MTR and ETR.	INL: CPP, TRA
Hexine	Used as a wash in the Hot Cells.	INL: TRA
HMDZ-treated silica	Component of GE Antifoam 60 used in peroxide precipitation.	RFP: 771
Hydraulic oil	Used throughout RFP.	RFP
Hydrazine	Used as a reducing agent in neptunium recovery. Used in Process Development and Methods Development for recovery processes. Used in the Laboratories. Used in the operation of the BORAX III, IV, and V reactors. At SPERT III, added to demineralized water to reduce the oxygen content.	RFP: 771, 779, 881 INL: ANL-W, PER
Hydrazine hydrate	Used in the Laboratories.	INL: CPP
Hydrazine sulfate	Used in the Laboratories.	INL: CPP
Hydriodic acid	Used in neptunium anion exchange and precipitation. Used in R&D operations.	RFP: 771, 779
Hydrobromic acid	Used in R&D operations.	RFP: 771, 779
Hydrocarbon resin	Component of Amercoat 33 paint used throughout RFP.	RFP: RFP

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Hydrochloric acid	Used in the Laboratories. Used in parts plating, etching, electropolishing, and in pickling beryllium-copper alloy parts prior to electroplating. Used in the Plutonium Recovery Processing including ion exchange. Used in R&D operations. Used in neptunium preparation. Used in the preparation of salts for Molten Salt Extraction and Electrorefining. Used in Electropolishing. Used in Chemistry Technology and in Nuclear Joining. Used in Enriched Uranium Recovery Operations. Used in Metallurgical Operations. Component of Tuckers Etch used in beryllium-aluminum Metallurgy. Used in the operation of the BORAX III, IV, and V reactors. Used in ML-1 reactor development. Used in fuel element reprocessing and analysis. Used in the Hot Cells and in the Radiochemistry Laboratory. Component of Marbles used in metallographic preparation.	RFP: 123, 331, 441, 444, 559, 771, 776, 779, 881, 991 INL: ANL-W, ARA, CPP, NRF, TAN, TRA INTEC/RWMC Laboratories

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Hydrofluoric acid	Used in the Laboratories. Used in Beryllium Metallurgy as an etchant and as a final polishing agent. Used in Plutonium Recovery Operations in dissolution. Used in R&D operations. Used in neptunium metal preparation. Used in Nuclear Joining, in Plutonium Physical Metallurgy, and in the Coatings facility. Used to pickle thorium. Used for metallographic preparation. Component of Tuckers Etch used in beryllium-aluminum metallurgy. Component of Derustit SS-3 used in development studies involving beryllium and depleted uranium. Used for ML-1 reactor development. Used in the recovery of natural uranium from simulated fuel elements processed. Used in zirconium-clad fuel and graphite fuel (ROVER 1965-1984) dissolution. Used as a decontamination solution. Used in the Hot Cells and in the Radiochemistry Laboratory. Used in cleaning reactor vessel surfaces. Component of Vilellas reagent used in metallographic preparation. Component of Ox-Out, tested in the R&D Laboratory.	RFP: 123, 441, 444, 771, 779, 881, 883 INL: ARA, CFA, CPP, NRF, PER, TAN, TRA INTEC/RWMC Laboratories
Hydrogenated terpheyls	Component of Dowtherm HT which may be similar to Dowtherm used as a heat transfer medium in ETR.	INL: TRA
hydrogen fluoride Anhydrous	Used in the hydrofluorinator to convert plutonium oxide to plutonium tetrafluoride.	RFP: 771
Hydrogen peroxide (30 percent, 35 percent and 50 percent)	Used for personnel decontamination. Used during analyses of autopsied material. Used in ultrasonic etching. Used in Peroxide Precipitation for enriched uranium and plutonium. Used in the purification of americium oxide. Used in R&D operations. Used in Process Chemistry Technology. Used in the preparation of U-235. Used in the Laboratories. Used in the operation of the BORAX III, IV, and V reactors. Used in ML-1 reactor development.	RFP: 122, 123, 444, 771, 779, 881 INL: ANL-W, ARA

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Hydroquinone	Component of Kodak Developer and Kodak Industrex Developer Replenisher used in NDT operations. Source document did not specify a use.	RFP: 444, 883 INL: ANL-W
Hydrotreated light naphthenic petroleum distillates	Component of Texaco Almag oil used in the spark machining of beryllium.	RFP: 444
Hydrotreated light petroleum distillate	Component of DP-50 Dye Penetrant (Dubl-Chek) used for parts inspection.	RFP: 444
Hydrotreated residual oils (petroleum)	Component of Texaco Thuban 140 used in R&D operations. Component of Release 1 VOC spilled in the SDA and cleaned up during excavation.	RFP: 779 INL: SDA
Hydroxyacetic acid	Component of Lime-A-Way used in R&D operations.	RFP: 779
Hydroxylamine hydrochloride	Used in neptunium metal preparation and processing MSE salts. Used in R&D operations. Used as a reagent in the Laboratory.	RFP: 771, 779, 881 INL: INTEC/RWMC Laboratories
Hydroxylamine nitrate	Used in neptunium precipitation and anion exchange. Used in the recovery of plutonium from lead-plutonium alloys.	RFP: 771
Hydroxylamine sulfate	Used in the Laboratory. Used in R&D operations.	RFP: 771, 779
Imbiber beads	Comprised of Alkylstyrene Copolymer (solvent swellable-water insoluble) and 1% Kaolin Clay to Retard Static. Used in the Laboratory to absorb organic matrix solutions.	INL: INTEC/RWMC Laboratories
Inconel	Construction material for various parts of the hydrofluorinator (feeder tube, reactor tube, etc.) and the off-gas system (plutonium). Construction material for boats and various parts of the hydrofluorinator (enriched uranium). Reactor structural material processed in the Hot Cells.	RFP: 771, 881 INL: TRA
Iconel-X	Used as reactor material.	INL: TRA
Iodine	Used in plutonium and enriched uranium thermite reduction. Used in R&D operations. Used in the Laboratories. Melt refining contaminant	RFP: 771, 779, 881 INL: ANL-W
Iodine cyanide	Used in R&D operations.	RFP: 771, 779
Iron-chromium-yttrium alloy	Used as cladding for some of the fuel elements in the HTRE reactors.	INL: TAN

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Iron metal	Scrap iron piles were maintained for recycle. Occasionally the piles became contaminated and had to be disposed to INL. Used in the general machining shop supporting Joining Technology for the manufacture of tools, fixtures, and special order parts. Included on an excess chemical list. Used in samples irradiated in ETR and processed in Hot Cells.	RFP: 444, 551, 779 INL: TRA
Iron oxide	Component of LECO crucibles used for analysis of carbon in plutonium. Component of Amercoat 78HB used in coating studies.	RFP: 559, 771 INL: TAN
Iron powder	Used in the Laboratory.	INL: INTEC/RWMC Laboratories
Iron sulfate	Included on an excess chemical list.	RFP: 779
Isobutyl alcohol (isobutanol)	Used in the Laboratories.	INL: CPP INTEC/RWMC Laboratories

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Isopropanol	Used for personnel decontamination. Used in the Laboratories. Used for cleaning depleted uranium parts prior to assembly, welding, and brazing. Used in Plutonium Metallurgical R&D. Used in cleaning activities. Used in Nuclear Joining and Plutonium Physical Metallurgy. Used in inspection of completed parts. Component of Noxon metal polish used for cleaning beryllium parts. Component of Formula A Paint Remover used throughout RFP. Component of Ram GS-3 used as a gasket sealant. Component of Sani-Phene and Winterphene used in machining coolant to kill bacteria. Component of Spot 'N Glaze putty. Component of Kerful used in R&D operations. Component of paints, strippers, and thinners. Component of Bon Ami used in stress corrosion cracking testson depleted uranium-niobium alloy. Component of Devran 4170 Converter and Phenoline 302 Part B used in coating studies.	RFP: 122, 123, 441, 444, 559, 707, 771, 776, 777, 779, 881, 991 INL: TAN INTEC/RWMC Laboratories
Isopropanol-d_8	Used in the Laboratory.	INTEC/RWMC Laboratories
Isopropyl benzene	Used in the Laboratories.	INL: CPP
Kaolin	Component of Spot 'N Glaze Putty. Component of Amercoat 78HB and Amercoat 66 used in coating. Component of Devran 4170, and Devran 4170. Converter used in coating studies.	RFP: 881 INL: TAN
Kerosene	Used by Special Recovery in plutonium-uranium solvent extraction. Used in Metallurgical operations. Component of BP Dielectric 200 Fluid used in Electric Discharge Machining. Component of Varsol used in enriched uranium R&D. Used extensively in solvent extraction process.	RFP: 444, 771, 779, 881 INL: CPP
Ketone-based solvent	Used in the Decontamination Shop.	INL: NRF
Lanthanum metal	Used as a coating on boron nitride in metallurgy. Used in R&D operations. Used in the Laboratories.	RFP: 123, 441, 444, 559, 771, 779, 881

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Lanthanum nitrate	Used in standards in the Laboratories.	RFP: 123, 441, 559, 771, 881
Lead acetate	Used in Laboratory operations. Used in Physical Metallurgy. Used in the Laboratories.	RFP: 444, 559 INL: CPP
Lead chloride	Used in Laboratory operations. Used in Physical Metallurgy.	RFP: 444, 559
Lead fluoroborate	Used in Physical Metallurgy and plating operations.	RFP: 444
Lead metal	Used in casting by Physical Metallurgy. Used in Special Order work. Used in R&D operations. Used in Tool and Gauge Machining. Used in Rolling and Forming (routinely ½"-thick hemi-shells were formed). Used in plating and back machining operations. Used in fixed and mobile shielding. The inside of final product shipping containers was covered with lead. Shielding, lead bricks, lead sheets, lead glovebox parts, and welding rods throughout RFP. Used as shielding at the reactors and on test equipment. Component of Prestolite Lead Acid Batteries. Used in ML-1 reactor development. Used in explosive fuses tested for use in the ANP reactors. Used in reactor development. Lead casks were used as shipping containers, sometimes inside other containers. Component of items processed in the Hot Cells.	RFP: 444, 447, 771, 774, 776, 777, 881, 883, 991 INL: ANL-W, ARA, CFA, CPP, NRF, PER, TAN, TRA Off-Site shipments: Rockwell ATI Division
Lead nitrate	Used in the Laboratories.	RFP: 123, 441, 559, 771, 881
Lead oxide	Used in Laboratory operations. Used in Physical Metallurgy.	RFP: 444, 559
Lead-based paint	Lead-based paint used throughout RFP.	RFP
Lead Peroxide	Component of Prestolite Lead Acid Batteries.	RFP
Lead-plutonium alloy	Received from LRL for the recovery of the plutonium.	RFP: 771
Lead powder	Used in the Laboratories. Lead shot was used to formulate lead standards used in analyses. Used in Ceramics Manufacture. Component of Led-Plate Anti-Seize Compound.	RFP: 123, 441, 559, 705, 771, 779, 881 INL: INTEC/RWMC Laboratories

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Limestone	Component of RTV21 which may be similar to RTV20, tested in the R&D Laboratory.	RFP: 771, 779, 881
Liquefied petroleum gas	Component of DP-50 Dye Penetrant (Dubl-Chek) used for parts inspection.	RFP: 444
Lithium-aluminum hydride	Used in R&D operations.	REP: 771, 779
Lithium borate	Used in vitrification studies.	RFP: 779
Lithium carbonate	Used extensively in eutectic salt baths for heating enriched and depleted uranium prior to rolling. Component of Holden 660 Mixture used for heat-treating depleted uranium.	RFP: 444, 881, 883
Lithium chloride	Used in the Laboratory. Used in R&D operations. Component of Kathene used in the air drying system. Used in the reduction of plutonium dioxide.	RFP: 771, 776, 777, 779
Lithium fluoride	Used in the fluidized bed fluorinator in lab-scale, pilot-scale, and production-scale operations.	RFP: 771
Lithium hydride	Detected during RWMC environmental sampling. Used as shielding during reactor development.	INL: RWMC, TRA Off-Site shipments: Rockwell ATI Division
Lithium metal	Used in R&D operations. Used in part pressing, casting, and machining for special order work. Used in the fabrication of special devices for LRL. Manufacture of lithium foil for use in the Neutrometer for use by other AEC facilities. Present in samples processed in Hot Cells.	RFP: 123, 444, 776, 777, 779, 881 INL: TRA
Lithium oxide	Component in lithium batteries, possibly buried in 742-sludge and/or in the debris.	RFP
Lithium perchlorate	Used in Chemistry Technology.	RFP: 779
Lithium salts, not specific	Used in fabrication from 1961 to 1963.	RFP: 444
Lithium tetraborate fusion	Used in the Laboratory.	INL: INTEC/RWMC Laboratories
Lutetium oxide	Included in an excess chemical list.	RFP: 779
Lutetium powder	Used in the Ceramics Laboratory. Included in an excess chemical list. Used in the Laboratory.	RFP: 705, 779 INL: INTEC/RWMC Laboratories

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Magnesia Cement	Used in the plutonium buildings as an absorbent in waste containers. Used in 744-sludge.	RFP: 774, RFP
Magnesium aluminum silicate	Component of Met-L-X powder used as a fire extinguishing agent in the Hot Cells.	INL: TRA
Magnesium carbonate	Component of the eutectic salt mixture used to heat enriched and depleted uranium prior to rolling and forming.	RFP: 444, 881, 883
Magnesium chloride	Used in R&D operations. Component of the salt used in molten salt extraction and electrorefining.	RFP: 771, 776, 779
Magnesium fluoride	Used in reduction of plutonium dioxide.	RFP: 771, 779
Magnesium metal	Used in Physical Metallurgy. Used in R&D operations. Used in thermite reduction. Used in Evaporative Separations. Used in Pyrochemical operations. Used in destructive testing of reactor components. Used to simulate voids in the SPERT I reactor.	RFP: 444, 771, 779 INL: PER
Magnesium oxide	Used as a heat-sink material and in crucibles for thermite reduction and early MSE and in Electrorefining. Used in crucibles in the enriched uranium foundry (until 1959). Used in ceramic liners. Used to coat inside surfaces of the bomb reactor vessel for enriched uranium. Component of magnesia cement used throughout RFP as an absorbent. Component of Portland cement used throughout RFP as an absorbent. Used for fire suppression in the plutonium areas. Melt refining furnace insulation. Used as an insulation in reactors. Used for fire suppression in the SDA	RFP: 771, 776, 779, 881 INL: ANL-W, PER, SDA, TRA
Magnesium perchlorate	Used in the solution for the Laboratory scrubber.	RFP: 771
Magnesium powder	Used in R&D operations. Used in thermite reduction. Used in the Laboratory.	RFP: 771 INL: INTEC/RWMC Laboratories

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Magnesium silicate	Component of Zyglo ZP9 and Glyptal Alkyd used in NDT. Component of Spot 'N Glaze Putty. Component of Bakelite used to mount metallorgraphic samples. Component of Amercoat 78HB, Amercoat 66, and Devran 232 Converter used in coating studies.	RFP: 444, 776, 881 INL: TAN
Magnesium stearate	Component of Met-L-X powder used as a fire extinguishing agent in the Hot Cells.	INL: TRA
Magnesium sulfate	Used as a reagent in First and Second Stage Precipitation processes. Used in R&D operations.	RFP: 771, 774, 779
Magnesium zirconate	Used in Metallurgical Operations, possibly as a crucible coating material.	RFP: 444, 881
Magnesium-aluminum-zinc-manganese alloy	Used for plutonium conveyor pendants; the Process Chemistry R&D group performed thermogravimetric tests and the Equipment and Material Test Laboratory R&D group performed burn tests on some of the pendants.	RFP: 707, 771, 776, 779
Magnesium-lead alloy	Used in R&D operations. Used in the reduction of plutonium dioxide.	RFP: 779
Magnesium-zinc alloy	Used in R&D operations for the recovery of plutonium and americium from MSE and DOR salt residues. Used in the reduction of plutonium dioxide. Liquid metal reclamation of melt refining skulls.	RFP: 771, 779 INL: ANL-W
Magnesocene, sublimed	Used in R&D operations, possibly as a catalyst.	RFP: 771, 779
Magnetite concrete	Material of construction of the ETR cubicles	INL: TRA
Maleic anhydride	Used in the Laboratories.	INL: CPP
Malonic acid	Used in beryllium metallurgy as an etchant. Used in Enriched Uranium Recovery precipitation operations.	RFP: 444, 881
Medium aliphatic petroleum solvent	Component of Aqua-Sol used in R&D operations.	RFP: 779
Mercuric chloride	Source document does not include usage or building(s) where used.	RFP
Mercuric oxide	Source document does not include usage or building(s) where used.	RFP

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Mercury metal	Used in the Laboratories. Used to determine accurate volumes. Spills from unknown sources in various buildings were cleaned up. Used in Physical Metallurgy. Used in Joining. Used in R&D testing of MSE extractor pumps. Some material containing mercury was heated in the furnace to produce mercury vapor – no additional information. Used in plant instruments such as thermometers and barometers, in plant machinery, mercury batteries, mercury switches, welder contacts, mercury vapor lights, some paints, and in experimental apparatus. Used in the processing of simulated fuel elements and natural uranium extraction and in the calciner. Found in underslab sampling. Spills from HTRE units when in storage. Used in reactor development.	RFP: 123, 125, 334, 441, 444, 551, 559, 771, 779, 881 INL: CFA, CPP, TAN INTEC/RWMC Laboratories Off-Site shipments: Rockwell ATI Division
Mercury nitrate	Used in Laboratory operations. Used in the recovery of natural uranium from simulated fuel elements. Used as a catalyst.	RFP: 559 INL: CFA, CPP
Mercury vapor	Some material containing mercury was heated in the furnace to produce mercury vapor – no additional information. Mercury vapor, sodium vapor, and fluorescent lights were used throughout RFP. Mercury rectifiers were used at RFP.	RFP: 881, RFP
Mercury/Thallium	Source document does not include usage or building(s) where used.	
Metalphthalein	Used in the Laboratory as an indicator.	INL: INTEC/RWMC Laboratories
Methachlor	Used to wipe down fuel casks.	INL: CPP

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Methanol	Used as a solvent in the Laboratories. Used in beryllium laboratory analysis. Used in Joining and Coatings. Used in the Metallurgical Laboratory. Used R&D operations. Used in Product Physical Chemistry. Used to clean glovebox windows throughout RFP. Common paint and thinner constituent. Component of Loctitie Pipe Sealant. Used in welding qualification. Used as a solvent. Component of Facsimilike tested in the R&D Laboratory.	RFP: 123, 441, 444, 559, 771, 779, 881 INL: ARA, CPP INTEC/RWMC Laboratories
Methyl 2-cyanoacrylate	Component of Eastman 910 Adhesive used in NDT.	RFP: 444, 883
Methyl acetoacetate	Used as a solvent in Physical Metallurgy.	RFP: 991
Methylene diphenyl 4, 4'-diisocyanate	Component of Chemglaze Urethane Aluminum Z652 used in coating studies.	INL: TAN
Methyl ethyl ketone	Used in the Metallurgical Laboratory as a solvent. Used in Physical Metallurgy and Nuclear Joining. Common constituent in paint and paint thinner used throughout RFP. Component of Amercoat 33 paint. Component of Glyptal 1511N Thinner and Glyptal Red Insulating Enamel, used in NDT. Component of Velcro adhesive. Used in the Laboratories. Used as a solvent. Component of Devran 4170 and Plasite 7155 used in coating studies.	RFP: 444, 776, 779, 881 INL: CPP, PER, TAN INTEC/RWMC Laboratories
Methyl iodide	Used in the Laboratories.	INL: CPP
Methyl isobutyl ketone	Used in the Metallurgical Laboratory as a solvent. Common constituent in paint and paint thinner used throughout RFP. Component of Amercoat 33 paint. Used in solvent extraction for aluminum-clad fuels and zirconium-clad fuels. Used in the Laboratories as a solvent. Used in Neptunium Recovery operations. Component of Amercoat 66, Devran 4170, and Phenoline 302 Part B used in coating studies. Used in spent fuel processing.	RFP: 444 INL: ARA, CPP, TAN

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Methyl methacrylate	Used in the Laboratories. Component of Facsimilike, tested in the R&D Laboratory.	RFP: 771, 779, 881 INL: CPP
Methyl n-Amyl ketone	Component of Amercoat 78HB, Amercoat 66, and Chemfast 547 used in coating studies.	INL: TAN
Methyl naphthalene	Detected during environmental sampling.	INL: ARA
Methyl orange	Used in the Laboratories as a pH indicator. Used for testing cooling tower make-up water.	RFP: 441, 881 INL: TRA INTEC/RWMC Laboratories
Methyl salicylate	Component of Sani-Phene and Winterphene used to kill bacteria in coolant.	RFP: 881
Methylene bromide	Used in the float-sink process for plutonium.	RFP: 776
Methylene chloride	Used in the Laboratory for sample preparation and analysis. Used in degreasing depleted uranium after quenching. Used in Physical Metallurgy and Nuclear Joining. Used in R&D operations. Component of paint and strippers used throughout RFP. Component of Ram GS-3 used as a gasket sealant Component of Formula A Paint Remover. Component of Magnaglo and Dubl-Chek. Component of Cee Bee solvent, used for parts cleaning. Component of Snopake®, used for an unknown purpose. Found in sampling at the solvent burner site. Used in the Laboratories. Used as a degreasing solvent. Component of Turco Decon Solvent, tested by the R&D Laboratory.	RFP: 123, 441, 444, 559, 771, 779, 881 INL: CPP, TRA INTEC/RWMC Laboratories
Methyltriacetoxysilane	Component of RTV20.01 which may be similar to RTV20, tested in the R&D Laboratory	RFP: 771, 779, 881
Mica	Component of Amercoat 33 paint used throughout RFP. Component of Loctite Pipe Sealant. Component of Devran 232 Converter, used in coating studies.	RFP: 444 INL: TAN
Mineral oil	Component of Cimcool used as a depleted uranium machining coolant. Used as shielding in Hot Cell windows.	RFP: 444 INL: TRA
Modified aliphatic polyamine	Component of Amercoat 78HB Cure used in coating studies.	INL: TAN
Molybdenum carbide	Used in the ceramic manufacture.	RFP: 705

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Molybdenum metal	Used in Physical Metallurgy and in Alloying. Used in the Ceramics Laboratory. Used in the Coatings facility. Used as a fuel alloy during reactor development. Component of samples irradiated in ETR.	RFP: 444, 705, 779 INL: TRA Off-Site shipments: Rockwell ATI Division
Molybdenum powder	Used in the Ceramics Laboratory. Used in the Coatings facility. Included on an excess chemical list.	RFP: 705, 779
Molybdenum sulfide	Component of Molykote and Moly-Dee. Component of Lubri Bond A used in Shipping and Receiving.	RFP: 444, 991
Monel	Used in production of parts. Construction material of valves, fitting, lines, filter boats, components of the hydrofluorinator, and the hydrofluorinator offgas system. Used in the Fluidized-Bed Fluorinator. Used in pit components in Assembly Operations. Used in filter boats in the conversion and reduction steps of Enriched Uranium Recovery operations.	RFP: 444, 771, 777, 881
Monocyclic terpene	Component of Aqua-Sol used in R&D operations.	RFP: 779
mono-Heptadecylphosphoric acid	Used in enriched uranium R&D operations.	RFP: 881
Morpholine	Used as an inhibitor in Chlorothene. Used in the operation of the BORAX III, IV, and V reactors.	RFP: 771, 903 Pad INL: ANL-W
n-Methylmorpholine	Used an inhibitor in perchloroethylene.	RFP: 334, 441, 444, 559, 771, 776/777, 779, 881, 883, 886, 991 INL: CPP, TAN
Naphtha	Component of Formula A Paint Remover used throughout RFP. Component of Amercoat 78HB, Amercoat 78HB Cure, and Chemfast 547, used in coating studies.	RFP INL: TAN

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Naphthalene	Component of Formula A Paint Remover used throughout RFP. Component of Varsol 1 solvent. Used in the Laboratories. Detected during environmental sampling. Component of Zyglo Penetrex ZL 22A which may be similar to Zyglo 22 tested in the R&D Laboratory.	RFP: 771, 779, 881 INL: ARA, CPP, TAN
Naphthalene-d_8	Used in the Laboratory in stock internal standard solutions.	INL: INTEC/RWMC
Naphthenic acid, crude	Component of Kerful used in R&D operations.	RFP: 779
Naphthenic mineral oil	Component of Yellow 77 Wire Pulling Lubricant.	RFP: 779
Natural uranium	Used in simulated fuel elements which were processed for natural uranium recovery. Used in fuel elements tested in the MTR and processed in the Hot Cells.	INL: CFA, TRA
Neoprene	Inadvertently used as gasket material for a hydrogen peroxide tank that was subsequently destroyed. Used in gloves used in the float-sink process by NDT. Possibly used as gasket material in other situations.	RFP: 771, 776
Neptunium nitrate	Used in the Laboratory.	RFP: 123, 441, 881
n-Ethyl acetate	Used in R&D operations. Used in Physical Metallurgy. Component of Spot 'N Glaze Putty. Detected during environmental sampling. Used as a solvent in the Laboratories.	RFP: 771, 779, 881, 991 INL: ARA, CPP
Nichrome	Mixed with enriched uranium oxide in fuel elements in the fuel cartridges and inserts for the HTRE reactors; also used as cladding.	INL: TAN
Nickel carbonyl	Uncontained gas, used for nickel plating.	RFP: 771, 776, 777, 779
Nickel chloride	Used in parts plating. Used in Laboratory operations. Used by the Technical Staff to electroplate and electroless plate thorium.	RFP: 444, 559, 881

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Nickel metal	Used to complex DTPA during analyses to determine the rate of excretion. Used in parts casting, alloying, electroplating, and plating. Used in Special Order work. Used in R&D operations. Used in rods and filters in the Fluidized-Bed Fluorinator. Used in the Laboratories. Used in the reactor at SPERT III.	RFP: 444, 771, 776, 777, 779, 881 INL: PER
Nickel nitrate	Used in Laboratory operations.	RFP: 559
Nickel oxide	Used in Laboratory operations.	RFP: 559
Nickel powder	Used in the Laboratory. Used in the Ceramics Laboratory.	RFP: 123, 559, 705 INL: INTEC/RWMC Laboratories
Nickel sulfamate	Used by the Technical Staff to electroplate thorium.	RFP: 444 or 881
Nickel sulfate	Used in Chemistry Technology. Component of Enthone Enplate nickel plating solution used to coat beryllium shapes. Component of Nickel Tungsten Plating Solution and Nickel Tungsten Solution used for plating.	RFP: 444, 771, 776, 777, 779
Niobium boride	Hot-pressed into containers/crucibles.	RFP: 705
Niobium carbide	Used in ceramics manufacture. Component of samples irradiated in the ETR.	RFP: 705 INL: TRA
Niobium metal	Used in Physical Metallurgy. Alloyed with depleted uranium and zirconium. Component of samples irradiated in the ETR.	RFP: 444, 447 INL: TRA
Niobium nitride	Component of samples irradiated in the ETR.	INL: TRA
Niobium oxide	Used in the Coatings facility.	RFP: 779
Nitradd activator (fluoride salts in acetic acid)	Used in stainless steel operations.	RFP: 881
Nitrate Salts	Collected on the filter media of CWS/HEPA glovebox and plenum filters. Added to the enriched uranium solvent extraction system to increase the specific gravity of the solution.	RFP: 771, 881

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Nitric acid	Used in Laboratory analysis, including analyses performed on autopsied and bioassay material. Used in Manufacturing Technology. Used as an etchant. Used in depleted uranium chip processing, in leaching (sludge, graphite, and ash), and in pickling beryllium-copper alloy parts prior to electroplating. Used in neptunium preparation. Used in plutonium recovery operations in: dissolution, anion exchange, leaching, in the calciner scrubber, and in the recovery of plutonium and americium from chloride salts. Used in R&D operations. Used in Chemistry Technology, in Plutonium Physical Metallurgy, and in the Coatings facility. Used in beryllium etching R&D. Used in Enriched Uranium Recovery operations, including: dissolution, in OY leach operations, and to clean out coolant lines during inventory. Used in cleaning and degreasing. Used to pickle thorium. Used in electropolishing throughout RFP. Used in clean out coolant lines during inventory. Component of Ox-Out used for cleaning. Component of Tuckers Etch used in beryllium-aluminum metallurgy. Component of Derustit SS-3 used in depleted uranium and beryllium R&D operations. Used in reactor operation. Used in ML-1 reactor development. Used in the Hot Cell and Laboratories. Used in the recovery of natural uranium from simulated fuel elements. Used in dissolution of fuel elements, graphite fuel element ash (ROVER), and stainless steel assemblies. Used in Neptunium Recovery operations at CPP. Used in combination with other chemicals and products for decontamination. Fed to the calciner at the Waste Calcining Facility to clean the lines. Used by Chemical Engineering. Used in the Decontamination room, in the Radiochemistry Laboratory, and as part of the Demineralizer wash and flush. Used in reactor surface cleaning. Deuterated nitric acid used in the heavy water system. Used in metallographic preparation.	RFP: 123, 331, 441, 444, 447, 559, 771, 776, 779, 881, 883 INL: ANL-W, ARA, CFA, CPP, NRF, PER, TAN, TRA INTEC/RWMC Laboratories Trans-shipped: CSMRF

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Nitric acid-Nitradd solution	Used in stainless steel operations.	RFP: 881
Nitrobenzene	Used in the Laboratories.	RFP: 123, 559, 771, 881 INL: CPP INTEC/RWMC Laboratories
Nitrobenzene-d_5	Used in the Laboratory in surrogate solutions.	INL: INTEC/RWMC Laboratories
Nitrocellulose	Used in R&D operations. Component of Dykem Steel Blue Dye Penetrant and Dychem Dye Penetrant used in parts inspection. Component of Spot 'N Glaze Putty.	RFP: 444, 771, 779, 881
Nitroglycerin	Component of dynamite used as a poison propellant in tests for the HTRE reactors.	INL: TAN
Nitromethane	Used as a solvent in the Metallurgical Laboratory. Component of Chlorothene VG used in Product R&D and in Chemistry R&D. Component of Dowclene EC in Product R&D. Included on an inventory.	RFP: 444, 771
Non-hazardous resin	Component of Nicrobraz Cement 500 tested in the R&D Laboratory.	RFP: 771, 779, 881
Nonylphenoxy polyethoxy ethanol	Component of Cimcool used as a coolant in depleted uranium machining.	RFP: 444
Nonylphenoxypoly (ethyleneoxy) ethanol	Component of Igepal used in "KW" detergent.	RFP
n-Propoxypropanol	Component of Devran 669 used in coating studies.	INL: TAN
o-Benzyl p-chlorophenol	Component of Sani-Phene and Winterphene, used to kill bacteria in machining coolant.	RFP: 881
Octamethylcyclotetra-siloxane	Component of Silastic E-RTV Rubber Base used in NDT.	RFP: 881
Octanol	Used in Physical Metallurgy. Component of Loctite Pipe Sealant.	RFP: 444, 991
Octyl diphenyl phosphate	Component of Pydraul 312 used in coolant flammability studies.	RFP: 779
Oils, absorbed	74A/743-sludge contains large quantities of absorbed oil-coolant mixture.	RFP: 774
Oil-Dri®	Used to absorb liquids at RFP. Added to waste during VE in the drum packaging station.	RFP INL:SDA

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Oils (not specific)	Used in plutonium heat treating baths for R&D. Component of Halocarbon 200, which may be similar to Halocarbon 208 used in reactivity tests with burning plutonium. Waste oil sludge in drums.	RFP: 779 INL: NRF
Oils, PCB Pentachlorobiphenyl	Included on an inventory list. Non-flammable hydraulic oil put into use after the 1957 fire. Used in at least 2 Clearing presses on the "A"-side; PCBs not flushed from these units until the early 1980s. Another press did not have the PCB oil flushed from it until the 1990s. Identified as a tentatively identified compound (TIC) in greater than 25% of the solid samples in the ID-SDA-SOIL waste stream.	RFP: 444, 776, 883
Organic acids, not specific	Used in the Laboratory.	RFP: 123, 441, 559, 771, 881
o-phenanthroline	Used in the Laboratories as a pH indicator to determine iron content.	RFP: 123, 441, 559, 771, 881
o-Toluidine	Used in the Laboratories.	INL: CPP
Oxalic acid	Used in the Laboratories. Used in oxalate precipitation for americium recovery. Used in precipitation for neptunium and Cm-244 recovery. Used in R&D operations. Used in Metallography operations for etching. Used in Nuclear Joining, in auger spectroscopy, and in the Coating facility. Component of Noxon metal polish used for cleaning beryllium parts. Used in combination with other chemicals and products for decontamination. Used in metallographic preparation.	RFP: 123, 441, 444, 771, 779, 881, 991 INL: CPP, TAN INTEC/RWMC Laboratories
p-(methylamino) phenol sulfate	Component of Kodak Developer used in NDT operations.	RFP: 444, 883
Paint	Contaminated paint was stripped off the floor and off equipment and either sent to the incinerator or disposed as combustible waste. Some equipment was painted with Hollingshead 333 "Cocoon" (50% acetone) prior to equipment removal and disposal to fix any contamination.	RFP: 771, RFP
Palladium metal	Used in plutonium Metallurgical R&D. Used in the Coatings facility. Source document does not specify use.	RFP: 771, 779 INL

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Paraffin-base petroleum oil	Component of Led-Plate Anti Seize Compound.	RFP: 779
Paraffin wax	Present in items processed in the Hot Cells.	INL: TRA
Paraffin wax, Technical grade	Used to construct hand phantoms for calibrating the lung counter at initial use. Component of Yellow 77 Wire Pulling Lubricant.	RFP: 122, 779
Paraffin-kerosene	Used as a lubricant in polishing metallurgical samples in the Plutonium Metallographic Laboratory.	RFP: 771
Paraffin wax, Hydrotreated and/or clay-treated	Component of Technical Grade Paraffin Wax, used to construct phantoms for calibrating the lung counter at initial use and a component of Yellow 77 Wire Pulling Lubricant.	RFP: 122, 779
Paraformaldehyde	Source document does not indicate use.	INL: ANL-W
Paraldehyde	Used in the Laboratories.	INL: CPP
Parylene®	Used in Product Integrity and Test Measurements.	RFP: 779
p-Chloroaniline	Used in the Laboratories.	INL: CPP
Pentachlorophenol	Potentially present in organic setups. Used in the Laboratory in acid matrix spike solutions.	RFP: 774 INL: INTEC/RWMC Laboratories
Perchloric acid	Used in the Laboratory as a reagent. Used in R&D Operations. Used in Chemistry Technology. Used in the Radiochemistry Laboratory. Present in Trans-shipped waste.	RFP: 123, 441, 771, 779 INL: NRF Trans-shipped: CSMRF

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Perchloroethylene (Tetrachloroethylene)	Used as a cleaning and degreasing solvent (enriched and depleted uranium). Used to recondition coolant lines and clean floors (enriched uranium). Used in the chip-cleaning centrifuges. Used to ultrasonically clean beryllium-copper alloy parts prior to electroplating. Used in Laboratory operations. Used in plutonium chip degreasing studies. Substituted for trichloroethylene for approximately four months in 1966; usage stopped due to gummy residue left in gloveboxes. Component of Dowclene EC and CSM-320 used in Product R&D. Component of Snopake® used for an unknown purpose. Used in the Laboratories as a solvent. Found in under-slab sampling.	RFP: 334, 441, 444, 559, 771, 776, 777, 779, 881, 883, 886, 991 INL: CPP, TAN INTEC/RWMC Laboratories
Perfluoro compounds	Component of FC-43, tested in the R&D Laboratory.	RFP: 771, 779, 881
Perfume	Component of Yellow 77 Wire Pulling Lubricant.	RFP: 779
Perylene-d_{12}	Used in the Laboratory in stock internal standard solutions.	INL: INTEC/RWMC Laboratories
Petrolatum	Component of Yellow 77 Wire Pulling Lubricant. Component of Stay-Clean Soldering Flux used in R&D operations.	RFP: 779
Petroleum grease	Component of Led-Plate Anti-Seize Compound.	RFP: 779
Petroleum naptha	Component of Turco Decon Solvent, tested by the R&D Laboratory.	RFP: 771, 779, 881
Petroleum sulfonate	Component of Amocool Soluble Oil tested in the R&D Laboratory.	RFP: 771, 779, 881
Petroleum sulfonate soluble oil base	Component of Texaco Soluble D metal working oil.	RFP: 881
Phenanthrene	Found during environmental sampling at ARA. No indication that this was included in any of the waste sent to the RWMC. Source document does not specify use.	INL: ARA
Phenanthrene-d_{10}	Used in the Laboratory in stock internal standard Solutions.	INL: INTEC/RWMC Laboratories
Phenetole	Used as a solvent in the Metallurgical Laboratory.	RFP: 444

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Phenol	Used as a solvent in the Metallurgical Laboratory. Component of Cee Bee solvent used for parts cleaning. Component of Bakelite used to mount metallographic samples. Used in the Laboratories. Component of Amercoat 78HB Cure and Phenoline 302 Part B, used in coating studies.	RFP: 444 INL: CPP, TAN INTEC/RWMC Laboratories
Phenol-d_6	Used in the Laboratroy in surrogates and in acid matrix surrogate spike solutions.	INL: INTEC/RWMC Laboratories
Phenol novolac	Component of Phenoline 302 Part A used in coating studies.	INL: TAN
Phenolphthalein	Used in the Laboratory	INL: INTEC/RWMC Laboratories
Phenyl ether	Used as a solvent in the Metallurgical Laboratory.	RFP: 444
Phenylacetaldehyde	Used as a solvent in the Metallurgical Laboratory.	RFP: 444
Phenylethylethanolamine	Component of Eastman 910 Surface Activator used NDT.	RFP: 444, 883
Phenylmethylsiloxane	Component of Dykem Dye Penetrant used by NDT.	RFP: 444
Phosphoric acid	Used in Physical Metallurgy as an electrolyte in etching and plating. Used in sample preparation in the Metallurgical Laboratory. Used in Plutonium Metallurgical R&D. Used in R&D operations, in Nuclear Joining, and in Coating operations. Used in beryllium etching R&D. Used in Enriched Uranium Recovery operations, for parts cleaning, and for etching. Used in sample preparation in the Laboratory. Used for parts cleaning. Component of Ospho Metal Treatment and Ospho Rust Dissolver used in Metallurgical operations. Component of Lime-A-Way used in R&D operations. Used in the operation of the BORAX III, IV, and V reactors. Used in ML-1 reactor development.	RFP: 444, 771, 779, 881, 883 INL: ANL-W, ARA INTEC/RWMC Laboratories
Phosphorus pentoxide	Used in R&D operations.	RFP: 771, 779
Phthalic anhydride	Used in the Laboratories.	INL: CPP

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Picric Acid	An INL employee stated that he had disposed of radiological contaminated glass bottles of crystalline picric acid under liquid in the burial ground during his early days working at the site.	RWMC
Pine oil	Component of Oakite Penetrant, used in NDT.	RFP: 444, 447
Platinized titanium	Used as anode material in gold electroplating.	RFP: 444
Platinum metal	Used in various tools and items used in peroxide precipitation and hydrofluorination. Used in the Coatings facility. Used in the Laboratories as electrodes and crucibles. Used in Process Chemistry Technology.	RFP: 123, 441, 559, 771, 779, 881
Platinum-iridium alloy	Used to line the reactor tubes of the hydrofluorinators.	RFP: 771
Plutonium-aluminum alloy	Used in Molten Salt Extraction salt cleanup experiments.	RFP: 779
Plutonium-beryllium	Neutron source used for Advance Test Reactor Critical start-up.	INL: TRA
Plutonium carbide	Component of samples irradiated in the ETR.	INL: TRA
Plutonium-gallium alloy	The Laboratories tested ingots for purity. Used in delta plutonium in plutonium fabrication operations. Processed through Recovery Operations. Processed through waste treatment operations. Used in R&D operations. Used in the Pyrochemical Support Laboratory.	RFP: 559, 707, 771, 774, 776, 777, 779
Plutonium hydride	Used to recover plutonium in an R&D scale process. Used to remove plutonium in the form of plutonium hydride from various items. Used to convert high purity plutonium metal to high bulk density plutonium dioxide. Hydride was calcined or burned to the oxide when hydriding was completed.	RFP: 771, 779
Plutonium nitride	The "black salt" formed during the cleanup of MSE salts using magnesium-zinc alloy.	RFP: 779
Plutonium tetrafluoride	Produced in the Hydrofluorinator and in the Fluid-Bed Fluorinator and processed in Thermite Reduction and in the Fluoride Volatility process (from plutonium hexafluoride).	RFP: 771
Polyamide resin	Component of Devran 232 Converter and Devran 4170 Converter used in coating studies.	INL: TAN
Polyamine adduct	Component of Phenoline 302 Part B used in coating studies.	INL: TAN
Polybutene	Component of BP Dielectric 200 fluid used in Electric Discharge Machining.	RFP: 444

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Polychlorinated biphenyls Pentachlorobiphenyl	Used throughout RFP in various items including: transformer and hydraulic oils, hydraulic and transformer oils cleaned up after spills, PCB-containing fluorescent light ballasts, circuit breakers, switch gear, synthetic rubbers, plastics, paints, varnishes, printing ink, paper, paper adhesives, and asphalt. Used at the BORAX III, IV, and V reactors. May be present in waste from the ECF. Found in under-slab sampling. Identified as a tentatively compound (TIC) in greater than 25% of the soild samples in the ID-SDA-SOIL waste stream.	RFP INL: ANL-W, NRF, TAN
Polychlorotrifluoroethylene	Component of Halocarbon 200, which may be similar to Halocarbon 208 used in reactivity tests with burning plutonium. Component of Kel-F polymer, used as a coating on steel in tests in the R&D Laboratory.	RFP: 771, 779, 881
Polydimethylsiloxane	Component of Dow Corning 510 Fluid, tested in the R&D Laboratory. Component of RTV20.01 which may be similar to RTV20, tested in the R&D Laboratory.	RFP: 771, 779, 881
Polyethylene glycol ester	Component of Yellow 77 Wire Pulling Lubricant.	RFP: 779
Polyethylenepoly-amines	Component of Thermofit S-1006 Adhesive Part B tested in the R&D Laboratory.	RFP: 771, 779, 881
Polyglycol	Component of Dow Tordon used as an herbicide. Should not be in the waste stream.	RFP
Polyglycol dimethlyacrylate	Component of Loctite Pipe Sealant.	RFP: 444
Polyisocyanate adduct	Component of Amercoat 450HS paint.	RFP
Polyoxyalkylene glycol	Component of Johnson's TL-131 used in Metallurgical Operations.	RFP: 444
Polyoxyethylene	Component of Triple C Spray Cleaner used for cleaning drums during shipping and receiving and used for an unknown purpose.	RFP: 779, 991
Polyoxyethylene alkyl phenol adduct	Component of Turco 4215 used as a plating bath rinsate.	RFP: 444
Polyoxyethylene monostearate	Component of GE Antifoam 60 used in peroxide precipitation.	RFP: 771
Polyoxyethylene phenol condensate	Component of Turco 4324 used in R&D operations.	RFP: 779
Polyvinyl pyrrolidone	Component of TISAB used in the Laboratory.	RFP: 771
Portland cement	Used as an absorbent throughout RFP. Used in 741-, 742-, and 744-sludges.	RFP: 774, RFP

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Potassium 2-ethylhexanoate	Component of Cat® ELC (Extended Life Coolant) Premix 50/50 and Cat® ELC (Extended Life Coolant) Premix 60/40 spilled in the SDA and cleaned up during excavation activities.	INL: SDA
Potassium bromide	Used in the Laboratory.	RFP: 881
Potassium carbonate	Used extensively in eutectic salt bath to heat enriched and depleted uranium prior to rolling.	RFP: 444, 881, 883
Potassium chloride	Component of the salt used in molten salt extraction and electrorefining R&D operations. Used in R&D operations. Used in electrocoating with uranium oxide. Used extensively in eutectic salt baths prior to rolling enriched and depleted uranium. Used in the operation of the BORAX III, IV, and V reactors.	RFP: 444, 771, 776, 779, 881, 883 INL: ANL-W
Potassium chromate	Used in Physical Metallurgy. Component of Turco 4502 used for decontamination. Used in the decontamination solution used in the Hot Cell.	RFP: 779 INL: CPP, TAN
Potassium cyanide	Used in copper strike operations when electroplating beryllium-copper alloy. Disposal of "KCN" in 742-sludge drums. Listed on a Warehouse inventory, no indication as to the building using the chemical. Source document mentions use in a heat-treating process in the Precision Shop. Used in the Laboratories.	RFP: 444, 774 INL: CPP
Potassium dichromate	Used in Physical Metallurgy. Component of Zyglo Aqueous Developer ZP-5 used in NDT.	RFP: 444, 779
Potassium dihydrogen phosphate	Used in the Laboratory.	RFP: 881
Potassium ferricyanide	On an inventory list, no building or use identified. Component of Murakamis reagent.	RFP INL: TAN
Potassium fluoride	Source document does not specify use.	RFP: 771
Potassium hydrogen phthalate	Used in the Laboratory in standards.	INL: INTEC/RWMC Laboratories

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Potassium hydroxide	Used in the copper strike performed during electroplating operations with beryllium-copper alloy parts. Used in the hydrofluorinator and incinerator scrubbers, in the off-gas scrubber, and in the scrubber for acid baths. Used in the seal liquid for the vacuum pumps. Used in KOH Precipitation in the americium recovery process. Used in R&D operations. Used in ion exchange. Used to neutralize acids. Used in electrocoating with uranium oxide. Used in the Laboratories. Used in the enriched uranium off-gas scrubber. Component of Kodak Developer and Kodak Industrex Developer Replenisher used in NDT operations. Used in the operation of the BORAX III, IV, and V reactors. Component of Turco 4502 used for decontamination. Used in the Radiochemistry Laboratory. Component of Murakamis reagent. Component of the decontamination solution used in the Hot Cell.	RFP: 444, 771, 774, 779, 881, 883 INL: ANL-W, CPP, NRF, TAN
Potassium iodate	Used in plutonium and neptunium thermite reduction as part of the pyrotechnic initiators. Used in chemical initiator studies. Used in the Laboratory.	RFP: 771, 779, 881 INL: INTEC/RWMC Laboratories
Potassium iodide	Used in the reduction of xenon trioxide.	INL: ANL-W
Potassium nitrate	Used in the Laboratory.	RFP: 881
Potassium permanganate	Used for personnel decontamination. Used in the Laboratory as a reagent. Component of Kodak Developer System Cleaner and Neutralizer. Included on an excess chemical list. Used in the operation of the BORAX III, IV, and V reactors. Component of Turco 4502 used for decontamination. Used in the decontamination solution used in the reactors and Hot Cells.	RFP: 122, 123, 441, 444, 559, 771, 779, 881 INL: ANL-W, CPP, TAN, TRA INTEC/RWMC Laboatories
Potassium persulfate	Used in the analytical Laboratory. Used in metallographic preparation.	RFP: 881 INL: TAN

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Potassium p-toluene sulfonate	Component of Oakite Aluminum Cleaner NST used to clean beryllium parts.	RFP: 444, 447
Potassium salt 4-amino-3,5,6-trichloropicolinic acid	Component of Dow Tordon used as an herbicide. Should not be in the waste stream.	RFP
Potassium sulfite	Component of Kodak Industrex Developer Replenisher used in NDT.	RFP: 444, 883
Potassium vanadate	Component of Nalco 2826 used in the process cooling water systems.	RFP: 444, 447, 991
Powdered iron	Used in Enriched Uranium Recovery R&D operations.	RFP: 881
Propane-1, 2-diol carbonate	Used in R&D operations.	RFP: 771, 779
Propylamine	Used as a solvent in the Metallurgical Laboratory.	RFP: 444
Propylene carbonate	Used in R&D operations.	RFP: 771, 779
Propylene glycol methyl ether	Component of Amercoat 78HB Cure and Devran 669 used in coating studies.	INL: TAN
Pyrene	Source document did not specify use.	INL: ARA
Pyridine	Used as a solvent in the Metallurgical Laboratory. Used in R&D operations. Used as a solvent in the Laboratories.	RFP: 444, 559, 771, 779 INL: CPP INTEC/RWMC Laboratories
Quartz	Component of Devran 232 Converter used in coating studies.	INL: TAN
Quartz silica	Component of Oil-Dri® used to absorb liquids.	RFP
Quaterphenyl	Component of Santowax used as a coolant in the OMRE reactor.	INL: OMRE
Radioactive Lanthanum	Processed.	INL: CPP
Red Iron Oxide	Component of RTV21 which may be similar to RTV20, tested in the R&D Laboratory.	RFP: 771, 779, 881
Resorcinol	Used in the Laboratories.	INL: CPP
Rheological additive	Component of Devran 4170 Converter used in coating studies.	INL: TAN
Rhodium metal	Used in the Coatings facility. Component of samples irradiated in ETR.	RFP: 779 INL: TRA
Salicylic acid	Used in the Laboratory.	RFP: 881
Samarium metal	Used as a neutron poison in the ML-1 reactor.	INL: ARA
Sand, organic-free	Used in the Laboratory.	INL: INTEC/RWMC Laboratories
Saran	Component of Met-L-X powder used as a fire extinguishing agent in the Hot Cells	INL: TRA

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
sec-Butylbenzene	Component of Dowtherm J used as a heat transfer fluid.	INL: TRA
Selenium dioxide	Used in the Laboratories.	INL: CPP
Selenium metal	Used in the sputtering chamber.	RFP: 991
Selenium powder	Used in the Laboratory.	INL: INTEC/RWMC Laboratories
Shell Vitrea oil	Use began in 1958. Added to the plutonium machining process to enable more rapid machining with less chance of spontaneous combustion. Switched to Texaco Regal A due to cost around 1960. Used in enriched uranium machining until around 1960 when Texaco Regal A began use.	RFP: 776, 881
Silica, crystalline	Component of Bon Ami used as a detergent to clean beryllium-copper alloy parts prior to electroplating. Component of Amercoat 78HB, Devran 669, Devran 332, and Phenoline 302 Part A all used in coating studies.	RFP: 444 INL: TAN
Silica aerogel	In B774, component of Santocel Grade 54 which replaced Cab-O-Sil in the Grease Plant operations. Santocel was eventually replaced by Micro-Cel E.	RFP: 774
Silica gel	Used in absorbers.	INL: CPP
Silicon carbide	Used as an insulating powder at the FCF at EBR-II. Component of Scotch Brite Pads, tested in the R&D Laboratory.	RFP: 771, 779, 881 INL: ANL-W
Silicon dioxide	Used in grit blasting. Formed in the off-gas system for the dissolution process from processing incinerator ash and ash heels causing plugging in the system. Used in the Coatings facility. Component of LECO crucibles used for carbon analysis of plutonium. Component of Rafrasil, a filler material used in the construction of reactor fuses tested in the Aircraft Nuclear Propulsion Program.	RFP: 444, 559, 771, 779 INL: PER, TAN
Silicon dioxide, Synthetic amorphous	Component of Cab-O-Sil, used in testing and initial operation of the Grease Plant, replaced by Santocel (eventually replaced with Micro-Cel E).	RFP: 774

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Silicone oil	Used in diffusion pumps. Used in elevated temperature testing of beryllium. Used to heat plutonium during rolling. Component of Dow Corning High Vacuum Grease. Component of Silastic 732 RTV Sealant used in NDT. Component of DC-705 used in diffusion pumps. Component of Dow 550 silicone oil used in the rolling mills.	RFP: 444, 707, 776, 777, 779
Silver cyanide	Used in the Laboratories.	INL: CPP
Silver metal	Cast into ingots, used in Physical Metallurgy, in Assembly Coating, and in NDT and film processing. Used in pit components in Assembly Operations, and in silver anodes in silver electroplating. Used in R&D operations. Used in beryllium welding. Used in cyanide plating of thorium and other materials. Used as a coating on boron nitride and other materials. Used in Special Order work. Used in Non-Destructive Testing. Used in the Laboratories. Used in the Coating Facility as a deposited film. Included on an excess chemical list. Component of fuel pin cladding and is a melt refining contaminant (EBR-II). Used in ML-1 reactor development. Generated radioactive silver. Source documents do not specify use.	RFP: 444, 559, 771, 776, 777, 779 INL: ANL-W, ARA, PER
Silver nitrate	Used in NDT analysis and film processing. Used in parts coating, plating, and NDT. Used in R&D operations. Used in the Laboratory. Low concentration sprayed into the effluent to aid in sampling and analysis.	RFP: 441, 444, 771, 881 INL: TAN
Silver oxide	Used in NDT analysis and film processing. Used in parts coating, plating, and nondestructive testing. Used in R&D operations.	RFP: 441, 444, 771
Silver powder	Used in the Laboratory.	INL: INTEC/RWMC Laboratories

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Silver sulfate	Used in NDT analysis and film processing. Used in parts coating, plating, and nondestructive testing. Used in R&D operations.	RFP: 441, 444, 771
Silver zeolilte	Used in halogen exhaust filters in the Hot Cells.	INL: TRA
Soda lime	Used in traps in the Fluidized-Bed Fluorinator. Used in Chemistry Technology.	RFP: 771, 779
Sodium acetate	Used in the Laboratory. Used in americium purification. Used in R&D operations. Used in the electroless plating of thorium. Component of TISAB used in the Laboratory. Component of Kodak Fixer and Kodak Industrex Fixer and replenisher used in NDT operations.	RFP: 123, 441, 444, 559, 771, 779, 881, 883
Sodium azide	Used in the Laboratories.	INL: CPP
Sodium bicarbonate	Used to neutralize acids. Used in the Laboratory.	RFP: 444, 881, 991
Sodium bichromate	Component of Ospho Rust Dissolver used in Metallurgical Operations.	RFP: 444
Sodium bisulfate	Used in an evaluation of commercial cleaners for use in waste treatment.	RFP: 779
Sodium borohydride	Used as a neutron poison in the fluidized bed fluorinator in lab-scale, pilot-scale, and production-scale operations	RFP: 771
Sodium carbonate	Used in analyses of autopsied material. Used to cathodically and anodically clean beryllium-copper alloy parts prior to electroplating. Used in chemical milling. Component of eutectic baths used prior to rolling enriched and depleted uranium. Used in the Laboratory. Used in enriched uranium recovery R&D. Component of Oakite 12 and Oakite Penetrant used for cleaning beryllium parts and in NDT. Component of Kodak Developer used in NDT operations. Component of Triple C Spray Cleaner used for cleaning drums and used for an unknown purpose. Used in metallographic preparation. Component of Oakite 160 used to clean sample fuel plates manufactured in a TRA laboratory.	RFP: 123, 444, 447, 779, 881, 883, 991 INL: TAN, TRA INTEC/RWMC Laboratories
Sodium carbonate, anhydrous	Component of Kerful used in R&D operations.	RFP: 779

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Sodium chlorate	Component of Clorox used in the process cooling water system.	RFP: 444
Sodium chloride	Used in the solution to determine the concentration of nickel in beryllium nickel-plating baths. Used in chemical milling of depleted uranium, beryllium, tungsten, brass, aluminum, and copper. Component of the salt used in MSE and Electrorefining R&D. Used in the Laboratories. Component of TISAB used in the Laboratory. Used in the demineralization of raw water. Component of Met-L-X powder used as a fire extinguishing agent in the Hot Cells. Component of experiments irradiated in the ETR.	RFP: 444, 447, 771, 776, 779, 881 INL: CPP, TRA INTEC/RWMC Laboratories
Sodium chromate	Component of Turco 4215 used as a plating bath rinsate.	RFP: 444
Sodium citrate	Used in the electroless plating of thorium.	RFP: 444, 881
Sodium cyanide	Used in plating operations, to neutralize residual acid during preparation of beryllium-copper alloy parts for electroplating, and in Metallurgical Operations. On an inventory of chemicals, listed as 400 gallons "in use", no building noted. Source document mentions use in a heat-treating process in the Precision Shop. Used in the Laboratories.	RFP: 444, RFP INL: CPP
Sodium cyclopentadienyl	Used in R&D operations.	RFP: 771, 779
Sodium dichromate	Used in Chemistry Technology.	RFP: 779
Sodium dodecylbenzene sulfonate	Component of Oakite 202 used to clean beryllium shapes. Component of Oakite 204 used in R&D operations.	RFP: 444, 447, 779
Sodium ferrocyanide	Component of Developer Rack Cleaner used in NDT operations.	RFP: 883
Sodium fluoride	Used in the Fluidized-Bed Fluorinator in lab-scale, pilot-scale, and production-scale operations. Used in the Laboratories. Used in the Coatings Laboratory.	RFP: 444, 771, 881

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Sodium hydroxide, 30 percent to 50 percent aqueous solution	Used in the Laboratories, Manufacturing Technology, in the Coating Facility, by Chemical Engineering, in Process Chemistry Technology, in R&D operations, and in metallographic preparation. Used in beryllium nickel plating and to cathodically and anodically clean beryllium-copper alloy parts prior to electroplating. Used in plutonium-uranium solvent extraction and peroxide precipitation. Used to neutralize acids. Component of Oakite Super Rustripper and Oakite 12 used for cleaning beryllium parts, in cleaning plutonium parts prior to plating, and in plutonium metallurgical preparation. Component of Formula 409 cleaner used in decontamination operations, particularly after the 1969 fire. Formula 409 was also evaluated in R&D operations. Component of Enthone Alumon and Enthone Enplate used in beryllium shape coating. Component of Kerful used in R&D operations. Used in the operation of the BORAX III, IV, and V reactors. Used in the Hot Cells and in the Radiochemistry Laboratory. Used to regenerate ion exchange resin and in the Demineralized Water Plant. Used to make alkaline permanganate for decontaminating loops and piping. Component of Oakite 160, used to clean sample fuel plates manufactured in an unnamed TRA laboratory.	RFP: 123, 441, 444, 447, 771, 774, 776, 777, 779, 881 INL: ANL-W, CFA, CPP, NRF, PER, TAN, TRA INTEC/RWMC Laboratories
Sodium hydroxide fusion	Used in the Laboratory.	INL: INTEC/RWMC Laboratories
Sodium hydroxyethylene diamine triacetate	Component of Oakite Super Rustripper used for cleaning beryllium parts and in plutonium metallurgical preparation.	RFP: 444, 779
Sodium hypochloride	Source documents do not identify use.	RFP: 771
Sodium hypochlorite	Used to decontaminate individual. Component of Clorox bleach used in process cooling water systems.	RFP: 122, RFP
Sodium hypophosphite	Component of Enthone Enplate nickel plating solution used for coating beryllium shapes. Used in electroless plating of thorium.	RFP: 444, 881
Sodium lauryl sulfate	Used in plutonium recovery studies.	RFP: 771, 779

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Sodium metaborate	Component of Kodak Developer used in NDT operations. Component of Long Life 6100 used in Metallurgical operations.	RFP: 444
Sodium metal	Used and/or reacted with alcohol in the laboratory (either 771 or 881). Used in R&D operations. Used to cool the calciner. Used as a moderator and coolant in several reactors. Used during reactor development. Handled in the Hot Cells.	RFP: 771, 881 INL: CFA, TAN, TRA, INL Off-Site shipments: Rockwell ATI Division
Sodium metasilicate	Component of Wyandotte Stainless Steel Polish used in stainless steel work. Component of Oakite Penetrant used in NDT. Component of Oakite 204 used in R&D operations. Component of Kerful used in R&D operations. Component of Triple C Spray Cleaner used for cleaning drums during shipping and receiving. Component of Altrex detergent used at SPERT II for reactor cleaning.	RFP: 444, 447, 779, 881, 991 INL: PER
Sodium methyl cellulose	Used in depleted uranium casting as a graphite mold and crucible coating.	RFP: 444
Sodium nitrate	Used in chemical milling of depleted uranium, beryllium, tungsten, brass, aluminum, and copper. Used in Enriched Uranium Recovery R&D. Component of Zyglo Aqueous Developer ZP-5 used by NDT. Component of Turco 4215 used as a plating bath rinsate. Used in the calciner while processing simulated natural uranium fuel elements. Source documents do not specify a use.	RFP: 444, 447, 881 INL: CFA, CPP
Sodium oxalate	Used in the Laboratory in standards.	INL: INTEC/RWMC Laboratories
Sodium nitride	Source document did not specify usage.	RFP: 771
Sodium nitrite	Used in anion exchange. Component of Nalco 2536 used as a rust inhibitor. Component of Johnson's TL-131 used in Metallurgical operations.	RFP: 444, 771, 883
Sodium oxide	Used in R&D operations. Component of LECO crucibles used for carbon analysis of plutonium.	RFP: 559, 771, 779

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Sodium perchlorate	Used in voltammetric studies of neptunium.	RFP: 771
Sodium peroxide	Used in plutonium and neptunium thermite reduction as part of the pyrotechnic initiators. Used by Manufacturing Technical in R&D operations. Used in chemical initiator studies.	RFP: 771, 779
Sodium phosphate	Source documents do not specify use.	INL: ANL-W
Sodium phosphate, tribasic	Component of Kerful used in R&D operations.	RFP: 779
Sodium propionate	Used in voltammetric studies of neptunium.	RFP: 771
Sodium silicate	Component of Triple C Cleaner used for cleaning drums during shipping and receiving. Component of Oakite 202 used for cleaning beryllium shapes.	RFP: 444, 447, 991
Sodium sulfate	Component of Kodak Developer used in NDT operations. Component of Triple C Cleaner used for cleaning drums during shipping and receiving. Source documents did not specify a use. Used in the Laboratory.	RFP: 444, 991 INL: ANL-W INTEC/RWMC Laboratories
Sodium sulfide	Used in tests to determine an improved method of liquid waste treatment.	RFP: 774
Sodium sulfite	Used in tests to determine an improved method of liquid waste treatment. Component of Kodak Developer and Kodak Industrex Fixer and Replenisher and Developer used in NDT operations. Source document did not specify a use.	RFP: 444, 771, 774, 883 INL: ANL-W
Sodium tetraborate	Component of Nalco 2536 used as a rust inhibitor. Component of Turco 4215 used as a plating bath rinsate solution.	RFP: 444, 883
Sodium tetraborate pentahydrate	Component of Turco 4215 Special used as a plating bath rinsate solution.	RFP: 444
Sodium tetraboride	Component of Nalco 2536.	RFP: 444, 883
Sodium thiocyanate	Used in the copper strike performed during the electroplating of beryllium-copper alloy.	RFP: 444
Sodium thiosulfate	Used in the Laboratory. Component of Developer Rack Cleaner and Kodak Fixer both used in NDT. Used in titrate xenon trioxide.	RFP: 444, 881, 883 INL: ANL-W INTEC/RWMC Laboratories
Sodium tolytriazole	Component of Nalco 2826 used in the process cooling water systems.	RFP: 444, 447, 991

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Sodium triphosphate	Inventory, no building specified.	RFP
Sodium tripolyphosphate	Component of Triple C Cleaner used for cleaning drums during shipping and receiving. Component of Turco 4215 used as a plating bath rinsate.	RFP: 444, 991
Sodium-potassium	Used for reactor cooling in the ANL-W reactors and in the SNAPTRAN reactor. Used to heat the Waste Calciner. Note of several spills.	INL: ANL-W, TAN, CCP
Solvent deasphalted residual petroleum oil	Component of Texaco Thuban 140, used in R&D operations.	RFP: 779
Soiltac®	Dust suppressant applied to soil during pit excavation.	INL: SDA
Solvent-dewaxed heavy paraffinic petroleum distillates	Component of Texaco Soluble D metal working oil. Component of Transultex 210 cutting and grinding oil used in machining. Component of Release 1 VOC spilled in the SDA and cleaned up during excavation.	RFP: 444, 881 INL: SDA
Solvent-dewaxed residual oils (petroleum)	Component of Release 1 VOC, spilled in the SDA and cleaned up during excavation.	INL: SDA
Solvent refined paraffinic petroleum oil	Component of Amocool Soluble Oil tested in the R&D Laboratory.	RFP: 771, 779, 881
Sorbitan monostearate	Component of GE Antifoam 60, used in peroxide precipitation.	RFP: 771
SP-400 granular absorbent	Comprised of crosslinked sodium polyacrylate. Added to the bottom of secondary waste drums generated at CPP-653 repack as a precaution for liquid from condensation/outside storage.	INL: INTEC PCC
Spill-X-A	Comprised of magnesium oxide, magnesium aluminum silicate (Fuller's Earth), sodium carbonate, sodium alkylnaphthalenesulfonate, red pigment. Used in the Laboratory as an absorbent or soldifaction agent for aqueous and inorganic matrices.	INL: INTEC/RWMC Laboratories
Spill-X-C	Comprised of citric acid, fumaric acid, magnesium aluminum silicate (Fuller's Earth), acrylate polymer, and sodium alkylnaphthalenesulfonate. Used in the Laboratory as an absorbent or solidification agent for aqueous and inorganic matrices.	INL: INTEC/RWMC Laboratories

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Stainless steel metal	Used in Parts Manufacturing and in Tool and Gauge Machining. Processed through electrochemical milling operations with tungsten, brass, copper, aluminum, beryllium, and depleted uranium. Used as a substrate in the Coatings Facility. Bonded to depleted uranium using dynamite. Used in filters for the Peroxide Precipitation Process. Used in molds in forming plutonium ingots. Stainless steel clad was used for ZPPR alloy plates. Used in the cans used to store plutonium briquettes. Used in pit components involved in Assembly. Used to encase beryllium ingots prior to rolling. Used in brazing operations. Used in Manufacturing. Used as cladding for some fuel elements. Used in cladding for the fuel in some inserts for the HTRE reactors.	RFP: 444, 447, 707, 776, 777, 779, 881, 883, 993 INL: CPP, TAN, TRA
Stainless steel-boron alloy	Used in Raschig rings in the batch tanks for the chloride and thiocyanate systems. Used in Raschig rings for the acid scrubber and for the caustic scrubber. Used in the plates in criticality experiments.	RFP: 771, 881, 886
Stannous chloride	Used in respirator fit testing. Used in R&D operations. Used in the Laboratory as a reagent.	RFP: 123, 771, 779 INL: INTEC/RWMC Laboratories
Stannous octoate	Component of Nuocure 28 Catalyst tested in the R&D Laboratory.	RFP: 771, 779, 881
Starch	Used in the Laboratory.	INL: INTEC/RWMC Laboratories
Steight run middle petroleum distillate	Component of Kerful, used in R&D operations.	RFP: 779

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Stoddard Solvent	Used in Tool and Gauge Machining. Component of Varsol® 1 solvent. Component of WD-40, used throughout RFP. Component of Dow Corning 557 Silicone Dry Film Lubricant, used in Assembly Testing. Ingredient of some paints, paint thinners, and liquid photocopier toners. Component of Aero-Gel, used in R&D operations. Used in the Equipment and Repair building. Used throughout INL.	RFP: 444, 779 INL: CFA, INL
Strychnine alkaloid 99.9%	Used mixed with corn to control the pigeon population. Should not be in the waste stream.	RFP
Styrene-divinylbenzene copolymer	Component of Dowex ion exchange resins.	RFP
Styrofoam®	Scrap Styrofoam® was dissolved using trichloroethylene. No indication as to the original use of the Styrofoam®.	RFP: 777
Sulfamic acid	Used in the dissolution process. Used in the Laboratories. Component of Kodak Developer and Developer System Cleaner, used in NDT operations. Used in the Decontamination Room. Component of Kodak Developer, used as a system cleaner.	RFP: 444, 771, 881 INL: NRF INTEC/RWMC Laboratories
Sulfide standards	Used in the Laboratory.	RFP: 881
Sulfonated castor oil	Component of Kerful, used in R&D operations.	RFP: 779
Sulfur containing C4-C8 olefin	Component of Transultex 210 cutting and grinding oil used in machining.	RFP: 444, 881
Sulfur hexafluoride	Used in the Metallurgical Laboratory.	RFP: 444
Sulfur powder	Used to clean-up mercury spills.	RFP: 441, 551

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Sulfuric acid	Used in the Laboratories. Used in Physical Metallurgy, in plating processes, and to pickle beryllium-copper alloy parts prior to electroplating. Used in Oralloy leach. Used in R&D operations. Used in Part V leach, in peroxide precipitation, and in neptunium dissolution. Used in tests to determine an improved method of liquid waste treatment. Used in Nuclear Joining and for coatings, brazing, and metallurgy. Used in beryllium etching R&D and in stainless steel decontamination studies. Used in Enriched Uranium Recovery Operations. Used in plutonium hydriding. Used in Process Chemistry Technology. Component of Kodak Fixer, Kodak Industrex Fixer and Replenisher, Kodak Developer System Cleaner and Neutralizer, and Kodak Industrex Fixer and Replenisher used in NDT operations. Component of Derustit SS-3 used in developmental studies for beryllium and depleted uranium. Component of Prestolite Lead-Acid Batteries. Used in the operation of the BORAX III, IV, and V reactors. Used in the ML-1 reactor development. Used in metallurgical sample preparation. Present in machine shop waste, batteries. Used in the dissolution of stainless steel-clad fuels from the Submarine Intermediate Reactor and in a decontamination solution used. Used in the demineralization of raw water. Used in the Radiochemistry Laboratory. Used to regenerate ion exchange resin.	RFP: 123, 441, 444, 559, 771, 774, 779, 881, 883 INL: ANL-W, ARA, CFA, CPP, NRF, PER, TAN, TRA INTEC/RWMC Laboratories
Tall oil	Component of Kerful used in R&D operations.	RFP: 779
Tall oil bottoms	Component of Oakite Penetrant used in NDT.	RFP: 444, 447
Tantalum carbide	Used in ceramic manufacture. Component in samples irradiated in the ETR.	RFP: 705 INL: TRA

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Tantalum metal	Present in waste and residues generated from MSE (crucibles, rods, funnels, stirrers, electrodes) and from the plutonium and enriched uranium foundries. Used in electroless coating. Residues processed through Recovery operations. Used in the Coatings Facility. Used in R&D operations. Used in plutonium hydriding. Used in the Pyrochemical Technology Support Laboratory (anodes, rods, shielding in extractor pumps, crucibles, funnels, stirrers). Used in the manufacture of special order components with depleted and enriched uranium and beryllium. Used in Manufacturing. Used in various parts of Enriched Uranium Recovery equipment including bayonet heaters. Component in samples irradiated in the ETR.	RFP: 444, 707, 771, 776, 777, 779, 881, 883 INL: TRA
Tantalum nitride	Component in samples irradiated in the ETR.	INL: TRA
Tantalum oxide	Used in the Coatings facility.	RFP: 779
Tantalum powder	Used in Ceramics Manufacture. Used in the Coatings Facility.	RFP: 705, 779
Tartaric acid	Used in R&D operations. Component of Nickel Tungsten Solution used for plating. Used in combination with caustic and other agents in decontamination operations.	RFP: 771, 776, 777, 779 INL: CPP
Tartrate	Component of Nickel Tungsten Solution used for plating.	RFP: 771, 776, 777, 779
Teflon®	Used in gaskets, glovebox lining, and piping on the chloride and thiocyanate lines. Used in dissolver pots for the dissolution of magnesium-zinc alloy used for MSE salt clean-up and for the dissolution of lead-plutonium oxide. Solid Teflon® used in the gaskets for the hydrogen peroxide system. Used in an entrainment separator in the Evaporator in Recovery Operations. Used in seals for the Fluidized-Bed Fluorinator. Sheets of Teflon® used as drying mats in plating and rods and rigs used in electroless nickel plating. Component of Loctite Pipe Sealant.	RFP: 444, 771
Terphenyl	Used in scintillation counting. Component of Santowax, used as a coolant in the OMRE reactor.	INL: ANL-W, OMRE

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Terphenyl-d_{14}	Used in the Laboratory in surrogate solutions	INL: INTEC/RWMC Laboratories
tert-butyl alcohol (2-methyl-2-propanol; trimethyl methanol)	Component of Tap Magic cutting fluid, used in Metallurgical Operations.	RFP: 444
Tetrabromoethylene	Used as float-sink separation process media in conjunction with beryllium work.	RFP: 444
Tetrabutyl ammonium hydroxide	Used in non-aqueous plutonium dissolution studies.	RFP: 771
Tetracalcium aluminoferrite	Component of Portland cement used throughout RFP as an absorbent.	RFP
Tetradecane	Used in Physical Metallurgy.	RFP: 991
Tetrahydrofuran	Used in the Metallurgical Laboratory as a solvent. Used in R&D operations.	RFP: 444, 771, 779
Tetrahydronapthalene	Component of Zyglo Penetrex ZL 22A which may be similar to Zyglo 22 tested in the R&D Laboratory.	RFP: 771, 779, 881
Tetramethyl pararsanilin	Component of Dychem Steel Blue dye penetrant used in parts inspection.	RFP: 444
Tetrasodium pyrophosphate	Component of Kerful used in R&D operations.	RFP: 779
Texaco Regal A oil	Replaced Shell Vitrea oil due to lower cost around 1960. Used for plutonium machining. Used in enriched uranium machining.	RFP: 776, 881
Thallic oxide	Used in the Laboratories.	INL: CPP
Thallium cyclopentadienyl	Used in R&D operations.	RFP: 771, 779
Thallium metal	Used in R&D operations. Present in a mixture of mercury and an unknown metal (8.2 percent thallium, 89.8 percent mercury, 2 percent unknown) and used for an unknown purpose. Component in samples irradiated in the ETR	RFP: 779, 991 INL: TRA
Thallium powder	Used in the Laboratory.	INL: INTEC/RWMC Laboratories
Thiourea	Used in the Laboratories.	INL: CPP
Thorium carbide	Waste processed at INTEC and disposed at the SDA involved intermittent bulk disposals containing unirradiated thorium. Explicit shipments of thorium materials were identified as consisting of thorium carbide.	INL: CPP

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Thorium metal	Used in Nuclear Joining. Used to manufacture components. Used to purify uranium-233 (thorium strike); waste sent to Oak Ridge for recovery. Used in experimental metallurgical operations. Thorium was vacuum-annealed and nickel-electroplated.	RFP: 123, 441, 559, 771, 779, 881
Thorium nitrate	Included in a list of excess chemicals. Source document did not specify use or building.	RFP: 779
Thorium oxide	Source document did not specify use – may have been used as a mold coating. Included in a list of excess chemicals. Used as a mold and crucible coating for metal refining at FCF. Component in samples irradiated in the ETR	RFP: 779 INL: ANL-W, TRA
Thorium, nuclear grade	Used in experiments pertaining to canning or coating the thorium to reduce health physics concerns.	RFP: 331, 881
Thullium metal	Included in an excess chemical list.	RFP: 779
Thullium powder/filings	Included in an excess chemical list.	RFP: 779
Tin metal	Used in R&D operations. No. 10 tin cans were used to store plutonium turnings created in the fabrication process. Used in experiments to coat thorium prior to rolling.	RFP: 331, 771, 779
Tin oxide	Used by Manufacturing Technical in R&D operations.	RFP: 771
Titanium boride	Used in ceramic manufacture.	RFP: 705
Titanium carbide	Used in ceramic manufacture. Component in samples irradiated in the ETR.	RFP: 705 INL: TRA
Titanium carbide-tungsten carbide-molybdenum carbide-aluminum oxide-cobalt	Used in ceramic manufacture.	RFP: 705
Titanium chloride	Used in the Labortory as a reagent.	INL: INTEC/RWMC Laboratories
Titanium dioxide	Component of Loctite Pipe Sealant. Component of Spot 'N Glaze Putty. Component of Snopake®, used for an unknown purpose. Component of Amercoat 66 used in coating studies. Component of Devran 669 used in coating studies. Components of Devran 232 used in coating studies. Components of Devran 4170 used in coating studies.	RFP: 444, 881 INL: TAN

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Titanium metal	Used in parts casting and alloying and in parts production. Used in Special Order work. Used in R&D operations. Used in Assembly Coating. Used in Physical Metallurgy. Used in Nuclear Joining. Used in the Coatings Facility. Used in Manufacturing. Used in dissolvers for stainless steel assembly dissolution. Mixed with uranium oxide in some of the fuel elements for the HTRE reactors. Component in samples irradiated in the ETR.	RFP: 444, 447, 779, 881, 883 INL: CPP, TAN, TRA
Titanium nitride	Used in ceramic manufacture. Component in samples irradiated in the ETR.	RFP: 705 INL: TRA
Titanium powder	Used in Assembly Coating. Used in the Coating facility. Included on an excess chemical list.	RFP: 444, 779
Titanium silicide	Used in ceramic manufacture.	RFP: 705
Titanium sponge	Used in vapor deposition, vacuum coating, and alloying with depleted uranium.	RFP: 444

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Toluene	Used in the Laboratories. Used as a solvent in plating and in the Metallurgical Laboratory. Used by HP radiation technicians to remove rubber cement from film frames. Used in R&D chemistry studies. Common constituent in paint, stripper, and thinner. Component of Varsol® 1 and Varsol® used in Metallurgical Operations, enriched uranium R&D, and in sample preparation for x-ray analysis, tensile testing, and plutonium metallurgy. Component of Cee Bee solvent used for parts cleaning. Component of Formula A Paint Remover used throughout RFP. Component of Amercoat 33 paint used throughout RFP. Component of Lubri Bond A used in Shipping and Receiving. Component of MacStop 9554 used as a plating bath solution rinsate. Component of Glyptal Red Insulating Enamel used in NDT. Component of Spot 'N Glaze Putty. Source documents do not specify use. Used in the Health and Safety Laboratory and in the RESL. Used as a solvent in the Laboratories. Component of Devran 4170 and Devran 4170 Converter used in coating studies.	RFP: 123, 441, 444, 771, 776, 779, 881 INL: ARA, CFA, CPP, PER, TAN INTEC/RWMC Laboratories
Toluene-d_8	Used in the Laboratory in standards and surrogates.	INL: INTEC/RWMC Laboratories
Toluene 2,4-diisocyanate	Component of Create-A-Mold 3D Molding Compound resin.	RFP: 444 or 881
Toluene sulfonamide	Component of Zyglo Penetrant ZL-22 which may be similar to Zyglo 22 tested in the R&D Laboratory.	RFP: 771, 779, 881
Tremolite	Component of Devran 232 Converter used in coating studies.	INL: TAN
Tri-aryl compounds	Component of Dowtherm G which may be similar to Dowtherm used as a heat transfer medium in the ETR.	INL: TRA
Tributyl phosphate	Used by Special Recovery in uranium solvent extraction. Used in solvent extraction in Enriched Uranium Recovery operations. Used in solvent extraction process. Component of Turco Decon Solvent, tested by the R&D Laboratory.	RFP: 771, 779, 881 INL: CPP

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Tricalcium aluminate	Component of Portland cement used throughout RFP as an absorbent.	RFP
Tricalcium silicate	Component of Portland cement used throughout RFP as an absorbent.	RFP
Trichloroethylene	Used as a solvent. Used in Process Chemistry R&D for vapor degreasing prior to plating or brazing. Used in depleted uranium Metallurgical Operations for vapor degreasing prior to annealing. Used in Ceramics R&D and as an equipment cleaner. Used in Plutonium Fabrication R&D and other R&D operations and in thermal cycling. Used to clean concrete. Used in Assembly Operations and Special Assembly Operations for in-process and final vapor degreasing of WR parts and hardware; replaced by TCA in 1972. Used in cleaning of DJO parts. Used in R&D operations. Used in enriched uranium Metallurgical Operations, Assembly Operations, and Fabrication Operations for in-process cleaning and vapor degreasing WR parts; also used to degrease stainless steel. Used in Metallurgical Operations and Chemistry Technology R&D. Used in Final Assembly and in vapor degreasing. Component of Zyglo ZP9 and ZC7, Alk-Tri, Neu-Tri, and Ex-Tri. Component of Turco Decon Solvent, tested by the R&D Laboratory. Used for fuel element cleaning. Found in sampling at the solvent burner site. Used as a solvent in the Laboratories. Used in the Decontamination Shop. Used at the SPERT I reactor building. Found in under-slab sampling. Used in the Laboratory in spike solutions.	RFP: 441, 444, 447, 705, 707, 771, 777, 779, 881, 883, 991 INL: ANL-W, CPP, NRF, PER, TAN INTEC/RWMC Laboratories
Trichlorofluoromethane	Used in the Laboratories as a solvent. Used in Nuclear Joining, Plutonium Physical Metallurgy, and in Product Physical Chemistry. Component of Molykote 557 Lubricant used in assembly testing. Component of Dubl-Chek.	RFP: 559, 771, 779, 881 INL: INTEC/RWMC Laboratories
Trichloro-trifluoroethane – ethylene glycol monobutyl ether mixture	Used in Nuclear Joining, Plutonium Physical Metallurgy, and in Product Physical Chemistry.	RFP: 779

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Triethanolamine	Component of Long Life 6100, Johnson's TL-131, and Vantrol used in Metallurgical operations. Mixture of this chemical, fatty acid soap, and sodium nitrite used in the cooling system.	RFP: 444
Triethylbenzene	Component of Dowtherm J used as a heat transfer fluid.	INL: TRA
Triethylenetriamine	Component of Devran 232 Converter and Devran 4170 Converter used in coating studies.	INL: TAN
Trifluoroacetic anhydride	Used in Physical Metallurgy.	RFP: 991
Triisooctomine	Used in the Laboratory.	RFP: 123
Triisooctylamine	Used with Varsol® in enriched uranium R&D.	RFP: 881
Trimethylamine	Component of Dowex 1x2 and Dowex 1x4 ion exchange resin used in plutonium and americium recovery and in R&D operations.	RFP: 771, 779
Trimethylolpropane trimester	High temperature turbine lubricant used in the PM-2A vessel. Empty drums containing residue of this chemical were disposed to the SDA from TAN607.	INL: TAN
Trimethyl-terminated dimethyl, phenymethly siloxane	Component of Dow Corning 510 Fluid, tested in the R&D Laboratory.	RFP: 771, 779, 881
Tri-n-octyl phosphine oxide	Used in the Laboratories. Used in enriched uranium R&D.	RFP: 123, 441, 559, 771, 881
tris(Hydroxymethyl)aminom ethane (THAM)	Used in R&D operations. Used in the Laboratory in standards.	RFP: 771, 779 INL: INTEC/RWMC Laboratory
Trisodium phosphate	Detergent used to clean reactor vessel surfaces.	INL: NRF, PER
Tungstate	Component of Nickel Tungsten Plating Solution and Nickel Tungsten Solution used for plating.	RFP: 771, 776, 777, 779
Tungsten boride	Used in ceramics manufacture.	RFP: 705
Tungsten carbide	Used in ceramics manufacture. Component in experiments irradiated in the ETR.	RFP: 705 INL: TRA
Tungsten carbide-cobalt	Used in ceramics manufacture.	RFP: 705
Tungsten disulfide	Used as a lubricant during bare beryllium rolling.	RFP: 883

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Tungsten metal	Used in depleted uranium manufacturing. Processed through electrochemical milling with stainless steel, brass, copper, aluminum, beryllium, and depleted uranium. Used in Special Order work. Used in R&D operations. Used in molten salt extraction. Used in Nuclear Joining. Used in depleted and enriched uranium Manufacturing. Used in the ML-1 reactor. Used in the Fast Spectrum Refractory Metals Reactor. Component in samples irradiated in the ETR.	RFP: 444, 776, 779, 881, 883 INL: ARA, TAN, TRA
Tungsten Nitride	Component in samples irradiated in the ETR.	INL: TRA
Tungsten powder	Used in Ceramics Manufacture.	RFP: 705
Ultrasorb	Comprised of diatomaceous earth, crystalline silica (quartz), and cristobolite. Added to waste during packaging or repackaging operations.	INL: SDA, INTEC PCC
Uranium aluminum alloy	Components of fuel and samples irradiated in the MTR and the ETR and examined in the Hot Cells.	INL: TRA
Uranium carbide	Component in samples irradiated in the ETR.	INL: TRA
Uranium hydride	Formed by the reaction of water with uranium metal in the SDA.	INL: SDA
Uranium oxide	Component in fuel samples irradiated in the MTR, ETR, and ATR and examined in the Hot Cells.	INL: TRA
Uranium oxide-stainless steel	Component of fuel or samples irradiated in the ETR.	INL: TRA
Uranium oxide-stainless steel cermit	Component of fuel or samples irradiated in the ETR.	INL: TRA
Uranium oxide-thorium oxide	Used in the fuel elements for BORAX-IV. Component in samples irradiated in the ETR.	INL: ANL-W, TRA
Uranium powder	Used in the Laboratory.	INL: INTEC/RWMC Laboratories
Uranium-silicon-alluminum alloy powder	Fuel irradiated in the ETR and examined in the Hot Cells.	INL: TRA
Uranium tricyclopentadienyl chloride	Used in R&D chemistry studies.	RFP: 771, 779
Uranium trioxide	Uranium solutions were converted to this material prior to packaging.	INL: CPP
Uranyl nitrate	An intermediate form of enriched uranium produced during Enriched Uranium Recovery. Used in criticality experiments.	RFP: 881, 886

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Vacuum pump oil (not specific)	Used in vacuum pumps throughout RFP.	RFP
Vanadium carbide	Used in ceramics manufacture.	RFP: 705
Vanadium metal	Used in Physical Metallurgy, electron beam welding with beryllium and depleted uranium, and in depleted uranium parts manufacture. Received parts were cleaned and assembled. Used in brazing operations. Used in enriched uranium Manufacturing.	RFP: 444, 447, 707, 776, 777, 881, 883
Vanadium oxide	Used in the Laboratories.	INL: CPP
Vanadium powder	Used in the Coatings facility. Included on an excess chemical list. Used in the Laboratory.	RFP: 779 INL: INTEC/RWMC Laboratories
VascoMax® R VascoMax® T	Used as a substrate in the Coatings facility.	RFP: 779
Vegetable oil soaps	Component of Winterphene disinfectant, used to kill bacteria in machining coolant.	RFP: 881
Vermiculite	Used as an absorbent throughout RFP. Used as an absorbent during packaging. Used to absorb liquid wastes in 30-gallon drums.	RFP INL: SDA, ANL-W
Vinyl chloride	Potentially present in organic setups. Used in the Laboratory.	RFP: 774 INL: INTEC/RWMC Laboratories
Vinylidene fluoride-hexafluoropropene polymer	Component of Fluorel® used in glovebox gaskets.	RFP
Vinyl plastic paint	Used to paint the mild steel supports and frame work for gloveboxes (equivalent to Amercoat 33).	RFP: 771
VM&P Naphtha	Component of Glyptal Alkyd and Glyptal Red Insulating Enamel used in NDT. Component of Spot 'N Glaze Putty. Component of Phenoline 302 Part B used in coating studies.	RFP: 444, 776, 881 INL: TAN
Warfarin .025 percent	Used in bait boxes to control the rat and mice population. Should not be in the waste stream.	RFP
Wetting agent, not specific	Component of Ospho Rust Dissolver used in Metallurgical Operations.	RFP: 444
Windex	Windex Blue comprised of ethylene glycol n-hexyl ether, isopropanol, and water. Windex Ammonia-D comprised of water, isopropanol, ethyleneglycol monohexylether. Used as a cleaning agent during packaging and repackaging operations.	INL: SDA, INTEC PCC

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Wood	Component of Benelex, used as a shielding material. Component of some items processed in the Hot Cells.	RFP INL: TRA
Xenon trioxide	Used in Chemistry Technology.	RFP: 779
Xylenes	Used in the Laboratories as a solvent. Used as a solvent in enriched uranium operations and in the Metallurgical Laboratory. Used to react contaminated lithium chips. Common constituent in paint, thinner, and stripper. Component of Varsol® and Varsol® 1. Varsol® used in depleted uranium Metallurgical Operations, enriched uranium R&D, and in sample preparation for x-ray analysis, tensile testing, and plutonium metallurgy. Component of Lubri Bond A used in Shipping and Receiving. Component of Glyptal Alkyd, Glyptal Clear Insulating Varnish, and Glyptal Red Insulating Enamel used in NDT. Component of Silastic E-RTV Rubber Base used in NDT. Component of Spot 'N Glaze Putty. Component of Lubri-Bond A. Used in the H&S Laboratory and in the RESL. Component of Amercoat 66, Devran 232, Devran 232 Converter, Devran 4170, Devran 4170 Converter, Plasite 7155, Phenoline 302 Part A and Part B all used in coating studies.	RFP: 123, 441, 444, 559, 771, 776, 779, 881, 883, 991 INL: ARA, CFA, CPP, PER, TAN INTEC/RWMC Laboratories
Xylol	Component of Chemfast 547 used in coating studies.	INL: TAN
Yellow pigment	Component of Yellow 77 Wire Pulling Lubricant.	RFP: 779
Yttrium metal	Included on an excess chemical list. Component in samples irradiated in the ETR.	RFP: 779 INL: TRA
Yttrium oxide	Used to coat beryllium and uranium graphite molds prior to use. Used to coat plutonium graphite molds prior to use. Used in ceramic manufacture. Used in fuel elements for the HTRE reactors ceramic fuel inserts. Component in samples irradiated in the ETR.	RFP: 444, 705, 771 INL: TAN, TRA
Yttrium powder	Used in the Coatings facility. Used in the Laboratory.	RFP: 779 INL: INTEC/RWMC Laboratories
Zeolite	Used as a softener in the water treatment system at SPERT III.	INL: PER

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Zinc bromide	Used in shielded windows in the Hot Shops and Hot Cells.	INL: TAN, TRA
Zinc chloride	Used in R&D operations. Used as a flux in tin baths for coating experiments with thorium. Component of Stay-Clean soldering flux used in R&D operations.	RFP: 331, 771, 779
Zinc metal	Used in R&D Operations. Used in the Pyrochemical Support Laboratory. Used in coating experiments with thorium and in cyanide plating of thorium.	RFP: 331, 444, 779
Zinc oxide	Component of Enthon Alumon used in beryllium shape coating. Component of RTV21 which may be similar to RTV20, tested in the R&D Laboratory.	RFP: 444, 771, 779, 881
Zinc powder	Used in the Laboratory.	INL: INTEC/RWMC Laboratories
Zircaloy®	Used as reactor structural material and fuel cladding material.	INL: ANL-W, CPP, NRF, PER, TRA
Zircaloy® and stainless steel	Component of samples irradiated in the ETR.	INL: TRA
Zirconia	Used in ceramic manufacture. Used as a mold coating for graphite melting crucibles and molds used in uranium-233 casting. Component of Zircoa Bond 6, tested by the R&D Laboratory	RFP: 705, 771, 779, 881
Zirconium boride	Used in ceramic manufacture.	RFP: 705
Zirconium carbide	Used in ceramic manufacture. Component of samples irradiated in the ETR.	RFP: 705 INL: TRA
Zirconium fluoride	Used in the recovery of natural uranium from simulated fuel elements processed.	INL: CFA
Zirconium hydride	Used as a moderator in the inserts for the HTRE reactors. Produced at TRA by adding hydrogen gas to zirconium metal.	INL: TAN, TRA

Table 5-5. Chemical Contaminants in Waste Buried in the Retrieval Area (Continued)

Chemical/Compound	Use/Source	Area/Building
Zirconium metal	Alloyed with uranium and niobium. Used in mold coating. Zirconium plates, turnings, and sawdust. Zirconium scrap with natural uranium. Used in the clad of simulated fuel processed for natural uranium recovery and in the calciner. Dissolution of zirconium and zirconium-alloy fuels performed. Component of Metco 201, tested in the R&D Laboratory. Component of samples irradiated in the ETR and processed in the Hot Cells.	RFP: 444, 447, 771, 779, 881 INL: CFA, CPP, TRA
Zirconium nitride	Used in ceramic manufacture. Component in samples irradiated in the ETR.	RFP: 705 INL: TRA
Zirconium oxide	Used in mold coating. Used as a spacer in hot-pressed container assemblies for ceramics manufacture. Used as a mold coating in the fabrication of U-233. Used to coat metal refining crucibles and molds. Used in ternary fuel. Used to remove fluoride from xenon trioxide. Used as cladding for some of the ceramic fuel elements in the inserts for the HTRE reactors. Used in reactor development.	RFP: 444, 705, 771, 779 INL: ANL-W, CFA, CPP, NRF, PER, TAN Off-Site shipments: Rockwell ATI Division
Zirconium phosphate	Used to remove fluoride in xenon trioxide.	INL: ANL-W
Zirconium silicide	Used in ceramic manufacture.	RFP: 705

Table 5-6. EPA Hazardous Waste Numbers for Waste Streams ID-SDA-DEBRIS, ID-SDA-SLUDGE and ID-SDA-SOIL

EPA Hazardous Waste Numbers	Constituent
F-Listed Organic Solvents	
F001	Carbon tetrachloride
F001, F002	Methylene chloride
F001, F002	Tetrachloroethylene
F001, F002	1,1,1-Trichloroethane
F001, F002	Trichloroethylene
F001, F002	Trichlorofluoromethane
F001, F002	1,1,2-Trichloro-1,2,2-trifluorethane (Freon 113, Freon TF)
F002	Chlorobenzene
F002	1,2-Dichlorobenzene (o-Dichlorobenzene)
F002	1,1,2-Trichloroethane
F004	Cresols
F004	Nitrobenzene
F005	Benzene
F005	Carbon disulfide
F005	Isobutanol
F005	2-Ethoxyethanol
F005	Methyl ethyl ketone (MEK)
F005	2-Nitropropane
F005	Pyridine
F005	Toluene
Other F-Listed Waste	
F006	Wastewater treatment sludges from electroplating operations
F007	Spent cyanide plating bath solutions from electroplating operations
F009	Spent stripping and cleaning bath solutions from electroplating operations
Toxicity Characteristic Metals	
D004	Arsenic
D005	Barium
D006	Cadmium
D007	Chromium
D008	Lead

Table 5-6. EPA Hazardous Waste Numbers for Waste Streams ID-SDA-DEBRIS, ID-SDA-SLUDGE and ID-SDA-SOIL (continued)

EPA Hazardous Waste Numbers	Constituent
D009	Mercury
D010	Selenium
D011	Silver
Toxicity Characteristic Organics	
D022	Chloroform
D027	1,4-Dichlorobenzene
D028	1,2-Dichloroethane
D029	1,1-Dichloroethylene
D030	2,4-Dinitrotoluene
D032	Hexachlorobenzene
D033	Hexachlorobutadiene
D034	Hexachloroethane
D037	Pentachlorophenol
D038	Pyridine
D043	Vinyl chloride
P-and U-Listed Waste	
P098	Potassium cyanide
P106	Sodium cyanide

5.6.1 F-Listed Constituents

This waste was mixed with F-listed hazardous wastes from non-specific sources listed in Title 20 New Mexico Administrative Code (NMAC) 4.1.200, which incorporates by reference 40 CFR 261.31 (References 16 and 17). Based on the evaluation of the AK source documentation, EPA HWNs F001, F002, F004, F005, F006, F007, and F009 are assigned to waste streams ID-SDA-SLUDGE, ID-SDA-SOIL, and ID-SDA-DEBRIS (Reference ID-C101).

Table 5-6, EPA Hazardous Waste Numbers for Waste Streams ID-SDA-DEBRIS, ID SDA SLUDGE and ID-SDA-SOIL, identifies the specific solvents associated with the assignment of the F001, F002, F004, and F005 EPA HWNs. In most cases, specific information relating to the use of these compounds for their solvent properties was identified. In the absence of information relating to the specific use of these compounds (e.g., analytical reagents typically used to dissolve or mobilize other constituents), the applicable F-code was assigned for these solvents (Reference ID-C101).

RFP Building 774 treated spent stripping, cleaning, and plating solution from electroplating operations in Building 444. These operations utilized various cyanide plating solutions. Building 774 sludge waste were derived from the treatment of the hazardous electroplating waste, and therefore, the waste streams are assigned EPA HWNs F006, F007, and F009 (References ID-C101 and RF-P090).

Cyanide was also used in metal heat treating operations in the Building 444 precision machine shop. Materials treated were limited primarily to tool steels, carbon steels, and aluminum; radioactive materials were not used. Wastes containing oil quenching bath residues and spent cyanide salt bath solutions from this process were not radioactively contaminated, and therefore, would not have been shipped to INL for disposal. As a result, these waste streams are not assigned EPA HWNs F010 and F011 (References RF-C045, RF-C416, RF-D001, RF-P084, RF-P404, RF-P405, and RF-P562).

Numerous F003-listed solvents (i.e., acetone, butanol, ethyl acetate, ethyl benzene, methanol, methyl isobutyl ketone, xylene) were used in the historical processes that generated this waste. F003-listed solvents are listed solely for ignitability; however, these waste streams do not exhibit the characteristic of ignitability and are therefore not assigned EPA HWN F003. The absence of ignitable liquids will be verified during retrieval and packaging activities (Reference ID-P109).

Based on an assessment of the waste buried in the retrieval area and the scope of the retrieval operation, EPA HWN F039 (multi-source leachate) does not apply. In order to determine whether a waste meets the criteria for assignment of F039, it is necessary to first determine that the waste meets the definition of leachate. As defined in 40 CFR 260.10, leachate is "any liquid, including any suspended components in the liquid that has percolated through or drained from hazardous waste." The purpose of the ARP is to recover buried waste materials with incidental soil, not environmental media containing leachate (i.e., ground water or sub-soils). Because the incidental soils will be removed and disposed with the targeted waste, the EPA HWNs associated with the targeted waste materials will be assigned to all the waste streams. Because the waste buried in the retrieval area did not include multi-source leachate media, EPA HWN F039 is not assigned to the waste streams (Reference ID-C101 and ID-C201).

5.6.2 Toxicity Characteristic Metals

These waste streams contain or are contaminated with toxicity characteristic metal compounds defined in 20 NMAC 4.1.200, which incorporates by reference 40 CFR 261.24 (References 16 and 17). Where a constituent has been identified and there is no or limited quantitative data available to demonstrate that the concentration of a constituent is below regulatory threshold levels, the applicable EPA HWN is applied to the waste streams. Based on the evaluation of the AK source documentation, EPA HWNs D004, D005, D006, D007, D008, D009, D010, and D011 are assigned to waste streams ID-SDA-SLUDGE, ID-SDA-SOIL, and ID-SDA-DEBRIS (Reference ID-C101).

5.6.3 Toxicity Characteristic Organics

These waste streams are contaminated with toxicity characteristic organic compounds defined in 20 NMAC 4.1.200, which incorporates by reference 40 CFR 261.24 (References 16 and 17). Where a constituent has been identified and there is no or limited quantitative data available to demonstrate that the concentration of a constituent is below regulatory threshold levels, the applicable EPA HWN is applied to the waste streams. Based on the evaluation of the AK source documentation, including analytical data from previous sampling at the INL, EPA HWNs D022, D027, D028, D029, D030, D032, D033, D034, D037, D038, and D043 are assigned to waste streams ID-SDA-SLUDGE, ID-SDA-SOIL, and ID-SDA-DEBRIS (Reference ID-C101).

The INL 3100 m^3 Project sampled and analyzed Item Description Code (IDC) 003, Organic Setups, and IDC 801, Solidified Organics. The process that generated IDC 003 is identical to the 743-series organic setups in the retrieval area. The solidification process that generated IDC 801 was somewhat different than IDC 003 but the organic liquid feed streams were much the same. A statistical evaluation of these results indicates that the calculated 90-percent upper confidence limit (UCL_{90}) is greater than the regulatory threshold limit (RTL) for chloroform (D022), 1,2-dichloroethane (D028), 1,1-dichloroethylene (D029), 2,4-dinitrotoluene (D030), hexachlorobenzene (D032), hexachloroethane (D034), and vinyl chloride (D043). Although the UCL_{90} for 1,4-dichlorobenzene (D027) and pyridine (D038) are less than their respective RTL, their maximum concentration is above the RTL (Reference RF-P090).

Homogeneous solids sampling and analysis of IDC 003 was also performed by the TRU waste program at Rocky Flats in 2005. A statistical evaluation of these results indicated that the calculated UCL_{90} is greater than the RTL for chloroform (D022). During the analytical data review of the "non-detect" observations, Rocky Flats determined that the method detection limit exceeded the program required quantification limit for cresols (D026), 1,4-dichlorobenzene (D027), 2,4-dinitrotoluene (D030), hexachlorobenzene (D032), hexachloroethane (D034), nitrobenzene (D036), and pentachlorophenol (D037) due to dilution. The dilution was due to high hydrocarbon content in the waste matrix that caused difficulties in analysis per the required methodology (RFETS WSPF RF135.01). EPA HWNs D027, D030, D032, and D034 have already been assigned to these waste streams as described in the previous paragraph. EPA HWNs D026 and D036 are not assigned as described in the next paragraph. Although no source has been identified for pentachlorophenol, EPA HWN D037 is also assigned to the waste streams (Reference RF-P429).

Several toxicity characteristic compounds identified as potential contaminants of the waste streams are also F-listed solvents. Because the applicable F-listed EPA HWNs have been assigned for these compounds, the corresponding EPA HWNs D018 (benzene), D019 (carbon tetrachloride), D021 (chlorobenzene), D026 (cresols), D035 (methyl ethyl ketone), D036 (nitrobenzene), D039 (tetrachloroethylene), D040 (trichloroethylene) are not assigned to the waste streams. No other toxicity characteristic organic compounds were identified as possible contaminants of these waste streams (Reference ID-C101).

Chlordane (EPA HWN D020) was used as a pesticide at RFP in the 1960s (Reference RF-C228), however this chemical would not have been used in the process areas generating radioactive waste. Chlordane was also detected in small concentrations in sludge from the clarifier system pits east of TAN-604 (Reference ARA-P009). No waste from TAN-604 is included in the retrieval area (References ID-U292 and ID-U304). Pesticides and herbicides were not used in processes that generated radioactive waste and would not have been buried in the retrieval area. Therefore, these waste streams do not exhibit the characteristic of toxicity due to pesticides or herbicides (Reference ID-C101).

5.6.4 P-, U-, and K-Listed Wastes

This waste may contain discarded commercial chemical products as defined in 20 NMAC 4.1.200, which incorporates by reference 40 CFR 261.33 (References 16 and 17). An evaluation of commercial products disposal is provided below (Reference ID-C101).

At least two 25-pound packs of potassium or sodium cyanide pellets were distributed among drums of RFP Building 774 second-stage sludge (References ID-P103 and RF-P047). A logbook used from 1967 through 1972 for 742-series sludge specifies cyanide pellets in a drum generated in August 1967. The same logbook specified "CN from 81" in three drums generated in February, 1968, "CN" or "KCN" in seven to nine drums (difficult to tell in the logbook) generated in March, 1968, and "small amount of cyanide" in two drums generated in June, 1969 (Reference RF-U026). Based on the dates waste was disposed in the retrieval area, the waste from ARP-I is not expected to include sludge containing cyanide pellets. However, the ARP-II area may include these drums. Because earlier 742-series sludge logbooks have not been located, it is not known if cyanide pellets were disposed in 742-series sludge prior to 1967. However, cyanide plating operations were limited in the 1960s and disposal of cyanide pellets would not have been a routine practice (Reference RF-C416). No other specific information has been found that indicates cyanide pellets were disposed prior to this time (References ID-P103 and RF-P047).

According to RFP personnel, chemicals disposed in 742-series sludge were packaged in bottles (References ID-C101, ID-P103, RF-C045, RF-C416, RF-C420, RF-P047, RF-P260, RF-P266, RF-P562, and TAN-U002). Bottles of cyanide pellets will be segregated from the waste streams if encountered during VE. However, because as of July 1, 2008, 742-series sludge is targeted waste, and to allow for the inclusion of targeted waste potentially contaminated by residual reacted cyanide resulting from the breach of bottles containing pellets during ARP excavation operations, EPA HWNs P098 and P106 will be assigned to the waste streams (References ID-C112, ID-P103, and RF-P047).

Approximately 10- to 20-gallons of the resin hardening agent 4,4-methylene-bis, 2-chloroaniline were mixed with cement in cylindrical plastic or cardboard 'ice cream' cartons, double bagged and placed in several drums as 744-series sludge. Since special setups (744 series sludge) are not a targeted waste form, and because this packaging configuration can be identified easily, this material will not be brought into the drum packaging stations and will not be included in the waste streams. Therefore, EPA HWN U158 is not assigned (References ID-C107, ID-D004, ID-P103, ID-P239, and RF-P047).

There is also documentation on the disposal of bottles of mercury in drums of second-stage sludge (742-series sludge). There is no indication that the mercury was unused and would meet the definition of a U-listed waste. For this reason, EPA HWN U151 is not assigned (References ID-P103, ID-P105, and RF-P047).

The review of the AK source documentation did not specifically identify the disposal of unused hydrofluoric acid or disposal of materials contaminated with spills of this acid. Additionally, bottles of liquids will be segregated and free liquids will be absorbed during packaging, and therefore EPA HWN U134 is not assigned to the waste streams.

General information was identified that describes the disposal of chemicals at the RFP that were no longer needed. Small amounts of chemicals were placed into the process waste (resulting in the generation of Building 774 sludge) or included in contaminated waste for burial (Reference RF-C400). In addition, bottles of chemical wastes were added directly to second-stage sludge drums. The 1967-1972 logbook for 742-series sludge specifies numerous examples of burying bottles of unknown contents in the sludge drums. Entries with specific information (not just a number) include: from June, 1967 – "containing scrubber salt" next to a number that may be a bottle number; from August, 1967 – "misc. chemicals"; from January, 1968 – "samples"; and from February, 1968 – "chemicals from 81" (ID-P103, RF-C055, RF-U026, and RF-U125). With the exception of the above examples, no other information was available to identify the specific chemicals disposed. Without this specific knowledge, P- and U-listed EPA HWNs cannot be assigned. However, if bottles of chemicals (liquid or solid) are discovered during retrieval or packaging operations, they will be segregated and not included in the waste streams.

The material in this waste stream is not a hazardous waste from any of the sources specified in 20 NMAC 4.1.200, which incorporates by reference 40 CFR 261.32 (References 16 and 17).

5.6.5 Ignitables, Corrosives, and Reactives

Ignitability

The debris materials in these waste streams do not meet the definition of ignitability as defined in 20 NMAC 4.1.200, which incorporates by reference 40 CFR 261.21 (References 16, 17, and ID-C101). The materials are not liquid, ignitable compressed gases, or oxidizers, and are not capable of causing fire through friction, absorption of moisture, or spontaneous chemical change.

Based on review of AK documentation, numerous ignitable liquids (e.g., alcohols, acetone, benzene, toluene, and xylenes) have been identified in processes that generated waste buried in the retrieval area (refer to Table 5-5). Any un-containerized liquids discovered during retrieval or packaging are absorbed into the soil or other suitable absorbents. Absorbent may be added to the waste during VE in the drum packaging station (References ID-C223, ID-P109, ID-P122, ID-P253, ID-P269, ID-P271, ID-P276, ID-P423, ID-P427, and ID-P431). Bottles of chemicals will be removed from the waste during

retrieval and packaging operations (References ID-P122, ID-P253, ID-P269, ID-P423, ID-427, and ID-P431). Ignitable compressed gases (e.g., un-punctured aerosol cans or compressed gas cylinders) may be present in the waste (References ID-P105, RF-C045, and RF-P047). These items are removed from the waste stream or vented during packaging activities (References ID-P122, ID-P253, ID-P269, ID-P423, ID-P427, and ID-P431).

Based on review of AK documentation, numerous oxidizers (e.g., chromates, nitrates, perchlorates, permanganate, peroxides) have been identified in processes that generated waste buried in the retrieval area (refer to Table 5-5). There is the possibility that bottles of chemicals, including oxidizers, were buried in the SDA. For that reason, bottles of chemicals (solids and liquids) will be removed from the waste during retrieval and packaging operations (References ID-P122, ID-P269, ID-P253, ID-P423, and ID-P427, and ID-P431). Evaporator Salts (745-series sludge) are composed of an approximately 90 weight percent mixture of potassium nitrate and sodium nitrate, and in concentrated form this material is an oxidizer. For this reason, 745-series sludge is removed from the waste during retrieval and packaging operations such that the waste does not meet the definition of an oxidizer (References ID-P398 and ID-P400). Cellulosic (e.g., wipes) waste items may be contaminated with oxidizers; however, tests performed in 1984 to determine burning characteristics of wipes and mop heads contaminated with nitric acid and potassium permanganate indicated that these wastes are not considered oxidizers. In addition, studies evaluating the formation of lead nitrate from leaded rubber gloves contaminated with nitric acid concluded that the gloves are not considered oxidizers. Therefore, the wastes will not exhibit the characteristic of ignitability (References ID-C102, ID-P111, ID-P122, ID-P250, ID-P253, ID-P269, ID-P398, ID-P400, ID-P423, ID-P427, ID-P431, RF-C028, RF-C260, and RF-P090).

Depleted uranium machine turnings were thermally stabilized to an oxide (i.e., roaster oxide); however, due to incomplete oxidation of some of the turnings, combustion may be possible if un-oxidized surfaces are exposed to oxygen (Reference ID-P105). During excavation operations on November 21, 2005, a fire occurred following the retrieval and venting of a drum containing roaster oxide. The succeeding investigation concluded the fire resulted from the rapid oxidation reaction that included the release of hydrogen from uranium hydride following the introduction and contact of oxygen to partially or incompletely roasted depleted uranium. Uranium hydride forms by the reaction of water or plastics with uranium metal. Buried uranium metal will react, or corrode, with the water vapor to form hydride on the surface. Such corrosion likely occurred during the storage of the buried drum within the oxygen-deficient atmosphere, and the availability of moisture increased the amount of hydride formed. The investigation also concluded a similar event is likely to occur and fires should be anticipated and planned for during excavation of drums of roaster oxide (References ID-P242, ID-P250, and ID-P253).

To ensure retrieved roaster oxide will not ignite, the material is raked multiple times after placement in the waste tray. In addition, multiple samples of roaster oxide transferred into the drum packaging station are tested according to TPR-7415, *ARP-Drum Packaging*

System, to ensure the material will not ignite (References ID-P122, ID-P250, ID-P253, ID-P269, ID-P423, ID-P427, and ID-U106).

Other radioactively-contaminated machine turnings from RFP were typically cemented. Small quantities of laboratory metals used at RFP such as potassium and sodium were reacted with alcohol in the labs (Reference RF-C416). Sodium and sodium-potassium metals from ATI were encased in concrete and therefore do not pose a hazard. Other pyrophoric materials, such as zirconium chips from INL generators, were also buried in the pits (Reference ID-U298).

The possibility of nitrocellulose formation on un-washed acid-contaminated combustibles and plastics has been evaluated resulting in a determination that the formation of this compound is not possible for the waste in the retrieval area. It was determined that the use of nitric acid and subsequent contact with cellulose material would not form a nitrocellulose compound. If nitrocellulose could have formed, the reaction would have occurred within a short period of time at the point of generation. The combustible material within the retrieval area has been exposed to outside environmental conditions for more than 40 years and as such would not form nor retain any potential for residual nitrocellulose formation (References RF-C028, RF-C260, RF-P086, and RF-P090).

Because the waste in the retrieval area was buried more than 40 years ago, and there have previously been floods in the SDA, the waste containers may show various degrees of degradation, especially those containers that were not stacked (Reference ID-P109). As a result, the potential risk for any chemical reaction is expected to be significantly reduced. Therefore, EPA HWN D001 is not assigned. The waste will be observed for any ignitability characteristics (e.g., burning, smoking, smoldering, sparking) during retrieval and packaging operations. Magnesium oxide sand will be used to extinguish the materials if these characteristics are observed, and the materials segregated from the waste streams (References ID-P122, ID-P250, ID-P253, ID-P269, ID-P423, ID-P427, and ID-P431). In addition, potentially ignitable materials (e.g., un-oxidized metal turnings, bottles containing liquid or solid materials) will be segregated from the waste streams if encountered during VE. Further evaluation of the waste will be required if any of these characteristics are observed (References ID-P122, ID-P253, ID-P269, ID-P423, ID-P427, and ID-P431).

Corrosivity

The debris materials in these waste streams do not meet the definition of corrosivity as defined in 20 NMAC 4.1.200, which incorporates by reference 40 CFR 261.22, because the waste is not liquid (References 16, 17, ID-C101). Based on review of AK documentation, numerous corrosive liquids (e.g., hydrochloric, nitric and sulfuric acids, and potassium and sodium hydroxide) have been identified in processes that generated waste buried in the retrieval area (refer to Table 5-5). Bottles of chemicals will be removed from the waste during retrieval and packaging operations (References ID-P122, ID-P253, ID-P269, ID-P423, ID-P427, and ID-P431). There is the possibility that lead-acid batteries were buried. Any un-containerized liquids discovered during retrieval or packaging are absorbed into the soil or other suitable absorbents. Absorbent may be added to the waste during VE

in the drum packaging station (References ID-C223, ID-P109, RF-P084, ID-P122, ID-P269, ID-P271, ID-P276, ID-P423, ID-P427, and ID-P431). Therefore, EPA HWN D002 is not assigned.

Reactivity

The debris materials in these waste streams do not meet the definition of reactivity as defined in 20 NMAC 4.1.200, which incorporates by reference 40 CFR 261.23 (References 16, 17, and ID-C101). The materials are stable and will not undergo violent chemical change. The materials will not react violently with water, form potentially explosive mixtures with water, or generate toxic gases, vapors, or fumes when mixed with water. The materials do not contain cyanides or sulfides in concentrations sufficient to generate toxic gases, vapors, or fumes. The materials are not capable of detonation or explosive reaction if subjected to a strong initiating source or if heated under confinement. The materials are not readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure.

Water reactive metals (e.g., calcium, lithium, and magnesium) have been identified in several documents. Small quantities of laboratory metals were reacted with alcohol in the labs. Larger quantities were burned in pits at RFP (References RF-C211, RF-C416, RF-P064, RF-P084, RF-P085, RF-P091, RF-P114, RF-P262, RF-U046, and RF-U124).

Cyanide pellets were distributed in bottles among drums of RFP Building 774 second-stage sludge (References ID-C101, ID-P103, RF-C045, RF-C416, RF-C420, RF-P047, RF-P260, RF-P266, RF-P562, RF-U026, and TAN-U002). A 1967-1972 logbook for 742-series sludge specifies cyanide pellets in three drums generated in August 1967 and cyanide in drums generated in February and March 1968, and June 1969 (Reference RF-U026). These drums may be in the ARP-II area. Because earlier 742-series sludge logbooks have not been located, it is not known if cyanide pellets were disposed in 742-series sludge prior to 1967. However, cyanide plating operations were limited in the 1960s, and disposal of cyanide pellets would not have been a routine practice (Reference RF-C416). No other specific information has been found that indicates cyanide pellets were disposed prior to this time. If packages or bottles of cyanide pellets are identified in the sludge during VE, they will be removed from the waste streams. If bottles are broken during excavation or VE, unreacted cyanide will be contained in the waste matrix and will not be packed for shipment to WIPP (References ID-C112, ID-P122, ID-P239, ID-P253, ID-P269,ID-P423, ID-P427, and ID-P431). Cyanide solutions used in RFP Buildings 444 and 881 were treated to destroy the cyanide by acidification and evaporation prior to treatment in Building 774, or by chlorination or oxidation and solidification in cement (References ID-P103, ID-P250, ID-P253, RF-C414, RF-C415, RF-C416, and RF-P047).

Prior to 1970, ion-exchange resins may not have been denitrated (washed with water) or mixed with cement prior to disposal. In the past, there was some question to if the resins that have dried out represent a flammable or explosive hazard. However, studies indicate that no credible mechanism exists for spontaneous detonation by degradation of a

nitrate-form ion-exchange resin (References RF-C045, RF-C120, RF-C409, RF-C416, and RF-P047).

The potential for shock sensitivity or violent exothermic reaction of leaded gloves exposed to nitric acid under the proper conditions was investigated. Previous studies at RFP relating to residue from nitric acid and reaction with leaded neoprene gloves outline the stringent conditions required for formation of reactive properties associated with nitric acid/leaded gloves. The formation of lead nitrate and organic nitrate or nitro-organic compounds were produced during this study by reacting lead-impregnated rubber gloves with concentrated nitric acid and subjecting the material to elevated temperatures (50 – 100° Celsius) under controlled laboratory conditions. The RFP wastes were not subjected to the necessary conditions (e.g., elevated temperatures) at the time of generation. Although leaded gloves from RFP did come in contact with nitric acid, mere contact with nitric acid does not constitute the criteria for forming shock sensitive and/or thermally unstable compounds. This information in conjunction with the fact that the RFP wastes have been buried in a pit that on two known occasions has undergone flooding, and the waste have been subjected to outside environmental conditions for more than 40 years is the basis for determining that the waste is not reactive (References ID-C102, RF-C028, RF-C260, and RF-P090).

Small quantities of explosives were used at RFP; however, they were strictly regulated and controlled and would not have been placed in drums for burial (Reference RF-C416 and RF-P040). Explosives, such as black powder, blasting caps and Primacord, were used at several INL facilities. No information has been found that indicates how explosives from INL generators were managed (References ID-P097, PER-P009, PER-P039, PER-P040, PER-P043, and PER-P044). Explosive chemicals, such as hydrazine and picric acid, have been identified in several documents (References ID-P109, PER-P006, RF-C227, RF-P040, RF-P085, and RF-P260). Small quantities of picric acid were disposed in the SDA although the specific location cannot be verified (Reference ID-P109). Prior to 1970, chemicals that were no longer needed were included in contaminated RFP waste for burial (References RF-C400, RF-C401, RF-C402, and RF-U026). Although chemical names are not specified, explosive chemicals such as picric acid used at RFP were burned on site and would not have been placed in drums for burial (Reference RF-C416).

Because the waste in the retrieval area was buried more than 40 years ago, and there have previously been floods in the SDA, the waste containers may show various degrees of degradation, especially those containers that were not stacked (Reference ID-P109). As a result, the potential risk for any chemical reaction is expected to be significantly reduced. Therefore, EPA HWN D003 is not assigned. During retrieval and packaging operations, the waste will be observed for any unanticipated reaction (e.g., bubbling, smoking, smoldering, sparking). In addition, potentially reactive materials (e.g., un-oxidized metal turnings, bottles containing liquid or solid materials) will be segregated from the waste streams if encountered during VE. Further evaluation of the waste will be required if any of these characteristics are observed (References ID-P122, ID-P253, ID-P-269, ID-P423, ID-P427, and ID-P431).

Based on CCP and CH2M-WG Idaho waste management practices, the materials contained in waste streams ID-SDA-DEBRIS, ID-SDA-SLUDGE and ID-SDA-SOIL do not exhibit the characteristics of ignitability (D001), corrosivity (D002), or reactivity (D003) as defined in 20 NMAC 4.1.200, which incorporates by reference 40 CFR 261.21, 261.22, and 261.23, respectively (References 16 and 17). VE will also be used to verify the absence of prohibited materials.

5.6.6 Polychlorinated Biphenyls

Sources of PCBs in waste shipped to Idaho for burial may include (References ID-P103, ID-P105, RF-C058, RF-C405, RF-P040, RF-P041, RF-P047, RF-P090, RF-P181, and RF-U401):

- Oils containing PCBs solidified in organic setups in RFP Building 774. Oils originated from transformers, oil-filled electrical equipment, vacuum pumps, and hydraulic equipment from RFP. Organic setups are identified as 74A- or 743-series waste.
- Drums that contained these oils were emptied, and the empty drums were shipped to Idaho for burial in 1967 and 1968. Oil-Dri® was added to the drum to absorb residual liquid prior to shipment. These drums would have been categorized as Type V, Noncombustible Waste (746-series waste).
- Fluorescent light ballasts. Based on the disposal dates of waste in the retrieval area, ballasts will contain a small amount of PCB fluid. Ballasts would have been categorized as Type V, Noncombustible Waste.
- Painted surfaces (e.g., gloveboxes). Based on the disposal dates of waste in the retrieval area, paints will contain PCBs. Waste with painted surfaces would have been categorized as Type V, Noncombustible Waste.
- Some combustible rags and wipes may have been used to cleanup spills of hydraulic and transformer fluids contaminated with PCBs (RF-C045, RF-U401). Combustibles would have been categorized as Type I waste.

Organic setups are the primary source of PCBs in the retrieval area. This waste contains greater than 50 parts-per-million (ppm) PCBs and is therefore regulated by the Toxic Substances Control Act (TSCA). The concentration of PCBs in this waste is based on analysis of 41 samples of organic setups waste from the INL 3,100 m^3 Program and analysis of 87 samples from the Pit 9 retrieval project. The organic setups from the INL 3,100 m^3 Program that were sampled and analyzed for PCBs were originally packaged from 1981 to 1986. Because the organic setups in the retrieval area were disposed from 1966 to 1968, the 3,100 m^3 data may not be representative of the buried waste. Of the 41 samples, three contain greater than 50 ppm PCBs with the maximum being 294 ppm. The samples from the Pit 9 retrieval project (GEM Project) were a composite of soil and sludge waste and were homogenized before analysis, and therefore, may not be representative of the organic setups waste. Of the 87 samples, 15 contain 50 ppm or

greater PCBs (Aroclor-1254 only) with the maximum being 270 ppm (References RF-U1282 and RF-U405). Newly packaged drums determined by VE to contain any amount of organic setups waste are managed as a TSCA waste under 40 CFR 761, *Polychlrinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions*, and in accordance with the PCB disposal requirements in the WIPP-WAC (References 5 and 18).

Debris waste items containing PCBs (e.g., empty oil drums with absorbent added to the bottom of the drum, fluorescent light ballasts, painted items, and wipes/rags contaminated with PCB oils or sludges) are not targeted waste but small amounts may be inadvertently commingled with targeted waste. Newly packaged containers will be evaluated on a case-by-case basis to determine the presence of these PCB items.

Several soil samples have been collected from the ARP-I area and analyzed for PCBs. Only one sample contained PCBs at 0.84 ppm. PCBs were not detected in the remaining samples. However, analysis of soil samples from ARP-II for waste stream ID-SDA-SOIL detected PCB congeners in soil that did not contain organic setups waste. The PCB congeners were detected as TICs from SVOC analysis. Considering this data, newly packaged drums determined by VE to contain 50 percent or greater by volume soil, waste stream ID-SDA-SOIL, are managed as a TSCA waste under 40 CFR 761 and in accordance with the PCB disposal requirements of the WIPP-WAC (References 5, 18, ID-C238, and ID-U310).

5.7 Prohibited Items

As described in Section 5.6.5, prohibited items potentially contained in the waste buried in the retrieval area include unabsorbed liquids, compressed gases, ignitable roaster oxides, and bottles of chemical reagents (References ANL-W-P010, ARA-U007, ID-U238, RF-C045, RF-C055, RF-C060, RF-C123, RF-C129, RF-C159, RF-C400, RF-C401, RF-C402, RF-P047, RF-P106, RF-P114, RF-P562, RF-U115, RF-U123, RF-U124, RF-U125, RF-U174, RF-U400, and RF-U402).

VE is performed to ensure prohibited items are not shipped to WIPP. The retrieved waste is placed in a tray and brought to the drum packaging stations within an airlock where it is visually examined for prohibited items. Un-containerized liquids are absorbed using soil and other suitable absorbents, and any other prohibited items are removed. Bottles of chemicals are removed from the waste during retrieval and packaging operations. Compressed gases (e.g., un-punctured aerosol cans or compressed gas cylinders) are removed from the waste or vented during packaging activities. To ensure retrieved roaster oxide will not ignite, the material is raked multiple times after placement in the waste tray and unoxidized portions are removed to ensure the waste is not ignitable. A VE record is generated to document the absence of prohibited items (References ID-P109, ID-P122, ID-P250, ID-P253, ID-P269, ID-P423, ID-P427, ID-P431, and ID-U305).

In preparing previously packaged sludge drums from Waste Stream ID-SDA-SLUDGE for solid sample analysis an evaluation conducted identified residual liquid in the drum void

space. The liquid was noted as being between the tray liner and the 90-mil polyethylene drum liner. The liquid was not present during visual examination and packaging in the drum packaging station, and was determined to be the result of redistribution or settling out of liquid from the sludge after packaging. Because a similar issue was found to potentially exist at LANL, CCP has opted to adopt a conservative approach to prevent this potential settling and accumulation of liquid in the void space of sludge drums. The packaging process has been modified to ensure that the void space within a drum is minimized by placing the waste directly in the rigid liner of the drum after visual examination. The bottom discharge tray liners, which are used for waste retrieval, are removed from the waste during packaging to allow the sludge material to minimize void space in the bottom of the drum. In addition, a granular absorbent is added to the top of the waste during VE in the drum packaging station (Reference ID-D003, ID-P122, ID-P269, ID-P273, ID-P276, ID-P423, ID-P427, ID-P431, and ID-U330).

Drums from Waste Stream ID-SDA-SLUDGE packaged with a tray liner and/or without absorbent will be repackaged to meet the new packaging configuration. The repackaging will involve removal of the waste and tray liner, replacement of the sludge directly into the rigid liner, and the addition of granular absorbent, such as the clay based absorbent Oil Dri®. By repackaging the waste in this manner all of the ID-SDA-SLUDGE drums will have the same packaging configuration, with the only difference being that the repackaged drums will have the tray liner rolled up and placed on the top of the waste. Repackaged ID-SDA-SLUDGE is characterized by radiography. The original VE data will then be used in conjunction with radiography to estimate the organic and inorganic sludge composition of the repackaged waste. In addition, secondary waste consisting of small quantities of sludge contaminated debris such as tray liners, plastic sheeting, rubber bands, glovebox gloves, and metal tools are generated from this operation. These waste containers are added to the debris waste stream, ID-SDA-DEBRIS, and are characterized by radiography (References ID-D003, ID-P122, ID-P269, ID-P373, and ID-U356).

Some waste from the INL facilities may have a dose rate greater than or equal to 200 millirems per hour at the surface of the waste. However, payload containers that exceed this dose rate will be placed back in the pit or repackaged to meet the WIPP-WAC.

5.8 Waste Packaging

Retrieved waste intermixed with soil is placed in a tray fitted with a liner. The tray is brought to the drum packaging stations within an airlock where the waste is visually examined for the targeted waste forms as well as prohibited items. Prohibited items and trays containing only non-targeted wastes are segregated from the waste streams described in this report. Original packaging was breached during retrieval and the breach is confirmed during VE to ensure that there are no additional layers of confinement in the final waste package. The tray liner containing the waste is hoisted out of the tray, as shown in Figure 9, and placed into a 55-gallon drum or SWB fitted with 90-mil polyethylene liner and a filtered liner bag. For ID-SDA-SLUDGE drums, the tray liner is removed during packaging. If the tray liner is a bottom discharge liner, the liner discharge port is opened and the waste is released directly into the drum. The tray liner is then removed from the

drum (References ID-D005, ID-D006, ID-P109, ID-P122, ID-P269, ID-P423, ID-P427, ID-P431, and ID-U305).

For repackaged sludge drums, the tray liners are removed and either rolled and placed on top of the repackaged waste or packaged separately with secondary waste. Granular absorbent, such as Oil Dri®, is added to the waste during packaging. The filtered liner bag is sealed with tape and is the only layer of confinement. The 90-mil rigid liner does not include a lid. The 55-gallon drum is weighed, and a vented lid is placed onto the container. A VE record is generated to document relevant information related to the packaging configuration. Secondary waste generated during this process, consisting of small quantities of sludge-contaminated debris such as tray liners, plastic sheeting, rubber bands, glovebox gloves, HEPA filters, duct work, and metal tools, are packaged in 55-gallon drums and SWBs as part of debris waste stream ID-SDA-DEBRIS. The 55-gallon drums are fitted with a 90-mil polyethylene liner and a filtered liner bag. No liner is used in the SWBs and the waste is packaged in polyethylene bags. Granular absorbent, such as Oil Dri® or SP-400®, is added to the waste during packaging, as needed. These containers are then characterized by radiography (References ID-C101, ID-P276, ID-P373, ID-P424, ID-U356, ID-U382, ID-U383, and INTEC-P213).

For facility filters packaged in SWBs, the filters are not brought into the DPS prior to packaging. The SWBs containing facility filters are transported to the Advanced Mixed Waste Treatment Project (AMWTP) for Real Time Radiography (RTR) to verify contents and layers of confinement, and an RTR record will be generated. If an SWB containing facility filters is found to include prohibited items, the container is returned for processing to remove the prohibited items through the DPS. Facility filters that are packaged in 55-gallon drums are sized in the retrieval area and then visually examined and processed through the DPS in the same manner as other waste that is exhumed from the ARP retrieval areas (Reference ID-P420).

Payload containers (e.g., individual drums, standard waste boxes, and 10-drum overpacks) packaged as described above will then be assembled for transfer to WIPP (References ID-P109, ID-P122, ID-P269, ID-P276, ID-P420, ID-P423, ID-P427, ID-P431, and ID-U305).

6.0 Supplemental Waste Stream Information

Numerous sources of supplemental AK information were collected for waste buried in the retrieval area. These sources are referenced throughout this document and listed in Section 8.0. The supplemental AK sources are also categorized on the Attachment 1 checklist for each waste stream created in accordance with CCP-TP-005 (Reference 1) and include the following types:

- Standard operating procedures
- Safety analysis reports
- Waste packaging and treatment logbooks
- Research and project reports
- Site databases (e.g., WILD)
- Correspondence with site personnel
- Analytical data
- Material Safety Data Sheets

7.0 Container Specific Information

In accordance with procedure CCP-TP-005 (Reference 1), a *CCP Waste Containers List* (Attachment 8 of the procedure) is completed and maintained as a quality record for waste tracking purposes. Information tracked includes the container identification number, the waste stream number, and closure date for each container.

8.0 REFERENCES

1. CCP-TP-005, *CCP Acceptable Knowledge Documentation*, Carlsbad, New Mexico, Washington TRU Solutions, LLC.

2. *Waste Isolation Pilot Plant Hazardous Waste Facility Permit,* New Mexico Environment Department, Santa Fe, New Mexico

3. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*, Carlsbad, New Mexico, Washington TRU Solutions, LLC.

4. DOE/LLW-217, *DOE Waste Treatability Group Guidance*, Idaho Falls, Idaho, INEEL-Lockheed Idaho Technologies

5. DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant*, Carlsbad, New Mexico, U.S. Department of Energy

6. *Interim Guidance on Ensuring that Waste Qualifies for Disposal at the Waste Isolation Pilot Plant*, U.S. DOE Carlsbad, 1997

7. Public Law 102-579, *The Waste Isolation Pilot Plant Land Withdrawal Act* (as amended)

8. 42 U.S.C. 10101, *Nuclear Waste Policy Act of 1982*

9. CCP-PO-002, *CCP Transuranic Waste Certification Plan*, Carlsbad, New Mexico, Washington TRU Solutions, LLC.

10. CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)*, Carlsbad, New Mexico, Washington TRU Solutions, LLC.

11. ICP/EXT-04-00248, *Historical Background Report for Rocky Flats Plant Waste Shipped to the INEEL and Buried in the SDA from 1954 through 1971, Revision 1.* Idaho Falls, Idaho. North Wind, Inc., March 2005

12. DOE/TRU-10-3425, *Annual Transuranic Waste Inventory Report* – 2010, Carlsbad, New Mexico, U.S. DOE Carlsbad

13. DOE/WIPP 01-3194, *CH-TRU Waste Content Codes* (CH-TRUCON), U.S. Department of Energy

14. DOE M 435.1-1, *Radioactive Waste Management Manual,* U.S. Department of Energy

15. CCP-QP-008, *CCP Records Management*, Carlsbad, New Mexico, Washington TRU Soluitons, LLC.

16. Title 20 NMAC 4.1.200, *Adoption of 40 CFR Part 261*

17. 40 CFR Part 261, *Identification and Listing of Hazardous Waste*, U.S. EPA

18. 40 CFR, 761, *Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions*, U.S. EPA

AK Source Documents

Source Document Number	Title	Document Number	Revision	Date
ANL-W-C001	Radioactive Waste Assessment	ANL-5820	N/A	12/12/1996
ANL-W-C002	RSWF Personnel's Comments on INEEL/EXT-02-01385, Revision A and Jeff Snook to Greg Bass Memo dated December 3, 2002	NA	N/A	03/17/2003
ANL-W-P001	Description and Proposed Operation of the Fuel Cycle Facility for the Second Experimental Breeder Reactor (EBR-II)	ANL-6605	N/A	04/01/1963
ANL-W-P002	Fabrication of the EBR-II, Core-1 Fuel Pins	ANL-6274	N/A	06/01/1962
ANL-W-P003	Estimated Radiological Inventory Sent from the Argonne National Laboratory-West to the Subsurface Disposal Area, from 1952 through 1993	INEEL/EXT-02-01385	Rev. 1	11/2005
ANL-W-P005	Radioactive Waste Disposal	ANL-6233	N/A	09/01/1960
ANL-W-P006	A Survey of NRTS Waste Management Practices, Volume II	ICP-1042-II	N/A	09/1971
ANL-W-P008	Radioactive Waste Disposal Data for the National Reactor Testing Station Idaho	IDO-12040 Supplement 2	N/A	11/01/1967
ANL-W-P009	Subsurface Disposal Area (SDA) Waste Identification (1952-1970 Emphasis)	EGG-WM-8727	Rev. 1	10/01/1989
ANL-W-P010	A Brief Analysis and Description of Wastes in the Subsurface Disposal Area of the Radioactive Waste Management Complex at INEEL.	EGG-WTD-9438	Rev. 1	08/01/1991
ANL-W-U003	ANL-W Disposals 1960-1970, RWMIS	NA	N/A	N/A
ARA-P001	Additional Analysis of the SL-1 Excursion, Final Report of Progress, July through October 1962	IDO-19313	N/A	11/21/1962
ARA-P002	Army Gas-Cooled Reactor Systems Program, ML-1-II Fuel Element Design Report	AGN TM-415, N/A	N/A	01/01/1966
ARA-P003	A Summary Report on ML-1 Fuel Element Development In-Pile Test History	IDO-10040	N/A	06/01/1964
ARA-P004	Final Disassembly and Examination of the ML-1 Reactor Core	IDO-17190	N/A	01/01/1966
ARA-P006	Full Power and Limited Endurance Test of the ML-1 Nuclear Power Plant (ANSOP 16625a)	IDO-28634	N/A	09/01/1964
ARA-P007	Army Gas-Cooled Reactor Systems Program – In-Pile Test of Prototype ML-1 Fuel Elements	IDO-28616	N/A	06/01/1964
ARA-P008	Final Environmental Impact Statement	ERDA-1536	N/A	09/01/1977

Source Document Number	Title	Document Number	Revision	Date
ARA-P009	Abbreviated Sampling and Analysis Plan for the Characterization of Underground Storage Tanks	EGG-WM-9457	Rev. 4	03/01/1994
ARA-P010	Summary Report for the Initial Characterization of Potential Waste Sources at ARA-I and ARA-II (COCA Units ARA-03, ARA-07, ARA-08, ARA-09, ARA-10, ARA-11, and ARA-19)	EGG-WM-10182	Rev. 0	04/01/1992
ARA-P013	Verification and Updating of the Radioactive Waste Management Information System for the Inactive TRU and Non-TRU Pits and Trenches at the Radioactive Waste Management Complex Subsurface Disposal Area (Volumes I and II)	EGG-ER-10519	Rev. 0	11/01/1992
ARA-P014	Army Gas-Cooled Reactor Systems Program – Final Hazards Summary Report for the ML-1 Nuclear Power Plant	IDO-28560, Supplement III	N/A	05/01/1964
ARA-P015	Army Gas-Cooled Reactor Systems Program – ML-1 Hazards Summary Report	IDO-28560, Supplement IV	N/A	01/01/1964
ARA-P018	Idaho Engineering and Environmental Laboratory Hazardous Waste Determination Record for the ARA-I Building ARA-626 Hot Cells 1 and 2 Concrete Floors and Soils Beneath the Floors	10805	N/A	04/22/1999
ARA-P019	Limited Scope and Hazard Characterization Plan for Decontamination and Dismantlement of the ARA-I Facility	INEL/INT-97-00438	Rev. 0	05/01/1997
ARA-P026	SL-1 Reactor Accident on January 3, 1961	IDO-19300	N/A	05/13/1961
ARA-U001	Sampling and Analysis Results for the Auxiliary Reactor Area-III Facility	EGG-WM-9507	N/A	02/01/1999
ARA-U002	Characterization and Decision Analysis for the Auxiliary Reactor Area – II	PT-WM-84-010	N/A	09/01/1985
ARA-U003	Installation Assessment Report for EG&G Idaho, Inc., Operations at the Idaho National Engineering Laboratory	EGG-WM-6875	N/A	01/01/1986
ARA-U004	Decontamination and Decommissioning Plan for Auxiliary Reactor Area II	WM-ERP-92-016	Rev. 1	05/01/1993
ARA-U006	Radioactive Waste Management Information System Solid Master Database List for 1954 to 1970, BGP04 for ARA	P61SHO90	N/A	Run Date 9/24/92

Source Document Number	Title	Document Number	Revision	Date
ARA-U007	Radioactive Waste Management Information System Solid Master Database List for 1954 to 1970, BGP04 for ARA	P61SHO90	N/A	Run Date 9/24/92
CFA-P001	INEL Environmental Characterization Report, Volumes I-III	EGG-NPR-6688	N/A	09/01/1984 to 01/01/1985
CFA-U001	Remedial Action/Feasibility Study, Workplan of the Subsurface Disposal Area, Radioactive Waste Management Complex at the INEL	EGG-WM-8776	DRAFT	12/01/1989
CFA-U002	Sampling and Analysis Plan for the CFA French Drains (COCA Units CFA-071/CFA-12)	EGG-WM-9089	Rev. 1	08/01/1990
CFA-U003	Closure Plan for the Central Facilities Area French Drain (COCA Unit CFA-07)	EGG-WM-9494	Rev. 0	03/01/1991
CFA-U004	Closure Plan for the Central Facilities Area French Drain (COCA Unit CFA-12)	EGG-WM-9495	Rev. 0	03/01/1991
CFA-U005	Radioactive Waste Management Information System Solid Master Database List for 1954 to 1970, BGT41 for CFA	P61SHO90	N/A	Run Date 9/24/92
CFA-U007	Radioactive Waste Management Information System Solid Master Database List for 1954 to 1970, BGT41 for CFA	P61SHO90	N/A	Run Date 9/24/92
ID-C101	Retrieval Area Chemical Evaluation and RCRA Hazards Analysis	NA	Rev. 3	02/24/2011
ID-C102	E-mail from Ken Gilbert to Tim Venneman. Leaded Gloves and Nitric Acid.	N/A	N/A	9/24/2004
ID-C103	E-mail from Dale Wells to Lisa Frost "CF-690 vs. CF-646"	N/A	N/A	04/20/2005
ID-C105	E-mail Correspondence from Joe Saye to Lisa Frost "WIR-Debris from CPP-601"	N/A	N/A	03/25/2005
ID-C106	Memorandum from Jeff Harrison to CCP Records Center. Re: Change to Waste Stream Number.	N/A	N/A	02/27/2006
ID-C107	Discussions with Qualified VE Operators and Retrieval Specialists Concerning the Types of Sludge Sent to the Drum Packaging Stations for Visual Examination	N/A	N/A	05/09/2006
ID-C108	Memorandum from Scott Smith to CCP Records Center. Re: Revised ARP Waste Stream Volume Projections and Statistical Selections	N/A	N/A	10/02/2008

Source Document Number	Title	Document Number	Revision	Date
ID-C109	Record of Communication, Interview with Abraham Romo, Re: Accelerated Retrieval Project (ARP) Drum Packaging Station (DPS) and Visual Examination (VE) Operations	N/A	N/A	06/02/2008
ID-C112	Results of AK Documentation Review and Response to the May 24, 2008 Observer Inquiry Related to Hazardous Waste Numbers Assigned to INL SDA Waste Streams	N/A	N/A	07/16/2008
ID-C113	Memo to CCP Records, re: Contents of GEM Project Waste Drums	N/A	N/A	11/16/2010
ID-C114	Email from Lisa Frost to Scott Smith and Carrie Johnson, re: Pit 9 & GEM & Lab Waste	N/A	N/A	03/11/2010
ID-C201	Multi-Source Leachate at Pit 4 and the Subsurface Disposal Area	N/A	N/A	04/28/2005
ID-C202	Compilation of emails concerning spills in the Accelerated Retrieval Area	N/A	N/A	2/08/2005 to 4/11/2005
ID-C204	E-mail Correspondence from Hopi Salomon to Douglas Parker. Subject: SDA Waste Retrieval Volume Projection Backup	N/A	N/A	03/01/2006
ID-C223	E-mail to Thomas Johnsen, Charles Stepinski, Abraham Romo, Barbara Broomfield, et al, re: Approval to Resume Shipments of ARP Debris Drums	N/A	N/A	06/01/2007
ID-C238	Emails between Brent Burton and Daryl Koch, et al, re: WAG 7 Agency Teleconference Meeting Summary for May 4, 2009	N/A	N/A	05/13/2009
ID-D001	Acceptable Knowledge Source Document Discrepancy Resolution, Radionuclide Content	N/A	N/A	04/21/2005
ID-D002	Discrepancy Report and Resolution Concerning Prevalent Radionuclides for Waste Streams ID-SDA-SLUDGE, ID-SDA-SOIL, and ID-SDA-DEBRIS	N/A	N/A	4/12/2006
ID-D003	Discrepancy Resolution Concerning Liquid Formation in ID-SDA-SLUDGE Following Visual Examination	N/A	N/A	1/16/2008
ID-D004	Discrepancy Resolution Concerning the Packaging of Sludge Material in Cardboard Ice Cream Carton-like Containers as Targeted Waste	N/A	N/A	9/10/2008
ID-D005	Discrepancy Resolution Concerning the Final Packaging Configuration of Sludge Waste Stream Containers	N/A	Rev. 2	9/6/2011

Source Document Number	Title	Document Number	Revision	Date
ID-D006	Discrepancy Resolution Concerning the Final Packaging Configuration of Secondary Waste Debris Waste Stream Containers	N/A	N/A	3/9/2011
ID-P088	Verification and Updating of the Radioactive Waste Management Information System for the Inactive TRU and Non-TRU Pits and Trenches at the Radioactive Waste Management Complex Subsurface Disposal Area (Volume I and II)	EGG-ER-10519	Rev. 0	11/01/1992
ID-P091	A Comprehensive Inventory of Radiological and Nonradiological Contaminants in Waste Buried in the Subsurface Disposal Area of the INEL RWMC During the Years 1952-1983 (Volumes 1 through 5)	INEL-95/0310 (formerly EGG-WM-10903)	Rev. 1	06/01/1994 to 08/01/1995
ID-P092	History of Buried Transuranic Waste at INEL	WPM 77-3	N/A	03/01/1977
ID-P093	Radioactive Waste Disposal Data for the National Reactor Testing Station Idaho	IDO-12040, Supplement No. 3	N/A	10/01/1968
ID-P094	Radioactive Waste Disposal Data for the National Reactor Testing Station Idaho	IDO-12040, Supplement No. 2	N/A	11/01/1967
ID-P095	Analysis of the Low-Level Waste Radionuclide Inventory for the Radioactive Waste Management Complex Performance Assessment	EGG-WM-9857	Rev. 1	06/01/1992
ID-P097	Instrument Development Branch Annual Report, 1965	IDO-17211	N/A	09/01/1966
ID-P100	Conceptual Design Report for the Accelerated Retrieval Project at Area G of Pit 4 Within the Radioactive Waste Management Complex	ICP/EXT-03-00121	N/A	01/27/2004
ID-P101	Engineering Evaluation/Cost Analysis for the Accelerated Retrieval of a Designated Portion of Pit 4	DOE/NE-ID-11146	N/A	04/01/2004
ID-P102	Accelerated Retrieval Concept Container Analysis	EDF-4388	Rev. 0	12/10/2003
ID-P103	Excavation Plan and Sequential Process Narrative for the Accelerated Retrieval Project for a Described Area within Pit 4	ICP/EXT-04-00283	Rev. 0	04/01/2004
ID-P104	Safety Analysis Report for the Accelerated Retrieval Project at Area G of Pit 4 within the Radioactive Waste Management Complex	SAR-215	Rev. 0	04/15/2004
ID-P105	Waste Categories and Characteristics for the Accelerated Retrieval Project for a Described Area within Pit 4	EDF-4591	Rev. 0	04/21/2004

Source Document Number	Title	Document Number	Revision	Date
ID-P106	Drum Packaging Station for the Accelerated Retrieval Project for a Described Area within Pit 4	SPC-552	Rev. 0	06/15/2004
ID-P107	Technical Safety Requirements for the Radioactive Waste Management Complex	TSR-4	Rev. 1	07/26/2004
ID-P108	Safety Analysis Report for the Radioactive Waste Management Complex	SAR-4	Rev. 7	07/26/2004
ID-P109	Removal Action Plan for the Accelerated Retrieval Project I, II, and III	DOE/NE-ID-11178	Draft B, Rev. 0, Rev. 1, Rev. 2, Rev. 4	08/2004, 10/2004, 08/2005, 08/2006, 10/2008
ID-P110	Air Emissions Evaluation for the OU 7-10 Glovebox Excavator Method Project	EDF-2322	Rev. 1	3/22/2004
ID-P111	Excerpt from Separations Monthly Report for August 1984. Savannah River Plant	DPSP84-14-B SEP	N/A	8/1984
ID-P112	Piqua, Ohio, Decommissioned Reactor Site Long- Term Surveillance and Maintenance Program Fact Sheet; Printout from Nukeworker.com: Piqua	N/A	N/A	07/2001, 10/07/2004
ID-P113	Hallam, Nebraska, Decomissioned Reactor Site Long-Term Surveillance and Maintenance Program Fact Sheet; Printout from Nukeworker.com: Hallam	N/A	N/A	07/2001, 10/07/2004
ID-P114	Santa Susana Field Laboratory (SSFL), CA, printout from be be http://c2d2.eml.doe.gov/index.cfm?target=docs.cfm&locat=54 .	N/A	N/A	NA
ID-P115	Final Documentation for Operable Unit 5-12 No Action Sites	DOE/ID-11058	Rev. 0	09/01/2003
ID-P117	Printout from Nukeworker.com: Shippingport	N/A	N/A	05/04/2005
ID-P118	ORAU Team Dose Reconstruction Project for NIOSH, Idaho National Engineering and Environmental Laboratory – Site Description	ORAUT-TKBS-0007-2	Rev. 1	07/28/2004
ID-P119	Criticality Safety Evaluation for the Accelerated Retrieval and Targeted Waste Removal and Disposition Projects (ARP/T-RAD) within the SDA at RWMC	EDF-4494	Rev. 3	11/01/2005
ID-P121	Proving the Principle	DOE/ID-10799	N/A	2000

Source Document Number	Title	Document Number	Revision	Date
ID-P122	AR Project – Drum Packaging System	TPR-7415	Rev. 46, Rev. 36, Rev. 35, Rev. 34, Rev. 31, Rev. 30, Rev. 29, Rev. 20, Rev. 16	07/24/2008, 11/16/2007, 11/09/2007, 10/03/2007, 09/14/2007, 08/07/2007, 07/18/2007, 8/24/2006, 04/12/2006
ID-P124	Agreement to Implement; U.S. District Court Order Dated May 25, 2006	N/A	N/A	05/25/2006
ID-P178	Waste Inventory of the Described Area within Pit 4 for the Accelerated Retrieval Project within the Radioactive Waste Management Complex	EDF-4478	Rev. 3	04/28/2005
ID-P200	Hazardous Inorganic Content of Pit 9	BWP-ISV-003	Rev. 0	1/24/1989
ID-P214	Supplement to Evaluation of Naval Reactors Facility Radioactive Waste Disposed of at the Radioactive Waste Management Complex from 1953–1999	ICP-EXT-05-00833	Rev. 0	04/01/2005
ID-P215	Area-Based Approach to Identify Type IV Waste for the Accelerated Retrieval Project I	EDF-5601	Rev. 0	05/03/2005
ID-P216	Evaluation of Potential Visual Discriminators for Targeted Rocky Flats Plant Sludge Waste Stream	EDF-5720	Rev. 0	05/16/2005
ID-P218	Engineering Evaluation/Cost Analysis for the Accelerated Retrieval Project II	DOE/NE-ID-11223	Rev. 0	03/01/2005
ID-P221	Waste Inventory Estimate for the Accelerated Retrieval Project II	EDF-5447	Rev. 1	05/31/2005
ID-P237	Waste Information and Location Database for the OU 7-13/14 Project	ICP/EXT-04-00271	Rev. 0	11/2005
ID-P239	SDA Targeted and Non-Targeted Waste Identification Operator Guide	GDE-318	Rev. 5, Rev. 3, Rev. 2, Rev. 1, Rev. 0	3/28/11, 10/09/08, 1/09/08, 8/21/06, 11/23/04
ID-P242	Independent Investigation Report of the November 2005 Drum Fire at the Idaho National Laboratory Site	RPT-190	Rev. 0	3/7/2006
ID-P249	Excavation Plan for the AR Project (WMF-1612) – Pits 4 and 6 Retrieval Area (ARP II)	EDF-6974	Rev. 0	06/13/2006
ID-P250	Justification for Continued Operation for SAR-4, Addendum K, and TSR-4: Accelerated Retrieval Project Continued Retrieval Operations	JCO-3	Rev. 1	05/03/2006

Source Document Number	Title	Document Number	Revision	Date
ID-P253	ARP – Waste Retrieval	TPR-7420	Rev. 53, Rev. 24, Rev. 22	11/15/2011, 03/28/2011, 08/28/2006, 06/13/2006
ID-P269	AR Project II – Drum Packaging System	TPR-7415-2	Rev. 6, Rev. 3	08/28/2007, 06/20/2007
ID-P271	Engineering Design File, Assessment of Residual Liquid Formation in Waste Soil Drums from the Subsurface Disposal Area	EDF-8180	Rev. 0	06/21/2007
ID-P273	Engineering Design File, Preliminary Evaluation of the Occurrence of Residual Liquid in AR Project Waste Drums	EDF-8170	Rev. 0	06/28/2007
ID-P275	Engineering Design File, Waste Inventory Estimate for the Accelerated Retrieval Project III	EDF-7884	Rev. 0	04/11/2007
ID-P276	Material Safety Data Sheet for Oil Dri Floor Absorbent	N/A	N/A	01/03/2005
ID-P288	Material Safety Data Sheet for Durasoil	N/A	N/A	3/16/2007
ID-P368	Engineering Evaluation/Cost Analysis for the Accelerated Retrieval Project III in the Subsurface Disposal Area	DOE/ID-11349	Rev. 0	06/18/2008
ID-P369	Health and Safety Plan for the Accelerated Retrieval Project	ICP/EXT-04-00209	Rev. 18, Rev. 14, Rev. 13, Rev. 11	11/07/2011 11/2009, 10/2009, 06/2008
ID-P373	Packaging Correction of ARP Waste Containers	TPR-7825	Rev. 6	11/25/2008
ID-P377	Waste Management Plan for the OU 7-10 Glovebox Excavator Method Project	INEEL/EXT-02-00767	Rev. 1	09/2003
ID-P380	Health and Safety Plan for OU 7-10 Glovebox Excavator Method Project Operations	INEEL/EXT-02-01117	Rev. 7	03/2004
ID-P384	Criticality Safety Evaluation for Accelerated Retrieval (AR) Project Waste Retrieval and Packaging	RPT-436	Rev. 1	07/2008
ID-P396	Engineering Design File, Excavation Plan for the Accelerated Retrieval Project (WMF-1615) – Pit 5 Retrieval Area (ARP- IV)	EDF-9385	Rev. 0	11/11/2009
ID-P398	Results of Oxidizing Solids Testing	EMRTC Report FR 10-13	N/A	4/12/2010
ID-P399	Idaho Completion Project's Accelerated Retrieval Project Overview Of The Pit 4 Non-Time Critical Removal Action	ICP/CON-04-00598 Preprint	N/A	2/27 – 03/03/2005
ID-P400	Allowable Nitrate Salt Concentration in ARP Waste	EDF-8723	Rev. 2, Rev. 1	6/30/2010, 07/03/2010

Source Document Number	Title	Document Number	Revision	Date
ID-P402	CH2M-WG Idaho Process Knowledge Summary Report for CH TRU Waste and Mixed Low-Level Waste Generated at INTEC and RWMC Analytical Laboratories in Support of AMWTP Sampling Activities, Waste Matrix Codes S5490 and S3900	RPT-670	Rev.2	1/2010
ID-P403	Waste Disposition Plan for ICP Laboratory Activities	PLN-3007	Rev. 0	2/23/2009
ID-P404	Analytical Laboratory Waste Management	ACLP-0.040	Rev. 9	8/24/2009
ID-P406	CCP Determination of Mercury by CVAA for TRU Waste Characterization	CCP-TP-181	Rev. 0	5/2/2007
ID-P407	CCP Determination of Metals by ICP-AES for TRU Waste Characterization	CCP-TP-182	Rev. 1	1/26/2009
ID-P408	CCP Microwave Assisted Digestion of Homogeneous Solids and Soil/Gravel	CCP-TP-183	Rev. 0	5/2/2007
ID-P-409	CCP Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry	CCP-TP-184	Rev. 0	5/2/2007
ID-P410	CCP Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry	CCP-TP-185	Rev. 1	11/18/2008
ID-P411	CCP Determination of Nonhalogenated Volatile Organics by Gas Chromatography	CCP-TP-189	Rev. 1	8/22/2007
ID-P412	CCP Sample Preparation of Semivolatile Organic Compounds	CCP-TP-187	Rev. 1	11/18/2008
ID-P420	ARP – Ventilation Exhaust Filter Replacement	TPR-7842	Rev. 5, Rev. 3	10/31/2011 10/27/2010
ID-P421	Excavation Plan for the Accelerated Retrieval Project (WMF-1618)–Pit 4 Retrieval Area (ARP VI)	EDF-9873	Rev. 0	12/21/2010
ID-P422	Excavation Plan for the Accelerated Retireval Project (WMF-1617) – Pit 9 Retrieval Area (ARP V)	EDF-9751	Rev. 0	08/04/2010
ID-P423	ARP VII – Drum Packaging Station	TPR-7415-7	Rev. 0	11/15/2011
ID-P424	Management Self-Assessment Plan for ARP Sludge Contact Handled Transuranic (CH-TRU) Waste Repackaging in CPP-653	PLN-2780	Rev. 0	04/09/2008
ID-P426	Excavation Plan for the Accelerated Retrieval Project (WMF-1619) – Pit 10 Retrieval Area (ARP VII)	EDF-10127	Rev. 0	10/25/2011
ID-P427	ARP V – Drum Packaging Station	TPR-7415-5	Rev. 1	11/04/2010

Source Document Number	Title	Document Number	Revision	Date
ID-P431	ARP VII – Waste Retrieval	TPR-7420-7	Rev. 0	11/15/2011
ID-U100	Waste Disposal Request and Authorization Forms, INL Generators to Buffer Areas of Pit 4, Area 1, Phase I.	N/A	N/A	04/17/1964
ID-U101	Beryllium Shipments in ARP-I Retrieval Area.	N/A	Rev. 1	01/13/2006
ID-U103	Waste Disposal Request and Authorization Forms, Idaho Generators to T-RAD Project Area	N/A	N/A	02/28/1963 to 09/22/1967, not inclusive
ID-U104	Beryllium Shipments in T-RAD Retrieval Area	N/A	N/A	01/13/06
ID-U106	ARP Roaster Oxide DOT Drop Test and Sample Tracking Log	N/A	N/A	3/29/2006 – 4/17/2006
ID-U109	Beryllium Shipments in ARP-III Retrieval Area	N/A	N/A	10/02/2008
ID-U111	Beryllium Shipments in ARP-IV Retrieval Area	N/A	N/A	06/13/2009
ID-U112	Beryllium Shipments in the ARP-V Retrieval Area	N/A	N/A	08/11/2010
ID-U113	Radioactive Waste Management Complex Map	G10-2355-07	N/A	not dated
ID-U114	Beryllium Shipments in the ARP-VI Retrieval Area	N/A	N/A	12/07/2010
ID-U115	Map of the Radioactive Waste Management Complex, Subsurface Disposal Area, and ARP-VII	G10-2355-14	N/A	not dated
ID-U116	Beryllium Shipments in the ARP-VII Retrieval Area	N/A	N/A	10/19/2011
ID-U292	Waste Inventory of Area G in Pit 4 for the Accelerated Retrieval Project within the Radioactive Waste Management Complex	EDF-4478	Rev. 1	01/30/2004
ID-U293	Engineering Design File – Assessment of the Radionuclide Activities in WCF Filters Shipped to the RWMC between 1964 and 1981	EDF-INTEC-2000-001/1642	N/A	09/25/2000
ID-U294	Radioactive Shipment Records	N/A	N/A	10/25/1963
ID-U295	Engineering Design File – Location of Pits, Trenches, and Soil Vault Rows	ERP WAG7 05	N/A	01/19/1991
ID-U297	Historical Report of the Transuranic Waste Pits and Trenches at the Subsurface Disposal Area of the Radioactive Waste Management Complex at the INEL	WTD-91-027	N/A	08/01/1991

Source Document Number	Title	Document Number	Revision	Date
ID-U298	Subsurface Disposal Area (SDA) Waste Identification (1952-1970 Emphasis)	EGG-WM-8727	Rev. 2	01/01/1990
ID-U304	ARP I Retrieval Area Shipment Lists	N/A	N/A	02/24/2005
ID-U305	Four Photographs for ARP-I: Operation of the Excavator, Retrieved Graphite, Waste Being Hoisted from the Tray in the Glovebox, Retrieved Inorganic Sludge in the Glovebox	N/A	N/A	06/07/2005
ID-U307	ARPII Total Rad. Term (by waste type) with Buffer Shipments spreadsheets	N/A	N/A	12/15/2005
ID-U310	Idaho Completion Project Analytical Laboratories Department. PCB Analysis Results from Accelerated Retrieval Project Waste Zone Samples	N/A	N/A	03/24/2005-11/22/2005
ID-U313	Composite Source Term Data for the Exhumation Areas in the SDA	N/A	Rev. 1, Rev. 2, Rev. 3	08/07/2006, 09/30/2008 11/17/2011
ID-U329	CCP Visual Examination Data for ARP-I	N/A	N/A	12/11/2006
ID-U330	Managing Free Liquid in Newly Generated Waste Drums	RPT-228	0	2/5/2007
ID-U343	Non-Rocky Flats Shipping Records ARP-III (P06P01)	N/A	N/A	07/31/2008
ID-U344	Non-Rocky Flats Shipping Records ARP-IV (P05P01)	N/A	N/A	12/04/1964 to 12/13/1966
ID-U345	Non-Rocky Flats Shipping Records ARP-V (P09P03-P09P04)	N/A	N/A	11/13/1967 to 09/11/1968
ID-U349	Non-Rocky Flats Shipping Records ARP-VI (P04P03)	N/A	N/A	08/26/1964 and 09/17/1965
ID-U351	Retrieval Estimates for 5.69 Acres	N/A	Rev. 2	08/03/2010
ID-U353	5.69 AK Physical Detail	N/A	Rev. 1	09/25/2008 and 09/20/2011
ID-U355	GEM Assay Data and Drum Descriptions	N/A	N/A	07/02/2008
ID-U356	CERCLA Waste Inventory Sheets for ARP Sludge Contaminated Secondary Waste	N/A	Rev. 1	04/16/2007 through 09/17/2009, not inclusive
ID-U376	CERCLA Storage/Staging Area, RWMC- TRAILER 14-CARGO-A	CSA_1539N	N/A	07/20/2010
ID-U377	Waste Determination & Disposition Form (WDDF), Sample Residue and Analytical Debris from ARP Samples	WDDF Number: RWMC10012.R1	N/A	07/22/2010

Source Document Number	Title	Document Number	Revision	Date
ID-U382	IWTS Data for Secondary Waste from ARP PCC Process at INTEC	N/A	N/A	02/08/2011
ID-U383	Waste Determination and Disposition Form (WDDF) for Waste Stream: Transuranic Targeted Heterogeneous Debris from the Accelerated Retrieval Project	WDDF Number: RWMC08016.R4; Material Profile Number: 4551N, 5634N, 5744N.R1	Rev. 4	09/30/2010
INTEC-C001	Evaluation of Records for Waste Generated at the Idaho Chemical Processing Plant (ICPP) and Disposed at the Radioactive Waste Management Complex (RWMC) During the Period of 1960-1983	DWR-01-93	N/A	01/08/1993
INTEC-P001	Estimated Radiological Inventory Sent from the Idaho Nuclear Technologyand Engineering Center to the Subsurface Disposal Area from 1952 through 1993	ICP/EXT-03-00967	Rev. 0, Rev. 1	03/01/2004, 12/01/2005
INTEC-P002	A History of the Radioactive Waste Management Complex at the Idaho National Engineering Laboratory	WM-F1-81-003	Rev. 3	07/01/1985
INTEC-P005	Comprehensive RI/FS for the Idaho Chemical Processing Plant OU 3-13 at the INEEL – Part A, RA/BRA Report (Final) Binder 3 of 3 (Appendix G only)	DOE/ID-10534	N/A	11/01/1997
INTEC-P006	Operable Unit 3/4 Tank Farm Soil and Groundwater Remedial Investigation/Feasibility Study Work Plan	DOE/ID-10676	Rev. 1	06/01/2004
INTEC-P007	A Regulatory Analysis and Reassessment of U. S. Environmental Protection Agency Listed Hazardous Waste Numbers for Applicability to the INTEC Liquid Waste System	INEEL/EXT-98-01213	Rev. 1	02/01/1999
INTEC-P098	Safety Analysis Report for the INTEC Waste Management Facility (IWMF)	SAR-103 Addendum A	Revs. 1 and 2	02/01/2006, 12/20/2006
INTEC-P213	Work Order for CPP-653. Dismantle and Dispose of Items For Building Transfer (includes pictures)	WO Number: 625825	N/A	09/01/2009
INTEC-P214	ICP USQ Process Proposed Change Form, Repackaging Waste in CPP-653 that Meet Exempt Quantities of Fissile Material	USQ-7029	Rev. 2	06/19/2008

Source Document Number	Title	Document Number	Revision	Date
INTEC-U001	Radioactive Waste Management Information System Solid Master Database List for 1954 to 1970, BGP04 for CPP	P61SHO90	N/A	09/24/1992
INTEC-U002	CPP Production Monthly Reports	Ay-22-66A	N/A	1/03/1966 to 12/26/1966
INTEC-U025	A Brief Analysis and Description of Wastes in the Subsurface Disposal Area of the Radioactive Waste Management Complex at INEEL.	EGG-WTD-9438	Rev. 1	08/01/1991
NRF-C031	Assessment of Six Waste Shipments from NRF to Pit #4 at the RWMC	NR:IBO-04/098	N/A	07/08/2004
NRF-U001	Historical Report of Transuranic Waste Pits and Trenches at the Subsurface Disposal Area of the Radioactive Waste Management Complex at the INEL	WTD-91-027	N/A	08/1991
NRF-U003	Waste Disposal Request and Authorization	N/A	N/A	7/22/1966 to 1/19/1967
NRF-U004	Estimated Naval Reactors Facility Radiological Inventory for Waste Area Group 7 Operable Unit 7-13/14 (Draft)	INEEL/EXT-03-00468	Rev. 0	04/01/2003
PER-C001	TAN-SPERT Health Physics Progress Report for August 1965	Cord-48-65A	N/A	09/16/1965
PER-C002	TAN-SPERT Health Physics Progress Report for April 1966	Cord-30-66A	N/A	05/16/1966
PER-C003	Office Memorandum: W.P. Gammill Calculations of Maximum Possible Environmental Releases of I-131 and I-135 from SPERT I Destruct Test, November 5, 1962	DOE/HRE-ID-207	N/A	05/10/1963
PER-C007	TAN-SPERT Health Physics Progress Report for December 1965	Cord-6-66A	N/A	01/20/1966
PER-C009	TAN-SPERT Health Physics Progress Report for January 1966	Cord-15-66A	N/A	02/18/1966
PER-C010	TAN-SPERT Health Physics Progress Report for February 1966	Cord-21-66A	N/A	03/15/1966
PER-C013	Shipment of SPERT Scrap Fuel	Etz-15-68A	N/A	04/17/1968
PER-P003	Quarterly Technical Report, SPERT Project, January, February, and March 1964	IDO-17010	N/A	07/01/1964
PER-P004	Transient Tests of the Fully Enriched, Stainless Steel Plate-Type, P Core in the SPERT I Reactor: Data Summery Report	IDO-17011	N/A	12/01/1964
PER-P005	Quarterly Technical Report, SPERT Project, April, May, and June 1964	IDO-17030	N/A	09/01/1964
PER-P006	SPERT III Reactor Facility E Core Revision	IDO-17036	N/A	11/01/1965

Source Document Number	Title	Document Number	Revision	Date
PER-P007	SPERT Program Projection	PTR-662	N/A	09/01/1963
PER-P008	The Effects of Coolant Temperature and Initial Power Level on the Excursion Behavior of a Highly Enriched Plate Core in SPERT III, Experiment and Analysis	IDO-17138	N/A	03/01/1967
PER-P009	Quarterly Technical Report, SPERT Project, October, November, and December 1964	IDO-17084	N/A	04/01/1965
PER-P010	Transient Tests of the SPERT I Low-Enrichment UO2 Core: Data Summery Report	IDO-16752	N/A	09/03/1963
PER-P011	Report of the SPERT I Destructive Test Program on an Aluminum, Plate-Type, Water-Moderated Reactor	IDO-16883	N/A	06/1964
PER-P012	SPERT II Facility Report Issued August 23, 1963	IDO-16888	N/A	08/23/1963
PER-P013	Heavy Water Handling Experience in the SPERT II Reactor Facility	IDO-16997	N/A	07/01/1964
PER-P022	SPERT Program Review	PTR-613	N/A	01/21/1963
PER-P027	Transient Tests of the BSR-II Core in the SPERT Facility	IDO-16768	N/A	04/01/1963
PER-P029	Quarterly Technical Report SPERT Project, January, February, March, 1963	IDO-16893	N/A	03/30/1963
PER-P030	Nuclear Start-up of the SPERT IV Reactor	IDO-16905	N/A	07/01/1963
PER-P031	SPERT I Low-Enrichment Oxide Core Destructive Test Program Safety Analysis Report	IDO-16906	N/A	08/01/1963
PER-P032	Quarterly Technical Report, April, May, June, 1963	IDO-16920	N/A	09/20/1963
PER-P033	Quarterly Technical Report, July, August, September, 1963	IDO-16931	N/A	04/30/1964
PER-P034	Quarterly Technical Report, October, November, December, 1963	IDO-16992	N/A	06/01/1964
PER-P035	Reactor Power Excursion Tests in the SPERT IV Reactor	IDO-17000	N/A	08/01/1964
PER-P036	Fuel Rod Experience during the SPERT I Destructive Test Series with a Stainless Clad, Rod-Type Core	IDO-17048	N/A	03/01/1965
PER-P037	Quarterly Technical Report, SPERT I Program, July, August, September, 1964	IDO-17055	N/A	01/01/1965
PER-P039	Quarterly Technical Report, SPERT Program, July, August, September, 1965	IDO-17146	N/A	02/01/1966

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PER-P040	Quarterly Technical Report, SPERT Program, October, November, December, 1965	IDO-17179	N/A	06/01/1966
PER-P041	SPERT I Destructive Test Series, Environmental Monitoring and Research Studies	IDO-12039	N/A	01/01/1965
PER-P042	Addendum to the SPERT III Hazard Summary Report–Low Enrichment Oxide Core	IDO-17003	N/A	10/01/1965
PER-P043	Quarterly Technical Report, Spert Program, April, May, June 1965	IDO-17123	N/A	01/01/1966
PER-P044	Quarterly Technical Report, Spert Program, January, February, March 1966	IDO-17206	N/A	09/01/1966
PER-P045	Quarterly Technical Report, Spert Program, April, May, June 1966	IDO-17207	N/A	01/01/1967
PER-P046	Quarterly Technical Report, Spert Program, July, August, September 1966	IDO-17228	N/A	04/01/1967
PER-P047	Safety Analysis and Operational Safety Requirements of the Power Burst Operations Support Facility	TFBP-TR-317	Rev. 0	02/01/1984
PER-P048	Instrument Development Branch Annual Report, 1966	IDO-17234	N/A	07/01/1967
PER-P049	Quarterly Technical Report, SPERT Project, October, November, and December 1966	IDO-17245	N/A	10/01/1967
PER-P060	An Engineering Description of the SPERT-I Reactor Facility	IDO16318	N/A	6/14/1957
PER-U001	Some Radiological Aspects of the SPERT I Destructive Test, April 14, 1964. Preliminary Report by the AEC Health and Safety Division	DOE/HRE-ID-208	N/A	05/18/1964
PER-U002	Special Power Excursion Reactor Tests (SPERT) General Information Fact Sheet on SPERT I	N/A	N/A	N/A
PER-U003	Safety Analysis and Operational Safety Requirements of the Power Burst Operations Support Facility	NA	Rev. 0	02/01/1984
PER-U004	Preliminary Safety Analysis Report, PBF (1965)	IDO-17060	N/A	3/65 and 6/65
PER-U005	Radioactive Waste Management Information System Solid Master Database List for 1954 to 1970, BGP05 for PER	P61SHO90	N/A	09/24/1992
RF-C010	Letter to Rod Thomas re: Conference meeting regarding depleted uranium	NA	N/A	12/11/2000
RF-C012	Letter to Mr. Rod Thomas, re: Building 774 Feed Solutions	EV-L01016-Rod Thomas	N/A	03/30/2001

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RF-C014	Letter to Rod Thomas re: Rocky Flats Retrieved Waste	N/A	N/A	9/12/2000
RF-C017	Letter to Bruce Becker. RE: Graphite Specifications	N/A	N/A	07/25/2001
RF-C018	Letter to Rod Thomas re: Sludges from building 881 – Your FAX of 10-24-00	N/A	N/A	01/18/2001
RF-C021	Letter to Rod Thomas re: Your Fax 03/02/01	N/A	N/A	04/24/2001
RF-C025	Letter to Rod Thomas re: NDA Reports	N/A	N/A	02/12/2001
RF-C028	Memo to Paul Sentierl re: pre 1970 RFP waste	N/A	N/A	11/07/2002
RF-C032	Letter to K.J. Holdren re: EPA Region 10 Requests	N/A	N/A	02/12/2002
RF-C035	Letter to Bruce Becker re: Nuclear Safety – Waste Management	N/A	N/A	9/26/2001
RF-C037	Rocky Flats Reports-Letter with attached report-To Ms. Marianne Little	EV-L01045-Marianne Little	N/A	12/11/2001
RF-C038	Your Fax July 23, 2001-Letter-To Bruce Becker	EV-L01033-Bruce Becker	N/A	08/16/2001
RF-C040	Rocky Flats Waste Information-Letter-To Ms. Marianne Little	EV-L01044-Marianne Little	N/A	12/04/2001
RF-C041	HEPA Filter Information, letter to Bruce Becker	N/A	N/A	07/06/2001
RF-C044	Memo to Bruce Becker re: Plutonium Estimates for Rocky Flats Waste Forms	N/A	N/A	08/29/2001
RF-C045	Rod Thomas notes on telephone conversations with Ed Vejvoda, LATA	N/A	N/A	06/20/2001
RF-C047	Rocky Flats Refractory Materials-Letter-To Mr. Ross Darnel	78-RF-2079	N/A	10/31/1978
RF-C050	LetterFred Wettich, Re: Further Information on Filters	N/A	N/A	08/1981
RF-C055	Updated Communication with J.L. De Rouchi re: Sludge Packaging	N/A	N/A	N/A
RF-C058	Memo to K. B. McKinley re: PCB Contaminated Waste at RWMC TLC-7-81	N/A	N/A	08/25/1980
RF-C060	Interoffice Correspondence to J.D. McKinney re: Buried Waste Characterization TLC47-80	RWMC-109-80	N/A	08/25/1980
RF-C064	Memo to T. H. Smith Subject: Nonradioactive Hazardous Waste Data	Pass-98-79	N/A	11/14/1979
RF-C065	Memo to J. D. McKinney re: Non-Radiological Hazards Study	C065	N/A	1/22/1980
RF-C066	Nonradiological Hazards Summary	ENF-75-80	N/A	2/15/1980

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RF-C070	Letter regarding solid waste disposal at RWMC	N/A	N/A	03/23/1959
RF-C073	Letter to Dr. J. D. Shreve, Jr. re: Proposal for Research Foundation on safety tests at Stonewall Flat.	N/A	N/A	4/23/1963
RF-C080	Letter to Rod Thomas transmitting information Re: Waste Shipments to Arco – 1959-1965	N/A	N/A	04/05/2000
RF-C089	Request for Storage and Loading Facility for Contaminated Waste	N/A	N/A	2/08/1957
RF-C090	Letter to C. M. Love re: Perclene	N/A	N/A	12/26/1957
RF-C095	Letter to J.O. Schiltz Re: Area Characteristics for Machining Beryllium	N/A	N/A	12/31/1958
RF-C096	Minutes – "Waste Disposal Meeting – October 21, 1963"	N/A	N/A	10/30/1963
RF-C098	Waste Disposal	N/A	N/A	8/17/1962
RF-C099	Disposal of Mercury-Type Dry Cell Batteries	N/A	N/A	8/15/1960
RF-C100	Letter to Dr. A. Feldman, re: Disposal of Radioactive Contaminated Wastes from Univ of Colorado Medical Center	N/A	N/A	03/29/1962
RF-C101	Letter to T.S. Klayder, U.S. Food and Drug Administration	N/A	N/A	05/17/1961
RF-C104	Correspondence regarding the disposal of waste from Coors Porcelain Company	N/A	N/A	1960-1962
RF-C105	Letter to Rod Thomas re: Rocky Flats Waste Information	N/A	N/A	07/17/2000
RF-C107	Memo – "Depleted Uranium and Beryllium Waste in Pit 9 RWT-05-99"	N/A	N/A	08/26/1999
RF-C108	Letter to Rod Thomas re: RA Waste Generation	N/A	N/A	12/02/1999
RF-C109	Memos – Non Salvable Contaminated Wastes for Disposal "B" Plant	N/A	N/A	1964 -1965
RF-C110	Letter from Ed Vejvoda (LATA) to Rod Thomas (BBWI) re: Responses to Faxes of 6/28/00 and 7/10/00	N/A	N/A	08/23/2000
RF-C113	Memo – "Depleted Uranium Alloys"	N/A	N/A	06/07/2000
RF-C114	Letter to Rod Thomas re: Waste Drum Generation from the 903 Pad and Mound Area	N/A	N/A	01/11/2001
RF-C116	903 Oil Drum Storage Area-Letter to E. A. Putzier	N/A	N/A	04/14/1970
RF-C117	Memo to Mr. Best re: Attempted Pu Recovery from Lathe Coolant in Storage Area	N/A	N/A	12/13/1967

Source Document Number	Title	Document Number	Revision	Date
RF-C118	Letter to K. V. Best, Disposal Summary of Pu Contaminated Materials – Building 903 Storage Area	N/A	N/A	09/24/1968
RF-C120	Rocky Flats Waste Information-ION EXCHANGE INFORMATION-Letter-To Rod Thomas-This letter covers two waste items (1) ion exchange resins and (2) waste generation information	ev-1-99019-thomas	N/A	11/29/1999
RF-C123	Letter to Rod Thomas re: Meeting Notes	N/A	N/A	09/12/2000
RF-C124	Memo from L. C. Farrell re: Waste Shipments	N/A	N/A	09/18/1957
RF-C129	Depleted Uranium and Beryllium Waste in Pit 9-RWT-05-99, To DE Wilkings – Letter	RWT-05-99	N/A	08/26/1999
RF-C132	Letter to F.H. Langell, Dow Chemical, re: off site solid waste disposal	N/A	N/A	12/17/1953
RF-C133	PRELIMINARY REPORT ON METHODS OF HANDLING BUILDING 81 RAFFINATES IN THE WASTE TREATMENT PLANT-To L.P.Ferris, II cc J.G.Epp, I.B.Venable	N/A	N/A	07/12/1954
RF-C134	Memo – "Graphite, Filter, and Potentially Pyrophoric Wastes in Pit 9 For OU 7-10 Extended Probe Hole Activities – RWT-02-00"	N/A	N/A	06/08/2000
RF-C137	Letter to Rod Thomas re: CY 1967 Discrepancy Corrections	N/A	N/A	02/10/1999
RF-C139	CY 1967 Discrepancy List Rework-To Rod Thomas-cc Roger Mayes, LATA-IDO Letter	EV-L99013-Thomas	N/A	04/19/1999
RF-C140	Report of Meeting Held in Mr. Langell's Office December 5 Regarding Feasibility Study for General Project Waste Incinerator	N/A	N/A	12/05/1952
RF-C147	Carbon Tetrachloride Recovery System. To W. F. McKelvey	N/A	N/A	12/01/1959
RF-C149	Proposal to Ship LSA Wastes from Rocky Flats to Richland. To J. F. Burke, Assistant Manager for Operations, ALO. Dow Chemical Company's proposal to ship LSA wastes to Richland	N/A	N/A	09/30/1971
RF-C150	Waste Disposal, To William Boyd. Conditions for Rocky Flats to Accept Be oxide contaminated waste from the Denver Research Institute	N/A	N/A	06/16/1971

Source Document Number	Title	Document Number	Revision	Date
RF-C151	Waste Disposal. To William L. Smith. Conditions for Rocky Flats to accept contaminated waste from USGS Nuclear Science Building 15	N/A	N/A	07/13/1971
RF-C156	Progress Report for the Month of December 1954, Waste Disposal Coordination Group. To L. C. Farrell. Monthly report.	N/A	N/A	01/04/1955
RF-C159	Waste Handling Procedures at Rocky Flats-Leaky Drum at NRTS, Idaho. To Lloyd M. Joshel. Policy against shipping liquids.	N/A	N/A	03/03/1971
RF-C162	Letter to General Manager, Rocky Flats Plant, re: Rocky Flats Disposal of Colorado School of Mines Research Foundation Waste Materials	N/A	N/A	03/27/1964
RF-C164	Letter to H. R. Neyle re: Organic Solvents	80402	N/A	5/21/1965
RF-C167	Letter to J. G. Epps re: Use of Acetone in Production of Dryboxes	N/A	N/A	10/18/1967
RF-C169	Letter to C. W. Piltingarud re: Tritium	N/A	N/A	12/11/1964
RF-C176	Criticality Recommendation: Raschig Rings-Letter-JB Owen	N/A	N/A	09/11/1969
RF-C180	Memo to H. E. Bowman re: Interim Capability – South Line	N/A	N/A	07/23/1969
RF-C181	Letter to R. J. Gallagher re: Exhaust Duct for Room 201, Building 44, Authorization 447669-44	N/A	N/A	1/3/1964
RF-C184	Letter to Chet Holifield, US Congress, re: Safety concerns at RFP	N/A	N/A	10/01/1969
RF-C185	Letter to E. A. Putzier, re: Equipment Decontamination Summary for 1969	N/A	N/A	01/13/1970
RF-C186	Letter to J. B. Owen, re: Plutonium Decontamination Capability	N/A	N/A	09/02/1969
RF-C195	Memo to R. A. Larson Re: Perchloroethylene – Building 76	N/A	N/A	05/23/1966
RF-C196	Memo to J. W. Lind re: Trichloroethylene Vapors from Ultrasonic Cleaners	N/A	N/A	06/30/1996
RF-C197	Waste Management, Packaging and Shipping of Wastes in Outside Storage. To T. C. Jones. Concerns the backlog of 1,738 55-gallon drums containing plutonium contaminated wastes in outside storage.	N/A	NA	10/20/1971
RF-C205	Ammonium Thiocyanate Concentrations – Americium Glove Box Line. To J. E. Hill, K. W. Hugo, W. D. Kittinger. Chemical information concerning this process.	N/A	N/A	5/21/1970

Source Document Number	Title	Document Number	Revision	Date
RF-C207	Calculations for Carbon Tetrachloride Still. To B. P. Shepherd. Calculations used for the carbon tetrachloride still.	DJO 4561	N/A	03/31/1959
RF-C208	Letter with attachment from J. F. Willging, Director Research and Ecology to F. E. Abbott, Manager RFAO, Mercury Usage Survey	N/A	N/A	8/3/1972
RF-C209	Mercury Survey. C. W. Piltingsrud. Use of mercury at Rocky Flats.	N/A	N/A	9/15/1970
RF-C210	Reactive Material Survey – Development Coating Facility in B777, Rms. 437, 463, and 464. To D. G. Williams. List of chemicals used in the operation.	N/A	N/A	12/21/1971
RF-C211	Reactive Chemicals, Building 771. To C. W. Barrick. List of chemicals used in Building 771.	N/A	N/A	09/01/1971
RF-C212	Hazardous Materials Survey NDT Environmental Testing. To S. J. Hartz. Chemicals used in Building 777.	N/A	N/A	11/12/1971
RF-C213	Formula A Paint Remover. To C. W. Ellis. Opinion on the use of Formula A paint remover.	N/A	N/A	12/2/1971
RF-C214	Service Lab Use of Halogenated Solvents. To M. A. Thompson. Use of halogenated solvents in the labs in Buildings 559, 881, and 771.	N/A	N/A	12/5/1973
RF-C215	Hazardous Materials Survey – Building 707 Manufacturing Assembly, et al.	N/A	N/A	9/7/1971
RF-C216	Procedure for Labeling, Sealing and Reporting on Containers Used for Waste Removal. To E. Martella, M. Roberts. Instructions for labeling, sealing, and reporting of waste containers used in the clean-up and restoration work after the Building 776 fire.	N/A	N/A	6/6/1969
RF-C218	Headspace Gas Analysis of 774 Building Drums. To S. Hamilton. Samples taken from 4 drums of paint thinner being used in Building 774.	N/A	N/A	3/29/1972
RF-C219	ZPPR Fast Recycle Residues	N/A	N/A	8/19/1969
RF-C220	ZPPR Residue Resume	N/A	N/A	2/12/1970
RF-C222	Neptunium-Plutonium Content of ZPPR Residues	N/A	N/A	4/8/1970
RF-C223	Contaminated Liquid Disposal Mechanical R&D Plutonium Shop, Bldg. 779A	N/A	N/A	12/04/1969

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RF-C224	List of Potentially Hazardous Substances. To F. E. Abbott, Manager, USAEC, RFAO. List of potentially hazardous substances in use at Rocky Flats.	N/A	N/A	12/8/1971
RF-C225	Letter to J. F. Landolt, re: Beryllium - Building 551	N/A	N/A	04/28/1969
RF-C226	Hazardous Materials Survey. To W. L. Rooker. List of materials used in Building 881.	N/A	N/A	9/2/1971
RF-C227	Reactive Materials Survey – Building 444 and 881 Metallurgical Operations. To W. H. Hauschildt. Chemicals used in the processes in Building 444 and 881 Metallurgical operations.	N/A	N/A	10/07/1971
RF-C228	Training – Pest Control and Public Health. To L. M. Grow, RFAO, USAEC. Notice of the discontinuance of the use of Chlordane and Malathion.	N/A	N/A	02/10/1970
RF-C230	Letter to D. Bainbridge, re: Copper-Beryllium Scrap	N/A	N/A	04/25/1968
RF-C232	Hazardous Materials Evaluation – Buildings 776 & 707 Manufacturing Fabrication. To F. B. Evans. List of chemicals and materials used in manufacturing fabrication in Buildings 707 and 776.	N/A	N/A	11/3/1971
RF-C234	Memo to L. C. Farrell re: History Report – Waste Disposal – March, 1958	N/A	N/A	04/02/1958
RF-C235	Partial Monthly Report, Waste Disposal Coordination Group	N/A	N/A	7/30/1963
RF-C236	Letter to T. S. Chapman, et al Re: Tentative Procedure for Handling Contaminated Solid and Liquid Waste	N/A	N/A	03/19/1953
RF-C242	Summary of Proposed Pest Control Practice – 1970	N/A	N/A	12/3/1969
RF-C243	Interview of RFP former employee, Al Wilson, conducted by Scott Smith on 4/30/03 regarding historical Rocky Flats plutonium operations	N/A	N/A	04/30/2003
RF-C244	Memorandum to J.M. Roberson, RFFO & J. M. Wilcynski, INEEL re: Identification of Defense Waste Streams Generated at Rocky Flats Environmental Technology Site (RFETS)	N/A	N/A	05/20/1997
RF-C245	Low Level Waste to be Shipped for Burial	N/A	N/A	11/20/1964

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RF-C246	Interview of Andy Jacobs, BBWI, WGS re: Bioassay Radioisotopes	N/A	N/A	03/30/2004
RF-C260	Letter to J. L. Long, Identification and Thermal Studies of the Residue from Nitric Acid Reaction with Leaded Neoprene Gloves	MSL-2507	N/A	03/30/1973
RF-C290	Telecon with Bill Conner of Los Alamos Programs Office, re: Defense Versus Non-Defense Related Projects	C188	N/A	04/03/1997
RF-C292	Telecon between Bill Conner of Rocky Flats Plant re: Defense Versus Non-Defense Related Projects	C190	N/A	05/19/1997
RF-C400	Letter, Chemical Waste Disposal, to J.R. Seed	N/A	N/A	01/13/1972
RF-C401	Letter, Disposal of Building 91 Chemical Wastes, to H.L. Fleischacker	N/A	N/A	08/10/1966
RF-C402	Letterconcerning unwanted chemical disposal	N/A	N/A	09/20/1971
RF-C403	Partial monthly report to L. C. Farrell	N/A	N/A	01/10/1958
RF-C404	Report on Waste Control Study	N/A	N/A	12/01/1969
RF-C405	Processing Alternatives for PCB Transformer Fluids	78-RF-1637	N/A	09/01/1978
RF-C406	Letter, Evaluation of Potential Sources of RCRA Compounds Found in Graphite Waste Headspace, to Sheila Hailey	KJP/114/0298	N/A	02/25/1998
RF-C407	Letter, Contamination Levels and Decontamination Activities Subsequent to the Incident of November 9, 1965 – Building 71, to E.A. Putzier	N/A	N/A	11/24/1965
RF-C408	Letter, Reactive Chemical Hazard Data on Samples Submitted October 7, 1971, to J.L. Summers	N/A	N/A	10/7/1971
RF-C409	Miscellaneous Correspondence Concerning Ion-Exchange Resin	N/A	N/A	5/18/83, 6/9/83, and 9/14/04
RF-C410	Letter, Hazardous Material Rating, to R.D. Gaskins	N/A	N/A	9/14/1971
RF-C411	Letter, Review of Chemicals Stored in Warehouse, to J.B. Tomlinson	N/A	N/A	12/22/1969
RF-C412	Letter, Information Regarding the Use of Trichloroethylene, to M.A. Thompson	NA	N/A	09/07/1973
RF-C413	Letter, Degreaser Building 47, to C.E. Wickland	N/A	N/A	2/28/1968
RF-C414	Letter, Cyanide Waste, to L.C. Farrell	N/A	N/A	3/22/1954

Source Document Number	Title	Document Number	Revision	Date
RF-C415	Compilation of History Reports from Waste Disposal.	N/A	N/A	05/05/1958 - 12/28/1964
RF-C416	Record of Communication, Interview with Ed Vejvoda. Waste Management Practices at Rocky Flats.	N/A	N/A	9/27/2004
RF-C417	Partial Waste Disposal Coordination Group Monthly Report for July 1964	N/A	N/A	08/25/1964
RF-C419	Classification of Waste	N/A	N/A	3/23/1964 and 3/25/1964
RF-C420	Record of Communication, Interview with Ed Vejvoda, Re: Chemical Disposal in 742-Series Sludge	N/A	N/A	06/09/2008
RF-C430	Contamination Levels and Decontamination Activities Subsequent to the Incident of October 15, 1965	N/A	N/A	10/25/1965
RF-C432	Beryllium Work in Building 889	N/A	N/A	08/21/1974
RF-C437	Email Correspondence: ARP Waste	N/A	N/A	7/25/2005
RF-C441	Newspaper Articles from The Denver Post, 1) Radioactive Material, Thorium in Jeffco Horses Revealed as Rocky Flats Item, and 2) Rocky Flats Accident, 10 Exposed to Plutonium	N/A	N/A	5/21/1976 and 5/23/1976
RF-C442	Denver Post Newspaper Article "Thorium Release Insignificant, Spokesman Declares"	N/A	N/A	5/30/1976
RF-C443	Disposal of Uranium-233 Waste	N/A	N/A	4/10/1974
RF-C445	Recommendation for Beryllium Powder Shipments	N/A	N/A	10/19/1959
RF-C446	Status Report – Waste Disposal Coordination – May, 1967	N/A	N/A	06/08/1967
RF-C447	Monthly Breakdown of Contaminated Waste Shipments to Arco, Idaho and Hanford, Washington – January, 1958	N/A	N/A	02/07/1958
RF-C450	Record of Communication, Interview with Maurice (Maury) Maas, Disposal of Chemicals in Building 774 Sludges	N/A	N/A	06/09/2008
RF-D001	Discrepancy Resolution Concerning the Use of Cyanide Salt Baths for Metal Heat-Treating.	N/A	Rev. 0	01/05/2006
RF-P003	Recycle of Uranium-3/4 Weight Percent Titanium Alloy Solid Scrap	RFP-3964	N/A	11/28/1986
RF-P018	Drum and Can Counter Computer Program	940232-101I	N/A	02/27/1968
RF-P021	Evaluation of Filter Flammability and Filter Bank Fire Detection Systems-Evaluation Report	RFP-222	N/A	02/24/1961
RF-P022	Absolute Air Filters Flammability and Fire Control Studies-Study	RFP-97	N/A	03/17/1958

Source Document Number	Title	Document Number	Revision	Date
RF-P023	Comparison of Vapor Ignition Requirements of Chlorinated Solvents (for Plutonium Metal Degreasing in Protective Enclosures)	CRDL 940511-4	N/A	06/30/1966
RF-P025	Historical Release Report for the Rocky Flats Plant, Volume I – Text	N/A	DRAFT	12/30/1991
RF-P026	Filter Testing and Development for Prolonged Transuranic Service and Waste Reduction	RFP-02643	N/A	3/1/1976
RF-P027	Filter Testing and Development for Prolonged Transuranic Service and Waste Reduction	RFP-2635	N/A	2/1/1977
RF-P028	Exhaust Filtration on Gloveboxes Used for Aqueous Process of Plutonium	RFP-2445	N/A	8/1/1976
RF-P040	Reconnaissance Level Characterization Report for the 779 Cluster.	RF/RMRS-96-0071	Rev. 0	12/17/1997
RF-P041	Reconnaissance Level Characterization Report for Area 2, Group 2 Closure Project – 991, 991 Tunnels, 985, 996, 997, 998 & 999.	03-RF-00072	Rev. 1	01/14/2003
RF-P042	Reconnaissance Level Characterization Report, Group A Facilities	N/A	Rev. 2	06/14/2000
RF-P047	Waste Characterization of Rocky Flats Plant Waste Shipped to INEL 1954-1890	WS-F2-81-001	NA	03/01/1980
RF-P049	Improvements to a 55-Gallon DOT 17C Shipping Container for Alpha-Emitting Transuranium Waste	CRDL 950703-001	Rev. 0	12/29/1972
RF-P051	Excerpt from RADWASTE Magazine, Cleaning up Trench 1 at Rocky Flats.	N/A	N/A	10/01/1999
RF-P054	NRTS Health and Safety Information Idaho Operations Office, Fire Hazard at NRTS Radioactive Waste Burial Ground	No. 50	N/A	09/20/1966
RF-P057	Rocky Flats Environmental Technology Site Reconnaissance Level Characterization Report (RLCR), 444 Cluster Closure Project, Buildings 444, 445, 447, 448, 450, 451, & 455	B444-A-000014	Rev. 0	09/05/2002
RF-P058	Building 771/774 Cluster Closure Project Reconnaissance Level Characterization Report	B771-A-000119	Rev. 2	08/08/1998
RF-P059	Building 776/777 Reconnaissance Level Characterization Report	B776-A-000145	Rev. 0	08/28/1998
RF-P060	Reconnaissance Level Characterization Report for the 886 Cluster Decommissioning Project	RF/RMRS-97-124	Rev. 1	12/24/1997

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RF-P061	Conceptual Process for Recovery of Plutonium from ZPPR Fuels	CRD83-015	N/A	3/15/1983
RF-P062	Accident and Fire Prevention Information, Suggested Summary Specification for Fire Resistance in High Efficiency Air Filters	N/A	N/A	04/04/1958
RF-P063	Reconnaissance Level Characterization Report (RLCR) 883 Cluster Closure Project (Buildings 883 and 879)	B883-A-000011	Rev. 0	10/17/01
RF-P064	Reconnaissance Level Characterization Report, 881 Cluster Closure Project	N/A	Rev. 0	11/06/2001
RF-P065	Reconnaissance Level Characterization Report, Buildings 331FD and C331	03-DOE-00448,03	Rev. 0	04/14/2003
RF-P066	Section 1.6.1, Addendum 1 of the RFP EWQA Manual and other documents	1-10000-EWQA	Rev. 0	9/27/1993
RF-P067	Separation of Thorium from Uranium by Selective Stripping from Dibutyl Carbitol	RFP-127	N/A	9/29/1958
RF-P068	Report of Investigation of Serious Incident in Building 71 on June 14, 1957	CD57-941	Rev. 1	07/09/1957
RF-P071	The Impurity Analysis of Americium Solutions	RFP-194	Rev. 0	9/28/1960
RF-P072	Investigation of Salts for Use in Uranium Metal Heat-Treating Baths	RFP-191	Rev. 0	07/25/1960
RF-P073	Preparation of Pure Americium on a One to Ten Gram Scale	RFP-130	Rev. 0	N/A
RF-P075	Thorium Canning Methods	RFP-268	N/A	06/20/1962
RF-P076	Nickel Plating by Nickel Carbonyl Decomposition	RFP-288	N/A	10/16/1962
RF-P080	Vacuum Induction Casting	RFP-317B	N/A	05/03/1963
RF-P081	Beryllium Braze-Welding Porosity and Arc Parameter Studies	RFP-287	N/A	N/A
RF-P084	Building Histories for Bldgs. 371,444,447,460,707,771,776/777, 881,883, and 991 Historical Release Report	N/A	N/A	11/01/1994
RF-P085	Reconstruction of Historical Rocky Flats Operations and Identification of Release Points	N/A	Rev. 0	08/01/1992
RF-P086	Pit 9 Estimated Inventory of Radiological And Nonradiological Constituents.	INEEL/EXT-99-00602	N/A	10/01/1999
RF-P090	Acceptable Knowledge Document for INEEL Stored Transuranic Waste – Rocky Flats Plant Waste	INEL-96.0280	Rev. 3	02/28/2003

Source Document Number	Title	Document Number	Revision	Date
RF-P091	Facility History for Building 771 at the Rocky Flats Plant	N/A	N/A	04/01/1992
RF-P092	Reconnaissance Level Characterization Report (RLCR), 334, T334B, T334D	N/A	Rev. 0	10/11/2002
RF-P093	Type 2 Reconnaissance Level Characterization Report (RLCR) and PDSR Bldg 441	N/A	Rev. 1	2/11/2003
RF-P094	RLCR 559 Closure Project Buildings 559, 561, and 528	N/A	Rev. 0	01/25/2002
RF-P095	RLCR Bldg 705	N/A	Rev. 0	4/23/2003
RF-P097	"Hot" Liquid Waste Tamed.	RFP-876	N/A	07/01/1967
RF-P098	Disposal of Contaminated Liquid Wastes at Rocky Flats, Colorado	RFP-378	N/A	04/06/1964
RF-P099	Plutonium Recovery from Fibrous Insulation and Firebrick	RFP-832	N/A	01/22/1968
RF-P100	Solvents for Degreasing and Machining Plutonium Metal	RFP-921	N/A	9/22/1967
RF-P102	Use of Trichloroethane for Degreasing Beryllium, Plutonium, and Uranium	RFP-2231	N/A	8/8/1974
RF-P103	Waste Reduction Studies	RFP-1676	N/A	03/18/1971
RF-P104	Evaluation of Methods to Recover Plutonium from Incinerator Ash	RFP-1723	N/A	08/16/1971
RF-P105	Report on the Flow of Recycled Uranium at the Department of Energy's Rocky Flats Plant, 1953-1993	N/A	N/A	06/30/2000
RF-P106	Evaluation and Compatibility of Process Materials Used at Rocky Flats Division (History) 7/64 – 5/69	N/A	N/A	05/27/1969
RF-P107	Incineration at Rocky Flats	N/A	N/A	02/12/1970
RF-P108	Report on Waste Control Study for Rocky Flats Plant	N/A	N/A	02/02/1970
RF-P109	The Molten Salt Extraction of Americium from Plutonium Metal	RFP-1356	N/A	8/26/1969
RF-P110	Plutonium Handling Safety Analysis of the Rocky Flats Nuclear Safety Facility	RFP-977	N/A	11/08/1967
RF-P112	Nuclear Safety Measurements on Systems Containing Boron and Enriched Uranium	RFP-246	N/A	10/24/1961
RF-P114	Disposal of Contaminated Lithium-Metal Scrap-Report.	RFP-1347	N/A	09/19/1969
RF-P116	Rocky Flats Information for the AEC Plutonium Storage and Plutonium Processing Task Force, Part I	N/A	N/A	02/10/1970
RF-P117	Flow of Recycled Uranium at the Rocky Flats Plant, 1952-1989	N/A	N/A	3/1/2000
RF-P119	Request for a Directive for Renovation, Phase I, Building 774 at Rocky Flats	N/A	N/A	01/28/1970

Source Document Number	Title	Document Number	Revision	Date
RF-P121	Plutonium Electrorefining at Rocky Flats	RFP-871	N/A	N/A
RF-P122	Dissolution of Piutonium Oxide	RFP-922	N/A	8/29/1967
RF-P123	Plutonium Ion Exchange System Preliminary Design Report	RFP-365	N/A	12/20/1963
RF-P128	Report on Investigation of Fire, Building 776-777, Rocky Flats Plant, Golden, Colorado, May 11, 1969. Volume I	N/A	N/A	08/01/1969
RF-P133	Report of Fire or Similar Incident	N/A	N/A	05/03/1962
RF-P134	Report of Fire or Similar Incident	N/A	N/A	08/29/1961
RF-P135	Metallographic Techniques for Vacuum-Cast Rolled Ingot Beryllium Sheet	RFP-962	N/A	8/7/1967
RF-P137	Effect of Water Vapor, Reduced Oxygen Concentrations, and Solvent Vapors on Plutonium Ignition	RFP-1566	N/A	01/28/1971
RF-P138	Performance of High Efficiency Particulate Air Filter for Fume from Burning Plutonium Metal	RFP-1680	N/A	02/01/1971
RF-P139	Preferred Orientation in Cross-Rolled Uranium	RFP-216	N/A	02/13/1961
RF-P142	Effects of Acid Concentration and Feed-Particle Size on the Dissolution of Pu-Bearing Materials	RFP-890	N/A	02/29/1968
RF-P158	Room Temperature Decomposition of Nickel Carbonyl	RFP-364	N/A	03/13/1964
RF-P160	Plating Beryllium-Copper Alloy with a Copper-Silver-Gold Laminate	RFP-366	NA	01/11/1964
RF-P161	Electroless Nickel Plating of Aluminum	RFP-367	N/A	01/10/1964
RF-P162	Recovery of Plutonium from Incinerator Ash	RFP-396	Rev. 0	07/31/1964
RF-P164	Beryllium Control at Rocky Flats	RFP-384	N/A	04/07/1964
RF-P165	Revised Engineering Criteria for Additional Processing Facilities at Building 71	N/A	N/A	04/27/1962
RF-P166	Ternary Alloy Program	RFP-372	N/A	04/27/1964
RF-P167	Fabrication of Ingot-Sheet Beryllium	RFP-1262	N/A	10/07/1968
RF-P168	New Procedure – Property Movement to and from the Decontamination Facility	N/A	N/A	10/25/1965
RF-P171	Serious Accidents, The United States Atomic Energy Commission, 1) Plutonium Chip Fire and 2) Maintenance on Plutonium Machining Coolant Lines Leads to $17,500 Fire	Issue No. 92 and Issue No. 262	N/A	12/14/1955 and 03/04/1966
RF-P173	The Forming of Containers for Molten Nickel and Beryllium at High Temperatures and Vacuum	RFP-882	N/A	04/15/1968

Source Document Number	Title	Document Number	Revision	Date
RF-P176	Plutonium Content of Several Internal Organs following Occupational Exposure	RFP-997	N/A	08/1969
RF-P177	Evaluation of Lung Burden Following Acute Inhalation Exposure to Highly Insoluble PuO2	N/A	N/A	12/09/1966
RF-P178	Evaluation and Treatment of an Acute Internal Exposure to Plutonium	RFP-446	N/A	N/A
RF-P181	Reconnaissance Level Characterization Report for Building 123.	RF/RMRS-97-021	Rev. 0	08/13/1997
RF-P183	Calcium-Lead Alloy Analysis by Atomic Absorption and Emission Spectroscopy	RFP-978	N/A	08/09/1967
RF-P184	Vacuum Coating of Boron Nitride	RFP-972	N/A	04/18/1969
RF-P187	A Survey of Potential Solvents to Replace Carbon Tetrachloride for Degreasing Plutonium	PRD 940477-104	N/A	06/04/1970
RF-P188	Compaction of Radioactive Waste at Rocky Flats	N/A	N/A	02/10/1970
RF-P191	Extraction of Uranium from Incinerator Ash Leach Solutions	RFP-115	N/A	07/10/1958
RF-P192	Extraction of Uranium from Incinerator Ash Leach Slurries	RFP-117	N/A	07/30/1958
RF-P199	Distribution of Plutonium and Americium in the Body 5 Years After an Exposure Via Contaminated Puncture Wound	RFP-1698	N/A	07/22/1971
RF-P200	Research and Ecology Annual Report, Chemistry Research and Development	N/A	N/A	12/31/1971
RF-P202	Measurements Involved in Shipping Plutonium Oxide	RFP-502	N/A	08/10/1965
RF-P209	Analytical Techniques and Results in Plutonium Nitrate Study	RFP-399	N/A	06/16/1964
RF-P216	Joining Beryllium by Electron Beam Braze Welding Technique	RFP-908	NA	02/06/1967
RF-P218	The Rolling Texture of Some Plutonium-Gallium Alloys	RFP-1315	NA	05/12/1969
RF-P222	Colorimetric Determination of Iron in Plutonium Metal using a Nitrobenzene Extraction Technique	RFP-948	N/A	12/20/1967
RF-P224	Criticality Recommendations for Chemistry – Metal Production, Building 81	RFP-382	N/A	04/29/1964
RF-P232	The Criticality of a Uranium-Solution Slab Under Various Reflector Conditions, Nuclear Applications & Technology, Vol. 7, December 1969	N/A	N/A	08/13/1969
RF-P233	Critical Parameters of a Uranium Solution Slab-Cylinder System	RFP-1314	N/A	12/16/1970

Source Document Number	Title	Document Number	Revision	Date
RF-P240	Historic American Engineering Record Rocky Flats Plant, Non-Nuclear Production Facility (Rocky flats Plant, Building 444) (Rocky Flats Plant, Plant A) (Rocky Flats Plant, Building 44)	HAER#CO-83-L	N/A	N/A
RF-P241	Use of Trichloroethylene at Rocky Flats	N/A	N/A	10/19/1973
RF-P244	Ingot-Sheet Beryllium Fabrication	RFP-910	N/A	02/09/1968
RF-P245	A Physical Inventory of the Enriched Uranium in a Solution System	RFP-1324	N/A	03/12/1969
RF-P246	The Enthalpy of Solution of Uranium in Nitric Acid	RFP-2097	N/A	10/05/1973
RF-P247	Recycled Uranium Project – Health Physics Safety and Exposure Data for Uranium Areas at the RFP DOE Complex	Appendix B	N/A	03/01/2000
RF-P248	Explosive Nature of Uranium-Base Niobium Alloys After Immersion in Nitric Acid	RFP-1575	N/A	12/08/1970
RF-P249	Generalized Area of Intersection Model for Uranyl Nitrate Filled Pipe Intersections	RFP-1553	N/A	09/04/1970
RF-P250	Simplified Metallographic Techniques for Uranium Alloys and other Metals	RFP-862	N/A	1/20/1967
RF-P251	Coating Beryllium with Electroless Nickel	RFP-478	N/A	12/29/1964
RF-P260	Actinide Processing at Rocky Flats	N/A	N/A	07/01/1984
RF-P261	A Survey of the Rocky Flats Division Waste Streams	CRDL-950351-009	N/A	06/30/1972
RF-P262	Rocky Flats Plant Plutonium Recovery Reference Process (Including Historical References 1952 to 1991)	RT92-002	N/A	02/03/1992
RF-P263	A History of the Rocky Flats Plutonium/Actinide Recovery Plant – 1952 to 1991	RT92-003	N/A	02/03/1992
RF-P264	A Comprehensive History of the Rocky Flats Plutonium/Actinide Recovery Operations 1952 to 1991	N/A	N/A	N/A
RF-P265	The Past 30 Years at Rocky Flats Plant	HS 371	N/A	11/01/1982
RF-P266	TWTF Buried Waste Characterization; Allied Chemical Corp., Rocky Flats Trip Report from 1973	TWTF-46	N/A	03/03/1981
RF-P267	Radioassay Data Collected During 3100 Cubic Meter Project-EDF	EDF-3374	Rev. 0	02/26/2002
RF-P269	Plutonium Mass Fractions Derived from SGRS Data.	EDF-1609	Rev. 0	12/20/2000
RF-P271	TRU Waste Certification Program for WIPP-WAC (U). Rockwell International.	CO-4500-A	Rev. A	05/24/1983

Source Document Number	Title	Document Number	Revision	Date
RF-P319	Anion Exchange (Lines 42 and 43D)	CO-1033-AA/0	Rev. AA/0	09/16/1988
RF-P332	Research and Development Quarterly Progress Report. July, August, and September, 1970	RFP-1602-A	N/A	10/30/1970
RF-P333	Research and Ecology Semi-Annual Progress Report, Chemistry Research and Development, January-June, 1972	RFP-1921-A	N/A	08/30/1972
RF-P335	Research and Development Semi-Annual Progress Report for January through June 1975	RFP-2417-A	N/A	08/29/1975
RF-P337	Chemistry Research and Development Annual Progress Report, November 1, 1979 to October 31, 1980	RFP-3180	N/A	08/04/1981
RF-P346	Research and Development Quarterly Progress Report. October, November, and December, 1970	RFP-1638-A	N/A	1/31/1971
RF-P347	Research and Development Quarterly Progress Report. April, May, and June, 1971	RFP-1748-A	N/A	7/30/1971
RF-P348	Research and Development Quarterly Progress Report. July, August, and September, 1971	RFP-1790-A	N/A	10/29/1971
RF-P349	Research and Ecology Annual Report, Chemistry Research and Development	RFP-1837-A	N/A	04/14/1972
RF-P356	Field Sampling Plan for the OU-7-10 Glovebox Excavator Method Project	INEEL/EXT-02-00542	Rev 2	10/2/2003
RF-P400	Oil Coolant Waste Disposal	MT-42-66	N/A	12/22/1966
RF-P401	Water Soluble Plutonium in Plenum Filters	CRDL 950355-4	N/A	11/11/1970
RF-P402	Action Description Memorandum for Proposed Closure of the Original Uranium Chip Roaster (SWMU 204)	A00690	N/A	04/01/1990
RF-P403	Closure Plan Inactive Interim Status Facilities: Original Uranium Chip Roaster, SWMU #204	N/A	Rev. 1	10/03/1988
RF-P404	Excerpts from Omnibus Environmental Assessment for the Rocky Flats Plant of the US Atomic Energy Commission	N/A	N/A	07/01/1974
RF-P405	Excerpt from Omnibus Environmental Assessment for the Rocky Flats Plant of the US Energy Research and Development Administration	N/A	N/A	05/01/1975
RF-P406	Hazardous Waste Code Determination for First/Second Stage Sludge Waste Stream (IDCs 001, 002, 800)	INEEL/EXT-01-0001	Rev. 2	05/2001
RF-P407	Liquid Media for Density Measurements of Beryllium, Plutonium, and Uranium.	RFP-691	N/A	2/25/1966
RF-P408	Material Hazards Rocky Flats Plant Atomic International Division.	N/A	N/A	8/1/1976

Source Document Number	Title	Document Number	Revision	Date
RF-P413	Health Physics Guide for Rocky Flats Division	N/A	Rev. 2	01/1967
RF-P417	Historic American Engineering Record, Rocky Flats Plant, Emergency Medical Services Facility (Building 122) and Photo Overview (Building 551)	CO-83-S	N/A	03/22/2005
RF-P418	U.S. Geological Survey Circular 1050, The United States Geological Survey: 1789-1989, "A New Age Begins"	N/A	N/A	06/07/2005
RF-P419	Research and Development Quarterly Progress Report*; October, November, and December, 1968; Chemistry	RFP-1311-A	N/A	1/31/1969
RF-P420	Research and Development Quarterly Progress Report*; April, May, and June, 1969; Chemistry	RFP-1406-A	N/A	7/31/1969
RF-P421	Research and Development Quarterly Progress Report*; July, August, and September, 1969; Chemistry	RFP-1436-A	N/A	10/31/1969
RF-P422	Research and Development Quarterly Progress Report*; January, February, and March, 1970; Chemistry	RFP-1519-A	N/A	4/30/1970
RF-P423	Research and Development Quarterly Progress Report; April, May, and June, 1970; Chemistry	RFP-1579-A	N/A	9/16/1970
RF-P424	Research and Development Quarterly Progress Report*; January, February, and March, 1971; Chemistry	RFP-1691-A	N/A	4/30/1971
RF-P425	Standard for HEPA Filters, General Purpose	SMU-401	Issue C Issue G Issue H	10/1974 01/1982 06/07/1991
RF-P427	Sixth AEC Air Cleaning Conference, July 7-9, 1959	TID-7593	N/A	10/1960
RF-P429	Rocky Flats Environmental Technology Site WIPP Waste Stream Profile Form, TRM Solidified Organic Waste	RFP135.01	Rev. 0	3/23/2005
RF-P562	Summary of Rocky Flats Plant Waste Buried in the Subsurface Disposal Area.	ICP/EXT-04-00717	Rev. 0	04/2005
RF-P563	Identifying Characteristics of Rocky Flats Plant Depleted Uranium Roaster Oxide Waste.	EDF-5943	Rev. 0	08/03/2005
RF-P569	Evaluation of Unique Identifiers for Rocky Flats Plant Test Category Waste	EDF-5060	Rev. 0	08/16/2004
RF-P570	Beryllium Waste from the Rocky Flats Plant Buried in the Subsurface Disposal Area at the Radioactive Waste Management Complex	EDF-6030	Rev. 0	02/10/2006
RF-U019	Engineering Evaluation 741 First-stage sludge in ICC-17C 55-gallon drums.	N/A	N/A	12/04/1967

Source Document Number	Title	Document Number	Revision	Date
RF-U021	Rocky Flats Plant Neptunium Program (transmitted via 5/15/01 letter to Rod Thomas from Ed Vejvoda)	N/A	N/A	04/01/2001
RF-U025	Information on Magnesium Alloy Conveyor Pendant and Polyethylene Parts Carrier	N/A	N/A	06/24/1969
RF-U026	Rocky Flats to INEEL Shipping and Loading Record Search for the 1960's and Early 1970's.	N/A	Interim	12/11/1998
RF-U028	Sampling Plan for the Rocky Flats Sites.	N/A	N/A	09/05/1986
RF-U033	History Report – Process Waste Disposal Group – May, 1963	N/A	N/A	06/17/1963
RF-U034	Electronic Group Monthly Progress Report – March, 1962	N/A	N/A	4/5/1962
RF-U035	Monthly Progress Report – Health Physics	N/A	N/A	01/1962
RF-U037	Industrial Hygiene Report for August, 1961	N/A	N/A	09/07/1961
RF-U038	Memo to W. M. Bean re: Industrial Hygiene Report for October, 1960	N/A	N/A	11/11/1960
RF-U040	Revised Engineering Criteria for Additional Processing Facilities at Building 71	N/A	N/A	04/27/1962
RF-U041	Ni Plating of Oralloy, Alpha and Delta Plutonium by Nickel Carbonyl Method	N/A	N/A	5/25/1962
RF-U042	Industrial Hygiene Report for November, 1960, To W.M. Bean	N/A	N/A	12/09/2004
RF-U043	Solid Waste Disposal Studies	DJO-4554	N/A	12/28/1960
RF-U044	Partial Monthly Report for the Waste Coordination Group for June, 1963	N/A	N/A	07/30/1963
RF-U045	Monthly Progress Report – Industrial Hygiene	N/A	N/A	03/04/1963
RF-U046	Industrial Hygiene Monthly Report – Report To Unknown	U046	N/A	08/01/1963
RF-U048	Waste Disposal Co-ordination Group-Summary Report November 1959-To Mr. L.C. Farrell cc: G.E.White	N/A	N/A	12/10/1959
RF-U049	Industrial Hygiene Report for September, 1959	N/A	N/A	10/07/1959
RF-U052	Revisions to Portion of Unclassified Document NYO 7830 Pertaining to Rocky Flats Plant Waste Disposal Operations Based on Fiscal Year 1957 Data	N/A	N/A	N/A
RF-U053	Partial Monthly Report from the Waste Disposal Coordination Group for December 1961	N/A	N/A	01/10/1958

Source Document Number	Title	Document Number	Revision	Date
RF-U054	History Report – January, 1958 – Waste Disposal Co-Ordination Group	N/A	N/A	02/04/1958
RF-U057	Supplementary Report on Fire in Building 71, September 11, 1957	N/A	N/A	12/10/1957
RF-U059	History Report for the Month of June, 1957 – Waste Disposal Co-Ordination Group	N/A	N/A	07/05/1957
RF-U060	Monthly Progress Report – Industrial Hygiene Operations, January, 1957	N/A	N/A	02/05/1957
RF-U061	History Report for the Month of December, 1956 – Waste Disposal Co-Ordination Group	N/A	N/A	01/09/1957
RF-U067	Program Plan for NRTS Solid Radioactive Waste Repackaging Facility Studies	N/A	DRAFT	08/21/1973
RF-U069	Photo Request	N/A	N/A	07/31/1980
RF-U070	Procedure for Packaging and Handling Pu Waste and Residue Drums	9257	N/A	03/29/1974
RF-U095	Study of Disposal of Radioactive Waste, Rocky Flats Colorado.	N/A	N/A	N/A
RF-U099	KW Formula for Spill Cleanup and Nuclear Material Transaction Reports (See RF-C110, Att. C and D)	N/A	N/A	N/A
RF-U100	A Summary of On Site Radioactive Waste Disposal	N/A	N/A	4/22/1970
RF-U101	Attachment B, 44 Building Waste Sheets	N/A	N/A	N/A
RF-U110	Waste Treatment Process Description	N/A	N/A	09/27/1951
RF-U111	Trip Report – Industrial Waste Survey of Rocky Flats Field Office and Plant, July 18-19, 1955	N/A	N/A	08/19/1955
RF-U112	Tentative Procedure for Handling Contaminated Solid and Liquid Waste	N/A	N/A	03/19/1953
RF-U113	Waste Classification Flow Chart	N/A	N/A	1/13/1954
RF-U115	Draft Consolidated Report of Rocky Flats Wastes Shipped to INEEL	INEEL/EXT-03-00	N/A	03/06/2003
RF-U117	An Evaluation of Fiberglass for Use in Plutonium Fabrication Line	RFP-1725	N/A	05/27/1971
RF-U118	Thorium Use at Rocky Flats	N/A	N/A	06/02/1976
RF-U119	History of Curium Processing at Rocky Flats	N/A	N/A	4/26/1977
RF-U120	Monthly Progress Report – Industrial Hygiene Operations, November, 1956	N/A	N/A	12/04/1956
RF-U121	Monthly Progress Report – Industrial Hygiene Operations	N/A	N/A	1/1/1957
RF-U123	Monthly Progress Reports – Industrial Hygiene	N/A	N/A	09/04/1964

Source Document Number	Title	Document Number	Revision	Date
RF-U124	Status Report – Industrial Hygiene, various months	N/A	N/A	04/01/1968
RF-U125	Description and recommendation of unwanted chemical disposal	N/A	N/A	N/A
RF-U126	Liquid Radioactive Waste Management Practices at Rocky Flats	N/A	N/A	02/23/1970
RF-U127	Synopsis of an oral presentation: Liquid Wastes and the Nitrate Problem at the Rocky Flats Plant	N/A	N/A	05/26/1971
RF-U128	Health Physics Status Reports – January, April, July, August, October – December, 1968; January – July, 1969; November, December, 1969; June, August – October, 1970	N/A	N/A	02/23/1970
RF-U133	History of Plutonium Contaminated Oil Drum Storage Area	RFP-INV-10	N/A	N/A
RF-U134	Pu Recovery Processing Systems. Rockwell International	CHOP-9248-80-03	N/A	05/01/1980
RF-U135	Ledger Sheets that Show Discard Amounts	N/A	N/A	1960 – 1971
RF-U136	CRDL –Process Chemistry-Waste Disposal Monthly Report	N/A	N/A	2/14/1964
RF-U137	FR Box Operation (Interim Report)	N/A	N/A	9/19/1963
RF-U139	Explosion and Fire November 9, 1965 in Building 71, Room 180	Unk	N/A	12/01/1965
RF-U141	Recent Developments in Plutonium Processing at Rocky Flats	RFP-966	N/A	06/05/1967
RF-U142	Health Physics of Plutonium Operational Experiences	N/A	N/A	11/21/1966
RF-U143	Compilation of Incidents Excerpted from the Executive Safety Council Minutes	N/A	N/A	12/21/1965
RF-U150	Industrial Hygiene Status Report for November 1964	N/A	N/A	12/14/1964
RF-U151	Industrial Hygiene Status Reports, Partial Reports	NA	NA	1965
RF-U152	Industrial Hygiene Reports Partial Documents for 1966	N/A	N/A	N/A
RF-U153	Status Report, Industrial Hygiene, Partial reports, 1967	N/A	N/A	N/A
RF-U157	Memo to Joshel, Brassier, Bowman, et al Re: Construction Project Data Sheet Replacements to Plutonium Chemical Recovery Facility	N/A	N/A	03/05/1970
RF-U167	Decontamination Log Book Pages from 1969 Fire	MF-RF-WD-15	N/A	11/18/1988

Source Document Number	Title	Document Number	Revision	Date
RF-U168	Revised Criteria for Authorization No. 300764 "Peroxide Precipitation Conversion," Building 771	N/A	N/A	Not Listed
RF-U170	Report on Beryllium Chip Fire in Building 44	N/A	N/A	10/29/1965
RF-U171	Tritium Work at Rocky Flats	N/A	N/A	10/01/1973
RF-U172	Radioactive Waste Disposal Dow Chemical Company, Rocky Flats Division	N/A	N/A	N/A
RF-U174	Proposal for the Disposition of Rocky Flats Barrels	N/A	N/A	N/A
RF-U178	Tritium at Rocky Flats	N/A	N/A	Not Listed
RF-U181	Justification for Parylene License	N/A	N/A	03/23/1970
RF-U182	Radiation Instruments Group, Monthly Report June 1956	N/A	N/A	7/9/1956
RF-U188	Procedures for Removing Aluminum Shim	N/A	N/A	1/14/1970
RF-U189	Excerpts from the Operating Procedure for FR System Anion Columns	N/A	N/A	05/25/1961
RF-U190	Flame Spectrophotometric Determination of Lead in Plutonium Process Solutions	RFP-1358	N/A	04/10/1969
RF-U196	Pilot Plant Experience on Volatile Fluoride Reprocessing of Plutonium	RFP-1351	N/A	4/8/1969
RF-U201	Metallographic Preparation of Plutonium	RFP-1184	N/A	06/04/1968
RF-U202	Preliminary Report on the Electron Metallography of Alpha Plutonium	RFP-374	N/A	03/30/1964
RF-U203	Annealing of a Cold-Rolled Pu/1 WT % Ga Alloy	N/A	N/A	N/A
RF-U206	A Laboratory Ignition System	RFP-397	N/A	N/A
RF-U207	A Spectrochemical Analysis of Impurities in Plutonium using a Modified Sodium Fluoride Carrier Distillation Method	RFP-838	N/A	11/21/1966
RF-U208	Kinetics of the Reaction between Plutonium (III) and Xenon Trioxide	RFP-857	N/A	12/01/1966
RF-U210	The Recovery of Electrical Resistivity in Pu-1 w/o Gallium after Plastic Deformation	RFP-1285	NA	02/05/1969
RF-U212	Can and Drum Counter Calculations	RFP-1274	N/A	10/21/1968
RF-U217	The Rolling Texture of Pu-3.4 Atomic Percent Gallium	RFP-1278	N/A	02/10/1969
RF-U230	The Effect of Niobium and Uranium on the Determination of Iron by Atomic Absorption Spectroscopy	RFP-1552	N/A	1/9/1970
RF-U231	Beryllium Braze-Welding Porosity and Arc Parameter Studies	RFP-287	N/A	10/01/1963

Source Document Number	Title	Document Number	Revision	Date
RF-U232	The Tensile Properties of Rocky Flats Division Ingot-Sheet Beryllium from Room Temperature to 250 degrees C	RFP-1205	N/A	09/18/1968
RF-U233	Metallographic Technique for a Bright Field Etch of Beryllium Grain Structure	RFP-947	N/A	05/11/1967
RF-U235	Vacuum Deposition of Thick Aluminum Films for Beryllium Joining	RFP-1306	N/A	05/07/1969
RF-U237	The Effects of Annealing on the Microstructure and Mechanical Properties of 0.100-inch-Thick Ingot-Source Beryllium	RFP-1831	N/A	Not Listed
RF-U242	An Organic Coating for U-4.2 wt% Nb	N/A	N/A	Not Listed
RF-U243	Controlled Potential Coulometric Determination of Uranium and Neptunium in Uranium-Neptunium Alloys	RFP-950	N/A	4/17/1967
RF-U244	The Stress-Corrosion Cracking Behavior of the U-4.2 wt% Nb Alloy Aged 80 Hours at 260 degrees C	RFP-1824	N/A	12/28/1971
RF-U245	Mechanical Properties of Uranium-Base Niobium Alloys	RFP-1703	N/A	4/29/1971
RF-U247	A Criticality Analysis of Enriched Uranium Metal Spheres Undergoing Dissolution	RFP-1718	N/A	Not Listed
RF-U254	Summary – Drum Field Activity	N/A	NA	08/19/1970
RF-U283	Trip Report on Industrial Health Survey of Rocky Flats Plant, Trip Conducted July 17-19, 1971	N/A	N/A	7/17/1961
RF-U286	Vacuum Induction Casting of Beryllium	RFP-340	NA	02/04/1964
RF-U287	Spark Machining of Beryllium	RFP-1462	N/A	02/05/1970
RF-U288	Sludge Packaging in 55-Gallon Drums	N/A	N/A	N/A
RF-U292	Evaluation of the EPA Code D001, Ignitability; D002, Corrosivity; and D003, Reactivity; Designations for RFP IDCs that are Stored at the INEL	3100m3 document number U046	N/A	02/29/1996
RF-U294	Sorting Radioactive Waste at Rocky Flats	N/A	N/A	02/11/1970
RF-U400	Solid Radioactive Waste Disposal Order and Shipment Data, for shipments to Pit 4, Area 1, Phase I and Phase II	N/A	N/A	3/07/1964 to 4/28/67, not inclusive
RF-U401	Compilation of PCB AK sources	N/A	N/A	09/05/2001
RF-U402	Problems Associated with Contaminated Waste Disposal.	N/A	N/A	3/1965
RF-U403	Authorization – Part II, Scope and Job Description, Laboratory Renovation, Room 180, Building 71	350710	N/A	04/29/1965
RF-U404	Portion of Health and Safety Monthly Report, Partial Beryllium Operations as of February 1966	N/A	N/A	02/01/1966

Source Document Number	Title	Document Number	Revision	Date
RF-U405	Email and Table 4-4 from EDF-5164, GEM Project sampling results	N/A	N/A	09/14/2004
RF-U406	Authorizations	N/A	N/A	01/21/1965
RF-U407	Building 44 Discarded Waste Report	654, 660, 667, 677	N/A	2/1962-8/1962
RF-U409	Chemistry Research and Development, Environmental Research, Investigation of Present Storage Practices of Beryllium Metal Scrap by the General Stores Group	ER Report 11-5-71	N/A	11/05/1971
RF-U416	Packet of documents: 1) Product and Health Physics Research Service Report, Nickel Carbonyl Disposal, 2) Letter from to H. E. Bowman, Hazardous Materials Proposal, 3) Letter from to J. R. Seed, Disposal of Cyanide Compounds.	1) 317-72-174	N/A	1) 9/1972 2) 4/7/72 3) 11/22/71
RF-U419	Waste Treatment Flowsheet – Bldg. 774	N/A	N/A	02/09/1973
RF-U420	Document excerpt, Description of the 207 Solar Evaporation Ponds	CO7890010526	Rev. 2	07/01/1988
RF-U421	Solid Radioactive Waste Disposal Order and Shipment Data for Shipments to Pit 4 and Pit 6, Area 1, Phase II	N/A	N/A	08/19/1966 to 04/23/1968, not inclusive
RF-U422	Building 444/447 Production Operations and Process Description	N/A	N/A	N/A
RF-U424	Evaluation of Graphitefrom Building 444 Beryllium Casting	N/A	N/A	02/27/2006
RF-U425	Evaluation of Filters Servicing the Building 444 Beryllium Shop	N/A	Rev. 1	09/22/2006
RF-U1282	Analysis Results for Organic Setups Waste from the INL 3,100 m^3 Project	N/A	N/A	1997, 1998
RF-U1306	Rocky Flats shipping records for ARP-III (P06P01) in the RWMC SDA	N/A	N/A	02/12/1968 to 09/03/1968
RF-U1307	Rocky Flats shipping records for ARP-IV (P05P01) in the RWMC SDA	N/A	N/A	07/22/1964 to 11/18/1966
RF-U1308	Rocky Flats shipping records for ARP- V (P09P03, P09P04) in the RWMC SDA	N/A	N/A	02/09/1968 to 09/24/1968
RF-U1313	Rocky Flats shipping records for ARP- VII (P10P03)	N/A	N/A	07/30/1968 to 10/30/1968
RF-U1315	Rocky Flats Shipping Records for ARP-VI (P04P03) in the RWMC SDA	N/A	N/A	03/07/1964 to 03/06/1965
TAN-C001	Office Correspondence to W.A. Erickson: Modify RAF Waste Handling	Bar-646-64A	N/A	11/17/1964

Source Document Number	Title	Document Number	Revision	Date
TAN-C002	Office Correspondence to T.R. Wilson: Radioactive Contamination Status of the IET Area	Cord-35-66A	N/A	05/18/1966
TAN-C003	Evaporator Comments	Pts-1-66A-N	N/A	02/16/1966
TAN-C004	Office Correspondence to Mr. J.W. McCaslin: Health Physics Inspection and Review, 1st Quarter 1967, CF Health Physics	Ree-12-67	N/A	03/31/1967
TAN-C005	Security Incident	Bkr-16-66A-M	N/A	05/03/1966
TAN-C006	Office Correspondence to All MTR HPs: MTR HP Meeting	VGJ-9-67	N/A	03/23/1967
TAN-C007	HP Hot Storage Inventory	Orm-7-A-N	N/A	04/19/1966
TAN-C008	HP Hot Storage Inventory	Orm-5-66A-N	N/A	04/19/1966
TAN-C009	MTR HP Meeting	VGJ-1-66A-N	N/A	02/07/1966
TAN-C010	ML-1 Air Operations. Army Gas-Cooled Reactor Systems Program, Operation of the ML-1 with Air as the Working Fluid	RGC:JCV, AN-GCR-519	N/A	05/27/1963
TAN-C024	Memo - SNAPTRAN-2 Monitoring Data	DOE/HRE-ID-385	N/A	04/14/1966
TAN-P001	RWMIS Solid Master Database List for 1954 to 1970 BGP08 for TAN	P61SHO90	N/A	09/24/1992
TAN-P004	TAN Hot Shops and Satellite Facilities	IDO-17032	N/A	11/01/1964
TAN-P005	Estimated Radiological Inventory Sent from Test Area North to the Subsurface Disposal Area from 1960 through 1993	INEEL/EXT-03-00997	Rev. 1	7/1/2004
TAN-P007	Preliminary Determination of Hazardous Waste from other Generators Collocated with Rocky Flats Plant Transuranic Waste in the OU 7-13/14 Subsurface Disposal Area	INEEL/EXT-03-01139	N/A	05/01/2004
TAN-P008	Manual of Procedures for Effecting Control of SS Materials at Station MTI	IDO-16817	N/A	11/01/1962
TAN-P028	Buried Waste Line Register for NRTS - Part II. TAN	ACI-108	N/A	01/01/1972
TAN-P029	A Study of Radioactive Liquid Waste Management at Test Area North (TAN)	ACI-101	N/A	12/01/1971
TAN-P034	Decontamination and Decommissioning Plan for TAN Liquid Waste Evaporation System (PM-2A)	PR-W-78	N/A	N/A
TAN-P035	Program Plan for NRTS Transuranic Waste Retrieval and Packaging Project	ACI-169	N/A	05/01/1975
TAN-P036	Survey of NRTS Waste Management Practices, Volume I	ACI-104	N/A	09/01/1971
TAN-P052	Waste Disposal Data for the National Reactor Testing Station Idaho	IDO-12074	N/A	08/01/1970
TAN-P058	Hot Shop Assembly – Disassembly Procedures for SNAPTRAN 2/10A-1 Reactor	PTR-656	N/A	08/01/1963

Source Document Number	Title	Document Number	Revision	Date
TAN-P064	Nonradioactive Waste Solvent Disposal Study	CI-1221	N/A	04/01/1971
TAN-P069	Radiological Aspects of SNAPTRAN 2/10A-3 Destructive Test	IDO-17038	N/A	01/01/1965
TAN-P070	Radiological Aspects of the SNAPTRAN-2 Destructive Test	IDO-17203	N/A	02/01/1967
TAN-P071	Safety Analysis Report SNAPTRAN 2/10A-1 and -2 Safety Tests	IDO-17076	N/A	10/01/1965
TAN-P076	Analysis of SNAPTRAN Reactor Behavior	IDO-17204	N/A	06/01/1967
TAN-P077	Proposed Post-Destructive Test Reactor Examination and Area Cleanup SNAPTRAN-2	PTR-736	N/A	1/1/1964
TAN-P078	Operations Report, HTRE-2, L2C-1 Cartridge	XDC 59-11-179	N/A	11/16/1959
TAN-P079	Comprehensive Technical Report, General Electric Direct-Air-Cycle Aircraft Nuclear Propulsion Program: Nuclear Safety	APEX-921	N/A	5/30/1962
TAN-P080	Comprehensive Technical Report, General Electric Direct-Air-Cycle Aircraft Nuclear Propulsion Program: Heat Transfer Reactor Experiment No. 2	APEX-905	N/A	5/25/1962
TAN-P081	Comprehensive Technical Report, General Electric Direct-Air-Cycle Aircraft Nuclear Propulsion Program: Heat Transfer Reactor Experiment No. 1	APEX-904	N/A	2/28/1962
TAN-P084	Final Report First Meltdown Experiment (Operation Boot)	APEX-445	N/A	1/2/1959
TAN-P086	Comprehensive Technical Report, General Electric Direct-Air-Cycle Aircraft Nuclear Propulsion Program: Heat Transfer Reactor Experiment No.3	APEX-906	N/A	6/15/1962
TAN-P089	Test Results From D101-L2E-5 Sub-LIME Experiment, IET 24	60-11-719	N/A	11/23/1960
TAN-P092	Quarterly Technical Report STEP Project January 1966 - March 1966	IDO-17186	N/A	11/1/1966
TAN-U001	Annual Health Physics Appraisal Phillips Petroleum Company Test Area North 1964	N/A	N/A	1964
TAN-U002	Program Plan for NRTS Solid Radioactive Waste Repackaging Facility Studies	N/A	DRAFT	08/21/1973
TAN-U003	Safe Work Permit	08-0407	N/A	8/16/66
TAN-U004	Safe Work Permit	09-6039	N/A	10/13/66
TAN-U005	Safe Work Permit	7661	N/A	11/16/66

Source Document Number	Title	Document Number	Revision	Date
TAN-U006	Safe Work Permit	N/A	N/A	5/27/66
TAN-U007	Safe Work Permit	2185	N/A	5/25/66
TAN-U008	Safe Work Permit	2188	N/A	5/17/66
TAN-U009	Safe Work Permit	2165	N/A	5/16/66
TAN-U010	Safe Work Permit	2164	N/A	5/13/66
TAN-U011	Safe Work Permit	2162	N/A	5/13/66
TAN-U012	Safe Work Permit	N/A	N/A	4/1/66
TAN-U013	Safe Work Permit	N/A	N/A	N/A
TAN-U014	On-Site Shipment, Radioactive Material Shipment Record	N/A	N/A	1967
TAN-U082	Idaho Operations Office, Solid Radioactive Waste Report	N/A	N/A	12/65, 5/66, 7/66, 8/66, 10/66, 2/67
TAN-U105	Historical Perspective of Solvent Usage at TAN	WM-ERP-91-008	N/A	04/01/1992
TAN-U106	Brief SNAPTRAN Program	T070493	N/A	1963
TRA-C001	Decontamination of WAPD L-12/M-13 Loop	Zim-7-65A	N/A	4/7/65
TRA-C038	Letter to T. E. Wade, II, re.: Response to NonReactor Nuclear Facilities Appraisal, EG&G Idaho, Inc. #84-3	Zan-36-84	N/A	02/24/1984
TRA-P001	ETR Operations Branch Progress Report for Cycle No. 87, January 30, 1967 to March 13, 1967	IN-1084	N/A	04/21/1967
TRA-P005	Hazards Evaluation of Proposed Site for ETR II (now designated ATR)	IDO-16623	N/A	08/18/1960
TRA-P006	Advanced Test Reactor Critical Facility Safety Analysis Report	IDO-16950	Rev. 1	07/1964
TRA-P007	ETR Hazards Survey for WAPD M-13 Experiment	IDO-16503	N/A	N/A
TRA-P008	Findings on Chloride Stress Corrosion in the MTR and ETR Primary Systems	CI-1004	N/A	8/66
TRA-P009	ETR Operations Branch Progress Report for Cycle No. 88 March 13, 1967 - April 24, 1967	IN-1092	N/A	6/12/67
TRA-P010	ETR Operations Branch Progress Report for Cycle No. 84, September 24, 1967 - November 6, 1966	IN-1046	N/A	12/16/66
TRA-P011	ETR Operations Branch Progress Report for Cycle No. 82, July 4, 1966 - August 14, 1966	IN-1029	N/A	9/16/66
TRA-P012	ETR Operations Branch Progress Report for Cycle No. 80, April 7, 1966 - May 22, 1966	IDO-17197	N/A	7/28/66
TRA-P013	ETR Operations Branch Progress Report for Cycle No. 76, October 26, 1965 - December 5, 1965	IDO-17144	N/A	1/21/66

Source Document Number	Title	Document Number	Revision	Date
TRA-P014	ETR Operations Branch Progress Report for Cycle No. 77, December 5, 1965 - January 16, 1966	IDO-17153	N/A	3/4/66
TRA-P015	ETR Operations Branch Progress Report for Cycle No. 79, February 27, 1966 - April 7, 1966	IDO-17184	N/A	6/15/66
TRA-P016	ETR Operations Branch Progress Report for Cycle No. 83, August 14, 1966 - September 25, 1966	IN-1037	N/A	10/31/66
TRA-P017	ETR Operations Branch Progress Report for Cycle No. 86, December 15, 1966 - January 30, 1967	IN-1071	N/A	3/9/67
TRA-P018	ETR Operations Branch Progress Report for Cycle No. 85, November 6, 1966 - December 15, 1966	IN-1059	N/A	1/31/67
TRA-P359	National Reactor Testing Station, U. S. Atomic Energy Commission	N/A	N/A	07/1967
TRA-P360	Operating Manual - MTR Hot Cell	PTR-293	N/A	04/10/1958
TRA-P388	Materials Testing Reactor Operating Manual Volume I, Demineralizer and Other Water Systems	CI #1037	N/A	06/01/1965
TRA-P401	Engineering Design File, Voluntary Consent Order Tank System TRA-004 - TRA Hot Waste Management System Characterization	EDF-5160	Rev. 1	05/16/2005
TRA-P461	Technical Safety Requirements for the Test Reactor Area Hot Cell Facility	Issue 009	N/A	05/12/1999
TRA-P464	Field Sampling Plan for the HWMA/RCRA Closure Certification of the TRA-731 Caustic and Acid Storage Tank System, 1997 Notice of Violation Consent Order	INEEL/EXT-01-01281	Rev. 0	10/2001
TRA-P465	Quality Assurance Project Plan for the HWMA/RCRA Closure Certification of the TRA-731 Caustic and Acid Storage Tank System, 1997 Notice of Violation Consent Order	INEEL/EXT-01-01280	Rev. 0, Rev. 1	10/2001, 01/2002
TRA-P473	Hot Cells Operating and Maintenance Manual	7.16.11	N/A	05/07/1992
TRA-P491	Metallurgy and Materials Science Branch Annual Report, Fiscal Year 1970	IN-1437	N/A	11/1970
TRA-U002	WAPD M-13 Cubicle Radiation Survey	N/A	N/A	8/15/66
TRA-U003	Radiation Survey of the ETR Basement	N/A	N/A	4/11/66 – 5/19/66
TRA-U004	WAPD M-13 Cubicle Radiation Survey	N/A	N/A	12/19/64
TRA-U005	WAPD C-7/L-10 Cubicle Survey	N/A	N/A	9/28/64
TRA-U008	Health Physics Logsheet	N/A	N/A	6/22/66
TRA-U010	Radioactive Material Shipment Record	WAPD L-12/M-13 (A-1-g)	N/A	12/22/64

Source Document Number	Title	Document Number	Revision	Date
TRA-U030	Aerojet Nuclear Company, EG&G Experiment Logs, and Facility Log for HCF; WWTF handwritten log	N/A	N/A	11/12/1973 – 8/9/1996, not inclusive
TRA-U081	TRA Hot Cell Facility Business Plan, Strategy for Continued Operations	N/A	N/A	N/A

Figure 1. Map of Rocky Flats Plant (Circa 1970)

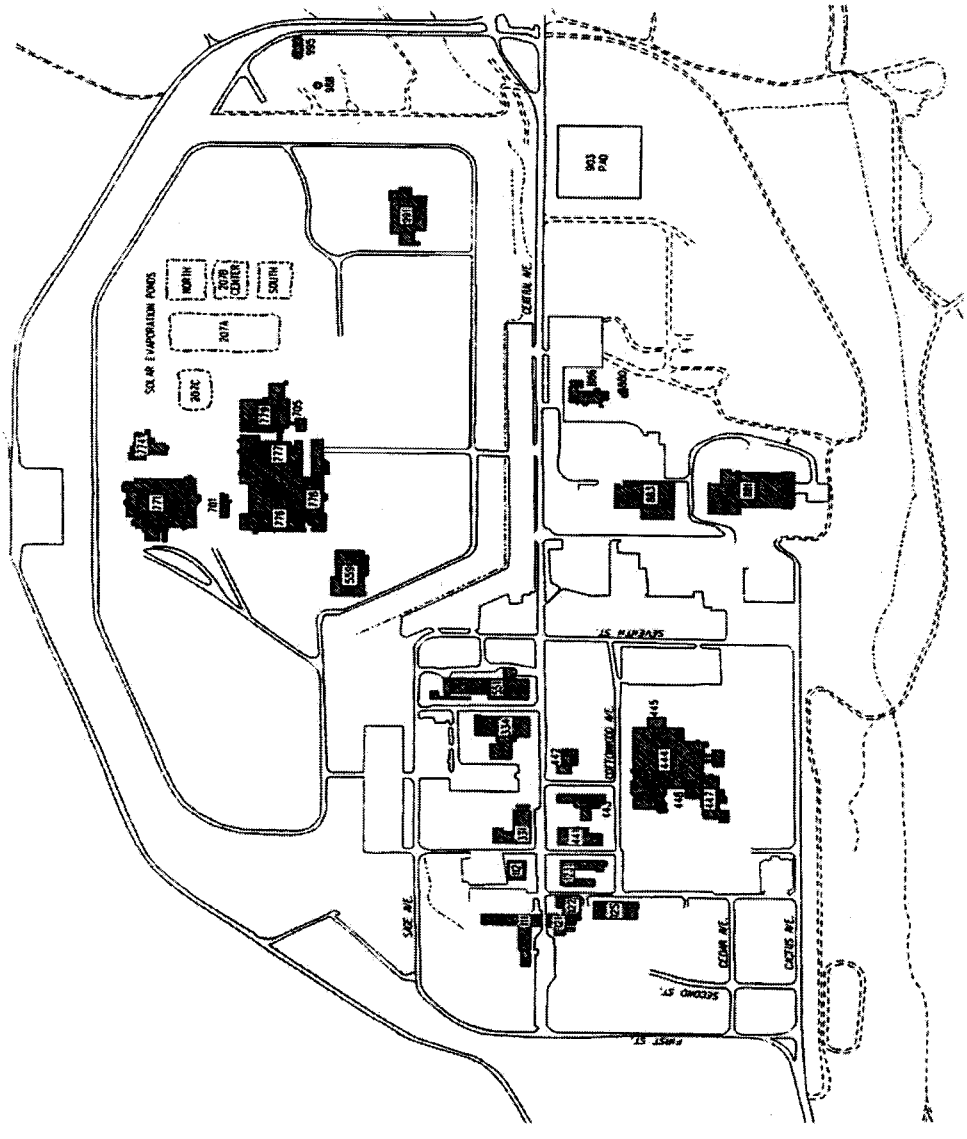


Figure 2. Map of INL

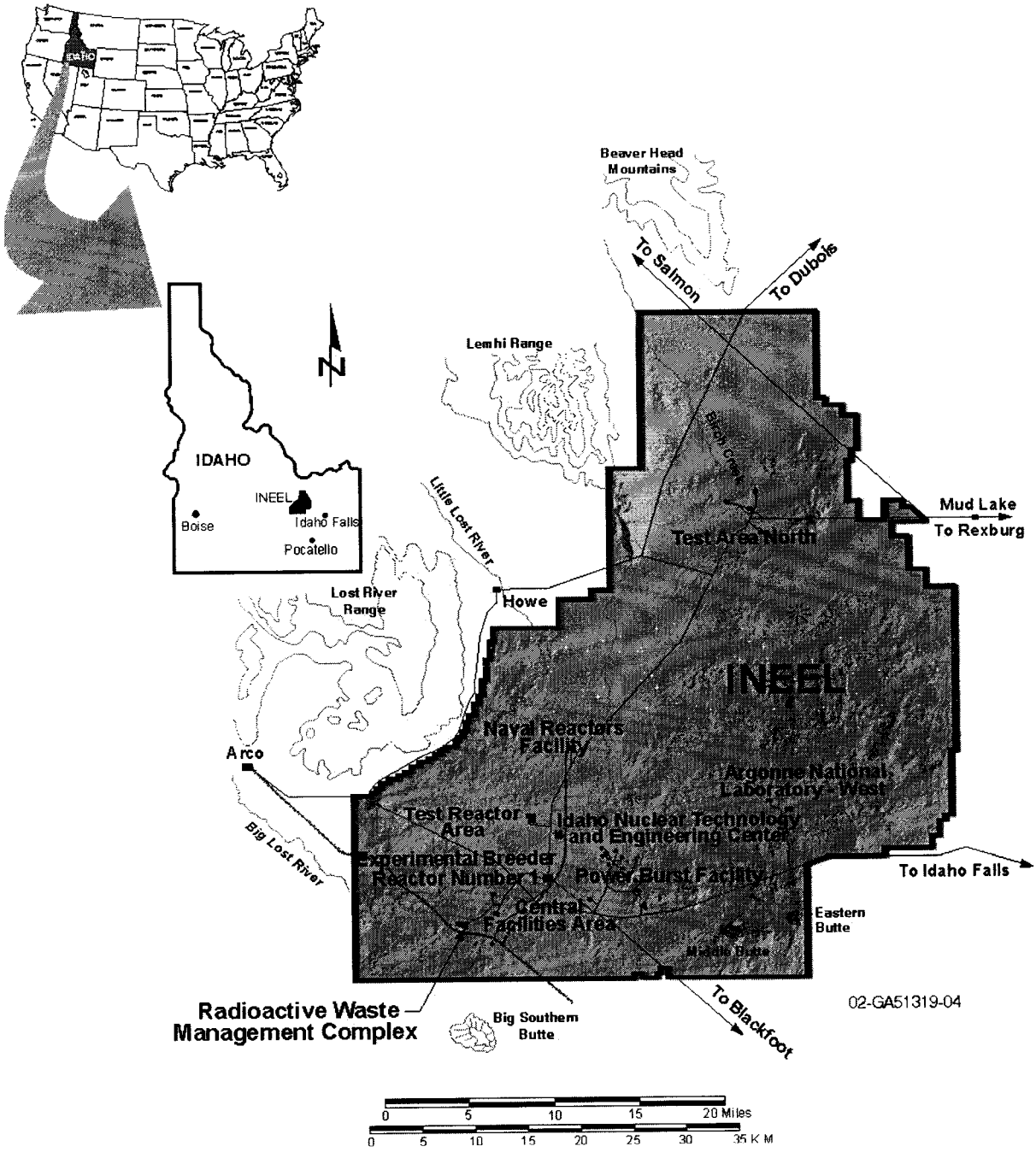
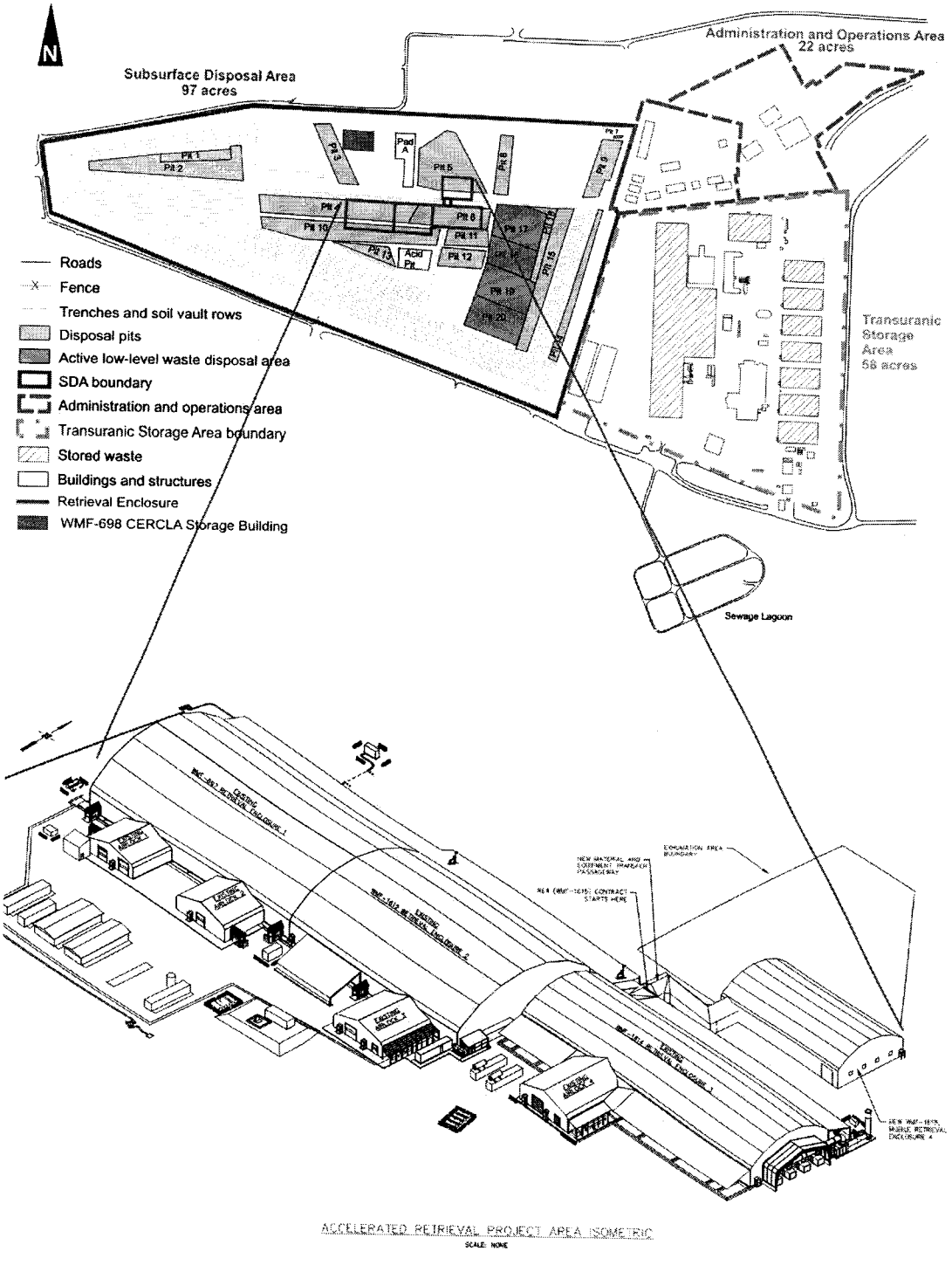


Figure 3A. Map of the SDA and the ARP-I, ARP-II, ARP-III, and ARP-IV Retrieval Areas



G08-2184-01

Figure 3B. Map of the SDA and the ARP-V Retrieval Area

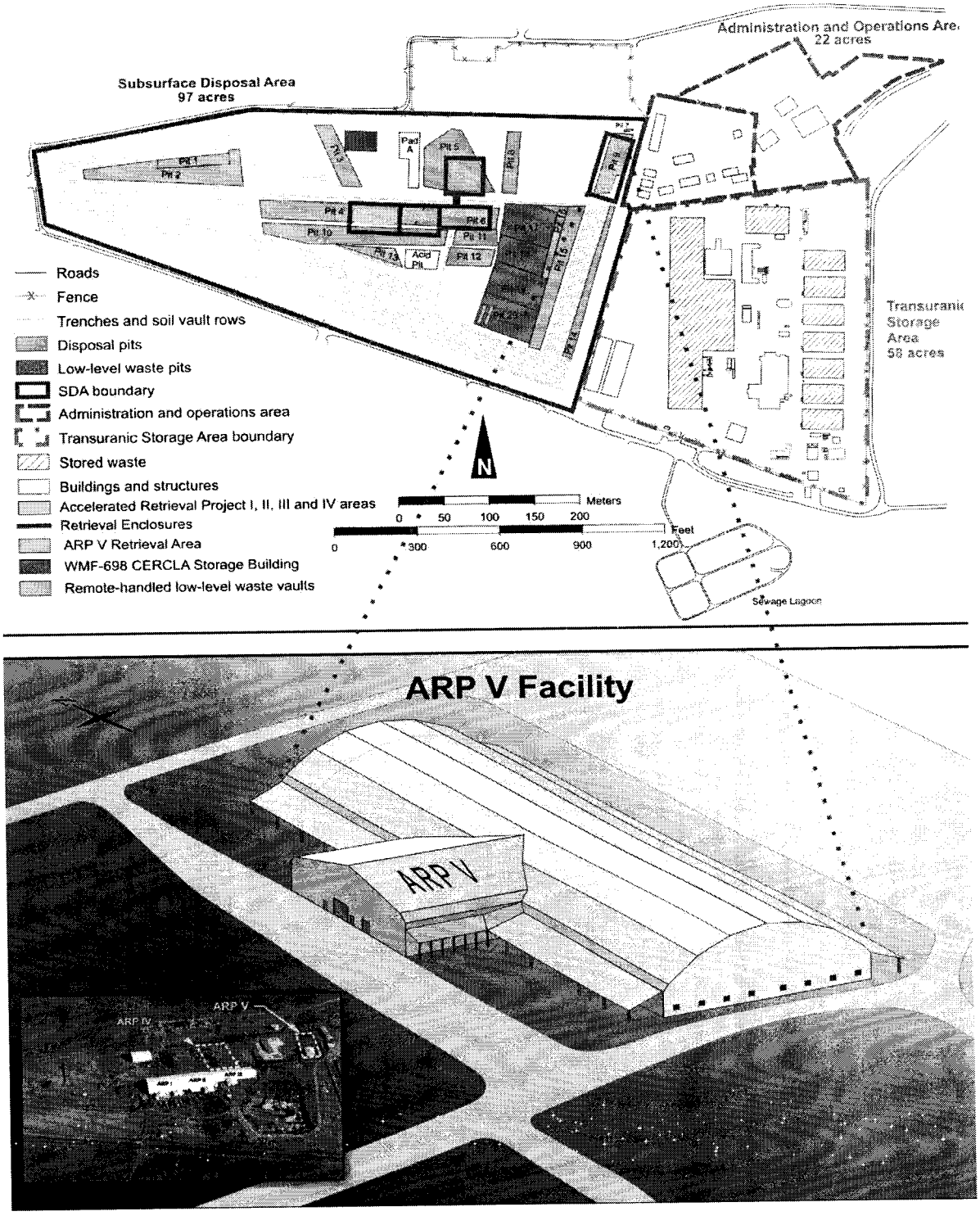


Figure 3C. Map of the SDA and the ARP-VI Retrieval Area

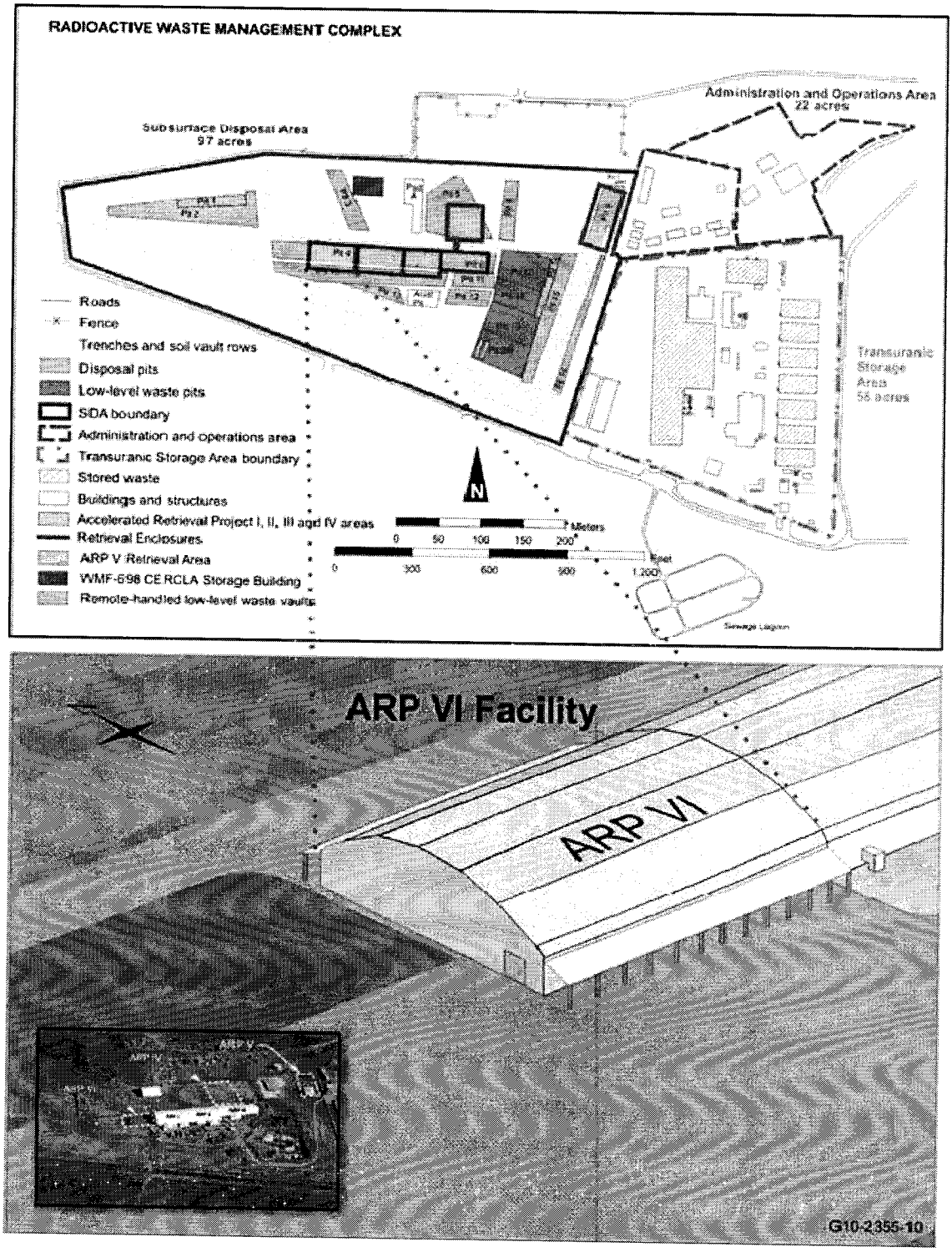
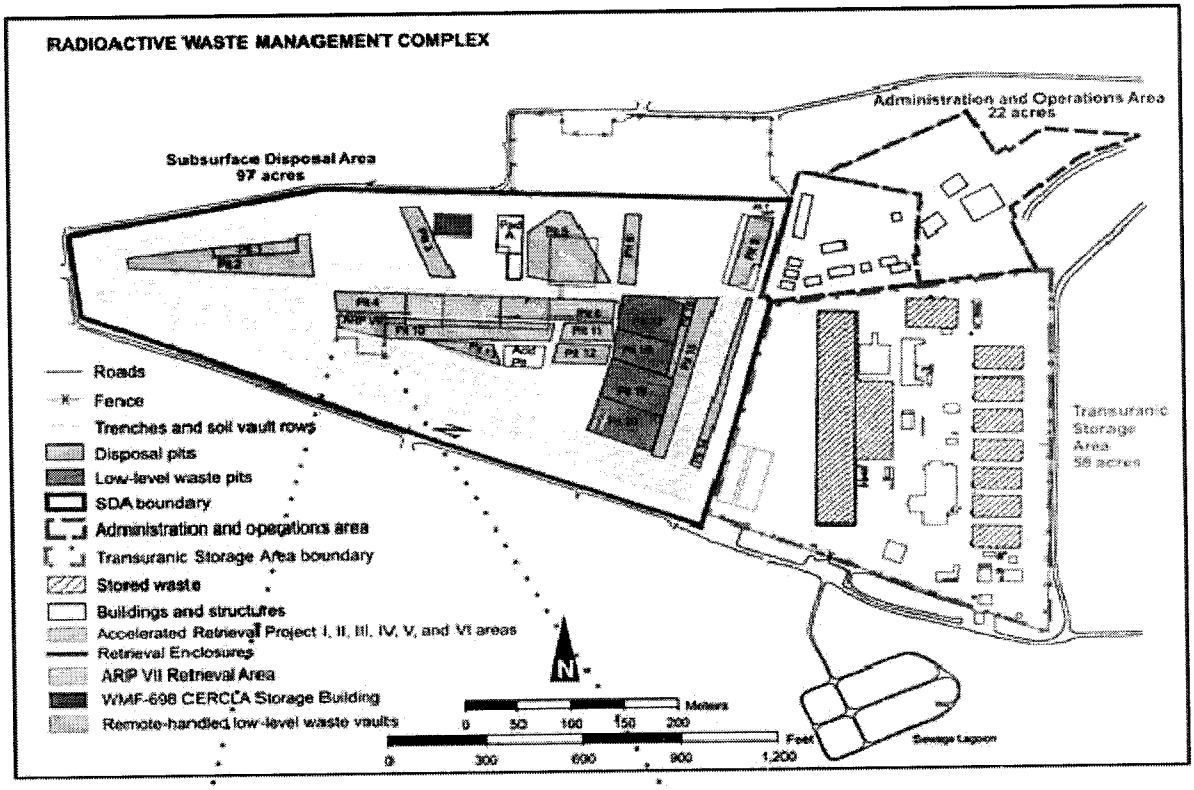


Figure 3D. Map of the SDA and the ARP-VII Retrieval Area



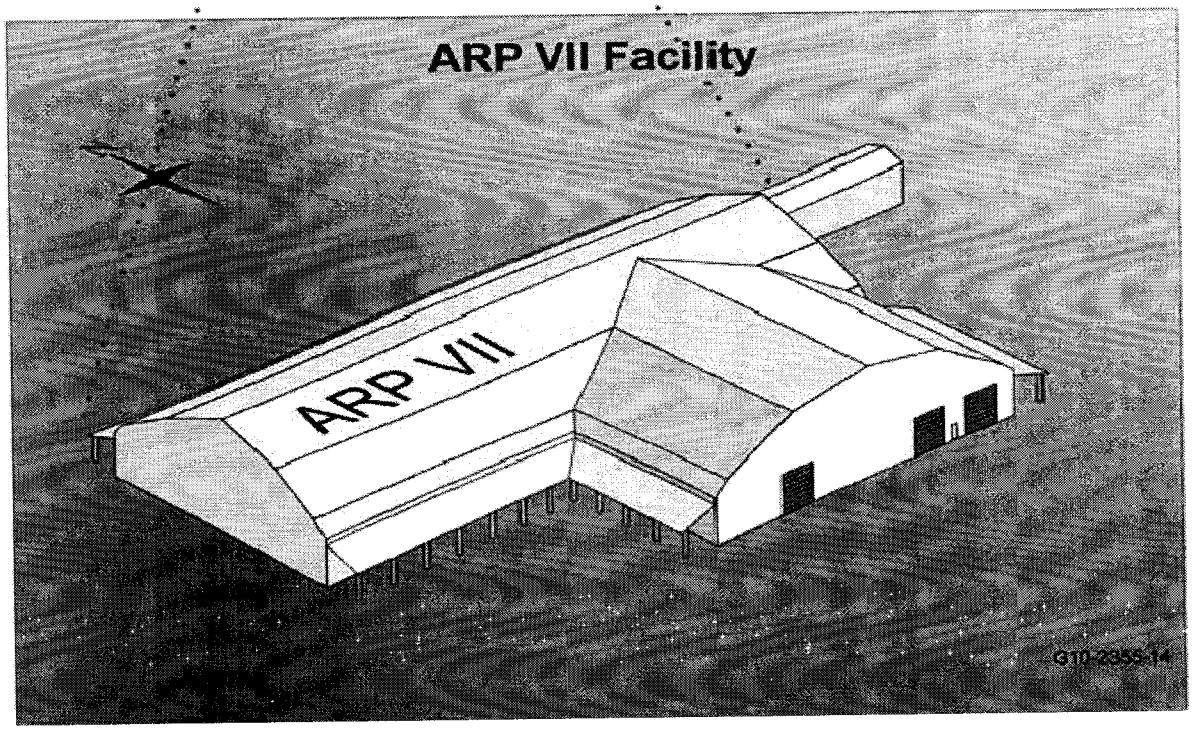


Figure 4. Map Showing the ARP Areas

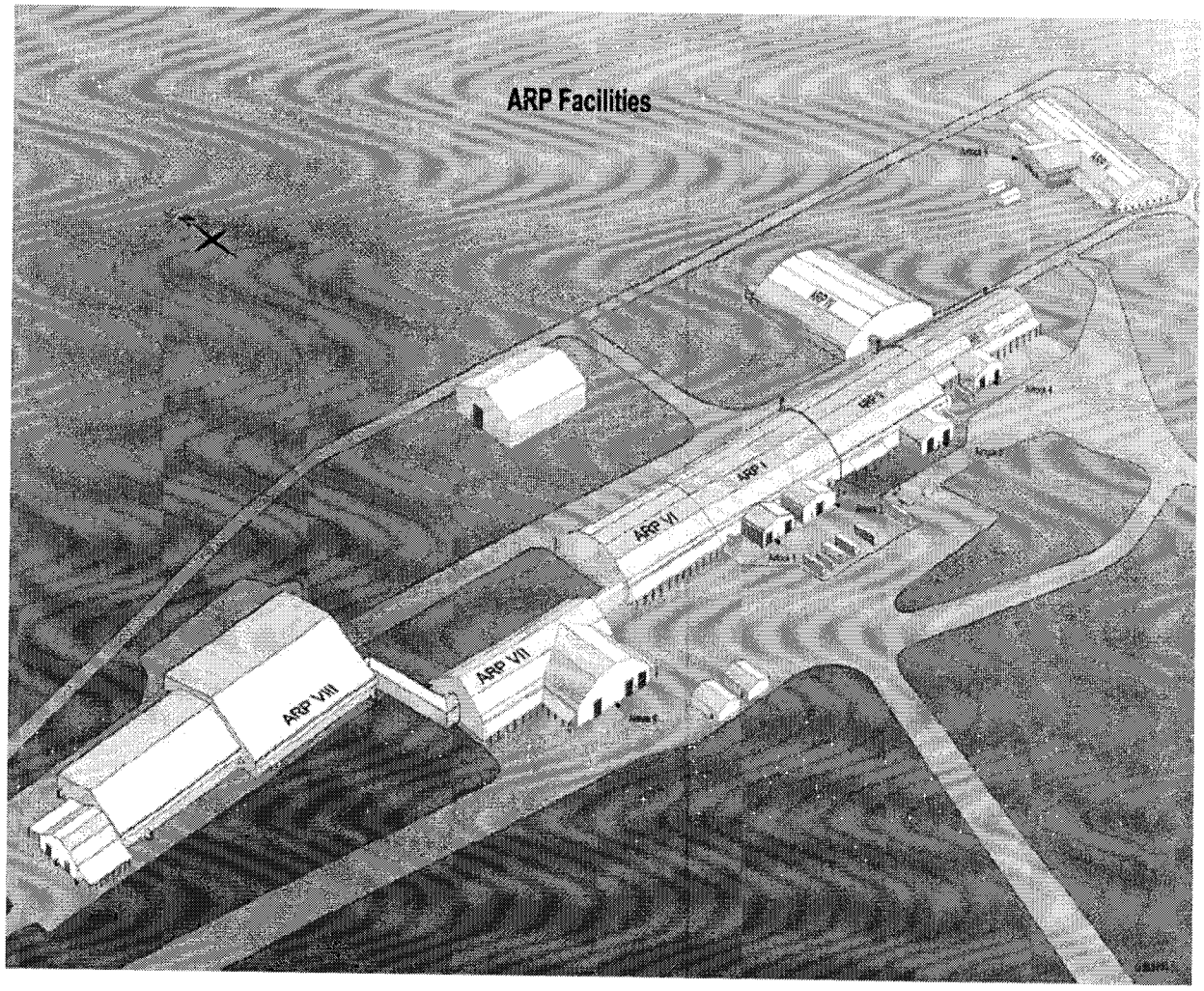


Figure 5. Cut Out of Retrieval Enclosure

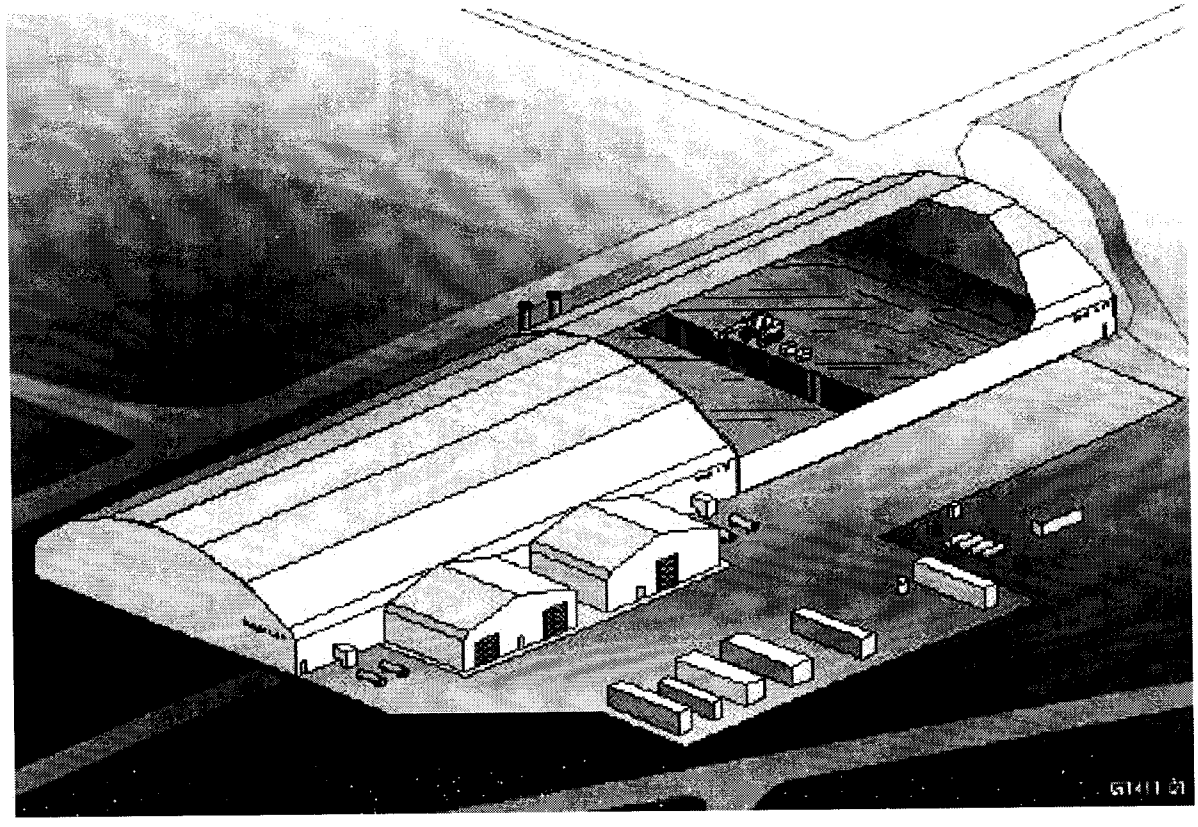


Figure 6A. Drum Packaging Station

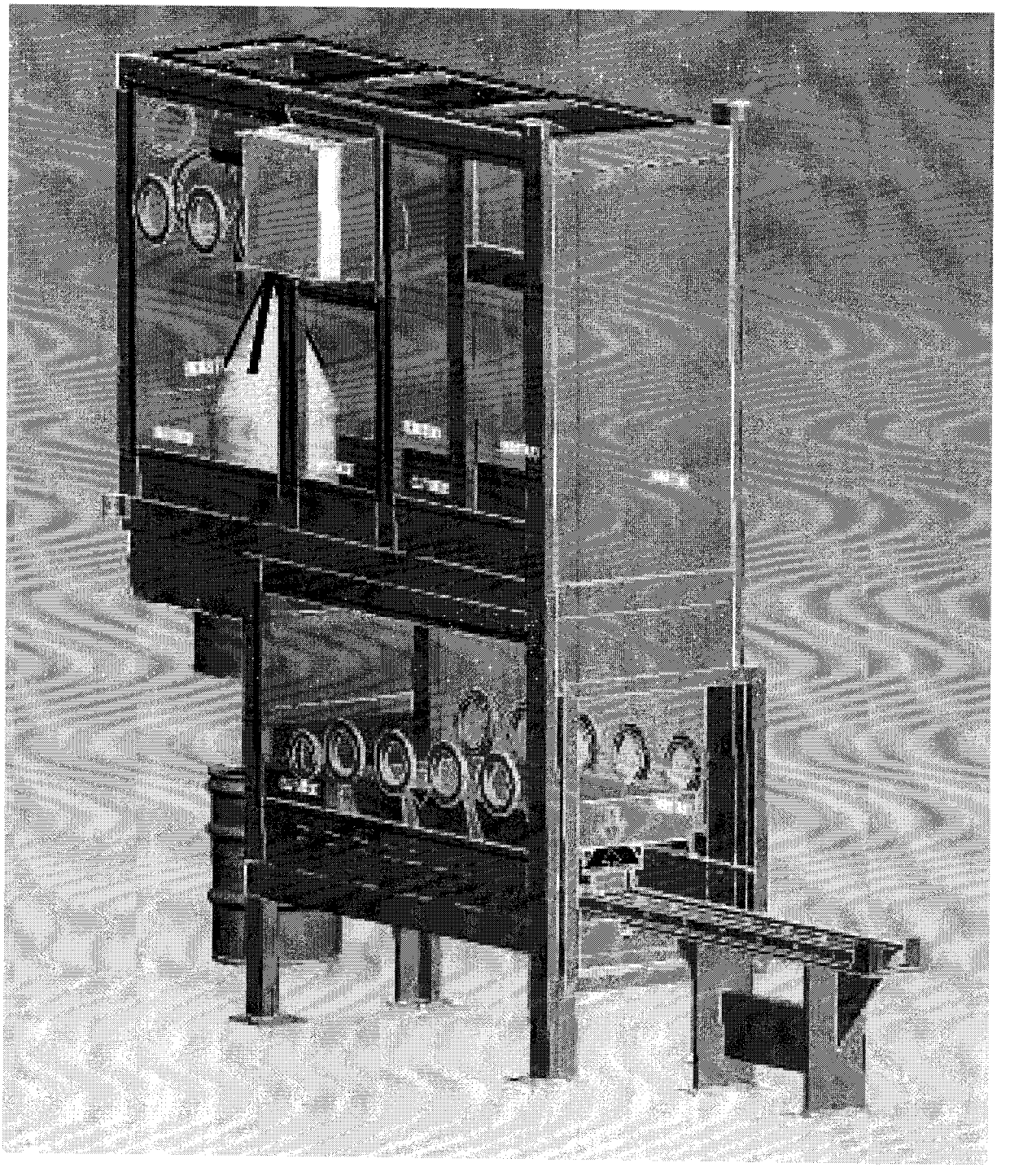


Figure 6B. Drum Packaging Station Equipped for Drums and SWBs

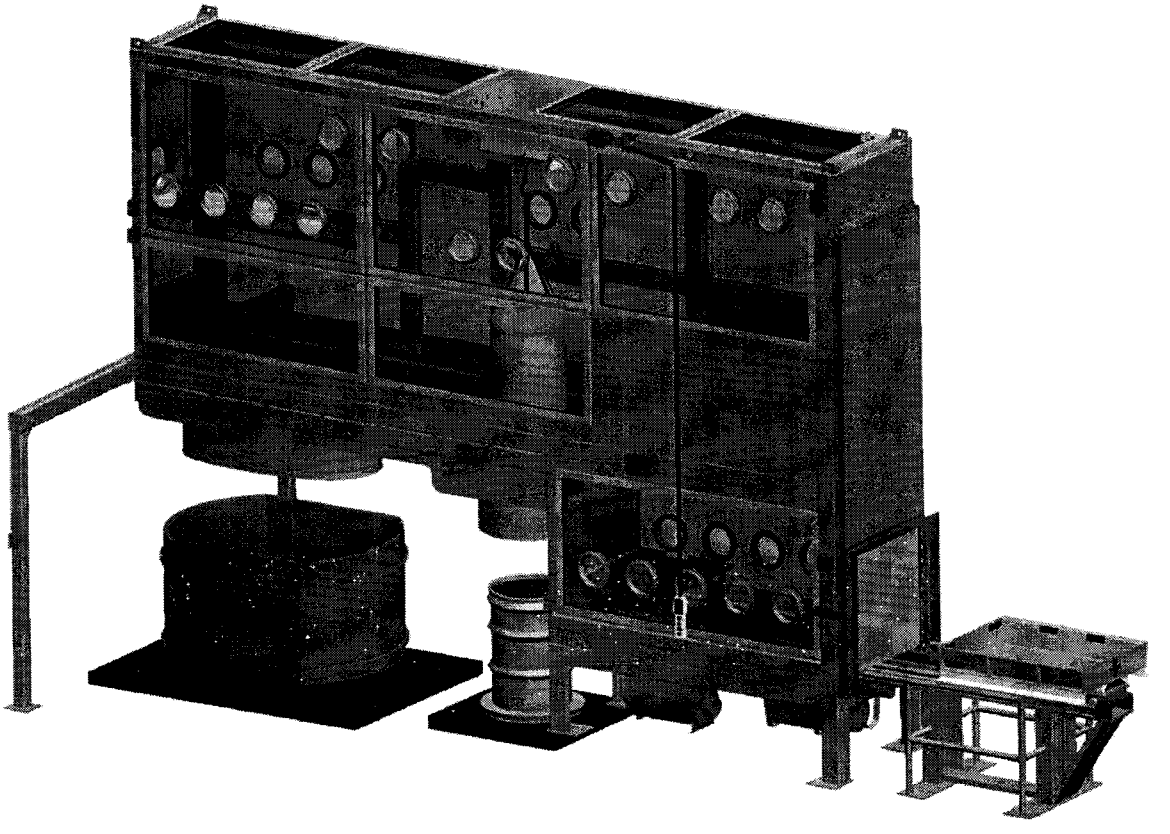


Figure 7. Excavator Removing Soil Overburden in ARP-I

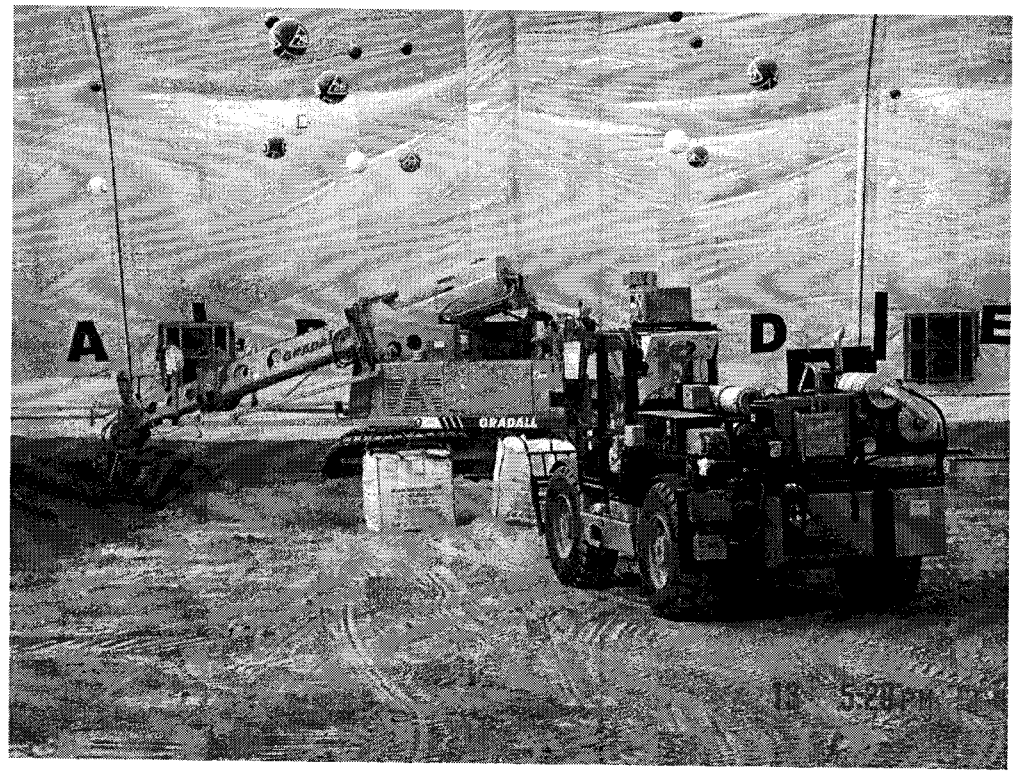
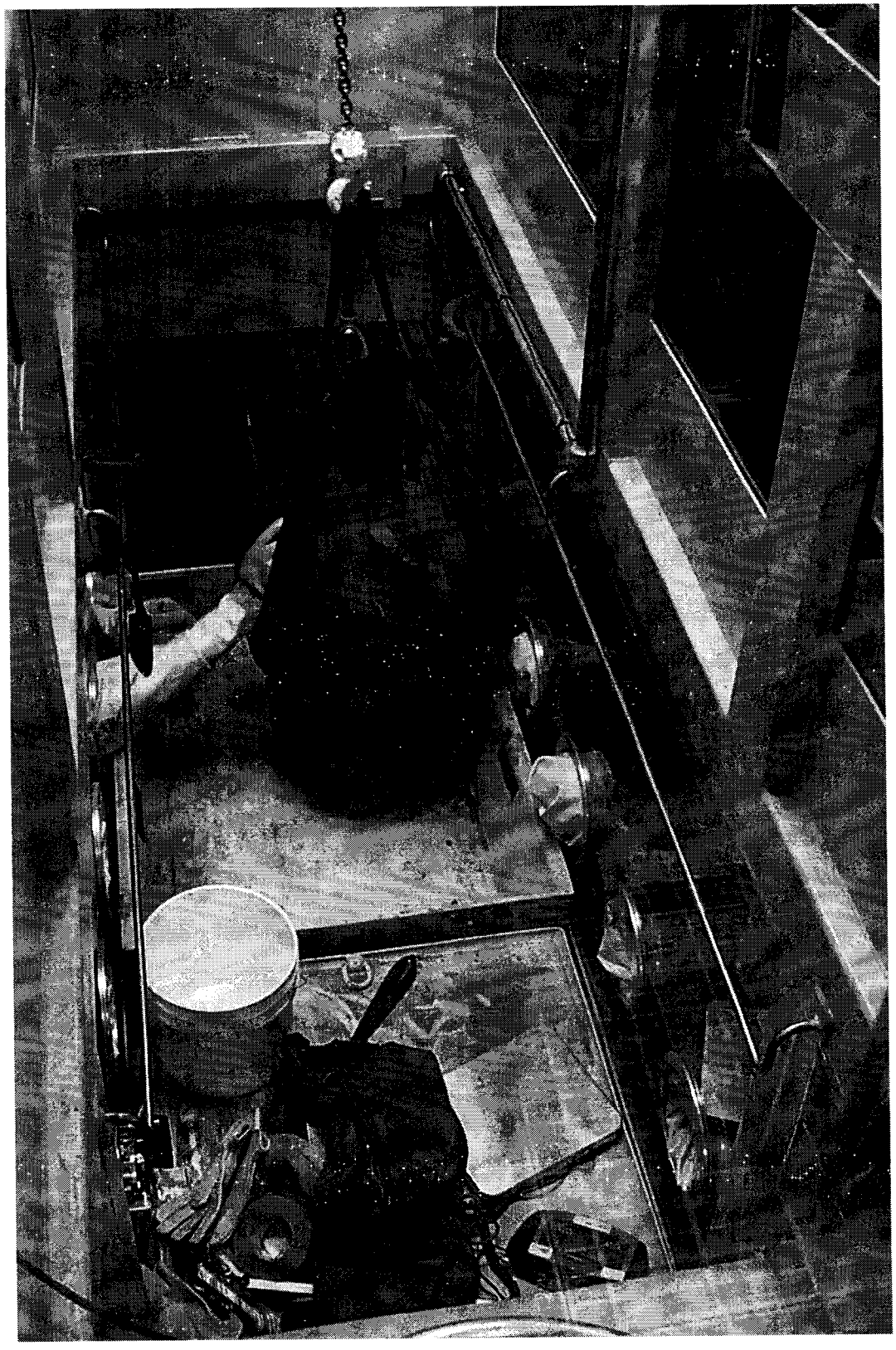


Figure 8. Drum Packaging Station Containing Inorganic Sludge

Figure 9. Hoisting Inorganic Sludge for Packaging into a Drum



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AK4

CCP-AK-INL-500

Central Characterization Program
Acceptable Knowledge Summary Report
For

REMOTE-HANDLED TRANSURANIC DEBRIS WASTE FROM ARGONNE NATIONAL LABORATORY-EAST STORED AT THE IDAHO NATIONAL LABORATORY

WASTE STREAM: ID-ANLE-S5000

Revision 11

November 20, 2012

Irene Quintana
Printed Name

APPROVED FOR USE

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
0	02/09/2006	Initial issue.
1	04/28/2006	Revised to address Carlsbad Field Office (CBFO) Document Review Record (DRR) comments.
2	06/01/2006	Revised to remove potential Official Use Only (OUO) information as identified by Idaho National Laboratory (INL). Also revised to address miscellaneous editorial and Acceptable Knowledge (AK) reference corrections and to address concerns identified during the May 9 through May 12, 2006, INL/Central Characterization Project (CCP) Program Evaluation.
3	07/07/2006	Revised to address findings identified during the U.S. Environmental Protection Agency (EPA) Inspection EPA-INL-RH-CCP-06.06-8.
4	11/16/2006	Revised to implement the Waste Isolation Pilot Plant Hazardous Waste Facility Permit requirements and associated Section 311/Remote-Handled (RH) Permit Modification Request (PMR) changes. Also revised to address the resolution of CCP NCR-RHINL-0007-06 to incorporate dried paint into the waste stream description.
5	11/01/2007	Revised to incorporate 56 containers originating from activities supporting Alpha Gamma Hot Cell Facility (AGHCF) examination operations conducted in the K-1 and K-2 cells of the M-Wing Hot Cell Facility. Also revised to incorporate miscellaneous freeze file changes and identify the potential for prohibited items (liquids, unpunctured aerosol cans, and sealed containers greater than 4 liters) identified during Real-Time Radiography (RTR).
6	01/31/2008	Revised to incorporate comments provided by inspector during EPA Tier 1 review of this report incorporating 56 containers of K-1 and K-2 cell debris waste into waste stream ID-ANLE-S5000.
7	06/17/2009	Revised to incorporate 12 containers originating from activities supporting Alpha Gamma Hot Cell Facility (AGHCF) examination operations conducted in the M-Wing Hot Cell Facility.

RECORD OF REVISION (Continued)

Revision Number	Date Approved	Description of Revision
8	06/24/2010	Revised to incorporate 48 canisters of waste originating from activities supporting Alpha Gamma Hot Cell Facility (AGHCF) examination operations.
9	09/06/2011	Revised to address permit modification changes in the November 30, 2010 *Waste Isolation Pilot Plant Hazardous Waste Facility Permit, Waste Analysis Plan* (WIPP-WAP). Revised to add references relative to processing potential ignitable and reactive materials. Other miscellaneous changes incorporated as necessary.
10	03/23/2012	Revised to describe additional processing of fuel type materials during repackaging operations. Other miscellaneous changes incorporated as necessary.
11	11/20/2012	Revised to incorporate comments provided by inspector during Environmental Protection Agency (EPA) Tier 1 review of this report for the addition of 48 canisters of high gamma waste from the Alpha Gamma Hot Cell Facility (AGHCF) into waste stream ID-ANLE-S5000. Updated waste stream physical description with items identified during waste repackaging. Other miscellaneous changes incorporated as necessary.

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LIST OF ACRONYMS AND ABBREVIATIONS

A/G	Alpha/Gamma
AEC	U.S. Atomic Energy Commission
AGHCF	Alpha Gamma Hot Cell Facility
AK	acceptable knowledge
ANL	Argonne National Laboratory
ANL-E	Argonne National Laboratory-East
ANL-W	Argonne National Laboratory-West
ATR	Advanced Test Reactor
ATWIR	Annual Transuranic Waste Inventory Report
CBFO	Carlsbad Field Office
CCP	Central Characterization Program
CFR	Code of Federal Regulations
CH	contact-handled
CTA	Clean Transfer Area
DEH	direct electrical heating
DOE	U.S. Department of Energy
DOT	U.S. Department of Transportation
DQO	data quality objective
DRA	Decontamination and Repair Area
DTC	dose-to-curie
EBL	Electron Beam Laboratory
EBR-II	Experimental Breeder Reactor-II
EMP	electron microprobe
EPA	U. S. Environmental Protection Agency
ERDA	U.S. Energy Research and Development Administration
FDP	Fluorinel Dissolution Process
FCF	Fuel Conditioning Facility
FFTF	Fast Flux Test Facility
HEPA	high efficiency particulate air
HEU	highly-enriched uranium
HFEF	Hot Fuel Examination Facility
HWN	Hazardous Waste Number
ICP	Idaho Cleanup Project
IFR	Integral Fast Reactor
ILTSF	Intermediate Level Transuranic Storage Facility
INL	Idaho National Laboratory
INTEC	Idaho Nuclear Technology and Engineering Center
ISC	Interim Storage Container
LANL	Los Alamos National Laboratory
lbs	pounds
LEU	low-enrichment uranium
LLNL	Lawrence Livermore National Laboratory
LMFBR	Liquid Metal Fast Breeder Reactor (Program)
LWA	Land Withdrawal Act

LIST OF ACRONYMS AND ABBREVIATIONS (Continued)

LWR	Light Water Reactor
m^3	cubic meters
MFC	Material and Fuels Complex
MFP	mixed fission products
mrem/hr	millirem per hour
MSDS	Material Safety Data Sheet
Na	sodium
NaK	sodium-potassium
NASA	National Air and Space Administration
nCi/g	nanocuries per gram
NFT	Nuclear Filter Technology, Inc.
NNSA	DOE National Nuclear Security Administration
NRC	U.S. Nuclear Regulatory Commission
NUMEC	Nuclear Materials and Equipment Corporation
NWCF	New Waste Calcining Facility
NWPA	Nuclear Waste Policy Act
ORNL	Oakridge National Laboratory
OUO	Official Use Only
PCB	polychlorinated biphenyl
psig	pounds per square inch gauge
Pu	plutonium
PVC	polyvinyl chloride
QA	quality assurance
QAO	quality qssurance objective
RCRA	Resource Conservation and Recovery Act
Report	Acceptable Knowledge Summary Report
RERTR	Reduced Enrichment Research and Test Reactor (Program)
rem/hr	rem per hour
RH	remote-handled
RHTRUCON	Remote-Handled Transuranic Waste Content Code
RSWF	Radioactive Scrap and Waste Facility
RTR	real-time radiography
RWMC	Radioactive Waste Management Complex
SAM	scanning auger microscope
SDIO	Strategic Defense Initiative Organization
SEM	scanning electron microscope
SFEF	Shielded Fuel Examination Facility
SGF	Shielded Glovebox Facility
SLSF	Sodium Loop Safety Facility
SO	shielded overpack
SPM	Special Materials
SRS	Savannah River Site
TREAT	Transient Reactor Test Facility
TRU	transuranic

LIST OF ACRONYMS AND ABBREVIATIONS (Continued)

TSA	Transuranic Storage Area
TSCA	Toxic Substances Control Act
U.S.	United States
VE	visual examination
WAC	Waste Acceptance Criteria
WCPIP	*Remote-Handled TRU Waste Characterization Program Implementation Plan*
WIPP	Waste Isolation Pilot Plant
WIPP-WAC	*Waste Isolation Pilot Plant Waste Acceptance Criteria*
WIPP-WAP	*Waste Isolation Pilot Plant Hazardous Waste Facility Permit, Waste Analysis Plan*
WMO	Waste Management Operations
WMP	waste material parameter
WS	work station
wt%	weight percent
ZPPR	Zero Power Plutonium (Physics) Reactor

1.0 EXECUTIVE SUMMARY

This acceptable knowledge (AK) Summary Report has been prepared for the Central Characterization Program (CCP) for remote-handled (RH) transuranic (TRU) waste generated at the Argonne National Laboratory-East (ANL-E) and managed at the Idaho National Laboratory (INL) Radioactive Waste Management Complex (RWMC) and Materials and Fuels Complex (MFC) Radioactive Scrap and Waste Facility (RSWF). This report was prepared in accordance with CCP-TP-005, *CCP Acceptable Knowledge Documentation* (Reference 18), to implement the AK requirements of DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan* (WCPIP) (Reference 1); *Waste Isolation Pilot Plant Hazardous Waste Facility Permit, Waste Analysis Plan* (WIPP-WAP) (Reference 19); and DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant* (WIPP-WAC) (Reference 24).

The WIPP-WAP AK requirements are addressed in CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan* (Reference 9). The WIPP-WAC AK requirements are addressed in CCP-PO-002, *CCP Transuranic Waste Certification Plan* (Reference 15). Additionally, this report provides the AK information required by CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control* (CCP RH-TRAMPAC) (Reference 25).

The CCP is tasked with certification of TRU waste for transportation to and disposal at the Waste Isolation Pilot Plant (WIPP). The CCP is responsible for collection, review, and management of AK documentation in accordance with CCP-TP-005 and reviews and approves this AK Summary Report. CCP maintains responsibility for this AK Summary Report and all CCP-TP-005 generated forms and records as quality assurance (QA) records. In addition, CCP maintains a copy of the "historical source documents" as non-QA records.

Argonne National Laboratory (ANL) historically managed numerous sites within the DOE complex, including ANL-E in Illinois and Argonne National Laboratory-West (ANL-W) in Idaho on the INL Site. In 2005 management of ANL-W was assigned to the INL and the facility was renamed MFC. Metallurgical research was conducted at the ANL-E site, while large-scale testing and development, including reactor programs, occurred at the MFC site. The sites have worked together to support the Laboratory's nuclear program for more than 50 years. In general, the program involved the irradiation of fuel elements and materials in MFC reactors that were transferred to ANL-E for examination. The spent fuel and resulting RH TRU debris waste were returned to INL for storage. These hot-cell-to-hot-cell transfers between MFC and ANL-E occurred regularly throughout the period of waste generation.

Waste stream ID-ANLE-S5000 consists of less than 1000 30-gallon drums and 48 canisters of RH TRU debris transferred to INL between 1975 and 1995. This waste was generated at the ANL-E Alpha Gamma Hot Cell Facility (AGHCF) and M-Wing Hot Cell Facility between November 1971 and November 1995 during the examination of

irradiated and unirradiated fuel pins and other reactor materials from various reactor programs at MFC and other U.S. Department of Energy (DOE) reactors. The AGHCF is a hot cell complex that includes office space, shielded gloveboxes, a hot cell under nitrogen atmosphere with work stations (WS) for remote manipulation of materials, and a Decontamination and Repair Area (DRA).

The M-Wing Hot Cell Facility contains megacurie and kilocurie hot cells constructed in 1964 to support analytical-chemical research on irradiated alpha-emitting materials. During the late 1960s and 1970s, containment boxes were constructed in three of the cells (M-4, K-1, and K-2) in the M-Wing Hot Cell Facility to expand the destructive examination capabilities of the AGHCF. These inert atmosphere boxes provided additional reactor fuel receipt, disassembly, sectioning, and macroexamination capabilities utilizing AGHCF procedures and personnel.

This AK summary report, along with the referenced supporting documentation, provides a defensible and auditable record of AK for waste stream ID-ANLE-S5000. The references and AK sources used to prepare this report are listed in Sections 8.0 and 9.0. The AK sources are referenced within this report by an alphanumeric designator (i.e., C001, DR001, P001, U001) corresponding to a unique CCP Source Document Tracking Number for this waste stream. This report includes information relating to AGHCF history, configuration, equipment, process operations, and waste management practices, as well as relevant waste management practices of the INL and its interface with ANL-E for RH TRU waste management. Information contained in this report was obtained from numerous sources, including: facility safety basis documentation; historical document archives; generator and storage facility waste records and documents; procedures for waste packaging and generation activities; container-specific waste packaging and characterization documentation; materials transfer documentation; monthly, quarterly, and annual reports; and interviews with cognizant AGHCF personnel.

This report and supporting source documentation provide the mandatory waste program and waste stream-specific information required by the WIPP-WAP (Reference 19). This report also compiles data relevant to applicable U.S. Environmental Protection Agency (EPA) requirements and presents the documentation necessary to satisfy each WCPIP data quality objective (DQO) and quality assurance objective (QAO) for RH TRU debris waste stream ID-ANLE-S5000 generated at ANL-E between November 1971 and November 1995. RH debris waste remaining at ANL-E (waste stream AERHDM) is addressed in CCP-AK-ANLE-500, *Central Characterization Project Acceptable Knowledge Summary Report for Argonne Remote-Handled Debris Waste, Waste Stream: AERHDM* (Reference 2).

2.0 WASTE STREAM IDENTIFICATION SUMMARY

Site Where TRU Waste Was Generated and Stored:

Generation Location:
ANL-E
9700 South Cass Avenue
Argonne, Illinois 60439
EPA ID No. IL3890008946

Current Storage Location:
INL RWMC
Transuranic Storage Area (TSA) – Intermediate Level Transuranic Storage Facility (ILTSF)
Idaho Nuclear Technology and Engineering Center (INTEC)
INL MFC Radioactive Scrap and Waste Facility
EPA ID No. ID4890008952

Characterization and Certification Location:
INTEC
CPP-1634, CPP-659, and CPP-666
EPA ID No. ID4890008952

Facility Where TRU Waste Was Generated:

Alpha Gamma Hot Cell Facility and M-Wing Hot Cell Facility (M-4, K-1, and K-2 Hot Cells)

Facility Mission:

ANL-E was a multi-disciplinary research laboratory that performed work in basic and applied science in the areas of engineering, energy technology, chemistry, physics, materials, biomedicine, and environmental studies. The ANL-E mission expanded from the initial experiments performed at the University of Chicago in 1941 to produce plutonium for the Manhattan Project. Officially founded in 1946 as the first national laboratory by the U.S. Atomic Energy Commission (AEC), ANL-E has been instrumental in the development of nuclear reactors and associated systems, materials, fuel elements, and components for use in both civilian and defense programs. This work included key participation in the development of essentially all the nuclear reactor systems in use today for isotope production, power generation, and naval submarine propulsion, as well as experimental or proposed applications for weapons destruction, defense waste management, defense security and safeguards, and space propulsion.

The 200 Area building containing the AGHCF was built in the late 1950s and started operations in the early 1960s as the Fuels Technology Center under the direction of the Metallurgy Division. The overriding design criterion for the building was to allow ANL-E to conduct research programs for the advancement of reactor technology, with a

particular emphasis on the use of plutonium (Pu) as fuel. This mission required that the facilities were designed to accommodate radiation fields and the unique handling requirements associated with plutonium materials.

The AGHCF is a kilocurie hot cell complex designed to conduct metallurgical research on radioactive fuel materials. The facility was designed to handle irradiated and unirradiated fuels used in the Liquid Metal Fast Breeder Reactor (LMFBR) Program and numerous other reactor testing programs. The AGHCF was used for destructive examination of irradiated fuel elements and fuel element clusters, involving the sectioning of fuel elements to prepare samples for examination. Waste from the AGHCF was generated primarily from analysis of post-irradiated nuclear fuel assemblies from fast breeder and light water reactors (LWR).

The 200 Area building containing the M-Wing Hot Cell Facility was built in 1951. In 1962, the M-Wing was added to the building to support isotope separation and research on heavy radioactive isotopes. The M-Wing Hot Cell Facility was added in 1964 to support analytical-chemical research on irradiated alpha-emitting materials. These cells were not designed to support the destructive examination associated with the disassembly and sectioning of irradiated fuel elements being conducted in the AGHCF. Based on the review of the AK record, a shielded fuel examination enclosure was built into the M-4 Cell in 1968 to support the examination of fast reactor fuel samples, such as mixed oxide and carbide fuels. A containment enclosure was incorporated into the K-1 Cell as early as 1972 to support direct electrical heating experiments of breeder reactor mixed oxide fuel samples. During the 1973-1974 time frame, plans were implemented to further expand the AGHCF destructive examination capabilities by expanding the containment in the K-1 Cell and constructing another inert gas alpha-containment enclosure within the K-2 Cell in anticipation of a major increase in demand for destructive examination capabilities associated with the fast breeder reactor and LWR fuels. During the 1972 to 1981 time frame, the M-4 Cell supported the destructive examination of uranium and mixed uranium/plutonium fuels. During the 1975 to 1981 time frame, research in the M-4 Cell focused primarily on the preparation of fuel specimens from the Big Rock Point Reactor for fission gas and burnup analysis. The K-1 Cell operated during the 1972 to 1978 time period supporting direct electrical heating experiments on LWR and breeder reactor fuel pin samples. The K-2 Cell operated during the 1978 to 1981 time frame supporting AGHCF fuel disassembly and macroexamination operations. The M-4, K-1, and K-2 Cell waste included in waste stream ID-ANLE-S5000 was generated both during the cell operations and cell decontamination, with the later taking place during the 1978 to 1981 time frame.

Waste Stream ID-ANLE-S5000

Summary Category Group:	S5000 – Debris Waste
Waste Matrix Code Group:	Heterogeneous Debris Waste
Waste Matrix Code:	S5400

RH TRU WASTE Content Code (RH TRUCON): ID 321, ID 322 and ID 325

Annual Transuranic Waste Inventory Report (ATWIR) Identification Numbers (Reference 23): IN-AE-AGHC-01
IN-AE-AGHC-02[1]

EPA Hazardous Waste Numbers: D004, D005, D006, D007, D008, D009, D010, D011, D019, D028, D029, F002, and F005

Waste Stream Description:

Waste stream ID-ANLE-S5000 consists of 30-gallon drums of RH TRU debris generated by destructive and nondestructive examination of radiological materials such as fuel pins, reactor structural materials, and targets in the AGHCF and M-Wing Hot Cell Facility between 1971 and 1995. Waste stream ID-ANLE-S5000 also includes 48 canisters formally stored at the MFC RSWF as high gamma TRU contaminated material. This includes fissile scrap, recoverable and non-recoverable, segregated from intermediate level TRU waste shipped to INL in the 30-gallon drums. These "scrap" materials have since been determined to be waste. The canisters are not the final waste package and they will be repackaged into 55-gallon drums. The waste was originally packaged and shipped to INL between March 1975 and November 1995. Waste from this stream was contaminated primarily with fissile materials and mixed fission products (MFP). A discussion relating to the radiological characterization of this waste stream is provided in Section 5.4.3.

This waste stream consists predominantly of organic and inorganic debris generated during the destructive and nondestructive examinations conducted in the AGHCF and supporting areas, and contains the following materials (see Section 5.4.1):

- **Cellulosic** materials including paper, cardboard, and cotton rags, cloth, towels, grinding paper, Kleenex, Kim wipes, boxes, liners, filter media, filter paper, tissues, string, rope, swabs, mop heads, and gloves. Wooden items include brooms, mop handles, rulers, brushes, blocks, Masonite, plywood, and chipboard items.

- **Plastic** materials including polyethylene, polypropylene, polyvinyl chloride (PVC), phthalate, Koroseal, Nylon, Tygon, styrene butadiene, polyurethane, Lucite, Teflon, paint (dried) and epoxy (hardened), metallurgical (Bakelite) sample mounts, bottles, cups, tubing, funnels, pipe, bags, sheeting, pieces, tape, syringes, markers, and other miscellaneous items.

- **Rubber** items including Neoprene and silicone O-rings, gaskets, stoppers, hose, gloves, wire/cord insulation, and other miscellaneous items.

[1] This waste was generated at ANL-E and shipped to INL for storage in the MFC RSWF.

- **Glass** items including glass, ceramic, alumina, Transite (asbestos), porcelain, quartz, Vycor, and boron nitrite bottles, jars, flasks, tubing, beakers, test tubes, stoppers, plates, insulation (fiberglass), Fiberglas disks, firebrick, insulators, light bulbs, thermometers, lenses, and other items.

- **Metal** items including ferrous materials such as carbon steel, stainless-steel, and cast iron cans, buckets, equipment, tools, c-clamps, tape measures, metal brushes, drill bits, tubing, fittings, rods, rings, chain, saw blades, dustpans, motors, manipulator tape, capsules, pin baskets, paint cans, can fixture hardware, cladding, nuts, bolts, small steel block, and other miscellaneous scrap items. Non-ferrous metal items include aluminum, brass, bronze, copper, lead, tungsten, tantalum, and tin cans (including punctured aerosol cans), sheeting, shielding (lead), foil, tools, wire, rods, cable, tubing, fittings, gauges, plates, motors, light fixtures, can fixture hardware, cladding, and other miscellaneous scrap items.

Waste stream ID-ANLE-S5000 contains lesser amounts (less than 50 percent in any container) of homogeneous organic and inorganic materials. Clay and vermiculite based absorbents were used during the neutralization and evaporation of acids, etchants, and alcohol solutions generated during the passivation of reactive metals. These absorbents were mixed with the liquids while the liquids were being heated to dryness on a hot plate. Acidic dissolution solutions (e.g., nitric and hydrofluoric acids) generated in the M-Wing were neutralized (Neutrasorb, calcium hydroxide, and sodium bicarbonate) and immobilized with compounds such as vermiculite and cement. Charcoal and ion exchange resins filter media used in the AGHCF water and air filtration systems was also included in this waste stream.

The typical drum packaging configuration for waste stream ID-ANLE-S5000 consists of (from inside to out) one, two, or three metal waste cans (5-, 7-, and 10-gallon), a fiber drum pouch spreader, a heat-sealed inner PVC plastic bag (with a high efficiency particulate air [HEPA] filter vent since 1990), a polyethylene drum liner, a heat-sealed outer PVC plastic bag (with a HEPA filter vent since 1990), and a U.S. Department of Transportation (DOT) 17H 30-gallon drum (with a HEPA filter vent since 1990). The filter vents used on the bags were specified as Nuclear Filter Technology, Inc. (NFT) 030 and for 30-gallon drums, NFT 013. Exceptions to this packaging configuration are discussed in Section 5.5.

The typical canister packaging configuration for waste stream ID-ANLE-S5000 consists of (from inside to out) one 1-gallon can (up to eight 1-gallon cans), a thin-walled steel liner (bag expander) 62-inches long, a heat sealed polyethylene loading sleeve, in a stainless steel cylinder approximately 9.25-inches in diameter by 71.75-inches in length including an 8-inch long steel plug threaded into the top end. In some cases, wastes may be packaged in 4-inch cans placed with other wastes in the 1-gallon cans. One canister in the waste stream contains waste in a 2R container in lieu of the eight 1-gallon paint cans. The 2R container is a steel cylinder 4.25-inches in diameter by 61-inches long.

The ANL-E canisters will be repackaged prior to shipment to WIPP. The waste from the cans will be placed into a 30-gallon drum. A lid with a NucFil-certified carbon composite filter, but without a locking ring will be placed on the 30-gallon drum. The 30-gallon drum will be placed into a woven polyethylene lifting bag. The drum and lifting bag are then wrapped in a plastic sleeve as the drum is lifted out of the repackaging cell. The sleeve is closed around the drum and lifting bag using a wire tie, plastic tie, or bungee cord. The 30-gallon drum is then lowered into a DOT 7A, Type A 55-gallon steel drum. The plastic sleeve may be removed from the 30-gallon drum before placement, or the top breached following placement in the 55-gallon drum. Polyethylene disks may be placed in the 30-gallon or 55-gallon drums just prior to placing on the drum lids to facilitate pushing down plastic used for contamination control. The standard 55-gallon drum is constructed of 16-gauge materials and has a removable head with a drum head gasket. The 55-gallon drums will include a carbon composite filter. The 55-gallon drum is loaded into the removable lid canister using a 55-gallon drum lifting bag. The drum lifting bag will remain in the canister with the drum. Up to three drums will be loaded into the removable lid canister. The waste in this configuration may include a maximum of one layer of confinement (the 30-gallon drum). Refer to Section 5.5 for detailed waste packaging discussion.

Items prohibited from the AGHCF RH TRU waste containers during the entire generation period for waste stream ID-ANLE-S5000 (from 1971 through 1995) included free liquids, residual liquids greater than one percent, compressed gases including aerosol cans, pyrophorics, explosives, and incompatible or potentially reactive chemicals. Liquids exceeding one percent in the drum are not expected to be present in any waste container in waste stream ID-ANLE-S5000, due to the AGHCF standard practice of evaporating and/or absorbing all liquids as described in Section 5.4.2.3. However, unpunctured aerosol cans, impenetrable lead-lined cans, and prohibited amounts of liquids (1-pint, ½-cup, and 1-tablespoon) in internal bottles have been identified during real-time radiography (RTR). In addition, RTR has determined that not all of the internal waste cans were vented by drilling holes into the side of these cans to install lifting cables; resulting in sealed containers exceeding 4-liters when a lid gasket may be present.

Potential prohibited items identified for the 48 canisters of high gamma TRU debris include sealed containers greater than 4-liters and potential pyrophorics. Review of container documentation indicates that inclusion of metal fines and cuttings can be expected in the waste. Additionally, container documentation and loading procedures indicate some fuel element pieces with sodium (Na) or sodium-potassium (NaK) bonded cladding may be present in the waste. During repackaging operations, these items (fines, cuttings, fuel pieces) will be evaluated for reactivity and ignitability. Two thermal events have occurred during the repackaging of individual waste containers in this population. Each event was attributed to the ignition of metallic fines and reaction of sodium present in sodium bonded fuel elements respectively with exposure to air during repackaging operations. Repackaging operations were modified to segregate fuel materials and fines from other waste materials for further handling. Fuel and fuel-like materials will be segregated and immersion tested in water. Materials found to exhibit a

characteristic of reactivity will be segregated for future handling. Fines identified will be segregated and mixed with a minimum of five times Met-L-X by weight. The segregated materials bound for WIPP disposal will be exposed to an air or 20 percent oxygen atmosphere for 30 minutes prior to packaging.

Any items possessing reactive or ignitable characteristics will either be rendered safe or segregated from the waste prior to placing waste in a 30-gallon drum. The high gamma TRU waste canisters may also contain a heat sealed polyethylene liner bag which will be breached during repackaging operations.

During retrieval of drums from the ILTSF, several instances were found of water in the storage vault and in contact with the waste drums. Over 130 vaults were used for storage of Idaho Cleanup Project (ICP) stored RH TRU waste. Two vaults were found during the 2004-2005 retrieval campaign to contain sufficient water to submerge the lowest stacked drum. None of the drums for which characterization is being performed using videotapes were stored in any vault containing water for the 2004-2005 retrieval campaign. In August of 2000, 15 drums were retrieved from four vaults. Review of videotapes and photographs taken during retrieval of the 15 drums revealed no visible water was present on the drums. In 2005, all vaults, including the four vaults opened in 2000, were opened. Each vault was verified to be empty of containers; verified that no visible water was present; and surveyed to verify absence of radiological contamination (References C337, P612, and P613).

Of the drums in this waste stream, 54 were either retrieved from water in the vault, retrieved from a vault that once contained water, or exhibited evidence that the drum was exposed to water (i.e., water/mud stains, rust, or water on top). Radiography will be performed on these containers to assure that the drums have not been inundated by water (Reference P612).

Based on a March 2003 report certifying a non-hazardous waste determination submitted by the DOE Chicago Operations Office to the Idaho Operations Office, the containers in waste stream ID-ANLE-S5000 have been and will continue to be managed as Resource Conservation and Recovery Act (RCRA) non-hazardous waste while at INL (Reference C351). Even though this waste stream will continue to be managed as non-hazardous by INL, the WIPP-WAP requires assignment of EPA Hazardous Waste Numbers (HWNs) to TRU waste streams that lack analytical evidence demonstrating that these constituents would have not exceeded the regulatory thresholds. For this reason, the containers in this waste stream will be assigned the following EPA HWNs, D004, D005, D006, D007, D008, D009, D010, D011, D019, D028, D029, F002, and F005, prior to shipment to WIPP. Refer to Section 5.4.2 for the waste stream chemical content evaluation.

Waste stream ID-ANLE-S5000 meets the WIPP-WAP and the WCPIP waste stream definitions. The waste is similar in material, physical form, hazardous constituents, and radiological properties and generated from a single process or activity.

3.0 ACCEPTABLE KNOWLEDGE DATA AND INFORMATION

TRU waste destined for disposal at the WIPP must be characterized prior to shipment. Development of knowledge of the waste materials and processes that generate and control the waste is required to provide a clear and convincing argument about the characteristics of each waste stream. The AK characterization documented herein complies with the requirements of the WIPP-WAP (Reference 19) and the WCPIP (Reference 1) and was developed in accordance with CCP-PO-001 (Reference 9), and CCP-TP-005 (Reference 18). The WCPIP identifies waste characterization requirements and methods to satisfy requirements in:

- Title 40 *Code of Federal Regulations* (CFR) Part 191, *Environmental Radiation Protection Standards for Management and Disposal of Spent Nuclear Fuel, High-Level and Transuranic Radioactive Wastes* (Reference 3)
- Title 40 CFR Part 194, *Criteria for the Certification and Re-Certification of the Waste Isolation Pilot Plant's Compliance with the 40 CFR Part 191 Disposal Regulations* (Reference 4)
- Criteria *for the Certification and Re-Certification of the Waste Isolation Pilot Plant's Compliance with the 40 CFR Part 191 Disposal Regulations: Certification Decision* (Reference 5)
- Public Law 102-579, *Waste Isolation Pilot Plant Land Withdrawal Act* (LWA) (Reference 6).

This report presents information obtained from the review of more than 850 AK sources relating to historical ANL-E operations, waste generating processes, and waste management practices. In addition, the available information has been reviewed to determine the physical, chemical, and radiological composition of waste stream ID-ANLE-S5000. A vast majority of the AK sources were originally collected by IT Corporation for Bechtel BWXT during an AK program initiated in 2000. Examples of these sources include safety analysis reports, procedures and radiological calculations describing isotopic content of the waste, release permits, material inputs to the waste generating process, diagrams, results of waste characterization programs, and site mission descriptions identifying defense and non-defense operations.

In addition to the 549 containers of RH waste generated by the AGHCF facility at ANL-E originally included in waste stream ID-ANLE-S5000, INL manages an additional 68 30-gallon drums generated in containment boxes in the M-Wing Hot Cell Facility, and 48 canisters of AGHCF high gamma TRU debris formally stored at the MFC RSWF. In an effort to collect sufficient AK to demonstrate that these containers should be included in waste stream ID-ANLE-S5000, information from the following sources were collected and reviewed (References C381, C1031, and C3660):

- CCP AK records collected for the characterization of contact-handled (CH) TRU waste generated at ANL-E were reviewed and 15 documents contained relevant information relating to M-Wing Hot Cell Facility operations.

- CCP AK records collected during the preparation of AK summary report for the AGHCF debris. These documents included information relating to operations in M-Wing Hot Cell Facility supporting operations in the AGHCF, and high gamma TRU waste management practices.

- A record search was performed at ANL-E for the documents that were scanned into their database for information relating to M-4, K-1, and K-2 operations. Numerous documents were obtained that contained relevant information relating to these operations (References C381 and C1031).

- Interviews with generators of the waste containers from the K-1 and K-2 Cells (References C380, C381, and DR018).

- Collection and review of numerous project papers and status reports associated with operations conducted in the M-4, K-1, and K-2 Cells (e.g., References C357, C1030, P620, P623, and P1004).

- Review of daily survey reports and monthly health physics reports identifying the operations performed in the cells and movement of materials (samples, waste, and equipment) in and out of the M-Wing cells (References U1001 and U1005).

- An extensive review of Argonne special material receipt and transfer documentation to identify the receipt and movement of irradiated materials between the AGHCF and M-Wing (References U1003 and C1031).

- Review of quick scan RTR examinations performed on a selected number of these containers and existing container documentation (References U343, U1002, and U1004).

- Preparation of an extensive operations timeline identifying the operations performed and materials transferred between the AGHCF and the M-Wing during the 1971 to 1981 time frame (Reference C1031).

- An extensive review of INL and MFC records including waste container disposal paperwork, correspondence, special material receipt and transfer documentation, and operational procedures regarding the receipt, movement, and management of ANL-E high gamma TRU wastes at MFC (References C3660, U3552, U3900, and U3901).

The references and AK sources used to prepare this report are listed in Sections 8.0 and 9.0, respectively. The AK sources referenced within this report by alphanumeric designations (i.e., C001, DR001, P001, and U001) correspond to the Source Document Tracking Number using the following convention:

- C – Correspondence (i.e., memoranda, letters, e-mail, interviews)
- DR – AK Discrepancy Reports
- P – Published Sources (i.e., reports, controlled procedures)
- U – Unpublished Data (i.e., databases, analytical data, draft reports)

4.0 REQUIRED PROGRAM INFORMATION

This section provides a description of the ANL-E and the INL facilities associated with the generation and storage of the RH TRU waste contaminated by post-irradiation examination operations conducted in the AGHCF and M-Wing Hot Cell Facility currently stored at the INL. Included is a description of the locations of the associated MFC and INL facilities. In addition, a description of the facility, summary of the mission, defense determination, and descriptions of AGHCF and M-Wing Hot Cell Facility operations associated with the generation of waste stream ID-ANLE-S5000 are provided.

4.1 Facility Location, Description, Mission, and Defense Determination

4.1.1 Facility Locations

ANL-E, AGHCF, and M-Wing Hot Cell Facility

The ANL-E is located on a 1,275-acre site in the Des Plaines River Valley of DuPage County, Illinois, approximately 22 miles southwest of downtown Chicago and 25 miles west of Lake Michigan. Laboratory facilities occupy about 200-acres of the total ANL-E area. Surrounding the ANL-E is the 2,040-acre Waterfall Glen Forest Preserve, a greenbelt forest preserve of the DuPage County Forest Preserve District. The buildings containing the AGHCF and M-Wing Hot Cell Facility are located in the 200 or Core Area of ANL-E within the Waterfall Glen Forest Preserve. Attachment 1, Location of the ANL-E Site, and Attachment 2, ANL-E Site Map, identify the locations of the ANL-E site and facilities (References P004, P380, and P616). ANL-E High-gamma RH TRU waste in 48 canisters were received at INL between 1975 and 1984 and transferred to the MFC RSWF for storage. The canisters were retrieved and transferred to INTEC for storage, processing, characterization, and preparation for shipment to WIPP in 2009 and 2010 (Reference C4129).

INL, RWMC, and INTEC Facilities

The INL covers 2,315 square kilometers of land near the center of the eastern Snake River Plain in southeastern Idaho. The RWMC, located approximately 51 miles west of Idaho Falls, Idaho, was established in 1952 as a controlled area for the burial of radioactive wastes generated from INL operations. In 1954, the area was designated as a solid TRU waste disposal site and remained so until 1970, when the TSA, a 55-acre area within the RWMC, was established. The TSA was designed for retrievable storage of CH TRU waste. In November 1976, the ILTSF was established for the storage of RH TRU waste. ANL-E RH TRU 30-gallon waste drums received at the INL between 1976 and 1995 were stored in the ILTSF until 2005.

The ANL-E RH TRU drums have been retrieved from the ILTSF storage vaults and placed in either Interim Storage Containers (ISCs) or 30-gallon shielded overpacks (SOs) at ILTSF Pad I and Pad II. The containers will be transported to interim storage areas at the INTEC and stored in ISCs or SOs pending characterization, certification, and transportation activities. These activities and RH TRU waste repackaging

operations are conducted in Building CPP-659, the New Waste Calcining Facility (NWCF) or in building CPP-666, the Fluorinel Dissolution Process (FDP) and Fuel Storage Facility. Maps showing the location of the INL and RWMC facilities are provided in Attachment 3, Location of the INL RWMC, and Attachment 4, RWMC Map. Maps of the INTEC facilities are maintained in the AK record (References 8, C108, C334, C3698, P007, P009, P056, P173, P230, and P612).

The MFC encompasses an area on the southeastern portion of the INL reservation about three miles north of U.S. Highway 20 and approximately 35 miles west of Idaho Falls, Idaho. The MFC includes several facilities for processing, examining, characterizing, and analyzing radioactive materials. High gamma TRU waste transferred from ANL-E was first received at the Hot Fuel Examination Facility (HFEF) or Fuel Conditioning Facility (FCF) before transfer to the RSWF for storage. A map showing the location of the MFC facilities is provided in Attachment 5, Materials and Fuels Complex Map (References C3660, C3661, P3042, P3049, P3077, P3658, P3659, U3025, U3552, and U3900).

The HFEF (formerly called HFEF-North) was built in 1972, became operational in 1975, and is currently used to examine irradiation experiments. The FCF first became operational in 1963 as the Fuel Cycle Facility, then named HFEF, and renamed HFEF-South in 1972 when HFEF-North was built. In the late 1960s, FCF conducted examination of EBR-II and Transient Reactor Test Facility (TREAT) irradiation experiments. However, following its activation, HFEF took over the bulk of the examination activities. The FCF continued conducting some examinations and in 1996, HFEF South was renamed Fuel Conditioning Facility. The RAS casks used to ship the ANL-E high gamma TRU wastes were received in the loading bays of these facilities where the canisters were unloaded and inspected (References C3660, C3661, P599, P3042, P3047, P3049, P3051, P3144, P3146, P3178, P3186, P3187, P3658, P3659, U3025, U3552).

Following inspection, the high gamma TRU waste canisters were loaded into an HFEF-5 cask and transferred to the RSWF for storage. The RSWF is a RCRA permitted radioactive and mixed waste storage facility, located one-half mile northeast of the MFC main site. The canisters have been retrieved from the RSWF and are stored in modified ISCs at INTEC pending repackaging into 55-gallon drums (References C3660, C3661, P599, P2040, P3042, P3049, P3077, U3552, and U3900).

4.1.2 ANL-E Facility Description

The 200 Area building containing the AGHCF was built in the late 1950s and started operations in the early 1960s as the Fuels Technology Center under the direction of the ANL-E Metallurgy Division. The overriding design criterion for the 275,000 square foot building was to allow ANL-E to conduct research programs pertinent to the advancement of reactor technology, with a particular emphasis on the use of plutonium as fuel. With this in mind, facilities were designed to accommodate radiation fields and the unique handling requirements associated with Pu (References 7 and P380).

The building is laid out in eight wings (A through H), primarily to limit the extent of contamination due to accidental release or fire. The AGHCF occupies 12,500 square feet of the south end of the F-Wing. The main section of the AGHCF consists of an 11-foot by 32-foot area under a high purity nitrogen atmosphere, with additional WSs and service space. Equipment from the AGHCF includes a kilocurie hot cell, a shielded electron microprobe (EMP), two shielded gloveboxes, a scanning electron microscope (SEM), an Auger EMP, and a DRA. The hot cell was capable of in-depth post-irradiation examinations of fuel elements, fuel, cladding, structural materials, and small test components. A shielded microscope was connected to the cell by a nitrogen pneumatic transfer system. The shielded gloveboxes were used for preparing small specimens of fuel for electron microscopy, or other tests, and for density measurements on claddings (References 7, C335, P002, P004, P027, P378, and P380).

The 200 Area building containing the M-Wing Hot Cell Facility was built in 1951. The building is a masonry, concrete, and steel structure consisting of a main ground level floor and a lower level service floor with each of the main wings having a fan loft above. The total floor area is about 400,000 square feet. The building was designed such that the seven main wings fanned out radially like the spokes of a wheel. In 1962, the M-Wing was added to the building to support isotope separation and research on heavy radioactive isotopes. The M-Wing Hot Cell Facility was added in 1964. The hot cells in this facility consisted of four full size megacurie hot cells on the service (lower) floor level and eight kilocurie hot cells (two full size, two half size, and four quarter size) in the same external space on the main floor. Attachment 7, M-Wing Hot Cell Process Areas, identifies the hot cells in the M-Wing main and lower floors (References C353, C354, C1022, P616, P1009, P1010, P1011, and U339).

The K-1 and K-2 Cells located in the east side of the main floor of the M-Wing were kilocurie level beta-gamma (air atmosphere) hot cells that had inert gas alpha-containment enclosures constructed inside the cell. As described in Section 4.1.3, these containment boxes were installed in the 1970s to expand the AGHCF post-irradiation examination capabilities. These containment enclosures were inerted with a nitrogen atmosphere to eliminate sodium-air reaction and prevented the spread of alpha contamination outside of the enclosures (References C138, P617, P618, and P1011).

The M-4 Cell is one of the megacurie hot cells located in the north side of the lower floor of the M-Wing. In 1968, approximately half of the cell was converted into an inert gas enclosure with the installation of a containment box. A pneumatic tube transfer system was also installed in M-4. The system used vacuum and helium gas pressure to move sample capsules between hot cell facilities (References C1002, C1022, P1001, and P1011).

4.1.3 ANL-E Facility Mission

ANL-E is a multidisciplinary research laboratory that performs work in basic and applied science in the areas of engineering, energy technology, chemistry, physics, materials, biomedicine, and environmental studies. The current ANL-E mission expanded from the initial experiments performed at the University of Chicago in 1941 to produce plutonium for the Manhattan Project. Officially founded by the AEC in 1946 as the first national laboratory, ANL-E has been instrumental in the development of nuclear reactors and associated systems, materials, fuel elements, and components for use in both civilian and defense programs. This work included key participation in the development of essentially all the nuclear reactor systems in use today for isotope production, power generation, and naval submarine propulsion, as well as experimental or proposed weapons applications, defense waste management, defense security and safeguards, and space propulsion (References 7, P002, P013, P014, P834, P836, P837, P1001, and U003).

The AGHCF, in operation since 1964, was originally designed to perform post-irradiation research on advanced fast reactor fuel materials containing plutonium for the LMFBR Program. This mission required that the facilities were designed to accommodate radiation fields and the unique handling requirements associated with plutonium materials. During early operations, the AGHCF was used primarily for the metallographic studies of fuel and structural materials. Later, as the emphasis in reactor development programs changed, additional equipment and techniques were developed to supply the information required in these new areas of interest. Specifically, this included information relating to the behavior of advanced ceramic fuel materials such as the mixed carbides and mixed oxides of uranium and plutonium. It is estimated that more than 90 percent of the fuel materials received and examined by the AGHCF during the 1971 to 1995 time frame originated from MFC and other INL reactors, including the Experimental Breeder Reactor-II (EBR-II),TREAT, and Advanced Test Reactor (ATR) test and research reactor facilities. Other test materials were also received from Savannah River Site (SRS), Hanford, Oakridge National Laboratory (ORNL), and Los Alamos National Laboratory (LANL) operations associated with DOE reactor programs (References 7, C046, C074, C082, C108, C124, C138, C155, C157, P002, P013, P061, P1001, P1004, and U045).

The AGHCF was the only hot cell facility of its kind in the United States with the capabilities to perform certain types of testing in conjunction with other examination and testing methods in the same remotely controlled environment. It was constructed of a single hot cell divided into three main areas subdivided into ten WSs. Activities at WSs included sectioning, grinding, polishing, metallography, storing irradiated samples, gamma spectroscopy and scanning, high-temperature testing, fission gas collection and analysis, macrophotography, and profilometry. The hot cell also houses a single WS for waste sorting and packaging. In 1983, the DRA was built to allow for the repair of in-cell equipment (i.e., manipulators). Waste from the AGHCF was generated primarily from destructive analysis of post-irradiated nuclear fuel assemblies from fast breeder and LWR programs (References C066, C108, and U001).

The original mission for the beta-gamma cells in M-Wing Hot Cell Facility was to support analytical-chemical research on irradiated alpha-emitting materials. These cells were not designed to support the destructive examination associated with the disassembly and sectioning of irradiated fuel elements being conducted in the AGHCF. In 1968, the Shielded Fuel Examination Facility (SFEF) was built into Cell M-4 of M-Wing. This inert atmosphere enclosure was installed in the cell to support AGHCF studies on ceramic fast reactor fuel samples, including mixed oxide and mixed carbide fuel specimens. During the 1973-1974 time frame, plans were implemented to formally expand the AGHCF destructive examination capabilities by constructing inert gas alpha-containment enclosures within the K Cells in anticipation of a major increase in demand for destructive examination capabilities associated with the fast breeder reactor fuels to be discharged from the Hanford Fast Flux Test Facility (FFTF), TREAT, and EBR-II reactors (References C138, C141, C365, C366, C378, C380, C381, C1002, C1022, C1031, P618, P619, P1001, P1003, P1004, P1005, P1009, P1010, P1011, U340, and U1003).

During the 1972 to 1981 time frame, the M-4 Cell supported the destructive examination of uranium and mixed uranium/plutonium fuel specimens. During the 1975 to 1981 time frame, research in the M-4 Cell in conjunction with the AGHCF focused primarily on the preparation of fuel samples for burnup, isotopic, and fission gas analysis of Big Rock Point Reactor specimens. These operations involved the separation of the cladding from the fuel material, including drilling, cutting, pulverizing, weighing, and dissolution of the separated fuel materials. Packaging of the waste from these activities generated 12 drums during three campaigns conducted in January 1979, October 1979, and March 1981 (References C1031, U1001, and U1005).

In April 1975, the containment enclosure constructed in the K-1 Cell to support the direct electric heating examination of mixed-oxide fuels since the early 1970s was added to the AGHCF Criticality Hazards Control Statement. Existing AGHCF procedures were to be used during operations in the cell. The K-1 Cell supported AGHCF direct electrical heating (DEH) experiments on LWR fuels from the Saxton, Dresden-1, and H.B. Robinson reactors during the 1975-1976 time frame. Clean-up of the cell was conducted in late 1978, corresponding with the generation dates for containers originating from K-1 between August and December, 1978 (References C364, C380, C381, P618, P622, P623, P624, U042).

In November 1978, the containment enclosure constructed in the K-2 Cell was added to the AGHCF Criticality Hazards Control Statement. Existing AGHCF procedures were to be used during operations in the cell. The K-2 Cell supported disassembly, sectioning, and macroexamination of TREAT and Sodium Loop Safety Facility (SLSF) reactor loops containing uranium and mixed-oxide fuels during the 1978-1981 time frame. The samples were sent to the AGHCF for microexamination. Clean-up of the cell was conducted between May and September, 1981, corresponding with the generation dates for containers originating from K-2 (References C074, C380, C381, P074, P617, P620, P621, U042).

By the late 1970s, plans were being implemented to move all destructive examination support back into the AGHCF due to the reduced funding associated with the LMFBR and SLSF programs. By November 1981, the Materials Science Division had moved out of K-2 and the Chemistry Division was requesting that the nine manipulators removed from the cell be decontaminated and repaired (References C373, C381, and P1001).

4.1.4 Defense Waste Determination

The WIPP requires generator sites to use AK to determine that TRU waste streams to be disposed of at WIPP meet the definition of TRU defense waste. TRU waste is eligible for disposal at WIPP if it has been generated in whole or part by one of the atomic energy defense activities listed in Section 10101(3) of the *Nuclear Waste Policy Act of 1982* (NWPA) (Reference 10). Based on the review of AK, there is sufficient evidence to demonstrate that TRU wastes generated by AGHCF operations are contaminated with materials from atomic energy defense activities associated with naval reactor development, materials security and safeguards, and defense research and development activities. Additionally, ANL-E has played an integral role supporting the underlying historical and ongoing defense missions associated with the DOE test and research reactor programs described below.

The United States has historically operated and continues to operate reactors used for the development of nuclear energy technology. Additionally, these reactors have been utilized to produce radioisotopes for medical, industrial, and military purposes; to generate neutron environments for scientific research; and to conduct irradiation experiments in support of the government's defense, space, fusion, and advanced reactor programs. Collectively referred to as test and research reactors, these facilities have been typically operated by private contractors for the DOE. Mixed oxide, carbide, and alloy fuels for, or tests in, the DOE breeder reactor research and testing program (formerly the AEC and U.S. Energy Research and Development Administration (ERDA) Fast Breeder Reactor Program) were manufactured with plutonium obtained primarily from DOE production reactors at the Hanford and SRS sites. DOE test and research reactor facilities include the EBR-II, Zero Power Plutonium (Physics) Reactor (ZPPR), ATR, TREAT, and Hanford FFTF. The MFC, ANL-E, and LANL hot cell facilities have played a major role in the examination of fuel specimens generated by this program and the AK documentation verifies the ongoing receipt and examination of mixed oxides, carbide, and alloy fuels at the AGHCF (References C046, C074, C124, C330, P002, P585, P586, P1001, U009, U040, and U076).

In 1967, the AEC initiated the LMFBR Program for developing and demonstrating fast breeder reactor technology for safe, reliable, and economical energy production. Critical to this program was the procurement and development of commercial industrial capabilities to manufacture mixed oxide fuel to support the plans for future commercial reactors. To this end, the AEC awarded contracts to Kerr-McGee and Nuclear Materials and Equipment Corporation (NUMEC) (a division of Babcock and Wilcox) to manufacture mixed oxide fuel pins for this program. Between 1968 and 1979,

Kerr-McGee and NUMEC produced mixed plutonium-uranium fuels for the LMFBR Program (References C331, P016, P394, P587, P835, and P1001).

The MFC EBR-II and Hanford FFTF reactors were the most important facilities in the LMFBR Program. The FFTF was constructed to produce higher neutron flux and testing capabilities than produced by EBR-II. The FFTF's unique capability allowed for closed-loop testing of a variety of fuels, control materials, and structural materials in a controlled fast neutron flux environment approximating that required for the development of fast breeder commercial power generation. Ongoing examination of LMFBR mixed fuel specimens originating from NUMEC, FFTF, and EBR-II operations were conducted at the AGHCF during the entire period of generation of waste stream ID-ANLE-S5000 (References C124, C138, C330, P394, P586, U007, U011, U012, U040, and U076).

During its ten years of operation (1982-1992), the FFTF supported a variety of experiments associated with industrial, nuclear energy (domestic and international), nuclear defense, and medical research and development. Several projects were identified having defense applications, including a series of tests to evaluate tritium production by the irradiation of lithium oxide targets. This joint venture with Canada and Japan assessed tritium production from these proposed breeder materials in a fusion facility. The Multiple Isotope Production project generated physics data on Pu-238 isotope production and also demonstrated the capability of the FFTF to produce more than 20 other isotopes for defense, medical, and industrial programs. In 1992, defense missions proposed for the FFTF included large-scale tritium production projects, continued defense isotope production, waste burn experiments, and defense nuclear waste transmutation. Other studies were performed to assess blending FFTF fuel with SRS Pu to produce weapons-grade materials. Even though full-scale programs were not implemented, these proposals and studies illustrate the involvement of defense organizations and the defense capabilities associated with DOE test and research reactors (References C331 and P587).

EBR-II supported ongoing defense experiments conducted throughout the 30-year operating life of the reactor (1964-1994). In 1968-1969, the reactor was converted to a fast-reactor irradiation test facility. Test fuels and materials were placed in the core assemblies identical to those holding the driver fuel assemblies. In addition to supporting the LMFBR Program, numerous experiments were conducted for defense applications, including support of the Bettis Atomic Power Laboratory dedicated to supporting the Naval Nuclear Propulsion Program. Other defense program experiments conducted at EBR-II included radiation of thermionic elements and tritium production test materials. During its final year, experiments included a cooperative effort between LANL and Lawrence Livermore National Laboratory (LLNL) to demonstrate disposition of weapons Pu in a fast reactor (References P599 and P1001).

The EBR-II, ZPPR, TREAT, and FFTF reactors also supported the irradiation of experimental fuel pins manufactured at LANL as part of the SP-100 Fuel Pin Irradiation Testing Program. This program was jointly funded by the National Air and Space

Administration (NASA), DOE, and the Strategic Defense Initiative Organization (SDIO). The SDIO (better known as the "Star Wars" program) was established to pursue technology in the development of a viable and comprehensive ballistic missile defense program. The SP-100 Program's objective was to verify and validate the design of a compact, fast-spectrum nuclear reactor fuel for a broad range of national defense-related space applications. There is no evidence that the AGHCF was involved directly in the examination of SP-100 fuel specimens; however, the hot cells examined EBR-II driver fuels and other test materials in the reactor during these SDIO experiments. Even though the primary mission of the DOE test and research reactors was focused on the development of commercial energy technology, the reactors had an underlying defense mission and ongoing defense research and development experiments were conducted in these facilities (References C068, C074, C329, C330, C331, P584, P588, U067, U068, and U330).

In 1978, the Reduced Enrichment Research and Test Reactor (RERTR) Program was established by the DOE at ANL to minimize the use of highly-enriched uranium (HEU) in civil nuclear programs. RERTR is a nuclear nonproliferation program currently administered by the DOE National Nuclear Security Administration (NNSA) in coordination with the Department of State, the Arms Control and Disarmament Agency, and the U.S. Nuclear Regulatory Commission (NRC). The primary mission of this international program is to develop the technology required for use of low-enrichment uranium (LEU) for use in test and research reactors to reduce the amount of HEU available for weapons production. Numerous fuel samples fabricated at MFC and irradiated in reactors including the ATR have been received and examined at the AGHCF (References C073, C124, C157, P010, P029, P374, P375, P583, P599, U003, U007, and U076).

AGHCF operations, including the M-Wing Hot Cell Facility, received Integral Fast Reactor (IFR) plutonium-uranium-zirconium metallic alloy fuel specimens from the EBR-II, TREAT, and FFTF facilities. The IFR mission included goals to improve nuclear power with respect to safety, waste management, fuel efficiency, and proliferation resistance fuels. Like RERTR, the IFR Program supported the DOE nonproliferation mission by creating a closed loop reactor system making it unnecessary to move fuel on or off the reactor site during the 30 to 40 year life cycle of the plant. The IFR Program began in 1983 and ran through September 30, 1994 (References C074, C358, C359, C381, C1031, P008, P010, P017, P603, P618, P619, P620, P621, U003, and U1003).

In addition to the defense support described above, the following defense-related examinations were also conducted at the AGHCF (References 2, C006, C011, C068, C092, C103, C124, C152, C305, P028, P320, P585, P599, P835, U001, U007, U023, U045, U076, and U307):

- Naval Research Laboratory specimens from the Knolls Atomic Power Laboratory, Bettis Atomic Laboratory, and the ATR. Experiments included the examination of blanket fuel plates and auger analysis of irradiated corrosion samples. The ATR is

the principal irradiation facility for the development of naval reactor fuels and materials.

- Gulf General Atomic has been listed as a sponsor for defense-related programs at MFC that have sent fuel specimens to the AGHCF. Specifically, oxide fuel designated G1-7 received at the AGHCF was listed as defense-related.

- Lithium-containing specimens (LILAC and LILY) irradiated at the ATR to generate tritium as part of classified defense research and development activities (naval reactor development and defense nuclear materials security).

Civilian programs identified in the AK record that submitted specimens to the AGHCF during the period of waste generation included H.B. Robinson, Dresden, Saxton, Exxon Nuclear Fuel, Carolina Power, Turkey Point, Big Rock Point, and Three Mile Island commercial reactors (References C036, C381, P622, P623, P624, U007, and U076).

In addition to combining waste materials during the ongoing destructive examination of materials from different programs, AGHCF personnel estimate that between five to ten percent of the fuel dust generated during cutting, grinding, and polishing activities would remain in the examination area contaminating hot cell surfaces and equipment. This contamination would remain in the area even after clean-up efforts that were conducted infrequently to commingle with wastes generated during subsequent examinations. Separation of material from different fuel pins and other destructively examined specimens was not, and is not, a possibility in the facility due to various factors such as the open atmospheric conditions within the cell, contamination of handling equipment including manipulator arms, and the destructive nature of work conducted in the hot cell. In addition, the receipt, transfer, and storage of fuel specimens, test materials, and contaminated waste materials within hot cells areas and between the hot cell facilities resulted in commingling of contamination from the projects conducted in these areas. As a result of the waste management practices and analytical nature of the operations conducted in the AGHCF and M-Wing Hot Cell Facility, segregation of non-defense waste from defense-related waste is not feasible. Therefore, waste stream ID-ANLE-S5000 is eligible for disposal at WIPP as a commingled defense waste stream generated "in part" by the atomic energy defense activities described in this section (References C001, C036, C125, C381, C1031, P001, P002, P025, U001, U013, and U1003).

4.2 RH TRU Waste Management

The elements of RH TRU waste management discussed in this section include waste identification, segregation, and characterization, as well as organizational and administrative controls that were in place to ensure proper management of RH TRU waste in the AGHCF. Management and packaging of the wastes generated during AGHCF support in the M-Wing Hot Cell Facility were performed by AGHCF personnel for the waste generated in the K Cells. The M-Wing Hot Cell Facility relied on AGHCF procedures for materials moving back and forth between the K Cells and AGHCF.

Based on a review of the AK record for the 12 drums of M-4 Cell waste, the waste materials contained in these drums and the packaging configuration for these containers is similar to the AGHCF waste. Section 5.5 describes the differences between the drums packaged at the AGHCF and those packaged at the M-Wing Hot Cell Facility. The resulting waste containers were included in the analysis for the shipment batches sent to INL described in this report (References C138, C379, C380, C381, C1031, P622, and U042).

At ANL-E, radioactive waste handling involved generator activities, Occupational Health and Safety Health Physics, Special Materials (SPM), and Plant Facilities and Services Division-Waste Management operations. These department designations changed over the time period under investigation; therefore, this report refers to these divisions as Health Physics, SPM, and Waste Management Operations (WMO) for consistency purposes. The WMO Manager was responsible for directing waste management activities at ANL-E (Reference P055).

Technicians performing the work at the workstations were responsible for handling waste, maintaining records, moving packaged waste off-site for disposal, and procuring appropriate waste containers. Information such as waste volume, gross weight, physical description of container, serial number, combustible and noncombustible designation, radiation smear survey results of the payload container exterior, and weights and type of fissile content, was documented prior to the transfer of waste containers from the AGHCF to WMO (References C335, P006, and U002).

Starting in 1973, the AEC required that TRU combustible waste and non-combustible waste be packaged into separate waste containers. Waste was segregated by material and physical description including the inventory class estimated to the nearest ten percent of the waste can volume. At this time, no further characterization activities were required after sorting and packaging if waste met certification criteria. Waste Can Inventory Sheets were completed with this information and signed before leaving the packaging area (References P001, P006, P055, and P064).

Beginning in 1975, TRU waste was sorted from fissile scrap by prohibition and segregation of recoverable fines from other waste materials. "Scrap" referred to recoverable and non-recoverable fuel-bearing materials that were placed into special canisters, and transferred to MFC as high gamma TRU contaminated material for storage. These materials were transferred to MFC as recoverable fissile material for storage. The 48 canisters containing this material were stored at the RSWF and have since been determined to be waste. Waste materials that could positively be identified as neither fuel nor fuel scrap containing insignificant quantities of fine debris from fuel element sectioning, metallography, or other destructive processes were defined as non-fissile debris waste. Such debris was packaged as RH TRU waste and shipped to the RWMC for storage (References C3660, P006, P009, P018, P032, P063, P067, P2040, P3657, U002, U342, U3552, and U3900).

Even though the specific AGHCF waste management practices and associated documentation varied over the time frame of RH TRU waste generation, general waste generator responsibilities included the following (Reference P055):

- Keeping the amount of radioactive wastes to a minimum by early planning.
- Maintaining knowledge of waste handling procedures.
- Planning for proper waste production, discussing any unique or large quantities of this waste with the WMO Manager, and informing Health Physics, SPM, and WMO of waste that was "non-routine" in nature.
- Segregating wastes by separating TRU waste from non-TRU waste based on the TRU radionuclides present and amounts of these radionuclides estimated by the Waste Generator on the Waste Disposal Requisition.
- Segregating combustibles from noncombustible waste materials.
- Placing radioactive wastes into acceptable receptacles to ensure segregation requirements were met.
- Providing information about the waste as requested on the appropriate waste packaging forms.
- Arranging with WMO to load shipping containers.
- Requesting radiation surveys of filled receptacles by contacting Health Physics.
- Managing filled waste receptacles as required by Health Physics to confirm that no materials were added once the Waste Disposal Requisition documentation had been completed.
- Labeling of waste cans with the Waste Disposal Requisition serial number.
- Obtaining SPM approval when waste was found to contain accountable nuclear material.

TRU waste packaging campaigns were conducted periodically in the AGHCF and M-Wing Hot Cells, beginning in 1975. The first such campaign during the period of interest represented material generated in the hot cell from 1971 to 1975 (References C364, P074, and U042). Shipments from ANL-E to the INL were stopped by DOE-Idaho in late 1988. It was not until 1991 that shipments resumed, with the following stipulations imposed:

- Assessment of radiation exposure to determine if drums would be vented at ANL-E or INL (66 drums were later retrofitted with filter vents at ANL-E in 1990) (Reference C060).

- Proper documentation of the content of each drum that was currently available for shipment at that time was provided to the INL for approximately 80 containers (References C059, C060, C061, and C083).

- Installation of filter vents (References C058, C060, C061, and C062).

The internal ANL-E requirements for packaging and management of RH TRU waste to be sent to INL were driven to meet the provisions outlined in the evolving INL Waste Acceptance Criteria (WAC). The INL WAC outlined the TRU waste requirements regarding classification, standardized containers, packaging, documentation, receiving, and shipment authorization. The INL WAC was revised several times throughout the period of waste stream generation. The original INL WAC included a section containing general criteria, which included a list of prohibited materials. For example, the general criteria in 1981 included the following prohibited items (Reference P049):

- Vessels pressurized greater than 7 pounds per square inch gauge (psig)

- Radioactive gaseous waste

- Pyrophorics (except for those rendered safe by mixing the chemically stable materials [i.e., concrete, glass])

- Liquid metals

- Acids (materials must be treated to be pH >4)

- Elemental alkaline metals

- Explosives

- Fuel assemblies

- Toxic or poisonous materials defined as poison A or B by 49 CFR, Parts 100-199

- Flammable liquids, solids, and/or gases

Later revisions of the INL WAC imposed increasingly more stringent requirements regarding marking and labeling, documentation, certification, acceptable waste management practices and demonstrated QA programs. Starting in 1984, the INL WAC began to reference WIPP criteria as part of their program. The INL WAC clearly stated that it was the responsibility of the waste generator to ensure compliance with applicable state and federal regulations, including DOE, EPA, NRC, DOT, and eventually the EPA's RCRA and the Toxic Substances Control Act (TSCA). Also, each generator was responsible for resolving characterization, documentation, packaging, shipping, and other discrepancies. As was the case for ANL-E, generators without a Memorandum of Understanding with DOE-Idaho were required to obtain special authorization prior to RH TRU waste shipments being accepted at INL. In addition,

special authorization was required if any waste package did not meet the applicable INL WAC requirements (References C336 and P049).

4.2.1 Types and Quantity of TRU Waste Generated

Waste stream ID-ANLE-S5000 consists of less than 1,000 30-gallon drums of RH TRU debris from AGHCF operations (including 68 drums generated in the M-Wing Hot Cell Facility supporting the AGHCF) transferred to INL between 1976 and 1995. Waste stream ID-ANLE-S5000 also includes 48 canisters of high gamma RH TRU waste transferred to the MFC RSWF between 1975 and 1984. This waste was generated between November 1971 and November 1995 during the examination of irradiated and unirradiated fuel pins and other reactor materials from various reactor programs at MFC and other DOE reactors (References C1031, C3660, U015, U017, U018, U019, U021, U022, U042, U043, U3552, and U3900).

The container-specific records have been reviewed for each container to verify the composition and origin of the waste stream inventory. It has been determined that every container included in waste stream ID-ANLE-S5000 was generated from AGHCF operations, including 68 RH TRU debris waste containers generated in the M-Wing Hot Cell Facility used to supplement AGHCF activities during the 1978 to 1981 time frame (References C381, C1031, C3660, DR018, U343, U3552, U3900, and U3901).

The WIPP-WAP defines a waste stream as "waste materials that have a common physical form, that contain similar hazardous constituents, and that are generated from a single process or activity." The WCPIP definition also includes that the materials in a waste stream must have similar radiological properties. As described in Section 5.4.1.2, all of the containers in waste stream ID-ANLE-S5000 were generated by AGHCF operations in two buildings that remained relatively unchanged examining the same type of materials in approximately the same relative percentages. As described in Section 5.5, periodic campaigns were conducted to prepare shipments of containers to be sent to INL. Waste was generally collected at individual WSs and then moved to the waste packaging area in WS 5 to be stockpiled until the next packaging campaign. Technicians in WS 5 visually examined, sorted, and loaded the waste. Due to these waste management practices in conjunction with the destructive nature of the examinations, further delineation of this waste stream, based on radiological contamination, is not possible. In addition, the waste stream contains waste materials generated during maintenance and waste management operations that could contain any radiological materials contaminating the cell surfaces and equipment (References C332, C333, C347, C350, P006, P009, P023, and U042).

Based on a review of the AK, it has been determined that the M-Wing Hot Cell Facility debris should be included in waste stream ID-ANLE-S5000 meeting the WCPIP and the WIPP-WAP waste stream definition of waste materials that have a common physical form, that contain similar hazardous constituents, that are generated from a single process or activity, and have similar radiological properties. The M-Wing debris waste containers are "similar" physically and chemically since these operations were an

extension of the AGHCF operations conducting the same destructive operations utilizing AGHCF procedures. In addition, the M-Wing wastes are bounded radiologically by the waste generated in the AGHCF. The operations in these areas worked together to receive, process, and examine the same irradiated breeder reactor and LWR fuel materials identified and included in the radiological evaluations performed by ANL-E on the batches shipped to INL (References 1, 19, C347, C348, C380, C381, C1031, DR018, U042, and U343).

Based on a review of the AK, it has been determined that the 48 canisters of AGHCF high gamma RH TRU debris should be included in waste stream ID-ANLE-S5000 meeting the WCPIP and the WIPP-WAP waste stream definition of waste materials that have a common physical form, that contain similar hazardous constituents, that are generated from a single process or activity, and have similar radiological properties. The high gamma debris waste containers are "similar" physically, chemically, and bounded radiologically since this material was generated from the AGHCF operations, and the materials were segregated from intermediate level RH TRU at the point of generation based on the fissile content (References 1, 19, C3660, P063, P067, U3552, U3900, and U3901).

4.2.2 Description of Waste Generating Processes

As described above, the AGHCF was a kilocurie hot cell facility that was used for the characterization and testing of irradiated reactor materials. Various types of examinations were conducted in the AGHCF and in the M-Wing Hot Cell Facility in support of AGHCF operations. The primary AGHCF nondestructive and destructive examination capabilities consist of the following activities (References C016, C138, C367, C377, C1007, C1030, C1031, P006, P059, P060, P061, P623, P624, P1004, P1005, P1012, P1013, P1015, and U1008):

Nondestructive Examinations

- Visual inspection and examination
- Capsule disassembly
- Macrophotography of irradiated fuel elements
- Bow, length, and weight measurement
- Diametral profilometry
- Diameter measurements with micrometers
- Eddy current inspection
- Fuel element length measurement
- Irradiated fuel element balance point
- Irradiated fuel element helium leak test
- Autoradiography
- X-ray analysis and gamma scanning
- Irradiated material transfer, management, and storage

Destructive Examinations

- Fuel element fission gas sampling and tritium gas collection
- Plenum volume determination and gas analysis
- Fuel element sectioning
- Metallographic specimen mounting
- DEH
- Stress corrosion cracking analysis of cladding
- Microphotography
- Microhardness
- Immersion density testing
- Optical microscopy and photography
- Scanning electron microscopy
- Scanning auger microscopy
- EMP analysis

The purpose of the AGHCF was to allow for analysis of highly irradiated, alpha-emitting samples. It was specifically designed and built to examine plutonium-bearing fuel elements from the MFC Experimental Breeder Reactor, although, over the years, the sources of specimens examined expanded to include other national laboratories, commercial nuclear power plants, international clients, and universities. Although numerous fuel and specimen types were examined over the years of operation, the waste generating activities remained relatively unchanged and the RH TRU waste generated essentially consists of the same materials in the same approximate percentages for wastes sent to INL (References P023 and P380).

The figure in Attachment 6, AGHCF Process Areas, provides the locations of the AGHCF operations areas, rooms, and associated remote WSs. Areas 1 and 3 contain a total of ten WSs with shielded viewing windows equipped with master-slave manipulators. Each station supported one to three job functions, most semi-permanently set up at the station. Fuel elements being examined were moved from one station to another depending upon the desired examination operation. Area 1 was used for disassembly of irradiation vehicles and destructive examination of fuel elements. Area 3 contained nondestructive examination facilities, special experimental setups, waste handling operations, maintenance facilities, the glove repair area, and the main transfer access into and out of the cell (References P004, P380, and U002).

The figure in Attachment 7 identifies the process areas in the M-Wing Hot Cell Facility (K-1, K-2, and M-4 Cells) where the containment enclosures were installed to augment AGHCF examinations. These containment boxes were designed to provide an inert (nitrogen) atmosphere to less than 0.1 percent oxygen on a continuous basis when required. Manipulator booting and rotating seals were installed to maintain the inert atmosphere and control the escape of alpha contamination into the cell. Materials were transferred in and out of the boxes through transfer locks (large objects) and smaller ports and chutes for smaller items and tools. Lighting for the box was provided by

fluorescent lighting fixtures mounted outside of the cells. The boxes contained equipment such as furnaces, disassembly saws, gamma scanners, metallographs, grinding-polishing equipment, and sodium dissolvers. In general, this equipment was used to disassemble, section, and prepare samples for macroexamination in the area followed by microexamination in the AGHCF. Because the same operations were being conducted in the AGHCF at the time, the AGHCF procedures were implemented for these operations (References P616, P617, P618, P619, P620, P621, P1009, and P1011).

The AGHCF and M-Wing Hot Cell contained several electro-mechanical devices, including master-slave manipulators at each WS, a Programmed and Removed robot, remote-operated manipulators, radio-controlled carts, rail cars (mules), pneumatic transfer tubes, etc. These pieces of equipment allowed for remote-handling at a specific WS and between WSs (References C138, C354, P380, P404, P1010, and P1011).

Area 4 included the majority of the space surrounding the hot cell. The Electron Beam Laboratory (EBL) consisted of an unshielded glovebox in room F-117, two gloveboxes and an SEM in room F-117A, an EMP in room F-118, and a scanning auger microscope (SAM) and its associated glovebox in room F-118A. The Shielded Glovebox Facility (SGF) in room F-117 consisted of two shielded gloveboxes. The EMP, SEM, and the SAM were used for electron beam analysis of samples. The shielded gloveboxes in the SGF were used to prepare small specimens for electron microscopy or other tests (References P380 and U002).

Each element or specimen received for examination was assigned an alphanumeric identification number. Fuel elements or other specimens were received at the AGHCF in a shielded shipping cask. The cask was moved into room F-113 and lined up with the door to the Clean Transfer Area (CTA) to allow for unloading of the fuel elements. WS 10 is located in the door to the CTA and is outside the nitrogen boundary. The elements were moved past the alpha wall and through the large lock into Area 1 for interim storage at WS 1 or long-term storage in storage holes in Area 2. Small casks were moved into the CTA for specimen removal. Fuel elements that were partially disassembled at INL were received at the AGHCF then transferred to the K Cells for further disassembly and macroexamination (References C335, P380, P620, and P621).

The fuel elements or specimens were examined according to a work plan detailing the analysis (both destructive and nondestructive) to be completed. Initial nondestructive examination and capsule disassembly was performed at WS 1. Nondestructive testing includes bow measurement, diametral profilometry, weight and length measurements, determination of balance point, and diameter measurements. If required, the element is moved to Area 3 for nondestructive examinations. Visual examination (VE), macrophotography, and some other miscellaneous experimental work were completed at WS 8. The gamma scanning equipment was located at WS 9; the holding fixture was inside the cell, and the germanium gamma detector, multichannel analyzers, and computer controlled data collection apparatus are external to the cell. This equipment

allowed for gamma spectrometry and gamma profiling of the fuel elements (References P380 and U002).

The puncturing rig and fission-gas collection apparatus was also located at WS 9. If an element was received unpunctured, so that the fission gas had not been released, the element was punctured in Area 3. The gas was collected and analyzed to quantify the amounts of fission and other gases present. The puncturing rig was located in-cell, while the gas collection and sampling apparatus was located in a cabinet external to the cell. Excess fission-gas was vented back into the cell where it was exhausted by the cell ventilation system. Research in the M-Wing M-4 Cell in conjunction with the AGHCF focused primarily on the preparation of fuel samples for burnup and fission gas analysis of Big Rock Point Reactor specimens. These operations involved the separation of the cladding from the fuel material, including drilling, cutting, pulverizing, weighing, and dissolution of the separated fuel materials (References C357 C1007, C1008, C1010, C1027, C1031, and P380).

Gas testing and density measurements were performed at WS 8 and WS 9. Fuel element fission gas sampling, tritium gas collection, and plenum volume determinations and gas analysis, in addition to helium leak testing, x-ray examination, and gamma scanning were conducted at these stations. Profilometry equipment on a wheeled cart was used at WS 8. The profilometry equipment is used for measurement of elements specifically to determine the amount of radial strain due to irradiation growth. The profilometer shared data collection equipment with the gamma scanner (References P380 and U002).

After the nondestructive examinations were completed, the element, or sample, was returned to Area 1 for destructive examinations. Based on a cutting diagram, that was part of the work plan for the examination, the element was sectioned using a dry abrasive cutoff wheel at WS 2. Each individual piece is identified with a break-off number and was typically placed in an aluminum pipe with a screw top; the aluminum pipe had the break-off number stamped on the side and is the primary container for the sample (Reference P380).

Samples requiring metallographic examination were cold-mounted using epoxy resin. Grinding wheels are located at WS 3 and polishing wheels are located at WS 4. The metallographs were accessed from WS 4. The sample was moved into a shielded glovebox that encloses the metallograph stage and was attached to the cell (Reference P380).

Specimens could also be prepared for examination on the EMP. Because the EMP was heavily shielded, the operator could analyze highly irradiated specimens. The EMP had an associated wave-length dispersive x-ray detector that allowed for quantitative chemical analysis of the specimens. A pneumatic transfer tube connected the instrument to WS 7 essentially making the EMP and its associated glovebox an appendage to Area 3 (Reference P380).

The SEM and SAM electron beam instruments were not heavily shielded, and the analysis was limited to samples with a radiation level that could be handled outside of the hot cell. Samples were bagged out of the hot cell either in the glove niche or in the CTA. The samples were then placed in a transfer pot and carried to the SEM glovebox in room F-117 or the SAM glovebox in room F-118A. The SEM and the associated energy dispersive x-ray system was used for microstructural and microchemical examination of small segments. The SAM was used for surface or grain boundary analysis of irradiated (low level) or contaminated specimens (Reference P380).

There were other experimental systems in the hot cell that were semi-permanently set up in WS 7. The WS 7 furnace was used for elevated temperature testing of fuel segments. The controllers, data collection equipment, and gas collection apparatus were located external to the cell. The gas collection apparatus for the WS 7 furnace was independent of the system described above and used for collection of additional fission gas that may be released during the elevated temperature testing in the WS 7 furnace. Post-test examinations included mounting of the test sample and optical or electron beam examination. The WS 6 furnace was similar in operation and set up to the WS 7 furnace. There was an out-of-cell gas collection apparatus for the WS 7 furnace as well. Post-test examinations included both nondestructive and destructive examinations, similar to the typical examinations described above for a fuel element (Reference P380).

After the examinations were completed, the samples were placed in storage to await either future work or eventual outbound shipment to a designated storage facility. Fuel elements or segments that were to be shipped out, usually back to MFC, were placed in a container that fit into the shipping cask. In a reverse manner to the receiving of the fuel elements, the container was placed in the shipping cask in room F-113, then shipped out of AGHCF (References P380 and U342).

If the samples were to be stored for future use or long-term storage, they were placed in a storage can (1-gallon or smaller) and "sealed" with a tamper-indicating device. These cans were either stored in Areas 1 or 3, or placed into the Area 2 storage holes for longer-term storage (Reference P380).

Equipment maintenance and repair also generated RH TRU waste. Maintenance ranged from routine tasks such as replacement of saw blades, air-system filters, broken glassware, and light bulbs, to less routine tasks such as replacement or repair of experimental apparatus and broken electrical motors. In addition, non-routine repairs of manipulator arms or other in-cell equipment were occasionally conducted. In 1983, a manipulator DRA was constructed in Area 6 to better handle a higher level contamination associated with the manipulators. Prior to this time, manipulator repair was conducted in the glove repair area. The DRA utilizes a shower stall, originally used for personnel decontamination after a hot cell entry, to decontaminate the manipulators so that they may be repaired in a glovebox with much lower levels of exposure to technicians (References C373, P009, P040, P380, and U065).

Because the areas were designed to handle multiple examinations, the specific locations of the examinations and other activities varied slightly. Waste generated in the AGHCF was either placed in cans at WSs or moved directly to the waste packaging area for temporary storage. Miscellaneous items that could have been generated from anywhere in the hot cell include vault cans, sample containers, plastic bags, plastic bottles, and sphincter cans. Waste cans were generally used to collect waste materials at individual WSs and then moved to WS 5 for temporary storage. Sorting and packaging activities were performed at WS 5 and videotaped after February 1993. In the M-Wing Hot Cell Facility, the waste materials were sorted and packaged into waste cans in the M and K Cells. After the waste cans were surveyed, they would be packaged into 30-gallon drums and, if dose rates indicated that they were RH TRU, the drums were shipped to the INL. The specific packaging configuration and contents of RH TRU waste containers is discussed in more detail in Sections 5.4 and 5.5 (References C089, C380, C381, C1031, DR018, P047, P380, U041, and U342).

Waste Repackaging and Prohibited Item Disposition

RH TRU waste repackaging and prohibited item disposition will be performed at the INTEC in the NWCF Cell 308 in Building CPP-659 or in the FDP Cell in Building CPP-666. The process of opening, loading, or unloading drums is normally conducted within these cells. Drummed wastes are normally first characterized using RTR and/or VE in the RH TRU characterization area (306) to identify nonconforming items. However, the ANL-E high gamma TRU waste canisters are not the final waste package and they will be repackaged into approved containers prior to shipment to WIPP.

Once in the cell and the canister has been opened, the following activities may be performed (References C3464, C3698, C4001, C4003, P839, P3115, P4119, P4121, U4056, and U4057):

1. the waste will be visually inspected to ensure absence of prohibited items,
2. prohibited items will be remediated or removed as necessary,
3. fuel and fuel-like pieces and metallic fines are segregated for further handling,
    a. fuel and fuel-like materials are immersion tested in water and those found to have a violent reaction are removed from the waste stream for future handling,
    b. water from immersion testing is vacuum filtered, absorbed and managed as low-level waste while the filters are dried and disposed with TRU waste,
    c. fines are segregated and blended in a mixture of a minimum of one part fines to five parts of Met-L-X,

4. after segregation the materials are exposed to an air or 20 percent oxygen atmosphere for 30 minutes, and

5. the waste will be transferred to a 30-gallon drum which will then be placed in a 55-gallon drum.

Characterization of the waste will be performed by RTR or VE (References C3464, C3698, C4001, C4003, P3089, P3115, P3182, P4119, P4121, U4056, and U4057).

5.0 REQUIRED WASTE STREAM INFORMATION

This section presents the waste stream information required by the WIPP-WAP and the WCPIP for waste stream ID-ANLE-S5000 (Reference 1). The area of generation, waste stream volume, period of generation, waste packaging, and the physical, chemical, and radiological characterization of the waste stream are described.

5.1 Area and Building of Generation

Waste stream ID-ANLE-S5000 was generated during ANL-E post-irradiation examination operations conducted in the ANL-E AGHCF and the M-Wing Hot Cell Facility. Container-specific documentation has been reviewed for each container to verify the composition and origin of the waste stream inventory. It has been determined that every container included in waste stream ID-ANLE-S5000 was generated from operations in these areas and meets the WCPIP and the WIPP-WAP waste stream definition of waste materials that have a common physical form, that contain similar hazardous constituents, that are generated from a single process or activity, and have similar radiological properties (References C066, C350, C380, C381, C1031, DR018, U015, U017, U018, U019, U021, U022, U042, U043, and U343).

5.2 Waste Stream Volume and Period of Generation

Waste stream ID-ANLE-S5000, shipped to INL between 1975 and 1995, was generated by the AGHCF operations between November 1971 and November 1995. The waste stream consists of less than 1000 30-gallon drums (114 cubic meters [m^3]) based on the review of waste requisition and waste packaging documentation. This waste stream also includes 48 canisters of high gamma TRU waste formerly stored at the MFC RSWF. The canisters are not the final waste package and each will be repackaged into at least two 55-gallon drums (20.0m^3) in the NWCF or FDP. However, due to the high fissile content and the wattage restrictions of the 72B canister, as many as 466 55-gallon drums may be generated. Since the waste in the canisters requires repackaging, a final assessment of the waste material parameters will be performed, as necessary (References C3660, U3552, and U3900). Table 1, Waste Stream ID-ANLE-S5000 Containers, Volume, Generation, and Shipment Dates, presents the volume and period of generation for containers currently included in waste stream ID-ANLE-S5000.

Table 1. Waste Stream ID-ANLE-S5000 Containers, Volume, Generation, and Shipment Dates

Waste Stream ID-ANLE-S5000	Volume	Generated at ANL-E	Shipped to INL
<1,000 30-gallon drums 48 canisters (466 55-gallon drums)	210.9 m^3	Nov. 1971 – Nov. 1995	1975 – 1995

5.3 Waste Generating Activities

Waste stream ID-ANLE-S5000 was generated from the destructive and nondestructive examination of irradiated and unirradiated reactor fuel materials and associated hot cell support activities described in Section 4.2.2.

5.4 Types of Wastes Generated

This section describes the process inputs, Waste Matrix Code assignment, waste material parameter (WMP) weight estimates, radionuclide contaminants, and RCRA hazardous waste determinations for debris waste stream ID-ANLE-S5000. The waste stream is characterized based on knowledge of the materials, knowledge of the processes generating the waste, and physical descriptions of the waste.

5.4.1 Material Input Related to Physical Form

Waste stream ID-ANLE-S5000 was generated from the destructive and nondestructive examination of irradiated and unirradiated reactor fuel materials and associated hot cell support activities described in Section 4.2.2. Most of the waste contaminants were introduced during specimen preparation associated with sectioning, grinding, and polishing of the fuel materials for analysis by methods including gamma spectroscopy and scanning, high-temperature testing, fission gas collection and analysis, macrophotography, and profilometry. Debris waste was also generated during the repair of in-cell equipment (i.e., manipulators), cell maintenance, and waste management activities (References C066, C108, C1031, and U001).

Waste stream ID-ANLE-S5000 consists predominantly of organic and inorganic debris generated during the examinations conducted in the AGHCF and M-Wing Hot Cell Facility and, based on the review of the AK documentation, may contain the following materials:

- **Cellulosic** materials including paper, cardboard, and cotton rags, cloth, towels, grinding paper, Kleenex, Kim wipes, boxes, liners, filter media, filter paper, tissues, string, rope, swabs, mop heads, and gloves. Wooden items include brooms, mop handles, rulers, brushes, blocks, and Masonite, plywood, and chipboard items

(References C013, C029, C066, C1031, C3660, C4001, P001, P006, P031, P4121, U002, U004, U041, U1002, U3552, U3900, U4032, and U4058).

- **Plastic** materials including polyethylene, polypropylene, PVC, phthalate, Koroseal, Nylon, styrene butadiene, Tygon, polyurethane, Lucite, Teflon, paint (dried) and epoxy (hardened), metallurgical (Bakelite) sample mounts, bottles, cups, tubing, funnels, pipe, bags, sheeting, pieces, tape, syringes, markers, and other miscellaneous items (References C013, C029, C1031, C3660, P006, P067, P068, P3657, U004, U015, U017, U018, U019, U021, U041, U072, U1002, U3552, U3900, and U4032).

- **Rubber items** including Neoprene and silicone O-rings, gaskets, stoppers, hose, gloves, wire/cord insulation, and other miscellaneous items (References C013, C029, C1031, P006, U015, U017, U018, U019, U021, U041, U1002, and U4032).

- **Glass** items including glass, ceramic, alumina, Transite (asbestos), porcelain, quartz, Vycor, and boron nitrite bottles, flasks, jars, tubing, beakers, test tubes, stoppers, plates, insulation (fiberglass), Fiberglas disks, firebrick, insulators, light bulbs, thermometers, lenses, and other items (References C1031, C3660, P006, P031, P067, P3657, U041, U1002, U3552, U3900, and U4032).

- **Metal** items including ferrous materials such as carbon steel, stainless-steel, and cast iron cans, buckets, equipment, tools, c-clamps, tape measures, metal brushes, drill bits, tubing, fittings, rods, rings, chain, saw blades, dustpans, motors, manipulator tape, capsules, pin baskets, paint cans, can fixture hardware, cladding, nuts, bolts, small steel block, and other miscellaneous scrap items. Non-ferrous metal items include aluminum, brass, bronze, copper, lead, tungsten, tantalum, and tin cans (including aerosol cans), sheeting, shielding (lead), foil, tools, wire, rods, cable, tubing, fittings, gauges, plates, motors, light fixtures, can fixture hardware, cladding, and other miscellaneous scrap items (References C013, C029, C066, C1031, C3660, C4002, P001, P006, P031, P032, P040, P067, P839, P3657, P4121, U002, U004, U015, U017, U018, U019, U021, U041, U1002, U3552, U3900, and U4032).

In addition to the debris materials described above, waste stream ID-ANLE-S5000 contains lesser amounts (less than 50 percent in any container) of homogeneous organic and inorganic materials. Clay and vermiculite based absorbents were used during the neutralization and evaporation of acids, etchants, and alcohol solutions generated during the passivation of reactive metals. Acidic dissolution solutions generated in the M-Wing were neutralized (Neutrasorb, calcium hydroxide, and sodium bicarbonate) and immobilized with compounds such as vermiculite and cement. Charcoal and ion exchange resins filter media used in AGHCF water and air filtration systems was also included in waste stream ID-ANLE-S5000. However, any payload container consisting of more than 50 percent by volume of homogeneous solids will be excluded from this waste stream (References C3660, U3552, and U3900).

Technicians in the work areas also collected the dust and fines (referred to as swarf) from cutting and grinding operations using a small broom and dustpan to sweep surfaces. The majority of the swarf was collected from pans under the cutting station, the grinding bowls at the grinding WS, or from dry sweeping the material with a shop brush and dustpan. In addition, recoverable residue was shaken off the grinding papers. This debris material was typically designated as "sweeps," "high level scrap," or "recoverable material," or dried sludge and may be included in the 48 canisters of high gamma TRU debris waste. As described in Section 4.2.2, when encountered during repackaging, the fines will be segregated and blended in a mixture of one part fines to five parts of Met-L-X, a man-made product containing sodium chloride and magnesium aluminum silicate. Drums containing greater than 50 percent by volume fines and Met-L-X are debris materials and are acceptable for the waste stream (References C066, C380, C1031, C3660, P001, P032, P617, P1001, P4119, P4121, U041, U072, U1003, U1005, U3552, U3900, U4032, and U4057).

5.4.1.1 Waste Matrix Code

Based on the evaluation of the materials contained in this waste stream and ANL-E waste management practices, the waste stream is comprised of greater than 50 percent of heterogeneous inorganic and organic debris. Therefore, Waste Matrix Code S5400, Heterogeneous Debris, is assigned to waste stream ID-ANLE-S5000. Although the waste stream, as a whole, is comprised of more than 50 percent heterogeneous debris, any drum may include nearly any percentage of the WMPs listed in Section 5.4.1.2, except that no individual drum will contain greater than 50 percent homogeneous solids (Reference C332).

5.4.1.2 Waste Material Parameters

The WMPs for waste stream ID-ANLE-S5000 were estimated by reviewing the waste can inventory records for 123 30-gallon drums packaged from 1990 through 1995. The waste can inventory records provide a waste item description and corresponding volume percentage for waste packaged in 7-gallon waste cans. Waste items were categorized into one or more of the following WMPs: iron metals, aluminum metals, other metals, other inorganics, cellulosics, rubber, plastics, and organic matrix. For 30-gallon drums containing two 7-gallon cans, an average volume percentage was then calculated for each WMP for each 30-gallon drum. It was assumed that the waste materials and corresponding volume percentages reported on the available waste can inventory records were representative of remaining containers in waste stream ID-ANLE-S5000. This assumption is supported by the AK record indicating that the AGHCF processes have remained relatively unchanged and the wastes generated consist of the same type of materials in approximately the same relative percentages for all the containers sent to INL (References C332, C333, and P023). This assumption is further supported by an evaluation performed on the combustible and noncombustible drums in the waste stream generated before and after 1990. This evaluation determined that the relative waste weight percentages for drums identified as

combustible (primarily organic debris) to noncombustible (primarily inorganic debris) waste for containers with packaging dates of 1990 and later was 29 percent and 71 percent, respectively. The relative waste weight percentages for wastes packaged prior to 1990 was 28 percent and 72 percent (Reference C347).

Estimated densities for each WMP were used to calculate the weight percentage of each WMP for each 30-gallon drum. The weight of each WMP for each drum was then calculated based on the recorded gross drum weight and a default tare weight of 69 pounds (lbs) (assuming two) for each drum (assuming two 7-gallon waste cans, liners, and bags). Finally, an overall WMP weight percentage was calculated for the 123 drums. The results of the assessment are presented in Table 2, Waste Stream ID-ANLE-S5000 Waste Material Parameter Estimates. It should be noted that Table 2 identifies only WMPs for the materials inside of the waste cans and does not include internal cans and liners. Waste cans, liners, and the 30-gallon drums may also be considered waste, depending on the final waste payload package configuration (Reference C332).

RTR prescreen was performed for the 12 drums packaged in the M-Wing Hot Cell Facility to assess the physical composition of the waste in these containers. As described in Section 5.5, 14 of the 24 waste cans contained impenetrable lead liners and the contents could not be determined. Based on a review of the waste that could be observed in the other ten cans, the waste is similar in composition with waste material generated in the AGHCF, consisting primarily of laboratory debris and immobilized liquids. A final assessment of the waste material parameters will be performed, as necessary, once the containers containing prohibited items (prohibited liquids, sealed containers > 4 liters, and impenetrable lead liners) are remediated and the contents of the containers are verified (References C1031, U343, and U1002).

The waste container inventory for the 48 canisters of high gamma TRU debris was reviewed to assess the physical composition of the waste in these containers. Waste material parameter estimates were not compiled by the waste generators and many of the can content descriptions are general. However, based on review of the descriptions provided, the waste is similar in composition with the waste containers previously evaluated for waste material parameter estimates. Since the waste in the canisters requires repackaging, a final assessment of the waste material parameters will be performed, as necessary (References C3660, U3552, and U3900).

Table 2. Waste Stream ID-ANLE-S5000 Waste Material Parameter Estimates

Waste Material Parameter	Avg. Weight Percent (wt%)	Weight Percent Range
Iron-based Metals/Alloys	30.6 %	0.0 – 87.5 %
Aluminum-based Metals/Alloys	13.5 %	0.0 – 66.2 %
Other Metals	20.4 %	0.0 – 60.0 %
Other Inorganic Materials	13.5 %	0.0 – 53.6 %
Cellulosics	12.0 %	0.0 – 80.1 %
Rubber	4.5 %	0.0 – 64.5 %
Plastic (waste materials)	5.0 %	0.0 – 57.4 %
Organic Matrix	0.6 %	0.0 – 30.7 %
Total Inorganic Waste Avg.	**78.0 %**	
Total Organic Waste Avg.	**22.0 %**	

Average Gross Drum Weight	119.2 lbs/drum (75 – 193 lbs)
Estimated Tare Weight	69 lbs
Steel Packaging (30-gallon drum)	36.25 lbs
Steel Packaging (two 7-gallon cans)	13 lbs (6.5 lbs each)
Plastic Packaging (rigid liner and bags)	16.75 lbs
Cellulosic Packaging (cardboard liner)	3 lbs
Average Waste Weight	50.2 lbs/drum (6 – 124 lbs)

5.4.2 Chemical Content Identification – Hazardous Constituents

The following sections describe the characterization rationale for assignment of EPA HWNs to waste stream ID-ANLE-S5000. Table 3, Waste Stream ID-ANLE-S5000 Hazardous Waste Characterization Summary, summarizes the waste codes assigned to this waste stream.

Table 3. Waste Stream ID-ANLE-S5000 Hazardous Waste Characterization Summary

Waste Stream	EPA HWNs
ID-ANLE-S5000	D004, D005, D006, D007, D008, D009, D010, D011, D019, D028, D029, F002, F005

The waste described in this report has been historically managed in accordance with INL waste management practices in compliance with the requirements imposed by the Idaho Department of Environment Quality. Based on historic waste characterization, certification, and management operations conducted by Argonne and INL, the containers in waste stream ID-ANLE-S5000 have been and will continue to be managed as non-hazardous waste. Argonne has historically characterized this waste as non-hazardous, culminating in a March 2003 report certifying a non-hazardous waste determination submitted by the DOE Chicago Operations Office to the Idaho Operations Office. This report concluded that there was no substantive basis for assigning RCRA HWNs to the RH TRU wastes generated by ANL-E stored at INL (Reference C351).

Even though this waste stream will continue to be managed as non-hazardous by INL, the WIPP-WAP requires assignment of EPA HWNs to TRU waste streams that lack analytical evidence demonstrating that these constituents would have not exceeded the regulatory thresholds; and therefore, the HWNs listed in Table 3 will be assigned to the containers in this waste stream prior to shipment to WIPP. The assignment of these EPA HWNs was based on a review of the available AK documentation to assess chemical usage in the AGHCF and supporting areas (including the M-Wing Hot Cells) to identify hazardous material potentially contaminating waste stream ID-ANLE-S5000. In addition, Material Safety Data Sheets (MSDSs) and other manufacturer information was obtained for commercial products to determine the presence of RCRA-regulated compounds. Table 4, Waste Stream ID-ANLE-S5000 Material and Chemical Inputs, lists the specific chemicals identified and associated HWNs assigned to the waste stream. The HWN assignments have been applied on a waste stream basis; individual containers may not contain all of the hazardous materials listed for the waste stream as a whole (Reference DR014).

Table 4. Waste Stream ID-ANLE-S5000 Material and Chemical Inputs

Chemical/Material	Use/Description	AK Source	EPA HWNs
1,1,1-trichloroethane	Manipulator arm maintenance and cleaning. Cell cleaning solvent. Component of Hyprez lubricant (10-30%).	C012, C066, C137, C147, U065, U072	F002
1-butanol (n-butyl alcohol)	Metallurgical sample preparation. Na and NaK passivation reagent.	C013, C066, C137, C147, P061	NA[1]
1,1-dichloroethylene	Metallurgical reagent – no use specified.	C147	D029
1,2-dichloroethane	Metallurgical reagent – no use specified.	C147	D028
1,4-dioxane	Component of Hyprez lubricant (0-1%).	C012, C029, C066, U072	NA[1]
Acetic acid	Metallography etchant acid.	C066, C118, P062	NA[1,2]
Acetone	Metallographic specimen (ultrasonic bath) and cell cleaning. Electron microscopy sample preparation.	C029, C066, C137, C147, U066, P061, P1012, P1014, U1005(1/79)	NA[1]
Acetyl cellulose	Electron microscopy sample preparation.	P061	NA
Alumina	Metallurgical sample polishing compound.	C025, C137, U072	NA[1]
Ammonia	Lithium passivation reagent.	C066	NA
Ammonium alginate	Component of uranium oxide slip for DEH analysis.	U072, U1003	NA
Ammonium hydroxide	Component of uranium oxide slip for DEH analysis.	U1003	NA[2]
Arsenic	Contaminant of HEPA filters and clay absorbent.	C014, U083	D004
Asbestos	Insulting materials and Transite waste.	U015, U017, U018, U019, U021	NA
Barium	Contaminant of HEPA filters, clay absorbent, and fluorescent bulbs.	C035, C116, C160, U083, U084	D005
Benzene	Laboratory reagent – no use specified.	C137, C147, U066	F005
Beryllium	Beryllium containing samples. Moderator limit of 10 kg. in Areas 1 and 3.	C066, C335, P407	NA
Cadmium	Contaminant of HEPA filters. Component of neutron shielding, batteries, photography solutions, and other metal alloys.	C020, C066, C094, C116, C160, P1012, P1014, U015, U017, U072, U083	D006
Calcium hydroxide (lime)	Used to during the neutralization and immobilization with cement of acidic dissolver solutions in the M-Wing.	P1001, U072	NA[2]

Table 4. Waste Stream ID-ANLE-S5000 Material and Chemical Inputs (Continued)

Chemical/Material	Use/Description	AK Source	EPA HWNs
Carbon tetrachloride	Immersion density measurements. Metallographic specimen and cell cleaning.	C066, C081, C137, C147	D019
Cellulosic Materials	Items include paper, cardboard, and cotton rags, cloth, towels, grinding paper, boxes, liners, filter media, tissues, string, rope, swabs, mop heads, and gloves. Wooden items include brooms, mop handles, rulers, brushes, blocks, and Masonite, plywood, Kim wipes, and chipboard items.	C013, C026, C029, C066, C3660, C4001, P001, P006, P031, P4121, U002, U004, U041, U3552, U3900, U4058	NA[4]
Cement	Used during the neutralization (calcium hydroxide) and immobilization of acidic dissolver solutions in the M-Wing.	P1001	NA
Charcoal	DRA water treatment unit filter media. AGHCP exhaust filtration media.	C137, C158, U015, U017, U018, U019, U021, U041, U073	NA
Chromic acid	Metallography etchant acid.	C066, C137, C147, U006	D007
Chromium	Component of chromic acid etchant, fuel, stainless steel cladding, chromium plated measuring tapes, chromic oxide polishing abrasive, and HEPA filters.	C066, C116, C137, C160, U006, U068, U069, U070, U072, U074, U083, U084	D007
Citric acid	Metallography etchant acid.	C066, C137, P062	NA[2]
Clay and vermiculite absorbents (Oil Dri)	Absorption of neutralized etchants and alcohol solutions from passivation of reactive materials (i.e., Na and NaK).	C013, C026, C029, C066, C106, C115, C116, C130, C147, C3660, P001, P006, P009, P617, U002, U004, U015, U017, U018, U019, U021, U041, U3552, U3900	NA[4]
Diamond paste/powder	Metallurgical sample polishing compound.	C137, P062	NA
Dioctyl phthalate	Component of Octoil vacuum pump oil.	U072	NA
Ethanol	Metallurgical sample cleaning and etching. Cell decontamination cleaning solvent. Component of Permatex gasket adhesive. Na and NaK passivation reagent.	C008, C011, C029, C066, C137, C147, C3660, P001, P062, P067, P620, P621, U004, U066, U072, U3552, and U3900	NA[1]
Ethyl ether	Metallurgical sample preparation. Cell cleaning solvent.	C066, C147	NA[1]
Ethylene glycol	Metallurgical sample etching.	P062	NA
Fluorinert – FC-43	Clear non-toxic fluorinated electric liquid in immersion density measurement of cladding samples.	C128, U072	NA
Graphite	Graphite felt, containers, and hardware covers.	C025, U015, U017, U018, U019, U021	NA
Glass	Items include glass, ceramic, alumina, porcelain, quartz, Vycor, and boron nitrite bottles, jars, tubing, beakers, plates, insulation (fiber glass), firebrick, insulators, light bulbs, thermometers, lenses, and other items.	C025, C026, C029, C3660, P006, P031, P3657, U041, U3552, U3900, U4032	NA[4]
Heptane	Metallurgical sample cleaning.	C066, C128, C147, P031	NA[1]
Hydrochloric acid	Metallography etchant acid. Clean shielding windows.	C066, C137, P034	NA[2]
Hydrofluoric acid	Metallography etchant acid. Fuel dissolution.	C066, C137, C357, P062, P1004, U030, U1005	NA[2]
Hyprez	Petroleum distillate based lubricant containing 1,4-dioxane (0-1%) and 1,1,1-trichloroethane (10-30%).	C012, C029, C066, P062, P069, U072	F002
Isobutanol	Metallurgical reagent – no use specified.	C147	F005
Isopropyl alcohol	Component of Permatex gasket adhesive.	U072	NA[1]
Kerosene	Microprobe sample preparation.	C029, U066	NA[1]

Table 4. Waste Stream ID-ANLE-S5000 Material and Chemical Inputs (Continued)

Chemical/Material	Use/Description	AK Source	EPA HWNs
Lead	Component of manipulator weights, metal scrap, lead-bismuth epoxy, lead solder, flashlight batteries, lead-acid batteries, sodium vapor lamps, drum numbering seals, and HEPA filter contaminant.	C013, C029, C066, C088, C091, C137, C143, C147, C148, C341, P023, P038, P039, U004, U006, U015, U017, U018, U019, U021, U022, U041, U072, U083	D008
Light bulbs	Broken fluorescent and mercury lamps.	U015, U017, U018, U019, U021	D009
Lithium metal	Coolant removed from fuel pins and cladding.	C066	NA[3]
Mercury	Component of mercury vapor lights, fluorescent lights, thermometers, and switches. Used in fuel immersion density testing and mercury diffusion pumps for fission gas analysis.	C013, C035, C066, C137, C147, C143, C356, C357, C1008, C1010, C1021, P070, P1004, U015, U018, U019, U021, U022, U041, U083, U085	D009
Metal (ferrous)	Items include carbon steel, stainless-steel, and cast iron cans, buckets, equipment, tools, tubing, fittings, rods, rings, chain, saw blades, dustpans, motors, manipulator tape, capsules, c-clamps, tape measures, metal brushes, drill bits, cladding nuts, bolts, small steel block, and other miscellaneous scrap items.	C013, C026, C029, C066, C3660, C4002, P001, P006, P031, P032, P040, P839, P3657, P4121, U002, U004, U015, U017, U018, U019, U021, U041, U3552, U3900 , and U4032	NA[4]
Metal (nonferrous)	Items include aluminum, brass, bronze, copper, lead, tungsten, tantalum, and tin cans (including aerosol cans), sheeting, foil, tools, wire, rods, cable, tubing, fittings, gauges, plates, motors, light fixtures, cladding, and other miscellaneous scrap items.	C013, C026, C029, C3660, C4002, P006, P839, P3657, P4121, U002, U004, U015, U017, U018, U019, U021, U041, U3552, U3900, and U4032	NA[4]
Methanol	Metallurgical sample preparation. Cell cleaning solvent.	C066, C106, C137, C147, P1012, P1014	NA[1]
Methyl cellulose	Compenent of uranium oxide slip for DEH analysis.	U072, U1003	NA
Met-L-X	Mineral (sodium chloride, magnesium aluminum silicate) based fire extinguishing agent used during waste repackaging operations.	C4114, P3089, P4119, P4121, U072, U4032, U4057	NA
Neutrasorb	Calcium carbonate, magnesium oxide, and sodium carbonate based absorbent used to neutralize acidic solutions.	U072, U1005(11/77)	NA
Nitric acid	Metallography etchant acid. Fuel dissolution. Total fission gas sampling.	C137, C357, C1007, C1027, P031, P062, P1004, U1005	NA[2]
Octoil	Dioctyl phthalate based vacuum pump oil.	U019, U066, U072	NA
Oxalic acid	Metallography etchant acid.	C066, C118, C137, P062	NA[2]
PCBs	Component of ballasts, capacitors, and transformers located outside of the cells.	C066, C137, C143, P618	NA
Permatex #2	INL WAC required drum gasket adhesive.	P031, U072	NA
Phosphoric acid	Metallography etchant acid.	C066, C137, P062	NA[2]
Plastic	Items include polyethylene, polypropylene, polyvinyl chloride, phthalate, Tygon, Koroseal, Nylon, styrene butadiene, polyurethane, Lucite, Teflon, paint (dried) and epoxy (hardened), metallurgical (Bakelite) sample mounts, bottles, tubing, funnels, pipe, bags, sheeting, tape, syringes, markers, cups and pieces, and other miscellaneous items.	C013, C026, C029, C3660, P006, P068, P3657, U004, U015, U017, U018, U019, U021, U041, U072, U333, U3552, U3900, U4032	NA[4]
Resin (Zeolite)	DRA water treatment unit filter media. In-cell vacuum air sweepers.	C026, U015, U017, U018, U019, U021, U041, U072, U073	NA

Table 4. Waste Stream ID-ANLE-S5000 Material and Chemical Inputs (Continued)

Chemical/Material	Use/Description	AK Source	EPA HWNs
Rubber	Items include Neoprene and silicone O-rings, gaskets, stoppers, hose, gloves, wire/cord insulation, and other miscellaneous items.	C013, C026, C029, P006, U015, U017, U018, U019, U021, U041, U4032	NA[4]
Selenium	Irradiation experiment reagent. Contaminant of HEPA filter media.	U006, U083	D010
Silver	Component of silver nitrate etchant, mounting epoxy, containers, solder, photographic film and chemicals, and HEPA filter contaminant.	C020, C029, C066, C137, C147, U006, P061, P062, P068, U072, U083	D011
Silver nitrate	Metallography etchant reagent for Zircaloy metals.	C066, C137, P062, U006	D011
Sodium metal	Removed from fuel pins and capsules during decladding.	C008, C009, C011, C013, C029, C147, C375, C3660, P001, P006, P009, P032, P060, P067, P617, P620, P621, U002, U004, U3552, and U3900	NA[3]
Sodium salts	Resulting from Na and NaK passivation absorbed on mineral (clay) absorbents.	C013, P617	NA
Sodium carbonate, sodium bicarbonate	Neutralize acidic etchant, spills, and dissolution solutions.	C066, C147, C3660, U1003, U1005(6/78), U3552, U3900	NA
Sodium hydroxide	Neutralize acidic etchant solutions. Autoradiography film etching.	C066, C147, P061	NA[2]
Sodium-potassium alloy	Removed from fuel pins and capsules during decladding.	C023, C029, C039, C066, C147, P001, P032, P060, U002	NA[3]
Sulfuric acid	Metallography etchant acid.	C066, C137, P031	NA[2]
Tetrachloroethylene	Manipulator arm maintenance and cleaning. Cell cleaning solvent.	C066, C137, C147, U066	F002
Toluene	Manipulator arm maintenance and cleaning. Metallographic specimen and cell cleaning.	C012, C066, C137, C147, U066, P062	F005
Vermiculite	Used with sodium bicarbonate to neutralize and absorb acidic solutions.	C3660, U1003, U1005(6/78), U3552, U3900	NA
Xylene	Metallography mount and lens cleaner.	C029, C066, C137, C147	NA[1]
Zinc bromide	Salt shielding solution in hot cell windows.	P031, P034	NA
Zircaloy	Fuel cladding material.	C137, P001, P032, P062, P372, U006	NA[3]

Notes 1, 2, and 3:

These chemicals may exhibit the characteristic of ignitability (1), corrosivity (2), and/or reactivity (3) in their pure form. Based on the analysis of the generating process and waste management practices, no ignitable, corrosive, or reactive materials would have been disposed of in the waste stream in a liquid or unused form or without being evaporated, reacted, neutralized, and/or immobilized. Review of VE data, historical VE video tapes, and/or RTR will be used to verify the absence of prohibited materials.

Note 4:

The hazardous compounds and associated EPA HWNs for these waste materials are addressed in the specific chemical compounds in this table (lead, mercury vapor light bulbs, etc.).

5.4.2.1 F-Listed and Other Solvents

Based on review of AK relative to chemicals used or present in AGHCF and supporting operations, waste stream ID-ANLE-S5000 may contain or be mixed with F-listed hazardous wastes from non-specific sources listed in Title 40 CFR 261.31, *Identification and Listing of Hazardous Waste* (Reference 20). As shown in Table 4, F002 and F005 listed solvents were used in the AGHCF area. F003 constituents, including acetone, n-butanol, ethyl ether, methanol, and xylene are listed solely because these solvents are ignitable in the liquid form. The waste stream will not exhibit the characteristic of ignitability because it is not liquid; therefore, F003 is not assigned. Although several F001 listed solvents were identified in the AK record (i.e., 1,1,1-trichloroethane, carbon tetrachloride, and tetrachloroethylene), EPA has provided a regulatory clarification that the F001 listing is only appropriate when the listed solvents are used in a "large-scale" degreasing operation such as cold cleaning or vapor degreasing on an industrial scale (Reference 21). The AGHCF did not conduct large-scale degreasing operations, and therefore, EPA HWN F001 is not assigned to this waste stream. Waste stream IN-ANLE-S5000 is assigned F-listed EPA HWNs F002 and F005 for 1,1,1-trichloroethane, benzene, isobutanol, tetrachloroethylene, and toluene (Reference DR014).

5.4.2.2 Toxicity Characteristic Compounds

Based on review of AK relative to chemicals used or present in AGHCF and supporting operations, waste stream ID-ANLE-S5000 is contaminated with toxicity characteristic compounds as defined in 40 CFR 261.24 (Reference 20). Where a constituent has been identified and there is no quantitative data available to demonstrate that the concentration of a constituent is below regulatory threshold levels, the applicable EPA HWN is applied to the waste stream (Reference DR014) in accordance with CCP-TP-005 (Reference 18).

Debris waste from the AGHCF contains or is contaminated with toxicity characteristic metal compounds listed in 40 CFR 261. Based on the references identified in Table 4, EPA HWNs D004, D005, D006, D007, D008, D009, D010, and D011 are assigned to waste stream IN-ANLE-S5000 (Reference DR014).

The AK sources identified the use of organic toxicity characteristic compounds including 1,1-dichloroethylene (D029), 1,2-dichloroethane (D028), benzene (D018), carbon tetrachloride (D019), and tetrachloroethylene (D039). Benzene and tetrachloroethylene are identified as F-listed solvents, assigned F005 and F002, respectively. Because the more specific F-listed EPA HWNs have been assigned for these compounds, assignment of the corresponding toxicity characteristic HWNs (D018 and D039) is not necessary. Therefore HWNs D019, D028, and D029 are assigned to waste stream ID-ANLE-S5000 (Reference DR014).

5.4.2.3 Ignitables, Reactives, and Corrosives

Potentially ignitable, corrosive, and reactive chemicals were prohibited from disposal in the RH TRU waste. Na, NaK alloy, and lithium metals contained in some fuel pins were generated during disassembly and sectioning activities during preparation of metallurgical specimens. Na and NaK were reacted with alcohol (ethanol) or an alcohol/water mixture and lithium was reacted with an ammonia solution. The resulting solutions were absorbed into pelletized clay and heated to dryness on a hot plate in the same manner as the acid solutions. Metal fines and cuttings and fuel element pieces with Na or NaK bonded cladding encountered during repackaging operations will be evaluated for ignitibility and reactivity. Any items possessing reactive or ignitable characteristics will either be rendered safe or segregated from the waste prior to placing waste in a 30-gallon drum (References C008, C009, C029, C066, C099, C106, C115, C118, C130, C137, C147, C375, C3660, C3754, C4003, P006, P007, P009, P032, P060, P063, P067, P617, P4054, P4119, P4121, U002, U004, U4056, U4057, and U4059).

Small amounts of etchant solutions were prepared in the AGHFC with hydrofluoric, sulfuric, hydrochloric, chromic, phosphoric, nitric, citric, acetic, and oxalic acids. A silver nitrate solution was used for etching the surface of Zircaloy specimens. Waste etchant solutions were neutralized using either sodium carbonate or sodium hydroxide to a pH between 5 and 10, absorbed into pelletized clay (Oil Dri), then heated to dryness on a hot plate. M-Wing operations neutralized (calcium hydroxide, sodium bicarbonate, and Neutrasorb) and immobilized (cement and vermiculite) acidic solutions (References C041, C066, C077, C147, C355, C357, C1010, C1013, C1018, C1031, P006, P009, P032, P062, P1001, U004, U006, U072, U1001, U1002, U1003, U1004, and U1005).

AGHCF operations used small amounts of ignitable solvents including acetone, xylene, ethyl ether, ethanol, butanol, and methanol. These chemicals were used primarily during cleaning operations in the hot cell. Solvents were also used during sample preparation to clean the surfaces of the metallographic specimens. Due to the AGHCF practice of evaporating all organic liquids to dryness, no solvent liquids are expected in the waste stream (References C029, C066, C097, C106, C115, C118, C130, C137, C147, C161, DR017, P006, P009, P025, and P032).

Based on these AGHCF waste management practices, the materials contained in waste stream ID-ANLE-S5000 do not exhibit the characteristics of ignitability (D001), corrosivity (D002), or reactivity (D003), as defined in 40 CFR 261.21, 261.22, and 261.23, respectively (Reference 20). Review of historical VE video tapes and/or RTR will be used to verify the absence of prohibited materials. Internal bottles containing prohibited amounts of free liquids have been identified during RTR examination. These containers are not eligible for WIPP disposal until these liquids are remediated (References DR017 and U1002).

5.4.2.4 P- and U-Listed Waste

The AK did not identify any source or incident where the debris was mixed with or contaminated with discarded commercial chemical product, an off-specification commercial chemical product, or a container residue or spill residue thereof. Production scale activities involving beryllium were not performed by AGHCF or supporting operations. The only source of beryllium identified in the AK record was samples being analyzed for beryllium. Based on the incidence of beryllium in the waste generating processes, the waste stream will not meet the definition of P015 waste and beryllium will not exceed 1 percent in any payload container. Hydrofluoric acid was used in the AGHCF and M-Wing Hot Cell Facility Cells as a metallurgical etchant and to dissolve fuel; however, there is no indication that unused acid or materials from spills of the acid were disposed of in this waste stream. Additionally, as described above, corrosive liquids were evaporated and immobilized prior to disposal. Waste stream ID-ANLE-S5000 is therefore not assigned a P- or U-listed HWN (References C066, C137, C335, C357, P062, P407, P1004, U030, and U1005).

5.4.2.5 K-Listed Waste

The material in this waste stream is not a hazardous waste from any of the sources specified in 40 CFR 261.32 (Reference 20).

5.4.3 Radiological Characterization

Waste stream ID-ANLE-S5000 was generated by AGHCF and supporting operations during the processing of various types of radiological material including irradiated and unirradiated fuel pins from numerous reactor programs. Based on AGHCF waste management practices and categorization schemes dating back to the 1970s, drums in this waste stream have surface dose rates exceeding 200 millirem per hour (mrem/hr) and less than 30 rem per hour (rem/hr), and contain more than 100 nanocuries per gram (nCi/g) of waste of alpha-emitting TRU isotopes with half lives greater than 20 years. The waste is contaminated primarily with fissile materials and MFP. The radiological characterization of this waste stream will be determined as described in CCP-AK-INL-501, *Central Characterization Project Remote-Handled Transuranic Radiological Characterization Technical Report for Remote-Handled Transuranic Debris Waste from Idaho National Laboratory* (References 11, C348, P001, P007, P009, U005, U014, U015, U017, U018, U019, U021, U022, U023, U024, U025, U026, U028, U036, U039, U042, and U043).

The overall approach to the radiological characterization of the INL RH TRU drums is what is termed, a dose-to-curie (DTC) approach. In this approach, the gamma dose (exposure) rate is measured for an individual drum, and from the measured dose rate, the concentration of a gamma radionuclide such as Cs-137 is determined. The dose rate used in the calculation of the Cs-137 concentration is the average of several gamma dose rate measurements at specific locations around the drum in conformance with the geometric modeling used to derive the DTC relationship. The weight of the drum is measured and the tare weight of the container is subtracted to yield a net

weight of the waste that is used in the density determination and, ultimately, in the DTC determination. For high gamma TRU waste a gamma spectrometry measurement is also made to derive the contribution of Co-60 to the dose rate, which is subtracted to yield the dose rate from Cs-137. Once the Cs-137 concentration has been determined, scaling factors are used to derive the concentrations of the remainder of the radionuclides that are required to be reported.

The WCPIP requires that, as a minimum, the masses and activities of the following ten radionuclides (if present) be reported:

Am-241	U-233
Pu-238	U-234
Pu-239	U-238
Pu-240	Sr-90
Pu-242	Cs-137

In addition to the above ten radionuclides, other radionuclides are required to be reported that, in aggregate, constitute 95 percent of the total radiological hazard. For criticality purposes, U-235 is also included in the list of radionuclides to be reported. At INL, because of the decay periods since the fuel elements and other reactor materials were removed from the reactor, the quantities of fission products, other than Sr-90 and Cs-137, are not significant.

5.4.3.1 ANL-E Reported Radiological Characterization

The primary sources of information for determining that materials were examined in the hot cell during the time period of interest are "Loss or Gain – SS Materials" forms for the consolidation batches described in the Grinding Loss Record. "Loss or Gain – SS Materials" forms (Form SPM-23) are described in greater detail in the following section. "Receipt – SS Material" forms (Form SPM-24) were also available for some materials received at the AGHCF that included accountable quantities of fissile isotopes. SPM-24 forms, where available, are useful in determining the fissile content of material incoming to the AGHCF. The SPM-24 forms identified the shipper, incoming batch number, and quantities of accountable isotopes, as well as a description of the incoming material (References U015, U016, U017, U018, U019, U021, U022, U042, U043, U045, U046, U047, U048, U049, U050, U053, U054, U056, U058, U059, U061, and U079).

Process Loss Calculations. According to the AGHCF Operations Manual, personnel estimated the amount of fissile material in a batch of drums by assigning a cut-off date for the last waste to be moved from AGHCF Area 1 (where most destructive examinations occurred) to Area 3 and identifying the fuel pins sectioned since the last cut-off date. The pins were included in the consolidation batch and the total fissile content for the batch of drums was determined (Reference P001).

The AGHCF waste generators completed ANL-E Form SPM-23 to quantify how much material from each fuel element was "lost" and how much was "gained" by the TRU waste. These calculations were developed in the mid-1970s to quantify Pu-239 and

U-235 to meet nuclear accountability requirements. More specifically, hot cell waste was allocated amounts of fissile material generated by the activities taking place in the hot cell during the period of waste generation, including sectioning, cutting, grinding, and mounting of specimens. Ideally, all of the source fuel elements that lost material between the dates noted on the AGHCF Records Chief Technician's notes and corresponding Loss/Gain forms would be accounted for under a new "consolidated batch number" assigned to the waste drums. All of the material lost from the elements would be added to (or "gained by") the new consolidated batch number assigned to the waste. Radionuclide contribution was not calculated for items examined in the hot cell that did not contain fissile material. The assumptions used for this calculation were based on operational history are documented in Reference U013. The AGHCF practice based on these calculations was to use 1.5 weight percent (wt%) of the fuel element as an estimate of what is in the waste. It should be noted that the AGHCF estimate accounts for ten cuts per fuel pin, and no additional accounting was performed if the actual number of cuts was fewer or greater than ten (References C066, C067 C121, P001, and U013).

In addition to the batch number assigned by SPM, each accountable item was assigned an Alpha/Gamma (A/G) Number upon arrival at the AGHCF. For process waste accumulated during a given cleanup campaign, the Records Chief Technician would determine the A/G Numbers of the elements worked on in the cell since the last waste can packaging campaign. Fissile materials from these elements were then assumed to be part of the RH TRU waste stream generated by a given campaign. For accounting purposes, a "consolidation batch" number was assigned to groups of RH TRU waste drums to account for the removal of fissile material from the AGHCF inventory (Reference P058).

The gram quantities of total Pu and U-235 were calculated as a percentage, usually 1.5 weight percent, of the fuel pins examined during the campaign. However, calculation for some batches between 1976 and 1982 reported using different percentages, ranging from 1.5 to 2 weight percent. The reason for the variance in percentage was not documented in source documents. The Pu and U-235 values were divided equally among all of the drums in a consolidation batch to give a per drum gram quantity. As a result, all of the containers described by a single consolidation batch have the same U-235 and Pu isotope quantities (Reference U042).

Once the total Pu value per drum was obtained from the estimate, the isotopes Pu-239, Pu-240, and Pu-241 were calculated by multiplying the total value by a percentage to obtain the grams of each. From 1990 to 1995, the percentage distribution changed slightly (ranging from 81.1% to 74% Pu-239; 26% to 17.9% Pu-240; and 1% Pu-241). The reason the ranges changed was not documented. For drums packaged before 1990, Pu isotope calculations were not performed, and all of the Pu contribution was reported as Pu-239 (References U015, U017, U018, U021, U022, U042, and U043). Once the process losses from each of the applicable elements was calculated, a consolidation log with the applicable A/G Numbers, batch numbers, and the amount of fissile material from each element that was assumed to be present as a component of

the waste was created and provided to the SPM organization. This information was then recorded on a "Loss or Gain – SS Materials" form (SPM-23) (References C067, U015, U017, U018, U019, U021, U022, U042, and U043).

The Loss or Gain - SS Materials form (SPM-23) and the rest of the accountability tracking system relies upon batch numbers unique to each accountable item or group of similar items moved. Batch numbers are 16-digit numbers assigned by SPM. The first three numbers of the batch number denote a particular program or source. A spreadsheet correlating the numbers to specific projects is provided in Reference U040. The second three numbers in the batch number notations denoted particular isotopes as follows (References C067 and U040):

- 010 series - neptunium
- 020 series - U-235
- 030 series - Pu-239/Pu-241
- 060 series - Depleted uranium (U-238)
- 080 and 090 series - Mixtures

The term "series" is used to indicate that all numbers from 021-029, for instance, denote the U-235 isotope. The last ten numbers in the overall batch number denote the particular fuel element and subassembly or other source of the material. The Loss or Gain–SS Materials form is divided into loss and gain sections. The batch numbers of fuel pins or other material losing accountable material to the waste were listed on the "Loss" or top portion of the form and continued on following continuation pages as needed. The batch number of the consolidation batch "gaining" the accountable material from the losing pins/materials was listed on the lower "Gain" portion of the form.

Fission Product Calculations. In addition to Pu and U quantities, for waste packaged after 1984, the AGHCF recorded Cs-137 or MFP on the drum packaging logs. Based on a review of the RH TRU books, in 1984, with the advent of the PFS 195/196 forms, MFP were reported. From 1990 on, Cs-137 was reported instead of MFP. For 30 drums that were packaged between 1994 and 1995, computer-generated spreadsheets provide the quantities of 25 isotopes. Drum dose rates were reported and used to convert to Ci of MFP or Cs-137. Curie values of activation products from stainless steel cladding may have been derived from ORIGEN calculations, and MicroShield may have also been another tool used to assign Cs-137 or MFP values (References C121, C127, P001 P009, U015, U017, U018, U021, U022, U042, U043, and U064).

Table 5, Summary of ANL-E Reported Radionuclides, presents the distribution of generator-reported radionuclides for containers in waste stream ID-ANLE-S5000. As discussed in this section, the radionuclides reported by ANL-E varied significantly over the time period of waste shipments to INL, which is reflected by the data in Table 5. The "Total Radionuclide Weight %" values in Table 5 are the reported gram values for each radionuclide over the entire waste stream divided by the total radiological mass reported by the generator in all containers in the waste stream. The

same calculation produced the values for the "Total Radionuclide Curie%" using the sum of activity values for each radionuclide over the entire waste stream. These values have been updated to include the 56 containers of debris waste originating from the K Cell activities supporting AGHCF operations (References C095, C348, U014, U015, U017, U018, U019, U020, U021, U022, U041, U042, and U043).

The "Radionuclide % Range for Individual Drums" illustrates the reported ranges of radionuclides in individual containers by identifying the maximum and minimum values for each radionuclide on a container-by-container basis over the entire waste stream. The minimum and maximum values include only those containers where the radionuclide was reported (Reference C348).

Table 5. Summary of ANL-E Reported Radionuclides

Radio-nucilde	Number of Drums With Reported Values	Total Radio-nuclide wt%	Radionuclide Wt. % Range for Individual Drums	Total Radio-nuclide Ci%	Radionuclide Ci% Range for Individual Drums
WIPP Required Radionuclides					
Am-241	0	---	--- ---	---	--- ---
Pu-238	0	---	--- ---	---	--- ---
Pu-239	603	30.59%	5.67% - 56.81%	1.82	0.01% - 99.99%
Pu-240	120	0.85%	5.81% - 11.12%	0.18%	0.02% - 5.16%
Pu-242	0	---	--- ---	---	--- ---
U-233	0	---	--- ---	---	--- ---
U-234	0	---	--- ---	---	--- ---
U-238	8	Trace	Trace - Trace	Trace	Trace - Trace
Cs-137	116	0.20%	0.02% - 11.12%	16.77%	1.39% - 96.47%
Sr-90	28	0.06%	0.55% - 5.44%	8.02%	6.76% - 13.31%
Additional Reported Radionuclides					
Pu-241	120	0.03%	0.23% - 0.58%	3.40%	0.31% - 91.81%
U-235	603	68.03%	40.76% - 94.33%	Trace	Trace - 0.06%
Np-237	8	Trace	Trace - Trace	Trace	Trace - Trace
MFP	79	MFP Mass Not Reported		13.41%	21.02% - 99.97%
Mn-54	28	Trace	Trace - 0.03%	0.80%	0.63% - 2.13%
Fe-55	28	0.01%	0.08% - 2.11%	20.35%	15.97% - 54.12%
Co-60	28	Trace	0.01% - 0.18%	0.79%	0.62% - 2.10%
Kr-85	18	Trace	0.02% - 0.16%	0.16%	0.63% - 0.69%
Zr-93	28	0.10%	0.87% - 8.56%	Trace	Trace - Trace
Tc-99	28	0.10%	0.92% - 9.06%	Trace	Trace - Trace
Ru-106	28	Trace	0.03% - 0.27%	9.73%	8.18% - 16.17%
Ag-110	28	Trace	Trace - Trace	Trace	Trace - Trace
Cd-113	28	Trace	0.01% - 0.13%	0.31%	0.26% - 0.52%
Sn-123	28	Trace	Trace - Trace	Trace	Trace - Trace
Sb-125	28	Trace	0.01% - 0.05%	0.56%	0.47% - 0.93%
Sn-126	28	Trace	0.04% - 0.37%	Trace	Trace - Trace
Te-127	28	Trace	Trace - Trace	0.04%	0.03% - 0.07%
Cs-134	28	Trace	Trace - Trace	Trace	Trace - Trace
Ce-144	28	Trace	0.04% - 0.43%	14.71%	12.40% - 24.41%
Pm-147	28	0.01%	0.09% - 0.85%	8.54%	7.19% - 14.19%
Sm-151	28	0.01%	0.10% - 1.02%	0.29%	0.24% - 0.48%
Eu-152	28	Trace	Trace - Trace	Trace	Trace - Trace
Eu-154	28	Trace	Trace - Trace	Trace	Trace - Trace
Eu-155	28	Trace	Trace - 0.02%	0.09%	0.08% - 0.15%

Note: "Trace" indicates less than 0.01 weight or activity percent.

5.4.3.2 INL Derived Radiological Characterization

INL performed more detailed radiological investigations of a ten-drum subset of this waste stream. The methodology employed by INL and the results of the investigation are documented in several reports, which are incorporated into the AK record as Source Documents P030, P590, P591, P592, P593, P594, P595, and P596.

5.4.3.3 High Gamma TRU Waste

The overall approach to the radiological characterization of the high gamma TRU debris is presented in CCP-AK-INL-501. The primary sources of information for determining materials included in the high gamma wastes include the "Retrievable Storage Canister Data Irradiated Hi-Level Gamma Transuranic Scrap Material" forms (Form SPM-50). A description of the waste can contents, A/G Numbers, SPM Batch Numbers, and assembly and/or element numbers were rolled up on these forms to determine the fissile content for each canister. In addition, a "Nuclear Material Transaction Report" Form AEC-741, and "Shipment - SS Material," Form SPM-43, including SPM Batch Numbers and plutonium and uranium enrichments were completed and transmitted to MFC for each canister (References C3660, P058, P063, U3552, U3900, and U3901).

Table 6, Summary of ANL-E Canister Reported Radionuclides, presents the distribution of generator-reported radionuclides for high-gamma TRU canisters in waste stream ID-ANLE-S5000. The values for Pu-239 are actually for Pu-239 and Pu-240. The "Total Radionuclide Weight %" values in Table 6 are the reported gram values for each radionuclide over the canister population divided by the total radiological mass reported by the generator in all the canisters in the waste stream. The same calculation produced the values for the "Total Radionuclide Curie%" using the sum of activity values for each radionuclide over the canister population (References C3660, U3552, U3607, U3900, and U3901).

The "Radionuclide % Range for Individual Canisters" illustrates the reported ranges of radionuclides in individual canisters by identifying the maximum and minimum values for each radionuclide on a canister-by-canister basis over the entire population. The minimum and maximum values include only those containers where the radionuclide was reported (References C3660, U3552, U3607, U3900, and U3901).

Table 6. Summary of ANL-E Canister Reported Radionuclides

Radio-nucilde	Number of Canisters With Reported Values	Total Radio-nuclide wt%	Radionuclide Wt% Range for Individual Drums	Total Radio-nuclide Ci%	Radionuclide Ci% Range for Individual Drums
WIPP Required Radionuclides					
Am-241	0	---	--- ---	---	--- ---
Pu-238	0	---	--- ---	---	--- ---
Pu-239	48	4.49%	Trace - 33.52%	0.46%	Trace - 34.70%
Pu-240	14	0.08%	Trace - 3.37%	0.03%	Trace - 0.23%
Pu-242	0	---	--- ---	---	--- ---
U-233	0	---	--- ---	---	--- ---
U-234	0	---	--- ---	---	--- ---
U-238	47	84.46%	Trace - 99.93%	Trace	Trace - 0.01%
Cs-137	3	Trace	0.00% - 0.91%	0.67%	0.00% - 9.98%
Sr-90	3	Trace	0.00% - 0.58%	0.67%	0.00% - 9.98%
Additional Reported Radionuclides					
Pu-241	0	---	--- ---	---	--- ---
U-235	51	10.96%	Trace - 98.42%	Trace	Trace - Trace
MFP	51	MFP Mass Not Reported		96.11%	99.38% - 100.%
Mn-54	2	Trace	0.00% - Trace	0.03%	0.00% - 1.12%
Co-58	2	Trace	0.00% - Trace	0.03%	0.00% - 1.19%
Cs-134	3	Trace	0.00% - 0.03%	0.33%	0.00% - 4.99%
Ce-144	3	Trace	0.00% - 0.06%	1.67%	0.00% - 24.94%
Th-232	1	0.01%	0.00% - 1.46%	Trace	0.00% - Trace

Note: "Trace" indicates less than 0.01 weight or activity percent.

The differences in the radionuclides and distributions between Table 5 and Table 6 are attributed to the waste generator reporting detail and methodology. The contributions of the mixed fission and activation products, such as Cs-134, Cs-137, Sr-90, etc. account for over 95 percent of the activity, and are small by weight for both cases, less than 0.1 percent. However, more of these products are identified in Table 5. These reported values are included based on the computer generated spreadsheet values assigned to drums packaged between 1994 and 1995 (References C348, U015, and U017). The mixed fission products for the canisters were reported as one activity, with additional isotopes only reported for a few canisters. In addition, the U-238 activity for the Table 5 data was only reported for 8 drums compared to 47 canisters in Table 6. The weight percent radionuclide distribution in Table 6 is skewed due to the low U-238 specific activity, 3.4 x10-7 Ci/g. While the activity contribution from U-238 is trace, less than 0.01 percent, when converted to weight percent the calculated gram values are significantly higher than any other radionuclide. The high-gamma TRU canister radiological distribution without the U-238 values is very similar to the radiological distribution in Table 5 (Reference C3660). The Table 6 distribution without U-238 is primarily composed of U-235 (70.5 percent) and Pu-239 (28.9 percent) (References C3660, U3552, U3607, U3900, and U3901).

5.4.4 Polychlorinated Biphenyls (PCBs)

Electrical equipment that might have contained Polychlorinated Biphenyls (PCBs) (such as ballasts, capacitors, and transformers) were located outside of the AGHCF and M-Wing cells for ease of maintenance. Oil was used inside the hot cell in a pressure relief reservoir in the facility exhaust system, but this fluid has never been changed out and, thus, could not have entered the RH TRU waste stream. The Waste Can Inventory for Can Number 85 lists "0.30 liter pump oil in palletized clay." Octoil (a non-PCB vacuum pump oil) was listed on a criticality safety quiz administered to AGHCF staff. Hyprez (a non-PCB lubricant) was used in "milliliter-volume" in the AGHCF and was solidified prior to disposal. Numerous light fixture items were identified in the packaging documents; however, the ballasts for the lighting in the AGHCF and K Cells were located outside of the cells and would not have been included in the RH TRU waste stream. Based on a review of the RTR prescreens performed on the 12 drums generated in the M-4 Cell, no lighting fixtures, ballasts, or other source for PCBs was observed in the containers. No other potential sources for PCBs were identified in the AK record (References C019, C066, C137, C3660, P618, U019, U066, U072, U1002, U3552, and U3900).

5.4.5 Prohibited Items

Items prohibited from AGHCF RH TRU waste containers during the entire generation period for waste stream ID-ANLE-S5000 (from 1971-1995) included free liquids, residual liquids greater than one volume percent, compressed gases including aerosol cans, pyrophorics, explosives, and incompatible or "potentially reactive chemicals" (References C084, C099, P006, P007, P009, P032, P055, P056, and P063). Review of historical VE tapes and/or RTR will be performed to verify the absence of prohibited items. As discussed below, prohibited items (unpunctured aerosol cans, prohibited liquids, sealed containers greater than 4-liters, potential pyrophorics, and impenetrable lead-lined cans) have been identified during RTR and waste container documentation; these drums are not eligible for disposal at WIPP until these items are remediated (References C008, C1031, C3660, DR017, DR019, DR020, P067, U1002, U3552, and U3900).

Residual liquids exceeding 1 percent in the drum are not expected to be present in any waste container in waste stream ID-ANLE-S5000, due to the AGHCF standard practice of evaporating and/or absorbing all liquids as described in Section 5.4.2.3. The absence of liquids is further supported by the fact that safety limits in the AGHCF and the M-Wing Cells limited the amount of hydrogenous liquids in these areas and the INL WAC prohibited liquids in excess of one percent since 1975. Additionally, none of the waste requisition forms (or other information provided by generators at the time of waste packaging) identifies liquids in any quantity. However, prohibited amounts of residual liquids (1-pint, ½-cup, and 1-tablespoon) have been identified during RTR in internal bottles in the waste stream (References C066, C084, C099, C106, C115, C118, C130, C137, C147, C161, C1031, DR017, P006, P009, P025, P032, P055, P063, P229, P232, P617, U002, U015, U017, U018, U019, U021, U022, U041, U042, U043, and U1002).

During retrieval of drums from the ILTSF, several instances were found of water in the storage vault and in contact with the waste drums. Over 130 vaults were used for storage of ICP stored RH-TRU waste. Two vaults were found during the 2004-2005 retrieval campaign to contain sufficient water to submerge the lowest stacked drum. None of the drums for which characterization is being performed using videotapes were stored in any vault containing water for the 2004-2005 retrieval campaign. In August 2000, 15 drums were retrieved from four vaults. Review of videotapes and photographs taken during retrieval of the 15 drums revealed no visible water was present on the drums. In 2005, all vaults, including the four vaults opened in 2000, were opened. Each vault was verified to be empty of containers; verified that no visible water was present; and surveyed to verify absence of radiological contamination (References C337, P612, and P613).

Of the 617 drums in the waste stream, 54 were either retrieved from water in the vault, retrieved from a vault that once contained water, or exhibited evidence that the drum was exposed to water (i.e., water/mud stains, rust, or water on top). Radiography will be performed on these containers to assure that the drums have not been inundated by water (Reference P612).

As described in Section 5.5, waste was typically loaded into the steel waste cans equipped with lifting cables attached to holes drilled into the cans that would vent these 5-, 7-, or 10-gallon steel waste cans. However, during RTR of the drums in this waste stream, several cans have been identified without these holes drilled in the container to vent the cans. Based on additional AK research, it was determined that a "choke" type cable lifting device was also used, primarily to lift the heavier waste cans. For this reason, these cans will be classified as prohibited sealed containers greater than 4 liters, when the drilled holes in the cans or the absence of lid gaskets cannot be verified (References C380, DR019, and U343).

As discussed in Section 5.5, 13 of the 24 cans in the 12 drums containing waste generated in the M-4 Cell contain impenetrable molded lead liners or lead shielding. These containers will be remediated, and the contents of the cans will be verified to assure that the waste is consistent with the waste stream description (References C1031 and U1002).

Review of container documentation for the 48 canisters of high gamma TRU debris indicates that inclusion of metal fines and cuttings can be expected in the waste. Additionally, container documentation and loading procedures indicate some fuel element pieces with Na or NaK bonded cladding may be present in the waste. During repackaging operations, these items (fines, cuttings, fuel pieces) will be evaluated for reactivity and ignitability. Two thermal events have occurred during the repackaging of individual waste containers in this population. Each event was attributed to the ignition of metallic fines and reaction of sodium present in sodium bonded fuel elements respectively with exposure to air during repackaging operations. Repackaging operations were modified to segregate fuel materials and fines from other waste materials for further handling. Fuel and fuel like materials will be segregated and immersion tested in water. Materials found to test positive for reactivity will be

segregated for further future handling (References C4001, P4121, U4056, and U4059). Fines identified will be segregated and mixed with a minimum of five times Met-L-X by weight. The segregated materials bound for WIPP disposal will be exposed to an air or 20 percent oxygen atmosphere for 30 minutes prior to packaging (References P4118, P4119, P4121, U4056, and U4057).

Any items possessing reactive or ignitable characteristics will either be rendered safe or segregated from the waste prior to placing waste in a 30-gallon drum. The high gamma TRU waste canisters may also contain a heat sealed polyethylene liner bag which will be breached during repackaging operations (References C008, C3660, P067, U3552, and U3900).

The WIPP LWA (Reference 6) prohibits the disposal of spent nuclear fuel and high-level waste as defined by the NWPA (Reference 10) at WIPP. According to the NWPA, spent nuclear fuel is "fuel that has been withdrawn from a nuclear reactor following irradiation, the constituent elements of which have not been separated by reprocessing." DOE M 435.1-1, *Radioactive Waste Management Manual* (Reference 22), expands on this definition to clarify that "Test specimens of fissionable material irradiated for research and development only, and not production of power or plutonium, may be classified as waste, and managed in accordance with the requirements of this Order when it is technically infeasible, cost prohibitive, or would increase worker exposure to separate the remaining test specimens from other contaminated material." High-level waste is defined by the NWPA as "the highly radioactive material resulting from the reprocessing of spent nuclear fuel, including liquid waste produced directly in reprocessing and any solid material derived from such liquid waste that contains fission products in sufficient concentrations, and other highly radioactive material that the Commission, consistent with existing law, determines by rule requires permanent isolation." Waste stream ID-ANLE-S5000 consists of debris waste generated during the examination of irradiated fuel specimens. These operations did not involve separation or reprocessing of constituent elements from reactor fuel. The waste stream is contaminated with residues from the preparation of irradiated test specimens and inherently contains specimens, including irradiated pin fragments and dispersed particulate (fines and dust). Fuel elements present were irradiated for research and development only and not production of power or plutonium. Therefore, the waste is not a spent nuclear fuel or high-level waste and is eligible for disposal at WIPP as RH TRU waste.

5.5 Waste Packaging

As described in Section 4.2.2, waste stream ID-ANLE-S5000 was generated from the destructive and nondestructive examination of irradiated and unirradiated reactor fuel materials. Debris waste was also generated during the repair of in-cell equipment, cell maintenance, and waste management activities. As described in Section 5.4.1, the waste stream consists predominantly of organic and inorganic debris with lesser amounts of homogeneous organic and inorganic materials.

Attachment 8, AGHCF Waste Management, provides a flow diagram depicting typical waste movements in the AGHCF. Waste cans were generally used to collect waste materials at individual WSs and then moved to the waste packaging area in WS 5 for temporary storage. The waste was then stockpiled until the next packaging campaign. TRU waste packaging campaigns were conducted periodically, beginning in 1975. The first such campaign during the period of interest represented material generated in the hot cell from 1971 to 1975 (References P006, P009, and U042).

Individual waste items (collected at various WSs in waste collection cans) may be loose, plastic-bagged, contained in 4-inch diameter x 10-inch high portal cans or contained in 1-gallon paint cans. After segregation of combustibles and noncombustibles, the items were placed in 5-, 7-, or 10-gallon steel waste cans. Waste was directly loaded into the steel waste cans typically equipped with lifting cables attached to holes drilled into the cans. A "choke" type lifting cable was used for lifting heavier waste cans. When filled, the waste can was closed with a toggle-latch cover clamp ring and a serially numbered, tamper-indicating device attached to the can. Although some older cans (before 1989) may have used a gasket, the can is not considered sealed due to the presence of the holes drilled for the lifting cable attachments (References C003, C380, DR010, DR016, DR018, P006, P007, P009, P031, and U042).

Technicians in WS 5 visually examined, sorted, and loaded the waste. Waste cans were then surveyed for the presence of high-activity materials (>30 rem/hr). The material was then sorted into combustible and non-combustible waste, and the absence of prohibited items, such as combustible gases and liquids, was visually verified. The waste was then packaged into 30-gallon drums for disposal (References P001, P006, P009, P031, U002, and U041).

The waste cans were transferred out of the facility through a bag-out waste chute into a fiber drum pouch spreader in a PVC bag. Based on a review of the container documentation: one, two, or three cans (one 7-gallon, two 7-gallon, one 5-gallon and one 10-gallon, or three 5-gallon) were placed into a 0.02-inch-thick PVC bag that was dielectrically heat-sealed to the outside of the facility waste chute using a bag-out procedure that prevented the outside of the bag from becoming contaminated during the transfer. This PVC bag was placed in a 1/10-inch-thick polyethylene liner and a puncture guard disc was placed on top of the first bag (References C003, C332, C333, DR021, P006, P009, P031, U015, U017, U018, U019, U021, U022, U041, and U042).

From at least 1976 forward, the PVC bags were required to meet ANL-E Materials Science Division Specification. Prior to 1990, the PVC bags were heat-sealed without filter vents. Drum venting campaigns initiated in 1990 for previously packaged drums did not breach the existing internal PVC bags; however, these bags may have been punctured during gas sampling conducted prior to shipping. Since 1990, HEPA filters have been installed in the PVC bags. The seamless, blow molded polyethylene drum liners have an 18-inch outer diameter body with a 0.1-inch minimum wall thickness. The plain liner disc covers have a minimum thickness of 0.06-inch (References C027, C099, P001, P006, P009, P034, P229, and U020).

The RH TRU 30-gallon drum package configuration used throughout the period of waste generation is shown schematically in Attachment 9, Waste Stream ID-ANLE-S5000 Typical Packaging Configuration. The packaging configuration was the same from 1976 to 1995 with the exception that PVC layers were heat-sealed without filter vents prior to 1990 and heat-sealed with filter vents beginning in 1990. A typical RH TRU waste drum (from inside to out) contained two metal waste cans, a fiber drum pouch spreader, a heat-sealed inner PVC bag (with a HEPA filter vent since 1990), a polyethyelene drum liner, a heat-sealed outer PVC bag (with a HEPA filter vent since 1990), and a DOT 17H 30-gallon drum (with a HEPA filter vent since 1990). The filter vents used on the bags were specified as NFT 030 and for 30-gallon drums, NFT 013 (References C107, C144, P001, P006, P007, P009, P024, P031, P035, and P052). Drums packaged in the K-1 and K-2 Cells were packaged by AGHCF personnel similar to the configuration described above. Interviews with the generators and quick scan RTR was used to assess the packaging for some of the K Cell drums, and the following exceptions to the packaging configuration described above were identified (References C380, DR018, and U343):

- Only one heat-sealed PVC pouch.
- No polyethylene puncture guard disc.
- One or two fiber pac cardboard containers with a slip lid, instead of the cut fiber pouch spreader.
- No fiber pac container or cut fiber pouch spreader.

The 30-gallon drums containing cans of M-4 Cell waste were packaged in three campaigns (References C355, C357, C1010, C1013, C1018, C1031, U1001, U1002, U1004, and U1005):

Drums 00395, 00396, 00397, and 00398 were packaged in January 1979. These drums contain 3-gallon and 5-gallon tabbed lid paint cans. The cans are packaged in one to two plastic bag liners in a rigid poly liner (three without puncture guard discs). Seven of the eight paint cans contain impenetrable ~2-gallon molded or formed lead containers (liners).

Drums 00393, 00394, 00399, and 00400 were packaged in October 1979. These drums contain 3-gallon and 5-gallon tabbed lid paint cans. The cans are packaged in one to two plastic bag liners in a rigid poly liner (without puncture guard discs). Five of the eight paint cans contain impenetrable ~2-gallon molded or formed lead containers (liners).

Drums 001002, 001003, 001004, and 001005 were packaged in March 1981. These drums contain 3-gallon and 5-gallon tabbed lid paint cans and 7-gallon waste cans. The cans are packaged in one to two plastic bag liners in cardboard liners (one or two) in a

rigid poly liner (one without a puncture guard disc). One can is lined with impenetrable lead sheeting.

Most of the waste that can be observed in the cans on RTR prescreens are contained in ~4-inch pipe nipples, bottles, and 1-gallon paint cans (with lids). Several AK sources describe the planned packaging of waste from fission gas analysis performed in the M-4 Cell. The AK record describes the preparation (cutting and shaping) of the lead liners observed in these containers to reduce the radiation level for shipment of the waste to Idaho. Based on a review of the AK record, it is assumed that these shielded cans contain debris and immobilized liquids contaminated with higher levels of fuel residues from the dissolution of fission gas samples prepared in the M-4 Cell. M-Wing operations neutralized (calcium hydroxide, sodium bicarbonate, and Neutrasorb) and immobilized (cement and vermiculite) acidic solutions (References C355, C357, C1010, C1013, C1018, C1031, P1001, U072, U1001, U1002, U1003, U1004, and U1005).

As described in Section 4.2.1 Waste stream ID-ANLE-S5000 includes 48 canisters of high gamma TRU debris. The canisters each consist of a stainless steel cylinder approximately 9.25-inches in diameter by 71.75-inches in length, including an 8-inch long steel plug inserted into the top of the container. A schematic of the canisters is provided in Attachment 10, ANL-E Canister Packaging Configuration. Before loading, the canister was lined with a polyethylene bag long enough to attach to the bag flange on the north alpha wall of the Clean Transfer Area. The liner bag was kept expanded in the canister by insertion of a thin-walled steel tube approximately 62-inches long. The canisters were then loaded with up to eight 1-gallon cans, loaded in descending order of gamma activity. The canister liner bag was then heat sealed and slack space between the top can and the canister plug was filled with fiberglass batting discs between aluminum discs. The plug was then threaded into the canister. Individual waste items were loaded into the 1-gallon cans, as described previously. In some cases, waste was packaged in 4-inch diameter by 7-inch long cans placed in the 1-gallon cans with other waste materials packaged around the 4-inch can. One canister in the waste stream contains waste in a 2R container, a steel cylinder 4.25-inches in diameter by 61-inches long (References C3660, P063, P067, P3657, U3552, and U3900).

The canisters were transferred to the MFC RSWF for storage in vertical underground 16-inch diameter liners. In 1989 an upgrade to the RSWF was initiated due to concerns about liner corrosion. Material relocation was determined based on the container configuration inside the liner. In three instances, the canisters and 16-inch liners were removed in their entirety and relocated to a cathodically protected 24-inch liner. The other canisters were opened and only the container was transferred to a new cathodically protected standard 16-inch liner (References P2040, P3657, and U3552).

The ANL-E canisters will be repackaged prior to shipment to WIPP. Waste materials, with the exception of fuel-like pieces, are placed directly in 30-gallon drums. Fuel and fuel-like pieces, with up to 50 grams of fines and 250 grams of Met-L-X, are packaged in a 1-gallon can and the can placed into the paint can spacer in a 30-gallon drum. Immersion test filter paper is also placed into drums with fuel and fuel-like pieces. A lid

with an open bung hole or a NucFil-certified carbon composite filter, but without a locking ring will be placed on the 30-gallon drum (Reference P839). The 30-gallon drum will be placed into a woven polyethylene lifting bag. The drum and lifting bag are then wrapped in a plastic sleeve as the drum is lifted out of the repackaging cell. The sleeve is closed around the drum and lifting bag using a wire tie, plastic tie, or bungee cord. The 30-gallon drum is then lowered into a DOT 7A, Type A 55-gallon steel drum. The plastic sleeve may be removed from the 30-gallon drum before placement, or the top breached following placement in the 55-gallon drum. Polyethylene disks may be placed in the 30-gallon or 55-gallon drums just prior to placing on the drum lids to facilitate pushing down plastic used for contamination control. The standard 55-gallon drum is constructed of 16-gauge materials and has a removable head with a drum head gasket. The 55-gallon drums will include a carbon composite filter. The 55-gallon drum is loaded into the removable lid canister using a 55-gallon drum lifting bag. The drum lifting bag will remain in the canister with the drum. Up to three drums will be loaded into the removable lid canister. The waste in this configuration may include a maximum of one layer of confinement (the 30-gallon drum) (References C3464, C3633, P839, P3089, P3115, and P3182).

6.0 QUALIFICATION OF AK INFORMATION

As stated in CCP-PO-002 (Reference 15), this AK Summary Report provides a description of the characterization of this RH waste stream. CCP-AK-INL-502, *Central Characterization Project RH TRU Waste Certification Plan for 40 CFR Part 194 Compliance for INL RH Waste Stream ID-ANLE-S5000* (Reference 17), describes how each DQO and QAO will be met along with the rationale for selection of the AK qualification methods used. As required by the appropriate section of the WCPIP (Reference 1), the description of waste stream ID-ANLE-S5000 is provided in Sections 4.0 and 5.0. The description of the confirmatory testing process, the percentage of containers that will be subjected to the process, a discussion of why the process is considered representative of the waste stream, and quantitative acceptance criteria is presented in CCP-AK-INL-502 (Reference 17).

The CCP intends to use a combination of methods to qualify the AK information associated with the INL waste streams because this will make the best use of the information available (such as video of waste packaging and fuel composition data), ability to perform VE when packaging waste and will avoid the radiation exposure of opening previously packaged waste. Table 7, Waste Stream ID-ANLE-S5000 DQO Determination Summary, lists the DQOs to be addressed using AK associated with waste stream ID-ANLE-S5000 relating to the defense waste, radiological, and physical waste stream determinations. The location (page number, section, etc.) of the relevant information is identified in the AK Source Document Summary forms for each AK source identified in Table 7.

Table 7. Waste Stream ID-ANLE-S5000 DQO Determination Summary

DQO Determinations	Summary of Characterization/Qualification Method	AK Sources
Defense, High Level Waste, and Spent Nuclear Fuel	As described in the defense waste justification in Section 4.1.4, there is sufficient evidence to demonstrate that TRU wastes generated by AGHCF operations are contaminated with materials from atomic energy defense activities associated with naval reactor development, materials security and safeguards, and defense research and development activities. As described in Section 5.4.5, this waste stream does not contain spent nuclear fuel or high-level waste.	C006, C011, C046, C068, C073, C074, C092, C103, C124, C138, C152, C157, C305, C329, C330, C331, C381, C1031, P002, P008, P010, P016, P017, P028, P029, P320, P374, P375, P394, P583, P584, P585, P586, P587, P599, P603, P834, P835, P836, P837, P1001, P1004, U003, U001, U007 , U009, U011, U023, U040, U045, U067, U068, U076, U307, U330, and U1003
TRU Waste	Evaluation of generator radionuclides demonstrate that this is a TRU waste stream. **Characterization/Qualification Method: Dose-to-Curie Method described in CCP-AK-INL-502.**	C095, C348, C1031, C3660, U014, U015, U017, U018, U019, U020,U021, U022, U041, U042, U043, U1004, U3552, U3900, and CCP-AK-INL-501
RH Waste	Generator reported dose rates for the containers in waste stream ID-ANLE-S5000 are greater than 200 mrem/hr and demonstrate that this is a RH waste stream. **Characterization/Qualification Method: Dose rate measurement of each container as described in CCP-AK-INL-502.**	C095, C348, C1031, C3660, U014, U015, U017, U018, U019, U020, U021, U022, U041, U042, U043, U1004, U3552, U3900, and CCP-AK-INL-501
Activity	This DQO is specific to payload containers and will not be assessed until the final payload configuration has been established.	Not Assessed
WIPP 10 Required Radionuclides	As shown in Tables 6 and 7, the only WIPP radionuclide reported by the generator consistently is Pu-239. The relative activity of the WIPP ten required radionuclides for this waste stream is documented in CCP-AK-INL-501 and will be quantified during implementation of the Dose-to-Curie Method. **Characterization/Qualification Method: Dose-to-Curie Method described in CCP-AK-INL-502.**	CCP-AK-INL-501
Physical Form	As described in Section 5.4, waste stream ID-ANLE-S5000 consists primarily of organic and inorganic debris meeting the WCPIP definition for Summary Category Group S5000. Section 5.4.1.2 identifies the WMPs, including the estimated amount of each in the waste stream. **Characterization/Qualification Method: 100 percent VE or RTR as described in CCP-AK-INL-502.**	C095, C332, C347, C1031, C3660, C4001, C4002, P067, P3657, P4121, U014, U015, U017, U018, U019, U020,U021, U022, U041, U042, U043, and U1002, U3552, U3900, U4032, U4057, and U4058
Residual Liquids	As described in Section 5.4.5, residual liquids were prohibited during the packaging of waste stream ID-ANLE-S5000 and are not expected in prohibited amounts in any container. **Characterization/Qualification Method: 100 percent VE or RTR as described in CCP-AK-INL-502.**	C066, C084, C099, C106, C115, C118, C130, C137, C147, C161. C1031, P006, P009, P025, P032, P055, P063, P067, P229, P232, P612, P613, U002, U015, U017, U018, U019, U021, U022, U041, U042, U043, and U1002

7.0 CONTAINER SPECIFIC INFORMATION

Container specific information for each drum in waste stream ID-ANLE-S5000 is maintained in the most current Container Tracking Spreadsheet. The Container Tracking Spreadsheet, at a minimum, identifies the drum identification number, internal waste can identification number, summary category group, vent date, and closure date for each drum, based on AK and the most current information from AK characterization activities, as applicable.

8.0 REFERENCES

1. DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*, Carlsbad, New Mexico, U.S. DOE Carlsbad Field Office

2. CCP-AK-ANLE-500, *Central Characterization Project Acceptable Knowledge Summary Report For Argonne Remote-Handled Debris Waste, Waste Stream: AERHDM,* Carlsbad, New Mexico, Nuclear Waste Partnership, LLC.

3. 40 CFR Part 191, *Environmental Radiation Protection Standards for Management and Disposal of Spent Nuclear Fuel, High-Level and Transuranic Radioactive Wastes*, Washington, D.C., U.S. EPA, December 20, 1993

4. 40 CFR Part 194, *Criteria for the Certification and Re-Certification of the Waste Isolation Pilot Plant's Compliance with the 40 CFR Part 191 Disposal Regulations*, Washington, D.C., U.S. EPA, February 9, 1996

5. *Criteria for the Certification and Re-Certification of the Waste Isolation Pilot Plant's Compliance with the 40 CFR Part 191 Disposal Regulations: Certification Decision*, Washington, D.C., U.S. EPA, May 18, 1998

6. Public Law 102-579, *The Waste Isolation Pilot Plant Land Withdrawal Act*, October 30, 1992, as amended by Public Law 104-201, September 23, 1996

7. CCP-AK-ANLE-001, *Central Characterization Project Acceptable Knowledge Summary Report For Argonne National Laboratory-East Contact-Handled TRU Waste Facility Maintenance and Laboratory Operations*, Carlsbad, New Mexico, Nuclear Waste Partnership, LLC.

8. CCP-AK-INL-002, *Central Characterization Project Acceptable Knowledge Summary Report For the Idaho National Laboratory Rocky Flats Transuranic Graphite Debris Waste Stream: ID-RF-S5126*, Carlsbad, New Mexico, Nuclear Waste Partnership, LLC.

9. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*, Carlsbad, New Mexico, Nuclear Waste Partnership, LLC.

10. 42 U.S.C 10101, *Nuclear Waste Policy Act of 1982*, U.S. Congress

11. CCP-AK-INL-501, *Central Characterization Project Remote-Handled Transuranic Radiological Characterization Technical Report For Remote-Handled Transuranic Debris Waste From Idaho National Laboratory,* Carlsbad, New Mexico, Nuclear Waste Partnership, LLC.

12. CCP-AK-LANL-500, *Central Characterization Project Acceptable Knowledge Summary Report For 16 Canisters of Remote-Handled Transuranic Debris Waste From Los Alamos National Laboratory Chemistry and Metallurgy Research Facility, Waste Stream: LA-MHD03.002,* Carlsbad, New Mexico, Nuclear Waste Partnership, LLC.

13. CCP-AK-LANL-501, *Central Characterization Project Remote-Handled Transuranic Radiological Characterization Technical Report For Remote-Handled Transuranic Debris Waste from Los Alamos National Laboratory,* Carlsbad, New Mexico, Nuclear Waste Partnership, LLC.

14. CCP-AK-LANL-503, *Central Characterization Project Los Alamos National Laboratory Quality Assurance Equivalency Report and Procedure Matrix For Remote-Handled Transuranic Debris Waste,* Carlsbad, New Mexico, Nuclear Waste Partnership, LLC.

15. CCP-PO-002, *CCP Transuranic Waste Certification Plan*, Carlsbad, New Mexico, Nuclear Waste Partnership, LLC.

16. DOE/CBFO-94-1012, *U.S. Department of Energy Carlsbad Field Office Quality Assurance Program Document*, Carlsbad, New Mexico, U.S. DOE Carlsbad Field Office

17. CCP-AK-INL-502, *Central Characterization Project RH TRU Waste Certification Plan for 40 CFR Part 194 Compliance for INL RH Waste Stream: ID-ANLE-S5000*, Carlsbad, New Mexico, Nuclear Waste Partnership, LLC.

18. CCP-TP-005, *CCP Acceptable Knowledge Documentation,* Carlsbad, New Mexico, Nuclear Waste Partnership, LLC.

19. *Waste Isolation Pilot Plant Hazardous Waste Facility Permit, Waste Analysis Plan, New Mexico Environment Department,* Santa Fe, New Mexico

20. *Title 40 CFR Part* 261, *Identification and Listing of Hazardous Waste*, U.S. EPA

21. McCoy and Associates, Inc. 2002. *McCoy's RCRA Unraveled*, Second Edition

22. DOE M 435.1-1, *Radioactive Waste Management Manual*

23. DOE/TRU-11-3425, *Annual Transuranic Waste Inventory Report – 2011*, Carlsbad, New Mexico, U.S. DOE Carlsbad

24. DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria For the Waste Isolation Pilot Plant*, Carlsbad, New Mexico, U.S. DOE Carlsbad Field Office

25. CCP-PO-005, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC)*, Carlsbad, New Mexico, Nuclear Waste Partnership, LLC.

9.0 AK SOURCE DOCUMENTS

Source Document Tracking Number	Title
C001	Fax to Larry Neimark re: Defense Versus Non-Defense Waste
C003	Intra-Laboratory Memo to Harvey Welsh re: Dimensions of Intermediate TRU Waste Containers
C006	Interview with Larry Neimark re: AGHCF Samples, Applicable Programs, Defense Relationship to Materials, and Commingling of Waste
C008	Intra-Laboratory Memo to J. V. Natale, SPM re: TRU Scrap Shipment No. 4, SPM-43 No. CZC-168
C009	Intra-Laboratory Memo to W. D. Jackson, MCT/ANL-E, re: Fissile Scrap and Irradiated Structural Materials Waste Shipments from ANL-E to ANL-W for Retrievable Storage in the RSWF
C011	Intra-Laboratory Memo to D. A. Donahue, MCT, re: Work Plan for the Examination of LILY-1 and LILY-1A Specimens
C012	Intra-Laboratory Memo to Operations Personnel re: Facility Nitrogen Purge Change and Storage of Flammable Liquids
C013	Correspondence to Mr. E. M. King, Oak Ridge National Laboratory re: Radioactive Waste, i.e., Nonrecoverable Material, Being Transferred from ANL to ORNL for Storage and/or Processing
C014	Correspondence to A. Cohen re: Process and Procedure with all and WMO for Sampling 1st Stage HEPA Filters. Description-8"x8"x3" w/ 5/8" Wood Frame Ultra Aire – MSA
C016	Intra-Laboratory Memo to C. E. Crouthamel, CMT, and M. J. Steindler, CMT re: LWR Hot-Cell Capability at ANL-E: The D-200 M-Wing Situation
C019	Intra-Laboratory Memo to L. A. Neimark re: Disposal of Spent Darkroom Solutions
C020	Intra-Laboratory Memo to Environmental Compliance Representatives re: Photo Processing Solutions – Waste Characterization
C023	Intra-Laboratory Memo to M. J. Ryan, SEC re: Potentially Hazardous Materials in "Operational Clean Sweep"
C025	Correspondence to D. A. Donahue re: Transfer of Special Materials from G-118 Glovebox 3 to Building 212 Caves
C026	Intra-Laboratory Memo to Melanie Tompkins re: Annual Forecast for Waste Management Operations-94
C027	Intra-Laboratory Memo to TRU Waste Generators re: Closure Methods for Plastic Bags Containing TRU Waste Material
C029	Letter re: Survey of Waste Streams in Building 212
C035	Intra-Laboratory Memo to Distribution re: Management of Broken Fluorescent Lamps
C036	Letter to Sheildon Meyers, Deputy Assistant Secretary for Nuclear Waste Management re: Disposition of TRU from LWR Program: Documentation of Agreements Reached in August 15, 1980 Meeting
C039	Intra-Laboratory Memo to L. A. Neimark re: Procedure for Disposal of "Clean Sweep" Pyrophoric Waste
C041	Intra-Laboratory Memo to Distribution re: Solid Radioactive Waste Drum Failure
C046	Intra-Laboratory Memo to D. C. Parzyck re: DOE request for Information Regarding Materials Not Classified as Waste
C058	Intra-Laboratory Memo to R. Bouie, Director, PFS re: Needs Prior to Shipment of Neimarks's TRU-RH Drums to Idaho
C059	Letter to Mr. A. L. Taboas, Area Manager, Argonne Area Office, U.S. Department of Energy re: Resumption of Shipments of TRU Waste to INEL
C060	Intra-Laboratory Memo to R. Bouie, Director, PFS re: Status: Resumption of Shipments of TRU Waste to INEL
C061	Intra-Laboratory Memo to L. A. Neimark, MCT re: Trip Report of Meeting with EG&G/Idaho on the Resumption of Shipments of TRU Waste to INEL
C062	Intra-Laboratory Memo to R. Bouie, Director, PFS re: TRU Shipments to INEL
C066	Record of Communication with Bill Kettman and Dennis Donahue, AGHCF re: AGHCF Operations and Waste Packaging
C067	Record of Communication with Fred Pausche and Terry Bray, AGHCF
C068	Correspondence to Craig R. Tyler, Lockheed Martin Idaho Technologies Co. re: ANL Transuranic Waste — Definition as Defense Waste
C073	Letter to Ms. Trisha Dedik, Director, International Policy and Analysis Division, NN-42, U.S. Department of Energy re: Transmittal of ANL Quarterly Reports
C074	Letter to Mr. Hilary Rauch, Manager, U.S. Department of Energy re: "TREAT Experiment Program"
C077	Letter to Mr. Mahlon Heileson, Lockheed Idaho Technologies Company re: Liquids Absorbed on Pelletized Clay are Non Hazardous
C081	Intra-Laboratory Memo to Larry Neimark, ET re: Use of Carbon Tetrachloride in Alpha Gamma Hot Cell Facility (AGHCF) Experiments
C082	Fax to Ray Lang, DOE-CH re: ANL-E Fuel Pins
C083	Correspondence to James E. Solecki, Acting Assistant Manager for Environmental Restoration and Waste Management, Idaho Operations Office re: Resumption of Shipments of TRU Waste to INEL, enclosure: Traceability of Hot Cell Waste
C084	Intra-Laboratory Memo to Building 212 Personnel re: Disposal of Solid Radioactive Waste (SRW)

Source Document Tracking Number	Title
C088	Correspondence to Mr. W. M. Heileson, Waste Generator Interface, EG&G Idaho, Inc. re: Content of ANL-E RH TRU Drums Stored at INEL
C089	Intra-Laboratory Memo to Dennis Donahue, Supervisor/AGHCF re: Waste Management Quality Assurance Surveillance Report No. 93-MCT-03a
C091	Correspondence to W. Mahlon Heilson, Waste Management, RWMC Technical Support, EG&G Idaho, Inc. re: Lead in Remote Handled Transuranic Waste Stored at Idaho National Engineering Laboratory (INEL)
C092	Intra-Laboratory Memo to J. L. Hooper, DOE (ARG) re: Experimental Fuel Segments in the AGHCF
C094	Correspondence to L.Neimark, Materials & Components Technology re: Metallographic Samples
C095	Email to Cheryl Schulz re: ANL All-Drum Information
C097	Correspondence to AGHCF, Operational Personnel re: Work Station III Fissile Grinding Waste
C099	Correspondence to Mr. Dennis Wilkinson, RWMC/SWEP re: TRU Waste at Argonne National Laboratory-East
C103	Intra-Laboratory Memo to C. A. DeLorenzo, OOS re: Safety Analysis for Handling Tritium-Containing Compounds in the AGHCF
C106	Email to Whitworth, Julia re: Exploding Drum at ANL
C107	Fax to Harvy re: Information on Venting of 30 Gallon RH-TRU Packages Sent to You from the Alpha Gamma Hot Cell at ANL East
C108	Correspondence to Mr. J. T. Case, U.S. Department of Energy, Idaho Field Office re: Strategy Plan for Long-term Management and Storage of Remote-handled (RH) Transuranic (TRU) Waste – TLC-224-92
C115	Intra-Laboratory Memo to W. H. Kline, Waste Management Coordinator re: Waste Packaging Criteria, Transuranic Waste, Idaho National Engineering Laboratory, Revision 1, IDO-10074
C116	Fax to M. Heileson re: Pelletized Clay
C118	Intra-Laboratory Memo to A. C. Smith, PFS re: Chemical Forms in AGHCF Transuranic Wastes
C121	Record of Communication with L. Neimark, A. Cohen, and F. Pausche (Former AGHCF Section and Facility Manager and Records Chief Technician) re: AGHCF Radiological Characterization of RH-TRU Waste Shipped to INEEL
C124	Fax to Mark Wyco and Larry Neimark, ANL-E re: Request for ANL-E to Identify Items of ANL-W Origin
C125	Intra-Laboratory Memo to Steve Gehl, MSD re: Burnup on LWR Samples
C127	Radiological Health Handbook
C128	Intra-Laboratory Memo to Distribution re: Revised Procedure for Determining Specimen Density by Immersion, Operations Manual Section 7.21
C130	Intra-Laboratory Memo to Waste Handling Procedures Manual Holders re: Packaging of Intermediate Level* Radioactive Waste for Disposal (Liquids)
C137	Email to Douglas W. Parker re: RH TRU Waste
C138	Intra-Laboratory Memo to Distribution re: Hot-cell Survey
C141	Intra-Laboratory Memo to L. A. Neimark, MSD re: Establishment of RAS Loop Disassembly Capability at ANL-E
C143	FAX to Cheryl Schulz re: Information on AGHCF Mercury Vapor Lamps and Lighting Fixtures
C144	Record of Communication with Curtis Merks re: Specifications for Filter Vents Used on ANL-E Drums and Bags
C147	Letter to Mr. John M. Schaffer re: Additional Information to Complete Actions Associated with Preexisting Condition (PEC) 316 – Argonne National Laboratory-East (ANL-E) Transuranic Waste
C148	Interview of Terri Bray, ANL-E AGHCF Manager re: Lead Solder and First Stage HEPA Filters
C152	Intra-Laboratory Memo to D.A. Donahue, MCT/IPS re: Work Plan for the Examination of LILAC Target No.19 for Battelle Pacific Northwest Laboratories
C155	Intra-Laboratory Memo to D. A. Donahue MCT re: Work Plan for the Preparation of Specimens for NPR Tests MA-2, -3, and -4
C157	Intra-Laboratory Memo to L. Neimark MCT re: Test Specification and Operating Procedure for NPR Tests ALCAL-1 and -2.
C158	Collection of Memos Beginning With: Intra-Laboratory Memo to ANL-E Environmental Compliance Representatives re: Illinois Environmental Protection Agency (EPA) Air Pollution Control Permit Applications
C160	Fax Memo to Mahlon Heileson, LITCO/RWMC re: Underlying Hazardous Constituents Waste Stream ANL212951004T
C161	Intra-Laboratory Memo to Waste Handling Procedures Manual Holders re: Packaging of Intermediate Level* Radioactive Waste for Disposal (Liquids)
C305	Memo from R. J. Page and A. Miron to T. S. Bray. Subject: Inventory and Dose Estimates for Radionuclides Stored in the Alpha-Gamma Hot Cells Facility. Report attached.
C329	Memorandum to CCP Central Records: Evaluation of FFTF Fuel History and Defense Experiments
C330	Memorandum to Ines Triay, Acting Manager, CBFO: Determination and Findings, Defense Origin of Nuclear Waste, Kerr-McGee Waste
C331	Memorandum to CCP Central Records: Evaluation of Kerr-McGee Fuel Production and FFTF History
C332	Memorandum to CCP Central Records: Assessment of Waste Material Parameters for Waste Stream ID-ANLE-S5000
C333	Memo to CCP Central Records: Assessment of Waste material Parameters (WMPs) for Waste Stream AERHDM
C334	RH-TRU Characterization Facilities Presentation

Source Document Tracking Number	Title
C335	CCP Review Comments and Resolutions for Draft A, Rev. 0, CCP-AK-ANLE-500
C336	CCP Review Comments and Resolutions for Draft A, Rev. 0, CCP-AK-INL-500
C337	ICP Controlled Document Review and Comments and Resolution Form on CCP-AK-INL-500, Revision 2
C341	Shaw Discrepancy Report R4 – RH TRU Waste from ANL-E- AGHCF, Re: Possible Presence of Lead in Waste
C347	Evaluation of Combustible versus Noncombustible Waste Drums in Waste Stream ID-ANLE-S5000
C348	Evaluation of Generator Reported Radionuclides for Waste Stream ID-ANLE-S5000
C350	Evaluation for Radiological Waste Stream Delineation for Waste Stream ID-ANLE-S5000
C351	Letter to W.E. Bergholz, DOE-Idaho Operations Office, Argonne National Laboratory-East (ANL-E) Remote Handled (RH) Transuranic Waste Stored at the Radioactive Waste Management Complex (RWMC)
C353	Discussions with Seth Snyder and Al Youngs; Chemistry Division Operations in Building 200, M-Wing and General Description of Building 200
C354	Miscellaneous Cave Area Description (for Building 200) from Tory Steed
C355	Letter to R.R. Heinrich, J-1/J-2 Burnup/ Isotopic Samples for the EPRI/EXXON Program
C356	Letter to C.E. Johnson; Monthly Report on EXXON/EPRI Program RP 306 for November 1978
C357	Letter to N.D. Dudey and C.E. Crouthamel (EXXON); Management Summary and Milestone Report for October 1978
C358	Letter to R.H. Bauer; Activation of K2 Hot Cell for RRT Safety Program Work
C359	Inter-Laboratory Memo to A.J. Goldman; Feasibility of Operating K-2 Facility in D200
C364	Intra-Laboratory Memo to C.H. Youngquist; Priority List for Work in M-Wing Cave Facility for Month of October 1978
C365	Intra-Laboratory Memo to B.R. Frost & L. Burris; Building 301 Glovebox and Nitrogen System
C366	Intra-Laboratory Memo to C.E. Dickerman; Schedule for In-Cell Containment Box for Loop Disassembly in Bldg. 200
C367	Intra-Laboratory Memo to O. McNary; Examination Plan for L6/L7 and L8 Sibling Pins
C373	Intra-Laboratory Memo to L.A. Niemark; Cave K-2
C375	Intra-Laboratory Memo; Minutes of September 9,1980 about Sb-125 Releases From Cell K-2, M-Wing, Building 200
C377	Memo to S.F. Burton, Re: Final Report of SAREF Support Facilities Requirements Task Group
C378	Intra-Laboratory Memo to R.G. Matlock; Cost Estimate for ANL-E Support for SAREF.
C379	Intra-Laboratory Memo; Addendum to Criticality Hazards Control Statement (Revision 7) Alpha-Gamma Hot Cell Facility (Special Facility FF-1)
C380	Interview with Bill Kettman
C381	Results of Document Review Relating to the AK Available for RH TRU Waste Containers Generated in the Building 200 K Cells at ANL-E
C1002	E-Mail Correspondence; Re: Work Performed in the M Cells of the Bldg. 200 M-Wing
C1007	Letter to N.D. Dudey and C.E. Crouthamel (EXXON); Management Summary and Milestone Report for April 1978
C1008	Letter to N.D. Dudey and C.E. Crouthamel (EXXON); Management Summary and Milestone Report for January 1978
C1010	Letter to C.E. Crouthamel (EXXON); Management Summary and Milestone Report for February 1979
C1013	Letter to N.D. Dudey and C.E. Crouthamel (EXXON); Management Summary and Milestone Report for November 1978
C1018	Letter to N.D. Dudey and C.E. Crouthamel (EXXON); Management Summary and Milestone Report for August 1978
C1021	Letter to L.A. Neimark; Estimated Costs for Exxon/EPRI Program
C1022	Drawings List for the CEN Shielded Fuel Examination Facility in Cell M-4 of MA-Wing in Building 200, Argonne National Laboratory
C1027	Letter to N.D. Dudey and C.E. Crouthamel (EXXON); Management Summary and Milestone Report for February 1978
C1030	Letter to N.D. Dudey and C.E. Crouthamel (EXXON); Management Summary and Milestone Report for January 1979
C1031	Summary of AK Research for 12 Drums Generated in the Building 200 M Wing to be Included in Waste Stream ID-ANLE-S5000.
C3464	Email to Mike Papp, re: HFEF Repackaging Operations
C3633	Email to Mike Papp, re: 90-Mil Liner Use
C3660	Evaluation of 51 ANL-E High Gamma TRU Waste Canisters Stored at the MFC Radioactive Scrap and Waste Facility to be Added to Waste Stream ID-ANLE-S5000, Revision 1
C3661	Email to Scott Smith, re: Material Transfer from ANL-E to ANL-W
C3698	Email to Tom Clements, re: Operation of CPP-666
C3754	Argonne National Laboratory Intra-Laboratory Memo to J.V. Natale, re: Sodium Content in ANL-E High Gamma Level Transuranic Scrap Stored at ANL-W
C4001	Email to Scott Smith re: Filtration of Lot 2 Immersion Water
C4002	Email to Scott Smith Re: Fuel Pin Packing Assembly Tare Wts.

Source Document Tracking Number	Title
C4003	Memorandum to Mr. Ed Ziemianski, Subject: Water Immersion Testing for Qualifying Lot 2 Fuel Pieces for Disposal at the Waste Isolation Pilot Plant
C4114	Emails to Lane Butler and Scott Smith, re: Metal-X Acceptability at WIPP
C4129	Comments and Resolution from CWI/CP for CCP-AK-INL-500; Rev 8, Draft E
DR010	Discrepancy Regarding the Volume of 7-Gallon Waste Cans
DR014	Discrepancy Report for the RCRA Assignment of EPA HWNs to Waste Stream ID-ANLE-S5000
DR016	Unsealed 1-gallon Waste Can Discrepancy Report
DR017	Discrepancy Involving Free Liquids in Waste
DR018	Discrepancy Resolution Regarding: K Cell Waste Packaging
DR019	Sealed Waste Cans
DR020	Discrepancy Resolution Regarding Aerosol Cans
DR021	Discrepancy Resolution for 3-Gallon Cans
P001	AGHCF Operations Manual
P002	Central Characterization Project Acceptable Knowledge Summary Report for Argonne National Laboratory-East Contact-Handled TRU Waste Facility Maintenance and Laboratory Operations
P004	Safety Analysis Report for the Alpha-Gamma Hot Cell Facility (Bldg. 212)
P006	Safety Analysis for Twenty Year Retrievable Storage of Intermediate Gamma Level Transuranic Waste
P007	Transport, Handling, and Interim Storage of Intermediate-Level Transuranic Waste at the INEL
P008	ANL-W History – Reactors (IFR)
P009	TRU-RH Waste Certification Plan for Waste Management Operations
P010	Argonne News Articles re: General Information; IFR Fuel; Low-Enrichment Fuel
P013	Frontiers: Research Highlights 1946-1996
P014	Institutional Plan: FY 1980-FY 1985 Institutional Plan: FY 1981-FY 1986
P015	Basic Research in the Mission Agencies: Agency Perspectives on the Conduct and Support of Basic Research
P016	Liquid Metal Fast Breeder: Right Answer, Wrong Question
P017	1992 Congressional Hearings Intelligence and Security: Naval Reactors, Arms Control, Office of Intelligence, 03/11/1992, Question and Answer
P018	Certification and Venting Plan for Remote-Handled Transuranic Waste Stored at the Idaho National Engineering Laboratory
P023	Argonne National Laboratory-East Remote Handled Waste
P024	Certification of Remote-Handled Transuranic Waste at the Tan Hot Cells
P025	Argonne National Laboratory-East, Transuranic Waste Acceptable Knowledge Report
P027	Preliminary Engineering Proposal on Alpha-Gamma Hot Laboratory for Fuels Technology Center, Argonne National Laboratory
P028	Presentation to DOE Office of Nuclear Safety re: Alpha-Gamma Hot Cell Facility (AGHCF)
P029	Engineering Test Plan for the Irradiation Testing of U3Si Dispersion Fuels: Reduced Enrichment Research and Test Reactor Program
P030	Radiological Acceptance Knowledge Report for Drums 728 through 737
P031	Alpha-Gamma Hot Cell Facility (AGHCF) Safety Analysis Report
P032	Procedure for Sorting Remote-Handled TRU Waste (30-Gallon Intermediate-Level Waste)
P034	AGHCF Operations Manual: 15.6 Procedure for Acid Cleaning a Zinc-Bromide Shielding Window
P035	AGHCF Operations Manual: 15.9 Procedure for Installing Vents in Pre-packaged 30-gal. TRU Waste Drums
P038	AGHCF Operations Manual: 15.13 Procedure for Installing a Modified D-301 Window Tank in a Type A Window Cavity
P039	AGHCF Operations Manual: 15.15 Procedure for Installing Lead Shielding Around a Tank Insert in an AGHCF Window Cavity
P040	AGHCF Operations Manual: 15.17 Procedure for Changing an In-line Filter in a Radioactive Gas Collective System
P047	AGHCF Operations Manual: 15.28 Painting a Drained Shielding Window Tank Cavity
P049	AK Documentation Report for INEEL-Stored Remote-Handled Transuranic Waste From Argonne National Laboratory-East
P052	Test and Evaluation Document for the US DOT Specification 7A Type A Packaging
P055	Waste Handling Procedures
P056	Program Plan for Packaging and Certification of INEL Remote-Handled Stored TRU Waste
P058	AGHCF Operations Manual: 15.0 Nuclear Materials Management
P059	AGHCF Operations Manual: Section VII – Examination Procedures
P060	AGHCF Operations Manual: 7.0 Standard Examination Procedures
P061	Examination Techniques for High Burnup U-Pu Elements for Fast Breeder Reactors
P062	AGHCF Operations Manual: 7.15 Preparation of Metallographic Specimens
P063	SPM Procedure for High Gamma Transuranic Waste Handling from Alpha Gamma Hot Cell Facility (AGHCF) Bldg. 212, MSD, ANL-E

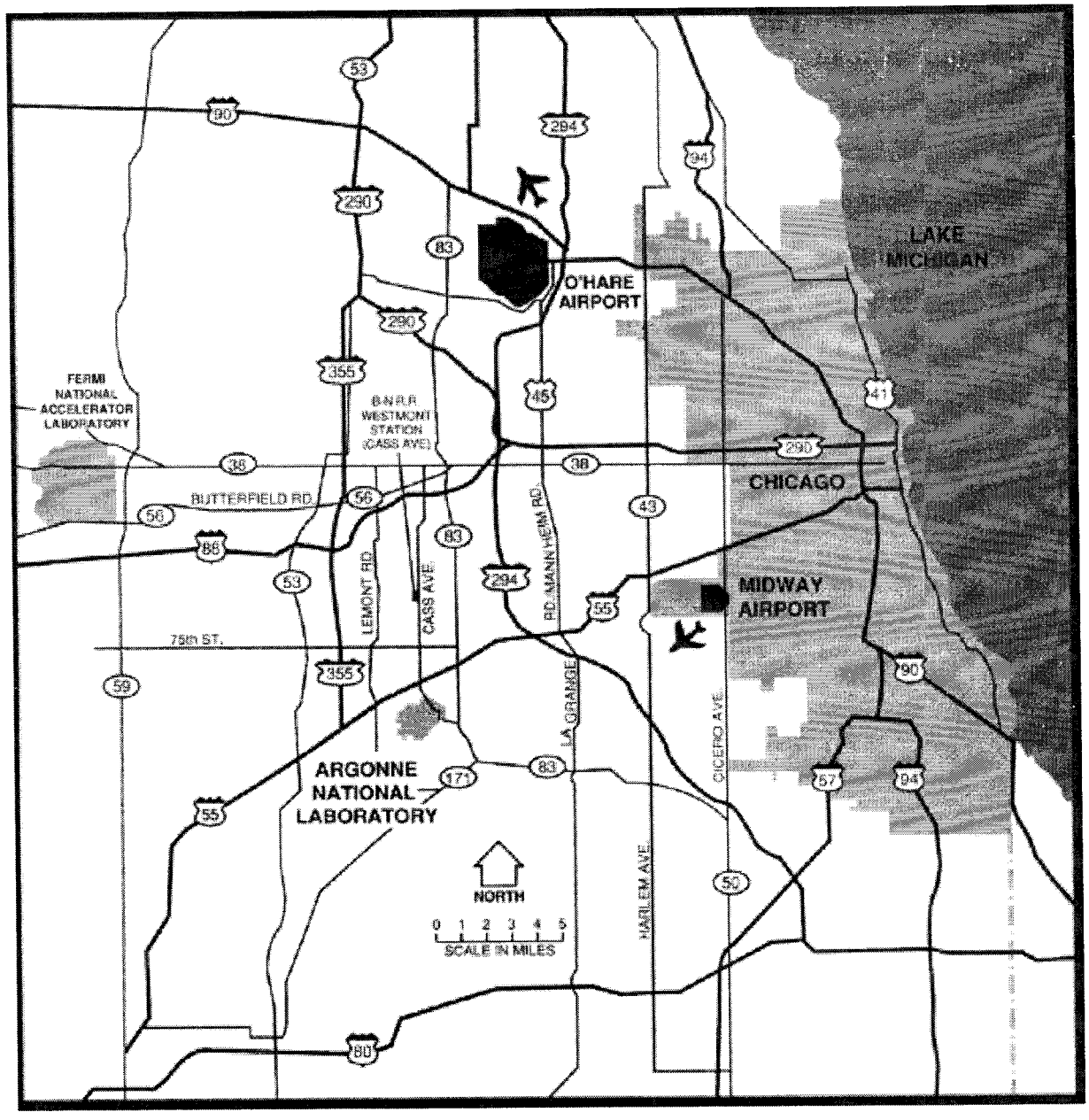
Source Document Tracking Number	Title
P064	US Atomic Energy Commission AEC Manual: Chapter 0511 Radioactive Waste Management
P067	Procedure for High Gamma Level Transuranic Waste Handling At the AGHCF, MSD, ANL-E
P068	AGHCF Operations Manual: 7.14 Mounting Metallographic Specimens
P069	AGHCF Operations Manual: 7.13 Fuel Element Sectioning
P070	AGHCF Operations Manual: 7.21 Specimen Density by Immersion
P074	Plan for Decommissioning TREAT Loop Disassembly Facility (K-2 cell, building 200, M-wing)
P173	Transuranic Waste Baseline Inventory Report
P229	Criteria for Packaging Transuranic Waste for Receipt at the Idaho National Engineering Laboratory Radioactive Waste Management Complex Offsite Generated Waste
P230	EG&G Internal Technical Report, Inventory Analysis of Stored Transuranic (TRU) Waste at the Radioactive Waste Management Complex (RWMC)
P232	Idaho National Engineering Laboratory Reusable Property, Recyclable Materials, and Waste Acceptance Criteria
P320	Management Plan for Irradiation Performance Section Facilities, Energy Technology Division
P372	Review of Zirconium-Zircaloy Pyrophoricity
P374	The RERTR Program: A Status Report
P375	Progress of the RERTR Program in 1999
P378	Argonne National Laboratory-East Building 212 Energy Technology Division Alpha-Gamma Hot Cell Facility Preliminary Decontamination and Decommissioning Plan
P380	Alpha-Gamma Hot Cell Facility (AGHCF) Safety Analysis Report
P394	Work Plan for the Preparation of Fuel Rods for Return Shipment to Idaho
P404	Movement of Material In-Cell
P407	Criticality Control
P583	Roadmap for SP-100 Fuel Pin Irradiation Testing
P584	U.S. Department of Energy – The Secretary's Annual Report to Congress 1992-1993
P585	Safety issues at the DOE Test and Research Reactors, A Report to the U.S. Department of Energy
P586	Report to Congress – The Liquid Metal Fast Breeder Reactor Program – Past, Present, and Future
P587	Program Scoping Plan for the Fast Flux Test Facility, A Nuclear Science and Irradiation Services User Facility
P588	An Overview of the Argonne National Laboratory Fast Critical Experiments 1963-1990
P590	Methodology to Determine Radioisotope Contents in RH TRU Waste Drums from Irradiated Fuel Examination at ANL-E
P591	Engineering Design File, Estimation of Inventory of Significant Isotopes in RH-TRU Waste Drums 728 through 737
P592	Evaluation of Radionuclide Contents in RH TRU Waste Drums 728 through 737 Based on Reported Irradiated Fuel Examination
P593	Engineering Design File, Quantifying Special Actinides in RH-TRU Waste from Irradiated Fuel Examined at ANL-E
P594	Engineering Design File – Results of ORIGEN2 Calculations for 14 EBR-II Experiment Fuel Elements that Generated Remote-Handled TRU Waste in Drums 728-737
P595	Engineering Design File – Verification and Validation of a Portion of ORGEN2 Code Used for RH-TRU Radiological Characterization
P596	White Paper: Peer Review of Proposed Radiological Characterization Methodology for Remote-Handled Transuranic Waste Stored at the Idaho National Engineering and Environmental Laboratory
P599	The Defense Programs Origin of Transuranic waste at Argonne National Laboratory-West
P603	Validation of the Rebus-3/RCT Methodologies for EBR-II Core-Follow Analysis
P612	ILTSF Drum Retrieval Completion Report
P613	Review of CY-2000 Retrieved RH-TRU Drums for Water
P616	Decontamination of Hot Cells K-1, K-3, M-1, M-3, and A-1, M-Wing, Building 200: Project Final Report Argonne National Laboratory-East
P617	Criticality Hazards Control Statement for Special Facility MF200-KW
P618	Quality Assurance Plan for RAS Loop Disassembly Facility, D-200, M-Wing, K-1 Cell
P619	Report of the Preliminary Design Review of the RAS Loop Disassembly Facility, D-200, M-Wing, K-1 Cell
P620	Posttest Examination Plan for the L6 Experiment
P621	Posttest Examination Plan for the L7 Experiment
P622	Addendum to Criticality Hazards Control Statement (Revision 7) Alpha-Gamma Hot Cell Facility (Special Facility FF-1)
P623	Light-Water-Reactor Safety Research Program: Quarterly Progress Report; April-June 1975
P624	Quarterly Progress Report for the Period Ending June 30, 1975; Transient Fuel Response and Fission-Product Release Program
P834	Chemical Engineering Division Fuel Cycle Programs Quarterly Progress Report April-June 1979
P835	Chemical Engineering Division Annual Technical Report 1980
P836	Light-Water-Reactor Safety Research Program: Quarterly Progress Report; January-March 1979
P837	Chemical Engineering Division Fuel Cycle Programs Quarterly Progress Report July-September 1979
P839	Packing Configuration for Repacked ANL-E Canisters

Source Document Tracking Number	Title
P1001	From Test Tube to Pilot Plant; A 50 Year History of the Chemical Technology Division at Argonne National Laboratory
P1003	Building 200/205 Pneumatic Transfer Tube D&D Project Final Report
P1004	Irradiation and Evaluation of Mixed Oxide Fuel Performance at the Big Rock Point Reactor, Post-Irradiation History: Fuel and Fission Product Behavior
P1005	Characterization of Low Burnup Rods (J-1) From Big Rock Point Reactor, Final Report
P1009	Reference Information Concerning Some 1960s and 1970s Use of Building 200 MA-Wing Hot Cells and Surrounding Areas
P1010	Progress in Nuclear Energy – Volume 5, Parts 5, 6, 7, Analytical Chemistry, A Large-Scale Facility for Chemical Research with Intensely Radioactive Materials
P1011	Verification Survey of Building 200 Hot Cells
P1012	Characterization of Irradiated Zircaloys: Susceptibility to Stress Corrosion Cracking
P1013	RP1027 – Characterization of Irradiated Zircaloys
P1014	Characterization of Irradiated Zircaloys: Susceptibility to Stress Corrosion Cracking
P1015	Fuel Performance Improvement Program – Semiannual Progress Report, October 1979 – March 1980
P2040	Radioactive Scrap and Waste Facility Storage Liner System
P3042	Analytical Laboratory Safety Analysis Report
P3047	Argonne National Laboratory Description and Proposed Operation of the Fuel Cycle Facility for the Second Experimental Breeder Reactor (EBR-II)
P3049	Estimated Radiological Inventory Sent from Argonne National Laboratory-West to the Subsurface Disposal Area From 1952 Through 1993
P3051	A Survey of NRTS Waste Management Practices, Volume II
P3077	ANL-W RCRA Part B Permit Application, General Information
P3089	AK Summary Documentation RH TRU Packaging
P3115	Decontamination Cell Operations in CPP-659
P3144	Hot Fuel Examination Facility/North, Facility Safety Report
P3146	Hot Fuel Examination Facility/South Final Safety Analysis Report
P3178	Overview of Idaho National Laboratory's Hot Fuels Examination Facility-2007 European Working Group Hot Laboratories and Remote Handling
P3182	Packing Configurations for Repacked TRA and ANL-E RH-TRU Waste
P3186	HFEF Safety Analysis Report
P3187	FCF Safety Analysis Report
P3657	Radioactive Scrap and Waste Facility – Liner Characterization Stage 2
P3658	Procedure for Receiving of ANL-East Scrap Shipments and Transport Vehicles at Argonne-West
P3659	Procedure for Storage of ANL-E Scrap at the Radioactive Scrap and Waste Facility
P4054	Results of Testing Metallographic (Met) Mounts for the Presence of Sodium, Performed in the Alpha Gamma Hot Cell Facility (AGHCF)
P4118	Probable Cause for Lot 2 Thermal Events
P4119	Engineering Design File, Argon Repackaging Station (ARS) Process Description
P4121	HFEF Repackaging at the FDPA
U001	AGHCF Position Statement Regarding Defense Versus Non-Defense TRU Waste
U002	Draft Proposal For: Alpha-Gamma Hot Cell Facility Waste Management Plan
U003	Argonne National Laboratory-West Mission Description
U004	Remote-Handled Waste Content Codes Assessed
U005	Data and Process Knowledge Assessment for Remote-Handled Transuranic Waste Stored at the Radioactive Waste Management Complex-Preliminary Draft
U006	Summary of Purchasing Requisitions Received from T. Bray: Heavy Metals Usage Identified by IT That May Be in the RH-TRU Waste Stream
U007	Material Control Sheets for A/G numbers 1 through 510 and some attached paperwork
U009	Transuranic Waste at Argonne National Laboratory-West: Meeting the Waste Acceptance Criteria for the TRU Repository
U011	Project Process Flow Diagram: Fuel Elements from EBR-II and FFTF
U012	Basis for Assessment of the Environmental impact of the Expanded Program at Argonne-East
U013	Waste Stream Fissile Content
U014	1990 Batch Information for Drums 614-685, 728-735
U015	RH-TRU 1995, Drums 798 to 809.
U016	Material Receipt and SPM Data for AG# 409 A,B
U017	RH-TRU 1994, Book 8, Drums 778 to 797
U018	RH-TRU 1993, Book 7, Drums 748 to 777
U019	RH-TRU 1991-1992, Book 6, Drums 728 to 737
U020	Book 5, Venting of 30-Gallon TRU Waste Drums, 1990

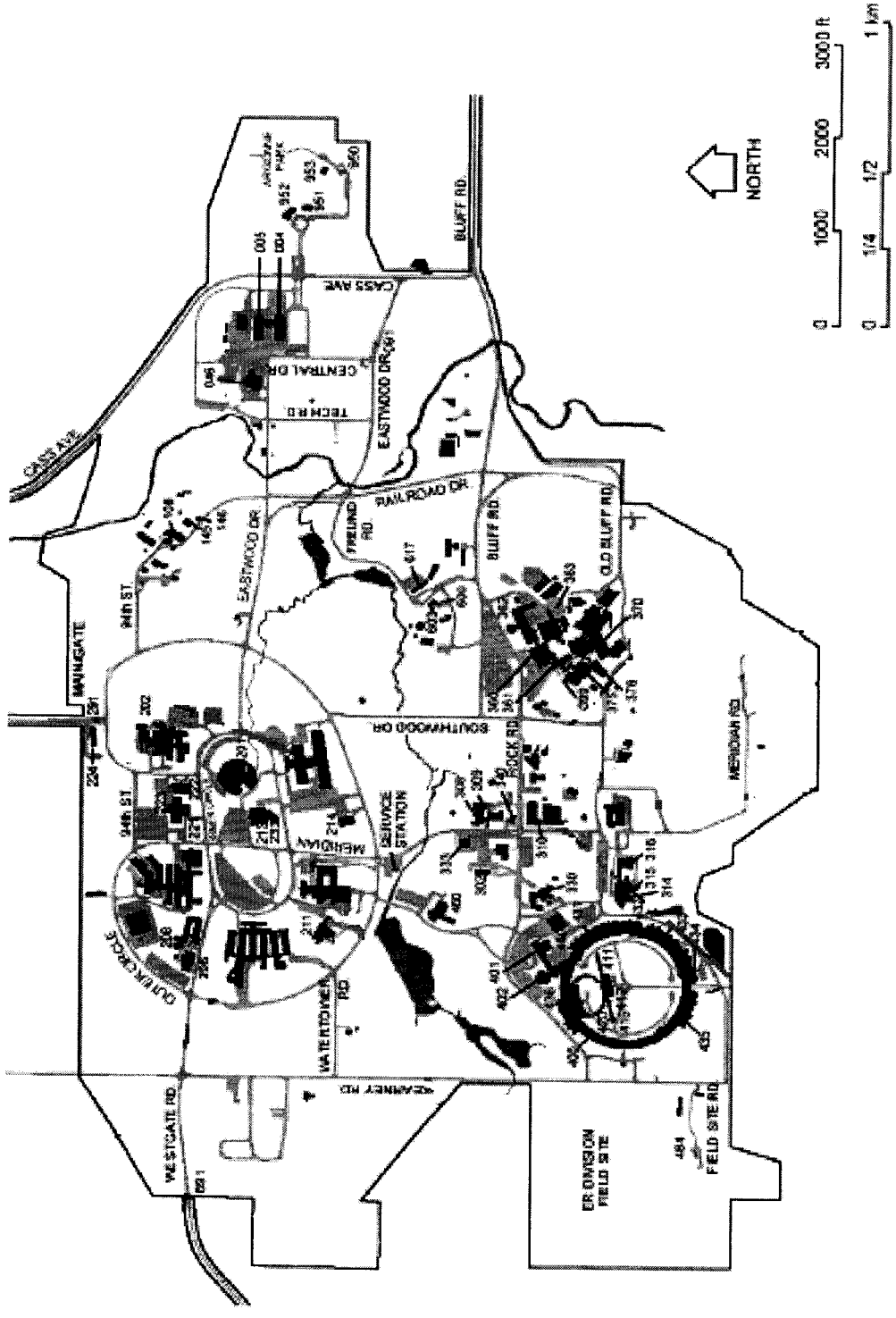
Source Document Tracking Number	Title
U021	RH-TRU 1990, Book 4, Drums 687 to 727
U022	RH-TRU 1985-1987, Book 3, Drums 617 to 686
U023	Fuel Shipments into AGHCF 1993-1995
U024	Spreadsheet Entries for Building 212 Irradiated Fuel Elements
U025	In "IFR Charact 031" Folder
U026	Analytical Results for EFL Castings: In "IFR Charact 036" Folder
U028	Elements Sectioned in Area 1 Between Nov. 1971 and 24 October 1975
U030	Liquid Waste Disposal Requisition
U036	Acceptable Knowledge for ANL RH-TRU Waste
U039	Report Selection Criteria
U040	Spreadsheet Correlating Number Quota with Quota Title and Number Project
U041	Videotape Logs
U042	RH-TRU 1976 to 1982, Book 1
U043	RH-TRU 1982 to 1985, Book 2
U045	Material Receipt and SPM Data for AG# 285
U046	Material Receipt and SPM Data for AG# 377
U047	Material Receipt and SPM Data for AG# 394
U048	Material Receipt and SPM Data for AG# 378
U049	Material Receipt and SPM Data for AG# 403 A,B
U050	Material Receipt and SPM Data for AG# 421A, B, C, D, E
U053	Material Receipt and SPM Data for AG# 425
U054	Material Receipt and SPM Data for AG# 426
U056	Material Receipt and SPM Data for AG# 427
U058	Material Receipt and SPM Data for AG# 428
U059	Material Receipt and SPM Data for AG# 429
U061	Material Receipt and SPM Data for AG# 430
U064	Conversion Factors
U065	Hand written Notes: One titled "Decon & Repair Procedures for Cleaning and Repairing a Manipulator"
U066	Addendum Criticality Safety Training Quiz 7/17 or 7/21/75
U067	Information on Fuel Elements T678 and T680
U068	Information on Fuel Elements DP-15, DP-17, DP-27, DP-32, DP-21, DP-24. DP-29, DP-45, and DP-61
U069	Information on Fuel Elements UBA-15, UBB-23, UCA-37, UCD-45, UCE-47
U070	Information on Fuel Element WT-185
U072	Material Safety Data Sheets (MSDS)--various metal and chemical compounds
U073	Combustible Waste Contents (52 cans)
U074	Information on Fuel Element T61 of Subassembly X425
U076	AGHCF Fissile Inventory Management System Database
U079	Work Station No. 3 Grinding Loss Record
U083	HEPA Filters
U084	Report of Analytical Results
U085	Procedure for Determining Fuel Pellet Density Using a Mercury Prinometer (handwritten)
U307	Report 105 - Custodian Batch Balance (Pure)
U330	West Valley Demonstration Project Transuranic Waste Defense Waste Determination
U333	DVDs of Packaging for Cans in RH-TRU Drums in the AGHCF
U339	General Description of Building 200 Provided by Al Young
U340	Draft of an Environmental Assessment for Increased Post Irradiation Examination Capabilities at ANL-E
U342	SAREF Safety Program Environmental Impact Assessment
U343	RTR Quick Scan Data for 6 K-Cell Drums
U1001	Building 200 Special Survey Reports
U1002	RH TRU RTR Prescreen For Repackaging/AK Worksheets and Videos
U1003	Argonne Special Material Receipt and Transfer Documentation by A/G Number
U1004	Miscellaneous Packaging and Shipping Documentation for Containers 393, 394, 395, 396, 397, 398, 399, 400, 1002, 1003, 1004, 1005
U1005	Health Physics Monthly Reports for Activities in Building 200
U1008	Argonne National Laboratory Core Competency Areas
U3025	DRAFT Facility Waste Descriptions Argonne – West
U3552	Compilation of MFC Liner Documents
U3607	Excel Spreadsheet: Information for 108 MFC RH-TRU Liners
U3900	Collection of Retrievable Storage Canister Data, Irradiated Hi-Level Gamma Transuranic Scrap Material Forms (SPM-50), Argonne National Laboratory-East

Source Document Tracking Number	Title
U3901	Collection of Handwritten Retrievable Storage Canister Data Irradiated Hi-Level Gamma Transuranic Scrap Material Sheets and Associated Paperwork
U4032	RH TRU Container Repackaging Datasheets for ANLE Canisters in Waste Stream ID-ANLE-S5000
U4056	Water Immersion Testing for Qualifying Lot 2 Fuel Pieces for Disposal at WIPP
U4057	RH-TRU Processing of Lot 2 Waste and Application of D001 and/or D003 Hazardous Waste Numbers
U4058	Whatman Schleicher & Schuell Filter Paper Information (3)
U4059	Evaluation of Surrogate Passivated and Nonpassivated Fuel Pin Samples

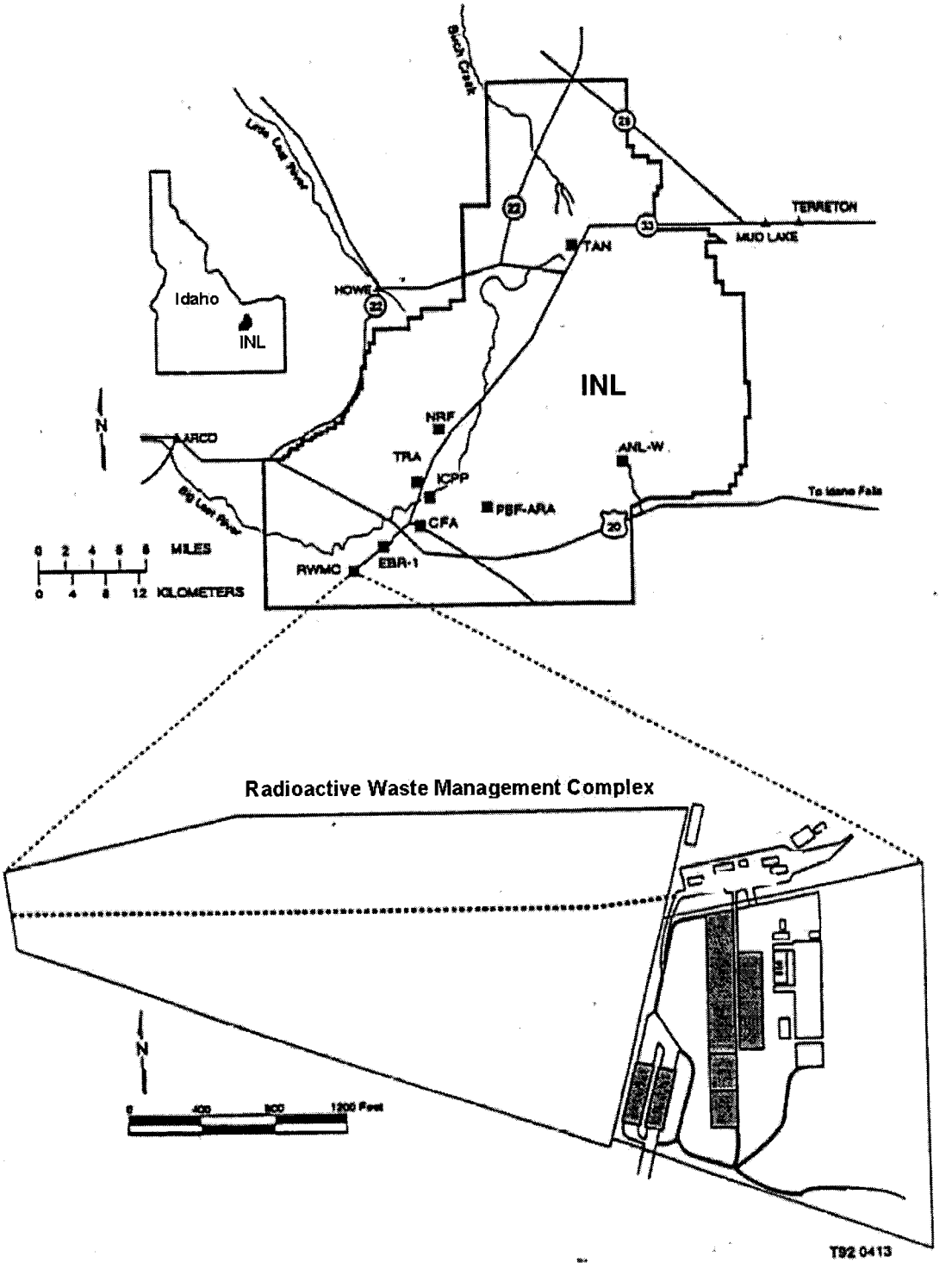
Attachment 1 – Location of the ANL-E Site



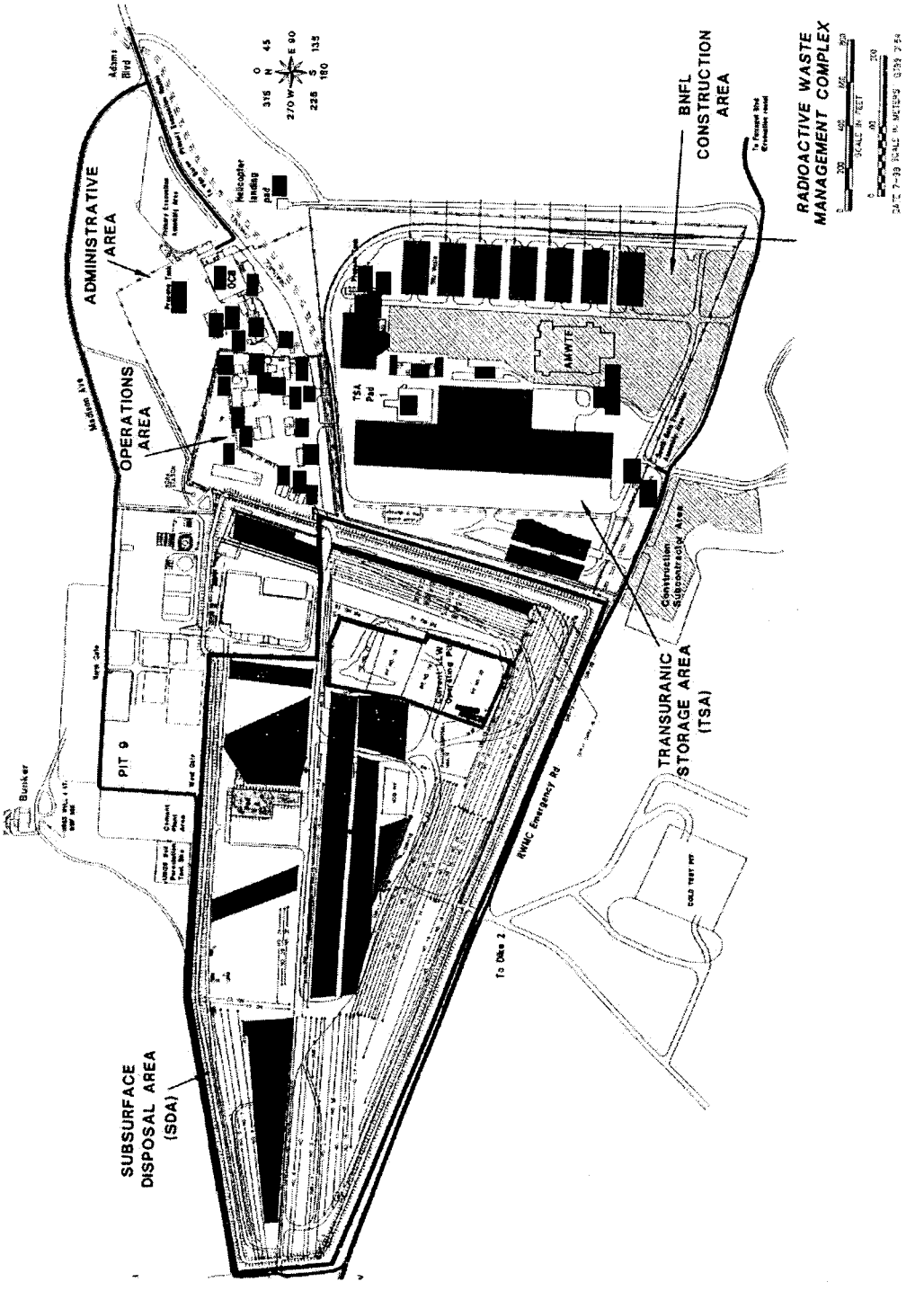
Attachment 2 – ANL-E Site Map



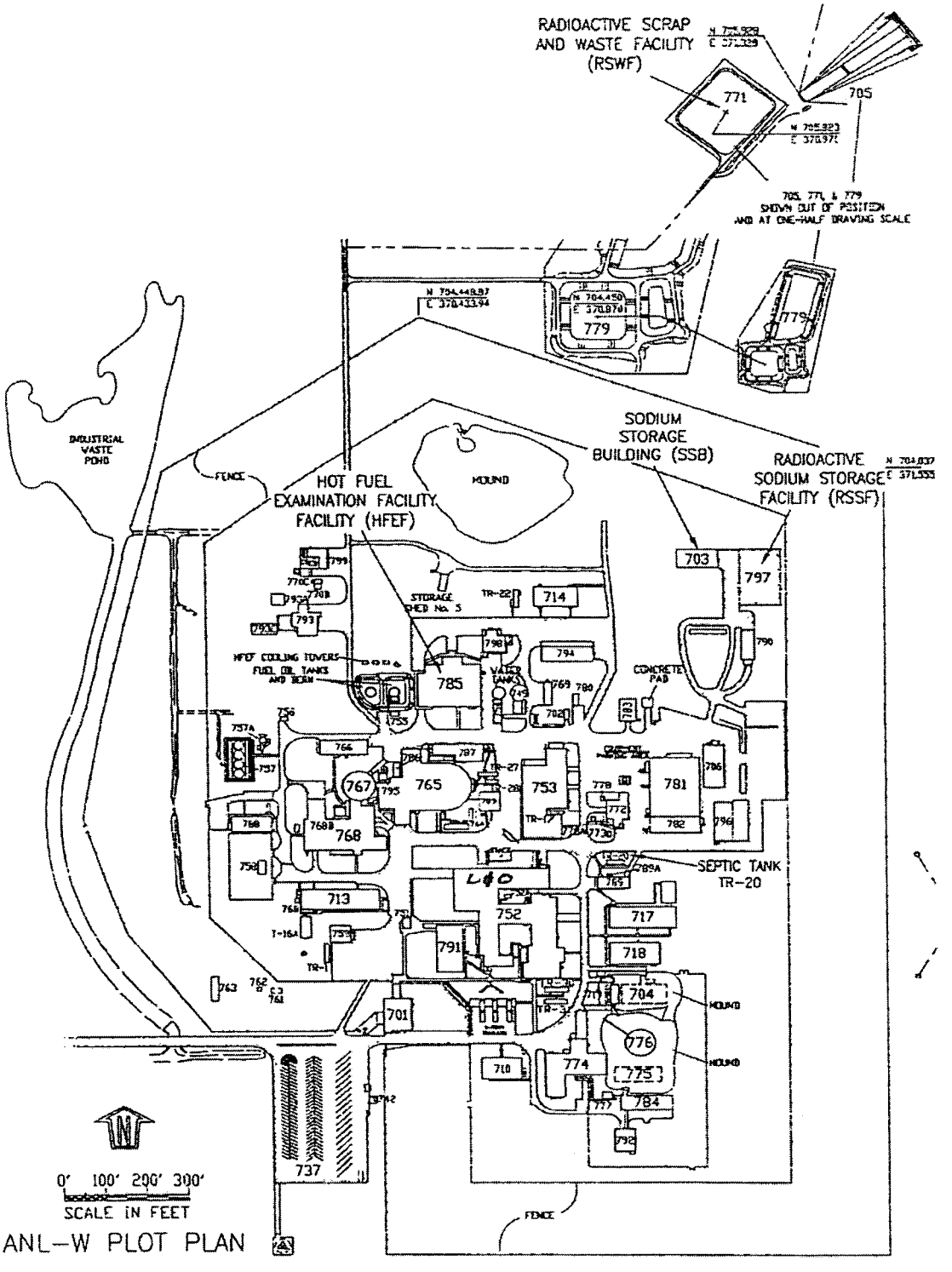
Attachment 3 – Location of the INL RWMC



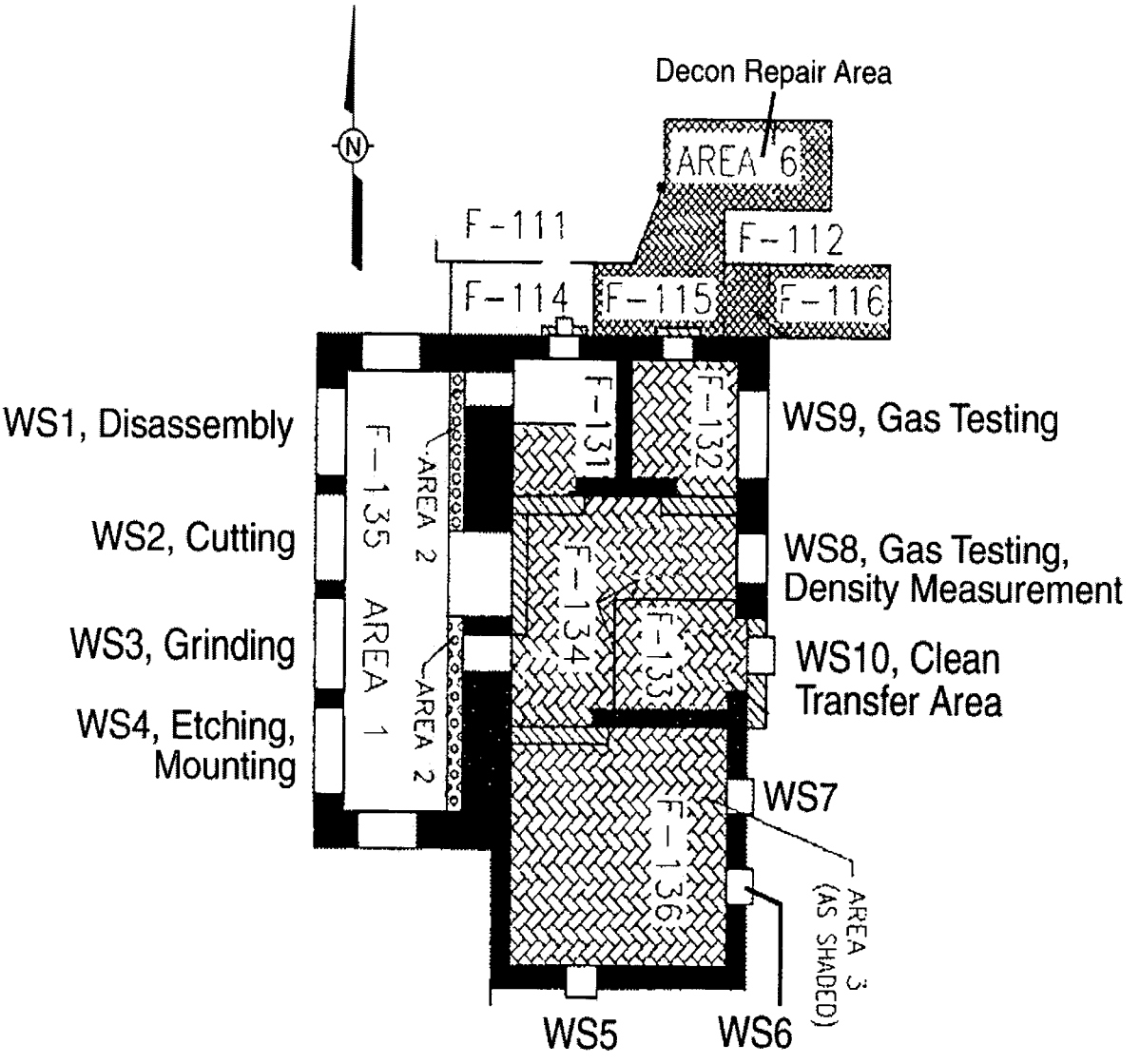
Attachment 4 – RWMC Map



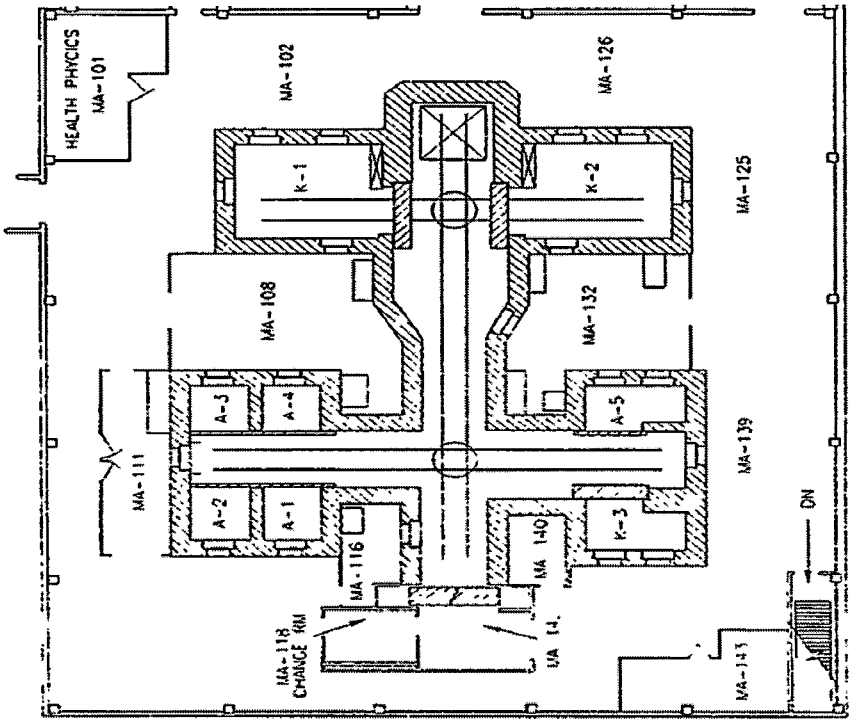
Attachment 5 – Materials and Fuels Complex Map



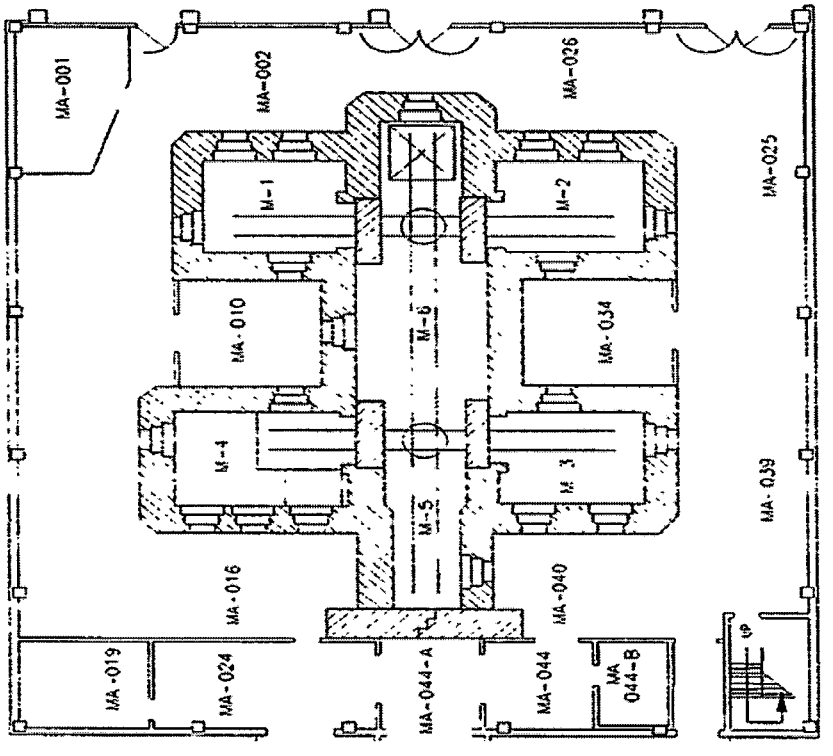
Attachment 6 – AGHCF Process Areas



Attachment 7 – M-Wing Hot Cell Process Areas

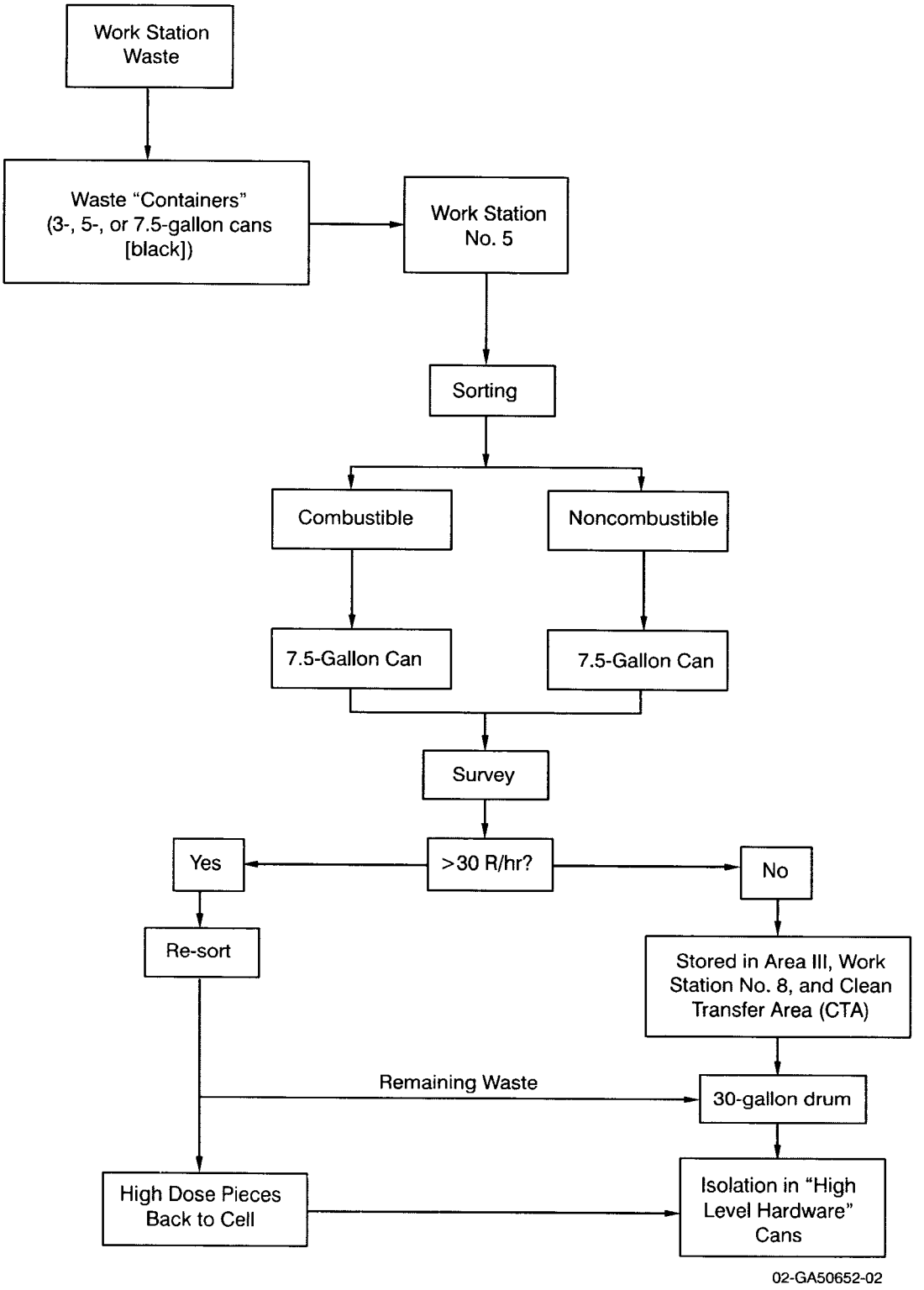


MAIN FLOOR

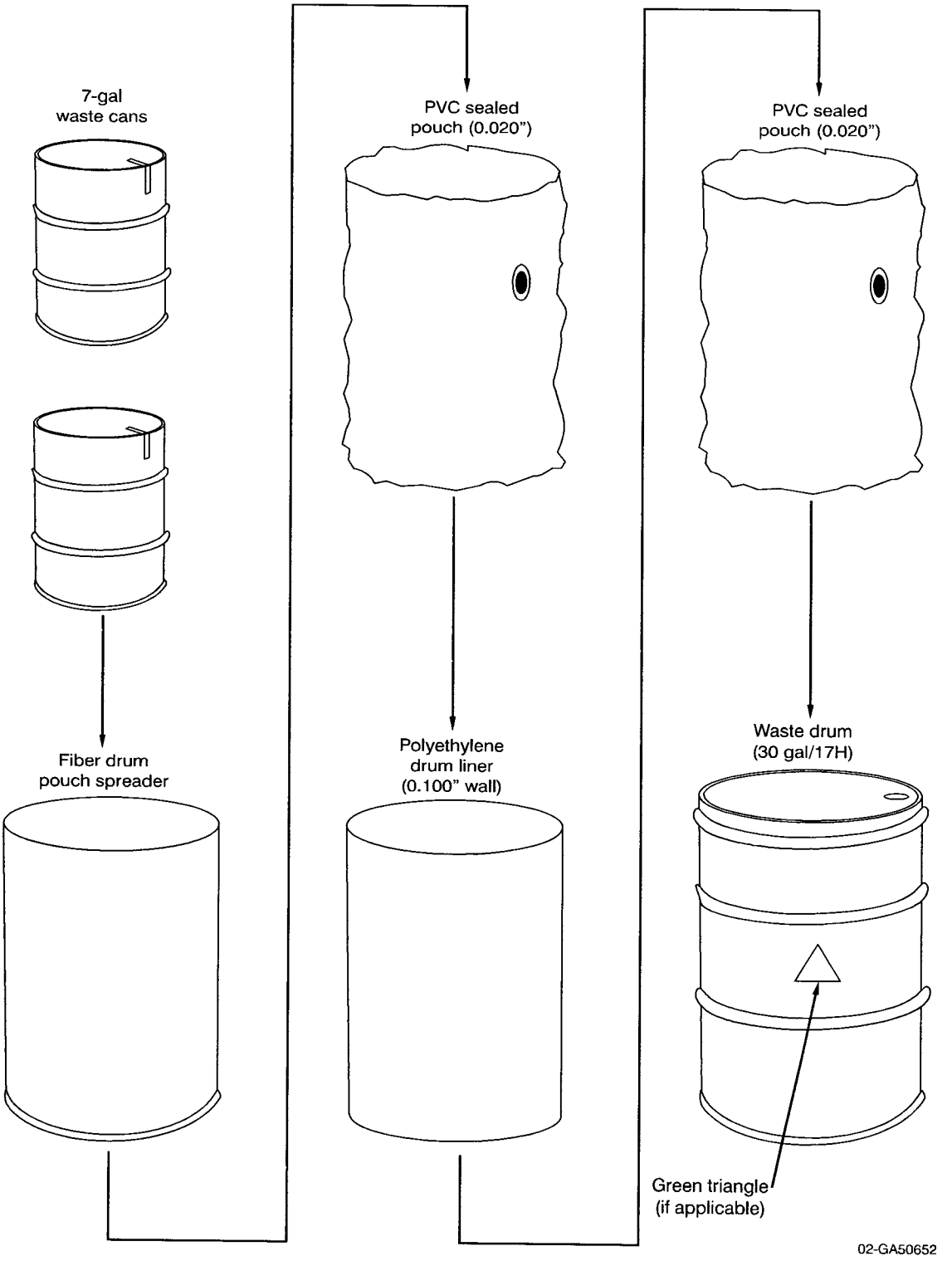


LOWER FLOOR

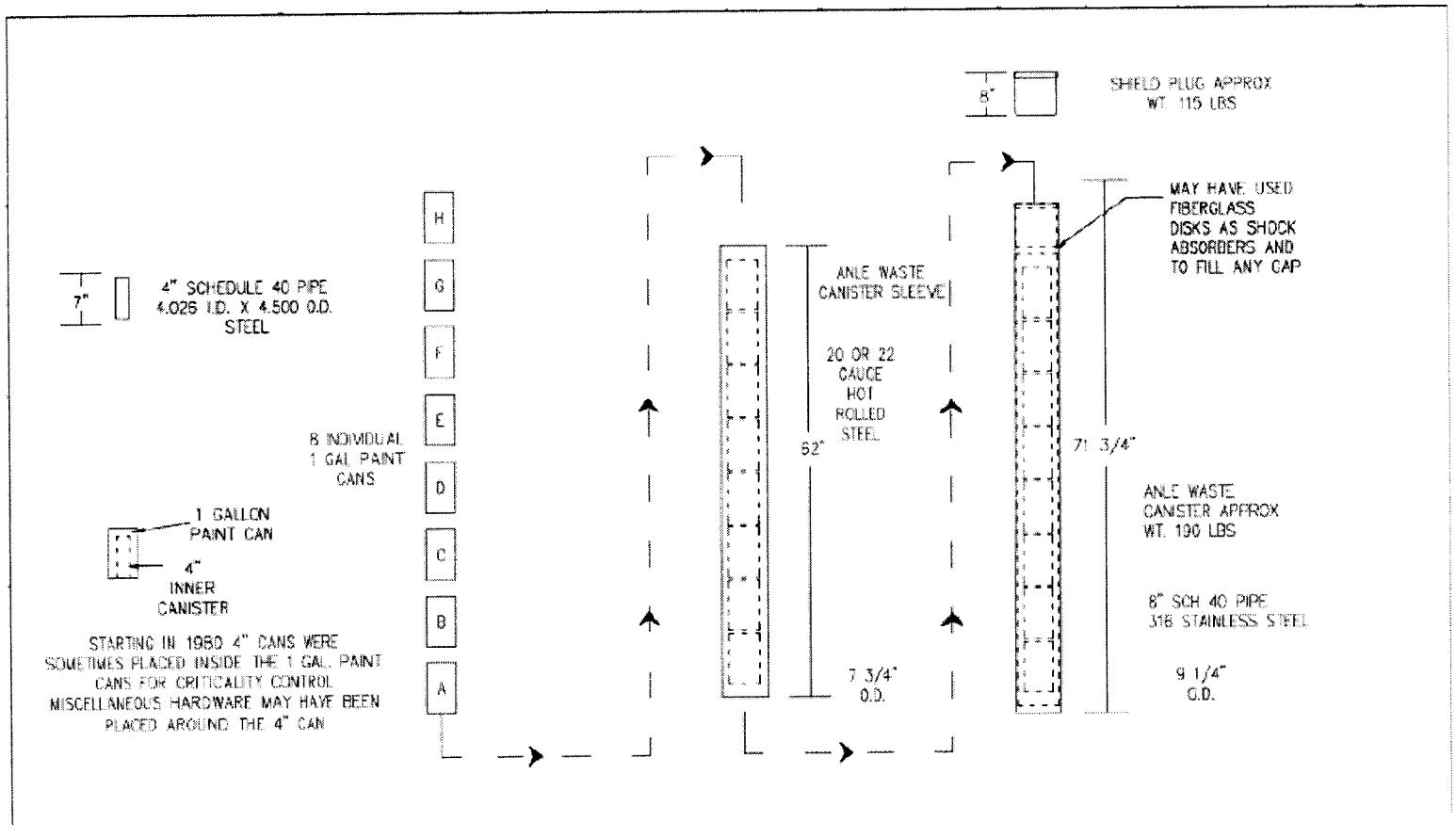
Attachment 8 – AGHCF Waste Management



Attachment 9 – Waste Stream ID-ANLE-S5000 Typical Packaging Configuration



Attachment 10 – ANL-E Canister Packaging Configuration



AK5

Controlled
Copy

CCP-AK-INL-590

Central Characterization Project
Acceptable Knowledge Summary Report
For

Bettis Laboratory
Remote-Handled Transuranic Waste
Stored at Idaho National Laboratory

Waste Stream
IN-ID-BTO-030

Revision 2

April 4, 2012

Irene Quintana
Printed Name

APPROVED FOR USE

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
0	06/07/2011	Initial issue.
1	12/27/2011	Incorporate minor editorial comments from Bettis Laboratory.
2	04/04/2012	Incorporate additional comments from Bettis Laboratory.

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LIST OF ACRONYMS AND ABBREVIATIONS

AEC	U.S. Atomic Energy Commission
AK	acceptable knowledge
ANL	Argonne National Laboratory
ANL-W	Argonne National Laboratory-West
APAC	alkaline permanganate/ammonium citrate solutions
ATR	Advanced Test Reactor
ATWIR	Annual Transuranic Waste Inventory Report
BMPC	Bechtel Marine Propulsion Corporation
BOL	Beginning-of-Life
BRASS	Bettis Remote Accountability and Safeguard System
CCP	Central Characterization Project
CFR	Code of Federal Regulations
CH	contact-handled
Ci/g	curies per gram
COW	Cut-Off-Wheel
DOE	U.S. Department of Energy
DOT	U.S. Department of Transportation
DQO	Data Quality Objective
EOL	End-of-Life
EPA	U.S. Environmental Protection Agency
HEPA	High-Efficiency Particulate Air
HFEF	Hot Fuels Examination Facility
HWN	Hazardous Waste Number
ILTSF	Intermediate Level Transuranic Storage Facility
INL	Idaho National Laboratory
INTEC	Idaho Nuclear Technology and Engineering Center
LWA	*The Waste Isolation Pilot Plant Land Withdrawal Act*
LWBR	Light Water Breeder Reactor
m^3	cubic meters
MEL	Materials Evaluation Laboratory
Met	Metallographic
MFC	Materials and Fuels Complex
mRem/hr	millirem per hour
MSDS	material safety data sheet
nCi/g	nanocuries per gram
NNPP	Naval Nuclear Propulsion Program
NRF	Naval Reactors Facility
NWPA	*Nuclear Waste Policy Act of 1982*
ORNL	Oak Ridge National Laboratory
PCB	polychlorinated biphenyl
PWR	Pressurized Water Reactor
QA	quality assurance
QAO	Quality Assurance Objective

LIST OF ACRONYMS AND ABBREVIATIONS (Continued)

RCRA	Resource Conservation and Recovery Act
R/hr	Rem per hour
RH	remote-handled
RH TRUCON	Remote-Handled Transuranic Waste Content Code
RTR	real-time radiography
RTV	Room Temperature Vulcanizing
rpm	revolutions per minute
RWMC	Radioactive Waste Management Complex
R&D	Research and Development
TCLP	Toxicity Characteristic Leaching Procedure
TRU	transuranic
TSA	Transuranic Storage Area
WCPIP	*Remote-Handled TRU Waste Characterization Program Implementation Plan*
WIPP	Waste Isolation Pilot Plant
WIPP-WAP	*Waste Isolation Pilot Plant Hazardous Waste Facility Permit, Waste Analysis Plan*
WMP	Waste Material Parameter

1.0 EXECUTIVE SUMMARY

This acceptable knowledge (AK) summary report has been prepared for the Central Characterization Project (CCP) for remote-handled (RH) transuranic (TRU) waste generated during the operations in the Materials Evaluation Laboratory (MEL) at the Bettis Laboratory located at West Mifflin, Pennsylvania. The RH TRU wastes generated by these operations were shipped to Idaho National Laboratory (INL) for processing at Argonne National Laboratory-West (ANL-W), which is now called the Materials and Fuels Complex (MFC). The waste was then sent to the Radioactive Waste Management Complex (RWMC) for storage. This report was prepared in accordance with DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan* (WCPIP), Attachment A, Acceptable Knowledge Procedure for Remote-Handled Waste; *Waste Isolation Pilot Plant Hazardous Waste Facility Permit, Waste Analysis Plan* (WIPP-WAP); and CCP-TP-005, *CCP Acceptable Knowledge Documentation* (References 1, 2, and 3).

The CCP is tasked with certification of TRU waste for transportation to and disposal at the Waste Isolation Pilot Plant (WIPP). The CCP is responsible for reviewing, approving, and maintaining this report and supporting AK source documentation as CCP quality assurance (QA) records. The CCP is responsible for AK development in accordance with CCP procedures and will review and approve this AK summary report, and maintain this document as a CCP quality assurance record. The CCP maintains responsibility for all CCP-TP-005 generated forms and records while the site is responsible for maintaining source documents as quality records.

This document, along with the referenced supporting documentation, provides a defensible and auditable record of the AK for the RH TRU debris waste stream resulting from the activities conducted by the Naval Nuclear Propulsion Program (NNPP) at Bettis Laboratory and processing and storage activities at INL. The references and AK sources used to prepare this report are listed in Sections 8.0 and 9.0. The AK sources are referenced within this report by an alphanumeric designator corresponding to a unique CCP Source Document Tracking Number for this waste stream. This report includes information relating to the facility's history, mission, process operations, and waste management practices. Information contained in this report was obtained from numerous sources, including facility safety basis documentation, historical document archives, generator and storage facility waste records and documents, interviews with cognizant personnel, and program/process documents (e.g., plans, procedures, etc.).

This report and supporting source documentation provide the mandatory waste program and waste stream-specific information required by the WIPP-WAP (Reference 2). This report also compiles data relevant to the applicable U.S. Environmental Protection Agency (EPA) requirements and presents the documentation necessary to satisfy each of the Data Quality Objective (DQO) and Quality Assurance Objective (QAO) requirements of the WCPIP for RH TRU waste (Reference 1).

2.0 WASTE STREAM IDENTIFICATION SUMMARY

Site Where TRU Waste Was Generated and Stored:

Generation Location:
Bettis Laboratory
814 Pittsburgh-McKeesport Blvd
P.O. Box 79
West Mifflin, PA 15122-0079
EPA ID # PA0890090004

Waste Trans-Shipment Location:
Hot Fuels Examination Facility (HFEF) in the MFC at INL
EPA ID ID4890008952

Interim Storage Location:
INL RWMC
Transuranic Storage Area (TSA) – Intermediate Level Transuranic Storage Facility (ILTSF)
EPA ID ID4890008952

Current Storage, Characterization, and Certification Location:
Idaho Nuclear Technology and Engineering Center (INTEC)
CPP-1634 and CPP-659
EPA ID ID4890008952

Facility Where TRU Waste Was Generated:

MEL 'N' Building Bettis Laboratory

Facility Mission:

Bettis Laboratory is a U.S. government-owned, contractor-operated research and development (R&D) facility located in West Mifflin, Pennsylvania. It mainly focuses on the design and development of nuclear power for the U.S. Navy. In the past, work was also performed for the commercial nuclear industry.

The laboratory, founded in 1949 and consisting of approximately 207 acres, is operated for the U.S. Department of Energy (DOE) by Bechtel Marine Propulsion Corporation (BMPC).

The laboratory's work is part of the NNPP, which is a joint U.S. Navy-DOE program responsible for the research, design, construction, operation, and maintenance of U.S. nuclear-powered warships.

The laboratory developed Oak Ridge National Laboratory's (ORNL) original design of the pressurized water reactor (PWR) for operational naval use. It built the nuclear propulsion plants for the first U.S. nuclear submarines and surface ships including the USS Nautilus (SSN-571), the USS George Washington (SSBN-598), the USS Long Beach (CGN-9), and the USS Enterprise (CVN-65).

Westinghouse's Nuclear Power Division (the first prime contractor for Bettis Laboratory) adapted the PWR design for commercial use and built the first commercial nuclear power plant in the United States, the Shippingport Power Plant (Reference U201). One of three Bettis laboratory locations is in West Mifflin, a suburb of Pittsburgh, Pennsylvania. Bettis Laboratory's functions can be categorized by four main areas:

- Bettis Laboratory performs fundamental research in many technical disciplines so as to develop better materials, chemistry controlled environments, and components for improved Navy nuclear propulsion technology.
- Bettis Laboratory applies theoretical knowledge, testing, and computational models to the design of new reactor and propulsion systems and components that will be installed on new or existing Navy surface ships and submarines. Newly designed components are built by vendors with Bettis Laboratory oversight and then thoroughly tested.
- Bettis Laboratory supports the existing Navy nuclear fleet by providing technical expertise during new construction, periodic maintenance, and refueling of surface ships and submarines. The Laboratory also trains enlisted and officer propulsion plant operators at its Charleston, South Carolina facility, and operates a one-of-a-kind reactor core examination facility at its Idaho Falls, Idaho location.
- Bettis Laboratory supports the cleanup efforts for the TRU waste from the MEL.

Waste Stream:	IN-ID-BTO-030
Summary Category Group:	S3000 – Homogeneous Solids
Waste Matrix Code Group:	Solidified Homogeneous Solids
Waste Matrix Code:	S3150
Remote-Handled Transuranic Waste Content Code (RH TRUCON):	ID 327
Annual Transuranic Waste Inventory Report (ATWIR) Identification Numbers (Reference 14):	IN-ID-BTO-030

Waste Stream Description:

The Bettis Laboratory program generated a total of 28 containers of RH TRU waste during analysis of post-irradiated nuclear fuel assemblies from Naval Reactor programs, using destructive examination methods. Of those 28 containers, 13 were solidified in IN-41 cans and shipped to INL for storage. The remaining 15 containers have been certified and shipped to WIPP as part of a different waste stream and are not part of this report. Waste in the 13 IN-41 cans was generated in the MEL between 1977 and 1987 (References C117, C127, C206, C207, C210, U212, U213, U217, U224, and U236).

As described in Section 5.4.1, waste stream IN-ID-BTO-030 consists predominantly of inorganic waste materials generated during the sectioning of fuel elements, grinding, mounting and polishing of metallographic specimens. Based on the review of the AK documentation, the waste may contain the following materials (References P201, U224, and U255).

Iron Based Metals/Alloys: IN-41 stainless steel containers

Inorganic Matrix: concreted materials in the IN-41 containers

Materials inside the concrete matrix include the following materials; however, they may not be visible as they are inside the solidified concrete.

Iron Based Metals/Alloys: including ferrous materials made from stainless steel, and iron.

Aluminum Based Metals/Alloys: aluminum items and aluminum oxide polishing compounds

Other Metals: materials include items made from Inconel, lead, and zirconium (Zircaloy) and fuel fines.

Other Inorganic Material: items include resin and silicon carbide grit from the cut-off wheels.

Plastic: plastic bags.

Rubber: waste consists of the rubber binder used in the abrasive cut-off wheel blades and Room Temperature Vulcanizing (RTV) silicon rubber.

Inorganic Matrix: cement

Water used as the cutting wheel coolant was allowed to air dry. No liquids were placed in the waste (References U224 and U255).

As described in Section 4.2.2, the inorganic waste from the operations in the MEL that generated waste stream IN-ID-BTO-030 was placed into IN-41 containers. At ANL-W the IN-41 containers were placed in six foot HFEF-5 containers for storage at the RWMC. The HFEF-5 containers were retrieved from storage and sent to INTEC for repackaging and characterization. The IN-41 containers will be placed into three 55-gallon drums for shipment to WIPP (Reference P204).

IN-41 containers are stainless steel with an overall length of 15.88 inches. They have an internal diameter of 4.5 inches and a wall thickness of 0.25 inches. The empty weight of the IN-41 container is 19 pounds. The loaded weight is approximately 30 pounds (References P205, P206, and U221).

The containers in this waste stream have been and will continue to be managed as non-hazardous waste (waste not regulated by Resource Conservation and Recovery Act [RCRA]) (References P131 and U224). The INL manages the waste in accordance with the hazardous waste designation determined by the waste generator. The WIPP-WAP requires the assignment of EPA Hazardous Waste Numbers (HWNs) to TRU waste streams that lack analytical evidence demonstrating that these constituents would not exceed regulatory thresholds. Therefore, the appropriate HWNs will be assigned by INL prior to shipment to WIPP to comply with this requirement. Additionally, AK documentation indicates the use of regulated solvents in waste generating processes and these spent solvents may contaminate the waste. For these reasons, the containers in this waste stream will be assigned the following EPA HWNs: D004, D005, D006, D007, D008, D010, D011, D039, D040, and F002. Refer to Section 5.4.2 for the waste stream chemical content evaluation.

No prohibited items should be in the waste stream. Any residual liquids were absorbed by the cement mixture and solidified. There are no un-punctured aerosol cans or internal containers.

Waste stream IN-ID-BTO-030 meets the WIPP-WAP (Reference 2) and WCPIP (Reference 1) waste stream definition of waste material which is similar in material, physical form, hazardous constituents, and radiological properties generated from a single process or activity.

3.0 ACCEPTABLE KNOWLEDGE DATA AND INFORMATION

RH TRU waste destined for disposal at WIPP must be characterized prior to shipment. Knowledge of the waste materials and processes that generate and control the waste is required to provide complete documentation of the characteristics of each waste stream. The AK characterization documented herein complies with the requirements of the WIPP-WAP (Reference 2) and the WCPIP (Reference 1) and was developed in accordance with CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan* (Reference 4). The WCPIP (Reference 1) identifies waste characterization requirements and methods to satisfy requirements in 40 Code of Federal Regulations (CFR) Part 191, *Environmental Radiation Protection Standards for Management and Disposal of Spent Nuclear Fuel, High-Level and Transuranic Radioactive Wastes* (Reference 5); 40 CFR Part 194, *Criteria for the Certification and Re-Certification of the Waste Isolation Pilot Plant's Compliance with the 40 CFR Part 191 Disposal Regulations* (Reference 6); *Criteria for the Certification and Re-Certification of the Waste Isolation Pilot Plant's Compliance with the 40 CFR Part 191 Disposal Regulations: Certification Decision* (Reference 7); and Public Law 102-579, *The Waste Isolation Pilot Plant Land Withdrawal Act* (LWA) (Reference 8).

The sources of AK were collected from historical files and personnel interviews maintained at Bettis Laboratory and at INL. This formal AK program included the implementation of an AK procedure and several hundred documents were collected and reviewed. Relevant documentation sources were incorporated into the AK record and interviews were conducted to supplement the data collected. AK documents were then developed that comprehensively described available historical knowledge, records, and database information for the TRU waste that was generated by Bettis Laboratory. These documents and others have been collected and reviewed in accordance with CCP-TP-005 to prepare this document (Reference 3).

The references and AK sources used to prepare this report are listed in Sections 8.0 and 9.0, respectively. The AK source documents referenced within this report by alphanumeric designations (e.g., Cxxx, DRxxx, Pxxx, and Uxxx) correspond to the CCP Source Document Tracking Number using the following convention:

- C – Correspondence (e.g., memoranda, letters, e-mail, interviews)
- DR – AK Discrepancy Reports
- P – Published Sources (e.g., reports, controlled procedures)
- U – Unpublished Data (e.g., databases, analytical data, draft reports)

4.0 PROGRAM INFORMATION

This section provides a description of the facility and operations associated with the generation of the Bettis Laboratory RH TRU waste from the MEL and the storage at INL, including a history of the MEL operations, a summary of the mission, a discussion of the operations associated with the generation of RH TRU waste, and a description of the Bettis Laboratory and INL TRU waste management programs. In addition, a description of the facilities, defense determination, and descriptions of waste storage locations are presented in this section.

4.1 Facility Location, Description, History Mission, and Defense Waste Determination

4.1.1 Facility Location

Bettis Laboratory

Bettis Laboratory consists of approximately 207 acres located in West Mifflin, Pennsylvania, approximately eight miles southeast of downtown Pittsburgh. Bettis Laboratory is located in Allegheny County. A map showing the location of Bettis Laboratory is in Attachment 1, Bettis Laboratory Site Map (References P102 and U266).

INL

The INL covers 890 square miles (569,135 acres) of land in the eastern Snake River Plain in southeastern Idaho. It is located approximately 34 miles west of Idaho Falls, Idaho. INL extends into parts of Butte, Jefferson, Bingham, Clark and Bonneville counties in Idaho. A map showing the location of INL is in Attachment 2, INL Site Map (References P016 and P025).

MFC

Formerly known as ANL-W, the MFC mission is to conduct advanced nuclear energy technology R&D. One of the facilities in the MFC is the HFEF. The HFEF, Building 785, performs a wide range of remote operations and examinations in one of the most capable modern nuclear hot cells in the country. The MFC is located on the eastern side of INL as shown on the map in Attachment 2 (References C132 and C133).

RWMC and ILTSF Facilities

The RWMC is located approximately 51 miles west of Idaho Falls, Idaho, on approximately 144 acres in the southwest corner of INL. The RWMC was established in 1952 as a controlled area for the burial of solid radioactive wastes generated from INL operations. In 1954, the area was designated as a solid TRU waste disposal site and remained so until 1970, when the TSA, a 55-acre area within the RWMC was established. The TSA was designated for retrievable storage of contact-handled (CH)

TRU waste. A map showing the location of RWMC is located in Attachment 3, RWMC Map (Reference P025).

In November 1976, the ILTSF was established for the storage of RH TRU waste within the TSA. The ILTSF stored TRU waste with direct radiation fields that necessitate remote handling to limit worker exposure levels. The IN-41 cans from this waste stream were stored in the ILTSF for approximately 20 years until they were transferred to INTEC for repackaging and characterization. Attachment 4, TSA and ILTSF Site Map, shows a map of the TSA and ILTSF (Reference P025).

INTEC

INTEC is located in the southwestern portion of the INL, three miles north of the Central Facilities Area. The HFEF-5 containers will be opened to remove the IN-41 canisters for sampling, repackaging final characterization and certification in Building 659, Building 666 or Building 1639. Attachment 2 shows the location of INTEC.

4.1.2 Bettis Laboratory Description

Bettis Laboratory is an R&D facility solely dedicated to support the NNPP. Bettis Laboratory is owned by the DOE and is operated by BMPC. Operation at Bettis Laboratory began in 1949. Bettis Laboratory also played a key role in the development of technology for the building of civilian nuclear power stations. Bettis Laboratory designed the nation's first full-scale nuclear power plant used exclusively for civilian needs, Shippingport, in a cooperative effort with Duquesne Light Company and the U.S. Atomic Energy Commission (AEC). The first civilian nuclear reactor delivered power to the commercial grid in December 1957. Bettis Laboratory also designed and built a Light Water Breeder Reactor (LWBR) to refuel Shippingport in 1977. This unique reactor produced more fissile fuel than it consumed. The LWBR core operated in Shippingport from 1977 to 1982.

The MEL at Bettis Laboratory was designed to provide the capability to examine and test highly irradiated or highly contaminated reactor materials to obtain engineering data. The data was used to support the development of new fuels, cladding, and structural materials (References P102, P104, U201, U256, and U266).

4.1.3 MEL History and Mission

The MEL, located at the east end of Wing-5-Right in the N-Building, was designed for examining and testing highly irradiated, highly contaminated materials. All examination work has been transferred to other facilities. Irradiated nuclear fuel operations now are solely for the purpose of packaging, storing, accounting for, and shipping material from the facility (Reference P106).

The facility is equipped with specially designed small shielded rooms, called "cells." The examination of specimens was performed in shielded cells consisting of

11 high-level general purpose shielded cells, seven smaller shielded steel metallographic cells, and two free standing steel shielded cells. The general purpose cells and the metallographic cells are arranged in three parallel cell banks: the Central, the Metallographic (Met), and the East. In-cell operations were conducted from a central room for each cell bank and were observed through periscopes and lead glass shielded windows. All cells are maintained at less than external air pressures for contamination control. Attachment 5, Floor Plan of MEL First Floor, and Attachment 6, Floor Plan of MEL Second Floor, depict floor plans of the MEL.

The original structure of the MEL was constructed in 1950. Central Cell Bank cells 6, 7, and 8 were added in 1956. The addition of Central cells 9 and 10 and the entire Met Cell Bank took place in 1959. The most recent addition, the East Cell Bank, was constructed in 1961.

The Central Cell Bank has five cells, and each has three-foot thick high density concrete walls, one three-foot thick leaded glass window, and the capacity for two master-slave manipulators. The Central Cell Bank inside dimensions is six or eight feet wide by five feet deep by 12 feet high.

The Met Cell Bank consists of seven shielded cells and two free standing cells used to perform metallographic examinations. These cells are smaller than the other cell banks and the walls are constructed of steel and lead.

The East Cell Bank comprises six general purpose shielded cells. Each cell has three-foot thick high density concrete walls, one three-foot thick leaded glass window and the capacity for two master-slave manipulators except cell 11 which has two leaded glass windows and the capacity for four master-slave manipulators. The East Cell Bank internal dimensions are six or eight feet wide, six feet deep and 12 feet high (References P103, P106, U243, and U256).

4.1.4 Defense Waste Determination

WIPP requires generator sites to use AK to document that RH TRU waste streams to be disposed at WIPP meet the definition of RH TRU defense waste. RH TRU waste is eligible for disposal at WIPP if it has been generated in whole or in part by one of the atomic energy defense activities listed in 42 U.S.C 10101, *Nuclear Waste Policy Act of 1982* (NWPA) (Reference 9). Based on the review of AK, there is sufficient evidence to demonstrate that RH TRU wastes generated in the MEL operations are contaminated with materials from atomic energy defense activities associated with naval reactors development and defense R&D activities. The RH TRU waste in this waste stream was generated during the examination of fuel elements from primarily naval reactor fuels for evaluation of fuel performance. The fuel elements were from nuclear-powered warships, prototype plants, irradiated test specimens, and the Shippingport Atomic Power Station.

The Shippingport Atomic Power Station was the nation's first commercial power reactor. Initial operation was in December 1957. Shippingport was a PWR. The first two reactor cores were "seed and blanket" cores. The seed assemblies had highly enriched uranium, and the blanket assemblies had natural uranium. One of the chief reasons for examining the seed and blanket fuel was to determine the accuracy of the calculations of the number of fissions occurring within various parts of the core (References P102 and P104).

Information from the examination of the various fuel types has been used to improve the capabilities of America's nuclear-powered warships. One result is that the endurance of naval nuclear propulsion plants has been increased from two years for the first core in USS Nautilus (SSN 571) to the entire 30+ year lifetime of the submarines under construction today. Most importantly, this research has dramatically improved the war fighting capabilities of America's nuclear-powered warships (Reference U201).

4.2 RH TRU Waste Management

As a small quantity site, Bettis Laboratory did not plan to develop an approved WIPP certification program when this waste was shipped to INL, but instead will use the certification process at INL. Waste was certified to meet the INL TRU Waste Acceptance Criteria (References C122, C214, C302, and P201).

Each waste container was sealed with a paper seal. Two individuals are required to apply or break a seal. The seals are recorded in the Bettis Remote Accountability and Safeguard System (BRASS) and a two person check of the seals is required. This ensures that nothing was added to the waste containers after packaging (References P114, P130, P131 and P133).

No segregation was performed based on the source of the fuel specimens (Reference P125).

At ANL-W, the waste was removed from the shipping cask and a 1/8-inch hole was drilled in the top of the IN-41 can. The IN-41 cans were then placed in the HFEF canisters for storage in the ILTSF (References P206, U200, and U301).

The HFEF canisters have been retrieved from the ILTSF and sent to INTEC for characterization and repackaging. The IN-41 cans will be removed from the HFEF canisters and sampled as necessary. Up to five IN-41 cans will be packaged in a 30-gallon drum. The 30-gallon drum will be overpacked into a 55-gallon drum. Prior to shipment to WIPP the Waste will undergo real-time radiography (RTR) to certify the waste.

4.2.1 Types and Quantity of TRU Waste Generated

The MEL operations generated a total of 28 containers of RH TRU waste. Of those 28 containers, 13 were solidified in IN-41 cans and shipped to INL for storage. The remaining 15 containers remained at Bettis Laboratory and were a separate waste stream CCP-AK-BAPL-500, *Central Characterization Project Acceptable Knowledge Summary Report For Bettis Laboratory Remote-Handled Transuranic Debris Waste: Waste Stream BT-T001*(Reference 18). Waste stream IN-ID-BTO-030 consists of the 13 solidified IN-41 containers stored at INL only. Each of the IN-41 cans have an internal volume of 3.66 liters. Attachment 7, IN-41 Container, is a drawing of the IN-41 container (References C123, C215, and P204).

Waste stream IN-ID-BTO-030 consists of Summary Category Group S3000 homogeneous materials generated during the MEL operations. This waste stream consists predominantly of inorganic metal debris solidified in cement (References P201, U221, and U276).

Based on CCP review of the container documentation, waste stream IN-ID-BTO-030 meets the WIPP-WAP (Reference 2) and WCPIP (Reference 1) waste stream definition of waste material which is similar in material, physical form, hazardous constituents, and radiological properties generated from a single process or activity.

4.2.2 Description of Waste Generating Processes

Waste generating operations in the MEL occurred in three cell banks, Central, Met, and East Cell Banks. The East Cell Bank was where the cut-off wheel occurred. Most of the waste was from the East Cell Bank. The Central Cell Bank was where photographic and tensile tests were performed. The Central Cell Bank generated very little TRU waste. The Met Cell Bank housed the specimen etching, metallographic mount polishing, and grinding equipment (References P105 and U264).

The major processes used in the MEL that generated waste are listed in the flow chart in Attachment 8, MEL TRU Waste Flow Diagram (References U211, U224, U238, and U243).

4.2.2.1 Fuel Element Sectioning Process Description

The slow speed abrasive cut-off wheel was used for sectioning specimens for destructive tests such as metallography, density, chemical analysis, and/or hydrogen analysis (References P112 and P113).

Sectioning of the fuel elements requires a method that minimizes air borne contaminations to reduce filter loads and contain contamination. A slow speed, wet abrasive cut-off wheel was used for that purpose. The cut-off wheels were composite blades with no reinforcement. They were made of silicon carbide grit and rubber bonding particles. The lower portion of the cutting wheel was immersed in water. The

water served to cool the wheel and the specimen. The water also restricted the spread of contamination by entrapping small particles in the water. The water was allowed to dry completely before the waste was placed into the waste containers. The abrasive wheel had to be changed regularly because it was designed to wear as it cut the material (References P112, P113, and U264).

The slow speed abrasive cut-off wheel was replaced by a diamond edge saw blade. The diamond edge saw blade provides a more precise cut with less wheel wear. The diamond edge saw blade was also used for cutting specimens into smaller sections or to cut specimens out of met mounts for further examination (References P113 and U237).

4.2.2.2 Lathe Operations

A small lathe was used to part the Zircaloy tubing. The test rod was parted to remove samples for subsequent analysis. The fuel rod assembly rotating speed was 30 revolutions per minute (rpm) (Reference P110).

4.2.2.3 Metallographic Specimen Process

Metallographic specimens were mounted, ground, polished, etched, and examined for microstructure, hydriding, corrosion attack, and cracking. Photomicrographs were obtained of the structure and any abnormalities. Hardness testing, grain size and corrosion and/or crud thickness measurements were also obtained. Attachment 9, Flow Diagram for Met Mount Operations, is a flow chart of the metallographic process (Reference P107).

Pressure mounting specimens were used to prevent loss of fissionable material during subsequent handling and processing operations. The process involved placing the specimen in a pre-formed metal mold and covering with epoxy resin (Hysol). After curing, the pressure mounted specimens were removed from the mounting fixture and were then ready for examination (Reference P108).

Metallographic mounts were produced for the evaluation of the specimen surfaces. It involved ultrasonic cleaning, mounting, grinding, polishing and etching the specimen (References P120 and U209).

The grinding process was performed by placing the mounted specimens into a specimen holder ring with other specimens and dummy specimens. Grinding is performed on a grinding wheel covered by a grinding paper disk wetted with water (Reference U209).

The polishing process was performed utilizing an Automet machine. Polishing of the specimens was accomplished by placing the specimen in contact with a cloth material on the polishing wheel. During the process, Linde "B" (>93% powdered aluminum oxide) mixed with water, was deposited on the cloth (References C211 and U209).

The etching process used several different types of acids to etch the specimen. The acids included lactic, nitric, and hydrofluoric. The etching process was accomplished by dipping the specimen into the acid solution and swabbing the surface with a cotton ball. Etching time was approximately 30 seconds per etch. All etchant solutions were neutralized after use. The volume of each etchant solution was 100 milliliters. Unused and excess etchant solution was solidified with cement and disposed of separately from this waste stream (References C211 and P132).

When the met mount was to be scrapped, it was split using the splitter and hydraulic pump. As much epoxy as possible was removed. The split specimen was placed in a storage can. The epoxy that was removed and the met mounting rings were disposed of separately (Reference P133).

4.2.2.4 Decrudding/Descaling of Irradiation Samples

All foreign materials that were deposited on the specimen surface were removed using alkaline permanganate/ammonium citrate (APAC) solutions and other chemicals. Excess APAC solution was not placed into waste stream IN-ID-BTO-030. The foreign materials were removed for visual and dimensional examinations (References P109 and P121).

4.2.2.5 Dye Penetrant and Fluorescent Penetrant Inspections

The dye and fluorescent penetrant inspections were used to check irradiated specimens for cracks, pits or other surface deformities. A commercial dye penetrant was placed on the surface of the specimen and any flaw would appear as red. The flaw indications were determined from the rate and extent of bleeding as well as from the richness of the red colored flaw patterns on the white developer background.

The fluorescent penetrant inspection is similar but a different penetrant was used and the surface was inspected using an ultraviolet light to see the flaws in the specimen (References P123 and P124).

4.2.2.6 Solidifying Waste and Packaging for Shipment to ANL-W

To immobilize the respirable fines, the waste was solidified with Portland cement and water. The pH of the water and cement mixture was adjusted, as needed, to between 7 and 11. The dry waste material was poured from the Dolly Tubes and paint cans where it was stored into the IN-41 container. Dolly Tubes are thin walled aluminum containers approximately 1-inch in diameter. The cement was mixed with water and poured into the IN-41 container. The waste and cement mixture was mixed thoroughly until it was a homogeneous mixture. The lid was placed onto the IN-41 container. The mixture did not exceed a level higher than one inch below the threads in the IN-41 container. The IN-41 cans were placed into NRBK-41 shipping casks for shipment to ANL-W (References C116, C311, DR006, P132, P204, P205, U221, and U264).

4.2.2.7 Drilling of IN Can and Packaging into HFEF Canisters

At ANL-W, the IN-41 was removed from the NRBK-41 shipping casks. The cans were placed into a drill press and a 1/8-inch hole was drilled through the IN-41 container cap to vent the container (References P206, U200, and U301).

Ten vented IN-41 cans were then placed into a special HFEF carbon steel inner-waste can. The inner-waste can was modified by replacing the standard neoprene gasket with a gasket made of a special permeable material. The permeable gasket was the only modification to the standard HFEF inner can. The ten IN-41 cans were loaded in tiers. Three cans were loaded followed by a circular flat plate. Three more IN-41 cans were placed in the second tier followed by another circular flat plate. The third tier again consisted of three IN-41 cans and another circular flat plate. The tenth IN-41 container was then placed on top of the third tier. The second shipment to RWMC only contained three IN-41 cans so only three waste cans were placed in the second HFEF container (References P206 and U301).

The loaded inner-waste can was placed into a six-foot stainless steel HFEF-5 waste cask. The standard stainless steel HFEF-5 waste cask has a lid that has been vented by the addition of a carbon composite material high-efficiency particulate air (HEPA) filter. The HFEF-5 waste cask was shipped to the RWMC for storage in the ILTSF in April and May of 1988 (References C215, C303, P206, U200, U301, and U302).

5.0 WASTE STREAM INFORMATION

This section presents the waste stream information required by the WIPP-WAP and the WCPIP for waste stream IN-ID-BTO-030 (References 1 and 2). The area of generation, waste stream volume, period of generation, waste packaging, and the physical, chemical, and radiological composition of the waste stream are described.

5.1 Area and Building of Generation

Waste stream IN-ID-BTO-030 consists of RH TRU homogeneous solids from the operations in the MEL. Container specific documentation has been reviewed for each container to verify the composition and origin of the waste stream inventory. It has been determined that every container included in waste stream IN-ID-BTO-030 was generated from the MEL processes and meets the WIPP-WAP (Reference 2) and the WCPIP (Reference 1) definition of a waste stream. The WIPP-WAP defines a waste stream as waste materials that have common physical form, that contain similar hazardous constituents, and that are generated from a single process or activity. The WCPIP definition also includes that the materials in a waste stream must have similar radiological properties.

5.2 Waste Stream Volume and Period of Generation

Waste stream IN-ID-BTO-030 consists of 13 IN-41 containers (0.04758 cubic meters [m^3]). They were generated between June 1977 and July 1987. The IN-41 cans were placed into two six-foot HFEF-5 canisters. The IN-41 cans will be removed from the HFEF-5 canisters and packaged into three 30-gallon drums. The 30-gallon drums will be packaged into 55-gallon drums for shipment to WIPP, increasing the volume to 0.624 m^3 (References C127, C206, C207, C208, C209, C210, U212, U213, U217, and U236).

5.3 Waste Generating Activities

Waste stream IN-ID-BTO-030 was generated during operations in the MEL. The operations involved evaluation of post-irradiation nuclear fuel assemblies from Naval Reactor programs for analysis of the fuel properties. Processes were described in Section 4.2.2.

5.4 Types of Waste Generated

This section describes the process inputs, Waste Matrix Code assignment, Waste Material Parameter (WMP) weight estimates, radionuclide contaminants, and RCRA hazardous waste determinations for waste stream IN-ID-BTO-030. The waste stream is characterized based on knowledge of the materials, knowledge of the processes generating the waste, and physical descriptions of the waste.

5.4.1 Material Input Related to Physical Form

The Bettis Laboratory program generated a total of 28 containers of inorganic RH TRU waste during analysis of post-irradiated nuclear fuel assemblies from Naval Reactor programs, using destructive examination methods. Thirteen containers of RH TRU waste were shipped to INL for storage. Wastes were generated in the MEL between 1977 and 1987 (References C117, C208, C209, U213, U217, U224, and U236).

The processes used in the MEL that generated waste are listed in the flow chart in Attachment 8 (References U211, U224, and U238).

Waste stream IN-ID-BTO-030 consists predominantly of inorganic homogeneous waste materials generated during the sectioning of fuel elements, grinding, mounting and polishing of metallographic specimens. Based on the review of the AK documentation, the waste may contain the following materials (References P201, U224, and U255).

Iron Based Metals/Alloys: IN-41 stainless steel containers.

Inorganic Matrix: concreted materials in the IN-41 containers.

Materials inside the concrete matrix include the following materials; however, they will not be visible as they are inside the solidified concrete.

Iron Based Metals/Alloys: including ferrous materials made from stainless steel, and iron.

Aluminum Based Metals/Alloys: aluminum items and aluminum oxide polishing compounds.

Other Metals: materials include items made from Inconel, lead, and zirconium (Zircaloy) and fuel fines.

Other Inorganic Material: items include resin and silicon carbide grit from the cut-off wheels.

Plastic: plastic bags.

Rubber: waste consists of the rubber binder used in the abrasive cut-off wheel blades and RTV silicon rubber.

Inorganic Matrix: cement

Water used as the cutting wheel coolant was allowed to air dry. No liquids were placed in the waste (References U224 and U255).

5.4.1.1 Waste Matrix Code

Based on the evaluation of the materials contained in this waste stream and MEL waste management practices, the waste stream is comprised of predominately metal items solidified in cement. Therefore, Waste Matrix Code S3150, Solidified Homogeneous Solids, is assigned to waste stream IN-ID-BTO-030 (References P201 and U276).

5.4.1.2 Waste Material Parameters

Materials: stainless steel IN-41 container, fuel fines, Portland cement, sandpaper grit, silicon carbide, met mount material, resin, plastic bags (References P201, U221, and U255).

The WMPs for waste stream IN-ID-BTO-030 were estimated based on the descriptions of waste in the Waste Profile Sheet prepared by ANL-W when shipping the waste to RWMC. This waste stream is greater than 50 percent by volume material that meets the criteria for homogeneous material (References P201 and U276).

Waste items were categorized into one or more of the following WMPs: iron-based metals/alloys, aluminum-based metals/alloys, other metals, other inorganic materials, cellulosics, rubber, plastics (waste materials), inorganic matrix, and organic matrix. The WMP volumes were estimated for the IN cans based on the descriptions of the waste from the repackaging performed at ANL-W. Volumes were calculated based on weights listed for each waste parameter. The calculations conclude that the relative waste weight percentages for inorganic waste materials and organic waste materials for waste stream IN-ID-BTO-030 are 99.97 percent and 0.03 percent, respectively. The results of the assessment are presented in Table 1, Waste Stream IN-ID-BTO-030 Waste Material Parameter Estimates (References P201 and U276).

The evaluation of data for the WMP weights for waste stream IN-ID-BTO-030 is documented in a memorandum as required by CCP-TP-005 (Reference 3).

Table 1. Waste Stream IN-ID-BTO-030 Waste Material Parameter Estimates

Waste Material Parameter	Avg. Weight Percent	Weight Percent Range
Iron-based Metals/Alloys	31.718 %	30 - 35 %
Aluminum-based Metals/Alloys	0 %	0 – 0 %
Other Metals	47.225 %	40 – 48 %
Other Inorganic Materials	1.824 %	0 – 4 %
Cellulosics	0 %	0 – 0 %
Rubber	0.016 %	0 – 0.1 %
Plastic (waste materials)	0.017 %	0 – 0.1 %
Organic Matrix	0 %	0 – 0 %
Inorganic Matrix	19.200 %	19 – 38 %
Total Organic Waste Avg.	**0.033 %**	
Total Inorganic Waste Avg.	**99.967 %**	
Est. Average Gross Drum Weight	**210.1 lb**	
Steel Packaging (55-gal. drum)	**60.1 lb**	
Plastic Packaging	**28.9 lb**	
Average Waste Weight	**150 lb**	

5.4.2 Chemical Content Identification – Hazardous Constituents

The following sections describe the characterization rationale for assignment of EPA HWNs to waste stream IN-ID-BTO-030. The EPA HWNs assigned to this waste stream are summarized in Table 2, Waste Stream IN-ID-BTO-030 Hazardous Waste Characterization Summary.

Table 2. Waste Stream IN-ID-BTO-030 Hazardous Waste Characterization Summary

EPA Hazardous Waste Number	Constituent
Toxicity Characteristic Metals	
D004	Arsenic
D005	Barium
D006	Cadmium
D007	Chromium
D008	Lead
D010	Selenium
D011	Silver
Toxicity Characteristic Organics	
D039	Tetrachloroethylene (Perc)
D040	Trichloroethylene
F Listed Organic Solvents	
F002	1, 1, 1 – Trichloroethane, Trichlorotrifluoroethane

The INL manages the waste in accordance with the hazardous waste designation determined by the waste generator. The WIPP-WAP requires the assignment of EPA HWNs to TRU waste streams that lack analytical evidence demonstrating that these constituents would not exceed regulatory thresholds. Therefore, the appropriate HWN's will be assigned by INL prior to shipment to WIPP to comply with this requirement. The HWNs assignments have been applied on a waste stream basis; individual containers will not contain all of the hazardous materials listed for the waste stream as a whole (Reference DR005).

To assign EPA HWNs, AK sources, including procedures, personnel interviews, previous AK reports, waste stream profiles, container packaging and shipping documentation, and material safety data sheet (MSDS) information for commercial products noted in the AK record, were reviewed. This information was used to determine potential waste material inputs and possible chemical contaminants associated with the Bettis Laboratory program and historic MEL operations. A comprehensive list of materials and chemicals identified during this assessment is provided in Table 3, Waste Stream IN-ID-BTO-030 Material and Chemical Inputs. The toxic characteristic for metals HWNs were assigned in accordance with RCRA to all of the containers in the waste stream for compounds used in the MEL due to the lack of analytical evidence quantifying the concentration of RCRA toxic contaminants in the waste matrix (References C031, C125, C128, C211, DR005, U214, U224, U264, and U265).

Table 3. Waste Stream IN-ID-BTO-030 Material and Chemical Inputs

Chemical/Material	Use/Description/Location	AK Source	EPA HWNs
1,1,1-Trichloroethane	Solvents used in the cells to clean specimens	C125, C128	F002
1, 2- Epoxyethylbenzene	Used in making replicas	P136	NA
Acetic Acid	Used to neutralize basic solutions	C126	NA
Acetone	Solvents used in the cells to clean specimens	C125, C128, U216, U225, U255, U264,	NA[1]
Alconox (detergent)	Cleaning of cells and equipment	C129, P120, U265	NA
Alkaline permanganate	APAC #1, Used to decrud specimens	C134, P109, P121	NA
Ammonium Citrate	Etching solution APAC # 2	C126, C134, P109, P121	NA
Ammonium Hydroxide	Used to descale specimens	P109, P121	NA
Amorphous Silica	Component of white grease used as electric insulating compound, valve lubricant and sealant	U265	NA
APAC Solution	Cleaning of specimens	C126, C129, U239, U264	NA
Arsenic	Metal found in the fuel	C031	D004
Barium	Metal found in the fuel	C031	D005
Butanol	General cleaning	C134	NA
Buehler-Ultramet Sonic Cleaning Solution #75-5000-032	Wetting agent used in ultra-sonic cleaning	U209, U265	NA
Buehler-Diamond Suspension	Used in the rough polishing of specimens	P107, U209, U265	NA
Buehler Metadi Fluid	Used in the rough polishing of specimens	U209, U265	NA
Cadmium	Metal found in the fuel	C031, P201	D006
Calcium Hydroxide	Used in Acid Dissolution Tests	C134	NA
Ceralay	Included on chemical list	C134, U239	NA
Chromium	A contaminant from the Processing of specimens, Metal found in the fuel	C125, C211, C309, P201, U303, U304, U225, U249	D007
Citric Acid	Cleaning of specimens	C126	NA
Cupric Chloride	Etching solution (Kallings etch)	C126	NA
Deionized water	Used to make solution to descale specimens	P121, U225	NA
Denatured Alcohol	Used to clean specimens	P123, P136, U225	NA
Diamonium Hydrogen Citrate $(NH_4)_2\ HC_6H_5O_7$	Etching solution APAC # 2	C126, P121	NA
Dimethyl, Methyl Silicon Resin	Component of white grease used as electric insulating compound, valve lubricant and sealant	U265	NA
Dimethyl Siloxane	Component of white grease used as electric insulating compound, valve lubricant and sealant	U265	NA
Dow Corning Silicon Grease (DC4/DC11)	Lubricant used on IN can o-ring	P136, P205	NA
Dow Corning Silicon Rubber	Included on chemical list	U239	NA
Epo-Met	Process material	C310	NA
Ethyl Alcohol	Used in etching solution (Kallings etch)	C126, U255	NA
Ethylenediaminetetraacetic acid (EDTA)	Used to descale specimens	P109, P121	NA
Freon (chlorofluoroethane)	Included on chemical list	U239	NA

Table 3. Waste Stream IN-ID-BTO-030 Material and Chemical Inputs (Continued)

Chemical/Material	Use/Description/Location	AK Source	EPA HWNs
Fryquel Hydraulic Fluid (Triphenyl Phosphates)	Hydraulic fluid	C125, C129	NA
Hydrazine	Used to make hydrazine versenate (HV)	P109, P121	NA
Hydrazine Versenate (HV)	Used to descale specimens	C134, P109, P121	NA
Hydrochloric Acid	Used to neutralize basic solutions, used in etching solutions	C126, U225, U239	NA
Hydrofluoric Acid	Used in etching process and final polishing of met mounts	C134, C211, P107, U209, U229, U239, U264	NA
Hydrogen Peroxide	Used in etching process	C134, C211	NA
Hysol (Petrolatum)	Metallographic mounts	C212, P201, P107, U209, U232	NA
Isopropyl Alcohol (2-Propanol)	Solvents used in the cells to clean specimens	C125, C128, C134, P107, P124, U216, U255, U264	NA
Lactic Acid	Used in etching process	C211	NA
Lead	Component of mineral oil, metal found in the fuel	C031, C125, C129, C309, P201	D008
Linde B Polishing Compound (>93% powdered aluminum oxide)	Polishing specimens	C211, C125, P107 U209	NA
Marktex tech-Pen, (Model K, Yellow)	Marker used in descaling process	P109, P121	NA
Met-L-Chek Flaw Finder, Penetrant, Type VP-31	Used for dye penetrant testing surfaces	P123, U265	NA
Met-L-Chek Flaw Finder, Remover, Type E-59	Used for dye penetrant testing surfaces	P123, U265	NA
Met-L-Chek Flaw Finder, Developer, Type D-70	Used for dye penetrant testing surfaces	P123, U265	NA
Mineral Oil (White, NF)	Leaked from Cell windows	C125, C129, C134	NA
Methanol	Solvents used in the cells to clean specimens	C125, C128,C134, U255	NA
Monoammoniumcitrate Hydroxyethylenediamine Trichloroacetic Acid (MAC/HEDTA)	Used to descale specimens	C134, P109, P121	NA
n-butanol (n-butyl alcohol)	Solvents used in the cells to clean specimens	C125, C128	NA
Nitric Acid	Used in etching process and descaling also in the final polishing of met mounts	C134, C211, P109, P121, U209, U224, U229	NA
Orthophosphoric Acid	Etching solution (phos etch)	C126	NA
Oxalic Acid	Used to descale specimens	C134, P109, P121, U224, U235	NA
Oxylene	Used in the etching process, general cleaning	C134, U216, U239	NA
Perc (Tetrachloroethylene)	Process Chemical	C134, U239, U264	F002[3]/D039
Phenol-formaldehyde	Met mount material	U255	NA
Phosphoric Acid	Used to etch specimen	U225	NA
Poly Vinyl Chloride	Process material	C310	NA
Portland Cement	Immobilizing material	C310, C311, P201	NA

Table 3. Waste Stream IN-ID-BTO-030 Material and Chemical Inputs (Continued)

Chemical/Material	Use/Description/Location	AK Source	EPA HWNs
Potassium Permanganate	Etching solution APAC # 1	C126, P109, P121	NA
Poly(Methyl Methacrylte)	Met mount material	U255	NA
Rhodine 30	Used in APAC #2 to prevent rusting	P121	NA
RTV	Manufacturing molds	C134, P107, P136	NA
Selenium	Metal found in the fuel	C031	D010
Silver	Metal found in the fuel, and diamond edged saw blade	C031	D011
Sodium Carbonate	Used to neutralize acids	C125, C126, P132	NA
Sodium Hydroxide	Etching solution APAC # 1	C126, C134, P109, P121	NA
Sodium thiosulfate	Used to clean precision cut-off wheel	P113, U244	NA
Thioglycolic Acid (Mercaptoacetic Acid)	Used to descale specimens	P109, P121	NA
Thioglycolic Acid/Hyroxyethylethylenediaminetriacetic Acid (Thio/HETDA)	Used to descale specimens	C134, P109, P121	NA
Trichloroethylene	Used as a coolant in machining process	C134, P119	F002[2]/D040
Trichlorotrifluoroethane	Used in ultrasonic cleaning	U214	F002
Zirconium and Zirconium Alloys	Fuel cladding material	C031	NA
Zyglo Dye Penetrant, Magnaflux	Used for dye penetrant testing	C129, C134, P124, U225, U265	NA
Zyglo Penetrant Emulsifier, Magnaflux	Used for dye penetrant testing	C134, P124, U265	NA
Zyglo Penetrant Developer, Magnaflux	Used for dye penetrant testing	C134, P124, U265	NA

General Note: Chemicals may exhibit the characteristic of ignitability, corrosivity, and/or reactivity in their pure form. Based on a review of the waste management practices, Bettis Laboratory waste segregation and packaging practices, and documentation for each container in waste stream IN-ID-BTO-030, no ignitable, corrosive, or reactive materials were disposed of in the waste stream.
Note 1: F003 constituents are listed solely because these solvents are ignitable in liquid form. These F003 chemicals listed are not in liquid form in waste stream IN-ID-BTO-030; therefore, the code does not apply.
Note 2: Trichloroethylene was used as a coolant not a solvent therefore F002 does not apply.
Note 3: Perc was listed as a process chemical, no evidence that it was used as a solvent: therefore F002 does not apply.

5.4.2.1 F-Listed Solvents

Based on review of AK relative to chemicals historically used in the MEL, waste stream IN-ID-BTO-030 may contain or be mixed with F-listed hazardous waste from non-specific sources listed in 40 CFR 261.31, *Identification and Listing of Hazardous Waste* (Reference 11). As shown in Table 3, F002 and F003 listed solvents were utilized and could potentially contaminate the waste. Acetone, a F003 listed waste, was identified. F003 wastes are listed solely because these solvents are ignitable in the liquid form (Reference 12). The waste stream does not exhibit the characteristic of ignitability; therefore, F003 is not assigned (References C125, C128, U216, U225,

U255, and U264). Trichloroethylene was used as a coolant not a solvent; therefore, the F002 code does not apply for this chemical. Perc was listed as a process chemical. No evidence demonstrated that it was used as a solvent; therefore F002 does not apply. Waste stream IN-ID-BTO-030 is assigned F-listed EPA HWN F002 for potential 1, 1, 1 – Trichloroethane, and Trichlorotrifluorethane contamination (References C125, C128, C301, C312, P119, and U214).

5.4.2.2 Toxicity Characteristic Compounds

Based on review of AK relative to chemicals used or present in the fuel element sectioning process and supporting operations, waste stream IN-ID-BTO-030 is contaminated with toxicity characteristic compounds as defined in 40 CFR 261.24 (Reference 11). Where a constituent has been identified and there is no quantitative data available to demonstrate that the concentration of a constituent is below regulatory threshold levels, the applicable EPA HWN is applied to the waste stream in accordance with RCRA and CCP-TP-005 (Reference 3).

A Toxicity Characteristic Leaching Procedure (TCLP) was performed on the spent fuel at Bettis Laboratory and at Naval Reactors Facility (NRF) in Idaho. A 100 gram representative sample that included only the fuel-bearing region of a reactor core was tested. The fuel-bearing region is where the maximum concentrations of the metals are found, with the exception of chromium. The maximum concentration of chromium is found in the zircaloy core structural material (small amounts of chromium were added to the zirconium as an alloying element); therefore, the representative sample used for the chromium element extraction calculation was Zircaloy structural material. Fission products with decay chains that end with a TCLP metal were assumed to be fully decayed to their stable state and thereby maximizing their concentrations (Reference C031).

Table 4, Calculated TCLP Results of NRF Fuel Samples, lists the results of those tests (Reference C031). The results for selenium and chromium were the only results that were above the regulatory limits in these tests. The DOE argued, and the Federal EPA agreed, that the numbers calculated were higher than would be expected due to the high corrosion resistance of the Zircaloy. The EPA agreed that the waste could be considered non-hazardous based on these test results. However, this waste has not been tested to ensure the metals do not exceed the regulatory limits. However, the WIPP-WAP requires the application of HWNs in accordance with RCRA. Therefore, in the absence of any other confirmatory test results, EPA HWNs D004, D005, D006, D007, D008, D010, D011, D039, D040, and F002 are assigned to waste stream IN-ID-BTO-030.

Table 4. Calculated TCLP Results of NRF Fuel Samples

Metal	Leachate Concentration (milligrams/liters)	TCLP Limit (mg/l)
Arsenic	1.25	5.0
Barium	30.0	100.0
Cadmium	0.22	1.0
Chromium	50.0[1]	5.0
Lead	3.4	5.0
Mercury	0.0	0.2
Selenium	1.1[2]	1.0
Silver	0.93	5.0

Note 1: Due to the presence of chromium as an alloying agent in Zircaloy, the TCLP test's 20 to 1 dilution into the leachate solution resulted in a calculated chromium concentration on the order of 50 mg/l. The extremely high corrosion resistance of Zircaloy would not permit such a high concentration, even using a corrosion rate significantly higher than actually observed. Actual concentration is on the order of 0.001 mg/l.

Note 2: This value does not consider corrosion resistance, surface area exposure, etc. Actual TCLP results would be lower.

Two organic toxicity characteristic compounds were identified. Trichloroethylene was used as a coolant rather than a solvent so F002 did not apply. Tetrachloroethylene (Perc) was also used. Therefore, D039 and D040 were assigned to waste stream IN-ID-BTO-030 (Reference P119).

5.4.2.3 Ignitables, Corrosives, and Reactives

Potentially corrosive chemicals were neutralized prior to disposal. Ignitables were limited to those listed in Table 3. No liquid ignitables or corrosives were included in the waste (Reference U264). The materials in this waste stream do not meet the definition of ignitable, corrosive, or reactive as defined in 40 CFR 261.21 (Reference 11).

Ignitability

The materials in waste stream IN-ID-BTO-030 do not meet the definition of ignitability as defined in 40 CFR 261.21 (Reference 11). Contents of the IN-41 have been dried and are therefore not liquid waste (Reference U264). The waste is not an oxidizer and it is not capable of causing fire through friction, absorption of moisture, or spontaneous chemical change. Waste stream IN-ID-BTO-030 is, therefore, not ignitable and is not assigned EPA HWN D001.

Corrosivity

The materials in waste stream IN-ID-BTO-030 do not meet the definition of corrosivity as defined in 40 CFR 261.22 (Reference 11). The materials are not liquid. RTR will be performed to ensure liquids are not present in the waste. Aqueous liquids were allowed to air dry. Waste stream IN-ID-BTO-030 is, therefore, not corrosive and is not assigned EPA HWN D002.

Reactivity

The materials in this waste stream do not meet the definition of reactivity as defined in 40 CFR 261.23 (Reference 11). The materials are stable and will not undergo violent chemical change. The materials will not react violently with water, form potentially explosive mixtures with water, or generate toxic gases, vapors, or fumes when mixed with water. The materials do not contain cyanides or sulfides and are not capable of detonation or explosive reaction. Sodium-potassium capsules were opened in the Central Cell Bank in the 1960s. However, the waste generation dates indicated that the probability of contamination from those operations entering this waste stream are remote. Even if small amounts of Sodium-potassium contamination had entered the waste stream, the solidification processes would have rendered the material non-reactive. Met mount material tested at Argonne National Laboratory (ANL) indicated that those materials similar to the met mounts in the MEL are not reactive (References P138 and U239).

The waste is not pyrophoric. The waste contains some zircaloy swarf from the processing of spent fuel assemblies. Because of reported concerns that finely divided zirconium may spontaneously combust, tests were performed on the zircaloy swarf. Zircaloy particles of various sizes, including Zircaloy powder, were tested at the NRF in Idaho. The test results showed that even particles much smaller than what is included in the waste were not pyrophoric (Reference C130). Waste stream IN-ID-BTO-030 is, therefore, not reactive and is not assigned EPA HWN D003.

5.4.2.4 P- and U-Listed Waste

Review of the AK record did not identify any specific source or incident where the MEL RH TRU waste was mixed with or contaminated with discarded commercial chemical product, an off-specification commercial chemical product, or a container residue or spill residue thereof. No listed chemicals were identified in the container-specific documentation completed in accordance with the Bettis Laboratory waste management program (Reference C312). No specific source for beryllium was identified for this waste stream in the AK record. Waste stream IN-ID-BTO-030 is, therefore, not assigned a P- or U-listed EPA HWN.

5.4.2.5 K-Listed Waste

The material in waste stream IN-ID-BTO-030 is not a hazardous waste from any of the sources specified in 40 CFR 261.32 (Reference 11). Waste stream IN-ID-BTO-030 is, therefore, not assigned a K-listed EPA HWN.

5.4.3 Radiological Characterization

Bettis Laboratory calculated the radiological distributions for the waste stream IN-ID-BTO-030 as reported in the shipping documents. ANL-W also reported the radiological data in the shipping documents as the waste was shipped to RWMC. The

total activity and activity fraction for the waste stream was calculated as shown in Table 5, Waste Stream IN-ID-BTO-030 Radiological Characterization (References U200, U275, and U305).

Table 5. Waste Stream IN-ID-BTO-030 Radiological Characterization

Radionuclide	Specific Activity curies per gram(Ci/g)[1]	Activity Fraction	Mass Fraction
WIPP Required Radionuclides			
Pu-238	1.73E+01	2.54E-02	2.29E-03
Pu-239	6.29E-02	3.75E-05	9.31E-04
Pu-240	2.30E-01	3.38E-05	2.30E-04
Pu-242	3.97E-03	3.97E-07	1.56E-04
Am-241	3.47E+00	4.36E-04	1.96E-04
U-233	9.76E-03	9.51E-05	1.52E-02
U-234	6.32E-03	Not Reported	Not Reported
U-238	3.40E-07	Not Reported	Not Reported
Cs-137	8.80E+01	1.76E-01	3.13E-03
Sr-90	1.38E+02	1.75E-01	1.98E-03
Additional Radionuclides			
Y-90	5.44E+05	1.74E-01	5.00E-07
Ba-137m	5.38E+08	1.68E-01	4.86E-10
Pm-147	9.38E+02	1.33E-01	2.22E-04
Pr-144	7.56E+07	5.97E-02	1.23E-09
Ce-144	3.22E+03	5.98E-02	2.90E-05
Kr-85	3.97E+02	1.77E-02	6.96E-05
U-235	2.19E-06	2.95E-07	2.11E-01
Th-232	1.11E-07	5.44E-08	7.65E-01
All other identified Radionuclides [2]		1.13E-02	1.25E-05
Total		**1.00E+00**	**1.00E+00**

[1] Source: RH-TRAMPAC, Rev. 0, Table 5.1-1
[2] All other radionuclides comprising less than two percent of the total activity.

5.4.3.1 RH TRU Waste Calculations

This waste is RH TRU waste based on generator supplied information covering the radiological attributes of the 13 IN-41 cans. All of the waste containers contain more than 100 nanocuries per gram (nCi/g) of TRU activity and the radiation surveys indicate surface dose rates greater than 200 millirems per hour (mRem/hr) (References C200, C202, C203, C204, C205, C305, C307, P126, U220, U223, and U305).

Bettis Laboratory used specific procedures to calculate the radiological distributions for the waste stream. The fuel accountability records provided the necessary information to

determine the mass of the pre-irradiated starting materials. The starting materials (Beginning-of-Life [BOL]) isotope weight formed the basis for deriving the nuclide distribution (References P126, U220 and U223).

The irradiated fuel specimens originated from two basic sources. The first source, which comprises the majority, was specimens that were irradiated in the Advanced Test Reactor (ATR). The second source was specimens that have been sectioned from Naval Reactor ship, commercial cores or prototype expended cores. The fuel accountability practices for the two types of specimens were different. The irradiated test specimens were recorded with their BOL fuel content values while the expended core specimens were recorded with calculated End-of-Life (EOL) fuel content values. The BOL fuel content of the expended core specimens was calculated to determine the radionuclide distribution (Reference U223).

ANL-W prepared a waste profile of the HFEF-5 containers when they were shipped to RWMC. The waste profile contained aggregate radionuclide information on the waste stream (Reference P201).

5.4.3.2 Uncertainties for RH TRU Waste

The largest uncertainty in the calculated nuclear material content comes from the accuracy of the accountability records. The enriched uranium waste is comprised of 82 different U-235 isotope percents (U-235 enrichment percentages). The U-235 enrichment was assumed to perform the calculations (Reference U223).

Combining the factors from the assumptions and comparing the values to the radionuclide distribution from the waste from the NRF (a similar waste) gives an overall factor of about 10. This uncertainty was not considered to be too large for this type of calculation and for the quantities of nuclear material involved.

5.4.4 Polychlorinated Biphenyls (PCBs)

Based on a review of the container documentation, materials potentially containing polychlorinated biphenyls (PCBs) were not specifically identified (e.g., capacitors, ballasts, etc.). MEL waste management practices required identification, segregation, and special management of suspect PCB containing materials (e.g., ballast, capacitors, and transformers) (Reference P201).

5.4.5 Prohibited Items

Water, used as the coolant for the abrasive cut-off wheel, was the main liquid. Free liquids were not packaged. Liquids were dried. Enough water was added to the waste to react with the Portland cement that was also added. All of the added water was used in the reaction with cement.

All containers in this waste stream will be characterized using RTR to ensure no prohibited items are present. Any prohibited item will be remediated prior to shipment to WIPP. An AK review of the waste packaging documentation verified the absence of all WIPP prohibited items for all containers in waste stream IN-ID-BTO-030.

The Land Withdrawl Act (Reference 8) prohibits the disposal of spent nuclear fuel and high-level waste as defined by the NWPA (Reference 9) at WIPP. According to the NWPA, spent nuclear fuel is "fuel that has been withdrawn from a nuclear reactor following irradiation, the constituent elements of which have not been separated by reprocessing." DOE M 435.1-1, *Radioactive Waste Management Manual* (Reference 17) expands on that definition to clarify that "Test specimens of fissionable material irradiated for research and development only, and not production of power or plutonium, may be classified as waste, and managed in accordance with the requirements of this Order when it is technically infeasible, cost prohibitive, or would increase worker exposure to separate the remaining test specimens from other contaminated material."

High-level waste is defined by the NWPA as "the highly radioactive material resulting from the reprocessing of spent nuclear fuel, including liquid waste produced directly in reprocessing and any solid material derived from such liquid waste that contains fission products in sufficient concentrations, and other highly radioactive material that the Commission, consistent with existing law, determines by rule requires permanent isolation." Waste stream IN-ID-BTO-030 consists of homogeneous material contaminated during the examination of irradiated fuel materials. The MEL operations did not involve separation or reprocessing of constituent elements from reactor fuel and the waste stream does not contain the irradiated fuel elements withdrawn from a reactor. Therefore, the waste is not a spent nuclear fuel or high-level waste and is eligible for disposal at WIPP as RH TRU waste (References P100, U201, and U256).

5.5 Waste Packaging

The waste was mixed with water and cement and solidified in an IN-41 container. The lid of the IN-41 container had a 1/8 inch hole drilled into it. Some of the IN-41 containers will have the lid removed to facilitate RCRA sampling. Three to five IN-41 containers will be placed in a vented 30-gallon U.S. Department of Transportation (DOT) Specification 7A, Type A steel drums. The 30-gallon drum will be placed in a 55-gallon drum for shipment to WIPP (References C311, DR006, P132, P206, and U221).

6.0 CHARACTERIZATION/QUALIFICATION METHODS

As stated in CCP-PO-002, *CCP Transuranic Waste Certification Plan* (Reference 13), this report provides a description of the characterization of this RH TRU waste stream. *CCP-CP-INL-592, Central Characterization Project RH TRU Waste Certification Plan for 40 CFR Part 194 Compliance for Bettis Laboratory Remote-Handled Transuranic Debris Waste Stored at the Idaho National Laboratory Waste Stream: IN-ID-BTO-030* (Reference 16) describes how each DQO and QAO will be met along with the rationale for selection of the AK qualification methods used. As required by the WCPIP (Reference 1), the description of waste stream IN-ID-BTO-030 is provided in Sections 4.0 and 5.0. The description of the confirmatory testing process, the percentage of containers that will be subjected to the process, a discussion of why the process is considered representative of the waste stream, and quantitative acceptance criteria is presented in *CCP RH-TRU Waste Certification Plan for 40 CFR 194 Compliance and Confirmation Plan*.

The CCP intends to use characterization methods listed in WCPIP Sections 4.2 and 4.3 to generate the information defining the isotopic ratios, physical form, and absence of liquids associated with waste stream IN-ID-BTO-030 because it makes the best use of the information available (such as inventory data and the sampling data from a similar waste stream), and will avoid the radiation exposure of opening previously packaged waste.

Table 6. Waste Stream IN-ID-BTO-030 DQO Determination Summary

DQO Determinations	Summary of AK	AK Sources
Defense Waste High-Level Waste Spent Nuclear Fuel	As described in the defense waste justification in Section 4.1.4, there is sufficient evidence to demonstrate that TRU wastes generated by MEL operations are contaminated with materials from atomic energy defense activities associated with defense research and development activities. As described in Section 5.4.5, this waste stream does not contain spent nuclear fuel or high-level waste.	P100, P102, U201, and U256
TRU Waste	Evaluation of generator reported concentrations of alpha- emitting TRU isotopes with half lives greater than 20 years, this is a TRU waste stream. Dose-to-Curie Method (including modeling or sampling) and Mass Determination methods are described in CCP-RC-INL-591 (Reference 15).	P201, P126, CCP- RC-INL-591, and CCP- AK-INL-592
RH Waste	Generator reported dose rates for containers in waste stream IN-ID-BTO-030 range from 8.25 R/hr to 22.95 R/hr. Dose rate measurements are taken foreach container as described in CCP- AK-INL-592 (Reference 16).	C201 and CCP-AK-INL-592
Activity	This DQO is specific to payload containers and will not be assessed until the final payload configuration has been established.	Not Assessed
WIPP 10 Required Radionuclides	The relative activity of the WIPP 10 required radionuclides is shown in Table 5 for this waste stream. The activity of the WIPP 10 radionuclides is documented in CCP- RC-INL-591 and will be quantified in waste containers during implementation of the Dose-to-Curie Method. Dose-to-Curie Method and Mass Determination Methods are described in CCP-AK-INL-592 (Reference 16).	P201, P126, U275, CCP- RC-INL-591, and CCP- AK-INL- 592
Physical Form	As described in Section 5.4, waste stream IN-ID-BTO-030 consists primarily of inorganic homogeneous solids meeting the WCPIP (Reference 1) definition for Summary Category Group S3000. Section 5.4.1.2 identifies the WMPs, including the expected amount of each in the waste stream. VE or RTR is performed on 100% of the containers as described in CCP- AK-INL-592.	P201, U255, U276, and CCP-AK-INL- 592
Liquids	As described in Section 5.4.5, prohibited quantities of liquids were/are prohibited during packaging of waste stream IN-ID- BTO-030 and are not expected in prohibited amounts in any container. VE or RTR. RTR is performed on 100% of the containers as described in CCP-AK-INL-592	P123, U264, and CCP-AK-INL-592

7.0 CONTAINER SPECIFIC INFORMATION

Container specific TRU Waste Package Loading Records were completed by MEL waste generators for each container of waste packaged in waste stream IN-ID-BTO-030. Additional discussion of container specific information related to physical form, chemical inputs, and radiological characterization is provided in Section 5.4.

8.0 REFERENCES

1. DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*, Carlsbad, New Mexico, U.S. DOE Carlsbad Field Office

2. *Waste Isolation Pilot Plant Hazardous Waste Facility Permit, Waste Analysis Plan,* Santa Fe, New Mexico, New Mexico Environment Department, 2010

3. CCP-TP-005, *CCP Acceptable Knowledge Documentation,* Carlsbad, New Mexico, Washington TRU Solutions, LLC.

4. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*, Carlsbad, New Mexico, Washington TRU Solutions, LLC.

5. 40 CFR Part 191, *Environmental Radiation Protection Standards for Management and Disposal of Spent Nuclear Fuel, High-Level and Transuranic Radioactive Wastes*, Washington, D.C., U.S. EPA, December 20, 1993

6. 40 CFR Part 194, *Criteria for the Certification and Re-Certification of the Waste Isolation Pilot Plant's Compliance with the 40 CFR Part 191 Disposal Regulations*, Washington, D.C., U.S. EPA, February 9, 1996

7. *Criteria for the Certification and Re-Certification of the Waste Isolation Pilot Plant's Compliance with the 40 CFR Part 191 Disposal Regulations: Certification Decision*, Washington, D.C., U.S. EPA, May 18, 1998

8. Public Law 102-579, *The Waste Isolation Pilot Plant Land Withdrawal Act*, October 30, 1992, *as amended by Public Law 104-201*, Washington D.C., U.S. Congress, September 23, 1996

9. 42 U.S.C 10101, *Nuclear Waste Policy Act of 1982*, Washington D.C., U.S. Congress

10. DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant*, Carlsbad, New Mexico, U.S. DOE Carlsbad Field Office

11. 40 CFR Part 261, *Identification and Listing of Hazardous Waste*, U.S. EPA

12. McCoy and Associates, Inc. 2010. *McCoy's RCRA Unraveled.* Second Edition

13. CCP-PO-002, *CCP Transuranic Waste Certification Plan*, Carlsbad, New Mexico, Washington TRU Solutions, LLC.

14. DOE/TRU-11-3425, *Annual Transuranic Waste Inventory Report – 2011*, Carlsbad, New Mexico, U.S. DOE Carlsbad Field Office

15. CCP- RC-INL-591, *Central Characterization Project Remote-Handled Transuranic Radiological Characterization Technical Report For Remote-Handled Transuranic Debris Waste From Bettis Laboratory Waste Stream stored at INL: IN-ID-BTO-030*, Carlsbad, New Mexico, Washington TRU Solutions, LLC.

16. CCP-AK-INL-592, *Central Characterization Project RH TRU Waste Certification Plan for 40 CFR Part 194 Compliance for Bettis Laboratory Remote-Handled Transuranic Debris Waste Stored at the Idaho National Laboratory Waste Stream: IN-ID-BTO-030,* Carlsbad, New Mexico, Washington TRU Solutions, LLC.

17. DOE M 435.1-1, *Radioactive Waste Management Manual*

18. CCP-AK-BAPL-500, *Central Characterization Project Acceptable Knowledge Summary Report For Bettis Laboratory Remote-Handled Transuranic Debris Waste: Waste Stream BT-T001,* Carlsbad, New Mexico, Washington TRU Solutions, LLC.

9.0 AK SOURCE DOCUMENTS

Source Document Tracking Number	Title	Document Number	Author	Date
C031	Letter to Joe Nagel; RE: TCLP Testing of Fuel Core Material	2802940	R.A. Guida	1/5/1994
C116	Letter to G. McClelland, RE: Transmittal of NRBK-41 Cask Drawings	WAPS-DLO(MEL) E-1521	R.T. Esper	1/15/1986
C117	Letter to H.F. Hoffman; RE: Fission Gas Analyzer Historical Data	NRFE-P-1813	C.W. Singleton	6/6/1991
C122	DOE Memorandum to S. Ahrends and P. Hamric, RE: Disposal of TRU Waste from Naval Reactors Facilities	NA	G.K. Oertel	11/15/1983
C123	Letter to J.D. Wells, RE: A Quality Assurance Plan for the Packaging of Transuranic Waste for Shipment to the Idaho National Engineering Laboratory	WAPD-DLO(E) F-1802	R.T. Esper	3/13/1987
C125	Letter to K.M. Tomko; RE: Near Cell Filter Hazardous Waste Evaluation	WAPD-DLO (MEL)FE-437	R.G. Pfeifer	6/6/1990
C126	Letter to MEL Waste File; RE: Hazardous Evaluation of APAC Solutions and Kalling Etch	WAPD-DLO-(MEL) E-2900	Donna DiRenna	2/25/1994
C127	Letter to Manager Pittsburgh Naval Reactors Office, RE: Shipment of Special Nuclear Materials: PZA-CZC-3	WAPD-DLO(E) F-2069	E.F. Hlad	12/14/1987
C128	Letter to W.R. Maxwell and K.D. Richardson; RE: Use of Alternative Cleaning Solvent for Test Specimens	WAPD-MT (FZCT)-1215	B.F. Kammenzind	4/18/1990
C129	Letter to M.A. DiBattista and J.F. Ruch, RE: Review of Fryquel 150 Oil	WAPD-RC/E (EE)-292	T.E. Reed	5/9/1988
C130	Letter to J.W. Frazier, NRF; RE: U.S. Department of Transportation (DOT) Hazard Categorization of Zircaloy Swarf	B-NRF(E)-073	T.L. Cox	9/12/2007
C132	Idaho Nuclear Infrastructure, Web Page: www.nuclear.energy.gov	NA	NA	February 2010
C133	About INL Facilities: Materials and Fuels Complex, Web Page:www.deq.state.id.us/inl_oversite/about/facilities/anl-w.cfm	NA	Idaho Department of Environmental Quality	6/22/2010
C134	Letter to File, RE: Central Cell Bank Process History	WAPD-DLO (MEL)E-2828	R. M. Ruzewski	12/30/1993
C200	Letter to R.T. Esper, RE: RWMIS 1988 Year End Data Review	NA	D.L. Litteer	1/17/1989
C201	Letter to M.A. DiBattista, RE: Comparison of Measured and Calculated Radiation Levels for MEL Sludge	WAPD-OP(SH) SA-166	T.N. Pitcairn	4/25/1989
C202	Letter to M.A. DiBattista, RE: Curie Content Determination to Support Development Laboratories Operations	WAPD-MT (CER) -1576	W. L. Skultety	4/19/1989

Source Document Tracking Number	Title	Document Number	Author	Date
C203	Grams of TRU Nuclides Curie Gram Conversions IN 41-20, 23, 33, 42, 67, 79, 83, 92, 94, and 93 Containers	TWR 17772	D.E.Overs	4/2/1988
C204	Letter to J. Sherfinski, RE: Data on the Fuel Sludge Cans in the MEL	WAPD-DLO (MEL)E-1184	R.T. Esper	5/23/1984
C205	Letter to G.C. McClelland, RE: Data Sheets for the First Shipment of Transuranic Sludge for Storage at the Radioactive Waste Management Complex (RWMC)	WAPD-DLO (MEL)E-1698	D.E. Overs	6/8/1987
C206	Letter to S.D. Harkness, RE: Request for Material Description and History of Thirteen Sludge Containers	WAPD-DLO (MEL)O-860	M.A. DiBattista	3/17/1989
C207	Letter to ANL, RE: Shipping Information	NA	Westinghouse Electric Corporation, BAPL	12/12/1988
C208	Letter to Manager, Pittsburgh Naval Reactor Office, RE: Advance Notification PZA-CZC-1	WAPD-DLO(E) F-1857	E.F. Hlad	5/1/1987
C209	Letter to Manager, Pittsburgh Naval Reactors Office, RE: Advance Notification: PZA-CZC-2	WAPD-DLO (E0F-1915	E.F. Hlad	7/2/1987
C210	Letter to Manager, Pittsburgh Naval Reactors Office, RE: Advance Notification: PZA-CZC-4	WAPD-DLO(E) F-3010	E.F. Hlad	1/29/1988
C211	Letter to T.E. Reed; RE: Disposition of Waste Generated from Process	WAPD-DLO (MEL)O-623	W.R. Maxwell	2/15/1988
C212	Letter to D.J. Miller; RE: Chemical Analysis of Hysol Material in Support of MEL Criticality Zone Limits	WAPD-LOS(NS)-409	R.F. Beyer	5/23/1980
C214	Letter to Manager, Pittsburgh Naval Reactors Office, RE: Certification of the Bettis Remote Handled Transuranic Waste to the Waste Isolation Pilot Plant Criteria	WAPD-DLO(E) F-3119	C.T. Lim	5/27/1988
C215	Letter to G.C. McClelland, RE: Shipment of Transuranic Sludge from Bettis for Burial at the Radioactive Waste Management Complex in Idaho	WAPS-DLO(E) F-1513	R.T. Esper	3/13/1986
C301	Fax to Raj Bhatt, RE: Response from Dick Esper of Bettis Concerning the Characterization of IDC-30 Waste	NA	Dale Wells	02/13/01
C302	Letter to J.N. Davis, RE: Waste Profile Statement for a Bettis Atomic Power Laboratory Remote Handled Transuranic Waste Stream	C302	B.J Mikkola	10/07/88

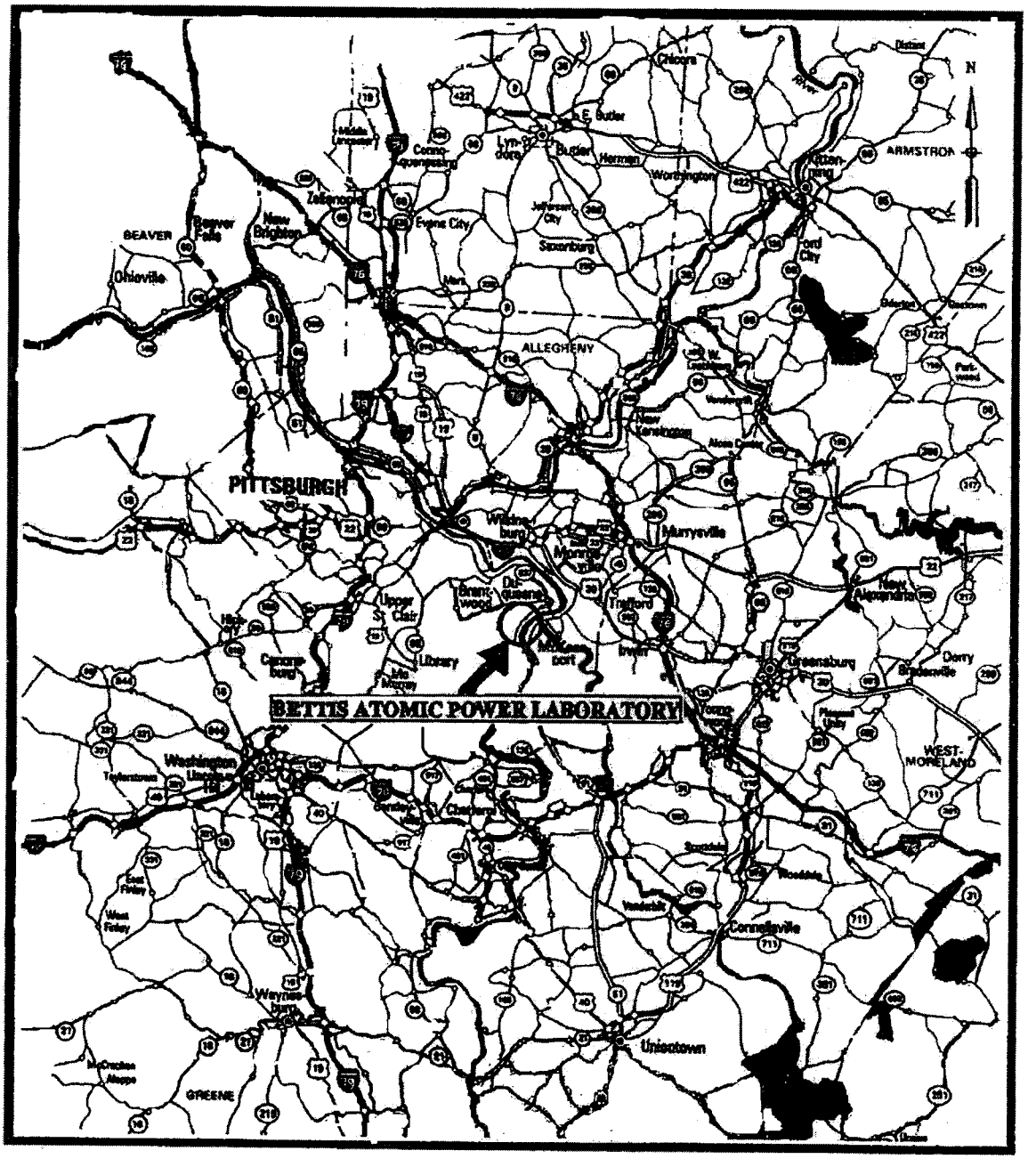
Source Document Tracking Number	Title	Document Number	Author	Date
C303	Telecon text to ANL and EG&G personnel RE: Discussion Regarding Feasibility of Shipping Radioactive Sludge Containing Transuranic material in IN Containers for Burial at the Radioactive Waste Management Complex (RWMC) in Idaho	WAPD-DLO(MEL)E-1501T	R.T. Esper	11/05/85
C305	Letter to D.L. Litteer RE: Bettis Review of the Radioactive Waste Information System Solid CY 1988 Data	WAPD-DLO(MEL) 0-890	M.A. DiBattista	04/28/89
C307	Email to DJB RE: RH Mixed Waste	NA	J. Dale Wells	10/15/1992
C309	Fax to Dale Wells RE: RH Mixed Waste and TRU Waste Profile Sheet for Bettis Content Code 30 Approval	NA	Unreadable	02/08/01
C310	Letter to M.E. Vaughn and J.D. Wells RE: Waste Profile for Transuranic Waste Shipped from Bettis to the Idaho National Engineering Laboratory	WAPD-DLO(MEL) 0-900	M.A. DiBattista	04/28/89
C311	Letter to C.J. Emert, RE: Respirable Fines	KPL-31-83	K.P. Lange	03/15/83
C312	Waste Determination & Disposition Form (WDDF)	WDDF number RWMC08003	Mark Sherick and Jeff Paynter	07/21/08
DR005	Attachment 11, Acceptable Knowledge Source Document Discrepancy Resolution (EPA Hazardous Waste Numbers)	DR005	J.W. Luginbyhl	6/24/2010
DR006	Attachment 11, Acceptable Knowledge Source Document Discrepancy Resolution (Containers Used for Solidification)	DR006	J.W. Luginbyhl	1/21/2011
P016	The NRF Environmental Monitoring Program	NRF 2455	NA	12/1/2006
P025	Mission Need Statement: RH TRU to WIPP Project	DOE/NE-ID-11114	Douglas Parker	8/31/2004
P100	The United States Naval Nuclear Propulsion Program	NA	Naval Reactor	7/31/1998
P102	Cultural Resource Assessment: Bettis Atomic Power Laboratory, Allegheny County, Pennsylvania	NA	Christine E. Davis	May 2002
P103	The Design and Construction of the Enlarged Westinghouse Hot Laboratory	WAPD-T-442	A.L. Maharam	3/1/1957
P104	Light Water Breeder Reactor (LWBR)	BET-10-U	NA	1975
P105	Nuclear Material Balance Area 4 Accountability Manual	WAPD-NMM-1004	M.A. Dibattista	May 1989
P106	Nuclear Safety Analysis for the Materials Evaluation Laboratory RM-SA-103	B-NEO(F)-34	M.L. Baker	7/6/2005
P107	Preparation of Metallographic Specimens	MEL(T)1-2	R.G. Pfeifer	1/15/1985
P108	Pressure Mounting of Fuel Rod Specimens	MELT 2-3	Ronald Minkus	3/3/1980

Source Document Tracking Number	Title	Document Number	Author	Date
P109	NRF 1662.20 Descale Solutions and Operations	MEL(T) 3-4 NRF1662.20	NA	6/30/1973
P110	Operation of Lathe to Part Fuel Rods	MEL(T)2-14	W.S. Roesener	4/1/1981
P112	Sectioning Specimens on the Slow Speed Abrasive Cut off wheel	MEL (T) 2-6	M.J. Hill	4/16/1986
P113	Sectioning Specimens on the Precision Cut-Off Wheel	MEL (T) 3-6	W. Vitvitsky	6/18/1987
P114	Quality Assurance Packaging Procedure	WAPD-DLO(E) F-1043	R.H. Cosgrove	1/18/1985
P119	Remote Milling of Irradiated Punch and Die Sections	HLP No. 35	K.L. Rupp	3/17/1964
P120	Procedure for Decontaminating Items in the 10KW Ultrasonic Cleaner	HLP No. 29	L.M. Behr	6/13/1967
P121	APAC Decrudding of Irradiated Specimens	HLP #22	V.J. Figliolia	7/31/1974
P123	Dye Penetrant Examination of Irradiated Specimens	HLP #27	V.J. Figliolia	10/29/1973
P124	Fluorescent Penetrant Inspection	MEL(T)3-10	M. Phillips	8/23/1990
P125	In-Cell Waste Segregation Plan and Guidelines	MEL(T) 8-13	B. Maxwell	9/22/1988
P126	Curie and Transuranic Content Determination for Radioactive Waste Packages	RM-AG-001	M. Bobuk	3/23/1988
P130	Quality Assurance Packaging Study Guide	NA	C.A. DiVecchio	Dec. 2004
P131	BRASS Study Guide	NA	C.A. DiVecchio	Dec. 2004
P132	MEL(T)2-16, Solidification of Radioactively Contaminated Liquids within Containments	MEL(T)2-16	M.J. Hill	4/16/1986
P133	MEL Scrap Fuel Program	MEL(G)-2-7	D.E. Overs	2/16/1987
P136	Replication of Non-irradiated and Irradiated Specimens	MEL(T) 3-12	R.E. Bright	6/14/85
P138	Results of Testing Metallographic (Met) Mounts for the Presence of Sodium, Performed in the Alpha Gamma Hot Cell Facility (AGHCF) at Argonne National Laboratory	NOD-215-00-00	D. Pancake	5/1/2010
P201	Memo to M.J. Holzemer, RE: TRU Waste Profile Sheet for Bettis Content Code 30 Approval	JDW-23-88	J.D. Wells	4/6/1988
P204	Off-Site Shipping Cask – NRBK-41	HFEF-OI-6208	K.H. Alberts and M. Franklin	6/29/2006
P205	Use of Westinghouse NRBK-41 Shipping Cask at HFEF/N (HFEF Process Work Sheet)	NA	NA	4/21/1987

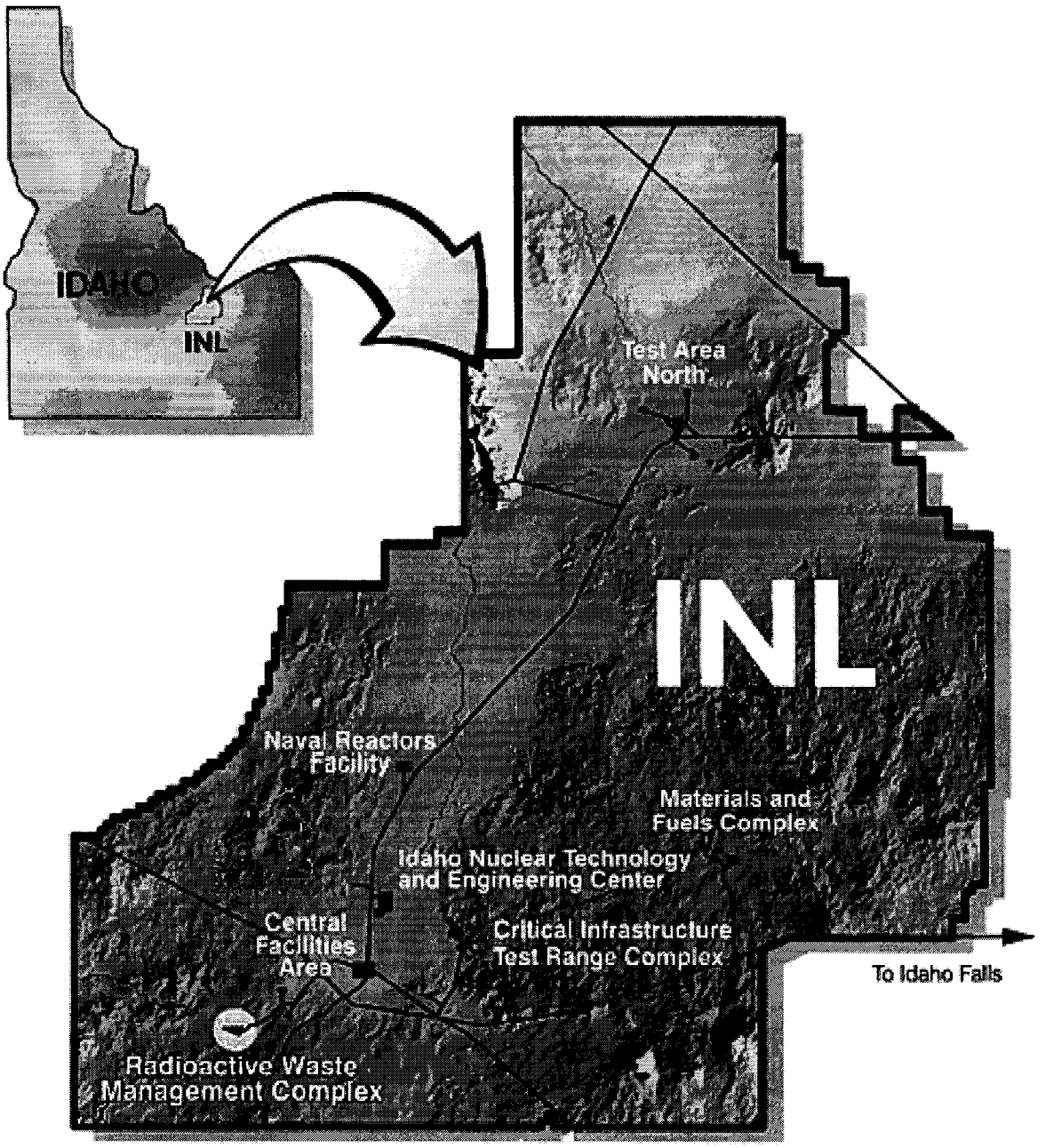
Source Document Tracking Number	Title	Document Number	Author	Date
P206	Drilling and Loading of BETTIS Sludge Waste Containers at HFEF/N Process Work Sheet	PWS No. 2-2118	P.L. Coomer	2/9/1988
U200	ANL-W Radioactive Waste Disposal Request Certification Statement	AW88-025	NA	4/12/1988
U201	News Release: Bettis Atomic Power Laboratory Celebrates 50th Anniversary	BET-3-U	B.J. Schramm	NA
U209	Phase I of the Metallographic Process for the East Cell Bank	NA	NA	NA
U211	Bettis Irradiation Test Planning Guide	WAPD-MT(I)-244	Irradiation Material Technology	August 1989
U212	Operation Record of Met Cell Equivalent Gram Loss	Book #2 and #3	NA	3/3/1982 Through 11/11/1986
U213	Grinding Equivalent Gram Loss Log Book No. 1	Book #1	NA	2/1977 through 2/1981
U214	Book #1 Ultrasonic Cleaning Logbook	Book 1	Various	3/12/1975
U216	Book #1 Fuel Crush & Etching Data Records Log Book	NA	Various	3/77 through 8/79
U217	Log Book Cut-Off-Wheel (COW) #3, Old Slow Speed COW, Waste Disposal Log Cell 12	COW #3	NA	3/17/1980
U220	Technical Work Record No. 70084 – Depletion Reviews	TWR 70084	Terry Carper	5/95
U221	Solidification Procedures	MEL 116 through MEL 143	R. E. Bright	4/14/1987 through 7/13/1987
U223	Technical Work Record No. Z02397 - MEL TRU Nuclide Distribution	TWR No. Z02397	M. J. Bobuk	9/27/2005
U224	Flow Charts for MEL Waste	NA	NA	NA
U225	Route Card	M-894	J.J. Korinko	8/13/1982
U229	Route Card M-823, Metallographic Exam of Three Specimens	M-823	P.H. Kreyns	4/15/1981
U232	Route Card F-655, Preparation of Special Fuel Transport/Crushing	F-655	D.A. Mertz	10/11/78
U236	COW Log Book #2, Waste Disposal Log	COW #2	NA	1/73 through 1/80
U237	Logbook, COW (Diamond) Waste Disposal Log, Cell 12, Start 2/25/1982	NA	NA	2/82 through 3/85
U238	MEL Processes	NA	NA	NA

Source Document Tracking Number	Title	Document Number	Author	Date
U239	Interview with D. Chapas – Operations - Chemicals - Pre-NAC	NA	NA	NA
U243	Miscellaneous Maps of Bettis, MEL floor plans and photos	NA	NA	NA
U244	Actions to Resolve I-131 Related to MEL	WAPD-DLO(MEL)-1260	B.J. Schramm	11/24/1982
U249	Hazardous Material in First Sludge Shipment	TWR 17272	D.E. Overs	6/3/87
U255	Trouble Record Response, Evaluation of Radiation Effects on Organics/Plastics in Containers in MEL Cell Banks	TRR-ECF(FP291)FPO1036-TR1	P.K. Sadhir	NA
U256	Bettis Experimental Facilities, Bettis Hot Laboratory, November 1978	NA	NA	11/1978
U264	Personnel Interview with Ron Minkus and Ron Pfeifer	NA	J.W. Luginbyhl	3/10/2010
U265	Miscellaneous MSDSs	NA	NA	NA
U266	Bettis Atomic Power Laboratory, EPA Region3 Baseline Corrective Action Facility	NA	NA	12/30/2008
U275	Radiological Data from INL-W Shipping Documents (U200)	NA	J.W. Luginbyhl	6/18/2010
U276	Material Weights and Volume Percentages from P201	NA	J.W. Luginbyhl	6/22/2010
U301	Notes on a Conference Call and Fax to Joe Manijak RE: Two Shipments of IN Waste Containers	NA	Roy Grant	02/03/05
U302	Telecon Information About Bettis Waste to ANL-W	NA	Rich Esper et al	1985, 1986
U303	ANL-W Radioactive Waste Disposal Request Certification Statement, Transuranic Waste, HFEF Waste Description	NA	Unreadable	04/08/88
U304	ANL-W Radioactive Waste Disposal Request Certification Statement, Transuranic Waste, HFEF Waste Description	NA	Unreadable	05/25/88
U305	Certified Waste Data Base System Transuranic Waste Data Base Input Form	NA	M.J. Hill and D.E. Overs	various

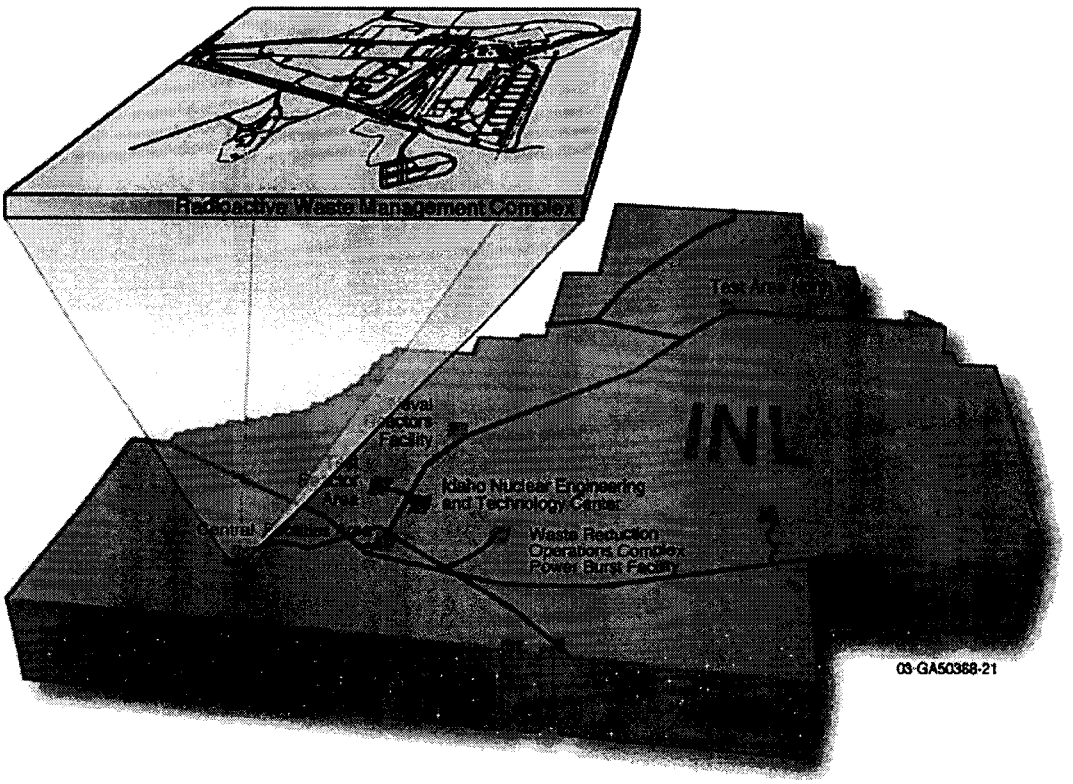
Attachment 1 – Bettis Laboratory Site Map



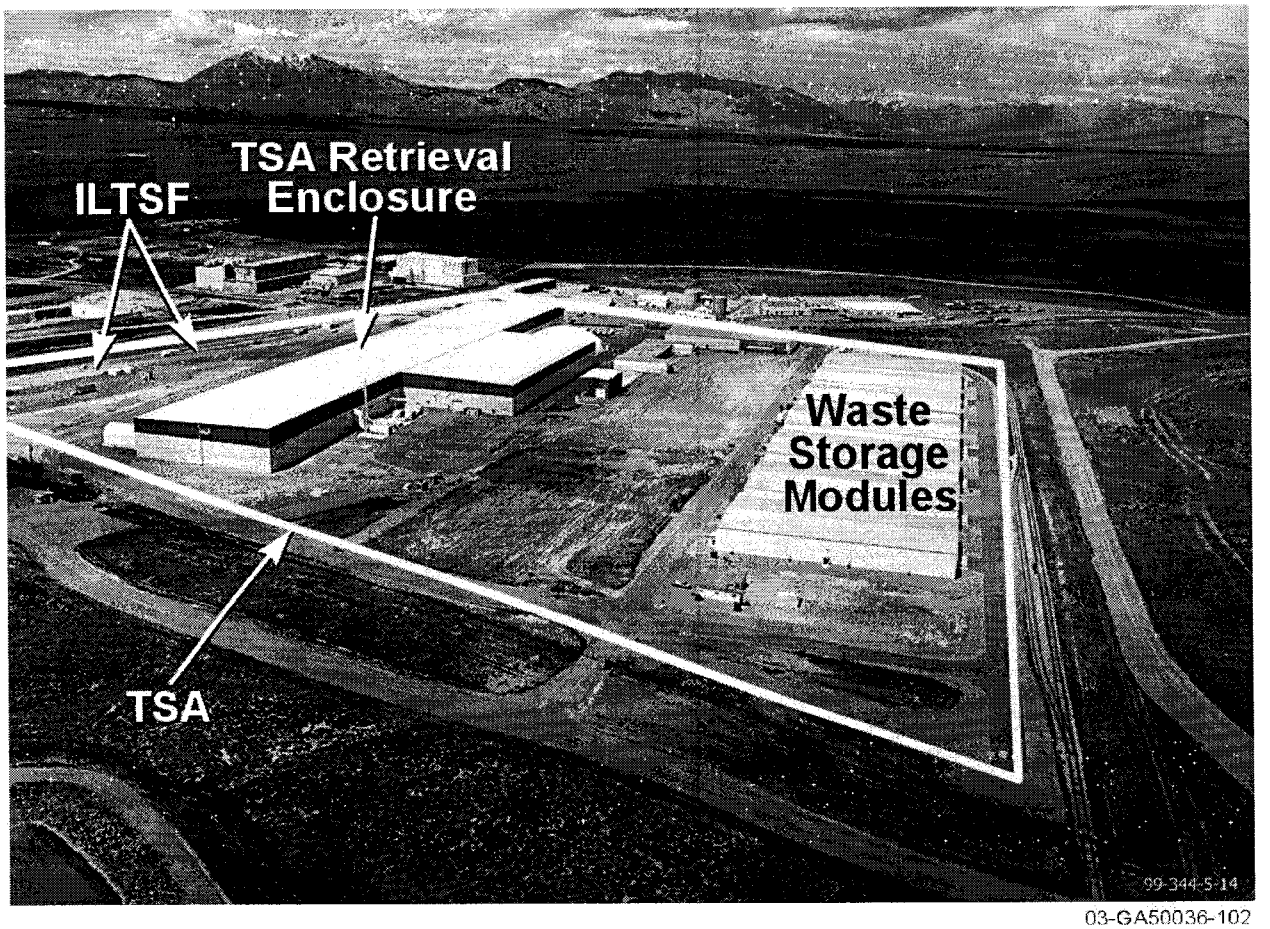
Attachment 2 – INL Site Map



Attachment 3 – RWMC Map



Attachment 4 – TSA and ILTSF Site Map



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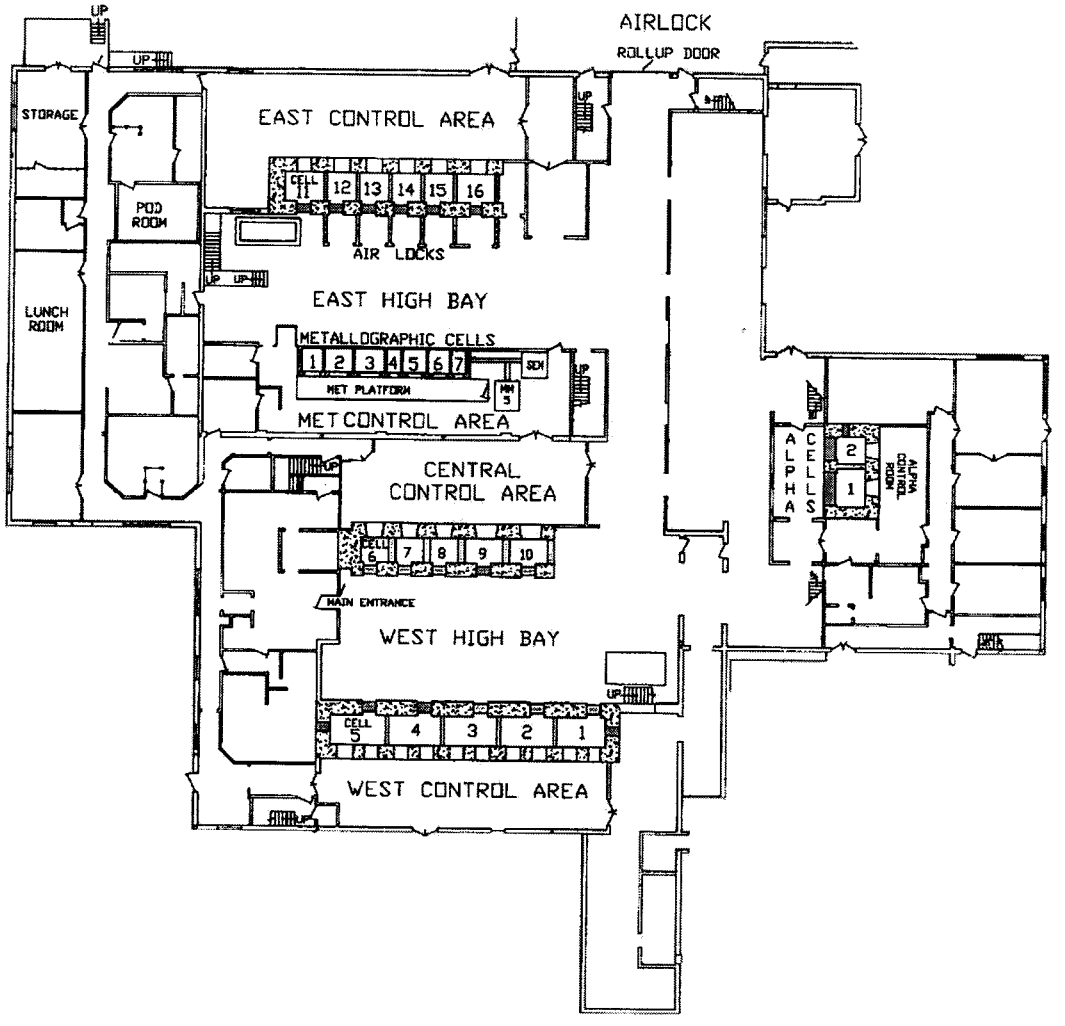
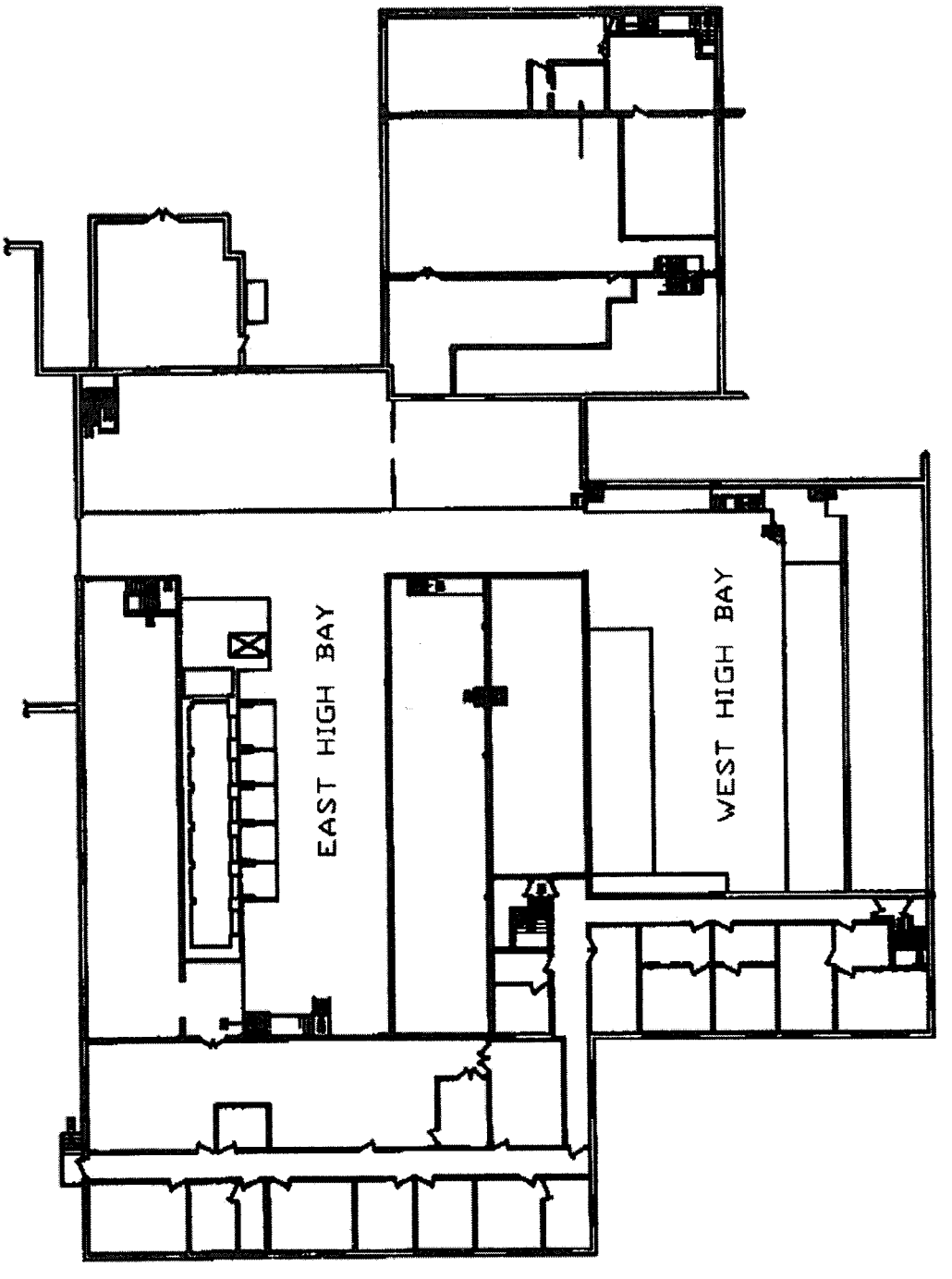
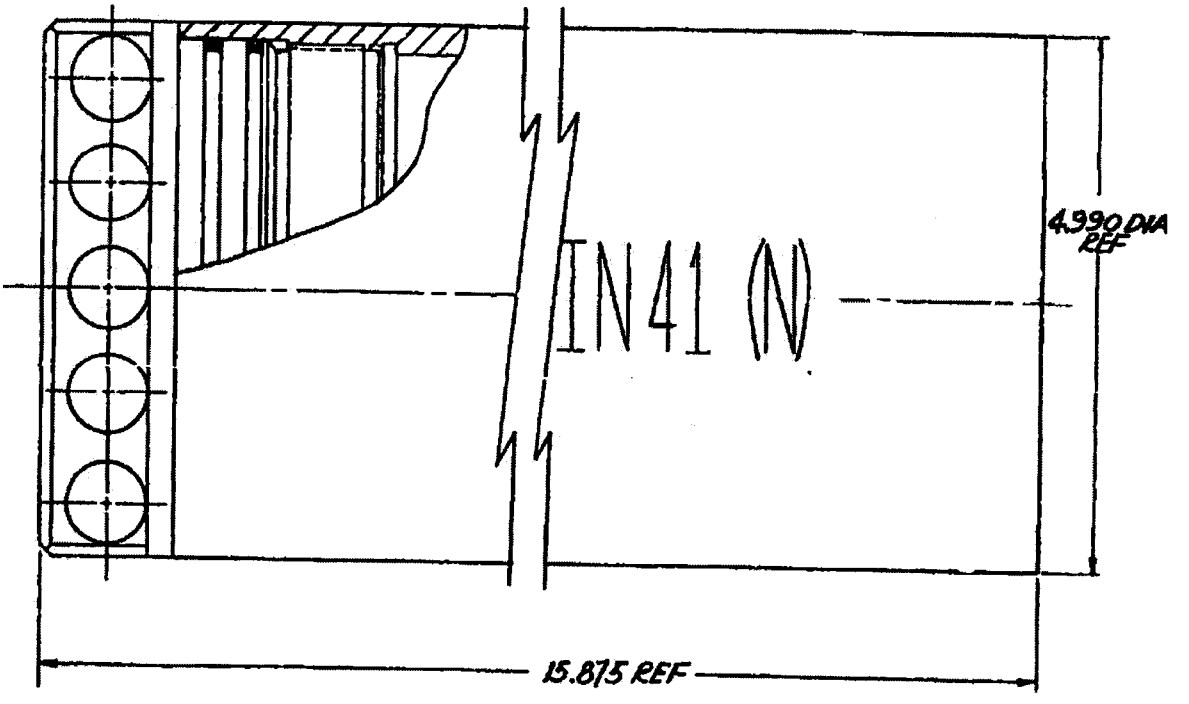
Attachment 5 – Floor Plan of MEL First Floor



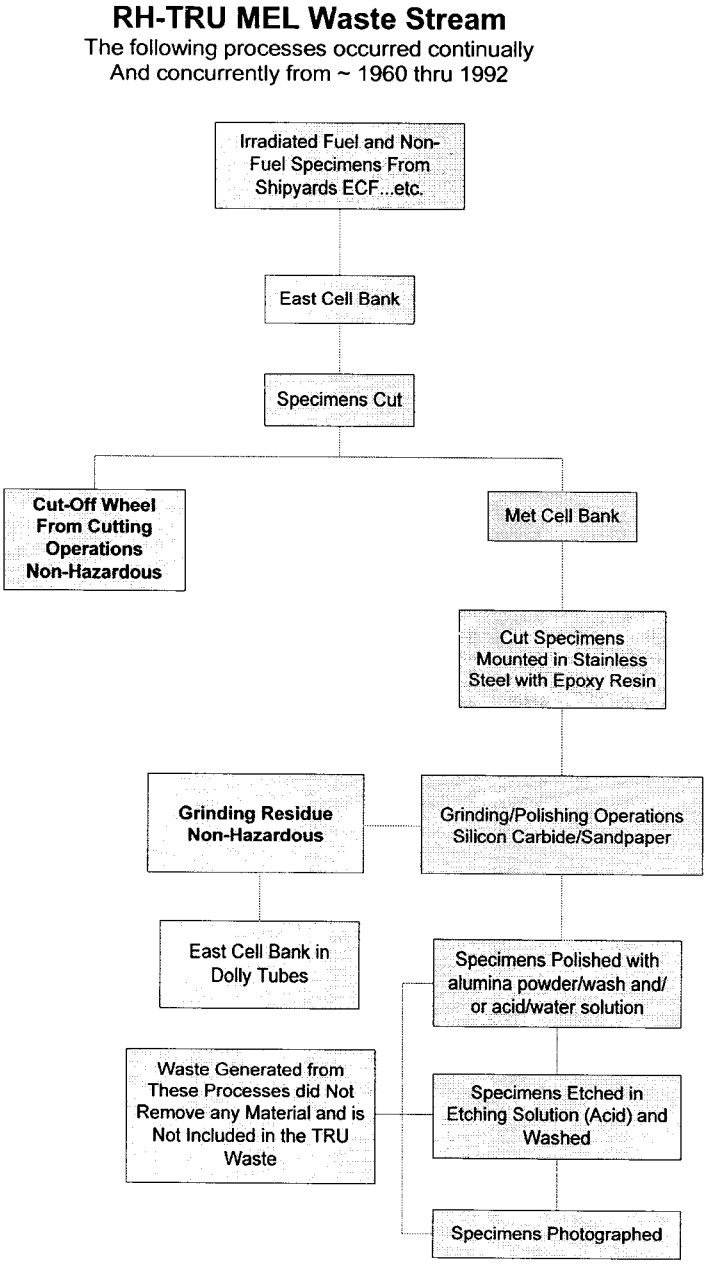
Attachment 6 – Floor Plan of MEL Second Floor



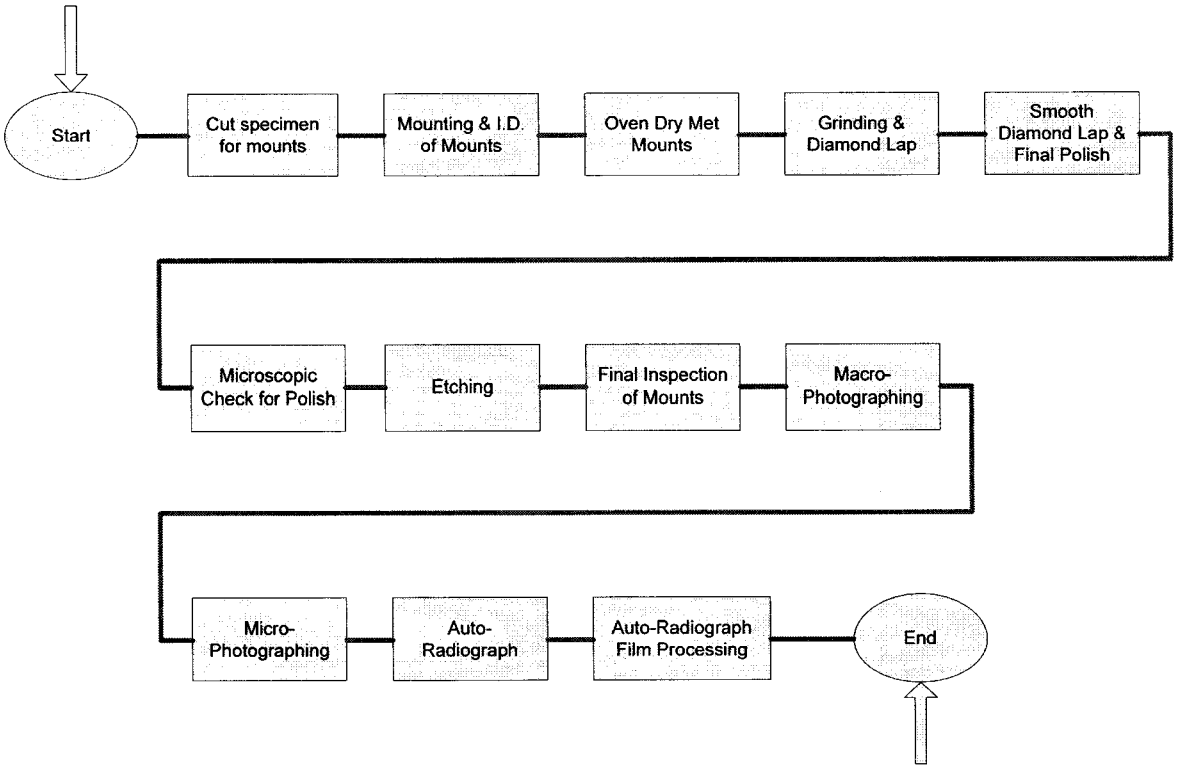
Attachment 7 – IN-41 Container



Attachment 8 – MEL TRU Waste Flow Diagram



Attachment 9 – Flow Diagram for Met Mount Operations



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Washington TRU Solutions LLC

INTER-OFFICE CORRESPONDENCE

DATE: May 31, 2012

FROM: J.A. Vernon LOCATION: Certification

TO: CCP Records Custodian GSA-212 LOCATION: Retrieval, Characterization and Transportation

SUBJECT: TRANSMITTAL OF IDAHO NATIONAL LABORATORY WASTE STREAM PROFILE FOR WASTE STREAM #ID-AECHDM

Please accept the attached Idaho National Laboratory Waste Stream Profile Form to be placed in records for Waste Stream #ID-AECHDM. This memo and attachment will supersede the Waste Stream Profile Form #ID-AECHDM in inter-office correspondence CP:12:01072.

JAV:jmc

cc: WTS
(without attachments)

R. P. Kantrowitz ED
M. W. Pearcy ED

(with attachments)

CCP Records Custodian GSA-212

INL
(with attachments)

S. Smith ED

5/31/12

Attachment 2 – CCP Waste Stream Profile Form

(1) Waste Stream Profile Number: ID-AECHDM			
(2) Generator site name: Idaho National Laboratory		(4)Technical contact: Jim Vernon	
(3) Generator site EPA ID: ID4890008952		(6) Technical contact phone number: (575) 234-7141	
(5) Date of audit report approval by New Mexico Environment Department (NMED): September 19, 2005; June 29, 2006; August 6, 2007; September 22, 2008; September 11, 2009; October 20, 2010			
(7) Title, version number, and date of documents used for WAP Certification: CCP-PO-001, CCP Transuranic Waste Characterization Quality Assurance Project Plan, Revision 20, June 16, 2011; CCP-PO-002, CCP Transuranic Waste Certification Plan, Revision 26, July 14, 2011; CCP-PO-024, CCP/INL Interface Document, Revision 11 July 18, 2011; CCP-AK-INL-025, Central Characterization Project Acceptable Knowledge Summary Report for Idaho National Laboratory Argonne Contact-Handled Transuranic Waste From Facility Maintenance and Laboratory Operations Waste Streams: ID-AECHDM ID-AECHHM, Revision 0, October 21, 2011			
(8) Did your facility generate this waste? YES [ ] NO [X]			
(9) If no, provide the name and EPA ID of the original generator: Argonne – IL3890008946			
Waste Stream Information			
(10) WIPP ID: AE-T001		(11) Summary Category Group: S5000 – Debris Waste	
(12) Waste Matrix Code Group: Heterogeneous Debris Waste		(13) Waste Stream Name: Argonne Heterogeneous Debris Waste	
(14) Description from the TWBIR: The debris waste consists primarily of organic and inorganic laboratory debris. Organic debris materials include paper, cardboard, cloth, (e.g., rags, towels, trays), plastic (e.g., bags, caps containers, tubing, fittings, filters, sheeting, tape, vials, syringes), rubber (e.g., tubing, gloves). Inorganic debris materials include aluminum items, glass (e.g., botties, labware, dishes, vials), tools lead (e.g., scrap, shielding), metal cans, scrap metal (e.g., piping, valves, bolts, clamps, rings, rods, screws, tubing, wire), laboratory equipment (electric motors, pumps, and circuit boards).			
(15) Defense TRU Waste: YES [X] NO [ ]			
(16) Check One: CH [X] RH [ ]			
(17) Number of SWBs NA	(18) Number of Drums 40 55-gallon drums	(19) Number of Canisters NA	
(20) Batch Data Report numbers supporting this waste stream characterization: See Characterization Information Summary for correlation of containers identification numbers to batch data report numbers.			
(21) List applicable EPA Hazardous Waste Numbers:[1] D004, D005, D006, D007, D008, D009, D010, D011, D019, D027, D028, D029, D030, D037, F002, F004 and F005			
(22) Applicable TRUCON Content Numbers: AE116/216, SQ 125/133/225/233			
(23)**Acceptable Knowledge Information**			
(For the following, enter the supporting documentation used [i.e., references and dates])			
Required Program Information			
(23A) Map of site: CCP-AK-INL-025, Revision 0, October 21, 2011, Figures 1, 2, 3 and 4			
(23B) Facility mission description: CCP-AK-INL-025, Revision 0, October 21, 2011, Section 4.2			
(23C) Description of operations that generate waste: CCP-AK-INL-025, Revision 0, October 21, 2011, Section 4.4			
(23D) Waste identification/categorization schemes: CCP-AK-INL-025, Revision 0, October 21, 2011, Section 4.5.2			
(23E) Types and quantities of waste generated: CCP-AK-INL-025, Revision 0, October 21, 2011, Section 4.5.1			

(23F) Correlation of waste streams generated from the same building and process, as applicable: CCP-AK-INL-025, Revision 0, October 21, 2011,Section 4.5.3			
(24) Waste certification procedures: CCP-TP-030, Revision 29, April 26, 2011			
(25)Required Waste Stream Information			
(25A) Area(s) and building(s) from which the waste stream was generated: CCP-AK-INL-025, Revision 0, October 21, 2011, Section 5.1			
(25B) Waste stream volume and time period of generation: CCP-AK-INL-025, Revision 0, October 21, 2011, Section 5.2			
(25C) Waste generating process description for each building: CCP-AK-INL-025, Revision 0, October 21, 2011, Section 4.4 and 5.3			
(25D) Waste Process flow diagrams: N/A			
(25E) Material inputs or other information identifying chemical/radionuclide content and physical waste form: CCP-AK-INL-025, Revision 0, October 21, 2011, Section 5.4			
(25F) Waste Material Parameter Weight Estimates per unit of waste: See table in Summation of Aspects of AK Summary Report: ID-AECHDM entitled "Waste Stream ID-AECHDM Waste Material Parameter Estimates".			
(26) Which Defense Activity generated the waste[2]: (check one)			
	Weapons activities including defense inertial confinement fusion		Naval Reactors development
	Verification and control technology		Defense research and development
X	Defense nuclear waste and material by products management		Defense nuclear material production
	Defense nuclear waste and materials security and safeguards and security investigations		
(27)Supplemental Documentation			
(27A) Process design documents: See AE-I-027, C138 in Summation of Aspects of AK Summary Report: Waste Stream ID-AECHDM, Source Documents Used			
(27B) Standard operating procedures: See AE-I-001, AE-I-004, AE-I-005, AE-I-006, AE-I-009, AE-I-018, AE-I-019, AE-I-021, AE-I-022, AE-I-023, AE-I-028, AE-I-030, AE-I-035, AE-I-036, AE-I-037, AE-I-040, AE-I-041, AE-I-042, AE-I-043, AE-I-044, AE-I-045, AE-I-046,AE-I-051, AE-I-052, AE-I-057, AE-I-058, AE-I-059, AE-I-060, AE-I-061, AE-I-062, AE-I-065, AE-I-066, AE-I-067, AE-I-068, AE-I-069, AE-I-070, AE-I-071, AE-I-073, AE-I-078, AE-I-084, AE-I-089, AE-I-099, AE-I-103, AE-I-106, AE-I-107, AE-I-109, AE-I-110, AE-I-112, AE-I-115, AE-I-117, AE-I-121, AE-I-124, AE-I-126, AE-I-128, AE-I-130, AE-I-131, AE-I-132, AE-I-134, AE-I-135, AE-I-140, AE-I-142, AE-I-143, AE-I-146, AE-I-147, AE-I-148, AE-I-149, AE-I-150, AE-I-151, AE-I-156, AE-I-160, AE-I-191, AE-I-192, AE-I-193, AE- P-018, AE-P-019, AE-P-095, AE-P-097, AE-P-099, AE-P-102, AE-P-103, AE-P-105, AE-P-106, C011, C012, C128, C130, C2006, C3001, C316, C812, P001, P004, P034, P038, P039, P055, P068, P069, P070, P3001, P3002, P3003, P3004, P320, P327, P329, P331, P386, P387, P389, P392, P407, P469, P472, P475, P480, P484, P485, P486, P487, P489, P490, P492, P503, P507, P516, P520, P521, P532, P536, P537, P539, P540, P546, P548, P552, P554, P556, P557, P566, P568, P574, P578, P580, P604, P620, P621, P816, P817, P819, P822, P826, P829, U065, U085 and U2010 in Summation of Aspects of AK Summary Report: Waste Stream ID-AECHDM, Source Documents Used			
(27C) Safety Analysis Reports: See AE-I-050, AE-P-044, AE-P-045, AE-P-106, C103, C2004, P004, P031, P2010, P2012, P2018, P380 and P617 in Summation of Aspects of AK Summary Report: Waste Stream ID-AECHDM, Source Documents Used			
(27D) Waste packaging logs: See AE-I-077, AE-I-079, C333, DR3003, P3001, P3002, P3003, U015, U017, U018, U019, U021, U022, U041, U3001, U3002 and U3003 in Summation of Aspects of AK Summary Report: Waste Stream ID-AECHDM, Source Documents Used			

(27E) Test plans/research project reports: See AE-I-008, AE-I-050, AE-I-055, AE-I-060, AE-I-165, AE-I-181, AE-I-182, AE-I-183, AE-I-184, AE-I-186, AE-I-187, AE-P-058, AE-P-059, AE-P-060, AE-P-061, AE-P-062, AE-P-063, AE-P-064, AE-P-065, AE-P-066, AE-P-067, AE-P-106, C011, C039, C2004, C2005, C2007, P1002, P2001, P2002, P2003, P2004, P2005, P2007, P2008, P2009, P2017, P2019, P2020, P2021, P2022, P2023, P2024, P2025, P2026, P2027, P2028, P2029, P2030, P326, P344, P372, P373, P375, P505, P509, P572, P575, P602, P607, P815, P816, P817, P821, P827 and U830 in Summation of Aspects of AK Summary Report: Waste Stream ID-AECHDM, Source Documents Used	
(27F) Site databases: See U076, U2002, U2004, U3002, U3005 and U307 in Summation of Aspects of AK Summary Report: Waste Stream ID-AECHDM, Source Documents Used	
(27G) Information from site personnel: See AE-C-003, AE-C-004, AE-C-006, AE-C-011, AE-C-013, AE-C-017, AE-C-019, AE-C-020, AE-C-022, AE-C-024, AE-C-027, AE-C-032, AE-C-035, AE-C-036, AE-C-037, AE-C-038, AE-C-042, AE-I-002, AE-I-012, AE-I-029, C006, C066, C124, C137, C2008, C2009, C3003, C302 and U3001 in Summation of Aspects of AK Summary Report: Waste Stream ID-AECHDM, Source Documents Used	
(27H) Standard industry documents: See C016 and P004 in Summation of Aspects of AK Summary Report: Waste Stream ID-AECHDM, Source Documents Used	
(27I) Previous analytical data: See U3006, C035, C116, C152, C160, C3002, C333, P1002, P3004, P821 and U304 in Summation of Aspects of AK Summary Report: Waste Stream ID-AECHDM, Source Documents Used	
(27J) Material safety data sheets: See AE-C-022, AE-C-023, AE-I-052, C143, P325, U072 and U076 in Summation of Aspects of AK Summary Report: Waste Stream ID-AECHDM, Source Documents Used	
(27K) Sampling and analysis data from comparable/surrogate Waste: See U3006, C116, C143, C160, C3002, DR3001, P004, P023 and U3002 in Summation of Aspects of AK Summary Report: Waste Stream ID-AECHDM, Source Documents Used	
(27L) Laboratory notebooks: See AE-I-015 in Summation of Aspects of AK Summary Report: Waste Stream ID-AECHDM, Source Documents Used	
Confirmation Information	
For the following, when applicable, enter procedure title(s), number(s) and date(s)	
(28)	Radiography: CCP-TP-053, Revision 11, July 20, 2011
(29)	Visual Examination: NA

(30) Comments: For a list of the waste characterization procedures used and date of respective procedures see the list of procedures on the attached CIS.

Reviewed by AK Expert: YES [X] Date: 11/11/2011

Reviewed by STR (if necessary): YES [X] N/A [ ] Date: 11/29/2011

Waste Stream Profile Form Certification:

I hereby certify that I have reviewed the information in this Waste Stream Profile Form, and it is complete and accurate to the best of my knowledge. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

(31)	(32) Jim Vernon	(33)
Signature of Site Project Manager	Printed Name	Date

NOTE: (1) If, radiography, visual examination were used to confirm EPA Hazardous Waste Numbers, attach signed Characterization Information Summary documenting this determination.

(2) This waste was also generated by the following defense activities: Weapons activities including defense inertial confinement fusion; Verification and control technology; Naval reactors development; Defense research and development; Defense nuclear materials production; and Defense nuclear waste and materials security and safeguards and security investigations.

CHARACTERIZATION INFORMATION SUMMARY

WSPF # ID-AECHDM

Lot 1

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CCP Characterization Information Summary Cover Page

Waste Stream # ID-AECHDM Lot #: 1

AK Expert Review: N/A Date: N/A

SPM Review: Jim Vernon Date: 12/7/2011

SPM signature certifies that through Acceptable Knowledge testing and/or analysis that the waste identified in this summary is not corrosive, ignitable, reactive, or incompatible with the TSDF.

A summary of the Acceptable Knowledge regarding this waste stream containing specific information about the corrosivity, reactivity, and ignitability of the waste stream is included as an attachment to the Waste Stream Profile Form. By reference, that information is included in this lot.

List of procedures used:

Real-Time Radiography (RTR):

CCP-TP-053	Rev. 11	07/20/11	CCP Standard Real-Time Radiography (RTR) Inspection Procedure

Non Destructive Assay (NDA):

CCP-TP-115	Rev. 4	06/24/09	CCP SWEPP Gamma-Ray Spectrometer (SGRS) Operating Procedure

Headspace Gas Analysis:

CCP-TP-093	Rev. 16	09/07/11	CCP Sampling of TRU Waste Containers
CCP-TP-173	Rev. 1	09/30/09	CCP Analysis of Gas Samples for VOCs by GC/FID
CCP-TP-175	Rev. 3	08/02/11	CCP Analysis of Gas Samples for VOCs by GC/MS

Project Level Data Validation / DQO Reconciliation:

CCP-TP-001	Rev. 19	12/29/10	CCP Project Level Data Validation and Verification
CCP-TP-002	Rev. 23	12/29/10	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-003	Rev. 18	12/29/10	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-005	Rev. 23	06/30/11	CCP Acceptable Knowledge Documentation
CCP-TP-030	Rev. 29	04/26/11	CCP CH TRU Waste Certification and WWIS/WDS Data Entry

WAP Certification:

CCP-PO-001	Rev. 20	06/16/11	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-002	Rev. 26	07/14/11	CCP Transuranic Waste Certification Plan

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-AECHDM Lot # 1

Container ID Number	NDA BDR	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Headspace Gas BDR				GGT BDR
							Sample	Analysis			
RW47763	INNDAS110152	INRTR5110102	N/A	N/A	N/A	N/A	INHSG1111	ECL11036M	N/A	N/A	N/A
RW47765	INNDAS110150	INRTR5110101	N/A	N/A	N/A	N/A	INHSG1111	ECL11036M	N/A	N/A	N/A
RW47784	INNDAS110152	INRTR5110102	N/A	N/A	N/A	N/A	INHSG1111	ECL11036M	N/A	N/A	N/A
RW47969	INNDAS110152	INRTR5110102	N/A	N/A	N/A	N/A	INHSG1111	ECL11036M	N/A	N/A	N/A
RW48074	INNDAS110152	INRTR5110102	N/A	N/A	N/A	N/A	INHSG1111	ECL11036M	N/A	N/A	N/A
RW48081	INNDAS110150	INRTR5110101	N/A	N/A	N/A	N/A	INHSG1111	ECL11036M	N/A	N/A	N/A
RW48192	INNDAS110152	INRTR5110102	N/A	N/A	N/A	N/A	INHSG1111	ECL11036M	N/A	N/A	N/A
RW48198	INNDAS110152	INRTR5110102	N/A	N/A	N/A	N/A	INHSG1111	ECL11036M	N/A	N/A	N/A
RW48201	INNDAS110150	INRTR5110101	N/A	N/A	N/A	N/A	INHSG1111	ECL11036M	N/A	N/A	N/A
RW49571	INNDAS110152	INRTR5110102	N/A	N/A	N/A	N/A	INHSG1111	ECL11036M	N/A	N/A	N/A

Signature of Site Project Manager

Jim Vernon
Printed Name

12/7/2011
Date

CBS - 003

CCP Headspace Gas UCL_{90} Evaluation Form

WSPF #: ID-AECHDM **Waste Stream Lot Number** 1 through 1

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL [1]	# Samples	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Acetone	Log	10	10	1.8871	-1.6080	1.4241	-0.9852	100	4.6052		
Benzene	SQRT	8	10	0.3000	0.1875	0.0766	0.2210	10	3.1623		
Bromoform	Log	0	10	-4.7677	-5.8051	0.3974	-5.6313	10	2.3026		
Butanol	Log	6	10	0.0000	-2.5870	1.6045	-1.8852	100	4.6052		
Carbon Disulfide[a]	Log	10	10	3.2958	-0.0598	2.1404	0.8763	10	2.3026		
Carbon Tetrachloride	No	9	10	0.0230	0.0169	0.0049	0.0190	10	N/A		
Chlorobenzene	Log	0	10	-4.1352	-5.1500	0.3905	-4.9792	10	2.3026		
Chloroform	Log	3	10	-3.0159	-4.4273	0.8338	-4.0627	10	2.3026		
Chloromethane[a]	Log	4	10	-1.7720	-2.9246	0.6882	-2.6237	10	2.3026		
Cyclohexane[a]	Log	6	10	-2.3645	-4.2196	0.9103	-3.8215	10	2.3026		
1,1-Dichloroethane	Log	0	10	-3.5936	-4.6286	0.3973	-4.4548	10	2.3026		
1,2-Dichloroethane	Log	1	10	-2.4534	-4.0507	0.6802	-3.7532	10	2.3026		
1,1-Dichloroethylene	Log	0	10	-3.4265	-4.4462	0.3908	-4.2753	10	2.3026		
cis-1,2-Dichloroethylene [a]	Log	0	10	-3.9120	-4.9291	0.3923	-4.7575	10	2.3026		
trans-1,2-Dichloroethylene	Log	0	10	-3.6306	-4.6482	0.3887	-4.4782	10	2.3026		
1,2-Dichloropropane[a]	Log	0	10	-5.2030	-6.2521	0.4015	-6.0766	10	2.3026		
Ethyl benzene	Log	5	10	0.9555	-3.6000	2.1583	-2.6560	10	2.3026		
Ethyl Ether	Log	0	10	-2.9004	-3.9577	0.4029	-3.7815	100	2.3026		
Methanol	Log	8	10	2.0015	-0.6397	1.5439	0.0355	100	4.6052		
Methyl Ethyl Ketone	Log	2	10	0.6419	-3.2211	1.4868	-2.5709	100	4.6052		
Methyl Isobutyl Ketone	SQRT	5	10	0.1581	0.0927	0.0383	0.1095	100	10.0000		
Methylene Chloride	Log	2	10	-1.0788	-3.8844	1.0747	-3.4144	10	2.3026		
1,1,2,2-Tetrachloroethane	Log	0	10	-4.9618	-5.9609	0.3843	-5.7928	10	2.3026		
Tetrachloroethylene	Log	4	10	-2.3752	-5.1829	1.2269	-4.6463	10	2.3026		
Toluene	Log	10	10	1.9459	0.0339	1.1883	0.5536	10	2.3026		
1,1,1-Trichloroethane	SQRT	5	10	0.1342	0.0970	0.0234	0.1073	10	3.1623		
Trichoroethylene	SQRT	7	10	0.1844	0.1157	0.0393	0.1329	10	3.1623		
1,1,2-Trichloro-1,2,2-trifluoroethane	Log	0	10	-4.6565	-5.6627	0.3874	-5.4932	10	2.3026		

CCS-004

CCP Headspace Gas UCL_{90} Evaluation Form

WSPF #: ID-AECHDM **Waste Stream Lot Number** 1 through 1

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL [1]	# Samples	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
1,3,5-Trimethylbenzene[a]	Log	4	10	-2.4889	-4.6164	1.2607	-4.0650	10	2.3026		
1,2,4-Trimethylbenzene[a]	Log	4	10	-1.6094	-3.9692	1.4912	-3.3170	10	2.3026		
m/p-Xylene[b]	Log	8	10	2.1633	-2.8230	2.3918	-1.7769	10	2.3026		
o-Xylene	Log	6	10	0.4700	-3.3563	2.2837	-2.3575	10	2.3026		

[a] These compounds are from the CH-TRAMPAC or CH-TRUCON and are flammable VOCs that do not appear in the QAPjP or the WIPP WAP. These are not part of the target analyte list, but samples may be analyzed for these compounds.

[b] These xylene isomers cannot be resolved by the analytical methods employed in the program. m-Xylene and p-Xylene will be reported as "Total m-p-Xylene."

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per section C4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

Signature of Site Project Manager

Jim Vernon
Printed Name

12/7/2011
Date

CBS - 005

CCP Headspace Gas Summary Data

Waste Stream Number ID-AECHDM Lot Number (s) 1 through 1

Tentatively Identified Compound	Maximum Observed Estimated Concentrations (ppmv)	# Samples Containing TIC	% Detected
NONE	N/A	N/A	N/A

Data Supports EPA Hazardous Waste Numbers Assigned by AK? Yes ☑ No ☐

If no, describe the basis for assigning the EPA Hazardous Waste Codes:

SPM Signature _____ Date 12/7/2011

CBS-006

CCP RTR/VE Summary of Prohibited Items and AK Confirmation

Waste Stream Number: ID-AECHDM Lot #: 1

Container Number	RTR Prohibited Items [a,b]	Visual Examination Prohibited Items [a,b]
See correlation of container ID numbers for list of remaining drum numbers in this Lot.	None of the containers in this lot had prohibited items identified during RTR.	VE was not used to certify any containers in this Lot.

a. See Batch Data Reports
b. If AK has assigned U134 to this waste stream, then any liquids in these containers are prohibited items (not acceptable by the TSDF).

Justification for the selection of RTR and/or VE: RTR was selected as the characterization method for this lot because the waste containers were previously packaged and RTR is an acceptable characterization method to meet all the Data Quality Objectives for NDE of waste stream ID-AECHDM.

Site Project Manager Signature | Jim Vernon (Printed Name) | 12/7/2011 (Date)

CIS-007

CCP Reconciliation with Data Quality Objectives

WSPF# ID-AECHDM Lot # 1

Sampling Completeness

RTR/VE

Number of Valid Samples: 10 Number of Total Samples Analyzed: 10
Percent Complete: 100 (QAO is 100%)

NDA

Number of Valid Samples: 10 Number of Total Samples Analyzed: 10
Percent Complete: 100 (QAO is 100%)

HSG

Number of Valid Samples: 10 Number of Total Samples Collected: 10
Percent Complete: 100 (QAO is ≥90%)
Number of Valid Samples: 10 Number of Total Samples Analyzed: 10
Percent Complete: 100 (QAO is ≥90%)

Total VOC

Number of Valid Samples: NA Number of Total Samples Collected: NA
Percent Complete: NA (QAO is ≥90%)
Number of Valid Samples: NA Number of Total Samples Analyzed: NA
Percent Complete: NA (QAO is ≥90%)

Total SVOC

Number of Valid Samples: NA Number of Total Samples Collected: NA
Percent Complete: NA (QAO is ≥90%)
Number of Valid Samples: NA Number of Total Samples Analyzed: NA
Percent Complete: NA (QAO is ≥90%)

Total Metals

Number of Valid Samples: NA Number of Total Samples Collected: NA
Percent Complete: NA (QAO is ≥90%)
Number of Valid Samples: NA Number of Total Samples Analyzed: NA
Percent Complete: NA (QAO is ≥90%)

CDS-008

CCP Reconciliation with Data Quality Objectives

WSPF# ID-AECHDM Lot # 1

	Y/N/NA	Reconciliation Parameter
1	Y	Waste Matrix Code.
2	Y	Waste Material Parameter Weights.
3	Y	The waste matrix code identified is consistent with the type of sampling and analysis used to characterize the waste.
4	Y	The TRU activity reported in the BDRs for each container demonstrates with a 95% probability that the container of waste contains TRU radioactive waste.
5	N	AK Sufficiency. Is there an approved AK sufficiency Determination for this waste stream?
6	Y	Mean concentrations, UCL_{90} values for the mean concentration, standard deviations, and the number of samples collected for each VOC in the HSG of each container were calculated and compared with the program required quantitation limits, as reported in CCP-TP-003 Attachment 3, and additional U.S. Environmental Protection Agency (EPA) Hazardous Waste Numbers were assigned as required. Samples were randomly collected (when appropriate).
7a	NA	Mean concentrations, UCL_{90} values for the mean concentration, standard deviations, and the number of samples collected for solids VOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003 Attachment 4, and additional EPA HWNs were assigned as required. Samples were randomly collected.
7b	NA	Mean concentrations, (UCL_{90}) values for the mean concentration, standard deviations, and the number of samples collected for solids SVOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003 Attachment 5, and additional EPA HWNs were assigned as required. Samples were randomly collected.
7c	NA	Mean concentrations, (UCL_{90}) values for the mean concentration, standard deviations, and the number of samples collected for total metals were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003 Attachment 6, and additional EPA HWNs were assigned as required. Samples were randomly collected.

CCP Reconciliation with Data Quality Objectives

WSPF# ID-AECHDM Lot # 1

8	Y	The data demonstrates whether the waste stream exhibits a toxicity characteristic under Title 40 Code of Federal Regulations (CFR), Part 261, Identification and Listing of Hazardous Waste, Subpart C, Characteristics of Hazardous Waste.
9	Y	Does the waste stream contain listed waste found in 20.4.1.200 NMAC incorporating 40 CFR Part 261, Subpart D, Lists of Hazardous Wastes.
10	Y	Waste stream can be classified as hazardous or nonhazardous at the 90-percent confidence level.
11	Y	Appropriate packaging configuration and Drum Age Criteria (DAC) is applied and documented in the headspace gas sampling documentation, and the drum age met prior to sampling.
12	Y	TICs were appropriately identified and reported in accordance with the requirements of Section C3-1 of the QAPjP.
13	Y	The PRQLs for headspace gas VOCs were met for all analyses as evidenced by the analytical batch data reports.
14		The overall completeness, comparability, and representativeness QAOs were met for each of the analytical and testing procedures as specified in the WAP Sections C3-2 through C3-9 prior to submittal of a waste stream profile form for a waste steam or waste stream lot.

	Completeness	Comparability	Representativeness
Radiography	Y	Y	Y
VE	NA	NA	NA
Headspace Gas Analysis	Y	Y	Y
Solids Sampling	NA	NA	NA
Solids VOCs	NA	NA	NA
Solids SVOCs	NA	NA	NA
Solids Metals	NA	NA	NA

Comments:

None

Signature of Site Project Manager | Jim Vernon, Printed Name | 12/7/2011, Date

CDS-010

SUMMATION OF ASPECTS OF AK SUMMARY REPORT: ID-AECHDM

Overview:

Argonne, previously known as Argonne National Laboratory-East, is a multi-disciplinary research laboratory that performs work in basic and applied science in the areas of engineering, energy technology, chemistry, physics, materials, biomedicine, and environmental studies (References AE-P-027 and AE-P-090). Argonne grew from the initial experiments performed at the University of Chicago in 1941 to produce plutonium for nuclear weapons (Reference AE-P-028). Officially founded in 1946 as the first national laboratory, Argonne has been instrumental in the development of nuclear reactors and associated systems, materials, fuel elements, and components for use in both civilian and defense programs (Reference AE-P-027). This work included key participation in the development of essentially all the domestic nuclear reactor systems in use today for isotope production, power generation, and naval submarine propulsion, as well as experimental or proposed applications for weapons destruction, defense waste management, defense security and safeguards, and space propulsion (References AE-P-027, AE-P-028, AE-P-042, AE-P-043, AE-P-047, AE-P-049, AE-P-051, AE-P-052, AE-P-053, and AE-P-071 through AE-P-085).

The waste described in this report was generated during the repackaging of the historic waste materials generated by the Argonne facilities supporting the operations described above. Waste stream ID-AECHDM consists of contact-handled (CH) heterogeneous debris waste from laboratory and maintenance operations packaged in Argonne Building 306 from July 2010 through September 2011. This CH transuranic (TRU) waste has been shipped to the Advanced Mixed Waste Treatment Project (AMWTP) located at the Idaho National Laboratory (INL). The waste will be stored and characterized at the Radioactive Waste Management Complex (RWMC) Transuranic Storage Area (TSA) at INL.

TRU waste generated at Argonne meets the definition of defense waste. The waste originated from, or commingled with, materials from defense activities including; defense nuclear waste and materials by-products management; naval reactors development; weapons activities, including inertial confinement fusion, verification and control technology, defense nuclear materials production, defense nuclear materials security and safeguards and security investigations; and defense research and development.

This Summation of the AK Summary Report includes information to support Waste Stream Profile Form (WSPF) number ID-AECHDM. The primary source of information for this Summation is CCP-AK-INL-025, Central Characterization Project Acceptable Knowledge Summary Report For Idaho National Laboratory Argonne Contact-Handled Transuranic Waste From Facility Maintenance and Laboratory Operations, Waste Streams: ID-AECHDM, ID-AECHHM.

Waste Stream Identification Summary:

Waste Stream Name:	Argonne Heterogeneous Debris Waste
Waste Stream Number:	ID-AECHDM
Waste Stream Volume, Current:	40 55-gallon drums
Waste Stream Volume, Projected:	None
Generation Dates:	July 2010 – September 2011
Summary Category Group:	S5000
Waste Matrix Code Group:	Heterogeneous Debris Waste
Waste Matrix Code:	S5400, Heterogeneous Debris
TRUPACT-II Content Code (TRUCON):	AE 116, AE 216, SQ 125, SQ 133, SQ 225, SQ 233

Annual Transuranic Waste Inventory Report
Identification Number: AE-T001

Waste Stream Description and Physical Form:

Waste stream ID-AECHDM is mixed heterogeneous debris consisting of repackaged waste from historic laboratory and maintenance operations at Argonne packaged by the Argonne Waste Management Organizations Department (WMO) in Building 306.

Waste stream ID-AECHDM is waste materials that have common physical form, that contain similar hazardous constituents, and are generated from a single process or activity. The activity that generated the waste is a repackaging campaign of waste from historic laboratory operations and the associated maintenance operations.

The waste consists primarily of organic and inorganic laboratory debris. Based on a review of the feed container and final 55-gallon drum packaging documentation drums in waste stream ID-AECHDM may included the following waste materials:

- **Metal** materials include the following: aluminum, stainless steel, and iron items; cans, lids, trays, wire, targets, disks, gauges, pipe, fittings, valves, bolts, clips, screws, tubing, tools (e.g., forceps, vise, tweezers, scissors, pliers, razor knives, and saw blades), screens, planchettes, foil, columns, racks, unistruts, and pressure cookers.

- **Other metal** materials include the following: copper, lead, brass items; pipe, tubing, fittings, sheeting, shot, and boxes.

- **Other inorganic materials** include the following: glass and ceramic items; bottles, jars, labware (e.g., pipettes, vials, flasks, beakers, and test tubes), crucibles (magnesium and beryllium oxide), leaded glass panes, and insulation (fiber glass and asbestos).

- **Cellulosic** materials include the following: paper, cardboard, cloth, and wood items; rags, towels, filters, cartons, boxes, personnel protective equipment (PPE) (e.g., suits and booties), lab coats, gloves (leather), and handles (wood).

- **Rubber** items include: gloves, tubing, o-rings, stoppers, cords, and gaskets.

- **Plastic** items include: bottles, lids, labware (vials, pipettes, and syringes), tubes, PPE (e.g., gloves, filter cartridges, tape), bags, sheeting, epoxy sample/source mounts, and rope (nylon).

In addition, the following specific waste items were identified during the review of the container documentation; smoke detectors, circuit boards, alkaline batteries, strippable paint, pumps, electric motors, high efficiency particulate air (HEPA) hood filters, floor sweepings, mercury and incandescent light bulbs, and light fixtures. The waste stream also contains secondary debris waste items generated during the repackaging of TRU waste, including empty containers, decontamination materials (rags), PPE, and any other debris materials generated by this operation.

In addition to the debris materials described above, waste stream ID-AECHDM also contains lesser amounts (less than 50 percent in any container) of homogeneous organic and inorganic materials from laboratory operations. Clay and vermiculite based absorbents were used during the neutralization and evaporation of acids, etchants, and solutions in the laboratories (see Argonne Waste Repackaging Process description). Solidification agents such as Portland cement, Acid Bond, Aquaset, Petroset, or Petrobond may have been used to immobilize some liquids. In addition, as much as 20 pounds of precautionary absorbent (e.g., Aquaset) have been added to the containers. Absorbent pads (Quicksolid pads) have also been used during the packaging of containers. Lesser amounts of soil and gravel materials were also noted during the packaging of containers in this waste stream.

Point of Generation: Argonne - Argonne, Illinois

Area and/or Building of Generation:

The primary Argonne facilities that generated this waste stream are: Buildings 200, 205, 212, 306 315/316, and 350 (New Brunswick Laboratory). Minor quantities of waste were also generated at Buildings 40, 202, 203, 206, 211, 222, 223, 330, 331, 333, 362,

369, 378, 391, 398, and 815. Waste from these buildings has been commingled with waste from the primary facilities in existing containers.

Generating Processes:

Description of Waste Generating Processes

Argonne is a multi-disciplinary research laboratory that performs work in support of numerous areas of basic and applied sciences; including engineering, energy technology, chemistry, physics, materials, biomedicine, and environmental studies. Waste stream ID-AECHDM consists of debris repackaged by the WMO in Building 306 generated during Argonne maintenance and waste management operations. The waste originated from numerous facilities on site over decades of research and development support in the laboratories and hot cells in these facilities. Due to the generally short-term and research and development nature of these numerous and ongoing TRU waste generating operations, development of a comprehensive description of all of these historic operations and processes is not feasible. However, extensive research relating to the general operations conducted in these buildings was performed to allow for adequate physical, radiological, and chemical characterization of the waste stream during the repackaging of these waste materials.

There are six primary facilities where TRU waste was generated at Argonne: Buildings 200, 205, 212, 306, 315/316, and 350. Building 200 housed two different generator entities, Chemistry Division (CHM) and the Analytical Chemistry Laboratory (ACL) operated by the Argonne Chemical Technology Division (CMT). Building 212 housed two generator entities, both operated by the Energy Technology Division (References AE-C-027, AE-P-009, AE-P-010, AE-P-028, AE-P-044, AE-P-054, AE-P-090, and AE-P-106).

Building 200 - Chemistry Division

CHM is headquartered in Building 200 and its primary mission is to support development of future energy technologies in fusion, fission, and solar energy (References AE-P-107 and AE-P-108). In addition to this, many of the CHM programs and projects have supported waste management efforts at Department of Energy (DOE) facilities throughout the complex (References AE-P-107 through AE-P-112, and AE-P-125). They have also supported investigation into radioactive waste forms, specifically borosilicate glass.

CHM performs all of its radioactive work in the M-Wing in Building 200. M-Wing is set up as three different areas: the cold labs used for materials preparation for research, the hot labs used for work with radioactive materials, and the hot cells, used for work with high-gamma radiation materials. The hot labs in M-Wing consist of numerous laboratories, each set up with unique equipment (e.g., a spectrophotometer) and related ancillary equipment (e.g., hoods, drains, chemical handling equipment). Because of the unique nature of the equipment in each laboratory, a particular research project may

use any or all laboratories depending on the type of work involved (References C353, C354, P616, and U339).

CHM developed the TRU extraction (TRUEX) and related strontium extraction (SREX) processes to recover TRU radionuclides and strontium, respectively, from radioactive wastes (References AE-P-107 through AE-P-112). Both the TRUEX and SREX processes had direct application to the tank waste at Hanford. CHM also developed a process using thermally unstable complexants to enhance the TRUEX process and provide a wider applicability to radioactive waste and spent nuclear fuel processing. Other key DOE programs that CHM has supported include monitoring waste isolation, isotope separation, waste management source term monitoring, development of a new ion exchange resin to address alpha-emitting mixed waste, by-product recovery from nuclear waste, and disposal options for actinide-contaminated waste. CHM is currently being funded directly by the DOE Defense Programs office for research and development in radiation damage to borosilicate glass, waste minimization during decontamination and decommissioning (D&D) projects, long-term performance of stored radioactive waste glass forms, immobilization of actinides in high-level waste, and radionuclide behavior in alkaline tank wastes.

Buildings 200 and 205 - Chemical Technology Division

CMT is headquartered in Building 205 (Reference AE-P-054). The facilities involved with TRU waste generation are the G- and K-Wing laboratories, which were designed for experimental work with radioactive materials. The ACL is operated by CMT in three locations: Building 200 (F-, K-, and N-Wings), Building 203 (A-Wing), and Building 205 (G- and K-Wings) (Reference AE-C-004). No TRU waste was generated from CMT's operations in Building 203.

The Building 205 laboratories in the G-Wing contain various types of analytical and pilot-scale equipment, which changes based on the types of work being performed. The K-Wing is situated on the ground floor of the building and consists of three hot cells (referred to as the Senior Cave), a manipulator room for the hot cells (operating area), a support area including isolation rooms behind the hot cells, and a combination workshop manipulator preparation area (service area) (References C2002, C2003, C2004, C2005, C2006, C2007, P2000, P2016, and P2018).

The ACL laboratories in Building 200 are set up for chemical preparation of analytical samples from a variety of Argonne programs, and for instrumental analysis of the prepared samples to determine inorganic constituents or isotopic composition. The laboratories contain various types of analytical chemistry instruments, including mass spectrometers, inductively-coupled plasma spectrometers, atomic absorption spectrophotometers, and elemental analyzers.

Originally, the CMT division's only mission was to develop processes for recovery of spent nuclear fuels. Over the years, the division's mission expanded to include research and development in a wide variety of chemistry and related applications, including fuel cells, radioactive waste management, environmental chemistry,

geochemistry, and operation of the ACL. Today, CMT's primary mission is the safe application of chemical and engineering disciplines and techniques to process design and development in areas that are energy related, or are related to other parts of the DOE charter such as nuclear energy, waste management, environmental restoration and remediation, production and transformation of nuclear and other materials, and energy utilization (Reference AE-P-124).

CMT has been involved in numerous reactor and waste management programs during the 1980s and 1990s (References AE-I-028 through AE-I-031, AE-I-038, AE-I-039, AE-I-040, AE-I-044, AE-I-046, AE-I-048, AE-I-049, AE-I-050, AE-I-052, AE-I-054, AE-I-055, AE-I-070, AE-I-071, AE-I-073, AE-I-165, and AE-P-054 through AE-P-067). Reactor program involvement included work on the Integral Fast Reactor (IFR) fuel cycle, fuel treatment studies using Hanford N-reactor fuel, and Proof-of-Breeding studies for naval nuclear reactors. Waste management program support included studies for the Defense Waste Processing Facility at the Savannah River Site (SRS) in support of the Yucca Mountain Project; radiolytic gas generation studies for ceramicrete waste forms; fabricating, characterizing, and testing ceramic waste forms for weapons plutonium disposal; testing of vitrified waste forms for application to the Hanford tank wastes; developing final flowsheets for the TRUEX process using New Brunswick Laboratory (NBL) waste and for application to Hanford wastes; and plutonium recovery from defense waste (scrap and residues) in cooperation with the Lawrence Livermore National Laboratory (LLNL) and SRS. CMT has also provided direct support to the Waste Isolation Pilot Plant (WIPP) program for actinide solubility in brine studies.

Building 212 - Energy Technology Division

The overriding design criterion for Building 212 was to allow Argonne to carry on research programs pertinent to the advancement of reactor technology, with a particular emphasis on the use of plutonium as fuel (Reference AE-P-037).

Building 212 is laid out in eight wings (Reference AE-P-037). D-Wing was identified as the "Plutonium Physical Metallurgy Laboratory" and was equipped to perform various metallurgical operations, including: metallography, welding, materials processing, x-ray diffraction, melting/casting, machining, heat treatment, and passivation (References AE-P-037 and AE-P-038). Various types of equipment were placed inside the gloveboxes to support D-Wing operations (e.g., hydraulic press, tools, lathes, furnaces, hot plates). (References AE-C-011 and AE-P-005).

Specific research and development programs that were conducted by the Metallurgy Division included fast reactors, breeder reactors, ceramic fuels (including cermet fuels), thorium-uranium-plutonium alloy fuels, fuel cells, fusion reactors, Zero Power Reactors, Liquid Metal Fast Breeder Reactors (LMFBR), Integral Fast Reactors (IFR), Gas-Cooled Fast Reactors, and the Strategic Defense Initiative (SDI) program (References AE-P-029 through AE-P-036). Specific programs that were conducted in D-Wing include: breeder reactors (e.g., Experimental Breeder Reactor [EBR], LMFBR, and IFR), cermet fuels, SDI, and plutonium passivation for the entire laboratory (References AE-C-003 and AE-I-001 through AE-I-017).

The Alpha Gamma Hot Cell Facility (AGHCF) in the F-Wing of the building was built in the late 1950s and started operations in the early 1960s as the "Fuels Technology Center" under the direction of the Metallurgy Division. The AGHCF was capable of in-depth post-irradiation examinations of fuel elements, fuel, cladding, and structural materials, and small test components. A shielded microscope was connected to the cell by a nitrogen pneumatic transfer system. The shielded gloveboxes were used for preparing small specimens of fuel for electron microscopy, or other tests, and for density measurements on claddings (References C138, C335, P002, P004, P378, and P380).

During early operations, the AGHCF was used primarily for the Post-Irradiation Examination (PIE) metallographic studies of fuel and structural materials. As the emphasis in reactor development programs changed, additional equipment and techniques were developed to supply the information required in these new areas of interest. Specifically, this included information relating to the behavior of advanced ceramic fuel materials, such as the mixed carbides and mixed oxides of uranium and plutonium. Fuel materials received and examined by the AGCHF originated from the Argonne National Laboratory-West (ANL-W) reactors including the EBR-II, Transient Reactor Test Facility (TREAT), Fast Flux Text Facility (FFTF), Materials Test Reactor (MTR), and Advanced Test Reactor (ATR) test and research reactor facilities. Other test materials were also received from SRS, Hanford, Oak Ridge National Laboratory (ORNL), and Los Alamos National Laboratory (LANL) operations (References C016, C046, C074, C082, C108, C138, C155, C157, C812, C2005, C2007, C2011, C2022, C2023, C2024, P002, P013, P061, P329, P520, P532, P606, P607, P815, P816, P817, P822, P826, P827, P829, P2032, P2033, P2034, U045, U076, U1003, and U2002).

Buildings 315/316 – Reactor Research and Development Group

Although a relatively minor generator compared to the other facilities described, Buildings 315/316 did generate TRU waste. Buildings 315/316 housed a reactor research and development group from the early 1950s through the mid 1980s (Reference AE-C-027). The buildings acted as a self-contained facility for design, mock-up, and construction of bench scale models of various reactor systems. Reactor systems designed and evaluated at these buildings included the Navy propulsion Nautilus reactor, the Zero Power series of reactors and the series of fast reactors developed by Argonne. Fast reactors included the IFR, the Fast Breeder Reactor, and the LMFBR.

Building 306 - Waste Management Organization

Building 306 is used by the Argonne WMO for waste treatment and repackaging operations, as well as waste storage. The waste repackaged by WMO originated from numerous TRU waste generating operations conducted in several facilities at Argonne and was transferred to the WMO for processing. Liquid wastes are neutralized (as necessary), sampled, and solidified before being placed into receiving drums (see Argonne Waste Repackaging Process description). All prohibited items are identified at

this time and either segregated or remediated prior to packaging. As part of these operations, WMO has and continues to routinely commingle waste from various Argonne primary waste generators, including Buildings 200, 205, 212, 315/316, and 350, as well as small quantities of waste from minor waste generating buildings. Commingling of liquid waste during the neutralization and solidification/absorption operations is especially common since this type of waste is normally received in small quantities (e.g., milliliter quantities up to several gallons). In addition, WMO is commingling and consolidating debris waste received in small quantities into single containers (e.g., 55-gallon drums) (References AE-C-025, AE-I-188, AE-I-195, P3002, U3001, U3003, U3004, and U3005).

Building 350 - New Brunswick Laboratory

NBL is dedicated to analytical chemistry and measurement science of materials (primarily plutonium and uranium) critical to the nation's defense and energy programs (Reference AE-P-045). NBL's activities involve measuring the elemental and isotopic composition of nuclear materials either to characterize and certify reference materials or to define the fissile materials content of samples taken by government inspectors for safeguards inventory verification purposes. NBL is also involved with developing or improving methods for the elemental and isotopic measurement of nuclear materials, and evaluating the performance of other nuclear laboratories through comparison programs or onsite inspections. Analyses of nuclear materials, ranging from high-purity metals or alloys to low-purity scrap, are conducted using a variety of methods. Analytical methods include reduction-oxidation titrimetry, controlled-potential and constant-current coulometry, mass spectrometry, isotope-dilution mass spectrometry, and x-ray and gamma ray spectrometry.

Other Generator Buildings

A minor portion of the total inventory of TRU waste at Argonne was generated or managed at several other buildings, including: Buildings 40, 202, 203, 206, 211, 222, 223, 330, 331, 333, 362, 369, 378, 391, 398, and 815. TRU waste from these buildings has been commingled with waste from the primary facilities in existing drums. Based on a review of the AK record relating to TRU waste generating projects at Argonne, these facilities would have generated waste in support of the programs described above resulting in a minimal amount of laboratory waste similar in physical form and radiological and chemical contamination (References AE-C-006, AE-C-024, AE-C-025, AE-I-188, AE-P-006, AE-P-007, U3001, U3003, U3004, and U3005).

Maintenance

Facility maintenance operations may include routine or one-time operations to repair or replace equipment or to clean out facilities. They may also encompass D&D activities, facility modification activities, or daily maintenance activities. Debris waste was generated during maintenance operations at various facilities (References U3001, U3003, U3004, and U3005).

Argonne Waste Repackaging Process

The waste repackaging operations generating the TRU waste streams were conducted by the Argonne WMO in the A160 hood (debris sorting and packaging) and A126 hood (liquid immobilization and packaging) in Building 306. These operations were conducted in accordance with the WMO TRU waste packaging procedures and work plans and all packaging operations were video and audio recorded to verify and document the physical form of the waste, waste stream description, and absence of prohibited items (References C3003, P3001, P3002, P3003, and P3004).

The waste being repackaged by WMO originated from numerous TRU waste generating operations conducted in several facilities at Argonne and was transferred to the WMO for processing in a variety of containers ranging from less than a liter to 55-gallon drums, with a majority of the containers being less than five gallons. Debris waste was removed from these original "feed" containers and inspected before being placed into the payload container. Liquid waste was neutralized (as necessary), sampled, and solidified before being placed in the receiving drums. All prohibited items were identified at this time and either segregated or remediated prior to packaging. Additionally, 20 pounds of absorbent were typically added to between the drum and liners and in the liner to absorb any condensation that may accumulate after packaging. (References C3003, P3001, P3002, P3003, P3004, and U3004).

CH TRU liquid wastes were bulked, neutralized (if necessary), and solidified. The organic liquids consisted primarily of extraction solvents (e.g., tributyl phosphate, dodecane, crown ether, ethyl hexanol, kerosene). Organic liquids were typically solidified using Petroset II-G. Aqueous liquids were typically solidified with Aquaset II-G. Multi-phase liquids were separated prior to solidification to ensure proper immobilization. Bench-scale bulking of these wastes was performed for volumes too small for operation of the bulking tub or the reactor tank. For larger volumes, up to approximately 13 gallons, bulking and neutralization was performed using a bulking tub. For liquid volumes greater than 13 gallons, but less than 120 gallons, bulking and neutralization were performed in a reactor tank (References C3003, P3004, U3003, U3004, and U3005).

For the neutralization of corrosive liquids containing acid solutions (e.g., nitric, hydrochloric, hydrofluoric, perchloric), a WMO Waste Specialist completed additional Calculation Data Sheets, as needed. These data sheets include the chemical requirements for neutralization and solidification. Before treatment, each waste container was transferred to Room A-134 and examined for leaks or other damage and to conduct radiation and contamination surveys. The waste containers were then transferred to the treatment hood in Room A-126. Bulking of wastes was conducted and magnesium hydroxide slurry (60 percent) was added to the bulked waste to neutralize the acidity and increase the pH to the range of 7 to 10. Before neutralization, a sample was taken for radiochemical analysis. The waste liquids were solidified in-situ

in 1-gallon cans or immobilized in trays and placed directly in 55-gal drums. The absorbent to waste ratio is 1.0 gram Aquaset II-G per 1 milliliter waste or 8.3 pounds of absorbent to one gallon of waste (References C3003, P3001, P3002, P3003, and P3004).

RCRA Determinations – Hazardous Waste Determinations

Historical Waste Management

Based on a review of the Argonne container documentation and historic waste management practices, feed containers originally containing waste materials packaged into the waste stream ID-AECHDM drums were historically managed and continue to be managed as hazardous waste (References U3003 and U3004). Notable changes to the HWNs originally assigned to Argonne waste stream AECHDM shipped directly to WIPP during the 2002 to 2003 timeframe, include (Reference DR3001):

- Removal of HWN F003 for solvents listed solely for ignitability in the liquid state.
- Removal of HWN for F001 listed solvents, because large-scale degreasing operations were not conducted in Argonne laboratory operations.
- Addition of HWN D019 and removal of F001 for carbon tetrachloride.
- Removal of HWN D021 (chlorobenzene) and assignment of more specific F002 HWN.
- Addition of D010 for selenium assigned to solidified wastes, because the secondary wastes from the solidification operations would be included in the debris waste stream.
- Addition of HWN D029 for 1,1-dichlorobenzene identified as a potential contaminant during subsequent remote-handled (RH) TRU waste characterization.
- Addition of HWN F002 for tetrachloroethylene identified as a potential contaminant during subsequent RH waste characterization.
- Addition of HWN F005 for isobutanol identified as a potential contaminant during subsequent RH waste characterization.

Waste Stream Material and Chemical Inputs

Chemical/Material	Use/Description	AK Source	EPA HWNs
1,1,1-trichloroethane	Manipulator arm maintenance and cleaning. Cell cleaning solvent. Ingredient of Hyprez lubricant (10-30%)	AE-C-022, AE-I-008, AE-I-011, AE-I-149, AE-I-150, C012, C066. C137, C147, P327, P389, P416, U065, U072, U321	F002
1,1-dichloroethylene	Metallurgical reagent.	C147	D029
1,1,2-trichloro-1,2, 2-trifluoroethane (Freon TA)	Used in the Analytical Chemical Laboratory in cold traps and sample preparation.	AE-D-011, AE-I-032, AE-I-124, AE-I-192	F002
1,2-dichloroethane	Metallurgical reagent and organic solvent.	AE-D-012, AE-I-131, C147	D028
1,4-dichlorobenzene	Spiking solution.	AE-D-012, AE-I-148	D027
2,4-dinitrotoluene	Spiking solution.	AE-D-012, AE-I-148	D030
Arsenazo III	Reagent.	AE-I-184, AE-I-195	D004
Arsenic	Contaminant of HEPA filters and clay absorbent. Present in acidic solutions.	AE-I-184, AE-I-195, C014, P412, U083, U3003	D004
Barium	Contaminant of HEPA filters, clay absorbent, and fluorescent bulbs. Present in dissolved fuel. Reagent.	AE-I-126, AE-I-149, AE-I-150, AE-I-192, AE-I-195, AE-I-199, C035, C116, C160, P412, P416, P2017, P2021, P2022, P2023, P2028, U083, U084, U3003	D005
Barium chromate	Waste product	AE-I-149, AE-I-150	D005 D007
Barium chloride	Molten salt solvent	AE-I-028, AE-I-047, AE-I-126	D005
Barium nitrate	Barium carrier	AE-I-149, AE-I-150	D005
Benzene	Laboratory reagent. Refluxing solvent for ammonium carbonate and Cyanex 301. Standard solution. Solvent.	AE-D-011, AE-I-131, AE-I-187, AE-I-192, AE-P-044, C147, P2022, U066	F005
Cadmium	Contaminant of HEPA filters and pelletized clay. Component of neutron shielding, batteries, photography solutions, and other metal alloys. Present in dissolved fuel. Dosimeter component.	AE-I-028, AE-I-038, AE-I-047, AE-I-050, AE-I-195, AE-P-070, AE-P-095, AE-P-099, C020, C066, C094, C116, C160, P412, P416, P2017, P2021, P2022, P2028, U015, U017, U072, U083, U3003	D006
Cadmium chloride	Pu oxidizing agent.	AE-I-028, AE-I-038, AE-I-047, AE-I-050	D006
Carbon tetrachloride	Immersion density measurements. Metallographic specimen and cell cleaning solvent. Extraction solvent.	AE-C-019, AE-D-005, AE-D-011, AE-I-030, AE-I-031, AE-I-034, AE-I-186, AE-I-193, C066, C081, C137, C147, P416	D019
Chlorobenzene	Standard solution.	AE-D-012, AE-I-131	F002
Chromic acid	Metallography etchant acid.	C066, C137, C147, U006	D007
Chromium	Component of chromic acid etchant, fuel, stainless steel cladding, chromium plated measuring tapes, chromic oxide polishing abrasive, pelletized clay and HEPA filters. Present in leachate solution.	AE-I-010, AE-I-011, AE-I-034, AE-I-035, AE-I-051, AE-I-052, AE-I-084, AE-I-106, AE-I-109, AE-I-149, AE-I-150, AE-I-195, AE-I-199, AE-P-044, AE-P-095, AE-P-099, C066, C116, C137, C160, P412, P490, P2003, P2021, P2023, U006, U068, U069, U070, U072, U074, U083, U084, U3003	D007
Hyprex	Petroleum distillate based lubricant containing 1, 4-dioxane (0-1%) and 1,1,1-trichloroethane (10-30%) used for specimen cleaning.	C012, C029, C066, P062, P069, P389, U072, U321	F002
Isobutanol	Metallurgical reagent – cleaning solvent.	C147, P416	F005
Lead	Component of manipulator weights, metal scrap, leaded glass, shielding, leaded gloves and aprons, blocks, shot, lead wool, lead-bismuth epoxy, paint, lead solder (electronics), flashlight batteries, lead-acid batteries, sodium vapor lamps, and HEPA filter contaminant. Reference Material. Present in leachate solution.	AE-C-032, AE-C-035, AE-C-036, AE-C-037, AE-D-004, AE-I-030, AE-I-195, AE-I-199, AE-P-095, AE-P-099, C013, C029, C066, C088, C091, C137, C143, C147, C148, C333, C341, P023, P038, P039, P380, P412, P416, P484, P485, P487, P489, P490, P521, P536, P537, P557, P2003, P2017, U004, U006, U015, U017, U018, U019, U021, U041, U072, U083, U332, U3003	D008

Chemical/Material	Use/Description	AK Source	EPA HWNs
Mercury	Component of mercury vapor lights, fluorescent lights, batteries, barometers, thermometers, prinometers (density testing), electrodes, and switches. Used in fuel immersion density testing.	AE-D-004, AE-I-006, AE-I-029, AE-I-078, AE-I-084, AE-I-107, AE-I-195, AE-I-199, AE-P-044, AE-P-095, AE-P-096, AE-P-099, C013, C035, C066, C137, C143, C147, C356, P070, P412, P416, P2011, U015, U017, U018, U019, U021, U022, U041, U083, U085, U3003	D009
Methylene chloride	Solvent. Rinse. Extraction solvent.	AE-D-011, AE-I-130, AE-I-148, AE-I-192	F002
Methyl ethyl ketone (MEK)	Building 205 chemical inventory. Solvent.	AE-D-011, AE-I-128, AE-I-192, AE-P-044, P2018	F005
Nitrobenzene	Spiking solution. Reagent/solvent.	AE-D-011, AE-I-148, AE-I-186	F004
Pentachlorophenol	Spiking solution	AE-D-012, AE-I-148	D037
Potassium dichromate	Titrant. Test for orthophosphoric acid. Oxidizing agent. Used to oxidize antimony impurity to Sb(V).	AE-C-019, AE-I-034, AE-I-035, AE-I-084, AE-I-106, AE-I-109, AE-I-195	D007
Selenium	Irradiation experiment reagent. Contaminant of HEPA filter media. Present in dissolved fuel.	AE-I-195, P412, P2028, U006, U083, U3003	D010
Silver	Component of silver nitrate etchant, mounting epoxy, containers, solder (electronics), foil, photographic film and chemicals, and HEPA filter contaminant and screw eyes. Present in dissolved fuel.	AE-C-017, AE-C-022, AE-I-040, AE-I-195, C020, C029, C066, C137, C147, P061, P062, P068, P410, P412, P416, P507, P539, P2017, P2021, P2028, U006, U072, U083, U3003	D011
Silver iodide	Waste material	AE-I-195	D011
Silver nitrate	Metallography etchant reagent for Zircaloy metals. Chloride ion test agent. Chloride detection.	AE-C-022, AE-I-044, AE-I-054, C066, C137, P062, P539, P2026, U006, U321, U3001	D011
Sodium arsenite	Hydrogen charging solution reagent for auger fracture specimens.	P521	D004
Sodium chromate	Precipitation agent.	AE-I-149, AE-I-150	D007
Tetrachloroethylene (perchlorethylene)	Manipulator arm maintenance and cleaning. Cell cleaning solvent. Test solvent.	AE-C-022, AE-I-044, C066, C137, C147, C2009, P416, U066, U2007, U2008, U2009, U2010	F002
Toluene	Manipulator arm maintenance and cleaning. Metallographic specimen and cell cleaning solvent. Component of Krylon Spray. Solvent.	AE-C-022, AE-I-131, AE-I-181, AE-I-184, AE-I-193, AE-P-044, AE-P-054, C012, C066, C137, C147, P062, P410, P416, P2018, U066, U072, U321	F005
Trichloroethylene	Cleaning solvent.	AE-D-011, AE-I-031, AE-I-032	F002

Ignitability, Corrosivity, Reactivity

Based on the review of the Argonne waste management practices and container documentation, no ignitable, corrosive, or reactive materials were disposed of in the waste stream in a liquid or unused form or without being reacted, neutralized, and/or immobilized. Any unused chemicals would have been segregated during packaging and disposed of as low-level waste (Reference P3001, U3003, and U3004).

The debris materials in this waste stream do not meet the definition of ignitability as defined in 40 CFR 261.21. Ignitable organic liquids were used in Argonne laboratory operations and immobilized during repackaging operations in accordance with WMO procedures and work plans. The waste may be contaminated with oxidizers (e.g., nitrates, perchlorates) that were used in Argonne operations, but should be present only in residual quantities (i.e., low concentrations in aqueous solutions). Therefore, the waste does not meet the definition of an oxidizer and will not cause a fire through friction, absorption of moisture, or spontaneous chemical change. All the solidified liquids were immobilized and all residual liquids were absorbed and verified in

accordance with the WMO TRU waste packaging procedures. Any unused chemicals identified during waste repackaging operations have been removed from this waste stream and disposed of as low-level waste. To ensure the final waste form does not exhibit the characteristic of ignitability, free liquids (regardless of quantity) and compressed gases were managed as prohibited items when identified during waste packaging. The materials in this waste stream are therefore not ignitable D001 wastes (References P3001, U3003, and U3004).

The debris materials in this waste stream do not meet the definition of corrosivity as defined in 40 CFR 261.22. As required by WMO procedures and work plans, all corrosive liquids (acidic and basic solutions) have been isolated, neutralized, and immobilized. To ensure that the final waste form does not exhibit the characteristic of corrosivity, liquids (regardless of quantity) have been managed as prohibited items when identified during WMO repackaging operations. The materials in this waste stream are therefore not corrosive D002 wastes (References P3001, P3002, P3003, P3004, U3003, and U3004).

The debris materials in this waste stream do not meet the definition of reactivity as defined in 40 CFR 261.23. The materials are stable and will not undergo violent chemical change. The materials will not react violently with water, form potentially explosive mixtures with water, or generate toxic gases, vapors, or fumes when mixed with water. The material will not readily detonate or undergo explosive decomposition. All the solidified liquids were immobilized and all residual liquids were absorbed and verified in accordance with the WMO TRU waste packaging procedures. Any unused chemicals identified during waste repackaging operations have been removed from this waste stream and disposed of as low-level waste. Other reactive materials, including cyanides, sulfides, and explosives, were not identified in the materials included in this waste stream. The materials in this waste stream are therefore not reactive D003 wastes (References P3001, U3003, and U3004).

Examples of the organic and inorganic liquids immobilized during repackaging at Argonne are provided in the Argonne Waste Repackaging Process description. The containers in this waste stream will be evaluated using radiography in accordance with the WIPP WAP prior to shipment to ensure the absence of prohibited liquids.

Toxicity Characteristic

Based on review of AK relative to chemicals used or present in Argonne laboratory and maintenance operations, waste stream ID-AECHDM may be contaminated with toxicity characteristic compounds as defined in 40 CFR 261.24. Where a constituent has been identified and there is no or limited quantitative data available to demonstrate that the concentration of a constituent is below regulatory threshold levels, the applicable EPA HWN is applied to the waste stream. Based on a review of the AK documentation, toxicity characteristic metal EPA HWNs D004 (arsenic), D005 (barium), D006 (cadmium), D007 (chromium), D008 (lead), D009 (mercury), D010 (selenium), and D011 (silver) are assigned to waste stream ID-AECHDM (Reference DR3001).

The AK sources identified the use of organic toxicity characteristic compounds including 1,1-dichloroethylene (D029), 1,2-dichloroethane (D028), 1,4-dichlorobenzene (D027), 2,4-dinitrotoluene (D030), benzene (D018), carbon tetrachloride (D019), chlorobenzene (D021), methyl ethyl ketone (D035), nitrobenzene (D036), pentachlorophenol (D037), and tetrachloroethylene (D039). Benzene, chlorobenzene, methyl ethyl ketone, nitrobenzene, and tetrachloroethylene are identified as F-listed solvents. Because the more specific F-listed EPA HWNs have been assigned for these compounds, assignment of the corresponding toxicity characteristic HWNs (D018, D021, D035, D036, and D039) is not necessary. Therefore the applicable HWNs D019, D027, D028, D029, D030, and D037 are assigned to waste stream ID-AECHDM (Reference DR3001).

F-Listed Waste

Based on review of AK relative to chemicals used or present in Argonne laboratory and maintenance operations, waste stream ID-AECHDM may contain or be mixed with F-listed hazardous wastes from non-specific sources listed in Title 40 CFR 261.31. F002, F004, and F005 listed solvents were used in these operations. F003 constituents used in these operations, including acetone, methyl isobutyl ketone, n-butyl alcohol, xylene, ethyl acetate, ethyl benzene, ethyl ether, and methanol are listed solely because these solvents are ignitable in the liquid form. The waste stream does not exhibit the characteristic of ignitability because it is not liquid; therefore, F003 is not assigned. Although several F001-listed solvents were identified in the AK record (i.e., 1,1,1-trichloroethane, 1,1,2-trichloro-1,2,2-trifluoroethane, carbon tetrachloride, methlyene chloride, tetrachloroethylene, and trichloroethylene), EPA has provided a regulatory clarification that the F001 listing is only appropriate when the listed solvents are used in a "large-scale" degreasing operation such as cold cleaning or vapor degreasing on an industrial scale. Argonne laboratory and maintenance operations did not conduct large-scale degreasing operations, and therefore, EPA HWN F001 is not assigned to this waste stream. Waste stream ID-AECHDM is assigned F-listed EPA HWNs F002, F004, and F005 for the listed chemicals identified in the table above (Reference DR3001).

U, K, P-Listed Chemicals

Based on a review of AK documentation, waste stream ID-AECHDM does not contain and is not mixed with a discarded commercial chemical product, an off-specification commercial chemical product, or a container residue or spill residue thereof, as defined in 40 CFR 261.33. The WMO TRU waste packaging procedure, requires unused chemicals identified during waste repackaging operations to be removed from the waste and disposed of as low-level waste. P- and U-listed reagents, including hydrofluoric acid (U134), were used in Argonne operations; however, no pure product or unused chemicals would have been disposed of in TRU waste containers. No listed chemicals were identified in the container-specific documentation and no records indicate that waste contains material originating from spill cleanup spill of listed chemicals (e.g., incident report). The only sources of beryllium identified in the AK record were samples being analyzed for beryllium and beryllium oxide crucibles used in an

electrorefining furnace in Building 205. Based on the physical form of the samples introduced into the waste generating processes, the waste stream will not meet the definition of P015 waste. Waste stream ID-AECHDM is therefore not assigned a P- or U-listed HWN (References AE-I-050, DR3001, DR3003, P3001, U3003, and U3004).

The material in this waste stream is not a hazardous waste from any of the sources specified in 40 CFR 261.32. Waste stream ID-AECHDM is therefore not assigned a K-listed HWN.

Polychlorinated Biphenyls

Based on the review of AK, no sources for polychlorinated biphenyl (PCB) compounds (e.g., hydraulic oils, fluids) or other PCB containing equipment (e.g., transformers, ballasts, capacitors) were identified in waste stream ID-AECHDM. Therefore, this waste stream is not regulated as a Toxic Substances Control Act (TSCA) waste under 40 CFR 761 (References U3003 and U3004).

Prohibited Items

Based on the review of the procedure for handling and packaging TRU waste, as well as container packaging records, no prohibited items were included in the ID-AECHDM waste stream during packaging. Prohibited liquids resulting from dewatering or condensation during shipment from Argonne to the AMWTP identified during RTR will be absorbed prior to shipment to WIPP (References P3001, U3003, and U3004).

CCP will perform RTR on this waste stream to ensure the absence of prohibited items in the containers prior to shipment to WIPP.

Method for Determining Waste Material Parameters (WMPs) Weights Per Unit of Waste

The WMP weight estimates for waste stream ID-AECHDM were derived using the certified data for the 373 drums of debris packaged and sent to WIPP from Argonne in waste stream AECHDM during the 2000 to 2003 time frame. The WMPs for the waste stream were estimated by using the characterization data from AECHDM contained in the WIPP Waste Information System/Waste Data System (WWIS/WDS). Average, minimum, and maximum WMP weight percentages were calculated using the WWIS/WDS data, and the results of this analysis are presented in the table below (Reference C3002).

Waste Stream ID-AECHDM Waste Material Parameter Estimates

WMP Description	Average Weight Percent	Weight Percent Range
Iron-based Metals	51.1%	0.0% - 90.5%
Aluminum-based Metals	0.9%	0.0% - 47.5%
Other Metals	4.1%	0.0% - 46.0%
Inorganic Matrix	1.8%	0.0% - 82.3%
Organic Matrix	<0.01%	0.0% - 76.2%
Other Inorganic Materials	4.3%	0.0% - 85.5%
Cellulosics	3.7%	0.0% - 60.0%
Plastics (waste materials)	26.7%	0.0% - 100%
Rubber	7.3%	0.0% - 83.5%
Soils/Gravel	0.1%	0.0% - 22.2%
Total Inorganic Waste Average	**62.3%**	
Total Organic Waste Average	**37.7%**	

List of AK Sufficiency Determinations

No AK Sufficiency Determinations have been requested for this waste stream.

Transportation

This waste stream meets the requirements for TRUCON codes AE 116, AE 216, SQ 125, SQ 133, SQ 225, SQ 233.

Beryllium

With the exception of one container (RW48192), beryllium is not expected to be present in more than trace quantities and will not exceed one percent, by weight, in payload containers. Debris originating from Room G-118 in Building 205 containing approximately 2 kilograms of beryllium oxide crucible pieces was packaged into drum RW48192 and exceeds one percent by weight. TRUCON Code SQ 133 is assigned to this drum (References AE-I-050, DR3001, DR3003, P3001, U3003, and U3004).

Radionuclide Information

Non-certified assay data from containers in waste stream ID-AECHDM were evaluated to identify the relative radionuclide weight and activity for waste stream ID-AECHDM (Reference U3006). All of the radionuclides listed in the table are expected in waste stream ID-AECHDM, including U-233. Based on this evaluation, the two prevalent radionuclides by mass are U-238 and Pu-239, and the two prevalent radionuclides by activity are Pu-241 and Pu-239.

Radionuclide Distribution for Waste Stream ID-AECHDM

Radio-nuclide	Container with Reported Radio-nuclide	Total Radio-nuclide Weight %[1,5]	Radionuclide Weight% Range for Individual Containers[3,5]	Total Radio-nuclide Curie%[2,5]	Radionuclide Curie% Range for Individual Containers[4,5]
WIPP Required Radionuclides					
Am-241	40	0.02%	Trace - 54.27%	6.60%	Trace - 87.35%
Pu-238	36	Trace	0% - 0.04%	2.34%	0% - 3.53%
Pu-239	39	3.81%	0% - 97.28%	22.50%	0% - 35.66%
Pu-240	39	0.34%	0% - 53.49%	7.33%	0% - 45.43%
Pu-242	36	Trace	0% - 0.13%	Trace	0% - Trace
U-233	0	0%	0% - 0%	0%	0% - 0%
U-234	6	Trace	0% - 0.90%	Trace	0% - 0.06%
U-238	5	95.24%	0% - 99.85%	Trace	0% - 0.98%
Sr-90	37	Trace	0% - 0.10%	0.08%	0% - 13.09%
Cs-137	37	Trace	0% - 0.16%	0.09%	0% - 13.78%
Additional Radionuclides					
Am-243	16	Trace	0% - 17.32%	0.02%	0% - 12.11%
Co-60	2	Trace	0% - Trace	Trace	0% - 0.04%
Cf-249	14	Trace	0% - 1.43%	0.02%	0% - 20.49%
Cm-243	14	Trace	0% - Trace	Trace	0% - 1.16%
Cm-244	2	Trace	0% - 0.03%	0.70%	0% - 11.33%
Cs-134	3	Trace	0% - Trace	Trace	0% - 0.03%
Eu-154	8	Trace	0% - Trace	Trace	0% - 1.90%
Np-237	27	0.09%	0% - 71.25%	Trace	0% - 0.41%
Pu-241	39	Trace	0% - 0.29%	60.28%	0% - 73.83%
Ra-226	3	Trace	0% - 0.19%	Trace	0% - 0.66%
Th-229	1	Trace	0% - Trace	Trace	0% - Trace
U-235	6	0.48%	0% - 56.22%	Trace	0% - Trace

1. This listing indicates the total weight percent of each radionuclide over the waste stream.
2. This listing indicates the total activity (curie) percent of each radionuclide over the waste stream.
3. This listing is the weight percent range of each radionuclide on a container-by-container basis. Radionuclide with "0" listed as the lower range indicates that at least one container did not report that radionuclide.
4. This listing is the curie percent range of each radionuclide on a container-by-container basis.
5. "Trace" indicates <0.01 percent for that radionuclide.

AECHDM is the corresponding waste stream certified and shipped to WIPP by the previous CCP TRU Waste Certification Program at Argonne in 2002 and 2003. Based on review of NDA data for the previous certified waste stream, additional radionuclides expected in waste stream ID-AECHDM include: Ac-228, Ag-110m, Bi-212, Bi-213, Bi-214, Cd-109, Cf-252, Eu-152, Fr-221, K-40, Mn-54, Na-22, Np-239, Pb-212, Pb-214, Sb-125, Tl-208, and Zn-65.

Payload management will not be utilized for this waste stream.

Source Documents Used

Source Document Tracking Number	Title	Document Number	Author	Date
AE-C-003	Historic Operations in Building 212, D-Wing	N/A	T. Krause	06/09/2000
AE-C-004	Record of Communication; Analytical Chemistry Laboratory Operations and Locations	N/A	T. Krause	07/20/2000
AE-C-005	Discussion with Jim Wescott and Dan McNamee; ANL-E Waste Stream Designations	N/A	T. Krause	07/20/2000
AE-C-006	Discussion with Cindy Rock; Waste Management Operations	N/A	T. Krause	07/20/2000
AE-C-011	Two D&D Projects in Building 212, D-wing	N/A	T. Krause	07/24/2000
AE-C-013	Discussion with Don Graczyk; ACL Facility Descriptions for Bldg 200	N/A	T. Krause	08/18/2000
AE-C-015	Discussion with Seth Snyder and Al Youngs; Chemistry Division operations in Building 200, M-Wing and general description of Building 200	N/A	T. Krause	07/27/2000
AE-C-016	Cave Area Description (for Building 200)	N/A	T. Steed	08/25/2000
AE-C-017	Communication with Terri Bray; Nonmixed RH TRU drums from the AGHCF	N/A	T. Krause	09/13/2000
AE-C-019	Chemical Usage at NBL for plutonium and uranium analysis - Conversation with Alma Stiffin and Iris Frank	N/A	T. Krause	09/13/2000
AE-C-020	Content of radionuclide solutions – Conversation with Alma Stiffen and Jan Muller	N/A	T. Krause	09/15/2000
AE-C-022	Correspondence with Terri Bray re: Chemical Usage in the AGHCF	N/A	T. Krause	09/21/2000
AE-C-023	Interview w/ Fred Martino concerning chemicals listed in ACL procedures	N/A	T. Krause	09/19/2000
AE-C-024	Email communications between G. Lasswell and D. Hecker and D. McNamee concerning details for certain waste requisitions and containers	N/A	Gary Lasswell	09/15/2000
AE-C-025	Conversation with Dan Hecker: Disposition of drums from Buildings other than 200, 205, 212, and 350.	N/A	T. Krause	09/18/2000
AE-C-026	Information concerning chemicals listed in CHM Safety Reviews	N/A	T. Krause	09/14/2000
AE-C-027	Operations in Building 315	N/A	T. Krause	09/28/2001
AE-C-032	NCR-ANLE-0019-02	N/A	W. Kimball, J.Elkins	03/18/2002
AE-C-035	NCR-ANLE-0074-02	N/A	F. Martin, J Elkins	05/02/2002
AE-C-036	NCR-ANLE-0111-02	N/A	F. Martin, J.Elkins	05/30/2002
AE-C-037	NCR-ANLE-0110-02	N/A	F. Martin, J.Elkins	05/29/2002
AE-C-038	E-mail from Jim Frego to Ben Gutierrez	N/A	J. Frego	08/20/2002
AE-C-042	Interview with Amrit Boparai, Analytical LabManager	N/A	D.B. Becker	03/19/2003
AE-C-043	Correspondence with Dan Hecker regarding TRU waste stream management	N/A	D. Hecker	06/26/2003
AE-D-004	Discrepancy; Hazardous Constituents	N/A	T. Krause	07/26/2000
AE-D-005	Resolution of NBL chemical usage and chemicals present in AE-CH-H-M waste stream	N/A	T. Krause	09/18/2000
AE-D-011	Source Document Discrepancy Resolution	N/A	D. Becker, C. Fesmire	02/10/2003
AE-D-012	Source Document Discrepancy Resolution	N/A	D. Becker, C. Fesmire	02/10/2003
AE-I-001	Separation of Plutonium by Mini Anion-Exchange	NBL-PC-IE-2	J.R. Weiss	03/10/1978
AE-I-002	IFR Fuels Work	8407-AGH-003	A.G. Hins	08/13/1984
AE-I-003	Determination of the Isotopic Composition of Plutonium By Thermal Ionization Mass Spectrometry	NBL-SA-Pu(I)-1	N/A	N/A
AE-I-004	Dissolution of Plutonium Containing Materials Using Sealed Reflux	NBL-SP-Pu-2	N/A	N/A
AE-I-005	Determination Of Weight Loss of Plutonium Oxide on Heating	NBL-SA-PP-1	N/A	N/A
AE-I-006	Determination of Specific Gravity and Density of Plutonium Solutions	NBL-SA-PP-2	N/A	N/A
AE-I-007	IFR Fuels Development	8407-AGH-001	A.G. Hins	07/06/1984
AE-I-008	IFR Fuel Interdiffusion Studies (Dayananda) Test Capsule Evaluation	8711-AGH-03	A.G. Hins	05/13/1988
AE-I-009	Determination of Plutonium by Controlled Potential Coulometry	NBL-SA-Pu(E)-1	N/A	N/A
AE-I-010	Memo from A.G. Hins to IFR Distribution "Diffusion Couple Studies - As Received Materials Structures" with internal report "Metallographic Examination of As-Received Clad and Fuel Materials for IFR Diffusion Studies," by J A Zic	N/A	A.G. Hins	04/22/1985
AE-I-011	Clad/Fuel Diffusion Studies - As Received U-Pu-Zr Materials	8407-AGH-014	A.G. Hins	06/05/1985
AE-I-012	SDI Cermet Fuel Fab -Glovebox Facility	8512-AGH-03	A.G. Hins	5/29/1986
AE-I-013	Field Work Proposal - Multi-megawatt Nuclear Space Power Systems; Reactor Fuels - Cermet Development	ANL 014 02 88	L.A. Nelmark	04/15/1987
AE-I-014	Bi-Monthly Report on Cermet Fuels - April/May 1987; Process Integration and Verification	N/A	H.R. Thresh	06/04/1987
AE-I-015	Sequence of Events for Camphor Coating Studies of UN Powder	N/A	N/A	05/22/1987
AE-I-016	Fissile Scrap Passivation, Activity 41603	N/A	A.G. Hins	12/28/1977
AE-I-017	Passivation Report	N/A	D.R. Schmitt	03/14/1980

Source Document Tracking Number	Title	Document Number	Author	Date
AE-I-018	Determination of Plutonium Using Automated Controlled-Potential Coulometry	NBL-SA-Pu(E)-1.1	N/A	N/A
AE-I-019	Dissolution of Pu-Containing Materials Using Acid Digestion	NBL-SP-Pu-1	N/A	N/A
AE-I-021	Purification of Neptunium by Anion Exchange Separation	NBP-SP-Np-01	New Brunswick Laboratory	N/A
AE-I-022	Electrolytic Cleaning of Pu Metal	NBL-SP-Pu-6	New Brunswick Laboratory	N/A
AE-I-023	Filing Method of Cleaning Pu Metal	NBL-SP-Pu-7	New Brunswick Laboratory	N/A
AE-I-027	Liquid-Liquid, Packed Column Countercurrent Extractor for Pu Extraction from U-Pu-Fe	ANL-CMTI-8602	W. Miller	09/19/1983
AE-I-028	Safety Review - Plutonium Experiment in G-118	ANL-CMTI-8883	T. Tomczuk, W. Miller	02/20/1985
AE-I-029	Trip Report Visit to LANL and Rocky Flats Analytical Laboratory	ANL-CMTI-8884	D.L. Bowers, R.R. Heinrich,E.A. Huff	02/26/1985
AE-I-030	Safety Review - Proposed Experiment - Alpha Radiolysis of TRUEX-CCl4 with 241Am	ANL-CMTI-8936	D. Kalina	05/23/1985
AE-I-031	Safety Review-PFP Waste Demonstration Run in G-117	ANL-CMTI-8955	R. Leonard	06/17/1985
AE-I-032	Safety Review of Facilities for the Determination of Hydrogen, Oxygen, and Nitrogen in Plutonium-Bearing Metals, Alloys, Oxides, Carbides, and Some Metal Compounds; Building 205, Room G102	ANL-CMTI-9012	H. Goodspeed, R. Heinrich, D. Gracyk	09/16/1985
AE-I-034	Determination of Uranium by Ferrous Reduction in Phosphoric Acid and Titration with Dichromate (NBL Titrimetric Method)	NBL-SA-U(E)-1	I. Frank	11/24/1999
AE-I-035	Determination of Uranium by Automated Constant Current Coulometry	NBL-SA-U(E)-3.1	P.V. Croatto	11/24/1999
AE-I-036	Determination of Uranium by Ferrous Reduction in Phosphoric Acid and Titration with Cerium (IV)	NBL-SA-U(E)-6	J.P. Zebrowski	12/03/1999
AE-I-037	Preparation of Plutonium Blind Standard Solution and Aliquants	NBL-CAL-Pu(E)-1	M.I. Spaletto	04/02/1986
AE-I-038	Safety Review - Pu Extraction Experiments In G118	ANL-CMTI-9123	T.R. Johnson, D.F. Fischer	04/02/1986
AE-I-039	Safety Review of ICP/AES for Analysis of Radioactive Samples	ANL-CMTI-9191	D. Bowers, E. Huff	09/08/1986
AE-I-040	Safety Review Alpha Particle Irradiation of Plastic Materials	ANL-CMTI-9947	D.T.Reed, T.J. Gerding, C.A. Seils	11/06/1989
AE-I-041	Dissolution of Plutonium-Containing Materials Using Acid Digestion	NBL-SP-Pu-1	A.V. Stiffin	12/13/1999
AE-I-042	Safety Review of Remote Preparation of Radioactive Glass Samples in the Senior Cave	ANL-CMTI-9988	J. Hoh, T. Gerding	01/16/1990
AE-I-043	Dissolution of Plutonium-Containing Materials Using Sodium Bisulfate Fusion	NBL-SP-Pu-3	A. V. Stiffin	12/13/1999
AE-I-044	Safety Review for Processing NBL Waste Solutions in G-134 and G-117	ANL-CMTI-10118	D.B. Chamberlain	09/14/1989
AE-I-045	Dissolution of Plutonium-Containing Materials Using Sodium Carbonate Fusion	NBL-SP-Pu-3.1	A.V. Stiffin	12/13/1999
AE-I-046	Safety Review for the Gas Generation Studies in Support of the WIPP	ANL-CMTI-101151	D. Reed S. Okajima	10/01/1990
AE-I-047	Safety Review Stripping Salt Previously Used in the Box 1 Electrorefiner in G-118	ANL-CMTI-10155	D.F. Fischer T.R. Johnson	10/04/1990
AE-I-048	Safety Review for Furnace Demonstration Test in Building 205, G-109	ANL-CMTI-10493	M.C. Petri, L. Liebowta, R.A. Blomquist	02/13/1992
AE-I-049	CMT Division Separation Science and Technology Section - January 1992	ANL-CMTI-10508	G.F. Vandergrift	03/31/1992
AE-I-050	Revised Criticality Hazards Control Statement for IFR Fuels Reprocessing Laboratory G-118 Located in Building 205	ANL-CMTI-9256	R. Wolson	02/01/1993
AE-I-051	Safety Review for Sealing and Opening Vials Irradiated with 60Co Irradiation Facilities – Building 205, Room X-109	ANL-CMTI-10953	B. Buchholz, L. Nunez	08/24/1993
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AE-I-053	Purification of Plutonium by Anion Exchange Separation (Mini-Column)	NBL-SP-Pu-4.1	U.I. Narayanan	12/13/1999
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AE-I-057	Preparation of Weight Aliquants of Plutonium Solutions	NBL-SP-Pu-5	M. Spaletto	12/13/1999
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AE-I-060	Electrodeposition of Plutonium and other Alpha-Active Actinides	NBL-SP-Pu-8	A. Stiffin	12/13/1999
AE-I-061	Dissolution of Uranium Metal Samples	NBL-SP-U-2	A. Stiffin	12/13/1999
AE-I-062	Dissolution of Uranium Oxides in Powder or Pellet Form	NBL-SP-U-3	I. Frank	12/13/1999
AE-I-065	Dissolution of Uranium-Aluminum and Uranium-Aluminum-Silicon Alloys	NBL-SP-U-4	I.W. Frank	12/13/1999
AE-I-066	Dissolution of Uranium-Containing Scrap and Ash Samples Using Acid Leaching	NBL-SP-U-5.1	A.V. Stiffin	12/13/1999
AE-I-067	Dissolution of Uranium-Containing Materials Using Sodium Carbonate	NBL-SP-U-5.2	A.V. Stiffin	12/14/1999
AE-I-068	Dissolution of Pre-Product and Product Materials	NBL-SP-U-7	A.V. Stiffin	12/14/1999
AE-I-069	Purification of Uranium and Plutonium by Anion Exchange for Mass or Alpha Spectrometric Analysis	NBL-SP-U, Pu(1)-1	B. Srinivasan	12/14/1999
AE-I-070	Safety Review for Unsaturated Testing of Uranium Metal Spent Fuel in Building 205 Senior Cave and K-116 Facilities	CMT50-0118-Draft	J. Fortner	03/07/2000
AE-I-071	Safety Review of Tests with Samples of Spent Fuel in Building 205, K-104 (Senior Cave) and, in K-116, Sampling of Leachate Solutions from the Tests	CMT50-0058-EP	P.A. Finn	03/13/2000
AE-I-073	PCT Testing of Pu-Containing Glass-Bonded Sodalite in Building 205, Labs G-109 and G-133	CMT50-0070-EP	L.R. Morss	04/14/2000
AE-I-077	Packaging Procedures	DPP 5.11	N/A	Various
AE-I-078	Manual Determination of the Density and Specific Gravity of Uranium-and Plutonium-Containing Solutions	NBL-SA-PP-2	K.S. Scheidelman	11/24/1999
AE-I-079	Data Sheets	DPP 5.12	N/A	Various
AE-I-084	Determination of Uranium by the New Brunswick Laboratory High Precision Titrimetric Method-Gravimetric Version	NBL-SA-U(E)-2.2	A.M. Voeks	12/02/1999
AE-I-089	Bagout and Packaging of Lead from Glove boxes	DPP 5.11	B. M. Pitman, P. S. Carlson	01/10/1994; 01/13/1994
AE-I-096	Transfer of TRU drums to CP-5 for storage	N/A	R.W. Rose, et.al.	11/11/1994
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AE-I-099	Determination of Micro- to Sub-microgram Quantities of Uranium Using Laser-Induced Kinetic Phosphorimetry	NBL-SA-U(E)-8	P.V. Croatto	11/24/1999
AE-I-103	Determination of Uranium and Plutonium Using Dilution Mass Spectrometry	NBL-SA-U, Pu(E)-1	B. Srinivasan	12/03/1999
AE-I-106	Preparation of Standard Potassium Dichromate Titrant	NBL-CAL-U(E)-1	M.I. Spaletto	12/03/1999
AE-I-107	Preparation of Uranium Standard Solutions	NBL-CAL-U(E)-2	M.I. Spaletto	12/03/1999
AE-I-109	Preparation and Standardization of Potassium Dichromate Titrant	NBL-CAL-U(E)-3	I.W. Frank	12/03/1999
AE-I-110	Preparation of Uranium Spike Solution for Isotope Dilution Mass Spectrometry Analysis	NBL-CAL-U(EI)-1	A.J. Traina	12/03/1999
AE-I-112	The Removal and Cleaning of the UF6 Mass Spectrometer Inlet System Cold Traps	NBL-S-U-3	P.V. Croatto	12/02/1999
AE-I-115	Operation of the Buehler Abrasive Cutter for Cutting Uranium Metals of Less Than 3% U-235 Enrichment	NBL-SP-U-9	G.J. Oriowicz	12/14/1999
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AE-I-121	Determination of Uranium in Solids, Sediments, and Sludges	SOP: ACL-032	A.M. Essling, D.G. Graczyk	01/30/1987
AE-I-124	Sample Preparation and Separation of Pu, Th, and Am from Solid (Soils, Sediments, Sweepings) and Liquid (Waters, Milk) Environmental Samples for Analysis by Alpha-Spectrometry	SOP: ACL-031	L.B. Gillis, F. Markin, L.L. Wetter	03/25/1993
AE-I-126	Standard Operating Procedure: Sample Preparation by Total Dissolution and Separation of Thorium, Plutonium, and Americium from Solid Environmental Samples for Analysis by Alpha-Spectrometry	SOP: ACL-130	L.L. Wetter	04/08/1988
AE-I-128	Standard Operating Procedure Gross Alpha and Beta Radioactivity	SOP: ACL-095	R.B. Holtzman, W.E. Streets	01/10/1992
AE-I-130	Standard Operating Procedure: Cleaning of Mixed Waste Glassware	SOP: ACL-178	K.J. Parish	10/26/1992
AE-I-131	Standard Operating Procedure: Volatile Organic Analysis for Mixed Waste	SOP: ACL-176	L.L. Lamoureux	10/26/1992
AE-I-132	Standard Operating Procedure: Gross Alpha/Beta Analysis of Soil and Sediment Samples by High-Pressure Microwave Digestion	SOP: ACL-201	J.S. Yaeger, L.L. Smith	05/08/1995
AE-I-134	Standard Operating Procedure: Separation of Plutonium, Thorium, Americium, and Uranium from Environmental Samples Utilizing Extraction Chromatography and Anion Exchange Chromatography	SOP: ACL-165	J.S. Yaeger, L.L. Smith	06/25/1996
AE-I-135	Standard Operating Procedure: Preconcentration and Determination of Actinides in Soil Samples Using Diphonix TM Resin and a NaOH Total Dissolution	SOP: ACL-204	J.S. Yaeger, L.L. Smith	11/19/1998

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AE-I-141	Standard Operating Procedure: Determination of Uranium in Soils, Sediments, and Sludges by Kinetic Phosphorimetry	SOP: ACL-143	A.M. Essling	05/16/1990
AE-I-142	Standard Operating Procedure: Determination of Uranium in Waters by Kinetic Phosphorimetry	SOP: ACL-144	A.M. Essling	05/24/1990
AE-I-143	Standard Operating Procedure: Determination of Uranium in Rocky Flats Soils, Sediments, and Sludges by Kinetic Phosphorimetry	SOP: ACL-148	A.M. Essling	02/11/1991
AE-I-146	Standard Operating Procedure: Radium-226 and Radium-228 Determination in Water and Soil Samples Using NaI Detector and Least Squares Processing of Data	SOP: ACL-108	F. Markun	11/17/1998
AE-I-147	Standard Operating Procedure: Determination of Strontium in Environmental Samples Utilizing Extraction Chromatography	SOP: ACL-167	J.S. Yeager, L.L. Smith	01/26/1996
AE-I-148	Standard Operating Procedure: Sample Preparation for Semivolatiles in Liquid Mixed Waste Using Liquid-Liquid Extraction	SOP: ACL-175	Stephen D. Kent	09/29/1994
AE-I-149	Standard Operating Procedure: Determination of Strontium in Environmental Water Samples	SOP: ACL-113	L.L. Wetter	07/31/1987
AE-I-150	Standard Operating Procedure: Determination of Strontium in Environmental Soils and Vegetations	SOP: ACL-117	L.L. Wetter	07/31/1987
AE-I-151	Standard Operating Procedure: Determination of Technetium-99 in Environmental Samples	SOP: ACL-124	F. Markun, L.L. Wetter	10/23/1987
AE-I-156	Waste Requisition Process	N/A	ANL-Environmental Management Operations	02/1995-02/05/1997
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AE-I-165	Transfer Request to Building 205 of Waste Pails: 288636: 28772, 289777: 288570: 289771	N/A	D.B. Chamberlain, et al	03/18/1991
AE-I-181	Basic and Applied Studies in Liquid-Liquid Extraction, Ion Exchange, and Extraction Chromatography	PRD Number: KLN-2	K.L. Nash, S. Snyder	06/02/2000
AE-I-182	Novel Liquid-Liquid Extraction and Extraction Chromatographic Systems for the Separation and Preconcentration of Radionuclides	PRD Number: KLN-1	M.L. DietzF.A.Cafasso	11/01/1996
AE-I-183	Basic and Applied Studies in Liquid-Liquid Extraction and Ion Exchange	PRD Number: KLN-2	Chemistry Division; Heavy Elements Coordination Chemistry; Argonne National Laboratory	11/05/1996
AE-I-184	Characterization of New Chelating Agents	PRD Number: KLN-3	Chemistry Division; Heavy Elements Coordination Chemistry; Argonne National Laboratory	11/05/1996
AE-I-186	Two-Stage Molecular Agents	PRD Number: KLN-5	Chemistry Division; Chemical Separations; Argonne National Laboratory	11/21/1996
AE-I-187	Synthesis of Compounds for Chemical Separations	PRD Number: MLD-1	Chemistry Division; Chemical Separations; Argonne National Laboratory	04/07/1998
AE-I-188	Determination of waste generated in Buildings 108, 202, 203, 206, 223, 306, 315 and 331	N/A	N/A	N/A
AE-I-191	Evaluation of Chemicals Used by New Brunswick Laboratory	N/A	N/A	N/A
AE-I-192	Evaluation of Chemicals used by the Analytical Chemical Laboratory	N/A	N/A	N/A
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AE-I-195	ANL-E At Files	N/A	N/A	07/18/2002
AE-I-199	Attachment 12 - Acceptable Knowledge Reevaluation Checklist, CCP-TP-005, Rev.6	Attachment 12	B. Gutierrez T. Krause	09/04/2002
AE-I-201	Radiological properties worksheets	N/A	N/A	N/A
AE-P-002	Building 212 Glove Box Decontamination & Decommissioning Project, Glove Box Detailed Description Document	Bldg. 212 DDD	R.E. Nietert	08/31/1992

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AE-P-003	Building 212 D Wing Glove Box Project, Project Management Plan, Quality Assurance Plan	78016-4A-02	P.S. Carlson, W.E. Stacy	07/14/1993
AE-P-005	Decontamination and Decommissioning of 61 Plutonium Gloveboxes in D-Wing, Building 212, Argonne National Laboratory-East: Final Project Report	ANL/D&D/TM-96/3	CL. Cheever, R.W. Rose	09/01/1996
AE-P-006	Revision II (Final) to the Argonne National Laboratory - East RCRA Part B Permit Application IL3 890 008 946	D303-101-W-T011	ANL-E Env Mgt Ops	08/20/1996
AE-P-007	Addendum to the Revision II to the Argonne National Laboratory - East RCRA Part B Permit Application IL3 890 008 946 (Addendum 1)	D303-101-W-T011-A1	ANL-E Env Mgt Ops	12/05/1995
AE-P-008	Update and Modification of the Argonne National Laboratory - East (ANL-E) Resource Conservation and Recovery Act Part B Permit Application	D303-101-W-T011	G. Kulma	08/14/1998
AE-P-009	RCRA Part B Permit Issued to Department of Energy Argonne National Laboratory - East Facility	IL3890008946	Illinois EPA	09/30/1997
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AE-P-011	Waste Handling Procedures Manual	N/A	WMO Department	05/29/2000
AE-P-012	Waste Handling Procedures Manual (Chapter 1-4 and Section II)	N/A	WMO	07/1998
AE-P-013	Waste Management Handling Procedures Manual; Sections 11-13, Radioactive Wastes	N/A	Waste Management Operations Department	02/1994
AE-P-014	Waste Management Handling Procedures Manual; Section 4, Waste Acceptance Quality Assurance Criteria	N/A	Waste Management Operations Department	08/1993
AE-P-015	Radioactive Wastes - Radioactive Solid and Liquid Waste Containment, Special Treatment, and Segregation Requirements	WMHPM-0012	Waste Management Operations Department	02/1992
AE-P-016	Waste Management Handling Procedures Manual; Appendix A, Radioactive Waste Disposal Requisitions	N/A	Waste Management Operations Department	07/1991
AE-P-017	Waste Management Handling Procedures Manual, Sections 11,12,14, 15, and Appendix A	N/A	Waste Management Operations Department	06/26/1991
AE-P-018	Waste Management Handling Procedures Manual, Sections 4, 11-15, Appendices A, C-D	N/A	Plant Facilities and Services, Waste Management, Building 215	01/1991
AE-P-019	Waste Management Handling Procedures Manual, Radioactive Wastes sections 11, 13, 14, 15, Appendices A, C, D	N/A	Waste Management Operations Department	09/1989
AE-P-020	Waste Management Handling Procedures Manual, Appendix V, Waste Analysis Plan	N/A	Waste Management Operations Department	09/1991
AE-P-022	Basic Research in the Mission Agencies	N/A	National Science Board	1978
AE-P-023	FY 1995 Budget - Atomic Energy Defense Activities	Q94AC193	Federation of American Scientists	05/03/1994
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AE-P-025	U.S. Nuclear Weapons Research, Development, Testing, and Production, and Naval Nuclear Propulsion Facilities	N/A	S.I. Schwartz	10/12/1999
AE-P-026	Department of Energy FY'99 Congressional Budget Table	TZRP41	DOE	03/06/1998
AE-P-027	Frontiers: Research Highlights 1946-1996	N/A	Argonne National Laboratory	1996
AE-P-028	A Brief History of Materials R&D at Argonne National Laboratory from the Met Lab to Circa 1995	N/A	B.R.T. Frost	09/03/1996
AE-P-029	Materials and components Technology Division Research Summary - 1987	N/A	R.W. Weeks	11/1987
AE-P-030	Materials and Technology Division Annual Review - 1983	N/A	B.R.T. Frost	08/1983
AE-P-031	Materials Science and Technology Division Annual Review-1982	N/A	B.R.T. Frost	11/1982
AE-P-032	Annual Progress Report for 1965 Metallurgy Division	ANL-7155	F.G. Foote	1965
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AE-P-034	Annual Report for 1963 Metallurgy Division	ANL-6868	F.G. Foote	1963
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AE-P-036	Annual Report for 1961 Metallurgy Division	ANL-6516	F.G. Foote	1961
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AE-P-039	Experiment Breeder Reactor-II (EBR-II)	N/A	Argonne National Laboratory	06/08/2000
AE-P-040	Metal Cooled Reactors	N/A	J. Gonyeau	08/28/1999
AE-P-041	Liquid Metal Fast Breeder; Right Answer, Wrong Question	N/A	Adams Atomic Engines	10/1995
AE-P-042	Application of Advanced Liquid Metal Reactors to the Destruction of Radioactive Wastes	N/A	R.A. Karnesky, et al	08/1991
AE-P-043	The Liquid metal Fast Breeder Reactor: Promises and Uncertainties	N/A	Energy Research and Development Administration	07/31/1975
AE-P-044	Safety Analysis Report - New Brunswick Laboratory	N/A	R.A. Mason	10/1990
AE-P-045	Draft Safety Analysis Report - New Brunswick Laboratory	N/A	D.E. Dallmann	01/2000
AE-P-047	The Integral Fast Reactor - A Practical Approach to Waste Management	N/A	J.J. Laidler	09/28/1993
AE-P-048	Management of Transuranics Using the Integral Fast Reactor (IFR) Fuel Cycle	N/A	D.C. Wade	01/23/1994
AE-P-049	Safeguards Operations in the Integral Fast Reactor Fuel Cycle	N/A	K.M. Goff	08/1994
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AE-P-054	Safety Analysis Report Building 205 G-Wing and K-Wing Laboratories	CMT-30-0470	C.A. KotM.G. Srinvasan	11/14/1996
AE-P-055	Chemical Technology Division Annual Technical Report 1997	ANL-98/13	Chemical Technology Division	06/01/1998
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AE-P-057	Chemical Technology Division Annual Technical Report 1982	ANL-83-55	Chemical Technology Division	07/01/1983
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AE-P-070	Transuranic Waste Baseline Inventory Report	DOE/CAO-95-1121	CAO Technical Assistance Contractor	1995
AE-P-071	Institutional PLAN FY 1980-FY 1985	N/A	ANL	12/1979
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AE-P-081	Institutional Plan FY 1991 - FY 1996	N/A	ANL	11/1990
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AE-P-083	Institutional Plan (FY 1993 - FY 1998)	N/A	ANL	08/1992
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AE-P-087	Institutional Plan (FY 1998 - FY 2003)	N/A	ANL	09/1997
AE-P-088	Institutional Plan (1999-2004)	N/A	ANL	10/1998
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AE-P-090	Argonne National Laboratory - East Site and Location Map	ANL-133	ANL-E	03/1997
AE-P-092	Quality Assurance Plan for ANL-E Waste Management Department	WMD-QA-01	WMO	08/1999
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AE-P-095	Waste Operations Operating Manual	N/A	ANL-E Waste Management Operations	08/02/1999
AE-P-096	Container Management Practices (Chapter 2.12 of Waste Management Operating Procedures Manual)	N/A	ANL-E Waste Management Operations	07/1998-05/05/2000
AE-P-097	Waste Management Operating Procedures Manual; Historic Chapter 4.5	N/A	ANL-E Waste Management Operations Department	01/1991 to 01/2000
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AE-P-099	Waste Management Operating Procedures Manual: historic Addendum 4 B	N/A	ANL-E Waste Management Operations Department	07/23/1996
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AE-P-104	Building 212 D-Wing Glove Box D&D Project Plan	78016-4A-01	P.S. Carlson, B. M. Pitman	11/06/1993
AE-P-105	New Brunswick Laboratory ESH Manual, Chapter V, Section I, "Waste Management"	N/A	C.L. Mansfield	06/2000
AE-P-106	Alpha-Gamma Hot Cell Facility (AGHCF) Safety Analysis Report	IPS-221-00-0	ANL-E/Energy Technology Division	01/30/1998
AE-P-107	Surveys of Research in the Chemistry Division - 1988	N/A	L.M. Stock, F.A. Cafasso	1988
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AE-P-111	Chemical Sciences KC-03 Program Budget -Fiscal Years 1997, 1988, and 1999	N/A	ANL-E/Chemistry Division	04/1997

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AE-P-113	Final Report for the Light Water Breeder Reactor Proof-of-Breeding Analytical Support Project	ANL-87-2	D.G. Graczyk, et al	05/1987
AE-P-115	About Yucca Mountain	N/A	EPA	08/2000
AE-P-116	Bettis Atomic Power Laboratory	N/A	BAPL	07/2000
AE-P-117	History; INEEL	N/A	INEEL	08/2000
AE-P-118	SRS Mission and Vision	N/A	SRS	08/2000
AE-P-119	About Sandia	N/A	SNL	08/2000
AE-P-120	Los Alamos National Laboratory Mission	N/A	LANL	08/2000
AE-P-121	Oak Ridge National Laboratory; About ORNL	N/A	ORNL	08/2000
AE-P-122	Creating the Laboratory's Future (LLNL)	N/A	LLNL	08/2000
AE-P-123	Hanford; Welcome to Hanford	N/A	Hanford Site	08/2000
AE-P-124	Chemical Technology Division; Vision, Mission, and Management Philosophy of CMT	N/A	CMT	09/18/2000
AE-P-125	Chemistry Division; Strategic Research at the Frontiers of Chemistry	N/A	ANL-E/CHM	08/24/2000
AE-P-129	Defense Waste Guidance	CAO:NTP:MRB 96-2236	D. Watkins, Manager National TRU Program	10/09/1996
AE-U-1	RCRA Part A Application for ANL-E	N/A	DOE/Argonne	12/18/1995
AE-U-2	Hazardous Waste Permit Application Part A (for ANL-E)	N/A	DOE/Argonne	12/19/1990
AE-U-5	General Description of Building 200	N/A	A. Youngs	08/14/2000
C001	Fax to Larry Neimark re: Defense versus Non-Defense Waste	N/A	Gary Marshall	1/21/1997
C004	Intra-Laboratory Memo to R. S. Wisner, HFEF re: Estimates of Total AGHCF Inventory for Future Shipments to ANL-W	N/A	A.B. Cohen	04/24/1995
C006	Interview with Larry Neimark re: AGHCF samples, applicable programs, defense relationship to materials, and commingling of waste	ROC-C6	C. Schultz	07/17/2001
C007	Correspondence to L. A. Neimark, Manager, IP Section re: Assessment of Nuclear Materials Inventory, Fissile Inventory Records and Handling Procedures in FF12	N/A	A.G. Hins	03/13/1991
C008	Intra-Laboratory Memo to J.V. Natale, SPM re: TRU Scrap Shipment No. 4, SPM-43 No. CZC-168	N/A	W.D. Jackson	06/05/1975
C009	Intra-Laboratory Memo to W. D. Jackson, MCT/ANL-E, re: Fissile Scrap and Irradiated Structural Materials Waste Shipments from ANL-E to ANL-W for retrievable Storage in the RSWF	L-W-SSS-(LCW)-88-146	L.C. Witbeck	11/17/1988
C011	Intra-Laboratory Memo to D. A. Donahue, MCT, re: Work Plan for the Examination of LILY-1 and LILY-1A Specimens	N/A	L.A. Neimark	11/28/1988
C012	Intra-Laboratory Memo to Operations Personnel re: Facility Nitrogen Purge Change and Storage of Flammable Liquids	N/A	D.A. Donahue	04/09/1990
C013	Correspondence to Mr. E. M. King, Oak Ridge National Laboratory re: Radioactive Waste	N/A	L.A. Neimark	04/10/1974
C014	Correspondence to A. Cohen re: Process and Procedure with all and WMO for Sampling 1st Stage HEPA Filters. Description-8'x8'x3' w/ 5/8' Wood Frame Ultra Aire – MSA	N/A	F. Pausche	04/22/1995
C016	Intra-Laboratory Memo to C. E. Crouthamel, CMT, and M. J. Steindler, CMT re: LWR Hot-Cell Capability at ANL-E: The D-200 M-Wing Situation	N/A	L.A. Neimark	05/03/1985
C020	Intra-Laboratory Memo to Environmental Compliance Representatives re: Photo Processing Solutions – Waste Characterization	N/A	R.G. Kolzow J.R. Thuot	12/19/1990
C023	Intra-Laboratory Memo to M. J. Ryan, SEC re: Potentially Hazardous Materials in "Operational Clean Sweep"	N/A	L.A. Neimark	03/21/1983
C025	Correspondence to D. A. Donahue re: Transfer of Special Materials from G-118 Glovebox 3 to Building 212 Caves	N/A	M.A. Vest	09/16/1994
C026	Intra-Laboratory Memo to Melanie Tompkins re: Annual Forecast for Waste Management Operations-94	N/A	A.C. Smith	08/31/1993
C029	Letter re: Survey of Waste Streams in Building 212	N/A	N. Kevin	05/31/1988
C035	Intra-Laboratory Memo to Distribution re: Management of Broken Fluorescent Lamps	N/A	J. Herman	02/02/1999
C036	Letter to Sheldon Meyers, re: Disposition of TRU from LWR Program: Documentation of Agreements Reached in August 15, 1980 Meeting	N/A	R.H. Bauer	09/09/1980
C039	Intra-Laboratory Memo to L. A. Neimark re: Procedure for Disposal of "Clean Sweep" Pyrophoric Waste	N/A	W.D. Jackson	09/06/1983
C046	Intra-Laboratory Memo to D. C. Parzyck re: DOE request for Information Regarding Materials Not Classified as Waste	N/A	A.C. Smith	03/13/1991

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C066	Record of Communication with Bill Kettman and Dennis Donahue, AGHCF re: AGHCF Operations and Waste Packaging	N/A	J. Whitworth M. Wyco	08/07/2001
C068	Correspondence to Craig R. Tyler, Lockheed Martin Idaho Technologies Co. re: ANL Transuranic Waste - Definition as Defense Waste	N/A	D.S. Kirschner	04/16/1997
C073	Letter to Ms. Trisha Dedik, Director, International Policy and Analysis Division, NN-42, U.S. Department of Energy re: Transmittal of ANL Quarterly Reports	N/A	A. Travelli	01/15/2001
C074	Letter to Mr. Hilary Rauch, Manager, U.S. Department of Energy re: "TREAT Experiment Program"	2694	R. Avery	04/04/1985
C081	Intra-Laboratory Memo to Larry Neimark, ET re: Use of Carbon Tetrachloride in Alpha Gamma Hot Cell Facility (AGHCF) Experiments	N/A	J. Johnson	09/02/1994
C082	Fax to Ray Lang, DOE-CH re: ANL-E fuel Pins	N/A	L.A. Neimark	05/20/1993
C088	Correspondence to Mr. W. M. Heileson, Waste Generator Interface, EG&G Idaho, Inc. re: Content of ANL-E RHTRU Drums Stored at INEL	N/A	L. A. Neimark	06/17/1994
C091	Correspondence to W. Mahlon Heilson, Waste Management, RWMC Technical Support, EG&G Idaho, Inc. re: Lead in Remote Handled Transuranic Waste Stored at Idaho National Engineering Laboratory (INEL)	N/A	J.F. Johnson	07/18/1994
C092	Intra-Laboratory Memo to J. L. Hooper, DOE (ARG) re: Experimental Fuel Segments in the AGHCF	N/A	L.A. Neimark	06/07/1996
C094	Correspondence to L.Neimark, Materials & Components Technology re: Metallographic Samples	N/A	J.E. Battles	06/13/1990
C103	Intra-Laboratory Memo to C. A. DeLorenzo, OOS re: Safety Analysis for Handling Tritium-containing Compounds in the AGHCF	N/A	L.A. Neimark	05/30/1984
C106	Email to Whitworth, Julia re: Exploding Drum at ANL	N/A	T.S. Bray	08/30/2001
C108	Correspondence to Mr. J. T. Case, U.S. Department of Energy, Idaho Field Office re: Strategy Plan for Long-term Management and Storage of Remote-handled (RH) Transuranic (TRU) Waste - TLC-224-92	TLC-224-92	T.L. Clements, Jr.	11/30/1992
C115	Intra-Laboratory Memo to W. H. Kline, Waste Management Coordinator re: Waste Packaging Criteria, Transuranic Waste, Idaho National Engineering Laboratory, Revision 1, IDO-10074	IDO-10074	W.D. Jackson	11/01/1979
C116	Fax to M. Heileson re: Pelletized Clay	N/A	J. Johnson	11/20/1995
C118	Intra-Laboratory Memo to A. C. Smith, PFS re: Chemical Forms in AGHCF Transuranic Wastes	N/A	L.A. Neimark	04/12/1989
C124	Fax to Mark Wyco and Larry Neimark, ANL-E re: Request for ANL-E to Identify Items of ANL-W Origin	N/A	J. Whitworth	02/21/2002
C125	Intra-Laboratory Memo to Steve Gehl, MSD re: Burnup on LWR Samples	N/A	E. R. Ebersole	10/22/1975
C128	Intra-Laboratory Memo to Distribution re: Revised Procedure for Determining Specimen Density by Immersion, Operations Manual Section 7.21	00 No. 41	L.A. Neimark	03/13/1995
C130	Intra-Laboratory Memo to Waste Handling Procedures Manual Holders re: Packaging of Intermediate Level* Radioactive Waste for Disposal (Liquids)	N/A	C.L. Cheever	09/12/1979
C137	Email to Douglas W. Parker re: RH TRU Waste	N/A	J. Whitworth	03/06/2002
C138	Intra-Laboratory Memo to Distribution re: Hot-cell Survey	ANL-26 (11-68)	L.A. Neimark	08/20/1973
C143	FAX to Cheryl Schulz re: Information on AGHCF Mercury Vapor Lamps and Lighting Fixtures	N/A	G. Staymates	03/10/2003
C147	Letter to Mr. John M. Schaffer, Project Director, RWMC Completion Project, Bechtel BWXT Idaho, LLC re: Additional Information to Complete Actions Associated with Preexisting Condition (PEC) 316 - Argonne National Laboratory-East (ANL-E) Transuranic Waste	EM-WM-03-055	E.J. Ziemianski	04/09/2003
C148	Interview of Terri Bray, ANL-E AGHCF Manager re: Lead Solder and First Stage HEPA Filters	ITC-POP-828599-01	C. Schulz	09/01/2001
C152	Intra-Laboratory Memo to D.A. Donahue, MCT/IPS re: Work Plan for the Examination of LILAC Target No.19 for Battelle Pacific Northwest Laboratories	IPS-46-00-00	L.A. Neimark	05/03/1991
C155	Intra-Laboratory Memo to D. A. Donahue MCT re: Work Plan for the Preparation of Specimens for NPR Tests MA-2, -3, and -4	IPS-27-00-00	L.A. Neimark	09/20/1990
C157	Intra-Laboratory Memo to L. Neimark MCT re: Test Specification and Operating Procedure for NPR Tests ALCL-1 and -2.	IPS-49-00-00	T. Shearer	05/29/1991
C158	Inter-Laboratory Memo to ANL-E Environmental Compliance Representatives re: Illinois Environmental Protection Agency (EPA) Air Pollution Control Permit Applications	ANL-26 (11-68)	D.C. Parzyck	10/22/1990
C160	Fax Memo to Mahlon Heileson, LITCO/RWMC re: Underlying Hazardous Constituents Waste Stream ANL212951004T	N/A	J. Johnson	11/20/1995
C301	Memo from T. Bray to Document File: Shipment of EBR-II Fuel to ANL-W	HFS-13-00-00	T.S. Bray	09/15/2004

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C302	Memo from L. A. Neimark to Distribution. Subject: Revision 1 to the Work Plan for the Preparation of Fuel Rods for Return Shipment to Idaho, HFS-015-00-00, December 8, 2004.	HFS-015-00-01	L.A. Neimark	12/09/2004
C303	Handwritten memo dated 10/21/1994. Subject: Change postings in to Areas I, III, IV to reconcile books to SPM - attached logbooks for Area I FGE, and Area III FGE	N/A	Unknown	10/21/1994
C304	Memo from T. S. Bray to OO Holders. Subject: New Pu Equivalent Mass Limits for Area IV	OO No. 58	T.S. Bray	02/22/2000
C305	Memo from R. J. Page and A. Miron to T. S. Bray. Subject: Inventory and Dose Estimates for Radionuclides Stored in the Alpha-Gamma Hot Cells Facility. Report attached.	N/A	R.J.Page, A. Miron	05/02/2003
C316	Memo from Omesh Chopra to Distribution. Subject: Laboratory ALARA Committee Review of the Work Plan for Unloading and Transferring Irradiated Stainless Steel Mechanical Test Specimens	N/A	O. Chopra	05/15/2000
C329	Memorandum to CCP Central Records: Evaluation of FFTF Fuel History and Defense Experiments	C009	K.J. Peters	04/24/2004
C330	Memorandum to Ines Triay, Acting Manager, CBFO: Determination and Findings, Defense Origin of Nuclear Waste, Kerr-McGee Waste	N/A	F. Marcinowski	04/15/2005
C331	Memorandum to CCP Central Records: Evaluation of Kerr-McGee Fuel Production and FFTF History	KJP:0604:001	K.J. Peters	06/28/2004
C333	Memo to CCP Central Records: Assessment of Waste material Parameters (WMPs) for Waste Stream AERHDM	N/A	D.B. Becker	01/2006
C335	CCP Review Comments and Resolutions for Draft A, Rev. 0, CCP-AK-ANLE-500	N/A	K. J. Peters S. Schafer	02/27/2006
C341	IT Shaw Discrepancy Report R4 - RH TRU Waste from ANL-E- AGHCF, Re: Possible Presence of Lead in Waste	N/A	C. Shulz	07/15/2003
C344	IT Shaw Discrepancy Report R7 for RH TRU Waste from ANL-E- AGHCF, Re: Waste Generated in K-Cells	N/A	C. Shulz	07/15/2003
C353	Discussions with Seth Snyder and Al Youngs; Chemistry Division Operations in Building 200, M-Wing and General Description of Building 200	N/A	T. Krause	07/27/2000
C354	Miscellaneous Cave Area Description (for Building 200) from Tory Steed	N/A	T. Steed	08/25/2000
C356	Letter to C.E. Johnson; Monthly Report on EXXON/EPRI Program RP 306 for November 1978	N/A	L.A. Neimark	12/12/1978
C357	Letter to N.D. Dudey and C.E. Crouthamel (EXXON); Management Summary and Milestone Report for October 1978	N/A	J.D. Griffith	12/04/1977
C375	Intra-Laboratory Memo; Minutes of September 9,1980 about Sb-125 Releases From Cell K-2, M-Wing, Building 200	N/A	R.H. Cooke	09/12/1980
C812	Memo from T. S. Bray & R. V. Strain to M. Goldberg, Characterization of N-Reactor Fuel Samples	N/A	T.S. Bray, R.V. Strain	10/04/2000
C2002	Memo to Dr. Frank Y. Fradin Safety Analysis Report (SAR) Revision 02 and Technical Safety Requirements (TSRs) Revision 01 for the Argonne National Laboratory - East (ANL-E) Building 205 G & K Wing Laboratories	0898-016	T.S. Crawford	08/07/1998
C2003	Memo from Robert C. Wunderlich to Dr. Hermann A. Grunder regarding Approval of the Safety Analysis Report (SAR) Revision 04 and the Technical Safety Requirements Revision 03 for Building 205 G-Wing and K-Wing Laboratories	0103-080	R.C. Wunderlich	01/23/2009
C2004	Safety Review for Unsaturated Testing of Uranium Metal Spent Fuel in Bldg. 205 Senior Cave and K-116 Facilities	CMT50-0118 Draft	R.D. Wolson	03/07/2009
C2005	Safety Review of Tests with Samples of Spent Fuel in Bldg. 205, K-104 (Senior Cave) and, in K-116, Sampling of Leachate Solutions from the Tests	CMT50-0058-EP	P.A. Finn	03/13/2000
C2006	Work Plan for the Preparation of Unirradiated Al-clad Specimens for CMT	IPS-329-00-00	T.S. Bray	12/02/1999
C2007	Work Plan for the Preparation of Specimens from the Characterization of Pins UW02010 (A/G 498A) and UW08036 (A/G 498B)	IPS-284-00-00	L.A.Neimark	06/17/1998
C2008	Interview of D Pancake, D Hodge, J Emery, L Maggos, and J Mackin regarding Waste Handling Practices, use of chemicals, time periods of waste generation for K-Wing hot cells, Bldg. 205	N/A	K.J. Peters	09/18/2009
C2009	Communication from Laura E. Maggos regarding 205 K-Wing - contactor cleaning solutions	N/A	L.E. Maggos	08/12/2009
C2011	ANL Memo to R.J. Page re: Estimating Mass and Radioactivity for EBR-2 Element Segments Stored in Building 212 - More Numbers	N/A	K.N. Grimm	04/22/2008

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C2022	ANL Memo to R.J. Page re: Pu-241/Am-241 Cooling Effects for EBR-2 Element T473	N/A	K.N. Grimm	01/25/2007
C2023	ANL Memo to R.J. Page re: Estimating Mass and Radioactivity for FFTF Element Segments Stored in Building 212 - More Numbers	N/A	K.N. Grimm	03/26/2008
C2024	ANL Memo to R.J. Page re: Estimating Mass and Radioactivity for EBR-2 and PFR Element Segments from the TREAT Facility Stored in Building 212 - More Numbers	N/A	K.N. Grimm	03/25/2008
C3001	Email from David Adkins re: CH-TRU Waste Packaging and Bag Closure	N/A	D. Adkins	03/18/2010
C3002	Evaluation of Waste Material Parameter Weights for Waste Streams AECHDM-PK and AECHHM-PK	N/A	K.J. Peters	03/23/2011
C3003	Interview and Follow-up Correspondence with Robert Schulten: Packaging of Waste Streams AECHDM-PK and AECHHM-PK	N/A	K.J. Peters	05/25/2010
C3004	Default Plutonium Distributions in Waste Streams ID-AECHDM and ID-AECHHM	N/A	John West	10/25/2011
DR3001	Resolution of Discrepancies Associated with the Assignment of EPA HWNs to Waste Streams AECHDM-PK and AECHHM-PK	N/A	K.J. Peters	03/23/2011
DR3002	Resolution of Discrepancies Associated with the Assignment of Containers RW48078 and RW48190 to Waste Stream AECHDM-PK	N/A	K.J. Peters	06/20/2011
DR3003	Resolution of Discrepancies Associated with Beryllium Oxide Crucible Pieces in Container RW48192	N/A	K.J. Peters	09/12/2011
DR3004	Resolution of Discrepancies Associated with Beryllium Oxide in Container RW48190	N/A	K. J. Peters	11/4/2011
P001	AGHCF Operations Manual	IPS-2-00-00	Argonne National Laboratory	09/10/1990
P002	Central Characterization Project Acceptable Knowledge Summary Report for Argonne National Laboratory-East Contact-Handled TRU Waste Facility Maintenance and Laboratory Operations	CCP-AK-ANLE-001	Central Characterization Project (CCP)	12/31/2003
P004	Safety Analysis Report for the Alpha-Gamma Hot Cell Facility	M4000-0025-SA-01	W.D. Jackson	12/06/1982
P006	Safety Analysis for Twenty Year Retrievable Storage of Intermediate Gamma Level Transuranic Waste	N/A	W.D. Jackson	06/01/1976
P008	ANL-W History - Reactors (IFR)	http://www.anl.gov/anlw_history/reactors/ifr.html	N/A	07/23/2001
P009	TRU-RH Waste Certification Plan for Waste Management Operations	J0306-0033-SA	R.W. Ditch G.E. Griffin	11/10/1986 and 04/16/1991
P010	Argonne News-About the People and Programs of Argonne National Laboratory	Volume 34, Number 13, October	N/A	1985
P013	Frontiers: Research Highlights 1946-1996	N/A	Argonne National Laboratory	1996
P016	Liquid Metal Fast Breeder: Right Answer, Wrong Question	http://www.atomicinsights.com/	Atomic Energy Insight	10/1995
P017	1992 Congressional Hearings Intelligence and Security: Naval Reactors, Arms Control, Office of Intelligence, 03/11/1992, Question and Answer	Qp2AF105 (http://www.fas.org/)	T. Bevill	03/11/1992
P023	Argonne National Laboratory-East Remote Handled Waste	EDF-RWMC-759	W.M. Heilseson	08/29/1994
P025	Argonne National Laboratory-East, Transuranic Waste Acceptable Knowledge Report	WMO-AK/WIPP-001.0	Benchmark Environmental Corporation	09/29/2000
P027	Preliminary Engineering Proposal on Alpha-Gamma Hot Laboratory for Fuels Technology Center, Argonne National Laboratory	N/A	The University of Chicago	06/1958
P028	Presentation to DOE Office of Nuclear Safety re: Alpha-Gamma Hot Cell Facility (AGHCF)	N/A	Argonne Illinois Site	07/19/1993
P029	Engineering Test Plan for the Irradiation Testing of U3Si Dispersion Fuels: Reduced Enrichment Research and Test Reactor Program	M4000-0004-SA-01	R. F. Mattas	06/1980
P031	Alpha-Gamma Hot Cell Facility (AGHCF) Safety Analysis Report	IPS-221-00-00	A.B. Cohen	01/1998
P032	Procedure for Sorting Remote-Handled TRU Waste (30-Gallon Intermediate-Level Waste)	N/A	Argonne National Laboratory	01/07/1987
P034	AGHCF Operations Manual: 15.6 Procedure for Acid Cleaning a Zinc-Bromide Shielding Window	IPS-2-06-00	W.C. Kettman	04/16/1996
P038	AGHCF Operations Manual: 15.13 Procedure for Installing a Modified D-301 Window Tank in a Type A Window Cavity	IPS-2-13-01	D.A. Donahue	12/07/1990
P039	AGHCF Operations Manual: 15.15 Procedure for Installing Lead Shielding Around a Tank Insert in an AGHCF Window Cavity	PS-2-15-00	Argonne National Laboratory	02/01/1991
P055	Waste Handling Procedures	N/A	C.L. Cheever	09/18/1986
P060	AGHCF Operations Manual: 7.0 Standard Examination Procedures	IPS-2-00-00	N/A	06/20/1989

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P062	AGHCF Operations Manual: 7.15 Preparation of Metallographic Specimens	IPS-2-00-00	Argonne National Laboratory	06/20/1989
P068	AGHCF Operations Manual: 7.14 Mounting Metallographic Specimens	IPS-2-00-00	N/A	03/29/1990
P069	AGHCF Operations Manual: 7.13 Fuel Element Sectioning	IPS-2-00-00	N/A	03/29/1990
P070	AGHCF Operations Manual: 7.21 Specimen Density by Immersion	IPS-2-00-00	N/A	06/20/1989
P304	Work Plan for Oxidizing Zircaloy Cladding Samples for the Zn-Zircaloy Interaction Study	IPS-362-00-00	H. Tsai	09/25/2000
P320	Management Plan for Irradiation Performance Section Facilities, Energy Technology Division	IPS-417-00-00	H. Drucker, Director EEST	10/14/2002
P325	Functional Requirements for Hydrogen-Charged Materials to be Used as Standards for Hydrogen Content Determination	IPS-424-00-00	R. Daum	01/22/2003
P326	Work Plan for Determining the Effectiveness of Defueling a Short Cladding Segment from High Burnup In-cell LOCA Test Sample ICL#2 in Room-Temperature Nitric Acid	IPS-428-00-00 and IPS-428-00-01	Y. Yan	08/06/2003 and 09/16/2003
P327	Procedure for Thinning Gauge Sections of Tensile Specimens after Tensile Tests	IPS-429-00-00 and IPS-429-00-01	H. Tsai	08/14/2003 and 08/26/2003
P329	Feasibility Study for Defueling Irradiated Cladding Using Non-Volatile Methods	IPS-432-00-00	R. Daum	12/02/2003
P331	Work Plan for Preparation of Samples for LECO Hydrogen or Oxygen Analysis	IPS-434-00-00	T. Burtseva	10/16/2003
P333	Procedure for the Steam Oxidation Tests at High Temperature at Unirradiated Advanced Cladding Alloys M5, E110, ZIRLO, and ZRY-4 Cladding within the Out-of-Cell LOCA Integral Test Apparatus Memo to M.C. Billone and T.S. Bray	IPS-438-00-00	Y.Yan	12/01/2003
P344	Analysis of Spent Nuclear Fuel Sample A/G 574B2 (Limerick Reactor) to Determine Selected Isotopes and Estimate Fuel Burnup	N/A	D.G. Graczyk	04/2003
P372	Review of Zirconium-Zircaloy Pyrophoricity	RHO-RE-ST-31 P	T.D. Cooper	11/1984
P373	Metallographic Analysis of irradiated RERTR-3 Fuel Test Specimens	ANL/NT/CP-103306	M.K. Meyer, et.al.	10/01-06/2001
P374	The RERTR Program: A Status Report	ANL/TD/CP-97495	A. Travelli	09/28/1999
P375	Progress of the RERTR Program in 1999	ANL/TD/CP-100128	A. Travelli	01/18/2000
P378	Argonne National Laboratory-East Building 212 Energy Technology Division Alpha-Gamma Hot Cell Facility Preliminary Decontamination and Decommissioning Plan	HFS-003	T.S. Bray	10/08/2003
P380	Alpha-Gamma Hot Cell Facility (AGHCF) Safety Analysis Report	IPS-221-00-01	ANL	10/2001
P386	CRIEPI Posttensile SEM Fractography	SI 197	H. Tsai	07/13/2001
P387	Prep of Creep Samples	SI 340	H. Tsai	02/25/2003
P389	AGHCF Supplemental Instructions for IRIS-11	IPS-295-00-00	L.A. Neimark	12/01/1998
P392	Procedures for Conducting Tests in the Whole-Pin furnace System (IPS-2-04-00)	IPS-2-04-00 and IPS-2-04-01	L.A. Neimark	01/22/1990 and 05/22/1990
P394	Work Plan for the Preparation of Fuel Rods for Return Shipment to Idaho	HFS-015-00-00	L.A. Neimark	12/08/2004
P396	AGHCF Special Nuclear material Inventory Management Plan	HFS-011-00-00	ANL	02/06/2004
P407	Criticality Control	AGHCF-OPS-109	ANL	04/05/2002
P410	Changing a Final HEPA Filter in the Main Exhaust	AGHCF-OPS-207	ANL	11/25/2002
P412	Remote Handled Transuranic Waste Sorting and Packaging	AGHCF-OPS-302	ANL	07/09/2001 and 03/29/2005
P414	Estimation of Activity in Waste Containers	AGHCF-OPS-304	ANL	04/20/2001
P416	Chemical and Other Regulated Waste Management	AGHCF-OPS-306	ANL	10/31/2001
P469	Changing an In-line Filter in a Radioactive Gas Collective System	AGHCF-MAINT-100	ANL	01/31/2001
P472	Manipulator Movement, Cleaning and Repair	AGHCF-MAINT-202	ANL	11/26/2002
P475	Acid-Clean Windows	HFS-MAINT-501	ANL	08/20/2003
P480	Painting a Drained Shielding Window Cavity	AGHCF-MAINT-509	ANL	12/15/2000
P484	Installing a Type A "Tank-in-a-Tank" Window Assembly	HFS-MAINT-513	ANL	08/20/2003
P485	Procedure for Installing Lead Shielding Around a Tank Insert in an AGHCF Window Cavity	HFS-MAINT-514	ANL	08/20/2003
P486	Hydroxylamine Hydrochloride Addition to Zinc Bromide Solution	HFS-MAINT-515	ANL	03/14/2005
P487	Installation of Lead-Glass Glovebox Window Panes	HFS-MAINT-516	ANL	09/05/2003
P489	Work Plan for Decontaminating the CTA after the Completion of the ANL/JNC Tensile Testing	IPS-313-00-00 and IPS-313-00-01	H. Tsai	07/06/1999

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P490	Work Plan for Diameter Measurements of Irradiated V-alloy Creep Specimens from the HFIR-2J Experiment	IPS-314-00-00	H. Tsai	07/16/1999
P492	Procedure for Cutting Uranium Metal or Uranium Alloys on the South Bay Diamond Bandsaw in the South Hood, Room F-206	IPS-315-00-00	R.V. Strain	07/20/1999
P503	Work Plan for Microstructural Examination on V-4Cr-4Ti Rods for Making Creep Tube Supplemental Instruction 252 for Rod/Specimen A/G 625A 1 through 14 Memo to IPS Document File	IPS-325-00-00	Y. Yan	11/04/1999
P505	Work Plan for the Heat Treatment and Microstructural Examination on V-4Cr-4Ti Rods for Making Creep Tubing Memo to IPS Document File	IPS-325-02-00	Y. Yan	01/22/2000
P507	Photography and Met of Weld Samples, Supplemental Instruction 252 for Rod/Specimen A/G 625A 1 through 14 in accordance with IPS-327-00-00	SI 252	R.V. Strain	12/13/2001
P509	Work Plan for the LOCA Mock-up - Phase 1 Memo to NRC Program File	IPS-328-00-00	R.V. Strain	11/23/1999
P516	Replacement of the WPF Furnace Memo to IPS Document File	IPS-333-00-00	H. Tsai, IPS-ET	10/20/1999
P520	PIE of RERTR-3	IPS-338-00-00 and SI 305	R.V. Strain	01/20/2000 and 04/05/2002
P521	Work Plan for Assessment of Auger Analyzer: Examination of NERI Stainless Steel Samples	IPS-339-00-00	R. V. Strain	1/25/2000
P532	Complete Axial Specimen Preparation for Rod/Specimen ID: 592C2C, 592C14C Surry According to IPS-382-00-00	SI 352	R. Daum	7/31/2003
P536	Decontamination and Transfer of A/G 587 Tensile Specimens to Clean Vials Memo to IPS Document File	IPS-354-00-00	T. Bray, Manager, AGHCF	04/18/2000
P537	Revised Work Plan for Unloading and Transferring Irradiated Stainless Steel Mechanical Test Specimens to Cell 2 of the IML	IPS-355-00-01	H. Chung, O. Chopra	05/15/2000
P539	Work Plan for Examination and Testing of Limerick Rod F9, Mid Segment, A/G 574C	IPS-357-00-00	H. Tsai	06/15/2000
P540	Work Plan for Preparation of Low-Oxygen Vanadium Alloy Test Specimens	IPS-358-00-00	H. Tsai	06/26/2000
P546	Work Plan for Conducting Melt Dissolution Tests on Al-clad Fuels and Supplemental Instruction 184	IPS-366-00-00	T.S. Bray	11/07/2000
P548	Work Plan for Conducting the Zn-Zircaloy Interaction Tests	IPS-368-00-00	H. Tsai	11/30/2000
P551	Work Plan for the Examination of Fuel Plates from the RERTR-4 Experiment in ATR; Work Plan for Cutting H. B. Robinson Rod Sections and Loading into Shipping Tubes, and Supplemental Instruction 153	IPS-375-00-00, -01-00, IPS-376-00-00	R. V. Strain	03/16/2001; 04/12/2001; 03/26/2001
P552	Oxygen Pickup by LECO Oxygen Determinator for the LOCA Zry-2 Test #6 and Work Plan for Preparing Samples for Oxygen Analyses from Zry Cladding after Steam Oxidation Test at High Temperature	IPS-377-00-00 and IPS-377-01-00	Y. Yan	04/06/2001
P554	Work Plan for the Initial Characterization and Sectioning of H. B. Robinson Rod RA1 8235 (A/G 611) and Supplemental Instruction 328	IPS-379-00-00	H. Tsai	05/16/2001
P556	Work Plan for Cutting Axial Tensile Specimens from Surry Cladding with the EDM in Cell 3 of the IML Memo to IPS Document File and Supplemental Instruction 260	IPS-381-00-00	R. Daum	07/10/2001
P557	Load Train Assembly and Testing Procedure for Axial Tensile Testing of Surry Cladding, and Supplemental Instruction 338, Rev. 1 Memo to IPS Document File	IPS-382-00-00, IPS-382-00-01	R. Daum, ET-IPS	11/29/2001; 04/11/2003
P566	Work Plan for Characterization of Surry Rod G6 (A/G 592)	IPS-392-00-00	H. Tsai, ET-IPS	09/21/2001
P568	Pre-oxidized Zry for TC Welding Practice, Supplemental Instruction 294 for Rod/Specimen Unirradiated 0.48" Zry cladding in accordance with IPS-395-00-00	SI 294	Y. Yan	03/29/2002
P572	Optical Metallography Test Weld, Supplemental Instruction 262 for Rod/Specimen A/G 625D5	SI 262	R.V. Strain	01/10/2002
P574	Procedure for the Repair of the Driver Screw Mechanism of AGHC Shield Door Number 2, Supplemental Instruction 354	IPS-401-00-00 and IPS-401-00-01	D. Donahue	01/08/2002 and 01/11/2002
P575	Work Plan for the Examination of Fuel Plates from the RERTR-4 Experiment in ATR, Revision 1	IPS-400-01-00	R.V. Strain	02/22/2002

Source Document Tracking Number	Title	Document Number	Author	Date
P578	General Work Plan for Preparing Segments of Fuel Cladding for Programmatic Investigations and Supplemental Instruction 303	IPS-405-00-00	R. Daum	02/28/2002
P580	In-cell LOCA Integral Test with unirradiated Zry-2, Supplemental Instructions 357 for Rod/Specimen 12" long unirradiated Zry-2, A/G 581C41 in accordance with IPS-409-01-03	SI 357	Y. Yan	09/03/2003
P583	Roadmap for SP-100 Fuel Pin Irradiation Testing	WHC-SP-1083	B.J. Makenas	02/1994
P584	U.S. Department of Energy - The Secretary's Annual Report to Congress 1992-1993	DOE/S-0111	U.S. DOE	1993
P585	Safety issues at the DOE Test and Research Reactors, A Report to the U.S. Department of Energy	N/A	National Academy Press	1988
P586	Report to Congress - The Liquid Metal Fast Breeder Reactor Program - Past, Present, and Future	RED-75-352	ERDA	04/28/1975
P587	Program Scoping Plan for the Fast Flux Test Facility, A Nuclear Science and Irradiation Services User Facility	PNNL-12245	PNNL	08/1999
P588	An Overview of the Argonne National Laboratory Fast Critical Experiments 1963-1990	ANL-NT-175	L.G. LeSarge	04/2001
P599	The Defense Programs Origin of Transuranic waste at Argonne National Laboratory-West	ANL-NT-192	H.F. McFarlane	11/2001
P602	Analysis of Three Mile Island and Quad Cities Spent Nuclear Fuel Samples	N/A	S.F. Wolf, D.L. Bowers, J.C. Cunnane	04/28/1999
P603	Validation of the Rebus-3/RCT Methodologies for EBR-II Core-Follow Analysis	CONF-920308-Vol. 2	R.D. McKnight	Unknown
P604	Criticality Hazards Control Statement, Alpha-Gamma Hot Cell Facility, Special Facility FF12, and Addendum 1, Use of a Safe Vac Vacuum Cleaner in Alpha-Gamma Hot Cell Facility Areas 1 and 3	IPS-6-00-09; IPS-6-00-10; IPS-6-01-10	J.A. Morman	03/08/1990; 07/2001
P606	Status and Progress of the RERTR Program in the Year 2000	ANL/TD/CP-103012	A. Travelli	2000
P607	Initial Assessment of Radiation Behavior of Very-High-Density Low-Enriched-Uranium Fuels	ANL/TD/CP-100148	G.L. Hofman, et.al.	1999
P616	Decontamination of Hot Cells K-1, K-3, M-1, M-3, and A-1, M-Wing, Building 200: Project Final Report Argonne National Laboratory-East	ANL/D&D/TM-96/2	C.L. Cheever, R.W. Rose	09/1996
P617	Criticality Hazards Control Statement for Special Facility MF200-KW	DOC-10146	W.D. Jackson	10/11/1978
P618	Quality Assurance Plan for RAS Loop Disassembly Facility, D-200, M- Wing, K-1 Cell	M3101-0025-SE-00	L.A. Neimark	01/16/1974
P620	Posttest Examination Plan for the L6 Experiment	M4000-0012-SA-00	W.F. Murphy	1/5/1981
P621	Posttest Examination Plan for the L7 Experiment	M3203-008-SA-00	L.A. Neimark	2/19/1979
P815	Paper: Initial Assessment of Radiation Behavior of Very-High-Density Low-Enriched-Uranium Fuels	ANL ID 29330	G.L .Hofman, et.al.	10/1999
P816	IPS-269-04-01, Metallography on an Additional RERTR-1 Microplate, A/G 549V	IPS-269-04-01	R.V. Strain	09/25/1998
P817	Additional Micro-Examination of Samples from the RERTR Program	IPS-292-00-00 thru IPS-292-09-00	R.V. Strain	08/1998 - 11/1999
P819	Work Plan for the Characterization of N-Reactor Fuel Specimens (A/G 562)	IPS-306-00-00	T. Bray	03/09/1999
P821	Metallographic Examination of Damaged N Reactor Spent Nuclear Fuel Element SFEC5,4378 ANL ID 41179	PNNL-11438; UC-602	S.C. Marschman, T.D. Pyecha, J. Abrefah	08/1997
P822	IPS-338-00-00, Work Plan for the Examination of Fuel Nano-Plates from the RERTR-3 Experiment in ATR ANL ID 6811	IPS-338-00-00	R.V. Strain	01/20/2000
P826	Revised Work Plan for the Examination of Fuel Plates from the RERTR-5 Experiment in ATR ANL DOC ID 27225	IPS-375-01-00	R.V. Strain	04/12/2001
P827	Recent Observations at the Postirradiation Examination of Low-Enriched U-Mo Miniplates Irradiated to High Burnup ANL DOC ID 29331	ANL ID 29331	G.L. Hofman, et.al.	10/05/2003
P829	Revised Work Plan for the Examination of Fuel Plates from the RERTR-4 Experiment in ATR ANL DOC ID 27220	IPS-400-01-00	R.V. Strain	N/A
P1002	Design, Operation, and Performance Data for High Burnup PWR Fuel from the H.B. Robinson Plant for Use in the NRC Experimental Program at Argonne National Laboratory	EPRI Report - 1001558	O. Ozer EPRI Project Manager	05/ 2002
P2000	Facility Hazard Category 2 Threshold Ratio Values for the K-Wing Nuclear Facility in Building 205	N/A	J.V. Beitz	08/01/2008
P2001	Retention of Neptunium in Uranyl Alteration Phases Formed During Spent Fuel Corrosion	ANL/CMT/CP-93028	E.C. Buck, et.al.	09/22/1997
P2002	Corrosion Mechanisms of Spent Fuel Under Oxidizing Conditions	ANL/CMP/CP-93030	P.A. Finn, et.al.	10/24/1997
P2003	Elements Present in Leach Solutions from Unsaturated Spent Fuel Tests	ANL/CMT/CP-79779	P.A. Finn, et.al.	11/29/1993

Source Document Tracking Number	Title	Document Number	Author	Date
P2004	Oxidative Corrosion of Spent UO2 Fuel in Vapor and Dripping Groundwater at 90C	ANL/CMT/CP-96766	R.J. Finch, et.al.	09/28/1999
P2005	Corroded Spent Nuclear Fuel Examined with EELS	ANL/CMT/CP-89579	E.C. Buck, et.al.	07/18/1996
P2007	Corrosion Testing of Spent Nuclear Fuel Performed at Argonne National Laboratory for Repository Acceptance	ANL/CMT/CP-102400	M.M. Goldberg	08/04/2000
P2008	I-129 Release Fractions in Unsaturated Tests with Fast-Flux MOX Fuels	ANL/CMT/CP-103284	P.A. Finn, et.al.	12/08/2000
P2009	Measurement Techniques in Dry-Powdered Processing of Spent Nuclear Fuels	ANL/CMT/CP-98274	S.F. Wolf, D.L. Bowers, P.J. Persiani	10/13/1999
P2010	Nuclear Operations Deactivation, Decommissioning, and Demolition Program: Activity-Specific Safety Analysis for Building 205 K-Wing Hot Cell Liquid Processing	NOD-181-00-00	B. Voelz	06/26/2009
P2011	Nuclear Operations Deactivation, Decommissioning, and Demolition Program: Appendix B: Building 205 K-Wing Hot Cell Deactivation Project Plan	NOD-162-00-01	D. Hodge	03/05/2009
P2012	"Nuclear Operations Deactivation, Decommissioning, and Demolition Program: Activity-Specific Safety Analysis for Building 205 K-Wing Cell A & B Material Sorting, Size Reduction, and Transfer	NOD-184-00-00	B. Voelz	07/09/2009
P2013	NUCLEAR OPERATIONS DIVISOIN WORK CLEARANCE PERMIT: 205 K-Wing Hot Cell Liquids Processing	WCP-09-205K-005	D. Hodge	07/15/2009
P2016	Basis of Interim Operations for Building 205 K-Wing Deactivation	NOD-205K-NSB-201	C.A. Sprain	08/28/2008
P2017	Determination of actinide and fission-product isotopes in very-high-burnup spent nuclear fuel	DOI: 10.1007/s10967-008-0709-4	V.S. Sullivan, et.al.	03/29/2007
P2018	Safety Analysis Report Building 205 G-Wing and K-Wing Laboratories	CMT-30-0470	M.H. Vander Pol M.C. Billone	12/01/1997
P2019	Test Plan for the Characterization of an Approved Testing Material Mixed Oxide Fuel	SNF-3A-004	M.A. Slawecki, et.al.	04/08/1998
P2020	Colloidal Products and Actinide in Leachate from Spent Nuclear Fuel	N/A	P.A. Finn E.C. Buck, et. Al.	1994
P2021	The Dissolution and Analyses of the Dissolver Solution, Undissolved Residue, and Cladding from Big Rock Point Irradiated Nuclear Fuel	N/A	A.J. Bakel, et.al.	2003
P2022	Results of the UREX+ Spent Fuel Demonstration	N/A	G.F. Vandegrift, et.al.	2003
P2023	Results of the UREX+2 Spent Fuel Demonstration	N/A	D. Bowers, et.al.	02/28/2005
P2024	Results of the 2005 UREX+1a Spent Fuel Demonstration	N/A	C. Pereira, et.al.	03/31/2006
P2025	2006 UREX+1a Spent Fuel Demonstration: Preliminary Results from Fuel Dissolution and UREX Feed Adjustment	N/A	A. Bakel C. Mertz G. Vandegrift	07/14/2006
P2026	Results of the 2006 UREX+1a Spent Fuel Demonstration	N/A	C. Pereira, et.al.	12/15/2006
P2027	Results of the 2007 TALSPEAK Spent Fuel Demonstration	N/A	C. Pereira, et.al.	04/30/2007
P2028	Preliminary Results of the UREX+3a Spent Fuel Demonstration	N/A	C. Pereira, et.al.	09/30/2007
P2029	Aqueous Dissolution of Urania-Thoria Nuclear Fuel	N/A	P.A. Demkowicz, et.al.	03/21/2003
P2030	Advanced Proliferation Resistant, Lower Cost, Uranium-Thorium Dioxide Fuels for Light Water Reactors Nuclear Energy Research Initiative Project 99-0153 Progress Report for Work through September, 2002 12th Quarterly Report and 3rd Annual Report	INEEL/EXT-02-01411	P.E. MacDonald	2002
P2032	Building 212 Alpha Gamma Hot Cell Facility Deactivation Project Plan with Appendix 1, 2 and 3	BOD-190-00-00 NOD-192-00-00 NOD-191-00-00 NOD-194-00-00	D. Pancake, M. Sodaro, D. Hodge	08/26/2009 08/14/2009 08/21/2009
P2033	Revised Estimate of the Radioactive Inventory in the AGHCF	NOD-155-00-00	R.J. Page	01/07/2009
P2034	Fuels for Sodium-Cooled Fast Reactors: US Perspective; article in Journal of Nuclear Materials	N/A	D.C. Crawford, D.L. Porter, S.L. Hayes	05/10/2007
P3001	Packaging CH-TRU Waste for Shipment to Idaho National Laboratory (INL) and Final Disposition at the Waste Isolation Pilot Plant (WIPP)	WMO-DOC-6, Rev. 0	WMO	12/09/2009
P3002	Solidification and Packaging CH-TRU Liquid Waste for Shipment to Idaho National Laboratory (INL) and Final Disposition at the Waste Isolation Pilot Plant (WIPP); Bulking Tub Neutralization and Solidification	Work Plan 09-WM-093	WMO	Not Dated
P3003	Solidification and Packaging CH-TRU Liquid Waste for Shipment to Idaho National Laboratory and Final Disposition at the Waste Isolation Pilot Plant; Bench Scale Neutralization and Solidification	Work Plan 09-WM-094	WMO	Not Dated

Source Document Tracking Number	Title	Document Number	Author	Date
P3004	Project-Specific Sampling and Analysis Plan (PSAP) Containerized Waste Material DQO and SAP Instructions; CH TRU Liquids Bulking/Neutralization/Solidification Project	CHTRU-001	WMO	12/03/2009
U001	AGHCF Position Statement Regarding Defense Versus Non-Defense TRU Waste	N/A	N/A	04/07/2000
U002	Draft Proposal For: Alpha-Gamma Hot Cell Facility Waste Management Plan	N/A	N/A	N/A
U003	Argonne National Laboratory-West Mission Description	N/A	N/A	05/18/2001
U004	Remote-Handled Waste Content Codes Assessed	N/A	N/A	N/A
U006	Summary of Purchasing Requisitions Received from T. Bray: Heavy Metals Usage Identified by IT That May Be in the RH-TRU Waste Stream	N/A	N/A	09/06/2001
U007	Material Control Sheets for A/G numbers 1 through 510 and some attached paperwork	N/A	N/A	N/A
U009	Transuranic Waste at Argonne National Laboratory-West: Meeting the Waste Acceptance Criteria for the TRU Repository	N/A	N/A	08/10/2001
U011	Project Process Flow Diagram: Fuel Elements from EBR-II and FFTF	N/A	N/A	N/A
U012	Basic Project and Anticipated Benefits	N/A	N/A	N/A
U013	Waste Stream Fissile Content	N/A	N/A	03/23/1990
U015	RH-TRU 1995, Book 5, Drums 798 to 809.	N/A	N/A	01/01/1995
U017	RH-TRU 1994, Book 8, Drums 778 to 797	N/A	N/A	N/A
U018	RH-TRU 1993, Book 7, Drums 748 to 777	N/A	N/A	N/A
U019	RH-TRU 1991-1992, Book 6, Drums 728 to 737	N/A	N/A	N/A
U021	RH-TRU 1990, Book 4, Drums 687 to 727	N/A	N/A	N/A
U022	RH-TRU 1985-1987, Book 3, Drums 617 to 686	N/A	N/A	N/A
U023	Fuel Shipments into AGHCF 1993-1995	N/A	N/A	07/08/1997
U030	Liquid Waste Disposal Requisition	N/A	L.A. Neimark	12/01/1976
U040	Spreadsheet Correlating Number Quota with Quota Title and Number Project	N/A	N/A	07/31/2001
U041	Videotape Logs	N/A	C.L. Schulz	09/15/2001
U045	Material Receipt and SPM Data for AG# 285	285JKLM	W.P. Kenney, D. Garcia	01/04/1985
U065	Hand written Notes: One titled "Decon & Repair Procedures for Cleaning and Repairing a Manipulator"	N/A	N/A	03/24/1987
U066	Addendum Criticality Safety Training Quiz 7/17 or 7/21/75	N/A	N/A	07/21/1975
U067	Information on Fuel Elements T678 and T680	IPS-26-00-00	N/A	05/24/2001
U068	Information on Fuel Elements DP-15, DP-17, DP-27, DP-32, DP-21, DP-24. DP-29, DP-45, and DP-61	N/A	N/A	N/A
U069	Information on Fuel Elements UBA-15, UBB-23, UCA-37, UCD-45, UCE-47	N/A	N/A	N/A
U070	Information on Fuel Element WT-185	N/A	N/A	07/09/2001
U072	Benzene, et.al MSDSs ds	N/A	N/A	02/09/1988
U073	Combustible Waste Contents (52 cans)	N/A	N/A	N/A
U074	Information on Fuel Element T61 of Subassembly X425	N/A	N/A	03/11/2002
U076	AGHCF Fissile Inventory Management System Database	N/A	N/A	07/16/2001 10/2009
U083	HEPA Filters	N/A	A. Cohen	03/15/1996
U084	Report of Analytical Results	MT-84 (4-94)	D. Bowers	11/3/1995
U085	Procedure for Determining Fuel Pellet Density Using a Mercury Prinometer (handwritten)	N/A	N/A	N/A
U304	Isotopic Analysis of High burn-up Spent Nuclear Fuel	N/A	N/A	Unknown
U307	Report 105 - Custodian Batch Balance (Pure)	Report 105	N/A	12/01/2004
U321	Area 1 Hydrogenous Liquid Inventory (Limit 3L plus fluids sealed in equipment)	N/A	N/A	1988 - 2004
U322	Hydrogenous Liquid in Cell Area I	N/A	N/A	1988 - 2001
U330	West Valley Demonstration Project Transuranic Waste Defense Waste Determination	N/A	K.J. Peters	09/20/2004
U332	Waste Requisitions - WMO-195, Radioactive and Mixed Waste Disposal Requisitions	Various	ANL	Various
U339	General Description of Building 200 Provided by Al Young	CH Ref. AE-U-5	Unknown	08/14/2000
U830	RERTR-3 Postirradiation Examination Plan at the Alpha-Gamma Hot Cell Facility; transmitted by memo from S. L. Hayes to R. V. Strain ANL ID 6808	ANL ID 6808	S.L. Hayes, M.K. Meyer	01/13/2000
U1003	Argonne Special Material Receipt and Transfer Documentation by A/G Number	N/A	Various	1964-1997

Source Document Tracking Number	Title	Document Number	Author	Date
U2002	CMT Nuclear Materials Inventory Database - detail report with ratios and FGEs	N/A	L.E. Maggos	07/21/2009
U2004	Material in K-Wing 07-29-09 Spreadsheet	N/A	L.E. Maggos	07/29/2009
U2007	RW85461 WMO-195 Radioactive and Mixed Waste Disposal Requisition	RW85461	D.S. Hodge	08/20/2003
U2008	RW85462 WMO-195 Radioactive and Mixed Waste Disposal Requisition	RW85462	D.S. Hodge	08/20/2003
U2009	RW85463 WMO-195 Radioactive and Mixed Waste Disposal Requisition	RW85463	D.S. Hodge	08/20/2003
U2010	Contactor Cleaning Procedure	N/A	S. Aase, R. Leonard	08/19/2003
U3001	CH TRU Project Inventory to be Repackaged	N/A	Argonne	01/18/2010
U3002	WDS Query and Compilation of Radiological Data for Waste Streams AECHDM and AECHHM	N/A	C. Chancellor	05/05/2010
U3003	Historic WMO-195 Waste Requisitions for containers repackaged into Waste streams AECHDM-PK and AECHHM-PK	N/A	WMO	Various
U3004	Waste Streams AECHDM-PK and AECHHM-PK Waste Container Packaging Forms and Supporting Documentation	N/A	WMO	Various
U3005	WMS Query for Repackaged CH Waste Streams AECHDM-PK and AECHHM-PK	N/A	WMO	9/26/2011
U3006	Radionuclide Data for Waste Streams ID-AECHDM and ID-AECHHM	N/A	N/A	9/26/2011

Washington
TRU Solutions LLC

CP:06:01187
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: April 18, 2006

FROM: R. R. Chavez LOCATION: Retrieval, Characterization & Transportation

TO: CCP Records Custodian LOCATION: Retrieval, Characterization & Transportation

SUBJECT: TRANSMITTAL OF WASTE STREAM PROFILE FORMS FOR WASTE STREAMS ID-RF-S5300-A, ID-RF-S5126, ID-RF-S3114, ID-RF-S3150-A, ID-RF-S5100-A

Please accept the subject waste stream profile forms to be placed in records for the Idaho National Laboratory.

RRC:jm

Enclosures (6)

cc: (without enclosures)
R. Chavez, WRES ED

Washington
TRU Solutions LLC

WRES:06:002
UFC:5822.00

January 6, 2006

Mr. M. F. Sharif
Central Characterization Project
Washington TRU Solutions LLC
P. O. Box 2078
Carlsbad, NM 88221-2078

Subject: TRANSMITTAL OF APPROVED CENTRAL CHARACTERIZATION PROJECT IDAHO NATIONAL LABORATORY WASTE STREAM PROFILE FORM NUMBER ID-RF-S3150-A, ORGANIC AND SLUDGE IMMOBILIZATION SYSTEM WASTE.

Dear Mr. Sharif:

Washington TRU Solutions LLC, on behalf of the Permittees, has evaluated the Central Characterization Project (CCP) Idaho National Laboratory (INL) Waste Stream Profile Form (WSPF) Number ID-RF-S3150-A, Organic and Sludge Immobilization System Waste. We have concluded that the WSPF is complete and that the waste stream determination was made in accordance with applicable procedures and guidance.

The Permittees therefore approve the WSPF as submitted. Using the methods approved for CCP/INL, CCP may enter the data into the certification and shipping modules of the WIPP Waste Information System.

If you have any questions, please contact me at (505) 234-7545.

Sincerely,

D. T. Bignell, Manager
Regulatory Compliance

DTB:slh

cc: P. Gilbert, LANL ED*
R. McCallister, DOE ED
S. Pearcy, L&M/CCP ED
V. Waldram, LANL ED
K. Watson, DOE ED
CBFO M&RC
WIPP Operating Record 486-06

*ED denotes Electronic Distribution

bcc: WRES Distribution

S. B. Jones	ED
R. F. Kehrman	ED
S. C. Kouba	ED
R. D. Reeves	ED
J. Siegel	ED

WTS Distribution

G. J. Johnson	ED
R. D. Raaz	ED

Washington
TRU Solutions LLC

WRES:06:001
UFC:5822.00

January 6, 2006

Mr. James Bearzi, Chief
Hazardous Waste Bureau
New Mexico Environment Department
2905 E. Rodeo Park Drive, Bldg. 1
Santa Fe, NM 87505

Subject: TRANSMITTAL OF APPROVED CENTRAL CHARACTERIZATION PROJECT WASTE STREAM PROFILE FORM NUMBER ID-RF-S3150-A, ORGANIC AND SLUDGE IMMOBILIZATION SYSTEM WASTE

Dear Mr. Bearzi:

Washington TRU Solutions, on behalf of the Permittees, has approved the Central Characterization Project Waste Stream Profile Form (WSPF) Number ID-RF-S3150-A, Organic and Sludge Immobilization System Waste.

Enclosed is a copy of the approved WSPF as required by Section B-4(b)(1) of the WIPP Hazardous Waste Facility Permit, No. NM4890139088-TSDF.

If you have any questions on this matter, please contact me at (505) 234-7545 or (505) 706-0055.

Sincerely,

D. T. Bignell, Manager
Regulatory Compliance

DTB:slh

Enclosure

cc: (without enclosure)

J. Kieling, NMED	ED*
C. Walker, TechLaw	ED
W. Ledford, CTAC	ED
CBFO M&RC	

(with enclosure)

P. Gilbert, LANL	ED
R. McCallister, CBFO	ED
V. Waldram, LANL	ED
K. Watson, CBFO	ED
WIPP Operating Record	ED

*ED denotes Electronic Distribution

P.O. Box 2078 • Carlsbad, New Mexico USA 88221-2078
Phone: (505) 234-7200 • Fax: (505) 234-7083

bcc: WRES Distribution

(without enclosures)
R. R. Chavez ED
S. B. Jones ED
R. F. Kehrman ED
S. C. Kouba ED
R. D. Reeves ED
J. Siegel ED

WTS Distribution

(with enclosures)
R. L. Chatfield ED
D. A. Hofer ED
D. R. Kump ED
D. L. Standiford ED

(without enclosures)
T. G. Hedahl ED
G. J. Johnson ED
R. D. Raaz ED

CCP Waste Stream Profile Form

(1) Waste Stream Profile Number: ID-RF-S3150-A			
(2) Generator site name:	Idaho National Laboratory (INL) Radioactive Waste Management Complex	(4)Technical contact:	Barbara Broomfield
(3) Generator site EPA ID:	ID4890008952	(6) Technical contact phone number:	(208) 526-6965
(5) Date of audit report approval by NMED: September 19, 2005			
(7) Title, version number, and date of documents used for WAP Certification: CCP-PO-001, Rev 11, CCP Transuranic Waste Characterization Quality Assurance Project Plan, March 10, 2005 CCP-PO-002, Rev 13, CCP Transuranic Waste Certification Plan, May 9, 2005 CCP-PO-003, Rev 8, CCP-TRUPACT-II Authorized Methods for Payload Control, Jan 25, 2005 CCP-PO-024, Rev 3, CCP/BBWI Interface Document, April 29, 2005			
(8) Did your facility generate this waste? YES [ ] NO [X]			
(9) If no, provide the name and EPA ID of the original generator: Rocky Flats Environmental Technology Site, CO7890010526			
Waste Stream Information[1]			
(10) WIPP ID: IN-W164.153[3]		(11) Summary Category Group: S3000	
(12) Waste Matrix Code Group: Solidified Organics		(13) Waste Stream Name: Organic and Sludge Immobilization System Waste	
(14) Description from the TWBIR: Organic and sludge immobilization system (OASIS) waste consists of cutting oil and organic solvents solidified with Envirostone emulsifier, gypsum concrete, and an accelerator.			
(15) Defense TRU Waste: YES [X] NO [ ]			
(16) Check One: CH [X] RH [ ]			
(17) Number of SWBs 0	(18) Number of Drums 860 55-gal.	(19) Number of Canisters 0	
(20) Batch Data report numbers supporting this waste stream characterization: See Characterization Information summary (CIS) Correlation of Container Identification Numbers to Batch Data Report Numbers			
(21) List applicable EPA Hazardous Waste Codes:[2] D022, D028, D029, D030, D032, D034, D036, D043, F001, F002, F005			
(22) Applicable TRUCON Content Codes: ID 112, ID212			
(23)Acceptable Knowledge Information[1]			
[For the following, enter the supporting documentation used (i.e., references and dates)]			
Required Program Information			
(23A) Map of site: CCP-AK-INL-005, Rev. 1, January 4, 2006 Figures 1, 2 and 3			
(23B) Facility mission description: CCP-AK-INL-005, Rev. 1, January 4, 2006 Sections 2.0 and 4.2			
(23C) Description of operations that generate waste: CCP-AK-INL-005, Rev. 1, January 4, 2006 Section 4.3			
(23D) Waste identification/categorization schemes: CCP-AK-INL-005, Rev. 1, January 4, 2006 Section 4.5			
(23E) Types and quantities of waste generated: CCP-AK-INL-005, Rev. 1, January 4, 2006 Section 4.4.1			
(23F) Correlation of waste streams generated from the same building and process, as appropriate: CCP-AK-INL-005, Rev. 1, January 4, 2006 Section 4.4.2			
(24) Waste certification procedures: CCP-TP-030, Rev. 16, CCP TRU Waste Certification and WWIS Data Entry, April 22, 2005			
(25) Required Waste Stream Information			
(25A) Area(s) and building(s) from which the waste stream was generated: CCP-AK-INL-005, Rev. 1, January 4, 2006 Section 6.1			
(25B) Waste stream volume and time period of generation: CCP-AK-INL-005, Rev. 1, January 4, 2006 Section 6.2			

(25C) Waste generating process description for each building: CCP-AK-INL-005, Rev. 1, January 4, 2006 Section 6.3			
(25D) Process flow diagrams: CCP-AK-INL-005, Rev. 1, January 4, 2006 Figure 5			
(25E) Material inputs or other information identifying chemical/radionuclide content and physical waste form: CCP-AK-INL-005, Rev. 1, January 4, 2006 Section 6.4.1			
(26) Which Defense Activity generated the waste: (check one)			
X	**Weapons activities including defense inertial confinement fusion**		**Naval Reactors development**
	Verification and control technology		**Defense research and development**
	Defense nuclear waste and material by products management		**Defense nuclear material production**
	Defense nuclear waste and materials security and safeguards and security investigations		
(27)Supplemental Documentation			
(27A) Process design documents: NA			
(27B) Standard operating procedures: See S2 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27C) Safety Analysis Reports: NA			
(27D) Waste packaging logs: See S4 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27E) Test plans/research project reports: See S5 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27F) Site databases: See S6 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27G) Information from site personnel: See S7 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27H) Standard industry documents: NA			
(27I) Previous analytical data: See S9 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27J) Material safety data sheets: See S10 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27K) Sampling and analysis data from comparable/surrogate Waste: See S12 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27L) Laboratory notebooks: NA			
Sampling and Analysis Information[2]			
For the following, when applicable, enter procedure title(s), number(s) and date(s)			
(28)	Radiography: See procedures listed on the attached CIS, CCP-TP-002, Attachment 3		
(29)	Visual Examination: See procedures listed on the attached CIS, CCP-TP-002, Attachment 3		
(30)	**Headspace Gas Analysis**		
(30A)	VOCs: See procedures listed on the attached CIS, CCP-TP-002, Attachment 3		
(30B)	Flammable: See procedures listed on the attached CIS, CCP-TP-002, Attachment 3		
(30C)	Other gases (specify): NA		
(31)	**Homogeneous Solids/Soils/Gravel Sample Analysis**		
(31A)	Total metals: See procedures listed on the attached CIS, CCP-TP-002, Attachment 3		
(31B)	PCBs: NA		
(31C)	Total VOCs: See procedures listed on the attached CIS, CCP-TP-002, Attachment 3		
(31D)	Nonhalogenated VOCs: See procedures listed on the attached CIS, CCP-TP-002, Attachment 3		
(31E)	Semi-VOCs: See procedures listed on the attached CIS, CCP-TP-002, Attachment 3		

Controlled Copy

CCP Waste Stream Profile Form

(31F)	Other (specify): NA
(32)Comments:	

Reviewed by AK Expert: YES [X] Date: 1-03-06

Reviewed by STR (if necessary): YES [X] N/A [ ] Date: 12-21-05

Waste Stream Profile Form Certification:

I hereby certify that I have reviewed the information in this Waste Stream Profile Form, and it is complete and accurate to the best of my knowledge. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

(33) _____ (34) Barbara Broomfield (35) 1/4/06

Signature of Site Project Manager | Printed Name | Date

NOTE:

(1) Use back of sheet or continuation sheets, if required.
(2) If radiography, visual examination, headspace gas analysis, and/or homogeneous solids/soils/gravel sample analysis were used to determine EPA Hazardous Waste Codes, attach signed Characterization Information Summary documenting this determination.
(3) The following WIPP ID numbers for immobilized organic liquids also apply; IN-W164.1000

CHARACTERIZATION INFORMATION SUMMARY

WSPF# ID-RF-S3150-A , LOT 1

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WSP: #: ID-RF-3150-A Lot #: 1

SPQAO Review: [signature] Date: 12/29/05

SPM Review: [signature] Date: 12/29/05

SPQAO signature indicates that the information presented in this package is consistent with analytical batch reports.

SPM signature certifies that through Acceptable Knowledge testing and/or analysis that the waste identified in this summary is not corrosive, ignitable, reactive, or incompatible with the TSDF.

A summary of the Acceptable Knowledge regarding this waste stream containing specific information about the corrosivity, reactivity, and ignitability of the waste stream is included as an attachment to the Waste Stream Profile Form. By reference, that information is included in this lot.

List of procedures used:

Radiography (RT/RT/NDE)

CCP-TP-102 CCP Radiography Inspection Procedure, 09-08-2005, Rev 8
CCP-TP-102 CCP Radiography Inspection Procedure, 08-09-2005, Rev 7
CCP-TP-102 CCP Radiography Inspection Procedure, 04-05-2005, Rev 6

Non Destructive Assay (NDA):

CCP-TP-109 CCP Data Reviewing, Validating, and Reporting Procedure, 09-21-2005, Rev 4
CCP-TP-109 CCP Data Reviewing, Validating, and Reporting Procedure, 04-12-2005, Rev 3
CCP-TP-109 CCP Data Reviewing, Validating, and Reporting Procedure, 03-18-2005, Rev 2
CCP-TP-109 CCP Data Reviewing, Validating, and Reporting Procedure, 05-06-2004, Rev 1

CCP-TP-115 CCP SWEPP Gamma-Ray Spectrometer (SRGS) Operating Procedure, 04-15-2005, Rev 1
CCP-TP-115 CCP SWEPP Gamma-Ray Spectrometer (SRGS) Operating Procedure, 02-27-2005, Rev 0

CCP-TP-019 CCP Waste Assay Gamma Pectrometer (WAGS) Operating Procedure, 06-10-2005, Rev 2
CCP-TP-019 CCP Waste Assay Gamma Pectrometer (WAGS) Operating Procedure, 04-18-2005, Rev 1
CCP-TP-019 CCP Waste Assay Gamma Pectrometer (WAGS) Operating Procedure, 02-27-2005, Rev 0

CCP-TP-097 Operating the CCP Tomographic Gamma Scanner (TGS), 07/22/2005, Rev 3
CCP-TP-097 Operating the CCP Tomographic Gamma Scanner (TGS), 04/15/2005, Rev 2
CCP-TP-097 Operating the CCP Tomographic Gamma Scanner (TGS), 04/12/2005, Rev 1
CCP-TP-097 Operating the CCP Tomographic Gamma Scanner (TGS), 02/27/2005, Rev 0

Headspace Gas Sampling and Analysis (HSG):

CCP-TP-093 CCP Sampling of TRU Waste Containers, 06-29-2005, Rev 7
CCP-TP-093 CCP Sampling of TRU Waste Containers, 04-15-2005, Rev 6
CCP-TP-093 CCP Sampling of TRU Waste Containers, 03-22-2005, Rev 5
CCP-TP-093 CCP Sampling of TRU Waste Containers, 03-11-2005, Rev 4
CCP-TP-093 CCP Sampling of TRU Waste Containers, 02-28-2005, Rev 3

CCP-TP-106 CCP Headspace Gas Sampling Batch Data Report Preparation, 04-15-2005, Rev 3
CCP-TP-106 CCP Headspace Gas Sampling Batch Data Report Preparation, 03-03-2005, Rev 2

ACMM-9910, Analysis of Gas Samples for VOCs by GC/FID, 04-15-2004, Rev 8

ACMM-9925, Analysis of Gas Samples for Hydrogen and Methane by GC/TD, 04-20-2004, Rev 1

ACMM-9930, Analysis of Gas Samples for VOCs by GC/MS, 07-10-2003, Rev 8

Visual Examination (VE):

TWCP Visual Examination HFEF-01-6890 04/07/03, Rev 5

NT-AP-09 TWCP Visual Exam Expert (VEE) Functions and Process, W0102-0168-AP, 04/15/03, Rev 5

INST-OI-34, Visual Examination Operating Procedures and Data Reporting, 7/21/05, Rev 11, FC1

Solids Sampling
HFEF-OI-6910, rev 2d, TWCP Core Drilling Operations, 9/9/03

Solids Analysis
Semi VOCs: ACMM-9270 Rev 5, Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry, 4/7/03
VOCs: ACMM-9260 Rev 9, Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry, 7/10/03
Total Metals: ACMM-2901, Rev.2, Determination of Trace Elements by ICP-AES for TRU Waste Characterization, 4/7/03
ACMM-2810, Rev. 2, Determination of Mercury by CVAA for TRU Waste Characterization, 4/7/03
Nonhalogenated VOCs: ACMM-9441 Rev. 6, Determination of Nonhalogenated Volatile Organic Compunds by Gas Chromatography, 4/7/03

Project Level Data Validation / DQO Reconciliation:

CCP-TP-001 CCP Project Level Data Validation and Verification, 03/23/05 Rev 11

CCP-TP-002 CCP Reconciliation of DQOs and Reporting Characterization Data 08/16/05 Rev 15
CCP-TP-002 CCP Reconciliation of DQOs and Reporting Characterization Data 03/29/05 Rev 14

CCP-TP-003 CCP Sampling Design and Data Analysis for RCRA Characterization 9/3/03 Rev 14

CCP-TP-005 CCP Acceptable Knowledge Documentation 03/31/05 Rev 15

CCP-TP-030 CCP TRU Waste Certification and WWIS Data Entry 4/22/05 Rev 16

WAP Certification:

CCP-PO-001 CCP-TRU Waste Characterization Quality Assurance Project Plan 03/10/05 Rev 11

CCP-PO-002 CCP Transuranic Waste Certification Plan 05/09/05 Rev 13

CIS 002

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

WSP: # ID-RF-3150-A

Lot # 1

Container ID Number	Historical Container ID	Headspace Gas BDR				NDA BDR	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Lead Management/ Overpack Yes
		Sample	Analysis								
10005799	IDRF074316312	INHSGS050063	ECL05072C	ECL05069G	ECL05069M	INNDAS050053	INRTR2050036	VVE05-01804	NA	NA	
10005808	IDRF074317410	INHSGS050063	ECL05072C	ECL05069G	ECL05069M	INNDAS050053	INRTR2050036	VVE05-01824	NA	NA	
10017132	IDRF074317933	INHSGS050063	ECL05072C	ECL05069G	ECL05069M	INNDAS050053	INRTR2050036	VVE05-01764	NA	NA	
10017136	IDRF074317916	INHSGS050063	ECL05072C	ECL05069G	ECL05069M	INNDAS050053	INRTR2050036	VVE05-01904_R1	NA	NA	
10017572	IDRF074317858	INHSGS050071	ECL05069C	ECL05086G	ECL05086M	INNDAS050064	INRTR2050067	NA	NA	NA	
10017574	IDRF074316318	INHSGS050071	ECL05069C	ECL05086G	ECL05086M	INNDAS050060	INRTR2050064	NA	NA	NA	
10017580	IDRF074316315	INHSGS050071	ECL05069C	ECL05086G	ECL05086M	INNDAS050060	INRTR2050064	NA	NA	NA	
10017586	IDRF074316084	INHSGS050071	ECL05069C	ECL05086G	ECL05086M	INNDAS050060	INRTR2050064	NA	NA	NA	
10017588	IDRF074316082	INHSGS050071	ECL05069C	ECL05086G	ECL05086M	INNDAS050060	INRTR2050064	NA	NA	NA	
10017723	IDRF074316306	INHSGS050071	ECL05069C	ECL05086G	ECL05086M	INNDAS050067	INRTR2050067	NA	NA	NA	
	** These containers were randomly selected for Solids analysis for the assignment of Hazardous Waste Numbers.										
10015886**	IDRF074316233	NA	NA	NA	NA	NA	NA	NA	WCS-0504	ALD05025N ALD05031S ALD05034V ALD05034M	
10016179**	IDRF074316350	NA	NA	NA	NA	NA	NA	NA	WCS-0504	ALD05025N ALD05031S ALD05034V ALD05034M	
10016503**	IDRF074316177	NA	NA	NA	NA	NA	NA	NA	WCS-0504	ALD05025N ALD05031S ALD05034V ALD05034M	
10016867**	IDRF074317456	NA	NA	NA	NA	NA	NA	NA	WCS-0504	ALD05025N ALD05031S ALD05034V ALD05034M	
10016876**	IDRF074317785	NA	NA	NA	NA	NA	NA	NA	WCS-0504	ALD05025N ALD05031S ALD05034V ALD05034M	

Signature of Site Project Manager

Craig Simmons
Printed Name

12/29/05
Date

CLS 003

CCP Headspace Gas UCL90 Evaluation Form

WSPF #: ID-RF-3150-A **Waste Stream Lot Number** 1 through 1

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples (2)	Maximum (ppmv) (2)	Mean (ppmv) (2)	SD (ppmv) (2)	UCL_{90} (ppmv) (2)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes (2)	EPA Code
Benzene	No	0	0	0.00	0.00	0.00	0.00	10	N/A		
Bromoform	No	0	0	0.00	0.00	0.00	0.00	10	N/A		
Carbon tetrachloride	SQRT	10	10	154.92	116.29	36.62	132.30	10	3.16	Yes	F001
Chlorobenzene	No	0	0	0.00	0.00	0.00	0.00	10	N/A		
Chloroform	No	5	5	50.00	48.60	1.14	49.36	10	N/A	Yes	D022
Cyclohexane [a]	No	0	0	0.00	0.00	0.00	0.00	10	N/A		
1,1-Dichloroethane	No	0	0	0.00	0.00	0.00	0.00	10	N/A		
1,2-Dichloroethane	No	0	0	0.00	0.00	0.00	0.00	10	N/A		
1,1-Dichloroethylene	No	0	0	0.00	0.00	0.00	0.00	10	N/A		
cis-1,2-Dichloroethylene	No	0	0	0.00	0.00	0.00	0.00	10	N/A		
trans-1,2-Dichloroethylene	No	0	0	0.00	0.00	0.00	0.00	10	N/A		
Ethyl benzene	No	0	0	0.00	0.00	0.00	0.00	10	N/A		
Ethyl ether	No	0	0	0.00	0.00	0.00	0.00	10	N/A		
Methylene chloride	No	0	0	0.00	0.00	0.00	0.00	10	N/A		
1,1,2,2-Tetrachloroethane	No	0	0	0.00	0.00	0.00	0.00	10	N/A		
Tetrachloroethylene	No	0	0	0.00	0.00	0.00	0.00	10	N/A		
Toluene	No	0	0	0.00	0.00	0.00	0.00	10	N/A		
1,1,1-Trichloroethane	Log	10	10	10.80	9.21	0.59	9.47	10	2.30	Yes	F001, F002
Trichloroethylene	No	0	0	0.00	0.00	0.00	0.00	10	N/A		
1,1,2-Trichloro-1,2,2-trifluoroethane (freon)	Log	10	10	8.73	6.18	2.35	7.20	10	2.30	Yes	F002
1,2,4-Trimethylbenzene [a]	No	0	0	0.00	0.00	0.00	0.00	10	N/A		
1,3,5-Trimethylbenzene [a]	No	0	0	0.00	0.00	0.00	0.00	10	N/A		
m-Xylene [b]	No	0	0	0.00	0.00	0.00	0.00	10	N/A		
p-Xylene [b]	No	0	0	0.00	0.00	0.00	0.00	10	N/A		
o-Xylene	No	0	0	0.00	0.00	0.00	0.00	10	N/A		

CCP Headspace Gas UCL90 Evaluation Form

WSPF #: ID-RF-3150-A **Waste Stream Lot Number** 1 through 1

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples (2)	Maximum (ppmv) (2)	Mean (ppmv) (2)	SD (ppmv) (2)	UCL_{90} (ppmv) (2)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes (2)	EPA Code
Acetone	No	0	0	0.00	0.00	0.00	0.00	100	N/A		
1-Butanol	No	0	5	44.50	43.00	1.12	43.77	100	N/A		
Methanol	No	10	10	330.00	195.00	82.36	231.02	100	N/A	Yes	(3)
Methyl ethyl ketone	Log	0	5	3.69	3.65	0.02	3.67	100	4.61		
Methyl isobutyl ketone	Log	0	5	3.31	3.27	0.03	3.29	100	4.61		
Chloromethane	No	0	0	0.00	0.00	0.00	0.00	10	N/A		
Carbon Disulfide	No	0	0	0.00	0.00	0.00	0.00	10	N/A		
Formaldehyde[c]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hydrazine[d]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

[a] These compounds are from the TRAMPAC and are flammable VOCs that do not appear in the QAPjP or the WIPP WAP. These are not part of the target analyte list, but samples may be analyzed for these compounds.
[b] These xylene isomers cannot be resolved by the analytical methods employed in the program. m-Xylene and p-Xylene will be reported as "Total m-p-Xylene."
[c] Required only for homogenous solids and soil/gravel waste from Savannah River Site.
[d] Required only for homogenous solids and soil/gravel waste from Oak Ridge National Laboratory and Savannah River Site.

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per section B4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

(2) As a result of dilution requirements, several analytes were reported as non-detected with MDL values in excess of the PRQL. In accordance with Section B4-3d of the WIPP-WAP, such "U" flagged observations with elevated MDL values due to dilution were not used in calculating mean concentration. Consequently, the subject analytes were statistically evaluated using only the useable observations. For analytes with no useable data, there is no corresponding data to report on the UCL90 evaluation form. See the Headspace Gas/Volatile Organic Compound Information section of the AK Summation for assignment of Hazardous Waste Numbers per AK.

(3) Although methanol was detected in concentrations above the PRQL, no EPA hazardous waste numbers were assigned. Specifically methanol is an F003 listed solvent that is listed solely for the characteristic of ignitability. Since this waste stream does not exhibit the characteristic of ignitability (i.e., is not assigned D001) the F003 hazardous waste number was not assigned to this waste stream.

CCP Totals Analysis VOC UCL90 Evaluation Form

WSPF # ID-RF-S3150-A **Waste Stream Lot Number:** 1

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples (2)	# Samples above MDL (1)	Maximum (mg/kg) (2)	Mean (mg/kg) (2)	SD (mg/kg) (2)	UCL 90 (mg/kg) (2)	PRQL (mg/kg)	Transformed PRQL (N/A or Value)	UCL 90 > PRQL YES	EPA Code
Benzene		0	0					10	N/A		
Bromoform		0	0					10	N/A		
Carbon disulfide		0	0					10	N/A		
Carbon tetrachloride	SQRT	5	5	178.89	133.97	35.57	158.36	10	3.162278	Yes	F001
Chlorobenzene		0	0					10	N/A		
Chloroform (3)	No	1	1	270	270	N/A	N/A	10	N/A		D022[4]
1,4-Dichlorobenzene [4]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	10	N/A		
ortho-Dichlorobenzene [4]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	10	N/A		
1,2-Dichloroethane		0	0					10	N/A		
1,1-Dichloroethylene		0	0					10	N/A		
trans 1,2-Dichloroethylene		0	0					10	N/A		
Ethyl benzene		0	0					10	N/A		
Methylene choloride		0	0					10	N/A		
1,1,2,2-Tetrachloroethane		0	0					10	N/A		
Tetrachloroethylene		0	0					10	N/A		
Toluene		0	0					10	N/A		
1,1,1-Trichloroethane	Log	5	5	10.78	9.93	0.7	10.41	10	2.302585	Yes	F001, F002
1,1,2,-Trichloroethane		0	0					10	N/A		
Trichoroethylene		0	0					10	N/A		
Trichlorofluoromethane		0	0					10	N/A		
1,1,2-Trichloro-1,2,2-trifluoroethane		0	0					10	N/A N/A		
Vinyl chloride		0	0					4	N/A		
m-Xylene		0	0					10	N/A		
p-Xylene		0	0					10	N/A		
o-Xylene		0	0					10	N/A		
Acetone	No	4	0	17.5	12.29	7.24	18.21	100	N/A		
Butanol	No	4	0	17.5	12.29	7.24	18.21	100	N/A		
Ethyl ether	No	4	0	17.5	12.2875	7.235	18.212	100	N/A		
Formaldehyde [4]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	100	N/A		

CCP Totals Analysis VOC UCL90 Evaluation Form

WSPF # ID-RF-S3150-A **Waste Stream Lot Number:** 1

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples (2)	# Samples above MDL (1)	Maximum (mg/kg) (2)	Mean (mg/kg) (2)	SD (mg/kg) (2)	UCL 90 (mg/kg) (2)	PRQL (mg/kg)	Transformed PRQL (N/A or Value)	UCL 90 > PRQL YES	EPA Code
Hydrazine [a]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	100	N/A		
Isobutanol	Log	5	0	3.79549	2.17635	1.32798	3.08691	100	4.60517		
Methanol	SQRT	5	1	6.67083	4.03871	2.32077	5.63	100	10		
Methyl ethyl ketone	No	4	0	17.5	12.2875	7.23514	18.21218	100	N/A		
Pyridine	No	4	0	17.5	12.2875	7.23514	18.21218	100	N/A		

(a) Required only for homogenous solids and soil/gravel waste from Los Alamos National Laboratory and Savannah River Site.
(b) Required only for homogenous solids and soil/gravel waste from Oak Ridge National Laboratory and Savannah River Site.
(c) Can also be analyzed as semi-volatile organic compound. If analyzed as a semi-volatile, the QAOs of Table B3-6 apply.

Comments:

(1) For analytes where the samples measured was below the MDL value, 1/2 of the MDL value was used. (Per section B4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

(2) As a result of dilution requirements, several analytes were reported as non-detected with MDL values in excess of the PRQL. In accordance with Section B4-3d of the WIPP-WAP, such "U" flagged observations with elevated MDL values due to dilution were not used in calculating mean concentration. Consequently, the subject analytes were statistically evaluated using only the useable observations. For analytes with no useable data, there is no corresponding data reported on the UCL90 evaluation form. See the Solids Sampling and Analysis Information section of the AK Summation for assignment of Hazardous Waste Numbers per AK.

(3) For analytes where there is no standard deviation, there is inadequate data to perform the statistical analysis.

(4) For Chloroform there was only one usable data point. Due to the lack of variability of the data no UCL90 value can be calculated. The D022 EPA code has been assigned based on AK.

ID-RF-S3150-A
CCP Totals analysis VOC Raw Data

Sample ID	Benzene	Bromoform	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroform	1,1-Dichloroethene	1,2-Dichloroethane	Ethylbenzene
10018503				8800					
10018886				11000					
10018875				25000					
10018178				18000					
10018867				32000		270			
> MDL	0	0	0	5	0	1	0	0	0

ID-RF-S3150-A
CCP Totals analysis VOC Raw Data

Sample ID	Methylene Chloride	m-Xylene and p-Xylene	o-Xylene	1,1,2,2-Tetrachloroethane	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	1,1,1-Trichloroethane
10018503								37000
10016886								16000
10018875								48000
10018178								14000
10018867								9100
> MDL	0	0	0	0	0	0	0	5

ID-RF-S3150-A
CCP Totals analysis VOC Raw Data

Sample ID	Trichloroethene	1,1,2-Trichloro-1,2,2-trifluoroethane	1,1,2-Trichloroethane	Trichlorofluoromethane	Vinyl Chloride	Acetone	Butanol	Methanol
10018503						17.5	17.5	11.5
10016886						16	16	37
10018875								44.5
10018178						14	14	9
10018867						1.65	1.65	1.1
> MDL	0	0	0	0	0	4	4	5

ID-RF-S3150-A
CCP Totals analysis VOC Raw Data

Sample ID	Methyl ethyl ketone	Ethyl Ether	Isobutanol	Pyridine
10018503	17.5	17.5	11.5	17.5
10018886	16	16	10.5	16
10018875			44.5	
10018178	14	14	9	14
10018867	1.65	1.65	1.1	1.65
> MDL	4	4	5	4

CCP Totals Analysis Semi-VOC UCL_{90} Evaluation Form

WSPF #: ID-RF-S3150-A **Waste Stream Lot Number:** 1

ANALYTE	Transform Data Used (No, Data-Log, SQRT	# Samples (2)	# Samples above MDL (1)	Maximum (mg/kg)	Mean (mg/kg)	SD (mg/kg) (2)	UCL_{90} (mg/kg)	PRQL (mg/kg)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL YES	EPA Code
2-Methylphenol (cresols) (3)	No	1	0	4	4	N/A	N/A	40	N/A		
3&4 -Methylphenol (cresols)(3)	No	1	0	4	4	N/A	N/A	40	N/A		
1,4-Dichlorobenzene[a](3)	No	1	0	10	10	N/A	N/A	40	N/A		
ortho-Dichlorobenzene[4] (3)	No	1	0	2	2	N/A	N/A	40	N/A		
2,4-Dinitrophenol (3)	No	1	0	4	4	N/A	N/A	40	N/A		
2,4-Dinitrotoluene	No	0						2.6	N/A		
Hexachlorobenzene	No	0						2.6	N/A		
Hexachloroethane (3)	No	1	1	180	180	N/A	N/A	40	N/A		D034[4]
Nitrobenzene (3)	No	1	0	2	2	N/A	N/A	40	N/A		
Polychlorinated Biphenyls[b]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	40	N/A		
Aroclor 1016[b]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	40	N/A		
Aroclor 1221[b]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	40	N/A		
Aroclor 1232[b]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	40	N/A		
Aroclor 1242[b]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	40	N/A		
Aroclor 1248[b]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	40	N/A		
Aroclor 1254[b]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	40	N/A		
Aroclor 1260[b]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	40	N/A		
Pentachlorophenol (3)	No	1	0	2	2	N/A	N/A	40	N/A		
Pyridine[a]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	40	N/A		

[a] Can also be analyzed as a volatile organic compound.
[b] Required only for waste matrix code S3220 (organic sludges).

Comments

(1) For Analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per section B4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration)

(2) As a result of dilution requirements, several analytes were reported as non-detected with MDL values in excess of the PRQL. In accordance with Section B4-3d of the WIPP-WAP, such "U" flagged observations with elevated MDL values due to dilution were not used in calculating mean concentration. Consequently, the subject analytes were statistically evaluated using only the useable observations. For analytes with no useable data, there is no corresponding data reported on the UCL90 evaluation form. See the Solids Sampling and Analysis Information section of the AK Summation for assignment of Hazardous Waste Numbers per AK.

(3) For analytes where there is no standard deviation, there is inadequate date to perform the statistical analysis.

(4) For Hexachloroethane there was only one usable data point. Due to the lack of variability of the data no UCL90 value can be calculated. The D034 EPA code has been assigned based on AK.

ID-RF-S3150-A CCP Totals analysis Semi-VOC Raw Data

Drum ID	2-Methylphenol	3&4-Methylphenol	1,4-Dichlorobenzene	ortho-Dichlorobenzene	2,4-Dinitrophenol	2,4-Dinitrotoluene	Hexachlorobenzene	Hexachloroethane	Nitrobenzene	Pentachlorphenol	Phenol	bis (2-Ethylhexyl) phthalate
10018503												
10016886												
10018875												
10018178												
10018867	4	4	10	2	4			180	2	2		
> MDL	0	0	0	0	0	0	0	1	0	0	0	0

CCP Totals Analysis Metals UCL_{90} Evaluation Form

WSPF #: ID-RF-S3150-A **Waste Stream Lot Number:** 1

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples	# Samples above MDL (1) (2)	Maximum (mg/kg)	Mean (mg/kg)	SD (mg/kg) (2)	UCL_{90} (mg/kg)	PRQL (mg/kg)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL YES	EPA Code
Antimony	No	5	0	0.3	0.3	0	N/A	100	N/A		
Arsenic	No	5	1	1.8	0.68	0.6261	1.1093	100	N/A		
Barium	Log	5	5	3.78419	2.18146	1.32336	3.08885	2000	7.6009		
Beryllium	Log	5	3	0.33647	-1.48776	1.65029	-0.3562	100	4.60517		
Cadmium	No	5	1	2	0.44	0.87207	1.03795	20	N/A		
Chromium	Log	5	5	2.63906	0.59812	1.41729	1.56992	100	4.60517		
Lead	Log	5	3	1.64866	0.66032	0.91919	1.29059	100	4.60517		
Mercury	SQRT	5	2	0.20125	0.11053	0.05887	0.1509	4	2		
Nickel	Log	5	5	2.48491	1.096	0.8989	1.71238	100	4.60517		
Selenium	No	5	1	1.4	0.52	0.49193	0.85731	20	N/A		
Silver	Log	5	5	-0.27444	-0.5816	0.2402	-0.41689	100	4.60517		
Thallium	No	5	0	0.5	0.5	0	N/A	100	N/A		
Vanadium	Log	5	5	3.3322	-0.30707	2.0451	1.0952	100	4.60517		
Zinc	No	5	5	26	20.8	4.54973	23.91961	100	N/A		

Comments:

(1) For analytes where the samples measured was below the MDL value, 1/2 of the MDL value was used. (Per section B4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

(2) For analytes where there is no standard deviation, there is inadequate data to perform the statistical analysis.

ID-RF-S3150-A
CCP Totals analysis Metals Raw Data

Sample ID	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Lead	Mercury	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
10024871	3.00E-01	4.00E-01	1.70E+00	5.00E-02	5.00E-02	9.40E-01	1.70E+00	5.00E-03	1.30E+00	3.00E-01	6.50E-01	5.00E-01	3.50E-01	1.40E+01
10008215	3.00E-01	4.00E-01	1.20E+01	1.40E-01	5.00E-02	2.80E+00	8.00E-01	4.05E-02	4.10E+00	3.00E-01	5.50E-01	5.00E-01	3.70E-01	2.20E+01
10001220	3.00E-01	4.00E-01	1.90E+01	1.20E+00	5.00E-02	1.80E+00	4.80E+00	4.95E-03	2.50E+00	3.00E-01	4.90E-01	5.00E-01	2.70E-01	2.60E+01
10045820	3.00E-01	4.00E-01	3.20E+00	5.00E-02	5.00E-02	3.00E-01	8.00E-01	5.00E-03	1.50E+00	3.00E-01	7.60E-01	5.00E-01	2.20E-01	2.30E+01
10036807	3.00E-01	1.80E+00	4.40E+01	1.40E+00	2.00E+00	1.40E+01	5.20E+00	1.95E-02	1.20E+01	1.40E+00	4.10E-01	5.00E-01	2.80E+01	1.90E+01
> MDL	0	1	5	3	1	5	3	2	5	1	5	0	5	5

CCP Headspace Gas Summary Data

WSPF Number: ID-RF-3150-A Lot Number (s) 1

Tentatively Identified Compound	Maximum Observed Estimated Concentrations (ppmv)	# Samples Containing TIC	% Detected
None	0.00	0	0.00%

Data Confirms Acceptable Knowledge? Yes ☑ No ☐

If no, describe the basis for assigning the EPA Hazardous Waste Codes:

SPM Signature Cyf Simmons Date 12/29/05

CES
OK

CCP Total VOCs Summary Data

WSPF Number: ID-RF-S3150-A Lot Number (s) 1

Tentatively Identified Compound	Maximum Observed Estimated Concentrations (ppmv)	# Samples Containing TIC	% Detected
None			

Data Confirms Acceptable Knowledge? Yes ☑ No ☐

If no, describe the basis for assigning the EPA Hazardous Waste Codes:

SPM Signature [signature] Date 12-29-05

CBS 017

CCP Total SVOCs Summary Data

WSPF Number: ID-RF-S3150-A Lot Number (s) 1

Tentatively Identified Compound	Maximum Observed Estimated Concentrations (ppmv)	# Samples Containing TIC	% Detected
bis(2-ethylhexyl)phthalate	38000.00	3	60
Phenol	160.00	1	20
1,2-Benzenedicarboxylic acid, dipentyl ester	110.00	1	20

Data Confirms Acceptable Knowledge? ☑ Yes No ☐

If no, describe the basis for assigning the EPA Hazardous Waste Codes:

TIC bis(2-ethylhexl)phthalate (CAS# 117-81-7) identified in > 25% of samples and found in 40CFR261 APP VIII. Per CCP-AK-INL-005, section 6.4.3.4 (P- and U-Listed Waste) this compound was specifically identified in the AK Summary Report. AK does indicate that vacuum pump oil used in mass spectrometers may have been composed of this TIC and this oil may have been disposed of in the oil/solvent mixture feed to the Grease Plant process, but not as an unused product. This TIC is also a common plasticizer used in plastic, including the plastic bags/packaging used to package this waste. Accordingly, this waste stream is not a U028-listed hazardous waste. This TIC will be added to the TAL for further Totals analysis.

SPM Signature [signature] Date 12-29-03

CCP

CCP RTR/VE Summary of Prohibited Items and AK Confirmation

WSP#: ID-RF-3150-A Lot(s)#: 1

Container Number	RTR Prohibited Items [a]	Visual Examination Prohibited Items [a]	AK Confirmation [b c]
See correlation of container ID numbers for list of drum numbers in this Lot.	RTR Data sheets confirm that none of the containers in this lot contain any prohibited items.	Four of the containers in this Lot underwent VE. No prohibited items were identified.	Consistent with CCP-TP-005 AK Confirmation checklist, U-134 is not assigned to this waste stream.

a. See Batch Data Reports
b. Attachment 13 of CCP-TP-005, *CCP Acceptable Knowledge Documentation*
c. If AK has assigned U134 to this waste stream, then any liquids in these containers are prohibited items (not acceptable by the TSDF).

Site Project Manager Signature | Craig Simmons Printed Name | 12/29/05 Date

CFS 619

CCP Reconcilliation with Data Quality Objectives

WSF# ID-RF-3150-A Lot # 1

SPQAO Sampling Completeness

RTR:
Number of Valid Samples: 10 Number of Total Samples Analyzed: 10
Percent Complete: 100 (QAO is 100%)

NDA
Number of Valid Samples: 10 Number of Total Samples Analyzed: 10
Percent Complete: 100 (QAO is 100%)

HSG
Number of Valid Samples: 10 Number of Total Samples collected: 10
Percent Complete: 100 (QAO is ≥90%)
Number of Valid Samples: 10 Number of Total Samples analyzed: 10
Percent Complete: 100 (QAO is ≥90%)

Total VOC
Number of Valid Samples: 5 Number of Total Samples collected: 5
Percent Complete: 100 (QAO is ≥90%)
Number of Valid Samples: 5 Number of Total Samples analyzed: 5
Percent Complete: 100 (QAO is ≥90%)

Total SVOC
Number of Valid Samples: 5 Number of Total Samples collected: 5
Percent Complete: 100 (QAO is ≥90%)
Number of Valid Samples: 5 Number of Total Samples analyzed: 5
Percent Complete: 100 (QAO is ≥90%)

Total Metals
Number of Valid Samples: 5 Number of Total Samples collected: 5
Percent Complete: 100 (QAO is ≥90%)
Number of Valid Samples: 5 Number of Total Samples analyzed: 5
Percent Complete: 100 (QAO is ≥90%)

SPQAO Signature and Date: 12/29/05

I certify that sufficient data have been collected to determine the following Program-required waste parameters:

	Y/N/NA	Reconcilliation Parameter
1	Y	Waste Matrix Code.
2	Y	Waste Material Parameter Weights.
3	Y	The waste matrix code identified is consistent with the type of sampling and analysis used to characterize the waste.
4	Y	The TRU activity reported in the BDRs for each container demonstrates with a 95% probability that the container of waste contains TRU radioactive waste.

CCP Reconcilliation with Data Quality Objectives

WSF# ID-RF-3150-A Lot # 1

5	Y	Potential Flammability. Is there sufficient AK or analytical data to demonstrate that the waste meets the potential flammability limits (Headspace Gas, BDR and Summary Sheet)?
6	Y (1)	Mean concentrations, UCL90 values for the mean concentration, standard deviations, and the number of samples collected for each VOC in the headspace gas of each container were calculated and compared with the program required quantitation limits, as reported in CCP-TP-003-A3, and additional EPA Hazardous Waste numbers were assigned as required. Samples were randomly collected (when appropriate)
7a	Y (1)	Mean concentrations, UCL90 values for the mean concentration, standard deviations, and the number of samples collected for total VOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003-A4, and additional EPA Hazardous Waste numbers were assigned as required. Samples were randomly collected.
7b	Y (1)	Mean concentrations, UCL90 values for the mean concentration, standard deviations, and the number of samples collected for total SVOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP TP 003 A5, and additional EPA Hazardous Waste numbers were assigned as required. Samples were randomly collected.
7c	Y	Mean concentrations, (UCL90) values for the mean concentration, standard deviations, and the number of samples collected for total metals were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP TP 003 A6, and additional EPA Hazardous Waste numbers were assigned as required. Samples were randomly collected.
8	Y	The data demonstrates whether the waste stream exhibits a toxicity characteristic under 40 CFR 261, Subpart C.
9	Y	Waste stream can be classified as hazardous or nonhazardous at the 90-percent confidence level.
10	Y	Sufficient number of waste containers have been visually examined to determine the UCL90 for the miscertification rate is less than 14%.

CCP Reconcilliation with Data Quality Objectives

WSF# ID-RF-3150-A Lot # 1

11	Y	Appropriate packaging configuration and Drum Age Criteria (DAC) is applied and documented in the headspace gas sampling documentation, and the drum age met prior to sampling.
12	Y	TICs were appropriately identified and reported in accordance with the requirements of Section B3-1 of the QAPjP.
13	Y	The PRQLs for headspace gas VOCs were met for all analyses as evidenced by the analytical batch data reports.
14		The overall completeness, comparability, and representativeness QAOs were met for each of the analytical and testing procedures as specified in the WAP Sections B3-2 through B3-9 prior to submittal of a waste stream profile form for a waste steam or waste stream lot.

	Completeness	Comparability	Representativeness
Radiography	Y	Y	Y
Headspace Gas Sampling and Analysis	Y	Y	Y
Headspace Gas Analysis	NA	NA	NA
Solids Sampling	Y	Y	Y
Total VOCs	Y (2)	Y	Y
Total SVOCs	Y (2)	Y	Y
Total Metals	Y	Y	Y

Signature of Site Project Manager

Craig Simmons
Printed Name

12 12 05
Date

NOTES:

1 As a result of dilution requirements, several analytes were reported as non-detected with MDL values in excess of the PRQL. In accordance with Section B4-3d of the WIPP-WAP, such "U" flagged observations with elevated MDL values due to dilution were not used in calculating mean concentration. Consequently, the subject analytes were statistically evaluated using only the useable observations. For analytes with no useable data, there is no corresponding data to report on the UCL90 evaluation form. AK was used to assign Hazardous Waste Numbers for these analytes.

2 Due to dilution requirements, Not all data was deemed "valid" for statistical analysis.

CIS 022

SUMMATION OF ASPECTS OF AK SUMMARY REPORT: ID-RF-S3150-A

Overview

Waste Stream ID-RF-S3150-A is homogeneous solid waste generated at Rocky Flats Environmental Technology Site (RFETS) in Golden, Colorado. The drums of this RFETS waste are stored at the Idaho National Laboratory (INL) Radioactive Waste Management Complex (RWMC). Rocky Flats had two primary missions: the production of triggers for nuclear weapons, and the processing of retired weapons for plutonium recovery. The triggers, also known as pits, were the first-stage fission bombs used to initiate the second-stage fusion reaction in hydrogen bombs. Plutonium metal was recovered from retired warheads and manufacturing residues for reuse. This transuranic waste stream was generated in support of these defense related weapons activities.

This summation of the AK Summary Report includes information to support Waste Stream Profile Form (WSPF) number ID-RF-S3150-A. The primary source of information for this summation was CCP-AK-INL-005, *Central Characterization Project Acceptable Knowledge Summary Report for Rocky Flats Immobilized Organic Liquids Stored at the Idaho National Laboratory, Waste Streams:ID-RF-S3114 and ID-RF-S3150-A Revision 1, dated January 4, 2006.* CCP-AK-INL-005 includes information obtained from numerous sources, including facility safety basis documentation, historical document archives, generator and storage facility waste records and documents including databases and interviews with operational and waste management personnel.

Waste Stream Identification Summary

Site Where TRU Waste Was Generated:	Rocky Flats Environmental Technology Site
Waste Stream Name:	Organic and Sludge Immobilization System Waste
Waste Stream Number:	ID-RF-S3150-A
Dates of Waste Generation:	1986 to 2000[3]
Facility Where TRU Waste Was Generated:	Bldg. 774
Summary Category Group:	S3000 – Homogeneous Solids
Waste Matrix Code Group:	Solidified Organics
Waste Matrix Code:	S3150
Waste Stream TWBIR Identification:	ID-W164.153[1]
Waste Stream Volume	860[2] 55-gallon drums (current/retrievably stored) 0 55-gallon drums (projected/newly generated)
RCRA EPA Hazardous Waste Numbers:	D022, D028, D029, D030, D032, D034, D036, D043, F001, F002, F005
TRUPACT-II Content Code (TRUCON) :	ID 112, ID 212

[1]The following TWBIR Identification Numbers for Organic and Sludge Immobilization System waste also apply; ID-W164.1060.
[2] Twenty two of these 55-gallon drums are in 85 gallon overpacks
[3] Waste with generation dates after 1988 are the result of waste characterization activities, such as VE.

Waste Stream Description and Physical Form

This waste consists of organic liquids immobilized into a solid monolith by the Organic and Sludge Immobilization System (OASIS) in Building 774. Oil and chlorinated solvent mixtures from the RFETS processes described below were the primary liquids treated by OASIS. The organic liquids were immobilized by mixing with water, ENVIROSTONE® emulsifier, accelerator, and gypsum cement. The emulsifier was a polyethylene glycol ether, and the accelerator contained gypsum and potassium sulfate. This waste may also include small amounts of metal and plastic.

This waste stream is assigned Waste Matrix Code S3150, Solidifed Homogeneous Solids.

Point of Generation - Area and Building of Generation

This waste was generated at Rocky Flats in Building 774.

Generating Process

Organic liquid wastes from numerous buildings on site were transferred to Building 774 for treatment in the OASIS. The organic liquids originated in Buildings 334, 371, 443, 444, 447, 559, 707, 776, 777, 778, 779, 865, 881, 883, and 991.

The OASIS feed waste oils and solvents were generated primarily from machining and degreasing operations in Buildings 707 and 777. A cutting oil, usually Texaco Regal® A (a nonhazardous oil), flowed onto a part during machining. After machining, the part was rinsed to remove residual oil. Various solvents were used to rinse machined parts and degrease tools. These included carbon tetrachloride, 1,1,2-trichloro-1,2,2-trifluoroethane, 1,1,1-trichloroethane, trichloroethylene, and tetrachloroethylene. Ultrasonic cleaner baths using 1,1,1-trichloroethane were used to clean parts. Metal turnings and scrap were cleaned in carbon tetrachloride baths before forming the turnings into briquettes. Trichloroethylene was replaced by 1,1,1-trichloroethane for vapor degreasing of plutonium parts. Trichloroethylene remained in use in only one plutonium operation, and later was used only in research and analytical activities. Since 1985, the solidified organic waste was derived almost exclusively from Buildings 707 and 777 (Reference U040). A logbook was used in Building 774 to record the types of organic waste and generation source of the liquids that made up the immobilized organic liquids wastes. The date of treatment, generation location, waste description, and volume of waste were entered in the logbook. The feed materials from Buildings 334, 371, 443, 444, 447, 559, 776, 778, 779, 865, 881, 883 and 991 included pump oil, hydraulic oil, engine oil, lathe cutting oil, coolant oils and some organic solvents (See Table 1 below for hazardous constituents identified in feed materials).

OASIS was a batch type process generating one drum per run. Waste oil and solvent mixtures were pumped into a PVC O-ring bag inside a 55-gallon drum attached to the bottom of the OASIS glovebox. ENVIROSTONE®, a non-hazardous emulsifier, and water were then added to the mix. An agitator was lowered into the drum and run for two minutes. ENVIROSTONE® gypsum cement was then added to the mix for approximately two minutes. A 90-second mix time allowed dispersement of cement throughout the matrix. The ENVIROSTONE® accelerator was added to the gypsum cement in the cement transfer station before transport into cement storage bins.

The typical composition of solidified organic waste is 170 pounds of organic liquid waste, 250 pounds of gypsum cement, 25 pounds of emulsifier, 10 pounds of accelerator, and 42 pounds of water.

The following is a table of toxicity characteristic and F-listed chemicals identified in the waste. These contaminate the waste, but the chemical itself was not discarded in the TRU waste stream

as commercial chemical product, an off-specification commercial chemical product or container residue or spill residue thereof (40 CFR 261.33).

Table 1 - TC and F-Listed Contaminants

Waste Stream ID-RF-S3150-A

Constituent*	CAS #	EPA Hazardous Waste Number
1,1,1-Trichloroethane	71-55-6	F001 and F002
1,1,2-Trichloro-1,2,2-trifluorethane (Freon 113)	76-13-1	F002
1,1-Dichloroethylene	75-35-4	D029
1,2-Dichloroethane	107-06-2	D028
2,4-Dintrotoluene	121-14-2	D030
2-Ethoxyethanol	110-80-5	F005
Benzene	71-43-2	F005
Carbon disulfide	75-15-0	F005
Carbon tetrachloride	56-23-5	F001
Chlorobenzene	108-90-7	F002
Chloroform	67-66-3	D022
Hexachlorobenzene	118-74-1	D032
Hexachloroethane	67-72-1	D034
Methyl ethyl ketone	78-93-3	F005
Methylene chloride	75-9-2	F002
Nitrobenzene	98-95-3	D036
Tetrachloroethylene	127-18-4	F002
Toluene	108-88-3	F005
Trichloroethylene	79-01-6	F002
Vinyl chloride	75-01-4	D043

* = See RCRA Determination Section for discussion on F003 constituents

RCRA Determinations - Hazardous Waste Determinations

Ignitability, Corrosivity, & Reactivity

Waste generated in this waste stream does not qualify for any of the exclusions outlined in 40 CFR 260 or 261. Real Time Radiography (RTR) or visual examination is used to verify that the waste stream is not a liquid waste and does not contain explosives, non radioactive pyrophoric materials, compressed gasses or reactive waste. Therefore, this waste stream does not exhibit the characteristic for ignitability (D001), corrosivity (D002), or reactivity (D003).

Ignitability

The waste does not meet the definition of ignitability as defined in 40 CFR 261.21. The materials are not liquid, and absorbents (Oil-Dri or vermiculite) were added to the waste containers during packaging (Reference P501). The materials are not compressed gases, nor does the waste contain compressed gases (References P012, P013, P015,P016, P022, P501). The materials are not capable of causing fire through friction or absorption of moisture (References P012, P016,

P501). The waste does not meet the definition of a Department of Transportation (DOT) oxidizer as defined in 49 CFR 173. Therefore this waste stream does not exhibit the characteristic of ignitability (D001).

Corrosivity

This waste does not meet the definition of corrosivity as defined in 40 CFR 261.22. These wastes are not liquid, and absorbents (e.g., Oil-Dri or vermiculite) were added to waste containers during packaging (P501). The characteristic of corrosivity (D002) does not apply to this waste stream.

Reactivity

The materials in this waste stream do not meet the definition of reactivity as defined in 40 CFR 261.23 (References P012, P013, P015, P016, and P022). The materials are stable and will not undergo violent chemical change. The materials will not react violently with water, form potentially explosive mixtures with water, or generate toxic gases, vapors, or fumes when mixed with water. The materials do not contain cyanides or sulfides, and are not capable of detonation or explosive reaction. The materials are not explosive nor do the drums contain other explosive materials. The reactivity characteristic (D003) does not apply to this waste stream.

Toxicity Characteristic

The waste in this waste stream exhibits the characteristic of toxicity per 40 CFR 261.24. The toxicity characteristic contaminants fall into two categories; metals and organics.

ID-RF-S3150-A does not exhibit the toxicity characteristic for metals as defined in Title 40 of the Code of Federal Regulations (CFR), Part 261, Subpart C (40 CFR 261.24). The feed materials to the solidification processes were organic liquids. Although trace quantities of metals may be present, totals analysis of the solidified organics waste conducted by the Rocky Flats, the INL 3100 m^3 TRU Waste Programs and CCP (see attached CIS) demonstrates that the UCL_{90} does not exceed the RTL for any of the RCRA-regulated metals (References P507, P522, and U099). Therefore, no EPA hazardous waste numbers for toxicity characteristic metals are assigned to this waste stream).

Waste stream ID-RF-S3150-A exhibits the characteristic of toxicity for some organic compounds as defined in 40 CFR 261, Subpart C (40 CFR 261.24). Some toxicity characteristic organic compounds were identified in the feed materials and may contaminate this waste or were identified by sampling/totals analysis conducted by Rocky Flats or the INL m^3 TRU Waste Programs. Chloroform (D022); 1,2-dichloroethane (D028); 1,1-dichloroethylene (D029); and hexachloroethane (D034), were identified as potential organic constituents in solidified organics waste.

Although carbon tetrachloride and tetrachloroethylene are present in this waste above the RTL, these compounds were used as solvents (i.e., for cleaning and degreasing), and therefore, the F-listed EPA hazardous waste number is applied (see F-Listed waste discussion below). The toxicity characteristic EPA hazardous waste numbers are not assigned.

During the analytical data review of the "non-detect" observations for homogeneous solids data, both the Rocky Flats and INL 3,100 m^3 Project determined that the MDL exceeded the PRQL for 2,4-dinitrotoluene (D030) and hexachlorobenzene (D032) due to dilution. The dilution was due to high hydrocarbon content in the waste matrix that caused difficulties in analysis per the required methodology. Subsequent review of the solid sampling data and reconsideration of process knowledge confirms that 2,4-dinitrotoluene and hexachlorobenzene were not expected contaminants in this waste stream. As a conservative measure, EPA hazardous waste numbers D030 and D032 are also assigned to waste stream ID-RF-S3150-A (References P522 and U099).

the potential for contamination of the instrument. As a result, some analytes did not meet the PRQL Quality Assurance Objective. These analytes were evaluated to determine if any could result in addition of EPA HWNs to the waste stream. AK was reviewed to determine if any of these analytes might be listed waste. The results of this evaluation demonstrated that the original AK determinations were comprehensive and no additional EPA HWNs needed to be assigned. These non-detects were evaluated to ensure that no additional EPA-HWNs apply. It was determined that only the following non-detects with elevated MDLs did not have EPA HWNs already assigned by AK; bromoform, cyclohexane, 1,1-Dichloroethane, cis-1,2-Dichloroethylene, Trans-1,2-Dichloroethylene, 1,1,2,2-Tetrachloroethane, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene. These are not F-listed solvents, are not TC constituents and the waste is not U, P, or K listed waste. Therefore, it was determined that no additional EPA HWNs apply.

Solids Sampling and Analysis Information

Solid core sampling and analysis was completed on 5 55-gallon drums in solids Lot #1. The VOC totals analysis UCL_{90} values exceeded the respective target analyte PRQLs for the following analytes; carbon tetrachloride, chloroform, 1,1,1-trichloroethane. EPA hazardous waste numbers F001 for carbon tetrachloride and 1,1,1 trichloroethane; F002 for 1,1,1-trichloroethane; and D022 for chloroform were previously applied by AK.

For one sample, the semi-VOC analyte hexachloroethathane was detected above the MDL and respective PRQL. EPA hazardous waste number D034 was previously applied by AK.

No metals total analysis UCL_{90} values exceeded respective PRQLs.

One TIC, bis(2-ethylhexly)phthalate (CAS# 117-81-7) found in 40 CFR 261 App. VIII was identified in > 25% of samples. CCP-AK-INL-005 indicates that vacuum pump oil used in mass spectrometers may have been composed of this TIC and this used may have been disposed of in the oil/solvent mixture feed to the Grease Plant process, but not as an unused product. This TIC is also a common plasticizer used in plastic, including the plastic bags/packaging used to package this waste. Accordingly, this waste stream is not a U028-listed hazardous waste. The TIC will be added to the Target Analyte List for this waste stream for further totals analysis.

Based on the analytical results, no new HWNs were assigned. Therefore, totals analysis confirms acceptable knowledge for this waste stream. The specifics of this information are included in the attached Characterization Information Summary report.

As a result of dilution requirements, some VOC and Semi-VOC analytes were reported as non-detected with MDL values in excess of the PRQL. In accordance with Section B4-3d of the WIPP-WAP, such U-flagged observations with elevated MDL values due to dilution were not used in calculating mean concentration. Consequently, the subject analytes were statistically evaluated using only the useable observations. Because the laboratory cannot analyze samples with GC/MS when some analytes have concentrations significantly greater than others in the sample, the samples were diluted to place the high concentrations within the instrument calibration curve and to minimize the potential for contamination of the instrument. As a result, some analytes did not meet the PRQL Quality Assurance Objective. These analytes were evaluated to determine if any could result in addition of EPA HWNs to the waste stream. The results of this evaluation demonstrated that the original AK determinations were comprehensive and no additional EPA HWNs needed to be assigned.

AK was used to make the hazardous waste determinations for these analytes. These non-detects were evaluated to ensure that no additional EPA-HWNs apply. It was determined that only the following non-detects with elevated MDLs did not have EPA HWNs already assigned by AK; bromoform, trans-1,2-dichloroethylene,

1,1,2,2-tetrachloroethane, 1,1,2-trichloroethane and trichlorofluoromethane. With the exception of trichlorofluoromethane and 1,1,2-trichloroethane, these are not F-listed solvents, are not TC constituents and the waste is not U, P, or K listed waste. Trichlorofluoromethane and 1,1,2-trichloroethane are F002 listed solvents. F002 is already assigned by AK, however trichloroflurormethane and 1,1,2-trichloroethane were not listed as constituents because no source for these spent solvent was identified in the feed materials. Therefore, it was determined that no additional EPA HWNs apply.

Transportation

This waste stream and its chemical constituents have been reviewed for consistency with the listed TRUCON codes and they are consistent.

Beryllium may be present in the wastes but only as a trace contaminant. Therefore, beryllium concentrations are less than one percent by weight of the waste in each drum and less than 18.14 kilograms in any payload container, including ten drum overpacks.

Flammable VOCs have the potential to exceed 500 ppm in the headspace gas. Therefore payload containers are evaluated with applicable CH TRAMPAC requirements using the CH-TRAMPAC software compliance evaluation system in the WIPP WWIS prior to shipment.

This waste meets the definition of a Type IV.1 material in the CH-TRAMPAC.

Radionuclide Information

The two most prevalent radionuclides in this waste stream (by weight) are Pu-239 and U-238. Previous data were evaluated to determine the radionuclide distribution in the waste stream. The results of this evaluation identified the isotopes listed in the table below.

Table 2 – Radionuclides In Waste Stream

WIPP Tracked	Other Radionuclides
Am-241	Am-240
Cs-137(NA)	Am-243
Pu-238	Cf-252
Pu-239	Cm-244
Pu-240	Np-237
Pu-242	H-3
Sr-90 (NA)	Pu-241
U-233	Th-228
U-234	U-232
U-238	U-235
	U-236

Payload management will be implemented in accordance with the WIPP Waste Acceptance Criteria, Appendix E. The percentage of the waste stream that is above 100 nCi/g is approximately 93 percent. The percentage of the waste stream that is below 100 nCi/g is approximately 7 percent. However, each payload container shipped to WIPP will be certified in accordance with CCP-PO-002, CCP Transuranic Waste Certification Plan as containing more than 100 nCi/g of alpha emitting isotopes with half-lives greater than 20 years.

This same problem occurred with the INL 3,100 m^3 Project analytical data review for nitrobenzene (D036), and vinyl chloride (D043). As a conservative measure, these EPA hazardous waste numbers are also assigned to this waste stream (Reference U099).

Therefore, EPA hazardous waste numbers D022, D028, D029, D030, D032, D034, D036, D043, are assigned to this waste stream (Reference D005).

F-Listed Waste

Waste stream ID-RF-S3150-A is an F-listed hazardous waste derived from the treatment of hazardous wastes (40 CFR 261.(c-d)) from non-specific sources as listed in 40 CFR 261, Subpart D (40 CFR 261.31). Carbon tetrachloride, chlorobenzene, 1,1,1-trichloroethane, 1,1,2-trichloro-1,2,2-trifluorethane, methylene chloride, tetrachloroethylene, trichloroethylene, 2-ethoxyethanol, benzene, carbon disulfide, methyl ethyl ketone, and toluene were used for their solvent properties, and therefore meet the definition of an F-listed waste. These were identified in the feed materials to the solidification processes. Although nitrobenzene (D036) is also an F004-listed constituent, there is no indication that nitrobenzene was ever used as a solvent at Rocky Flats (References P052 and P507). Therefore, this waste stream is assigned EPA hazardous waste numbers F001, F002 and F005 (Reference D005).

F003-listed solvents such as acetone, ethyl benzene, ethyl ether, methanol, and xylene were used at Rocky Flats and are potential contaminants of the solidified organic waste. F003-listed solvents are listed solely for ignitability; however this waste does not exhibit the characteristic of ignitability and is therefore not assigned HWN F003 (References P052, P077, P507, P521, and U099).

EPA hazardous waste numbers F001, F002, and F005 are assigned to this waste stream as indicated below.

(F001)
Carbon tetrachloride, 1,1,1-Trichloroethane

(F002)
1,1,1-Trichloroethane, 1,1,2-Trichloro-1,2,2-trifluorethane (Freon 113), Methylene chloride, Tetrachloroethylene, Trichloroethylene, Chlorobenzene

(F005)
2-Ethoxyethanol, Benzene, Carbon disulfide, Methyl ethyl ketone, Toluene,

U, K, and P-Listed Chemicals

This waste stream was not mixed with a discarded commercial chemical product, an off-specification species, a container residue, or a spill residue thereof, 40 CFR 261.33 (References P052, P077, P507, P522, and U099). This waste stream is therefore not a P- or U-listed hazardous waste as defined in 40 CFR 261, Subpart D.

Beryllium

Any beryllium present is as a contaminant of the process and not an unused, commercial product. Therefore, this waste stream is not a P015-listed waste (References P052, P053).

Other Similar Solidified Organics Waste Streams

Waste stream profile form RF 107.04 was reviewed as being pertinent to this waste stream. The HWNs in ID-RF-S3150-A are inclusive of the HWNs in RF 107.04. The following EPA HWNs are applied to ID-RF-S3150-A but were not applied to RF 107.04; D036 and D043. For some

samples taken by the INL prior to assigning the waste stream to CCP, the MDLs were elevated above the respective PRQLs for D036 and D043, therefore these codes were conservatively assigned to ID-RF-S3150-A.

Conclusion

The following EPA hazardous waste numbers are assigned to this waste stream: D022, D028, D029, D030, D032, D034, D036, D043, F001, F002, and F005.

Polychlorinated Biphenyls

Waste stream ID-RF-S3150-A is not regulated as a Toxic Substances Control Act (TSCA) waste under 40 CFR 761. Treatment of PCB-contaminated oils in Building 774 did occur prior to 1985; however, this waste stream was not generated until February 1986. Therefore, PCB-containing fluids would not have been treated by the OASIS (References C207, P507, and U099).

Prohibited Items

The absence of prohibited items is determined and documented through acceptable knowledge and confirmation activities. Radiography or visual examination is performed on each container in this waste stream as a confirmation activity. The following items have been determined as not present in the waste:

- Liquids
- Non-radioactive pyrophoric materials
- Waste incompatible with backfill, seal and panel closure materials, container and packaging materials, or other wastes
- Explosives or compressed gases
- Waste with PCBs not authorized under an EPA PCB waste disposal authorization
- Waste exhibiting the characteristics of ignitability, corrosivity, or reactivity
- Non-mixed hazardous wastes

Headspace Gas/Volatile Organic Compound Information

Lot #1 consists of 10 drums. The UCL_{90} values for the following detected target analytes are above the program required quantitation limits (PRQLs); carbon tetrachloride, 1,1,1-trichloroethane, 1,1,2-trichloro-1,2,2-trifluoroethane (freon) and methanol. EPA hazardous waste numbers F001 for carbon tetrachloride and 1,1,1-trichloroethane; F002 for 1,1,1-trichloroethane and 1,1,2-trichloro-1,2,2-trifluoroehtane (freon); and D022 for chloroform were previously applied by AK. No EPA hazardous waste numbers were assigned for methanol. Methanol was used as a solvent at RFETS. It is an F003 listed solvent that is listed solely for the characteristic of ignitability. Since this waste stream does not exhibit the characteristic of ignitability F003 does not apply. No TICs listed in 40 CFR 261 Appendix VIII were detected in this lot. No additional hazardous waste numbers were added to the waste stream based on headspace gas sampling (HSGS). Therefore, the HSGS analysis confirms the acceptable knowledge for this waste stream. The specifics of this information are included in the attached Characterization Information Summary report.

As a result of dilution requirements, some analytes were reported as non-detected with MDL values in excess of the PRQL. In accordance with Section B4-3d of the WIPP-WAP, such U-flagged observations with elevated MDL values due to dilution were not used in calculating mean concentrations. Consequently, the subject analytes were statistically evaluated using only the useable observations. Because the laboratory cannot analyze samples with GC/MS when some analytes have concentrations significantly greater than others in the sample, the samples were diluted to place the high concentrations within the instrument calibration curve and to minimize

Attachment 1, AK Source Documents- Supplemental Documentation

Source Document Number	AK Number	Title	Document Number	Date
C032	S15	External letter from J. K. Paynter to J. N. Davis, Idaho National Engineering Laboratory. Data Package Information Change for Drum D40197-0743-18283.	88-RF-2813	9/9/88
C057	S7, S16	Drum, gasket, liner usage at RFP compiled by Larry Bearly		1989
C134	S7	Interview Record and associated documentation of several former Rocky Flats employees		Undated
C137	S7	Interview Record of E. Putzier and E. Vejvoda by D. Herrick and J. Lamb		9/5/91
C154	S7	Interview Record of W. V. Conner by T Widner and D. Lamb		8/13/91
C159	S7	Interview Record of R. Hoffman by D. Herrick and J. Lamb		9/4/91
C170	S7, S15	Telecon between Al Morgan of Rocky Flats (retired) and Jeff Harrison		2/17/97
C171	S7	Telecon between Bill Connor of Kaiser-Hill LATO and Jeff Harrison		2/13/97
C184	S7	Interview Record of Al Morgan by Jeff Harrison		3/19/97
C185	S7	Telecon between Bill Connor of LAPO and Jeff Harrison		3/20/97
C207	NA	Summary of Review of PCB AK Sources		9/5/01
D005	NA	Discrepancy Resolution for EPA Hazardous Waste Number Assignments for Waste Streams ID-RF-S3114 and ID-RF-S3150-A		12/05
P001	S16	TRU Waste Compliance Program for WIPP-WAC (U). WO-4500-H		1989
P002	S5	Organic and Sludge Immobilization System.	RFP-4095	7/27/87
P008	S2, S16	Packaging and Handling Line- and Nonline-Generated Materials (U)	1-1002-C/O	1988
P012	S16	TRUPACT-II Content Codes (TRUCON)	89-004	1992
P013	S16	EG&G Sampling Program Results FY1987.	PSD87-059	1987
P014	S2	TRU Waste Certification Program for WIPP-WAC (U).	CO-4500-A	5/24/83

Attachment 1, AK Source Documents- Supplemental Documentation

Source Document Number	AK Number	Title	Document Number	Date
P015	S9, S16	TRU Waste Sampling Program: Volume I- Waste Characterization	EGG-WM-6503	1985
P016	S7	Idaho National Engineering Laboratory Code Assessment of the Rocky Flats Transuranic Waste	INEL-95/0281	1995
P022	S16	EG&G Sampling Program Results FY1989	PSD89-011	2/1/89
P026	S2	Transuranic Solid Waste Inspection (U)	WC-4003-A	11/11/85
P033	S9	Summary of Transuranic Waste Characterization Programs at the INEL (1979-Present)	INEL-95/0397	1995
P043	S2, S16	TRU Waste Compliance Program for WIPP-WAC (U)	WO-4500-F	1/19/87
P052	NA	Backlog Waste Reassessment Baseline Book, Solidified Organics.	WF47	5/3/04
P053	NA	(Tasks 3&4 Final Draft Report) Reconstruction of Historical Rocky Flats Operations and Identification of Release Points.		8/92
P066	S10	Material Safety Data Sheet for ENVIROSTONE (and related data).		5/12/86
P063	S2, S16	Packaging Wastes for Shipment Offsite (U)	WO-4034-C	10/13/86
P064	S2, S16	Waste Packaging Requirements	WO-4034-F	7/8/88
P069	S15	Nuclear Materials Control Elements printout. SAN Database Report	6016-01	6/1/84
P077	NA	Waste Stream and Residue Identification and Characterization Building 559	774-V3.2	1993
P084	S10	Material Safety Data Sheet for Varsol 1.		8/25/86
P089	S5	Waste Systems Progress Report March 1984 through February 1985.	RFP-3871	4/11/86
P091	S10	Materials Hazards Manual.		8/1/76
P142	S10	Material Safety Data Sheet for ZL-22A Zyglo Penetrant		6/14/93
P167	S5	Neptunium Processing at the Rocky Flats Plant	RFP-2899	9/20/81
P199	S5	Chemistry Research and Development Annual Progress Report October 1, 1982 to September 30, 1983	RFP-3654	9/24/84

Attachment 1, AK Source Documents- Supplemental Documentation

Source Document Number	AK Number	Title	Document Number	Date
P200	S5	Chemistry Research and Development Annual Progress Report October 1, 1983 to September 30, 1984	RFP-3825	6/13/86
P201	S5	Chemistry Research and Development Annual Progress Report October 1, 1984 through September 30, 1985	RFP-3931	8/18/86
P501	S2, S16	Packaging Waste for Shipment Offsite	WO-4034-A	8/16/85
P504	S2, S16	Packaging Waste for Shipment Offsite	WO-4034-B	1/21/86
P507	S9	Acceptable Knowledge Document for INEEL Stored Transuranic Waste – Rocky Flats Plant Waste	INEL-96/0280, Rev. 3	2/28/03
P512	S9, S16	Waste Description Information for Transuranically Contaminated Wastes Stored at Idaho National Engineering Laboratory.	INEL-95/0412	12/95
P516	S9	Advanced Mixed Waste Treatment Project Waste Stream Designations	BNFL-5232-RPT-TRUW-12, Rev. 1	11/20/03
P518	S10	Material Safety Data Sheets for Various Oils Used at Rocky Flats		Various
P522	S9	Rocky Flats Environmental Technology Site WIPP Waste Stream Profile Form, TRM Solidified Organic Waste.	RF107.04, Rev. 0	1/11/05
U010	S5, S12	OASIS Solidification and Off Gas Analysis.	PSD 88-038	9/88
U040	S4, S15	Building 774 Low Level Organic and TRU-Waste Organic Waste Log Book.		1976 – 1990
U043	S4	Building 774 Set Up Log Book.		1973 – 1990
U059	S4, S15	Drum Prefix Numbers and Corresponding Material Balance Areas		1/84 – 6/94
U069	S4, S15	Drum Prefix Issue Dates Log Book		1987-1997
U092	S6	Inventory values as generated by TRIPS Change Request (TCR) 1821.		5/22/01
U099	S9	Draft Waste Stream Profile Form – Solidified Organics and Supporting Documentation	INW164.001	4/10/02

Alphanumeric Designations

C	Correspondence
D	Documents (e.g. published reports)
M	Miscellaneous (e.g. unpublished data)
P	Procedures
U	Unpublished Documents

AK Numbers

S1	Process Design Documents
S2	Standard Operating Procedure
S3	Safety Analysis Reports
S4	Waste Packaging Logs
S5	Test plans/research project reports
S6	Site databases
S7	Information from site personnel
S8	Standard industry documents
S9	Previous analytical data
S10	Material safety data sheets
S11	Laboratory Notebooks
S12	Comparable or surrogate sampling and analysis data
S13	Other
S14	Safeguards and Security and other related information
S15	NMMA logs or inventory records or other related information
S16	Packaging
NA	Not a supplemental source document, but cited in the AK Summation

DIVIDER

PAGE

Washington
TRU Solutions LLC

CP:08:00024
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: January 10, 2008

FROM: R. P. Kantrowitz RPK LOCATION: Project Certification

TO: CCP Records Custodian ED LOCATION: Retrieval, Characterization and Transportation

SUBJECT: SUBMISSION OF CHANGE NOTICE #1 FOR WASTE STREAM PROFILE FORM ID-RF-S3150-A

Attached is Change Notice #1 for the Waste Stream Profile Form (WSPF) ID-RF-S3150-A for Rocky Flats Immobilized Organic Liquids stored at the Idaho National Laboratory.

The WSPF was approved by DOE/CBFO on January 6, 2006.

RPK:yhc

Attachment

cc: (without attachment)

R. R. Chavez, WRES ED
M. L. Sensibaugh, WTS ED

Organic and Sludge Immobilization System Waste (ID-RF-S3150-A)
Change Notice #1
Update for WIPP Operating Record

Please add the following information to the WIPP Operating Record for Waste Stream Profile Form (WSPF) ID-RF-S3150-A. This waste stream is Organic and Sludge Immobilization System Waste and was approved by DOE/CBFO on January 6, 2006.

This WSPF is being revised. The WSPF components are bolded. The updates are:

1. **WSPF, Date of audit report approval by NMED**

   Update the audit approval date to include June 29, 2006.

2. **WSPF, Title, version, number, and date of documents used for WAP Certification**

   Update the following procedures:

   CCP-PO-001, CCP Transuranic Waste Characterization Quality Assurance Project Plan, rev. 13, November 16, 2006.

   CCP-PO-002, CCP Transuranic Waste Certification Plan, rev. 18, November 16, 2006

   CCP-PO-024, CCP/INL Interface Document, rev. 5, November 16, 2006.

3. **WSPF, new item entitled Waste Material Parameter Weight Estimates Per Unit Waste**

   Add the following response for the new item. See Table entitled Waste Stream ID-RF-S3150-A Waste Material Parameters as described in Item 9.

4. **WSPF, Waste Stream Information, Applicable TRUCON Content Codes**

   Update the list of applicable TRUCON Content Codes to include SQ 154.

5. **WSPF, Required Program Information, Required Waste Stream Information, and Supplemental Documentation**

   Update reference CCP-AK-INL-005, Rev. 1, January 4, 2006 to CCP-AK-INL-005, Rev. 2, November 16, 2006.

6. **Summation of Aspects of AK Summary Report: ID-RF-S3150-A, Overview**

Update reference CCP-AK-INL-005, Rev. 1, January 4, 2006 to CCP-AK-INL-005, Rev. 2, November 16, 2006.

7. **Summation of Aspects of AK Summary Report: ID-RF-S3150-A, Waste Stream Identification Summary, Dates of Generation**

Revise the date of generation from 1986 to 2000 to 1986 to 1998.

8. **Summation of Aspects of AK Summary Report: ID-RF-S3150-A, Waste Stream Identification Summary, TRUPACT-II Content Code (TRUCON)**

Update the list of applicable TRUCON Content Codes to include SQ 154.

9. **Waste Stream ID-RF–S3150-A, new section entitled Waste Material Parameter Weight Estimates**

Add a new section entitled Waste Material Parameter Weight Estimates that includes the following information.

Waste material parameters for waste stream ID-RF-3150-A were derived from RTR and VE data from Rocky Flats solidified organic waste by the CCP TRU waste certification program at INL and the Rocky Flats TRU waste certification program. Data from 62% of the current CCP waste stream volume, in addition to the Rocky Flats TRU waste certification program, were evaluated to establish the waste material parameters. Drums evaluated for the current CCP waste stream were generated from February 1986 to September 1988 and are representative of the waste stream.

A statistical analysis of the RTR and VE data was performed to establish the average weight percent and weight percent range, the results of which are presented in the following table.

Waste Stream ID-RF-S3150-A Waste Material Parameter Weights

Waste Material Parameter	Average Weight Percent	Weight Percent Range
Iron-based Metal/Alloy	0.01%	0.0 – 0.44%
Other Inorganic Materials	0.32%	0.0 –3.09%
Cellulosics	<0.01%	0.0 – 2.79%
Plastics (waste materials)	0.32%	0.0 – 3.53%
Organic Matrix	99.35%	99.35– 100%
Total Inorganic Waste Avg.	0.32%	
Total Organic Waste Ave.	99.67%	

Reason/Justification for the Change

The audit report approval date has been revised to reflect the most recent approval dates.

Documents used for WAP certification have been revised to reflect the most recent revisions.

The approved TRUCON Content Code SQ 154 is being added to high wattage CH waste. This TRUCON Content Code was approved by WIPP on December 29, 2005.

Reference to CCP-AK-INL-005, Rev. 1, January 4, 2006 is being updated to reflect the most current version, CCP-AK-INL-005, Rev. 2, November 16, 2006.

The generation date is revised to reflect the inventory of waste containers that have been retrieved from the Transuranic Storage Area (TSA) at AMWTP.

Waste material parameter weight estimates per unit waste and the method for determining those estimates have been incorporated to meet revised WIPP Hazardous Waste Facility Permit requirements as described in CCP-PO-001, Section B3-12.

Update for the WIPP Operating Record (ID-RF-S3150-A) certification:
I hereby certify that I have reviewed this Update for WIPP Operating Record, and it is complete and accurate to the best of my knowledge. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Signature of Site Project Manager	Printed Name and Title	Date
	Paul C. Gomez	11/15/2006

CARLSBAD FIELD OFFICE

DOCUMENT REVIEW RECORD

SITE: CCP/ID

DOCUMENT TITLE: Organic and Sludge Immobilization System Waste Change Notice 1

DOCUMENT NUMBER and REVISION: ID-RF-S3150-A

DOCUMENT DATE: 11/16/06
TYPE OF REVIEW: Completeness

ASSIGNED REVIEWER: D. Bignell

DELEGATED REVIEWER: L. Barnett, R. Chavez, M. Doherty, L. Greene, K. Guillermo, M. Strum

ADDITIONAL INSTRUCTIONS:

FORWARD RESPONSE TO: Site.Documents@wipp.ws

#	PAGE	SECT/ PARA	COMMENT	RESPONSE	ACC	REJ
1.	1		WSPF Item 7: Consider updating the WAP Certification Documents to current revisions. (R. Chavez)	Updated as requested		
2.	1		New Item: The TRUCON is also listed in the AK Summation. Insert a new item: **Summation of Aspects of AK Summary Report: ID-RF-S3114, Waste Stream Identification Summary, TRUPACT-II Content Code (TRUCON):** Update the list of applicable TRUCON Content Codes to include SQ 154. (L. Greene)	Added as requested with correction to ID-RF-S3150-A		
3.	1		Item 3 Required Waste Stream Information: Per the WAP and CCP-PO-001 Section B3-12B(1) consider adding the following "Add a new item entitled Waste material parameter weight estimates per unit of waste: See AK Summation Table ...:" (R. Chavez)	Added as requested		
4.	1		Item 6 Title: Consider deleting "Waste Stream Description." This will distinctly separate the waste material parameter weight estimates from the waste stream description for purposes of confirmation. (R. Chavez)	Deleted as requested		
5.	1		Item 6, Last Paragraph: Consider deleting "This analysis is documented in the AKS" since the AKS has been previously referenced. (R. Chavez)	Deleted as requested		
6.	1-2		Item 6: Ensure that the generation dates of February 1986 to September 1988 mentioned here are correct. Ensure that you want to include the months since CCP has gone to the year format. Also it seems odd that 62% of the waste stream was generated in such a short period (2 years - 1986 to 1988). Compared to the entire 12 year period this seems more than would be expected. (L. Greene)	Information reverified as correct and consistent with other CNs.		
7.	2		Reason Justification for Change: Consider revising the last sentence to read "Waste material parameter weight estimates per unit of waste and the method for determining those estimates have been incorporated to meet the revised WIPP Hazardous Waste Facility Permit per CCP-PO-001, Section B3-12. Consider including the WAP certification documents that are being updated. (R. Chavez)	Revised as requested Justification provided		

COMMENT RESOLUTION APPROVED:

Signature

Date

URS

CP:10:01371
UFC:5900.00

Washington TRU Solutions LLC

INTER-OFFICE CORRESPONDENCE

DATE: June 8, 2010

FROM: V. M. Waldram V Waldram LOCATION: Certification

TO: CCP Records Custodian GSA-212 LOCATION: Retrieval, Characterization & Transportation

SUBJECT: TRANSMITTAL OF IDAHO NATIONAL LABORATORY WASTE STREAM PROFILE FORM FOR WASTE STREAM #ID-SDA-SOIL, REVISION 1

Please accept the attached Idaho National Laboratory Waste Stream Profile Form to be placed in Records for Waste Stream # ID-SDA-SOIL, Revision 1 – Interstitial Soil from the Subsurface Disposal Area.

VMW:jmc

Attachment

cc: (without attachment)

R. Kantrowitz ED
M. Pearcy ED

ORIGINAL

Department of Energy
Carlsbad Field Office
P. O. Box 3090
Carlsbad, New Mexico 88221

OCT 09 2009

Mr. D. K. Ploetz, Manager
Central Characterization Project
Washington TRU Solutions LLC
P. O. Box 2078
Carlsbad, NM 88221-2078

Subject: Review of CCP-INL Waste Stream Profile Form Number ID-SDA-SOIL, Revision 1 – Interstitial Soil from the Subsurface Disposal Area

Dear Mr. Ploetz:

The Carlsbad Field Office (CBFO) has reviewed the subject Waste Stream Profile Form (WSPF) ID-SDA-SOIL, Revision 1 – Interstitial Soil from the Subsurface Disposal Area and have concluded that the WSPF is complete and that the waste stream determinations were made in accordance with applicable procedures and guidance.

The CBFO therefore approves the WSPF as submitted. Using the methods approved for CCP-INL, CCP-INL may enter the data into the certification and shipping modules of the WIPP Waste Information System.

If you have questions on this matter, please contact me at (575) 234-7313.

Sincerely,

J. R. Stroble

J. R. Stroble, Acting Director
Office of the National TRU Program

cc:
N. Castaneda, CBFO *ED
C. Fesmire, CBFO ED
G. Basabilvazo, CBFO ED
S. McCauslin, CBFO ED
D. Miehls, CBFO ED
M. Navarrete, CBFO ED
K. Watson, CBFO ED
P. Gilbert, LANL ED
S. Lott, LANL ED
G. Lyshik, LANL ED
CBFO, M&RC
WIPP Operating Record 459-09
*ED denotes electronic distribution

CBFO:NTP: IRS:GS:09-0777:UFC 5822.00

Attachment 2 –CCP Waste Stream Profile Form

(1) Waste Stream Profile Number: ID-SDA-SOIL, Revision 1							
(2) Generator site name: Idaho National Laboratory					(4)Technical contact: Barbara Broomfield		
(3) Generator site EPA ID: ID4890008952					(6) Technical contact phone number: (208) 526-6466		
(5) Date of audit report approval by New Mexico Environment Department (NMED): January 12, 2007; May 8, 2008; September 22, 2008, September 11, 2009							
(7) Title, version number, and date of documents used for WAP Certification: CCP-PO-001, CCP Transuranic Waste Characterization Quality Assurance Project Plan, Revision 17, June 23, 2009 CCP-PO-002, CCP Transuranic Waste Certification Plan, Revision 21, January 26, 2009 CCP-PO-024, CCP/INL Interface Document, Revision 9, March 16, 2009							
(8) Did your facility generate this waste?	YES	X	NO				
(9) If no, provide the name and EPA ID of the original generator: NA							
Waste Stream Information[1]							
(10) WIPP ID: IN-ID-SDA-SOIL[3]					(11) Summary Category Group: S4000		
(12) Waste Matrix Code Group: Soil					(13) Waste Stream Name: Interstitial Soil from the Subsurface Disposal Area		
(14) Description from the TWBIR: Pre-1970 buried waste retrieved from the Idaho Completion Project							
(15) Defense TRU Waste:	YES	X	NO				
(16) Check One:	CH	X	RH				
(17) Number of SWBs 134	(18) Number of Drums 8,451 55-gallon drums				(19) Number of Canisters 0		
(20) Batch Data report numbers supporting this waste stream characterization: See Characterization Information Summary (CIS) Correlation of Container Identification Numbers to Batch Data Report Numbers							
(21) List applicable EPA Hazardous Waste Numbers:[2] D004, D005, D006, D007, D008, D009, D010, D011, D022, D027, D028, D029, D030, D032, D033, D034, D037, D038, D043, F001, F002, F004, F005, F006, F007, F009, P098 and P106							
(22) Applicable TRUCON Content Numbers: : ID 112, ID 122, ID 127, SQ 154							
(23)**Acceptable Knowledge Information**[1]							
[For the following, enter the supporting documentation used (i.e., references and dates)]							
Required Program Information							
(23A) Map of site: CCP-AK-INL-001, Revision 8, September 8, 2009, Figures 1, 2 and 3							
(23B) Facility mission description: : CCP-AK-INL-001, Revision 8, September 8, 2009, Sections 4.1 and 4.2							
(23C) Description of operations that generate waste: CCP-AK-INL-001, Revision 8, September 8, 2009, Section 4.4 and 4.5							
(23D) Waste identification/categorization schemes: CCP-AK-INL-001, Revision 8, September 8, 2009, Section 4.6							
(23E) Types and quantities of waste generated: CCP-AK-INL-001, Revision 8, September 8, 2009, Section 4.7.1							
(23F) Correlation of waste streams generated from the same building and process, as applicable: CCP-AK-INL-001, Revision 8, September 8, 2009, Section 4.7.2							
(24) Waste certification procedures: CCP-TP-030, CCP TRU Waste Certification and WWIS Data Entry, Rev. 26, May 27, 2009							
(25)Required Waste Stream Information							

(25A) Area(s) and building(s) from which the waste stream was generated: CCP-AK-INL-001, Revision 8, September 8, 2009, Section 5.1			
(25B) Waste stream volume and time period of generation: CCP-AK-INL-001, Revision 8, September 8, 2009, Section 5.2			
(25C) Waste generating process description for each building: CCP-AK-INL-001, Revision 8, September 8, 2009, Section 4.4, 4.5, and 5.3			
(25D) Waste Process flow diagrams: See CCP-AK-INL-001, Revision 8, September 8, 2009, Section 4.4, 4.5 and 5.3 for Waste Generating Activities in lieu of process flow diagrams			
(25E) Material inputs or other information identifying chemical/radionuclide content and physical waste form: CCP-AK-INL-001, Revision 8, September 8, 2009, Section 5.4, 5.5, and 5.6			
(25F) Waste Material Parameter Weight Estimates per unit of waste: See Table 2 of the Summation of Aspects of AK Summary Report: ID-SDA-SOIL			
(26) Which Defense Activity generated the waste: (check one)			
X	Weapons activities including defense inertial confinement fusion		Naval Reactors development
	Verification and control technology		Defense research and development
	Defense nuclear waste and material by products management		Defense nuclear material production
	Defense nuclear waste and materials security and safeguards and security investigations		
(27)Supplemental Documentation			
(27A) Process design documents: : See S1 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27B) Standard operating procedures: See S2 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27C) Safety Analysis Reports: See S3 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27D) Waste packaging logs: See S4 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(28E) Test plans/research project reports: See S5 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27F) Site databases: See S6 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27G) Information from site personnel: See S7 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27H) Standard industry documents: See S8 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27I) Previous analytical data: See S9 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27J) Material safety data sheets: See S10 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27K) Sampling and analysis data from comparable/surrogate Waste: See S12 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27L) Laboratory notebooks: NA			
Confirmation Information[2]			
For the following, when applicable, enter procedure title(s), number(s) and date(s)			
(28)	Radiography: NA		
(29)	Visual Examination: CCP-TP-006, Revision 14, November 11, 2008		

(30)Comments:
For a list of the waste characterization procedures used and date of the respective procedures see the list of procedures on the attached CIS.

This waste stream profile was revised in accordance with NMED direction received in the September 22, 2008 NMED Approval of the Idaho National Laboratory/Central Characterization Project Audit A-08-10. The original WSPF was approved on June 19, 2008.

Reviewed by AK Expert: YES [X] **Date:** 9/24/09

Reviewed by STR (if necessary): YES [X] NA [ ] **Date:** 9/24/09

Waste Stream Profile Form Certification:

I hereby certify that I have reviewed the information in this Waste Stream Profile Form, and it is complete and accurate to the best of my knowledge. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

(31) Signature of Site Project Manager	(32) Michael Walentine Printed Name	(33) 10/7/09 Date

NOTE: (1) Use back of sheet or continuation sheets, if required.
(2) If radiography, visual examination, headspace gas analysis, and/or homogeneous solids/soils/gravel sample analysis were used to determine EPA Hazardous Waste Numbers, attach signed Characterization Information Summary documenting this determination.
(3) TWBIR numbers IN-ICP-002, IN-ICP-003, IN-ICP-004, and IN-ICP-005 also apply.

CHARACTERIZATION INFORMATION SUMMARY

WSPF # ID-SDA-SOIL Rev. 1

Lot 22*

TABLE OF CONTENTS

Characterization Information Summary Cover Page..... 002

Correlation of Container Identification Numbers to Batch Data Report Numbers..... 004

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* See comments on page 016

CIS-001

CCP Characterization Information Summary Cover Page

Waste Stream # ID-SDA-SOIL Lot #: 22

AK Expert Review: N/A Date: N/A

SPM Review: Michael Walentine Date: 10/7/2009

SPM signature certifies that through Acceptable Knowledge testing and/or analysis that the waste identified in this summary is not corrosive, ignitable, reactive, or incompatible *with the TSDF.*

A summary of the Acceptable Knowledge regarding this waste stream containing specific information about the corrosivity, reactivity, and ignitability of the waste stream is included as an attachment to the Waste Stream Profile Form. By reference, that information is included in this lot.

List of procedures used:

Visual Examination Technique

CCP-TP-006	Rev. 14	11/11/08	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 13	10/30/08	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 12	05/01/08	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 11	04/14/08	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 10	12/11/07	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 9	10/18/07	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 8	11/16/06	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 7	08/09/06	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 6	08/02/05	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 5	05/05/05	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 4	04/19/05	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 3	04/15/05	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 2	03/18/05	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 1	02/21/05	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits
CCP-TP-006	Rev. 0	11/16/04	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits

Non Destructive Assay (NDA):

CCP-TP-109	Rev. 6	03/16/09	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 5	11/16/06	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 4	09/21/05	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 3	04/12/05	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 2	03/18/05	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-109	Rev. 1	05/06/04	CCP Data Reviewing, Validating, and Reporting Procedure
CCP-TP-115	Rev. 4	06/24/09	CCP SWEPP Gamma-Ray Spectrometer (SGRS) Operating Procedure
CCP-TP-115	Rev. 3	12/08/06	CCP SWEPP Gamma-Ray Spectrometer (SGRS) Operating Procedure
CCP-TP-115	Rev. 2	06/12/06	CCP SWEPP Gamma-Ray Spectrometer (SGRS) Operating Procedure
CCP-TP-115	Rev. 1	04/15/05	CCP SWEPP Gamma-Ray Spectrometer (SGRS) Operating Procedure
CCP-TP-115	Rev. 0	02/27/05	CCP SWEPP Gamma-Ray Spectrometer (SGRS) Operating Procedure
CCP-TP-019	Rev. 5	09/16/09	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
CCP-TP-019	Rev. 4	10/19/06	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
CCP-TP-019	Rev. 3	06/15/06	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
CCP-TP-019	Rev. 2	06/10/05	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
CCP-TP-019	Rev. 1	04/16/05	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
CCP-TP-019	Rev. 0	02/27/05	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
CCP-TP-097	Rev. 8	04/11/07	*Operating the CCP Tomographic Gamma Scanner (TGS)*
CCP-TP-097	Rev. 7	11/16/06	Operating the CCP Tomographic Gamma Scanner (TGS)
CCP-TP-097	Rev. 6	04/26/06	Operating the CCP Tomographic Gamma Scanner (TGS)
CCP-TP-097	Rev. 5	03/21/06	Operating the CCP Tomographic Gamma Scanner (TGS)
CCP-TP-097	Rev. 4	01/23/06	Operating the CCP Tomographic Gamma Scanner (TGS)
CCP-TP-097	Rev. 3	07/22/05	Operating the CCP Tomographic Gamma Scanner (TGS)
CCP-TP-097	Rev. 2	04/15/05	Operating the CCP Tomographic Gamma Scanner (TGS)
CCP-TP-097	Rev. 1	04/12/05	Operating the CCP Tomographic Gamma Scanner (TGS)
CCP-TP-097	Rev. 0	02/27/05	Operating the CCP Tomographic Gamma Scanner (TGS)
CCP-TP-107	Rev. 10	02/08/08	Operating the CCP High Efficiency Neutron Counter Using NDA2000
CCP-TP-107	Rev. 9	04/11/07	Operating the CCP High Efficiency Neutron Counter Using NDA2000
CCP-TP-107	Rev. 8	06/15/06	Operating the CCP High Efficiency Neutron Counter Using NDA2000
CCP-TP-107	Rev. 7	03/17/06	Operating the CCP High Efficiency Neutron Counter Using NDA2000
CCP-TP-107	Rev. 6	04/12/05	Operating the CCP High Efficiency Neutron Counter Using NDA2000

Solids Sampling:

INST-OI-73	Rev. 0	03/28/07	Manual Drum Coring Operations
INST-OI-16	Rev. 24	12/20/06	Drum Coring Operations

Solids Analysis:

CCP-TP-181	Rev. 0	05/02/07	CCP Determination of Mercury by CVAA for TRU Waste Characterization
CCP-TP-182	Rev. 1	01/26/09	CCP Determination of Metals by ICP-AES for TRU Waste Characterization
CCP-TP-182	Rev. 0	05/02/07	CCP Determination of Metals by ICP-AES for TRU Waste Characterization
CCP-TP-183	Rev. 0	05/02/07	CCP Microwave Assisted Digestion of Homogeneous Solids and Soil/Gravel

CIS-002

CCP-TP-184	Rev. 0	05/02/07	CCP Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry
CCP-TP-185	Rev. 1	11/18/08	CCP Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry
CCP-TP-185	Rev. 0	05/02/07	CCP Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry
CCP-TP-186	Rev. 1	08/22/07	CCP Determination of Nonhalogenated Volatile Organics by Gas Chromatography
CCP-TP-186	Rev. 0	05/02/07	CCP Determination of Nonhalogenated Volatile Organics by Gas Chromatography
CCP-TP-187	Rev. 1	11/18/08	CCP Sample Preparation for Semivolatile Organic Compounds
CCP-TP-187	Rev. 0	05/02/07	CCP Sample Preparation for Semivolatile Organic Compounds

Project Level Data Validation / DQO Reconciliation:

CCP-TP-001	Rev. 17	09/24/07	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 16	04/26/07	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 15	11/22/06	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 14	11/16/06	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 13	07/21/06	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 12	05/25/06	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 11	03/23/05	CCP Project Level Data Validation and Verification
CCP-TP-002	Rev. 21	08/04/09	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 20	08/18/08	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 19	12/22/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 18	11/16/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 17	10/11/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 16	06/06/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 15	08/16/05	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-003	Rev. 16	10/02/07	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 15	11/16/06	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 14	09/03/03	CCP Sampling Design and Data Analysis for RCRA Characterization
CCP-TP-005	Rev. 18	11/16/06	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 17	06/05/06	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 16	02/27/06	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 15	03/31/05	CCP Acceptable Knowledge Documentation
CCP-TP-030	Rev. 26	05/27/09	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 25	01/22/09	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 24	08/20/08	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 23	03/12/08	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 22	07/24/07	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 21	05/21/07	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 20	02/07/07	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev 19	11/16/06	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 18	05/01/06	CCP TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 17	12/29/05	CCP TRU Waste Certification and WWIS Data Entry

WAP Certification:

CCP-PO-001	Rev. 17	08/23/09	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 16	10/31/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 15	08/08/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 14	03/28/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 13	11/16/06	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 12	03/22/06	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 11	03/10/05	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-002	Rev. 21	01/26/09	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 20	11/02/07	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 19	05/22/07	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 18	11/16/06	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 17	11/16/06	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 16	11/16/06	CCP Transuranic Waste Certification Plan

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-SDA-SOIL

Lot # 22

Container ID Number	Historical Container ID	NDA BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Transportation Headspace Gas BDR			
							Sample	Analysis		
ARP03111	10157002	INNDAS070107	IN-ARP-VE-000459	SSC07-00021	ALD08021V ALD08021S ALD08013N ALD08044M		IN07FG1082	N/A	N/A	N/A
ARP03117	10157016	INNDAS070113	IN-ARP-VE-000458	SSC07-00165	ALD08021V ALD08021S ALD08013N ALD08044M		IN07FG1081	N/A	N/A	N/A
ARP09073*	10246517	INNDAS080234	IN-ARP-VE-001010	SSC08-00014	ALD08030V ALD08030S ALD08022N ALD08055M		IN08FG1136	N/A	N/A	N/A
ARP09261	10245890	INNDAH080300	IN-ARP-VE-001010	SSC08-00014	ALD08030V ALD08030S ALD08022N ALD08055M		IN08FG1138	N/A	N/A	N/A
ARP09283	10240709	INNDAH080274	IN-ARP-VE-001027	SSC08-00014	ALD08030V ALD08030S ALD08022N ALD08055M		IN08FG6109	N/A	N/A	N/A
ARP09351	10240033	INNDAH080271	IN-ARP-VE-001031	SSC08-00014	ALD08030V ALD08030S ALD08022N ALD08055M		IN08FG1124	N/A	N/A	N/A
ARP09371	10239882	INNDAS080201	IN-ARP-VE-001028	SSC08-00014	ALD08030V ALD08030S ALD08022N ALD08055M		IN08FG6101	N/A	N/A	N/A
ARP09485	N/A	INNDAH080290	IN-ARP-VE-001081	S4200-LOT-04-03	ALD08022V ALD08022S ALD08014N ALD08045M		IN08FG6120	N/A	N/A	N/A
ARP00398**	10128437	INNDAH060043	IN-ARP-VE-000141	SSC07-00021	ALD07012M ALD07003N ALD07005S ALD07007V		IN07FG1223	N/A	N/A	N/A
ARP01516**	10126249	INNDAH060109	IN-ARP-VE-000408	SSC07-00021	ALD07012M ALD07003N ALD07005S ALD07007V		IN07FG1219	N/A	N/A	N/A
ARP00007**	10153378	INNDAH060041	IN-ARP-VE-000057	SSC07-00165	ALD07076M ALD07013N ALD07024S ALD07034V		INHSGS060070	ECL06075C	ECL06064G	ECL06064M

C15-004

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-SDA-SOIL

Lot # 22

Container ID Number	Historical Container ID	NDA BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Transportation			
							Sample	Analysis		
ARP00585**	10137334	INNDAH060001	IN-ARP-VE-000168	SSC07-00165	ALD07076M ALD07013N ALD07024S ALD07034V		IN07FG1264	N/A	N/A	N/A
ARP01474**	10131289	INNDAH060128	IN-ARP-VE-000406	SSC07-00165	ALD07076M ALD07013N ALD07024S ALD07034V		IN07FG1148	N/A	N/A	N/A

* This container is included only as it was randomly selected for solids sampling and analysis. This container's TRU Alpha Activity Concentration is less than 100 nCi/g and will not be certified for shipment.

** These containers were submitted as part of ID-SDA-SOIL Lot 1. They are inlcuded in this cross correlation only for comlpeteness.

Signature of Site Project Manager

Michael Walentine
Printed Name

10/7/2009
Date

C15-DC

CCP Solids Analysis VOC UCL_{90} Evaluation Form

WSPF #: ID-SDA-SOIL Rev. 1

Solids Summary Waste Stream Lot Number 1 through 2

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL [1]	# Samples	Maximum (mg/kg)	Mean (mg/kg)	SD (ppmv)	UCL_{90} (mg/kg)	PRQL (mg/kg)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA HWN [2]
Benzene	Log	0	13 [3]	1.2669	-1.6399	1.2768	-1.1373	10	2.30		
Bromoform	Log	0	13 [3]	0.5596	-1.8155	0.9943	-1.4242	10	2.30		
Carbon Disulfide	Log	0	13 [4]	0.9361	-1.7597	1.0984	-1.3053	10	2.30		
Carbon Tetrachloride	Log	6	13	7.4384	0.5260	3.7430	1.9340	10	2.30		
Chlorobenzene	Log	0	13 [3]	1.2669	-1.6399	1.2768	-1.1373	10	2.30		
Chloroform	Log	4	13	4.2767	-0.7345	2.3898	0.1644	10	2.30		
1,1-Dichloroethylene	Log	0	13 [3]	1.2669	-1.3485	1.1237	-0.9062	10	2.30		
1,2-Dichloroethane	Log	0	13 [3]	1.2669	-1.4640	1.2009	-0.9913	10	2.30		
Ethylbenzene	Log	0	13 [3]	1.2669	-1.6399	1.2768	-1.1373	10	2.30		
Methylene Chloride	Log	0	13 [3]	1.2669	-1.4640	1.2009	-0.9913	10	2.30		
m,p-Xylene [b]	Log	0	13 [4]	0.9361	-1.4419	0.9364	-1.0545	10	2.30		
o-Xylene	Log	1	13 [3]	1.2669	-1.6399	1.2768	-1.1373	10	2.30		
1,1,2,2-Tetrachloroethane	Log	1	13 [3]	1.2669	-1.2872	1.1602	-0.8306	10	2.30		
Tetrachloroethylene	Log	8	13	4.7875	0.4749	2.9137	1.5708	10	2.30		
Toluene	Log	3	13 [3]	1.2669	-1.3809	1.2416	-0.8922	10	2.30		
Trans-1,2-Dichloroethylene	Log	0	13 [3]	1.2669	-1.6399	1.2768	-1.1373	10	2.30		
1,1,1-Trichloroethane	Log	1	13 [3]	3.5264	-1.2143	1.8101	-0.5019	10	2.30		
Trichloroethylene	Log	5	13 [5]	6.8244	0.2180	3.2580	1.4435	10	2.30		
1,1,2-Trichloro-1,2,2-trifluoroethane	Log	0	13 [3]	1.2669	-1.6399	1.2768	-1.1373	10	2.30		
1,1,2-Trichloroethane	Log	0	13 [3]	1.2669	-1.4640	1.2009	-0.9913	10	2.30		
Trichlorofluoromethane	Log	0	13 [3]	1.2669	-1.5243	1.2227	-1.0431	10	2.30		
Vinyl Chloride	Log	0	13 [4]	0.5306	-1.7781	0.8914	-1.4093	10	2.30		

215-0

CCP Solids Analysis VOC UCL_{90} Evaluation Form

WSPF #: ID-SDA-SOIL Rev. 1

Solids Summary Waste Stream Lot Number 1 through 2

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples	Maximum (mg/kg)	Mean (mg/kg)	SD (ppmv)	UCL_{90} (mg/kg)	PRQL (mg/kg)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA HWN (2)
Acetone	Log	0	13	2.8904	-0.2520	0.9885	0.1199	4	1.39		
Butanol	Log	2	13	3.5973	0.3266	1.5993	0.9282	100	4.61		
Methanol	Log	0	13	3.5973	-0.0421	1.1429	0.3878	100	4.61		
Methyl ethyl ketone	Log	0	13	2.8904	-0.2032	0.9641	0.1594	100	4.61		
Ethyl ether	Log	0	13	3.5973	0.4324	0.9608	0.7938	100	4.61		
Isobutanol	Log	0	13	2.8904	-0.3586	0.9822	0.0109	100	4.61		
Pyridine [a]	Log	0	13	2.8904	0.2713	0.8438	0.5887	100	4.61		

[a] Can also be analyzed as an SVOC. If analyzed as an SVOC, the QAO's of CCP-TP-001, Table B3-6 apply.

[b] These xylene isomers cannot be resolved by the analytical methods employed in the program. m-Xylene and p-Xylene will be reported as "Total m-p-Xylene."

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per section B4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

(2) No additional EPA Hazardous Waste Numbers were identified for this waste stream.

(3) As a result of dilution requirements for one of the thirteen samples, Benzene, Bromoform, Chlorobenzene, 1,1-Dichloroethylene, 1,2-Dichloroethane, Ethylbenzene, Methylene Chloride, o-Xylene, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloro-1,2,2-trifluoroethane, 1,1,2-Trichloroethane, and Trichloroethane were reported as non-detected with an MDL value in excess of the PRQL. In accordance with the Waste Analysis Plan, Section B4-3d such observations with elevated MDL values due to dilution were not used in calculating the mean concentration. Consequently, the subject analytes were statistically evaluated with 12, rather than 13, usable observations.

(4) As a result of dilution requirements for two of the thirteen samples, Carbon Disulfide, m,p-Xylene, and Vinyl chloride were reported as non-detected with an MDL value in excess of the PRQL. In accordance with the Waste Analysis Plan, Section B4-3d such observations with elevated MDL values due to dilution were not used in calculating the mean concentration. Consequently, the subject analytes were statistically evaluated with 11, rather than 13, usable observations.

(5) As a result of dilution requirements for eight of the thirteen samples, Trichloroethylene was reported as non-detected with an MDL value in excess of the PRQL. In accordance with the Waste Analysis Plan, Section B4-3d such observations with elevated MDL values due to dilution were not used in calculating the mean concentration. Consequently, the subject analytes were statistically evaluated with 5, rather than 13, usable observations.

Signature of Site Project Manager

Michael Walentine
Printed Name

10/7/2009
Date

215-01

CCP Solids Analysis SVOC UCL_{90} Evaluation Form

WSPF #: ID-SDA-SOIL Rev. 1 **Solids Summary Waste Stream Lot Number** 1 through 2

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples	Maximum (mg/kg)	Mean (mg/kg)	SD (mg/kg)	UCL90 (mg/kg)	PRQL (mg/kg)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code (2)
1,2-Dichlorobenzene [a]	Log	0	13 (3)	2.71	-0.89	1.91	-0.14	40.00	3.69		
1,4-Dichlorobenzene[a]	Log	0	13 (3)	2.71	-0.89	1.91	-0.14	40.00	3.69		
2,4-Dinitrophenol	Log	0	13 (3)	2.71	-1.13	1.72	-0.45	40.00	3.69		
2,4-Dinitrotoluene	SQRT	0	13 (4)	0.95	0.44	0.24	0.55	40.00	6.32		
Hexachlorobenzene	SQRT	0	13 (4)	0.95	0.44	0.24	0.55	2.60	1.61		
Hexachloroethane	SQRT	6	13 (3)	20.25	5.53	6.70	8.17	40.00	6.32	Yes	D034
2-Methylphenol (cresols)	Log	0	13 (3)	2.71	-0.89	1.91	-0.14	40.00	3.69		
3&4-Methylphenol (cresols)	Log	0	13 (3)	2.71	-0.89	1.91	-0.14	40.00	3.69		
Nitrobenzene	Log	0	13 (3)	2.71	-0.89	1.91	-0.14	40.00	3.69		
Pentachlorphenol	Log	0	13 (3)	2.71	-0.89	1.91	-0.14	40.00	3.69		

[a] Can also be analyzed as a VOC. If analyzed as a VOC, the QAO's of CCP-TP-001, Table B3-4 apply.

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per B4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

(2) The EPA Hazardous Waste Number for Hexachloroethane (D034) is assigned to this waste stream.

(3) As a result of dilution requirements for one of the thirteen samples, 1,2-Dichlorobenzene, 1,4-Dichlorobenzene, 2,4-Dinitrophenol, Hexachloroethane, 2-Methylphenol, 3&4-Methylphenol, Nitrobenzene, and Pentachlorophenol were reported as non-detected with an MDL value in excess of the PRQL. In accordance with the Waste Analysis Plan, Section B4-3d such observations with elevated MDL values due to dilution were not used in calculating the mean concentration. Consequently, the subject analytes were statistically evaluated with 12, rather than 13, usable observations.

(4) As a result of dilution requirements for four of the thirteen samples, 2,4-Dinitrotoluene and Hexachlorobenzene were reported as non-detected with an MDL value in excess of the PRQL. In accordance with the Waste Analysis Plan, Section B4-3d such observations with elevated MDL values due to dilution were not used in calculating the mean concentration. Consequently, the subject analytes were statistically evaluated with 12, rather than 13, usable observations.

Signature of Site Project Manager

Michael Walentine
Printed Name

10/7/2009
Date

C15-00

CCP Solids Analysis Metals UCL_{90} Evaluation Form

WSPF #: ID-SDA-SOIL Rev. 1 **Solids Summary Waste Stream Lot Number** 1 through 2

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples	Maximum (mg/kg)	Mean (mg/kg)	SD (mg/kg)	UCL90 (mg/kg)	PRQL (mg/kg)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Antimony	SQRT	12	13	1.84	1.28	0.32	1.40	100	10.00		
Arsenic	Log	13	13	2.83	2.22	0.21	2.30	100	4.61		
Barium	No	13	13	280.00	233.08	34.25	245.96	2000	N/A		
Beryllium	SQRT	13	13	6.86	3.70	1.89	4.41	100	10.00		
Cadmium	Log	13	13	4.41	1.50	1.44	2.04	20	3.00		
Chromium	Log	13	13	5.44	4.02	0.57	4.24	100	4.61		
Lead	Log	13	13	3.85	3.15	0.40	3.30	100	4.61		
Mercury	Log	11	13	1.48	-1.98	1.65	-1.36	4	1.39		
Nickel	Log	13	13	5.63	3.95	0.71	4.21	100	4.61		
Selenium	Log	4	13	0.10	-0.92	0.46	-0.75	20	3.00		
Silver	Log	8	13	1.86	-0.15	1.27	0.33	100	4.61		
Thallium	SQRT	8	13	1.97	1.08	0.53	1.28	100	10.00		
Vanadium	No	13	13	63.00	51.15	9.97	54.90	100	N/A		
Zinc	Log	13	13	6.13	4.88	0.48	5.06	100	4.61	Yes	(2)

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per section B4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

(2) Zinc is not listed under 40CFR 261.30 or as a toxicity characteristic metal per 40CFR 261.24.

Signature of Site Project Manager

Michael Walentine
Printed Name

10/7/2009
Date

C15-10

CCP Solid VOCs Summary Data

Waste Stream Number: ID-SDA-SOIL

Solids Summary Waste Stream Lot Number: 1 and 2

Tentatively Identified Compound	Maximum Observed Estimated Concentrations (mg/kg)	# Samples Containing TIC	% Detected
NONE	N/A	N/A	N/A

Data Supports EPA Hazardous Waste Numbers Assigned by AK? Yes ☑ No ☐

If no, describe the basis for assigning the EPA Hazardous Waste Codes:

SPM Signature: [signature] Date: 10/7/2009

C15-0

CCP Solid SVOCs Summary Data

Waste Stream Number: ID-SDA-SOIL

Solids Summary Waste Stream Lot Number: 1 and 2

Tentatively Identified Compound	Maximum Observed Estimated Concentrations (mg/kg)	# Samples Containing TIC	% Detected
Bis(2-ethylhexyl)phthalate	21.00	6	46.15%
Pentachlorobiphenyl	810.00	5	38.46%
Tetrachlorobiphenyl	9.70	2	15.38%
Hexachlorobutadiene	71.00	4	30.77%
Hexachloropropene	0.51	1	7.69%
1,4-Dioxane	1.10	1	7.69%
Diethyl phthalate	2.10	1	7.69%
Hexachlorobiphenyl	4.80	1	7.69%

Note: Hexachlorobutadiene, bis(2-ethylhexyl)phthalate, and Pentachlorobiphenyl are listed in 20.4.1.200 NMAC (incorporating 40 CFR 261) Appendix VIII, and are present as TICs in greater than 25% of samples in the waste stream. These analytes will be added to the target analyte list for ID-SDA-SOIL.

Data Supports EPA Hazardous Waste Numbers Assigned by AK? Yes ☑ No ☐

If no, describe the basis for assigning the EPA Hazardous Waste Codes:

SPM Signature [signature] Date 10/7/2009

CIS-011

CCP RTR/VE Summary of Prohibited Items and AK Confirmation

Waste Stream Number: ID-SDA-SOIL Lot #: 22

Container Number	RTR Prohibited Items	Visual Examination Prohibited Items [a]
See correlation of container ID numbers for list of remaining drum numbers in this Lot.	None of the containers in this lot were processed through RTR.	None of the containers in this lot had prohibited items identified during Visual Examination technique.

a. See Batch Data Reports

b. If AK has assigned U134 to this waste stream, then any liquids in these containers are prohibited items (not acceptable by the TSDF).

Site Project Manager Signature | Michael Walentine (Printed Name) | 10/7/2009 (Date)

C15-C

CCP Reconciliation with Data Quality Objectives

WSPF# ID-SDA-SOIL Rev. 1 Lot # 22

Sampling Completeness

RTR/VE:

Number of Valid Samples: 13 Number of Total Samples Analyzed: 13
Percent Complete: 100 (QAO is 100%)

NDA

Number of Valid Samples: 13 Number of Total Samples Analyzed: 13
Percent Complete: 100 (QAO is 100%)

HSG

Number of Valid Samples: NA Number of Total Samples collected: NA
Percent Complete: NA (QAO is ≥90%)
Number of Valid Samples: NA Number of Total Samples analyzed: NA
Percent Complete: NA (QAO is ≥90%)

Total VOC

Number of Valid Samples: 13 Number of Total Samples collected: 13
Percent Complete: 100 (QAO is ≥90%)
Number of Valid Samples: 13 Number of Total Samples analyzed: 13
Percent Complete: 100 (QAO is ≥90%)

Total SVOC

Number of Valid Samples: 13 Number of Total Samples collected: 13
Percent Complete: 100 (QAO is ≥90%)
Number of Valid Samples: 13 Number of Total Samples analyzed: 13
Percent Complete: 100 (QAO is ≥90%)

Total Metals

Number of Valid Samples: 13 Number of Total Samples collected: 13
Percent Complete: 100 (QAO is ≥90%)
Number of Valid Samples: 13 Number of Total Samples analyzed: 13
Percent Complete: 100 (QAO is ≥90%)

CCP Reconciliation with Data Quality Objectives

WSPF# ID-SDA-SOIL Rev. 1 Lot # 22

	Y/N/NA	Reconciliation Parameter
1	Y	Waste Matrix Code.
2	Y	Waste Material Parameter Weights.
3	Y	The waste matrix code identified is consistent with the type of sampling and analysis used to characterize the waste.
4	Y	The TRU activity reported in the BDRs for each container demonstrates with a 95% probability that the container of waste contains TRU radioactive waste.
5	N	AK Sufficiency. Is there an approved AK sufficiency Determination for this waste stream?
6	NA	Mean concentrations, UCL_{90} values for the mean concentration, standard deviations, and the number of samples collected for each VOC in the HSG of each container were calculated and compared with the program required quantitation limits, as reported in CCP-TP-003 Attachment 3, and additional Environmental Protection Agency (EPA) Hazardous Waste Numbers were assigned as required. Samples were randomly collected (when appropriate).
7a	Y	Mean concentrations, UCL_{90} values for the mean concentration, standard deviations, and the number of samples collected for solids VOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003 Attachment 4, and additional EPA Hazardous Waste Numbers were assigned as required. Samples were randomly collected.
7b	Y	Mean concentrations, UCL_{90} values for the mean concentration, standard deviations, and the number of samples collected for solids SVOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003 Attachment 5, and additional EPA Hazardous Waste Numbers were assigned as required. Samples were randomly collected.
7c	Y	Mean concentrations, (UCL_{90}) values for the mean concentration, standard deviations, and the number of samples collected for total metals were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003 Attachment 6, and additional EPA Hazardous Waste Numbers were assigned as required. Samples were randomly collected.

CCP Reconciliation with Data Quality Objectives

WSPF# ID-SDA-SOIL Rev. 1 Lot # 22

8	Y	The data demonstrates whether the waste stream exhibits a toxicity characteristic under Title 40 Code of Federal Regulations (CFR), Part 261, Identification and Listing of Hazardous Waste, Subpart C, Characteristics of Hazardous Waste.
9	Y	Does the waste stream contain listed waste found in 20.4.1.200 NMAC incorporating 40 CFR Part 261, Subpart D, Lists of Hazardous Wastes.
10	Y	Waste stream can be classified as hazardous or nonhazardous at the 90-percent confidence level.
11	Y	Appropriate packaging configuration and Drum Age Criteria (DAC) is applied and documented in the headspace gas sampling documentation, and the drum age met prior to sampling.
12	Y	TICs were appropriately identified and reported in accordance with the requirements of Section B3-1 of the QAPjP.
13	NA	The PRQLs for headspace gas VOCs were met for all analyses as evidenced by the analytical batch data reports.
14		The overall completeness, comparability, and representativeness QAOs were met for each of the analytical and testing procedures as specified in the WAP Sections B3-2 through B3-9 prior to submittal of a waste stream profile form for a waste steam or waste stream lot.

	Completeness	Comparability	Representativeness
Radiography	NA	NA	NA
VE	Y	Y	Y
Headspace Gas Analysis	NA	NA	NA
Solids Sampling	Y	Y	Y
Solids VOCs	Y	Y	Y
Solids SVOCs	Y	Y	Y
Solids Metals	Y	Y	Y

CCP Reconciliation with Data Quality Objectives

WSPF# ID-SDA-SOIL Rev. 1 Lot # 22

Comments:

This CIS represents the NDE and NDA data from the 22nd shipping lot and the solids analytical data from Solid Summary lots 1 and 2 from waste stream ID-SDA-SOIL. A total of 1106 containers have been evaluated in shipping lots 1 through 22.

A total of 13 containers have been sampled for solids RCRA analysis. Solids summary lot 2 included as part of this shipping lot, accumulates 5 containers from solids summary lot 1 and 8 additional containers from solids summary lot 2. The 5 samples from solids summary lot 1 were submitted in the CIS for the original revision of the WSPF for the ID-SDA-SOIL waste stream.

UCL90 values are computed from the statistical evaluation of data from all 13 drums. However, in cases where the MDL for a given analyte was reported above the PRQL due to dilution and the analyte was not detected (i.e. flagged with a "U" qualifier) those data were not used in calculating mean concentration in accordance with Section B4-3d of the WIPP-WAP.

3 analytes - bis(2-ethylhexyl)phthalate, hexachlorobutadiene, and pentachlorobiphenyl, are listed in 20.4.1.200 NMAC (incorporating 40 CFR 261) and are present as TICs in greater than 25% of samples in the waste stream. An AK re-evaluation was performed and the results are detailed as follows:

- Bis(2-ethylhexyl)phthalate carries EPA HWN U028, but because the compound is not present as a unused commercial chemical product, off-specification chemical product, or spill residue thereof, U028 is not assigned to this waste stream. This compound will be added to the target analyte list.
- Hexachlorobutadiene carries EPA HWNs D033 and U128, but because the compound is not present as a unused commercial chemical product, off-specification chemical product, or spill residue thereof, U128 is not assigned to this waste stream. EPA HWN D033 is already assigned to this waste stream. This compound will be added to the target analyte list.
- Although pentachlorobiphenyl is listed in 20.4.1.200 NMAC (incorporating 40 CFR 261), there is no EPA HWN associated it. No additional EPA HWNs are assigned as a result of the addition of this compound. This compound will be added to the target analyte list.

Signature of Site Project Manager	Michael Walentine Printed Name	10/7/2009 Date

SUMMATION OF ASPECTS OF AK SUMMARY REPORT: ID-SDA-SOIL

Overview:

Waste Stream ID-SDA-SOIL is comprised of interstitial soil buried in the Subsurface Disposal Area (SDA) at Idaho National Laboratory (INL) Radioactive Waste Management Complex (RWMC). The waste is being retrieved and packaged for disposal.

Waste Stream ID-SDA-SOIL was originally approved on June 19, 2008. This waste stream profile has been revised in accordance with NMED direction described in the September 22, 2008 NMED Approval of the Idaho National Laboratory/Central Characterization Project Audit A-08-10 to add EPA HWNs P098 and P106. The waste stream designation has not changed because there is no change to the generating process, physical form, or hazardous constituents. Second stage sludge (742 sludge) has always been part of this waste stream but is now targeted waste. Cyanide is an anticipated hazardous constituent in waste stream ID-SDA- SOIL and EPA HWNs F006, F007 and F009 were applied. At the direction of NMED, P098 and P106 are conservatively applied to this waste stream to address the potential for other cyanide (breached bottles of potassium and sodium cyanide pellets) to enter the waste stream. Because F006, F007 and F009 HWNs were previously applied, there is no change to the hazardous constituents and the waste stream designation. This will allow for disposal of targeted waste if bottles of potassium cyanide and sodium cyanide are inadvertently broken during future excavation or visual examination. If packages or bottles of cyanide pellets are identified in the soil during the visual examination, they will be removed from the waste.

Most of the waste in the retrieval areas, and all of the targeted waste, was generated from defense activities (i.e., production of nuclear weapons) at the decommissioned Rocky Flats Plant (RFP) in Golden, Colorado. Waste in the retrieval areas was also generated by the INL and other government sponsored small quantity generators (i.e., Rockwell Atomics International Division, Denver Research Institute, United States Geological Survey, Colorado School of Medicine, Colorado School of Mines Research Foundation, and the United States Department of the Interior). Waste, from the INL and the small quantity generators, was historically generated from reactor research including testing of nuclear reactors, fuel development, fuel reprocessing and isotope studies. Defense related activities conducted at the INL included Army, Navy, and space reactor development. Although soil is not a targeted waste, some containers packaged with targeted waste are predominantly soils. Waste stream ID-SDA-SOIL is therefore considered defense related waste.

This summation of the AK Summary Report includes information to support Waste Stream Profile Form (WSPF) number ID-SDA-SOIL, Revision 1, for mixed soil. The primary source of information for this report was CCP-AK-INL-001, *Central Characterization Project Acceptable Knowledge Summary Report For Waste Retrieved from Designated Areas within the Subsurface Disposal Area at the Idaho National Laboratory: Transuranic Waste Streams ID-SDA-DEBRIS, ID-SDA-SLUDGE, ID-SDA-SOIL,* Revision 8, dated September 8, 2009. CCP-AK-INL-001 includes information obtained from numerous sources, including facility safety basis documentation, historical document archives, generator and storage facility waste records and documents including databases, and interviews with operational and waste management personnel.

Waste Stream Identification Summary:

Site Where TRU Waste Was Generated: Idaho National Laboratory

Waste Stream Name:	Interstitial Soil from the Subsurface Disposal Area
Waste Stream Number:	ID-SDA-SOIL, Revision 1
Dates of Waste Generation:	2005 to Present
Summary Category Group:	S4000
Waste Matrix Code Group:	Soils
Waste Matrix Code:	S4200
Waste Stream TWBIR Identification:	IN-ID-SDA-SOIL[1]
Waste Stream Volume:	1969 55-gallon drums (current) 6482 55-gallon drums (projected) 134 SWBs (projected)
RCRA EPA Hazardous Waste Numbers:	D004, D005, D006, D007, D008, D009, D010, D011, D022, D027, D028, D029, D030, D032, D033, D034, D037, D038, D043, F001, F002, F004, F005, F006, F007, F009, P098 and P106
TRUPACT-II Content Code (TRUCON):	ID 112, ID 122, ID 127, SQ 154

Waste Stream Description and Physical Form:

This waste stream is predominantly interstitial soils from the retrieval area. Soils are not targeted waste; however, there may be containers packaged with targeted waste forms where the predominant waste is soil. Other types of waste may include debris such as rags, paper, plastic, rubber, wood, filters, glass, graphite, metal, equipment, and concrete, as well as roaster oxide and inorganic and organic sludge.

Waste stream ID-SDA-SOIL is predominantly soil by volume with the balance being homogenous solids (i.e., roaster oxide, sludge and absorbed liquids such as organic setups) and debris. Waste Matrix Code S4200, Soil/Debris, is applied to this waste stream. This category includes waste that is predominantly soil, sand, silt, rock, or gravel with rock and gravel volumes totaling at least 50 percent of the matrix. No individual containers consist of more than 50% debris or sludge. The waste that comprises waste stream ID-SDA-SOIL was generated from an activity that is similar in material, physical form and hazardous constituents and is therefore a single waste stream.

Point of Generation - Area and Building of Generation

The point of generation for newly generated waste stream ID-SDA-SOIL is the INL SDA. Although this soil was generated at the INL, the degradation of drums and subsequent retrieval process may result in co-mingling of waste from the following facilities:

[1] TWBIR numbers IN-ICP-002, IN-ICP-003, IN-ICP-004, and IN-ICP-005 also apply.

RFP

- Buildings 122, 123, 331, 334, 441, 444, 447, 551, 559, 771, 774, 776, 777, 779, 881, 883, 886, 889, and 991, as well as the solar evaporation ponds.

Idaho National Laboratory

- Argonne National Laboratory-West (ANL-W) Buildings 601 and 767
- Auxiliary Reactor Area (ARA) Building 602, 616, and 626
- Central Facilities Area (CFA) Buildings 601, 633, 646, 654, 674, 687, and 690
- Idaho Chemical Processing Plant (CPP) Buildings 601 and 630
- Naval Reactors Facility (NRF) Buildings 601, 617, and 618
- Power Excursion Reactor (PER) Building 601
- Test Area North (TAN) Buildings 607 and 633
- Test Reactor Area (TRA) Buildings 603, 642, 653, and 661
- Radioactive Waste Management Complex (RWMC)

Other Off-Site Facilities

- Rockwell Atomics International Division (ATI) (Canoga Park, California)
- Denver Research Institute (DRI) (Denver, Colorado)
- United States Geological Survey (USGS) (Denver, Colorado)
- Colorado School of Medicine (CSM) (Denver, Colorado)
- Colorado School of Mines Research Foundation (CSMRF) (Golden, Colorado)
- United States Department of the Interior (USDI)

Generating Process

The objective of the Accelerated Retrieval Project (ARP) is to perform a targeted retrieval of certain RFP waste that is contaminated with transuranic radionuclides, uranium, and volatile organic compounds (VOCs). The waste-zone material, or targeted waste, will be retrieved using excavators. Dust suppression is used during the retrieval process as conditions warrant. This activity includes addition of localized water, Soiltac® (a non-hazardous vinyl acrylic copolymer emulsion), or other non-hazardous dust suppressants (e.g., Durasoil®).

Retrieved waste will be placed into trays fitted with a liner. Targeted and non-targeted waste determinations are made by an operator by way of closed-circuit television cameras at the dig-face. If the tray contents are exclusively non-targeted waste, it is returned to the pit. If targeted waste is present in the tray, operators support transfer of the tray to the drum packaging station. Operators then perform visual examination, and prohibited item removal and sampling as required. Soil is loaded into the drum in the tray liner. Absorbent (e.g., Oil-Dri®) may be added to ensure the absence of liquids. The drum is then removed from the drum port, closed, and transferred from the area.

The following information provides a summary of the historical operations, by facility, that generated waste disposed of in the retrieval areas:

RFP

Plutonium Operations

TRU waste generated at the RFP was primarily associated with operations that manufactured, recovered, and treated plutonium metal and plutonium containing materials. Plutonium operations were conducted in Buildings 771, 776, and 777. Activities included:

- Plutonium Component Production
- Plutonium Recovery and Purification

Enriched Uranium (EU) Operations

EU operations included production chemistry, foundry operations, fabrication, inspection, parts cleaning, EU recovery, and scrap material recycling. Activities included:

- Enriched Uranium Component Production
- Enriched Uranium Recovery

Depleted Uranium (DU) Operations

DU operations were conducted in Buildings 444, 447, and 883. Operations included casting, machining, heat treating, coating, plating, cleaning, and inspection. These operations were similar to those described for plutonium and EU fabrication. Rolling and forming was conducted in Building 883. To make the metal malleable for rolling, the ingots were placed in a furnace and/or heated, rolled, and annealed. The parts were cut for forming, then returned to Building 444 for final machining. Turnings and other DU residue materials were returned to Building 444 for recasting or conversion to roaster oxide in Building 447 for disposal. Roaster Oxide is depleted uranium chips, turning, and fines that have been thermally stabilized (self-sustained combustion) to an oxide.

Beryllium (Be) Operations

Beryllium operations were primarily conducted in buildings containing DU and/or EU operations. Some beryllium operations, such as machining, were segregated from uranium operations; however waste from other operations was commingled.

Final Assembly

The original final assembly building was Building 991. The original final assembly operations used acetone or trichloroethylene to clean components and the finished product. As a result of the additional requirements associated with the hollow-core design, Building 777 was put into service to provide necessary support. The operations involved in final assembly of the hollow-core design included drilling, welding, brazing, turning and polishing DU, EU, beryllium and plutonium parts.

Laboratory Operations

The laboratories in Buildings 559, 771 and 881 supported production operations at RFP. The laboratories provided sampling and analysis support for production activities. In addition, the laboratories supported recovery, purification, and liquid waste treatment operations.

Building 123 was a health physics laboratory that performed bioassays and low-level radiological studies. These efforts generated a few drums per year of combustible waste which was shipped to INL.

Building 441 contained a general analytical laboratory, including a spectrochemical laboratory and chemical stockroom, which supported the depleted uranium and beryllium operations and general site chemical analyses.

Research and Development (R&D) and Special Order Work

R&D included activities related to production, recovery, and purification as well as "special order" work, or work involving materials processed separately. Building 779 conducted many of the R&D operations at the RFP. Other areas supporting R&D included Buildings 331, 771, 776, 777, 881, and 886. Activities included:

- Research and Development
- Special Order Work

Waste Treatment

Waste processing at RFP treated both liquid and solid process waste. Most of the waste treatment operations were conducted in Building 774 and subsequently shipped to INL. Solid waste treatment operations were conducted for plutonium and uranium recovery, or to render the waste suitable for transportation and disposal. Waste treatment operations relative to recovery were conducted in Buildings 771, 776, 881, and 883. Activities included:

- Liquid Waste Treatment
- Solid Waste Treatment

The aqueous liquid waste treatment process was divided into two separate areas or "stages". The first stage received and treated only plutonium and americium contaminated liquid wastes by neutralization (lime and sodium or potassium hydroxide), precipitation (ferric sulfate and calcium chloride or magnesium sulfate), flocculation (Purifloc nonhazardous polyacrylamide coagulation agent), clarification and filtration. The sludge from precipitation and flocculation was fed to the vacuum drum filter for de-watering and drumming for off-site disposal. The second stage received and treated enriched and depleted uranium contaminated aqueous liquid wastes, in addition to treated plutonium and americium contaminated wastes from the first stage. Similar to first stage operations, these liquids were made basic when necessary, then processed by precipitation and flocculation. Liquid effluent was recycled back to the process, sent to the evaporation ponds, or discharged from the site. Solids were filtered and drummed for off-site disposal.

The "Grease Plant" processed backlog and newly generated organic liquid waste. Contaminated lathe coolant and organic solvents from plutonium and Enriched Uranium (EU)

machining operations, were transferred into a mixer/processor. The organic liquids were blended with calcium silicate and extruded into lined 55-gallon drums. This waste was identified as organic setups or 743-sludge.

Routine Maintenance and Utilities

Building 334 was the primary maintenance support facility and conducted operations including utilities maintenance, filter testing and replacement, removal and replacement of equipment, and change-out of oils, coolants, and Raschig rings. Most of the buildings contained maintenance operations for the building and peripheral areas. Utility operations included the up-keep of the heating, ventilation and air conditioning, fume scrubbers, and process vacuum systems.

Non-Routine Operations

Non-routine operations included strip-out operations, renovation, and activities associated with fires and Site incidents. Strip-out of glovebox lines, process piping, valves, and associated systems were performed to remediate radioactive contamination from these incidents as well as for renovation or decommissioning of operations.

Miscellaneous Operations

Building 122 was the medical facility where routine physicals and industrial injuries were treated. Capabilities included first aid, taking X-rays, minor surgical treatment, and providing ambulances. The personnel decontamination center handled plutonium and highly enriched uranium personnel contamination cases. Building 122 also housed the internal dosimetry center which measured radioactive material in the body.

Building 551 provided warehousing for equipment, materials, chemicals, supplies, metal fabrication, a service shop and a large equipment and tool crib. Scrap metal (iron, aluminum, beryllium and copper) was stored near Building 551. Periodically, uranium chips were found in the scrap metal due to the cross contamination of machining equipment in Building 444. Occasionally, chemicals stored and received in the building leaked or were spilled. The non-destructive testing group performed tests on beryllium parts in Building 551 beginning in 1968.

Idaho National Laboratory

The facilities that generated waste at the INL and for which small amounts of the described waste may be included in this waste stream are described below.

ANL-W

Activities that generated waste included:

- General plant operation, maintenance, decontamination, and monitoring.
- Hot cell operations at the Fuel Cycle Facility (FCF). Most of this waste was stored in the Radioactive Scrap Waste Facility (RSWF), but some was sent to the RWMC.
- Hot cell operations at ANL-W.
- Large pieces of excess or demolished equipment from ANL-W radiological control areas were shipped to the RWMC on a non-routine basis.

- Concreted evaporator bottoms were generated from the evaporation of radioactive liquids received from FCF and Transient Reactor Test Facility (TREAT).

Idaho Chemical Process Plant (CPP)

The CPP facilities that sent waste to the SDA are as follows.

- Fuel Processing Facility
- Support Facility

Activities that generated waste included:

- Fuel Processing
- Decontamination of tools and equipment
- Miscellaneous laboratory operations
- Water treatment

Naval Reactors Facility (NRF)

The NRF facilities that sent waste to the SDA are as follows.

- The Submarine Thermal Reactor

  This facility generated occasional metal valves and piping sections. Metal tanks and drums containing spent ion-exchange resins and sludge from water processing systems were also generated.

- The Large Ship Reactor Prototypes

  Waste was generated by this facility as a result of reactor coolant sampling, maintenance, operation of the oil-water separation equipment, repair, and refueling. Waste includes empty oil drums from the oil-water separation system.

- Expended Core Facility (ECF)

  The majority of the radioactivity (curies) and the volume of waste transferred from NRF to the RWMC came from ECF. Most of the radioactivity from ECF is in structural materials removed during the naval fuel examinations.

Test Area North (TAN)

Most of the waste produced at TAN was a result of specific test and evaluation programs. The decontamination, disassembly, evaluation, and discarding of components of the tests generated debris waste.

Test Reactor Area (TRA)

The TRA generated waste from the test reactors, craft and maintenance shops, radiochemistry and physics laboratories, and hot cells. Waste included contaminated dirt, concrete, spent ion-exchange resins, filters, gloveboxes, irradiated experiment components, and equipment.

Other INL Generating Facilities

Other generators disposed of scrap metals and combustible materials that were radiologically contaminated. These facilities and related waste materials include:

- Auxiliary Reactor Area – Solvents, thinners, acids, and mineral oils were used at this facility.
- Central Facilities Area - Radioactive waste includes contaminated combustibles, scrap metal, sewage sludge, and nuclear radiation sources.
- Power Excursion Reactor - This waste consisted of metals, combustibles, and core and loop components. Small amounts of non-radiological waste (solvents, resins, cleaning solutions, and acids) were included with waste shipments to the SDA.
- RWMC - Waste consists of radiologically contaminated materials (combustibles, soil, and plastic) associated with decontamination processes at the RWMC.

Other Off-Site Generating Facilities

Off-site educational institutions, private companies, and other federal agencies shipped waste to RFP for disposal. RFP accepted this waste and shipped it to the INL RWMC SDA. For the current retrieval areas five Colorado-based waste generators are identified: University of Colorado School of Medicine (CSM), Colorado School of Mines Research Foundation (CSMRF), United States Geological Service (USGS), the Denver Research Institute (DRI), and the United States Department of the Interior (USDI). In addition, the Rockwell Atomics International Division (ATI) of Canoga Park, California generated waste that is buried in the retrieval areas.

The CSM, the medical school associated with the University of Colorado, conducted various biomedical research activities with radionuclides. The CSMRF was a research institute conducting research for the Defense Atomic Support. The USGS office in the Denver Federal Center operated a small nuclear reactor used to determine the age and chemical makeup of rocks and minerals. The USGS also evaluated the effects of underground nuclear explosions at the Atomic Energy Commission's (AECs) Nevada Test Site (NTS); that program was expanded to study the geologic and hydrogeologic conditions affecting the peaceful uses of atomic energy and the disposal of radioactive waste. DRI was a chemistry laboratory affiliated with the University of Denver that used small amounts of radioactive material and beryllium oxide in chemistry classes. The USDI encompasses several organizations including: the USGS, the Bureau of Land Management, the Bureau of Reclamation, the Bureau of Mines, the Bureau of Indian Affairs, the Interstate Commerce Commission, the National Park Service, Territorial Oversight (including the Marshall Islands), and the U.S. Fish and Wildlife Service. It is not known what project or organization within the USDI generated the waste shipped to the INL. The USDI waste is not targeted for retrieval. Rockwell ATI conducted R&D, design, construction, and testing of nuclear reactors and associated systems.

Table 1 identifies toxicity characteristic (TC) and F-listed chemicals in waste stream ID-SDA-SOIL. These chemicals were used in the processes and contaminate the waste, but the chemical itself was not discarded in the TRU waste stream as commercial chemical product, an off-specification commercial chemical product or spill residue thereof (40 CFR 261.33)

Table 1 – Metals and Organic TC and F-Listed Contaminants for Waste Stream ID-SDA-SOIL

Constituent	CAS Number	EPA Hazardous Waste Number
1,2-Dichlorobenzene	95-50-1	F002
Carbon tetrachloride	56-23-5	F001
Chlorobenzene	108-90-7	F002
Isobutanol	78-83-1	F005
Methylene chloride	75-09-2	F001, F002
Tetrachloroethylene	127-18-4	F001, F002
1,1,1-Trichloroethane	71-55-6	F001, F002
1,1,2-Trichloroethane	79-00-5	F002
Trichloroethylene	79-01-6	F001, F002
Trichlorofluoromethane	75-69-4	F001, F002
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113, Freon TF)	76-13-1	F001, F002
Cresols	1319-77-3	F004
Nitrobenzene	98-95-3	F004
Benzene	71-43-2	F005
Carbon disulfide	75-15-0	F005
2-Ethoxyethanol	110-80-5	F005
Methyl ethyl ketone (MEK)	78-93-3	F005
2-Nitropropane	79-46-9	F005
Toluene	108-88-3	F005
Wastewater treatment sludges from electroplating operations	NA	F006
Spent cyanide plating bath solutions from electroplating operations	NA	F007
Spent stripping and cleaning bath solutions from electroplating operations	NA	F009

Constituent	CAS Number	EPA Hazardous Waste Number
Arsenic	7440-38-2	D004
Barium	7440-39-3	D005
Cadmium	7440-43-9	D006
Chromium	7440-47-3	D007
Lead	7439-92-1	D008
Mercury	7439-97-6	D009
Selenium	7782-49-2	D010
Silver	7440-22-4	D011
Chloroform	67-66-3	D022
1,4-Dichlorobenzene	106-46-7	D027
1,2-Dichloroethane	107-06-2	D028
1,1-Dichloroethylene	75-35-4	D029
2,4-Dinitrotoluene	121-14-2	D030
Hexachlorobenzene	118-74-1	D032
Hexachlorobutadiene	87-68-3	D033
Hexachloroethane	67-72-1	D034
Pentachlorophenol	87-86-5	D037
Pyridine	110-86-1	D038, F005
Sodium cyanide	143-33-9	P106
Potassium cyanide	151-50-8	P098
Vinyl chloride	75-01-4	D043

RCRA Determinations - Hazardous Waste Determinations

Ignitability, Corrosivity, Reactivity

Waste generated in this waste stream does not qualify for any of the exclusions outlined in 40 CFR 260 or 261. The Visual Examination Technique (VET) is used to verify that the waste stream is not a liquid waste and does not contain explosives, non-radioactive pyrophoric material, compressed gasses or reactive waste. Therefore, this waste stream does not exhibit the characteristic for ignitability (D001), corrosivity (D002), or reactivity (D003).

Ignitability

The waste does not meet the definition of ignitability as defined in 40 CFR 261.21 (Reference ID-C101). The materials are not liquid, ignitable compressed gases, or oxidizers, and are not capable of causing fire through friction, absorption of moisture, or spontaneous chemical

change. Un-containerized liquids discovered during retrieval or packaging are absorbed into the soil or other suitable absorbents (References ID-P109, ID-P122, ID-P253). Bottles of chemicals (if present) will be removed from the waste during retrieval and packaging operations. Ignitable compressed gases (e.g., un-punctured aerosol cans or compressed gas cylinders), if present, are removed from the waste stream or vented during packaging activities (References ID-P105, RF-C045, RF-P047).

Based on review of AK documentation, oxidizers (e.g., chromates, nitrates, perchlorates, permanganate, peroxides) have been identified in processes that generated waste buried in the retrieval area. Bottles of chemicals, including oxidizers, may have been buried in the SDA. For that reason, bottles of chemicals (solids and liquids) will be removed from the waste during retrieval and packaging operations. Cellulosic (e.g., wipes) waste may be contaminated with oxidizers; however, tests performed by Savannah River Site in 1984 to determine burning characteristics of wipes and mop heads contaminated with nitric acid and potassium permanganate indicated that this waste is not considered an oxidizer. In addition, studies evaluating the formation of lead nitrate from leaded rubber gloves contaminated with nitric acid concluded that the gloves are not oxidizers. Therefore, the waste will not exhibit the characteristic of ignitability (References ID-P111, ID-P250, ID-P253, RF-C028, RF-C102, RF-C260, RF-P090).

Depleted uranium machine turnings were thermally stabilized to an oxide (i.e., roaster oxide); however, due to incomplete oxidation of some of the turnings, combustion is possible if un-oxidized surfaces are exposed to oxygen (Reference ID-P105). To ensure retrieved roaster oxide will not ignite, the material is raked multiple times after placement in the waste tray. In addition, multiple samples of roaster oxide transferred into the drum packaging station are tested to ensure the material will not ignite (References ID-P122, ID-P250, ID-P253, and ID-U106).

Other radioactively-contaminated machine turnings from RFP were typically cemented. Small quantities of laboratory metals such as potassium and sodium were reacted with alcohol in the labs (Reference RF-C416). Sodium and sodium-potassium metals from ATI were encased in concrete and therefore do not pose a hazard. Pyrophoric materials, such as zirconium chips from INL generators, were buried in the SDA and will be segregated from the waste stream if encountered (Reference ID-U298).

Nitrocellulose formation on un-washed acid-contaminated combustibles and plastics has been evaluated, resulting in a determination that the formation of nitrocellulose is not possible for the waste in the SDA. It was determined that the use of nitric acid and subsequent contact with cellulose material will not form a nitrocellulose compound. If nitrocellulose could have formed, the reaction would have occurred within a short period of time at the point of generation. The combustible material within the SDA has been exposed to outside environmental conditions for nearly 40 years and as such would not form nor retain the potential for residual nitrocellulose formation (References RF-C028, RF-P086, and RF-P090).

Because the waste in the SDA was buried nearly 40 years ago, and there have previously been floods in the SDA, the waste containers may show various degrees of degradation (Reference ID-P109). As a result, the potential risk for chemical reaction is expected to be significantly reduced. Waste will be examined for ignitability characteristics (e.g., burning, smoking, smoldering, sparking) during retrieval and packaging operations. Magnesium oxide will be used to extinguish the material if these characteristics are observed, and the materials segregated from the waste (References ID-P122, ID-P250, ID-P253 and ID-P269). In addition, potentially

ignitable materials (e.g., un-oxidized metal turnings, bottles containing liquid or solid materials) will be segregated from the waste if encountered during visual examination. Further evaluation of the waste will be required if any of these characteristics are observed.

The waste does not exhibit the characteristic of ignitability. Therefore, the hazardous waste number for ignitability (D001) does not apply to this waste stream.

Corrosivity

The waste does not meet the definition of corrosivity as defined in 40 CFR 261.22. The waste is not a liquid waste (Reference ID-C101) and absorbent (e.g., Oil-Dri®.) is added as needed to ensure the absence of liquids. Bottles of chemicals will be removed from the waste during retrieval and packaging operations (References ID-P122). There is the possibility that lead-acid batteries were buried but they are not part of this waste stream. Un-containerized liquids discovered during retrieval or packaging are absorbed into the soil or other suitable absorbents (References ID-P109, RF-P084, and ID-P269). Therefore the characteristic of corrosivity (D002) does not apply to this waste stream.

Reactivity

The waste does not meet the definition of reactivity as defined in 40 CFR 261.23 (Reference ID-C101). The materials are stable and will not undergo violent chemical change. The materials will not react violently with water, form potentially explosive mixtures with water, or generate toxic gases, vapors, or fumes when mixed with water. The waste is not a liquid waste (Reference ID-C101) and absorbent (e.g., Oil-Dri®.) is added as needed to ensure the absence of liquids. The materials are not capable of detonation or explosive reaction if subjected to a strong initiating source or if heated under confinement. The materials are not readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure.

Cyanide pellets were placed into drums of RFP Building 774 second-stage sludge. If packages or bottles of cyanide pellets are identified in the soil during the visual examination, they will be removed from the waste.

Ion-exchange resins may not have been denitrated (washed with water) or mixed with cement prior to disposal. Studies indicate that no credible mechanism exists for detonation by degradation of a nitrate-form ion-exchange resin, therefore posing no flammable or explosive hazard (References RF-C045, RF-C120, RF-C409, RF-C416, and RF-P047).

The potential for shock sensitivity or exothermic reaction of leaded gloves exposed to nitric acid was investigated. Although leaded gloves did come in contact with nitric acid, mere contact with nitric acid does not constitute the criteria for forming shock sensitive and/or thermally unstable compounds. This information in conjunction with the fact that the RFP waste has been buried in a pit for nearly 40 years and has been subjected to outside environmental conditions and that on two known occasions has undergone flooding, is the basis for determining that the waste is not reactive (References RF-C028 and RF-P090).

Small quantities of reactive materials were used at RFP; however, they were strictly controlled and would not have been placed in drums for burial (Reference RF-C416). Blasting caps and primacord, were used at several INL facilities. Chemicals, such as hydrazine and picric acid, have been identified in several documents (References ID-P109, PER-P006, RF-C227, RF-P040, RF-P085, and RF-P260) and were disposed of in the SDA (References ID-P109). Water

reactive metals (e.g., calcium, lithium, and magnesium) have been identified in AK documents. Because the waste has been buried for nearly 40 years, and there have been subsequent floods in the SDA, the potential risk for chemical reaction is expected to be reduced.

During waste retrieval and packaging operations, the waste will be observed for unanticipated reaction (e.g., bubbling, smoking, smoldering, sparking). Potentially reactive materials (e.g., un-oxidized metal turnings, bottles containing liquid or solid materials) will be segregated from the waste stream if encountered during VET. The characteristic of reactivity does not apply to this waste stream. Therefore, the EPA hazardous waste number for reactivity (D003) is not assigned to this waste stream.

Toxicity Characteristic

This waste stream exhibits the characteristic of toxicity per 40 CFR 261.24. The toxicity characteristic contaminants fall into two categories; metals and organics.

This waste is contaminated with toxicity characteristic metal compounds listed in 40 CFR 261.24. Based on the evaluation of the AK source documentation several compounds or materials may contaminate this waste. Solutions containing arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver were used in laboratory operations at RFP. Compounds found in laboratory solutions include: arsenic trioxide, barium chloride, cadmium nitrate, chromium nitrate, lead acetate, mercury nitrate, selenium dioxide, and silver nitrate. Metals such as barium, cadmium, chromium, selenium, and silver were used in R&D operations and metallurgical operations. Therefore, EPA hazardous waste numbers for arsenic (D004), barium (D005), cadmium (D006), chromium (D007), lead (D008), mercury (D009), selenium (D010), and silver (D011) are assigned to this waste stream (Reference ID-C101).

This waste stream is contaminated with toxicity characteristic organic compounds listed in 40 CFR 261.24. Based on the evaluation of the AK source documentation, including analytical data from previous sampling at the INL, chloroform (D022) , 1,4-dichlorobenzene (D027), 1,2-dichloroethane (D028), 1,1-dichloroethylene (D029), 2,4-dinitrotoluene (D030), hexachlorobenzene (D032), hexachlorobutadiene (D033), hexachloroethane (D034), pentachlorophenol (D037), pyridine (D038), and vinyl chloride (D043) were used in the laboratories at RFP. Therefore, EPA hazardous waste numbers D022, D027, D028, D029, D030, D032, D033, D034, D037, D038, and D043 are assigned to this waste stream (References ID-C101 and RF-P429).

The INL 3100 m^3 Project sampled and analyzed waste that may be intermixed with this soil waste stream. The INL 3,100 m^3 Project sampled and analyzed IDC 003, Organic Setups, and IDC 801, Solidified Organics. The process that generated IDC 003 is identical to the 743-series organic setups in the retrieval areas. The solidification process that generated IDC 801 was somewhat different than IDC 003 but the organic liquid feed streams were much the same. The 743-series organic setups are in waste stream ID-SDA-SLUDGE. An evaluation of the results indicated that the UCL_{90} was greater than the regulatory threshold limit (RTL) for chloroform (D022), 1,2-dichloroethane (D028), 1,1-dichloroethylene (D029), 2,4-dinitrotoluene (D030), hexachlorobenzene (D032), hexachloroethane (D034), and vinyl chloride (D043). Hexachlorobutadiene (D033) is attributed to waste from INL laboratory facilities that is stored in the SDA and is conservatively assigned to this waste. Although the UCL_{90} for 1,4-dichlorobenzene (D027) and pyridine (D038) are less than their respective RTL, their maximum concentration is above the RTL (Reference RF-P090).

Analysis performed at the RFP indicated that the UCL90 is greater than the RTL for chloroform (D022). During the data review of the "non-detect" observations, Rocky Flats determined that the method detection limit (MDL) exceeded the program required quantification limit (PRQL) for cresols (D026), 1,4-dichlorobenzene (D027), 2,4-dinitrotoluene (D030), hexachlorobenzene (D032), hexachloroethane (D034), nitrobenzene (D036), and pentachlorophenol (D037) due to dilution. The dilution was due to high hydrocarbon content in the waste matrix that caused difficulties in analysis per the required methodology (RFETS WSPF RF135.01). EPA hazardous waste numbers D027, D030, D032 and D034 have already been assigned to this waste stream. EPA hazardous waste numbers D026 and D036 are not assigned as described in the next paragraph. Although no source has been identified for pentachlorophenol, EPA hazardous waste number D037 is also assigned to the waste stream as a conservative measure (Reference RF-P429).

Several toxicity characteristic compounds identified as potential contaminants of the waste stream are also F-listed solvents. Because the applicable F-listed EPA hazardous waste numbers have been assigned for these compounds, the corresponding EPA hazardous waste numbers D018 (benzene), D019 (carbon tetrachloride), D021 (chlorobenzene), D026 (cresols), D035 (methyl ethyl ketone), D036 (nitrobenzene), D039 (tetrachloroethylene), and D040 (trichloroethylene) are not assigned to the waste stream.

Listed Waste

The material in this waste stream was mixed with or derived from waste listed in 40 CFR 261, Subpart D as a hazardous waste from non-specific sources. Based on the evaluation of the AK source documentation, EPA hazardous waste codes F001, F002, F004, F005, F006, F007, and F009 are assigned to waste stream (Reference ID-C101).

Table 1 identifies the specific solvents associated with the assignment of the F001, F002, F004, and F005 EPA hazardous waste numbers. In most cases, specific information relating to the use of these compounds for their solvent properties was identified. In the absence of information relating to the specific use of these compounds (e.g., analytical reagents typically used to dissolve or mobilize other constituents), the F listed HWN was conservatively assigned for these solvents.

F003-listed solvents (i.e., acetone, butanol, ethyl acetate, ethyl benzene, methanol, methyl isobutyl ketone, and xylene) were used in the historical processes that generated this waste. F003-listed solvents are listed solely for ignitability; however, this waste stream does not exhibit the characteristic of ignitability and is therefore not assigned EPA hazardous waste number F003. The absence of ignitable liquids will be verified during retrieval and packaging activities (Reference ID-P109).

RF Building 774 treated spent stripping, cleaning, and plating solution from electroplating operations in Building 444. These operations utilized various cyanide plating solutions. Building 774 sludge was derived from the treatment of the hazardous electroplating waste, and is therefore assigned EPA hazardous waste numbers F006, F007, and F009. This waste stream is potentially commingled with Building 774 sludge and is consequently assigned EPA hazardous waste numbers F006, F007, and F009. The following is a listing of the EPA HWNs and associated constituents assigned to waste stream ID-SDA-SOIL.

(F001)
Carbon tetrachloride, methylene chloride, tetrachloroethylene, 1,1,1-trichloroethane, trichloroethylene, 1,1,2-trichloro-1,2,2-trifluoroethane (Freon 113), trichlorofluoromethane

(F002)
Chlorobenzene, 1,2-dichlorobenzene, methylene chloride, tetrachloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, trichloroethylene, 1,1,2-trichloro-1,2,2-trifluoroethane (Freon 113, Freon TF), trichlorofluoromethane

(F004)
Cresols, nitrobenzene

(F005)
Benzene, carbon disulfide, 2-ethoxyethanol, isobutanol, methyl ethyl ketone, 2-nitropropane, pyridine and toluene

(F006)
Wastewater treatment sludges from electroplating operations

(F007)
Spent cyanide plating bath solutions from electroplating operations

(F009)
Spent stripping and cleaning solutions from electroplating operations where cyanides were used in the process

U, K, and P-Listed Chemicals

This waste stream was mixed with a discarded commercial chemical product, an off-specification commercial chemical product, or a container residue or spill residue thereof (40 CFR 261.33).

Bottles of potassium or sodium cyanide pellets were distributed among drums of RFP Building 774 second-stage sludge (References ID-P103 and RF-P047). As of July 1, 2008, second stage sludge (742 sludge) became targeted waste. Even though bottles of cyanide pellets will be segregated from the waste stream if encountered during VE, targeted waste may potentially become contaminated by the breach of these bottles during excavation operations. Consequently, EPA hazardous waste numbers P098 and P106 are conservatively assigned to the waste stream (References ID-C101, ID-C112, ID-P103, RF-C045, RF-C416, RF-C420, RF-P047, RF-P260, RF-P266, RF-P562, and TAN-U002).

The review of the AK source documentation did not specifically identify the disposal of unused hydrofluoric acid or disposal of materials contaminated with spills of this acid, therefore EPA hazardous waste number U134 is not assigned to the waste streams.

Beryllium is present in the waste stream but does not meet the definition of a P015-listed waste. Beryllium exists as contamination only. Various forms of beryllium waste (i.e., beryllium metal, beryllium oxide, and beryllium fines) may be encountered in 742-sludge, 743-sludge, combustible debris, noncombustible debris (e.g., graphite molds and crucibles) and soil. Beryllium metal and oxide may include metal castings and rejected parts; casting skulls; and

turnings, chips, or grinding fines from machining operations. Beryllium may also be present from the periodic replacement of reactor reflection shields. Minor amounts would not be recognized as beryllium in the soil, which looks like a shiny metal or stainless steel. These forms of beryllium do not meet the definition of the commercial chemical product beryllium powder (40 CFR 261.33) and P015 is not applied.

Solids Sampling/Analysis Information

Solid sampling and analysis was completed on 13 drums from Solid Summary Lots #1 and 2. No new hazardous waste numbers were assigned as a consequence of sampling and analysis for metals, VOCs and SVOCs, although the PRQLs were exceeded for trichloroethylene (F001, F002) and hexachloroethane (D034). The PRQL for zinc was also exceeded but this constituent is not listed in 40 CFR 261.24 or 40 CRF 261.30. Three SVOC Tentatively Identified Compounds (TICs) (bis(2-ethylhexyl)phthalate, pentachlorobiphenyl and hexachlorobutadiene) were found in greater than 25% of the containers in this lot and have been added to the target analyte list. Neither bis(2-ethylhexyl)phthalate (U028) nor hexachlorobutadiene (D033,U128) are present as an unused commercial chemical product, off-specification chemical product, or spill residue thereof . Therefore, neither U028 nor U128 are applied. However, EPA HWN D033 has been previously applied by AK for hexachlorobutadiene. Although pentachlorophenol is listed in 20.4.1.200 NMAC (incorporating 40 CFR 261), there is no EPA HWN associated with it. No additional EPA HWN is assigned as a result of the addition of pentachlorophenol. These data are consistent with AK.

Based on the analytical results, no new HWNs were assigned. The specifics of this information are included in the attached Characterization Information Summary report.

Conclusion

The following EPA hazardous waste numbers are assigned to this waste stream: D004, D005, D006, D007, D008, D009, D010, D011, D022, D027, D028, D029, D030, D032, D033, D034, D037, D038, D043, F001, F002, F004, F005, F006, F007, F009, P098 and P106.

Polychlorinated Biphenyls

Sources of PCBs in waste shipped to Idaho for burial may include:

- Oils containing PCBs solidified in organic setups in RF Building 774. Oils originated from transformers, oil-filled electrical equipment, and hydraulic equipment from RF. Organic setups are identified as 74A- or 743-series waste.
- Drums that contained these oils were emptied, and the empty drums were shipped to Idaho for burial in 1967 and 1968. Oil-Dri was added to the drum to absorb residual liquid prior to shipment. These drums would have been categorized as Type V, Noncombustible Waste (746-series waste).
- Fluorescent light ballasts. Based on the disposal dates of waste in the retrieval areas, ballasts will contain a small amount of PCB fluid. Ballasts would have been categorized as Type V, Noncombustible Waste.
- Painted surfaces (e.g., gloveboxes). Based on the disposal dates of waste in retrieval areas, paints will contain PCBs. Waste with painted surfaces would have been categorized as Type V, Noncombustible Waste.

- Some combustible rags and wipes may have been used to cleanup spills of hydraulic and transformer fluids contaminated with PCBs. Combustibles would have been categorized as Type I waste.

Soil samples have been collected from the ARP and analyzed for PCBs. One sample contained PCBs at 0.84 ppm. PCBs were not detected in the remaining samples (Reference ID-U310). However, analysis of soil samples from ARP-II for Waste Stream ID-SDA-SOIL detected PCB congeners in soil that did not contain organic setups waste. The PCB congeners were detected as TICs from SVOC analysis. Considering this data, newly packaged drums determined by VE to be waste stream ID-SDA-SOIL, are managed in accordance with the PCB disposal requirements of the WIPP-WAC (References ID-C238 and ID-U310).

Prohibited Items

The absence of prohibited items is determined and documented through acceptable knowledge and confirmation activities. Visual examination technique is performed on each container in this waste stream. The following items have been determined as not present in the waste:

- Liquids
- Non-radioactive pyrophoric materials
- Waste incompatible with backfill, seal and panel closure materials, container and packaging materials, or other wastes
- Explosives or compressed gases
- Waste with PCBs not authorized under an EPA PCB waste disposal authorization
- Waste exhibiting the characteristics of ignitability, corrosivity, or reactivity,
- Non-mixed hazardous wastes
- Waste that has ever been managed as high-level waste and waste from tanks specified in Table B-8 of the WIPP Hazardous Waste Facility Permit, unless specifically approved through a Class 3 permit modification.
- Any waste container from a waste stream (or waste stream lot) which has not undergone either radiographic or visual examination of a statistically representative subpopulation of the waste stream in each shipment, as described in WIPP Hazardous Waste Facility Permit, Attachment B7.

Each container of waste is certified and shipped only after visual examination:

- Did not identify any prohibited items in the waste container, or
- All prohibited items found in a waste container by visual examination are identified and corrected (i.e., eliminated or removed) through the site non-conformance reporting system.

Method for Determining Waste Material Parameter Weights per Unit of Waste

The WMPs for waste stream ID-SDA-SOIL were estimated by CCP VE batch data reports. VE was conducted for 2067 containers from waste stream ID-SDA-SOIL, packaged through December 2008. This evaluation is documented in a memorandum as required by CCP-TP-005, *CCP Acceptable Knowledge Documentation*. The results of this evaluation are presented in Table 2.

Table 2. Waste Stream ID-SDA-SOIL Waste Material Parameter Estimates

Waste Material Parameter	Avg. Weight Percent
Iron-based Metals/Alloys	<1.0 %
Aluminum-based Metals/Alloys	<1.0 %
Other Metals	<1.0 %
Other Inorganic Materials	2.8 %
Cellulosics	1.8 %
Rubber	<1.0 %
Plastic (waste materials)	<1.0 %
Organic Matrix	<1.0 %
Inorganic Matrix	<1.0 %
Soil/Gravel	93.4 %

List of AK Sufficiency Determinations

No AK Sufficiency Determinations apply to this waste stream.

Transportation

This waste stream and its chemical constituents have been reviewed for consistency with CCP-AK-INL-001 and they are consistent.

Although some individual containers may contain greater than 1 weight percent depleted uranium, the waste stream as a whole does not.

Graphite in this waste stream, if present due to commingling with debris and sludge, is chemically or physically bound to the radiological contaminants associated with the debris waste materials.

The level of beryllium contamination in individual drums is expected to be less than one weight percent. Payload containers (including Ten Drum Overpacks) are expected to contain less than 18.14 kg of beryllium. Because beryllium metal and beryllium oxide are not targeted for retrieval, payload containers will likely contain very little beryllium. Waste determined to contain greater than one percent beryllium will be managed in accordance with the WIPP-WAC and the CH-TRAMPAC.

Flammable VOCs have the potential to exceed 500 ppm in the headspace gas. Therefore payload containers are evaluated with applicable CH TRAMPAC requirements using the CH-TRAMPAC software compliance evaluation system in the WIPP WWIS prior to shipment.

Radiological Characterization

The two most prevalent radionuclides (by weight) in this waste stream based on AK are U-238 and U-235. The isotopes expected to be present in the waste stream are listed in Table 3.

Table 3 – Radionuclides in Waste Stream ID-SDA-SOIL

WIPP Tracked	Other Radionuclides
Am-241	Pu-241 (<0.01%)
Cs-137 (<0.01%)	U-235
Pu-238 (<0.01%)	Ce-144 (<0.01%)
Pu-239	Co-60 (<0.01%)
Pu-240 (<0.01%)	Ni-63 (<0.01%)
Pu-242 (<0.01%)	Pm-147 (<0.01%)
Sr-90 (<0.01%)	
U-233 (<0.01%)	
U-234 (<0.01%)	
U-238	

Payload management will not be utilized for this waste stream.

Attachment 1, AK Source Documents – Supplemental Documentation

Source Document Number	AK#	Title	Document Number	Revision	Date
ARA-P003	S5	A Summary Report on ML-1 Fuel Element Development In-Pile Test History	IDO-10040	NA	06/01/1964
ARA-P004	S9	Final Disassembly and Examination of the ML-1 Reactor Core	IDO-17190	NA	01/01/1966
ARA-U006	S6	Radioactive Waste Management Information System Solid Master Database List for 1954 to 1970, BGP04 for ARA	P61SHO90	NA	Run Date 9/24/92
ARA-U007	S6	Radioactive Waste Management Information System Solid Master Database List for 1954 to 1970, BGP04 for ARA	P61SHO90	NA	Run Date 9/24/92
CFA-U005	S6	Radioactive Waste Management Information System Solid Master Database List for 1954 to 1970, BGT41 for CFA	P61SHO90	NA	Run Date 9/24/92
CFA-U007	S6, S13	Radioactive Waste Management Information System Solid Master Database List for 1954 to 1970, BGT41 for CFA	P61SHO90	NA	Run Date 9/24/92
ID-C101	S10	Pit 4, Area 1, Chemical Evaluation and RCRA Hazards Analysis	NA	1	01/13/2006
ID-C112	NA	Results of AK Documentation Review and Response to the May 24, 2008 Observer Inquiry Related to Hazardous Waste Numbers Assigned to INL SDA Waste Streams	NA	NA	07/16/2008
ID-P091	S6, S9	A Comprehensive Inventory of Radiological and Nonradiological Contaminants in Waste Buried in the Subsurface Disposal Area of the INEL RWMC During the Years 1952-1983 (Volumes 1 through 5)	INEL-95/0310 (formerly EGG-WM-10903)	1	06/01/1994 to 08/01/1995
ID-P097	S13	Instrument Development Branch Annual Report, 1965	IDO-17211	NA	09/01/1966
ID-P103	NA	Excavation Plan and Sequential Process Narrative for the Accelerated Retrieval Project for a Described Area within Pit 4	ICP/EXT-04-00283	0	04/01/2004
ID-P105	S13	Waste Categories and Characteristics for the Accelerated Retrieval Project for a Described Area within Pit 4	EDF-4591	0	04/21/2004
ID-P109	NA	Removal Action Plan for the Accelerated Retrieval Project for a Described Area within Pit 4	DOE/NE-ID-11178	0	10/2004
ID-P111	NA	Excerpt from Separations Monthly Report for August 1984. Savannah River Plant	DPSP84-14-B SEP	NA	8/1984
ID-P122	S2, S4	ARP Drum Packaging Procedure	TPR-7415	16 and 20	4/12/2006 and 08/24/2006

Source Document Number	AK#	Title	Document Number	Revision	Date
ID-P250	S3	Justification for Continued Operation for SAR-4, Addendum K, and TSR-4: Accelerated Retrieval Project Continued Retrieval Operations	JCO-3	1	05/03/2006
ID-P253	S2	Manual: ARP Technical Procedures Manual, AR Project - Waste Retrieval	TPR-7420	22 and 24	06/13/2006 and 08/28/2006
ID-P269	NA	AR Project II – Drum Packaging System	TPR-7415-2	3	06/20/2007
ID-U101	S6	Beryllium Shipments in Pit 4, Area 1, Phase I.	NA	NA	03/30/2005
ID-U106	NA	ARP Roaster Oxide DOT Drop Test and Sample Tracking Log	NA	NA	3/29/2006 - 4/17/2006
ID-U297	S13	Historical Report of the Transuranic Waste Pits and Trenches at the Subsurface Disposal Area of the Radioactive Waste Management Complex at the INEL	WTD-91-027	NA	08/01/1991
ID-U298	S13	Subsurface Disposal Area (SDA) Waste Identification (1952-1970 Emphasis)	EGG-WM-8727	2	01/01/1990
ID-U304	S6	ARP I Retrieval Area Shipment Lists	NA	NA	02/24/2005
ID-U310	NA	Idaho Completion Project Analytical Laboratories Department. PCB Analysis Results from Accelerated Retrieval Project Waste Zone Samples	NA	NA	03/24/2005 - 11/22/2005
INTEC-U001	S6	Radioactive Waste Management Information System Solid Master Database List for 1954 to 1970, BGP04 for CPP	P61SHO90	NA	09/24/1992
INTEC-U002	S5	CPP Production Monthly Reports	Ay-22-66A	NA	1/03/1966 to 12/26/1966
PER-P006	S2	SPERT III Reactor Facility E Core Revision	IDO-17036	NA	11/01/1965
PER-P008	S8	The Effects of Coolant Temperature and Initial Power Level on the Excursion Behavior of a Highly Enriched Plate Core in SPERT III, Experiment and Analysis	IDO-17138	NA	03/01/1967
PER-P009	S13	Quarterly Technical Report, SPERT Project, October, November, and December 1964	IDO-17084	NA	04/01/1965
PER-P012	S8	SPERT II Facility Report Issued August 23, 1963	IDO-16888	NA	08/23/1963
PER-P031	S2	SPERT I Low-Enrichment Oxide Core Destructive Test Program Safety Analysis Report	IDO-16906	NA	08/01/1963
PER-P039	S13	Quarterly Technical Report, SPERT Program, July, August, September, 1965	IDO-17146	NA	02/01/1966
PER-P040	S13	Quarterly Technical Report, SPERT Program, October, November, December, 1965	IDO-17179	NA	06/01/1966
PER-P043	S13	Quarterly Technical Report, Spert Program, April, May, June 1965	IDO-17123	NA	01/01/1966

Source Document Number	AK#	Title	Document Number	Revision	Date
PER-P044	S13	Quarterly Technical Report, Spert Program, January, February, March 1966	IDO-17206	NA	09/01/1966
RF-C018	S7	Letter to Rod Thomas re: Sludges from building 881 - Your FAX of 10-24-00	N/A	N/A	01/18/2001
RF-C025	S13	Letter to Rod Thomas re: NDA Reports	NA	NA	02/12/2001
RF-C028	NA	Memo to Paul Sentieri re: pre 1970 RFP waste	NA	NA	11/07/2002
RF-C037	S9, S10	Rocky Flats Reports-Letter with attached report-To Ms. Marianne Little	EV-L01045-Marianne Little	NA	12/11/2001
RF-C045	S7	Rod Thomas notes on telephone conversations with Ed Vejvoda, LATA	NA	NA	06/20/2001
RF-C102	NA	TWX to J. B. Mailocci re: Disposition of Unclassified Scrap (Shipment of material to Rocky Flats for disposal at INEEL)	NA	NA	12/1/1960
RF-C120	NA	Rocky Flats Waste Information-ION EXCHANGE INFORMATION-Letter-To Rod Thomas-This letter covers two waste items (1) ion exchange resins and (2) waste generation information	ev-1-99019-thomas	NA	11/29/1999
RF-C123	S7	Letter to Rod Thomas re: Meeting Notes	NA	NA	09/12/2000
RF-C180	S1	Memo to H. E. Bowman re: Interim Capability - South Line	NA	NA	07/23/1969
RF-C227	NA	Reactive Materials Survey - Building 444 and 881 Metallurgical Operations. To W. H. Hauschildt. Chemicals used in the processes in Building 444 and 881 Metallurgical operations.	NA	NA	10/07/1971
RF-C243	S7	Interview of RFP former employee, Al Wilson, conducted by Scott Smith on 4/30/03 regarding historical Rocky Flats plutonium operations	NA	NA	04/30/2003
RF-C260	NA	Letter to J. L. Long, Identification and Thermal Studies of the Residue from Nitric Acid Reaction with Leaded Neoprene Gloves	MSL-2507	NA	03/30/1973
RF-C400	S13	Letter to J. R. Seed, Chemical Waste Disposal	NA	NA	01/13/1972
RF-C402	S13	Letter to unknown, untitled, concerns unwanted chemical disposal	NA	NA	09/20/1971
RF-C406	S9	Letter to Sheila Hailey from Kevin Peters, Evaluation of Potential Sources of RCRA Compounds Found in Graphite Waste Headspace	KJP/114/0298	NA	02/25/1998
RF-C408	S10	Letter to J. L. Summers from T. L. Waldrup. Reactive Chemical Hazard Data on Samples Submitted October 7, 1971.	NA	NA	10/7/1971
RF-C409	S12	Miscellaneous Correspondence Concerning Ion-Exchange Resin	NA	NA	Various
RF-C415	S13	Compilation of History Reports from Waste Disposal.	NA	NA	4/1958 – 9/1964

Source Document Number	AK#	Title	Document Number	Revision	Date
RF-C416	S7	Interview with Ed Vejvoda. Waste Management Practices at Rocky Flats.	NA	NA	9/27/2004
RF-C420	NA	Record of Communication, Interview with Ed Vejvoda, Disposal of Chemicals in Building 774 Sludges	NA	NA	06/09/2008
RF-P021	S5	Evaluation of Filter Flammability and Filter Bank Fire Detection Systems-Evaluation Report	RFP-222	NA	02/24/1961
RF-P040	NA	Reconnaissance Level Characterization Report for the 779 Cluster.	RF/RMRS-96-0071	0	12/17/1997
RF-P047	NA	Waste Characterization of Rocky Flats Plant Waste Shipped to INEL 1954-1980	WS-F2-81-001	NA	03/01/1980
RF-P075	S5	Thorium Canning Methods	RFP-268	NA	06/20/1962
RF-P080	S5	Vacuum Induction Casting	RFP-317B	NA	05/03/1963
RF-P084	NA	Building Histories for Bldgs. 371,444,447,461,707,771,776/777,881,883, and 991 Historical Release Report	NA	NA	11/01/1994
RF-P085	S5	Reconstruction of Historical Rocky Flats Operations and Identification of Release Points	N/A	0	08/01/1992
RF-P086	NA	Pit 9 Estimated Inventory of Radiological And Nonradiological Constituents.	INEEL/EXT-99-00602	NA	10/01/1999
RF-P090	NA	Acceptable Knowledge Document for INEEL Stored Transuranic Waste - Rocky Flats Plant Waste	INEL-96.0280	3	02/28/2003
RF-P103	S5	Waste Reduction Studies	RFP-1676	N/A	03/18/1971
RF-P104	S5	Evaluation of Methods to Recover Plutonium from Incinerator Ash	RFP-1723	N/A	08/16/1971
RF-P109	S5	The Molten Salt Extraction of Americium from Plutonium Metal	RFP-1356	NA	8/26/1969
RF-P110	S5	Plutonium Handling Safety Analysis of the Rocky Flats Nuclear Safety Facility	RFP-977	N/A	11/08/1967
RF-P114	S5	Disposal of Contaminated Lithium-Metal Scrap-Report.	RFP-1347	N/A	09/19/1969
RF-P137	S5	Effect of Water Vapor, Reduced Oxygen Concentrations, and Solvent Vapors on Plutonium Ignition	RFP-1566	N/A	01/28/1971
RF-P138	S5	Performance of High Efficiency Particulate Air Filter for Fume from Burning Plutonium Metal	RFP-1680	N/A	02/01/1971
RF-P142	S5	Effects of Acid Concentration and Feed-Particle Size on the Dissolution of Pu-Bearing Materials	RFP-890	N/A	02/29/1968
RF-P160	S5	Plating Beryllium-Copper Alloy with a Copper-Silver-Gold Laminate	RFP-366	NA	01/11/1964
RF-P167	S5	Fabrication of Ingot-Sheet Beryllium	RFP-1262	NA	10/07/1968
RF-P184	S5	Vacuum Coating of Boron Nitride	RFP-972	N/A	04/18/1969

Source Document Number	AK#	Title	Document Number	Revision	Date
RF-P216	S5	Joining Beryllium by Electron Beam Braze Welding Technique	RFP-908	NA	02/06/1967
RF-P218	S5	The Rolling Texture of Some Plutonium-Gallium Alloys	RFP-1315	NA	05/12/1969
RF-P244	S5	Ingot-Sheet Beryllium Fabrication	RFP-910	NA	02/09/1968
RF-P260	NA	Actinide Processing at Rocky Flats	NA	NA	07/01/1984
RF-P261	S9	A Survey of the Rocky Flats Division Waste Streams	CRDL-950351-009	N/A	06/30/1972
RF-P265	S7, S13	The Past 30 Years at Rocky Flats Plant	HS 371	N/A	11/01/1982
RF-P266	S7	TWTF Buried Waste Characterization; Allied Chemical Corp., Rocky Flats Trip Report from 1973	TWTF-46	NA	03/03/1981
RF-P267	S6, S9	Radioassay Data Collected During 3100 Cubic Meter Project-EDF	EDF-3374	0	02/26/2002
RF-P429	NA	Rocky Flats Environmental Technology Site WIPP Waste Stream Profile Form, TRM Solidified Organic Waste	RFP135.01	0	3/23/2005
RF-P562	S5	Summary of Rocky Flats Plant Waste Buried in the Subsurface Disposal Area.	ICP/EXT-04-00717	0	04/2005
RF-U026	NA	Rocky Flats to INEEL Shipping and Loading Record Search for the 1960's and Early 1970's.	NA	Interim	12/11/1998
RF-U117	S5	An Evaluation of Fiberglass for Use in Plutonium Fabrication Line	RFP-1725	N/A	05/27/1971
RF-U201	S5	Metallographic Preparation of Plutonium	RFP-1184	N/A	06/04/1968
RF-U202	S5	Preliminary Report on the Electron Metallography of Alpha Plutonium	RFP-374	N/A	03/30/1964
RF-U203	S5	Annealing of a Cold-Rolled Pu/1 WT % Ga Alloy	N/A	N/A	N/A
RF-U206	S5	A Laboratory Ignition System	RFP-397	N/A	N/A
RF-U208	S5	Kinetics of the Reaction between Plutonium (III) and Xenon Trioxide	RFP-857	N/A	12/01/1966
RF-U210	S5	The Recovery of Electrical Resistivity in Pu-1 w/o Gallium after Plastic Deformation	RFP-1285	NA	02/05/1969
RF-U217	S5	The Rolling Texture of Pu-3.4 Atomic Percent Gallium	RFP-1278	NA	02/10/1969
RF-U235	S2	Vacuum Deposition of Thick Aluminum Films for Beryllium Joining	RFP-1306	NA	05/07/1969
RF-U286	S5	Vacuum Induction Casting of Beryllium	RFP-340	NA	02/04/1964
RF-U292	S9	Evaluation of the EPA Code D001, Ignitability; D002, Corrosivity; and D003, Reactivity; Designations for RFP IDCs that are Stored at the INEL	N/A	N/A	02/29/1996

Source Document Number	AK#	Title	Document Number	Revision	Date
RF-U402	S13	Problems Associated with Contaminated Waste Disposal.	NA	NA	3/1965
RF-U405	S9	Table 4-4 from EDF-5164, GEM Retrieval Document.	NA	NA	NA
RF-U1282	NA	Analysis Results for Organic Setups Waste from the INL 3,100 m3 Project	NA	NA	1997, 1998
TAN-U002	NA	Program Plan for NRTS Solid Radioactive Waste Repackaging Facility Studies	Draft	NA	08/21/1973
TAN-U105	S10	Historical Perspective of Solvent Usage at TAN	WM-ERP-91-008	NA	04/01/1992
TRA-P008	S13	Findings on Chloride Stress Corrosion in the MTR and ETR Primary Systems	CI-1004	NA	8/66
TRA-U008	S13	Health Physics Logsheet	N/A	NA	6/22/66

Alphanumeric Designations

C Correspondence
D Documents
DR Discrepancy Resolution
M Miscellaneous
P Procedures and Published Documents
U Unpublished Documents

AK Numbers

S1 Process Design Documents
S2 Standard Operating Procedure
S3 Safety Analysis Reports
S4 Waste Packaging Logs
S5 Test plans/research project reports
S6 Site databases
S7 Information from site personnel
S8 Standard industry documents
S9 Previous analytical data
S10 Material safety data sheets
S11 Laboratory Notebooks
S12 Comparable or surrogate sampling and analysis data
S13 Other

DIVIDER

PAGE

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CP:11:01449
UFC:5900.00

Washington TRU Solutions LLC

INTER-OFFICE CORRESPONDENCE

DATE: June 22, 2011

FROM: ~~G.R. Kirkes~~ M.F. RAMIREZ MR 3-7-12 MR

LOCATION: Certification

TO: CCP Records Custodian GSA-212

LOCATION: Retrieval, Characterization and Transportation

SUBJECT: TRANSMITTAL OF IDAHO NATIONAL LABORATORY CHANGE NOTICE FOR WASTE STREAM #ID-SDA-SOIL REVISION 1

Please accept the attached Idaho National Laboratory Change Notice to be placed in Records for Waste Stream #ID-SDA-SOIL REVISION 1.

CRK:jmc

Attachment

cc: (without attachment)
M. Pearcy ED
W. Weyerman ED

CCP RECORDS ORIGINAL
DATE REC'D 3/7/2012

Update for WIPP Operating Record (Change Notice #1)

Interstitial SOIL from the Subsurface Disposal Area

(ID-SDA-SOIL Revision 1)

Please add the following information to the WIPP operating record for Waste Stream Profile Form (WSPF) ID-SDA-SOIL revision 1. This waste stream is Interstitial Soil from the Subsurface Disposal Area at Idaho National Laboratory (INL) and was approved by DOE/CBFO on October 9, 2009.

This WSPF is being revised. The WSPF components are bolded. The updates are:

1. **WSPF, Date of audit report approval by NMED**

   Update the audit approval date to include October 20, 2010

2. **WSPF, Title, version, number, and date of documents used for WAP certification**

   Update the following procedure revision numbers and approval dates:

   CCP-PO-001, CCP Transuranic Waste Characterization Quality Assurance Project Plan, Revision 19, December 29, 2010.

   CCP-PO-002, CCP Transuranic Waste Certification Plan, Revision 25, December 29, 2010

   CCP-PO-024, CCP/INL Interface Document, Revision 10, December 29, 2010

3. **WSPF, Waste Stream Information, Number of Drums and Number of SWBs**

   Update the Number of Drums from 8,451 to 6,224
   Update the number of SWBs from 134 to NA.

4. **WSPF, Required Program Information, Required Waste Stream Information, and Supplemental Documentation**

   Update reference CCP-AK-INL-001, Rev.8, September 8, 2009 to CCP-AK-INL-001, Rev. 10, February 16, 2011.

5. **WSPF, For the following, when applicable, enter procedure title(s), number(s) and date(s)**

   Update Radiography from NA to CCP-TP-053, Revision 10, March 4, 2011

6. **Characterization Information Summary, List of procedures used**

   Add the following to the list of procedure used, CCP-TP-053 rev.10 3-4-2011 CCP Standard Real-Time Radiography (RTR) Inspection Procedure

7. **Characterization Information Summary, CCP Reconciliation with Data Quality Objectives item 14 Completeness, Comparability, Representativeness**

Update Radiography from NA to Y

8. **Characterization Information Summary, CCP RTR/VE Summary of Prohibited Items and AK Confirmation, new section entitled Justification for the Selection of Radiography or VE**

The following information will be added to the last cell in the table Both Radiography and VE are used to characterize containers in waste stream ID-SDA-SOIL, Rev. 1. RTR is selected as a characterization method because some of the containers are already packaged and RTR meets all the Data Quality Objectives for NDE for previously packaged waste in this waste stream. VE is selected as a characterization method because VE meets all the Data Quality Objectives for NDE for newly generated waste in this waste stream.

9. **Summation of Aspects of AK Summary Report: ID-SDA-SOIL Revision 1, Overview**

Update reference CCP-AK-INL-001, Rev.8, September 8, 2009 to CCP-AK-INL-001, Rev. 10, February 16, 2011.

10. **Summation of Aspects of AK Summary Report: ID-SDA-SOIL Revision 1, Waste Stream Identification Summary, Waste Stream Volume:**

Update the waste stream volume from 1,969 to 2,917 55-gallon drums (current), 6,482 to 3,307 55-gallon drums (projected) SWB from 134 to NA (projected).

11. **Summation of Aspects of AK Summary Report: ID-SDA-SOIL Revision 1 , Generating Process, Idaho National Laboratory, Other INL Generating Facilities:**

Add the following bullets to the list of facilities:

- INTEC-602/630 and RWMC WMF-TR-14 Modular Analytical Laboratory- Laboratory wastes (including unaltered sample material) from INTEC/RWMC laboratory support operations are generated from analyzing the soil and homogeneous solid samples collected by ARP or ARP waste but do not include unaltered sample material or laboratory waste generated in support of characterizing waste streams or samples submitted by other generators. The processes that generate the wastes are the same for both INTEC and RWMC.

- Glove box Excavator Method (GEM) Project (within the SDA) - GEM waste forms are analogous to those in the ARP in terms of form and time spent buried.

12. **Summation of Aspects of AK Summary Report: ID-SDA-SOIL Revision 1 , RCRA Determinations – Hazardous Waste Determinations New Section Entitled Historical Waste Management**

Add to the first paragraph of the RCRA section.

Waste disposal at the SDA ceased in 1970 when the AEC directed that all waste contaminated with TRU radioisotopes be segregated in a readily retrievable manner from other types of radioactive waste. In August 1987, DOE and the EPA entered into a Consent Order and Compliance Agreement requiring DOE to conduct an initial assessment of all solid and hazardous waste disposal units at the INL and set up a process for conducting any necessary corrective actions. The DOE, EPA, and Idaho Department of Environmental Quality (IDEQ) entered into the "Federal Facility Agreement and Consent Order for the Idaho National Engineering Laboratory" (FFA/CO) in December 1991. The FFA/CO, in part, established the framework for developing, prioritizing, implementing, and monitoring appropriate response actions at INL in accordance with the CERCLA, RCRA, and Hazardous Waste Management Act (HWMA). In addition, the DOE had made other commitments to the State of Idaho and the EPA in a 1995 Settlement Agreement that was renegotiated and amended in 2008. The final agreement required DOE to exhume targeted waste from a defined area of the SDA of 5.69 acres. The "Agreement to Implement U.S. District Court Order Dated May 25, 2006" fully implements the 1995 Settlement Agreement relating to buried TRU waste in the SDA and set the Targeted Waste to those outlined in this AK Summary Report (References ID-P091, ID-P104, ID-P108, ID-P109, and ID-P124).

The subject waste stream is newly generated and is being managed in accordance with the generator site requirements and in compliance with the requirements of the IDEQ. EPA hazardous waste numbers (HWNs) were assigned to the waste stream based on a review of available AK documentation to identify chemical usage and potentially hazardous materials that may have been contained in the waste buried in the retrieval area. The same EPA HWNs are assigned to Waste Stream ID-SDA-SOIL Rev.1.

13. Summation of Aspects of AK Summary Report: ID-SDA-SOIL Revision 1, RCRA Determinations- Hazardous Waste Determinations, Ignitability, 2nd paragraph.

Before the last sentence add the following information to the 2nd paragraph of the Ignitability Section: Evaporator salts (745-series SLUDGE) are composed of an approximately 90 weight percent mixture of potassium nitrate and sodium nitrate, and in concentrated form this material is an oxidizer. For this reason, 745-series SLUDGE is removed from the waste during retrieval and packaging operations so the waste stream does not meet the definition of an oxidizer (References ID-P269, ID-P398 and ID-P400).

14. Summation of Aspects of AK Summary Report: ID-SDA-SOIL Revision 1, new section entitled Justification for the Selection of Radiography or VE

This section should be added between the Prohibited Items and Method for Determining Waste Material Parameter (WMPs) Weights Per Unit of Waste sections.

Both Radiography and VE are used to characterize containers in waste stream ID-SDA-SOIL, Rev. 1. RTR is selected as a characterization method because some of the containers are already packaged and RTR meets all the Data Quality Objectives for NDE for previously package waste in this waste stream. VE is selected as a characterization method because VE meets all the Data Quality Objectives for NDE for newly generated waste in this waste stream.

15. Summation of Aspects of AK Summary Report: ID-SDA-SOIL , Attachment 1, AK Source Documents-Supplemental Documentation

Add the following references to attachment 1:

ID-P269, AK # S2, S4, ARP Project II – Drum Packaging System, Document Number TPR-7415-2, Rev. 3, 06/20/2007

ID-P398, AK #, S5 and S12 Results of Oxidizing Solids Testing, Document Number EMRTC Report FR 10-13, 4/12/2010

ID-P400, AK #, S9 and S12 Allowable Nitrate Salt Concentration in ARP Waste, Document Number EDF-8723, Rev. 2, 6/30/2010

ID-P104, AK# S3 Safety Analysis Report for the Accelerated Retrieval Project at Area G of Pit 4 within the Radioactive Waste Management Complex

ID-P108, AK# S3 Safety Analysis Report for the Radioactive Waste Management Complex

ID-P124, AK# NA Agreement to Implement; U.S. District Court Order Dated May 25, 2006

Reason/justification for the change

The audit report approval date has been revised to reflect the most recent approval date.

Documents used for WAP certification have been revised to reflect the most recent revisions.

Reference to CCP-AK-INL-001, Revision 8, September 8, 2009 is being updated to reflect the most current version CCP-AK-INL-001, Revision 10, February 16, 2011.

Changes to the waste volume have been made in order to more accurately reflect waste generated since the original profile was approved, as well as to support waste generated from the INTEC-602/630 and RWMC WMF-TR-14 Modular Analytical Laboratory and the GEM Project. .

The INTEC-602/630 and RWMC WMF-TR-14 Modular Analytical Laboratory has been added to the generating facilities as a support laboratory to the TRU waste certification process. The GEM Project has been included as a retrieval project within the SDA that contributed waste to this waste stream.

The Ignitability Section has been revised to discuss that nitrate salts, identified during retrieval, are not ignitable and to include the associated references.

Added two new sections: "Justification for the Selection of Radiography or VE" and the "Historical Waste Management" to support the revision to the Waste Isolation Pilot Plant Hazardous Waste Permit date November 30, 2010

Added new source documents to Attachment 1 of the Summation of Aspects.

The waste being added to the waste stream has common physical form, similar hazardous constituents, and is from the same process as the waste currently identified in waste stream ID-SDA-SOIL, Rev.1. Therefore there is no impact to the EPA HWNs assigned to ID-SDA-SOIL, Rev. 1.

Update for the WIPP Operating Record (ID-SDA-SOIL) certification:

I hereby certify that I have reviewed this Update for WIPP Operating Record, and it is complete and accurate to the best of my knowledge. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Signature of Site Project Manager	Printed Name and Title	Date
	Tim Vernon	6-16-11

Controlled Copy

Attachment 2 – CCP Waste Stream Profile Form

(1) Waste Stream Profile Number: ID-ANLE-S5000					
(2) Generator site name: INL			(4)Technical contact: Eric D'Amico		
(3) Generator site EPA ID: ID4890008952			(6) Technical contact phone number: 303-641-5609		
(5) Date of audit report approval by New Mexico Environment Department (NMED): September 19, 2005, June 29, 2006, August 25, 2006, December 20, 2006					
(7) Title, version number, and date of documents used for WAP Certification: CCP-PO-001, CCP Transuranic Waste Characterization Quality Assurance Project Plan, Revision 13, November 16, 2006. CCP-PO-002, CCP Transuranic Waste Certification Plan, Revision 18, November 16, 2006 CCP-PO-501 CCP/INL RH Interface Document, Revision 2, November 16, 2006.					
(8) Did your facility generate this waste?	YES		NO	X	
(9) If no, provide the name and EPA ID of the original generator: ANL-E; IL3890008946					
Waste Stream Information[1]					
(10) WIPP ID: IN-W349, IN-W259, IN-AE-AGHC-01			(11) Summary Category Group: S5000		
(12) Waste Matrix Code Group: Heterogeneous Debris Waste			(13) Waste Stream Name: Remote Handled (RH) Mixed Heterogeneous Debris Waste from the Argonne National Laboratory-East		
(14) Description from the TWBIR: This waste stream, generated at Argonne National Laboratory-East, contains alpha hot cell waste.					
(15) Defense TRU Waste:	YES	X	NO		
(16) Check One:	CH		RH	X	
(17) Number of SWBs: N/A	(18) Number of Drums:		(19) Number of Canisters: 183[3]		
(20) Batch Data report numbers supporting this waste stream characterization: See Characterization Information Summary (CIS) Correlation of Container Identification Numbers to Batch Data Report Numbers					
(21) List applicable EPA Hazardous Waste Numbers:[2] D004, D005, D006, D007, D008, D009, D010, D011, D019, D028, D029, F002, F005					
(22) Applicable TRUCON Content Numbers: ID 322, ID 325					
(23)**Acceptable Knowledge Information**[1]					
[For the following, enter the supporting documentation used (i.e., references and dates)]					
Required Program Information					
(23A) Map of site: CCP-AK-INL-500, Revision 4, November 16, 2006, Attachments 1, 2, 3, 4					
(23B) Facility mission description: CCP-AK-INL-500, Revision 4, November 16, 2006, Section 4.1					
(23C) Description of operations that generate waste: CCP-AK-INL-500, Revision 4, November 16, 2006, Section 4.2.2					
(23D) Waste identification/categorization schemes: CCP-AK-INL-500, Revision 4, November 16, 2006, Section 4.2.1					
(23E) Types and quantities of waste generated: CCP-AK-INL-500, Revision 4, November 16, 2006, Section 4.2.1					
(23F) Correlation of waste streams generated from the same building and process, as applicable: CCP-AK-INL-500, Revision 4, November 16, 2006, Sections 1.0 and 4.2.1					
(24) Waste certification procedures: CCP-TP-530, Revision 3, CCP RH TRU Waste Certification and WWIS Data Entry, November 16, 2006					
(25)Required Waste Stream Information					

Attachment 2 – CCP Waste Stream Profile Form (Continued)

(25A) Area(s) and building(s) from which the waste stream was generated: CCP-AK-INL-500, Revision 4, November 16, 2006, Section 5.1			
(25B) Waste stream volume and time period of generation: CCP-AK-INL-500, Revision 4, November 16, 2006, Section 5.2			
(25C) Waste generating process description for each building: CCP-AK-INL-500, Revision 4, November 16, 2006, Section 5.3			
(25D) Waste process flow diagrams: CCP-AK-INL-500, Revision 4, November 16, 2006, Attachments 5 and 6			
(25E) Material inputs or other information identifying chemical/radionuclide content and physical waste form: CCP-AK-INL-500, Revision 4, November 16, 2006, Section 5.4.1			
(25F) Waste Material Parameter Weight Estimates per unit of waste: CCP-AK-INL-500, Revision 4, November 16, 2006, Section 5.4.1.2			
(26) Which Defense Activity generated the waste: (check one)			
	Weapons activities including defense inertial confinement fusion		Naval Reactors development
	Verification and control technology	X	Defense research and development
	Defense nuclear waste and material by products management		Defense nuclear material production
	Defense nuclear waste and materials security and safeguards and security investigations		
(27)Supplemental Documentation			
(27A) Process design documents: See S1 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27B) Standard operating procedures: See S2 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27C) Safety Analysis Reports: See S3 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27D) Waste packaging logs: See S4 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27E) Test plans/research project reports: See S5 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27F) Site databases: See S6 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27G) Information from site personnel: See S7 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27H) Standard industry documents: See S8 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27I) Previous analytical data: See S9 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27J) Material safety data sheets: See S10 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27K) Sampling and analysis data from comparable/surrogate Waste: See S12 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27L) Laboratory notebooks: See S11 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
Confirmation Information[2]			
For the following, when applicable, enter procedure title(s), number(s) and date(s)			
(28)	Radiography: N/A		
(29)	Visual Examination: See list of procedures on the attached CIS, CCP-TP-002-A3		

(30)Comments: For a list of waste characterization procedures used and the reference and date of the procedures see list of procedures on the attached CIS.

Reviewed by AK Expert: YES [x] Date: 1-8-07

Reviewed by STR (if necessary): YES [x] NA [ ] Date: 1-6-07

Waste Stream Profile Form Certification:

I hereby certify that I have reviewed the information in this Waste Stream Profile Form, and it is complete and accurate to the best of my knowledge. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

(31) Larry Porter	(32) Larry Porter	(33) 1/12/07
Signature of Site Project Manager	Printed Name	Date

NOTE: (1) Use back of sheet or continuation sheets, if required.
(2) If radiography, visual examination were used to confirm EPA Hazardous Waste Numbers, attach signed Characterization Information Summary documenting this determination.
(3) This estimate is for 549 30-gallon drums packaged directly into RH Canisters or into 55-gallon drums which will then be packaged into RH Canisters.

CHARACTERIZATION INFORMATION SUMMARY

WSPF # ID-ANLE-S5000

Lot 1

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CCP Characterization Information Summary Cover Page

Waste Stream # ID-ANLE-S5000 Sub-Lot #: 1

AK Expert Review: Kevin Peters Date: 12/7/2006

SPM Review: Irene Quintana Date: 12/7/2006

SPM signature certifies that through Acceptable Knowledge testing and/or analysis that the waste identified in this summary is not corrosive, ignitable, reactive, or incompatible with the TSDF.

A summary of the Acceptable Knowledge regarding this waste stream containing specific information about the corrosivity, reactivity, and ignitability of the waste stream is included as an attachment to the Waste Stream Profile Form. By reference, that information is included in this lot.

List of procedures used:

Radiography (RTR/NDE)

N/A

Headspace Gas Sampling and Analysis (HSG):

CCP-TP-093	Rev. 11	11/16/06	CCP Sampling of TRU Waste Containers
CCP-TP-106	Rev. 5	11/16/06	CCP Headspace Gas Sampling Batch Data Report Preparation
ACMM-9910	Rev. 7	04/24/06	Analysis of Gas Samples for VOCs by GC/FID
ACMM-9925	Rev. 2	05/13/06	Analysis of Gas Samples for Hydrogen and Methane by GC/TCD
ACMM-9930	Rev. 9	02/16/06	Analysis of Gas Samples for VOCs by GC/MS

Visual Examination (VE):

CCP-TP-500	Rev. 4	11/16/06	CCP Remote-Handled Waste Visual Examination

Project Level Data Validation / DQO Reconciliation:

CCP-TP-001	Rev. 15	11/22/06	CCP Project Level Data Validation and Verification
CCP-TP-002	Rev. 19	12/22/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 18	11/16/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-003	Rev. 15	11/16/06	CCP Sampling Design and Data Analysis for RCRA Characterization
CCP-TP-005	Rev. 18	11/16/06	CCP Acceptable Knowledge Documentation

WAP Certification:

CCP-PO-001	Rev. 13	11/16/06	CCP Transuranic Waste Characterization Quality Assurance Project Plan

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-ANLE-S5000 Sub-Lot # 1

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
00738	NA	NA	NA	RHINLVE060001 R1	NA	NA		NA	NA	NA	NA
00739	NA	NA	NA	RHINLVE060001 R1	NA	NA		NA	NA	NA	NA
00740	NA	NA	NA	RHINLVE060001 R1	NA	NA		NA	NA	NA	NA
00741	NA	NA	NA	RHINLVE060001 R1	NA	NA		NA	NA	NA	NA
00742	NA	NA	NA	RHINLVE060001 R1	NA	NA		NA	NA	NA	NA
00743	NA	NA	NA	RHINLVE060001 R1	NA	NA		NA	NA	NA	NA
00744	NA	NA	NA	RHINLVE060001 R1	NA	NA		NA	NA	NA	NA
00747	NA	NA	NA	RHINLVE060001 R1	NA	NA		NA	NA	NA	NA
00748	NA	NA	NA	RHINLVE060001 R1	NA	NA		NA	NA	NA	NA
00749	NA	NA	NA	RHINLVE060001 R1	NA	NA		NA	NA	NA	NA
00755	NA	NA	NA	RHINLVE060002 R1	NA	NA		NA	NA	NA	NA
00759	NA	NA	NA	RHINLVE060002 R1	NA	NA		NA	NA	NA	NA
00760	NA	NA	NA	RHINLVE060001 R1	NA	NA		NA	NA	NA	NA
00762	NA	NA	NA	RHINLVE060001 R1	NA	NA		NA	NA	NA	NA
00770	NA	NA	NA	RHINLVE060001 R1	NA	NA		NA	NA	NA	NA
00771	NA	NA	NA	RHINLVE060001 R1	NA	NA		NA	NA	NA	NA
00773	NA	NA	NA	RHINLVE060002 R1	NA	NA		NA	NA	NA	NA
00789	NA	NA	NA	RHINLVE060003 R1	NA	NA		NA	NA	NA	NA
00761***	NA	NA	NA	RHINLVE060001 R1	NA	NA		INHSGS060304	ECL06494M	ECL06494C	ECL06494G
00798***	NA	NA	NA	RHINLVE060003 R1	NA	NA		INHSGS060304	ECL06494M	ECL06494C	ECL06494G
00800***	NA	NA	NA	RHINLVE060003 R1	NA	NA		INHSGS060304	ECL06494M	ECL06494C	ECL06494G
00757***	NA	NA	NA	NA	NA	NA		INHSGS060304	ECL06494M	ECL06494C	ECL06494G
00769***	NA	NA	NA	NA	NA	NA		INHSGS060304	ECL06494M	ECL06494C	ECL06494G
00772***	NA	NA	NA	NA	NA	NA		INHSGS060304	ECL06494M	ECL06494C	ECL06494G
00785***	NA	NA	NA	NA	NA	NA		INHSGS060304	ECL06494M	ECL06494C	ECL06494G
00792***	NA	NA	NA	NA	NA	NA		INHSGS060304	ECL06494M	ECL06494C	ECL06494G
00796***	NA	NA	NA	NA	NA	NA		INHSGS060304	ECL06494M	ECL06494C	ECL06494G
00809***	NA	NA	NA	NA	NA	NA		INHSGS060304	ECL06494M	ECL06494C	ECL06494G

***These containers were randomly selected for verifying the assignment of Hazardous Waste Numbers

Signature of Site Project Manager

Irene Quintana
Printed Name

12/7/2006
Date

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CIS 03

CCP Headspace Gas UCL_{90} Evaluation Form

WSPF #: ID-ANLE-S5000 **Waste Stream Lot Number** 1 through 1

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples (2)	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Benzene	Log	2	10	-1.61	-2.75	0.54	-2.52	10	2.30		
Bromoform	Log	0	10	-3.96	-4.44	0.17	-4.37	10	2.30		
Carbon tetrachloride	Log	0	10	-3.27	-3.75	0.17	-3.68	10	2.30		
Chlorobenzene	Log	0	10	-3.00	-3.47	0.17	-3.40	10	2.30		
Chloroform	Log	1	10	-2.04	-3.21	0.44	-3.02	10	2.30		
Cyclohexane[a]	Log	0	10	-2.59	-3.05	0.16	-2.98	10	2.30		
1,1-Dichloroethane	Log	1	10	-2.04	-3.01	0.38	-2.85	10	2.30		
1,2-Dichloroethane	Log	0	10	-2.66	-3.12	0.16	-3.05	10	2.30		
1,1-Dichloroethylene	Log	0	10	-2.66	-3.14	0.17	-3.07	10	2.30		
cis-1,2-Dichloroethylene	Log	0	10	-2.73	-3.20	0.17	-3.13	10	2.30		
trans-1,2-Dichloroethylene	Log	0	10	-2.73	-3.23	0.17	-3.15	10	2.30		
Ethyl benzene	Log	9	10	0.18	-1.41	0.98	-0.99	10	2.30		
Ethyl ether	No	0	10	0.10	0.06	0.01	0.06	10	N/A		
Methylene chloride	Log	1	10	-1.27	-3.03	0.64	-2.75	10	2.30		
1,1,2,2-Tetrachloroethane	Log	0	10	-3.23	-3.71	0.17	-3.63	10	2.30		
Tetrachloroethylene	Log	5	10	0.69	-2.19	1.88	-1.37	10	2.30		
Toluene	Log	8	10	1.39	-1.67	1.38	-1.07	10	2.30		
1,1,1-Trichloroethane	Log	1	10	-1.90	-3.50	0.59	-3.24	10	2.30		
Trichloroethylene	No	5	10	0.44	0.17	0.16	0.24	10	N/A		
1,1,2-Trichloro-1,2,2-trifluoroethane	Log	0	10	-3.26	-3.74	0.17	-3.66	10	2.30		
1,2,4-Trimethylbenzene[a]	Log	4	10	0.47	-2.45	1.43	-1.82	10	2.30		
1,3,5-Trimethylbenzene[a]	Log	4	10	-0.71	-2.90	0.93	-2.49	10	2.30		
m-Xylene[b]	Log	10	10	1.70	0.10	0.89	0.49	10	2.30		
p-Xylene[b]	Log	10	10	1.70	0.10	0.89	0.49	10	2.30		
o-Xylene	Log	9	10	1.03	-1.12	1.12	-0.63	10	2.30		
Acetone	SQRT	10	10	4.58	2.46	1.38	3.07	100	10.00		
1-Butanol	SQRT	9	10	0.87	0.50	0.19	0.58	100	10.00		
Methanol	No	0	10	8.50	8.30	0.26	8.41	100	N/A		
Methyl ethyl ketone	SQRT	7	10	0.92	0.52	0.26	0.64	100	10.00		

01/11/2007 THU 19:46 FAX 1 630 252 6706 WASTE MANAGEMENT 002

CCP Headspace Gas UCL_{90} Evaluation Form

WSPF #: ID-ANLE-S5000 **Waste Stream Lot Number** 1 through 1

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples (2)	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Methyl isobutyl ketone	No	7	10	0.62	0.27	0.22	0.36	100	N/A		
Chloromethane	Log	6	10	-0.12	-1.71	1.05	-1.25	10	2.30		
Carbon Disulfide	Log	1	10	-2.21	-2.99	0.33	-2.85	10	2.30		
1,2-Dichloropropane	Log	0	10	-2.90	-3.38	0.17	-3.31	10	2.30		

[a] These compounds are from the TRAMPAC and are flammable VOCs that do not appear in the QAPjP or the WIPP WAP. These are not part of the target analyte list, but samples may be analyzed for these compounds.

[b] These xylene isomers cannot be resolved by the analytical methods employed in the program. m-Xylene and p-Xylene will be reported as "Total m-p-Xylene."

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per section B4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

Signature of Site Project Manager

Irene Quintana
Printed Name

1/11/2007
Date

01/11/2007 THU 19:47 FAX 1 630 252 6706 WASTE MANAGEMENT 003

CCP Waste Stream Headspace Gas Tentatively Identified Compounds

WSPF Number: ID-ANLE-S5000 Lot Number: 1 through 1

Number of samples evaluated to date in the Waste Stream: 10

The following TICs were detected during Headspace Gas Analysis of this Waste Stream:

Tentatively Identified Compound	CAS Number	Maximum Observed Estimated Concentrations (ppmv)	Total Number of Samples Containing TIC	% TIC Detected in Waste Stream	Greater than 25% Yes
1,4-Dioxane	123-91-1	0.04	1	10.00%	No

Data Supports EPA Hazardous Waste Numbers Assigned by AK Yes: X No: ___

If no, describe the basis for assigning the EPA Hazardous Waste Numbers:

Approved By: Irene Quintana 12/7/2006

Signature Print Name Date

C15 06

CCP RTR/VE Summary of Prohibited Items and AK Confirmation

Waste Stream Number: ID-ANLE-S5000 Sub-Lot(s)#: 1

Container Number	RTR Prohibited Items [a]	Visual Examination Prohibited Items [a]
See correlation of container ID numbers for list of remaining drum numbers in this Lot.	RTR was not performed on any of the containers in this lot to confirm the absence of prohibited items.	None of the containers in this lot had prohibited items identified in VE.

a. See Batch Data Reports
b. If AK has assigned U134 to this waste stream, then any liquids in these containers are prohibited items (not acceptable by the TSDF).

Site Project Manager Signature	Irene Quintana Printed Name	12/7/2006 Date

C1S 07

CCP Reconcilliation with Data Quality Objectives

WSF# ID-ANLE-S5000 Lot # 1

Sampling Completeness

VE:

Number of Valid Samples: 21 Number of Total Samples Analyzed: 21
Percent Complete: 100 (QAO is 100%)

DTC:

Number of Valid Samples: 21 Number of Total Samples Analyzed: 21
Percent Complete: 100 (QAO is 100%)

HSG

Number of Valid Samples: 10 Number of Total Samples collected: 10
Percent Complete: 100 (QAO is ≥90%)
Number of Valid Samples: 10 Number of Total Samples analyzed: 10
Percent Complete: 100 (QAO is ≥90%)

Total VOC

Number of Valid Samples: NA Number of Total Samples collected: NA
Percent Complete: 100 (QAO is ≥90%)
Number of Valid Samples: NA Number of Total Samples analyzed: NA
Percent Complete: 100 (QAO is ≥90%)

Total SVOC

Number of Valid Samples: NA Number of Total Samples collected: NA
Percent Complete: 100 (QAO is ≥90%)
Number of Valid Samples: NA Number of Total Samples analyzed: NA
Percent Complete: 100 (QAO is ≥90%)

Total Metals

Number of Valid Samples: NA Number of Total Samples collected: NA
Percent Complete: 100 (QAO is ≥90%)
Number of Valid Samples: NA Number of Total Samples analyzed: NA
Percent Complete: 100 (QAO is ≥90%)

2 15 08

CCP Reconcilliation with Data Quality Objectives

WSF# ID-ANLE-S5000 Lot # 1

	Y/N/NA	Reconcilliation Parameter
1	Y	Waste Matrix Code.
2	Y	Waste Material Parameter Weights.
3	Y	The waste matrix code identified is consistent with the type of sampling and analysis used to characterize the waste.
4	Y	The TRU activity reported in the BDRs for each container demonstrates with a 95% probability that the container of waste contains TRU radioactive waste.
5	NA	AK Sufficiency. Is there an approved AK sufficiency Determination for this waste stream?
6	Y	Mean concentrations, UCL90 values for the mean concentration, standard deviations, and the number of samples collected for each VOC in the HSG of each container were calculated and compared with the program required quantitation limits, as reported in CCP TP 003, Attachment 3, and additional Environmental Protection Agency (EPA) Hazardous Waste Numbers were assigned as required. Samples were randomly collected (when appropriate).
7a	NA	Mean concentrations, UCL90 values for the mean concentration, standard deviations, and the number of samples collected for solids VOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003-Attachment 4, and additional EPA Hazardous Waste Numbers were assigned as required. Samples were randomly collected.
7b	NA	Mean concentrations, UCL90 values for the mean concentration, standard deviations, and the number of samples collected for solids SVOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP TP 003 Attachment 5, and additional EPA Hazardous Waste Numbers were assigned as required. Samples were randomly collected.
7c	NA	Mean concentrations, (UCL90) values for the mean concentration, standard deviations, and the number of samples collected for total metals were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP TP 003 Attachment 6, and additional EPA Hazardous Waste Numbers were assigned as required. Samples were randomly collected.

CCP Reconcilliation with Data Quality Objectives

WSF# ID-ANLE-S5000 Lot # 1

8	Y	The data demonstrates whether the waste stream exhibits a toxicity characteristic under Title 40 Code of Federal Regulations (CFR), Part 261, Identification and Listing of Hazardous Waste, Subpart C, Characteristics of Hazardous Waste.
9	Y	Does the waste stream contain listed waste found in 20.4.1.200 NMAC incorporating 40 CFR Part 261, Subpart D, Lists of Hazardous Wastes.
10	Y	Waste stream can be classified as hazardous or nonhazardous at the 90-percent confidence level.
11	Y	Appropriate packaging configuration and Drum Age Criteria (DAC) is applied and documented in the headspace gas sampling documentation, and the drum age met prior to sampling.
12	Y	TICs were appropriately identified and reported in accordance with the requirements of Section B3-1 of the QAPjP.
13	Y	The PRQLs for headspace gas VOCs were met for all analyses as evidenced by the analytical batch data reports.
14		The overall completeness, comparability, and representativeness QAOs were met for each of the analytical and testing procedures as specified in CCP-PO-001 Sections B3-2 through B3-9 prior to submittal of a waste stream profile form for a waste steam or waste stream lot.

	Completeness	Comparability	Representativeness
Radiography	NA	NA	NA
VE	Y	Y	Y
Headspace Gas Analysis	Y	Y	Y
Solids Sampling	NA	NA	NA
Solids VOCs	NA	NA	NA
Solids SVOCs	NA	NA	NA
Solids Metals	NA	NA	NA

Comments: N/A

Irene Quintana

Signature of Site Project Manager | Irene Quintana Printed Name | 12/7/2006 Date

0/6 C/C

SUMMATION OF ASPECTS OF AK SUMMARY REPORT: ID-ANLE-S5000

Overview:

Waste Stream ID-ANLE-S5000 is Remote Handled (RH) mixed heterogeneous debris waste generated at Argonne National Laboratory- East (ANL-E) and transferred to Idaho National Lab (INL) between 1976 and 1995. Founded in 1946 as the first national laboratory by the U.S. Atomic Energy Commission (AEC), ANL-E has been instrumental in the development of nuclear reactors and associated systems, materials, fuel elements, and components for use in both civilian and defense programs. This work included participation in the development of nuclear reactor systems in use today for isotope production, power generation, and naval submarine propulsion, as well as experimental or proposed applications for weapons destruction, defense waste management, defense security and safeguards, and space propulsion. This waste was generated at the ANL-E Alpha Gamma Hot Cell Facility (AGHCF) between November 1971 and November 1995 during the examination of irradiated and non-irradiated fuel pins and other reactor materials from reactor programs at ANL-W and other U.S. Department of Energy (DOE) reactors. The AGHCF is a hot cell complex that includes office space, shielded gloveboxes, a hot cell under nitrogen atmosphere with work stations (WS) for remote manipulation of materials, and a Decontamination and Repair Area (DRA). This waste stream consists of TRU mixed waste generated in support of ANL-E defense related activities.

This Summation of the AK Summary Report includes information to support Waste Stream Profile Form (WSPF) number ID-ANLE-S5000 for Remote Handled (RH) TRU debris. The primary source of information for this Summation is CCP-AK-INL-500, Remote-Handled Transuranic Debris Waste From Argonne National Laboratory- East Stored at the Idaho National Laboratory, Revision 4, November 16, 2006. CCP-AK-INL-500 includes information obtained from numerous sources, including facility safety basis documentation, historical document archives, generator and storage facility waste records and documents, procedures for waste packaging and generation activities, container-specific waste packaging and characterization documentation, and interviews with knowledgeable AGHCF personnel.

Waste Stream Identification Summary:

Site Where TRU Waste Was Generated:	Argonne National Laboratory- East
Waste Stream Name:	Remote Handled (RH) Mixed Heterogeneous Debris Waste from the Argonne National Laboratory-East
Waste Stream Number:	ID-ANLE-S5000
Dates of Waste Generation:	1971 through 1995
Facility Where TRU Waste Was Generated:	AGHCF
Summary Category Group:	S5000 – Debris Waste
Waste Matrix Code Group:	Heterogeneous Debris Waste
Waste Matrix Code:	S5400
Waste Stream TWBIR Identification:	IN-W349, IN-W259 and IN-AE-AGHC-01

Waste Stream Volume:	183 RH Cannisters[1] (current/retrievably stored) 0 RH Cannisters (projected/newly generated)
RCRA EPA Hazardous Waste Numbers:	D004, D005, D006, D007, D008, D009, D010, D011, D019, D028, D029, F002, and F005
TRUCON Content Numbers:	ID 322 and ID 325 (RH 72-B Content Numbers)

Waste Stream Description and Physical Form:

Waste stream ID-ANLE-S5000 consists of RH mixed heterogeneous debris waste that was generated by destructive and nondestructive examination of radiological materials such as fuel pins, reactor structural materials, and targets in the AGHCF. Waste from this stream was contaminated primarily with fissile materials and mixed fission products (MFP). Examples of waste items are listed below.

Cellulosic items including paper, cardboard, cotton, leather rags, cloth, towels, grinding paper, boxes, liners, High-Efficiency Particulate Air (HEPA) filter media, tissues, string, boxes, rope, swabs, mop heads, and gloves. Wooden items including brooms, mop head and handles, HEPA filter frames, rulers, brushes, blocks, and Masonite, plywood, cork, fiber board, and chipboard items.

Plastic materials including polyethylene, polypropylene, polyvinyl chloride (PVC), phthalate, Koroseal (high impact PVC), Tygon, styrene butadiene, polyurethane, Lucite (methyl methacrylate polymer plastic), Nylon, Teflon, Nalgene, and epoxy (hardened), metallurgical sample mounts (Bakelite plastic made from synthetic components), small bottles (less than 4 liters), tubing, funnels, pipe, bags, filter cartridges, sheeting, vials, tape, syringes and markers.

Rubber items including Neoprene, silicone O-rings, gaskets, stoppers, hose, tubing, gloves, wire/cord and insulation.

Glass items including glass, ceramic, alumina, porcelain, quartz, Vycor (heat resistant silica glass), and boron nitrite bottles, small jars, tubing, caps, beakers, plates, insulation (fiber glass), firebrick, insulators, light bulbs, thermometers and lenses.

Metal items including carbon steel, stainless steel, and cast iron cans, buckets, slings, equipment, tools, tubing, fittings, rods, rings, rounds, chain, saw blades, dustpans, motors, fixtures, hot plate, steel wool, manipulator parts and tape, trays, capsules, and other miscellaneous scrap items.

Non-ferrous metals items including aluminum, brass, bronze, copper, lead, tungsten, tantalum, tin, vanadium, zinc, tin cans (including punctured aerosol cans), vials, sheeting, foil, tools, wire, shot, rods, cable, tubing, capsules, fittings, gauges, plates, motors, samples, light fixtures, and other miscellaneous scrap items.

Waste Stream ID-ANLE-S5000 contains lesser amounts (less than 50 percent in any container) of homogeneous organic and inorganic materials. Clay and vermiculite based absorbents were used during the neutralization and evaporation of acids, etchants, and alcohol solutions. Charcoal and ion exchange resin filter media was also included in this waste stream. No individual payload container consists of more than 50 percent homogenous solids.

[1] This estimate is for 549 30-gallon drums packaged directly into RH Canisters or into 55-gallon drums which will then be packaged into RH Canisters.

This waste stream is assigned Waste Matrix Code S5400, Heterogeneous Debris. The waste material that comprises waste stream ID-ANLE-S5000 was generated from a single process or from an activity that is similar in material, physical form, and radiological constituents and is therefore a single waste stream.

Point of Generation - Area and Building of Generation

This TRU mixed heterogeneous debris waste stream was generated at the ANL-E AGHCF and is stored at the INL.

Generating Process

The ANL-E AGHCF conducted research programs for the advance reactor technology, with an emphasis on the use of plutonium as fuel. The AGHCF was a hot cell facility that was used for the characterization and testing of irradiated reactor materials. The primary AGHCF nondestructive and destructive examination capabilities consist of the following activities:

Nondestructive Examinations
- Visual inspection and examination
- Capsule disassembly
- Macrophotography of irradiated fuel elements
- Bow, length, and weight measurement
- Diametral profilometry
- Diameter measurements with micrometers
- Eddy current inspection
- Fuel element length measurement
- Irradiated fuel element balance point
- Irradiated fuel element helium leak test
- Autoradiography
- X-ray analysis and gamma scanning
- Irradiated material transfer, management, and storage

Destructive Examinations
- Fuel element fission gas sampling and tritium gas collection
- Plenum volume determination and gas analysis
- Fuel element sectioning
- Metallographic specimen mounting
- Microphotography
- Microhardness
- Immersion density testing
- Optical microscopy and photography
- Scanning electron microscopy
- Scanning auger microscopy
- EMP

The purpose of the AGHCF was to allow for analysis of highly irradiated alpha emitting samples. It was specifically designed to examine plutonium-bearing fuel elements from the ANL-W Experimental Breeder Reactor, although over the years, the sources of specimens examined expanded to include other national laboratories, commercial nuclear power plants, international clients, and universities. Numerous fuel and specimen types were examined over the years of operation but the waste generating activities remained unchanged and the RH TRU waste generated consists of the same materials in the same approximate percentages for wastes sent to INL.

The AGHCF consisted of operations areas, rooms, and remote WSs. Fuel elements were moved from one WS to another depending upon the examination operation. The AGHCF contained electro-mechanical devices, including master-slave manipulators at each WS, a Programmed and Removed

robot, remote operated manipulators, and radio controlled carts. These pieces of equipment allowed for remote handling at a specific WS and between WSs.

The Electron Beam Laboratory (EBL) consisted of an unshielded glovebox, two gloveboxes and a Scanning Electron Microscope (SEM), an Electron Microprobe (EMP), and a scanning auger microscope (SAM) and its associated glovebox. The EMP, SEM, and the SAM were used for electron beam analysis of samples. The gloveboxes in the Shielded Glovebox Facility (SGF) were used to prepare small specimens for electron microscopy or other tests.

Fuel elements or other specimens were received at the AGHCF in a shielded cask and assigned an identification number. The cask was moved to the Clean Transfer Area (CTA) to allow for unloading of the fuel elements. The elements were then moved into interim storage or long-term storage. Small casks were moved into the CTA for specimen removal.

Initial capsule examination and disassembly were performed. Nondestructive testing was then conducted and included bow measurement, diametral profilometry, weight and length measurements, determination of balance point, diameter measurements, visual examination (VE), macrophotography, gamma spectrometry and gamma profiling of the fuel elements.

If a fuel element was received unpunctured and the fission gas had not been released, the element was punctured using the puncturing rig and fission-gas collection apparatus. The gas was collected and analyzed to quantify the amounts of fission and other gases present. Excess fission-gas was exhausted by the cell ventilation system.

Fuel element fission gas sampling, tritium gas collection, plenum volume determinations and gas analysis, in addition to helium leak testing, X-ray examination, and gamma scanning were conducted during gas testing and density measurements. Profilometry equipment was used to determine the amount of radial strain due to irradiation growth.

After the nondestructive examinations were completed, the fuel element was sent for destructive examinations. The fuel element was sectioned, each section was numbered and was placed in an aluminum pipe; the aluminum pipe had the number stamped on the side. Samples requiring metallographic examination were mounted using epoxy resin (e.g. phenol, 4,4-(1-methylethylidene)bis, polymer with (chloromethyl) oxirane). Grinding and polishing of the element was also conducted. The sample was then moved to the metallograph. Specimens could also be prepared for examination on the EMP and quantitative chemical analysis of the specimens.

Lower level radioactive samples were taken to the SEM or the SAM glovebox. The SEM and the energy dispersive X-ray system were used for microstructural and microchemical examination of small segments. The SAM was used for surface or grain boundary analysis of irradiated (low level) or contaminated specimens.

Other experimental systems were set up on a temporary basis such as the furnace (used for elevated temperature testing of fuel segments), controllers, data collection equipment, and gas collection apparatus. Post-test examinations included mounting of the test sample and optical or electron beam examination. Post-test examinations included both nondestructive and destructive examinations, similar to the typical examinations described above for a fuel element.

After the examinations were completed, the samples were placed in storage pending future evaluation or shipment to a designated storage facility. If the samples were to be stored, they were placed in a storage can (1-gal or smaller) and sealed.

Equipment maintenance and repair also generated RH TRU waste. Maintenance ranged from routine replacement of saw blades, air-system filters, broken glassware, and light bulbs, to non-routine replacement or repair of experimental apparatus and broken electrical motors. In addition, non-routine repairs of manipulator arms or other in-cell equipment were conducted. In 1983, a manipulator DRA was

constructed to better handle a higher level contamination associated with the manipulators. The DRA utilized a shower stall to decontaminate the manipulators prior to repair. Because the WSs were designed to handle multiple examinations, the specific locations of the examinations and other activities varied. Waste was either placed in cans at WSs or moved directly to the waste packaging area for temporary storage. Miscellaneous items generated in the hot cell included vault cans, sample containers, plastic bags, plastic bottles, and sphincter cans. Waste cans were used to collect waste materials at WSs and then moved for temporary storage. Sorting and packaging activities were performed and videotaped after February 1993. After the waste cans were surveyed, they would be packaged into 30-gallon drums and if dose rates indicated that they were RH TRU, the drums were shipped to the INL.

Table 1 identifies toxicity characteristic and F-listed chemicals in this waste stream. These chemicals and constituents were used in processes and contaminate the debris waste, but the chemical itself was not discarded in this waste stream as commercial chemical product, an off specification commercial chemical product, or a container residue or spill residue thereof (40 CFR 261.33).

Table 1 – Metals or organic TC and F-Listed Contaminants

Waste Stream ID-ANLE-S5000

Chemical	CAS Number	EPA Hazardous Waste Numbers
Arsenic	7440-38-2	D004
Barium	7440-39-3	D005
Benzene	71-42-2	F005
Cadmium	7440-43-9	D006
Carbon tetrachloride	56-23-5	D019
Chromium	7440-47-3	D007
Isobutanol	78-83-1	F005
Lead	7439-92-1	D008
Mercury	7439-97-6	D009
Selenium	7782-49-2	D010
Silver	7440-22-4	D011
Tetrachloroethylene	127-18-4	F002
Toluene	108-88-3	F005
1,1,1-trichloroethane	71-55-6	F002
1,1-dichloroethylene	75-35-4	D029
1,2-dichloroethane	107-06-2	D028

RCRA Determinations - Hazardous Waste Determinations

Ignitability, Corrosivity, Reactivity

Waste generated in this waste stream does not qualify for any of the exclusions outlined in 40 CFR 260 or 261. Review of historical VE video tapes is used to confirm that the waste stream is not a liquid waste and does not contain explosives, non radioactive pyrophoric materials, compressed gasses or reactive waste. Therefore, this waste stream does not exhibit the characteristic for ignitability (D001), corrosivity (D002), or reactivity (D003).

Ignitability

The waste does not meet the definition of ignitability as defined in 40 CFR 261.21. The waste is not a liquid or compressed gas, nor does the waste contain ignitable materials or compressed gases. AGHCF operations used small amounts of ignitable solvents including acetone, xylene, ethyl ether, ethanol, butanol, and methanol. These chemicals were used primarily during cleaning operations in the hot cell. Solvents were also used during sample preparation to clean the surfaces of the metallographic specimens. The AGHCF evaporated all organic liquids to dryness, no solvent liquids are in the waste stream. The waste is not capable of causing fire through friction or absorption of moisture. The waste

does not meet the definition of a Department of Transportation (DOT) oxidizer as defined in 49 CFR 173.151. The waste does not exhibit the characteristic of ignitability. Therefore, the hazardous waste number for ignitability (D001) does not apply to this waste stream. (References C029, C066, C097, C106, C115, C118, C130, C137, C147, C161, P006, P009, P025, and P032)

Corrosivity

This waste does not meet the definition of corrosivity as defined in 40 CFR 261.22. Small amounts of etchant solutions were prepared in the AGHFC with hydrofluoric, sulfuric, hydrochloric, chromic, phosphoric, nitric, citric, acetic, and oxalic acids. A silver nitrate solution was used for etching the surface of Zircaloy (zirconium-tin alloy) specimens. Waste etchant solutions were neutralized using either sodium carbonate or sodium hydroxide to a pH between 5 and 10, absorbed into pelletized clay (Oil Dri), then heated to dryness. The waste is not liquid, and review of historical VE video tapes is performed to ensure the absence of liquids. Therefore the characteristic of corrosivity (D002) does not apply to this waste stream. (References C041, C066, C077, C147, P006, P009, P032, P062, U004, and U006)

Reactivity

This waste stream does not meet the definition of reactivity as defined in 40 CFR 261.23. The waste is stable and will not undergo violent chemical change. The waste will not react violently with water, form potentially explosive mixtures with water, or generate toxic gases, vapors, or fumes when mixed with water. Potentially reactive metals were prohibited from disposal in the RH TRU waste. Sodium (Na), sodium-potassium (NaK) alloy, and lithium metals contained in some fuel pins were generated during disassembly and sectioning activities during preparation of metallurgical specimens. Na and NaK were reacted with alcohol (ethanol) and lithium was reacted with an ammonia solution. The resulting solutions were absorbed into pelletized clay and heated to dryness. The characteristic of reactivity does not apply to this waste stream. Therefore, the EPA hazardous waste number for reactivity (D003) is not assigned. (References C009, C029, C066, C099, C106, C008, C115, C118, C130, C137, C147, P006, P007, P009, P032, P060, U002, and U004)

Toxicity Characteristic

This waste stream exhibits the characteristic of toxicity per 40 CFR 261.24. The toxicity characteristic contaminants fall into two categories; metals and organics. Where a constituent has been identified and there is no quantitative data available to demonstrate that the concentration is below regulatory threshold, the applicable EPA Hazardous Waste Number (HWN) is conservatively applied to the waste stream. EPA HWNs D004, D005, D006, D007, D008, D009, D010, D011, D019, D028 and D029.are assigned to waste stream IN-ANLE-S5000.

Arsenic (D004), barium (D005), cadmium (D006), chromium (D007), lead (D008), mercury (D009), selenium (D010) and silver (D011) have been identified as contaminants in the debris. For example arsenic, barium, cadmium, chromium, lead, and selenium were identified as HEPA filter contaminants, Mercury vapor lights and sodium vapor lamps are examples of debris items containing toxicity characteristic metals (References C013, C014, C020, C029, C035, C066, C088, C091, C094, C116, C137, C143, C147, C148, C160, C341, P023, P038, P039, P061, P062, P068, P070, U004, U006, U015, U017, U018, U019, U021, U022, U041, U068, U069, U070, U072, U074, U083, and U085).

The AK sources identified the use of organic toxicity characteristic compounds including carbon tetrachloride (D019), 1,2-dichloroethane (D028) and 1,1-dichloroethylene (D029). For example carbon tetrachloride was used in metallographic specimen and cell cleaning and 1,2-dichloroethane and 1,1-dichloroethylene were identified in metallurgical reagents. (References C066, C081, C137, and C147)

Because the more specific F-listed EPA HWNs have been assigned for benzene and tetrachloroethylene, the corresponding toxicity characteristic HWNs (D018 and D039) for these constituents are not applied. (Reference DR014)

Listed Waste

Waste stream ID-ANLE-S5000 was mixed with or derived from F-listed hazardous wastes from non-specific sources as listed in Title 40 *Code of Federal Regulations* (CFR) 261.31. F002 and F005 listed solvents were used in the AGHCF and potentially contaminate the waste. The following F-listed constituents may contaminate the waste and are conservatively applied:

(F002)
Tetrachloroethylene, 1, 1, 1-trichloroethane

(F005)
Benzene, isobutyl alcohol, toluene

F003 constituents, including acetone, n-butanol, ethyl ether, methanol, and xylene were also used in the the AGHCF. These solvents are listed solely for ignitability. However, the waste stream does not exhibit the characteristic of ignitability; therefore, F003 is not assigned. Although several F001-listed solvents were identified in the AK record (i.e., 1,1,1- trichloroethane, carbon tetrachloride, and tetrachloroethylene), these listed solvents were not used in a "large-scale" degreasing operation such as cold cleaning or vapor degreasing. The AGHCF did not conduct large-scale degreasing operations, and therefore, EPA HWN F001 is not assigned to this waste stream. Waste stream IN-ANLE-S5000 is assigned EPA HWNs F002 and F005 for 1,1,1-trichloroethane, benzene, isobutyl alcohol, tetrachloroethylene, and toluene (Reference DR014, C012, C066, C137, C147, U065, and U072).

U, K, and P-Listed Chemicals

Waste stream ID-ANLE-S5000 was not mixed with or contaminated with a discarded commercial chemical product, an off-specification commercial chemical product, or a container residue or spill residue thereof (40 CFR 261.33). Waste stream ID-ANLE-S5000 was not mixed with or contaminated with any of the sources specified in 40 CFR 261.32.

Any beryllium present is as a contaminant of the process and not unused, commercial product. The only source of beryllium identified was special nuclear material samples that were analyzed for beryllium. This form of beryllium is not Be powder. Therefore, this waste stream is not P015-listed waste.

Hydrofluoric acid was used in the AGHCF as a metallurgical etchant, however no unused acid or materials from spills of the acid were disposed of in this waste stream. Additionally, as described above, corrosive liquids were neutralized, evaporated and immobilized prior to disposal. Therefore U134 for hydrofluoric acid is not assigned to the waste stream.

This waste stream is therefore not a U-, K- or P-listed hazardous waste as defined in 40 CFR 261, Subpart D.

Headspace Gas/Volatile Organic Compound Information

Lot 1 from waste stream ID-ANLE-S5000 consists of 70 30-gallon drums. Ten headspace gas samples were obtained randomly from the lot. The UCL_{90} calculated values of all of the Target Analytes for lot 1, using either the transformed or untransformed value, are below the program required quantitation limits (PRQLs). One tentatively identified compound (1,4-Dioxane) was detected in headspace gas analysis of lot 1 but was not found in greater than 25% of the containers in this lot.

Specific information about the maximum, mean, standard deviation and UCL_{90} are included in the attached Characterization Information Summary (CIS).

Conclusion

The following EPA hazardous waste numbers are assigned to this waste stream: D004, D005, D006, D007, D008, D009, D010, D011, D019, D028, D029, F002, and F005.

Polychlorinated Biphenyls (PCBs)

This waste stream is not regulated as a Toxic Substance Control Act (TSCA) waste under 40 CFR 761 (References C029, C066, C137, U019, U066, U072, and U332).

Prohibited Items

The absence of prohibited items is determined and documented through acceptable knowledge and confirmation activities. Review of historical VE tapes is performed to verify the absence of prohibited items. The following items have been determined as not present in the waste:

- Liquids
- Non-radioactive pyrophoric materials
- Waste incompatible with backfill, seal and panel closure materials, container and packaging materials, or other wastes
- Explosives or compressed gases
- Waste with PCBs not authorized under an EPA PCB waste disposal authorization
- Waste exhibiting the characteristics of ignitability, corrosivity, or reactivity
- Non-mixed hazardous wastes

Each container of waste is certified and shipped only after VE either:

- Did not identify any prohibited items in the waste container, or
- All prohibited items found in a waste container by VE are identified and corrected (i.e., eliminated or removed) through the site non-conformance reporting system.

Method for Determining Waste Material Parameter Weights per Unit of Waste

The waste material parameters (WMPs) for waste stream ID-ANLE-S5000 were estimated by reviewing the waste can inventory records for drums packaged from 1990 through 1995. The waste can inventory records provide a waste item description and corresponding volume percentage for waste packaged in waste cans. An average volume percentage was then calculated for each waste material parameter. The containers evaluated are representative of the waste stream because the AGHCF processes have remained relatively unchanged and the wastes generated consist of the same type of materials in approximately the same relative percentages for the containers sent to INL

Estimated densities were used to calculate the weight percentage for each WMP for each 30-gallon drum. The weight of each WMP for each drum was then calculated based on the recorded gross drum weight and a default tare weight of 69 lbs. for each drum (assuming two 7-gallon waste cans, liners, and bags). Finally, an overall WMP weight percentage was calculated for the evaluated drums. The WMPs, average weight percent and weight percent range are presented in Table 2.

Table 2. Waste Stream ID-ANLE-S5000 Waste Material Parameter Estimates

Waste Material Parameter	Avg. Weight Percent	Weight Percent Range
Iron-based Metals/Alloys	31.0 %	0.0 – 87.5 %
Aluminum-based Metals/Alloys	13.5 %	0.0 – 66.2 %

Other Metals	20.1 %	0.0 – 60.0 %
Other Inorganic Materials	13.5 %	0.0 – 53.6 %
Cellulosics	12.0 %	0.0 – 80.1 %
Rubber	4.5 %	0.0 – 64.5 %
Plastic (waste materials)	5.0 %	0.0 – 57.4 %
Organic Matrix	0.6 %	0.0 – 30.7 %
Total Inorganic Waste Avg.	**78.0 %**	
Total Organic Waste Avg.	**21.5 %**	

List of AK Sufficiency Determinations

No AK Sufficiency Determinations apply to this waste stream.

Transportation

The only sources of beryllium identified in the AK record were samples and actinide/beryllium sources. The level of beryllium contamination in individual drums will be less than one weight percent. RH-TRU 72-B canisters will contain less than 25 kg of beryllium.

The waste is not machine compacted.

Radionuclide Information

Containers in this waste stream have surface dose rates exceeding 200 mrem/h, but less than 1000 rem/h, and contain more than 100 nanocuries per gram (nCi/g) of waste of alpha-emitting TRU isotopes with half lives greater than 20 years. The waste is contaminated primarily with fissile materials and Mixed Fission Products (MFPs).

The 10 WIPP tracked radionuclides are presented in Table 3 in addition to other radionuclides that, in aggregate, constitute 95% of the total radiological hazard.

Table 3. Summary of ANL-E Radionuclides

WIPP Tracked Radionuclides	Additional Reported Radionuclides
Am-241	Ba-137m
Pu-238	U-235
Pu-239	Pu-241
Pu-240	Y-90
Pu-242	
U-233	
U-234	
U-238	
Cs-137	
Sr-90	

Payload management will not be utilized for this waste stream.

Attachment 1 AK SOURCE DOCUMENTS, SUPLLEMENTAL DOCUMENTATION

Source Document Tracking Number	AK #	Title	Document Number	Author	Date
C002	S16	Memorandum to File re: ANL Scrap Request 4-NU/EU-8-71-KZ 8-20/70 6-EBR I-Mark III fuel slugs. (1442g U235)	N/A	Wilton Jackson	6/6/1972
C003	S16	Intra-Laboratory Memo to Harvey Welsh re: Dimensions of Intermediate TRU Waste Containers	N/A	Dennis Donahue	9/14/1989
C006	S7	Interview with Larry Neimark re: AGHCF samples, applicable programs, defense relationship to materials, and commingling of waste	ROC-C6	Cheryl Schultz	7/17/2001
C007	S14	Correspondence to L. A. Neimark, Manager, IP Section re: Assessment of Nuclear Materials Inventory, Fissile Inventory Records and Handling Procedures in FF12	N/A	A. G. Hins	3/13/1991
C009	N/A	Intra-Laboratory Memo to W. D. Jackson, MCT/ANL-E, re: Fissile Scrap and Irradiated Structural Materials Waste Shipments from ANL-E to ANL-W for retrievable Storage in the RSWF	L-W-SSS-(LCW)-88-146An-184-66	L.C. Witbeck	11/17/1988
C010	S16	Memo to F. Pausche, AGHCF Records Chief re: Fuel Element Sectioning and metallography debris, accounting and criticality safety procedures for disposal	N/A	W. D. Jackson	4/17/1975
C011	S2, S5	Intra-Laboratory Memo to D. A. Donahue, MCT, re: Work Plan for the Examination of LILY-1 and LILY-1A Specimens	N/A	L. A. Neimark	11/28/1988
C012	S2	Intra-Laboratory Memo to Operations Personnel re: Facility Nitrogen Purge Change and Storage of Flammable Liquids	N/A	D. A. Donahue	4/9/1990
C013	S16	Correspondence to Mr. E. M. King, Oak Ridge National Laboratory re: Radioactive Waste, i.e., nonrecoverable material, being transferred from ANL to ORNL for storage and/or processing	N/A	L. A. Neimark	4/10/1974
C014	N/A	Correspondence to A. Cohen re: Process and Procedure with all and WMO for Sampling 1st Stage HEPA Filters. Description-8'x8'x3' w/ 5/8' Wood Frame Ultra Aire – MSA	N/A	F. Pausche	4/22/1995
C016	S8, S13	Intra-Laboratory Memo to C. E. Crouthamel, CMT, and M. J. Steindler, CMT re: LWR Hot-Cell Capability at ANL-E: The D-200 M-Wing Situation	N/A	L. A. Neimark	5/3/1985
C017	S8, S16	Intra-Laboratory Memo to L. A. Neimark, MCT re: TRU-RH Waste Payload Meeting Summary	N/A	J. R. Thuot	8/14/1990
C020	N/A	Intra-Laboratory Memo to Environmental Compliance Representatives re: Photo Processing Solutions – Waste Characterization	N/A	R. G. Kolzow J. R. Thuot	12/19/1990
C024	S14	Intra-Laboratory Memo to W. C. Kettman, ET/IPS re: Clarification of 00 No. 29 with Regard to Inventory of 6-in. Storage Holes	N/A	L. A. Neimark	12/7/1993
C025	S16	Correspondence to D. A. Donahue re: Transfer of Special Materials from G-118 Glovebox 3 to Building 212 Caves	N/A	M. A. Vest	9/16/1994
C027	S16	Intra-Laboratory Memo to TRU Waste Generators re: Closure Methods for Plastic Bags Containing TRU Waste Material	N/A	A. C. Smith, Jr.	5/23/1989
C028	S16	Intra-Laboratory Memo to J. Thuot, WMO re: Costs of Current RH-TRU Disposal Campaign	N/A	L. A. Neimark	7/31/1990
C029	S16	Letter re: Survey of Waste Streams in Building 212	N/A	Noreen Kevin	5/31/1988
C031	S2	Intra-Laboratory Memo to Distribution re: New Movement Slip for SNM and Other Programmatically Valuable Materials in the AGHCF	OO No. 32	L. A. Neimark	10/5/1993
C032	S2	Intra-Laboratory Memo to Distribution re: New Sectioning SLIP for SNM and Other Programmatically Valuable Materials in the AGHCF	OO No. 34	L. A. Neimark	4/5/1994
C035	S9	Intra-Laboratory Memo to Distribution re: Management of Broken Fluorescent Lamps	N/A	J. Herman	2/2/1999
C037	S16	Intra-Laboratory Memo to L. Neimark, MST and W. Jackson re: Transuranic Waste Retrievable Burial	N/A	M. J. Ryan	2/7/1983
C038	S5	Intra-Laboratory Memo to L. A. Neimark re: Self-ignition Material from "Operation Clean Sweep"	N/A	W. D. Jackson	4/13/1983

Source Document Tracking Number	AK #	Title	Document Number	Author	Date
C039	S5	Intra-Laboratory Memo to L. A. Neimark re: Procedure for Disposal of "Clean Sweep" Pyrophoric Waste	N/A	W. D. Jackson	9/6/1983
C041	S12	Intra-Laboratory Memo to Distribution re: Solid Radioactive Waste Drum Failure	N/A	B. R. T. Frost	1/7/1977
C044	S16	Notes from Waste Pkg Mtg (Twist & Ties)	N/A	Jack Jackson	6/28/1985
C045	S5	Intra-Laboratory Memo to G. R. Imel, Mgr., Reactor Physics & Experiments re: Disposal of Irradiated Stainless Steel	N/A	D. C. Cutforth	7/13/1994
C047	S16	Phone call from Tom Clements, EGG, Idaho re: CH Letter on Resumption of Shipments INEL	N/A	Ray Lang	3/15/1990
C048	S16	Intra-Laboratory Memo to L. T. Loyd, MSD re: Justification for Purchase of Stainless Steel Pipe	N/A	L. A. Neimark	8/2/1974
C050	S7	Intra-Laboratory Memo to L. A. Neimark and F. Pausche re: AGHCF Fissile Material Items to be Submitted for Scrappage from Area IV and Areas I and II	N/A	A. G. Hins	11/20/1990
C058	S16	Intra-Laboratory Memo to R. Boule, Director, PFS re: Needs Prior to Shipment of Niemark's TRU RH-drums to Idaho	N/A	Ralph Ditch	3/1/1990
C060	S16	Intra-Laboratory Memo to R. Boule, Director, PFS re: Status: Resumption of Shipments of TRU Waste to INEL	N/A	A. C. Smith	3/30/1990
C061	S16	Intra-Laboratory Memo to L. A. Neimark, MCT re: Trip Report with Meeting of EGG/Idaho on the Resumption of Shipments of TRU Waste to INEL	N/A	D. A. Donahue	5/8/1990
C062	S16	Intra-Laboratory Memo to R. Boule, Director, PFS re: TRU Shipments to INEL	N/A	J. R. Thout	7/12/1990
C066	S7, S16	Record of Communication with Bill Kettman and Dennis Donahue, AGHCF re: AGHCF Operations and Waste Packaging	N/A	J. Whitworth M. Wyco	8/7/2001
C067	S7, S16	Record of Communication with Fred Pausche and Terry Bray, AGHCF	N/A	J. Whitworth M. Wyco	8/8/2001
C069	S16	Letter to Dr. Robert G. Sachs, Director Argonne National Laboratory re: Inventory and Characterization of ERDA Intermediate-Level Beta-Gamma Transuranic (TRU) Waste.	N/A	Robert H. Bauer	1/17/1977
C071	S16	Notes on Conference call on waste shipments west.	N/A	N/A	4/26/1993
C072	S16	Intra-Laboratory Memo to W. C. Kettman and F. Pausche, MCT re: Disposition of Materials from TREAT Tests RX2, LO5, and LO7 at the AGHCF	N/A	J. W. Holland	8/20/1992
C075	S16	Intra-Laboratory Memo D. A. Donahue re: DOE/CH Letter to DOE Idaho Field Office on Shipment of RH-TRU to INEL.	N/A	K. A. Gablin	6/15/1992
C077	N/A	Letter to Mr. Mahlon Heileson, Lockheed Idaho Technologies Company re: Liquids absorbed on pelletized clay are non hazardous	N/A	Daniel Pancake	10/16/1995
C080	S5	Intra-Laboratory Memo to L. A. Neimark re: Work Plan for the Postirradiation Examination of Six Mixed-oxide Fuel Pins from X470 at the AGHCF	N/A	R. V. Strain	11/1/1990
C081	N/A	Intra-Laboratory Memo to Larry Neimark, ET re: Use of Carbon Tetrachloride in Alpha Gamma Hot Cell Facility (AGHCF) Experiments	N/A	Judd Johnson	9/2/1994
C083	S15, S16	Correspondence to James E. Solecki, Acting Assistance Manager for Environmental Restoration and Waste Management, Idaho Operations Office re: Resumption of Shipments of TRU Waste to INEL, enclosure: Traceability of Hot Cell Waste	N/A	Jay O. Hunze	4/11/1990
C088	N/A	Correspondence to Mr. W. M. Heileson, Waste Generator Interface, EG&G Idaho, Inc. re: Content of ANL-E RHTRU Drums Stored at INEL	N/A	L. A. Neimark	6/17/1994
C089	S2, S16	Intra-Laboratory Memo to Dennis Donahue, Supervisor/AGHCF re: Waste Management Quality Assurance Surveillance Report No. 93-MCT-03a	N/A	Georgia Anast	3/16/1993
C091	N/A	Correspondence to W. Mahlon Heilson, Waste Management, RWMC Technical Support, EG&G Idaho, Inc. re: Lead in Remote Handled Transuranic Waste Stored at Idaho National Engineering Laboratory (INEL)	N/A	Judd F. Johnson	7/18/1994

Source Document Tracking Number	AK #	Title	Document Number	Author	Date
C094	N/A	Correspondence to L.Neimark, Materials & Components Technology re: Metallographic Samples	N/A	J. E. Battles	6/13/1990
C095	S16	Email to Cheryl Schulz re: ANL All Drum Information	N/A	Douglas W. Parker	5/21/2002
C096	S16	Fax to Sheila Lott re: ANL-E data	N/A	H. D. Welch	12/14/1992
C097	S2, S16	Correspondence to AGHCF, Operational Personnel re: Work Station III Fissile Grinding Waste	N/A	Dennis Donahue	N/A
C098	S7	Interview with Cindy Rock (WMO) re: hazardous waste procedures, etc.	N/A	Cheryl Schulz	8/28/2001
C099	S16	Correspondence to Mr. Dennis Wilkinson, RWMC/SWEP re: TRU Waste at Argonne National Laboratory-East	N/A	J. R. Thuot	5/17/1990
C101	S2	Memorandum to J. O. Hunze, Director, Technology Management Division, Chicago Operations Office re: WACCC Comments on ANL-E Audit Response	WACCC:LPT89 -950	E. K. Hunter	8/16/1989
C103	S3	Intra-Laboratory Memo to C. A. DeLorenzo, OOS re: Safety Analysis for Handling Tritium-containing Compounds in the AGHCF	N/A	L. A. Neimark	5/30/1984
C105	S16	Intra-Laboratory Memo to L. A. Neimark re: Remote Handled (RH) TRU Waste Certification Requirements	N/A	W. D. Jackson	12/2/1982
C106	N/A	Email to Whitworth, Julia re: Exploding Drum at ANL	N/A	Terri S Bray	8/30/2001
C107	S16	Fax to Harvey re: Information on venting of 30 gallon RH-TRU packages sent to you from the Alpha Gamma Hot Cell at ANL East	N/A	Dennis Donahue	7/29/1992
C108	S16	Correspondence to Mr. J. T. Case, U.S. Department of Energy, Idaho Field Office re: Strategy Plan for Long-term Management and Storage of Remote-handled (RH) Transuranic (TRU) Waste - TLC-224-92	TLC-224-92	T. L. Clements, Jr	11/30/1992
C111	S16	Intra-Laboratory Memo to L. A. Neimark, Manager, Irradiation Performance Section, MCT re: Waste Handling Training and Operator Qualification	N/A	W. D. Jackson	5/23/1988
C112	S16	Intra-Laboratory Memo to Division Directors and Department Heads re: Interim Procedures: On-site Packaging and Transportation of Hazardous Material	N/A	R.L. Herriford	1/18/1991
C113	S16	Intra-Laboratory Memo to C. L. Cheever, PFS re: Packaging for Transportation of Remote Handled Transuranic Waste (RH-TRU)	N/A	W. D. Jackson	3/24/1983
C114	S2, S16	Intra-Laboratory Memo to Distribution re: Procedure for Installation of Gaskets on 30 Gallon DOT 17-H Drums Used for Remote Handled Transuranic Waste (RH-TRU)	N/A	W. D. Jackson	6/9/1983
C115	S16	Intra-Laboratory Memo to W. H. Kline, Waste Management Coordinator re: Waste Packaging Criteria, Transuranic Waste, Idaho National Engineering Laboratory, Revision 1, IDO-10074	IDO-10074	W. D. Jackson	11/1/1979
C116	S9, S12	Fax to M. Heileson re: Pelletized Clay	N/A	Judd Johnson	11/20/1995
C118	N/A	Intra-Laboratory Memo to A. C. Smith, PFS re: Chemical Forms in AGHCF Transuranic Wastes	N/A	L. A. Neimark	4/12/1989
C121	S7, S16	Record of Communication with L. Neimark, A. Cohen, and F. Pausche (former AGHCF Section and Facility Manager and Records Chief Technician) re: AGHCF Radiological Characterization of RH-TRU Waste Shipped to INEEL	N/A	J. Whitworth J. Biedscheid P. Kuan R. Bhatt S. Kheriche	12/18/2001 12/19/2001
C124	S7, S14	Fax to Mark Wyco and Larry Neimark, ANL-E re: Request for ANL-E to Identify Items of ANL-W Origin	N/A	Julia Whitworth	2/21/2002
C127	S8	Fax to C. Schulz re: Radiological Health Handbook	N/A	Raj Bhatt	7/9/2003
C128	S2	Intra-Laboratory Memo to Distribution re: Revised Procedure for Determining Specimen Density by Immersion, Operations Manual Section 7.21	00 No. 41	L. A. Neimark	3/13/1995
C130	S2, S16	Intra-Laboratory Memo to Waste Handling Procedures Manual Holders re: Packaging of Intermediate Level Radioactive Waste for Disposal (Liquids)	N/A	C. L. Cheever	9/12/1979
C131	S7	Record of Communication with Larry Neimark, AGHCF re: Apparent discrepancies in the batch codes assigned to various elements as reported in different databases	N/A	M. Wyco	2/21/2002

Source Document Tracking Number	AK #	Title	Document Number	Author	Date
C132	S2, S16	Intra-Laboratory Memo to L. A. Neimark Section Manager, Irradiation Performance Section, MCT re: WMO Quality Assurance Audit (draft) dated May 26, 1988 - Finding #4	ANL-26 (11-68)	W. D. Jackson	7/11/1988
C137	S7	Email to Douglas W. Parker re: RH TRU Waste	N/A	Julia Whitworth	3/6/2002
C138	S1	Intra-Laboratory Memo to Distribution re: Hot-cell Survey	ANL-26 (11-68)	L. A. Neimark	8/20/1973
C140	S7	Fax to Julia Whitworth, IT Corporation re: Attached Letter and 99 Questions	N/A	D. Parker	5/14/2002
C142	S7, S16	Fax to Cheryl Schulz re: New C132 and Larry N. Comments	N/A	Julia Whitworth	6/18/2002
C143	S10, S12	FAX to Cheryl Schulz re: Information on AGHCF Mercury Vapor Lamps and Lighting Fixtures	N/A	Geneine Staymates	3/10/2003
C144	S7, S8, S10, S16	Record of Communication with Curtis Merks re: Specifications for filter vents used on ANL-E drums and bags	N/A	Cheryl Schulz	3/10/2003
C147	S16	Letter to Mr. John M. Schaffer, Project Director, RWMC Completion Project, Bechtel BWXT Idaho, LLC re: Additional Information to Complete Actions Associated with Preexisting Condition (PEC) 316 - Argonne National Laboratory-East (ANL-E) Transuranic Waste	EM-WM-03-055	E. J. Ziemianski	4/9/2003
C148	N/A	Interview of Terri Bray, ANL-E AGHCF Manager re: Lead Solder and First Stage HEPA Filters	ITC-POP-828599-01	Cheryl Schulz	9/1/2001
C150	S16	Intra-Laboratory Memo to C. L. Cheever, WMO re: Draft of WMO Quality Assurance Audit Report	N/A	C. A. Diokno	5/26/1988
C151	S16	Intra-Laboratory Memo to Distribution re: Procedure for Installing Vents in Pre-packaged 30-gal. TRU Waste Drums (IPS-2-09-00/Section 15.9)	N/A	L. A. Neimark	7/24/1990
C152	S9	Intra-Laboratory Memo to D.A. Donahue, MCT/IPS re: Work Plan for the Examination of LILAC Target No.19 for Battelle Pacific Northwest Laboratories	IPS-46-00-00	L. A. Neimark	5/3/1991
C153	S9	Intra-Laboratory Memo to D. A. Donahue AGHCF Supervisor re: Work Plan for WPF Tests	IPS-18-00-00	Yung Y. Liu John W. Holland	5/3/1990
C160	S9, S12	Fax Memo to Mahlon Heileson, LITCO/RWMC re: Underlying Hazardous Constituents Waste Stream ANL212951004T	N/A	Judd Johnson	11/20/1995
C161	S2, S16	Intra-Laboratory Memo to Waste Handling Procedures Manual Holders re: Packaging of Intermediate Level* Radioactive Waste for Disposal (Liquids)	ANL-26 (11-68)	C. L. Cheever	9/12/1979
C162	S2	Intra-Laboratory Memo to Distribution re: Procedure for the AGHCF Remote-Handled Waste Documentation	N/A	Ralph Ditch	10/30/1986
C302	S7	Memo from L. A. Neimark to Distribution. Subject: Revision 1 to the Work Plan for the Preparation of Fuel Rods for Return Shipment to Idaho, HFS-015-00-00, December 8, 2004.	HFS-015-00-01	L. A. Neimark	12/9/2004
C310	S11	Memo from D. A. Donahue to AGHCF Operations Personnel: Subject: New Operations Log Book	OO No. 9	D. A. Donahue	1/14/1991
C311	S2	Memo from L. A. Neimark to AGHCF Operations Personnel and IPS Staff. Subject: Operations Order No. 17: Metallography Size Limitations	OO No. 17	L. A. Neimark	8/15/1991
C312	S11	Memo from D. A. Donahue to Distribution. Subject: Record Log Books	OO No. 15	D. A. Donahue	5/30/1991
C314	S2	Memo from M. C. Billone to Irradiation Performance Section. Subject: Deletions for the AGHCF Operations Manual (EBL Documents)	IPS-435-00-00	M. C. Billone	10/28/2003
C315	S2	Memo from M. C. Billone to Irradiation Performance Section. Subject: Deletions for the AGHCF Operations Manual (PROG documents)	IPS-436-00-00	M. C. Billone	10/28/2003
C316	S2	Memo from Omesh Chopra to Distribution. Subject: Laboratory ALARA Committee Review of the Work Plan for Unloading and Transferring Irradiated Stainless Steel Mechanical Test Specimens	N/A	Chopra, Omesh	5/15/2000
C317	S2	Memo from Hanchung Tsai to JNC Program File. Subject: Data Report No. 1 - Phase II Tensile Specimen Preparation	N/A	Tsai, Hanchung	1/29/2002

Source Document Tracking Number	AK #	Title	Document Number	Author	Date
C320	S2	Memo from A. B. Cohen to Distribution. Subject: Criticality Rules for Sealed Cans	OO No. 29	A. B. Cohen	10/27/1992
C332	S4, S9	Memorandum to CCP Central Records: Assessment of Waste Material Parameters for Waste Stream ID-ANLE-S5000	N/A	B. Becker	1/3/2006
C333	S4, S9	Memo to CCP Central Records: Assessment of Waste material Parameters (WMPs) for Waste Stream AERHDM	N/A	D. B. Becker	1/2006
C334	S16	RH-TRU Characterization Facilities Presentation	N/A	Jerry O'Leary Mark Sherick	2/2/2006
C335	S16	CCP Review Comments and Resolutions for Draft A, Rev. 0, CCP-AK-ANLE-500	N/A	K. Peters S. Schafer	2/27/2006
C337	S16	ICP Controlled Document Review and Comments and Resolution Form on CCP-AK-INL-500, Revision 2	N/A	K. Peters	5/24/2006
C341	N/A	IT Shaw Discrepancy Report R4 - RH TRU Waste from ANL-E- AGHCF, Re: Possible Presence of Lead in Waste	N/A	Cheryl Shulz	7/15/2003
C343	S15	IT Shaw Discrepancy Report R6 for RH TRU Waste from ANL-E- AGHCF, Re: Batch Numbers vs. A/G numbers	N/A	Cheryl Shulz	7/15/2003
C348	S14	Evaluation of Generator Reported Radionuclides for Waste Stream ID-ANL-E-S5000	N/A	K. J. Peters	6/29/2006
C350	S16	Evaluation for Radiological Waste Stream Delineation for Waste Stream ID-ANLE-S5000	N/A	K. Peters	9/1/2006
C801	S5,S9	Memo to J. McDade from T. S, Bray, Misidentified Fuel Elements in 1982 Fuel Shipment to the AGHCF	ANL ID 17881	T. S. Bray	1/21/2004
C802	S5, S9	Memo from A. B. Cohen to J. R. McDade, Shipment of RERTR Samples to PNNL	ANL ID 27342	A. B. Cohen	7/31/1997
C803	S5, S9	Memo from A. B. Cohen to SRL Characterization File, Optical metallography and SEM Analysis of RERTR Irradiated Specimens (Task 2)	ANL ID 27348	A. B. Cohen	3/26/1997
C804	S5, S9	Memo from A. B. Cohen to SRL Characterization File, SRTC Fission-Product Collection Test 96-1	ANL ID 27352	A. B. Cohen	12/04/1996
C805	S5, S9	Memo from T. Bray to M. Goldberg, Availability of Al-Clad UAlx Plate Fuel	ANL ID 27294	T. Bray	5/25/1999
C806	S5, S9	Memo from D. E. Rasmussen to J. L. Welker, A. Boltax, J. H. Bottcher, and M. J. D. B. Lambert, Fuel Pin Certification Data for Forty-Nine (49) SPA Fuel Pins for the DOE/PNC Phase II ORT Program	ANL ID 41068 Letter ID 8952185	D. E. Rasmussen	4/07/1989
C807	S5, S9	Memo from Richard McKnight to George Fenske regarding A/G 505A, 504B, 460A, 498A, 498B, 497C	ANL ID 41180	R. D. McKnight	2/19/1996
C808	S5, S9	Memo from Kou Hira to L. A. Neimark, Progress of OTT Program During the Term of the Eighth Assignee	ANL ID 2890	L. A. Neimark	2/12/1993
C809	S5, S9, S15	Memo from L. A. Neimark to M. H. Derbidge, SNF Inventory in the AGHCF	ANL ID 19024	L. A. Neimark	5/6/1996
C810	S5, S9, S14, S15	Logbook for receipt & verification; GE's loading; GE's manifest; GE's instructions to carrier; GE transmittal to ANL-SPM; ANL-ESH/HP documentation; ANL-SPM receipt documentation of cask contents; AGHCF Transfer Slip	ANL ID 17811	L. A. Neimark	11/12/1997
C811	S5, S15	Memo from Terri Bray from A. B. Cohen, Information on AGHCF Materials Irradiated in the State of Idaho	ANL ID 17222	T. S. Bray	1/6/2003
C812	S2	Memo from T. S. Bray & R. V. Strain to M. Goldberg, Characterization of N-Reactor Fuel Samples	N/A	T. S. Bray; R. V. Strain	10/4/2000
C813	S7	Email from Mike Billone to George Fenske (ANL) responding to Limerick Fuel Discharge date request.	ANL ID 41167	Mike Billone	6/24/2002
C816	S7	Email from Wade Bickford to George Fenske, Request from ANL to Characterize MK-22 Scrap	ANL ID 41204	Wade Bickford	3/27/2006
DR010	S16	Discrepancy Regarding the Volume of 7-Gallon Waste Cans	N/A	K. Peters	6/7/2006
DR011	S16	Waste Requisition and Video Discrepancies	N/A	L. Price	6/13/2006
DR012	S16	Discrepancy Report for Duplicate Can ID# in Waste Streams ID-ANLE-S5000 (Drum 809) and AERHDM (Drum 813)	N/A	K. Peters	8/17/2006

Source Document Tracking Number	AK #	Title	Document Number	Author	Date
DR014	N/A	Discrepancy Report for the RCRA Assignment of EPA HWNs to Waste Stream ID-ANLE-S5000	N/A	K. Peters	11/16/2006
P001	S2, S16	AGHCF Operations Manual	IPS-2-00-00	Argonne National Laboratory	9/10/1990
P002	S16	Central Characterization Project Acceptable Knowledge Summary Report for Argonne National Laboratory-East Contact-Handled TRU Waste Facility Maintenance and Laboratory Operations	CCP-AK-ANLE-001	Central Characterization Project (CCP)	12/31/2003
P003	S2, S16	Procedure for Solidification of Liquid Radioactive Waste MCT Alpha-Gamma Hot Cell Facility (AGHCF)	N/A	D. A. Donahue	6/10/1987
P004	S2, S3, S8, S12	Safety Analysis Report for the Alpha-Gamma Hot Cell Facility	M4000-0025-SA-01	W. D. Jackson	12/6/1982
P006	S16	Safety Analysis for Twenty Year Retrievable Storage of Intermediate Gamma Level Transuranic Waste	N/A	W. D. Jackson	6/1/1976
P007	S16	Transport, Handling, and Interim Storage of Intermediate-Level Transuranic Waste at the INEL	TREE-1172	John C. Metzger Alan M. Snyder	9/1/1977
P009	S16	TRU-RH Waste Certification Plan for Waste Management Operations	J0306-0033-SA	Ralph W. Ditch Gary E. Griffin	11/10/1986 and 4/16/1991
P023	S12	Argonne National Laboratory-East Remote Handled Waste	EDF-RWMC-759	W. M. Heilseson	8/29/1994
P024	S16	Certification of Remote-Handled Transuranic Waste at the Tan Hot Cells	EDF-RWMC-424	H. D. Welch	9/28/1990
P030	S16	Radiological Acceptance Knowledge Report for Drums 728 through 737	INEEL/EXT-02-00527	Julia Whitworth	7/31/2002
P031	S3, S16	Alpha-Gamma Hot Cell Facility (AGHCF) Safety Analysis Report	IPS-221-00-00	A. B. Cohen	1/1/1998
P032	N/A	Procedure for Sorting Remote-Handled TRU Waste (30-Gallon Intermediate-Level Waste)	N/A	Argonne National Laboratory	1/7/1987
P033	S2	AGHCF Operations Manual: 15.3 Procedure for Operation of the Fuel Behavior Test Apparatus (FBTA)	IPS-2-03-01	Argonne National Laboratory	3/11/1992
P034	S2	AGHCF Operations Manual: 15.6 Procedure for Acid Cleaning a Zinc-Bromide Shielding Window	IPS-2-06-00	W. C. Kettman	4/16/1996
P035	S16	AGHCF Operations Manual: 15.9 Procedure for Installing Vents in Pre-packaged 30-gal. TRU Waste Drums	IPS-2-09-00	D. A. Donahue	7/24/1990
P036	S2, S16	AGHCF Operations Manual: 15.10 Procedure for Repackaging 30-gal. TRU Waste Drums	IPS-2-10-00	Argonne National Laboratory	9/14/1990
P037	S2	AGHCF Operations Manual: 15.12 Procedure for preparing Window Cavity for Modified Window Tank Inspection	IPS-2-12-00	Daniel J. Evans	11/14/1990
P038	S2	AGHCF Operations Manual: 15.13 Procedure for Installing a Modified D-301 Window Tank in a Type A Window Cavity	IPS-2-13-01	D. A. Donahue	12/7/1990
P039	S2	AGHCF Operations Manual: 15.15 Procedure for Installing Lead Shielding Around a Tank Insert in an AGHCF Window Cavity	PS-2-15-00	Argonne National Laboratory	2/1/1991
P040	S2	AGHCF Operations Manual: 15.17 Procedure for Changing an In-line Filter in a Radioactive Gas Collective System	IPS-2-17-00	Argonne National Laboratory	11/8/1991
P041	S16	Application of Advanced Liquid Metal Reactors to the Destruction of Radioactive Wastes	WHC-SA-1075-FP, DE91 017808	R. A. Kamesky K. D. Dobbin D. P. Jordheim J. A. Rawlins D. W. Wootan	8/1/1991
P042	S2	AGHCF Operations Manual: 15.20 Procedure for Conducting Plenum-Unplugging Tests on ORT Mixed-Oxide Fuel Pins in the Whole-Pin Furnace System	IPS-2-20-00	G. R. Fenske	1/11/1994
P043	S2	AGHCF Operations Manual: 15.22 Procedure for Conducting Tests on ORT Mixed-oxide Fuel Pins in the Whole-Pin Furnace System	IPS-2-22-01	G. R. Fenske	3/16/1994
P044	S2	AGHCF Operations Manual: 15.24 Procedure for Testing the AGHCF Peripheral High-Gamma Alarm System	IPS-2-24-00	Argonne National Laboratory	3/24/1995

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P046	S2	AGHCF Operations Manual: 15.27 Removal of Outer Glass from a Type B or C Shielding Window	IPS-2-24-00	W. C. Kettman	4/16/1996
P047	S2	AGHCF Operations Manual: 15.28 Painting a Drained Shielding Window Tank Cavity	IPS-2-24-00	W. C. Kettman	4/16/1996
P048	S2	AGHCF Operations Manual: 15.29 Procedure for Installation of Cold-side Gaskets	IPS-2-24-00	W. C. Kettman	4/16/1996
P050	S16	LWR Fuel Reprocessing and Recycle Program Quarterly Progress Report	ORNL-TM-5660	B. L. Vandra	9/30/1976
P052	S16	Test and Evaluation Document for the US DOT Specification 7A Type A Packaging	http://www.hanford.gov/pss/t&p	N/A	N/A
P053	S16	Radioactive Waste that Does Not Conform to Disposal Site Acceptance Criteria	ANL-E PFS-WMO QP 15.1	N/A	7/17/1990
P054	S2, S16	Procedure for Remote Outloading of RH-TRU Waste at the AGHCF	M4000-00320SA-00	W. D. Jackson	8/1/1983
P055	S2, S16	Waste Handling Procedures	N/A	C. L. Cheever	9/18/1986
P057	S2	AGHCF Operations Manual: 15.4 Procedures for Conducting Tests in the Whole-Pin Furnace System	IPS-2-04-01	Yung. Y. Liu	5/10/1990
P060	N/A	AGHCF Operations Manual: 7.0 Standard Examination Procedures	IPS-2-00-00	N/A	6/20/1989
P061	N/A	Examination Techniques for High Burnup U-Pu Elements for Fast Breeder Reactors	ANL-rhs-912A	B.J. Koprowski F. L. Brown	6/30/1967
P062	N/A	AGHCF Operations Manual: 7.15 Preparation of Metallographic Specimens	IPS-2-00-00	Argonne National Laboratory	6/20/1989
P063	S2, S14, S16	SPM Procedure for High Gamma Transuranic Waste Handling from Alpha Gamma Hot Cell Facility (AGHCF) Bldg. 212, MSD, ANL-E	N/A	N/A	1/20/1975
P064	S16	US Atomic Energy Commission AEC Manual: Chapter 0511 Radioactive Waste Management	AEC 0511-01	N/A	9/19/1973
P067	S2, S16	Procedure for High Gamma Level Transuranic Waste Handling At the AGHCF, MSD, ANL-E	M1002-0047-SP-00	N/A	12/30/1974
P068	S2	AGHCF Operations Manual: 7.14 Mounting Metallographic Specimens	IPS-2-00-00	N/A	3/29/1990
P069	S2	AGHCF Operations Manual: 7.13 Fuel Element Sectioning	IPS-2-00-00	N/A	3/29/1990
P070	S2	AGHCF Operations Manual: 7.21 Specimen Density by Immersion	IPS-2-00-00	N/A	6/20/1989
P071	S16	Specification for AGHCF Waste Removal Vinyl Pouch 17¼ in.	M1002-0039-SF-00	Materials Science Division	9/12/1973
P073	S2, S14, S16	AGHCF Operations Manual: 8.0 Administrative Controls	IPS-2-00-00	N/A	12/20/1995
P096	S16	Internal Technical Report Waste Characterization for INEL Remote-Handled/Special-Case Stored Transuranic Wastes	WM-PD-85-014	D.A. Peterson	11/1985
P173	S16	Transuranic Waste Baseline Inventory Report	DOE/CAO-95-1121	U.S DOE	6/1/1996
P229	S16	Criteria for Packaging Transuranic Waste for Receipt at the Idaho National Engineering Laboratory Radioactive Waste Management Complex Offsite Generated Waste	IDO-10074	Idaho Fuel Cycle Division Idaho Operations Office	6/1978
P230	S6	EG&G Internal Technical Report, Inventory Analysis of Stored Transuranic (TRU) Small Waste at the Radioactive Waste Management Complex (RWMC)	WM-PD-90-003	C. J. Barnard	8/31/1993
P232	S16	Idaho National Engineering Laboratory Reusable Property, Recyclable Materials, and Waste Acceptance Criteria	DOE/ID-10381	DOE Idaho Operations Office	10/10/1995
P236	S16	Draft RH-TRUCON, Content Codes ID 325A, 325B, 325C, 325D	DOE/WIPP 90-045	DOE/WIPP	8/2001
P301	S14	Verification and Validation Requirements for the GHCF Fissile Inventory Management System (FIMS) 4.0	HFS-004-00-00	T. S. Bray	9/15/2003

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P307	S2	Standard Operating Procedure - Analysis and Calculation of Gamma Radioactivity	SOP: ACL-084	Vivian S. Sullivan	3/25/2003
P308	S2	Standard Operating Procedure - Procedure for the Determination of Trace Elements in Solution by Inductively Coupled Plasma Mass Spectrometry	WMRD-SOP-034	Waste Materials Research Department	8/13/2003
P309	S2	Standard Operating Procedure: Alpha Scan for Actinides Utilizing Extraction Chromatography	SOP: ACL-258	Vivian S. Sullivan	8/8/2002
P310	S1, S5, S9	Design, Operation, and Performance Data for High Burnup PWR Fuel from the H. B. Robinson Plant for Use in the NRC Experimental Program at ANL	EMF-2528	E. J. Ruzauskas	4/2001
P314	S2	Standard Operating Procedure - Obtaining Gamma Spectra for Samples in a Calibrated Geometry Using the Ortec Gamma Vision Program	SOP: ACL-259	Vivian S. Sullivan	3/25/2003
P320	S2	Management Plan for Irradiation Performance Section Facilities, Energy Technology Division	IPS-417-00-00	H. Drucker Director EEST	10/14/2002
P321	S2	Work Plan for Replacing Water/Acid Solution in K-2 Cell Windows with Zinc Bromide Solution	IPS-419-00-00	S. Baumann	12/3/2002
P322	S1, S2, S16	Design of Shielding Containers to Store Radioactive Samples within the K2 Hot Cell in Building 200	IPS-420-00-00	Robert Daum	1/20/2003
P324	S2	Shielding of Wall Ports in K2 Hot Cell	IPS-422-00-00	Robert Daum	1/22/2003
P325	S10	Functional Requirements for Hydrogen-Charged Materials to be Used as Standards for Hydrogen Content Determination	IPS-424-00-00	Robert Daum	1/22/2003
P326	S5	Work Plan for Determining the Effectiveness of Defueling a Short Cladding Segment from High Burnup In-cell LOCA Test Sample ICL#2 in Room-Temperature Nitric Acid	IPS-428-00-00 and IPS-428-00-01	Y. Yan	8/6/2003 and 9/16/2003
P327	S2	Procedure for Thinning Gauge Sections of Tensile Specimens after Tensile Tests	IPS-429-00-00 and IPS-429-00-01	Hanchung Tsai	8/14/2003 and 8/26/2003
P329	S2	Feasibility Study for Defueling Irradiated Cladding Using Non-Volatile Methods	IPS-432-00-00	Robert Daum	12/2/2003
P336	S2	Operation Procedure for Rodlet Pressurization and Leak Checking - Part 1. Ex-cell Mockup Tests	IPS-441-000-000	Tatiana Burtseva	4/12/2004
P342	S2	International Conference on the Physics of Nuclear Science and Technology, Volume 2: Incorporation of Measurement Data from Irradiated Fuel Samples ingot the MTG System at FCF	ANL/RA/CP-95623	R. D. McKnight	10/5-8/1998
P343	S5, S9	Proceedings of the International Conference on the Physics of Nuclear Science and Technology, Volume 2: Comparison of Measured and Calculated Composition of Irradiated EBR-II Blanket Assemblies	N/A	Grimm, Hill, Khalil, McKnight, Stillman, Toppel	10/5-8/1998
P344	S5	Analysis of Spent Nuclear Fuel Sample A/G 574B2 (Limerick Reactor) to Determine Selected Isotopes and Estimate Fuel Burnup	N/A	D. G. Graczyk	4/2003
P349	S5, S9	ANL Calculational Methodologies for Determining Spent Nuclear Fuel Source Term	ANL/RA/CP-101396	R. D. McKnight	4/6/2000
P355	S5	Spent Fuel Fissile Mass Verification at the ANL-West Radioactive Scrap and Waste Facility	N/A	Smith, Mosby, Aumeier, Klann, Hill	2/25/2001
P358	S2	Procedure for Changing the Glove Rings in the Glove Niche: OO No. 42	OO No. 42	A. B. Cohen	3/15/1995
P359	S6, S15	Tracking of Non-Accountable Samples in the AGHCF	OO No. 86	T. Bray	10/15/2004
P365	S16	Remote Outloading of RH TRU Waste from Cell - Operations Order Revisions to Manual Procedure 11.5.7.	OO No. 46	L. A. Neimark	10/25/1995
P367	S2	Radioactive Gas Release Approval Form	OO No. 36	Adam Cohen	6/3/1994
P368	S16	Verification of Contents of Primary RH TRU Waste Containers	OO No. 21	A. B. Cohen	3/16/1992 and 8/7/1996
P372	S5	Review of Zirconium-Zircaloy Pyrophoricity	RHO-RE-ST-31 P	T. D. Cooper	11/1984

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P377	S8	Inventory of Power Plants in the United States as of January 1, 1998	DOE/EIA-0095(98)	Energy Information Administration	12/1998
P378	S16	Argonne National Laboratory-East Building 212 Energy Technology Division Alpha-Gamma Hot Cell Facility Preliminary Decontamination and Decommissioning Plan	HFS-003	T. S. Bray	10/08/2003
P379	S3	Design Basis Threat Impact Assessment and Implementation Plan for the Argonne Illinois Site	N/A	ANL	12/19/2003
P380	S3, S16	Alpha-Gamma Hot Cell Facility (AGHCF) Safety Analysis Report	IPS-221-00-01	ANL	10/2001
P383	S9, S12	Validation Results Based on the Spent Fuel Demonstration Program at FCF	ANL/RA/CP-101397	R. D. McKnight	4/6/2000
P385	S2	Quality Assurance Plan for the Building 212 Irradiated Materials Laboratory (IML)	IPS-312-00-00 and IPS-312-00-01	T. Bray	8/11/1999 and 8/9/2001
P386	S2	CRIEPI Posttensile SEM Fractography, Supplemental Instruction SI 197 for Rod/Specimen 583D1 (S1T4), 583E1 (S1T5) in accordance with IPS-311-00-00	SI 197	H. Tsai	7/13/2001
P387	S2	Prep of Creep Samples, Supplemental Instruction 340 of Rod/Specimen A/G 611C16, A/G 611C17, A/G 592C in accordance with IPS-393-00-02	SI 340	H. Tsai	2/25/2003
P389	S2	AGHCF Supplemental Instructions for IRIS-11, A/G 558 in accordance with IPS-295-00-00	IPS-295-00-00	L. A. Neimark	12/1/1998
P392	S2	Procedures for Conducting Tests in the Whole-Pin furnace System (IPS-2-04-00)	IPS-2-04-00 and IPS-2-04-01	L. A. Neimark	1/22/1990 and 5/22/1990
P393	S2	Quality Assurance Plan for Irradiation Performance Section Activities	IPS-1-00-01	ANL	6/1989
P394	S13	Work Plan for the Preparation of Fuel Rods for Return Shipment to Idaho	HFS-015-00-00	L. A. Neimark	12/8/2004
P399	S2	Cask Handling at the AGHCF	HFS-OPS-101	ANL	4/6/2001 and 12/14/2004
P401	S2, S14, S15	Movements and Transfers In or Out of Material Balance Area	AGHCF-OPS-103	ANL	7/9/2001
P402	S2	Loading and Unloading of Shielded Casks	AGHCF-OPS-104	ANL	2/15/2001
P403	S2	Movement of Materials Through the Alpha Barrier	AGHCF-OPS-105	ANL	2/9/2001
P404	S2	Movement of Material In-Cell	AGHCF-OPS-106	ANL	2/15/2001
P405	S2, S14, S15	Nuclear Materials Management	AGHCF-OPS-107	ANL	7/16/2001
P406	S2, S14, S15	Nuclear Materials Accountability	AGHCF-OPS-108	ANL	2/9/2001
P407	S2	Criticality Control	AGHCF-OPS-109	ANL	4/5/2002
P408	S14, S15	Special Materials Group (SPM) Documentation	AGHCF-OPS-110	ANL	2/9/2001
P409	S2, S14	Nuclear Materials Management Safeguards	AGHCF-OPS-111	ANL	4/6/2001
P412	S16	Remote Handled Transuranic Waste Sorting and Packaging	AGHCF-OPS-302	ANL	7/9/2001 and 3/29/2005
P413	S2, S4, S16	30 gallon Remotely Handled Transuranic Waste Drum Assembly	AGHCF-OPS-303	ANL	1/19/2001 and 7/9/2001
P415	S2, S4, S16	RH-TRU 30-gal Waste Drum Outloading	AGHCF-OPS-305	ANL	6/7/2002
P416	S16	Chemical and Other Regulated Waste Management	AGHCF-OPS-306	ANL	10/31/2001

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P433	S10	Industrial Hygiene and Environmental Health	HFS-POLICY-401	ANL	3/29/2005
P456	S2	Electron Beam Laboratory User's Guide	AGHCF-EBL-100	ANL	6/11/2001
P457	S2	Oxygen Analyzer Calibration, Area 4	AGHCF-EBL-101	ANL	6/15/2001
P463	S2	Emergency Response to an In-cell Fire	HFS-EMER-200	ANL	10/2/2003
P466	S2	Procedure for Positioning the AGHCF Movable Gamma Shield	HFS-EMER-300	ANL	10/2/2003
P469	S2, S16	Changing an In-line Filter in a Radioactive Gas Collective System	AGHCF-MAINT-100	ANL	1/31/2001
P470	S2	Alpha-Gamma Hot Cell Facility Operations Manual. ANL-E Energy Technology, Irradiation Performance Section. Removing Master Manipulator at Work Station 5.	AGHCF-MAINT-200	N/A	1/31/2001
P471	S2	Removal and Installation of Model A Slave Manipulators	AGHCF-MAINT-201	ANL	1/19/2001
P472	S2	Manipulator Movement, Cleaning and Repair	AGHCF-MAINT-202	ANL	11/26/2002
P473	S2	Changing Glove Rings in AGHCF Glove Niche	AGHCF-MAINT-300	ANL	1/31/2001
P474	S2	Semi-annual HFS Facilities Glove and Pouch Inspection	HFS-MAINT-301	ANL	8/19/2003
P475	S2, S16	Acid-Clean Windows	HFS-MAINT-501	ANL	8/20/2003
P476	S2	Zinc-Bromide Shielding Windows Argon Gas Blanket Maintenance	HFS-MAINT-502	ANL	9/26/2005
P477	S2	Removing Window Glass Type A	HFS-MAINT-503	ANL	11/20/2003
P478	S2	Preparation of a Type A Tank-in-a-Tank Replacement Window Assembly	HFS-MAINT-505	ANL	8/20/2003
P479	S2	Removal of Outer Glass From a Type B or C Shielding Window	AGHCF-MAINT-508	ANL	1/31/2001
P480	S2	Painting a Drained Shielding Window Cavity	AGHCF-MAINT-509	ANL	12/15/2000
P481	S2	Installation of Coldside Gaskets	AGHCF-MAINT-510	ANL	12/15/2000
P482	S2	Installation of Outer Glass Type B or C Shielding Window Tank	AGHCF-MAINT-511	ANL	1/31/2001
P483	S2	Preparing Window Cavity for Modified Window Tank Insert	HFS-MAINT-512	ANL	8/20/2003
P484	S2	Installing a Type A "Tank-in-a-Tank" Window Assembly	HFS-MAINT-513	ANL	8/20/2003
P485	S2	Procedure for Installing Lead Shielding Around a Tank Insert in an AGHCF Window Cavity	HFS-MAINT-514	ANL	8/20/2003
P486	S2, S16	Hydroxylamine Hydrochloride Addition to Zinc Bromide Solution	HFS-MAINT-515	ANL	3/14/2005
P487	S2	Installation of Lead-Glass Glovebox Window Panes	HFS-MAINT-516	ANL	9/5/2003
P489	S2	Work Plan for Decontaminating the CTA after the Completion of the ANL/JNC Tensile Testing	IPS-313-00-00 and IPS-313-00-01	H. Tsai	7/6/1999
P490	S2	Work Plan for Diameter Measurements of Irradiated V-alloy Creep Specimens from the HFIR-2J Experiment	IPS-314-00-00	H. Tsai	7/16/1999
P491	S2	Revised Work Plan for Diameter Measurements of Irradiated V-alloy Creep Specimens from the HFIR RB-12J Experiment	IPS-314-00-01	Hanchung Tsai	9/13/1999
P492	S2	Procedure for Cutting Uranium Metal or Uranium Alloys on the South Bay Diamond Bandsaw in the South Hood, Room F-206	IPS-315-00-00	R. V. Strain	7/20/1999
P493	S8	Specification for Plastic Tunnel Suit, Alpha-Gamma Hot Cell Facility	IPS-316-00-00	Terri Bray	8/12/1999

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P507	S2	Photography and Met of Weld Samples, Supplemental Instruction 252 for Rod/Specimen A/G 625A 1 through 14 in accordance with IPS-327-00-00	SI 252	Bob Strain	12/13/2001
P508	S2	Work Plan for Cutting Ring Stretch Specimens from Big Rock Point Cladding with the EDM in Cell 4 of the IML	IPS-327-00-00, -01, -02	Robert Daum	12/7/1999; 3/22/2000; 3/20/2001
P517	S6, S14	Functional Requirements for the AGHCF Fissile Inventory Management System (FIMS) 3.0 Including Validation and Verification Requirements	IPS-334-00-00	T. Bray	1/7/2000
P520	S2	Work Plan for the Examination of Fuel Nano-plates from the RERTR-3 Experiment in ATR; and Supplemental Instruction 305 for PIE of RERTR-3 on Rod/Specimen A/G 580AB, and Supplemental Instruction 286 Repolish Sample and Specimen Ring for EMPA	IPS-338-00-00 and SI 305	R. V. Strain	1/20/2000 and 4/5/2002
P521	S2	Work Plan for Assessment of Auger Analyzer: Examination of NERI Stainless Steel Samples	IPS-339-00-00	R. V. Strain	1/25/2000
P522	S5	Work Plan for Blister Tests of Micro-plates from the RERTR-2 Irradiation	IPS-341-00-00	R. V. Strain	2/1/2000
P539	S2	Work Plan for Examination and Testing of Limerick Rod F9, Mid Segment, A/G 574C	IPS-357-00-00	H. Tsai	6/15/2000
P540	S2	Work Plan for Preparation of Low-Oxygen Vanadium Alloy Test Specimens	IPS-358-00-00	H. Tsai	6/26/2000
P545	S2	Work Plan for End-fitting to Cladding Welding for LWR Fuel Rod Segments and Supplemental Instruction 133	IPS-364-00-00	R. V. Strain	10/3/2000
P546	S2	Work Plan for Conducting Melt Dissolution Tests on Al-clad Fuels and Supplemental Instruction 184	IPS-366-00-00	T. S. Bray	11/7/2000
P548	S2	Work Plan for Conducting the Zn-Zircaloy Interaction Tests	IPS-368-00-00	H. Tsai	11/30/2000
P553	S2	Procedure for the Removal, Repair, and Replacement of Valves in the Vacuum System for the ETEC Scanning Electron Microscope	IPS-378-00-00	R. V. Strain	4/13/2001
P564	S2	Preparation and Examination of Cladding Tensile Specimens	IPS-390-00-00	Rob Daum	9/10/2003
P574	S2	Procedure for the Repair of the Driver Screw Mechanism of AGHC Shield Door Number 2, Supplemental Instruction 354	IPS-401-00-00 and IPS-401-00-01	D. Donahue	1/8/2002 and 1/11/2002
P575	S5	Work Plan for the Examination of Fuel Plates from the RERTR-4 Experiment in ATR, Revision 1	IPS-400-01-00	R. V. Strain	2/22/2002
P578	S2	General Work Plan for Preparing Segments of Fuel Cladding for Programmatic Investigations and Supplemental Instruction 303	IPS-405-00-00	R. Daum	2/28/2002
P600	S2	Standard Operating Procedure: Preparation of Samples for Gamma Spectrometry Analysis	SOP: ACL-072	W. Elane Streets	3/25/2003
P601	S2	Standard Operating Procedure: Gross Alpha and Beta Radioactivity	SOP: ACL-095	R. B. Holtzman W. Elane Streets	3/31/2003
P602	S5	Analysis of Three Mile Island and Quad Cities Spent Nuclear Fuel Samples	N/A	Stephen F. Wolf Delbert L. Bowers James C. Cunnane	4/28/1999
P604	S2, S16	Criticality Hazards Control Statement, Alpha-Gamma Hot Cell Facility, Special Facility FF12, and Addendum 1, Use of a Safe Vac Vacuum Cleaner in Alpha-Gamma Hot Cell Facility Areas 1 and 3	IPS-6-00-09; IPS-6-00-10; IPS-6-01-10	James A. Morman	3/8/1990; 7/2001
P607	S5	Initial Assessment of Radiation Behavior of Very-High-Density Low-Enriched-Uranium Fuels	ANL/TD/CP-100148	G. L. Hofman M. K. Meyer J. L. Snelgrove M. L. Dietz R. V. Strain K. H. Kim	1999
P612	S16	ILTSF Drum Retrieval Completion Report	ICP/EXT-05-00886, Project No. 23048	Fairfield Service Group	1/2006
P613	S16	Review of CY-2000 Retrieved RH-TRU Drums for Water	EDF-7045	ICP	6/13/2006

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P801	S5, S9	Oxidation of Spent Fuel Between 250° and 360°C	RP2062-10-1; TV-48296A	R. E. Einziger R. V. Strain	1/1984
P802	S5, S9	Extended Burnup Demonstration, Reactor Fuel Program, Pre-Irradiation Characterization and Summary of Pre-Program Poolside Examinations, Big Rock Point Extended Burnup Fuel	XN-NF-80-40; UC-78; DOE/ET/34006-3	C. A. Exarhos L. F. Van Swam F. P. Wahlquist	12/1981
P803	S5, S9	Extended Burnup Demonstration, Reactor Fuel Program, Poolside Fuel Examination, Big Rock Point Extended Burnup Fuel	XN-NF-81-62; UC-78; DOE/ET-34006-10	C. A. Exarhos L. F. Van Swarn G. A. Sofer	12/1983
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P805	S5, S9	Summary Report on the HFED Miniplate Irradiations for the RERTR Program	ORNL-6539	R. L. Senn	4/1989
P806	S5, S9	Evaluation of Existing Technology Base for Candidate Fuels for the HWR-NPR	ANL/NPR-93/002; UC-940	J. L. Snelgrove G. L. Hofman R. L. Frontroth W. R. McDonnell H. B. Peacock R. F. Whitacre G. L. Copeland	2/1993
P807	S5, S9	Proceedings of the International Meeting on Reduced Enrichment for Research and Test Reactors, 24-27 October, 1983, Tokai, Japan	Jaeri-M 84-073	Keichiro Tsuchihashi	5/1984
P808	S5, S9	Memo from Garkisch to Kazuya Yamamoto transmitting the SPA-1A Data Report, Data Report, SPA-1A Test Irradiation in EBR-II	NDP-94-028 Doc ID: WCAP-14154, WAES-TR-94-001	H. D. Garkisch K. Yamamoto	9/1994
P809	S5, S9	Review of Behavior of Mixed-Oxide Fuel Elements in Extended Overpower Transient Tests in EBR-II	ANL/ET/CP 83008; Conf-950426--5	H. Tsai L. A. Neimark S. Nagai N. Nakae	10/1994
P810	S5, S9	Memo from H. D. Garkisch to Seiichiro Maeda transmitting SPA-2 Data Report, Data Report SPA-2 Test Assembly Irradiation in EBR-II	Rpt: WCAP-14184, WAES-TR-95-001; NDP-95-032	H. D. Garkisch S. Maeda G. W. Kuhns	9/1995
P811	S2, S5, S9	IPS-166-00-00, Work Plan for the Examination of Tritium Breeding Ceramic materials from the FUBR Experiment in EBR-II (S/A X415A)	IPS-166-00-00	L. A. Neimark	5/18/1995
P812	S5, S9	Fusion Materials, Semiannual Progress Report for Period Ending June 30, 1999	DOE/ER-0313/26	Unknown	6/30/1999
P813	S2, S5	IPS-282-00-00, Work Plan for Conducting Melt Dilution Tests on Al-clad Fuels	IPS-282-00-00	A. B. Cohen	5/18/1998
P814	S5	Paper: Postirradiation Examination of High-Density Alloy Dispersion Fuels	ANL ID 29329	S. L. Hayes M. K. Meyer G. L. Hofman R. V. Strain	10/1/1998
P815	S5, S15	Paper: Initial Assessment of Radiation Behavior of Very-High-Density Low-Enriched-Uranium Fuels	ANL ID 29330	G. L .Hofman M. K. Meyer J. L. Snelgrove M. L. Dietz R. V. Strain K. H. Kim	10/1999
P816	S2, S5	IPS-269-04-01, Metallography on an Additional RERTR-1 Microplate, A/G 549V	IPS-269-04-01	R. V. Strain	9/25/1998
P817	S2, S5	Miscellaneous IPS Work Instructions: IPS-292-00-00 through IPS-292-09-00	IPS-292-00-00 thru IPS-292-09-00	R. V. Strain	8/1998 - 11/1999
P818	S2	IPS-292-02-00, Continuation of Metallography on RERTR-2 Microplates	IPS-292-02-00	R. V. Strain	11/10/1998

Source Document Tracking Number	AK #	Title	Document Number	Author	Date
P819	S2	IPS-306-00-00, Work Plan for the Characterization of N-Reactor Fuel Specimens (A/G 562)	IPS-306-00-00	T. Bray	3/9/1999
P820	S2	IPS-329-00-00, Work Plan for the Preparation of Unirradiated Al-clad Fuel Specimens for CMT	IPS-329-00-00	T. S. Bray	12/2/1999
P821	S5, S9	Metallographic Examination of Damaged N Reactor Spent Nuclear Fuel Element SFEC5,4378	PNNL-11438; UC-602	S. C. Marschman T. D. Pyecha J. Abrefah	8/1997
P822	S2	IPS-338-00-00, Work Plan for the Examination of Fuel Nano-Plates from the RERTR-3 Experiment in ATRANL ID 6811	IPS-338-00-00	R. V. Strain	1/20/2000
P823	S2	Work Plan for Preparing the Surry Rod Sections for Shipment	IPS-368-00-00	Hanchung Tsai	11/27/2000
P824	S5	Examination of Spent PWR Fuel Rods After 15 Years in Dry Storage	NUREG/CR-6831 ANL-03/17	R. E. Einziger H. Tsai M. C. Billone B. A. Hilton	9/2003
P825	S2	Work Plan for the Initial Characterization and Sectioning of Surry Rod FA-434 (A/G 591)	IPS-373-00-00	Hanchung Tsai	3/20/2001
P826	S2	Revised Work Plan for the Examination of Fuel Plates from the RERTR-5 Experiment in ATR	IPS-375-01-00	R. V. Strain	4/12/2001
P827	S5	Recent Observations at the Postirradiation Examination of Low-Enriched U-Mo Miniplates Irradiated to High Burnup	ANL ID 29331	G. L. Hofman Y. S. Kim M. R. Finaly J. L. Snelgrove S. L. Hayes M. K. Meyer C. R. Clark	10/5/2003
P828	S5	Design, Operation, and Performance Data for High Burnup PWR Fuel from the H. B. Robinson Plant for Use in the NRC Experimental Program at ANL	EPRI 1001558	E. J. Ruzauskas K. N. Fardell	4/2001
P829	S2	Revised Work Plan for the Examination of Fuel Plates from the RERTR-4 Experiment in ATR	IPS-400-01-00	R. V. Strain	N/A
P830	S5	Irradiation and Evaluation of Mixed Oxide Fuel Performance at the Big Rock Point Reactor	ANL ID 13901	C. E. Johnson R. R. Heinrich L. A. Neimark J. E. Sanecki C. E. Crouthamel M. H. Campbell	11/1987
P831	S5	Characterization of Irradiated Fuel From the Big Rock Point Reactor	ANL ID 13093	C. E. Crouthamel M. H. Campbell	12/1982
U002	S16	Draft Proposal For: Alpha-Gamma Hot Cell Facility Waste Management Plan	N/A	N/A	N/A
U004	S16	Remote-Handled Waste Content Codes Assessed	N/A	N/A	N/A
U005	S6, S8	Data and Process Knowledge Assessment for Remote-Handled Transuranic Waste Stored at the Radioactive Waste Management Complex-Preliminary Draft	N/A	C. R. Tyler	9/1/1994
U010	S16	Closeout Mtg w Wilkinson	N/A	N/A	10/18/1992
U015	S4, S16	RH-TRU 1995, Book 5, Drums 798 to 809.	N/A	N/A	1/1/1995
U017	S4, S15, S16	RH-TRU 1994, Book 8, Drums 778 to 797	N/A	N/A	N/A
U018	S4, S15, S16	RH-TRU 1993, Book 7, Drums 748 to 777	N/A	N/A	N/A
U019	S4, S15, S16	RH-TRU 1991-1992, Book 6, Drums 728 to 737	N/A	N/A	N/A
U020	S16	Book 5, Venting of 30-Gallon TRU Waste Drums, 1990	N/A	Dennis	N/A
U021	S4, S15	RH-TRU 1990, Book 4, Drums 687 to 727	N/A	N/A	N/A
U022	S4, S15, S16	RH-TRU 1985-1987, Book 3, Drums 617 to 686	N/A	N/A	N/A

Source Document Tracking Number	AK #	Title	Document Number	Author	Date
U027	S9	Report of Analytical Results	CMT-84 (10-84)	N/A	8/1/1990
U033	S16	Stored, Disposed, or Processed Solid Radioactive Waste Form: from "ILTSF ANL-E RH-TRU Waste Info"	ID F 5820.2 (Rev. 02-89)	Dan McNanee	11/15/1995
U036	S9	Acceptable Knowledge for ANL RH-TRU Waste	N/A	R.T. Klann K. N. Grimm B. A. Brush	N/A
U041	S4, S16	Videotape Logs	N/A	Cheryl L. Schulz	9/15/2001
U042	S4, S15, S16	RH-TRU 1976 to 1982, Book 1	N/A	N/A	N/A
U043	S4, S15	RH-TRU 1982 to 1985, Book 2	N/A	N/A	N/A
U057	S2	General Data and Sectioning Information from AG Book for AG# 427B, F, G, H, J, K	N/A	Yung Y. Liu	N/A
U060	S2	General Data and Sectioning Information from AG Book for AG# 429A, B, C, D	N/A	N/A	N/A
U065	S2	Hand written Notes: One titled "Decon & Repair Procedures for Cleaning and Repairing a Manipulator"	N/A	N/A	3/24/1987
U066	N/A	Addendum Criticality Safety Training Quiz 7/17 or 7/21/75	N/A	N/A	7/21/1975
U068	N/A	Information on Fuel Elements DP-15, DP-17, DP-27, DP-32, DP-21, DP-24. DP-29, DP-45, and DP-61	N/A	N/A	N/A
U069	N/A	Information on Fuel Elements UBA-15, UBB-23, UCA-37, UCD-45, UCE-47	N/A	N/A	N/A
U070	N/A	Information on Fuel Element WT-185	N/A	N/A	N/A
U072	S10	Material Safety Data Sheets (MSDS)--various metal and chemical compounds	N/A	N/A	N/A
U074	N/A	Information on Fuel Element T61 of Subassembly X425	N/A	N/A	3/11/2002
U075	S6	LANMAS database	N/A	N/A	5/31/2001
U076	S6, S10	AGHCF Fissile Inventory Management System Database	N/A	N/A	7/16/2001
U083	N/A	HEPA Filters	N/A	Adam Cohen	3/7/1996
U085	S2	Procedure for Determining Fuel Pellet Density Using a Mercury Prinometer (handwritten)	N/A	N/A	N/A
U304	S9	Robinson Report	N/A	N/A	Unknown
U307	S6	Report 105 - Custodian Batch Balance (Pure)	Report 105	N/A	12/1/2004
U315	S6, S14	Reportable Mass Information	N/A	Unknown	5/1989
U316	S6	Materials List	N/A	Unknown	Unknown
U317	S4, S11	Material Control Ledger	N/A	Various	Unknown
U320	S16	Various Site and Facility Maps, demographic data	N/A	N/A	Various
U322	N/A	Hydrogenous Liquid in Cell Area I	N/A	N/A	1988 - 2001
U323	S16	Draft - AGHCF-DSA-Chapter 2 Facility Description	DSA Chpt 2	ANL	2/18/2004
U324	S16	Destroyed Seals	N/A	T. Bray	7/8/2005
U325	S11, S16	AGHCF Seal Logbook	N/A	Various	1992 - 2001
U326	S9	Report of Analytical Results (AGHCF Smear Data)	N/A	Terri Bray	12/7/2005
U327	S9	Preliminary Report of Analysis of Smear Data from Alpha Gamma Hot Cell Facility	06-0053	Vivian Sullivan	12/8/2005
U332	N/A	Waste Requisitions-WMO-195, Radioactive and Mixed Waste Disposal Requisitions	Various	ANL	Various
U333	S16	DVDs of Packaging for Cans in RH-TRU Drums in the AGHCF	Various	N/A	1993 - 2002
U334	S16	Handwritten Drum List of Drums with top and bottom can numbers	N/A	Terri Bray	1976 - 2002
U335	S15	Various Excel Spreadsheets Regarding Fissile Material and Waste Management Tracking	N/A	Various	Various
U336	S15	Various Inventory Spreadsheets from AGHCF	N/A	Various	Various
U801	S5, S9, S15	SPM Logbook information for A/G 505	ANL ID 46488	N/A	Various

Source Document Tracking Number	AK #	Title	Document Number	Author	Date
U802	S5, S9, S15	SPM Logbook information for A/G 249	ANL ID 46232	N/A	Various
U803	S5, S9	RERTR Miniplate Data Sheets	ANL ID 328	R. F. Domagala	3/1998
U804	S15	Report 105 dated 5/31/2001	ANL ID 422	N/A	5/31/2001
U805	S5, S9, S15	SPM Logbook data for A/G 356	ANL ID 46339	N/A	Various
U806	S5, S9	Documentation Providing Status of ANL Compatibility Plates	ANL ID 327	N/A	Various
U807	S5, S11	Document providing links between AGSC can numbers, A/G numbers, and element numbers	ANL ID 37788	N/A	11/18/1994
U808	S11, S15	Special Materials Information System Principal User Batch Balance Sheet (Report 105)	ANL ID 45659	N/A	9/5/1990
U809	S5, S9	Memo from L. A. Neimark to Walter Gray re: Fissile Contents of RERTR and SRL Specimens for Leaching Studies; Work Plan for the Preparation of Al-clad Fuel Specimens for Pacific Northwest National Laboratory (PNNL)	IPS-247-00-01	N/A	5/1997; 4/1997
U810	S5, S9	Memo and Draft Report from R. V. Strain to M. M. Goldberg: Draft Report: Initial Results of Electron Microprobe Examination of a Section from Mixed-oxide Fuel Pin UW02010ANL ID 3987	ANL ID 3987	R. V. Strain	5/20/1999
U811	S5, S9	Special Materials (SPM) Logbook Data for A/G 558	ANL ID 46539	N/A	NA
U812	S5, S9	Tables and Core Date for the ORR	ANL ID 41197	N/A	Unknown
U813	S5, S9	Appendix A, Core Configuration, Fuel Element Locations, and BOC 235U Fuel Element Masses; Appendix F, Evaluation of Fuel Element Powers, U235 Masses, and Burnups of the Gamma-Scanning of Full-Sized Fuel Elements	ANL ID 41198	N/A	Unknown
U814	S5, S9	Lists of RERTR Samples Currently in AGHCF	ANL ID 43971	N/A	6/11/1992
U815	S5, S9, S15	Documentation from AGHCF SPM Logbook for A/G 497	ANL ID 41183	N/A	Various
U816	S5, S9	Proceedings of the Technical Review Meeting of DOE/PNC Operational Reliability Testing (ORT) program in EBR-II	ANL ID 2076	John Lambert	NA
U817	S5, S9, S15	Special Materials Logbook information for A/G 497	ANL ID 46480	N/A	Various
U818	S5, S9	Record of Meeting: Final Technical Review of PNC/DOE Operational Reliability Testing Program in EBR-II	ANL ID 39017	N/A	3/1996
U819	S5, S9	Paper: Characterization of Mixed-Oxide Fuel Pins UW02010 and UW08036, DOE Spent Nuclear Fuels Program	ANL ID 8745	N/A	Unknown
U820	S2, S5, S9	Miscellaneous Gamma Scans and Work Plan: Work Plan for the Examination of Actinide-Burning Pin G562 (A/G 505) at the Alpha Gamma Hot Cell Facility ANL ID 39380	IPS-172-00-00 ANL ID 39380	N/A	Various
U822	S5	Final Report: Procurement and Characterization of Fuel Rod Segments from Quad Cities-2 Fuel Rods VW00101, ZB00113, AND ZS00102	ANL ID 7748	N/A	Unknown
U823	S5	YMP Draft Annual Report, FY 1998	ANL ID 42099	N/A	11/19/1998
U824	S5	As-Built Data Package, RERTR Microplate Irradiation in the Advanced Test Reactor (RERTR-1 and RERTR-2)	ANL ID 1212	S. L. Hayes C. L. Trybus M. K. Meyer	8/4/1997
U825	S5, S9, S15	Special Materials Logbook information for A/G 460	ANL ID 46443	N/A	Various
U826	S11	AGHCF Sectioning Slips Nos. 223 - 354 dating from 1/25/1999 through 3/5/2001	ANL ID 5249	Various	1/25/1999 - 3/5/2001
U827		http://www.pnl.gov/main/welcome/history.html	N/A	PNNL	8/2005
U830	S5	RERTR-3 Postirradiation Examination Plan at the Alpha-Gamma Hot Cell Facility; transmitted by memo from S. L. Hayes to R. V. Strain	ANL ID 6808	S. L. Hayes M. K. Meyer	1/13/2000

Source Document Tracking Number	AK #	Title	Document Number	Author	Date
U831	S14, S15	AGHCF Transfer Slips No. 161 through 216. Dates range from 02/09/1999 to 07/15/2000	ANL ID 1355	Various	2/9/1999 - 7/15/2000
U832	S2	Miscellaneous AGHCF Supplemental Instructions	SI 311; SI 308; SI 305; SI 293; SI 250; ETC.	Various	Various
U833	S5, S9	Excerpted pages from Report: Design, Operation, and Performance Data for High Burnup PWR Fuel from the H. B. Robinson Plant for Use in the NRC Experimental Program at Argonne National Laboratory	1001558; ANL ID 8824	E. J. Ruzauskas K. N. Fardell	5/2001
U834	S14, S15	Special Materials (SPM) Logbook information for A/G 607	ANL ID 46587	N/A	NA
U835	S13, S14, S15	Special Materials (SPM) Logbook Information for A/G 608	ANL ID 46588	N/A	NA
U836	S14, S15	Special Materials (SPM) Logbook Information for A/G 612	ANL ID 46592	N/A	NA
U837	S14, S15	AGHCF Transfer Slips No. 366 through 467. Date spans from 12/5/2001 through 10/12/2004	ANL ID 1361	N/A	12/5/2001 - 10/12/2004
U838	S14, S15	AGHCF Transfer Slips No. 254 for A/G 573 A-3. Included are Loss or Gain Reports	ANL ID 46554	N/A	Various
U840	S15	AGHCF Sectioning Slips 2-1125	1350; 1353; 5252; 5249; 1351	N/A	4/1994 - 7/2005
U842	S5, S9	Fuel Pin Composition Calc.	INL-RH-01	Jene Vance	5/8/2006
U843	S5, S9	Scaling Factor Development	INL-RH-02	Jim Holderness	6/5/2006
U844	S5, S9	INL Cs-137 Dose-to-Curie Correlation	INL-RH-03	Jim Holderness	5/8/2006
U845	S5, S9	MCNP Sensitivity Studies	INL-RH-04	Jim Holderness	5/8/2006
U846	S5, S9	INL Cs-137 Dose-to-Curie Correlation Uncertainty	INL-RH-05	Jim Holderness	5/8/2006
U848	S5, S9	Uncertainty Analysis for Drums	INL-RH-07	Jim Holderness	6/5/2006
U849	S5, S9	Determination of Isotopes to be Reported Per WIPP WAC	INL-RH-08	Jene Vance	6/5/2006
U850	S5, S9	INL Shielded and Unshielded Dose-to-Curie Correlations	INL-RH-09	Jim Holderness	5/8/2006
U853	S5, S9	Disposition of Identified Items	INL-RH-12	Jene Vance	6/5/2006
U854	S5, S9	Modification of ORIGEN Input Files for Specific Pins	INL-RH-13	Jim Holderness	5/8/2006
U855	S5, S9	Co-60 Dose Rate Contribution	INL-RH-14	Jim Holderness	5/8/2006
U856	S5, S9	Derivation of Burnup and Composition for Thorium Pins	INL-RH-15	J. Vance	5/8/2006
U857	S5, S9	Scaling Factor Sensitivity Analysis	INL-RH-16	Jim Holderness	6/5/2006
U858	S8, S9	Demonstration of Commonality of INL and LANL Experimenters	INL-RH-17	Jene Vance	7/11/2006
U859	S5, S9	Pu and U Isotope Relationships in Fuel	LANL-RH-03	Jene Vance	2/22/2006
U860	S5, S9	Mass Spectroscopy Results Input Check	LANL-RH-05	Jene Vance	2/22/2006
U861	S5, S9	ORIGEN2.2 Code Verification Check	LANL-RH-09	Jene Vance	2/22/2006
U862	S5, S9	Fission Product Contribution to Total Dose Rate	LANL-RH-10	Jene Vance	2/22/2006
U863	S5, S9	Evaluation of Cs-137 Migration in Fuel Pin	LANL-RH-12	J. Vance	2/22/2006
U864	S5, S9	ORIGEN2.2 One Step Burnup Evaluation	LANL-RH-13	J. Vance	2/22/2006
U865	S2	ORIGEN 2.2 Input Generation	LANL-RH-14	Jene Vance	Unknown
U866	S5, S9	ORIGEN 2.2 Data Extraction	LANL-RH-15	Jim Holderness	2/22/2006
U867	S5, S9	Mass Spectroscopy Comparison to ORIGEN	LANL-RH-16	Jene Vance	2/22/2006
U869	S5, S9	Fast Reactor Cross Section Library Sensitivity Study	LANL-RH-29	Jim Holderness	5/8/2006
U870	S5, S9	Evaluation of the Effects of Reactor Operating History	LANL-RH-30	Jim Holderness	5/8/2006
U872	S5, S8	Experimental Fuel Pins Irradiated in EBR-II Through December 8, 1980	TC-1117-3	F. R. Shober W. A. Briggs H. M. Armstrong J. N. Casale	9/1981
U873	S5, S8	Argonne National Laboratory EBR-II Project, Run 89, Report of EBR-II Operations, June 15, 1977 through August 8, 1977	ANL ID 3137	D. J. Fluke	8/1977
U874	S5, S8	Performance of Commercially-Produced Mixed-Oxide Fuels in EBR-II (P-15 Test)	HEDL TME 80-41; UC-79b	J. W. Hales C. W. Hoth	8/1980
U875	S5, S8, S9	Engineering and Safety Analysis for AIR1 (R1) Fuel Rods	DP071270-001	Atomics International	4/5/1976
U876	S3, S8	Performance Evaluation of the WBA-20 Radial Blanket Irradiation Test	WARD-RB-94000-4	Umesh P. Nayak Timothy S. Roth Carl E. Schenone	2/1981

Source Document Tracking Number	AK #	Title	Document Number	Author	Date
U877	S5, S8, S9	Proposal to Irradiate Unencapsulated Fuel Pins in the EBR-88: Subassemblies PNL-6, PNL-7, and PNL-8	BNWL-1103	E. O Ballard L. A. Pember	6/6/1969
U878	S8	EBR-II Quality Assurance Requirements; As-Built Description, Certification, and Data Transmittal Checklist for EBR-II Experiments	463-PP-E-44	J. Barner	12/1/1975
U879	S5, S8	Advanced Carbide/Nitride Fuels Program Irradiation Experiments	ANL-AFP-25	NA	8/1976
U880	S5	Irradiation Behavior of the WBA-21 Oxide Blanket Test	WARD-RB-94000-5	Umesh P. Nayak Thomas P. Soffa	11/1982
U881	S5	The K6 Test: Helium-Bonded Uranium-Plutonium Carbide Fuel Pins Irradiated to 12-at.% Burnup in EBR-II	LA-8688	Trent W. Latimer Roy L. Petty	6/1981
U892	S5, S9	Analysis of Cladding Co-60 Activity Level	LANL-RH-19	Jim Holderness	2/22/2006
U893	S5, S9	Activation Product Contribution to Total Dose Rate	LANL-RH-27	Jene Vance	5/8/2006

Alphanumeric Designations

C Correspondence
D Documents (e.g. published reports)
M Miscellaneous (e.g. unpublished data)
P Procedures
U Unpublished Documents

AK Numbers

S1 Process Design Documents
S2 Standard Operating Procedure
S3 Safety Analysis Reports
S4 Waste Packaging Logs
S5 Test plans/research project reports
S6 Site databases
S7 Information from site personnel
S8 Standard industry documents
S9 Previous analytical data
S10 Material safety data sheets
S11 Laboratory Notebooks
S12 Comparable or surrogate sampling and analysis data
S13 Other
S14 Safeguards and Security and other related information
S15 NMMA logs or inventory records or other related information
S16 Packaging

DIVIDER

PAGE

Remote Handled (RH) Mixed Heterogeneous Debris Waste from the Argonne National Laboratory-East (ID-ANLE-S5000)
Change Notice #1
Update for WIPP Operating Record

Please add the following information to the WIPP Operating Record for Waste Stream Profile Form (WSPF) ID-ANLE-S5000. This waste stream is Remote Handled (RH) Mixed Heterogeneous Debris Waste from the Argonne National Laboratory-East and was approved by DOE/CBFO on January 17, 2007.

This WSPF is being revised. The WSPF components are bolded. The updates are:

1. **WSPF, Title, version, number, and date of documents used for WAP Certification**

   Update the following procedure revisions:

   CCP-PO-001, CCP Transuranic Waste Characterization Quality Assurance Project Plan, Revision 14, March 28, 2007.

   CCP-PO-002, CCP Transuranic Waste Certification Plan, Revision 19, May 22, 2007

2. **WSPF, Applicable TRUCON Content Numbers**

   Update the list of applicable TRUCON Content Number to include ID 321.

3. **Summation of Aspects of AK Summary Report: ID-ANLE-S5000, TRUCON Content Numbers**

   Update the list of applicable TRUCON Content Codes to include ID 321.

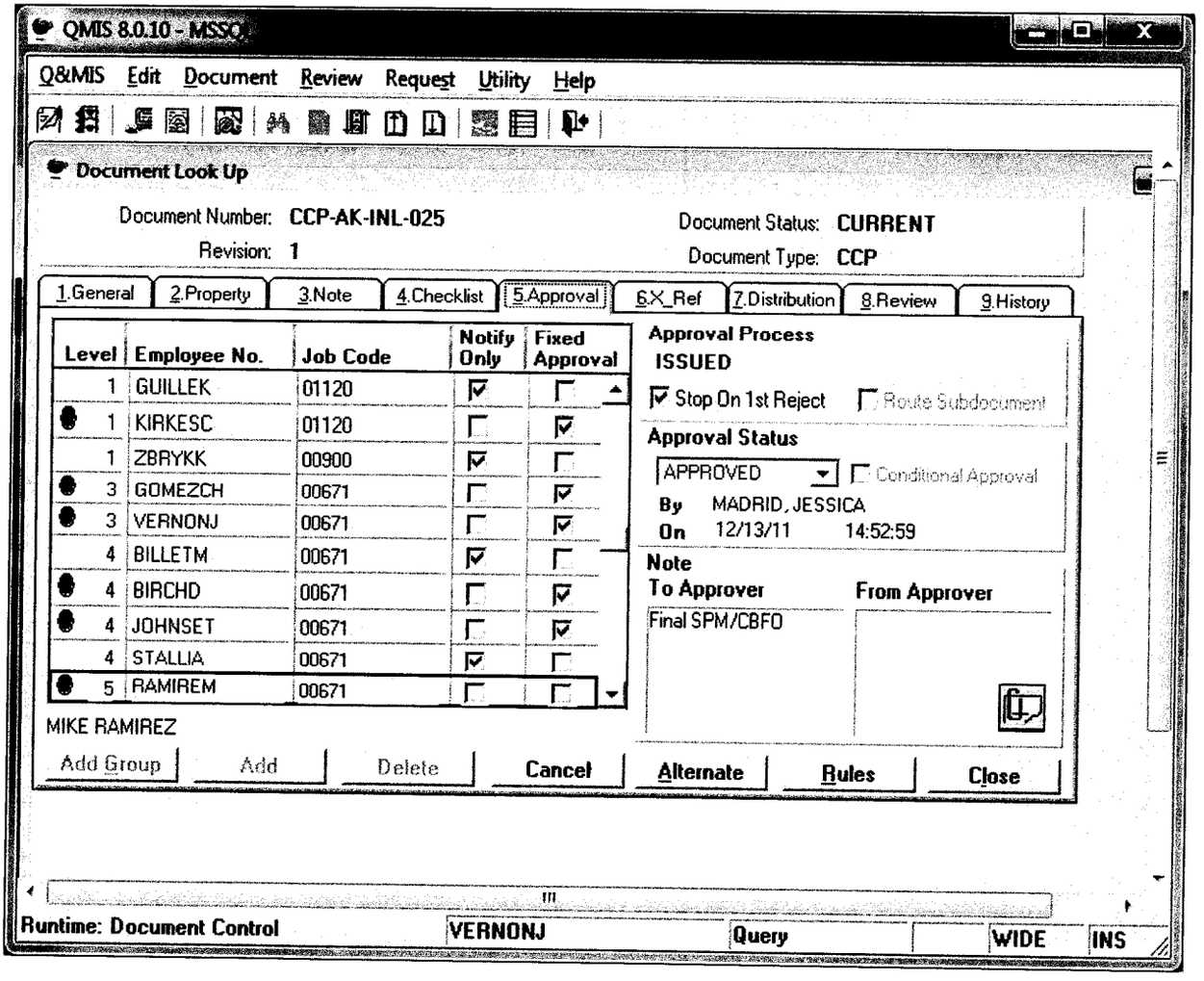
Reason/Justification for the Change

Documents used for WAP certification have been revised to reflect the most recent revisions.

The approved TRUCON Content Number ID 321 is being added to waste stream ID-ANLE-S5000 to support containers of up to 50 % organic waste that may be generated under the formal certification program. This TRUCON Content Number was approved by WIPP on July 12, 2007.

Update for the WIPP Operating Record (ID-ANLE-S5000) certification:
I hereby certify that I have reviewed this Update for WIPP Operating Record, and it is complete and accurate to the best of my knowledge. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Signature of Site Project Manager	Printed Name and Title	Date
Irene Quintana	Irene Quintana	7/16/07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1.General 2.Property 3.Note 4.Checklist 5.Approval 6.X_Ref 7.Distribution 8.Review 9.History
Level Employee No. Job Code Notify Only Fixed Approval
1 GUILLEK 01120
1 KIRKESC 01120
1 ZBRYKK 00900
3 GOMEZCH 00671
3 VERNONJ 00671
4 BILLETM 00671
4 BIRCHD 00671
4 JOHNSET 00671
4 STALLIA 00671
5 RAMIREM 00671
MIKE RAMIREZ
Approval Process
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Stop On 1st Reject
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Approval Status
APPROVED
Conditional Approval
By MADRID, JESSICA
On 12/13/11 14:52:59
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To Approver
From Approver
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Add Group
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Delete
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Alternate
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Close
Runtime: Document Control
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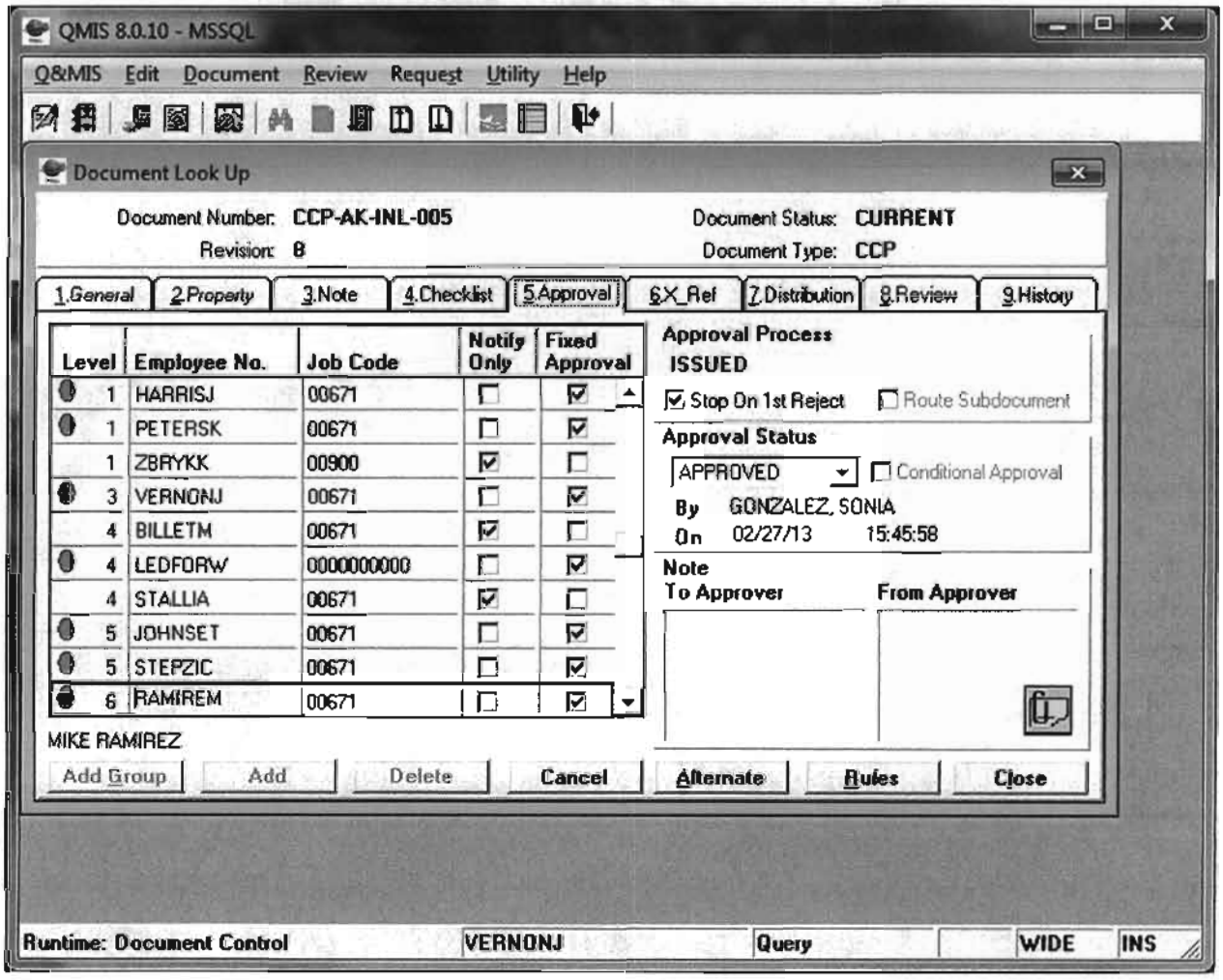
QMIS 8.0.10 - MSSQL
Q&MIS Edit Document Review Request Utility Help
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Revision: 8
Document Status: CURRENT
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1.General 2.Property 3.Note 4.Checklist 5.Approval 6.X_Ref 7.Distribution 8.Review 9.History
Level Employee No. Job Code Notify Only Fixed Approval
1 HARRISJ 00671
1 PETERSK 00671
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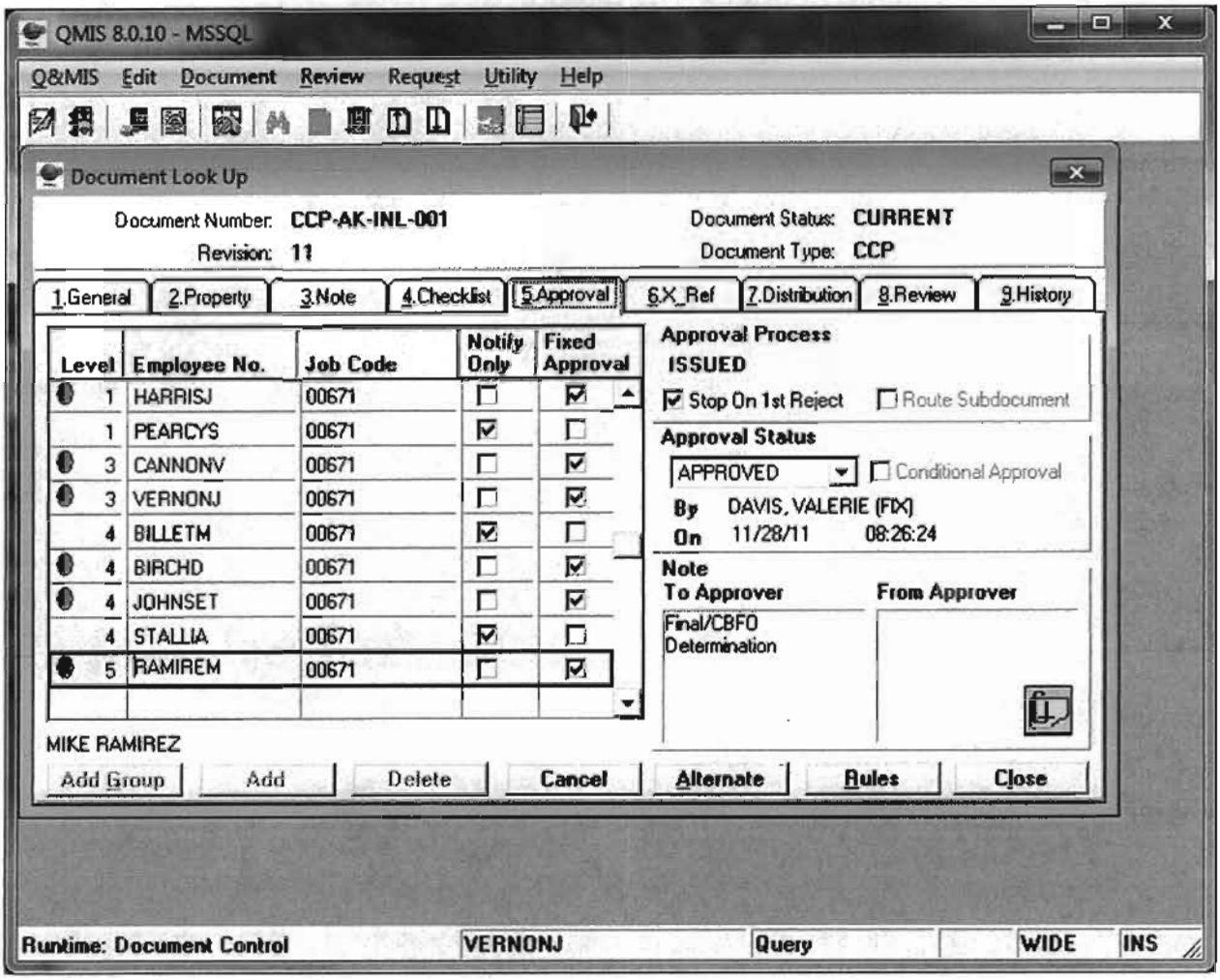
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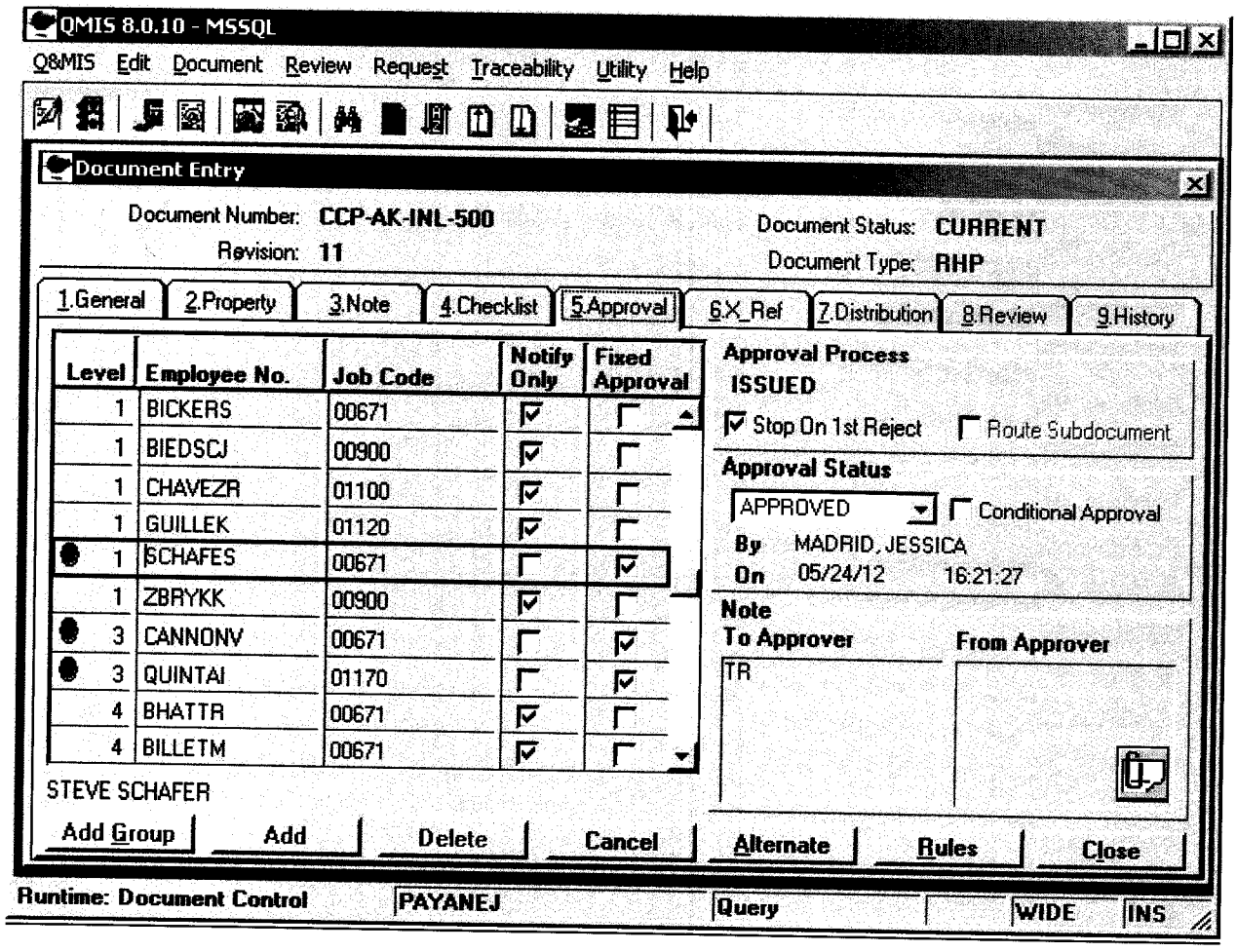
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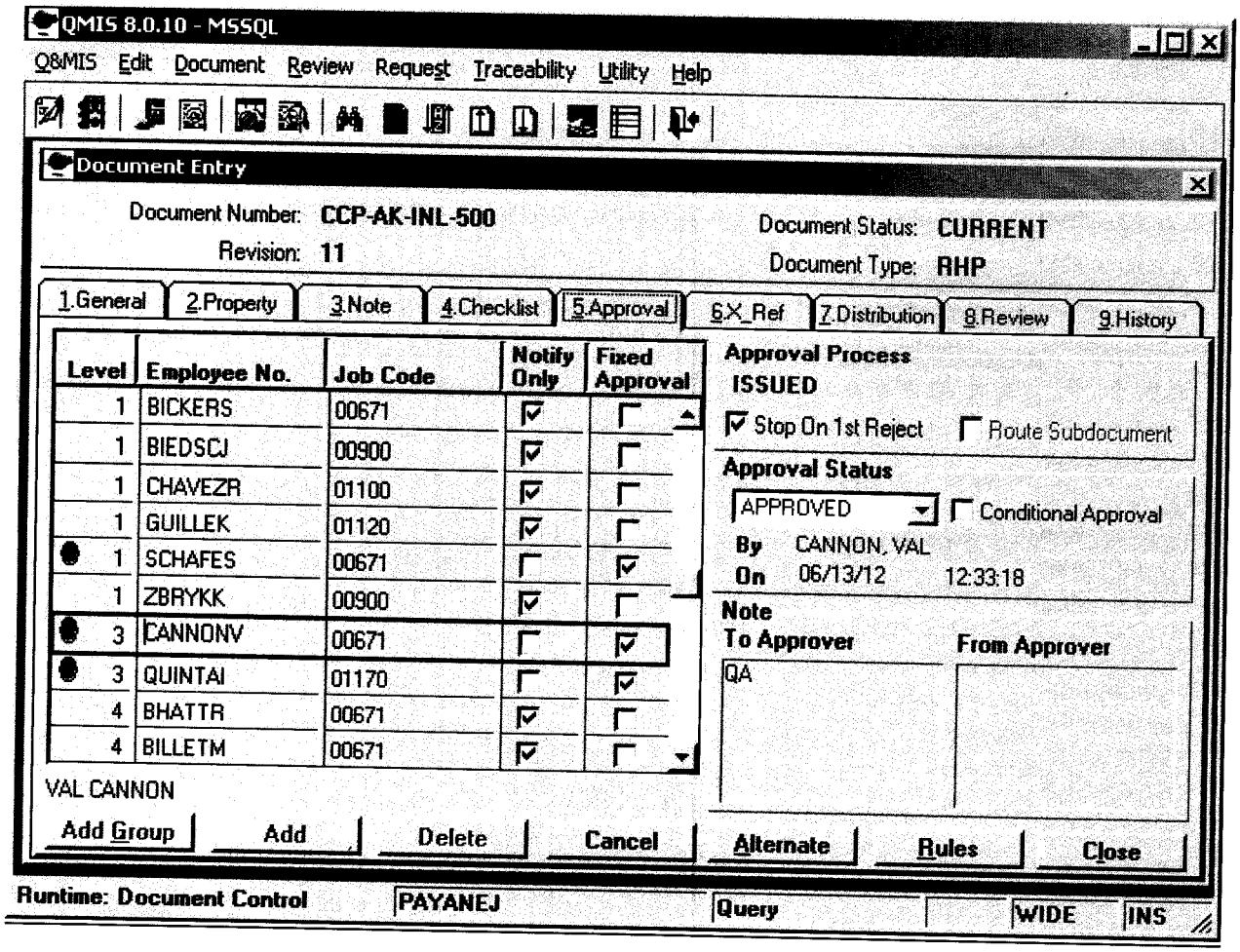
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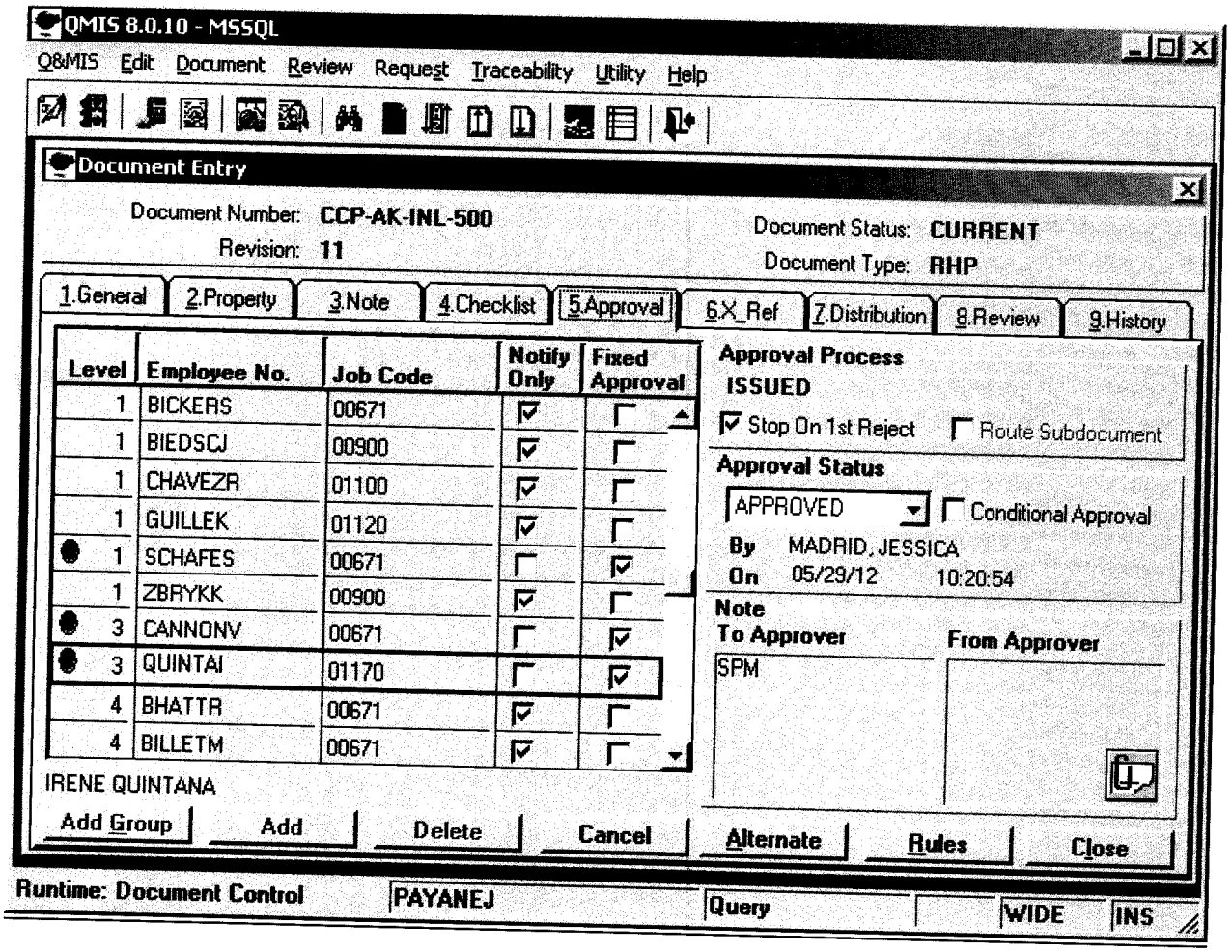
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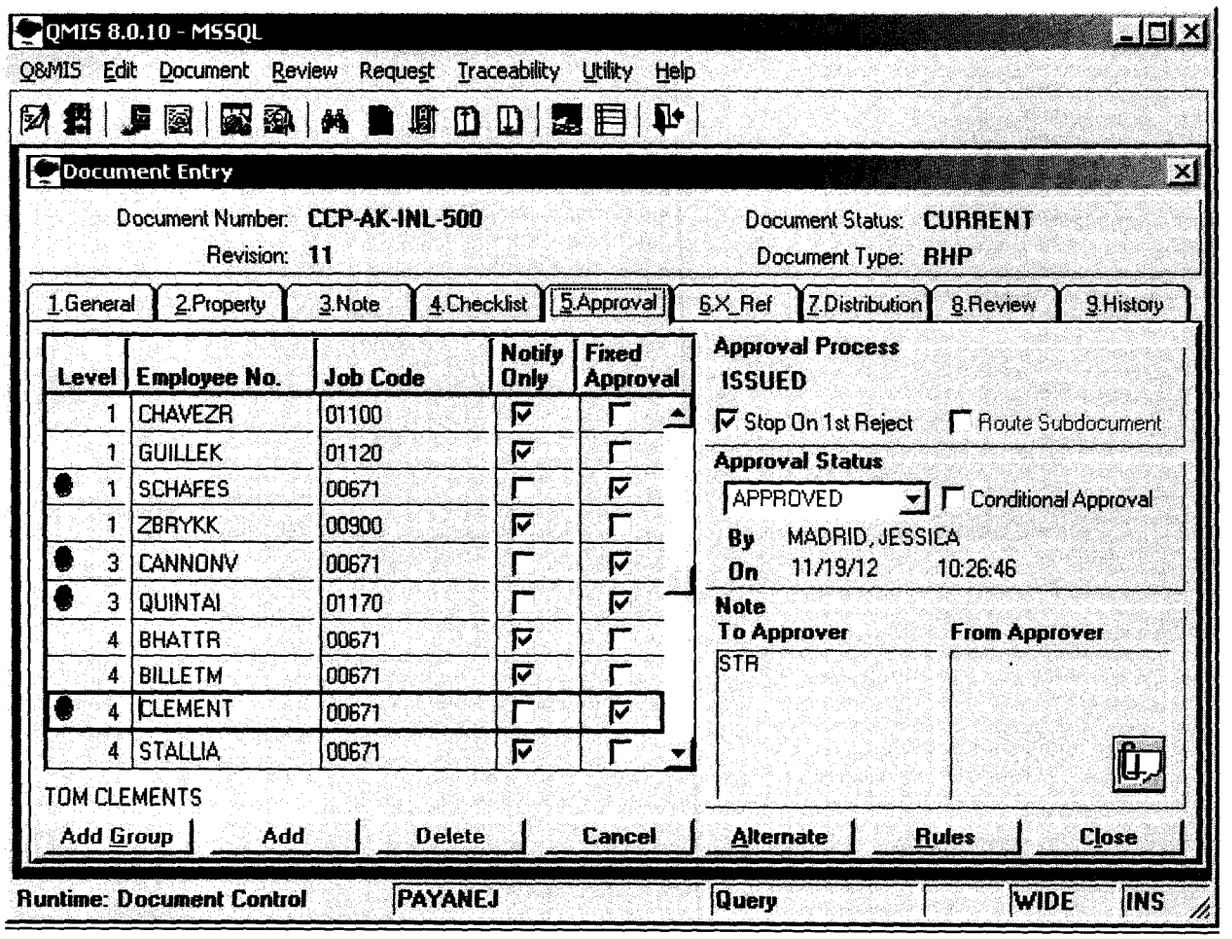
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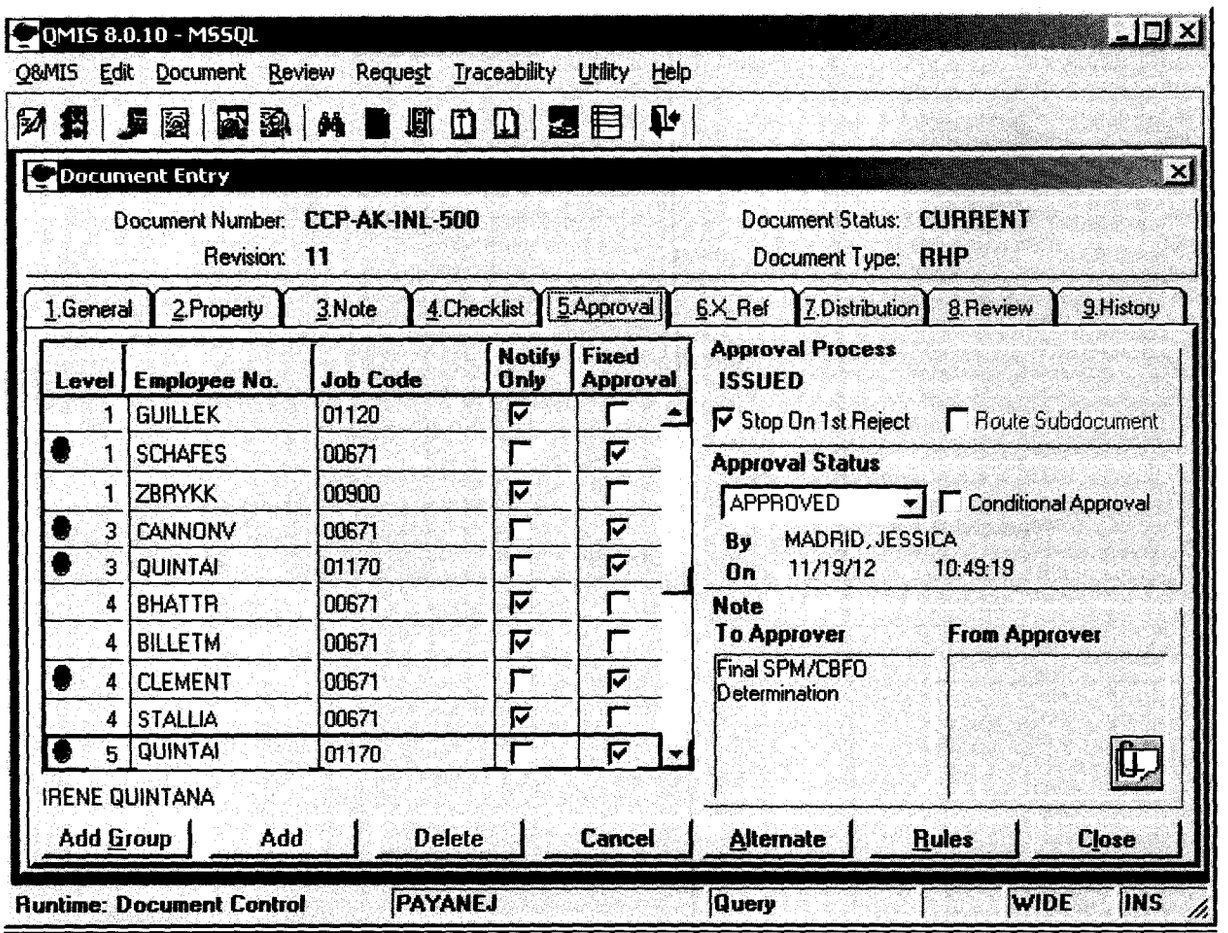
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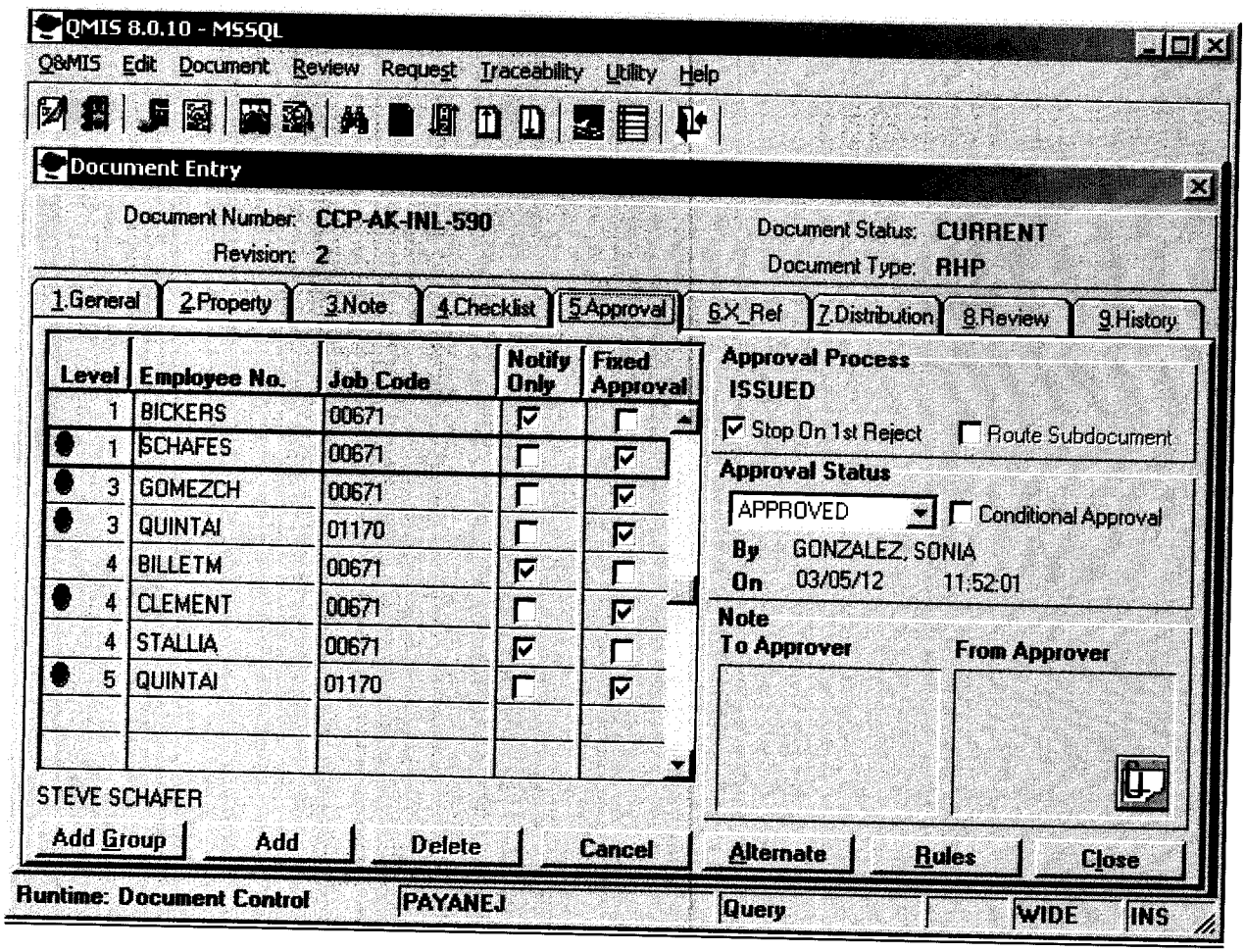
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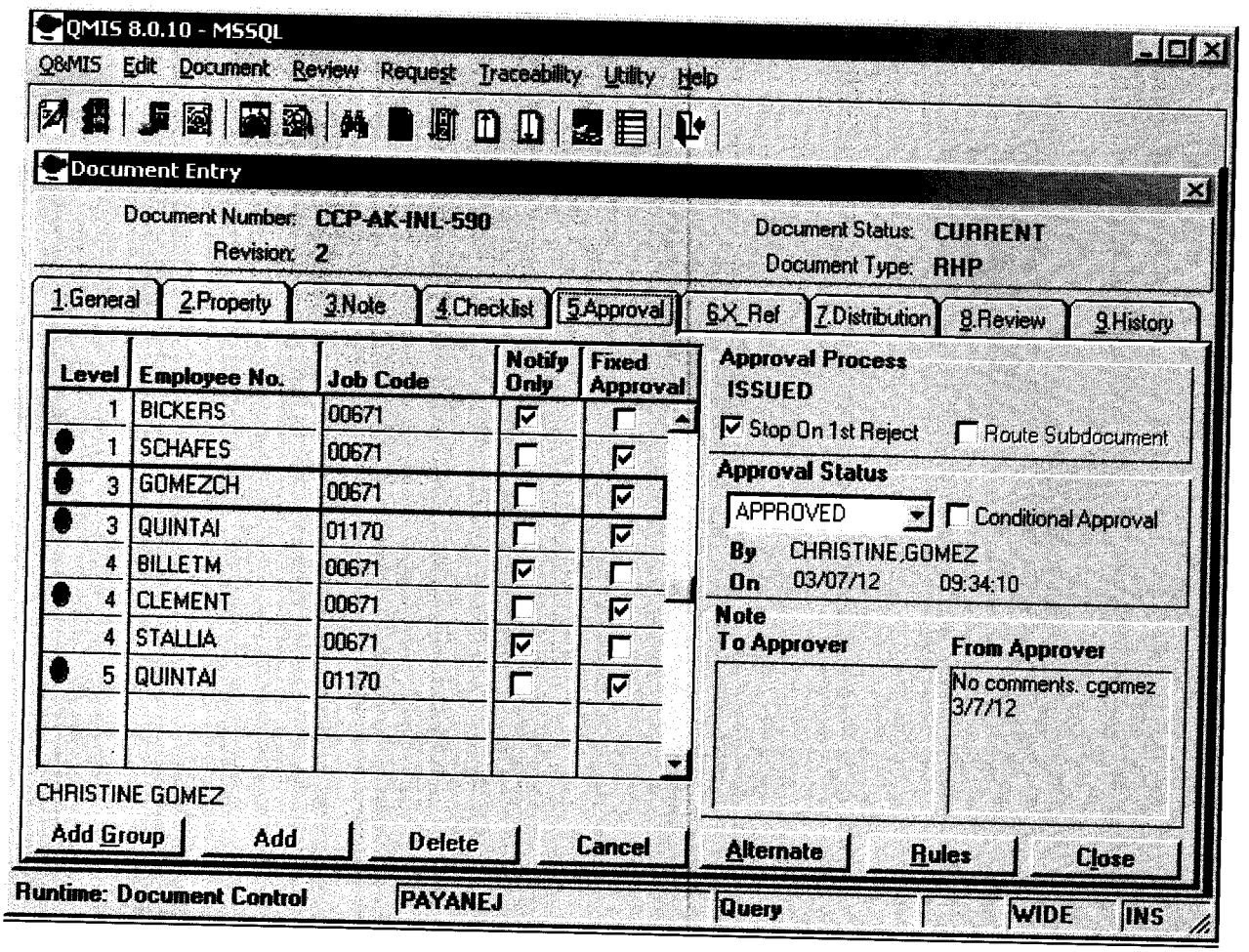
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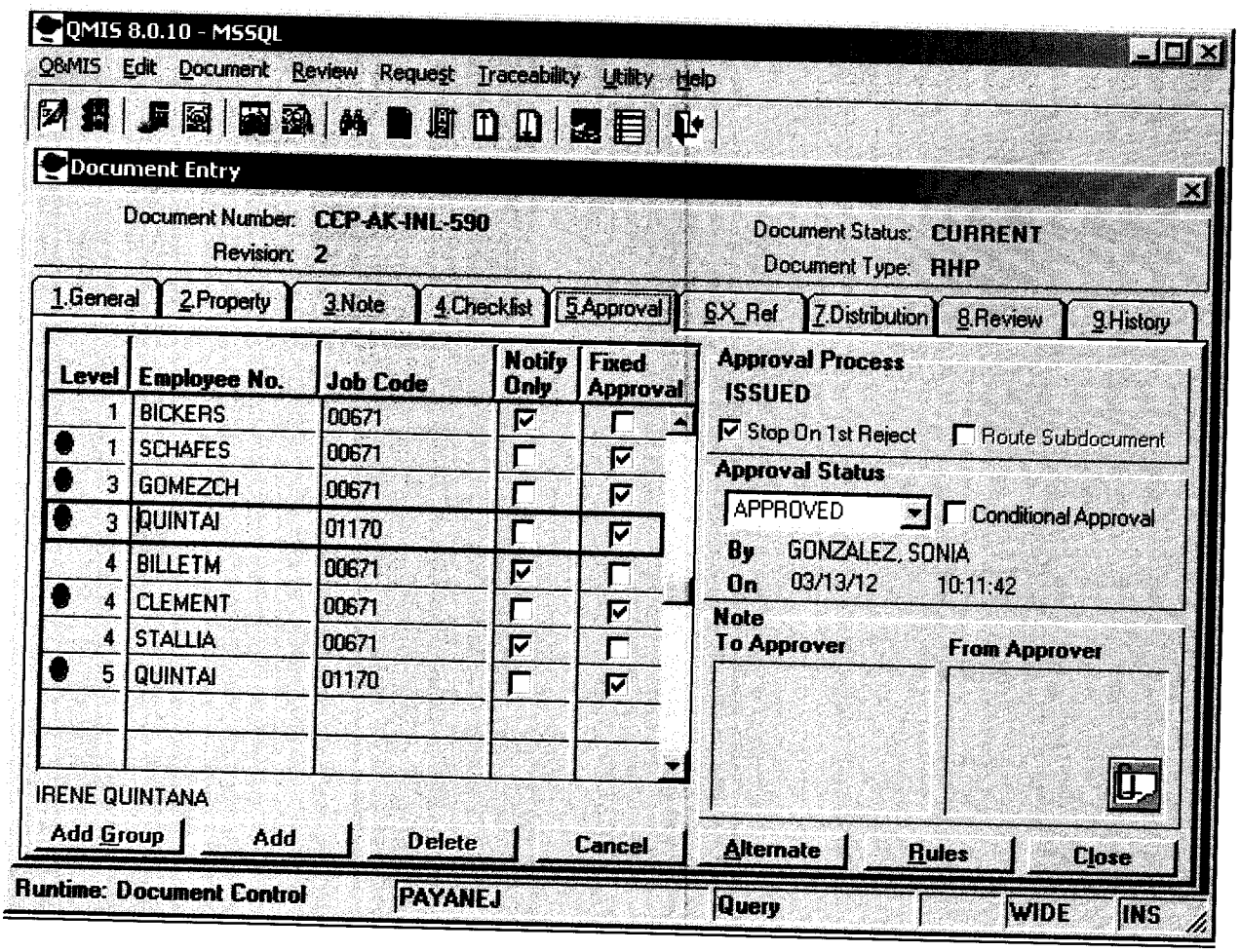
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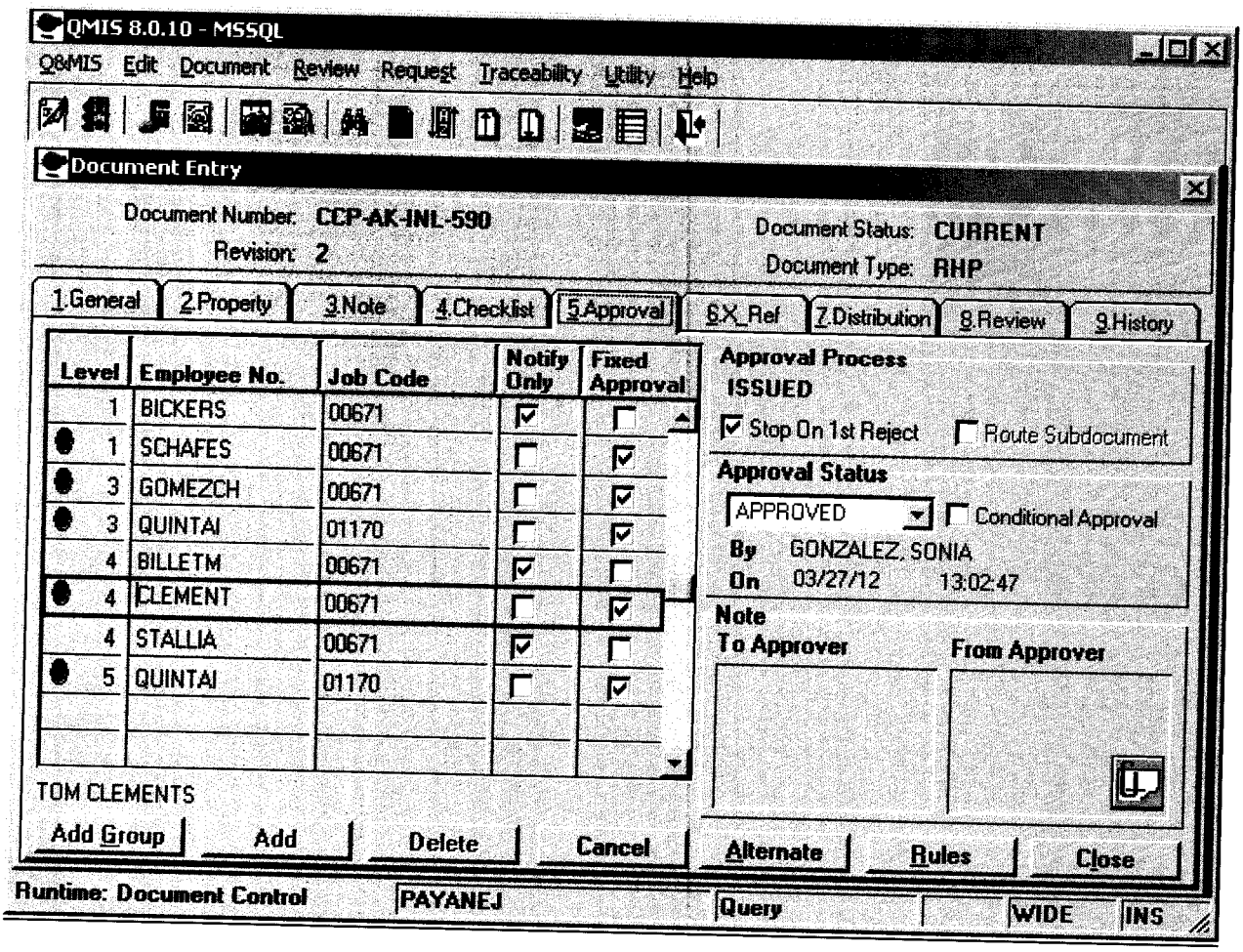
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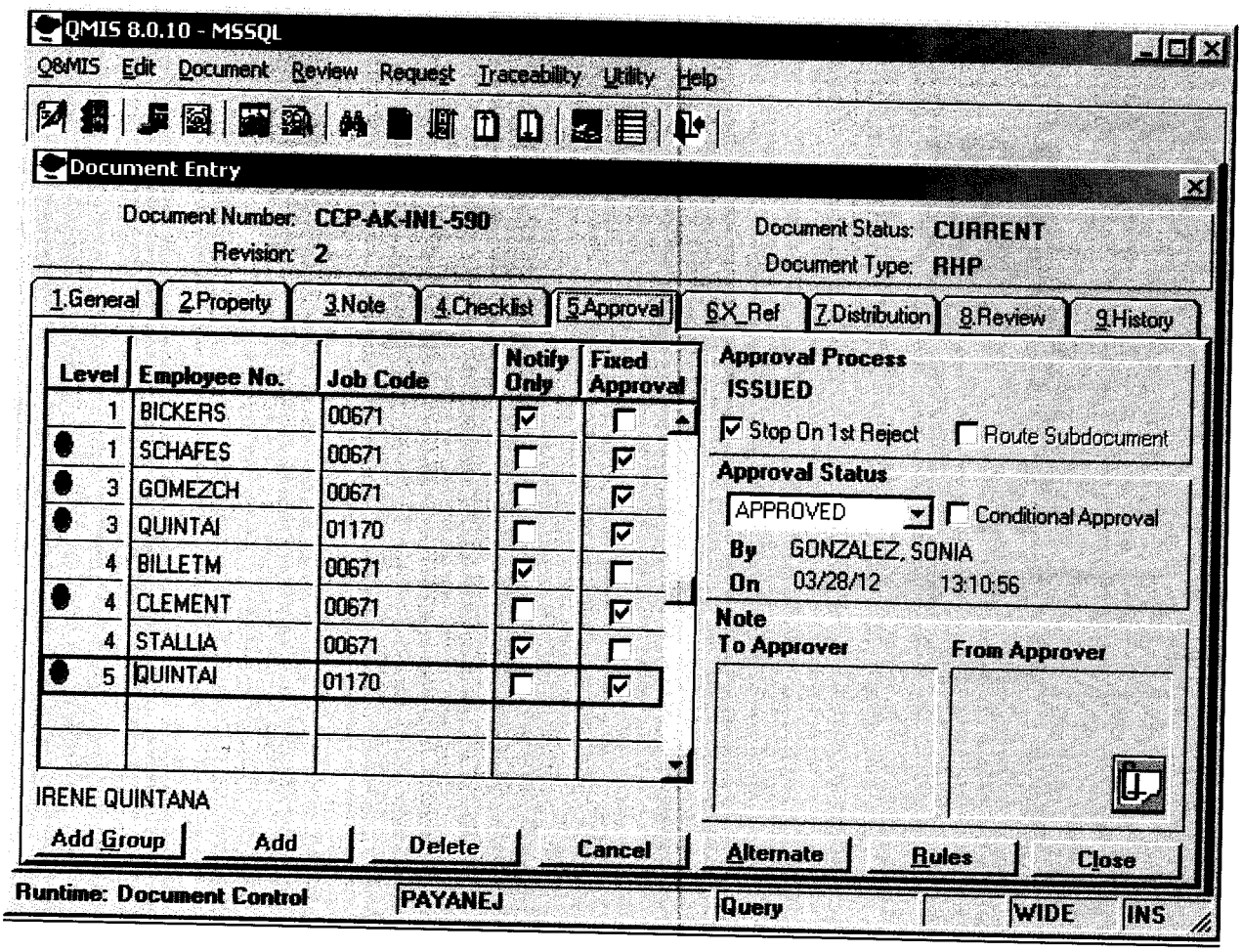
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Attachment 3 - Acceptable Knowledge Source Document Summary

Site(s): Idaho National Laboratory	Source Document Tracking Number: U3001
Waste Stream Number(s): ID-AECHDM, ID-AECHHM (Applicable only when site library is not in use)	
Acceptable Knowledge Documentation Type: ☑ TRU Waste Management Program Information ☑ Waste Stream-Specific Information ☑ Additional Information	Category: ☐ C - Correspondence ☐ DR - Discrepancy Resolution ☐ I - Internal procedures ☐ M - Miscellaneous ☐ P - Published plans, documents, and procedures ☑ U - Unpublished Documents
Title of Source Document: CH TRU Project Inventory to be Repackaged	
Source Document Reference Information (author(s), document and revision number, date, publisher): Argonne, NA, 01/18/2010	

AK # [a]	Source Doc. Page # [b]	AK Information Summary
PR5, PR6, PR7, WS1, WS2, WS3, WS4, WS6, WS8, WS9, WS10, WS11, WS12, S4, S7	All	Includes two spreadsheets identifying the inventory of waste containers to be repackaged as CH waste. Spread sheets include: Container No. Container Wt. (gross and waste) Assigned RCRA Waste Code(s) Generateor (Division, Building, Rm) Waste Description (chemicals) Waste Material Surface Dose Total TRU (nCi/g) Prohibited Items (liquids) Current Outer Container Type ANL AK CH TRU Waste Stream designation Chemicals Identified: 1,2,4-trimethylbenzene, Bis(2-ethylhexoxy) phosphinic acid (HDEHP), Di(2-ethylhexyl) phosphoric acid (D2EHPA), Diethylenetriamine pentaacetic acid (DTPA), Dodecane (n-dodecane), Ferric nitrate, hydrochloric acid, Hydrofluoric acid, Lactate buffer (Ammonium Lactate/Lactic Acid), Lithium salts, nitric acid, Octyl(phenyl)-N,N-diisobutylcarbamoyl methyl phosphine oxide (CMPO), phosphoric acid, Potassium permanganate, Rathenium nitrate, silver nitrate, sodium hydroxide, sodium nitrate, socium salts, No-Char, Acid Bond, sulfuric acid, Tributyl phosphate (TBP), Ultima Gold XP.

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DATED 10-21-11

Attachment 3 - Acceptable Knowledge Source Document Summary (continued)

Site(s): Idaho National Laboratory	Source Document Tracking Number: U3001

Waste Stream Number(s): ID-AECHDM, ID-AECHHM
(Applicable only when site library is not in use)

Source Document Data Limitations (if any):

1. Consist of a preliminary inventory of containers to be repackaged, additional waste will be included as generated.

Acceptable Knowlege Expert:

Elizabeth Lickliter — Date: 10/04/2011
Print — /Sign

[a] Obtain from Acceptable Knowledge Documentation Checklist
[b] For microfilm or microfiche, identify box, tape, reel number and location.

Attachment 3 - Acceptable Knowledge Source Document Summary

Site(s): Idaho National Laboratory	Source Document Tracking Number: U3002

Waste Stream Number(s): ID-AECHDM, ID-AECHHM
(Applicable only when site library is not in use)

Acceptable Knowledge Documentation Type:	Category:
☐ TRU Waste Management Program Information	☐ C - Correspondence
☑ Waste Stream-Specific Information	☐ DR - Discrepancy Resolution
☑ Additional Information	☐ I - Internal procedures
	☐ M - Miscellaneous
	☐ P - Published plans, documents, and procedures
	☑ U - Unpublished Documents

Title of Source Document: WDS Query and Compilation of Radiological Data for Waste Streams AECHDM and AECHHM

Source Document Reference Information (author(s), document and revision number, date, publisher): Chris Chancellor, NA, NA, 05/05/2010

AK # [a]	Source Doc. Page # [b]	AK Information Summary
WS1, WS3, WS9, WS11, S4, S6, S12	Throughout	This document contains the container ID # associated with the waste generation date, closure date, disposal date, material parameters, and radionuclides for waste streams AECHDM and AECHHM generated by a WDS query. Includes the radiological data from WDS for ANL waste streams AECHDM (373 drums) and AECHHM (55 drums).

Source Document Data Limitations (if any):

1. Includes data for waste previously sent to WIPP in waste streams AECHDM and AECHHM.

Acceptable Knowlege Expert:

Elizabeth Lickliter / Date: 10/04/2011
Print /Sign

[a] Obtain from Acceptable Knowledge Documentation Checklist
[b] For microfilm or microfiche, identify box, tape, reel number and location.

10-21-11

Attachment 3 - Acceptable Knowledge Source Document Summary

Site(s): Idaho National Laboratory	Source Document Tracking Number: U3003

Waste Stream Number(s): ID-AECHDM, ID-AECHHM
(Applicable only when site library is not in use)

Acceptable Knowledge Documentation Type:	Category:
☑ TRU Waste Management Program Information	☐ C - Correspondence
☑ Waste Stream-Specific Information	☐ DR - Discrepancy Resolution
☑ Additional Information	☐ I - Internal procedures
	☐ M - Miscellaneous
	☐ P - Published plans, documents, and procedures
	☑ U - Unpublished Documents

Title of Source Document: Historic WMO-195 Waste Requisitions for containers repackaged into Waste Streams AECHDM-PK and AECHHM-PK

Source Document Reference Information (author(s), document and revision number, date, publisher): WMO, NA, NA, Various

AK # [a]	Source Doc. Page #[b]	AK Information Summary
PR1, PR5, PR6, PR7, WS1, WS2, WS3, WS6, WS8, WS9, WS10, WS11, WS12, S4	Throughout	This source contains Historic WMO-195 packaging documentation and/or Argonne queries containing WMO-195 waste requistition information for the containers being repackaged into waste streams AECHDM-PK and AECHHM-PK.

Source Document Data Limitations (if any):

1. Data in queries contains information entered from generator waste requesitions, original WMP-195 documentation available upon request.

Acceptable Knowlege Expert:

Elizabeth Lickliter /Elizabeth Lickliter/ Date: 10/04/2011
Print /Sign

[a] Obtain from Acceptable Knowledge Documentation Checklist
[b] For microfilm or microfiche, identify box, tape, reel number and location.

10-21-11

Attachment 3 - Acceptable Knowledge Source Document Summary

Site(s): Idaho National Laboratory	Source Document Tracking Number: U3004
Waste Stream Number(s): ID-AECHDM, ID-AECHHM (Applicable only when site library is not in use)	
Acceptable Knowledge Documentation Type: ☑ TRU Waste Management Program Information ☑ Waste Stream-Specific Information ☑ Additional Information	Category: ☐ C - Correspondence ☐ DR - Discrepancy Resolution ☐ I - Internal procedures ☐ M - Miscellaneous ☐ P - Published plans, documents, and procedures ☑ U - Unpublished Documents
Title of Source Document: Waste Streams AECHDM-PK and AECHHM-PK Waste Container Packaging Forms and Supporting Documentation	
Source Document Reference Information (author(s), document and revision number, date, publisher): WMO, NA, NA, Various	

AK # [a]	Source Doc. Page # [b]	AK Information Summary
PR8, WS1, WS3, WS8, WS9, WS10, WS11, WS12, S16	Throughout	Source contains packaging documentation for waste streams AECHDM-PK and AECHHM-PK including: Waste Container Packaging Forms Section 1 - General Information Section 2 - Waste Container Information Section 3 - Feed Container Information Section 4 - Container Inventory Section 5 - Packaging Summary Section 6 - Operator Information Section 7 - Radiological Properties Also includes CH-TRU Project 55 Gallon Drum Inventory Repack Sheets Container ID Fill Date information Source Container Inventory Numbers Transfer Date Waste Type and Description Absorbent Added Weight

10-21-11

Attachment 3 - Acceptable Knowledge Source Document Summary (continued)

Site(s): Idaho National Laboratory	Source Document Tracking Number: U3004
Waste Stream Number(s): ID-AECHDM, ID-AECHHM (Applicable only when site library is not in use)	
Source Document Data Limitations (if any): 1. Container documentation to be added as generated.	
Acceptable Knowlege Expert: Elizabeth Lickliter /Sign Date: 10/04/2011 Print	
[a] Obtain from Acceptable Knowledge Documentation Checklist [b] For microfilm or microfiche, identify box, tape, reel number and location.	

Attachment 3 - Acceptable Knowledge Source Document Summary

Site(s): Idaho National Laboratory	Source Document Tracking Number: U3005
Waste Stream Number(s): ID-AECHDM, ID-AECHHM (Applicable only when site library is not in use)	
Acceptable Knowledge Documentation Type: ✔ TRU Waste Management Program Information ✔ Waste Stream-Specific Information ✔ Additional Information	Category: ☐ C - Correspondence ☐ DR - Discrepancy Resolution ☐ I - Internal procedures ☐ M - Miscellaneous ☐ P - Published plans, documents, and procedures ✔ U - Unpublished Documents
Title of Source Document: WMS Query for Repackaged CH Waste Streams AECHDM-PK and AECHHM-PK	
Source Document Reference Information (author(s), document and revision number, date, publisher): WMO, NA, NA, 09/29/2011	

AK # [a]	Source Doc. Page #[b]	AK Information Summary
PR5, PR6, WS1, WS2, WS6, WS10, S6, S16	Throughout	This spreadsheet was provided by Steve Heffron (Argonne WMO) on September 29, 2011. This data includes the inventory of drums expected to be certified for the first shipments (70 drums) to AMWTP. Information in the table includes Drum ID, Feed Container RW numbers, waste stream designation, container weight data, nCi/g, and NDA method.

Source Document Data Limitations (if any):

1. The container identification does not include the preceding "RW" designation typically used in the documentation.

Acceptable Knowlege Expert:

Elizabeth Lickliter /Sign Date: 10/04/2011
Print

[a] Obtain from Acceptable Knowledge Documentation Checklist
[b] For microfilm or microfiche, identify box, tape, reel number and location.

ORIGINAL
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DIVIDER

PAGE

AE-C-025

RECORD OF COMMUNICATION

Interviewer: Tom Krause 9/18/00	Date: 9/18/00	Time: 3:00 pm
Interviewee: Dan Hecker	Group/Organization: ANL-E/WMO	Phone: (630) 252-6790

Subject:
Disposition of drums from Buildings other than 200, 205, 212, and 350

Summary:
Mr. Hecker indicated the disposition of 20 waste requisitions that were difficult to place into waste streams based on information contained in the WMS. Many of the waste requisitions could easily be placed into waste streams because it was already commingled with waste from Buildings 200, 205, 212, or 350. Other waste requisitions could be placed with the assumption that waste would be commingled as part of routine waste management operations at ANL-E (i.e., those waste containers <30 gallons). For the other waste requisitions, Mr. Hecker provided input as to the content or origin of the waste so that a final disposition could be made.

See attached worksheet, "Resolution/Comments" column for information provided by Mr. Hecker.

Data Limitations:

Mr. Hecker assumed that source material is defense-related based on the likely origin of the plutonium material (i.e., Savannah River). Sources can also be considered defense-related because of the WIPP WAC definition of defense TRU waste that includes verification and control technology.

INFORMATION ON THIS PAGE IS PROPRIETARY. DO NOT DISCLOSE.

Generator Bldg.	Generator Div.	Room	Req. No.	Container Vol.	Unit of Measure	Temp. or Shipping Container No.	Currently Commingled with Waste from Building(s)	Preliminary Waste Stream	Final Waste Stream	Resolution/Comments
108	EWM		24421	55	GALS			AE-CH-D-N	AE-CH-D-N	Originated in Building 350 per waste req
202	CMB	D149	21477	0				AE-CH-D-N	AE-CH-D-N	Defense by future commingling
202	CMB	D-149	74209	2.91	GALS	TD98-0225	200, 212	AE-CH-D-N	AE-CH-D-N	Defense by Commingling
202	CMB	D-149	74210	2.91	GALS	TD98-0225	200, 212	AE-CH-D-N	AE-CH-D-N	Defense by Commingling
202	BIO	D149 FLR	75065	11	LITERS	S006500043	205	AE-CH-D-N	AE-CH-D-N	Defense by Commingling
203	PHY		4443	7.48	GALS	S006500046	200, 205	AE-CH-D-N	AE-CH-D-N	Defense by Commingling
203	ER		4483	89.76	GALS	TD98-0180	200, 205	AE-CH-D-N	AE-CH-D-N	Defense by Commingling
203	ER	C066	76608	1	CUFT			AE-CH-D-M	AE-CH-D-M	Defense by future commingling
206	RE	B-133	76486	4	CUFT	TD00-0391	212	AE-CH-D-N	AE-CH-D-N	Defense by Commingling
223	MSD	A234	27138	7.48	GALS	TD98-0185	200, 205	AE-CH-D-N	AE-CH-D-N	Defense by Commingling
306	EMO-WMO	A150-2	22629	5	GALS	TD98-0220	205, 350	AE-CH-H-M	AE-CH-H-M	Defense by Commingling
306	EMO	D001	22868	5	GALS	TD98-0232	205	AE-CH-H-M	AE-CH-H-M	Defense by Commingling
306	EMO	D001	22869	14.96	GALS	TD98-0232	205	AE-CH-H-M	AE-CH-H-M	Defense by Commingling
306	EMO	D001	22926	5	GALS	TD98-0227	205	AE-CH-H-M	AE-CH-H-M	Defense by Commingling
306	EMO-WMO	D001	22927	5	GALS	TD97-0141	205	AE-CH-H-M	AE-CH-H-M	Defense by Commingling
306	EMO	D001	22929	5	GALS	TD97-0141	205	AE-CH-H-M	AE-CH-H-M	Defense by Commingling
306	EWM	D001	22930	5	GALS	TD97-0142	205	AE-CH-H-M	AE-CH-H-M	Defense by Commingling
306	EWM	D001	22933	5	GALS	TD97-0141	205	AE-CH-H-M	AE-CH-H-M	Defense by Commingling
306	EMO	D001	22934	5	GALS	TD97-0142	205	AE-CH-H-M	AE-CH-H-M	Defense by Commingling
306	EMO-WMO	D001	22935	5	GALS	TD97-0141	205	AE-CH-H-M	AE-CH-H-M	Defense by Commingling
306	EMO	D001	22938	5	GALS	TD98-0227	205	AE-CH-H-M	AE-CH-H-M	Defense by Commingling
306	ESH		23007	30	GALS			AE-CH-D-N	AE-CH-D-N	Neutron source material; assume defense
306	EWM		25168	55	GALS			AE-CH-D-N	AE-CH-H-M	Absorbed liquid from NBL and other buildings; change to AE-CH-H-M
306	PFS-BM	C157	25727	55	GALS			AE-CH-D-N	AE-CH-D-N	Empty Pu bottles from NBL
306	PFS-BM	C157	25728	55	GALS			AE-CH-D-N	AE-CH-D-N	
306	PFS-BM	C157	25729	55	GALS			AE-CH-D-N	AE-CH-D-N	
306	ACU	C157	3155	55	GALS			AE-CH-D-N	AE-CH-D-N	
306	EMO	A-126	46556	22.44	GALS	TD98-0169	200, 212	AE-CH-D-N	AE-CH-D-N	Defense by Commingling

306	EMO	A-126	46559	7.48	GALS	TD98-0169	200, 212	AE-CH-D-N	AE-CH-D-N	Defense by Commingling
306	EMO		557	55	GALS	TD98-0165		AE-CH-H-M	None	Non-TRU based on calculation: remove from TRU population
306	EMO	HIBAY	73392	5	GALS	S006500046	200, 205	AE-CH-D-N	AE-CH-D-N	Defense by Commingling
306	EMO	BACK OF A-134	73955	30	GALS			AE-CH-D-M	AE-CH-H-M	Evaporator bottoms from liquid waste treatment; change to AE-CH-H-M
306	EMO	A160	74717	89.76	GALS	TD98-0243		AE-CH-D-N	AE-CH-D-N	Building 306 shop waste from repackaging operations for small waste packages from all over ANL-E; assume defense by commingling
306	EMO	B-125	75115	55	GALS	TD98-0238		AE-CH-D-N	AE-CH-D-N	
306	EMO	B-125/A-160	75116	55	GALS	TD98-0240		AE-CH-D-N	AE-CH-D-N	
306	EMO	B-125/A-160	75117	55	GALS	TD98-0239		AE-CH-D-N	AE-CH-D-N	
306	EMO	A-161	75305	55	GALS	TD98-0241		AE-CH-D-N	AE-CH-D-N	
306	EMO	A-161	75306	55	GALS	TD98-0242		AE-CH-D-N	AE-CH-D-N	
306	PFS	B-125	76294	55	GALS	TD98-0270		AE-CH-D-N	AE-CH-D-N	
306	PFS	B-125	76295	55	GALS	TD98-0271		AE-CH-D-N	AE-CH-D-N	
306	PFS	B-125	76296	55	GALS	TD98-0272		AE-CH-D-N	AE-CH-D-N	
306	EMO	C-157	78599					AE-CH-D-N	AE-CH-D-N	55-gallon drum with Pu bottles from NBL
315	SPM	VAULT 40	25933	1	GALS	TD98-0184	205	AE-CH-D-N	AE-CH-D-N	Defense by Commingling
315	EP	S217	26273	5	GALS	TD99-0353	200	AE-CH-D-N	AE-CH-D-N	Defense by Commingling
315	EP		26360	7.48	GALS			AE-CH-D-N	AE-CH-D-N	Defense by future commingling
315	SSD	VAULT 40	26991	30	GALS			AE-CH-D-N	AE-CH-D-N	Pu source material; assume defense
331	TDD	SHELL	44920	55	GALS			AE-RH-D-N	AE-RH-D-N	Defense by Facility Mission

DIVIDER

PAGE

AE-C-022

RECORD OF COMMUNICATION

Interviewer: Tom Krause DL 9/21/00	Date: 8/15/00 to 9/21/00	Time: 7:30 am
Interviewee: Terri Bray	Group/Organization: ANL-E/ET (AGHCF)	Phone: (630) 252-9957

Subject:
Information concerning chemicals listed in AGHCF Operations Manual.

Summary:

Ms. Bray indicated whether or not certain chemicals were still in use in the AGHCF, whether they were likely to be found in the waste, and provided MSDSs for certain materials normally used in AGHCF operations. In general, all of the solvents mentioned in the Operations Manual were phased out of use in the hot cells prior to 1995 and so would not be found in the waste. This includes perchloroethylene and toluene, however, acetone is still used in small quantities.

To summarize the results of conversations and communications with Ms. Bray:

Materials in the waste include: silver epoxy, silver solder, epoxy, bakelite powder, diallyl phthalate powder, hyprez polishing lubricant, diamond paste abrasive, ethanol (on rags - dried before disposal), acetone (on rags - dried before disposal), and silver nitrate

Materials not in the waste include: fuel-bearing specimens, AB silicon mold release, AB samplex hydraulic oil, transoptic powder, rubber cement, super glue, Photo Flo solution, cellulose nitrate, mercury, Pt-Ir standard #2, perchloroethylene (a.k.a. tetrachloroethylene), toluene, ethylene glycol, and xylene

Ms. Bray also stated that no liquids are ever placed into a waste container. All liquids are evaporated to dryness or absorbed prior to disposal.

See attached email, correspondence, and MSDSs.

Data Limitations:

NA

INFORMATION ON THIS PAGE IS PROPRIETARY. DO NOT DISCLOSE.

"Terri Bray" <tbray@anl.gov> on 09/21/2000 06:38:37 AM

To: <Tom_Krause/Benchmark@becorp.com>
cc:

Subject: Re: Just a few more questions...

Tom,

Sorry for the delay--I've been out of town. I'll try to answer the questions as best I can below.

Terri

----- Original Message -----
From: <Tom_Krause/Benchmark@becorp.com>
To: <tbray@anl.gov>
Sent: Wednesday, September 13, 2000 4:35 PM
Subject: Just a few more questions...

> I have just a few quick questions concerning (possible) hazardous
> constituents and waste generating rates.
>
> 1. Section 4.12 of the AGHCF Operations Manual mentions using xylene to
> clean the objectives of the metallograph. This is a F003 solvent, so if
> it's dried prior to disposal and is not mixed with other solvents, it's
not
> hazardous. However, I thought I would ask if you still use it since you
> have discontinued use of other solvents.
>
This is all outside of the hot cell and not in the RH waste stream.

> 2. You mentioned in a previous correspondence that the super glue and
> Photo-Flo solution used in Section 7.20 does not end up in the waste. Is
> this also true for these chemicals used in Section 7.17?
>
Yes.

> 3. Section 7.21 mentions Pt-Ir density standard. Is this a solid or
> liquid-based standard and does it end up in t he waste?
>
This is not a waste. It is kept for multiple uses and is not thrown away.

> 4. In a correspondence dated 8/11/00, you said that toluene is not used
> in the facility and has not been used for some time. Later in that
> correspondence, you mention that toluene (along with other chemicals) is
> used in etchants (see Section 7.15). Can we assume that toluene, along
> with perchloroethylene was phased out of use prior to any of the current
> waste being generated?

Yes.

>
> 5. With the delineation of both a mixed and nonmixed RH TRU waste stream

> now, what is your estimated division for future generation rates. ANL-E
> had previously reported that approximately 1.0 m3/yr of RH TRU would be
> generated in the future. How should we divide this by mixed vs. nonmixed?
>
I would assume that we are looking at almost a 50-50 mix.

> I believe that should cover it. Thanks for your help.
>
> Tom Krause
> Benchmark Env Corp
>

Tom Krause
08/11/2000 08:15 AM

To: tbray@anl.gov
cc:

Subject: AGHCF AK Questions

Terri-

We have completed our review of the AGHCF Operations Manual and have noticed a few instances where RCRA-regulated hazardous constituents are mentioned as part of routine examination or maintenance operations. In addition, we have noted that many procedures mention the use of certain materials that may contain hazardous constituents. However, without MSDSs or some other information, we can't make this determination. If you could take a few minutes to answer the questions below, it would be greatly appreciated. Also, for any of the materials that do end up in the waste (e.g., bakelite powder, epoxy), if you could send an MSDS for the AK record, that would help immensely (FAX is OK -- 505*262*2698).

Also, I recall that you told me that none of the actual fuel or met mounts end up in the waste because it is accountable material. Is that correct? If so, then the epoxy, silver solder and possibly some other materials become a non-issue.

If you have any questions (about these questions), give me a call [505*262*2694] or email. Thanks again for all your help!

Tom Krause
Benchmark Env Corp

- Several sections such as 7.13.3 (step 13a) and 7.14.2 discuss the use of epoxy. Can you provide any additional chemical information about the epoxy and if it may be present in your TRU waste stream?
- After Section 7.14.3.4, there are several pages with diagrams and a tables of chemicals, etc. On the eighth page of these pages, titled "SUPPLIES," a list of chemicals is present. Can you provide any additional chemical information on the content of: Bakelite powder, diallyl phthalate powder, transoptic powder, AB Silicon Mold Release Fluid, and AB Samplex Hydraulic Oil and if there is a possibility that these materials may enter your TRU waste stream?
- Section 7.15.2, items 3, 8, 9 list toluene, hyprez polishing lubricant and diamond paste abrasive. Can you provide any additional chemical information about the lubricant and the abrasive and tell me if any of these three materials may be present in your TRU waste stream?
- Section 7.16.2.6 lists rubber cement. Can you provide any additional chemical information about the cement and tell me if it may be present in your TRU waste stream?
- Section 7.19.2, discusses the use of bioden RFA cellulose acetate sheets. Can you provide any additional chemical information about this material and if it may be present in your TRU waste stream?
- Section 7.20.2 discusses the use of super glue and Photo-Flo solution. Can you provide any additional chemical information about these materials and if they may be present in your TRU waste stream?

- Section 7.20.4.1 discusses high purity cellulose nitrate. Can you provide any additional chemical information about this material and if it may be present in your TRU waste stream?

- Section 7.21.2.b discusses Pt-Ir density standard #2. Can you provide any additional chemical information about this material and if it may be present in your TRU waste stream?

The following lists additional RCRA-regulated hazardous constituents that have been identified as being used in your operations, per our review of the AGHCF Operations Manual. Can you tell me if the following materials may be present in your TRU waste stream.

- Section 4.9.1, step 3 and 4: perchloroethylene (aka: tetrachloroethylene)

- Section 7.14.3.4, Step 5: chamber filled with 29 in. of mercury. (Would a broken chamber end up as TRU waste or is this outside of the hot cell?)

- Section 7.14.4: silver-solder on metal mounts.

- Section 7.15.3.5, step 3, items 1-5 show an extensive list of chemicals. Are any of these present in the your TRU waste? Of particular concern is: ethylene glycol, ethanol, toluene, and silver nitrate.

- Several sections such as 7.19.2 and 7.17.3.1, step 9: acetone

This transmission consists of _30__ page(s), (including this page).

DATE: 8/11/00

FACSIMILE TRANSMISSION

Argonne National Laboratory

Building 212
9700 South Cass Avenue
Argonne, IL 60439-4878

FAX No. (630) 252-9232

TO VERIFY TRANSMISSION: (630) 252-5199

TO: T. Krause

FAX: 505*262*2698

FROM: Terri Bray
Energy Technology Division
(630) 252-9957

Message:

Tom,

I've enclosed MSDS sheets for the materials you asked that may end up in the TRU waste stream at the AGHCF.

Epoxy (silver and regular) is used inside of the bakelite mounts to hold the sample. It will end up in the TRU waste stream in powder form (from grinding and polishing) and as chunks. The quantity is very small compared to the volume of waste we generate.

Silver solder used to be used to place a steel washer onto the bottom of a diallyl phthalate met mount...but it is not used anymore. However, my guess is there are some mounts still in there and we may discard them at some point, so the MSDS for both materials is enclosed.

Diamond paste and hyprez are used as lubricants when polishing samples. The diamond paste comes in tubes and the empty tubes end up in the waste stream. The paste and hyprez also ends up on tissues and polishing cloths, so it will also end up in the waste—but not as a liquid. The hyprez will be

absorbed onto tissues and probably evaporates before it is packaged into waste cans.

We don't use toluene or perchloroethlene anymore for cleaning samples or other parts. The mercury referred to in 7.14.3.4 step 5 is a pressure measurement (i.e., inHg).

The cellulose acetate sheets aren't used much at all anymore—they are for replicating small features on samples. However, there is a predicted use for these in the future, so a MSDS is enclosed. This stuff would most likely end up in the contact handled TRU waste stream—not the RH-TRU waste stream. You have to use a small amount of acetone with this material to make it work...that may end up on rags/tissues, etc. but will evaporate before it is packaged into the waste cans.

The high purity cellulose nitrate is not in the TRU waste stream—this is done outside of the cell.

The Pt-Ir density standard is a measurement standard that we do not have multiple copies of nor do we plan on throwing it out.

The ethylene glycol, ethanol, toluene, and silver nitrate is used in etchants with acids. They are used in very small quantities on a very infrequent basis (few times/year and in a few mL quantities). The etchants are neutralized in sodium carbonate and solidified with pelletized clay.

No liquids make their way to the waste stream. They are either evaporated or solidified with pelletized clay.

I hope this helps. One thing I noticed in the new draft of the TRU WIPP-WAC is that they are probably looking for organic content measurements. We may need to purchase (or have WM purchase) a HNU meter and measure organics before we close the 7-gal waste cans to meet this requirement. What do you think?

Thanks

Terri

"Terri Bray" <tbray@anl.gov> on 08/21/2000 01:44:31 PM

To: <Tom_Krause/Benchmark@becorp.com>
cc:

Subject: Re: Missing Info

Tom,

We do not use, nor have ever used, transoptic powder. This was an option for the mount material that was never used.

I'll fax you the missing 195A.

Terri
----- Original Message -----
From: <Tom_Krause/Benchmark@becorp.com>
To: <tbray@anl.gov>
Sent: Monday, August 21, 2000 2:25 PM
Subject: Missing Info

> Terri-
>
> I hate to keep bothering you, but, we need a few more tidbits of
> information for the RH waste.
>
> 1.) We never received a MSDS for "transoptic powder", do you have one?
>
> 2.) Form WMO 195A, is missing for Waste Req #76647. Morgan may have
> overlooked it when she copied everything for us. Could you please fax
this
> information?
>
> Fax Number: (505) 262-2698
>
> Thanks again!
>
> Tom Krause
> Benchmark Env Corp
>

WHMIS REGULATIONS - CANADIAN WORKPLACE.

epoxy resin 1/2

Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

IDENTITY (As Used on Label and List)
20-8130 Epoxide Resin/20-8133 Epo-mix

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

Section I

Epoxide

RESELLER
BUEHLER LTD

Emergency Telephone Number
312-295-6500

Address (Number, Street, City, State, and ZIP Code)
41 Waukegan Road, Lake Bluff, IL 60044

Telephone Number for Information
312-295-6500

WHMIS CLASSIFICATION: CLASS B3; D2B

Date Prepared
October 30, 1989

CLASS: EPOXY RESIN BLEND

Signature of Preparer (optional)
T. Deram

Section II — Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s))	CAS	OSHA PEL	ACGIH TLV	Other Limits Recommended		% (optional)
				LD50	(mg/kg)	
Butyl Glycidyl Ether	2426-08-6	25 ppm	25ppm	2050	2500	10-30
Bisphenol-A Epoxy Resin	25068-38-6	N/A	N/A	11400	> 13,000	70-90
				(RAT)	(RBT)	
				ORAL	DERMAL	

ALL INGREDIENTS ARE LISTED ON TSCA INVENTORY LIST.

CALIFORNIA PROP 65 - NOT KNOWN TO CONTAIN ANY MATERIALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER OR REPRODUCTIVE HARM.

LC50ppm (RAT)
INHAL
Butyl Glycidyl Ether - 1030
Bisphenol - A Epoxy resin - NO DEATHS

HMIS HAZARD CODE: Personal protective equipment: P
Health: 3 serious, flammability: 2 moderate, reactivity: 0 Minimal

Section III — Physical/Chemical Characteristics

Boiling Point	N/A	Specific Gravity (H_2O = 1)	1.13
Vapor Pressure (mm Hg.) < 0.1mm at 20°C		Melting Point	N/A
Vapor Density (AIR = 1)	Heavier than air	Evaporation Rate Relative to N-Butyl Acetate	SLOWER
Solubility in Water	Neglibible (< 0.1%)	Percentage Volatile by Volume	10-20%
Appearance and Odor	Light yellow clear liquid with sweet odor	PH-slightly basic.	

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used) Setaflash	165° F	Flammable Limits		LEL N/A	UEL N/A
Extinguishing Media	Foam, CO_2, Dry Chemical	OSHA	Combustible Liquid Class III A	DOT	COMBUSTIBLE LIQ

Special Fire Fighting Procedures
Wear self contained breathing apparatus and protective clothing. Use water to cool exposed containers. Water stream directed into fire may cause frothing with subsequent spread of fire

Unusual Fire and Explosion Hazards
Irritating and/or toxic gases or fumes may be generated by thermal decomposition or combustion. Closed containers may rupture or explode (due to possible build up) when exposed to extreme heat.

(Reproduce locally)

N/A = NOT AVAILABLE

Section V — Reactivity Data

Stability		Conditions to Avoid
Unstable		NOT APPLICABLE
Stable	X	

Incompatibility (Materials to Avoid)
Strong bases or oxidants. Strong Lewis or Mineral Acids.

Hazardous Decomposition or Byproducts
Acrid FUMES. Oxides of Carbon. Aldehydes and acids from incomplete combustion. Phenols.

Hazardous Polymerization		Conditions to Avoid
May Occur		Reactions with some amines releases considerable heat and may release acrid fumes.
Will Not Occur	X	

Section VI — Health Hazard Data

Route(s) of Entry:	Inhalation?	Skin?	Ingestion?
	X	X	X

Health Hazards (Acute and Chronic)
Eyes- moderate irritant. May cause reversible corneal injury.. Skin-moderate irritant. May cause dermatitus and allergic responses. Repeated or prolonged overexposure may cause sensitization. Inhalation- may cause irritation of respiratory tract. Ingestion- may cause nausea and vomitting. No specific effects known. Slightly toxic..

Carcinogenicity:	NTP?	IARC Monographs?	OSHA Regulated?
	NO	NO	NO

Butyl Glycidyl Ether is mutanic in vitro.
Mutagenicity tests in mice gave mixed results.

Signs and Symptoms of Exposure
Preexisting pulmonary and dermatological disorders may be aggravated by exposure to hazardous components.

Emergency and First Aid Procedures:
Eyes - Flush with plenty of water at least 15 minutes. Obtain immediate medical attention.
Skin - Remove contaminated clothing. Wash affected area with soap and water. Consult a physician. Inhalation - Remove to fresh air. If breathing is difficult, give oxygen. Administer artificial respiraton if not breathing. Obtain medical attention.
Ingestion-induce vomitting if victim is conscious and not drowsy. Give water or milk if if victim is conscious and not drowsy. Should vomitting occur, be sure to keep victims head below hips to avoid aspiration of vomitus into lungs. Obtain immediate medical attention.

Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled
Ventilate area, eliminate sources of ignition, contain spill absorb with inert material Sweep or shovel into containers with lids cover loosely and store in well ventilated area until disposal. Wash spill area with soap and water. Prevent washings from entering waterways.

Waste Disposal Method
Review all local State and Federal regulations concerning health and pollution for appropriate disposal procedures.

Precautions to Be Taken in Handling and Storing
Do not take internally, avoid breathing vapor/dust/mist. wash thoroughly after handling. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation.

Other Precautions
FOR INDUSTRIAL USE ONLY

Section VIII — Control Measures

Respiratory Protection (Specify Type)
Use Niosh approved respirator (29CFR 1910.134) . IF TLV IS EXCEEDED, or if ventilation is limite

Ventilation			
	Local Exhaust To control vapor/dust Levels to below recommended limits	Special	NONE KNOWN
	Mechanical (General) NONE KNOWN	Other	NONE KNOWN

Protective Gloves	Eye Protection
Impervious Rubber	Chemical Safety Goggles

Other Protective Clothing or Equipment
CLEAN PROTECTIVE CLOTHING. EYE WASH.

Work/Hygienic Practices
Good personal hygiene to be followed at all times.

he data and information as stated was furnished by the manufacturer and upplier of this product. BUEHLER, LTD. cannot warrant the accuracy of this information and hall not be responsible or liable for any damage that may result, should any of the information e erroneous.

Epoxy Hardener 1/2

Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

IDENTITY (As Used on Label and List): Epo-Mix 20-8132 Epoxide Hardener/20-8133 Epoxide

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

Section I

Manufacturer's Name: BUEHLER LTD	Emergency Telephone Number: 312-295-6500
Address (Number, Street, City, State, and ZIP Code): 41 Waukegan Road, Lake Bluff, IL 60044	Telephone Number for Information: 312-295-6500
	Date Prepared: February 26, 1987
	Signature of Preparer (optional): T. Deram

Section II — Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s))	CAS	OSHA PEL	ACGIH TLV	Other Limits Recommended		% (optional)
				LD50(mg/Kg)		
Diethylenetriamine (Deta)	11 1-40-0	N/A	1ppm	1000	805	16.5
Polyethyleneamine Adduct n	Confidential	N/A	N/A	N/A	N/A	37.675
Polyoxypropyleneiamine	9046-10-0	N/A	N/A	220	400	10.0
Trisaminoethylamine	4097-89-6	N/A	N/A	N/A	N/A	1.75
Piperazilyl-Ethylenediamine	24028-46-4	N/A	N/A	N/A	N/A	3.5
Aminoethylpiperazine (AEP)	140-31-8	N/A	N/A	2100	880	5.25
Triethylenetetramine	112-24-3	N/A	N/A	2500	805	24.5
Phenol	108-95-2	5ppm	5ppm	414 (RAT) ORAL	850 (RBT) DERMAL	.82

HMIS HAZARD CODE: Personal protective equipment: D,

HEALTH: 3 Serious, Flammability: 1 slight, reactivity 0 Minimal.

Section III — Physical/Chemical Characteristics

Boiling Point	N/A	Specific Gravity (H_2O = 1)	1.02
Vapor Pressure (mm Hg.)	N/A	Melting Point	N/A
Vapor Density (AIR = 1)	Heavier than Air	Evaporation Rate: Relative to N-Butyl Acetate	slower
Solubility in Water	Appreciable 10.0-99.9%	% Volatile by volume	0.0%

Appearance and Odor: Clear liquid with moderate amine odor.

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used)	Flammable Limits	% V in AIR LEL	UEL
200° F (TAG)		1.1	9.2

Extinguishing Media: Foam CO_2 Dry Chemical/Combustible liquid class III B

Special Fire Fighting Procedures: Wear self-contained breathing apparatus and protective clothing. Use water to cool exposed containers. Water steam directed into fire may cause frothing with subsequent spread of fire.

Unusual Fire and Explosion Hazards: Irritating and/or toxic gases or fumes may be generated by thermal decompostion or combustion. Closed containers may rupture or explode (due to pressure build up) when exposed to extreme heat.

Epoxy Hardener 2/2

Section V — Reactivity Data

Stability		Conditions to Avoid
Unstable		Excessive temperatures
Stable	X	

Incompatibility (*Materials to Avoid*) Strong bases or oxidants. Strong Lewis or Mineral acids. Epoxy resin in large masses or under uncontrolled conditions.

Hazardous Decomposition or Byproducts
Acrid smoke, oxides of carbon, toxic nitrogenous oxides.

Hazardous Polymerization		Conditions to Avoid
May Occur		
Will Not Occur	X	Epoxy resins under uncontrolled conditions.

Section VI — Health Hazard Data

Route(s) of Entry:	Inhalation?	Skin?	Ingestion?
	X	X	X

Health Hazards (*Acute and Chronic*) Eyes - severe irritant. Corrosive. may cause chemical burns with permanent corneal injury and even blindness. Skin - severe irritant. Corrosive. May cause chemical burns and blisters. Inhalation -may cause irritation of respiratory tract. Ingestion - May cause irritation/burns of mouth, throat and stomach. TOXIC.

Carcinogenicity:	NTP?	IARC Monographs?	OSHA Regulated?
	N/A	N/A	N/A

Signs and Symptoms of Exposure Over exposure may cause headache nausea and vomitting. Material aspirated into the lungs may cause chemical pneumonitis. Ingestion - symptoms include nausea, abdominal pain and possible collapse.

Medical Conditions Generally Aggravated by Exposure Repeated or prolonged overexposure may cause sensitization. May be absorbed in harmful amounts.

Emergency and first aid procedures: Eyes - flush with water for atleast 15 minutes. Obtain immediate medical attention. Skin - Remove contaminated clothing. Wash thoroughly with soap and water - consult a physician. Inhalation - remove to fresh air, if breathing is difficult give oxygen. Administer artificial respiration. If not breathing obtain medica attention. Ingestion - Do Not induce vomiting. Give water or milk if victim is conscious and not drowsy. Should vomiting occur keep victim's head below hips - obtain immediate medical attenti

Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled
Ventilate area, eliminate sources of ignition, contain spill, absorb with inert material. sweep or shovel into container with lids. COver loosely and store in a well ventilated area until disposal. Wash spill area with soap and water. Prevent washings from entering waterways.

Waste Disposal Method
Review all local, state and federal regulations concerning health and pollution for appropriate disposal procedures.

Precautions to Be Taken in Handling and Storing
Do Not Take internally. Avoid contact with eyes, skin and clothing. Avoid breathing vapor, dust, mist. Wash thoroughly after handling. Tightly reseal all partially used containers.

Other Precautions
Use only with adequate ventilation.

For Industrial Use Only..

Section VIII — Control Measures

Respiratory Protection (*Specify Type*)
Use NIOSH Approved Respirator (29 CFR 1910.134) if TLV is exceeded

Ventilation		
Local Exhaust: To control vapor/dust levels to below recommended limits.	Special: N/A	
Mechanical (General): N/A	Other: N/A	

Protective Gloves	Eye Protection
Impervious rubber	Chemical safety goggles - Face shield

Other Protective Clothing or Equipment
Accessible eye wash, clean protective clothing, rubber apron.

Work/Hygienic Practices
Good personal hygiene to be followed at all times.

e data and information as stated was furnished by the manufacturer and pplier of this product. BUEHLER, LTD. cannot warrant the accuracy of this information and all not be responsible or liable for any damage that may result, should any of the information erroneous.

• USGPO: 1988-491-529/45775

Silver Epoxy 2/4

MATERIAL SAFETY DATA SHEET

DYNALOY, INC.
1910 South State Ave.
Indianapolis, IN 46203
Phone: (317) 788-5694

EMERGENCY PHONE: 1-800-424-9300 (CHEMTREC)
INTERNATIONAL CALL U.S. COLLECT: 1-703-527-3887
Date Prepared .: 12/03/98
Supersedes ....: 10/30/97
Prepared by ...: DREW O'BRIEN
TECHNICAL SERVICES SPECIALIST

	HMIS RATING
HEALTH 2	4 = SEVERE
FLAMMABILITY ... 1	3 = SERIOUS
REACTIVITY 0	2 = MODERATE
PROTECTION X	1 = SLIGHT
	0 = MINIMAL
	X = SEE SECTION 6

PRODUCT IDENTITY.....: DYNALOY 325 - PART A
PRODUCT CODE NUMBER .....: J014A
PRODUCT USE .....: SILVER FILLED EPOXY RESIN
DOT HAZARD CLASSIFICATION .: NOT REGULATED

SECTION 1 - HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENTS	CAS NUMBER	Wgt. %	EXPOSURE LIMITS PEL-OSHA	TLV-ACGIH	OTHER	CARCINOGEN	NOTE
SILVER POWDER	7440-22-4	60-100	10 ug/m3	100 ug/m3	N/AV	NO	**
n-BUTYL GLYCIDYL ETHER	2426-08-6	3-7	25 ppm	25 ppm	N/AV	N/AV	
EPOXY RESIN	MIXTURE	15-40	N/AV	N/AV	N/AV	N/AV	

**SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF SARA TITLE III, SEE SECTION 8 - REGULATORY INFORMATION.
All components of this product are listed on the TSCA registry.

SECTION 2 - PHYSICAL AND CHEMICAL CHARACTERISTICS

PHYSICAL STATE .....: PASTE
ODOR AND APPEARANCE .: SILVER W/SLIGHT ODOR
SPECIFIC GRAVITY (water=1): 1.2
SOLUBILITY IN WATER .....: NEGLIGIBLE
VOC(lbs/gl).....: 0.581

VAPOR PRESSURE (mmHg)..: N/AV
VAPOR DENSITY (Air=1)..: N/AV
ODOR THRESHOLD .....: N/AV
EVAP. RATE (n-BUTYL ACETATE=1): SLOWER

pH .....: N/AP
BOILING POINT (F)....: N/A
FREEZING POINT (F)...: N/

SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT AND METHOD...: >200°F (93°C), OC

FLAMMABLE LIMITS: LEL = N/AV UEL = N/AV

EXTINGUISHING MEDIA: Use water, carbon dioxide, alcohol foam or dry chemical type extinguishers. Keep containers cool with water spray.

SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode when fighting fires.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Vapors are heavier than air and may travel along the ground or be moved by ventilation and ignited by heat, electrical sparks, pilot lights, other flames and ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near containers (even empty) because product or its residue can ignite explosively.

SECTION 6 - REACTIVITY DATA

IS THE PRODUCT STABLE? YES CONDITIONS TO AVOID FOR STABILITY: None known

INCOMPATIBILITY (Materials to Avoid): Avoid contact with strong oxidizing agents, acids, bases and amines.

HAZARDOUS DECOMPOSITION PRODUCTS....: Oxides of carbon, NOx fumes.

WILL HAZARDOUS POLYMERIZATION OCCUR? NO CONDITIONS TO AVOID FOR POLYMERIZATION: N/AP

KEEP OUT OF REACH OF CHILDREN

N/AP - Not Applicable N/AV - Not Available

epoxy

Silver epoxy

MATERIAL SAFETY DATA SHEET

1/4

PRODUCT IDENTIFIER: J014A DYNALOY 325 - PART A

SECTION 5 - HEALTH HAZARD DATA

ROUTE OF ENTRY: a) Skin b) Inhalation c) Eye contact

EFFECTS OF ACUTE EXPOSURE: a) EYES - Can cause severe irritation, redness, tearing, blurred vision. b) SKIN - Prolonged or repeated contact can cause moderate irritation, defatting and dermatitis. c) INHALATION - Excessive inhalation of vapors can cause nasal and respiratory irritation, Central Nervous System effects including dizziness, weakness, fatigue, nausea, headache and possible unconsciousness. d) INGESTION - Can cause gastrointestinal irritation, nausea, vomiting and diarrhea. Aspiration of material into the lungs can cause chemical pneumonitis which can be fatal.

EFFECTS OF CHRONIC EXPOSURE: Overexposure to this product (or its components) may cause skin sensitization.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Pre-existing eye, skin and respiratory disorders.

EMERGENCY AND FIRST AID PROCEDURES:

a) SKIN - Thoroughly wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash clothing before reuse. If irritation develops, consult a physician.

b) EYES - Immediately flush with plenty of clear, running water for at least 15 minutes, lifting upper and lower lids occasionally. Get medical attention.

c) INHALATION - If affected remove individual to fresh air. If breathing is difficult give oxygen. If breathing has stopped, administer artificial respiration. Keep person warm and quiet and get medical attention.

d) INGESTION - If swallowed, call a physician immediately. ONLY induce vomiting at the instructions of a physician. Never give anything by mouth to an unconscious person. Aspiration of material into the lungs due to vomiting can cause chemical pneumonitis which can be fatal.

SECTION 6 - CONTROL AND PROTECTIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT:

GLOVES...:	Impervious, Neoprene	RESPIRATOR..:	NIOSH-Approved (fume/mist/dust)	EYE....:	Chemical splash goggles
FOOTWEAR..:	Boots	CLOTHING....:	Impervious	OTHER..:	N/AP

VENTILATION: LOCAL EXHAUST: Below TLV MECHANICAL (General): Explosion proof.

WORK/HYGIENIC PRACTICES: Eye wash and safety shower should be easily accessible. Provide adequate ventilation. Wash thoroughly after handling and before eating, drinking or smoking. Remove contaminated clothing promptly and wash it before reuse.

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Eliminate all ignition sources. Absorb small spills on suitable absorbent and transfer to hood. Stop large spills at source, dike area to prevent spreading, and pump liquid to salvage tank. Absorb remaining liquid on suitable absorbent and collect for proper disposal. Prevent run-off to sewers, streams or other bodies of water. If run-off occurs, notify proper authorities that a spill has occured.

WASTE DISPOSAL METHOD: Contaminated absorbent may be disposed of according to local, state and federal regulations.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Keep away from heat, sparks and open flames. Protect from physical damage and keep tightly closed. Do not store under freezing conditions or above 120 degrees F.

MAINTENANCE PRECAUTIONS: When working with combustible or flammable material, electrically ground all equipment and use only non-sparking tools.

OTHER PRECAUTIONS: Empty containers retain product residue and vapors. Always obey hazard warnings.

SECTION 8 - REGULATORY INFORMATION

This product contains the following chemical or chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372:

METALLIC SILVER PIGMENT CAS#7440-24-4 60-100%

KEEP OUT OF REACH OF CHILDREN

N/AP - Not Applicable N/AV - Not Available

Silver epoxy

444

MATERIAL SAFETY DATA SHEET

DYNALOY, INC.
1910 South State Ave.
Indianapolis, IN 46203
Phone: (317) 788-5694

EMERGENCY PHONE: 1-800-424-9300 (CHEMTREC)
INTERNATIONAL CALL U.S. COLLECT: 1-703-527-3887
Date Prepared .: 12/03/98
Supersedes ....: 10/30/97
Prepared by ...: DREW O'BRIEN
TECHNICAL SERVICES SPECIALIST

	HMIS RATING
HEALTH 3	4 = SEVERE
FLAMMABILITY ... 1	3 = SERIOUS
REACTIVITY 0	2 = MODERATE
PROTECTION X	1 = SLIGHT
	0 = MINIMAL
	X = SEE SECTION 6

PRODUCT IDENTITY.....: DYNALOY 325 - PART B
PRODUCT CODE NUMBER .....: J014B
PRODUCT USE .....: SILVER FILLED EPOXY HARDENER
DOT HAZARD CLASSIFICATION .: NOT REGULATED

SECTION 1 - HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENTS	CAS NUMBER	Wgt. %	EXPOSURE LIMITS PEL-OSHA	TLV-ACGIH	OTHER	CARCINOGEN	NOTE
SILVER POWDER	7440-22-4	60-100	10 ug/m3	100 ug/m3	N/AV	NO	**
ALAPHATIC POLYAMINOAMIDE	68082-29-1	5-10	N/AV	N/AV	N/AV	N/AV	
FATTY ACID POLYAMIDE	68410-23-1	7-13	N/AV	N/AV	N/AV	NO	
TETA	112-24-3	1-5	N/AV	N/AV	N/AV	N/AV	
2,4,6-TRI (DIMETHYLAMINOMETHYL) PHENOL	90-72-2	3-7	N/AV	N/AV	N/AV	N/AV	

**SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF SARA TITLE III, SEE SECTION 8 - REGULATORY INFORMATION.
All components of this product are listed on the TSCA registry.

SECTION 2 - PHYSICAL AND CHEMICAL CHARACTERISTICS

PHYSICAL STATE .....: PASTE
ODOR AND APPEARANCE .: SILVER W/SLIGHT ODOR
SPECIFIC GRAVITY (water=1): 0.95
SOLUBILITY IN WATER .....: NEGLIGIBLE
VOC(lbs/gl).....: <1.0

VAPOR PRESSURE (mmHg)..: <15 mm/Hg @ 20°C
VAPOR DENSITY (Air=1)..: >1
ODOR THRESHOLD .....: N/AV
EVAP. RATE (n-BUTYL ACETATE=1): SLOWER

pH .....: N
BOILING POINT (F)....: >[illegible] F
FREEZING POINT (F)...: N/AP

SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT AND METHOD...: >200°F (93°C), CC FLAMMABLE LIMITS: LEL = N/AV UEL = N/AV

EXTINGUISHING MEDIA: Use water, carbon dioxide, alcohol foam or dry chemical type extinguishers. Keep containers cool with water spray.

SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode when fighting fires.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Vapors are heavier than air and may travel along the ground or be moved by ventilation and ignited by heat, electrical sparks, pilot lights, other flames and ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near containers (even empty) because product or its residue can ignite explosively.

SECTION 4 - REACTIVITY DATA

IS THE PRODUCT STABLE? YES CONDITIONS TO AVOID FOR STABILITY: None known

INCOMPATIBILITY (Materials to Avoid): Avoid contact with strong oxidizing agents, acids, bases and amines.

HAZARDOUS DECOMPOSITION PRODUCTS....: Oxides of carbon, NOx fumes.

WILL HAZARDOUS POLYMERIZATION OCCUR? NO CONDITIONS TO AVOID FOR POLYMERIZATION: N/AP

KEEP OUT OF REACH OF CHILDREN

N/AP - Not Applicable N/AV - Not Available

Silver epoxy

MATERIAL SAFETY DATA SHEET 3/4

PRODUCT IDENTIFIER: J014B DYNALOY 325 - PART B

SECTION 5 - HEALTH HAZARD DATA

ROUTE OF ENTRY: a) Skin b) Inhalation c) Eye contact

EFFECTS OF ACUTE EXPOSURE: a) EYES - Can cause severe irritation, redness, tearing, blurred vision. b) SKIN - Prolonged or repeated contact can cause moderate irritation, defatting and dermatitis. c) INHALATION - Excessive inhalation of vapors can cause nasal and respiratory irritation, Central Nervous System effects including dizziness, weakness, fatigue, nausea, headache and possible unconsciousness. d) INGESTION - Can cause gastrointestinal irritation, nausea, vomiting and diarrhea. Aspiration of material into the lungs can cause chemical pneumonitis which can be fatal.

EFFECTS OF CHRONIC EXPOSURE: Overexposure to this product (or its components) may cause skin sensitization.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Pre-existing eye, skin and respiratory disorders.

EMERGENCY AND FIRST AID PROCEDURES:

a) SKIN - Thoroughly wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash clothing before reuse. If irritation develops, consult a physician.
b) EYES - Immediately flush with plenty of clear, running water for at least 15 minutes, lifting upper and lower lids occasionally. Get medical attention.
c) INHALATION - If affected remove individual to fresh air. If breathing is difficult give oxygen. If breathing has stopped, administer artificial respiration. Keep person warm and quiet and get medical attention.
d) INGESTION - If swallowed, call a physician immediately. ONLY induce vomiting at the instructions of a physician. Never give anything by mouth to an unconscious person. Aspiration of material into the lungs due to vomiting can cause chemical pneumonitis which can be fatal.

SECTION 6 - CONTROL AND PROTECTIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT:

GLOVES...:	Impervious, Neoprene	RESPIRATOR..:	NIOSH-Approved (fume/mist/dust)	EYE....:	Chemical splash goggles
FOOTWEAR..:	Boots	CLOTHING....:	Impervious	OTHER..:	N/AP

VENTILATION: LOCAL EXHAUST: Below TLV MECHANICAL (General): Explosion proof.

WORK/HYGIENIC PRACTICES: Eye wash and safety shower should be easily accessible. Provide adequate ventilation. Wash thoroughly after handling and before eating, drinking or smoking. Remove contaminated clothing promptly and wash it before reuse.

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Eliminate all ignition sources. Absorb small spills on suitable absorbant and transfer to hood. Stop large spills at source, dike area to prevent spreading, and pump liquid to salvage tank. Absorb remaining liquid on suitable absorbent and collect for proper disposal. Prevent run-off to sewers, streams or other bodies of water. If run-off occurs, notify proper authorities that a spill has occured.

WASTE DISPOSAL METHOD: Contaminated absorbant may be disposed of according to local, state and federal regulations.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Keep away from heat, sparks and open flames. Protect from physical damage and keep tightly closed. Do not store under freezing conditions or above 120 degrees F.

MAINTENANCE PRECAUTIONS: When working with combustible or flammable material, electrically ground all equipment and use only non-sparking tools.

OTHER PRECAUTIONS: Empty containers retain product residue and vapors. Always obey hazard warnings.

SECTION 8 - REGULATORY INFORMATION

This product contains the following chemical or chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372:

METALLIC SILVER PIGMENT CAS#7440-24-4 60-100%

KEEP OUT OF REACH OF CHILDREN

N/AP - Not Applicable N/AV - Not Available

5-2-91

UNITED WIRE & SUPPLY CORPORATION

TELEPHONE
401-781-3000

SEAMLESS TUBES
ALUMINUM, COPPER
BRASS, NICKEL-SILVER

MANUFACTURERS
ESTABLISHED 1888

1497 ELMWOOD AVENUE
PROVIDENCE, RHODE ISLAND 02910
BRAZING ALLOYS DIVISION

TELEX
92-7764

DRAWN WIRE, BRASS
ALUMINUM, COPPER AND
SILVER BRAZING ALLOYS

65

#38

August 9, 1972

#2265

Silver Solder

1/1

Argonne National Laboratory
9700 South Cass Avenue
Argonne, Illinois 50439

Attention: Mr. J. L. Woodring
Industrial Hygienist

Dear Mr. Woodring:

This responds to your July 25, 1972 dated letter concerning the percentage breakdown of the chemical composition of our Sil 56T Silver Brazing Alloy. This alloy conforms to the AWS Specification A5.8-BAg-1. It has the following nominal composition:

55 - 57 %	Silver
21 - 23 %	Copper
15 - 19 %	Zinc
4.5 - 5.5%	Tin

The original tensile strength is about 66,000 P.S.I. with an elongation of 36% in two inches.

We have been pleased to provide this information and would be pleased to hear further from you if you have any questions.

Very truly yours,

E. J. D'Amore, Manager
Brazing & Wire Division Sales

EJD/JNA

Card Typed on 10/31/72
Sieve

IP-1

diamond paste

1/3

AFFIDAVIT OF PRODUCT SAFETY

METADI® DIAMOND PASTE COMPOUND

All ingredients of METADI® DIAMOND PASTE COMPOUND are common materials used in topically-applied cosmetics, personal care products, household products and even pharmaceuticals. Each ingredient has a history of safe use in consumer products as well as industrial formulations.

ALL METADI® ingredients are properly listed in the REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES (1977). All of the ingredients are known to be practically non-toxic in human exposure via inhalation, ingestion, skin, or eye contact.

Furthermore, each of the ingredients of METADI® DIAMOND COMPOUND has:

1) No OSHA established TLV to limit inhalation

2) No flashpoint below 200 degrees c and not subject to spontaneous heating or decomposition

3) No ability to cause skin burns

4) No strong oxidizing agent

5) No possibility of hazardous polymerization

Finally, none of the ingredients in METADI® DIAMOND COMPOUND are known to be poison, carcinogen or a skin irritant or sensitizer.

BUEHLER, LTD.

Thomas R. Deram
Manager
Quality Control

TRD:sf
03/30/87

diamond paste 2/3

Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

IDENTITY (As Used on Label and List)
40-6080 THRU 40-6259 METADI® I, II & III

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

Section I

Manufacturer's Name: BUEHLER LTD	Emergency Telephone Number: 312-295-6500
Address (Number, Street, City, State, and ZIP Code): 41 Waukegan Road, Lake Bluff, IL 60044	Telephone Number for Information: 312-295-6500
WHMIS CLASSIFICATION: UNREGULATED	Date Prepared: July 7, 1989
CHEMICAL FAMILY: FATTY ACID/POLYALKYLENE GLYCOL	Signature of Preparer (optional): T. DERAM

Section II — Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s))	CAS NO.	OSHA PEL	ACGIH TLV	Other Limits Recommended	W % (optional)
DIAMOND POWDER (VARIABLE ACCORDING TO GRADE)	7782-40-3	N/A	N/A	NONE	1-30
FATTY ACID	57-11-4	N/A	N/A	NONE	1-30
POTASSIUM SOAP	143-18-0	N/A	N/A	NONE	<10
POLYETHYLENE GLYCOL	25322-68-3	N/A	N/A	NONE	<10
POLYALKYLENE GLYCOL	25322-69-4	N/A	N/A	NONE	40-60

NFPA - FLAMMABILITY 0
HEALTH 0
REACTIVITY 0 NO SPECIFIC HAZARD

Section III — Physical/Chemical Characteristics

Boiling Point: GREATER THAN	400°F	Specific Gravity (H_2O = 1): GREATER THAN	1
Vapor Pressure (mm Hg.): LESS THAN	0.01	Melting Point	N/A
Vapor Density (AIR = 1)	N/A	Evaporation Rate (Butyl Acetate = 1)	N/A

Solubility in Water: 90% DISPERSIBLE

Appearance and Odor: SMOOTH PASTE-MILD ODOR

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used): (CLEVELAND OPEN CUP) GREATER THAN 250°F	Flammable Limits	LEL: N/A	UEL: N/A

Extinguishing Media: WATER, FOAM, DRY CHEMICAL, CARBON DIOXIDE

Special Fire Fighting Procedures: NONE

Unusual Fire and Explosion Hazards: NONE

(Reproduce locally) - N/A = NOT APPLICABLE

OSHA 174, Sept. 1985

08/10/2000 14:47 6302529232

diamond paste 3/3

	Stable	X	Conditions to Avoid NONE

Incompatibility (Materials to Avoid) NONE

Hazardous Decomposition or Byproducts NONE

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	NONE

Section VI — Health Hazard Data

Route(s) of Entry: Inhalation? N/A Skin? X Ingestion? X

Health Hazards (Acute and Chronic) NONE KNOWN

Carcinogenicity: NTP? NO IARC Monographs? NO OSHA Regulated? NO

Signs and Symptoms of Exposure
EYES - ABRASIVE PARTICLES MAY IRRITATE IF RUBBED IN EYES. SKIN - MILD DEFATTING.
SWALLOW - MILD IRRITAION, NAUSEA

Medical Conditions Generally Aggravated by Exposure NONE KNOWN

Emergency and First Aid Procedures
SKIN- WASH THOROUGHLY WITH SOAP & WATER. EYES - FLUSH THOROUGHLY WITH WATER, LIFTING EYE LIDS OCCASIONALLY.

Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled
CLEAN UP RESIDUE WITH SOAP & WATER.

Waste Disposal Method
DISCARD WITH CONVENTIONAL WASTE.

Precautions to Be Taken in Handling and Storing NONE

Other Precautions NONE

Section VIII — Control Measures

Respiratory Protection (Specify Type) NONE REQUIRED

Ventilation	Local Exhaust	NONE	Special	NONE
	Mechanical (General)	NONE	Other	NONE
Protective Gloves	NONE		Eye Protection	NONE

Other Protective Clothing or Equipment - NONE

Work/Hygienic Practices
Good personal hygiene to be followed at all times.

• USCPB. 1800-691-339/63779

le data and information as stated was furnished by the manufacturer and
ipplier of this product. BUEHLER, LTD. cannot warrant the accuracy of this information and
all not be responsible or liable for any damage that may result, should any of the information
erroneous.

diallyl phthalate 1/2

WHMIS REGULATIONS - CANADIAN WORKPLACE

Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

IDENTITY (As Used on Label and List)
20-3340-080 DIALLYL PHTHALATE

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

Section I

RESELLER
BUEHLER LTD

Address (Number, Street, City, State, and ZIP Code)
41 Waukegan Road, Lake Bluff, IL 60044

WHMIS CLASSIFICATION: Class D2B

Emergency Telephone Number
708-295-6500

Telephone Number for Information
708-295-6500

Date Prepared
November 3, 1989

Signature of Preparer (optional)
TOM DERAM

Section II — Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s))	CAS	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
Glass Fiber	65997-17-3	Not Est.	10mg/m^3 <7um*	None Known	<50
Titanium Dioxide	13463-67-7	" "	10mg/m^3 Resp.	" "	< 3

* <7um = For Particle Sizes

HMIS = Health 1, Reactivity 0, Flammability 0

Section III — Physical/Chemical Characteristics

Boiling Point	N/A	Specific Gravity (H_2O = 1)	1.6-1.9
Vapor Pressure (mm Hg.) Negligible at 20°		Melting Point	N/A
Vapor Density (AIR = 1)	N/A	Evaporation Rate (Butyl Acetate = 1)	N/A
Solubility in Water Negligible		pH	N/A

Appearance and Odor
Blue granular pigmented material characteristic odor.

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used) N/A	Flammable Limits	LEL N/A	UEL N/A

Extinguishing Media
CO_2, Dry Chemical, Water Fog

Special Fire Fighting Procedures
Firefighters should be equipped with a self contained breathing apparatus.

Unusual Fire and Explosion Hazards
Avoid breathing fumes generated in a fire.

(Reproduce locally)

diallyl phthalate 2/2 11

Section V — Reactivity Data

Stability		Conditions to Avoid
Unstable		N/A
Stable	X	

Incompatibility (*Materials to Avoid*): None Known

Hazardous Decomposition or Byproducts: None at normal use conditions; oxides of carbon and aromatic hydrocarbons may be generated on exposure to high temperatures.

Hazardous Polymerization		Conditions to Avoid
May Occur		N/A
Will Not Occur	X	

Section VI — Health Hazard Data

Route(s) of Entry:	Inhalation?	Skin?	Ingestion?
	X	X	

Health Hazards (*Acute and Chronic*): NONE KNOWN

Carcinogenicity:	NTP?	IARC Monographs?	OSHA Regulated?
	No	No	No

Signs and Symptoms of Exposure: May cause skin irritation upon repeated or prolonged contact. Dust will cause nose and throat irritation and will be mildly irritating to eyes.

Medical Conditions Generally Aggravated by Exposure: NONE KNOWN

Emergency and First Aid Procedures: INGESTION: If product is ingested, seek medical attention. Skin: Wash with soap & water. EYES: Flush with water for at least 15 minutes - Obtain medical attention if irritation persists. INHALATION: Remove to fresh air.

Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled: Vacuum up - Avoid generating dust.

Waste Disposal Method: Dispose of in accordance with Federal, State and Local regulations.

Precautions to Be Taken in Handling and Storing: Avoid extremely rough handling which might generate excessive dust, store indoors for product quality. Recommended storage temperature is below 75°F.

Other Precautions: If rough handling creates excessive dust, provide ventilation and respiratory protection as necessary to conform to OSHA regulations for nuisance dust.

Section VIII — Control Measures

Respiratory Protection (*Specify Type*): Not Normally Required.

Ventilation			
Local Exhaust	N/A	Special	N/A
Mechanical (General)	X	Other	N/A

Protective Gloves: NONE

Eye Protection: Safety glasses are recommended in al industrial operations.

Other Protective Clothing or Equipment: NONE

Work/Hygienic Practices: Good personal hygiene to be followed at all times.

The data and information as stated was furnished by the manufacturer and supplier of this product. BUEHLER, LTD. cannot warrant the accuracy of this information and shall not be responsible or liable for any damage that may result, should any of the information be erroneous.

• USOFA 1800-421-3275/45775

Hyprez 1/2 #5011

MATERIAL SAFETY DATA SHEET

Page 1 of 2 Pages

SECTION I

MANUFACTURER'S NAME: Engis Corporation
EMERGENCY PHONE NO.: (312) 966-5600
ADDRESS (Number, Street, City, State, and ZIP Code): 8035 Austin Avenue, Morton Grove, Illinois 60053
9/1/95
CHEMICAL NAME AND SYNONYMS: Petroleum Solvent
TRADE NAME AND SYNONYMS: Hyprez OS Lubricant Type III
CHEMICAL FAMILY: Saturated hydrocarbon
FORMULA: 3403
FEDERAL STOCK NUMBER (FSN):
GROSS WEIGHT (LBS):
OUTSIDE PACKAGE DIMENSIONS (Inches):
MIL-STD-1341/NATIONAL FIRE PROTECTION ASSOCIATION STD 704M SIGNAL
FLAMMABILITY 2 HEALTH 1 REACTIVITY 0 SPECIFIC HAZARD Ingestion

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, AND SOLVENTS	%	THRESHOLD LIMIT VALUE (Units)	ALLOYS AND METALLIC COATINGS	%	THRESHOLD LIMIT VALUE (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	THRESHOLD LIMIT VALUE (Units)
Solvent Naphtha (Petroleum) - CAS No. 64742-96-7	60-100	PEL 400 PPM

SECTION III - PHYSICAL DATA

BOILING POINT (°F)	335° F	SPECIFIC GRAVITY (H_2O=1)	0.8
VAPOR PRESSURE (mm Hg.)	Less than 0.1 (70°F)	PERCENT VOLATILE BY VOLUME (%)	80%
VAPOR DENSITY (AIR=1)	6.0	EVAPORATION RATE (n-Bu Ac =1)	0.5
SOLUBILITY IN WATER	Dispersible		

APPEARANCE AND ODOR: Clear, thin, purple fluid; pleasantly scented

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	LOWER EXPLOSIVE LIMIT	UPPER EXPLOSIVE LIMIT
130°F (tag closed cup)		1.1%	Not available

EXTINGUISHING MEDIA: Foam; dry chemical; carbon dioxide

SPECIAL FIRE FIGHTING PROCEDURES: Water jets unsuitable; use self-contained breathing apparatus

UNUSUAL FIRE AND EXPLOSION HAZARDS:

2/2/89

OS LUBRICANT TYPE III

Nypret 2/2

SECTION V HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE
See Section II

EFFECTS OF OVEREXPOSURE Inhalation: drowsiness, dizziness, nasal and respiratory irritation. Skin: mild irritation, defatting with prolonged contact. Eyes: mild irritation, redness, tearing. Swallowing: nausea, vomiting, diarrhea, pulmonary edema if aspirated into lungs.

EMERGENCY AND FIRST AID PROCEDURES Breathing: remove individual to fresh air. If breathing is difficult, administer oxygen. Get proper medical attention. Skin: wash thoroughly with soap and water. Eyes: flush thoroughly with water, lifting upper and lower lids occasionally. Swallowing: do not induce vomiting. Keep person warm, quiet and get immediate medical attention.

SECTION VI REACTIVITY DATA

STABILITY			CONDITIONS TO AVOID
	UNSTABLE		None
	STABLE	X	

INCOMPATABILITY (Materials to avoid)
Strong oxidizing agents (nitric acid, permanganates)

HAZARDOUS DECOMPOSITION PRODUCTS
Carbon monoxide, carbon dioxide, various hydrocarbons

HAZARDOUS POLYMERIZATION			CONDITIONS TO AVOID
	MAY OCCUR		None
	WILL NOT OCCUR	X	

SECTION VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Take up liquid on absorbent material and transfer to exhaust hood, allowing volatile portion to escape. Eliminate all ignition sources (smoking, flames, pilot lights, electrical sparks) until cleanup is completed. Place absorbent material and residue in closed containers.

WASTE DISPOSAL METHOD
Dispose of residue in closed containers. Do not pour liquid material down drains or sewers. Material may be disposed of in normal fashion in accordance with local, state and federal regulations.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type) Self-contained breathing apparatus if TLV of the product is exceeded. OSHA regulations permit various NIOSH/MESA respirators.

VENTILATION	LOCAL EXHAUST	SPECIAL
To maintain exposure below TLV	Required for spraying operation producing mists.	
	MECHANICAL (General) Recommended for liquid (non-spray) applications.	OTHER

PROTECTIVE GLOVES	EYE PROTECTION
Neoprene	Safety glasses without side shields.

OTHER PROTECTIVE EQUIPMENT
To prevent repeated or prolonged skin contact

SECTION IX SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
Since empty containers retain residues (vapor, liquid), all hazard precautions in this sheet must be observed for storage and disposal of containers.

OTHER PRECAUTIONS

SECTION X TRANS. DATA

PROPER SHIPPING (Article) NAME
OS Lubricant Type III

DOT CLASSIFICATION
Combustible

DOT LABEL	DOT MARKING	EMERGENCY ACCIDENT PRECAUTIONS AND PROCEDURES
None		As per Section VII

DOT PLACARD

PRECAUTIONS TO BE TAKEN IN TRANSPORTATION

1254 71 Bakelite 1/4

MSDS

Canadian Centre for Occupational Health and Safety

*** IDENTIFICATION ***

RECORD NUMBER : 78745
LANGUAGE : ENGLISH
PRODUCT NAME(S) : BAKELITE (R) VINYL BUTYRAL XYHL AND XYSG
PRODUCT IDENTIFICATION DATA : F-48227A
DATE OF MSDS : 1986-01-01

*** MANUFACTURER INFORMATION ***

MANUFACTURER : UNION CARBIDE CORPORATION
SOLVENTS AND COATINGS MATERIALS DIVISION
ADDRESS : 39 OLD RIDGEBURY ROAD
DANBURY CONNECTICUT
U.S.A. 06817
EMERGENCY TELEPHONE NO.(S) : 304-744-3487 (24 HOUR SERVICE)
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*** SUPPLIER INFORMATION ***

SUPPLIER/DISTRIBUTOR : UNION CARBIDE CANADA LIMITED
ADDRESS : 123 EGLINTON AVENUE EAST
TORONTO ONTARIO
CANADA M4P 1J3
Telephone: 514-640-6400
EMERGENCY TELEPHONE NO.(S) : 514-640-6400 (days, nights, weekends, and holidays)
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'Bakelite 2/4

*** MATERIAL SAFETY DATA ***

MATERIAL SAFETY DATA SHEET
EFFECTIVE DATE: JANUARY 1, 1986

I. IDENTIFICATION

RODUCT NAME: BAKELITE (R) VINYL BUTYRAL XYHL AND XYSG
HEMICAL NAME: Poly (vinyl butyral) resin
CHEMICAL FAMILY: Poly (vinyl butyral)
ORMULA: Terpolymer of vinyl butyral, vinyl alcohol, vinyl acetate
MOLECULAR WEIGHT: >40,000

EPARTMENT OF RANSPORTATION
Hazard Classification None
Shipping Name None

AS # 27360-07-2
CAS NAME: Acetic acid vinyl ester, polymer with vinyl alcohol and vinyl butyral.

II. PHYSICAL DATA

ELTING POINT: Softening range: 140-200 deg C (284-392 deg F)
ENSITY: 1.1 gm/cm3 (1100 kg/m3) at 20 deg C
ERCENT VOLATILES BY WEIGHT: Approximately 1.5 percent (water and trace organics)
ARANCE AND ODOR: White granular solid (powder); mild ester-acetal odor

III. INGREDIENTS

MATERIAL	%	TLV (Units)	HAZARD
olymer	>97	None established	None currently known
ater	<3	--	--

IV. FIRE AND EXPLOSION HAZARD DATA

UTOIGNITION EMPERATURE: 714 deg F ASTM D1929

XTINGUISHING EDIA: Use carbon dioxide or dry chemical for small fires. Use alcohol-type foam for large fires. Water fog will reduce intensity of flame.

PECIAL IRE FIGHTING ROCEDURES: Use supplied breathing air and protective clothing.

NUSUAL FIRE ND EXPLOSION AZARDS: To reduce potential explosion hazard, avoid dispersion of dust in air.

V. HEALTH HAZARD DATA

LV AND SOURCE

Bakelite 3/4

one established by ACGIH or OSHA.

FFECTS OF ACUTE OVEREXPOSURE

SWALLOWING	No evidence of adverse effects from available information.
SKIN ABSORPTION	No evidence of adverse effects from available information.
INHALATION	No evidence of adverse effects from available information.
SKIN CONTACT	No evidence of adverse effects from available information.
EYE CONTACT	May cause minimal irritation, seen as excess redness of the conjunctiva.

FFECTS OF REPEATED OVEREXPOSURE

o evidence of adverse effects from available information.

THER HEALTH HAZARDS

his product may contribute to nuisance dusts and possibly to respirable dusts.

MERGENCY AND FIRST AID PROCEDURES:

SWALLOWING	No emergency care anticipated.
SKIN	Wash skin with soap and water.
INHALATION	Remove to fresh air.
EYES	Flush eyes with water for 15 minutes.

OTES TO PHYSICIAN

here is no specific antidote. Treatment of overexposure should be directed at he control of symptoms and the clinical condition.

VI. REACTIVITY DATA

STABILITY

NSTABLE	STABLE		
]	[X]	CONDITIONS TO AVOID	Will degrade and char above 200 deg C.

NCOMPATIBILITY (materials to avoid) Strong oxidizers

AZARDOUS COMBUSTION OR ECOMPOSITION PRODUCTS Butyraldehyde; butyric acid; acrolein; crotonaldehyde in trace amounts; carbon monoxide.

AZARDOUS POLYMERIZATION

ay Occur	Will Not Occur		
]	[X]	CONDITIONS TO AVOID	None

VII. SPILL OR LEAK PROCEDURES

Bakelite 4/4

EPS TO BE TAKEN MATERIAL IS RELEASED SPILLED	Sweep up; collect in a suitable container for disposal.
E DISPOSAL HOD	Bury in a landfill where permitted under appropriate Federal, State, and local regulations.

VIII. SPECIAL PROTECTION INFORMATION

SPIRATORY PROTECTION	Dust respirator, if dusting conditions exist.		
NTILATION	Special, local ventilation may be needed where extrusion or other processing of these resins at elevated temperature is done. Also, special local ventilation is recommended in areas where containers are opened and discharged (to control dusting).		
OTECTIVE OVES	Substantial leather work gloves	EYE PROTECTION	Safety glasses
HER PROTECTIVE QUIPMENT	Eye bath and safety shower		

IX. SPECIAL PRECAUTIONS

RECAUTIONS TO BE TAKEN IN HANDLING AND STORING
void contact with eyes, skin and clothing.
ash thoroughly after handling.
void breathing dust.

FOR INDUSTRY USE ONLY

ER PRECAUTIONS
one known.

-48227A
M

SN: 78745

SPI Supplies Division
Structure Probe, Inc.
P.O. Box 656 West Chester, PA 19381-0656 USA
***Phone:** 1-(610)-436-5400 **Fax:** 1-(610)-436-5755*
***E-mail:** spi3spi@2spi.com*
WWW: http://www.2spi.com
Manufacturer's CAGE: 1P573

Material Safety Data Sheet

SPI #01819-AB/01818-AB/01856-AB/01857-AB Cellulose Acetate Tape and Sheets

Section 1: Identification

Date Effective..... June 1, 2000
(most recent revision)

Chemical Name/Synonyms... Cellulose acetate

Chemical family..... Acetate

Emergencies
Contacting CHEMTREC:

24 Hour Emergency Use Only #'s.....
Worldwide phone: 1-(703)-527-3887
Worldwide FAX: 1-(703)-741-6090
Toll-free phone: 1-(800)-242-9300 USA only

Product or Trade Name.... SPI Replicating Tape and Sheets

CAS #..... 9004-35-7

NIOSH (RTECS) Number: 1005201CA

Chemical Formula..... Not known

Section 2 Composition

Component Name	CAS #	OSHA PEL	OSHA STEL	ACGIH TLV	ACGIH STEL	Carcinogenic Listing
Polyethylene homopolymer						

9004-35-7	N/L	N/L	N/L	N/L	N/L
Proprietary additives	N/L	N/L	N/L	N/L	N/L

Note: N/L = Not listed

Concentration by

Wt/Mol%	Avg.	Min.	Max.
100.0	100.0	0.0	0.0

NFPA Rating: Health: 0 Fire: 1 Reactivity: 0

Section 3: Hazard Identification

Emergency overview:

This material is not hazardous by OSHA Hazard Communication Definition

Signal Word

CAUTION!

Chronic Hazard: No
Acute Health Hazard: Slight
Contact Hazard: Slight
Fire Hazard: None

Physical Health Hazards:

None known

Physical state: Solid

Color: Transparent and colorless

Odor: None

Odor threshold: Not applicable

Potential Health Effects:

Routes of exposure

Ingestion

Signs and Symptoms of Acute Exposure:

None known

Skin contact:

None known

Inhalation:

If the product is used as intended, it just just not possible to envision how one could "inhale" this solid material.

Eye contact:

Mechanical irritation is not envisioned as being possible.

Ingestion:

Ingestion is unlikely, so long as product is used as intended.

Chronic Health Effects Summary:

No known chronic health effects.

Cellulose acetate:

Conditions Aggravated by Exposure:

No known conditions are aggravated by this material.

Section 4: First Aid Measures

Take proper precautions to ensure your own health and safety before attempting to rescue and providing first aid. For specific information refer to the Emergency Overview in Section of this MSDS.

Inhalation: If this occurs, contact physician at once.

Eye Contact: Wash eyes with clean low-pressure water. If irritation persists, seek medical advice. It is not envisioned that eye contact requiring this kind of response could ever occur.

Skin Contact: No adverse health effects are anticipated, however if irritation developes, then contact physician at once.

Ingestion: Contact physician at once.

Section 5: Fire Fighting Measures

NFPA Rating: Not known

Flammability classification:

Not classified.

Flash Point/Method: Not applicable

Auto-Ignition Temperature: Not known

Flammable Limits: Lower: Not applicable
Upper: Not applicable

Hazardous Combustion Products:

Carbon monoxide, carbon dioxide

Special Conditions to Avoid:

None known

Extinguishing Media:

Small fires: Water spray, foam carbon dioxide, dry chemical.

Large fires: Water spray, foam carbon dioxide, dry chemical.

Fire Fighting Instructions:

Protective Equipment/Clothing: Wear a NIOSH approved positive pressure self-contained breathing apparatus and firefighter turnout gear. However, we would consider this kind of protection not necessary if the small laboratory quantities are involved, that is, the levels envisioned for research quantities.

Instructions: Use flooding quantities of water until well after fire is out.

Section 6: Accidental Release Measures

Release response:

Pick up and retain for recycle or disposal. Do not flush spilled material to the sewer or the environment.

Reportable Quantities: See Section 15: Regulatory information.

Section 7: Handling and Storage

Handling: No particular precautions are needed. If working around highly flammable materials, some attention has to be paid to the tendency of cellulose acetate to pick up a static charge. No particular precautions would be needed when cutting our a small piece of the product for use in an experiment with the normal exception of eye protection.

Storage: Keep container dry. Store away from excessive heat and away from strong oxidizing agents.

Section 8: Exposure Controls and Personal Protection

Engineering Controls: If user operations generate dust or fumes, ventilate area to prevent accumulation. However, such use would be outside the scope for which this product was originally released.

Personal Protection:

Inhalation: Use appropriate respiratory protection where atmosphere exceeds recommended limits. Total Dust (PNOC): ACGIH 10 mg/M³, OSHA 15 mg/M³. Respirable Dust(PNOC) ACGIH 3 mg/M³, OSHA 5 mg/M³.

Skin: Protective clothing such as long sleeves or a lab coat should be worn. When handling heated materials, also be sure to use heat-resistant gloves, boots and face protection.

Eye: Always use safety glasses, even for work with small quantities, such as the making of positive replicas. The concern is really more from the acetone solvent being used to soften and dissolve the cellulose acetate.

Section 9: Physical and Chemical Properties

Boiling Point/Range: Not applicable

pH: Not applicable

Vapor Pressure: Not applicable

Viscosity: Not applicable

Specific Gravity:

Solid/Liquid	1.31 - 1.32 (water = 1)
Vapor	Not applicable

Water solubility: Insoluble

Melting/Freezing Point: Not applicable

Evaporation Rate: Not applicable

Vapor Density (Air = 1): Not applicable/Not available

Percent volatiles by volume: Not applicable/Not available

Section 10: Stability and Reactivity

Chemical Stability: The product is stable

Conditions to Avoid: None known, however the material should be kept away from high temperatures and open flames.

Incompatibility with: Strong oxidizers

Hazardous Products of Deposition: Carbon monoxide, carbon dioxide

Reactions with Air and Water: Does not react with air, water or other common materials.

Section 11: Toxicological Information

Summary: Not considered to be toxic to humans or animals

Component:
Cellulose acetate

LC_{50} (INHL): None listed by manufacturer

Skin Effects: No skin effects are expected from exposure to cellulose contact.

Acute Oral Effects: None known

Acute Inhalation Effects: None known

Chronic Effects/Carcinogenicity:
None expected

Reproductive/Development Effects:
No reproductive or developmental effects are expected.

Section 12: Ecological Information

Exotoxicity: Exotoxicity is expected to be low based on the low water solubility of cellulose acetate.

Environmental Fate: No information found in our selected references.

Bioaccumulation: Not expected to occur.

Section 13: Disposal Considerations

This material is NOT classified as a hazardous material by RCRA. Use only licensed transporters and permitted disposal facilities and conform to all laws.

Recycle to process, if possible.

Section 14: Transport Information

Proper Shipping Name: Cellulose acetate

DOT Hazard Class: Non-Regulated

UN/NA ID: Not Regulated

Packing Group: Not Applicable

Labels: Not Regulated

Marine Pollutant: No

NAER Guidebook: Not Regulated

DOT Status: Not Regulated

Section 15: Regulatory Information

TSCA: All components of this product are listed on the TSCA 8(b) inventory. If identified components of this product are listed under the TSCA 12(b) Export Notification Rule, they will be listed below.

TSCA 12(b) Component	**Listed under TSCA Section**
None	None

SARA-Section 313 Emissions Reporting:

Component	**Reporting Threshold**

SARA-Section 311/312: No components present in this product are subject to the reporting requirements of this statute.

CERCLA Hazardous Substances and their Reportable Quantities:

Component	**Reportable Quantity**

California Prop. 65:
Proposition 65 requires manufacturers or distributors of consumer products into the State of California to provide a warning statement if the product contains ingredients for which the State has found to cause cancer, birth defects or other reproductive harm. If this product contains an ingredient listed by the State of California to cause cancer or reproductive toxicity,

it will be listed below:

Section 16: Other Information

Caution! Do not use SPI Supplies products or materials in applications involving implantation within the body; direct or indirect contact with the blood pathway; contact with bone, tissue, tissue fluid, or blood; or prolonged contact with mucous membranes. Products offered by SPI Supplies are not designed or manufactured for use in implantation in the human body or in contact with internal body fluids or tissues. SPI Supplies will not provide to customers making devices for such applications any notice, certification, or information necessary for such medical device use required by US FDA (Food and Drug Administration) regulation or any other statute. SPI Supplies and Structure Probe, Inc. make no representation, promise, express warranty or implied warranty concerning the suitability of these materials for use in implantation in the human body or in contact with internal body tissues of fluids.
****

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[redacted] To Ask a Question or Make a Comment

[redacted] To Place an Order or Request a Quote

Return to:

- SPI Supplies MSDS Safety Sheets Table of Contents
- SPI Supplies Catalog Table of Contents
- SPI Supplies Home Page

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DIVIDER

PAGE

Attachment 3 - Acceptable Knowledge Source Document Summary

Site(s): Idaho National Laboratory	Source Document Tracking Number: C3003

Waste Stream Number(s): ID-AECHDM, ID-AECHHM
(Applicable only when site library is not in use)

Acceptable Knowledge Documentation Type:	Category:
✓ TRU Waste Management Program Information ✓ Waste Stream-Specific Information ✓ Additional Information	✓ C - Correspondence ☐ DR - Discrepancy Resolution ☐ I - Internal procedures ☐ M - Miscellaneous ☐ P - Published plans, documents, and procedures ☐ U - Unpublished Documents

Title of Source Document: Interview and Follow-up Correspondence with Robert Schulten: Packaging of Waste Streams AECHDM-PK and AECHHM-PK

Source Document Reference Information (author(s), document and revision number, date, publisher): Kevin Peters, NA, NA, 05/25/2010

AK # [a]	Source Doc. Page #[b]	AK Information Summary
PR6, WS1, WS2, WS3, WS4, WS6, WS8, WS9, S7, S16	All	This Record of Communication summarizes communications and an interview conducted on May 25, 2010 between CCP AKE Kevin Peters and Robert Schulten. The communications focus on updating the inventory projections for waste stream AECHDM-PK and AECHHM-PK, and clarification of waste processing and packaging operations associated with these CH streams for the preparation and shipment of these containers to AMWTP.

Source Document Data Limitations (if any):

1. Waste packaging of waste streams AECHDM-PK and AECHHM-PK is currently in progress. The description of the waste processing and packaging and inventory estimates are based on Mr. Schulten's best knowledge at the time of the interview and correspondence and may change as the campaign proceeds.

Acceptable Knowlege Expert: 10/20/11

Trey Greenwood

~~Elizabeth Lickliter~~ 10/20/11 10/20/11

Print /Sign Date: ~~10/04/2011~~

[a] Obtain from Acceptable Knowledge Documentation Checklist
[b] For microfilm or microfiche, identify box, tape, reel number and location.

CCP RECORDS ORIGINAL
DATE REC'D 12-16-11

Attachment 2 – Record of Communication

Waste Stream Number(s): AECHDM-PK AECHHM-PK	**Corresponding Source Document Tracking No: C3003**	
Interviewer: Kevin Peters	**Date:** May 25, 2010	**Time:** 2:00 PM
Interviewee: Robert Schulten	**Group/Organization:** ANL WMO **Job Title:** CH Waste	**Phone:** 630-252-7230 **Email:** rschulten@anl.gov

Subject: Interview and Follow-up Correspondence with Robert Schulten: Packaging of Waste Streams AECHDM-PK and AECHHM-PK

Summary:

This Record of Communication summarizes communications and an interview conducted on May 25, 2010 between CCP AKE Kevin Peters and Robert Schulten. The communications focus on updating the inventory projections for waste stream AECHDM-PK and AECHHM-PK, and clarification of waste processing and packaging operations associated with these CH streams for the preparation and shipment of these containers to AMWTP.

Waste Packaging:

Waste streams AECHDM-PK (debris) and AECHHM-PK (homogeneous) are being packaged for shipment to INL by the WMO in the A160 hood (debris sorting and packaging) and A126 hood (liquid immobilization and packaging) in Building 306.

The homogeneous immobilized liquids will be packaged in 1-gallon or 2-gallon cans placed in the 55-gallon drum. The primary packaging configuration consists of 10 pounds of absorbent (e.g. Aquaset) added to the bottom of the 55-gallon drum. A vented Nucfil polyethylene drum liner bag is then placed into the drum and an additional 10 pounds of absorbent is placed in the bag. One-gallon cans (up to 4 layers of 8 cans) or two-gallon cans (up to 3 layers of 4 cans) without lids are then loaded into the liner bag. A rigid cardboard cylinder may be used in the center of the drum when packaging one-gallon cans (4 layers of 7 cans). The liner bag is then closed over the cans using a twist and tape or fold and tape method. Original containers will either be deconed (larger containers) or disposed of in the debris stream (smaller containers).

The primary payload container for Argonne debris waste is a 55-gallon drum. The primary packaging configuration consists of 10 pounds of absorbent (e.g., Aquaset) added to the bottom of the 55-gallon drum. A polyethylene drum liner bag, with a NucFil vent installed is placed into the drum and an additional 10 pounds of absorbent is placed in the bag. Debris waste is then either directly loaded or bags of waste are placed into the liner bag. A SWB may also be used to package only CH debris waste materials. These DOT 7A, Type A, containers can be used to package larger debris items (e.g., HEPA filters) or directly loaded bags of waste.

Waste Stream Volume Estimates

Based on discussions with Bob Schulten the following container estimates were established for the Argonne debris and homogeneous CH waste streams.

Estimated Final 55 Gallon Drum Quantities:

Liquids: Total of 31 drums of homogenous

- **Neutralized & Solidified Acidic Liquids = 23 (Originally 80 containers)**
- **>HC3 Liquids = 3 (Originally 12 containers)**
- **Solidified Organic Liquids = 5 (Originally 25 containers)**

Solids: (Estimate 20% Homogeneous Solids & 80% Debris) – Total of 16 drums of homogeneous and 64 drums of debris

- **<HC3 solids = 60 (Originally 100 containers)**
- **>HC3 solids = 20 (Originally 30 containers)**

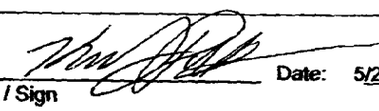
Total number of containers to repackage existing WMP inventory:

Homogeneous Solids – 47 55-gallon drums
Debris – 64 55-gallon drums

The following estimates for containers to generated annually was based on the projections for these materials in the original CH AK report for the correlating streams sent to WIPP:

Debris – 2.0 m3 per year (10 55-gallon drums equivalents)
Homogeneous solids – 0.4 m3 per year (2 55-gallon drum equivalents)

Data Limitations: Waste packaging of waste streams AECHDM-PK and AECHHM-PK is currently in progress. The description of the waste processing and packaging and inventory estimates are based on Mr. Schulten's best knowledge at the time of the interview and correspondence and may change as the campaign proceeds.

Acceptable Knowledge Expert: Kevin Peters  Date: 5/25/2010
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Attachment 3 - Acceptable Knowledge Source Document Summary

Site(s): Idaho National Laboratory	Source Document Tracking Number: C066

Waste Stream Number(s): ID-AECHDM, ID-AECHHM
(Applicable only when site library is not in use)

Acceptable Knowledge Documentation Type:	Category:
☑ TRU Waste Management Program Information	☑ C - Correspondence
☑ Waste Stream-Specific Information	☐ DR - Discrepancy Resolution
☑ Additional Information	☐ I - Internal procedures
	☐ M - Miscellaneous
	☐ P - Published plans, documents, and procedures
	☐ U - Unpublished Documents

Title of Source Document: Record of Communication with Bill Kettman and Dennis Donahue, AGHCF re: AGHCF Operations and Waste Packaging

Source Document Reference Information (author(s), document and revision number, date, publisher): J. Whitworth, M. Wyco, n/a, n/a, 08/07/2001

AK # [a]	Source Doc. Page #[b]	AK Information Summary
PR4, PR7, PR8, WS4, WS7, WS8, WS11, WS12, S7, S16	1-3	Record of an interview between J. Whitworth and M. Wyco and Bill Kettman and Dennis Donahue, both of whom were technicians in the AGHCF. Whitworth and Wyco were trying to tie down chemicals that might be in the RH-TRU waste. Specifically, they were asked about 1) hydrochloric, sulfuric, hydrofluoric, chromic, and oxalic acids, and silver nitrate; 2) Organic solvents, e.g., methanol/hydrochloric acid mix, carbon tetrachloride. Ethanol, toluene, heptane, acetone, and ether, perchloroethylene; 3) oils, e.g., hyprezlubricant, 4) mercury; 5) lead; 6) cadmium; 7) chromium; 8) silver; 9) caustics; 10) ignitables; 11) tritium, 12) SS low/Gain sheet (Form SPM23); 13) training and gas generation testing. Keywords: Hydrochloric, sulfuric, hydrofluoric, chromic, and oxalic acids, and silver nitrate;organic solvents, methanol/hydrochloric acid mix, carbon tetrachloride, ethanol, toluene, heptane, acetone, and ether, perchloroethylene, oils, hyprezlubricant, mercury, lead, cadmium, chromium, silver, caustics, ignitables, tritium, SS low/Gain sheet (Form SPM23), training, gas generation testing, interview, Kettman, Donahue, LILY, LILAC, PCBs, ballasts, beryllium

Source Document Data Limitations (if any):

1. Generators could not provide specific time periods during which particular chemicals were used.

Acceptable Knowlege Expert:

Elizabeth Lickliter — Date: 10/04/2011
Print /Sign

[a] Obtain from Acceptable Knowledge Documentation Checklist
[b] For microfilm or microfiche, identify box, tape, reel number and location.

CCP RECORDS ORIGINAL
DATE REC'D 10-21-11

Attachment 3 - Acceptable Knowledge Source Document Summary

Site(s): Idaho National Laboratory	Source Document Tracking Number: AE-P-095

Waste Stream Number(s): ID-AECHDM, ID-AECHHM
(Applicable only when site library is not in use)

Acceptable Knowledge Documentation Type:	Category:
☑ TRU Waste Management Program Information	☐ C - Correspondence
☐ Waste Stream-Specific Information	☐ DR - Discrepancy Resolution
☑ Additional Information	☐ I - Internal procedures
	☐ M - Miscellaneous
	☑ P - Published plans, documents, and procedures
	☐ U - Unpublished Documents

Title of Source Document: Waste Operations Operating Manual

Source Document Reference Information (author(s), document and revision number, date, publisher): ANL-E Waste Management Operations, Revision 1, 08/02/1999, ANL-E Waste Management Operations

AK # [a]	Source Doc. Page #[b]	AK Information Summary
PR3, PR4, PR5, S2	All (partial copy)	Mission Statement: "The waste Management Department supports the Scientific Mission of Argonne National Laboratory by delivering customer defined quality products and services for the safe collection , treatment, storage of all regulated waste at the Illinois Site. Chapter 2.12 describes how containers are labeled and managed in storage areas and includes a description of the TRU storage areas. Chapter 4.5 describes the steps taken when TRU waste is picked up a the generator location. It demonstrates that waste is verified against the Waste Requisition Form during pickup and demonstrates good control over waste acceptance for storage. Chapter 4.8 describes how waste is labeled and tracked at ANL-E. Addendum 4B includes a listing of waste stream Identifiers used at ANL-E (some included in the TWBIR). Attachment 9.1A describes the review and approval of the Waste Requisition forms and how data is entered into the Waste Management System. Chapter 9.12 describes how liquid waste is co- mingled and solidified. Chapter 9 .15 is a procedure for operation of the ANL-E RTR system and the type of information that is recorded. Chapter 12.1 describes the pick up segregation, transport and storage of TRU mixed waste.

Source Document Data Limitations (if any):

1. This referance has numerous partial doucments with different dates and revisions. It is also unclear how long was WMO managing their TRU waste with these procedures,

Acceptable Knowlege Expert:

Elizabeth Lickliter [signature] Date: 10/04/2011
Print /Sign

[a] Obtain from Acceptable Knowledge Documentation Checklist
[b] For microfilm or microfiche, identify box, tape, reel number and location.

CCP RECORDS ORIGINAL
DATE REC'D 12-8-11

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Transuranic Waste at Argonne National Laboratory-West:

Meeting the Waste Acceptance Criteria for the TRU Repository

DRAFT

August 10, 2001

Transuranic Waste at Argonne National Laboratory-West: Meeting the Waste Acceptance Criteria for the TRU Repository

In order to dispose of transuranic (TRU) waste in the Waste Isolation Pilot Plant (WIPP) in Carlsbad, New Mexico, it is necessary to certify that each container of waste meets the WIPP Waste Acceptance Criteria (WIPP-WAC). [1] These criteria have been established for contact-handled (CH) TRU waste and criteria have been drafted for remote-handled TRU waste. If the drum (container) has a radiation reading of greater than 200 mRem/hr at the surface, it is classified as remote handled. If it has a reading in excess of 1000 Rem/hr, it is not acceptable to WIPP. The repository is only accepting contact-handled waste at this time. The National TRU Waste Management Plan lists 54.5 m^3 of RH-TRU waste from ANL-W and 150.6 m^3 at ANL-E to be disposed at WIPP. [2]

The acceptance criteria for both categories are the same in many respects. The criteria comprise container properties, physical properties, radiological properties, chemical properties and specified quality assurance (QA) documentation. In addition, there are numerous requirements on the repository itself, among them the Land Withdrawal Act requirements. [3] A waste's physical, chemical, and radiological properties are established through characterization and process knowledge. The waste is packaged appropriately to meet packaging and transportation criteria and is accompanied by a "waste package" that contains all the required documentation. The Land Withdrawal Act requirements are met through documents that establish "acceptable knowledge" (AK). The principal requirement is that:

> "By law, WIPP can accept only radioactive waste generated by atomic energy defense activities of the United States...A TRU waste is eligible for disposal at WIPP if it has been generate in whole or in part by one or more of the following functions:
>
> - naval reactors development
> - weapons activities, including inertial confinement fusion
> - verification and control technology
> - defense nuclear materials productions
> - defense nuclear waste and materials by-products management
> - defense nuclear materials security and safeguards and security investigations
> - defense research and development" [4]

The main purpose of this paper is to summarize how transuranic waste currently in storage at Argonne National Laboratory-West (ANL-W) meets the Land Withdrawal Act criterion, i.e., that the waste has been generated in whole or in part by defense-related activities. This is not a speculative position, but rather one that has been tested and accepted. The proof in the pudding is actual shipments of transuranic waste for disposal at WIPP.

Prior to actual waste shipments, detailed documents, including AK reports, are prepared to certify that the waste acceptance requirements have been met. ANL-W has assisted the Idaho National Engineering and Environmental Laboratory (INEEL) in preparation of AK reports describing Argonne-origin TRU waste that has been shipped to WIPP. More recently, six drums of CH-TRU waste were shipped off the ANL-W site in July 2001 after having been accepted for

---

1 DOE/WIPP-069, Revision 7, November 8, 1999

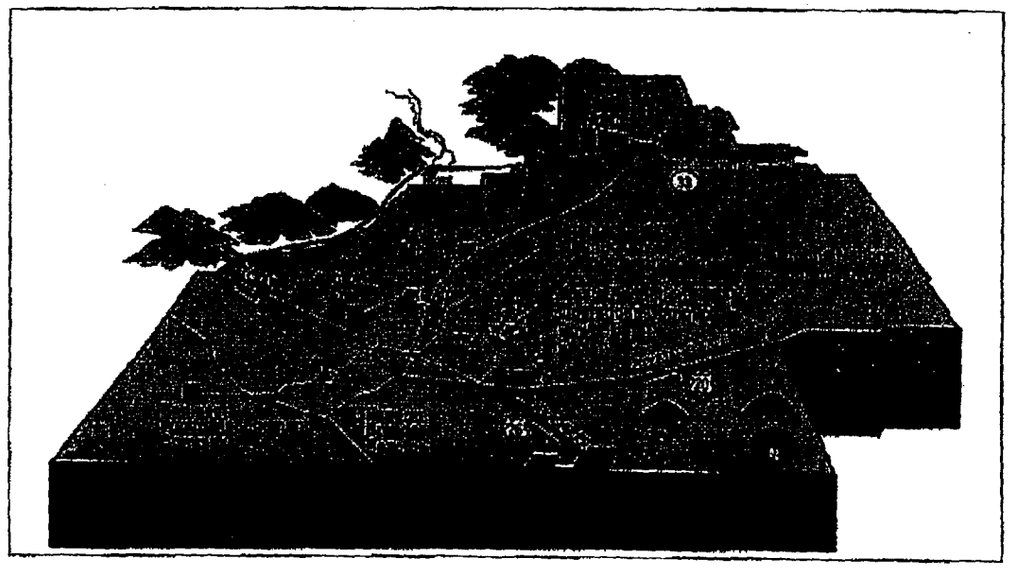
2 DOE/NTP-96-1204, Revision 2, December 2000.

3 Public Law 102-579, 106 Stat.4777 (as amended by Public Law 104-201). Waste Isolation Pilot Plant Land Withdrawal Act.

4 Op cit. p. 3-7.

disposal at WIPP. Argonne National Laboratory has also prepared an extensive AK document [5] that covers TRU waste at Argonne's Illinois site (ANL-E). This document, first released in September 2000 and currently being updated to include additional waste streams, has helped to provide a basis for approved shipments of CH-TRU waste from ANL-E directly to WIPP. Further, the report pertains to both Argonne sites because the Laboratory's nuclear program has been integrated between the two sites for more than 50 years. Hot cell-to-hot cell transfers have been a standard way of doing business since the facilities first came into existence.

Prior to 1995, ANL-E transuranic waste has been transferred to ANL-W or another storage location within the INEEL, which is better suited for intermediate-term storage of TRU waste than the greater metropolitan Chicago area. Although normal contact-handled TRU waste will soon be shipped directly to WIPP from ANL-E, highly radioactive waste, including remote-handled TRU waste, will still transferred to ANL-W for safe handling and storage if necessary. A batch of 30 containers of RH-TRU waste is currently being reviewed for possible shipment to ANL-W. [6]



Argonne is not a national security laboratory, so how is defense-related waste generated here? First, there is the matter of location. The ANL-West site is situated in Southeastern Idaho on the Idaho National Engineering and Environmental Laboratory reservation, as shown in Fig. 1. The ANL-W site includes a collection of facilities for processing, examining, characterizing, and analyzing radioactive materials. The two major hot cell facilities—the Fuel Conditioning Facility (FCF) and the Hot Fuel Examination Facility (HFEF) are the principal facilities for these activities. The Analytical Laboratory (AL) and the Waste Characterization Area (WCA) are also

5 Argonne National Laboratory-East Transuranic Waste Acceptable Knowledge Report, Sept. 2000.
6 ANL Memorandum, C. Grandy to F. Yapuncich, "Remote-Handled (RH) Transuranic (TRU) Waste Streams Generated at the ANL-E Site, June 6, 2001.

prominent in waste activities. The WCA is actually located inside the HFEF building, on a floor above the hot cells These facilities are among the most active and modern of their respective types within the DOE complex. They receive materials from a variety of programs and across the complex. Within the INEEL site, shipments to ANL-W commonly originate from the Radioactive Waste Management Complex (RWMC), which stores 60% of the nation's transuranic waste. Within the past two years, waste shipments have been received from the Naval Reactor Facility (NRF) for the purpose of characterization and treatment–just one of many examples of defense-related waste commerce within the INEEL.

Transuranic waste stored at ANL-W is tied to defense-related activities primarily through one of three ways: directly from defense-related programs, commingling from operations in facilities containing defense waste, and waste arising from operations in support of defense programs. Although all three ties are important, the critical point is that whether for characterization, packaging or processing, all transuranic materials are handled only in glovebox or hot cell facilities. For safety and environmental control, these facilities are classified according to their plutonium-handling capabilities, not by the programs or the waste types that pass through them. These facilities remain contaminated throughout their operating lifetime (and beyond), with each new campaign adding a component to the contamination. Even though contamination levels are reduced as needed for sound management of the facilities, the residual contamination contains a history of all that has gone before. Facilities such as FCF and HFEF are remotely operated and maintained without human entry. Through commingling, all waste packaged in these facilities is in part of defense-programs origin, just as is all waste packaged in plutonium gloveboxes in the analytical laboratory.

Transuranic isotopes of different origins inexorably become commingled during waste packaging operations. Sound waste management practices stemming from integrated safety management (ISM), ALARA and waste minimization require that waste be packaged efficiently according to characteristic, not according to program origin. For example, waste cans in the HFEF hot cell remain in-cell for months until they are filled; then shipped out-of-cell for storage. Since HFEF and all other plutonium-handling facilities have hosted defense programs and materials of defense origin, all packaged transuranic waste at ANL-W is at least in part defense related.

Many defense-related projects have taken place at the ANL-W site. In spite of not being a national security laboratory, ANL-W has been chosen for these projects because of its convenience (INEEL proximity) or for its unique or rare capabilities such as fast neutron irradiation. For most of its 30 years, the Experimental Breeder Reactor-II (EBR-II) was the nation's principal fast spectrum irradiation facility. From the earliest years, the reactor irradiated experiments that supported both defense programs and the civilian reactor development program. For example, one of the longest-running experiments in EBR-II involved an irradiation for the Bettis Atomic Power Laboratory, which is dedicated to supporting naval reactor programs. Examples of other defense program experiments in EBR-II include thermionic elements, space reactor materials and tritium production test materials.

The reactor was fueled with highly enriched uranium, plutonium and depleted uranium supplied by defense programs. That fuel was used to irradiate defense-program experiments. Therefore, any plutonium-contaminated waste arising from handling or processing the fuel is defense related, because the fuel itself was used in defense-programs research and development (function

7 of the Land Withdrawal Act requirement.) From 1983-1985, DOE defense programs reclaimed 17 metric tons of EBR-II blanket fuel and had it shipped to Rockwell International and later to Savannah River for reprocessing. Prior to 1990, all EBR-II driver fuel was sent to the Idaho Chemical Processing Plant (since renamed INTEC) where only defense-related materials were processed, [7] The recovered highly enriched uranium was used in defense programs rather than being recycled in EBR-II.

The Waste Characterization Area has been almost exclusively dedicated to defense-related activities and accounts by far for the majority of TRU waste flow through the ANL-W site. The WCA is the visual examination center for the INEEL's store of TRU waste from weapons production activities at Rocky Flats, Colorado. Prior to opening the WCA more than a decade ago, the HFEF served this function, particularly in preparation of the bin tests for WIPP certification.

The ANL-W Analytical Laboratory is the principal Pu-capable radiological laboratory on the INEEL. Besides supporting ANL-W programs, the AL routinely performs services for INEEL facilities that support defense programs or that manage defense-program-generated waste. Services have been provided for the RWMC, INTEC, the Advanced Test Reactor (ATR) which serves as the test bed for naval reactor programs, and the Naval Reactor Facilities. The AL also exchanges services with national security laboratories such as Los Alamos National Laboratory (LANL). Examples of the latter include the plutonium metal exchange program and support of the LANL MOX program for plutonium disposition. Together with HFEF, the AL has examined RERTR (Reduced Enrichment Research and Test Reactor) fuel samples that have been fabricated at ANL-W and irradiated in the ATR. RERTR is a nuclear nonproliferation program that is administered by DOE-NNSA.

In addition to WIPP-related programs, HFEF has supported several defense-related projects since going into operation in 1975. Recent examples include TPBAR (a classified defense materials production project) and handling of Naval Reactor Facility waste for processing and characterization. Both HFEF and FCF have been involved in testing waste forms for plutonium disposition, which of course is a national security program. HFEF has been involved in testing high-level glass waste from defense production activities.

There is no simple way to catalog all the types of defense-related programs that have been a part of ANL-W activities, much less the specific programs and materials. Some of the stored waste has been shipped in from the Alpha-Gamma Hot Cell (AGHC) and other hot cell facilities at ANL-E. This waste has all been certified to be of defense-related origin in detailed documentation. To give a sample of direct ANL-W programs that generate waste, the CENTAURUS program was conducted at ANL-W's Transient Reactor Test (TREAT) Facility in collaboration with Lawrence Livermore National Laboratory (LLNL) during the 1980's. Like TPBAR, the details of the CENTAURUS program are classified, but it was a reactor-based program for the Strategic Defense Initiative (SDI). Another current example is the Knolls Atomic Power Laboratory (KAPL) subcontractor performance assessment program, an ongoing activity that will generate analytical laboratory waste later this calendar year.

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7 DOE/EM-0319 "Linking Legacies," January 1997, p. 36.

The Radioactive Scrap and Waste Facility (RSWF) and the Radioactive Sodium Storage Facility (RSSF) are the two main storage facilities at ANL-West. TRU waste is commingled with other waste types throughout both facilities.

The RSWF is a Resource Conservation Recovery Act (RCRA) permitted storage facility for mixed waste. Spent fuel and radioactive waste are also stored at this facility. The RSWF provides storage and retrieval capabilities to support the ANL-West AL, HFEF, and FCF facilities. The RSWF is located one-half mile northeast of the ANL-West main site within a four-acre fenced location as shown in Fig. 2. The RSWF began operations in 1965, concurrent with startup of the site's principal facilities.

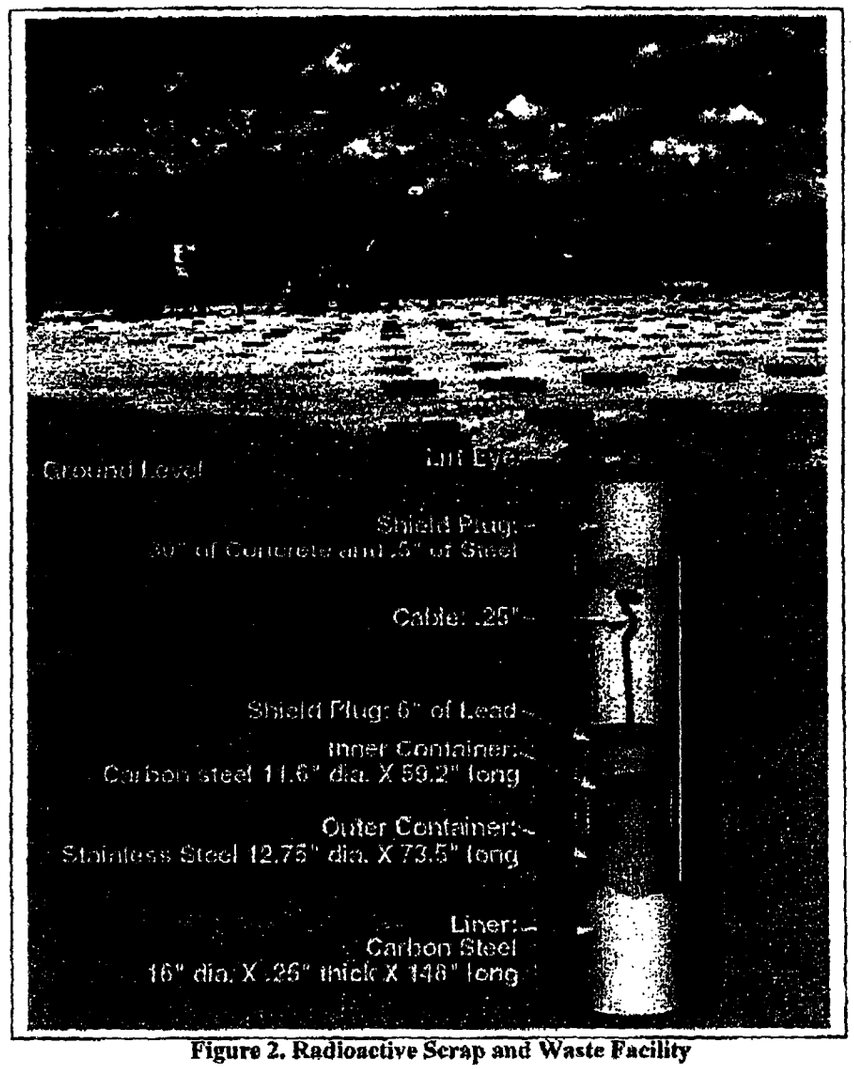

Figure 2. Radioactive Scrap and Waste Facility

The RSSF stores contact handled waste as well as heavily shielded, highly radioactive waste. Primarily stemming from the Experimental Breeder Reactor-II (EBR-II) primary sodium system (cold traps and nuclide traps), the RSSF wastes contain large inventories of radioactive isotopes within the shielded vessels. In addition, the RSSF stores used High Efficiency Particulate Air (HEPA) filters that were used in the ventilation systems of ANL-W hot cells. When repacked to meet WIPP criteria, most of this waste would also be classified as remote handled.

In summary, ANL-W involvement with defense-related programs and/or materials has been long and continuous since the earliest days of operation. Most fuel on the ANL-W site has a defense programs origin and has been used in part to support defense programs. ANL-W has received defense-related TRU waste for storage, characterization, analysis, and processing. ANL-W facilities that are qualified for plutonium handling are contaminated with defense-origin TRU and they will remain that way until their ultimate disposition. Consistent with current practice, all transuranic waste at the ANL-W site will be thoroughly documented in waste package reports as required by the WIPP-WAC and the INEEL prior to future shipment.

ACRYONYM LIST

AGHCF	Alpha-Gamma Hot Cell Facility
AL	Analytical Laboratory
ALARA	As Low as Reasonably Achievable [radiation dose]
ANL	Argonne National Laboratory
ANL-E	Argonne National Laboratory-East
ANL-W	Argonne National Laboratory-West
ATR	Advanced Test Reactor
CH	Contact Handled
DOE	Department of Energy
EBR-II	Experimental Breeder Reactor-II
FCF	Fuel Conditioning Facility
HEPA	High Efficiency Particulate Air
HEU	Highly Enriched Uranium
HFEF	Hot Fuel Examination Facility
INEEL	Idaho National Engineering and Environmental Laboratory
INTEC	Idaho Nuclear Technology and Engineering Center
ISM	Integrated Safety Management
LANL	Los Alamos National Laboratory
LLNL	Livermore National Laboratory
MOX	Mixed Oxide
NNSA	National Nuclear Security Administration
RCRA	Resource Conservation Recovery Act
RERTR	Reduced Enrichment for Research and Test Reactors
RH	Remote Handled
RSSF	Radioactive Sodium Storage Facility
RSWF	Radioactive Scrap and Waste Facility
RWMC	Radioactive Waste Management Complex
SLSF	Sodium Loop Safety Facility
TRA	Test Reactor Area
TRU	Transuranic
TRUEX	Transuranic Extraction
WAC	Waste Acceptance Criteria
WCA	Waste Characterization Area
WIPP	Waste Isolation Pilot Plant

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P055

WASTE HANDLING PROCEDURES

ARGONNE NATIONAL LABORATORY
ARGONNE, ILLINOIS SITE

SEPTEMBER 18, 1986

PREPARED BY: C. L. CHEEVER
MANAGER, WASTE MANAGEMENT OPERATIONS

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Acknowledgement is made for input by Ralph Ditch and Larry Boing (PFS-WMO); for previous work on the manual done by William Kline (PFS-WMO); preparation for printing by Marilyn Suffern and Janet Bormet, and for comments by reviewers.

REFERENCE MANUALS AND PUBLICATIONS

The following list of manuals and publications are applicable to various phases of waste handling and should be referred to in connection with these procedures as the need arises.

1. ANL Policy Manual

2. ANL-E Health and Safety Manual

3. ANL Special Materials Users Guide

4. ANL Supply Policy and Procedures Manual

5. Laboratory Waste Disposal Manual, Manufacturing Chemists Association, Current Edition

6. Manual of Hazardous Chemical Reactions, NFPA #491M, National Fire Protection Association, Current Edition

7. N. Irving Sax, Dangerous Properties of Industrial Materials, Van Nostrand Reinhold Publishing Co., Current Edition

8. The Condensed Chemical Dictionary, Van Nostrand Reinhold Publishing Co., Current Edition

9. The Merck Index, Merck and Co., Tenth Edition

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300 and East Areas SPM Reps	L. H. Berkes	2-6068 Page Boy 144-321
	K. R. Ziech	2-6068 Page Boy 144-325

FOREWORD

These procedures, which are part of the Argonne National Laboratory's Policy Manual,* supersede all previous procedures which have been issued. New radioactive waste acceptance criteria established for the Department of Energy disposal sites and regulations under the EPA Resource Conservation Recovery Act (RCRA), and the Toxic Substances Control Act (TSCA) have necessitated changes in this manual. Substantial changes have been made since issuance of the last written procedures; therefore, th: material contained herein should be carefully reviewed by all individuals involved in waste handling.

Close adherence to the procedures described in this document should result in the identification and segregation of wastes into appropriate categories; minimize the amount of actual waste generated, and allow for maximum volume reduction which in turn will reduce storage space and disposal costs. Waste Generators are responsible for the proper disposition of the wastes they produce.

These procedures apply to most routine waste produced in moderate quantities. Unusual waste problems or situations involving the production of large quantities of wastes should be brought to the attention of the Plant Facilities and Services Division Waste Management Operations Manager for consideration at an early stage in the planning.

*See "Reference Manuals" in Volume I of the Policy Manual.

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SECTION I

PROCEDURES FOR HANDLING RADIOACTIVE WASTES ARGONNE NATIONAL LABORATORY - ILLINOIS SITE

SECTION IA
INTRODUCTION, RESPONSIBILITIES, TERMS AND DEFINITIONS

1.0 INTRODUCTION

1.1 Waste Handling Procedures are established, reviewed, and revised as appropriate. They are included as part of the Laboratory's Policy Manual. This section applies to most radioactive wastes produced in moderate quantities. Projects anticipating unusual waste problems or producing large or unique quantities of waste shall be brought to the attention of the Waste Management Operations Manager at an early stage in the planning by the Waste Generator.

1.2 The actual onsite handling of radioactive wastes involves the waste generator, Occupational Health and Safety - Health Physics (OHS-HP), - Special Materials (OHS-SPM), and Plant Facilities and Services Division - Waste Management Operations (PFS-WMO). **Waste Generators shall have the primary responsibility for the wastes they produce;** with the support groups providing the necessary services, guidance, and surveillance. **Waste Management Operations will have the primary handling responsibility after the waste is properly contained, labeled, and documented..**

1.3 Safety at the Laboratory is the responsibility of all employees; adherence to these procedures will contribute toward the fulfillment of that obligation. The ANL-Illinois Health and Safety Manual contains the applicable Laboratory Safety Policy which must be followed.

2.0 RESPONSIBILITIES

2.1 **Line responsibility** for compliance with these procedures extends through Laboratory Management--Division Management and Supervisors--to each employee. All are charged with minimizing waste volumes through (1) foresighted advanced planning, (2) the design of the facilities and equipment, and (3) the control of work methods.

2.2 **The Director of Plant Facilities and Services (PFS)**, under the Chief Operations Officer, has the responsibility of establishing and maintaining a waste management program for ANL-Illinois. The purpose of the program is to develop, direct, evaluate, and enforce all waste handling and disposal requirements with the ultimate goal being that of protecting personnel onsite, the general public, and the environment from potentially hazardous materials.

2.3 The **Waste Management Operations (WMO) Manager**, who reports to the Director of Plant Facilities and Services Division, has the responsibility of directing the waste management program for ANL-Illinois. Administration and reporting requirements for the control of all radioactive, hazardous, and other special wastes handled at the Laboratory are coordinated by the Waste Management Operations Manager.

The duties of the Manager of PFS-WMO include (but are not limited to) the following:

2.3.1 Prepare and review waste handling procedures, for ANL-Illinois on a continuing basis and revise them whenever regulatory requirements necessitate change or when technical improvements permit more efficient and/or safer methods of operation.

2.3.2 Maintain on a continuing basis an awareness of the waste-handling and processing problems arising within the Laboratory.

2.3.3 Apprise Laboratory Management of the status and needs of waste management programs.

2.3.4 Provide guidance to Waste Generators and other pertinent groups and keep them abreast of changes which may affect their methods of operation.

2.3.5 Coordinate and/or prepare reports and other information as required or requested by DOE and other outside organizations in the field of waste management.

2.3.6 Maintain on a continuing basis knowledge of pertinent regulations and disposal-site criteria regarding radioactive waste.

2.3.7 Procure appropriate outlets for ANL-Illinois wastes.

2.3.8 Advise Laboratory Management concerning policies on radioactive and other hazardous waste materials, as appropriate.

2.3.9 Assure that necessary training of Waste Generators is provided for the proper handling of radioactive and other hazardous wastes.

2.4 **Divisional Waste Management Representatives** provide coordination and communication within the Division on radioactive, hazardous, and other hazardous wastes by:

2.4.1 Disseminating information on waste handling procedures to the appropriate Divisional employees.

2.4.2 Communicating information on special waste problems or needs to appropriate support groups.

2.4.3 Acting as coordinator of efforts to improve Divisional waste management activities.

2.4.4 Serving as Divisional contact for development of specific waste handling procedures and for training of personnel.

2.5 **Waste Generators** have the primary responsibility for the wastes that they produce. Guidance is available from those people shown on the "Contacts" list provided at the front of this manual. Specific responsibilities include:

2.5.1 Planning ahead to keep the volume of radioactive wastes to a minimum.

2.5.2 Maintaining knowledge of pertinent waste handling procedures such as through review of information in this Waste Handling Procedures Manual.

2.5.3 Planning for proper handling of waste production by including the following considerations:

(1) Levels of Radioactivity
(2) Physical and Chemical State
(3) Isotope Identification and Quantity
(4) Volume and the Means to Minimize Quantities Generated
(5) Segregation
(6) Schedule of Production
(7) Containment and Shielding Requirements - Containment techniques must be employed which will prevent the exterior of the primary receptacle from becoming contaminated with transferable radioactivity or other hazardous materials during all phases of waste handling and will keep exposures as low as reasonably achievable (ALARA). Lead cannot be used as shielding material for offsite disposal of non-TRU radioactive wastes.
(8) Documentation and Labeling.

(9) Storage Requirements
(10) Nuclear Criticality Safety and other Radiation Safety Aspects
(11) Industrial Safety Aspects
(12) Fire Safety Aspects

2.5.4 Discussing the foregoing during the planning stage with the Waste Management Operations Manager when waste production quantities are large or waste problems are unique.

2.5.5 Informing OHS-HP, OHS-SPM, and PFS-WMO of intended waste production that is nonroutine in nature.

2.5.6 Segregating wastes by keeping transuranic (TRU) waste separate from non-TRU waste, combustibles separate from noncombustibles, and low-level wastes (equal to or less than 200 mrem/h) separate from intermediate-level wastes (greater than 200 mrem/h)

2.5.7 Placing radioactive wastes into acceptable receptacles assuring that all segregation requirements are met.

2.5.8 Providing all the information about the waste as requested on the PFS-195 and PFS-196, or PFS-199 waste disposal requisition. (See Appendix A for copies of the requisitions, instructions for their completion, and definitions of terms used.)

2.5.9 Arranging for PFS-WMO to load the shipping container when the shipping container is also the primary receptacle.

2.5.10 Requesting radiation surveys of filled receptacles by contacting OHS-HP.

2.5.11 Sealing of filled waste receptacles with assistance as required from OHS-HP to assure that no materials are added after the Waste Disposal Requisition documentation is completed.

2.5.12 Labeling of sealed waste containers with the serial number of the Waste Disposal Requisition (and column number for the PFS-195).

2.5.13 Obtaining OHS-SPM approval when waste contains accountable nuclear materials.

2.5.14 Providing the PFS-195 and PFS-196, or PFS-199 forms to OHS-HP after the Waste Generator sections of the forms have been completed and signed.

2.6 **Occupational Health and Safety-Health Physics (OHS-HP):** OHS-HP is responsible for the radiological aspects in handling wastes including the following:

2.6.1 Keeping abreast of radioactive wastes produced and informing the Waste Generator, PFS-WMO, OHS-SPM, and others of waste problems.

2.6.2 Informing other sections in OHS when nonradiological problems are recognized in the course of handling waste.

2.6.3 Providing guidance as required.

2.6.4 Through observation, verifying that Waste Generators are complying with the radioactive waste segregation requirements.

2.6.5 Performing necessary radiation and receptacle surveys and continually reviewing all solid radioactive waste collection locations to determine proper primary containment.

2.6.6 Assisting Waste Generators in sealing waste receptacles as required.

2.6.7 Instructing Waste Generators to request timely removal of radioactive wastes from work areas.

2.6.8 Completing information on a PFS-172 label and attaching it to the receptacle.

2.6.9 Submitting completed waste disposal requisitions to Waste Management Operations.

2.7 **Occupational Health and Safety-Special Materials Control and Accountability Group (OHS-SPM):** OHS-SPM is responsible for approving disposal of accountable materials, including the following:

2.7.1 Providing guidance and advice on limits of fissionable, source, and other accountable materials that may be classified as expendable wastes.

2.7.2 Approving PFS-195 and PFS-196, or PFS-199 forms and preparation of Special Materials accountability documents when disposal of accountable materials are involved.

2.7.3 Assuring that the amounts of accountable materials shown on the PFS-195 and 196, or PFS-199 agree with the amounts shown on the SPM-23 form. When not in agreement, instructing the Waste Generator to correct the PFS-195 and PFS-196, or PFS-199.

2.7.4 Reviewing waste-shipment documentation and preparing and distributing 741 forms.

2.7.5 Performing the assay for U-235 and Pu-239 content in solid radioactive waste receptacles.

2.7.6 Providing the assay results on the PFS-195 form when the "TRU" box is marked on this form.

2.8 **Plant Facilities and Services Division-Waste Management Operations (PFS-WMO):** PFS-WMO has the responsibility for handling radioactive waste after the receptacle has been filled, sealed, and its contents properly documented as well as the following:

2.8.1 Providing guidance as required, including procedures for waste confinement and documentation.

2.8.2 Delivering primary waste receptacles to the Waste Generator. Delivering appropriately labeled secondary receptacles as requested by OHS-HP.

2.8.3 Loading all wastes that are to be placed directly into a shipping container.

2.8.4 Reviewing the information on the waste disposal requisitions for adequacy and requesting additional information about the waste as necessary.

2.8.5 Collecting waste which is properly contained and adequately documented and described on a waste-disposal requisition.

2.8.6 Assuring that waste receptacles have been labeled so that their contents can always be identified with the supporting waste-disposal requisition.

2.8.7 Delivering solid-waste receptacles to SPM-NDA for appropriate assay measurements.

2.8.8 Baling compactible solid low level radioactive waste which is safe for volume reduction.

2.8.9 Maintaining operating procedures for waste handling, treatment, and disposal.

2.8.10 Maintaining segregation aspects for each waste package.

2.8.11 Assuring that approved waste containers are used for waste packages.

2.8.12 Assembling waste packages.

2.8.13 Weighing and labeling waste packages.

2.8.14 Keeping records so that the contents of each waste package can be readily identified and traced to the related waste disposal requisition.

2.8.15 Keeping records as evidence that the waste packages and their contents are in compliance with the waste acceptance criteria for the waste disposal or storage sites.

2.8.16 Certifying, when appropriate, that waste packages and their contents meet the waste disposal and storage site waste acceptance criteria.

2.8.17 Arranging for temporary onsite storage of waste packages.

2.8.18 Arranging for secondary shipping containers as required.

2.8.19 Arranging for shipment of waste packages to a waste storage or disposal site.

2.8.20 Assuring that shipments of radioactive wastes meet Federal and other applicable regulations.

3.0 TERMS AND DEFINITIONS

3.1 Absorbed Liquids

Liquids that have been absorbed into an absorbent material (e.g., vermiculite, etc.) with sufficient absorbent to absorb at least twice the volume of the liquid.

3.2 Accountable Radioactive Material

Accountable radioactive materials are those materials which require an OHS-SPM representative's review and signature approval for disposal accountability.

Accountable Radionuclides

Americium 241	Curium 246	Tritium
Americium 243	Neptunium 237	Uranium Isotopes
Berkelium 249	Plutonium Isotopes	
Californium 246	Thorium Isotopes	

3.3 Biological Material

Materials derived directly from living organisms that size reduce, produce liquids, or produce gases during decomposition.

3.4 Capital Equipment and Sensitive Items

Capital Equipment or Sensitive Items are items which are assigned ANL or CSI numbers.

3.5 Class of Radioactive Waste

Radioactive wastes are either classified as transuranic (TRU) or nontransuranic (non-TRU). TRU wastes are U-233

and radionuclides having atomic numbers 93 and above. If the waste contains TRU radionuclides, the Waste Generator is to mark the "TRU" box on the waste disposal form. If the waste does not contain TRU radionuclides, the Waste Generator is to mark "non-TRU." Note: PFS-WMO will determine if the waste is to be packaged as TRU or non-TRU based upon the radionuclides and quantity provided by the Waste Generator on the waste-disposal requisitions. (Also see TRU and non-TRU Waste.)

3.6 **Combustible Materials**

Combustible materials are those materials that will sustain combustion in atmospheric air when exposed to an ignition source of 1475°F for a period of 5 minutes. Materials such as paper, non-fire-retardant plastics, rubber gloves, rags, plastic or rubber shoe covers or garments, plastic or rubber tubing, and wood are combustibles.

3.7 **Compressed Gas**

Compressed gases are those materials defined as such by 49 CFR 173, Subpart G. Any vessel that could contain compressed gases must be permanently vented prior to placement into a waste receptacle. This includes aerosol cans, gas cylinders, and other sealed vessels. Aerosol cans must be punctured and drained, gas cylinders must be vented and have the valve removed, and other vessels must have a visible opening.

3.8 **Corrosive Material**

Corrosive materials are those defined as such by 49 CFR 173, Subpart F. Corrosive materials are materials that have a severe corrosion rate on steel. Corrosive materials normally have either a high or low pH.

3.9 **Dempster Boxes**

Dempster boxes are large steel boxes used for deposit of solid, nonhazardous trash that is placed into the ANL sanitary landfill.

3.10 **Explosive Materials**

Explosive materials are those defined as such by 49 CFR 173, Subpart C.

3.11 **Fines (Particulates)**

Fines are powders, dusts, glovebox sweepings, etc., that can easily be dispersed in air.

3.12 **Flammable Gas**

Any gas that will burn in normal concentrations of oxygen in the air.

3.13 **Flammable (Ignitable) Liquid**

Any liquid having a flash point below 140°F.

3.14 **Flammable Solid**

Any solid capable of causing fire through friction, absorption of moisture or spontaneous chemical changes under standard temperature and pressure conditions.

3.15 **Free Liquid**

Liquid that is not absorbed in a host material (e.g., vermiculite or diatomaceous earth) such that it could spill or drain from its containment.

3.16 **Gaseous Radioactive Waste**

Any radioactive waste which is gaseous at all times under normal storage and handling conditions.

3.17 **Immobilized Materials**

Materials that are fixed in a matrix such as glass, ceramic, cement, concrete, etc.

3.18 **Liquid Radioactive Waste**

Any radioactive waste which is in a liquid state at standard temperature and pressure.

3.19 **Non-TRU Waste (nontransuranic)**

Radioactive waste whose transuranic content (U-233 and radionuclides with atomic numbers of 93 and above) is equal to or less than 100 nCi/g (1E-7 curies/gram).

3.20 **Poison A or Poison B Materials**

Poisons A or B are those materials defined as poisons by the DOT in 49 CFR 173, Subpart H. Note: The waste acceptance criteria of the radioactive waste disposal sites have replaced the term "Poisons A and B with the term "Radioactive Mixed Waste." See definition of Radioactive Mixed Waste.

3.21 **Primary Waste Receptacle** (See waste receptacle)

3.22 **Prohibited Materials in Waste Packages**

Prohibited materials are those waste forms that must not be included in a waste package. See Waste Acceptance Criteria in Sections ID (Solid Radioactive Waste), and IE (Liquid Radioactive Waste).

3.23 **Pyrophoric Materials**

Materials that will ignite spontaneously in dry or moist air at temperatures below 130°F, or that may ignite spontaneously under the ambient conditions of shipment or storage.

3.24 **Radioactive Mixed Waste**

Radioactive mixed waste (often called mixed waste) is radioactive waste that also contains hazardous waste that is regulated by the EPA under RCRA (Resource Conservation and Recovery Act). The RCRA materials are listed in 40 CFR 261, Subparts C and D. (See questionnaire located in Appendix B to determine whether a waste is regulated under RCRA.)

3.25 **Routine Pickups**

Routine pickups are removals of solid radioactive waste by PFS-WMO that do not need special handling requirements, have been sealed in standard PFS-WMO approved receptacles that contain less than 5 grams of fissile materials, and have a maximum radiation reading of 200 mrem/h at the surface.

3.26 **Secondary Waste Receptacle**

Any nondisposable receptacle, usually made of metal, which holds the primary waste receptacle until the primary receptacle is removed for disposal.

3.27 **Sludges**

Sludges are wet precipitates, resins, evaporator residues, or other solid or semisolid materials containing liquids.

3.28 **Solid Radioactive Waste**

Any dry radioactive waste **which remains a solid at all times** under storage, handling, and shipping conditions. Solids resulting from the solidification of liquids must not emit potentially hazardous vapors nor contain any freestanding liquids. (Temperature extremes of -40°F to 150°F may occur during transportation and storage.)

3.29 **Transuranic Waste (TRU)**

Without regard to source or form, radioactive waste that is contaminated with alpha-emitting transuranic radionuclides (U-233 and radionuclides with atomic numbers of 93 and above) with a half-life greater than 20 years and in concentrations greater than 100 nCi/g (1E-7 Curies/gram).

Note: PFS-WMO will determine if a waste receptacle that contains TRU nuclides is to be packaged as TRU or non-TRU based upon the radionuclides and amounts provided on the waste disposal requisition by the Waste Generator.

3.30 **Transuranic - Contact Handled (TRU-CH)**

Transuranic waste materials that are packaged in such a way that the maximum dose equivalent rate at the surface of the waste package is not greater than 200 mrem/h.

3.31 **Transuranic - Remote Handled (TRU-RH)**

Transuranic waste materials that are packaged such that the dose equivalent rate at the surface of the waste package is greater than 200 mrem/h but not greater than 30 rem/h (as practiced at ANL-IL).

3.32 **Waste Container**

A waste container is the disposable containment (shipment) vessel for waste materials, including any integral liner or shielding materials that are intended for emplacement at the WIPP or a burial site.

3.33 **Waste Package**

A waste package is the waste material (receptacles and contents), any liner material, and the waste container that is intended to be handled and emplaced at a radioactive waste disposal site.

3.34 **Waste Receptacle**

A waste receptacle is a PFS-WMO approved disposable waste receptacle used by the Waste Generators to hold their radioactive wastes. Examples of waste receptacles are TV cartons, Blickman can inserts (metal pails and fiber drums), and 30- or 55-gallon metal drums.

3.35 **WIPP**

Acronym for Waste Isolation Pilot Plant. The WIPP is a repository (2100 feet underground) in a salt formation in New Mexico which has been constructed by DOE for emplacement of TRU waste packages.

SECTION IB

RADIOACTIVE SOLID AND LIQUID WASTE CONTAINMENT, SPECIAL TREATMENT, AND SEGREGATION REQUIREMENTS

1.0 WASTE CONTAINMENT

Waste Generators are responsible for containing their radioactive wastes in accordance with requirements in this manual. It must be done in a manner which will ensure that the contents can be transported and stored without contamination or other hazard to personnel or property until processing and final disposition can be accomplished. The generator is reminded that radioactive accountable materials may not be disposed of without Special Materials approval; such aspects must be discussed with them in advance.

Liquid radioactive waste must be collected in appropriate receptacles for pickup and proper disposal by PFS-WMO. Waste Generators anticipating large quantities of liquid waste, or unique problems, should make adequate plans for containment including discussions with the Waste Management Operations Manager in advance of actual production.

1.1 Rejection of Improperly Contained Waste

PFS-Waste Management Operations (PFS-WMO) may reject any waste containers that are unacceptable for safe containment or transport. Acceptable containers for radioactive liquid and solid wastes are shown in Appendix C. The containers must be in good condition.

PFS-WMO must certify that the contents of shipping containers meet the acceptance criteria of the offsite waste receiver and must load and otherwise prepare containers for shipment. Except in unique circumstances and with the express knowledge and written approval of Waste Management Operations, **Waste Generators shall not directly load shipment containers.**

1.2 Large Quantities

Waste Generators anticipating large quantities of radioactive wastes should contact the Waste Management Operations Manager well in advance of actual production of their wastes to plan how they will be handled.

1.3 Primary Receptacles

1.3.1 Size and Procurement

All radioactive waste must be contained in the proper radioactive waste receptacles by the generator. See Appendix C which contains a description and photographs of approved radioactive waste receptacles. These receptacles will be delivered by PFS-WMO and may be requested by contacting Health Physics (OHS-HP). If waste cannot be accommodated in the existing receptacles, the waste dimensions must be modified.

Secondary (shielding and nonshielding) receptacles are procured by the Waste Generator's division. Certain secondary receptacles become the property of PFS-WMO and are under their control.

1.3.2 Transuranic (TRU) Solid Waste Receptacles

All TRU waste must be contained inside rigid receptacles of sufficient integrity so that it remains sealed during handling and transport. This will consist of TRU waste being confined inside a metal 5-gallon paint can (PC-5) meeting DOT 37A-60 specifications or in a 30- or 55-gallon drum meeting DOT 17C or 17H specifications. Should the use of these receptacles be impractical, PFS-WMO must approve any alternative containment prior to its use.

1.3.3 Non-TRU Solid Waste Receptacles (less than 200 mrem/h)

All non-TRU waste must be contained and sealed in a manner which will assure that loose contamination is confined and does not leak out. The receptacles considered adequate are TV cartons and fiber drums that are sealed with tape. The metal containers used for TRU wastes are also acceptable but are not desirable for wastes that are compactible. Wastes placed into shipping containers (bins) must either be in one of the above receptacles or as a minimum, be placed inside 8-mil poly bags or plastic sheeting sealed with tape.

1.3.4 Non-TRU Solid Waste Receptacles (greater than 200 mrem/h)

Wastes having radioactive levels greater than 200 mrem/h at the surface of a receptacle must be sealed in one of the following metal receptacles: (1) 5-gallon paint can, 5-PC, meeting DOT 37A-60 specification, or (2) 30- or 55-gallon drum meeting DOT 17C or 17H specification.

1.4 Liquid Radioactive Waste Containment

Receptacles for the collection and containment of liquid radioactive waste are available from PFS-WMO and may be requested through Health Physics. Photographs of available receptacles for liquid radioactive waste appear in Appendix C.

1.4.1 The safe processing of liquid radioactive waste requires the separation of liquids containing organic compounds and materials from liquids containing inorganic compounds and materials. **The generator should never mix organic and inorganic waste during initial collection or at a later date. Wastes that do not meet this criterion will require expensive processing.**

1.5 Labeling of Solid and Liquid Waste Receptacles

The PFS-172 labels are to be completed and applied to the receptacle by OHS-HP. The PFS-172 labels are to identify the receptacle with the Waste Disposal Requisition serial number (and receptacle number from the PFS-195). The requisition number must include either the RS or RL suffix and for RS requisitions must also be followed by a "-" and the column used to document the receptacle. Examples: RL 2235, or RS 2235-1, RS 2235-2, RS 2235-3, etc. Radiation information must also be completed on the PFS-172 form in addition to the building number, room number, and date sealed. The PFS-172 label is shown in Appendix D.

2.0 SECONDARY RECEPTACLE REQUIREMENTS AND LABELING

Secondary solid waste receptacles are normally used in those work areas where radioactive waste is generated on a routine basis. Their purpose is: (1) to protect the primary receptacle from damage, (2) to make it convenient to place wastes into the receptacle, (3) to prevent the dispersal of contamination to the surrounding areas, and (4) to provide an added degree of fire safety. The use of primary receptacles without secondaries must have the concurrence of OHS-HP.

2.1 Secondary Waste Receptacle Labeling

All secondary solid waste receptacles must be permanently marked with the appropriate segregation label, (TRU or non-TRU, combustible or noncombustible) radiation hazard symbols, and the words "Caution, Radioactive Materials." Secondaries not labeled in this manner should be returned to PFS-WMO in exchange for units with the proper markings. The segregation labels are shown in Appendix D.

2.2 Nontransuranic Secondary Receptacles

Blickman Cans and TV Carton secondaries (as pictured in Appendix C) are authorized non-TRU secondary receptacles. In order to segregate non-TRU waste, it will be necessary to maintain receptacles for combustibles and noncombustibles at each waste-collection location. Secondary recep-

tacles will be delivered by PFS-WMO and may be requested through OHS-HP.

2.3 Transuranic Secondary Receptacles

The Blickman Cans (as pictured in Appendix C) are authorized transuranic secondary receptacles. In order to segregate TRU waste, it will be necessary to maintain both combustible and noncombustible receptacles at each waste-collection location. Secondary receptacles may be requested through OHS-HP and will be delivered by PFS-WMO. The 55-gallon drum when used with the special lid that has been properly labeled and equipped with a handle may be used for bagged-out glovebox waste and other similar waste and does not require a secondary.

3.0 FINAL PACKAGING (PFS-Waste Management Operations Only)

3.1 Transuranic Packaging Requirements

The requirements for the packaging of TRU waste are those specified by the Waste Isolation Pilot Plant in documents WIPP-DOE-069, WIPP-DOE-114, and WIPP-DOE-158, and the ANL-IL TRU Waste Certification Plans. TRU waste will be packaged in the ANL-M4 bin or 30- or 55-gallon drums meeting the requirements for a DOT 7A container. Packaging of contact-handled TRU waste (less than 200 mrem/h at the package surface) shall be performed by PFS-WMO personnel only. Packaging of remote-handled TRU waste shall be performed by PFS-WMO personnel, or by the waste generation personnel identified in the ANL-IL Remote-Handled TRU Waste Certification Plan. Prior to filling, each container shall be inspected to assure that it is dry and undamaged and meets all appropriate standards. After filling, but before the cover is bolted down, the gasket must be inspected and repaired or replaced, if necessary, to obtain an adequate seal. Each container shall be weighed, labeled, surveyed for direct radiation level and for loose contamination and have a tamper-seal affixed. These actions shall be documented.

3.2 Nontransuranic Packaging Requirements

Documenting and packaging of waste into shipment bins is to be performed only by PFS-WMO. Non-TRU waste will normally be packaged into an Argonne M-3A bin. Every effort must be made to ensure that the integrity of the waste package is maintained. Compactible waste will be volume reduced and wrapped in 8-mil plastic before being loaded. Combustible waste may not be mixed with that which is noncombustible and packages must be positioned and/or shielded in such a manner that radiation readings on the outside surface of the bin do not exceed 200

mrem/h. Prior to filling, each bin shall be inspected to assure that it is dry, undamaged, and meets all appropriate standards. After filling, but before the cover is bolted down, the gasket must be inspected and repaired, if necessary, to obtain an adequate seal. Each bin shall then be weighed, numbered, appropriately labeled, surveyed as to radiation intensity, smeared for contamination, and have a tamper seal affixed. These actions shall be documented.

4.0 SPECIAL TREATMENT OR CONTAINMENT REQUIREMENTS

Due to their physical or chemical nature, some wastes may require special treatment or containment before being placed into a waste receptacle. Any waste that will decompose, react, or otherwise produce free liquids, gas, or the formation of substances which could lead to spontaneous combustion, explosion (or similar hazardous occurrences) must be treated to render them safe during handling, transport, storage, and disposal. This type of waste must be documented by answering "yes" to the appropriate questions on the PFS-195 form. Any treatments performed by the Waste Generator must have prior approval by PFS-WMO except for biological materials in 4.1 below.

4.1 Animal Carcasses

Animal carcasses and other biological materials containing radioactivity shall be treated with sufficient preservatives, such as slaked lime and desiccants or absorbents, to prevent bacterial action which could cause gas buildup or the formation of free liquids. These wastes shall be sealed in a plastic bag prior to placing them into a receptacle.

The question "Biological Material" must be answered on the PFS-195 form and the treatment stated on the PFS-196 form.

4.2 Incompatible Materials

Wastes which are incompatible with one another or could react with a receptacle must be kept separate and contained during all phases of waste handling.

5.0 SEGREGATION

Segregation of radioactive waste into appropriate categories is very important because: (1) radioactive waste disposal is governed by the most restrictive limits, (2) radioactive waste should be disposed of in the smallest volume feasible, and (3) radioactive waste that contains

prohibited waste forms, not accepted by a waste disposal site, must be kept to an absolute minimum and stored in separate containers.

Keeping the amount of waste at the lowest volume that is feasible includes: (1) planning ahead to avoid having excess amounts of materials contaminated with radioactivity, (2) keeping containers, wrappings, etc., from becoming contaminated. For example, boxes containing gloves and tissues, etc., could be disposed of as trash if they are not allowed to become contaminated, and (3) certain materials that become contaminated can be torn and folded and solid objects can be placed flat in a receptacle rather than at an angle. However, glass should not be broken unless the broken glass is contained inside of puncture guards such as cardboard cartons or metal cans, etc., before it is placed into a receptacle.

Keeping the amount of waste that contains a prohibited waste form not accepted by a waste disposal site to an absolute minimum includes: (1) knowing what waste forms are prohibited, (2) planning ahead to keep prohibited waste forms out of the radioactive waste stream, and (3) keeping prohibited waste segregated from acceptable waste by placing it into its own identified receptacle. Prohibited waste forms are shown in the Waste Acceptance Criteria for solid radioactive waste located in Section 1D of this manual; also see Special Treatment or Containment Requirements in Paragraph 4 of this section.

Planning and proper segregation will allow for the most economical processing and ultimate disposal. Expensive repackaging or processing may be avoided. Final disposal costs are based on the volume and category of radioactive waste.

5.1 Transuranic Waste (TRU)

TRU waste must be segregated from non-TRU waste and sorted as to combustible and noncombustible when it is placed into receptacles. TRU waste exceeding 200 mrem/h at the surface of the receptacle requires shielding to meet the packaging requirements for TRU-CH (contact handled) wastes; otherwise, it must be packaged as TRU-RH (Remote Handled) waste. Note: Presently, the only approved TRU-RH waste packaging is used at the Alpha Gamma Hot Cell Facility located in Building 212.

The segregation and sorting requirements are the specific responsibility of the Waste Generator; OHS-HP will visually verify adherence to sorting to the extent practicable as the receptacles are sealed. PFS-WMO will maintain the segregation in bin packaging. Waste marked TRU by the Waste Generator will be classified as non-TRU by PFS-

WMO if it is determined that the TRU curie content is less than 100 nCi/g.

5.2 **Nontransuranic Waste**

Combustible material must be separate from noncombustibles. Proper segregation of wastes will allow for compaction, thereby reducing the volume of radioactive waste shipped offsite with resulting cost savings.

5.3 **Prohibited Waste Forms**

Prohibited waste forms are shown in the Waste Acceptance Criteria for solid radioactive waste located in Section 1D and 1E of this manual. Note: This includes lead for waste packages that have a TRU curies content of less than 100 nCi/g. Any prohibited waste form generated must be segregated into its own receptacle and documented on its own PFS-195 or PFS-199 waste disposal requisition. Note: Costs incurred by PFS-WMO to treat prohibited waste forms or to remove prohibited waste from nonsegregated receptacles are charged to the Waste Generator.

5.4 **Trash Disposal**

Items and materials which have been surveyed and determined to be free from detectable radioactive contamination (clean) should not be placed into a radioactive waste receptacle. Clean trash that is not listed elsewhere as a hazardous material can be disposed of by burial in the ANL Sanitary Landfill. Note: Liquids are prohibited from being placed into the trash receptacles. Free liquids are a prohibited waste form at the ANL Sanitary Landfill.

5.4.1 **Dempster Boxes**

To prevent radioactive materials from inadvertently being mixed with the trash in Dempster boxes serving areas using radioactive materials, the boxes are kept locked with keys under the sole control of Health Physics. Appropriate radiation surveys by Health Physics are performed on all materials from these areas prior to the waste being placed into the Dempster box.

6.0 **DISPOSAL OF CAPITAL EQUIPMENT AND SENSITIVE ITEMS CONTAMINATED WITH RADIOACTIVITY**

The disposal of all Capital Equipment or Sensitive Items (items with, or assigned, ANL or CSI numbers) contaminated with radioactivity requires compliance with the procedures found in the Supply Policy and Procedure Manual. Your Divisional Property Representative must be notified prior to the disposal of all such material and should be consulted whenever problems or questions arise.

SECTION IC

GASEOUS RADIOACTIVE WASTE DISPOSAL

1.0 RESPONSIBILITY

The collection, containment, and disposal of gaseous radioactive waste is the responsibility of the Waste Generator. Waste Generators must consider the following during the original design of a facility and/or the planning of a particular experiment which will generate gaseous waste:

Isotopes involved
Quantities to be generated
Means planned for containment
Methods planned for disposal or release

The Waste Generator is responsible for notifying OHS-HP, of planned gaseous waste production and for supplying any information about the waste that is required.

2.0 CONTAINMENT

Radioactive gaseous waste must be contained in an appropriate holdup or containment system designed for gas containment.

Holdup or containment equipment, as well as, special equipment for monitoring gaseous radioactive waste discharges, must be provided by the generator.

3.0 DISPOSAL

3.1 **Planned Controlled Release:** A planned release of radioactive gaseous waste must be approved by OHS-HP and may involve holdup for decay of short half-life materials or controlled release through adsorbers or scrubbers.

Planned controlled release to the atmosphere is a common method of disposal for gaseous radioactive waste. It is essential that an evaluation be made to determine that such planned controlled releases are done in a manner to minimize the potential radiation exposure to "as low as reasonably achievable" and to assure that the pertinent concentration guides are not exceeded as specified in DOE Order 5480.1, Chapter XI, "Requirements for Radiation Protection." These guides appear in Appendix E.

Health Physics will approve and monitor such releases as appropriate and keep the generators informed of the monitoring results.

4.0 PROCEDURE FOR DISPOSAL OF GASEOUS RADIOACTIVE WASTE

The procedures for handling and disposal of gaseous radioactive wastes are outlined below. The format designates the proper sequence of actions required to carry out each disposal procedure.

	Personnel	Responsibility
4.1	**Waste Generator**	Plans for the proper handling (capture, reaction, and/or release) and ultimate disposal of gaseous radioactive waste **prior** to its production, and:
4.2	**Waste Generator**	Determines facilities and equipment required for handling gaseous radioactive waste.
4.3	**Waste Generator**	Requests assistance in planning for disposal of gaseous radioactive waste from OHS-HP and OHS-IH and/or PFS-WMO as appropriate.
4.4	**Waste Generator**	Obtains instrumentation required to properly monitor the handling of radioactive gaseous waste.
4.5	**OHS-HP**	Provides advice and assistance to the Waste Generator and pertinent individuals in the planning for disposal of gaseous radioactive waste with respect to: -Isotope(s) involved -Production rates and volumes -Disposal rates and disposal times -Concentration Guide values -Reaction or treatment methods -Monitoring methods -Protective measures and equipment -Alarms and emergency measures
4.6	**OHS-HP**	Requests and coordinates assistance from others as required, e.g., OHS-IH, ER-Atmospheric Physics, and PFS-WMO.

	Personnel Involved	Responsibility
4.7	OHS-IH	Provides, as requested, information and assistance in planning and evaluating the ventilation and reaction facilities proposed for use in controlling the gaseous radioactive waste and associated toxics, if present.
4.8	Atmospheric Physics	Provides, upon request, information regarding pertinent meteorological aspects involved in the control of gaseous radioactive waste.
4.9	PFS-WMO	Provides information and assistance in the planning, installation, replacement, disposal of filters or reaction media, and disposal of the containers if necessary.
4.10	Waste Generator	Arranges for use of appropriate facilities and installation of equipment necessary to control the gaseous radioactive waste and:
4.11	Waste Generator	Procures, stocks, and arranges for construction of initial and replacement filters and/or reaction materials.
4.12	Waste Generator	Prepares documented emergency procedures as required.
4.13	OHS-HP	Assists in the procurement, evaluation, installation, and operation of monitoring systems and alarms, and:
4.14	OHS-HP	Tests monitoring equipment upon completion of installation.
4.15	OHS-HP	Reviews emergency procedures.
4.16	Waste Generator	Informs OHS-HP of the planned time of operation and the production of gaseous radioactive waste.
4.17	OHS-HP	Monitors as appropriate during disposal of gaseous radioactive waste.
4.18	OHS-HP	Keeps Waste Generators informed as appropriate of levels of gaseous radioactive waste being disposed of with respect to current Concentration

	Personnel Involved	Responsibility
		Guides (CG) and, if necessary, recommends additional measures to comply with CG restrictions as stated in the current edition of DOE Order 5480.1, "Requirements for Radiation Protection," as appropriate. See Appendix E for Concentration Guides.
4.19	**OHS-HP**	Records and furnishes the appropriate data for use in reporting The disposal of gaseous radioactive waste, as required by DOE.

SECTION ID

SOLID RADIOACTIVE WASTE ACCEPTANCE CRITERIA

All solid radioactive wastes are shipped offsite to radioactive waste storage and disposal facilities that are owned by the Department of Energy. In order for wastes to be accepted at a disposal/storage site, the waste documentation and the waste packages must meet site waste acceptance criteria. When the acceptance criteria are satisfied, non-TRU waste packages are normally buried, whereas TRU waste packages are placed in interim storage for subsequent shipment to the Waste Isolation Pilot Plant (WIPP). Generally, the acceptance criteria are similar between disposal sites; however, different sets of criteria are used for TRU and non-TRU wastes.

In order for TRU waste packages to be accepted by the WIPP, the packages must be certified as meeting the WIPP-Waste Acceptance Criteria (WIPP-WAC). A Certification Plan for Transuranic-Contact Handled (TRU-CH) waste and a QA Plan, written by PFS-WMO, has been approved by the WIPP-WAC Certification Committee (WIPP-WACCC) and the State of New Mexico. The Certification and QA plans specify the methods and actions that will be used to certify that TRU waste packages meet the WIPP-WAC. The WIPP-WACCC has given PFS-WMO the authority to certify designated TRU-CH wastes provided that the requirements specified by the plans are fulfilled.

1.0 RADIOACTIVE WASTE MANAGEMENT COMPLEX (RWMC), INEL IDAHO, ACCEPTANCE CRITERIA FOR NON-TRU WASTE

1.1 Non-TRU wastes shall be segregated from TRU wastes.

1.2 Combustible wastes shall be segregated from noncombustible wastes to the extent practicable.

1.3 Tritium-contaminated waste will be evaluated by the waste disposal site on a case-by-case basis.

1.4 Liquids must be immobilized. When absorbents such as vermiculite are used, at least twice as much absorbent must be used as is needed to assure complete absorption.

1.4.1 Corrosive liquid waste must be treated to obtain a pH in the range of 4 to 10.

1.5 The following materials are prohibited:

1.5.1 Materials that are not considered radioactive.

1.5.2 Free liquids (liquids that are not immobilized).

1.5.3 Vessels pressurized to greater than 7 psig. Disposal of aerosol cans requires that the cans be vented, drained, and have a visible opening.

1.5.4 Radioactive wastes containing biological, pathogenic, or infectious materials unless treated with sufficient preservatives and desiccants to prevent bacterial action, significant gas buildup (7 psig, maximum), or the formation of free liquids.

1.5.5 Chelating organic material, unless treated to eliminate the potential for interaction with radionuclides to form stable complexes which may increase the mobility of the radionuclides.

1.5.6 Radioactive gases that are filtered or collected unless in a solid form so that decomposition or environmental heat will not result in the release of radioactive gases.

1.5.7 Hazardous (RCRA) wastes as defined by 40 CFR 261 Subparts C and D, or mixed waste (radioactive wastes contaminated with hazardous wastes). (See RCRA waste in Appendix B.)

(1) This includes hazardous wastes listed by name or the characteristic of being ignitable, reactive, pyrophoric, corrosive, or EP toxic.

(2) EP toxic includes lead. Lead is EP toxic if an extraction procedure sample contains greater than 5 mg lead/L from a representative sample of the waste.

Note: There are other waste acceptance criteria that are not listed here which are applicable to PFS-WMO and are available from PFS-WMO upon request. These criteria include requirements for shipping, documentation, containment, fissile material limits, radiation limits, package size and weights, labeling, certification, and quality assurance.

2.0 ACCEPTANCE CRITERIA FOR TRU WASTE

The ANL-IL Waste Certification and QA Plans specify the responsibilities, training, procedures, waste management and QA measures used to certify waste packages.

2.1 Immobilization

Powders, ashes, and similar particulate waste materials shall be immobilized if more than 1 weight (wt) % of the waste matrix in each package is in the form of particles below 10 microns in diameter, or if more than 15 wt % is in the form of particles below 200 microns in size.

The purpose of this criterion is to reduce: (1) the quantity of potential respirable fines and (2) the dispersibility of radioactive materials, in the event of container failure. Immobilization by mixing with Envirostone or cement is an option.

2.2 Liquid Waste

TRU waste shall not be in free liquid form. Minor liquid residues remaining in well drained bottles, cans, and similar containers are acceptable. The purpose for this criterion is to reduce the dispersibility of radionuclide materials in the event of waste container failure.

Note: PFS-WMO will determine if radioactive wastes are to be packaged as TRU or non-TRU based upon the gross weight of the full waste receptacle and the amount of radionuclides it contains. If the waste is non-TRU, it must not contain liquid in any amount. If the waste is TRU, only minor free liquid residues in well drained containers are acceptable.

2.3 Pyrophoric Materials

Pyrophoric materials, other than radionuclides, shall be rendered safe by mixing with chemically stable material (e.g., concrete, glass, etc.) or processed to remove their hazardous properties. No more than 1% by weight of the waste in each package may be pyrophoric forms of radionuclides, and these shall be generally dispersed in the waste.

The purpose for this criterion is to reduce the possibility of fire originating from spontaneous combustion.

2.4 Explosives and Compressed Gases

TRU waste shall contain no explosives or compressed gases as defined by 49 CFR 173, Subparts C and G.

The purpose for this criterion is to reduce the personnel risk from possible explosions and the potential release of contamination in the event of waste container failure.

2.5 Radioactive Mixed Waste

TRU waste shall contain no chemical waste, unless it exists as a co-contaminant with transuranics. Waste packages containing reactive material shall be identified with the appropriate DOT label. TRU contaminated corrosive materials shall be neutralized, rendered noncorrosive, or packaged in a manner to ensure container adequacy through the design lifetime. Hazardous materials

to be reported are listed in 40 CFR 261, Subparts C and D.

The Waste Generator must identify the presence and amounts of any hazardous materials listed in Appendix B. Non-TRU wastes containing Appendix-B hazardous materials are classed as Mixed Wastes.

The purpose for this criterion are: (a) to ensure that operating personnel are aware of potential hazards in the event of a waste container failure and (b) to preclude the possibility of container failure through the potential retrieval period because of attack by corrosive materials.

2.6 **Surface Dose Rate**

TRU contact handled (TRU-CH) waste packages shall have a maximum surface dose equivalent rate at any point no greater than 200 mrem/h. Neutron contributions of greater than 20 mrem/h to the total package dose rate shall be reported separately in the data package.

The purpose for this criterion is to control the radiological exposure to operating personnel.

2.7 **Additional TRU Waste Acceptance Criteria:** These criteria are to meet the Radioactive Waste Management Complex, (RWMC) INEL, Idaho requirements.

2.7.1 Radioactive waste containing biological, pathogenic, or infectious material shall be treated with sufficient preservatives and desiccants to prevent bacterial action, or the formation of free liquids. Toxins produced by the biological, pathogenic, or infectious agents shall be neutralized. Treatment of these agents and toxins shall be identified in the quality assurance plan and shipping documents.

2.7.2 Chelating organic material shall be treated to eliminate the potential for interaction with radionuclides forming stable complexes which may increase the mobility of the radionuclides. Treatment of these materials shall be identified in the quality assurance plan and the shipping documents.

2.7.3 Combinations of materials that could lead to spontaneous combustion (strong oxidants in combination with solidified oil, greases, solvents, or other materials) shall not be placed in the same waste receptacle. Fuel and oxidizers shall be placed in separate waste receptacles.

2.7.4 Transuranic waste containing free liquids are prohibited. Waste packages having the potential for liquid to be present shall have an absorbent and/or stabilizer added and mixed to ensure total immobilization of potential liquids.

2.7.5 The following criteria is for TRU waste packages that cannot be certified as meeting the WIPP-WAC because of known prohibited constituents, unknown properties, improper packaging, etc. Uncertified waste packages may be processed by shredding the container and its contents.

The following shall not be intermixed in individual containers (receptacles) with other waste:

(1) Lead, such as lead bricks, lead gloves, lead aprons.

(2) Radioactive sources imbedded in lead bricks.

(3) Gas cylinders, unless verification shows the cylinder has been vented and any valves have been removed.

(4) Carbon or stainless steel having dimensions larger than the following (length of these materials is not important):

- 1.25-inch diameter round bar.
- 1-inch square bar.
- 3/4-inch bar by 1.5-inch wide.
- 1/2-inch bar by 2-inch wide.
- 3/8-inch bar by 2.5-inch wide.
- Pipe with .25-inch wall thickness or diameter greater than 5 inches.
- 1/4 inch plate by 2 feet square.
- Plexiglas, glass, or Benelex thicker than two inches.

3.0 SOLID RADIOACTIVE WASTE DISPOSAL REQUISITIONS

The Solid Radioactive Waste Disposal Requisition (form PFS-195) and its Supplemental Sheet (form PFS-196) is used to assist in providing essential information about the radioactive waste and its containment receptacle to PFS-WMO. The information is needed in order to assure that the radioactive waste complies with: (1) the applicable requirements for safe handling and onsite temporary-storage, (2) the Federal shipping requirements, and (3) the waste acceptance criteria for the radioactive waste storage and disposal facility where the waste will be shipped.

The PFS-195 form has four numbered columns (1-4) that are divided into eight sections (1-8). Each column is to be used to document the waste in one receptacle and the sections are to be completed by individuals as indicated on the form. The Supplemental Sheet (PFS-196 form) is a continuation of section four. The requisition serial number, including the RS suffix, and column number is used to provide a unique identification for a receptacle and its contents. The term "receptacle" is used to avoid confusion with the term "container" which means the outermost disposable containment vessel for waste materials, including any integral liners or shielding materials, that are intended to be emplaced at a disposal facility. As an example, a bin is a container, whereas Blickman can inserts and TV cartons are receptacles.

The instructions for completing the PFS-195 and PFS-196 forms are provided in Appendix A. The instructions designate the individuals who are to supply the information, the information that is to be provided, and the sequence for supplying the information.

3.1 **The Waste Generator Sections** are to be completed by an individual (Waste Generator) who is cognizant about the radionuclides and amounts and forms of wastes in the receptacle. It is recommended that when more than one individual is using a receptacle, a clipboard be used to log the waste forms and the radionuclides and amounts placed into the receptacle.

3.1.1 For receptacles that are to be packaged as TRU waste (greater than 100 nCi/g as determined by PFS-WMO), the Waste Generator must also be on record as attending an annual class on documenting TRU waste. This class is presented by the PFS-WMO Manager; only those individuals who have been instructed will be considered authorized by PFS-WMO to sign a PFS-195 form as the Waste Generator. TRU waste will only be accepted from individuals on the authorization list.

3.1.2 If the waste receptacle contains TRU radionuclides in any amount, the Waste Generator is to mark the TRU box on the PFS-195 form.

The radionuclides (elements and isotopes) and amounts in a receptacle must be provided. Normally listing up to four radionuclides having the highest radioactivity (curies) is adequate. If additional radionuclides and amounts are thought to be significant, list them in Section A on the PFS-196 form. Long half-life and highly radiotoxic nuclides are more significant than short half-life and low radiotoxicity nuclides. List the TRU radionuclides first followed by any significant non-TRU radionuclides. Use Appendix F, Table of Isotopes, to deter-

mine half-life, which radionuclides are TRU, and which have the highest curie amount.

4.0 PROCEDURE FOR DISPOSAL OF SOLID RADIOACTIVE WASTE

The procedure for handling and disposal of solid radioactive wastes is outlined below. The format designates the proper sequence of actions required to carry out the disposal procedure.

	Personnel Involved	Responsibility
4.1	Waste Generator	Plans for the proper handling of waste prior to its production and performs the following:
4.2	Waste Generator	Consults with PFS-WMO on containment requirements for waste that will not fit into standard waste receptacles.
4.3	Waste Generator	Consults with OHS-HP on shielding requirements.
4.4	Waste Generator	Arranges through own Division for use or procurement of shielded secondary receptacle if needed.
4.5	Waste Generator	Fills waste receptacle (in accordance with segregation requirements) with solid radioactive waste only.
4.6	Waste Generator	Assures that nonradioactive waste is excluded.
4.7	Waste Generator	Segregates waste forms that are not acceptable from wastes that are acceptable. Places the unacceptable waste into its own receptacle that is labeled to show that it contains this waste form.
4.8	Waste Generator	Seals waste receptacle.
4.9	Waste Generator	Completes Section 1 though 4 on the PFS-195 form including the Supplemental Sheet PFS-196 form.
4.10	Waste Generator	Signs the PFS-195 form.
4.11	Waste Generator	Notifies OHS-HP of full receptacle(s) and requests a radiation survey of wastes.

	Personnel Involved	Responsibility
4.12	**Waste Generator**	If accountable radioactive materials are involved, provides PFS-195 form and PFS-196 form to OHS-SPM for approval.
4.13	**Waste Generator**	If Capital Equipment or Sensitive Items are involved, notifies Divisional Property Representative prior to disposal.
4.14	**Divisional Property Representative**	Takes appropriate action to comply with the Supply Policy and Procurement Manual procedures when Capital Equipment or Sensitive Items are involved. Notifies the Waste Generator when disposal is approved or other action is required.
4.15	**OHS-SPM**	Reviews all PFS-195 and PFS-196 forms that show accountable radionuclides, approves or disapproves of disposal, and performs the following:
4.16	**OHS-SPM**	If disapproved, holds the PFS-195 and PFS-196 and arranges with the Waste Generator for holding of the receptacle until problems are resolved.
4.17	**OHS-SPM**	If approved, assures that the radionuclide(s) and amount(s) of accountable materials provided on the PFS-195 and PFS-196 forms are in agreement and are the same as recorded on the SPM-23 form. Signs the PFS-195, attaches a copy of the SPM-23, and returns the PFS-195, PFS-196, and SPM-23 forms to the Waste Generator.
4.18	**OHS-HP**	Performs a radiation survey on the receptacle, records on the PFS-195 form the maximum activity detected at contact.
4.19	**OHS-HP**	Records the type of receptacle.
4.20	**OHS-HP**	Checks that detectable loose contamination on the receptacle is removed prior to signing the PFS-195 forms.

	Personnel Involved	Responsibility
4.21	OHS-HP	Checks the PFS-195 and PFS-196 forms for completeness of information including required signatures.
4.22	OHS-HP	Signs the PFS-195 form.
4.23	OHS-HP	Completes the information on a PFS-172 tag and attaches it to the receptacle.
4.24	OHS-HP	Sends the PFS-195 and PFS-196 forms, and a copy of the SPM-23 form, if applicable, to PFS-WMO.
4.25	PFS-WMO	Reviews the PFS-195 and PFS-196 forms (documentation) to assure that the waste is adequately documented and the required signatures are provided. For wastes that will require packaging as TRU waste, assures that the Waste Generator is on the approval list for documenting TRU waste and that the waste is in the correct type of receptacle. PFS-WMO also performs the following:
4.26	PFS-WMO	If the review indicates that information is missing, or that the waste is in the wrong type of receptacle, the documentation may be returned to the Waste Generator with a message describing the inadequacy and the requirements for acceptance of the waste.
4.27	PFS-WMO	If the review indicates that the documentation is acceptable and the waste is in the correct receptacle, the receptacle is scheduled for pickup.
4.28	PFS-WMO	Checks to determine that the receptacle is satisfactory and sealed, and that the PFS-172 tag agrees with the serial number of the PFS-195 form. If the receptacle is inadequate or the tag does not agree with the serial number, the receptacle is not picked up, and the inadequacy is reported to the PFS-WMO Supervisor for resolution with the Waste Generator.

	Personnel Involved	Responsibility
4.29	**PFS-WMO**	Transports waste receptacles to Building 306 for SPM-NDA assay.
4.30	**SPM-NDA**	Assays the receptacles for fissile material content and returns the receptacles to PFS-WMO. Any discrepancy found between the amounts shown on the PFS-195 form and the amounts detected by the assay are reported to OHS-SPM for resolution with the Waste Generator, and the receptacle is red tagged until the discrepancy is resolved.
4.31	**SPM-NDA**	Records positive assay results for Pu-239 and U-235 on the PFS-195 forms marked TRU. NDQ may be used for "no detectable quantity."
4.32	**SPM-NDA**	Places receptacles with no fissile material discrepancy in a designated area of Building 306.
4.33	**SPM-NDA**	Sends a monthly summary report of assay activities to the WMO Manager.
4.34	**PFS-WMO**	Weighs receptacles containing TRU radionuclides, determines which receptacles are to be packaged as TRU, and performs the following:
4.35	**PFS-WMO**	Maintains waste segregation requirements.
4.36	**PFS-WMO**	Bales compactible/combustible wastes as appropriate.
4.37	**PFS-WMO**	Places receptacles into shipping containers. Weighs and labels packages and prepares package documentation.
4.38	**PFS-WMO**	Arranges for shipment of waste packages to a radioactive waste storage and/or disposal facility and prepares shipment documentation.
4.39	**PFS-WMO**	Certifies waste packages meet the Waste Acceptance Criteria of the storage and/or disposal facility and the DOT transportation requirements.

	Personnel Involved	Responsibility
4.40	PFS-WMO	Ships waste packages and maintains waste package and shipment documentation.
4.41	OHS-HP	Performs radiation surveys of waste packages and shipments. Results are recorded on data forms.
4.42	OHS-HP	Ensures that instruments used for surveys are in good working order and have been calibrated within six months.
4.43	OHS-HP	Maintains a survey instrument calibration log.

SECTION IE

LIQUID RADIOACTIVE WASTE DISPOSAL

Free Liquid Wastes are prohibited from being sent to a Department of Energy Radioactive Waste Storage and Disposal Facility. Free liquids are those which have not been immobilized (can drain or spill from their containment).

Note: Hoses, vials, vessels, etc., containing liquids are not to be placed into Solid Radioactive Waste Receptacles (TV cartons, Blickman can inserts, etc.) Immobilization of liquid radioactive wastes must be performed by PFS-WMO. The only exception is aqueous liquid residuals from drained bottles, hoses, etc., which may be immobilized by the Waste Generator.

Immobilized liquids or liquid residues that are sent to a DOE Radioactive Waste Storage and Disposal Facility as Solid Wastes must meet the Waste Acceptance Criteria of that facility.

1.0 WASTE ACCEPTANCE CRITERIA FOR TREATED non-TRU LIQUID WASTES

1.1 Corrosive Liquids must be treated to obtain a pH of 4 to 10.

1.2 Liquids must be immobilized. When absorbents such as vermiculite are used, twice as much absorbent as is needed must be used to assure immobilization.

2.0 WASTE ACCEPTANCE CRITERIA FOR TREATED TRU LIQUID WASTES

A TRU waste certification program must be instituted and followed as specified by the ANL-IL TRU Waste Certification and QA Plans. The plans specify the responsibilities, training, procedures, waste management and QA measures that will be used to certify waste packages. The plans are approved by the Waste Isolation Pilot Plant Project Office (WPO) and the Waste Acceptance Criteria Certification Committee (WACC) and the program is subject to audits by the WACC, DOE-CH, and the ANL-IL Quality Assurance Office.

2.1 Liquid Waste

TRU waste shall not be shipped in free liquid form. Minor liquid residues remaining in well drained bottles, cans, and similar containers are acceptable.

Note: PFS-WMO will determine if radioactive wastes are to be packaged as TRU or non-TRU based upon the gross weight of the solid waste receptacle and the radionuclides and quantity it contains. Therefore, unless the Waste Generator is certain that the solid waste receptacle will contain sufficient TRU radionuclides and quantities to cause

it to be packaged as TRU waste, the waste must not contain free liquids in any amount. Free liquids are prohibited in non-TRU waste. TRU liquid wastes must be documented on a PFS-199 Liquid Radioactive Waste Disposal Requisition and be treated and immobilized by PFS-WMO using approved procedures. See Appendix A for a copy of a PFS-199 form and instructions for its completion.

3.0 LIQUID RADIOACTIVE WASTE DISPOSAL REQUISITION

The Liquid Radioactive Waste Disposal Requisition (form PFS-199) is available from the OHS-HP offices. The PFS-199 is used to provide essential information about a liquid waste to allow determination of immobilization or solidification methods. Any radioactive liquid wastes which include organic, inorganic, or hazardous waste as defined by 40 CFR 261, Subparts C and D, are to be documented on the PFS-199 form. This includes scintillation counting fluids that contain small amounts of radionuclides. Many of the scintillation cocktail fluids are hazardous wastes because they have the characteristic of being ignitable (flash point below 140°F) or contain solvents listed in Subpart D.

Note: **Organic scintillation fluids must not be absorbed (e.g., into vermiculite).**

The PFS-199 form is to be used to document the contents of one receptacle or more than one receptacle of **identical** solutions.

3.1 **Sections 1 and 2** are to be completed by an individual (Waste Generator) having cognizance of the liquid, chemical composition, and the radionuclides and amounts.

3.1.1 For treated and immobilized liquid wastes that are to be packaged as TRU wastes (TRU content greater than 100 nCi/g as determined by PFS-WMO), the Waste Generator must be on record as having participated in an annual training class on TRU waste. Only those individuals who have received this instruction will be considered authorized by PFS-WMO to sign a PFS-199 form as the Waste Generator. TRU waste will only be accepted from individuals on the authorization list.

4.0 LIQUID RADIOACTIVE WASTE DISPOSAL PROCEDURES

The procedures for handling and disposal of liquid radioactive wastes are outlined below. The format designates the proper sequence of actions required to carry out the disposal procedure.

	Personnel Involved	Responsibility
4.1	Waste Generator	Plans for proper handling of liquid waste prior to its production and is to determine the containment needs for safe handling.
4.2	Waste Generator	Consults with PFS-WMO to determine proper containment of the liquid for safe handling. Note: PFS-WMO has receptacles of various sizes available for use.
4.3	Waste Generator	Consults with OHS-HP on shielding needs, if applicable.
4.4	Waste Generator	After carefully considering possible chemical reactions and potentially hazardous mixtures, fills and seals the liquid waste container.
4.5	Waste Generator	Completes Sections 1 and 2 on the PFS-199 form.
4.6	Waste Generator	Labels container with Serial Number of PFS-199 form, e.g., RL 1531.
4.7	Waste Generator	Notifies OHS-HP of a full liquid waste container and requests a radiation survey of the container.
4.8	Waste Generator	Signs the PFS-199 form and provides Payroll Number, telephone number, and date signed.
4.9	Waste Generator	If accountable radionuclides are in the liquid, provides the PFS-199 form to OHS-SPM for review and approval.
4.10	OHS-SPM	If accountable radionuclides are in the liquid, approves or disapproves of disposal.
4.11	OHS-SPM	If disapproved, holds the PFS-199 and arranges with the Waste Generator for safe storage of the receptacle until problems are resolved.

	Personnel Involved	Responsibility
4.12	OHS-SPM	If approved, signs the PFS-199 form, provides SPM-23 form, Payroll Number, date signed, and attaches a copy of the SPM-23 to the PFS-199, and returns the PFS-199 to the Waste Generator.
4.13	OHS-HP	Performs survey of liquid waste receptacle and records surface reading and contamination results on the PFS-199 form. NDQ, for no detectable quantities, may be used if no contamination is detected.
4.14	OHS-HP	Checks the PFS-199 form for completeness of information, including required signatures, and has any missing information added.
4.15	OHS-HP	Signs the PFS-199 form, and provides Payroll number, and date of survey.
4.16	OHS-HP	Completes the information on a PFS-172 label and affixes the label on the liquid waste container.
4.17	OHS-HP	Sends the PFS-199 form and a copy of the SPM-23 form, if applicable, to PFS-WMO.
4.18	PFS-WMO	Reviews the PFS-199 form to assure that the liquid is adequately documented and the required signatures are provided. Ensures that the Waste Generator is on the authorized list for documenting TRU wastes.
4.19	PFS-WMO	If the review discloses that more information is needed, the PFS-199 form may be returned to the Waste Generator with a message describing the inadequacy and the requirements that must be fulfilled for acceptance of the liquid.
4.20	PFS-WMO	Determines proper treatment and disposal requirements.
4.21	PFS-WMO	If the review finds that the documentation is acceptable, the liquid

	Personnel Involved	Responsibility
		waste receptacle is scheduled for pickup.
4.22	PFS-WMO	Checks to determine that the liquid waste receptacle is sealed and adequate for safe handling of the liquids, and checks that the PFS-172 tag agrees with the Serial Number of the PFS-199 form. If the receptacle is found to be inadequate, or the tag does not agree with the Serial Number, the receptacle is not picked up and is reported to the PFS-WMO Supervisor for resolution with the Waste Generator.
4.23	PFS-WMO	Transports acceptable and properly tagged liquid waste receptacles to Building 306 for treatment or processing of the liquids.
4.24	PFS-WMO	Treats liquids, except scintillation liquids, to an acceptable solid form for shipment.
4.25	PFS-WMO	Scintillation liquids are normally packaged and stored until shipped to a hazardous waste disposal facility for incineration.
4.26	PFS-WMO	Provides the documentation and reporting requirements as required for treatment, disposal, or shipment for disposal.
4.27	OHS-HP	Performs radiation surveys as required for safe handling and treatment of wastes, and surveys waste shipments. Results are recorded on data forms and shipment documentation.

APPENDIX A

RADIOACTIVE WASTE DISPOSAL

REQUISITION FORMS

(PFS-195, PFS-196, and PFS-199)

WITH INSTRUCTIONS FOR THEIR COMPLETION

SOLID RADIOACTIVE WASTE DISPOSAL REQUISITION RS № 04253

Sec. 1
Div ☐☐☐
Bldg ☐☐☐☐

Class: TRU ☐ Non-TRU ☐
Type: Combustible ☐ Non-Combustible ☐
(only one class & type on requisition)

Sec. 2 Receptacle Number	1	2	3	4
A. Room Number				
B. Secondary Container Identification				
C. Volume % organic 0 to 100 %				
D. Compactible? check if yes	☐	☐	☐	☐
E. Accountable Materials? check if yes	☐	☐	☐	☐
No. (explain yes answers in supplement)	Yes No	Yes No	Yes No	Yes No
1. Fines: > 200 grams below 200 microns?	☐ ☐	☐ ☐	☐ ☐	☐ ☐
2. Fines: > 10 grams below 10 microns?	☐ ☐	☐ ☐	☐ ☐	☐ ☐
3. Liquids or Absorbed Liquids?	☐ ☐	☐ ☐	☐ ☐	☐ ☐
4. Pyrophorics?	☐ ☐	☐ ☐	☐ ☐	☐ ☐
5. Pressurized vessels?	☐ ☐	☐ ☐	☐ ☐	☐ ☐
6. Poisons A or B?	☐ ☐	☐ ☐	☐ ☐	☐ ☐
7. Corrosives?	☐ ☐	☐ ☐	☐ ☐	☐ ☐
8. Biological Material?	☐ ☐	☐ ☐	☐ ☐	☐ ☐
9. Sludges?	☐ ☐	☐ ☐	☐ ☐	☐ ☐
10. Special Hazards? or Mixed Waste?	☐ ☐	☐ ☐	☐ ☐	☐ ☐
Sec. 3 Radionuclides & Quantity				
1A Element & Isotope				
1B Quantity - Specify gram(g) or Curie(C)	E	E	E	E
2A Element & Isotope				
2B Quantity - Specify gram(g) or Curie(C)	E	E	E	E
3A Element & Isotope				
3B Quantity - Specify gram(g) or Curie(C)	E	E	E	E
4A Element & Isotope				
4B Quantity - Specify gram(g) or Curie(C)	E	E	E	E

Sec. 4 One supplemental sheet is to be completed for each requisition.
The above sections and the attached supplement are complete and accurately describe the waste in the receptacles listed.

Cost Code | Signature of Generator | Payroll # | Phone# | Date

Sec. 5 OHS	Direct Radiation mR/h				
	Receptacle Type				
	Survey performed by: Signature of Surveyor		Payroll #		Date
Sec. 6 SPM	I have been notified of accountable materials listed on this requisition. SPM 23 #	Signature of Representative	Payroll #		Date
Sec. 7 NDA	PU239 Assay results grams				
	U 235 Assay results grams				
	Assay performed by: Signature of Assayer		Payroll #		Date
Sec. 8 WMO	Shipping Container S/N				
	Gross Weight of Receptacle Pounds				
	Total Curies in Sec. 3 Total Ci	E	E	E	E
	Total Alpha Curies Alpha Ci	E	E	E	E
	Total TRU Curies TRU Ci	E	E	E	E
	TRU nano Curies/gram nCi/g	E-09	E-09	E-09	E-09
	Reviewed by Initials				

PPS-195 (8-85) White - WMO, Canary - Generator, Pink - OHS GPO 1988-226-339

SOLID RADIOACTIVE WASTE DISPOSAL REQUISITION

RS ☐☐☐☐

* SUPPLEMENTAL SHEET

(one required for each requisition)

The number placed in the upper corner of this supplement must match the number of the Solid Radioactive Waste Disposal Requisition used to document your waste. The sections of this form are to supply additional information about the waste in each receptacle listed on the requisition.

Receptacle No.	Section A: Provide physical (generic) description of waste (e.g., rags, paper, glassware, plastics, steel, etc.). Items over one cubic foot are to include a description (e.g., vacuum pump, electrical motor, furnace, HEPA filter, ductwork, etc.)	Section B: If "Accountable Materials" was marked "yes," list materials and provide weight for each. Otherwise, mark this section "NA" for not applicable.	Section C: If any of Section 2 questions (1-10) were marked "yes," provide the "yes" question number and explain the constituents. Otherwise, mark this section "NA" for not applicable.
1			
2			
3			
4			

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FDS 1986 (7-84)

White - WMO, Canary - Generator, Pink - OHS

INSTRUCTIONS FOR COMPLETING SECTIONS 1-7 ON PFS-195 AND PFS-196 REQUISITIONS

Sections 1 through 4 on the Solid Radioactive Waste Disposal Requisition (PFS-195) and its supplemental sheet (PFS-196) are to be completed by an individual who is cognizant of the waste and its constituents. The PFS-196 is a continuation of Section 4 on the PFS-195. Both the PFS-195 and PFS-196 must be completed as a set in order for the documentation to be acceptable.

The PFS-195 has four vertical (receptacle) columns numbered 1-4, and the PFS-196 has four horizontal (receptacle) rows numbered 1-4. Each of the four numbers is to be used to document the contents of one receptacle. For example, if one receptacle is to be documented, use column 1 and row 1, two receptacles use columns 1 and 2 and rows 1 and 2, etc. If more than four receptacles are to be documented, an additional PFS-195 and PFS-196 must be used.

Section 1

Division and Building: Provide the symbols used to identify your division and the building number where the waste is located.

Class: If the waste in the receptacle(s) to be documented on the PFS-195 and PFS-196 contains TRU (Transuranic, elements with atomic numbers greater than 92 and U-233), place an X in the "TRU" square; otherwise, place an X in the "Non-TRU" square. If the TRU square is marked, all receptacles to be documented on a PFS-195 must contain at least one TRU radionuclide. If the non-TRU square is marked, no receptacle is to contain TRU nuclides.

Note: When the TRU square is marked, the TRU radionuclide(s) and quantity must be listed in Section 3. PFS-WMO will determine if the receptacle(s) will be packaged as TRU (TRU content greater than 100 nanocuries per gram) or as non TRU waste based upon the quantity of TRU provided in Section 3 and the weight of the receptacle, determined in Section 8 by PFS/WMO.

TYPE: If the waste in the receptacle(s) contains combustible waste, mark the "Combustible" square; otherwise, mark the Non-Combustible square. If the Combustible square is marked, all receptacles must contain combustible waste; likewise, if the Non-Combustible square is marked, all receptacles must contain non-combustible wastes.

Section 2

Room Number: Provide the room number where the receptacle is located.

Secondary Container Identification: Provide the identification number (ID/N) of the Blickman can, metal TV carton overpack, drum lid, etc. If the ID/N is not available, place a piece of tape on the secondary container and mark a letter A through Z, and use the letter A-Z as the secondary container identification. Note: it should be ascertained that the same letter designation was not used for other secondary containers in the room.

INSTRUCTIONS FOR COMPLETING SECTIONS 1-7 ON PFS-195 AND PFS-196 REQUISITIONS

(Section 2 cont.)

VOLUME % ORGANIC: Estimate the percent of waste in the receptacle that is organic. Use a whole number 1-100 to represent %.

Compactible: If the waste in the receptacle is compactible, mark the "yes" square; otherwise, leave blank to represent not compactible.

Accountable Materials: If the receptacle contains accountable materials that must be accounted for by Special Materials, place an X in the yes square and list the materials and amounts in Section C of the PFS-196; otherwise, leave blank to represent no accountable materials. (See the list of accountable materials provided on the "Definitions for Terms Used on the SRW Requisition."

Waste Constituents questions 1-10:

All questions 1-10 must be answered either yes or no. (See "Waste Form Questions 1-10 on PFS-195 Data Form.")

Section 3:

Radionuclides and Quantity: Up to four sets of information can be provided for radionuclides and quantities. A set contains a number (1-4) followed by an A and B. The A part of a set is to list the element and isotope. For example, Pu-239, U-235, and Co-60 is an acceptable way to list an element and its isotope; however, Pu, U, and Co are not acceptable because the isotopes are not provided.

If the TRU class is marked in Section 1, the TRU radionuclides are to be listed first in decreasing order in respect to their curie quantity, followed by any non-TRU radionuclides in decreasing order in respect to their curie quantity.

If the non-TRU class is marked in Section 1, the radionuclides should be listed in decreasing order in respect to their curie quantity.

The quantity of a radionuclide is to be provided using (E) scientific notation with the letter E representing the number 10. For example .005 would be listed as 5.0E-3, 5.0 as 5.0E+0, 50 as 5.0E+1, etc. The sign (+ -) which follows the E must be provided.

The unit of the quantity must be provided and is to be placed into the box provided to the right of the quantity. A capital "C" is to be used to represent curies, and a small "g" is to be used to represent grams. It is important to use a small g because the capital G can be misread as a c when it is written.

INSTRUCTIONS FOR COMPLETING SECTIONS 1-7 ON PFS-195 AND PFS-196 REQUISITIONS

Section 4

One PFS-196 must be completed for each PFS-195. The PFS-196 is a continuation of the PFS-195. Each horizontal column on the PFS-196 represents the same receptacles as on the PFS-195.

Place the serial number of the PFS-195 into the RS boxes at the top of the PFS-196 and follow the instructions provided at the beginning of each of the three sections (A-C).

When the information required on the PFS-195 (Sections 1-4) and PFS-196 (A-C) is complete, sign your name and provide your payroll number, phone number, date signed, and the cost code to be used to charge your waste in Section 4.

If no accountable materials are in the receptacles, proceed to step 1 below.

If accountable materials are in the receptacles, submit the PFS-195 and PFS-196 to the PFS/Special Materials representative in your area. After the representative reviews the accountable materials, signs the PFS-195 (Section 6), attaches a copy of the SPM-23, and returns the signed Section 6 to you:

1. Retain the canary copy of the PFS-195 and PFS-196 as your record.

2. Provide the original and pink (OHS) copies of the PFS-195 and PFS-196, (and copy of SPM-23 form if applicable) to the Health Physics Technician in your Area.

Section 5

This section is to be completed by a Health Physics Technician. For each receptacle documented, record the results of the highest beta/gamma level detected at direct contact with the survey instrument. Allowances do not need to be made for the distance between the instrument's sensor and the receptacle.

For each receptacle documented, provide the type of receptacle. Examples: 5PC (5 gallon metal pail), 5FD (5 gallon fiber Drum), TV (TV carton), 55 drum (55 gallon metal drum), etc.

When Section 5 information has been provided, sign your name and fill in the payroll number and the date of the survey.

1. Retain the Pink copies of the PFS-195 and 196 as your record.

2. Submit the completed WMO copies of the PFS-195 and 196, and the SPM-23 copy (if applicable) to: WMO Supervisor, Building 306.

INSTRUCTIONS FOR COMPLETING SECTIONS 1-7 ON PFS-195 AND PFS-196 REQUISITIONS

Section 6

This section is to be completed by a SPM Representative when accountable materials are being disposed. Check that the amount of radioactive accountable materials identified in Section 3 of the PFS-195 agrees with the amount provided in Section B of the PFS-196.

If this section is required, sign your name, and provide your payroll number and date signed.

1. Attach a copy of the SPM-23 form to the PFS-195 and 196.

2. Return the PFS-195 and 196 to the Waste Generator.

Section 7

This section is to be completed by the NDA Assayer for wastes that have been classified, in Section 1, as TRU. For each receptacle documented, provide the amount of Pu-239 or U-235 detected. If none is detected, write NDQ for no detectable quantities.

When the infomation has been supplied, sign your name, and provide your payroll number and date of assay.

Definitions for Terms Used on the Solid Radioactive Waste Disposal Requisitions

Accountable Materials:

Americium 241	Lithium 6
Americium 243	Neptunium 237
Berkelium 249	Osmium
Beryllium	Palladium
Boron-10	Plutonium Isotopes
Californium 252	Platinum
Curium 246	Rhodium
Deuterium	Silver
Gallium	Stable Separated Isotopes
Gold	Thorium Isotopes
Hafnium	Tritium
Heavy Water	Uranium Isotopes
Iridium	Zirconium

Absorbed Liquids: Liquids that have been absorbed into rags, paper tissue, vermiculite, etc.

Biological Material: Materials from living organisms that produce gases or liquids during decomposition.

Combustible: Materials that will sustain combustion in atmospheric air when exposed to an ignition source of 1475^{0} F for a period of 5 minutes.

Corrosives: Materials that will greatly weaken or destroy steel receptacles in a relatively short time. Corrosive materials normally have either a low or high pH.

Fines: Powders, dusts, glovebox sweepings, etc.

Mixed Waste: Radioactive waste that also contains any of the hazardous waste constituents that are identified in 40 CFR 261. Note: Lead is a hazardous waste constituent.

Noncompactible: Materials that are not readily compactible when a force of 20 psig is applied: Examples are most metals, blocks of plastic, pipe, concrete, rocks, glassware etc.

Organic: Materials derived from plant or animal life. Examples are paper, rags, wood, most plastics, etc.

Poisons A or B: Toxic materials that are defined as Poisons A or B by 49 CFR 172.101.

Definitions for Terms Used on the Solid Radioactive Waste Disposal Requisitions

Pressurized Vessels: A container that is pressurized with a gas to greater than 7 psig, or is capable of being pressurized with a gas to greater than 7 psig. This includes areosol cans, gas cylinders, sealed pipes, etc.

Pyrophorics: Materials that will ignite spontaneously in dry or moist air at temperatures below 130° F.

Receptacle: A container that is approved by WMO and used to confine radioactive waste. Examples of receptacles are TV cartons, fiber drums, five-gallon pails (TRU) and 55-gallon drums (TRU).

Secondary Container: A container that is used to hold and protect a waste receptacle, e.g., Blickman can.

Special Hazards: Explosive items or materials that include any selected chemical compound, mixture, or device that has the primary purpose to function by explosion, i.e., with substantial instantaneous release of gases and heat. See 49 CFR subpart C for a further definition of explosive materials.

Also materials that require special handling for safety reasons.

Sludges: A soft mud, slush, or mire that contains materials which may corrode a steel receptacle. Also see corrosives.

TRU Waste: Radioactive waste containing U-233 or radionuclides having atomic numbers 93 and above. Note: PFS-WMO will determine whether this class of waste will be packaged as TRU waste (greater than 100 nanocuries per gram) or as non-TRU based upon the quantity of radionuclides provided in Section 3 on the PFS-195 form and the gross weight of the receptacle obtained by PFS-WMO in Section 8.

LIQUID RADIOACTIVE WASTE DISPOSAL REQUISITION RL 00330

Sec. 1

Div ☐☐☐☐ Class: Type:

Bldg ☐☐☐☐ TRU ☐ Flammable ☐

Room ☐☐☐☐ Non-TRU ☐ Non-Flammable ☐

(only one class and type on a requisition)

Sec. 2

(only one vessel on each requisition unless all vessels contain identical solutions)

A. pH of solution ☐ amount of solution ☐

Sp.g. of solution ☐ amount units ☐

B. Only use this space if all vessels contain identical solutions.

number of vessels ☐

C. accountable materials? circle either

yes or no

D. Radionuclides and Quantity

E. List all chemicals in solution using generic names (no symbols) and one line per chemical.

F. Accountable Materials

Line	Isotope	Quantity	C or g	Chemical Name	Amount	U	Materials	g
1		E						
2		E						
3		E						
4		E						

The above sections are complete and accurately describe the liquid and its constituents.

Signature of Generator | Payroll # | Date | Phone # | Cost Code

Sec. 3

OHS. Direct Radiation from Vessel mRem/h _____ Surface Contamination _____

Signature of Surveyor | Payroll # | Date

Sec. 4

SPM I have been notified of accountable materials:

Signature of Representative | Payroll # | Date | SPM 23 #

Sec. 5

Approved for waste pickup: _____ _____

Signature of Supervisor | Date

Waste Treatments:

☐ Absorption ☐ Solid Matrix

☐ pH adjustment ☐ Other _____

WMO Picked up by: _____ _____ _____ _____

Signature of Mechanic | Payroll # | Date | WO #

Waste Treated by: _____ _____ _____ _____

Signature of Mechanic | Payroll # | Date | Batch #

PFS-199

WASTE GENERATOR'S INSTRUCTIONS FOR COMPLETING A PFS-199 DATA FORM (LIQUID RADIOACTIVE WASTE DISPOSAL REQUISITION)

Section 1

Div., Bldg., Room:

Provide your Division (Div), and Building (Bldg) and Room number where the waste is located. For DOE/NBL, use NBL for division.

Class:

If the liquid contains TRU nuclides, mark the TRU box; otherwise mark the non-TRU box. Note: If TRU is marked, the TRU nuclides and amounts must be shown in Section D.

Type:

If the liquid is flammable, mark the flammable box; otherwise, mark the nonflammable box.

Section 2

Subpart A

Provide the pH of solution

Provide the specific gravity of solution.

Provide the amount of solution in gallons (gals) or pounds (lbs).

Provide the amount of units (either gals or lbs)

Subpart B

Only use this subpart if more than one vessel is used to contain identical solutions including radionuclides and quantities; otherwise mark the box NA for not applicable.

Subpart C

If the solution contains accountable materials, circle "yes"; otherwise circle "no."

Subpart D (Radionuclides and Quantity)

Isotopes

Up to four radionuclides can be listed in lines 1-4. If TRU isotopes are in the solution, identify the TRU isotopes first in decreasing order according to curie amounts prior to listing non-TRU isotopes. For non-TRU isotopes, identify the isotopes in

WASTE GENERATOR'S INSTRUCTIONS FOR COMPLETING A PFS-199 DATA FORM (LIQUID RADIOACTIVE WASTE DISPOSAL REQUISITION)

Isotopes (cont.)

decreasing order according to the curie amounts. Both the element and isotope must be provided to be acceptable. For example, Pu-239 and Cs-137 are acceptable, but Pu and Cs are not because the isotope is not provided.

Quantity

Provide the quantity of each of the radionuclides using E (scientific notation) with the letter E representing the base 10. For example, .000005 (5 micro) would be listed 5.0E-06, .005 (5 mili) would be listed 5.0E-03, 5.0 would be listed 5.0E+00, and 50 would be listed 5.0E+01, etc.

C (curie) or g (gram)

Provide the quantity unit C for curie, or g for gram. Use the small letter g for grams because a capital G can be misread as a C. Either the quantity unit C or g must be provided to be acceptable.

Subpart E (chemicals and amounts in solution)

Chemical name

Using lines 1 through 4, list the chemicals in the solution using generic names (no symbols). Examples: nitric acid, sulfuric acid, vacuum pump oil, etc.

Note: If more than four chemicals are in the solution, use a sheet of paper to list the chemicals and amounts and attach the sheet to the PFS-199 form. When an additional sheet is used, write "see attached sheet," in line 1 of chemical name and leave lines 2, 3 and 4 blank. On the attached sheet, place the serial number of the PFS-199 at the top of the page (example RL 00131) and list the chemicals and amounts (one line per chemical and amount) in the same format as that required on the PFS-199.

Amount and U (amount units)

Provide the amount of the chemical in the solution and the amount unit. Examples: 10 grams would be shown as 10 g, 10 pounds would be shown as 10 lb, etc. The amount of chemical in percent of the solution is also acceptable and the unit is to be shown as percent (%). When percent is used, the total of all the chemicals must add up to 100%, and water will therefore be included as a chemical.

WASTE GENERATOR'S INSTRUCTIONS FOR COMPLETING A PFS-199 DATA FORM (LIQUID RADIOACTIVE WASTE DISPOSAL REQUISITION)

Subpart F (accountable materials and amounts in solution)

Materials and g (grams)

If the accountable materials question in Subpart C was answered yes, list the accountable materials, and the amounts in grams. If the accountable materials were listed as an isotope on a line in Subpart D, place a capital A on the same line in Subpart F. If the quantity of the accountable isotopes in Subpart D was shown in curies, the curies must be converted to gram units for Subpart F.

Signatures

Sign the PFS-199 (signature of generator), provide your payroll number, the date signed, phone number, and the cost code to be used for handling and treating the wastes. For DOE/NBL waste generators, use your film badge number for the payroll number.

If accountable materials are in the waste, forward the PFS-199 to the PFS-SPM representative in your area for review and signature. After the PFS-SPM signature is obtained, forward the signed PFS-199 and a copy of the SPM-23 form to the Health Physics office in your building.

WASTE GENERATOR'S INSTRUCTIONS FOR DOCUMENTING SCINTILLATION COCKTAIL VIALS CONTAINING RADIONUCLIDES

Note: These instructions are to be followed for documenting scintillation cocktail vials. Scintillation fluids in other containers are to be documented using the instructions titled "Waste Generator's Instructions For Completing a PFS-199 Data Form."

1. Use the Liquid Radioactive Waste Disposal Requisition (form PFS-199)

2. All Scintillation Cocktails documented on any PFS-199 must contain identical chemicals and amounts and identical radionuclides and amounts. Those with different chemicals and amounts and/or different radionuclides and amounts must be documented on another PFS-199.

3. The PFS-199 form is to be completed according to the instructions except for the following:

   Section A:

   Provide the amount of solution in each of the identical vials. Example: amount of solution "10", amount unit "mL"

   Section B:

   Provide the quantity (number) of identical vials being documented and write "scintillation cocktails" in space next to number box.

   Section D:

   Provide the Radionuclides and Quantity in each of the identical vials.

   Section E:

   Provide the names and amounts of chemicals in each of the identical vials.

APPENDIX B

EPA HAZARDOUS WASTES

or

RCRA WASTES

(As defined by 40 CFR 161, Subparts C and D)

The hazardous wastes identified in this Appendix are regulated by both the State of Illinois and the Federal Environmental Protection Agency (EPA) under the Resource Conservation and Recovery Act (RCRA). These wastes are commonly referred to as RCRA wastes.

Contents of Appendix B

1. Questionnaire for determining if a waste is RCRA regulated.
2. Excerpts from 40 CFR 161, Subparts C and D.

   Subpart C: Characteristics of Hazardous Waste

   Subpart D: List of Hazardous Waste

QUESTIONNAIRE FOR DETERMINING IF WASTE IS RCRA REGULATED
AS DEFINED BY 40 CFR 261, SUBPARTS C and D
Page 1 of 2

1.	Is the chemical pure (not spent or diluted and in original container)?	If no, go to step 3. If yes, go to step 2.
2.	Does chemical have a generic name listed in Table 3 or Table 4?	If no, go to step 3. If yes, write listed-waste-number in box A, then go to step 9.
3.	Is chemical a spent solvent used in degreasing and listed in Table 2 as F001?	If no, go to step 4. If yes, write F001 in box B, then go to step 9.
4.	Is chemical a spent solvent listed in Table 2 as F002, F003, F004 or F005?	If no, go to step 5. If yes, write the F-code in box B, then go to step 5.
5.	Is chemical a liquid, or liquid solution having a flash point below 140° F?	If no, go to step 5A. If yes, check box C, then go to step 6.
5A.	Is chemical a solid and under standard temperature and pressure capable of causing a fire through friction, absorption of moisture, or spontaneous chemical changes?	If no, go to step 5B. If yes, check box C, then go to step 6.
5B.	Is chemical a flammable gas?	If no, go to step 5C. If yes, check box C, then go to step 6.
5C.	Is chemical an oxidizer such as a chlorate, permanganate, organic peroxide, or a nitrate that yields oxygen readily to stimulate the combustion of organic matter?	If no, go to step 6. If yes, check box C, then go to step 6.
6.	Is chemical aqueous with a pH less than 2 or greater than 12.5?	If no, go to step 7. If yes, check box D, then go step 7.
7.	Is chemical normally unstable and readily undergoes violent changes without detonation?	If no, go to step 7A. If yes, check box E, then go to step 8.
7A	Does chemical react violently with water?	If no, go to step 7B. If yes, check box E, then go to step 8.

QUESTIONNAIRE FOR DETERMINING IF WASTE IS RCRA REGULATED
AS DEFINED BY 40 CFR 261, SUBPARTS C and D

7B. When mixed with water, does the chemical generate toxic gases, vapors, or fumes in quantities sufficient to present a health hazard to human life or the environment?	If no, go to step 7C. If yes, check box E, then go to step 8.
7C. Is chemical a cyanide or sulfide which, when exposed to a pH condition between 2 and 12.5, can generate toxic gases, vapors, or fumes in quantities sufficient to present a health hazard to human life or the environment?	If no, go to step 7D. If yes, check box E, then go to step 8.
7D. Is chemical capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement?	If no, go to step 7E. If yes, check box E, then go to step 8.
7E. Is chemical capable of detonation or explosive decomposition or reaction at standard temperature and pressure?	If no, go to step 7F. If yes, check box E, then go to step 8.
7F. Is chemical a forbidden explosive as defined in 49 CFR 173.53 or 173.88?	If no, to to step 8. If yes, check box E, then go to step 8.
8. Does the chemical contain any of the contaminants listed in Table 1 at a concentration equal to or greater than the respective values provided in the table?	If no, go to step 9. If yes, place the D code in box F, then go to step 9.
9. Do any of the boxes (A through F) contain information?	If no, the chemical <u>is not</u> RCRA regulated If yes, the chemical <u>is</u> RCRA regulated as per the code(s) shown in the box(s).

QUESTIONNAIRE RESULTS

CHEMICAL IS RCRA REGULATED IF ANY OF THE BOXES CONTAIN INFORMATION

A	B	C	D	E	F
Listed Waste	Spent Solvent	D001	D002	D003	EP Toxic
☐	☐	☐	☐	☐	☐

EXCERPTS FROM 40 CFR 261, SUBPART C

CHARACTERISTICS OF A HAZARDOUS WASTE

A waste is defined as hazardous if it exhibits any one or any combination of the following characteristics:

Characteristic of Ignitability

A waste exhibits the characteristic of ignitability if a representative sample of the waste has any of the following properties:

1. It is a liquid, other than an aqueous solution containing less than 24 percent alcohol by volume, and has a flash point less than 140°F, as determined with an appropriate Closed Cup Flash Point Tester.

2. It is not a liquid and is capable, under standard temperature and pressure, of causing fire though friction absorption of moisture or spontaneous chemical changes and, when ignited, burns so vigorously and persistently that it creates a hazard.

3. It is an ignitable compressed gas as defined in 49 CFR 173.300 and as determined by the test methods described in that regulation or equivalent test methods.

4. It is an oxidizer as defined in 49 CFR 173.151.

Characteristic of Corrosivity

A waste exhibits the characteristic of corrosivity if a representative sample of the waste has either of the following properties:

1. It is aqueous and has a pH less than or equal to 2 or greater than or equal to 12.5, as determined by a pH meter using either an EPA test method or an equivalent test method.

EXCERPTS FROM 40 CFR 261, SUBPART C (continued)

2. It is a liquid and corrodes steel (SAE 1020) at a rate greater than 6.35 mm (0.250 inch) per year at a test temperature of 130°F.

Characteristic of Reactivity

A waste exhibits the characteristic of reactivity if a representative sample of the waste has any of the following properties:

1. It is normally unstable and readily undergoes violent change without detonating.

2. It reacts violently with water.

3. It forms potentially explosive mixtures with water.

4. When mixed with water, it generates toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment.

5. It is a cyanide or sulfide bearing waste which, when exposed to pH conditions between 2 and 12.5 can generate toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment.

6. It is capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement.

7. It is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure.

8. It is a forbidden explosive as defined in 49 CFR 173.51, or a Class A explosive as defined in 49 CFR 173.53 or a Class B explosive as defined in 49 CFR 173.88.

EXCERPTS FROM 40 CFR 261, SUBPART C (continued)

Characteristic of EP Toxicity

A waste exhibits the characteristic of EP toxicity if, using EPA test methods or equivalent, the extract from a representative sample of the waste contains any of the contaminants listed in Table 1 at a concentration equal to or greater than the respective value given in that Table. Where the waste contains less than 0.5 percent filterable solids, the waste itself, after filtering, is considered to be the extract for the purposes of this section.

2. A waste that exhibits the characteristic of EP toxicity, but is not listed as a hazardous waste in Subpart D, has the EPA Hazardous Waste Number specified in Table 1 which corresponds to the toxic contaminant causing it to be hazardous.

Table 1

MAXIMUM CONCENTRATION OF CONTAMINANTS
FOR THE CHARACTERISTIC OF EP TOXIC

EPA Hazardous Waste Number	Contaminant	Maximum Concentration (milligrams per liter)
D004	Arsenic	5.0
D005	Barium	100.0
D005	Cadmium	1.0
D007	Chromium	5.0
D008	Lead	5.0
D009	Mercury	.2
D010	Selenium	1.0
D011	Silver	5.0
D012	Endrin (1,2,3,4,10,10-hexachloro-1,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-1,4-endo, endo-5,8-dimethylanonaphthalene)	.02
D013	Lindane (1,2,3,4,5,6-hexa-chlorocyclohexane, gamma isomer)	.4
D014	Methoxychlor (1,1,1-Trichlor-2,2-bis p-methoxyphenyl ethane)	10.0
D015	Toxaphene ($C_{10}H_{10}Cl_8$, Technical chlorinated camphene, 67-69 percent chlorine)	.5
D016	2,4-D (2,4-Dichlorphenoxyacetic acid)	10.0
D017	2,4,4-TP Silvex (2,4,5-Trichlorophenoxypropionic acid)	1.0

40 CFR 261, SUBPART D

LISTS OF HAZARDOUS WASTE

40 CFR 261.30

a. A waste is a hazardous waste if it is listed in this Subpart.

b. The basis for listing the classes or types of wastes listed in this Subpart is indicated by employing one or more of the Hazard Codes:

Ignitable Waste	(I)
Corrosive Waste	(C)
Reactive Waste	(R)
EP Toxic Waste	(E)
Acute Hazardous Waste	(H)
Toxic Waste	(T)

c. Each hazardous waste listed in this Subpart is assigned an EPA Hazardous Waste Number which precedes the name of the waste.

40 CFR 261, Subpart D (continued)

Table 2

HAZARDOUS WASTES FROM NONSPECIFIC SOURCES

40 CFR 261.31

EPA Hazardous Waste Number	Hazardous Waste	Hazard Code
F001	The following spent halogenated solvents used in degreasing: tetrachlorethylene, trichloroethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride, and chlorinated fluorocarbons; and sludges from the recovery of these solvents in degreasing operations.	(T)
F002	The following spent halogenated solvents: tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2,-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, and trichlorofluoromethane; and the still bottoms from the recovery of these solvents.	(T)
F003	The following spent non-halogenated solvents: xylene, acetone, ethyl acetate, ethyl benzene, ethyl-ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol; and the still bottoms from the recovery of these solvents.	(I)
F004	The following spent non-halogenated solvents: cresols and cresylic acid, and nitrobenzene; and the still bottoms from the recovery of these solvents.	(T)
F005	The following spent non-halogneated solvents: toluene, methyl ethyl ketone, carbon disulfide, isobutanol,and pyridine; and the still bottoms from the recovery of these solvents	(I,T)
F027	Discarded unused formulations containing tri-, tetra-, or pentachlorophenol or discarded unused formulations containing compounds derived from these chlorophenols. (This listing does not include formulations containing Hexachlorophene synthesized from prepurified 2,4,5-trichlorophenol as the sole component)	(H)

40 CFR 261, Subpart D (continued)

DISCARDED COMMERCIAL CHEMICAL PRODUCTS, OFF-SPECIFICATION SPECIES, CONTAINER RESIDUES, and SPILL RESIDUES THEREOF

Waste chemicals having the generic name listed in the following Tables 3 and 4 are regulated by RCRA. The chemicals listed in Table 3 (with the letter P) are identified as acute hazardous wastes (H) (40 CFR 161.33e). The chemicals that are listed in Table 4 (with the letter U) are identified as toxic wastes (T) (40 CFR 161.33f).

In addition to the waste chemicals listed in Tables 3 and 4; the following materials associated with those chemicals are also regulated:

1. Any container, or inner liner removed from a container, that has been used to hold an acute hazardous chemical (chemicals listed in Table 3 - assigned numbers beginning with the letter P), until the container or inner liner has been emptied and triple rinsed using a solvent capable of removing the chemical.

2. Any residue or contaminated soil, water or other debris resulting from the cleanup of a spill of the chemicals identified with either the letter P or U (chemicals listed in Tables 3 and 4).

Appendix B

TABLE 3

ACUTE HAZARDOUS WASTES

40 CFR 261.33e

(chemicals assigned EPA Hazardous Waste Numbers beginning with the letter P)

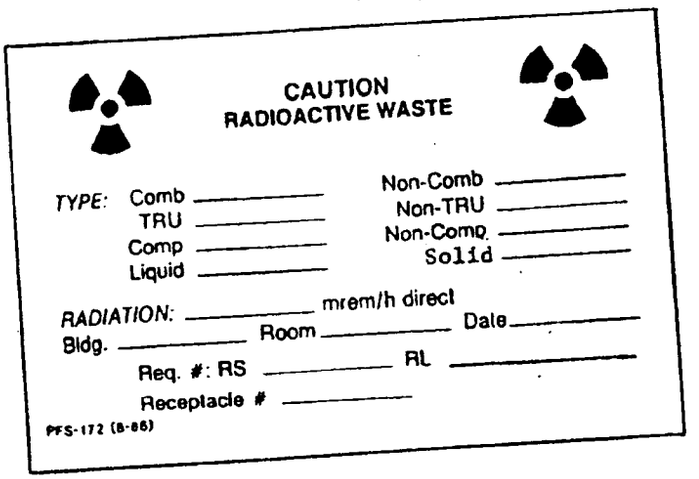
Hazardous Waste No.	Substance
P023	Acetaldehyde, chloro-
P002	Acetamide, N-(aminothioxomethyl)-
P057	Acetamide, 2-fluoro-
P058	Acetic acid, fluoro-, sodium salt
P066	Acetimedic acid, N-[(methylcarbamoyl)oxy]thio-, methyl ester
P001	3-(alpha-acetonylbenzyl)-4-hydroxycoumarin and salts, when present at concentrations greater than 0.3%
P002	1-Acetyl-2-thiourea
P003	Acrolein
P070	Aldicarb
P004	Aldrin
P005	Allyl alcohol
P006	Aluminum phosphide
P007	5-(Aminomethyl)-3-isoxazolol
P008	4-Aminopyridine
P009	Ammonium picrate (R)
P119	Ammonium vanadate
P010	Arsenic acid
P012	Arsenic (III) oxide
P011	Arsenic (V) oxide
P011	Arsenic pentoxide
P012	Arsenic trioxide
P038	Arsine, diethyl-
P054	Aziridine
P013	Barium cyanide
P024	Benzenamine, 4-chloro-
P077	Benzenamine, 4-nitro-
P028	Benzene, (chloromethyl)-
P042	1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl]-
P014	Benzenethiol
P028	Benzyl chloride
P015	Beryllium dust
P016	Bis(chloromethyl) ether
P017	Bromoacetone
P018	Brucine
P021	Calcium cyanide
P123	Camphene, octachloro-
P103	Carbamidoselenoic acid
P022	Carbon bisulfide
P022	Carbon disulfide
P095	Carbonyl chloride
P033	Chlorine cyanide
P023	Chloroacetaldehyde
P024	p-Chloroaniline
P026	1-(o-Chlorophenyl)thiourea
P027	3-Chloropropionitrile
P029	Copper cyanides
P030	Cyanides (soluble cyanide salts), not elsewhere specified
P031	Cyanogen
P033	Cyanogen chloride
P036	Dichlorophenylarsine
P037	Dieldrin
P038	Diethylarsine
P039	O,O-Diethyl S-[2-(ethylthio)ethyl] phosphorodithioate
P041	Diethyl-p-nitrophenyl phosphate
P040	O,O-Diethyl O-pyrazinyl phosphorothioate
P043	Diisopropyl fluorophosphate
P044	Dimethoate
P045	3,3-Dimethyl-1-(methylthio)-2-butanone, O-[(methylamino) carbonyl] oxime
P071	O,O-Dimethyl O-p-nitrophenyl phosphorothioate
P082	Dimethylnitrosamine
P046	alpha, alpha-Dimethylphenethylamine
P047	4,6-Dinitro-o-cresol and salts
P034	4,6-Dinitro-o-cyclohexylphenol
P048	2,4-Dinitrophenol
P020	Dinoseb
P085	Diphosphoramide, octamethyl-
P039	Disulfoton
P049	2,4-Dithiobiuret
P109	Dithiopyrophosphoric acid, tetraethyl ester
P050	Endosulfan
P088	Endothall

Note: Complete P & U lists are included

APPENDIX D

LABELS FOR RADIOACTIVE WASTE

Labels


CAUTION
RADIOACTIVE WASTE
TYPE:
Comb
TRU
Comp
Liquid
Non-Comb
Non-TRU
Non-Comp.
Solid
RADIATION:
mrem/h direct
Bldg.
Room
Date
Req. #: RS
RL
Receptacle #
PFS-172 (8-86)

Labels

COMBUSTIBLE-TRU

SOLID RADIOACTIVE WASTE (SRW)
TRANSURANIC

ITEMS CONTAMINATED WITH URANIUM-233 OR
ELEMENTS WITH ATOMIC NO. 93 OR ABOVE
AT GREATER THAN **100 nCi/g**

NO LIQUIDS

ANL-357 (7-81)

NON-COMBUSTIBLE-TRU

SOLID RADIOACTIVE WASTE (SRW)
TRANSURANIC

ITEMS CONTAMINATED WITH URANIUM-233 OR
ELEMENTS WITH ATOMIC NO. 93 OR ABOVE
AT GREATER THAN **100 nCi/g**

NO LIQUIDS

ANL-356 (7-81)

Labels

COMBUSTIBLE-NON-TRU

SOLID RADIOACTIVE WASTE (SRW)
NON-TRANSURANIC

DO NOT PUT ITEMS CONTAMINATED WITH URANIUM-233
OR ELEMENTS WITH ATOMIC NO. 93 OR ABOVE
AT GREATER THAN **100 nCi/g INTO THIS CONTAINER**

NO LIQUIDS

ANL-358 (7-81)

NON-COMBUSTIBLE-NON-TRU

SOLID RADIOACTIVE WASTE (SRW)
NON-TRANSURANIC

DO NOT PUT ITEMS CONTAMINATED WITH URANIUM-233
OR ELEMENTS WITH ATOMIC NO. 93 OR ABOVE
AT GREATER THAN **100 nCi/g INTO THIS CONTAINER**

NO LIQUIDS

ANL-470 (7-81)

APPENDIX E

MAXIMUM PERMISSIBLE CONCENTRATIONS (MPC)

ABOVE BACKGROUND

OF RADIONUCLIDES IN AIR AND WATER

APPENDIX F

Isotope Listing

Includes isotope, half-life,[1] specific activity in Ci/g,[2] and transport group.[3]

Element	Radionuclide	Half-Life	Specific Activity (Ci/g)
Actinium (89)	Ac^{227}	21.773 y	72.9
	Ac^{228}	6.13 h	2.24×10^{6}
Americium (95)	Am^{241} (TRU)[4]	433 y	3.43
	Am^{243} (TRU)	7370 y	2.00×10^{-1}
Antimony (51)	Sb^{122}	2.68 d	3.99×10^{5}
	Sb^{124}	60.2 d	1.75×10^{4}
	SB^{125}	2.7 y	1.06×10^{3}
Argon (18)	Ar^{41}	1.83 h	4.18×10^{7}
Arsenic (33)	As^{73}	80.3 d	2.23×10^{4}
	As^{74}	17.78 d	9.93×10^{4}
	As^{76}	26.3 h	1.57×10^{6}
	As^{77}	38.8 h	1.05×10^{6}
Astatine (85)	At^{211}	7.21 H	2.06×10^{6}
Barium (56)	Ba^{131}	12.0 d	8.30×10^{4}
	Ba^{133}	10.7 y	2.52×10^{2}
	Ba^{140}	12.79 d	7.29×10^{4}
Berkelium (97)	Bk^{249}	.88 y	1.63×10^{3}
Beryllium (4)	Be^{7}	53.3 d	3.50×10^{5}
Bismuth (83)	Bi^{206}	6.243 d	1.02×10^{5}
	Bi^{207}	38 y	45.5
	Bi^{210}	5.01 d	1.24×10^{5}
	Bi^{212}	60.60 m	1.46×10^{7}
Bromine (35)	Br^{82}	35.34 h	1.08×10^{6}
Cadmium (48)	Cd^{109}	453 d	2.64×10^{3}
	Cd^{115m}	44.8 d	2.53×10^{4}
	Cd^{115}	53.4 h	5.10×10^{5}
Calcium (20)	Ca^{45}	165 d	1.76×10^{4}
	Ca^{47}	4.536 d	6.12×10^{5}
Californium (98)	Cf^{249} (TRU)	351 y	4.09
	Cf^{250} (TRU)	13.1 y	1.08×10^{2}
	Cf^{252} (TRU)	2.64 y	5.37×10^{2}
Carbon (6)	C^{14}	5730 y	4.46
Cerium (58)	Ce^{141}	32.5 d	2.85×10^{4}
	Ce^{143}	33 h	6.64×10^{5}
	Ce^{144}	284 d	3.19×10^{3}

[1] Table of Isotopes, 7th ed., C. M. Lederer and V. S. Shirley. J. Wiley and Sons, Inc., N.Y., 1978

[2] Calculated.

[3] 49CFR 173.390

[4] (TRU) Transuranium Nuclide.

APPENDIX G

BASIC STORAGE

PRECAUTIONS FOR CLASSES OF CHEMICALS

AND EXAMPLES OF EACH CLASS

ACIDS

Acetic Acid	Nitric Acid
Benzoic Acid	Nitrous Acid
Chloroacetic Acid	Perchloric Acid
Chromic Acid	Phenol
Hydrobromic Acid	Phosphoric Acid
Hydrobromous Acid	Phosphorous Acid
Hydrochloric Acid	Propionic Acid
Hydrochlorous Acid	Sulfamic Acid
Hydrofluoric Acid	Sulfanilic Acid
Hydroiodic Acid	Sulfuric Acid
Iodic Acid	Sulfurous Acid

STORAGE PRECAUTIONS (ACIDS)

Store large bottles of acids on low shelf or in acid cabinets.

Segregate oxidizing acids from organic acids, flammable and combustible materials.

Segregate acids from bases and active metals such as sodium potassium, magnesium, etc.

Segregate acids from chemicals which could generate toxic gases upon contact such as sodium cyanide, iron sulfide, etc.

Use bottle carriers for transporting acid bottles.

Have spill-control pillows or acid neutralizers available in case acid spills.

BASES

Ammonium Hydroxide	Calcium Hydroxide
Bicarbonates, Salts of*	Potassium Hydroxide
Carbonates, Salts of**	Sodium Hydroxide

*Potassium bicarbonate, sodium bicarbonate, etc.
**Calcium carbonate, sodium carbonate, etc.

STORAGE PRECAUTIONS (BASES):

Segregate bases from acids

Store solutions of inorganic hydroxides in polyethylene containers.

Have spill-control pillows or caustic neutralizers available for caustic spills.

FLAMMABLES

SOLIDS

Benzoyl Peroxide
Calcium Carbide
Phosphorous, Yellow
Picric Acid

GASES

Acetylene
Ammonia
Butane
Carbon Monoxide
Ethane
Ethyl Chloride
Ethylene
Ethylene Oxide
Formaldehyde
Hydrogen
Hydrogen Sulfide
Methane
Propane
Propylene

LIQUIDS

Acetaldehyde
Acetone
Acetyl Chloride
Allyl Alcohol
Allyl Chloride
N-Amyl Acetate
N-Amyl Alcohol
Benzene
N-Butyl Acetate
N-Butyl Alcohol
N-Butylamine
Carbon Disulfide
Chlorobenzene
Cyclohexane
Diethylamine
Diethyl Carbonate
p-Dioxane
Ethanol
Ethyl Acetate
Ethyl Acrylate
Ethylamine
Ethyl Benzene
Ethylene Dichloride
Ethyl Ether
Ethyl Formate
Furan
Gasoline
Heptane
Hexane
Hydrazine
Isobutyl Alcohol
Isopropyl Acetate
Isopropyl Alcohol
Isopropyl Ether
Mesityl Oxide
Methanol
Methyl Acetate
Methyl Acrylate
Methylal
Methyl Butyl Ketone
Methyl Ethyl Ketone
Methyl Formate
Methyl Isobutyl Ketone
Methyl Methacrylate
Methyl Propyl Ketone
Morpholine
Naptha
Nitromethane*
Octane
Piperidine
Propanol
Propyl Acetate
Propylene Oxide
Pyridine
Styrene
Tetrahydrofuran
Toluene
Turpentine
Vinyl Acetate
Xylene

*Most nitrohydrocarbons are flammable

Additional info was included.

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APPENDIX K

EXAMPLES OF NONCOMPATIBLE CHEMICALS

This appendix provides examples of noncompatible hazardous materials. The listing provided is by no means complete but does contain some of the more dangerous noncompatible mixtures. Contact Waste Management Operations prior to mixing chemicals for disposal purposes.

EXAMPLES OF NONCOMPATIBLE CHEMICALS

(This list is not complete, nor are all noncompatible mixtures shown)

CHEMICAL	KEEP OUT OF CONTACT WITH:
Alkaline metals, such as powdered aluminum or magnesium, sodium, potassium, etc.	Carbon tetrachloride or other chlorinated hydrocarbon, carbon dioxide, the halogens, or caustics.
Acetic Acid	Chromic acid, nitric acid, hydroxyl compounds, ethylene glycol, perchloric acid, peroxides, permanganates.
Ammonia, Anhydrous	Mercury (in manometers, for instance), chlorine, calcium hypochlorite, iodine, bromine, hydrofluoric acid anhydrous.
Ammonium Nitrate	Acids, metal powders, flammable liquids, chlorates, nitrites, sulfur, finely divided organic or combustible materials.
Aniline	Nitric Acid, hydrogen peroxide.
Bromine	Same as for chlorine.
Benzoyl Peroxide	Acids; sources of heat or impact
Carbon, Activated	Calcium hypochlorite and all oxidizing agents (sodium chlorate).
Copper	Acetylene, hydrogen, peroxide.
Chlorates	Ammonium salts, acids, metal powders, sulfur, finely divided organic or combustible materials.
Chromic Acid (Chromium Trioxide)	Acetic acid, naphthalene, acetone, camphor, glycerine, turpentine, alcohols and flammable liquids in general.
Chlorine	Ammonia, acetylene, butadiene, butane, methane, propane (or other petroleum gases), hydrogen, sodium carbide, turpentine, benzene finely divided metals.
Chlorine Dioxide	Ammonia, methane, phosphine, hydrogen sulfide.
Cumene Hydroperoxide	Acids--organic or inorganic.
Flammable Liquids	Ammonium nitrate, chromic acid, hydrogen peroxide, nitric acid, sodium peroxide and the halogens.
Fluorine	Isolate from everything.
Hydrocyanic Acid	Nitric acid, alkalis.
Hydrogen Peroxide	Copper, chromium, iron, most metals or their salts, alcohols, acetone, organic materials, aniline, nitromethane, any flammable liquid, combustible materials.
Hydrofluoric	Ammonia, aqueous or anhydrous.
Hydrogen Sulfide	Fuming nitric acid, oxidizing gases.
Hydrocarbons (Butane, propane, benzene, gasoline, turpentine, etc.)	Fluorine, chlorine, bromine, chromic acid, sodium peroxide.
Iodine	Acetylene, ammonia (aqueous or anhydrous), hydrogen.
Mercury	Acetylene, fluminic acid, ammonia
Nitric acid (concentrated)	Acetic acid, aniline, chromic acid, hydrocyanic acid, hydrogen sulfide, flammable liquids (acetone) flammable gases, sawdust, organics.
Oxalic acid	Silver, mercury.
Perchloric Acid	Acetic anhydride, bismuth and its alloys, alcohol, paper, wood.
Potassium	Carbon tetrachloride, carbon dioxide, water.
Potassium Chlorate	Sulfuric and other acids.
Potassium Perchlorate (See also Chlorates)	Sulfuric and other acids.
Potassium Permanganate	Glycerine, ethylene glycol, benzaldehyde, sulfuric acid.
Silver	Acetylene, oxalic acid, tartaric acid, fulminic acid, ammonium compounds.
Sodium	Carbon tetrachloride, carbon dioxide, water, acid chlorides.
Sodium Peroxide	Ethyl or methyl alcohol, glacial acetic acid, acetic anhydride, benzaldehyde, carbon disulfide, glycerine, ethylene glycol, ethyl acetate, methyl acetate, furfural.
Sulfuric acid	Potassium chlorate, potassium perchlorate, potassium permanganate (or such compounds with similar light metals, as sodium, lithium, etc.)
Tri Ethyl Borane	Air.
Water	Acid chlorides, strong acids, such as PCl_3, $POCl_3$ sulfuric, fuming sulfuric, sulfam.

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Attachment 3 - Acceptable Knowledge Source Document Summary

Site(s): Idaho National Laboratory	Source Document Tracking Number: P3001
Waste Stream Number(s): ID-AECHDM, ID-AECHHM (Applicable only when site library is not in use)	
Acceptable Knowledge Documentation Type: ☑ TRU Waste Management Program Information ☑ Waste Stream-Specific Information ☑ Additional Information	Category: ☐ C - Correspondence ☐ DR - Discrepancy Resolution ☐ I - Internal procedures ☐ M - Miscellaneous ☑ P - Published plans, documents, and procedures ☐ U - Unpublished Documents
Title of Source Document: Packaging CH-TRU Waste for Shipment to Idaho National Laboratory (INL) and Final Disposition at the Waste Isolation Pilot Plant (WIPP)	
Source Document Reference Information (author(s), document and revision number, date, publisher): WMO, WMO-DOC-6, Rev. 0, 12/09/2009	

AK # [a]	Source Doc. Page # [b]	AK Information Summary
PR5, PR7, PR8, WS2, WS4, WS6, WS8, WS9, WS10, WS11, WS12, S2, S4	All	This procedure provides instructions for packaging and repackaging of CH waste planned for shipment to INL. The procedure describes the packaging by WMO personnel to be performed in Building 306, including repackaging, vedeo recording, and documentation. This procedure also describes the neutralization and solidification steps for liquid waste. The procedure includes: Prohibited items (Section 9.0, page 11 of 35). Radiological limits (Section 10.0, page 12 of 35). Liquid waste, bulking, sampling, nuetralization, and Solidification (Section 11.0 page 13 of 35) Packaging configuration for 55-gallon drums. Cutting of aerosol cans in half (pg. 17). Blocking and bracing (pg. 18) Records/Required Documentation (Section 12.0, page 21 of 35) Waste Container Packaging Form (Page 22-25). Waste Bag or Wrap Inventory Form (Page 26-27). Chemicals and materials identified: magnesium hydroxide slurry (pg. 13), Aquaset IIG (pg. 13), acids to neuralize caustic liquids (pg. 13),

CCP RECORDS ORIGINAL
DATE REC'D 10-25-11

Attachment 3 - Acceptable Knowledge Source Document Summary (continued)

Site(s): Idaho National Laboratory	Source Document Tracking Number: P3001
Waste Stream Number(s): ID-AECHDM, ID-AECHHM (Applicable only when site library is not in use)	
Source Document Data Limitations (if any): 1. Planned packaging procedure may change as repackaging operations continue.	
Acceptable Knowlege Expert: Sherry Auckland /Sign Date: 10/04/2011 Print	
[a] Obtain from Acceptable Knowledge Documentation Checklist [b] For microfilm or microfiche, identify box, tape, reel number and location.	

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P3001

WMO-DOC-6
Packaging CH-TRU Waste for Shipment to Idaho National Laboratory (INL) and Final Disposition at the Waste Isolation Pilot Plant (WIPP)

Approved By:

CH-TRU Project Manager:

Signature	Print Name	Effective Date
	ROBERT F. SCHOLTEN JR	12-9-09

WMO Division Director:

Signature	Print Name	Effective Date
	Susan Lewis	12-9-09

Concurrence By:

Argonne Project Manager:

Signature	Print Name	Date
	Devin S. Hodge	12/9/09

REVISION HISTORY

Revision	Oate	Document Revision
0	Effective Date	This is a new procedure.

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1.0 PURPDSE

1. This procedure provides instructions for packaging and repackaging of Contact Handled (CH) Transuranic (TRU) waste planned for shipment to Idaho National Laboratory (INL), where the packaged waste container will be characterized for shipment to the Waste Isolation Pilot Plant (WIPP).
2. Video recording including an audio narrative is a major element of the packaging process that documents information specific to the physical form of the waste and waste stream description (i.e., debris, soil/gravel, or homogeneous solids), confirm the absence of prohibited items, and obtain the weight percent composition of the specific waste constituents.

2.0 SCDPE

1. This procedure will be performed by Waste Management Operations (WMO) personnel and skilled craft personnel. The majority of the work is expected to take place in Building 306.
2. This procedure provides the actions necessary to perform CH-TRU repackaging, video recording, and document the results of the process.
3. Work Control Documents (WCD) and procedures will be required to authorize and implement work in the field. This will be used as a reference in the WCDs and procedures.

3.0 SOURCE REQUIREMENTS

1. 40 CFR, Protection of Environment, Parts 268.2(g) and 268.2(h)
2. 49 CFR, Transportation, Part 173.433(g)
3. DOE Order 435.1, Radioactive Waste Management
4. DOE Manual 435.1-1, Radioactive Waste Management Manual
5. CH-TRU Waste Packaging Instructions, Office Environmental Management, current revision
6. Resource Conservation and Recovery Act (RCRA)
7. NOD-WM-QA-101, Quality Assurance Plan for the Argonne Waste Management Department, current revision

4.0 APPLICABILITY

This procedure applies to the repackaging of CH-TRU waste and will be repackaged by WMO for shipment to Idaho National Laboratory (INL), where the packaged waste container will be certified for final disposition at the Waste Isolation Pilot Plant (WIPP). This also includes neutralization and solidification steps for liquid waste streams.

5.0 USQ APPLICABILITY

Changes in this document require review under the Unreviewed Safety Question (USQ) procedure.

6.0 DEFINITIONS

1. CH-TRU: is defined as waste containing more than 100 nCi/g of alpha emitting Transuranic isotopes (with half-lives greater than 20 years) and a surface dose rate less than 200 mrem/hr. Each container must comply with this definition.
2. Waste Stream: waste that is similar in material, physical form, radiological properties, and hazardous constituents and that is generated from a single process or similar types of processes.
3. Homogeneous solids: solid materials, excluding soil, which does not meet the criteria for classification as debris as defined in 40 CFR Parts 268.2(g) and 268.2(h). Included in the category of homogeneous solids are inorganic process residues, inorganic sludges, salt waste, and pyrochemical salt waste. Other waste streams are included in this category based on the specific waste stream types and final waste form.
4. Soil and Gravel: waste streams that are at least 50 percent by volume soil and/or gravel.
5. Debris: heterogeneous waste that is greater than 50 percent by volume materials that meet the criteria specified in 40 CFR Parts 268.2(g). Debris means solid material exceeding a 60 mm particle size that is intended for disposal and that is 1) a manufactured object, 2) plant or animal matter, or 3) natural geologic material. Particles smaller than 60 mm in size may be considered debris if the debris is a manufactured object and if it is not a particle of homogeneous solid or soil and gravel.

7.0 RESPONSIBILITIES

1. WMO Facility Manager or designee is responsible for authorizing this work to be conducted within the WMO facility.
2. WMO Operations Manager or designee is responsible for:
   - Assigning the Person-In-Charge (PIC)
   - Performing periodic walkthrough inspections of the work to ensure work is being performed as specified
3. WMO Foreman is responsible for:
   - Assuming the duties of the Person-In-Charge (i.e., overall validation, coordination, release, execution, and closeout of the work activity)
   - Assigning Waste mechanics to the job
   - Confirming Waste mechanics are trained to perform the work
   - Walk down the job with the Waste mechanics to ensure required controls are in place before job begins
   - Ensuring all required materials and equipment are available to perform the job
   - Conducting pre-job briefings with all involver workers
   - Monitoring the job to ensure it is executed safely and in accordance with the WCD, HAC, and operating procedures
   - Conducting post-job briefings, communicating lessons learned, and closing out the WCD when it is completed
4. Waste Mechanics is responsible for performing consistent with the WCD, hazard analysis control (HAC), and operations procedures.
5. Audio/Video Mechanics are responsible for:
   - Documenting information specific to the physical form of the waste and waste stream description (i.e., debris, soil/gravel, or homogeneous solids)
   - Confirming the absence of prohibited items
   - Obtaining the weight percent composition of the specific waste constituents
   - Stopping work in the field if information is not sufficient to allow waste to be documented sufficiently
6. Waste Specialist is responsible for:
   - Providing the container lists and technical report to the WMO team
   - Tracking and characterizing waste
7. Health Physics Technicians are responsible for the radiological aspects of handling wastes including radiation and contamination surveys and RWPs.

8.0 PREREQUISITES

1. CH-TRU waste being packaged and/or repackaged will be shipped to INL for characterization and certification, the waste shall also meet the waste acceptance criteria of the Advanced Mixed Waste Treatment Project HWMA/RCRA Waste Storage and Treatment permits. The hazardous waste numbers listed below are acceptable at INL. No additional hazardous waste numbers will be accepted. (40 CFR Part 261 Subpart C)

   - F001, F002, F003, F004, F005, F006, F007, F009
   - D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021 D022, D026, D027, D028, D029, D030, D032, D033, D034, D035, D036, D037, D038, D039, D040, D043
   - P015, P030, P098, P099, P106, P120
   - U002*, U003*, U019*, U037, U043, U044, U052, U070, U072, U078, U079, U103, U105, U108, U122, U133*, U134*, U151, U154*, U159*, U196, U209, U210, U220, U226, U228, U239*

   *Hazardous waste listed in part or wholly for ignitability, corrosivity, or reactivity characteristics shall not be packaged unless there is documented evidence that the waste no longer exhibits the characteristics of ignitability, corrosivity, or reactivity

2. Approved containers and configurations for CH-TRU waste going to WIPP:

   a. 55-Gallon Drum – a U.S. Department of Transportation (DOT) 7A, Type A, 55-gallon open head drum. [(This is the preferred package for use at Argonne National Laboratory]:

      - Contain homogeneous solids, soil/gravel, or debris
      - Drums shall be made of steel (including stainless or galvanized steel) and in good unimpaired condition as determined by the CH-TRU Waste Packaging Instructions, Attachment 1, Payload Container Integrity Checklist, at a minimum. (Refer to Attachment D, Payload Container Integrity Checklist, for an example of the checklist.)
      - Acceptable 55-gallon drum dimensions are 34.5-inches to 35-inces tall including the locking ring and a diameter not exceeding 24-inches including lock ring but not including the locking bolt
      - Drums must have documentation for the procurement and receipt inspection or certification of the 55-gallon drum to the DOT Specification 7A, Type A, requirements
      - Drums must have documentation that the maximum gross weights does not exceed the maximum tested weight and no more than 1,000 pounds
      - Drums must have documentation of the presence/absence of a rigid drum liner
      - Drums must have documentation of the presence/absence of a rigid drum liner lid

8.0 PREREQUISITES - continued

2. a. (continued)

Package CH-TRU waste into 55-gallon drum using as few confinement layers as possible, but no more than two confinement layers. A confinement layer is any boundary that restricts, but does not prohibit, the release of hydrogen gas across the boundary. Allowable confinement layers are as follows:

- The two closed bag layers may consist of one closed inner bag and one closed 55-gallon drum liner bag, two closed inner bags, or two closed 55-gallon drum liner bags. A 55-gallon drum liner bag may be used when the two closed bag layers consist of two closed liner bags if the 55-gallon drum liner bag layers consist of two closed inner bags if the 55-gallon drum liner bag is not closed. Drum liner bags are of a size sufficient to line a 55-gallon drum. Inner bags are smaller in size and may be used to package individual waste items
- Each bag, if closed, shall be closed by the twist-and-tape method and fitted with a filter with a minimum hydrogen diffusivity value of 1.075E-05 mol/s/mol fraction
- Closed metal cans fitted with a filter vent having a minimum hydrogen diffusivity value of 1.85E-5 mol/s/mol fraction
- When packaging homogeneous solids that are in internal containers (i.e., container without lid), use a 55-gallon drum liner bag
- When direct packaging homogeneous solids or soil and gravel, use 90 mil polyethylene drum liner (without the lid) inside the 55-gallon drum
- Do not use a 90-mil polyethylene drum liner when packaging or repackaging debris
- A fiberboard liner (without the lid) may be used in 55-gallon drums when packaging or repackaging debris (not required)
- The 55-gallon drum lid must be fitted with a container filter vent with an integral sample port (NUCFIL-019DS) septum

8.0 PREREQUISITES - continued

b. Standard Waste Box (SWB) – a DOT 7A, Type A, carbon steel container, which is generally rectangular with rounded ends:

- Contain direct-loaded debris waste only
- SWB must have documentation for the procurement and receipt inspection or certification of the SWB to the DOT Specification 7A, Type A, requirements
- SWB must have documentation that the maximum gross weights must not exceed the maximum tested weight and no more than 4,000 pounds

Package CH-TRU waste in an SWB using as few confinement layers as possible, but no more than two confinement layers. A confinement layer is any boundary that restricts, but does not prohibit the release of hydrogen gas across the boundary. Allowable confinement layers are as follows:

- The two closed bag layers may consist of one closed inner bag and one closed SWB liner bag, two closed inner bags, or two closed SWB liner bags. A SWB liner bag may be used when the two closed bag layers consist of two closed inner bags if the SWB liner bag is not closed. SWB liner bags are of size sufficient to line an SWB. Inner bags are smaller in size and may be used to package individual waste items
- Each inner bag, if closed, shall be closed by the twist-the-tape method and fitted with a filter with a minimum hydrogen diffusivity value of 1.075E-05 mol/s/mol fraction
- Closed metal cans fitted with a filter vent having a minimum hydrogen diffusivity value of 1.85E-5 mol/s/mol fraction
- Each SWB liner bag, if closed, shall be closed by folding and taping (twist and tape is allowed when using a sleeve as the liner). Each SWB liner bag or sleeve shall be fitted with a filter with a minimum hydrogen diffusivity value of 1.075E-05 mol/s/mol fraction
- A fiberboard liner (without the lid) may be used in SWB when packaging or repackaging of debris (not required)
- The SWB must be fitted with two container filter vents. At least one must have an integral sample port (NUCFIL-019DS) septum

8.0 PREREQUISITES - continued

3. Container Filter Vent Specification (NUCFIL-019DS is the recommended filter at Argonne):

   a. Filter vents to be installed on 55-gallon drums and SWBs must have a minimum hydrogen diffusivity value of 1.85E-05 mol/s/mol fraction.

   b. Ensure the filter installed on the 55-gallon drums and at least one of the filter vents on the SWB has an integral sample port septum.

   c. Filter vents must be marked with identification of the manufacturer and one of the following: date of manufacture, lot number, or unique serial number.

   d. Container filter vent housings and elements must have an operating temperature range between minus 40 to plus 70 DEGC (minus 40 to plus 158 DEGF).

   e. Ensure the filter vent threads are compatible with the bung in the container.

   f. Filter vents must have documentation for the procurement and receipt inspection, or certification of the filter vents to the container filter vent specifications listed above.

4. Wastes requiring formal written notice to the Director of the Office of the National TRU Program, CBFO prior to packaging, include the following:

   - Polychlorinated Biphenyls (PCBs)
   - Discrete Radiological Sources (calibration or sealed sources)
   - Be or BeO greater than 1 percent by weight
   - Solidified organics (e.g., solvents, organic acids, halogenated organics, etc.)

   Packaging of any of these materials shall not proceed until the Director of the Office of the National TRU Program provides specific written direction or packaging instructions and/or container limits as applicable.

5. Any planned packaging activities that will deviate from the CH-TRU Waste Packaging Instructions require prior written approval from the Director, Office of Disposal Operations, and Environmental Management (EM) Headquarters Office of Regulatory Compliance.

9.0 PROHIBITED ITEMS

The following items are prohibited in CH-TRU waste being transported to WIPP:

1. Internal shielding or deliberate waste placement to provide shielding for high radiation items. (Surface dose rate of container cannot be greater than 200 mrem/hr on contact.)
2. Machine compacted waste (waste whose volume has been reduced by mechanical compaction process.)
3. Liquids.
4. Unvented containers larger than 4 liters.
5. Nonradioactive pyrophorics are materials that may ignite spontaneously in air or that emit sparks when scratched or struck, especially with materials such as steel. A flammable solid that, under transport conditions, might cause fires through friction or retained heat or that can be ignited readily and, when ignited, burns vigorously and persistently so as to create a serious transportation hazard. Included in the pyrophorics definition are spontaneously combustible materials, water reactive materials, and oxidizers. Examples of nonradioactive pyrophorics are organic peroxides, sodium metal, and chlorates.
6. Radioactive pyrophorics greater than 1 percent by weight (e.g., metallic plutonium, uranium, or americium).
7. Non-mixed hazardous waste.
8. Waste exhibiting the Resource Conservation and Recovery Act (RCRA) characteristics of ignitability, corrosivity, or reactivity.
9. Explosives.
10. Compressed gases.
11. Waste that has been managed as high-level waste.
12. Classified shapes and/or composition (without prior approval of the Carlsbad Field Office (CBFO) Manager.)

10.0 LIMITATIONS

1. Co-Packaging CH-TRU Waste:
   a. Only waste that is similar in material, physical form, radiological properties, and hazardous constituents and that is generated from a single process or similar types or processes shall be packaged together.
   b. Chemical compatibility shall be ensured when co-packaging chemical waste.
2. Radiological Properties:
   a. Waste with different radiological properties (e.g., isotopic distributions) shall not be mixed in the same container.
   b. The activities and masses of the isotopes contributing to 95% of the radiological hazard for each container [per 49 CFR 173.433(g)] shall be identified on the Waste Container Packaging Form.
   c. Isotopic data collected by sampling must have a sampling plan that defines data quality objectives and quality assurance objectives must be developed and documented.
3. Fissile Gram Equivalents (FGEs) Limitations:
   a. Each 55-gallon drum shall have less than or equal to 200 Pu239 FGEs of radioactive materials.
   b. Each SWB shall have less than or equal to 325 Pu239 FGEs of radioactive materials.
   c. Building 306 room limitations, if not contained in closed standard containers, fissile material must not exceed 225g Pu FGE.
   d. The calculation for FGE in CH-TRU Waste Packaging Instructions, Attachment 2, Fissile Gram Equivalent, shall include two times the measurement error (uncertainty). (See Attachment E, Fissile Gram Equivalent - example.)
   e. Document the data and measurement error for any assay done. Results of the FGE calculation shall be documented on the Waste Container Packaging Form.
4. Plutonium Equivalent Curies (PE-Ci) Limitations:
   a. Each 55-gallon drum shall have less than or equal to 80 PE-Ci.
   b. Each SWB shall have less than or equal to 560 PE-Ci.
   c. Results of the PE-Ci calculation in CH-TRU Waste Packaging Instructions, Attachment 3, ^{239}Pu Equivalent Activity, shall be documented on the Waste Container Packaging Form. (See Attachment F, ^{239}Pu Equivalent Activity - example.)
5. Surface dose rate on the outside of the shipping container shall be less than or equal to 200 mrem/hr after packaging and the dose rate shall be documented on the Waste Container Packaging Form.
6. Sites shall identify 95 percent of the radiological hazard for each container pursuant to 49 CFR § 173.433(g), 49 CFR [(10-1-07 edition)]. The activities and masses of the isotopes contributing to 95 percent of the radiological hazard shall be documented on the Waste Container Packaging Form.

11.0 PROCEDURE

1. Liquid Waste Bulking, Sampling, Neutralization, and Solidification:

   a. A separate work plan will be generated to cover the bulking, neutralization and solidification of our liquid waste streams in greater detail. Treatment recipes included in the work plan will be based on results of a treatability testing with surrogate material to insure the process will work and the waste matrix will not release liquids.

   b. A large portion of the CH-TRU waste containers at Argonne are primarily liquid. Most of these containers are acidic liquids. The waste containers vary in size from less than 1 liter to 55-gallon drums with the majority being less than 5 gallons.

   c. In general, liquids will be evaluated and processed using the following steps:

      - When the liquid is unused product (still in manufacturers container) and not CH-TRU, segregate the container for disposition as low-level waste or mixed low-level waste as appropriate
      - Waste will be evaluated to verify that it is generally the same with respect to the following: similar material, same physical form, similar radiological properties, and hazardous constituents
      - Chemical compatibility will be verified
      - Written documentation will be generated for all liquid waste treatment operations. This will include identification of all original feed containers being bulked.

      Note: The bulking and neutralization steps will **not** be on video; however, written documentation will be generated.

      - Containers of liquid waste will be bulked as specified in the work plan
      - Bulked liquids will be sampled for characterization purposes
      - Acidic Liquids will then go through a neutralization process to achieve a liquid waste in the neutral range (pH: 6 to 9). The preferred chemical for this neutralization will be magnesium hydroxide slurry [Milk of Magnesia (MoM)]
      - Liquids with a pH greater than 9 will be neutralized with acid before solidification

      Note: The solidification and PFLT step will be documented in writing with the audio/video of the process.

      - The neutralized liquid waste will be solidified with Aquaset® IIG (or approved equal), a clay based non-biodegradable absorbent marketed by Fluid Tech, Inc., or alternatively any other absorbent identified by surrogate treatability studies
      - Verify the waste does not contain free liquids using Environmental Protection Agency Publication SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," Method 9095B (Paint Filter Liquids Test)
      - The detailed work plan will include the Paint Filter Test steps which will be followed by Operations

11.0 PROCEDURE - continued

1. c. (continued)

- Establish traceability of the PFLT sample back to the stabilized waste container and document the results both with audio/video documentation and written documentation on the Waste Container Packaging Form
- The following information must be documented on the Waste Container Packaging Form (Attachment A, Section 5) for all treated waste
  - The waste that was treated
  - The treatment method(s) used
  - Type of absorbent used (when applicable)
  - Solidification agent used (when applicable)
  - Product name and manufacturer of all material(s) added to the waste
  - Results of a Method 9095B Paint Filter Liquids Tests for each container tested (including container number)

2. Repackaging of CH-TRU Waste:

Note: This section covers the requirements for repackaging debris, homogeneous solids (including the solidified liquid waste streams in steps), and soil and gravel. The majority of the Argonne waste will fall into either a debris or homogeneous solid waste category (see Section 6.0, Definitions).

The Waste Mechanics repackaging the waste and the Audio/Video Mechanic must be in constant communication to be certain that all aspect of the waste are documented both on video and in written form on Waste Container Packaging Form (Attachment A).

Video record the repackaging of all waste with an audio narration that will provide indisputable evidence of packaging configuration, all waste contents, and absence of prohibited items. Good quality video images with thorough narrative descriptions of the waste and well-written Waste Container Packaging Forms for all 55-gallon drum and SWB loadings are the best insurance that waste containers will not need to be repackaged again at a future date.

The following steps must be performed to develop sufficient video and written records of waste packaging for each receiving container. The Waste Container Packaging Form (Attachment A) must be completed as the container is filled along with the narrated video.

a. Test the audio and video equipment to be sure everything is working properly before waste mechanics dress-out and enter the repackaging area at the beginning of each shift. This should include verification that the camera resolution and audio inputs are recording clearly.

b. Ensure that the original (feed) container(s) identification number(s) are clearly visible to the camera, read for the audio narration, and documented on the Waste Container Packaging Form (Attachment A, Sections 3 and 4).

11.0 PROCEDURE - continued

2. (continued)

Note: Waste Container Packaging Form, Section 4, will be used to document the feed container number and a detailed waste description.

c. Describe for the audio narration the repackaging activity that is to be performed. Examples listed below:

- Repackaging of feed 55-gallon drum number xyz into receiving 55-gallon drum number pdq
- Repackaging of feed 5-gallon can(s) container number mno into receiving 55-gallon drum number abc (multiple feed containers can be packaged into the final 55-gallon drum - be sure to state all container identification numbers being repackaged)

Note: SWB are only approved for shipment of debris. Argonne's preferred package for all waste streams will be the (DOT) 7A, Type A, 55-gallon drum.

d. Argonne - Database Management Group is responsible for assigning the unique container identification numbers (Waste Shipping Container Numbers) to receiving containers. Requirements for CH-TRU container identification numbers are as follows:

- Each container must have a unique container identification number not exceeding 16 alpha-numeric characters
- Example Container Identification Number: ANLS090001R
  - First three letters "ANL" equals Site Prefix – required by INL/WIPP
  - Fourth letter "S" equals Shipping Container
  - First 2 numbers equals year generated
  - Last 4 numbers equals tracking number
  - Final letter "R" equals required by INL/WIPP ("R" equals Receiving Container)
- Waste folders, which include a bar code label for placement on the receiving drum, are assigned to the project and tracked by the Database Management Group

e. Demonstrate that the receiving drum is empty by turning the open drum upside down. Ensure that this activity is clearly visible to the camera, described in detail for the audio narration, documented on the Waste Container Packing Form.

f. Ensure that the receiving 55-gallon drum(s) or SWB unique container identification number(s) is clearly visible to the camera, read for the audio narration, and documented on the Waste Container Packaging Form(s) (Attachment A, Section 1).

g. Document the container type (e.g., 55-gallon drum or SWB) on the Waste Container Packaging Form(s) (Attachment A, Section 2).

11.0 PROCEDURE - continued

2. (continued)

h. Install filter vent(s), as specified in Section 8.0, step 3, on the container. The following filter vent information must be documented on the Waste Container Packaging Form(s) (Attachment A, Section 2):

- Minimum H_2 Diffusivity 1.85E-05 mol/s/mol? (Yes or No) (NUCFIL-019DS meets this requirement and is the recommended filter at Argonne)
- Identification of the filter manufacturer
- Date of manufacture, or lot number, or unique serial number

i. Use of drum liners must follow the following criteria and be documented on the Waste Container Packaging Form(s) (Attachment A, Section 2):

- When packaging homogeneous solids that are in internal containers (i.e., container without lid), use a 55-gallon drum liner bag
- When direct packaging homogeneous solids or soil and gravel, use 90 mil polyethylene drum liner (without the lid) inside the 55-gallon drum
- Do not use a 90 mil polyethylene drum liner when packaging debris
- A fiberboard liner (without the lid) may be used in 55-gallon drums when packaging or repackaging debris (not required)

j. Clearly state the date(s) of loading waste into the receiving 55-gallon drum(s) or SWB for the audio narration and document on the Waste Container Packaging Form(s) (Attachment A, Section 1).

k. Ensure that recordings of waste packaging activities are traceable to each container by labeling each recording with the unique container identification number(s) and document on the Waste Container Packaging Form(s) (Attachment A, Section 1).

l. Separate items based on waste type (e.g. debris, homogeneous solids, soil & gravel) and package into a receiving 55-gallon drum or SWB designated for the specific waste type. (See Section 5.0, Definitions, for waste type).

m. Ensure that all feed containers are opened and determined to be free of liquid prior to packaging into receiving 55-gallon drum:

- When a small amount of residual liquid is present in the opened inner containers, add Aquaset® IIG (or approved equal) so that liquid is no longer observed prior to packaging into a receiving 55-gallon drum. Additional absorbent must be added to the waste as it is packaged to remove any residual moisture which may be on the surface of items being packaged
- When possible, segregate the liquid and solidify the liquid waste as defined in step 1 of this section

11.0 PROCEDURE - continued

2. (continued)

Note: Absorbent added to solids must be identified and quantified on the Waste Container Packaging Form.

n. Layering Homogeneous Solids - when packaging homogeneous solids into the receiving 55-gallon drum, be sure to add a light coating of absorbent to the bottom of the 55-gallon drum for condensation control, then add a 90-mil poly liner and another layer of absorbent on the bottom of the poly drum liner before adding waste. As the homogeneous solids are added, place the absorbent between layers of waste to absorb any residual moisture that may exist in the waste. Specific amounts of absorbent will be defined by the Waste Specialist.

o. Ensure that all personnel loading waste into the receiving 55-gallon drum(s) or SWB are identified by name for the audio narration, and documented on the Waste Container Packaging Form(s) (Attachment A, Section 6).

Note: Precede each interruption of the video by audio narration explaining the reason for the interruption. Following each interruption of the video by audio narration explaining nothing was added to the container during the interruption.

p. Ensure that each individual item placed into the receiving 55-gallon drum(s) or SWB is clearly visible to the camera, described in detail for the audio narration, and documented on the Waste Container Packaging Form (Attachment A, Sections 3 and 4). Ensure and state for the audio narration that waste items within the packaging area that are not included in this waste stream, are not placed in the drum being packaged.

q. Ensure that the description of each item of waste placed into the receiving container includes estimated weight percent composition of the following waste constituents and is documented on the Waste Container Packaging Form (Attachment A, Section 4):

- Iron-based metals/alloys
- Aluminum-based materials/alloys
- Other metals
- Cellulosics
- Rubber
- Plastics
- Inorganic materials
- Soil/gravel

r. Empty aerosol cans must be cut in half (not just punctured) prior to placing in the receiving drum.

s. Demonstrate for the video the absence of liquid in pipe by holding in an inclined position and describe for the audio narration.

11.0 PROCEDURE - continued

2. (continued)

t. Demonstrate for the video the absence of liquid in pipe with inline valve(s) by opening the valve(s), holding in an inclined position, and describe for the audio narration.

u. Demonstrate for the video and describe for the audio narration that lubricant reservoirs and other components of mechanical equipment that may contain liquid (e.g., pump housings, gear boxes, oil sumps, etc.), have been completely drained and the plugs removed. If the equipment contains non-flowing lubricant (at ambient temperatures), the lubricant does not have to be removed but acknowledge its presence for the audio narration and document on the Waste Container Packaging Form.

v. Cut hoses and tubing into approximate one foot sections to demonstrate the absence of liquids.

w. Individual items with dose rates approaching 200 mrem/hr must be placed against the wall of the receiving container in a manner that ensures the item will remain where it was placed until the container is closed and the surface dose measurement is performed. Describe the placement location of these items for the audio narration.

x. Block, brace, or suitably package sharp or heavy objects in the waste as necessary to provide puncture protection for the container. Describe protective measures for the audio narration.

y. When a feed container has multiple inner containers, perform the following steps:

- Pull the inner containers from the feed container
- Display any container markings so they are clearly visible to the camera.
- Remove the lids from all inner containers
- Describe contents and material composition
- Display contents to the camera
- Remove the contents such that each waste item can be described in detail and displayed to the camera
- Ensure each inner container is completely empty and verify on camera by turning the container upside down, if possible
- Do not put lid back on inner container prior to placing in a receiving container

z. Drums containing soil & gravel require an additional step - after waste is placed into a receiving container and prior to closing, add approximately three to four inches of absorbent to the top surface of the waste.

11.0 PROCEDURE - continued

2. (continued)

aa. Open all inner containers and determine the absence of liquid prior to packaging into a receiving 55-gallon drum.

- Demonstrate the absence of liquid in empty containers by turning the open container upside down. Ensure that this activity is clearly visible to the camera and described in detail for the audio narration
- When a small amount of residual liquid is present in the opened inner containers, add Aquaset® IIG (or approved equal) so that liquid is no longer observed prior to packaging into a receiving 55-gallon drum. Additional absorbent must be added to the waste as it is packaged to remove any residual moisture which may be on the surface of items being packaged
- When possible, segregate the liquid and solidify the liquid waste as defined in step 1 of this section
- Ensure camera captures and audio narration describes the presence of a liquid and steps taken to add a non-biodegradable absorbent to absorb all liquid; document process on Waste Container packaging Form

3. Waste Bag or Wrap Inventory Requirements:

a. If waste item(s) will be bagged or wrapped for loading at a later time/date, then mark each bag with a unique identification number that is clearly visible and state for audio narration. This waste must be tracked just like any other waste container until it is packaged into the final receiving drum. Documentation of wrapped items will be made on a Waste Bag or Wrap Inventory Form (Attachment B). Refer to CH-TRU Waste Packaging Instructions for waste bag or wrap inventory requirements.

b. The Waste Bag or Wrap Inventory Form requires nearly the same level of detail as the final waste packaging form plus all the tracking just like a regular container. This process should only be used if absolutely necessary.

c. When placing bagged/wrapped waste into a receiving drum for final disposition, it is not required to duplicate all the documented information from the waste bag or wrap inventory form on the Waste Container Packaging Form. Entries of "see attached Waste Bag or Wrap Inventory Forms and specific inventory number" will suffice.

4. Closure of Receiving Container:

a. Enter container fill percentage on the Waste Container Packaging Form (Attachment A, Section 2).

b. Record the percentage of each specific waste constituent on the Waste Container Packaging Form (Attachment A, Section 4).

c. Enter the number of confinement layers present in the payload container and document that each bag layer is vented on the Waste Container Packaging Form (Attachment A, Section 2), and state this for the Audio/Video record.

11.0 PROCEDURE - continued

4. (continued)

d. All receiving containers must be closed in accordance with the manufacturer's specific closure instructions/specifications. The specific closure method must be documented on the Waste Container Packaging Form (Attachment A, Section 2), and state this for the Audio/Video record.

e. Affix a tamper-indicating device (TID) with a unique identification number to the 55-gallon drum or SWB.

f. Install TIDs such that the container cannot be opened without breaking one or more seals.

- Ensure that TID placement locations do not interfere with filter vent diffusivity or accessibility to the sample port septum
- Ensure that TID placement locations do not interfere with the operation of the 55-gallon drum closure bolt and lock nut or the SWB closure bolts

g. Ensure that the unique TID identification number(s) are clearly visible to the camera, read for the audio narration and documented on the Waste Container Packaging Form (Attachment A, Section 2).

h. Obtain a weight reading of the payload container and enter it on the Waste Container Packaging Form (Attachment A, Section 2). This does not need to be recorded on the Audio/Video record.

i. Verify the Waste Container Packaging Form (Attachment A) is complete. All information boxes must be filled in. Ensure the following general information has been entered on the form:

- Waste Generator Site (Section 1)
- Date of Packaging or Repackaging (Section 1)
- Audio/Video Recording Number(s) (Section 1)
- Number of pages for Data Packages (Attachment A, top of pages 2 thru 4)
- Waste Stream Name (Section 2)
- Waste Category Group (Section 2)
- Site Procedure Number and Revision (Section 1)

5. Approval/Verification of Waste Container Contents - two personnel must sign the Waste Container Packaging Form (Attachment A, Section 6). These signatures demonstrate their approval that information on the waste form correctly represents what is in the container. The personnel signing the form must have direct knowledge of what was packaged into the container such as the Audio/Video Mechanics performing oversight of packaging and/or Waste Mechanics actually performing the repackaging.

11.0 PROCEDURE - continued

6. Removable Surface Contamination limitations for waste going to WIPP - monitor the container for surface contamination. Removable surface contamination that exceeds 20 dpm/100 cm² alpha and/or 200 dpm/100 cm² beta-gamma is not permitted. Fixing of surface contamination is also not allowed.

Note: Argonne procedure ESH-5.9, "Routine Workplace Surveillance and Oversight," will be used as a guidance procedure when performing routine radiological surveys.

7. Documenting Radiological Properties for each container - the following information must be documented on the Waste Container Packaging Form (Attachment A, Section 7):

- List the isotopes that contribute to 95 percent of the radiological hazard including their associated activities and masses
- Fissile gram equivalent curies (FGEs) in the container
- Plutonium equivalent curies (PE-Ci) in the container
- Highest measured surface dose rate on the loaded container
- TRU alpha activity (nCi/gram) of the waste in container
- Enter the name and phone number of point of contact for radiological characterization information

12.0 RECORDS/REQUIRED DOCUMENTATION

1. Waste Container Packaging Form – ensure that a well-written form exists for each container, verify the unique container identification number is present on each page of the form and that it has been reviewed to verify every section is complete or marked as N/A if the section not required. Completed forms must be placed into the Database Management Group's waste tracking folder for logging into the Argonne waste tracking database.

2. Audio/Video Recordings – ensure that recordings are available for each container packaged and be certain they are traceable to the container by verifying the unique container identification number is present on each video recording. Audio/Video recordings must be placed into the Database Management Group's waste tracking folder in order to keep all information in one location.

3. Database Management Group will update the database with information from the Waste Container Packaging Form. The barcode label on the drum is used to track container movements. The database will then be used by Argonne to track all information related to that container through shipment for disposal.

13.0 ATTACHMENTS

- Attachment A, Waste Container Packaging Form
- Attachment B, Waste Bag or Wrap Inventory Form
- Attachment C, Table 1 - Specific Waste Constituents

ATTACHMENT A (page 1 of 4)

Waste Container Packaging Form	
Section 1: General Information	
Unique Container Identification Number:	
DOE or DOE Contract Site Name:	
☐ Initial Waste Packaging ☐ Repackaging	
Date(s) of Packaging or Repackaging:	
Audio-Video Recording Number:	
Site Procedure Number and Revision Used:	
Section 2: Waste Container Information	
Container Type: ☐ 55-gallon drum ☐ SWB	
Rigid Liner Used? ☐ Yes ☐ No If rigid liner was used, list the type of rigid liner and affirm that the lid was not installed:	
Container Filter Vent #1 with sample port septum: Minimum H_2 Diffusivity 1.85E-05 mol/s/mol? ☐ Yes ☐ No Identification of the filter manufacturer: _____ Date of manufacture, or lot number, or unique serial number:	
Container Filter Vent #2: (required for SWB only) Minimum H_2 Diffusivity 1.85E-05 mol/s/mol? ☐ Yes ☐ No Identification of the filter manufacturer: _____ Date of manufacture, or lot number, or unique serial number:	
Number layers of confinement: ☐ one ☐ two	
Closure Method used for 55-gallon drum or SWB liner bag: Closure Method used for inner bags:	
All Bag Layers Vented? ☐ Yes ☐ No Minimum H_2 Diffusivity of Bag Filters 1.075E-05 mol/s/mol? ☐ Yes ☐ No	
Waste Container Weight	
Container Fill Percentage: _____%	Container gross wt: _____ kg. Container tare wt.: _____ kg Waste net wt.: kg.
Waste Category Group: ☐ Homogeneous Solids ☐ Soil/gravel ☐ Debris	
Waste Stream Name:	
TID Identification Number(s):	

ATTACHMENT A (page 2 of 4)

Waste Container Packaging Form	
Unique Container ID #: _____ Page 2 of ___(incl. attachments)	
Section 3: Feed Container Information (Repackaging Only)	
Feed Container Type:	
Feed Container ID Number:	
Section 4: Container Inventory *If loading bagged or wrapped waste, the unique identification number for each bag or wrap shall be entered in the "waste item" column. "See attached" may be entered in the "waste description" column if the completed Waste Bag or Wrap Inventory Form contains the waste description and is attached to this form.*	
Are "Bag and/or Wrap Inventory Forms" attached for items listed below? ☐ Yes ☐ No	
Waste Item or Bag/Wrap ID#	Waste Description (including weight % of iron-based metals/alloys, aluminum-based metals/alloys, other metals, cellulosics, rubber, plastics, inorganic materials, and soil/gravel)

ATTACHMENT A (page 3 of 4)

Waste Container Packaging Form		
Unique Container ID #: _____ Page 3 of ___(incl. attachments)		
Section 5: Packaging Summary	Yes	No
Does this waste contain any treated liquids? If waste contains treated liquid, describe in the Comments section: • The waste that was treated • Treatment method used • The type of absorbent used, • Solidification agent used, • Product name and manufacturer of any material added to the waste • Results of a Method 9095B Paint Filter Liquids Test for each container tested (including container #).		
Was any other treatment performed prior to packaging? If yes, describe the treatment in the Comments section.		
Was this waste packaged in accordance with the "CH-TRU Waste Packaging Instructions"? If not, attach the letter from the Director, Office of Disposal Operations, and Environmental Management (EM) Headquarters Office of Regulatory Compliance that approves the variance.		
Comments:		
Section 6: Operator Information		
List all personnel loading waste into container:		
Printed names and signatures of two site personnel who are approving this form attesting to the contents of the waste container (Section 7: Radiological Properties completion occurs after signature)		
Printed Name:	Printed Name:	
Signature:	Signature:	
Date:	Date:	

ATTACHMENT A (page 4 of 4)

Waste Container Packaging Form
Unique Container ID #: _____ Page 4 of ___(incl. attachments)
Section 7: Radiological Properties
List the isotopes that contribute to 95% of the radiological hazard including their associated activities and masses:
Fissile gram equivalents (FGEs) in the container: _____ FGEs
Plutonium equivalent curies (PE-Ci) in the container: _____ PE-Ci
Highest measured surface dose rate of the loaded container: _____ mrem/hr
TRU alpha activity of waste in container: _____ nCi/gram
Printed or typed name and phone number of point of contact for radiological characterization information:

ATTACHMENT B (page 1 of 2)

Waste Bag or Wrap Inventory Form	
Section 1: General Information	
Unique Bag or Wrap ID Number:	
Location/Point of Waste Generation (where bagging or wrapping was done, building, room number, process):	
Date of Bagging or Wrapping:	
Audio-Video Recording Number:	
Site Procedure Number and Revision Used:	
Section 2: Bag or Wrap Information	
☐ Bag ☐ Wrap	
Number of bag layers: ☐ one ☐ two	
Closure Method used for bags: _____	
All Bag Layers Vented? ☐ Yes ☐ No Minimum H_2 Diffusivity of Bag Filters 1.075E-05 mol/s/mol? ☐ Yes ☐ No	
Waste Category Group: ☐ Homogeneous Solids ☐ Soil/gravel ☐ Debris	
Waste Stream Name:	
Section 3: Inventory of Bag or Wrap	
Waste Item	Waste Description (including weight % of iron-based metals/alloys, aluminum-based metals/alloys, other metals, cellulosics, rubber, plastics, inorganic materials, and soil/gravel)

ATTACHMENT B (page 2 of 2)

Waste Bag or Wrap Inventory Form		
Bag or Wrap Number: _____		
Section 4: Bagging or Wrapping Summary	Yes	No
Does this bag or wrap include any high dose rate items, approaching 200 mrem/hr, that require placement against the wall of the 55-gallon drum or SWB?		
Does this waste contain any treated liquids? If waste contains treated liquid, describe in the Comments section: • The waste that was treated • Treatment method used • The type of absorbent used • Solidification agent used • Product name and manufacturer of any material added to the waste, and • Results of a Method 9095B Paint Filter Liquids Test for each container treated (including container ID#).		
Was any other treatment performed prior to bagging or wrapping? If yes, describe the treatment in the Comments section.		
Was this waste bagged or wrapped in accordance with the "CH-TRU Waste Packaging Instructions"? If not, attach the letter from the Director, Office of Disposal Operations, and EM Headquarters Office of Regulatory Compliance that approves the variance.		
Comments:		
Section 5: Printed names and signatures of two site personnel who are approving this form attesting to the contents of the bag or wrap		
This completed Waste Bag or Wrap Inventory Form consists of _____ pages		
Printed Name:	Printed Name:	
Signature:	Signature:	
Date:	Date:	

ATTACHMENT C (page 1 of 1)

Table 1 - Specific Waste Constituents

Waste Material Parameter	Description
Iron-based metals/alloys	Iron and steel alloys in the waste; does not include the waste container materials
Aluminum-based metals/alloys	Aluminum or aluminum-based alloys in the waste materials
Other metals	All other metals found in the waste materials
Other inorganic materials	Nonmetallic inorganic waste, including concrete, glass, firebrick, ceramics, sand, and inorganic sorbents
Cellulosics	Materials generally derived from high polymer plant carbohydrates (e.g., paper, cardboard, wood, cloth)
Rubber	Natural or man-made elastic Latex materials (e.g., surgeon's gloves, leaded rubber gloves)
Plastics (waste materials)	Generally man-made materials, often derived from petroleum feedstock (e.g., polyethylene, polyvinylchloride)
Organic materials	Cemented organic resins, solidified organic liquids, and sludges
Inorganic materials	Any homogeneous materials consisting of sludge, or aqueous-based liquids which are solidified with cement, calcium silicate, or other solidification agents (e.g., waste water treatment sludge, cemented aqueous liquids, and inorganic particulate)
Soils/Gravel	Generally consists of naturally occurring soils which have been contaminated with inorganic waste materials

ATTACHMENT D (Page 1 of 2)
Payload Container Integrity Checklist (Example)

Attachment 1
Payload Container Integrity Checklist

CONTAINER EXAMINATION		DISCUSSION OF CRITERIA
1	Is the payload container obviously degraded?	Obviously degraded means clearly visible and potentially significant defects in the payload container or payload container surface.
2.	Is there evidence that the payload container is, or has been, pressurized?	Pressurization can be indicated by a fairly uniform expansion of the sidewalls, bottom or top. Post pressurization can be indicated by a notable outward deflection of the bottom or top. Verify that the payload container is not warped.
3.	Is there any potentially significant rust or corrosion such that wall thinning, pin holes, or breaches are likely or the load bearing capacity is suspect?	Rust shall be assessed in terms of its type, extent, and location. Pitting, pocking, flaking, or dark coloration characterizes potentially significant rust or corrosion. This includes the extent of the payload container surface area covered, thickness, and if it occurs in large flakes or built-up (caked) areas. Rusted payload containers may not be accepted if: • Rust is present in caked layers or deposits • Rust is present in the form of deep metal flaking, or built-up areas of corrosion products In addition, the location of rust should be noted; for example on a drum: top lid; filter region; locking chine; top one-third, above the second rolling hoop; middle one-third, between the first and second rolling hoops; bottom one-third, below the second rolling hoop; and on the bottom Payload containers may still be considered acceptable if the signs of rust show up as: • Some discoloration on the payload container • If rubbed would produce fine grit or dust or minor flaking (such that wall thinning does not occur)
4.	Are any of the following apparent? • Wall thinning • Pin holes • Breaches	Wall thinning, pin holes, and breaches can be a result of rust/corrosion (see discussion for #3).

ATTACHMENT D (Page 2 of 2)
Payload Container Integrity Checklist (Example)

CONTAINER EXAMINATION		DISCUSSION OF CRITERIA
5	Are there any split seams, tears, obvious holes, punctures (of any size), creases, broken welds, or cracks?	Payload containers with obvious leaks, holes or openings, cracks, deep crevices, creases, tears, broken welds, sharp edges or pits, are either breached or on the verge of being breached. Verify that there is no warping that could cause the container to be unstable or prevent it from fitting properly in the applicable package.
6	Is the load-bearing capacity suspect?	The load-bearing capacity could be reduced for excessive rust (see discussion for #3), wall thinning (see discussion for #4), breaches, cracks, creases, broken welds, etc (see discussion for #5).
7	Is the payload container improperly closed?	Inspect the fastener and fastener ring (chine) if applicable for damage or excessive corrosion. Check the alignment of the fastener to ensure that it is in firm contact around the entire lid and the payload container will not open during transportation.
8	Are there any dents, scrapes, or scratches that make the payload container's structural integrity questionable or prevent the top and bottom surfaces from being parallel?	Deep gouges, scratches, or abrasions over wide areas are not acceptable. If top and bottom surfaces are not parallel, this would indicate that the container is warped. Dents should be less than ¼ inch deep by 3 inches long and between ¼ inch to 6 inches wide. All other dents must be examined to determine impact of structural integrity.
9	Is there discoloration which would indicate leakage or other evidence of leakage of material from the payload container?	Examine the payload container regions near vents, top lid fittings, bottom fittings, welds, seams and intersections of one or more metal sheets or plates. Payload containers must be rejected if evidence of leakage is present.
10	Is the payload container bulged?	For the purposes of this examination, bulging is indicated by: • A fairly uniform expansion of the sidewalls, bottom, or top (e.g., in the case of a drum, either the top or bottom surface protrudes beyond the planar surface of the top or bottom ring, • A protrusion of the side wall (e.g., in the case of a drum, beyond a line connecting the peaks of the surrounding rolling hoops or a line between a surrounding rolling hoop and the bottom or top ring), or • Expansion of the sidewall (e.g., in the case of a drum, such that it deforms any portion of a rolling hoop).

ATTACHMENT E (Page 1 of 3)
Fissile Gram Equivalent (Example)

Attachment 2
Fissile Gram Equivalent

Determination of FGE requires the following information:

1. The isotopic composition of the waste in a 55-gallon drum or SWB
2. The quantity of each isotope contained in a 55-gallon drum or SWB
3. The measurement error for each isotope contained in the 55-gallon drum or SWB

Calculation of the FGE and Compliance Evaluation

Only the isotopes listed below contribute to the FGE calculation:

Isotope	Equivalent Factor (EF)
U-233	9.00E-01
U-235	8.43E-01
Np-237	1.50E-02
Pu-238	1.13E-01
Pu-239	1.00E+00
Pu-240	2.25E-02
Pu-241	2.25E+00
Pu-242	7.50E-03
Am-241	1.87E-02
Am-242m	3.46E+01
Am-243	1.29E-02
Cm-243	5.00E+00
Cm-244	9.00E-02
Cm-245	1.50E+01
Cm-247	5.00E-01
Cf-249	4.50E+01
Cf-251	9.00E+01

The following equation is used to calculate FGE:

$$\sum_{i=1}^{n}\left\{G_{isotope}+2TMU_{isotope}\right\}\cdot EF_{isotope}$$

Where:

n is the number of isotopes from the list above, contained in the waste

$G_{isotope}$ is the value in grams for each isotope listed above

$TMU_{isotope}$ is the total measurement uncertainty for each isotope and

$EF_{isotope}$ is the Equivalent Factor for each isotope listed above

ATTACHMENT E (Page 2 of 3)
Fissile Gram Equivalent (Example)

Attachment 2
Fissile Gram Equivalent

Determination of FGE requires the following information:

1. The isotopic composition of the waste in a 55-gallon drum or SWB
2. The quantity of each isotope contained in a 55-gallon drum or SWB
3. The measurement error for each isotope contained in the 55-gallon drum or SWB

Calculation of the FGE and Compliance Evaluation

Only the isotopes listed below contribute to the FGE calculation:

Isotope	Equivalent Factor (EF)
U-233	9.00E-01
U-235	8.43E-01
Np-237	1.50E-02
Pu-238	1.13E-01
Pu-239	1.00E+00
Pu-240	2.25E-02
Pu-241	2.25E+00
Pu-242	7.50E-03
Am-241	1.87E-02
Am-242m	3.48E+01
Am-243	1.29E-02
Cm-243	5.00E+00
Cm-244	8.00E-02
Cm-245	1.30E+01
Cm-247	5.00E-01
Cf-249	4.50E+01
Cf-251	9.00E+01

The following equation is used to calculate FGE:

$$\sum_{isotope=1}^{n}\left(G_{isotope}+2\,TMU_{isotope}\right)\cdot EF_{isotope}$$

Where:

n is the number of isotopes from the list above, contained in the waste

$G_{isotope}$ is the value in grams for each isotope listed above

$TMU_{isotope}$ is the total measurement uncertainty for each isotope and

$EF_{isotope}$ is the Equivalent Factor for each isotope listed above

ATTACHMENT E (Page 3 of 3)
Fissile Gram Equivalent (Example)

The FGE of each 55-gallon drum or SWB shall be calculated from the isotopic composition and quantity of isotopes. The FGE value plus two times the TMU shall be less than or equal to the applicable limit for each payload container.

Example:

A 55-gallon drum is assayed and found to contain:

Isotope	Grams	TMU
Pu-239	10.00	15%
Am-241	0.012	7%
Cs-137[1]	0.001	3%

The FGE is calculated by:

$$FGE=(G_{Pu\text{-}239} + 2(TMU_{Pu\text{-}239}))\ EF_{Pu\text{-}239} + \{G_{Am\text{-}241} + 2(TMU_{Am\text{-}241})\}\ EF_{Am\text{-}241}$$

$$FGE=\{10.00 + 2(10.00 \times 0.15)\}*1.00E+00 + \{0.012 + 2(0.012 \times 0.07)\}*1.87E-02$$

$$FGE=(10.00g + 2(1.50g))*1 + \{0.012g + 2(0.00084)\}*0.0187$$

$$FGE=\{10.00g + 3.00g\}*1 + \{0.012g + 0.00168\}*0.0187$$

$$FGE= 13.00g + 0.000256g = 13.00g$$

[1] Cs-137 is ignored for the calculation of FGE because it does not appear in the list above.

ATTACHMENT F (Page 1 of 2)
239Pu Equivalent Activity (Example)

Attachment 3
^{239}Pu Equivalent Activity

For a known radioactivity quantity and isotopic distribution, the ^{239}Pu equivalent activity is determined using isotope-specific weighting factors. The ^{239}Pu equivalent activity (EA) can be characterized by

$$EA = \sum_{I=1}^{K} Ai / WFi$$

where *K* is the number of TRU[1] isotopes, *Ai* is the activity of isotope *i*, and *WFi* is the PE-Ci weighting factor for isotope *i*.

WFi is further defined as the ratio

$$WFi = Eo / Ei$$

where *Eo* (rem/μCi) is the 50-year effective whole-body dose commitment due to the inhalation of ^{239}Pu particulates with a 1.0 μm activity median aerodynamic diameter (AMAD) and a weekly pulmonary clearance class, and *Ei* (rem/μCi) is the 50-year effective whole-body dose commitment due to the inhalation of isotope (*i*) particulates with a 1.0 μm AMAD and the pulmonary clearance class resulting in the highest 50-year effective whole-body dose commitment. Weighting factors calculated in this manner are presented in below for isotopes typically present in CH TRU waste. If other TRU isotopes are determined to be present in the payload container, their weighting factors can be obtained from the values of Eo and Ei contained in DOE/EH-0071[2]

PE-Ci Weighting Factors for Selected Isotopes[3]

Isotope	Pulmonary Clearance Class[4]	Weighting Factor
U-233	Y	3.9
Np-237	W	1.0
Pu-236	W	3.2
Pu-238	W	1.1
Pu-239	W	1.0
Pu-240	W	1.0
Pu-241	W	51.0
Pu-242	W	1.1
Am-241	W	1.0

PE-Ci Weighting Factors for Selected Isotopes (continued)

[1] TRU as designated in this equation refers to any radionuclide with an atomic number greater than 92 and including U-233.
[2] U.S. Department of Energy *Internal Dose Conversion Factors for Calculation of DOSE to the Public* DOE/EH-0071 July 1988.
[3] PE-Ci must be calculated using all radionuclides, not just these selected radionuclides
[4] (W) Weekly (Y) Yearly

ATTACHMENT F (Page 2 of 2)
239Pu Equivalent Activity (Example)

Isotope	Pulmonary Clearance Class	Weighting Factor
Am-243	W	1.0
Cm-242	W	30.0
Cm-244	W	1.9
Cf-252	Y	3.9

Example:

A 55-gallon drum is assayed and found to contain:

Nuclide	Grams	Activity (Ci)
Pu-239	10.00	0.629
Am-241	0.012	0.042
Cs-137	0.001	0.088

The weighting factor for Cs-137 must be calculated because it does not appear in the list :

WFi = Eo /Ei

$WF_{Cs\text{-}137}$ *=610/0.032=15,937*

The PE-Ci is calculated by

$EA = A_{Pu\text{-}239}/WF_{Pu\text{-}239} + A_{Am\text{-}241}/WF_{Am\text{-}241} + A_{Cs\text{-}137}/WF_{Cs\text{-}137}$

EA=0.629/1 + 0.042/1 + 0.088/15937

EA=0.629 + 0.042 + 0.0000055

EA=0.671 PE-Ci

Attachment 3 - Acceptable Knowledge Source Document Summary

Waste Stream Number(s): ID-RF-S3150-A

Site(s): Idaho National Laboratory	Source Document Tracking Number: U010
Acceptable Knowledge Documentation Type: ☑ TRU Waste Management Program Information ☑ Waste Stream-Specific Information ☑ Supplemental Information	Category: ☐ C - Correspondence ☐ D - Discrepancy Resolution ☐ P - Published Documents ☑ U - Unpublished Documents

Title of Source Document: OASIS Solidification and Off Gas Analysis

Source Document Reference Information (author(s), document and revision number, date, publisher): PSD 88-038, NA, 9/1/1988

AK # [a]	Source Doc. Page # [b]	AK Information Summary
PR4, WS4, WS8, S5, S12	1-7	Note that the title for OASIS changed from Organic and Sludge Immobilization System to Oil and Solvent Immobilization System at some time after 1984. Pgs. 1-2 Brief decription of the waste materials processed in the OASIS process and the products used in the immobilization process. Table 1 gives the amount of each material used. Pgs. 2-7 Description of the headspace gas experiment performed on the simulated waste materials. Results of the sampling. Results indicate that the solvents were not retained in the Envirostone product, but were released through the plastic liners into the headspace of the drum. Also indicated is that the ability of Envirostone to solidify is not diminished by the amount of solvent in the oil.

Source Document Data Limitations (if any):

1. None

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OASIS SOLIDIFICATION AND OFF GAS ANALYSIS

R.V. HARDER
A.J. JOHNSON

PSD 88-038

September 1988

PROCESS SYSTEMS DEVELOPMENT
Waste Process Development

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KWIK Index

Solidification
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INTRODUCTION

The Rocky Flats Plant uses large amounts of oil and solvents in the manufacturing operations. The nature of these operations cause the oils to become contaminated with solvents and plutonium producing a transuranic (TRU) mixed waste. This oil may contain any combination of solvents, including trichloroethylene [TCE], carbon tetrachloride [CCl_4], and freon [CCl_2FCClF_2] and in varying amounts. A process called the Oil and Solvent Immobilization System (OASIS) is used to immobilize the approximately 500 gallons of TRU mixed waste generated per month in an Envirostone ^{R} matrix. Twenty to twenty five gallons of waste are solidified in 55-gallon drums. This results in an approximate 2:1 waste volume increase. Table 1 shows the typical composition of the solidified waste. This ratio will vary slightly from drum to drum, but the variance is minimal due to controls placed upon the process.

Table 1

Typical Composition of Drummed Solidified Waste

ITEM	AMOUNT (POUNDS)	PERCENT (WT)
WASTE	170	34.2
ENVIROSTONE ^{R}	250	50.3
EMULSIFIER	25	0.1
ACCELERATOR	10	0.1
WATER	42	15.3

During a typical month the solvent concentration in the waste oil drops during the first part of the month and increases during the mid-to-later part of the month. This is primarily due to the cycle of washing down the process equipment toward the end of the month. All of the TRU waste oils are placed in receiving tanks while awaiting solidification, which allows the various oils and solvents to mix together. To insure that the final solidified product will meet transportation and storage requirements, additional data was requested by Waste Operations. The maximum and minimum mixing ratios that will allow the waste to set up are of concern, as well as determining whether volatile organic compounds (VOCs) are escaping the Envirostone matrix. The objective of this work focused on two concerns regarding the hazardous component of the waste feed: 1) Determine the solvent concentrations at which solidification is impeded or stopped, and 2) Determine whether volatilized solvent is escaping from the Envirostone matrix.

EXPERIMENTAL

Non-radioactive samples of solidified waste were made using the same ingredient ratios and mixing times as used in the actual OASIS process. The only variable was the amount of solvent [TCE, CCl_4, or Freon] contained in the total waste volume. The oil/solvent ratios and results are shown in Table 2.

Table 2

Oil/Solvent Solidified Ratios

OIL (WT %)	SOLVENT (WT%)	TIME TO SOLIDIFY (MIN)
100	0	10
75	25	10
50	50	15
25	75	10
0	100	15

After the samples were solidified they were tested to determine if the solvent was retained within the Envirostone, or escaped into the head space of the container. Additional samples of lower solvent content were also. A drawing of the test equipment is shown in Figure 1. Tests were conducted by pulling air through the head space of the sample container in order to entrain any solvent vapors present. The air/solvent mixture was then bubbled through an oil bath where the solvent was transferred to the bath. The supply of solvent coming into the bath had to be greater than the amount being sparged in order to detect the solvent in the oil. Chlor-D-Tech 1000^{R} detection kits were used to detect chlorine, both free and in a compound, within the range of 250 ppm to 1000 ppm.

The kits use a chemical reaction to produce a color change depending on the level of chlorine in the sample. The color will change from clear at <250 ppm to dark purple at >1000 ppm. The color is then compared to a chart to determine the chlorine level. The kits were used because of the ease and speed of testing. The oil bath was sampled and tested for chlorine prior to each run as well as after one hour of bubbling. Sampling of the head space for volatilized organics began immediately after solidification was completed. The sample that contained 1% solvent had to set for 1 week to allow vapors to collect in the head space. Air was passed over the 1% sample for five minutes to minimize sparging of the oil. All oil samples prior to bubbling indicated less than 250 ppm, which is the lower end of the detection kits. Chlorine detected after bubbling, indicates that solvent was escaping from the envirostone matrix. For the purpose of these tests a qualitative measurement was sufficient. Waiting for a lab analysis would have made the determination more difficult, because the solvent was continually escaping from the oil.

Figure 1

Chlorine Detection Equipment

RESULTS

Qualitative rather than quantitative results were required for this analysis. For that reason, results that were repeatable using the test equipment and detection kits were considered sufficient. Three tests were conducted for each data point in order to insure accuracy.

Testing of the head space off gas indicates that the solvent is not retained within the Envirostone. Every sample except the 1 wt% solvent, exceeded the chlorine detection limit of 1000 ppm, in less than one hour. It is believed that chlorine was not found at > 1000 ppm with the 1 wt% sample because it was air sparged from the oil before it could be detected. Additional tests of samples with 1 wt% solvent were in the range of 250 - 500 ppm. More sensitive test equipment would be needed to achieve a more accurate result. A chart showing initial solvent concentrations in the sample and the resultant chlorine level in the oil bath are shown in Table 3.

Table 3

Chlorine Detected After 1 Hour

OIL (%)	SOLVENT (%)	RESULTS (ppm)
100	0	< 250
99	1	250 - 500 *
90	10	> 1000
75	25	> 1000
50	50	> 1000
25	75	> 1000
0	100	> 1000

* Sample was allowed to set for one week prior to testing. Air was passed through the head space and bubbler for only five minutes in order to minimize the air sparging of the oil.

CONCLUSIONS

Results of these tests indicate that as the solvent concentration increases, the ability of the Envirostone ^{R} to solidify does not appear to be diminished. The tests also indicate that there is no degradation of the solidified waste form as the solvent level increases.

Qualitative results also indicate that the solvent is not bound within the solidified waste at even the lowest concentration. Escaping vapors will travel through the plastic liners and exhaust through the carbon filters in the drums if the vapor pressure is great

enough. Currently there is no requirement to prevent the solvent from exhausting, and no tests have been conducted to determine the volume of solvent required to break-through the carbon filter. Should the vapor not be permitted to exhaust, a new process would be required.

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Document Number	Title/Description	Record Date	Total Pages
U010	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-004	7/5/2005	1
	OASIS Solidification and Off Gas Analysis	9/1/1988	9
	NA		

Comments
None

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Document Number	Title/Description	Record Date	Total Pages
U010	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-004	7/5/2005	1
	OASIS Solidification and Off Gas Analysis	9/1/1988	9

DIVIDER

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Attachment 3 - Acceptable Knowledge Source Document Summary

Waste Stream Number(s): ID-RF-S3150-A

Site(s): Idaho National Laboratory	Source Document Tracking Number: C511
Acceptable Knowledge Documentation Type: ☐ TRU Waste Management Program Information ☐ Waste Stream-Specific Information ☑ Supporting Information	Category: ☑ C - Correspondence ☐ D - Discrepancy Resolution ☐ P - Published Documents ☐ U - Unpublished Documents

Title of Source Document: Record of Communication with Mark Crocker. Subject: OASIS Waste Packaging.

Source Document Reference Information (author(s), document and revision number, date, publisher): Jeff Harrison, 12/6/05

AK # [a]	Source Doc. Page #[b]	AK Information Summary
S7, S16	1	The primary reason RTR can see more than two horsetails is because they put a bag stub from the previous bag cut on top of the waste. In aqueous waste treatment processes where a PVC O ring bag was also used to attach the bag to the glovebox, the bag stubs were tossed into the bottom of the drum before the sludge was added. In the OASIS process, they could not put the bag stub into the bottom of the drum because the waste organic liquids were added to the drum followed by water and an emulsifier, and an agitator was then lowered into the drum to mix the contents. Instead, the bag stub remaining from a bag cut was put on top of the waste in the subsequent run. In some cases, only two horsetails may be present because they may have collected two or three bag stubs in the glovebox before adding them to the top of a drum. This would result in some drums with what may appear to be 4 or 5 horsetails (2 actual layers of confinement plus 2 or 3 bag stubs). Mark also said that when the OASIS process first started, they sometimes had a problem with the agitator tearing into the inner plastic bag. In this instance, they added another plastic bag around the waste. There will be very few drums like this because they quickly fixed this problem by attaching Tygon tubing to a vacuum pump and inserting the tubing between the rigid liner and the polyethylene drum liner bag which kept the agitator from contacting the plastic bag

Source Document Data Limitations (if any):

1. This information is based solely on Mr. Crocker's memory.

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ORIGINAL

Attachment 2 – Record of Communication

Waste Stream Numbers: ID-RF-S3150-A	Corresponding Source Document #: **C511**	
Interviewer: Jeff Harrison	Date: 12/6/05	Time: 1:00 pm
Interviewees: Mark Crocker	Group/Organization: SRS Job Title: D&D	Phone: 803-725-8343 Email:
Subject: OASIS Waste Packaging		

Mark Crocker currently works in D&D at Savannah River Site. Before working at SRS, Mr. Crocker worked at Rocky Flats Building 774. He was one of two operators that worked in the OASIS process in Building 774 from the time it started up (1986) until it shut down and has first-hand knowledge of the waste packaging.

I told Mark that RTR has been seeing drums of IDC 801 with three horsetails (i.e., twist and tape closure), and the AK we have indicates only two layers of confinement. Mark said that the packaging configuration for this waste was a 55-gallon drum with a rigid liner, a polyethylene drum liner bag, and a PVC O-ring bag.

The primary reason RTR can see more than two horsetails is because they put a bag stub from the previous bag cut on top of the waste. In aqueous waste treatment processes where a PVC O-ring bag was also used to attach the bag to the glovebox, the bag stubs were tossed into the bottom of the drum before the sludge was added. In the OASIS process, they could not put the bag stub into the bottom of the drum because the waste organic liquids were added to the drum followed by water and an emulsifier, and an agitator was then lowered into the drum to mix the contents. Instead, the bag stub remaining from a bag cut was put on top of the waste in the subsequent run. In some cases, only two horsetails may be present because they may have collected two or three bag stubs in the glovebox before adding them to the top of a drum. This would result in some drums with what may appear to be 4 or 5 horsetails (2 actual layers of confinement plus 2 or 3 bag stubs).

Mark also said that when the OASIS process first started, they sometimes had a problem with the agitator tearing into the inner plastic bag. In this instance, they added another plastic bag around the waste. There will be very few drums like this because they quickly fixed this problem by attaching Tygon tubing to a vacuum pump and inserting the tubing between the rigid liner and the polyethylene drum liner bag which kept the agitator from contacting the plastic bag.

Data Limitations: This information is based solely on Mr. Crocker's memory.

Acceptable Knowledge Expert: Jeff Harrison Jeff Harrison Date: 12/6/05
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C511	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-005	4/5/2007	1
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Attachment 3 - Acceptable Knowledge Source Document Summary

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Site(s): Idaho National Laboratory	Source Document Tracking Number: P002
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Title of Source Document: Organic and Sludge Immobilization System

Source Document Reference Information (author(s), document and revision number, date, publisher): RFP-4095, NA, 7/27/1987

AK # [a]	Source Doc. Page # [b]	AK Information Summary
WS2, WS4, WS5, WS8, WS9, S5	2-13	Discussion concerning the implementation of two systems to solidify organic liquid wastes; one for low-level organics and another for TRU organics. Includes a brief description of the old Grease Plant and problems associated with it. Discussion of previous work performed to replace the Grease Plant and the materials tested in the laboratory. Pgs. 2-5 Discussion of the process used to immobilize low-level organic wastes, including photographs and a flow diagram. This process was separate from the OASIS equipment. Pgs. 5-13 Discussion of the Organic and Sludge Immobilization System (OASIS) including equipment used, a flow diagram, a description of the process for both sludge and organic waste. Includes description of problems associated with the OASIS process, including free liquids in the drums (~3% of those produced). Note that the system had been in operation since October of 1984.

Source Document Data Limitations (if any):

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ORGANIC AND SLUDGE IMMOBILIZATION SYSTEM

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P002

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ORGANIC AND SLUDGE IMMOBILIZATION SYSTEM

R. D. Petersen

ABSTRACT

An Organic and Sludge Immobilization System (OASIS) has been implemented at the Rocky Flats Plant to solidify transuranic waste organic liquids and sludges from the aqueous waste processing facility to meet the Waste Isolation Pilot Plant, Waste Acceptance Criteria.

INTRODUCTION

The old liquid waste treatment facility at the Rocky Flats Plant (RFP) treats aqueous and organic liquid process wastes from the Plutonium Recovery Areas and Metal Fabrication operations. The aqueous waste is generally handled as transuranic (TRU), while the organics can be either TRU or low-level waste. This paper describes a system for solidifying low-level waste organics and another system for solidifying both TRU liquid organics and aqueous precipitation sludge.

The low-level organic wastes received in the Liquid Waste Processing Facility consist mainly of machining and lubricating oils from maintenance and non-plutonium production operations. In some cases, these liquid organic wastes also contain water and/or solvents such as carbon tetrachloride, trichloroethane, and Freon.

The aqueous wastes from the plutonium recovery areas are treated in a hydroxide precipitation process to remove heavy metallic elements. The precipitation sludge is then passed through a rotary drum vacuum filter, coated with a diatomaceous earth filter media, to remove the solids from the waste stream. A thin layer of filter cake is continually cut from the drum filter into a waste drum, thereby producing a wet sludge.

Presently, to absorb free liquids Type I portland cement is intermittently fed at 0.75 lb/min through a screw feeder into the waste drum. By intermittently feeding the cement, the sludge and cement form layers in the waste drum. This practice was initiated based upon the theory that any water desorbing from the sludge would be absorbed by the portland cement. However, in practice, the discharge rate and moisture content of the sludge varies depending on the physical properties of the waste being treated. Also, this process provides no means for determining water content of the sludge. Furthermore, since there is no control of the water-to-cement ratio in the drum, the process is dependent on water absorption properties of the portland cement. Free liquids have been noted in the sludge drums using this process.

Radioactively contaminated liquid organics (such as hydraulic oils, solvents, and lathe coolant) are sent to the waste treatment facility from the Metal Fabrication areas and development laboratories. The organics were formerly processed through an extruder with Microcel-E,™ a synthetic calcium silicate. The resulting waste form did not encapsulate or bind the liquids in the waste matrix and has been associated with desorption of the liquid into the waste drum.

The liquid organic TRU waste forms presently produced at RFP do not meet the criteria established by the Waste Isolation Pilot Plant (WIPP) Waste Acceptance Criteria (WAC)[1] prohibiting the presence of free liquids in the waste. Free liquids have also been found in precipitation sludge waste drums. Although desorption of water in the sludge does not occur regularly and damp sludge without pourable liquids currently meets the WIPP-WAC, it would be desirable to immobilize the waste and bind any free water in the waste drum.

PRIOR WORK

Previous work has been completed concerning the solidification of simulated TRU organic waste. The

goal was to determine an acceptable solidification media and a cost-effective immobilization method. The following solidification media were investigated: Envirostone™ gypsum cement, Type I portland cement, portland cement with Oil Dri™ absorbent, Envirostone with portland cement, and Envirostone with Oil Dri absorbent.

The organic wastes solidified in this study consisted of (1) crank case oil and (2) a spent lathe coolant stream simulated by mixing hydraulic oil with carbon tetrachloride in various ratios of oil to carbon tetrachloride. Samples were prepared on a batch basis and were mixed by hand or with a Jiffy variable-speed laboratory mixer.

Evaluation of the various solidification media was based on suitability for immobilizing organic wastes, waste loading efficiency, required set time, and the estimated cost of production-scale operation. A uniform, free-standing monolithic cast containing no free liquid was considered a high-quality cast.

Results of the study indicated that Envirostone gypsum cement would be most applicable to the organic wastes handled by the Liquid Waste Processing Facility. Envirostone provides a solid, homogeneous cast without free liquid. In addition, the high waste loading efficiencies achieved and relative light weight of the resulting casts allow more efficient use of waste container volume while remaining within transportation weight limits. Also, compared with other solidification media, the Envirostone was the most cost effective.

In studies conducted by the United States Gypsum Company on the use of Envirostone for the solidification of low-level radioactive waste, the binder produced solidified waste forms meeting all the criteria recommended by the United States Nuclear Regulatory Commission in their Branch Technical Position Report on 10 CFR 61.[2] The various radioactive wastes tested included simulated pressurized water reactor waste streams, boiling water reactor waste streams, waste oils, and ion exchange resins. For waste oils, a 50% waste loading was achieved in full-scale, 55-gallon drum tests.

Laboratory work has been completed to determine the water-to-sludge and water-to-cement mixing ratios of dried nonradioactive sludge and Type I portland cement to form a sludge monolith.[3] A process was conceptualized in which Type I portland cement would be mixed with the waste stream in a ribbon-type blender. As a result of this work, the final configuration of the Direct Cementation Process (DCP) was developed. The DCP was operated to immobilize both simulated and actual noncontaminated wastes, and produced product up to 40 wt% waste with 30 wt% water and 30 wt% portland cement.

Table 1 illustrates the results of several test samples using dry low-level sludge and the parameters determined by the DCP study. Samples 3, 4, 5, 7, and 8 did not produce a uniform cast due to the small amount of cement in the waste form. The remaining samples produced acceptable waste forms, although Runs 1 and 4 had unacceptable drying times and Runs 5 and 9 produced very stiff mixes.

LOW-LEVEL ORGANIC IMMOBILIZATION

A solidification process consisting of an in-drum mixer, electric hoist, drum pump, and 55-gallon drum mixing station was used in a test system for the low-level organics. The agitator used to mix the waste was a Lightnin, Model XJQ-174, 2-hp, variable-speed mixer with two 11.3-inch A310 impellers. The electric hoist lowered the agitator

TABLE 1. Solidification of Dry Sludge With Type I Portland Cement

Sample	Formulation (wt%)		
	Dry Sludge	Portland Cement	Water
1	41.9	16.6	41.5
2	40.0	30.0	30.0
3	50.0	15.2	34.8
4	40.8	20.4	38.8
5	47.6	23.9	28.5
6	40.0	30.0	30.0
7	55.0	20.0	25.0
8	55.0	15.0	30.0
9	35.0	40.0	25.0
10	33.0	33.0	34.0

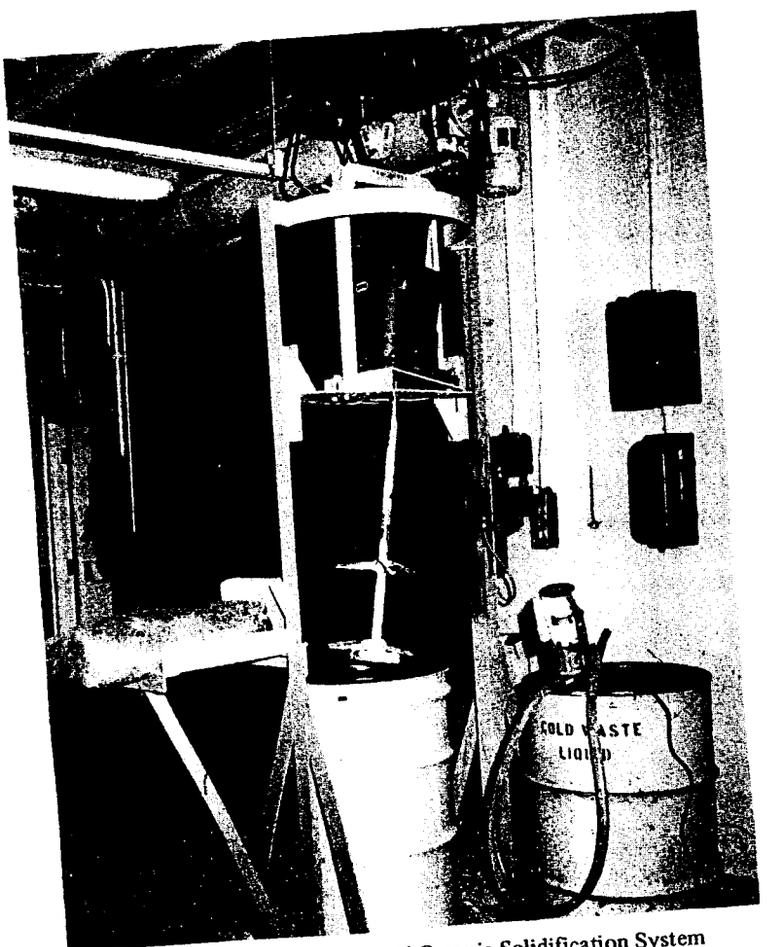

FIGURE 1. Low-Level Liquid Organic Solidification System

at a 12° angle from vertical into the drum. Waste liquid was introduced into the drum with the drum pump, and the quantity of liquid was determined by measuring the liquid level with a dip stick and calculating the volume. Figure 1 shows the low-level system consisting of a hoist, agitator, and cement loading platform.

The batch process began by adding a predetermined amount of oil into the waste drum, lowering the agitator, and setting the speed at approximately 225 rpm. Envirostone emulsifier and water were volumetrically measured and added to the oil. The emulsifier is needed to form an oil/water emulsion, since the binder reacts with the water to encapsulate the oil into the monolith. Envirostone gypsum cement was added to the mixture and agitated at 150 rpm until the cement was completely dispersed. An accelerator was then mixed into the matrix and the speed was increased to 240 rpm. Total mixing time was kept below 10 minutes to ensure that the agitator was not caught in the waste when hydration began.

Figure 2 depicts the low-level test system. Figures 3 and 4 show a typical test run cut from the rigid liner and the same sample sectioned. Approximately 57 drums were processed using the system. The optimum final waste form contained approximately 30 gallons of liquid organic waste, 7 gallons of water, 2 gallons of emulsifier, and 220 pounds of Envirostone. An average curing time

FIGURE 2. Low-Level Liquid Organic Solidification System

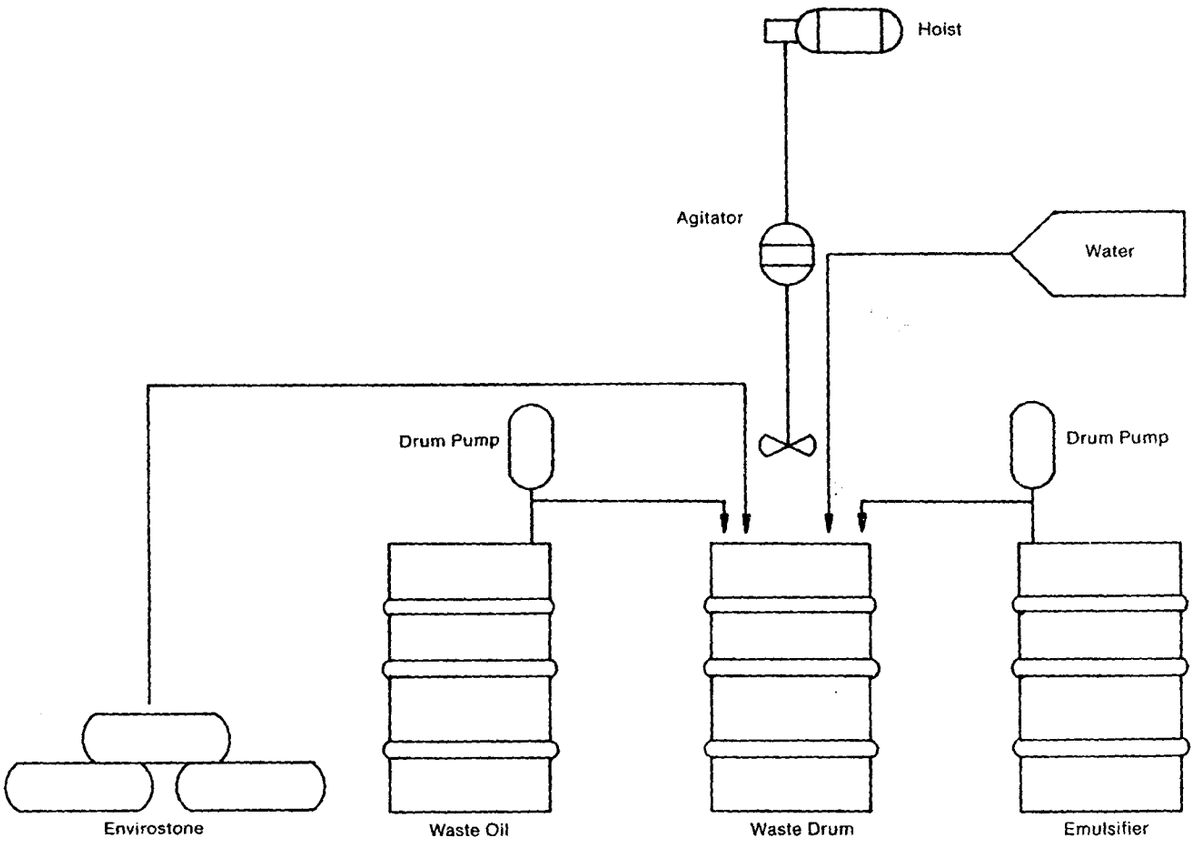

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FIGURE 3. Low-Level Liquid Organic Solidification System Sample

for the cast was approximately one day. Table 2 contains a summary of data collected from typical runs of the solidification process.

ORGANIC AND SLUDGE IMMOBILIZATION SYSTEM

The Organic and Sludge Immobilization System (OASIS) was developed to provide a dual function: (1) basis for studies on the solidification of wet precipitation sludges and (2) solidification of TRU organics. The concept for the OASIS was taken from the solidification system currently used at the Mound Facility to cement low-level sludges produced from carbon filters. Furthermore, the Mound system closely resembled the low-level organics solidification test system discussed above.

To accommodate the existing processing equipment in the Liquid Waste Processing Facility, the OASIS was designed as a remotely located system in which waste drums can be bagged onto a cementation glovebox without disruption to the existing process.

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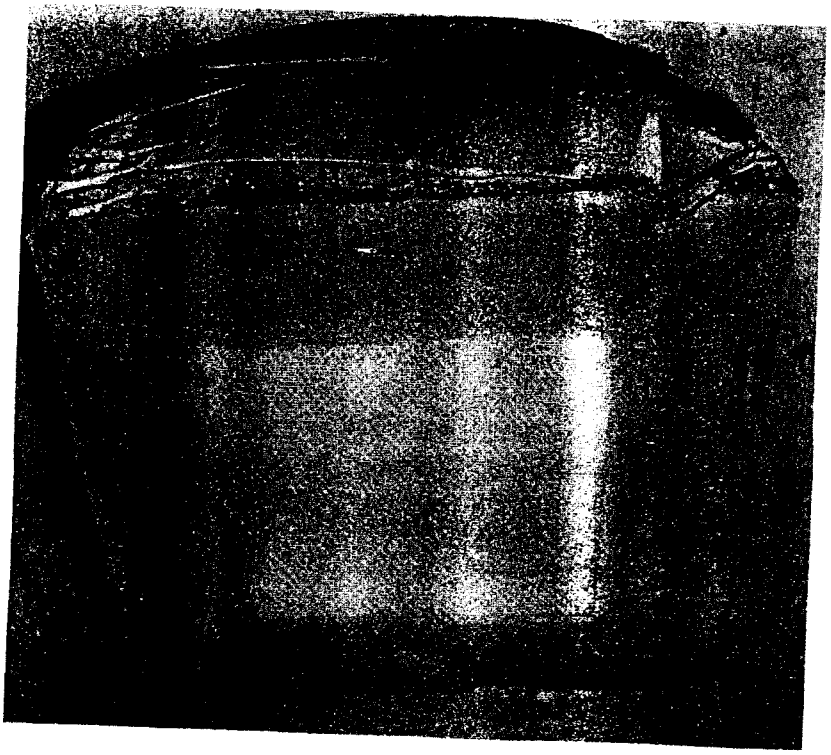


FIGURE 4. Sectioned Sample 29657-09

TABLE 2. Low-Level Liquid Organic Envirostone Solidification

	Waste Stream (Vol%)			Additives (Vol%)			
Test Run	Waste Oil	Lathe Coolant	Solvent	Water	Envirostone	Emulsifier	Accelerator
7	50.0	NA	NA	0	45.0	5.0	0
17	NA	NA	49.6	4.5	40.0	4.5	1.0
18	NA	NA	56.7	9.5	28.4	4.7	0.7
19	NA	NA	52.9	8.8	33.0	4.4	0.9
16	42.2	NA	NA	8.5	44.3	4.2	0.8
20	52.9	NA	NA	8.8	32.0	4.4	1.9
24	NA	NA	57.3	4.4	33.0	4.4	0.9
26	NA	NA	57.3	4.4	33.0	4.4	0.9
28	NA	61.3	NA	4.7	28.3	4.7	1.0
30	NA	62.0	NA	4.8	28.6	3.6	1.0
32	NA	61.3	NA	4.7	28.3	4.7	1.0
33	NA	63.1	NA	4.5	27.0	4.5	0.9
34	NA	63.1	NA	4.5	27.0	4.5	0.9
41	62.5	NA	NA	4.5	26.8	4.5	1.3
42	62.5	NA	NA	4.5	26.8	4.5	1.3

The system consists of a glovebox with a retractable agitator mounted through the top, load cells, moisture detectors, cement storage hoppers, and a cement transfer station. The process is controlled using two separate computer systems. Station I monitors the weight and moisture content of the sludge as it is cut from the rotary drum filters, and Station II controls the cementation process. Figure 5 depicts the OASIS process.

The waste container package used in the process for solidifying sludge consists of two polyvinyl chloride (PVC) O-ring bags and a metal mesh retaining ring positioned inside the rigid liner and white 55-gallon drum. The PVC O-ring bags are used as the primary containment for the waste and must be protected from the agitator; the metal retaining ring is used for that purpose. The retaining ring is 16-gauge mild steel, 22 inches long with 1/4-inch mesh. A 2-inch wide, 11-gauge stainless steel band is welded onto each end of the retaining ring to prevent any sharp corners from tearing the PVC bags. A double O-ring bag waste drum is used with the sludge solidification process allowing the drum to be bagged onto the vacuum filter glovebox, cut off, and then bagged onto Station II, the cementation glovebox.

Station I

Station I monitors the weight of the filter cake as it is cut from the rotary vacuum filters. The system measures the moisture content of the sludge with a Moisture Systems Quadra-Beam II Model 475 infrared moisture analyzer. The sludge is weighed with a National Control Incorporated (NCI) Model 3142 low-profile platform scale equipped with a Model 5787 digital weight display, mounted below the filter glovebox. When the weight of the sludge collected in the drum reaches a predetermined set point, the filter cake cutting blade stops and the system alarms, alerting operators to remove the drum.

The moisture analyzer is a near-infrared photometric analyzer that performs analyses with fixed wavelengths of near-infrared energy. The analyzer measures moisture content by focusing a pulsating light beam on the sample to be measured. Optical infrared filters are then used to create, measure, and reference beams, which are either absorbed or reflected by the water in the sample. The reflected energy from the sample illuminates a detector providing an electrical signal that is proportional to moisture content.

Station II Process Equipment

Station II is the immobilization process for both the liquid organics and the sludge. The cementation process consists of a glovebox, a Lightnin XJQ-174AM agitator, hoist, NCI platform scale, storage bins for portland cement and Envirostone, and a computer control system. Cement is added to the storage bins with a Dynamic Air pneumatic transfer system located outside the process area. Figure 6 shows the Dynamic Air powder pump in the outside area. Cement addition to the powder pump is a manual operation requiring the operator to place an appropriate amount of cement in the transfer hopper and transport it to the storage bin.

The agitator and hoist are attached to a totally enclosed structure on top of the cementation glovebox. The hoist lowers the agitator through a seal mounted in the glovebox ceiling. The weights of the components are determined by the low-profile platform scale located under the glovebox. Cement is transported by gravity from the storage bins to the waste drum through a four-inch transfer pipe, which is sloped 45° from the glovebox. Aerators are used to fluidize the cement to facilitate solids flow through the pipe. An enclosed air-operated pinch valve, Red Valve Type A with a gum rubber sleeve, is used as the discharge valve on the cement bins. A butterfly valve was placed in series with the pinch valve in case of loss of plant air to ensure contamination containment. Figures 7 and 8 were taken during construction and show the cementation glovebox and cement storage bins.

Station II Process Operation

Processing sludge on the OASIS begins by bagging the waste drum onto the cementation glovebox. The control system retrieves the moisture content and weight for the drum from the information system. All data for a specific drum are stored using

FIGURE 5. OASIS Process

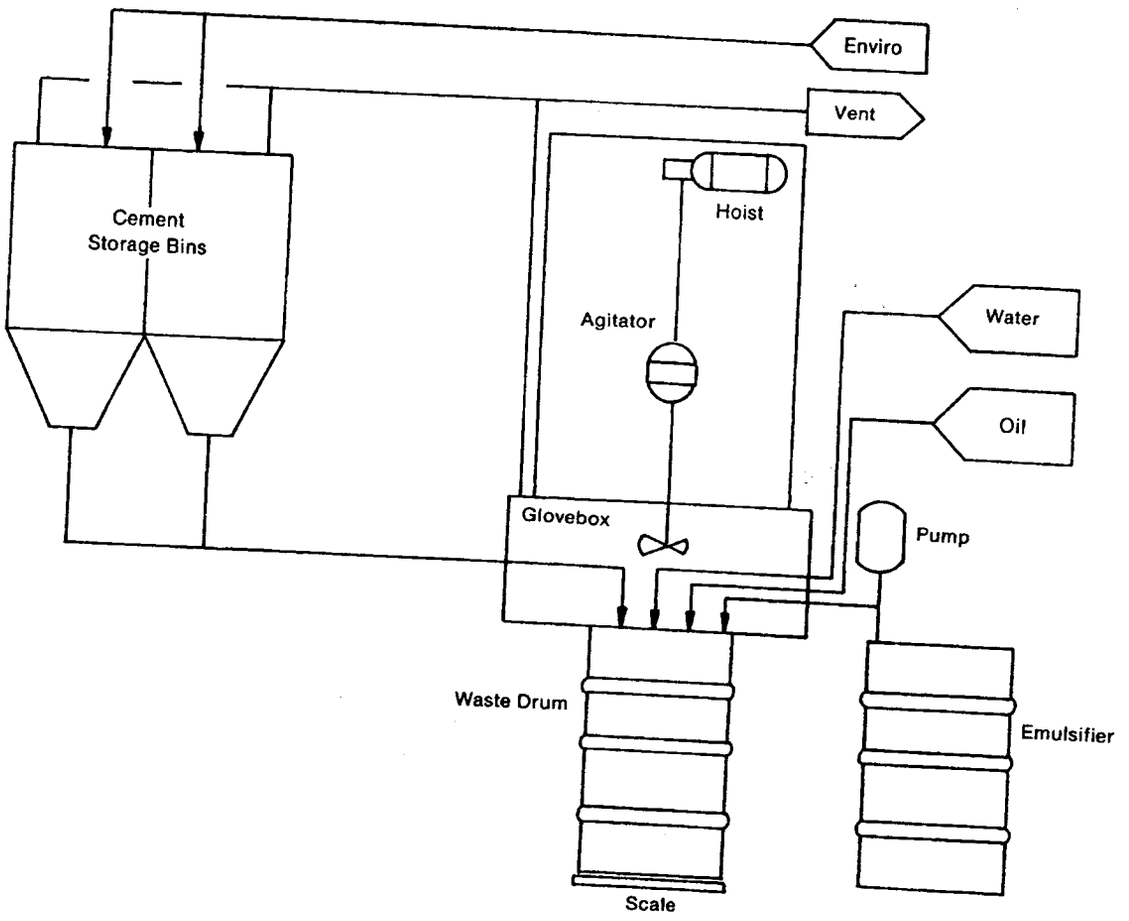
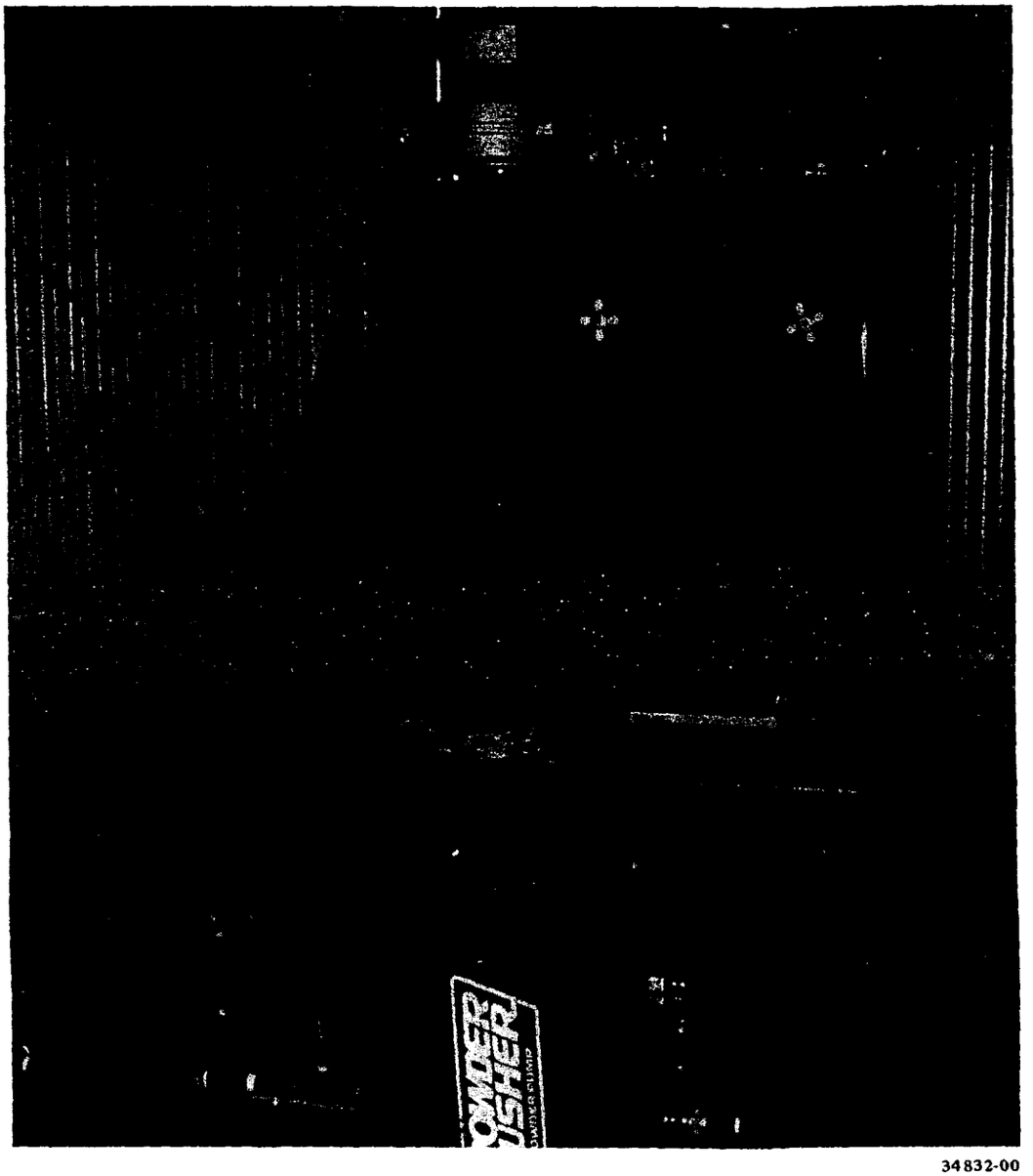


FIGURE 6. OASIS Pneumatic Transfer System



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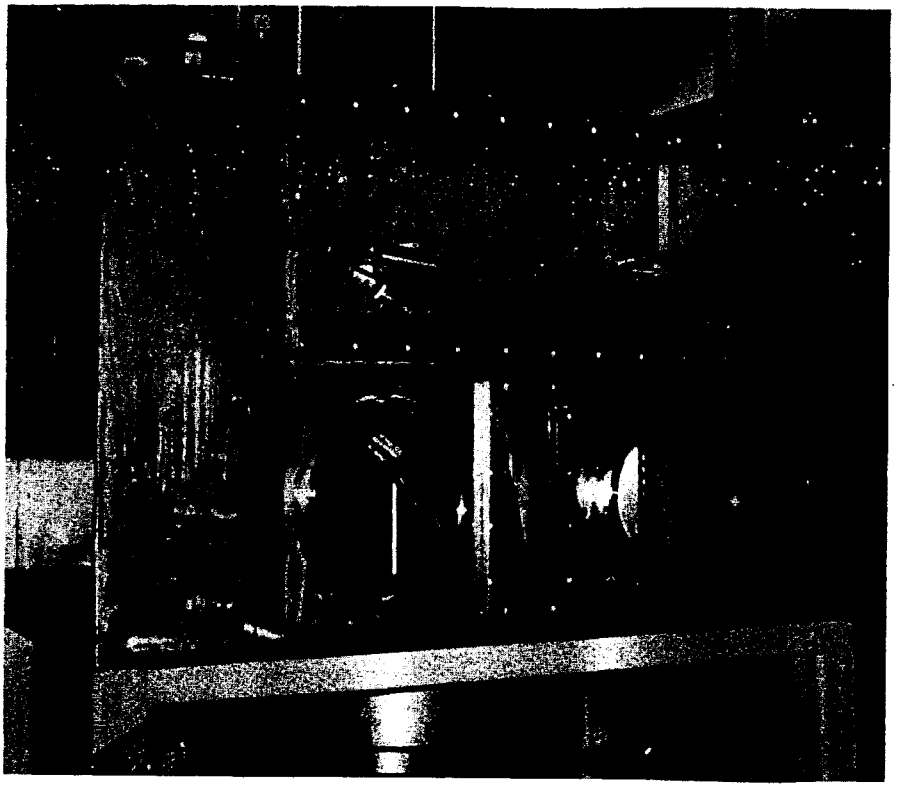

FIGURE 7. OASIS Cementation Glovebox 34833-00

a unique five-digit drum number that accompanies the drum from time of delivery through shipment offsite.

Solidification parameters are preset in the control system maintenance program prior to the operation. These parameters include weight percentages of water and portland cement in the final waste form. The control system determines the amount of water in the sludge exceeding that measured at Station I to achieve proper waste ratios. The water addition is then made using the platform scale to measure the amount.

The agitator lowers and starts at a preset speed. Mixing time is also a predetermined parameter, but no longer than five-minutes. Cement is added to the mix and the speed of the agitator is increased to facilitate dispersement. Table 3 shows the results of the sludge test runs. All runs produced acceptable final waste forms.

Organic waste processing on the OASIS is similar to the low-level organic operation. Liquid waste is added to the waste drum to a predetermined set point entered into the control system program. Envirostone emulsifier and water are then added to the mix in quantities determined by the program. The agitator is lowered into the drum and started; the speed is also preset in the control system program. The mixture is agitated 120 seconds before Envirostone cement addition begins. Envirostone gypsum cement is added to the mix through the four-inch transfer line, and the addition requires approximately two minutes. A 90-second mix time allows dispersement of cement throughout the matrix. Mix time for the cement is kept to a minimum because of the fast initial set time resulting from addition of an accelerator. The accelerator is added to the Envirostone in the cement transfer station and is transported and stored in the cement bins.

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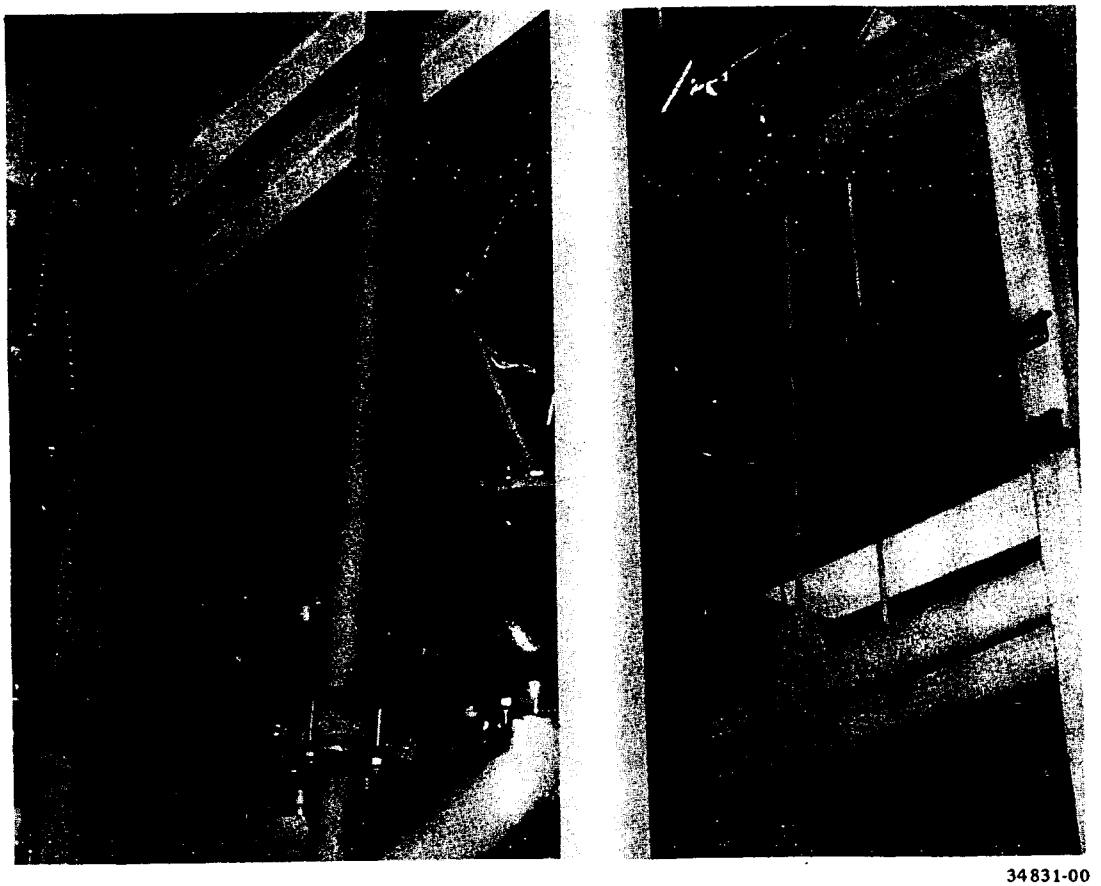

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FIGURE 8. OASIS Cement Storage Bins

TABLE 3. OASIS Sludge/Portland Cement Immobilization

	Formulation (wt%)		
Sample	Sludge	Water	Cement
1	39.7	30.1	30.2
2	40.0	30.0	30.0
3	45.0	30.0	25.0
4	50.0	25.0	25.0
5*	40.0	30.0	30.0
6*	40.0	30.0	30.0

*Moisture content estimated at 15 wt%.

Table 4 shows weight percent of the components during the TRU organic waste test runs. The highest waste loading was 39 wt% oil, 2 wt% emulsifier, 15 wt% water, and 44 wt% Envirostone cement. This corresponds closely with the data collected on the low-level organics test system.

TABLE 4. TRU Organic Waste Envirostone Solidification

Sample	Formulation (wt%)			
	Oil	Envirostone	Water	Emulsifier
1	36.0	47.0	15.0	2.0
2	33.0	50.0	15.0	2.0
3	32.7	51.2	14.8	1.3
4	34.0	50.0	14.5	1.5
5	33.7	49.4	14.9	2.0
6	33.7	49.4	14.9	2.0
7	39.3	43.8	14.7	2.2
8	36.8	46.5	14.7	2.0

PRODUCTION EXPERIENCE

Some minor problems were encountered by the development group during startup testing of the OASIS. The problems involved three areas: glovebox pressurization, free liquids in the drum, and visibility into the glovebox. Solutions to these problems are in progress or have been fully implemented.

The first area of concern involved pressurization of the cementation glovebox during transfer of cement into the waste drum. The gloveboxes at RFP are vented through a dedicated vent system to facilitate contamination containment: consequently, the gloveboxes are maintained at 0.5 inches Hg vacuum. At higher than 0.5 inches Hg vacuum, the boxes are considered pressurized.

The rapid addition of 1.25 cubic feet of cement through the glovebox in the waste drum caused a displacement of air in the cementation glovebox and transfer line. The ventilation system could not evacuate the air displacement, causing pressure inside the OASIS cementation glovebox to rise above 0.5 inches Hg vacuum. The method currently used by operations to overcome this problem is to increase glovebox pressure to 2.0 inches Hg vacuum during the cement addition. The increase in pressure in the box then remains within safe operating limits during cement transfer.

The second problem encountered during startup was the presence of free liquids trapped in folds of the O-ring bag. This problem still exists, but the rejection rate due to free liquids has been kept at approximately 3%. This was accomplished by instituting some minor procedural changes, including adding the water required for organic setups to the waste drum before bagging the drum onto the glovebox and raising the O-ring bag to remove slack. Also, a vacuum tube is inserted between the inner and outer bags to keep the O-ring bag from collapsing. This procedure has eliminated use of an expanded metal retaining ring discussed earlier.

The glovebox currently used with the system provides limited access to the waste drum and limited viewing of the waste drum contents. Splashing the Envirostone mix onto the glovebox windows also occurred, furthering the viewing problem. The modifications requested by Operations include a splash guard that can be placed over the drum bag port, a reconfigured glovebox, and a port for adding Envirostone accelerator.

Other improvements have also been requested including replacing the electric hoist that lowers the agitator into the waste drum. The present electric-powered chain drive system experiences frequent breakdowns, and there is concern that the agitator will fail to retract from the waste mix. Two possibilities for the new system are (1) a lifting screw attached to the agitator support frame or (2) a hydraulic system. The screw system is the most likely replacement for the present electric hoist because of safety concerns associated with using pressurized hydraulic fluid in a contaminated area.

The system has been in operation since October 1984. Some changes in composition of the organic feed stream have been noticed. In the initial test runs, the waste oil had low concentrations of solvent. The amount of solvent in the waste oil has increased, resulting in a change in immobilization parameters. Currently, less than 1% Envirostone emulsifier and up to four times more Envirostone accelerator are added to the waste mixture. Operations also noted increased off-gassing in immobilized waste, which increases the time the waste drum must remain on the glovebox for drying. A manual control system was added to allow operators to override the computer system on the cementation process. This was necessary

to handle changing amounts of solvents in the waste stream.

CONCLUSIONS

The old waste processing facility now has the capability to immobilize transuranic waste oil and sludge and low-level waste oils to comply with the WIPP-WAC and Nevada Test Site waste criteria. Modifications were implemented to increase the reliability and throughput capacity of the OASIS system. The OASIS has handled waste loadings containing up to 30 gallons of oil per drum and as many as seven drums per eight-hour shift.

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PR5, WS2, WS4, WS10, S16	1-26	Description of the waste streams at RFP performed to provide information for the Waste Certification Program. Involved studying the types and amounts of retrievable TRU waste frm RFP and INEL. Study covered the eight year period from June 1971 to June 1979. Discussion of document control practices in the mid-1970s. Discussion concerning waste packaging, including container type and packaging procedures used. Pgs. 3-7 Discussion of waste categories (IDCs). Appendix A - Tabulated summaries of major waste categories shipped to INEL. Appendix B - RFP Content Codes and Descriptions.

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HISTORY OF ROCKY FLATS WASTE STREAMS

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HISTORY OF ROCKY FLATS WASTE STREAMS

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HISTORY OF ROCKY FLATS WASTE STREAMS

Lori L. Luckett, Alice A. Dickman,

Charlene R. Wells, and Donald J. Vickery

ABSTRACT

An analysis of the waste streams at Rocky Flats was done to provide information for the Waste Certification Program. This program has involved studying the types and amounts of retrievable transuranic (TRU) waste from Rocky Flats that is stored at the Idaho National Engineering Laboratory (INEL). The information can be used to estimate the types and amounts of waste that will need to be permanently stored in the Waste Isolation Pilot Plant (WIPP). The study covered mostly the eight-year period from June 1971 to June 1979. The types, amounts, and plutonium content of TRU waste and the areas or operations responsible for generating the waste are summarized in this waste stream history report.

From the period studied, a total of 24,546,153 lbs of waste containing 211,148 g of plutonium currently occupies 709,497 cu ft of storage space at INEL.

INTRODUCTION

The objective of this study was to generate a waste-history file that would identify and characterize transuranic (TRU) waste produced at the Rocky Flats Plant and stored at the Idaho National Engineering Laboratory (INEL) since 1970. Transuranic waste is presently defined as waste contaminated with more that 10 nanocuries of TRU nuclides per gram of waste. This TRU classification was first used in the early 1970's. Most TRU waste originating at Rocky Flats is contaminated with plutonium, with the waste being generated primarily in plutonium fabrication areas and in the chemical processing facility. The Research and Development organization, Plutonium Analytical Laboratories, and other support groups generate lesser quantities of contaminated waste.

The TRU waste is packaged and shipped for storage at INEL where it is classified as retrievable, awaiting permanent storage in an approved repository. One proposed repository is the Waste Isolation Pilot Plant (WIPP) near Carlsbad, New Mexico. A recently issued Waste Acceptance Criteria (WAC) set forth by WIPP is considered a basis for acceptance of waste in a permanent repository. The study described in this report will aid in determining the certification status of past and present Rocky Flats waste against the WAC.

Internal shipping and handling procedures at the Rocky Flats Plant were obtained to aid in documenting the Plant's waste history. Plant procedures used prior to 1975 for inspecting TRU waste were discarded whenever a new procedure was issued that superseded the previous one. After 1975, the Technical Writing Group was given the responsibility of distributing and upgrading the Plant procedures. Also included in this task was the maintenance of a history copy of the procedures. All shipping and handling procedures prior to 1975 presumably had been destroyed; however, shipping and handling procedures, dated 1971, were found in the Quality Engineering System and Plans Office. These procedures correlated closely with those now in effect.

Data on Plant waste shipped off-site for storage was not kept until mid-1971 when a records-keeping effort was begun by Waste Management personnel; consequently, data on waste generation from 1970 to mid-1971 was not incorporated into the computer data base. Much of the data contained in this report was obtained from the Process Control Computer Operations Group. Other information was collected from personnel and records in Production Control, Data Processing, Waste Operations, Nuclear Materials Control, and from area supervisors. While most of the information reported here pertains to the period 1971-1979, current activities also are included.

DISCUSSION

Waste Packaging

Container Condition

All TRU waste shipped from Rocky Flats to INEL during the 1970's was packaged in 30-gal drums, 55-gal drums, 4' X 4' X 7' boxes and 2' X 4' X 7' boxes (half boxes). Use of the 30-gal drums was discontinued in 1973; however, while they were in use, the 30-gal drums were often packaged inside the 55-gal drums. Prior to 1971, wooden crates were used for shipping TRU waste from the Rocky Flats Plant to Idaho. In 1971, improved waste packages came into use. These packages consist of plywood boxes coated with fiberglass reinforced polyester (FRP). The coating was applied to the boxes by Rocky Flats personnel until late 1971 when the Plant began purchasing FRP boxes from a vendor. This type of box is still being used. Another change in the acceptable waste shipping containers started in late 1975 when rigid liners were first used in the 55-gal drums.

All containers were and continue to be inspected prior to leaving the Rocky Flats Plant site. The inspection criteria consists of (1) satisfactory condition of container element, (2) absence of free liquids, (3) levels of radioactive contamination control being within Department of Transportation (DOT) and Rocky Flats Plant limits, and (4) waste containers being labeled properly.

Standard procedure for all 55-gal drums and the 2.3-mm-thick molded polyethylene drum liners require a visual inspection by the operator for damage prior to having waste placed in the drums. When a drum is full, the generator contacts Waste Management for disposal. Waste Management is responsible for visually inspecting the drum gasket and drum liner for damage and for final inspection approval of each waste container. After a drum has passed all inspection tests, it is sealed by Waste Management using the following procedure:

1. Place lid on drum
2. Assure gasket is in proper position for an airtight seal
3. Assure bolt is in line with seal
4. Seal

The boxes are composed of 3/4-inch-thick plywood and are coated with a 3-mm laminate of FRP. This coating serves several purposes. It is a fire retardant, it seals the crate against moisture, and it serves as a support, thus strengthening the crate. Prior to use, the crates are lined with 0.15-mm polyvinyl chloride (PVC) and a 1.3-mm fiberboard to protect the PVC from sharp edges in the waste. The boxes are visually inspected by an operator before he adds any waste. Waste Management personnel then inspect the boxes after they have been filled. To pass inspection, boxes must be judged satisfactory by both the operator and by Waste Management.

Waste Certification - Present Practices

Free Liquids: Waste Management personnel visually inspect the drums and boxes for free liquids prior to the containers being sealed. The procedure for checking drums has been to place a drum in a horizontal position with the bottom of the drum slightly elevated. This position helps toward determining that the drum contains no free liquids. Sealed drums are opened for this test, and those stored outside at freezing conditions are moved inside for at least 24 hours prior to the free-liquid test. Waste Management performs the free-liquid test as an essential step of overall inspection approval. Containers in which free liquid is present can pass inspection by adding an absorbent such as Oil Dri or cement, depending on the type of waste.

Radioactive Limits: Waste Management, with the aid of personnel from Health, Safety and Environment or from Health Physics, is responsible for measuring the level of radioactivity. All waste receptacles shipped off the Rocky Flats Plant site are subject to alpha and gamma radiation limits. These limits are determined by the Department of Transportation (DOT). The limits are

1. 250 counts per minute of fixed alpha radiation
2. 20 disintegrations per minute of alpha radiation

3. 200 millirem surface gamma count

Label: Waste Management must also inspect the label of a waste container to ensure that the label is correct. The label contains the following information:

1. content code
2. prefix and/or building and room number of generation
3. radiology test results
4. beryllium content
5. line generated or non-line generated
6. total weight and plutonium content
7. seal date
8. supervisor certification

Each of these will be discussed in turn.

The content code is a three-digit entry that specifically identifies the type of material in the container. Appendix B is a complete listing of content codes used for waste shipped to INEL from Rocky Flats during the period 1971-1979.

Rocky Flats identifies its general stream operations by account numbers. Prefix numbers, which provide a further breakdown of account numbers, are used to identify a specific operation within the general account stream. Since 1970, prefix numbers have been discontinued when an operation is discontinued; however, the same numbers have sometimes been reassigned to another operation. In cases where one prefix is assigned to more than one operation, the date of the package can separate which operation the prefix is describing. Some labels do not give the prefix; instead, it gives the room and building number where the waste is processed. This serves the same purpose as the prefix; it locates the source of the waste stream.

Radiology tests are checked to make certain that radiation from the waste is within the limits previously described. Beryllium contaminants are noted although there are no shipping limits. The waste also is marked as line generated or non-line generated. Line generated waste is generated in a process, such as plutonium recovery sludge. Non-line generated waste is considered to be suspect waste, such as laundry waste.

The weight and plutonium content are checked to make certain both are within the shipping limits. These limits are as follow:

Container	Maximum Weight (lbs)	Maximum Pu Weight (g)
55-gal drum	800	200
30-gal drum	800	200
4' X 4' X 7' box	5000	560
2' X 4' X 7' box	5000	280

Although the maximum shipping weight for plutonium in boxes is 5 g/cu ft, the rule-of-thumb limit for a box is 350 g. The waste is retrieved if there is more than 350 g of plutonium in a box. The half-box legal limit is 280 g of plutonium; however, waste contaminated with large amounts of plutonium is not shipped in half boxes but in the 4' X 4' X 7' FRP-coated boxes.

The waste package is sealed after Waste Management inspects the package and the shipping label. If the container passes inspection and the labeling information is correct and within shipping requirements, the label is signed and dated.

Waste Categories

Unleached Light Metals

The largest waste category is unleached light metals (Content Code 480). This category includes metals such as iron, copper, aluminum, and stainless steel, which are low enough in plutonium content that they are not processed through the leaching process of the plutonium recovery operations in Building 771.

The total volume of these metals, as shown in Tables 1 and 2,* is 308,829 cu ft, which represents 43.5 vol % of the total waste generated at the Rocky Flats Plant. The overall weight percent is 34.2 and the plutonium is 13.8 wt %.

Table 3 shows the major waste contributors of unleached light metals. Most of the light metals are equipment, such as glove boxes, from all areas of the Rocky Flats Plant. The equipment is too bulky to be stored efficiently, so it is sent to Size Reduction (Prefixes 389, 33, 776**) for compaction and treatment before being shipped to INEL. The major waste contributor to this category of unleached light metals is the Size Reduction area which accounts for 82.1% of the waste by volume. Plutonium waste having high radiation levels, which accounts for 75.7% of the plutonium in this category, is packaged in FRP boxes (Prefix 389). Although the equipment has been through Size Reduction, the packaging is still somewhat inefficient, which accounts for the volume percent (43.5) in this category being larger than the weight percent (34.2).

Since 1972, the first year for which complete data are available, there has been a decrease in the volume, weight, and plutonium content in the unleached metals category. These decreases reduced the volume and mass by a factor of 4. There are two reasons believed to be the cause of these reductions. First, the cleanup of Building 776 after the 1969 fire added a large amount to this category, causing an increase through 1972. Secondly, there was a backlog of metal awaiting treatment prior to shipment, when the discard limits were lowered. This allowed more metal to be transported without treatment.

Combustibles

Combustibles are divided into two categories, dry (Content Code 330) and wet (Content Code 336). Dry combustibles are the Plant's second largest waste type, by volume, stored at INEL. They account for 72,902 cu ft of waste (10.3 vol %) and 1,404,797 lbs of waste (5.7 wt %).

The major waste sources are shown in Table 4 for dry combustibles and in Table 5 for wet combustibles. Size Reduction accounts for the largest amount of combustible wastes; the Slow Non-Specification Recount (recycle) is the next largest contributor.

There are more sources of combustible waste than unleached light metals for two reasons. First, generation of combustible waste occurs plantwide. Secondly, combustibles are more easily disposed of by individual areas because special treatment is not required, as is the case with unleached light metals.

The amount of dry combustibles generated has increased steadily over the years, and the amount of wet combustibles generated has steadily decreased. There are two apparent reasons for these changes. One is better segregation between wet and dry combustibles. With the addition of a small amount of wet combustibles to a package containing dry combustibles, the package has been reclassified as wet combustibles. The second reason is that dry combustibles generally are below the discard limit and therefore are more easily disposed of. The wet combustibles, in contrast, are usually above the discard limit and therefore more difficult to dispose of.

Waste that contains low amounts of plutonium or waste that contains no plutonium but is generated in a plutonium production area is considered TRU-suspect waste and is handled in the same manner as other TRU wastes with higher amounts of contaminants. The dry combustible category consists primarily of suspect waste.

HEPA Filters

High Efficiency Particulate Air (HEPA) filters (Content Code 490) are used throughout the Plant and are the third largest volume contributor, with 8.9 vol % of the total waste. Table 6 shows the sources of the HEPA filters. Since these filters are bulky and inefficient for shipping, they are sent from production areas of the Plant to Size Reduction which accounts for 6.2 vol % of the overall waste (44,057 cu ft) and 12.5 wt % of the waste

*All tables are presented in Appendix A.
**See Table 3.

93.9 vol % of all filters, a total of 59,472 cu ft. The filters with higher plutonium content are packaged in FRP boxes, which account for 84.4 vol % of the total HEPA filter waste. Filters collected during a PuF cleanup following the 1969 fire are another source of HEPA filters and account for 2.0 vol % of the total filter waste.

Plutonium weight remains fairly constant as do the percentage contribution of HEPA filters to the total waste in each year. The yearly weight and volume of HEPA filters decreased, however, over the years studied. There are several reasons for this decrease. The building fire in 1969 caused the total HEPA filter disposal to be high through 1972 because the plenums were rebuilt and all of the old filters were discarded. Also, during the early 1970's, several building filtering systems were upgraded, which resulted in high totals during 1973 and 1974.

Plutonium Recovery Wastes

Four of the major TRU waste categories stored at INEL from Rocky Flats are liquid wastes from the plutonium recovery operations that have been treated to form a sludge—a solid suitable for shipping. Waste liquids are collected through process drain networks and stored in holding tanks in the process areas. These tanks are sampled to determine what subsequent treatment is required. The liquid waste is then transferred by pipeline or by truck to the appropriate treatment tank. In certain cases, such as R&D laboratories that generate small amounts of contaminated liquid, the liquid is accumulated in suitable containers and transferred by truck to the treatment area. The TRU liquid waste categories are

First Stage Sludge - Content Code 1

Second Stage Sludge - Content Code 2

Grease - Content Code 3

Special Setups - Content Code 4

The first stage of the solidification operation is a chemical precipitation of radioactive elements from the liquid waste. The chemicals used are ferric sulfate, calcium chloride, magnesium sulfate, and coagulates. The resulting sludge, categorized as first stage sludge, is filtered and discarded into a drum. The sludge in each drum is then sampled and analyzed for radioactive material content. First stage sludge is packed with cement that absorbs any free liquids.

Effluent from the first stage treatment is filtered and sent to the second stage batch process where it is mixed with high-nitrate radioactive materials. The same chemicals used in the first stage chemical precipitation process are used for precipitation in the second stage. The second stage batch process handles radioactive high-nitrate waste. Radioactive low-nitrate wastes are treated in a continuous process that is similar to the batch process in treatment, filtration, packaging, and sampling. The resulting precipitate is packaged in drums with cement and referred to as second stage sludge. Samples of second stage sludge are taken at random intervals during the shift and are analyzed for radioactive materials. Effluent from the second stage treatment unit is sampled to ensure that radioactivity limits are met. The effluent is then transferred to evaporation ponds for concentration of the nitrate solution.

Contaminated liquid wastes that are not compatible with the chemical precipitation and evaporation treatments are solidified by mixing the liquids with a cement absorbent. The liquid waste is made into a basic solution and put into a drum that contains the absorbent mixture. The moisture is absorbed by the cement mixture, which then hardens to form a solid mass suitable for shipping. These waste drums are called Special Setups.

Organic liquid wastes, such as contaminated lathe coolant, are transferred from process areas to Building 774 feed tanks for the organic solidification line. These wastes are then mixed with solidifying agents to form a dry solid that is discharged into 55-gal drums. The resultant product is categorized as Grease.

Second stage sludge is the fourth largest category of waste shipped from Rocky Flats for storage at INEL. (See Table 1.) It accounts for 46,351 cu ft (6.5 vol %) and 3,385,472 lbs (13.8 wt %). The next largest waste contributor is first stage sludge,

which accounts for 6.2 vol % of the overall waste (44,057 cu ft) and 12.5 wt % of the waste (3,073,238 lbs). The plutonium content of first stage sludge is about 15 times greater than that of second stage sludge. This is expected since it is the primary plutonium removal treatment. Grease follows first stage sludge with 4.4 vol % and 9.2 wt % (30,289 cu ft and 2,228,119 lbs, respectively). Special Setups contribute 1.1 vol % and 2.7 wt % of the total waste (7,739 cu ft and 653,876 lbs, respectively).

Tables 7, 8, 9, and 10 show the sources of second stage sludge, first stage sludge, grease, and special setups, respectively. It would seem logical to expect all of the first stage sludge to come from the first stage liquid waste treatment area and similarly the other wastes to come from their area. Although the vast majority of the wastes (more than 99.9%) do this, there are a few drums that do not conform to this expectation. There is no reasonable explanation for this, and a labeling error is assumed to be the explanation.

The percent of yearly waste remains relatively unchanged over the years studied. This indicates an overall decreased production of waste at the Rocky Flats Plant during the years highlighted in this report (1971-1979).

Blacktop, Concrete, Dirt, and Sand

Content Code 374 includes dirt, concrete, blacktop, and sand that have been excavated for construction work. This accounts for 23,517 cu ft, or 3.3 vol % of the TRU waste generated at Rocky Flats and stored at INEL. Sources of this waste are shown in Table 11. The largest source of this waste category, 68.8 vol %, is material from the lip area beside the blacktop pad that covers contaminated soil near the east gate of the Rocky Flats Plant. This does not contain a detectable amount of plutonium weight. Size Reduction areas account for 20.9 vol % of the waste, 7.6% of this being packaged in FRP boxes.

The remaining 10.3 vol % comes from such sources as maintenance, laundry, and utility areas. The liquid waste treatment area and the slow side of the plutonium recovery area in Building 771 are also contributors, as well as other areas. All waste in the dirt, concrete, blacktop, and sand category was collected from 1973 to 1977. Most of this was collected in 1976 and 1977 when excavation around the blacktop pad was performed.

Plastics and Non-Leaded Rubber

Plastics [e.g. polyvinyl chloride (PVC), teflon, and vinyl] and non-leaded rubber are grouped together under Content Code 337. These materials contribute 11,948 cu ft to the TRU waste shipped for storage at INEL from Rocky Flats. This quanity represents 1.7 vol %, 1.2 wt %, and 1.0 plutonium weight percent of all TRU waste from Rocky Flats during the 8 yrs studied. (See Table 1.)

Table 12 shows the major sources of plastics from the Rocky Flats Plant. The Special Setup operations of the liquid waste treatment facilities in Building 774 account for 25.5 vol % of the plastic waste. The slow recycle (recount) side of the plutonium recovery facilities accounts for 14.7 vol %, the fast side accounts for 3.2 vol %, and the Size Reduction areas account for 15.9 vol % of the plastics. The laboratories and chemical operations in Building 771 supply another 10.5 vol %, and 7.6 vol % is attributed to maintenance, laundry, and utilities. Of the remaining sources of plastics and unleaded rubber, each source contributes less than 1 vol % to the total quantity of waste in this category. The diversity of the sources of plastics show that plastics, like wet and dry combustibles, are an easily handled waste form; therefore they are not sent to Size Reduction for treatment prior to shipping.

The volume, weight, and plutonium weight of plastics and unleaded rubber, as well as their respective percentages of the yearly waste, have decreased steadily over the years.

Raschig Rings

Raschig rings used at Rocky Flats are hollow glass cylinders containing boron, a neutron absorber. Raschig rings are used in liquid-holding tanks in various areas of the Plant, and serve to prevent

criticality in liquid solutions that have a high concentration of neutron-emitting particles, such as plutonium. Raschig rings that contain insufficient amounts of plutonium to warrant recovery are packaged as waste without any pretreatment. These rings are grouped together in Content Code 441 (Unleached Raschig Rings). Unleached Raschig rings account for 11,390 cu ft of the waste stored at INEL from Rocky Flats. This amount represents 1.6 vol %, 1.2 wt %, and 5.9 plutonium weight percent.

Major waste contributors of unleached Raschig rings are given in Table 13. The major contributors are the plutonium recovery areas (Prefix Codes 2 and 5), which accounts for 74.6 vol % of this category. The remaining 25.4 % of the Raschig rings come from areas that include the R&D Chemistry Laboratory's process waste, R&D liquid, Building 707 Foundry Operations, and Size Reduction areas.

An increase in unleached Raschig rings shipped from Rocky Flats to INEL in 1973 resulted from a change in Nuclear Safety rules at Rocky Flats requiring that Raschig rings be changed more often. In 1975 the discard limits were changed, and Raschig rings that earlier would have undergone treatment prior to storage were shipped without treatment. Since 1975, the volume of Raschig rings has been decreasing, corresponding to the decreased generation of plutonium production solutions.

Insulation and Chemical Warfare Service Filter Media

A total of 10,402 cu ft (1.5 vol % of insulation and Chemical Warfare Service (CWS) filter media (Content Code 338) was shipped between 1971 and 1976 from Rocky Flats for storage at INEL.

The sources of insulation and CWS filter media are shown in Table 14. Size Reduction areas account for 84.0 vol % of this category. Only 17.2 vol % of this waste category is packaged in FRP boxes, indicating a low plutonium level; 11.3 vol % is from Building 771 Plutonium Recovery–Slow Side (Prefix 2).

The insulation and CWS filter media category contributed approximately 4 vol % of the total yearly waste in 1973 and 1974. In 1972, 1975, and 1976, small quantities of this waste category were found in the yearly waste stream. After 1976, this category was completely phased out and the waste was incorporated into cemented insulation and filter media, Content Code 376.

Other Waste Types

All of the waste categories, divided by content codes, that contribute more than 1.0 vol % of the total Rocky Flats TRU waste stored at INEL have been tabulated and discussed previously in this report. The "other" waste categories, collectively, contribute 8.4 vol %, 8.5 wt %, and 50.8 plutonium weight percent to the total waste. The waste is classified into the more narrow categories of glass, brick and concrete, graphite, dirt and sludges, filters, metal, hard and soft LSA* material, resins, ash, rubber, and salt, as shown in Table 2. These are listed in order of decreasing volumes.

SUMMARY AND CONCLUSIONS

All waste packaged for storage must pass inspection before being shipped off the Rocky Flats Plant site. This inspection ensures that the containers are in satisfactory condition, there are no free liquids present, the levels of radioactive contamination are within specified limits, and that the container is properly classified and labeled. This waste, having met all criteria, is then shipped to INEL for storage until the proposed repository is completed. With the storage data now computerized, coupled with content codes and prefixes, it is significantly easier to discover the type of material packed in a specific container, where that waste stream originated, the primary contaminants and their weight, the weight of the container, and the date the container was shipped for storage.

*LSA - Low Specific Activity. This term is defined under Content Code 900 and 950 in Appendix B.

Waste shipped from Rocky Flats to INEL for storage has been categorized by the type and source of the waste. This report summarized the volumes, weights, and plutonium weights of the waste by categorizing the waste into groups having similar content. Within the groups that categorize the waste by type, this report sub-categorizes the waste by its source (prefix). The Computer Center can provide information on any combination of content code and prefix. Over the years, the amount of TRU waste shipped for storage at INEL from Rocky Flats has decreased steadily in volume, weight, and plutonium weight.

APPENDIX A

Tabulated Summaries of Major Waste Categories Shipped to INEL

Appendix A contains summaries, in tabular form, of the waste stream categories sent to INEL for storage from June 1971 to June 1979. Table 1 shows the volumes, weights, and plutonium weights of TRU waste shipped from Rocky Flats to INEL by classification of waste type in order of decreasing volume. Table 2 shows the generalized breakdown of waste classified as "Other" in Table 1, also in the order of decreasing volume. Tables 3-14 show the major sources of each waste stream of the major waste category, again in the order of decreasing volume.

Volume and volume percent of the major waste categories are by calendar year in Table 15. Table 16 shows the content weight and weight percent by calendar year. Mass and mass percent of the waste by calendar year is shown in Table 17.

TABLE 1. Major Waste Categories Shipped to INEL from Rocky Flats Plant 1971-1979

Content Code	Content Type	Volume (cu ft)	Volume (%)	Weight (lbs)	Weight (%)	Pu Weight (g)	Pu Weight (%)
480	Unleached Light Metals	308,829	43.5	8,386,295	34.2	29,194	13.8
330	Dry Combustibles	72,902	10.3	1,404,797	5.7	7,913	3.8
490	HEPA Filters	63,340	8.9	1,079,186	4.4	7,488	3.5
2	Sludge-2nd Stage	46,351	6.5	3,385,472	13.8	1,937	0.9
1	Sludge-1st Stage	44,057	6.2	3,073,238	12.5	30,481	14.4
3	Grease	30,829	4.4	2,228,119	9.1	1,921	0.9
374	Concrete, Blacktop, Dirt, and Sand	23,517	3.3	1,007,546	4.1	647	0.3
336	Wet Combustibles	18,554	2.6	469,649	1.9	2,509	1.2
337	Plastic (PVC, Teflon, Vinyl) & Non-Leaded Rubber	11,948	1.7	275,252	1.1	1,877	0.9
441	Raschig Rings-Unleached	11,390	1.6	300,679	1.2	12,428	5.9
338	Insulation & Chemical Warfare Service Filter Media	10,402	1.5	191,054	0.8	6,501	3.1
4	Special Setups	7,739	1.1	653,876	2.7	1,016	0.5
Other*		59,639	8.4	2,090,990	8.5	107,236	50.8
	TOTAL	709,497	100.0	24,546,153	100.0	211,148	100.0

*For further detail on this category, see Table 2.

TABLE 2. Generalized Classification of Waste Listed as "Other" in Table 1

1971-1979

Classification	Content Codes	Volume (cu ft)	Volume (%)	Weight (lbs)	Weight (%)	Pu Weight (g)	Pu Weight (%)
Glass	302, 370, 391, 392, 393, 440, 442, 464, 970	16,193	2.3	443,030	1.8	10,616	5.0
Brick & Concrete	371, 372	5,512	0.8	180,111	0.7	3,249	1.5
Graphite	300, 301, 310, 311	6,928	1.0	242,336	1.0	9.465	4.5
Sludges & Dirt	241, 290, 292, 375, 976, 978, 990, 995	6,782	1.0	282,605	1.2	3.103	1.5
Filter	335, 360, 361, 376	6,628	0.9	187,472	0.8	17.307	8.2
Metal	320, 481, 960, 980	8,267	1.2	366,321	1.5	20.095	9.5
Hard & Soft LSA*	900, 950	1,945	0.3	57,988	0.2	58	--
Resins	430, 431, 432	1,697	0.2	70,220	0.3	8.556	4.2
Ash	420, 421, 422	911	0.1	27,833	0.1	18.931	9.0
Rubber	339, 460, 463	4,557	0.6	220,696	0.9	15.619	7.4
Salt	5, 407, 410, 411	219	--	12,378	--	237	--
	TOTAL	59,639	8.4	2,090,990	8.5	107.236	50.8

*LSA-Low Specific Activity.

TABLE 3. Major Waste Contributors of Light Metals–Not Readily Leachable (Content Code 480)
1971-1979

Prefix	Title	Volume (cu ft)	Volume (%)	Weight (lbs)	Weight (%)	Pu Weight (g)	Pu Weight (%)
389	Size Reduction FRP Boxes	201,464	65.2	5,644,500	67.3	22,094.2	75.7
33	Size Reduction Construction	32,629	10.6	767,387	9.1	68.0	0.2
776	Size Reduction Non-Retrievable	19,351	6.3	425,713	5.1	286.7	1.0
777	Specification Assay Drums-Bulk Residue	11,480	3.7	242,010	2.9	18.4	0.1
771	R&D Drums-Bulk Residue Pu Cleanup	9,353	3.0	225,497	2.7	923.2	3.2
15	Non-Specification	5,271	1.7	111,150	1.3	26.3	0.1
11	Metallurgical Operations Casting	3,248	1.1	65,680	0.8	1.3	--
2	Non-Specification Recount, Slow	2,301	0.7	81,048	1.0	419.0	1.4
Other		23,732	7.7	823,310	9.8	5,356.7	18.3
	TOTAL	308,829	100.0	8,386,295	100.0	29,193.8	100.0

TABLE 4. Major Waste Contributors of Dry Combustibles (Content Code 330)
1971-1979

Prefix	Title	Volume (cu ft)	Volume (%)	Weight (lbs)	Weight (%)	Pu Weight (g)	Pu Weight (%)
389	Size Reduction FRP Boxes	55,167	75.7	919,210	65.4	5,468.5	69.1
2	Non-Specification Recount, Slow	3,969	5.4	91,498	6.5	459.0	5.8
90	Solid Waste NMC	3,844	5.3	136,949	9.7	757.0	9.6
15	Non-Specification	2,374	3.3	57,597	4.1	155.0	2.0
17	Mtce., Laundry, Utilities	1,286	1.8	31,724	2.3	21.0	0.3
33	Size Reduction Construction	803	1.1	17,905	1.3	2.9	--
771	R&D Drums-Bulk Residue Pu Cleanup	374	0.5	27,026	1.9	197.0	2.5
Other		5,085	6.9	122,888	8.8	2,852.8	10.7
	TOTAL	72,902	100.0	1,404,797	100.0	7,913.2	100.0

TABLE 5. Major Waste Contributors of Wet Combustibles (Content Code 336)

1971-1979

Prefix	Title	Volume (cu ft)	Volume (%)	Weight (lbs)	Weight (%)	Pu Weight (g)	Pu Weight (%)
89	Size Reduction Area	6,817	36.7	148,527	31.6	298.0	11.9
2	Non-Specification Recount, Slow	3,381	18.2	83,174	17.7	743.0	29.6
90	Solid Waste NMC (Bldg. 750)*	1,577	8.5	57,108	12.2	395.3	15.7
90	Waste Mgmt. Compacted Discard Drums (Bldg. 776)*	1,430	7.7	51,785	11.0	435.9	17.4
37	Labs, Chem Op Supply	1,194	6.4	22,358	4.8	144.0	5.7
17	Mtce, Laundry, Utilities	907	4.9	19,747	4.2	4.0	0.2
15	Non-Specification	545	2.9	14,488	3.1	44.1	1.7
1	Non-Specification Recount, Fast	472	2.5	11,172	2.4	11.0	0.4
12	Foundry 707	332	1.8	8,255	1.8	24.0	1.0
389	Size Reduction FRP Boxes	224	1.2	3,980	0.8	2.1	0.1
Other		1,675	9.0	49,055	10.4	408.2	16.3
	TOTAL	18,554	100.0	469,649	100.0	2,509.6	100.0

*The original title for prefix 90 came into disuse. After a period of time, the prefix was again used, but for a different title.

TABLE 6. Major Waste Contributors of HEPA Filters (Content Code 490)

1971-1979

Prefix	Title	Volume (cu ft)	Volume (%)	Weight (lbs)	Weight (%)	Pu Weight (g)	Pu Weight (%)
389	Size Reduction FRP Boxes	53,424	84.4	947,766	87.8	6,343.5	84.7
776	Size Reduction Non-Retrievable	4,256	6.7	44,870	4.2	363.3	4.9
1371	Pu Chemistry	1,904	3.0	21,460	2.0	86.0	1.1
33	Size Reduction Construction	1,792	2.8	32,240	3.0	1.6	--
771	R&D Drums-Bulk Residue Pu Cleanup	1,268	2.0	17,706	1.6	499.0	6.0
Other		696	1.1	15,144	1.4	244.6	3.3
	TOTAL	63,340	100.0	1,079,186	100.0	7,488.0	100.0

TABLE 7. Waste Contributors of Second Stage Sludge (Content Code 2)

1971-1979

Prefix	Title	Volume (cu ft)	Volume (%)	Weight (lbs)	Weight (%)	Pu Weight (g)	Pu Weight (%)
742	Liquid Waste Treatment-2nd Stage	46,339	100.0	3,383,501	100.0	1,925.9	100.0
743	Liquid Waste Treatment-Drainage Sludge	8	--	1,397	--	1.8	--
741	Liquid Waste Treatment-1st Stage	4	--	574	--	8.9	--
	TOTAL	46,351	100.0	3,385,472	100.0	1,936.6	100.0

TABLE 8. Waste Contributors of First Stage Sludge (Content Code 1)

1971-1979

Prefix	Title	Volume (cu ft)	Volume (%)	Weight (lbs)	Weight (%)	Pu Weight (g)	Pu Weight (%)
741	Liquid Waste Treatment-1st Stage	44,050	100.0	3,072,724	100.0	30,480.5	100.0
742	Liquid Waste Treatment-2nd Stage	7	--	514	--	.3	--
	TOTAL	44,057	100.0	3,073,238	100.0	30,480.8	100.0

TABLE 9. Waste Contributors of Grease (Content Code 3)

1971-1979

Prefix	Title	Volume (cu ft)	Volume (%)	Weight (lbs)	Weight (%)	Pu Weight (g)	Pu Weight (%)
743	Liquid Waste Treatment-Drainage Sludge	30,789	99.9	2,225,203	98.7	1,920.0	100.0
32	Assembly Bulk Residue	22	0.1	1,134	0.5	0.0	--
744	Liquid Waste Treatment-Special Setups	7	--	590	0.3	0.6	--
742	Liquid Waste Treatment-2nd Stage	7	--	692	0.3	0.1	--
89	Size Reduction Area	4	--	500	0.2	0.5	--
	TOTAL	30,829	100.0	2,228,119	100.0	1,921.2	100.0

TABLE 10. Waste Contributor of Special Setups (Content Code 4)

1971-1979

Prefix	Title	Volume (cu ft)	Volume (%)	Weight (lbs)	Weight (%)	Pu Weight (g)	Pu Weight (%)
744	Liquid Waste Treatment, Special Setups	7,739	100.0	653,876	100.0	1,016.2	100.0

TABLE 11. Major Waste Contributors of Concrete, Asphalt, Dirt, and Grit (Content Code 374)

1971-1979

Prefix	Title	Volume (cu ft)	Volume (%)	Weight (lbs)	Weight (%)	Pu Weight (g)	Pu Weight (%)
185	Contaminated Soil-Lip Area Side of Pad	16,184	68.8	747,760	74.2	0.0	--
33	Size Reduction Construction	3,136	13.3	85,920	8.5	6.2	1.0
389	Size Reduction FRP Boxes	1,792	7.6	54,220	5.4	70.2	10.9
2	Non-Specification Recount, Slow	1,087	4.6	50,460	5.0	298.1	46.1
5	Non-Specification Raschig Rings	559	2.4	20,638	2.1	271.0	41.8
17	Mtce., Laundry, Utilities	265	1.1	17,321	1.7	0.0	--
746	Liquid Waste Treatment, Misc. Waste	176	0.8	14,262	1.4	0.0	--
Other		318	1.4	16,965	1.7	1.4	0.2
	TOTAL	23,517	100.0	1,007,546	100.0	646.9	100.0

TABLE 12. Major Waste Contributors of Plastic (PVC, Teflon, Vinyl) and Non-Leaded Rubber (Content Code 337) 1971-1979

Prefix	Title	Volume (cu ft)	Volume (%)	Weight (lbs)	Weight (%)	Pu Weight (g)	Pu Weight (%)
744	Liquid Waste Treatment, Special Setups	3,041	25.5	54,762	19.9	37.5	2.0
2	Non-Specification Recount, Slow	1,757	14.7	42,483	15.4	588.0	31.3
89	Size Reduction Area	1,338	11.2	28,242	10.3	130.0	6.9
37	Analytical Labs, Chemical Operations, Support Labs	1,250	10.5	35,631	12.9	70.0	3.8
17	Mtce., Laundry, Utilities	904	7.6	21,689	7.0	13.0	0.7
33	Size Reduction Construction	448	3.7	8,480	3.1	0.6	--
1	Non-Specification Recount, Fast	382	3.2	8,804	3.2	25.0	1.3
776	Size Reduction Non-Retrievable Waste	125	1.0	9,641	3.5	261.0	13.9
Other		2,703	22.6	65,520	23.8	751.7	40.1
	TOTAL	11,948	100.0	275,252	100.0	1,876.8	100.0

TABLE 13. Major Waste Contributors of Raschig Rings–Unleached (Content Code 441) 1971-1979

Prefix	Title	Volume (cu ft)	Volume (%)	Weight (lbs)	Weight (%)	Pu Weight (g)	Pu Weight (%)
2	Non-Specification Recount, Slow	4,449	39.1	115,646	38.5	6,929.5	55.8
5	Non-Specification Raschig Rings	4,050	35.5	100,429	33.4	1,258.0	10.1
12	Foundry 707	545	4.8	14,912	5.0	1,404.0	11.3
89	Size Reduction Area	531	4.7	17,195	5.7	337.0	2.7
41	R&D Chem Lab Process Waste	479	4.2	12,675	4.2	1,227.0	9.9
23	776 Fabrication Bulk Residue	302	2.7	8,548	2.8	157.0	1.3
76	Size Reduction Equipment	265	2.3	7,181	2.4	0.0	--
45	R&E Lab Chemical Processing	206	1.8	5,278	1.8	0.0	--
Other		563	4.9	18,815	6.2	1,115.0	8.9
	TOTAL	11,390	100.0	300,679	100.0	12,427.5	100.0

TABLE 14. Major Waste Contributors of Insulation Chemical Warfare Service Filter Media (Content Code 338)

1971-1979

Prefix	Title	Volume (cu ft)	Volume (%)	Weight (lbs)	Weight (%)	Pu Weight (g)	Pu Weight (%)
33	Size Reduction Construction	6,944	66.8	123,850	64.8	9.1	0.1
389	Size Reduction FRP Boxes	1,792	17.2	30,040	15.7	66.5	1.0
2	Non-Specification Recount, Slow	1,172	11.3	23,417	12.3	4,010.0	61.7
Other		494	4.7	13,747	7.2	2,415.0	37.2
	TOTAL	10,402	100.0	191,054	100.0	6,500.6	100.0

TABLE 15. Content Volumes and Volume Percents by Year (1971-1979)

Content Code	1971 Volume (cu ft)	1971 Volume (%)	1972 Volume (cu ft)	1972 Volume (%)	1973 Volume (cu ft)	1973 Volume (%)	1974 Volume (cu ft)	1974 Volume (%)
480	42,226	66.1	65,762	46.9	58,793	48.7	59,944	53.7
330	4,422	6.9	3,919	2.8	3,545	2.9	3,654	3.3
490	4,965	7.8	12,151	8.7	10,818	9.0	10,871	9.7
2	4,459	7.0	8,388	6.0	6,626	5.5	9,323	8.4
1	1,916	3.0	9,298	6.6	8,424	7.0	6,766	6.1
3	1,363	2.1	8,078	5.8	4,400	3.6	4,223	3.8
374	--	--	--	--	2,842	1.3	2,081	1.9
336	1,209	1.9	10,670	7.6	3,265	2.7	1,599	1.4
337	391	0.6	4,808	3.4	3,223	2.7	1,271	1.1
441	--	--	384	0.3	1,778	1.5	295	0.3
338	--	--	239	0.2	4,972	4.1	4,734	4.2
4	420	0.7	2,128	1.5	1,187	1.0	722	0.6
Other	2,525	3.9	14,356	10.2	10,839	9.0	6,232	5.5
TOTAL	63,896	100.0	140,181	100.0	120,712	100.0	111,715	100.0

Content Code	1975 Volume (cu ft)	1975 Volume (%)	1976 Volume (cu ft)	1976 Volume (%)	1977 Volume (cu ft)	1977 Volume (%)	1978 Volume (cu ft)	1978 Volume (%)	1979 Volume (cu ft)	1979 Volume (%)
480	25,741	38.9	27,056	38.0	14,265	19.6	10,643	23.3	4,399	25.4
330	3,879	5.9	11,499	16.1	20,904	28.7	14,174	31.0	6,906	39.9
490	9,527	14.4	4,480	6.3	4,032	5.5	4,480	9.8	2,016	11.6
2	5,314	8.0	4,260	6.0	3,346	4.6	3,346	7.3	1,289	7.5
1	5,328	8.1	4,179	5.9	3,781	5.2	3,803	8.3	562	3.2
3	3,626	5.5	2,661	3.7	2,462	3.4	3,486	7.7	530	3.1
374	935	1.4	4,172	5.9	13,487	18.6	--	--	--	--
336	848	1.3	703	1.0	140	0.2	96	0.2	24	0.1
337	803	1.2	671	0.9	560	0.8	221	0.5	--	--
441	3,346	5.1	2,484	3.5	2,034	2.8	1,069	2.3	--	--
338	265	0.4	192	0.3	--	--	--	--	--	--
4	774	1.1	678	1.0	1,135	1.6	649	1.4	46	0.3
Other	5,745	8.7	8,154	11.4	6,558	9.0	3,688	8.1	1,542	8.9
TOTAL	66,131	100.0	71,190	100.0	72,704	100.0	45,654	100.0	17,314	100.0

TABLE 16. Content Weight and Weight Percent by Year (1971-1979)

Content Code	1971 Weight (lbs)	1971 Weight (%)	1972 Weight (lbs)	1972 Weight (%)	1973 Weight (lbs)	1973 Weight (%)	1974 Weight (lbs)	1974 Weight (%)
480	871,640	49.1	2,357,959	38.9	1,545,343	38.8	1,516,339	40.2
330	101,011	5.7	113,803	1.9	102,347	2.6	98,993	2.6
490	53,900	3.0	215,117	3.6	189,577	4.7	182,320	4.8
2	337,371	19.0	745,193	12.4	464,013	11.7	672,906	17.8
1	129,460	7.3	756,834	12.6	566,689	14.2	470,869	12.4
3	107,350	6.0	685,042	11.4	316,160	7.9	293,268	7.8
374	--	--	--	--	84,186	2.1	68,465	1.8
336	28,080	1.6	245,717	4.1	95,956	2.4	48,745	1.3
337	8,823	0.5	115,126	1.9	70,823	1.8	29,030	0.8
441	--	--	14,338	0.2	51,754	1.3	7,561	0.2
338	--	--	4,485	0.1	90,043	2.2	85,429	2.3
4	35,636	2.0	231,981	3.9	88,169	2.2	55,382	1.5
Other	102,268	5.8	539,095	9.0	316,640	8.1	243,347	6.5
TOTAL	1,775,539	100.0	6,024,690	100.0	3,981,700	100.0	3,772,654	100.0

Content Code	1975 Weight (lbs)	1975 Weight (%)	1976 Weight (lbs)	1976 Weight (%)	1977 Weight (lbs)	1977 Weight (%)	1978 Weight (lbs)	1978 Weight (%)	1979 Weight (lbs)	1979 Weight (%)
480	664,859	28.5	668,079	29.0	373,129	15.3	289,347	20.0	99,600	21.2
330	88,339	3.8	221,080	9.6	335,873	13.8	227,771	15.7	115,580	24.5
490	165,072	7.1	85,420	3.7	71,280	2.9	81,260	5.6	35,240	7.5
2	354,131	15.2	279,865	12.2	223,044	9.2	225,583	15.6	82,841	17.6
1	362,299	15.5	291,039	12.6	260,363	10.7	202,157	14.0	33,528	7.2
3	242,117	10.4	169,621	7.4	151,344	6.2	222,738	15.4	40,479	8.6
374	56,559	2.4	143,439	6.2	654,897	26.9	--	--	--	--
336	26,099	1.1	17,890	0.8	4,452	0.2	2,517	0.2	193	0.0
337	17,566	0.8	14,877	0.6	13,480	0.5	5,527	0.4	--	--
441	84,606	3.6	62,731	2.7	51,336	2.1	28,353	2.0	--	--
338	5,335	0.2	5,762	0.3	--	--	--	--	--	--
4	56,724	2.4	50,025	2.2	82,477	3.4	47,872	3.3	5,610	1.2
Other	212,054	9.0	292,209	12.7	214,115	8.8	113,395	7.8	57,867	12.2
TOTAL	2,335,760	100.0	2,302,037	100.0	2,435,790	100.0	1,446,520	100.0	470,938	100.0

TABLE 17. Content Plutonium Weight and Plutonium Weight Percent by Year (1971-1979)

Content Code	1971		1972		1973		1974	
	Plutonium (g)	Plutonium (wt %)	Plutonium (g)	Plutonium (wt %)	Plutonium (g)	Plutonium (wt %)	Plutonium (g)	Plutonium (wt %)
480	348.0	8.3	9,386.0	22.5	9,545.4	27.7	6,628.0	22.9
330	295.0	7.1	543.4	1.3	372.1	1.1	425.9	1.5
490	592.3	14.2	1,492.2	3.6	698.9	2.0	1,040.0	3.6
2	96.0	2.3	396.9	1.0	269.7	0.8	379.4	1.3
1	2,309.5	55.4	11,472.4	27.5	3,767.7	10.9	3,230.8	11.2
3	80.5	1.9	866.5	2.1	613.3	1.8	151.0	0.5
374	--	--	--	--	97.6	0.3	520.6	1.8
336	78.1	1.9	828.0	2.0	563.0	1.6	275.3	1.0
337	17.7	0.4	728.6	1.7	529.0	1.5	187.5	0.6
441	--	--	390.0	0.9	4,583.0	13.3	557.0	1.9
338	--	--	27.0	0.1	1,948.6	5.7	2,152.0	7.4
4	58.2	1.4	342.6	0.8	193.4	0.6	118.7	0.4
Other	295.0	7.1	15,256.1	36.5	11,290.4	32.7	13,291.4	45.9
TOTAL	4,170.3	100.0	41,729.7	100.0	34,472.6	100.0	28,957.6	100.0

Content Code	1975		1976		1977		1978		1979	
	Plutonium (g)	Plutonium (wt %)	Plutonium (g)	Plutonium (wt %)	Plutonium (g)	Plutonium (wt %)	Plutonium (g)	Plutonium (wt %)	Plutonium (g)	Plutonium (wt %)
480	885.4	3.3	550.3	2.4	1,270.1	3.5	457.3	4.1	123.3	2.5
330	436.7	1.6	1,236.6	5.3	2,684.7	7.5	987.2	8.9	931.6	18.9
490	835.6	3.1	1,142.1	4.9	656.6	1.8	959.7	8.7	70.0	1.4
2	216.3	0.8	188.7	0.8	181.6	0.5	155.5	1.4	52.2	1.1
1	3,283.2	12.3	2,502.2	10.7	1,536.6	4.3	2,025.1	18.3	353.3	7.2
3	82.2	0.3	79.6	0.3	39.2	0.1	8.9	0.1	0.0	0.0
374	23.4	0.1	5.3	--	0.0	--	--	--	--	--
336	431.5	1.6	170.1	0.7	121.0	0.3	41.6	0.4	0.0	0.0
337	112.6	0.4	58.7	0.3	169.3	0.5	73.4	0.7	--	--
441	5,180.5	19.4	924.0	4.0	478.0	1.3	315.0	2.9	--	--
338	1,278.0	4.8	1,095.0	4.7	--	--	--	--	--	--
4	133.3	0.5	83.3	0.4	55.4	0.2	27.3	0.2	4.0	0.1
Other	13,829.6	51.8	15,295.4	65.5	28,598.2	80.0	5,993.0	54.3	3,386.7	68.8
TOTAL	26,728.3	100.0	23,331.3	100.0	35,790.7	100.0	11,044.0	100.0	4,921.1	100.0

APPENDIX B

Rocky Flats Content Codes and Descriptions

Appendix B identifies the content codes used to describe TRU waste shipped from Rocky Flats to INEL for storage from June 1971 to June 1979. Also included in the appendix is a brief description of the waste code and the area in which it originated.

Content Code 1 - First Stage Sludge
Plutonium recovery liquid wastes are treated with chemicals to precipitate radioactive elements in Building 774. The resulting sludge is filtered and discharged into 55-gal drums with cement being added to ensure that no free liquid is present.

Content Code 2 - Second Stage Sludge
Radioactive high-nitrate wastes are mixed with the first stage effluent along with chemicals or coagulants to precipitate the radioactive contaminants. The resulting sludge is filtered and packaged in 55-gal drums. This process is called the "batch" process.

Radioactive low-nitrate wastes are treated in a continuous process that is similar to the batch process in treatment, filtration, and packaging. Effluent from the first stage sludge is not added to this process.

Content Code 3 - Grease
Organic wastes such as lathe coolant are mixed with solidifying agents to form a dry solid. The solid is discharged into 55-gal drums.

Content Code 4 - Special Setups
Contaminated liquid wastes that are not compatible with chemical precipitation and evaporation treatments are made basic, if necessary, and added to a cement absorbent mixture in 55-gal drums.

Content Code 5 - Evaporator Salts
High-nitrate wastes are concentrated in solar evaporation ponds and sent to the Building 774 evaporator. The liquids are then concentrated and dried on steam-heated drums, which results in a salt residue.

Content Code 241 - Americium Process Residue
Information on this content code was unattainable.

Content Code 290 - Filter Sludge
This category is a sludge type residue from the incinerator drum filter and various filter plenums. This waste originates from all plutonium areas.

Content Code 292 - Cemented Sludge
This category consists of miscellaneous sludges produced on-site, which have been packaged in drums with cement added as an absorbent.

Content Code 300 - Graphite Molds
Graphite is used as the mold material in casting plutonium metal. Used casting molds make up this category. This waste originates in the plutonium foundry.

Content Code 301 - Graphite Cases
Graphite cases are a part of the mold used in casting plutonium metal. The waste originates in the plutonium foundry.

Content Code 302 and 464 - Benelex and Plexiglass
Benelex and plexiglass are used in all areas as neutron radiation shielding around glove boxes.

Content Code 310 - Graphite, Pulverized or Fines
This category consists of graphite that has been pulverized; it originates from the Plutonium Recovery area.

Content Code 311 - Graphite Heels
Pulverized graphite is passed through the acid dissolution process with the remaining residue being classified as Graphite Heel. This waste originates in the Plutonium Recovery area.

Content Code 320 - Heavy Non-SS* Metal (Ta, W, Pt, Pb)
This category consists mainly of used tantalum crucibles, funnels, and inserts from casting plutonium metal. This waste originates from the Foundry and Molten Salt areas.

Content Code 330 - Combustibles, Dry
Mainly dry rags and paper make up this category. This waste originates from all areas that have plutonium.

Content Code 335 - Absolute Drybox Filters
This waste category originates from all plutonium areas and consists of 8" X 8" wooden frames with asbestos type filter media. These filters are used to remove airborne particulates in glove-box systems.

Content Code 336 - Combustibles, Wet
All plutonium areas generate this waste category, which consists primarily of paper saturated with decontamination solution and/or rags that may contain nitric acid from inside the glove boxes.

Content Code 337 - Plastics (Teflon, PVC, Vinyl, etc.) and Non-Leaded Rubber
This category consists of plastics, bags, sample vials, and plastic sheeting used to line decontamination enclosures and dryboxes. This waste originates from all plutonium areas.

Content Code 338 and 360 - Insulation
The asbestos type material that is used as a heat shield around furnaces and steam pipes and filter media is included. This waste originates from all plutonium areas.

Content Code 339 - Leaded Drybox Gloves and Other Leaded Material
This category is made up mostly of heavy-leaded rubber gloves that are used in the access ports of glove boxes. All plutonium areas generate this waste category.

*SS = Source and Special Material.

Content Code 360 - (see Code 338)

Content Code 361 - Insulation Heel
Information on this content code was unattainable.

Content Code 370 - Leco Crucibles
Leco crucibles are small ceramic crucibles used for laboratory analysis. This waste category originates from the plutonium laboratory.

Content Code 371 - Firebrick
Firebrick is plutonium-contaminated brick used to line the recovery incinerator. This category is generated from the Plutonium Recovery area.

Content Code 372 - Grit
Tiny particles used to grit-blast non-stainless steel metal items. This method is no longer used. The Plutonium Recovery area generated this waste category.

Content Code 374 - Blacktop, Concrete, Dirt, and Sand
The entire plant site generates this category as a result of spills.

Content Code 375 - Oil Dri (Trade Name)
Oil Dri is an absorbent clay used primarily in the bottom of 55-gal drums to absorb liquid that could leak through a ruptured polyethylene bag. The Plutonium Recovery area is responsible for the origin of this category.

Content Code 376 - Cemented Insulation and Filter Media
Insulation and filter media is cemented to ensure against moisture and pressurization.

Content Code 391 - Unpulverized Sand and Crucible
This category is made up of magnesium oxide crucibles and sand generated when plutonium fluoride is reduced to plutonium metal in the reduction furnaces. The Plutonium Recovery area is the originator of this category.

Content Code 392 - Unpulverized Slag and Crucible
This category consists of a mixture of slag, crucible, and sand generated when plutonium fluoride is reduced to plutonium metal in the reduction furnace. The Plutonium Recovery area is where this category is generated.

Content Code 393 - Sand, Slag, and Crucible Heel
The Plutonium Recovery area is the originator of this category. After the buttons are broken out of their crucibles, the crucibles are returned to the dissolution lines for recovery of the plutonium. A crucible that does not dissolve is termed a "sand, slag, and crucible heel."

Content Code 407 - Molten Salt, 8% Unpulverized
Salt consisting of sodium chloride, potassium chloride, and 8% magnesium chloride. These salts are used to pyrochemically remove americium from plutonium metal. The Molten Salt area is the originator of this category.

Content Code 410 - Molten Salt, 30% Pulverized
The description of this category is the same as Content Code 407, except that the magnesium chloride percentage is 30%. The Molten Salt area is also the originator of this category.

Content Code 411 - Electrorefining Salt
This salt consists of sodium chloride and potassium chloride with 8% magnesium chloride. The salt is used to pyrochemically remove all types of impurities from plutonium metal. The Electrorefining Facility is responsible for originating this category.

Content Code 420 - Incinerator Ash, Virgin
Combustible plutonium-bearing residues are burned in the Recovery Facility incinerator with the ash residue making up this category. The ash is jaw crushed and ball milled prior to removal from the glove box. The Plutonium Recovery area is the originator of this category.

Content Code 421 - Ash Heels
The heel is the residue remaining after the incinerator ash has received one or more passes through the dissolution process. The Plutonium Recovery area is the originator of this category.

Content Code 422 - Soot
This category is generated from the incinerator in the Plutonium Recovery area. This airborne fly ash material accumulated in the offgas system and is generated only when the offgas system is disassembled and cleaned.

Content Code 430 - Resin, Unleached
This category originates from ion columns in the Plutonium Recovery area and is unleached.

Content Code 431 - Resin, Leached
This category originates from the Plutonium Recovery area where the ion column resin has been leached in water to recover the plutonium.

Content Code 432 - Resin, Cemented
This category is made up of ion column resin that has been washed in water and mixed with a cementing agent to solidify the material. This waste originates from the Plutonium Recovery area.

Content Code 440 - Glass (Except Raschig Rings)
This category is made up of glassware, primarily from the analytical lab, and glass vessels from the recovery facility glove boxes. All plutonium areas are responsible for generating this waste.

Content Code 441 - Unleached Raschig Rings Only
These high boron content glass rings are used as a neutron poison in storage tanks that contain plutonium solution. All plutonium areas generated this waste category.

Content Code 442 - Leached Raschig Rings
These high boron content glass rings have been leached with nitric acid to remove the plutonium residue. All plutonium areas generate this category.

Content Code 460 - Washables
Information on this category was unattainable.

Content Code 463 - Drybox Gloves
This content code has been incorporated into Content Code 339.

Content Code 464 - (see Code 302)

Content Code 480 - Light Non-SS Metal*, (Fe, Cu, Al, Stainless Steel, etc.) Not Prepared for Leaching
This category consists of contaminated metals, primarily stainless steel that has been removed from all plutonium areas.

Content Code 481 - Light Non-SS Metal*, (Fe, Cu, Al, Stainless Steel, etc.) Prepared for Leaching
This category consists of contaminated metal that has been cut into pieces suitable for cleaning. The Size Reduction area is the originator of this waste category.

Content Code 490 - HEPA Filters
This category consists of High Efficiency Particulate Air (HEPA) filters that are used in the exhaust systems of plutonium buildings to remove airborne particles. All plutonium areas contribute to this category.

Content Code 900 - Soft-LSA Non-Plutonium
This category consists of paper and plastics that have been contaminated as follows:

a. Uranium and Thorium or chemical concentrates.
b. Material in which the activity is essentially uniformly distributed and in which the estimated concentration per gram of contents does not exceed
   1. 0.0001 millicuries of Group I radionuclides (e.g., U-230, U-233, U-234, U-232), or
   2. 0.005 millicuries of Group II radionuclides (e.g., U-230, U-233, U-234, U-236), or
   3. 0.3 millicuries of Group III or IV radionuclides (e.g., tritium, U-235, U-238, natural uranium, europium, plutonium)
c. Nonradioactive objects externally contaminated with radioactive material, provided that the radioactive material is not readily dispersible and the surface contamination, when averaged over an area of one square meter, does not exceed 0.0001 millicuries per square centimeter of Group I radionuclides or 0.001 millicuries per square centimeter of other radionuclides.

Content Code 950 - LSA Metal and Glass
This category consists of any metals or glass that have become contaminated as follows:

a. Contaminated with uranium or thorium ores or their chemical concentrates.

*SS means Source and Special Material, a term that has been replaced by the term, Nuclear Material.

b. Material in which the activity is essentially uniformly distributed and in which the estimated average concentration does not exceed
   1. 0.0001 millicuries of Group I radionuclides (e.g., americium, plutonium, U-232), or
   2. 0.005 millicuries of Group II radionuclides (e.g., U-230, U-233, U-234, U-236), or
   3. 0.3 millicuries of Group III or IV radionuclides (e.g., tritium, U-235, U-238, natural uranium, europium, plutonium)

c. Nonradioactive objects externally contaminated with radioactive material, provided that the radioactive material is not readily dispersible and the surface contamination, when averaged over an area of one square meter, does not exceed 0.0001 millicuries per square centimeter of Group I radionuclides or 0.001 millicuries per square centimeter of other radionuclides.

Content Code 960 - Non-Plutonium Concrete and Asphalt
This category is made up of concrete and asphalt from areas considered to be "suspect."

Content Code 970 - Non-Plutonium Wood and Benelex
This category consists of wood and benelex from areas that are considered to be "suspect."

Content Code 976 - 776 Process Sludge
This category consists of sludge retrieved from the process tanks behind Building 776.

Content Code 978 - 778 Laundry Sludge
This content code consists of sludge from laundry waste.

Content Code 980 - Non-Plutonium Equipment
This category consists of discarded equipment from non-plutonium areas.

Content Code 990 - Soil 774
This category consists of soil taken from around Building 774.

Content Code 995 - Sludge-Building 995
Sanitary sludge from Building 995 makes up this category.

Attachment 2 - CCP Records Transmittal/Receiving Form

CCP Central Records/Records Custodian, 4021 National Parks Highway - MS: GSA 203, Carlsbad, New Mexico 88220

Telephone Number: 505-234-7523, 505-234-7233, 505-234-7617
Fax Number: 505-234-7014

☒ Original Record
☐ Faxed Record

Attn:	Records Custodian	From:	Jeff Harrison
Ship to:	CCP Central Records/ CCP Records Custodian	Site:	Idaho National Laboratory, CCP-AK-INL-005
	4021 National Parks Highway - MS GSA 203	Company:	Technical Specialists, LLC
	Carlsbad, NM 88220	Telephone Number:	720-977-7042
		Date Sent:	8/24/05

Telephone Number: 505-234-7523

Document Number	Title/Description	Record Date	Total Pages
P090	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-004	~~7/5/2005~~ 00 8/11/05 1/24/06	1
	History of Rocky Flats Waste Streams	3/10/1982	P 30 CD 8/9/06
	NA		

Comments

~~This transmittal includes only a revised Attachment 3. The source document itself is not included because it was transmitted previously for a different INL AK Summary Report.~~ N/A CD 8/9/06

CCP Records Center
Acceptance/Rejection Signature and Date

Records Accepted ☒	Christa Ingram (Signature)	Christa Ingram (Printed Name)	1-24-06 (Date)
Records Rejected ☐	Signature	Printed Name	Date

Reason for Rejection: _____

Re-submittal:	Signature	Printed Name	Date

P.01

TRANSACTION REPORT

AUG-09-2006 WED 09:23 AM

FOR: CCP RECORDS 15052347014

SEND

DATE	START	RECEIVER	TX TIME	PAGES	TYPE	NOTE	M#	DP
AUG-09	09:22 AM	LANL _ CBAD	20"	1	FAX TX	OK	224	

TOTAL : 20S PAGES: 1

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CCP-QP-008, Rev. 10
CCP Records Management

Effective Date: 10/15/2004
Page 29 of 33

Attachment 2 - CCP Records Transmittal/Receiving Form

CCP Central Records/Records Custodian, 4021 National Parks Highway - MS: GSA 203, Carlsbad, New Mexico 88220

Telephone Number: 505-234-7523, 505-234-7233, 505-234-7617
Fax Number: 505-234-7014

☒ Original Record
☐ Faxed Record

Attn: Records Custodian

Ship to: CCP Central Records/ CCP Records Custodian

4021 National Parks Highway - MS GSA 203

Carlsbad, NM 88220

Telephone Number: 505-234-7523

From: Jeff Harrison

Site: Idaho National Laboratory, CCP-AK-INL-005

Company: Technical Specialists, LLC

Telephone Number: 720-977-7042

Date Sent: 8/24/05

Document Number	Title/Description	Record Date	Total Pages
P090	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-004	~~7/5/2005~~ 8/11/05 1/24/06	1
	History of Rocky Flats Waste Streams	3/10/1982	P 30 CB 8/9/06

DIVIDER

PAGE

Attachment 3 - Acceptable Knowledge Source Document Summary

Site(s): Idaho National Laboratory	Source Document Tracking Number: P522
Waste Stream Number(s): ID-RF-S3150-A	
Acceptable Knowledge Documentation Type: ☐ TRU Waste Management Program Information ☑ Waste Stream-Specific Information ☐ Additional Information	Category: ☐ C - Correspondence ☐ D - Discrepancy Resolution ☐ M - Miscellaneous Documents ☑ P - Published Documents ☐ U - Unpublished Documents
Title of Source Document: Rocky Flats Environmental Technology Site WIPP Waste Stream Profile Form, TRM Solidified Organic Waste	
Source Document Reference Information (author(s), document and revision number, date, publisher): RF107.04, 0, 1/11/2005	

AK # [b]	Source Doc. Page # [c]	AK Information Summary
WS1, WS2, WS4, WS6, WS7, WS8, WS9, WS10, WS11, WS12	1-20, 7.27-1 to 7.27-10	Waste stream profile for solidified organic waste generated in Building 774 (OASIS). Includes: solid sampling summary, headspace gas summary data, metals summary data, total VOC summary data, total SVOC summary data, exclusion of prohibited items, and correlation of container identification to batch data reports. Packet also includes the Acceptable Knowledge TRU/TRM Waste Stream Summary for TRM Solidified Organic Waste (D022, D028, D029, D030, D032, D034, F001, F002, F005), Profile No. RF107.04, Revision 1. Includes information concerning the generating process for the waste and the locations where the oils/solvent wastes were produced.

NTPC RECORDS ORIGINAL
DATE REC'D 4/26/13 SP

Attachment 3 - Acceptable Knowledge Source Document Summary (continued)

Site(s): Idaho National Laboratory		Source Document Tracking Number: P522
AK # [b]	Source Doc. Page # [c]	AK Information Summary

Source Document Data Limitations (if any):

1. None

Acceptable Knowlege Expert:

Scott Smith / [signature] Date: 8/14/2013

Print /Sign

[a] Provide description for non-titled information (i.e., container paperwork, MSDS sheets, etc.)
[b] Obtain from Acceptable Knowledge Documentation Checklist
[c] For microfilm or microfiche, identify box, tape, reel number and location.

DIVIDER PAGE ONLY

Not part of page count

P522

Department of Energy
Carlsbad Field Office
P. O. Box 3090
Carlsbad, New Mexico 88221

JAN 12 2005

Mr. Steve Zappe, WIPP Project Leader
Hazardous Waste Permits Program
New Mexico Environment Department
2905 E. Rodeo Park Drive, Bldg. 1
Santa Fe, NM 87505

Subject: Transmittal of Approved RFETS WSPF Number RF107.04, TRM Solidified Organic Waste

Dear Mr. Zappe:

The Department of Energy, Carlsbad Field Office (CBFO) has approved the Rocky Flats Environmental Technology Site (RFETS) Waste Stream Profile Form (WSPF) RF107.04, TRM Solidified Organic Waste.

Enclosed is a copy of the approved form as required by Section B-4(b)(1) of the WIPP Hazardous Waste Facility Permit, No. NM4890139088-TSDF.

If you have any questions on this matter, please contact me at (505) 234-7357 or (505) 706-0066.

Sincerely,

Kerry W. Watson, Director
Office of Characterization and Transportation

Enclosure

cc: w/o enclosure

J. Kieling, NMED	*ED
C. Walker, TechLaw	ED
M. Strum, WTS	ED
R. Chavez, WRES	ED
L. Greene, WRES	ED
K. Zbryk, WRES	ED
W. Ledford, CTAC	ED
CBFO M&RC	

*ED denotes Electronic Distribution

CBFO:OCT:KWW:VW:05-0142:UFC:5822

WIPP WASTE STREAM PROFILE FORM

Waste Stream Profile Number: RF107.04
Generator site name: RFETS
Technical contact: Eric D'Amico
Generator site EPA ID: CO7890010526
Phone number: (303) 966-5362
Date of audit report approval by NMED: March 9, 2000 as amended February 6, 2001; May 24, 2001; June 5, 2001; April 5, 2002; April 8, 2002; August 20, 2002; August 29, 2002; December 20, 2002; April 8, 2003; September 19, 2003; December 30, 2003; July 14, 2004 and September 14, 2004
Title, version number, and date of documents used for WAP certification: Rocky Flats Environmental Technology Site TRU Waste Characterization Program Quality Assurance Project Plan, 95-QAPjP-0050, Version 10, August 2004. Transuranic (TRU) Waste Management Manual, 1-MAN-008-WM-001, Version 8, November 2004. Contact-Handled Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant, Revision 2.0, November 2004.
Did your facility generate this waste? ☑ Yes ☐ No If no, provide the name and EPA ID of the original generator:

Waste Stream Information[1]

WIPP ID: RF-MT0801
Summary Category Group: S3000[2] Waste Matrix Code Group: Solidified Organics[2]
Waste Stream Name: TRM Solidified Organic Waste (D022, D028, D029, D030, D032, D034, F001, F002, F005)[2]
Description from the WTWBIR: This waste stream consists of solidified organic liquids.[2]
Defense TRU Waste: ☑ Yes ☐ No
Check one: ☑ CH ☐ RH Number of SWBs N/A Number of Drums 493 Number of Canisters N/A
Batch Data Report numbers supporting this waste stream characterization: See Table 7.
List applicable EPA Hazardous Waste Codes[3]: D022, D028, D029, D030, D032, D034, F001, F002, F005
Applicable TRUCON Content Codes: RF112A/212A, RF112B/212B, RF112D/212D, RF112DF/212DF, RF112J/212J, RF112N/212N, RF112O/212O, RF112OA/212OA, RF112P/212P, RF112PA/212PA, RF112Q/212Q, RF112QA/212QA

Acceptable Knowledge Information[1]

Required Program Information

- Map of site: Reference List, No. 3
- Facility mission description: Reference List, No. 3
- Description of operations that generate waste: Reference List, Nos. 1, 2, 3, 6
- Waste identification/categorization schemes: Reference List, Nos. 13, 14
- Types and quantities of waste generated: Reference List, Nos. 1, 2, 3, 6
- Correlation of waste streams generated from the same building and process, as appropriate: Reference List, Nos. 1, 2, 6
- Waste certification procedures: Reference List, No. 5

Required Waste Stream Information

- Area(s) and building(s) from which the waste stream was generated: Reference List, Nos. 1, 2, 6
- Waste stream volume and time period of generation: Reference List, Nos. 4, 6
- Waste generating process description for each building: Reference List, Nos. 1, 2, 6
- Process flow diagrams: Reference List, Nos. 1, 2
- Material inputs or other information identifying chemical/radionuclide content and physical waste form: Reference List, Nos. 1, 2, 3, 6
- Which Defense Activity generated the waste: (Check one) Reference List, No. 3

☑ Weapons activities including defense inertial confinement fusion
☐ Verification and control technology
☐ Defense nuclear waste and material by products management
☐ Defense nuclear waste and materials security and safeguards and security investigations
☐ Naval Reactors development
☐ Defense research and development
☐ Defense nuclear materials production

Supplemental Documentation:

- Process design documents: Note 4
- Standard operating procedures: Note 4
- Safety Analysis Reports: Note 4
- Waste packaging logs: Note 4
- Test plans/research project reports: Note 4
- Site data bases: Note 4
- Information from site personnel: Note 4
- Standard industry documents: Note 4
- Previous analytical data: Note 4
- Material safety data sheets: Note 4
- Sampling and analysis data from comparable/surrogate Waste: Note 4
- Laboratory notebooks: Note 4

Sampling and Analysis Information[1]

[For the following, when applicable, enter procedure title(s), number(s) and date(s)]

☑ Radiography: Reference List, Nos. 19, 20, 21
☑ Visual Examination: Reference List, Nos. 22, 23, 28
☑ Headspace Gas Analysis
VOCs: Reference List, No. 7, 17, 18
Flammable: Reference List, No. 7, 17, 18
Other gases (specify): N/A
☑ Homogeneous Solids/Soils/Gravel Sample Analysis
Total metals: Reference List, Nos. 11, 12
PCBs: N/A
VOCs: Reference List, No. 8
Nonhalogenated VOCs: Reference List, No. 10
Semi-VOCs: Reference List, No. 9
Other (specify): N/A

Waste Stream Profile Form certification:

I hereby certify that I have reviewed the information in this Waste Stream Profile Form, and it is complete and accurate to the best of my knowledge. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

M. O'Leary
Signature of Site Project Manager

G. A. O'Leary, Manager TRU Programs
Printed Name and Title

1/11/05
Date

C. L. Ferrera
Signature of Site QA Officer

C. L. Ferrera, TWCP Site QAO
Printed Name and Title

1/11/05
Date

NOTE (1) Use back of sheet or continuation sheets, if required.

(2) The Waste Stream Name Solidified Organics–Bldg.774/TRM in the WTWBIR has been changed to TRM Solidified Organic Waste (D022, D028, D029, D030, D032, D034, F001, F002, F005). The Waste Stream Description in the WTWBIR has been changed as shown. The actual Waste Stream Description in the WTWBIR requires clarification in that any liquid present will be as residual liquid in a quantity that is less than one volume percent of the payload container that is reasonably achievable after pouring, pumping and/or aspirating, and internal containers shall contain less than 1 inch or 2.5 centimeters of liquid in the bottom of the container. The Hazardous Waste Numbers in the WTWBIR are incorrect, and the waste stream is now assigned Hazardous Waste Numbers D022, D028, D029, D030, D032, D034, F001, F002, and F005. The Waste Stream Name, Description, Summary Category Group, Waste Matrix Code, and Environmental Protection Agency (EPA) Hazardous Waste Numbers are based on acceptable knowledge (see attached Acceptable Knowledge Summary).

(3) EPA Hazardous Waste Codes were determined using acceptable knowledge and confirmed using solids and headspace gas sampling and analysis (see attached Characterization Information Summary documenting this determination).

(4) See the References section in the Acceptable Knowledge Summary (attached) for additional backup documentation associated with this waste stream.

REFERENCE LIST

1. Backlog Waste Reassessment Baseline Book, Waste Form 47, Solidified Organics, November 2004.
2. Waste Stream and Residue Identification and Characterization (WSRIC), Version 7, December 2004, and archived versions.
3. RFETS TRU Waste Acceptable Knowledge Supplemental Information, RF/RMRS-97-018, Revision 14, October 2004.
4. Waste and Environmental Management System (WEMS) database.
5. Transuranic (TRU) Waste Certification, PRO-X05-WC-4018, Version 9, November 22, 2004.
6. Acceptable Knowledge TRU/TRM Waste Stream Summaries, RMRS-WIPP-98-100, Section 7.27, Revision 1, December 2004.
7. GC/MS Determination of Volatile Organics Waste Characterization, L-4111-X, January 2002.
8. Volatile Organic Compounds by Gas Chromatography Mass Spectrometry, ACMM-9260, Revision 9, July 2003.
9. Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry, ACMM-9270, Revision 5, April 2003.
10. Determination of Nonhalogenated Volatile Organics by Gas Chromatography, ACMM-9441, Revision 8, April 2003.
11. Determination of Mercury by CVAA for TRU Waste Characterization, ACMM-2810, Revision 2, April 2003.
12. Determination of Metals by ICP-AES for TRU Waste Characterization, ACMM-2901, Revision 2, April 2003.
13. Waste Characterization, Generation, and Packaging, 1-PRO-079-WGI-001, Revision 4, May 2002.
14. Waste Characterization Program Manual, 1-MAN-036-EWQA-Section 1.6.1, Revision 3, May 2002.
15. Interoffice Memorandum from Thomas R. Gatliffe to Eric L. D'Amico, Revised Headspace Gas Analysis Data Evaluation Report For Waste Stream Profile 107.04 Lot 1, TRG-440-04, December 2004.
16. Interoffice Memorandum from Thomas R. Gatliffe to Eric L. D'Amico, Revised Statistical Solid Analysis Data Evaluation Report For Transuranic (TRM) Solidified Organic Waste [D022, D028, D029, D030, D032, D034, F001, F002, F005], Solid Sampling Lot 1 (Waste Stream Profile 107.04), TRG-430-04, December 2004.
17. Headspace Gas Sampling And Analysis Using An Automated Manifold, L-4231-F, March 2002
18. Headspace Gas Sampling and Analysis Using An On-Line Integrated System, PRO-1676-HGAS-S&A, Version 2, January 2004.
19. Real-Time Radiography Testing of Transuranic and Low-Level Waste, 4-W30-NDT-00664, Version 11, July 2004.
20. Real-Time Radiography Testing of Transuranic and Low-Level Waste in Building 569, 4-119-NDT-00569, Revision 5, January 2002.
21. Mobile Real-Time Radiography Testing of Transuranic and Low-Level Waste, PRO-1520-Mobile-RTR, Version 5, October 2004.
22. Glovebox and C-Cell Waste Operations, PRO-1358-440-VERP, Version 7, July 2004.
23. RTR Visual Examination Confirmation, Building 371, PRO-1608-VECRTR-371, Revision 0, October 2002.
24. TWCP Core-Drilling Operation, HFEF-OI-6910, Revision 2c, April 2003.
25. TWCP Solid Sample Preparation, HFEF-OI-6921, Revision 3c, July 2003.
26. Interoffice Memorandum from Vivian S. Sendelweck to Eric L. D'Amico, Tentatively Identified Compounds in RF107.04 TRM Solidified Organic Waste (F001, F002) Solid Sampling Lot 1, VSS-032-2004, August 2004.
27. Interoffice Memorandum from M.L. Johnson to E. L. D'Amico, Tentatively Identified Compounds in TRM Solidified Organic Waste (D022, D028, D030, D032, F001, F002, F005) Lot 1, MLJ-100-2004, December 2004.
28. Visual Examination for Confirmation of RTR, 4-H80-776-ASRF-007, Revision 5, June 2001.

Form A
Reconciliation with Data Quality Objectives

I certify by signature (below) that sufficient data have been collected to determine the following Program-required waste parameters:

WSPF # RF107.04

Item	Check Box[a]	Reconciliation Parameter
1	✓	Waste Matrix Code as reported in WEMS.
2	✓	Waste Material Parameter Weights for individual containers as reported in WEMS.
3	✓	The waste matrix code identified is consistent with the type of sampling and analysis used to characterize the waste.
4	✓	Container mass and activities of each radionuclide of concern as reported in WEMS.
5	✓	Each waste container of waste contains TRU radioactive waste.
6	✓	Mean concentrations, UCL_{90} for the mean concentrations, standard deviations, and the number of samples collected for each VOC in the headspace gas of waste containers in the waste stream/waste stream lot.
7	✓	Mean concentrations, UCL_{90} for the mean concentrations, standard deviations, and number of samples collected for VOCs in the waste stream/waste stream lot. Summary Categories S3000 and S4000.
8	✓	Mean concentrations, UCL_{90} for the mean concentrations, standard deviations, number of samples collected for SVOCs in the waste stream/waste stream lot. Summary Categories S3000 and S4000.
9	✓	Mean concentrations, UCL_{90} for the mean concentrations, standard deviations, and number of samples collected for metals in the waste stream/waste stream lot. Summary Categories S3000 and S4000.
10	✓	Sufficient number of samples was taken to meet statistical sampling requirements.
11	✓	Only validated data were used in the above calculations, as documented through the site data review and validation forms and process.
12	✓	Waste containers were selected randomly for sampling, as documented in site procedures.
13	✓	The potential flammability of TRU waste headspace gases.
14	✓	Sufficient number of waste containers was visually examined to determine with a reasonable level of certainty that the UCL_{90} for the miscertification rate is less than 14 percent.
15	✓	Whether the waste stream exhibits a toxicity characteristic (TC) under 40 CFR Part 261, Subpart C.
16	✓	All TICs were appropriately identified and reported in accordance with the requirements of the WIPP WAP prior to submittal of a waste stream profile form for a waste stream or waste stream lot.
17	✓	The overall completeness, comparability, and representativeness QAOs were met for each of the analytical and testing procedures as specified in the WIPP WAP Sections B3-2 through B3-9 prior to submittal of a waste stream profile form for a waste stream or waste stream lot.
18	✓	The RTLs (i.e., PRQLs) for all analyses were met prior to submittal of a waste stream profile form for a waste stream or waste stream lot.
19	✓	Appropriate packaging configuration and DAC were met and documented in the headspace gas sampling documentation and the drum age was met prior to sampling.
20	✓	Whether the waste stream can be classified as hazardous or non-hazardous at the 90-percent confidence limit.

[a] Check (✓) indicates that data or acceptable knowledge are sufficient to determine the waste parameters and that the waste parameters have been reported in the listed document or database. *N/A* indicates parameter does not apply to waste stream. NO indicates data are insufficient.

Signature of Site Project Manager | G. A. O'Leary, Printed Name | 1-11-05, Date

Data Summary Report—Table 1: Solid Sampling Summary

WSPF # RF107.04

Determination of Number of Retrievably Stored Waste Containers to Sample (S3000, S4000)

Preliminary Estimates of Mean, Variance, and Coefficient of Variation:

Attach a table(s) that correlates container identification numbers to data packages if different from containers used for characterization.

Description of Source Data: Preliminary samples were collected and analyzed in compliance with all requirements (specified in the WIPP Waste Analysis Plan Section B2-2a) for being counted as part of the total number of calculated required samples. Sufficient preliminary samples were collected to demonstrate sampling sufficiency – i.e., collection of additional samples other than the preliminary samples was not required. See Reference List, No 16

Samples Randomly Selected from Waste Stream (yes/no)? Yes.

Treatment of less-than-detectable measurements: This pertains only to data for analytes in which at least one detectable measurement was obtained. Data were evaluated using one half the method detection limit (MDL) for less-than-detectable observations. See Reference List, No. 16.

Analytes that are toxicity characteristic contaminants associated with F-codes and therefore not included in the UCL_{90} estimate calculation to determine the toxicity characteristic: Benzene, Carbon Tetrachloride, Chlorobenzene, Methyl Ethyl Ketone, Pyridine, Tetrachloroethylene, and Trichloroethylene.

Largest Calculated Sample Size selection and associated analyte: Pertains only to toxicity characteristic or listed waste analytes and only to those analytes where the associated EPA hazardous waste number is not assigned (i.e., it only applies to those cases where a site intends to establish that the constituent is below the regulatory threshold and the associated EPA hazardous waste number does not apply). Largest value is 0.132 for isobutanol.

Minimum number of containers to sample: 5 (based on WIPP Waste Analysis Plan Section B2-2a requirement that preliminary estimates be based on samples from a minimum of 5 waste containers).

Attach preliminary estimates: See Reference List, No. 16. Preliminary estimates are identical to final results because sufficient preliminary samples were collected and analyzed in compliance with all requirements for being used as required samples.

Data Summary Report—Table 1: Solid Sampling Summary (continued)

WSPF # RF107.04

Retrievably Stored Waste Sampling Results:

Analytes that are toxicity characteristic contaminants associated with F-codes and therefore not included in the UCL_{90} estimate calculation to determine the toxicity characteristic: Benzene, Carbon Tetrachloride, Chlorobenzene, Methyl Ethyl Ketone, Pyridine, Tetrachloroethylene, and Trichloroethylene.

Largest Calculated Sample Size and associated analyte: Pertains only to toxicity characteristic or listed waste analytes and only to those analytes where the associated EPA hazardous waste number is not assigned (i.e., it only applies to those cases where a site intends to establish that the constituent is below the regulatory threshold and the associated EPA hazardous waste number does not apply). Largest value is 0.132 for isobutanol. Although 1,1,1-trichloroethane, 1,1,2-trichloro-1,2,2-trifluoroethane, carbon tetrachloride and methanol all have larger calculated sample sizes than isobutanol, these sample size values are not used. For 1,1,1-trichloroethane, 1,1,2-trichloro-1,2,2-trifluoroethane and carbon tetrachloride the sample size values are not used because the associated EPA hazardous waste numbers associated with these analytes are already assigned to the waste stream. For methanol, the sample size value is not used because the waste stream does not exhibit the characteristic of ignitability and so assignment of the associated EPA hazardous waste number F003 is not required.

Comparison of largest calculated sample size with largest calculated sample size selected from preliminary estimate: 0.132 versus 0.132 (isobutanol).

Treatment of less-than-detectable measurements: This pertains only to data for analytes in which at least one detectable measurement was obtained. Data were evaluated using one half the method detection limit (MDL) for less-than-detectable observations except in cases where samples had to be diluted because the waste matrix contained one or more constituents at concentrations that were orders of magnitude higher than the less-than-detectable measurement. See Reference List, No. 16.

Transformations applied to data and justification: Logarithmic or Square Root transformations were applied to the data as necessary to achieve (or better achieve) a normal probability distribution of the data for UCL_{90} comparison to RTL values.

Drums overpacked for shipment/WMIS tracking (Yes/No)? No.
If yes, overpack container identification number:

Sampled drums included in waste stream lot reported here (Yes/No)? Yes.
If no, WSPF # including sampled drums:

Newly Generated Waste Sampling Results:

Batch or continuous process? N/A[a]

Samples randomly selected from Waste Stream? (yes/no) N/A[a]

Sample locations (part of process): N/A[a]

Treatment of less-than-detectable measurements: N/A[a]

Transformations applied to data and justification: N/A[a]

NOTES:

[a] This waste stream is comprised of retrievably stored waste that was sampled by coring, therefore, Newly Generated Waste Sampling is not applicable.

Data Summary Report—Table 2: Headspace Gas Summary Data

WSPF # RF107.04

Sampling and Analysis Method (check one):

☑ 100% Sampling ☐ Reduced Sampling

2A

ANALYTE[a]	# Samples[b]	Transform Applied[c]	Normality Test (Pass/Fail)[d]	Max. Value (ppmv)[d]	Mean[d]	Std. Dev.[d]	UCL_{95}[d]	Transformed RTL[e]	Un-Transformed RTL[e] (ppmV)	EPA Code[f]
1,1-Dichloroethane	24[h]	Sq. Rt.	Pass	38	3.028	1.606	3.412	3.162	10	None
1,2-Dichloroethane	16[h]	Log	Fail[g]	46	1.227	1.416	1.566	2.303	10	
1,1-Dichloroethylene	24	Sq. Rt.	Fail[g]	470	6.48	5.045	7.668	3.162	10	D029
cis-1,2-Dichloroethylene	8[h]	Log	Pass	23	0.244	0.562	0.378	2.303	10	
trans-1,2-Dichloroethylene	0[h]			27	0.958				10	
1,1,2,2-Tetrachloroethane	0[h]			25	1.0				10	
1,1,1-Trichloroethane	29	Sq. Rt.	Fail[g]	89000	92.407	78.923	110.982	3.162	10	F001 F002
1,1,2-Trichloro-1,2,2-Trifluoroethane	28	Log	Pass	32000	5.913	3.224	6.672	2.303	10	F001 F002
1,2,4-Trimethylbenzene	0[h]			32	0.992				NA	
1,3,5-Trimethylbenzene	0[h]			30	0.996				NA	
Acetone	17[h]	Log	Fail[g]	340	3.493	0.991	3.73	4.605	100	
Benzene	1[h]	Sq. Rt.	Fail[g]	23	0.943	0.188	0.988	3.162	10	
Bromoform	0[h]			29	0.934				10	
Butanol	0[h]			300	11.063				100	
Carbon disulfide	0[h]			21	0.949				10	
Carbon tetrachloride	29	Sq. Rt.	Fail[g]	230000	156.412	113.004	183.008	3.162	10	F001
Chlorobenzene	0[h]			35	1.069				10	
Chloroform	28	Sq. Rt.	Pass	310	9.017	4.267	10.022	3.162	10	D022
Cyclohexane	0[h]			26	1.024				NA	
Ethyl benzene	0[h]			33	1.003				10	
Ethyl ether	0[h]			20	0.98				10	
Methanol	30	Sq. Rt.	Pass	1600	18.614	7.651	20.415	10	100	None[j]
Methyl ethyl ketone	0[h]			330	11.807				100	
Methyl isobutyl ketone	0[h]			430	12.483				100	
Methylene chloride	28	Sq. Rt.	Pass	42	3.202	1.53	3.562	3.162	10	F001 F002
o-Xylene	0[h]			31	0.995				10	
m,p-Xylene	0[h]			59	1.961				10	
Tetrachloroethylene	8[h]	Log	Fail[g]	27	0.223	0.477	0.338	2.303	10	
Toluene	5	Log	Fail[g]	29	0.219	0.508	0.339	4.2769	72.02[h]	
Trichloroethylene	14[h]	Log	Fail[g]	28	0.773	0.958	1.003	2.303	10	

NOTES:

[a] A total of 31 samples were collected and analyzed. Analysis was performed for all analytes identified. Samples were not composited.

[b] Identifies the number of samples in which the associated analyte was detected.

Data Summary Report—Table 2: Headspace Gas Summary Data (continued)

NOTES (continued):

[c] Identifies the type of data transformation used, if applicable, to achieve (or better achieve) a normal probability distribution of the data.

[d] Statistics calculated based on using ½ the MDL for less-than-detectable observations with data transformation as identified (Reference 15). When transformation was applied, the mean, standard deviation, and UCL_{90} values presented are the transformed values (Reference 15). With no detectable concentrations, listed mean reflects average of one-half of reported MDL values for analyte and calculation of standard deviation and UCL_{90} values is not meaningful. With fewer than five detectable concentrations, calculated values for UCL_{90} are subject to potentially large relative error.

[e] RTLs for headspace gas analysis results correspond to the analyte PRQL for analytes that are WIPP WAP target analytes. "NA" means the analyte is not a WIPP WAP target analyte, but instead a flammable VOC that is analyzed for compliance with the Contact Handled Transuranic Waste Authorized Methods for Payload Control (CH-TRAMPAC).

[f] No entry indicates that the respective UCL_{90} value did not exceed the associated RTL.

[g] Data set (with or without transformation) did not pass the test for normality. The data set that most approximated a normal distribution was used for computation of statistics.

[h] Limit used for evaluation of EPA Hazardous Waste Code for toluene (Reference No. 3).

[i] Maximum value represents the largest value reported for the analyte in the data set and includes reported MDL values for samples in which data is reported as less-than-detectable. For analytes with no detectable concentrations reported, the max value corresponds to the maximum reported MDL value.

[j] Although methanol was detected in the headspace sampling and analysis data in concentrations above the RTL, no EPA hazardous waste number was assigned. Specifically, methanol is an F003 listed solvent that is listed solely for the characteristic of ignitability. Since the solidified waste material does not exhibit the characteristic of ignitability (i.e., is not assigned D001), the F003 hazardous waste number was not assigned to the waste stream. (See Reference 6).

[k] As a result of dilution requirements for one of the 31 samples, several analytes were reported as non-detected with MDL values in excess of the PRQL. In accordance with Section B4-3d of the WIPP-WAP, such 'U'-flagged observations with elevated MDL values due to dilution were not used in calculating mean concentration. Consequently, the subject analyte was statistically evaluated with 30, rather than 31, usable observations.

Data Summary Report—Table 2: Headspace Gas Summary Data (continued)

WSPF # RF107.04

2B

TENTATIVELY IDENTIFIED COMPOUND (TIC)	Maximum Observed Estimated Concentrations (ppmV)	# Samples Containing TIC
1,4-Dioxane (CAS 123-91-1)[a]	430	11

Did the data verify the acceptable knowledge? ☐ Yes ☑ No

If not, describe the basis for assigning the EPA Hazardous Waste Codes:

EPA hazardous waste numbers F001 and F002 were originally assigned to this waste stream based on acceptable knowledge. These EPA hazardous waste numbers were confirmed by the headspace gas sampling and analysis data. EPA hazardous waste numbers D022 (chloroform) and D029 (1,1-dichloroethylene) were added to the waste stream because the UCL_{90} values for chloroform and 1,1-dichloroethylene exceeded their associated RTL. Although the UCL_{90} value for 1,2-dichloroethane was below the RTL, the EPA code D028 was conservatively added to the waste stream based on a more conservative statistical evaluation of the headspace gas sampling and analysis data (see Reference List, No. 15).

NOTES:

[a] TIC was detected in 25 percent or more of the samples and is listed in 40 CFR 261 Appendix VIII. The TIC was used with chlorinated solvents, particularly 1,1,1-trichloroethane, as a stabilizer and corrosion inhibitor. None of the documentation reviewed indicated that this TIC is present in the solidified organic waste as a listed constituent; therefore, no additional EPA hazardous waste numbers were applied to the waste stream because of the detection of this TIC. However, as required by the Waste Analysis Plan, the TIC was added to the headspace VOC target analyte list for this waste stream. (See Reference 27).

Data Summary Report—Table 3: Metals Summary Data

WSPF # RF107.04

Sampling and Analysis Method/Units (check one):

☑ Totals (units are in mg/kg) ☐ TCLP (units are in mg/l)

ANALYTE[a]	# Samples[b]	Transform Applied[c]	Normality Test (Pass/Fail)[d]	Min. Sample Size[d]	Mean[d]	Std. Dev.[d]	UCL_{90}[d]	Transformed RTL[e]	Un-Transformed RTL[e] (mg/kg)	EPA Code[f]
Antimony	0				0.403				100	
Arsenic	0				0.251				100	
Barium	5	Log	Pass	0.027	1.839	0.618	2.262	7.601	2000	
Beryllium[g]	2	Sq. Rt.	Fail[h]	0.000	0.283	0.086	0.342	10	100	
Cadmium	2	None	Fail[h]	0.000	0.102	0.072	0.151	NA	20	
Chromium	5	Log	Fail[h]	0.105	0.552	0.857	1.140	4.605	100	
Lead	0				0.6				100	
Mercury	0				0.01				4	
Nickel	5	None	Pass	0.001	6.0	1.969	7.350	NA	100	
Selenium	0				0.353				20	
Silver	5	Log	Pass	0.005	-0.521	0.241	-0.356	4.605	100	
Thallium	0				0.2				100	
Vanadium	5	Log	Pass	0.010	-0.959	0.366	-0.708	4.605	100	
Zinc	5	Sq. Rt.	Pass	0.102	4.931	1.054	5.653	10	100	

Did the data verify the acceptable knowledge? ☑ Yes ☐ No

Data as reported in Data Summary Report – Table 3 did confirm acceptable knowledge in that no toxicity characteristic metal EPA codes are applicable.

If not, describe the basis for assigning the EPA Hazardous Waste Codes.

NOTES:

[a] A total of 5 samples were collected and analyzed. Analysis was performed for all analytes identified.
[b] Identifies the number of samples in which the associated analyte was detected.
[c] Identifies the type of data transformation used, if applicable, to achieve (or better achieve) a normal probability distribution of the data.
[d] Statistics calculated based on using ½ the MDL values for all less-than-detectable observations with data transformation as identified (Reference 16). When transformation was applied, the mean, standard deviation, and UCL_{90} values presented are the transformed values (Reference 16). With no detectable concentrations, listed mean reflects average of one-half of reported MDL values for the analyte. No entry for standard deviation or UCL_{90} indicates no detectable measurements available for calculation of statistics.
[e] RTLs correspond to the analyte PRQL for analytes that are not characteristic hazardous waste constituents.
[f] No entry indicates that the applicable UCL_{90} value did not exceed the associated RTL.

Data Summary Report—Table 3: Metals Summary Data (continued)

NOTES (continued):

[g] The EPA hazardous waste number P015, beryllium powder, is not applicable to this waste stream. The applicable regulations controlling the identification of U and P listed hazardous wastes are given in 40 CFR 261.33, Discarded Commercial Chemical Products, Off-Specification Species, Container Residues, and Spill Residues Thereof. Within this regulation, it states that "The phrase 'commercial chemical product or manufacturing chemical intermediate having the generic name listed in...' refers to a chemical which is manufactured or formulated for commercial or manufacturing use which consists of the commercially pure grade of the chemical, any technical grades of the chemical that are produced or marketed, and all formulations in which the chemical is the sole active ingredient. It does not refer to a material, such as a manufacturing process waste, that contains any of the substances listed in paragraph (e) or (f). Where a manufacturing process waste is deemed to be a hazardous waste because it contains a substance listed in paragraph (e) or (f), such waste will be listed in either Sec. 261.31 or Sec. 261.32 or will be identified as a hazardous waste by the characteristics set forth in subpart C of this part." Beryllium parts were used in the manufacture/assembly of weapons components, and residual beryllium contamination of plutonium parts may have occurred. As a result beryllium is present in the solidified inorganic waste. The beryllium is present as a contaminant of the process and not as unused commercial chemical product, and therefore is not a P015-listed waste.

[h] Data transformation did not pass the test for normality. The data transformation that most approximated a normal distribution was used for computation of statistics.

Data Summary Report—Table 4: Total VOC Summary Data

WSPF # RF107.04

4A

ANALYTE[a]	# Samples[b]	Transform Applied[c]	Normality Test (Pass/Fail)[d]	Min. Sample Size[d]	Mean[d]	Std. Dev.[d]	UCL_{90}[d]	Transformed RTL[e]	Un-Transformed RTL[e] (mg/kg)	EPA Code[f]
1,1-Dichloroethylene	0				Note[b]				14	
trans-1,2-Dichloroethylene	0				Note[b]				10	
1,2-Dichloroethane	0				Note[b]				10	
1,1,1-Trichloroethane	5	Sq. Rt.	Pass	0.639	112.516	57.01	151.606	3.162	10	F001 F002
1,1,2-Trichloro-1,2,2-Trifluoroethane	4[j]	Log	Pass	1.215	6.535	2.849	8.867	2.303	10	F001 F002
1,1,2-Trichloroethane	0				Note[b]				10	
1,1,2,2-Tetrachloroethane	0				Note[b]				10	
Acetone	0				7.73				100	
Benzene	0				Note[b]				10	
Bromoform	0				Note[b]				10	
Butanol	0				7.73				100	
Carbon disulfide	0				Note[b]				10	
Carbon tetrachloride	5	None	Pass	0.887	45400	27889.1	64522.7	NA	10	F001
Chloroform	5	Log	Pass	0.071	4.661	0.411	4.943	4.787	120	D022
Chlorobenzene	0				Note[b]				10	
Ethyl benzene	0				Note[b]				10	
Ethyl ether	0				7.73				100	
Isobutanol	1	Log	Pass	0.132	1.96	0.626	2.389	4.605	100	
Methanol	5	Log	Pass	5.475	4.046	0.853	4.631	4.605	100	None[g]
o-Xylene	0				Note[b]				10	
m,p-Xylene	0				Note[b]				10	
Methyl ethyl ketone	0				7.73				100	
Methylene chloride	0				Note[b]				10	
Tetrachloroethylene	0				Note[b]				10	
Toluene	0				Note[b]				10	
Trichloroethylene	0				Note[b]				10	
Trichlorofluoromethane	0				Note[b]				10	
Pyridine	0				7.73				100	
Vinyl chloride	0				Note[b]				4	

NOTES:

[a] A total of 5 samples were collected and analyzed. Analysis was performed for all analytes identified.
[b] Identifies the number of samples in which the associated analyte was detected.
[c] Identifies the type of data transformation used, if applicable, to achieve (or better achieve) a normal probability distribution of the data.
[d] Statistics calculated based on using ½ the MDL values for all less-than-detectable observations with data transformation as identified (Reference 16). When transformation was applied, the mean, standard deviation and UCL_{90} values presented are the transformed values (Reference 16). With no detectable concentrations, listed mean reflects average of one-half of reported MDL values for the analyte. No entry for standard deviation or UCL_{90} indicates no detectable measurements available for calculation of statistics.

Data Summary Report—Table 4: Total VOC Summary Data (continued)

NOTES (continued):

[e] RTLs correspond to the analyte PRQL for analytes that are F-listed hazardous waste constituents or to the applicable total RTL value as calculated from the TC RTL. RTLs correspond to the analyte PRQL for analytes that are not F-listed or characteristic hazardous waste constituent.

[f] No entry indicates that the applicable UCL_{90} value did not exceed the associated RTL.

[g] Although methanol was detected in the solid sampling and analysis data in concentrations above the RTL, no EPA hazardous waste number was assigned. Specifically, methanol is an F003 listed solvent that is listed solely for the characteristic of ignitability. Since the solidified waste material does not exhibit the characteristic of ignitability (i.e., is not assigned D001), the F003 hazardous waste number was not assigned to the waste stream. (See Reference 6).

[h] All results for this analyte were flagged as less than detectable and all samples were diluted because the waste matrix contained one or more constituents at concentrations that were orders of magnitude higher than the analyte. In accordance with the Waste Analysis Plan, Section B4-3d, under these circumstances, data showing an elevated MDL will not be used in calculating the mean concentration. Therefore, with no data to use, the mean concentration is not provided for this analyte. (See Reference 16).

[i] As a result of dilution requirements for one of the 5 samples, 1,1,2-trichloro-1,2,2-trifluoroethane was reported as non-detected with an MDL value in excess of the PRQL. In accordance with the Waste Analysis Plan, Section B4-3d such observations with elevated MDL values due to dilution were not used in calculating the mean concentration. Consequently, the subject analyte was statistically evaluated with 4, rather than 5, usable observations. (See Reference 16).

Data Summary Report—Table 4: Total VOC Summary Data (continued)

WSPF # RF107.04

4B

TENTATIVELY IDENTIFIED COMPOUND (TIC) CHEMICAL ABSTRACTS SERVICE (CAS) Number	Maximum Observed Estimated Concentrations (mg/kg)	# Samples Containing TIC
No TIC listed in 40 CFR 261, Appendix VIII was detected in any of the containers sampled.		

Did the data verify acceptable knowledge? ☐ Yes ☑ No

If not, describe the basis for assigning the EPA Hazardous Waste Codes:

EPA hazardous waste numbers F001 and F002 were originally assigned to this waste stream based on acceptable knowledge. These EPA hazardous waste numbers were confirmed by the solids sampling and analysis data. EPA hazardous waste number D022 (chloroform) was added to the waste stream because the UCL_{90} value for chloroform exceeded its associated RTL (see Reference List, No. 16).

Data Summary Report—Table 5: Total SVOC Summary Data

WSPF # RF107.04

5A

ANALYTE[a]	# Samples[b]	Transform Applied[c]	Normality Test (Pass/Fail)[d]	Min. Sample Size[d]	Mean[d]	Std. Dev.[d]	UCL_{90}[d]	Transformed RTL[e]	Un-Transformed RTL[e] (mg/kg)	EPA Codes[f]
1,2-Dichlorobenzene	0				3.026				40	
1,4-Dichlorobenzene	0				3.026				150	
2,4-Dinitrophenol	0				3.026				40	
2,4-Dinitrotoluene	0				3.026				2.6	D030[g]
2-Methylphenol (o-Cresol)	0				3.026				40	
3-&4-Methylphenol (m,p-Cresol)	0				6.04				40	
Hexachlorobenzene	0				3.026				2.6	D032[g]
Hexachloroethane	5	Log	Pass	2.568	4.384	0.727	4.882	4.094	60	D034
Nitrobenzene	0				3.026				40	
Pentachlorophenol	0				3.026				2,000	

NOTES:

[a] A total of 5 samples were collected and analyzed. Analysis was performed for all analytes identified.
[b] Identifies the number of samples in which the associated analyte was detected.
[c] Identifies the type of data transformation used, if applicable, to achieve (or better achieve) a normal probability distribution of the data.
[d] Statistics calculated based on using ½ the MDL values for all less-than-detectable observations with data transformation as identified (Reference 16). When transformation was applied, the mean, standard deviation and UCL_{90} values presented are the transformed values (Reference 16). With no detectable concentrations, listed mean reflects average of one-half of reported MDL values for the analyte. No entry for standard deviation or UCL_{90} indicates no detectable measurements available for calculation of statistics.
[e] RTLs correspond to the analyte PRQL for analytes that are F-listed hazardous waste constituents or to the applicable total RTL value as calculated from the TC RTL. RTLs correspond to the analyte PRQL for analytes that are not F-listed hazardous waste constituents or characteristic hazardous waste constituents.
[f] No entry indicates that the applicable UCL_{90} value did not exceed the associated RTL.
[g] Identified EPA code was conservatively added to the waste stream because the calculated mean exceeded the associated RTL.

Data Summary Report—Table 5: Total SVOC Summary Data (continued)

WSPF # RF107.04

5B

TENTATIVELY IDENTIFIED COMPOUND (TIC) CHEMICAL ABSTRACTS SERVICE (CAS) Number	Maximum Observed Estimated Concentrations (mg/kg)	# Samples Containing TIC
1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester (CAS 117-81-7)[a]	580	3

Did the data verify acceptable knowledge? ☐Yes ☑ No

If not, describe the basis for assigning the EPA Hazardous Waste Codes:

EPA hazardous waste numbers F001 and F002 were originally assigned to this waste stream based on acceptable knowledge. EPA hazardous waste number D034 (hexachloroethane) was added to the waste stream because the UCL_{90} value for hexachloroethane exceeded its associated RTL (see Reference List, No. 16).

NOTES:

[a] TIC was detected in 25 percent or more of the samples and is listed in 40 CFR 261, Appendix VIII. TIC is a constituent in an F-listed waste whose presence is attributable to waste packaging materials and so was not added to the target analyte list for the waste stream. TIC was determined not to be a listed hazardous waste based on comparison of the TIC identification to acceptable knowledge (see Reference No. 26).

Data Summary Report—Table 6: Exclusion of Prohibited Items

WSPF # RF107.04

The absence of prohibited items is documented through acceptable knowledge. Radiography or visual examination is performed on each container in this waste stream to verify the absence of the following prohibited items:

- Liquids
- Non-radionuclide pyrophoric materials
- Waste incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials, or other wastes
- Explosives or compressed gases
- Waste exhibiting the characteristics of ignitability, corrosivity or reactivity
- Non-mixed hazardous waste
- Wastes with polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization

Newly generated waste is characterized by visual verification (VV) at the time of waste packaging using the visual examination (VE) technique unless the use of radiography in lieu of, or in combination with, visual verification is justified by any of the following criteria:

- Visual verification was conducted during packaging, but was unacceptable,
- Visual verification requires extensive handling of high gram content waste that results in high radioactive exposure for the VV personnel;
- Situations where waste packaging is conducted at numerous locations generating small quantities of transuranic waste requiring a large number of VV personnel, and/or
- Where waste was originally packaged as low-level waste, but subsequently determined to be transuranic.

Each container of waste is certified and shipped only after radiography and/or VE either:

- Did not identify any prohibited items in the waste container, or
- All prohibited items found in a waste container by radiography or VE are identified and corrected (i.e., eliminated or removed) through the site non-conformance reporting system.

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Data Summary Report—Table 7: Correlation of Container Identification to Batch Data Reports

Package No.	Radioassay Data Package	Solid Sample Batch No.[a]	Metals Data Package[a]	VOC Data Package[a]	SVOC Data Package[a]	Headspace Sample Batch No.	Headspace VOC Data Package	RTR Data Package	VE or VV Data Package[b]
D56063	440IP1-DP-091204					04W0044	HGAS-DP-00765	6T-2178	
D60886	440IP1-DP-050503					04W0187	HGAS-DP-00903	6R-039	
D63388	440IP1-DP-042303					03W0151	HGAS-DP-00500	6T-2167	
D63599	440IP1-DP-082504					04W0121	HGAS-DP-00838	MT0063	
D64386	440IP1-DP-042303					03W0151	HGAS-DP-00500	6T-2177	
D64759	440IP1-DP-061303					04W0121	HGAS-DP-00838	MT0057	
D64922	440IP1-DP-082304					03W0391	HGAS-DP-00719	MT0050	
D65049	440IP1-DP-091304					04W0131	HGAS-DP-00847	6T-2168	
D65086	440IP1-DP-052003					04W0121	HGAS-DP-00838	MT0057	
D65326	440IP1-DP-092204					04W0131	HGAS-DP-00847	MT0059	
D65360	440IP1-DP-042303					03W0151	HGAS-DP-00500	MT0072	
D65568	440IP1-DP-091504					04W0044	HGAS-DP-00765	MT0099	
D66507	440IP1-DP-090804					04W0121	HGAS-DP-00838	MT0062	
D66521	440IP1-DP-091504					04W0121	HGAS-DP-00838	MT0062	
D66528	440IP1-DP-091204					04W0179	HGAS-DP-00895	MT0060	
D67403	569IP1-DP-012803					03W0084	HGAS-DP-00441	5T0329	
D67432	440IP1-DP-090804					04W0131	HGAS-DP-00847	MT0051	
D69306	440IP1-DP-091204					04W0130	HGAS-DP-00846	6T-2178	
D71141	440IP1-DP-091204					04W0043	HGAS-DP-00764	6R-040	
D71609	440IP1-DP-091204					04W0044	HGAS-DP-00765	6R-026	
D72287	440IP1-DP-090804					04W0130	HGAS-DP-00846	MT0065	
D72623	440IP1-DP-060203					04W0187	HGAS-DP-00903	6R-033	
D72799	440IP1-DP-091204					03W0391	HGAS-DP-00719	MT0050	
D72980	440IP1-DP-051704					04W0044	HGAS-DP-00765	MT0092	
D73184	440IP1-DP-061203					03W0391	HGAS-DP-00719	6R026	
D85136	440IP1-DP-090104					04W0131	HGAS-DP-00847	6T2125	

Data Summary Report—Table 7: Correlation of Container Identification to Batch Data Reports (continued)

Package No.	Org. Package No.	Radioassay Data Package	Solid Sample Batch No.[a]	Metals Data Package[a]	VOC Data Package[a]	SVOC Data Package[a]	Headspace Sample Batch No.	Headspace VOC Data Package	RTR Data Package	VE or VV Data Package[b]
DE0873[c]	D62537	569IP1-DP-012403	WCS-03-14	ALD03029M	ALD03026V ALD03029N	ALD03026S	03W0075	HGAS-DP-00432	5T-0329	
DE0875[c]	D67420	569IP1-DP-012403	WCS-03-14	ALD03029M	ALD03026V ALD03029N	ALD03026S	03W0076	HGAS-DP-00436	5T-0329	
DE0876[c]	D70647	569IP1-DP-012403	WCS-03-14	ALD03029M	ALD03026V ALD03029N	ALD03026S	03W0357	HGAS-DP-00685	5T-0332	
DE0877[c]	D71330	569IP1-DP-012403	WCS-03-14	ALD03029M	ALD03026V ALD03029N	ALD03026S	03W0348	HGAS-DP-00681	5T-0329	
DE0878[c]	D73588	440IP1-DP-042103	WCS-03-14	ALD03029M	ALD03026V ALD03029N	ALD03026S	03W0348	HGAS-DP-00681	MT0020	

NOTES:

[a] No entry indicates container was not selected or used for solid sampling.
[b] No entry indicates container was characterized using radiography and did not undergo visual examination (VE) at the time of packaging using the VE technique or selected for visual examination to confirm radiography.
[c] Containers were solid sampled in accordance with References 24 and 25.

Acceptable Knowledge Summary

WSPF # RF107.04

RMRS-WIPP-98-100, Acceptable Knowledge TRU/TRM Waste Stream Summaries, Section 7.27, TRM Solidified Organic Waste (D022, D028, D029, D030, D032, D034, F001, F002, F005) (attached).

Rocky Flats Environmental Technology Site

ACCEPTABLE KNOWLEDGE INFORMATION

ACCEPTABLE KNOWLEDGE TRU/TRM WASTE STREAM SUMMARIES

RMRS-WIPP-98-100

Section 7.27

TRM Solidified Organic Waste

(D022, D028, D029, D030, D032, D034, F001, F002, F005)

Profile No. RF107.04

Revision 1

Reviewed for Classification/UCNI
By: Unclassified Not UCNI
Reference Exemption Number CEX-032-00
Date: January 4, 2005

Approval signatures in Site Document Control history file

7.27 **TRM Solidified Organic Waste (D022, D028, D029, D030, D032, D034, F001, F002, F005)** **Profile No. RF107.04**

Acceptable Knowledge (AK) Waste Stream Summary

Waste Stream Name: TRM Solidified Organic Waste (D022, D028, D029, D030, D032, D034, F001, F002, F005)

Generation Buildings: Buildings 440, 774, 750 Pad, and 776 [1,11]

Waste Stream Volume (Retrievably Stored): 493 55-gallon drums

Generation Dates (Retrievably Stored): January 1988 – March 2005 [1]

NOTE: Waste generated after November 1998 is repackaged, retrievably stored waste. Also, waste may be repackaged in the future.

Waste Stream Volume (Newly Generated): None [1]

Generation Dates (Newly Generated): N/A

Waste Stream Volume (Projected): None [1]

Generation Dates (Projected): N/A

TRUCON Content Code [2]: RF112A/RF212A, RF112B/RF212B, RF112D/RF212D, RF112DF/RF212DF, RF112J/RF212J, RF112N/RF212N, RF112O/212O, RF112OA/212OA, RF112P/212P, RF112PA/212PA, RF112Q/212Q, RF112QA/212QA

Process Knowledge Demonstrates Flammable VOCs in Headspace < 500 ppm: No (see Section 7.27.6)

7.27.1 Transuranic Waste Baseline Inventory Report Information [3]

WIPP Identification Number(s): RF-MT0801

Summary Category Group: S3000 Waste Matrix Code Group: Solidified Organics

Waste Matrix Code: S3190 See Note Waste Stream Name: TRM Solidified Organic Waste (D022, D028, D029, D030, D032, D034, F001, F002, F005) See Note

Description from the WTWBIR: This waste stream consists of solidified organic liquids. See Note

NOTE: The Waste Stream Name Solidified Organics–Bldg.774/TRM in the Waste Isolation Pilot Plant (WIPP) Transuranic Waste Baseline Inventory Report (WTWBIR) has been changed to TRM Solidified Organic Waste (D022, D028, D029, D030, D032, D034, F001, F002, F005). Waste Matrix Code S3222 (Halogenated Organic Sludge) in the WTWBIR is incorrect, as the final waste product is composed of

greater than 50 volume percent inorganic homogeneous solids (i.e., solidification agents), and has been re-designated Waste Matrix Code S3190 (Unknown/Other Inorganic Homogeneous Solids), see Section 7.27.2. [13] The actual Waste Stream Description in the WTWBIR requires clarification in that any liquid present will be as residual liquid in a quantity that is less than one volume percent of the payload container that is reasonably achievable after pouring, pumping, and/or aspirating, and internal containers shall contain less than 1 inch or 2.5 centimeters of liquid in the bottom of the container. The Hazardous Waste Numbers in the WTWBIR are incorrect, and the waste stream is assigned Hazardous Waste Numbers D022, D028, D029, D030, D032, D034, F001, F002, and F005 (see Section 7.27.5). The Waste Stream Name, Description, Summary Category Group, Waste Matrix Code, and Environmental Protection Agency (EPA) Hazardous Waste Numbers are based on AK (see Section 7.27.2).

7.27.2 Waste Stream Description

Transuranic Mixed (TRM) Solidified Organic Waste assigned United States Environmental Protection Agency (EPA) Hazardous Waste Numbers D022, D028, D029, D030, D032, D034, F001, F002, and F005 consists of Solidified Organic Waste [Item Description Code (IDC 801)]. This material was generated from the Building 774 Organic and Sludge Immobilization System (OASIS); is similar in material, physical form, and hazardous constituents; and is therefore considered a single waste stream. Table 7.27-1 presents the Waste Matrix Code and waste material parameters for TRM Solidified Organic Waste. [4]

Table 7.27-1, TRM Solidified Organic Waste

IDC	IDC Description	Waste Matrix Code	Waste Material Parameters	Weight % (Average)
801	Solidified Organics - Building 774	S3190, Unknown/Other Inorganic Homogeneous Solids	Organic Matrix	100%

NOTE: The actual waste material solidified was organic waste liquids, such as oil and solvents. The solidification materials and agents used to solidify the organic waste material were predominantly inorganic. The ratio of solidification materials to organic waste material used in the solidification process resulted in a final waste product that consisted of greater than 50 percent by volume of inorganic solidification materials. Hence, the final waste product is assigned a waste matrix code of Unknown/Other Inorganic Homogeneous Solids with a waste material parameter of organic matrix (i.e., cemented organic resins, solidified organic liquids, and sludges).(13,14,15)

IDC 801, Solidified Organics – Building 774: This material consists of solidified organic waste resulting from the treatment of waste oils and solvents in the Building 774 Organic and Sludge Immobilization System (OASIS) process. The waste was solidified with a nonhazardous mixture of Envirostone™ products [i.e., an organic emulsifier (polyethyleneglycol ester), gypsum cement with proprietary synthetic resin, and an accelerator (gypsum and potassium sulfate)] in quantities greater than 50 volume percent of the final waste form. Small quantities of nonhazardous absorbent (e.g., calcined diatomaceous earth or NoChar® - organic polymer solidification agent) may also be added when necessary during repackaging to absorb potential residual liquid. (5,11,12,13,20,22)

7.27.3 Areas of Operation

TRM Solidified Organic Wastes assigned EPA Hazardous Waste Numbers D022, D028, D029, D030, D032, D034, F001, F002, and F005 were generated by the following defense operations in Building 774 and are or may be repackaged in Buildings 440, 750 PAD, and 776. [5,6,7,8,9,10,11,12]

- Waste treatment
- Waste repackaging

7.27.4 Generation Processes

TRM Solidified Organics Waste, assigned EPA Hazardous Waste Number D022, D028, D029, D030, D032, D034, F001, F002, and F005, was generated from a single process - i.e., the OASIS process in Building 774. The OASIS was a batch-type process generating one drum per run. Line-generated waste oils and solvents (i.e., waste oils and solvents generated from operations performed within gloveboxes), as discussed below, were pumped into a drum attached to the bottom of the OASIS glovebox. Envirostone™ emulsifier, gypsum cement, and accelerator were also metered into the drum. Domestic water was then added to the mixture. The operator controlled the amount of materials that were added to the mixture. After all of the materials were added, a mixer (specifically a Lightning Mixer) was used to ensure adequate mixing prior to the solidification of the waste. After the mixture was set, the drum was moved to storage. The OASIS process was suspended in August 1991; however, the process was restarted in 1998 in preparation of the oil and solvent waste collection systems for decommissioning and deactivation (D&D). [1,5,7]

The OASIS feed waste oils and solvents were generated primarily from machining and degreasing operations performed in Buildings 707 and 777. Building 707 was the main weapons components production facility where plutonium metal was cast into ingots in the foundry. The ingots were machined into parts on various pieces of equipment and assembled into weapons components with welders. Many of the same weapons components production operations were also performed in Building 777. The cutting oil typically used for machining was Texaco Regal "A" (a nonhazardous, medium-weight paraffinic mineral oil). After machining, the parts were cleaned with various solvents to remove the residual oil. The solvents used included carbon tetrachloride and 1,1,1-trichloroethane. In addition, waste 1,1,1-trichloroethane was generated from ultrasonic cleaners used to clean parts, and waste carbon tetrachloride was generated from baths used to clean metal turnings and scrap prior to forming the metal into briquettes. Feed material to the OASIS process also included waste Freon TF (1,1,2-trichloro-1,2,2-trifluoroethane) that was generated from density balances in Buildings 707 and 777, and various waste oils (coolant, vacuum pump, and sight guage oils) that were generated from maintenance activities in Buildings 707 and 776/777. These waste oils and solvents were accumulated in tank systems prior to transfer to Building 774 for treatment in the OASIS process and generation of the final waste product. [5,8,9,10]

Containers of TRM Solidified Organic Waste are repackaged or may be repackaged to meet WIPP Waste Acceptance Criteria (WAC) in Buildings 440, 750 PAD, and 776. Small quantities of nonhazardous absorbent material (e.g., calcined diatomaceous earth or NoChar® with or without sodium carbonate) may also be added when necessary during repackaging to absorb potential residual liquid and/or to neutralize potential acidic vapors. [6,11,12,21]

Process flow diagrams can be found in the Backlog Waste Reassessment (BWR) Baseline Book and Waste Stream and Residue Identification and Characterization (WSRIC) Building Books referenced in Section 7.27.8.

7.27.5 RCRA Characterization

This waste stream is characterized as a mixed waste. The specific BWR Baseline Book Subpopulations and WSRIC Process Numbers associated with TRM Solidified Organic Wastes assigned EPA Hazardous Waste Numbers D022, D028, D029, D030, D032, D034, F001, F002, and F005 are listed in the Waste and Environmental Management System (WEMS) AK Waste Stream Summary for Profile Number RF107.04.[4]

Visual examination of waste contents at the time of packaging and/or Real-Time Radiography (RTR) is used to verify that the waste stream is not a liquid waste and does not contain explosives, non-radionuclide pyrophoric materials, compressed gases, or reactive waste. Therefore, this waste stream does not exhibit the characteristics of ignitability (D001), corrosivity (D002), or reactivity (D003). [11,12,20]

This waste stream was derived from the treatment of waste oils and Freon TF mixed with solvents (i.e., carbon tetrachloride and 1,1,1-trichloroethane) that were used for degreasing or other solvent properties. Therefore, this waste meets the definition of an F-listed waste. Based on historical analytical data, this waste does not exhibit the characteristic of toxicity for metals; however, the waste did exceed the characteristic regulatory limit for carbon tetrachloride. In accordance with 40 CFR 268.9, Rocky Flats Environmental Technology Site (RFETS) adopted the policy not to assign characteristic EPA Hazardous Waste Numbers to a listed waste where the treatment standards for the listed waste address the characteristic. Consequently, because the treatment standards for F001 address the treatment standards for carbon tetrachloride, D019 was not assigned to this waste stream. Therefore, F001 and F002 were originally assigned to this waste stream based on AK.[5,7,11,12]

Although F003-listed solvents, such as acetone and methanol, were detected in the confirmatory solid and headspace sampling and analysis results, these solvents are listed solely for ignitability. Because the TRM Solidified Organic Waste is not ignitable (i.e., are not assigned D001), EPA Hazardous Waste Number F003 is not assigned to this waste stream. [16,17]

Beryllium parts were used in the manufacture/assembly of weapons components, and residual beryllium contamination of plutonium parts may have occurred; therefore, the TRM Solidified Organic Waste may have been contaminated with particulate beryllium, and residual quantities of beryllium may be present in the waste stream. Based on confirmatory solid samples, the back-transformed calculated 90 percent upper confidence limit (UCL_{90}) of the mean concentrations is 0.1 mg/kg (less than 1 percent by weight); therefore, the total weight of beryllium in an individual drum of TRM Solidified Organic Waste will not exceed 5 kilograms. The beryllium is present as a contaminant of the process, not as unused commercial chemical product, and therefore is not a P015-listed waste. [11,12,16]

No discarded chemical products, off-specification species, chemical residues, and spill residues thereof [40 Code of Federal Regulations (CFR) 261.33] were included in this waste stream, and no hazardous waste from specific sources (40 CFR 261.32) was generated at the site. Therefore no K, U, or P listings have been applied to this waste stream. [5,20]

Confirmatory solid samples were analyzed for total metal, volatile organic compound (VOC), and semivolatile organic compound (SVOC) constituents. Statistics were calculated based on using one-half the method detection limit (MDL) for less-than-detectable observations, except in cases where samples had to be diluted because the waste matrix contained one or more constituents at concentrations that were orders of magnitude higher than the less-than-detectable measurement. Data transformation was also applied, where appropriate. Using this "WIPP directed" method, the calculated upper confidence limit (UCL_{90}) of the mean concentration did exceed the associated regulatory threshold limit (RTL) value for carbon tetrachloride (D019, F001), chloroform (D022, F025, F039), hexachloroethane (D034, F024, F025, F039), 1,1,1-trichloroethane (F001, F002), 1,1,2-trichloro-1,2,2-trifluoroethane (F001, F002), and methanol (F003). As stated before, EPA Hazardous Waste Number D019 is not assigned to this waste, because the treatment standard for EPA Hazardous Waste Number F001 addresses the toxic characteristic for carbon tetrachloride. Also, as stated before, F003 does not apply to this waste stream, because the solidified organic waste is not ignitable. Based on a review of AK, EPA Hazardous Waste Numbers F024, F025, and F039 do not apply to this waste stream, since RFETS usage was not for manufacturing of aliphatic hydrocarbons (F024, F025) and the waste is not from a multisource leachate source (F039). During the analytical data review, it was determined that the method detection limit (MDL) for 2,4-dinitrotoluene (D030) and hexachlorobenzene (D032) exceeded their program required quantification limits (PRQLs) for all solid confirmatory samples collected, due to difficulties in analysis of the waste matrix. Subsequent review of the solid sampling data and reconsideration of process knowledge confirms that there is no indication that this waste became contaminated with 2,4-dinitrotoluene and/or hexachlorobenzene. Nevertheless, as a conservative measure, D030 (for 2,4-dinitrotoluene) and D032 (for hexachlorobenzene) were added to the waste stream. Accordingly, D022, D030, D032, and D034 are

assigned to this waste stream in addition to the original F001 and F002 codes assigned, based on AK. [5,7,8,9,16]

Headspace gas sampling and analysis of the first lot of containers assigned to this waste stream detected 15 VOCs [acetone, benzene, carbon tetrachloride, chloroform, 1,1-dichloroethane, 1,2-dichloroethane, 1,1-dichloroethylene, cis-1,2-dichloroethylene, methanol, methylene chloride, tetrachloroethylene, toluene, 1,1,1-trichloroethane, 1,1,2-trichloro-1,2,2- trifluoroethane, and trichloroethylene]. Statistics were calculated based on using one-half the method detection limit (MDL) for less-than-detectable observations except in cases where samples had to be diluted, because the waste matrix contained one or more constituents at concentrations that were orders of magnitude higher than the less-than-detectable measurement. Data transformation was also applied, where appropriate. Using this "WIPP directed" method, the calculated 90 percent UCL_{90} of the mean concentration for carbon tetrachloride (D019, F001), chloroform (D022, F025, F039), 1,1-dichloroethylene (D029, F025, F039), methanol (F003), methylene chloride (F001, F002), 1,1,2-trichloro-1,2,2-trifluoroethane (F001, F002), 1,1,1-trichloroethane (F001, F002) and 1,1-dichloroethane (F024, F039) were found to exceed their associated RTL values for the containers assigned to this first lot. As stated before, EPA Hazardous Waste Number D019 is not assigned to this waste because the treatment standard for EPA Hazardous Waste Number F001 addresses the toxic characteristic for carbon tetrachloride and F003 is not assigned to this waste because the waste is not ignitable. Based on a review of AK, EPA Hazardous Waste Numbers F024, F025, and F039 do not apply to this waste stream, since RFETS usage was not for manufacturing of aliphatic hydrocarbons (F024, F025); and the waste is not from a multisource leachate source (F039). Accordingly, D029 (for 1,1-dichloroethylene) is assigned to this waste stream in addition to D022, D030, D032, D034, F001, and F002 assigned based on AK and solid confirmatory sampling. [5,7,8,9,16,17]

This waste stream also includes containers where 1,2-dichloroethane (D028, F024, F025, F038) and toluene (F005, F037, F038, F039) were detected in concentrations above the associated RTL/Program Required Quantitation Limit (PRQL) value in the individual container headspace for containers not included in the first headspace lot. Based on a review of the AK, EPA Hazardous Waste Numbers F024, F025, F037, F038, and F039 do not apply to this waste stream, since RFETS usage was not for manufacturing of aliphatic hydrocarbons (F024, F025) or for refining petroleum product (F037, F038), and the waste is not from a multisource leachate source (F039); however, toluene was used as a solvent (F005) at RFETS. Although the UCL_{90} value for 1,2-dichloroethane and toluene were below their associated RTL/PRQL in the first headspace lot, EPA Hazardous Waste Numbers D028 and F005 are conservatively assigned to this waste stream in addition to D022, D029, D030, D032, D034, F001, and F002. [4,5,6]

One constituent, included in 40 CFR 261, Appendix VIII, was detected as an SVOC tentatively identified compound (TIC) in over 25 percent of the solid confirmatory

samples collected. This constituent is 1,2-benzenedicarboxylic acid, bis (2-ethylhexyl) ester (CAS 117-81-7), also known as dioctyl phthalate (DOP), which is F- and U-listed. An evaluation to compare the TIC identification with AK was performed to determine if this TIC is a listed hazardous waste in the waste stream. This evaluation determined that this constituent was not used in the process that generated this waste stream and is not present as unused commercial chemical products (i.e., U-listed waste) or as F-listed waste. The waste in this waste stream has been packaged and stored at RFETS for several years. 1,2-benzenedicarboxylic acid, bis (2-ethylhexyl) ester was used as a plasticizer in plastics for over 70 years, including the plastic bags used to package this waste. The extended storage of this waste packaged in plastic bags could account for the presence of 1,2-benzenedicarboxylic acid, bis (2-ethylhexyl) ester in the solid samples. In summary, the presence of this TIC neither renders the waste stream a U-listed hazardous waste nor requires the assignment of any additional F-listed hazardous waste numbers. [18]

One constituent, included in 40 CFR 261, Appendix VIII, was detected as a tentatively identified compound (TIC) in over 25 percent of the headspace samples collected in headspace Lot 1. This constituent is 1,4-dioxane (CAS No. 123-91-1) which is F- and U-listed (i.e., F039 and U108). An evaluation to compare the TIC identification with AK was performed to determine if this TIC is a listed hazardous waste in the waste stream. This evaluation determined that this constituent was not present in the process that generated this waste stream in a manner that requires application of the associated F-listed Hazardous Waste Number [i.e., the waste is not from a multisource leachate source (F039)]. Also, this constituent is not present as unused commercial chemical products (i.e., U-listed waste). The evaluation did reveal that 1,4-dioxane was added by the manufacturer to chlorinated solvents, particularly 1,1,1-trichloroethane, as a stabilizer and corrosion inhibitor. Because the constituent was detected in the headspace gas analysis, this constituent has been added to the headspace VOC target analyte list for this waste steam. In summary, the presence of this TIC neither renders the waste stream a U-listed hazardous waste nor requires the assignment of any additional F-listed hazardous waste numbers. [19]

7.27.6 Transportation

The payload containers in the waste stream must also comply with the Contact-Handled Transuranic Waste Authorized Methods for Payload Control (CH-TRAMPAC) requirements. Flammable volatile organic compounds (VOCs) including acetone, benzene, 1,1-dichloroethane, 1,2-dichloroethane, 1,1-dichlroethylene, cis-1,2-dichlorotheylene, methanol, and toluene were identified in this waste stream based on headspace gas sampling and analysis. Therefore, flammable VOCs in the payload container headspace have the potential to exceed 500 ppm. All payload containers, including those that exceed 500 ppm flammable VOCs in the headspace gas, are evaluated for compliance with applicable CH-TRAMPAC requirements using the CH-TRAMPAC software compliance evaluation system in the WIPP Waste Information System (WWIS) prior to shipment. Any containers not passing the

compliance evaluation are identified and corrected through the site non-conformance reporting system.[5.17]

Payload management will not be used for this waste stream.

7.27.7 Radionuclides

Table 7.27-2 summarizes the radionuclides that may be present in TRM Solidified Organic Waste assigned EPA Hazardous Waste Numbers D022, D028, D029, D030, D032, D034, F001, F002, and F005.[4]

Table 7.27-2, TRM Solidified Organic Waste Radionuclides

IDC	Description	Radionuclides
801	Solidified Organics – Building 774	WG Pu, Am-241, Am-243, DU, EU, Np-237

Key:
WG Pu weapons-grade plutonium
DU depleted uranium
EU enriched uranium
Am-241 americium-241
Am-243 americium-243
Np-237 neptunium-237

7.27.8 References

1. Wastren 2004. Interoffice Memorandum from M. L. Johnson to Waste Records Center, Current and Projected Waste Volumes for TRM Solidified Organic Waste (F001, F002), Profile Number RF107.04, MLJ-109-2004, December 20, 2004.

2. RFETS 2004. Transuranic (TRU) Waste Management Manual, Version 8, 1-MAN-008-WM-001, November 15, 2004.

3. DOE 1995. Transuranic Waste Baseline Inventory Report, Revision 2. DOE/CAO-95-1121.

4. RMRS 2004. RFETS TRU Waste Acceptable Knowledge Supplemental Information. RF/RMRS-97-018, Revision 15, December 16, 2004.

5. RFETS 2004. Backlog Waste Reassessment Baseline Book, Waste Form 47, Building 774, Solidified Organics.

6. Waste and Environmental Management System (WEMS) database.

7. RFETS 1996. Waste Stream and Residue Identification and Characterization Building 774, Version 5.0.

8. RFETS 1993. Waste Stream and Residue Identification and Characterization Building 707, Version 3.2.

9. RFETS 1993. Waste Stream and Residue Identification and Characterization Building 776, Version 3.2.

10. RFETS 1993. Waste Stream and Residue Identification and Characterization Building 777, Version 3.2

11. RFETS 2004. Waste Stream and Residue Identification and Characterization Building 440 Storage, Version 7.0.

12. RFETS 2004. Waste Stream and Residue Identification and Characterization Building 750 Pad, Version 7.0

13. RMRS 1999. Interoffice Memorandum from Jeff Harrison to Ann Kercher, Determining Waste Material Parameters Using Acceptable Knowledge, JLH-004-1999, April 23, 1999.

14. Wastren 2003. Interoffice Memorandum from Jeff Harrison to Vivian Sendelweck et. al., Update of Waste Matrix Codes, JLH-009-2003, February 7, 2003.

15. Wastren 2004. Interoffice Memorandum from M. L. Johnson to E.L. D'Amico, Update of Waste Material Parameter, MLJ-014-2004, February 24, 2004.

16. Interoffice Memorandum from Thomas R. Gatliffe to Eric L. D'Amico, Revised Statistical Solid Analysis Data Evaluation Report For Transuranic Mixed (TRM) Solidified Organic Waste [D022, D028, D029, D020, D034, F001, F002, F005], Solid Sampling Lot 1 (Waste Stream Profile RF107.04), TRG-430-04, December 13, 2004.

17. Interoffice Memorandum from Thomas R. Gatliffe to Eric L. D'Amico, Revised Headspace Gas Analysis Data Evaluation Report For Waste Stream Profile RF107.04 Lot 1, TRG-440-04, December 16, 2004.

18. Interoffice Memorandum from Vivian S. Sendelweck to Eric D'Amico, Tentatively Identified Compounds in RF107.04 TRM Solidified Organic Waste (F001, F002) Solid Sampling Lot 1, VSS-032-2004, August 18, 2004.

19. Interoffice Memorandum from M. L. Johnson to E. L. D'Amico, Tentatively Identified Compounds in TRM Solidified Organic Waste (D022, D028, D029, D020, D034, F001, F002, F005) Lot 1, MLJ-100-2004, December 1, 2004.

20. RFETS 2004. Solid Radioactive Waste Packing Requirements Manual, 1-M12-WO-4034, Version 15, November 22, 2004.

21. RFETS 2004. 750 PAD Perma-Con East Sludge Repackaging Operations, PRO-1745-750PAD-SRO, Version 6, October 21, 2004.

22. NoChar, Inc. Material Safety Data Sheet for polymer absorbents A660, N960, and N962.

DOE F 1325.8

United States Government **Department of Energy**

memorandum

Carlsbad Field Office
Carlsbad, New Mexico 88221

DATE: JAN 12 2005

REPLY TO ATTN OF: CBFO:OCT:KWW:VW:05-0141:UFC:5822

SUBJECT: CBFO Approval of RFETS WSPF RF107.04, TRM Solidified Organic Waste

TO: Joseph Legare, DOE-RFPO

The Carlsbad Field Office (CBFO) has evaluated the Rocky Flats Environmental Technology Site (RFETS) Waste Stream Profile Form (WSPF) RF107.04. We have concluded that the WSPF is complete and that the waste stream determination was made in accordance with CBFO procedures and guidance.

The CBFO therefore approves the WSPF as submitted. Using the methods approved at RFETS, RFETS may enter the data into the certification and shipping modules of the WIPP Waste Information System.

If you have any questions, please contact me at (505) 234-7357.

Kerry W. Watson, Director
Office of Characterization and Transportation

cc:
L. Xuan, DOE-RF *ED
D. Hicks, DOE-RF ED
G. O'Leary, RFETS ED
C. Ferrera, RFETS ED
M. Strum, WTS ED
R. Chavez, WRES ED
L. Greene, WRES ED
WIPP Operating Record
CBFO M&RC

*ED denotes Electronic Distribution

Washington
TRU Solutions LLC

WRES:05:003
UFC:5822.00

COPY

January 12, 2004

Mr. K. W. Watson, Assistant Manager
Office of National TRU Program
Carlsbad Field Office
U.S. Department of Energy
P.O. Box 3090
Carlsbad, NM 88221-3090

Subject: REVIEW OF ROCKY FLATS WASTE STREAM PROFILE FORM NUMBER RF107.04, TRM SOLIDIFIED ORGANIC WASTE

Dear Mr. Watson:

Washington Regulatory and Environmental Services (WRES) has reviewed the subject Waste Stream Profile Form (WSPF) RF107.04, TRM Solidified Organic Waste, in accordance with WP 08-NT.03, WSPF Review and Approval Program.

The complete WSPF, Characterization Information Summary, Acceptable Knowledge Summary, and comments and resolutions from the review team are enclosed.

If you have any questions, please contact me at Extension 7545.

Sincerely,

D.T. Bigniell, Manager
Regulatory Compliance

RDR/llp

Attachments (2)

UNIQUE #	DOE UFC	DATE RECVD	ADDRESSEES
0500159	5822.00	JAN 1 2 2005	K. Watson

P.O. Box 2078 • Carlsbad, New Mexico USA 88221-2078
Phone: (505) 234-7200 • Fax (505) 234-7083

CARLSBAD FIELD OFFICE

DOCUMENT REVIEW RECORD

SITE: RFETS

DOCUMENT TITLE: TRM Solidified Organic Waste (D022, D028, D029, D030, D032, D034, F001, F002, F005)

DOCUMENT NUMBER and REVISION: RF107.04, Revision 0

DOCUMENT DATE: 1/4/05

TYPE OF REVIEW: WAP

ASSIGNED REVIEWER: Kerry Watson

DELEGATED REVIEWER: R. Chavez, M. Doherty, L. Greene, D. Lipinski, C. Luoma, L. Price, R. Reeves, M. Strum, K. ZbryK

ADDITIONAL INSTRUCTIONS:

FORWARD RESPONSE TO: Site.Documents@wipp.ws

#	PAGE	SECT/ PARA	COMMENT	RESPONSE	ACC	REJ
1.	General		Suggest adding a note somewhere clearly explaining that this is definitely an inorganic waste stream. (L. Price)	It is not an inorganic waste stream. The actual waste material that was solidified is organic material such as oil and solvents like carbon tetrachloride and 1,1,1-trichloroethane. The solidification materials and agents used to solidify the organic waste material were inorganic. The ratio of solidification materials to organic waste material used in the solidification process resulted in a final waste product that consisted of greater than 50 percent by weight of inorganic solidification materials. Hence the final waste product is assigned a waste matrix code of S3190 (Unknown/Other Inorganic Homogeneous Solids); however, the waste stream still consists of solidified organic waste with an appropriate waste material parameter of Organic Matrix (i.e., cemented organic resins, solidified organic liquids and sludges). Expanded note under Table Table 7.27-1 to better explain this.	X	
2.	1 of 20 and 7.27-1		Description from the WTWBIR: Consider changing "cemented" to "solidified." (R. Reeves)	Comment incorporated.	X	
3.	15 of 20		Data Summary Report – Table 5: The WAP lists cresols as a target analyte for SVOCs. Consider clarifying that cresols are analyzed as 2-Methylphenol,	Added clarification.	X	

#	PAGE	SECT/ PARA	COMMENT	RESPONSE	ACC	REJ
			and 3-&4-Methylphenol. (R. Reeves)			
4.	15 of 20		Data Summary Report – Table 5: It does not appear that note g is applied to Table 5. Please apply or delete. (R. Reeves, K. Zbryk)	Deleted footnote g in Table 5.	X	
5.	7.27-2		Waste Matrix Code S3190 was applied to inorganic homogeneous solids yet this is an organic waste stream. Clarify why S3290 has not been applied. (K. Zbryk)	See response to comments # 1, 6 and 7	X	
6.	7.27-3		Table 7.27-1 & IDC 801 description paragraph – This is an inorganic waste stream, therefore "Waste Material Parameters" from Table 7.27-1 should be "Inorganic Matrix," because the final waste form is inorganic. Please clarify. (L. Price)	Expanded note to Table7.27-1 as follows: "The actual waste material solidified was organic waste liquids such as oil and solvents. The solidification materials and agents used to solidify the organic waste material were predominantly inorganic. The ratio of solidification materials to organic waste material used in the solidification process resulted in a final waste product that consisted of greater than 50 percent by volume of inorganic solidification materials. Hence the final waste product is assigned a waste matrix code of Unknown/Other Inorganic Homogeneous Solids with a waste material parameter of organic matrix (i.e., cemented organic resins, solidified organic liquids and sludges). Also see response to Comment # 7	X	
7.	7.27-3		IDC 801, Solidified Organics-Building 774: Provide the chemical constituents associated with the products Envirostone, NoChar, and accelerator. Also clarify that gypsum cement and small quantities of absorbent are non-hazardous. (R. Reeves, K. Zbryk, L. Price)	Changed 2nd sentence to: "The waste was solidified with a nonhazardous mixture of Envirostone™ products [i.e. an organic emulsifier (polyethyleneglycol ester), gypsum cement with synthetic resin, and an accelerator (gypsum and potassium sulfate)] in quantities greater than 50 volume % of the final waste form." NOTE: MSDS for Envirostone products included in reference number 13. Changed 3rd sentence to: "Small quantities of nonhazardous absorbent (e.g., calcined diatomaceous earth or NoChar® - an organic polymer solidification agent)	X	

#	PAGE	SECT/ PARA	COMMENT	RESPONSE	ACC	REJ
				may also be added when necessary during repackaging to absorb potential residual liquid." Also added new reference 22, MSDS for NoChar absorbents.		
8.	7.27-4		Generation Processes: 2nd sentence – Please describe "line-generated." (L. Price)	Added the following clarification: "(i.e., waste oils and solvents generated from operations performed within gloveboxes)"	X	
9.	7.27-4		Generation Process: Consider revising the first paragraph, third sentence to read "Line-generated waste oils and solvents discussed below..." (R. Reeves)	Incorporated recommendation	X	
10.	7.27-4		Generation Process: First paragraph. Define the term house water. (L. Greene, L. Price)	Change "house water" to "domestic water"	X	
11.	7.27-4		Generation Process: Second paragraph. Include a description of the type of materials that were machined. Describe the process in a way that makes it clear why this waste is TRU. Also describe Texaco Regal "A." Also (R. Reeves, L. Price)	Added the following as the 2nd through 4th sentences: "Building 707 was the main weapons components production facility where plutonium metal was cast into ingots in the foundry. The ingots were machined into parts on various pieces of equipment and assembled into weapons components with welders. Added the following to describe Regal "A": "a nonhazardous, medium-weight paraffinic mineral oil"	X	
12.	AK-6		RCRA Characterization: The presence of chloroform could indicate the presence of F025 and F039 listed waste. Consider revising the second paragraph, fourth sentence to read "... chloroform (D022, F025, F039)" and explain that a review of AK confirmed that these HWNs do not apply. (R. Reeves)	Changed 4th sentence of 2nd paragraph to: "...carbon tetrachloride chloroform (D022, F025, F039), hexachloroethane (D034, F024, F025, F039)," Added the following sentence to 2nd paragraph: "Based on a review of AK, EPA Hazardous Waste Numbers F024, F025 and F039 do not apply to this waste stream since RFETS usage was not for manufacturing of aliphatic hydrocarbons (F024, F025) and the waste is not from a multisource leachate source (F039)." Also added references 7, 8, and 9 to 2nd paragraph.	X	
13.	AK-6		RCRA Characterization: The presence of chloroform could indicate the presence of F025 and F039 listed	Changed 4th sentence of 3rd paragraph to:	X	

DOCUMENT REVIEW RECORD (CONTINUED)

#	PAGE	SECT/ PARA	COMMENT	RESPONSE	ACC	REJ
			waste and the presence of 1,1-dichloroethane could indicate the presence of F024 and F039 listed waste. Consider revising the third paragraph, fourth sentence to read "... chloroform (D022, F025, F039)" and "1,1-dichloroethane (F024, F039)" and explain that a review of AK confirmed that F024, F025 and F039 do not apply. (R. Reeves)	"...carbon tetrachloride chloroform (D022, F025, F039), 1,1-dichloroethylene (D029, F025, F039), ... 1,1-dichloroethane (F024, F039)." Added the following sentence to 3rd paragraph: "Based on a review of AK, EPA Hazardous Waste Numbers F024, F025 and F039 do not apply to this waste stream since RFETS usage was not for manufacturing of aliphatic hydrocarbons (F024, F025) and the waste is not from a multisource leachate source (F039)." Also added references 7, 8, and 9 to 3rd paragraph.		
14.	AK-7		RCRA Characterization: Second paragraph. Indicate if concentrations were above PRQL and indicate if AK reevaluation was required. Make discussion consistent with Table 2 – HSG data in the CIS relative to D022 and D029. Clarify if AK was reviewed to determine if toluene was used as an F005 solvent. (R. Chavez)	Revised 2nd paragraph as follows: "This waste stream also includes containers where 1,2-dichloroethane (D028, F024, F025, F038) and toluene (F005, F037, F038, F039) were detected in concentrations above the associated RTL/Program Required Quantitation Limit (PRQL) value in the individual container headspace for containers not included in the first headspace lot. Based on a review of the AK, EPA Hazardous Waste Numbers F024, F025, F037, F038, and F039 do not apply to this waste stream since RFETS usage was not for manufacturing of aliphatic hydrocarbons (F024, F025) or for refining petroleum product (F037, F038) and the waste is not from a multisource leachate source (F039); however, toluene was used as a solvent (F005) at RFETS. Although the UCL_{90} value for 1,2-dichloroethane and toluene were below their associated RTL/PRQL in the first headspace lot, EPA Hazardous Waste Numbers D028 and F005 are conservatively assigned to this waste stream in addition to	X	

#	PAGE	SECT/ PARA	COMMENT	RESPONSE	ACC	REJ
				D022, D029, D030, D032, D034, F001, and F002." Also added references 4 and 5 to 2nd paragraph.		
15.	AK-7		RCRA Characterization: Fourth paragraph. The fourth sentence states that 1,4-dioxane was not used in the process; however, the fifth sentence states it was used with solvents as a stabilizer. For this reason, consider revising the fourth sentence to read "...not used in the process that generated this waste stream in a manner that requires application of F-listed Hazardous Waste Numbers and is not present as unused commercial chemical products (i.e., U-listed waste)." Also clarify how 1,4-dioxane is F-listed (F039). (R. Reeves, K. Zbryk)	Changed 2nd sentence to" "... which is F- and U-listed (i.e., F039 and U108)." Changed 4th and 5th sentences to: "...not present in the process that generated this waste stream in a manner that requires application of F-listed Hazardous Waste Number [i.e., the waste is not from a multisource leachate source (F039)]. Also, this constituent is not present as unused commercial chemical products (i.e., U-listed waste). The evaluation did reveal that 1,4-dioxane was added by the manufacturer to chlorinated solvents..."	X	
16.	AK-7		RCRA Characterization: Please add to the fourth paragraph the language from the Table 2 (note a), which also states that 1,4-dioxane was added as a TIC on the target analyte list for this waste stream. (L. Price)	Added the following sentence: "Because the constituent was detected in the headspace gas analysis, this constituent has been added to the headspace VOC target analyte list for this waste steam."	X	
17.	AK-7		Table 5 and on page 7.27-7: WSPF 122.05 states that you did not find a source for DOP in the waste packaging. DOP was used to test HEPA filters after replacement (not an F-listed solvent use). Please clarify the discrepancy between RF107 and RF122.05. (M. Doherty)	The waste assigned to RF122.05 was historically stored in tanks prior to solid sampling and not packaged in plastic packaging. Therefore, 1,2-benzenedicarboxylic acid, bis (2-ethylhexyl) ester (also known as DOP) was added to the SVOC target analyte list for RF122.05 because the source of DOP could not be attributed to packaging. However, the waste assigned to RF107.04 was historically packaged in plastic. RF107.04 changed as follows to clarify waste was long term packaging in plastic: "The waste in this waste stream has been packaged and stored at RFETS for several years. 1,2-benzenedicarboxylic acid, bis (2-ethylhexyl) ester was used as a plasticizer in plastics for over 70 years, including the	X	

DOCUMENT REVIEW RECORD (CONTINUED)

#	PAGE	SECT/ PARA	COMMENT	RESPONSE	ACC	REJ
				plastic bags used to package this waste. The extended storage of this waste packaged in plastic bags could account for the presence of 1,2-benzenedicarboxylic acid, bis (2-ethylhexyl) ester in the solid samples."		
18.	AK-9		References: Apply reference 15 to the document or delete. (R. Reeves)	Added as reference 15 to note for Table 7.27-1	X	

COMMENT RESOLUTION APPROVED:

R. Reeves

Signature

1/12/05

Date

Attachment 2 - CCP Records Transmittal/Receiving Form

CCP Central Records/Records Custodian, 4021 National Parks Highway - MS: GSA 203, Carlsbad, New Mexico 88220

Telephone Number: 505-234-7523, 505-234-7233, 505-234-7617
Fax Number: 505-234-7014

☒ Original Record
☐ Faxed Record

Attn:	Records Custodian	From:	Jeff Harrison
Ship to:	CCP Central Records/ CCP Records Custodian	Site:	Idaho National Laboratory, CCP-AK-INL-005
	4021 National Parks Highway - MS GSA 203	Company:	Technical Specialists, LLC
	Carlsbad, NM 88220	Telephone Number:	720-977-7042
		Date Sent:	8/24/05
Telephone Number:	505-234-7523		

Document Number	Title/Description	Record Date	Total Pages
P522	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-004	7/5/2005	1
	Rocky Flats Environmental Technology Site WIPP Waste Stream Profile Form, TRU Solidified Organic Waste	1/11/2005	39
	NA		

Comments
None

CCP Records Center
Acceptance/Rejection Signature and Date

Records Accepted ☒ [signature] [printed name] 11/28/05
Signature Printed Name Date

Records Rejected ☐ _____ _____ _____
Signature Printed Name Date

Reason for Rejection: _____

Re-submittal: _____ _____ _____
Signature Printed Name Date

P.01

TRANSACTION REPORT

AUG-10-2006 THU 09:57 AM

FOR: CCP RECORDS 15052347014

SEND DATE START	RECEIVER	TX TIME	PAGES	TYPE	NOTE	M#	DP
AUG-10 09:57 AM	LANL _ CBAD	18″	1	FAX TX	OK	294	

TOTAL : 18S PAGES: 1

Controlled Copy

CCP-QP-008, Rev. 10 **Effective Date: 10/15/2004**
CCP Records Management **Page 29 of 33**

Attachment 2 - CCP Records Transmittal/Receiving Form

CCP Central Records/Records Custodian, 4021 National Parks Highway - MS: GSA 203, Carlsbad, New Mexico 88220

Telephone Number: 505-234-7523, 505-234-7233, 505-234-7617
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P522	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-004	7/5/2005	1
	Rocky Flats Environmental Technology Site WIPP Waste Stream Profile Form, TRU Solidified Organic Waste	1/11/2005	39

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PAGE

Attachment 3 - Acceptable Knowledge Source Document Summary

Waste Stream Number(s): ID-RF-S3114, ID-RF-S3121-374, ID-RF-S3150-A, ID-RF-S5126, ID-RF-S5300-A

Site(s): Idaho National Laboratory

Source Document Tracking Number: P043

Acceptable Knowledge Documentation Type:
- ☑ TRU Waste Management Program Information
- ☑ Waste Stream-Specific Information
- ☑ Supplemental Information

Category:
- ☐ C - Correspondence
- ☐ D - Discrepancy Resolution
- ☑ P - Published Documents
- ☐ U - Unpublished Documents

Title of Source Document: TRU Waste Compliance Program for WIPP-WAC (U)

Source Document Reference Information (author(s), document and revision number, date, publisher): WO-4500-F, 1/19/1987

AK # [a]	Source Doc. Page # [b]	AK Information Summary
PR5, PR8, WS2, WS4, WS10, WS11, S2, S16	21-166	Pgs. 20-26 A partial list of TRU Waste Forms and a list and descriptions of RFP IDCs and the areas where they are generated. Pgs. 31-40 Flow of waste and residue packages through the waste drum/box and data collection system. Pgs. 44-50, 50-53 Waste flow description for line-generated combustibles, nonline-generated combustibles, repackaging combustibles, specially handled combustibles. Waste form controls and compliance for combustibles. Pgs. 56-68, 68-71 Waste flow description for line-generated metal waste to be repackaged, nonline-generated metal waste to be repackaged, repackaging metal waste, and metal waste packaged directly into a drum. Waste form controls and compliance for metals. Pgs. 83-84 Waste form controls and compliance for glass waste. Pgs. 88-92 Waste flow description for TRU solidified aqueous waste. Waste form controls and compliance for TRU solidified aqueous waste. Pgs. 93-99 Certification of TRU solidified organic waste, including waste form description, waste flow description, and waste form compliance. Pgs. 100-107 Certification of TRU solidified laboratory waste, including waste form description, waste flow description, and waste form compliance. Pgs. 109-115 Certification of TRU graphite waste, including description and waste form compliance. Pgs. 116-121 Certification of TRU organic solid waste, including description and waste form compliance. Pgs. 122-132 Certification of TRU inorganic solid waste, including description and waste form compliance. Pgs. 133-143 Certification of TRU filter waste, including description and waste form compliance.

Attachment 3 - Acceptable Knowledge Source Document Summary (continued)

Site(s): Idaho National Laboratory		Source Document Tracking Number: P043
AK # [a]	**Source Doc. Page # [b]**	**AK Information Summary**
		Pgs. 144-150 Certification of TRU leaded rubber waste, including description and waste form compliance. Pgs. 151-158 Certification of solidified process solids, including new IDCs, description and waste form compliance. Pgs. 159-166 Certification of TRU pyrochemical salt waste, including description and waste form compliance.

Source Document Data Limitations (if any):

1. Document is missing many pages.
2. Effective date of the document is at the end of TRU waste shipment to INEL.

Acceptable Knowlege Expert:

Jeff Harrison / Jeff Harrison / Date: 8/11/05

Print /Sign

[a] Obtain from Acceptable Knowledge Documentation Checklist
[b] For microfilm or microfiche, identify box, tape, reel number and location.

P. B. Hoffman, Manager
Classification Office

TRU WASTE COMPLIANCE PROGRAM
FOR WIPP-WAC (U)

WO-4500-F

Document and Procedure No. Revision

WQ Eng	R&D	Quality		Effective Date
				1-19-87

SHEET	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
REVISION	F	E	E	B	C	B	C	C	C	C	B	C	C	B	D	D	D	B	B	D	C
LATEST CHANGE	rev	rev	rev		rev		rev	rev	rev	rev		rev	rev		rev	rev	rev			rev	rev
SHEET	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
REVISION	D	C	D	D	D	B	C	C	B	C	C	C	C	C	C	C	C	C	C	B	C
LATEST CHANGE	rev	rev	rev	rev	rev					rev	rev	rev	rev	rev	rev	rev	rev	rev	rev		
SHEET	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
REVISION	B	C	C	C	D	D	D	C	D	C	D	C	B	C	C	C	C	C	D	D	B
LATEST CHANGE		rev		rev	rev	rev	rev	rev	rev		rev			rev		rev			rev	rev	
SHEET	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84
REVISION	C	C	D	C	D	D	D	C	C	B	C	C	C	D	D	D	C	C	D	C	D
LATEST CHANGE		rev	rev	rev	rev	rev	rev	rev			rev		rev	rev	rev	rev	rev		rev	rev	rev
SHEET	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
REVISION	C	C	D	D	C	D	D	D	D	D	C	D	D	D	C	D	D	C	C	D	C
LATEST CHANGE			rev	rev		rev	rev	rev	rev	rev	rev	rev	rev	rev	rev	rev	rev	rev	rev	rev	rev
SHEET	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126
REVISION	C	C	D	D	D	C	C	D	C	C	D	D	C	C	C	D	C	D	D	C	C
LATEST CHANGE	rev	rev	rev	rev	rev	rev	rev	rev	rev	rev	rev	rev	rev	rev	rev	rev	rev	rev	rev	rev	rev
SHEET	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147
REVISION	D	C	C	C	C	B	C	C	D	C	C	C	D	D	C	C	C	C	D	D	D
LATEST CHANGE	rev	rev	rev	rev	rev	rev	rev	rev	rev	rev	rev	rev	rev	rev	rev	rev	rev	rev	rev	rev	rev
SHEET	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168
REVISION	D	D	D	D	D	D	C	C	D	D	C	D	D	D	D	E	D	E	D		
LATEST CHANGE	rev	rev	rev	rev	rev	rev	rev	rev	rev	rev	rev	rev	rev	rev	rev	rev	rev	rev	rev	del	del
SHEET	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189
REVISION																					
LATEST CHANGE																					

D-216(2)

Drawing	Sheet
WO-4500	-1

P043

1.3.2 Packages containing nonconforming wastes or having incomplete information on the labeling, as determined by Waste Certification (WC) or RTR examination, are returned to the generator for corrective action with a copy of a Waste Rejection Report (WRR) RF-47042, which identifies the specific reason for rejection. The generator must take corrective action which is acceptable to Quality Engineering (see Figure 4).

Data for each TRU waste package is reviewed by QE personnel who verify the information is complete and correct. The QE representative then approves WIPP certification for that waste package.

1.4 Operating Procedures Referenced in WO-4500 TRU Waste Compliance Program for WIPP-WAC

Document Number	Title
WO-4005	Loading Transuranic Waste into ATMX Railcars (U)
WO-4016	Handling Miscellaneous Wastes in the Size Reduction Area, Building 776 (U)
WO-4033	Segregation of Plutonium-Contaminated Solid Waste (U)
WO-4034	Packaging Wastes for Shipment Offsite (U)
WO-4040	Waste Operations Supplies (U)
CO-1009	Operating South Drum Counter (U)
CO-1011	North Drum Counter Ge (Li) System (U)
CO-1039	Sorting and Scarfing Firebrick (Line 48) (U)
CO-1103	Segmented Drum Scan Counter, Building 771 (U)
CO-1106	Segmented Drum Scan Counter, Building 707 (U)
CO-1107	Passive/Active Crate Counter II, Building 664 (U)
CO-1112	LOSAC Segmented Drum Counter, Building 776 (U)
CO-1113	Salt Scrub Process, Building 776 (U)

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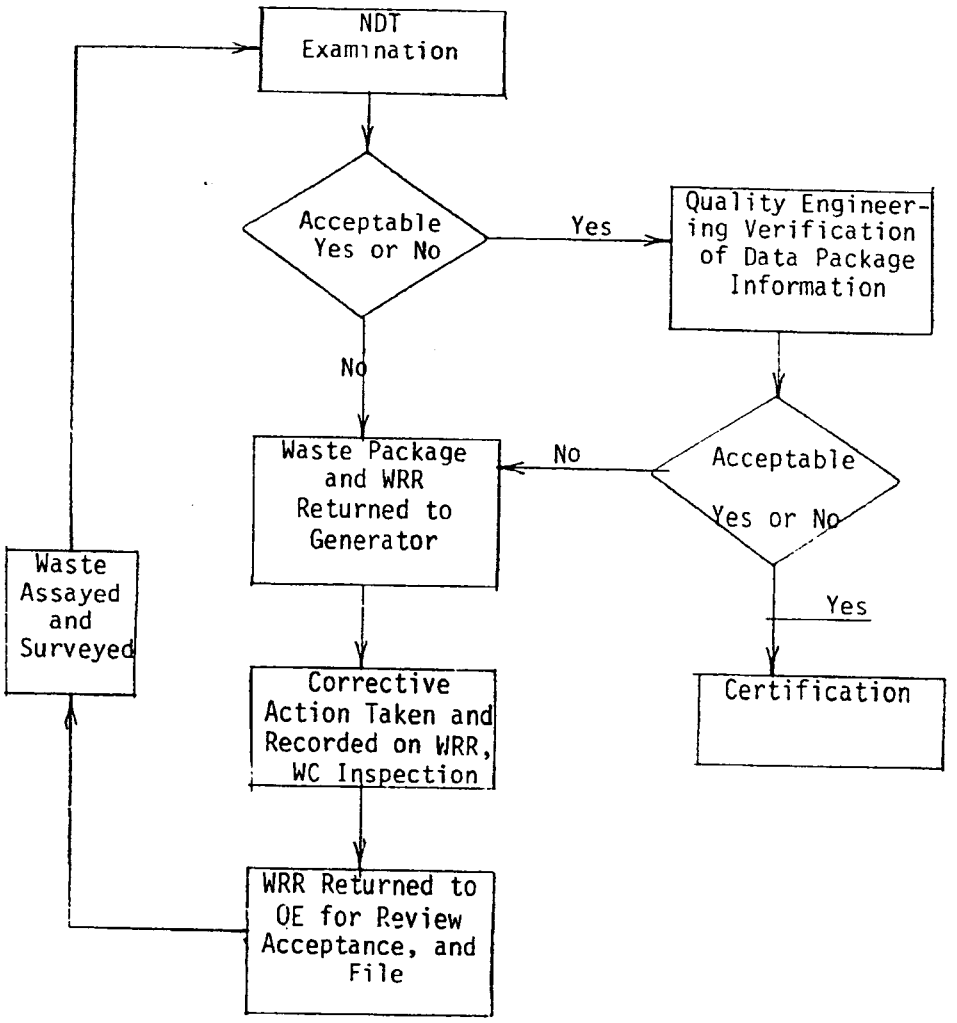

Figure 4. Corrective Action for Nonconforming Items

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Document Number	Title
CO-3001	Removal and Replacement of Raschig Rings (U)
CO-4001	Liquid Waste Processing (First Stage) (U)
WO-4020	Organic and Sludge Immobilization System (U)
WO-4021	Miscellaneous Aqueous Waste Handling and Solidification (U)
CO-5014	Filtering, Conveying, and Packaging Sludge (U)
CO-5017	Waste Collection System for Building 371 Recovery Operations (U)
CO-6017	HSA Incineration System Scarfing and Grinding (U)
CO-6069	Residue Cementing (U)
CO-7006	Operating the Crate Counter (U)
CO-9999	Master List of CO Procedures (U)
Traffic Procedure T-300-1	Procedure for Labeling and Marking Unclassified TRU Waste Containers for Shipment to INEL (U)
WC-4003	Solid Waste Inspection Procedure (U)
L-3007	Analysis of Low Level Plutonium and Americium in Discard Solution
FO-707-1000	Coolant Oil System, Building 707 (U)
FO-707-1012	Graphite Process Operations, Building 707 (U)

TABLE 2-1. TRU WASTE FORMS (contd)

Waste Form Number	Waste Form Name	IDC Number	IDC Name
118	TRU Glass Waste	370	Leco Crucibles
		440	Glass, Except Raschig Rings
		441	Raschig Rings, Not Leached
		442	Raschig Rings, Leached
119	TRU Filter Waste	335	Absolute Dry Box Filters
		490	HEPA Filters
		328	Ful-Flo Filters
		338	Insulation and Filter Media
		376	Processed Insulation and Filter Media
121	TRU Organic Solid Waste	302	Benelex and Plexiglas
122	TRU Inorganic Solid Waste	371	Firebrick
		375	Oil Dri
123	TRU Leaded Rubber	339	Leaded Rubber
124	TRU Pyrochemical Salt Waste	409	Molten Salt
		411	Electrorefining Salt
		414	Direct Oxide Reduction Salt
		429	Scrub Alloy Spent Salt (Molten Salt)

2.2 Item Description Codes (IDC)

IDC	Name and Description	Origin
001	First and Second Stage Sludge - Building 774 Waste consists of a solidified sludge produced by treatment of aqueous process wastes in Building 774. A cement/adsorbent mixture is added to the drum with a feed auger.	All Pu Areas
003	Grease - Building 774 Consists of solidified coolant oil, and various halogenated solvents. The majority of this stream is carbon tetrachloride and oil from the fabrication machining facility. Processed in Building 774.	Fabrication Area and Laboratories
004	Special Setups - Building 774 Consists of various aqueous solids which result from analyses performed by the Analytical Laboratories. Processed in Building 774.	Laboratories
007	Wet Sludge - Building 374 A wet sludge produced in Building 374 by treatment of process wastes.	All Pu Areas
292/ 807	Cemented Sludge A wet sludge produced by recovery of incinerator residues and solidified with portland cement.	Pu Recovery Areas

IDC	Name and Description	Origin
300	Graphite Molds Used for casting plutonium metal.	Plutonium Foundries
302	Benelex and Plexiglas Used around gloveboxes in all areas as neutron radiation shielding.	All plantsite areas where gloveboxes are used
311/ 809	Graphite Heels and Fines Residue remaining after one or more passes through the acid dissolution process of the pulverized graphite or graphite heel.	Pu Recovery Areas
320	Heavy Non-SS Metal (Ta, U, Pt, Pb) Mainly used tantalum crucibles, funnels and inserts from casting plutonium metal.	Foundry and Molten Salt Areas
328	Ful-Flo Filters Fibrous polypropylene filter media used to remove particulates from a liquid stream.	Plutonium Process Areas
330	Combustibles, Dry Mainly dry rags and paper.	All Pu Areas
335	Absolute Drybox Filters 8- x 8-inch HEPA filters.	All Pu Areas
336	Combustibles, Wet Consists primarily of paper towels with "KW" decontamination solution or rags that have been rinsed with water.	All Pu Areas

IDC	Name and Description	Origin
337	Plastic and Nonleaded Rubber Consists of Teflon, PVC, polyolefins, and nonleaded rubber. These are primarily from plastic bags, sample vials, unleaded dry box gloves and PVC sheeting used to line wooden crates and decontamination enclosures.	All Pu Areas
338	Insulation and Filter Media This waste contains insulation from pipes and furnaces, and HEPA filter media.	All Pu Areas
339	Leaded Rubber Leaded dry box gloves and leaded aprons.	All Pu Areas
370	Leco Crucibles Small ceramic crucibles used for laboratory analyses.	Plutonium Laboratory
371	Firebrick Plutonium contaminated brick from the recovery incinerator.	Pu Recovery Area
372/ 812	Grit Grit-blasting media in all forms.	Pu Recovery Area
373/ 813	Firebrick Heels and Fines Remaining solid residue after dissolution of pulverized firebrick.	Pu Recovery Area

IDC	Name and Description	Origin
375	Oil Dri An adsorbent clay material.	Recovery Incinerator
376	Processed Insulation and Filter Media Wastes from IDC's 328, 335, and 338 which have been processed with portland cement.	Size Reduction
393	Sand, Slag and Crucible Heels Residue remaining after pulverized sand, slag and crucible, or sand, slag and crucible heel has received one or more passes through the dissolution process.	Pu Recovery Area
> 409	Molten Salt (not a waste) Waste consists primarily of a fused halide salt mixture of NaCl, KCl, and $MgCl_2$ used to pyrochemically remove americium from plutonium metal.	776, MSE Area
> 411	Electrorefining Salt (not a waste) Waste consists of fused halide salt mixture of NaCl, KCl, and $MgCl_2$ used to remove impurities from plutonium metal.	371, ER Facility
> 414	Direct Oxide Reduction Salt (not a waste) Waste consists of a fused mixture of $CaCl_2$, CaO, and Ca metal used to convert plutonium oxide directly to plutonium metal.	776, Pyrochemical Operations

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IDC	Name and Description	Origin
421/ 819	Incinerator Ash and Ash Heels Residue remaining after incinerator ash heel has received one or more passes through the dissolution process.	Pu Recovery Area
423/ 821	Soot and Soot Heels Residue remaining after incinerator soot has received one or more passes through the dissolution process.	Pu Recovery Area
429	Scrub Alloy Spent Salt (Molten Salt) Waste consisting of a fused salt mixture of NaCl, KCl, and $MgCl_2$	776, MSE Area
432/ 822	Cemented Resin Ion column resin that has been water washed and mixed with a cementing agent to solidify the material.	Pu Recovery Area
440	Glass (except Raschig Rings) Primarily glassware from the Analytical Laboratory and glass vessels from the recovery facility gloveboxes. Includes ceramic materials.	All Pu Areas
441	Unleached Raschig Rings High boron content glass rings. Used as a neutron poison in storage tanks which contain plutonium solution.	All Pu Areas

IDC	Name and Description	Origin
442	Leached Raschig Rings High boron content glass rings. Used as a neutron poison in storage tanks which contain plutonium solution.	All Pu Areas
454	Spent Direct Oxide Reduction Salt Waste consisting of a fused salt mixture that has been sparged with oxygen while molten.	776, MSE Area
480	Light Metal (Fe, Cu, Al, SS, etc.)--Not Leached Contaminated steel piping, brackets, flanges, equipment, etc., which have been removed from all plutonium areas.	All Pu Areas
481	Light Metal (Fe, Cu, Al, SS, etc.)--Leached Contaminated steel piping, brackets, flanges, equipment, etc., which have been removed from all plutonium areas.	All Pu Areas
490	HEPA Filters High efficiency filters used in exhaust systems of plutonium buildings to remove airborne particles (24 x 24 inches).	All Pu Areas

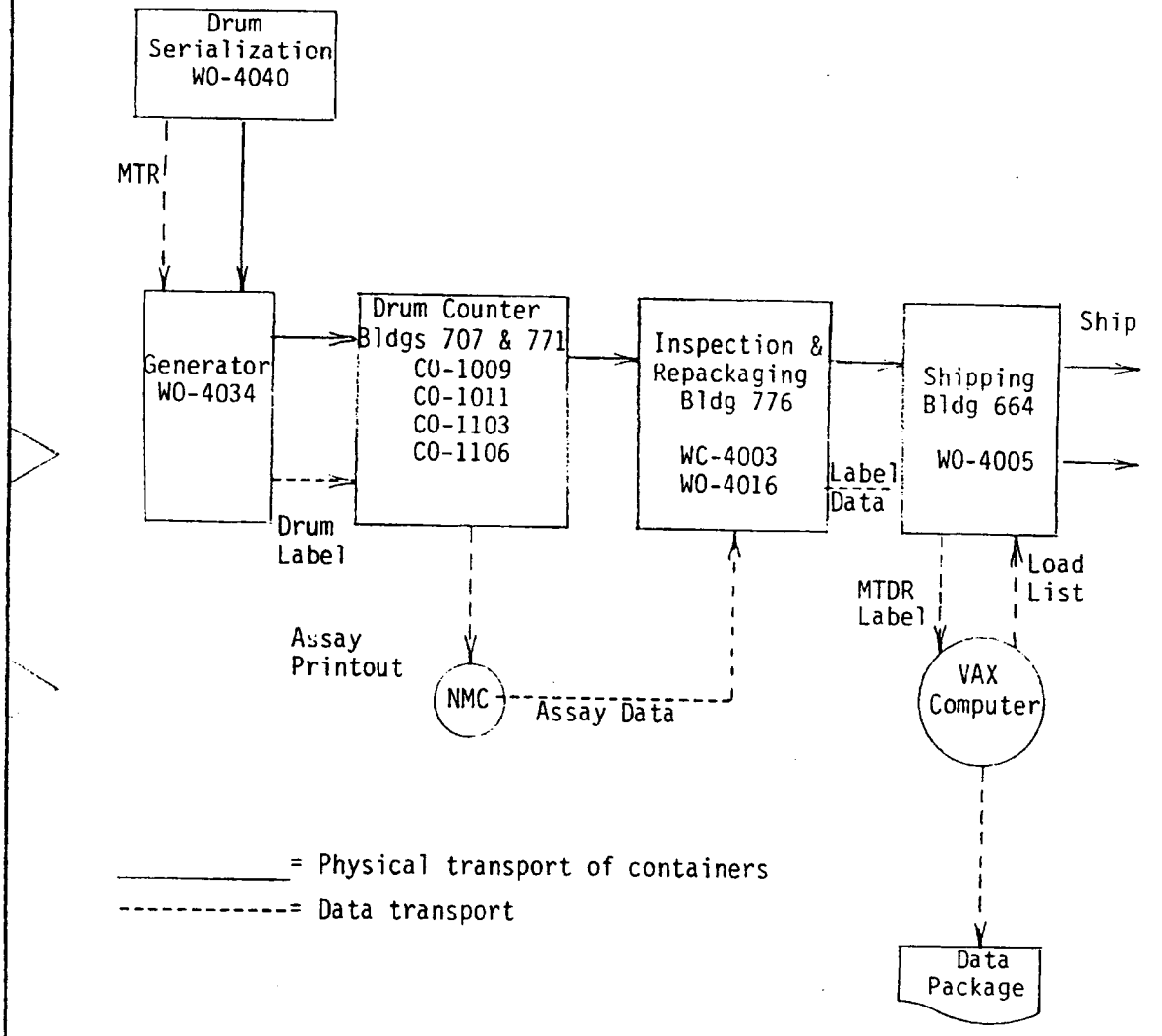

Figure 5. Waste Drum and Data Collection

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(3) Drum Counter (CO-1009, CO-1011, CO-1103, or CO-1106):	Waste drums are assayed in the 707/771 drum counter. A computer printout which contains the following information is sent to Nuclear Material Control (NMC): container number, prefix number, serial number, IDC, primary element (Chem symbol, weight, units) and secondary element (Chem symbol, weight, units). Drum counting, as currently performed, separates scrap and residues from waste. Other assay operations will be performed to separate TRU from LLW by assaying at the 100nCi/g level.
(4) Waste Drum Count Label:	A Waste Drum Count label contains the date (month, day, year) in addition to the information listed above. This form is sent to content verification/repackaging/size reduction (Building 776) with the drum.
(5) Content Verification/ Repackaging/ Size Reduction (WO-4016 and WO-4034):	The waste package is inspected and undergoes a final Quality Assurance verification, consisting of a physical container inspection, content verification, free liquid detection, and a final waste package conformance check. The conformance check includes gaskets, welds, and high-efficiency filters. All necessary data is compiled and entered on the Waste Drum Count label. The waste container is transported to Waste Shipping, Building 664.
(6) Waste Shipping:	Waste packages are staged for shipment in Building 664. Building 371 issues a computerized warehouse inventory to the shipping area. A shipping list is generated and sent to the 371 computer. The following information is included on the shipping list: container number, prefix number, serial number, container type, content code, gross weight, primary element (symbols, mass weight - g), secondary element (symbol, mass weight - g), total container curies, and penetrating radiation.

The 371 computer generates a waste shipment data package. The computer calculates the total alpha curie, PE curies, Pu-239 gram equivalent values, and also checks for errors and/or unallowable items.

3.2.1.2 Boxes (See Figure 6)

(1) Repackaged Wastes: Waste that is collected in drums and prepared for repackaging into a waste box follows the Figure 5 flow chart, from the "drum serialization" step to the "content verification/repackaging" step.

(2) Size Reduction Waste: Size reduction generates waste that is placed in boxes from two sources: (1) waste to be repackaged (e.g., paper, plastic, nonleaded rubber, glass, metal), and (2) waste that is disassembled, cut, or crushed to improve packaging efficiency (e.g., gloveboxes, large equipment, HEPA filters). As these items are taken from the vault and packaged into waste boxes, a WC inspector inspects them for compliance with the acceptance criteria. Each item and its radiometric survey value is logged on the Waste Box Log Sheet (WBLS) RF-46487. The waste generator is identified by a prefix number which is entered on the WBLS. This logsheet is then used to determine the value of radioactive material being discarded. The box and the logsheet are sent to the waste shipping building where the box is weighed, assayed in the crate counter, and readied for shipment. The weight is recorded on the logsheet. WC reviews the logsheet for completeness. WO inputs the logsheet information on the VAX computer. The labels and logsheet contain all of the information for the data package required by the acceptance criteria. A box is shipped only after the computer checks the information and prepares a shipping load list, and after Quality Engineering has approved certification for the waste package.

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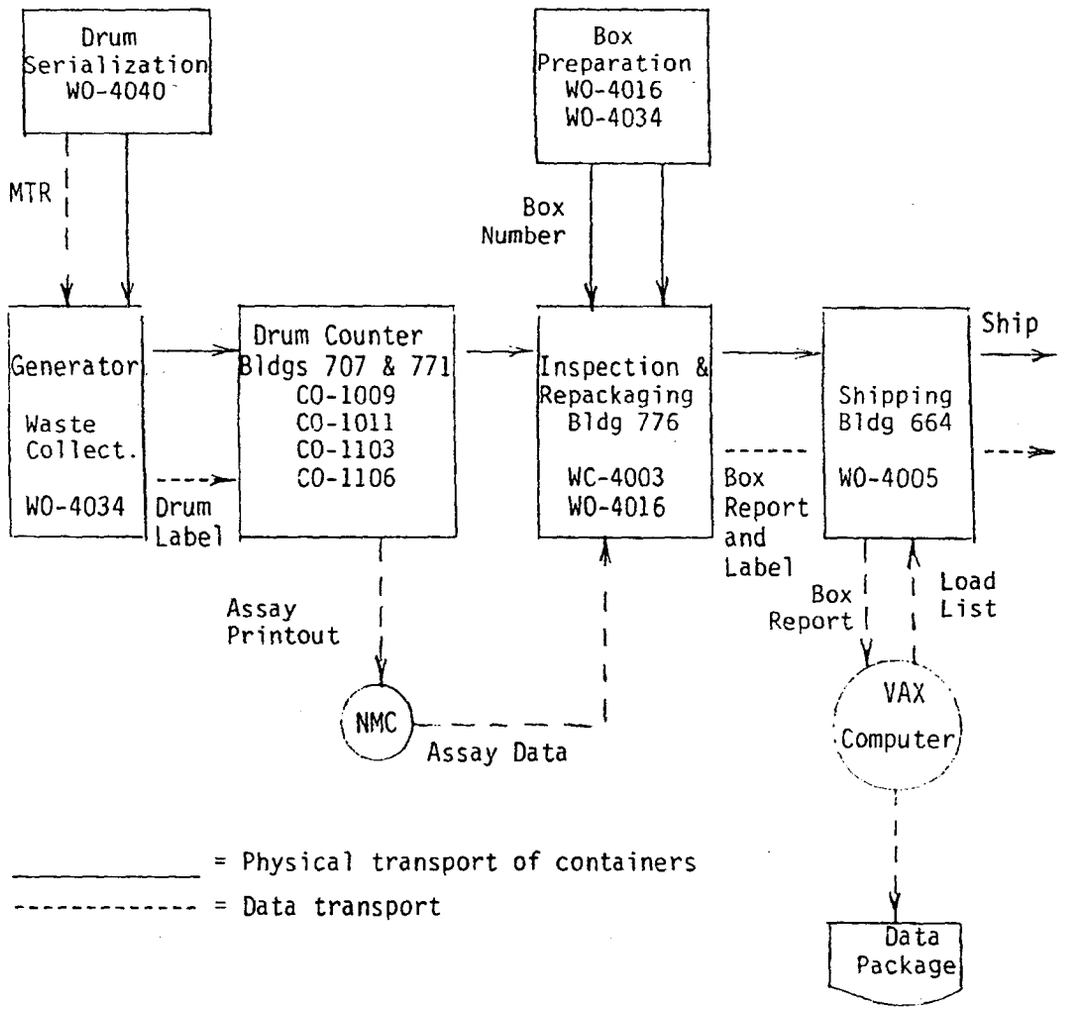

Figure 6. Waste Box and Data Collection

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(3) Directly-Placed Waste: Waste boxes are issued to waste generators who have waste from decommissioning projects (i.e., waste that has been size-reduced in place) and/or waste that is too large to fit into a drum, yet small enough to fit into a box. A WC inspector is present to unlock the box, inspect, and log the waste as it is loaded into the box. The box and the logsheet follow the same routing as described for Size Reduction Waste.

3.3 Waste Package Control Methods

NOTE

Instruments, scales, and assay equipment mentioned in the following subsections are covered by the Rocky Flats documented and auditable calibration program.

3.3.1 Waste Package Weight

(1) Drums - Packaging procedures for TRU waste drums (WO-4034) do not allow drums to exceed 800 pounds gross weight. This meets the WIPP criterion for waste package weight.

Waste drums are weighed by the assay operator and the weight is recorded on the drum label and subsequently transferred to the 371 computer. Scales are calibrated and checked according to the Rocky Flats Plant Quality Program Manual. Compliance is assured by Quality Engineering.

Waste drums are inspected (WC-4003) by WC inspection personnel who check the label to ensure that the package has been weighed and recorded.

(2) Boxes - Packaging procedures for TRU waste boxes (WO-4034) do not allow boxes to exceed 6000 pounds. This meets the WIPP criterion for waste package weight.

Waste boxes are weighed by WO personnel in Building 664 and the weight is recorded on the WBLS. Compliance is assured by the immediate supervisor with frequent periodic verifications by Quality Engineering. The WBLS is transferred to the 371 computer.

(3) All Containers - Before shipment, data packages are reviewed by a computer program which flags any overweight packages.

3.3.2 Nuclear Criticality

(1) Drums - All drums are required to be assayed for fissile material according to WO-4034.

Drum counting is performed according to CO-1009 and CO-1011, and fissile content is recorded on the Drum Count label. These procedures will be updated for the new assay equipment, or new procedures will be written. Calibration at the drum counters is performed in accordance with the RFP Quality Manual. Compliance is assured by the immediate supervisor with periodic verification by Quality Engineering.

Drum information is inspected according to WC-4003. The fissile content recorded on the label is checked to ensure that the drum contains not more than the 200-gram limit.

(2) Boxes - The fissile material of TRU boxes is determined for directly packaged, repackaged, and size-reduced waste as follows:

- Directly packaged and size-reduced waste is assayed with a detector to determine the fissile material content. This value is recorded on the WBLS. Boxes are also assayed in the crate counter at Building 664 (CO-7006 and CO-1107).

- Drummed waste, designated for repackaging, is assayed for fissile material content in the drum counter. The fissile material content assigned to these drums is reassigned to the waste box into which the drums were repackaged.

In accordance with WIPP Acceptance Criteria, WO-4034 limits the amount of fissile material in a 4- x 4- x 7-foot waste box, to 350 grams.

(3) All Containers - Before shipment, data packages are reviewed by a computer program which flags any packages not meeting specifications. The computer calculates Pu-239 equivalent grams, total alpha curies, and thermal activity.

3.3.3 Surface Dose Rate

All Waste Containers - All items leaving controlled areas at Rocky Flats must be monitored by Radiation Monitoring, using gamma and neutron assay instrumentation. Maximum surface dose rates are recorded on the container label. The information is transferred to the 371 computer. Waste packages with significant neutron emissions (>20 mRem/hr) are noted in the container data package. Surface dose rate must not exceed 200 mRem/hr.

Monitoring is performed according to the Radiation Monitoring Policy Manual, Subsections 3.2 and 3.2A. Compliance is assured by the immediate supervisor with periodic verification by Quality Engineering.

Radiation Monitoring, in conjunction with the Standards Laboratory and Instrumentation Management Group, calibrates monitoring equipment.

3.3.4 Surface Contamination

All Containers - All items leaving controlled areas at Rocky Flats must be surveyed for surface contamination by Radiation Monitoring according to the Radiation Monitoring Policy Manual, Subsection 3.2.

Removable alpha contamination is determined by smearing the item in accordance with controlled Radiation Monitoring procedures, and by counting the smear in a scintillator smear counter. Direct alpha contamination is surveyed using air proportional direct alpha assay instrumentation. This survey is performed in accordance with controlled radiation monitoring procedures. Compliance is assured by the immediate supervisor with periodic verification by Quality Engineering. Calibration is performed by Radiation Monitoring personnel in conjunction with the Standards Laboratory and Instrumentation Management Group.

No item leaves a controlled area unless the removable alpha contamination is less than 20 disintegrations per minute per 100 cm^2 (i.e., 10 pCi/100 cm^2 and 250 cpm/55 cm^2 [227 pCi/100 cm^2]) total alpha activity. This satisfies the WIPP waste acceptance criterion of 50 pCi/100 cm^2 maximum alpha contamination. If isotopes that are primary beta emitters are present in a waste container, the generator notifies Waste Operations through Waste Processing Request Form RF-46367. This waste is then processed according to WO-4021 for liquid waste, or WO-4016 for solid waste.

Because of the restrictive internal limit on alpha contamination, and the infrequent use of isotopes that are primary beta emitters, waste containers are not checked for beta surface contamination.

3.3.5 Thermal Power

The thermal output of each waste package is calculated by the VAX computer system, using the assay information obtained in Step 3.3.2. Thermal powers in excess of 0.1 watt/ft^3 are recorded, as appropriate, in the data package.

3.3.6 Gas Generation

Organic content weight factors are determined for each waste content code. The organic content of each package is calculated by the VAX computer system which multiplies the gross weight of the package by the organic weight factor. This organic mass and volume percent are included with the container data package.

3.3.7 Labels

(1) All Containers - Waste package identification numbers are assigned at Rocky Flats to include the account number of the waste generator and a unique serial number for the package. The generator maintains a logbook to ensure that serial numbers are not duplicated.

(2) Drums - Prefix numbers and Letters (lbs) are stenciled on drums by the maintenance painter. SWO stamps the serial number and weight in pounds. Recorded on the drum label is the following:

(a) Identity and assay values of the TRU contaminants

(b) Surface dose readings

(c) Waste form identification (IDC)

(d) Inspection date and inspector identification

(e) Weight of the drum and contents

(f) Identifying code (prefix) for the waste generator

(3) Boxes - Serial numbers and weight in pounds are stenciled on boxes by Waste Operations in Building 664. Recorded on the WBLS is the following:

(a) Surface dose readings

(b) Waste form identification (IDC)

(c) Inspection date and inspector identification

(d) Weight of the box and contents

(e) Identity and assay values of the TRU contaminants

(f) Identifying code (prefix and drum number) for the generator of each drum repackaged into the box, if the box is filled with repackaged waste

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(4) All Containers - All containers are checked for adequate labels before loading for shipment by WC inspection.

3.3.8 Data Packages

(1) Drums - Required information on TRU waste drums is collected using the drum label. This information is transferred to the VAX computer system.

(2) Boxes - Required information on TRU waste boxes is collected on the Waste Box Logsheet, and is transferred to the VAX computer system.

(3) All Containers - The VAX computer system checks each data package for completeness before finalizing the load list for that shipment. This program checks for erroneous entries and for packages out of compliance.

Designated QE personnel signs a Certificate of Compliance attesting that all compliance requirements have been met. Copies of this statement are included in the shipping manifest and kept on file in the Waste Certification office.

The transmitted data package follows the format specified by "Data Package Format for Certified Transuranic Waste for the Waste Isolation Pilot Plant (WIPP)" (Reference: WIPP-DOE-157).

4.3 Waste Flow Description

4.3.1 Line-Generated Combustibles

The combustible waste is segregated from all other materials, especially removing all free liquids, particulates, and process residues. The waste is then collected (often prepackaged at this point) and bagged out of the glovebox line (see Figure 7).

All line-generated waste is double bagged and monitored for contamination before being placed into the waste collection drum. Collection drums are clearly marked "Line-Generated Combustibles."

Full collection drums are closed and labeled by the generator, surveyed for contamination and radiation by Radiation Monitoring personnel, and then transferred to the drum counter (WO-4034).

Nondestructive Assay and Material Control (NDA&MC) from Process Planning and Control, determines the nuclear material content by DOE-approved assay methods (CO-1009, CO-1103, or CO-1106); they determine whether the drum contents are recoverable residue or TRU waste. If the contents are TRU waste, the NDA&MC operator enters the assay value on the Drum Count label and tapes the label to the drum lid (WO-4034).

The drum is then surveyed for surface contamination and transferred to Size Reduction and Repackaging (SRR) in Building 776.

4.3.2 Nonline-Generated Combustibles

Combustible wastes generated within the Pu processing area, but outside of a glovebox line, are termed "nonline-generated wastes." These wastes are collected in 55-gallon drums located in all Pu areas. The drum covers are clearly marked "Nonline Combustibles." Normally, according to WO-4034, nonline waste is not bagged before being placed in the collection drum (see Figure 8).

When the drum is full, the two "barrel bag" liners are sealed and the drum is closed. The drum label, completed with all necessary information, is then taped to the drum lid. The drum is surveyed for surface contamination and radiation and then transferred to the LOSAC counter for assay (WO-4034).

The Low Specific Activity Counter (LOSAC) determines if the waste is TRU or Low Level Waste (LLW). If the waste is TRU, the LOSAC counter can assign an accurate Pu gram value up to 10 grams. If the waste contains greater than 10 grams of Pu, it is assayed by the Building 707 or 771 drum counter (CO-1009, CO-1103, CO-1106). The Drum Count label is taped to the drum lid, and the assay results are recorded on the label. If the waste is LLW, the LLW label is used (CO-1112).

The drum is then transferred to the Size Reduction and Repackaging Facility.

4.3.3 Repackaging Combustibles

At Building 776 the drums are held until approximately 20 drums of either line-generated or nonline-generated combustibles have accumulated. The line-generated or nonline-generated wastes are repackaged separately into boxes (WO-4016).

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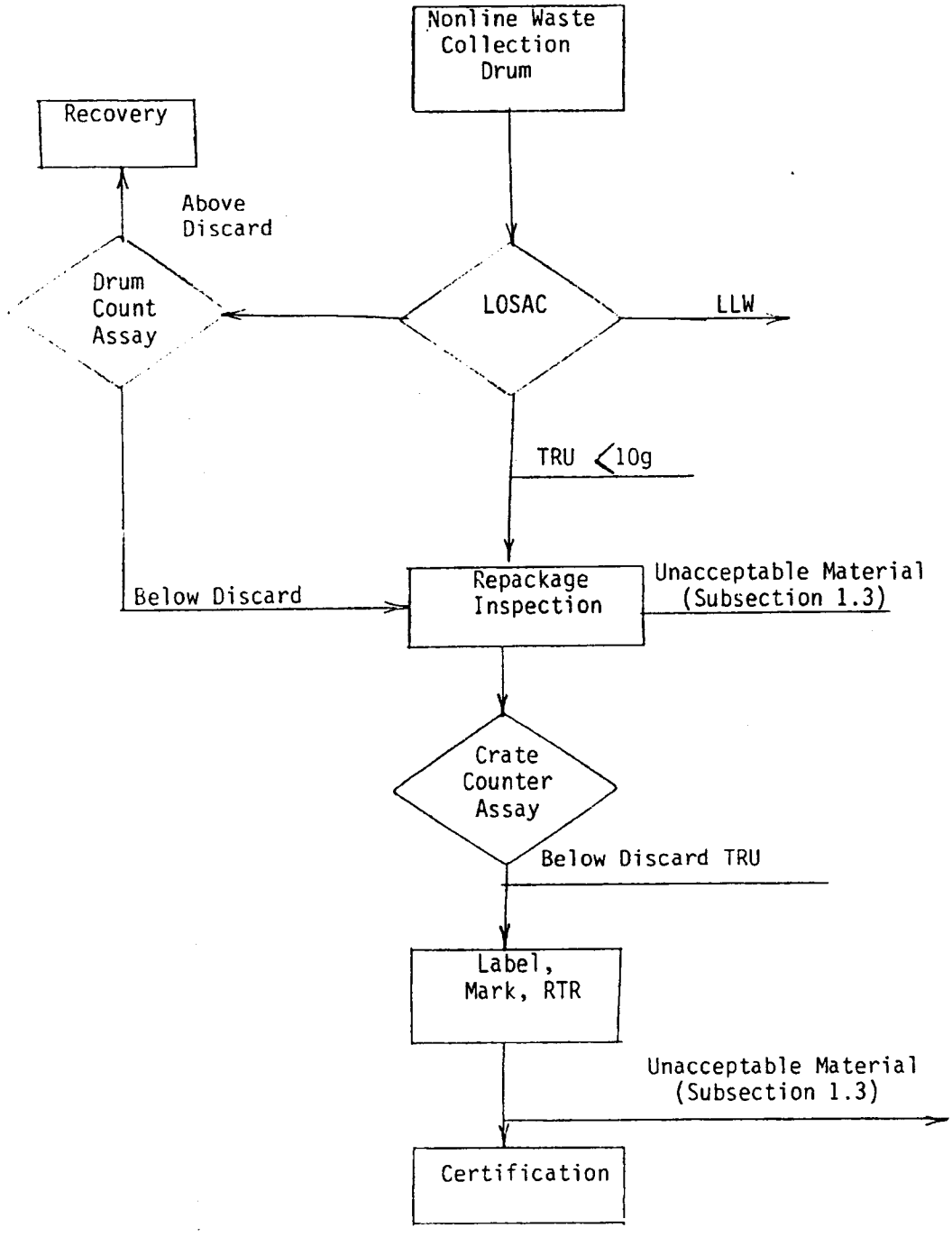

Figure 8. Nonline-Generated Combustible TRU Waste

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Repackaging is performed under controlled conditions in the airlock of the Size Reduction and Repackaging Facility. The data from each drum is transferred to a WBLS when the drum is opened and the waste is transferred to the box (WO-4034 and WC-4003).

Each bag of waste is opened, inspected by a WC inspector, and distributed in the box to obtain greater packing density. This inspection detects and eliminates noncomplying materials (WC-4003). Noncomplying materials are returned to the generator with a Waste Rejection Report RF-47042; this form is forwarded to QE with the corrective action documented by the generator. QE reviews and approves the corrective action (Subsection 1.3).

When the box is full, the liner is closed and sealed. The box is surveyed for surface contamination. Radiation readings are taken at the surface and at 1 meter and are recorded on the WBLS. The lid is welded, providing a tamper-proof seal. The box is then transferred to Building 664. The waste box liners and a certified filter/vent unit are installed by Waste Operations personnel (WO-4034). The liners and filter/vent unit are inspected by a WC inspector (WC-4003).

Final assay is performed in the crate counter (CO-7006 and CO-1107). This assay must agree with the cumulative assays of the drums which have been consolidated into the box, within the limits of error established for the counters. A waste review board determines actions to be taken on assay discrepancies.

The alpha curies, PE curies, and thermal activity are calculated based on the gram quantities of the TRU contaminants from the drum counter assay (Steps 3.3.2 and 3.3.5).

The box is then marked and labeled, based on the information on the WBLS (Traffic Procedure T-300-1).

NDT personnel perform RTR inspection of the box. These trained personnel, who are certified to Rocky Flats Plant (RFP) procedures that implement the Level II SNT-TC-1A standards, use the information on the WBLS (Step 3.3.7, Labels) to detect and document the following:

(1) Nonconforming items in the package

(2) Utilization of fiberboard and polyethylene liners

(3) Correct waste form description

(4) Presence of free liquid

Nonconforming waste packages are returned to the generator for corrective action with a copy of a Waste Rejection Report RF-47042, which identifies the specific reason for rejection (see Subsection 1.3).

Data from each of the above operations is reviewed by QE personnel who verify that the information is complete and correct. WIPP certification for that waste package is approved by QE, and Computer Operations is notified that the waste package can be added to the shipment load list and that the information has been verified and can be included in the data package.

4.3.4 Specially Handled Combustible Waste

Specially handled combustible waste is packaged in a DOT-17C, 55-gallon drum with a 90-mil polyethylene liner and will not be repackaged. The waste will be contaminated with either americium which will require lead shielding or with reportable toxic material (WO-4034).

Specially handled combustible waste is inspected by a WC Inspector at the generator site before the waste drum is closed. After the waste has been inspected, the liners are sealed and the drum is closed. The inspector then installs a tamper-proof seal on the bolted closure ring and records the required data on the drum label (WC-4003 and WO-4034).

The alpha curies, PE curies, and thermal activity are calculated based on gram quantities of the TRU contaminants from the drum counter assay (Steps 3.3.2 and 3.3.5).

The waste drum is then processed as shown in Figure 9.

4.4 Waste Form Controls

4.4.1 Immobilization (Particulates)

All of the components of this waste form are nonparticulate and have demonstrated stability in long-term storage. Combustibles must be segregated from unacceptable particulates when packaged as waste (WO-4034). During repackaging in SRR combustibles receive 100 percent inspection for particulates by WC independent inspection (WC-4003). These procedures are audited annually by Rocky Flats QA audit schedules and periodically by DOE auditors.

4.4.2 Free Liquids

Liquids are prohibited from being placed in the waste package (WO-4034). Also, 100 percent inspection of this waste form during repackaging ensures that no free liquids are present (WC-4003).

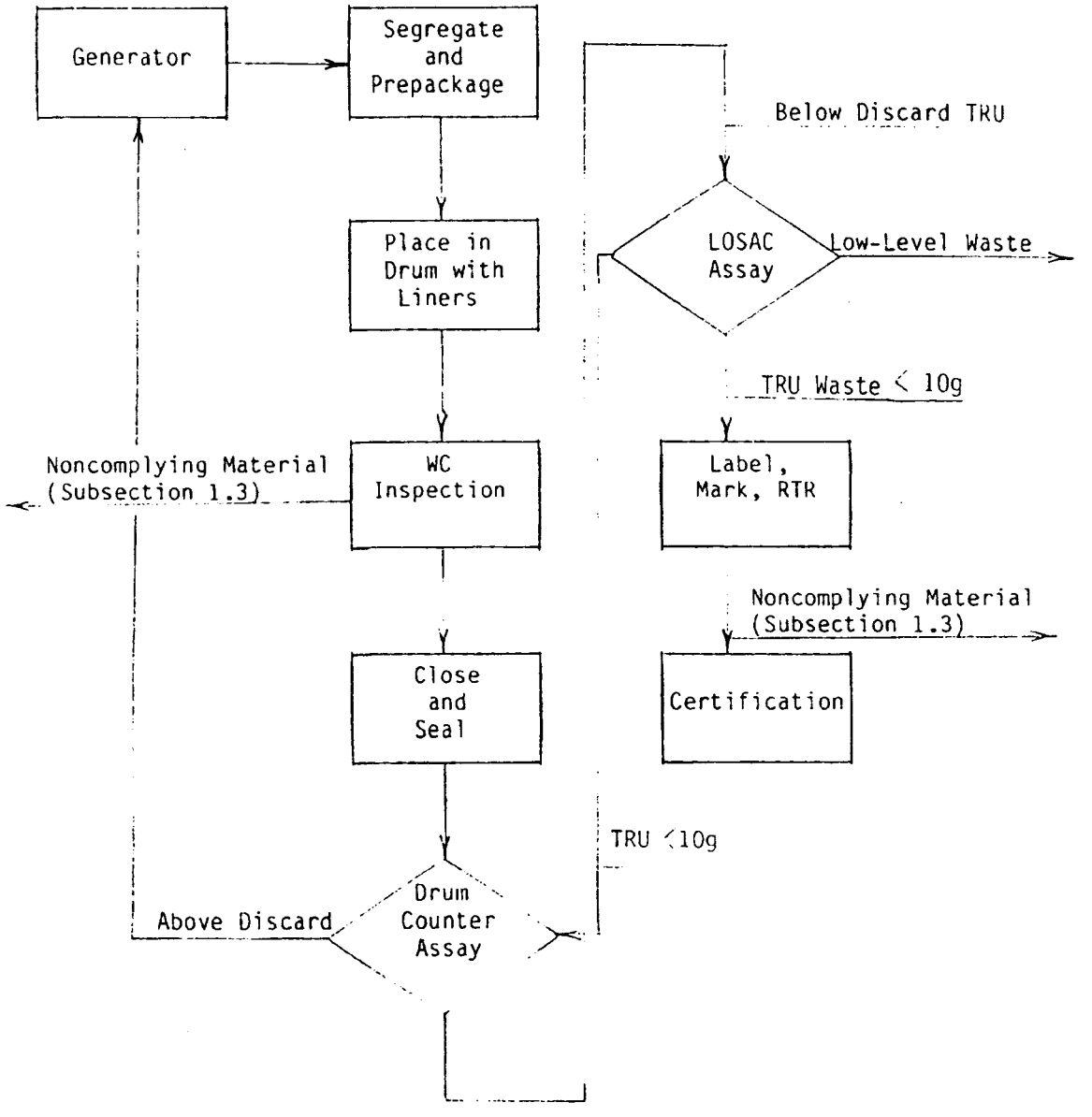

Figure 9. Specially Handled Combustible TRU Waste

4.4.5 Radioactive Mixed Wastes

All combustible wastes which have contacted corrosive material must be segregated and/or neutralized before packaging (WO-4034). Corrosive action would be detected and eliminated at the point of repackaging because complete inspection is performed (WC-4003). All TRU Waste packages have a corrosion resistant liner.

Examination of Rocky Flats stored TRU waste revealed no signs of corrosive action.

Occasionally, some hazardous materials could be present in waste as cocontaminants with the transuranic material. However, the Rocky Flats Health, Safety, and Environment Manual ensures that all hazardous materials are handled and disposed of safely (HS&E, Chapters 1.02 and 2.32). Waste packages with reportable toxics, ignitible, reactive, or corrosive wastes are identified by type and amount in the data packages.

5.3 Waste Flow Description

5.3.1 Line-Generated Metal Waste to be Repackaged (see Figure 10)

The metal waste is first segregated from all other materials, especially removing particulates, liquids, and process residues. The waste is then prepackaged to prevent cutting the O-ring bag as it is removed from the line (WO-4034).

All line-generated metal waste is double bagged and then surveyed for contamination and radiation (Radiation Monitoring Procedure Manual, Subsection 2.5). The waste is then placed in the proper waste collection drum which is marked for line-generated metal waste only (WO-4034).

When the drum is full, the liners are taped closed, the lid is secured with a bolted ring and the Drum Count label is completed and taped to the drum lid by the generator (WO-4034).

The drum is then surveyed for contamination and radiation by Radiation Monitoring personnel. After radiation readings are entered on the drum label, the drum is sent to the drum counter for assay.

NDA&MC determines the nuclear material content of the drum, using DOE-approved assay methods (CO-1009, CO-1011, CO-1103, CO-1106); they determine whether the drum contents are recoverable, TRU waste, or LLW. The NDA&MC operator enters the assay value on the Drum Count label.

The drum is then surveyed for surface contamination and transferred to SRR in Building 776.

5.3.2 Nonline-Generated Metal Waste to be Repackaged (See Figure 11)

Metal wastes generated within the plutonium processing area, but outside of a glovebox line, are termed "nonline-generated wastes." These wastes are collected in 55-gallon drums located in all Pu areas. The collection drums are clearly marked for nonline metal waste only. Normally, nonline waste is not bagged before being placed in the collection drum.

When the drum is full, the two "barrel bag" liners are sealed and the drum is closed. The generator completes the Drum Count label with all necessary information and tapes it to the drum lid. The drum is then surveyed for surface contamination and for radiation; radiation readings are entered on the drum label. The drum is then transferred to the drum counter for assay (WO-4034).

NDA&MC determines the nuclear material content by appropriate assay methods (CO-1009, CO-1103, CO-1106); the determination is made whether the drum contents are recoverable, TRU Waste, or LLW. The NDA operator enters the assay value on the Drum Count label and tapes the label to the drum lid (WO-4034).

The drum is then surveyed for surface contamination and transferred to SRR in Building 776.

5.3.3 Repackaging Metal Waste

At the SRR facility in Building 776, the drums of waste are collected until enough waste, either line-generated or nonline-generated, has accumulated to fill one waste box (see Figure 12). Line-generated and nonline-generated waste is repackaged separately.

Repackaging is performed under controlled conditions in the airlock of the SRR vault. The data from each drum is transferred to a WBLS when the drums are opened and the waste transferred to the waste box (WC-4003 and WO-4016).

Each bag of waste is opened, inspected by a WC inspector, and distributed in the waste box to obtain greater packing density. This inspection detects and eliminates all noncomplying materials (WC-4003). Noncomplying materials (Subsection 1.3) which require processing are returned to the generator with a Waste Rejection Report RF-47042. A copy of the WRR, stating the corrective action taken, must be returned to Quality Engineering (WC-4003).

The waste box liners and a certified filter/vent unit are installed by Waste Operations personnel (WO-4034). The liners and filter/vent unit are inspected by a WC inspector (WC-4003). When the box is full, the liners are closed and sealed, and the box is surveyed for surface contamination. Radiation readings are taken at the surface and at 1 meter and are recorded on the WBLS.

The lid is welded on, providing a tamper-proof seal. The waste package is then sent to Building 664 with the WBLS which has been approved by the WC inspector (WC-4003).

At Building 664 the box is weighed and the weight is stenciled on the box and entered on the WBLS. The box then receives final assay in the crate counter (CO-7006 and CO-1107). This assay must agree with the cumulative assays obtained by drum count, within the limits of error assigned to each assay method. A waste review board determines actions to be taken on assay discrepancies.

The proper "Radioactive" shipping labels and all other required marking and labeling are then affixed to the box (Traffic Procedure T-300-1).

The alpha curies, PE curies, and thermal activity are calculated based on gram quantities of the TRU contaminants from the drum counter assay (Steps 3.3.2 and 3.3.5).

NDT personnel perform RTR examination of the box. These trained personnel who are certified to Rocky Flats Plant (RFP) procedures that implement the Level II SNT-TC-1A standards, use the information on the WBLS (Step 3.3.7, Labels) to detect and document the following:

(1) Nonconforming items in the package

(2) Utilization of fiberboard and polyethylene liners

(3) Correct waste form description

(4) Presence of free liquid

Nonconforming waste packages are returned to the generator for corrective action with a copy of a Waste Rejection Report RF-47042, which identifies the specific reason for rejection (see Subsection 1.3). There will be 100 percent inspection of this waste by RTR until data has been established showing control can be maintained through statistical sampling.

Data from each of the above operations is reviewed by QE personnel who verifies that the information is complete and correct. The QE personnel then (1) approves WIPP certification for the waste package and (2) notifies Computer Operations that the waste package can be added to the shipment load list, and that the information on the Drum Count label has been verified and can be included in the data package.

Waste box liners and a certified filter/vent unit are installed by Waste Operations personnel (WO-4034). The liners and filter/vent unit are inspected by a WC inspector (WC-4003). When the box is full, the liners are closed and sealed and a temporary lid is secured (locked) in place for transfer to the welding station. The box is then surveyed for contamination and radiation. Radiation readings are entered on the WBLS. The box is then shipped to the welding station. After welding, the waste box follows the flow path described in Step 5.3.3.

5.3.5 Metal Waste Packaged Directly Into a Drum

Metal waste which will not be repackaged into a box is packaged in a DOT-17C, 55-gallon drum with a 90-mil polyethylene liner (WO-4034).

Metal waste contaminated with high radiation isotopes is packaged, according to WO-4034, in a DOT-17C, 55-gallon drum with a 90-mil polyethylene liner and a lead liner (see Figure 14).

The waste is first segregated from all noncomplying materials, inspected by a WC inspector, prepackaged, and bagged out of the glovebox. The waste is double bagged, surveyed for contamination and radiation, identified by the WC inspector, and placed in the drum. The data for that package is recorded on the drum contents logsheet.

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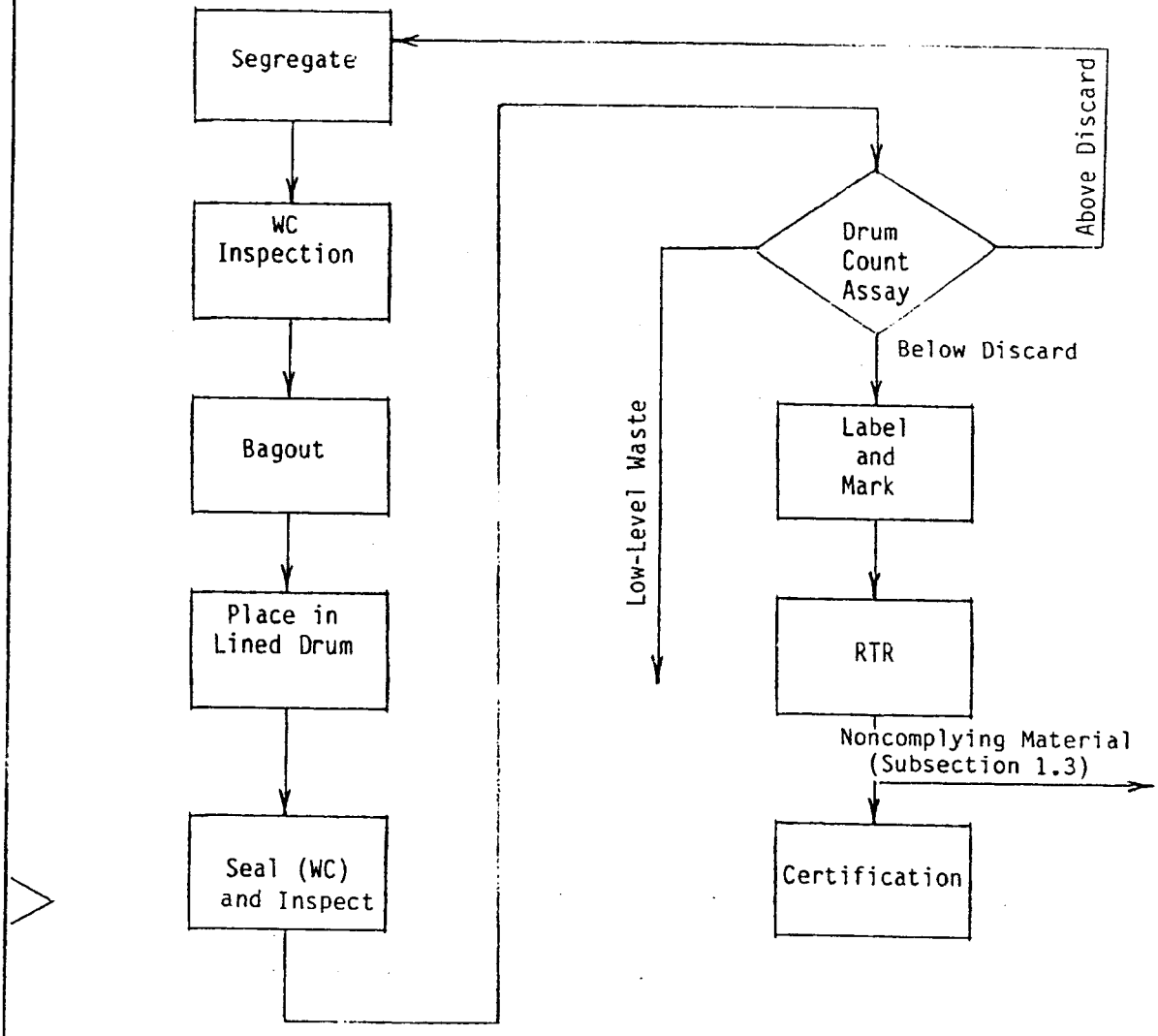

Figure 14. Metal Waste Packaged Directly Into a Drum

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Metal waste is packaged as efficiently as possible to minimize the possibility of container rupture due to waste shifting. If a single piece of heavy metal is packaged, it is braced to prevent shifting. When the drum is full, the WC inspector checks the drum for proper packaging. The liners are then closed and sealed and the lid is bolted on. The WC inspector then installs a tamperproof seal on the closure bolt. The data from the drum contents logsheet is transferred to the Drum Count label (WO-4034 and WC-4003). The drum is then sent to the drum counter.

NDA&MC weighs the drum and determines the nuclear material content by DOE-approved assay methods; drum contents are determined to be either recoverable residue or TRU waste. The NDA&MC operator enters the drum weight and assay value on the Drum Count label.

The drum is then surveyed for contamination and radiation. The radiation readings are recorded on the Drum Count label. If the radiation at the surface is greater than 200 mRem/hr, the drum is returned to the generator for more lead shielding (WO-4034).

If the drum is less than 200 mRem/hr at the surface, it is sent to Waste Operations in Building 664. The proper "Radioactive" shipping labels are then affixed to the drum (Traffic Procedure T-300-1).

The alpha curies, PE curies, and thermal activity are calculated based on gram quantities of the TRU contaminants from the drum counter assay (Steps 3.3.2 and 3.3.5).

NDT personnel perform RTR inspection of the drum contents. These trained personnel, who are certified to Rocky Flats Plant (RFP) procedures that implement the Level II SNT-TC-1A standards, use the information on the drum label (see Step 3.3.7) to detect and document the following:

(1) Use of polyethylene and 90-mil rigid liners

(2) Correct waste form description

(3) Presence of free liquid

(4) Identification of other extraneous forbidden articles

Nonconforming waste packages are returned to the generator for corrective action with a copy of a Waste Rejection Report RF-47042, which identifies the specified reason for rejection (see Subsection 1.3).

The data from each of the previous operations is reviewed by QE personnel who verifies that the information is complete and correct. WIPP certification for that waste package is approved by QE personnel and Computer Operations is notified that this waste package can be added to the shipment load list and that the information has been verified and can be included in the data package.

5.4 Waste Form Compliance

5.4.1 Immobilization (Particulates)

The metal waste matrix is, by definition, nonparticulate. Metal fines generated by conventional working operations such as sawing, grinding, and filing have been evaluated for particle size. The particle size distribution, based on five random samples of Rocky Flats waste metal fines, has less than 1 percent of the particles less than 200 microns, and less than 0.01 percent of the particles less than 10 microns. Thus, metal working fines associated with WF-117 are well within the required limits for particulates.

Particulate metal waste, such as IDC-372 Grit, is cast into a cement matrix and is not part of TRU Metal Waste WF-117 (WO-4034).

TRU Metal Waste is segregated from all particulate material as much as is reasonably possible (WO-4034) and is independently inspected for unacceptable particulates by a WC inspector (WC-4003). Packaging and inspection operations are audited periodically, per the QA audit schedule.

5.4.2 Free Liquids

Liquid of all types is prohibited from being packaged in TRU waste (WO-4034). One hundred percent inspection of TRU Metal Waste, by a WC inspector, during repackaging assures that no free liquid is present in the waste (WC-4003).

Waste generators are instructed to thoroughly drain all fluid reservoirs, lines, gearboxes, etc., before disposing of metal equipment (WO-4034).

Radiographic examination of the waste package is performed as a conclusive determination that no unacceptable free liquid is present in the waste.

5.4.3 Pyrophorics and Explosives

Reactive pyrophorics and all explosives are strictly prohibited from TRU waste (WO-4034). These materials are controlled and monitored very closely under several RFP safety policies.

One hundred percent inspection by Waste Certification Inspection (WC-4003) and periodic audits, per the QA audit schedule, ensure that these materials are excluded from TRU waste.

5.4.4 Compressed Gases

All closed containers and pressure vessels (including aerosol cans) must have an opening which makes it obvious that the container is not pressurized (WO-4034). The WC inspector must be able to visually determine that closed containers are not pressurized (WC-4003).

5.4.5 Radioactive Mixed Wastes

All corrosive materials must be neutralized or removed from TRU metal waste before packaging (WO-4034). Thorough WC inspection (WC-4003) and periodically, per the QA audit schedule, ensure that corrosive material is excluded from TRU waste.

Examination of Rocky Flats stored TRU metal waste showed no evidence of corrosive action up to 12 years after packaging.

All Rocky Flats TRU Waste packages have either a 90-mil polyethylene liner or an 11-mil polyvinyl chloride (PVC) liner for corrosion protection.

Waste packages with reportable toxics, ignitible, reactive, or corrosive wastes are identified by type and amount in the data package.

WC inspection allows toxics in waste as co-contaminants if it is properly identified.

All waste packages containing reportable toxics receive prior shipping approval from the WIPP operator.

The data from each of the previous operations, is reviewed by QE personnel who verifies that the information is complete and correct. WIPP certification for that waste package is approved by QE personnel and Computer Operations is notified that the waste package can be added to the load list for shipment and that the information has been verified and can be included in the data package.

6.4 Waste Form Compliance

6.4.1 Immobilization (Particulates)

The components of glass waste are nonparticulate by definition and must be segregated from all other unacceptable particulate fines before final packaging (WO-4034 and CO-3001).

Complete inspection by Waste Certification ensures that glass waste meets WIPP/WAC for particulates (WC-4003).

Examination of TRU Glass Waste after exposure to the transportation environment (shipment from RFP to INEL and return) has shown that glass waste remains certifiable during the period of storage and transportation to WIPP.

6.4.2 Free Liquids

TRU Glass Waste must be dried, drained, or otherwise segregated from all free liquids (WO-4034 and CO-3001). In addition, sufficient absorbent is added directly to the waste whenever wet glass is observed to immobilize any liquid that may be desorbed during shipment and storage.

Complete inspection by Waste Certification Inspection and examination of the waste by RTR verify that no unacceptable free liquid is present in the final waste package (WC-4003).

6.4.3 Pyrophorics and Explosives

Reactive pyrophorics and all explosives are strictly prohibited from TRU waste (WO-4034). These materials are closely controlled and monitored under several RFP safety policies.

Complete inspection by Waste Certification Inspection (WC-4003) and periodic audits per the QA audit schedule ensures that these materials are excluded from TRU waste.

6.4.4 Compressed Gases

Closed glass containers which could have internal gas pressure must have an opening through which the gas can be vented and verified by a WC inspector (WO-4034 and WC-4003).

7.1 Introduction

TRU Solidified Aqueous Waste, Waste Form 111 (WF-111), is composed of IDC-001 (First and Second Stage Sludge from Building 774) and IDC-007 (Building 374 Wet Sludge).

These wastes are the product of aqueous waste treatment from all radioactively contaminated waste water streams at Rocky Flats.

Waste Form 111 is the final waste product obtained by mixing the wet sludge with approximately 30 percent portland cement, to form a solid monolithic cast in a lined 55-gallon drum. WF-111 is packaged and shipped in DOT-17C 55-gallon steel drums (SX-200) with a 90-mil rigid polyethylene liner (SX-202).

7.2 Waste Form Description

Solidified Aqueous Waste (WF-111) is produced by vacuum filtration of solids from pretreated aqueous waste slurry. The filter agent is an inert diatomaceous earth medium that accumulates on a rotating drum. Solids are trapped on the surface of the filter medium as the pretreated waste solution passes through. The surface of the filter medium with entrapped filtrate solids is skimmed off and collected as wet sludge. The decontaminated effluent is disposed of by an evaporation process. The wet sludge is blended with portland cement and diatomite mixture (Building 774) in a lined 55-gallon drum (CO-4001 and CO-5014) and forms a solid monolith after curing.

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The aqueous waste stream is composed of the following (see Subsection 1.2, Waste Generating Activities):

Plutonium Recovery Operations

- Ion column effluent
- Evaporator distillates
- Process filtrates
- Process condensates
- Process raffinates
- Process caustic solutions

Support Operations

- Process sink and drain waste
- Decontamination and wash solutions

7.3 Waste Flow Description (See Figure 18)

The waste solutions are collected near the point of origin in appropriate tanks as they are generated. The solution is then sampled and analyzed for discardable radioactive content and other controlled components (L-3007).

If the analysis shows the waste is below the discard limit, it is transferred to the liquid waste treatment facility where it is processed and converted to wet sludge. The wet sludge is then mixed with portland cement and diatomite mixture (Building 774) in a lined 55-gallon drum. (CO-9999 lists numerous transfer procedures.)

After the solidified waste has been allowed to obtain initial cure, it is inspected by a WC Inspector (WC-4003). The drum is then closed and sealed. A completed Drum Count label is attached to the lid.

The concentrations of plutonium and americium in the individual drums is obtained by dividing the batch concentration of plutonium and americium by the number of waste drums produced from that batch (CO-4001, CO-5017, and WO-4034). The total plutonium content for the batch is controlled to less than 200 grams.

For every drum or mixture produced for the Direct Cementation Process (DCP), a dry sludge sample must be taken from Hopper H-3. A sample vial must be used and be given a number. The computer printout, drum label, drum number, sample vial number, and sample results must be recorded in the logbook, Room 3801, Building 374.

The drum is surveyed for surface contamination and radiation dose levels, then sent to Building 664. The proper "Radioactive" shipping labels and all other required marking and labeling are then affixed to the drum (WO-4034 and Traffic Procedure T-300-1).

The alpha curies, PE curies, and thermal activity are calculated based on gram quantities of the TRU contaminants from the distribution assay based on batch concentrations.

NDT personnel then perform RTR examination of the drum. These trained personnel, who are certified to Rocky Flats Plant (RFP) procedures that implement Level II SNT-TC-1A standards, use the information on the drum label (Step 3.3.7, Labels) to detect and document the following:

(1) Nonconforming items in the package
(2) Use of polyethylene and 90-mil rigid liners
(3) Incorrect waste form description
(4) Presence of free liquid

Rejected waste packages are returned to the generator for corrective action with a copy of a Waste Rejection Report, RF-47042, which identifies the specific reason for rejection (see Subsection 1.3) There will be 100 percent waste inspection by RTR personnel until data has been established showing control can be maintained through statistical sampling.

Data from each of the above operations is forwarded to QE personnel who verify the information is complete and correct. The QE representative then (1) approves WIPP certification for the waste package, and (2) notifies Computer Operations the waste package can be added to the shipment load list, and the information has been verified and can be included in the data package.

7.4 Waste Form Compliance

7.4.1 Immobilization (Particulates)

TRU Solidified Aqueous Waste is cast into a solid monolith according to Procedures CO-4001 and CO-5014. WC Inspection ensures that operational controls have produced a solid or the moist sludge meets the WIPP Immobilization Criterion (WC-4003). WC inspection consists of reviewing the microprocessor printout of process parameters, waste, water, and cement amounts for each drum to ensure they are within the established parameters for the cementation process. There will be 100 percent inspection of the processes until data has been established showing control can be maintained through statistical sampling. Packaging and inspection operations are audited periodically, per the QA audit schedule.

7.4.2 Free Liquids

TRU solidified aqueous waste is cast into a solid monolith according to Procedures CO-4001 and CO-5017. WC inspection of process parameters ensures that operational controls have produced a solid cast without free liquids for the direct cementation process (WC-4003). There will be 100 percent inspection of the processes until data has been established showing control can be maintained through statistical sampling.

RTR examination by NDT personnel ensures that free liquids have not been overlooked in visual examination and that free liquid has not developed after the waste package was closed.

7.4.3 Pyrophorics and Explosives

Pyrophoric and explosive materials have not been found in this waste form.

7.4.4 Compressed Gases

WF-111 is produced in a closed system which precludes the introduction of extraneous materials such as pressure vessels. Procedures CO-4001, CO-5014, WO-4034, and WC-4003 prohibit pressure vessels from WF-111.

7.4.5 Radioactive Mixed Wastes

No toxic materials (40 CFR 261, Subparts C and D) have been identified in this waste. This waste form is packaged in a DOT-17C, 55-gallon drum with a 90-mil polyethylene liner and an 11-mil PVC liner for corrosion protection.

Waste packages with reportable toxics, ignitible, reactive, or corrosive wastes are identified by type and amount in the data package.

8. ATTACHMENT V: CERTIFICATION OF TRU SOLIDIFIED ORGANIC WASTE (WF-112)

Contents

8.1 Introduction

8.2 Waste Form Description

8.3 Waste Flow Description

8.4 Waste Form Compliance

- 8.4.1 Immobilization (Particulates)
- 8.4.2 Free Liquids
- 8.4.3 Pyrophorics and Explosives
- 8.4.4 Compressed Gases
- 8.4.5 Radioactive Mixed Wastes

8.1 Introduction

TRU Solidified Organic Waste, Waste Form 112 (WF-112), is a waste form produced by converting liquid organic waste (IDC-003) to a solid by crystallization with Envirostone gypsum cement.

Waste Form 112 is mixed in a DOT-17C, 55-gallon drum with a 90-mil, rigid polyethylene liner. The mix sets up and cures in the drum, which is the shipping container.

8.2 Waste Form Description

TRU Solidified Organic Waste (WF-112) is produced from liquid organics such as oils, solvents, carbon tetrachloride, and lathe coolants (IDC-003).

The liquid organic waste is solidified with a suitable binder (WO-4020).

The organic waste and TRU contaminants are bound in the structure of the binder.

8.3 Waste Flow Description (Figure 19)

The TRU contaminated liquid organics are collected at or near the point of origin in appropriate tanks or containers as they are generated. The liquid organics are then sampled and analyzed for discardable concentrations of plutonium, americium, and other controlled components (L-3007 and FO-707-1000).

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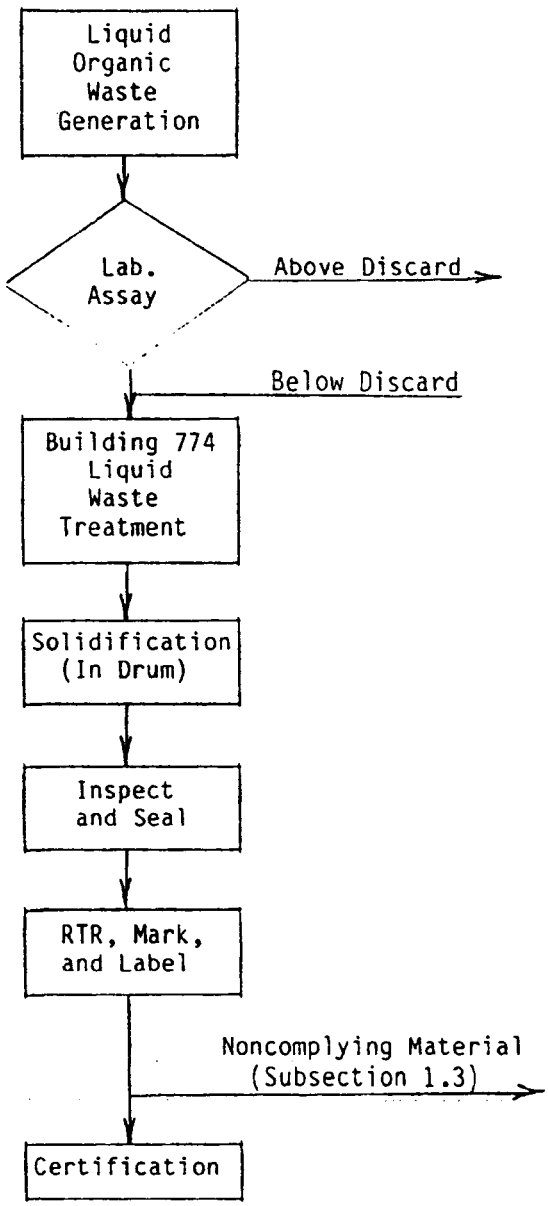

Figure 19. TRU Solidified Organic Waste

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If examination of the analysis shows that the waste is below the discard limit, it is transferred to the liquid waste treatment facility (Building 774) where it is collected in tanks until enough waste is accumulated for a "run." The batch is then homogenized in preparation for solidification. The total plutonium content for the batch is controlled to less than 200 grams.

The waste is then transferred by pipeline to a 55-gallon drum, with rigid liner, which is attached to the mixing box by an 11-mil PVC O-ring bag. Each 32-gallon batch of liquid organic waste is then mixed with the appropriate binder (WO-4020).

Mixing by the high shear impeller continues until the batch begins to stiffen. The mixer is then removed and the drum of waste is cut off from the mixing box at the O-ring bag and placed aside for setup to occur (WO-4020).

A WC inspector verifies that solidification has occurred by checking the microprocessor printout of process parameters, and waste and binder amounts for each drum to ensure they are within the established parameters. There will be 100 percent inspection of the process until data has been established showing control can be maintained through statistical sampling. The liner and drum are closed and sealed (WC-4003).

A completed Drum Count label is attached to the lid. Data on radioactive content is obtained by dividing the batch radioactive content by the number of waste drums produced from that batch. The drum is surveyed for surface contamination and radiation dose levels, then sent to Building 664. The proper "Radioactive" shipping labels and all other required marking, labeling, are then affixed to the drum (Traffic Procedure T-300-1).

The alpha curies, PE curies, and thermal activity are calculated based on the radioactive content assigned to each drum (Steps 3.3.2 and 3.3.5).

NDT personnel then perform RTR examination of the drum. These trained personnel, who are certified to Rocky Flats Plant (RFP) procedures that implement Level II SNT-TC-1A standards, use the information on the drum label (Step 3.3.7, Labels) to detect and document the following:

(1) Nonconforming items in the package

(2) Use of polyethylene and 90-mil rigid liners

(3) Incorrect waste form description

(4) Presence of free liquid

Rejected waste packages are returned to the generator for corrective action with a copy of a Waste Rejection Report RF-47042, which identifies the specific reason for rejection (Subsection 1.3).

Data from each of the above operations is forwarded to QE personnel, who verify the information is complete and correct. The QE representative then (1) approves WIPP certification for the waste package, and (2) notifies Computer Operations that the waste package can be added to the shipment load list, and that the information has been verified and can be included in the data package.

8.4 Waste Form Compliance

8.4.1 Immobilization (Particulates)

TRU Solidified Organic Waste is cast into a solid monolith according to Procedure WO-4020. WC Inspection of process parameters ensures that operational controls have produced a solid which meets the WIPP Immobilization Criterion (WC-4003). There will be 100 percent inspection of the process until data has been established showing control can be maintained through statistical sampling. Packaging and inspection operations are audited periodically, per the QA audit schedule.

8.4.2 Free Liquids

TRU Solidified Organic Waste is cast into a solid monolith according to Procedure WO-4020. WC Inspection of process parameters ensures that operational controls have produced a solid cast with no unacceptable free liquids (WC-4003). There will be 100 percent inspection of the process until data has been established showing control can be maintained through statistical sampling.

RTR examination by NDT personnel ensures that free liquids have not been overlooked in visual examinations and that free liquids have not developed after the waste package was closed.

8.4.3 Pyrophorics and Explosives

Pyrophoric and explosive materials have not been found in this waste form. However, any such products would be rendered innocuous by the solidified matrix of this waste.

8.4.4 Compressed Gases

WF-112 is produced in a closed system which precludes the introduction of extraneous material such as pressure vessels. Procedures WO-4020, WO-4034, and WC-4003 prohibit pressure vessels from this waste.

8.4.5 Radioactive Mixed Waste

No toxic materials (40 CFR 261, Subparts C and D) have been identified in this waste. All TRU organic wastes have a 90-mil polyethylene liner and an 11-mil PVC liner for corrosion protection.

Waste packages with reportable toxics, ignitible, reactive, or corrosive wastes are identified by type and amount in the data package.

9. ATTACHMENT VI: CERTIFICATION OF TRU SOLIDIFIED LABORATORY WASTE (WF-113)

Contents

9.1 Introduction

9.2 Waste Form Description

9.3 Waste Flow Description

9.4 Waste Form Compliance

- 9.4.1 Immobilization (Particulates)
- 9.4.2 Free Liquids
- 9.4.3 Pyrophorics and Explosives
- 9.4.4 Compressed Gases
- 9.4.5 Radioactive Mixed Wastes

9.1 Introduction

TRU solidified laboratory waste, Waste Form 113 (WF-113), is composed of aqueous wastes which are not compatible with the primary liquid waste stream. WF-113 (IDC-004, special setups) is solidified with a mixture of portland cement and magnesia cement in Waste Treatment Building 774 by a batch method.

WF-113 is packaged and shipped in Type A, DOT-17C, 55-gallon drums (SX-200) with 90-mil rigid polyethylene liners (SX-202).

9.2 Waste Form Description

Solidified laboratory waste specifically means the processing of those aqueous wastes which are intentionally excluded from the normal liquid waste treatment process and which are immobilized and rendered innocuous by a process which is tailored for each batch.

A batch may be as little as 1 liter, or as much as several hundred liters of waste solution.

Each batch must be accompanied by a Waste Processing Request Form and a Laboratory Analysis Form. The WPRF is completed by the waste generator. The WPRF must describe the origin and composition of the waste and give any special instructions for safe handling of the waste (if appropriate).

The laboratory analysis will provide information on the amount and isotope of discarded radioactive material and additional chemical information if requested.

TRU laboratory wastes are generated in the Analytical laboratories, Research and Development laboratories, and occasionally in special project operations.

Laboratory wastes are not discarded into the primary aqueous waste stream because they contain complexing agents and other chemicals which could disrupt normal waste treatment operations.

Special setups (IDC-004) are made by adding 80 - 100 liters of lab waste to a previously prepared drum containing 188 pounds of portland cement and approximately 130 pounds of magnesia cement (WO-4021).

The cement mixture has proven to be an excellent media for the immobilization of these wastes.

This combination of cements allows complete absorption and solidification to occur in the the waste form.

9.3 Waste Flow Description (See Figure 20)

TRU laboratory wastes are collected in a 4-liter (poly) bottle at the point of origin. When enough waste has accumulated to make a transfer, each bottle is identified by serial number and sampled.

The sample is analyzed for plutonium and americium content and other TRU materials, if known to be present. The grams per liter radioactive content is recorded and verified as being below the discard limit. The total grams of plutonium and/or americium is then recorded on the WPRF for the batch. The total plutonium content for the batch is controlled to less than 200 grams.

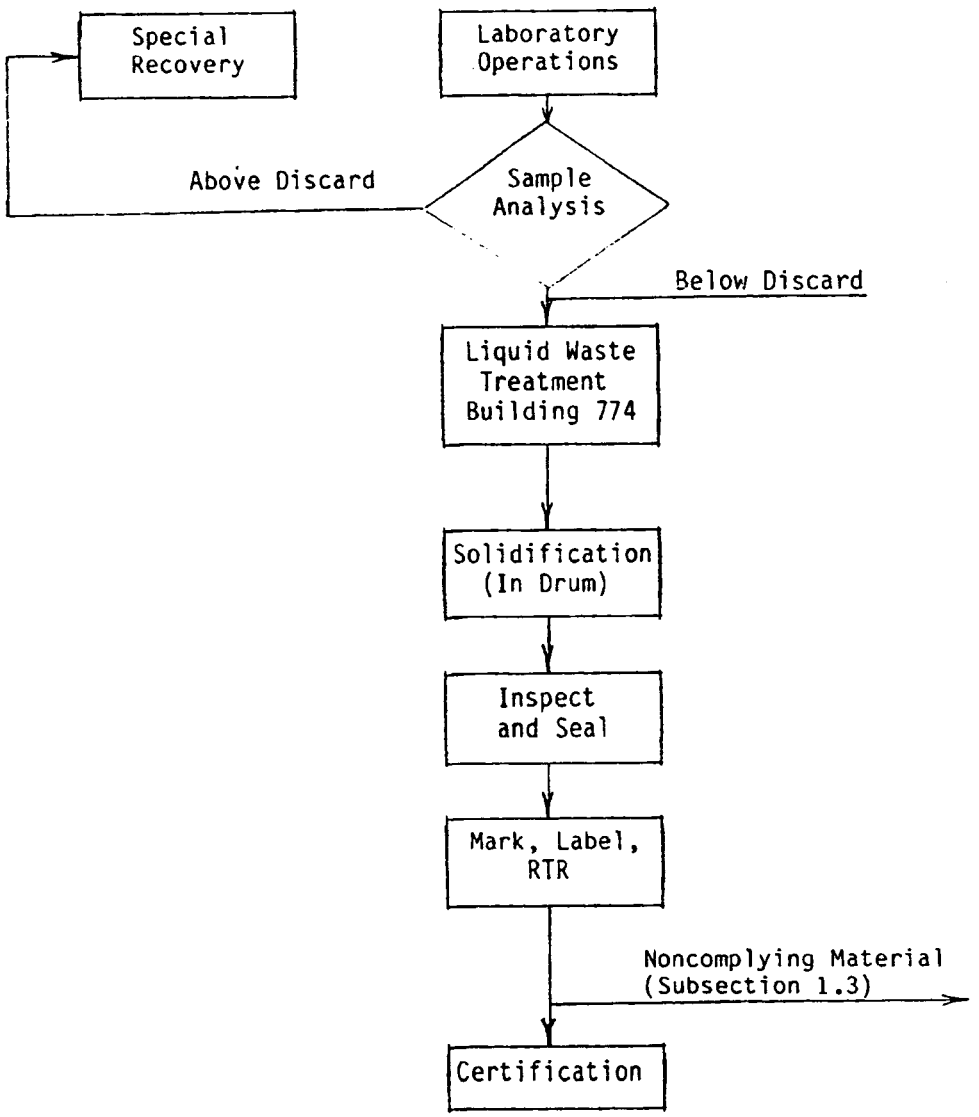

Figure 20. TRU Solidified Laboratory Waste

The batch, with each container identified, is then transferred to Waste Operations, Building 774. The Waste Operations supervisor then reviews the WPRF and assay information and accepts the transfer.

Each container is then entered into a logbook by serial number and batch. When enough waste has been accumulated to make a "run," the batches are grouped together in 80 - 100 liter drum batches. The drum number is then entered in the logbook for each drum batch.

The drum batch is then neutralized if necessary, and "poured" by emptying the contents of each container assigned to that drum batch into the premixed cement. Procedure WO-4021, Miscellaneous Aqueous Waste Handling and Solidification, specifies the amount of cement and liquid waste which is added to the drum to ensure a waste form complying with the WIPP-WAC. The drum of immobilized waste is then disconnected from the glovebox via the bag cut-off procedure.

After the waste has been allowed to obtain initial cure, it is inspected by a WC inspector (WC-4003). The drum is then closed and sealed.

A completed Drum Count label is attached to the lid. Radioactive content is obtained by adding the content of each batch which was placed in the drum.

The drum is surveyed for surface contamination and radiation dose levels. The alpha curies, PE curies, and thermal activity are calculated based on gram quantities of the TRU contaminants from the total assay of each batch added to the drum. All required information is entered on a Drum Count label and is then sent to Building 664. The proper "Radioactive" shipping labels and all other required marking and labeling are then affixed to the drum (Traffic Procedure T-300-1).

NDT personnel then perform RTR examination of the drum. These trained personnel, who are certified to Rocky Flats Plant (RFP) procdures that implement the Level II SNT-TC-1A standards, use the information on the drum label (Step 3.3.7, Labels) to detect and document the following:

(1) Nonconforming items in the package

(2) Use of polyethylene and 90-mil rigid liners

(3) Incorrect waste form description

(4) Presence of free liquid

Rejected waste packages are returned to the generator for corrective action with a copy of a Waste Rejection Report RF-47042 which identifies the specific reason for rejection (see Step 1.3.2). There will be 100 percent inspection of the waste by RTR until data has been established showing control can be maintained through statistical sampling.

Data from each of the above operations is forwarded to QE personnel who verify the information is complete and correct. The QE representative then (1) approves WIPP certification for the waste package, and (2) notifies Computer Operations the waste package can be added to the shipment load list, and the information has been verified and can be included in the data package.

9.4 Waste Form Compliance

9.4.1 Immobilization (Particulates)

TRU solidified laboratory waste is cast into a solidified waste form according to Procedure WO-4021. WC inspection ensures that operational controls have produced a solid which meets the WIPP Immobilization Criterion (WC-4003). There will be 100 percent inspection of the process until data has been established showing control can be maintained through statistical sampling. Packaging and inspection operations are audited periodically per the QA audit schedule.

9.4.2 Free Liquids

TRU solidified laboratory waste is cast into a solidified waste form according to Procedure WO-4021. WC inspection ensures that operational controls have produced a solid which meets the WIPP Immobilization Criterion (WC-4003). There will be 100 percent inspection of the process until data has been established showing control can be maintained through statistical sampling.

RTR examination by NDT personnel ensures that free liquids have not been overlooked in visual examination and that free liquid has not developed after the waste package was closed.

9.4.3 Pyrophorics and Explosives

Pyrophoric and explosive materials have not been found in this waste form. However, any such products would be rendered innocuous by the solidified matrix of this waste.

9.4.4 Compressed Gases

WF-113 is produced in a closed system which precludes the introduction of extraneous material such as pressure vessels. Procedures WO-4021, WO-4034, and WC-4003 prohibit pressure vessels from WF-113.

9.4.5 Radioactive Mixed Waste

TRU solidified laboratory waste has been processed so that potentially corrosive liquids are permanently fixed. This waste form is packaged in a DOT-17C, 55-gallon drum with a 90-mil polyethylene liner and an 11-mil PVC liner for corrosion protection.

Toxics as defined in 40 CFR 261, Subparts C and D in reportable quantities, ignitible, reactive, or corrosive waste are identified by type and amount in the data package.

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10. ATTACHMENT VII: CERTIFICATION OF TRU GRAPHITE WASTE (WF-115)

Contents

10.1 Introduction

10.2 Waste Form Description

10.3 Waste Flow Description

10.4 Waste Form Compliance

- 10.4.1 Immobilization (Particulates)
- 10.4.2 Free Liquids
- 10.4.3 Pyrophorics and Explosives
- 10.4.4 Compressed Gases
- 10.4.5 Radioactive Mixed Waste

10.1 Introduction

TRU graphite waste is generated by the plutonium foundry (Building 707) and by plutonium metallurgy, R&D (Building 771). The waste is identified as IDC 300-graphite molds. TRU graphite waste is packaged in DOT-17C, 55-gallon steel drums with a rigid liner. Graphite waste packages are limited to 200 pounds net graphite and 200 grams of plutonium (WO-4034).

10.2 Waste Form Description

TRU graphite waste consists of graphite molds, scarfed graphite chunks, and coarse graphite pieces which have been used for casting molten plutonium (IDC-300).

Graphite molds are cut from solid blocks, logs, or slabs which have high mechanical strength. The mechanical strength of mold graphite is sufficient to prevent the formation of fines and particulates during normal handling.

Graphite molds may be used several times before they become unusable and are discarded as waste. Discarded molds are cleaned to remove plutonium metal which may be stuck to the surface or imbedded in the mold (FO-707-1012).

Classified graphite molds must be processed in such a way as to obliterate the mold shape and identification (WO-4034 and FO-707-1012).

10.3 Waste Flow Description (See Figure 21)

TRU graphite waste molds are cleaned and inspected in the glovebox to ensure that recoverable plutonium has been removed from the molds. This operation is performed by foundry personnel (WO-4034 and FO-707-1012).

The waste molds are segregated from all noncomplying materials, prepackaged, and removed from the glovebox via a routine bagout operation and placed into a 55-gallon waste drum or placed directly into a 55-gallon waste drum which is connected to the glovebox by an 11-mil PVC O-ring bag. The drum is inspected by a WC Inspector then closed and sealed.

There will be 100 percent inspection of the process until data has been established showing control can be maintained through statistical sampling.

A completed Drum Count label is attached to the lid. The drum is then transferred to the drum counter for assay. The results of this assay determine if the contents are above or below the discard level (CO-1103 and CO-1106). The fissile gram values are entered on the Drum Count label for each radionuclide.

The gram values for plutonium, americium, and any other TRU materials determined by the drum counter assay are entered into the computer. The computer is used to calculate the alpha curies, PE curies, and thermal activity of the waste package based on these gram quantities. This information is reported in the data package along with the gram quantities plutonium, americium, and any other TRU materials (Steps 3.3.2 and 3.3.5).

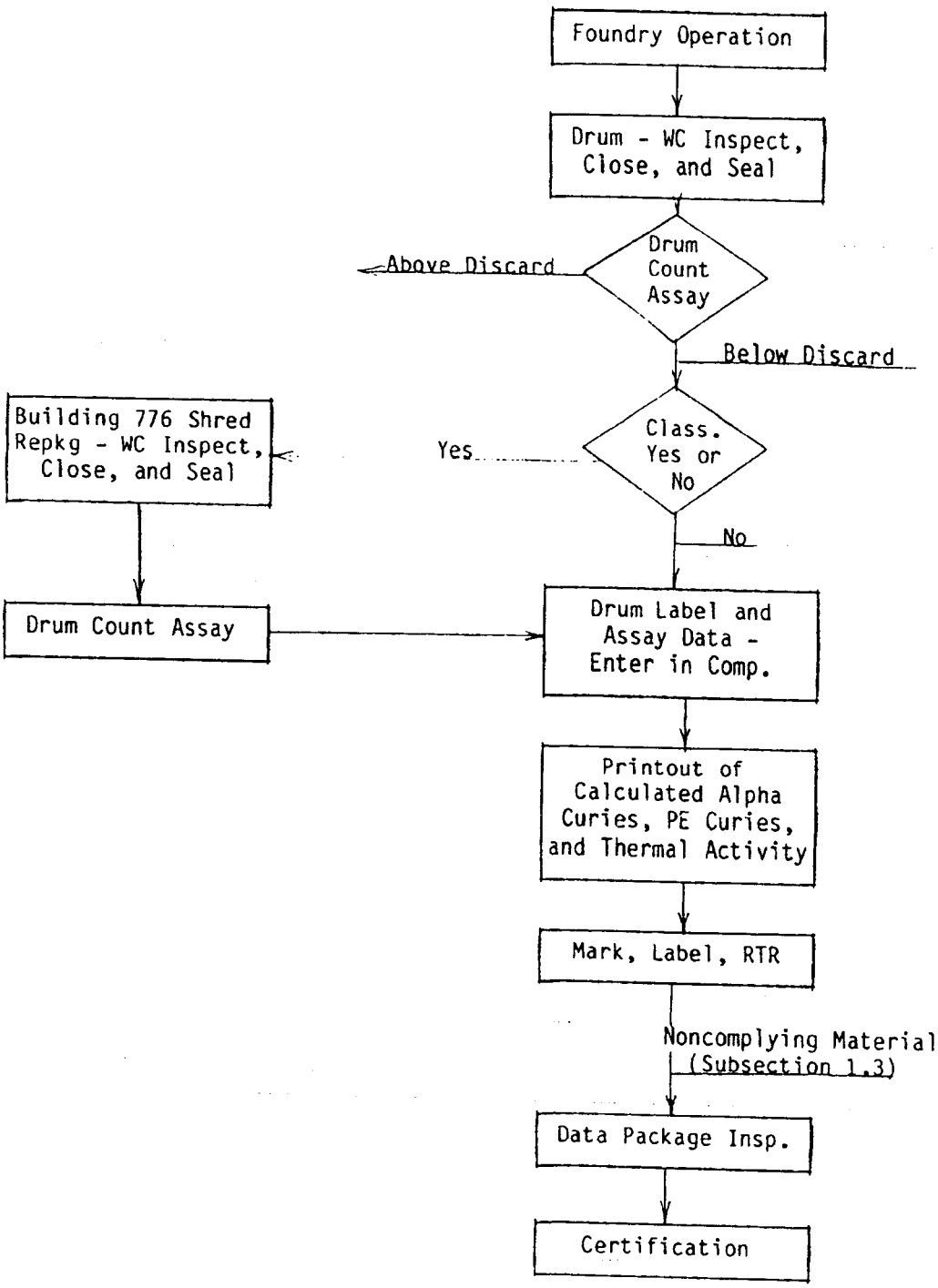

Figure 21. TRU Graphite Waste

The computer is programmed to flag any waste having an excess of the allowed fissile material limit. The waste package will then be rejected for shipment.

If the drum contains classified graphite shapes, it is sent to Size Reduction, Building 776, for shredding to declassify the waste, and then repackaged into a drum. This waste is inspected by WC Inspection as it is repackaged. The drum is assayed again by the drum counter to verify the radionuclide content.

The container is surveyed for surface contamination, surface dose rate, and radiation reading at 1 meter. These survey results are entered on the Drum Count label. Radiation Monitoring signs the forms verifying the information is correct (Radiation Monitoring Manual). The waste package is sent to Building 664 with the Drum Count label which has been approved by a WC inspector (WC-4003 and WO-4034).

The drum will be labeled with any required shipping labels (Traffic Procedure T-300-1). Real-time radiographic examination is then performed by NDT personnel. These trained personnel, who are certified to Rocky Flats Plant (RFP) procedures that implement the Level II SNT-TC-1A standards, use the information on the drum label (Step 3.3.7, Labels) to detect and document the following:

(1) Nonconforming items

(2) Use of polyethylene and 90-mil rigid liners

(3) Correct waste form description

(4) Presence of free liquid

Nonconforming waste packages are returned to the generator for corrective action with a copy of a Waste Rejection Report RF-47042, which identifies the specific reason for rejection (see Step 1.3.2). There will be 100 percent inspection of the waste by RTR until data has been established showing control can be maintained through statistical sampling.

Data from each of the above operations is reviewed by QE personnel who verify that the information is correct and complete. The QE representative then approves WIPP certification for that waste package and notifies the Computer Operations group that the waste package can be added to the shipment load list and that the information has been verified and can be included in the data package.

10.4 Waste Form Compliance

10.4.1 Immobilization (Particulates)

TRU graphite waste is a nonparticulate waste form. Structural strength of the graphite is sufficient to resist the formation of particulates during shipping and handling, as demonstrated by the examination of graphite waste as part of the INEL Examination of Stored Waste Project. Shredded graphite has been shown to meet the WIPP Immobilization Criterion in an internal report. WC inspections at the waste bagout ensure that unacceptable particulates have not been added to the waste package (WO-4034 and WC-4003).

10.4.2 Free Liquids

TRU graphite waste contains no free liquid. Direct inspection of the waste by WC inspectors and RTR examination of the waste package ensure that no free liquid is present in the waste package (WO-4034 and WC-4003).

10.4.3 Pyrophorics and Explosives

TRU graphite waste contains no pyrophoric material other than discard levels of radionuclides. Pyrophorics and explosives are prohibited from all waste packages (WO-4034). WC inspection of each container and periodic QA audits ensure that pyrophorics and explosives are excluded from the waste package.

10.4.4 Compressed Gases

Pressure vessels may not be packaged with TRU graphite waste (WO-4034). WC inspection and RTR examination of each waste package ensures that pressure vessels are excluded from the waste (WC-4003).

10.4.5 Radioactive Mixed Waste

TRU graphite waste contains no hazardous materials (WO-4034). WC inspection of each waste container and routine audits by Quality Engineering ensure that hazardous materials are excluded from graphite waste (WC-4003).

Waste packages with reportable toxics, ignitible, reactive, or corrosive wastes are identified by type and amount in the data package.

11. ATTACHMENT VIII: CERTIFICATION OF TRU ORGANIC SOLID WASTE (WF-121)

Contents

11.1 Introduction

11.2 Waste Form Description

11.3 Waste Flow Description

11.4 Waste Form Compliance

11.1 Introduction

Waste Form 121, TRU Organic Solid Waste, consists of materials identified as IDC-302, Benelex and Plexiglas.

IDC-302, Benelex and Plexiglas, are massive sheets or slabs of material used as radiation shielding around gloveboxes, tanks, and equipment.

Benelex and Plexiglas are packaged in DOT-7A, Type A, steel boxes lined with fiberboard and an 11-mil PVC liner (SX-209).

11.2 Waste Form Description

TRU Organic Solid Waste (WF-121) refers specifically to large, massive (2- or 4-inch thick) sheets or slabs of solid organic material used as neutron shielding around gloveboxes, tanks, or high radiation equipment.

Benelex and Plexiglas are manufacturer's trade names; however, those terms are generically used here to describe materials of the same or similar composition.

Experience has confirmed that gas generation from Benelex and Plexiglass is negligible.

Benelex and Plexiglas are not combustible materials (as defined) because they will not support combustion when the heat source is removed.

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11.3 Waste Flow Description (See Figure 22)

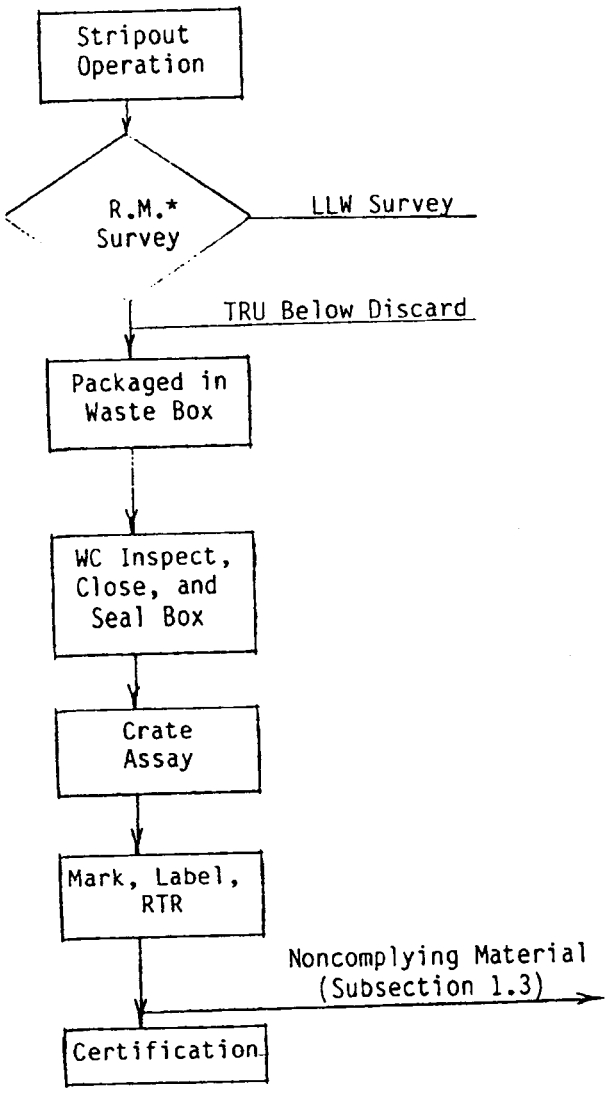
Benelex and Plexiglas waste is generated during strip-out (D&D) operations. This waste is considered TRU waste only if the Radiation Monitoring survey results indicate high enough contamination levels (WO-4034, WO-4033, WC-4003, and Radiation Monitoring Manual).

The waste is gamma-scanned to determine the assay gram value to be assigned to the waste (WC-4003). The waste is then placed directly into a waste box and the data for that item is entered on the WBLS.

The waste box is locked closed at all times. Waste is placed into the waste box only in the presence of a WC inspector who has custody of the waste box keys. The waste box liners and a certified filter/vent unit are installed by Waste Operations personnel (WO-4034). The liners and filter/vent unit are inspected by a WC inspector (WC-4003). When the box is full, the liners are closed and sealed, and the box is surveyed for surface contamination. Radiation readings are taken at the surface and at 1 meter and are recorded on the WBLS. All required data is then entered on the WBLS which accompanies the waste box to the lid welding station in Building 776.

The lid is then welded on the waste box, providing a tamper-proof seal. The waste box is leak-tested and inspected (WC-4003). The waste package is then sent to Building 664 along with the WBLS which has been approved by a WC inspector (WC-4003).

At Building 664, the waste package receives final assay in the crate counter (CO-7006). It is marked and labeled according to the information on the WBLS (WO-4034 and Traffic Procedure T-300-1). A waste review board determines actions to be taken on assay discrepancies.



* Radiation Monitoring

Figure 22. TRU Benelex and Plexiglas Waste

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NDT personnel then perform RTR examination of the package. These trained personnel, who are certified to Rocky Flats Plant (RFP) procedures that implement the Level II SNT-TC-1A standards, use the information on the WBLS (Step 3.3.7, Labels) to detect and document the following:

(1) Nonconforming items in the package

(2) Use of fiberboard and polyethylene liners

(3) Correct waste form description

(4) Presence of free liquid

Nonconforming waste packages are returned to Size Reduction for corrective action with a copy of a Waste Rejection Report RF-47042, which identifies the specific reason for rejection (see Step 1.3.2).

Data from each of the above operations is reviewed by QE personnel who verify that the information is complete and correct. The QE representative then (1) approves WIPP certification for the waste package, and (2) notifies Computer Operations that the waste package can be added to the shipment load list and that the information has been verified and can be included in the data package.

11.4 Waste Form Compliance

TRU organic solid waste (Benelex and Plexiglas) meets all of the waste form requirements in such an obvious and straightforward manner that it is unnecessary to list each one separately.

Benelex and Plexiglas are not particulate, liquid, sludge, pyrophoric, explosive, or toxic. This waste form may not be packaged with particulates, liquids, pyrophorics, explosives, pressure vessels, toxics, ignitible, reactive, or corrosive waste (WO-4034 and WC-4003).

WC inspection and RTR examination verify TRU solid organic waste compliance (WC-4003).

12. ATTACHMENT IX: CERTIFICATION OF TRU INORGANIC SOLID WASTE (WF-122)

Contents

12.1 Introduction

12.2 Waste Form Description

12.2.1 Firebrick (IDC-371)

12.2.2 Oil Dri (IDC-375)

12.3 Waste Flow Description

12.4 Waste Form Compliance

12.4.1 Immobilization (Particulates)

12.4.2 Free Liquids

12.4.3 Pyrophorics and Explosives

12.4.4 Compressed Gases

12.4.5 Radioactive Mixed Wastes

12.1 Introduction

TRU inorganic solid waste (WF-122) is comprised of Firebrick (IDC-371) and Oil Dri (IDC-375). These materials do not require processing in order to meet WIPP Waste Acceptance Criteria.

Examination of retrieved waste shows that this waste is unaffected by the transportation environment.

TRU inorganic solid waste is packaged in DOT-17C 55-gallon steel drums with a 90-mil, rigid polyethylene liner (SX-202) or repackaged into a DOT-7A steel box (SX-231) with an 11-mil PVC liner (SX-209).

12.2 Waste Form Description

12.2.1 Firebrick (IDC-371) refers to high-density refractory clay insulating materials. Firebrick becomes TRU waste when plutonium processing furnaces or incinerators are dismantled or repaired. Firebrick is cleaned and scarfed before disposal (CO-1039 and CO-6017).

12.2.2 Oil Dri (IDC-375) is an absorbent clay which is placed in waste packages containing damp materials. Oil Dri becomes a specific waste item when it is collected and packaged by itself. Oil Dri is collected when waste is put back into the glovebox system for repackaging or reprocessing.

12.3 Waste Flow Description

12.3.1 Waste Flow Description for Drums (See Figure 23)

TRU inorganic solid waste is first segregated from all noncomplying materials inspected by WC waste inspectors, as it is removed from the glovebox by a standard bagout operation, placed in a drum, and sealed with a tamper-proof seal (WC-4003). There will be 100 percent inspection of the process until data has been established showing control can be maintained through statistical sampling.

A completed Drum Count label is then attached to the lid. The drum is then surveyed for surface contamination and surface dose rate. These survey results are entered on the label and then verified by the signature of a Radiation Monitor (WO-4034 and Radiation Monitoring Manual).

The drum is then transferred to the drum counter for assay. The results of this assay determine if the contents are above or below the discard level (CO-1103 and CO-1106). The gram values are entered on the TRU Drum Count label for each radionuclide.

The gram values for plutonium, americium, and any other TRU materials, as determined by the drum counter assay, are entered into the computer. The computer is used to calculate the alpha curies, PE curies, and thermal activity of the waste package based on these gram quantities. This information is reported in the data package along with the gram quantities of plutonium, americium, and any other TRU materials (Steps 3.3.2 and 3.3.5).

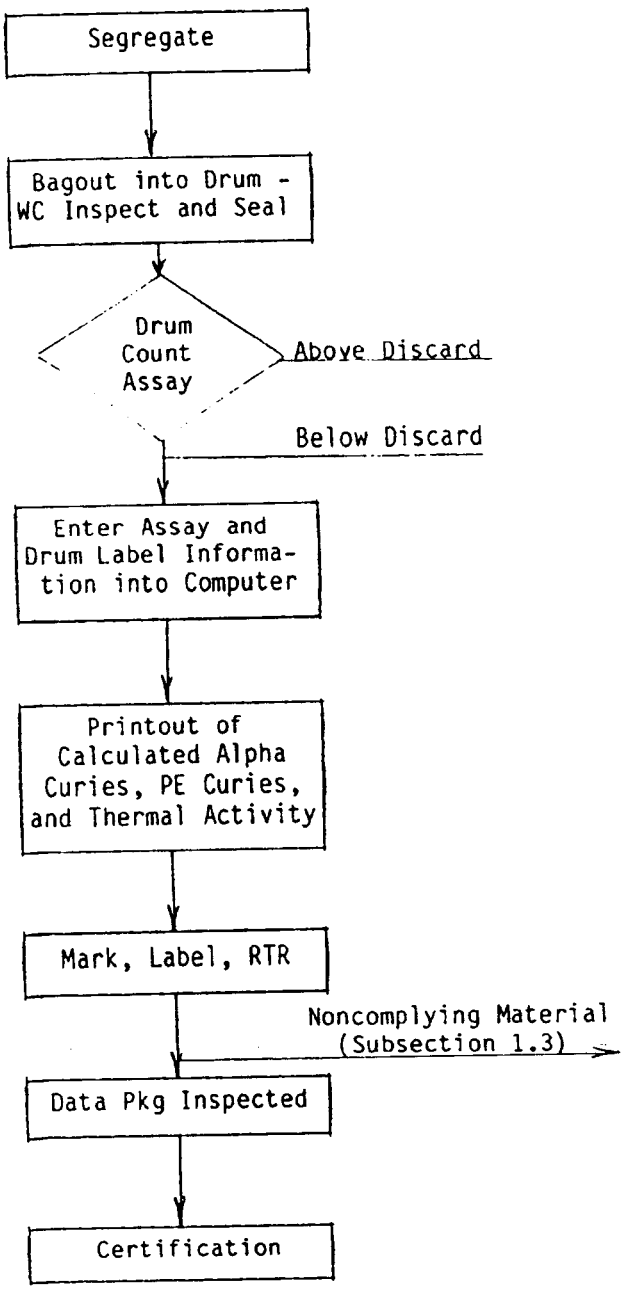

Figure 23. TRU Inorganic Solid Waste

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The computer is programmed to flag any waste having an excess of the allowed fissile material limit. This waste package will then be rejected for shipment. Quality Engineering will inspect the data package for each waste container to ensure completeness prior to certification and transmission to the WIPP.

The inspected and sealed waste drum is then sent to Building 664 (WC-4003 and WO-4034) if the waste is not to be repackaged into a box.

The drum will be labeled with any required shipping labels (WO-4034 and Traffic Procedure T-300-1). Real-time radiographic examination is then performed by NDT personnel. These trained personnel, who are certified to Rocky Flats Plant (RFP) procedures that implement Level II SNT-TC-1A standards, use the information on the drum label (Step 3.3.7, Labels) to detect and document the following:

(1) Nonconforming items

(2) Use of polyethylene and 90-mil rigid liners

(3) Correct waste form description

(4) Presence of free liquid

Nonconforming waste packages are returned to the generator for corrective action with a copy of a Waste Rejection Report RF-47042, which identifies the specific reason for rejection (see Step 1.3.2). There will be 100 percent inspection of the waste by RTR until data has been established showing control can be maintained through statistical sampling.

Data from each of the above operations is reviewed by QE personnel who verify that the information is correct and complete. The QE representative then approves WIPP certification for that waste package and notifies the Computer Operations group that the waste package can be added to the shipment load list and that the information has been verified and can be included in the data package.

12.3.2 Waste Flow Description for Boxes (See Figure 24)

If the TRU inorganic solid waste is to be repackaged into a box, then it is first segregated from all noncomplying materials, prepackaged, and removed from the glovebox by a standard bagout operation.

The waste is then placed in a DOT-17C 55-gallon steel drum with two "barrel bag" liners.

When the waste drum is full, the liners are closed and sealed and the steel drum lid is attached with a bolted closure ring.

A completed Drum Count label is then attached to the lid. The drum is then surveyed for surface contamination and surface dose rate. These survey results are entered on the label and then verified by the signature of a Radiation Monitor (WO-4034 and Radiation Monitoring Manual).

The drum is then transferred to the drum counter for assay. The results of this assay determine if the contents are above or below the discard level (CO-1103 and CO-1106). The gram values are entered on the Drum Count label for each radionuclide.

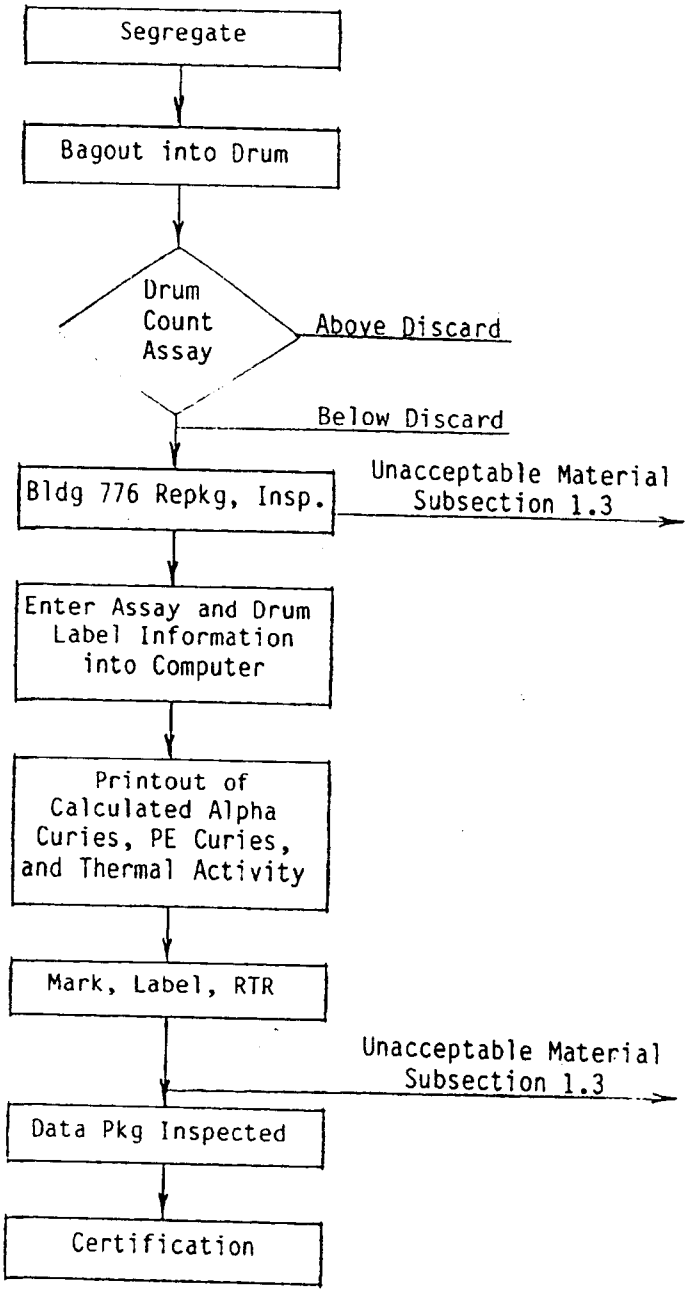

Figure 24. TRU Inorganic Solid Waste

The gram values for plutonium, americium, and any other TRU materials, as determined by the drum counter assay, are entered into the computer. The computer is used to calculate the alpha curies, PE curies, and thermal activity of the waste package based on these gram quantities. This information is reported in the data package along with the gram quantities of plutonium, americium, and any other TRU materials (Steps 3.3.2 and 3.3.5).

The waste drum and a completed Drum Count label are then sent to Size Reduction in Building 776. The waste is repackaged into a lined box under controlled conditions in the airlock of the SRR vault. The data from each drum are transferred to a WBLS when the drums are opened, and the waste is transferred to the waste box (WO-4016 and WC-4003).

Each fiberpack or bag is opened, inspected by a WC inspector, and distributed in the waste box to obtain greater packing density. This inspection detects and eliminates all noncomplying materials (WC-4003).

Noncomplying materials which require processing are returned to the generator with the Waste Rejection Report (RF-47042). A copy of the WRR stating the corrective action taken must be returned to Quality Engineering (Subsection 1.3).

Waste box liners and a certified filter/vent unit are installed by Waste Operation personnel (WO-4034). The liners and filter/vent unit are inspected by a WC inspector (WC-4003). When the box is full, the liners are closed and sealed, and the box is surveyed for surface contamination. Radiation readings are taken at the surface and at 1 meter, and are recorded on the WBLS.

The lid is welded on, providing a tamper-proof seal. The waste package is then sent to Building 664 with the TRU waste label and the WBLS which has been approved by the WC inspector (WC-4003).

At Building 664, the box is weighed and the weight is stenciled on the box. The box then receives final assay in the crate counter (CO-7006). This assay must agree with the cumulative assays obtained by the drum count, within the limits of error assigned to each assay method. A waste review board determines actions to be taken on assay discrepancies.

The proper "Radioactive" shipping labels and all other required marking and labeling are then affixed to the box (Traffic Procedure T-300-1).

Real-time radiographic examination is then performed by NDT personnel. These trained personnel, who are certified to Rocky Flats Plant (RFP) procedures that implement the Level II SNT-TC-1A standards, use the information on the WBLS (Step 3.3.7, Labels) to detect and document the following.

(1) Nonconforming items

(2) Use of fiberboard and polyethylene liners

(3) Correct waste form description

(4) Presence of free liquid

Nonconforming waste packages are returned to the generator for corrective action with a copy of Waste Rejection Report RF-47042, which identifies the specific reason for rejection (see Step 1.3.2).

Data from each of the above operations is reviewed by QE personnel who verify that the information is correct and complete. The QE representative then approves WIPP certification for that waste package and notifies the Computer Operations group that the waste package can be added to the shipment load list and that the information has been verified and can be included in the data package.

12.4 Waste Form Compliance

12.4.1 Immobilization (Particulates)

TRU inorganic solid waste does not require processing to immobilize particulates. Firebrick is not a particulate waste and must be segregated from particulates during packaging (WO-4034).

Oil Dri is a particulate waste; however, particle size analysis shows that this waste is well within the limits of the WIPP waste acceptance criteria and must be segregated from other particulate material before packaging (WO-4034).

12.4.2 Free Liquids

TRU inorganic solid waste contains no free liquid. Direct inspection of the waste by WC inspectors and RTR examination of the waste package ensures that no free liquid is present (WO-4034 and WC-4003).

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12.4.3 Pyrophorics and Explosives

TRU inorganic solid waste contains no pyrophoric or explosive materials. Pyrophorics and explosives are prohibited from all waste packages (WO-4034). WC inspection of each package and periodic audits per the QA audit schedule ensures that pyrophorics and explosives are excluded from the waste package (WC-4003).

12.4.4 Compressed Gases

Pressure vessels may not be packaged with TRU waste (WO-4034). WC inspection and RTR examination of each waste package ensures that pressure vessels are excluded from the waste (WC-4003).

12.4.5 Radioactive Mixed Waste

TRU inorganic solid waste contains no hazardous or corrosive materials (WO-4034). WC inspection of each waste package and periodic audits per the QA audit schedule ensures that hazardous and corrosive materials are excluded from the waste (WC-4003).

Waste packages with reportable toxics, ignitible, reactive, or corrosive wastes are identified by type and amount in the data package.

13. ATTACHMENT X: CERTIFICATION OF TRU FILTER WASTE (WF-119)

Contents

13.1 Introduction

13.2 Waste Form Description

13.2.1 Absolute Dry Box Filters (IDC-335)

13.2.2 HEPA Filters (IDC-490)

13.2.3 Ful-Flo Filters (IDC-328)

13.2.4 Insulation and Filter Media (IDC-338)

13.2.5 Processed Insulation and Filter Media (IDC-376)

13.3 Waste Flow Description

13.4 Waste Form Compliance

13.4.1 Immobilization (Particulates)

13.4.2 Free Liquids

13.4.3 Pyrophorics and Explosives

13.4.4 Compressed Gases

13.4.5 Radioactive Mixed Wastes

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13.1 Introduction

TRU Filter Waste (WF-119) is comprised of absolute dry box filters (IDC-335), high efficiency particulate air (HEPA) filters (IDC-490), insulation and filter media (IDC-338), Ful-Flo filters (IDC-328), and processed insulation and filter media (IDC-376).

The absolute dry box filters (IDC-335), Ful-Flo filters (IDC-328), and insulation and filter media (IDC-338) are mixed with portland cement which neutralizes acid and adsorbs any residual liquid to meet the WIPP Waste Acceptance Criterion. Waste forms of IDC's 335, 328, and 338 are identified as processed insulation and filter media (IDC-376) after mixing with dry portland cement.

HEPA filters (IDC-490) are crushed and placed directly into a waste box.

TRU Filter Waste is packaged in DOT-17C, 55-gallon steel drums (SX-200) with a 90-mil rigid polyethylene liner (SX-202) or a DOT-7A steel box (SX-231) with an 11-mil PVC liner (SX-209).

13.2 Waste Form Description

13.2.1 Absolute dry box filters (IDC-335) refer to filters approximately 8 x 8 x 6 inches which are used at the gloveboxes for filtering intake and exhaust air. Other filter sizes include 8 x 8 x 4 inches and 12 x 12 x 6 inches. The filters are composed of wood or particle board frames and a fiberglass-type filter media. The absolute filters are processed as Content Code 376 (Processed insulation and filter media) or Content Code 490 (HEPA Filters).

The filter is mixed with portland cement to neutralize the residual acid and adsorb any residual liquid.

13.2.2 HEPA (IDC-490) filters are used on all ventilation intake and exhaust systems. Only the filters from the first stage of the four-stage exhaust system in plutonium processing areas are considered TRU waste and are segregated during processing and packaging from the second, third, and fourth stage filters.

The Size 5 filter frames (2- x 2- x 1-foot) can be either wood or aluminum. Filter media is fiberglass-type (Nomex) media.

13.2.3 Ful-Flo filters (IDC-328) consist of fibrous polypropylene filter media and are used to remove particulates from liquid streams. The waste is bagged out of the glovebox and placed in a prepared 55-gallon drum.

13.2.4 Insulation and filter media (IDC-338) consists of filter media (fiberglass, asbestos), asbestos-type pipe insulation, and asbestos gloves and fire blankets. The filter media is generated from splitting absolute and HEPA filters apart in the process areas. Any loose particulate materials are dislodged from the filter during this process and disposed of separately. Filter media is packaged by placing the media into a 1-gallon polyethylene bottle or in a polyethylene bag and double bagged out of the glovebox. Each bottle or bag is placed in a prepared 55-gallon drum.

Content Code 338 also includes insulation waste generated from routine maintenance and removal of pipe insulation from process lines and steam lines. If any of this waste is nonline generated, it is packaged separately from line-generated waste and marked as "nonline generated" on the drum label (WO-4034).

13.2.5 Processed insulation and filter media (IDC-376) consists of Ful-Flo, filter media, and whole filters. Portland cement is added to all waste packages as a precautionary measure to neutralize any residual nitric acid that may be present in the waste.

The waste also includes limited amounts of insulation waste such as asbestos gloves and fire blankets.

The waste is initially packaged into drums by each waste-generating area (as Content Codes 335, 328, and 338 wastes) and then assayed for plutonium content in Building 771. Waste contaminated with discardable amounts of plutonium are then transported to Size Reduction (Building 776). All insulation and filter media wastes are processed by Size Reduction. After the waste is processed, it is relabeled as Content Code 376. **An exception:** Absolute dry box filters (IDC-335) from nonacid lines may be packaged into boxes with first stage HEPA filters (IDC-490).

13.3 Waste Flow Description (See Figures 25 and 26)

Each absolute dry-box filter removed from a glovebox is double contained in plastic bags, sealed with tape, and placed in a 55-gallon drum. Generally, absolute filters are dry when packaged. Adsorbent (Oil-Dri) is added to any bags containing damp filters. A completed drum label is attached to the lid.

HEPA filters, removed from plutonium process area filter plenums, are double bagged and placed in cardboard cartons. The cardboard cartons are then placed in appropriate metal containers for transfer to the drum counter for assay. The cartons are surveyed for surface contamination and surface dose rate.

The stage each HEPA filter is taken from is marked on the cardboard carton. The first stage filters are segregated from the second, third,

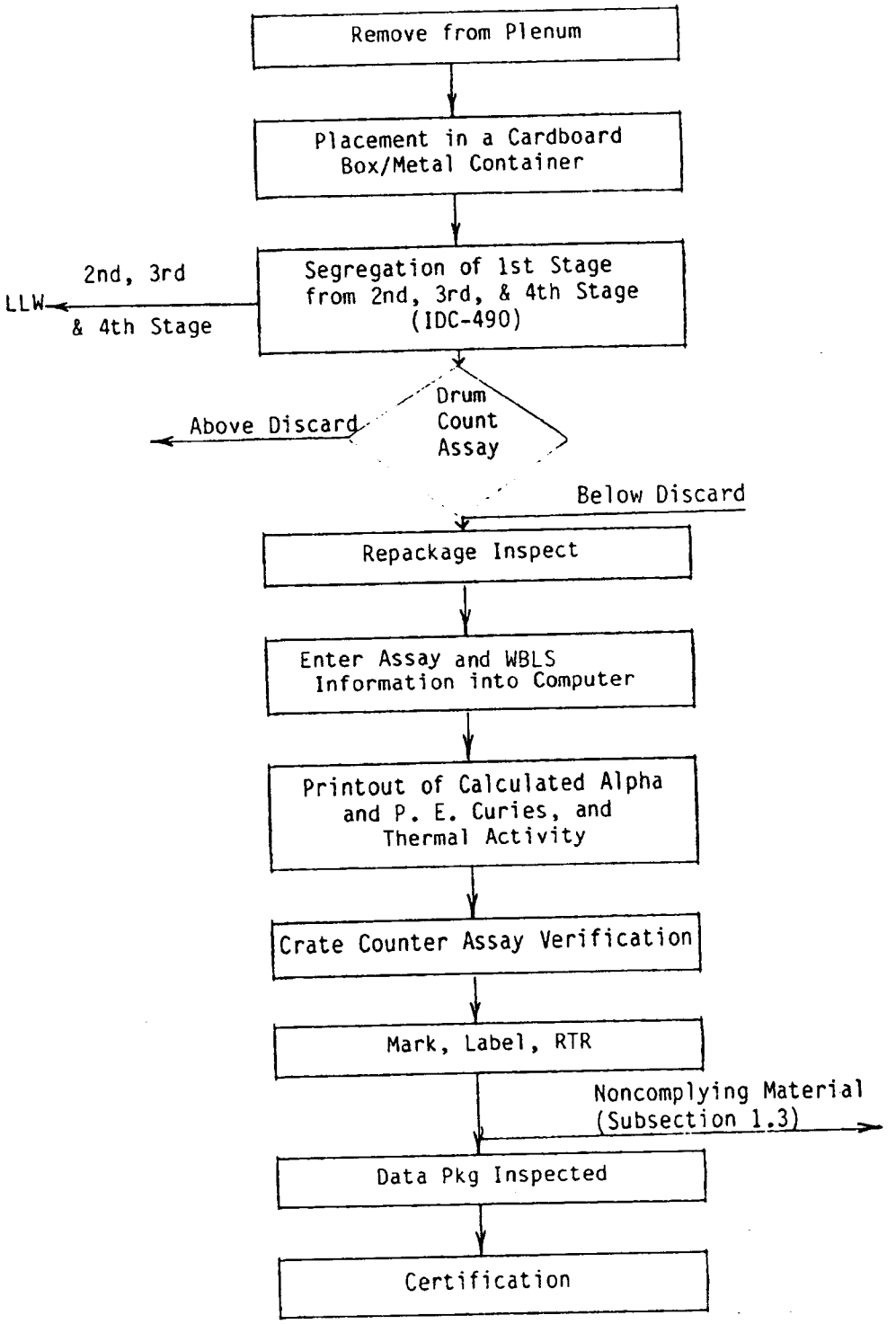

Figure 25. Boxed TRU Filter Waste

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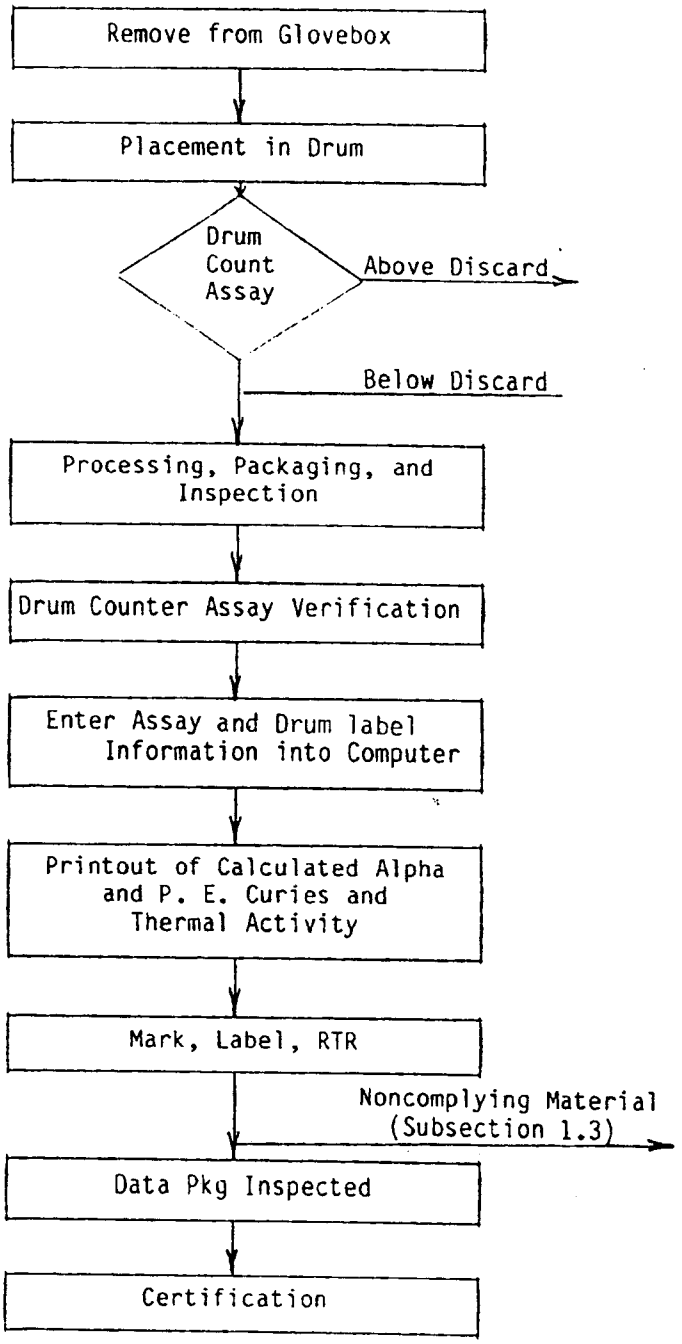

Figure 26. Drummed TRU Filter Waste

and fourth stage filters. The second, third, and fourth stage filters are identified as "nonline generated" and assayed on the Passive/Active Crate Counter (CO-1107) to verify they are LLW.

As filter media and insulation (including asbestos gloves and fire blankets) are removed from the glovebox line, they are either double contained in plastic bags and placed directly into prepared 55-gallon drums or placed in 1-gallon polyethylene bottles, double bagged out of the glovebox in PVC and polyethylene bags, and placed into prepared 55-gallon drums.

The metal containers and drums are then transferred to the drum counter for assay. The results of this assay determine if the contents are above or below the discard level (CO-1103 and CO-1106). The gram values are entered on the drum label for each radionuclide.

The gram values for plutonium, americium, and any other TRU materials, as determined by the drum counter assay, are entered into the computer. The computer is used to calculate the alpha curies, PE curies, and thermal activity of the waste package based on these gram quantities. This information is reported in the data package along with the gram quantities of plutonium, americium, and any other TRU materials (Steps 3.3.2 and 3.3.5).

If the HEPA filters (IDC's 490 and 335), Ful-Flo filters (IDC-328), and filter media (IDC-338) are waste, they are sent to the Size Reduction (SR) facility in Building 776. Processing and repackaging are performed under controlled conditions in the SR vault.

Each plastic bag of filter waste (IDC-328, -335, and -338) is opened by Waste Operations personnel and inspected by a Waste Certification inspector. The Waste Certification personnel log the identification number and assay values of each drum or carton on a WBLS.

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Waste Operations personnel mix the filters with dry portland cement to neutralize any residual acid and adsorb any residual liquid. The mixture is placed in double polyethylene bags, taped shut, and packaged into a 55-gallon drum with a rigid poly liner. The waste is identified as processed insulation and filter media (IDC-376). The drum is sent to the drum counter to verify the assay.

HEPA filters (IDC-490) are crushed in a press after being removed from the cardboard carton. The crushed filter is then placed into a prepared waste box. The cardboard boxes used for transporting the filters are cut flat and placed on top of the filters before the box is closed and sealed. WC inspection personnel inspects the crushing and packaging of HEPA filters.

Waste is inspected by WC inspection as it is placed into drums. Drums are sealed by WC Inspection (WC-4003). Lids are welded on waste boxes by Maintenance personnel, providing a tamper-proof seal. The waste box weld is leak-tested and inspected by WC inspection (WC-4003). A completed Drum Count label is attached to the drum or a WBLS for boxes. The container is surveyed for surface contamination, surface dose rate, and radiation readings at 1 meter by Radiation Monitoring. These survey results are entered on the Drum Count label or WBLS by Waste Operations personnel, and then verified by the signature of a Radiation Monitor (WO-4034 and Radiation Monitoring Manual).

The waste package is then sent to Building 664 with the Drum Count label or WBLS which has been approved by a WC inspector (WC-4003).

The drum or box will be labeled and marked with the required shipping labels and markings (Traffic Procedure T-300-1).

Real-time radiographic examination is then performed by NDT personnel. These trained personnel, who are certified SNT-TC-1A operators, use the information on the drum label or WBLS (Step 3.3.7, Labels) to detect and document the following:

(1) Nonconforming items

(2) Use of polyethylene and 90-mil rigid liners for drums or fiberboard and polyethylene liners for boxes

(3) Correct waste form description

(4) Presence of free liquid

Nonconforming waste packages are returned to the generator for corrective action with a copy of a Waste Rejection Report, RF-47042, which identifies the specific reason for rejection (see Step 1.3.2). There will be 100 percent inspection of the waste by RTR until data have been accumulated showing control can be maintained through statistical sampling.

Waste boxes receive final assay in the crate counter (CO-7006 and CO-1107). A waste review board determines actions to be taken on assay discrepancies.

Data from each of the above operations are reviewed by QE personnel who verify that the information is correct and complete. The QE representative then approves WIPP certification for that waste package and notifies Waste Operations that the waste package can be added to the shipment load list and that the information on all labels has been verified and can be included in the data package.

13.4 Waste Form Compliance

13.4.1 Immobilization (Particulates)

First stage HEPA filters (IDC-490) and Absolute Dry Box filters (IDC-335) from several plutonium process areas were shaken and then crushed in an 85,000 pound drum crusher. All particulate material was collected, weighed, and sized. In all cases, the particulate material was within the WIPP-WAC criteria for immobilization (HEPA Filter Evaluation, August 1985, Internal Report).

Additional studies were conducted during 1986 with similar results. Worst case results were obtained from filters in which the filter frame was not included in the waste matrix weight. The results averaged 5.33 wt/% particulate material less than 200 microns and 0.12 wt/% particulate material less than 10 microns. Results would have been approximately 2/3 lower had the frames been included as part of the waste matrix. Results from other filter plenums indicate that the filters average less than 1.0 wt/% particulate material less than 200 microns and less than 0.01 wt/% particulate material less than 10 microns. These results are presented in an internal report, Characterization of Spent HEPA Filters from Rocky Flats Plant, PSD86-056, P. M. Arnold, September 1986. This waste form may be packaged without any further treatment.

Any loose particualte material will be dislodged from the filter media (IDC-338) when it is separated from the frames in the process areas. Insulation (also IDC-338) and Ful-Flo filters (IDC-328) are not particulate waste forms and Waste Certification Inspection ensures no particualte material is mixed with the waste as it is packaged for shipment.

13.4.2 Free Liquids

HEPA filters, absolute filters, filter media, and insulation must be dried, drained, or otherwise segregated from all free liquids (WO-4034) in addition, sufficient adsorbent is added directly to the waste to immobilize any liquid that may be desorbed during shipment and storage.

Inspection by Waste Certification and RTR examination of the waste by NDT verify that no free liquid is present in the final waste package (WC-4003).

13.4.3 Pyrophorics and Explosives

HEPA filters, absolute filters, filter media, and insulation contain no pyrophoric or explosive materials. Pyrophorics and explosives are prohibited from all waste packages (WO-4034). WC inspection of each package and periodic audits per the QA audit schedule ensures that pyrophorics and explosives are excluded from the waste package (WC-4003).

13.4.4 Compressed Gases

Pressure vessels may not be packaged with TRU waste (WO-4034). WC inspection and RTR examination of each waste package ensures that pressure vessels are excluded from the waste (WC-4003).

13.4.5 Radioactive Mixed Wastes

All corrosive materials must be neutralized or removed from TRU waste (WO-4034). All TRU waste packages have either a 90-mil polyethylene liner or an 11-mil PVC liner for corrosion protection.

No toxic materials (40 CFR 261, Subparts C and D) have been identified in the waste forms.

Waste packages with reportable toxics, ignitable, reactive, or corrosive wastes are identified by type and amount in the data package.

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14. ATTACHMENT XI: CERTIFICATION OF TRU LEADED RUBBER (WF-123)

Contents

14.1 Introduction and Waste Form Description

14.2 Waste Flow Description

14.3 Waste Form Compliance

14.4.1 Immobilization (Particulates)

14.4.2 Free Liquids

14.4.3 Pyrophorics and Explosives

14.4.4 Compressed Gases

14.4.5 Radioactive Mixed Wastes

14.1 Introduction and Waste Form Description

Leaded rubber gloves contain layers of Hypalon and lead oxide impregnated neoprene.

Leaded rubber gloves and aprons are IDC-339 and gloves contaminated with nitric acid are IDC-341.

Those leaded items from wet glovebox lines, or items above discard level, are washed to remove nitrates and contamination. Nitric acid in contact with lead forms lead nitrate, which is a pyrophoric material.

Leaded rubber waste is packaged in DOT-17C, 55-gallon steel drums (SX-200) with a 90-mil rigid polyethylene liner (SX-202), see WO-4034.

14.2 Waste Flow Description (See Figure 27)

Leaded glovebox gloves and aprons are double contained in plastic and placed in prepared 55-gallon drums (see WO-4034). Absorbent material (Oil-Dri) is added to the drum. A completed drum label is attached to the lid.

The drums are then transferred to the drum counter for weight and assay. The results of this assay determine if the contents are above or below the discard level (CO-1103 and CO-1106). The gram values and weight are entered on the drum label for each radionuclide.

The gram values for plutonium, americium, and any other TRU materials, as determined by the drum counter assay, are entered into the computer. The computer is used to calculate the alpha curies, PE curies, and thermal activity of the waste package based on these gram quantities. This

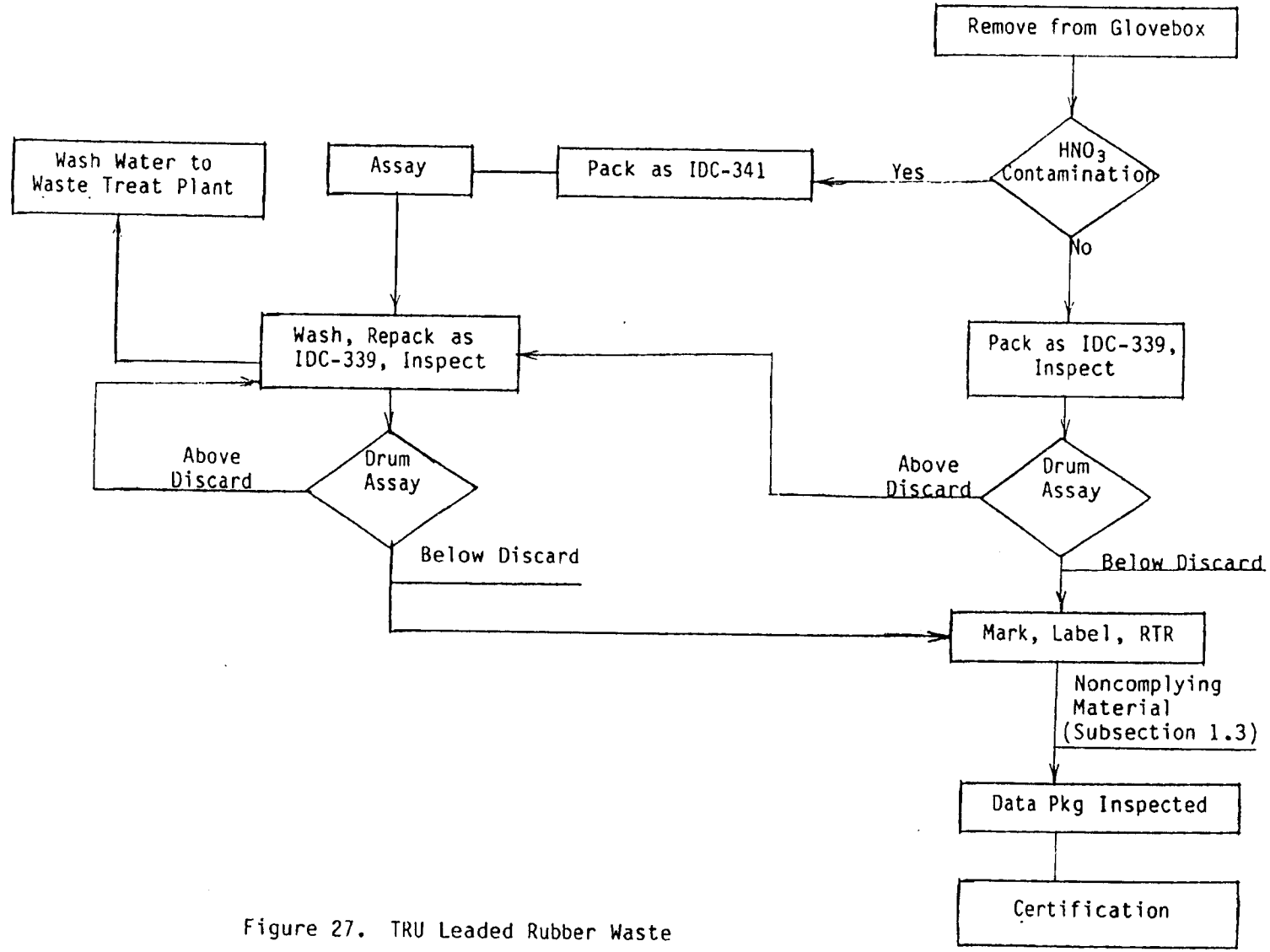

Figure 27. TRU Leaded Rubber Waste

information is reported in the data package along with the gram quantities of plutonium, americium, and any other TRU materials (Steps 3.3.2 and 3.3.5).

The waste and residue drums are sent to the Size Reduction facility, Building 776, where the leaded gloves and aprons taken from an acid environment and those that are above the discard level are washed with hot water in a ball-mill washer to remove any nitric acid and recoverable plutonium. After washing, they are air dried, rolled up, and repackaged in a prepared 55-gallon drum (ID-339). Oil Dri is added. Waste is inspected by Waste Certification Inspection as it is packaged into a drum. Drums are returned to the drum counter for assay. If the leaded gloves and aprons have never been exposed to an acid environment, the drum is opened and contents inspected.

When the drum is full, the liner is closed. The drums are sealed with a tamper-proof seal. The container is surveyed for surface contamination. Radiation readings are taken at the surface and at 1-meter and are recorded on the drum label. Drums are sent to the drum counter and the waste package is sent to Building 664 with the required drum label.

The container is labeled and marked with the required shipping labels and markings (Traffic Procedure T-300-1).

Real-time radiographic examination is then performed by NDT personnel. These trained personnel, who are certified to Rocky Flats Plant (RFP) procedures that implement the SNT-TC-1A standards, use the information on the drum label (Step 3.3.7, Labels) to detect and document the following:

(1) Nonconforming items

(2) Use of polyethylene and 90-mil rigid liners for drums

(3) Correct waste form description

(4) Presence of free liquid

Nonconforming waste packages are returned to the generator for corrective action with a copy of a Waste Rejection Report, RF-47042, which identifies the specific reason for rejection (see Subsection 1.3). There will be 100 percent inspection of the waste by RTR until data have been accumulated showing control can be maintained through statistical sampling.

Data from each of the above operations are reviewed by QE personnel who verify that the information is correct and complete. The QE representative then approves WIPP certification for that waste package and notifies Waste Operations that the information has been verified and can be included in the data package.

14.3 Waste Form Compliance

14.3.1 Immobilization (Particulates)

All of the components of this waste form are nonparticulate and have demonstrated stability in long-term storage. Leaded rubber must be segregated from unacceptable particulates when packaged as waste (WO-4034). During repackaging in Size Reduction, leaded rubber is inspected by WC Inspection to ensure no particulate material is added

to the waste (WC-4003). These procedures are audited periodically per the QA audit schedule.

14.3.2 Free Liquids

Leaded rubber must be dried, drained, or otherwise segregated from all free liquids (WO-4034). In addition, sufficient absorbent is added directly to the waste to immobilize any liquid that may be present.

WC inspection and RTR examination of the waste verify that no free liquid is present in the final waste package (WC-4003).

14.3.3 Pyrophorics and Explosives

The washing of leaded gloves which have been exposed to nitric acid removes the nitric acid and any pyrophoric lead nitrate that may have formed through the reaction of the nitric acid with lead. Leaded rubber contains no explosive materials (WO-4016).

TRU-contaminated wash water is pumped into Raschig-ring filled tanks and sampled. After analysis, the wash water is pumped to the liquid waste treatment plant where it is treated (see Attachment IV: Certification of TRU-Solidified Aqueous Waste).

14.3.4 Compressed Gases

Pressure vessels may not be packaged with TRU waste (WO-4034). WC inspection and RTR examination ensure that pressure vessels are excluded from the waste (WC-4003).

14.3.5 Radioactive Mixed Waste

Leaded rubber was subjected to the Environmental Protection toxicity test (EPA Manual SW 846, Section 2.1.4 Method 1310). The test results show that leaded rubber waste contains no toxic materials as identified in 40 CFR 261, Subparts C and D. (Analytical Laboratory Report, M85-2833).

All corrosive materials must be neutralized or removed from TRU waste (WO-4034). All TRU waste packages have either a 90-mil polyethylene liner or an 11-mil PVC liner for corrosion protection.

Waste packages with reportable toxics, ignitible, reactive, or corrosive waste are identified by type and amount in the data package.

15. ATTACHMENT XII: CERTIFICATION OF SOLIDIFIED PROCESS SOLIDS (WF-114)

Contents

15.1 Introduction

15.2 Waste Form Description

15.2.1 Cemented Sludge (IDC-292/807)

15.2.2 Graphite Heels and Fines (IDC-311/809); Firebrick Heels and Fines (IDC-373/813); Sand, Slag, and Crucible Heels (IDC-393/817); Incinerator Ash and Heels (IDC-421/819); and Soot and Soot Heels (IDC-423/821)

15.2.3 Grit (IDC-372/812)

15.2.4 Cemented Resin (IDC-432/822)

15.3 Waste Flow Description

15.4 Waste Form Compliance

15.4.1 Immobilization (Particulates)

15.4.2 Free Liquids

15.4.3 Pyrophorics and Explosives

15.4.4 Compressed Gases

15.4.5 Radioactive Mixed Wastes

15.1 Introduction

Solidified process solids (WF-114) are comprised of sludges (IDC-292/807); graphite heels and fines (IDC-311/809); grit (IDC-372/812); firebrick heels and fines (IDC-373/813); sand, slag, and crucible heels (IDC-393/817); incinerator ash and heels (IDC-421/819); soot and soot heels (IDC-423/821); cemented resin (IDC-432/822); and other similar process solids.

The major generator of these waste forms is Plutonium Recovery Operations in Building 771. Solidification is required to meet WIPP Waste Acceptance Criteria.

A new series of IDC's are being used to designate wastes which are solidified with portland cement instead of just having dry portland cement added as an adsorbent. These waste forms are:

Old IDC	New IDC	Description
292	807	Cemented Sludge
372	812	Grit
432	822	Cemented Resin
421	819	Incinerator Ash and Heel
393	817	Cemented Sand, Slag, and Crucible Heels
373	813	Cemented Firebrick Heels
423	821	Cemented Soot Heels
311	809	Cemented Graphite Heels

Solidified process solids are packaged in DOT-17C, 55-gallon steel drums with a 90-mil rigid polyethylene liner.

15.2 Waste Form Description

15.2.1 Cemented sludge (IDC-292/807) consists of sludge generated from the recovery building pumps and incinerator off-gas system.

15.2.2 Graphite heels and fines (IDC-311/809); firebrick heels and fines (IDC-373/813); sand, slag, and crucible heels (IDC-393/817); incinerator ash and heels (IDC-421/819); and soot and soot heels (IDC-423/821) are the remaining insoluble residues generated from leaching with hot nitric acid. After leaching, the insoluble residue (heel) is collected on a filter and dried on a hotplate.

15.2.3 Grit (IDC-372/812) consists of aluminum oxide and iron fines or pellets used in grit-blasting operations.

15.2.4 Cemented resin (IDC-432/822) consists on anion and cation exchange resins used in the purification and recovery of plutonium and americium, respectively. The resins are leached and cemented before disposal.

15.3 Waste Flow Description (See Figure 28)

Sludge, heels, and grit are collected in 1-gallon polyethylene bottles, removed from the glovebox line and assayed for plutonium content by nondestructive analysis. Below-discard (TRU waste) level bottles are returned to the glovebox for solidification (CO-6069, Cementing Residue).

Prior to removal of ion exchange resin from a column, the resin is washed in dilute nitric acid. The resin is removed from the column and packaged in Kraft cardboard tubes. Each tube is placed in a drum and assayed to determine the plutonium content. Tubes contaminated with discardable amounts of plutonium are returned for solidification. The gram values

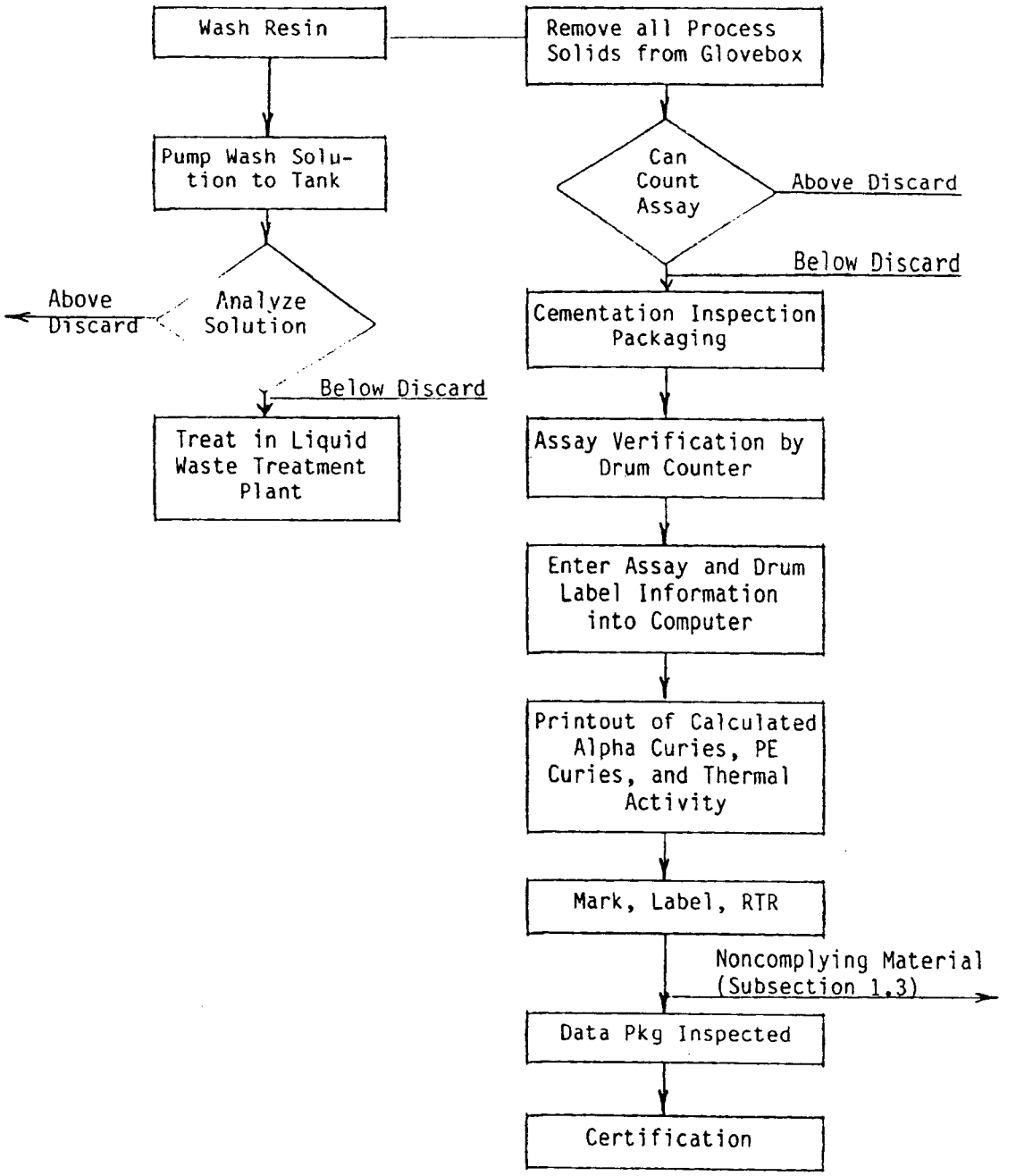

Figure 28. Solidified Process Solids Waste

for the TRU waste materials are entered on the drum label for each radionuclide.

Waste material is returned to the glovebox and washed with water to remove any nitric acid, salts, or plutonium that may remain. The wash water is sent to Raschig-ring-filled tanks and sampled. If the solution contains recoverable amounts of plutonium, it is transferred to Plutonium Operations. If the solution is below the discard level, it is pumped to the liquid waste treatment plant for treatment (see Attachment IV). The washed material is thoroughly coated with cement. The slurry of cement and material is poured into a polyethylene residue container mold and allowed to solidify. The process parameters are described in Procedure CO-6069. After the cement has set, it is removed from the mold, then removed from the glovebox and placed in a drum with a 90-mil, rigid polyethylene liner (CO-6069). WC Inspection seals the drum following inspection. There will be 100 percent inspection of the process until data have been established showing control can be maintained through statistical sampling.

A completed Drum Count label is attached to the lid. The drum is then surveyed for surface contamination, surface dose rate, and radiation readings at 1 meter. These survey results are entered on the Drum Count label and then verified by the signature of a Radiation Monitor (WO-4034 and Radiation Monitoring Manual).

The drum is transferred to the drum counter for assay verification.

The gram values for plutonium, americium, and any other TRU materials, as determined by the can counter assay, are entered into the computer. The computer is used to calculate the alpha curies, PE curies, and thermal activity of the waste package based on these gram quantities. This

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information is reported in the data package along with the gram quantities of plutonium, americium, and any other TRU materials (Steps 3.3.2 and 3.3.5).

The drum will be labeled and marked with the required shipping labels and markings (Traffic Procedure T-300-1).

Real-time radiographic examination is then performed by NDT personnel. These trained personnel, who are certified to Rocky Flats Plant (RFP) procedures that implement the SNT-TC-1A standards, use the information on the drum label (Step 3.3.7, Labels) to detect and document the following:

(1) Nonconforming items

(2) Use of polyethylene and 90-mil rigid liners for drums

(3) Correct waste form description

(4) Presence of free liquid

Nonconforming waste packages are returned to the generator for corrective action with a copy of a Waste Rejection Report, RF-47042, which identifies the specific reason for rejection (see Step 1.3.2). There will be 100 percent inspection of the waste by RTR until data have been accumulated showing control can be maintained through statistical sampling.

Data from each of the above operations are reviewed by QE personnel who verify that the information is correct and complete. The QE representative then approves WIPP certification for that waste package and notifies Waste Operations that the waste package can be added to the shipment load list and that the information has been verified and can be included in the data package.

15.4 Waste Form Compliance

15.4.1 Immobilization (Particulates)

These wastes are particulate and do not meet the WIPP Waste Acceptance Criterion without any further treatment. The treatment is solidification into gallon-size blocks which are inspected, wrapped in plastic, and placed in a drum according to CO-6069.

15.4.2 Free Liquids

The cemented waste is inspected before being placed into a drum to ensure there is no free liquid present. The absence of free liquids will be verified by RTR examination.

15.4.3 Pyrophorics and Explosives

Pyrophoric or explosive materials would be rendered innocuous by the solidified cement matrix of this waste.

15.4.4 Compressed Gases

Pressure vessels may not be packaged with TRU waste (WO-4034). WC inspection and RTR examination of each waste package ensures that pressure vessels are excluded from the waste (WC-4003).

15.4.5 Radioactive Mixed Wastes

All corrosive, iginitible, reactive, or toxic materials are rendered innocuous by the cemented matrix of this waste.

All TRU solidified process waste is packaged in a DOT-17C, 55-gallon drum with a 90-mil rigid polyethylene liner for corrosion protection.

Waste packages with reportable toxics, ignitible, reactive or corrosive wastes are identified by type and amount in the data package.

16. ATTACHMENT XIII: CERTIFICATION OF TRU PYROCHEMICAL SALT WASTE (WF-124)

Contents

16.1 Introduction

16.2 Waste Form Description

16.2.1 Molten Salt (IDC-409/429)

16.2.2 Direct Oxide Reduction Salt (IDC-414/454)

16.3 Waste Flow Description

16.4 Waste Form Compliance

16.4.1 Immobilization (Particulates)

16.4.2 Free Liquids

16.4.3 Pyrophorics and Explosives

16.4.4 Compressed Gases

16.4.5 Radioactive Mixed Wastes

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16.1 Introduction

TRU pyrochemical salt waste (WF-124) is comprised of molten salt (IDC-429) and direct oxide reduction salt (IDC-454) and other similar IDC's.

Molten salt (IDC-409) consists of a fused halide salt mixture of NaCl, KCl, and $MgCl_2$. In molten salt extraction (MSE), the salt serves as a solvent for americium. Plutonium and americium are removed from spent MSE salt by the salt scrub process to yield a waste salt (IDC-429) and an Al-Mg-Pu-Am alloy which is processed at Savannah River Plant.

The direct oxide reduction (DOR) process is a one step reduction of plutonium oxide to plutonium metal. The process employs a calcium metal reductant and a molten calcium chloride salt flux. The DOR salt (IDC-414) is the spent salt from this process. The uncertainty in the quantities of unreacted calcium metal present in the salt has resulted in the need to process the salt by air oxidizing this calcium metal, a nonradionuclide pyrophoric material to produce a waste salt (IDC-454).

The process is still in the research and development stage, and the facility to oxidize the calcium metal is not yet installed. The salt is being stored until this facility is operational to treat the waste. An internal report will show data to prove the process completely oxidizes the calcium metal. A new IDC will be assigned to this treated salt. These pyrochemical salt wastes are packaged in DOT-17C, 55-gallon steel drums (SX-200) with a 90-mil rigid polyethylene liner (SX-202).

16.2 Waste Form Description

16.2.1 Molten salt (IDC-429) is a salt mixture of NaCl, KCl, and $MgCl_2$ in mole percentages of 35-35-30, respectively.

16.2.2 DOR salt (IDC-414) is a calcium chloride salt containing unreacted calcium metal (1 to 3 weight percent) and calcium oxide.

16.3 Waste Flow Description (See Figure 29)

The spent salts are assayed by the "in line" can counter to determine the EUL waste/residue. Waste molten and electrorefining salts are packaged in produce cans.

After assay, molten salts (IDC-429) are packaged in a lead-lined 55-gallon drum. Each drum contains a 90-mil polyethylene rigid drum liner; the rigid liner is lined with one round-bottom polyethylene drum liner. The gram values for the TRU waste materials are entered on the drum label for each radionuclide.

The waste is inspected before the drum is closed. The drum is then sealed by WC Inspection (WC-4003). There will be 100 percent inspection of the process until data have been accumulated showing control can be maintained through statistical sampling.

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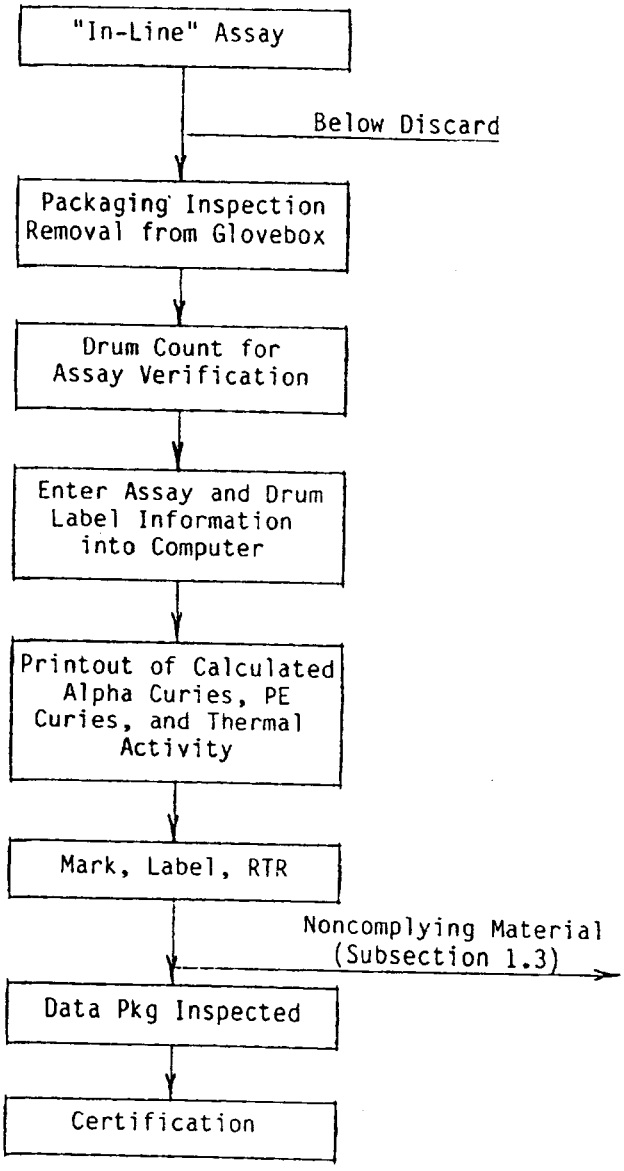

Figure 29. Pyrochemical Salt Waste

A completed Drum Count label is attached to lid. The drum is then surveyed for surface contamination, surface dose rate, and radiation readings at 1 meter. These survey results are entered on the Drum Count label and then verified by the signature of a Radiation Monitor (WO-4034 and Radiation Monitoring Manual).

The drum is transferred to the segmented drum counter for safeguard verification.

NOTE

The safeguard assay verification is for assurance of gross discrepancies in assay values; it is not for EDL determination.

The gram values for plutonium, americium, and any other TRU materials, as determined by the "in-line" counter, are entered into the computer. The computer is used to calculate the alpha curies, PE curies, and thermal activity of the waste package based on these gram quantities. This information is reported in the data package along with the gram quantities of plutonium, americium, and any other TRU materials (Steps 3.3.2 and 3.3.5).

The waste drum is sent to Building 664 with the drum label which has been approved by a WC inspector (WC-4003).

The drum will be labeled and marked with the required shipping labels and markings (Traffic Procedure T-300-1).

NOTE

Drums lined with lead will not be submitted to RTR. The in-process inspections by Waste Inspection will verify compliance of the waste (WC-4003).

Real-time radiographic examination is then performed by NDT personnel. These trained personnel, who are certified to Rocky Flats Plant (RFP) procedures that implement the SNT-TC-1A standards, use the information on the drum label (Step 3.3.7, Labels) to detect and document the following:

(1) Nonconforming items
(2) Use of polyethylene and 90-mil rigid liners for drums
(3) Correct waste form description
(4) Presence of free liquid

Nonconforming waste packages are returned to the generator for corrective action with a copy of a Waste Rejection Report, RF-47042, which identifies the specific reason for rejection (see Step 1.3.2).

Data from each of the above operations are reviewed by QE personnel who verify that the information is correct and complete. The QE representative then approves WIPP certification for that waste package and notifies Waste Operations that the waste package can be added to the shipment load list and that the information has been verified and can be included in the data package.

16.4 Waste Form Compliance

16.4.1 Immobilization (Particulates)

According to the EG&G study conducted on stored TRU pyrochemical (molten and electrorefining) salt waste, this waste consists of dry, fused salt in the form of chunks. Respirable and dispersible fines are not present in quantities that exceed the WIPP-WAC limits (Content Code Assessments for INEL Contact-Handled Stored Transuranic Wastes, October 1982, WM-F1-82-021).

Spent DOR Salts (IDC-414) are placed in a disposable crucible and sparged with oxygen to oxidize the calcium while molten. After the salts and crucible are cooled, they are packaged into drums as IDC-454. Cooled salts form large granuals or chunks and do not constitute a particulate problem.

16.4.2 Free Liquids

These waste forms are dry when packaged. WC inspection and RTR examination of the waste verify that no free liquid is present in the final waste package (WC-4003).

16.4.3 Pyrophorics and Explosives

Molten salt (IDC-419) and DOR salt (IDC-454) contain no pyrophorics or explosives.

DOR salt (IDC-414) contains free calcium which is a reactive material. This calcium will be oxidized using an air oxidation process. When the calcium is oxidized, the DOR salt will be assigned a new IDC-454. DOR salt contains no explosive materials.

16.4.4 Compressed Gases

Pressure vessels may not be packaged with TRU waste (WO-4034). WC inspection and RTR examination of each waste package ensures that pressure vessels are excluded from the waste (WC-4003).

16.4.5 Radioactive Mixed Wastes

No toxic or corrosive materials (40 CFR 261, Subparts C and D) have been identified in this waste. All TRU pyrochemical salt waste packages have a 90-mil polyethylene liner for corrosion protection.

Waste packages with reportable toxics, ignitible, reactive, or corrosive wastes are identified by type and amount in the data package.

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	TRU Waste Compliance Program for WIPP-WAC (U)	1/19/1987	Ø 121 CJ 8/8/06
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Comments

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	TRU Waste Compliance Program for WIPP-WAC (U)	1/19/1987	0 121 CO 8/8/06

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Attachment 3 - Acceptable Knowledge Source Document Summary

Waste Stream Number(s): ID-RF-S3114, ID-RF-S3121-374, ID-RF-S3150-A, ID-RF-S5126, ID-RF-S5300-A

Site(s): Idaho National Laboratory

Source Document Tracking Number: P014

Acceptable Knowledge Documentation Type:
- ☑ TRU Waste Management Program Information
- ☑ Waste Stream-Specific Information
- ☑ Supplemental Information

Category:
- ☐ C - Correspondence
- ☐ D - Discrepancy Resolution
- ☑ P - Published Documents
- ☐ U - Unpublished Documents

Title of Source Document: TRU Waste Certification Program for WIPP-WAC (U).

Source Document Reference Information (author(s), document and revision number, date, publisher): CO-4500-A, 5/24/1983

AK # [a]	Source Doc. Page # [b]	AK Information Summary
PR5, PR8, WS10, S2	5-80	Pgs. 5-16 Description of the RFP TRU Waste Certification Program. Section 1.2 includes a broad description of the plutonium recovery process. Pgs. 16-29 Description of the RFP Quality Assurance Program. Section 2.2 includes the control measures used when generating and packaging wastes. Section 2.3 includes prescribed tests and inspections and records management. Section 2.5 describes the control of nonconforming packages. Pgs. 30-56 Description of waste processing activities, including a list of IDCs and their origination locations. Section 3.2 includes a waste classification matrix and a list of the TRU waste content code. Pgs. 57-73 Description of waste container and package certification, including a description of waste package and box flows and waste package control methods (weight, package counting, surface dose rate, surface contamination, thermal, gas generation, color coding, labels, and data packages). Pgs. 74-80 Description of waste category certification that outlines the controls used to ensure that waste packages containing Raschig rings, Content Code 442, meet the waste form compliance requirements for shipment to WIPP.

Source Document Data Limitations (if any):

1. On page 35, IDC 007 is described as dried sludge that is immobilized, but does not say how it is immobilized. On page 50, it states that IDC 007 uncertified wet sludges will be shipped until an approved immobilization process is in place.

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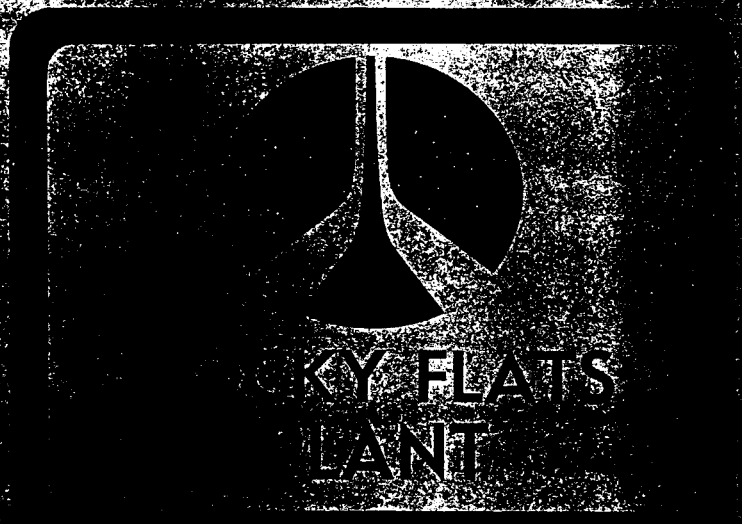

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ROCKY FLATS PLANT

TRU WASTE CERTIFICATION PROGRAM
FOR WIPP-WAC (U)

CO-4500-A

Document and Procedure No. Revision

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SHEET	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
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TRU WASTE CERTIFICATION PROGRAM
FOR WIPP-WAC (U)

DRAWING NO.
CO-4500-2

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1. INTRODUCTION

This document describes the measures necessary to implement a Transuranic (TRU) Waste Certification Program at Rocky Flats, in order to comply with the Waste Isolation Pilot Plant (WIPP) Waste Acceptance Criteria. Guidance for meeting these requirements has been provided by the following documents:

(1) DOE 5480.1A, Chapter III, Environmental Protection, Safety, and Health Protection Program for DOE Operations, as updated.

(2) WIPP-DOE-114, "TRU Waste Certification Compliance Requirements for Newly-Generated-Contact-Handled Waste for Shipment to the WIPP," as updated.

(3) WIPP-DOE-120, "Quality Assurance Measures for Certification of TRU Waste for Shipment to the WIPP," as updated.

(4) DOE-5820, "Management of Transuranic Contaminated Material," as updated.

(5) DOE AL Order 5700.6A, "Quality Assurance," as updated.

Sections within this program plan may refer to the above mentioned documents by number.

This document is divided into the following major subject areas: an introduction to the subject of waste certification (including policies and general descriptions and plans); a quality assurance plan; a waste content survey and compliance status matrix; a description of waste container and package certification activities; and a discussion of waste form(s) certification activities.

1.1 TRU Waste Certification

1.1.1 General Description

The Plant's mission is the fabrication of radioactive and non-radioactive parts of nuclear weapons in support of the country's national defense program. As a result of fabrication, assembly, chemical processing, analytical, and research activities, transuranic wastes are produced that fall under the control of the certification program.

Approximately 95 percent of the radioactively contaminated wastes generated are the result of processing plutonium with the majority of the remaining 5 percent generated by the processing of depleted uranium. (See Solid Waste Process Flow Diagram, Figure 1). After processing, 70 percent of the waste shipped is low-level waste (LLW) and the remaining 30 percent is transuranic (TRU).

POLICIES AFFECTING THE TRU WASTE CERTIFICATION PROGRAM

(1) Radioactive Waste Management RFPM M20-001

IT IS THE POLICY OF THE COMPANY TO CONDUCT PLANT OPERATIONS IN SUCH A MANNER AS TO MINIMIZE, OR ELIMINATE, THE GENERATION OF BOTH LIQUID AND SOLID RADIOACTIVE WASTES WHICH MUST BE SHIPPED OFF SITE.

(2) Transuranic (TRU) Waste Certification RFPM M20-002

IT IS THE POLICY OF THE PLANT TO CONDUCT PLANT OPERATIONS IN SUCH A MANNER AS TO PROVIDE A CERTIFICATION PROGRAM FOR TRU WASTE. THE PROGRAM IS DESIGNED TO MEET ALL APPLICABLE ACCEPTANCE CRITERIA SET BY THE DEPARTMENT OF ENERGY (DOE) AND ALSO TO MINIMIZE ADVERSE IMPACTS ON PRODUCTION ACTIVITIES.

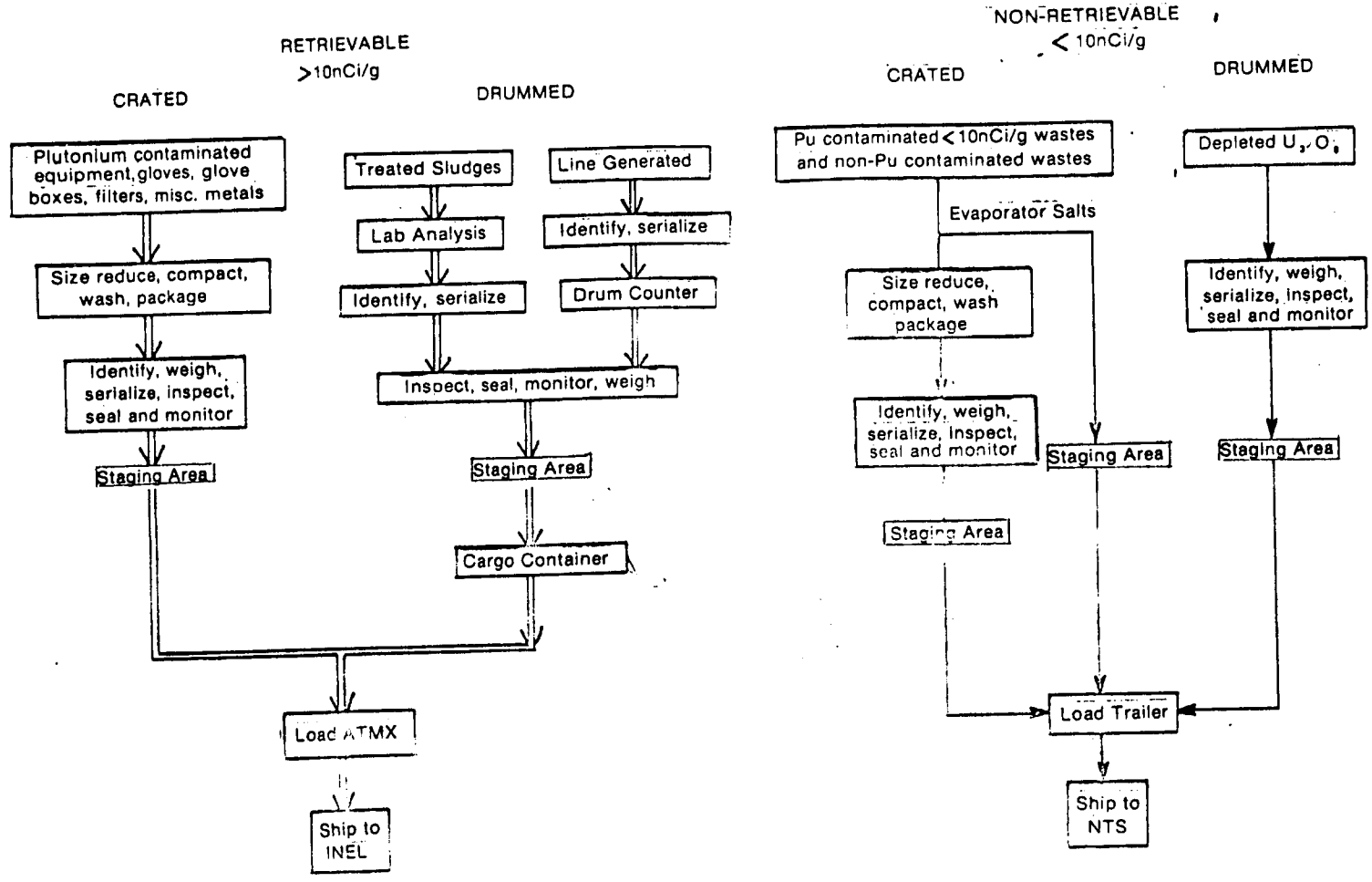

Figure 1. Solid Waste Process Flow Diagram

In keeping with the Radioactive Waste Management Policy (RFPM M20-001), Rocky Flats emphasizes TRU waste certification procedures to maintain an efficient, effective, and auditable program that will comply with all existing orders, guidelines, and regulations.

1.1.2 Responsibilities for Certification Program

Figures 2 and 3 describe the current organizational structure within Plutonium Operations, Quality Engineering, and Waste Operations. The managers of Waste Operations, and Waste Technology and Certification have the authority to review, approve, and implement, and are responsible for the Plant Certification Program and associated certification procedures.

Departmental responsibilities for implementing a Plant certification program are outlined in the Plant policy. The Rocky Flats Organization Manual gives a detailed, up-to-date description of the Plant organization.

1.1.2.1 Plutonium Operations (Waste Operations)

The Waste Operations Department in Plutonium Operations is responsible for providing assistance to waste generators, and for the promulgation of TRU waste certification operating programs, policies, and procedures. The Department is also responsible for the effective implementation of the certification program. Such implementation will include, but not be limited to, operator indoctrination, performance of internal departmental program audits, verification inspection, and final certification of waste packages.

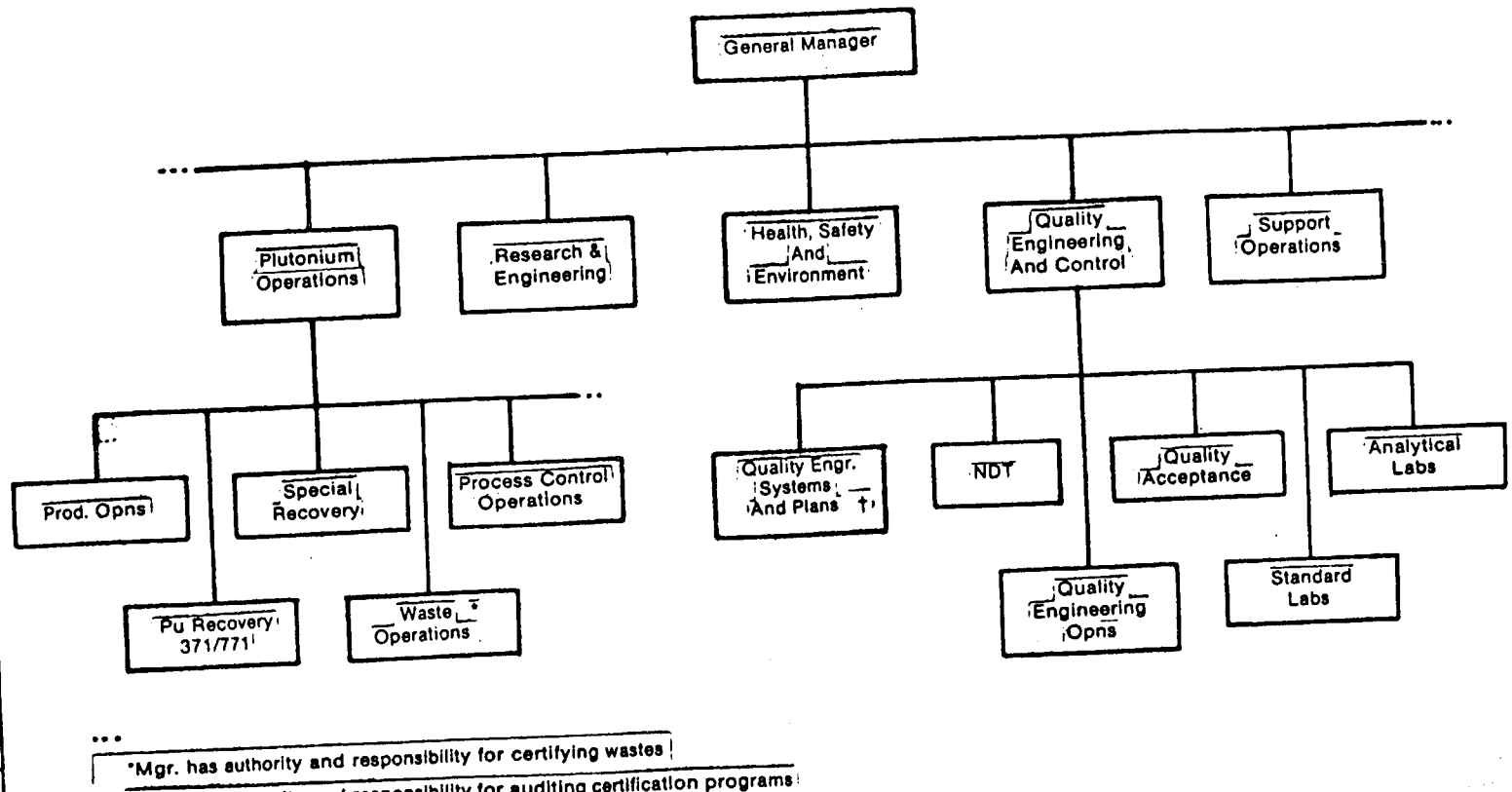

Figure 2. Rocky Flats Plant Organization

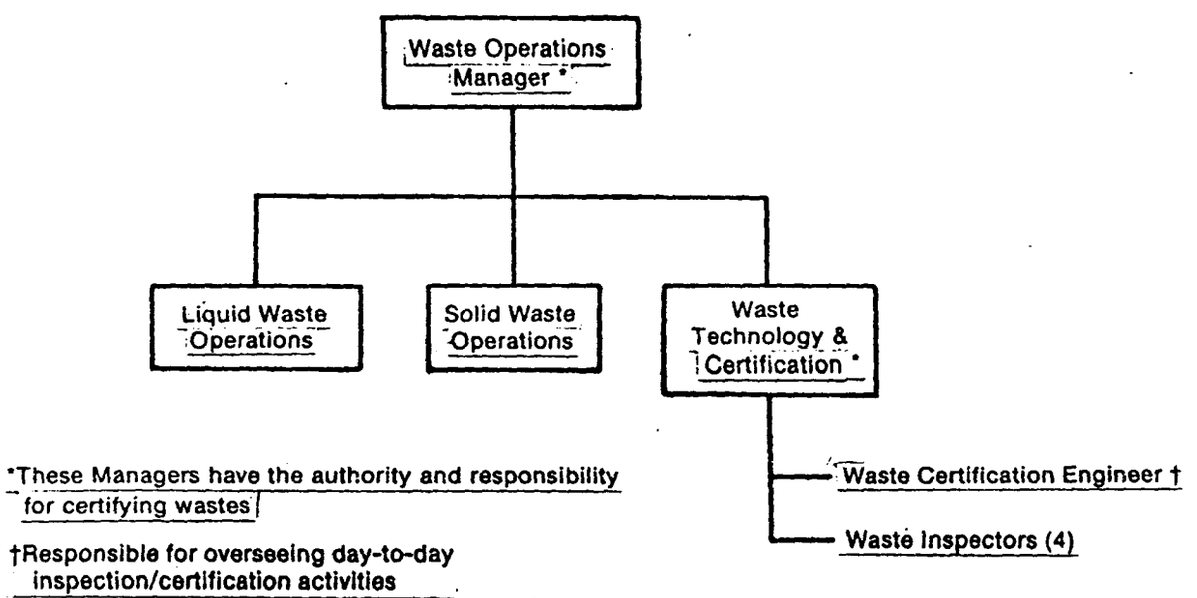

Figure 3. Waste Operations Organization

1.1.2.2 Quality Engineering and Control

The Quality Engineering and Control Department assists the Waste Operations Department in implementing, continually reviewing, and updating the Rocky Flats Certification Plan for TRU Waste. The Quality Engineering and Control Department is responsible for formal periodic Plant audits and surveys of the overall TRU Waste Certification programs and activities.

This group is also responsible for interfaces, review and approval functions for the development, design, procurement, manufacture, and utilization of waste containers, and for operational and certification procedures used by Waste Operations.

1.1.2.3 Supervisors

Each supervisor responsibile for handling radioactive wastes must assure compliance with Waste Operations' approved certification procedures.

1.1.2.4 Employees

Each employee handling radioactive materials is responsible for knowing and following Plant waste certification procedures that apply to his/her operation.

1.2 Waste Generating Activities

Site return metal is extracted in a molten salt medium for americium removal. Subsequent aqueous processes separate the americium from the salt. This operation generates the following wastes: chloride effluents, spent ion exchange resins, and combustibles.

Considerable americium is discarded through the various waste streams to waste treatment.

The plutonium metal is melted in tantalum crucibles, cast in graphite molds, and sent to the fabrication area. Oil-based coolants and fluids contact the plutonium in the fabrication process. Scrap plutonium metal from the fabrication and assembly process is recycled through the foundry for reuse in the casting operation. Intermediate steps required before casting include degreasing and briquetting (Figure 4).

Residues which cannot be recycled as metal (such as casting skull, glove box sweepings, and impure metal) are sent to the Plutonium Operations Plutonium Recovery Plant in either metal or oxide form. These residues, after being converted to oxide, are dissolved in nitric acid containing small amounts of fluoride. The dissolver solutions, if sufficiently pure, undergo a precipitation process in which plutonium is converted to peroxide. The peroxide is then calcined and hydrofluorinated to plutonium tetrafluoride (PuF_4). The PuF_4 is then reduced to metal using calcium as a reductant. The plutonium metal produced is recycled to the foundry. Filtrates from the peroxide precipitation process are evaporated and the concentrate is processed through anion exchange to purify the plutonium before recycling to peroxide precipitation.

The evaporator condensate and scrubber solutions from hydrofluorination off-gas streams are sent to Liquid Waste Treatment. In the manufacturing, fabrication, recovery processes, and Analytical and R&D Laboratories, additional residues are generated which require pretreatment before peroxide precipitation. These include casting crucibles and molds, reduction residues, gloves and plastics, paper and other combustible waste, and a variety of miscellaneous residues such as glass, scrap metal, and insulation. These residues are incinerated, leached,

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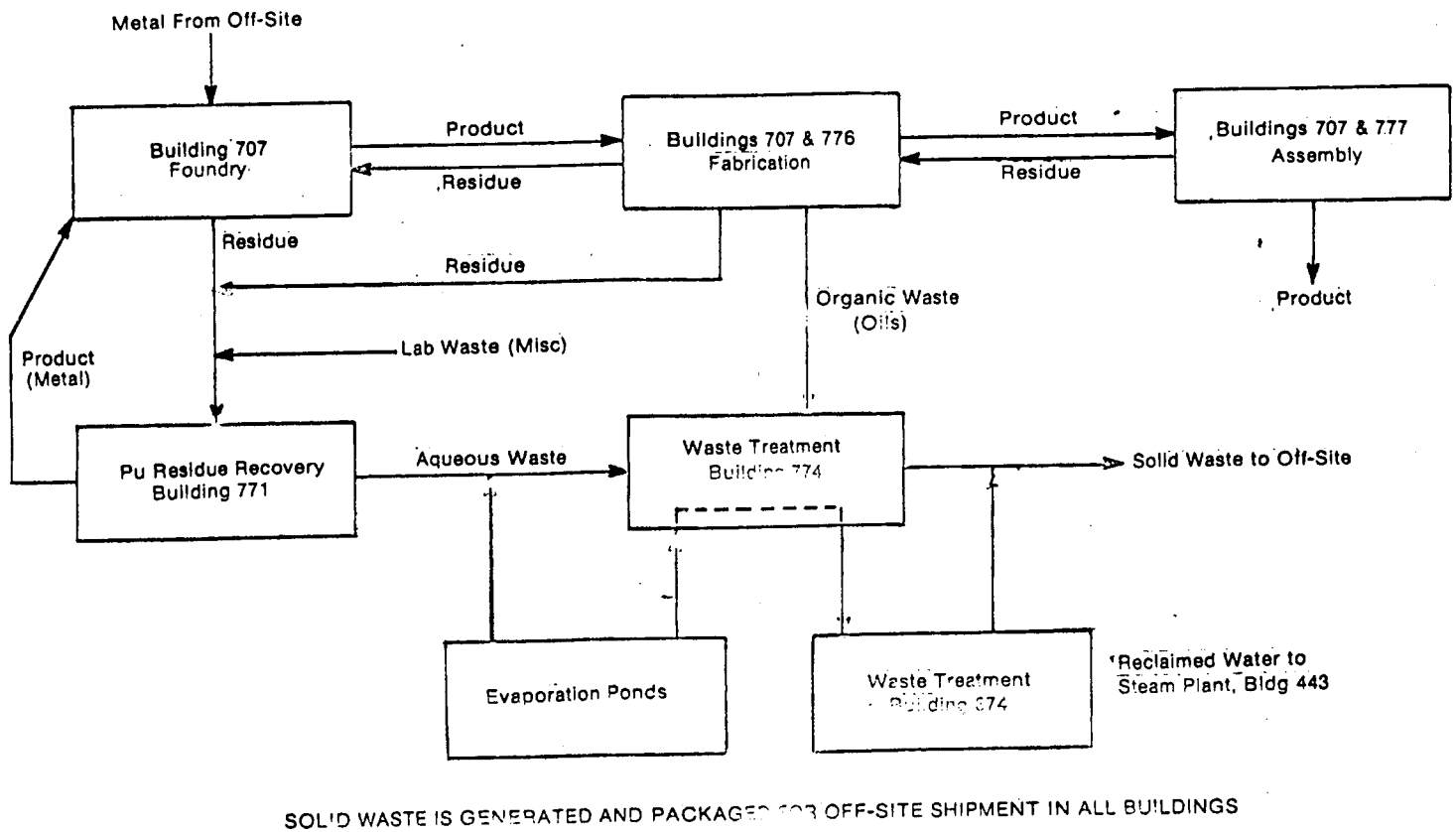

Figure 4. Flow Diagram for Rocky Flats Plant

dissolved, scraped, and/or hand-washed to remove as much plutonium as possible. The treatment used depends upon the type of residue to be processed. In processing these residues, secondary residues are generated. An example would be the incineration of combustibles. Items such as firebrick, soot, and off-gas filters become loaded with plutonium and must also be processed for plutonium recovery. The soluble plutonium in these residues, after being dissolved through repeated contact with nitric acid, is adsorbed on anion exchange columns for purification and concentration. If the effluents are less than the discard limit, they are sent to the Liquid Waste Treatment Plant for plutonium decontamination and conversion to a solid form. The adsorbed plutonium is stripped from the ion columns and sent to peroxide precipitation for further purification and conversion to metal.

The insolubles from the leaching and dissolution operations are recycled through dissolution until the plutonium concentration is below the economic discard limit.

1.3 Certification Strategy and Plans

Work during 1982 focused on the following three areas:

(1) A certification strategy for the Plant.

(2) A certification procedure for Raschig rings and the development of a quality assurance plan for the procedure.

(3) A restructuring of functions within Waste Operations to facilitate and validate inspection and certification activities.

1.3.1 The certification strategy set priorities for Waste Certification. In order to appraise the magnitude of the certification effort, the majority of waste forms were evaluated, with most becoming categorized as "easily certifiable." (See Waste Classification Matrix, Section 4.)

1.3.2 Raschig rings underwent the certification process prior to developing a certification procedure for all of the WIPP-WAC. The WIPP Certification Committee is studying the quality assurance plan, developed for the certification program to support the Raschig Ring certification procedure.

To guide further procedure and/or process development, relative volumes of specific wastes (Figure 5) are being used. Procedure development will concentrate on combustible and metal wastes in 1983. No pre-certification process for combustible or metal wastes is considered necessary at this time.

HEPA filter certification is hampered by the suspected presence of particulates in excess of WIPP requirements. FY 1983 work will evaluate treatment (compacting and/or coating) processes to render this waste form safe. Necessary capital funds have been identified for FY 1984.

To correct the deficiencies of precipitation sludges with dispersible fines and/or desorbable water, Rocky Flats is developing processes to incorporate the sludges in a cement matrix. Testing should be completed by early 1983 and construction of a selected process underway immediately thereafter. Efforts will be made to use pilot-scale test equipment in the production cementing facility. If such reuse is not feasible, design and construction of a cementing process should be completed no later than January 1985.

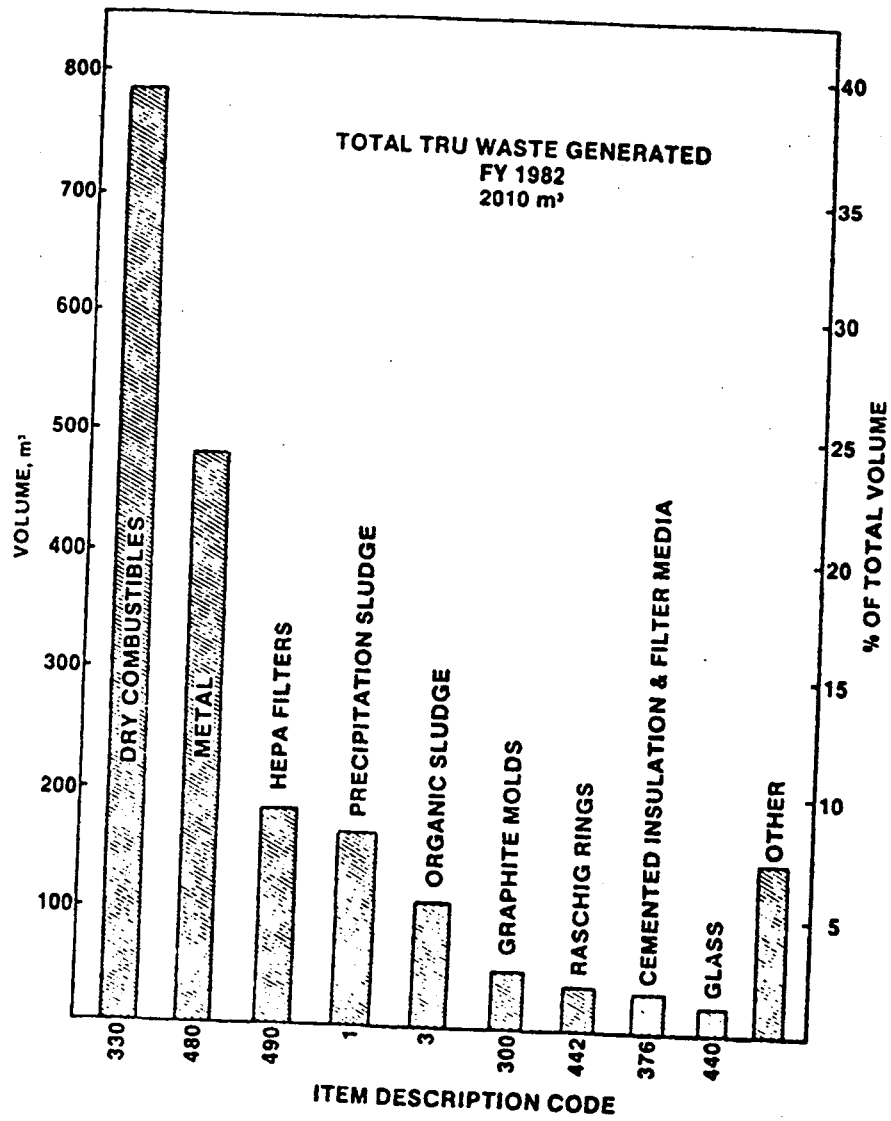

Figure 5. Total TRU Waste Generated FY 1982

Organic sludges (oils and solvents mixed with calcium silicate) have been known to dewater. To bring this waste form into compliance with WIPP-WAC, development efforts are underway to test a different binder. Envirostone®, a gypsum cement, has immobilized similar waste forms at Lawrence Livermore National Laboratory and several commercial sites. If changing the binder does not correct the problem, oils and solvents will be burned in the Building 371 Rotary Kiln Incinerator.

The above waste streams constitute the majority of the Plant waste. After these higher priority items are resolved, the remaining waste streams will be considered.

To ensure the independence of the personnel who inspect and certify wastes from their operational counterparts, the inspection crew was reassigned to Waste Technology & Certification. Special efforts will be made to institute training programs for both the inspectors and the waste generators to facilitate compliance with WIPP-WAC certification criteria.

2. QUALITY ASSURANCE PROGRAM PLAN

Quality Assurance philosophy and guidelines are addressed for plantwide operations in the Quality Program Manual (QPM). Guidelines provided in the QPM are in accordance with DOE orders dealing with Quality Assurance requirements. One step lower in the Plant Quality Assurance documentation hierarchy, the Quality Program Plan-Waste Processing (QPP-WP) outlines responsibilities for groups involved in Waste Operations activities, in order to comply with the guidelines specified in the QPM.

The Quality Assurance Plan for waste certification activities, which is described in the following sections, falls in the next lower documentation level to the QPP-WP. This waste certification QA plan complies with the guidelines specified in the QPP-WP, the QPM, and the "Quality Assurance Requirements for Certification of TRU Waste for Shipment to the WIPP", WIPP-DOE-120 (as revised).

2.1 Organization

As described in Section 1, the majority of the TRU waste is generated as a result of weapons production. The remaining waste is generated by facility decontamination and renovation, analytical laboratory, and research and development work.

Various groups, such as Pu Recovery, Pu Manufacturing, R&D, Maintenance, and analytical groups can be considered as waste generators.

Waste Operations is assigned to process and package liquid and solid radioactive wastes. Within Waste Operations, Liquid Waste Operations and Solid Waste Operations groups handle the actual processing and packaging. For certification purposes, these operational groups are also considered waste generators. Therefore, to make the certification function independent from waste generating groups, the waste certification function of procedural and program development and implementation has been assigned to the Waste Technology and Certification (WT&C) Group within Waste Operations.

WT&C has the overall authority and responsibility for inspecting and certifying a generator's (including Solid and Liquid Waste Operations) wastes. WT&C also provides certification guidance to waste generators through training and the development of certification procedures. They review waste generator's operations, check for compliance with certification procedures, and visually inspect waste packages for criteria compliance, rejecting those items that do not conform. Finally, they certify waste packages that have been generated, packaged, and inspected in accordance with approved certification procedures. Another independent check for procedural and program compliance is Quality Engineering and Control, which, through its Quality Engineering Systems and Plans Department, performs formal and informal audits of the certification program and its associated procedures.

2.2 Control Measures

2.2.1 Waste Generation Control Measures

2.2.1.1 Administrative Control

Waste generators exercise the primary control when waste is initially packaged to ensure that the waste meets the WIPP criteria. In order for the generators to be aware of certification requirements, they are instructed regarding the role of the criteria in the packaging procedures prepared by WT&C. As explained in the company policy, each employee must know and follow waste certification (i.e., packaging) procedures that apply to his/her operation. Also, the employee's supervisor must assure that the employee is trained to perform these procedures, and that the procedures are followed. In the case of the generation of Raschig Rings, assurance is indicated by individual signoffs on each ring removal step. In the case of the generation of glove box line generated and non-line generated waste, compliance to initial packaging procedures is assured by the supervisor's daily monitoring of employee's activities. Monitoring implies frequent, rather than constant, checks to ensure procedural compliance.

When waste is initially packaged, it is segregated by content (a description of content codes is explained in Section 3). Segregation is used for the purposes of assaying and controlling nuclear materials. When waste drums are assayed, the plutonium content is determined using a specific scrap/waste matrix dependent factor. Controls exercised over the development and use of the matrix factor are addressed in Section 2.3.1.6.

Another form of segregation is the separation of LLW from TRU waste. The Radiation Monitoring group checks wastes that have readily accessible surfaces (e.g., desks, lockers, sheet metal) for surface contamination. If the contamination level falls below that level specified by DOE Order 5820 (as updated) and CO procedures, the waste is packaged and shipped as LLW. This method of segregating wastes also aids the certification effort in that certified and uncertified waste forms are more easily identified and controlled.

After the waste has been segregated, packaged, and placed in a waste drum, the supervisor generating the waste becomes responsible for the drummed material. To ensure that other unapproved materials are not inadvertently placed in the drum, the drum is kept in a locked enclosure. The supervisor generating the waste maintains responsibility for what is introduced into that waste drum until it is filled, bolted closed, and sent to the drum counting facility to determine whether it is a recoverable residue or a discardable waste. This determination is based on an economic discard limit. These discard limits are DOE established for each waste/scrap material using a documented and controlled procedure. If the material is determined to be waste (i.e., below the discard limit), it is then sent to WT&C for inspection.

Waste items too large to place in a drum, but which can fit in a waste box, are placed into the box only after they have been visually inspected by WT&C and scanned to determine the radioactive material content. Waste items that do not meet the acceptance criteria are unallowable and are returned to the waste generator who is responsible for the proper treatment and/or processing of the nonconforming items. WT&C controls what is placed into waste boxes by keeping all TRU waste boxes locked. Waste generators must obtain WT&C's approval before placing waste into a TRU waste box.

Waste items too large to fit into a waste box (e.g., gloveboxes, large equipment, ducting) are sent to Size Reduction for disposal. WT&C controls over Size Reduction activities are discussed in Substep 2.2.2.2.

2.2.1.2 Process Control

The acceptability of certified waste that is generated by a process (e.g., sludge cementation) is primarily controlled by instrumentation, control charts, flow rates, etc., to produce a uniform and acceptable product. Certified Chemical Operators use the operational procedure to maintain the process within acceptable tolerance limits. Process control equipment supports operator control in areas where fast response times are required, precise parameters need to be maintained, or where redundant controls are used to alert the operator and/or shut down the system if unacceptable limits are reached.

2.2.2 Waste Technology and Certification Control

2.2.2.1 Drum Inspection

WT&C inspects waste drums readied for shipment offsite. This inspection includes both a visual inspection of the container and its contents, and a check for free liquids. Drums in violation of the acceptance criteria are returned to the generator who is responsible for proper repackaging and/or reprocessing of the nonconforming items.

2.2.2.2 Box Inspection

Waste is placed into boxes either (a) directly by the generator, (b) after size reduction, or (c) after repackaging.

(a) Waste that is placed directly into process area boxes is scanned to determine the amount of radioactive material present, and visually inspected by WT&C for acceptance criteria compliance. Nonconforming items are not allowed into the boxes, and are returned to the generator who is responsible for their proper treatment and/or processing.

Items placed in the box are logged on the box sheet along with their radioactive material content value.

(b) Waste that has been size reduced "in-place" is placed in a waste box in the same manner as described in (a) above.

Waste that has been size reduced in the Size Reduction vault is placed in a waste box only after it has been visually inspected by a WT&C representative. Items not conforming to the waste acceptance criteria are returned to the generator, who is responsible for their proper treatment and/or processing.

The radioactive material content value assigned to an acceptable discard item is recorded and assigned to the waste box.

(c) Certain wastes (primarily paper, plastic, and metal) are repackaged from drums to boxes in the Size Reduction vault to obtain a higher package efficiency. Wastes to be repackaged (an updated list of the approved waste forms to be repackaged is maintained in WT&C's inspection procedure) are originally assayed in the drum counter, sent to WT&C's inspection area for a surface contamination check, and readied for processing in the Size Reduction vault. The drum contents are removed (the drums are checked for contamination and reused on site) and placed into TRU waste boxes. The bags are split as they are loaded into the box, and the contents spread in order to reduce void spaces. A WT&C representative oversees the operation and inspects the items placed in the box for acceptance criteria compliance. Items not conforming to the waste acceptance criteria are returned to the generator who is responsible for the proper treatment and/or processing of such items.

The assay value of the repackaged waste (originally determined by the drum counter) is assigned to the waste box.

2.2.2.3 Final Certification

After a package has been inspected, sealed, and the information required by the data package recorded, WT&C certifies that the waste package meets the WIPP criteria. This certification is indicated by recording on the Waste Container Data Collection (WCDC) form that the package meets the criteria. This form is signed by WT&C or the Waste Operations Manager. The information on the WCDC form is placed on file on the Process Material Control computer (Section 2.3.2). A certification label is signed and placed on the container.

2.2.2.4 Generator Surveys

WT&C personnel informally survey the waste generator's areas to provide assistance (e.g., procedures) and training in meeting the waste acceptance criteria, and to verify that operational procedures which impact waste certification are prepared and followed.

The frequency with which these surveys are conducted will be determined by the following factors: manpower availability, procedural compliance history (e.g., troublesome process or area, new operation), and overall complexity of the operation.

2.3 Support Group Responsibilities

2.3.1 Additional Tests and Inspections

The following organizations support the certification program by performing the prescribed tests and inspections under the direction of their respective documented and auditable programs and procedures.

2.3.1.1 Process Material Control assays waste drums and boxes to determine radioactive material content.

2.3.1.2 Radiation Monitoring surveys waste packages for removable contamination and penetrating radiation, to comply with shipment and certification criteria.

2.3.1.3 Final Quality Acceptance and Certification (FQA&C) initiates and coordinates acceptance inspection and test activities on waste containers and supplies, and certifies conforming items for use.

2.3.1.4 Quality Acceptance physically inspects waste processing containers and associated supplies.

2.3.1.5 Analytical Laboratories has several laboratory organizations responsible for acceptance testing of procured containers and associated supplies, and for analysis of in-process samples from waste processing and certification activities.

2.3.1.6 Standards Laboratory calibrates the equipment and instrumentation used in waste processing and certification activities. This group also prepares the standard material matrices used to calibrate assay instrumentation (e.g., drum counter, crate counter).

2.3.1.7 Non-destructive Testing evaluates and tests procured waste containers and associated supplies.

2.3.2 Records Management

Records and information pertinent to waste certification are kept on file as specified by the Plant Records Management Manual, which references DOE specified retention schedules (ref. DOE Appendix 0230, Annex C-8 Records Disposition).

For example, process log books and data package information on each certified waste package are maintained on permanent file by Process Control Operation, and process (e.g., hourly) work sheets are maintained on file a minimum of one year by the operational group.

Also, all records which directly relate to the certifiability of a waste package are maintained in accordance with documented and auditable programs and procedures.

2.3.3 Document Control

Technical Writing maintains control of the operation and certification procedures. Before they are issued, all changes, additions, and deletions are routed through Waste Operations, Quality, R&D, and the appropriate Safety personnel for approval. All changes to operational and certification procedures are maintained on permanent file by Technical Writing.

Additions and changes to the main certification program procedure (CO-4500) are routed through the WIPP/DOE Certification Committee for concurrence and approval before issue.

2.3.4 Process and Container Design and Development Control

Design and development functions for waste processing and certification activities are accomplished by a Development Team consisting of members from Waste Operations, Quality Engineering and Control, Research and Engineering, and Purchasing. Development Team activity is directed and coordinated by WT&C. The Development Team plans and executes development activities on projects authorized by Waste Operations to meet DOE and DOT criteria. Results of these activities are documented in Research and Engineering reports.

Design and development activities are subject to procurement, calibration, drawing specification, and revision controls requiring Waste Operations and Quality approval as a minimum. Additional approvals may be required.

Facilities Engineering prepares drawings and specifications for development items from data provided by Waste Operations. This data is developed from the above activities. These documents are issued and controlled by Facilities Engineering (utilizing a documented, controlled distribution and revision system), and are approved by Quality Engineering Systems and Plans (QES&P).

2.3.5 Procurement and Certification Control

Waste container and associated process supplies used for certified waste streams are procured to controlled specifications from qualified vendors and are certified for use by Final Quality Acceptance and Certification (FQA&C).

Requisitions for these items are initiated by Waste Operations and reviewed and approved by the Quality Engineer. Solicitations are based on current specification documents provided by Facilities Engineering. Vendors to be solicited are chosen from a "Qualified Vendor" list prepared and maintained by Quality Engineering. Acceptance of procured materials is based upon acceptance activities specified in a Quality Instruction Directive prepared for the item by Quality Engineering. These acceptance activities may take place in the vendor's plant or at Rocky Flats, depending upon the characteristics of the item. FQA&C accumulates the documentation of the acceptance activities and certifies conforming material for stock and use.

The Quality Engineer is notified of nonconforming material for review, disposition (return to vendor, rework, scrap, accept, or Materials Review Board), and corrective action.

Waste container and associated supplies are segregated in storage, according to acceptance status, with certified and rejected items identified as specified by the Quality Instruction Directive.

2.4 Calibration and Certification

The standards and calibration activities at Rocky Flats are within the scope of the AL Standardization Program, AL Chapter 72xF. This program ensures the accuracy of instrumentation, gages, and testers used during research, development, test, fabrication, assembly, and inspection of waste materials and containers. Accuracy is assured through a closed-loop program of standards calibration to the National Bureau of Standards.

Some standards are developed specifically for waste/scrap assaying purposes, and are not directly traceable to NBS. The development of these standards is conducted in a cooperative documented and auditable program by the Chemistry Instrumentation R&D and the Standards Laboratory groups.

2.5 Control of Nonconforming Waste Packages

Waste packages that do not conform to waste disposal/storage criteria are reviewed, and disposition (e.g., treatment, shipment, repackaging, etc.) is selected with the concurrence of Quality Engineering Systems and Plans. Records of these activities are maintained in accordance with the guidelines mentioned in Section 2.3.2. Items requiring concurrence from the WIPP project office will be handled in accordance with the WIPP/WAC Compliance Requirements (WIPP-DOE-114).

2.6 Audits

Quality Engineering and Control conducts periodic formal audits of the certification program. The frequency and thoroughness of the audits is determined by DOE guidance, available manpower, compliance history, and the priority and complexity of the operation.

Procedural audits and informal inspections are conducted frequently (e.g., several procedures in one year). The scheduling and priority of audits is determined by available manpower, procedural compliance history of the operation, and the priority placed on a particular activity.

3. WASTE PROCESSING ACTIVITIES

3.1 Waste Content Survey and Certification Plans

All Rocky Flats TRU waste is segregated and classified (for the purpose of controlling nuclear materials) into separate item description codes (IDC or content codes).

To prepare certification procedures which make the certification program more manageable, these numerous IDC's were grouped into categories describing their primary generation/treatment mode. The categories are as follows:

Category A - Administrative Control
Category B - Process Control - Immobilization
Category C - Administrative Control - Immobilization
Category D - Process Control - Compaction
Category E - Miscellaneous Waste

The following is a description of these waste content codes and categories.

3.1.1 Category A - Administrative Control--Segregation Wastes in Category A are administratively controlled by segregation procedures.

Item Description Code (IDC)	Description	Origin
300A, Graphite Molds	Used in the casting of plutonium metal. Used casting molds are assigned code 300.	Casting furnaces in the plutonium foundry
301A, Graphite Cores	A part of molds used in the casting of plutonium metal.	Casting furnaces in the plutonium foundry
302A, Benelex and Plexiglas	Used around glove boxes in all areas as neutron radiation shielding.	All areas on plantsite where glove boxes are used
320A, Heavy Non-DS Metal (Ta, W, Pt, Pb)	Mainly used tantalum crucibles, funnels, and inserts from casting plutonium metal.	Foundry and Molten Salt Areas
330A, Combustibles, Dry	Mainly dry rags and paper.	All areas that have Pu

Item Description Code (IDC)	Description	Origin
334A, Fire Blankets	Used primarily as heat shields when welding in glove boxes. Some may be made of an asbestos material.	All Pu Areas
336A, Combustibles, Wet	Consists primarily of paper saturated with "KW" decontamination solution or rags that have been rinsed with water.	All Pu Areas
337A, Plastic (Teflon, PVC, Vinyl, Etc.) and rubber, nonleaded.	Consists of Teflon, PVC, polyolefins, and non-leaded rubber. These are primarily from plastic bags, sample vials, unleaded dry box gloves and PVC sheeting used to line wooden crates and decontamination enclosures.	All Pu Areas

Item Description Code (IDC)	Description	Origin
339A, Leaded Dry Box Gloves and other leaded rubber.	Mainly used in access ports of glove boxes.	All Pu Areas
370A, Leco Crucible	Small ceramic crucibles used for laboratory analyses.	Plutonium Laboratory
371A, Firebrick	Plutonium contaminated brick from the recovery incinerator.	Pu Recovery Area
440A, Glass (except Raschig Rings)	Primarily glassware from the analytical laboratory, and glass vessels from the recovery facility glove boxes.	All Pu Areas
480A, Light Non-SS scrap metal, not prepared for leaching (Fe, Cu, Al, stainless steel, etc.)	Contaminated stainless steel piping, brackets, flanges, etc., which have been removed from all plutonium areas. The majority of metal in this group is stainless steel.	All Pu Areas

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Item Description Code (IDC)	Description	Origin
481A, Light Non-SS scrap metal, not prepared for leaching (Fe, Cu, Al, stainless steel, etc.)	Contaminated metal that has been cut into pieces suitable for cleaning, and washed.	Size Reduction Area

3.1.2 Category B - Process Controls--Immobilization Wastes in Category B are immobilized by either the direct cementation method, the inert carrier cementation method, or the Envirostone® immobilization process.

Item Description Code (IDC)	Description	Origin
001B, First and Second Stage Sludge	Derived from the ferric hydroxide precipitation process, and blended and labeled 001. These sludges are vacuum filtered to approximately 70% water.	Building 774, Liquid Waste Treatment

Item Description Code (IDC)	Description	Origin
003B, Solidified Organics	Consists of solidified collant oil, and various halogenated solvents. The majority of this stream is carbon tetrachloride and oil from the fabrication machining facility.	Fabrication Area and Laboratories; Building 774
007B, Dried Sludge	Derived from the 3-stage ferric hydroxide precipitation process; dried and immobilized.	Building 374
310B, Graphite, Pulverized or Fines	Coarse graphite which has been pulverized and then assigned code 310.	Pu Recovery Area
311B, Graphite Heel	Residue remaining after one or more passes through the acid dissolution process of the pulverized graphite or graphite heel.	Pu Recovery Area

Item Description Code (IDC)	Description	Origin
373B, Firebrick Heel	Remaining solid residue after dissolution of pulverized firebrick.	Pu Recovery Area
375B, Oil Dry	Absorbent clay used primarily in the bottom of 55 gallon drums to absorb liquid. Normally an additive and not a waste form in itself.	Pu Recovery Area
393B, Sand, Slag & Crucible Heel	Residue remaining after pulverized sand, slag and crucible, or sand, slag and crucible heel has received one or more passes through the dissolution process.	Pu Recovery Area

Item Description Code (IDC)	Description	Origin
410B, Pulverized Molten Salt, 30% MgCl	Pulverized salt consisting of sodium chloride, potassium chloride and 30% magnesium chloride. These salts are used to pyrochemically remove americium from plutonium metal, and contain plutonium chloride and americium chloride.	Pu Recovery Area Building 371
420B, Incinerator Ash, Virgin	Residue remaining after combustible plutonium-bearing residues are burned in the recovery facility incinerator. The ash is jaw crushed and ball milled before removal from the glove box.	Pu Recovery Area

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Item Description Code (IDC)	Description	Origin
421B, Ash Heels	Residue remaining after incinerator ash heel has received one or more passes through the dissolution process.	Pu Recovery Area
422B, Soot	Generated from the operation of the Pu Recovery incinerator. It is the airborne fly ash material that accumulates in the off-gas system. Soot is generated only when the off-gas system is disassembled and cleaned.	Pu Recovery Area

425B, Fluid-bed Ash	A fine powder ash generated by the fluid bed incinerator. The ash basically consists of the following: 10% NaCl 10% Na_2Co_3 6% Carbon 30% Cr_2O_3 on Al_2O_3 40% Fly Ash (SiO_2, Fe_2O_3, Al_2O_3)	Fluid-bed

3.1.3 Category C - Administrative Control--Immobilization Wastes in Category C are immobilized through administrative procedural control for in-line cementation processes. These wastes are immobilized within the glove boxes.

Item Description Code (IDC)	Description	Origin
004C, Special Setups	Consists of various aqueous solutions which result from analyses performed by the Analytical Laboratories.	Laboratories

Item Description Code (IDC)	Description	Origin
292C, Cemented Sludge	Sludge type residue resulting from incinerator scrubbing systems.	Recovery Incinerator Areas
338C, Insulation	Consists of the asbestos-type material used as a heat shield around furnaces and steam pipes and includes media from filters.	All Pu Areas
374C, Blacktop, Concrete, Dirt and Sand	Generated only as a result of spills.	All Plantsite
376C, Cemented Insulation and filter media	Consists of the asbestos-type material used as a heat shield around furnaces and steam pipes; includes CWS filter media.	All Pu Areas

Item Description Code (IDC)	Description	Origin
393C, Pulverized Sand Slag and Crucible Heels	Mixture of slag, crucible and sand generated when PuF_4 is reduced to plutonium metal in the reduction furnaces. The heel is the residue remaining after one or more passes are made through the dissolution process.	Pu Recovery Area
411C, Electrorefining Salt	Salt consisting of sodium chloride and potassium chloride with 8% magnesium chloride. Used to pyrochemically remove all types of impurities from plutonium metal.	Electrorefining Facility

Item Description Code (IDC)	Description	Origin
432C, Resin Leached and Cemented	Cemented resin is ion column resin that has been water washed and mixed with a cementing agent to solidify the material. Cementing is required to meet shipping and long-term storage requirements.	Pu Recovery Area

3.1.4 Waste Category D - Process Control--Compaction Waste in Category D are compacted by the HEPA filter compactor.

Item Description Code (IDC)	Description	Origin
335D, Absolute Dry Box Filters	Has an 8" x 8" wooden frame with asbestos-type filter medium. Used to remove airborne particles in glove box systems.	All Pu Areas

Item Description Code (IUC)	Description	Origin
490D, HEPA Filters	High efficiency filters used in exhaust systems of plutonium buildings to remove airborne particles.	All Pu Areas

3.1.5 Waste Category E - Miscellaneous Wastes--Any wastes which are not considered Category A, B, C, or D are considered Waste Category E--Miscellaneous Wastes.

Item Description Code (IUC)	Description	Origin
442E, Leached Raschig Rings	High boron content glass rings. They are used as a neutron poison in storage tanks which contain plutonium solution.	All Pu Areas, Laboratories

3.2 Waste Classification Matrix

In an effort to review the status of the content codes with respect to the waste form criteria, a matrix of content codes versus criteria was formulated. Each cell in the waste classification matrix indicates the status that a particular waste form has with respect to a particular waste form criterion. The status assigned to each cell can be one of the following:

Status Code	Status
0	No longer a waste content code.
2	Certified/certifiable waste form.
3	Meets requirements under assumptions noted/no action required.
4	Meets requirements/however, internal action pursued.
5	Compliance with requirements unknown/further study required.
6	Does not meet requirements/action required.

The waste classification matrix and an explanation of action items follows.

3.2.1 Waste Classification Matrix

	TOX	SLU	PYR	IMM	GAS	LIQ	EXP
1	5	2	2	6	4	2	2
2	0	0	0	0	0	0	0
3	5	2	2	2	5	6	2
4	5	2	2	2	3	3	2
6	0	0	0	0	0	0	0
7	5	2	2	6	2	2	2
9	0	0	0	0	0	0	0
292	5	2	2	2	5	2	2
300	2	2	2	5	2	2	2
301	2	2	2	5	2	2	2
302	2	2	2	2	3	2	2
310	2	2	2	6	2	2	2
311	2	2	2	6	2	2	2
320	2	2	2	2	2	2	2
330	2	2	2	2	4	2	2
334	4	2	2	2	2	3	2
335	5	2	6	6	2	2	2
336	2	2	2	2	4	3	2
337	2	2	2	2	3	2	2
338	2	2	2	3	2	2	2
339	4	2	2	2	4	2	2
370	2	2	2	2	2	2	2
371	2	2	2	5	2	2	2
372	0	0	0	0	0	0	0
373	2	2	2	6	2	2	2
374	4	2	2	6	2	2	2
375	2	2	2	6	2	2	2
376	2	2	3	3	2	2	2
392	2	2	2	6	2	2	2

	TOX	SLU	PYR	IMM	GAS	LIQ	EXP
393	2	2	4	6	2	2	2
410	2	2	5	6	4	2	5
411	2	2	2	6	2	2	2
420	2	2	2	6	2	2	2
421	2	2	2	6	2	2	2
422	2	2	2	6	2	2	2
425	2	2	2	6	2	2	2
432	2	2	2	2	5	2	2
440	2	2	2	2	4	2	2
441	0	0	0	0	0	0	0
442	2	3	3	3	4	2	2
480	4	2	3	5	2	2	2
481	4	2	3	5	2	2	2
490	2	2	3	6	2	2	2

3.2.2 TRU Waste Content Codes

Content Code	Description
001	First and Second Stage Sludge - Building 774
003	Grease - Building 774
004	Special Setups - Building 774
006	Organic Sludge - Retrievable - Building 774
007	Dried Sludge - Retrievable - Building 374
009	Miscellaneous Waste - Nonretrievable - Building 374
292	Cemented Sludge
300	Graphite Molds
301	Graphite Cores
302	Benelex and Plexiglas
310	Graphite Pulverized or Fines
311	Graphite Heels
320	Heavy Non-SS Metal (Ta, W, Pt, Pb)
330	Combustibles, Dry (paper, rags, etc.)
334	Blanket, Fire
335	Absolute Drybox Filters
336	Combustibles, Wet
337	Plastic (Teflon, PVC, Vinyl, etc.) and Rubber, non-leaded
338	Insulation (including CWS filter media)
339	Leaded Drybox Gloves and other Leaded Rubber
371	Fire Brick
372	Grit
373	Fire Brick Heel
374	Blacktop, Concrete, Dirt, and Sand
375	Oil-Dri**

** Trade Name

Content Code	Description
376	Cemented Insulation and Filter Media
392	Unpulverized Sand, Slag, and Crucible
393	Sand, Slag, and Crucible Heel
410	Molten Salt, 30% Pulverized - Building 771
411	Electrorefining Salt
420	Incinerator Ash, Virgin
421	Ash Heels
422	Soot
425	Fluid Bed Ash
432	Resin - leached and cemented
440	Glass (except Raschig rings)
441	Unleached Raschig rings only
442	Leached Raschig rings
480	Light Non-SS Metal (Fe, Cu, Al, Stainless Steel, etc.) not prepared for leaching
481	Light Non-SS Metal (Fe, Cu, Al, Stainless Steel, etc.) prepared for leaching
490	HEPA Filters

3.2.3 Explanation of Action Items

001/GAS/4 Although this waste meets criterion, a gas generation study, due to radiolysis, is currently in progress on first and second stage sludges. These blended sludges are labeled as IDC 001.

001/IMM/6 The action is to immobilize. Immobilization of some sludges using the direct cementation process is scheduled to commence operation in FY 1983. Until the new liquid waste treatment is fully operable, not all sludges will be immobilized. Uncertified wet sludges will be shipped until an approved immobilization is in place.

001/TOX/5 Past analyses indicate Be content within the range of 50-1000 ppm. It has not been determined whether color coding is requisite. Analysis for metal oxide will be performed.

003/LIQ/6 The action has not been determined. Solidification with Envirostone® gypsum cement utilizing existing equipment is being investigated, along with the possibility of rotary kiln incineration. Reuse and recycling of oils is also being investigated.

003/GAS/5 The organic content of this waste form needs to be determined. However, no study has been initiated. Determination of organic content is contingent upon determined action.

003/TOX/5 The presence of toxics in this waste needs to be determined. No study has been initiated. Determination of toxic content is contingent upon determined action.

004/GAS/3 A weight factor is adequate for the determination of organic content.

004/TOX/5 The presence of toxics and chelating agents in this waste needs to be determined. No study has been initiated.

007/IMM/6 The action is to immobilize. Immobilization of some sludges using the direct cementation process is scheduled to commence operation by FY 1983. Until the new liquid waste treatment facility is fully operable, not all sludges will be immobilized. Uncertified wet sludges will be shipped until an approved immobilization process is in place.

007/TOX/5 Past analyses indicate Be content within the range of 50-1000 ppm. It has not been determined whether color coding is requisite. Analysis for metal oxide will be performed.

292/GAS/5 The americium content of this waste needs to be determined.

292/TOX/5 Although a large percentage of this waste is mineral ash, characterization studies are required. Analysis for Be metal oxide will be performed.

300/IMM/5 Visual estimates indicate the amount of fines present are well below the values listed in the criteria (i.e., less than 1 percent by weight 10u diameter particles and less than 15 percent by weight 200u diameter particles). However, a verification study is still required.

301/IMM/5 Visual estimates indicate the amount of fines present are well below the values listed in the criteria (i.e., less than 1 percent by weight 10u diameter particles and less than 15 percent by weight 200u diameter particles). However, a verification study is still required.

302/GAS/3 A weight factor is adequate for the determination of organic content.

310/IMM/6 The action is to immobilize using a process control.

311/IMM/6 The action is to immobilize using a process control.

330/GAS/4 Although this waste meets criteria, the favored action is to incinerate. If incineration is not feasible, the alternative is to ship combustibles above 100nCi/G as TRU waste.

334/LIQ/3 The tip test is adequate for the detection of free liquids.

334/TOX/4 Although color coding for asbestos is not required, the presence of asbestos must be indicated on the data package.

335/IMM/6 The action is to compact these filters. Compacted filters will be subjected to respirable fines generation studies and polyvinylalcohol solidification studies in order to assure the adequacy of the waste form.

335/PYR/6 Compacting adequately renders pyrophoric fines safe, thereby meeting criteria.

335/TOX/5 Asbestos content needs to be determined.

336/LIQ/3 The tip test is adequate for the detection of free liquids.

336/GAS/4 The favored action is to incinerate. No action has been determined.

337/GAS/3 A weight factor is adequate for the determination of organic content.

338/IMM/3 Inspection by Waste Technology assures adequate segregation control.

339/GAS/4 Although this waste meets criteria, a decontamination study employing the vibratory cleaning method is being pursued. Its applicability and use is pending economic analysis and efficiency evaluation.

339/TOX/4 Although Pb is not listed as either a Poison A or Poison B, the favored action is to decontaminate using the vibratory cleaning method. Research and development studies for decontamination are in progress. Pb content will be indicated in the data package. ISF decontamination is not feasible.

371/IMM/5 Visual estimates indicate the amount of fines are well below the values listed in the criteria (i.e., less than 1 percent by weight 10u diameter particles, and less than 15 percent by weight 200u diameter particles). However, a verification study is still required.

373/IMM/6	The action is to immobilize using a process control.
374/IMM/6	This waste will be handled on an "as generated" basis and inspected by Waste Technology for particulates.
375/IMM/6	The action is to immobilize using a process control.
376/IMM/3	The cementation process is adequate to assure the rendering safe of pyrophoric fines. Inspection by Waste Technology assures that segregation controls are being followed.
376/PYR/3	The cementation process is adequate to assure the rendering safe of pyrophoric fines. Inspection by Waste Technology assures that segregation controls are being followed.
392/IMM/6	Compatibility of this waste form with the inert carrier process needs to be determined.
393/IMM/6	Compatibility of this waste form with the inert carrier process needs to be determined.
410/EXP/5	The possible presence of calcium metal in the salt cake creates the potential for hydrogen production and a possible fire/explosion hazard. An analytical evaluation of the waste salts is necessary. Further treatment methods are currently being investigated.
410/GAS/4	The possible presence of calcium metal in the salt cake creates the potential for hydrogen production and a possible fire/explosion hazard. An analytical evaluation of the waste salts is necessary. Further treatment methods are currently being investigated.

410/IMM/6	Compatibility with the inert carrier process needs to be determined.
410/PYR/5	The possible presence of calcium metal in the salt cake creates the potential for hydrogen production and a possible fire/explosion hazard. An analytical evaluation of the waste salts is necessary. Further treatment methods are currently being investigated. Also, compatibility with the inert carrier process needs to be determined.
411/IMM/6	Compatibility with the inert carrier process needs to be determined.
420/IMM/6	The action is to immobilize using a process control.
421/IMM/6	The action is to immobilize using a process control.
422/IMM/6	The action is to immobilize using a process control.
425/IMM/6	The action is to immobilize using a process control.
432/GAS/4	A gas generation study is required.
440/GAS/4	Although this waste meets criteria, a decontamination study employing the vibratory cleaning method is being pursued. Its applicability and use is pending economic analysis and efficiency evaluation.
442/GAS/4	Although this waste meets criteria, a decontamination study employing the vibratory cleaning method is being pursued. Its applicability and use is pending economic analysis and efficiency evaluation.

442/TOX/5	The quantity of carbon tetrachloride needs to be determined.
480/GAS/4	Although this waste meets criteria, a decontamination study employing the vibratory cleaning method is being pursued. Its applicability and use is pending economic analysis and efficiency evaluation.
480/IMM/5	Visual estimates indicate the amount of fines present are well below the values listed in the criteria (i.e., less than 1 percent by weight 10u diameter particles and less than 15 percent by weight 200u diameter particles). However, a verification study is still required.
480/PYR/3	The assumption is that the amount of pyrophoric radionuclides present are well below the values listed in the criteria (i.e., less than 1 percent by weight), that all pyrophorics have been oxidized to nonpyrophorics, and that oxidation is complete.
481/GAS/4	Although this waste meets criteria, a decontamination study employing the vibratory cleaning method is being pursued. Its applicability and use is pending economic analysis and efficiency evaluation.
481/IMM/5	Visual estimates indicate the amount of fines present are well below the values listed in the criteria (i.e., less than 1 percent by weight 10u diameter particles and less than 15 percent by weight 200u diameter particles). However, a verification study is still required.

481/PYR/3 The assumption is that the amount of pyrophoric radionuclides present are well below the values listed in the criteria (i.e., less than 1 percent by weight), that all pyrophorics have been oxidized to nonpyrophorics, and that oxidation is complete.

490/PYR/3 Compacting adequately renders pyrophoric fines safe, thereby meeting criteria. A study will be conducted to determine if significant amounts of fines are present in the filters.

490/IMM/6 The action is to compact HEPA filters. Compacted filters will be subjected to respirable fines generation studies in order to assure the adequacy of the waste form. Solidification with polyvinyl alcohol is being investigated.

NOTES

1) IDC's 002, Second Stage Sludge, 372, Grit, and 441, Unleached Raschig Rings, are no longer viable content codes. These IDC's will be identified by the Building 371 PMC computer. Also note that IDC's 370, Leco Crucibles, 392, Unpulverized Sand, Slag, and Crucible, and 425, Fluid Bed Ash, have been identified as new waste content codes.

2) Content Codes 006, Organic Sludge, Building 774, and 009, Miscellaneous Wastes, Building 371, are no longer viable content codes. These IDC's will also be identified by the Building 371 PMC computer.

4. WASTE CONTAINER AND PACKAGE CERTIFICATION

4.1 Waste Container Certification

This section describes the procedures and evidence which ensure that TRU waste containers used at Rocky Flats meet the certification requirements for shipment to the Waste Isolation Pilot Plant.

NOTE

The four container requirements set forth in DOE-WIPP-114 for DOT 17C and 17H Drums, and DOT-7A Metal Waste Boxes are addressed. As appropriate, QA measures outlined in WIPP-DOE-120 are identified.

4.1.1 Dot 17C and DOT 17H Drums

Drums are inspected and procured in accordance with controlled procurement specifications and instructions from Quality (Section 2.3.5).

4.1.1.1 Waste Container Compliance Requirements

(1) Combustibility: DOT Specification 17C and 17H Drums are constructed from 16- and 18-gauge steel respectively and are non-combustible.

(2) DOT-Type 7A: DOT Specification 17C and 17H Drums were shown to meet Type A requirements during testing at Mound Facility. (See Mound Report MLM-2228, June 1975.)

(3) Design Life: Improvements to the DOT 17C and 17H Drums have been incorporated by Rocky Flats to ensure that drums can be retrieved, contamination-free, from storage. (See Rocky Flats Report CRDL 950703-001, December 1972.)

(4) Labeling and Color Coding: Research in durability of paints used for waste containers has been performed at Rocky Flats and is documented in Reports CRD-78102, November 1978 and CSE-80-0031, July 1981. Several paints have been identified which are expected to meet the desired design life. Any additional paints or tapes procured will meet performance specification to ensure adequate compliance.

(5) Container Inspections: Drums are inspected for damage by the waste generator according to CO-4003.

4.1.1.2 Size Compliance Requirements

DOT Specification 17C and 17H 55 gallon Drums, procured to Rocky Flats Specifications SX-200 and SX-201, meet all WIPP size requirements.

4.1.1.3 Handling Compliance Requirements

DOT Specification 17C and 17H 55-gallon Drums are manufactured with rolling hoops as specified by Rocky Flats Procurement Specifications SX-200 and SX-201. Rolling hoops are an approved WIPP handling device.

4.1.2 DOT-7A Type A

Boxes are inspected and procured according to controlled procurement specifications and instructions from Quality (Section 2.3.5).

4.1.2.1 Waste Container Compliance Requirements

(1) Combustibility: The Metal Waste Box is constructed from 14-gauge steel and has no combustible parts (See Rocky Flats Drawing D-26383-1).

(2) DOT-Type 7A: The Metal Waste Box was shown to meet Type A requirements during testing at the Rocky Flats Plant. Results of these tests are documented in Rocky Flats Report CSE 82-0003 and SARP 3345.

(3) Design Life: The Metal Waste Box can be expected to remain intact and contamination-free through the potential retrieval period at the WIPP because of its all-metal construction which is externally protected by paint. Performance standards for external coatings used with the Sand Box are explained in Rocky Flats Report CSE-82-0014, March 1982.

(4) Labeling and Color Coding: Research in durability of paints used for waste containers has been performed at Rocky Flats. (See Reports CRD-78102, November 1978, and CSE-80-0031, July 1981.) Several paints and tapes have been identified which are expected to meet the desired design life. Any additional paints procured will meet performance specification to ensure adequate compliance.

(5) Container Inspections: Before filling, boxes are inspected for damage by Waste Operations personnel according to Chemical Operations Procedure CO-4034.

4.1.2.2 Size Compliance Requirements

The Metal Waste Box is procured to Rocky Flats Standard SX-231 and meets all WIPP size requirements.

4.1.2.3 Handling Compliance Requirements

The Metal Waste Box is manufactured with the WIPP approved Sandia Lifting Lugs as shown in Rocky Flats Standard SX-231.

4.2 Waste Package Certification

This section describes the controls used to ensure that TRU waste packages meet the Waste Package Compliance Requirements identified in the WIPP-WAC for shipment to the Waste Isolation Pilot Plant.

4.2.1 Description of Waste Package Flow and Flow Chart

4.2.1.1 Drums (See Figure 6)

(1) Drum Serialization — Drum numbers are issued from Building 668. Each drum is assigned a unique identification number. A serialized label is affixed to the drum and the number is recorded by Waste Operations and entered into the nuclear materials control system.

(2) Generator (CO-4034) — Empty drums are transported to the generator. The generator is responsible for the correct packaging of the wastes. (See Section 2.2.1 for generator responsibility and control activities.) Affixed to the drum is a drum label which contains the following: prefix number, (RF generator location code), serial number, (RF container number), and identification content code (RF waste form identifier). Waste packages are then transported to the drum counter for Pu assay.

(3) Drum Counter (CO-1009, CO-1010, CO-1011) — Waste drums are assayed in the 771 drum center. A teletype printout and paper tape which contain the following information are sent to Process Material Control (PMC): container number, prefix number, serial number, IDC, primary element (Chem symbol, weight, units) and secondary element (Chem symbol, weight, units). Drum counting, as currently

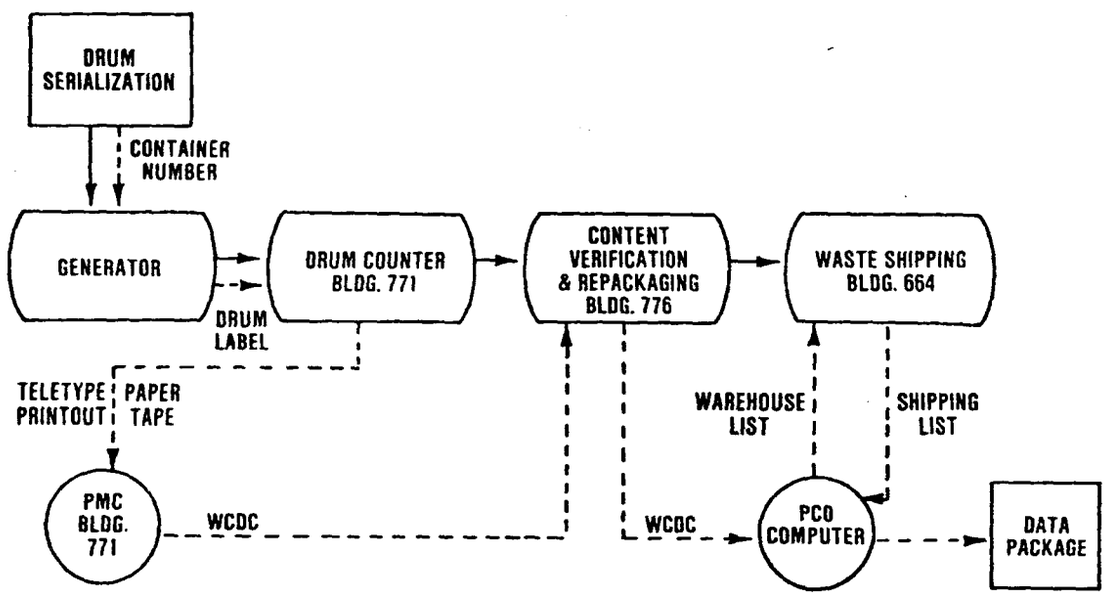

Figure 6. Waste Package Flow Diagram (Drums)

ISSUE	A 5-12-83 Cst					
TRU WASTE CERTIFICATION PROGRAM FOR WIPP-WAC (U)					DRAWING NO. CO-4500-62	

		performed, separates scrap and residues from waste. Other assay operations (pending arrival of equipment) will be performed to separate TRU from LLW by assaying at the 100nCi/g level.
(4)	Waste Container Data Collection Form	A Waste Container Data Collection form (WCDC) generated at PMC, contains the date (month, day, year) in addition to the information listed above. This form is sent to content verification/repackaging/size reduction (Building 776) and a copy is retained by PMC.
(5)	Content Verification/ Repackaging/ Size Reduction (CO-4016)	The waste package is inspected and undergoes a final Waste Operations' verification consisting of physical container inspection, content verification, free liquid detection and final waste package certification. The following data is compiled and entered on the WCDC: class code, transuranic or nontransuranic, drum or box, gross weight (digits, units), radiation MRem/hr. (@ surface, @ 3 ft), cost code, type liner used, and container number. The WCDC is sent to the Process Control Operations (PCO) computer with a copy retained by Waste Operations. The waste container is transported to Waste Shipping, Building 664.

(6) Waste Shipping

Waste packages are loaded for shipment in Building 664. A computerized warehouse list (inventory) is issued to the shipping area from Building 371. A shipping list is generated and sent to the 371 computers. The following information is included on the shipping list: Container number, prefix number, serial number, container type, content code, gross weight (lbs), primary element (symbols, mass weight - g), secondary element (symbol, mass weight - g), total container curies, and penetrating radiation.

A waste package (data package) is generated by the 371 computer. The computer calculates the total alpha curie and Pu-239 gram equivalent values and also checks for errors and/or unallowable items.

4.2.1.2 Boxes (See Figure 7)

(1) Repackaged Wastes

Waste that is collected in drums and prepared for repackaging into a waste box follows the Figure 6 flow chart, from the "drum serialization" step to the "content verification/repackaging" step.

(2) Size Reduction Waste

Size reduction generates waste that is placed in boxes from two sources: (1) waste to be repackaged (e.g., paper, plastic, nonleaded rubber, metal), and (2) waste that is disassembled, cut, or crushed to improve

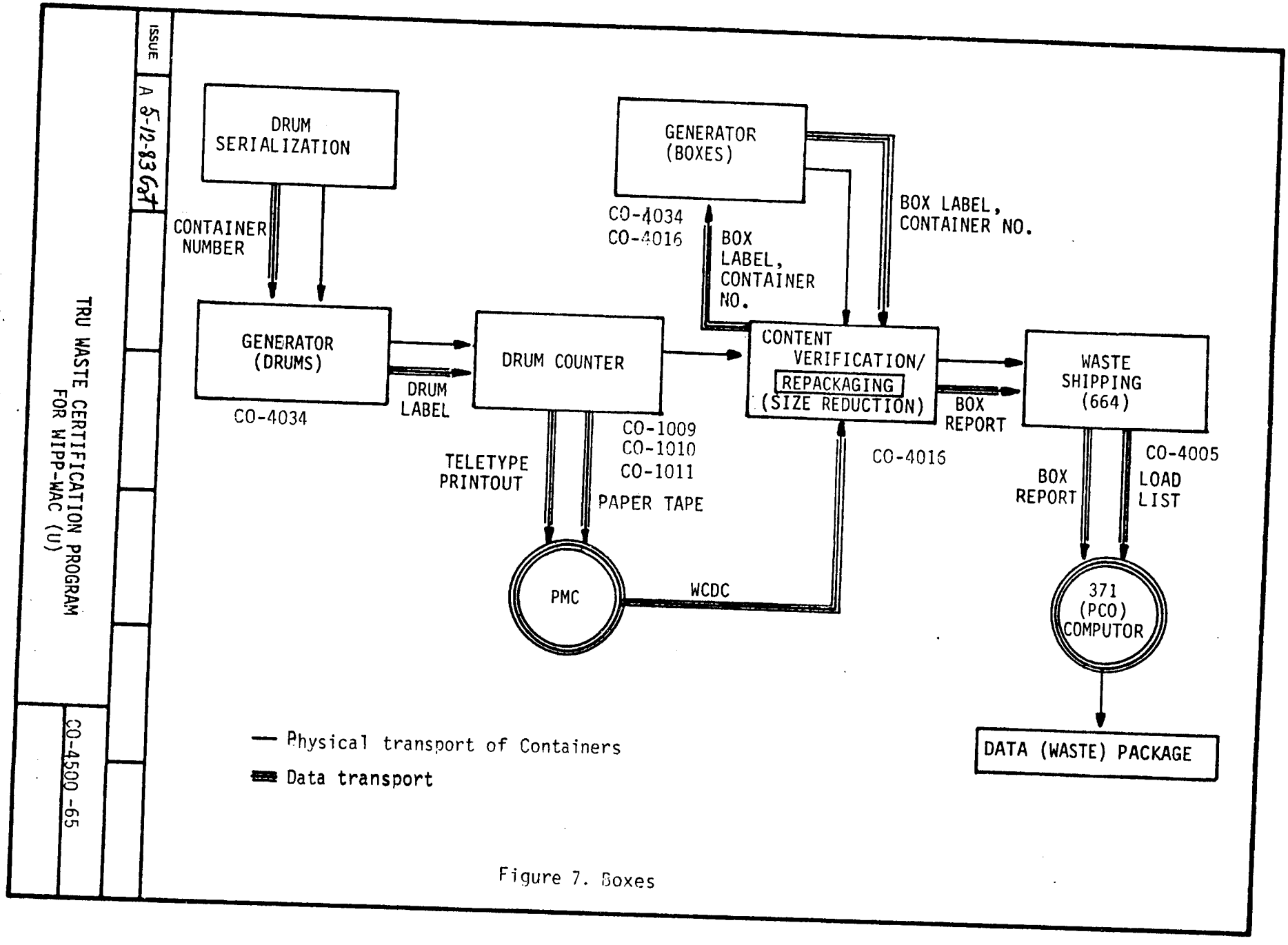

Figure 7. Boxes

packaging efficiency (e.g., glove boxes, large equipment, HEPA filters). WT&C inspects these items for compliance with the acceptance criteria as they are taken from the vault and packaged into waste boxes. [See WT&C Control Section 2.2.2.2 (b) and (c).] Each item and its radiometric survey value is logged on the Plutonium Waste Box Form RF-46487. This box report is then used by Process Material Control to determine the value of radioactive material being discarded. The box and the report are sent to the waste shipping building where the box is weighed and readied for shipment. The weight is recorded on the box report which is sent to Process Control Operations (PCO). PCO reviews the box report for completeness and records the report information on a Waste Container Data Collection (WCDC) form, which inputs the information on the PCO computer. The WCDC form records all of the information for the data package required by the acceptance criteria. Only after the information is checked by the computer, and a shipping load list is prepared (also by the computer), will a box be shipped.

(3) Directly-Placed Waste

Waste boxes are issued by WT&C to waste generators who have waste from decommissioning projects (i.e., waste that has been size-reduced in place) and/or waste that is too large to fit into a drum, yet small enough to fit into a box. A WT&C representative is

present to unlock the box, inspect, assay, and log the waste as it is loaded into the box. [See WT&C Control Section 2.2.2.2 (a).] The box and the box report follow the same routing as described for Size Reduction Waste.

4.3 Waste Package Control Methods

NOTE

Instruments, scales, and assay equipment mentioned in the following subsections are covered by the Plant's documented and auditable calibration program (Subsection 2.4).

4.3.1 Waste Package Weight

(1) Drums - Packaging procedures for TRU Waste Drums (CO-4034) do not allow drums to exceed 800 pounds gross weight. This will meet the WIPP criteria for waste package weight.

Waste drums are weighed by the generator of the package and the weight is recorded on the drum label, RFP Form RF-45720, and subsequently transferred to the 371 computer. Scales are calibrated and checked according to the Rocky Flats Plant Quality Program Manual. Compliance is assured by the immediate supervisor with frequent periodic verification by Waste Operations.

Waste drums are inspected (CO-4003) by Waste Operations personnel who check the label to assure that the package has been weighed and recorded.

(2) Boxes - Packaging procedures for TRU waste boxes (CO-4003) do not allow boxes to exceed 5000 pounds. This meets the WIPP Criterion for waste package weight.

Waste boxes are weighed by Waste Operations personnel in Building 664 and the weight is recorded on a Box Report. Compliance is assured by the immediate supervisor with frequent periodic verifications by Waste Operations. The Box Report is transferred to the 371 computer.

(3) All Containers - Before shipment, data packages are reviewed by a computer program which flags any overweight packages.

4.3.2 Nuclear Criticality

(1) Drums - All drums are required to be assayed for fissile material according to Waste Packaging Procedure CO-4034.

Drum counting is performed according to Procedure CO-1009 and CO-1011, and fissile content is recorded on RF Form 45720(WCDC). Calibration at the drum counters is performed in accordance with the RFP Quality Manual. Compliance is assured by the immediate supervisor with periodic verification by Waste Operations.

Drum information is inspected according to Procedure CO-4003. The fissile content recorded on the label is checked to ensure that the drum contains less than the 200 g limit.

(2) Boxes - The fissile material of TRU boxes is determined for directly packaged, repackaged, and size-reduced waste as follows:

- Directly packaged and size-reduced waste is assayed with a sodium iodide detector to determine the fissile material content. This value is recorded on the Box Log Sheet [Section 2.2.2.2 (a), (b)].

- Drummed waste, designated for repackaging, is assayed for fissile material content in the drum counter. The fissile material content assigned to these drums is reassigned to the waste box into which the drums were repackaged [Section 2.2.2.2 (c)].

In accordance with WIPP Acceptance Criteria, CO-4034 limits the amount of fissile material in a waste box to 350 g.

(3) All Containers - Before shipment, data packages are reviewed by a computer program which flags any packages not meeting specifications. The computer will calculate Pu-239 equivalent and total alpha curies.

4.3.3 Surface Dose Rate

All Waste Containers - All items leaving controlled areas at Rocky Flats Plant must be monitored by Radiation Monitoring. Monitoring is performed using gamma and neutron assay instrumentation. Maximum surface dose rates are recorded on RF Form 45720 (WCDC), and the information is transferred to the 371 computer.

Radiation monitoring is performed according to the Radiation Monitoring Policy Manual, Sections 3.2 and 3.2A. Compliance is assured by the immediate supervisor with periodic verification by Waste Operations.

Calibration of radiation monitoring equipment is performed by Radiation Monitoring in conjunction with the Standards Laboratory and Instrumentation Management Group.

4.3.4 Surface Contamination

All Containers - All items leaving control areas at Rocky Flats Plant must be surveyed for removable contamination by Radiation Monitoring according to the Radiation Monitoring Policy Manual, Section 3.2.

Removable alpha contamination is determined by smearing the item in accordance with controlled Radiation Monitoring procedures, and by counting the smear in a scintillator smear counter. Direct alpha contamination is surveyed using air proportional direct alpha assay instrumentation. This survey is performed in accordance with controlled Radiation Monitoring procedures, and is used to detect contamination under painted surfaces. Compliance is assured by the immediate supervisor with periodic verification by Waste Operations. Calibration is performed by Radiation Monitoring personnel in conjunction with the Standards Laboratory and Instrumentation Management Group.

No item leaves a controlled area unless the removable alpha contamination is less than 20 disintegrations per minute per 100 cm^2 (i.e., 10 pCi/100 cm^2). This satisfies the WIPP Waste Acceptance Criteria of 50 pCi/100 cm^2 maximum alpha contamination.

Due to the restrictive internal limit on alpha contamination, coupled with infrequent use of isotopes that are primary beta emitters, waste containers are not checked for beta surface contamination.

4.3.5 Thermal

The thermal output of each waste package is determined by calculations using the assay information obtained in Section 4.3.2.

Calculations are performed by the PCO computer system.

The data package for any waste package having greater than 0.1 watt/ft^3 are flagged so that the package can be correctly color coded. Thermal powers in excess of 0.1 watt/ft^3 are recorded as appropriate in the data package.

4.3.6 Gas Generation

Organic content weight factors are determined for each waste content code. The organic content for each package is determined by multiplying the gross weight of the package by the organic weight factor. This operation is performed by the PCO computer, and the information is included with the container data package.

4.3.7 Color Coding

The data package of each waste package is scanned by the 371 computer to determine any required color coding.

The PCO computer will identify packages that have wastes containing greater than 25% combustibles, reportable concentrations of toxic materials, and surface dose rates exceeding 10 mR/hr. Color coding instructions are prepared for each package and sent to WT&C. The packages are then color coded and set aside for shipment.

Color coding is checked before shipment by WT&C.

4.3.8 Labels

(1) All Containers - Waste package identification numbers are assigned at Rocky Flats to include the account number of the waste generator and a unique serial number for the package. A log-book is maintained by the generator to ensure that serial numbers are not duplicated.

(2) Drums - Serial numbers and weight in kilograms are stenciled on by WT&C.

(3) Boxes - Serial numbers and weight in kilograms are stenciled on by Waste Operations in Building 664.

(4) All Containers - All containers are checked for adequate labels before loading for shipment by WT&C.

4.3.9 Data packages

(1) Drums - Required information on TRU waste drums is collected using the drum label and RF Form 45720 (WCDC). This information is transfered to the PCO computer system.

(2) Boxes - Required information on TRU waste boxes is collected on the Rocky Flats Box Report, and is transferred to the PCO computer system.

(3) All Containers - The PCO computer system checks each data package for completeness before finalizing the load list for that shipment. This program checks for erroneous entries and packages out of specifications.

Waste Operations monitors the Certification Program to ensure that it is operating as specified. A certification statement to this effect is signed by the manager of Waste Technology and Certification. Copies of this statement are included in the shipping manifest and kept on file in the Waste Operations Office.

The transmitted data package follows the format specified by "Data Package Format for Certified Transuranic Waste for the Waste Isolation Pilot Plant (WIPP)."

5. WASTE CATEGORY CERTIFICATION

5.1 Raschig Rings Procedure and Control Methods

This procedure is part of the Rocky Flats Transuranic Waste Certification Plan and outlines the controls used to ensure that waste packages containing Raschig Rings, Content Code 442, meet the waste form compliance requirements for shipment to the Waste Isolation Pilot Plant.

5.1.1 Description of Waste Form and Package

(1) Raschig Rings are borosilicate glass rings, routinely used at Rocky Flats as a nuclear poison in process tanks containing plutonium or americium solutions.

(2) Raschig Rings, purchased to meet Rocky Flats Procurement Specification SX-106, have been certified to meet the specification of 11.8 - 13.8 wt.% B_2O_3 with an isotopic content of B^{10}/B^{11} of not less than 0.24. The rings are fabricated from structurally sound heat and chemical resistant glass of the borosilicate type with a density of not less than 2.22 g/cm^3 @ 25°C (see Procurement Specification SX-106).

(3) Raschig Rings are exposed to a wide variety of solutions including acidic solutions (HCl, HNO_3), caustic solutions (KOH) and organic solvents (oil and CCl_4, trichloroethane).

(4) Rings are removed by sampling on a regular basis and subjected to destructive analysis in accordance with Plant Procedure L-1099.

(5) The Raschig Rings in a tank are replaced regularly or when sampling shows wall thinning due to corrosion, loss of boron, buildup of solid material in tanks, or process modifications.

(6) This waste package will consist solely of Raschig Rings, packing material, and a DOT spec 7A Drum. The rings are packaged in a minimum of two layers of plastic bags. The drum is further lined by a rigid polyethylene liner.

5.1.2 Description of Waste Flow and Flow Diagram. (Figure 8) (Applicable Procedures are noted.)

(1) Drum Preparation (CO-3001, CO-4034, CO-1021)

- Approved drums, drum liners, and drum lids are inspected for damage. Damaged drums, liners, and lids are rejected.

- A rigid plastic liner is placed within each drum and a 55-gallon polyethylene liner is placed inside each rigid liner.

(2) Tank Preparation (CO-3001 controls flushing and draining of tanks before packaging for particulate, free liquid, pyrophoric, explosive, compressed gases, toxic, corrosive and sludges.)

- Before removing the Raschig Rings, all tanks are drained and then flushed. Tanks containing nitric acid are flushed with .35N nitric acid. Tanks containing oil and carbon tetrachloride are flushed with carbon tetrachloride. The identification numbers on the drums generated from these tanks are forwarded to Waste Operations for identification requirements on toxic materials.

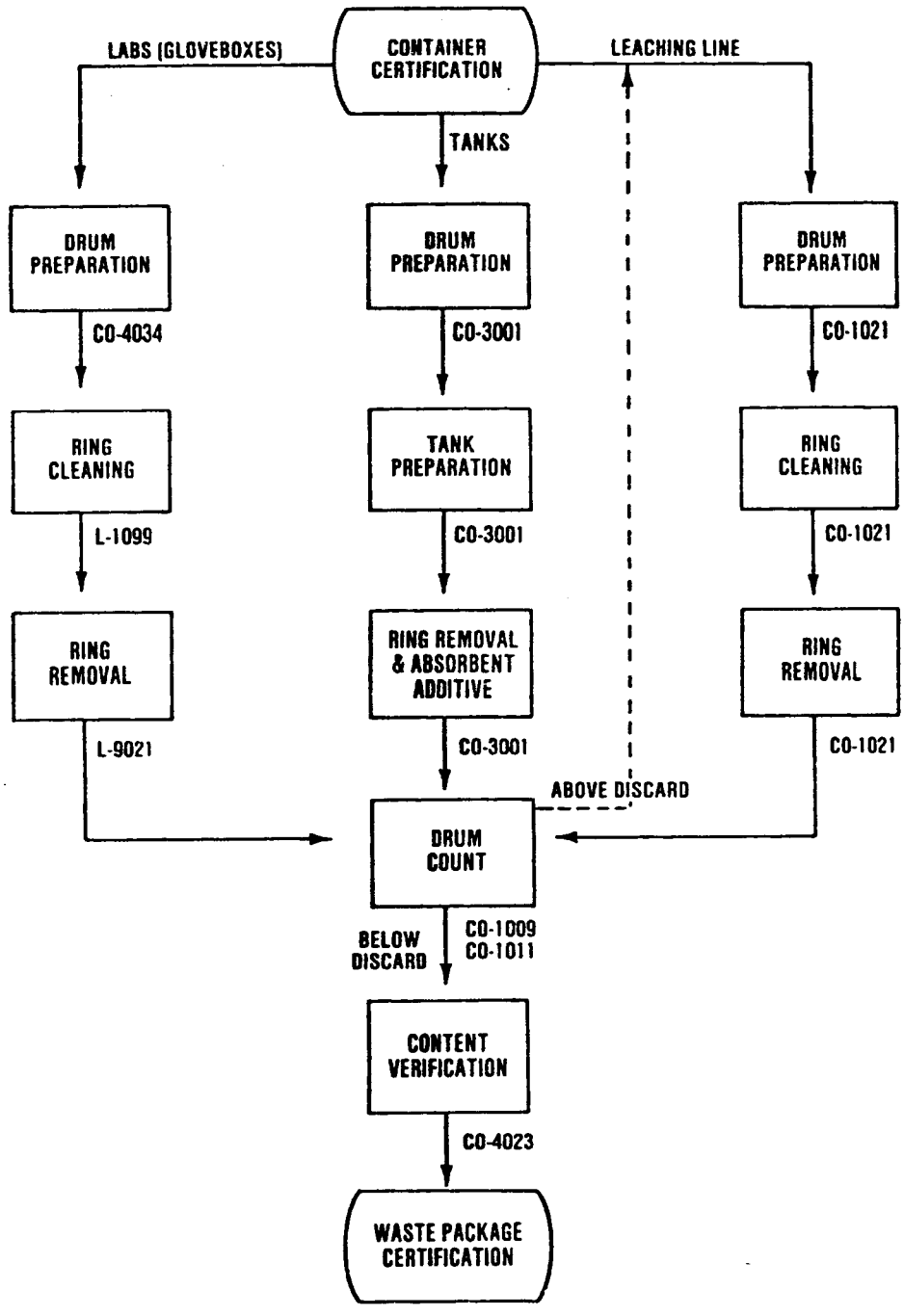

Figure 8. Waste Raschig Ring Flow Diagram

ISSUE	A 5-12-836					
TRU WASTE CERTIFICATION PROGRAM FOR WIPP-WAC (U)						DRAWING NO. CO-4500 -76

- All liquids are drained from the tank and all valves are locked out and tagged.

(3) Ring Cleaning In Lab Glove Box Line (L-1099 controls drying of rings for free liquid and particulate control.)

- Raschig Rings which have undergone laboratory analysis are wiped clean before disposal.

(4) Ring Cleaning in Leaching Glove Box Line (CO-1021 controls drying step for free liquids.)

- After leaching, the clean rings are dried and checked for free liquids.

(5) Ring Disposal After Lab Analysis in Lab Glove Box Line (L-9021 controls segregation of Raschig Rings from other wastes and assures correct packaging.)

Raschig rings are broken into fragments of approximately 1/4-inch diameter. The fragments are segregated within the glove box line from combustibles and metals. All wastes are bagged out in double bags when generated.

The Raschig Ring fragments are placed in 4-liter polyethylene bottles, and double bagged out of the glove box in PVC bags. The bags are placed in prepared 55-gallon drums and sealed.

(6) Rings Removed from Tanks (CO-3001 controls segregation of Raschig Rings from other wastes in the glove box line and controls application of inorganic absorbent material for free liquid control.)

- Raschig Rings are removed from the side port of the tank and placed in plastic bags. The bag is then placed in a plastic waste bag and taped closed.

- Rings containing recoverable plutonium are placed inside one 13 x 15-1/2 inch diameter Fibre Pak, and sent to the ring leaching line.

(7) Rings Removed from Leaching Line (CO-1021 controls segregation of Raschig Rings from other wastes within the glove box line and controls the drying step for free liquids. This also assures correct packaging.)

Before the Raschig Rings are bagged into the glove box for leaching, all excess plastic and Fibre Paks are removed. Rings are bagged out from the glove box in double bags, and placed in Fibre Paks.

(8) Drum Count (CO-1010 and CO-1011 discriminate between the recoverable scrap and nonrecoverable plutonium wastes.)

Waste drums are assayed in the drum counter. If the SS-weight of plutonium in the waste divided by the weight of the waste is greater than the discard value, the drum is transported to the storage area for leaching. Wastes with assay values of less than the discard value are shipped to Inspection.

(9) Content Verification (CO-4003 controls internal inspection of wastes.)

- Before removal of the drum lid, drum labels are examined for inclusion of proper data.

5.1.3.2 Free Liquids

(1) Laboratory Waste Stream - According to Laboratory Procedure L-1099, Raschig Ring samples taken to the 559 Laboratories are cleaned and dried before analysis by laboratory personnel. During ring analysis, the rings are not exposed to any liquids. Compliance is assured by the immediate supervisor with periodic verification by WT&C.

Raschig Rings are disposed of after analysis according to Laboratory Procedure L-9021. The waste Raschig Rings are segregated from other waste types. The waste drums are locked and waste is disposed of under the supervision of the drum custodian. This prevents free liquids and other types of waste which could contain free liquids from being added. Compliance is assured by the drum custodian with periodic verification by Waste Operations.

(2) Ring Removal Operations - Nonrecoverable Stream - Before ring removal, tanks are flushed and drained in accordance with CO-3001. The operator and supervisor responsible for this operation sign Form RF-46501, indicating compliance with the procedures.

Rings are removed from tanks by certified operators from Chemical Operations Tank Inspection, according to CO-3001. Operators are required to stop removing rings if free liquids are encountered. Both the operator and the supervisor sign RF-46501, indicating compliance with the procedures.

Rings that are removed from the tank are packaged in two layers of plastic. Absorbent material is added to the drum as specified by CO-3001. Drums are loaded so that Raschig Ring filled bags are the only content. Compliance is assured by the immediate supervisor with periodic verification by WT&C. Also, the drums are checked for free liquids by WT&C during final inspection.

(3) Ring Removal Operation - Recoverable Stream - Rings are removed from the tank as described by the preceding section. When Nuclear Safety or Drum Counting determine that cleaning is required, Raschig Ring waste packages are transported to Line 21C of Building 771. After cleaning, the rings are dried to remove any free liquids, in accordance with CO-1021. Compliance is assured by the immediate supervisor with periodic verification by WT&C.

Rings are packaged in accordance with CO-1021 so that Raschig Rings are the sole content in the waste drum. Compliance is assured by the immediate supervisor with periodic verification by WT&C.

(4) All Waste Streams - This waste form, as described in Section 4.1.1, is not capable of degrading into a free liquid upon handling, transport, or storage.

5.1.3.3 Pyrophorics

(1) All Waste Streams - This waste form is inert to combustion (see Section 4.1.1 and Rocky Flats Procurement Specification SX-106.)

(2) Before ring removal, the tanks are rinsed and drained according to CO-3001, leaving insufficient material on the rings to produce any pyrophoric conditions within the waste packages. Both operator and supervisor sign RF-46501, indicating compliance with procedures.

Raschig Ring waste packages are segregated according to Procedures L-9021, CO-3001, and CO-1021, to prevent the addition of any waste containing or capable of forming pyrophorics.

Compliance is assured by the immediate supervisor with periodic verification by WT&C.

5.1.3.4 Explosives

(1) All Waste Streams - This waste form is not reactive and does not degrade into explosive compounds. (See Section 5.1.1 and Rocky Flats Procurement Specification SX-106.)

(2) Before ring removal, and according to CO-3001, the tanks are rinsed and drained, leaving insufficient material on the rings to create an explosive situation. Both operator and supervisor sign Form RF-46501, indicating compliance with these procedures.

(3) Raschig Ring waste packages are segregated according to Procedures L-9021, CO-3001, and CO-1021, to prevent the addition of any waste containing or capable of forming explosives.

(4) Compliance is assured by the immediate supervisor with periodic verification by WT&C.

5.1.3.5 Compressed Gases

(1) All Waste Streams - This waste form is not associated with compressed gases and does not generate gases. (See Section 5.1.1 and Rocky Flats Procurement Specification SX-106.)

(2) Before ring removal, and according to CO-3001, the tanks are rinsed and drained, leaving insufficient material on the rings to generate significant gas. Both operator and supervisor sign Form RF-46501, indicating compliance with these procedures.

(3) Raschig Ring waste packages are segregated according to Procedures L-9021, CO-3001, and CO-1021, to prevent the addition of any waste containing compressed gases or capable of generating gases.

(4) Compliance is assured by the immediate supervisor with periodic verification by WT&C.

5.1.3.6 Toxics

(1) All Waste Streams - This waste form does not contain toxics and does not degrade into toxic compounds. (See Section 5.1.1 and Rocky Flats Procurement Specification SX-106.)

(2) Before ring removal, and according to CO-3001, the tanks are rinsed and drained, leaving insufficient material on the rings to create a toxic hazard. Both operator and supervisor sign Form RF-46501, indicating compliance with these procedures.

(3) Raschig Ring waste packages are segregated according to Procedures L-9021, CO-3001, and CO-1021, to prevent the addition of any waste containing or capable of forming toxic compounds.

(4) Compliance is assured by the immediate supervisor with periodic verification by WT&C.

5.1.3.7 Corrosives and Sludges

(1) All Waste Streams -This waste form is not corrosive and does not degrade into corrosive compounds. (See Section 5.1.1 and Rocky Flats Procurement Specification SX-106.)

(2) Before ring removal, and according to CO-3001, the tanks are rinsed and drained, leaving insufficient material (i.e., sludges) on the rings to cause significant corrosion. Both operator and supervisor sign Form RF-46501, indicating compliance with these procedures.

(3) As an added measure, the waste is packaged in a rigid polyethylene liner, which adds corrosion protection to the drum.

(4) Raschig Ring waste packages are segregated according to Procedures L-9021, CO-3001, and CO-1021, to prevent the addition of any waste containing or capable of forming corrosives.

(5) Compliance is assured by the immediate supervisor with periodic verification by WT&C.

- After the drum lid is removed, the drum is inspected for damage, such as punctures, rust, dents, steps at the seam and other possible leak paths.

- The drum is tilted on its side for a minimum of two minutes and checked for the presence of free liquids.

- The drum is inspected for proper drum liners and the content code is checked against the contents of the package. The drums are either accepted, or rejected and returned to the generator. All rejected drums are reported to Waste Operations and Quality Engineering and Control.

- Absorbent material is placed on the sealed polyethylene liner in order to fill the void space. The lid of the rigid liner is then placed on the body of the liner and sealed (e.g., using an approved adhesive, or by clamping.)

5.1.3 Control Methods

5.1.3.1 Immobilization (Particulates)

(1) Laboratory Waste Stream - According to Laboratory Procedure L-1099, all Raschig Rings are cleaned of particulates by laboratory personnel before analysis. Quality will be assured by the immediate supervisor with periodic verification by Waste Operations.

Raschig Ring wastes are segregated according to Laboratory Procedure L-9021 to prevent particulate wastes and other waste types from being added. Drums remain locked and under the control of a drum custodian. Compliance is assured by the drum custodian with periodic verification by WT&C.

(2) Ring Removal Operations - Nonrecoverable Stream - According to CO-3001, rings are removed from tanks by certified operators from Chemical Operations Tank Inspection. This procedure requires the operator to stop and call Nuclear Safety if unusual amounts of solid materials are encountered on the lip of the port. If unacceptable amounts of solid material are found, rings will be sent for cleaning. Both the operator and the supervisor sign Form RF-46501, indicating that these procedures have been followed during ring removal operations. Drums are loaded so that Raschig Rings and associated packaging materials are the sole content. Compliance is assured by the immediate supervisor with periodic verification by WT&C.

(3) Ring Removal Operation - Recoverable Stream - Rings are removed from the tank as described by the preceding section. When cleaning is required as determined by Nuclear Safety or Drum Counting, Raschig Ring waste packages are transported to Line 21C of Building 771. Rings are cleaned of particulates by Chemical Operations in accordance with CO-1021. Rings are then repackaged as the sole content of the waste package. Compliance is assured by the immediate supervisor with periodic verification by WT&C.

(4) All Waste Streams - Because of the mechanical durability of tempered borosilicate glass, it will take considerably more mechanical effort than produced by transportation and handling to produce significant quantities of less than 200 and 10 micron particles (Ref. RFP-285, CRD-000077-002, and CRD-950351 101.)

Attachment 2 - CCP Records Transmittal/Receiving Form

CCP Central Records/Records Custodian, 4021 National Parks Highway - MS: GSA 203, Carlsbad, New Mexico 88220

Telephone Number: 505-234-7523, 505-234-7233, 505-234-7617
Fax Number: 505-234-7014

☒ Original Record
☐ Faxed Record

Attn:	Records Custodian	From:	Jeff Harrison
Ship to:	CCP Central Records/ CCP Records Custodian	Site:	Idaho National Laboratory, CCP-AK-INL-005
	4021 National Parks Highway - MS GSA 203	Company:	Technical Specialists, LLC
	Carlsbad, NM 88220	Telephone Number:	720-977-7042
		Date Sent:	8/24/05
Telephone Number:	505-234-7523		

Document Number	Title/Description	Record Date	Total Pages
P014	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-004	~~7/5/2005~~ 8/11/05 cd 1/23/06	1
	TRU Waste Certification Program for WIPP-WAC (U).	5/24/1983	086 (95 1810
	NA		

Comments

~~This transmittal includes only a revised Attachment 3. The source document itself is not included because it was transmitted previously for a different INL AK Summary Report.~~ cd 8/8/06

CCP Records Center
Acceptance/Rejection Signature and Date

Records Accepted ☒	Christal Ingram (Signature)	Christal Ingram (Printed Name)	1-23-06 (Date)
Records Rejected ☐	Signature	Printed Name	Date

Reason for Rejection: _____

Re-submittal:

Signature	Printed Name	Date

P.01

TRANSACTION REPORT

AUG-08-2006 TUE 12:47 PM

FOR: CCP RECORDS 15052347014

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DATE	START	RECEIVER	TX TIME	PAGES	TYPE	NOTE	M#	DP
AUG-08	12:47 PM	LANL _ CBAD	20"	1	FAX TX	OK	166	

TOTAL : 20S PAGES: 1

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CCP-QP-008, Rev. 10
CCP Records Management

Effective Date: 10/15/2004
Page 29 of 33

Attachment 2 - CCP Records Transmittal/Receiving Form

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Telephone Number: 505-234-7523, 505-234-7233, 505-234-7617
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Ship to:	CCP Central Records/ CCP Records Custodian	Site:	Idaho National Laboratory, CCP-AK-INL-005
	4021 National Parks Highway - MS GSA 203	Company:	Technical Specialists, LLC
	Carlsbad, NM 88220	Telephone Number:	720-977-7042
		Date Sent:	8/24/05

Telephone Number: 505-234-7523

Document Number	Title/Description	Record Date	Total Pages
P014	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-004	~~7/6/2005~~ 8/1/05	1
	TRU Waste Certification Program for WIPP-WAC (U).	5/24/1983	836 CS Enclosure

Attachment 3 - Acceptable Knowledge Source Document Summary

Waste Stream Number(s): ID-SDA-DEBRIS, ID-SDA-SLUDGE, ID-SDA-SOIL
(Applicable only when site library is not in use)

Site(s): INL	**Source Document Tracking Number:** ID-C101
Acceptable Knowledge Documentation Type: ☐ TRU Waste Management Program Information ☑ Waste Stream-Specific Information ☑ Additional Information	**Category:** ☑ C - Correspondence ☐ D - Discrepancy Resolution ☐ P - Published Documents ☐ U - Unpublished Documents

Title of Source Document: Retrieval Area Chemical Evaluation and RCRA Hazards Analysis

Source Document Reference Information (author(s), document and revision number, date, publisher): N/A, NA, Rev. 3, 2/24/2011

AK # [a]	Source Doc. Page # [b]	AK Information Summary
WS2, WS4, WS8, WS9, WS11, WS12, S10	1-13, 14-209, 210-239, 240-243, 244-end	This document provides a summary of the RCRA characterization rationale used for the Retrieval Area AK document (CCP-AK-INL-001). Rev. 1 was dated 1/26/2006 and Rev. 2 was dated 3/21/2007. Pgs. 1-13 Section one of this document is comprised of: chemical content identification and hazardous constituents in the waste streams; the rationale for assigning or not assigning listed and characteristic EPA hazardous waste numbers to the waste streams; the rationale for not assigning P- and U- EPA hazardous waste numbers to the waste streams; discussion concerning ignitable, corrosive, and reactive EPA code listing; and a brief discussion concerning PCBs. Pgs. 14-209 Section two of this documents is comprised of Table II, Chemicals Used by RFP and Non-RFP Generators. This table includes: chemical constituent list; generating site; amount of the chemical that may be present in the waste (e.g., trace, minor, major, etc); the waste flow of the chemical (the waste stream in which the chemicals may be found, e.g., 741-sludge, 742-sludge, 743-sludge, etc.), if known; the buildings in which the chemicals were used and there original use, if known; and the source documents in which the chemicals were mentioned. Pgs. 210-239 Section three of the document consists of Table III, Products Used by RFP and Non-RFP Generators. This table includes: whether or not an MSDS was found for the product; the trade name of the product; the ingredients in the product, if known; the source document in which the product is mentioned; the building in which the product was used, if known; and the use of the product. Occasionally an msds for a product cannot be found, but the product is listed in the RFP Material Hazards Manual (RF-P091). In this situation, the chemical ingredients of the product are obtained from the Material Hazards Manual. If the msds cannot be located and the product is not listed in the Material Hazards Manual, a similar product and its ingredients are listed in the table in italics. Pgs. 240-243 Section four of the document consists of: Email 1 - discussion concerning metal chips and turnings, roaster oxide, and composite waste chips. Email 2 - discussion concerning the possibility of trimethylopropane-triester and sodium-potassium being in the waste in Area 1 of Pit 4.

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Attachment 3 - Acceptable Knowledge Source Document Summary (continued)

Site(s): INL		Source Document Tracking Number: ID-C101
AK # [a]	Source Doc. Page # [b]	AK Information Summary
		Pgs. 244 - end Section five consists of the MSDSs for the products listed in Table III.

Source Document Data Limitations (if any):

1. None

Acceptable Knowlege Expert:

Carrie J. Johnson / Carrie J. Johnson Date: 3/28/2011

Print /Sign

[a] Obtain from Acceptable Knowledge Documentation Checklist
[b] For microfilm or microfiche, identify box, tape, reel number and location.

Retrieval Area Chemical Evaluation and RCRA Hazards Analysis

(ID-C101, Rev. 3)

Chemical Content Identification – Hazardous Constituents

EPA hazardous waste numbers (HWNs) were assigned to each waste stream included in the Retrieval Area based on a review of available Acceptable Knowledge (AK) documentation to identify chemical usage and potentially hazardous materials that may have been contained in the waste. AK for both Rocky Flats Plant (RFP) and non-RFP generators was collected from a variety of sources, including historical waste characterization documents and data, historical waste generator chemical inventories, waste shipping records, technical reports, and generator interviews. Material data safety sheets (MSDSs) and the RFP Material Hazards Manual (Reference RF-P408) for products were also collected. This information was reviewed to compile a list of chemicals and products that may have been introduced into the historic waste materials. This list was further evaluated and supplemental information was collected, as necessary, to attempt to answer the following questions for each chemical identified:

- How the chemical was used historically (R&D reagent versus major production chemical)?
- When was the chemical used?
- What was the likely final disposition for the chemical (e.g., waste treatment sludges, debris, or unused reagent)?
- What is the expected final form of the chemical (e.g., liquid, sludge, powder, fines, or turnings)?
- Based on the review of the inventory, is the chemical contained in targeted waste?
- How did the generators manage potentially hazardous materials?
- Can potentially reactive, corrosive, and ignitable materials be identified and segregated during waste retrieval and confirmation activities?

The assessment was compiled into this comprehensive chemical evaluation and Resource Conservation and Recovery Act (RCRA) hazards analysis and is incorporated into the AK record. Table II, Chemicals Used by RFP and Non-RFP Generators, includes chemicals found in AK documentation as having been used by RFP and/or non-RFP generators. Table II includes chemical uses, the waste stream in which the chemical is expected to be included, and the general amount of the chemical expected to be in this waste stream. Products listed in the AK documentation as having been used by RFP and/or non-RFP generators are listed in Table III, Product Table for RFP and Non-RFP Generators. The constituent chemicals for these products are included in Table II.

Due to the commingling of the waste materials during the retrieval operations, the same EPA HWNs are assigned to waste streams ID-SDA-DEBRIS, ID-SDA-SLUDGE and ID-SDA-SOIL. These EPA HWNs are listed in Table I below (references listed in the following narrative and Tables are those listed in CCP-AK-INL-001):

Table I, EPA Hazardous Waste Numbers for Waste Streams ID-SDA-DEBRIS, ID-SDA-SLUDGE, and ID-SDA-SOIL

EPA Hazardous Waste Numbers	Constituent
F-Listed Organic Solvents	
F001	Carbon tetrachloride
F001, F002	Methylene chloride
F001, F002	Tetrachloroethylene
F001, F002	1,1,1-Trichloroethane
F001, F002	Trichloroethylene
F001, F002	Trichlorofluoromethane (Freon 11)
F001, F002	1,1,2-Trichloro-1,2,2-trifluorethane (Freon 113, Freon TF)
F002	Chlorobenzene
F002	1,2-Dichlorobenzene (o-Dichlorobenzene)
F002	1,1,2-Trichloroethane
F004	Cresols
F004	Nitrobenzene
F005	Benzene
F005	Carbon disulfide
F005	2-Ethoxyethanol
F005	Isobutanol
F005	Methyl ethyl ketone (MEK)
F005	2-Nitropropane
F005	Pyridine
F005	Toluene
Other F-Listed Waste	
F006	Wastewater treatment sludges from electroplating operations
F007	Spent cyanide plating bath solutions from electroplating operations
F009	Spent stripping and cleaning bath solutions from electroplating operations
Toxicity Characteristic Metals	
D004	Arsenic
D005	Barium
D006	Cadmium
D007	Chromium
D008	Lead
D009	Mercury
D010	Selenium
D011	Silver
Toxicity Characteristic Organics	
D022	Chloroform
D027	1,4-Dichlorobenzene
D028	1,2-Dichloroethane
D029	1,1-Dichloroethylene
D030	2,4-Dinitrotoluene
D032	Hexachlorobenzene

Table I, EPA Hazardous Waste Numbers for Waste Streams ID-SDA-DEBRIS, ID-SDA-SLUDGE, and ID-SDA-SOIL (continued)

EPA Hazardous Waste Numbers	Constituent
D033	Hexachlorobutadiene
D034	Hexachloroethane
D037	Pentachlorophenol
D038	Pyridine
D043	Vinyl chloride
P- and U-Listed Waste	
P098	Potassium Cyanide
P106	Sodium Cyanide

F-Listed Constituents

This waste was mixed with F-listed hazardous wastes from non-specific sources listed in Title 20 New Mexico Administrative Code (NMAC) 4.1.20, which incorporates by reference 40 CFR 261.31 (References 16 and 17). Based on the evaluation of the AK source documentation as listed in Table II, Chemicals Used by RFP and Non-RFP Generators, EPA HWNs F001, F002, F004, F005, F006, F007, and F009 are assigned to waste streams ID-SDA-SLUDGE, ID-SDA-SOIL, and ID-SDA-DEBRIS.

Table I identifies the specific solvents associated with the assignment of the F001, F002, F004, and F005 EPA HWNs. In most cases, specific information relating to the use of these compounds for their solvent properties was identified as listed in Table II, Chemicals Used by RFP and Non-RFP Generators. In the absence of information relating to the specific use of these compounds (e.g., analytical reagents typically used to dissolve or mobilize other constituents), the F-code was assigned for these solvents.

RFP Building 774 treated spent stripping, cleaning, and plating solution from electroplating operations in Building 444. These operations utilized various cyanide plating solutions. Building 774 Second-Stage (742-series) sludge wastes were derived from the treatment of the hazardous electroplating waste, and therefore, the waste streams are assigned EPA HWNs F006, F007, and F009 (see Table II and Reference RF-P090).

Cyanide was also used in metal heat-treating operations in the Building 444 Precision Machine Shop. Materials treated were limited primarily to tool steels, carbon steels, and aluminum; radioactive materials were not used. Wastes containing oil quench bath residues and spent cyanide salt bath solutions from this process were not radioactively contaminated and, therefore, would not have been shipped to INL for disposal. As a result, these waste streams are not assigned EPA HWNs F010 and F011 (References RF-C045, RF-C416, RF-D001, RF-P084, RF-P404, RF-P405, and RF-P562).

Numerous F003-listed solvents (i.e., acetone, butanol, ethyl acetate, ethyl benzene, methanol, methyl isobutyl ketone, xylene) were used in the historical processes that generated these wastes. F003-listed solvents are listed solely for ignitability; however, these waste streams do not exhibit the characteristic of ignitability and are therefore not assigned EPA hazardous waste

number F003. The absence of ignitable liquids will be verified during retrieval and packaging activities (Reference ID-P109).

Based on an assessment of the waste buried in the Retrieval Area and the scope of the retrieval operation, EPA HWN F039 (multi-source leachate) does not apply. In order to determine whether a waste meets the criteria for assignment of F039, it is necessary to first determine that the waste meets the definition of leachate. As defined in 40 CFR 260.10, leachate is "any liquid, including any suspended components in the liquid that has percolated through or drained from hazardous waste." The purpose of the Accelerated Retrieval Project is to recover buried waste materials with incidental soil, not environmental media containing leachate (i.e., ground water or sub-soils). Because the incidental soils will be removed and disposed with the targeted waste, the EPA HWNs associated with the targeted waste materials will be assigned to all the waste streams. Because the waste buried in the Retrieval Area did not include multi-source leachate media, EPA HWN F039 is not assigned to the waste streams (Reference ID-C201 and RF-C448).

Toxicity Characteristic Metals

These waste streams contain or are contaminated with toxicity characteristic metal compounds defined in 20 NMAC 4.1.200, which incorporates by reference 40 CFR 261.24 (References 16 and 17). Based on the evaluation of the AK source documentation as listed in Table II, EPA HWNs D004, D005, D006, D007, D008, D009, D010, and D011 are assigned to waste streams ID-SDA-SLUDGE, ID-SDA-SOIL, and ID-SDA-DEBRIS.

Toxicity Characteristic Organics

These waste streams are contaminated with toxicity characteristic organic compounds defined in 20 NMAC 4.1.200, which incorporates by reference 40 CFR 261.24 (References 16 and 17). Where a constituent has been identified and there is no or limited quantitative data available to demonstrate that the concentration of a constituent is below regulatory threshold levels, the applicable EPA HWN is applied to the waste streams in accordance with CCP-TP-005 (Reference 1). Based on the evaluation of the AK source documentation as listed in Table II, including analytical data from previous sampling at the INL, EPA HWNs D022, D027, D028, D029, D030, D032, D033, D034, D037, D038, and D043 are assigned to waste streams ID-SDA-SLUDGE, ID-SDA-SOIL, and ID-SDA-DEBRIS.

The INL 3100m^3 Project sampled and analyzed Item Description Code (IDC) 003, Organic Setups, and IDC 801, Solidified Organics. The process that generated IDC 003 is identical to the process that generated the 743-series organic setups in the Retrieval Area. The solidification process that generated IDC 801 was somewhat different than IDC 003 but the organic liquid feed streams were much the same. A statistical evaluation of these results indicates that the calculated 90-percent upper confidence limit (UCL_{90}) is greater than the regulatory threshold limit (RTL) for chloroform (D022), 1,2-dichloroethane (D028), 1,1-dichloroethylene (D029), 2,4-dinitrotoluene (D030), hexachlorobenzene (D032), hexachloroethane (D034), and vinyl chloride (D043). Although the UCL_{90} for 1,4-dichlorobenzene (D027) and pyridine (D038) are less than their respective RTL, their maximum concentration is above the RTL; therefore, these EPA HWNs are included (References RF-P090 and RF-P429).

Homogeneous solids sampling and analysis of IDC 003 was also performed by the TRU waste program at Rocky Flats in 2005. A statistical evaluation of these results indicated that the calculated UCL_{90} is greater than the RTL for chloroform (D022). During the analytical data review of the "non-detect" observations, Rocky Flats determined that the method detection limit (MDL) exceeded the program required quantification limit (PRQL) for cresols (D026), 1,4-dichlorobenzene (D027), 2,4-dinitrotoluene, hexachlorobenzene (D032), hexachloroethane (D034), nitrobenzene (D036), and pentachlorophenol (D037) due to dilution. The dilution was due to high hydrocarbon content in the waste matrix that caused difficulties in analysis per the required methodology (RFETS WSPF RF135.01). EPA HWNs D027, D030, D032, and D034 have already been assigned to these waste streams as described in the previous paragraph. EPA HWNs D026 and D036 are not assigned as described in the next paragraph. Although no source has been identified for pentachlorophenol, EPA HWN D037 is also assigned to the waste streams as a conservative measure (Reference RF-P429).

Several toxicity characteristic compounds identified as potential contaminants of the waste streams are also F-listed solvents. Because the applicable F-listed EPA HWNs have been assigned for these compounds, the corresponding EPA HWNs D018 (benzene), D019 (carbon tetrachloride), D021 (chlorobenzene), D026 (cresols), D035 (methyl ethyl ketone), D036 (nitrobenzene), D039 (tetrachloroethylene), and D040 (trichloroethylene) are not assigned to the waste streams. No other toxicity characteristic organic compounds were identified as possible contaminants of these waste streams.

Chlordane (EPA HWN D020) was used as a pesticide at RFP in the 1960s (Reference RF-C228); however, this chemical would not have been used in the process areas generating radioactive waste. Chlordane was also detected in small concentrations in sludge from the clarifier system pits east of TAN-604 (Reference ARA-P009). However, no waste from TAN-604 is included in the Retrieval Area (References ID-U292 and ID-U304). Pesticides and herbicides were not used in processes that generated radioactive waste and would not have been buried in the Retrieval Area. Therefore, these waste streams do not exhibit the characteristic of toxicity due to pesticides or herbicides.

P-, U-, and K-Listed Wastes

This waste does not contain discarded commercial chemical products as defined in 20 NMAC 4.1.200, which incorporates by reference 40 CFR 261.33 (References 16 and 17). An evaluation of commercial product disposal is provided below in Table II, Chemicals Used by RFP and Non-RFP Generators, and in Table III, Products Used by RFP and Non-RFP Generators.

At least two 25-lb packs of potassium or sodium cyanide pellets were distributed among drums of Second-Stage (742-series) sludge (References ID-P103, RF-P047). A logbook for 742-series sludge used from 1967 through 1972 specifies "P.U. Cyanide Pellets" in a drum generated in August 1967. The same logbook specifies "CN from 81" in three drums generated in February, 1968; "CN" or "KCN" in seven to ten drums (difficult to tell in the logbook) generated in March, 1968; and a "small amount of cyanide" in two drums generated in June, 1969 (Reference RF-U026). Based on the dates waste was disposed in the Retrieval Area, the waste from ARP-I is not expected to include sludge containing cyanide pellets. However, the ARP-II Retrieval Area may include some of these drums. Because earlier 742-series sludge logbooks have not been located, it is not known if cyanide pellets were disposed in 742-series sludge prior to 1967. However, cyanide plating operations were limited in the 1950s and 1960s, and disposal of cyanide pellets would not have been a routine practice (Reference RF-C416). No other specific

information has been found that indicates how cyanide pellets were disposed prior to this time (References ID-P103 and RF-P047).

According to RFP personnel, chemicals disposed in 742-series sludge were packaged in bottles (References ID-P103, RF-C045, RF-C416, RF-C420, RF-P047, RF-P260, RF-P266, RF-P562, and TAN-U002). Bottles of cyanide pellets will be segregated from the waste streams if encountered during VE. However, because as of July 1, 2008, 742-series sludge is targeted waste, and to allow for the inclusion of targeted waste potentially contaminated by residual reacted cyanide resulting from the breach of bottles containing pellets during ARP excavation operations, EPA HWNs P098 and P106 will be assigned to the waste streams (References ID-C112, ID-P103, and RF-P047).

Approximately 10 to 20 gallons of the resin hardening agent 4,4-Methylene-bis (2-chloroaniline), also known as MOCA, were mixed with cement in cylindrical plastic or cardboard 'ice cream' cartons, double-bagged and placed in several drums as 744-series sludge. Since Special Setups (744-sludge) are not a targeted waste form, and because this packaging configuration can be identified easily, this material will not be brought into the drum packaging stations and will not be included in the waste streams. Therefore, EPA HWN U158 is not assigned (References ID-C107, ID-P103, and RF-P047).

There is also documentation of the disposal of bottles of mercury in drums of Second-Stage sludge (742-series sludge). There is no indication that the mercury was unused and would meet the definition of a U-listed waste. For this reason, EPA HWN U151 is not assigned (References ID-P103, ID-P105, and RF-P047).

The review of the AK source documentation did not specifically identify the disposal of unused hydrofluoric acid or the disposal of materials contaminated with spills of this acid. Additionally, bottles of liquids will be segregated and free liquids will be absorbed during packaging, therefore EPA HWN U134 is not assigned to the waste streams.

General information was identified that describes the disposal of chemicals that were no longer needed. Small amounts of chemicals were placed into the process waste drains (resulting in the generation of Building 774 sludge) or were included in contaminated trash waste destined for burial (Reference RF-C400). In addition, bottles and packages of chemical wastes were added directly to Second-Stage sludge drums (ID-P103, RF-C055, RF-U026, and RF-U125). The 1967-1972 logbook for 742-series sludge specifies numerous examples of burying bottles of unknown contents in the sludge drums. Entries with specific information (not just a number) include: from January, 1967 – "Hot KW" and "Oil-CCl4"; from June, 1967 – "Containing Scrubber Salt", "74 Sludge Sample", and "Lab Waste"; from July, 1967 – "Hot Waste 76 Laundry" and "Sludge Samples"; from August, 1967 – "71 Sludge", "P.U. Cyanide Pellets", and "Misc. Chemicals"; from September, 1967 – "74 Sludge Samples"; from October, 1967 – "1-Gal Sample Sludge from 741 Cont 6 gms"; from February, 1968 – "11484 – chemicals from 81" and "11484 CN from 81"; from March, 1968 – "11480 CN from 81"; and from July, 1968 – "Sample 1st Stage" (Reference RF-U026). With the exception of the above examples, no other information was available to identify the specific chemicals disposed. Without this specific knowledge, P- and U-listed hazardous waste numbers cannot be assigned. However, if bottles of chemicals (liquid or solid) are discovered during retrieval or packaging operations, they will be segregated and not included in the waste streams.

The material in this waste stream is not a hazardous waste from any of the sources specified in 20 NMAC 4.1.200, which incorporates by reference 40 CFR 261.32 (References 16 and 17).

Ignitables, Corrosives, and Reactives

Ignitability

The debris materials in these waste streams do not meet the definition of ignitability as defined in 20 NMAC 4.1.200, which incorporates by reference 40 CFR 261.21 (References 16 and 17). The materials are not liquid, ignitable compressed gases, or oxidizers, and are not capable of causing fire through friction, absorption of moisture, or spontaneous chemical change.

Based on review of AK documentation, numerous ignitable liquids (e.g., alcohols, acetone, benzene, toluene, and xylenes) have been identified in processes that generate waste buried in the retrieval area (refer to Table II). Any un-containerized liquids discovered during retrieval or packaging will be absorbed into the soil or other suitable absorbents. Absorbent may be added to the waste during VE in the drum packaging station (References ID-C223, ID-P109, ID-P122, ID-P253, ID-P269, ID-P271, and ID-P276). Bottles of chemicals will be removed from the waste during retrieval and packaging operations (References ID-P122, ID-P253, and ID-P269). Ignitable compressed gases (e.g., un-punctured aerosol cans or compressed gas cylinders) may be present in the waste (References ID-P105, RF-C045, RF-P047). These items will be removed from the waste stream or vented during packaging activities (References ID-P122, ID-P253, and ID-P269).

Based on review of AK documentation, numerous oxidizers (e.g., chromates, nitrates, perchlorates, permanganate, peroxides) have been identified in processes that generated waste buried in the Retrieval Area; refer to Table II, Chemicals Used by RFP and Non-RFP Generators. There is the possibility that bottles of chemicals, including oxidizers, were buried in the SDA. For that reason, bottles of chemicals (solids and liquids) will be removed from the waste during retrieval and packaging operations (References ID-P122, ID-P269, and ID-P253). Evaporator Salts (745-series sludge) are composed of an approximately 90 weight percent mixture of potassium nitrate and sodium nitrate, and in concentrated form this material is an oxidizer. For this reason, 745-series sludge is removed from the waste druing retrieval and packaging operations such that the waste does not meet the definition of an oxidizer (References ID-P398 and ID-P400). Cellulosic (e.g., wipes) waste items may be contaminated with oxidizers; however, tests performed in 1984 to determine burning characteristics of wipes and mop heads contaminated with nitric acid and potassium permanganate indicated that these wastes are not considered oxidizers. In addition, studies evaluating the formation of lead nitrate from leaded rubber gloves contaminated with nitric acid concluded that the gloves are not considered oxidizers. Therefore, the wastes will not exhibit the characteristic of ignitability (References ID-P111, ID-P250, ID-P253, ID-P269, RF-C028, ID-C102, RF-C260, and RF-P090).

Depleted uranium machine turnings were thermally stabilized to an oxide (i.e., roaster oxide); however, due to incomplete oxidation of some of the turnings, combustion may be possible if un-oxidized surfaces are exposed to oxygen (Reference ID-P105). On November 21, 2005, during excavation operation, a fire occurred following the retrieval and venting of a drum containing roaster oxide. The subsequent investigation concluded that the fire resulted from the rapid oxidation reaction that included the release of hydrogen from uranium hydride following the introduction and contact of oxygen to partially or incompletely roasted depleted uranium. Uranium hydride forms by the reaction of water or plastics with uranium metal. Buried uranium metal will react, or corrode, with the water vapor to form hydride on the surface. Such corrosion likely occurred during the storage of the buried drum within the oxygen-deficient atmosphere, and the availability of moisture increased the amount of hydride formed. The investigation also

concluded that similar events are likely to occur and fires should be anticipated and planned for during excavation of drums of roaster oxide (References ID-P242, ID-P250, and ID-P253).

To ensure retrieved roaster oxide will not ignite, the material is raked multiple times after placement in the waste tray. In addition, multiple samples of roaster oxide transferred into the drum packaging station are tested according to TPR-7415, *ARP-Drum Packaging System*, to ensure the material will not ignite (References ID-P122, ID-P250, ID-P253, ID-P269, and ID-U106).

The presence of slabs or large chunks of depleted uranium in the debris waste was also documented in the reference documents (References RF-C045 and RF-C123). The surfaces of these slabs should be oxidized; however, the process of excavation and recovery may expose unoxidized portions of the slabs to oxygen. Other radioactively-contaminated machine turnings from RFP were typically cemented. Small quantities of laboratory metals used at RFP such as lithium, potassium, and sodium were reacted with alcohol or xylene in the laboratories (Reference RF-C416). Sodium and sodium-potassium metals from Rockwell ATI were encased in concrete and therefore do not pose a hazard. Other pyrophoric materials, such as zirconium chips and turnings from INL generators, were also also buried in the pits (Reference ID-U298).

The possibility of nitrocellulose formation on un-washed acid-contaminated combustibles and plastics has been evaluated resulting in a determination that the formation of this compound is not possible for the waste in the Retrieval Area. It was determined that the use of nitric acid and subsequent contact with cellulose material would not form a nitrocellulose compound. If nitrocellulose could have formed, the reaction would have occurred within a short period of time at the point of generation. The combustible material within the Retrieval Area has been exposed to outside environmental conditions for more than 40 years and as such would not form nor retain any potential for residual nitrocellulose formation (References RF-C028, RF-C260, RF-P086, and RF-P090).

Because the waste in the Retrieval Area was buried more than 40 years ago, and there have previously been floods in the SDA, the waste containers may show various degrees of degradation, especially those containers that were not stacked (Reference ID-P109). As a result, the potential risk for any chemical reaction is expected to be significantly reduced. Therefore, EPA hazardous waste number D001 is not assigned. The waste will be observed for any ignitability characteristics (e.g., burning, smoking, smoldering, sparking) during retrieval and packaging operations. Magnesium oxide sand will be used to extinguish the materials if these characteristics are observed, and the materials segregated from the waste streams (References ID-P122, ID-P250, ID-P253, and ID-P269). In addition, potentially ignitable materials (e.g., un-oxidized metal turnings, bottles containing liquid or solid materials) will be segregated from the waste streams if encountered during visual examination. Further evaluation of the waste will be required if any of these characteristics are observed (References ID-P122, ID-P253, and ID-P269).

Corrosivity

The debris materials in these waste streams do not meet the definition of corrosivity as defined in 20 NMAC 4.1.200, which incorporates by reference 40 CFR 261.22, because the waste is not liquid (Reference 16 and 17). Based on review of AK documentation, numerous corrosive liquids (e.g., hydrochloric, nitric, and sulfuric acids, and potassium and sodium hydroxide) have been identified in processes that generated waste buried in the retrieval area (refer to Table II). Bottles of chemicals will be removed from the waste during retrieval and packaging operations (References ID-P122, ID-P253, and ID-P269). There is the possibility that lead-acid batteries

were buried. Any un-containerized liquids discovered during retrieval or packaging are absorbed into the soil or other suitable absorbents. Absorbent may be added to the waste during VE in the drum packaging station (References ID-C223, ID-P109, ID-P122, ID-P269, ID-P271, ID-P276, and RF-P084). Therefore, EPA HWN D002 is not assigned.

Reactivity

The debris materials in these waste streams do not meet the definition of reactivity as defined in 20 NMAC 4.1.200, which incorporates by reference 40 CFR 261.23 (References 16 and 17). The materials are stable and will not undergo violent chemical change. The materials will not react violently with water, form potentially explosive mixtures with water, or generate toxic gases, vapors, or fumes when mixed with water. The materials do not contain cyanides or sulfides in concentrations sufficient to generate toxic gases, vapors, or fumes. The materials are not capable of detonation or explosive reaction if subjected to a strong initiating source or if heated under confinement. The materials are not readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure.

Water reactive metals (e.g., calcium, lithium, and magnesium) have been identified in several documents. Small quantities of these metals were reacted with alcohol in the laboratories. Larger quantities of these metals were burned in pits at RFP or were consumed in the processes that used them (References RF-C211, RF-C416, RF-P064, RF-P084, RF-P085, RF-P091, RF-P114, RF-P262, RF-U046, and RF-U124).

Cyanide pellets were distributed in bottles among drums of RFP Building 774 second-stage (742-series) sludge (References ID-P103, RF-C045, RF-C416, RF-C420, RF-P047, RF-P260, RF-P266, RF-P562, RF-U026, and TAN-U002). A 1967 through 1972 logbook for 742-series sludge specifies cyanide pellets in a drum generated in August 1967, and cyanide in drums generated in February and March, 1968, and June, 1969 (Reference RF-U026). These drums may be in the ARP-II Retrieval Area. Because earlier 742-series sludge logbooks have not been located, it is not known if cyanide pellets were disposed in 742-series sludge prior to 1967. However, cyanide plating operations were limited in the 1950s and 1960s, and disposal of cyanide pellets would not have been a routine practice (Reference RF-C416). No other specific information has been found that indicates cyanide pellets were disposed prior to this time. If packages or bottles of cyanide pellets are identified in the sludge during visual examination, they will be removed from the waste streams. If bottles are broken during excavation or visual examination, unreacted cyanide will be contained in the waste matrix and will not be packaged for shipment to WIPP (References ID-C112, ID-P122, ID-P239, ID-P253, and ID-P269). Cyanide solutions used in RFP Buildings 444 and 881 were treated to destroy the cyanide prior to disposal, either by acidification and evaporation prior to treatment in Building 774 or by caustic chlorination and cementation (References ID-P103, ID-P250, ID-P253, RF-C414, RF-C415, RF-C416, and RF-P047).

Prior to 1970, ion-exchange resins may not have been denitrated (washed with water) or mixed with cement prior to disposal. In the past, there was some question if the resins that have dried out represent a flammable or explosive hazard. However, studies indicate that no credible mechanism exists for spontaneous detonation by degradation of a nitrate-form ion-exchange resin (References RF-C045, RF-C120, RF-C409, RF-C416, and RF-P047).

The potential for shock sensitivity or violent exothermic reaction of leaded gloves exposed to nitric acid under the proper conditions was investigated. Previous studies at RFP relating to residue from nitric acid and reaction with leaded neoprene gloves outline the stringent

conditions required for formation of reactive properties associated with nitric acid/leaded gloves. The formation of lead nitrate and organic nitrate or nitro-organic compounds were produced during this study by reacting lead-impregnated rubber gloves with concentrated nitric acid and subjecting the material to elevated temperatures (50 – 100°C) under controlled laboratory conditions. The RFP wastes were not subjected to the necessary conditions (e.g., elevated temperatures) at the time of generation. Although leaded gloves from RFP did come in contact with nitric acid, mere contact with nitric acid does not constitute the criteria for forming shock sensitive and/or thermally unstable compounds. This information in conjunction with the fact that the RFP wastes have been buried in pits that on two known occasions have undergone flooding, and the waste have been subjected to outside environmental conditions for more than 40 years, is the basis for determining that the waste is not reactive (References ID-C102, RF-C028, RF-C260, and RF-P090).

Small quantities of explosives, such as detonator caps, were used at RFP for forming, bonding, and in R&D operations; however, they were strictly regulated and controlled and would not have been placed in drums for burial (Reference RF-C416, RF-P041, RF-P106, and RF-U152). Explosives, such as black powder, blasting caps, cherry bombs, and Primacord, were used at several INL facilities. No information has been found that indicates how explosives from INL generators were managed (References ID-P097, PER-P009, PER-P039, PER-P040, PER-P043, and PER-P044). Explosive chemicals, such as hydrazine and picric acid, have been identified in several documents (References ID-P109, PER-P006, RF-C227, RF-P040, RF-P085, and RF-P260). Small quantities of picric acid were disposed in the SDA although the specific location cannot be verified (Reference ID-P109). Prior to 1970, chemicals that were no longer needed were included in contaminated RFP waste for burial (References RF-C400, RF-C401, RF-C402, and RF-U026). Although chemical names are not specified, explosive chemicals such as picric acid used at RFP were burned on site and would not have been placed in drums for burial (Reference RF-C416).

Because the waste in the Retrieval Area was buried 40 years or more ago, and there have been several floods in the SDA, the waste containers may show various degrees of degradation, especially those containers that were not stacked (Reference ID-P109). As a result, the potential risk for any chemical reaction is expected to be significantly reduced. Therefore, EPA HWN D003 is not assigned. During retrieval and packaging operations, the waste will be observed for any unanticipated reaction (e.g., bubbling, smoking, smoldering, sparking). In addition, potentially reactive materials (e.g., un-oxidized metal turnings, bottles containing liquid or solid materials) will be segregated from the waste streams if encountered during visual examination. Further evaluation of the waste will be required if any of these characteristics are observed (References ID-P122, ID-P253, and ID-P269).

Based on CCP and CWI waste management practices, the materials contained in waste streams ID-SDA-DEBRIS, ID-SDA-SLUDGE, and ID-SDA-SOIL do not exhibit the characteristics of ignitability (D001), corrosivity (D002), or reactivity (D003) as defined in 20 NMAC 4.1.200, which incorporates by reference 40 CFR 261.21, 261.22, and 262.23, respectively (References 16 and 17). VE will also be used to verify the absence of prohibited materials.

Polychlorinated Biphenyls (PCBs)

Based on evaluation of AK documentation (References ID-P103, ID-P105, RF-C058, RF-C405, RF-P040, RF-P041, RF-P047, RF-P090, RF-P181, and RF-U401), sources of PCBs in waste shipped to INL for burial may include:

- Oils containing PCBs solidified in Organic Setups (74A- and 743-series sludge) in RFP Building 774. The oils originated from transformers, oil-filled electrical equipment, vacuum pumps, and hydraulic equipment from RFP (References ID-U297, RF-C405, RF-P063, and RF-U401).
- Drums that contained these oils were emptied, and the empty drums were shipped to INL for burial in 1967 and 1968. Micro-Cel E and Oil-Dri® were added to the drum to absorb residual liquid prior to shipment. These drums would have been categorized as Type V, Noncombustible Waste (746-series waste) (Reference RF-U400).
- Fluorescent light ballasts and capacitors. Based on the disposal dates of waste in the Retrieval Area, ballasts and capacitors will contain a small amount of PCB fluid. Ballasts and capacitors would have been categorized as Type V, Noncombustible Waste.
- Painted surfaces (e.g., gloveboxes). Based on the disposal dates of waste in the Retrieval Area, paints will contain PCBs. Waste with painted surfaces would have been categorized as Type V, Noncombustible Waste. Stripped paint would have been categorized as either Type I, Combustible Waste or as Type V, Noncombustible Waste.
- Some combustible rags and wipes may have been used to cleanup spills of hydraulic and transformer fluids contaminated with PCBs (References RF-C045 and RF-U401). Combustibles would have been categorized as Type I, Combustible Waste. Trash generated in Building 774 and at 903 Pad was identified as 742-series, Type I & V waste (occasionally as Type IV) in the 742-series Sludge Logbook and on Waste Disposal Forms (References RF-U026 and RF-U400). It is believed that this practice continued until the 746- prefix came into use for combustible and non-combustible trash in the late 1960s.

Organic setups are the primary source of PCBs in the Retrieval Area. This waste contains greater than 50 parts-per-million (ppm) PCBs and is therefore regulated by the Toxic Substances Control Act (TSCA). The concentration of PCBs in this waste is based on analysis of 41 samples of organic setups waste from the INL 3,100 m^3 Program and analysis of 87 samples from the Pit 9 retrieval project. The organic setups from the INL 3,100m^3 Program that were sampled and analyzed for PCBs were originally packaged from 1981 to 1986. Because the organic setups in the retrieval area were disposed from 1966 to 1968, the 3,100m^3 data may not be representative of the buried waste. Of the 41 samples, 3 contain greater than 50 ppm PCBs with the maximum being 294 ppm. The samples from the Pit 9 retrieval project were a composite of soil and sludge waste and were homogenized before analysis and, therefore, may not be representative of the organic setups waste. Of the 87 samples, 15 contain 50 ppm or greater PCBs (Aroclor-1254 only) with the maximum being 270 ppm (References RF-U1282, RF-U405) Newly packaged drums determined by visual examination to contain any amount of organic setups waste are managed as a TSCA waste under 40 CFR 761, *Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions, and* in accordance with the PCB disposal requirements in the WIPP-WAC (References 5 and 18).

Debris waste items containing PCBs (e.g., empty oil drums with absorbent added to the bottom of the drum, fluorescent light ballasts and capacitors, painted items, and wipes/rags contaminated with PCB oils or sludges) are not targeted waste but small amounts may be inadvertently commingled with targeted waste. Newly packaged drums will be evaluated on a case-by-case basis to determine the presence of these PCB items.

Several soil samples have been collected from the ARP-I Retrieval Area and analyzed for PCBs. Only one sample contained PCBs at 0.84 ppm. PCBs were not detected in the remaining samples. However, analysis of soil samples from ARP-II for waste stream ID-SDA-SOIL detected PCB congeners in soil that did not contain organic setups waste. The PCB cogeners were detected as Tentatively Identified Compounds (TICs) from semi-volatile organic compounds (SVOC) analysis. Considering this data, newly packaged drums determined by VE to contain 50 percent or greated volume soil, waste stream ID-SDA-SOIL, are managed as a TSCA waste under 40 CFR 761 and in accordance with the PCB disposal requirements of the WIPP-WAC (References 5, 18, ID-C238, and ID-U310).

Prohibited Items

Prohibited items potentially contained in the waste buried in the Retrieval Area include unabsorbed liquids, compressed gases, and bottles of chemical reagents (References ANL-W-P010, ARA-U007, ID-U238, RF-C045, RF-C055, RF-C060, RF-C123, RF-C129, RF-C159, RF-C400, RF-C401, RF-C402, RF-P047, RF-P106, RF-P114, RF-P562, RF-U115, RF-U123, RF-U124, RF-U125, RF-U174, RF-U174, RF-U400, and RF-U402).

Visual examination (VE) is performed to ensure prohibited items are not shipped to WIPP. The retrieved waste is placed in a tray and brought to the drum packaging stations within an airlock where it is visually examined for prohibited items. Un-containerized liquids are absorbed using soil and other suitable absorbents, and any other prohibited items are removed. Bottles of chemicals are removed from the waste during retrieval and packaging operations. Compressed gases (e.g., un-punctured aerosol cans or compressed gas cylinders) are removed from the waste or vented during packaging activities (References ID-P122, ID-P253, and ID-P269). A VE record is generated to document the absence of prohibited items (References ID-P109 and ID-U305).

In preparing previously packaged sludge drums from waste stream ID-SDA-SLUDGE for solid sample analysis, an evaluation conducted identified residual liquid in the drum void space. The liquid was noted as being between the tray liner and the 90-mil polyethylene drum liner. The liquid was not present during visual examination and packaging in the drum packaging station, and was determined to be the result of redistribution or settling out of liquid from the sludge after packaging. Because a similar issue was found to potentially exist at LANL, CCP has opted to adopt a conservative approach to prevent this potential settling and accumulation of liquid in the void space of sludge drums. The packaging process has been modified to ensure that the void space within a drum is minimized by placing the waste directly in the rigid liner of the drum after visual examination. The bottom discharge tray liners, which are used for waste retrieval, are removed from the waste during packaging to allow the sludge material to minimize void space in the bottom of the drum. In addition, a granular absorbent is added to the top of the waste during VE in the drum packaging station (Reference ID-D003, ID-P122, ID-P269, ID-P273, ID-P276, and ID-U330).

Drums from waste stream ID-SDA-SLUDGE packaged with a tray liner and/or without absorbent will be repackaged to meet the new packaging configuration. The repackaging will involve removal of the waste and tray liner, replacement of the sludge directly into the rigid liner, and the addition of granular absorbent, such as the clay based absorbent Oil Dri®. By repackaging the waste in this manner all of the ID-SDA-SLUDGE drums will have the same packaging configuration, with the only difference being that the repackaged drums will have the tray liner rolled up and placed on the top of the waste. Repackaged ID-SDA-SLUDGE is characterized by radiography. The original VE data will then be used in conjunction with radiography to estimate the organic and inorganic sludge composition of the repackaged waste. In addition, secondary waste consisting of small quantities of sludge-contaminated debris such as tray liners, plastic sheeting, rubber bands, glovebox gloves, and metal tools are generated from this operation. These waste containers have been added to the debris waste stream, ID-SDA-DEBRIS, and are characterized by radiography (References ID-D003, ID-P122, ID-P269, ID-P373, and ID-U356).

Some waste from the INL facilities may have a dose rate greater than or equal to 200 mR/hr at the surface of the waste. However, payload containers that exceed this dose rate will be placed back in the Retrieval Area or repackaged to meet the WIPP-WAC.

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Attachment 3 - Acceptable Knowledge Source Document Summary

Waste Stream Number(s): ID-SDA-PIT4-DEBRIS, ID-SDA-PIT4-SLUDGE, ID-SDA-PIT4-SOIL

Site(s): INEEL	**Source Document Tracking Number:** RF-P090
Acceptable Knowledge Documentation Type: ☑ TRU Waste Management Program Information ☑ Waste Stream-Specific Information ☑ Supplemental Information	**Category:** ☐ C - Correspondence ☐ D - Discrepancy Resolution ☑ P - Published Documents ☐ U - Unpublished Documents

Title of Source Document: Acceptable Knowledge Document for INEEL Stored Transuranic Waste - Rocky Flats Plant Waste

Source Document Reference Information (author(s), document and revision number, date, publisher): INEEL Bechtel BWXT Idaho, LLC, INEL-96.0280, 3, 2/28/2003

AK # [a]	Source Doc. Page # [b]	AK Information Summary
PR2, WS7	Sec 3, pg 1	Description, mission and defense related determination provided.
PR1	Sec 3, pg 2	map of RFP
PR2, PR3, PR4, WS2, WS3, WS4, WS5, WS7, WS8, WS9, WS10, WS11, WS12, S16	Sec 3 Pages 3-1 through 3-30	TRU waste operations, defense and non-defense work, Pu operations listed by building and description, chemicals used, time of generation, and building locations. Uranium and beryllium was leached from site returns in building 881 and 771 between 73-75. Research and development was described on pages 3-10 through 3-12. Non-routine operations are described on page 3-13 (fire, K module, tritium release in 1973. Process flow of production, recovery, and purification (Page 3-7). TRU waste inventory from Rocky Flats at INEEL was 23,784 drums generated between 1971-1988. Pages 3-23 through 3-30. This chart identified IDC's, title, dates of generation, baseline EPA codes, waste stream profile forms, and approved waste stream approved EPA codes. Waste operations were described on pages 3-14 through 3-19. Segregation of waste and IDC use were described here. Packaging is described on pages 3-15 through 3-16.
PR8, WS2, WS4, WS8, WS9, WS10, WS11, WS12, S16	Sec 6 pages 6-1 through 6-4	Americium process residues include waste generation in sections 6.0- 6.1 from 1963-64 which list radionuclides, contents, and chemcials. IDC was 241. Packaging is described in section 6.2. Waste charcterization was based on knowledge of the process, VE, RTR, and headspace gas analysis. Ignitability, corrosivity, reactivity, toxicity, solvents, radionuclides with associated IDC, and complexing agents, are also described in this section.
PR4, PR6,	Section5 Pages 5-1	Adresses absorbents used at Rocky Flats for spill clean up, oil absorption, added to waste packages and drums with the potential of generating free liquids.

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Attachment 3 - Acceptable Knowledge Source Document Summary (continued)

Site(s): INEEL		Source Document Tracking Number: RF-P090
AK # [a]	Source Doc. Page # [b]	AK Information Summary
PR7, PR8, WS2, WS3, WS4, WS8, WS9, WS10, WS11, WS12, S16	through 5-6	Waste generation of drums of absorbent is described in section 5.1. Packaging is described in section 5.2 Hazardous waste determination is described in section 5.3. Ignitability, corrosivity, reactivity, toxicity, solvents, radionuclides with associated IDC, and complexing agents, are also described in this section.
WS2, WS4, WS8, WS9, WS10, WS12	Section 5-26	Summarized process and waste from 3100 m3 project. Process description including IDCs are in the first sub-section of each section.
WS8, S16	Sections 5-26	Waste packaging is described for each sections waste type in second sub-section of each section. Some will indicate absorbant material or packing material.
PR4, PR8, WS2, WS4, WS8, WS10, WS11, WS12	Sections 5-26	The third sub-section of each section incudes hazardous waste determination (chemicals and EPA codes), radionuclides, and complexing agents.
WS2, WS5, WS8, WS9, WS10, WS11, WS12	12-6, 14-7, 14-9, 21-3, 21-4, 21-6, 22-5, 22-7, 23-5, 25-4, 25-5	Process flow diagrams.

Attachment 3 - Acceptable Knowledge Source Document Summary (continued)

Site(s): INEEL	Source Document Tracking Number: RF-P090

Source Document Data Limitations (if any):

1. This document applies mostly to waste sent to the INEEL after 1974. However, many of the processes did not change significantly over time.

Acceptable Knowlege Expert:

Jerri McTaggart Jerri McTaggart Date: 11/31/05

Print /Sign

[a] Obtain from Acceptable Knowledge Documentation Checklist
[b] For microfilm or microfiche, identify box, tape, reel number and location.

CCP AK#
RF-P090

INEEL# RFP-P090

INEL-96/0280
Rev.03

Acceptable Knowledge Document for INEEL Stored Transuranic Waste— Rocky Flats Plant Waste

February 28, 2003

Idaho National Engineering and Environmental Laboratory
Bechtel BWXT Idaho, LLC

INEL-96/0280
Rev. 3

Acceptable Knowledge Document for INEEL Stored Transuranic Waste—Rocky Flats Plant Waste

February 28, 2003

Idaho National Engineering and Environmental Laboratory
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Idaho Falls, Idaho 83415

Prepared for the
U.S. Department of Energy
Assistant Secretary for Environmental Management
Under DOE Idaho Operations Office
Contract DE-AC07-99ID13727

EXECUTIVE SUMMARY

A consistent, defensible, and auditable record of acceptable knowledge for waste generated at the Rocky Flats Plant (RFP) which was sent to the Idaho National Engineering and Environmental Laboratory (INEEL) for storage is provided in this document and its supporting documentation. The wastes addressed by this document include containers currently in the INEEL accessible storage inventory, and those containers characterized and sent for disposal at the Waste Isolation Pilot Plant (WIPP) facility during the 3,100 m^3 Project. The inventory consists of transuranic (TRU) waste generated at the Rocky Flats Plant (RFP) from 1971 through 1988. The wastes consist of a wide variety of matrices generated during plutonium parts production and support operations including recovery, treatment, maintenance, laboratory, and research and development. The inventory also contains TRU wastes generated by nonroutine events including renovations, spills, fires, and decommissioning.

The Resource Conservation and Recovery Act (RCRA) and New Mexico Hazardous Waste Management Regulations authorize waste generators and treatment, storage, and disposal facilities to use acceptable knowledge (AK) in appropriate circumstances to make hazardous waste determinations. Knowledge of the materials and processes that generated a waste was used for characterization of TRU wastes when adequate documentation relating to the generating processes and composition of the wastes were available. For example, wastes contaminated with one or more spent solvents were characterized as listed hazardous waste if the compound(s) had been used for their solvent properties in the processes that generated the waste.

Acceptable Knowledge (AK) includes information relating to plant history, process operations, and waste management, in addition to waste-specific data generated prior to the effective date of the RCRA regulations. Acceptable knowledge, as an alternative to sampling and analysis, can be used to meet all or part of the waste characterization requirements under RCRA.

In addition to published documents describing the inventory and historical operations, acceptable knowledge documentation was collected from numerous other sources including the RFP library, historical document archives, operator historical records, and interviews with cognizant personnel. This revision also includes confirmatory AK data generated during the 3,100 m^3 Project; the results of data collection and confirmatory sampling and analyses conducted at the INEEL in compliance with the WIPP Contact Handled Waste Acceptance Criteria (CH-WAC) and Waste Analysis Plan (WAP) as documented in Waste Stream Profiles (WSPs). Over 600 sources of information were obtained, reviewed, and incorporated into a data management system. The information presented is traceable to the source by the alpha-numeric references in the text of this document. The references are divided into published documents, unpublished data, and correspondence, which correspond to the "P," "U," and "C" references.

In an effort to facilitate the review of the available acceptable knowledge documentation, the inventory was subdivided into "waste groups" consisting of materials with similar physical and chemical properties. Once AK information was identified and obtained, the documentation was incorporated into source files. As this document is reviewed the reader can access the source files to review the references as needed.

This document was organized to provide the reader a comprehensive presentation of the TRU waste inventory ranging from descriptions of the historical plant operations that generated and managed the waste to specific information about the composition of each waste group. The requirements that dictated and directed TRU waste characterization and authorized the use of the acceptable knowledge approach are listed in Section 2. The historical operations, waste management, characterization, certification activities associated with the inventory as well as the TRU waste inventory are summarized in Section 3. Sections 5.0 through 26.0 contain descriptions of the individual waste groups in the

inventory including waste generation, waste packaging, and waste characterization. The source references and acceptable knowledge documents reviewed during this program are listed in Appendix A.

An expanded discussion for each waste group of potential radionuclide contaminants, in addition to other physical properties and interferences that could potentially impact radioassay systems, was included in Revision 1 of this document. Revisions 1 and 2 also included a table in Appendix B, which was compiled to allow the user to determine the building or area of generation for containers in inventory using the container prefix contained in the drum identification number. The AK relating to historical operations and the date of generation could in turn be used to assess a given container for potential process specific contaminants. The accessible storage drum inventory was segregated in the table by waste group (numbered the same as the sections in this document), Item Description Code (IDC), Container Prefix, and building of generation. The generation dates, process descriptions, and potential radionucide contaminants were identified for each population. The Appendix B table is no longer included in this document. Information from the Appendix B table has been incorporated into each section for easier reference. Revision 3 was developed to augment the AK information as well as incorporate the results from confirmatory solid, and headspace gas sampling and analysis conducted for the 3,100 m^3 Project.

Information in previous revisions of this document was used by the 3,100 m^3 Project to delineate waste streams as required by the WIPP Hazardous Waste Facility Permit, Attachment B .Waste Analysis Plan. Waste stream delineation is documented in Radioactive Waste Management Complex (RWMC) EDF-922, "Identification of Transuranic Waste Streams." The information was then used to compile waste stream profiles (WSPs) and acceptable knowledge waste stream summary sheets for each waste stream. Each waste stream summary sheet was attached to its corresponding WIPP WSP and submitted to the DOE Carlsbad Field Office for review and approval. This revision can be used to continue the characterization of the RFP wastes for disposal at the WIPP facility.

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ACRONYMS

AK	Acceptable Knowledge
ANL-W	Argonne National Laboratory-West
ATMX	atomic materials rail transfer
BWR	Backlog Waste Reassessment
CBFO	Carlsbad Field Office (formerly known as the Carlsbad Area Office [CAO])
CFR	*Code of Federal Regulations*
CH	contact -handled
CH-WAC	Contact-Handled Waste Acceptance Criteria
CH-WAP	Contact-Handled Waste Analysis Plan
CWS	Chemical Warfare Service
DCP	direct cementation process
DHDECMP	dihexyl-n,n-diethylcarbamoyl methylphosphonate
DOD	United States Department of Defense
DOE	United States Department of Energy
DOR	direct oxide reduction
DOT	United States Department of Transportation
DU	depleted uranium
ECL	Environmental Chemistry Laboratory
EDF	Engineering Design File
EDL	economic discard limit
EDTA	ethylenediaminetetraacetic acid
EPA	United States Environmental Protection Agency
EU	enriched uranium
FBI	Fluidized Bed Incinerator
FY	fiscal year

GGT	Gas Generation Testing
HEPA	high efficiency particulate air
HSA	high specific activity
HSG	headspace gas
HVAC	heating, ventilation, and air conditioning
HWN	hazardous waste number
IDC	item description code
INEEL	Idaho National Engineering and Environmental Laboratory
LASL	Los Alamos Scientific Laboratory
LDR	land disposal restriction
LLNL	Lawrence Livermore National Laboratory
LLW	low level waste
LRL	Lawrence Radiation Laboratory
LSA	low specific activity
MBA	Material Balance Area
MCP	Management Control Procedure
MDC	minimum detectable concentration
MDL	method detection limit
MSE	molten salt extraction
ND	not detected
NDA	nondestructive radioassay
NGS	nuclear generating station
NMAC	New Mexico Administrative Code
OASIS	Organic and Sludge Immobilization System
ORNL	Oak Ridge National Laboratory
PADC	passive/active drum counter

PAN	passive/active neutron
PCBs	polychlorinated biphenyls
PRQL	program required quantitation limit
PVC	polyvinyl chloride
QAPD	Quality Assurance Program Description
QAPP	Quality Assurance Program Plan
QAPjP	Quality Assurance Project Plan
R&D	research and development
RCRA	Resource Conservation and Recovery Act
RFP	Rocky Flats Plant
RH	remote-handled
RPC	residue process container
RTL	regulatory threshold limit
RTR	real-time radioscopy
RWMC	Radioactive Waste Management Complex
SGRS	SWEPP Gamma-Ray System
SGS	segmented gamma scan
SRV	size reduction vault
SS	special source
SWB	standard waste box
SWEPP	Stored Waste Examination Pilot Plant
TCLP	toxicity characteristic leaching procedure
TISAB	total ionic strength adjustment buffer
TRIPS	Transuranic Reporting, Inventory, and Processing System
TRU	transuranic
TRUPACT	transuranic package container

TSA	Transuranic Storage Area
TSCA	Toxic Substance Control Act
TWCP	TRU Waste Characterization Program
UCL	upper confidence limit
VE	visual examination
WAC	Waste Acceptance Criteria
WAGS	Waste Assay Gamma System
WAP	Waste Analysis Plan
WG Pu	weapons grade plutonium
WIPP	Waste Isolation Pilot Plant
WIPPOK	WIPP okay (meets applicable WIPP criteria)
WSIC	Waste Stream Identification and Characterization
WSP	Waste Stream Profile
WSPF	Waste Stream Profile Form
WSRIC	Waste Stream and Residue Identification and Characterization
WSS	Waste Stream Summaries
WSSS	Waste Stream Summary Sheet
WWCP	WIPP Waste Characterization Program

Acceptable Knowledge Document for INEEL Stored Transuranic Waste — Rocky Flats Plant Waste

1. INTRODUCTION

The purpose of this document and supporting documentation is to present the Acceptable Knowledge (AK) available for Rocky Flats Plant (RFP) waste stored in accessible storage at the Idaho National Engineering and Environmental Laboratory (INEEL). The accessible storage inventory contains drums and boxes of transuranic (TRU) waste shipped to the INEEL from 1971 through 1988. This document focuses on the generation, packaging, and characterization of the drummed waste, since the waste boxes will be reprocessed prior to disposal. The primary objective of this document is to provide a consistent, defensible, and auditable record of AK for the inventory.

The Resource Conservation and Recovery Act (RCRA) and New Mexico Hazardous Waste Management Regulations authorize waste generators and treatment, storage, and disposal facilities to use AK in appropriate circumstances to make hazardous waste determinations. AK includes information relating to plant history, process operations, and waste management, in addition to waste specific data generated prior to the effective date of the RCRA regulations. AK, as an alternative to sampling and analysis, can be used to meet all or part of the waste characterization requirements under RCRA [P131, P132, P134, P136, P137].

Since TRU waste presents serious health and safety risks to waste characterization personnel, excessive handling and manipulation of the waste is to be minimized. In addition, TRU waste generated by Department of Energy (DOE) facilities consists of debris and other complex matrix materials that are extremely difficult to sample. The collection of representative samples of TRU waste is extremely costly and increases the potential of human exposure to radiation and, under most circumstances, is not feasible. TRU waste can be and has been characterized using AK in conjunction with radioscopy, headspace gas analysis, and solidified waste analysis, while limiting exposure to personnel and the environment [P131].

Data collected from a variety of sources relating to historical RFP operations, waste generating processes, and waste management practices are presented in this document. In addition, the available information used to determine the physical, chemical, and radiological composition of the TRU waste inventory and confirmatory data generated during characterization activities for the 3,100 m^3 Project at the INEEL have been incorporated. The information on waste is divided into waste groups that consist of populations of drums with similar sources and waste matrices. The AK record consists of Rocky Flats and INEEL information from the following sources:

Published Documentation. In general, published documents represent the most reliable, reviewed, and controlled sources of information. This documentation consists primarily of controlled documents, previously controlled documents, and procedures, in addition to formal reports, studies, and databases. Published sources are identified by the "P" at the beginning of the reference number, which appear in brackets throughout the document.

Unpublished data. Unpublished data consist of information from a variety of sources that has typically not received peer review and may not have been formally controlled. In many cases, this information will consist of the raw data used during the development of published documentation. Unpublished data include, but are not limited to, draft documents, analytical data packages, log books, and inventory lists, in addition to internal reports, studies, and databases. Unpublished sources are identified by the "U" at the beginning of the reference number, which appear in brackets throughout the document.

Correspondence. Correspondence consists of communication records relating to specific TRU waste streams or TRU waste management. Typically, this information consists of uncontrolled records of internal and external communications. Correspondence includes, but is not limited to, internal and external letters, memos, directives, telecommunication records, meeting minutes, personnel interview summaries, and discrepancy reports. Correspondence sources are identified by the "C" at the beginning of the reference number, which appear in brackets throughout the document.

Over 680 sources were collected and reviewed during the development of this document. The sources were incorporated into an inventory that is controlled as an AK record, (Appendix A) [U094]. When possible, discrepancies between sources were resolved by contacting cognizant personnel or collecting additional information. If the inconsistency was irresolvable, the most conservative information was incorporated into the document. Discrepancy reports were generated and referenced either directly in this document or in waste-stream specific waste stream summary sheets (WSSSs).

Appendix A contains the Acceptable Knowledge Record Inventory of the data sources. An Appendix B was included in revisions 1 and 2 of this document. This appendix had been compiled to allow the user to determine the building or area of generation for containers in inventory using the container prefix contained in the drum identification number. The AK relating to historical operations and the date of generation could in turn be used to assess a given container for potential process specific contaminants. The accessible storage drum inventory is segregated in the table by waste group (numbered the same as the sections in this document), item description code (IDC), container prefix, and building of generation. The generation dates, process descriptions, and potential radionuclide contaminants also were identified for each population. The Appendix B table is no longer included in this document. Information from the Appendix B table has been incorporated into each section for easier accessibility.

2. REQUIREMENTS

This section lists the requirement and guidance documents that dictate or direct waste characterization and certification activities associated with this program.

- **Contact-Handled Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant (WIPP CH-WAC), DOE/WIPP-02-3122.** The Waste Isolation Pilot Plant (WIPP) Contact-Handled (CH) Waste Acceptance Criteria (WAC) defines the quality requirements associated with the certification of compliance with WIPP operational and safety criteria. The CH-WAC requires the preparation of certification plans and associated quality assurance plans describing site-specific transuranic (TRU) waste certification programs. Acceptable Knowledge requirements defined in the CH-WAC include radionuclide and defense waste determinations.

- **40 Code of Federal Regulations (CFR) Parts 260 through 265, 268, and 270.** Title 40 of the CFR describes the federal hazardous waste regulations implementing the RCRA. The regulations define the requirements for making a hazardous waste determination and obtaining hazardous waste permits, as well as control the land disposal of hazardous wastes. Also included are standards for waste generators; transporters; and treatment, storage, and disposal facilities.

- **WIPP Hazardous Waste Facility Permit, Attachment B – Contact-Handled TRU Waste Analysis Plan (CH-WAP), U.S. Environmental Protection Agency (EPA) No. NM4890139088.** The WIPP CH Waste Analysis Plan (CH-WAP) defines the requirements that each generating site must implement before disposal of CH TRU waste. The CH-WAP contains the requirements set forth in 20 NMAC 4.1.500 (incorporating 40 CFR 264.13), including waste characterization sampling methods, statistical methods used in sampling and analysis, quality assurance objectives and data validation techniques, and waste characterization using AK.

- **Quality Assurance Program Document (QAPD), CAO-94-1012.** The QAPD establishes, implements, and maintains an effective quality assurance program that supports compliance with applicable federal, state, and local regulations and U.S. Department of Energy Orders and requirements and is applicable to the Carlsbad Field Office (CBFO) quality assurance program. The QAPD also establishes the minimum requirements for CBFO personnel, and guidance for the development and implementation of quality assurance programs by all participants managed by the CBFO.

- **Quality Assurance Project Plan for the Transuranic Waste Characterization Program, PLN-190.** This Quality Assurance Project Plan (QAPjP) specifies the quality of data necessary and the characterization techniques employed at INEEL to meet the requirements of the WIPP CH-WAP. The QAPjP describes the roles and responsibilities of all participants in the Transuranic Waste Characterization Program.

- **Collection, Review, and Management of Acceptable Knowledge Documentation, Management Control Procedure (MCP)-2989.** This INEEL procedure outlines the method for compiling, reviewing, and managing AK documentation. This procedure was implemented to assure that a consistent, defensible, and auditable record is created.

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3. TRU WASTE GENERATION

The RFP operations associated with the generation of the TRU waste inventory stored at the INEEL, a brief history of the plant, and a summary of the mission of the RFP site are described in this section. In addition, plutonium operations, uranium operations, TRU waste management, TRU waste certification, and the inventory are described.

3.1 Rocky Flats Plant Description and Mission

The DOE's Rocky Flats Plant is located in northern Jefferson County, Colorado, approximately 16 miles northwest of Denver. The 6,550-acre government-owned and contractor-operated facility was part of the nationwide nuclear weapons production complex. Groundbreaking for the first permanent buildings for the plant began in 1951. By 1954, approximately 700,000 square feet of building space had been completed. As the plant operations expanded, as much as 1.6 million square feet were occupied by manufacturing, chemical processing, plutonium recovery, and waste treatment operations. Plutonium operations were located primarily in the 384 acre high-security area (Protected Area). A map of the plant highlighting the buildings that generated TRU waste is provided in Figure 3-1 [P053].

The plant had two primary missions during the period of operations from 1952 through 1990: the production of triggers for nuclear weapons, and the processing of retired weapons for plutonium recovery. The triggers, also known as pits, were the first-stage fission bombs used to initiate the second-stage fusion reaction in hydrogen bombs [P053]. Plutonium metal was recovered from retired warheads and manufacturing residues, and was also imported from the Hanford Reservation in Washington State and the Savannah River Plant in South Carolina. Weapons parts were manufactured from plutonium, uranium, beryllium, stainless steel, and various other metals [P053].

In general, the plant's primary mission changed little from 1952 until 1990 when plutonium operations were suspended. In the early 1960s, the DOE implemented the single mission concept to reduce redundant operations between DOE facilities. At that time, Rocky Flats became the primary manufacturer for nuclear weapon triggers. With the exception of periodic refinements, only three trigger configurations were manufactured at the plant. The first two trigger designs were solid units manufactured primarily of uranium, similar to the devices used during World War II. In 1957, the trigger design was changed to sealed hollow spheres, which were manufactured with much less uranium and more plutonium. This design change resulted in lighter, smaller, and more powerful weapons [P053].

The general design of the trigger did not change dramatically since 1958, although the relative amounts of metals, dimensions, and other features of the parts were modified over the years. The primary materials of construction included plutonium, uranium, beryllium, aluminum, and stainless steel. Other metals such as cadmium, vanadium, silver, and gold were also used in some of the parts. The plant also supported weapons development programs responsible for fabricating, testing, and assembling parts with new geometries or metal compositions. Because of the plant's metal manufacturing capabilities, Rocky Flats often fabricated other weapons parts, including components made of stainless steel and beryllium [P053].

Attachment 3 - Acceptable Knowledge Source Document Summary

Site(s): Idaho National Laboratory	Source Document Tracking Number: U1002
Waste Stream Number(s): ID-ANLE-S5000 (Applicable only when site library is not in use)	
Acceptable Knowledge Documentation Type: ☑ TRU Waste Management Program Information ☑ Waste Stream-Specific Information ☑ Additional Information	Category: ☐ C - Correspondence ☐ DR - Discrepancy Resolution ☐ I - Internal procedures ☐ M - Miscellaneous ☐ P - Published plans, documents, and procedures ☑ U - Unpublished Documents
Title or Description of Source Document [a]: RH TRU RTR Prescreen For Repackaging/AK Worksheets and Videos	
Source Document Reference Information (author(s), document and revision number, date, publisher): Various, N/A, Various, N/A	

AK # [b]	Source Doc. Page # [c]	AK Information Summary
PR7, PR8, WS1, WS6, WS8, WS9, WS12, S9, S16	All	AK source includes the RH TRU RTR Prescreen for Repackaging/AK Worksheets for the 12 containers generated in Building 200. RTR Includes containers 393, 394, 395, 396, 397, 398, 399, 400, 1002, 1003, 1004, and 1005 performed during the August-September 2007 timeframe. Includes information relating to the internal packaging and waste components for these 12 containers. Identifies prohibited items including liquids, sealed containers >4 liters, and impenatrable lead lined waste cans. Also includes video recording from the prescreen for these 12 containers.

Source Document Data Limitations (if any):

1. All internal waste items cannont be determined due to lead lining in many internal containers.

Acceptable Knowlege Expert:

Travis Smith _____ Date: 09/10/2012
Print /Sign

a Provide description for non-titled information (i.e., container paperwork, MSDS sheets, etc)
b Obtain from Acceptable Knowledge Documentation Checklist
c For microfilm or microfiche, identify box, tape, reel number and location.

CCP RECORDS ORIGINAL
DATE REC'D 9/11/2012

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FRM-828
Rev. 0
08/02/07
Page 1 of 3
Used with TPR-7755
Project No. 23048
DRF No., 319143

RH TRU RTR PRESCREEN FOR REPACKAGING/AK WORKSHEET

This worksheet is used when performing prescreen radiography scan of an RH TRU drum. This information will be used when repackaging RH TRU drums or developing AK.

RTR SME: Greg Lamb (Print Name) _____ (Signature) 8/9/07 (Date)

RTR Operator: LASHELL HLADE (Print Name) _____ (Signature) 8-09-07 (Date)

File location (or DVD #) C:\movie\Prescreen\K-CELL (UNKNOWN) Date: 8-09-07

A. Drum Characteristics:

1. Drum # 00393	2. Waste Generator ANL-E (generator bldg. Unknown)
3. Drum size ☒ 30 gal. ☐ 55 gal.	4. Is drum vented? ☒ Yes ☐ No

B. Drum Packaging Characteristics:

1. Rigid liner present? ☒ Yes ☐ No	2. Rigid liner vented? ☒ Yes ☐ No
3. Drum liner bag(s) present? ☒ Yes ☐ No	4. Drum liner bags vented? ☐ Yes ☒ No
5. Estimated number of liner bags: 2 a. Closure type: ☒ Heat seal ☐ Horsetail ☐ Other (describe) _____	6. Absorbents present? 04d. 8-9-07 a. Estimated quantity: N/A 1 cup b. Location: N/A cotton and can 4d: 8-9-07
7. Liquids present between the liner and the drum? ☐ Yes ☒ No	

C. Drum Inner Packaging Characteristics:

1. Inner packages present? ☒ Yes ☐ No	2. Number of inner packages? 2
Type of inner packages: ____5 gal. 2 7-1/2 gal. ____10 gal. ____other (requires description) _____	

D. Inner Package Contents (start from top of drum):

Package #1

a. Vented ☐ Yes ☒ No

1. Description and average weight percent of physical contents: 3 metal pipes with lids. Inside pipes are plastic bottles with caps with Dense solidified material. One plastic bottle contains approx. 6 oz liquid. 1% organics 99% metal.

2. Prohibited item(s) present? ☒ Yes ☐ No	3. Number of prohibited item(s): 1

4. Description and location of prohibited item(s):
At 04d 8-9-07 15 inches, greater than residual liquid in plastic bottle in pipe.

RH TRU RTR PRESCREEN FOR REPACKAGING/AK WORKSHEET

D. Inner Package Contents (start from top of drum) con't:

Package #2

a. Vented ☐ Yes ☒ No

1. Description and average weight percent of physical contents: 1% [illegible] 97% metals
Absorbent: lead

[illegible] indeterminable due to impenetrable item.

2. Prohibited item(s) present? ☒ Yes ☐ No

3. Number of prohibited item(s): 1

4. Description and location of prohibited item(s):
impenetrable item: lead.

Package other (as applicable)

a. Vented ☐ Yes ☐ No

1. Description and average weight percent of physical contents:
CLP 8-9-07

2. Prohibited item(s) present? ☐ Yes ☐ No

3. Number of prohibited item(s): ______

4. Description and location of prohibited item(s):

(use additional continuation sheets as necessary)

RH TRU RTR PRESCREEN FOR REPACKAGING/AK WORKSHEET

E. Additional Drum configuration information/comments (additional repackaging information including hazards, sharps, lead, etc.)

Comments:

RH TRU RTR PRESCREEN FOR REPACKAGING/AK WORKSHEET

This worksheet is used when performing prescreen radiography scan of an RH TRU drum. This information will be used when repackaging RH TRU drums or developing AK.

RTR SME: Greg Lamb (Print Name) _____ (Signature) 8/9/07 (Date)

RTR Operator: LASHELL BLADE (Print Name) _____ (Signature) 8-09-07 (Date)

File location (or DVD #) C:\Medical Prescreen\K-CELL (UNANCWN) Date: 8-09-07

A. Drum Characteristics:

1. Drum # 00394	2. Waste Generator ANL-E (generator bldg. Unknown)
3. Drum size ☒ 30 gal. ☐ 55 gal.	4. Is drum vented? ☒ Yes ☐ No

B. Drum Packaging Characteristics:

1. Rigid liner present? ☒ Yes ☐ No	2. Rigid liner vented? ☒ Yes ☐ No
3. Drum liner bag(s) present? ☒ Yes ☐ No	4. Drum liner bags vented? ☐ Yes ☒ No
5. Estimated number of liner bags: 2 a. Closure type: ☒ Heat seal ☐ Horsetail ☐ Other (describe) _____	6. Absorbents present? a. Estimated quantity: 1 quart b. Location: Top of first can
7. Liquids present between the liner and the drum? ☐ Yes ☒ No	

C. Drum Inner Packaging Characteristics:

1. Inner packages present? ☒ Yes ☐ No	2. Number of inner packages? 2
Type of inner packages: ____5 gal. 2 7-1/2 gal. ____10 gal. ____other (requires description) _____	

D. Inner Package Contents (start from top of drum):

Package #1

a. Vented ☐ Yes ☒ No

1. Description and average weight percent of physical contents: 5% organics 95% steel Absorbent; lead

RTR is indeterminate due to impenetrable item.

2. Prohibited item(s) present? ☒ Yes ☐ No	3. Number of prohibited item(s): 1

4. Description and location of prohibited item(s): Lead - impenetrable item

RH TRU RTR PRESCREEN FOR REPACKAGING/AK WORKSHEET

D. Inner Package Contents (start from top of drum) con't:

Package #2

a. Vented ☐ Yes ☒ No

1. Description and average weight percent of physical contents: 1% plastic 99% steel
4 metal pipes with Caps. Inside Are plastic bottes with caps full of dense solidified material. 2 of the plastic bottles appear To Contain Sources.

2. Prohibited item(s) present? ☐ Yes ☒ No

3. Number of prohibited item(s): N/A

4. Description and location of prohibited item(s):
N/A

Package other (as applicable)

a. Vented ☐ Yes ☐ No

1. Description and average weight percent of physical contents:
GD 8-3-07

2. Prohibited item(s) present? ☐ Yes ☐ No

3. Number of prohibited item(s): _____

4. Description and location of prohibited item(s):

(use additional continuation sheets as necessary)

RH TRU RTR PRESCREEN FOR REPACKAGING/AK WORKSHEET

E. Additional Drum configuration information/comments (additional repackaging information including hazards, sharps, lead, etc.)

Comments: Bottom of 30 gallon Drum is very thin Due to rust, there appears to be holes

RH TRU RTR PRESCREEN FOR REPACKAGING/AK WORKSHEET

This worksheet is used when performing prescreen radiography scan of an RH TRU drum. This information will be used when repackaging RH TRU drums or developing AK.

RTR SME: Greg Lamb (Print Name) Greg Lamb (Signature) 9/19/07 (Date)

RTR Operator: Colleen Duffy (Print Name) C. Duffy (Signature) 9-13-07 (Date)

File location (or DVD #) K-CELL (UNKNOWN) Date: 9-13-07

A. Drum Characteristics:

1. Drum # 00395	2. Waste Generator ANL-E
3. Drum size ☒ 30 gal. ☐ 55 gal.	4. Is drum vented? ☒ Yes ☐ No

B. Drum Packaging Characteristics:

1. Rigid liner present? ☒ Yes ☐ No	2. Rigid liner vented? ☐ Yes NA NO LID ☐ No CANNOT BE DETERMINED
3. Drum liner bag(s) present? ☒ Yes ☐ No	4. Drum liner bags vented? ☐ Yes ☐ No CANNOT DETERMINED
5. Estimated number of liner bags: 2 a. Closure type: ☐ Heat seal ☐ Horsetail ☒ Other (describe) CANNOT DETERMINED	6. Absorbents present? a. Estimated quantity: ND b. Location:
7. Liquids present between the liner and the drum? ☐ Yes ☒ No	

C. Drum Inner Packaging Characteristics:

1. Inner packages present? ☒ Yes ☐ No	2. Number of inner packages? 2
Type of inner packages: X 5 gal. ____ 7-1/2 gal. ____ 10 gal. ____ other (requires description) ____	

D. Inner Package Contents (start from top of drum):

Package #1

a. Vented ☐ Yes ☒ No

1. Description and average weight percent of physical contents:
LEAD SHIELDED object UNable to penetrate through

2. Prohibited item(s) present? ☒ Yes ☐ No	3. Number of prohibited item(s): 1

4. Description and location of prohibited item(s):
Metal 5 gal. can not vented, sealed container >4 liters.

RH TRU RTR PRESCREEN FOR REPACKAGING/AK WORKSHEET

D. Inner Package Contents (start from top of drum) con't:

Package #2

a. Vented ☐ Yes ☑ No

1. Description and average weight percent of physical contents:
LEAD SHEILDED OBJECT, UNable to penetrate

2. Prohibited item(s) present? ☑ Yes ☐ No

3. Number of prohibited item(s): 1

4. Description and location of prohibited item(s):
5 gal. metal can, not vented, sealed container > 4 liters.

Package other (as applicable)

a. Vented ☐ Yes ☐ No

1. Description and average weight percent of physical contents:
N/A

2. Prohibited item(s) present? ☐ Yes ☐ No

3. Number of prohibited item(s): _____

4. Description and location of prohibited item(s):

(use additional continuation sheets as necessary)

RH TRU RTR PRESCREEN FOR REPACKAGING/AK WORKSHEET

E. Additional Drum configuration information/comments (additional repackaging information including hazards, sharps, lead, etc.)

Comments:

N/A

RH TRU RTR PRESCREEN FOR REPACKAGING/AK WORKSHEET

This worksheet is used when performing prescreen radiography scan of an RH TRU drum. This information will be used when repackaging RH TRU drums or developing AK.

RTR SME: Greg Lamb (Print Name) Greg Lamb (Signature) 9/11/07 (Date)

RTR Operator: Colleen Duffy (Print Name) Colleen Duffy (Signature) 9-10-07 (Date)

File location (or DVD #) K-cell (UNKNOWN) Date: 9-10-07

A. Drum Characteristics:

1. Drum # 00396	2. Waste Generator ANL-E
3. Drum size ☑ 30 gal. ☐ 55 gal.	4. Is drum vented? ☑ Yes ☐ No

B. Drum Packaging Characteristics:

1. Rigid liner present? ☑ Yes ☐ No	2. Rigid liner vented? 9-10-07 ☒ Yes ☐ No N/A (No liner)
3. Drum liner bag(s) present? ☒ Yes ☐ No	4. Drum liner bags vented? ☐ Yes ☐ No N/A cannot determine
5. Estimated number of liner bags: 2 a. Closure type: ☐ Heat seal ☐ Horsetail ☒ Other (describe) Cannot determined	6. Absorbents present? a. Estimated quantity: N/A b. Location:
7. Liquids present between the liner and the drum? ☐ Yes ☒ No	

C. Drum Inner Packaging Characteristics:

1. Inner packages present? ☒ Yes ☐ No	2. Number of inner packages? 2
Type of inner packages: cd 9/11/07 X 5 gal. X 7-1/2 gal. ____ 10 gal. ____ other (requires description)	

D. Inner Package Contents (start from top of drum):

Package #1

a. Vented ☐ Yes ☒ No

1. Description and average weight percent of physical contents:
Lead lined object, cannot penetrate

2. Prohibited item(s) present? ☒ Yes ☐ No	3. Number of prohibited item(s): 1

4. Description and location of prohibited item(s):
metal can not vented, (sealed container > 4 liters

RH TRU RTR PRESCREEN FOR REPACKAGING/AK WORKSHEET

D. Inner Package Contents (start from top of drum) con't:

Package #2

a. Vented ☒ Yes ☐ No

1. Description and average weight percent of physical contents:
Lead lined object not able to penetrate.

2. Prohibited item(s) present? ☐ Yes ☒ No	3. Number of prohibited item(s): N/A

4. Description and location of prohibited item(s):
N/A

Package other (as applicable)

a. Vented ☐ Yes ☐ No

1. Description and average weight percent of physical contents:
N/A

2. Prohibited item(s) present? ☐ Yes ☐ No	3. Number of prohibited item(s):

4. Description and location of prohibited item(s):

(use additional continuation sheets as necessary)

RH TRU RTR PRESCREEN FOR REPACKAGING/AK WORKSHEET

E. Additional Drum configuration information/comments (additional repackaging information including hazards, sharps, lead, etc.)

Comments:

RH TRU RTR PRESCREEN FOR REPACKAGING/AK WORKSHEET

This worksheet is used when performing prescreen radiography scan of an RH TRU drum. This information will be used when repackaging RH TRU drums or developing AK.

RTR SME: Greg Lamb (Print Name) — Greg Lamb (Signature) — 9/11/07 (Date)

RTR Operator: Colleen Duffy (Print Name) — Colleen Duffy (Signature) — 9-10-07 (Date)

File location (or DVD #) K-CELL (UNKNOWN) Date: 9-10-07

A. Drum Characteristics:

1. Drum # 00397	2. Waste Generator ANL-E
3. Drum size ☒ 30 gal. ☐ 55 gal.	4. Is drum vented? ☒ Yes ☐ No

B. Drum Packaging Characteristics:

1. Rigid liner present? ☒ Yes ☐ No	2. Rigid liner vented? ☐ Yes ☐ No N/A (NO LID)
3. Drum liner bag(s) present? ☒ Yes ☐ No	4. Drum liner bags vented? ☐ Yes ☐ No Can not N/A
5. Estimated number of liner bags: 2 a. Closure type: ☐ Heat seal ☐ Horsetail ☒ Other (describe) Can not determine	6. Absorbents present? a. Estimated quantity: ND b. Location:
7. Liquids present between the liner and the drum? ☐ Yes ☒ No	

C. Drum Inner Packaging Characteristics:

1. Inner packages present? ☒ Yes ☐ No	2. Number of inner packages? 2
Type of inner packages: ca. 9/11/07 X 5 gal. X 7-1/2 gal. ____ 10 gal. ____ other (requires description)	

D. Inner Package Contents (start from top of drum):

Package #1

a. Vented ☐ Yes ☒ No

1. Description and average weight percent of physical contents:
LEAD LINED Object, can not penetrate

2. Prohibited item(s) present? ☒ Yes ☐ No	3. Number of prohibited item(s): LQ 9-10-07 2 /

4. Description and location of prohibited item(s):
metal can, not vented, sealed container greater than 4 liters

RH TRU RTR PRESCREEN FOR REPACKAGING/AK WORKSHEET

D. Inner Package Contents (start from top of drum) con't:

Package #2

a. Vented ☐ Yes ☒ No

1. Description and average weight percent of physical contents:
LEAD LINED Object, can not penetrate

2. Prohibited item(s) present? ☒ Yes ☐ No

3. Number of prohibited item(s): 1

4. Description and location of prohibited item(s):
metal can, not vented (sealed container > 4) liter

Package other (as applicable)

a. Vented ☐ Yes ☐ No

1. Description and average weight percent of physical contents:
N/A

2. Prohibited item(s) present? ☐ Yes ☐ No

3. Number of prohibited item(s):

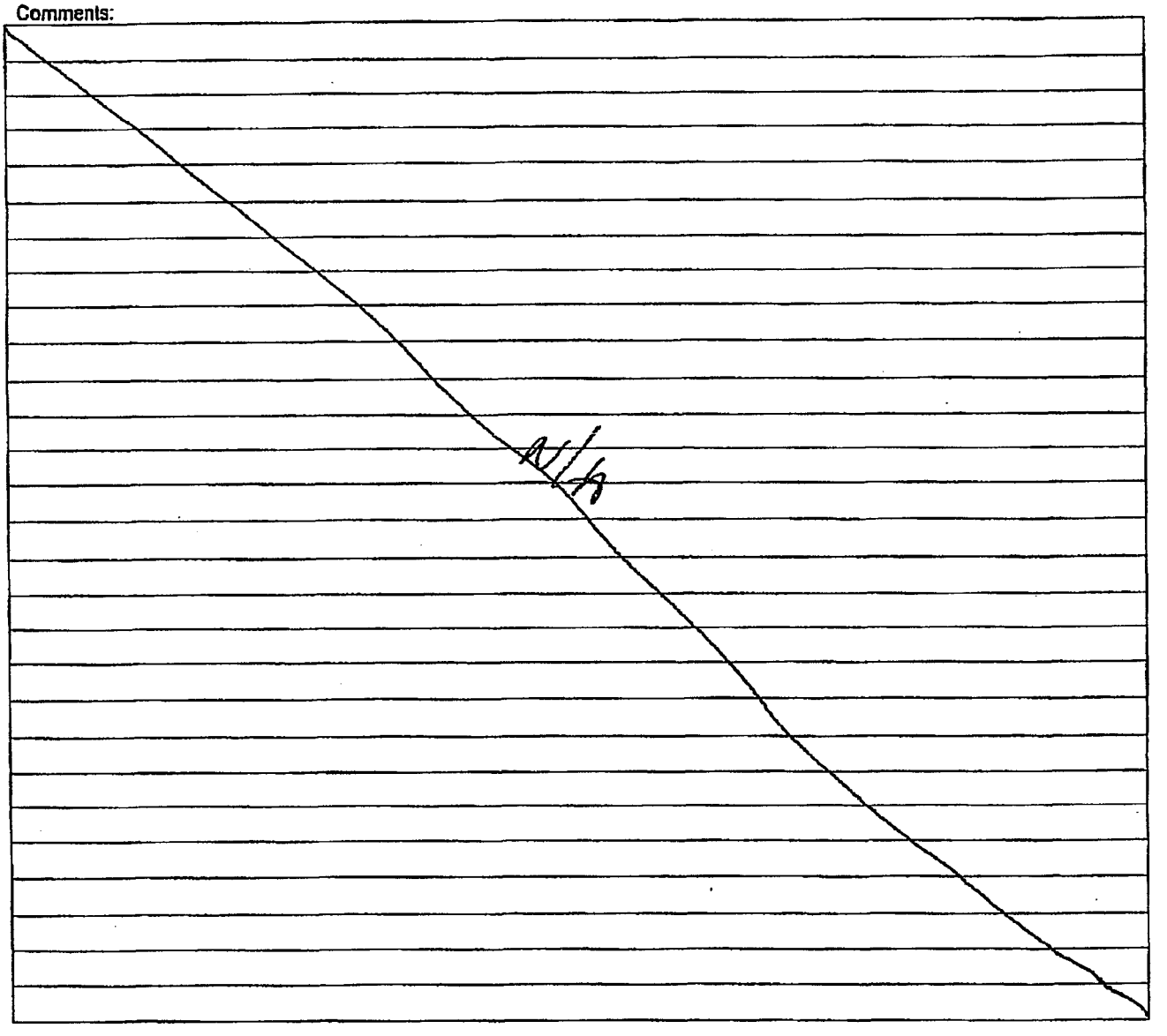
4. Description and location of prohibited item(s):

(use additional continuation sheets as necessary)

RH TRU RTR PRESCREEN FOR REPACKAGING/AK WORKSHEET

E. Additional Drum configuration information/comments (additional repackaging information including hazards, sharps, lead, etc.)

Comments:



RH TRU RTR PRESCREEN FOR REPACKAGING/AK WORKSHEET

This worksheet is used when performing prescreen radiography scan of an RH TRU drum. This information will be used when repackaging RH TRU drums or developing AK.

RTR SME: Greg Lamb (Print Name) — Greg Lamb (Signature) — 9/19/07 (Date)

RTR Operator: Colleen Duffy (Print Name) — C Duffy (Signature) — 9-13-07 (Date)

File location (or DVD #) K-CELL (UNKNOWN) Date: 9-13-07

A. Drum Characteristics:

1. Drum # 00398	2. Waste Generator ANL-E
3. Drum size ☒ 30 gal. ☐ 55 gal.	4. Is drum vented? ☒ Yes ☐ No

B. Drum Packaging Characteristics:

1. Rigid liner present? ☒ Yes ☐ No	2. Rigid liner vented? ☐ Yes ☐ No N/A NO LID
3. Drum liner bag(s) present? ☒ Yes ☐ No	4. Drum liner bags vented? ☐ Yes ☐ No CANNOT DETERMINE
5. Estimated number of liner bags: 2 a. Closure type: ☐ Heat seal ☐ Horsetail ☒ Other (describe) CANNOT DETERMINE	6. Absorbents present? a. Estimated quantity: N/A b. Location:
7. Liquids present between the liner and the drum? ☐ Yes ☒ No	

C. Drum Inner Packaging Characteristics:

1. Inner packages present? ☒ Yes ☐ No	2. Number of inner packages? 2
Type of inner packages: X 6 gal. ____ 7-1/2 gal. ____ 10 gal. ____ other (requires description) ____	

D. Inner Package Contents (start from top of drum):

Package #1

a. Vented ☐ Yes ☒ No

1. Description and average weight percent of physical contents:
~~Plastic bel~~ LA 9-13-07 LEAD SHIELDED ~~obj~~ LA 9-13-07 object CANNOT PENETRATE

2. Prohibited item(s) present? ☒ Yes ☐ No	3. Number of prohibited item(s): 1

4. Description and location of prohibited item(s):
5 gal ~~paint~~ LA 9-13-07 can, not vented, sealed container > 4 liters

RH TRU RTR PRESCREEN FOR REPACKAGING/AK WORKSHEET

D. Inner Package Contents (start from top of drum) con't:

Package #2

a. Vented ☐ Yes ☒ No

1. Description and average weight percent of physical contents:
Plastic bottles, plastic bottle w/ SOLIDIFIED, scrap plastic, Glass beaker scrap metal,
75% plastic
15% glass
10% metal

2. Prohibited item(s) present? ☒ Yes ☐ No

3. Number of prohibited item(s): 2

4. Description and location of prohibited item(s):
2 tablespoon liquid in glass beaker - 21" down in 2nd can, 5gal can, not vented sealed container >4 liters.
½ teaspoon liquid in glass bottle 22" " "
~~2 tablespoon liquid in plastic bottle 23" " "~~ 1 tablespoon liquid in plastic bottle 23" " " LA 9-13-07

Package other (as applicable)

a. Vented ☐ Yes ☐ No

1. Description and average weight percent of physical contents:
N/A

2. Prohibited item(s) present? ☐ Yes ☐ No

3. Number of prohibited item(s):

4. Description and location of prohibited item(s):

(use additional continuation sheets as necessary)

RH TRU RTR PRESCREEN FOR REPACKAGING/AK WORKSHEET

E. Additional Drum configuration information/comments (additional repackaging information including hazards, sharps, lead, etc.)

Comments:

N/A

RH TRU RTR PRESCREEN FOR REPACKAGING/AK WORKSHEET

This worksheet is used when performing prescreen radiography scan of an RH TRU drum. This information will be used when repackaging RH TRU drums or developing AK.

	Print Name	Signature	Date
RTR SME:	Greg Lamb	[signature]	8/9/07
RTR Operator:	Lashell Blade	[signature]	8-09-07

File location (or DVD #): C:\movie\Prescreen\K-cell (unknown) Date: 8-09-07

A. Drum Characteristics:

1. Drum # 00399	2. Waste Generator ANL-E (generator bldg. Unknown)
3. Drum size ☒ 30 gal. ☐ 55 gal.	4. Is drum vented? ☒ Yes ☐ No

B. Drum Packaging Characteristics:

1. Rigid liner present? ☒ Yes ☐ No	2. Rigid liner vented? ☒ Yes ☐ No
3. Drum liner bag(s) present? ☒ Yes ☐ No	4. Drum liner bags vented? ☐ Yes ☒ No
5. Estimated number of liner bags: 2 a. Closure type: ☒ Heat seal ☐ Horsetail ☐ Other (describe)	6. Absorbents present? a. Estimated quantity: 1 gallon b. Location: ~~[illegible]~~ (corrections initialed 8-9-07) See Comments
7. Liquids present between the liner and the drum? ☐ Yes ☒ No	

C. Drum Inner Packaging Characteristics:

1. Inner packages present? ☒ Yes ☐ No	2. Number of inner packages? 2
Type of inner packages: ____ 5 gal. 2 7-1/2 gal. ____ 10 gal. ____ other (requires description)	

D. Inner Package Contents (start from top of drum):

Package #1

a. Vented ☐ Yes ☒ No

1. Description and average weight percent of physical contents: 7 gallon metal can, absorbent, lead pig
RTR is indeterminate due to impenetrable item,

5 % organic 95 % metals

2. Prohibited item(s) present? ☒ Yes ☐ No	3. Number of prohibited item(s): 1

4. Description and location of prohibited item(s):
impenetrable item, lead pig

RH TRU RTR PRESCREEN FOR REPACKAGING/AK WORKSHEET

D. Inner Package Contents (start from top of drum) con't:

Package #2

a. Vented ☐ Yes ☑ No

1. Description and average weight percent of physical contents: 7 gallon vented can. 5% organic 1% plastic Metal caps, plastic bag: Absorbent, lead pig, screw driver, 94% metals flow sweepings. RTR is indeterminate due to impenetrable item.

2. Prohibited item(s) present? ☑ Yes ☐ No

3. Number of prohibited item(s): 1

4. Description and location of prohibited item(s): Impenetrable item. lead pig

Package other (as applicable)

a. Vented ☐ Yes ☐ No

1. Description and average weight percent of physical contents:

CAL 8-9-07

2. Prohibited item(s) present? ☐ Yes ☐ No

3. Number of prohibited item(s):

4. Description and location of prohibited item(s):

(use additional continuation sheets as necessary)

RH TRU RTR PRESCREEN FOR REPACKAGING/AK WORKSHEET

E. Additional Drum configuration information/comments (additional repackaging information including hazards, sharps, lead, etc.)

Comments:

Absorbent is 1/2 gallon in each Can.

RH TRU RTR PRESCREEN FOR REPACKAGING/AK WORKSHEET

This worksheet is used when performing prescreen radiography scan of an RH TRU drum. This information will be used when repackaging RH TRU drums or developing AK.

RTR SME: Greg Lamb (Print Name) Greg Lamb (Signature) 8/9/07 (Date)

RTR Operator: LASHELL ALADE (Print Name) Lashell Alade (Signature) 8-09-07 (Date)

File location (or DVD #) C:\MOVIE\PRE-SCREEN\K-CELL(UNKNOWN) Date: 8-09-07

A. Drum Characteristics:

1. Drum # 00400	2. Waste Generator ANL-E (generator bldg. Unknown)
3. Drum size ☒ 30 gal. ☐ 55 gal.	4. Is drum vented? ☒ Yes ☐ No

B. Drum Packaging Characteristics:

1. Rigid liner present? ☒ Yes ☐ No	2. Rigid liner vented? ☒ Yes ☐ No
3. Drum liner bag(s) present? ☒ Yes ☐ No	4. Drum liner bags vented? ☐ Yes ☒ No
5. Estimated number of liner bags: 2 a. Closure type: ☐Heat seal ☐Horsetail ☒Other (describe) Can't determine	6. Absorbents present? a. Estimated quantity: ½ gallon b. Location: 2nd can
7. Liquids present between the liner and the drum? ☐ Yes ☒ No	

C. Drum Inner Packaging Characteristics:

1. Inner packages present? ☒ Yes ☐ No	2. Number of inner packages? 2
Type of inner packages: ____5 gal. 2 7-1/2 gal. ____10 gal. ____other (requires description) ____	

D. Inner Package Contents (start from top of drum):

Package #1

a. Vented ☐ Yes ☒ No

1. Description and average weight percent of physical contents: 2 metal pipes with caps with 2 plastic bottles with lids with dense solidified material.

1% plastic 99% metals

2. Prohibited item(s) present? ☐ Yes ☒ No	3. Number of prohibited item(s): N/A
4. Description and location of prohibited item(s): n/a	

RH TRU RTR PRESCREEN FOR REPACKAGING/AK WORKSHEET

D. Inner Package Contents (start from top of drum) con't:

Package #2

a. Vented ☐ Yes ☒ No

1. Description and average weight percent of physical contents: 10% organics 90% metals
Absorbent, lead

RTR indeterminate due to impenetrable item.

2. Prohibited item(s) present? ☑ Yes ☐ No

3. Number of prohibited item(s): 1

4. Description and location of prohibited item(s):
Impenetrable item, lead

Package other (as applicable)

a. Vented ☐ Yes ☐ No

1. Description and average weight percent of physical contents:
N/A 8-9-07

2. Prohibited item(s) present? ☐ Yes ☐ No

3. Number of prohibited item(s):

4. Description and location of prohibited item(s):

(use additional continuation sheets as necessary)

RH TRU RTR PRESCREEN FOR REPACKAGING/AK WORKSHEET

E. Additional Drum configuration information/comments (additional repackaging information including hazards, sharps, lead, etc.)

Comments:

RH TRU RTR PRESCREEN FOR REPACKAGING/AK WORKSHEET

This worksheet is used when performing prescreen radiography scan of an RH TRU drum. This information will be used when repackaging RH TRU drums or developing AK.

RTR SME: Greg Lamb (Print Name) Greg Lamb (Signature) 8/23/07 (Date)

RTR Operator: Colleen Duffy (Print Name) Colleen Duffy (Signature) 8-23-07 (Date)

File location (or DVD #) C:\Images\Pre-screen\K-cell Date: 8-23-07

A. Drum Characteristics:

1. Drum # 001002	2. Waste Generator K-cell unknown
3. Drum size ☒ 30 gal. ☐ 55 gal.	4. Is drum vented? ☒ Yes ☐ No

B. Drum Packaging Characteristics:

1. Rigid liner present? ☒ Yes ☐ No	2. Rigid liner vented? ☒ Yes ☐ No
3. Drum liner bag(s) present? ☒ Yes ☐ No	4. Drum liner bags vented? ☐ Yes ☒ No
5. Estimated number of liner bags: 2 a. Closure type: ☐ Heat seal ☐ Horsetail ☒ Other (describe) Cut & taped	6. Absorbents present? a. Estimated quantity: N/A b. Location: N/A
7. Liquids present between the liner and the drum? ☐ Yes ☒ No	

C. Drum Inner Packaging Characteristics:

1. Inner packages present? ☒ Yes ☐ No	2. Number of inner packages? 2
Type of inner packages: 1 5 gal. ____ 7-1/2 gal. 1 10 gal. ____ other (requires description) ____	

D. Inner Package Contents (start from top of drum):

Package #1

a. Vented ☐ Yes ☒ No 60 gal glass

1. Description and average weight percent of physical contents: 1% Rubber, 1% Cellulosics, ~~20%~~ Metals, 18% Plastics — Metal? Paint cans, glass bottles, metal lids, ~~plastic~~ plastic bottles, metal? caps, Plastic caps, Rubber stopper, Plastic bags, Cardboard. (5 gallon)

2. Prohibited item(s) present? ☐ Yes ☒ No	3. Number of prohibited item(s): N/A
4. Description and location of prohibited item(s): N/A	

RH TRU RTR PRESCREEN FOR REPACKAGING/AK WORKSHEET

D. Inner Package Contents (start from top of drum) con't:

Package #2

a. Vented ☐ Yes ☒ No

1. Description and average weight percent of physical contents: 10 gallon - 1% Cardboard, 1% Rubber, 10% glass, 88% metal. - Floor sweepings, metal cans, metal lids, plastic bags, cardboard, O-ring bags, tie wire, Broken Glass.

2. Prohibited item(s) present? ☐ Yes ☒ No

3. Number of prohibited item(s): N/A

4. Description and location of prohibited item(s):

N/A

Package other (as applicable)

a. Vented ☐ Yes ☐ No

1. Description and average weight percent of physical contents:

2. Prohibited item(s) present? ☐ Yes ☐ No

3. Number of prohibited item(s): _____

4. Description and location of prohibited item(s):

(use additional continuation sheets as necessary)

RH TRU RTR PRESCREEN FOR REPACKAGING/AK WORKSHEET

E. Additional Drum configuration information/comments (additional repackaging information including hazards, sharps, lead, etc.)

Comments:

RH TRU RTR PRESCREEN FOR REPACKAGING/AK WORKSHEET

This worksheet is used when performing prescreen radiography scan of an RH TRU drum. This information will be used when repackaging RH TRU drums or developing AK.

RTR SME: Greg Lamb (Print Name) _____ (Signature) 8/23/07 (Date)

RTR Operator: Colleen Duffy (Print Name) _____ (Signature) 8/23/07 (Date)

File location (or DVD #) C:\Images\Pre-screen\K-cell Date: 8-22-07

A. Drum Characteristics:

1. Drum # MO1003	2. Waste Generator K-Cell unknown
3. Drum size ☒ 30 gal. ☐ 55 gal.	4. Is drum vented? ☒ Yes ☐ No

B. Drum Packaging Characteristics:

1. Rigid liner present? ☒ Yes ☐ No	2. Rigid liner vented? ☒ Yes ☐ No
3. Drum liner bag(s) present? ☒ Yes ☐ No	4. Drum liner bags vented? ☐ Yes ☒ No
5. Estimated number of liner bags: 2 a. Closure type: ☐Heat seal ☐Horsetail ☒Other (describe) Can't determine	6. Absorbents present? a. Estimated quantity: N/A b. Location: N/A
7. Liquids present between the liner and the drum? ☐ Yes ☒ No	

C. Drum Inner Packaging Characteristics:

1. Inner packages present? ☒ Yes ☐ No	2. Number of inner packages? 2
Type of inner packages: ____5 gal. X 7-1/2 gal. ____10 gal. ____other (requires description) _____	

D. Inner Package Contents (start from top of drum):

Package #1

a. Vented ☐ Yes ☒ No

1. Description and average weight percent of physical contents: Dense material, Possibly lead blankets, Cannot determine waste contents.

2. Prohibited item(s) present? ☒ Yes ☐ No	3. Number of prohibited item(s): 1

4. Description and location of prohibited item(s): Dense material, possibly lead blankets, Cannot penetrate item.

RH TRU RTR PRESCREEN FOR REPACKAGING/AK WORKSHEET

D. Inner Package Contents (start from top of drum) con't:

Package #2

a. Vented ☐ Yes ☒ No

1. Description and average weight percent of physical contents: 70% Metal 30% Plastic
Plastic bags, 1 gallon metal paint cans, Scott-Kote, Plastic caps, Plastic bottles, Plastic tubes, Metal washers.

2. Prohibited item(s) present? ☐ Yes ☒ No

3. Number of prohibited item(s): N/A

4. Description and location of prohibited item(s):

N/A

~~Package other (as applicable)~~

a. Vented ☐ Yes ☐ No

1. Description and average weight percent of physical contents:

N/A 9-23-07

2. Prohibited item(s) present? ☐ Yes ☐ No

3. Number of prohibited item(s): _____

4. Description and location of prohibited item(s):

(use additional continuation sheets as necessary)

RH TRU RTR PRESCREEN FOR REPACKAGING/AK WORKSHEET

E. Additional Drum configuration information/comments (additional repackaging information including hazards, sharps, lead, etc.)

Comments:

RH TRU RTR PRESCREEN FOR REPACKAGING/AK WORKSHEET

This worksheet is used when performing prescreen radiography scan of an RH TRU drum. This information will be used when repackaging RH TRU drums or developing AK.

RTR SME: Greg Lamb (Print Name) _____ (Signature) 8/23/07 (Date)

RTR Operator: Chris G. Davis (Print Name) _____ (Signature) 8-22-07 (Date)

File location (or DVD #) c:\movies\prescreen\k-cell Date: 8-22-07

A. Drum Characteristics:

1. Drum # 001004	2. Waste Generator ANL E-K CELL
3. Drum size ☑ 30 gal. ☐ 55 gal.	4. Is drum vented? ☑ Yes ☐ No

B. Drum Packaging Characteristics:

1. Rigid liner present? ☑ Yes ☐ No	2. Rigid liner vented? ☑ Yes ☐ No
3. Drum liner bag(s) present? ☑ Yes ☐ No	4. Drum liner bags vented? ☐ Yes ☑ No
5. Estimated number of liner bags: 2 a. Closure type: ☐ Heat seal ☐ Horsetail ☒ Other (describe) can't determine	6. Absorbents present? NO a. Estimated quantity: N/a b. Location: N/A
7. Liquids present between the liner and the drum? ☐ Yes ☑ No	

C. Drum Inner Packaging Characteristics:

1. Inner packages present? ☑ Yes ☐ No	2. Number of inner packages? 2
Type of inner packages: ____5 gal. ✓ 7-1/2 gal. ____10 gal. ____other (requires description) _____	

D. Inner Package Contents (start from top of drum):

Package #1 a. Vented ☐ Yes ☑ No	
1. Description and average weight percent of physical contents: 2 metal paint cans w/ lids, electric wire, razor knife, o-ring bags plastic bottle, electric outlet box, scrap metal, plastic lid 90% metal, 10% plastic	
2. Prohibited item(s) present? ☐ Yes ☑ No	3. Number of prohibited item(s): NA
4. Description and location of prohibited item(s): NA	

RH TRU RTR PRESCREEN FOR REPACKAGING/AK WORKSHEET

D. Inner Package Contents (start from top of drum) con't:

Package #2

a. Vented ☐ Yes ☑ No

1. Description and average weight percent of physical contents:
2 metal paint cans with lids, floor sweepings, plastic bags, metal scrap, glass bottles w/ metal ring inside of them, plastic disc w/ screws 70% plastic, 30% glass, ~~10%~~ Cd 8/22/07

2. Prohibited item(s) present? ☐ Yes ☑ No

3. Number of prohibited item(s): NA

4. Description and location of prohibited item(s):
NA

Package other (as applicable)

a. Vented ☐ Yes ☐ No

1. Description and average weight percent of physical contents:
Cd 8-22-07

2. Prohibited item(s) present? ☐ Yes ☐ No

3. Number of prohibited item(s): _____

4. Description and location of prohibited item(s):

(use additional continuation sheets as necessary)

RH TRU RTR PRESCREEN FOR REPACKAGING/AK WORKSHEET

E. Additional Drum configuration information/comments (additional repackaging information including hazards, sharps, lead, etc.)

Comments:

RH TRU RTR PRESCREEN FOR REPACKAGING/AK WORKSHEET

This worksheet is used when performing prescreen radiography scan of an RH TRU drum. This information will be used when repackaging RH TRU drums or developing AK.

RTR SME: Greg Lamb (Print Name) Greg Lamb (Signature) 9/11/07 (Date)

RTR Operator: Colleen Duffy (Print Name) Colleen Duffy (Signature) 9-10-07 (Date)

File location (or DVD #) K-Cell (UNKNOWN) Date: 9-10-07

A. Drum Characteristics:

1. Drum # 001005	2. Waste Generator ANL-E
3. Drum size ☒ 30 gal. ☐ 55 gal.	4. Is drum vented? ☒ Yes ☐ No

B. Drum Packaging Characteristics:

1. Rigid liner present? ☒ Yes ☐ No	2. Rigid liner vented? ☐ Yes ☐ No N/A and LID
3. Drum liner bag(s) present? ☒ Yes ☐ No	4. Drum liner bags vented? ☐ Yes ☐ No Can not determined
5. Estimated number of liner bags: 2 a. Closure type: ☐ Heat seal ☐ Horsetail ☒ Other (describe) cannot determine	6. Absorbents present? a. Estimated quantity: N/A b. Location:
7. Liquids present between the liner and the drum? ☐ Yes ☒ No	

C. Drum Inner Packaging Characteristics:

1. Inner packages present? ☒ Yes ☐ No	2. Number of inner packages? 2
Type of inner packages: ____5 gal. X 7-1/2 gal. ____10 gal. ____other (requires description)	

D. Inner Package Contents (start from top of drum):

Package #1

a. Vented ☐ Yes ☒ No

1. Description and average weight percent of physical contents:
paint can (upside down w/lid), plastic bags, scrap metal, cloth plastic bottles, tie wire, plastic caps
75% plastic
25% metal

2. Prohibited item(s) present? ☒ Yes ☐ No	3. Number of prohibited item(s): 1

4. Description and location of prohibited item(s):
*metal can (sealed container > 4liters)

RH TRU RTR PRESCREEN FOR REPACKAGING/AK WORKSHEET

D. Inner Package Contents (start from top of drum) con't:

Package #2

a. Vented ☐ Yes ☒ No

1. Description and average weight percent of physical contents:
2nd plastic bags, paint can, scrap metal, rubber stopper, tie wire, metal tubes, plastic bottles, metal pipe w/fittings, metal tray
75% metal
24% plastic
1% rubber

2. Prohibited item(s) present? ☒ Yes ☐ No

3. Number of prohibited item(s): 1

4. Description and location of prohibited item(s):
2nd metal can, not vented (sealed container greater than 4 liters)

Package other (as applicable)

a. Vented ☐ Yes ☐ No

1. Description and average weight percent of physical contents: N/A

2. Prohibited item(s) present? ☐ Yes ☐ No

3. Number of prohibited item(s):

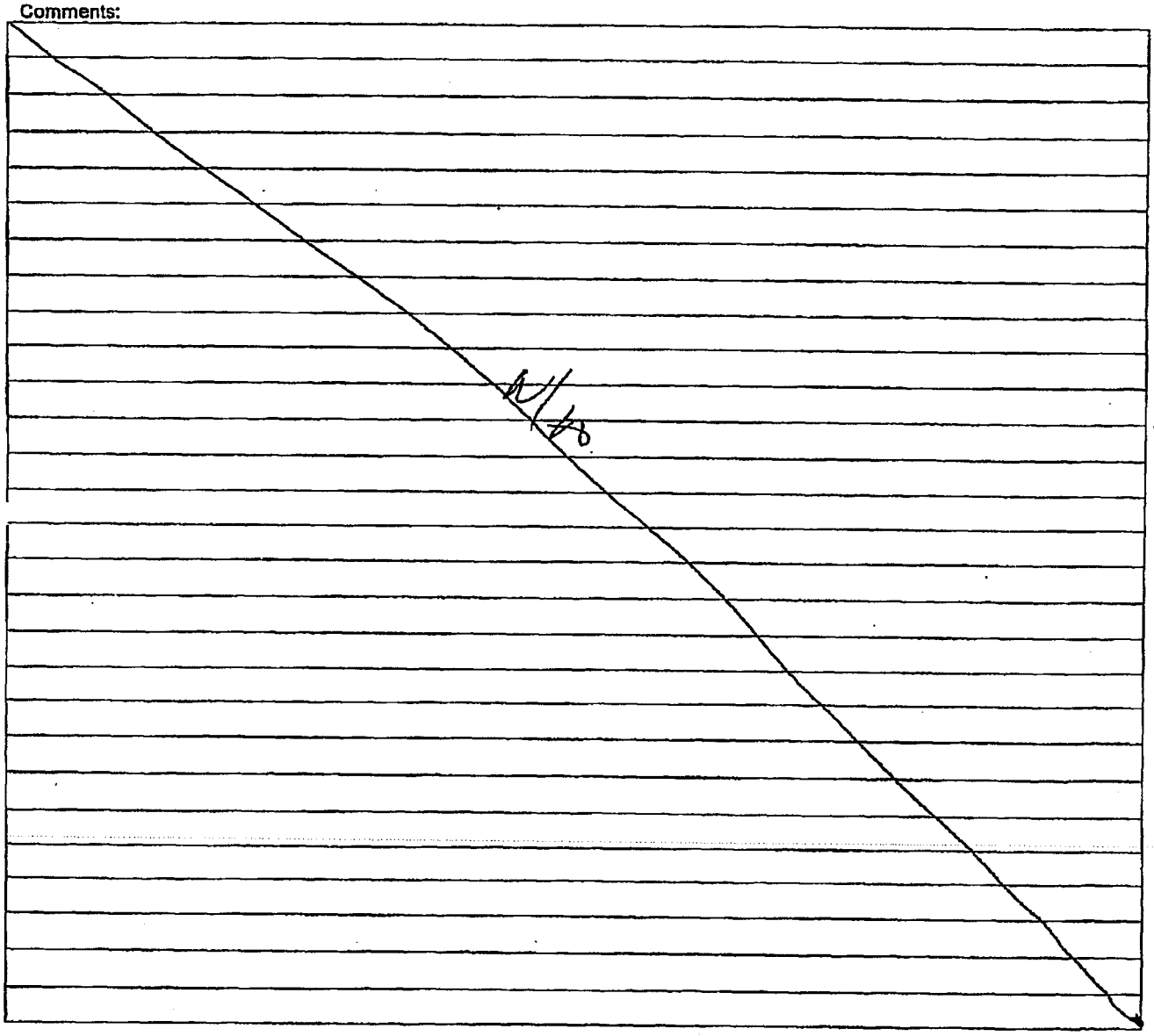
4. Description and location of prohibited item(s):

(use additional continuation sheets as necessary)

RH TRU RTR PRESCREEN FOR REPACKAGING/AK WORKSHEET

E. Additional Drum configuration information/comments (additional repackaging information including hazards, sharps, lead, etc.)

Comments:



DIVIDER PAGE ONLY

Not part of page count

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Central Records / Records Custodian, 4021 National Parks Highway - MS: GSA 203, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523

Fax Number: 575-234-7014

[X] Original Record
[ ] Fax Record
[ ] Electronic Record

Attn:	Sheila Pearcy	From:	Chezie Todd
Ship to:	CCP Central Records/CCP Records	Site:	Argonne National Laboratory - East
	Custodian	Company:	Technical Specialists
	4021 National Parks Highway – MS	Telephone Number:	575-725-0135
	GSA 203, Carlsbad, NM 88220	Date Sent:	10/02/09
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
U1002	Attachment 3 – Acceptable Knowledge Source Document for AERHDM, ID-ANLE-S5000	9/28/09	1
N/A	RH TRU RTR Prescreen for Repackaging/AK Worksheets and Videos	~~Various~~ 8/2007 - 9/2007	36

Comments

None

SG 10/2/09

Acceptance/Rejection Signature and Date

Records Accepted [✓] Sonia Gonzalez (Signature) SONIA GONZALEZ (Printed Name) 10/02/09 (Date)

Records Rejected [ ] _____ (Signature) _____ (Printed Name) _____ (Date)

Reason for Rejection:

N/A

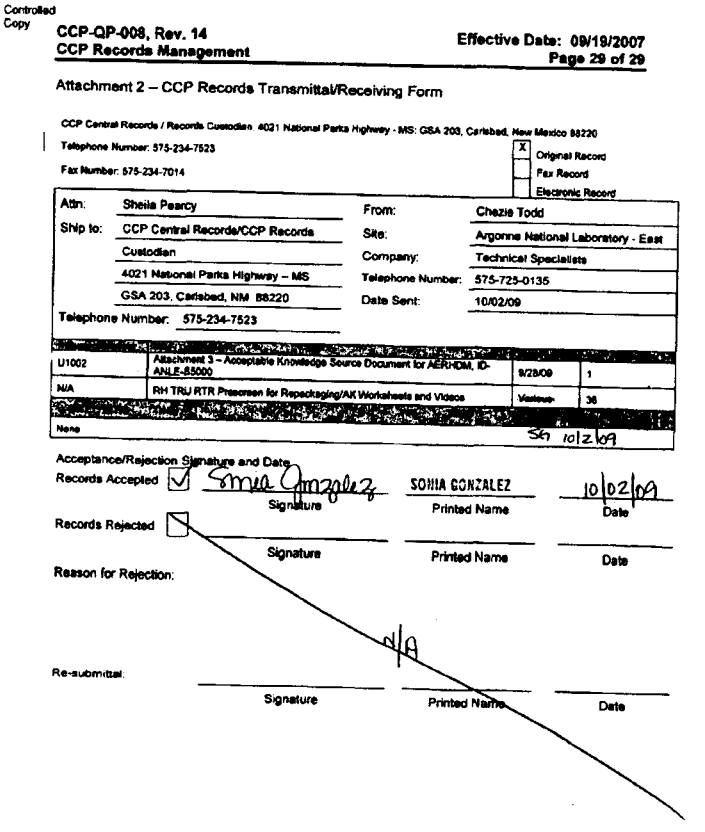
Re-submittal: _____ (Signature) _____ (Printed Name) _____ (Date)

HP Color LaserJet *CM2320nf MFP*

Fax Confirmation Report

CCP RECORDS
5752347033
Oct-2-2009 11:15AM

Job	Date	Time	Type	Identification	Duration	Pages	Result
9012	10/ 2/2009	11:14:36AM	Send	92347138	0:36	1	OK



Controlled Copy

CCP-QP-008, Rev. 14
CCP Records Management

Effective Date: 09/19/2007
Page 29 of 29

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Central Records / Records Custodian 4021 National Parks Highway - MS: GSA 203, Carlsbad, New Mexico 88220
Telephone Number: 575-234-7523
Fax Number: 575-234-7014

[X] Original Record
[ ] Fax Record
[ ] Electronic Record

Attn:	Sheila Pearcy	From:	Chezie Todd
Ship to:	CCP Central Records/CCP Records Custodian 4021 National Parks Highway – MS GSA 203, Carlsbad, NM 88220	Site: Company: Telephone Number: Date Sent:	Argonne National Laboratory - East Technical Specialists 575-725-0135 10/02/09
Telephone Number:	575-234-7523		

U1002	Attachment 3 – Acceptable Knowledge Source Document for AERI-IDM, ID-ANLE-55000	9/28/09	1
N/A	RH TRU RTR Prescreen for Repackaging/AK Worksheets and Videos	Various	36
None		SG 10/2/09	

Acceptance/Rejection Signature and Date

Records Accepted [✓] Sonia Gonzalez — Signature | SONIA GONZALEZ — Printed Name | 10/02/09 — Date

Records Rejected [ ] — Signature | Printed Name | Date

Reason for Rejection: N/A

Re-submittal: — Signature | Printed Name | Date

DIVIDER

PAGE

Attachment 3 - Acceptable Knowledge Source Document Summary

Site(s): Idaho National Laboratory	Source Document Tracking Number: C137
Waste Stream Number(s): ID-ANLE-S5000 (Applicable only when site library is not in use)	
Acceptable Knowledge Documentation Type: ☑ TRU Waste Management Program Information ☑ Waste Stream-Specific Information ☑ Additional Information	Category: ☑ C - Correspondence ☐ DR - Discrepancy Resolution ☐ I - Internal procedures ☐ M - Miscellaneous ☐ P - Published plans, documents, and procedures ☐ U - Unpublished Documents
Title or Description of Source Document [a] : Email to Julia Whitworth re: RH TRU Waste	
Source Document Reference Information (author(s), document and revision number, date, publisher): Douglas W. Parker, N/A, 03/06/2002, N/A	

AK # [b]	Source Doc. Page # [c]	AK Information Summary
WS8, WS12, S7	37-40	Emails and faxes from Julia Whitworth to Cheryl Schulz and Douglas Parker assessing the answers to the 99 questions. Some RCRA hazardous waste issues remain. Address RCRA characterization including metals, acids, and solvent use and management. Keywords, fluorescent light bulbs, charcoal, resin, solvents, lead, liquids.
PR8, WS11	1-5	Email among Julia Whitworth, Cheryl Schulz, John Saye, and "the Neimarks" discussing the 99 questions.
WS8, WS12	6-15	Faxed copy of the 99 questions.
PR8, WS4, WS8, WS12	16-36	Faxed copy of ANL-E's answers to the 99 questions. Fax is from William D. Luck (Assistant General Counsel--ANL-E) to Joe Saye (Senior Counsel--INEEL) dated March 25, 2002. Cover letter re: Answers to Questions Regarding RH-TRU Waste sent from ANL-E. Pages 19-36 is a listing of the 99 answers. Q 1-4. Silver: probably present in the waste stream as a solidified mass from silver epoxy. No TCLP at this time. Q 5-8. Chromium: Chromic acid was not in the waste stream, but chromium salts from the acid neutralization were. No TCLP at this time. Q 9-12. Hydrofluoric acid: Hydrofluoric acid was not in the waste stream, but fluorine compounds from acid neutralization were. No TCLP at this time. Q 13-16. Oxalic acid: Oxalic acid was not in the waste stream, but sodium salts from the acid neutralization were. TCLP not applicable. Q 17-20. Phosphoric acid: Phosphoric acid was not in the waste stream, but sodium (phosphate?--handwritten) salts from the acid neutralization were. TCLP not applicable. Q 21-24. Sulfuric acid: Sulfuric acid was not in the waste stream, but sodium salts from the acid neutralization were. TCLP not applicable

CCP RECORDS ORIGINAL
DATE REC'D 12/1/2012

Attachment 3 - Acceptable Knowledge Source Document Summary (continued)

Site(s): Idaho National Laboratory		Source Document Tracking Number: C137
Waste Stream Number(s): ID-ANLE-S5000 (Applicable only when site library is not in use)		
AK # [b]	Source Doc. Page # [c]	AK Information Summary
		Q 25-28. Liquids: "No absorbed liquids were ever placed in RH-TRU drums. Liquids were always evaporated to dryness. TCLP not applicable. Q 29-31. HEPA filters: "No HEPA filters were ever included in the RH-TRU wastes sent to INEEL for storage." Records indicate that the drums are still at ANL-E and were packaged after the last shipment to INEEL. Q 32-35. Fluorescent Tubes/Mercury Lamps: It is unknown if fluorescent tubes/mercury lamps were included in the RH-TRU waste stream. If present, they would be listed as "broken glass" rather than "mercury lamp" on the inventory sheets. Twelve mercury lamps were purchased before the discontinuation of their use. ANL-E calculates a maximum of 2.6 mg/kg possible, if all were to be in one can. Q 36-42. Lead: Lead was probably placed in the waste stream when lead was an acceptable material (pre RCRA). One mount containing Pb-Bi Cerrobase and a piece of lead solder were placed into the RH-TRU waste stream. No other documentation describes the presence of lead in the waste stream. *TCLP results not available. Significant pieces of lead would have been uniquely identified during packaging.* Q 43-46. Cadmium: Cadmium contaminated crucibles were not included in the waste stream. *TCLP not applicable.* Q 47-53. Carbon tetrachloride: Carbon tetrachloride was not included in the RH-TRU waste drums. All volatile organic liquids were evaporated to dryness in their containers or on rags before the containers and rags entered the waste stream. TCLP not available at this time. Q 54-61. Perchloroethylene/Toluene: Neither were included in the waste stream. Volatile organics were evaporated to dryness in their containers or on rags before the containers and rags entered the waste stream. TCLP not applicable for toluene; TCLP not available for perchloroethylene. Kleenex used to blot excess toluene left to dry in dry atmosphere of the hot cell. Eventually, it was added to the RH-TRU waste stream. Q 62-68. Chloroethene: Chloroethene was not used in the AGHCF, but chlorothene (1,1,1-trichloroethane) was. TCLP not applicable. All volatile organics were evaporated to dryness in their containers or on rags before the containers and rags entered the waste stream. Q 69-70. Pelletized clay: Pelletized clay was used as a binder for liquids and the mixture was evaporated on a hot plate. Clay was removed from the waste can if the gamma level exceeded the limit of 30 R/hr because it would be the source of activity from isotopes etchants or sodium passivation. Q 71-77. Rags: Rags used to wipe down manipulators to be decontaminated. Liquids were poured on rags and then used to wipe surfaces. Don't believe that benzene was used in hot cell. All rags dried. TCLP not available at this time. Q 78-81. Firebrick: Firebrick is in waste stream. No TCLP available. Q 82. Charcoal/Resin filter media: Charcoal and zeolite resin filter media was used to clean T2O from cell atmosphere, but contact with T2O would not cause either to be hazardous.

Attachment 3 - Acceptable Knowledge Source Document Summary (continued)

Site(s): Idaho National Laboratory		Source Document Tracking Number: C137
Waste Stream Number(s): ID-ANLE-S5000 (Applicable only when site library is not in use)		
AK # [b]	Source Doc. Page # [c]	AK Information Summary
		Q 83. Correspondence: Only C72 and C77 have anything to do with hazardous waste determinations. Q 84. D011: The benchmark report was incorrect in stating, "liquids are routinely absorbed." Liquids were evaporated to dryness. Q 85-86. Solvents: Solvents used included: xylene, butanol, acetone, ethanol, and methanol. Their disposition was not as a spent liquid. No documentation about duration of use. Butanol and xylene have not been used in the last 15 years. Q 87. Containers: Containers have no liquids in them when they enter the waste stream. Q 88-89. Light fixtures/electric motors: The PCB content of the motor (oils) is not known. Light fixtures in the cells do not contain ballasts, therefore, no PCBs. Q 90-93. Incinerator ash from Los Alamos: Incinerator ash not added to the waste stream until 1998. Q 94. Samples: Samples "would be adventitious irradiated fuel particles and contain the spectrum of solid and volatile fission products, specific fission products themselves might be hazardous. However, DOE has claimed that such inherent fission products do not make the fuel envelope, or render the other waste in contact with it hazardous. Q 95-96. Polishing compounds: Polishing compounds, e.g., used diamond paste and alumina were included and are nonhazardous. Q 97-98. Screw with solder: Based on the video for can #151in drum # 767, a coiled piece of soft solder was physically attached, not boded to a screw, as the screw was being placed into the can. They were not together. Calculations indicate it was significantly below the regulatory TCLP limit for lead. Q 99. P-Listed waste: No.

Attachment 3 - Acceptable Knowledge Source Document Summary (continued)

Site(s): Idaho National Laboratory	Source Document Tracking Number: C137

Waste Stream Number(s): ID-ANLE-S5000
(Applicable only when site library is not in use)

Source Document Data Limitations (if any):

1. Assertions not based on formal or proceduralized sampling and do not necessarily support a non-RCRA determination. No supporting documentation included.

Acceptable Knowlege Expert:

Travis Smith _____ Date: 09/05/2012
Print /Sign

a Provide description for non-titled information (i.e., container paperwork, MSDS sheets, etc)
b Obtain from Acceptable Knowledge Documentation Checklist
c *For microfilm or microfiche, identify box, tape, reel number and location.*

C137

Chicago Office
312/499-3516

Schulz, Cheryl

From: Whitworth, Julia
Sent: Thursday, March 07, 2002 10:33 AM
To: Schulz, Cheryl; Wyco, Mark
Subject: FW: RH TRU Waste

Thought you guys would be interested in the "progress" on answering the 99 questions. Cheryl, we may need to add this correspondence as a source document, so you might want to start a summary. I envision folding up other correspondence regarding this issue into a single source document.
Julia

-----Original Message-----
From: Douglas W Parker/PWD/CC01/INEEL/US [mailto:PWD@inel.gov]
Sent: Wednesday, March 06, 2002 3:06 PM
To: julia.whitworth@theitgroup.com
Subject: Re: RH TRU Waste

Julia,

Info on HWD review from ANL-E...just so you know.

Doug.
----- Forwarded by Douglas W Parker/PWD/CC01/INEEL/US on 03/06/02 03:08 PM -----

John J Saye
03/06/02 02:37 PM
To: John M Espinosa/NOS/CC01/INEEL/US@INEL, Timothy A Venneman/TEV/LMITCO/INEEL/US@INEL, Thomas L Clements/TLC/CC01/INEEL/US@INEL, Douglas W Parker/PWD/CC01/INEEL/US@INEL
cc:
Fax to:
Subject: Re: RH TRU Waste

FYI.
----- Forwarded by John J Saye/SAYEJJ/CC01/INEEL/US on 03/06/2002 02:36 PM -----

"The Neimarks" <carolandlarry@attbi.com>
03/06/2002 12:45 PM
To: "John J Saye/SAYEJJ/CC01/INEEL/US" <SAYEJJ@inel.gov>
cc: "Terri Bray" <tshearer@anl.gov>, "Bill Luck" <wluck@anl.gov>, "Adam Cohen" <adam.cohen@anl.gov>
Fax to:
Subject: Re: RH TRU Waste

Joe,
I'll give you a preliminary reply to the issue of the surrogates now, and a more complete one later after we evaluate what the total costs might

12:45 PM <adam.cohen@anl.gov>
Fax to:
Subject: Re: RH TRU Waste

Joe,

I'll give you a preliminary reply to the issue of the surrogates now, and a more complete one later after we evaluate what the total costs might be. What you're asking for in having us analyze "used" materials, in the same manner they were used in the hot-cell but not be radioactive, adds a significant perturbation to getting any analyses done, and we'll have to take that into consideration. You're asking us to duplicate some not so trivial operations in duplicate environments that do not now exist.

As to my early submittal of some answers to groups of questions, that was based on my feeling at the time that surrogate analyses were out of the question and answering the rest of the questions in a group would then be straightforward. However, subsequent to the conference call we decided to look at the feasibility of surrogate testing, leading to my question to you last week and the answer you just gave me. Surrogates apply to about 90 of your 99 questions, and until we make a determination of their feasibility I can't supply you answers to any group of questions. The 22nd is still my goal.
Larry

----- Original Message -----
From: John J Saye/SAYEJJ/CC01/INEEL/US
To: laneimark@anl.gov
Sent: Wednesday, March 06, 2002 9:47 AM
Subject: RH TRU Waste

Larry, you requested clarification concerning what the various surrogates should look like for the compliance concerns we identified in our 1/4/02 submittal to ANL-E. In short, we are suggesting that you follow the procedures in existence at the time the waste was generated but use non-rad
material. For example, make up silver epoxy, place on a mount, perform TCLP on the mount and grindings, and report the results. For materials such as solvents and spent acids that were absorbed or otherwise dried, simulate the use of the reagents. In other words, use the solvents and acids in the same manner as you did initially, only on non-rad material. After such use, absorb or dry it, whichever is appropriate for the wastestream in question and then perform the TCLP. What we don't want is for testing to be performed on unused material if the wastestream in question underwent use prior to shipment. Rather, it needs to be done on material that has been used in a manner consistent with procedures that were in place at the time.

If unused acids or solvents were absorbed unused, we need that to be identified.

Finally, in our last conversation, you indicated that we would have answers
to all 99 questions, along with supporting documentation, no later than March 22nd. Answers to the first batch of questions was to have been received on March 4th. Can you please give me a status update? Thanks!

Chicago Office
312/499-3516

Schulz, Cheryl

From: Whitworth, Julia
Sent: Sunday, March 10, 2002 6:06 PM
To: 'Douglas W Parker/PWD/CC01/INEEL/US'
Cc: Givens, Craig; Schulz, Cheryl; Wyco, Mark
Subject: RE: RH TRU Waste

Doug,

I talked with Larry Neimark late last week and he identified some concerns regarding an ANL-W document we used to support the defense relationship of the ANL-E waste. The document in question is our source document D4, which lists defense-related ANL-W fuel elements. Larry says that the ANL-W people he has talked with think this source is worthless and he himself believes that it lists many elements that are clearly not defense-related. We had previously thought this source was reliable because it was used as support in one of Terry Bray's white papers on defense relationship. In light of this information, I think it would behoove us to talk to some ANL-W people with this document in hand to get a better idea of what is and is not defense-related. The only problematic time period for us without this source is pre-1981. Larry also had some suggestions of other arguments that might be made from the ANL-E side. Let me know what you think - I should be in the office most of this week.

Julia
505-262-8754

-----Original Message-----
From: Douglas W Parker/PWD/CC01/INEEL/US [mailto:PWD@inel.gov]
Sent: Wednesday, March 06, 2002 3:06 PM
To: julia.whitworth@theitgroup.com
Subject: Re: RH TRU Waste

Julia,

Info on HWD review from ANL-E...just so you know.

Doug.
----- Forwarded by Douglas W Parker/PWD/CC01/INEEL/US on 03/06/02 03:08 PM

John J Saye
03/06/02 02:37 PM
To: John M Espinosa/NOS/CC01/INEEL/US@INEL, Timothy A Venneman/TEV/LMITCO/INEEL/US@INEL, Thomas L Clements/TLC/CC01/INEEL/US@INEL, Douglas W Parker/PWD/CC01/INEEL/US@INEL
cc:
Fax to:
Subject: Re: RH TRU Waste

FYI.
----- Forwarded by John J Saye/SAYEJJ/CC01/INEEL/US on 03/06/2002 02:36 PM

"The Neimarks" <carolandlarry@attbi.com>
03/06/2002
To: "John J Saye/SAYEJJ/CC01/INEEL/US" <SAYEJJ@inel.gov>
cc: "Terri Bray" <tshearer@anl.gov>, "Bill Luck" <wluck@anl.gov>, "Adam Cohen"

Chicago Office
312/499-3516

I pored over Appendix C of your AK report looking at the content inventory of every drum that was video taped. None identified "screw/solder" or the firebrick and ultrasonic washer that Tim Venneman said was in the same drum. When Cheryl viewed the tapes, are you saying that she made her own inventories based on the voice-over of the packager? That could lead to inconsistencies between our "official" inventories, what Cheryl thinks she heard, and what you have in your spreadsheet in Appendix C. That could open up a large can of worms. E-mail me because I'll be home tomorrow. Thanks,
Larry

Schulz, Cheryl

From: Whitworth, Julia
Sent: Thursday, March 14, 2002 8:42 AM
To: 'PWD@inel.gov'
Cc: Schulz, Cheryl
Subject: Recent Request from ANL-E

Doug,

Just wanted to keep you posted on this request for information from Larry Neimark. He left me a phone message that he had called Tim Venneman while working on some of the 99 questions and that Tim referred him to me regarding some sources of drum content information. The source in question was the videotape logs (Reference M29). We found the containers having the contents in which he was interested. Any more response on the 99 questions?

Julia Whitworth
IT-Albuquerque
505-262-8754

-----Original Message-----
From: Whitworth, Julia
Sent: Thursday, March 14, 2002 7:35 AM
To: 'The Neimarks'
Subject: RE: Defense Relationship and IT Memo

Larry,

Yes, the contents in our report in the Appendix C database are exactly what was reported on the Radioactive or Mixed Waste Disposal Requisition forms, copies of which are in the RH-TRU Data Books. That said, in order to use the videotapes as a source (which we wanted to do because they have great information!), we had to know what was on them. To facilitate this, Cheryl completed a videotape log for each videotape. These logs (and videotapes) are consistent with what was written on the Requisition forms, but considerably more detailed.

After looking through the logs, we discovered the following cans that have the contents you mentioned:

1. Can 124 (in Drum 762) - firebrick and large piece of furnace
2. Can 151 (in Drum 767) - "screw with piece of solder"
3. Can 163 (in Drum 759) - firebrick
4. Can 170 (in Drum 752) - firebrick pieces

We did not look for "ultrasonic washer" specifically, but can do so if needed. I have copies of all of the videotapes here and would be happy to verify these contents for these cans if that would be helpful. Of course, you also have the original videotapes at the hot cell if you want to have someone there check on it. Please let me know if you need any other assistance.

Julia

-----Original Message-----
From: The Neimarks [mailto:carolandlarry@attbi.com]
Sent: Wednesday, March 13, 2002 6:45 PM
To: Whitworth, Julia
Subject: Re: Defense Relationship and IT Memo

Julia,

the group

Fax Cover Sheet

IT CORPORATION
Regional Office
5301 Central Ave., NE, Suite 700
Albuquerque, New Mexico 87108-1513
FAX #: (505) 262-8855

Date: 4-25-02

From: Forest
Phone: 505-262-8744

No. of Pages: 9
(including cover sheet)

TO: NAME	LOCATION	FAX NUMBER
Cheryl Schulz	Chicago	312-263-3728

Comments:

If you receive this communication in error or do not receive all pages please call (505) 262-8702 or 8706

Summary of Questions Regarding RH TRU Waste Received from ANL-E

Compliance Concern	Source Document #	Questions
Silver: Silver epoxy Silver grindings Silver nitrate (absorbed)	C2 (excerpted from P27) Procedure IPS-2-0-00 7.14 C06 C13 (P29) Procedure IPS-2-0-00 7.15 (P29 Preparation of Metallographic Specimens)	1. Was silver epoxy/grindings/absorbed silver nitrate included in any ANL-E generated RH-TRU waste containers shipped to the INEEL for storage? If no, provide documentation that silver epoxy/grindings/absorbed silver nitrate was stored/disposed at a facility other than the INEEL or included in contact-handled TRU waste streams. 2. If so, are TCLP results available indicating the concentration of the metal constituents (provide analysis and backup documentation)? 3. If silver epoxy/grindings/absorbed silver nitrate was placed in drums received at the INEEL but no TCLP results are available, provide TCLP results from a non-radioactive surrogate of silver epoxy/grindings/absorbed silver nitrate representative of epoxy/grindings/absorbed silver nitrate shipped to INEEL for storage (or radioactively contaminated silver epoxy/grindings/absorbed silver nitrate, if it is still being generated). 4. If TCLP results (actual radioactive sample or surrogate) exceed regulatory thresholds, provide documentation and the basis for the maximum weight of silver epoxy/grindings/absorbed silver nitrate that might be contained in one drum.
Chromium: Chromic acid etchant (absorbed)	~~C06~~	5. Was absorbed chromic acid included in any ANL-E generated RH-TRU waste containers shipped to the INEEL for storage? If no, provide documentation that absorbed chromic acid was stored/disposed at a facility other than the INEEL or included in contact-handled TRU waste streams. 6. If so, are TCLP results available indicating the concentration of the metal constituents (provide analysis and backup documentation)? 7. If absorbed chromic acid was placed in drums received at the INEEL but no TCLP results are available, provide TCLP results from a non-radioactive surrogate of absorbed chromic acid (or radioactively contaminated absorbed chromic acid, if it is still being generated). 8. If TCLP results (actual radioactive sample or surrogate) exceed regulatory thresholds, provide documentation and the basis for the maximum weight of absorbed material that might be contained in one drum.
Hydrofluoric acid (HF)	~~C06~~ M18 M55	9. Was absorbed HF acid included in any ANL-E generated RH-TRU waste containers shipped to the INEEL for storage? If no, provide documentation that absorbed HF acid was stored/disposed at a facility other than the INEEL or included in contact-handled TRU waste streams. 10. If so, are TCLP results available indicating the concentration of the metal constituents (provide analysis and backup documentation)? 11. If absorbed HF acid was placed in drums received at the INEEL but no TCLP results are available, provide TCLP results from a non-radioactive surrogate of absorbed HF (or radioactively contaminated absorbed HF, if it is still being generated). 12. If TCLP results (actual radioactive sample or surrogate) exceed regulatory thresholds, provide documentation and the basis for the maximum weight of absorbed material that might be contained in one drum.

Summary of Questions Regarding RH TRU Waste Received from ANL-E

Compliance Concern	Source Document #	Questions
Oxalic acid	C65	13. Was absorbed oxalic acid included in any ANL-E generated RH-TRU waste containers shipped to the INEEL for storage? If no, provide documentation that absorbed oxalic acid was stored/disposed at a facility other than the INEEL or included in contact-handled TRU waste streams. 14. If so, are TCLP results available indicating the concentration of the metal constituents (provide analysis and backup documentation)? 15. If absorbed oxalic acid was placed in drums received at the INEEL but no TCLP results are available, provide TCLP results from a non-radioactive surrogate of absorbed oxalic acid (or radioactively contaminated absorbed oxalic acid, if it is still being generated). 16. If TCLP results (actual radioactive sample or surrogate) exceed regulatory thresholds, provide documentation and the basis for the maximum weight of absorbed material that might be contained in one drum.
Phosphoric acid	M56	17. Was absorbed phosphoric acid included in any ANL-E generated RH-TRU waste containers shipped to the INEEL for storage? If no, provide documentation that absorbed phosphoric acid was stored/disposed at a facility other than the INEEL or included in contact-handled TRU waste streams. 18. If so, are TCLP results available indicating the concentration of the metal constituents (provide analysis and backup documentation)? 19. If absorbed phosphoric acid was placed in drums received at the INEEL but no TCLP results are available, provide TCLP results from a non-radioactive surrogate of absorbed phosphoric acid (or radioactively contaminated absorbed phosphoric acid, if it is still being generated). 20. If TCLP results (actual radioactive sample or surrogate) exceed regulatory thresholds, provide documentation and the basis for the maximum weight of absorbed material that might be contained in one drum.
Sulfuric acid	C66 M55	21. Was absorbed sulfuric acid included in any ANL-E generated RH-TRU waste containers shipped to the INEEL for storage? If no, provide documentation that absorbed sulfuric acid was stored/disposed at a facility other than the INEEL or included in contact-handled TRU waste streams. 22. If so, are TCLP results available indicating the concentration of the metal constituents (provide analysis and backup documentation)? 23. If absorbed sulfuric acid was placed in drums received at the INEEL but no TCLP results are available, provide TCLP results from a non-radioactive surrogate of absorbed sulfuric acid (or radioactively contaminated absorbed sulfuric acid, if it is still being generated). 24. If TCLP results (actual radioactive sample or surrogate) exceed regulatory thresholds, provide documentation and the basis for the maximum weight of absorbed material that might be contained in one drum.

Summary of Questions Regarding RH TRU Waste Received from ANL-E

Compliance Concern	Source Document #	Questions
Liquids (absorbed)	C29	25. Were other absorbed liquids included in any ANL-E generated RH-TRU waste containers shipped to the INEEL for storage? If no, provide documentation that absorbed liquids were stored/disposed at a facility other than the INEEL or included in contact-handled TRU waste streams. 26. If so, are TCLP results available indicating the concentration of the metal constituents (provide analysis and backup documentation)? 27. If absorbed liquids were placed in drums received at the INEEL but no TCLP results are available, provide TCLP results from a non-radioactive surrogate of the absorbed liquids in question (or radioactively contaminated absorbed liquids, if it is still being generated). 28. If TCLP results (actual radioactive sample or surrogate) exceed regulatory thresholds, provide documentation and the basis for the maximum weight of absorbed material that might be contained in one drum.
HEPA filters: Filter Frames	C14 Handwritten (3-22-96)– TII C13 – ~~C29~~	29. Were any HEPA filters included in any ANL-E generated RH-TRU waste containers shipped to the INEEL for storage? If yes, were any of the filters shipped to the INEEL first stage filters? If so, provide TCLP analysis for all constituents of concern and backup documentation for these filters. If no, were any of the filters shipped to the INEEL second or later stage filters and/or some other type of filter? Can these filters be documented as being stored/disposed at a facility other than the INEEL or included in contact-handled TRU waste streams? If yes, provide documentation that supports the route of storage/disposal. 30. If any filters were placed in drums received at the INEEL but no TCLP results are available, provide TCLP results from a non-radioactive surrogate of the filter in question (or radioactively contaminated filters, if they are still being generated). 31. If TCLP results (actual radioactive sample or surrogate) exceed regulatory thresholds, provide documentation on a drum-by-drum basis as to the maximum weight of filters within those containers identified as containing filters.
Fluorescent tubes/Mercury lamps	~~C29~~ – ~~C13~~ – M29	32. Were fluorescent tubes/mercury lamps included in any ANL-E generated RH-TRU waste containers shipped to the INEEL for storage? If no, provide documentation that fluorescent tubes/mercury lamps were stored/disposed at a facility other than the INEEL or included in contact-handled TRU waste streams. 33. If so, are TCLP results available indicating the concentration of the metal constituents (provide analysis and backup documentation)? 34. If fluorescent tubes/mercury lamps were placed in drums received at the INEEL but no TCLP results are available, provide TCLP results from a non-radioactive surrogate of the fluorescent tubes/mercury lamps in question (or radioactively contaminated fluorescent tubes/mercury lamps, if they are still being generated). 35. If TCLP results (actual radioactive sample or surrogate) exceed regulatory thresholds, provide documentation and the basis for the maximum weight of fluorescent tubes/mercury lamps that might be contained in one drum.

Summary of Questions Regarding RH TRU Waste Received from ANL-E

Compliance Concern	Source Document #	Questions
Lead	C13 C75 ✓ C76 ✓ C78 ✓ D23 ✓	36. Was lead included in any ANL-E generated RH-TRU waste containers shipped to the INEEL for storage? If no, provide documentation that lead was stored/disposed at a facility other than the INEEL or included in contact-handled TRU waste streams. 37. If so, are TCLP results available indicating the concentration of the lead (provide analysis and backup documentation)? 38. If lead was placed in drums received at the INEEL but no TCLP results are available, provide TCLP results from a non-radioactive surrogate of the lead in question (or radioactively contaminated lead, if it is still being generated). 39. If TCLP results (actual radioactive sample or surrogate) exceed regulatory thresholds, provide documentation and the basis for the maximum weight of lead that might be contained in one drum. 40. Would lead have been identified during packaging/repackaging in the inventory leads as a routine practice? 41. Please provide an explanation of the referenced sources (i.e., correspondence). Ref. Tiger, Ref. D23 42. Appendix B indicates a significant amount of lead in the waste stream. Are these containers shielded? D008 waste code is assigned. Is this correct?
Cadmium	C81 C94	43. Were crucibles contaminated with cadmium included in any ANL-E generated RH-TRU waste containers shipped to the INEEL for storage? If no, provide documentation that crucibles contaminated with cadmium were stored/disposed at a facility other than the INEEL or included in contact-handled TRU waste streams. 44. If so, are TCLP results available indicating the concentration of the metal constituents (provide analysis and backup documentation)? 45. If crucibles contaminated with cadmium were placed in drums received at the INEEL but no TCLP results are available, provide TCLP results from a non-radioactive surrogate of the crucibles contaminated with cadmium in question (or radioactively contaminated crucibles contaminated with cadmium, if they are still being generated). 46. If TCLP results (actual radioactive sample or surrogate) exceed regulatory thresholds, provide documentation and the basis for the maximum weight of crucibles contaminated with cadmium that might be contained in one drum.

Summary of Questions Regarding RH TRU Waste Received from ANL-E

Compliance Concern	Source Document #	Questions
Carbon tetrachloride	~~C68~~ C12 C16 Procedure ~~IPS-2-8-08-7.15~~	47. Was absorbed carbon tetrachloride included in any ANL-E generated RH-TRU waste containers shipped to the INEEL for storage? If no, provide documentation that absorbed carbon tetrachloride was stored/disposed at a facility other than the INEEL or included in contact-handled TRU waste streams. 48. If so, are TCLP results available indicating the concentration of the metal and organic constituents (provide analysis and backup documentation)? 49. If absorbed carbon tetrachloride was placed in drums received at the INEEL but no TCLP results are available, provide TCLP results from a non-radioactive surrogate of the absorbed carbon tetrachloride in question (or radioactively contaminated absorbed carbon tetrachloride, if it is still being generated). 50. If TCLP results (actual radioactive sample or surrogate) exceed regulatory thresholds, provide documentation and the basis for the maximum weight of absorbed carbon tetrachloride that might be contained in one drum. 51. What documentation exists that shows that carbon tetrachloride was evaporated instead of being absorbed? 52. How was carbon tetrachloride used in the hot cells? 53. Was carbon tetrachloride used as a solvent?
Perchloroethylene, Toluene	~~C68~~ P29 ~~C29~~ – for liquids. above	54. Was absorbed perchloroethylene/toluene included in any ANL-E generated RH-TRU waste containers shipped to the INEEL for storage? If no, provide documentation that absorbed perchloroethylene/toluene was stored/disposed at a facility other than the INEEL or included in contact-handled TRU waste streams. 55. If so, are TCLP results available indicating the concentration of the metal and organic constituents (provide analysis and backup documentation)? 56. If absorbed perchloroethylene/toluene were placed in drums received at the INEEL but no TCLP results are available, provide TCLP results from a non-radioactive surrogate of the absorbed perchloroethylene/toluene in question (or radioactively contaminated absorbed perchloroethylene/toluene, if it is still being generated). 57. If TCLP results (actual radioactive sample or surrogate) exceed regulatory thresholds, provide documentation and the basis for the maximum weight of absorbed perchloroethylene/toluene that might be contained in one drum. 58. What documentation exists that shows that perchloroethylene/toluene was evaporated instead of being absorbed? 59. How was perchloroethylene/toluene used in the hot cells? 60. Was perchloroethylene/toluene used as a solvent (P29)? 61. What happened to the 'Kleenex' that was used to blot excess toluene?

the group

Fax Cover Sheet

IT CORPORATION
Regional Office
5301 Central Ave., NE, Suite 700
Albuquerque, New Mexico 87108-1513
FAX #: (505) 262-8855

Date: 4-29-02

From: Forest

Phone: 505-262-8744

No. of Pages: 3 (including cover sheet)

TO: NAME	LOCATION	FAX NUMBER
Cheryl Schulz	Chicago	312-263-2728

Comments:

If you receive this communication in error or do not receive all pages please call (505) 262-8702 or 8706

Summary of Questions Regarding RH TRU Waste Received from ANL-E

Compliance Concern	Source Document #	Questions
Chloroethene	M01 ✓ M62 ✓	62. Was absorbed chloroethene included in any ANL-E generated RH-TRU waste containers shipped to the INEEL for storage? If no, provide documentation that absorbed chloroethene was stored/disposed at a facility other than the INEEL or included in contact-handled TRU waste streams. 63. If so, are TCLP results available indicating the concentration of the metal and organic constituents (provide analysis and backup documentation)? 64. If absorbed chloroethene was placed in drums received at the INEEL but no TCLP results are available, provide TCLP results from a non-radioactive surrogate of the absorbed chloroethene in question (or radioactively contaminated absorbed chloroethene, if it is still being generated). 65. If TCLP results (actual radioactive sample or surrogate) exceed regulatory thresholds, provide documentation and the basis for the maximum weight of absorbed chloroethene that might be contained in one drum. 66. What documentation exists that shows that chloroethene was evaporated instead of being absorbed? 67. How was chloroethene used in the hot cells? 68. Was chloroethene used as a solvent?
Pelletized clay (absorbents)	T02* ✓ M3 ✓	69. See statements under liquids (general). 70. Reference cans #21, 201, and 223, originally packaged 3/15/94, and repackaged 10/24/95. The document claims that two containers of pelletized clay removed during repackaging; please provide an explanation of why they were removed.
Rags General		71. How were rags used in conjunction with organic liquids? (i.e., benzene, toluene, 1,1,1-TCA, carbon tetrachloride) 72. Did the use of organic liquids in conjunction with the rags constitute a listed waste? If not, provide the basis for this determination. 73. Were rags contaminated with organic liquids included in any ANL-E generated RH-TRU waste containers shipped to the INEEL for storage? If no, provide documentation that the rags were stored/disposed at a facility other than the INEEL or included in contact-handled TRU waste streams? 74. If so, are TCLP results available indicating the concentration of the metal and organic constituents (provide analysis and backup documentation) 75. If rags contaminated with organic liquids were placed in drums received at the INEEL but no TCLP results are available, provide TCLP results from a non-radioactive surrogate of the rags in question (or radioactively contaminated rags, if it is still being generated) or some other basis to demonstrate that the rags would no longer exceed TCLP limits after 30 years in storage. (e.g., rate of evaporation of solvent over a period of time.) 76. If TCLP results (actual radioactive sample or surrogate) exceed regulatory thresholds, provide documentation and the basis for the maximum weight of rags contaminated with organic liquids that might be contained in one drum. 77. What documentation exists that shows that organic liquids were placed on the rags prior to use?

Summary of Questions Regarding RH TRU Waste Received from ANL-E

Compliance Concern	Source Document #	Questions
Firebrick	~~C20~~	78. Was firebrick included in any ANL-E generated RH-TRU waste containers shipped to the INEEL for storage? If no, provide documentation that firebrick was stored/disposed at a facility other than the INEEL or included in contact-handled TRU waste streams. 79. If so, are TCLP results available indicating the concentration of the metal constituents (provide analysis and backup documentation)? 80. If firebrick was placed in drums received at the INEEL but no TCLP results are available, provide TCLP results from a non-radioactive surrogate of the firebrick in question (or radioactively contaminated firebrick, if it is still being generated)? 81. If TCLP results (actual radioactive sample or surrogate) exceed regulatory thresholds, provide documentation and the basis for the maximum weight of firebrick that might be contained in one drum.
Charcoal/Resin Filter media	M1 ✓ ~~M3~~ M4 ✓ M8 ✓ ~~C29~~ C120 ✓	82. Reference can #40 (charcoal resin): How was the material used? What chemicals would they have come into contact with? Has it been characterized?
Correspondences	Falconer 5/18/93 (Rad Fr. C86 ✓ C74 ✓ C18 ✓ C72 ✓ C77 ✓	83. Explain the interactions of all of the documents and the basis for making the determination that the waste is not hazardous.
D011	Benchmark AK report - Assume that everyone besides this. D39	84. The document assigned D011 to streams generated in the hot cell. This document addresses wastes generated from 1985 to 2000. The document makes claims that liquids are routinely absorbed or evaporated, and also indicates that listed waste solvents were used prior to 1985. Can you explain why the D011 does not apply to the containers received at the INEEL and identify which liquids were evaporated and absorbed?
Solvents		85. What solvents were used? 86. When was solvent use discontinued (by each solvent)?
Containers		87. For equipment meeting the definition of a container, is there evidence that such equipment was emptied in accordance with RCRA requirements prior to being packaged?
Light Fixtures/Electric Motors	~~M1-M3~~ M2 M6 ✓ ~~M29~~ — See Fluorescent Tubes	88. Did light fixtures/electric motors contain PCBs greater than 50 ppm? 89. Were the ballasts removed from light fixtures?

Summary of Questions Regarding RH TRU Waste Received from ANL-E

Compliance Concern	Source Document #	Questions
Incinerator Ash from Los Alamos	T1	90. Was incinerator ash included in any ANL-E generated RH-TRU waste containers shipped to the INEEL for storage? If no, provide documentation that incinerator ash was stored/disposed at a facility other than the INEEL or included in contact-handled TRU waste streams. 91. If so, are TCLP results available indicating the concentration of the metal constituents (provide analysis and backup documentation)? 92. If incinerator ash was placed in drums received at the INEEL but no TCLP results are available, provide TCLP results from a non-radioactive surrogate of incinerator ash representative of incinerator ash shipped to INEEL for storage (or radioactively contaminated incinerator ash, if it is still being generated)? 93. If TCLP results (actual radioactive sample or surrogate) exceed regulatory thresholds, provide documentation and the basis for the maximum weight of incinerator ash that might be contained in one drum.
Samples	T1	94. Review the samples noted in source document T1, and provide a hazardous waste determination for each.
Polishing Compounds	M29	95. What chemicals were involved with polishing compounds? 96. What was the hazardous waste determination for these polishing compounds?
Screw with solder	M29	97. What chemicals were involved with the screw with solder? 98. What was the hazardous waste determination for this screw with solder?
P-listed Waste		99. Were any P-listed wastes ever managed in the hot cells?

* No current source document number could be found so the old source document number was referenced.

the group

Fax Cover Sheet

IT CORPORATION
Regional Office
5301 Central Ave., NE, Suite 700
Albuquerque, New Mexico 87108-1513
FAX #: (505) 262-8855

Date: 4/?/02

From: J. Whorton No. of Pages: ?
Phone: . (including cover sheet)

TO: NAME	LOCATION	FAX NUMBER
Cheryl Schulz	Chicago	

Comments:

99 Q. Response

If you receive this communication in error or do not receive all pages please call (505) 262-8702 or 8706

ARGONNE NATIONAL LABORATORY
LEGAL DEPARTMENT
TELECOPIER TRANSMITTAL SHEET

PLEASE DELIVER THE FOLLOWING PAGES TO:

NAME(S): Joe Saye
INEEL

FAX NUMBER(S): (208)528-0685

FROM: William D. Luck

DATE: March 25, 2002

SUBJECT:

NOTES: See attached.

CONFIDENTIALITY NOTICE

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PLEASE VERIFY RECEIPT

ARGONNE NATIONAL LABORATORY
9700 South Cass Avenue
Argonne, Illinois 60439

William D. Luck
Assistant General Counsel

Phone: (630) 252-7300
Fax: (630) 252-5986

March 25, 2002

Joe Saya
Senior Counsel
Idaho National Engineering & Environmental Laboratory
Bechtel BWXT Idaho, LLC
P.O. Box 1625
Idaho Falls, Idaho 83415

Re: Answers to Questions Regarding RH-TRU Waste From ANL-E

Dear Joe:

Enclosed as requested is a document entitled "Answers to Questions Regarding RH-TRU Waste sent from ANL-E," prepared in response to the 99 questions on the subject that you sent to General Counsel Mark Jones in January.

You and I have talked about arranging for a telephone call to discuss subsequent steps. I will be calling you to try finalizing arrangements that are convenient for the schedules of all concerned.

Sincerely,

William D. Luck
Assistant General Counsel

WDL/ml

Enclosure

Answers to Questions Regarding RH-TRU Waste Sent from ANL-E

Silver

1. Probably yes for silver epoxy, but not as grindings, only as a solidified mass. Silver nitrate etchant was used very sparingly on Zircaloy metal, which was not a common material in the hot cell during the period in question. The answer, therefore, is "probably".
2. No. No TCLP results available
3. TCLP results from a non-radioactive surrogate drum are not available at this time. However, a plan is being developed to obtain meaningful TCLP results for process materials that may have been included in the RH-TRU drums now at INEEL where relevant.
4. TCLP results not available at this time.

Chromium

5. No, absorbed chromic acid was not included, but chromium salts derived from neutralization of the acid were.
6. No. - No TCLP results available
7. TCLP results from a non-radioactive surrogate drum are not available at this time. However, a plan is being developed to obtain meaningful TCLP results for process materials that may have been included in the RH-TRU drums now at INEEL where relevant.
8. TCLP results not available at this time.

Hydrofluoric Acid

9. No, but fluorine compounds derived from neutralization of the acid were. —
10. Not applicable; absorbed HF acid was not a waste form.
11. Not applicable.
12. Not applicable.

i.e, acids were always neutralized before absorption. —
#11- TCLP not applicable for HF. Question is whether unused (i.e. excess) HF was ever neutralized.

Oxalic Acid

13. No, absorbed oxalic acid was not included, only sodium salts remaining from its neutralization.
14. Not applicable; absorbed oxalic acid was not a waste form.
15. Not applicable.
16. Not applicable.

Phosphoric Acid

17. No, absorbed phosphoric acid was not included, only sodium phosphate salts remaining from its neutralization.
18. Not applicable; absorbed phosphoric acid was not a waste form.
19. Not applicable.
20. Not applicable.

Sulfuric Acid

21. No, absorbed sulfuric acid was not included, only sodium salts from its neutralization.
22. Not applicable; absorbed sulfuric acid was not a waste form.
23. Not applicable.
24. Not applicable.

Liquids

25. No absorbed liquids were placed in RH-TRU drums. Liquids were always evaporated to dryness. What ab... HEPA filters Generated prob. 1995?
26. Not app
27. Not ap
28. Not a

HEPA Filters

29. No HEPA filters were ever included in the RH-TRU wastes sent to INEEL for storage. Our records indicate that the drums containing first stage HEPA filters are stored at ANL-E, as they were packaged after the last shipment to Idaho was made.

30. Not applicable.

31. Not applicable.

Fluorescent Tubes/Mercury Lamps

32. Unknown. Purchase records indicate that 12 mercury vapor lamps were purchased in 1975; shortly thereafter, the use of these lamps was discontinued. Assuming that the 12 lamps were placed into the hot cell, at most 12 lamps would have been placed in the waste stream. Lamps are broken for volume reduction prior to placement in the waste containers (and would not be identified as "mercury lamp" on the inventory list but rather as "broken glass"); therefore, a significant percentage (most likely >90%) of the mercury vapor was released into the hot cell atmosphere. The mercury vapor co for a 400W lamp) was obtained from an MSDS. If the 12 la RH/TRU waste container and assuming that the waste conta maximum concentration of mercury in the drum would be 2. is much less than the 4 mg/kg totals limit for mercury; there not be hazardous.

33. Yes, generic fluorescent tubes were sent for analysis

34. Not applicable as demonstrated by the conservative c to Question 32.

35. TCLP results do not exceed regulatory thresholds.

Lead

36. Yes, lead was probably placed into the RH/TRU waste stream when lead was an acceptable material (pre-RCRA). However, there is no documentation indicating the form, amount, quantity, or purpose (e.g., shielding) available. Pb-Bi Cerrobase was used to mount metallographic samples for a specific project. Records indicate that a single metallographic mount, A/G477A1, was placed into the RH-TRU waste stream on 7/20/95. A piece of lead solder was also placed into a waste container as discussed in the response to questions 97-98. No other documentation examined confirms that lead was placed into the RH-TRU waste stream.

37. No TCLP analytical results are available.

38. TCLP results from a non-radioactive surrogate drum are not available at this time. However, a plan is being developed to obtain meaningful TCLP results for process materials that may have been included in the RH-TRU drums now at INEEL where relevant (e.g., Pb-Bi cerrobase as part of a metallographic mount).

39. TCLP results are not available at this time.

40. Yes, significant pieces of lead would have been uniquely — This did not occur in the case of lead shielding, but may have been an oversight for insignificant amount. How would lead have been identified?

41. [illegible] #41 Refs. C13, C75, C76, and [illegible] correctly locates the Alpha [illegible] See also response to Quest [illegible] a.)

C13 is relevant — lists metal slugs incl. lead as waste in SB6 Category 16 which could include RH-TRU waste. C75, 76, 78 are not.

42. [illegible] reliable source of information and should not be relied [illegible] ion; after a significant amount of study, there were [illegible]. For example, page P-IN-303 indicates that the waste was vitrified and has no information on other waste constit[illegible] However, it is a fact that the waste shipped to INEEL f[illegible] stream, not a vitrified waste stream. Page P-IN-303 in[illegible] canister to overpack 55-gal drums; however, it is a fac[illegible] in 30-gal drums. The page also implies that lead pack[illegible] documentation examined confirms this and procedure[illegible] shielding materials were used in the waste packages. Additionally, the "AK Information Summary" coversheet to this reference states that page P-IN-303 "states that noncombustible and combustible wastes were segregated, and lists constituents of each." This information is not on the referenced page. Finally, page P-IN-303 [illegible] dicts information provided on page P-IN-304. Base[illegible] not be relied upon for accurate information rel[illegible]

Text of D23 explains that INEL did not provide the waste Matl. Param. info. EL

this is on p. 30 Summary sheet correct.

Why not explain where the D308 came from? We have to defend this at audit.

Cadmium (Note: Ref C81 is not in any reference list i[illegible]

43. No. The CMT Division, mentioned in the respo[illegible] [illegible]ducted research on fuel reprocessing using cadmium cr[illegible] [illegible] the Integral Fast Reactor program. In support of that program, seven metallography mounts (A/G No. 413) were brought into the AGHCF in 1990 for Scanning Electron Microscope examination. Our records (the FIMS) show that these seven specimens are still in the hot cell.

44. Not applicable.

45. Not applicable.

46. Not applicable.

Carbon Tetrachloride

47. No, absorbed CCl_4 was not included in the RH-TRU drums. All volatile organic liquids were evaporated to dryness in their containers or on rags before the containers and rags entered the waste stream. (See response to Questions 71-77.) Note that Refs C12, C16 and Procedure IPS-2-0-00 7.15 make no mention of CCl_4 either in the AGHCF or in its waste stream.

48. Not applicable.

49. TCLP results from a non-radioactive surrogate drum are not availal However, a plan is being developed to optimally obtain meaningful process materials that may have been included in the RH-TRU drur where relevant.

50. TCLP results not available at this time.

(51.) No documentation exists to show that individual quantities of CCl_4 were evaporated rather than absorbed. The AGHCF Sort Procedure (AGHCF-SORT, Jan. 1987) stipulates that all liquids, including volatile or[g] yness, as liquids are forbidden in the waste strean

52. Carbon tetrachloride was use ensity of solid specimens. In the early days of the hot cell, y early 1970's, CCl_4 may have been used to rinse meta ocumented procedure stating this is not available, only the ~~30-year old recollections~~ of two retired hot-cell technicians (Ref. C66).

53. Carbon tetrachloride may have been used as a extractant solvent only in its possible use to rinse metallography mounts of their polishing residues.

Perchloroethylene, Toluene

54. No, absorbed perchloroethylene and toluene were not included in the AGHCF waste stream, nor were they stored or disposed of at another facility. Volatile organic compounds

were evaporated to dryness in their containers or on rags before the containers and rags entered the waste stream. (See response to Questions 71-77).

55. Not applicable for toluene. Unavailable for perchloroethylene.

56. TCLP for perchlorethylene results from a non-radioactive surrogate drum are not available at this time. However, a plan is being developed to optimally obtain meaningful TCLP results for process materials that may have been included in the RH-TRU drums now at INEEL where relevant. TCLP not applicable for toluene.

57. TCLP results not available at this time for perchloroethylene. Not ~~a~~ ?

58. See answer to Question No. 51.

59. Perchloroethylene was used to wipe manipulator parts as they were worked on. Toluene was used to rinse metallog residues.

60. Perchloroethylene might be described as a solvent in the ho ~~solutions~~ were formed by its use. The manipulators were essentially greaseless when it was applied. Toluene was used as a rinse agent, which could be considered to be an extractant solvent. Its use was based on its volatility and ability to leave a residue-free surface.

61. The Kleenex used to blot excess toluene was left to dry in the dry atmosphere (<100 ppm H_2O vapor) of the hot cell. It eventually was added to the RH-TRU waste stream.

Chloroethene

62. No, chloroethene (vinyl chloride) was not used in the AGHCF. However, chloroethene (1,1,1-trichloroethane) was.

63. Not applicable.

64. Not applicable.

65. Not applicable.

66. The answer to Question No. 51 also pertains to chloroethene.

67. Chloroethene was used to wipe manipulator parts to remove contamination before they were worked on.

68. Chloroethene might be described as a solvent in the hot-cell, although no solutions were formed by its use. The manipulators were essentially greaseless when it was applied.

Pelletized Clay

69. The objective of this question is not obvious. However, pelletized clay was generally used as a binder for liquids and the mixture then evaporated to dryness on a hot-plate. The answers to Questions 25-28 would be applicable here.

70. Pelletized clay was removed from a can if the gamma activity level of the can would make the drum activity exceed the 30R/hr limit or the earlier 15R/hr limit. The pelletized clay was the source of the activity, apparently owing to fission-product isotopes from etching or sodium passivation operations.

Rags General

71. Rags were used to wipe down manipulators and other surfaces to be decontaminated. For decontamination operations, the rags were first impregnated with the liquid and then used to wipe the surfaces. Note that benzene was never used in-cell, to the best of our knowledge.

72. No. The rags were not wetted with a spent solvent nor was a spent solvent disposed of in the RH-TRU waste stream; all wet rags were dried thoroughly prior to packaging in the RH-TRU waste containers.

73. Yes, rags that once were damp with organic liquids before they dried were shipped to INEEL.

74. No TCLP results are available.

75. See answer to Question No. 3.

76. TCLP results are not available at this time.

77. No documentation exists that shows the organic liquids were placed on the rags prior to use. However, this is standard practice supported by current and past process knowledge. Pouring liquids on an object and then wiping it off would create an unnecessary mess.

Firebrick

78. Yes.

79. TCLP results are not available for the firebrick that was included in the waste sent to INEEL.

80. Firebricks used in the AGHCF were effectively generic in nature, some coming from the linings of furnaces (but not directly exposed to reactants). Attached is a generic MSDS for "insulating firebrick products".

81. Not applicable.

Charcoal/Resin Filter Media

82. Charcoal and zeolite resin were used in in-cell canister-type "vacuum sweepers" in an attempt to clean the cell atmosphere of T_2O. Neither the charcoal nor the zeolite were ever characterized, as the intended purpose was not really satisfied; however, contact with T_2O would not cause the charcoal or zeolite to become a hazardous waste.

Correspondence

83. We have no knowledge of the April 7, 1993 request by INEEL for additional information or characterization of the ANL waste stored and INEEL, nor do we recall having input to Mr. Brunner's response to Mr. Falconer (actually Ref. C120). Mr. Brunner's answer is essentially correct, save for the answers being supplied for this question panel. Ref. C18 pertains to calculation of radionuclide content and is not germane to a hazardous waste determination. Reference C72 is a repeat of Ref. C29, each a 1988 ANL internal survey to better understand the AGHCF waste stream and the EPA and RCRA implications. Ref. C74 is a Program Plan for the TREAT Reactor prepared by the ANL Reactor Analysis and Safety Division. It has no direct bearing on the wastes generated in the AGHCF, although most of the TREAT experiments were examined in the facility. Ref. C77 is the 1995 letter that addresses the issue of whether the neutralization of our acid etchants, which are subsequently mixed with pelletized clay and heated to dryness, renders the etchants non-hazardous. References to 40CFR260.10 and 264.1 are cited by the then ANL Radioactive Waste Specialist in the WMO Division. Ref C86 is a 1991 letter responding to a question of the percentage of "metal" in the ANL RH-TRU waste stream. The question of hazardous metals was not asked and an answer was not in the letter. To summarize, the only interaction between any of these references cited is between Ref. C72, a 1988 amplification of one of our in-cell processes, and Ref. C77, a 1995 letter providing the rationale for classifying the results of the operation as non-hazardous.

D011

84. One of our comments on the "Benchmark AK Report" was to correct the statements that "liquids are routinely absorbed," leaving the impression that a liquid waste form existed. This is not true as we have shown in our comments on the report and indicated in the answers to numerous questions in this document. No liquids were "absorbed"; all the liquids identified in this question panel were evaporated to dryness, from liquid-contacted surfaces at room temperature or heated pelletized clay. Also, the D011 category applies to silver, and it is not obvious why it is included in the context of this question.

Solvents

85. A number of different solvents were used over the years for very specific purposes. In addition to those enumerated elsewhere in this question panel, they were xylene (for cleaning metallographic lens and rinsing metallography mounts), butanol (for passivating sodium and NaK), acetone (for decontaminating metal surfaces), ethanol (as an ingredient in etchants and for decontaminating metal surfaces), and methanol (as an ingredient in etchants). Although some of these solvents were used as mobilizers or extractants, their disposition was never as a spent liquid, and, therefore, they never entered the waste stream as such. Rather, they were either evaporated or mixed with pelletized clay, which was then heated and evaporated to dryness in the dry atmosphere of the hot-cell.

86. Documentation as to when use of each of these solvents was discontinued is not available. Butanol and xylene have not been used for many years, at least fifteen.

Containers

87. Equipment "containers" meet the "common container emptying practice" criterion, namely they contain no liquids at the time they enter the waste stream and subsequently are packaged. All of our procedures, dating from the 1976 Safety Analysis for RH-TRU waste and our Sort Procedure, forbid any liquids in the waste stream. All containers, therefore, contain no liquids, either by virtue of pouring or evaporation over time.

Light Fixtures/Electric Motors

88. We have no knowledge of the PCB content of any of the electrical motors that were disposed of over the 20 year period in question. Light fixtures in the cell do not contain ballasts and therefore do not contain PCBs.

89. Ballasts were not part of the light fixtures that were disposed of.

Incinerator Ash from Los Alamos

90. No. A portion of the incinerator ash from Los Alamos was mixed with Pu during a process operation. This material was not sent to INEEL, as our documentation shows it was not put into a waste stream until 1998, after the last shipment was made to INEEL.

91. Not applicable.

92. Not applicable.

93. Not applicable.

Samples

94. Ref. T1 is the entire SPM database for special nuclear materials at the ANL-E site. It does not pertain specifically to the waste sent to INEEL, although the special nuclear materials that were sent are included. As these materials would be adventitious irradiatiated fuel particulates that contain the entire spectrum of solid and volatile fission products, specific fission-products by themselves might be deemed "hazardous". However, DOE has deemed that such inherent fission-products do not make the fuel envelope, or the other waste it may be in contact with, a "hazardous" waste.

Polishing Compounds

95. Polishing compounds were commercially-procured diamond paste or alumina . The contained "chemicals" are carbon, in the diamond paste, and alumina, in the alumina product.

96. The MSDSs for these materials (attached) are the bases for concluding that they are not hazardous materials.

Screw with Solder

97. Based on a review of the video for can #151 in drum No. 767, a coiled piece of soft solder 0.062 in dia., approximately 11 in. long happened to be physically attached, not bonded to a screw as the screw was being placed into the can. They were not together as a component from a larger unit. A likely similar solder currently in the ANL stockroom is 60% Pb and 40% Sn. By actual weighing an 11 in. piece of this solder weighs 4.7 g or 2.82 g of Pb. Drum 767 weighed 155 lbs, or 70.45 kg. The total lead content would then be 40 mg/kg, and the equivalent TCLP 2.0 mg/L. That is significantly below the regulatory TCLP limit of 5.0 mg/L for lead.

98. See No. 97, above.

P-listed Waste

99. No.

the IT group

Fax Cover Sheet

IT CORPORATION
Regional Office
5301 Central Ave., NE, Suite 700
Albuquerque, New Mexico 87108-1513
FAX #: (505) 262-8855

Date: 4-25-02

From: Forest
Phone: 505-262-8744

No. of Pages: 7
(including cover sheet)

TO: NAME	LOCATION	FAX NUMBER
Cheryl Schulz	Chicago	312-263-2738

Comments:

If you receive this communication in error or do not receive all pages please call (505) 262-8702 or 8706

Answers to Questions Regarding RH-TRU Waste Sent from ANL-E

Silver

1. Probably yes for silver epoxy, but not as grindings, only as a solidified mass. Silver nitrate etchant was used very sparingly on Zircaloy metal, which was not a common material in the hot cell during the period in question. The answer, therefore, is "probably".
2. No. No TCLP results available
3. TCLP results from a non-radioactive surrogate drum are not available at this time. However, a plan is being developed to obtain meaningful TCLP results for process materials that may have been included in the RH-TRU drums now at INEEL where relevant.
4. TCLP results not available at this time.

Chromium

5. No, absorbed chromic acid was not included, but chromium salts derived from neutralization of the acid were.
6. No. - No TCLP results available
7. TCLP results from a non-radioactive surrogate drum are not available at this time. However, a plan is being developed to obtain meaningful TCLP results for process materials that may have been included in the RH-TRU drums now at INEEL where relevant.
8. TCLP results not available at this time.

Hydrofluoric Acid

9. No, but fluorine compounds derived from neutralization of the acid were.
10. Not applicable; absorbed HF acid was not a waste form.
11. Not applicable.
12. Not applicable.

Oxalic Acid

13. No, absorbed oxalic acid was not included, only sodium salts remaining from its neutralization.
14. Not applicable; absorbed oxalic acid was not a waste form.
15. Not applicable.
16. Not applicable.

Phosphoric Acid

17. No, absorbed phosphoric acid was not included, only sodium salts remaining from its neutralization.
18. Not applicable; absorbed phosphoric acid was not a waste form.
19. Not applicable.
20. Not applicable.

Sulfuric Acid

21. No, absorbed sulfuric acid was not included, only sodium salts from its neutralization.
22. Not applicable; absorbed sulfuric acid was not a waste form.
23. Not applicable.
24. Not applicable.

Liquids

25. No absorbed liquids were ever placed in RH-TRU drums. Liquids were always evaporated to dryness.
26. Not applicable.
27. Not applicable.
28. Not applicable.

HEPA Filters

29. No HEPA filters were ever included in the RH-TRU wastes sent to INEEL for storage. Our records indicate that the drums containing first stage HEPA filters are stored at ANL-E, as they were packaged after the last shipment to Idaho was made.

30. Not applicable.

31. Not applicable.

Fluorescent Tubes/Mercury Lamps

32. Unknown. Purchase records indicate that 12 mercury vapor lamps were purchased in 1975; shortly thereafter, the use of these lamps was discontinued. Assuming that the 12 lamps were placed into the hot cell, at most 12 lamps would have been placed in the waste stream. Lamps are broken for volume reduction prior to placement in the waste containers (and would not be identified as "mercury lamp" on the inventory list but rather as "broken glass"); therefore, a significant percentage (most likely >90%) of the mercury vapor was released into the hot cell atmosphere. The mercury vapor content of the lamps (97.6 mg for a 400W lamp) was obtained from an MSDS. If the 12 lamps were placed into the same RH/TRU waste container and assuming that the waste container weighed 100 lbs, the maximum concentration of mercury in the drum would be 2.6 mg/kg. This concentration is much less than the 4 mg/kg totals limit for mercury; therefore, the waste drum would not be hazardous.

33. Yes, generic fluorescent tubes were sent for analysis and the results are attached.

34. Not applicable as demonstrated by the conservative calculations discussed in the response to Question 32.

35. TCLP results do not exceed regulatory thresholds.

Lead

36. Yes, lead was probably placed into the RH/TRU waste stream when lead was an acceptable material (pre-RCRA). However, there is no documentation indicating the form, amount, quantity, or purpose (e.g., shielding) available. Pb-Bi Cerrobase was used to mount metallographic samples for a specific project. Records indicate that a single metallographic mount, A/G477A1, was placed into the RH-TRU waste stream on 7/20/95. A piece of lead solder was also placed into a waste container as discussed in the response to questions 97-98. No other documentation examined confirms that lead was placed into the RH-TRU waste stream.

37. No TCLP analytical results are available.

38. TCLP results from a non-radioactive surrogate drum are not available at this time. However, a plan is being developed to obtain meaningful TCLP results for process materials that may have been included in the RH-TRU drums now at INEEL where relevant (e.g., Pb-Bi cerrobase as part of a metallographic mount).

39. TCLP results are not available at this time.

40. Yes, significant pieces of lead would have been uniquely identified.

41. To the best of our knowledge, Refs. C13, C75, C76, and C78 have no relevance to the topic in question. Ref. D23 incorrectly locates the Alpha-Gamma Hot Cell Facility in Bldg. 205; it is in Bldg. 212. (See also response to Questions No. 42 and 43 on Cadmium.)

42. Appendix P appears to be an unreliable source of information and should not be relied utilized for waste characterization; after a significant amount of study, there were numerous inconsistencies found. For example, page P-IN-303 indicates that the waste was vitrified and has no information on other waste constituents (such as aluminum metal). However, it is a fact that the waste shipped to INEEL from ANL-E is a debris waste stream, not a vitrified waste stream. Page P-IN-303 indicates that the waste is in an RH canister to overpack 55-gal drums; however, it is a fact that waste was shipped to INEEL in 30-gal drums. The page also implies that lead packaging materials were used; no documentation examined confirms this and procedures clearly indicate that no lead shielding materials were used in the waste packages. Additionally, the "AK Information Summary" coversheet to this reference states that page P-IN-303 "states that noncombustible and combustible wastes were segregated, and lists constituents of each." This information is not on the referenced page. Finally, page P-IN-303 contradicts information provided on page P-IN-304. Based on the reasons above, the reference should not be relied upon for accurate information relating to waste characterization.

Cadmium (Note: Ref C81 is not in any reference list in ANL's possession)

43. No. The CMT Division, mentioned in the response to Question No. 42, has conducted research on fuel reprocessing using cadmium crucibles for the Integral Fast Reactor program. In support of that program, seven metallography mounts (A/G No. 413) were brought into the AGHCF in 1990 for Scanning Electron Microscope examination. Our records (the FIMS) show that these seven specimens are still in the hot cell.

44. Not applicable.
45. Not applicable.
46. Not applicable.

Carbon Tetrachloride

47. No, absorbed CCl_4 was not included in the RH-TRU drums. All volatile organic liquids were evaporated to dryness in their containers or on rags before the containers and rags entered the waste stream. (See response to Questions 71-77.) Note that Refs C12, C16 and Procedure IPS-2-0-00 7.15 make no mention of CCl_4 either in the AGHCF or in its waste stream.
48. Not applicable.
49. TCLP results from a non-radioactive surrogate drum are not available at this time. However, a plan is being developed to optimally obtain meaningful TCLP results for process materials that may have been included in the RH-TRU drums now at INEEL where relevant.
50. TCLP results not available at this time.
51. No documentation exists to show that individual quantities of CCl_4 were evaporated rather than absorbed. The AGHCF Sort Procedure (AGHCF-SORT, Jan. 1987) stipulates that all liquids, including volatile organics, are to be evaporated to dryness, as liquids are forbidden in the waste stream. (Copy of reference included.)
52. Carbon tetrachloride was used as a medium to measure the density of solid specimens. In the early days of the hot cell, from 1964 until perhaps the very early 1970's, CCl_4 may have been used to rinse metallography mounts. However, a documented procedure stating this is not available, only the 30-year old recollections of two retired hot-cell technicians (Ref. C66).
53. Carbon tetrachloride may have been used as a extractant solvent only in its possible use to rinse metallography mounts of their polishing residues.

Perchloroethylene, Toluene

54. No, absorbed perchloroethylene and toluene were not included in the AGHCF waste stream, nor were they stored or disposed of at another facility. Volatile organic compounds

were evaporated to dryness in their containers or on rags before the containers and rags entered the waste stream. (See response to Questions 71-77).

55. Not applicable for toluene. Unavailable for perchloroethylene.

56. TCLP for perchlorethylene results from a non-radioactive surrogate drum are not available at this time. However, a plan is being developed to optimally obtain meaningful TCLP results for process materials that may have been included in the RH-TRU drums now at INEEL where relevant. TCLP not applicable for toluene.

57. TCLP results not available at this time for perchloroethylene. Not applicable for toluene.

58. See answer to Question No. 51.

59. Perchloroethylene was used to wipe manipulator parts and remove contamination before they were worked on. Toluene was used to rinse metallography mounts of their polishing residues.

60. Perchloroethylene might be described as a solvent in the hot-cells, although no solutions were formed by its use. The manipulators were essentially greaseless when it was applied. Toluene was used as a rinse agent, which could be considered to be an extractant solvent. Its use was based on its volatility and ability to leave a residue-free surface.

61. The Kleenex used to blot excess toluene was left to dry in the dry atmosphere (<100 ppm H_2O vapor) of the hot cell. It eventually was added to the RH-TRU waste stream.

Chlorothene

62. No, chloroethene (vinyl chloride) was not used in the AGHCF. However, chlorothene (1,1,1-trichloroethane) was.

63. Not applicable.

64. Not applicable.

65. Not applicable.

66. The answer to Question No. 51 also pertains to chlorothene.

67. Chlorothene was used to wipe manipulator parts to remove contamination before they were worked on.

68. Chlorothene might be described as a solvent in the hot-cell, although no solutions were formed by its use. The manipulators were essentially greaseless when it was applied.

Schulz, Cheryl

From: Whitworth, Julia
Sent: Thursday, April 11, 2002 9:27 AM
To: Schulz, Cheryl; Givens, Craig
Subject: FW: 99 Questions

-----Original Message-----
From: Whitworth, Julia
Sent: Thursday, April 11, 2002 8:27 AM
To: 'Douglas W Parker/PWD/CC01/INEEL/US'
Subject: RE: 99 Questions

Doug,

Here are my thoughts on the 99 question responses related to metals, acids, and liquids (generally). Sorry for the informal format, but hope the information is helpful. More to follow on organics.

1. Silver - in lieu of TCLP results, it would be helpful to know the composition of silver nitrate etchant and its frequency of use.

2. Chromium - similar to silver, some information on the frequency of use of chromic acid etchant would be helpful in lieu of TCLP results

3. HF - I was a bit confused by the question. Are we concerned about metals that might have become dissolved in the HF? Or are we concerned about a potential U code? If the latter, the answer seems to indicate that only spent HF would have been absorbed/evaporated to dryness.

4. Other acids - as with HF, if the questions are getting at quantities of metals leached by the acids (for instance, from cladding during etching), this is difficult to determine without TCLP results.

5. Liquids - The answer to questions 25 and 51 that "liquids were always evaporated to dryness" is somewhat contradictory to the 1987 sorting procedure (source document P4) states only that liquids were to be treated "either by evaporation or by mixing with a solidification agent," with nothing further about evaporation of solidified liquids to dryness. However, Larry Neimark knows better than anyone what the practice was, so this information will be helpful to establish that the practice was to evaporate solidified liquids to dryness. In any case, this information does not necessarily allow us to avoid assigning hazardous waste numbers for listed constituents.

6. HEPA filters - It would be helpful to have access to the records referenced in the response to Question 29. Otherwise, this seems to be a sufficient answer.

7. Fluorescent tubes/mercury lamps - The question #33 response satisfies the issue of mercury in fluorescent tubes (along with source document C35). However, many of our drums (as noted on videotape logs, for instance) have broken glass that could potentially be mercury lamps. Please check my math, but is the 2.6 mg/kg figure one order of magnitude too small? I'm not sure of the source of the 4 mg/kg totals limit, but this does seem to support a hazardous waste number assignment for mercury, at least for the noncombustible containers (or those containing "broken glass").

8. Lead - One other potential source of lead that was not mentioned was the lead manipulator weights (source documents C75 and C78). Did lead ever become "non-acceptable" in RH-TRU waste after RCRA? If so, it would be very helpful to have some documentation to that effect. It would be helpful to know how much Pb-Bi cerrobase epoxy was used and whether any mixing containers, application tools, etc., were disposed in

RH-TRU waste. Also, how or where on the disposal forms would lead have been identified (I have not found any cases where it ever was identified, but may not have looked in the right place). The response to Question 41 is partially correct - Source Documents C75 and C78 have been renumbered as C88 and C91. I will fax those over this morning, but they document conversations between AGHCF and INEEL regarding the lead manipulator weights. However, C13 is a valid reference. The concern expressed in the response to Question 42 that the TWBIR is incorrect is valid: however, under the CH-TRU program, we are required to correlate current waste streams to those identified in the TWBIR, unfortunately. For this reason, it is important to understand why there are differences in the descriptions of the waste streams in that document and our current AK report. The statement about noncombustible and combustible waste segregation is on p. P-IN-304 of the document, rather than the previous page.

9. Cadmium - I think the response answers the questions raised by Reference C94.

Schulz, Cheryl

From: Whitworth, Julia
Sent: Thursday, April 11, 2002 10:51 AM
To: 'Douglas W Parker/PWD/CC01/INEEL/US'
Cc: Schulz, Cheryl; Givens, Craig
Subject: More Coments on 99 Question Responses

10. Carbon Tetrachloride - Reference C81 (formerly C16) is probably most useful for this contaminant, although if Carbon Tet was used in a cleaning bath, its use should be consistent with the use of toluene described in the procedure (Source document P29). I don't think that ANL-E had access to C81, but it is a memo to Larry from Judd Johnson indicating that waste contaminated with CCl4 would not be regulated unless it was used as a degreaser or unless a TCLP extract of the waste contained > 0.5 mg/L. So the question of whether it was used as a degreaser is an important one. As with the acids, the argument is presented that no absorbed liquid is present because it was all evaporated. However, the procedure referenced in the response to Question 51 states that liquids were either "treated either by evaporation or by mixing with a solidification agent..." I have heard Terri Bray state that organic liquids were evaporated rather than being absorbed (and I think this is in Source Doc D9 (circa 1986), which makes since considering that most have high vapor pressures, but I don't see that argument here. In summary, based on potential sources, it will be difficult to argue that the D-code does not apply without TCLP results; applicability of the F-code depends on the answer to the degreasing question.

11. PCE, Toluene - Same response, same question - liquids having been evaporated does not forestall the assignment of an F or U code. The response to Question 61 supports assignment of an F code for toluene (assuming the excess toluene was spent), at least for combustible waste.

12. Chlorethene (1,1,1-Trichloroethane) - The response to Question 62 is correct according to Source Document P28. This reference also suggests that chlorothene was used in a cleaning bath, similar to toluene and CCl4, in addition to the use stated in the response to Question 67. It sounds like it was a cleaner/solvent, but not a degreaser, so the question of exactly how the solvent was applied to wipes (ie, the response to Question 71) is important.

13. Pelletized clay - The question was adequately answered.

14. Rags general - Are the response to Questions 71, 72, and 77 consistent with the response to Question 61 about the blotting of "excess Toluene?" According to "RCRA Unravelled," it sounds like EPA's approach to solvent rag management has changed somewhat. Originally, if solvents were applied to a surface or piece of equipment and then cleaned off with a rag, a RCRA F code would apply. However, since 1991, EPA has left determinations on solvent rags up to state regulators (Section 3.2 of RCRA Unravelled). The proposed RH WAP would allow WIPP to use existing site determinations with their state regulators, but I'm not sure whether the state of New Mexico will go for this flexibility (they have not yet begun to review WIPP's Part B permit for RH-TRU waste). So, I would recommend making the best determination possible as supported by the available evidence - we will then need to very thoroughly justify it in the AK Summary Report. I do think ANL-E has supplied sufficient information now for a determination to be made.

15. Firebrick, containers, correspondences, light fixtures, incinerator ash, polishing compounds, and P-listed waste - After a cursory review, I thought that the questions were adequately answered (with supporting MSDS information in some cases).

16. Charcoal/resin filter media - I will look through the videotape logs, as I seem to recall some of the resins might have been from water treatment.

17. Solvents - Same response, same question - liquids having been evaporated does not preclude waste from being listed.

18. Electric motors - In light of the response, we need to consider how frequently motors were disposed and how much oil was in each.

19. Screw with solder - a good answer. How often was this type of material disposed?

Please call me if you have any additional questions. I will be in and out of my office for the rest of the morning, but you can contact Joe Baglio to come find me if needed. His number is 505-262-8702.

Julia Whitworth
505-262-8754

Attachment 2 - CCP Records Transmittal/Receiving Form

CCP Central Records/Records Custodian, 4021 National Parks Highway - MS: GSA 203, Carlsbad, New Mexico 88220

Telephone Number: 505-234-7523, 505-234-7233, 505-234-7617
Fax Number: 505-234-7014

☒ Original Record
☐ Fax Record
☐ Electronic Record

Attn:	Records Custodian	From:	Kevin Peters
Ship to:	CCP Central Records/ CCP Records Custodian	Site:	Argonne National Laboratory-East RH-TRU Waste
	4021 National Parks Highway - MS GSA 203	Company:	Technical Specialists, LLC
	Carlsbad, NM 88220	Telephone Number:	303-980-0543
		Date Sent:	3-24-06
Telephone Number:	505-234-7523		

Document Number	Title/Description	Record Date	Total Pages
C137	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-500 and CCP-AK-ANLE-500	3/22/2006	3
	Email to Douglas W. Parker re: RH TRU Waste	3/6/2002	40
	N/A		

Comments
None

Acceptance/Rejection Signature and Date

	Signature	Printed Name	Date
Records Accepted ☒	Christal Ingram	Christal Ingram	3-31-06
Records Rejected ☐			

Reason for Rejection: _____

Re-submittal:	Signature	Printed Name	Date

P. 01

TRANSACTION REPORT

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Page 28 of 28

Attachment 2 - CCP Records Transmittal/Receiving Form

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Telephone Number: 505-234-7523

From: Kevin Peters

Site: Argonne National Laboratory-East RH-TRU Waste

Company: Technical Specialists, LLC

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DIVIDER

PAGE

Attachment 3 - Acceptable Knowledge Source Document Summary

Site(s): Idaho National Laboratory	Source Document Tracking Number: C147
Waste Stream Number(s): ID-ANLE-S5000 (Applicable only when site library is not in use)	
Acceptable Knowledge Documentation Type: ☑ TRU Waste Management Program Information ☑ Waste Stream-Specific Information ☑ Additional Information	Category: ☑ C - Correspondence ☐ DR - Discrepancy Resolution ☐ I - Internal procedures ☐ M - Miscellaneous ☐ P - Published plans, documents, and procedures ☐ U - Unpublished Documents
Title or Description of Source Document [a]: Letter to Mr. John M. Schaffer re: Additional Information to Complete Actions Associated with Preexisting Condition (PEC) 316 - Argonne National Laboratory-East (ANL-E) Transuranic Waste	
Source Document Reference Information (author(s), document and revision number, date, publisher): Edward J. Ziemianski, EM-WM-03-055, 04/09/2003, N/A	

AK # [b]	Source Doc. Page # [c]	AK Information Summary
WS8, WS12	1	Letter to John Schaffer from Edward Ziemianski saying that BBWI shall finalize the ANL-E RH-TRU report by FY-03 and any remaining unanswered questions will be dispositioned in accordance with the CBFO-RH-TRU WIPP WAC.
WS12	2	Enclosure: March 20, 2003 letter from Robert C. Wunderlich, Area Manager, Argonne Area Office to Warren E. Bergholz, Manager, Idaho Operations Office re: ANL-E RH-TRU Waste Stored at the RWMC. Includes the Summary of Process Knowledge for RH-TRU generated at ANL-E currently stored at the RWMC on the INEEL site. INEEL has raised a concern that the waste previously certified and accepted as nonhazardous might be mixed waste based on preparation of an AK report in support of shipment of waste to WIPP. The report concludes there is no substantative basis for assigning RCRA waste codes to the RH-TRU nor is there sufficient basis to change the original hazardous waste determinations.
WS3	3	620 drums of RH-TRU packaged at ANL-E between 1976-1999.
WS9, WS11, S16	4	Section 2: RH-TRU drums from the AGHCF contain heterogeneous mixed debris that are highly variable from drum-to-drum. Contents of 346 drums are characterized as "combustible" and 262 are "non-combustible." Waste streams include fissile materials, tritium, and mixed fission products consisting of the following: plutonium (Pu)-239, Pu-240, Pu-241, uranium (U)-235, tritium (H-3), and cesium (Cs)-137, along with numerous short- and long-lived fission products and transuranic elements. Each 30-gallon drum consists of two 7-gallon covered metal cans. The cans are contained within two concentric, heat-sealed plastic bags. When the bags were sealed the atmosphere in the cans and bags was >99% nitrogen. The average and maximum weights of the drums are 107 and 200 pounds, respectively. The typical radiation dose on contact is about 15 R/hr with a maximum of 30 R/hr. The drums are sealed with filtered vents.
PR8	5	Packaging waste complied with the following: 1) No sludges or free liquids, 2) No compressed gases, 3) Powders and fines were immobilized in solid matrix, 4) Rags/tissues were allowed to dry before transfer to waste, 5) Acidic etchant solutions allowed to evaporate to dryness, 6) Residual liquid allowed to evaporate to dryness, 7) Pyrophoric materials rendered safe before disposal, 7) Packaging personnel were trained and qualified. Beginning in 1985, ANL changed RH-TRU waste characterization to include more detailed descriptions of waste items. This documentation was generated for 142 of the 608 drums.

CCP RECORDS ORIGINAL
DATE REC'D 12/1/2012

Attachment 3 - Acceptable Knowledge Source Document Summary (continued)

Site(s): Idaho National Laboratory		Source Document Tracking Number: C147
Waste Stream Number(s): ID-ANLE-S5000 (Applicable only when site library is not in use)		
AK # [b]	Source Doc. Page # [c]	AK Information Summary
WS8, WS11, WS12	6	Waste was consistent with ten-applicable INEEL waste acceptance criteria for RH-TRU. Section 3: Some organic chemicals used in the hot cells included xylene, acetone, n-butyl alcohol (all RCRA ignitable) and others, e.g., 1,1,1-trichloroethane, 1,2 dichloroethane, tetrachloroethylene, and 1,1-dichloroethylene, isobutanol, toluene, and carbon tetrachloride, are RCRA toxic. After examination, ANL-E has no basis for concluding that any of the 608 drums generated at the AGHCF are hazardous waste. No F-listed codes apply to the radioactive waste because 1) no free liquids, 2) items cleaned with organic liquids were allowed to dry to complete evaporation, not by wiping with a cloth or tissue, 3) when rags/cloths were used for cleaning items with F-listed toxic organic liquids, the rag was first moistened with the liquid, then used to wipe the item and the cloth allowed to dry completely before disposal. The EPA's position until January 1991 was that rags so used did not retain the F-code listing of the cleaning solvent.
WS8, WS12	7,8	Absorption of organic liquids onto clay pellets occurred for ethanol or 1-butanol with alkali metals. The alcohols were evaporated to dryness prior to disposal of the clay pellets. Not RCRA listed. Acids were neutralized and the neutralized product absorbed into clay pellets. No corrosivity characteristic (D002). Pyrophoric materials present in the waste would have been readily oxidized by reaction with even the low level oxygen in the cell, rendering them stable during long storage times. Significant quantities of fines were stabilized in a solid matrix. Two acidic metal-etching solutions contained either chromium trioxide or silver nitrate. They were neutralized and the product absorbed unto clay pellets, which were then evaporated to dryness with heating. The chromium and silver concentrations would be less than TCLP thresholds.
WS12	8-9	A single discarded mount would result in a TCLP lead concentration of 0.1 mg/L; therefore, it is most likely that none of the RH-TRU waste exhibits the D008 characteristic. Calculations indicate that the amount of lead in the solder was insufficient to render the waste hazardous (D008). No evidence for the D008 characteristic.
PR8	10	Unlikely that waste contains residual mercury because free liquids were prohibited from the RH-TRU waste stream. Worst case mercury from mercury vapor lamps indicates a concentration of about 0.02 mg/l well under the TCLP limit. No evidence that the RH-TRU exhibits the D009 characteristic. "To the best of our knowledge, the RH-TRU does not include any primary HEPA filters from the AGHCF." Other HEPA filters from the AGHCF were managed as low-level radioactive waste and were not shipped to the INEEL as RH-TRU waste. Have no reason to conclude that the 12 drums of RH-TRU waste generated at ANL-E facilities other than the AGHCF are RCRA hazardous. Keywords: CBFO-RH-TRU WIPP WAC, questions, RH-TRU report, Lead, Mercury, Silver, TCLP, RCRA codes, Pu-239, Pu-240, Pu-241, U-235, tritium (H-3), and Cs-137, chromium trioxide, silver nitrate, xylene, acetone, n-butyl alcohol, 1,1,1-trichloroethane, 1,2 dichloroethane,

Attachment 3 - Acceptable Knowledge Source Document Summary (continued)

Site(s): Idaho National Laboratory		Source Document Tracking Number: C147
Waste Stream Number(s): ID-ANLE-S5000 (Applicable only when site library is not in use)		
AK # [b]	Source Doc. Page # [c]	AK Information Summary
		tetrachloroethylene, and 1,1-dichloroethylene, isobutanol, toluene, carbon tetrachloride, pelletized clay, rags, cloths

Source Document Data Limitations (if any):

1. While ANL-E maintains that the RH TRU waste sent to INL is non-RCRA, the report lacks traceable and complete evidence to support all of the assertions.

Acceptable Knowlege Expert:

Travis Smith — Date: 09/05/2012

Print /Sign

[a] Provide description for non-titled information (i.e., container paperwork, MSDS sheets, etc)
[b] Obtain from Acceptable Knowledge Documentation Checklist
[c] For microfilm or microfiche, identify box, tape, reel number and location.

C147

Department of Energy
Idaho Operations Office
850 Energy Drive
Idaho Falls, Idaho 83401-1563

April 9, 2003

Mr. John M. Schaffer, Project Director
RWMC Completion Project
Bechtel BWXT Idaho, LLC
P.O. Box 1625, MS 3920
Idaho Falls, Idaho 83415

SUBJECT: Additional Information to Complete Actions Associated With Preexisting Condition (PEC) 316 – Argonne National Laboratory-East (ANL-E) Transuranic Waste - (EM-WM-03-055)

REFERENCE: DOE-ID letter to: R. A Rossell, from: B. G. Bauer, subject: "Preexisting Condition (PEC) 316 – Argonne National Laboratory-East (ANL-E) Transuranic Waste (CF&AO-PSD-BGB-03-008), dated October 24, 2002.

Dear Mr. Schaffer:

DOE-ID provided contract direction relative to PEC 316 as referenced above. The letter included as item #1, the following contract direction:

> "1. BBWI shall finalize the ANL-E RH-TRU AK report consistent with the schedule for delivery in the Fiscal Year 03 DWP based on additional information that can be supplied by Department of Energy Chicago Operations Office (DOE-CH) and ANL-E. If all questions are not resolved, then BBWI is to proceed with the assumption that the outstanding topics from BBWI's list of questions will go unanswered but will be dispositioned in accordance with the CBFO RH-TRU WIPP WAC."

DOE-CH/ANL-E has provided additional information that is pertinent to the AK report for the ANL-E RH-TRU waste. DOE-ID is formally providing this new information to BBWI, included as an enclosure to this letter, to be evaluated for inclusion in the completion of the AK report as directed in PEC 316. Please brief the DOE-ID Waste Management Division Director within ten business days of receipt of this letter on the impact of incorporating this additional information into the ANL-E RH-TRU AK report.

Sincerely,

Edward J. Ziemianski, Director
Waste Management Division

Enclosure

Department of Energy
Argonne Area Office
9800 South Cass Avenue
Argonne, Illinois 60439

AAO.030320.0201

MAR 2 0 2003

Warren E. Bergholz, Manager
Idaho Operations Office

SUBJECT: ARGONNE NATIONAL LABORATORY-EAST (ANL-E) REMOTE HANDLED (RH) TRANSURANIC (TRU) WASTE STORED AT THE RADIOACTIVE WASTE MANAGEMENT COMPLEX (RWMC)

Enclosed is the Summary of Process Knowledge for RH Transuranic Waste generated at ANL-E and currently stored at the RWMC on the Idaho National Engineering and Environmental Laboratory (INEEL) site. This document was prepared by Argonne National Laboratory in close cooperation with the Argonne Area Office. I concur in the information and conclusions in this document.

The Summary was prepared to address questions raised by INEEL during their preparations for eventual disposal of this waste stream, currently in storage at the Intermediate-Level Transuranic Storage Facility (ILTSF), and to facilitate discussions with Idaho Department of Environmental Quality (IDEQ) regarding the process knowledge for this waste stream. INEEL had raised a concern that the waste previously certified and accepted as nonhazardous might in fact be mixed waste based on preparation of an Acceptable Knowledge Report in support of shipment of waste to the Waste Isolation Pilot Plant (WIPP). The Summary clarifies these concerns and corrects misunderstandings. The Summary concludes that, based on the information examined and discussions held with current and past ANL employees, there is no substantive basis for assigning RCRA waste codes to the RH-TRU nor is there sufficient basis to change the original hazardous waste determinations. Moreover, as a result of the reviewing records and undertaking new inquiries as part of preparing the Summary, the Acceptable Knowledge Report will be revised to reflect the information provided in the Summary.

If you have any questions concerning this Summary please call me at (630) 252-2366 or have a member of your staff contact Angela Harvey at (630) 252-2696.

Robert C. Wunderlich
Area Manager

Enclosure:
As Stated

cc: E. Ziemanski, DOE-ID, w/encl.
B. Bowhan, DOE-ID, w/encl.
M. Gunn, DOE-CH/OM, w/encl.

Summary of Process Knowledge for Remote-Handled Transuranic Waste Generated at Argonne National Laboratory and Stored at the Idaho National Engineering and Environmental Laboratory

Prepared by
Argonne National Laboratory for DOE-Chicago Operations Office
March 2003

CONTENTS

1. Introduction
2. AGHCF* Work Processes and Waste Management
3. AGHCF* Material-Specific Process Knowledge
   - 3.1 Organic Liquids
   - 3.2 Acidic Liquids
   - 3.3 Reactive Materials
   - 3.4 Toxic Metals
     - 3.4.1 Silver- and chromium-containing etching solutions
     - 3.4.2 Metallurgical mounts
     - 3.4.3 Lead
     - 3.4.4 Mercury
     - 3.4.5 HEPA filters
4. RH-TRU Wastes Generated at Other ANL-E Facilities
5. Conclusion

*AGHCF, Alpha-Gamma Hot Cell Facility

1. INTRODUCTION

Argonne National Laboratory (ANL) prepared this summary for the DOE Chicago Operations Office after extensive communication between ANL and the Idaho National Engineering and Environmental Laboratory[1] (INEEL). The scope of the summary is limited to remote-handled transuranic (RH-TRU) waste that (a) was generated at

[1] In this summary, both INEEL and the predecessor organization, the Idaho National Engineering Laboratory, are described as "INEEL."

Argonne National Laboratory East (ANL-E), and (b) is now stored as non-hazardous waste at the INEEL Radioactive Waste Management Complex (RWMC).

Within the next two to five years it is anticipated that DOE will authorize disposal of RH-TRU waste at the Waste Isolation Pilot Plant (WIPP) in New Mexico. RH-TRU wastes shipped to WIPP will need to meet the yet to be finalized WIPP waste acceptance criteria. Drums of RH-TRU waste generated by DOE contractors contain highly radioactive wastes, making physical examination of the contents extremely difficult. DOE initiated an "acceptable knowledge" pilot project to determine whether the available process knowledge supports a determination that the waste would meet the anticipated WIPP waste acceptance criteria. During 2001 and 2002, the pilot project addressed 620 drums of RH-TRU waste generated at ANL-E and now in storage at INEEL's RWMC.

The 620 drums of RH-TRU waste within the scope of this summary were packaged at ANL-E during the period 1971 to 1995, and shipped to the RWMC during the period 1976 to 1995. As indicated by these dates, some of the drums were packaged and shipped to the RWMC before RCRA was applicable to radioactive waste. Of the 620 drums, 608 were generated at the Alpha-Gamma Hot Cell Facility (AGHCF), and 12 were generated at one or more other ANL-E facilities. During the period between 1985 and 1995 ANL and INEEL personnel generated documents indicating that the waste management practices at the AGHCF conformed to the then-applicable INEEL acceptance criteria for RH-TRU waste.

The acceptable knowledge pilot project included (a) examination of more than 2000 records generated at ANL-E and INEEL, (b) interviews of knowledgeable present and former ANL-E personnel, and (c) interactive communication within ANL and between ANL and INEEL regarding the significance of the available information. The records included general descriptions of the waste stream, operating procedures for the AGHCF, container-specific descriptions of the waste, previous evaluations of the waste characteristics, and site-level waste management protocols and requirements.

The available information regarding the 608 drums of waste generated at the AGHCF is more extensive than the available information on the 12 drums generated at other ANL-E facilities. Section 2 summarizes the composition of the AGHCF waste, as well as the AGHCF protocols and procedures that minimized the potential for generation of RCRA hazardous RH-TRU waste. Section 3 illustrates the AGHCF process knowledge that supports ANL conclusions for materials of particular interest (e.g., organic liquids, and corrosive acids). Section 4 addresses the 12 drums of RH-TRU waste that were generated at other ANL-E facilities.

Based on the information examined, ANL believes that there is no substantive basis for assigning RCRA waste codes to the RH-TRU.

2. AGHCF WORK PROCESSES AND WASTE MANAGEMENT

During the relevant 24-year waste generation period, the AGHCF was used primarily for destructive and nondestructive examination of irradiated fuel elements, structural materials from research and commercial nuclear reactors, and irradiated test materials associated with nuclear technology research. Examination included measurement of physical and chemical characteristics of the cladding and fuel. A substantial fraction of the measurements required remote preparation of small sections of fuel elements by cutting with a powered saw, followed by grinding and polishing.

Waste generated at the AGHCF was either contact-handled TRU (CH-TRU) or RH-TRU depending on the radiation level. In addition to the research-related activities, ongoing maintenance, repair, and replacement of radiologically contaminated in-cell equipment and devices contributed to generation of "combustible" and "non-combustible" RH-TRU waste. "Combustible" waste included mixed debris typically composed of plastic, rubber, wood, paper, and cloth. The scope of this summary is limited to the RH-TRU waste.

The RH-TRU drums packaged at the AGHCF contain heterogeneous mixed debris generated by a research and development organization, rather than a production process. The content of the mixed debris is highly variable from drum-to-drum. Of the 608 drums generated at the AGHCF and now at INEEL's RWMC, the contents of 346 are characterized as "combustible" and of 262 are characterized as "non-combustible." Of these 608 drums, the documented content of 466 specific drums is limited to either "combustible" or "non-combustible," with no other item-specific information other than generic descriptions of the types of wastes items generated at the facility.

Radiological constituents for both "combustible" and "non-combustible" waste streams are identical, and include primarily fissile materials, tritium, and mixed fission products consisting of the following radioisotopes: plutonium (Pu)-239, Pu-240, Pu-241, uranium (U)-235, tritium (H-3), and cesium (Cs)-137, along with numerous smaller quantities of short- and long-lived fission products and transuranic elements. Each 30-gallon carbon steel drum contains two 7-gallon covered metal cans. The cans are contained within two concentric, heat-sealed plastic bags. When the bags were sealed the atmosphere in the cans and bags was > 99% nitrogen. The average and maximum weights of the drums are 107 and 200 pounds, respectively. The typical (median) radiation dose rate on contact with the outside of the drum is about 15 R/hr, and the maximum is 30 R/hr. The waste drums were securely sealed (with filtered vents to allow pressure equalization) because the radiological constituents pose a significant health and environmental hazard.

At INEEL's RWMC, the drums are stored in 20- to 30-ft deep carbon steel pipes (with a removable concrete shielding plug and cover) grouted to a concrete pad for which the upper surface is slightly above ground level.

The following requirements[2] were applied when packaging all of the RH-TRU waste generated at the AGHCF and shipped to INEEL:

- Sludges and free liquids were prohibited from waste cans.
- Compressed gases were prohibited from waste cans. Valves on gas cylinders were removed, and aerosol cans were punctured prior to introduction into waste cans.
- Before disposal, powders/fines that exceeded 1% or 15% of the waste volume (if less than 10 microns, or less than 200 microns, respectively) were immobilized in a solid matrix to decrease the potential for post-packaging reactions.
- Rags/tissues that had contacted liquids were allowed to dry in a loose open configuration on a worktable (in the constantly flowing atmosphere of dry nitrogen) for periods of weeks to months prior to transfer to a waste can.
- Prior to disposal, all of several types of acidic solutions used to etch, electro polish, or clean materials were sequentially neutralized, absorbed on pelletized clay, and evaporated to dryness under heat.
- Residual liquid in any vessel was always allowed to evaporate to dryness before the vessel was transferred to a waste container.
- Pyrophoric materials were all rendered safe prior to disposal by mixing with concrete or similar material. As part of the process for preparation of certain types of materials for analysis, sodium and sodium-potassium alloy were rendered safe by controlled reaction with ethanol or butanol. The resulting product was adsorbed on pelletized clay and evaporated to dryness prior to disposal.
- Personnel who generated and packaged the waste were formally trained and qualified with regard to each of the requirements, and were familiar with the materials for ease of recognition. In later years, waste packaging was documented via audio-visual tape recordings.

Comprehensive evaluation of the available information raised no concerns about the potential presence in the waste cans of incompatible materials that could react during storage or initiate release of the radioactive constituents.

Beginning in approximately 1985, ANL changed the RH-TRU waste characterization system to include more detailed descriptions of waste items other than only "combustible" and "noncombustible" (for example, pelletized clay, rags, gloves, grinding paper, broken glass, aluminum tubing, discarded manual and power tools). Such documentation was generated for 142 of the 608 drums generated at the AGHCF, along with the categorization as either "combustible" or "non-combustible" waste.

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[2] These or equivalent requirements had already been established by the ANL-E waste management organization by 1972. The specific requirements presented in this summary were (a) formally drafted as an AGHCF procedure in 1975, (b) formally adopted as an AGHCF procedure in 1976, including approval by the contemporary ANL-E waste management organization, and (c) subsequently the basis for acceptance of RH-TRU waste by the RWMC.

A series of at least six documents generated by both ANL and INEEL during the period 1985 to 1995 indicated that the characteristics of the RH-TRU waste generated at the AGHCF were consistent with the then-applicable INEEL waste acceptance criteria for RH-TRU. These documents included reports by INEEL personnel who had visited ANL-E to observe and evaluate ANL-E waste handling procedures and practices.

The extensive information analysis performed by ANL during 2001 and 2002 did not result in discovery of any basis for contradicting the conclusions documented between 1985 and 1995.

3. AGHCF MATERIAL-SPECIFIC PROCESS KNOWLEDGE

During the pilot acceptable knowledge process conducted in 2001 and 2002, ANL and INEEL personnel examined numerous records and acquired anecdotal information about work processes and waste management practices/procedures associated with the AGHCF. The purpose of Section 3 is to illustrate the process knowledge that supports the ANL hazardous waste determination conclusions.

3.1 Organic Liquids

Small quantities of various organic liquids were used in the hot cell. The volume of organic liquids in the hot cell complex (nine work stations) was small because nuclear criticality safety requirements limited the total volume of hydrogen-containing liquids (including water) to 3 liters. Some of these organic liquids, such as xylene, acetone, n-butyl alcohol, methanol, and isobutanol, are RCRCA ignitable. Others, such as 1,2-dichloroethane, 1,1,1-trichloroethane, tetrachloroethylene, and 1,1-dichloroethylene, isobutanol, toluene, and carbon tetrachloride, are RCRA toxic. We examined how the liquids were used, how they were dispositioned, and the waste management standards (see Section 2 above) that were routinely applied. Based on the available information, we have no basis for concluding that any of the 608 drums generated at the AGHCF are hazardous wastes. The following paragraphs describe the bases for our conclusions that organic liquid do not render the wastes F-code listed, U-code listed, ignitable, or toxic hazardous wastes.

None of the radioactive waste would have been F-listed on the basis of three operational practices. First, the waste packaging procedures prohibited the presence of any free liquids. Second, with one exception (metallurgical mounts addressed in the next paragraph), items cleaned with organic liquids in ultrasonic baths[3] were allowed to dry by complete evaporation, not by wiping with a cloth or tissue. Third, when rags or cloths were used for cleaning items with F-listed toxic organic liquids, the rag or cloth was first moistened with the liquid, then used to wipe the item to be cleaned, and then the cloth/tissue allowed to dry completely before disposal. The U. S Environmental Protection Agency's position until January 1991 was that rags used in this manner do not retain the F-code listing of the cleaning solvent.

[3] The ultrasonic baths remain in the hot cell and were not included in the RH-TRU shipped to INEEL.

We have some indication that, prior to the early 1990's, polished metallurgical mounts were cleaned by sonication in toluene, and that residual toluene (<0 .2 mL) remaining on the <1.5-sq. inch nonporous polished surfaces was removed by blotting on a tissue. However, we have no record that any tissues generated by this process prior to the early 1990's are in any of the drums of RH-TRU at INEEL

Wastes would not have been U-code listed because only small quantities of U-listed liquids were introduced into the cell as required for immediate use; therefore, they became in-use process material when introduced into the cell. All stock supplies were outside the hot cell. Furthermore, we have no evidence that any of the RH-TRU drums contain spill residues of U-listed liquids.

Clay pellets were the only solid materials (other than rags and tissues) used to absorb organic liquids. Absorption of organic liquids onto clay pellets was limited to the liquid reaction products of ethanol or 1-butanol with alkali metals (to passivate the metals prior to disposal). The alcohols were evaporated to dryness prior to disposal of the clay pellets. Because ethanol and butanol are not RCRA toxic, the materials on which they were absorbed would not be RCRC toxic. No RCRA toxic organic liquids were absorbed onto clay pellets.

3.2 Acidic Liquids

Some materials characterization techniques used in the AGHCF required preparation of small volumes (typically 100 mL) of aqueous acidic solutions to etch samples prior to microscopic examination. Facility specific procedures required that formally qualified personnel neutralize all spent and excess acidic solutions with either sodium hydroxide or sodium carbonate, absorb the neutralized product onto clay pellets, and subsequently evaporate the clay pellets to dryness with heating. Consistent implementation of this requirement for disposal of acidic solutions was corroborated via interviews with current and former hot cell supervisors and operators.

We conclude that there is no evidence that the RH-TRU waste exhibits the corrosivity characteristic (D002).

3.3 Reactive Materials

Technical knowledge of the properties of the pyrophoric metals that were present in the AGHCF (e.g., uranium, transuranic metals, and zircalloy) supports the conclusion that the surface of fines/powders generated by cutting and grinding would have been readily oxidized by reaction with even the low level (< 0.2 %) oxygen in the cell, thus rendering them stable during prolonged storage. Furthermore, as described in Section 2 above, the facility-specific waste management process required that significant quantities of all fines/powders be immobilized in a solid matrix to decrease the potential for post-packaging reactions, and to prevent dispersal of the fines in the event of container failure.

As part of the process for preparing certain types of materials for analysis, sodium and sodium-potassium alloy were rendered safe by controlled reaction with either ethanol or 1-butanol. The resulting product was mixed with pelletized clay, and the mixture was evaporated to dryness prior to disposal. No elemental forms of alkali metals, including the metallic sodium in sodium-containing fuel elements, entered the RH-TRU waste stream.

We conclude that there is no evidence that the RH-TRU waste contains reactive materials.

3.4 Toxic Metals

Small amounts of some of the D-listed metals were used in the AGHCF. We therefore examined facility procedures and other records, and gathered anecdotal information about how the metal-containing materials were used and subsequently dispositioned.

3.4.1 Silver- and chromium-containing etching solutions

Two acidic metal-etching or electro-polishing solutions that were *occasionally* used in the hot cell contained procedurally defined concentrations of either chromium trioxide or silver nitrate. (Most of the acidic etchants did not contain toxic metals.) As described under "Acidic Solutions" above, an AGHCF procedure required that qualified personnel neutralize all acidic solutions with either sodium hydroxide or sodium carbonate, adsorb the neutralized product onto clay pellets, and subsequently evaporate the clay pellets to dryness with heating. When appropriate because of the level of radionuclides, dry clay pellets in a covered can were placed in RH-TRU waste cans. The volume of clay in a typical batch was 1-2 liters. Consistent implementation of this requirement for disposition of acidic solutions was corroborated via interviews with current and former hot cell supervisors and operators.

The amount of chromium or silver in a single seven-gallon waste would most likely be limited to that contained in a single 100-mL batch of solution. Conservatively assuming *complete* solubility of the clay-associated metals in a hypothetical TCLP test, a seven-gallon waste can containing *two* 100-mL batches of *each* of the two etchants adsorbed on clay pellets would have chromium and silver concentrations less than the respective TCLP thresholds.

4.4.2 Metallurgical mounts

Facility personnel used a paste-like, non-polymerized silver-containing epoxy component (approximately 0.15 cm^3 paste, 5-10 mg silver in a proprietary pigment, for each sample) to prepare numerous metallurgical mounts for photographic visualization of polished and etched surfaces of metallic samples (< 0.5 cm^3). Prior to disposal of the solid cylindrical plastic metallurgical mount (3 cm diameter, 0.6 cm long, 4-5 cm^3), facility personnel remotely used a power saw to transversely cut the cylinder through the plane in which the largest volume of silver-containing paste was contained in a central axial bore of the

plastic assembly, thus allowing subsequent use of a tool to extrude the metallic sample (either for retention or disposal in another waste stream). Some indeterminate, but most likely substantial, fraction of the silver-containing paste (a) was dispersed by the cutting process, and (b) adhered to the extrusion tool, the sample, and the two discarded sections of the plastic cylinder. Of the 142 drums for which narrative descriptors of the constituents are available, only three indicate the presence of "metallurgical mounts" (along with rags, grinding papers, plastics, and paper), and two indicate the presence of "mounting materials," along with mixed debris. (Metallurgical mounts could also be in drums for which the presence of "plastics" was documented.) Within the limitations of the available information, and by application of reasonable approximations for (a) the fraction of the silver-containing paste remaining on the discarded, sawn plastic cylinders, (b) the solubility of a proprietary silver pigment in aqueous solution, and (c) the weight of waste in a drum, we estimate that a single discarded mount would result in a TCLP silver concentration of 0.001 mg/L. This estimated value is orders of magnitude less than the limit of 5.0 mg/L TCLP limit for silver. Therefore, it is most likely that none of the RH-TRU waste exhibits the D011 characteristic.

A cerrobase alloy that is 44.5 percent lead was occasionally used as an alternative to silver epoxy to prepare metallurgical mounts. Based on the size, weight, and density of the metallurgical mounts, and the weight of wastes in a drum, we estimate that a single discarded mount would result in a TCLP lead concentration of 0.1 mg/L. Because this is less than the TCLP limit of 5.0 mg/L for lead, it is most likely that none of the RH-TRU waste exhibits the D008 characteristic.

3.4.3 Lead

Lead scrap, lead-containing bases from sodium vapor lamps, lead counter weights, and electrical equipment that could contain lead solder were disposed from the AGHCF. However, except for several written records describing disposal of electrical motors, and one audio-video record of disposal of 10 inches of solder, the presence of none of these is specifically documented in the drum-specific records for the RH-TRU waste. Calculations indicate that the amount of lead in the solder was insufficient to render the waste hazardous (D008). The approximately 3 g of lead in the solder would cause a 70-kg drum to have a TCLP extract lead concentration of about 2 mg /l. This is less than the TCLP limit of 5.0 mg/l. Sodium vapor lamps were most likely changed individually on an as-needed basis. Our analysis of lamps with lead contents similar to sodium vapor lamps indicates that the amount of lead in a single lamp base is insufficient to render a drum hazardous waste. A 0.5-lb bulb containing 12 g of lead would cause a 150 lb drum to have a TCLP extract lead concentration of less than 1.7 mg/l. This is less than the TCLP limit of 5.0 mg/l.

Our estimates of the undocumented amounts of lead likely to be present in the RH-TRU waste from any of several postulated scenarios, together with the relatively low surface to mass ratio of any lead-containing items (e.g., an intact lead-containing lamp base or a lead manipulator counter weight), provides no evidence that the heterogeneous mixed debris RH-TRU waste exhibits the D-008 characteristic.

3.4.4 Mercury

Broken mercury-containing thermometers (before conversion to use of thermocouples) *could* have been generated in the hot cell. However, no records describe the transfer of mercury from broken/discarded thermometers or discarded mercury-containing switches to the RH-TRU waste stream. It is unlikely that any broken thermometers containing residual mercury would have been included in any of the RH-TRU drums, because free liquids were prohibited from the RH-TRU waste stream.

The RH-TRU waste stream may have contained crushed mercury vapor lamps. Much of the mercury in the lamps likely evaporated in the AGHCF. Our evaluation of the amount of mercury in the lamps, and a conservative assumption of the number of lamps in a drum, indicates that the worst-case concentration of mercury in a TCLP extract would be about 0.02 mg/l, well below the TCLP limit of 0.2 mg/l. We found no evidence indicating that the RH-TRU waste exhibits the D009 characteristic.

3.4.5 HEPA filters

Primary HEPA filters could contain metals above TCLP concentrations. The single ANL-E document (prepared in 1988) indicating that primary HEPA filters were one of the multiple waste items generated at the of AGHCF, was *not* prepared as an inventory of materials packaged for shipment to INEEL. None the numerous waste can inventories indicate the presence of HEPA filters. Two former AGHCF managers were interviewed about the disposition of primary HEPA filters, and both said that no primary HEPA filters were sent to INEEL during the life of the facility. Furthermore, ANL-E has drum-by-drum records demonstrating that primary HEPA filters generated since at least as early as 1984 to 1995 remain under the control of the ANL-E waste management organization. In 1996 ANL packaged 40 primary HEPA filters, which remain at ANL-E. Based on the known filter replacement rate, these 40 filters would represent approximately 30 years of hot cell operations, which correlates to the operation of the AGHCF from its commissioning in the mid-1960's. Therefore, to the best of our knowledge the RH-TRU waste at INEEL does not include any primary HEPA filters from the AGHCF.

Other HEPA filters from the AGHCF (that is, HEPA filters that were not primary HEPA filters) were managed as low-level radioactive wastes and therefore were not shipped to INEEL as RH-TRU wastes.

4. RH-TRU WASTES GENERATED AT OTHER ANL-E FACILITIES

The remaining 12 drums were generated elsewhere at ANL-E, and were packaged by knowledgeable, formally trained personnel in the ANL-E waste management organization in accordance with then-applicable acceptance criteria for RH-TRU waste destined for shipment to the RWMC. At INEEL's RWMC, these drums are also stored in 20- to 30-ft deep carbon steel pipes (with a removable concrete shielding plug and cover) grouted to a concrete pad for which the upper surface is slightly above ground level.

Formalized, written descriptions of the ANL-E waste management program in 1986 indicate that the AGHCF was the only ANL-E organization (other than the site's waste management organization, WMO) authorized to package RH-TRU waste. At least as early as 1971, WMO established criteria for packaging RH-TRU generated at various ANL facilities for transfer to the RWMC. We have no reason to believe that the WMO acceptance criteria were less stringent than those that WMO subsequently approved for the AGHCF in 1975 (see criteria in Section 2 above). The WMO packaging criteria as described in 1971 required immobilization of significant quantities of powders and prohibited the presence of (a) free liquids, (b) corrosive materials, (c) pyrophoric materials, (d) explosives and compressed gases, (e) organic materials that could generate hydrogen gas through radiolysis, and (f) chemical waste not a co-contaminant of the transuranics. Therefore, we have no basis for concluding that the 12 drums of RH-TRU waste generated at ANL-E facilities other than the AGHCF are RCRA hazardous.

5. CONCLUSION

Based on the information examined, ANL believes that there is no substantive basis for assigning RCRA waste codes to the RH-TRU wastes generated and ANL-E and stored at INEEL.

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CCP Central Records/Records Custodian, 4021 National Parks Highway - MS: GSA 203, Carlsbad, New Mexico 88220

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Attn:	Records Custodian	From:	Kevin Peters
Ship to:	CCP Central Records/ CCP Records Custodian	Site:	Argonne National Laboratory-East RH-TRU Waste
	4021 National Parks Highway - MS GSA 203	Company:	Technical Specialists, LLC
	Carlsbad, NM 88220	Telephone Number:	303-980-0543
		Date Sent:	3-24-06
Telephone Number:	505-234-7523		

Document Number	Title/Description	Record Date	Total Pages
C147	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-500 and CCP-AK-ANLE-500	3/22/2006	3
	Letter to Mr. John M. Schaffer, Project Director, RWMC Completion Project, Bechtel BWXT Idaho, LLC re: Additional Information to Complete Actions Associated with Preexisting Condition (PEC) 316 - Argonne National Laboratory-East (ANL-E) Transuranic Waste	4/9/2003	12
	N/A		

Comments
None

Acceptance/Rejection Signature and Date

Records Accepted ☒ Christal Ingram (Signature) Christal Ingram (Printed Name) 3-31-06 (Date)

Records Rejected ☐ _____ (Signature) _____ (Printed Name) _____ (Date)

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P.01

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CCP-QP-008, Rev. 11
CCP Records Management

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Page 28 of 28

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	Carlsbad, NM 88220	Telephone Number:	303-980-0543
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Telephone Number:	505-234-7523		

Document Number	Title/Description		Record Date	Total Pages
C147	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-500 and CCP-AK-ANLE-500		3/22/2006	3
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	N/A			

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PAGE

Attachment 3 - Acceptable Knowledge Source Document Summary

Site(s): Idaho National Laboratory	Source Document Tracking Number: C334
Waste Stream Number(s): ID-ANLE-S5000 (Applicable only when site library is not in use)	
Acceptable Knowledge Documentation Type: ☑ TRU Waste Management Program Information ☑ Waste Stream-Specific Information ☑ Additional Information	Category: ☑ C - Correspondence ☐ DR - Discrepancy Resolution ☐ I - Internal procedures ☐ M - Miscellaneous ☐ P - Published plans, documents, and procedures ☐ U - Unpublished Documents
Title or Description of Source Document [a] : RH-TRU Characterization Facilities	
Source Document Reference Information (author(s), document and revision number, date, publisher): Jerry O'Leary and Mark Sherick, N/A, 02/02/2006, CH2M-WG	

AK # [b]	Source Doc. Page # [c]	AK Information Summary
PR1, PR3, PR8, WS2, WS4, WS5, S16	Throughout	Power Point Presentation provided by the Idaho Cleanup Project regarding RH-TRU Waste Characterization that will be performed at INTEC. Page 3 provides an INTEC Site Map Page 4 describes the waste characterization process flow: - TH TRU will be stored at INTEC in interim storage areas in interim storage containers - Unvented drums will be moved in interim storage containers for venting - Some randomly selected drums in ISCs will be moved for pre-heating and HSGS - ISCs will be moved form ISAs for RTR and dose measurements - ISCs will be returned to ISAs after waste characterization is complete. Page 5 provides the RH TRU Process Flowsheet describing the flow of the different characterization and transportation activities (venting, characterization, headspace gas, transportation) Page 6 describes necessary facility modifications to CPP-1634 including SAR rev. to include as a CAT-2 nuclear facility; power upgrades, shielding, reinforced floor Page 7 provides the CPP-1634 Floor Plan Page 8 describes necessary facility modifications to CPP-659 including installation of cameras & video equipment; installation of RTR and dose measurement units; Establishment of a control room; remote tooling for Decon Cell for repackaging, sizing, sampling, VE, and addition of liquid absorbent. Page 9 provides layout of CPP-659 First Floor Page 10 provides layout of CPP-659 Second Floor Page 11 provides photo of 72B RH cask Page 12 provides necessary facility mods (CPP-659, Room 428) to support shipping including providing an access ramp; providing cameras and video equipment; providing lag storage of loaded and sealed 72B waste containers; shielding as required.

CCP RECORDS ORIGINAL
DATE REC'D 12/11/12

Attachment 3 - Acceptable Knowledge Source Document Summary (continued)

Site(s): Idaho National Laboratory		Source Document Tracking Number: C334
Waste Stream Number(s): ID-ANLE-S5000 (Applicable only when site library is not in use)		
AK # [b]	Source Doc. Page # [c]	AK Information Summary
		Page 13 provides layout of CPP-659 Room 428 Page 14 provides the shipping process flow via 72B.

Source Document Data Limitations (if any):

1. *Addresses planned INTEC certification operations.*

Acceptable Knowlege Expert:

Travis Smith / [signature] Date: 09/05/2012

Print /Sign

[a] Provide description for non-titled information (i.e., container paperwork, MSDS sheets, etc)
[b] Obtain from Acceptable Knowledge Documentation Checklist
[c] For microfilm or microfiche, identify box, tape, reel number and location.

Idaho Cleanup Project

RH-TRU CHARACTERIZATION FACILITIES

Jerry O'Leary
Mark Sherick

February 2, 2006

CH2M•WG IDAHO, LLC

ANL-E-C334

RH-TRU Waste Characterization (Will be performed at INTEC)

Idaho Cleanup Project

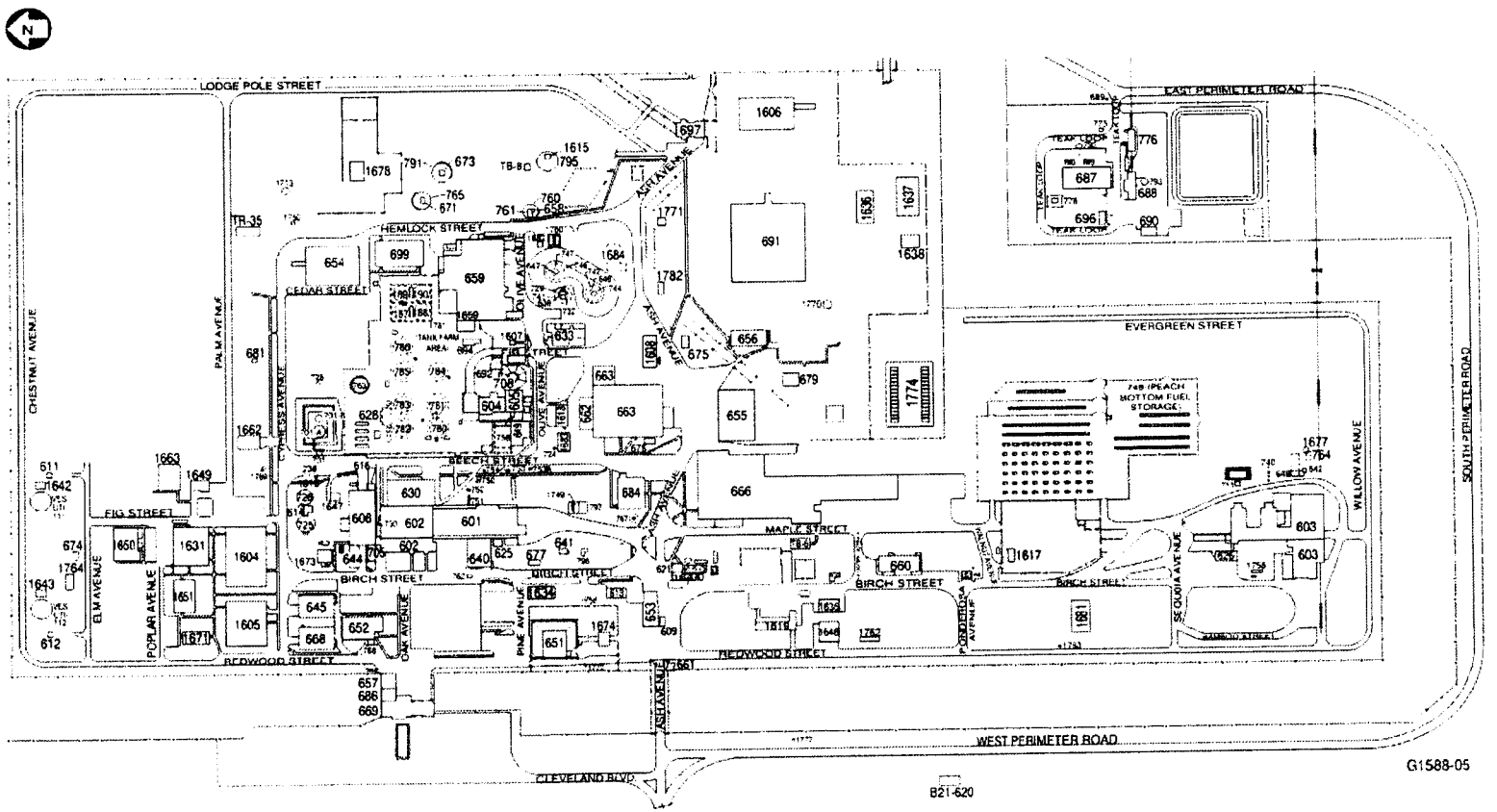
- HSGS will be performed in CPP-1634
- RTR and dose measurements will be performed in CPP-659 Room 306
- Repackaging, sizing, sampling, visual examination, and addition of liquid absorbent will be performed in CPP-659 Room 308, as required

CH2M•WG

Idaho Cleanup Project

INTEC Site Map

INTEC Site Map



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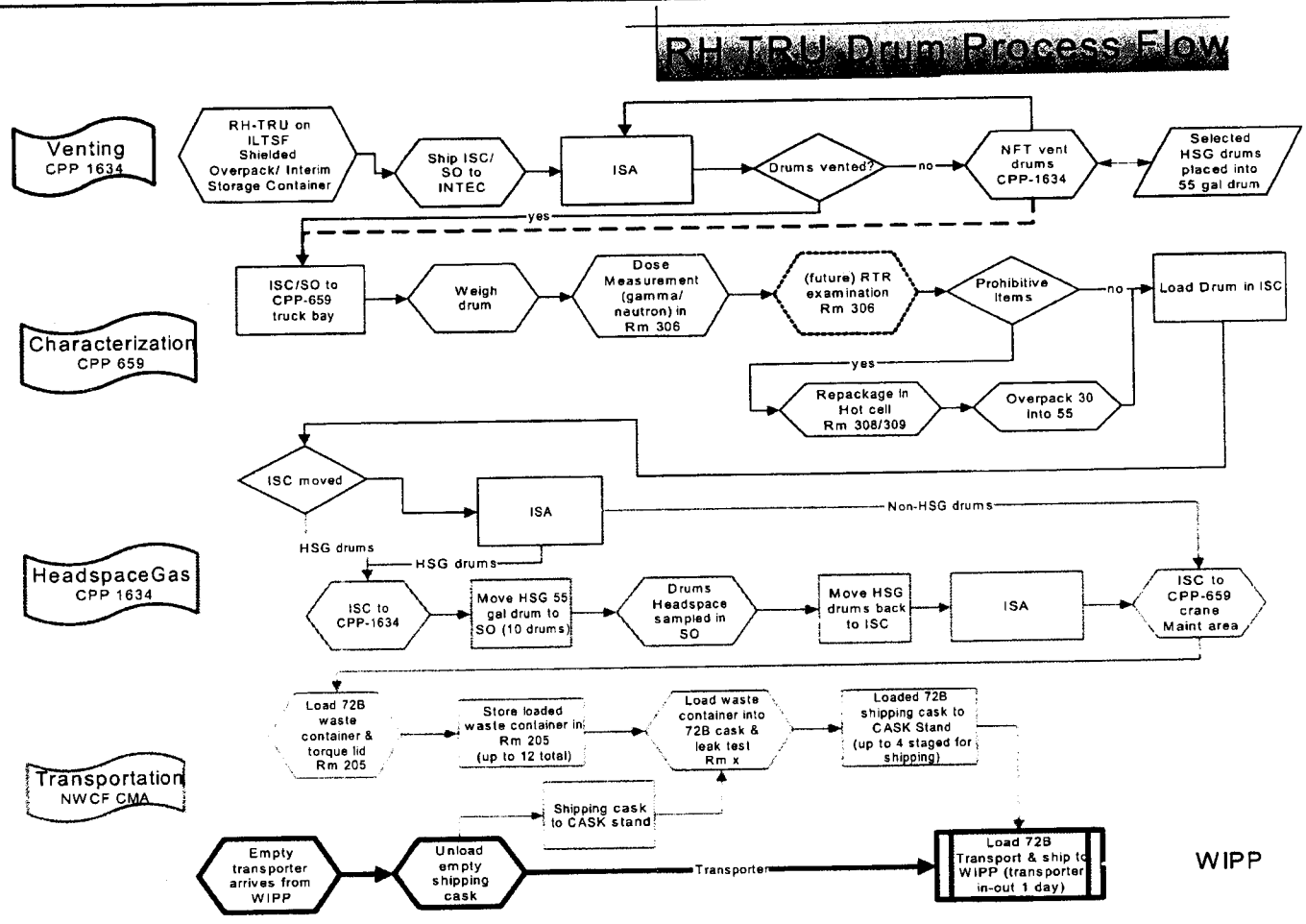
Waste Characterization Process Flow

- RH TRU will be stored at INTEC in Interim Storage Areas (ISAs) in Interim Storage Containers (ISCs) that hold up to four drums
- Unvented drums will be moved to CPP-1634 in ISCs for venting (up to 500)
- A few randomly-selected drums in ISCs will be moved to CPP-1634 for pre-heating and HSGS
- ISCs will be moved from ISAs to CPP-659 for RTR and dose measurements
- ISCs will be returned to ISAs after waste characterization is completed

RH-TRU Process Flowsheet



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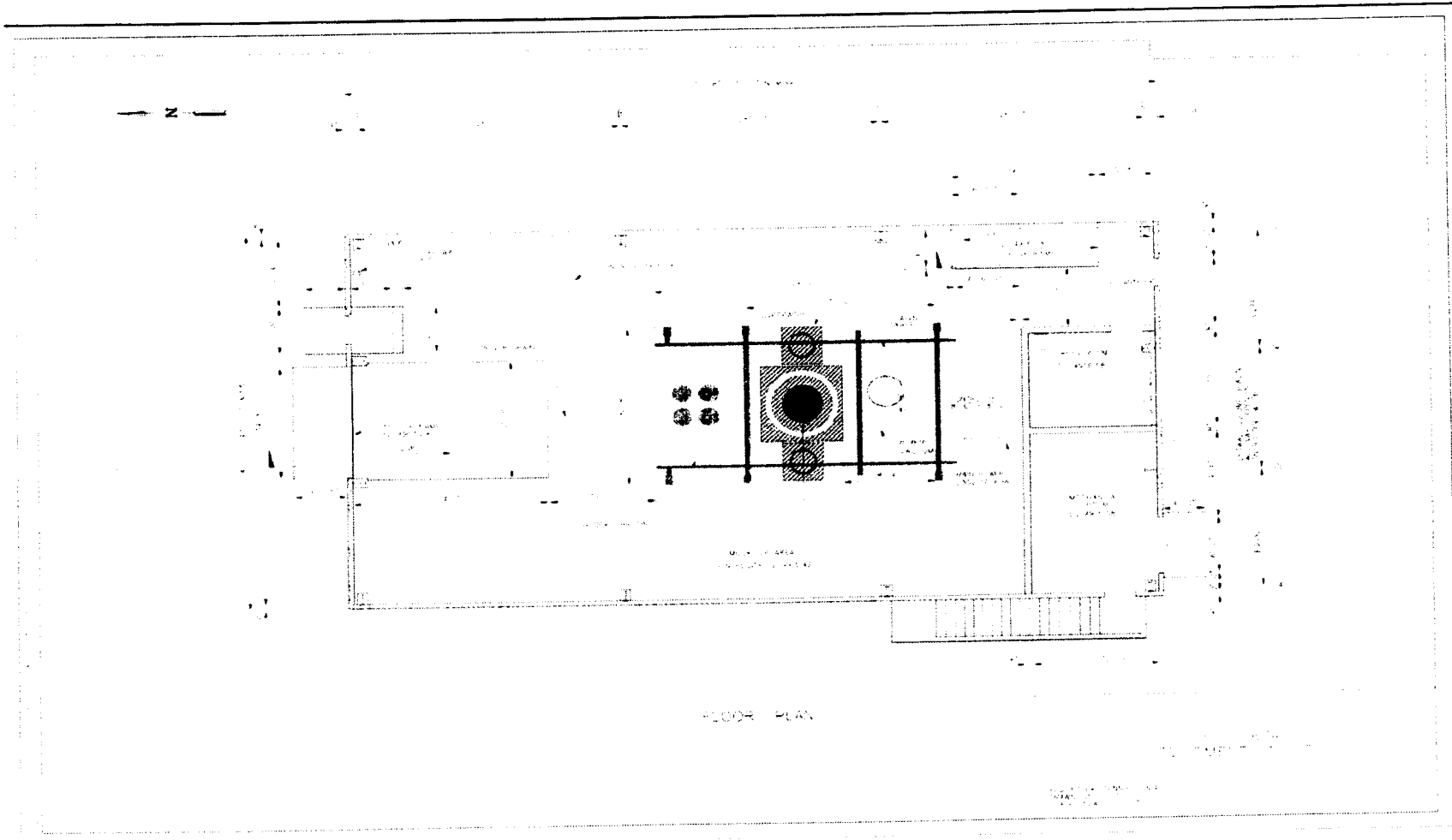
Facility Modifications

- **CPP-1634 will be modified to:**
  - SAR revision to include CPP-1634 as CAT-2 nuclear facility
  - Provide power upgrades for venting system
  - Shielding as required
  - Reinforce floor to allow 36-ton forklift access

CPP-1634 Floor Plan

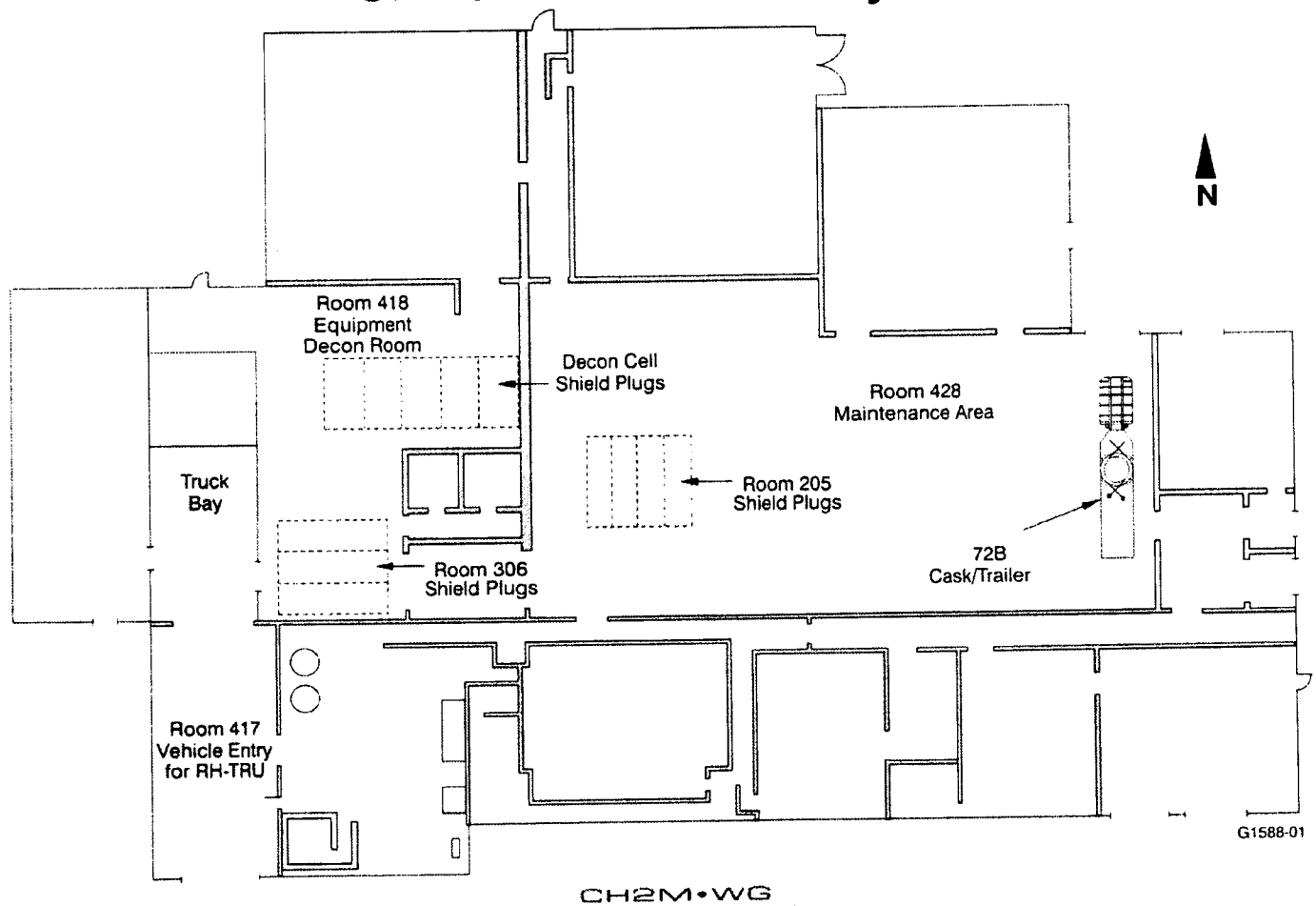


Facility Modifications

- **CPP-659 Modifications:**
  - Installation of cameras and video monitoring equipment to support remote movement and processing of RH-TRU drums -
  - Installation of an RTR and dose measurement units in Room 306
  - Establishment of a control room for the RTR and dose measurement units in Room 302
  - Remote tooling for Decon Cell for repackaging, sizing, sampling, visual examination, and addition of liquid absorbent in Room 308

CPP- 659 First Floor

CPP-659 First Level Layout



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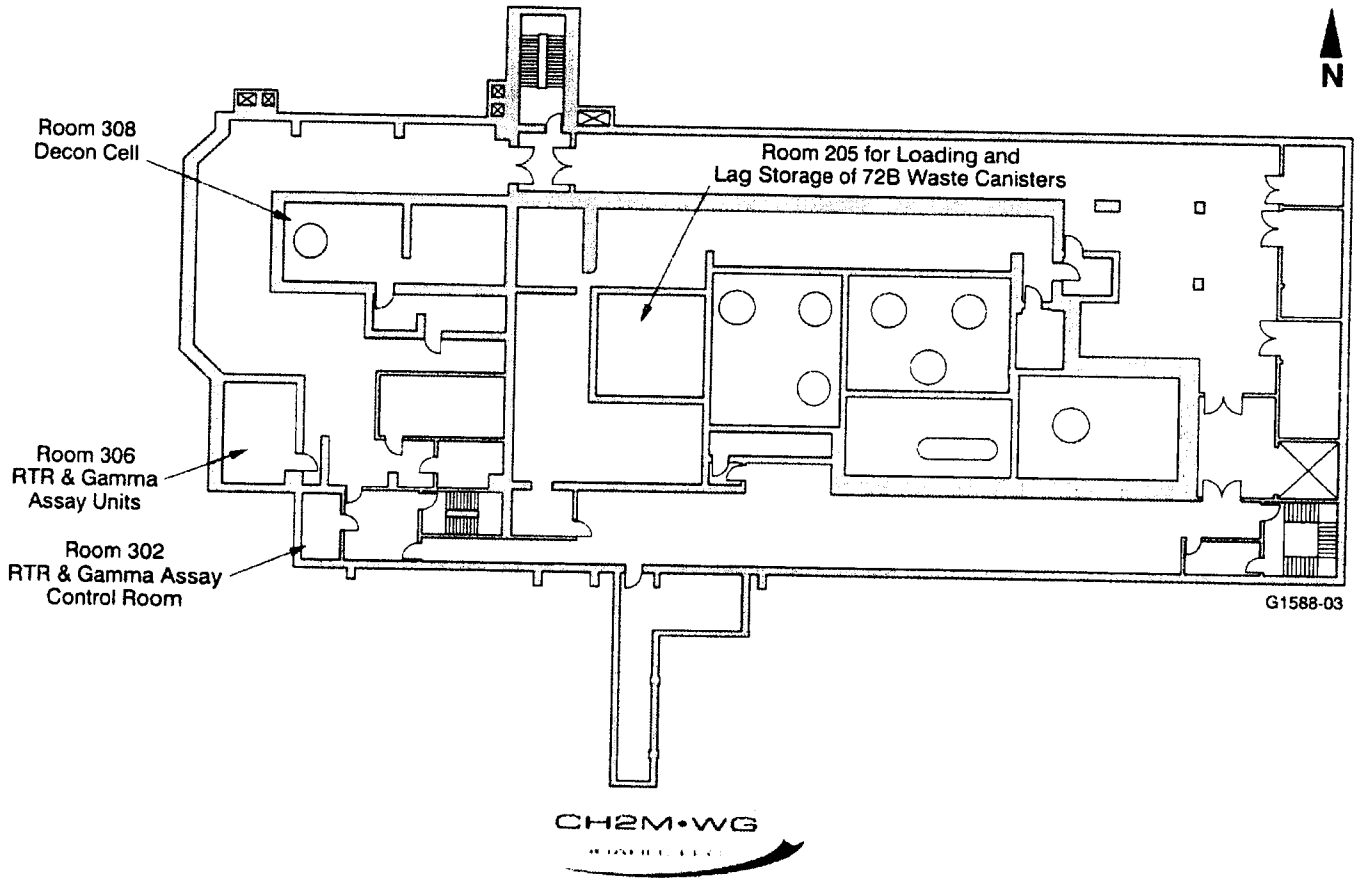
CPP- 659 Second Floor

CPP-659 Second Level Layout



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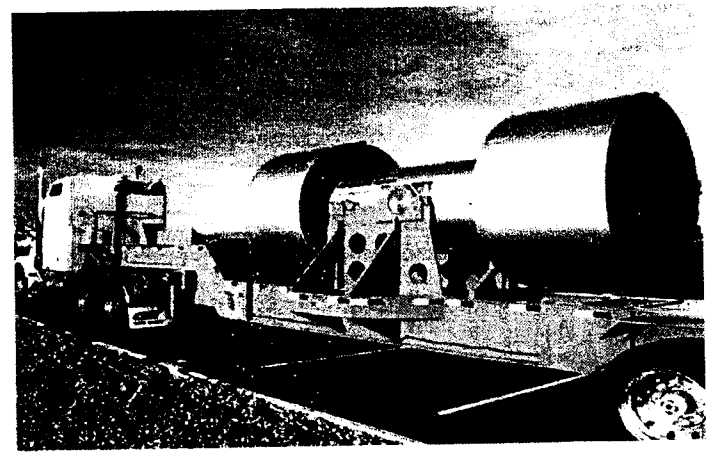
Transportation

- Via 72B

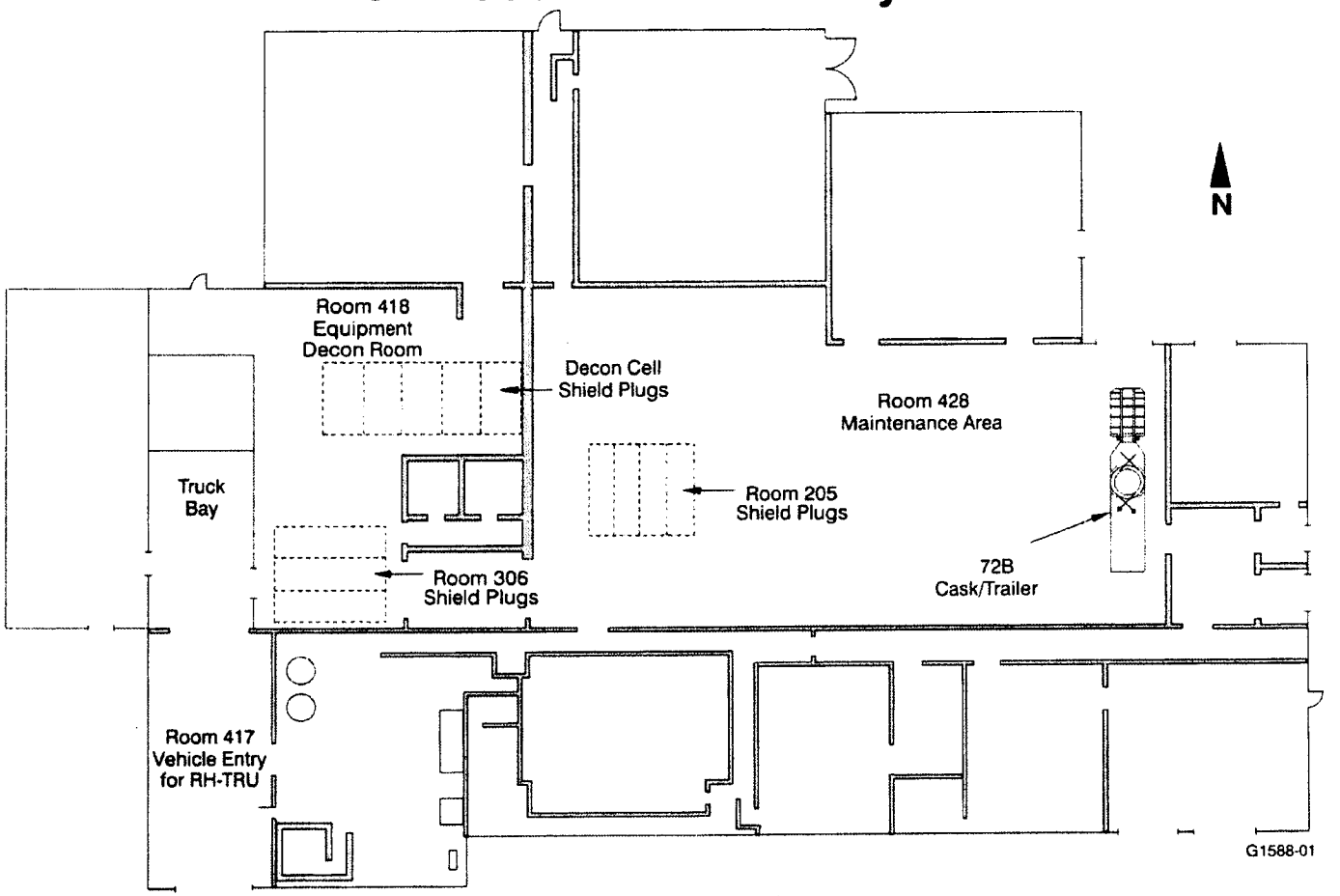


CPP-659 Facility Modifications to Support Shipping

- **CPP- 659 Room 428 will be modified to:**
  - Provide an access ramp to Room 428 to permit ingress/egress of 72B cask/trailer
  - Provide cameras and video monitoring equipment to support remote movement of drums and loading of waste canisters
  - Provide lag storage of loaded and sealed 72B waste containers
  - Shielding as required - July 2006 (baseline)

CPP- 659 Room 428

CPP-659 First Level Layout



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CPP- 659 Shipping Process Flow

- **Via 72B**

  Upon designation of a given shipping configuration:

  - Designated ISCs will be placed in Room 428
  - Applicable drums will be removed from ISCs for placement in 72B waste canisters
  - Upon insertion of drums in waste canisters, canisters will be sealed and positioned in a lag storage rack (Room 205) (up to 12 canisters)

CPP- 659 Shipping Process Flow (cont.)

- **Via 72B (cont)**

  Upon arrival of 72B Cask:

  - Trailer will be backed into facility
  - Impact limiters will be removed
  - Cask will be removed from trailer and will be positioned vertically for loading
  - Previously loaded waste canisters will be removed from lag storage and be positioned in the Inner Containment Vessel (ICV)

CPP- 659 Shipping Process Flow (cont.)

- ICV lid will be positioned and leak rate tested
- 72B cask lid will be positioned
- Leak rate test will be performed
- Cask will be returned to horizontal position on the trailer
- Impact limiters will be positioned on cask and shipment will be released upon being approved by CBFO

** If spare casks are available – casks will be preloaded and ready for pickup the day of arrival

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Attn:	Records Custodian	From:	Kevin Peters
Ship to:	CCP Central Records/ CCP Records Custodian	Site:	Argonne National Laboratory-East RH-TRU Waste
	4021 National Parks Highway - MS GSA 203	Company:	Technical Specialists, LLC
	Carlsbad, NM 88220	Telephone Number:	303-980-0543
		Date Sent:	3-24-06
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Document Number	Title/Description	Record Date	Total Pages
C334	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-500	3/22/2006	2
	RH-TRU Characterization Facilities Presentation	2/2/2006	16
	N/A		

Comments
None

Acceptance/Rejection Signature and Date

Records Accepted ☒	Christal Ingram (Signature)	Christal Ingram (Printed Name)	3-31-06 (Date)
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CCP Records Management

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Page 28 of 28

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Document Number	Title/Description	Record Date	Total Pages
C334	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-500	3/22/2006	2
	RH-TRU Characterization Facilities Presentation	2/2/2006	16
	N/A		

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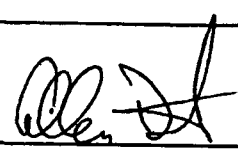
Attachment 3 - Acceptable Knowledge Source Document Summary

Site(s): Argonne National Laboratory	Source Document Tracking Number: P839
Waste Stream Number(s): ID-ANLE-S5000, ID-ANLE-S5000-RP (Applicable only when site library is not in use)	
Acceptable Knowledge Documentation Type: ☑ TRU Waste Management Program Information ☑ Waste Stream-Specific Information ☑ Additional Information	Category: ☐ C - Correspondence ☐ DR - Discrepancy Resolution ☐ I - Internal procedures ☐ M - Miscellaneous ☑ P - Published plans, documents, and procedures ☐ U - Unpublished Documents
Title or Description of Source Document [a]: Packing Configuration for Repacked ANL-E Canisters	
Source Document Reference Information (author(s), document and revision number, date, publisher): EDF-10236, Rev. 0, 02/15/2012, CH2M-WG Idaho, LLC	

AK # [b]	Source Doc. Page # [c]	AK Information Summary
PR8, WS2, WS3, WS4, WS5, WS8, WS9, S2, S16	Throughout	The purpose of this document is to describe the final packaging configuration of product drums produced from remote-handled transuranic (RH TRU) waste from the Materials and Fuels Complex (MFC). These product drums will be produced from the repack of Lot 2 ANL-E storage containers. The storage containers have been transported to the Idaho Nuclear Technology and Engineering Center (INTEC) for repacking. This document describes the packaging materials and components required to perform repacking the waste. The document was prepared to support the development of RH-TRU Waste Content Codes (TRUCON) and dose conversion factors supporting waste characterization and shipping requirements for disposal at the Waste Isolation Pilot Plant (WIPP). The majority of waste generated from each ANL-E container will produce two or more 30-gal product drums. See section 2 for the RH TRU packaging configuration. The ANL-E canisters have been segregated into two "Lots", Lot 2a and Lot 2b, for acceptable knowledge and characterization purposes. In Lot 2 there are 48 ANL-E canisters that will produce approximately 411 product drums (see Table 1 on page 4). Processed waste materials are described on page 6 including fines blended with a 5:1 mix of Met-L-X. Page 7 defines the tests for ignitability and reactivity in fines and fuel pins. Table 2 Waste Packaging components, tare weights, dimensions and materials is shown on page 11. The final packaging configuration for the MFC waste will be Department of Transportation (DOT) 7A, 55-gal drums. When present the PVC sleeving from the inner sleeve will be inside the drum on top of the waste, but will not form a layer of confinement. An NFT vent filter or similar type may be installed in the lid of the 30-gal drum, however, there is no requirement for a filter. The 30-gallon drum lid is not secured by a drum lid ring. An NFT vent filter will be installed in the lid of the 55 gallon drum. The 55-gal drum lid will be secured by a drum lid ring (page 13).

CCP RECORDS ORIGINAL
DATE REC'D 6/11/12

Attachment 3 - Acceptable Knowledge Source Document Summary (continued)

Site(s): Argonne National Laboratory	Source Document Tracking Number: P839
Waste Stream Number(s): ID-ANLE-S5000, ID-ANLE-S5000-RP (Applicable only when site library is not in use)	
Source Document Data Limitations (if any): 1. None	
Acceptable Knowlege Expert: Allen Dickerson /  Print /Sign	Date: 05/02/2012
a Provide description for non-titled information (i.e., container paperwork, MSDS sheets, etc) b Obtain from Acceptable Knowledge Documentation Checklist c For microfilm or microfiche, identify box, tape, reel number and location.	

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Attachment 3 - Acceptable Knowledge Source Document Summary

Waste Stream Number(s): AERHDM, ID-ANLE-S5000

Site(s): Idaho National Laboratory	**Source Document Tracking Number:** P046
Acceptable Knowledge Documentation Type: ☐ TRU Waste Management Program Information ☑ Waste Stream-Specific Information ☑ Supplemental Information	**Category:** ☐ C - Correspondence ☐ D - Discrepancy Resolution ☑ P - Published Documents ☐ U - Unpublished Documents

Title of Source Document: AGHCF Operations Manual: 15.27 Removal of Outer Glass from a Type B or C Shielding Window

Source Document Reference Information (author(s), document and revision number, date, publisher): W. C. Kettman, IPS-2-24-00, 0, 4/16/1996

AK # [a]	Source Doc. Page # [b]	AK Information Summary
WS4, S2	1-4	This procedure covers the removal of the outer glass from an installed Type B or C shielding window. Keywords: Shielding window, glass removal, Type B or C window

Source Document Data Limitations (if any):

1. This procedure is conducted on the cold-side outer glass, not in the hot cell.

Acceptable Knowlege Expert:

D. B. Becker for K. Peters / D B Becker — Date: 3/22/2006

Print /Sign

[a] Obtain from Acceptable Knowledge Documentation Checklist
[b] For microfilm or microfiche, identify box, tape, reel number and location.

15.27 Removal of Outer Glass from a Type B or C Shielding Window

15.27.1 Scope

This procedure covers the removal of the outer glass from an installed Type B or C shielding window. Draining of the liquid prior to the glass removal is covered in Section 15.5 of the AGHCF Operations Manual. The window glass being removed weighs ~300 lbs (Type B) or ~200 lbs (Type C).

15.27.2 Equipment/Materials

Penetrating oil

3/4-in. ratchet wrenches

3/4-in. socket and breaker bar

Pry bar with cushion blocks

Miscellaneous hand tools (wrenches, pliers, screw drivers, etc.)

Two pieces 3/8-in. cotton rope, each about 50-ft. long

Modified hand-crank lift table (IPS-D-88-00)

Chokes and cable (2)

Support jack (or appropriate length of wood 2" x 4")

Contact adhesive

15.27.3 General

1. ESH-HP coverage shall be available during all phases of operation in front of the window tank.

2. The gamma activity level at the face of the empty window tank should be ≤100 mR/hr before the work may proceed.

3. A gamma shield shall be placed away from the wall at least 5 ft (to allow space for the modified lift table). This shield, and any supplementary shielding, shall remain in

3. A gamma shield shall be placed away from the wall at least 5 ft (to allow space for the modified lift table). This shield, and any supplementary shielding, shall remain in place until the tank is refilled with either zinc-bromide solution or water.

Procedure

1. Liberally spray the holding bolts of the bottom bracket with penetrating oil.

2. Loosen, but do not remove, the 1/2-20 cap screws in the bottom bracket. Confirm that the glass remains firmly held in place by the top and the two side brackets.

3. Remove the holding bolts for the bottom window bracket and remove it.

4. Quickly support one end of the now exposed underside of the glass plate with the support jack (or wood 2 x 4 wedged against a window rail).

5. During reinstallation, the glass is to be supported on a neoprene cushion between the glass and the bottom support bracket. From 1/2-in.-thick neoprene, cut support blocks, 1-3/4-in. wide x 3-in. long to fit between each cap screw. In addition, if needed, cut two end blocks, 1-3/4-in. wide x 1-1/4-in. long.

6. Cement neoprene blocks to the inside bottom of the bottom holding bracket with contact adhesive, such that the neoprene blocks are centered between the screw holes and the 3-in. and 1-1/4-in. sides of the blocks are 1/4-in. in from the root of the angle-iron.

7. From 1/16-in.-thick neoprene, cut a strip 1-3/4-in. wide and the width of the glass. Using contact adhesive, cement the strip to the tops of the 1/2-in.-thick blocks in the previous step. Combined, the neoprene pieces will make a continuous shim 9/16-in. thick that vertically centers the glass on the window tank. The edge of the glass, when resting on top of the combined neoprene, will be 3/16-in. (uncompressed) above the tops of the bottom holding bolts.

8. Position the now-padded bottom support bracket on the angle-iron on the lift table so that it can receive the glass plate when it is lowered.

9. Position the modified lift table so that the table top just clears the top equipment support rail under the window. Push the lift table against the cell wall and secure it to the steel shelf below the window with chokes and cable. (Because each Type B and C window is unique, the method for securing will be handled on a case-by-case basis.)

10. Slowly raise the lift table until there is only a 1/8" gap between the rubber padding on the support bracket and the glass.

11. Spray the holding bolts in the remaining three brackets with penetrating oil.

12. Loosen, but do not remove, the remaining holding bolts. The glass most likely will slip onto the support angle at this time. If not, wait overnight.

13. If the glass still has not slipped, use a cushioned pry bar to (1) pry the window frames loose from the glass and (2) pry the glass loose from the window tank. Exercise extreme care not to damage the glass.

14. With an operator standing behind the lift table to prevent the glass from falling outward and with the bottom of the glass resting on the support bracket, remove the top window bracket, then the two side brackets.

15. Make certain that the top of the glass is leaning against the window tank and pull the bottom of the glass to the back of the support bracket (away from edge). Check that the glass remains firmly seated on the support bracket.

16. By hand, two operators shall gently pull the top of the glass out and rest it against the cushioned support attached to the table.

17. Secure the window glass to the lift table support bracket with rope (make certain rope is tight) making sure that the glass cannot topple.

18. Back the lift table away from the cell wall and move it clear of window area. This cold-side glass will remain on the lift table during window refurbishment. The glass will be cleaned while secured to the lift table.

Prepared by: W. C. Kettman — Date: 4/16/96

Reviewed by: L. A. Neimark, Manager, IPS — Date: 4/16/96

Approved by: A. B. Cohen, Manager AGHCF — Date: 4-16-96

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Not part of page count

Attachment 2 - CCP Records Transmittal/Receiving Form

CCP Central Records/Records Custodian, 4021 National Parks Highway - MS: GSA 203, Carlsbad, New Mexico 88220

Telephone Number: 505-234-7523, 505-234-7233, 505-234-7617
Fax Number: 505-234-7014

☒ Original Record
☐ Fax Record
☐ Electronic Record

Attn:	Records Custodian	From:	Kevin Peters
Ship to:	CCP Central Records/ CCP Records Custodian	Site:	Argonne National Laboratory-East RH-TRU Waste
	4021 National Parks Highway - MS GSA 203	Company:	Technical Specialists, LLC
	Carlsbad, NM 88220	Telephone Number:	303-980-0543
		Date Sent:	3-29-06
Telephone Number:	505-234-7523		

Document Number	Title/Description	Record Date	Total Pages
P046	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-500 and CCP-AK-ANLE-500	3/22/2006	1
	AGHCF Operations Manual: 15.27 Removal of Outer Glass from a Type B or C Shielding Window	4/16/1996	4
	N/A		

Comments
None

Acceptance/Rejection Signature and Date

	Signature	Printed Name	Date
Records Accepted ☒	Katie Chester	Katie Chester	5-1-06
Records Rejected ☐			

Reason for Rejection: _____

Re-submittal:	Signature	Printed Name	Date

P.01

TRANSACTION REPORT

MAY-01-2006 MON 01:58 PM

FOR: CCP RECORDS 15052347014

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DATE START	RECEIVER	TX TIME	PAGES	TYPE	NOTE	M#	DP
MAY-01 01:57 PM	LANL _ CBAD	17"	1	FAX TX	OK	569	

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CCP Records Management

Effective Date: 8/22/2005
Page 28 of 28

Attachment 2 - CCP Records Transmittal/Receiving Form

CCP Central Records/Records Custodian, 4021 National Parks Highway - MS: GSA 203, Carlsbad, New Mexico 88220

Telephone Number: 505-234-7523, 505-234-7233, 505-234-7617
Fax Number: 505-234-7014

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Attn: Records Custodian

Ship to: CCP Central Records/ CCP Records Custodian
4021 National Parks Highway - MS GSA 203
Carlsbad, NM 88220

Telephone Number: 505-234-7523

From: Kevin Peters

Site: Argonne National Laboratory-East RH-TRU Waste

Company: Technical Specialists, LLC

Telephone Number: 303-980-0543

Date Sent: 3-29-06

Document Number	Title/Description	Record Date	Total Pages
P046	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-500 and CCP-AK-ANLE-500	3/22/2006	1
	AGHCF Operations Manual: 15.27 Removal of Outer Glass from a Type B or C Shielding Window	4/16/1996	4

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PAGE

Attachment 3 - Acceptable Knowledge Source Document Summary

Site(s): Idaho National Laboratory	Source Document Tracking Number: P056
Waste Stream Number(s): ID-ANLE-S5000 (Applicable only when site library is not in use)	
Acceptable Knowledge Documentation Type: ☑ TRU Waste Management Program Information ☑ Waste Stream-Specific Information ☐ Additional Information	Category: ☐ C - Correspondence ☐ DR - Discrepancy Resolution ☐ I - Internal procedures ☐ M - Miscellaneous ☑ P - Published plans, documents, and procedures ☐ U - Unpublished Documents
Title or Description of Source Document [a]: *Program Plan for Packaging and Certification of INEL Remote-Handled Stored TRU Waste*	
Source Document Reference Information (author(s), document and revision number, date, publisher): H. D. Welch, WM-PD-88-017, 9/1988, N/A	

COPY

AK # [b]	Source Doc. Page # [c]	AK Information Summary
PR6, PR8	ii-iv	Purpose is to examine alternatives for processing and certifying RH-TRU waste drums and hot fuel examination facility (HFEF) inserts stored at the INEL. RWMC background. Majority of RH-TRU stored at RWMC was generated at ANL-E (397 drums or 87% of containers as of January 1, 1988). Expect to receive 44 drums uncertified and 26 drums certified from ANL-E. Projected that 30 drums WIPP will be certified per year.
PR8	iv	ANL-E waste generated since 1987 has WIPP-WACCC approval. Waste stored at RWMC dates back to 1976. Existing records may not be adequate to certify older waste.
PR8, WS12	xvi	RH-TRU stored at the RWMC was characterized in an internal report, "Waste Characterization for INEL RH/Special-Case Stored TRU Wastes." Detailed information from waste storage records and personal contact with the waste generating site provide the bases for the waste characterizations. RH-TRU waste does not contain free liquids, pyrophoric material, explosives, or compressed gases and sludges. Newly generated waste is currently being certified by ANL-E.
PR8	xvi	For precertified waste drums, the approach for waste certification will be to prepare an INEL certification Program Plan using the generators' certification plans, as approved by the WIPP-Waste Acceptance Criteria Certification Committee (WACCC). The existing NOMAD data base and Stored Waste Examination Pilot Plant (SWEPP) Data Management System will be used to prepare the data package for RH-TRU waste. A Quality Assurance Plan, consistent with the requirements of WIPP-DOE-120, Quality Assurance Requirements for Certification of TRU Waste for Shipment to the Waste Isolation Pilot Plant will be prepared.
PR8	xvii	This approach for certifying uncertified drums (pre-1987 ANL-E) is dependent on the acceptability of using existing waste shipment records, past waste handling procedures, and final transportation requirements as the bases for the certification program. Will require WIPP approval. At that time WIPP was evaluating the acceptability of existing records for waste certification. The use of a limited sampling program for uncertified drums appears to be a viable option. The sampling program would serve to verify the waste characterization studies completed for RH-TRU waste.
PR8	xvii, xviii	Concerns: 1) Need Assay System, 2) Gas generation studies needed, 3) WIPP supplies nondestructive examination equipment, 4) Acceptance of existing records for meeting waste certification and transportation needs.

CCP RECORDS ORIGINAL
DATE REC'D 12/11/2012

Attachment 3 - Acceptable Knowledge Source Document Summary (continued)

Site(s): Idaho National Laboratory	Source Document Tracking Number: P056

Waste Stream Number(s): ID-ANLE-S5000
(Applicable only when site library is not in use)

Source Document Data Limitations (if any):

1. Describes INEL Certification plan, rather than ANL-E implementation.

Acceptable Knowlege Expert:

Travis Smith / T. Smith Date: 09/10/2012
Print /Sign

a Provide description for non-titled information (i.e., container paperwork, MSDS sheets, etc)
b Obtain from Acceptable Knowledge Documentation Checklist
c For microfilm or microfiche, identify box, tape, reel number and location.

P056

WM-PD-88-017

PROGRAM PLAN
FOR
PACKAGING AND CERTIFICATION OF
INEL REMOTE-HANDLED STORED TRU WASTE

H. D. Welch

Published September 1988

Idaho National Engineering Laboratory
EG&G Idaho, Inc.
Idaho Falls, Idaho 83415

Prepared for the
U.S. Department of Energy
Idaho Operations Office
Under DOE Contract No. DE-AC07-76ID01570

EXECUTIVE SUMMARY

I. Introduction

Remote-handled transuranic (RH-TRU) defense waste is presently being retrievably stored at the Idaho National Engineering Laboratory (INEL).

In compliance with Department of Energy (DOE) guidelines this waste has been stored to facilitate its retrieval for subsequent emplacement in permanent storage. The designated permanent storage facility is the Waste Isolation Pilot Plant (WIPP) located near Carlsbad, New Mexico. This facility is scheduled to begin receiving RH-TRU wastes for emplacement and testing in 1990. Actual shipment of INEL RH-TRU waste will begin in 1991.

The purpose of this study is to examine a number of alternatives for processing and certifying RH-TRU waste drums and Hot Fuel Examination Facility (HFEF) inserts stored at the INEL so that the best method can be identified. The bases for the final selection and recommendation will be the following: cost, manpower loading, safety, current regulation of WIPP, and Department of Transportation (DOT), DOE and Nuclear Regulatory Commission (NRC) requirements.

EG&G Idaho has the capability to meet the Defense Waste Management Program goals. EG&G can meet the objectives of the Defense Special-Case Transuranic Waste Implementation Plan dated June 1987, the Defense Remote Handled Transuranic Waste Implementation Plan dated January 1988, and the Draft Implementation Plan for Remote Handled Transuranic Waste During the Five-Year Period 1988-1993, dated July 1988.

II. Background

The Radioactive Waste Management Complex (RWMC) encompasses approximately 144 acres in the southwestern corner of the INEL. The RWMC was established in 1952 as a controlled area for burial of solid

radioactive wastes generated by INEL operations. In 1954, the burial ground was designated as a solid transuranic (TRU) waste disposal site. Until 1970, all TRU waste was buried below grade at the RWMC. In November 1970, the Transuranic Storage Area (TSA) was established for retrievable storage of waste contaminated with greater than 10 nCi of TRU alpha activity per gram of waste (contact-handled). In November 1976, the Intermediate Level Transuranic Storage Facility (ILTSF) was established for retrievable storage of RH-TRU contaminated waste (greater than 200 mR/h and less than 4500 R/h surface dose rate).

The majority of the RH-TRU waste stored at the RWMC has been generated by Argonne National Laboratory-East. Other waste generators include Argonne National Laboratory-West, the Naval Reactor Facility, and the Idaho Chemical Processing Plant.

Table ES-1 shows the amount of RH-TRU waste in storage at the RWMC as of January 1, 1988:

Table ES-1. RH-TRU Waste Stored at RWMC (as of January 1, 1988)

Waste Generator		Containers	Percentage of Total Containers Stored
Argonne National Laboratory-East	(ANL-E)	397 drums	87%
Argonne National Laboratory-West	(ANL-W)	29 HFEF Inserts	6%
Naval Reactor Facility	(NRF)	27 drums	6%
Idaho Chemical Processing Plant	(ICPP)	2 drums	1%
	Total	455 waste containers	

Projected RWMC RH-TRU waste receipts for 1988 and beyond are as follows:

- Argonne National Laboratory-East
  - 1988: 44 drums uncertified
    26 drums WIPP certified
  - Projected: 30 drums WIPP certified per year.

- Argonne National Laboratory-West
  - 1988: 5 inserts non-certified
  - Projected: 10 per year certified.

III. Approaches

Trade studies were conducted that considered all alternatives that would allow early implementation of retrieval, certification, and canisterization of RH-TRU waste to meet the goals of FY-1991 to support the WIPP RH Demonstration Project (Draft Implementation Plan for Remote-Handled Transuranic Waste During the Five-Year Test Period 1988-1993, dated July 1988).

The studies concluded that, for precertified drums, cost-effective implementation is relatively easy. However, for uncertified drums, a number of questions remain regarding certification. For example, ANL-E waste generated since 1987 has WIPP-WACCC approval; however, INEL stored RH-TRU waste dates back to 1976. Existing records may not be adequate to certify older waste. Also, requirements for transportation and acceptability of records are not known. To meet transportation requirements, all waste drums that are not equipped with an acceptable venting device may need venting.

The configuration of the HFEF inserts makes them more difficult to handle than the drums. The higher-radiation HFEFs will need to be processed in a hot cell. Twenty-one HFEFs will require venting.

IV. Alternatives Developed

Alternatives have been developed for handling precertified drums, uncertified drums, and HFEF inserts. Each of these is discussed in detail in the main body of this report.

For precertified drums, the following alternatives have been developed:

- In-vault-type welding
- Venting at the RWMC Drum Venting Facility (DVF).

For uncertified drums, the following alternatives have been developed:

- Use WIPP-supplied real-time radiography (RTR) and assay systems.
- Use existing facilities [Test Area North (TAN) hot cells].
- Modify existing facilities (TAN-641, WMO-616).
- Build new facilities.

For HFEF inserts, the following alternatives have been developed:

- Install vented closures on the 21 HFEF inserts and package these in WIPP 10-ft RH canisters.

- Remove and inspect contents of HFEF inserts. Repackage contents in 55-gal drums and package these in WIPP 10-ft RH canisters.

Table ES-2 summarizes these alternatives and the estimated associated costs. The costs provided by this report should be used for planning purposes. Several issues (gas generation, transportation requirements) require resolution before a definitive alternative is selected. The implementation costs for each alternative reflect the costs for program management (five years only), preparation of supporting documentation such as certification plans, quality assurance, and safety and environmental documents.

Table ES-2. Summary of Processing Alternatives and Cost for RH-TRU Waste

NOTE: Assumes WIPP canister will be supplied by WIPP.

Conditions	Possible Solutions	Implementation Cost [1]	Design and Construction Cost	Operation Cost per Canister	Total Estimated Project Cost	Cost/Canister Based on 58 Canisters
PRECERTIFIED WASTE DRUMS						
1. No venting required	In-vault type processing	$655,000	$ 25,000	$ 1,600	$ 773,000[2]	$13,300
2. Venting required	Process the waste through the Drum Venting Facility (Scenario III)	$595,000	$586,000	$3,100	$1,361,000[2]	$23,500

Conditions	Possible Solutions	Implementation Cost [1]	Design and Construction Cost	Operation Cost per Canister	Total Cost for 150 Canisters	Cost/Canister Based on 150 Canisters
UNCERTIFIED WASTE DRUMS						
1. Certified using existing records. No venting req'd	In-vault type processing	$655,000	$ 25,000	$1,600	$ 952,000[3]	$ 6,300
2. Certified using existing records. Venting required	Process the waste through the Drum Venting Facility and in-vault type welding (Scenario III)	$595,000	$ 586,000	$3,100	$1,641,000[3]	$10,940
3. Records not acceptable for certification. Venting required.						
A. Certify drums by records and 7% sampling being processed at WMEO	1. Process the waste through the Drum Venting Facility (Scenario III) 2. Process samples by visual examination at WMEO (WMEO Option 3a). Cost based on 40 drums	$595,000	$ 586,000	$3,100 $21,000 cost/drum for 40 drums	$2,486,000[3]	$16,600
B. Open and 100% visual inspection	1. Process the waste through the Drum Venting Facility (Scenario III) 2. Process by visual examination at WMEO (WMEO Option 2a)	$655,000	$ 586,000	$3,100 $18,700	$4,581,000[3]	$30,000
C. Modify facilities						
1. TAN 640/641	1. Process the waste through the Drum Venting Facility 2. Process utilizing EG&G-supplied RIR and assay systems	$595,000	$ 586,000 $4,740,000	$3,100 $8,600	$7,681,000[3]	$51,200

Table ES-2. (Continued)

Conditions	Possible Solutions	Implementation Cost (1)	Design and Construction Cost	Operation Cost per Canister	Total Cost for 150 Canisters	Cost/Canister Based on 150 Canisters
2. TAN 650	1. Process the waste through the Drum Venting Facility	$595,000	$ 586,000	$3,100	$7,341,000	$48,900
	2. Process utilizing EG&G-supplied RTR and assay systems		$4,400,000	$8,600		
3. RWMC 616	1. Process the waste through the Drum Venting Facility	$595,000	$ 586,000	$3,100	$9,039,000(3)	$60,300
	2. Process utilizing EG&G-supplied RTR and assay systems		$6,040,000	$6,000		
D. New Facilities						
1. Process and office space	1. Process the waste through the Drum Venting Facility	$595,000	$ 586,000	$3,100	$9,724,750(3)	$64,900
	2. Process utilizing EG&G-supplied RTR and assay systems		$7,185,000	$6,000		
2. Process only	1. Process the waste through the Drum Vent Facility	$595,000	$ 586,000	$3,100	$9,464,000(3)	$63,000
	2. Process utilizing EG&G-supplied RTR and assay systems		$6,925,000	$6,000		
4. HFEF INSERTS						
A. Precertified and vented (8)	In-vault type processing	$277,000	$ 25,000	$1,600	$ 318,000	$39,500
B. Uncertified and require venting (21 inserts)	Retrieve from ILTSF, examine and canisterize at NMEO	$277,000	-0-	$1,600 $39,000	$1,147,000	$54,400
C. Uncertified and require venting	Retrieve from ILTSF, Install new vented lid at NMEO (no exam.)	$277,000	-0-	$1,600 $44,000	$1,242,600	$59,100

(1) Implementation costs are those costs projected for the preparation of supporting documentation such as the Project Management/Technical Support, Certification Plan, Quality Assurance, Special Studies, Safety and Environmental Document, etc.

(2) Based on total precertified receipt of 175 drums (total of 58 canisters or approximately 12 canisters/year).

(3) Project cost based on 450 drums.

* See Appendix B for cost estimates for processing HFEF waste containers and 30-gal RH-TRU drums at the INEL Test Area North's NMEO facility.

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ANL-E-P056

V. Recommended Alternatives

The following alternatives are recommended for handling precertified drums, uncertified drums, and HFEF inserts.

5.1 Precertified Drums (no additional venting required)

The INEL is currently receiving precertified RH-TRU drums from ANL-E. An estimated 26 precertified drums are expected in FY-1988. Approximately 30 precertified drums will be shipped to INEL in outyears. The INEL approach for retrieval and overpacking of precertified drums consists of installing a weld fixture at the RWMC ILTSF, sealing the canister by hand-welding, and leak testing. This option assumes no venting of the drums is required (see Scenario I, Section 5.1, of main text).

In FY-1989, design of the in-vault weld fixture would be finalized. A demonstration using the prototype fixture will be completed 1Q FY-1989. Preparation of supporting documentation (Certification Program Plan, Quality Assurance Plan, Safety Assessment, Operational Safety Requirements, procedures and environmental documentation) would be completed. Gas generation studies would be initiated to determine the adequacy of the ANL-E semi-permeable gasket for aspirating radiolytic-produced hydrogen. Modifications to the INEL PERM computer model, developed to support aspiration times for contact-handled TRU waste, would be completed to allow modeling of RH-TRU waste drums. During 1Q FY-1990, a Readiness Review will be conducted. Canisterization operations will begin 1Q FY-1990 and be conducted on a periodic campaign basis as required to support the WIPP shipment schedule for RH-TRU waste.

The following assumptions are made as part of this alternative:

- The permeable drum gasket is an acceptable drum venting system.

- Some tooling and other costs have not been identified such as those required to interface with the NU-PAC-72-B shipping cask. (The costs are not identified because the cask drawings lack some dimensions.)

- ANL-E will install carbon vent on new certified waste starting in 1989.

- Westinghouse WIPP will provide the RH canister.

The estimated schedule and cost for implementing this alternative are shown in Tables ES-3 and ES-4, respectively.

Advantages of this alternative are as follows:

- Low cost.
- No on-site transportation costs involved since operation is conducted at the RWMC.
- Will not impact other operations or facilities at the RWMC.
- Does not require transportation of unvented waste packages.

5.2 Uncertified Drums

At present, selection of a single alternative for retrieving and certifying INEL uncertified stored RH-TRU waste drums is not possible. The appropriate alternative will be determined based on completion of gas generation studies on the permeable styrene butadiene gasket, determination of transportation compliance requirements for the NU-PAC-72-B, and acceptability of existing waste records and waste generator post procedures for complying with WIPP-WACCC requirements.

If venting of the waste drums is required, the schedule and cost for completing modification to the SWEPP Drum Venting Facility are shown in Tables ES-5 and ES-6, respectively.

TABLE ES-3. Milestone Schedule for Precertified Drums (No Venting Required)

Milestone	FY89				FY90				FY91			
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
Complete Design	▽											
Complete Construction		▽										
Prepare Certification Plan/ QAP	▽											
Conduct Gas Generation Studies	▽											
Prepare Safety/Environmental Documentation	▽											
Prepare Operational Procedures		▽										
Complete Training & Qualification of Personnel		▽										
Conduct Readiness Review					▽							
Initiate Operations					▽		▽		▽		▽	
Project Engr./Technical Support	▽				▽		▽		▽			
												▽

TABLE ES-4. Estimated Cost Summary for Precertified Drums (No Venting Required)

Task Element	FY-89 ($K)	FY-90 ($K)	FY-91 ($K)	FY-92 ($K)	FY-93 ($K)
Project Management/Technical Support	150K	150K	50K	50K	50K
Complete Design	3K				
Complete Construction	22K				
Certification Plan/QAP	25K				
Gas Generation Studies	75K				
Safety/Environmental Documentation	60K				
Operational Procedures	15K				
Training and Qualification		20K			
Readiness Review		10K			
Operations		30K	23K	20K	20K
Total	$350K	$210K	$ 73K	$ 70K	$ 70K

1. Canisterization operations conducted at 20 canisters per year.

2. Assumes Westinghouse WIPP procures the canister.

TABLE ES-5. Milestone Schedule for Modifying the Drum Venting Facility

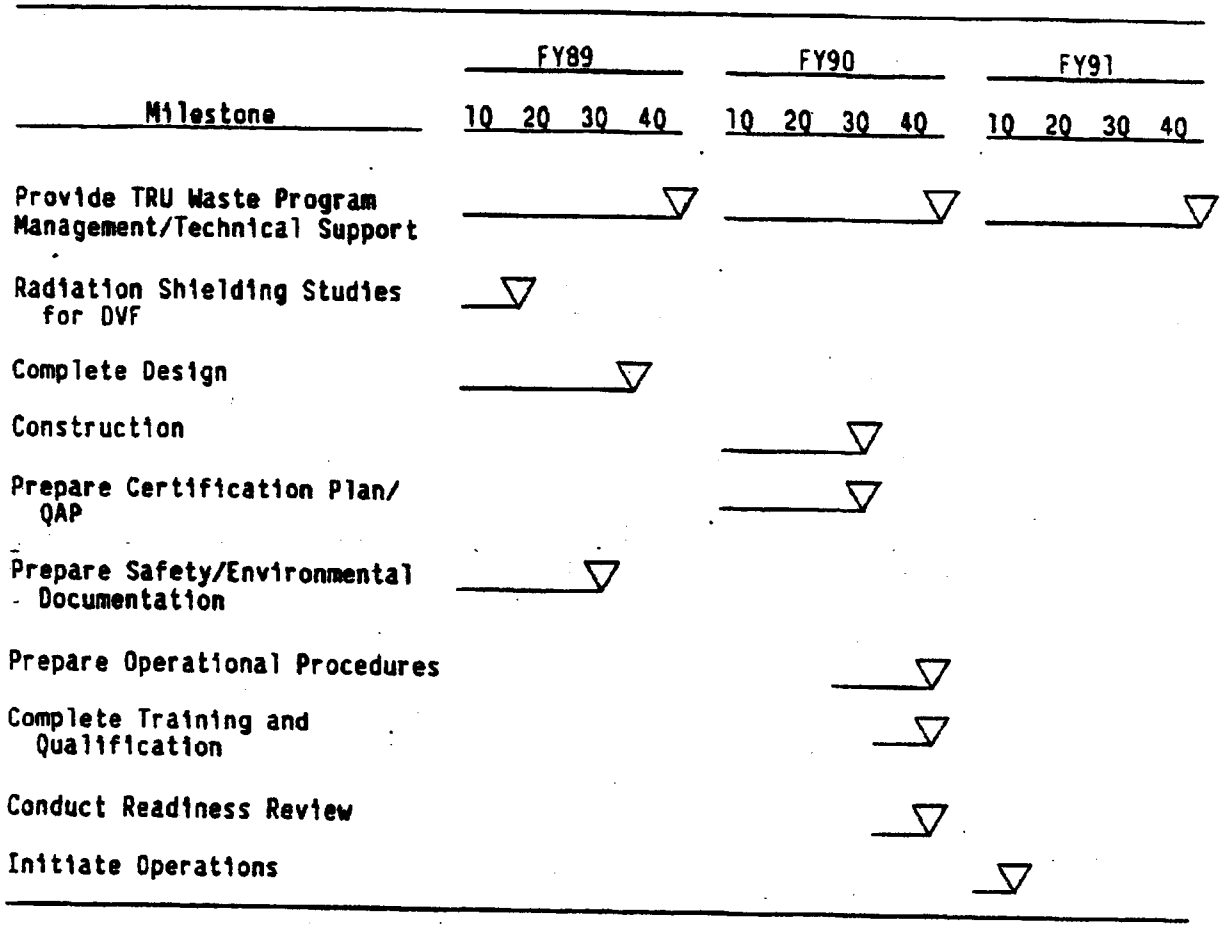

TABLE ES-6. Estimated Cost Summary for Modification to the Drum Venting Facility

Task Element	FY-89 ($K)	FY-90 ($K)	FY-91 ($K)	FY-92 ($K)	FY-93 ($K)
Project Management/Technical Support	150K	150K	50K	50K	50K
Complete Design	25K				
Construction		561K			
Safety/Environmental Documentation	60K				
Operational Procedures		30K			
Training and Qualification		20K			
Readiness Review		10K			
Total	$235K	$771K	$ 50K	$ 50K	$ 50K

1. Canisterization operations conducted at 20 canisters per year.
2. Assumes Westinghouse WIPP procures the canister.
3. Project management/technical personnel for this project and precertified drum (no venting required) project personnel could cover both projects.

Based on these issues, a number of alternatives were developed (see Table ES-2). The most viable alternatives are discussed below.

1. Continue In-Vault Welding. This option assumes that the existing waste records and generator waste handling procedures are adequate for certifying the waste, and the styrene butadiene gasket is an acceptable venting device for meeting transportation requirements.

   The estimated cost for this alternative is $773,000 for 150 canisters of RH-TRU waste. Advantages of this alternative include low implementing cost, no on-site transportation except within the RWMC, and no significant impacts on RWMC operations.

2. Modify DVF and Continue to Use In-Vault Welding. In this alternative, the existing DVF at the RWMC would be modified to receive RH-TRU waste drums (see Section 7.0, main text). A shielded area would be provided to allow the drum to aspirate prior to overpacking in the RH canister. This alternative assumes that existing records and generator waste handling procedures are acceptable to the WIPP-WACCC.

   The estimated cost for this alternative is $1,361,000. A primary advantage is that no on-site transportation of unvented drums is required (both a cost and safety issue).

3. Modify DVF, Sample Waste at NMEO, In-Vault Welding. In this alternative, the DVF would be modified to allow venting of RH-TRU waste drums. The approach to certifying the waste is based on a limited sampling program to verify records and previous waste characterization studies. Approximately 7% of the stored inventory would be opened at the Nuclear Materials Evaluation Operations (NMEO) hot cells for verification of compliance. Drums would be placed in canisters in the ILTSF in-vault welding fixture and sealed.

The estimated cost for this alternative is $2,486,000.

4. Modify DVF and Complete 100% Sampling. This alternative assumes that existing records are not adequate for waste certification. Drums of waste would be vented prior to shipment to the NMEO hot cells where a 100% opening and visual examination would be completed. The wastes would be repackaged into the RH canister and welded. Venting is assumed to be required before shipment of the waste to allow aspiration of radiolytic-produced gases.

The estimated cost for implementing this alternative is $4,511,000.

The cost of modifying existing facilities or building new facilities and using nondestructive examination and assay equpment was evaluated and found to exceed that of the above-described alternatives.

Because of the uncertainty associated with selecting a particular alternative for the uncertified drums, no schedules were prepared. Activities under the above alternative could be initiated in FY-1989.

5.3 HFEF Inserts

The HFEF inserts from ANL-W could be handled by several methods:

a. Precertified and Vented. Currently, there are eight HFEF inserts at the RWMC that have been equipped with carbon composite filters and are expected to be certified for shipment to WIPP after approval of the ANL-W Certification Program Plan. These eight inserts would be processed by in-vault welding at the RWMC-ILTSF. Estimated cost for completing the overpacking and welding of these inserts is $318K. Implementation could begin in FY-1989.

b. Uncertified and Unvented. There are 21 HFEF inserts at the RWMC which will require venting and may require processing to satisfy the WIPP certification requirements. Five of the HFEF inserts have surface dose rates greater than 100 R and will require special handling during processing. Conducting this work at NMEO hot cells is estimated at $1,147,000 to $1,242,600. Implementation could begin in FY-1989.

VI. Certification/Approach

The RH-TRU waste stored at the RWMC was previously characterized in an internal report, "Waste Characterization for INEL Remote-Handled/Special-Case Stored Transuranic Wastes." Detailed information from waste storage records and personal contact with the waste generating site provide the bases for the waste characterizations. The report concluded that the stored RH-TRU waste does not contain free liquids, pyrophoric material, explosives, or compressed gases and sludges, with the exception of the two drums from the ICPP which contain sludges. Whether or not the two ICPP drums contain liquid waste, explosives, or compressed gases is unknown.

Newly generated waste is currently being certified by ANL-E.

For precertified waste drums, the approach for waste certification will be to prepare an INEL Certification Program Plan using the generators' certification plans, as approved by the WIPP-Waste Acceptance Criteria Certification Committee (WACCC), as a basis. The existing NOMAD data base and the Stored Waste Examination Pilot Plant (SWEPP) Data Management System will be used to prepare the data package for RH-TRU waste. Administrative controls and procedures will be used to ensure that additional requirements, such as final radiation surveys, are properly measured and recorded. A Quality Assurance Plan, consistent with the requirements of WIPP-DOE-120, Quality Assurance Requirements for Certification of TRU Waste for Shipment to the Waste Isolation Pilot Plant, will be prepared.

The approach for certifying the uncertified drums (pre-1987 ANL-E drums and other INEL generators' drums) is dependent on the acceptability of using existing waste shipment records, past waste handling procedures, and final transportation requirements as the bases for the certification program. The approach for certifying presently uncertified drums, without using nondestructive examination and assay techniques, will require prior approval by the WIPP-WACCC before any of the identified alternatives are implemented. Contact with Westinghouse TRU Waste and Integration personnel and with ANL-E indicates the WIPP-WACCC is evaluating the acceptability of existing records for waste certification. The acceptability of using past records for fulfilling transportation requirements will not be known until the transportation system for RH-TRU waste is completed.

The use of a limited sampling program for uncertified drums appears to be a viable option, pending approval from the WIPP-WACCC. The sampling program would serve to verify the waste characterization studies completed for RH-TRU waste. This approach is similar to that used by the INEL for certifying contact-handled TRU waste. This approach would not require the procurement of expensive examination equipment or new facility construction.

The precertified HFEF inserts will be certified in the same manner as precertified waste drums (described above). The ANL-W RH Certification Program Plan will provide the basis for the certification program. If the uncertified HFEF inserts require opening and examination, a separate Certification Program Plan and Quality Assurance Plan will be developed. Administrative controls (training, procedures, etc.) during the waste examination process will provide control of the certification process.

VII. Issues/Concerns

1. Assay System. Continual development of the Los Alamos National Laboratory assay system will be required if use of existing records for uncertified waste, with sampling, is not acceptable.

2. Gas Generation Issue. To date, no gas generation test or studies have been done on waste in remote-handled containers. This type of container is different from the contact-handled container because it is generally packaged differently and contains, in addition to alpha activity, higher levels of beta and gamma activity. It is expected that the hydrogen generation rate would be greater for remote-handled containers than that projected for contact-handled containers, provided the packaging is equivalent.

   Filter vent and gasket tests conducted by Science Applications International Corporation (Pleasanton, California) for Monsanto Research Corporation Mound Laboratory conclude that the breathable gasket yields variable results. None of the gaskets tested performed as well as the previously tested gaskets at Oak Ridge National Laboratory.

   It is anticipated that NRC will require a demonstration to show that all metal cans and buckets within the RH 30-gal drums are being vented and hydrogen concentration will be below the explosive limit of 5%. Additional modification to the drum venting machine and to the venting technique may be required. Gas generation studies, to be conducted in FY-1989, have been identified.

3. WIPP Supplied Nondestructive Examination Equipment. WIPP could fund an assay unit and an RTR unit for use at the INEL and possible reuse at Oak Ridge National Laboratory. If the RTR and assay system were skid-mounted, with shielding supplied at the using lab, the cost of one system could be saved.

4. The Acceptance of Existing Records for Meeting Waste Certification and Transportation Needs. Further investigation, with a knowledge of the waste streams, past records, the generator quality control systems, RTR and possible sampling techniques, could eliminate the need for an assay system. Over 90% of the RH wastes have been quantified for

nuclide content by gram weight and curies. Detailed records were maintained in the form of before-and-after examination records in which both the gram weight and curies were required to balance. The waste materials and containers were inspected prior to and during the handling and packaging sequence to ensure compliance with the document "Safety Analysis for Twenty-Year Retrievable Storage of Intermediate Gamma Level Transuranic Waste" by W. D. Jackson.

The records appear to be more accurate than the assay units now available. The RTR system, if needed, would identify pressure vessels, free liquids, and particulate waste materials.

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Attachment 2 - CCP Records Transmittal/Receiving Form

CCP Central Records/Records Custodian, 4021 National Parks Highway - MS: GSA 203, Carlsbad, New Mexico 88220

Telephone Number: 505-234-7523, 505-234-7233, 505-234-7617
Fax Number: 505-234-7014

☒ Original Record
☐ Fax Record
☐ Electronic Record

Attn:	Records Custodian	From:	Kevin Peters
Ship to:	CCP Central Records/ CCP Records Custodian	Site:	Argonne National Laboratory-East RH-TRU Waste
	4021 National Parks Highway - MS GSA 203	Company:	Technical Specialists, LLC
	Carlsbad, NM 88220	Telephone Number:	303-980-0543
		Date Sent:	3-29-06
Telephone Number:	505-234-7523		

Document Number	Title/Description	Record Date	Total Pages
P056	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-500	3/22/2006	2
	Program Plan for Packaging and Certification of INEL Remote-Handled Stored TRU Waste	9/1/1988	21
	N/A		

Comments
None

Acceptance/Rejection Signature and Date

Records Accepted ☑	Christal Ingram (Signature)	C. Ingram (Printed Name)	5-3-2006 (Date)
Records Rejected ☐	_____ (Signature)	_____ (Printed Name)	_____ (Date)

Reason for Rejection: _____

Re-submittal:	_____ (Signature)	_____ (Printed Name)	_____ (Date)

P.01

TRANSACTION REPORT

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Attn:	Records Custodian	From:	Kevin Peters
Ship to:	CCP Central Records/ CCP Records Custodian	Site:	Argonne National Laboratory-East RH-TRU Waste
	4021 National Parks Highway - MS GSA 203	Company:	Technical Specialists, LLC
	Carlsbad, NM 88220	Telephone Number:	303-980-0543
		Date Sent:	3-29-06
Telephone Number:	505-234-7523		

Document Number	Title/Description	Record Date	Total Pages
P056	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-500	3/22/2006	2
	Program Plan for Packaging and Certification of INEL Remote-Handled Stored TRU Waste	9/1/1988	21
	N/A		

Attachment 3 - Acceptable Knowledge Source Document Summary

Site(s): Bettis Atomic Propulsion Lab	Source Document Tracking Number: C125

Waste Stream Number(s): BT-T001

(Applicable only when site library is not in use)

Acceptable Knowledge Documentation Type:	Category:
TRU Waste Management Program Information	✔ C - Correspondence
✔ Waste Stream-Specific Information	DR - Discrepancy Resolution
Supporting Information	M - Miscellaneous
	P - Procedures
	U - Unpublished Documents

Title of Source Document: Letter to K.M. Tomko; RE: Near Cell Filter Hazardous Waste Evaluation

Source Document Reference Information (author(s), document and revision number, date, publisher): R.G. Pfeifer, WAPD-DLO(MEL)FE-437, 6/6/1990

AK # [a]	Source Doc. Page # [b]	AK Information Summary
WS8, WS12	Throughout	The purpose of this letter was to document the hazardous material evaluation performed on the air filters. Chemicals used in the cells that could be in the filters include: Sodium Carbonate, Linde B polishing compound, methanol, acetone, n-butanol, 2-propanol, and 1,1,1-trichloroethane. Chromium is also a concern. Mercury was used in the west cell bank in the fission gas rig. Lead was used but not cut, ground, or machined so fine particles are not expected. Mineral Oil and Fyrquel hydraulic fluid could be in the filters. Fyquel contains triphenyl phosphates.

Source Document Data Limitations (if any):

1. None

Acceptable Knowlege Expert:

James Luginbuhl / James Luginbuhl Date: 7/23/2010

Print /Sign

[a] Obtain from Acceptable Knowledge Documentation Checklist
[b] For microfilm or microfiche, identify box, tape, reel number and location.

FORM 73311

WAPD-DLO(MEL)FE-437

From MEL Facility Engineering

Date June 6, 1990
Subject Near Cell Filter Hazardous Waste Evaluation

To K. M. Tomko, Manager 64A
MEL Facility Engineering
Development Laboratories Operations

cc: M. A. DiBattista 62D
B. J. Dobransky 62A
S. Fiscus 64A
R. B. Greenstine 64C
W. R. Maxwell 62A

Reference a)- WAPD-DLO(MEL)FE-429 dated May 25, 1990

The purpose of this document is to detail the hazardous material evaluation performed on the thirteen Nuclear Air Cleaning (NAC) system near-cell HEPA filters and nine NAC firescreens which have been removed from the system and are awaiting disposal.

This evaluation is based, in part, on the data that was obtained for the hazardous material evaluation of the expended NAC charcoal filters which was detailed in reference (a). The data for the charcoal filter hazardous material evaluation was obtained from a review of all the specimen examination requests (MELER's) for samples processed in the hot cells since the NAC system was on-line (1986). This review provided the process chemicals used in the cells which could have reached the filters. In addition, MEL technicians and supervisors provided additional chemical process knowledge. The materials used to construct the HEPA filters and firescreens were also reviewed to determine if they were intrinsically hazardous.

This evaluation for the near-cell filters and firescreens was performed for both the RCRA hazardous waste regulations and the Washington state regulations (WAC) because, pending the approval of the filter activity content calculation method, it is believed that several of the filters will have to be shipped to the Hanford burial site because their transuranic activity will be greater than 10 nCi/gram.

The evaluation is detailed in Attachment 1. Appendix F checklists and Hanford Waste Designation Forms are attached for the HEPA filters and firescreens.

Based on this evaluation, it is concluded that the filters and firescreens contain no hazardous materials under RCRA regulations. However, the presence in the Met and East filters of urethane sealant, DOP from efficiency testing, silica from polishing powder (Met only), and chromium from cutting and grinding of specimens renders them Extremely Hazardous Waste under the Washington state regulations. The firescreens from these cell banks would also be considered Extremely Hazardous Waste due to the presence of chromium from cutting and polishing operations. In addition, under the Washington state regulations, the West Cell Bank near-cell filters are rendered Dangerous Waste by the presence of DOP and urethane sealant in the filters. Central Cell and West Cell firescreens are not hazardous per WAC regulations. No Central Cell filters are awaiting disposal.

RG Pfeifer

R. G. Pfeifer
MEL Facility Engineering
Development Laboratories Operations

Attachments

Hazardous Evaluation of NAC Near-Cell Filters and Firescreens

HEPA Filter

The HEPA filter is constructed of stainless steel walls and, on some filters, stainless steel transition duct sections. The filter media is fiberglass. The filter media to wall seal is fire retardant urethane. Under RCRA rules, no hazardous materials are present in the HEPA filter. Under WAC rules, however, urethane is regarded as Toxic Category D and is also considered carcinogenic.

Firescreen

The firescreens are constructed of stainless steel rings and wire mesh. A "Grafoil" gasket is attached to the firescreen with a Permatex adhesive. The MSDS sheets for the "Grafoil" and for the Permatex adhesive are attached. No hazardous materials are present in either of these products by either RCRA or WAC rules.

DOP Testing Solution in the Filter Media

The near-cell filters are tested for efficiency using Di-(-2-ethylhexyl)-Phthalate (DOP fluid) as a smoke generator. The process consists of atomizing the DOP fluid into smoke and passing it through the filters. The filters must stop greater than 99.97% of particles greater than 0.3 microns in size to pass the test.

Using RCRA regulations, atomized DOP fluid is considered spent and is considered to be non-hazardous. Filters which contain this material are, therefore, not considered hazardous by RCRA rules. However, by Washington state rules (WAC), the presence of DOP in the filter medium renders the filters Toxic Category X. The firescreens are not affected by the DOP since it would pass through them.

Etchants

Several different etchant solutions are used in the hot cells to enhance the structure of a specimen for photography. Reference (a) detailed the etchants used in the cells during this time period. The spent etchant solutions are neutralized with sodium carbonate and allowed to evaporate.

A review of the etchants used determined that the wastes generated as a result of etching operations are not hazardous by RCRA regulations. The neutralization of the etchant solutions, however, will result in the formation of salts which may be considered hazardous by WAC if they are above certain concentrations in the waste. Salts are crystalline structures, however, and as such are relatively heavy. It is considered unlikely that these salts would have become entrained in the airstream and reached the HEPA filters or firescreens. In addition, the presence of in-cell filters in the Met Cells, where etches are primarily used, would further reduce the possibility that the filters or firescreens would contain these salts. It is concluded that the use of etchants will not cause the filters or firescreens to become hazardous waste.

Polishing Chemicals

Specimens are polished in the Met Cells to provide a smooth surface for metallographic examination. Reference (a) detailed the materials and processes used. Based on a review of these materials and processes, it is concluded that they do not render the near-cell HEPA filters and firescreens hazardous under RCRA regulations. Under WAC regulations, however, the Linde B polishing compound is considered Toxic Category D due to the presence of silica in its formulation. The near-cell filters and firescreens from the Met Cell Bank would be expected to contain this chemical and would also be considered Toxic Category D.

Fluorescent Penetrant Chemicals

Reference (a) details the processes and materials used to perform fluorescent penetrant examinations in the cells. Based on an engineering evaluation, the near-cell filters and firescreens do not become hazardous waste after being exposed to these materials by either RCRA rules. Under WAC regulations, however, the dry developer used in the process is considered Toxic Category D due to the presence of silica in its formulation.

Solvents

Solvents used in the cells in this time period include methanol, acetone, n-butanol, 2-propanol, and 1,1,1-trichloroethane. These solvents would only reach the HEPA filters and firescreens after they have evaporated in the cell. As such, they would be in a gaseous form and would pass through the firescreen and HEPA filter medium. These solvents would, therefore, not be present in either the filters or firescreens and would not render them hazardous.

Toxic Metals

Lead, mercury, and chromium are known to exist in the cells. The chromium comes from the processing of specimens. Previous EP Toxicity tests have shown that pure chromium does not exceed the leaching limits. It is concluded that any chromium inside the filter will also pass the EP Toxicity test and will not render the filter or firescreen hazardous under RCRA rules.

Under WAC regulations, the presence of chromium in the filters and firescreens would render them Toxic Category X. This situation is expected to apply to the Met and East Cell Bank filters and firescreens since samples are cut and ground in these cell banks.

Mercury was used in the West Cell Bank in the fission gas rig. Only minute quantities on an infrequent basis were used. This mercury is exposed to the exhaust airstream only during fission gas rig seal replacement operations and it is concluded that the chance that this mercury entered the filters/firescreens is remote. Some waste mercury is also expected to be present on the cell floor from past operations but, since the exhaust duct openings in the West Cell Bank are at table height, none of this mercury is expected to have entered the airstream and, therefore, the filters/firescreens.

Lead is used in-cell in a variety of places. However, lead was not cut, ground, or otherwise machined in the cells during this time period. Fine lead particulate, which would be the most likely to become entrained in the exhaust airstream and reach the filters, is, therefore, not considered to be prevalent in the cells.

Most of the known in-cell lead is present in the East Cells in the form of bricks or other large pieces. The exhaust air intakes for the East Cells are beneath the cell tables so handling the lead in the cell would be unlikely to cause it to reach the near-cell filters. Although lead may be present beneath the cell tables, no operations are performed in this area to provide a driving mechanism which would enable the lead to become entrained in the exhaust airstream. Lead is rarely handled in the West or Central Cells. The exhaust intakes for the Met Cells contained in-cell filters throughout this time period which would have further reduced the possibility that lead could reach the near-cell filters.

Based on the above considerations, it is considered unlikely that the filters and firescreens contain lead or mercury above the allowable limits.

Oil

Many of the originally installed firescreens were removed from the system after the differential pressure drop across them reached the allowable limit. This pressure drop was attributed, in at least one case from the Central Cell Bank, to the build-up on the firescreen of mineral oil and Fyrquel hydraulic fluid which became entrained in the exhaust airstream after leaking from the cell window and MTS machine respectively. A review of the constituents of these two fluids determined that Fyrquel contains triphenyl phosphates which are considered Toxic Category D under the WAC rules. No hazardous materials are present under the RCRA rules.

Waste Classification

Based on the above review, the filters and firescreens are not considered to be hazardous under RCRA regulations.

The waste classification under WAC rules was determined by using the method detailed in WAC Section 173-303-101. This method involves calculating an Equivalent Concentration (E.C.) of the toxic contaminants in the waste and comparing this value to a graph which determines whether a waste is Extremely Hazardous, Dangerous, or non-hazardous. Weights of the toxic contaminants in the filters and firescreens were conservatively estimated to develop the E.C. WAC-173-303-103 was also reviewed to determine whether the waste is carcinogenic. Based on these determinations, the filters and firescreens would be classified as follows under WAC:

Extremely Hazardous Wastes- East and Met near-cell filters and firescreens

Dangerous Wastes- West near-cell filters

Non-Hazardous Wastes- Central and West firescreens

DIVIDER PAGE

Attachment 3 - Acceptable Knowledge Source Document Summary

Site(s): Bettis Atomic Propulsion Lab | Source Document Tracking Number: C031

Waste Stream Number(s): BT-T001

(Applicable only when site library is not in use)

Acceptable Knowledge Documentation Type:
- TRU Waste Management Program Information
- ✔ Waste Stream-Specific Information
- Supporting Information

Category:
- ☑ C - Correspondence
- ☐ DR - Discrepancy Resolution
- M - Miscellaneous
- P - Procedures
- U - Unpublished Documents

Title of Source Document: Letter to Joe Nagel; RE: TCLP Testing of Fuel Core Material

Source Document Reference Information (author(s), document and revision number, date, publisher): R.A. Guida, 2802940, 1/5/1994

AK # [a]	Source Doc. Page # [b]	AK Information Summary
WS12	Throughout	This letter discusses Toxicity Characteristic Leachate Procedure (TCLP) tests performed on spent fuel

Source Document Data Limitations (if any):

1 None

Acceptable Knowlege Expert:

James Luginbuhl — /Sign — Date: 8/3/2010
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Department of Energy
Washington, DC 20585

D.R.CONNORS
FOR YOUR ACTION
BHR

NR-RAG

January 5, 1994

C031

B. H. RUTH

JAN 20 1994

0 OPEN COMMITMENTS

cc: HARRIS
MUELK
LUCAS

Mr. Joe Nagel
Administrator
Division of Environmental Quality
Idaho Department of Health and Welfare
1410 North Hilton
Boise, ID 83706

Dear Mr. Nagel:

The purpose of this letter is to apprise you that the Naval Nuclear Propulsion Program has performed a Toxicity Characteristic Leachate Procedure (TCLP) test on spent naval fuel.) Based on the results of that test, we have determined that spent naval fuel is not a mixed radioactive and hazardous waste. We provided the test methodology and detailed results, which are classified since they describe naval fuel design and configuration, to EPA headquarters for review. EPA has completed their review and affirmed our conclusion. Enclosed is a copy of the EPA letter to that effect. Also enclosed is an unclassified summary of the test results.

We are informing you of the test results and our conclusion to ensure you are fully apprised on this matter. If you would like to review a copy of the TCLP test report, please let us know and we will make arrangements for state personnel holding appropriate security clearances to review a copy. Mark Neblett of my staff or I can be reached at 703-602-8229. We appreciate your interest in this matter.

ENVIRONMENTAL + SPENT FUEL + EPA + DESIGN

Sincerely,

Richard A. Guida

Richard A. Guida
Associate Director
for Regulatory Affairs
Naval Nuclear Propulsion Program

Enclosures

Copy to:
Director, Office of Solid Waste, EPA
Administrator, EPA Region X

ACCESSNO: NB090931

BOX NO: AP-41112

87571

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

NOV 22 1993

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

Mr. Richard A. Guida
Associate Director for Regulatory Affairs
Office of Naval Reactors
Department of Energy
Washington, DC 20585

Dear Mr. Guida:

Thank you for the opportunity to review the reports which you recently submitted to me regarding the Naval Nuclear Propulsion Program's (NNPP) spent nuclear reactor fuels and the RCRA hazardous waste determination. In these reports, the NNPP detailed its efforts at characterizing the Program's spent fuels based both on "process knowledge" and actual analyses conducted in hot cells in accordance with the Toxicity Characteristic Leachate Procedure (TCLP).

First, I want to commend your staff for the extraordinary efforts undertaken to characterize actual samples of irradiated fuel for the Toxicity Characteristic. I recognize that it is a fairly daunting task to sample and analyze these highly radioactive materials, and I believe your Program's efforts are unprecedented in this respect. I also would like to thank Mark Neblett of your staff for his efforts to clarify for my staff portions of the draft report that accompanied your September 20, 1993 letter to EPA, and to hand deliver additional materials to assist the Office of Solid Waste (OSW) in its review.

The entire report was reviewed by both EPA mixed waste policy staff in the Permits and State Programs Division, and RCRA testing methods experts in our Characterization and Assessment Division. Based on my staff's review, the Office of Solid Waste concurs with the reports' conclusion that the NNPP's spent reactor fuels and assemblies should not present any of the characteristics that identify RCRA hazardous wastes. Our concurrence is based on our review and agreement with the NNPP's "process knowledge" analysis, the TCLP analytical procedures used, and the TCLP/quality control measures described in your report. We also believe, given the conservative assumptions which the NNPP employed in selecting representative spent fuel samples (i.e., selecting samples that contained the highest possible concentrations of RCRA hazardous metals), that the reports support a general determination that none of the Program's spent reactor fuels would be classified as RCRA

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hazardous wastes. This latter conclusion is, of course, conditioned on the completeness and accuracy of the information shared with EPA on the Program's "process knowledge," particularly with regard to projecting the TCLP test results obtained to other fuels than those that were actually involved in the testing.

As you are aware, EPA delegates the authority to implement the Subtitle C RCRA program to the States. Currently, 35 States and one territory have received from EPA the approval to regulate RCRA mixed waste. We recommend that you share your results with the appropriate hazardous waste personnel in those States where the spent reactor fuel is managed.

Again, we appreciate the opportunity to evaluate the results of the spent fuel "process knowledge" analysis and TCLP test. If you have any questions on EPA's review, please contact Susan Jones, at (703) 308-8762.

Sincerely,

Elizabeth A. Cotsworth

for Michael Shapiro, Director
Office of Solid Waste

SUMMARY OF NAVAL FUEL RCRA HAZARD "PROCESS KNOWLEDGE" ANALYSIS

1. Does spent naval fuel contain any "listed" hazardous wastes?

   a. 40 C.F.R. § 261.31 Non-specific sources (F-wastes):

   Solvents (F001 - F005) . . . . . None
   Wastewater-Electroplating Sludges (F006 & F019) . . . . . None
   Cyanide bath wastes (F007 - F012) . . . . . None
   Organic related wastes (F020 - F038) . . . . . None
   Leachate from listed wastes (F039) . . . . . None

   b. 40 C.F.R. § 261.32 Specific sources (K-wastes):

   Sludges/bottoms/ends/tars/filters, organic & inorganic, explosives, petroleum refining, iron & steel (manufacture), primary copper/lead/zinc/ aluminum production, veterinary pharmaceuticals, ink production, and coking . . . . . None

   c. 40 C.F.R. § 261.33 Discarded commercial chemical products (commercially pure grade chemicals), off-specification species, & their residues . . . . None

2. Does spent naval fuel exhibit any of the "characteristics" of a hazardous waste?

   a. 40 C.F.R. § 261.21 Ignitability:

   Spent naval fuel is not "capable under standard temperature and pressure of causing fire through friction, adsorption of moisture or spontaneous chemical changes."

   b. 40 C.F.R. § 261.22 Corrosivity:

   Not applicable - spent naval fuel is not a liquid with pH less than 2 or greater than 12.5.

   c. 40 C.F.R. § 261.23 Reactivity:

   Spent naval fuel is not unstable, potentially explosive, capable of detonation, does not generate toxic gases, and does not react violently with water.

   d. 40 C.F.R. § 261.24 Toxicity Characteristic:

   Spent naval fuel does not contain any of the organic materials listed in Table 1 of § 261.24. Accordingly, only the metals listed in Table 1 need be evaluated. The Toxicity Characteristic Leachate Procedure (TCLP) test limits for these metals are:

Metal	TCLP Concentration Limit
Arsenic	5.0 mg/liter (ppm)
Barium	100.0 mg/l
Cadmium	1.0 mg/l
Chromium	5.0 mg/l
Lead	5.0 mg/l
Mercury	0.2 mg/l
Selenium	1.0 mg/l
Silver	5.0 mg/l

Assumptions Used in the "Process Knowledge" Analysis:

Based on a 100 gram sample, all constituents are assumed to be exposed to the leaching fluid (2000 grams of leaching fluid ≈ 2 liters) - no credit is taken for unexposed surfaces within the sample particles.

The representative sample includes only the fuel-bearing region of a naval reactor core, which is where the maximum concentrations of the above metals, with the exception of chromium, are found. The maximum concentration of chromium is found in the Zircaloy[redacted] core structural material (small amounts of chromium are added to the zirconium as an alloying element), therefore the representative sample used for the chromium extraction calculation is Zircaloy[redacted] structural material.

Fission products with decay chains that end with a TCLP metal are assumed to be fully decayed to their stable state (thereby maximizing their concentrations) and are present in the proportions observed with the parent radinuclides from Uranium-235 fission.

All of the TCLP metals present in the sample are assumed to be released to the leaching solution during the test period. No credit is taken for the highly corrosion-resistant nature of naval fuel, except in the chromium analysis (see note below).

Calculated Theoretical Maximum Concentrations:

Metal	Leachate Concentration	TCLP Limit
Arsenic	1.25 mg/l	5.0 mg/l
Barium	30.0	100.0 mg/l
Cadmium	0.22	1.0 mg/l
Chromium	---*	5.0 mg/l
Lead	3.4	5.0 mg/l
Mercury	0.0	0.2 mg/l
Selenium	1.1**	1.0 mg/l
Silver	0.93	5.0 mg/l

* Due to the presence of chromium as an alloying agent in Zircaloy[redacted], the TCLP test's 20 to 1 dilution into the leachate solution results in a calculated chromium concentration on the order of 50 mg/l. The extremely high corrosion resistance of Zircaloy[redacted] would not permit such a high concentration to actually occur. The calculated leachate concentration, even using a corrosion rate significantly higher than any ever actually observed, is on the order of 0.001 mg/l.

** This value does not consider corrosion resistance, surface area exposure, etc. Actual TCLP results would be far below the TCLP limit.

Manager, Bettis

Navy/DOD bcc:
DUSD (ES)
DASN (E&S)
OPNAV (N45)
AGC(I&E)
COMNAVSEA (00L, 07, 92)

DOE bcc:
Mgr., Bettis Atomic Power Laboratory, Naval Reactors Facility
Mgr., PNRO
Mgr., Operations, IBO
GC-11, 20
EH-20
EM-3, 30
NE-2

DIVIDER

PAGE

Attachment 3 - Acceptable Knowledge Source Document Summary

Site(s): Idaho National Laboratory	Source Document Tracking Number: P201
Waste Stream Number(s): IN-ID-BTO-030 (Applicable only when site library is not in use)	
Acceptable Knowledge Documentation Type: ☑ TRU Waste Management Program Information ☑ Waste Stream-Specific Information ☑ Supporting Information	Category: ☐ C - Correspondence ☐ DR - Discrepancy Resolution ☐ M - Miscellaneous ☑ P - Procedures ☐ U - Unpublished Documents
Title of Source Document: Memo to M.J. Holzemer with waste profile attachment RE: TRU Waste Profile Sheet for Bettis Content Code 30 Approval	
Source Document Reference Information (author(s), document and revision number, date, publisher): J. D Wells, JDW-23-88, 04/06/88	

AK # [a]	Source Doc. Page #[b]	AK Information Summary
PR5, PR6, PR7, PR8, WS1, WS2, WS3, WS4, WS6, WS8, WS9, WS10, WS11, WS12, S16	1 - 12	This letter is a notification that the Bettis Atomic Power Lab's metallurgical solidified sludge residues waste stream is assigned the description "Solidified Grinding Sludge, Etc" and includes the waste profile sheet for this waste stream. Facility: ANL-West (Argonne National Laboratories Argonne West, integrated into Idaho National Laboratory in February 2005) HFEF (Hot Fuels Examination Facility) p.2 Waste Stream General information (All on p.1): Bettis metallurgical solidified sludge residues Solidified Grinding Sludge, Etc All on p.2: Content Code: 30 EPA ID Number: PA0890090004 Fuel - mixed fission products p.8 Process Generating Waste: solidified sludge from metallurgical exams p.2 Physical characteristics of waste stream: Solid @ 70 degrees F p.2 Chemical composition of waste stream: All on p.3: Weight of cement and water in concrete Weight of IN-41 containers Weight of metallurgical samples Weight and concentration of chromium D007 EP Toxic hazardous waste Cr did not exceed EP toxic limit p.9 Lead p.4 D008 No explosive, pyrophoric, or shock sensitive materials p.4 Radioactive characteristics:

Attachment 3 - Acceptable Knowledge Source Document Summary (continued)

Site(s): Idaho National Laboratory		Source Document Tracking Number: P201
AK # [a]	Source Doc. Page # [b]	AK Information Summary
		All of p.3: 100 R/hr Am-241 Ba-137M Ce-144 Cs-137 Kr-85 Nb-95 Np-237 Pm-147 Pr-144 Pu-238,239,240,242 Rh-106 Ru-106 Sr-90 Y-90 Zr-95 DOT data (all on p.4): shipping name hazard class Identification number Packaging: Lead shielding is inside stainless steel outer waste can p.4 Certification that met INEL TRU WAC p.11

Source Document Data Limitations (if any):

1. None

Acceptable Knowlege Expert:

James Luginbyhl — Date: 4/27/2011

Print — Sign

[a] Obtain from Acceptable Knowledge Documentation Checklist
[b] For microfilm or microfiche, identify box, tape, reel number and location.

INEL
Idaho National Engineering Laboratory

April 6, 1988

Mr. M. J. Holzemer
Argonne National Laboratory-W
P.O. Box 2528
Idaho Falls, ID 83401

TRU WASTE PROFILE SHEET FOR BETTIS CONTENT CODE 30 APPROVAL - JDW-23-88

Dear Mr. Holzemer:

The waste characterization data supplied by the attached waste profile sheet for Bettis metallurgical solidified sludge residues is approved for use. The content code number and description have been entered in the RWMIS. The assigned description is: Solidified Grinding Sludge, Etc.

This profile sheet need only be completed once and will be retained on file along with available analytical results and other waste stream information. However, changes to this characterized waste stream will require the submittal and approval of a new profile sheet before shipment of the newly defined waste stream is authorized.

Please let me know if this is satisfactory. As future profile sheets are submitted, please transmit them formally to allow better tracking of communications concerning each submittal. I can be contacted at 526-2482 for further discussion as necessary.

Very truly yours,

J. D. Wells, Operations Specialist
RWMC/SWEPP Technical Programs

JDW:lap

Attachment:
As Stated

cc: D. G. Hinckley, DOE-ID
J. O. Zane, EG&G Idaho (w/o Attach.)

WASTE PROFILE SHEET FOR TRANSURANIC AND TRANSURANIC MIXED WASTE STREAMS

Please refer to attached instructions before completing form.

Facility ANL-West Hot Fuels Examination Facility 30 Content Code

A. GENERAL INFORMATION

Generator Name: Westinghouse Electric Co. Bettis Atomic Power Lab EPA ID No.: PA0890090004
State ID No.:

Facility Address: Bettis Atomic Power Lab
P.O. Box 79
West Mifflin, PA 15122-0079

Mailing Address: Same

Technical Contact: M. E. Vaughn - HFEF Project Engineer 583-7440 (FTS)
D. E. Overs - Bettis Title: Engineer Phone: 721-5313 (FTS)

Transporter: ANL-W, M. Windmiller Transporter Phone: 7320

Name of Waste: Solidified waste sludge from Bettis Atomic Power Lab.

Process Generating Waste: Solidified sludge from metallurgical exams

B. PHYSICAL CHARACTERISTICS OF WASTE

Physical State @ 70 °F:

- [X] Solid
- [ ] Solidified liquid
- [ ] Absorbed liquid
- [ ] Semi-solid
- [ ] Powder

C. INCINERATION INFORMATION N/A

_____ Btus
Heat of Combustion

_____ %
Ash Content

_____ %
Halogen Content

D. CHEMICAL COMPOSITION (Totals must add up to 100% or attach analysis sheet)

Total weight of waste including IN-41 containers,	%
metallurgical samples, concrete = 135,970 g	100 %
	%
Concrete = 54,168 g	%
Cement in concrete = 33,431 g	25 %
Water in concrete = 20,737 g	15 %
Weight of IN-41 containers = 81,720 g	60 %
Weight of met samples = 83.13 g	< 1 %
Chromium = .13 g	< 1 %
	%
	%

METALS _____ Total (ppm) _____ EPA Extraction Procedure (mg/L)

State Concentrations as ppm or mg/L for:

Arsenic (As)	_____	Selenium (Se)	_____
Barium (Ba)	_____	Silver (Ag)	_____
Cadmium (Cd)	_____	Copper (Cu)	_____
Chromium (Cr)	2.7 mg/l	Nickel (Ni)	_____
Mercury (Hg)	_____	Zinc (Zn)	_____
Lead (Pb)	_____	Thallium (Tl)	_____
Chromium-Hex (Cr+6)	_____	_____	_____

OTHER COMPONENTS - Total (ppm) N/A

Cyanides _____ PCBs _____ (ppm prior to solidification)

Sulfides _____ Phenolics _____

E. RADIOACTIVE? X Yes _____ No

Radiation Level 100 ~~mrem~~ R/hr

Radionuclide Content Pr-144 Ce-144 Pm-147 Cs-137 Y-90 Sr-90
Ba-137M Kr-85 Rh-106 Ru-106 Nb-95 Zr-95

F. ANALYTICAL METHODS Pu-238, 239, 240, 242 Am-241 Np-237

A. Radioactive: Gamma spectroscopy

B. Chemical: _____

C. History/Knowledge of Process Contents based on analysis of radiation history of metallurgical samples, size of sample,

G. BASIS FOR LISTING AS HAZARDOUS WASTE (* PER 40 CFR 261):

Ignitable* _____ Reactive* _____ Corrosive* _____
EP Toxic* X Listed Waste* _____
Other _____

Applicable U.S. EPA Hazardous Waste Numbers:

Hazardous Waste Constituents	Waste No.	Hazardous Waste Constituents	Waste No.
Chromium	D007		
Lead	D008		

H. SHIPPING INFORMATION

Anticipated Volume: _____ Gals. _____ Cubic Yards
96 liters Other

Per: ____ One Time ____ Week ____ Month
____ Quarter __X__ Year _____

Anticipated Weight of Hazardous Waste Per Container: _____

Does this waste product contain explosive, pyrophoric, or shock sensitive materials? ____ Yes __X__ No

If yes, please specify: _____

Please specify the following:

Is this waste a hazardous material per DOT regulations?
__X__ yes ____ no

Proper DOT Shipping Name: Radioactive material fissile NOS
DOT Hazard Class: Radioactive material
DOT Identification Number(s): UN 2918
(See 49 CFR for Hazardous Materials List and Characteristics)

I. SPECIAL HANDLING INFORMATION FOR TREATMENT, STORAGE, OR DISPOSAL:

This waste is to be sent to the RWMC for storage in the TRU storage vaults. When WIPP is operational, it will be recovered and sent to them.

The waste package contains 121,672 grams of lead as shielding. This shielding is inside of a stainless-steel outer waste can.

CERTIFICATION

I hereby certify that I have personally examined and am familiar with the information submitted in this and all attached documents. Based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete to the best of my knowledge and ability and that all known and suspected hazards have been disclosed.

I certify that this waste meets all requirements of the INEL TRU Waste Acceptance Criteria (DOE/ID-10074).

2-11-88	Project Engineer	M. E. Vaughn
Date	Title	Signature

FOR OFFICE USE ONLY

Waste Product Status
____ Approved ____ Denied ____ Pending

Treatment Class _____

Segregation Class _____

Reviewed by _____

Technical Review Date _____

Special Handling Requirements:

NOTIFICATION OF LAND DISPOSAL RESTRICTIONS

Subject: ITEM DESCRIPTION CODE (IDC) 30

As required by Federal Regulations promulgated by EPA in 40 CFR 268, you are hereby notifed that the subject waste shipment contains the following hazardous wastes that are restricted from land disposal. These wastes require treatment to meet the performance standard indicated below, and detailed in 40 CFR 268, Subpart D. Waste analysis data for these restricted wastes are attached.

Applicable to this IDC? ____ yes __X__ no

If yes, complete the following:

EPA Waste No.	Treatment Standard	Manifest No./Line Item

2-11-88 Project Engineer M. E. Vaughn

Date Title Signature

IRU ONLY

WASTE PROFILE STATEMENT FOR TRANSURANIC AND TRANSURANIC MIXED WASTE STREAMS

Please refer to attached instructions before completing form.

30 Content Code

Waste Generator Facility BETTIS ATOMIC POWER LABORATORY

A. GENERAL INFORMATION

Generator Name: BET EPA ID No.: PA0890090004
State ID No.: N/A

Facility Address: WEC - BAPL
Pittsburgh-McKeesport Blvd.
West Mifflin, PA 15122-0079

Mailing Address: WEC - BAPL
P. O. Box 79
West Mifflin, PA 15122-0C

Technical Contact: C. T. Lim Title: Manager Phone: (412) 476-5493

Transporter: Tri-State Motor Transit Co. (Longhaul) Transporter Phone: (208) 232-3443

Name of Waste: Solidified Grinding Sludge

Process Generating Waste: Sectioning, Drilling and Grinding Sludge from Metallographic and Dissolution Processes

B. PHYSICAL CHARACTERISTICS OF WASTE

Physical State @ 70 °F:

- X Solid (Sludge Solidified in a matrix)
- ____ Solidified liquid
- ____ Absorbed liquid
- ____ Semi-solid
- ____ Powder

C. INCINERATION INFORMATION

N/A Btus/h
Heat of Combustion

N/A %
Ash Content

N/A %
Halogen Content

TRU ONLY

D. WASTE CHEMICAL COMPOSITION (Totals must add up to 100% or attach analysis sheet).

Stainless Steel Type 304	~46.14 %
Immobilizing Matrix (Cement, Hysol or similar epoxy type resin)	~53.80 %
Fuel - Mixed Fission Products	~0.06 %
(The waste consists of mixed fission products, fuel and metallic sludge or fines in an immobilizing matrix contained in an IN container).	%

State Concentrations as ppm or mg/L for: (Per IN Container)

Arsenic (As)	N/A	Selenium (Se)	N/A
Barium (Ba)	N/A	Silver (Ag)	N/A
Cadmium (Cd)	< 1 ppm	Copper (Cu)	Trace
Chromium (Cr)	0-7 ppm	Nickel (Ni)	Trace
Mercury (Hg)	N/A	Zinc (Zn)	Trace
Lead (Pb)	N/A	Thallium (Tl)	N/A
Chromium-Hex (Cr+6)	N/A		

METALS 0-7 Total (ppm) + EPA Extraction Procedure (mg/L)
+ (See Attached Sheet)

OTHER COMPONENTS - Total (ppm)

Cyanides N/A PCBs N/A (ppm prior to solidification)

Sulfides N/A Phenolics N/A

E. RADIOACTIVE? X Yes ____ No

Radiation Level 14,500 mrem/hr @ 6 inches

Radionuclide Content Cs-137 Y-90 Sr-90 Ba-137M Pm-147 U-233

F. ANALYTICAL METHODS Th-232 Pu-238 Pu-239 Pu-240 Pu-242 Am-241 Np-2:

A. Radioactive: Based on Cs-137 content, radiation readings, weights of waste material and approved shielding calculations

B. Chemical: Limited Application

C. History/Knowledge of Process Based on irradiation history of material **

G. BASIS FOR LISTING AS HAZARDOUS WASTE (* PER 40 CFR 261): (See Attached Sheet)

Ignitable* N/A Reactive* N/A Corrosive* N/A

EP Toxic* N/A Listed Waste* N/A

Other ____

Page 2a

Note: (+) An EP Toxicity Test on 100 gms of pure chromium resulted in chromium not failing the test. Maximum level from test was 0.17 mg/l compared to an EP toxic limit of 5.0 mg/l. The small amount of chromium in the solid mixture is well below the level of chromium tested, and hence, will not exceed the EP toxic limit.

(**) Although the waste contains a minute amount of metallic chromium in an immobilizing matrix, the waste does not fail the EP toxicity test and is not a hazardous waste.

Note: The immobilizing matrix could be either cement, Hysol or similar epoxy type resin.

INU UNLY

Applicable U.S. EPA Hazardous Waste Numbers:

Hazardous Waste Constituents	Waste No.	Hazardous Waste Constituents	Waste No.
N/A			

H. SHIPPING INFORMATION

Anticipated Volume: _____ Gals. _____ Cubic Yards
0.45 m^3 Other

Per: _____ One Time _____ Week _____ Month
_____ Quarter X Year (Total) _____

Anticipated Weight of Hazardous Waste Per Container: N/A

Does this waste product contain explosive, pyrophoric, or shock sensitive materials? _____ Yes X No

If yes, please specify: _____

Please specify the following:

Is this waste a hazardous material per DOT regulations?
_____ Yes X No

Proper DOT Shipping Name: N/A
DOT Hazard Class: N/A
DOT Identification Number(s): N/A
(See 49 CFR for Hazardous Materials List and Characteristics)

I. SPECIAL HANDLING INFORMATION FOR TREATMENT, STORAGE, OR DISPOSAL:

Storage for eventual transfer to the WIPP

J. CERTIFICATION

I hereby certify that I have personally examined and am familiar with the information submitted in this and all attached documents. Based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete to the best of my knowledge and ability and that all known waste streams and/or waste form characteristics and suspected hazards have been disclosed.

I certify that this waste meets all requirements of the INEL TRU Waste Acceptance Criteria (IDO-10074).

8/25/88	Mgr MEL, Bechtel	
Date	Title	Waste Generator Manager Signature

FOR OFFICE USE ONLY

Waste Product Status
_____ Approved _____ Denied _____ Pending
Treatment Class _____
Segregation Class _____
Reviewed by _____
Technical Review Date _____

Special Handling Requirements:
_____
_____
_____
_____
_____
_____

K. NOTIFICATION OF LAND DISPOSAL RESTRICTIONS

Subject: ITEM DESCRIPTION CODE (IDC or content code) 30

As required by Federal Regulations promulgated by EPA in 40 CFR 268, you are hereby notified that the subject waste shipment contains the following hazardous wastes that are restricted from land disposal. These wastes require treatment to meet the performance standard indicated below, and detailed in 40 CFR 268, Subpart D. Waste analysis data for these restricted wastes are attached.

Applicable to this IDC? _____ Yes __X__ No

If yes, complete the following:

EPA Waste No.	Treatment Standard	Manifest No./Line Item

8/25/88 — Date

Mgr, Materials Evaluation Laboratory, Bettis — Title

Signature

DIVIDER

PAGE

Attachment 3 - Acceptable Knowledge Source Document Summary

Site(s): Bettis Atomic Propulsion Lab | Source Document Tracking Number: C211

Waste Stream Number(s): BT-T001

(Applicable only when site library is not in use)

Acceptable Knowledge Documentation Type:
- ✔ TRU Waste Management Program Information
- ✔ Waste Stream-Specific Information
- ☐ Supporting Information

Category:
- ✔ C - Correspondence
- ☐ DR - Discrepancy Resolution
- ☐ M - Miscellaneous
- ☐ P - Procedures
- ☐ U - Unpublished Documents

Title of Source Document: Letter to T.E. Reed: RE: Disposition of Waste Generated from Process

Source Document Reference Information (author(s), document and revision number, date, publisher): W.R. Maxwell, WAPD-DLO(MEL)O-623, 2/15/1988

AK # [a]	Source Doc. Page # [b]	AK Information Summary
PR6, PR7, WS4, WS8, WS9, WS12	Page 1 and 2	The purpose of this letter was to request approval of the disposition of waste material from the grinding, polishing, etching, and cleaning of specimens after polishing. The review was to determine what processes would result in mixed waste. Grinding would possible produce mixed waste due to chrome The polishing process was performed utilizing an Automet machine. Polishing of the specimens was accomplished by placing the specimen in contact with a cloth material on the polishing wheel. During the process, Linde "B" (>93% powdered aluminum oxide) mixed with water was deposited on the cloth. The etching process used four different types of acids to etch the specimen. The chemicals used were: lactic, nitric, hydrofluoric and hydrogen peroxide. The etching process was accomplished by dipping the specimen into the acid solution and swabbing the surface with a cotton ball. Etching time was approximately 30 seconds per etch. All etchant solutions were neutralized after use. The volume of each etchant solution was 100 ml

Source Document Data Limitations (if any):

1. None

Acceptable Knowlege Expert:

James Luginbuhl — Print
/Sign
Date: 7/23/2010

[a] Obtain from Acceptable Knowledge Documentation Checklist
[b] For microfilm or microfiche, identify box, tape, reel number and location.

Form 79311

NNPI has been redacted.

WAPD-DLO(MEL)0-623

From : MEL Operations

Date : February 15, 1988
Subject: Disposition of Waste Generated from [redacted] Process

To :
T. E. Reed, Manager
Environmental Engineering
Radiological Controls & Engineering

cc: M. A. DiBattista R. M. Muzik K. K. Underwood
W. F. Irvine K. M. Tomko

The purpose of this letter is to request your approval of the Materials Evaluation Laboratory (MEL) disposition of [redacted] material. You performed a review of the MEL Met Cell operations on 1/15/88 for processing [redacted]

The specific processes reviewed were:

Item	Process
1.	Grinding
2.	Polishing
3.	Etching
4.	Rinse water for cleaning specimens after polish
5.	Areas in-cell where diapers were used for the different processes

The purpose of the review was to determine what processes would result in the generation of a mixed waste.

Item 1.

It is my understanding from discussions during the review that the grinding operation, including the diapers in the grinding bowl that catch and absorb the specimen particulate, will result in a mixed waste, unless proven otherwise via a clean blank-analysis test. The mixed waste determination is primarily due to chrome. The MEL will perform a review and blank analysis tests via Environmental Engineering approved methods.

Item 2.

The polishing process was performed utilizing an Automet machine. Polishing of the specimens was actually accomplished by placing the specimen in contact with a cloth material on the polishing wheel. During this process, Linde "B" (>93% powdered Aluminum oxide) mixed with water, is deposited on the cloth. Per our discussion during the review, I understand that the materials associated with this process may be disposed of as radioactive waste only.

Item 3.

Four different types of acids were used at various times to accomplish specimen etching. The acids were lactic, nitric, hydroflouric and hydrogen peroxide. All acids were diluted in water for use. The surface area of each specimen was .187 square inch. The etching process was accomplished by dipping the specimen into the acid solution and swabbing the surface area with a cotton ball. Etching time was approximately 30 second per etch. All etchant solutions were neutralized after use. The volume of each etchant solution was 100 ml. Based on the type of etching process, dip and swab, in which no specimen particulate is removed, it is judged that all waste generated from this process produces radioactive waste only.

Item 4.

Approximately 2500 ml of water has been accumulated in the cells from processing [redacted] specimens. This water has accumulated because the normal in-cell recirculating water system was isolated and not used. Clean water was placed into the cells as needed. The water was used to rinse specimens after etching, and to submerse specimens, while still in the grinding/polishing rings, for overnight storage. This accumulation of rinse water is judged to be radioactive waste only. The MEL plans on solidifying this water for disposal as radioactive waste.

Item 5.

Aside from the specific specimen work stations in-cell, such as the grinder and polisher accumulation bowls, diapers were placed on the cell floor and kept damp for the purpose of precluding cross contamination of the cells from the [redacted] These diapers were used only to enhance maintaining cell cleanliness and not for any specific operation. The MEL judges these diapers to be radioactive waste only.

In conclusion, the above documents the processes of [redacted] examination in the MEL Met Cells, and identifies the waste generation associated with each process. Your concurrence to the disposition of the waste generated, as identified above, is requested.

W. R. Maxwell, Supervisor
MEL Operations - Metallography
Development Laboratories Operations

DIVIDER

PAGE

Attachment 3 - Acceptable Knowledge Source Document Summary

Site(s): Idaho National Laboratory	Source Document Tracking Number: C215
Waste Stream Number(s): IN-ID-BTO-030 (Applicable only when site library is not in use)	
Acceptable Knowledge Documentation Type: ☐ TRU Waste Management Program Information ☐ Waste Stream-Specific Information ☑ Supporting Information	Category: ☑ C - Correspondence ☐ DR - Discrepancy Resolution ☐ M - Miscellaneous ☐ P - Procedures ☐ U - Unpublished Documents
Title of Source Document: Letter to G.C. McClelland, RE: Shipment of Transuranic Sludge from Bettis for Burial at the Radioactive Waste Management Complex in Idaho	
Source Document Reference Information (author(s), document and revision number, date, publisher): R.T. Esper, WAPS-DLO(E)F-1513, 3/13/1986	

AK # [a]	Source Doc. Page #[b]	AK Information Summary
S16	Page 2 and 3	This letter discusses the shipment of waste in IN cans. The IN cans have an overall length of 15.88 inches and a diameter of 4.95 inches. The wall thickness is 0.228 inches. The IN cans will be placed in HFEF-5 at ANL.

Source Document Data Limitations (if any):

1. None

Acceptable Knowlege Expert:

James Luginbyhl / James Luginbyhl / Date: 4/27/2011
Print /Sign

[a] Obtain from Acceptable Knowledge Documentation Checklist
[b] For microfilm or microfiche, identify box, tape, reel number and location.

WAPD-DLO(E)F-1513

March 13, 1986

Shipment of Transuranic Sludge from Bettis For Burial at the Radioactive Waste Management Complex in Idaho

WAPD-DLO(MEL)E-1501T

November 1, 1985

Telephone Conference

FORM 73308A

WAPD-DLO(E)F-1513

Westinghouse
Electric Corporation

Bettis Atomic Power Laboratory

Box 79
West Mifflin, PA 15122-0079

March 13, 1986

Mr. G. C. McClelland
c/o Argonne National Laboratory
P. O. Box 2528
Idaho Falls, Idaho 83403-2528

Subject: Shipment of Transuranic Sludge from Bettis for Burial at the Radioactive Waste Management Complex in Idaho

References: (a) WAPD-DLO(MEL)E-1501T dated November 5, 1985
(b) WAPD-DLO(MEL)E-1521 dated January 15, 1986

Dear Mr. McClelland:

This letter provides additional information pertaining to proposed future shipments of transuranic sludge from Bettis for burial at the Radioactive Waste Management Complex (RWMC) in Idaho. The information provided is in response to a request per telecon between Bettis, Argonne National Lab (ANL) and EG&G Idaho Inc. (R. Esper - M. Vaughn/D. Wells) on 2/25/86 and is expected to enable ANL to initiate actions which will aid in facilitating the eventual shipment of sludge between Bettis and the RWMC.

As mentioned in Reference (a), Bettis proposes to ship several containers of high level sludge currently stored in its hot cell banks. The sludge, which is high in transuranic content, was accumulated over the years from cutting, grinding, polishing and machining operations performed during various irradiated fuel specimen evaluations. The sludge material includes enriched uranium as well as fuel containing thoria and U^{235}. In general, the sludge contains U^{233}, U^{235} and thoria as well as traces of plutonium. All of the sludge is in solid form. Approximately half of the sludge is solidified in concrete.

It is planned to place the sludge in IN containers and subsequently ship these containers via the NRBK-41 casks to ANL where a number of these containers will eventually be placed and sealed inside of a standard waste container, identified as HFEF-5. When full, the standard waste container will be shipped for burial at the RWMC. The IN container is comprised of two component parts, the main body and a threaded lid. The lid is designed to accept two "O" rings which form a seal with the container when the lid is installed. The overall length of the IN container is 15.88 in. and the diameter is 4.95 in. (Ref. Westinghouse Dwgs. 971D201 and 971D207). The wall thickness is 0.228 in. and the outer volume is 285 in^3.

Considering the volume of an IN container and the inner volume of the carbon steel container of the standard HFEF-5 waste container, it is estimated that 8 to 12 IN containers can fit inside the carbon steel container. This, however, will depend upon loading techniques and the manipulating room needed for remote handling of the containers. Based on dimensional considerations, it appears feasible to load four tiers of three IN containers per tier inside the carbon steel container. However, if additional space is required for remote handling and insertion of the IN containers, only two IN containers will fit per tier. Hence, the number of IN containers that can fit in the standard waste container will range from 8 to 12. It is estimated that from 38 to 43 IN containers will be required to package all of the fuel sludge currently in storage in the Bettis hot cells.

It is not known at the present time as to the level of radiation expected at the outer surface of an IN container filled with sludge. Calculations are currently underway to establish a correlation between the sludge inside the IN container and the radiation level at its outer surface. It is estimated that the radiation level at the container surface will range between 50-75 R/hr.

With regard to contamination levels that could be expected on the outer surface of the IN container and the inner surface of the NRBK-41 cask, Reference (b) stated that based on a recent cask contamination survey, contamination levels as high as 320,000 pCi/100 cm^2 β-γ were observed. Alpha contamination, if any, is expected to be minimal in such shipments. The outer surface of the cask will be maintained below Bettis clean limits of 450 pCi/100 cm^2 β-γ and 50 pCi/100 cm^2 α.

As mentioned in the telecon, waste burial operations at the RWMC are weather dependent and are limited timewise to the period of May-October. Consequently, Bettis will initiate actions as necessary in anticipation that shipments will commence during this period in 1986.

Very truly yours,

R. T. Esper
Fuel Operations Engineering
Development Laboratories Operations

Approved:
B. E. Fischer, Manager
Fuel Operations Engineering
Development Laboratories Operations

cc: M. A. DiBattista
M. J. Hill
R. D. Kaestner
~~D.~~ M. Miotla
J. D. Wells EG&G Idaho Inc.

WP:DL0860215G

Westinghouse Electric Corporation
Bettis Atomic Power Laboratory, Box 79, West Mifflin, Pa. 15122-0079

NO. WAPD-DLO(MEL)E-1501T

COPIES TO		TELEPHONE CONFERENCE
	J. P. Bacca - ANL	TIME 1530 DATE 11/1/85
	G. McClelland - ANL	☒ INCOMING ☐ OUTGOING
	D. Wells - EG&G	WITH J. P. Bacca, et.al.
	B. Fischer - 64E	REPRESENTING Argonne National Lab
	D. Miotla - 64C	WITH R. T. Esper
M. A. DiBattista		REPRESENTING Bettis
M. J. Hill		COMMITMENT MADE ☐ YES ☒ NO
R. D. Kaestner		FILE

PURPOSE OF TELECON To discuss the feasibility of shipping radioactive sludge containing transuranic material in IN containers for burial at the Radioactive Waste Management Complex (RWMC) in Idaho.

TEXT OF TELECON

This telecon presented, in general, the Bettis plan to ship high level radioactive sludge, which contains transuranic waste material (TRU) greater than 100nCi/g, to Idaho for eventual burial at the RWMC by EG&G Idaho, Inc. This plan was presented to Argonne National Lab (ANL) personnel to determine its feasibility.

Currently, Bettis has a total of 53 small containers of high level sludge stored in two cell banks. This sludge was accumulated over the years from cutting, grinding, polishing and machining operations performed during various irradiated fuel specimen evaluations. Because of the high transuranic content in this sludge, disposal of the sludge cannot be made by normal means, i.e., shipment in concrete vaults. An alternate shipment method is required. Bettis is investigating the feasibility of shipping the sludge by one of the following two methods.

1. A DOT Spec 6M packaging container.
2. An IN container shipped in a NRBK-41 cask.

ACTIVITY DLO/MEL R. T. Esper R. T. Esper 11/5/85
(TYPED NAME) (SIGNATURE) (DATE)

TELEPHONE CONFERENCE MEMORANDUM
FORM 73816E

☆U.S. Government Printing Office 1983-000-975/22 3-1

Shipping sludge via the 6M container has its limitations. The maximum allowable weight for this container is 640 lbs. Since the weight of the drum and its contents is 250 lbs, this allows only 390 lbs for shielding. This translates to a 1.5"thick lead shield around the internal 2R pipe which may not be sufficient to shield the high level sludge contained in the inner pipe. Calculations to evaluate the use of the 6M container for sludge disposal is currently underway.

Shipping sludge in the IN container via a cask is considered by Bettis to be a better approach. The advantages of this method are as follows:

1. Procedures for packaging and shipping the fuel are available.

2. More sludge can be placed in an IN container compared to a 6M container since shielding is not limiting in the case of the IN container.

3. Because of the item 2, more sludge can be disposed of in one cask shipment.

4. Because of Items 2 and 3, fewer shipments are necessary to dispose of the same sludge inventory.

5. The burial waste container will hold several (4-5) IN containers and thereby minimize burial space compared to that required by the 6M container.

Since about 3 or 4 in-cell sludge cans can be placed in one IN container, a total of from 15 to 20 IN containers or shipments will be required.

In answer to an ANL inquiry, the method of loading the IN container in the cell and also placing it into a cask at Bettis was explained in detail. ANL's concern is the level of surface contamination expected on both the IN container and cask. At ANL, there is an airlock which is used to load and unload special type casks. This airlock is kept clean. They have never unloaded a NRBK-41 cask. The only Bettis cask they have ever handled was the WAPD-40. They are not sure at the present time as to how they will be able to handle the IN containers and the NRBK-41 cask in their facility and still keep it clean. However, they feel confident they will be able to handle them even if it requires designing new handling equipment. They would like to have drawings of the cask and the IN container for their handling evaluation. ANL stated, however, that before they initiate any review, Bettis must ensure that all involved DOE parties are agreeable to the burial of the Bettis sludge at the RWMC in Idaho.

ANL explained that their plan for handling such sludge would be as follows:

1. A standard waste container, identified as HFEF-5, will be used. It is comprised of a stainless steel outer container with a carbon steel inner container. The carbon steel container is 6 ft. long with an ID of 11 inches.

2. The waste filled IN containers (4-5) will be placed inside the carbon steel container which will subsequently be placed in the stainless steel container.

3. A shield plug will be placed on top of the carbon steel container and a mechanical lid installed on the stainless steel container with a molten metal seal.

4. The HFEF-5 can, filled with waste, will be shipped for burial in the RWMC via EG&G.

ANL have a two hot cell facility and they handle about 20 waste cans per year. Their method for the remote handling of waste was published in the American Nuclear Society 30th Proceeding - Winter Meeting, 1982. Conference on Remote System Technology, page 67 - Remote Waste Handling at a Facility by Michael Vaughan (requested from the Bettis Library).

ANL is currently doing work on LWBR rods for Westinghouse NRF. This is done per a purchase order. Any future work with Bettis will be done on the same basis.

In the future, Grant McClelland, Manager of Customer Interface, will be the ANL contact man for this job. All correspondence, inquiries, etc., are to be directed to him.

Mr. Bacca stated that ANL is interested in doing the work provided there is an agreement between all involved DOE parties that the waste can be buried at the RWMC in Idaho.

R. T. Esper
Materials Evaluation Facility Engineering
Development Laboratories Operations

/vlb

DIVIDER

PAGE

Attachment 3 - Acceptable Knowledge Source Document Summary

Site(s): Bettis Atomic Propulsion Lab | Source Document Tracking Number: P112

Waste Stream Number(s): BT-T001

(Applicable only when site library is not in use)

Acceptable Knowledge Documentation Type:
- TRU Waste Management Program Information
- ✔ Waste Stream-Specific Information
- Supporting Information

Category:
- C - Correspondence
- DR - Discrepancy Resolution
- M - Miscellaneous
- ✔ P - Procedures
- ☐ U - Unpublished Documents

Title of Source Document: Sectioning Specimens on the Slow Speed Abrasive Cut Off Wheel

Source Document Reference Information (author(s), document and revision number, date, publisher): M.J. Hill. MEL(T) 2-6, Rev. 11, 4/16/1986

AK # [a]	Source Doc. Page # [b]	AK Information Summary
WS4	Page 2	This document provides detailed instructions for the operation of the slow speed cut-off wheel to section specimens for destructive tests such as metallographic, density, chemical analysis hydrogen analysis etc.

Source Document Data Limitations (if any):

1 None

Acceptable Knowlege Expert:

James Luginbyhl / James Luginbyhl Date: 7/23/2010

Print /Sign

[a] Obtain from Acceptable Knowledge Documentation Checklist
[b] For microfilm or microfiche, identify box, tape, reel number and location.

NNPI has been redacted.

DETAILED WORK PROCEDURE

Original Date	85-063-MEL	11	4
	RCE No.	Rev.	C/N
TITLE: SECTIONING SPECIMENS ON THE SLOW SPEED ABRASIVE CUT OFF WHEEL	MEL(T) 2-6	11	4
	Area No.	Rev.	C/N

DESCRIPTION/REASON FOR CHANGE: To include verbatim compliance

WORK SHALL BE CONDUCTED IN VERBATIM COMPLIANCE WITH THIS PROCEDURE. IN THE EVENT THIS PROCEDURE CAN NOT BE FOLLOWED EXACTLY, THE WORK SHALL BE STOPPED AND THE RESPONSIBLE AREA MANAGER SHALL BE NOTIFIED FOR RESOLUTION.

IN THE EVENT OF AN EMERGENCY OR CASUALTY, PERSONNEL PERFORMING THIS PROCEDURE HAVE THE RESPONSIBILITY AND AUTHORITY TO TAKE ANY ACTION CONSIDERED NECESSARY TO PREVENT INJURY OR EXPOSURE TO PERSONNEL OR DAMAGE TO FACILITIES OR EQUIPMENT AND TO SECURE THE AREA IN A SAFE CONDITION. AFTER ANY SUCH EMERGENCY ACTION, THE RESPONSIBLE AREA MANAGER SHALL BE IMMEDIATELY NOTIFIED.

IT IS REQUIRED THAT THIS PROCEDURE BE REVIEWED BY AREA MANAGEMENT AND REVISED AS NECESSARY TO MAINTAIN ADEQUATE RADIOLOGICAL CONTROLS.
WHEN A PROCEDURE IS CHANGED, IT MUST BE SUBMITTED TO RC & E, ENGINEERING AND FIRE PROTECTION FOR REVIEW AND APPROVAL. COMPLETED WORK PROCEDURES AND OPERATING PROCEDURES SHALL BE RETAINED FOR 3 YEARS BY THE CURRENT MANAGER OF THE AREA IN WHICH THE WORK WAS CONDUCTED, OR BY AN ALTERNATE COGNIZANT MANAGER. ALTERNATE COGNIZANT MANAGERS SHALL BE DESIGNATED IN WRITING BY THE CURRENT AREA MANAGER.

APPROVAL SIGNATURES

Originator	4/16/86 Date	N/A Works Engrg. Supv. Foreman (If applicable)	Date
N/A Current Area Manager	Date	N/A Radiological Training & Safety Supv. (If applicable)	Date
N/A Engineering & Fire Protection Engineer		N/A Name of Job Site Inspector (If applicable)	Date
D. Ridge per telecon 4/16/86 Manager, Engineering & Fire Protection Radiological Controls & Engineering	Date	Manager, Materials Evaluation Facility Engineering	4/16/86 Date

Distribution:

Manager, Engrg. & Fire Protection	1	Personnel Assigned to Perform the Work	2
Manager, Radiological Monitoring	1	Area Manager	1
Supervisor, Works Engrg. (If applicable)	1		

MEL(T)2-6 | 11 | 4
Area No. | Rev. | C/N

85-063-MEL
RCE No.

LIST OF EFFECTIVE PAGES

Page	MEL Revision	Change Notice
Cover	11	4
1	11	4
1	11	3
2	11	3
3	11	3
4	11	3
5	11	3
6	11	3
7	11	3
8	11	3

A. SCOPE

This procedure covers the sectioning of non-fuel specimens on a slow speed cut-off wheel which is located within a high level cell. The specific sectioning details and instructions are provided by the test sponsor via an MEL Examination Request (MELER). (3)

B. GENERAL INFORMATION

1. Description of Apparatus

The slow speed abrasive cut-off wheel is used for sectioning specimens to obtain specific portions of the specimens for such destructive tests as metallography, density, chemical analysis, hydrogen analysis, etc.

The apparatus is shown in Figure 1. The in-cell portion of the apparatus consists of:

a) Plexiglass cover
b) Abrasive wheel
c) Support frame
d) Air activated vise jaws
e) Feed mechanism/control
f) Water tray

The controls for the cut-off wheel consist of two control boxes as shown in Figure 1.

To make a cut on a specimen the specimen is clamped into a double jaw vise with the position of the intended cut located between the two jaws. When the feed mechanism is activated, the vise is slowly fed into the rotating abrasive wheel. The abrasive wheel rotates with one portion of the wheel dipping into a tray of water. The water is carried by the wheel and serves to cool the wheel and the specimen. The water also restricts the spread of contamination by entrapping small particles in the water as they are removed during cutting.

The low pressure gage on the left at the top of the Control Box indicates the pressure applied to the cylinder that operates the feed mechanism and the vernier adjustment at the extreme left of the control box regulates the pressure for the feed motion. The high pressure gage on the extreme right of the control box indicates the clamping force pressure and is controlled by the vernier adjustment at the extreme right of the control box.

B. (Cont'd)

2. The cutting operation is conducted according to a Materials Evaluation Laboratory Work Request with an approved cutting sketch.

3. Containers to be used for the pieces created during the cutting operation are pre-identified and placed in the cell for use, as specimens are generated.

C. GENERAL REQUIREMENTS

1. After cutting, the resulting specimen identifications must be transferred onto a new container to ensure correct identification. Place the cut specimens into pre-marked containers promptly following cutting to avoid improper identification of specimens.

2. Record all information required on the MELER. Problems encountered shall also be recorded.

3. Store specimen containers in appropriate storage when not in use.

4. The work area in the cell should be maintained as clean as practicable.

5. Maintenance shall be performed per Appendix A.

6. Do not exceed 1.0 amp reading on the motor current meter longer than 30 seconds to avoid damage to the drive motor. The motor current is affected by the low presure vernier which regulates the cutting feed function.

7. Care should be taken to prevent losing a very small specimen removed from a larger piece. The small specimen may cling to the upper jaw due to surface tension of the water. In this case the small specimen must be slid carefully off of the jaw.

8. Before initiating cutting operations check operation of the equipment to insure that:

   a) The wheel turns freely at constant speed
   b) The vise jaws operate properly.
   c) The feed mechanism moves freely.
   d) The wheel rotates in the proper direction. The wheel should rotate through the water and up through the specimen.
   e) Inspect air lines and electrical lines for visible defects.

9. All waste generated (wiping cloths) during operations by this procedure must be placed in a sealable container.

10. Water level in the sludge tray must be above the bottom of the wheel.

11. Specimens shall be kept in their containers during operations to the maximum extent possible.

12. Correct orientation and identity of specimens must be maintained during cutting. This can be achieved by marking the specimens (e.g., paint stripe), cutting and notching the specimens in a manner which leaves the serial number on the last piece in the fixture, or by some other method identified by the sponsor on the MELER.

△2

D. OPERATIONS

1. Connect house air lines to the control box.

2. Plug in the control box to a 110 V electrical connection.

3. Turn on the main power switch located on the control box to the "ON" position (switch up) and observe the pilot light on the control box is lit.

4. Open both the left and right jaws of the vise by placing the jaw operating toggle switches on the control box to the open position (switch up).

5. Place the specimen onto the vise in the position to be cut. Ensure proper specimen orientation and location by referring to the cutting sketch and identifying marks on the specimen. Note that the wheel will remove at least 1/16 inch of material during the cutting operation.

6. Hold the specimen on one side and close the opposite vise jaw by placing the appropriate jaw operating toggle switch on the control box to the "CLOSE" (switch down) position.

7. Close the second vise jaw by placing the approprite jaw operating toggle switch on the control box to the "CLOSE" (switch down) position.

7a. If cutting high specific activity sample, close the plexiglas cover over the cut-off wheel.

△3

8. Start the cutting wheel rotation by placing the motor power switch to the "ON" position (switch up).

9. Initiate the cutting feed by placing the in-out toggle switch to the "IN" position (switch down).

10. After the wheel has begun to cut, decrease the feed pressure by rotating the right vernier located on the control box clockwise. Regulate the feed pressure until the ammeter on the control box reaches approximately 1.0 amp.

11. Occasionally adjust the feed pressure during the cutting operation by repeating step 10 to maintain approximately 1.0 amp as indicated by the ammeter.

12. When the cut is complete, reverse the feed by placing the in-out toggle switch to the "OUT" position (switch up).

13. Stop the wheel rotation by placing the motor power switch to the "OFF" position (switch down).

△3 14. After cutting high specific activity material, wait at least 15 minutes before opening the plexiglass cover on the cut-off wheel.

15. Open one of the vise jaws by placing the appropriate jaw operating toggle switch on the control box to the "OPEN" (switch up) position. Take action to avoid dropping the specimen as the vise grip is released.

16. Place the specimen section in its container.

17. Repeat steps 15 and 16 for the remaining section of the specimen in the other vise jaw.

18. If no further cuts are to be made, place the specimen into the container with the proper identification.

△3 19. If more cuts are to be made, repeat step 4 through 18 as necessary. Clean up according to step 20 should be accomplished at the end of each shift.

20. If no further cutting is to be done, wipe the vise and jaw assemblies, abrasive disk, and any other areas of the cut-off wheel which might have contamination buildup. Place wiping rags into a sealable waste container for disposal.

21. Close the plexiglass cover over the cut-off wheel.

22. Turn the main power switch located on the control box to the "OFF" position (switch down).

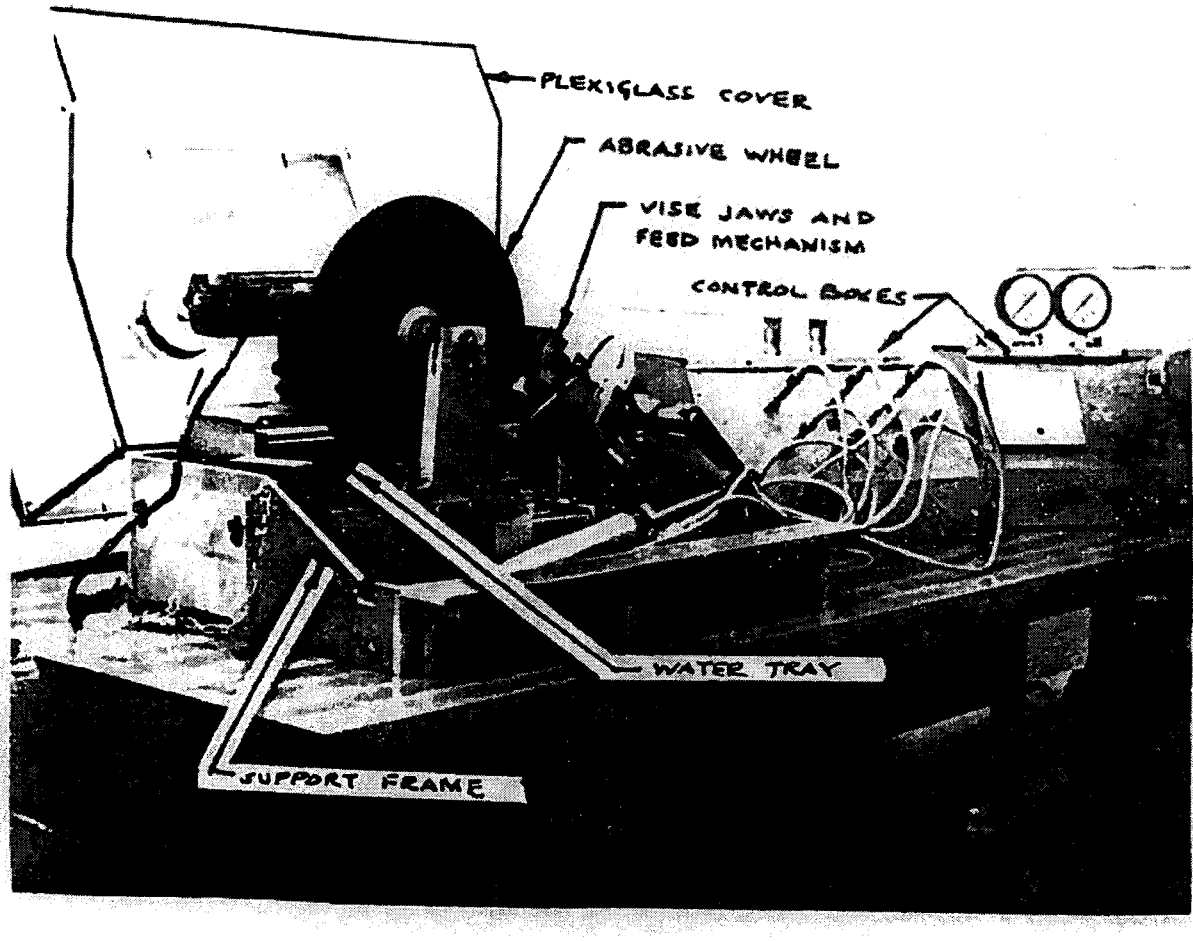
23. Clean up the work area.

F. RECORD INFORMATION

1. Ensure that all information required by the MELER is recorded.

2. Update all accountability records, as required.

FIGURE 1


PLEXIGLASS COVER
ABRASIVE WHEEL
VISE JAWS AND FEED MECHANISM
CONTROL BOXES
WATER TRAY
SUPPORT FRAME

3

MEL(T)2-6 | 11 | 3
Area No. | Rev. | C/N

85-063-MEL
RCE No.

FIGURE 2

PROJECT H025 SPECIMEN NO. 75-300 BOOK NO. 8 PAGE NO. 3

IDENT. As Shown BY MEL Technician DATE

3

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MEL(T)2-6 11 3
Area No. Rev. C/N

85-063-MEL
RCE No.

FIGURE 3

PROJECT H025 SPECIMEN NO. 75-300-M1 BOOK NO. 8 PAGE NO. 4

IDENT. As Shown BY MEL Technician DATE

EDP I.D.

3

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Appendix A

Maintenance Requirements

The cut-off wheel was designed to minimize maintenance requirements. Due to the high levels of contamination deposited on the wheel and vise assemblies, all maintenance and repairs must be performed remotely.

Major maintenance generally consists of replacing components when they are no longer operative. The vise itself is the most expensive component and is the component which warrants some effort to salvage. The maintenance shall be performed within one month of operation.

1. Inspect flexible air lines. Replace if abrasions, bulges or other deformity is observed.

2. Inspect electrical cables for cracks, loose connections, frayed wires, abrasions and evidence of severe radition damage. Replace as required.

3. Apply a few drops of oil to the [illegible] assembly. Wipe with dry rag.

4. An air line shut-off device is attached to the control box which will shut-off supply air in the event of air [illegible]. Each air line connecting the control box and the cut-off [illegible] be disconnected (at the control box) to check that the shut-off [illegible] functions. If shut-off does not occur, an adjustment knob is provided to change the shut-off point. Adjust and retest as necessary.

5. Perform an operational check of apparatus.

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PAGE

Attachment 3 - Acceptable Knowledge Source Document Summary

Site(s): Bettis Atomic Propulsion Lab | Source Document Tracking Number: U224

Waste Stream Number(s): BT-T001

(Applicable only when site library is not in use)

Acceptable Knowledge Documentation Type:
- TRU Waste Management Program Information
- ✔ Waste Stream-Specific Information
- Supporting Information

Category:
- C - Correspondence
- DR - Discrepancy Resolution
- M - Miscellaneous
- P - Procedures
- ✔ U - Unpublished Documents

Title of Source Document: Flow Charts for MEL Waste

Source Document Reference Information (author(s), document and revision number, date, publisher):

AK # [a]	Source Doc. Page # [b]	AK Information Summary
WS4, WS5, WS8	1	These flow charts map out the processes used to generate waste in the MEL. Specific chemicals listed are: Potassium Pyrosulfate Nitric acid Oxalic acid

Source Document Data Limitations (if any):

1 None

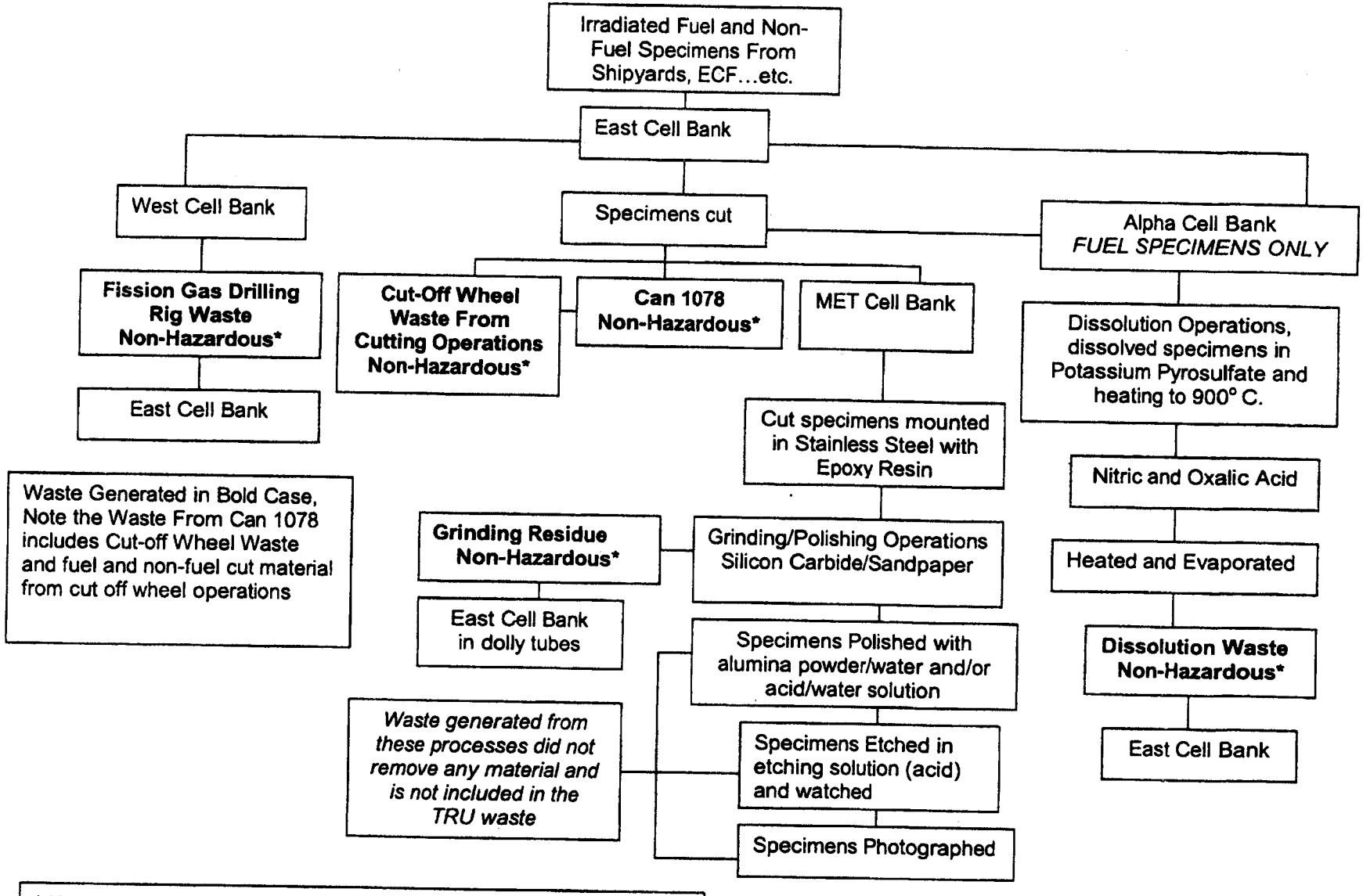
Acceptable Knowlege Expert:

James Luginbuhl / [signature] Date: 7/23/2010

Print /Sign

[a] Obtain from Acceptable Knowledge Documentation Checklist
[b] For microfilm or microfiche, identify box, tape, reel number and location.

RH-TRU MEL Waste Stream
The following processes occurred continually
And concurrently from ~ 1960 thru 1992



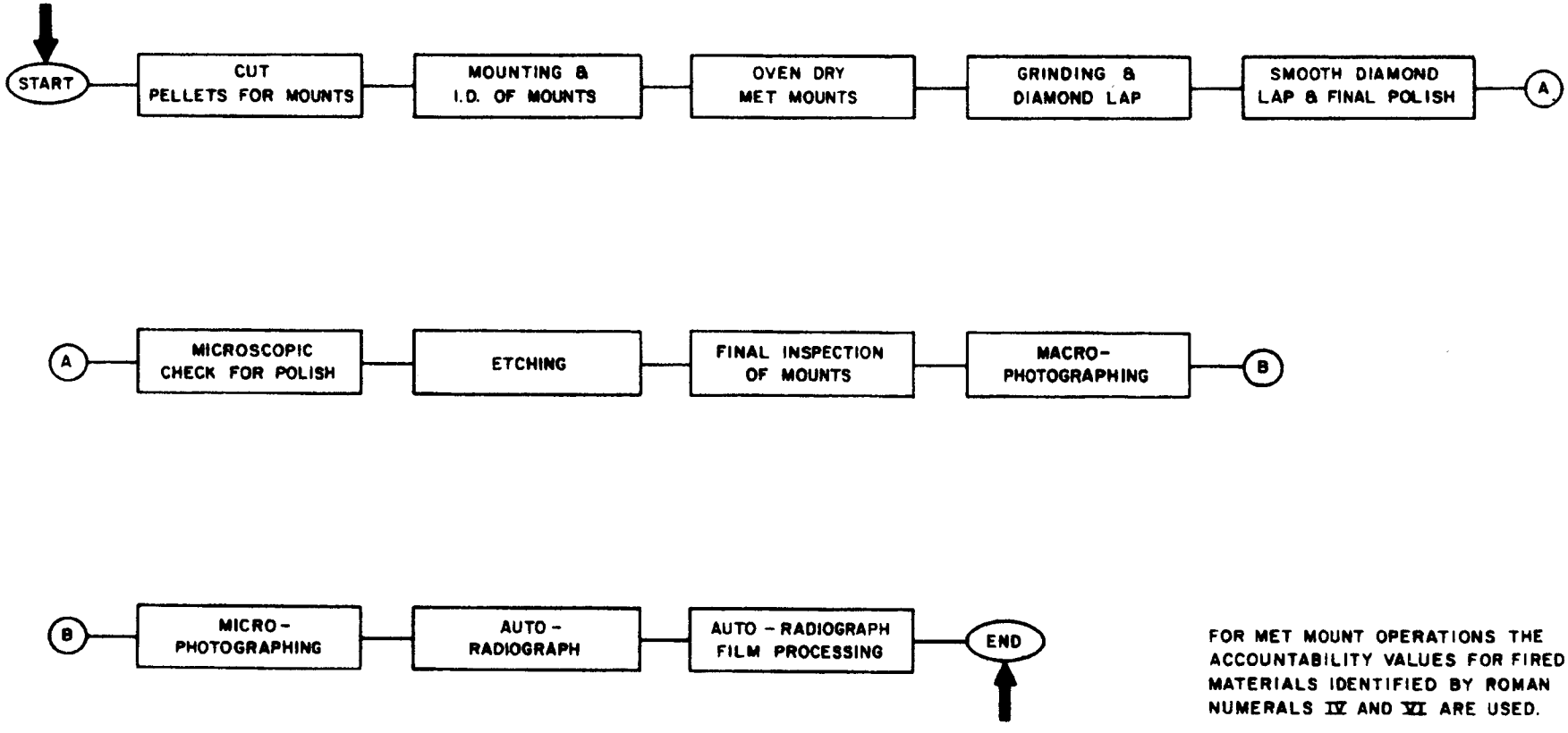
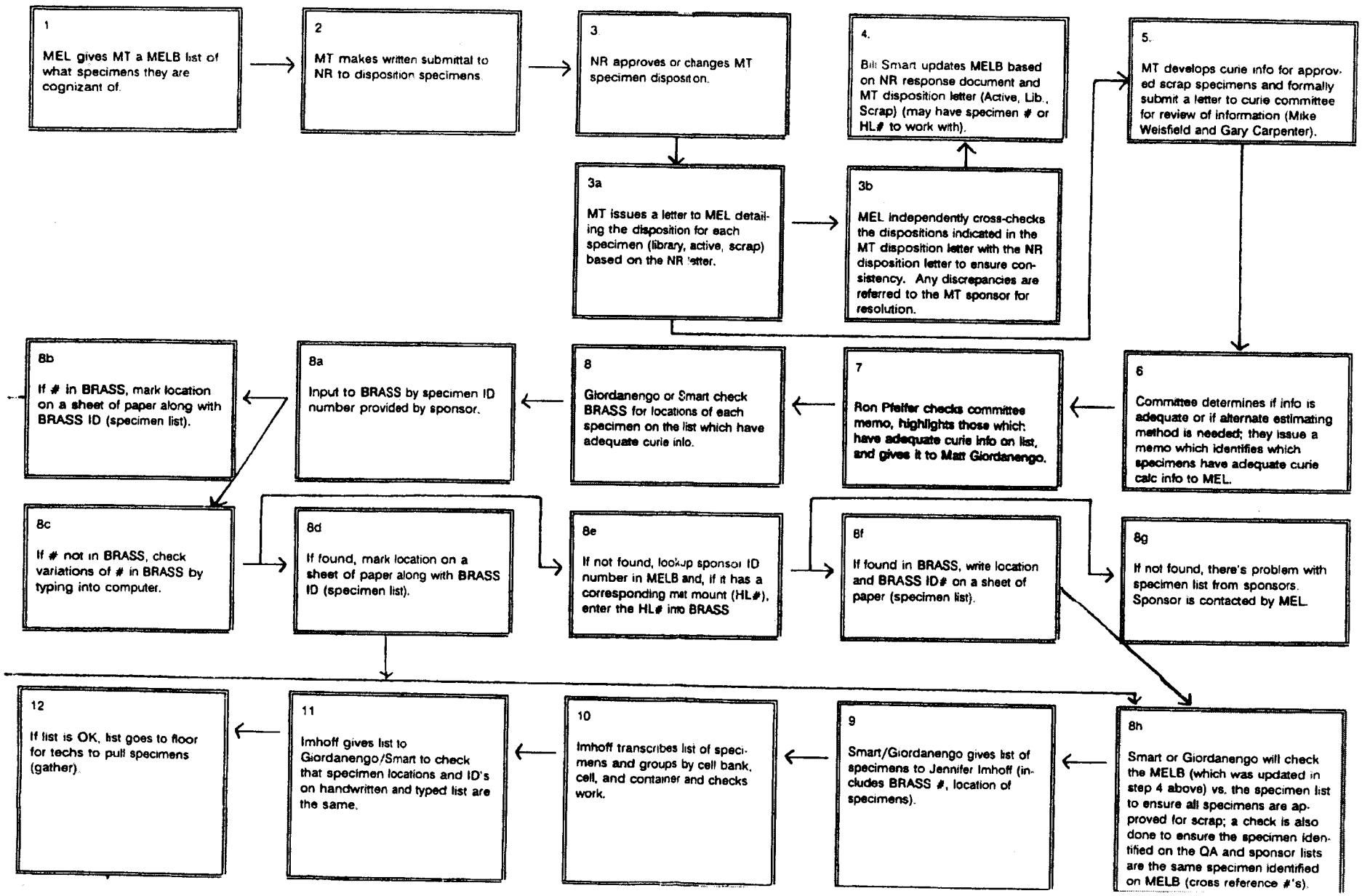
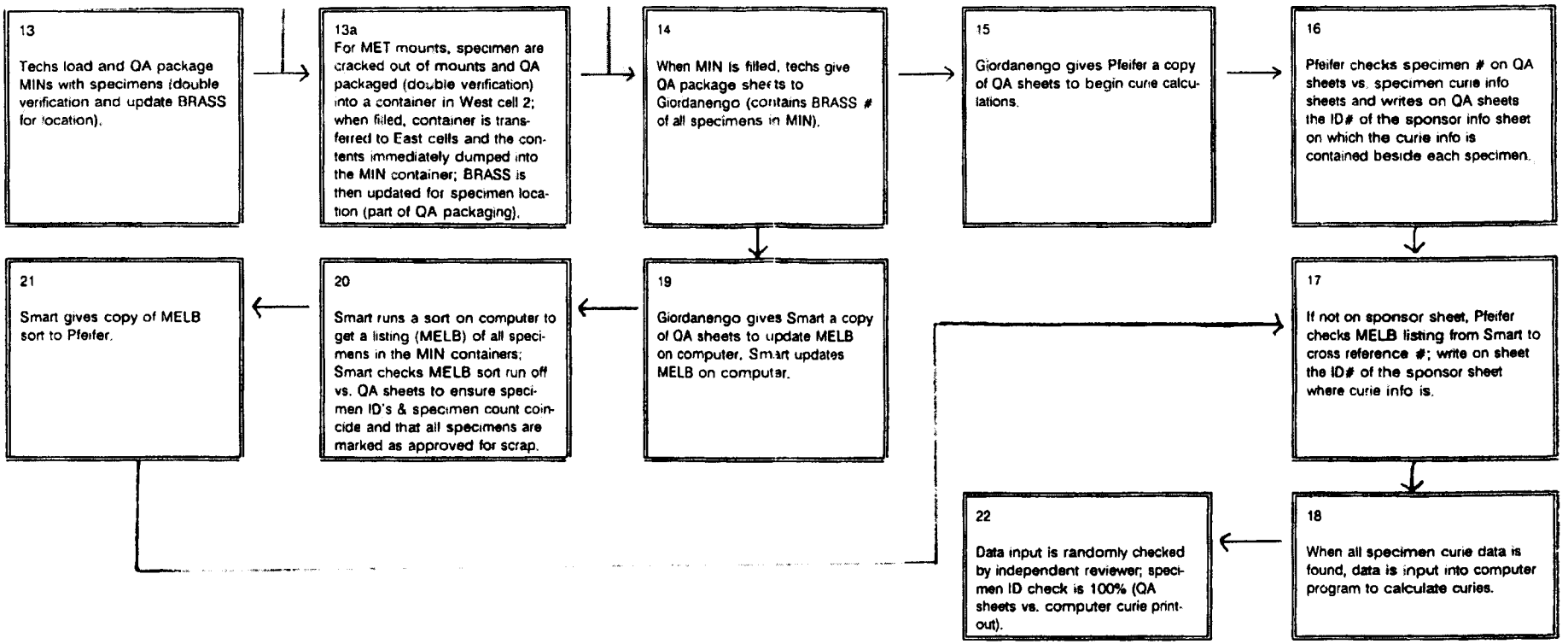


FIGURE 3. MET MOUNT OPERATIONS

SPECIMEN TRACKING FLOWCHART




13
Techs load and QA package MINs with specimens (double verification and update BRASS for location).
13a
For MET mounts, specimen are cracked out of mounts and QA packaged (double verification) into a container in West cell 2; when filled, container is transferred to East cells and the contents immediately dumped into the MIN container; BRASS is then updated for specimen location (part of QA packaging).
14
When MIN is filled, techs give QA package sheets to Giordanengo (contains BRASS # of all specimens in MIN).
15
Giordanengo gives Pfeifer a copy of QA sheets to begin curie calculations.
16
Pfeifer checks specimen # on QA sheets vs. specimen curie info sheets and writes on QA sheets the ID# of the sponsor info sheet on which the curie info is contained beside each specimen.
17
If not on sponsor sheet, Pfeifer checks MELB listing from Smart to cross reference #; write on sheet the ID# of the sponsor sheet where curie info is.
18
When all specimen curie data is found, data is input into computer program to calculate curies.
22
Data input is randomly checked by independent reviewer; specimen ID check is 100% (QA sheets vs. computer curie printout).
19
Giordanengo gives Smart a copy of QA sheets to update MELB on computer. Smart updates MELB on computer.
20
Smart runs a sort on computer to get a listing (MELB) of all specimens in the MIN containers; Smart checks MELB sort run off vs. QA sheets to ensure specimen ID's & specimen count coincide and that all specimens are marked as approved for scrap.
21
Smart gives copy of MELB sort to Pfeifer.

Attachment 1 - Acceptable Knowledge Documentation Checklist

Site(s): Idaho National Laboratory

Waste Stream Description: Heterogeneous Debris from ANL

Waste Stream Number(s): ID-AECHDM

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
Mandatory generator site TRU waste program (PR) information [a]:			
Map of the generator site that identifies TRU waste generation, treatment, and storage areas.	PR1	Y	AE-P-002, AE-P-005, AE-P-009, AE-P-010, AE-P-054, AE-P-090, AE-P-106, AE-U-1, AE-U-2, C138, C158, C2005, C354, P002, P004, P025, P027, P028, P061, P2016, P2018, P2032, P320, P378, P380, P604, P616, U3003, U339

CCP RECORDS ORIGINAL
DATE REC'D 12-16-11

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-AECHDM

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
Generator site mission descriptions related to TRU waste generation and management identifying defense and non-defense operations.	PR2	Y	AE-C-003, AE-C-004, AE-C-027, AE-I-007, AE-I-011, AE-I-013, AE-I-014, AE-I-015, AE-I-038, AE-I-039, AE-I-042, AE-I-044, AE-I-051, AE-I-052, AE-I-054, AE-I-056, AE-I-188, AE-P-006, AE-P-011, AE-P-022, AE-P-023, AE-P-024, AE-P-025, AE-P-026, AE-P-027, AE-P-028, AE-P-029, AE-P-030, AE-P-031, AE-P-032, AE-P-033, AE-P-034, AE-P-035, AE-P-036, AE-P-037, AE-P-039, AE-P-040, AE-P-041, AE-P-042, AE-P-043, AE-P-044, AE-P-045, AE-P-047, AE-P-050, AE-P-051, AE-P-052, AE-P-053, AE-P-054, AE-P-055, AE-P-056, AE-P-057, AE-P-058, AE-P-059, AE-P-060, AE-P-061, AE-P-062, AE-P-063, AE-P-064, AE-P-065, AE-P-066, AE-P-067, AE-P-070, AE-P-071, AE-P-072, AE-P-073, AE-P-074, AE-P-075, AE-P-076, AE-P-077, AE-P-078, AE-P-079, AE-P-080, AE-P-081, AE-P-082, AE-P-083, AE-P-084, AE-P-085, AE-P-086, AE-P-087, AE-P-088, AE-P-089, AE-P-090, AE-P-098, AE-P-107, AE-P-108, AE-P-109, AE-P-110, AE-P-111, AE-P-112, AE-P-113, AE-P-115, AE-P-116, AE-P-117, AE-P-118, AE-P-119, AE-P-120, AE-P-121, AE-P-122, AE-P-123, AE-P-124, AE-P-129, C001, C006, C016, C036, C068, C073, C074, C092, C103, C124, C138, C152, C155, C157, C2004, C2006, C2008, C2011, C2022, C2023, C2024, C303, C304, C305, C316, C329, C330, C331, P002, P004, P006, P008, P009, P010, P013, P016, P017, P025, P027, P028, P029, P1002, P2007, P2008, P2010, P2012, P2016, P2018, P2019, P2028, P2030, P2032, P2033, P2034, P320, P325, P326, P344, P373, P374, P380, P389, P392, P394, P396, P520, P532, P583, P584, P585, P586, P587, P588, P599, P603, P606, P607, P616, P617, P618, P620, P621, U001, U003, U007, U009, U011, U012, U013, U023, U040, U045, U067, U068, U069, U070, U076, U1003, U307, U330

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-AECHDM

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
Overview of the generator site and generator site TRU waste management operations in the context of the facility's mission.	PR3	Y	AE-C-006, AE-C-015, AE-I-106, AE-I-124, AE-I-160, AE-P-003, AE-P-006, AE-P-011, AE-P-012, AE-P-014, AE-P-015, AE-P-016, AE-P-017, AE-P-019, AE-P-020, AE-P-028, AE-P-054, AE-P-070, AE-P-071, AE-P-072, AE-P-073, AE-P-074, AE-P-075, AE-P-076, AE-P-077, AE-P-078, AE-P-080, AE-P-081, AE-P-082, AE-P-083, AE-P-084, AE-P-085, AE-P-087, AE-P-088, AE-P-089, AE-P-092, AE-P-093, AE-P-094, AE-P-095, AE-P-097, AE-P-098, AE-P-099, AE-P-102, AE-P-103, AE-P-104, AE-P-105, AE-U-1, AE-U-2, C008, C016, C036, C082, C115, C124, C138, C157, C353, P002, P004, P006, P025, P028, P029, P032, P060, P069, P1002, P2018, P2032, P320, P380, P394, P617, U001, U002, U013, U017, U018, U066
Descriptions of historical and current TRU waste generating operations, including how waste is tracked and managed and/or how operations relative to isotopic composition were tracked.	PR4	Y	AE-C-006, AE-C-011, AE-I-054, AE-I-057, AE-I-089, AE-I-107, AE-I-130, AE-I-131, AE-I-186, AE-I-187, AE-P-003, AE-P-005, AE-P-006, AE-P-007, AE-P-009, AE-P-010, AE-P-011, AE-P-012, AE-P-013, AE-P-014, AE-P-015, AE-P-016, AE-P-017, AE-P-019, AE-P-020, AE-P-054, AE-P-071, AE-P-072, AE-P-073, AE-P-074, AE-P-075, AE-P-076, AE-P-077, AE-P-078, AE-P-080, AE-P-081, AE-P-082, AE-P-083, AE-P-084, AE-P-085, AE-P-087, AE-P-088, AE-P-089, AE-P-092, AE-P-093, AE-P-094, AE-P-095, AE-P-097, AE-P-098, AE-P-099, AE-P-100, AE-P-102, AE-P-103, AE-P-104, AE-P-106, AE-P-109, C007, C020, C029, C066, C092, C103, C125, C130, C138, C143, C155, C157, C158, C2009, C2011, C2022, C2023, C2024, C333, C335, C356, C357, P002, P004, P006, P009, P027, P029, P032, P055, P060, P061, P062, P2000, P2011, P2016, P2018, P2032, P2033, P2034, P3004, P329, P375, P392, P396, U002, U007, U017, U018, U019, U021, U022, U023, U065, U068, U1003

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-AECHDM

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
Waste identification and/or categorization schemes and terminology used at the generator site, including codes correlating to specific isotopic distributions.	**PR5**	Y	AE-C-005, AE-I-036, AE-I-053, AE-I-148, AE-I-181, AE-I-183, AE-I-184, AE-P-005, AE-P-011, AE-P-012, AE-P-013, AE-P-014, AE-P-016, AE-P-017, AE-P-019, AE-P-020, AE-P-044, AE-P-045, AE-P-051, AE-P-070, AE-P-095, AE-P-096, AE-P-097, AE-P-098, AE-P-099, AE-P-102, AE-P-103, AE-P-106, C026, C094, C124, C3004, C357, DR3001, P001, P002, P006, P009, P025, P028, P031, P3001, P3002, P3003, P3004, U002, U004, U041, U1003, U3001, U3003, U3005, U307
Types and quantities of TRU waste generated, including historical generation through future projections.	**PR6**	Y	AE-C-024, AE-P-005, AE-P-006, AE-P-044, AE-P-045, AE-P-070, AE-P-096, AE-P-104, AE-P-106, AE-U-1, AE-U-2, C004, C013, C026, C029, C036, C082, C108, C138, C2011, C2022, C2023, C2024, C3003, C305, C333, C335, P001, P004, P031, P2032, P2033, P3004, P327, P329, P331, P392, P410, P616, U012, U076, U2002, U3001, U3003, U3005
Correlation of waste streams and description of time of generation, waste generating processes, and area and building/facility where each waste stream was generated.	**PR7**	Y	AE-C-004, AE-C-015, AE-I-010, AE-I-040, AE-I-044, AE-I-055, AE-I-148, AE-P-038, AE-P-044, AE-P-104, C006, C025, C029, C046, C066, C152, C2002, C2003, C2008, C333, C356, C357, C375, DR3001, DR3003, DR3004, P001, P002, P025, P2032, P3001, P3002, P3003, P327, P331, P392, P616, P617, P620, P621, U001, U002, U004, U007, U012, U015, U017, U018, U019, U021, U022, U041, U070, U1003, U3001, U3003
Certification procedures for waste to be sent to the WIPP facility (i.e., procedures to ensure that prohibited items are documented and managed in accordance with site-specific certification plans).	**PR8**	Y	AE-C-006, AE-P-003, AE-P-019, AE-P-104, C001, C009, C066, C088, C091, C108, C115, C116, C137, C143, C147, DR3002, DR3003, P002, P006, P009, P023, P032, P055, P061, P2011, P3001, P3002, P3003, P372, P412, P414, P416, U001, U004, U009, U017, U041, U3004
Mandatory generator site TRU waste stream (WS)-specific information (a) :			
Waste stream designation.	**WS1**	Y	AE-C-017, AE-C-025, AE-C-038, AE-I-199, AE-P-070, C035, C158, C3002, C3003, C333, C356, C357, DR3001, DR3002, DR3004, P001, P002, P327, P329, P331, P378, P410, P620, P621, U041, U1003, U3001, U3002, U3003, U3004, U3005, U307, U332

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-AECHDM

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
Area(s) and building(s) from which the waste stream was or is generated.	WS2	Y	AE-C-003, AE-C-004, AE-C-013, AE-C-015, AE-C-016, AE-C-025, AE-I-002, AE-I-007, AE-I-008, AE-I-014, AE-I-015, AE-I-016, AE-I-019, AE-I-028, AE-I-031, AE-I-032, AE-I-038, AE-I-040, AE-I-042, AE-I-044, AE-I-046, AE-I-047, AE-I-048, AE-I-050, AE-I-051, AE-I-052, AE-I-054, AE-I-070, AE-I-071, AE-I-073, AE-I-077, AE-I-089, AE-I-096, AE-I-098, AE-I-112, AE-I-115, AE-I-141, AE-I-148, AE-I-181, AE-I-182, AE-I-183, AE-I-184, AE-I-186, AE-I-187, AE-I-188, AE-I-195, AE-P-002, AE-P-003, AE-P-005, AE-P-008, AE-P-015, AE-P-028, AE-P-037, AE-P-038, AE-P-044, AE-P-045, AE-P-054, AE-P-070, AE-P-104, AE-P-106, AE-P-125, AE-U-5, C138, C2002, C2003, C2004, C2005, C2006, C2007, C2008, C2009, C3003, C333, C344, C353, C354, C357, C375, C812, DR3004, P002, P004, P027, P028, P061, P2000, P2010, P2011, P2012, P2013, P2016, P2018, P2019, P2032, P3001, P3002, P3003, P3004, P327, P329, P331, P333, P380, P386, P387, P392, P396, P407, P410, P412, P414, P416, P469, P472, P489, P490, P492, P516, P536, P537, P540, P546, P551, P552, P554, P578, P580, P616, P617, P618, P620, P621, P817, P819, P822, P826, P829, U007, U015, U017, U018, U019, U021, U022, U1003, U2002, U2007, U2008, U2009, U3001, U3003, U3005, U332, U339
Waste stream volume and time period of generation.	WS3	Y	AE-C-025, AE-I-077, AE-I-112, AE-I-188, AE-I-195, AE-P-058, AE-P-059, AE-P-060, AE-P-061, AE-P-062, AE-P-063, AE-P-064, AE-P-065, AE-P-066, AE-P-067, AE-P-070, AE-P-104, C013, C014, C036, C103, C108, C138, C147, C3003, C301, C303, C304, C305, C333, C357, C812, DR3004, P002, P025, P027, P028, P3004, P327, P329, P331, P333, P373, P378, P386, P410, P486, P604, P616, P822, P826, P829, U015, U1003, U2007, U2008, U2009, U3001, U3002, U3003, U3004, U304, U321, U322

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-AECHDM

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
Waste generating process (describe for each building) including processes associated with U134 waste generation, if applicable.	WS4	Y	AE-C-003, AE-C-015, AE-C-024, AE-I-006, AE-I-007, AE-I-011, AE-I-013, AE-I-014, AE-I-015, AE-I-016, AE-I-017, AE-I-019, AE-I-030, AE-I-031, AE-I-032, AE-I-034, AE-I-035, AE-I-037, AE-I-040, AE-I-042, AE-I-048, AE-I-050, AE-I-053, AE-I-054, AE-I-056, AE-I-057, AE-I-058, AE-I-059, AE-I-079, AE-I-109, AE-I-110, AE-I-115, AE-I-126, AE-I-128, AE-I-130, AE-I-131, AE-I-132, AE-I-134, AE-I-135, AE-I-140, AE-I-141, AE-I-165, AE-P-002, AE-P-005, AE-P-007, AE-P-032, AE-P-033, AE-P-035, AE-P-036, AE-P-039, AE-P-040, AE-P-041, AE-P-042, AE-P-043, AE-P-044, AE-P-045, AE-P-047, AE-P-051, AE-P-053, AE-P-054, AE-P-058, AE-P-059, AE-P-060, AE-P-061, AE-P-062, AE-P-063, AE-P-064, AE-P-065, AE-P-066, AE-P-067, AE-P-070, AE-P-104, AE-P-106, AE-P-107, AE-P-108, AE-P-110, AE-P-111, AE-P-112, AE-P-113, AE-P-124, AE-P-125, C011, C016, C066, C073, C103, C115, C128, C130, C137, C138, C152, C155, C157, C2004, C2006, C2007, C2008, C2009, C2011, C2022, C2023, C2024, C3003, C316, C335, C353, C357, C375, P002, P004, P009, P025, P027, P028, P029, P031, P034, P038, P039, P060, P062, P068, P069, P1002, P2011, P2032, P2033, P2034, P3001, P3002, P3003, P3004, P304, P320, P326, P327, P329, P331, P333, P344, P374, P375, P378, P380, P386, P387, P389, P392, P396, P410, P469, P472, P475, P480, P487, P489, P490, P492, P503, P505, P507, P509, P516, P520, P521, P532, P536, P537, P539, P540, P546, P548, P551, P552, P554, P556, P557, P566, P568, P572, P574, P575, P578, P580, P602, P603, P604, P606, P607, P616, P617, P618, P620, P621, P819, P822, P826, P827, P829, U030, U067, U068, U069, U074, U3001, U304

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-AECHDM

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
Process flow diagrams. For research/development, analytical laboratory waste, or other similar processes where process flow diagrams cannot be created, a description of the waste generating processes, rather than a formal process flow diagram, may be included, if justified.	**WS5**	Y	AE-C-013, AE-I-001, AE-I-003, AE-I-004, AE-I-005, AE-I-007, AE-I-009, AE-I-013, AE-I-014, AE-I-015, AE-I-016, AE-I-017, AE-I-018, AE-I-035, AE-I-044, AE-I-049, AE-I-050, AE-I-051, AE-I-058, AE-I-059, AE-I-060, AE-I-061, AE-I-062, AE-I-066, AE-I-067, AE-I-084, AE-I-103, AE-I-106, AE-I-109, AE-I-110, AE-I-115, AE-I-117, AE-I-121, AE-I-124, AE-I-126, AE-I-128, AE-I-131, AE-I-132, AE-I-134, AE-I-135, AE-I-140, AE-I-141, AE-I-181, AE-I-182, AE-I-183, AE-I-184, AE-P-002, AE-P-019, AE-P-032, AE-P-039, AE-P-040, AE-P-041, AE-P-042, AE-P-043, AE-P-047, AE-P-053, AE-P-058, AE-P-059, AE-P-060, AE-P-061, AE-P-062, AE-P-063, AE-P-064, AE-P-065, AE-P-066, AE-P-067, AE-P-106, AE-P-107, AE-P-108, AE-P-110, AE-P-111, AE-P-112, AE-P-113, C138, P001, P032, P2022, P2023, P2024, P2026, P2027, P2028, P380, P412, U011, U304, U830
Summary of basis and rationale for delineating each waste stream that is traceable to referenced documents.	**WS6**	Y	AE-I-195, AE-I-199, AE-P-019, AE-P-079, C013, C124, C2010, C3002, C3003, C333, C335, C356, C357, DR3001, DR3002, DR3003, P001, P002, P3001, P3002, P3003, P3004, P378, P604, P618, P620, P621, U015, U017, U018, U019, U021, U022, U1003, U3001, U3003, U3005, U304
Generator site mission descriptions related to TRU waste generation and management identifying defense and non-defense operations.	**WS7**	Y	AE-C-025, AE-I-040, AE-I-056, AE-I-188, AE-I-195, AE-P-028, AE-P-033, AE-P-054, AE-P-079, AE-P-129, C001, C006, C016, C046, C066, C068, C092, C138, C152, C2004, C2011, C2022, C2023, C2024, C305, C329, C330, C331, P002, P2007, P2008, P2010, P2012, P2016, P2018, P2019, P2028, P2030, P2032, P2033, P2034, P320, P380, P389, P394, P520, P537, P599, P617, P822, U001, U011, U040, U067, U076, U1003, U304, U307

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-AECHDM

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
Material inputs or other information that identified the chemical contents of the waste and the stream. Includes events or processes that may have modified the chemical properties of the waste stream after generation.	**WS8**	Y	AE-C-020, AE-C-022, AE-C-026, AE-D-011, AE-D-012, AE-I-003, AE-I-006, AE-I-009, AE-I-010, AE-I-011, AE-I-019, AE-I-031, AE-I-032, AE-I-034, AE-I-035, AE-I-036, AE-I-037, AE-I-053, AE-I-056, AE-I-057, AE-I-058, AE-I-059, AE-I-061, AE-I-062, AE-I-066, AE-I-067, AE-I-068, AE-I-069, AE-I-077, AE-I-078, AE-I-079, AE-I-084, AE-I-098, AE-I-099, AE-I-103, AE-I-106, AE-I-109, AE-I-110, AE-I-112, AE-I-115, AE-I-117, AE-I-121, AE-I-124, AE-I-126, AE-I-128, AE-I-130, AE-I-131, AE-I-132, AE-I-134, AE-I-135, AE-I-140, AE-I-141, AE-I-142, AE-I-143, AE-I-146, AE-I-147, AE-I-148, AE-I-149, AE-I-150, AE-I-151, AE-I-181, AE-I-182, AE-I-183, AE-I-184, AE-I-186, AE-I-187, AE-I-191, AE-I-192, AE-I-193, AE-I-195, AE-I-199, AE-P-002, AE-P-005, AE-P-007, AE-P-011, AE-P-015, AE-P-019, AE-P-029, AE-P-030, AE-P-031, AE-P-034, AE-P-035, AE-P-054, AE-P-070, AE-P-104, AE-P-106, C008, C009, C011, C012, C013, C014, C020, C023, C025, C026, C029, C035, C039, C066, C081, C088, C091, C094, C106, C115, C116, C118, C128, C130, C137, C143, C147, C148, C158, C160, C2004, C2005, C2006, C2007, C2008, C2009, C3002, C3003, C303, C316, C333, C335, C341, C356, C357, DR3001, DR3003, DR3004, P001, P002, P004, P006, P027, P031, P032, P034, P038, P039, P060, P061, P062, P068, P069, P070, P2000, P2001, P2002, P2003, P2004, P2005, P2009, P2010, P2011, P2013, P2017, P2018, P2019, P2020, P2021, P2022, P2023, P2024, P2025, P2026, P2027, P2028, P2029, P2030, P3001, P3002, P3003, P304, P326, P327, P329, P331, P333, P344, P372, P378, P380, P386, P387, P392, P410, P412, P416, P472, P475, P480, P484, P485, P486, P487, P503, P505, P507, P509, P516, P520, P521, P532, P536, P537, P539, P540, P548, P551, P552, P554, P556, P557, P566, P568, P572, P574, P575, P578, P580, P603, P604, P616, P617, P620, P621, P816, P817, P819, P822, U002, U006, U015, U017, U018, U019, U021, U022, U030, U041, U065, U066, U068, U069, U072, U073, U074, U083, U084, U085, U2002, U2007, U2008,

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-AECHDM

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
			U2009, U2010, U3001, U3003, U3004, U304, U321, U322
Physical waste form (e.g., glovebox materials and chemicals handled during glovebox operations, if applicable), assigned summary category group, waste matrix code and materials inputs, including waste material parameters present in the waste stream. Includes events or processes that may have modified the physical properties of the waste stream after generation.	**WS9**	Y	AE-C-006, AE-I-001, AE-I-004, AE-I-005, AE-I-009, AE-I-010, AE-I-018, AE-I-021, AE-I-022, AE-I-023, AE-I-031, AE-I-034, AE-I-035, AE-I-036, AE-I-037, AE-I-053, AE-I-055, AE-I-057, AE-I-058, AE-I-060, AE-I-077, AE-I-079, AE-I-089, AE-I-106, AE-I-107, AE-I-109, AE-I-110, AE-I-115, AE-I-117, AE-I-121, AE-I-124, AE-I-126, AE-I-134, AE-I-135, AE-I-142, AE-I-143, AE-I-146, AE-I-147, AE-I-148, AE-I-149, AE-I-150, AE-I-151, AE-I-181, AE-I-183, AE-I-184, AE-I-186, AE-I-187, AE-I-195, AE-P-002, AE-P-005, AE-P-011, AE-P-019, AE-P-034, AE-P-054, AE-P-070, AE-P-101, AE-P-104, C013, C026, C029, C035, C147, C2002, C2003, C2004, C2005, C2006, C2008, C2010, C3001, C3002, C3003, C305, C333, C335, C341, DR3002, P001, P006, P031, P032, P034, P039, P061, P062, P068, P069, P2000, P2004, P2009, P2011, P2012, P2017, P2019, P2020, P2021, P2022, P2025, P2029, P2030, P3001, P3002, P3003, P326, P327, P329, P331, P344, P372, P373, P378, P380, P386, P392, P395, P407, P410, P412, P469, P472, P475, P480, P484, P485, P486, P487, P489, P490, P492, P505, P507, P509, P516, P520, P521, P532, P536, P537, P540, P546, P548, P551, P552, P554, P556, P557, P568, P574, P575, P578, P580, P603, P604, P606, P616, P617, P620, P621, P819, P822, U002, U015, U017, U018, U019, U021, U022, U041, U068, U072, U073, U084, U2002, U2004, U2007, U2008, U2009, U3001, U3002, U3003, U3004, U304, U307, U321, U322, U332
Waste identifiers assigned by the generator site (e.g., item description code, packaging identification numbers).	**WS10**	Y	AE-C-020, AE-C-038, AE-I-188, AE-I-195, AE-P-005, AE-P-019, C013, C092, C124, P069, P3001, P3002, P3003, P412, U015, U017, U018, U019, U021, U022, U040, U041, U1003, U2007, U2008, U2009, U3001, U3003, U3004, U3005, U304, U307

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-AECHDM

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
Radionuclides present in the waste stream, if available particularly the isotopic distribution of the 10 WIPP-tracked radionuclides and/or the radionuclides that comprise 95% of the radiological hazard of the waste stream, if applicable. Chemical and physical information that could affect the waste isotopic distribution, as well as numerical adjustments or calculations used to derive the isotopic distribution.	**WS11**	Y	AE-C-003, AE-C-013, AE-I-003, AE-I-004, AE-I-009, AE-I-014, AE-I-021, AE-I-022, AE-I-023, AE-I-030, AE-I-036, AE-I-037, AE-I-053, AE-I-054, AE-I-055, AE-I-056, AE-I-058, AE-I-059, AE-I-061, AE-I-062, AE-I-066, AE-I-067, AE-I-079, AE-I-084, AE-I-103, AE-I-107, AE-I-110, AE-I-115, AE-I-117, AE-I-124, AE-I-126, AE-I-128, AE-I-134, AE-I-135, AE-I-140, AE-I-141, AE-I-142, AE-I-143, AE-I-146, AE-I-147, AE-I-149, AE-I-150, AE-I-151, AE-I-184, AE-I-195, AE-I-201, AE-P-002, AE-P-005, AE-P-011, AE-P-017, AE-P-019, AE-P-044, AE-P-045, AE-P-054, AE-P-070, AE-P-093, AE-P-094, AE-P-104, AE-P-106, C004, C007, C009, C011, C013, C025, C026, C029, C036, C046, C066, C082, C092, C094, C103, C124, C125, C137, C138, C147, C152, C155, C157, C2002, C2003, C2004, C2005, C2007, C2011, C2022, C2023, C2024, C3004, C302, C303, C304, C305, C329, C812, P001, P002, P004, P006, P009, P025, P031, P055, P1002, P2000, P2001, P2002, P2003, P2008, P2009, P2010, P2017, P2018, P2019, P2020, P2021, P2022, P2023, P2024, P2025, P2026, P2027, P2028, P2029, P2030, P2033, P2034, P3001, P3002, P3003, P3004, P326, P329, P344, P372, P373, P374, P375, P378, P380, P407, P414, P416, P575, P602, P603, P604, P607, P616, P617, P620, P621, P815, P816, p817, P819, P821, P822, P826, P827, P829, U004, U007, U009, U012, U013, U015, U017, U018, U019, U021, U022, U045, U065, U067, U068, U069, U070, U074, U076, U1003, U2002, U2004, U2007, U2008, U2009, U3001, U3002, U3003, U3004, U3006, U304, U307, U332, U830

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-AECHDM

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
State and EPA hazardous waste constituents in the waste stream and state and EPA Hazardous Waste Numbers assigned, including documentation regarding how the site has historically managed the waste, including the historical regulatory status of the waste (i.e., TRU mixed versus TRU non-mixed waste).	**WS12**	Y	AE-C-017, AE-C-019, AE-C-022, AE-C-023, AE-C-024, AE-C-026, AE-C-042, AE-D-004, AE-D-005, AE-D-011, AE-D-012, AE-I-003, AE-I-006, AE-I-011, AE-I-019, AE-I-021, AE-I-022, AE-I-023, AE-I-031, AE-I-032, AE-I-034, AE-I-037, AE-I-050, AE-I-053, AE-I-055, AE-I-057, AE-I-060, AE-I-061, AE-I-068, AE-I-078, AE-I-079, AE-I-084, AE-I-089, AE-I-098, AE-I-107, AE-I-110, AE-I-124, AE-I-126, AE-I-135, AE-I-140, AE-I-142, AE-I-143, AE-I-147, AE-I-148, AE-I-149, AE-I-150, AE-I-151, AE-I-181, AE-I-182, AE-I-183, AE-I-184, AE-I-186, AE-I-187, AE-I-191, AE-I-192, AE-I-193, AE-I-195, AE-I-199, AE-P-005, AE-P-007, AE-P-019, AE-P-033, AE-P-034, AE-P-044, AE-P-045, AE-P-054, AE-P-106, C012, C014, C020, C023, C029, C035, C039, C066, C081, C088, C091, C094, C106, C116, C137, C143, C147, C148, C160, C2009, C335, C341, C356, C357, DR3001, DR3003, P002, P004, P006, P009, P023, P025, P027, P031, P038, P039, P055, P061, P062, P068, P070, P2003, P2011, P2017, P2018, P2021, P2022, P2023, P2024, P2026, P2027, P3001, P3002, P3003, P3004, P304, P329, P331, P333, P372, P410, P412, P416, P480, P484, P485, P486, P487, P489, P490, P505, P507, P536, P537, P620, P621, U006, U065, U066, U069, U072, U083, U084, U085, U2007, U2008, U2009, U2010, U3001, U3003, U3004, U321, U322, U332
Additional acceptable knowledge documentation (briefly describe) :			
Process design documents (e.g., Title II Design).	**S1**	Y	AE-I-027, C138

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-AECHDM

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
Standard operating procedures that may include a list of raw materials or reagents, a description of the process or experiment generating the waste, and a description of the waste generated and how the wastes are managed at the point of generation.	**S2**	Y	AE-I-001, AE-I-004, AE-I-005, AE-I-006, AE-I-009, AE-I-018, AE-I-019, AE-I-021, AE-I-022, AE-I-023, AE-I-028, AE-I-030, AE-I-035, AE-I-036, AE-I-037, AE-I-040, AE-I-041, AE-I-042, AE-I-043, AE-I-044, AE-I-045, AE-I-046, AE-I-051, AE-I-052, AE-I-057, AE-I-058, AE-I-059, AE-I-060, AE-I-061, AE-I-062, AE-I-065, AE-I-066, AE-I-067, AE-I-068, AE-I-069, AE-I-070, AE-I-071, AE-I-073, AE-I-078, AE-I-084, AE-I-089, AE-I-099, AE-I-103, AE-I-106, AE-I-107, AE-I-109, AE-I-110, AE-I-112, AE-I-115, AE-I-117, AE-I-121, AE-I-124, AE-I-126, AE-I-128, AE-I-130, AE-I-131, AE-I-132, AE-I-134, AE-I-135, AE-I-140, AE-I-142, AE-I-143, AE-I-146, AE-I-147, AE-I-148, AE-I-149, AE-I-150, AE-I-151, AE-I-156, AE-I-160, AE-I-191, AE-I-192, AE-I-193, AE-P-018, AE-P-019, AE-P-095, AE-P-097, AE-P-099, AE-P-102, AE-P-103, AE-P-105, AE-P-106, C011, C012, C128, C130, C2006, C3001, C316, C812, P001, P004, P034, P038, P039, P055, P068, P069, P070, P3001, P3002, P3003, P3004, P320, P327, P329, P331, P386, P387, P389, P392, P407, P469, P472, P475, P480, P484, P485, P486, P487, P489, P490, P492, P503, P507, P516, P520, P521, P532, P536, P537, P539, P540, P546, P548, P552, P554, P556, P557, P566, P568, P574, P578, P580, P604, P620, P621, P816, P817, P819, P822, P826, P829, U065, U085, U2010
Preliminary and Final Safety Analysis Reports and technical safety requirements.	**S3**	Y	AE-I-050, AE-P-044, AE-P-045, AE-P-106, C103, C2004, P004, P031, P2010, P2012, P2018, P380, P617
Waste Packaging records.	**S4**	Y	AE-I-077, AE-I-079, C333, DR3003, DR3004, P3001, P3002, P3003, U015, U017, U018, U019, U021, U022, U041, U3001, U3002, U3003

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-AECHDM

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
Test plans or research project reports that describe the reagents, radionuclides, and other raw materials used in experiments.	S5	Y	AE-I-008, AE-I-050, AE-I-055, AE-I-060, AE-I-165, AE-I-181, AE-I-182, AE-I-183, AE-I-184, AE-I-186, AE-I-187, AE-P-058, AE-P-059, AE-P-060, AE-P-061, AE-P-062, AE-P-063, AE-P-064, AE-P-065, AE-P-066, AE-P-067, AE-P-106, C011, C039, C2004, C2005, C2007, P1002, P2001, P2002, P2003, P2004, P2005, P2007, P2008, P2009, P2017, P2019, P2020, P2021, P2022, P2023, P2024, P2025, P2026, P2027, P2028, P2029, P2030, P326, P344, P372, P373, P375, P505, P509, P572, P575, P602, P607, P815, P816, P817, P821, P827, U830
Site databases (e.g., chemical inventory database for SARA Title III requirements, SNM or nuclear material databases).	S6	Y	U076, U2002, U2004, U3002, U3005, U307
Information from site personnel (e.g., documented interviews).	S7	Y	AE-C-003, AE-C-004, AE-C-006, AE-C-011, AE-C-013, AE-C-017, AE-C-019, AE-C-020, AE-C-022, AE-C-024, AE-C-027, AE-C-032, AE-C-035, AE-C-036, AE-C-037, AE-C-038, AE-C-042, AE-I-002, AE-I-012, AE-I-029, C006, C066, C124, C137, C2008, C2009, C3003, C3004, C302, U3001
Standard industry documents (e.g., industry specification sheets, handbooks, reference materials, or other vendor information).	S8	Y	C016, P004
Analytical data relevant to the waste stream, including results from fingerprint analyses, spot checks, or routine verification sampling. This may include new information (or previously collected data) which augments required information (e.g., visual examination not performed in compliance with CCP-PO-001).	S9	Y	C035, C116, C152, C160, C3002, C3004, C333, P1002, P3004, P821, U3006, U304
Material Safety Data Sheets, product labels, or other product information.	S10	Y	AE-C-022, AE-C-023, AE-I-052, C143, P325, U072, U076
Laboratory notebooks that detail the research processes and raw materials used in an experiment.	S11	Y	AE-I-015
Comparable or surrogate sampling and analysis data.	S12	Y	C116, C143, C160, C3002, DR3001, P004, P023, U3002, U3006
Other (describe).	S13	Y	AE-P-048, AE-P-049, AE-P-101, C016, P394
Safeguards and security, Materials Control and Accountability, and other nuclear material control system data Reports of nuclear safety or criticality accidents involving special nuclear materials (SNM).	S14	Y	AE-I-050, C007, C124, U1003
NMMA logs or inventory records or waste disposal logs providing SNM or nuclear material information.	S15	Y	P815, U017, U018, U019, U021, U022, U3006

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-AECHDM

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
Packaging.	S16	Y	AE-C-024, AE-C-032, AE-C-035, AE-C-036, AE-C-037, AE-I-053, AE-I-059, AE-I-077, AE-I-109, AE-I-115, AE-I-181, AE-I-183, AE-P-005, AE-P-008, AE-P-011, AE-P-012, AE-P-013, AE-P-015, AE-P-017, AE-P-019, AE-P-045, AE-P-101, C013, C025, C029, C066, C108, C115, C130, C147, C2008, C3001, C3003, C335, DR3002, P001, P002, P006, P009, P031, P055, P2010, P2011, P2012, P373, P378, P380, P412, P416, P469, P475, P486, P604, P616, U002, U004, U015, U017, U018, U019, U022, U041, U3004, U3005
N/A		12/6/2011	

Acceptable knowledge information regarding waste generated off-site or from similar process:

N/A 12/6/2011

(1) AK#s are used as identifieres for program, waste stream-specific and supporting elements.
The identifiers are to be used in the Acceptable Knowledge Source Document Summary and Acceptable Knowledge Source Document Information list to aid in the page location of program and waste stream-specific elements within a given document. N/A means that item is not applicable.

a. Specified in CCP-PO-001.
b. Required for OSR containers that will NOT undergo headspace gas sampling and analysis.

Additional Comments:

N/A 12/6/2011

All required AK information has been compiled and source document tracking numbers assigned.

Acceptable Knowledge Expert: Sherry Auchland Date: 12/6/2011
Print/Sign

DIVIDER

PAGE

Attachment 1 - Acceptable Knowledge Documentation Checklist

Site(s): INL

Waste Stream Description: Soil with Minor Amounts of Homogeneous Solids and Debris

Waste Stream Number(s): ID-SDA-SOIL

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
Mandatory generator site TRU waste program (PR) information [a]:			
Map of the generator site that identifies TRU waste generation, treatment, and storage areas.	PR1	Y	ANL-W-P003, ANL-W-P006, ARA-P008, ARA-P009, ARA-P019, ARA-P026, ARA-U003, ARA-U004, CFA-P001, CFA-U001, CFA-U002, CFA-U003, CFA-U004, ID-P089, ID-P091, ID-P092, ID-P094, ID-P095, ID-P100, ID-P101, ID-P103, ID-P105, ID-P108, ID-P109, ID-P110, ID-P118, ID-P119, ID-P121, ID-P124, ID-P158, ID-P163, ID-P168, ID-P187, ID-P188, ID-P195, ID-P206, ID-P214, ID-P218, ID-P231, ID-P237, ID-P242, ID-P246, ID-P247, ID-P248, ID-P249, ID-P302, ID-P368, ID-P369, ID-P377, ID-P380, ID-P384, ID-P396, ID-P402, ID-P421, ID-P422, ID-P426, ID-U113, ID-U115, ID-U297, ID-U298, ID-U323, ID-U343, ID-U344, ID-U345, ID-U349, ID-U353, ID-U354, INTEC-P001, INTEC-P006, INTEC-P098, NRF-U001, NRF-U004, PER-P006, PER-P012, PER-P031, PER-P042, PER-P058, PER-P059, PER-P060, PER-U004, RF-C107, RF-P040, RF-P041, RF-P057, RF-P058, RF-P059, RF-P060, RF-P084, RF-P085, RF-P090, RF-P181, RF-P356, RF-P415, RF-P515, RF-U100, RF-U1306, RF-U1307, RF-U1308, RF-U1313, RF-U1315, RF-U157, TAN-P005, TAN-P007, TAN-P052, TAN-P069, TAN-P071, TAN-P083, TAN-P084, TAN-P090, TAN-U105, TRA-P005, TRA-P006, TRA-P359, TRA-P388, TRA-U081

CCP RECORDS ORIGINAL
DATE REC'D 11-12-2012

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-SDA-SOIL

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
Generator site mission descriptions related to TRU waste generation and management identifying defense and non-defense operations.	PR2	Y	ARA-P006, ARA-P008, ARA-P010, ARA-P015, ARA-U001, ARA-U002, ID-P091, ID-P095, ID-P100, ID-P101, ID-P103, ID-P104, ID-P108, ID-P109, ID-P114, ID-P121, ID-P187, ID-P188, ID-P231, ID-P248, ID-P249, ID-P368, ID-P369, ID-P384, ID-P396, ID-P421, ID-P422, ID-P426, PER-P059, PER-P060, PER-U002, PER-U003, PER-U004, RF-C014, RF-C038, RF-C039, RF-C105, RF-C142, RF-C244, RF-P040, RF-P041, RF-P047, RF-P058, RF-P059, RF-P060, RF-P084, RF-P085, RF-P088, RF-P090, RF-P096, RF-P105, RF-P116, RF-P240, RF-P260, RF-P262, RF-P263, RF-P264, RF-P271, RF-U021, RF-U028, RF-U095, RF-U112, RF-U115, RF-U116, RF-U119, RF-U127, RF-U133, RF-U134, RF-U157, RF-U172, RF-U196, RF-U206, TAN-P004, TAN-P029, TAN-P082, TAN-P094, TAN-P104, TAN-P105, TAN-U106, TRA-U081
Overview of the generator site and generator site TRU waste management operations in the context of the facility's mission.	PR3	Y	ANL-W-P006, ANL-W-P009, ANL-W-P010, ARA-P008, ID-P091, ID-P104, ID-P106, ID-P108, ID-P109, ID-P118, ID-P124, ID-P163, ID-P168, ID-P188, ID-P194, ID-P246, ID-P247, ID-P302, ID-P377, ID-P380, ID-P384, ID-P396, ID-P403, ID-P421, ID-P422, ID-P426, ID-U292, INTEC-P098, INTEC-U002, INTEC-U025, NRF-U004, PER-P058, PER-P059, PER-P060, PER-U002, PER-U003, PER-U004, RF-C038, RF-C039, RF-C070, RF-C105, RF-C117, RF-C142, RF-C234, RF-C502, RF-P047, RF-P085, RF-P088, RF-P090, RF-P091, RF-P096, RF-P108, RF-P116, RF-P261, RF-P262, RF-P263, RF-P271, RF-P413, RF-P562, RF-U040, RF-U115, RF-U134, RF-U181, TAN-P004, TAN-P028, TAN-P029, TAN-P052, TAN-P076, TAN-P077, TAN-P082, TAN-P086

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-SDA-SOIL

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
Descriptions of historical and current TRU waste generating operations, including how waste is tracked and managed and/or how operations relative to isotopic composition were tracked.	**PR4**	Y	ANL-W-P005, ANL-W-P006, ANL-W-P009, ANL-W-P010, ARA-P008, ID-C107, ID-C112, ID-C115, ID-P089, ID-P091, ID-P092, ID-P100, ID-P101, ID-P103, ID-P104, ID-P119, ID-P195, ID-P231, ID-P368, ID-P369, ID-P421, ID-P422, ID-P426, ID-U292, ID-U295, INTEC-P001, INTEC-U025, NRF-U004, PER-P058, PER-P059, PER-U004, RF-C014, RF-C038, RF-C039, RF-C041, RF-C078, RF-C081, RF-C086, RF-C096, RF-C105, RF-C110, RF-C124, RF-C134, RF-C142, RF-C208, RF-C234, RF-C502, RF-P047, RF-P085, RF-P088, RF-P090, RF-P091, RF-P096, RF-P108, RF-P116, RF-P261, RF-P262, RF-P263, RF-P271, RF-P562, RF-U099, RF-U115, RF-U119, RF-U126, RF-U133, RF-U172, RF-U174, RF-U254, TAN-C009, TAN-P028, TAN-P029, TAN-P052
Waste identification and/or categorization schemes and terminology used at the generator site, including codes correlating to specific isotopic distributions.	**PR5**	Y	ARA-P013, ID-C104, ID-C108, ID-C112, ID-C204, ID-P088, ID-P091, ID-P100, ID-P101, ID-P103, ID-P105, ID-P109, ID-P119, ID-P124, ID-P171, ID-P178, ID-P214, ID-P215, ID-P221, ID-P231, ID-P237, ID-P239, ID-P242, ID-P275, ID-P303, ID-P368, ID-P369, ID-P384, ID-P396, ID-P403, ID-P421, ID-P422, ID-P426, ID-U105, ID-U292, ID-U304, ID-U313, ID-U334, ID-U335, ID-U336, ID-U337, ID-U343, ID-U344, ID-U345, ID-U349, ID-U351, ID-U353, RF-C045, RF-C105, RF-C109, RF-C110, RF-C120, RF-C124, RF-C139, RF-C140, RF-C142, RF-C216, RF-C220, RF-C502, RF-P088, RF-P103, RF-P108, RF-P262, RF-P265, RF-P267, RF-P271, RF-P299, RF-P334, RF-P335, RF-P555, RF-P562, RF-U099, RF-U101, RF-U115, RF-U1289, RF-U1290, RF-U1294, RF-U1295, RF-U1296, RF-U1297, RF-U1298, RF-U1299, RF-U1306, RF-U1307, RF-U1308, RF-U1313, RF-U1315, RF-U172, RF-U174, RF-U292, RF-U400, RF-U419, RF-U421, RF-U427, TAN-C009

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-SDA-SOIL

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
Types and quantities of TRU waste generated, including historical generation through future projections.	**PR6**	Y	ANL-W-P009, ANL-W-P010, ARA-P013, ID-C108, ID-C204, ID-P088, ID-P091, ID-P092, ID-P094, ID-P101, ID-P103, ID-P105, ID-P109, ID-P163, ID-P222, ID-P275, ID-P368, ID-P421, ID-P422, ID-P426, ID-U100, ID-U102, ID-U292, ID-U304, ID-U313, ID-U329, ID-U351, ID-U353, INTEC-U025, RF-C038, RF-C109, RF-C134, RF-C404, RF-P047, RF-P084, RF-P085, RF-P090, RF-P261, RF-P356, RF-U026, RF-U133, RF-U172, RF-U174, RF-U254
Correlation of waste streams and description of time of generation, waste generating processes, and area and building/facility where each waste stream was generated.	**PR7**	Y	ANL-W-P009, ARA-P013, ID-C112, ID-P088, ID-P091, ID-P093, ID-P094, ID-P109, ID-U292, INTEC-P001, RF-C055, RF-C502, RF-P047, RF-P085, RF-P088, RF-P090, RF-P091, RF-P429, RF-U100, RF-U112, RF-U134, RF-U167, RF-U254
Certification procedures for waste to be sent to the WIPP facility (i.e., procedures to ensure that prohibited items are documented and managed in accordance with site-specific certification plans).	**PR8**	Y	ID-C109, ID-C112, ID-C223, ID-P109, ID-P215, ID-P271, RF-C129, RF-C159, RF-P090, RF-P096, RF-P265, RF-P271, RF-U123, RF-U206, TAN-C004
Mandatory generator site TRU waste stream (WS)-specific information [a] :			
Waste stream designation.	**WS1**	Y	ANL-W-C001, ID-C105, ID-C106, ID-D002, ID-M001, ID-P206, ID-U102, ID-U292, RF-C028, RF-C032, RF-D001, RF-P085, RF-P088, RF-P267, RF-P271, RF-P429, RF-U174, RF-U427

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-SDA-SOIL

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
Area(s) and building(s) from which the waste stream was *or is generated.*	**WS2**	Y	ANL-W-C002, ANL-W-P001, ANL-W-P003, ANL-W-P006, ANL-W-P008, ANL-W-P009, ANL-W-U003, ANL-W-U004, ARA-C013, ARA-C014, ARA-C015, ARA-C016, ARA-C017, ARA-P001, ARA-P002, ARA-P003, ARA-P004, ARA-P006, ARA-P007, ARA-P008, ARA-P009, ARA-P010, ARA-P013, ARA-P017, ARA-P018, ARA-P019, ARA-P020, ARA-P021, ARA-P026, ARA-U001, ARA-U002, ARA-U003, ARA-U004, ARA-U006, ARA-U007, ARA-U010, CFA-P001, CFA-U001, CFA-U002, CFA-U003, CFA-U004, CFA-U005, CFA-U007, CFA-U011, ID-C101, ID-C103, ID-C104, ID-C112, ID-C113, ID-C114, ID-C202, ID-C227, ID-C231, ID-C238, ID-D002, ID-P088, ID-P091, ID-P092, ID-P093, ID-P094, ID-P097, ID-P109, ID-P110, ID-P112, ID-P113, ID-P114, ID-P115, ID-P116, ID-P117, ID-P118, ID-P121, ID-P122, ID-P124, ID-P158, ID-P163, ID-P168, ID-P171, ID-P178, ID-P195, ID-P206, ID-P214, ID-P216, ID-P218, ID-P221, ID-P222, ID-P231, ID-P239, ID-P242, ID-P246, ID-P247, ID-P253, ID-P269, ID-P271, ID-P303, ID-P377, ID-P380, ID-P384, ID-P396, ID-P399, ID-P402, ID-P403, ID-P406, ID-P407, ID-P408, ID-P409, ID-P410, ID-P411, ID-P412, ID-P421, ID-P422, ID-P423, ID-P426, ID-P427, ID-P428, ID-P429, ID-P430, ID-P431, ID-U100, ID-U102, ID-U103, ID-U105, ID-U107, ID-U109, ID-U111, ID-U112, ID-U114, ID-U116, ID-U292, ID-U298, ID-U304, ID-U306, ID-U313, ID-U323, ID-U324, ID-U326, ID-U327, ID-U328, ID-U334, ID-U335, ID-U336, ID-U337, ID-U343, ID-U344, ID-U345, ID-U349, ID-U354, ID-U356, ID-U376, ID-U377, ID-U382, INTEC-C001, INTEC-C007, INTEC-C008, INTEC-C009, INTEC-P001, INTEC-P005, INTEC-P006, INTEC-U001, INTEC-U031, INTEC-U032, NRF-C031, PER-C002, PER-C007, PER-C009, PER-C010, PER-C013, PER-P003, PER-P004, PER-P005, PER-P006, PER-P007, PER-P008, PER-P009, PER-P010, PER-P011, PER-P012, PER-P013, PER-P022, PER-P027, PER-P029, PER-P030, PER-P032, PER-P033, PER-P034, PER-P035, PER-P036, PER-P037, PER-P039, PER-P040, PER-P041, PER-

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-SDA-SOIL

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
			P042, PER-P043, PER-P044, PER-P045, PER-P046, PER-P047, PER-P048, PER-P049, PER-U001, RF-C010, RF-C012, RF-C014, RF-C017, RF-C018, RF-C019, RF-C021, RF-C026, RF-C028, RF-C032, RF-C039, RF-C044, RF-C047, RF-C055, RF-C057, RF-C060, RF-C062, RF-C063, RF-C065, RF-C073, RF-C078, RF-C080, RF-C086, RF-C088, RF-C089, RF-C096, RF-C098, RF-C101, RF-C102, RF-C105, RF-C108, RF-C109, RF-C110, RF-C113, RF-C114, RF-C116, RF-C118, RF-C120, RF-C134, RF-C140, RF-C142, RF-C148, RF-C149, RF-C150, RF-C151, RF-C156, RF-C157, RF-C162, RF-C185, RF-C186, RF-C197, RF-C207, RF-C212, RF-C216, RF-C220, RF-C223, RF-C225, RF-C232, RF-C235, RF-C236, RF-C239, RF-C243, RF-C290, RF-C401, RF-C404, RF-C407, RF-C410, RF-C412, RF-C413, RF-C414, RF-C415, RF-C416, RF-C417, RF-C419, RF-C420, RF-C423, RF-C424, RF-C425, RF-C427, RF-C428, RF-C429, RF-C430, RF-C432, RF-C433, RF-C434, RF-C442, RF-C445, RF-C446, RF-C447, RF-C450, RF-C502, RF-C510, RF-C532, RF-D001, RF-P025, RF-P040, RF-P041, RF-P042, RF-P047, RF-P051, RF-P057, RF-P058, RF-P059, RF-P060, RF-P063, RF-P065, RF-P066, RF-P068, RF-P084, RF-P085, RF-P088, RF-P090, RF-P091, RF-P092, RF-P093, RF-P094, RF-P095, RF-P105, RF-P106, RF-P107, RF-P108, RF-P110, RF-P116, RF-P117, RF-P119, RF-P121, RF-P123, RF-P128, RF-P133, RF-P134, RF-P164, RF-P165, RF-P168, RF-P181, RF-P187, RF-P224, RF-P240, RF-P241, RF-P245, RF-P247, RF-P260, RF-P261, RF-P262, RF-P263, RF-P264, RF-P265, RF-P267, RF-P319, RF-P334, RF-P356, RF-P400, RF-P402, RF-P403, RF-P404, RF-P405, RF-P406, RF-P411, RF-P413, RF-P415, RF-P416, RF-P417, RF-P418, RF-P426, RF-P427, RF-P428, RF-P429, RF-P512, RF-P515, RF-P562, RF-P563, RF-P569, RF-P570, RF-U021, RF-U026, RF-U033, RF-U035, RF-U037, RF-U038, RF-U040, RF-U042, RF-U045, RF-U046, RF-U048, RF-U049, RF-U052, RF-U053,

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-SDA-SOIL

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
			RF-U054, RF-U057, RF-U059, RF-U060, RF-U061, RF-U067, RF-U069, RF-U099, RF-U100, RF-U101, RF-U1072, RF-U111, RF-U112, RF-U115, RF-U119, RF-U120, RF-U121, RF-U123, RF-U124, RF-U126, RF-U127, RF-U128, RF-U1289, RF-U1290, RF-U1291, RF-U1292, RF-U1293, RF-U1294, RF-U1295, RF-U1296, RF-U1297, RF-U1298, RF-U1299, RF-U1306, RF-U1307, RF-U1308, RF-U1313, RF-U1315, RF-U133, RF-U134, RF-U135, RF-U136, RF-U139, RF-U141, RF-U143, RF-U150, RF-U151, RF-U152, RF-U153, RF-U157, RF-U167, RF-U168, RF-U170, RF-U171, RF-U172, RF-U174, RF-U178, RF-U182, RF-U254, RF-U292, RF-U294, RF-U400, RF-U401, RF-U403, RF-U404, RF-U406, RF-U407, RF-U408, RF-U409, RF-U413, RF-U416, RF-U420, RF-U421, RF-U422, RF-U424, RF-U425, RF-U426, TAN-C001, TAN-C002, TAN-C003, TAN-C004, TAN-C005, TAN-C006, TAN-C007, TAN-C008, TAN-C010, TAN-C015, TAN-C016, TAN-C025, TAN-P001, TAN-P005, TAN-P007, TAN-P035, TAN-P036, TAN-P058, TAN-P069, TAN-P070, TAN-P071, TAN-P084, TAN-P086, TAN-P088, TAN-P089, TAN-P090, TAN-P091, TAN-P094, TAN-P100, TAN-P101, TAN-P103, TAN-P104, TAN-P105, TAN-U001, TAN-U003, TAN-U004, TAN-U005, TAN-U006, TAN-U007, TAN-U008, TAN-U009, TAN-U010, TAN-U011, TAN-U012, TAN-U013, TAN-U014, TAN-U076, TAN-U082, TAN-U089, TAN-U110, TAN-U111, TAN-U112, TAN-U113, TAN-U114, TRA-C001, TRA-C038, TRA-P001, TRA-P005, TRA-P006, TRA-P007, TRA-P009, TRA-P010, TRA-P011, TRA-P012, TRA-P013, TRA-P014, TRA-P015, TRA-P016, TRA-P017, TRA-P018, TRA-P357, TRA-P358, TRA-P359, TRA-P360, TRA-P365, TRA-P371, TRA-P388, TRA-P401, TRA-P461, TRA-P464, TRA-P465, TRA-P473, TRA-P491, TRA-U008, TRA-U025, TRA-U027, TRA-U030, TRA-U081

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-SDA-SOIL

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
Waste stream volume and time period of generation.	**WS3**	Y	ANL-W-P003, ANL-W-P009, ANL-W-P010, ANL-W-U003, ARA-P013, ID-C108, ID-C204, ID-P088, ID-P091, ID-P092, ID-P093, ID-P094, ID-P109, ID-P168, ID-P178, ID-P222, ID-P237, ID-P239, ID-U100, ID-U101, ID-U102, ID-U104, ID-U105, ID-U292, ID-U304, ID-U334, ID-U336, ID-U337, INTEC-P001, INTEC-U025, NRF-C031, NRF-U003, PER-U005, RF-C012, RF-C017, RF-C018, RF-C019, RF-C026, RF-C027, RF-C035, RF-C044, RF-C053, RF-C057, RF-C060, RF-C062, RF-C063, RF-C073, RF-C080, RF-C086, RF-C088, RF-C101, RF-C102, RF-C104, RF-C105, RF-C107, RF-C108, RF-C109, RF-C110, RF-C114, RF-C116, RF-C118, RF-C120, RF-C137, RF-C139, RF-C140, RF-C156, RF-C197, RF-C245, RF-C403, RF-C415, RF-C446, RF-C447, RF-C510, RF-D001, RF-P047, RF-P085, RF-P086, RF-P088, RF-P090, RF-P096, RF-P261, RF-P562, RF-U026, RF-U043, RF-U044, RF-U099, RF-U110, RF-U111, RF-U115, RF-U133, RF-U167, RF-U170, RF-U172, RF-U174, RF-U254, RF-U283, RF-U288, RF-U425, TAN-P005

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-SDA-SOIL

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
Waste generating process (describe for each building), including processes associated with U134 waste generation, if applicable.	**WS4**	Y	ANL-W-P001, ARA-P001, ARA-P002, ARA-P004, ARA-P008, ID-C101, ID-C112, ID-C113, ID-C227, ID-C231, ID-P091, ID-P109, ID-P118, ID-P119, ID-P189, ID-P190, ID-P191, ID-P192, ID-P193, ID-P194, ID-P195, ID-P214, ID-P216, ID-P239, ID-P248, ID-P253, ID-P303, ID-P377, ID-P380, ID-P399, ID-P402, ID-P406, ID-P407, ID-P408, ID-P409, ID-P410, ID-P411, ID-P412, ID-P431, ID-U292, INTEC-P005, INTEC-P006, NRF-C031, RF-C010, RF-C017, RF-C018, RF-C019, RF-C021, RF-C027, RF-C028, RF-C032, RF-C039, RF-C041, RF-C044, RF-C045, RF-C060, RF-C062, RF-C065, RF-C086, RF-C088, RF-C095, RF-C096, RF-C107, RF-C108, RF-C113, RF-C117, RF-C120, RF-C123, RF-C129, RF-C132, RF-C133, RF-C134, RF-C142, RF-C148, RF-C197, RF-C207, RF-C209, RF-C216, RF-C219, RF-C232, RF-C243, RF-C342, RF-C404, RF-C433, RF-D001, RF-P003, RF-P025, RF-P027, RF-P028, RF-P040, RF-P041, RF-P047, RF-P061, RF-P063, RF-P066, RF-P067, RF-P068, RF-P071, RF-P072, RF-P075, RF-P076, RF-P081, RF-P084, RF-P085, RF-P088, RF-P090, RF-P091, RF-P094, RF-P095, RF-P096, RF-P099, RF-P103, RF-P104, RF-P107, RF-P108, RF-P109, RF-P110, RF-P112, RF-P114, RF-P116, RF-P117, RF-P121, RF-P122, RF-P123, RF-P128, RF-P133, RF-P134, RF-P135, RF-P137, RF-P138, RF-P139, RF-P142, RF-P158, RF-P160, RF-P161, RF-P162, RF-P164, RF-P166, RF-P167, RF-P171, RF-P173, RF-P176, RF-P177, RF-P178, RF-P181, RF-P183, RF-P191, RF-P192, RF-P199, RF-P202, RF-P209, RF-P216, RF-P222, RF-P232, RF-P233, RF-P240, RF-P241, RF-P244, RF-P246, RF-P247, RF-P248, RF-P250, RF-P251, RF-P260, RF-P261, RF-P262, RF-P263, RF-P264, RF-P267, RF-P271, RF-P319, RF-P332, RF-P334, RF-P335, RF-P337, RF-P346, RF-P347, RF-P348, RF-P349, RF-P356, RF-P400, RF-P401, RF-P402, RF-P403, RF-P404, RF-P405, RF-P406, RF-P412, RF-P413, RF-P414, RF-P415, RF-P416, RF-P419, RF-P420, RF-P421, RF-P422, RF-P423, RF-P424, RF-P427,

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-SDA-SOIL

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
			RF-P428, RF-P429, RF-P562, RF-P563, RF-P569, RF-P570, RF-U021, RF-U040, RF-U041, RF-U048, RF-U057, RF-U067, RF-U095, RF-U1072, RF-U115, RF-U118, RF-U119, RF-U120, RF-U123, RF-U124, RF-U125, RF-U126, RF-U127, RF-U133, RF-U134, RF-U139, RF-U143, RF-U157, RF-U167, RF-U168, RF-U170, RF-U181, RF-U188, RF-U189, RF-U190, RF-U203, RF-U231, RF-U232, RF-U233, RF-U237, RF-U242, RF-U243, RF-U247, RF-U254, RF-U286, RF-U294, RF-U403, RF-U413, RF-U416, RF-U422, RF-U423, RF-U424, RF-U425, RF-U426, TAN-P034, TAN-P075, TAN-P077, TAN-P078, TAN-P079, TAN-P080, TAN-P081, TAN-P082, TAN-P083, TAN-P084, TAN-P086, TAN-P087, TAN-P089, TAN-P092, TAN-U002, TRA-P001, TRA-P005, TRA-P360, TRA-P365, TRA-P371, TRA-P388, TRA-P473, TRA-P491, TRA-U030

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-SDA-SOIL

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
Process flow diagrams. For research/development, analytical laboratory waste, or other similar processes where process flow diagrams cannot be created, a description of the waste generating processes, rather than a formal process flow diagram, may be included, if justified.	**WS5**	Y	ANL-W-P001, ARA-P002, ARA-P004, ARA-P006, ARA-P008, ARA-P020, ARA-P026, ARA-U003, CFA-P001, CFA-U001, ID-P168, ID-P302, ID-U335, INTEC-P002, NRF-C031, PER-P004, PER-P006, PER-P008, PER-P009, PER-P011, PER-P012, PER-P013, PER-P027, PER-P030, PER-P031, PER-P034, PER-P036, PER-P041, PER-P042, RF-C014, RF-C039, RF-C113, RF-C147, RF-C223, RF-C243, RF-P025, RF-P028, RF-P040, RF-P067, RF-P071, RF-P085, RF-P090, RF-P099, RF-P105, RF-P116, RF-P117, RF-P123, RF-P158, RF-P161, RF-P171, RF-P173, RF-P181, RF-P224, RF-P251, RF-P260, RF-P263, RF-P264, RF-P271, RF-P319, RF-P332, RF-P335, RF-P349, RF-P400, RF-P403, RF-P406, RF-P414, RF-P419, RF-P420, RF-P421, RF-P422, RF-P423, RF-P424, RF-P426, RF-P427, RF-P428, RF-P514, RF-P562, RF-P570, RF-U043, RF-U110, RF-U113, RF-U115, RF-U119, RF-U126, RF-U134, RF-U137, RF-U141, RF-U142, RF-U196, RF-U419, RF-U423, TAN-C001, TAN-C010, TAN-P058, TAN-P071, TAN-P084, TAN-P086, TAN-P088, TAN-P089, TAN-P091, TAN-P101, TRA-P006, TRA-P007, TRA-P388, TRA-P401, TRA-P464, TRA-P465
Summary of basis and rationale for delineating each waste stream including justification for combining waste historically managed separately as TRU mixed and TRU non-mixed waste streams into a single waste stream, that is traceable to referenced documents.	**WS6**	Y	ID-C105, ID-D002, ID-M001, ID-P403, ID-U377, RF-C109, RF-D001, RF-P085, RF-P088, RF-P267, RF-P429, RF-U134, RF-U427
Generator site mission descriptions related to TRU waste generation and management identifying defense and non-defense operations.	**WS7**	Y	ANL-W-P003, ID-P091, ID-P109, ID-P121, ID-P214, ID-P221, ID-P303, INTEC-C001, RF-C032, RF-C042, RF-C062, RF-C108, RF-C117, RF-C164, RF-C184, RF-C243, RF-C244, RF-C290, RF-C292, RF-P047, RF-P058, RF-P059, RF-P084, RF-P085, RF-P088, RF-P090, RF-P105, RF-P116, RF-P128, RF-P240, RF-P263, RF-U021, RF-U028, RF-U041, RF-U095, RF-U115, RF-U116, RF-U119, RF-U134, RF-U157, RF-U172, RF-U196, RF-U206

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-SDA-SOIL

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
Material inputs or other information that identified the chemical contents of the waste and the stream. Includes events or processes that may have modified the chemical properties of the waste stream after generation.	**WS8**	Y	ANL-W-P001, ANL-W-P002, ANL-W-P003, ANL-W-P008, ANL-W-P009, ANL-W-P010, ARA-P001, ARA-P002, ARA-P003, ARA-P004, ARA-P006, ARA-P007, ARA-P008, ARA-P009, ARA-P010, ARA-P018, ARA-P021, ARA-P026, ARA-U001, ARA-U002, ARA-U003, ARA-U004, CFA-P001, CFA-U001, CFA-U002, CFA-U003, CFA-U004, CFA-U007, CFA-U011, ID-C101, ID-C102, ID-C104, ID-C112, ID-C202, ID-P091, ID-P095, ID-P097, ID-P100, ID-P101, ID-P103, ID-P104, ID-P105, ID-P108, ID-P109, ID-P110, ID-P111, ID-P112, ID-P113, ID-P114, ID-P116, ID-P118, ID-P122, ID-P158, ID-P163, ID-P168, ID-P187, ID-P188, ID-P189, ID-P190, ID-P191, ID-P192, ID-P193, ID-P194, ID-P198, ID-P199, ID-P200, ID-P201, ID-P206, ID-P214, ID-P216, ID-P231, ID-P239, ID-P248, ID-P249, ID-P250, ID-P251, ID-P253, ID-P276, ID-P288, ID-P302, ID-P303, ID-P368, ID-P369, ID-P384, ID-P402, ID-P406, ID-P407, ID-P408, ID-P409, ID-P410, ID-P411, ID-P412, ID-P421, ID-P422, ID-P423, ID-P426, ID-P428, ID-P429, ID-P430, ID-P431, ID-U100, ID-U107, ID-U109, ID-U110, ID-U111, ID-U112, ID-U114, ID-U116, ID-U292, ID-U297, ID-U298, ID-U326, ID-U327, ID-U328, ID-U376, ID-U377, INTEC-C001, INTEC-P001, INTEC-P002, INTEC-P005, INTEC-P006, INTEC-P007, INTEC-U001, INTEC-U002, INTEC-U025, NRF-C031, NRF-U001, NRF-U003, NRF-U004, PER-C001, PER-C002, PER-C009, PER-C010, PER-C013, PER-P003, PER-P004, PER-P005, PER-P006, PER-P007, PER-P008, PER-P009, PER-P010, PER-P011, PER-P012, PER-P013, PER-P022, PER-P027, PER-P029, PER-P030, PER-P031, PER-P032, PER-P033, PER-P034, PER-P035, PER-P036, PER-P037, PER-P039, PER-P040, PER-P041, PER-P042, PER-P043, PER-P044, PER-P045, PER-P046, PER-P048, PER-P049, PER-P060, PER-U002, PER-U004, RF-C014, RF-C019, RF-C027, RF-C028, RF-C032, RF-C037, RF-C039, RF-C040, RF-C042, RF-C045, RF-C053, RF-C055, RF-C058, RF-C060, RF-C062, RF-C064, RF-C065, RF-C066, RF-C073, RF-C080, RF-C088,

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-SDA-SOIL

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
			RF-C089, RF-C090, RF-C095, RF-C096, RF-C098, RF-C099, RF-C100, RF-C104, RF-C107, RF-C108, RF-C109, RF-C110, RF-C113, RF-C114, RF-C116, RF-C118, RF-C120, RF-C123, RF-C129, RF-C133, RF-C134, RF-C147, RF-C167, RF-C180, RF-C195, RF-C196, RF-C197, RF-C205, RF-C207, RF-C208, RF-C209, RF-C210, RF-C211, RF-C212, RF-C213, RF-C214, RF-C215, RF-C218, RF-C219, RF-C223, RF-C224, RF-C225, RF-C226, RF-C227, RF-C228, RF-C230, RF-C232, RF-C235, RF-C243, RF-C245, RF-C320, RF-C321, RF-C342, RF-C400, RF-C401, RF-C402, RF-C403, RF-C404, RF-C405, RF-C406, RF-C407, RF-C408, RF-C409, RF-C410, RF-C411, RF-C412, RF-C413, RF-C414, RF-C415, RF-C416, RF-C426, RF-C427, RF-C432, RF-C437, RF-C502, RF-C510, RF-C531, RF-C532, RF-D001, RF-P003, RF-P021, RF-P022, RF-P023, RF-P025, RF-P026, RF-P027, RF-P028, RF-P040, RF-P041, RF-P047, RF-P049, RF-P051, RF-P054, RF-P057, RF-P058, RF-P059, RF-P060, RF-P062, RF-P063, RF-P064, RF-P066, RF-P067, RF-P068, RF-P071, RF-P072, RF-P073, RF-P075, RF-P076, RF-P080, RF-P081, RF-P084, RF-P085, RF-P086, RF-P088, RF-P090, RF-P091, RF-P092, RF-P093, RF-P094, RF-P095, RF-P096, RF-P097, RF-P098, RF-P099, RF-P100, RF-P102, RF-P103, RF-P104, RF-P105, RF-P106, RF-P108, RF-P109, RF-P112, RF-P114, RF-P116, RF-P117, RF-P121, RF-P122, RF-P123, RF-P128, RF-P133, RF-P135, RF-P137, RF-P138, RF-P139, RF-P142, RF-P158, RF-P160, RF-P161, RF-P162, RF-P164, RF-P165, RF-P166, RF-P167, RF-P171, RF-P173, RF-P176, RF-P177, RF-P178, RF-P181, RF-P183, RF-P184, RF-P187, RF-P191, RF-P192, RF-P199, RF-P200, RF-P202, RF-P209, RF-P216, RF-P218, RF-P222, RF-P224, RF-P233, RF-P240, RF-P241, RF-P244, RF-P246, RF-P248, RF-P250, RF-P251, RF-P260, RF-P261, RF-P262, RF-P263, RF-P264, RF-P265, RF-P266, RF-P267, RF-P271, RF-P319, RF-P332, RF-P334, RF-P335, RF-P337, RF-P346,

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-SDA-SOIL

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
			RF-P347, RF-P348, RF-P349, RF-P356, RF-P400, RF-P401, RF-P402, RF-P403, RF-P404, RF-P405, RF-P406, RF-P407, RF-P408, RF-P411, RF-P412, RF-P413, RF-P414, RF-P419, RF-P420, RF-P421, RF-P422, RF-P423, RF-P424, RF-P426, RF-P427, RF-P428, RF-P429, RF-P514, RF-P562, RF-P563, RF-P569, RF-P570, RF-U019, RF-U021, RF-U025, RF-U034, RF-U035, RF-U037, RF-U038, RF-U040, RF-U041, RF-U042, RF-U044, RF-U045, RF-U046, RF-U048, RF-U049, RF-U053, RF-U060, RF-U067, RF-U099, RF-U101, RF-U1072, RF-U110, RF-U111, RF-U113, RF-U115, RF-U117, RF-U118, RF-U119, RF-U120, RF-U121, RF-U123, RF-U124, RF-U125, RF-U126, RF-U128, RF-U133, RF-U134, RF-U136, RF-U137, RF-U139, RF-U141, RF-U143, RF-U150, RF-U151, RF-U152, RF-U153, RF-U157, RF-U167, RF-U168, RF-U170, RF-U172, RF-U174, RF-U182, RF-U188, RF-U189, RF-U190, RF-U196, RF-U201, RF-U202, RF-U203, RF-U206, RF-U207, RF-U208, RF-U210, RF-U217, RF-U230, RF-U231, RF-U232, RF-U233, RF-U235, RF-U237, RF-U242, RF-U243, RF-U244, RF-U247, RF-U254, RF-U283, RF-U287, RF-U288, RF-U292, RF-U294, RF-U401, RF-U402, RF-U403, RF-U404, RF-U405, RF-U406, RF-U407, RF-U408, RF-U416, RF-U420, RF-U422, RF-U423, RF-U424, RF-U425, TAN-C001, TAN-C002, TAN-C003, TAN-C004, TAN-C006, TAN-C008, TAN-C009, TAN-C010, TAN-P001, TAN-P005, TAN-P007, TAN-P035, TAN-P036, TAN-P064, TAN-P075, TAN-P077, TAN-P078, TAN-P079, TAN-P080, TAN-P081, TAN-P082, TAN-P083, TAN-P086, TAN-P087, TAN-P088, TAN-P089, TAN-P092, TAN-U001, TAN-U002, TAN-U013, TAN-U014, TAN-U105, TRA-C001, TRA-P005, TRA-P007, TRA-P008, TRA-P009, TRA-P010, TRA-P011, TRA-P012, TRA-P013, TRA-P014, TRA-P015, TRA-P016, TRA-P017, TRA-P018, TRA-P356, TRA-P359, TRA-P388, TRA-P464, TRA-P465, TRA-P473, TRA-P491, TRA-U005, TRA-U008, TRA-U010, TRA-U030, TRA-U081

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-SDA-SOIL

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
Physical waste form (e.g., glovebox materials and chemicals handled during glovebox operations, if applicable), assigned summary category group, waste matrix code and material inputs, including waste material parameters present in the waste stream. Includes events or processes that may have modified the physical properties of the waste stream after generation.	**WS9**	Y	ANL-W-C002, ANL-W-P001, ANL-W-P002, ANL-W-P003, ANL-W-P009, ANL-W-P010, ANL-W-U003, ARA-P001, ARA-P004, ARA-P013, CFA-U011, ID-C101, ID-C102, ID-C112, ID-C113, ID-C114, ID-C227, ID-P088, ID-P091, ID-P093, ID-P094, ID-P102, ID-P103, ID-P105, ID-P119, ID-P122, ID-P158, ID-P163, ID-P168, ID-P176, ID-P178, ID-P198, ID-P199, ID-P200, ID-P201, ID-P206, ID-P214, ID-P216, ID-P239, ID-P242, ID-P248, ID-P249, ID-P250, ID-P253, ID-P271, ID-P302, ID-P303, ID-P373, ID-P384, ID-P402, ID-P406, ID-P407, ID-P408, ID-P409, ID-P410, ID-P411, ID-P412, ID-P421, ID-P422, ID-P423, ID-P426, ID-P428, ID-P429, ID-P430, ID-P431, ID-U102, ID-U292, ID-U293, ID-U305, ID-U328, ID-U329, ID-U344, ID-U345, ID-U349, ID-U353, ID-U355, ID-U356, ID-U376, ID-U377, ID-U382, INTEC-C001, INTEC-P001, INTEC-U025, INTEC-U032, NRF-C031, NRF-U003, NRF-U004, PER-C013, PER-P029, PER-U005, RF-C010, RF-C014, RF-C018, RF-C019, RF-C021, RF-C027, RF-C028, RF-C032, RF-C035, RF-C037, RF-C038, RF-C039, RF-C040, RF-C041, RF-C042, RF-C044, RF-C045, RF-C047, RF-C050, RF-C053, RF-C055, RF-C060, RF-C062, RF-C064, RF-C065, RF-C066, RF-C073, RF-C088, RF-C095, RF-C096, RF-C100, RF-C101, RF-C102, RF-C104, RF-C108, RF-C110, RF-C113, RF-C114, RF-C116, RF-C117, RF-C118, RF-C120, RF-C123, RF-C129, RF-C132, RF-C133, RF-C134, RF-C140, RF-C148, RF-C149, RF-C157, RF-C176, RF-C197, RF-C216, RF-C230, RF-C234, RF-C236, RF-C243, RF-C404, RF-C405, RF-C409, RF-C416, RF-C420, RF-C437, RF-C450, RF-C502, RF-C510, RF-C532, RF-D001, RF-P003, RF-P021, RF-P022, RF-P027, RF-P028, RF-P041, RF-P047, RF-P049, RF-P062, RF-P066, RF-P085, RF-P088, RF-P090, RF-P091, RF-P097, RF-P104, RF-P105, RF-P107, RF-P108, RF-P116, RF-P128, RF-P133, RF-P188, RF-P191, RF-P232, RF-P245, RF-P260, RF-P261, RF-P262, RF-P263, RF-P264, RF-P265, RF-P266, RF-P267, RF-P271, RF-P299, RF-P319, RF-P356, RF-P400, RF-

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-SDA-SOIL

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
			P402, RF-P403, RF-P404, RF-P405, RF-P406, RF-P419, RF-P420, RF-P421, RF-P422, RF-P423, RF-P424, RF-P425, RF-P426, RF-P427, RF-P428, RF-P562, RF-P570, RF-U019, RF-U021, RF-U025, RF-U026, RF-U033, RF-U040, RF-U042, RF-U043, RF-U046, RF-U057, RF-U067, RF-U069, RF-U095, RF-U099, RF-U100, RF-U101, RF-U1072, RF-U113, RF-U115, RF-U117, RF-U121, RF-U124, RF-U1307, RF-U1308, RF-U1313, RF-U1315, RF-U133, RF-U139, RF-U141, RF-U143, RF-U157, RF-U167, RF-U170, RF-U172, RF-U174, RF-U181, RF-U206, RF-U230, RF-U243, RF-U254, RF-U283, RF-U287, RF-U288, RF-U292, RF-U403, RF-U404, RF-U409, RF-U416, RF-U424, RF-U425, RF-U426, TAN-C002, TAN-C007, TAN-C008, TAN-P005, TAN-P007, TAN-P078, TAN-P089, TAN-U110, TAN-U112, TRA-P358, TRA-U010, TRA-U030
Waste identifiers assigned by the generator site (e.g., item description code, packaging identification numbers).	**WS10**	Y	ARA-P013, ID-C104, ID-C113, ID-D002, ID-P088, ID-P109, ID-P119, ID-P124, ID-P171, ID-P178, ID-P206, ID-P221, ID-P222, ID-P239, ID-P242, ID-P275, ID-P377, ID-P380, ID-P384, ID-U101, ID-U104, ID-U105, ID-U107, ID-U109, ID-U111, ID-U112, ID-U114, ID-U116, ID-U292, ID-U304, ID-U307, ID-U313, ID-U329, ID-U334, ID-U335, ID-U336, ID-U337, ID-U351, ID-U353, NRF-U004, RF-C018, RF-C021, RF-C032, RF-C045, RF-C047, RF-C057, RF-C105, RF-C109, RF-C110, RF-C120, RF-C123, RF-C124, RF-C137, RF-C139, RF-C140, RF-C142, RF-C197, RF-C216, RF-P090, RF-P262, RF-P265, RF-P267, RF-P271, RF-P299, RF-P334, RF-P335, RF-P356, RF-P406, RF-P429, RF-P555, RF-P562, RF-U026, RF-U101, RF-U112, RF-U115, RF-U1289, RF-U1290, RF-U1294, RF-U1295, RF-U1296, RF-U1297, RF-U1298, RF-U1299, RF-U1306, RF-U135, RF-U167, RF-U172, RF-U288, RF-U400, RF-U421, RF-U425, RF-U427

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-SDA-SOIL

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
Radionuclides present in the waste stream, if available, particularly the isotopic distribution of the 10 WIPP-tracked radionuclides and/or the radionuclides that comprise 95% of the radiological hazard of the waste stream, if applicable. Chemical and physical information that could affect the waste isotopic distribution, as well as numerical adjustments or calculations used to derive the isotopic distribution.	**WS11**	Y	ANL-W-C001, ANL-W-C002, ANL-W-P001, ANL-W-P003, ANL-W-P006, ANL-W-P008, ANL-W-P009, ANL-W-P010, ANL-W-U003, ARA-C013, ARA-C014, ARA-C015, ARA-C016, ARA-C018, ARA-P001, ARA-P002, ARA-P003, ARA-P004, ARA-P006, ARA-P007, ARA-P008, ARA-P009, ARA-P010, ARA-P013, ARA-P020, ARA-P021, ARA-P026, ARA-U001, ARA-U002, ARA-U003, CFA-U001, ID-C101, ID-C227, ID-C231, ID-D001, ID-D002, ID-P088, ID-P089, ID-P091, ID-P093, ID-P094, ID-P095, ID-P101, ID-P104, ID-P105, ID-P108, ID-P109, ID-P110, ID-P118, ID-P119, ID-P121, ID-P163, ID-P168, ID-P178, ID-P187, ID-P189, ID-P190, ID-P191, ID-P192, ID-P193, ID-P194, ID-P195, ID-P198, ID-P199, ID-P200, ID-P201, ID-P206, ID-P214, ID-P216, ID-P218, ID-P221, ID-P231, ID-P237, ID-P242, ID-P248, ID-P249, ID-P250, ID-P275, ID-P301, ID-P302, ID-P368, ID-P402, ID-U100, ID-U293, ID-U294, ID-U297, ID-U298, ID-U307, ID-U313, ID-U328, ID-U355, ID-U356, INTEC-C001, INTEC-P001, INTEC-P002, INTEC-P005, INTEC-P006, INTEC-U002, INTEC-U025, NRF-C031, NRF-U001, NRF-U003, NRF-U004, PER-C001, PER-C002, PER-C003, PER-C010, PER-P003, PER-P009, PER-P058, PER-P059, PER-P060, PER-U001, PER-U005, RF-C010, RF-C017, RF-C019, RF-C027, RF-C028, RF-C032, RF-C035, RF-C038, RF-C039, RF-C044, RF-C045, RF-C057, RF-C073, RF-C080, RF-C096, RF-C101, RF-C102, RF-C105, RF-C107, RF-C109, RF-C110, RF-C113, RF-C116, RF-C117, RF-C120, RF-C134, RF-C148, RF-C149, RF-C159, RF-C186, RF-C197, RF-C205, RF-C210, RF-C211, RF-C212, RF-C215, RF-C219, RF-C220, RF-C223, RF-C227, RF-C232, RF-C243, RF-C245, RF-C246, RF-C290, RF-C292, RF-C342, RF-C350, RF-C404, RF-C415, RF-C419, RF-C441, RF-C442, RF-C443, RF-C502, RF-P003, RF-P018, RF-P025, RF-P028, RF-P040, RF-P041, RF-P047, RF-P057, RF-P058, RF-P059, RF-P060, RF-P061, RF-P063, RF-P064, RF-P066, RF-P067, RF-P068, RF-P071, RF-P072, RF-P073, RF-P075, RF-P076,

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-SDA-SOIL

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
			RF-P084, RF-P085, RF-P086, RF-P088, RF-P090, RF-P091, RF-P092, RF-P093, RF-P094, RF-P095, RF-P096, RF-P097, RF-P098, RF-P100, RF-P102, RF-P104, RF-P105, RF-P108, RF-P109, RF-P110, RF-P112, RF-P116, RF-P117, RF-P122, RF-P123, RF-P128, RF-P133, RF-P137, RF-P138, RF-P139, RF-P142, RF-P162, RF-P168, RF-P171, RF-P176, RF-P177, RF-P178, RF-P181, RF-P187, RF-P191, RF-P192, RF-P199, RF-P200, RF-P202, RF-P209, RF-P218, RF-P222, RF-P224, RF-P232, RF-P233, RF-P240, RF-P245, RF-P246, RF-P247, RF-P248, RF-P250, RF-P260, RF-P261, RF-P262, RF-P263, RF-P264, RF-P265, RF-P266, RF-P267, RF-P269, RF-P299, RF-P319, RF-P332, RF-P334, RF-P335, RF-P337, RF-P346, RF-P347, RF-P348, RF-P349, RF-P400, RF-P401, RF-P404, RF-P405, RF-P406, RF-P413, RF-P414, RF-P415, RF-P416, RF-P419, RF-P420, RF-P421, RF-P422, RF-P423, RF-P424, RF-P429, RF-P512, RF-P555, RF-P562, RF-P563, RF-P570, RF-U021, RF-U040, RF-U041, RF-U054, RF-U057, RF-U067, RF-U095, RF-U099, RF-U100, RF-U1072, RF-U111, RF-U115, RF-U116, RF-U117, RF-U118, RF-U119, RF-U120, RF-U126, RF-U127, RF-U128, RF-U133, RF-U135, RF-U136, RF-U137, RF-U139, RF-U141, RF-U143, RF-U157, RF-U171, RF-U172, RF-U174, RF-U178, RF-U181, RF-U189, RF-U190, RF-U196, RF-U201, RF-U202, RF-U203, RF-U207, RF-U208, RF-U210, RF-U212, RF-U217, RF-U230, RF-U242, RF-U243, RF-U244, RF-U245, RF-U247, RF-U254, RF-U283, RF-U294, RF-U403, RF-U407, RF-U427, TAN-C015, TAN-C016, TAN-P005, TAN-P036, TAN-P052, TAN-P058, TAN-P069, TAN-P070, TAN-P071, TAN-P075, TAN-P076, TAN-P077, TAN-P078, TAN-P079, TAN-P080, TAN-P081, TAN-P082, TAN-P083, TAN-P084, TAN-P086, TAN-P087, TAN-P088, TAN-P089, TAN-P090, TAN-P091, TAN-P092, TAN-P094, TAN-P100, TAN-P101, TAN-P103, TAN-P104, TAN-U002, TRA-C038, TRA-P006, TRA-P359, TRA-P360, TRA-P365, TRA-

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-SDA-SOIL

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
			P461, TRA-P473, TRA-P491, TRA-U002, TRA-U003, TRA-U004, TRA-U005, TRA-U030, TRA-U081

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-SDA-SOIL

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
State and EPA hazardous waste constituents in the waste stream and state and EPA Hazardous Waste Numbers assigned, including documentation regarding how the site has historically managed the waste, including the historical regulatory status of the waste (i.e., TRU mixed versus TRU non-mixed waste).	**WS12**	Y	ANL-W-P001, ANL-W-P002, ANL-W-P003, ANL-W-P008, ANL-W-P009, ANL-W-P010, ARA-P001, ARA-P002, ARA-P003, ARA-P004, ARA-P006, ARA-P007, ARA-P008, ARA-P009, ARA-P010, ARA-P018, ARA-U001, ARA-U002, ARA-U003, ARA-U004, CFA-P001, CFA-U001, CFA-U002, CFA-U003, CFA-U004, CFA-U007, ID-C101, ID-C102, ID-C112, ID-C201, ID-C238, ID-P091, ID-P095, ID-P097, ID-P100, ID-P101, ID-P103, ID-P104, ID-P105, ID-P108, ID-P109, ID-P110, ID-P111, ID-P112, ID-P113, ID-P114, ID-P116, ID-P158, ID-P163, ID-P187, ID-P188, ID-P198, ID-P199, ID-P200, ID-P201, ID-P216, ID-P218, ID-P231, ID-P237, ID-P242, ID-P248, ID-P249, ID-P303, ID-P368, ID-P369, ID-P377, ID-P400, ID-P401, ID-U292, ID-U297, ID-U298, ID-U376, ID-U377, INTEC-C001, INTEC-P001, INTEC-P005, INTEC-P006, INTEC-P007, INTEC-U001, INTEC-U025, NRF-C031, NRF-U001, NRF-U003, NRF-U004, PER-C001, PER-C002, PER-C009, PER-C010, PER-C013, PER-P003, PER-P004, PER-P005, PER-P006, PER-P007, PER-P008, PER-P009, PER-P010, PER-P011, PER-P012, PER-P013, PER-P022, PER-P027, PER-P029, PER-P030, PER-P031, PER-P032, PER-P033, PER-P034, PER-P035, PER-P036, PER-P037, PER-P039, PER-P040, PER-P041, PER-P042, PER-P043, PER-P044, PER-P045, PER-P046, PER-P048, PER-P049, PER-P060, PER-U002, PER-U004, RF-C019, RF-C088, RF-C096, RF-C107, RF-C109, RF-C113, RF-C134, RF-C148, RF-C156, RF-C164, RF-C197, RF-C207, RF-C208, RF-C209, RF-C210, RF-C211, RF-C212, RF-C213, RF-C214, RF-C215, RF-C218, RF-C219, RF-C223, RF-C224, RF-C227, RF-C228, RF-C232, RF-C320, RF-C400, RF-C401, RF-C402, RF-C403, RF-C404, RF-C405, RF-C406, RF-C407, RF-C408, RF-C409, RF-C410, RF-C411, RF-C412, RF-C413, RF-C414, RF-C415, RF-C416, RF-C420, RF-C450, RF-P022, RF-P023, RF-P025, RF-P026, RF-P027, RF-P028, RF-P040, RF-P041, RF-P047, RF-P054, RF-P057, RF-P058, RF-P059, RF-P060, RF-P063, RF-

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-SDA-SOIL

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
			P066, RF-P068, RF-P071, RF-P072, RF-P073, RF-P075, RF-P076, RF-P084, RF-P085, RF-P086, RF-P088, RF-P090, RF-P091, RF-P092, RF-P093, RF-P094, RF-P095, RF-P097, RF-P098, RF-P099, RF-P100, RF-P102, RF-P103, RF-P104, RF-P105, RF-P106, RF-P108, RF-P109, RF-P112, RF-P114, RF-P116, RF-P117, RF-P121, RF-P122, RF-P128, RF-P135, RF-P137, RF-P138, RF-P142, RF-P158, RF-P160, RF-P161, RF-P162, RF-P164, RF-P165, RF-P166, RF-P167, RF-P171, RF-P181, RF-P183, RF-P184, RF-P187, RF-P191, RF-P192, RF-P209, RF-P216, RF-P218, RF-P222, RF-P224, RF-P240, RF-P241, RF-P244, RF-P250, RF-P251, RF-P260, RF-P261, RF-P263, RF-P264, RF-P265, RF-P266, RF-P267, RF-P271, RF-P299, RF-P349, RF-P400, RF-P401, RF-P402, RF-P403, RF-P404, RF-P405, RF-P406, RF-P407, RF-P408, RF-P415, RF-P416, RF-P419, RF-P420, RF-P421, RF-P422, RF-P423, RF-P424, RF-P429, RF-P562, RF-P569, RF-U019, RF-U021, RF-U037, RF-U038, RF-U040, RF-U042, RF-U046, RF-U048, RF-U067, RF-U099, RF-U100, RF-U110, RF-U113, RF-U115, RF-U117, RF-U119, RF-U121, RF-U123, RF-U124, RF-U125, RF-U126, RF-U128, RF-U133, RF-U136, RF-U137, RF-U139, RF-U141, RF-U143, RF-U150, RF-U151, RF-U152, RF-U153, RF-U157, RF-U167, RF-U170, RF-U172, RF-U174, RF-U182, RF-U188, RF-U189, RF-U190, RF-U196, RF-U201, RF-U202, RF-U206, RF-U207, RF-U208, RF-U210, RF-U217, RF-U230, RF-U231, RF-U232, RF-U235, RF-U243, RF-U244, RF-U254, RF-U283, RF-U286, RF-U287, RF-U288, RF-U292, RF-U401, RF-U402, RF-U403, RF-U404, RF-U405, RF-U406, RF-U413, TAN-C001, TAN-C002, TAN-C003, TAN-C004, TAN-C006, TAN-C008, TAN-C009, TAN-C010, TAN-P001, TAN-P005, TAN-P007, TAN-P035, TAN-P036, TAN-P064, TAN-P077, TAN-P078, TAN-P079, TAN-P080, TAN-P081, TAN-P082, TAN-P086, TAN-P092, TAN-U001, TAN-U013, TAN-U014, TAN-U105, TRA-C001, TRA-P007, TRA-P008, TRA-

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-SDA-SOIL

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
			P009, TRA-P010, TRA-P011, TRA-P012, TRA-P013, TRA-P014, TRA-P015, TRA-P016, TRA-P017, TRA-P018, TRA-P360, TRA-P401, TRA-P464, TRA-U005, TRA-U008, TRA-U010

Additional acceptable knowledge documentation (briefly describe) :			
Process design documents (e.g., Title II Design).	S1	Y	RF-C180
Standard operating procedures that may include a list of raw materials or reagents, a description of the process or experiment generating the waste, and a description of the waste generated and how the wastes are managed at the point of generation.	S2	Y	ANL-W-P006, ID-P122, ID-P123, ID-P251, ID-P253, ID-P269, ID-P373, ID-P404, ID-P406, ID-P407, ID-P408, ID-P409, ID-P410, ID-P411, ID-P412, ID-P423, ID-P427, ID-P428, ID-P429, ID-P430, ID-P431, ID-U356, PER-P006, PER-P031, RF-C216, RF-C223, RF-P202, RF-P319, RF-U070, RF-U188, RF-U189, RF-U235, TAN-P008, TRA-P006, TRA-P360, TRA-P388, TRA-P473
Preliminary and Final Safety Analysis Reports and technical safety requirements.	S3	Y	ARA-P014, ARA-P015, ID-P104, ID-P107, ID-P108, ID-P250, INTEC-P098, PER-P012, PER-P047, PER-U003, PER-U004, TRA-P461
Waste Packaging records.	S4	Y	ANL-W-U003, ARA-P013, ID-P088, ID-P122, ID-P269, ID-P423, ID-P427, ID-P428, ID-P429, ID-P430, ID-U356, ID-U382, RF-C137

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-SDA-SOIL

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
Test plans or research project reports that describe the reagents, radionuclides, and other raw materials used in experiments.	**S5**	Y	ARA-P003, ID-P301, ID-P302, ID-P303, ID-P398, INTEC-U002, RF-C260, RF-C320, RF-P003, RF-P021, RF-P023, RF-P071, RF-P072, RF-P075, RF-P076, RF-P080, RF-P085, RF-P100, RF-P102, RF-P103, RF-P104, RF-P109, RF-P110, RF-P112, RF-P114, RF-P122, RF-P135, RF-P137, RF-P138, RF-P142, RF-P158, RF-P160, RF-P161, RF-P162, RF-P167, RF-P173, RF-P183, RF-P184, RF-P191, RF-P192, RF-P202, RF-P216, RF-P218, RF-P222, RF-P232, RF-P233, RF-P244, RF-P246, RF-P248, RF-P250, RF-P251, RF-P335, RF-P346, RF-P347, RF-P348, RF-P349, RF-P412, RF-P414, RF-P419, RF-P420, RF-P421, RF-P422, RF-P423, RF-P424, RF-P514, RF-P515, RF-P562, RF-U048, RF-U117, RF-U137, RF-U181, RF-U196, RF-U201, RF-U202, RF-U203, RF-U206, RF-U207, RF-U208, RF-U210, RF-U217, RF-U230, RF-U231, RF-U232, RF-U233, RF-U237, RF-U242, RF-U243, RF-U244, RF-U245, RF-U247, RF-U286, RF-U416, RF-U423, TAN-C024, TAN-P079, TAN-P080, TAN-P081, TAN-P082, TAN-P083, TAN-P084, TAN-P086, TAN-P088, TAN-P089, TAN-P090, TAN-P091, TAN-P100, TAN-P101, TAN-P103, TAN-P104, TAN-P105, TRA-P491
Site databases (e.g., chemical inventory database for SARA Title III requirements, SNM or nuclear material databases).	**S6**	Y	ARA-U006, ARA-U007, CFA-U005, CFA-U007, ID-P091, ID-P237, ID-P275, ID-U101, ID-U104, ID-U304, INTEC-U001, RF-P087, RF-P088, RF-P267, TAN-P001
Information from site personnel (e.g., documented interviews).	**S7**	Y	ID-C107, ID-C109, ID-C112, ID-C227, INTEC-C007, INTEC-C008, RF-C018, RF-C045, RF-C123, RF-C243, RF-C246, RF-C290, RF-C292, RF-C321, RF-C416, RF-C420, RF-C450, RF-C502, RF-P265, RF-P266
Standard industry documents (e.g., industry specification sheets, handbooks, reference materials, or other vendor information).	**S8**	Y	ID-U110, ID-U356, PER-P008, PER-P012, RF-P062, RF-P087, RF-P425

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-SDA-SOIL

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
Analytical data relevant to the waste stream, including results from fingerprint analyses, spot checks, routine verification sampling or other processes that collected information pertinent to the waste stream. This may include new information (or previously collected data) which augments required information (e.g., visual examination not performed in compliance with CCP-PO-001, radiography screening for prohibited items).	S9	Y	ARA-P004, ARA-P020, ID-C227, ID-C231, ID-P091, ID-P168, ID-P242, ID-P301, ID-P302, ID-P400, ID-P401, ID-P402, ID-U310, ID-U329, ID-U355, ID-U356, RF-C037, RF-C218, RF-C223, RF-C239, RF-C406, RF-P066, RF-P088, RF-P191, RF-P261, RF-P267, RF-P429, RF-P569, RF-U292, RF-U405
Material Safety Data Sheets, product labels, or other product information.	S10	Y	ID-C101, ID-P276, ID-P288, ID-U110, RF-C037, RF-C042, RF-C408, TAN-U105
Laboratory notebooks that detail the research processes and raw materials used in an experiment.	S11	Y	TRA-U030
Comparable or surrogate sampling and analysis data.	S12	Y	ID-P384, ID-P398, ID-P400, RF-C409, RF-P515
Other (describe).	S13	Y	CFA-U007, ID-P097, ID-P105, ID-P158, ID-U297, ID-U298, PER-P009, PER-P039, PER-P040, PER-P043, PER-P044, RF-C025, RF-C169, RF-C181, RF-C400, RF-C402, RF-C415, RF-P054, RF-P265, RF-U402, TAN-P007, TAN-P035, TAN-P036, TRA-P008, TRA-U008
Safeguards and security, Materials Control and Accountability, and other nuclear material control system data Reports of nuclear safety or criticality accidents involving special nuclear materials (SNM).	S14	Y	ID-P119, ID-U356, RF-C502, RF-P224, RF-P232, RF-P249, RF-P262, RF-P562, RF-U021, RF-U099
NMMA logs or inventory records or waste disposal logs providing SNM or nuclear material information.	S15	Y	ID-P214, ID-U307, ID-U313, RF-P555, RF-U099, RF-U135, RF-U167, RF-U415
Packaging.	S16	Y	ANL-W-P010, ARA-U007, ID-C114, ID-C227, ID-C231, ID-P091, ID-P092, ID-P102, ID-P109, ID-P122, ID-P174, ID-P186, ID-P206, ID-P216, ID-P242, ID-P269, ID-P373, ID-P384, ID-P423, ID-P427, ID-P428, ID-P429, ID-P430, ID-U294, ID-U351, ID-U382, INTEC-U001, INTEC-U025, RF-C010, RF-C021, RF-C032, RF-C037, RF-C041, RF-C055, RF-C073, RF-C080, RF-C089, RF-C100, RF-C104, RF-C108, RF-C124, RF-C162, RF-C197, RF-C403, RF-C425, RF-C427, RF-C433, RF-C434, RF-C443, RF-P027, RF-P047, RF-P049, RF-P090, RF-P097, RF-P108, RF-P188, RF-P260, RF-P261, RF-P263, RF-P267, RF-P271, RF-P413, RF-P514, RF-P562, RF-P570, RF-U019, RF-U026, RF-U052, RF-U054, RF-U070, RF-U113, RF-U115, RF-U121, RF-U167, RF-U172, RF-U174, RF-U283, RF-U288, RF-U407, TRA-U010

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

	N/A		
Acceptable knowledge information regarding waste generated off-site or from similar process:			
	N/A		

(1) AK#s are used as identifieres for program, waste stream-specific and supporting elements.
The identifiers are to be used in the Acceptable Knowledge Source Document Summary and Acceptable Knowledge Source Document Information list to aid in the page location of program and waste stream-specific elements within a given document. N/A means that item is not applicable.

a. Specified in CCP-PO-001.
b. Required for OSR containers that will NOT undergo headspace gas sampling and analysis.

Additional Comments: N/A 6/5/2012 EHL

All required AK information has been compiled and source document tracking numbers assigned.

Acceptable Knowledge Expert: Elizabeth H. Lickliter / Elizabeth H. Lickliter Date: 6/5/2012
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Attachment 1 - Acceptable Knowledge Documentation Checklist

Site(s): Idaho National Laboratory

Waste Stream Description: Solidified Organics (IDCs 700 and 801)

Waste Stream Number(s): ID-RF-S3150-A

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
Mandatory generator site TRU waste program (PR) information (a):			
Map of the generator site that identifies TRU waste generation, treatment, and storage areas.	PR1	Y	P053, P507, P508, P509, P512, P520
Generator site mission descriptions related to TRU waste generation and management identifying defense and non-defense operations.	PR2	Y	P001, P053, P060, P061, P062, P076, P077, P078, P079, P081, P082, P164, P507, P520
Overview of the generator site and generator site TRU waste management operations in the context of the facility's mission.	PR3	Y	P004, P053, P507, P512
Descriptions of historical and current TRU waste generating operations and how waste is tracked and managed and/or how operations relative to isotopic composition were tracked.	PR4	Y	C515, P001, P012, P161, P210, P507, P535, U064, U505
Waste identification and/or categorization schemes and terminology used at the generator site, including codes correlating to specific isotopic distributions.	PR5	Y	C184, D009, D017, D022, P008, P013, P014, P015, P016, P022, P026, P033, P043, P060, P061, P063, P064, P077, P152, P161, P164, P501, P504, P507, P512, P513, U059, U092, U505
Types and quantities of TRU waste generated, including historical generation through future projections.	PR6	Y	P507, P515
Correlation of waste streams and description of time of generation, waste generating processes, and area and building/facility where each waste stream was generated.	PR7	Y	P507, U505
Certification procedures for waste to be sent to the WIPP facility (i.e., procedures to ensure that prohibited items are documented and managed in accordance with site-specific certification plans).	PR8	Y	P001, P014, P016, P026, P043, P507
Mandatory generator site TRU waste stream (WS)-specific information (a):			
Waste stream designation.	WS1	Y	D004, P052, P507, P516, P522, U099
Area(s) and building(s) from which the waste stream was or is generated.	WS2	Y	C134, C154, C159, C170, C171, C184, C185, C207, P002, P004, P008, P012, P015, P026, P043, P052, P053, P060, P061, P062, P076, P077, P078, P079, P081, P082, P089, P161, P164, P167, P516, P519, P520, P522, U040, U043, U059, U069, U092, U099, U505
Waste stream volume and time period of generation.	WS3	Y	P515
Waste generating process (describe for each building), including processes associated with U134 waste generation, if applicable.	WS4	Y	C134, C137, C154, C159, C185, C515, P002, P012, P014, P016, P023, P043, P052, P053, P060, P061, P062, P076, P077, P078, P079, P081, P082, P089, P161, P164, P167, P199, P200, P201, P202, P520, P522, P535, U099
Process flow diagrams. For research/development, analytical laboratory waste, or other similar processes where process flow diagrams cannot be created, a description of the waste generating processes, rather than a formal process flow diagram, may be included, if justified.	WS5	Y	P002, P052, P053, P060, P061, P062, P076, P077, P078, P079, P081, P082, P089, P164, P167, U099

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Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-RF-S3150-A

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
Summary of basis and rationale for delineating each waste stream including justification for combining waste historically managed separately as TRU mixed and TRU non-mixed waste streams into a single waste stream, that is traceable to referenced documents.	WS6	Y	D004, P052, P507, P516, P522, U099
Generator site mission descriptions related to TRU waste generation and management identifying defense and non-defense operations.	WS7	Y	P001, P053, P061, P062, P076, P078, P079, P081, P082, P507, P520, P522
Material inputs or other information that identified the chemical contents of the waste and the stream. Includes events or processes that may have modified the chemical properties of the waste stream after generation.	WS8	Y	C032, C086, C134, C137, C154, C207, C505, C506, C514, D005, D017, D019, D022, P002, P012, P016, P023, P033, P052, P053, P060, P061, P062, P066, P076, P077, P078, P079, P081, P082, P084, P089, P142, P152, P161, P164, P199, P200, P201, P518, P519, P520, P522, P534, P535, U040, U043, U099
Physical waste form (e.g., glovebox materials and chemicals handled during glovebox operations, if applicable), assigned summary category group, waste matrix code and material inputs, including waste material parameters present in the waste stream. Includes events or processes that may have modified the physical properties of the waste stream after generation.	WS9	Y	C514, D017, D019, P002, P012, P013, P015, P022, P052, P060, P061, P062, P076, P077, P078, P079, P081, P082, P164, P512, P519, P522, P534, P535, U099
Waste identifiers assigned by the generator site (e.g., item description code, packaging identification numbers).	WS10	Y	C032, C184, C502, P008, P013, P014, P015, P016, P022, P026, P033, P043, P052, P060, P061, P062, P063, P064, P076, P077, P078, P079, P081, P082, P164, P501, P504, P507, P512, P516, P522, U059, U069, U092, U099, U505
Radionuclides present in the waste stream, particularly the isotopic distribution of the 10 WIPP-tracked radionuclides and/or the radionuclides that comprise 95% of the radiological hazard of the waste stream. Chemical and physical information that could affect the waste isotopic distribution, as well as numerical adjustments or calculations used to derive the isotopic distribution.	WS11	Y	C039, C130, C134, C137, C154, C159, C171, C184, C185, C502, C508, C509, D009, P008, P013, P015, P016, P022, P026, P033, P043, P053, P060, P061, P062, P063, P064, P076, P077, P078, P079, P081, P082, P152, P161, P164, P166, P167, P169, P199, P200, P201, P202, P210, P227, P512, P513, P520, P522, U040, U043, U064, U099
State and EPA hazardous waste constituents in the waste stream and state and EPA Hazardous Waste Numbers assigned, including documentation regarding how the site has historically managed the waste, including the historical regulatory status of the waste (i.e., TRU mixed versus TRU non-mixed waste).	WS12	Y	C032, C086, C134, C137, C505, C506, C514, D005, D017, D022, P016, P023, P033, P052, P053, P060, P061, P062, P076, P077, P078, P079, P081, P082, P152, P161, P164, P516, P519, P520, P522, P534, U099
Additional acceptable knowledge documentation (briefly describe) :			
Process design documents (e.g., Title II Design).	S1	N	NA SN 2/27/13
Standard operating procedures that may include a list of raw materials or reagents, a description of the process or experiment generating the waste, and a description of the waste generated and how the wastes are managed at the point of generation.	S2	Y	P008, P014, P026, P043, P063, P064, P501, P504, P535
Preliminary and Final Safety Analysis Reports and technical safety requirements.	S3	N	NA SN 2/27/13
Waste Packaging records.	S4	Y	U040, U043, U059, U069

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-RF-S3150-A

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
Test plans or research project reports that describe the reagents, radionuclides, and other raw materials used in experiments.	S5	Y	D022, P002, P089, P167, P199, P200, P201, P534, U010
Site databases (e.g., chemical inventory database for SARA Title III requirements, SNM or nuclear material databases).	S6	Y	U092
Information from site personnel (e.g., documented interviews).	S7	Y	C057, C134, C137, C154, C159, C170, C171, C184, C185, C511, C514, C515, P016
Standard industry documents (e.g., industry specification sheets, handbooks, reference materials, or other vendor information).	S8	Y	D009
Analytical data relevant to the waste stream, including results from fingerprint analyses, spot checks, routine verification sampling or other processes that collected information pertinent to the waste stream. This may include new information (or previously collected data) which augments required information (e.g., visual examination not performed in compliance with CCP-PO-001, radiography screening for prohibited items).	S9	Y	D004, D005, D017, D019, P015, P016, P033, P512, P516
Material Safety Data Sheets, product labels, or other product information.	S10	Y	P066, P084, P091, P142, P518
Laboratory notebooks that detail the research processes and raw materials used in an experiment.	S11	N	NA SN 2/27/13
Comparable or surrogate sampling and analysis data.	S12	Y	U010
Other (describe).	S13	N	
Safeguards and security, Materials Control and Accountability, and other nuclear material control system data Reports of nuclear safety or criticality accidents involving special nuclear materials (SNM).	S14	N	NA SN 2/27/13
NMMA logs or inventory records or waste disposal logs providing SNM or nuclear material information.	S15	Y	C039, C170, P069, U040, U059, U069
Packaging.	S16	Y	C057, C511, P001, P008, P012, P013, P015, P016, P022, P043, P063, P064, P501, P504, P512

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

N/A SH 2/27/13	
Acceptable knowledge information regarding waste generated off-site or from similar process:	
N/A SH 2/27/13	
(1) AK#s are used as identifieres for program, waste stream-specific and supporting elements. The identifiers are to be used in the Acceptable Knowledge Source Document Summary and Acceptable Knowledge Source Document Information list to aid in the page location of program and waste stream-specific elements within a given document. N/A means that item is not applicable. a. Specified in CCP-PO-001. b. Required for OSR containers that will NOT undergo headspace gas sampling and analysis	

Additional Comments:

N/A SH 2/27/13

All required AK information has been compiled and source document tracking numbers assigned.

Acceptable Knowledge Expert: Sheri Nance / Sheri Nance Date: 2/27/13
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Attachment 1 - Acceptable Knowledge Documentation Checklist

Site(s): Idaho National Laboratory

Waste Stream Description: Argonne East Remote-Handled Mixed Debris Stored at Idaho National Laboratory

Waste Stream Number(s): ID-ANLE-S5000

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
Mandatory generator site TRU waste program (PR) information [a]:			
Map of the generator site that identifies TRU waste generation, treatment, and storage areas.	PR1	Y	C1022, C138, C158, C334, C354, P002, P004, P025, P027, P028, P030, P049, P061, P074, P1001, P1010, P1011, P2040, P230, P3042, P3049, P3051, P3144, P3146, P3186, P3187, P320, P3657, P378, P380, P612, P616, U1005, U3025, U339
Generator site mission descriptions related to TRU waste generation and management identifying defense and non-defense operations.	PR2	Y	C001, C006, C016, C036, C068, C073, C074, C092, C103, C1031, C124, C138, C152, C155, C157, C305, C329, C330, C331, C336, C358, C365, C366, C377, C378, C379, C381, P002, P004, P006, P008, P009, P010, P013, P014, P015, P016, P017, P018, P025, P027, P028, P029, P030, P049, P1001, P1003, P1004, P1005, P1009, P1011, P1012, P1014, P1015, P173, P229, P230, P3042, P3144, P3178, P3186, P3187, P320, P374, P380, P394, P583, P584, P585, P586, P587, P588, P599, P603, P616, P617, P618, P619, P620, P621, P622, P623, P624, P834, P835, P836, P837, U001, U003, U007, U009, U011, U012, U013, U014, U016, U023, U025, U028, U036, U040, U045, U053, U067, U068, U069, U070, U076, U1003, U1005, U1008, U3025, U307, U330, U340
Overview of the generator site and generator site TRU waste management operations in the context of the facility's mission.	PR3	Y	C008, C016, C036, C061, C082, C099, C115, C124, C138, C157, C334, C353, C355, C381, P002, P004, P006, P018, P025, P028, P029, P030, P032, P035, P049, P058, P060, P067, P069, P074, P1001, P1009, P1011, P3042, P3051, P3077, P3089, P3144, P3146, P3186, P3187, P320, P380, P394, P617, P623, P624, P835, U001, U002, U013, U017, U018, U066, U3025

CCP RECORDS ORIGINAL
DATE REC'D 12/11/12

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-ANLE-S5000

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
Descriptions of historical and current TRU waste generating operations, including how waste is tracked and managed and/or how operations relative to isotopic composition were tracked.	PR4	Y	C007, C010, C015, C018, C019, C020, C022, C024, C029, C031, C032, C066, C067, C092, C095, C099, C103, C1031, C121, C125, C130, C138, C143, C155, C157, C158, C332, C333, C335, C355, C356, C357, C381, DR014, P002, P004, P006, P009, P014, P027, P029, P030, P032, P049, P055, P058, P059, P060, P061, P062, P063, P064, P1001, P1004, P1005, P1009, P1011, P1013, P230, P3051, P375, P612, P619, U002, U005, U007, U017, U018, U019, U021, U022, U023, U024, U028, U054, U065, U068, U1001, U1003, U1005, U1008, U3025
Waste identification and/or categorization schemes and terminology used at the generator site, including codes correlating to specific isotopic distributions.	PR5	Y	C015, C026, C083, C084, C089, C094, C099, C1031, C107, C121, C124, C332, C348, C357, C381, P001, P002, P006, P009, P018, P025, P028, P030, P031, P049, P063, P067, P3657, P4119, P612, U002, U004, U036, U041, U1003, U1005, U307, U3552, U3607, U4049-1, U4049-10, U4049-11, U4049-12, U4049-13, U4049-14, U4049-15, U4049-16, U4049-17, U4049-18, U4049-19, U4049-2, U4049-20, U4049-21, U4049-22, U4049-23, U4049-24, U4049-25, U4049-26, U4049-27, U4049-28, U4049-29, U4049-3, U4049-30, U4049-31, U4049-32, U4049-33, U4049-34, U4049-35, U4049-36, U4049-37, U4049-38, U4049-39, U4049-40, U4049-41, U4049-42, U4049-43, U4049-44, U4049-45, U4049-46, U4049-47, U4049-48, U4049-49, U4049-5, U4049-6, U4049-7, U4049-8, U4049-9

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-ANLE-S5000

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
Types and quantities of TRU waste generated, including historical generation through future projections.	PR6	Y	C004, C013, C026, C029, C036, C059, C060, C062, C082, C083, C1031, C108, C138, C305, C332, C333, C335, C336, C3660, C380, C381, P001, P004, P030, P031, P049, P056, P074, P1009, P173, P230, P616, U012, U076, U1004, U333, U3607, U4049-1, U4049-10, U4049-11, U4049-12, U4049-13, U4049-14, U4049-15, U4049-16, U4049-17, U4049-18, U4049-19, U4049-2, U4049-20, U4049-21, U4049-22, U4049-23, U4049-24, U4049-25, U4049-26, U4049-27, U4049-28, U4049-29, U4049-3, U4049-30, U4049-31, U4049-32, U4049-33, U4049-34, U4049-35, U4049-36, U4049-37, U4049-38, U4049-39, U4049-40, U4049-41, U4049-42, U4049-43, U4049-44, U4049-45, U4049-46, U4049-47, U4049-48, U4049-49, U4049-5, U4049-6, U4049-7, U4049-8, U4049-9
Correlation of waste streams and description of time of generation, waste generating processes, and area and building/facility where each waste stream was generated.	PR7	Y	C006, C025, C028, C029, C041, C046, C060, C061, C066, C083, C095, C1002, C1007, C1008, C1010, C1013, C1018, C1021, C1027, C1030, C1031, C152, C332, C333, C350, C355, C356, C357, C358, C359, C364, C367, C373, C375, C378, C379, C380, C381, C4129, DR010, P001, P002, P025, P035, P049, P059, P1001, P1004, P1005, P1009, P1011, P1012, P1014, P616, P617, P620, P621, P622, P623, P624, P835, P836, U001, U002, U004, U007, U012, U015, U017, U018, U019, U021, U022, U041, U042, U043, U070, U1001, U1002, U1003, U1004, U1005, U333, U340, U342, U3607
Certification procedures for waste to be sent to the WIPP facility (i.e., procedures to ensure that prohibited items are documented and managed in accordance with site-specific certification plans).	PR8	Y	C001, C009, C021, C027, C033, C058, C061, C062, C066, C067, C088, C089, C091, C099, C1031, C108, C115, C116, C121, C137, C143, C147, C161, C334, C336, C4129, P002, P006, P007, P009, P018, P023, P024, P032, P049, P055, P056, P061, P063, P067, P173, P229, P232, P372, P4119, P4121, P612, P839, U001, U004, U005, U009, U017, U041, U1002

Mandatory generator site TRU waste stream (WS)-specific information [a] :

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-ANLE-S5000

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
Waste stream designation	**WS1**	Y	C035, C084, C1010, C1013, C1031, C158, C332, C333, C348, C355, C356, C357, C381, DR015, DR017, DR019, DR020, DR021, P001, P002, P049, P1009, P378, P620, P621, U041, U1001, U1002, U1003, U1004, U1005, U307, U333, U343
Area(s) and building(s) from which the waste stream was or is generated.	**WS2**	Y	C1002, C1007, C1008, C1010, C1013, C1018, C1022, C1031, C138, C332, C333, C334, C350, C353, C354, C355, C357, C358, C359, C364, C366, C3660, C367, C375, C380, C381, C4129, DR010, DR017, DR018, P002, P004, P027, P028, P049, P058, P061, P1001, P1009, P1010, P1011, P173, P2040, P230, P3042, P3047, P3049, P3051, P3089, P3144, P3146, P3178, P3182, P3657, P380, P404, P407, P4118, P4119, P612, P616, P617, P618, P619, P620, P621, P622, P623, P624, P836, P839, U007, U015, U017, U018, U019, U021, U022, U024, U042, U043, U1001, U1003, U1004, U3025, U333, U339, U340, U343, U3552, U4049-1, U4049-10, U4049-11, U4049-12, U4049-13, U4049-14, U4049-15, U4049-16, U4049-17, U4049-18, U4049-19, U4049-2, U4049-20, U4049-21, U4049-22, U4049-23, U4049-24, U4049-25, U4049-26, U4049-27, U4049-28, U4049-29, U4049-3, U4049-30, U4049-31, U4049-32, U4049-33, U4049-34, U4049-35, U4049-36, U4049-37, U4049-38, U4049-39, U4049-40, U4049-41, U4049-42, U4049-43, U4049-44, U4049-45, U4049-46, U4049-47, U4049-48, U4049-49, U4049-5, U4049-6, U4049-7, U4049-8, U4049-9
Waste stream volume and time period of generation	**WS3**	Y	C005, C013, C014, C028, C034, C036, C067, C095, C1002, C1007, C1008, C1010, C1013, C1018, C1021, C1027, C103, C1030, C1031, C108, C121, C138, C147, C305, C332, C333, C351, C357, C3660, C367, C380, C381, C4129, DR018, P002, P007, P025, P027, P028, P049, P1009, P3049, P378, P616, P623, P624, P839, U015, U1001, U1003, U1004, U1005, U3025, U333, U3607

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-ANLE-S5000

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
Waste generating process (describe for each building) including processes associated with U134 waste generation, if applicable.	WS4	Y	C011, C016, C066, C067, C073, C077, C083, C1007, C1008, C1010, C1013, C1018, C1021, C1027, C103, C1030, C1031, C115, C128, C130, C137, C138, C141, C152, C155, C157, C334, C335, C353, C357, C358, C359, C364, C366, C367, C375, C381, DR017, P002, P004, P009, P025, P027, P028, P029, P030, P031, P034, P035, P038, P039, P040, P047, P049, P058, P059, P060, P062, P068, P069, P1004, P1005, P1009, P1011, P1012, P1013, P1014, P3047, P3115, P3144, P320, P374, P375, P378, P380, P404, P591, P592, P603, P616, P617, P618, P619, P620, P621, P622, P623, P624, P839, U030, U036, U067, U068, U069, U074, U1005, U1008, U340
Process flow diagrams. For research/development, analytical laboratory waste, or other similar processes where process flow diagrams cannot be created, a description of the waste generating processes, rather than a formal process flow diagram, may be included, if justified.	WS5	Y	C1007, C1021, C121, C138, C334, C377, P001, P032, P058, P1001, P1004, P1005, P1013, P3047, P3144, P380, P4119, P839, U011
Summary of basis and rationale for delineating each waste stream including justification for combining waste historically managed separately as TRU mixed and TRU non-mixed waste streams into a single waste stream, that is traceable to referenced documents.	WS6	Y	C013, C015, C1002, C1007, C1008, C1010, C1013, C1018, C1021, C1027, C1030, C1031, C124, C332, C333, C335, C347, C350, C355, C356, C357, C358, C3660, C381, DR012, P001, P002, P030, P049, P1003, P1004, P1005, P1009, P1011, P173, P378, P618, P620, P621, P623, P624, P835, U015, U017, U018, U019, U021, U022, U042, U043, U1001, U1002, U1003, U1004, U1005
Generator site mission descriptions related to TRU waste generation and management identifying defense and non-defense operations.	WS7	Y	C001, C006, C016, C046, C066, C068, C092, C138, C152, C305, C329, C330, C331, C336, C358, C377, C378, C381, P002, P014, P030, P049, P1001, P1004, P1005, P1009, P3049, P320, P380, P394, P599, P617, P835, U001, U011, U014, U040, U067, U076, U1003, U307

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-ANLE-S5000

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
Material inputs or other information that identified the chemical contents of the waste and the stream. Includes events or processes that may have modified the chemical properties of the waste stream after generation.	**WS8**	Y	C008, C009, C011, C012, C013, C014, C019, C020, C023, C025, C026, C029, C035, C039, C041, C066, C077, C081, C088, C091, C094, C097, C099, C1007, C1008, C1013, C1027, C1031, C106, C115, C116, C118, C128, C130, C137, C143, C147, C148, C158, C160, C161, C332, C333, C335, C337, C341, C347, C351, C356, C357, C3754, C381, C4114, DR014, P001, P002, P004, P006, P007, P027, P030, P031, P032, P034, P038, P039, P040, P047, P049, P060, P061, P062, P063, P067, P068, P069, P070, P1012, P1014, P173, P232, P3047, P3049, P3144, P3186, P3187, P3657, P372, P378, P380, P4054, P4118, P603, P612, P613, P616, P617, P620, P621, P839, U002, U006, U015, U017, U018, U019, U021, U022, U030, U041, U042, U043, U065, U066, U068, U069, U072, U073, U074, U083, U084, U085, U1002, U1005, U343, U3552, U3900

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-ANLE-S5000

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
Physical waste form (e.g., glovebox materials and chemicals handled during glovebox operations, if applicable), assigned summary category group, waste matrix code and materials inputs, including waste material parameters present in the waste stream. Includes events or processes that may have modified the physical properties of the waste stream after generation.	WS9	Y	C010, C013, C026, C029, C035, C1013, C1031, C147, C305, C332, C333, C335, C336, C341, C351, C381, C4114, DR010, DR014, DR016, DR017, DR018, DR020, P001, P006, P031, P032, P034, P039, P047, P049, P061, P062, P067, P068, P069, P173, P232, P3047, P3049, P3089, P3182, P3657, P372, P378, P380, P404, P4054, P407, P4118, P4119, P591, P603, P612, P613, P616, P617, P620, P621, P839, U002, U015, U017, U018, U019, U021, U022, U039, U041, U042, U043, U068, U072, U073, U084, U1001, U1002, U1005, U307, U333, U343, U3552, U3607, U3900, U3901, U4049-1, U4049-10, U4049-11, U4049-12, U4049-13, U4049-14, U4049-15, U4049-16, U4049-17, U4049-18, U4049-19, U4049-2, U4049-20, U4049-21, U4049-22, U4049-23, U4049-24, U4049-25, U4049-26, U4049-27, U4049-28, U4049-29, U4049-3, U4049-30, U4049-31, U4049-32, U4049-33, U4049-34, U4049-35, U4049-36, U4049-37, U4049-38, U4049-39, U4049-40, U4049-41, U4049-42, U4049-43, U4049-44, U4049-45, U4049-46, U4049-47, U4049-48, U4049-49, U4049-5, U4049-6, U4049-7, U4049-8, U4049-9
Waste identifiers assigned by the generator site (e.g., item description code, packaging identification numbers).	WS10	Y	C005, C013, C067, C092, C1031, C124, C332, C347, C381, P030, P049, P058, P069, P173, P612, U015, U017, U018, U019, U021, U022, U040, U041, U042, U043, U1003, U1004, U1005, U307, U4049-1, U4049-10, U4049-11, U4049-12, U4049-13, U4049-14, U4049-15, U4049-16, U4049-17, U4049-18, U4049-19, U4049-2, U4049-20, U4049-21, U4049-22, U4049-23, U4049-24, U4049-25, U4049-26, U4049-27, U4049-28, U4049-29, U4049-3, U4049-30, U4049-31, U4049-32, U4049-33, U4049-34, U4049-35, U4049-36, U4049-37, U4049-38, U4049-39, U4049-40, U4049-41, U4049-42, U4049-43, U4049-44, U4049-45, U4049-46, U4049-47, U4049-48, U4049-49, U4049-5, U4049-6, U4049-7, U4049-8, U4049-9

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-ANLE-S5000

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
Radionuclides present in the waste stream, if available particularly the isotopic distribution of the 10 WIPP-tracked radionuclides and/or the radionuclides that comprise 95% of the radiological hazard of the waste stream, if applicable. Chemical and physical information that could affect the waste isotopic distribution, as well as calculations used to derive the isotopic distribution.	WS11	Y	C002, C004, C007, C009, C010, C011, C013, C015, C017, C024, C025, C026, C029, C033, C036, C046, C059, C061, C066, C067, C082, C083, C092, C094, C095, C099, C1018, C1021, C103, C1031, C121, C124, C125, C137, C138, C147, C152, C155, C157, C161, C305, C329, C332, C348, C350, C355, C381, P001, P002, P004, P006, P007, P009, P024, P025, P030, P031, P035, P040, P049, P055, P058, P064, P1004, P1005, P1009, P1012, P1014, P173, P232, P3042, P3047, P3049, P3051, P3186, P3187, P3657, P372, P374, P375, P378, P380, P407, P590, P591, P592, P593, P594, P595, P596, P603, P612, P616, P617, P620, P621, U004, U005, U007, U009, U012, U013, U014, U015, U016, U017, U018, U019, U021, U022, U024, U025, U026, U028, U036, U039, U042, U043, U045, U046, U047, U048, U049, U050, U053, U054, U056, U058, U059, U061, U064, U065, U067, U068, U069, U070, U074, U076, U079, U1003, U1004, U307, U342, U3552, U3607, U3900, U3901, U4025, U4043, U4044, U4045, U4046, U4047, U4048, U4049-1, U4049-10, U4049-11, U4049-12, U4049-13, U4049-14, U4049-15, U4049-16, U4049-17, U4049-18, U4049-19, U4049-2, U4049-20, U4049-21, U4049-22, U4049-23, U4049-24, U4049-25, U4049-26, U4049-27, U4049-28, U4049-29, U4049-3, U4049-30, U4049-31, U4049-32, U4049-33, U4049-34, U4049-35, U4049-36, U4049-37, U4049-38, U4049-39, U4049-40, U4049-41, U4049-42, U4049-43, U4049-44, U4049-45, U4049-46, U4049-47, U4049-48, U4049-49, U4049-5, U4049-6, U4049-7, U4049-8, U4049-9, U4051, U4052, U4053, U4054

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-ANLE-S5000

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
State and EPA hazardous waste constituents in the waste stream and state and EPA Hazardous Waste Numbers assigned, including documentation regarding how the site has historically managed the waste, including the historical regulatory status of the waste (i.e., TRU mixed versus TRU non-mixed waste).	WS12	Y	C012, C014, C020, C021, C023, C029, C035, C039, C066, C077, C081, C088, C091, C094, C097, C1013, C106, C116, C137, C143, C147, C148, C160, C332, C335, C336, C337, C341, C351, C356, C357, C381, P002, P004, P006, P009, P018, P023, P024, P025, P027, P031, P038, P039, P049, P055, P056, P061, P062, P068, P070, P173, P232, P3042, P3047, P3049, P3657, P372, P4054, P4118, P4119, P613, P620, P621, U006, U065, U066, U069, U072, U083, U084, U085, U1002, U3552, U4057
Additional acceptable knowledge documentation (briefly describe) :			
Process design documents (e.g., Title II Design)	S1	Y	C138
Standard operating procedures that may include a list of raw materials or reagents, a description of the process or experiment generating the waste, and a description of the waste generated and how the wastes are managed at the point of generation	S2	Y	C011, C012, C031, C032, C084, C089, C097, C1021, C128, C130, C161, C381, P001, P004, P034, P038, P039, P040, P047, P055, P063, P067, P068, P069, P070, P3051, P3115, P320, P3658, P3659, P404, P407, P4119, P620, P621, P839, U065, U085
Preliminary and Final Safety Analysis Reports and technical safety requirements	S3	Y	C103, P004, P031, P3042, P3144, P3146, P3186, P3187, P380, P617, U1004
Waste Packaging records	S4	Y	C095, C332, C333, C348, DR020, P4118, U015, U017, U018, U019, U021, U022, U041, U042, U043, U1001, U1005, U3900, U3901
Test plans or research project reports that describe the reagents, radionuclides, and other raw materials used in experiments	S5	Y	C011, C039, C1007, C1008, C1010, C1018, C1021, C1027, C1030, P1004, P1005, P1012, P1014, P372, P375, P836
Site databases (e.g., chemical inventory database for SARA Title III requirements, SNM or nuclear material databases)	S6	Y	P230, P3657, P612, U005, U076, U307, U3552
Information from site personnel (e.g., documented interviews)	S7	Y	C006, C066, C067, C121, C124, C137, C144, C348, C3661, C380, C381, DR018, DR019, P1009
Standard industry documents (e.g., industry specification sheets, handbooks, reference materials, or other vendor information)	S8	Y	C016, C017, C030, C127, C144, C377, P004, U005, U4058

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): ID-ANLE-S5000

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
Analytical data relevant to the waste stream, including results from fingerprint analyses, spot checks, routine verification sampling or other processes that collected information pertinent to the waste stream. This may include new information (or previously collected data) which augments required information (e.g., visual examination not performed in compliance with the CCP-PO-001, radiography screening for prohibited items).	S9	Y	C035, C1018, C1021, C1027, C1030, C1031, C116, C152, C160, C332, C333, C348, C4001, C4003, C4004, P1004, P1005, P4054, U036, U1001, U1002, U1004, U4025, U4043, U4044, U4045, U4046, U4047, U4048, U4051, U4052, U4053, U4054, U4056, U4059
Material Safety Data Sheets, product labels, or other product information	S10	Y	C143, C144, DR014, DR016, U072, U076
Laboratory notebooks that detail the research processes and raw materials used in an experiment	S11	N	N 9012/6/12
Comparable or surrogate sampling and analysis data	S12	Y	C041, C116, C143, C160, P004, P023, U3025
Other (describe)	S13	Y	C016, P394
Safeguards and security, Materials Control and Accountability, and other nuclear material control system data Reports of nuclear safety or criticality accidents involving special nuclear materials (SNM)	S14	Y	C007, C024, C124, C348, P063, U1001, U1003, U1004, U1005
NMMA logs or inventory records or waste disposal logs providing SNM or nuclear material information	S15	Y	C083, U017, U018, U019, U021, U022, U042, U043, U3901
Packaging	S16	Y	C002, C003, C010, C013, C017, C025, C027, C028, C029, C058, C059, C060, C061, C062, C066, C067, C083, C089, C095, C097, C099, C1018, C1031, C107, C108, C115, C121, C130, C144, C147, C161, C334, C335, C337, C3464, C347, C348, C350, C3633, C3661, C3698, C380, C4002, C4129, DR010, DR012, DR015, DR017, DR018, DR019, DR021, P001, P002, P006, P007, P009, P018, P024, P030, P031, P035, P052, P055, P063, P064, P067, P173, P2040, P229, P232, P3089, P3115, P3182, P3657, P378, P380, P4121, P612, P613, P616, P839, U002, U004, U015, U017, U018, U019, U020, U022, U041, U042, U1002, U1004, U333, U3900, U4032

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

	N/A	2012/8/22		
Acceptable knowledge information regarding waste generated off-site or from similar process:				
	N/A	6/13/12		

(1) AK#s are used as identifieres for program, waste stream-specific and supporting elements. The identifiers are to be used in the Acceptable Knowledge Source Document Summary and Acceptable Knowledge Source Document Information list to aid in the page location of program and waste stream-specific elements within a given document. N/A means that item is not applicable.

a. Specified in CCP-PO-001.
b. Required for OSR containers that will NOT undergo headspace gas sampling and analysis.

Additional Comments:

N/A 6/13/12

All required AK information has been compiled and source document tracking numbers assigned.

Acceptable Knowledge Expert: TRAVIS SMITH, [signature] Date: 11/21/2012

Print/Sign

DIVIDER

PAGE

Attachment 1 - Acceptable Knowledge Documentation Checklist

Site(s): Idaho National Laboratory

Waste Stream Description: Solidified Waste Sludge from Bettis Atomic Power Lab

Waste Stream Number(s): IN-ID-BTO-030

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
Mandatory generator site TRU waste program (PR) information [a]:			
Map of the generator site that identifies TRU waste generation, treatment, and storage areas.	PR1	Y	C132, P016, P025, P102, P103, U243, U256
Generator site mission descriptions related to TRU waste generation and management identifying defense and non-defense operations.	PR2	Y	C312, P025, P102, P104, P119, P204, P205, P206, U201, U256, U302
Overview of the generator site and generator site TRU waste management operations in the context of the facility's mission.	PR3	Y	C312, P025, P100, P102, P204, P205, P206, U256, U266, U302
Descriptions of historical and current TRU waste generating operations, including how waste is tracked and managed and/or how operations relative to isotopic composition were tracked.	PR4	Y	C305, C310, C311, C312, P102, P107, P126, P133, P204, U201, U209
Waste identification and/or categorization schemes and terminology used at the generator site, including codes correlating to specific isotopic distributions.	PR5	Y	C301, C305, C306, C307, C309, C310, C311, C312, P126, P201, P206, U229, U303, U304, U305
Types and quantities of TRU waste generated, including historical generation through future projections.	PR6	Y	C211, C305, C306, C307, C309, C310, P201, P205, U301, U303, U304, U305
Correlation of waste streams and description of time of generation, waste generating processes, and area and building/facility where each waste stream was generated.	PR7	Y	C211, C301, C302, C305, C306, C309, C310, C312, P201, U301, U303, U304, U305
Certification procedures for waste to be sent to the WIPP facility (i.e., procedures to ensure that prohibited items are documented and managed in accordance with site-specific certification plans).	PR8	Y	C122, C214, C305, C311, C312, P130, P201, P204, U303, U304, U305
Mandatory generator site TRU waste stream (WS)-specific information [a]:			
Waste stream designation	WS1	Y	C305, C306, C307, C309, C310, C311, C312, P201, P206, U301, U302, U303, U304, U305
Area(s) and building(s) from which the waste stream was or is generated.	WS2	Y	C132, C133, C206, C210, C301, C309, P105, P106, P201, P204, P205, P206, U207, U256, U264
Waste stream volume and time period of generation	WS3	Y	C117, C207, C208, C209, C210, C305, C306, C309, C310, P201, U200, U213, U216, U217, U236, U237, U301, U302, U303, U304, U305
Waste generating process (describe for each building) including processes associated with U134 waste generation, if applicable.	WS4	Y	C203, C305, C309, C310, C312, P105, P107, P108, P109, P110, P112, P113, P119, P120, P121, P123, P124, P125, P201, U209, U211, U214, U224, U238, U264

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): IN-ID-BTO-030

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
Process flow diagrams. For research/development, analytical laboratory waste, or other similar processes where process flow diagrams cannot be created, a description of the waste generating processes, rather than a formal process flow diagram, may be included, if justified.	WS5	Y	P105, U224, U243
Summary of basis and rationale for delineating each waste stream including justification for combining waste historically managed separately as TRU mixed and TRU non-mixed waste streams into a single waste stream, that is traceable to referenced documents.	WS6	Y	C306, C309, C310, P201, U303, U304, U305
Generator site mission descriptions related to TRU waste generation and management identifying defense and non-defense operations.	WS7	Y	P025, P100, P104, P125, P204, P205, U201, U264
Material inputs or other information that identified the chemical contents of the waste and the stream. Includes events or processes that may have modified the chemical properties of the waste stream after generation.	WS8	Y	C125, C126, C128, C129, C134, C211, C306, C309, C310, C312, P107, P108, P109, P114, P120, P121, P123, P124, P132, P136, P201, U209, U214, U216, U221, U224, U225, U229, U232, U239, U244, U255, U264, U303, U304, U305
Physical waste form (e.g., glovebox materials and chemicals handled during glovebox operations, if applicable), assigned summary category group, waste matrix code and materials inputs, including waste material parameters present in the waste stream. Includes events or processes that may have modified the physical properties of the waste stream after generation.	WS9	Y	C211, C305, C306, C309, C310, C312, P132, P133, P201, U209, U221, U276, U303, U304, U305
Waste identifiers assigned by the generator site (e.g., item description code, packaging identification numbers).	WS10	Y	C305, C306, C307, C309, C310, C311, P126, P201, P204, P205, U211, U212, U301, U303, U304, U305
Radionuclides present in the waste stream, if available particularly the isotopic distribution of the 10 WIPP-tracked radionuclides and/or the radionuclides that comprise 95% of the radiological hazard of the waste stream, if applicable. Chemical and physical information that could affect the waste isotopic distribution, as well as calculations used to derive the isotopic distribution.	WS11	Y	C120, C127, C200, C201, C202, C204, C205, C208, C209, C210, C301, C305, C306, C309, C310, P126, P201, P204, U220, U223, U244, U275, U302, U303, U304, U305
State and EPA hazardous waste constituents in the waste stream and state and EPA Hazardous Waste Numbers assigned, including documentation regarding how the site has historically managed the waste, including the historical regulatory status of the waste (i.e., TRU mixed versus TRU non-mixed waste).	WS12	Y	C031, C125, C126, C128, C129, C130, C211, C301, C306, C309, DR005, P138, P201, U249, U264, U265, U303, U304, U305
Additional acceptable knowledge documentation (briefly describe) (b):			
Process design documents (e.g., Title II Design)	S1	Y	P204

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Waste Stream Number(s): IN-ID-BTO-030

Acceptable Knowledge Information	(1) AK#	Compiled? (Y/N)	Source Document Tracking Number
Standard operating procedures that may include a list of raw materials or reagents, a description of the process or experiment generating the waste, and a description of the waste generated and how the wastes are managed at the point of generation	S2	Y	P107, P120, P123, P124, P125, P132, P133, P204, P205, U216, U225, U229, U232, U302
Preliminary and Final Safety Analysis Reports and technical safety requirements	S3	Y	P204
Waste Packaging records	S4	Y	U213, U214, U217, U221, U236, U237
Test plans or research project reports that describe the reagents, radionuclides, and other raw materials used in experiments	S5	Y	U232
Site databases (e.g., chemical inventory database for SARA Title III requirements, SNM or nuclear material databases)	S6	Y	C305, C306
Information from site personnel (e.g., documented interviews)	S7	Y	U264
Standard industry documents (e.g., industry specification sheets, handbooks, reference materials, or other vendor information)	S8	Y	U265
Analytical data relevant to the waste stream, including results from fingerprint analyses, spot checks, routine verification sampling or other processes that collected information pertinent to the waste stream. This may include new information (or previously collected data) which augments required information (e.g., visual examination not performed in compliance with the CCP-PO-001, radiography screening for prohibited items).	S9	Y	C305, C306
Material Safety Data Sheets, product labels, or other product information	S10	Y	C129, U265
Laboratory notebooks that detail the research processes and raw materials used in an experiment	S11	Y	U214, U216
Comparable or surrogate sampling and analysis data	S12	Y	C130, P138
Other (describe)	S13	N	
Safeguards and security, Materials Control and Accountability, and other nuclear material control system data Reports of nuclear safety or criticality accidents involving special nuclear materials (SNM)	S14	Y	P126
NMMA logs or inventory records or waste disposal logs providing SNM or nuclear material information	S15	Y	P131, U303, U304, U305
Packaging	S16	Y	C116, C123, C203, C215, C303, C307, C309, C310, DR006, P114, P130, P131, P201, P204, P205, P206, U221, U302

Attachment 1 - Acceptable Knowledge Documentation Checklist (continued)

Acceptable knowledge information regarding waste generated off-site or from similar process:				

(1) AK#s are used as identifieres for program, waste stream-specific and supporting elements.
The identifiers are to be used in the Acceptable Knowledge Source Document Summary and Acceptable Knowledge Source Document Reference list to aid in the page location of program and waste stream-specific elements within a given document. N/A means that item is not applicable.

a. Specified in CCP-PO-001.
b. Not required by CCP-PO-001 unless waste stream-specific information is NOT available.
c. Required for OSR containers that will NOT undergo headspace gas sampling and analysis

Additional Comments:
None

All required AK information has been compiled and source document tracking numbers assigned.

Acceptable Knowledge Expert: James Lynnbyhl James Lynnbyhl Date: 5/19/2011
Print/Sign

Attachment 4 - Acceptable Knowledge Source Document Information List

Site(s): Idaho National Laboratory

Waste Stream Number: ID-AECHDM

Waste Stream Description: Heterogeneous Debris from ANL

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
AE-C-003	Historic Operations in Building 212, D-Wing	Tom Krause	NA	06/09/2000
AE-C-004	Record of Communication; Analytical Chemistry Laboratory Operations and Locations	Tom Krause	NA	07/20/2000
AE-C-005	Discussion with Jim Wescott and Dan McNamee; ANL-E Waste Stream Designations	Tom Krause	NA	07/20/2000
AE-C-006	Discussion with Cindy Rock; Waste Management Operations	Tom Krause	NA	07/20/2000
AE-C-011	Two D&D Projects in Building 212, D-wing	Tom Krause	NA	NA, 07/24/2000
AE-C-013	Discussion with Don Graczyk; ACL Facility Descriptions for Bldg 200	Tom Krause	NA	08/18/2000
AE-C-015	Discussion with Seth Snyder and Al Youngs; Chemistry Division operations in Building 200, M-wing and general description of Building 200	Tom Krause	NA	NA, 07/27/2000
AE-C-016	Cave Area Description (for Building 200)	Tory Steed	NA	08/25/2000
AE-C-017	Communication with Terri Bray; Nonmixed RH TRU drums from the AGHCF	Tom Krause	NA	09/13/2000
AE-C-019	Chemical Usage at NBL for plutonium and uranium analysis - Conversation with Alma Stiffin and Iris Frank	Tom Krause	NA	09/13/2000
AE-C-020	Content of radionuclide solutions - Conversation with Alma Stiffen and Jan Muller	Tom Krause	NA	09/15/2000
AE-C-022	Correspondence with Terri Bray re: Chemical Usage in the AGHCF	T. Krause	NA	09/21/2000
AE-C-023	Interview w/ Fred Martino concerning chemicals listed in ACL procedures	T. Krause	NA	09/19/2000
AE-C-024	E-mail communications between G. Lasswell and D. Hecker and D. McNamee concerning details for certain waste requisitions and containers.	Gary Lasswell	NA	09/15/2000
AE-C-025	Conversation with Dan Hecker: Disposition of drums from Buildings other than 200, 205, 212, and 350.	Tom Krause	NA	09/18/2000
AE-C-026	Record of communication re: Information concerning chemicals listed in CHM Safety Reviews	T. Krause	NA	09/14/2000

CCP RECORDS ORIGINAL
DATE REC'D 12-16-11

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
AE-C-027	Operations Building 315	Tom Krause	NA	09/28/2001
AE-C-032	NCR-ANLE-0019-02	William Kimball/Jeanne Elkins	NA	03/18/2002
AE-C-035	NCR-ANLE-0074-02	Forrest Martin/Jeanne Elkins	NA	05/02/2002
AE-C-036	NCR-ANLE-0111-02	Forrest Martin/ Jeanne Elkins	NA	05/30/2002
AE-C-037	NCR-ANLE-0110-02	Forrest Martin/Jeanne Elkins	NA	05/29/2002
AE-C-038	E-mail from Jim Frego to Ben Gutierrez	Jim Frego	NA	08/20/2002
AE-C-042	Record of Communication re: Use of Methoxychlor in Extract Cleanup by Gel Permeation Chromatography (GPC)	David B Becker	NA	03/19/2003
AE-D-004	Acceptable Knowledge Source Document Discrepancy re: hazardous constituents	Tom Krause	NA	07/26/2000
AE-D-005	Resolution of NBL chemical usage and chemicals present in AE-CH-H-M waste stream	Tom Krause	NA	09/18/2000
AE-D-011	Source Document Discrepancy Resolution	D. B. Becker, C. Fesmire	NA	02/10/2003
AE-D-012	Source Document Discrepancy Resolution	D. B. Becker, C. Fesmire	NA	02/10/2003
AE-I-001	Separation of Plutonium by Mini Anion-Exchange	Jon R. Weiss	NBL-PC-IE-2	03/10/1978
AE-I-002	IFR Fuels Work	A. G. Hins	8407-AGH-003	08/13/1984
AE-I-003	Determination of the Isotopic Composition of Plutonium By Thermal Ionization Mass Spectrometry	NA	NBL-SA-Pu(I)-1	NA
AE-I-004	Dissolution of Plutonium Containing Materials Using Sealed Reflux	NA	NBL-SP-Pu-2	NA, NA
AE-I-005	Determination Of Weight Loss of Plutonium Oxide on Heating	NA	NBL-SA-PP-1	NA, NA
AE-I-006	Determination of Specific Gravity and Density of Plutonium Solutions	NA	NBL-SA-PP-2	NA
AE-I-007	IFR Fuels Development	A. G. Hins	8407-AGH-001	07/06/1984

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
AE-I-008	IFR Fuel Interdiffusion Studies (Dayananda) Test Capsule Evaluation	Allan Hins	8711-AGH-03	05/13/1988
AE-I-009	Determination of Plutonium by Controlled -Potential Coulometry	NA	NBL-SA-Pu(E)-1	NA
AE-I-010	Memo from A.G. Hins to IFR Distribution "Diffusion Couple Studies - As Received Materials Structures" with internal report "Metallographic Examination of As-Received Clad and Fuel Materials for IFR Diffusion Studies," by J A Zic, et. al., undated	A. G. Hins	NA	04/22/1985
AE-I-011	Clad/Fuel Diffusion Studies - As Received U-Pu-Zr Materials	A. G. Hins	8407-AGH-014	06/05/1985
AE-I-012	SDI Cermet Fuel Fab - Glovebox Facility	A. G. Hins	8512-AGH-03	05/29/1986
AE-I-013	Field Work Proposal - Multi-megawatt Nuclear Space Power Systems; Reactor Fuels - Cermet Development	L. A. Nelmark	ANL 014 02 88	04/15/1987
AE-I-014	Bi-Monthly Report on Cermet Fuels - April/May 1987; Process Integration and Verification	H. R. Thresh	NA	06/04/1987
AE-I-015	Sequence of Events for Camphor Coating Studies of UN Powder	NA	NA	05/22/1987
AE-I-016	Fissile Scrap Passivation, Activity 41603	A. G. Hins	NA	12/28/1977
AE-I-017	Passivation Report	D. R. Schmitt	NA	03/14/1980
AE-I-018	Determination of Plutonium Using Automated Controlled-Potential Coulometry	NA	NBL-SA-Pu(E)-1.1	NA
AE-I-019	Dissolution of Pu-Containing Materials Using Acid Digestion	NA	NBL-SP-Pu-1	NA
AE-I-021	Purification of Neptunium by Anion Exchange Separation	NA	NBL-SP-Np-1	NA
AE-I-022	Electrolytic Cleaning of Pu Metal	NA	NBL-SP-Pu-6	NA
AE-I-023	Filing Method of Cleaning Pu Metal	NA	NBL-SP-Pu-7	NA
AE-I-027	Liquid-Liquid, Packed Column Countercurrent Extractor for Pu Extraction from U-Pu-Fe	W. Miller	ANL-CMTI-8602	09/19/1983
AE-I-028	Safety Review - Plutonium Experiment in G-118	T. Tomczuk, W. Miller	ANL-CMTI-8883	02/20/1985
AE-I-029	Trip Report Visit to LANL and Rocky Flats Analytical Laboratory	Bowers, D. L., Heinrich, R. R., Huff, E. A.	ANL-CMTI-8884	02/26/1985
AE-I-030	Safety Review - Proposed Experiment - Alpha Radiolysis of TRUEX-CCl4 with 241Am	Kalina, D.	ANL-CMTI-8936	05/23/1985
AE-I-031	Safety Review-PFP Waste Demonstration Run in G-117	R. Leonard	ANL-CMTI-8955	06/17/1985

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
AE-I-032	Safety Review of Facilities for the Determination of Hydrogen, Oxygen, and Nitrogen in Plutonium-Bearing Metals, Alloys, Oxides, Carbides, and Some Metal Compounds; Building 205, Room G-102	H. Goodspeed, R. Heinrich, and D. Gracyk	ANL-CMTI-9012	09/16/1985
AE-I-034	Determination of Uranium by Ferrous Reduction in Phosphoric Acid and Titration with Dichromate (NBL Titrimetric Method)	I. Frank	NBL-SA-U(E)-1	Revision 5, 11/24/1999
AE-I-035	Determination of Uranium by Automated Constant Current Coulometry	Paul V. Croatto	NBL-SA-U(E)-3.1	Revision 1, 11/24/1999
AE-I-036	Determination of Uranium by Ferrous Reduction in Phosphoric Acid and Titration with Cerium (IV).	Jeffrey P. Zebrowski	NBL-SA-U(E)-6	Revision 1, 11/24/1999
AE-I-037	Preparation of Plutonium Blind Standard Solution and Aliquants	M. I. Spaletto	NBL-CAL-Pu(E)-1	Revision 4, 12/03/1999
AE-I-038	Safety Review - Pu Extraction Experiments In G-118	Johnson, T. R., Fischer, D.F.	ANL-CMTI-9123	04/02/1986
AE-I-039	Safety Review of ICP/AES for Analysis of Radioactive Samples	Bowers, D., Huff, E.	ANL-CMTI-9191	09/08/1986
AE-I-040	Safety Review Alpha Particle Irradiation of Plastic Materials	Reed, D. T.; Gerding, T. J.; Seils, C. A.	ANL-CMTI-9947	11/06/1989
AE-I-041	Dissolution of Plutonium-Containing Materials Using Acid Digestion	Alma V. Stiffin	NBL-SP-Pu-1	Revision 2, 12/13/1999
AE-I-042	Safety Review of Remote Preparation of Radioactive Glass Samples in the Senior Cave	Hoh, J., Gerding. T.	ANL-CMTI-9988	01/16/1990
AE-I-043	Dissolution of Plutonium-Containing Materials Using Sodium Bisulfate Fusion	Alma V. Stiffin	NBL-SP-Pu-3	Revision 2, 12/13/1999
AE-I-044	Safety Review for Processing NBL Waste Solutions in G-134 and G-117	Chamberlain, D.B.	ANL-CMTI-10118	09/14/1989
AE-I-045	Dissolution of Plutonium-Containing Materials Using Sodium Carbonate Fusion	Alma V. Stiffin	NBL-SP-Pu-3.1	Revision 2, 12/13/1999
AE-I-046	Safety Review for the Gas Generation Studies in Support of the WIPP	Reed. D., Okajima, S.	ANL-CMTI-10.151	10/01/1990
AE-I-047	Safety Review Stripping Salt Previously Used in the Box 1 Electrorefiner in G-118	Fischer, D. F., Johnson, T. R.	ANL-CMTI-10155	10/04/1990
AE-I-048	Safety Review for Furnace Demonstration Test in Building 205, G-109	Petri, M. C., Liebowta, L., Blomquist, R. A.	ANL-CMTI-10493	02/13/1992

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
AE-I-049	CMT Division Separation Science and Technology Section - January 1992	Vandergrift, G.F.	ANL-CMTI-10508	03/31/1992
AE-I-050	Revised Criticality Hazards Control Statement for IFR Fuels Reprocessing Laboratory G-118 Located in Building 205	Wolson, R.	ANL-CMTI-9256	02/01/1993
AE-I-051	Safety Review for Sealing and Opening Vials Irradiated with 60Co Irradiation Facilities - Building 205, Room X-109	Buchholz, B., Nunez, L.	ANL-CMTI-10953	08/24/1993
AE-I-052	Safety Review for CM-1725-10 VT Furnace Operations in Building 205, G109 Pu Glovebox Export Controlled Document	Petri, M.C., Leibowitz, L. Blomquist, R.A.	ANL-CMTI-10905	08/31/1993
AE-I-053	Purification of Plutonium by Anion Exchange Separation (Mini-Column)	Usha I. Narayanan	NBL-SP-Pu-4.1	Revision 3, 12/13/1999
AE-I-054	CMT Division Separation Science and Technology Section	George Vandegrift	ANL-CMTI-10999	01/05/1994
AE-I-055	Revised IFR Fuel Reprocessing Program Monthly Report - December 1993	Laidler, L.L.	ANL-CMTI-11067	01/17/1994
AE-I-056	CMT Division Separation Science and Technology Section - July 1994	G. Vendergrift	ANL-CMTI-11200	12/12/1994
AE-I-057	Preparation of Weight Aliquants of Plutonium Solutions	M. Spaletto	NBL-SP-Pu-5	Revision 3, 12/13/1999
AE-I-058	Electrolytic Cleaning and Dissolution of Plutonium Metal	M. Spaletto	NBL-SP-Pu-6	Revision 3, 12/13/1999
AE-I-059	Cleaning by Filing and Dissolution of Plutonium Metal	A. Stiffin	NBL-SP-Pu-7	Revision 3, 12/13/1999
AE-I-060	Electrodeposition of Plutonium and other Alpha-Active Actinides	A. Stiffin	NBL-SP-Pu-8	Revision 1, 12/13/1999
AE-I-061	Dissolution of Uranium Metal Samples	A. Stiffin	NBL-SP-U-2	Revision 2, 12/13/1999
AE-I-062	Dissolution of Uranium Oxides in Powder or Pellet Form	I. Frank	NBL-SP-U-3	Revision 3, 12/13/1999
AE-I-065	Dissolution of Uranium-Aluminum and Uranium-Aluminum-Silicon Alloys	Iris W. Frank	NBL-SP-U-4	Revision 2, 12/13/1999
AE-I-066	Dissolution of Uranium-Containing Scrap and Ash Samples Using Acid Leaching	Alma V. Stiffin	NBL-SP-U-5.1	Revision 1, 12/13/1999
AE-I-067	Dissolution of Uranium-Containing Materials Using Sodium Carbonate	Alma V. Stiffin	NBL-SP-U-5.2	Revision 1, 12/14/1999

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
AE-I-068	Dissolution of Pre-Product and Product Materials	Alma V. Stiffin	NBL-SP-U-7	12/14/1999
AE-I-069	Purification of Uranium and Plutonium by Anion Exchange for Mass or Alpha Spectrometric Analysis	B. Srinivasan	NBL-SP-U, Pu(1)-1	Revision 4, 12/14/1999
AE-I-070	Safety Review for Unsaturated Testing of Uranium Metal Spent Fuel in Building 205 Senior Cave and K-116 Facilities	Fortner, J.	CMT50-0118-Draft	Revision 00, 03/07/2000
AE-I-071	Safety Review of Tests with Samples of Spent Fuel in Building 205, K-104 (Senior Cave) and, in K-116, Sampling of Leachate Solutions from the Tests	Finn, P. A.	CMT50-0058-EP	Revision 01, 03/13/2000
AE-I-073	PCT Testing of Pu-Containing Glass-Bonded Sodalite in Building 205, Labs G-109 and G-133	Morss, L. R.	CMT50-0070-EP	Revision 01, 04/14/2000
AE-I-077	Packaging Procedures	NA	DDP 5.11, Section 9.0	Revision 1, 05/24/1993 through 1994
AE-I-078	Manual Determination of the Density and Specific Gravity of Uranium- and Plutonium-Containing Solutions	Khalida S. Scheidelman	NBL-SA-PP-2	Revision 2, 11/24/1999
AE-I-079	Data Sheets	Rick Lee	DPP 5.12	Revision 0, 1994
AE-I-084	Determination of Uranium by the New Brunswick Laboratory High Precision Titrimetric Method-Gravimetric Version	Anna M. Voeks	NBL-SA-U(E)-2.2	Revision 8, 12/02/1999
AE-I-089	Bagout and Packaging of Lead from Glove boxes	B. M. Pitman, P. S. Carlson	DPP 5.11	Revision 0 and 1, 01/10/1994; 01/13/1994
AE-I-096	Intra-Laboratory Memos	R. W. Rose, D. B. Black, M. J. Lineberry, D. C. Parzyck, C. L. Cheever, Tom Krause	NA	1994 through 2000
AE-I-098	Determination of Uranium by the Ignition (Gravimetric) Method	Alma V. Stiffin	NBL-SA-U(E)-5	Revision 2, 11/24/1999
AE-I-099	Determination of Micro- to Sub-microgram Quantities of Uranium Using Laser-Induced Kinetic Phosphorimetry	Paul V. Croatto	NBL-SA-U(E)-8	Revision 1, 11/24/1999
AE-I-103	Determination of Uranium and Plutonium Using Dilution Mass Spectrometry	B. Srinivasan	NBL-SA-U, Pu(E)-1	Revision 2, 12/03/1999

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
AE-I-106	Preparation of Standard Potassium Dichromate Titrant	M. Irene Spaletto	NBL-CAL-U(E)-1	Revision 6, 12/03/1999
AE-I-107	Preparation of Uranium Standard Solutions	M. Irene Spaletto	NBL-CAL-U(E)-2	Revision 5, 12/03/1999
AE-I-109	Preparation and Standardization of Potassium Dichromate Titrant	Iris W. Frank	NBL-CAL-U(E)-3	Revision 3, 12/03/1999
AE-I-110	Preparation of Uranium Spike Solution for Isotope Dilution Mass Spectrometry Analysis	Anthony J. Traina	NBL-CAL-U(EI)-1	Revision 1, 12/03/1999
AE-I-112	The Removal and Cleaning of the UF6 Mass Spectrometer Inlet System Cold Traps	Paul V. Croatto	NBL-S-U-3	Revision 1, 12/02/1999
AE-I-115	Operation of the Buehler Abrasive Cutter for Cutting Uranium Metals of Less Than 3% U-235 Enrichment	Glennda J. Oriowicz	NBL-SP-U-9	Revision 2, 12/14/1999
AE-I-117	Purification of Uranium for Mass Spectrometric Analysis	Alma V. Stiffin	NBL-SP-U-(I)-1	Revision 3, 12/14/1999
AE-I-121	Determination of Uranium in Solids, Sediments, and Sludges	Alice M. Essling, Donald G. Graczyk	SOP: ACL-032	Revision 01, 01/30/1987
AE-I-124	Sample Preparation and Separation of Pu, Th, and Am from Solid (Soils, Sediments, Sweepings) and Liquid (Waters, Milk) Environmental Samples for Analysis by Alpha-Spectrometry	L. B. Gillis, F. Markin, L. L. Wetter	SOP: ACL-031	Revision 6, 03/25/1993
AE-I-126	Standard Operating Procedure: Sample Preparation by Total Dissolution and Separation of Thorium, Plutonium, and Americium from Solid Environmental Samples for Analysis by Alpha-Spectrometry	Lesa L. Wetter	SOP: ACL-130	Revision 00, 04/08/1988
AE-I-128	Standard Operating Procedure Gross Alpha and Beta Radioactivity	Richard B. Holtzman, W. Elane Streets	SOP: ACL-095	Revision 01, 01/10/1992
AE-I-130	Standard Operating Procedure: Cleaning of Mixed Waste Glassware	Kathleen J. Parish	SOP: ACL-178	Revision 00, 10/26/1992
AE-I-131	Standard Operating Procedure: Volatile Organic Analysis for Mixed Waste	Laura L. Lamoureux	SOP: ACL-176	Revision 00, 10/26/1992
AE-I-132	Standard Operating Procedure: Gross Alpha/Beta Analysis of Soil and Sediment Samples by High-Pressure Microwave Digestion	Judith S. Yaeger, Lesa L. Smith	SOP: ACL-201	Revision 00, 05/08/1995
AE-I-134	Standard Operating Procedure: Separation of Plutonium, Thorium, Americium, and Uranium from Environmental Samples Utilizing Extraction Chromatography and Anion Exchange Chromatography	Judith S. Yaeger, Lesa L. Smith	SOP: ACL-165	Revision 03, 06/25/1996

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
AE-I-135	Standard Operating Procedure: Preconcentration and Determination of Actinides in Soil Samples Using Diphonix TM Resin and a NaOH Total Dissolution	Judith S. Yaeger and Lesa L. Smith	SOP: ACL-204	Revision 01, 11/19/1998
AE-I-140	Standard Operating Procedure Sample Preparation and Separation of Plutonium, Americium, Uranium, and Strontium from Air Filters	TonyTenKate, Lesa L. Wetter	SOP: ACL-132	Revision 00, 04/05/1988
AE-I-141	Standard Operating Procedure: Determination of Uranium in Soils, Sediments, and Sludges by Kinetic Phosphorimetry	Alice M. Essling	SOP: ACL-143	Revision 00, 05/16/1990
AE-I-142	Standard Operating Procedure: Determination of Uranium in Waters by Kinetic Phosphorimetry	Alice M. Essling	SOP: ACL-144	Revision 00, 05/24/1990
AE-I-143	Standard Operating Procedure: Determination of Uranium in Rocky Flats Soils, Sediments, and Sludges by Kinetic Phosphorimetry	Alice M. Essling	SOP: ACL-148	Revision 01, 02/11/1991
AE-I-146	Standard Operating Procedure: Radium-226 and Radium-228 Determination in Water and Soil Samples Using NaI Detector and Least Squares Processing of Data	Francis Markun	SOP: ACL-108	Revision 03, 11/17/1998
AE-I-147	Standard Operating Procedure: Determination of Strontium in Environmental Samples Utilizing Extraction Chromatography	Judith S. Yeager, Lesa L. Smith	SOP: ACL-167	Revision 05, 01/26/1996
AE-I-148	Standard Operating Procedure: Sample Preparation for Semivolatiles in Liquid Mixed Waste Using Continuous Liquid-Liquid Extraction	Stephen D. Kent	SOP: ACL-175	Revision 01, 09/29/1994
AE-I-149	Standard Operating Procedure: Determination of Strontium in Environmental Water Samples	Lesa L. Wetter	SOP: ACL-113	Revision 01, 07/31/1987
AE-I-150	Standard Operating Procedure: Determination of Strontium in Environmental Soils and Vegetations	Lesa L. Wetter	SOP: ACL-117	Revision 00, 07/31/1987
AE-I-151	Standard Operating Procedure: Determination of Technetium-99 in Environmental Samples	Francis Markun, Lesa L. Wetter	SOP: ACL-124	Revision 01, 10/23/1987
AE-I-156	Document Discrepancy - AE-D-4	ANL-Environmental Management Operations	NA	Revision 0-3, 02/1995-02/05/1997
AE-I-160	Waste Disposal Requisition Process	Lachman, M. M.	NBL-SOP-ESH-4	Revision 1, 12/1994
AE-I-165	Transfer Request to Building 205 of Waste Pails 288636; 289722; 289777; 288570; and 289771	D. B. Chamberlain, et al	NA	03/18/1991
AE-I-181	Basic and Applied Studies in Liquid-Liquid Extraction, Ion Exchange, and Extraction Chromatography	Kenneth L. Nash, Seth Snyder	PRD Number: KLN-2	Revision 1, 06/02/2000
AE-I-182	Novel Liquid-Liquid Extraction and Extraction Chromatographic Systems for the Separation and Preconcentration of Radionuclides	Dietz, Mark L. and Cafasso, Fred A.	KLN-1	11/01/1996

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
AE-I-183	Basic and Applied Studies in Liquid-Liquid Extraction and Ion Exchange	Chemistry Division; Chemical Separations; Argonne National Laboratory	PRD Number: KLN-2	11/05/1996
AE-I-184	Characterization of New Chelating Agents	Chemistry Division; Heavy Elements Coordination Chemistry; Argonne National Laboratory	PRD Number: KLN-3	11/05/1996
AE-I-186	Two-Stage Molecular Agents	Chemistry Division; Chemical Separations; Argonne National Laboratory	PRD Number: KLN-5	11/21/1996
AE-I-187	Synthesis of Compounds for Chemical Separations	Chemistry Division; Chemical Separations Science; Argonne National Laboratory	PRD Number: MLD-1	04/07/1998
AE-I-188	Determination of Waste Generated in Buildings 108, 202, 203, 206, 223, 306, 315 and 331	N/A	NA	N/A
AE-I-191	Evaluation of Chemicals Used by New Brunswick Laboratory	N/A	NA	N/A
AE-I-192	Evaluation of Chemicals used by the Analytical Chemical Laboratory	N/A	NA	N/A
AE-I-193	Evaluation of Chemicals used by the Chemistry Division	NA	NA	NA
AE-I-195	ANLE-AK-Files	NA	NA	7/18/2002
AE-I-199	Attachment 12 - Acceptable Knowledge Re-evaluation Checklist, CCP-TP-005, Rev.6	Ben Gutierrez/ Tom Krause	Attachment 12	09/04/2002
AE-I-201	Radiological properties worksheets	N/A	NA	None
AE-P-002	Building 212 Glove Box Decontamination & Decommissioning Project, Glove Box Detailed Description Document	R. E. Nietert	Bldg. 212 DDD	Revision 0, 08/31/1992
AE-P-003	Building 212 D Wing Glove Box Project, Project Management Plan, Quality Assurance Plan	P. S. Carlson, W. E. Stacy	78016-4A-02	Revision 0, 07/14/1993

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
AE-P-005	Decontamination and Decommissioning of 61 Plutonium Gloveboxes in D-Wing, Building 212, Argonne National Laboratory-East: Final Project Report	C.L. Cheever, R.W. Rose	ANL/D&D/TM-96/3	09/01/1996(?)
AE-P-006	Revision II (Final) to the Argonne National Laboratory - East RCRA Part B Permit Application IL3 890 008 946	ANL-E Env Mgt Ops	D303-101-W-T011	Revision II (Final), 08/20/1996
AE-P-007	Addendum to the Revision II to the Argonne National Laboratory - East RCRA Part B Permit Application IL3 890 008 946 (Addendum 1)	ANL-E Env Mgt Ops	D303-101-W-T011-A1	Revision (II) Addendum, 12/05/1995
AE-P-008	Update and Modification of the Argonne National Laboratory - East (ANL-E) Resource Conservation and Recovery Act Part B Permit Application	G. Kulma	D303-101-W-T011	Revision II (Update/modification), 08/14/1998
AE-P-009	RCRA Part B Permit Issued to Department of Energy Argonne National Laboratory - East Facility	Illinois EPA	IL3890008946	09/30/1997
AE-P-010	RCRA Part B Permit issued to DOE ANL-E Facility, Modification 1	Illinois EPA	IL3890008946	02/08/1999
AE-P-011	Waste Handling Procedures Manual	WMO Department	NA	Revision 6, 05/26/2000
AE-P-012	Waste Handling Procedures Manual (Chapter 1-4 and Section II)	WMO	NA	Revision 3, 07/1998
AE-P-013	Waste Management Handling Procedures Manual; Sections 11-13, Radioactive Wastes	Waste Management Operations Department	WMHPM-0011 - 0013	Revision 2, 02/1994
AE-P-014	Waste Management Handling Procedures Manual; Section 4, Waste Acceptance Quality Assurance Criteria	Waste Management Operations Department	WMHPM 0004	Revision 1, 08/1993
AE-P-015	Radioactive Wastes - Radioactive Solid and Liquid Waste Containment, Special Treatment, and Segregation Requirements	Waste Management Operations	WMHPM-0012	Revision 2, 02/1992
AE-P-016	Waste Management Handling Procedures Manual; Appendix A, Radioactive Waste Disposal Requisitions	Waste Management Operations Department	WMHPM-APOA	Revision 1, 07/1991

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
AE-P-017	Waste Management Handling Procedures Manual, Sections 11,12,14, 15, and Appendix A	Waste Handling Operations Department	NA	Revision 1, 06/26/1991
AE-P-018	Waste Management Handling Procedures Manual, Sections 4, 11-15, Appendices A, C-D	Plant Facilities and Services, Waste Management, Building 215 Waste Handling Procedures Manual	NA	Revision 0, 01/1991
AE-P-019	Waste Management Handling Procedures Manual, Radioactive Wastes sections 11, 12, 13, 14, 15, Appendices A, C, D	Waste Management Operations Department	NA	09/1989
AE-P-020	Waste Management Handling Procedures Manual, Appendix V, Waste Analysis Plan	Waste Management Operations Department	NA	09/1991
AE-P-022	Basic Research in the Mission Agencies	National Science Board	NA	1978
AE-P-023	FY 1995 Budget - Atomic Energy Defense Activities	Federation of American Scientists	Q94AC193	05/03/1994
AE-P-024	Naval Reactors , Arms Control Office of Intelligence, Questions and Answers.	Federation of American Scientists	Q92AF105	03/11/1992
AE-P-025	U.S. Nuclear Weapons Research, Development , Testing, and Production, and Naval Nuclear Propulsion Facilities	Stephen I. Schwartz	NA	10/12/1999
AE-P-026	Department of Energy FY'99 Congressional Budget Table	DOE	TZRP41	03/06/1998
AE-P-027	Frontiers: Research Highlights 1946-1996	Argonne National Laboratory	NA	1996
AE-P-028	A Brief History of Materials R&D at Argonne National Laboratory from the Met Lab to Circa 1995	Brian R.T. Frost	NA	09/03/1996
AE-P-029	Materials and Components Technology Division Research Summary - 1987	R.W. Weeks	NA	11/1987
AE-P-030	Materials, Science and Technology Division Annual Review - 1983	B.R.T. Frost	NA	08/1983

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
AE-P-031	Materials Science and Technology Division Annual Review-1982	B.R.T. Frost	NA	11/1982
AE-P-032	Annual Progress Report for 1965 Metallurgy Division	Frank G. Foote	ANL-7155	1965
AE-P-033	Annual Progress Report for 1964 Metallurgy Division	Frank G. Foote	ANL-7000	1964
AE-P-034	Annual Report for 1963 Metallurgy Division	Frank G. Foote	ANL-6868	1963
AE-P-035	Annual Report for 1962 Metallurgy Division	Frank G. Foote	ANL-6677	1962
AE-P-036	Annual Report for 1961 Metallurgy Division	Frank G. Foote	ANL-6516	1961
AE-P-037	Annual Report for 1958 Metallurgy Division	Franke G. Foote	ANL-5975	03/1959
AE-P-038	Criticality Hazards Control Building 212, Wing D, Special Facility FD12, Materials Science Division	A.G. Hins	M0001-0006-Sp-01	Revision 4, 02/22/1979
AE-P-039	Unofficial: Experiment Breeder Reactor-II (EBR-II)	Argonne National Laboratory	NA	06/08/2000
AE-P-040	Metal Cooled Reactors	Joseph Gonyeau	NA	08/28/1999
AE-P-041	Liquid Metal Fast Breeder; Right Answer, Wrong Question	Adams Atomic Engines	NA	10/1995
AE-P-042	Application of Advanced Liquid Metal Reactors to the Destruction of Radioactive Wastes	R.A. Karnesky, et al	WHC-SA-1075	08/1991
AE-P-043	The Liquid Metal Fast Breeder Reactor: Promises and Uncertainties	Energy Research and Development Administration	NA	07/31/1975
AE-P-044	Safety Analysis Report - New Brunswick Laboratory	Mason, Robert A	None	10/1990
AE-P-045	Draft Safety Analysis Report - New Brunswick Laboratory	Dallmann, D. Eric	None	Draft, 01/2000
AE-P-047	The Integral Fast Reactor - A Practical Approach to Waste Management	James J. Laidler	NA	09/28/1993
AE-P-048	Management of Transuranics Using the Integral Fast Reactor (IFR) Fuel Cycle	David C. Wade	NA	01/23/1994
AE-P-049	Safeguards Operations in the Integral Fast Reactor Fuel Cycle	K. Michael Goff	NA	08/1994
AE-P-050	Integral Fast Reactor	UC-Berkeley	NA	06/07/2000
AE-P-051	Proliferation Resistance of the Fuel Cycle for the Integral Fast Reactor	Leslie Burris	NA	09/12/1993

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
AE-P-052	Spacelift 2025: The Supporting Pillar for Space Superiority	Henry D. Baird, et al	NA	08/1996
AE-P-053	Nuclear Thermal Propulsion	Federation of American Scientists	NA	06/08/2000
AE-P-054	Safety Analysis Report Building 205 G-Wing and K-Wing Laboratories	Kot, C. A., Srinvasan, M. G.	CMT-30-0470	Revs 1 and 2, 11/14/1996
AE-P-055	Chemical Technology Division Annual Technical Report 1997	Chemical Technology Division	ANL-98/13	06/01/1998
AE-P-056	Chemical Technology Division Annual Technical Report 1998	Chemical Technology Division	ANL-99/10	07/01/1999
AE-P-057	Chemical Technology Division Annual Technical Report 1982	Chemical Technology Division	ANL-83-55	07/01/1983
AE-P-058	Chemical Technology Division Annual Technical Report 1983	Chemical Technology Division	ANL-84-26	04/01/1984
AE-P-059	Chemical Technology Division Annual Technical Report 1984	Chemical Technology Division	ANL-85-9	02/01/1985
AE-P-060	Chemical Technology Division Annual Technical Report 1987	Chemical Technology Division	ANL-88-19	05/01/1988
AE-P-061	Chemical Technology Division Annual Technical Report 1989	Chemical Technology Division	ANL-90/11	03/01/1990
AE-P-062	Chemical Technology Division Annual Technical Report 1986	Chemical Technology Division	ANL-87-19	06/01/1987
AE-P-063	Chemical Technology Division Annual Technical Report 1990	Chemical Technology Division	ANL-91/18	05/01/1991
AE-P-064	Chemical Technology Division Annual Technical Report 1991	Chemical Technology Division	ANL-92/15	03/01/1992
AE-P-065	Chemical Technology Division Annual Technical Report 1992	Chemical Technology Division	ANL-93/17	06/01/1993
AE-P-066	Chemical Technology Division Annual Technical Report 1993	Chemical Technology Division	ANL-94/15	04/01/1994
AE-P-067	Chemical Technology Division Annual Technical Report 1995	ANL-E	ANL-96/10	06/01/1996

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
AE-P-070	TRU Waste Baseline Inventory Waste Profile	CAO Technical Assistance Contractor	DOE/CAO-95-1121	12/1995
AE-P-071	Institutional PLAN FY 1980-FY 1985	ANL	NA	12/1979
AE-P-072	Institutional Plan August 1980	Argonne National Laboratory	NA	08/1980
AE-P-073	Institutional Plan FY 1983 - FY 1988	ANL	NA	11/1982
AE-P-074	Institutional Plan FY 1984-FY 1989	ANL	NA	11/1983
AE-P-075	Institutional Plan FY 1985-1990	ANL	NA	11/1984
AE-P-076	Institutional Plan FY 1986 - FY 1991	ANL	NA	11/1985
AE-P-077	Institutional Plan FY 1987 - FY 1992	ANL	NA	12/1986
AE-P-078	Institutional Plan FY 1988 - FY 1993	ANL	NA	12/1987
AE-P-079	Institutional Plan FY 1989 - FY 1994	ANL	NA	12/1988
AE-P-080	Institutional Plan FY 1990 - FY 1995	ANL	NA	11/1989
AE-P-081	Institutional Plan FY 1991 - FY 1996	ANL	NA	11/1990
AE-P-082	Institutional Plan FY 1992 - FY 1997	ANL	NA	11/1991
AE-P-083	Institutional Plan (FY 1993 - FY 1998)	ANL	NA	08/1992
AE-P-084	Institutional Plan FY 1994 - FY 1999	ANL	NA	09/1993
AE-P-085	Institutional Plan FY 1995 - FY 2000	ANL	NA	10/1994
AE-P-086	Institutional Plan	NA	NA	09/07/2000
AE-P-087	Institutional Plan (FY 1998 - FY 2003)	ANL	NA	07/1997
AE-P-088	Institutional Plan (1999-2004)	ANL	NA	10/1998
AE-P-089	Institutional Plan FY 2000-FY 2005	ANL	NA	10/1999
AE-P-090	Argonne National Laboratory - East Site and Location Map	ANL-E	ANL-133	03/1997

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
AE-P-092	Quality Assurance Plan for ANL-E Waste Management Department	WMO	WMD-QA-01	Revision 11, 08/1999
AE-P-093	Quality Assurance Plan for ANL-E Waste Management Department	WMO	WMD-QA-01	Revision 8, 04/1996
AE-P-094	Quality Assurance Plan for ANL Waste Management Department	WM Dept	J0306-0007-SA-05	Revision 5, 01/1991
AE-P-095	Waste Operations Operating Manual	ANL-E Waste Management Operations	NA	Revision 1, 08/02/1999
AE-P-096	Container Management Practices (Chapter 2.12 of Waste Management Operating Procedures Manual)	ANL- Waste Management Operations	NA	Revision 0-3, 07/1998-05/05/2000
AE-P-097	Waste Management Operating Procedures Manual; Historic Chapter 4.5	Waste Management Operations Department	NA	Revision 0 to 5, 01/1991 to 01/2000
AE-P-098	Waste Management Operating Procedures Manual; Historic Chapter 4.16	Waste Management Operations Department	NA	01/1994 to 09/1995
AE-P-099	Waste Management Operating Procedures Manuel : historic Addendum 4 B	ANL-E Enviorment Management Operations	NA	07/23/1996
AE-P-100	Waste Management Operating Procedures Manual, Historic Attachment 9.1A	Waste Management Operations Dept.	NA	Revision 0, 4, 02/05/1997 to 11/16/1999
AE-P-101	Waste Management Operating Procedures Manual; Historic Chapter 9.12	Waste Management Operations Department	NA	Revision 0, 2, 08/1997 to 07/1998
AE-P-102	Waste Management Operating Procedures Manual; Historic Chapter 9.15	Waste Management Operations Department	NA	Revision 0 to 1, 05/1999 to 08/1999

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
AE-P-103	Waste Management Operating Procedures Manual; Historic Chapter 12.1	Waste Management Operations Department	NA	12/1995 to 05/2000
AE-P-104	Building 212 D-Wing Glove Box D&D Project Plan	P. S. Carlson, B. M. Pitman	78016-4A-01	Revision 0, 11/06/1993
AE-P-105	New Brunswick Laboratory ESH Manual, Chapter V, Section I, "Waste Management"	Mansfield, C. L.	NA	Revision 1, 06/2000
AE-P-106	Alpha-Gamma Hot Cell Facility (AGHCF) Safety Analysis Report	ANL-E/Energy Technology Division	IPS-221-00-0	Revision 0, 01/30/1998
AE-P-107	Surveys of Research in the Chemistry Division - 1988	Leon M. Stock, Fred A. Cafasso	NA	1988
AE-P-108	Surveys of Research in the Chemistry Division-1990	Leon M. Stock, Fred A. Cafasso	NA	1990
AE-P-109	Surveys of Research in the Chemistry Division - 1992	L. Stock, F. Cafasso	NA	1992
AE-P-110	Surveys of Research in the Chemistry Division - 1994	Leon M. Stock, Fred A. Cafasso	NA	1994
AE-P-111	Chemical Sciences KC-03 Program Budget - Fiscal Years 1997, 1988, and 1999	ANL-E/Chemistry Division	NA	04/1997
AE-P-112	Environmental Management (Defense Funds) Field Work Proposals - Fiscal Years 2000, 2001, and 2002	ANL-E	NA	04/2000
AE-P-113	Final Report for the Light Water Breeder Reactor Proof-of-Breeding Analytical Support Project	D.G. Graczyk, et al	ANL-87-2	05/1987
AE-P-115	About Yucca Mountain	EPA	NA	08/2000
AE-P-116	Bettis Atomic Power Laboratory	BAPL	NA	07/2000
AE-P-117	History; INEEL	INEEL	NA	08/2000
AE-P-118	SRS Mission and Vision	SRS	NA	08/2000
AE-P-119	About Sandia	SNL	NA	08/2000
AE-P-120	Los Alamos National Laboratory Mission	LANL	NA	08/2000
AE-P-121	Oak Ridge National Laboratory; About ORNL	ORNL	NA	08/2000

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
AE-P-122	Creating the Laboratory's Future (LLNL)	LLNL	NA	08/2000
AE-P-123	Hanford; Welcome to Hanford	Hanford Site	NA	08/2000
AE-P-124	Chemical Technology Division; Vision, Mission, and Management Philosophy of CMT	CMT	NA	09/18/2000
AE-P-125	Chemistry Division; Strategic Research at the Frontiers of Chemistry	ANL-E/CHM	NA	08/24/2000
AE-P-129	Defense Waste Guidance	Don Watkins, Manager National TRU Program	CAO:NTP:MRB 96-2236	10/09/1996
AE-U-1	RCRA Part A Application for ANL-E	DOE/Argonne	NA	12/18/1995
AE-U-2	Hazardous Waste Permit Application Part A (for ANL-E)	DOE/Arogonne	NA	12/19/1990
AE-U-5	General Description of Building 200	A. Youngs	NA	08/14/2000
C001	Fax to Larry Neimark re: Defense versus Non-Defense Waste	Gary Marshall	n/a	n/a, 01/21/1997
C004	Intra-Laboratory Memo to R. S. Wisner, HFEF re: Estimates of Total AGHCF Inventory for Future Shipments to ANL-W	A. B. Cohen, Manager, AGHCF	n/a	n/a, 04/24/1995
C006	Interview with Larry Neimark re: AGHCF samples, applicable programs, defense relationship to materials, and commingling of waste	Cheryl Schultz	Record of Communication:ROC-C6	n/a, 07/17/2001
C007	Correspondence to L. A. Neimark, Manager, IP Section re: Assessment of Nuclear Materials Inventory, Fissile Inventory Records and Handling Procedures in FF12	A. G. Hins, CSR, Special Facility FF12	n/a	n/a, 03/13/1991
C008	Intra-Laboratory Memo to J. V. Natale, SPM re: TRU Scrap Shipment No. 4, SPM-43 No. CZC-168	W. D. Jackson, MSD	n/a	n/a, 06/05/1975
C009	Intra-Laboratory Memo to W. D. Jackson, MCT/ANL-E, re: Fissile Scrap and Irradiated Structural Materials Waste Shipments from ANL-E to ANL-W for retrievable Storage in the RSWF	L.C. Witbeck	L-W-SSS-(LCW)-88-146	n/a, 11/17/1988
C011	Intra-Laboratory Memo to D. A. Donahue, MCT, re: Work Plan for the Examination of LILY-1 and LILY-1A Speciments	L. A. Neimark, MCT	n/a	n/a, 11/28/1988
C012	Intra-Laboratory Memo to Operations Personnel re: Facility Nitrogen Purge Change and Storage of Flammable Liquids	D. A. Donahue	n/a	n/a, 04/09/1990
C013	Correspondence to Mr. E. M. King, Oak Ridge National Laboratory re: Radioactive Waste Categories	L. A. Neimark	n/a	n/a, 04/10/1974

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
C014	Correspondence to A. Cohen re: Process and Procedure with all and WMO for Sampling 1st Stage HEPA Filters. Description-8'x8'x3' w/ 5/8' Wood Frame Ultra Aire - MSA	F. Pausche	n/a	n/a, 04/22/1995
C016	Intra-Laboratory Memo to C. E. Crouthamel, CMT, and M. J. Steindler, CMT re: LWR Hot-Cell Capability at ANL-E: The D-200 M-Wing Situation	L. A. Neimark, MST	n/a	n/a, 05/03/1985
C020	Intra-Laboratory Memo to Environmental Compliance Representatives re: Photo Processing Solutions - Waste Characterization	R. G. Kolzow, ESH/QA Oversight; J. R. Thuot, PFS/WMO	n/a	n/a, 12/19/1990
C023	Intra-Laboratory Memo to M. J. Ryan, SEC re: Potentially Hazardous Materials in "Operational Clean Sweep"	L. A. Neimark, MST	n/a	n/a, 03/21/1983
C025	Correspondance to D. A. Donahue re: Transfer of Special Materials from G-118 Glovebox 3 to Building 212 Caves	M. A. Vest, CMT	n/a	n/a, 09/16/1994
C026	Intra-Laboratory Memo to Melanie Tompkins re: Annual Forecast for Waste Management Operations-94	Aubrey C. Smith, Manager, Bldg. 212	n/a	n/a, 08/31/1993
C029	Letter re: Survey of Waste Streams in Building 212	Noreen Kevin, W. H. Livernash	n/a	n/a, 05/31/1988
C035	Intra-Laboratory Memo to Distribution re: Management of Broken Fluorescent Lamps	J. Herman, PFS-WMO	n/a	n/a, 02/02/1999
C036	Letter to Sheldon Meyers, re: Disposition of TRU from LWR Program: Documentation of Agreements Reached in August 15, 1980 Meeting	Robert H. Bauer	n/a	n/a, 09/09/1980
C039	Intra-Laboratory Memo to L. A. Neimark re: Procedure for Disposal of "Clean Sweep" Pyrophoric Waste	W. D. Jackson	n/a	n/a, 09/06/1983
C046	Intra-Laboratory Memo to D. C. Parzyck re: DOE request for Information Regarding Materials Not Classified as Waste	AUBREY C. Smith, MCT/MSD Environmental Compliance	n/a	n/a, 03/13/1991
C066	Record of Communication with Bill Kettman and Dennis Donahue, AGHCF re: AGHCF Operations and Waste Packaging	J. Whitworth, M. Wyco	n/a	n/a, 08/07/2001
C068	Correspondnece to Craig R. Tyler, Lockheed Martin Idaho Technologies Co. re: ANL Transuranic Waste - Definition as Defense Waste	D. S. Kirschner, Manager, Radiation, Fire and Safety	n/a	n/a, 04/16/1997

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
C073	Letter to Ms. Trisha Dedik, Director, International Policy and Analysis Division, NN-42, U.S. Department of Energy re: Transmittal of ANL Quarterly Reports	Armando Travelli, Manager, RERTR Program	n/a	n/a, 01/15/2001
C074	Letter to Mr. Hilary Rauch, Manager, U.S. Department of Energy re: "TREAT Experiment Program"	R. Avery, Director, Reactor Analysis and Safety Division	2694	n/a, 04/04/1985
C081	Intra-Laboratory Memo to Larry Neimark, ET re: Use of Carbon Tetrachloride in Alpha Gamma Hot Cell Facility (AGHCF) Experiments	Judd Johnson, EWM/WMTS	n/a	n/a, 09/02/1994
C082	Fax to Ray Lang, DOE-CH re: ANL-E fuel Pins	L. A. Neimark	n/a	n/a, 05/20/1993
C088	Correspondance to Mr. W. M. Heileson, Waste Generator Interface, EG&G Idaho, Inc. re: Content of ANL-E RHTRU Drums Stored at INEL	L. A. Neimark, Energy Technology Division	n/a	n/a, 06/17/1994
C091	Correspondance to W. Mahlon Heilson, Waste Management, RWMC Technical Support, EG&G Idaho, Inc. re: Lead in Remote Handled Transuranic Wste Stored at Idaho National Engineering Laboratory (INEL)	Judd F. Johnson, Mixed Waste Specialist, Environment and Waste Management Program	n/a	n/a, 07/18/1994
C092	Intra-Laboratory Memo to J. L. Hooper, DOE (ARG) re: Experimental Fuel Segments in the AGHCF	L. A. Neimark, ANL (ET)	n/a	n/a, 06/07/1996
C094	Correspondance to L.Neimark, Materials & Components Technology re: Metallogrphic Samples	J. E. Battles, Chemical Technology Division and Z. Tomczuk, Chemical Technology Division	n/a	n/a, 06/13/1990
C103	Intra-Laboratory Memo to C. A. DeLorenzo, OOS re: Safety Analysis for Handling Tritium-containing Compounds in the AGHCF	L. A. Neimark, MST	n/a	n/a, 05/30/1984
C106	Email to Whitworth, Julia re: Exploding Drum at ANL	Terri S Bray [tbray@pop.et.anl.gov]	n/a	n/a, 08/30/2001

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
C108	Correspondance to Mr. J. T. Case, U.S. Department of Energy, Idaho Field Office re: Strategy Plan for Long-term Management and Storage of Remote-handled (RH) Transuranic (TRU) Waste - TLC-224-92	T. L. Clements, Jr., Manager Transuranic Waste Programs	TLC-224-92	n/a, 11/30/1992
C115	Intra-Laboratory Memo to W. H. Kline, Waste Management Coordinator re: Waste Packaging Criteria, Transuranic Waste, Idaho National Engineering Laboratory, Revision 1, IDO-10074	W. D. Jackson, Alpha-Gamma Hot Cell Facility, Supervisor	IDO-10074	n/a, 11/01/1979
C116	Fax to M. Heileson re: Pelletized Clay	Judd Johnson	n/a	n/a, 11/20/1995
C118	Intra-Laboratory Memo to A. C. Smith, PFS re: Chemical Forms in AGHCF Transuranic Wastes	L. A. Neimark, MCT	n/a	n/a, 04/12/1989
C124	Fax to Mark Wyco and Larry Neimark, ANL-E re: Request for ANL-E to Identify Items of ANL-W Origin	Julia Whitworth, IT Corporation	n/a	n/a, 02/21/2002
C125	Intra-Laboratory Memo to Steve Gehl, MSD re: Burnup on LWR Samples	E. R. Ebersole, AL-AW	n/a	n/a, 10/22/1975
C128	Intra-Laboratory Memo to Distribution re: Revised Procedure for Determining Specimen Density by Immersion, Operations Manual Section 7.21	L. A. Neimark, Manager, IPS	00 No. 41	n/a, 03/13/1995
C130	Intra-Laboratory Memo to Waste Handling Procedures Manual Holders re: Packaging of Intermediate Level* Radioactive Waste for Disposal (Liquids)	C. L. Cheever, Acting Waste Management Coordinator	n/a	n/a, 09/12/1979
C137	Email to Douglas W. Parker re: RH TRU Waste	Julia Whitworth	n/a	n/a, 03/06/2002
C138	Intra-Laboratory Memo to Distribution re: Hot-cell Survey	L. A. Neimark, MSD	ANL-26 (11-68)	n/a, 08/20/1973
C143	FAX to Cheryl Schulz re: Information on AGHCF Mercury Vapor Lamps and Lighting Fixtures	Geneine Staymates	n/a	n/a, 03/10/2003
C147	Letter to Mr. John M. Schaffer, Project Director, RWMC Completion Project, Bechtel BWXT Idaho, LLC re: Additional Information to Complete Actions Associated with Preexisting Condition (PEC) 316 - Argonne National Laboratory-East (ANL-E) Transuranic Waste	Edward J. Ziemianski, Director, Waste Management Division, Department of Energy, Idaho Operations Office	EM-WM-03-055	n/a, 04/09/2003

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
C148	Interview of Terri Bray, ANL-E AGHCF Manager re: Lead Solder and First Stage HEPA Filters	Cheryl Schulz	ITC-POP-828599-01 ITC-POP-828599-01 n/a	n/a, 09/01/2001
C152	Intra-Laboratory Memo to D.A. Donahue, MCT/IPS re: Work Plan for the Examination of LILAC Target No.19 for Battelle Pacific Northwest Laboratories	L. A. Neimark, MCT/IPS	IPS-46-00-00	n/a, 05/03/1991
C155	Intra-Laboratory Memo to D. A. Donahue MCT re: Work Plan for the Preparation of Specimens for NPR Tests MA-2, -3, and -4	L.A. Neimark	IPS-27-00-00	n/a, 09/20/1990
C157	Intra-Laborataory Memo to L. Neimark MCT re: Test Specification and Operating Procedure for NPR Tests ALCL-1 and -2.	Terri Shearer, MCT	IPS-49-00-00	n/a, 05/29/1991
C158	Inter-Laboratory Memo to ANL-E Environmental Compliance Representatives re: Illinois Environmental Protection Agency (EPA) Air Pollution Control Permit Applications	D. C. Parzyck, Director, Quality Assurance, Environment & Safety	ANL-26 (11-68)	n/a, 10/22/1990
C160	Fax Memo to Mahlon Heileson, LITCO/RWMC re: Underlying Hazardous Constituents Waste Stream ANL212951004T	Judd Johnson, ANL/Waste Management	n/a	n/a, 11/20/1995
C2002	Memo to Dr. Frank Y. Fradin, Safety Analysis Report (SAR) Revision 02 and Technical Safety Requirements (TSRs) Revision 01 for the Argonne National Laboratory - East (ANL-E) Building 205 G & K Wing Laboratories	Timothy S. Crawford	0898-016	NA, 08/07/1998
C2003	Memo from Robert C. Wunderlich to Dr. Hermann A. Grunder regarding Approval of the Safety Analysis Report (SAR) Revision 04 and the Technical Safety Requirements Revision 03 for Building 205 G-Wing and K-Wing Laboratories	Robert C. Wunderlich	0103-080	NA, 01/23/2003
C2004	Safety Review for Unsaturated Testing of Uranium Metal Spent Fuel in Bldg. 205 Senior Cave and K-116 Facilities	J. Fortner	CMT50-0118-Draft	Rev. 00, 03/07/2009
C2005	Safety Review of Tests with Samples of Spent Fuel in Bldg. 205, K-104 (Senior Cave) and, in K-116, Sampling of Leachate Solutions from the Tests	P. A. Finn	CMT50-0058-EP	1, 03/13/2000
C2006	Work Plan for the Preparation of Unirradiated Al-clad Specimens for CMT	T. S. Bray	IPS-329-00-00	NA, 12/02/1999
C2007	Work Plan for the Preparation of Specimens from the Characterization of Pins UW02010 (A/G 498A) and UW08036 (A/G 498B)	L.A.Neimark	IPS-284-00-00	NA, 06/17/1998

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
C2008	Interview of D. Pancake, D. Hodge, J. Emery, L. Maggos, and J. Mackin regarding Waste Handling practices, use of chemicals, time periods of waste generation for K-Wing hot cells, Bldg.205	Kevin Peters	NA	NA, 09/18/2009
C2009	Communication from Laura E. Maggos to Judith Stewart regarding 205 K-Wing - contactor cleaning solutions	Laura E. Maggos	NA	NA, 08/12/2009
C2010	Evaluation of the Physical Waste Composition for K-Wing Waste in Waste Stream AERHDM.	Christopher Chancellor	NA	NA, 09/24/2009
C2011	ANL Memo to R.J. Page re: Estimating Mass and Radioactivity for EBR-2 Element Segments Stored in Building 212 - More Numbers	K.N Grimm	NA	NA, 04/22/2008
C2022	ANL Memo to R.J. Page re: Pu-241/Am-241 Cooling Effects for EBR-2 Element T473	K.N Grimm	NA	NA, 01/25/2007
C2023	ANL Memo to R.J. Page re: Estimating Mass and Radioactivity for FFTF Element Segments Stored in Building 212 - More Numbers	K.N Grimm	NA	NA, 03/26/2008
C2024	ANL Memo to R.J. Page re: Estimating Mass and Radioactivity for EBR-2 and PFR Element Segments from the TREAT Facility Stored in Building 212 - More Numbers	K.N Grimm	NA	NA, 03/25/2008
C3001	Email from David Adkins re: CH-TRU Waste Packaging and Bag Closure	David Adkins	NA	03/18/2010
C3002	Evaluation of Waste Material Parameter Weights for Waste Streams AECHDM-PK and AECHHM-PK	Kevin Peters	NA	03/23/2011
C3003	Interview and Follow-up Correspondence with Robert Schulten: Packaging of Waste Streams AECHDM-PK and AECHHM-PK	Kevin Peters	NA	NA, 05/25/2010
C3004	Default Plutonium Distributions in Waste Streams ID-AECHDM and ID-AECHHM	John West	Document Number and Revision: NA	Revision: NA, 10/25/2011
C301	Memo from T. Bray to Dcoument File: Shipment of EBR-II Fuel to ANL-W	T. S. Bray	HFS-13-00-00	NA, 09/15/2004
C302	Memo from L. A. Neimark to Distrubution. Subject: Revision 1 to the Work Plan for the Preparation of Fuel Rods for Return Shipment to Idaho, HFS-015-00-00, December 8, 2004.	L. A. Neimark	HFS-015-00-01	Rev. 1, 12/09/2004
C303	Handwritten memo dated 10/21/1994. Subject: Change postings in to Areas I, III, IV to reconcile books to SPM - attached logbooks for Area I FGE, and Area III FGE	Unknown	NA	NA, 10/21/1994
C304	Memo from T. S. Bray to OO Holders. Subject: New Pu Equivalent Mass Limits for Area IV	T. S. Bray	OO No. 58	NA, 02/22/2000
C305	Memo from R. J. Page and A. Miron to T. S. Bray. Subject: Inventory and Dose Estimates for Radionuclides Stored in the Alpha-Gamma Hot Cells Facility. Report attached.	Page and Miron	NA	NA, 05/02/2003
C316	Memo from Omesh Chopra to Distribution. Subject: Laboratory ALARA Committee Review of the Work Plan for Unloading and Transferring Irradiated Stainless Steel Mechanical Test Specimens	Chopra, Omesh	NA	NA, 05/15/2000

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
C329	Memorandum to CCP Central Records: Evaluation of FFTF Fuel History and Defense Experiments	K. J. Peters	C009	NA, 04/2/2004
C330	Memorandum to Ines Triay, Acting Manager, CBFO: Determination and Findings, Defense Origin of Nuclear Waste, Kerr-McGee Waste	F. Marcinowski	N/A	N/A, 04/15/2005
C331	Memorandum to CCP Central Records: Evaluation of Kerr-McGee Fuel Production and FFTF History	K. J. Peters	KJP:0604:001	NA, 06/28/2004
C333	Memo to CCP Central Records: Assessmentof Waste material Parameters (WMPs) for Waste Stream AERHDM	N/A	NA	NA, 01/2006
C335	CCP Review Comments and Resolutions for Draft A, Rev. 0, CCP-AK-ANLE-500	K. Peters and S. Schafer	N/A	N/A, 02/27/2006
C341	Shaw Discrepancy Report R4 - RH TRU Waste from ANL-E- AGHCF Re: Possible Presence of Lead in Waste	Cheryl Shulz	R4	NA, 07/15/2003
C344	Shaw Discrepancy Report R7 for RH TRU Waste from ANL-E- AGHCF Re: Waste Generated In K-Cells	Cheryl Shulz	R7	NA, 07/15/2003
C353	Discussions with Seth Snyder and Al Youngs; Chemistry Division Operations in Building 200, M-Wing and General Description of Building 200	Tom Krause	NA	NA, 07/27/2000
C354	Cave Area Description (for Building 200) from Tory Steed	T. Steed	NA	NA, 08/25/2000
C356	Letter to C.E. Johnson; Monthly Report on EXXON/EPRI Program RP 306 for November 1978	L.A. Neimark	NA	NA, 12/12/1978
C357	Letter to N.D. Dudey and C.E. Crouthamel (EXXON); Management Summary and Milestone Report for October 1978	C.E. Johnson	NA	NA, 11/30/1978
C375	Intra-Laboratory Memo; Minutes of September 9,1980 about Sb-125 Releases From Cell K-2, M-Wing, Building 200	R.H. Cooke	NA	NA, 09/12/1980
C812	Memo from T. S. Bray & R. V. Strain to M. Goldberg re: Characterization of N-Reactor Fuel Samples ANL ID 3983	T. S. Bray; R. V. Strain	NA	NA, 10/04/2000
DR3001	Resolution of Discrepancies Associated with the Assignment of EPA HWNs to Waste Streams AECHDM-PK and AECHHM-PK	Kevin Peters	NA	03/23/2011
DR3002	CCP Discrepancy Resolution: Resolution of Discrepancies Associated with the Assignment of Containers RW48078 and RW48190 to Waste Stream AECHDM-PK	K. Peters	DR3002	06/20/2011
DR3003	Resolution of Discrepancies Associated with Beryllium Oxide Crucible Pieces in Container RW48192	K. J. Peters	DR3003	NA, 09/14/2011

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
DR3004	Resolution of Discrepancies Associated with Beryllium Oxide in Container RW48190	K. J. Peters	Document Number and Revision: NA	11/04/2011
P001	AGHCF Operations Manual	Argonne National Laboratory	IPS-2-00-00	2, 09/10/1990
P002	Central Characterization Project Acceptable Knowledge Summary Report for Argonne National Laboratory-East Contact-Handled TRU Waste Facility Maintenance and Laboratory Operations	Central Characterization Project (CCP)	CCP-AK-ANLE-001	11, 12/31/2003
P004	Safety Analysis Report for the Alpha-Gamma Hot Cell Facility (BLDG. 212)	W. D. Jackson, Materials Science and Technology Division, Argonne National Laboratory	M4000-0025-SA-01	0, 12/06/1982
P006	Safety Analysis for Twenty Year Retrievable Storage of Intermediate Gamma Level Transuranic Waste	W. D. Jackson	n/a	n/a, 06/01/1976
P008	ANL-W History - Reactors (IFR)	n/a	http://www.anl.gov/anlw_history/reactors/ifr.html	n/a, 07/23/2001
P009	TRU-RH Waste Certification Plan for Waste Management Operations	Ralph W. Ditch, Gary E. Griffin	J0306-0033-SA	2 and 4, 11/10/1986 & 04/16/1991
P010	Argonne News-About the People and Programs of Argonne National Laboratory	N/A	Volume 34, Number 13, October	NA, 1985
P013	Frontiers: Research Highlights 1946-1996	Argonne National Laboratory	n/a	n/a, 1996
P016	Liquid Metal Fast Breeder: Right Answer, Wrong Question	Atomic Energy Insight	NA	Volume 1, Issue 7, 1995
P017	1992 Congressional Hearings Intelligence and Security: Naval Reactors, Arms Control, Office of Inteligence, 03/11/1992, Question and Answer	T. Bevill	Qp2AF105 (http://www.fas.org/)	n/a, 03/11/1992
P023	Argonne National Laboratory-East Remote Handled Waste	W. Mahlon Heilseson	EDF-RWMC-759	n/a, 08/29/1994

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P025	Argonne National Laboratory-East, Transuranic Waste Acceptable Knowledge Report	Benchmark Environmental Corporation, A ThermoRetec Company	WMO-AK/WIPP-001.0	n/a, 09/29/2000
P027	Preliminary Engineering Proposal on Alpha-Gamma Hot Laboratory for Fuels Technology Center, Argonnel Naltional Laboratory	The University of Chicago	n/a	n/a, June 1958
P028	Presentaion to DOE Office of Nuclear Safety re: Alpha-Gamma Hot Cell Facility (AGHCF)	Argonne Illinois Site	n/a	n/a, 07/19/1993
P029	Engineering Test Plan for the Irradiation Testing of U3Si Dispersion Fuels: Reduced Enrichment Research and Test Reactor Program	R. F. Mattas	M4000-0004-SA-01	Rev. 1, June 1980
P031	Alpha-Gamma Hot Cell Facility (AGHCF) Safety Analysis Report	A. B. Cohen, Manager, AGHCF	IPS-221-00-00	n/a, January 1998
P032	Procedure for Sorting Remote-Handled TRU Waste (30-Gallon Intermediate-Level Waste)	ANL	n/a	0, 01/07/1987
P034	AGHCF Operations Manual: 15.6 Procedure for Acid Cleaning a Zinc-Bromide Shielding Window	W. C. Kettman	IPS-2-06-00	1, 04/16/1996
P038	AGHCF Operations Manual: 15.13 Procedure for Installing a Modified D-301 Window Tank in a Type A Window Cavity	Dennis A. Donahue, Supervisor, AGHCF	IPS-2-13-01	Revision 1, 12/07/1990
P039	AGHCF Operations Manual: 15.15 Procedure for Installing Lead Shielding Around a Tank Insert in an AGHCF Window Cavity	Argonne National Laboratory	PS-2-15-00	0, 02/01/1991
P055	Waste Handling Procedures	C. L. Cheever, Manager, Waste Management Operations	n/a	n/a, 09/18/1986
P060	AGHCF Operations Manual: 7.0 Standard Examination Procedures	n/a	IPS-2-00-00	0, 06/20/1989
P061	Examination Techniques for High Burnup U-Pu Elements for Fast Breeder Reactors	B.J. Koprowski and F. L. Brown	ANL-ms-912A	n/a, 06/30/1967
P062	AGHCF Operations Manual: 7.15 Preparation of Metallographic Specimens	ANL	IPS-2-00-00	0, 06/20/1989
P068	AGHCF Operations Manual: 7.14 Mounting Metallographic Specimens	n/a	IPS-2-00-00	1, 03/29/1990
P069	AGHCF Operations Manual: 7.13 Fuel Element Sectioning	n/a	IPS-2-00-00	1, 03/29/1990
P070	AGHCF Operations Manual: 7.21 Specimen Density by Immersion	n/a	IPS-2-00-00	0, 06/20/1989

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P1002	Design, Operation, and Performance Data for High Burnup PWR Fuel from the H.B. Robinson Plant for Use in the NRC Experimental Program at Argonne National Laboratory	O. Ozer	EPRI Report - 1001558	05/2001
P2000	Facility Hazard Category 2 Threshold Ratio Values for the K-Wing Nuclear Facility in Building 205 OUO	Dr. James V. Beitz	NA	NA, 08/01/2008
P2001	Retention of Neptunium in Uranyl Alteration Phases Formed During Spent Fuel Corrosion	E. C. Buck, R. J. Finch, P. A. Finn, and J. K. Bates	ANL/CMT/CP-93028	NA, 09/22/1997
P2002	Corrosion Mechanisms of Spent Fuel Under Oxidizing Conditions	P. A. Finn, R. Finch, E. Buck, and J. Bates	ANL/CMP/CP-93030	NA, 10/24/1997
P2003	Elements Present in Leach Solutions from Unsaturated Spent Fuel Tests	P. A. Finn, J. K. Bates, J. C. Hoh, J. W. Emery, L. D. Hafenrichter, E. C. Buck, and M. Gong	ANL/CMT/CP-79779	NA, 11/29/1993
P2004	Oxidative Corrosion of Spent UO2 Fuel in Vapor and Dripping Groundwater at 90C	Robert J. Finch, Edgar C. Buck, Patricia A. Finn, and John K. Bates	ANL/CMT/CP-96766	NA, 09/28/1999
P2005	Corroded Spent Nuclear Fuel Examined with EELS	Edgar C. Buck, Nancy L. Dietz, and John K. Bates	ANL/CMT/CP-89579	NA, 07/18/1996
P2007	Corrosion Testing of Spent Nuclear Fuel Performed at Argonne National Laboratory for Repository Acceptance	Margaret M. Goldberg	ANL/CMT/CP-102400	NA, 08/04/2000
P2008	I-129 Release Fractions in Unsaturated Tests with Fast-Flux MOX Fuels	P.A. Finn, Y. Tsai, M. M. Goldberg, and R. V. Strain	ANL/CMT/CP-103284	NA, 12/08/2000
P2009	Measurement Techniques in Dry-Powdered Processing of Spent Nuclear Fuels	Stephen F. Wolf, Delbert L. Bowers, and Paul J. Persiani	ANL/CMT/CP-98274	NA, 10/13/1999
P2010	Nuclear Operations Deactivation, Decommissioning, and Demolition Program: Activity-Specific Safety Analysis for Building 205 K-Wing Hot Cell Liquid Processing	B. Voelz	NOD-181-00-00	Rev.0, 06/26/2009

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P2011	Nuclear Operations Deactivation, Decommissioning, and Demolition Program: Appendix B: Building 205 K-Wing Hot Cell Deactivation Project Plan	D. Hodge	NOD-162-00-01	Rev.1, 03/05/2009
P2012	"Nuclear Operations Deactivation, Decommissioning, and Demolition Program: Activity-Specific Safety Analysis for Building 205 K-WingCell A & B Material Sorting, Size Reduction, and Transfer"	B. Voelz	NOD-184-00-00	Rev.0, 07/09/2009
P2013	NUCLEAR OPERATIONS DIVISION WORK CLEARANCE PERMIT: 205 K-Wing Hot Cell Liquids Processing	D. Hodge	WCP-09-205K-005	NA, 06/25/2009
P2016	Basis of Interim Operations for Building 205 K-Wing Deactivation	C. A. Sprain	NOD-205K-NSB-201	NA, 08/29/2008
P2017	Determination of actinide and fission-product isotopes in very-high-burnup spent nuclear fuel	V. S. Sullivan, et al.	DOI: 10.1007/s10967-008-0709-4	NA, 03/29/2007
P2018	Safety Analysis Report Building 205 G-Wing and K-Wing Laboratories	M. A. Slawecki, R. D. Wolson, J. B. Rajan, F. G. Teats	CMT-30-0470	Rev.2, 12/01/1997
P2019	Test Plan for the Characterization of an Approved Testing Material Mixed Oxide Fuel	Lawrence A. Neimark	SNF-3A-004	Rev.0, 04/08/1998
P2020	Colloidal Products and Actinide Species in Leachate from Spent Nuclear Fuel	P. A. Finn, E. C. Buck, M. Gong, J. C. Hoh, J. W. Emery, L. D. Hafenrichter, and J. K. Bates	NA	NA, 1994
P2021	The Dissolution and Analyses of the Dissolver Solution, Undissolved Residue, and Cladding from Big Rock Point Irradiated Nuclear Fuel	A. J. Bakel, D. L. Bowers, K. J. Quigley, M. C. Regalbuto, and G. F. Vandegrift	NA	NA, 2003

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P2022	RESULTS OF THE UREX+ SPENT FUEL DEMONSTRATION	G. F. Vandegrift, M. C. Regalbuto, C. Pereira, S. Aase, A. Bakel, D. Bowers, J. P. Byrnes, M. A. Clark, J. W. Emery, J. R. Falkenberg, A. V. Gelis, L. Hafenrichter, Y. Tsai, K. J. Quigley, and M. H. Vander Pol,	NA	NA, 2003
P2023	RESULTS OF THE UREX+2 SPENT FUEL DEMONSTRATION	C. Pereira, G. F. Vandegrift, M. C. Regalbuto, A. Bakel, S. Aase, D. Bowers, J. P. Byrnes, M. A. Clark, J. W. Emery, J. R. Falkenberg, A. V. Gelis, A. Leyva, L. Hafenrichter, Y. Tsai, K. J. Quigley, M. H. Vander Pol, and K. Wardle	NA	NA, 02/28/2005

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P2024	RESULTS OF THE 2005 UREX+1a SPENT FUEL DEMONSTRATION	C. Pereira, L. E. Miller, G. F. Vandegrift, M. C. Regalbuto, A. Bakel, J. Basco, D. Bowers, J. Bruso, J. P. Byrnes, M. A. Clark, J. W. Emery, J. R. Falkenberg, A. V. Gelis, L. Hafenrichter, R. A. Leonard, A. Leyva, H. Mayes, T. Robinson,Y. Tsai, K.Quigley	NA	NA, 03/31/2006
P2025	2006 UREX+1a SPENT FUEL DEMONSTRATION: Preliminary Results from Fuel Dissolution and UREX Feed Adjustment	Allen Bakel, Carol Mertz, and G. Vandegrift	NA	NA, 07/14/2006
P2026	RESULTS OF THE 2006 UREX+1a SPENT FUEL DEMONSTRATION	Candido Pereira, Laura E. Maggos, George F. Vandegrift, Monica C. Regalbuto, Kurt Alford, Allen Bakel, Delbert Bowers, James P. Byrnes, Mark A. Clark, Chad Cramer, John R. Falkenberg, Artem V. Gelis, . . .	NA	NA, 12/15/2006

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P2027	RESULTS OF THE 2007 TALSPEAK SPENT FUEL DEMONSTRATION	Candido Pereira, Laura E. Maggos, George F. Vandegrift, Monica C. Regalbuto, Kurt Alford, Allen Bakel, Delbert Bowers, James P. Byrnes, Mark A. Clark, John R. Falkenberg, Artem V. Gelis, Lohman Hafenrichter, . . .	NA	NA, 04/30/2007
P2028	PRELIMINARY RESULTS OF THE UREX+3a SPENT FUEL DEMONSTRATION	C. Pereira, G. F. Vandegrift, M. C. Regalbuto, K. C. Alford, A. Bakel, D. Bowers, J. P. Byrnes, J. R. Falkenberg, L. Hafenrichter, M. Kalensky, J. F. Krebs, A. Leyva, L. E. Maggos, K. Rafacz, V.Sullivan, Y. Tsai, K. J. Quigley, A. Wright	NA	NA, 09/30/2007

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P2029	AQUEOUS DISSOLUTION OF URANIA-THORIA NUCLEAR FUEL	PAUL A. DEMKOWICZ, JAMES L. JERDEN, Jr., and JAMES C. CUNNANE, NORIKO SHIBUYA and RONALD BANEY, JAMES TULENKO	NA	NA, 07/2004
P2030	Advanced Proliferation Resistant, Lower Cost, Uranium-Thorium Dioxide Fuels for Light Water Reactors Nuclear Energy Research Init. Proj. 99-0153 Progress Rpt. For Work through Sept., 2002 12th Quarterly Rpt. And 3rd Annual Rpt.	Philip E. MacDonald	INEEL/EXT-02-01411	NA, 2002
P2032	Building 212 Alpha Gamma Hot Cell Facility Deactivation Project Plan with Appendix 1, 2, and 3	D. Pancake, M. Sodaro, D. Hodge	NOD-190-00-00, 191-00-00, 192-00-00, 194-00-00	NA, 08/26/2009, 08/14/2009, 08/21/2009
P2033	Revised Estimate of the Radioactive Inventory in the AGHCF	R.J. Page	NOD-155-00-00	NA, 01/07/1009
P2034	Fuels for Sodium-Cooled Fast Reactors: US Perspective; article in Journal of Nuclear Materials	D.C. Crawford, D.L. Porter, S.L. Hayes	NA	NA, 05/10/2007
P3001	Packaging CH-TRU Waste for Shipment to Idaho National Laboratory (INL) and Final Disposition at the Waste Isolation Pilot Plant (WIPP)	WMO	WMO-DOC-6, Rev. 0	12/09/2009
P3002	Solidification and Packaging CH-TRU Liquid Waste for Shipment to Idaho National Laboratory (INL) and Final Disposition at the Waste Isolation Pilot Plant (WIPP); Bulking Tub Neutralization and Solidification	WMO	Work Plan 09-WM-093	NA
P3003	Solidification and Packaging CH-TRU Liquid Waste for Shipment to Idaho National Laboratory and Final Disposition at the Waste Isolation Pilot Plant; Bench Scale Neutralization and Solidification	WMO	Work Plan 09-WM-094	NA
P3004	Project-Specific Sampling and Analysis Plan (PSAP) Containerized Waste Material DQO and SAP Instructions; CH TRU Liquids Bulking/Neutralization/Solidification Project	WMO	CHTRU-001	12/03/2009
P304	Work Plan for Oxidizing Zircaloy Cladding Samples for the Zn-Zircaloy Interaction Study Memo to IPS Document File	Hanchung Tsai, ET-IPS	IPS-362-00-00	NA, 09/25/2000
P320	Management Plan for Irradiation Performance Section Facilities, Energy Technology Division	H. Drucker, Associate Lab Director EEST	IPS-417-00-00	NA, 10/14/2002

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P325	Functional Requirements for Hydrogen-Charged Materials to be Used as Standards for Hydrogen Content Determination	Robert Daum	IPS-424-00-00	NA, 01/22/2003
P326	Work Plan for Determining the Effectiveness of Defueling a Short Cladding Segment from High Burnup In-cell LOCA TestSample ICL#2 in Room-Temperature Nitric Acid	Y. Yan	IPS-428-00-00 and IPS-428-00-01	Revs 0 and 1, 08/06/2003 and 09/16/2003
P327	Procedure for Thinning Gauge Sections of Tensile Specimens after Tensile Tests	Hanchung Tsai, ET-IPS	IPS-429-00-00 and IPS-429-00-01	NA, 08/14/2003 and 08/26/2003
P329	Feasibility Study for Defueling Irradiated Cladding Using Non-Volatile Methods	Robert Daum	IPS-432-00-00	NA, 12/02/2003
P331	Work Plan for Preparation of Samples for LECO Hydrogen or Oxygen Analysis	T. Burtseva, ET	IPS-434-00-00	NA, 10/16/2003
P333	Procedure for the Steam Oxidation Tests at High Temperature on Unirradiated Advanced Cladding Alloys M5, E110, ZIRLO and Zry-4 Cladding within the Out-of-cell LOCA Integral Test Apparatus Memo to M. C. Billone and T. S.Bray	Y. Yan, IPS	IPS-438-00-00	NA, 12/01/2003
P344	Analysis of Spent Nuclear Fuel Sample A/G 574B2 (Limerick Reactor) to Determine Selected Isotopes and Estimate Fuel Burnup	D. G. Graczyk	NA	NA, 04/2003
P372	Review of Zirconium-Zircaloy Pyrophoricity	Thurman D. Cooper	RHO-RE-ST-31 P	NA, 11/1984
P373	Metallographic Analysis of irradiated RERTR-3 Fuel Test Specimens	Meyer, Hofman, Strain, Clark, and Stuart	ANL/NT/CP-103306	NA, 10/1-06/2001
P374	The RERTR Program: A Status Report	A. Travelli	ANL/TD/CP-97495	NA, 09/28/1999
P375	Progress of the RERTR Program in 1999`	A. Travelli	ANL/TD/CP-100128	NA, 01/18/2000
P378	Argonne National Laboratory-East Building 212 Energy Technology Division Alpha-Gamma Hot Cell Facility Preliminary Decontamination and Decommissioning Plan	T. S. Bray	HFS-003	3, 10/08/2003
P380	Alpha-Gamma Hot Cell Facility (AGHCF) Safety Analysis Report OUO	ANL	IPS-221-00-01	Rev. 1, 10/2001
P386	CRIEPI Posttensile SEM Fractography	H. Tsai	SI 197	NA, 07/13/2001
P387	Prep of Creep Samples	H. Tsai	SI 340	NA, 02/25/2003
P389	AGHCF Supplemental Instructions for IRIS-11	L. A. Neimark	IPS-295-00-00	NA, 12/01/1998

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P392	Procedures for Conducting Tests in the Whole-Pin furnace System (IPS-2-04-00)	L. A. Neimark	IPS-2-04-00 and IPS-2-04-01	Revs. 0 and 1, 01/22/1990 and 05/22/1990
P394	Work Plan for the Preparation of Fuel Rods for Return Shipment to Idaho	L. A. Neimark, ET-HFS	HFS-015-00-00	NA, 12/08/2004
P395	Work Plan for the Replacement of the Area 3 GM Manipulator Power Cord	K. Stoll, Asst. Manager, HFS	HFS-014-00-00	NA, 10/12/2004
P396	AGHCF Special Nuclear material Inventory Management Plan	ANL	HFS-011-00-00	NA, 02/06/2004
P407	Criticality Control	ANL	AGHCF-OPS-109	Rev. 1, 04/05/2002
P410	Changing a Final HEPA Filter in the Main Exhaust	ANL	AGHCF-OPS-207	Rev. 1, 11/25/2002
P412	Remote Handled Transuranic Waste Sorting and Packaging	ANL	AGHCF-OPS-302, NOD-AGHCF-OPS-302	Revs. 0, 2, and 3, 07/09/2001; 03/29/2005; 05/09/2007
P414	Estimation of Activity in Waste Containers	ANL	AGHCF-OPS-304	Rev. 0, 04/20/2001
P416	Chemical and Other Regulated Waste Management	ANL	AGHCF-OPS-306	Rev. 0, 10/31/2001
P469	Changing an In-line Filter in a Radioactive Gas Collective System	ANL	AGHCF-MAINT-100	Rev. 0, 01/31/2001
P472	Manipulator Movement, Cleaning and Repair	ANL	AGHCF-MAINT-202	Rev. 1, 11/26/2002
P475	Acid-Clean Windows	ANL	HFS-MAINT-501	Rev. 2, 08/20/2003
P480	Painting a Drained Shielding Window Cavity	ANL	AGHCF-MAINT-509	Rev. 0, 12/15/2000
P484	Installing a Type A "Tank-in-a-Tank" Window Assembly	ANL	HFS-MAINT-513	Rev. 3, 08/20/2003
P485	Procedure for Installing Lead Shielding Around a Tank Insert in an AGHCF Window Cavity	ANL	HFS-MAINT-514	Rev. 1, 08/20/2003
P486	Hydroxylamine Hydrochloride Addition to Zinc Bromide Solution	ANL	HFS-MAINT-515	Rev. 1, 03/14/2005
P487	Installation of Lead-Glass Glovebox Window Panes	ANL	HFS-MAINT-516	Rev. 0, 09/05/2003
P489	Work Plan for Decontaminating the CTA after the Completion of the ANL/JNC Tensile Testing	H. Tsai	IPS-313-00-00 and IPS-313-00-01	Revs. 0 and 1, 07/06/1999

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P490	Work Plan for Diameter Measurements of Irradiated V-alloy Creep Specimens from the HFIR-2J Experiment	H. Tsai	IPS-314-00-00	Rev. 0, 07/16/1999
P492	Procedure for Cutting Uranium Metal or Uranium Alloys on the South Bay Diamond Bandsaw in the South Hood, Room F-206	R. V. Strain	IPS-315-00-00	NA, 07/20/1999
P503	Work Plan for Microstructural Examination on V-4Cr-4Ti Rods for Making Creep Tube Supplemental Instruction 252 for Rod/Specimen A/G 625A 1 through 14 Memo to IPS Document File	Yong Yan	IPS-325-00-00	NA, 11/04/1999
P505	Work Plan for the Heat Treatment and Microstructural Examination on V-4Cr-4Ti Rods for Making Creep Tubing Memo to IPS Document File	Yong Yan	IPS-325-02-00	NA, 01/22/2000
P507	Photography and Met of Weld Samples, Supplemental Instruction 252 for Rod/Specimen A/G 625A 1 through 14 in accordance with IPS-327-00-00	Bob Strain	SI 252	NA, 12/13/2001
P509	Work Plan for the LOCA Mock-up - Phase 1 Memo to NRC Program File	R. V. Strain	IPS-328-00-00	NA, 11/23/1999
P516	Replacement of the WPF Furnace Memo to IPS Document File	Hanchung Tsai, IPS-ET	IPS-333-00-00	NA, 10/20/1999
P520	PIE of RERTR-3	R. V. Strain, ET/IPS	IPS-338-00-00 and SI 305	NA, 01/20/2000 and 04/05/2002
P521	Workplan for Assessment of Auger Analyzer: Examination of NERI Stainless Steel Samples	R. V. Strain	IPS-339-00-00	NA, 01/25/2000
P532	Complete Axial Specimen Preparation for Rod/Specimen ID: 592C2C, 592C14C Surry According to IPS-382-00-00	R. Daum	SI 352	NA, 07/31/2003
P536	Decontamination and Transfer of A/G 587 Tensile Specimens to Clean Vials Memo to IPS Document File	T. Bray, Manager, AGHCF	IPS-354-00-00	Rev. 0, 04/18/2000
P537	Revised Work Plan for Unloading and Transferring Irradiated Stainless Steel Mechanical Test Specimens to Cell 2 of the IML	H. Chung, O Chopra	IPS-355-00-01	NA, 05/15/2000
P539	Work Plan for Examination and Testing of Limerick Rod F9, Mid Segment, A/G 574C	H. Tsai	IPS-357-00-00	NA, 06/15/2000
P540	Work Plan for Preparation of Low-Oxygen Vanadium Alloy Test Specimens	H. Tsai	IPS-358-00-00	NA, 06/26/2000
P546	Work Plan for Conducting Melt Dioolution Tests on Al-clad Fuels and Supplemental Instruction 184	T. S. Bray	IPS-366-00-00	NA, 11/07/2000
P548	Work Plan for Conducting the Zn-Zircaloy Interaction Tests	H. Tsai	IPS-368-00-00	NA, 11/30/2000

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P551	Work Plan for the Examination of Fuel Plates from the RERTR-4 Experiment in ATR; Work Plan for Cutting H. B. Robinson Rod Sections and Loading into Shipping Tubes, and Supplemental Instruction 153	R. V. Strain, Bob Strain	IPS-375-00-00, -01-00, IPS-376-00-00	NA, 03/16/2001; 04/12/2001; 03/26/2001
P552	Oxygen Pickup by LECO Oxygen Determinator for the LOCA Zry-2 Test #6 and Work Plan for Preparing Samples for Oxygen Analyses from Zry Cladding after Steam Oxidation Test at High Temperature	Y. Yan	IPS-377-00-00 and IPS-377-01-00	NA, 04/06/2001
P554	Work Plan for the Initial Characterization and Sectioning of H. B. Robinson Rod RA1 8235 (A/G 611) and Supplemental Instruction 328	Hanchung Tsai	IPS-379-00-00	NA, 05/16/2001
P556	Work Plan for Cutting Axial Tensile Specimens from Surry Cladding with the EDM in Cell 3 of the IML Memo to IPS Document File and Supplemental Instruction 260	R. Daum	IPS-381-00-00	NA, 07/10/2001
P557	Load Train Assembly and Testing Procedure for Axial Tensile Testing of Surry Cladding, and Supplemental Instruction 338, Rev. 1 Memo to IPS Document File	Rob Daum, ET-IPS	IPS-382-00-00, IPS-382-00-01	Revs. 0 and 1, 11/29/2001, 04/11/2003
P566	Work Plan for Characterization of Surry Rod G6 (A/G 592)	Hanchung Tsai, ET-IPS	IPS-392-00-00	NA, 09/21/2001
P568	Pre-oxidized Zry for TC Welding Practice, Supplemental Instruction 294 for Rod/Specimen Unirradiated 0.48" Zry cladding in accordance with IPS-395-00-00	Y. Yan	SI 294	NA, 03/29/2002
P572	Optical Metallography Test Weld, Supplemental Instruction 262 for Rod/Specimen A/G 625D5	Bob Strain	SI 262	NA, 01/10/2002
P574	Procedure for the Repair of the Driver Screw Mechanism of AGHC Shield Door Number 2, Supplemental Instruction 354	D. Donahue	IPS-401-00-00 and IPS-401-00-01	Revs. 0 and 1, 01/08/2002 and 01/11/2002
P575	Work Plan for the Examination of Fuel Plates from the RERTR-4 Experiment in ATR, Revision 1	R. V. Strain	IPS-400-01-00	NA, 02/22/2002
P578	General Work Plan for Preparing Segments of Fuel Cladding for Programmatic Investigations and Supplemental Instruction 303	R. Daum	IPS-405-00-00	NA, 02/28/2002
P580	In-cell LOCA Integral Test with unirradiated Zry-2, Supplemental Instructions 357 for Rod/Specimen 12" long unirradiated Zry-2, A/G 581C41 in accordance with IPS-409-01-03	Y. Yan	SI 357	NA, 09/03/2003
P583	Roadmap for SP-100 Fuel Pin Irradiation Testing	B. J. Makenas	WHC-SP-1083	NA, 02/1994
P584	U.S. Department of Energy - The Secretary's Annual Report to Congress 1992-1993	U.S. DOE	DOE/S-0111	NA, 1993
P585	Safety issues at the DOE Test and Research Reactors, A Report to the U.S. Department of Energy	National Academy Press	NA	NA, 1988

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P586	Report to Congress - The Liquid Metal Fast Breeder Reactor Program - Past, Present, and Future	ERDA	RED-75-352	NA, 04/28/1975
P587	Program Scoping Plan for the Fast Flux Test Facility, A Nuclear Science and Irradiation Services User Facility	PNNL	PNNL-12245	Rev. 1, 08/1999
P588	An Overview of the Argonne National Laboratory Fast Critical Experiments 1963-1990	L. G. LeSage	ANL-NT-175	NA, 04/2001
P599	The Defense Programs Origin of Transuranic waste at Argonne National Laboratory-West	H. F. McFarlane	ANL-NT-192	NA, 11/2001
P602	Analysis of Three Mile Island and Quad Cities Spent Nuclear Fuel Samples	Stephen F. Wolf, Delbert L. Bowers, and James C. Cunnane	NA	NA, 04/28/1999
P603	Validation of the Rebus-3/RCT Methodologies for EBR-II Core-Follow Analysis	R. D. McKnight	CONF-920308-Vol. 2	NA, Unknown
P604	Criticality Hazards Control Statement, Alpha-Gamma Hot Cell Facility, Special Facility FF12, and Addendum 1, Use of a Safe Vac Vacuum Cleaner in Alpha-Gamma Hot Cell Facility Areas 1 and 3	James A. Morman	IPS-6-00-09; IPS-6-00-10; IPS-6-01-10	Revs. 9 and 10, 03/08/1990; 07/2001
P606	Status and Progress of the RERTR Program in the Year 2000	Armando Travelli	ANL/TD/CP-103012	NA, 2000
P607	Initial Assessment of Radiation Behavior of Very-High-Density Low-Enriched-Uranium Fuels	G. L. Hofman, M. K. Meyer, J. L. Snelgrove, M. L. Dietz, r. V. Strain, and K. H. Kim	ANL/TD/CP-100148	NA, 1999
P616	Decontamination of Hot Cells K-1, K-3, M-1, M-3, and A-1, M-Wing, Building 200: Project Final Report Argonne National Laboratory-East	C.L. Cheever and R.W. Rose	ANL/D&D/TM-96/2	NA, 09/1996
P617	Criticality Hazards Control Statement for Special Facility MF200-KW	W.D. Jackson	DOC-10146	NA, 10/11/1978
P618	Quality Assurance Plan for RAS Loop Disassembly Facility, D-200, M-Wing, K-1 Cell	L.A. Neimark	M3101-0025-SE-00	NA, 01/16/1974
P620	Posttest Examination Plan for the L6 Experiment	W.F. Murphy	M4000-0012-SA-00	Rev. 0, 01/05/1981
P621	Posttest Examination Plan for the L7 Experiment	L.A. Neimark	M3203-008-SA-00	Rev. 0, 02/19/1979

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P815	Paper: Initial Assessment of Radiation Behavior of Very-High-Density Low-Enriched-Uranium Fuels ANL ID 29330	G. L .Hofman, M. K. Meyer, J. L. Snelgrove, M. L. Dietz, R. V. Strain, K. H. Kim	ANL ID 29330	NA, 10/1999
P816	IPS-269-04-01, Metallography on an Additional RERTR-1 Microplate, A/G 549V	R. V. Strain	IPS-269-04-01	NA, 09/25/1998
P817	Additional Micro-Examination of Samples from the RERTR Program	R. V. Strain	IPS-292-00-00 thru IPS-292-09-00	NA, 08/1998 - 11/1999
P819	Work Plan for the Characterization of N-Reactor Fuel Specimens (A/G 562)	T. Bray	IPS-306-00-00	NA, 03/09/1999
P821	Metallographic Examination of Damaged N Reactor Spent Nuclear Fuel Element SFEC5,4378	S. C. Marschman, T. D. Pyecha, J. Abrefah	PNNL-11438; UC-602	NA, 08/1997
P822	IPS-338-00-00, Work Plan for the Examination of Fuel Nano-Plates from the RERTR-3 Experiment in ATR ANL ID 6811	R. V. Strain	IPS-338-00-00	NA, 01/20/2000
P826	Revised Work Plan for the Examination of Fuel Plates from the RERTR-5 Experiment in ATR	R. V. Strain	IPS-375-01-00	1, 04/12/2001
P827	Recent Observations at the Postirradiation Examination of Low-Enriched U-Mo Miniplates Irradiated to High Burnup ANL DOC ID 29331	G. L. Hofman; Y. S. Kim; M. R. Finaly; J. L. Snelgrove; S. L. Hayes; M. K. Meyer; and C. R. Clark	ANL ID 29331	NA, 10/05/2003
P829	Revised Work Plan for the Examination of Fuel Plates from the RERTR-4 Experiment in ATR, Revision 1	R. V. Strain	IPS-400-01-00	NA, 02/22/2002
U001	AGHCF Position Statement Regarding Defense Versus Non-Defense TRU Waste	n/a	n/a	n/a, 04/07/2000
U002	Draft Proposal For: Alpha-Gamman Hot Cell Facility Waste Management Plan	n/a	n/a	n/a, n/a
U003	Argonne National Laboratory-West Mission Description	n/a	n/a	n/a, 05/18/2001
U004	Remote-Handled Waste Content Codes Assessed	n/a	n/a	n/a, n/a
U006	Summary of Purchasing Requisitions Received from T. Bray: Heavy Metals Usage Identified by IT That May Be in the RH-TRU Waste Stream	n/a	n/a	n/a, 09/06/2001

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
U007	Material Control Sheets for A/G numbers 1 through 510 and some attached paperwork	n/a	n/a	n/a, n/a
U009	Transuranic Waste at Argonne National Laboratory-West: Meeting the Waste Acceptance Criteria for the TRU Repository	n/a	n/a	n/a, 08/10/2001
U011	Project Process Flow Diagram: Fuel Elements from EBR-II and FFTF	n/a	n/a	n/a, n/a
U012	Basic Project ad Anticipated Benefits	n/a	n/a	n/a, n/a
U013	Waste Stream Fissile Content	n/a	n/a	n/a, 03/23/1990
U015	RH-TRU 1995, Book 5, Drums 798 to 809.	n/a	n/a	n/a, 01/01/1995
U017	RH-TRU 1994, Book 8, Drums 778 to 797	n/a	n/a	n/a, n/a
U018	RH-TRU 1993, Book 7, Drums 748 to 777	n/a	n/a	n/a, n/a
U019	RH-TRU 1991-1992, Book 6, Drums 728 to 737	n/a	n/a	n/a, n/a
U021	RH-TRU 1990, Book 4, Drums 687 to 727	n/a	n/a	n/a, n/a
U022	RH-TRU 1985-1987, Book 3, Drums 617 to 686	n/a	n/a	n/a, n/a
U023	Fuel Shipments into AGHCF 1993-1995	n/a	n/a	n/a, 07/08/1997
U030	Liquid Waste Disposal Requisition	L. A. Neimark, MSD	n/a	n/a, 11/01/1976
U040	Spreadsheet Correlating Number Quota with Quota Title and Number Project	n/a	n/a	n/a, 07/31/2001
U041	Videotape Logs	Cheryl L. Schulz	n/a	n/a, 09/5/2001
U045	Material Receipt and SPM Data for AG# 285	W. P. Kenney, D. Garcia	285JKLM	n/a, 01/04/1985
U065	Hand written Notes: One titled "Decon & Repair Procedures for Cleaning and Repairing a Manipulator"	n/a	n/a	n/a, 03/24/1987
U066	Addendum Criticality Safety Training Quiz 7/17 or 7/21/75	n/a	n/a	n/a, 07/21/1975
U067	Information on Fuel Elements T678 and T680	n/a	n/a	n/a, 05/24/2001
U068	Information on Fuel Elements DP-15, DP-17, DP-27, DP-32, DP-21, DP-24. DP-29, DP-45, and DP-61	n/a	n/a	n/a, n/a
U069	Information on Fuel Elements UBA-15, UBB-23, UCA-37, UCD-45, UCE-47	n/a	n/a	n/a, n/a

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
U070	Information on Fuel Element WT-185	n/a	n/a	n/a, n/a
U072	Material Safety Data Sheets (MSDS)--Benzene and other MSDSs	n/a	n/a	n/a, 2/09/1988
U073	Combustible Waste Contents (52 cans)	n/a	n/a	n/a, n/a
U074	X425 Data Package Addendum	n/a	n/a	n/a, 03/11/2002
U076	AGHCF Fissile Inventory Management System Database	n/a	n/a	n/a, 11/12/2009
U083	HEPA Filters	Adam Cohen	n/a	n/a, 03/15/1996
U084	Report of Analytical Results	D. Bowers	MT-84 (4-94)	n/a, 11/03/1995
U085	Procedure for Determining Fuel Pellet Density Using a Mercury Prinometer (handwritten)	n/a	n/a	n/a, n/a
U1003	Arrgone Special Material Reciept and Transfer Documentation by A/G Number (A/G 1 - 535)	ANLE	N/A	1964-1997
U2002	CMT Nuclear Materials Inventory Database - detail report with ratios and FGEs	Laura E. Maggos	NA	NA, 07/21/09
U2004	Material in K-Wing 07-29-09 Spreadsheet	Laura E. Maggos	NA	NA, 07/29/2009
U2007	RW85461 WMO-195 Radioactive and Mixed Waste Disposal Requisition	Devin S. Hodge	RW85461	NA, 08/20/2003
U2008	RW85462 WMO-195 Radioactive and Mixed Waste Disposal Requisition	Devin S. Hodge	RW85462	NA, 08/20/2003
U2009	RW85463 WMO-195 Radioactive and Mixed Waste Disposal Requisition	Devin S. Hodge	RW85463	NA, 08/20/2003
U2010	Contactor Cleaning Procedure	Scott Aase and Ralph Leonard	NA	NA, 08/19/2003
U3001	CH TRU Project Inventory to be Repackaged	Argonne	NA	01/18/2010
U3002	WDS Query and Compilation of Radiological Data for Waste Streams AECHDM and AECHHM	Chris Chancellor	NA	NA, 05/05/2010
U3003	Historic WMO-195 Waste Requisitions for containers repackaged into Waste Streams AECHDM-PK and AECHHM-PK	WMO	NA	NA, Various
U3004	Waste Streams AECHDM-PK and AECHHM-PK Waste Container Packaging Forms and Supporting Documentation	WMO	NA	NA, Various
U3005	WMS Query for Repackaged CH Waste Streams AECHDM-PK and AECHHM-PK	WMO	NA	NA, 09/29/2011
U3006	Radionuclide Data for Waste Streams ID-AECHDM and ID-AECHHM	NA	NA	NA, 09/26/2011

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
U304	Isotopic Analysis of High Burn-0p Spent Nuclear Fuel	NA	NA	NA, NA
U307	Report 105 - Custodian Batch Balance (Pure)	NA	Report 105	NA, 12/01/2004
U321	Area 1 Hydrogenous Liquid Inventory (Limit 3L plus fluids sealed in equipment)	NA	NA	NA, 1988 - 2004
U322	Hydrogenous Liquid in Cell Area I	NA	NA	NA, 1988 - 2001
U330	West Valley Demonstration Project Transuranic Waste Defense Waste Determination	K. J. Peters	NA	NA, 09/20/2004
U332	Waste Requisitions - WMO-195, Radioactive and Mixed Waste Disposal Requisitions	ANL	NA	NA, 1993 through 2001
U339	General Description of Building 200 Provided by Al Young	Unknown	CH Ref. AE-U-5	NA, 08/11/2000
U830	RERTR-3 Postirradiation Examination Plan at the Alpha-Gamma Hot Cell Facility; transmitted by memo from S. L. Hayes to R. V. Strain ANL ID 6808	S. L. Hayes and M. K. Meyer	ANL ID 6808	NA, 01/13/2000

[a] From Acceptable Knowledge Souce Document Summaries (Attachments 3)

[b] Or publisher's document number if available

[c] In the case where a AK Summary Report has been revised based on information in Attachment 11- Acceptable Knowledge Source Document Discrepancy Resolution form, identify the tracking number.

Acceptable Knowledge Expert: Sherry Auckland , _____ Date: 12/6/2011
Print/Sign

DIVIDER PAGE

Attachment 4 - Acceptable Knowledge Source Document Information List

Site(s): INL

Waste Stream Number: ID-SDA-SOIL

Waste Stream Description: Soil with Minor Amounts of Homogeneous Solids and Debris

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
ANL-W-C001	Radioactive Waste Assessment	D.S. Kirschner	ANL-5820	Revision: NA, 12/12/1996
ANL-W-C002	RSWF Personnel's Comments on INEEL/EXT-02-01385, Revision A and Jeff Snook to Greg Bass Memo dated December 3, 2002	T.P. Zahn	Document Number and Revision: NA	3/17/2003
ANL-W-P001	Description and Proposed Operation of the Fuel Cycle Facility for the Second Experimental Breeder Reactor (EBR-II)	J. C. Hesson, M. J. Feldman, L. Burris	ANL-6605	Revision: NA, 4/1/1963
ANL-W-P002	Fabrication of the EBR-II, Core-1 Fuel Pins	H. F. Jelinek, N. J. Carson, A. B. Schuck	ANL-6274	Revision: NA, 6/1/1962
ANL-W-P003	Estimated Radiological Inventory Sent from the Argonne National Laboratory-West to the Subsurface Disposal Area from 1952 through 1993	Michael L. Carboneau, James A. Vail	INEEL/EXT-02-01385	Rev. 1, 11/2005
ANL-W-P005	Radioactive Waste Disposal	Walton A. Rodger	ANL-6233	NA, 9/1/1960
ANL-W-P006	A Survey of NRTS Waste Management Practices, Volume II	G. W. Hogg, W. F. Holcomb, L. T. Lakey, L. H. Jones, D. D. Coward	ICP-1042-II	NA, 09/1971
ANL-W-P008	Radioactive Waste Disposal Data for the National Reactor Testing Station Idaho	Joe S. Osloond	IDO-12040 Supplement 2	NA, 11/1/1967
ANL-W-P009	Subsurface Disposal Area (SDA) Waste Identification (1952-1970 Emphasis)	M. J. Vigil	EGG-WM-8727	Rev. 1, 10/1/1989
ANL-W-P010	A Brief Analysis and Description of Wastes in the Subsurface Disposal Area of the Radioactive Waste Management Complex at INEEL.	D.A. Arrenholz, J.L. Knight	EGG-WTD-9438	Rev. 1, 8/1/1991
ANL-W-U003	ANL-W Disposals 1960-1970, RWMIS	NA	NA	NA, NA
ANL-W-U004	Waste Disposal Request and Authorization	not legible	ANL767SR008/01/6 780010	NA, 08/01/1967

CCP RECORDS ORIGINAL
DATE REC'D 1/21/2013

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
ARA-C013	Transmittal of Resubmitted Forms for the Decontamination and Dismantlement of ARA-626, Sample Delivery Group Number ADD00101	Donna R. Kirchner	DRK-35-98	NA, 5/5/1998
ARA-C014	Transmittal of Updated Result Tables for the ARA-I Buildings ARA-626 and ARA-627 Sampling Project Radionuclide Data	D. Jones	DJ-545-94	NA, 12/13/1994
ARA-C015	Transmittal of Updated Result Tables for the ARA-I Buildings ARA-626 and ARA-627 Sampling Project Radionuclide Data	D. Jones	DJ-523-94	NA, 12/2/1994
ARA-C016	Transmittal of Revised QC Data and Result Tables for the ARA-I Buildings ARA-626 and ARA-627 Sampling Project	D. Jones	DJ-461-94	NA, 10/25/1994
ARA-C017	Transmittal of QC Data and Result Tables for the ARA-I Buildings ARA-626 and ARA-627 Sampling Project	D. Jones	DJ-421-94	NA, 9/13/1994
ARA-C018	Transmittal of Limitations and Validation (L&V) Report for Radiological Analyses for Decontamination and Decommissioning for ARA-626, Sample Delivery Group (SDG)# ADD00101	B. A. McIlwain	BAM-111-97	NA, 10/24/1997
ARA-P001	Additional Analysis of the SL-1 Excursion, Final Report of Progress, July through October 1962	SL-1 Project, Idaho Test Station, General Electric Company	IDO-19313	NA, 11/21/1962
ARA-P002	Army Gas-Cooled Reactor Systems Program, ML-1-II Fuel Element Design Report	R. E. Soulis, W. F. English, L. A. Kimura, T. P. Wilcox, G. W. Titus	AGN TM-415, N/A	NA, 1/1/1966
ARA-P003	A Summary Report on ML-1 Fuel Element Development In-Pile Test History	G. L. Vivian	IDO-10040	NA, 6/1/1964
ARA-P004	Final Disassembly and Examination of the ML-1 Reactor Core	T. L. Murphy, D. R. Schuyler, W. L. Clarke, Jr.	IDO-17190	NA, 1/1/1966
ARA-P006	Full Power and Limited Endurance Test of the ML-1 Nuclear Power Plant (ANSOP 16625a)	Aerojet-General Nucleonics	IDO-28634	NA, 9/1/1964
ARA-P007	Army Gas-Cooled Reactor Systems Program - In-Pile Test of Prototype ML-1 Fuel Elements	J. S. Burnhouse, A. B. Burgess, G. T. Geering, S. Nakazato, G. W. Titus	IDO-28616	NA, 6/1/1964
ARA-P008	Final Environmental Impact Statement	James L. Liverman	ERDA-1536	NA, 9/1/1977

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
ARA-P009	Abbreviated Sampling and Analysis Plan for the Characterization of Underground Storage Tanks	T. J. Meyers	EGG-WM-9457	Rev. 4, 3/1/1994
ARA-P010	Summary Report for the Initial Characterization of Potential Waste Sources at ARA-I and ARA-II (COCA Units ARA-03, ARA-07, ARA-08, ARA-09, ARA-10, ARA-11, and ARA-19)	T. J. Meyers	EGG-WM-10182	Rev. 0, 4/1/1992
ARA-P013	Verification and Updating of the Radioactive Waste Management Information System for the Inactive TRU and Non-TRU Pits and Trenches at the Radioactive Waste Management Complex Subsurface Disposal Area (Volumes I and II)	C. J. Barnard	EGG-ER-10519	Rev. 0, 11/01/1992
ARA-P014	Army Gas-Cooled Reactor Systems Program - Final Hazards Summary Report for the ML-1 Nuclear Power Plant	R.H. Chesworth	IDO-28560, Supplement III	NA, 5/1/1964
ARA-P015	Army Gas-Cooled Reactor Systems Program - ML-1 Hazards Summary Report	R.H. Chesworth	IDO-28560, Supplement IV	NA, 1/1/1964
ARA-P017	Initial Assessment Form for the Drain from ARA-626	Terry Alexander	NA	NA, 9/15/1986
ARA-P018	Idaho National Engineering and Environmental Laboratory Hazardous Waste Determination Record for the ARA-I Building ARA-626 Hot Cells 1 and 2 Concrete Floors and Soils Beneath the Floors	D. M. Nicklaus	10805	NA, 4/22/1999
ARA-P019	Limited Scope and Hazard Characterization Plan for Decontamination and Dismantlement of the ARA-I Facility	L. A. Wilson	INEL/INT-97-00438	0, 5/1/1997
ARA-P020	WAG 5, OU 5-12, ARA-16 Radionuclide Tank Remedial Action Waste - Radiological Source Term Calculations	J. R. Giles	EDF-3002	0, 12/6/2001
ARA-P021	MicroShield Shielding Calculations for ARA-16 Liquid and Sludge Waste Packaging	J. R. Giles	EDF-ARA-2001-026	1, 2/28/2003
ARA-P026	SL-1 Reactor Accident on January 3, 1961	Atomic Energy Commission	IDO-19300	NA, 5/13/1961
ARA-U001	Sampling and Analysis Results for the Auxiliary Reactor Area-III Facility	C. K. Hardy, S. L. Pickett	EGG-WM-9507	NA, 2/1/1999
ARA-U002	Characterization and Decision Analysis for the Auxiliary Reactor Area - II	Jeffrey D. Bradford, John H. Clark, Max R. Dolenc, Gregory J. White	PT-WM-84-010	NA, 9/1/1985
ARA-U003	Installation Assessment Report for EG&G Idaho, Inc., Operations at the Idaho National Engineering Laboratory	EG&G Idaho	EGG-WM-6875	NA, 1/1/1986
ARA-U004	Decontamination and Decommissioning Plan for Auxiliary Reactor Area II	T. N. Thiel	WM-ERP-92-016	Rev. 1, 5/1/1993

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
ARA-U006	Radioactive Waste Management Information System Solid Master Database List for 1954 to 1970, BGP04 for ARA	N/A	P61SHO90	NA, Run Date 9/24/92
ARA-U007	Radioactive Waste Management Information System Solid Master Database List for 1954 to 1970, BGP04 for ARA	N/A	P61SHO90	NA, Run Date 9/24/92
ARA-U010	Waste Disposal Request and Authorization	not legible	ARA626SR009/15/67800200	NA, 9/15/1967
CFA-P001	INEL Environmental Characterization Report, Volumes I-III	A. L. Bowman, W. F. Downs, K. S. Moor, B. F. Russell	EGG-NPR-6688	NA, 09/01/1984 to 01/01/1985
CFA-U001	Remedial Action/Feasibility Study, Workplan of the Subsurface Disposal Area, Radioactive Waste Management Complex at the INEL	N/A	EGG-WM-8776	DRAFT, 12/1/1989
CFA-U002	Sampling and Analysis Plan for the CFA French Drains (COCA Units CFA-071/CFA-12)	R. S. Rice, J. P. Shea, M. J. Spry, S. N. Stanisich	EGG-WM-9089	Rev. 1, 8/1/1990
CFA-U003	Closure Plan for the Central Facilities Area French Drain (COCA Unit CFA-07)	R. D. Rasco, M. J. Spry	EGG-WM-9494	Rev. 0, 3/1/1991
CFA-U004	Closure Plan for the Central Facilities Area French Drain (COCA Unit CFA-12)	R. D. Rasco, M. J. Spry	EGG-WM-9495	Rev. 0, 3/1/1991
CFA-U005	Radioactive Waste Management Information System Solid Master Database List for 1954 to 1970, BGT41 for CFA	NA	P61SHO90	NA, Run Date 9/24/92
CFA-U007	Radioactive Waste Management Information System Solid Master Database List for 1954 to 1970, BGT41 for CFA	NA	P61SHO90	NA, Run Date 9/24/92
CFA-U011	Waste Disposal Request and Authorization for CFA 690	A. V. Grimaul	CFA690SR008/22/6780010	NA, 8/22/1967
ID-C101	Retrieval Area Chemical Evaluation and RCRA Hazards Analysis	N/A	NA	Rev. 3, 2/24/2011
ID-C102	E-mail from Ken Gilbert to Tim Venneman. Leaded Gloves and Nitric Acid	Tim Venneman, Ken Gilbert	NA	NA, 9/24/2004
ID-C103	email from Dale Wells to Lisa Frost, "CF-690 vs. CF-646"	Dale Wells	NA	NA, 4/20/2005
ID-C104	emails - Enclosure of the 1st Stage Vacuum Filter	Carrie Johnson	NA	NA, 8/11/2005
ID-C105	E-mail Correspondence from Joe Saye to Lisa Frost "WIR-Debris from CPP-601"	Joe Saye	NA	NA, 3/25/2005

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
ID-C106	Memorandum from Jeff Harrison to CCP Records Center. Re: Change to Waste Stream Number.	Jeff Harrison	N/A	N/A, 02/27/2006
ID-C107	Discussions with Qualified VE Operators and Retrieval Specialists Concerning the Types of Sludge sent to the Drum Packaging Stations for Visual Examination	Abraham L. Romo	NA	NA, 5/9/2006
ID-C108	Memorandum from Scott Smith to CCP Records Center. Re: Revised ARP Waste Stream Volume Projections and Statistical Selections"	Scott Smith	N/A	N/A, 10/2/2008
ID-C109	Record of Communication, Interview with Abraham Romo, re: Accelerated Retrieval Project (ARP) Drum Packaging Station (DPS) and Visual Examination (VE) Operations	Scott Smith and Jeff Harrison	NA	NA, 06/02/2008
ID-C112	Results of AK Documentation Review and Response to the May 24, 2008 Observer Inquiry Related to Hazardous Waste Numbers Assigned to INL SDA Waste Streams	Scott Smith	NA	NA, 07/16/2008
ID-C113	Memo to CCP Records, re: Contents of GEM Project Waste Drums	Carrie Johnson	NA	NA, 11/16/2010
ID-C114	Email from Lisa Frost to Scott Smith and Carrie Johnson, re: Pit 9 & GEM & Lab Waste	Lisa Frost	NA	NA, 03/11/2010
ID-C115	email to Carrie Johnson, re: ARP Lab Waste	Lisa R. Frost	NA	NA, 12/08/2010
ID-C201	Multi-Source Leachate at Pit 4 and the Subsurface Disposal Area	Richard B. Provencher	NA	NA, 4/28/2005
ID-C202	Compilation of emails concerning spills in the Accelerated Retrieval Area	John M. Espinosa, Ann M. Boehmer, William J. Becker, Monte V. Davis, Scott L. Reno	NA	NA, 2/08/2005 to 4/11/2005
ID-C204	E-mail Correspondence from Hopi Saloman to Douglas Parker. Subject: SDA Waste Retrieval Volume Projection Backup	Hopi Saloman	NA	NA, 3/1/2006
ID-C223	email to Thomas Johnsen, Charles Stepinski, Abraham Romo, Barbara Broomfield, et al, re: Approval to Resume Shipments of ARP Debris Drums	David Ploetz	NA	NA, 6/01/2007
ID-C227	InterOffice Memorandum to Kevin Kooda, re: Continued Need to Store Pad "A" Waste , Barcodes 15081K and 15082K	Frank Webber	WAG-7-17-02	NA, 10/23/2002
ID-C231	Letter to Distribution, re: Brief History and Status of Rocky Flats Pad Anitrate Salts and Sludge Solidification Efforts	P.G. Shaw	PGS-05-97	NA, 05/03/1997
ID-C238	Emails between Brent Burton and Daryl Koch, et al, re: WAG 7 Agency Teleconference Meeting Summary for May 4, 2009	Brent N. Burton	NA	NA, 05/13/2009
ID-D001	Acceptable Knowledge Source Document Discrepancy Resolution, Radionuclide Content	Steve Schafer	NA	NA, 4/21/05

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
ID-D002	Discrepancy Report and Resolution Concerning Prevalent Radionuclides for Waste Streams ID-SDA-SLUDGE, ID-SDA-SOIL, and ID-SDA-DEBRIS	Jeff Harrison	NA	NA, 4/12/2006
ID-M001	Memorandum to CCP Central Records, re: Evaluation of Additional Containers for Idaho Cleanup Project Accelerated Retrieval Project (ARP) Waste Streams ID-SDA-SLUDGE, ID-SDA-SOIL, and ID-SDA-DEBRIS	Carrie J. Johnson	NA	Rev. 1, 05/30/2012
ID-P088	Verification and Updating of the Radioactive Waste Management Information System for the Inactive TRU and Non-TRU Pits and Trenches at the Radioactive Waste Management Complex Subsurface Disposal Area (Volumes I and II)	C. J. Barnard	EGG-ER-10519	Rev. 0, 11/1/1992
ID-P089	Annual Progress Report, Hydrology of Waste Disposal, 1962, National Reactor Testing Station	U.S. Department of the Interior Geological Survey	IDO-22044-USGS	NA, April 1963
ID-P091	A Comprehensive Inventory of Radiological and Nonradiological Contaminants in Waste Buried in the Subsurface Disposal Area of the INEL RWMC During the Years 1952-1983 (Volumes 1 through 5)	Lockheed	INEL-95/0310 (formerly EGG-WM-10903)	Rev. 1, 06/01/1994 to 08/01/1995
ID-P092	History of Buried Transuranic Waste at INEL	D.H. Card	WMP 77-3	NA, 3/1/1977
ID-P093	Radioactive Waste Disposal Data for the National Reactor Testing Station Idaho	Joe H. Osloond, D. L. Newcomb	IDO-12040, Supplement No. 3	NA, 10/1/1968
ID-P094	Radioactive Waste Disposal Data for the National Reactor Testing Station Idaho	Joe H. Osloond	IDO-12040, Supplement No. 2	NA, 11/1/1967
ID-P095	Analysis of the Low-Level Waste Radionuclide Inventory for the Radioactive Waste Management Complex Performance Assessment	L. E. Plansky, S. A. Hoiland	EGG-WM-9857	Rev. 1, 6/1/1992
ID-P097	Instrument Development Branch Annual Report, 1965	N. Wilde, T. J. Boland, S. D. Anderson	IDO-17211	NA, 9/1/1966
ID-P100	Conceptual Design Report for the Accelerated Retrieval Project at Area G of Pit 4 Within the Radioactive Waste Management Complex	Stephanie L. Austad, David W. Wilkins, Brent R. Helm	ICP/EXT-03-00121	NA, 1/27/2004
ID-P101	Engineering Evaluation/Cost Analysis for the Accelerated Retrieval of a Designated Portion of Pit 4	U.S. DOE Idaho Operations Office	DOE/NE-ID-11146	NA, 4/1/2004
ID-P102	Accelerated Retreival Concept Container Analysis	William H. Landman, Jr.	EDF-4388	Rev. 0, 12/10/2003

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
ID-P103	Excavation Plan and Sequential Process Narrative for the Accelerated Retrieval Project for a Described Area within Pit 4	Brian Preussner, Kirt Jamison, Matt Allred, Alan Yonk, Bert Lilburn	ICP/EXT-04-00283	Rev. 0, 4/1/2004
ID-P104	Safety Analysis Report for the Accelerated Retrieval Project at Area G of Pit 4 within the Radioactive Waste Management Complex	Idaho National Engineering and Environmental Laboratory	SAR-215	Rev. 0, 4/15/2004
ID-P105	Waste Categories and Characteristics for the Accelerated Retrieval Project for a Described Area within Pit 4	Thomas G. McDonald	EDF-4591	Rev. 0, 4/21/2004
ID-P106	Drum Packaging Station for the Accelerated Retrieval Project for a Described Area within Pit 4	R. J. Carpenendo	SPC-552	Rev. 0, 6/15/2004
ID-P107	Technical Safety Requirements for the Radioactive Waste Management Complex	Idaho National Engineering and Environmental Laboratory	TSR-4	Rev. 1, 7/26/2004
ID-P108	Safety Analysis Report for the Radioactive Waste Management Complex	Idaho National Engineering and Environmental Laboratory	SAR-4	Rev. 7, 7/26/2004
ID-P109	Removal Action Plan for the Accelerated Retrieval Project I, II, and III	Brent Burton, Idaho Completion Project	DOE/NE-ID-11178	DRAFT B, Rev. 0, Rev. 1, Rev. 2, Rev. 4, 8/1/2004, 10/1/2004, 8/1/2005, 8/2006, 10/2008
ID-P110	Air Emissions Evaluation for the OU-7-10 Glovebox Excavator Method Project	Michael L. Abbott	EDF-2322	Rev. 1, 3/22/04
ID-P111	Excerpt from Separations Monthly Report fo August 1984, Savannah River Plant	Savannah River Plant	DPSP 84-14-8 SEP	NA, Aug-84
ID-P112	Piqua, Ohio, Decommissioned Reactor Site, Long-Term Surveillance and Maintenance Program; printout from Nukeworker.com, "Piqua"	Grand Junction Office, DOE; Nukeworker.com	NA	NA, 7/1/01, 10/07/2004

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
ID-P113	Hallam, Nebraska, Decommissioned Reactor Site, Long-Term Surveillance and Maintenance Program; printout from Nukeworker.com, "Hallam"	Grand Junction Office, DOE; Nukeworker.com	NA	NA, 07/2001, 10/07/2004
ID-P114	Santa Susana Field Laboratory (SSFL), CA: Printout from http://c2d2.eml.doe.gov/index.cfm?target=docs. Cfm&locat=54	DOE/EM	NA	NA, NA
ID-P115	Final Documentation for Operable Unit 5-12 No Action Sites	US Department of Energy Idaho Operations Office	DOE/ID-11058	0, 9/1/2003
ID-P116	Mass Estimates of Organic Compounds Buried in the Subsurface Disposal Area for Operable Units 7-08 and 7-13/14	Mark D. Varvel	INEEL/EXT-01-00277 EDF-ER-301	Rev. 1 and Rev. 2, 4/4/2005 and 2/16/2006
ID-P117	Printout from Nukeworker.com: Shippingport	Nukeworker.com	NA	NA, 5/4/2005
ID-P118	ORAU Team Dose Reconstruction Project for NIOSH, Idaho National Engineering and Environmental Laboratory - Site Description	Norman D. Rohrig, Oak Ridge Associated Universities, Dade Moeller & Associates, and MJW Corporation	ORAUT-TKBS-0007-2	02, 7/29/2005
ID-P119	Criticality Safety Evaluation for the Accelerated Retrieval and Targeted Waste Removal and Disposition Projects (ARP/T-RAD) within the SDA at RWMC	C. A. Cise	EDF-4494	3, 11/01/2005
ID-P121	Proving the Principle	Susan M. Stacy	DOE/ID-10799	NA, 2000
ID-P122	AR Project—Drum Packaging System	Idaho Cleanup Project	TPR-7415	Revs. 46, 36, 35, 34, 31, 30, 29, 20, 16, 7/24/08, 11/16/07, 11/9/07, 10/3/07, 9/14/07,et al
ID-P123	ARP - Respond to Fire, Emergency Response Procedure	Idaho Cleanup Project	EAR-246	Rev. 7, 5/4/2006

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
ID-P124	Agreement to Implement; U.S. District Court Order Dated May 25, 2006	James Rispoli, Admiral Kirkland Donald, Governor C.L. "Butch" Otter, and Lawrence G. Wasden	NA	NA, 05/25/2006
ID-P158	Preliminary Determination of Hazardous Waste from other Generators Collocated with Rocky Flats Plant Transuranic Waste in the OU 7-13/14 Subsurface Disposal Area	Idaho Completion Project	INEEL/EXT-03-01139	NA, 5/1/2004
ID-P163	Action Memorandum for Accelerated Retrieval of a Described Area within Pit 4	U.S. Department of Energy, Idaho Operations Office	DOE/NE-ID-11179	Rev. 0, 08/2004
ID-P168	Remedial Action Report for the OU 7-10 Glovebox Excavator Method Project	Idaho National Engineering and Environmental Laboratory	DOE/NE-ID-11155	Rev. 0, 11/2004
ID-P171	Geographic Information Systems WasteOScope Application for Operable Unit 7-13/14	Luke J. White, Linda A. Tedrow	INEEL/EXT-02-0292	0, August 2002
ID-P174	Test Plan for Development of a Qualification Test Procedure for Targeted Waste Tray Liners for the Accelerated Retrieval Project for a Described Area within Pit 4.	Idaho National Engineering and Environmental Laboratory	PLN-1775	1, 08/26/04
ID-P176	Estimate of Metal Content of SDA	E. C. Garcia, S. M. Thurmond, J. Knight	EDF- BWP-15V-005	0, 1/24/89
ID-P178	Waste Inventory of the Described Area within Pit 4 for the Accelerated Retrieval Project within the Radioactive Waste Management Complex	Idaho National Engineering and Environmental Laboratory	EDF-4478	3, 04/28/2005
ID-P186	Targeted Waste Tray Liners Engineering Design Development for the Accelerated Retrieval Project for a Described Area within Pit 4	Marcela R. Stacey	EDF-5220	0, 1, 9/28/2004
ID-P187	Hydrology of the National Reactor Testing Station Idaho 1966	J. T. Barraclough, W. E. Teasdale, J.B. Robertson, R. G. Jensen	IDO-22049	October 1967

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
ID-P188	Liquid Waste at the National Reactor Testing Station, Idaho	B. L. Schmalz	IDO-12066	NA, July 1968
ID-P189	Annual Report-1958, Health and Safety Division, Idaho Operations Office	John R. Horan, editor	IDO-12012	N/A, 10/15/1959
ID-P190	Annual Report of the Health and Safety Division - 1959, Idaho Operations Office	National Reactor Testing Station, U. S. Atomic Energy Commission	IDO-12014	N/A, 10/1/1960
ID-P191	1960 Annual Report of the Health and Safety Division, Idaho Operations Office	National Reactor Testing Station, U. S. Atomic Energy Commission	IDO-12019	N/A, 9/1/1961
ID-P192	Health & Safety Division Annual Report, 1961	John R. Horan, editor	IDO-12021	N/A, 5/21/1962
ID-P193	Health and Safety Division Annual Progress Report, 1962	John R. Horan, Director; Aubrey O. Dodd, editor	IDO-12033	N/A, 1/1/1963
ID-P194	Health and Safety Division Annual Progress Report, 1963	John R. Horan, Director; Aubrey O. Dodd, editor	IDO-12037	N/A, 8/1/1964
ID-P195	Idaho National Laboratory Historical Dose Evaluation	Idaho Operations Office, U.S. DOE	DOE/ID-12119	NA, 8/1/1991
ID-P198	EPA Toxic and Ordinary Metal Content in Pit 9	E. C. Garcia, J. Knight	BWP-ISV-001	0, 1/24/1989
ID-P199	Hazardous Organic Content of Pit 9	E. C. Garcia, J. Knight	BWP-ISV-002	0, 1/24/1989
ID-P200	Hazardous Inorganic Content of Pit 9	E. C. Garcia, J. L. Knight	BWP-ISV-003	0, 1/24/1989
ID-P201	Detailed Estimate of Radioactive Material Contents for Pit 9	E. C. Garcia, J. L. Knight	BWP-ISV-004	0, 2/23/89
ID-P206	Chemical Compatibility and Inventory Evaluation for the Accelerated Retrieval Project for a Described Area within Pit 4	John R. Dick	EDF-5307	0 and 1, 10/27/2004 and 8/9/2006

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
ID-P214	Supplement to Evaluation of Naval Reactors Facility Radioactive Waste Disposed of at the Radioactive Waste Management Complex from 1953 to 1999	John Giles, K. Jean Holdren, Arpad Lengyel	ICP/EXT-05-00833	Revision 0, 4/1/2005
ID-P215	Area-Based Approach to Identify Type IV Waste for the Accelerated Retrieval Project I	Whitney St. Michel	EDF-5601	0, 5/3/2005
ID-P216	Evaluation of Potential Visual Discriminators for Targeted Rocky Flats Plant Sludge Waste Streams	Rod R. Kimmett and Eric C. Miller	EDF-5720	Revision 0, 5/16/2005
ID-P218	Engineering Evaluation/Cost Analysis for the Accelerated Retrieval Project II	U.S. Department of Energy Idaho Operations Office	DOE/NE-ID-11223	0, 3/1/2005
ID-P221	Waste Inventory Estimate for the Accelerated Retrieval Project II	Jeffrey D. Bryan	EDF-5447	1, 5/31/05
ID-P222	Access Database, Exhumation Area 1-7 WILD database	Doug McKenzie	NA	Rev. 2, 08/17/2006
ID-P231	Remedial Investigation and Baseline Risk Assessment for Operable Unit 7-13/14	K. Jean Holdren, Danny L. Anderson, Bruce H. Becker, Nancy L. Hampton, L. Don Koeppen, Swen O. Magnuson, and A. Jeffrey Sondrup	DOE/ID-11241	NA, 05/2006
ID-P237	Waste Information and Location Database for the OU 7-13/14 Project	M. Doug McKenzie, Donald E. Sebo, Kirk M. Green, Vivian G. Schultz	ICP/EXT-04-00271	0, 11/2005
ID-P239	SDA Targeted and Non-Targeted Waste Identification Operator Guide	Idaho Cleanup Project	GDE-318	Rev. 5, Rev. 3, Rev. 2, Rev. 1, Rev. 0, 03/28/11, 10/09/08, 1/09/08, 8/21/06, 11/23/04
ID-P242	Independent Investigation Report of the November 2005 Drum Fire at the Idaho National Laboratory Site	Idaho Cleanup Project	RPT-190	0, 3/7/2006

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
ID-P246	Technical and Functional Requirements for the Accelerated Retrieval Project for a Described Area within Pit 4	Idaho Completion Project	TFR-265	Rev. 4, 11/09/2004
ID-P247	Project Execution Plan for the Accelerated Retrieval Project for a Described Area within Pit 4	Idaho Completion Project	ICP/EXT-04-00203	Rev. 0, 09/2004
ID-P248	Engineering Design File: Criticality Safety Evaluation for the Accelerated Retrieval and Targeted Waste Removal and Disposition Projects (ARP/T-RAD) within the SDA at RWMC	C. A. Cise	EDF-4494	Rev. 3, 11/01/2005
ID-P249	Excavation Plan for the AR Project (WMF-1612) - Pits 4 and 6 Retrieval Area (ARP II)	Jerry D. Lainhart and Brian D. Preussner	EDF-6974	Revision 0, 06/13/2006
ID-P250	Justification for Continued Operation for SAR-4, Addendum K, and TSR-4: Accelerated Retrieval Project Continued Retrieval Operations	Steve Additon	JCO-3	Rev. 1, 05/03/2006
ID-P251	Plan of Action for the Phase 4 of ARP Drum Fire Recovery Plan at the Subsurface Disposal Area	Idaho Cleanup Project	PLN-2195	Rev. 1, 05/09/2006
ID-P253	ARP Waste Retrieval	Idaho Cleanup Project	TPR-7420	Rev. 53, Rev. 24, Rev. 22, 03/28/2011, 08/28/2006, 06/13/2006
ID-P269	AR Project II—Drum Packaging System	Idaho Cleanup Project	TPR-7415-2	Revision 6, Revision 3, 8/28/2007, 6/20/2007
ID-P271	Engineering Design File, Assessment of Residual Liquid Formation in Waste Soil Drums from the Subsurface Disposal Area	R. R. Kimmitt	EDF-8180	Rev. 0, 06/21/2007
ID-P275	Engineering Design File, Waste Inventory Estimate for the Accelerated Retrieval Project III	Brent N. Burton	EDF-7884	Rev. 0, 04/11/2007
ID-P276	Material Safety Data Sheet for Oil Dri Floor Absorbent	Oil-Dri Corporation of America	NA	NA, 01/03/2005
ID-P288	Material Safety Data Sheet for Durasoil	Soilworks, LLC	NA	NA, 03/16/2007
ID-P301	Laboratory Scale Vitrification of Low-Level Radioactive Nitrate Salts and Soils from the Idaho National Engineering Laboratory	Peter Shaw, Brenda Anderson, Douglas Davis	EGG-WTD-10640	NA, 07/1993

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
ID-P302	Preremedial Design Report of Remediation Options for OU 7-13/14	Gretchen E. Matthern, Neal Yancey, Gregory Hulet, Peter Shaw	ICP/EXT-04-00330	Rev. 0, 09/2005
ID-P303	Waste Management Plan for Operable Unit 7-13/14 Preremedial Design, Retrieved Waste and Soil Characterization, and Environmental Management Science Program Tests	Duane J. Hanson, Brent N. Burton, Gary S. Groenewold, Steve L. Lopez, Gretchen E. Matthern, Jeffery C. Messaros	INEEL/EXT-03-00554	Rev. 0, 09/2003
ID-P368	Engineering Evaluation/Cost Analysis for the Accelerated Retrieval Project III in the Subsurface Disposal Area	Kelly A. Wooley	DOE/ID-11349	Rev. 0, 06/18/2008
ID-P369	Health and Safety Plan for the Accelerated Retrieval Project	Kevin E. Streeper	ICP/EXT-04-00209	Rev. 18, Rev. 14, Rev. 13, Rev. 11, 11/07/2011, 11/2009, 10/2009, 6/2008
ID-P373	Packaging Correction of ARP Waste Containers	Idaho Cleanup Project	TPR-7825	Rev. 6, 11/25/2008
ID-P377	Waste Management Plan for the OU 7-10 Glovebox Excavator Method Project	Idaho Completion Project	INEEL/EXT-02-00767	Rev. 1, 09/2003
ID-P380	Health and Safety Plan for OU 7-10 Glovebox Excavator Method Project Operations	Bruce P. Miller	INEEL/EXT-02-01117	Rev. 7, 03/2004
ID-P384	Criticality Safety Evaluation for Accelerated Retrieval (AR) Project Waste Retrieval and Packaging	Carol A. Cise	RPT-436	Revision 1, 07/2008
ID-P396	Engineering Design File, Excavation Plan for the Accelerated Retrieval Project (WMF-1615) - Pit 5 Retrieval Area (ARP- IV)	Kirk M. Green	EDF-9385	Rev. 0, 11/11/2009
ID-P398	Results of Oxidizing Solids Testing	Graham Walsh, Research Scientist for Energetic Materials Research and Testing Center	EMRTC Report FR 10-13	NA, 04/12/2010

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
ID-P399	Idaho Completion Project's Accelerated Retrieval Project Overview Of The Pit 4 Non-Time Critical Removal Action	T. L. Clements, R. E. Arbon, B. D. Preussner	ICP/CON-04-00598 Preprint	NA, 2/27 - 03/03/2005
ID-P400	Allowable Nitrate Salt Concentration in ARP Waste	Rod Kimmett	EDF-8723	Rev. 2, Rev. 1, 06/30/2010, 07/03/2008
ID-P401	Oxidizer Test Results from SwRI on an ARP Evaporator Salt Sample	Radonna Spies	NA	NA, 05/05/2010
ID-P402	CH2M-WG Idaho Process Knowledge Summary Report for CH TRU Waste and Mixed Low-Level Waste Generated at INTEC and RWMC Analytical Laboratories in Support of AMWTP Sampling Activities, Waste Matrix Codes S5490 and S3900	Idaho Cleanup Project	RPT-670	Rev. 2, 01/2010
ID-P403	Waste Disposition Plan for ICP Laboratory Activities	Idaho Cleanup Project	PLN-3007	Rev. 0, 2/23/2009
ID-P404	Analytical Laboratory Waste Management	Idaho Cleanup Project	ACLP-0.040	Rev. 9, 08/24/2009
ID-P406	CCP Determination of Mercury by CVAA for TRU Waste Characterization	Central Characterization Project	CCP-TP-181	Rev. 0, 5/2/2007
ID-P407	CCP Determination of Metals by ICP-AES for TRU Waste Characterization	Central Characterization Project	CCP-TP-182	Rev. 1, 01/26/2009
ID-P408	CCP Microwave Assisted Digestion of Homogeneous Solids and Soil/Gravel	Central Characterization Project	CCP-TP-183	Rev. 0, 05/02/2007
ID-P409	CCP Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry	Central Characterization Project	CCP-TP-184	Rev. 0, 05/02/2007
ID-P410	CCP Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry	Central Characterization Project	CCP-TP-185	Rev. 1, 11/18/2008
ID-P411	CCP Determination of Nonhalogenated Volatile Organics by Gas Chromatography	Central Characterization Project	CCP-TP-189	Rev. 1, 8/22/2007

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
ID-P412	CCP Sample Preparation of Semivolatile Organic Compounds	Central Characterization Project	CCP-TP-187	Rev. 1, 11/18/2008
ID-P421	Excavation Plan for the Accelerated Retrieval Project (WMF-1618) – Pit 4 Retrieval Area (ARP VI)	Idaho Cleanup Project	EDF-9873	Rev. 0, 12/21/2010
ID-P422	Excavation Plan for the Accelerated Retireval Project (WMF-1617) – Pit 9 Retrieval Area (ARP V)	Idaho Cleanup Project	EDF-9751	Rev. 0, 08/04/2010
ID-P423	ARP VII - Drum Packaging Station	Idaho Cleanup Project	TPR-7415-7	Revision 0, 11/15/2011
ID-P426	Excavation Plan for the Accelerated Retrieval Project (WMF-1619) - Pit 10 Retrieval Area (ARP VII)	Idaho Cleanup Project	EDF-10127	Rev. 0, 10/25/2011
ID-P427	ARP V—Drum Packaging Station	Idaho Cleanup Project	TPR-7415-5	Rev. 1, 11/04/2010
ID-P428	AR Project II—Waste Retrieval	Idaho Cleanup Project	TPR-7420-2	Rev. 8, 02/12/2008
ID-P429	AR Project III—Waste Retrieval	Idaho Cleanup Project	TPR-7420-3	Rev. 2, 11/24/2008
ID-P430	ARP V—Waste Retrieval	Idaho Cleanup Project	TPR-7420-5	Rev. 1, 11/18/2010
ID-P431	ARP VII —Waste Retrieval	Idaho Cleanup Project	TPR-7420-7	Revision 0, 11/15/2011
ID-U100	Waste Disposal Request and Authorization Forms, INL Generators to Buffer Areas of Pit 4, Area 1, Phase I.	Various	NA	NA, 04/17/1964
ID-U101	Beryllium Shipments In ARP-I Retrieval Area	Jeff Harrison	NA	Rev. 1, 1/13/2006
ID-U102	CCP VPM Container Data System Guide	Jeff Harrison	NA	NA, 4/25/05
ID-U103	Waste Disposal Request and Authorization Forms, Idaho Generators to T-RAD Project Area	various authors	NA	NA, 2/28/1963 to 9/22/1967
ID-U104	Beryllium Shipments in T-RAD Retrieval Area	Jeff Harrison	NA	Rev. 0, 1/13/2006
ID-U105	Waste Shipments in ARP-II Retrieval Area, West Buffer Area, and East Buffer Area spreadsheets from a WILD database query and Limitations of the data	Jeff Harrison	NA	NA, 3/29/2006
ID-U107	Beryllium Shipments in Contract Areas 1A, 2A, 6A, 6B, and 6C	Scott Smith	NA	NA, 12/19/2006

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
ID-U109	Beryllium Shipments in ARP-III Retrieval Area	Scott Smith	NA	NA, 10/02/2008
ID-U110	Concise International Chemical Assessment Document 55, Polychlorinated Biphenyls: Human Health Aspects	Dr Obaid M. Faroon, Mr L. Samuel Keith, Ms Cassandra Smith-Simon, and Dr Christopher T. De Rosa, Agency for Toxic Substances and Disease Registry, Atlanta, Georgia, USA	Document 55	1st DRAFT, 2003
ID-U111	Beryllium Shipments in ARP-IV Retrieval Area	Scott Smith	NA	NA, 06/13/2009
ID-U112	Beryllium Shipments in the ARP-V Retrieval Area	Carrie Johnson	NA	NA, 08/11/2010
ID-U113	Radioactive Waste Management Complex Map	NA	G10-2355-07	NA, not dated
ID-U114	Beryllium Shipments in the ARP-VI Retrieval Area	Carrie Johnson	NA	NA, 12/07/2010
ID-U115	Map of the Radioactive Waste Management Complex, Subsurface Disposal Area, and ARP-VII	Idaho National Laboratory	G10-2355-14	N/A, N/A
ID-U116	Beryllium Shipments in the ARP-VII Retrieval Area	Carrie Johnson	NA	NA, 10/19/2011
ID-U292	Waste Inventory of Area G in Pit 4 for the Accelerated Retrieval Projectwithin the Radioactive Waste Management Complex	William H. Landman	EDF-4478	Rev. 1, 1/30/2004
ID-U293	Engineering Design File - Assessment of the Radionuclide Activities in WCF Filters Shipped to the RWMC between 1964 and 1981	D.R. Wenzel	EDF-INTEC-2000-001/1642	NA, 9/25/2000
ID-U294	Radioactive Shipment Records	NA	NA	NA, 10/25/1963
ID-U295	Engineering Design File - Location of Pits, Trenches, and Soil Vault Rows	Eileen Yokuda	ERP WAG7 05	NA, 1/19/1991
ID-U297	Historical Report of the Transuranic Waste Pits and Trenches at the Subsurface Disposal Area of the Radioactive Waste Management Complex at the INEL	D. A Arrenholz, J. L. Knight	WTD-91-027	NA, 8/1/1991
ID-U298	Subsurface Disposal Area (SDA) Waste Identification (1952-1970 Emphasis)	M. J. Vigil	EGG-WM-8727	Rev. 2, 1/1/1990
ID-U304	ARP I Retrieval Area Shipment Lists	Lisa Frost	NA	NA, 02/24/2005

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
ID-U305	Four Photographs for ARP-I: Operation of the Excavator, Retrieved Graphite, Waste Being Hoisted from the Tray in the Glovebox, Retrieved Inorganic Sludge in the Glovebox	N/A	NA	NA, 06/07/2005
ID-U306	SDA Shipments with UNKNOWN Disposal Location	Kirk Green	NA	NA, 6/15/2005
ID-U307	ARPII Total Rad. Term (by waste type) with Buffer Shipments spreadsheets	Kirk M. Green	NA	NA, 12/12/2005
ID-U310	Idaho Completion Project Analytical Laboratories Department. PCB Analysis Results from Accelerated Retrieval Project Waste Zone Samples	Idaho Completion Project	NA	NA, 03/24/2005-11/22/2005
ID-U313	Composite Source Term Data for the Exhumation Areas in the SDA	Kirk Green	NA	Rev. 3, Rev. 2, Rev. 1, 11/17/2011, 9/30/2008, 08/07/2006
ID-U323	Map of the SDA retrieval Areas	Linda Tedrow, Rick Powell	NA	NA, 09/19/2006
ID-U324	Waste Disposal Request and Authorization Forms, Idaho Generators to the NRTS, Area 1A	G. A. Long	NA	NA, 07/09/1962
ID-U326	Various Idaho National Laboratory Generators Waste Shipping Papers - Contract Area 5A	Various	NA	NA, 11/18/1964 to 12/13/1966, not inclusive
ID-U327	Various Idaho National Laboratory Generators Waste Shipping Papers - Contract Area 5B	Various	NA	NA, 01/18/1966 to 06/07/1966, not inclusive
ID-U328	Various Non-RFP, Non-INL Generators Waste Shipping Papers - Contract Area 1D	Various	NA	NA, 07/20/1960 to 11/28/1960, not inclusive
ID-U329	CCP Visual Examination Data for ARP-1	Jeff Harrison	NA	NA, 12/11/2006
ID-U334	Various Spreadsheets Formulated from an Access Query of the WILD Database	Doug McKenzie and Kirk Green	NA	NA, 04/12/2007
ID-U335	Contract Area's Container Dose Ratio	Doug McKenzie and Kirk Green	NA	NA, 04/12/2007
ID-U336	Contract Area's Container Description and Ratio	Doug McKenzie and Kirk Green	NA	NA, 04/12/2007
ID-U337	Contract Area's Shipment Description and Ratio	Doug McKenzie and Kirk Green	NA	NA, 04/12/2007

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
ID-U343	Non-Rocky Flats Shipping Records ARP-III (P06P01)	Kirk Green	NA	NA, 07/31/2008
ID-U344	Non-Rocky Flats Shipping Records ARP-IV (P05P01)	Kirk Green, et al	NA	NA, 12/04/1964 t0 12/13/1966
ID-U345	Non-Rocky Flats Shipping Records ARP-V (P09P03, P09P04)	Various	NA	NA, 11/13/1967 to 09/11/1968, not inclusive
ID-U349	Non-Rocky Flats Shipping Records ARP-VI (P04P03)	NA	NA	NA, 08/26/1964 to 09/17/1965, not inclusive
ID-U351	Retrieval Estimates for 5.69 Acres	Lisa Frost	NA	Rev. 2, 08/30/2010
ID-U353	5.69 AK Physical Detail	Kirk Green	NA	Rev. 1, 09/25/2008 and 9/20/2011
ID-U354	Map of 5.69 Acre Retireval Areas	Kirk Green	5pt69_Acres_R1.mxd	Rev. 1, 10/07/2008
ID-U355	GEM Assay Data and Drum Descriptions	Various	NA	NA, 07/02/2008
ID-U356	CERCLA Waste Inventory Sheets for ARP Sludge Contaminated Secondary Waste	Idaho Completion Project	NA	Rev. 1, 04/16/2007 thru 09/17/2009, not inclusive
ID-U376	CERCLA Storage/Staging Area, RWMC- TRAILER 14-CARGO-A	Laura P. Davis, Sylvia Sing	CSA_1539N	NA, 07/20/2010
ID-U377	Waste Determination & Disposition Form (WDDF), Sample Residue and Analytical Debris from ARP Samples	Jeff Laug, Sylvia O. Sing, Leanne Hackney, Laura Davis	WDDF Number: RWMC10012.R1	NA, 07/22/2010
ID-U382	IWTS Data for Secondary Waste from ARP PCC Process at INTEC	NA	NA	NA, 02/08/2011
INTEC-C001	Evaluation of Records for Waste Generated at the Idaho Chemical Processing Plant (ICPP) and Disposed at the Radioactive Waste Management Complex (RWMC) During the Period of 1960-1983	D. W. Rhoades	DWR-01-93	NA, 1/8/1993
INTEC-C007	Telecom with Ben Hunter	John Davis	NA	NA, 2/17/2005

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
INTEC-C008	Telecom with Russ Stuart	John Davis	NA	NA, 2/18/2005
INTEC-C009	Information re: Generation of Waste from INTEC Building CPP-630	John Davis	NA	NA, 2/22/2005
INTEC-P001	Estimated Radiological Inventory Sent from the Idaho Nuclear Technology and Engineering Center to the Subsurface Disposal Area from 1952 through 1993	James A. Vail, Michael L. Carboneau, and Glen R. Longhurst	INEEL/EXT-05-00967	Rev. 1, Rev. 0, 12/1/2005, 03/01/2004
INTEC-P002	A History of the Radioactive Waste Management Complex at the Idaho National Engineering Laboratory	Waste Management Programs Division RWMC Operations Branch	WM-F1-81-003	Rev. 3, 7/1/1985
INTEC-P005	Comprehensive RI/FS for the Idaho Chemical Processing Plant OU 3-13 at the INEEL - Part A, RA/BRA Report (Final) Binder 3 of 3 (Appendix G only)	NA	DOE/ID-10534	NA, 11/1/1997
INTEC-P006	Operable Unit 3/4 Tank Farm Soil and Groundwater Remedial Investigation/Feasibility Study Work Plan	USDOE Idaho Operations Office	DOE/ID-10676	Rev. 1, 6/1/2004
INTEC-P007	A Regulatory Analysis and Reassessment of U. S. Environmental Protection Agency Listed Hazardous Waste Numbers for Applicability to the INTEC Liquid Waste System	Kenneth L. Gilbert, Ph.D, Timothy N. Venneman, MS	INEEL/EXT-98-01213	Rev. 1, 2/1/1999
INTEC-P098	Safety Analysis Report for the INTEC Waste Management Facility (IWMF)	Idaho Cleanup Project	SAR-103 Addendum A	Rev. 2, Rev. 1, 12/20/2006, 02/01/2006
INTEC-U001	Radioactive Waste Management Information System Solid Master Database List for 1954 to 1970, BGP04 for CPP	RWMIS	P61SHO90	NA, Run Date 9/24/92
INTEC-U002	CPP Production Monthly Reports	A. L. Ayers	Ay-22-66A	N/A, 1/03/1966 to 12/26/1966
INTEC-U025	A Brief Analysis and Description of Wastes in the Subsurface Disposal Area of the Radioactive Waste Management Complex at INEEL.	D.A. Arrenholz, J.L. Knight	EGG-WTD-9438	Rev. 1, 8/1/1991
INTEC-U031	Facility Report for CPP-630	Jack M. Cleveland	NA	NA, 2/17/2005
INTEC-U032	Summary of Waste Disposal Requests for Waste Shipped from Building CPP-630 (1960 through 1972)	Not listed	NA	NA, 2/22/2005
NRF-C031	Asessment of Six Waste Shipments from NRF to Pit #4 at the RWMC	W. R. Dixon	NR:IBO-04/098	NA, 7/8/2004

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
NRF-U001	Historical Report of Transuranic Waste Pits and Trenches at the Subsurface Disposal Area of the Radioactive Waste Management Complex at the INEL	D. A. Arrenholz and J. L. Knight	WTD-91-027	NA, 08/1991
NRF-U003	Waste Disposal Request and Authorization	Various	NA	NA, 7/22/1966 to 1/19/1967
NRF-U004	Estimated Naval Reactors Facility Radiological Inventory for Waste Area Group 7 Operable Unit 7-13/14 (Draft)	Frank L. Webber, and T.J. Myer	INEEL/EXT-03-00468	Rev. 0, 4/1/2003
PER-C001	TAN-SPERT Health Physics Progress Report for August 1965	O. L. Cordes	Cord-48-65A	NA, 9/16/1965
PER-C002	TAN-SPERT Health Physics Progress Report for April 1966	O. L. Cordes	Cord-30-66A	NA, 5/16/1966
PER-C003	Office Memorandum: W.P. Gammill, Calculations of Maximum Possible Environmental Releases of I-131 and I-135 from Spert I Destruct Test November 5, 1962	Norman R. Islitzer	DOE/HRE-ID-207	NA, 05/10/1963
PER-C007	TAN-SPERT Health Physics Progress Report for December 1965	O. L. Cordes	Cord-6-66A	NA, 1/20/1966
PER-C009	TAN-SPERT Health Physics Progress Report for January 1966	O. L. Cordes	Cord-15-66A	NA, 2/18/1966
PER-C010	TAN-SPERT Health Physics Progress Report for February 1966	O. L. Cordes	Cord-21-66A	NA, 3/15/1966
PER-C013	Shipment of SPERT Scrap Fuel	W. H. Etz	Etz-15-68A	NA, 4/17/1968
PER-P003	Quarterly Technical Report, SPERT Project, January, February, and March 1964	A. H. Spano	IDO-17010	NA, 7/1/1964
PER-P004	Transient Tests of the Fully Enriched, Stainless Steel Plate-Type, P Core in the SPERT I Reactor: Data Summery Report	A. P. Wing	IDO-17011	NA, 12/1/1964
PER-P005	Quarterly Technical Report, SPERT Project, April, May, and June 1964	A. H. Spano	IDO-17030	NA, 9/1/1964
PER-P006	SPERT III Reactor Facilty E Core Revision	J. Dugone	IDO-17036	NA, 11/1/1965
PER-P007	SPERT Program Projection	SPERT Staff	PTR-662	NA, 9/1/1963
PER-P008	Report: THE EFFECTS OF COOLANT TEMPERATURE AND INITIAL POWER LEVEL ON THE EXCURSION BEHAVIOR OF A HIGHLY ENRICHED PLATE CORE IN SPERT III EXPERIMENT AND ANALYSIS	C.M. Condit J.F. Scott R.L. Johnson	IDO-17138	N/A, 3/1/1967
PER-P009	Report: QUARTERLY TECHNICAL REPORT SPERT PROJECT October, November, December 1964	J.G. Crocker / Editor	IDO-17084	N/A, 4/1/1965
PER-P010	Report: TRANSIENT TESTS OF THE SPERT I LOW-ENRICHMENT UO2 CORE: DATA SUMMARY REPORT	R. Scott, Jr., A.A.Wasserman, and R.C. Schmitt	IDO-16752	N/A , 9/3/1963

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
PER-P011	Report of the SPERT I Destructive Test Program on an Aluminum, Plate-Type, Water-Moderated Reactor	R. W. Miller, Alain Sola, R. K. McCradell	IDO-16883	N/A, 6/1/1964
PER-P012	SPERT II Facility Report Issued August 23, 1963	CC. R. Montgomery	IDO-16888	0, 8/23/1963
PER-P013	Heavy Water Handling Experience in the SPERT II Reactor Facility	C. R. Montgomery	IDO-16997	N/A, 7/1/1964
PER-P022	SPERT Program Review	Frank Schroeder	PTR-613	N/A, 1/21/1963
PER-P027	Transient Tests of the BSR-II Core in the SPERT Facility	L. A. Stephan	IDO-16768	N/A, 4/1/1963
PER-P029	Quarterly Technical Report SPERT Project, January, February, March, 1963	J. R. Huffman, W. E. Nyer, F. Schroeder	IDO-16893	N/A, 3/30/1963
PER-P030	Nuclear Start-up of the SPERT IV Reactor	J. G. Crocker, J. E. Koch, Z. R. Matrinson. A. M.	IDO-16905	N/A, 7/1/1963
PER-P031	SPERT I Low-Enrichment Oxide Core Destructive Test Program Safety Analysis Report	J. E. Grund, B. E. Norton	IDO-16906	NA, 8/1/1963
PER-P032	Quarterly Technical Report, April, May, June, 1963	J. R. Huffman, W. E. Nyer, F. Schroeder	IDO-16920	NA, 9/20/1963
PER-P033	Quarterly Technical Report, July, August, September, 1963	A. H. Spano	IDO-16931	NA, 4/30/1964
PER-P034	Quarterly Technical Report, October, November, December, 1963	A. H. Spano	IDO-16992	NA, 6/1/1964
PER-P035	Reactor Power Excursion Tests in the SPERT IV Reactor	J. G. Crocker, L. A. Stephan	IDO-17000	NA, 8/1/1964
PER-P036	Fuel Rod Experience during the SPERT I Destructive Test Series with a Stainless Clad, Rod-Type Core	J. A. Norberg, D. D. Wieland	IDO-17048	NA, 3/1/1965
PER-P037	Quarterly Technical Report, SPERT I Program, July, August, Spetember, 1964	J. G. Crocker	IDO-17055	NA, 1/1/1965
PER-P039	Quarterly Technical Report, SPERT Program, July, August, September, 1965	J. G. Crocker	IDO-17146	NA, 2/1/1966
PER-P040	Quarterly Technical Report, SPERT Program, October, November, December, 1965	J. G. Crocker	IDO-17179	NA, 6/1/1966
PER-P041	SPERT I Destructive Test Series, Environmental Monitoring and Research Studies	D. F. Bunch	IDO-12039	NA, 1/1/1965

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
PER-P042	Addendum to the SPERT III Hazard Summary Report--Low Enrichment Oxide Core	J. E. Houghtling, J. A. Norberg, J. C. Haire	IDO-17003	NA, 10/1/1965
PER-P043	Quarterly Technical Report, Spert Program, April, May, June 1965	J. G. Crocker	IDO-17123	NA, 1/1/1966
PER-P044	Quarterly Technical Report, Spert Program, January, February, March 1966	R. M. Potenza	IDO-17206	NA, 9/1/1966
PER-P045	Quarterly Technical Report, Spert Program, April, May, June 1966	T. G. Taxelius, R. M. Potenza	IDO-17207	NA, 1/1/1967
PER-P046	Quarterly Technical Report, Spert Program, July, August, September 1966	T. G. Taxelius	IDO-17228	NA, 4/1/1967
PER-P047	Safety Analysis and Operational Safety Requirements of the Power Burst Operations Support Facility	A. M. Jensen	TFBP-TR-317	Rev. 0, 2/1/1984
PER-P048	Instrument Development Branch Annual Report, 1966	N. Wilde, T. J. Boland, S. D. Anderson	IDO-17234	NA, 7/1/1967
PER-P049	Quarterly Technical Report, SPERT Project, October, November, and December 1966	T. G. Taxelius	IDO-17245	NA, 10/1/1967
PER-P058	SPERT IV Facility	R. E. Heffner, E. L. Morris, D. T. Jones, D. R. Seaman, M. K. Shane	IDO-16745	2/22/1962
PER-P059	SPERT III Reactor Facility	R. E. Heffner, T. R. Wilson	IDO-16721	10/25/1961
PER-P060	An Engineering Description of the SPERT-I Reactor Facility	T. R. Wilson	IDO16318	NA, 6/14/1957
PER-U001	Some Radiological Aspects of the SPERT I Destructive Test, April 14, 1964. Preliminary Report by the AEC Health and Safety Division	NA	DOE/HRE-ID-208	NA, 05/18/1964
PER-U002	Special Power Excursion Reactor Tests (SPERT) General Information Fact Sheet on SPERT I	N/A	N/A	NA, N/A
PER-U003	Safety Analysis and Operational Safety Requirements of the Power Burst Operations Support Facility	N/A	NA	Rev. 0, 2/1/1984
PER-U004	Preliminary Safety Analysis Report, PBF (1965)	E. Feinauer, R. S. Kern	IDO-17060	NA, 3/65 and 6/65
PER-U005	Radioactive Waste Management Information System Solid Master Database List for 1954 to 1970, BGP05 for PER	NA	P61SHO90	NA, 9/24/1992

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
RF-C010	Letter to Rod Thomas re: Conference meeting regarding depleted uranium	Ed Vejvoda	NA	NA, 12/11/2000
RF-C012	Letter to Mr. Rod Thomas, re.: Buiding 774 Feed Solutions	Ed Vejvoda	EV-L01016-Rod Thomas	NA, 03/30/2001
RF-C014	Letter to Rod Thomas re: Rocky Flats Retrieved Waste	Ed Vejvoda	NA	NA, 9/12/2000
RF-C017	Letter to Bruce Becker re: Graphite Specifications	Ed Vejvoda	NA	NA, 7/25/2001
RF-C018	Letter to Rod Thomas re: Sludges from building 881 - Your FAX of 10-24-00	Ed Vevjoda	N/A	N/A, 1/18/2001
RF-C019	Letter to Rod Thomas re: Discrepancy List for 1954 Shipment- Waste Data Set	Ed Vejvoda	NA	NA, 03/12/2001
RF-C021	Letter to Rod Thomas re: Your Fax 03/02/01	Ed Vejvoda	NA	NA, 04/24/2001
RF-C025	Letter to Rod Thomas re: NDA Reports	Ed Vejvoda	NA	NA, 2/12/2001
RF-C026	Letter to Rod Thomas re: CY 1967 discrepancy corrections	Ed Vejvoda	NA	NA, 2/10/1999
RF-C027	Letter to Rod Thomas re: Your FAX 2/19/01, July 12, 1955 Shipment	Ed Vejvoda	NA	NA, 3/23/2001
RF-C028	Memo to Paul Sentieri re: pre 1970 RFP waste	Ed Vejvoda	NA	NA, 11/7/2002
RF-C032	Letter to K.J. Holdren re: EPA Region 10 Requests	Ed Vejovda (LATA)	NA	NA, 2/12/2002
RF-C035	Letter to Bruce Becker re.: Nuclear Safety - Waste Management	Ed Vejvoda	NA	NA, 9/26/2001
RF-C037	Rocky Flats Reports-Letter with attached report-To Ms. Marianne Little	Ed Vejvoda	EV-L01045-Marianne Little	NA, 12/11/2001
RF-C038	Your Fax July 23, 2001-Letter-To Bruce Becker	Ed Vejvoda	EV-L01033-Bruce Becker	NA, 08/16/2001
RF-C039	Uranium-233 Questions-Letter-To Bruce Becker	ED-Vejvoda	EV-L01030-Bruce	NA, 08/03/2001
RF-C040	Rocky Flats Waste Information-Letter-To Ms. Marianne Little	Ed Vejvoda	EV-L01044-Marianne Little	N/A, 12/04/2001
RF-C041	HEPA Filter Information, letter to Bruce Becker	Ed Vejvoda	NA	NA, 7/6/2001
RF-C042	WR Material List To Bruce Becker-Letter	Ed Vejvoda	EL-L01035-Bruce	NA, 09/05/2001
RF-C044	Memo to Bruce Becker re: Plutonium Estimates for Rocky Flats Waste Forms	Ed Vevjoda	N/A	N/A, 8/29/2001
RF-C045	Rod Thomas' notes on telephone conversations with Ed Vejvoda, LATA	Rod Thomas	NA	NA, 6/20/2001

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
RF-C047	Rocky Flats Refractory Materials-Letter-To Mr. Ross Darnel	C. E. Wickland	78-RF-2079	NA, 10/31/1978
RF-C050	Letter Fred Wettich, re: Further Information on Filters	G. R. Darnell	GRD- -81	NA, 08/1981
RF-C053	Memorandum to J. D. McKinney re: Nitrate Salts Estimate in SDA	T.L. Clements	NA	NA, 8/26/1980
RF-C055	Updated Communication with J.L. De Rouchi re: Sludge Packaging	Unknown	NA	NA, N/A
RF-C057	Letter to Dr. J. A. Buckham re: Rocky Flats Waste Shipped to NRTS	C. Wayne Bills	NA	NA, 12/7/1971
RF-C058	Memo to K. B. McKinley re: PCB Contaminated Waste at RWMC TLC-7-81	T.L. Clements, JR	NA	NA, 8/25/1980
RF-C060	Interoffice Correspondence to J.D. McKinney re: Buried Waste Characterization TLC47-80	T.L. Clements, JR	RWMC-109-80	NA, 8/25/1980
RF-C062	Memo to J. D. McKinney re: Nonradiological Hazards Study	T. L. Clements	TLC-35-80	N/A, 6/16/1980
RF-C063	Letter to J. B. Whitsett re: Non radiological Hazards	L. P. Duffy	Duf-71-79	N/A, 2/26/1979
RF-C064	Memo to T. H. Smith Subject: Nonradioactive Hazardous Waste Data	R.W. Passmore	Pass-98-79	N/A, 11/14/1979
RF-C065	Memo to J. D. McKinney re: Non-Radiological Hazards Study	T. L. Clements, Jr.	C065	N/A, 1/22/1980
RF-C066	Nonradiological Hazards Summary	E. N. Fray	ENF-75-80	NA, 2/15/1980
RF-C070	Letter regarding solid waste disposal at RWMC.	V.V. Hendrix	NA	NA, 3/23/1959
RF-C073	Letter to Dr. J. D. Shreve, Jr. Re: Proposal for Research Foundation on safety tests at Stonewall Flat.	Fred L. Smith	NA	NA, 4/23/1963
RF-C078	Letter to Martin B. Biles re: Radioactive Solid Waste Management at the National Reactor Testing Stations	Ray D. Walton Jr., AEC	N/A	N/A, 11/10/1969
RF-C080	Letter to Rod Thomas transmitting information re: Waste Shipments to Arco - 1959 - 1965	Ed Vejvoda	NA	NA, 4/5/2000
RF-C081	Letter to Ftl Langell Re: Disposal of Contaminated Solid Waste	T.S. Chapman, DOW Chemical Co.	NA	NA, 4/4/1952
RF-C086	Memo to Director, Safety & Fire Protection Devision re: Disposal of Solid Radioactive Waste from Rocky Flats Plant	Gilbert C. Hoover, RFFO	NA	NA, 5/14/1954
RF-C088	Memorandum to L. MI Jodel, DOW, regarding oil leakage in drum storage area	F. E. Abbott, USAEC	NA	NA, 2/17/1970
RF-C089	Request for Storage and Loading Facility for Contaminated Waste	H. C. Anderson	NA	NA, 2/08/1957
RF-C090	Letter to C. M. Love Re: Perclene	E. E. Hicks	NA	NA, 12/26/1957

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
RF-C095	Letter to J. O. Schiltz, re: Area Characteristics for Machining Beryllium	W. M. Bean	NA	NA, 12/31/1958
RF-C096	Minuets - "Waste Disposal Meeting - October 21, 1963"	F.E. Butler	NA	NA, 10/30/1963
RF-C098	Waste Disposal	Frank E. Butler	NA	NA, 8/17/1962
RF-C099	Disposal of Mercury-Type Dry Cell Batteries	F. H. Langell	NA	NA, 8/15/1960
RF-C100	Letter to Dr. A. Feldman, re: Disposal of Radioactive Contaminated Wastes from Univ of Colorado Medical Center	Edward S. Ryan	NA	NA, 03/29/1962
RF-C101	Letter to T.S. Klayder, U.S. Food and Drug Administration	T.S. Chapman	NA	NA, 5/17/1961
RF-C102	TWX to J. B. Mailocci re: Disposition of Unclassified Scrap (Shipment of material to Rocky Flats for disposal at INEEL)	H.C. Strauss	NA	NA, 12/1/1960
RF-C104	Correspondence regarding the disposal of waste from Coors Porcelain Company	Various	NA	1960-1962
RF-C105	Letter to Rod Thomas re: Rocky Flats Waste Information	Ed Vejvoda, LATA	NA	NA, 7/17/2000
RF-C107	Memo - "Depleted Uranium and Beryllium Waste in Pit 9 RWT-05-99"	R.W. Thomas	NA	NA, 8/26/1999
RF-C108	Letter to Rod Thomas re: RA Waste Generation	Ed Vejvoda	NA	NA, 12/2/1999
RF-C109	Memos - Non Salvable Contaminated Wastes for Disposal "B" Plant	A.M. McNeill	NA	NA, 1964-1965
RF-C110	Letter from Ed Vejvoda (LATA) to Rod Thomas (BBWI) re: Responses to Faxes of 6/28/00 and 7/10/00	Ed Vejvoda	NA	NA, 8/23/2000
RF-C113	Memo - "Depleted Uranium Alloys"	Ed Vejvoda	NA	NA, 6/7/2000
RF-C114	Letter to Rod Thomas re: Waste Drum Generation from the903 Pad and Mound Area	Ed Vejvoda	NA	NA, 1/11/2001
RF-C116	903 Oil Drum Storage Area, Letter to E.A. Putzier	K. J. Freiberg	NA	NA, 4/14/1970
RF-C117	Memo to Mr. Best re: Attempted Pu Recovery from Lathe Coolant in Storage Area	M. E. Maas	NA	NA, 12/13/1967
RF-C118	Letter to K. V. Best, Disposal Summary of Pu Contaminated Materials -- Building 903 Storage Area	H. E. Mans	NA	NA, 9/24/68
RF-C120	Rocky Flats Waste Information-ION EXCHANGE INFORMATION-Letter-To Rod Thomas-This letter covers two waste items (1) ion exchange resins and (2) waste generation information	Ed Vejvoda	ev-1-99019-thomas	N/A, 11/29/1999
RF-C123	Letter to Rod Thomas re: Meeting Notes	Ed Vejvoda	NA	NA, 9/12/2000

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
RF-C124	Memo from L. C. Farrell re: Waste Shipments	L. C. Farrell	NA	NA, 9/18/1957
RF-C129	Depleted Uranium and Beryllium Waste in Pit 9-RWT-05-99, To DE Wilkings-Letter	R.W. Thomas	RWT-05-99	N/A, 08/26/1999
RF-C132	Letter to F.H. Langell, Dow Chemical, re: off site solid waste disposal	Gilbert C. Hoover	NA	NA, 12/17/1953
RF-C133	PRELIMINARY REPORT ON METHODS OF HANDLING BUILDING 81 RAFFINATES IN THE WASTE TREATMENT PLANT-To L.P.Ferris,II cc J.G.Epp, I.B.Venable	J.A. Basinger	N/A	N/A, 07/12/1954
RF-C134	Memo - "Graphite, Filter, and Potentially Pyrophoric Wastes in Pit 9 For OU 7-10 Extended Probe Hole Activities - RWT-02-00"	R.W. Thomas	NA	NA, 6/8/2000
RF-C137	Letter to Rod Thomas re: CY 1967 Discrepancy Corrections	Ed Vevjoda	NA	NA, 02/10/1999
RF-C139	CY 1967 Discrepancy List Rework-To Rod Thomas-cc Roger Mayes, LATA-IDO Letter	Ed Vejvoda	EV-L99013-Thomas	N/A, 04/19/1999
RF-C140	Report of Meeting Held in Mr. Langell's Office December 5 Regarding Feasibility Study for General Project Waste Incinerator	B. P. Shepherd	NA	NA, 12/5/1952
RF-C142	903 Oil Drum Storage Area, To E. A. Putzier, Letter with a brief history of the disposal of oil drums from the 903 Area.	K. J. Freiberg	NA	NA, 4/14/1970
RF-C147	Carbon Tetrachloride Recovery System. To W. F. McKelvey	R. A. Vandegrift	NA	NA, 12/1/1959
RF-C148	Request for Proposal to Ship Radioactive Waste to Richland. To F. E. Abbott, Request that Dow Chemical Company submit a proposal to ship low specific activity waste to Richland.	J. F. Burke	NA	NA, 8/24/1971
RF-C149	Proposal to Ship LSA Wastes from Rocky Flats to Richland. To J. F. Burke, Assistant Manager for Operations, ALO. Dow Chemical Company's proposal to ship LSA wastes to Richland	A. K. Williams	NA	NA, 09/30/1971
RF-C150	Waste Disposal, To William Boyd. Conditions for Rocky Flats to Accept Be oxide contaminated waste from the Denver Research Institute	J. B. Owens	na	na, 6/16/1971
RF-C151	Waste Disposal. To William L. Smith. Conditions for Rocky Flats to accept contaminated waste from USGS Nuclear Science Building 15	J. B. Owens	NA	NA, 7/13/1971
RF-C156	Progress Report for the Month of December 1954, Waste Disposal Coordination Group. To L. C. Farrell. Monthly report	E. S. Ryan	NA	NA, 1/4/1955
RF-C157	Plutonium-Contaminated Equipment. To Lloyd M. Joshel. Equipment contaminated by the plutonium fire in B71 in September, 1957.	I. B. Venable and L. A. Matheson	NA	NA, 3/25/1963
RF-C159	Waste Handling Procedures at Rocky Flats - Leaky Drum at NRTS, Idaho. To Lloyd M. Joshel. Policy against shipping liquids.	F. E. Abbott, Area Manager	NA	NA, 3/3/1971

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
RF-C162	Letter to General Manager, Rocky Flats Plant, re.: Rocky Flats Disposal of Colorado School of Mines Research Foundation Waste Materials	Fred L. Smith	NA	NA, 03/27/1964
RF-C164	Letter to H. R. Neyle re: Organic Solvents	John E. Hill	80402	NA, 05/21/1965
RF-C167	Letter to J. G. Epps re: Use of Acetone in Production of Dryboxes	Sam H. Pitts	NA	NA, 10/18/1967
RF-C169	Letter to C. W. Piltingarud re: Tritium	AB	NA	NA, 12/11/1964
RF-C176	CRITICALITY RECOMMENDATION: RASCHIG RINGS-Letter-JB Owen	CL Schuske	N/A	N/A, 09/11/1969
RF-C180	Memo to H. E. Bowman re: Interim Capability - South Line	A. R. Konecny	NA	NA, 07/23/1969
RF-C181	Letter to R. J. Gallagher re: Exhaust Duct for Room 201, Building 44, Authorization 447669-44	Carl F. St. John	NA	NA, 1/3/1964
RF-C184	Letter to Chet Holifield, US Congress, re: Safety concerns at RFP	Glen T. Seaborg, US AEC	NA	NA, 10/01/1969
RF-C185	Letter to E. A. Putzier, re.: Equipment Decontamination Summary for 1969	R. M. Vogel	NA	NA, 01/13/1970
RF-C186	Letter to J. B. Owen, re.: Plutonium Decontamination Capability	R. M. Vogel	NA	NA, 09/02/1969
RF-C195	Memo to R. A. Larson Re: Perchloroethylene -- Building 76	J. E. Hill	NA	NA, 05/23/1966
RF-C196	Memo to J. W. Lind re: Trichloroethylene Vapors from Ultrasonic Cleaners	S. E. Hammond	NA	NA, 06/30/1996
RF-C197	Waste Management, Packaging and Shipping of Wastes in Outside Storage. To T. C. Jones. Concerns the backlog of 1,738 55-gallon drums containing plutonium contaminated wastes in outside storage.	J. B. Owen	N/A	NA, 10/20/1971
RF-C205	Ammonium Thiocyanate Concentrations - Americium Glove Box Line. To J. E. Hill, K. W. Hugo, W. D. Kittinger. Chemical information concerning this process.	L. F. Gill, Superintendent, Chemical Operations	NA	NA, 5/21/1970
RF-C207	Calculations for Carbon Tetrachloride Still. To B. P. Shepherd. Calculations used for the carbon tetrachloride still.	R. W. Hawley	DJO 4561	N/A, 3/31/1959
RF-C208	Letter with attachment from J. F. Willging, Director Research and Ecology to F. E. Abbott, Manager RFAO, Mercury Usage Survey	J F. Willging	N/A	N/A, 8/3/1972
RF-C209	Mercury Survey. C. W. Piltingsrud. Use of mercury at Rocky Flats.	J. E. Hill	N/A	N/A, 9/15/1970
RF-C210	Reactive Material Survey - Development Coating Facility in B777, Rms. 437, 463, and 464. To D. G. Williams. List of chemicals used in the operation.	C. W. Barrick	N/A	N/a, 12/21/1971

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
RF-C211	Reactive Chemicals, Building 771. To C. W. Barrick. List of chemicals used in Building 771.	R. D. Gaskins	N/A	N/A, 9/1/1971
RF-C212	Hazardous Materials Survey NDT Environmental Testing. To S. J. Hartz. Chemicals used in Building 777.	C. W. Barrick	N/A	N/A, 11/12/1971
RF-C213	Formula A Paint Remover. To C. W. Ellis. Opinion on the use of Formula A paint remover.	C. W. Barrick	N/A	N/A, 12/2/1971
RF-C214	Service Lab Use of Halogenated Solvents. To M. A. Thompson. Use of halogenated solvents in the labs in Buildings 559, 881, and 771.	C. W. Barrick	N/A	N/A, 12/5/1973
RF-C215	Hazardous Materials Survey - Building 707 Manufacturing Assembly, et al.	F.D. Hobbs, R.M. Saiki, R.R. Gunning, W.D. Scheuer	N/A	N/A, 9/7/1971
RF-C216	Procedure for Labeling, Sealing and Reporting on Containers Used for Waste Removal. To E. Martella, M. Roberts. Instructions for labeling, sealing, and reporting of waste containers used in the clean-up and restoration work after the Building 776 fire.	B. A. Bowman	NA	NA, 6/6/1969
RF-C218	Headspace Gas Analysis of 774 Building Drums. To S. Hamilton. Samples taken from 4 drums of paint thinner being used in Building 774.	T. L. McFeeters	N/A	N/A, 3/29/1972
RF-C219	ZPPR Fast Recycle Residues	Seth R. Woodruff, Jr.	NA	NA, 8/19/1969
RF-C220	ZPPR Residue Resume	J. F. Willging	NA	NA, 2/12/1970
RF-C223	Contaminated Liquid Disposal Mechanical R&D Plutonium Shop, Bldg. 779A	John H. Quella	NA	NA, 12/04/1969
RF-C224	List of Potentially Hazardous Substances. To F. E. Abbott, Manager, USAEC, RFAO. List of potentially hazardous substances in use at Rocky Flats.	J. F. Willging	N/A	N/A, 12/8/1971
RF-C225	Letter to J. F. Landolt, re.: Beryllium - Building 551	J. E. Hill	NA	NA, 04/28/1969
RF-C226	Hazardous Materials Survey. To W. L. Rooker. List of materials used in Building 881.	F. D. Hobbs and D. M. Saiki	N/A	N/A, 9/2/1971
RF-C227	Reactive Materials Survey - Building 444 and 881 Metallurgical Operations. To W. H. Hauschildt. Chemicals used in the processes in Building 444 and 881 Metallurgical operations.	F. D. Hobbs and D. M. Saiki	N/A	N/A, 10/7/1971
RF-C228	Training - Pest Control and Public Health. To L. M. Grow, RFAO, USAEC. Notice of the discontinuance of the use of Chlordane and Malathion.	J. Seastone	N/A	N/A, 2/10/1970
RF-C230	Letter to D. Bainbridge, re.: Copper-Beryllium Scrap	J. E. Hill	NA	NA, 04/25/1968

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
RF-C232	Hazardous Materials Evaluation - Buildings 776 & 707 Manufacturing Fabrication. To F. B. Evans. List of chemicals and materials used in manufacturing fabrication in Buildings 707 and 776.	D. M. Saiki, F. D. Hobbs, E. F. Lombardi	N/A	N/A, 11/3/1971
RF-C234	Memo to L. C. Farrell re: History Report - Waste Disposal - March, 1958	E. E. Johnston	NA	NA, 04/02/1958
RF-C235	Partial Monthly Report, Waste Disposal Coordination Group	E. S. Ryan	NA	NA, 7/30/1963
RF-C236	Letter to T. S. Chapman, re: Tentative Procedure for Handling Contaminated Solid and Liquid Wastes	L. C. Farrell	NA	NA, 3/19/1953
RF-C239	Letter to J. G. Epp, re.: Water in 74 Building Sludge	G. E. White	NA	NA, 08/15/1963
RF-C243	Interview of RFP former employee, Al Wilson, conducted by Scott Smith on 4/30/03 regarding hisotorical Rocky Flats plutonium operations	Scott Smith	NA	NA, 04/30/2003
RF-C244	Memorandum to J.M. Roberson, RFFO & J. M. Wilcynski, INEEL re: Identification of Defense Waste Streams Generated at Rocky Flats Environmental Technology Site (RFETS)	George E. Dials, DOE CBFO	NA	NA, 05/20/1997
RF-C245	Low Level Waste to be Shipped for Burial	H. B. Dukkelberger	NA	NA, 11/20/1964
RF-C246	Interview of Andy Jacobs, BBWI, WGS re.: Bioassay Radioisotopes	Carolyn K. Abbott	NA	NA, 03/30/2004
RF-C260	Letter to J. L. Long, Identification and Thermal Studies of the Residue from Nitric Acid Reaction with Leaded Neoprene Gloves	K. J. Grossaint	MSL-2507	NA, 03/30/1973
RF-C290	Telecon with Bill Conner of Los Alamos Programs Office, re.: Defense Versus Non-Defense Related Projects	Jeff Harrison	C188	NA, 04/03/1997
RF-C292	Telecon between Bill Conner of Rocky Flats Plant re.: Defense Versus Non-Defense Related Projects	Jeff Harrison	C190	NA, 05/19/1997
RF-C320	Correspondence to Sheila Hailey (BBWXT), re: Cyanide Content of Solidified Aqueous Sludge - Bldg. 774	Kevin J. Peters (Wastren)	KJP/004/0501	NA, 05/22/2001
RF-C321	Telecon with Dr. Mason Harrup (BBWI), re: Is free cyanide available for release from wastewater treatment sludge after receiving electroplating waste in a wastewater treatment facility.	Joan Connolly and Carolyn Abbott (North Wind)	NA	NA, 04/29/1999
RF-C342	Transmittal of Aluminum/Magnesium Salt Crub Process Description for Molten Salt Extraction Salts	Alice M. Murray	AMM-059-94	NA, 4/15/1994
RF-C350	Fax from Steve Cunningham to Jeff Paynter, Rocky Flats Plutonium Isotopic Levels	Steve Cunningham	NA	NA, 1/2/1997
RF-C400	Letter, Chemical Waste Disposal, to J. R. Seed	J. E. Hill	NA	NA, 1/13/1972
RF-C401	Letter, Disposal of Building 91 Chemical Wastes, to H. L. Fleischacker	A. H. Voight	NA	NA, 8/10/1966

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
RF-C402	Letter concerning unwanted chemical disposal	Hill	NA	NA, 9/20/1971
RF-C403	Partial Monthly Report to L. C. Farrell	E. S. Ryan	NA	NA, 1/10/1958
RF-C404	Report on Waste Control Study	Lloyd M. Joshel	NA	NA, 12/1/1969
RF-C405	Processing Alternatives for PCB Transformer Fluids	E. Vejvoda	78-RF-1637	NA, 9/1/1978
RF-C406	Letter, Evaluation of Potential Sources of RCRA Compounds found in Graphite Waste Headspace, to Sheila Hailey	K. J. Peters	KJP/114/0298	NA, 2/25/1998
RF-C407	Letter, Contamination Levels and Decontamination Activities Subsequent to the Incident of November 9, 1965 - Building 71, to E. A. Putzier	C. R. Johnson, W. D. Kittinger	NA	NA, 11/24/1965
RF-C408	Letter, Reactive Chemical Hazard Data on Samples Submitted October 7, 1971, to J. L. Summers	T. L. Waldrup	NA	NA, 10/7/1971
RF-C409	Miscellaneous Correspondence Concerning Ion-Exchange Resin	R. N. Rogers, C. Abbott	NA	NA, 5/18/83, 6/9/83, and 9/14/04
RF-C410	Letter, Hazardous Material Rating, to R. D. Gaskins	C. W. Barrick	NA	NA, 9/14/1971
RF-C411	Letter, Review of Chemicals Stored in the Warehouse, to J. B. Tomlinson	A. K. Williams	NA	NA, 12/22/1969
RF-C412	Letter, Information Regarding the Use of Trichloroethylene, to M. A. Thompson	D. D. Hornbacher, D. K. Strangfeld	NA	NA, 9/7/1973
RF-C413	Letter, Degreaser - Building 47, to C. E. Wickland	J. E. Hill	NA	NA, 2/28/1968
RF-C414	Letter, Cyanide Waste, to L. C. Farrell	R. W. Hawley	NA	NA, 3/22/1954
RF-C415	Compilation of History Reports from Waste Disposal	E. E. Johnston, E. S. Ryan	NA	NA, 5/5/1958 - 12/28/1964
RF-C416	Record of Communication, Interview with Ed Vejvoda, Waste Management Practices at Rocky Flats	K. Peters, J. Harrison, C. Johnson	NA	NA, 9/27/2004
RF-C417	Partial Waste Disposal Coordination Group Monthly Report for July 1964	E. S. Ryan	NA	NA, 08/25/1964
RF-C419	Classification of Waste	John Epp to T. S. Chapman and T. S. Chapman to J. G. Epp	NA	NA, 3/23/1964 and 3/25/1964

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
RF-C420	Record of Communication, Interview with Ed Vejvoda, re: Chemical Disposal in 742-Series Sludge	Scott Smith and Carrie Johnson	NA	NA, 06/09/2008
RF-C423	Beryllium Usage - 881 General Lab	R. L. Carpenter	NA	NA, 8/30/1974
RF-C424	Beryllium Operations	P. F. Kreizenbeck	NA	NA, 10/1/1974
RF-C425	Disposal of Radioactive Solid Waste from Rocky Flats Plant	Gilbert C. Hoover	NA	NA, 3/29/1954
RF-C426	Polychlorinated Biphenyl Vacuum Pump Fluids	N. H. Miller	NA	NA, 1/4/1972
RF-C427	Movement of Contaminated Wastes to the On-Site Mound Area	E. S. Ryan	NA	NA, 11/23/1954
RF-C428	Building 44 Waste Incineration	R. W. Hawley and L. C. Farrell	NA	NA, 6/5/1958
RF-C429	D-38 Residue Disposal	F. H. Langell	NA	NA, 4/12/1961
RF-C430	Contamination Levels and Decontamination Activities Subsequent to the Incident of October 15, 1965	W. D. Kittinger and C. R. Johnson	NA	NA, 10/25/1965
RF-C432	Beryllium Work in Building 889	W. W. Bright	NA	NA, 08/21/1974
RF-C433	Off-site Solid Waste Disposal Rocky Flats Plant	F. H. Langell	NA	NA, 1/8/1954
RF-C434	Radioactive Container Classification	G. E. Behler	NA	NA, 6/12/1968
RF-C437	Email Correspondence: ARP Waste	Lisa R. Frost	NA	NA, 7/25/2005
RF-C441	Newspaper Articles from The Denver Post, 1) Radioactive Material, Thorium in Jeffco Horses Revealed as Rocky Flats Item, and 2) Rocky Flats Accident, 10 Exposed to Plutonium	Fred Gillies	NA	NA, 5/21/1976 and 5/23/1976
RF-C442	Denver Post Newspaper Article "Thorium Release Insignificant, Spokesman Declares"	Fred Gillies	NA	NA, 5/30/1976
RF-C443	Disposal of Uranium-233 Waste	J. H. Hanes	NA	NA, 4/10/1974
RF-C445	Recommendation for Beryllium Powder Shipments	E. E. Hicks	NA	NA, 10/19/1959
RF-C446	Status Report - Waste Disposal Coordination - May, 1967	E. S. Ryan	NA	NA, 06/08/1967
RF-C447	Monthly Breakdown of Contaminated Waste Shipments to Arco, Idaho and Hanford, Washington - January, 1958	L. C. Farrell	NA	NA, 02/07/1958
RF-C450	Record of Communication, Interview with Maurice (Maury) Maas, Disposal of Chemicals in 774 Sludges	Scott Smith and Carrie Johnson	NA	NA, 06/09/2008

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
RF-C502	Interview of Ed Vejvoda	Jean Holdren, Jeff Sondrup, Bruce Becker	NA	NA, 11/11/2004
RF-C510	Interoffice Correspondence to G. E. White re: History Report - Process Waste Disposal Group - July, 1963	E.S. Ryan	NA	NA, 08/19/1963
RF-C531	Letter to H. E. Bowman re: Hazardous Materials Proposal	F. D. Hobbs	NA	NA, 04/07/1972
RF-C532	Letter to J. R. Seed re: Disposal of Cyanide Compounds	J.E. Hill	NA	NA, 11/22/1971
RF-D001	Discrepancy Resolution Concerning the Use of Cyanide Salt Baths for Metal Heat-Treating Operations	Jeff Harrison	NA	Rev. 0, 1/5/2006
RF-P003	Recycle of Uranium-3/4 Weight Percent Titanium Alloy Solid Scrap	R. J. Jackson and L. DiGiallonardo, Sr.	RFP-3964	NA, 11/28/1986
RF-P018	Drum and Can Counter Computer Program	J. L. Lawless, O.H. Willoughby	940232-101I	NA, 2/27/1968
RF-P021	Evaluation of Filter Flammability and Filter Bank Fire Detection Systems-Evaluation Report	P.D. Erickson, J.A. Geer, F.J. Linck	RFP-222	N/A, 02/24/1961
RF-P022	Absolute Air Filters Flammability and Fire Control Studies-Study	P.D. Erickson, F.J. Linck, Jr	RFP-97	N/A, 03/17/1958
RF-P023	Comparison of Vapor Ignition Requirements of Chlorinated Solvents (for Plutonium Metal Degreasing in Protective Enclosures)	R. E. Giebel, R. L. Riegel	CRDL 940511-4	NA, 06/30/66
RF-P025	Historical Release Report for the Rocky Flats Plant, Volume I - Text	Environmental Restoration Program, U.S. Department of Energy, Rocky Flats Plant	NA	DRAFT, 12/30/1991
RF-P026	Filter Testing and Development for Prolonged Transuranic Service and Waste Reduction	J.A.Geer, K.Terada, & R. W. Woodard	RFP-02643	NA, 3/1/1976
RF-P027	Filter Testing and Development for Prolonged Transuranic Service and Waste Reduction	Geer, Buttedahl, Skaats, Terada, Soodard	RFP-2635	NA, 2/1/1977

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
RF-P028	Exhaust Filtration on Gloveboxes Used for Aqueous Process of Plutonium	Woodard, Grossaint, McFeeters	RFP-2445	NA, 8/1/1976
RF-P040	Reconnaissance Level Characterization Report for the 779 Cluster.	Rocky Mountain Remediation Services, LLC	RF/RMRS-96-0071	0, 12/17/1997
RF-P041	Reconnaissance Level Characterization Report for Area 2, Group 2 Closure Project - 991, 991 Tunnels, 985, 996, 997, 998 & 999.	RFETS	03-RF-00072	1, 1/14/2003
RF-P042	Reconnaissance Level Characterization Report, Group A Facilities	RFETS	NA	2, 06/14/2000
RF-P047	Waste Characterization of Rocky Flats Plant Waste Shipped to INEL 1954-1980	G. R. Darnell, T. L. Clements, Jr., R. R. Wright	WS-F2-81-001	NA, 3/1/1980
RF-P049	Improvements to a 55-Gallon DOT 17C Shipping Container for Alpha-Emitting Transuranium Waste	P. A. Patton, J. W. Lindsay	CRDL 950703-001	0, 12/29/1972
RF-P051	Excerpt from RadWaste Magazine, "Cleaning Up Trench 1 at Rocky Flats"	Not included	NA	NA, 10/01/1999
RF-P054	NRTS Health and Safety Information Idaho Operations Office, Fire Hazard at NRTS Radioactive Waste Burial Ground	R. J. Beers	No. 50	NA, 09/20/66
RF-P057	Rocky Flats Environmental Technology Site Reconnaissance Level Characterization Report (RLCR), 444 Cluster Closure Project, Buildings 444, 445, 447, 448, 450, 451, & 455	Cameron Freiboth	B444-A-000014	Rev. 0, 09/05/02
RF-P058	Building 771/774 Cluster Closure Project Reconaissance Level Characterization Report	Brian D. Larsen	B771-A-000119	Rev. 2, 08/08/98
RF-P059	Building 776/777 Reconaissance Level Charaterization Report	none listed	B776-A-000145	Rev. 0, 08/28/98
RF-P060	Reconnaissance Level Characterization Report for the 886 Cluster Decommissioning Project	Rocky Mountain Remediation Services	RF/RMRS-97-124	1, 12/24/1997
RF-P061	Conceptual Process for Recovery of Plutonium from ZPPR Fuels	J. S. Knighton	CRD83-015	NA, 3/15/1983
RF-P062	Accident and Fire Prevention Information, Suggested Summary Specifications for Fire Resistance in High Efficiency Air Filters	United States Atomic Energy Commission	Issue No. 77	NA, 4/4/1958
RF-P063	Reconnaissance Level Characterization Report (RLCR) 883 Cluster Closure Project (Buildings 883 and 879)	K. N. Dorr	B883-A-000011	Rev. 0, 10/17/01
RF-P064	Reconnaissance Level Characterization Report, 881 Cluster Closure Project	Kaiser Hill	NA	0, 11/06/2001

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
RF-P065	Reconnaissance Level Characterization Report, Buildings 331FD and C331	Kaiser Hill	03-DOE-00448,03	0, 04/14/2003
RF-P066	Section 1.6.1, Addendum 1 of the RFP EWQA Manual and other documents	E&WM, Waste Programs	1-10000-EWQA	Rev. 0, 9/27/1993
RF-P067	Separation of Thorium from Uranium by Slective Stripping from Dibutyl Carbitol	Leroy Hampton	RFP-127	NA, 9/29/1958
RF-P068	Report of Investigation of Serious Incident in Building 71 on June 14, 1957	The Dow Chemical Company, Rocky Flats Plant	CD57-941	Rev. 1, 07/09/57
RF-P071	The Impurity Analysis of Americium Solutions	A. J. Johnson & E. Vejvoda	RFP-194	0, 9/28/1960
RF-P072	Investigation of Salts for Use in Uranium Metal Heat-Treating Baths	S. R. Pocsik	RFP-191	0, 7/25/1960
RF-P073	Preparation of Pure Americium on a One to Ten Gram Scale	V. A. Ryan and J. W. Pringle	RFP-130	0, N/A
RF-P075	Thorium Canning Methods	R. C. Bailie	RFP-268	NA, 06/20/62
RF-P076	Nickel Plating by Nickel Carbonyl Decomposition	S. H. Pitts	RFP-288	NA, 10/16/62
RF-P080	Vacuum Induction Casting	J. L. Frankeny	RFP-317B	NA, 05/03/1963
RF-P081	Beryllium Braze-Welding Porosity and Arc Parameter Studies	R. B. Barker	RFP-287	NA, NA
RF-P084	Building Histories for Bldgs 371, 444, 447, 460, 707, 771, 776/777, 881, 883, and 991 Historical Release Report	EG&G Rocky Flats, Inc	NA	NA, 11/1/1994
RF-P085	Reconstruction of Historical Rocky Flats Operations and Identification of Release Points	ChemRisk	N/A	0, 8/1/1992
RF-P086	Pit 9 Estimated Inventory of Radiological and Nonradiological Constituents	J. J. Einerson, R. W. Thomas	INEEL/EXT-99-00602	NA, 10/19/99
RF-P087	WasteOScope User's Manual for Operable Unit 7-13/14 Mapping Software	Clem Potelunas, Luke J. White, and Linda A. Tedrow	INEEL/EXT-01-01585	0, 10/1/2002
RF-P088	A Comprehensive Inventory of Radiological and Nonradiological Contaminants in Waste Buried in the Subsruface Disposal Area of the INEL RWMC During the Years 1952 - 1983	Lockheed Idaho Technologies Company, Idaho National Engineering Laboratory	INEL-95/0310	1, 8/1/1995

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
RF-P090	Acceptable Knowledge Document for INEEL Stored Transuranic Waste - Rocky Flats Plant Waste	INEEL Bechtel BWXT Idaho, LLC	INEL-96.0280	3, 2/28/2003
RF-P091	Facility History for Building 771 at the Rocky Flats Plant	M.H. Chew & Associates, Inc.	N/A	N/A, 4/1/1992
RF-P092	Reconnaissance Level Characterization Report (RLCR), 334, T334B, T334D	Kaiser-Hill	N/A	0, 10/11/2002
RF-P093	Type 2 Reconnaissance Level Characterization Report (RLCR) and PDSR Bldg 441	Kaiser-Hill	N/A	Revision 1, 2/11/2003
RF-P094	RLCR 559 Closure Project Bldg 559,561, and 528	Kaiser-Hill	N/A	0, 1/25/2002
RF-P095	RLCR Bldg 705	Kaiser-Hill	N/A	O, 4/23/2003
RF-P096	Type I RLCR Area 5 Group 16 Closure Projects (Building 952, T974A, 988, 988A, 990, 990A, and 995)	Kaiser-Hill	N/A	0, 9/3/2003
RF-P097	"Hot" Liquid Waste Tamed.	D. M. Anderson	RFP-876	N/A, 7/1/1967
RF-P098	Disposal of Contaminated Liquid Wastes at Rocky Flats, Colorado	E. S. Ryan	RFP-378	N/A, 4/6/1964
RF-P099	Plutonium Recovery from Fibrous Insulation and Firebrick	William V. Conner	RFP-832	N/A, 1/22/1968
RF-P100	Solvents for Degreasing and Machining Plutonium Metal	Ray E. Giebel	RFP-921	N/A, 9/22/1967
RF-P102	Use of Trichloroethane for Degreasing Beryllium, Plutonium, and Uranium	Larry E. Musgrave	RFP-2231	N/A, 8/8/1974
RF-P103	Waste Reduction Studies	D. L. Ziegler	RFP-1676	N/A, 3/18/1971
RF-P104	Evaluation of Methods to Recover Plutonium from Incinerator Ash	Ziegler, Lindsey and Fraser	RFP-1723	N/A, 8/16/1971
RF-P105	Report on the Flow of Recycled Uranium at the Department of Energy's Rocky Flats Plant, 1953-1993	Rocky Flats Environmental Technology Site	N/A	N/A, 6/30/2000
RF-P106	Evaluation and Compatibility of Process Materials Used at Rocky Flats Division (History) 7/64 - 5/69	J. L. Hoist	N/A	N/A, 05/27/1969
RF-P107	Incineration at Rocky Flats	R. D. Gaskins and R. L. Martin	N/A	N/A, 2/12/1970
RF-P108	Report on Waste Control Study for Rocky Flats Plant	D. L. Ziegler	N/A	N/A, 2/2/1970
RF-P109	The Molten Salt Extraction of Americium from Plutonium Metal	J. L. Long and C. C. Perry	RFP-1356	N/A, 8/26/1969

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
RF-P110	Plutonium Handling Safety Analysis of the Rocky Flats Nuclear Safety Facility	Douglas C. Hunt, Grover Tuck	RFP-977	N/A, 11/8/1967
RF-P112	Nuclear Safety Measurements on Systems Containing Boron and Enriched Uranium	L. A. Matheson	RFP-246	N/A, 10/24/1961
RF-P114	Disposal of Contaminated Lithium-Metal Scrap-Report	Donald L. Ziegler	RFP-1347	N/A, 9/19/1969
RF-P116	Rocky Flats Information for the AEC Plutonium Storage and Plutonium Processing Task Force, Part I -	M. A. Thompson, K.W. Calkins, L. F. Grill	N/A	N/A, 2/10/1970
RF-P117	Flow of Recycled Uranium at the Rocky Flats Plant, 1952-1989	Not listed	NA	NA, 3/1/2000
RF-P119	Request for a Directive for Renovation, Phase I, Building 774 at Rocky Flats	N/A	N/A	N/A, 1/28/1970
RF-P121	Plutonium Electrorefining at Rocky Flats	Jack L. Long and Robert D. Schweikhardt	RFP-871	N/A, N/A
RF-P122	Dissolution of Plutonium Oxide	Garrel F. Molen	RFP-922	N/A, 8/29/1967
RF-P123	Plutonium Anion Exchange System Preliminary Design Report	R. S. Foster and D. S. Irwin	RFP-365	NA, 12/20/1963
RF-P128	Report on Investigation of Fire, Building 776-777, Rocky Flats Plant, Golden, Colorado, May 11, 1969. Volume I	U.S. Atomic Energy Commission	NA	NA, 08/01/1969
RF-P133	Report of Fire or Similar Incident	W. F. McRolney	NA	NA, 05/03/1962
RF-P134	Report of Fire or Similar Incident	D. A. Craig	NA	NA, 08/29/1961
RF-P135	Metallographic Techniques for Vacuum-Cast Rolled Ingot Beryllium Sheet	Arthur E. Calabra, Ross J. Jackson	RFP-962	N/A, 8/7/1967
RF-P137	Effect of Water Vapor, Reduced Oxygen Concentrations, and Solvent Vapors on Plutonium Ignition	Larry E. Musgrave	RFP-1566	N/A, 1/28/1971
RF-P138	Performance of High Efficiency Particulate Air Filter for Fume from Burning Plutonium Metal	R. W. Woodard, H. N. Robinson, and H. M. Baker	RFP-1680	N/A, 2/1/1971
RF-P139	Preferred Orientation in Cross-Rolled Uranium	G. R. Mallet	RFP-216	NA, 02/13/1961
RF-P142	Effects of Acid Concentration and Feed-Particle Size on the Dissolution of Pu-Bearing Materials	G. F. Molen	RFP-890	N/A, 2/29/1968

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
RF-P158	Room Temperature Decomposition of Nickel Carbonyl	S. H. Pitts, Jr.	RFP-364	NA, 03/13/64
RF-P160	Plating Beryllium-Copper Alloy with a Copper-Silver-Gold Laminate	W. H. Roberts	RFP-366	NA, 01/11/64
RF-P161	Electroless Nickel Plating of Aluminum	W. H. Roberts	RFP-367	NA, 01/10/64
RF-P162	Recovery of Plutonium from Incinerator Ash	F. E.Butler, J. D. Moseley, G. F. Molen	RFP-396	0, 07/31/1964
RF-P164	Beryllium Control at Rocky Flats	S. E. Hammond, J. E. Hill	RFP-384	NA, 04/07/64
RF-P165	Revised Engineering Criteria for Additional Processing Facilities at Building 71	Engineering Dept, RF, Dow	NA	Unk, 04/27/1962
RF-P166	Ternary Alloy Program	W. R. Andrews	RFP-372	NA, 04/27/64
RF-P167	Fabrication of Ingot-Sheet Beryllium	D. R. Floyd	RFP-1262	NA, 10/7/1968
RF-P168	New Procedure - Property Movement to and from the Decontamination Facility	C. W. Piltingsrud	NA	NA, 10/25/1965
RF-P171	Serious Accidents, The United States Atomic Energy Commission, 1) Plutonium Chip Fire and 2) Maintenance on Plutonium Machining Coolant Lines Leads to $17,500 Fire	Division of Operational Safety, U.S. Atomic Energy Commission	Issue No. 92 and Issue No. 262	NA, 12/14/1955 and 03/04/1966
RF-P173	The Forming of Containers for Molten Nickel and Beryllium at High Temperatures and Vacuum	Marvin C. Lunde and Wendelin P. Meier	RFP-882	NA, 04/15/1968
RF-P176	Plutonium Content of Several Internal Organs following Occupational Exposure	C. R. Lagerquist, D. L. Bokowski, S. E. Hammond, and D. B. Hylton, M.D.	RFP-997	NA, 08/1969
RF-P177	Evaluation of Lung Burden Following Acute Inhalation Exposure to Highly Insoluble PuO2	J. R. Mann and R. A. Kirchner	NA	NA, 12/09/1966
RF-P178	Evaluation and Treatment of an Acute Internal Exposure to Plutonium	E. A. Putzier, et al	RFP-446	NA, NA
RF-P181	Reconnaissance Level Characterization Report for Building 123.	RFETS	RF/RMRS-97-021	0, 8/13/1997

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
RF-P183	Calcium-Lead Alloy Analysis by Atomic Absorption and Emission Spectroscopy	Harlan N. Barton, Andrew J. Johnson, and Glenn A. Shepherd	RFP-978	NA, 08/09/1967
RF-P184	Vacuum Coating of Boron Nitride	Robert G. Kurtz and T. Van Vorous	RFP-972	N/A, 4/18/1969
RF-P187	A Survey of Potential Solvents to Replace Carbon Tetrachloride for Degreasing Plutonium	F. D. Hobbs	PRD 940477-104	N/A, 6/4/1970
RF-P188	Compaction of Radioactive Waste at Rocky Flats	D. M. Anderson and D. L. Ziegler	NA	N/A, 2/10/1970
RF-P191	Extraction of Uranium from Incinerator Ash Leach Solutions	J. C. Biery	RFP-115	NA, 07/10/1958
RF-P192	Extraction of Uranium from Incinerator Ash Leach Slurries	J. C. Biery	RFP-117	NA, 07/30/1958
RF-P199	Distribution of Plutonium and Americium in the Body 5 Years After an Exposure Via Contaminated Puncture Wound	C. R. Lagerquist, S. E. Hammond, and D. B. Hylton, M. D.	RFP-1698	NA, 07/22/1971
RF-P200	Research and Ecology Annual Report, Chemistry Research and Development	M. A. Thompson, et al	NA	NA, 12/31/1971
RF-P202	Measurements Involved in Shipping Plutonium Oxide	J. T. Byrne, C. E. Caldwell, R. L. Delnay, J. D. Moseley, and F. L. Oetting	RFP-502	NA, 08/10/1965
RF-P209	Analytical Techniques and Results in Plutonium Nitrate Study	L. F. Grill	RFP-399	NA, 06/16/64
RF-P216	Joining Beryllium by Electron Beam Braze Welding Technique	G. K. Hicken and W. B. Sample, Jr.	RFP-908	NA, 2/6/1967
RF-P218	The Rolling Texture of Some Plutonium-Gallium Alloys	Joseph E. Schindler	RFP-1315	NA, 5/12/1969
RF-P222	Colorimetric Determination of Iron in Plutonium Metal using a Nitrobenzene Extraction Technique	C. E. Plock and C. E. Caldwell	RFP-948	N/A, 12/20/1967
RF-P224	Criticality Recommendations for Chemistry - Metal Production, Building 81	D. R. Ferguson	RFP-382	NA, 04/29/1964

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
RF-P232	The Criticality of a Uranium-Solution Slab Under Various Reflector Conditions, Nuclear Applications & Technology, Vol. 7, December 1969	Robert E. Rothe, C. L. Schuske, and E. E. Hicks	NA	NA, 08/13/1969
RF-P233	Critical Parameters of a Uranium Solution Slab-Cylinder System	Grover Tuck and Harold E. Clark	RFP-1314	NA, 12/16/1970
RF-P240	Historic American Engineering Record Pocky Flats Plant, Non-Nuclear production Facility (Rocky flats Plant, Building 444) (Rocky Flats Plant, Plant A) (Rocky Flats Plant, Building 44)	D. Jayne Aaron, Judith Berryman, Ph.D.	HAER # CO-83-L	N/A, N/A
RF-P241	Use of Trichloroethylene at Rocky Flats	J. F. Willging	N/A	N/A, 10/19/1973
RF-P244	Ingot-Sheet Beryllium Fabrication	Julius L. Frankeny and Dennis R. Floyd	RFP-910	NA, 2/9/1968
RF-P245	A Physical Inventroy of the Enriched Uranium in a Solution System	Robert E. Rothe	RFP-1324	NA, 3/12/1969
RF-P246	The Enthalpy of Solution of Uranium in Nitric Acid	James D. Navratil and Franklin L. Oetting	RFP-2097	NA, 10/05/1973
RF-P247	Recycled Uranium Project - Health Physics Safety and Exposure Data for Uranium Areas at the RFP DOE Complex	Ken Freiberg	Appendix B	N/A, 3/1/2000
RF-P248	Explosive Nature of Uranium-Base Niobium Alloys After Immersion in Nitric Acid	Ross J. Jackson and Wilbur L. Johns	RFP-1575	NA, 12/08/1970
RF-P249	Generalized Area of Intersection Model for Uranyl Nitrate Filled Pipe Intersections	Deanne Dickinson and C. L. Schuske	RFP-1553	NA, 09/04/1970
RF-P250	Simplified Metallographic Techniques for Uranium Alloys and other Metals	Ross J. Jackson, W. L. Johns, Arthur E. Calabra	RFP-862	NA, 1/20/1967
RF-P251	Coating Beryllium with Electroless Nickel	W. H. Roberts	RFP-478	NA, 12/29/1964
RF-P260	Actinide Processing at Rocky Flats	James D. Navratil and Frend John Miner	N/A	N/A, 07/01/1984
RF-P261	A Survey of the Rocky Flats Division Waste Streams	C. E. Plock	CRDL-950351-009	N/A, 06/30/1972
RF-P262	Rocky Flats Plant Plutonium Recovery Reference Process (Including Historical References 1952 to 1991)	L. R. Crisler	RT92-002	N/A, 02/03/1992

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
RF-P263	A History of the Rocky Flats Putonium/Actinide Recovery Plant - 1952 to 1991	L. R. Crisler	RT92-003	N/A, 02/03/1992
RF-P264	A Comprehensive History of the Rocky Flats Plutonium/Actinide Recovery Operations 1952 to 1991	L. R. Crisler	N/A	NA, N/A
RF-P265	The Past 30 Years at Rocky Flats Plant	Edward A. Putzier	HS 371	N/A, 11/01/1982
RF-P266	TWTF Buried Waste Characterization; Allied Chemical Corp., Rocky Flats Trip Report from 1973	G. R. Darnell; R. J. Thompson	TWTF-46	NA, 03/03/1981
RF-P267	Radioassay Data Collected During 3100 Cubic Meter Project-EDF	Cecilia Hoffman	EDF-3374	Rev 0, 02/26/2002
RF-P269	Plutonium Mass Fractions Derived from SGRS Data	Yale D. Harker	EDF-1609	Revision 0, 12/20/2000
RF-P271	TRU Waste Certification Program for WIPP-WAC (U). Rockwell International.	N/A	CO-4500-A	Rev. A, 05/24/1983
RF-P299	Residue Elimination Project Residue Analysis Study: Study Methodology, Analysis Summary, and User's Guide	KMI Services Technical Staff	CE-010-001	0, 10/22/1992
RF-P319	Anion Exchange (Lines 42 and 43D)	Operational Compliance and Control	CO-1033-AA/0	Rev. AA/0, 09/16/1988
RF-P332	Research and Development Quarterly Progress Report. July, August, and September, 1970	M. A. Thompson, et al	RFP-1602-A	NA, 10/30/1970
RF-P334	Research and Ecology Semi-Annual Progress Report. July-December, 1973	R. D. Forest, et al.	RFP-2200-A	NA, 3/18/1974
RF-P335	Research and Development Semi-Annual Progress Report for January through June 1975	R. H. Karlsson, et al.	RFP-2417-A	NA, 8/29/1975
RF-P337	Chemistry Research and Development Annual Progress Report, November 1, 1979 to October 31, 1980	F. J. Miner, et al.	RFP-3180	NA, 8/4/1981
RF-P346	Research and Development Quarterly Progress Report. October, November, and December, 1970	M. A. Thompson, et al.	RFP-1638-A	NA, 1/31/1971
RF-P347	Research and Development Quarterly Progress Report. April, May, and June, 1971	Milton A. Thompson, et al.	RFP-1748-A	NA, 7/30/1971
RF-P348	Research and Development Quarterly Progress Report. July, August, and September, 1971	Milton A. Thompson, et al.	RFP-1790-A	NA, 10/29/1971
RF-P349	Research and Ecology Annual Report, Chemistry Research and Development	M. A. Thompson, et al	RFP-1837-A	NA, 04/14/1972

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
RF-P356	Field Sampling Plan for the OU-7-10 Glovebox Excavator Method Project	Hopi Salomon, Daryl R. Haefner, Beth A. McIlwain, Jila Banaee, Jeffrey J. Einerson, Anna K. Podgorney	INEEL/EXT-02-00542	Rev. 2, 10/02/2003
RF-P400	Oil Coolant Waste Disposal	D. M. Anderson	MT-42-66	NA, 12/22/1966
RF-P401	Water Soluble Plutonium on Plenum Filters	P. G. Hagan, F. J. Miner	CRDL 950355-4	NA, 11/11/1970
RF-P402	Action Description Memorandum for Proposed Closure of the Original Uranium Chip Roaster (SWMU 204)	Bill Moore	A00690	NA, 4/1/1990
RF-P403	Closure Plan, Inactive Interim Status Facilities, Original Uranium Chip Roaster, SWMU #204	Rockwell International, Roy F. Weston, Inc., Chen & Associates, Inc	NA	Rev. 1, 10/3/1988
RF-P404	excerpts from Omnibus Environmental Assessment for the Rocky Flats Plant of the U.S. Atomic Energy Commission	Dow Chemical U.S.A., Rocky Flats Division	NA	NA, 7/1/1974
RF-P405	excerpts from Omnibus Environmental Assessment for the Rocky Flats Plant of the U.S. Energy Research and Development Administration	Dow Chemical U.S.A., Rocky Flats Division	NA	NA, 5/1/1975
RF-P406	Hazardous Waste Code Determination for First/Second-Stage Sludge Waste Stream (IDCs 001, 002, 800)	R. E. Arbon	INEEL/EXT-01-0001	Rev. 2, 5/2001
RF-P407	Liquid Media for Density Measurements of Beryllium, Plutonium, and Uranium	H. N. Elsheimer	RFP-691	NA, 2/25/1966
RF-P408	Material Hazards Manual, Rocky Flats Plant, Atomics International Division	C. W. Barrick	NA	Rev. 1, 8/1/1976
RF-P411	Waste Systems Progress Report, January 1982 through February 1983	Gordon L. Hickel, et al	RFP-3533	0, 10/24/1983
RF-P412	The Heats of Solution of Beryllium in Chemical Milling Solutions	James D. Navratil and Franklin L. Oetting	RFP-1985	NA, 1/24/1973
RF-P413	Health Physics Guide for Rocky Flats Division	E. A. Putzier	NA	2, 01/1967

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
RF-P414	Description of Invention, Plutonium and Americium Recovery with the Aluminum-Magnesium Scrub-Alloy Process	Robert F. Fitzpatrick, Michael J. Cusik	RFPD-861	NA, 2/1/1984
RF-P415	Reconnaissance-Level Characterization Report, Closure Project for Buildings 112, 223, 367, 553, T371A, T371C, T371D, T371E, T371F, and T760A	Doug Bryant	IA-A-001246	0, 10/7/2002
RF-P416	Reconnaissance-Level Characterization Report, Building 707 Cluster	Not Listed	B707-A-000016	1, 8/2/2000
RF-P417	Historic American Engineering Record, Rocky Flats Plant, Emergency Medical Serices Facility (Building 122) and Photo Overview (Building 551)	D. Jayne Aaron and Judith Berryman	CO-83-S	NA, 03/22/2005
RF-P418	US Geological Survey Circular 1050, The United States Geological Survey: 1789-1989. " A New Age Begins"	http://pubs.usgs.gov /circ/c1050/age.htm	NA	NA, 6/7/2005
RF-P419	Research and Development Quarterly Progress Report*; October, November, and December, 1968; Chemistry	M. A. Thompson, et al.	RFP-1311-A	NA, 1/31/1969
RF-P420	Research and Development Quarterly Progress Report*; April, May, and June, 1969; Chemistry	M. A. Thompson, et al.	RFP-1406-A	NA, 7/31/1969
RF-P421	Research and Development Quarterly Progress Report*; July, August, and September, 1969; Chemistry	Milton A. Thompson, et al.	RFP-1436-A	NA, 10/31/1969
RF-P422	Research and Development Quarterly Progress Report*; January, February, and March, 1970; Chemistry	Milton A. Thompson, et al.	RFP-1519-A	NA, 4/30/1970
RF-P423	Research and Development Quarterly Progress Report; April, May, and June, 1970; Chemistry	Milton A. Thompson, et al.	RFP-1579-A	NA, 9/16/1970
RF-P424	Research and Development Quarterly Progress Report*; January, February, and March, 1971; Chemistry	Milton A. Thompson, et al.	RFP-1691-A	NA, 4/30/1971
RF-P425	Standard for HEPA Filters, General Purpose	Design Engineering Department and Facilities Engineering Department	SMU-401	Issue C, Issue G, Issue H, 10/1974,1/1982, 6/7/1991

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
RF-P426	Fifth Atomic Energy Commission Air Cleaning Conference, June 24-27, 1957	Sponsored by: Harvard University School of Public Health, Boston, Mass.; and U.S. Atomic Energy Commission Division of Reactor Development, Washington, D.C.	NA	NA, 4/1958
RF-P427	Sixth AEC Air Cleaning Conference, July 7-9, 1959.	United States Atomic Energy Commission Office of Technical Information	TID-7593	NA, 10/1960
RF-P428	Proceedings of the Twelfth AEC Air Cleaning Conference held at Oak Ridge, Tennessee. 28-31 August, 1972	Editor, Melvin W. First	CONF-720823	NA, 1/1973
RF-P429	Rocky Flats Environmental Technology Site WIPP Waste Stream Profile Form, TRM Solidified Organic Waste.	NA	RF135.01	0, 3/23/2005
RF-P512	History of Uranium-233 (233U) Processing at the Rocky Flats Plant	R. L. Moment, F. E. Gibbs, C. J. Freiboth	RS-090-056	NA, 4/1/1999
RF-P514	Nitrate Explosives Tests to Support the Operable Unit 7-13/14 In Situ Vitrification Project	John R. Dick	INEEL/EXT-01-00265	Rev. 0, 08/2001
RF-P515	Nitrate Reaction Report for the OU 7-10 Glovebox Excavator Method Project	John R. Dick	INEEL/EXT-03-00471	Rev. 0, 06/2003
RF-P555	Validation of the Rocky Flats Plant Radionuclide Inventory in the Historic Data Task Using SWEPP Assay Data	Larry G. Blackwood and Cecilia Hoffman	ICP/EXT-04-00211	1, 8/1/2004
RF-P562	Summary of Rocky Flats Plant Waste Buried in the Subsurface Disposal Area	Edward Vejvoda	ICP/EXT-04-00717	0, 4/2005
RF-P563	Identifying Characteristics of Rocky Flats Plant Depleted Uranium Roaster Oxide Waste	Rod R. Kimmett	EDF-5943	0, 8/3/2005
RF-P569	Evaluation of Unique Identifiers for Rocky Flats Plant Test Category Waste	John F. Keck and Jeffrey J. Einerson	EDF-5060	0, 8/16/2004

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
RF-P570	Beryllium Waste from the Rocky Flats Plant Buried in the Subsurface Disposal Area at the Radioactive Waste Management Complex	Eric C. Miller	EDF-6030	0, 2/10/2006
RF-U019	Engineering Evaluation – 741 First-stage sludge in ICC-17C 55-gallon drums.	F.E. Adcock	NA	NA, 12/4/1967
RF-U021	Rocky Flats Plant Neptunium Program (transmitted via 5/15/01 letter to Rod Thomas from Ed Vejvoda)	Ed Vejvoda, LATA	NA	NA, 04/01/2001
RF-U025	Information on Magnesium Alloy Conveyor Pendant and Polyethylene Parts Carrier	R. W. Woodard	NA	NA, 06/24/1969
RF-U026	Rocky Flats to INEEL Shipping and Loading Record Search for the 1960's and Early 1970's.	E. Vejvoda	NA	Interim, 12/11/1998
RF-U028	Sampling Plan for the Rocky Flats Sites.	John B. Murphy, et al	NA	NA, 09/05/1986
RF-U033	History Report - Process Waste Disposal Group - May, 1963	E. S. Ryan	NA	NA, 06/17/1963
RF-U034	Electronic Group Monthly Progress Report - March, 1962	not listed	NA	NA, 4/5/1962
RF-U035	Monthly Progress Report - Health Physics	Not listed	NA	NA, 01/1962
RF-U037	Industrial Hygiene Report for August, 1961	NA	NA	NA, 09/07/1961
RF-U038	Memo to W. M. Bean re: Industrial Hygiene Report for October, 1960	Unknown	NA	NA, 11/11/1960
RF-U040	Revised Engineering Criteria for Additional Processing Facilities at Building 71	Engineering Department, Rocky Flats Division, The Dow Chemical Company	NA	NA, 04/27/1962
RF-U041	Ni Plating of Oralloy, Alpha and Delta Plutonium by Nickel Carbonyl Method	S. M. Pitts, Jr. and Ray Palmer	NA	NA, 5/25/1962
RF-U042	Industrial Hygiene Report for November, 1960, To-W.M.Bean	E.E. Hicks	N/A	N/A, 12/09/2004
RF-U043	Solid Waste Disposal Studies	S. R. Pocsik	DJO-4554	NA, 12/28/1960
RF-U044	Partial Monthly Report for the Waste Coordination Group for June, 1963	E. S. Ryan	NA	NA, 07/30/1963
RF-U045	Monthly Progress Report - Industrial Hygiene	J. E. Hill	NA	NA, 03/04/1963
RF-U046	Industrial Hygiene Monthly Report-Report-To Unknown	S.E. Hammond	U046	N/A, 08/01/1963

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
RF-U048	Waste Disposal Co-ordination Group-Summary Report November 1959-To Mr. L.C. Farrell cc: G.E.White	E.S. Ryan	N/A	N/A, 12/10/1959
RF-U049	Industrial Hygiene Report for September, 1959	E. E. Hicks	NA	NA, 10/07/1959
RF-U052	Revisions to Portion of Unclassified Document NYO 7830 Pertaining to Rocky Flats Plant Waste Disposal Operations Based on Fiscal Year 1957 Data	L. C. Farrell and E. S. Ryan	NA	NA, NA
RF-U053	Partial Monthly Report from the Waste Disposal Coordination Group for December 1961	E. S. Ryan	NA	NA, 01/10/1958
RF-U054	History Report - January, 1958 - Waste Disposal Co-Ordination Group	E. E. Johnston	NA	NA, 02/04/1958
RF-U057	Supplementary Report on Fire in Building 71, September 11, 1957	The Dow Chemical Company	NA	NA, 12/10/1957
RF-U059	History Report for the Month of June, 1957 - Waste Disposal Co-Ordination Group	E. S. Ryan	NA	NA, 07/05/1957
RF-U060	Monthly Progress Report - Industrial Hygiene Operations, January, 1957	Not included	NA	NA, 02/05/1957
RF-U061	History Report for the Month of December, 1956 - Waste Disposal Co-Ordination Group	E. S. Ryan	NA	NA, 01/09/1957
RF-U067	Program Plan for NRTS Solid Radioactive Waste Repackaging Facility Studies	R. A. Brown, W. B. Kerr, A. S. Neuls, and R. J. Thompson	NA	DRAFT, 08/21/1973
RF-U069	Photo Request	C. E. Wickland	NA	NA, 07/31/1980
RF-U070	Procedure for Packaging and Handling Pu Waste and Residue Drums	J. Walko	9257	NA, 03/29/1974
RF-U095	Study of Disposal of Radioactive Waste, Rocky Flats Colorado	N/A	NA	NA, N/A
RF-U099	KW Formula for Spill Cleanup and Nuclear Material Transaction Reports (See RF-C110, Att. C and D)	N/A	NA	NA, N/A
RF-U100	A Summary of On Site Radioactive Waste Disposal	E. A. Putzier	NA	NA, 4/22/1970
RF-U101	Attachment B, 44 Building Waste Sheets	Not included	NA	NA, NA
RF-U1072	Hazardous Waste Generation of the Project Pluto Program	John Krueger	NA	NA, 6/3/1986
RF-U110	Waste Treatment Process Description	JWP	NA	NA, 09/27/1951
RF-U111	Trip Report - Industrial Waste Survey of Rocky Flats Field Office and Plant, July 18-19, 1955	Everett R. Mathews	NA	NA, 08/19/1955

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
RF-U112	Tentative Procedure for Handling Contaminated Solid and Liquid Waste	L. C. Farrell	NA	NA, 03/19/1953
RF-U113	Waste Classification Flow Chart	RWH	NA	1/13/1954
RF-U115	Draft Consolidated Report of Rocky Flats Wastes Shipped to INEEL	Ed Vejvoda	INEEL/EXT-03-00	NA, 3/6/2003
RF-U116	Adminstrative Procedures and Controls in Plutonium Production Areas	N/A	N/A	N/A, 4/2/1971
RF-U117	An Evaluation of Fiberglass for Use in Plutonium Fabrication Line	E. F. Lombardi and R. I. Donovan	RFP-1725	N/A, 5/27/1971
RF-U118	Thorium Use at Rocky Flats	Not given	NA	NA, 06/02/1976
RF-U119	History of Curium Processing at Rocky Flats	W. V. Conner	N/A	N/A, 4/26/1977
RF-U120	Monthly Progress Report - Industrial Hygiene Operations, November, 1956	E. R. Johnson	NA	NA, 12/04/1956
RF-U121	Monthly Progress Report - Industrial Hygiene Operations	E. R. Johnson	N/A	N/A, 1/1/1957
RF-U123	Monthly Progress Reports - Industrial Hygiene	J. E. Hill	N/A	N/A, 9/4/1964
RF-U124	Status Report - Industrial Hygiene, various months	J. E. Hill	N/A	N/A, 4/1/1968
RF-U125	Description and recommendation of unwanted chemical disposal	None identified	N/A	N/A, N/A
RF-U126	Liquid Radioactive Waste Management Practices at Rocky Flats	Water Quality Office	NA	NA, 02/23/1970
RF-U127	Synopsis of an oral presentation: Liquid Wastes and the Nitrate Problem at the Rocky Flats Plant	not listed	NA	NA, 05/26/1971
RF-U128	Health Physics Status Reports - January, April, July, August, October-December, 1968; January-July, November, December, 1969; June, August-October, 1970	Water Quality Office	NA	NA, 02/23/1970
RF-U1289	Solid Radioactive Waste Disposal Order and Shipment Data and Disposal Forms for Shipments from Rocky Flats Plant to the NRTS, Area 1A	L. C. Farrell and E. S. Ryan	NA	NA, 12/04/1959 to 04/20/1960
RF-U1290	Solid Radioactive Waste Disposal Order and Shipment Data and Disposal Forms for Shipments from Rocky Flats Plant to the NRTS, Area 2A	Not Given	NA	NA, 12/19/1961 to 02/07/1962
RF-U1291	Solid Radioactive Waste Disposal Order and Shipment Data and Disposal Forms for Shipments from Rocky Flats Plant to the NRTS, Area 6A	E. S. Ryan	NA	NA, 03/08/1968 to 06/19/1968
RF-U1292	Solid Radioactive Waste Disposal Order and Shipment Data and Disposal Forms for Shipments from Rocky Flats Plant to the NRTS, Area 6B	E. S. Ryan	NA	NA, 03/04/1968 to 07/09/1968

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
RF-U1293	Solid Radioactive Waste Disposal Order and Shipment Data and Disposal Forms for Shipments from Rocky Flats Plant to the NRTS, Area 6C	E. S. Ryan	NA	NA, 06/17/1968 to 09/03/1968
RF-U1294	Dow Chemical Company, Rocky Flats Plant Waste Container Shipping Papers - Contract Area 5A	Rocky Flats Plant	NA	NA, 10/10/1964 to 11/11/1966, not inclusive
RF-U1295	Dow Chemical Company, Rocky Flats Plant Waste Container Shipping Papers - Contract Area 5B	Rocky Flats Plant	NA	NA, 01/03/1966 to 05/06/1966, not inclusvie
RF-U1296	Dow Chemical Company, Rocky Flats Plant Waste Container Shipping Papers - Contract Area 5C	Rocky Flats Plant	NA	NA, 05/22/1965 to 08/23/1965, not inclusive
RF-U1297	Dow Chemical Company, Rocky Flats Plant Waste Container Shipping Papers - Contract Area 1B	Rocky Flats Plant	NA	NA, 04/17/1958 to 04/10/1959, not inclusive
RF-U1298	Dow Chemical Company, Rocky Flats Plant Waste Container Shipping Papers - Contract Area 1C	Rocky Flats Plant	NA	NA, 09/22/1958 to 11/06/1958, not inclusive
RF-U1299	Dow Chemical Company, Rocky Flats Plant Waste Container Shipping Papers - Contract Area 1D	Rocky Flats Plant	NA	NA, 09/26/1957 to 11/30/1960, not inclusive
RF-U1306	Rocky Flats Shipping Records for ARP-III (P06P01) in the RWMC SDA	E.S. Ryan and Lisa Frost	NA	NA, 02/12/1968 through 09/03/1968, not inclusive
RF-U1307	Rocky Flats Shipping Records for ARP-IV (P05P01) in the RWMC SDA	Kirk Green, Ed Ryan, et al	NA	NA, 7/22/64 thru 11/18/66 and 9/28/08, not inclusive
RF-U1308	Rocky Flats Shipping Records for ARP-V (P09P03, P09P04) in the RWMC SDA	Various	NA	NA, 02/09/1968 to 09/24/1968, not inclusive
RF-U1313	Rocky Flats shipping records for ARP-VII (P10P03)	Lisa Frost, E. Ryan, et al	NA	NA, 07/30/1968 to 10/30/1968, not inclusive

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
RF-U1315	Rocky Flats Shipping Records for ARP-VI (P04P03) in the RWMC SDA	NA	NA	NA, 03/07/1964 to 03/06/1965, not inclusive
RF-U133	History of Plutonium Contaminated Oil Drum Storage Area	Unknown	RFP-INV-10	N/A, N/A
RF-U134	Pu Recovery Processing Systems	Rockwell International	CHOP-9248-80-03	NA, 05/01/1980
RF-U135	Ledger Sheets that Show Discard Amounts	NA	NA	NA, 1960-1971
RF-U136	CRDL –Process Chemistry-Waste Disposal Monthly Report	F.E. Butler	NA	NA, 2/14/1964
RF-U137	FR Box Operation (Interim Report)	R.S. Foster	NA	NA, 9/19/1963
RF-U139	Explosion and Fire November 9, 1965 in Building 71, Room 180	Unknown	Unk	NA, 12/01/1965
RF-U141	Recent Developments in Plutonium Processing at Rocky Flats	J. D. Moseley & M. A. Thompson	RFP-966	NA, 06/05/1967
RF-U142	Health Physics of Plutonium Operational Experiences	C.W. Piltingsrud	NA	NA, 11/21/1966
RF-U143	Compilation of Incidents Excerpted from the Executive Safety Council Minutes	E. E. Hicks	NA	NA, 12/21/1965
RF-U150	Industrial Hygiene Status Report for November 1964	Unknown	NA	NA, 12/14/1964
RF-U151	Industrial Hygiene Status Report, Partial Reports	Numerous	NA	NA, 1965
RF-U152	Industrial Hygiene Reports Partial Documents for 1966	J.E. Hill	NA	NA, N/A
RF-U153	Status Report, Industrial Hygiene, Partial reports, 1967	J.E. Hills	NA	NA, N/A
RF-U157	Memo to Joshel, Bassler, Bowman, etal Re: Construction Project Data Sheet Replacements to Plutonium Chemical Recovery Facility	R. L. Delnay	NA	NA, 03/05/1970
RF-U167	Decontamination Log Book Pages from 1969 Fire	NA	MF-RF-WD-15	NA, 11/18/1988
RF-U168	Revised Criteria for Authorization No. 300764 "Peroxide Precipitation Conversion," Building 771	Not given	NA	NA, not listed
RF-U170	Report on Beryllium Chip Fire in Building 44	J. W. Green	NA	NA, 10/29/1965
RF-U171	Tritium Work at Rocky Flats	JFW	NA	NA, 10/01/1973
RF-U172	Radioactive Waste Disposal Dow Chemical Company, Rocky Flats Division	NA	NA	NA, N/A

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
RF-U174	Proposal for the Disposition of Rocky Flats Barrels	N/A	N/A	N/A, N/A
RF-U178	Tritium at Rocky Flats	Not given	NA	NA, Not listed
RF-U181	Justification for Parylene License	R. O. Adams	NA	NA, 03/23/1970
RF-U182	Radiation Instruments Group, Monthly Report June 1956	R. G. Maras	N/A	N/A, 7/9/1956
RF-U188	Procedures for Removing Aluminum Shim	NA	NA	NA, 1/14/1970
RF-U189	Excerpts from the Operating Procedure for FR System Anion Columns	B. D. Troyer	NA	NA, 05/25/1961
RF-U190	Flame Spectrophotometric Determination of Lead in Plutonium Process Solutions	A. J. Johnson and G. A. Shepherd	RFP-1358	NA, 4/10/1969
RF-U196	Pilot Plant Experience on Volatile Fluoride Reprocessing of Plutonium	M. A. Thompson, R. S. Marshall, R. L. Standifer	RFP-1351	N/A, 4/8/1969
RF-U201	Metallographic Preparation of Plutonium	A. L. Rafalski	RFP-1184	N/A, 6/4/1968
RF-U202	Preliminary Report on the Electron Metallography of Alpha Plutonium	N/A	RFP-374	N/A, 3/30/1964
RF-U203	Annealing of a Cold-Rolled Pu/1 WT % Ga Alloy	S. Beitscher	N/A	N/A, N/A
RF-U206	A Laboratory Ignition System	M. A. Thompson	RFP-397	N/A, N/A
RF-U207	A Spectrochemical Analysis of Impurities in Plutonium using a Modified Sodium Fluoride Carrier Distillation Method	Gerald A. Schreiber and Charles W. Barrick	RFP-838	N/A, 11/21/1966
RF-U208	Kinetics of the Reaction between Plutonium (III) and Xenon Trioxide	J. M. Ceveland	RFP-857	N/A, 12/1/1966
RF-U210	The Recovery of Electrical Resistivity in Pu-1 w/o Gallium after Plastic Deformation	W. N. Seery	RFP-1285	NA, 2/5/1969
RF-U212	Can and Drum Counter Calculations	N/A	RFP-1274	N/A, 10/21/1968
RF-U217	The Rolling Texture of Pu-3.4 Atomic Percent Gallium	R. L. Moment and J. E. Schindler	RFP-1278	NA, 2/10/1969
RF-U230	The Effect of Niobium and Uranium on the Determination of Iron by Atomic Absorption Spectroscopy	Ann C. Ficklin	RFP-1552	N/A, 1/9/1970
RF-U231	Beryllium Braze-Welding Porosity and Arc Parameter Studies	R. B. Barker	RFP-287	NA, 10/01/1963

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
RF-U232	The Tensile Properties of Rocky Flats Division Ingot-Sheet Beryllium from Room Temperature to 250 degrees C	S. Beitscher	RFP-1205	NA, 09/18/1968
RF-U233	Metallographic Technique for a Bright Field Etch of Beryllium Grain Structure	V. K. Grotzky	RFP-947	NA, 05/11/1967
RF-U235	Vacuum Deposition of Thick Aluminum Films for Beryllium Joining	R. L. Beno	RFP-1306	NA, 5/7/1969
RF-U237	The Effects of Annealing on the Microstructure and Mechanical Properties of 0.100-inch-Thick Ingot-Source Beryllium	David L. Fergason	RFP-1831	NA, not listed
RF-U242	An Organic Coating for U-4.2 wt% Nb	R. L. Riegel	NA	NA, Not listed
RF-U243	Controlled Potential Coulometric Determination of Uranium and Neptunium in Uranium-Neptunium Alloys	C. E. Plock	RFP-950	NA, 4/17/1967
RF-U244	The Stress-Corrosion Cracking Behavior of the U-4.2 wt% Nb Alloy Aged 80 Hours at 260 degrees C	James M. Macki and Robert L. Kochen	RFP-1824	NA, 12/28/1971
RF-U245	Mechanical Properties of Uranium-Base Niobium Alloys	Ross J. Jackson and Joseph F. Boland	RFP-1703	NA, 4/29/1971
RF-U247	A Criticality Analysis of Enriched Uranium Metal Spheres Undergoing Dissolution	D. C. Hunt and R. E. Rothe	RFP-1718	NA, Not listed
RF-U254	Summary - Drum Field Activity	K. W. Calkins	NA	NA, 8/19/1970
RF-U283	Trip Report on Industrial Health Survey of Rocky Flats Plant, Trip Conducted July 17-19, 1971	Everett R. Mathers	N/A	N/A, 7/17/1961
RF-U286	Vacuum Induction Casting of Beryllium	J. L. Frankeny	RFP-340	NA, 2/4/1964
RF-U287	Spark Machining of Beryllium	A. W. Brewer	RFP-1462	N/A, 2/5/1970
RF-U288	Sludge Packaging in 55-Gallon Drums	Unknown	NA	NA, N/A
RF-U292	Evaluation of the EPA Code D001, Ignitability; D002, Corrosivity; and D003, Reactivity; Designations for RFP IDCs that are Stored at the INEL	Don Kudera	3100m3 document number U046	NA, 02/29/96
RF-U294	Sorting Radioactive Waste at Rocky Flats	D. M. Anderson, E. A. Putzier, and D. L. Ziegler	NA	NA, 02/11/1970

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
RF-U400	Solid Radioactive Waste Disposal Order and Shipment Data, for shipments to Pit 4, Area 1, Phase I and Phase II	E. S. Ryan, et al	NA	NA, 3/07/1964 to 4/28/67, not inclusive
RF-U401	Compilation of PCB AK sources	various	NA	NA, 09/05/01
RF-U402	Problems Associated with Contaminated Waste Disposal	E. S. Ryan	NA	NA, 3/1/1965
RF-U403	Authorization - Part II, Scope and Job Description, Laboratory Renovation, Room 180, Building 71	L. A. Matheson	350710	NA, 4/29/1965
RF-U404	Portion of Health and Safety Monthly Report, Partial Beryllium Operations as of February 1966	Hill	NA	NA, 2/1/1966
RF-U405	Email and Table 4-4 from EDF-5164, GEM Project sampling results.	Carolyn Abbott	NA	NA, 09/14/04
RF-U406	Authorizations	D. M. Lynkiewicz	NA	NA, 01/21/1965
RF-U407	Building 44 Discarded Waste Report	A. J. Demlauler and E. E. Sutton, Jr.	654, 660, 667, 677	na, 2/1962 through 8/1962
RF-U408	General Design Criteria for Authorization No. 319008, Liquid Plutonium Waste Treatment Facility Improvements - Building 774	B. L. Kelchner	NA	NA, 1/15/1971
RF-U409	Chemistry Research and Development, Environmental Research, Investigation of Present Storage Practices of Beryllium Metal Scrap by the General Stores Group	J. W. Lindsay	ER Report 11-5-71	NA, 11/05/1971
RF-U413	Authorization: Beryllium Development Machining Facilities, Rm. 201, Bldg. 44	B. P. Shepherd	5910-44	NA, 9/19/1960
RF-U415	Attachment 1, Economic Discard Limit	None listed	NA	na, 9/3/1971
RF-U416	Packet of documents: 1) Product and Health Physics Research Service Report, Nickel Carbonyl Disposal; 2) Letter to H. E. Bowman, Hazardous Materials Proposal; 3) Letter to J. R. Seed, Disposal of Cyanide Compounds	S. H. Pitts, F. D. Hobbs, J. E. Hill	317-72-174	NA, 1) 9/1972, 2) 4/7/1972, 3) 11/22/1971
RF-U419	Waste Treatment Flowsheet - Bldg. 774	M. E. Maas	NA	NA, 02/09/1973
RF-U420	document excerpt, Description of the 207 Solar Evaporation Ponds	Not Listed	CO7890010526	2, 07/01/1988
RF-U421	Solid Radioactive Waste Disposal Order and Shipment Data, for shipments to Pit 4 and Pit 6, Area 1, Phase II	E. S. Ryan, et al	NA	NA, 8/19/1966 to 4/23/1968, not inclusive
RF-U422	Building 444/447 Production Operations and Process Description	Not Listed	NA	NA, Not Listed

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
RF-U423	Chemical Milling of Beryllium for Machining Damage Removal	Everett L. Childs and Kenneth R. Souply	RFP-2174	NA, 4/22/1975
RF-U424	Evaluation of Graphite from Building 444 Beryllium Casting	Jeff Harrison and Carrie Johnson	NA	NA, 2/27/2006
RF-U425	Evaluation of Filters Servicing the Building 444 Beryllium Shop	Jeff Harrison and Carrie Johnson	NA	Rev. 1, 9/22/2006
RF-U426	Rocky Flats History of Filter Changes and Plenum Modifications, 1953-1975	unknown	NA	NA, 9/1975
RF-U427	Summary of Building 774 Aqueous Sludge, First-Stage Sludge (741-Series), Second-Stage Sludge (742-Series), and Combined Sludge (7412-Series) and WWIS Query - All Emplaced Waste Containers in AMWTP Waste Stream BNINW216	Jeff Harrison	NA	NA, 3/23/2006
TAN-C001	Office Correspondence to W.A. Erickson: Modify RAF Waste Handling	M.H. Bartz	Bar-646-64A	N/A, 11/17/1964
TAN-C002	Office Correspondence to T.R.Wilson: Radioactive Contamination Status of the IET Area	O.L. Cordes	Cord-35-66A	N/A, 5/18/1966
TAN-C003	Evaporator Comments	R. S. Peterson	Pts-1-66A-N	NA, 2/16/1966
TAN-C004	Office Correspondence to Mr. J.W. McCaslin: Health Physics Inspection and Review 1st Quarter 1967 CF Health Physics	N.G. Reece	Ree-12-67	N/A, 3/31/1967
TAN-C005	Security Incident	Lloyd Barker	Bkr-16-66A-M	NA, 5/3/1966
TAN-C006	Office Correspondence to All MTR HPs: MTR HP Meeting	V.G. Johnson: mlm	VGJ-9-67	N/A, 3/23/1967
TAN-C007	HP Hot Storage Inventory	M. P. Orme	Orm-7-A-N	NA, 4/19/1966
TAN-C008	HP Hot Storage Inventory	M. P. Orme	Orm-5-66A-N	NA, 4/19/1966
TAN-C009	MTR HP Meeting	V. G. Johnson	VGJ-1-66A-N	NA, 2/7/1966
TAN-C010	ML-1 Air Operations. Army Gas-Cooled Reactor Systems Program, Operation of the ML-1 with Air as the Working Fluid	D. E. Williams	RGC:JCV, AN-GCR-519	NA, 5/27/1963
TAN-C015	ML-1 Fuel Disposal	C. B. Amberson	Amb-116-69	NA, 6/4/1969
TAN-C016	Memorandum to C. B. Amberson, ML-I Fuel Disposal	D. C. Sparks	N/A	N/A, 5/2/1969
TAN-C024	Memo - SNAPTRAN-2 Monitoring Data	John R. Horan	DOE/HRE-ID-385	NA, 4/14/1966
TAN-C025	Water Supply and Fluid-Waste Disposal at ANPR Site	R. L. Nace	NA	NA, 9/5/1952

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
TAN-P001	RWMIS Solid Master Database List for 1954 to 1970 BGP08 for TAN	RWMIS	P61SHO90	NA, 9/24/1992
TAN-P004	TAN HOT SHOP AND SATELLITE FACILITIES	R.A Freeman	IDO-17032	N/A, 11/1/1964
TAN-P005	Estimated Radiological Inventory Sent from Test Area North to the Subsurface Disposal Area from 1960 through 1993	Greg W. Studley, Peter A. Pryfogle, Donald E. Sebo, Steve L. Lopez, Pui Kuan	INEEL/EXT-03-00997	Revision 1, 7/1/2004
TAN-P007	Preliminary Determination of Hazardous Waste from other Generators Collocated with Rocky Flats Plant Transuranic Waste in the OU 7-13/14 Subsurface Disposal Area	Idaho Completion Project	INEEL/EXT-03-01139	NA, 5/1/2004
TAN-P008	Manual of Procedures for Effecting Control of SS Materials at Station MTI	B.S. Lewis, A.E. Hall, F.H. Tingey	IDO-16817	NA, 11/1/1962
TAN-P028	Buried Waste Line Register for NRTS - Part II. TAN	B.E. Paige	ACI-108	NA, 1/1/1972
TAN-P029	A Study of Radioactive Liquid Waste Management at Test Area North (TAN)	W.B. Kerr	ACI-101	NA, 12/1/1971
TAN-P034	Decontamination and Decommissioning Plan for TAN Liquid Waste Evaporation System (PM-2A)	R. E. Hine	PR-W-78	NA, N/A
TAN-P035	Program Plan for NRTS Transuranic Waste Retrieval and Packaging Project	R. A. Brown, J. C. Commander, W. B. Kerr, R. L Nebeker, A. S. Neuls, R. J. Thompson	ACI-169	NA, 5/1/1975
TAN-P036	Survey of NRTS Waste Management Practices, Volume I	G. W. Hogg, W. F. Holcomb, L. T. lakey, L. H. Jones, D. D. Coward	ACI-104	NA, 9/1/1971
TAN-P052	Waste Disposal Data for the National Reactor Testing Station Idaho	J.H. Osloond	IDO-12074	NA, 8/1/1970
TAN-P058	Hot Shop Assembly-Disassembly Procedures for SNAPTRAN 2/10A-1 Reactor	R. D. Fletcher	PTR-656	NA, 8/1/1963
TAN-P064	Nonradioactive Waste Solvent Disposal Study	J.C. Commander	CI-1221	NA, 4/1/1971
TAN-P069	Radiological Aspects of SNAPTRAN 2/10A-3 Destructive Test	O.L. Cordes, R. P. Bird, G. A. Dinneen, and J. R. Fielding	IDO-17038	NA, 1/1/1965

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
TAN-P070	Radiological Aspects of the SNAPTRAN-2 Destructive Test	O. L. Cordes, D. F. Bunch, J. R. Fielding, J. K. Warkentin	IDO-17203	NA, 2/1/1967
TAN-P071	Safety Analysis Report SNAPTRAN 2/10A-1 And -2 Safety Tests	W. J. Neal, et al	IDO-17076	NA, 10/1/1965
TAN-P075	Post-Test Physical, Chemical, and Metallurgical Analysis of SNAPTRAN-3 Waste	R. D. Fletcher	IDO-170-65	6/1/1965
TAN-P076	Analysis of SNAPTRAN Reactor Behavior	W. E. Kessler, R. E. Prael, L. N. Weydert, Jr.	IDO-17204	NA, 6/1/1967
TAN-P077	Proposed Post-Destructive Test Reactor Examination and Area Cleanup SNAPTRAN-2	R. D. Fletcher	PTR-736	NA, 1/1/1964
TAN-P078	Operations Report, HTRE-2, L2C-1 Cartridge	R. C. Evans	XDC 59-11-179	NA, 11/16/1959
TAN-P079	Comprehensive Technical Report, General Electric Direct-Air-Cycle Aircraft Nuclear Propulsion Program: Nuclear Safety	P. H. Wilks	APEX-921	NA, 5/30/1962
TAN-P080	Comprehensive Technical Report, General Electric Direct-Air-Cycle Aircraft Nuclear Propulsion Program: Heat Transfer Reactor Experiment No. 2	P. N. Flagella	APEX-905	NA, 5/25/1962
TAN-P081	Comprehensive Technical Report, General Electric Direct-Air-Cycle Aircraft Nuclear Propulsion Program: Heat Transfer Reactor Experiment No. 1	G. Thornton, S. H. Minninch, C. Heddleson	APEX-904	NA, 2/28/1962
TAN-P082	Comprehensive Technical Report, General Electric Direct-Air-Cycle Aircraft Nuclear Propulsion Program: Progam Summary and References	G. Thornton, A. J. Rothstein	APEX-901	6/28/1962
TAN-P083	Second Limited Melt Experiment (LIME-II): Final Report	R. E. Baker	APEX-714	6/30/1961
TAN-P084	Final Report First Meltdown Experiment (Operation Boot)	R. E. Baker, C. C. Gamertsfelder, R. F. Gentzler	APEX-445	NA, 1/2/1959
TAN-P086	Comprehensive Technical Report, General Electric Direct-Air-Cycle Aircraft Nuclear Propulsion Program: Heat Transfer Reactor Experiment No.3	F. C. Linn	APEX-906	NA, 6/15/1962
TAN-P087	Comprehensive Technical Report, General Electric Direct-Air-Cycle Aircraft Nuclear Propulsion Program: Aircraft Nuclear Propulsion Systems Studies	R. J. Spera, G. Thornton	APEX-909	6/4/1962
TAN-P088	Test Results From the D101-L2A-2 Fuel Element Effluent Test (FEET), IET 21 and 23	G. D. Pincock	DC-60-12-732	12/21/1960
TAN-P089	Test Results From D101-L2E-5 Sub-LIME Experiment, IET 24	G. D. Pincock	60-11-719	NA, 11/23/1960

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
TAN-P090	Test Results From D101-L2E-2 LIME Experiment, IET 22	G. D. Pincock	DC-60-10-720	10/12/1960
TAN-P091	SNAPTRAN 2/10A-3 Destructive Test Results	W. E. Kessler, O. L. Cordes, G. A. Dinneen, R. D. Fletcher, G. F. Brockett	IDO-1709	1/1/1965
TAN-P092	Quarterly Technical Report STEP Project January 1966 - March 1966	K. A. Dietz	IDO-17186	NA, 11/1/1966
TAN-P094	Operation Boot Test Results (IET #12)	F. G. Devens, G. D. Pincock, G. St. Leger-Barter, L. G. Whitlow	DC-58-7-728	7/27/1958
TAN-P100	Results From the Power Testing of D101-L2E-2, IET 20	C. N. Anderson, H. E. Anderson, D. C. Foster, C. A. Gukeisen, G. D. Pincock	DC-60-9-722	9/19/1960
TAN-P101	HTRE-2 Insert 1-C (D101-C3) Operations Report	R. C. Evans	N/A	9/22/1958
TAN-P103	Test Results From D101-L2E-1 Power Testing, IET #17	G. D. Pincock	DC-60-4-700	3/31/1960
TAN-P104	Test Results From D101-L2E-3 Power Testing, IET #19	G. D. Pincock	DC-60-7-717	7/8/1960
TAN-P105	Preliminary Data Report IET Test Series No. 18 Phase II Testing of The D102A2 (A) Power Plant	J. W. Highberg, K. J. Snow, R. F. Brenton, J. F. Kunze, D. A. McKenzie, C. B. Cannon, C. Davidson, A. F. Clark	DC-60-6-735	6/17/1960
TAN-U001	Annual Health Physics Appraisal Phillips Petroleum Company Test Area North 1964	N/A	N/A	N/A, 1964
TAN-U002	Program Plan for NRTS Solid Radioactive Waste Repackaging Facility Studies	R. A. Brown, W. B. Kerr, A. S. Neuls, R. J. Thompson	NA	DRAFT, 8/21/1973

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
TAN-U003	Safe Work Permit	R. K. Ingram	08-0407	NA, 8/16/66
TAN-U004	Safe Work Permit	R. K. Ingram	09-6039	NA, 10/13/66
TAN-U005	Safe Work Permit	R. K. Ingram	7661	NA, 11/16/66
TAN-U006	Safe Work Permit	R. K. Ingram	NA	NA, 5/27/66
TAN-U007	Safe Work Permit	R. K. Ingram	2185	NA, 5/25/66
TAN-U008	Safe Work Permit	R. K. Ingram	2188	NA, 5/17/66
TAN-U009	Safe Work Permit	R. K. Ingram	2165	NA, 5/16/66
TAN-U010	Safe Work Permit	R. K. Ingram	2164	NA, 5/13/66
TAN-U011	Safe Work Permit	R. K. Ingram	2162	NA, 5/13/66
TAN-U012	Safe Work Permit	R. K. Ingram	NA	NA, 4/1/66
TAN-U013	Safe Work Permit	R. B. Johns	NA	NA, N/A
TAN-U014	On-Site Shipment, Radioactive Material Shipment Record	Various	NA	NA, 1967
TAN-U076	TAN 607A Isolation and Transition	John E. Duggan	EDF-2552	0, 10/9/2001
TAN-U082	Idaho Operations Office, Solid Radioactive Waste Report	R. L. Peterson, J. B. Levitt	NA	NA, 12/65, 5/66, 7/66, 8/66, 10/66, 2/67
TAN-U089	Geology, Ground Water, and Waste Disposal at the Aircraft Nuclear Propulsion Project Site, National Reactor Testing Station, Idaho	Morris Deutsch, R. L. Nace, and P. T. Voegeli	IDO-22023-USGS	NA, 12/1/1952
TAN-U105	Historical Perspective of Solvent Usage at TAN	Sylvia Median, Rob Patrick	WM-ERP-91-008	NA, 4/1/1992
TAN-U106	Brief SNAPTRAN Program	Unknown	T070493	NA, 1963
TAN-U110	Waste Disposal Request and Authorization from TAN area	L. E. Dobson, D. B. Haynes, J. C. Pruden, R. L. Peterson, R. K. Ingram	NA	NA, 4/8/1966

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
TAN-U111	Waste Disposal Request and Authorization	R. K. Ingram	TAN607SR007/28/67800	NA, 7/28/1967
TAN-U112	Disposal Request and Authorization	B. C. Laurey	TAN633SR002/28/638101500	NA, 2/28/1963
TAN-U113	Waste Disposal Request Authorization for TAN	L. E. Dobson	NA	NA, 4/17/1964
TAN-U114	Waste Disposal Request Authorization	H. R. Petty	NA	NA, 12/3/1965
TRA-C001	Decontamination of WAPD L-12/M-13 Loop	C. A. Zimmerman	Zim-7-65A	N/A, 4/7/65
TRA-C038	Letter to T. E. Wade, II, re.: Response to NonReactor Nuclear Facilities Appraisal, EG&G Idaho, Inc. #84-3	J. O. Zane	Zan-36-84	NA, 02/24/1984
TRA-P001	ETR Operations Branch Progress Report for Cycle No.87 January 30, 1967 - March 13, 1967	E. H. Smith, et al	IN-1084	NA, 04/21/1967
TRA-P005	Hazards Evaluation of Proposed Site for ETR II (now designated ATR)	D. R. deBoisblanc, R. J. Nertney, and L. H. Jones	IDO-16623	NA, 8/18/1960
TRA-P006	Advanced Test Reactor Critical Facility Safety Analysis Report	E. E. Burdick and J. W. Henscheid	IDO-16950	Rev. 1, 07/1964
TRA-P007	ETR Hazards Survey for WAPD M-13 Experiment	R. L. Gump	IDO-16503	NA, NA
TRA-P008	Findings on Chloride Stress Corrosion in the MTR and ETR Primary Systems	R. P Wadkins	CI-1004	NA, 8/66
TRA-P009	ETR Operations Branch Progress Report for Cycle No. 88 March 13, 1967 - April 24, 1967	E. H. Smith	IN-1092	NA, 6/12/67
TRA-P010	ETR Operations Branch Progress Report for Cycle No. 84, September 24, 1967 - November 6, 1966	E. H. Smith	IN-1046	NA, 12/16/66
TRA-P011	ETR Operations Branch Progress Report for Cycle No. 82, July 4, 1966 - August 14, 1966	E. H. Smith	IN-1029	NA, 9/16/66
TRA-P012	ETR Operations Branch Progress Report for Cycle No. 80, April 7, 1966 - May 22, 1966	E. H. Smith	IDO-17197	NA, 7/28/66
TRA-P013	ETR Operations Branch Progress Report for Cycle No. 76, October 26, 1965 - December 5, 1965	E. H. Smith	IDO-17144	NA, 1/21/66
TRA-P014	ETR Operations Branch Progress Report for Cycle No. 77, December 5, 1965 - January 16, 1966	E. H. Smith	IDO-17153	NA, 3/4/66
TRA-P015	ETR Operations Branch Progress Report for Cycle No. 79, February 27, 1966 - April 7, 1966	E. H. Smith	IDO-17184	NA, 6/15/66
TRA-P016	ETR Operations Branch Progress Report for Cycle No. 83, August 14, 1966 - September 25, 1966	E. H. Smith	IN-1037	NA, 10/31/66

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
TRA-P017	ETR Operations Branch Progress Report for Cycle No. 86, December 15, 1966 - January 30, 1967	E. H. Smith	IN-1071	NA, 3/9/67
TRA-P018	ETR Operations Branch Progress Report for Cycle No. 85, November 6, 1966 - December 15, 1966	E. H. Smith	IN-1059	NA, 1/31/67
TRA-P356	Chemical Compatibility and Inventory Evaluation for the Accelerated Retrieval Project for a Described Area within Pit 4	John R. Dick, PhD.	EDF-5307	0, 10/27/2004
TRA-P357	Disposal Request and Authorization for waste shipped from TRA	G. R. Allred	NA	NA, 4/13/1966
TRA-P358	Aircraft Nuclear Propulsion Department Interim Report on SL-1 Examination and Analysis	R. F. Brenton, V. A. DeLiso, J. F. Kunze, and G. G. Plastino	DC 61-7-708	NA, 7/21/1961
TRA-P359	National Reactor Testing Station, U. S. Atomic Energy Commission	U. S. Atomic Energy Commission	NA	NA, 07/1967
TRA-P360	Operating Manual - MTR Hot Cell	H. T. Watanabe	PTR-293	NA, 4/10/1958
TRA-P365	MTR Progress Report Cycle No. 94, October 6 through 28, 1957	F. R. Keller, editor	IDO-16427	NA, 11/15/1957
TRA-P371	MTR Progress Report Cycle No. 173, April 23 - May 14, 1962	E. H. Smith, editor	IDO-16786	NA, 5/1962
TRA-P388	Materials Testing Reactor Operating Manual Volume I, Demineralizer and Other Water Systems	R. L. Rider and J. Leatham	CI #1037	NA, 6/1/1965
TRA-P401	Engineering Design File, Voluntary Consent Order Tank System TRA-004 - TRA Hot Waste Management System Characterization	D. P. Collins and M. D. Clark	EDF-5160	Rev. 1, 05/16/2005
TRA-P461	Technical Safety Requirements for the Test Reactor Area Hot Cell Facility	Lockheed Martin Idaho Technologies Company	Issue 009	NA, 05/12/1999
TRA-P464	Field Sampling Plan for the HWMA/RCRA Closure Certification of the TRA-731 Caustic and Acid Storage Tank System, 1997 Notice of Violation Consent Order	INEEL Environmental Affairs	INEEL/EXT-01-01281	Rev. 0, 10/2001
TRA-P465	Quality Assurance Project Plan for the HWMA/RCRA Closure Certification of the TRA-731 Caustic and Acid Storage Tank System, 1997 Notice of Violation Consent Order	INEEL Environmental Affairs	INEEL/EXT-01-01280	Rev. 1, Rev. 0, 01/2002, 10/2001

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
TRA-P473	Hot Cells Operating and Maintenance Manual	Not Given	7.16.11	NA, 05/07/1992
TRA-P491	Metallurgy and Materials Science Branch Annual Report, Fiscal Year 1970	Idaho Nuclear Corporation, National Reactor Testing Station	IN-1437	NA, 11/1970
TRA-U002	WAPD M-13 Cubicle Radiation Survey	DFM	NA	NA, 8/15/66
TRA-U003	Radiation Survey of the ETR Basement	B.L., Arthur Reynolds, Mike Swendson	NA	NA, 4/11/66 - 5/19/66
TRA-U004	WAPD M-13 Cubicle Radiation Survey	ERC	NA	NA, 12/19/64
TRA-U005	WAPD C-7/L-10 Cubicle Survey	PM, JWC	NA	NA, 9/28/64
TRA-U008	Health Physics Logsheet	N/A	NA	NA, 6/22/66
TRA-U010	Radioactive Material Shipment Record	D. R. Alvord	WAPD L-12/M-13 (A-1-g)	NA, 12/22/64
TRA-U025	Waste Disposal Request and Authorization for waste shipments from TRA	not legible	NA	NA, 1/20/1967
TRA-U027	Disposal Request and Authorization, numerous shipments from TRA	G. R. Allred	NA	NA, 4/13/1966
TRA-U030	Aerojet Nuclear Company, EG&G Experiment Logs, and Facility Log for HCF; WWTF handwritten log	Various	NA	NA, 11/12/1973 - 8/9/1996, not inclusive
TRA-U081	TRA Hot Cell Facility Business Plan, Strategy for Continued Operations	NA	NA	NA, NA

[a] From Acceptable Knowledge Souce Document Summaries (Attachments 3)

[b] Or publisher's document number if available

[c] In the case where a AK Summary Report has been revised based on information in Attachment 11- Acceptable Knowledge Source Document Discrepancy Resolution form, identify the tracking number.

Acceptable Knowledge Expert: Elizabeth H. Lickliter Date: 1/11/2013
Print/Sign

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Attachment 4 - Acceptable Knowledge Source Document Information List

Site(s): Idaho National Laboratory

Waste Stream Number: ID-RF-S3150-A

Waste Stream Description: Solidified Organics (IDCs 700 and 801)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
M004	Material Safety Data Sheet for Fabric	NA	NA	NA, NA
C032	External letter to J. N. Davis, Idaho National Engineering Laboratory, Data Package Information Change for Drum D40197-0743-18283	J. K. Paynter	88-RF-2813	NA, 9/9/1988
C039	Internal Correspondence from J. K. Paynter to B. C. Barrett	NA	WCP8-20	3/23/1989
C057	Drum, Gasket, Liner Usage at RFP Compiled by Larry Bearly	NA	NA	1989
C086	Memorandum from Jeff Paynter to Pamela of IT Corporation. Use of the Complexing Agent DHDECMP	J. K. Paynter	NA	NA, 2/7/1989
C130	Fax from Steve Cunningham, Rocky Flats, to Jeff Paynter	NA	NA	2/18/1992
C134	Interview Record and associated documentation of several former Rocky Flats employees	Not listed	NA	NA, NA
C137	Interview Record of E. Putzier and E. Vejvoda by D. Herrick and J. Lamb	D. Herrick and J. Lamb	NA	NA, 9/5/1991
C154	Interview Record of W. V. Conner by T Widner and D. Lamb	NA	NA	8/13/1991
C159	Interview Record of R. Hoffman by D. Herrick and J. Lamb	NA	NA	9/4/1991
C170	Telecon between Al Morgan of Rocky Flats (retired) and Jeff Harrison	NA	NA	2/17/1997
C171	Telecon between Bill Connor of Kaiser-Hill LATO and Jeff Harrison	NA	NA	2/13/1997
C184	Interview Record of Al Morgan by Jeff Harrison	NA	NA	3/19/1997
C185	Telecon between Bill Connor of LAPO and Jeff Harrison	NA	NA	3/20/1997
C207	Summary of Review of PCB AK Sources	Various	NA	NA, 9/5/2001
C502	Letter from John A. Ciucci to Joseph A. Legare. Resolution of Cesium-137 AK Discrepancy Between Rocky Flats Environmental Technology Site and Idaho National Engineering and Environmental Laboratory	NA	04-RF-01306	Rev. 2, 12/27/2004

NTPC RECORDS ORIGINAL
DATE REC'D 4/25/13 SP

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
C505	Letter from Cynthia Zvonar, Department of Energy Carlsbad Field Office, to Lou E. Roberts, Environmental Protection Agency	Cynthia Zvonar, Department of Energy Carlsbad Field Office	NA	NA, 6/21/2001
C506	Letter from John H. Smith, Environmental Protection Agency, to Lynne Smith, Department of Energy WIPP Office Director, EM-23	John H. Smith, Environmental Protection Agency	NA	NA, 2/28/2002
C508	E-mail Correspondence from Martin Clapham to Joan Connolly. Subject: Cs-137	Martin Clapham	NA	8/4/2005
C509	E-mail Correspondence from Joe Harvill to Jeff Harrison	Joe Harvill	NA	10/6/2005
C511	Record of Communication with Mark Crocker. Subject: OASIS Waste Packaging.	Jeff Harrison	NA	12/6/05
C514	Email from Mike Rivera to Kathy Leonard, "WMF-633 ARP Drums"	Mike Rivera	NA	NA, 8/16/2007
C515	Email from Whitney St Michel to Barbara Broomfield, Vince Medina, Bill Verlanic, "RF-003 Treated Drums"	Whitney St Michel, AMWTP	NA	NA, 9/2/2009
D004	Discrepancy Resolution for Waste Matrix Code Assignments for Waste Streams ID-RF-S3114 and ID-RF-S3150-A	Jeff Harrison	NA	NA, 7/1/2005
D005	Discrepancy Resolution for EPA Hazardous Waste Number Assignments for Waste Streams ID-RF-S3114 and ID-RF-S3150-A	Jeff Harrison	NA	Rev. 1, 12/21/2005
D009	Discrepancy Resolution for Cs-137 and Sr-90 in Rocky Flats TRU Waste	Jeff Harrison	NA	10/14/05
D017	Discrepancy Resolution. Incorrect EPA Hazardous Waste Number.	Scott Smith	N/A	N/A, 03/11/2008
D019	Discrepancy Resolution. Liquids Identified During Characterization	Scott Smith	NA	0, 4/16/2008
D022	Discrepancy Resolution. Solvent Use of Nitrobenzene	Scott Smith	N/A	0, 8/11/2011
P001	TRU Waste Compliance Program for WIPP-WAC (U).	NA	WO-4500-H	1989
P002	Organic and Sludge Immobilization System	NA	RFP-4095	NA, 7/27/1987
P004	Rocky Flats Plant Waste Management Site Plan	NA	NA	Dec-87
P008	Packaging and Handling Line- and Nonline-Generated Materials (U)	NA	1-1002-C/O	1988
P012	TRUPACT-II Content Codes (TRUCON)	NA	89-004	1992
P013	EG&G Sampling Program Results FY1987.	NA	PSD87-059	1987

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P014	TRU Waste Certification Program for WIPP-WAC (U).	NA	CO-4500-A	5/24/1983
P015	TRU Waste Sampling Program: Volume I-Waste Characterization	NA	EGG-WM-6503	9/1/1985
P016	Idaho National Engineering Laboratory Code Assessment of the Rocky Flats Transuranic Waste	NA	INEL-95/0281	7/1/1995
P022	EG&G Sampling Program Results FY1989	NA	PSD89-011	02/01/1989
P023	(Task 5 Draft Report) Estimating Historical Emissions from Rocky Flats (Partial)	ChemRisk	NA	NA, 11/1/1992
P026	Transuranic Solid Waste Inspection (U)	NA	WC-4003-A	11/11/1985
P033	Summary of Transuranic Waste Characterization Programs at the INEL (1979-Present)	NA	INEL-95/0397	9/1/1995
P043	TRU Waste Compliance Program for WIPP-WAC (U)	NA	WO-4500-F	1/19/1987
P052	Backlog Waste Reassessment Baseline Book	Waste Inventory and Documentation Rocky Mountain Remediation Services, L.L.C	WF4, WF5, WF6, WF17, WF19, WF47, WF52	B, 01/04/1995
P053	(Tasks 3&4 Final Draft Report) Reconstruction of Historical Rocky Flats Operations and Identification of Release Points.	NA	NA	Aug-92
P060	Waste Stream and Residue Identification and Characterization Building 707	NA	707-V3.2	2/19/1993
P061	Waste Stream and Residue Identification and Characterization Building 771	NA	771-V3.2	9/13/1993
P062	Waste Stream and Residue Identification and Characterization Building 779	NA	779-V3.2	6/24/1993
P063	Packaging Wastes for Shipment Offsite (U)	NA	WO-4034-C	10/13/1986
P064	Waste Packaging Requirements	NA	WO-4034-F	7/8/1988
P066	Material Safety Data Sheets for Envirostone Accelerator, Envirostone Emulsifier, and Envirostone Gypsum Cement	U. S. Gypsum Company	NA	NA, 5/12/1986
P069	Nuclear Materials Control Elements printout. SAN Database Report	NA	6016-01	6/1/1984
P076	Waste Stream and Residue Identification and Characterization Building 559	NA	559-V3.2	1991
P077	Waste Stream and Residue Identification and Characterization, Building 774	Wastren, Inc.	774-V3.2	3.2, 3/22/1993

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P078	Waste Stream Residue Identification and Characterization Building 776	NA	776-V3.2	3/8/1993
P079	Waste Stream Residue Identification and Characterization Building 777	NA	777-V3.2	02/18/1993
P081	Waste Stream Residue Identification and Characterization Building 371	NA	371-V3.2	1992
P082	Waste Stream Residue Identification and Characterization Building 374.	NA	374-V3.2	1992
P084	Material Safety Data Sheet for Varsol 1	Exxon	NA	NA, 8/25/1986
P089	Waste Systems Progress Report, March 1984 through February 1985	NA	RFP-3871	NA, 4/11/1986
P142	Material Safety Data Sheet for ZL-22A Zyglo Penetrant	NA	NA	6/14/1993
P152	Plutonium Metal Feed Specification for Use in the Weapons Program Volume 1	NA	NA	3/22/1985
P161	Dose Reconstruction Project Task 5	NA	NA	Nov-92
P164	A History of The Rocky Flats Plutonium/Actinide Recovery Plant 1952-1991	NA	RT92-003	2/3/1992
P166	Rocky Flats Risk Assessment Guide	NA	RF/03/00/85/0/5	Mar-85
P167	Neptunium Processing at the Rocky Flats Plant	NA	RFP-2899	9/20/1981
P169	Plutonium Isotopic Ratios at Rocky Flats	NA	NA	11/16/1990
P199	Chemistry Research and Development Annual Progress Report October 1, 1982 to September 30, 1983	NA	RFP-3654	9/24/1984
P200	Chemistry Research and Development Annual Progress Report October 1, 1983 to September 30, 1984	NA	RFP-3825	6/13/1986
P201	Chemistry Research and Development Annual Progress Report October 1, 1984 through September 30, 1985	NA	RFP-3931	8/18/1986
P202	Chemistry R&D Monthly Progress Report	J. D. Navratil, C. E. Baldwin, L. J. Beach, L. R. Crisler, et al	R&D 86-012	NA, 1/1/1986
P210	Default Plutonium Mass Fractions for Rocky Flats Plant Waste	NA	EDF-1242	Sep-99
P227	Plutonium Mass Fractions Derived from SGRS Data	NA	EDF-1609	Dec-00
P501	Packaging Waste for Shipment Offsite	NA	WO-4034-A	8/16/1985

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P504	Packaging Waste for Shipment Offsite	NA	WO-4034-B	1/31/1986
P507	Acceptable Knowledge Document for INEEL Stored Transuranic Waste – Rocky Flats Plant Waste	NA	INEL-96/0280	Rev. 3, 2/28/2003
P508	Radioactive Waste Management Complex Map Drawing	NA	Ref. AC1876	Jul-99
P509	Radioactive Waste Management Complex – Idaho Completion Project	NA	NA	Undated
P512	Waste Description Information for Transuranically Contaminated Wastes Stored at the Idaho National Engineering Laboratory	B. D. Ravio, G. K. Becker, T. H. Smith, G. L. Anderson	INEL-95/0412	NA, 12/1995
P513	Determination of Radioisotopic Content In TRU Waste Based on Acceptable Knowledge	BNFL Inc.	BNFL-5232-RPT-TRUW-07	5, 12/16/04
P515	Estimated Earthen and Geofabric Covered TRU Waste Inventory in the TSA at Radioactive Waste Management Complex (RWMC)	J.R. Wixon	INEL-95/194 RWMC EDF #837	8/24/95
P516	Advanced Mixed Waste Treatment Project (AMWTP) Waste Stream Designations	NA	BNFL-5232-RPT-TRUW-12	1, 11/20/2003
P518	Material Safety Data Sheets for various Texaco oils and Shell Vitrea M oil	Texaco and Shell oil companies	NA	NA, Various
P519	Waste Systems Progress Report, March 1983 through February 1984	NA	RFP-3682	NA, 10/1/1984
P520	Building Histories for Buildings 371, 444, 447, 460, 707, 771, 776/777, 881, 883, and 991. Historical Release Report (HRR)	NA	NA	11/1/1994
P522	Rocky Flats Environmental Technology Site WIPP Waste Stream Profile Form, TRM Solidified Organic Waste	NA	RF107.04	0, 1/11/2005

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P534	Shipment And Disposal Of Solidified Organic Waste (Waste Type IV) To The Waste Isolation Pilot Plant (WIPP), Presented at WM'06 Conference, February 26-March 2, 2006, Tucson, AZ	E. L D'Amico, Washington TRU Solutions, D. R. Edmiston, John Hart & Associates, G. A. O'Leary, CH2M-WG Idaho, LLC, M. A. Rivera, Aspen Resources Ltd., Inc., D. M. Steward, Boulder Research Enterprises, LLC	NA	NA, 2/26/2006
P535	Drum Treatment Facility Operations	AMWTP	INST-OI-68	11, 9/1/09
U010	OASIS Solidification and Off Gas Analysis	NA	PSD 88-038	NA, 9/1/1988
U040	Building 774 Low Level Organic and TRU-Waste Organic Waste Log Book	F. P. McMenus, et al	NA	NA, 1976-1990
U043	Building 774 Set Up Log Book	various	NA	NA, 1973-1990
U059	Drum Prefix Numbers and Corresponding Material Balance Areas	NA	NA	1/11/84 – 6/3/94
U064	Radioactive Materials Associated with Rocky Flats	NA	NA	4/14/1977
U069	Drum Prefix Issue Date Log Book	various, not listed	NA	NA, 1987-1997
U092	Inventory values as generated by TRIPS Change Request (TCR) 1821	Unknown	NA	NA, 5/22/2001
U099	DRAFT Waste Stream Profile Form - Solidified Organics and Supporting Documentation	NA	INW164.001	NA, 4/10/2002
U505	Rocky Flats Prefix History Timeline	N/A	N/A	N/A, N/A

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

[a] From Acceptable Knowledge Souce Document Summaries (Attachments 3)

[b] Or publisher's document number if available

[c] In the case where a AK Summary Report has been revised based on information in Attachment 11- Acceptable Knowledge Source Document Discrepancy Resolution form, identify the tracking number.

Acceptable Knowledge Expert: Sheri Nance, Sheri Nance Date: 2/27/13
Print/Sign

DIVIDER PAGE

Attachment 4 - Acceptable Knowledge Source Document Information List

Site(s): Idaho National Laboratory

Waste Stream Number: ID-ANLE-S5000

Waste Stream Description: Argonne East Remote-Handled Mixed Debris Stored at Idaho National Laboratory

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
C001	Fax to Larry Neimark re: Defense Versus Non-Defense Waste	Gary Marshall	N/A	01/21/1997
C002	Memorandum to File re: ANL Scrap Request 4-NU/EU-8-71-KZ 8-20/70 6-EBR I-Mark III fuel slugs. (1442g U235)	Wilton Jackson, ANL, Ext-3228	N/A	6/6/1972
C003	Intra-Laboratory Memo to Harvey Welsh re: Dimensions of Intermediate TRU Waste Containers	Dennis Donahue	N/A	9/14/1989
C004	Intra-Laboratory Memo to R. S. Wisner, HFEF re: Estimates of Total AGHCF Inventory for Future Shipments to ANL-W	A. B. Cohen, Manager, AGHCF	N/A	4/24/1995
C005	Correspondence to Larry re: List of RH-TRU cans from AGHCF and their packaging dates	N/A	N/A	10/30/1992
C006	Interview with Larry Neimark re: AGHCF samples, applicable programs, defense relationship to materials, and commingling of waste	Cheryl Schultz	Record of Communication:ROC-C6	7/17/2001
C007	Correspondence to L. A. Neimark, Manager, IP Section re: Assessment of Nuclear Materials Inventory, Fissile Inventory Records and Handling Procedures in FF12	A. G. Hins, CSR, Special Facility FF12	N/A	3/13/1991
C008	Intra-Laboratory Memo to J. V. Natale, SPM re: TRU Scrap Shipment No. 4, SPM-43 No. CZC-168	W. D. Jackson, MSD	N/A	6/5/1975
C009	Intra-Laboratory Memo to W. D. Jackson, MCT/ANL-E, re: Fissile Scrap and Irradiated Structural Materials Waste Shipments from ANL-E to ANL-W for retrievalbe Storage in the RSWF	L.C. Witbeck, Assist. to Mgr., SS&S	L-W-SSS-(LCW)-88-146An-184-66	11/17/1988
C010	Memo to F. Pausche, AGHCF Records Chief re: Fuel Element Sectioning and metallography debris, accounting and criticality safety procedures for disposal	W. D. Jackson, AGHCF Facility Supervisor	N/A	4/17/1975
C011	Intra-Laboratory Memo to D. A. Donahue, MCT, re: Work Plan for the Examination of LILY-1 and LILY-1A Specimens	L. A. Neimark, MCT	N/A	11/28/1988
C012	Intra-Laboratory Memo to Operations Personnel re: Facility Nitrogen Purge Change and Storage of Flammable Liquids	D. A. Donahue	N/A	4/9/1990

CCP RECORDS ORIGINAL
DATE REC'D 12/11/12

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
C013	Correspondence to Mr. E. M. King, Oak Ridge National Laboratory re: Radiactive Waste, i.e., nonrecoverable material, being transferred from ANL to ORNL for storage and/or processing	L. A. Neimark, Materials Science Division	N/A	4/10/1974
C014	Correspondence to A. Cohen re: Process and Procedure with all and WMO for Sampling 1st Stage HEPA Filters. Description - 8" x 8" x 3" w/ 5/8" Wood Frame Ultra Aire - MSA	F. Pausche	N/A	4/22/1995
C015	Intra-Laboratory Memo to C. M. Rock, EMO, re: Radionuclide Inventory of Waste from Alpha-Gamma Hot-Cell and Gloveboxes	A. B. Cohen, Manager, AGHCF	N/A	10/2/1996
C016	Intra-Laboratory Memo to C. E. Crouthamel, CMT, and M. J. Steindler, CMT re: LWR Hot-Cell Capability at ANL-E: The D-200 M-Wing Situation	L. A. Neimark, MST	N/A	5/3/1985
C017	Intra-Laboratory Memo to L. A. Neimark, MCT re: TRU-RH Waste Payload Meeting Summary	J. R. Thuot, Acting Manager, PFS-WM	N/A	8/14/1990
C018	Email to Tony Aldred, DR Diercks, Tom Kassner, RB Poeppel, Richard Valentin, Dick Weeks re: Chemical Waste Inventory ii	WJ Shack	N/A	5/18/1990
C019	Intra-Laboratory Memo to L. A. Neimark re: Disposal of Spent Darkroom Solutions	D. A. Donahue	N/A	11/20/1990
C020	Intra-Laboratory Memo to Environmental Compliance Representatives re: Photo Processing Solutions - Waste Characterization	R. G. Kolzow, ESH/QA Oversight and J. R. Thuot, PFS/WMO	N/A	12/19/1990
C021	Intra-Laboratory Memo to All ANL Employees re: DOE Imposed Hazardous Waste Shipping Moratorium	R.J. Teunis, Chief Operations Officer	N/A	10/18/1991
C022	Intra-Laboratory Memo to Distribution re: Orphan or Unwanted Chemicals	Aubrey C. Smith, MCT/MSD, Bldg. 212	N/A	12/7/1992
C023	Intra-Laboratory Memo to M. J. Ryan, SEC re: Potentially Hazardous Materials in "Operational Clean Sweep"	L. A. Neimark, MST	N/A	3/21/1983
C024	Intra-Laboratory Memo to W. C. Kettman, ET/IPS re: Clarification of 00 No. 29 with Regard to Inventory of 6-in. Storage Holes	L. A. Neimark, Manager, IPS	N/A	12/7/1993
C025	Correspondance to D. A. Donahue re: Transfer of Special Materials from G-118 Glovebox 3 to Building 212 Caves	M. A. Vest, CMT	N/A	9/16/1994
C026	Intra-Laboratory Memo to Melanie Tompkins re: Annual Forecast for Waste Management Operations-94	Aubrey C. Smith, Manager, Bldg. 212	N/A	8/31/1993
C027	Intra-Laboratory Memo to TRU Waste Generators re: Closure Methods for Plastic Bags Containing TRU Waste Material	A. C. Smith, Jr., Manager, WMO	N/A	5/23/1989

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
C028	Intra-Laboratory Memo to J. Thuot, WMO re: Costs of Current RH-TRU Disposal Campaign	L. A. Neimark, MCT	N/A	7/31/1990
C029	Letter re: Survey of Waste Streams in Building 212	Noreen Kevin and W. H. Livernash	N/A	5/31/1988
C030	Westinghouse Hanford TRU Disposal Requirements	J. R. Thuot	N/A	N/A
C031	Intra-Laboratory Memo to Distribution re: New Movement Slip for SNM and Other Programmatically Valuable Materials in the AGHCF	L. A. Neimark, Manager, AGHCF	32	Rev. 2, 10/5/1993
C032	Intra-Laboratory Memo to Distribution re: New Sectioning SLIP for SNM and Other Programmatically Valuable Materials in the AGHCF	L. A. Neimark, Manager, AGHCF	00 No. 34	4/5/1994
C033	Intra-Laboratory Memo to Distribution re: Radioactive Gas Release Approval Form	Adam Cohen, Regulatory Compliance Officer, AGHCF	00 No. 36	6/3/1994
C034	Intra-Laboratory Memo to A. Smith, PFS-306 re: AGHCF Intermediate-Level Transuranic Waste Removal and Storage	D. Donahue, MCT-212	N/A	10/21/1986
C035	Intra-Laboratory Memo to Distribution re: Management of Broken Fluorescent Lamps	J. Herman, PFS-WMO	N/A	2/2/1999
C036	Letter to Sheildon Meyers, Deputy Assistant Secretary for Nuclear Waste Management re: Disposition of TRU from LWR Program: Documentation of Agreements Reached in August 15, 1980 Meeting	Robert H. Bauer, Manager/Regional Representative	N/A	9/9/1980
C039	Intra-Laboratory Memo to L. A. Neimark re: Procedure for Disposal of "Clean Sweep" Pyrophoric Waste	W. D. Jackson	N/A	9/6/1983
C041	Intra-Laboratory Memo to Distribution re: Solid Radioactive Waste Drum Failure	B. R. T. Frost, Director, MSD	N/A	1/7/1977
C046	Intra-Laboratory Memo to D. C. Parzyck re: DOE request for Information Regarding Materials Not Classified as Waste	Aubrey C. Smith, MCT/MSD Environmental Compliance	N/A	3/13/1991
C058	Intra-Laboratory Memo to R. Boule, Director, PFS re: Needs Prior to Shipment of Neimarks's TRU-RH Drums to Idaho	Ralph Ditch, Supervisor, PFS-WMO	N/A	3/1/1990
C059	Letter to Mr. A. L. Taboas, Area Manager, Argonne Area Office, U.S. Department of Energy re: Resumption of Shipments of TRU Waste to INEL	R. Boule, Director, Plant Facilities and Services	N/A	3/5/1990

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
C060	Intra-Laboratory Memo to R. Bouie, Director, PFS re: Status: Resumption of Shipments of TRU Waste to INEL	A. C. Smith, WM Compliance Specialist	N/A	3/30/1990
C061	Intra-Laboratory Memo to L. A. Neimark, MCT re: Trip Report of Meeting with EG&G/Idaho on the Resumption of Shipments of TRU Waste to INEL	D. A. Donahue, MCT	N/A	5/8/1990
C062	Intra-Laboratory Memo to R. Bouie, Director, PFS re: TRU Shipments to INEL	J. R. Thuot, Acting Manager, PFS/WMO	N/A	7/12/1990
C066	Record of Communication with Bill Kettman and Dennis Donahue, AGHCF re: AGHCF Operations and Waste Packaging	J. Whitworth, M. Wyco	N/A	8/7/2001
C067	Record of Communication with Fred Pausche and Terry Bray, AGHCF re: Completion of SS Material Loss/Gain Forms	J. Whitworth, M. Wyco	N/A	8/8/2001
C068	Correspondnece to Craig R. Tyler, Lockheed Martin Idaho Technologies Co. re: ANL Transuranic Waste - Definition as Defense Waste	D. S. Kirschner, Manager, Radiation, Fire and Safety	N/A	4/16/1997
C073	Letter to Ms. Trisha Dedik, Director, International Policy and Analysis Division, NN-42, U.S. Department of Energy re: Transmittal of ANL Quarterly Reports	Armando Travelli, Manager, RERTR Program	N/A	1/15/2001
C074	Letter to Mr. Hilary Rauch, Manager, U.S. Department of Energy re: "TREAT Experiment Program"	R. Avery, Director, Reactor Analysis and Safety Division	N/A	4/4/85
C077	Letter to Mr. Mahlon Heileson, Lockheed Idaho Technologies Company re: Liquids absorbed on pelletized clay are non hazardous	Daniel Pancake, Waste Management Department, Argonne National Laboratory	N/A	10/16/95
C081	Intra-Laboratory Memo to Larry Neimark, ET re: Use of Carbon Tetrachloride in Alpha Gamma Hot Cell Facility (AGHCF) Experiments	Judd Johnson, EWM/WMTS	N/A	09/02/1994
C082	Fax to Ray Lang, DOE-CH re: ANL-E fuel Pins	L. A. Neimark	N/A	5/20/1993

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
C083	Correspondance to James E. Solecki, Acting Assitant Manager for Environmental Restoration and Waste Management, Idaho Operations Office re: Resumption of Shipments of TRU Waste to INEL, enclosure: Traceability of Hot Cell Waste	Jay O. Hunze, Director Technology Management Division	N/A	4/11/1990
C084	Intra-Laboratory Memo to Building 212 Personnel re: Disposal of Solid Radioactive Waste (SRW)	F. P. Marchetti, OHS/HP	N/A	2/4/1986
C088	Correspondance to Mr. W. M. Heileson, Waste Generator Interface, EG&G Idaho, Inc. re: Content of ANL-E RHTRU Drums Stored at INEL	L. A. Neimark, Energy Technology Division	N/A	6/17/1994
C089	Intra-Laboratory Memo to Dennis Donahue, Supervisor/AGHCF re: Waste Management Quality Assurance Surveillance Report No. 93-MCT-03a	Georgia Anast, Acting QAR, EWM/WM	N/A	3/16/1993
C091	Correspondence to W. Mahlon Heileson, Waste Management, RWMC Technical Support, EG&G Idaho, Inc. re: Lead in Remote Handled Transuranic Waste Stored at Idaho National Engineering Laboratory (INEL)	Judd F. Johnson	N/A	7/18/1994
C092	Intra-Laboratory Memo to J. L. Hooper, DOE (ARG) re: Experimental Fuel Segments in the AGHCF	L. A. Neimark, ANL (ET)	N/A	6/7/1996
C094	Correspondance to L.Neimark, Materials & Components Technology re: Metallogrphic Samples	J. E. Battles, Chemical Technology Division and Z. Tomczuk, Chemical Technology Division	N/A	6/13/1990
C095	Email to Cheryl Schulz re: ANL All-Drum Information	Douglas W. Parker	N/A	5/21/2002
C097	Correspondance to AGHCF, Operational Personnel re: Work Station III Fissile Grinding Waste	Dennis Donahue, AGHCF Operations Chief	N/A	N/A
C099	Correspondance to Mr. Dennis Wilkinson, RWMC/SWEP re: TRU Waste at Argonne National Laboratory-East	J. R. Thuot, Manager, Waste Management	N/A	5/17/1990
C1002	E-Mail Correspondence; Re: Work Performed in the M Cells of the Bldg. 200 M-Wing	J. Beitz to C.M. Rock	N/A	3/18/2008

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
C1007	Letter to N.D. Dudey and C.E. Crouthamel (EXXON); re: Management Summary and Milestone Report for April 1978	C.E. Johnson	N/A	6/16/1978
C1008	Letter to N.D. Dudey and C.E. Crouthamel (EXXON); re: Management Summary and Milestone Report for January 1978	C.E. Johnson	N/A	2/13/1978
C1010	Letter to C.E. Crouthamel (EXXON); re: Management Summary and Milestone Report for February 1979	C.E. Johnson	N/A	3/13/1979
C1013	Letter to N.D. Dudey and C.E. Crouthamel (EXXON); re: Management Summary and Milestone Report for November 1978	C.E. Johnson	N/A	12/18/1978
C1018	Letter to N.D. Dudey and C.E. Crouthamel (EXXON); re: Management Summary and Milestone Report for August 1978	C.E. Johnson	N/A	09/18/1978
C1021	Letter to L. A. Neimark; re: Estimated Costs for Exxon/EPRI Program	C. E. Johnson	N/A	4/6/1977
C1022	Drawings List for the CEN Shielded Fuel Examination Facility in Cell M-4 of MA-Wing in Building 200, Argonne National Laboratory	James V. Beitz	N/A	3/9/2007
C1027	Letter to N. D. Dudey and C. E. Crouthamel (EXXON); re: Management Summary and Milestone Report for February 1978	C. E. Johnson	N/A	3/16/1978
C103	Intra-Laboratory Memo to C. A. DeLorenzo, OOS re: Safety Analysis for Handling Tritium-containing Compounds in the AGHCF	L. A. Neimark, MST	N/A	5/30/1984
C1030	Letter to C. E. Crouthamel (EXXON); re: Management Summary and Milestone Report for January 1979	C. E. Johnson	N/A	2/14/1979
C1031	Summary of AK Research for 12 Drums Generated in the Building 200 M Wing to be Included in Waste Stream ID-ANLE-S5000	Kevin J. Peters	N/A	7/10/2009
C106	Email to Whitworth, Julia re: Exploding Drum at ANL	Terri S Bray	N/A	8/30/2001
C107	Fax to Harvy re: Information on venting of 30 gallon RH-TRU packages sent to you from the Alpha Gamma Hot Cell at ANL East	Dennis Donahue, Facility Supervisor	N/A	7/29/1992
C108	Correspondance to Mr. J. T. Case, U.S. Department of Energy, Idaho Field Office re: Strategy Plan for Long-term Management and Storage of Remote-handled (RH) Transuranic (TRU) Waste - TLC-224-92	T. L. Clements, Jr., Manager Transuranic Waste Programs	TLC-224-92	11/30/1992
C115	Intra-Laboratory Memo to W. H. Kline, Waste Management Coordinator re: Waste Packaging Criteria, Transuranic Waste, Idaho National Engineering Laboratory, Revision 1, IDO-10074	W. D. Jackson, Alpha-Gamma Hot Cell Facility, Supervisor	N/A	11/1/1979

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
C116	Fax to M. Heileson re: Pelletized Clay	Judd Johnson	N/A	11/20/1995
C118	Intra-Laboratory Memo to A. C. Smith, PFS re: Chemical Forms in AGHCF Transuranic Wastes	L. A. Neimark, MCT	N/A	4/12/1989
C121	Record of Communication with L. Neimark, A. Cohen, and F. Pausche (former AGHCF Section and Facility Manager and Records Chief Technician) re: AGHCF Radiological Characterization of RH-TRU Waste Shipped to INEEL	J. Whitworth and J. Biedscheid of IT Corporation; P. Kuan, R. Bhatt, and S. Kheriche of INEEL	N/A	12/18/2001,12/19/2001
C124	Fax to Mark Wyco and Larry Neimark, ANL-E re: Request for ANL-E to Identify Items of ANL-W Origin	Julia Whitworth, IT Corporation	N/A	2/21/2002
C125	Intra-Laboratory Memo to Steve Gehl, MSD re: Burnup on LWR Samples	E. R. Ebersole, AL-AW	N/A	10/22/1975
C127	Radiological Health Handbook	Bureau of Radiological Health and the Training Institute Environmental Control Administration	N/A	01/1970
C128	Intra-Laboratory Memo to Distribution re: Revised Procedure for Determining Specimen Density by Immersion, Operations Manual Section 7.21	L. A. Neimark, Manager, IPS	00 No. 41	03/13/1995
C130	Intra-Laboratory Memo to Waste Handling Procedures Manual Holders re: Packaging of Intermediate Level* Radioactive Waste for Disposal (Liquids)	C. L. Cheever, Acting Waste Management Coordinator	N/A	09/12/1979
C137	Email to Julia Whitworth re: RH TRU Waste	Douglas W. Parker	N/A	03/06/2002
C138	Intra-Laboratory Memo to Distribution re: Hot-cell Survey	L. A. Neimark, MSD	N/A	08/20/1973
C141	Intra-Laboratory Memo to L. A. Neimark, MSD re: Establishment of RAS Loop Disassembly Capability at ANL-E	W. D. Jackson, MSD	N/A	06/11/1973
C143	FAX to Cheryl Schulz re: Information on AGHCF Mercury Vapor Lamps and Lighting Fixtures	Geneine Staymates	N/A	03/10/2003

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
C144	Record of Communication with Curtis Merks re: Specifications for filter vents used on ANL-E drums and bags	Cheryl Schulz	N/A	03/10/2003
C147	Letter to Mr. John M. Schaffer re: Additional Information to Complete Actions Associated with Preexisting Condition (PEC) 316 - Argonne National Laboratory-East (ANL-E) Transuranic Waste	Edward J. Ziemianski	EM-WM-03-055	04/09/2003
C148	Interview of Terri Bray, ANL-E AGHCF Manager re: Lead Solder and First Stage HEPA Filters	Cheryl Schulz	N/A	09/2001
C152	Intra-Laboratory Memo to D.A. Donahue, MCT/IPS re: Work Plan for the Examination of LILAC Target No.19 for Battelle Pacific Northwest Laboratories	L. A. Neimark, MCT/IPS	IPS-46-00-00	5/3/1991
C155	Intra-Laboratory Memo to D. A. Donahue, MCT re: Work Plan for the Preparation of Specimens for NPR Tests MA-2, -3, and -4	L.A. Neimark, MCT	IPS-27-00-00	9/20/1990
C157	Intra-Laboratoary Memo to L. Neimark, MCT re: Test Specification and Operating Procedure for NPR Tests ALCAL-1 and -2.	Terri Shearer, MCT	IPS-49-00-00	5/29/1991
C158	Collection of Memos beginngin with: Intra-Laboratory Memo to ANL-E Environmental Compliance Representatives re: Illinois Environmental Protection Agency (EPA) Air Pollution Control Permit Applications	D. C. Parzyck, Director, Quality Assurance, Environment & Safety	N/A	10/22/1990
C160	Fax Memo to Mahlon Heileson, LITCO/RWMC re: Underlying Hazardous Constituents Waste Stream ANL212951004T	Judd Johnson, ANL/Waste Management	N/A	11/20/1995
C161	Intra-Laboratory Memo to Waste Handling Procedures Manual Holders re: Packaging of Intermediate Level* Radioactive Waste for Disposal (Liquids)	C. L. Cheever, Acting Waste Management Coordinator	ANL-26 (11-68)	9/12/1979
C305	Memo from R. J. Page and A. Miron to T. S. Bray. Subject: Inventory and Dose Estimates for Radionuclides Stored in the Alpha-Gamma Hot Cells Facility. Report attached.	R. J. Page and A. Miron	N/A	05/02/2003
C329	Memorandum to CCP Central Records: Evaluation of FFTF Fuel History and Defense Experiments	Kevin J. Peters	N/A	4/2/2004
C330	Memorandum to Ines Triay, Acting Manager, CBFO: Determination and Findings, Defense Origin of Nuclear Waste, Kerr-McGee Waste	Frank Marcinowski	N/A	4/15/2005
C331	Memorandum to CCP Central Records: Evaluation of Kerr-McGee Fuel Production and FFTF History	Kevin J. Peters	KJP:0604:001	06/28/2004

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
C332	Memorandum to CCP Central Records: Assessment of Waste Material Parameters (WMPs) for Waste Stream ID-ANLE-S5000	Becker	N/A	01/06/2006
C333	Memo to CCP Central Records: Assessment of Waste material Parameters (WMPs) for Waste Stream AERHDM	N/A	N/A	N/A
C334	RH-TRU Characterization Facilities	Jerry O'Leary and Mark Sherick	N/A	02/02/2006
C335	CCP Review Comments and Resolutions for Draft A, Rev. 0, CCP-AK-ANLE-500	Kevin Peters and Steve Schafer	N/A	2/27/06
C336	CCP Review Comments and Resolutions for Draft A, Rev. 0, CCP-AK-INL-500	Kevin Peters and Steve Schafer	N/A	2/7/2006
C337	ICP Controlled Document Review Comments and Resolution for CCP AK Summary Report for ANL-E RH-TRU Debris	Kevin J. Peters	N/A	5/24/2006
C341	Acceptable Knowledge Source Document Discrepancy Report - RH TRU Waste from ANL-E AGHCF	Cheryl Shulz	R4	7/15/03
C3464	Email to Mike Papp, re: HFEF Repackaging Operations	Tom Clements	N/A	03/03/2009
C347	Evaluation of Combustible versus Noncombustible Waste Drums in Waste Stream ID-ANLE-S5000	N/A	N/A	06/29/2006
C348	Evaluation of Generator Reported Radionuclides for Waste Stream ID-ANLE-S5000	Steve Schafer	N/A	06/30/2006
C350	Evaluation for Radiological Waste Stream Delineation for Waste Stream ID-ANLE-S5000	Kevin J. Peters	N/A	09/01/2006
C351	Letter to W. E. Bergholz, Manager Idaho Operations Office, re: Argonne National Laboratory-East (ANL-E) Remote Handled (RH) Transuranic Waste Stored at the Radioactive Waste Management Complex (RWMC)	R. C. Wunderlich, Area Manager	AAO.030320.0201	03/20/2003
C353	Record of Communication with Seth Snyder and Al Youngs, re: Chemistry Division Operations in Building 200, M-Wing and General Description of Building 200	Tom Krause	N/A	7/27/2000
C354	Fax to Tom Krause, re: Cave Area Description	Tory Steed	N/A	8/25/2000
C355	Letter to R.R. Heinrich, re: J-1/J-2 Burnup/ Isotopic Samples for the EPRI/EXXON Program	C.E. Johnson	N/A	12/20/1978
C356	Letter to C.E. Johnson, re: Monthly Report on EXXON/EPRI Program RP 306 for November 1978	L.A. Neimark	N/A	12/12/1978
C357	Letter to N.D. Dudey and C.E. Crouthamel (EXXON), re: Management Summary and Milestone Report for October 1978	C.E. Johnson	N/A	11/30/1978
C358	Letter to R.H. Bauer, re: Activation of K2 Hot Cell for RRT Safety Program Work	J.D. Griffith	N/A	12/4/1977

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
C359	Inter-Laboratory Memo to A.J. Goldman, re: Feasibility of Operating K-2 Facility in D200	L.A. Neimark	N/A	4/3/1978
C3633	Email to Mike Papp and Scott Smith, re: 90-mil Liner Use	Tom Clements	N/A	07/14/2009
C364	Intra-Laboratory Memo to C.H. Youngquist, re: Priority List for Work in M-Wing Cave Facility for Month of October 1978	L.A. Neimark	N/A	10/12/1978
C365	Intra-Laboratory Memo to B.R. Frost & L. Burris, re: Building 301 Glovebox and Nitrogen System	E.L. Martinec	N/A	3/4/1974
C366	Intra-Laboratory Memo to C.E. Dickerman, re: Schedule for In-Cell Containment Box for Loop Disassembly in Bldg. 200	L.A. Neimark	N/A	1/9/74
C3660	Evaluation of 51 ANL-E High Gamma TRU Waste Canisters Stored at the MFC Radioactive Scrap and Waste Facility to be Added to Waste Stream ID-ANLE-S5000, Revision 1	S. Smith	NA	Rev. 1, 05/02/2012
C3661	Email to Scott Smith, re: Material Transfer from ANL-E to ANL-W	Bud Lowman and Kathy Perez	N/A	09/29/2009
C367	Intra-Laboratory Memo to O. McNary, re: Examination Plan for L6/L7 and L8 Sibling Pins	L.A. Neimark	N/A	1/6/1977
C3698	Email to Tom Clements, et al; re: CCP-AK-INL-580, Rev 1, Draft N	Gerald G. Streier	N/A	07/28/2009
C373	Intra-Laboratory Memo to L.A. Niemark, re: Cave K-2	J.R. McCreary	N/A	10/15/1981
C375	Intra-Laboratory Memo to Distribution, re: Minutes of September 9,1980 about Sb-125 Releases From Cell K-2, M-Wing, Building 200	R.H. Cooke	N/A	9/12/1980
C3754	Argonne National Laboratory Intra-Laboratory Memo to J. V. Natale, re: Sodium Content in ANL-E High Gamma Level Transuranic Scrap Stored at ANL-W	R. Pohto	ANL-W-RE-(WM)-34	06/16/1975
C377	Memo to S. F. Burton, Re: Final Report of SAREF Support Facilities Requirements Task Group	J.R. Honekamp	N/A	7/29/1977
C378	Intra-Laboratory Memo to R.G. Matlock, re: Cost Estimate for ANL-E Support for SAREF	L.A. Neimark	N/A	10/14/1975
C379	Intra-Laboratory Memo to Distribution, re: Addendum to Criticality Hazards Control Statement (Revision 7), Alpha-Gamma Hot Cell Facility (Special Facility FF-1)	W.D. Jackson	N/A	7/8/1975
C380	Record of Communication - Interview with Bill Kettman, re: Extension of AGHCF Operations in Building 200 K-1 and K-2 Cells and 10-gallon Waste Cans	Kevin J. Peters and Tom Clements	N/A	07/16/2007
C381	Results of Document Review Relating to the AK Available for RH TRU Waste Containters Generated in the Building 200 K-Cells at ANL-E	Kevin J. Peters	N/A	10/23/2007
C4001	Email to Irene Quintana, re: Filtration of Lot 2 Immersion Water	Thomas Clements	N/A	12/06/2011

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
C4002	Email to Scott Smith, Re: Fuel Pin Packing Assembly Tare Wts.	Jeff Shainholtz	N/A	01/17/2012
C4003	Memorandum to Mr. Ed Ziemianski, Subject: Water Immersion Testing for Qualifying Lot 2 Fuel Pieces for Disposal at the Waste Isolation Pilot Plant	James R. Cooper, Deputy Manager, Idaho Cleanup Project	WDP-RWMC-11-079	12/19/2011
C4114	Emails to Lane Butler and Scott Smith, re: Metal-X Acceptability at WIPP	Raj Bhatt and John D. Harris	N/A	11/04/2009
C4129	Review Comments and Resolution for CCP-AK-INL-500; Rev 8, Draft E	N/A	N/A	N/A
DR010	Discrepancy Regarding the Volume of 7-Gallon Waste Cans	K. Peters	DR010	6/7/2006
DR012	Discrepancy Report for Duplicate Can ID# in Waste Streams ID-ANLE-S5000 (Drum 809) and AERHDM (Drum 813)	K. Peters	DR012	0, 08/17/2006
DR014	Discrepancy Report for the RCRA Assignment of EPA HWNS to Waste Stream ID-ANLE-S5000	Kevin J. Peters	DR014	11/16/2006
DR015	Drum Number Discrepancy (01109 vs. 00109)	K. Peters	Document Number and Revision: NA	12/12/2006
DR016	Unsealed 1-gallon Waste Can Discrepancy Report	Kevin Peters	DR016	08/14/2007
DR017	Discrepancy Involving Free Liquids in Waste	Kevin J. Peters	DR017	05/07/2007
DR018	Discrepancy Resolution Regarding: K Cell Waste Packaging	Kevin J. Peters	DR018	10/24/2007
DR019	Discrepancy Resolution Re: Sealed Waste Cans	Kevin J. Peters	DR019	09/20/2007
DR020	Discrepancy Resolution Re: Aerosol Cans	Kevin J. Peters	DR020	09/20/2007
DR021	Discrepancy Resolution for 3-Gallon Cans	Kevin J. Peters	DR021	10/23/2007
P001	AGHCF Operations Manual	Argonne National Laboratory	IPS-2-00-00	Rev. 0, Rev. 1, Rev. 2, 06/20/1989; 03/29/1990; 9/10/1990
P002	Central Characterization Project Acceptable Knowledge Summary Report for Argonne National Laboratory-East Contact-Handled TRU Waste Facility Maintenance and Laboratory Operations	Central Characterization Project (CCP)	CCP-AK-ANLE-001	11, 12/31/2003

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P004	Safety Analysis Report for the Alpha-Gamma Hot Cell Facility (BLDG. 212)	W. D. Jackson, Materials Science and Technology Division, Argonne National Laboratory	M4000-0025-SA-01	Rev. 0, 12/6/1982
P006	Safety Analysis for Twenty Year Retrievalbe Storage of Intermediate Gamma Level Transuranic Waste	W. D. Jackson, Alpha-Gama Hot Cell Facility, Materials Science Division, Argonne National Laboratory	N/A	6/1/1976
P007	Transport, Handling, and Interim Storage of Intermediate-Level Transuranic Waste at the INEL	John C. Metzger and Alan M. Snyder	TREE-1172	9/1977
P008	ANL-W History - Reactors (IFR)	N/A	http://www.anl.gov/anlw_history/reactors/ifr.html	7/23/2001
P009	TRU-RH Waste Certification Plan for Waste Management Operations	Ralph W. Ditch & Gary E. Griffin	J0306-0033-SA	Rev. 0, 1, 2, 3, & 4, 11/10/1986 & 4/16/1991
P010	Argonne News Articles re: General Information; IFR Fuel; Low-Enrichment Fuel	Rudy Bouie, et al	Volume 34, Number 13, October	10/1985; 11/1985
P013	Frontiers: Research Highlights 1946-1996	N/A	N/A	1996
P014	Institutional Plan: FY 1980-FY1985; Institutional Plan FY 1981 - FY1986	N/A	N/A	12/1979; 08/1980
P015	Basic Research in the Mission Agencies: Agency Perspectives on the Conduct and Support of Basic Research	James S. Kane, Deputy Assistant Administrator for Physical Research	N/A	1978
P016	Liquid Metal Fast Breeder: Right Answer, Wrong Question	N/A	http://www.atomicinsights.com/	10/1995
P017	1992 Congressional Hearings Intelligence and Security: Naval Reactors, Arms Control, Office of Inteligence, 03/11/1992, Question and Answer	T. Bevill	Q92AF105 (http://www.fas.org/)	3/11/1992

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P018	Certification and Venting Plan for Remote-Handled Transuranic Waste Stored at the Idaho National Engineering Laboratory	H. D. Welch	EGG-WM-PD-92-010	9/1992
P023	Argonne National Laboratory-East Remote Handled Waste	W. Mahlon Heilseson	EDF-RWMC-759	8/29/1994
P024	Certification of Remote-Handled Transuranic Waste at the Tan Hot Cells	H. D. Welch	EDF-RWMC-424	9/28/1990
P025	Argonne National Laboratory-East, Transuranic Waste Acceptable Knowledge Report	Benchmark Environmental Corporation	WMO-AK/WIPP-001.0	9/29/2000
P027	Preliminary Engineering Proposal on Alpha-Gamma Hot Laboratory for Fuels Technology Center, Argonne Naltional Laboratory	N/A	N/A	06/1958
P028	Presentaion to DOE Office of Nuclear Safety re: Alpha-Gamma Hot Cell Facility (AGHCF) Argonne Illinois Site	N/A	N/A	7/19/1993
P029	Engineering Test Plan for the Irradiation Testing of U3Si Dispersion Fuels: Reduced Enrichment Research and Test Reactor Program	R. F. Mattas	M4000-0004-SA-01	Rev. 1, 6/1980
P030	Radiological Acceptance Knowledge Report for Drums 728 through 737	Julia Whitworth	INEEL/EXT-02-00527	Rev. 0, 7/31/2002
P031	Alpha-Gamma Hot Cell Facility (AGHCF) Safety Analysis Report	A. B. Cohen, Manager, AGHCF	IPS-221-00-00	1/1998
P032	Procedure for Sorting Remote-Handled TRU Waste (30-Gallon Intermediate-Level Waste)	Alpha-Gamma-Hot Cell Facility Irradiation Performance Section Materials and Components Technology Division	AGHCF-SORT	Rev. 0, 1/7/1987
P034	AGHCF Operations Manual: 15.6 Procedure for Acid Cleaning a Zinc-Bromide Shielding Window	W. C. Kettman	IPS-2-06-00	Rev. 1, 4/16/1996
P035	AGHCF Operations Manual: 15.9 Procedure for Installing Vents in Pre-packaged 30-gal. TRU Waste Drums	Dennis A. Donahue, Supervisor, MCT-AGHCF	IPS-2-09-00	Rev. 0, 7/24/1990
P038	AGHCF Operations Manual: 15.13 Procedure for Installing a Modified D-301 Window Tank in a Type A Window Cavity	Dennis A. Donahue, Supervisor, AGHCF	IPS-2-13-01	Rev. 1, 12/7/1990

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P039	AGHCF Operations Manual: 15.15 Procedure for Installing Lead Shielding Around a Tank Insert in an AGHCF Window Cavity	D. A. Donahue	PS-2-15-00	Rev. 0, 2/1/1991
P040	AGHCF Operations Manual: 15.17 Procedure for Changing an In-line Filter in a Radioactive Gas Collective System	F. E. Savoie	IPS-2-17-00	Rev. 0, 11/8/1991
P047	AGHCF Operations Manual: 15.28 Painting a Drained Shielding Window Tank Cavity	W. C. Kettman	IPS-2-24-00	Rev. 0, 4/16/1996
P049	AK Documentation Report for INEEL-Stored Remote-Handled Transuranic Waste From Argonne National Laboratory-East	IT Corporation	ITC-DOC-828599-02	Rev. 0, 7/15/2003
P052	Test and Evaluation Document for the U.S. Department of Transportation Specification 7A Type A Packaging	N/A	DOE/RL-96-57	Rev. 0-F, Vol. 1 & Rev. 0-D, Vol. 2, 7/3/2002
P055	Waste Handling Procedures	C. L. Cheever, Manager, Waste Management Operations	N/A	9/18/1986
P056	Program Plan for Packaging and Certification of INEL Remote-Handled Stored TRU Waste	H. D. Welch	WM-PD-88-017	9/1988
P058	AGHCF Operations Manual: 5.0 Nuclear Materials Management	L. A. Neimark	IPS-2-00-00	Rev. 0 & 1, Various
P059	Alpha-Gamma Hot Cell Facility Operations Manual, Section VII - Examination Procedures	W. D. Jackson	M1002-0032-SE-00	2/20/1973
P060	AGHCF Operations Manual: 7.0 Standard Examination Procedures	N/A	IPS-2-00-00	Rev. 0, 6/20/1989
P061	Examination Techniques for High Burnup U-Pu Fuel Elements for Fast Breeder Reactors	B. J. Koprowski and F. L. Brown	ANL-ms-912A	6/30/1967
P062	AGHCF Operations Manual: 7.15 Preparation of Metallographic Specimens	N/A	IPS-2-00-00	Rev. 0, 6/20/1989
P063	SPM Procedure for High Gamma Transuranic Waste Handling from Alpha Gamma Hot Cell Facility (AGHCF) Bldg. 212, MSD, ANL-E	N/A	N/A	1/20/1975
P064	US Atomic Energy Commission AEC Manual: Chapter 0511 Radioactive Waste Management	N/A	AEC 0511-01	9/19/1973
P067	Procedure for High Gamma Level Transuranic Waste Handling At the Alpha-Gamma Hot Cell Facility, MSD, ANL-E	N/A	M1002-0047-SP-00	Rev. 0, 12/30/1974
P068	AGHCF Operations Manual: 7.14 Mounting Metallographic Specimens	N/A	IPS-2-00-00	Rev. 0; Rev. 1, Various
P069	AGHCF Operations Manual: 7.13 Fuel Element Sectioning	N/A	IPS-2-00-00	Rev. 0; Rev. 1, Various

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P070	AGHCF Operations Manual: 7.21 Specimen Density by Immersion	N/A	IPS-2-00-00	Rev. 0, 6/20/1989
P074	Plan for Decommissioning TREAT Loop Disassembly Facility (K-2 cell, building 200, M-wing)	W. D. Jackson, Irradiation Performance Group	M4000-0019-SA-00	6/12/1981
P1001	From Test Tube to Pilot Plant; A 50 Year History of the Chemical Technology Division at Argonne National Laboratory	Robert K. Steunenberg and Leslie Burris	ANL-00/16	August 2000
P1003	Building 200/205 Pneumatic Transfer Tube D&D Project Final Report	N/A	ANL/D&D98-5	1998
P1004	Irradiation and Evaluation of Mixed Oxide Fuel Performance at the Big Rock Point Reactor, Post-Irradiation History: Fuel and Fission Product Behavior	C. E. Johnson, et. al	Research Project 306	November 1987
P1005	Characterization of Low Burnup Rods (J-1) From the Big Rock Point Reactor	C. E. Johnson, et. al	Research Project 306	June 1980
P1009	Reference Information Concerning Some 1960s and 1970s Use of Building 200 MA-Wing Hot Cells and Surrounding Areas	James V. Beitz	N/A	12/23/2008
P1010	Progress in Nuclear Energy-Volume 5, Parts 5,6,7, Analytical Chemistry, A Large-Scale Facility for Chemical Research with Intensely Radioctive Materials	Donald C. Stewart	N/A	1963
P1011	Verification Survey of Building 200 Hot Cells	C. M. Sholeen	ANL/ESH-HP-96/02	3/1996
P1012	Characterization of Irradiated Zircaloys: Susceptibility to Stress Corrosion Cracking	F.L. Yaggee, R.F. Mattas, L.A. Neimark	EPRI NP-1557 - Research Project 1027	October 1980
P1013	RP1027 - Characterization of Irradiated Zircaloys	N/A	DOC-000012266	April 1978
P1014	Characterization of Irradiated Zircaloys: Susceptibility to Stress Corrosion Cracking	F.L. Yaggee, R.F. Mattas, L.A. Neimark	EPRI NP-1155 - Project 1027	September 1979
P1015	Fuel Performance Improvement Program - Semiannual Progress Report, October 1979 - March 1980	C.E. Crouthamel, M.D. Freshley	DOE/ET/34215-16, UC-78	Arpil 1980
P173	Transuranic Waste Baseline Inventory Report	N/A	DOE/CAO-95-1121	Rev. 2, 12/1995
P2040	Radioactive Scrap and Waste Facility Storage Liner System	N/A	SDD-225	Rev. 0, 06/16/2008
P229	Criteria for Packaging Transuranic Waste for Receipt at the Idaho National Engineering Laboratory Radioactive Waste Management Complex Offsite Generated Waste	N/A	IDO-10074	June 1978

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P230	EG&G Internal Technical Report, Inventory Analysis of Stored Transuranic (TRU) waste at the Radioactive Waste Management Complex (RWMC)	C.J. Barnard	WM-PD-90-003	Rev. 1, 8/31/1993
P232	Idaho National Engineering Laboratory Reusable Property, Recyclable Materials, and Waste Acceptance Criteria	N/A	DOE/ID-10381	Rev. 5, 10/10/1995
P3042	Analytical Laboratory Safety Analysis Report	N/A	W0660-0055-KH	Rev. 4, 04/06/2006
P3047	Description and Proposed Operation of the Fuel Cycle Facility for the Second Experimental Breeder Reactor (EBR-II)	J.C. Hesson, M.J. Feldman, L. Burris	ANL-6605	04/1963
P3049	Estimated Radiological Inventory Sent from Argonne National Laboratory-West to the Subsurface Disposal Area from 1952 through 1993	Michael L. Carboneau, James A. Vail	INEEL/EXT-02-01385	Rev, 0, 04/2004
P3051	A Survey of NRTS Waste Management Practices, Volume II	G. W. Hogg, et. al	ICP-1042-II	09/1971
P3077	ANL-W RCRA Part B Permit Application, General Information	N/A	W0001-0920-ES-04	09/1994
P3089	AK Summary Documentation RH TRU Repackaging	N/A	RPT-456	10/2007, 11/2007
P3115	Decontamination Cell Operation in CPP-659	N/A	TPR-7298	Revs. 7, 14, 06/04/2008, 06/16/2009
P3144	Hot Fuel Examination Facility/North, Facility Safety Report	R.M. Adams, D.C. Hampson, K.R. Ferguson, E. Hylsky	ANL-7959, LMFBR Fuel Handling (UC-79g)	02/1975
P3146	Hot Fuel Examination Facility/South, Final Safety Analysis Report	N/A	N/A	Rev. 0, 1/29/1982
P3178	Overview of Idaho National Laboratory's Hot Fuels Examination Facility - 2007 European Working Group Hot Laboratories and Remote Handling	Adam B. Robinson, R. Paul Lind, and Daniel M. Wachs	INL/CON-07-13203	09/2007
P3182	Packing Configurations for Repacked TRA and ANL-E RH-TRU Waste	Greg Hulet	EDF-8860	Rev. 0, 08/18/2008
P3186	HFEF Safety Analysis Report	N/A	DSA-003-HFEF	Rev. 3, 01/31/2008
P3187	FCF Safety Analysis Report	Idaho National Laboratory	F0000-0018-AK	Rev. 11, 10/26/2006
P320	Management Plan for Irradiation Performance Section Facilities, Energy Technology Division	H. Drucker	IPS-417-00-00	Rev. 0, 10/14/2002
P3657	Radioactive Scrap and Waste Facility – Liner Characterization Stage 2	B. Welty	PLN-3209	Rev. 0, 06/30/2009

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P3658	Procedure for Receiving of ANL-East Scrap Shipments and Transport Vehicles at Argonne-West	R. U. Curl; C. E. Holson; C. S. Abrams	W0225-0001-SA-00	02/1975
P3659	Procedure for Storage of ANL-E Scrap at the Radioactive Scrap and Waste Facility	L.C. Witbeck, H.W. Greening	W0225-0002-SA-00	Rev. 0, 04/1975
P372	Review of Zirconium-Zircaloy Pyrophoricity	Thurman D. Cooper	RHO-RE-ST-31 P	11/1984
P374	The RERTR Program: A Status Report	A. Travelli	ANL/TD/CP-97495	09/28/1999
P375	Progress of the RERTR Program in 1999*	A. Travelli	ANL/TD/CP-100128	10/3-8/1999
P378	Argonne National Laboratory-East Building 212 Energy Technology Division Alpha-Gamma Hot Cell Facility Preliminary Decontamination and Decommissioning Plan	T. S. Bray	HFS-003	Rev. 3, 10/08/2003
P380	Alpha-Gamma Hot Cell Facility (AGHCF) Safety Analysis Report	T. S. Bray	IPS-221-00-01	Rev. 1, 10/3/2001
P394	Work Plan for the Preparation of Fuel Rods for Return Shipment to Idaho	L. A. Neimark, ET-HFS	HFS-015-00-00	12/08/2004
P404	Movement of Material In-Cell	N/A	AGHCF-OPS-106	Rev. 0, 02/15/2001
P4054	Results of Testing Metallographic (Met) Mounts for the Presence of Sodium, Performed in the Alpha Gamma Hot Cell Facility (AGHCF)	D. Pancake	NOD-215-00-00	Rev. 0, 05/01/2010
P407	Criticality Control	N/A	AGHCF-OPS-109	Rev. 1, 04/05/2002
P4118	Probable Cause for Lot 2 Thermal Events	Thomas L. Clements, Jr.	EDF-9982	Rev. 0, 03/29/2011
P4119	Engineering Design File, Argon Repackaging Station (ARS) Process Description	March Sherick	EDF-10025	Rev. 0, Rev. 1, 05/23/2011; 06/08/2011
P4121	HFEF Repackaging at the FDPA	N/A	TPR-7857	Rev. 39, 01/18/2012
P583	Roadmap for SP-100 Fuel Pin Irradiation Testing	B. J. Makenas	WHC-SP-1083	02/1994
P584	U.S. Department of Energy - The Secretary's Annual Report to Congress 1992-1993	N/A	DOE/S-0111	1993
P585	Safety Issues at the DOE Test and Research Reactors	N/A	N/A	1988
P586	Report to Congress - The Liquid Metal Fast Breeder Reactor Program - Past, Present, and Future	N/A	RED-75-352	4/28/1975

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P587	Program Scoping Plan for the Fast Flux Test Facility, A Nuclear Science and Irradiation Services User Facility	N/A	PNNL-12245	Rev. 1, 08/1999
P588	An Overview of the Argonne National Laboratory Fast Critical Experiments 1963-1990	L. G. DeSarge	ANL-NT-175	04/2001
P590	Methodology to Determine Radioisotope Contents in RH TRU Waste Drums from Irradiated Fuel Examination at ANL-E	N/A	INEEL/EXT-02-00169	Rev. 0, 09/2003
P591	Engineering Design File, Estimation of Inventory of Significant Isotopes in RH-TRU Waste Drums 728 through 737	N/A	EDF-1979	Rev. 1, 03/19/2003
P592	Evaluation of Radionuclide Contents in RH TRU Waste Drums 728 through 737 Based on Reported Irradiated Fuel Examination	N/A	INEEL/EXT-02-00168	Rev. 0, 09/2003
P593	Engineering Design File, Quantifying Special Actinides in RH-TRU Waste from Irradiated Fuel Examined at ANL-E	N/A	EDF-2555	Rev. 0, 12/16/2002
P594	Engineering Design File - Results of ORIGEN2 Calculations for 14 EBR-II Experiment Fuel Elements that Generated Remote-Handled TRU Waste in Drums 728-737	N/A	EDF-2365	Rev. 0, 09/2002
P595	Engineering Design File - Verification and Validation of a Portion of ORIGEN2 Code Used for RH-TRU Radiological Characterization	N/A	EDF-1980	Rev. 0, 03/2002
P596	White Paper: Peer Review of Proposed Radiological Characterization Methodology for Remote-Handled Transuranic Waste Stored at the Idaho National Engineering and Environmental Laboratory	Pui Kuan and Raj Bhatt	INEEL/EXT-03-01182	09/2003
P599	The Defense Programs Origin of Transuranic Waste at Argonne National Laboratory-West	H. F. McFarlane	ANL-NT-192	11/2001
P603	Validation of the Rebus-3/RCT Methodologies for EBR-II Core-Follow Analysis	R. D. McKnight	CONF-920308-Vol. 2	N/A
P612	ILTSF Drum Retrieval Completion Report	Fairfield Service Group for ICP	ICP/EXT-05-00886, Project No. 23048	Rev. 0, January 2006
P613	Review of CY 2000 Retrieved RH-TRU Drums for Water	N/A	EDF-7045	Rev. 0, 6/13/2006
P616	Decontamination of Hot Cells K-1, K-3, M-1, M-3, and A-1, M-Wing, Building 200: Project Final Report Argonne National Laboratory-East	C.L. Cheever and R.W. Rose	ANL/D&D/TM-96/2	09/1996
P617	Criticality Hazards Control Statement for Special Facility MF200-K2	W. D. Jackson	DOC-000010146	10/11/1978
P618	Quality Assurance Plan for RAS Loop Disassembly Facility, D-200, M-Wing, K-1 Cell	L. A. Neimark	M3101-0025-SE-00	1/16/1974
P619	Report of the Preliminary Design Review of the RAS Loop Disassembly Facility, D-200, M-Wing, K-1 Cell	L.A. Neimark	M3101-0026-SF-00	3/13/1974
P620	Posttest Examination Plan for the L6 Experiment	W. F. Murphy	M4000-0012-SA-00	1/5/1981

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P621	Posttest Examination Plan for the L7 Experiment	W. F. Murphy	M3203-0008-SA-00	02/19/1979
P622	Addendum to Criticality Hazards Control Statement (Revision 7) Alpha-Gamma Hot Cell Facility (Special Facility FF-1)	W. D. Jackson	Bldg. 200 File H121A	4/28/1975
P623	Light-Water-Reactor Safety Research Program: Quarterly Progress Report; April-June 1975	Robert G. Sachs and Jack A. Kyger	ANL-75-58	9/26/1975
P624	Quarterly Progress Report for the Period Ending June 30, 1975; Transient Fuel Response and Fission-Product Release Program	L. R. Kelman	N/A	7/24/1975
P834	Chemical Engineering Division Fuel Cycle Programs Quarterly Progress Report for April - June 1979	M. J. Steindler, et. al	ANL-79-99	9/1980
P835	Chemical Engineering Division Annual Technical Report 1980	L. Burris, et. al	ANL-81-38	6/1981
P836	Light-Water-Reactor Safety Research Program: Quarterly Progress Report, January - March 1979	E. Gale Pewitt and Jack A. Kyger	ANL-79-43	8/1979
P837	Chemical Engineering Division Fuel Cycle Programs Quarterly Progress Report, July - September 1979	M. J. Steindler, et. al	ANL-79-109	1979
P839	Packing Configuration for Repacked ANL-E Canisters	N/A	EDF-10236	Rev. 0, 02/15/2012
U001	AGHCF Position Statement Regarding Defense Versus Non-Defense TRU Waste	N/A	N/A	4/7/2000
U002	Draft Proposal For: Alpha-Gamma Hot Cell Facility Waste Management Plan	N/A	N/A	N/A
U003	Argonne National Laboratory-West Mission Description	N/A	N/A	5/18/2001
U004	Remote-Handled Waste Content Codes Assessed	N/A	N/A	N/A
U005	Data and Process Knowledge Assessment for Remote-Handled Transuranic Waste Stored at the Radioactive Waste Management Complex - Preliminary Draft	C. R. Tyler	N/A	9/1994
U006	Summary of Purchasing Requisitions Received from T. Bray: Heavy Metals Usage Identified by IT That May Be in the RH-TRU Waste Stream	N/A	N/A	9/6/2001
U007	Material Control Sheets for A/G numbers 1 through 510 and Related Paperwork and Correspondence	N/A	N/A	N/A
U009	Transuranic Waste at Argonne National Laboratory-West: Meeting the Waste Acceptance Criteria for the TRU Repository	N/A	N/A	8/10/2001
U011	Project Process Flow Diagram: Fuel Elements from EBR-II and FFTF	N/A	N/A	N/A
U012	Basis for Assessment of the Environmental impact of the expanded Program at Argonne-East	N/A	N/A	N/A

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
U013	Waste Stream Fissile Content	N/A	N/A	3/23/1990
U014	1990 Batch Information for Drums 614-685, 728-735	N/A	N/A	N/A
U015	Data from Logbooks for RH TRU Drums 798 to 809 1995	N/A	N/A	Various
U016	Material Receipt and SPM Data for AG# 409 A,B	W. P. Kenney	N/A	5/14/1990
U017	Data from Logbooks for RH TRU Drums 778 to 797 1994, Book 8	N/A	N/A	N/A
U018	Data from Logbooks for RH TRU Drums 748 to 777 1993, Book 7	N/A	N/A	N/A
U019	Data from Logbooks for RH TRU Drums 728 to 737 1991-1992, Book 6	N/A	N/A	N/A
U020	Book 5, Venting of 30-Gallon TRU Waste Drums, 1990	Dennis Donahue, Facility Supervisor	N/A	07/29/1992
U021	Data from Logbooks for RH TRU Drums 687 to 727 1990, Book 4	N/A	N/A	N/A
U022	Data from Logbooks for RH TRU Drums 617 to 686 1985 to 1987, Book 3	N/A	N/A	N/A
U023	Fuel Shipments into AGHCF 1993-1995	N/A	N/A	7/8/1997
U024	Spreadsheet Entries for Building 212 Irradiated Fuel Elements	N/A	N/A	N/A
U025	In "IFR Charact 031" Folder	N/A	N/A	07/18/2001
U026	Analytical Results for EFL Castings: In "IFR Charact 036" Folder	N/A	N/A	07/18/2001
U028	Elements Sectioned in Area 1 Between Nov. 1971 and 24 October 1975	W. D. Jackson, AGHCF, Facility Supervisor	N/A	4/17/1975
U030	Liquid Waste Disposal Requisition	L. A. Neimark, MSD	N/A	12/13/1976
U036	Acceptable Knowledge Package for ANL RH-TRU Waste	Raymond T. Klann, et. al	N/A	N/A
U039	Report Selection Criteria	N/A	N/A	N/A
U040	Spreadsheet Correlating Number Quota with Quota Title and Number Project	N/A	N/A	7/31/2001
U041	Videotape Logs	Cheryl L. Schulz	N/A	Various
U042	Data from Logbooks for RH TRU Drums 1976 to 1982, Book 1	Various	N/A	Various

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
U043	Data from Logbooks for RH TRU Drums 1982 to 1985, Book 2	Various	N/A	Various
U045	Material Receipt and SPM Data for AG# 285	W. P. Kenney, D. Garcia	N/A	1/4/1985
U046	Material Receipt and SPM Data for AG# 377	W. Keeney and B. Brush	E 883	1/23/1989
U047	Material Receipt and SPM Data for AG# 394	D.R. Stallions and R. Underwood	E894	8/1/1989
U048	Material Receipt and SPM Data for AG# 378	W. Keeney and B. Brush	E884	1/23/1989
U049	Material Receipt and SPM Data for AG# 403 A,B	W. P. Keeney	E897	2/19/1990
U050	Material Receipt and SPM Data for AG# 421A, B, C, D, E	W. P. Keeney	E904	11/5/1990
U053	Material Receipt and SPM Data for AG# 425	J. C. Castal	E906	01/15/1991
U054	Material Receipt and SPM Data for AG# 426	Dennis Donahue	N/A	2/4/1991
U056	Material Receipt and SPM Data for AG# 427	W. P. Keeney	E-907	3/4/1991
U058	Material Receipt and SPM Data for AG# 428	H. W. Helenberg	N/A	5/29/1991
U059	Material Receipt and SPM Data for AG# 429	N/A	N/A	6/26/1991
U061	Material Receipt and SPM Data for AG# 430	N/A	N/A	6/26/91
U064	Conversion Factors	N/A	N/A	10/8/1980
U065	Hand written Notes: One titled "Decon & Repair Procedures for Cleaning and Repairing a Manipulator"	N/A	N/A	3/24/87
U066	Addendum Criticality Safety Training Quiz 7/17 or 7/21/75	N/A	N/A	7/21/1975
U067	Information on Fuel Elements T678 and T680	N/A	Various	Various
U068	Information on Fuel Elements DP-15, DP-17, DP-27, DP-32, DP-21, DP-24. DP-29, DP-45, and DP-61	N/A	N/A	Various
U069	Information on Fuel Elements UBA-15, UBB-23, UCA-37, UCD-45, UCE-47	N/A	N/A	Various
U070	Information on Fuel Elements WT-185 and WT-186	N/A	N/A	Various

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
U072	Material Safety Data Sheets (MSDS)--various metal and chemical compounds	N/A	N/A	Various
U073	Combustible Waste Contents (52 cans)	N/A	N/A	N/A
U074	Information on Fuel Element T61 of Subassembly X425	N/A	N/A	3/11/2002
U076	AGHCF Fissile Inventory Management System Database	N/A	N/A	Various
U079	Work Station No. 3 Grinding Loss Record	N/A	N/A	Various
U083	HEPA Filters	Adam Cohen	N/A	3/22/1996
U084	Report of Analytical Results	D. Bowers	MT-84 (4-94)	11/3/1995
U085	Procedure for Determining Fuel Pellet Density Using a Mercury Prinometer (handwritten)	N/A	N/A	Various
U1001	Building 200 Special Survey Reports	Various	N/A	Various
U1002	RH TRU RTR Prescreen For Repackaging/AK Worksheets and Videos	Various	N/A	Various
U1003	Arrgone Special Material Reciept and Transfer Documentation by A/G Number (A/G 1 - 535)	Various	N/A	1964-1997
U1004	Miscellaneous Packaging and Shipping Documentation for Containers 393, 394, 395, 396, 397, 398, 399, 400, 1002, 1003, 1004, 1005	N/A	N/A	Various
U1005	Health Physics Monthly Reports for Activities in Building 200	Various	N/A	1975-1981
U1008	Argonne National Laboratory Core Competency Areas	N/A	DOC-000011567	N/A
U3025	DRAFT - Facility Waste Descriptions Argonne – West	N/A	N/A	12/14/1973
U307	Report 105 - Custodian Batch Balance (Pure)	N/A	Report 105	12/01/2004
U330	West Valley Demonstration Project Transuranic Waste Defense Waste Determination	Kevin Peters	N/A	12/3/2005
U333	DVDs of Packaging for Cans in RH-TRU Drums in the AGHCF	NA	Various	NA, 1993 - 2002
U339	General Description of Building 200 Provided by Al Young	N/A	N/A	8/14/2000
U340	Draft of an Environmental Assessment for Increased Post Irradiation Examination Capabilites at ANL-E	N/A	N/A	DRAFT, N/A
U342	SAREF Safety Program Environmental Impact Assessment	N/A	N/A	Various
U343	RTR Quick Scan Data for 6 K-Cell Drums	N/A	NA	NA, Various

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
U3552	Compilation of MFC Liner Documents	Various	Various	Various
U3607	Excel Spreadsheet: Information for 108 MFC RH-TRU Liners	Reese Gannon	N/A	N/A
U3900	Collection of Retrievable Storage Canister Data, Irradiated Hi-Level Gamma Transuranic Scrap Material Forms (SPM-50), Argonne National Laboratory-East	Kent R. Zeich, Robert F. Gronemeyer, C.R. Rutkowski, E.J. Kasmar, H.J. Howard	Various	03/06/1975 thru 11/01/1984, not inclusive
U3901	Collection of Handwritten Retrievable Storage Canister Data Irradiated Hi-Level Gamma Transuranic Scrap Material Sheets and Associated Paperwork	Various	N/A	02/06/1975 thru 10/18/1991, not inclusive
U4025	RH TRU Radiological Characterization, Determination of Reportable Radionuclides - HFEF Lot 2	J. Holderness	INL-RH-110	Rev. 0, 10/25/2011
U4032	RH TRU Container Repackaging Datasheets for ANLE Canisters in Waste Stream ID-ANLE-S5000	N/A	FRM-880	Various
U4043	INL HFEF RH TRU Radiological Characterization, ORIGEN2.2 Analysis of HFEF Lot 2 High Gamma TRU Waste	J. Holderness	INL-RH-109	Rev. 0, 10/25/2011
U4044	INL HFEF RH TRU Radiological Characterization, HFEF Lot 2 Debris Waste Scaling Factors	J. Holderness	INL-RH-115	Rev. 0, 11/25/2011
U4045	INL HFEF RH TRU Radiological Characterization, HFEF Lot 2 Debris Cs-137 DTC Correlation	J. Holderness	INL-RH-116	Rev. 0, 10/25/2011
U4046	INL HFEF RH TRU Radiological Characterization, HFEF Lot 2 Debris Uncertainty	J. Holderness	INL-RH-117	Rev. 0, 10/25/2011
U4047	INL HFEF RH TRU Radiological Characterization, DTC Spreadsheet HFEF Lot 2 Debris	J. Holderness	INL-RH-118	Revisions 0, 1, and 2, 10/25/2011; 01/18/2011; 03/20/2012
U4048	INL HFEF RH TRU Radiological Characterization, HFEF Lot 2 Fuel Segment Mass Input Check	J. Holderness	INL-RH-108	Rev. 0, 10/25/2011
U4049-1	CCP Calc Package: INL-RH-113-1, HFEF Lot 2 High Gamma TRU Uncertainty - Canister 1	Jim Holderness	INLRH-113-1	Rev. 0, 10/26/2011, 6/27/2012
U4049-10	CCP Calc Package: INL-RH-113-10, Uncertainty Analysis for HFEF Lot 2 - Canister 10	Jim Holderness	INL-RH-113-10	Revs. 1, 0, 03/01/2012; 10/26/2011

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
U4049-11	CCP Calc Package: INL-RH-113-11, Uncertainty Analysis for HFEF Lot 2 - Canister 11	Jim Holderness	INL-RH-113-11	Revs. 1 and 0, 03/01/2012 and 10/26/2011
U4049-12	CCP Calc Package: INL-RH-113-12, Uncertainty Analysis for HFEF Lot 2 - Canister 12	Jim Holderness	INL-RH-113-12	Rev. 0, 10/26/2011
U4049-13	CCP Calc Package: INL-RH-113-6, Uncertainty Analysis for HFEF Lot 2 - Canister 6	Jim Holderness	INL-RH-113-13	Rev. 0, 10/26/2011
U4049-14	CCP Calc Package: INL-RH-113-14, Uncertainty Analysis for HFEF Lot 2 - Canister 14	Jim Holderness	INL-RH-113-14	Rev. 0, 10/26/2011
U4049-15	CCP Calc Package: INL-RH-113-15, Uncertainty Analysis for HFEF Lot 2 - Canister 15	Jim Holderness	INL-RH-113-15	Revs. 1, 0, 03/01/2012; 10/26/2011
U4049-16	CCP Calc Package: INL-RH-113-16, Uncertainty Analysis for HFEF Lot 2 - Canister 16	Jim Holderness	INL-RH-113-16	Rev. 0, 10/26/2011
U4049-17	CCP Calc Package: INL-RH-113-17, Uncertainty Analysis for HFEF Lot 2 - Canister 17	Jim Holderness	INL-RH-113-17	Rev. 0, 10/26/2011
U4049-18	CCP Calc Package: INL-RH-113-18, Uncertainty Analysis for HFEF Lot 2 - Canister 18	Jim Holderness	INL-RH-113-18	Revision 0, 10/26/2011
U4049-19	CCP Calc Package: INL-RH-113-19, Uncertainty Analysis for HFEF Lot 2 - Canister 19	Jim Holderness	INL-RH-113-19	Revision 0, 10/26/2011
U4049-2	CCP Calc Package: INL-RH-113-2, Uncertainty Analysis for HFEF Lot 2 - Canister 2	Jim Holderness	INL-RH-113-2	Revs. 1, 0, 03/01/2012; 10/26/2011
U4049-20	CCP Calc Package: INL-RH-113-20, Uncertainty Analysis for HFEF Lot 2 - Canister 20	Jim Holderness	INL-RH-113-20	Rev. 0, 10/26/2011
U4049-21	CCP Calc Package: INL-RH-113-21, Uncertainty Analysis for HFEF Lot 2 - Canister 21	Jim Holderness	INL-RH-113-21	Rev. 0, 10/26/2011
U4049-22	CCP Calc Package: INL-RH-113-22, Uncertainty Analysis for HFEF Lot 2 - Canister 22	Jim Holderness	INL-RH-113-22	Rev. 0, 10/26/2011
U4049-23	CCP Calc Package: INL-RH-113-23, Uncertainty Analysis for HFEF Lot 2 - Canister 23	Jim Holderness	INL-RH-113-23	Rev. 0, 10/26/2011
U4049-24	CCP Calc Package: INL-RH-113-24, Uncertainty Analysis for HFEF Lot 2 - Canister 24	Jim Holderness	INL-RH-113-24	Rev. 0, 10/26/2011
U4049-25	CCP Calc Package: INL-RH-113-25, Uncertainty Analysis for HFEF Lot 2 - Canister 25	Jim Holderness	INL-RH-113-25	Rev. 0, 10/26/2011
U4049-26	CCP Calc Package: INL-RH-113-26, Uncertainty Analysis for HFEF Lot 2 - Canister 26	Jim Holderness	INL-RH-113-26	Rev. 0, 10/27/2011
U4049-27	CCP Calc Package: INL-RH-113-27, Uncertainty Analysis for HFEF Lot 2 - Canister 27	Jim Holderness	INL-RH-113-27	Rev. 0, 10/27/2011
U4049-28	CCP Calc Package: INL-RH-113-28, Uncertainty Analysis for HFEF Lot 2 - Canister 28	Jim Holderness	INL-RH-113-28	Rev. 0, 10/27/2011

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
U4049-29	CCP Calc Package: INL-RH-113-29, Uncertainty Analysis for HFEF Lot 2 - Canister 29	Jim Holdemess	INL-RH-113-29	Rev. 0, 10/27/2011
U4049-3	CCP Calc Package: INL-RH-113-3, Uncertainty Analysis for HFEF Lot 2 - Canister 3	Jim Holdemess	INL-RH-113-3	Rev. 0, 10/26/2011
U4049-30	CCP Calc Package: INL-RH-113-30, Uncertainty Analysis for HFEF Lot 2 - Canister 30	Jim Holdemess	INL-RH-113-30	Rev. 0, 10/27/2011
U4049-31	CCP Calc Package: INL-RH-113-31, Uncertainty Analysis for HFEF Lot 2 - Canister 31	Jim Holdemess	INL-RH-113-31	Rev. 0, 10/27/2011
U4049-32	CCP Calc Package: INL-RH-113-32, Uncertainty Analysis for HFEF Lot 2 - Canister 32	Jim Holdemess	INL-RH-133-32	Rev. 0, 10/27/2011
U4049-33	CCP Calc Package: INL-RH-113-33, Uncertainty Analysis for HFEF Lot 2 - Canister 33	Jim Holdemess	INL-RH-113-33	Rev. 0, 10/27/2011
U4049-34	CCP Calc Package: INL-RH-113-34, Uncertainty Analysis for HFEF Lot 2 - Canister 34	Jim Holdemess	INL-RH-113-34	Rev. 0, 10/27/2011
U4049-35	CCP Calc Package: INL-RH-113-35, Uncertainty Analysis for HFEF Lot 2 - Canister 35	Jim Holdemess	INL-RH-113-35	Rev. 0, 10/27/2011
U4049-36	CCP Calc Package: INL-RH-113-36, Uncertainty Analysis for HFEF Lot 2 - Canister 36	Jim Holdemess	INL-RH-113-36	Rev. 0, 10/27/2011
U4049-37	CCP Calc Package: INL-RH-113-37, Uncertainty Analysis for HFEF Lot 2 - Canister 37	Jim Holdemess	INL-RH-113-37	Rev. 0, 10/27/2011
U4049-38	CCP Calc Package: INL-RH-113-38, Uncertainty Analysis for HFEF Lot 2 - Canister 38	Jim Holdemess	INL-RH-113-38	Rev. 0, 10/27/2011
U4049-39	CCP Calc Package: INL-RH-113-39, Uncertainty Analysis for HFEF Lot 2 - Canister 39	Jim Holdemess	INL-RH-113-39	Rev. 0, 10/27/2011
U4049-40	CCP Calc Package: INL-RH-113-40, Uncertainty Analysis for HFEF Lot 2 - Canister 40	Jim Holdemess	INL-RH-113-40	Revs. 1, 0, 03/01/2012; 10/27/2011
U4049-41	CCP Calc Package: INL-RH-113-41, Uncertainty Analysis for HFEF Lot 2 - Canister 41	Jim Holdemess	INL-RH-113-41	Revs. 1, 0, 03/01/2012; 10/27/2011
U4049-42	CCP Calc Package: INL-RH-113-42, Uncertainty Analysis for HFEF Lot 2 - Canister 42	Jim Holdemess	INL-RH-113-42	Rev. 0, 10/27/2011
U4049-43	CCP Calc Package: INL-RH-113-43, Uncertainty Analysis for HFEF Lot 2 - Canister 43	Jim Holdemess	INL-RH-113-43	Rev. 0, 10/27/2011
U4049-44	CCP Calc Package: INL-RH-113-44, Uncertainty Analysis for HFEF Lot 2 - Canister 44	Jim Holdemess	INL-RH-113-44	Rev. 0, 10/27/2011
U4049-45	CCP Calc Package: INL-RH-113-45, Uncertainty Analysis for HFEF Lot 2 - Canister 45	Jim Holdemess	INL-RH-113-45	Rev. 0, 10/27/2011
U4049-46	CCP Calc Package: INL-RH-113-46, Uncertainty Analysis for HFEF Lot 2 - Canister 46	Jim Holdemess	INL-RH-113-46	Rev. 0, 10/27/2011
U4049-47	CCP Calc Package: INL-RH-113-47, Uncertainty Analysis for HFEF Lot 2 - Canister 47	Jim Holdemess	INL-RH-113-47	Revs. 1, 0, 03/01/2012; 10/27/2011

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
U4049-48	CCP Calc Package: INL-RH-113-48, Uncertainty Analysis for HFEF Lot 2 - Canister 48	Jim Holderness	INL-RH-113-48	Rev. 0, 10/27/2011
U4049-49	CCP Calc Package: INL-RH-113-49, Uncertainty Analysis for HFEF Lot 2 - Canister 49	Jim Holderness	INL-RH-113-49	Rev. 0, 10/27/2011
U4049-5	CCP Calc Package: INL-RH-113-5, Uncertainty Analysis for HFEF Lot 2 - Canister 5	Jim Holderness	INL-RH-113-5	Rev. 0, 10/26/2011
U4049-6	CCP Calc Package: INL-RH-113-6, Uncertainty Analysis for HFEF Lot 2 - Canister 6	J. Holderness	INL-RH-113-6	Rev. 0, 10/26/2011
U4049-7	CCP Calc Package: INL-RH-113-7, Uncertainty Analysis for HFEF Lot 2 - Canister 7	Jim Holderness	INL-RH-113-7	Rev. 0, 10/26/2011
U4049-8	CCP Calc Package: INL-RH-113-8, Uncertainty Analysis for HFEF Lot 2 - Canister 8	Jim Holderness	INL-RH-113-8	Rev. 0, 10/26/2011
U4049-9	CCP Calc Package: INL-RH-113-9, Uncertainty Analysis for HFEF Lot 2 - Canister 9	Jim Holderness	INL-RH-113-9	Rev. 0, 10/26/2011
U4051	RH TRU Radiological Characterization, HFEF Lot 2 High Gamma TRU Waste Scaling Factors	J. Holderness	INL-RH-112	Rev. 0, 2, 10/25/2011, 6/28/2012
U4052	RH TRU Radiological Characterization, DTC Spreadsheet HFEF Lot 2 High Gamma TRU Waste	J. Holderness; Jene Vance	INL-RH-114	Revisions 0, 1, 2, and 4, 10/25/2011; 02/20/2012; 03/20/2012; 7/27/2012
U4053	RH TRU Radiological Characterization, DTC Values for Met Mounts and Fines	J. Holderness	INL-RH-119	Rev. 0, 11/06/2011
U4054	RH TRU Radiological Characterization, DTC Values for Fuel Segments in Centered Containers	J. Holderness	INL-RH-120	Rev. 0, 11/06/2011
U4056	Water Immersion Testing for Qualifying Lot 2 Fuel Pieces for Disposal at WIPP	N/A	N/A	12/05/2011
U4057	RH-TRU Processing of Lot 2 Waste and Application of D001 and/or D003 Hazardous Waste Numbers	N/A	N/A	08/03/2011
U4058	Whatman Schleicher & Schuell Filter Paper Information (3)	N/A	N/A	N/A
U4059	Evaluation of Surrogate Passivated and Nonpassivated Fuel Pin Samples	N/A	N/A	1992

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

[a] From Acceptable Knowledge Souce Document Summaries (Attachments 3)

[b] Or publisher's document number if available

[c] In the case where a AK Summary Report has been revised based on information in Attachment 11- Acceptable Knowledge Source Document Discrepancy Resolution form, identify the tracking number.

Acceptable Knowledge Expert: Travis Smith Date: 11/26/2012

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Attachment 4 - Acceptable Knowledge Source Document Information List

Site(s): Idaho National Laboratory

Waste Stream Number: IN-ID-BTO-030

Waste Stream Description: Solidified Waste Sludge from Bettis Atomic Power Lab

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
C031	Letter to Joe Nagel; Re: TCLP Testing of Fuel Core Material	R.A. Guida	2802940	1/5/1994
C116	Letter to G. McClelland, Re: Transmittal of NRBK-41 Cask Drawings	R.T. Esper	WAPS-DLO(MEL)E-1521	1/15/1986
C117	Letter to H.F. Hoffman; Re: Fission Gas Analyzer Historical Data	C.W. Singleton	NRFE-P-1813	6/6/1991
C122	DOE Memorandum to S. Ahrends and P. Hamric, Re: Disposal of TRU Waste from Naval Reactors Facilities	G.K. Oertel	NA	11/15/1983
C123	Letter to J.D. Wells, Re: A Quality Assurance Plan for the Packaging of Transuranic Waste for Shipment to the Idaho National Engineering Laboratory	R.T. Esper	WAPD-DLO(E)F-1802	3/13/1987
C125	Letter to K.M. Tomko; Re: Near Cell Filter Hazardous Waste Evaluation	R.G. Pfeifer	WAPD-DLO(MEL)FE-437	6/6/1990
C126	Letter to MEL Waste File; Re: Hazardous Evaluation of APAC Solutions and Kalling Etch	Donna DiRenna	WAPD-DLO(MEL)E-2900	2/25/1994
C127	Letter to Manager Pittsburgh Naval Reactors Office, Re: Shipment of Special Nuclear Materials: PZA-CZC-3	E.F. Hlad	WAPD-DLO(E)F-2069	12/14/1987
C128	Letter to W.R. Maxwell and K.D. Richardson; Re: Use of Alternative Cleaning Solvent for Test Specimens	B.F. Kammenzind	WAPD-MT(FZCT)-1215	4/18/1990
C129	Letter to M.A. DiBattista and J.F. Ruch, Re: Review of Fryquel 150 Oil	T.E. Reed	WAPD-RC/E(EE)-292	5/9/1988
C130	Letter to J.W. Frazier, NRF; Re: DOT Hazard Categorization of Zircaloy Swarf	T.L. Cox	B-NRF(E)-073	9/12/2007
C132	Idaho Nuclear Infrastructure, Web Page: www.nuclear.energy.gov	NA	NA	February 2010
C133	About INL Facilities: Materials and Fuels Complex, Web Page:www.deq.state.id.us/inl_oversite/about/facilities/anl-w.cfm	Idaho Department of Environmental Quality	NA	6/22/2010
C134	Letter to File, Re: Central Cell Bank Process History	R. M. Ruzewski	WAPD-DLO(MEL)E-2828	12/30/1993

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
C200	Letter to R.T. Esper, Re: RWMIS 1988 Year End Data Review	D.L. Litteer	NA	1/17/1989
C201	Letter to M.A. DiBattista, Re: Comparison of Measured and Calculated Radiation Levels for MEL Sludge	T.N. Pitcairn	WAPD-OP(SH)SA-166	4/25/1989
C202	Letter to M.A. DiBattista, Re: Curie Content Determination to Support Development Laboratory Operations	W. L. Skultety	WAPD-MT(CER)-1576	4/19/1989
C203	Grams of TRU Nuclides Curie Gram Conversions IN 41-20, 23, 33, 42, 67, 79, 83, 92, 94, and 93 Containers	D.E. Overs	TWR 17772	4/2/1988
C204	Letter to J. Sherfinski, Re: Data on the Fuel Sludge Cans in the MEL	R.T. Esper	WAPD-DLO(MEL)E-1184	5/23/1984
C205	Letter to G.C. McClelland, Re: Data Sheets for the first Shipment of Transuranic Sludge for Storage at the Radioactive Waste Management Complex (RWMC).	D.E. Overs	WAPD-DLO(MEL)E-1698	6/8/1987
C206	Letter to S.D. Harkness, Re: Request for Material Description and History of Thirteen Sludge Containers	M.A. DiBattista	WAPD-DLO(MEL)O-860	3/17/1989
C207	Letter to ANL, Re: Shipping Information	Westinghouse Electric Corporation, BAPL	NA	12/12/1988
C208	Letter to Manager, Pittsburgh Naval Reactor Office, Re: Advance Notification PZA-CZC-1	E.F. Hlad	WAPD-DLO(E)F-1857	5/1/1987
C209	Letter to Manager, Pittsburgh Naval Reactors Office, Re: Advance Notification: PZA-CZC-2	E.F. Hlad	WAPD-DLO(E)F-1915	7/2/1987
C210	Letter to Manager, Pittsburgh Naval Reactors Office, Re: Advance Notification:PZA-CZC-4	E.F. Hlad	WAPD-DLO(E)F-3010	1/29/1988
C211	Letter to T.E. Reed; Re: Disposition of Waste Generated from Process	W.R. Maxwell	WAPD-DLO(MEL)O-623	2/15/1988
C212	Letter to D.J. Miller; Re: Chemical Analysis of Hysol Material in Support of MEL Criticality Zone Limits	R.F. Beyer	WAPD-LOS(NS)-409	5/23/1980
C214	Letter to Manager, Pittsburgh Naval Reactors Office, Re: Certification of the Bettis Remote Handled Transuranic Waste to the Waste Isolation Pilot Plant Criteria	C.T. Lim	WAPD-DLO(E)F-3119	5/27/1988
C215	Letter to G.C. McClelland, Re: Shipment of Transuranic Sludge from Bettis for Burial at the Radioactive Waste Management Complex in Idaho	R.T. Esper	WAPS-DLO(E)F-1513	3/13/1986
C301	Fax to Raj Bhatt, Re: Response from Dick Esper of BETTIS concerning the characterization of IDC-30 waste	Dale Wells	NA	02/13/01

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
C302	Letter to J.N. Davis, Re: Waste Profile Statement for a Bettis Atomic Power Laboratory Remote Handled Transuranic Waste Stream	B.J Mikkola	NA	10/07/88
C303	Telecon text to ANL and EG&G personnel Re: Discussion Regarding Feasibility of Shipping Radioactive Sludge Containing Transuranic material in IN Containers for Burial at the Radioactive Waste Management Complex (RWMC) in Idaho	R.T. Esper	WAPD-DLO(MEL)E-1501T	11/05/85
C305	Letter to D.L. Litteer Re: Bettis Review of the Radioactive Waste Information System Solid CY 1988 Data	M.A. DiBattista	WAPD-DLO(MEL)0-890	04/28/89
C307	Email to DJB Re: RH Mixed Waste	J. Dale Wells	NA	10/15/1992
C309	Fax to Dale Wells Re: RH Mixed Waste and TRU Waste Profile Sheet for Bettis Content Code 30 Approval	NA	NA	02/08/01
C310	Letter to M.E. Vaughn and J.D. Wells Re: Waste Profile for Transuranic Waste Shipped from Bettis to the Idaho National Engineering Laboratory	M.A. DiBattista	WAPD-DLO(MEL)0-900	04/28/89
C311	Letter to C.J. Emert RE Respirable Fines	K.P. Lange	KPL-31-83	03/15/83
C312	Waste Determination & Disposition Form (WDDF)	Mark Sherick and Jeff Paynter	WDDF number RWMC08003	07/21/08
DR005	Attachment 11, Acceptable Knowledge Document Discrepancy Resolution (EPA Hazardous Waste Numbers)	James Luginbyhl	DR005	1/12/2011
DR006	Attachment 11, Acceptable Knowledge Document Discrepancy Resolution (Containersa User for Solidification)	James Luginbyhl	DR006	12/21/2010
P016	The NRF Environmental Monitoring Program	NA	NRF 2455	Rev. 5, 12/1/2006
P025	Mission Need Statement: RH TRU to WIPP Project	Douglas Parker	DOE/NE-ID-11114	8/2004
P100	The United States Naval Nuclear Propulsion Program	Naval Reactors	NA	7/31/1998
P102	Cultural Resource Assessment: Bettis Atomic Power Laboratory, Allegheny County, Pennsylvania	Christine E. Davis	NA	May 2002
P103	The Design and Construction of the Enlarged Westinghouse Hot Laboratory	A.L. Maharam	WAPD-T-442	3/1/1957
P104	Light Water Breeder Reactor (LWBR)	NA	BET-10-U	1975
P105	Nuclear Material Balance Area 4 Accountability Manual	M.A. DiBattista	WAPD-NMM-1004	Issue II Rev. 5, May 1989
P106	Nuclear Safety Analysis for the Materials Evaluation Laboratory, RM-SA-103	M.L. Baker	B-NEO-(F)-34	Rev. 7, 7/6/2005

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P107	Preparation of Metallographic Specimens	R. G. Pfeifer	MEL(T)1-2	Rev. 1, 1/15/1985
P108	Pressure Mounting of Fuel Rod Specimens	Ronald Minkus	MELT 2-3	Original, 3/3/1980
P109	NRF 1662.20 Descale Solutions and Operations	NA	MEL(T) 3-4 NRF1662.20	Rev. 9, 6/30/1973
P110	Operation of Lathe to Part Fuel Rods	W.S. Roesener	MEL(T)2-14	Original, 4/1/1981
P112	Sectioning Specimens on the Slow Speed Abrasive Cut Off Wheel	M.J. Hill	MEL(T) 2-6	Rev. 11, 4/16/1986
P113	Sectioning Specimens on the Precision Cut-Off Wheel	W. Vitvitsky	MEL (T) 3-6	Rev. 6, 6/18/1987
P114	Quality Assurance Packaging Procedure	R.H. Cosgrove	WAPD-DLO(E)F-1043	Addendum 1, Rev. 7, 1/18/1985
P119	Remote Milling of Irradiated Punch and Die Sections	K.L. Rupp	HLP No. 35	3/17/1964
P120	Procedure for Decontaminating Items in the 10KW Ultrasonic Cleaner	L.M. Behr	HLP No 29	Rev. 1, 6/13/1967
P121	APAC Decrudding of Irradiated Specimens	V.J. Figliolia	HLP #22	Rev. 3, 7/31/1974
P123	Dye Penetrant Examination of Irradiated Specimens	V.J. Figliolia	HLP #27	Original, 10/29/1973
P124	Fluorescent Penetrant Inspection	M. Phillips	MEL(T)3-10	Rev. 2, 8/23/1990
P125	In-Cell Waste Segregation Plan and Guidelines	B. Maxwell	MEL(T) 8-13	Rev. 0, 9/22/1988
P126	Curie and Transuranic Content Determination for Radioactive Waste Packages	M. Bobuk	RM-AG-001	Rev. 3, 3/23/1988
P130	Quality Assurance Packaging Study Guide	C.A. DiVecchio	NA	Dec. 2004
P131	BRASS Study Guide	C.A. DiVecchio	NA	Dec. 2004
P132	MEL(T)2-16, Solidification of radioactively Contaminated Liquids within Containments	M.J. Hill	MEL(T)2-16	Rev. 3, 4/16/1986
P133	MEL Scrap Fuel Program	D.E. Overs	MEL(G)-2-7	Rev. 2, 2/16/1987
P136	Replication of Non-irradiated and Irradiated Specimens	R.E. Bright	MEL(T) 3-12	0, 6/14/85
P138	Results of Testing Metallographic (Met) Mounts for the Presence of Sodium, Performed in the Alpha Gamma hot Cell Facility (AGHCF) at Argonne National Laboratory	D. Pancake	NOD-215-00-00	0, 5/1/2010
P201	Memo to M.J. Holzemer with waste profile attachment Re: TRU Waste Profile Sheet for Bettis Content Code 30 Approval	J. D Wells	JDW-23-88	04/06/88

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P204	Off-Site Shipping Cask- NRBK-41	K. H. Alberts and M. Franklin	HFEF-OI-6208	3, 06/29/06
P205	Use of Westinghouse NRBK-41 Shipping Cask at HFEF/N (HFEF Process Work Sheet)	P.L. Coomer	NA	04/21/87
P206	Drilling and Loading of BETTIS Sludge Waste Containers at HFEF/N Process Work Sheet	P.L. Coomer	PWS No. 2-2118	02/09/1988
U200	ANL-W Radioactive Waste Disposal Request Certification Statement (Summary)	Dwight Dudley	AW88-025	5/8/2009
U201	News Release: Bettis Atomic Power Laboratory Celebrates 50th Anniversary	B.J. Schramm	BET-3-U	NA
U209	Phase I of the Metallographic Process for the East Cell Bank	NA	NA	NA
U211	Bettis Irradiation Test Planning Guide	Irradiation Material Technology	WAPD-MT(I)-244	3, August 1989
U212	Operation Record of Met Cell Equivalent Gram Loss	NA	Book #2 and #3	3/3/82 through 11/11/86
U213	Grinding Equivalent Gram Loss Logbook No. 1	NA	Book #1	2/77 through 2/81
U214	Book #1 Ultrasonic Cleaning Logbook	Various	Book 1	3/12/1975
U216	Book #1 Fuel Crush & Etching Data Records Logbook	Various	Book #1	3/77 through 8/79
U217	Logbook COW #3, Old Slow Speed COW, Waste Disposal Log Cell 12	NA	COW #3	3/17/1980
U220	Technical Work Record No. 70084 - Depletion Reviews	Terry Carper	TWR 70084	May 1995
U221	Solidification Procedures	R.E. Bright	MEL 116 through MEL 143	4/14/1987 to 7/13/1987
U223	Technical Work Record No. Z02397 - MEL TRU Nuclide Distribution	M. J. Bobuk	TWR No. Z02397	9/27/2005
U224	Flow Charts for MEL Waste	NA	NA	NA, NA
U225	Route Card M-894	J.J. Korinko	M-894	8/13/1982
U229	Route Card M-823, Metallographic Exam of Three Specimens	P.H. Kreyns	M-823	4/15/1981
U232	Route Card F-655, Preparation of Special Fuel Transport/Crushing	D.A. Mertz	F-655	10/11/78
U236	COW Logbook #2, Waste Disposal Log	NA	COW #2	1/73 through 11/79
U237	Logbook, COW (Diamond) Waste Disposal Log, Cell 12, Start 2/25/1982	NA	NA	2/82 through 3/85

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
U238	MEL Processes	NA	NA	NA
U239	Interview with D. Chapas - Operations - Chemicals - Pre-NAC	NA	NA	NA
U243	Miscellaneous Maps of Bettis, MEL Floor Plans and Photos	NA	NA	NA
U244	Actions to Resolve I-131 Related to MEL	B.J. Schramm	WAPD-DLO(MEL)-1260	11/24/1982
U249	Hazardous Material in First Sludge Shipment	D.E. Overs	TWR 17272	6/3/87
U255	Trouble Record Response, Evaluation of Radiation Effects on Organics/Plastics in Containers in MEL Cell Banks	P.K. Sadhir	TRR-ECF(FP291)FPO1036-TR1	NA
U256	Bettis Experimental Facilities, Bettis Hot Laboratory, November 1978	NA	NA	11/1978
U264	Personnel Interview with Ron Minkus and Ron Pfeifer	J.W. Luginbyhl	NA	3/10/2010
U265	Miscellaneous MSDSs	Dow Corning	NA	1/3/2006
U266	Bettis Atomic Power Laboratory, EPA Region 3 Baseline Corrective Action Facility	NA	NA	12/30/2008
U275	Radiological Data from INL-W Shipping Documents (U200)	J. W. Luginbyhl	NA	6/18/2010
U276	Material Weights and Volume Percentages from P201	J.W. Luginbyhl	NA	6/22/2010
U301	Notes on a Conference Call and Fax to Joe Manijak Re: Two Shipments of IN Waste Containers	Roy Grant	NA	02/03/05
U302	Telecon information about Bettis waste to ANL-W	Rich Esper et al	NA	2/25/1986
U303	ANL-W Radioactive Waste Disposal Request Certification Statement, Transuranic Waste, HFEF Waste Description	NA	NA	04/08/88
U304	ANL-W Radioactive Waste Disposal Request Certification Statement, Transuranic Waste, HFEF Waste Description	NA	NA	05/25/88
U305	Certified Waste Data Base System Transuranic Waste Data Base Input Form	M.J. Hill and D.E. Overs	NA	6/10/87

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

[a] From Acceptable Knowledge Souce Document Summaries (Attachments 3)

[b] Or publisher's document number if available

[c] In the case where a AK Summary Report has been revised based on information in Attachment 11- Acceptable Knowledge Source Document Discrepancy Resolution form, identify the tracking number.

Acceptable Knowledge Expert: James Lugenbyhl James Lugenbyhl Date: 7/24/2012
Print/Sign

Attachment 5 – Hazardous Constituents

Site(s): AMWTP – Argonne CH Waste

Waste Stream Description: Mixed Heterogeneous Debris from Argonne Facility Maintenance and Laboratory Operations

Waste Stream Number: ID-AECHDM										
Compound	Suspected Present? (Y/N)	Suspected Concen-tration (ppm)	Used as a solvent? [a] (Y/N/NA)	Associated with packaging? (Y/N/NA)	TC constituent concentration less than regulatory level? [a] (Y/N/NA)	TC Hazardous Waste Number [a]	F-Listed Hazardous Waste Number [a]	U- or P-Listed Hazardous Waste Number [a]	EPA Hazardous Waste Number Assigned (N/Specify HWN)	State Hazardous Waste Number [b]
Metal Compounds (CCP-PO-001 – Table C3-8 & 40 CFR Part 261) [i]										
Arsenic	Y	Unknown	N/A	N/A	N	D004	N/A	N/A	D004	N/A
Barium	Y	Unknown	N/A	N/A	N	D005	N/A	N/A	D005	N/A
Beryllium	Y	**Note 1**	N/A	N/A	N/A	N/A	N/A	P015	N	N/A
Cadmium	Y	Unknown	N/A	N/A	N	D006	N/A	N/A	D006	N/A
Chromium	Y	Unknown	N/A	N/A	N	D007	N/A	N/A	D007	N/A
Lead	Y	Unknown	N/A	N/A	N	D008	N/A	N/A	D008	N/A
Mercury	Y	Unknown	N/A	N/A	N	D009	N/A	U151	D009	N/A
Selenium	Y	Unknown	N/A	N/A	N	D010	N/A	N/A	D010	N/A
Silver	Y	Unknown	N/A	N/A	N	D011	N/A	N/A	D011	N/A
Volatile Organic Compounds (CCP-PO-001 – Tables C3-2 and C3-4 & 40 CFR Part 261)										
1,1,1-Trichloroethane	Y	Unknown	Y	N	N/A	N/A	F001/F002	U226	F002	N/A
1,1,2,2-Tetrachloroethane	N	N/A	N/A	N/A	N/A	N/A	N/A	U209	N	N/A
1,1,2-Trichloro-1,2,2-trifluoroethane	Y	Unknown	Y	N	N/A	N/A	F001/F002	N/A	F002	N/A
1,1,2-Trichloroethane	N	N/A	N/A	N/A	N/A	N/A	F002	U227 [k]	N	N/A
1,1-Dichloroethane	N	N/A	N/A	N/A	N/A	N/A	N/A	U076 [k]	N	N/A
1,1-Dichloroethylene	Y	Unknown	Y	N		D029	N/A	U078	D029	N/A
1,2-Dichlorobenzene [d]	N	N/A	N/A	N/A	N/A	N/A	F002	U070	N	N/A
1,2-Dichloroethane	Y	Unknown	Y	N		D028	N/A	U077 [k]	D028	N/A
1,4-Dichlorobenzene [d]	Y	Unknown	Y	N		D027	N/A	U072	D027	N/A
2-Ethoxyethanol	N	N/A	N/A	N/A	N/A	N/A	F005	U359 [k]	N	N/A
2-Nitropropane	N	N/A	N/A	N/A	N/A	N/A	F005	U171 [k]	N	N/A
Acetone	Y	Unknown	Y	N	N/A	N/A	F003	U002	N	N/A
Benzene	Y	Unknown	Y	N		D018	F005	U019	F005	N/A

CCP RECORDS ORIGINAL
DATE REC'D 12-1-11

Attachment 5 – Hazardous Constituents (continued)

Waste Stream Number: ID-AECHDM

Compound	Suspected Present? (Y/N)	Suspected Concen-tration (ppm)	Used as a solvent? [a] (Y/N/NA)	Associated with packaging? (Y/N/NA)	TC constituent concentration less than regulatory level? [a] (Y/N/NA)	TC Hazardous Waste Number [a]	F-Listed Hazardous Waste Number [a]	U- or P-Listed Hazardous Waste Number [a]	EPA Hazardous Waste Number Assigned (N/Specify HWN)	State Hazardous Waste Number [b]
Volatile Organic Compounds (continued)										
Bromoform	N	N/A	N/A	N/A	N/A	N/A	N/A	U225 [k]	N	N/A
Butanol (n-Butyl alcohol)	Y	Unknown	Y	N	N/A	N/A	F003	U031 [k]	N	N/A
Carbon disulfide	N	N/A	N/A	N/A	N/A	N/A	F005	P022 [k]	N	N/A
Carbon tetrachloride	Y	Unknown	Y	N	N/A	D019	F001	U211 [k]	D019	N/A
Chlorobenzene	Y	Unknown	Y	N	N/A	D021	F002	U037	F002	N/A
Chloroform	N	N/A	N/A	N/A	N/A	D022	N/A	U044	N	N/A
Cyclohexanone	N	N/A	N/A	N/A	N/A	N/A	F003	U057 [k]	N	N/A
Ethyl acetate	Y	Unknown	Y	N	N/A	N/A	F003	U112 [k]	N	N/A
Ethyl benzene	Y	Unknown	Y	N	N/A	N/A	F003	N/A	N	N/A
Ethyl ether	Y	Unknown	Y	N	N/A	N/A	F003	U117 [k]	N	N/A
Formaldehyde [g]	Y	Unknown	Y	N	N/A	N/A	N/A	U122	N	N/A
Hydrazine [h]	Y	Unknown	Y	N	N/A	N/A	N/A	U133	N	N/A
Isobutanol	Y	Unknown	Y	N	N/A	N/A	F005	U140 [k]	F005	N/A
Methanol	Y	Unknown	Y	N	N/A	N/A	F003	U154	N	N/A
Methyl ethyl ketone	Y	Unknown	Y	N	N/A	D035	F005	U159	F005	N/A
Methyl isobutyl ketone	Y	Unknown	Y	N	N/A	N/A	F003	U161 [k]	N	N/A
Methylene chloride	Y	Unknown	Y	N	N/A	N/A	F001/F002	U080 [k]	F002	N/A
Pyridine [d]	N	N/A	N/A	N/A	N/A	D038	F005	U196	N	N/A
Tetrachloroethylene	Y	Unknown	Y	N	N/A	D039	F001/F002	U210	F002	N/A
Toluene	Y	Unknown	Y	N	N/A	N/A	F005	U220	F005	N/A
trans-1,2-Dichloroethylene	N	N/A	N/A	N/A	N/A	N/A	N/A	U079	N	N/A
Trichloroethylene	Y	Unknown	Y	N	N/A	D040	F001/F002	U228	F002	N/A
Trichlorofluoromethane	N	N/A	N/A	N/A	N/A	N/A	F001/F002	U121 [k]	N	N/A
Vinyl Chloride	N	N/A	N/A	N/A	N/A	D043	N/A	U043	N	N/A
Xylenes	Y	Unknown	Y	N	N/A	N/A	F003	U239	N	N/A

Attachment 5 – Hazardous Constituents (continued)

Waste Stream Number: ID-AECHDM

Compound	Suspected Present? (Y/N)	Suspected Concen-tration (ppm)	Used as a solvent? [a] (Y/N/NA)	Associated with packaging? (Y/N/NA)	TC constituent concentration less than regulatory level? [a] (Y/N/NA)	TC Hazardous Waste Number [a]	F-Listed Hazardous Waste Number [a]	U- or P-Listed Hazardous Waste Number [a]	EPA Hazardous Waste Number Assigned (N/Specify HWN)	State Hazardous Waste Number [b]
Semivolatile Organic Compounds (CCP-PO-001 – Table C3-6 & 40 CFR Part 261)										
2,4,5-Trichlorophenol	N	N/A	N/A	N/A	N/A	D041 [k]	F027 [k]	N/A	N	N/A
2,4,6-Trichlorophenol	N	N/A	N/A	N/A	N/A	D042 [k]	F027 [k]	N/A	N	N/A
2,4-Dinitrophenol	N	N/A	N/A	N/A	N/A	N/A	N/A	P048 [k]	N	N/A
2,4-Dinitrotoluene	Y	Unknown	N	N	N/A	D030	N/A	U105	D030	N/A
Cresols	N	N/A	N/A	N/A	N/A	D026	F004	U052	N	N/A
Cresols (m)	N	N/A	N/A	N/A	N/A	D024 [k]	N/A	N/A	N	N/A
Cresols (o)	N	N/A	N/A	N/A	N/A	D023 [k]	N/A	N/A	N	N/A
Cresols (p)	N	N/A	N/A	N/A	N/A	D025 [k]	N/A	N/A	N	N/A
Hexachlorobenzene	N	N/A	N/A	N/A	N/A	D032	N/A	U127 [k]	N	N/A
Hexachlorobutadiene	N	N/A	N/A	N/A	N/A	D033	N/A	U128 [k]	N	N/A
Hexachloroethane	N	N/A	N/A	N/A	N/A	D034	N/A	U131 [k]	N	N/A
Nitrobenzene	Y	Unknown	Y	N	N/A	D036	F004	U169 [k]	F004	N/A
Pentachlorophenol	Y	Unknown	N	N	N/A	D037	F027 [k]	N/A	D037	N/A
Pesticides and Herbicides (40 CFR Part 261)										
2,4,5-TP (Silvex)	N	N/A	N/A	N/A	N/A	D017 [k]	F027 [k]	N/A	N	N/A
2,4-D	N	N/A	N/A	N/A	N/A	D016 [k]	N/A	U240 [k]	N	N/A
Chlordane	N	N/A	N/A	N/A	N/A	D020 [k]	N/A	U036 [k]	N	N/A
Endrin	N	N/A	N/A	N/A	N/A	D012 [k]	N/A	P051 [k]	N	N/A
Heptachlor (and its epoxide)	N	N/A	N/A	N/A	N/A	D031 [k]	N/A	P059 [k]	N	N/A
Lindane	N	N/A	N/A	N/A	N/A	D013 [k]	N/A	U129 [k]	N	N/A
Methoxychlor	N	N/A	N/A	N/A	N/A	D014 [k]	N/A	U247 [k]	N	N/A
Toxaphene	N	N/A	N/A	N/A	N/A	D015 [k]	N/A	P123 [k]	N	N/A

Attachment 5 – Hazardous Constituents (continued)

Waste Stream Number: ID-AECHDM										
Compound	Suspected Present? (Y/N)	Suspected Concen-tration (ppm)	Used as a solvent? [a] (Y/N/NA)	Associated with packaging? (Y/N/NA)	TC constituent concentration less than regulatory level? [a] (Y/N/NA)	TC Hazardous Waste Number [a]	F-Listed Hazardous Waste Number [a]	U- or P-Listed Hazardous Waste Number [a]	EPA Hazardous Waste Number Assigned (N/Specify HWN)	State Hazardous Waste Number [b]
Other Constituents										
Wastewater treatment sludges from electroplating operations	N	N/A	N/A	N/A	N/A	N/A	F006	N/A	N	N/A
Spent cyanide plating bath solutions from electroplating operations	N	N/A	N/A	N/A	N/A	N/A	F007	N/A	N	N/A
Spent cyanides stripping and cleaning bath solutions from electroplating operations	N	N/A	N/A	N/A	N/A	N/A	F009	N/A	N	N/A
Total PCB Concentration [j]	N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Additional EPA Hazardous Constituents (List)	N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Note: If sampling homogeneous waste, identify all chemical constituents listed in tables C3-4, C3-6 and C3-8 of the WAP										
Additional State Hazardous Constituents [b] (List) [e]	N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N	N/A
Potentially Flammable VOCs (List) [e,f] Acetone, Benzene, Chlorobenzene, Cyclohexane, 1,2-dichloroethane, 1,1-dichloroethylene, Ethyl benzene, Ethyl ether, Methanol, Methyl ethyl ketone, Methyl isobutyl ether, Toluene, 1,2,4-trimethylbenzene, Xylenes	Y	Unknown	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Attachment 5 – Hazardous Constituents (continued)

Waste Stream Number: ID-AECHDM

Compound	Suspected Present? (Y/N)	Suspected Concen-tration (ppm)	Used as a solvent? [a] (Y/N/NA)	Associated with packaging? (Y/N/NA)	TC constituent concentration less than regulatory level? [a] (Y/N/NA)	TC Hazardous Waste Number [a]	F-Listed Hazardous Waste Number [a]	U- or P-Listed Hazardous Waste Number [a]	EPA Hazardous Waste Number Assigned (N/Specify HWN)	State Hazardous Waste Number [b]
Tentatively Identified Compounds (List) [e]	N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N	N/A

Note 1: With the exception of container RW48192, beryllium will be less than 1% weight in any drum. RW48192 contains approximately 6-7 weight percent broken beryllium oxide crucibles – See DR3003.

a Source: Title 40 Code of Federal Regulations Part 261, Identification and Listing of Hazardous Waste
b. Source: Cite applicable state regulation
c. Superscript not used
d. Can also be analyzed as a semivolatile organic compound
e. Add rows or attach additional sheets as necessary
f. Flammable VOCs included in the CH-TRAMPAC
g. Required only for homogeneous solids and soil/gravel from LANL and SRS
h. Required only for homogeneous solids and soil/gravel from ORNL and SRS
i. Antimony, nickel, thallium, vanadium, and zinc are included in Table C3-8 of CCP-PO-001 but are not regulated under 40 CFR Part 261, and therefore, are not subject to AK evaluation per CCP-PO-001.
j. Source: Title 40 Code of Federal Regulations Part 761, Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions.
k. This EPA hazardous waste Number is not permitted for WIPP disposal.

NOTE: If any of the information requested on this form is not available or not applicable, enter N/A in the appropriate box.

Acceptable Knowledge Expert: Kevin J. Peters (Print) , (Sign) Date: 9/29/2011

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Attachment 5 – Hazardous Constituents

Site(s): Idaho National Laboratory (CCP-AK-INL-005)

Waste Stream Description: Solidified Organics (IDCs 700 and 801)

Waste Stream Number: ID-RF-S3150-A

Compound	Suspected Present? (Y/N)	Suspected Concentration (ppm)	Used as a solvent? [a] (Y/N/NA)	Associated with packaging? (Y/N/NA)	TC constituent concentration less than regulatory level? [a] (Y/N/NA)	TC Hazardous Waste Number [a]	F-Listed Hazardous Waste Number [a]	U- or P-Listed Hazardous Waste Number [a]	EPA Hazardous Waste Number Assigned (N/Specify HWN)	State Hazardous Waste Number [b]
Metal Compounds (CCP-PO-001 – Table C3-8 & 40 CFR Part 261) [l]										
Arsenic	N	N/A	N/A	N/A	N/A	D004	N/A	N/A	N	N/A
Barium	Y	<PRQL	N/A	N/A	Y	D005	N/A	N/A	N	N/A
Beryllium	Y	<1 Wt%	N/A	N/A	N/A	N/A	N/A	P015	N	N/A
Cadmium	Y	<PRQL	N/A	N/A	Y	D006	N/A	N/A	N	N/A
Chromium	Y	<PRQL	N/A	N/A	Y	D007	N/A	N/A	N	N/A
Lead	Y	>PRQL	N/A	N/A	N	D008	N/A	N/A	D008	N/A
Mercury	N	N/A	N/A	N/A	N/A	D009	N/A	U151	N	N/A
Selenium	N	N/A	N/A	N/A	N/A	D010	N/A	N/A	N	N/A
Silver	Y	<PRQL	N/A	N/A	Y	D011	N/A	N/A	N	N/A
Volatile Organic Compounds (CCP-PO-001 – Tables C3-2 and C3-4 & 40 CFR Part 261)										
1,1,1-Trichloroethane	Y	>PRQL	Y	N	N/A	N/A	F001/F002	U226	F001/F002	N/A
1,1,2,2-Tetrachloroethane	N	N/A	N/A	N/A	N/A	N/A	N/A	U209	N	N/A
1,1,2-Trichloro-1,2,2-trifluoroethane	Y	>PRQL	Y	N	N/A	N/A	F001/F002	N/A	F002	N/A
1,1,2-Trichloroethane	N	N/A	N/A	N/A	N/A	N/A	F002	U227 [k]	N	N/A
1,1-Dichloroethane	Y	<PRQL	N/A	N/A	N/A	N/A	N/A	U076 [k]	N	N/A
1,1-Dichloroethylene	Y	>PRQL	N/A	N	N	D029	N/A	U078	D029	N/A
1,2-Dichlorobenzene [d]	N	N/A	N/A	N/A	N/A	N/A	F002	U070	N	N/A
1,2-Dichloroethane [h]	Y	>PRQL	N/A	N	N	D028	N/A	U077 [k]	D028	N/A
1,4-Dichlorobenzene [d]	N	N/A	N/A	N/A	N/A	D027	N/A	U072	N	N/A
2-Ethoxyethanol	Y	Unknown	Y	N	N/A	N/A	F005	U359 [k]	F005	N/A
2-Nitropropane	N	N/A	N/A	N/A	N/A	N/A	F005	U171 [k]	N	N/A
Acetone	Y	N/A	Y	N	N/A	N/A	F003	U002	N	N/A
Benzene	Y	<PRQL	Y	N	Y	D018	F005	U019	F005	N/A

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Attachment 5 – Hazardous Constituents (continued)

Waste Stream Number: ID-RF-S3150-A

Compound	Suspected Present? (Y/N)	Suspected Concen-tration (ppm)	Used as a solvent? [a] (Y/N/NA)	Associated with packaging? (Y/N/NA)	TC constituent concentration less than regulatory level? [a] (Y/N/NA)	TC Hazardous Waste Number [a]	F-Listed Hazardous Waste Number [a]	U- or P-Listed Hazardous Waste Number [a]	EPA Hazardous Waste Number Assigned (N/Specify HWN)	State Hazardous Waste Number [b]
Volatile Organic Compounds (continued)										
Bromoform	N	N/A	N/A	N/A	N/A	N/A	N/A	U225 [k]	N	N/A
Butanol (n-Butyl alcohol)	N	N/A	N/A	N/A	N/A	N/A	F003	U031 [k]	N	N/A
Carbon disulfide	Y	<PRQL	Y	N	N/A	N/A	F005	P022 [k]	F005	N/A
Carbon tetrachloride	Y	>PRQL	Y	N	N	D019	F001	U211 [k]	F001	N/A
Chlorobenzene	Y	>PRQL	Y	N	Y	D021	F002	U037	F002	N/A
Chloroform	Y	>PRQL	N/A	N	N	D022	N/A	U044	D022	N/A
Cyclohexanone	N	N/A	N/A	N/A	N/A	N/A	F003	U057 [k]	N	N/A
Ethyl acetate	N	N/A	N/A	N/A	N/A	N/A	F003	U112 [k]	N	N/A
Ethyl benzene	Y	N/A	Y	N	N/A	N/A	F003	N/A	N	N/A
Ethyl ether	Y	N/A	Y	N	N/A	N/A	F003	U117 [k]	N	N/A
Formaldehyde [g]	N	N/A	N/A	N/A	N/A	N/A	N/A	U122	N	N/A
Hydrazine [h]	N	N/A	N/A	N/A	N/A	N/A	N/A	U133	N	N/A
Isobutanol	N	N/A	N/A	N/A	N/A	N/A	F005	U140 [k]	N	N/A
Methanol	Y	N/A	Y	N	N/A	N/A	F003	U154	N	N/A
Methyl ethyl ketone	Y	<PRQL	Y	N	Y	D035	F005	U159	F005	N/A
Methyl isobutyl ketone	N	N/A	N/A	N/A	N/A	N/A	F003	U161 [k]	N	N/A
Methylene chloride	Y	>PRQL	Y	N	N/A	N/A	F001/F002	U080 [k]	F002	N/A
Pyridine [d]	N	N/A	N/A	N/A	N/A	D038	F005	U196	N	N/A
Tetrachloroethylene	Y	<PRQL	Y	N	Y	D039	F001/F002	U210	F002	N/A
Toluene	Y	<PRQL	Y	N	N/A	N/A	F005	U220	F005	N/A
trans-1,2-Dichloroethylene	N	N/A	N/A	N/A	N/A	N/A	N/A	U079	N	N/A
Trichloroethylene	Y	<PRQL	Y	N	Y	D040	F001/F002	U228	F002	N/A
Trichlorofluoromethane	N	N/A	N/A	N/A	N/A	N/A	F001/F002	U121 [k]	N	N/A
Vinyl Chloride [h]	Y	<PRQL	N/A	N	Y	D043	N/A	U043	D043	N/A
Xylenes	Y	N/A	Y	N	N/A	N/A	F003	U239	N	N/A

Attachment 5 – Hazardous Constituents (continued)

Waste Stream Number: ID-RF-S3150-A

Compound	Suspected Present? (Y/N)	Suspected Concen-tration (ppm)	Used as a solvent? [a] (Y/N/NA)	Associated with packaging? (Y/N/NA)	TC constituent concentration less than regulatory level? [a] (Y/N/NA)	TC Hazardous Waste Number [a]	F-Listed Hazardous Waste Number [a]	U- or P-Listed Hazardous Waste Number [a]	EPA Hazardous Waste Number Assigned (N/Specify HWN)	State Hazardous Waste Number [b]
Semivolatile Organic Compounds (CCP-PO-001 – Table C3-6 & 40 CFR Part 261)										
2,4,5-Trichlorophenol	N	N/A	N/A	N/A	N/A	D041 [k]	F027 [k]	N/A	N	N/A
2,4,6-Trichlorophenol	N	N/A	N/A	N/A	N/A	D042 [k]	F027 [k]	N/A	N	N/A
2,4-Dinitrophenol	N	N/A	N/A	N/A	N/A	N/A	N/A	P048 [k]	N	N/A
2,4-Dinitrotoluene [m]	N	N/A	N/A	N/A	N	D030	N/A	U105	D030	N/A
Cresols	N	N/A	N/A	N/A	N/A	D026	F004	U052	N	N/A
Cresols (m)	N	N/A	N/A	N/A	N/A	D024 [k]	N/A	N/A	N	N/A
Cresols (o)	N	N/A	N/A	N/A	N/A	D023 [k]	N/A	N/A	N	N/A
Cresols (p)	N	N/A	N/A	N/A	N/A	D025 [k]	N/A	N/A	N	N/A
Hexachlorobenzene [m]	N	N/A	N/A	N/A	N	D032	N/A	U127 [k]	D032	N/A
Hexachlorobutadiene	N	N/A	N/A	N/A	N/A	D033	N/A	U128 [k]	N	N/A
Hexachloroethane	Y	>PRQL	N/A	N	N	D034	N/A	U131 [k]	D034	N/A
Nitrobenzene [n]	Y	<PRQL	N	N	Y	D036	F004	U169 [k]	D036	N/A
Pentachlorophenol	N	N/A	N/A	N/A	N/A	D037	F027 [k]	N/A	N	N/A
Pesticides and Herbicides (40 CFR Part 261)										
2,4,5-TP (Silvex)	N	N/A	N/A	N/A	N/A	D017 [k]	F027 [k]	N/A	N	N/A
2,4-D	N	N/A	N/A	N/A	N/A	D016 [k]	N/A	U240 [k]	N	N/A
Chlordane	N	N/A	N/A	N/A	N/A	D020 [k]	N/A	U036 [k]	N	N/A
Endrin	N	N/A	N/A	N/A	N/A	D012 [k]	N/A	P051 [k]	N	N/A
Heptachlor (and its epoxide)	N	N/A	N/A	N/A	N/A	D031 [k]	N/A	P059 [k]	N	N/A
Lindane	N	N/A	N/A	N/A	N/A	D013 [k]	N/A	U129 [k]	N	N/A
Methoxychlor	N	N/A	N/A	N/A	N/A	D014 [k]	N/A	U247 [k]	N	N/A
Toxaphene	N	N/A	N/A	N/A	N/A	D015 [k]	N/A	P123 [k]	N	N/A

Attachment 5 -- Hazardous Constituents (continued)

Waste Stream Number: ID-RF-S3150-A

Compound	Suspected Present? (Y/N)	Suspected Concen-tration (ppm)	Used as a solvent? [a] (Y/N/NA)	Associated with packaging? (Y/N/NA)	TC constituent concentration less than regulatory level? [a] (Y/N/NA)	TC Hazardous Waste Number [a]	F-Listed Hazardous Waste Number [a]	U- or P-Listed Hazardous Waste Number [a]	EPA Hazardous Waste Number Assigned (N/Specify HWN)	State Hazardous Waste Number [b]
Other Constituents										
Wastewater treatment sludges from electroplating operations	N	N/A	N/A	N/A	N/A	N/A	F006	N/A	N	N/A
Spent cyanide plating bath solutions from electroplating operations	N	N/A	N/A	N/A	N/A	N/A	F007	N/A	N	N/A
Spent cyanides stripping and cleaning bath solutions from electroplating operations	N	N/A	N/A	N/A	N/A	N/A	F009	N/A	N	N/A
Total PCB Concentration [j]	Y	<50 ppm	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Additional EPA Hazardous Constituents (List)	N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Additional State Hazardous Constituents [b] (List)	N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Potentially Flammable VOCs (List) [e,f,o]	Y		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Acetone		990 max								
Benzene		23 max								
1,1-Dichloroethane		220 max								
1,2-Dichloroethane		100 max								
1,1-Dichloroethylene		530 max								
Methanol		1600 max								
Toluene		29 max								
Xylene		59 max								
Sum		3551 ppm								

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Attachment 5 -- Hazardous Constituents (continued)

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Waste Stream Number: ID-RF-S3150-A

Tentatively Identified Compounds (List) [e]			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
bis(2-ethylhexyl) phthalate	Y	580 ppm								
1,4-dioxane	Y	430 ppm								

a Source: Title 40 Code of Federal Regulations Part 261, Identification and Listing of Hazardous Waste
b. Source: Cite applicable state regulation
c. Superscript not used.
d. Can also be analyzed as a semivolatile organic compound
e. Add rows or attach additional sheets as necessary
f. Flammable VOCs included in the CH-TRAMPAC
g. Required only for homogeneous solids and soil/gravel from LANL and SRS
h. Required only for homogeneous solids and soil/gravel from ORNL and SRS

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i. Antimony, nickel, thallium, vanadium, and zinc are included in Table C3-8 of CCP-PO-001 but are not regulated under 40 CFR Part 261, and therefore, are not subject to AK evaluation per CCP-PO-001.
j. Source: Title 40 Code of Federal Regulations Part 761, Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions.
k. This EPA hazardous waste Number is not permitted for WIPP disposal.
m. In previous analysis by the Rocky Flats and/or the INL 3100 m^3 TRU Waste Programs, the MDL exceeded the PRQL for this compound due to dilution. The dilution was due to high hydrocarbon content in the waste matrix that caused difficulties in analysis per the required methodology. The EPA hazardous waste number was applied as a conservative measure.

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n. Although this compound was below the RTL in previous analysis of Rocky Flats and/or INL 3100 m^3 TRU Waste Programs, it was identified by AK as potentially present in this waste. Therefore, the EPA hazardous waste number was applied as a conservative measure.
o. Concentrations from Rocky Flats or INL TRU Waste Programs data (References P507, P522, U099).

NOTE: If any of the information requested on this form is not available or not applicable, enter N/A in the appropriate box.

Acceptable Knowledge Expert: Scott Smith (Print) _____ (Sign) **Date:** 2/21/2013

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Attachment 5 – Hazardous Constituents

Site(s): Idaho National Laboratory

Waste Stream Description: Soil with Minor Amounts of Homogeneous Solids and Debris (CCP-AK-INL-001)

Waste Stream Number: ID-SDA-SOIL

Compound	Suspected Present? (Y/N)	Suspected Concen-tration (ppm)	Used as a solvent? [a] (Y/N/NA)	Associated with packaging? (Y/N/NA)	TC constituent concentration less than regulatory level? [a] (Y/N/NA)	TC Hazardous Waste Number [a]	F-Listed Hazardous Waste Number [a]	U- or P-Listed Hazardous Waste Number [a]	EPA Hazardous Waste Number Assigned (N/Specify HWN)	State Hazardous Waste Number [b]
Metal Compounds (CCP-PO-001 – Table C3-8 & 40 CFR Part 261) [i]										
Arsenic	Y	Unknown	N/A	N/A	N	D004	N/A	N/A	D004	N/A
Barium	Y	Unknown	N/A	N/A	N	D005	N/A	N/A	D005	N/A
Beryllium	Y	<1 Wt%	N/A	N/A	N/A	N/A	N/A	P015	N	N/A
Cadmium	Y	Unknown	N/A	N/A	N	D006	N/A	N/A	D006	N/A
Chromium	Y	Unknown	N/A	N/A	N	D007	N/A	N/A	D007	N/A
Lead	Y	Unknown	N/A	N/A	N	D008	N/A	N/A	D008	N/A
Mercury	Y	Unknown	N/A	N/A	N	D009	N/A	U151	D009	N/A
Selenium	Y	Unknown	N/A	N/A	N	D010	N/A	N/A	D010	N/A
Silver	Y	Unknown	N/A	N/A	N	D011	N/A	N/A	D011	N/A
Volatile Organic Compounds (CCP-PO-001 – Tables C3-2 and C3-4 & 40 CFR Part 261)										
1,1,1-Trichloroethane	Y	Unknown	Y	N	N/A	N/A	F001/F002	U226	F001/F002	N/A
1,1,2,2-Tetrachloroethane	N	N/A	N/A	N/A	N/A	N/A	N/A	U209	N	N/A
1,1,2-Trichloro-1,2,2-trifluoroethane	Y	Unknown	Y	N	N/A	N/A	F001/F002	N/A	F001/F002	N/A
1,1,2-Trichloroethane	Y	Unknown	Y	N	N/A	N/A	F002	U227 [k]	F002	N/A
1,1-Dichloroethane	N	N/A	N/A	N/A	N/A	N/A	N/A	U076 [k]	N	N/A
1,1-Dichloroethylene	Y	Unknown	N	N	N	D029	N/A	U078	D029 [n]	N/A
1,2-Dichlorobenzene [d]	Y	Unknown	Y	N	N/A	N/A	F002	U070	F002	N/A
1,2-Dichloroethane	Y	Unknown	Y	N	N	D028	N/A	U077 [k]	D028	N/A
1,4-Dichlorobenzene [d]	Y	Unknown	N	N	N	D027	N/A	U072	D027	N/A
2-Ethoxyethanol	Y	Unknown	Y	N	N/A	N/A	F005	U359 [k]	F005	N/A
2-Nitropropane	Y	Unknown	Y	N	N/A	N/A	F005	U171 [k]	F005	N/A
Acetone	Y	Unknown	Y	N	N/A	N/A	F003	U002	N	N/A
Benzene	Y	Unknown	Y	N	N	D018	F005	U019	F005	N/A

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Attachment 5 – Hazardous Constituents (continued)

Waste Stream Number: ID-SDA-SOIL

Compound	Suspected Present? (Y/N)	Suspected Concen-tration (ppm)	Used as a solvent? [a] (Y/N/NA)	Associated with packaging? (Y/N/NA)	TC constituent concentration less than regulatory level? [a] (Y/N/NA)	TC Hazardous Waste Number [a]	F-Listed Hazardous Waste Number [a]	U- or P-Listed Hazardous Waste Number [a]	EPA Hazardous Waste Number Assigned (N/Specify HWN)	State Hazardous Waste Number [b]
Volatile Organic Compounds (continued)										
Bromoform	Y	Unknown	N	N	N/A	N/A	N/A	U225 [k]	N	N/A
Butanol (n-Butyl alcohol)	Y	Unknown	Y	N	N/A	N/A	F003	U031 [k]	N	N/A
Carbon disulfide	Y	Unknown	Y	N	N/A	N/A	F005	P022 [k]	F005	N/A
Carbon tetrachloride	Y	Unknown	Y	N	N/A	D019	F001	U211 [k]	F001	N/A
Chlorobenzene	Y	Unknown	Y	N	N/A	D021	F002	U037	F002	N/A
Chloroform	Y	Unknown	Y	N	N/A	D022	N/A	U044	D022	N/A
cis-1,2-Dichloroethylene	N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N	N/A
Cyclohexanone	Y	Unknown	Y	N	N/A	N/A	F003	U057 [k]	N	N/A
Ethyl acetate	N	N/A	N/A	N/A	N/A	N/A	F003	U112 [k]	N	N/A
Ethyl benzene	Y	Unknown	Y	N	N/A	N/A	F003	N/A	N	N/A
Ethyl ether	N	N/A	N/A	N/A	N/A	N/A	F003	U117 [k]	N	N/A
Formaldehyde [g]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	U122	N	N/A
Hydrazine [h]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	U133	N	N/A
Isobutanol	Y	Unknown	Y	N	N/A	N/A	F005	U140 [k]	F005	N/A
Methanol	Y	Unknown	Y	N	N/A	N/A	F003	U154	N	N/A
Methyl ethyl ketone	Y	Unknown	Y	N	N/A	D035	F005	U159	F005	N/A
Methyl isobutyl ketone	Y	Unknown	Y	N	N/A	N/A	F003	U161 [k]	N	N/A
Methylene chloride	Y	Unknown	Y	N	N/A	N/A	F001/F002	U080 [k]	F001/F002	N/A
Pyridine [d]	Y	Unknown	Y	N	N	D038	F005	U196	D038 [o]	N/A
Tetrachloroethylene	Y	Unknown	Y	N	N/A	D039	F001/F002	U210	F001/F002	N/A
Toluene	Y	Unknown	Y	N	N/A	N/A	F005	U220	F005	N/A
trans-1,2-Dichloroethylene	N	N/A	N/A	N/A	N/A	N/A	N/A	U079	N	N/A
Trichloroethylene	Y	Unknown	Y	N	N/A	D040	F001/F002	U228	F001/F002	N/A
Trichlorofluoromethane	Y	Unknown	Y	N	N/A	N/A	F001/F002	U121 [k]	F001/F002	N/A
Vinyl Chloride	Y	Unknown	N	N	N	D043	N/A	U043	D043	N/A
Xylenes	Y	Unknown	Y	N	N/A	N/A	F003	U239	N	N/A

Attachment 5 – Hazardous Constituents (continued)

Waste Stream Number: ID-SDA-SOIL

Compound	Suspected Present? (Y/N)	Suspected Concen-tration (ppm)	Used as a solvent? [a] (Y/N/NA)	Associated with packaging? (Y/N/NA)	TC constituent concentration less than regulatory level? [a] (Y/N/NA)	TC Hazardous Waste Number [a]	F-Listed Hazardous Waste Number [a]	U- or P-Listed Hazardous Waste Number [a]	EPA Hazardous Waste Number Assigned (N/Specify HWN)	State Hazardous Waste Number [b]
Semivolatile Organic Compounds (CCP-PO-001 – Table C3-6 & 40 CFR Part 261)										
2,4,5-Trichlorophenol	N	N/A	N/A	N/A	N/A	D041 [k]	F027 [k]	N/A	N	N/A
2,4,6-Trichlorophenol	N	N/A	N/A	N/A	N/A	D042 [k]	F027 [k]	N/A	N	N/A
2,4-Dinitrophenol	N	N/A	N/A	N/A	N/A	N/A	N/A	P048 [k]	N	N/A
2,4-Dinitrotoluene	Y	Unknown	N	N	N	D030	N/A	U105	D030	N/A
Cresols	Y	Unknown	Y	N	N/A	D026	F004	U052	F004	N/A
Cresols (m)	N	N/A	N/A	N/A	N/A	D024 [k]	N/A	N/A	N	N/A
Cresols (o)	N	N/A	N/A	N/A	N/A	D023 [k]	N/A	N/A	N	N/A
Cresols (p)	N	N/A	N/A	N/A	N/A	D025 [k]	N/A	N/A	N	N/A
Hexachlorobenzene	Y	Unknown	N	N	N	D032	N/A	U127 [k]	D032	N/A
Hexachlorobutadiene	Y	Unknown	N	N	N	D033	N/A	U128 [k]	D033	N/A
Hexachloroethane	Y	Unknown	N	N	N	D034	N/A	U131 [k]	D034	N/A
Nitrobenzene	Y	Unknown	Y	N	N/A	D036	F004	U169 [k]	F004	N/A
Pentachlorophenol	Y	Unknown	N	N	N	D037	F027 [k]	N/A	D037	N/A
Pesticides and Herbicides (40 CFR Part 261)										
2,4,5-TP (Silvex)	N	N/A	N/A	N/A	N/A	D017 [k]	F027 [k]	N/A	N	N/A
2,4-D	N	N/A	N/A	N/A	N/A	D016 [k]	N/A	U240 [k]	N	N/A
Chlordane	N	N/A	N/A	N/A	N/A	D020 [k]	N/A	U036 [k]	N	N/A
Endrin	N	N/A	N/A	N/A	N/A	D012 [k]	N/A	P051 [k]	N	N/A
Heptachlor (and its epoxide)	N	N/A	N/A	N/A	N/A	D031 [k]	N/A	P059 [k]	N	N/A
Lindane	N	N/A	N/A	N/A	N/A	D013 [k]	N/A	U129 [k]	N	N/A
Methoxychlor	N	N/A	N/A	N/A	N/A	D014 [k]	N/A	U247 [k]	N	N/A
Toxaphene	N	N/A	N/A	N/A	N/A	D015 [k]	N/A	P123 [k]	N	N/A

Attachment 5 – Hazardous Constituents (continued)

Waste Stream Number: ID-SDA-SOIL

Compound	Suspected Present? (Y/N)	Suspected Concen-tration (ppm)	Used as a solvent? [a] (Y/N/NA)	Associated with packaging? (Y/N/NA)	TC constituent concentration less than regulatory level? [a] (Y/N/NA)	TC Hazardous Waste Number [a]	F-Listed Hazardous Waste Number [a]	U- or P-Listed Hazardous Waste Number [a]	EPA Hazardous Waste Number Assigned (N/Specify HWN)	State Hazardous Waste Number [b]
Other Constituents										
Wastewater treatment sludges from electroplating operations	Y	Unknown	N/A	N/A	N/A	N/A	F006	N/A	F006	N/A
Spent cyanide plating bath solutions from electroplating operations	Y	Unknown	N/A	N/A	N/A	N/A	F007	N/A	F007	N/A
Spent cyanides stripping and cleaning bath solutions from electroplating operations	Y	Unknown	N/A	N/A	N/A	N/A	F009	N/A	F009	N/A
Total PCB Concentration [j]	Y	>500 [p]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Additional EPA Hazardous Constituents (List) Potassium cyanide Sodium cyanide	Y	Unknown	N/A	N/A	N/A	N/A	N/A	 P098 P106	 P098 [q] P106 [q]	N/A
Note: If sampling homogeneous waste, identify all chemical constituents listed in tables C3-4, C3-6 and C3-8 of the WAP										
Additional State Hazardous Constituents [b] (List) [e]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Potentially Flammable VOCs (List) [e,f] Acetone Benzene 1-Butanol Chlorobenzene Cyclohexane 1,2-Dichloroethane 1,1-Dichloroethane Ethyl benzene	Y	Unknown	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Attachment 5 – Hazardous Constituents (continued)

Waste Stream Number: ID-SDA-SOIL										
Potentially Flammable VOCs (continued) Methanol Methyl ethyl ketone Methyl isobutyl ketone Toluene 1,2,4-Trimethylbenzene Xylenes	Y	Unknown	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tentatively Identified Compounds (List) [e] Pentachlorobiphenyl bis(2-Ethylhexyl)phthalate Tetrachlorobiphenyl	Y	Unknown	N/A	N	N	N/A	N/A	N/A	N/A	N/A

a Source: Title 40 Code of Federal Regulations Part 261, Identification and Listing of Hazardous Waste.
b. Source: Cite applicable state regulation.
c. Superscript not used.
d. Can also be analyzed as a semivolatile organic compound.
e. Add rows or attach additional sheets as necessary.
f. Flammable VOCs included in the CH-TRAMPAC.
g. Required only for homogeneous solids and soil/gravel from LANL and SRS
h. Required only for homogeneous solids and soil/gravel from ORNL and SRS
i. Antimony, nickel, thallium, vanadium, and zinc are included in Table C3-8 of CCP-PO-001 but are not regulated under 40 CFR Part 261, and therefore, are not subject to AK evaluation per CCP-PO-001.
j. Source: Title 40 Code of Federal Regulations Part 761, Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions.
k. This EPA Hazardous Waste Number is not permitted for WIPP disposal.
n. Although 1,1-dichloroethylene is noted in AK source documentation as a possible radiolysis product of 1,1,1-trichloroethane, EPA hazardous waste number D029 is assigned.
o. Previous revisions of CCP-AK-INL-001 identified pyridine as potentially present in this waste but did not identify its use as a solvent; therefore, EPA hazardous waste number F005 for pyridine was not assigned, but instead EPA hazardous waste number D038 was applied. Subsequently, information was identified that indicates pyridine was used as a solvent; however, since EPA hazardous waste number D038 had already been assigned to the waste stream, it will not be removed.
p. Soil is not targeted for retrieval, but some containers in this waste stream may contain minor amounts of PCB-contaminated waste such as 743-series organic setups waste, light ballasts, and paint. It is assumed that containers in this waste stream with any amount of PCB-contaminated wastes will contain > 500 ppms PCBs.
q. As of July 1, 2008 742-sludge is targeted waste. This waste is potentially contaminated by residual reacted cyanide resulting from the breach of bottles containing potassium or sodium cyanide pellets. To allow for the inclusion of this targeted waste during ARP excavation operations, EPA hazardous waste numbers P098 and P106 are assigned to the waste streams.

NOTE: If any of the information requested on this form is not available or not applicable, enter N/A in the appropriate box.

Acceptable Knowledge Expert: Carrie J. Johnson (Print) (Sign) **Date:** 03/17/2011

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Attachment 5 – Hazardous Constituents

Site(s): Idaho National Laboratory

Waste Stream Description: RH Debris from AGHCF Operations at Argonne National Laboratory-East

Waste Stream Number: ID-ANLE-S5000

Compound	Suspected Present? (Y/N)	Suspected Concentration (ppm)	Used as a solvent? [a] (Y/N/NA)	Associated with packaging? (Y/N/NA)	TC constituent concentration less than regulatory level? [a] (Y/N/NA)	TC Hazardous Waste Number [a]	F-Listed Hazardous Waste Number [a]	U- or P-Listed Hazardous Waste Number [a]	EPA Hazardous Waste Number Assigned (N/Specify HWN)	State Hazardous Waste Number [b]
Metal Compounds (CCP-PO-001 Table B3-8 & 40 CFR Part 261) [i]										
Arsenic	Y	Unknown	N/A	N/A	N	D004	N/A	N/A	D004	N/A
Barium	Y	Unknown	N/A	N/A	N	D005	N/A	N/A	D005	N/A
Beryllium	Y	<1 wt%	N/A	N/A	N	N/A	N/A	P015	N	N/A
Cadmium	Y	Unknown	N/A	N/A	N	D006	N/A	N/A	D006	N/A
Chromium	Y	Unknown	N/A	N/A	N	D007	N/A	N/A	D007	N/A
Lead	Y	Unknown	N/A	N/A	N	D008	N/A	N/A	D008	N/A
Mercury	Y	Unknown	N/A	N/A	N	D009	N/A	U151	D009	N/A
Selenium	Y	Unknown	N/A	N/A	N	D010	N/A	N/A	D010	N/A
Silver	Y	Unknown	N/A	N/A	N	D011	N/A	N/A	D011	N/A
Volatile Organic Compounds (CCP-PO-001 Tables B3-2 and B3-4 & 40 CFR Part 261)										
1,1,1-Trichloroethane	Y	Unknown	Y	N	N/A	N/A	F001/F002	U226	F002	N/A
1,1,2,2-Tetrachloroethane	N	N/A	N/A	N/A	N/A	N/A	N/A	U209	N	N/A
1,1,2-Trichloro-1,2,2-trifluoroethane	N	N/A	N/A	N/A	N/A	N/A	F001/F002	N/A	N	N/A
1,1,2-Trichloroethane	N	N/A	N/A	N/A	N/A	N/A	F002	U227 [k]	N	N/A
1,1-Dichloroethane	N	N/A	N/A	N/A	N/A	N/A	N/A	U076 [k]	N	N/A
1,1-Dichloroethylene	Y	Unknown	Unknown	N	N	D029	N/A	U078	D029	N/A
1,2-Dichlorobenzene [d]	N	N/A	N/A	N/A	N/A	N/A	F002	U070	N	N/A
1,2-Dichloroethane	Y	Unknown	Unknown	N	N	D028	N/A	U077 [k]	D028	N/A
1,4-Dichlorobenzene [d]	N	N/A	N/A	N/A	N/A	D027	N/A	U072	N	N/A
2-Ethoxyethanol	N	N/A	N/A	N/A	N/A	N/A	F005	U359 [k]	N	N/A
2-Nitropropane	N	N/A	N/A	N/A	N/A	N/A	F005	U171 [k]	N	N/A
Acetone	Y	Unknown	Y	N	N/A	N/A	F003	U002	N	N/A
Benzene	Y	Unknown	Unknown	N	N/A	D018	F005	U019	F005	N/A

Attachment 5 – Hazardous Constituents (continued)

Waste Stream Number: ID-ANLE-S5000

Compound	Suspected Present? (Y/N)	Suspected Concen-tration (ppm)	Used as a solvent? [a] (Y/N/NA)	Associated with packaging? (Y/N/NA)	TC constituent concentration less than regulatory level? [a] (Y/N/NA)	TC Hazardous Waste Number [a]	F-Listed Hazardous Waste Number [a]	U- or P-Listed Hazardous Waste Number [a]	EPA Hazardous Waste Number Assigned (N/Specify HWN)	State Hazardous Waste Number [b]
Volatile Organic Compounds (continued)										
Bromoform	N	N/A	N/A	N/A	N/A	N/A	N/A	U225 [k]	N	N/A
Butanol (n-Butyl alcohol)	Y	Unknown	Y	N	N/A	N/A	F003	U031 [k]	N	N/A
Carbon disulfide	N	N/A	N/A	N/A	N/A	N/A	F005	P022 [k]	N	N/A
Carbon tetrachloride	Y	Unknown	N (F001)	N	N/A	D019	F001	U211 [k]	D019	N/A
Chlorobenzene	N	N/A	N/A	N/A	N/A	D021	F002	U037	N	N/A
Chloroform	N	N/A	N/A	N/A	N/A	D022	N/A	U044	N	N/A
cis-1,2-Dichloroethylene [c]	N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cyclohexanone	N	N/A	N/A	N/A	N/A	N/A	F003	U057 [k]	N	N/A
Ethyl acetate	N	N/A	N/A	N/A	N/A	N/A	F003	U112 [k]	N	N/A
Ethyl benzene	N	N/A	N/A	N/A	N/A	N/A	F003	N/A	N	N/A
Ethyl ether	Y	Unknown	Y	N	N/A	N/A	F003	U117 [k]	N	N/A
Formaldehyde [g]	N	N/A	N/A	N/A	N/A	N/A	N/A	U122	N	N/A
Hydrazine [n]	N	N/A	N/A	N/A	N/A	N/A	N/A	U133	N	N/A
Isobutanol	Y	Unknown	Unknown	N	N/A	N/A	F005	U140 [k]	F005	N/A
Methanol	Y	Unknown	Y	N	N/A	N/A	F003	U154	N	N/A
Methyl ethyl ketone	N	N/A	N/A	N/A	N/A	D035	F005	U159	N	N/A
Methyl isobutyl ketone	N	N/A	N/A	N/A	N/A	N/A	F003	U161 [k]	N	N/A
Methylene chloride	N	N/A	N/A	N/A	N/A	N/A	F001/F002	U080 [k]	N	N/A
Pyridine [d]	N	N/A	N/A	N/A	N/A	D038	F005	U196	N	N/A
Tetrachloroethylene	Y	Unknown	Y	N	N/A	D039	F001/F002	U210	F002	N/A
Toluene	Y	Unknown	Y	N	N/A	N/A	F005	U220	F005	N/A
trans-1,2-Dichloroethylene	N	N/A	N/A	N/A	N/A	N/A	N/A	U079	N	N/A
Trichloroethylene	N	N/A	N/A	N/A	N/A	D040	F001/F002	U228	N	N/A
Trichlorofluoromethane	N	N/A	N/A	N/A	N/A	N/A	F001/F002	U121 [k]	N	N/A
Vinyl Chloride	N	N/A	N/A	N/A	N/A	D043	N/A	U043	N	N/A
Xylenes	Y	Unknown	Y	N	N/A	N/A	F003	U239	N	N/A

Attachment 5 – Hazardous Constituents (continued)

Waste Stream Number: ID-ANLE-S5000

Compound	Suspected Present? (Y/N)	Suspected Concen-tration (ppm)	Used as a solvent? [a] (Y/N/NA)	Associated with packaging? (Y/N/NA)	TC constituent concentration less than regulatory level? [a] (Y/N/NA)	TC Hazardous Waste Number [a]	F-Listed Hazardous Waste Number [a]	U- or P-Listed Hazardous Waste Number [a]	EPA Hazardous Waste Number Assigned (N/Specify HWN)	State Hazardous Waste Number [b]
Semivolatile Organic Compounds (CCP-PO-001 Table B3-6 & 40 CFR Part 261)										
2,4,5-Trichlorophenol	N	N/A	N/A	N/A	N/A	D041 [k]	F027 [k]	N/A	N	N/A
2,4,6-Trichlorophenol	N	N/A	N/A	N/A	N/A	D042 [k]	F027 [k]	N/A	N	N/A
2,4-Dinitrophenol	N	N/A	N/A	N/A	N/A	N/A	N/A	P048 [k]	N	N/A
2,4-Dinitrotoluene	N	N/A	N/A	N/A	N/A	D030	N/A	U105	N	N/A
Cresols	N	N/A	N/A	N/A	N/A	D026	F004	U052	N	N/A
Cresols (m)	N	N/A	N/A	N/A	N/A	D024 [k]	N/A	N/A	N	N/A
Cresols (o)	N	N/A	N/A	N/A	N/A	D023 [k]	N/A	N/A	N	N/A
Cresols (p)	N	N/A	N/A	N/A	N/A	D025 [k]	N/A	N/A	N	N/A
Hexachlorobenzene	N	N/A	N/A	N/A	N/A	D032	N/A	U127 [k]	N	N/A
Hexachlorobutadiene	N	N/A	N/A	N/A	N/A	D033	N/A	U128 [k]	N	N/A
Hexachloroethane	N	N/A	N/A	N/A	N/A	D034	N/A	U131 [k]	N	N/A
Nitrobenzene	N	N/A	N/A	N/A	N/A	D036	F004	U169 [k]	N	N/A
Pentachlorophenol	N	N/A	N/A	N/A	N/A	D037	F027 [k]	N/A	N	N/A
Pesticides and Herbicides (40 CFR Part 261)										
2,4,5-TP (Silvex)	N	N/A	N/A	N/A	N/A	D017 [k]	F027 [k]	N/A	N	N/A
2,4-D	N	N/A	N/A	N/A	N/A	D016 [k]	N/A	U240 [k]	N	N/A
Chlordane	N	N/A	N/A	N/A	N/A	D020 [k]	N/A	U036 [k]	N	N/A
Endrin	N	N/A	N/A	N/A	N/A	D012 [k]	N/A	P051 [k]	N	N/A
Heptachlor (and its epoxide)	N	N/A	N/A	N/A	N/A	D031 [k]	N/A	P059 [k]	N	N/A
Lindane	N	N/A	N/A	N/A	N/A	D013 [k]	N/A	U129 [k]	N	N/A
Methoxychlor	N	N/A	N/A	N/A	N/A	D014 [k]	N/A	U247 [k]	N	N/A
Toxaphene	N	N/A	N/A	N/A	N/A	D015 [k]	N/A	P123 [k]	N	N/A

Attachment 5 – Hazardous Constituents (continued)

Waste Stream Number: ID-ANLE-S5000

Compound	Suspected Present? (Y/N)	Suspected Concen-tration (ppm)	Used as a solvent? [a] (Y/N/NA)	Associated with packaging? (Y/N/NA)	TC constituent concentration less than regulatory level? [a] (Y/N/NA)	TC Hazardous Waste Number [a]	F-Listed Hazardous Waste Number [a]	U- or P-Listed Hazardous Waste Number [a]	EPA Hazardous Waste Number Assigned (N/Specify HWN)	State Hazardous Waste Number [b]
Other Constituents										
Wastewater treatment sludges from electroplating operations	N	N/A	N/A	N/A	N/A	N/A	F006	N/A	N	N/A
Spent cyanide plating bath solutions from electroplating operations	N	N/A	N/A	N/A	N/A	N/A	F007	N/A	N	N/A
Spent cyanides stripping and cleaning bath solutions from electroplating operations	N	N/A	N/A	N/A	N/A	N/A	F009	N/A	N	N/A
Total PCB Concentration [j]	N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Additional EPA Hazardous Constituents (List)	N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Note: If sampling homogeneous waste, identify all chemical constituents listed in tables B3-4, B3-6 and B3-8 of the WAP										
Additional State Hazardous Constituents [b] (List) [e]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Potentially Flammable VOCs (List) [e,f] Acetone Benzene 1-Butanol 1,2-Dichloroethane 1,1-Dichloroethene Ethyl ether Methanol Toluene Xylenes	Y	Unknown	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Attachment 5 – Hazardous Constituents (continued)

Waste Stream Number: ID-ANLE-S5000

Compound	Suspected Present? (Y/N)	Suspected Concen-tration (ppm)	Used as a solvent? [a] (Y/N/NA)	Associated with packaging? (Y/N/NA)	TC constituent concentration less than regulatory level? [a] (Y/N/NA)	TC Hazardous Waste Number [a]	F-Listed Hazardous Waste Number [a]	U- or P-Listed Hazardous Waste Number [a]	EPA Hazardous Waste Number Assigned (N/Specify HWN)	State Hazardous Waste Number [b]
Other Constituents (cont.)										
Tentatively Identified Compounds (List) [e]	N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

a Source: Title 40 Code of Federal Regulations Part 261, Identification and Listing of Hazardous Waste
b. Source: Cite applicable state regulation
c. Source: CCP-PO-001 CCP Transuranic Waste Characterization Quality Assurance Project Plan
d. Can also be analyzed as a semivolatile organic compound
e. Add rows or attach additional sheets as necessary
f. Flammable VOCs included in the CH-TRAMPAC
g. Required only for homogeneous solids and soil/gravel from LANL and SRS
h. Required only for homogeneous solids and soil/gravel from ORNL and SRS
i. Antimony, nickel, thallium, vanadium, and zinc are included in Table B3-8 of CCP-PO-001 but are not regulated under 40 CFR Part 261, and therefore, are not subject to AK evaluation per the WIPP-WAP Section B4.
j. Source: Title 40 Code of Federal Regulations Part 761, Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions.
k. This EPA hazardous waste Number is not permitted for WIPP disposal.

NOTE: If any of the information requested on this form is not available or not applicable, enter N/A in the appropriate box.

Acceptable Knowledge Expert: Kevin J. Peters (Print) / (Sign) **Date:** 11/16/06

DIVIDER

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Site: Idaho National Laboratories (CCP-AK-INL-590)

Waste Stream Description: Bettis Laboratory Homogeneous RH TRU Waste Stored at INL

Waste Stream Number: **IN-ID-BTO-030**

Compound	Suspected Present? (Y/N)	Suspected Concentration (ppm)	Used as a solvent?[a] (Y/N/NA)	Associated with packaging? (Y/N/NA)	TC concentration less than regulatory level?[a] (Y/N/NA)	TC Hazardous Waste Number[a]	F-Listed Hazardous Waste Number[a]	U- or P-Listed Hazardous Waste Number[a]	EPA Hazardous Waste Number Assigned (N/Specify HWN)	State Hazardous Waste Number[b]
Metal Compounds (CCP-PO-001 - Table C3-8 & 40 CFR Part 261)[l]										
Arsenic	Yes	Unknown	N/A	N/A	Unknown	D004	N/A	N/A	D004	N/A
Barium	Yes	Unknown	N/A	N/A	Unknown	D005	N/A	N/A	D005	N/A
Beryllium	No	N/A	N/A	N/A	N/A	N/A	N/A	P015	N/A	N/A
Cadmium	Yes	Unknown	N/A	N/A	Unknown	D006	N/A	N/A	D006	N/A
Chromium	Yes	Unknown	N/A	N/A	Unknown	D007	N/A	N/A	D007	N/A
Lead	Yes	Unknown	N/A	N/A	Unknown	D008	N/A	N/A	D008	N/A
Mercury	No	N/A	N/A	N/A	N/A	D009	N/A	U151	N/A	N/A
Selenium	Yes	Unknown	N/A	N/A	Unknown	D010	N/A	N/A	D010	N/A
Silver	Yes	Unknown	N/A	N/A	Unknown	D011	N/A	N/A	D011	N/A
Volatile Organic Compounds (CCP-PO-001 - Tables C3-2 and B3-4 & 40 CFR Part 261)										
1,1,1-Trichloroethane	Yes	Unknown	Yes	No	N/A	N/A	F001/F002	U226	F002	N/A
1,1,2,2-Tetrachloroethane	No	N/A	N/A	N/A	N/A	N/A	N/A	U209	N/A	N/A
1,1,2-Trichloro-1,2,2-trifluoroethane	Yes	Unknown	Yes	No	N/A	N/A	F001/F002	N/A	F002	N/A
1,1,2-Trichloroethane	No	N/A	N/A	N/A	N/A	N/A	F002	U227[k]	N/A	N/A
1,1-Dichloroethane	No	N/A	N/A	N/A	N/A	N/A	N/A	U076[k]	N/A	N/A
1,1-Dichloroethylene	No	N/A	N/A	N/A	N/A	D029	N/A	U078	N/A	N/A
1,2-Dichlorobenzene[d]	No	N/A	N/A	N/A	N/A	N/A	F002	U070	N/A	N/A
1,2-Dichloroethane	No	N/A	N/A	N/A	N/A	D028	N/A	U077[k]	N/A	N/A
1,4-Dichlorobenzene[d]	No	N/A	N/A	N/A	N/A	D027	N/A	U072	N/A	N/A
2-Ethoxyethanol	No	N/A	N/A	N/A	N/A	N/A	F005	U359[k]	N/A	N/A
2-Nitropropane	No	N/A	N/A	N/A	N/A	N/A	F005	U171[k]	N/A	N/A
Acetone	Yes	Unknown	Yes	No	Unknown	N/A	F003	U002	N/A	N/A
Benzene	No	N/A	N/A	N/A	N/A	D018	F005	U019	N/A	N/A

CCP RECORDS ORIGINAL
DATE REC'D 12/14/17

Waste Stream Number: **IN-ID-BTO-030**

Compound	Suspected Present? (Y/N)	Suspected Concentration (ppm)	Used as a solvent?[a] (Y/N/NA)	Associated with packaging? (Y/N/NA)	TC concentration less than regulatory level?[a] (Y/N/NA)	TC Hazardous Waste Number[a]	F-Listed Hazardous Waste Number[a]	U- or P-Listed Hazardous Waste Number[a]	EPA Hazardous Waste Number Assigned (N/Specify HWN)	State Hazardous Waste Number[b]
Volitile Organic Compounds (Continued)										
Bromoform	No	N/A	N/A	N/A	N/A	N/A	N/A	U225[k]	N/A	N/A
Butanol (n-Butyl alcohol)	Yes	Unknown	Yes	No	N/A	N/A	F003	U031[k]	N/A	N/A
Carbon disulfide	No	N/A	N/A	N/A	N/A	N/A	F005	P022[k]	N/A	N/A
Carbon tetrachloride	No	N/A	N/A	N/A	N/A	D019	F001	U211[k]	N/A	N/A
Chlorobenzene	No	N/A	N/A	N/A	N/A	D021	F002	U037	N/A	N/A
Chloroform	No	N/A	N/A	N/A	N/A	D022	N/A	U044	N/A	N/A
cis-1,2-Dichloroethylene[c]	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cyclohexanone	No	N/A	N/A	N/A	N/A	N/A	F003	U057[k]	N/A	N/A
Ethyl acetate	No	N/A	N/A	N/A	N/A	N/A	F003	U112[k]	N/A	N/A
Ethyl benzene	No	N/A	N/A	N/A	N/A	N/A	F003	N/A	N/A	N/A
Ethyl ether	No	N/A	N/A	N/A	N/A	N/A	F003	U117[k]	N/A	N/A
Formaldehyde[g]	No	N/A	N/A	N/A	N/A	N/A	N/A	U122	N/A	N/A
Hydrazine[h]	Yes	N/A	N/A	N/A	N/A	N/A	N/A	U133	N/A	N/A
Isobutanol	No	N/A	N/A	N/A	N/A	N/A	F005	U140[k]	N/A	N/A
Methanol	Yes	Unknown	Yes	No	Unknown	N/A	F003	U154	N/A	N/A
Methyl ethyl ketone	No	N/A	N/A	N/A	N/A	D035	F005	U159	N/A	N/A
Methyl isobutyl ketone	No	N/A	N/A	N/A	N/A	N/A	F003	U161[k]	N/A	N/A
Methylene chloride	No	N/A	N/A	N/A	N/A	N/A	F001/F002	U080[k]	N/A	N/A
Pyridine[d]	No	N/A	N/A	N/A	N/A	D038	F005	U196	N/A	N/A
Tetrachloroethylene	Yes	Unknown	No	No	Unknown	D039	F001/F002	U210	D039	N/A
Toluene	No	N/A	N/A	N/A	N/A	N/A	F005	U220	N/A	N/A
trans-1,2-Dichloroethylene	No	N/A	N/A	N/A	N/A	N/A	N/A	U079	N/A	N/A
Trichloroethylene	Yes	Unknown	No	No	Unknown	D040	F001/F002	U228	D040	N/A
Trichlorofluoromethane	No	N/A	N/A	N/A	N/A	N/A	F001/F002	U121[k]	N/A	N/A
Vinyl Chloride	No	N/A	N/A	N/A	N/A	D043	N/A	U043	N/A	N/A
Xylenes	No	N/A	N/A	N/A	N/A	N/A	F003	U239	N/A	N/A

Waste Stream Number: **IN-ID-BTO-030**

Compound	Suspected Present? (Y/N)	Suspected Concentration (ppm)	Used as a solvent?[a] (Y/N/NA)	Associated with packaging? (Y/N/NA)	TC concentration less than regulatory level?[a] (Y/N/NA)	TC Hazardous Waste Number[a]	F-Listed Hazardous Waste Number[a]	U- or P-Listed Hazardous Waste Number[a]	EPA Hazardous Waste Number Assigned (N/Specify HWN)	State Hazardous Waste Number[b]
Semivolatile Organic Compounds (CCP-PO-001 - Table C3-6 & 40 CFR Part 261)										
2,4,5-Trichlorophenol	No	N/A	N/A	N/A	N/A	D041[k]	F027[k]	N/A	N/A	N/A
2,4,6-Trichlorophenol	No	N/A	N/A	N/A	N/A	D042[k]	F027[k]	N/A	N/A	N/A
2,4-Dinitrophenol	No	N/A	N/A	N/A	N/A	N/A	N/A	P048[k]	N/A	N/A
2,4-Dinitrotoluene	No	N/A	N/A	N/A	N/A	D030	N/A	U105	N/A	N/A
Cresols	No	N/A	N/A	N/A	N/A	D026	F004	U052	N/A	N/A
Cresols (m)	No	N/A	N/A	N/A	N/A	D024[k]	N/A	N/A	N/A	N/A
Cresols (o)	No	N/A	N/A	N/A	N/A	D023[k]	N/A	N/A	N/A	N/A
Cresols (p)	No	N/A	N/A	N/A	N/A	D025[k]	N/A	N/A	N/A	N/A
Hexachlorobenzene	No	N/A	N/A	N/A	N/A	D032	N/A	U127[k]	N/A	N/A
Hexachlorobutadiene	No	N/A	N/A	N/A	N/A	D033	N/A	U128[k]	N/A	N/A
Hexachloroethane	No	N/A	N/A	N/A	N/A	D034	N/A	U131[k]	N/A	N/A
Nitrobenzene	No	N/A	N/A	N/A	N/A	D036	F004	U169[k]	N/A	N/A
Pentachlorophenol	No	N/A	N/A	N/A	N/A	D037	F027[k]	N/A	N/A	N/A
Pesticides and Herbicides (40 CFR Part 261)										
2,4,5-TP (Silvex)	No	N/A	N/A	N/A	N/A	D017[k]	F027[k]	N/A	N/A	N/A
2,4-D	No	N/A	N/A	N/A	N/A	D016[k]	N/A	U240[k]	N/A	N/A
Chlordane	No	N/A	N/A	N/A	N/A	D020[k]	N/A	U036[k]	N/A	N/A
Endrin	No	N/A	N/A	N/A	N/A	D012[k]	N/A	P051[k]	N/A	N/A
Heptachlor (and its epoxide)	No	N/A	N/A	N/A	N/A	D031[k]	N/A	P059[k]	N/A	N/A
Lindane	No	N/A	N/A	N/A	N/A	D013[k]	N/A	U129[k]	N/A	N/A
Methoxychlor	No	N/A	N/A	N/A	N/A	D014[k]	N/A	U247[k]	N/A	N/A
Toxaphene	No	N/A	N/A	N/A	N/A	D015[k]	N/A	P123[k]	N/A	N/A

Waste Stream Number: **IN-ID-BTO-030**

Compound	Suspected Present? (Y/N)	Suspected Concentration (ppm)	Used as a solvent?[a] (Y/N/NA)	Associated with packaging? (Y/N/NA)	TC concentration less than regulatory level?[a] (Y/N/NA)	TC Hazardous Waste Number[a]	F-Listed Hazardous Waste Number[a]	U- or P-Listed Hazardous Waste Number[a]	EPA Hazardous Waste Number Assigned (N/Specify HWN)	State Hazardous Waste Number[b]
Other Constituents										
Wastewater treatment sludges from electroplating operations	No	N/A	N/A	N/A	N/A	N/A	F006	N/A	N/A	N/A
Spent cyanide plating bath solutions from electroplating operations	No	N/A	N/A	N/A	N/A	N/A	F007	N/A	N/A	N/A
Spent cyanides stripping and cleaning bath solutions from electroplating operations	No	N/A	N/A	N/A	N/A	N/A	F009	N/A	N/A	N/A
Total PCB Concentration[j]	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Additional EPA Hazardous Constituents (List)	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Note: If sampling homogeneous waste, identify all chemical constituents listed in tables C3-4, C3-6 and C3-8 of the WAP										
Additional State Hazardous Constituents[b] (List)[e]	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Potentially Flammable VOCs (List)[e,f] Acetone Butanol (n-butyl alcohol) Methanol	Yes	Unknown	Yes	No	N/A	N/A	N/A	N/A	No	N/A
Tentatively Identified Compounds (List)[e]	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

a. Source: Title 40 Code of FederalRegulations Part 261, Identification and Listing of Hazardous Waste
b. Source: Cite applicable state regulation
c. Superscript not used
d. Can also be analyzed as a semivolatile organic compound
e. Add rows or attach additional sheets as necessary
f. Flammable VOCs included in the CH-TRAMPAC
g. Required only for homogeneous solids and soil/gravel from LANL and SRS
h. Required only for homogeneous solids and soil/gravel from ORNL and SRS
i. Antimony, nickel, thallium, vanadium, and zinc are included in Table C3-8 of CCP-PO-001but are not regulated under 40 CFR Part 261, and therefore, are not subject to AK evaluation per CCP-PO-001.
j. Source: Title 40 Code of Federal Regulations Part 761, Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions.
k. This EPA Hazardous Waste Number is not permitted for WIPP disposal.
NOTE: If any of the information requested on this form is not available or not applicable, enter N/A in the appropriate box.

Acceptable Knowledge Expert: James Luginbyhl / James Luginbyhl Date: 6/13/2012
Print Sign

Attachment 6 – Waste Form, Waste Material Parameters, Prohibited Items, and Packaging

Site(s): AMWTP

Waste Stream Description: Argonne Heterogeneous Debris Waste

Container ID Numbers: See CCP-TP-005, Attachment 8 for containers in this waste stream

Waste Stream Number: ID-AECHDM	
Physical Waste Form (e.g., debris, solidified waste)	Debris
Summary Category Group [a]	S5000
Waste Matrix Code Group [a]	Heterogeneous Debris Waste
Waste Matrix Code [b]	S5400
Waste Material Parameter Weights [c] (See attached AK Source C3002 – w/o attachments)	Estimated Waste Stream Weight Percent Average (attach evaluation justifying percentages)
Iron-based metals/alloys	51.1%
Aluminum-based metals/alloys	0.9%
Other metals	4.1%
Other inorganic materials	4.3%
Cellulosics	3.7%
Rubber	7.3%
Plastics (waste materials)	26.7%
Organic matrix	<0.01%
Inorganic matrix	1.8%
Soils/Gravels	0.1%
Packaging Materials	Present (Y/N)?
Steel	N
Plastics	Y – vented (NucFil Bag Vent) polyethylene drum liner bag
Prohibited Wastes [d,e,f,g]	Present (Y/N)?
Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE. Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. Observable liquid shall not be present in a container with EPA HWN U134 assigned.	N
Non-radionuclide pyrophoric materials	N
Sealed containers > 4 liters	N
Hazardous waste not occurring as co-contaminants with TRU mixed waste (non-mixed hazardous waste)	N

CCP RECORDS ORIGINAL
DATE REC'D 12-1-11

Attachment 6 – Waste Form, Waste Material Parameters, Prohibited Items, and Packaging (continued)

Waste Stream Number: ID-AECHDM	
Explosives	N
Compressed gases	N
Residual hydrofluoric acid (if U134 assigned to stream)	N
Residual PCB liquids [j]	N
Ignitables (EPA Hazardous Waste Number D001)	N
Corrosives (EPA Hazardous Waste Number D002)	N
Reactives (EPA Hazardous Waste Number D003)	N
Waste incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials, or other wastes [h]	N
Spent Nuclear fuel or high-level waste [i]	N
Any un-vented plastic bags > 4 liters that have been heat-sealed	N
Additional Information (if available)	None
Packaging	—
Waste container type?	DOT 7A, Type A, 55-gallon open head drum
Liner type?	vented (NucFil Bag Vent) polyethylene drum liner bag
Is liner punctured?	No – closed with twist and tape or fold and tape method and vented
Is filter vent installed?	NucFil-036 R DA PU on liner bag NucFil-019DS – 55-gallon drums
Maximum number of confinement layers	2 layers

a. Source: *CCP Transuranic Waste Characterization Quality Assurance Project Plan* (CCP-PO-001) Introduction.
b. Source: *Transuranic Waste Baseline Inventory Report* (DOE/CAO-95-1121) or DOE Waste Treatability Group Guidance (DOE/LLW-217). Note: the waste matrix code should not be assigned at the summary category group level.
c. Source: CCP-PO-001 – Table C3-1. Attach the Waste Material Parameter Evaluation Memorandum used to estimate values include in this Table (see Section 4.4.27).
d. Source: CCP-PO-001 – Section C-1c
e. Source: *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant* (WAC)(DOE/WIPP-02-3122), Section 3
f. Source: *TRUPACT-II Content Codes* (TRUCON) (DOE/WIPP 89-004)
g. Source: *TRUPACT-II Authorized Methods for Payload Control (TRAMPAC)*, Washington TRU Solutions, LLC
h. This waste has been approved for disposal at the WIPP by the Permittee as documented by Appendix C1 of the WIPP RCRA Part B Permit Application and the Permittee's approval and assignment of the applicable TRUCON Codes for this waste stream.
i. Source: *Nuclear Waste Policy Act of 1982* (42 U.S.C. 10101)
j. Source: Polychlorinated Biphenyls (PCBs) manufacturing, Processing, Distribution and Commerce, and Use Prohibitions (40 CFR 761)

Acceptable Knowledge Expert: Kevin J. Peters (Print) (Sign) Date: 9/29/2011

Memorandum

To: CCP Records

From: Kevin J. Peters, AKE

Date: March 23, 2011

RE: Evaluation of Waste Material Parameter Weights for Waste Streams AECHDM-PK and AECHHM-PK

In accordance with *CCP Process Knowledge Compilation for Preliminary Characterization*, CCP-TP-401, Revision 1, Section 4.4.19, Waste Material Parameters (WMP) shall be estimated on a weight percent basis for the waste stream, documenting the assumptions and justification for deriving the estimated WMP. This memorandum documents the results of the evaluation to estimate the relative WMP weights for Argonne CH waste streams AECHDM-PK and AECHHM-PK.

Waste Stream AECHDM-PK

The WMP weight estimates for Waste Stream AECHDM-PK were derived using WMP data generated during the certification corresponding Argonne debris waste stream AECHDM (373 drums) shipped to WIPP during the 2002 to 2003 time frame. The WMPs for the waste stream were estimated by using the characterization data from AECHDM contained in the WIPP Waste Data System (WDS) assuming that this data would be representative of the remaining inventory of the same waste. The results of this analysis are presented below.

WMP Description	Average Weight Percent	Weight Percent Range
Iron-based Metals/Alloys	51.1%	0.0% - 90.5%
Aluminum-based Metals/Alloys	0.9%	0.0% - 47.5%
Other Metals/Alloys	4.1%	0.0% - 46.0%
Inorganic Matrix	1.8%	0.0% - 82.3%
Organic Matrix	<0.01	0.0% 76.2%
Other Inorganic Materials	4.3%	0.0% - 85.5%
Cellulosics	3.7%	0.0% - 60.0%
Rubber	7.3%	0.0% - 83.5%
Plastics (waste materials)	26.7%	4.7% - 100%
Soils/Gravel	0.1%	0.0% 22.3%
Total Inorganic Waste Average	**62.3%**	
Total Organic Waste Average	**37.7%**	

The WMP data from WDS and associated calculations are provided in Attachment A. These estimates assume that the waste is similar to the original Argonne debris waste stream and may vary due to the high level of variability between waste containers. Additionally, addition of secondary debris waste from the immobilization during the packaging of waste stream AECHHM-PK may result in an increased amount of plastic

(bottles, jugs, carboys, bags), metal (cans and drums), glass (bottles and vials), and cellulosics (rags) being added to this stream.

Waste Stream AECHDM-PK

Based on data obtained from WIPP WDS database for 55 drums in waste stream AECHHM originally sent to WIPP, these drums contained 100 percent WMP inorganic matrix (See Attachment B). This waste stream only contained solidified aqueous liquids and did not include the organic liquids to be included in waste stream AECHHM-PK. In an effort to estimate the relative amounts of solidified organic liquids (WMP organic matrix) and solidified aqueous liquids (WMP inorganic matrix) to be generated during WMO solidification operations, the liquids present in the inventory to be solidified were evaluated. Based on this evaluation it was determined that approximately 10 percent of the liquids were organic and 90 percent of the liquids were aqueous (See Attachment C). The results of this analysis are presented below.

WMP Description	Average Weight Percent	Weight Percent Range
Inorganic Matrix	89.1%	0.0% - 100%
Organic Matrix	10.9%	0.0% - 100%

It should be noted that this evaluation was limited to estimating the WMP weights for the immobilized homogeneous waste materials and does not include the metal inner cans used during the solidification of the liquids packaged in the drums. The relative amount of inorganic matrix may be greater than that estimated due to the reprocessing of failed containers originally packaged to be shipped to WIPP in waste stream AECHHM.

ATTACHMENTS

Attachment A - WMP Analysis of Waste Stream AECHDM
Attachment B - WMP Analysis of Waste Stream AECHHM
Attachment C - Evaluation of AECHHM Liquids

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Attachment 6 – Waste Form, Waste Material Parameters, Prohibited Items, and Packaging

Site(s): Idaho National Laboratory (CCP-AK-INL-005)

Waste Stream Description: Solidified Organics (IDCs 700 and 801)

Container ID Numbers: See CCP-TP-005, Attachment 8 for containers in this waste stream

Waste Stream Number: ID-RF-S3150-A	
Physical Waste Form (e.g., debris, solidified waste)	Homogeneous Solids
Summary Category Group [a]	S3000
Waste Matrix Code Group [a]	Solidified Organics
Waste Matrix Code [b]	S3150
Waste Material Parameter Weights [c]	Estimated Waste Stream Weight Percent Average (see attached WMP memorandum justifying percentages)
Iron-based metals/alloys	<0.01%
Aluminum-based metals/alloys	0.00%
Other metals	<0.01%
Other inorganic materials	0.32%
Cellulosics	<0.01%
Rubber	<0.01%
Plastics (waste materials)	0.32%
Organic matrix	99.35%
Inorganic matrix	0.00%
Soils/Gravels	<0.01%
Packaging Materials	Present (Y/N)?
Steel (packaging materials)	Yes
Plastics (packaging materials)	Yes

NTPC RECORDS ORIGINAL
DATE REC'D 4/25/1380

Attachment 6 – Waste Form, Waste Material Parameters, Prohibited Items, and Packaging (continued)

Waste Stream Number: ID-RF-S3150-A

Prohibited Wastes [d,e,f,g]	Present (Y/N)?
Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE. Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. Observable liquid shall not be present in a container with EPA HWN U134 assigned.	Yes
Non-radionuclide pyrophoric materials	No
Sealed containers > 4 liters	Yes
Hazardous waste not occurring as co-contaminants with TRU mixed waste (non-mixed hazardous waste)	No
Explosives	No
Compressed gases	No
Residual hydrofluoric acid (if U134 assigned to stream)	No
Residual PCB liquids [j]	No
Ignitables (EPA Hazardous Waste Number D001)	No
Corrosives (EPA Hazardous Waste Number D002)	No
Reactives (EPA Hazardous Waste Number D003)	No
Waste incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials, or other wastes [h]	No
Spent Nuclear fuel or high-level waste [i]	No
Any un-vented plastic bags > 4 liters that have been heat-sealed	No
Additional Information (if available)	N/A

Attachment 6 – Waste Form, Waste Material Parameters, Prohibited Items, and Packaging (continued)

Waste Stream Number: ID-RF-S3150-A	
Packaging	
Waste container type?	55-gallon drum
Liner type?	90-mil rigid liner
Is liner punctured?	Yes and No (not all have been punctured)
Is filter vent installed?	Yes and No (not all have a filter vent)
Maximum number of confinement layers?	2

a. Source: *CCP Transuranic Waste Characterization Quality Assurance Project Plan* (CCP-PO-001) Introduction.
b. Source: *Transuranic Waste Baseline Inventory Report* (DOE/CAO-95-1121) or DOE Waste Treatability Group Guidance (DOE/LLW-217). Note: the waste matrix code should not be assigned at the summary category group level.
c. Source: CCP-PO-001 – Table C3-1. Attach the Waste Material Parameter Evaluation Memorandum used to estimate values included in this Table (see Section 4.4.27).
d. Source: CCP-PO-001 – Section C-1c
e. Source: *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant* (WAC)(DOE/WIPP-02-3122), Section 3
f. Source: *TRUPACT-II Content Codes* (TRUCON) (DOE/WIPP 89-004)
g. Source: *TRUPACT-II Authorized Methods for Payload Control (TRAMPAC)*, Washington TRU Solutions, LLC
h. This waste has been approved for disposal at the WIPP by the Permittee as documented by Appendix C1 of the WIPP RCRA Part B Permit Application and the Permittee's approval and assignment of the applicable TRUCON Codes for this waste stream.
i. Source: *Nuclear Waste Policy Act of 1982* (42 U.S.C. 10101)
j. Source: Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution and Commerce, and Use Prohibitions (40 CFR Part 761)

Acceptable Knowledge Expert: Scott Smith / [signature] Date: 2/21/2013
Print Sign

Memorandum

To: CCP Records

From: Scott Smith, CCP AKE

Date: February 21, 2013

RE: Revised Waste Material Parameter Analysis for Waste Stream ID-RF-S3150-A, Rocky Flats Solidified Organics

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In accordance to *CCP Acceptable Knowledge Documentation*, CCP-TP-005, Revision 24, Section 4.4.27, Waste Material Parameters (WMP) shall be estimated on a weight percent basis for the waste stream, documenting the assumptions and justification for deriving the estimated WMP.

This memo is to document a change to the WMP estimate previously prepared, see October 2, 2012 memo "Revised Waste Material Parameter Analysis for Waste Stream ID-RF-S3150-A, Rocky Flats Solidified Organics, based on additional Acceptable Knowledge (AK). The waste stream has been revised to add estimates for 'Aluminum-Based Metals/Alloys', 'Other Metals', 'Rubber', and 'Inorganic Matrix'. These revisions are necessary because drums of solidified organics containing lead have been identified, and the WMP table is being updated to include all of the WMP categories for consistency with the CCP-TP-005 Attachment 6. The revised WMP estimates are indicated in the table below, Waste Stream ID-RF-S3150-A WMP Estimates.

Aluminum-Based Metals/Alloys and Inorganic Matrix

Aluminum and inorganic matrix WMPs have not been identified for this waste stream. However, the WMP categories are added to the table below for consistency with the CCP-TP-005 Attachment 6.

Other Metals and Rubber

As described in Discrepancy Resolution D025, Addition of EPA Hazardous Waste Number D008 to Waste Stream ID-RF-S3150-A, one (1) drum of solidified organics was found by real-time radiography (RTR) to contain leaded aprons. The average, minimum, and maximum WMP weight percentage for this drum was calculated using the RTR data, included as Attachment 1. Since the lead identified was leaded aprons, the RTR operator included the entire weight estimate for these items as 'Rubber'. Weight estimates for 'Rubber' are now included for the waste stream based on this data. However, since this data is based on a very small portion of the waste stream (one container), the average value for this parameter over the entire waste stream will be listed as less than 0.01 percent. Although an estimate for 'Other Metals' for lead was not included by RTR, this WMP is assumed to potentially be included in the waste stream in small quantities, less than 0.01 percent. In addition, with this same rationale, and since the maximum values in this small population for the WMP categories previously estimated (e.g., Other Inorganics, Plastics, and Organic Matrix) are within the previously identified weight percent ranges, the estimates for these parameters will not be changed.

Waste Stream ID-RF-S3150-A WMP Estimates

Waste Material Parameter	Average Weight Percent	Weight Percent Range
Iron-Based Metals/Alloys	<0.01%	0.0 – 0.44%
Aluminum-Based Metals/Alloys	0.0%	0.0 – 0.0%
Other Metals	<0.01%	0.0 – <0.01%
Other Inorganic Materials	0.32%	0.0 – 3.09%
Cellulosics	<0.01%	0.0 – 2.79%
Plastics (waste materials)	0.32%	0.0 – 3.53%
Rubber	<0.01%	0.0 – 2.15
Organic Matrix	99.35%	99.35 – 100%
Inorganic Matrix	0.0%	0.0 – 0.0%
Soils/Gravels	<0.01%	0.0 - <0.1%
Total Inorganic Waste Average	**0.32%**	
Total Organic Waste Average	**99.67%**	

SMS

Attachments as stated.

Attachment 1
Waste Material Parameter Data for Lead Container in Waste Stream ID-RF-S3150-A

Batch Data Report No.	Container	Cellulosics (kg)	Plastics (kg)	Rubber (kg)	Organic Matrix (kg)	Inorganic Matrix (kg)	Iron-based Metals (kg)	Aluminum-based Metals (kg)	Other Metals (kg)	Other Inorganics (Absorbent) (kg)
INRTR5050104	10018191	0.0	1.0	5.0	224.3	0.0	0.0	0.0	0.0	2.0

	Cellulosics Weight %	Plastics Weight %	Rubber Weight %	Organic Matrix Weight %	Inorganic Matrix Weight %	Iron-based Metals Weight %	Aluminum-based Metals Weight %	Other Metals Weight %	Other Inorganics (Absorbent) Weight %
	0.00%	0.43%	2.15%	96.56%	0.00%	0.00%	0.00%	0.00%	0.86%
Average	0.00%	0.43%	2.15%	96.56%	0.00%	0.00%	0.00%	0.00%	0.86%
Min	0.00%	0.43%	2.15%	96.56%	0.00%	0.00%	0.00%	0.00%	0.86%
Max	0.00%	0.43%	2.15%	96.56%	0.00%	0.00%	0.00%	0.00%	0.86%

Page 1 of 1

Memorandum

To: CCP Records

From: Scott Smith, CCP AKE

Date: October 2, 2012

RE: Revised Waste Material Parameter Analysis for Waste Stream ID-RF-S3150-A, Rocky Flats Solidified Organics

I421 Overpacked in 55 gal for 100 pinch

I409 Overpacked in 55 gal for 100 pinch

In accordance to *CCP Acceptable Knowledge Documentation*, CCP-TP-005, Revision 24, Section 4.4.27, Waste Material Parameters (WMP) shall be estimated on a weight percent basis for the waste stream, documenting the assumptions and justification for deriving the estimated WMP.

This memo is to document a change to the WMP estimate previously prepared, see October 16, 2006 memo "Waste Material Parameter Analysis for Waste Streams ID-RF-S3114 and ID-RF-S3150-A, Rocky Flats Absorbed and Solidified Organic Liquids Waste", based on additional Acceptable Knowledge (AK). The Accelerated Retrieval Project-V (ARP-V) enclosure will be utilized by the Sludge Repackaging Project (SRP) to repackage solidified organics waste. The sludge will be processed in a drum packaging station (DPS), a glovebox facility in the enclosure. As described in References P542, *SRP DPS Waste Packaging*; and P543, *SRP RA V Waste Processing*; small quantities of soil from cleanup of incidental spills of waste material during reprocessing activities may also be included with the waste. Spills may occur when the waste is being inspected, mixed with absorbents, and/or when the tray liners are hoisted. This spillage will accumulate at the bottom of the DPS. It will be cleaned out by collecting the spillage and surrounding soil, transferring to other waste handling trays, and then returned to the sorting table for inclusion in repackaged waste. Inspections of the soil in the immediate vicinity of containment pans and processing areas will be conducted on a daily basis using cameras to ensure collection of any waste/material that is spilled.

Soils were not previously identified as a WMP potentially included in the waste stream. It is estimated that very small quantities will be included, contributing trace amounts to the overall waste stream average. Therefore the waste stream waste material parameters are revised as indicated in the following table.

Waste Material Parameter	Average Weight Percent	Weight Percent Range
Iron-Based Metals/Alloys	<0.01%	0.0 – 0.44%
Other Inorganic Materials	0.32%	0.0 – 3.09%
Cellulosics	<0.01%	0.0 – 2.79%
Plastics (waste materials)	0.32%	0.0 – 3.53%
Organic Matrix	99.35%	99.35 – 100%
Soils/Gravels	<0.01%	0.0 - <0.1%
Total Inorganic Waste Average	**0.32%**	
Total Organic Waste Average	**99.67%**	

To: CCP Records

Memorandum

From: Jeff Harrison, CCP AKE

Date: October 16, 2006

RE: Waste Material Parameter Analysis for Waste Streams ID-RF-S3114 and ID-RF-S3150-A, Rocky Flats Absorbed and Solidified Organic Liquids Waste

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In accordance to *CCP Acceptable Knowledge Documentation*, CCP-TP-005, Revision 18, Section 4.4.24, Waste Material Parameters (WMP) shall be estimated on a weight percent basis for the waste stream, documenting the assumptions and justification for deriving the estimated WMP.

To estimate the WMP for waste streams ID-RF-S3114 and ID-RF-S3150-A, WMP data were obtained from the WIPP Waste Information System (WWIS) database as of October 3, 2006. The WMP data were derived from real-time radiography (RTR) and visual examination (VE) of the Absorbed Organic Liquid waste and the Solidified Organic Liquid waste by the current Central Characterization Project (CCP) TRU Waste Certification Program (TWCP) at the Idaho National Laboratory (INL) (waste streams ID-RF-S3114 and ID-RF-S3150-A, respectively) and by the Rocky Flats Environmental Technology Site (RFETS) TWCP (waste stream profiles RF135.01 and RF107.04, respectively). WWIS data from the INL 3100m^3 Project TWCP were not used in this evaluation as these waste streams were not certified for shipment to WIPP by the 3100m^3 Project.

Waste Stream ID-RF-S3114

The number of containers from the RFETS TWCP that were evaluated is 11. The number of containers from the CCP TWCP that were evaluated is 156. The current total volume of CCP waste stream ID-RF-S3114 is 4,657 containers (CCP-TP-005, Attachment 8, 10/06/06). The 156 containers represent only 3.3% of the current waste stream volume. The closure dates for the 4,657 containers in CCP waste stream ID-RF-S3114 range from August 1972 to September 1988. The closure dates for the 156 drums in WWIS (for CCP waste stream ID-RF-S3114) range from August 1975 to February 1986. There are more than 900 containers in the waste stream generated before August 1975, but only 17 containers generated after February 1986. Even though RTR or VE has not been performed on 97% of the waste stream, including the waste generated before August 1975, the Grease Plant was a waste treatment process that produced a consistent sludge-like material, and that process did not change during this time period. It is not expected that the waste generated prior to 1975 would be dissimilar to the wastes that have undergone RTR and VE. Therefore, it is assumed that the WWIS data for these 167 containers are representative of waste stream ID-RF-S3114 as a whole. Average, minimum, and maximum WMP weight percentages were calculated using the WWIS data. The results of this analysis are presented in the following table. The WWIS raw data and calculations are provided electronically in Microsoft Excel.

Waste Material Parameter	Average Weight Percent	Weight Percent Range
1-Fe Based Metals/Alloys	0.01%	0.0 – 0.92%
4-Other Inorganic Materials	0.84%	0.0 – 16.10%
6-Cellulosics	<0.01%	0.0 – 2.79%
8-Plastics (waste materials)	0.39%	0.0 – 3.53%
10-Solidified Organic Material	98.75%	83.90 – 100%
Total Inorganic Waste Average	**0.85%**	
Total Organic Waste Average	**99.14%**	

Waste Stream ID-RF-S3150-A

The number of containers from the RFETS TWCP that were evaluated is 499. The number of containers from the CCP TWCP that were evaluated is 516. The current total volume of CCP waste stream ID-RF-S3150-A is 836 containers (CCP-TP-005, Attachment 8, 02/02/06). The 516 containers represent 62% of the current waste stream volume. The closure dates for the 836 containers in CCP waste stream ID-RF-S3150-A range from February 1986 to September 1988. The closure dates for the 516 drums in WWIS (for CCP waste stream ID-RF-S3150-A) also range from February 1986 to September 1988. Therefore, it is assumed that the WWIS data for these 1,015 containers are representative of waste stream ID-RF-S3150-A as a whole. Average, minimum, and maximum WMP weight percentages were calculated using the WWIS data. The results of this analysis are presented in the following table. The WWIS raw data and calculations are provided electronically in Microsoft Excel.

Waste Material Parameter	Average Weight Percent	Weight Percent Range
1-Fe Based Metals/Alloys	<0.01%	0.0 – 0.44%
4-Other Inorganic Materials	0.32%	0.0 – 3.09%
6-Cellulosics	<0.01%	0.0 – 2.79%
8-Plastics (waste materials)	0.32%	0.0 – 3.53%
10-Solidified Organic Material	99.35%	99.35 – 100%
Total Inorganic Waste Average	**0.32%**	
Total Organic Waste Average	**99.67%**	

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Attachment 6 – Waste Form, Waste Material Parameters, Prohibited Items, and Packaging

Site(s): Idaho National Laboratory

Waste Stream Description: Soil with Minor Amounts of Homogeneous Solids and Debris (CCP-AK-INL-001)

Container ID Numbers: See CCP-TP-005, Attachment 8 for containers in this waste stream

Waste Stream Number: ID-SDA-SOIL	
Requirement	**Result**
Physical Waste Form (e.g., debris, solidified waste)	Soil/Gravel
Summary Category Group [a]	S4000
Waste Matrix Code Group [a]	Soils
Waste Matrix Code [b]	S4200
Waste Material Parameter Weights [c]	Estimated Waste Stream Weight Percent Average (attach evaluation justifying percentages)
Iron-based metals/alloys	<1.0%
Aluminum-based metals/alloys	<1.0%
Other metals	<1.0%
Other inorganic materials	2.8%
Cellulosics	1.8%
Rubber	<1.0%
Plastics (waste materials)	<1.0%
Organic matrix	<1.0%
Inorganic matrix	<1.0%
Soils/Gravels	93.4%
Packaging Materials	Present (Y/N)?
Steel (packaging materials)	Y
Plastics (packaging materials)	Y

ORIGINAL

Attachment 6 – Waste Form, Waste Material Parameters, Prohibited Items, and Packaging (continued)

Waste Stream Number: ID-SDA-SOIL	
Requirement	**Result**
Prohibited Wastes [d,e,f,g]	Present (Y/N)?
Liquid waste > 1 inch or 2.5 cm in the bottom of internal container or >1 percent of volume of the waste container	Y
Non-radionuclide pyrophoric materials	Y
Sealed containers > 4 liters	N
Hazardous waste not occurring as co-contaminants with TRU mixed waste (non-mixed hazardous waste)	N
Explosives	Y
Compressed gases	Y
Residual hydrofluoric acid (if U134 assigned to stream)	N
Residual PCB liquids	Y
High plutonium content material/waste	N
Ignitables (EPA Hazardous Waste Number D001)	Y
Corrosives (EPA Hazardous Waste Number D002)	Y
Reactives (EPA Hazardous Waste Number D003)	Y
Waste incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials, or other wastes [h]	N
Any un-vented plastic bags > 4 liters that have been heat-sealed	N
Additional Information (if available)	

Attachment 6 – Waste Form, Waste Material Parameters, Prohibited Items, and Packaging (continued)

Waste Stream Number: ID-SDA-SOIL	
Requirement	**Result**
Packaging	
Waste container type?	55-gallon drum
Liner type?	90-mil polyethylene liner
Is liner punctured?	N/A (90-mil liner does not have a lid)
Is filter vent installed?	Yes
Maximum number of confinement layers?	1 (filtered liner bag is sealed with tape)

a. Source: *CCP Transuranic Waste Characterization Quality Assurance Project Plan* (CCP-PO-001) Introduction.
b. Source: *Transuranic Waste Baseline Inventory Report* (DOE/CAO-95-1121) Table 1-2 or DOE Waste Treatability Group Guidance (DOE/LLW-217). Also see WIPP Hazardous Waste Permit Final Clarification Number CAO-00-061. Note: the waste matrix code should not be assigned at the summary category group level.
c. Source: CCP-PO-001 – Table B3-1
d. Source: CCP-PO-001 – Section B-1c
e. Source: *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant* (WAC)(DOE/WIPP-02-3122), Section 3
f. Source: *TRUPACT-II Content Codes* (TRUCON) (DOE/WIPP 89-004)
g. Source: *TRUPACT-II Authorized Methods for Payload Control (TRAMPAC)*, Westinghouse TRU Solutions, LLC
h. This waste has been approved for disposal at the WIPP by the Permittee as documented by Appendix C1 of the WIPP RCRA Part B Permit Application and the Permittee's approval and assignment of the applicable TRUCON Codes for this waste stream.

Acceptable Knowledge Expert: Carrie Johnson / Carrie Johnson
Print Sign

Date: 6/19/2009

Verified
when was there no defined

Memorandum

TO: CCP Records Center

FROM: Scott M. Smith

DATE: June 19, 2009

SUBJECT: Revised Waste Material Parameter Analysis for Waste Streams ID-SDA-SLUDGE, ID-SDA-SOIL, and ID-SDA-DEBRIS

In accordance to *CCP Acceptable Knowledge Documentation*, CCP- TP-005, Revision 18, Section 4.4.24, Waste Material Parameters (WMPs) shall be estimated on a weight percent basis for the waste stream, documenting the assumptions and justification for deriving the estimated WMPs.

To estimate the WMP weight percentages for waste streams ID-SDA-SLUDGE, ID-SDA-SOIL, and ID-SDA-DEBRIS, data from two sources were evaluated; the INL Waste Inventory Location Database (WILD) and CCP Visual Examination (VE) batch data reports. The WILD data evaluated consists of the weights of graphite, filters, RO, 741-sludge, 742-sludge, and 743-sludge targeted for retrieval and in the entire ARP (i.e., 5.69 acre area of the SDA). CCP VE batch data reports were evaluated for approximately 11,500 drums that have been generated from ARP-I and the portions of ARP-II and ARP-III that have been retrieved and packaged through December 31, 2008 (Reference ID-U329).

Waste Inventory Location Database

The WILD contains shipment information from waste disposal forms, including the waste type, generator, and waste weight (Reference ID-U353). The WILD was queried for waste buried in all of the Subsurface Disposal Area (SDA) retrieval areas which are as follows:

- ARP-I (~½-acre area within Pit 4)
- ARP- II (~½-acre area within Pits 4 and the adjacent 6)
- ARP- III (~½-acre within Pit 6)
- ARP- IV (~0.8-acre area within Pit 5)
- ARP- V (~0.6-acre area within Pit 9)
- Remaining 3.15 Acre Area (parts of Pits 1, 2, 4, and 10)

WILD does not contain data for each individual container. The container data from the waste disposal forms are grouped by Type Code and Generator. For example, shipment number RFODOWSRIOI/06/6781010 includes several waste types and generators. For Waste Type IV, Generator RF0741, WILD indicates 12,615 lbs gross weight and a container count of 25 55-gallon drums. The WILD data were filtered to include only those waste types that are targeted for retrieval, which are:

- Graphite Debris - Type Codes "GRAPHITE" and "F" (Bldg. 444 Graphite)
- Filter Debris - Type Codes II (filter paper) and III (CWS and HEPA filters)
- Inorganic Sludge - Type Codes RO (Roaster Oxide) and IV (Gen. RF0741 and RF0742)

- Organic Sludge - Type Codes IV and VI (Gen. RF0743)

Since the graphite and filter debris are a separate waste stream from the inorganic and organic sludges, the data were analyzed separately. The following are the results of this analysis. The WILD data are provided in the Excel spreadsheet WMP_WILD Data_ID-U353_5.69 AK Physical Detail, with excerpts provided as Attachment 1.

Sludge

- 64.8 wt% inorganic sludge and 35.2 wt% organic sludge (all retrieval areas combined)
- 39.1 wt% inorganic sludge and 60.9 wt% organic sludge (ARP-I - ARP-III only)
- 50.0 wt% inorganic sludge and 50.0 wt% organic sludge (ARP-I - ARP-IV combined)

Debris

- 35.3 wt% graphite and 64.7 wt% filters (all retrieval areas combined)
- 27.5 wt% graphite and 72.5 wt% filters (ARP-I - ARP-III only)
- 30.9 wt% graphite and 69.1 wt% filters (ARP-I - ARP-IV combined)

This analysis is based on net weight of the waste. The WILD only provides gross weights, a container count, and container type. Net weights or tare weights are not given. Net weights were calculated based on assumed tare weights.

- 55-Gal Drum - 50 lbs (17H drum weight from Ref. P512 in CCP-AK-INL-004)
- 30-Gal Drum - 42 lbs (17C drum weight from Ref. P512 in CCP-AK-INL-004)
- 40-Gal Drum - 46 lbs (A guess mid-way between a 30-gallon and a 55-gallon)
- 30-Gal Drum inside a 55-Gal Drum - 92 lbs (Sum; this is for Roaster Oxide)
- Cardboard Box - 3 lbs (A guess based on size of HEPA filter; 2-ft x 2-ft x 1-ft)
- Wooden Box - 614 lbs (The wooden boxes used to ship Type III HEPA filters were typically 4-ft x 4-ft x 7-ft [Ref. RF-C037]. Based on similar boxes listed in Ref. P512 in CCP-AK-INL-004, the tare weight assumed for this box is 560 lbs. And because of the size of this box and the size of the filter, it is assumed that a box may contain up to 18 filters. The weight of 18 cardboard box containing filters would be 54 lbs (3 lbs x 18). Therefore, 614 lbs will be assumed as the overall tare weight of the box.
- Wooden Box - 225 lbs (There are 34 boxes of filters that cannot be 560 or 614 lbs because the calculated net weight is a negative number. Using 225 lbs is somewhat arbitrary but provides a reasonable calculated net weight).

Visual Examination Data

As of December 2008, VE data has been compiled for 8,750 drums in waste stream ID-SDA-SLUDGE, 2,067 drums in waste stream ID-SDA-SOIL, and 738 drums in waste stream ID-SDA-DEBRIS. The WMP weight percentage estimates from this VE data (ID-U329) are presented in Attachment 2.

Based on an evaluation of VE data for the 8,750 drums in waste stream ID-SDA-SLUDGE, inorganic matrix (741/742-sludge and RO) is about 23.5 wt% and organic matrix (743-sludge) is 70.4 wt%. This is consistent with the above WILD data for the areas currently being excavated, ARP-I, and portions of ARP-II and ARP-III (Reference ID-U353).

Even though soil is not targeted for retrieval, waste stream ID-SDA-SOIL was created because there are drums that contain some targeted debris and/or sludge wastes but are predominantly soil (at least 50 vol.%). Based on an evaluation of VE data for the 2,067 drums in waste stream ID-SDA-SOIL, soil/gravel is 93.4 wt%.

Based on an evaluation of VE data for the 738 drums in waste stream ID-SDA-DEBRIS, other inorganic material (primarily graphite) is about 59.0 wt% and cellulosics (primarily filters) is about 35.4 wt%. This is not consistent with the above WILD data for the entire retrieval areas to be excavated. There may be a couple of reasons for this inconsistency. One is the retrieval has progressed only through ARP-I and a portion of ARP-II and ARP-III, and based on waste disposal locations in WILD, 67 percent of the filter waste volume is buried in the portions of the retrieval area to be excavated (e.g. ARP-IV, ARP-V, and the remaining 3.15 acre area (Reference ID-U351).

Another possible reason for this inconsistency is the removal of the wood filter frame. For ARP-I and portions of ARP-II operations, only 55-gallon drums were being used for packaging waste and a 2-ft x 2-ft x 1-ft HEPA filter with the frame will not fit in a 55-gallon drum. Only the filter media was packaged into the drum; the wood filter frame was removed and placed back into the pit. The above calculations include the whole filter.

Waste Material Parameter Evaluation

To determine the WMPs, the waste types have to be correlated to the appropriate WMP. The following is the basis for this correlation.

- 741-Sludge and 742-Sludge - These sludges were derived from the treatment of aqueous liquid wastes. Portland cement was also added to the dried sludge. This waste is best described by the WMP "inorganic matrix" which is defined in the WAP as sludge or aqueous based liquids that are solidified with cement, calcium silicate, or other solidification agents, such as wastewater treatment sludge.

- Roaster Oxide - RO consists of pure depleted uranium metal machine turnings that have been converted to an oxide in a roaster. The WMP "other inorganic material" could be assigned but is not. The WAP defines homogeneous waste as an inorganic process residues, and RO fits the description of an inorganic process residue. Since the above sludges are also considered homogeneous waste, RO was assigned the WMP "inorganic matrix."

- 743-Sludge - This sludge was derived from the treatment of oils and organic solvents into a solid by mixing with a synthetic calcium silicate. This waste is best described by the WMP "organic matrix" which is defined in the WAP as cemented organic resins, solidified organic liquids and sludges.

- Graphite - Graphite is one of the allotropes of carbon. This waste is best described by the WMP "other inorganic material" which is defined in the WAP as nonmetallic inorganic waste including concrete, glass, firebrick, ceramics, sand, and inorganic sorbents.

- Filters - Filter wastes include Type II and Type III wastes. Most of the filters in the SDA are best described by the WMP "cellulosics" which is defined in the WAP as materials generally derived from high-polymer plant carbohydrates, such as paper, cardboard, wood, and cloth. Type II waste is filter paper used to filter machine coolant and other process liquids.

  Type III waste is CWS filters utilized in building ventilation systems, and HEPA filters which eventually replaced CWS filters. The standard CWS-6 type filter consisted of a wooden frame. cellulose-asbestos medium, and Kraft paper separators and were about 95% combustible (Reference RF-P021). Following the September 1957 fire in Building 771, all buildings began replacing the CWS-6 type filter with a fire-resistant filter, with the exception of the old part of Building 881 (Reference RF -D057). These new filters consisted of a wooden frame, fiberglass or fiberglass-asbestos medium, and asbestos paper or aluminum separators (References RF-P062, RF-P425, RF-P427, RF-P562). Building 881 continued the use of CWS filters because the chemical atmospheres involved with the enriched uranium (EU) recovery operations required a filter rejuvenation system, and the fiberglass filters did not work with this system (Reference RF-P021). Building 881 EU operations began phasing out in 1964, and most of the EU operations had ceased by 1966 (Reference RF-P084). Closeout of EU operations and processes was completed in 1967 (Reference RF-P105). Seventeen wood boxes containing filters from Building 881 were shipped to the SDA in early 1967 and are located in the ARP-I and ARP-II retrieval areas (Reference ID-U353). These filters are likely the 95% combustible filters from strip-out of the old Building 881 filter plenum. The filters from other buildings in ARP-I, ARP-II, ARP-III, and ARP-IV are likely the newer fire resistant filters. The fire-resistant filters had wooden frames, and depending on the size of the filter, comprised 60 to 80 percent of the filters weight (Reference RF-C450). For this reason, the WMP "cellulosics" will be assigned to CWS and HEP A filters with wooden frames.

  One exception is the filters from the Building 771 incinerator plenum. Because of the high temperature application, these filters consisted of a cadmium-plated steel frame, fiberglass-asbestos medium, and aluminum separators. The first bank of 12 HEPA filters had to be replaced about twice a week due to soot plugging (Reference RF-P107). Therefore, any filters with a metal frame will be assigned the WMP "iron-based metals" because like the wood frame filters, the metal frame will comprise the majority of the total filter weight.

Waste stream ID-SDA-SOIL consists of drums that contain less than 50 percent, by volume, targeted debris and/or sludge wastes with the balance being interstitial soil removed during excavation. WILD data cannot be used to estimate the waste material parameters in this waste stream. The estimated weight percentages for the soil waste stream are based solely on VE data. These data will be representative of the soil waste stream as a whole; however, this will be verified as the waste stream will undergo 100 percent VE. The results of this evaluation for waste stream ID-SDA-SOIL are presented in Table 1 below.

Since the VE data include only waste from ARP-I and portions of ARP-II and ARP-III that have been retrieved and packaged, a combination of the VE data and the WILD data were evaluated to estimate the waste material parameters weight percentages for waste streams ID-SDA-SLUDGE and ID-SDA-DEBRIS. There are a few waste material parameters (associated with non-targeted waste) that have not been identified during VE to date. It is expected that less than one weight percent of these materials will be present. The evaluation is as follows:

Waste Stream ID-SDA-SLUDGE

For waste stream ID-SDA-SLUDGE, the estimated weight percentages of organic matrix (743-sludge) and inorganic matrix (741-sludge, 742-sludge, RO) from the VE data were subtracted from 100 and then divided by two with a result of 3.0 weight percent. This result was subtracted from the organic sludge and inorganic sludge weight percentages calculated from the WILD data. The other waste material parameter weight percentages from the VE were determined to be less than one weight percent with the exception of other inorganic materials, 5.7 wt%. The results of this evaluation for waste stream ID-SDA-SLUDGE are presented in Table 2 below.

- 100 wt% - 23.5 wt% inorganic matrix (VE data) – 70.4 wt% organic matrix (VE data) = 6.1 wt% / 2 = 3.0 wt%
- 64.8 wt% inorganic sludge (WILD data) – 3.0 wt% = 61.8 wt%
- 35.2 wt% organic sludge (WILD data) – 3.0 wt% = 32.2 wt%
- Other inorganic materials (VE data) = 5.7 wt%; all other calculated WMP from VE date are <1 wt%

Waste Stream ID-SDA-DEBRIS

For waste stream ID-SDA-DEBRIS, the estimated weight percentages of other inorganic material (graphite) and cellulosics (filters) from the VE data were subtracted from 100 and then divided by two with a result of 2.8 weight percent. This result was subtracted from the graphite and filter weight percentages calculated from the WILD data. The other waste material parameter weight percentages from the VE were determined to be less than one weight percent with the exception of plastic, 3.3 wt%, and soil/gravel, 1.3 wt%. The results of this evaluation for waste stream ID-SDA-DEBRIS are presented below in Table 3.

- 100 wt% - 59.0 wt% other inorganic material (VE data) – 35.4 wt% cellulosics (VE data) = 5.6 wt% / 2 = 2.8 wt%
- 35.3 wt% graphite (WILD data) – 2.8 wt% = 32.5 wt%
- 64.7 wt% filters (WILD data) – 2.8 wt% = 61.9 wt%
- Plastic waste (VE data) = 3.3 wt%; soils and gravel (VE data) = 1.3 wt%, all other calculated WMP from VE date are <1 wt%

Data Limitations

1. 742-sludge was not always targeted waste but is be visually indistinguishable from targeted 741-sludge. Original waste volume projections assumed only half of the 742-sludge will be retrieved. For the purposes of this analysis, the inorganic matrix estimate includes all of the 742-sludge. This may result in a lower inorganic matrix than reported in Table 2.
2. Although roaster oxide (RO) is a targeted waste, it is pure depleted uranium oxide. Drums of RO that are retrieved intact will be packaged as low-level waste and will not be shipped to WIPP. The RO has been included in the inorganic matrix estimates because there is a possibility of RO intermingling with other TRU waste in the pit due to severely corroded drums. This may result in a lower inorganic matrix than reported in Table 2.

3. Some of the graphite and filter wastes were generated in Rocky Flats uranium facilities that did not use transuranics. The graphite and filter wastes from the uranium facilities will be visually indistinguishable from these wastes from plutonium facilities. The waste from the uranium facilities has been included in the WMP estimates because there is a possibility of this waste intermingling with TRU waste in the pit due to severely corroded drums. This may have an affect on the WMP estimates reported in Table 3.

4. To date, most of the filters retrieved have been assigned "cellulosics" although a couple of metal-framed filters have been found. While only the incinerator filters had metal frames, these filters were replaced about twice a week. The volume of incinerator filters shipped to the SDA is not known. This may have an affect on the cellulosics and iron-based metals WMP estimates reported in Table 3.

5. Tables 1,2, and 3 include calculated weight percent ranges based on VE data. As of the date of this memo, only waste from ARP-I and a portion of the ARP-II and APR-III areas has been retrieved and packaged, and therefore, it is unlikely that these ranges will be representative of the waste streams as a whole. For this reason, the ranges shown in Tables 1,2, and 3 will be not be reported in CCP-AK-INL-001.

Table 1 Waste Stream ID-SDA-SOIL Waste Material Parameters

Waste Material Parameter	Weight Percent
Aluminum-based Metals/Alloys	<1.0%
Iron-based Metals/Alloys	<1.0%
Other Metals/Alloys	<1.0%
Other Inorganic Materials	2.8%
Cellulosics	1.8%
Rubber	<1.0%
Plastics (waste materials)	<1.0%
Organic Matrix	<1.0%
Inorganic Matrix	<1.0%
Soil/Gravel	93.4%

Table 2 Waste Stream ID-SDA-SLUDGE Waste Material Parameters

Waste Material Parameter	Weight Percent
Aluminum-based Metals/Alloys	<1.0%
Iron-based Metals/Alloys	<1.0%
Other Metals/Alloys	<1.0%
Other Inorganic Materials	5.7%
Cellulosics	<1.0%
Rubber	<1.0%
Plastics (waste materials)	<1.0%
Organic Matrix	32.2%
Inorganic Matrix	61.8%
Soil/Gravel	<1.0%

Table 3 Waste Stream ID-SDA-DEBRIS Waste Material Parameters

Waste Material Parameter	Weight Percent
Aluminum-based Metals/Alloys	<1.0%
Iron-based Metals/Alloys	<1.0%
Other Metals/Alloys	<1.0%
Other Inorganic Materials	32.5%
Cellulosics	61.9%
Rubber	<1.0%
Plastics (waste materials)	3.3%
Organic Matrix	<1.0%
Inorganic Matrix	<1.0%
Soil/Gravel	1.3%

SMS

Attachments As Stated

Attachment 1

SUMMARY OF WILD DATA FROM AK SOURCE DOCUMENT ID-U353

Attachment 1
WILD Data Summary By Waste Category and Retrieval Area Scenario

Scenario	Waste Materials							
	Sludge				Debris			
	Sludge Net Wt (lbs)	Sludge Net Wt (lbs)	Sludge Wt %	Sludge Wt %	Net Wt (lbs)	Net Wt (lbs)	Graphite Wt %	Filters Wt %
All Contract Area	7675626	4164322	64.8%	35.2%	350100	641448	35.3%	64.7%
ARP-I - ARP-III	2023869	3152016	39.1%	60.9%	65682	172853	27.5%	72.5%
ARP-I - ARP-IV	3165200	3169007	50.0%	50.0%	105260	234927	30.9%	69.1%

Derived from ID-U353
June 19, 2009

Attachment 2

VE DATA FROM AK SOURCE DOCUMENT ID-U329

BWI

VE Weight Percents

Examination Period: 01/13/2005 to 12/31/2008

Weight Percents by Matrix Code

S3900:Homogeneous Solids	Containers: 8750		Avg. % Full: 79 %	
Waste Material Parameter	**Cont. with Material**	**Weight Percent**	**Max Weight Percent**	**Min Weight Percent**
Aluminum-based metals/alloys	2	0.00%	2.30%	0.00%
Cellulosics	177	0.05%	31.84%	0.00%
Inorganic matrix	3157	23.52%	99.59%	0.00%
Iron-based metals/alloys	96	0.04%	49.56%	0.00%
Organic matrix	6652	70.40%	99.35%	0.00%
Other inorganic materials	7323	5.66%	58.88%	0.00%
Other metals	8	0.01%	9.35%	0.00%
Plastics (waste materials)	8569	0.27%	11.22%	0.00%
Rubber	47	0.01%	10.94%	0.00%
Soils/gravel	27	0.05%	45.71%	0.00%

S4200:Soil	Containers: 2067		Avg. % Full: 82 %	
Waste Material Parameter	**Cont. with Material**	**Weight Percent**	**Max Weight Percent**	**Min Weight Percent**
Aluminum-based metals/alloys	8	0.00%	2.39%	0.00%
Cellulosics	530	1.75%	40.94%	0.00%
Inorganic matrix	338	0.64%	45.10%	0.00%
Iron-based metals/alloys	85	0.10%	57.61%	0.00%
Organic matrix	628	0.26%	19.15%	0.00%
Other inorganic materials	441	2.81%	62.13%	0.00%
Other metals	5	0.02%	13.12%	0.00%
Plastics (waste materials)	2060	0.96%	21.32%	0.00%
Rubber	35	0.01%	5.81%	0.00%
Soils/gravel	2067	93.45%	100.00%	36.69%

EWI

VE Weight Percents

Examination Period: 01/13/2005 to 12/31/2008

Weight Percents by Matrix Code

S5400:Heterogeneous Debris Containers: 738 Avg. % Full: 77 %

Waste Material Parameter	Cont. with Material	Weight Percent	Max Weight Percent	Min Weight Percent
Aluminum-based metals/alloys	2	0.20%	80.41%	0.00%
Cellulosics	434	35.40%	99.32%	0.00%
Inorganic matrix	10	0.09%	42.10%	0.00%
Iron-based metals/alloys	15	0.40%	96.24%	0.00%
Organic matrix	26	0.17%	37.11%	0.00%
Other inorganic materials	316	59.03%	99.45%	0.00%
Other metals	0			
Plastics (waste materials)	738	3.31%	100.00%	0.55%
Rubber	6	0.10%	43.82%	0.00%
Soils/gravel	24	1.31%	56.63%	0.00%

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Attachment 6 – Waste Form, Waste Material Parameters, Prohibited Items, and Packaging

Site(s): Idaho National Laboratory

Waste Stream Description: RH Debris from AGHCF Operations at Argonne National Laboratory-East

Container ID Numbers: See CCP-TP-005, Attachment 8 for containers in this waste stream

Waste Stream Number: ID-ANLE-S5000	
Requirement	**Result**
Physical Waste Form (e.g., debris, solidified waste)	Debris
Summary Category Group [a]	S5000
Waste Matrix Code Group [a]	Heterogeneous Debris Waste
Waste Matrix Code [b]	S5400
Waste Material Parameter Weights [c] No change of WMP weight average from original estimates 12/20/06 (C332)	***Estimated Waste Stream Weight Percent Average (attach evaluation justifying percentages)***
Iron-based metals/alloys	30.6 %
Aluminum-based metals/alloys	13.5 %
Other metals	20.4 %
Other inorganic materials	13.5 %
Cellulosics	12.0 %
Rubber	4.5 %
Plastics (waste materials)	5.0 %
Organic matrix	0.6 %
Inorganic matrix	0.0 %
Soils/Gravels	0.0 %
Packaging Materials	***Present (Y/N)?***
Steel	Y
Plastics	Y

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Attachment 6 – Waste Form, Waste Material Parameters, Prohibited Items, and Packaging (continued)

Waste Stream Number: ID-ANLE-S5000

Requirement	Result
Prohibited Wastes [d,e,f,g]	*Present (Y/N)?*
Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE. Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. Observable liquid shall not be present in a container with EPA HWN U134 assigned.	Y – small volumes (1/2 cup and 1Tbs) in internal waste bottles (DR017)
Non-radionuclide pyrophoric materials	Y – potential sodium or sodium-potassium in bonded clad fuel pieces
Sealed containers > 4 liters	Y – sealed internal waste cans (DR019)
Hazardous waste not occurring as co-contaminants with TRU mixed waste (non-mixed hazardous waste)	N
Explosives	N
Compressed gases	Y – unvented aerosol cans (DR020)
Residual hydrofluoric acid (if U134 assigned to stream)	N
Residual PCB liquids[i]	N
Ignitables (EPA Hazardous Waste Number D001)	Y – potential for ignitable fines
Corrosives (EPA Hazardous Waste Number D002)	N
Reactives (EPA Hazardous Waste Number D003)	Y – potential sodium or sodium-potassium in bonded clad fuel pieces
Waste incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials, or other wastes [h]	N
Spent Nuclear fuel or high-level waste[i]	N
Any un-vented plastic bags > 4 liters that have been heat-sealed	Y (for containers generated prior to 1990)
Additional Information (if available)	Vented PVC bags used starting 1990.

Attachment 6 – Waste Form, Waste Material Parameters, Prohibited Items, and Packaging (continued)

Waste Stream Number: ID-ANLE-S5000

Requirement	Result
Packaging	
Waste container type?	DOT 17H 30-Gallon Drum or 55-Gallon Steel Drum
Liner type?	If present, polyethylene drum liner and fiber drum pouch spreaders.
Is liner punctured?	Unsealed liner discs.
Is filter vent installed?	Y NFT HEPA-013 (30-gallon or 55-gallon drums)
Maximum number of confinement layers?	4 (two PVC bags, waste cans, and cardboard pouch spreader (w/ slip lid) inside of the 30-gallon drums)

a. Source: *CCP Transuranic Waste Characterization Quality Assurance Project Plan* (CCP-PO-001) Introduction.
b. Source: *Transuranic Waste Baseline Inventory Report* (DOE/CAO-95-1121) or DOE Waste Treatability Group Guidance (DOE/LLW-217). Note: the waste matrix code should not be assigned at the summary category group level.
c. Source: CCP-PO-001 - Table C3-1. Attach the Waste Material Parameter Evaluation Memorandum used to estimate values included in this Table (See Section 4.4.27).
d. Source: CCP-PO-001 - Section C-1c
e. Source: Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant(WAC)(DOE/WIPP-02-3122), Section 3
f. Source: TRUPACT-II Content Codes (TRUCON) (DOE/WIPP 89-004)
g. Source: *TRUPACT-II Authorized Methods for Payload Control (TRAMPAC)*, Washington TRU Solutions, LLC
h. This waste has been approved for disposal at the WIPP by the Permittee as documented by Appendix C1 of the WIPP RCRA Part B Permit Application and the Permittee's approval and assignment of the applicable TRUCON Codes for this waste stream.
i. Source: *Nuclear Waste Policy Act of 1982* (42 U.S.C. 10101).
j. Source: Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution and Commerce, and Use Prohibitions (40 CFR Part 761)/

Acceptable Knowledge Expert: Scott Smith / [signature] Date: 8/29/2011
Print Sign

C 332

Memo to CCP Central Records: Assessment of Waste Material Parameters (WMPs) for Waste Stream ID-ANLE-S5000

To determine the WMPs, waste can inventory records were used for 123 thirty-gallon drums packaged from 1990 through 1995 (References U015, U017, U018, U019, U021, U041). The waste can inventory records provide a waste item description and corresponding volume percentage for waste packaged in 7.5 gallon cans. Waste items were categorized into one or more of the following WMPs: iron metals, aluminum metals, other metals, other inorganics, cellulosics, rubber, plastics, and organic matrix. For 30-gallon drums containing two 7.5 gallons cans, an average volume percentage was then calculated for each WMP for the 30-gallon drum.

Densities for each WMP were used to calculate the weight percentage of each WMP for each 30-gallon drum. The weight of each WMP for each drum was then calculated based on the 30-gallon drum gross weight and the following tare weight: 37.00 lbs for a 30-gallon drum, 6.25 lbs for a 7.5 gallon can, 16.4 lbs of plastic packaging, and 3.1 lbs of cardboard packaging. Finally, an overall WMP weight percentage was calculated for the 123 drums. The results are as follows:

Waste Material Parameter	Overall weight % for 123 drums	Weight % range for any given drum
Iron metals	30.59%	0 – 87.49%
Aluminum metals	13.52%	0 – 66.19%
Other metals	20.36%	0 – 60.03%
Other inorganics	13.49%	0 – 53.58%
Cellulosics	12.00%	0 – 80.09%
Rubber	4.46%	0 – 64.46%
Plastics	5.02%	0 – 57.37%
Organic matrix	0.56%	0 – 30.69%

It is presumed that the waste materials and corresponding volume percentages reported on the waste can inventory records are similar to the waste materials and percentages in packaged drums that do not have waste can inventory records.

Assumptions for waste item categorization:

- Silicon carbide grinding papers – 50% other inorganic, 50% cellulosics
- Power cords – conservatively assigned to 100% rubber unless percentage of metal was specified
- Bottles w/ absorbent – assigned to 100% other inorganic unless percentage of plastic was specified

Densities for each WMP were taken from CCP-AK-SRS-5 source document D010.

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Attachment 6 – Waste Form, Waste Material Parameters, Prohibited Items, and Packaging

Site(s): Idaho National Laboratories (CCP-AK-INL-590)

Waste Stream Description: Bettis Laboratory Homogeneous RH TRU Waste Stored at INL

Container ID Numbers: See CCP-TP-005, Attachment 8 for containers in this waste stream

Waste Stream Number: IN-ID-BTO-030	
Requirement	**Result**
Physical Waste Form (e.g., debris, solidified waste)	Homogeneous Solids
Summary Category Group [a]	S3000
Waste Matrix Code Group [a]	Solidified Homogeneous Solids
Waste Matrix Code [b]	S3150, Solidified Homogeneous Solids
Waste Material Parameter Weights [c]	Estimated Waste Stream Weight Percent Average (attach evaluation justifying percentages)
Iron-based metals/alloys	31.72
Aluminum-based metals/alloys	0.0
Other metals	47.23
Other inorganic materials	1.82
Cellulosics	0.0
Rubber	0.02
Plastics (waste materials)	0.02
Organic matrix	0.0
Inorganic matrix	19.20
Soils/Gravels	0.0
Packaging Materials	Present (Y/N)?
Steel (packaging materials)	Yes
Plastics (packaging materials)	Yes

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Attachment 6 – Waste Form, Waste Material Parameters, Prohibited Items, and Packaging (continued)

Waste Stream Number: IN-ID-BTO-030

Requirement	Result
Prohibited Wastes [d,e,f,g]	Present (Y/N)?
Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE. Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. Observable liquid shall not be present in a container with EPA HWN U134 assigned.	No
Non-radionuclide pyrophoric materials	No
Sealed containers > 4 liters	No
Hazardous waste not occurring as co-contaminants with TRU mixed waste (non-mixed hazardous waste)	No
Explosives	No
Compressed gases	No
Residual hydrofluoric acid (if U134 assigned to stream)	No
Residual PCB liquids	No
High plutonium content material/waste	No
Ignitables (EPA Hazardous Waste Number D001)	No
Corrosives (EPA Hazardous Waste Number D002)	No
Reactives (EPA Hazardous Waste Number D003)	No
Waste incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials, or other wastes [h]	No
Any un-vented plastic bags > 4 liters that have been heat-sealed	No
Additional Information (if available)	N/A

Attachment 6 – Waste Form, Waste Material Parameters, Prohibited Items, and Packaging (continued)

Waste Stream Number: IN-ID-BTO-030

Requirement	Result
Packaging	
Waste container type?	DOT Type A Specification 7A 55-gallon drum
Liner type?	None
Is liner punctured?	N/A
Is filter vent installed?	Yes
Maximum number of confinement layers?	Two

a. Source: *CCP Transuranic Waste Characterization Quality Assurance Project Plan* (CCP-PO-001) Introduction.
b. Source: *Transuranic Waste Baseline Inventory Report* (DOE/CAO-95-1121) or DOE Waste Treatability Group Guidance (DOE/LLW-217). Note: the waste matrix code should not be assigned at the summary category group level.
c. Source: CCP-PO-001 – Table C3-1. Attach the Waste Material Parameter Evaluation Memorandum used to estimate values include in this Table (see Section 0).
d. Source: CCP-PO-001 – Section C-1c
e. Source: *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant* (WAC)(DOE/WIPP-02-3122), Section 3
f. Source: *TRUPACT-II Content Codes* (TRUCON) (DOE/WIPP 89-004)
g. Source: *TRUPACT-II Authorized Methods for Payload Control (TRAMPAC)*, Washington TRU Solutions, LLC
h. This waste has been approved for disposal at the WIPP by the Permittee as documented by Appendix C1 of the WIPP RCRA Part B Permit Application and the Permittee's approval and assignment of the applicable TRUCON Codes for this waste stream.

Acceptable Knowledge Expert: James Luginbyhl / Jama Luginbyhl
Print Sign

Date: 5/19/2011

To: CCP Records

Memorandum

From: James Luginbyhl, CCP AKE

Date: May 25, 2011

RE: Waste Material Parameter Analysis for Waste from the Solidified Bettis Laboratory Remote-Handled Transuranic Waste stored at INL

In accordance to *CCP Acceptable Knowledge Documentation*, CCP-TP-005, Revision 22, Section 4.4.27, Waste Material Parameters (WMP) shall be estimated on a weight percent basis for the waste stream, documenting the assumptions and justification for deriving the estimated WMP.

To estimate the WMP for waste streams IN-ID-BTO-030 data were obtained from the TRU Waste Profile Sheets (P201) prepared when the waste was shipped to the RWMC for storage in the TRU storage vaults.

The weights of the cement in the concrete, water in the concrete, the IN containers, met samples and chromium were listed in grams. The IN containers were included in the waste calculations. The solidified material in the IN containers were over 60% of the total volume. Therefore, the waste is considered homogeneous. The calculations are summarized in Source Document U276. The reported weights and volume calculations are summarized in Table 1, Volume calculations.

The data obtained were grouped into one of ten categories. The material groupings are listed in Table 2, Waste Material Distributions. The categories were: Iron-based metals, Aluminum-based metals, Other metals, Other inorganic Material, Cellulosics, Rubber, Plastics, Organic Matrix, Inorganic Matrix and soil. The weights and percentages of each category was estimated from the available data. The weights were summed up for each of the ten categories and the percentages were determined. The highest and lowest weight percentage for each category was determined to develop the range.

The WMP data for the waste streams is summarized in Table 1, Waste Stream IN-ID-BTO-030 Waste Material Parameters.

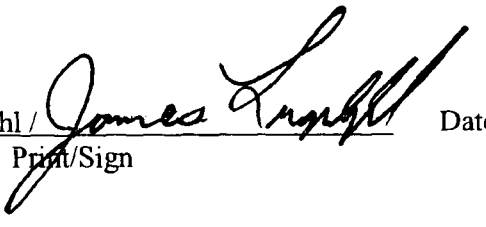
CCP AK Expert: James Luginbyhl /  Date: 5/25/2011

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Table 1. Volume Calculations

		Weight of Material grams	wt %	Density g/m3	Volume m3	vol %
concrete		54168	39.838	31443400	0.002	61.763
IN Container		81720	60.101	77011400	0.001	38.044
samples		83.13	0.061	15472200	0.000	0.193
chromium		0.13	0.000	86344600	0.000	0.000
totals		135971.26			0.003	

Percent Debris	**38.044**
Percent Homogenous	**61.956**

Table 2. Waste Material Distributions

Waste Material Parameter		Weight Percent	Components
Iron-based Metals/Alloys		31.718	IN Can
Aluminum-based Metals/Alloys		0.000	NA
Other Metals		47.225	Lead and other metals in samples
Other Inorganic Materials		1.824	resin and silicon carbide grit
Cellulosics		NA	
Rubber		0.016	Rubber Portion of Samples
Plastic (waste materials)		0.017	Resins from samples
Organic Matrix		NA	
Inorganic Matrix		19.200	Portland Cement
Total Inorganic Waste		99.967	
Total Organic Waste		0.033	

100.000

Table 3. Waste Stream IN-ID-BTO-030 Waste Material Parameters

Waste Material Parameter	Avg. Weight Percent	Weight Percent Range
Iron-based Metals/Alloys	31.718 %	30 - 35 %
Aluminum-based Metals/Alloys	0 %	0 – 0 %
Other Metals	47.225 %	40 – 48 %
Other Inorganic Materials	21.024 %	20 – 39 %
Cellulosics	0 %	0 – 0 %
Rubber	0.016 %	0 – 0.1 %
Plastic (waste materials)	0.017 %	0 – 0.1 %
Organic Matrix	0 %	0 – 0 %
Inorganic Matrix	0 %	0 – 0 %
Total Organic Waste Avg.	**0.033 %**	
Total Inorganic Waste Avg.	**99.967 %**	

Attachment 8 – Waste Containers List – Example Form

(This attachment may be provided in a different format)

Site(s): AMWTP – Argonne Waste

Waste Stream Number(s): ID-AECHDM

Waste Stream Description: Heterogeneous Debris from Argonne Maintenance and Laboratory Operations

Number of Waste Containers in Waste Stream: 40 (See list below)

Total Existing Volume (m^3): 8

Is waste expected to be generated in the future?: Yes

If yes, Estimated Future Volume (m^3): ~10 drums/yr. (2.0 m^3/yr.)

Assumptions: Future containers are not currently addressed in this waste stream and will be determined and added, as applicable in the future

Waste Stream Container Evaluation Memo(s) for Added Containers: N/A

Container Identification Number	Generation Date	Generation Point
RW47763	7/21/2010	ANLE Building 306
RW47765	7/23/2010	ANLE Building 306
RW47766	7/26/2010	ANLE Building 306
RW47768	7/29/2010	ANLE Building 306
RW47769	8/3/2010	ANLE Building 306
RW47777	8/19/2010	ANLE Building 306
RW47778	8/23/2010	ANLE Building 306
RW47780	8/24/2010	ANLE Building 306
RW47781	8/25/2010	ANLE Building 306
RW47783	8/30/2010	ANLE Building 306
RW47784	8/31/2010	ANLE Building 306
RW47785	9/1/2010	ANLE Building 306
RW47786	9/8/2010	ANLE Building 306
RW47787	9/9/2010	ANLE Building 306
RW47963	9/20/2010	ANLE Building 306

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Attachment 8 – Waste Containers

Site(s): Idaho National Laboratory (CCP-AK-INL-005)

Waste Stream Number(s): ID-RF-S3150-A

Waste Stream Description: Solidified Organics (IDCs 700 and 801)

Number of Waste Containers in Waste Stream: 858 55-gallon drums

Total Existing Volume (m^3): 178.46

Is waste expected to be generated in the future?: No

If yes, Estimated Future Volume (m3): N/A

Assumptions: Waste generated since 1/1/80 was never on pads, and all of this waste was generated after 1/1/80. EDF-837 (Reference P515) indicates no drums assigned IDCs 700 or 801. Therefore, future projections are 0. However, there are approximately three (3) drums in 83-gallon overpacks that are currently not included in the above volumes.

Container Identification Number	Generation Date	Generation Point
See attached waste container list.	N/A 05/31/11	
	N/A 05/31/11	

Acceptable Knowledge Expert: Scott Smith (Print) _____ (Sign)

Date: 8/18/2011

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DATE REC'D 8-25-11

Attachment 8 - 06/28/2011 Waste Container List
Waste Stream ID-RF-S3150-A, Solidified Organics (IDCs 700 and 801)

CONTAINER ID	ORG CLOSURE DATE	SEC CLOSURE DATE	WASTE STREAM	AK_REPORT	ORG VENT DATE	SEC VENT DATE
10005799	7/20/1988	9/22/2005	ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	9/22/2005
10005805	2/4/1987	9/26/2005	ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	9/26/2005
10005806	1/7/1987	2/1/2006	ID-RF-S3150-A	CCP-AK-INL-005	1/20/2006	2/1/2006
10005807	10/7/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	9/24/2005
10005808	12/16/1986	9/23/2005	ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	9/23/2005
10005809	6/3/1986	7/7/2006	ID-RF-S3150-A	CCP-AK-INL-005	9/24/2005	7/7/2006
10005810	9/4/1987	9/22/2005	ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	9/22/2005
10005811	3/19/1987	9/22/2005	ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	9/22/2005
10007231	8/15/1988		ID-RF-S3150-A	CCP-AK-INL-005		11/6/2004
10007232	7/7/1988		ID-RF-S3150-A	CCP-AK-INL-005	4/30/1998	
10007233	6/1/1988		ID-RF-S3150-A	CCP-AK-INL-005		5/14/2004
10007234	11/4/1987		ID-RF-S3150-A	CCP-AK-INL-005	10/26/1998	5/14/2004
10007551	9/4/1986	11/13/1998	ID-RF-S3150-A	CCP-AK-INL-005	11/13/1998	11/6/2004
10015123	6/3/1988	5/14/1996	ID-RF-S3150-A	CCP-AK-INL-005		
10015576	3/19/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10015578	12/22/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10015579	2/4/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10015580	6/15/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10016003	11/5/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10016004	10/31/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10016005	11/5/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10016006	6/10/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10016007	9/4/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10016008	4/22/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10016009	11/24/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10016010	10/31/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10016014	11/24/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10016015	10/21/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10016133	8/2/1986	4/6/2000	ID-RF-S3150-A	CCP-AK-INL-005	2/21/1998	
10016134	5/13/1986	4/6/2000	ID-RF-S3150-A	CCP-AK-INL-005	2/28/1998	
10016136	10/21/1986	4/9/2000	ID-RF-S3150-A	CCP-AK-INL-005	2/24/1998	
10016137	7/5/1988	4/6/2000	ID-RF-S3150-A	CCP-AK-INL-005	2/26/1998	
10016221	9/12/1986		ID-RF-S3150-A	CCP-AK-INL-005		5/31/2004
10016234	9/23/1987		ID-RF-S3150-A	CCP-AK-INL-005		5/26/2004
10016238	4/14/1987		ID-RF-S3150-A	CCP-AK-INL-005		5/14/2004
10016239	3/19/1986		ID-RF-S3150-A	CCP-AK-INL-005		5/22/2004
10016240	10/7/1986		ID-RF-S3150-A	CCP-AK-INL-005		5/14/2004
10016304	11/24/1986		ID-RF-S3150-A	CCP-AK-INL-005		5/22/2004
10016346	10/7/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10016347	9/23/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10016397	1/7/1986	1/3/1996	ID-RF-S3150-A	CCP-AK-INL-005		
10016411	8/17/1988		ID-RF-S3150-A	CCP-AK-INL-005	4/11/2002	7/6/2004
10016622	4/13/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/13/2001	
10016623	8/2/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/15/2001	
10016628	3/12/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/13/2001	
10016707	11/24/1986		ID-RF-S3150-A	CCP-AK-INL-005	3/31/1997	5/16/2004
10016708	9/17/1986		ID-RF-S3150-A	CCP-AK-INL-005	3/28/1997	5/16/2004
10016709	4/9/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	9/11/2004
10016710	3/14/1986	6/1/2004	ID-RF-S3150-A	CCP-AK-INL-005	12/17/2001	6/1/2004
10016754	6/16/1988		ID-RF-S3150-A	CCP-AK-INL-005		5/16/2004
10016755	4/9/1987		ID-RF-S3150-A	CCP-AK-INL-005	3/31/1997	5/16/2004
10016756	9/12/1986		ID-RF-S3150-A	CCP-AK-INL-005	4/3/1997	

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Waste Stream ID-RF-S3150-A, Solidified Organics (IDCs 700 and 801)

CONTAINER ID	ORG CLOSURE DATE	SEC CLOSURE DATE	WASTE STREAM	AK_REPORT	ORG VENT DATE	SEC VENT DATE
10016757	1/27/1987		ID-RF-S3150-A	CCP-AK-INL-005	3/29/1997	5/16/2004
10016758	12/16/1986		ID-RF-S3150-A	CCP-AK-INL-005	3/29/1997	5/16/2004
10016759	8/29/1988		ID-RF-S3150-A	CCP-AK-INL-005	3/29/1997	5/16/2004
10016760	6/3/1988		ID-RF-S3150-A	CCP-AK-INL-005	5/19/2004	7/6/2006
10016761	8/25/1987		ID-RF-S3150-A	CCP-AK-INL-005	1/23/1997	5/16/2004
10016762	1/21/1987	10/31/2009	ID-RF-S3150-A	CCP-AK-INL-005	3/31/1997	10/31/2009
10016763	9/17/1986		ID-RF-S3150-A	CCP-AK-INL-005	3/31/1997	5/27/2004
10016764	9/19/1988		ID-RF-S3150-A	CCP-AK-INL-005	5/6/1998	5/15/2004
10016765	4/9/1987		ID-RF-S3150-A	CCP-AK-INL-005	4/30/1998	5/15/2004
10016766	4/30/1986		ID-RF-S3150-A	CCP-AK-INL-005	10/25/1996	
10016767	3/25/1987		ID-RF-S3150-A	CCP-AK-INL-005	3/29/1997	5/16/2004
10016768	9/4/1987		ID-RF-S3150-A	CCP-AK-INL-005	1/14/1997	5/16/2004
10016769	9/23/1986		ID-RF-S3150-A	CCP-AK-INL-005	3/31/1997	6/1/2004
10016770	1/7/1987		ID-RF-S3150-A	CCP-AK-INL-005	3/31/1997	5/31/2004
10016771	4/16/1988		ID-RF-S3150-A	CCP-AK-INL-005	4/30/1998	
10016772	5/13/1986		ID-RF-S3150-A	CCP-AK-INL-005	10/25/1996	
10016773	4/29/1987		ID-RF-S3150-A	CCP-AK-INL-005	4/3/1997	5/16/2004
10016774	2/10/1987		ID-RF-S3150-A	CCP-AK-INL-005	3/31/1997	5/31/2004
10016775	5/19/1988		ID-RF-S3150-A	CCP-AK-INL-005	5/16/2004	6/22/2006
10016776	8/8/1988		ID-RF-S3150-A	CCP-AK-INL-005	5/9/1994	5/16/2004
10016777	5/13/1986		ID-RF-S3150-A	CCP-AK-INL-005	3/31/1997	5/16/2004
10016778	3/12/1986		ID-RF-S3150-A	CCP-AK-INL-005	3/29/1997	5/31/2004
10016779	10/23/1987		ID-RF-S3150-A	CCP-AK-INL-005		12/31/2005
10016780	3/16/1988		ID-RF-S3150-A	CCP-AK-INL-005	1/28/1997	1/19/2006
10016781	6/19/1986		ID-RF-S3150-A	CCP-AK-INL-005		5/31/2004
10016782	3/14/1986		ID-RF-S3150-A	CCP-AK-INL-005	3/28/1997	6/1/2004
10016783	4/18/1986		ID-RF-S3150-A	CCP-AK-INL-005		5/16/2004
10016784	9/8/1987		ID-RF-S3150-A	CCP-AK-INL-005	1/27/1997	5/16/2004
10016785	3/12/1986		ID-RF-S3150-A	CCP-AK-INL-005		1/1/2006
10016786	3/12/1986		ID-RF-S3150-A	CCP-AK-INL-005	3/31/1997	6/6/2004
10016787	3/19/1986		ID-RF-S3150-A	CCP-AK-INL-005	5/26/2004	6/28/2006
10016788	3/12/1986	11/7/2009	ID-RF-S3150-A	CCP-AK-INL-005	5/16/2004	11/7/2009
10016789	10/21/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/28/1997	5/19/2004
10016790	4/14/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/28/1997	6/6/2004
10016791	3/12/1986		ID-RF-S3150-A	CCP-AK-INL-005	3/31/1997	5/31/2004
10016792	12/16/1987		ID-RF-S3150-A	CCP-AK-INL-005	1/28/1997	1/1/2006
10016793	3/14/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/28/1997	1/1/2006
10016866	6/10/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10016867	4/25/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10016868	5/26/1987	6/4/2004	ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	6/4/2004
10016869	6/19/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10016870	10/31/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10016871	4/30/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10016872	8/2/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	5/26/2004
10016881	11/11/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10016882	7/23/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	1/1/2003
10016883	9/23/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10016884	6/19/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10016885	10/7/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10016886	4/25/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10016887	11/5/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10016888	3/19/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	

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Waste Stream ID-RF-S3150-A, Solidified Organics (IDCs 700 and 801)

CONTAINER ID	ORG CLOSURE DATE	SEC CLOSURE DATE	WASTE STREAM	AK_REPORT	ORG VENT DATE	SEC VENT DATE
10016889	10/28/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10016890	6/3/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10016891	3/11/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10017130	4/30/1986	8/17/2005	ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	8/17/2005
10017131	8/8/2005	9/23/2005	ID-RF-S3150-A	CCP-AK-INL-005	8/8/2005	9/23/2005
10017132	3/5/1987	9/22/2005	ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	9/22/2005
10017133	3/5/1987	9/21/2005	ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	9/21/2005
10017134	8/8/2005	9/23/2005	ID-RF-S3150-A	CCP-AK-INL-005	8/8/2005	9/23/2005
10017135	4/18/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10017136	2/10/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	8/8/2005
10017137	5/25/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10017138	3/9/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10017139	5/4/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10017140	1/27/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10017141	1/27/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10017142	9/12/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10017143	7/23/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10017144	9/4/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/26/2001	
10017145	9/12/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10017146	10/7/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10017147	9/12/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10017148	4/30/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10017149	12/16/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10017150	3/9/1987		ID-RF-S3150-A	CCP-AK-INL-005		
10017199	2/10/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10017200	3/10/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10017201	2/4/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10017202	3/9/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10017203	5/27/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10017204	6/19/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10017205	3/9/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10017206	8/26/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10017207	11/5/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10017208	6/19/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10017209	2/10/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10017210	3/9/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10017211	9/12/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10017212	11/4/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10017213	10/21/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10017214	10/21/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10017215	5/26/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10017216	1/27/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10017217	4/25/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10017225	12/16/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017226	1/5/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017227	1/7/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017228	4/18/1986	9/2/2006	ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	9/2/2006
10017229	1/7/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	
10017230	1/7/1987	10/31/2009	ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	10/31/2009
10017231	3/19/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017232	11/18/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017233	4/30/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	

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Waste Stream ID-RF-S3150-A, Solidified Organics (IDCs 700 and 801)

CONTAINER ID	ORG CLOSURE DATE	SEC CLOSURE DATE	WASTE STREAM	AK_REPORT	ORG VENT DATE	SEC VENT DATE
10017234	9/12/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	
10017235	1/21/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017236	9/23/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	
10017237	9/12/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017238	1/7/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017239	1/7/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	
10017240	11/24/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017241	12/21/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017242	1/7/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	
10017243	11/26/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	
10017244	11/24/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	
10017245	1/7/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	
10017246	11/26/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	
10017247	1/7/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017248	1/21/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	
10017249	6/18/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017277	5/13/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10017278	9/12/1986		ID-RF-S3150-A	CCP-AK-INL-005		12/30/2001
10017279	7/23/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10017280	5/13/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/26/2001	
10017281	9/4/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/26/2001	
10017282	10/24/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10017283	3/9/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10017284	8/20/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/26/2001	
10017285	10/31/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/26/2001	
10017286	11/24/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/26/2001	
10017287	8/20/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/26/2001	
10017288	11/24/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/26/2001	
10017289	2/23/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/26/2001	
10017290	5/5/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/26/2001	
10017291	5/5/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/26/2001	
10017292	2/23/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/26/2001	4/7/2006
10017293	6/24/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	
10017294	1/7/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	
10017295	6/24/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	
10017296	4/30/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	
10017297	4/30/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	
10017298	7/5/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	
10017301	11/24/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/26/2001	
10017303	4/22/1988		ID-RF-S3150-A	CCP-AK-INL-005	9/24/2001	
10017304	9/14/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	
10017305	6/30/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	
10017306	3/1/1988		ID-RF-S3150-A	CCP-AK-INL-005	9/24/2001	
10017307	3/4/1988		ID-RF-S3150-A	CCP-AK-INL-005	9/24/2001	
10017308	2/24/1988		ID-RF-S3150-A	CCP-AK-INL-005	9/24/2001	
10017309	3/19/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	
10017310	10/6/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	
10017311	9/13/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	
10017312	3/11/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	
10017313	4/9/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	
10017314	8/20/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/26/2001	
10017315	10/20/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	

Attachment 8 - 06/28/2011 Waste Container List
Waste Stream ID-RF-S3150-A, Solidified Organics (IDCs 700 and 801)

CONTAINER ID	ORG CLOSURE DATE	SEC CLOSURE DATE	WASTE STREAM	AK_REPORT	ORG VENT DATE	SEC VENT DATE
10017316	6/3/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	4/7/2006
10017317	9/12/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	
10017319	3/5/1987		ID-RF-S3150-A	CCP-AK-INL-005	9/24/2001	
10017320	5/5/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/26/2001	
10017336	11/4/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	
10017337	8/2/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	
10017338	3/5/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	
10017339	9/1/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	
10017340	1/27/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	1/1/2003
10017341	8/25/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	
10017342	4/18/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	
10017343	2/23/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	
10017344	7/22/1988		ID-RF-S3150-A	CCP-AK-INL-005	9/24/2001	
10017402	4/14/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	
10017403	4/9/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	
10017404	4/9/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	
10017405	8/5/1988		ID-RF-S3150-A	CCP-AK-INL-005	9/24/2001	
10017406	6/3/1986		ID-RF-S3150-A	CCP-AK-INL-005	9/24/2001	
10017407	7/5/1988		ID-RF-S3150-A	CCP-AK-INL-005	9/24/2001	
10017408	2/2/1988		ID-RF-S3150-A	CCP-AK-INL-005	9/24/2001	
10017409	11/24/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017410	1/7/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017411	8/8/1988		ID-RF-S3150-A	CCP-AK-INL-005	9/24/2001	
10017412	6/15/1988		ID-RF-S3150-A	CCP-AK-INL-005	9/24/2001	
10017413	4/18/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	
10017414	12/16/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017415	5/20/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017416	11/24/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017417	6/3/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	
10017418	4/9/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	
10017419	9/4/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	
10017420	9/8/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	
10017421	4/9/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	
10017422	3/9/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	
10017423	10/23/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	
10017424	10/20/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	
10017425	9/4/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	
10017426	10/13/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	
10017434	4/30/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017436	10/21/1986		ID-RF-S3150-A	CCP-AK-INL-005	9/24/2001	
10017437	8/5/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017438	1/27/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017439	9/16/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/22/2001	
10017440	2/23/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017441	9/2/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017442	9/23/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017443	4/22/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017444	6/17/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017445	10/7/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017446	4/19/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017447	7/7/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017448	4/30/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	

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Waste Stream ID-RF-S3150-A, Solidified Organics (IDCs 700 and 801)

CONTAINER ID	ORG CLOSURE DATE	SEC CLOSURE DATE	WASTE STREAM	AK_REPORT	ORG VENT DATE	SEC VENT DATE
10017449	6/3/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017450	9/12/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017451	3/12/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017452	6/20/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017453	9/4/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017454	6/30/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017455	8/24/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017456	9/19/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017457	7/7/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017458	9/12/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017459	10/20/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017460	9/23/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017461	2/2/1988	5/30/2004	ID-RF-S3150-A	CCP-AK-INL-005	9/23/2001	5/30/2004
10017462	9/12/1986		ID-RF-S3150-A	CCP-AK-INL-005	9/24/2001	
10017463	3/11/1987		ID-RF-S3150-A	CCP-AK-INL-005	9/24/2001	
10017464	6/7/1988		ID-RF-S3150-A	CCP-AK-INL-005	9/24/2001	
10017465	8/26/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/22/2001	
10017466	2/24/1988		ID-RF-S3150-A	CCP-AK-INL-005	9/24/2001	
10017467	7/27/1988		ID-RF-S3150-A	CCP-AK-INL-005	9/24/2001	
10017468	4/29/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/22/2001	
10017469	4/13/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	
10017470	6/2/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/22/2001	
10017471	6/24/1987		ID-RF-S3150-A	CCP-AK-INL-005	9/24/2001	
10017472	8/4/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/22/2001	
10017473	3/11/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	
10017474	8/4/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/22/2001	
10017475	4/1/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/22/2001	
10017476	6/1/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/22/2001	
10017477	9/8/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/22/2001	
10017478	4/1/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/22/2001	
10017479	1/20/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	
10017480	10/13/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/22/2001	
10017481	9/12/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/22/2001	
10017482	5/27/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/22/2001	
10017483	8/2/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/22/2001	
10017484	4/13/1988		ID-RF-S3150-A	CCP-AK-INL-005	1/12/2006	4/24/2006
10017485	6/1/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/22/2001	
10017486	7/26/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/22/2001	
10017487	5/17/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/22/2001	
10017488	4/19/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/22/2001	
10017489	5/27/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/22/2001	
10017490	10/23/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/22/2001	
10017491	5/19/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/22/2001	
10017492	9/12/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/22/2001	
10017493	6/19/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/22/2001	
10017494	2/1/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/22/2001	
10017495	4/22/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/22/2001	
10017496	9/8/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/22/2001	
10017497	7/29/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/22/2001	
10017498	7/27/1988		ID-RF-S3150-A	CCP-AK-INL-005	9/24/2001	
10017499	5/19/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/22/2001	
10017500	8/2/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/22/2001	

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Waste Stream ID-RF-S3150-A, Solidified Organics (IDCs 700 and 801)

CONTAINER ID	ORG CLOSURE DATE	SEC CLOSURE DATE	WASTE STREAM	AK_REPORT	ORG VENT DATE	SEC VENT DATE
10017501	9/19/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/22/2001	
10017502	6/1/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/22/2001	
10017503	1/29/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/22/2001	
10017504	4/18/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/22/2001	
10017505	4/25/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/22/2001	
10017506	4/16/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/22/2001	
10017507	4/22/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/22/2001	
10017508	5/4/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/22/2001	
10017509	1/29/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/22/2001	
10017510	1/28/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/22/2001	
10017511	6/30/1987		ID-RF-S3150-A	CCP-AK-INL-005	9/24/2001	
10017512	5/4/1988		ID-RF-S3150-A	CCP-AK-INL-005	9/24/2001	
10017513	8/25/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	
10017514	9/12/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	
10017515	1/7/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	
10017516	1/7/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	
10017517	11/26/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	
10017518	7/27/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	
10017519	4/13/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	
10017520	5/13/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	
10017521	9/12/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	
10017522	8/13/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	
10017523	9/12/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	
10017524	4/18/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	
10017525	10/7/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	1/22/2006
10017526	9/12/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	
10017527	9/12/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	
10017528	9/2/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	
10017529	4/30/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	
10017551	9/19/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	5/23/2004
10017552	10/7/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017553	9/12/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	1/22/2006
10017554	8/20/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017555	9/16/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	9/12/2004
10017556	5/13/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017557	7/14/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	9/12/2004
10017558	3/19/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017559	9/12/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017560	3/14/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017561	5/17/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	9/12/2004
10017562	3/12/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	1/1/2003
10017563	9/23/1987	10/31/2009	ID-RF-S3150-A	CCP-AK-INL-005	9/12/2004	10/31/2009
10017564	11/5/1986		ID-RF-S3150-A	CCP-AK-INL-005	9/24/2001	
10017565	8/18/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	9/12/2004
10017566	5/19/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017567	6/3/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	9/12/2004
10017568	9/12/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	1/1/2003
10017569	5/13/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	9/12/2004
10017570	7/21/1988		ID-RF-S3150-A	CCP-AK-INL-005	9/12/2004	6/22/2006
10017571	3/12/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017572	11/26/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	9/11/2004
10017573	3/16/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	

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Waste Stream ID-RF-S3150-A, Solidified Organics (IDCs 700 and 801)

CONTAINER ID	ORG CLOSURE DATE	SEC CLOSURE DATE	WASTE STREAM	AK_REPORT	ORG VENT DATE	SEC VENT DATE
10017574	7/26/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017575	4/18/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017576	7/14/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	9/12/2004
10017577	4/18/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017578	2/10/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017579	6/24/1987		ID-RF-S3150-A	CCP-AK-INL-005	9/24/2001	
10017580	10/6/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017581	3/12/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017582	5/19/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017583	2/4/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017584	10/20/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017585	9/4/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017586	5/19/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017587	2/4/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017588	8/17/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017589	4/18/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017590	2/23/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	9/12/2004
10017591	5/4/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017592	4/18/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017593	11/18/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017594	10/23/1987		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	
10017595	5/19/1988		ID-RF-S3150-A	CCP-AK-INL-005	9/12/2004	7/7/2006
10017596	3/12/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017597	2/1/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	9/12/2004
10017598	4/22/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017599	10/7/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	11/2/2005
10017600	8/30/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017601	8/13/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017602	2/12/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017603	8/24/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	9/12/2004
10017604	9/23/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017605	7/23/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017606	3/10/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017607	7/27/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017608	4/13/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017609	1/27/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017610	1/27/1987		ID-RF-S3150-A	CCP-AK-INL-005	9/28/2001	
10017611	1/27/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	9/12/2004
10017612	8/5/1988		ID-RF-S3150-A	CCP-AK-INL-005	9/24/2001	
10017613	7/29/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017614	7/7/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017615	4/30/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017616	9/12/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017617	3/9/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017618	9/2/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017619	7/20/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017645	6/3/1987		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	
10017646	9/12/1988		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	
10017647	8/24/1988		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	
10017650	4/1/1987		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	
10017651	5/13/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	
10017652	4/30/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	

Attachment 8 - 06/28/2011 Waste Container List
Waste Stream ID-RF-S3150-A, Solidified Organics (IDCs 700 and 801)

CONTAINER ID	ORG CLOSURE DATE	SEC CLOSURE DATE	WASTE STREAM	AK_REPORT	ORG VENT DATE	SEC VENT DATE
10017653	4/22/1988		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	
10017654	5/13/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	
10017655	1/28/1988		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	
10017656	9/12/1988		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	
10017657	3/1/1988		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	
10017658	10/24/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	
10017659	7/23/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	
10017660	9/16/1988		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	
10017661	5/13/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	4/9/2006
10017662	4/18/1988		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	
10017663	4/18/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	
10017664	4/9/1987	7/11/2006	ID-RF-S3150-A	CCP-AK-INL-005	7/11/2006	9/8/2006
10017665	6/30/1987		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	
10017666	10/21/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	
10017667	8/17/1988		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	
10017668	5/17/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017669	3/5/1987		ID-RF-S3150-A	CCP-AK-INL-005	9/28/2001	
10017671	8/19/1987		ID-RF-S3150-A	CCP-AK-INL-005	9/27/2001	
10017672	3/5/1987		ID-RF-S3150-A	CCP-AK-INL-005	9/28/2001	
10017673	5/13/1987		ID-RF-S3150-A	CCP-AK-INL-005	9/28/2001	
10017674	11/4/1987		ID-RF-S3150-A	CCP-AK-INL-005	9/27/2001	
10017675	4/14/1987		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	
10017676	1/29/1988		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	
10017677	5/13/1987		ID-RF-S3150-A	CCP-AK-INL-005	9/28/2001	
10017678	8/20/1986		ID-RF-S3150-A	CCP-AK-INL-005	9/28/2001	
10017679	11/26/1986		ID-RF-S3150-A	CCP-AK-INL-005	9/27/2001	
10017680	7/22/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017681	12/16/1986		ID-RF-S3150-A	CCP-AK-INL-005	9/27/2001	
10017682	7/21/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017683	3/11/1987		ID-RF-S3150-A	CCP-AK-INL-005	9/27/2001	1/1/2003
10017684	6/24/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017685	5/13/1986		ID-RF-S3150-A	CCP-AK-INL-005	9/25/2001	
10017686	10/6/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017687	2/24/1988		ID-RF-S3150-A	CCP-AK-INL-005	9/23/2001	1/1/2003
10017688	10/6/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017689	2/26/1988		ID-RF-S3150-A	CCP-AK-INL-005	9/23/2001	
10017690	8/2/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017691	2/2/1988		ID-RF-S3150-A	CCP-AK-INL-005	9/23/2001	
10017692	1/28/1988		ID-RF-S3150-A	CCP-AK-INL-005	9/27/2001	
10017693	1/5/1988		ID-RF-S3150-A	CCP-AK-INL-005	9/27/2001	
10017694	5/13/1986		ID-RF-S3150-A	CCP-AK-INL-005	9/27/2001	
10017695	10/20/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017696	12/16/1986		ID-RF-S3150-A	CCP-AK-INL-005	9/27/2001	
10017697	6/30/1987		ID-RF-S3150-A	CCP-AK-INL-005	9/23/2001	
10017698	8/25/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017699	8/8/1988		ID-RF-S3150-A	CCP-AK-INL-005	9/23/2001	7/10/2005
10017700	4/18/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017701	7/30/1987		ID-RF-S3150-A	CCP-AK-INL-005	9/27/2001	
10017702	10/23/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017703	6/3/1986		ID-RF-S3150-A	CCP-AK-INL-005	9/27/2001	
10017704	4/19/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/23/2001	
10017705	3/10/1988		ID-RF-S3150-A	CCP-AK-INL-005	9/23/2001	

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Waste Stream ID-RF-S3150-A, Solidified Organics (IDCs 700 and 801)

CONTAINER ID	ORG CLOSURE DATE	SEC CLOSURE DATE	WASTE STREAM	AK_REPORT	ORG VENT DATE	SEC VENT DATE
10017706	8/4/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017707	3/5/1987		ID-RF-S3150-A	CCP-AK-INL-005	9/25/2001	
10017708	7/29/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017709	6/30/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017710	2/4/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017711	3/9/1987		ID-RF-S3150-A	CCP-AK-INL-005	11/16/2001	
10017713	3/5/1987		ID-RF-S3150-A	CCP-AK-INL-005	9/25/2001	
10017714	4/14/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017715	6/1/1988		ID-RF-S3150-A	CCP-AK-INL-005	11/10/2001	
10017716	7/21/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017717	5/17/1988		ID-RF-S3150-A	CCP-AK-INL-005	11/11/2001	
10017718	3/9/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017719	7/29/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017720	4/1/1987		ID-RF-S3150-A	CCP-AK-INL-005	11/11/2001	
10017721	7/26/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017722	6/20/1988		ID-RF-S3150-A	CCP-AK-INL-005	11/12/2001	
10017723	7/14/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10017835	3/10/1988		ID-RF-S3150-A	CCP-AK-INL-005	9/17/2001	7/6/2004
10017837	3/16/1988		ID-RF-S3150-A	CCP-AK-INL-005	9/17/2001	
10017838	2/26/1988		ID-RF-S3150-A	CCP-AK-INL-005	9/17/2001	7/6/2004
10017839	8/25/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	7/5/2004
10017840	9/8/1988		ID-RF-S3150-A	CCP-AK-INL-005	9/28/2001	9/12/2004
10017841	3/10/1988		ID-RF-S3150-A	CCP-AK-INL-005	9/17/2001	9/12/2004
10017842	3/2/1988		ID-RF-S3150-A	CCP-AK-INL-005	9/17/2001	9/12/2004
10017843	10/21/1986		ID-RF-S3150-A	CCP-AK-INL-005	9/17/2001	9/12/2004
10017844	8/2/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	9/12/2004
10017845	10/24/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	9/12/2004
10017846	11/26/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	9/12/2004
10017847	10/21/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	9/12/2004
10017848	6/18/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	9/12/2004
10017849	12/16/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	9/12/2004
10017850	4/30/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	9/12/2004
10017851	10/24/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	9/12/2004
10017852	8/25/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	9/12/2004
10017853	8/2/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	9/12/2004
10017854	4/9/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	9/12/2004
10017855	4/19/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	9/12/2004
10017856	5/17/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	9/12/2004
10017857	10/23/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	9/12/2004
10017858	6/7/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	9/12/2004
10017859	7/20/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	9/12/2004
10017860	6/17/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	9/12/2004
10017861	6/30/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	9/12/2004
10017862	5/19/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	9/12/2004
10017863	8/24/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	9/12/2004
10017864	7/29/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	9/12/2004
10017865	4/18/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	9/12/2004
10017866	10/20/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	9/12/2004
10017867	5/12/1988		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	
10017868	4/15/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	9/11/2004
10017869	4/22/1988		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	
10017870	7/22/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	9/12/2004

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Waste Stream ID-RF-S3150-A, Solidified Organics (IDCs 700 and 801)

CONTAINER ID	ORG CLOSURE DATE	SEC CLOSURE DATE	WASTE STREAM	AK_REPORT	ORG VENT DATE	SEC VENT DATE
10017871	11/24/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	
10017872	4/14/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	9/11/2004
10017873	9/8/1988		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	
10017874	4/14/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	9/11/2004
10017875	10/31/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	
10017876	3/25/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	9/11/2004
10017877	6/2/1988		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	
10017878	7/14/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	9/11/2004
10017879	10/31/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	
10017880	5/1/1986	11/1/2009	ID-RF-S3150-A	CCP-AK-INL-005	9/11/2004	11/1/2009
10017881	8/26/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	
10017882	6/3/1988	5/24/2010	ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	5/24/2010
10017883	4/9/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	9/11/2004
10017884	4/14/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	9/11/2004
10017885	11/5/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	
10017886	10/13/1987	10/31/2009	ID-RF-S3150-A	CCP-AK-INL-005	9/12/2004	10/31/2009
10017887	12/16/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	
10017888	7/29/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/21/2001	9/11/2004
10017889	6/3/1988		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	
10017890	10/7/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	9/12/2004
10018024	3/11/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/17/2001	7/7/2004
10018025	12/11/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/17/2001	7/5/2004
10018026	8/19/1987	10/31/2009	ID-RF-S3150-A	CCP-AK-INL-005	7/6/2004	10/31/2009
10018027	3/11/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/17/2001	7/6/2004
10018028	7/23/1986		ID-RF-S3150-A	CCP-AK-INL-005	7/7/2004	6/28/2006
10018029	9/4/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/17/2001	7/6/2004
10018030	11/4/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/17/2001	7/7/2004
10018031	8/19/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/17/2001	7/6/2004
10018032	12/18/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/17/2001	7/5/2004
10018033	11/30/1987		ID-RF-S3150-A	CCP-AK-INL-005		7/5/2004
10018034	1/5/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/17/2001	7/7/2004
10018035	3/11/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/17/2001	7/7/2004
10018036	7/26/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/17/2001	7/5/2004
10018037	10/1/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/17/2001	7/7/2004
10018038	6/13/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/17/2001	
10018039	5/13/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/17/2001	7/5/2004
10018040	3/19/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/17/2001	7/5/2004
10018041	3/11/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/17/2001	7/7/2004
10018042	10/21/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/17/2001	7/7/2004
10018043	4/18/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/17/2001	5/27/2004
10018044	9/15/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/17/2001	7/5/2004
10018045	10/7/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/17/2001	7/7/2004
10018046	10/28/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/17/2001	7/5/2004
10018047	3/19/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/17/2001	7/5/2004
10018048	9/14/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/17/2001	7/7/2004
10018049	9/12/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/17/2001	7/5/2004
10018051	4/30/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/17/2001	7/5/2004
10018052	3/19/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/17/2001	7/7/2004
10018053	7/23/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/17/2001	7/7/2004
10018054	9/4/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/17/2001	7/5/2004
10018056	7/14/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/17/2001	7/7/2004
10018057	4/30/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/17/2001	7/7/2004

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Waste Stream ID-RF-S3150-A, Solidified Organics (IDCs 700 and 801)

CONTAINER ID	ORG CLOSURE DATE	SEC CLOSURE DATE	WASTE STREAM	AK_REPORT	ORG VENT DATE	SEC VENT DATE
10018058	3/11/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/17/2001	7/7/2004
10018059	6/3/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/17/2001	7/7/2004
10018060	9/14/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/17/2001	7/5/2004
10018061	6/19/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/17/2001	7/7/2004
10018062	9/12/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	7/7/2004
10018063	9/16/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	7/5/2004
10018064	10/1/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	7/7/2004
10018065	9/17/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/17/2001	7/5/2004
10018066	10/21/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	7/5/2004
10018067	6/17/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	7/5/2004
10018068	10/1/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	7/5/2004
10018069	7/30/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	7/5/2004
10018070	6/24/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	
10018071	1/21/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	
10018072	6/20/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	
10018073	9/23/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	
10018074	5/13/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	
10018075	5/13/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	
10018076	6/20/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	7/6/2004
10018096	3/25/1987	4/1/1997	ID-RF-S3150-A	CCP-AK-INL-005		
10018097	5/20/1987	4/14/1997	ID-RF-S3150-A	CCP-AK-INL-005		
10018098	3/19/1986	3/29/1997	ID-RF-S3150-A	CCP-AK-INL-005		
10018167	11/24/1986	7/3/2006	ID-RF-S3150-A	CCP-AK-INL-005	6/28/2004	7/3/2006
10018169	5/13/1987		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	5/28/2004
10018170	6/2/1988		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	6/28/2004
10018171	5/26/1988		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	6/28/2004
10018172	1/7/1987		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	6/28/2004
10018173	5/20/1987		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	6/28/2004
10018174	8/17/1988		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	6/27/2004
10018175	7/14/1987		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	6/27/2004
10018176	11/11/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	6/27/2004
10018177	11/24/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	6/27/2004
10018178	8/30/1988		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	6/27/2004
10018179	11/5/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	6/27/2004
10018180	11/24/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	6/27/2004
10018181	4/22/1988		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	6/27/2004
10018182	6/24/1987		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	6/27/2004
10018183	4/29/1987		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	6/27/2004
10018184	4/29/1987		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	6/27/2004
10018185	5/26/1988		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	6/27/2004
10018186	9/8/1988		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	6/27/2004
10018187	8/5/1988		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	6/27/2004
10018188	9/12/1988		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	6/27/2004
10018189	9/12/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	6/28/2004
10018190	5/27/1988		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	6/28/2004
10018191	5/27/1988		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	6/28/2004
10018264	8/26/1986	6/8/2011	ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	6/8/2011
10018265	7/1/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	7/6/2004
10018266	8/28/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	7/25/2004
10018267	5/17/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	7/6/2004
10018268	9/16/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	7/6/2004
10018269	10/1/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	7/6/2004

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Waste Stream ID-RF-S3150-A, Solidified Organics (IDCs 700 and 801)

CONTAINER ID	ORG CLOSURE DATE	SEC CLOSURE DATE	WASTE STREAM	AK_REPORT	ORG VENT DATE	SEC VENT DATE
10018270	9/23/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	7/25/2004
10018271	9/12/1986	7/22/2005	ID-RF-S3150-A	CCP-AK-INL-005	7/8/2004	7/22/2005
10018272	8/19/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	7/24/2004
10018273	3/14/1986	8/2/2005	ID-RF-S3150-A	CCP-AK-INL-005	7/25/2004	8/2/2005
10018274	9/16/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	7/5/2004
10018275	4/30/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	7/6/2004
10018276	6/19/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	7/8/2004
10018277	8/4/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	7/6/2004
10018278	7/20/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	7/5/2004
10018279	8/26/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	7/8/2004
10018280	3/14/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	7/6/2004
10018284	11/11/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	7/6/2004
10018285	4/18/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	7/6/2004
10018286	9/14/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	7/6/2004
10018287	4/30/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	7/6/2004
10018288	9/12/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	7/6/2004
10018319	8/4/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	7/6/2004
10018320	8/26/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	7/6/2004
10018321	9/16/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	7/6/2004
10018324	4/18/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	7/6/2004
10018325	8/2/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	7/6/2004
10018457	12/22/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	7/6/2004
10018474	6/24/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/18/2001	5/27/2004
10018485	11/26/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	5/27/2004
10018486	11/24/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	5/28/2004
10018487	11/24/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	5/28/2004
10018488	3/14/1988		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	6/28/2004
10018489	3/3/1988		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	6/28/2004
10018490	6/16/1988		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	5/28/2004
10018491	11/11/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	6/28/2004
10018492	11/24/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	6/28/2004
10018493	7/22/1988		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	5/28/2004
10018494	5/13/1987		ID-RF-S3150-A	CCP-AK-INL-005	5/28/2004	6/27/2006
10018495	10/21/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	6/28/2004
10018496	2/26/1988		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	6/28/2004
10018497	8/28/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	5/28/2004
10018498	3/14/1988		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	5/27/2004
10018499	7/30/1987	10/31/2009	ID-RF-S3150-A	CCP-AK-INL-005	6/28/2004	10/31/2009
10018500	6/19/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	6/28/2004
10018501	4/30/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	6/28/2004
10018502	8/2/1986	6/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	5/28/2004	6/24/2006
10018503	3/2/1988		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	6/28/2004
10018504	3/2/1988		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	6/28/2004
10018505	10/7/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	5/28/2004
10018506	10/7/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	6/28/2004
10018507	3/3/1988		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	5/28/2004
10018508	2/23/1987	5/3/2005	ID-RF-S3150-A	CCP-AK-INL-005	5/28/2004	5/3/2005
10018509	9/4/1986		ID-RF-S3150-A	CCP-AK-INL-005	5/31/2004	1/12/2006
10018510	5/5/1987	6/6/2004	ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	6/6/2004
10018511	3/16/1988		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	6/27/2004
10018512	8/26/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	5/31/2004
10018513	9/4/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	6/27/2004

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Waste Stream ID-RF-S3150-A, Solidified Organics (IDCs 700 and 801)

CONTAINER ID	ORG CLOSURE DATE	SEC CLOSURE DATE	WASTE STREAM	AK_REPORT	ORG VENT DATE	SEC VENT DATE
10018514	9/4/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	6/28/2004
10018515	4/18/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	6/27/2004
10018516	10/12/1987		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	6/27/2004
10018517	8/2/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	6/27/2004
10018518	3/3/1988		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	6/28/2004
10018519	3/19/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	6/28/2004
10018520	3/14/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	6/27/2004
10018521	3/3/1988		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	6/28/2004
10018525	12/18/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	5/30/2004
10018526	11/5/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	5/29/2004
10018528	1/7/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	5/29/2004
10018529	12/16/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	5/30/2004
10018530	1/11/1988		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	5/30/2004
10018531	9/12/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	5/31/2004
10018532	2/23/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	5/30/2004
10018533	8/20/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	5/30/2004
10018534	5/13/1987		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	5/30/2004
10018563	2/10/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	5/29/2004
10018564	2/23/1987		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	5/29/2004
10018565	5/13/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	5/30/2004
10018566	5/13/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	5/27/2004
10018567	2/23/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	5/28/2004
10018568	2/10/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	5/31/2004
10018569	10/31/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	5/29/2004
10018570	1/27/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	5/30/2004
10018571	9/23/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	5/30/2004
10018572	9/23/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	5/29/2004
10018573	3/2/1988		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	5/30/2004
10018574	9/8/1987		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	5/31/2004
10018575	11/11/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	5/31/2004
10018576	2/26/1988		ID-RF-S3150-A	CCP-AK-INL-005	5/30/2004	6/27/2006
10018577	1/15/1988		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	5/30/2004
10018578	11/24/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	5/31/2004
10018579	1/15/1988		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	5/30/2004
10018580	11/13/1987		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	5/30/2004
10018581	5/5/1987		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	5/29/2004
10018582	1/5/1988		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	5/29/2004
10018583	5/5/1987		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	5/30/2004
10018584	12/16/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	5/29/2004
10018585	2/23/1987	6/1/2004	ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	6/1/2004
10018587	12/16/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	5/31/2004
10018589	10/21/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	6/28/2004
10018590	5/13/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	6/28/2004
10018591	5/13/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	6/28/2004
10018592	5/13/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	6/28/2004
10018593	5/13/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	6/28/2004
10018594	2/17/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	
10018595	9/23/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/2/2002	6/28/2004
10018596	9/4/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	6/27/2004
10018597	5/5/1987		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	6/27/2004
10018598	4/18/1986		ID-RF-S3150-A	CCP-AK-INL-005	1/1/2002	6/27/2004
10018676	3/19/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/29/2001	

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Waste Stream ID-RF-S3150-A, Solidified Organics (IDCs 700 and 801)

CONTAINER ID	ORG CLOSURE DATE	SEC CLOSURE DATE	WASTE STREAM	AK_REPORT	ORG VENT DATE	SEC VENT DATE
10018677	9/23/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018678	6/19/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018679	10/31/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018680	4/30/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10018681	8/2/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018682	8/2/1986	11/1/2009	ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	11/1/2009
10018683	8/2/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018684	6/19/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018685	6/19/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	1/1/2003
10018686	4/18/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018687	8/2/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018688	8/26/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	4/6/2006
10018689	4/18/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018690	2/17/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018691	6/19/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018692	8/2/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018693	8/2/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018694	8/20/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018695	4/30/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018696	10/21/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018698	8/2/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018699	12/16/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018700	9/4/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018701	6/19/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018702	3/19/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018703	6/10/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018704	8/2/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018705	3/19/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018706	11/26/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018707	7/23/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018708	8/28/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018709	8/28/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018710	6/19/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018711	8/20/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018712	8/2/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018713	4/18/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018714	8/26/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018715	4/30/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018716	8/20/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018717	6/19/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018718	8/26/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018719	6/10/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	5/26/2004
10018720	6/3/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018721	12/11/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018722	3/11/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018723	3/14/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018724	7/23/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018725	6/24/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018726	2/10/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	1/1/2003
10018727	7/23/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	1/1/2003
10018728	1/27/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018838	9/23/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/29/2001	

Attachment 8 - 06/28/2011 Waste Container List
Waste Stream ID-RF-S3150-A, Solidified Organics (IDCs 700 and 801)

CONTAINER ID	ORG CLOSURE DATE	SEC CLOSURE DATE	WASTE STREAM	AK_REPORT	ORG VENT DATE	SEC VENT DATE
10018839	10/21/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/29/2001	5/27/2004
10018840	8/25/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/29/2001	
10018841	8/20/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/29/2001	
10018842	12/11/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/29/2001	
10018843	1/21/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/29/2001	11/1/2005
10018844	8/26/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/29/2001	
10018845	8/20/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/29/2001	
10018846	1/21/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/29/2001	
10018847	8/25/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/29/2001	
10018848	7/30/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/29/2001	
10018849	6/19/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/29/2001	4/9/2006
10018850	11/24/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/29/2001	
10018851	6/19/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/29/2001	
10018852	6/19/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/29/2001	
10018853	1/20/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	4/7/2006
10018854	11/18/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	
10018855	3/14/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/29/2001	
10018856	12/22/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/29/2001	
10018857	11/11/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	
10018858	1/20/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	
10018859	8/20/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	
10018860	6/3/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	
10018861	8/26/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	
10018862	2/4/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	
10018863	1/11/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	
10018864	11/5/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	
10018865	8/28/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018866	5/13/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	1/1/2003
10018867	5/26/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/29/2001	
10018868	1/5/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	
10018869	10/7/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018870	11/26/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018871	8/26/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018872	8/28/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018873	6/19/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/29/2001	
10018874	1/11/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/29/2001	
10018875	10/7/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018876	12/16/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/31/2001	
10018877	8/28/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	
10018878	11/13/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/24/2001	
10018879	4/14/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/29/2001	
10018880	8/2/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/29/2001	
10018881	6/19/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/29/2001	
10018882	8/2/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/29/2001	
10018883	5/13/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/29/2001	
10018884	8/2/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/29/2001	
10018885	8/20/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/29/2001	
10018886	12/21/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10018887	12/16/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/29/2001	
10018909	11/26/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/30/2001	
10018910	5/13/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/29/2001	
10018911	9/4/1986	7/3/2006	ID-RF-S3150-A	CCP-AK-INL-005	12/29/2001	7/3/2006

Attachment 8 - 06/28/2011 Waste Container List
Waste Stream ID-RF-S3150-A, Solidified Organics (IDCs 700 and 801)

CONTAINER ID	ORG CLOSURE DATE	SEC CLOSURE DATE	WASTE STREAM	AK_REPORT	ORG VENT DATE	SEC VENT DATE
10018912	9/17/1986	6/5/2004	ID-RF-S3150-A	CCP-AK-INL-005	12/29/2001	1/6/2005
10018913	5/13/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/29/2001	
10020692	3/11/1987	6/10/2000	ID-RF-S3150-A	CCP-AK-INL-005		
10023698	3/14/1986	4/1/1997	ID-RF-S3150-A	CCP-AK-INL-005		
10023791	6/20/1988		ID-RF-S3150-A	CCP-AK-INL-005		
10023832	5/13/1986		ID-RF-S3150-A	CCP-AK-INL-005		
10027453	10/31/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10027454	6/1/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10027455	10/31/1986		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10027456	5/13/1987		ID-RF-S3150-A	CCP-AK-INL-005	12/20/2001	
10031734	3/19/1986		ID-RF-S3150-A	CCP-AK-INL-005	3/27/1997	11/28/2005
10033750	11/4/1987		ID-RF-S3150-A	CCP-AK-INL-005		
10033751	8/5/1988		ID-RF-S3150-A	CCP-AK-INL-005		
10033752	4/30/1986		ID-RF-S3150-A	CCP-AK-INL-005		
10033753	11/5/1986		ID-RF-S3150-A	CCP-AK-INL-005		
10033754	11/18/1987		ID-RF-S3150-A	CCP-AK-INL-005		
10033756	10/24/1986		ID-RF-S3150-A	CCP-AK-INL-005		
10033757	8/28/1986		ID-RF-S3150-A	CCP-AK-INL-005		
10033758	9/12/1986		ID-RF-S3150-A	CCP-AK-INL-005		
10308665	4/22/1988	8/15/2009	ID-RF-S3150-A	CCP-AK-INL-005		8/15/2009
10394159	12/16/1986	1/20/2011	ID-RF-S3150-A	CCP-AK-INL-005		1/20/2011
IDRF002500526	9/14/1988		ID-RF-S3150-A	CCP-AK-INL-005	12/17/2001	

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Attachment 8 – Waste Containers List

Site(s): Idaho National Laboratory

Waste Stream Number(s): ID-SDA-SOIL (CCP-AK-INL-001)

Waste Stream Description: Soil with Minor Amounts of Homogeneous Solids and Debris

Number of Waste Containers in Waste Stream: 3,405 55-gallon drums

Total Existing Volume (m^3): 708.24 m^3

Is waste expected to be generated in the future?: Yes

If yes, Estimated Future Volume (m^3): 586.35 m^3 (2,819 55-gallon drums)

Assumptions: The basis for the projected volume is provided in AK Source Document ID-U351, Rev. 2. This projection is based on all soil waste to be retrieved and packaged, plus GEM soil/sludge drums: 6.224 55-gallon drums – 3,405 55-gallon drums = 2,819 55-gallon drums.

Waste Stream Container Evaluation Memo(s) for Added Containers: see attached

Container Identification Number	Generation Date	Generation Point

See attached list of containers

Acceptable Knowledge Expert: Carrie J. Johnson / [signature] Date: 11/09/11
Print Sign

CCP RECORDS ORIGINAL
DATE REC'D 12-1-11

Attachment 8 - 10/01/2011 Waste Container Additions
Waste Stream ID-SDA-SOIL

Container ID	Closure Date	Waste Matrix Code	Waste Stream	AK Report	Added to AK
ARP26834	5/2/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP26913	5/2/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP26087	5/3/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP26163	5/3/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP26827	5/3/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP26838	5/3/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP26862	5/3/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP26863	5/3/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP26864	5/3/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP26870	5/3/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP26901	5/3/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP26910	5/3/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP26928	5/3/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP26935	5/3/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP60044	5/3/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP60099	5/3/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP24655	5/4/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP25076	5/4/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP25298	5/4/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP26813	5/4/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP26840	5/4/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP26841	5/4/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP26956	5/4/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP26958	5/4/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP26974	5/4/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP60029	5/4/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP60030	5/4/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP60046	5/4/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP60071	5/4/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP60098	5/4/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP26760	5/5/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP26957	5/5/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP26963	5/5/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP26964	5/5/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP26971	5/5/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP26976	5/5/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP26977	5/5/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP26980	5/5/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP26983	5/5/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27000	5/5/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27001	5/5/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27003	5/5/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27009	5/5/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27015	5/5/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011

Attachment 8 - 10/01/2011 Waste Container Additions
Waste Stream ID-SDA-SOIL

Container ID	Closure Date	Waste Matrix Code	Waste Stream	AK Report	Added to AK
ARP27017	5/5/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP60026	5/5/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP26758	5/9/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP26811	5/9/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27013	5/9/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27029	5/9/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP26858	5/10/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP26972	5/10/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP26984	5/10/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP26991	5/10/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27011	5/10/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27020	5/10/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27036	5/10/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27044	5/10/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27048	5/10/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27080	5/10/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27086	5/10/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27037	5/11/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27082	5/11/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27095	5/11/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27160	5/11/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP25125	5/12/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP24806	5/16/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP25366	5/16/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP26299	5/16/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27052	5/16/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27212	5/16/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27245	5/16/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP25127	5/17/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP25128	5/17/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP25140	5/17/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP25141	5/17/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP25362	5/17/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP25365	5/17/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP26294	5/17/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27221	5/17/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27226	5/17/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP26453	5/18/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27235	5/18/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27237	5/18/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27243	5/18/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27255	5/18/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27256	5/18/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27259	5/18/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011

Attachment 8 - 10/01/2011 Waste Container Additions
Waste Stream ID-SDA-SOIL

Container ID	Closure Date	Waste Matrix Code	Waste Stream	AK Report	Added to AK
ARP27261	5/18/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27262	5/18/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27385	5/18/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP60037	5/18/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP26969	5/19/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27352	5/19/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27357	5/19/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27361	5/19/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27299	5/23/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27319	5/23/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27384	5/23/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27151	5/24/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27345	5/24/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27370	5/24/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27377	5/31/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27128	6/1/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27426	6/1/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27527	6/1/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27538	6/1/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27264	6/2/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27305	6/2/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27658	6/2/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27671	6/2/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27672	6/2/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27120	6/7/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27435	6/7/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27555	6/7/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27653	6/7/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27661	6/7/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27670	6/7/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27673	6/7/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27617	6/8/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27620	6/8/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27621	6/8/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27622	6/8/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27630	6/8/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27631	6/8/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27652	6/8/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27663	6/8/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27682	6/8/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27701	6/8/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27709	6/8/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27557	6/9/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27575	6/9/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011

Attachment 8 - 10/01/2011 Waste Container Additions
Waste Stream ID-SDA-SOIL

Container ID	Closure Date	Waste Matrix Code	Waste Stream	AK Report	Added to AK
ARP27685	6/9/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27699	6/9/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27703	6/9/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27708	6/9/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27711	6/9/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27718	6/9/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27681	6/13/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27713	6/13/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27632	6/14/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27755	6/14/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27757	6/14/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27766	6/14/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27646	6/15/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27691	6/15/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27733	6/15/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27642	6/20/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27693	6/20/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27832	6/20/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27834	6/20/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28027	6/21/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27837	6/23/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27806	6/29/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28058	6/30/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28050	7/6/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28182	7/6/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28141	7/7/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28164	7/7/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28181	7/7/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27549	7/11/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27571	7/11/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27585	7/13/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27514	7/14/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27546	7/18/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28314	7/18/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27497	7/19/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28254	7/19/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28261	7/19/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28267	7/19/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28270	7/19/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28300	7/19/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28309	7/19/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28313	7/19/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28226	7/20/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28230	7/20/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011

Attachment 8 - 10/01/2011 Waste Container Additions
Waste Stream ID-SDA-SOIL

Container ID	Closure Date	Waste Matrix Code	Waste Stream	AK Report	Added to AK
ARP28250	7/20/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28271	7/20/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28327	7/20/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28229	7/21/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28232	7/21/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28234	7/21/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28237	7/21/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28238	7/25/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28174	7/26/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28205	7/26/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28245	7/26/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27339	7/27/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP27556	7/27/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28102	7/27/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28386	7/27/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28392	7/27/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28397	7/27/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28200	7/28/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28394	7/28/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28501	8/1/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28297	8/2/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28775	8/2/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28779	8/2/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28795	8/2/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28783	8/3/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28799	8/3/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28160	8/4/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28986	8/4/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28823	8/5/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28367	8/10/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP29025	8/11/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28677	8/15/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28499	8/16/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28682	8/16/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28705	8/16/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28447	8/17/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28673	8/23/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28938	8/23/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP29058	8/23/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP29285	8/24/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28116	8/25/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP29200	8/25/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP29276	8/25/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP28724	8/26/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011

Attachment 8 - 10/01/2011 Waste Container Additions
Waste Stream ID-SDA-SOIL

Container ID	Closure Date	Waste Matrix Code	Waste Stream	AK Report	Added to AK
ARP28936	8/26/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP29123	8/29/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP29327	8/29/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP29117	8/30/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP29182	8/31/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP29437	8/31/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP29540	9/6/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP29556	9/7/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP29560	9/7/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP29735	9/14/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP29772	9/14/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011
ARP29822	9/15/2011	S4200	ID-SDA-SOIL	CCP-AK-INL-001	10/1/2011

To: CCP Central Records

Memorandum

From: Jeff Harrison, CCP AKE

Date: September 19, 2006

RE: Evaluation of Additional Containers for Idaho Cleanup Project Accelerated Retrieval Project (ARP) Waste Streams ID-SDA-SLUDGE, ID-SDA-SOIL, and ID-SDA-DEBRIS

The purpose of this memorandum is to satisfy the requirements of Sections 4.9, 4.10, and 4.11 of CCP-TP-005, CCP Acceptable Knowledge Documentation, for newly generated waste retrieved and packaged by the Idaho Cleanup Project (ICP) Accelerated Retrieval Project (ARP). Waste is retrieved from designated areas within the Subsurface Disposal Area (SDA) and brought into a glovebox where it undergoes visual examination (VE) by "VE Technique" in accordance with procedure CCP-TP-006 and then is packaged into a new container. VE data documented on CCP-TP-006 Attachment 1, CCP Waste Visual Examination Technique Data Form, include:

- Container ID
- Drum closure date
- Waste material parameter weights (and calculated volumes based on assumed densities)
- Waste matrix code assignment (based on calculated waste material parameter volumes)
- Presence or absence of prohibited items

As additional containers are packaged, the completed CCP-TP-006 Attachment 1 forms are periodically reviewed to determine the proper waste stream assignment and to verify that the containers are bounded by the existing CCP-AK-INL-001 AK Summary Report (INL-001 AK) for inclusion in waste stream ID-SDA-DEBRIS, ID-SDA-SLUDGE, or ID-SDA-SOIL. Based on this review, containers are added to the Container Tracking Spreadsheet and to the Attachment 8 –Waste Containers List. The following are verified for each new container:

- Waste Generation Location and Process – Verify that each drum has a Container ID that begins with "ARP" indicating that they were generated by the retrieval and packaging of waste from the Accelerated Retrieval Project.

- Time Period of Generation – Verify that each drum has a closure date after 11/18/2004 (the effective date of Revision 0 of the INL-001 AK).

- Physical Form – Verify that the assigned Waste Matrix Code is consistent with the waste material parameters (WMP) and calculated waste volumes.
  - Drums where the predominant waste materials (by volume) are solidified organics (WMP organic matrix) and/or solidified inorganics (WMP inorganic matrix) should be assigned Waste Matrix Code S3900.
  - Drums where the predominant waste material (by volume) is soil/gravel (WMP soils) should be assigned Waste Matrix Code S4200.
  - Drums where the predominant waste material (by volume) is heterogeneous debris should be assigned Waste Matrix Code S5400. The WMP categories associated with heterogeneous debris are iron-based metals/alloys, aluminum-based metals/alloys, other metals, other inorganic material, cellulosics, rubber, and plastics. The typical heterogeneous debris waste items are filters and graphite molds.

- Prohibited Items – Verify that no prohibited items are present in the waste.

Note: For these newly generated waste streams, the chemical and radiological content of the waste described in the INL-001 AK is not evaluated by VE. The chemical and radiological content will be assessed by headspace gas/solids sampling and analyses and non-destructive assay, respectively.

Each drum that meets the above criteria is assigned to the appropriate waste stream on the Container Tracking Spreadsheet and to the Attachment 8 –Waste Containers List.

- Drums with Waste Matrix Code S3900 are assigned to waste stream ID-SDA-SLUDGE
- Drums with Waste Matrix Code S4200 are assigned to waste stream ID-SDA-SOIL
- Drums with Waste Matrix Code S5400 are assigned to waste stream ID-SDA-DEBRIS

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Attachment 8 – Waste Containers List

Site(s): Argonne RH TRU Waste Stored at the INL (CCP-AK-INL-500)

Waste Stream Number(s): ID-ANLE-S5000

Waste Stream Description: Heterogeneous Debris from Argonne AGHCF Operations

Number of Waste Containers in Waste Stream: 617 30-gallon drums and 48 high gamma TRU canisters (to be repackaged into as many as 466 30-gallon drums, each in a 55-gallon drum)

Total Existing Volume (m^3): 166.6

Is waste expected to be generated in the future?: No

If yes, Estimated Future Volume (m^3): N/A

Assumptions: Drum volume projected from repackaging high gamma TRU canisters is a conservative estimate based on the potential need to split canister contents to achieve allowable wattage limits. Cubic meter volume calculation consists of 617 30-gallon drums and 466 55-gallon drums. To date 22 canisters have been repackaged into 156 55-gallon drums.

Waste Stream Container Evaluation Memo(s) for Added Containers: See attached and AK source document C3660.

Container Identification Number	Generation Date	Generation Point

See attached list of containers

Acceptable Knowledge Expert: Scott Smith / [signature] Date: 06/04/2013
Print Sign

NTPC RECORDS ORIGINAL
DATE REC'D 6/5/13 SP

Attachment 8 - 04/22/2013 Waste Container Additions
Waste Stream ID-ANLE-S5000, Heterogeneous Debris from Argonne AGHCF Operations

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
ANLE10A	4/23/2012	CCP-AK-INL-500	ID-ANLE-S5000	4/23/2012	S5000	Debris	ANLE10	4/19/1976	D-31
ANLE10B	5/7/2012	CCP-AK-INL-500	ID-ANLE-S5000	5/7/2012	S5000	Met Mounts, etc.	ANLE10	4/19/1976	D-31
ANLE10C	5/8/2012	CCP-AK-INL-500	ID-ANLE-S5000	5/8/2012	S5000	Pins	ANLE10	4/19/1976	D-31
ANLE10D	4/23/2012	CCP-AK-INL-500	ID-ANLE-S5000	4/23/2012	S5000	Pins	ANLE10	4/19/1976	D-31
ANLE10E	4/16/2012	CCP-AK-INL-500	ID-ANLE-S5000	4/16/2012	S5000	Pins	ANLE10	4/19/1976	D-31
ANLE10F	4/11/2012	CCP-AK-INL-500	ID-ANLE-S5000	4/11/2012	S5000	Pins	ANLE10	4/19/1976	D-31
ANLE10G	5/7/2012	CCP-AK-INL-500	ID-ANLE-S5000	5/7/2012	S5000	Fines w/ Met-L-X	ANLE10	4/19/1976	D-31
ANLE6A	6/19/2012	CCP-AK-INL-500	ID-ANLE-S5000	6/19/2012	S5000	Debris	ANLE6	8/28/1975	D-25
ANLE6B	6/19/2012	CCP-AK-INL-500	ID-ANLE-S5000	6/19/2012	S5000	Met Mounts, etc.	ANLE6	8/28/1975	D-25
ANLE6C	6/19/2012	CCP-AK-INL-500	ID-ANLE-S5000	6/19/2012	S5000	Fines w/ Met-L-X	ANLE6	8/28/1975	D-25
ANLE6D	6/19/2012	CCP-AK-INL-500	ID-ANLE-S5000	6/19/2012	S5000	Pins	ANLE6	8/28/1975	D-25
ANLE6E	6/19/2012	CCP-AK-INL-500	ID-ANLE-S5000	6/19/2012	S5000	Pins	ANLE6	8/28/1975	D-25
ANLE6F	6/20/2012	CCP-AK-INL-500	ID-ANLE-S5000	6/20/2012	S5000	Fines w/ Met-L-X	ANLE6	8/28/1975	D-25
ANLE6G	6/20/2012	CCP-AK-INL-500	ID-ANLE-S5000	6/20/2012	S5000	Pins	ANLE6	8/28/1975	D-25
ANLE3A	6/20/2012	CCP-AK-INL-500	ID-ANLE-S5000	6/20/2012	S5000	Debris	ANLE3	5/9/1975	D-16
ANLE3B	6/20/2012	CCP-AK-INL-500	ID-ANLE-S5000	6/20/2012	S5000	Met Mounts, etc.	ANLE3	5/9/1975	D-16
ANLE3C	6/21/2012	CCP-AK-INL-500	ID-ANLE-S5000	6/21/2012	S5000	Pins	ANLE3	5/9/1975	D-16
ANLE3D	6/21/2012	CCP-AK-INL-500	ID-ANLE-S5000	6/21/2012	S5000	Pins	ANLE3	5/9/1975	D-16
ANLE3E	6/21/2012	CCP-AK-INL-500	ID-ANLE-S5000	6/21/2012	S5000	Pins	ANLE3	5/9/1975	D-16
ANLE3G	6/21/2012	CCP-AK-INL-500	ID-ANLE-S5000	6/21/2012	S5000	Fines w/ Met-L-X	ANLE3	5/9/1975	D-16
ANLE5A	6/22/2012	CCP-AK-INL-500	ID-ANLE-S5000	6/22/2012	S5000	Debris	ANLE5	6/23/1975	D-23
ANLE5B	6/21/2012	CCP-AK-INL-500	ID-ANLE-S5000	6/21/2012	S5000	Met Mounts, etc.	ANLE5	6/23/1975	D-23
ANLE5C	6/22/2012	CCP-AK-INL-500	ID-ANLE-S5000	6/22/2012	S5000	Pins	ANLE5	6/23/1975	D-23
ANLE5D	6/22/2012	CCP-AK-INL-500	ID-ANLE-S5000	6/22/2012	S5000	Pins	ANLE5	6/23/1975	D-23
ANLE5F	6/22/2012	CCP-AK-INL-500	ID-ANLE-S5000	6/22/2012	S5000	Fines w/ Met-L-X	ANLE5	6/23/1975	D-23
ANLE28A	7/16/2012	CCP-AK-INL-500	ID-ANLE-S5000	7/16/2012	S5000	Debris	ANLE28	8/18/1978	D-29
ANLE28B	7/16/2012	CCP-AK-INL-500	ID-ANLE-S5000	7/16/2012	S5000	Met Mounts, etc.	ANLE28	8/18/1978	D-29
ANLE28C	7/17/2012	CCP-AK-INL-500	ID-ANLE-S5000	7/17/2012	S5000	Met Mounts, etc.	ANLE28	8/18/1978	D-29
ANLE28D	7/17/2012	CCP-AK-INL-500	ID-ANLE-S5000	7/17/2012	S5000	Pins	ANLE28	8/18/1978	D-29
ANLE28E	7/16/2012	CCP-AK-INL-500	ID-ANLE-S5000	7/16/2012	S5000	Pins	ANLE28	8/18/1978	D-29
ANLE28F	7/16/2012	CCP-AK-INL-500	ID-ANLE-S5000	7/16/2012	S5000	Fines w/ Met-L-X	ANLE28	8/18/1978	D-29
ANLE28G	7/17/2012	CCP-AK-INL-500	ID-ANLE-S5000	7/17/2012	S5000	Fines w/ Met-L-X	ANLE28	8/18/1978	D-29
ANLE28H	7/17/2012	CCP-AK-INL-500	ID-ANLE-S5000	7/17/2012	S5000	Fines w/ Met-L-X	ANLE28	8/18/1978	D-29
ANLE7A	7/18/2012	CCP-AK-INL-500	ID-ANLE-S5000	7/18/2012	S5000	Debris	ANLE7	10/14/1975	SS-40
ANLE7B	7/17/2012	CCP-AK-INL-500	ID-ANLE-S5000	7/17/2012	S5000	Met Mounts, etc.	ANLE7	10/14/1975	SS-40
ANLE7C	7/18/2012	CCP-AK-INL-500	ID-ANLE-S5000	7/18/2012	S5000	Pins	ANLE7	10/14/1975	SS-40
ANLE7D	7/19/2012	CCP-AK-INL-500	ID-ANLE-S5000	7/19/2012	S5000	Pins	ANLE7	10/14/1975	SS-40

Attachment 8 - 04/22/2013 Waste Container Additions
Waste Stream ID-ANLE-S5000, Heterogeneous Debris from Argonne AGHCF Operations

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
ANLE7E	7/19/2012	CCP-AK-INL-500	ID-ANLE-S5000	7/19/2012	S5000	Pins	ANLE7	10/14/1975	SS-40
ANLE7F	7/19/2012	CCP-AK-INL-500	ID-ANLE-S5000	7/19/2012	S5000	Pins	ANLE7	10/14/1975	SS-40
ANLE7G	7/17/2012	CCP-AK-INL-500	ID-ANLE-S5000	7/17/2012	S5000	Fines w/ Met-L-X	ANLE7	10/14/1975	SS-40
ANLE12A	8/6/2012	CCP-AK-INL-500	ID-ANLE-S5000	8/6/2012	S5000	Debris	ANLE12	7/12/1976	D-47
ANLE12B	8/6/2012	CCP-AK-INL-500	ID-ANLE-S5000	8/6/2012	S5000	Met Mounts, etc.	ANLE12	7/12/1976	D-47
ANLE12C	8/6/2012	CCP-AK-INL-500	ID-ANLE-S5000	8/6/2012	S5000	Met Mounts, etc.	ANLE12	7/12/1976	D-47
ANLE12D	8/7/2012	CCP-AK-INL-500	ID-ANLE-S5000	8/7/2012	S5000	Pins	ANLE12	7/12/1976	D-47
ANLE12E	8/6/2012	CCP-AK-INL-500	ID-ANLE-S5000	8/6/2012	S5000	Pins	ANLE12	7/12/1976	D-47
ANLE12F	8/6/2012	CCP-AK-INL-500	ID-ANLE-S5000	8/6/2012	S5000	Fines w/ Met-L-X	ANLE12	7/12/1976	D-47
ANLE12G	8/7/2012	CCP-AK-INL-500	ID-ANLE-S5000	8/7/2012	S5000	Fines w/ Met-L-X	ANLE12	7/12/1976	D-47
ANLE26A	8/7/2012	CCP-AK-INL-500	ID-ANLE-S5000	8/7/2012	S5000	Debris	ANLE26	6/28/1978	SS-43
ANLE26B	8/8/2012	CCP-AK-INL-500	ID-ANLE-S5000	8/8/2012	S5000	Met Mounts, etc.	ANLE26	6/28/1978	SS-43
ANLE26C	8/9/2012	CCP-AK-INL-500	ID-ANLE-S5000	8/9/2012	S5000	Met Mounts, etc.	ANLE26	6/28/1978	SS-43
ANLE26D	8/9/2012	CCP-AK-INL-500	ID-ANLE-S5000	8/9/2012	S5000	Pins	ANLE26	6/28/1978	SS-43
ANLE26F	8/8/2012	CCP-AK-INL-500	ID-ANLE-S5000	8/8/2012	S5000	Fines w/ Met-L-X	ANLE26	6/28/1978	SS-43
ANLE16A	9/5/2012	CCP-AK-INL-500	ID-ANLE-S5000	9/5/2012	S5000	Debris	ANLE16	4/29/1977	C-43
ANLE16B	9/5/2012	CCP-AK-INL-500	ID-ANLE-S5000	9/5/2012	S5000	Met Mounts, etc.	ANLE16	4/29/1977	C-43
ANLE16C	9/5/2012	CCP-AK-INL-500	ID-ANLE-S5000	9/5/2012	S5000	Pins	ANLE16	4/29/1977	C-43
ANLE16D	9/5/2012	CCP-AK-INL-500	ID-ANLE-S5000	9/5/2012	S5000	Pins	ANLE16	4/29/1977	C-43
ANLE16E	9/5/2012	CCP-AK-INL-500	ID-ANLE-S5000	9/5/2012	S5000	Pins	ANLE16	4/29/1977	C-43
ANLE16F	9/4/2012	CCP-AK-INL-500	ID-ANLE-S5000	9/4/2012	S5000	Fines w/ Met-L-X	ANLE16	4/29/1977	C-43
ANLE16G	9/4/2012	CCP-AK-INL-500	ID-ANLE-S5000	9/4/2012	S5000	Fines w/ Met-L-X	ANLE16	4/29/1977	C-43
ANLE27A	9/10/2012	CCP-AK-INL-500	ID-ANLE-S5000	9/10/2012	S5000	Debris	ANLE27	7/20/1978	SS-45
ANLE27B	9/6/2012	CCP-AK-INL-500	ID-ANLE-S5000	9/6/2012	S5000	Met Mounts, etc.	ANLE27	7/20/1978	SS-45
ANLE27C	9/5/2012	CCP-AK-INL-500	ID-ANLE-S5000	9/5/2012	S5000	Met Mounts, etc.	ANLE27	7/20/1978	SS-45
ANLE27D	9/10/2012	CCP-AK-INL-500	ID-ANLE-S5000	9/10/2012	S5000	Pins	ANLE27	7/20/1978	SS-45
ANLE27E	9/10/2012	CCP-AK-INL-500	ID-ANLE-S5000	9/10/2012	S5000	Pins	ANLE27	7/20/1978	SS-45
ANLE27F	9/10/2012	CCP-AK-INL-500	ID-ANLE-S5000	9/10/2012	S5000	Fines w/ Met-L-X	ANLE27	7/20/1978	SS-45
ANLE36A	9/17/2012	CCP-AK-INL-500	ID-ANLE-S5000	9/17/2012	S5000	Debris	ANLE36	5/7/1979	D-42
ANLE36B	9/17/2012	CCP-AK-INL-500	ID-ANLE-S5000	9/17/2012	S5000	Met Mounts, etc.	ANLE36	5/7/1979	D-42
ANLE36C	9/17/2012	CCP-AK-INL-500	ID-ANLE-S5000	9/17/2012	S5000	Pins	ANLE36	5/7/1979	D-42
ANLE36D	9/18/2012	CCP-AK-INL-500	ID-ANLE-S5000	9/18/2012	S5000	Pins	ANLE36	5/7/1979	D-42
ANLE36E	9/18/2012	CCP-AK-INL-500	ID-ANLE-S5000	9/18/2012	S5000	Pins	ANLE36	5/7/1979	D-42
ANLE36F	9/18/2012	CCP-AK-INL-500	ID-ANLE-S5000	9/18/2012	S5000	Fines w/ Met-L-X	ANLE36	5/7/1979	D-42
ANLE18A	9/25/2012	CCP-AK-INL-500	ID-ANLE-S5000	9/25/2012	S5000	Debris	ANLE18	8/16/1977	C-45
ANLE18B	9/25/2012	CCP-AK-INL-500	ID-ANLE-S5000	9/25/2012	S5000	Met Mounts, etc.	ANLE18	8/16/1977	C-45
ANLE18C	9/25/2012	CCP-AK-INL-500	ID-ANLE-S5000	9/25/2012	S5000	Pins	ANLE18	8/16/1977	C-45

Attachment 8 - 04/22/2013 Waste Container Additions

Waste Stream ID-ANLE-S5000, Heterogeneous Debris from Argonne AGHCF Operations

CNTR_NUM	Closure Date	AK Report	Waste Stream	[illegible] Date	Summary Cat Group	Special Info	[illegible] ID	[illegible] Date	RSWF Location
ANLE18D	9/25/2012	CCP-AK-INL-500	ID-ANLE-S5000	9/25/2012	S5000	Pins	ANLE18	8/16/1977	C-45
ANLE18E	9/20/2012	CCP-AK-INL-500	ID-ANLE-S5000	9/20/2012	S5000	Pins	ANLE18	8/16/1977	C-45
ANLE18F	9/20/2012	CCP-AK-INL-500	ID-ANLE-S5000	9/20/2012	S5000	Fines w/ Met-L-X	ANLE18	8/16/1977	C-45
ANLE24A	10/17/2012	CCP-AK-INL-500	ID-ANLE-S5000	10/17/2012	S5000	Debris	ANLE24	4/17/1978	P-34
ANLE24B	10/17/2012	CCP-AK-INL-500	ID-ANLE-S5000	10/17/2012	S5000	Met Mounts, etc.	ANLE24	4/17/1978	P-34
ANLE24C	10/17/2012	CCP-AK-INL-500	ID-ANLE-S5000	10/17/2012	S5000	Pins	ANLE24	4/17/1978	P-34
ANLE24D	10/17/2012	CCP-AK-INL-500	ID-ANLE-S5000	10/17/2012	S5000	Pins	ANLE24	4/17/1978	P-34
ANLE24E	10/17/2012	CCP-AK-INL-500	ID-ANLE-S5000	10/17/2012	S5000	Fines w/ Met-L-X	ANLE24	4/17/1978	P-34
ANLE24F	10/18/2012	CCP-AK-INL-500	ID-ANLE-S5000	10/18/2012	S5000	Fines w/ Met-L-X	ANLE24	4/17/1978	P-34
ANLE24G	10/18/2012	CCP-AK-INL-500	ID-ANLE-S5000	10/18/2012	S5000	Fines w/ Met-L-X	ANLE24	4/17/1978	P-34
ANLE34A	11/5/2012	CCP-AK-INL-500	ID-ANLE-S5000	11/5/2012	S5000	Debris	ANLE34	3/27/1979	P-42
ANLE34B	11/6/2012	CCP-AK-INL-500	ID-ANLE-S5000	11/6/2012	S5000	Met Mounts, etc.	ANLE34	3/27/1979	P-42
ANLE34C	11/5/2012	CCP-AK-INL-500	ID-ANLE-S5000	11/5/2012	S5000	Pins	ANLE34	3/27/1979	P-42
ANLE34D	11/5/2012	CCP-AK-INL-500	ID-ANLE-S5000	11/5/2012	S5000	Pins	ANLE34	3/27/1979	P-42
ANLE34E	11/5/2012	CCP-AK-INL-500	ID-ANLE-S5000	11/5/2012	S5000	Pins	ANLE34	3/27/1979	P-42
ANLE34F	11/5/2012	CCP-AK-INL-500	ID-ANLE-S5000	11/5/2012	S5000	Fines w/ Met-L-X	ANLE34	3/27/1979	P-42
ANLE25A	11/6/2012	CCP-AK-INL-500	ID-ANLE-S5000	11/6/2012	S5000	Debris	ANLE25	5/19/1978	P-40
ANLE25B	11/6/2012	CCP-AK-INL-500	ID-ANLE-S5000	11/6/2012	S5000	Met Mounts, etc.	ANLE25	5/19/1978	P-40
ANLE25C	11/6/2012	CCP-AK-INL-500	ID-ANLE-S5000	11/6/2012	S5000	Pins	ANLE25	5/19/1978	P-40
ANLE25D	11/6/2012	CCP-AK-INL-500	ID-ANLE-S5000	11/6/2012	S5000	Pins	ANLE25	5/19/1978	P-40
ANLE25E	11/6/2012	CCP-AK-INL-500	ID-ANLE-S5000	11/6/2012	S5000	Fines w/ Met-L-X	ANLE25	5/19/1978	P-40
ANLE13A	12/3/2012	CCP-AK-INL-500	ID-ANLE-S5000	12/3/2012	S5000	Debris	ANLE13	11/17/1976	C-41
ANLE13B	12/3/2012	CCP-AK-INL-500	ID-ANLE-S5000	12/3/2012	S5000	Met Mounts, etc.	ANLE13	11/17/1976	C-41
ANLE13C	12/3/2012	CCP-AK-INL-500	ID-ANLE-S5000	12/3/2012	S5000	Pins	ANLE13	11/17/1976	C-41
ANLE13D	12/3/2012	CCP-AK-INL-500	ID-ANLE-S5000	12/3/2012	S5000	Pins	ANLE13	11/17/1976	C-41
ANLE13E	12/3/2012	CCP-AK-INL-500	ID-ANLE-S5000	12/3/2012	S5000	Fines w/ Met-L-X	ANLE13	11/17/1976	C-41

To: CCP Records

Memorandum

From: Scott Smith, CCP AKE

Date: April 22, 2013

RE: Revision 1, Evaluation of Drums From Repack of ANL-E High Gamma TRU Waste Containers at INL in Waste Stream ID-ANLE-S5000

This memorandum describes the addition drums to waste stream ID-ANLE-S5000 since April 16,2012 as described in the memorandum of the same date, "Evaluation of Drums From Repack of ANL-E High Gamma TRU Waste Containers at INL in Waste Stream ID-ANLE-S5000".

Form -880s, completed during repackaging of ANL-E High Gamma TRU waste canisters (Reference U4032), have been reviewed for an additional 16 repackaged canisters producing 100 additional 55-gallon drums of heterogeneous debris waste. This information was reviewed to verify that the containers are bounded by the existing CCP-AK-INL-500, Revision 11 AK Summary Report for inclusion in waste stream ID-ANLE-S5000.

Waste Generation Location and Process

The Form-880s (Reference U4032) indicated the canisters were repackaged and the drums generated in Building CPP-666 at INTEC. These operations are currently described in CCP-AK-INL-500 for the waste stream. Therefore the generation location and process is bounded by the CCP-AK-INL-500 waste stream AK.

Time Period of Generation

The repackaging operations are currently being conducted as indicated in CCP-AK-INL-500. The 100 drums were packaged from April 2012 through December 2012. Operations continue and additional containers are to be repackaged. Therefore the generation period is bounded by the CCP-AK-INL-500 waste stream AK.

Physical Form compared to the assigned waste material parameters and waste matrix code

The physical descriptions for the waste items identified for the container listed in the FRM-880s (Reference U4032) is consistent with waste materials currently identified for waste stream ID-ANLE-S5000. The waste is primarily debris (S5000) and composed of both organic (cellulosic, plastic, and rubber) and inorganic (metal, glass, ceramics) waste items. Therefore, the physical form for the containers is consistent with the waste stream and bounded by the CCP-AK-INL-500 waste stream AK.

Chemical Content

The FRM-880s (Reference U4032) do not provide information on chemical content. The chemicals identified in the AK are based on an evaluation of all of the operations that generated AGHCF and repackaged heterogeneous debris wastes. No additional RCRA constituents or associated EPA hazardous waste numbers were identified from the FRM-880s (Reference U4032). Therefore, all of the drums are bounded by the CCP-AK-INL-500 waste stream AK.

Radiological Characterization

The FRM-880s (Reference U4032) do not provide information on radionuclides. The radionuclides identified in the AK are based on an evaluation of all of the operations that generated AGHCF and repackaged heterogeneous debris wastes. Therefore, all of the drums are bounded by the by the CCP-AK-INL-500 waste stream AK.

Prohibited Items

The FRM-880s (Reference U4032) documents the absence of prohibited items, the segregation and addition of Met-L-X to fines, and water immersion testing of fuel pieces during repackaging operations. In addition, prohibited items in individual drums will be assessed by CCP characterization activities.

SMS

[Type text]

Memorandum

To: CCP Records

From: Scott Smith, CCP AKE

Date: April 16, 2012

RE: Evaluation of Drums From Repack of ANL-E High Gamma TRU Waste Containers at INL in Waste Stream ID-ANLE-S5000

The 51 canisters of high gamma TRU waste were added to waste stream ID-ANLE-S5000 with Revision 8 of CCP-AK-INL-500, *Central Characterization Project Acceptable Knowledge Summary Report for Remote-Handled Transuranic Debris Waste From Argonne National Laboratory-East Stored At The Idaho National Laboratory*, as described in the memo to CCP Records dated September 30, 2009 (AK source document C3660). Since that time, three of the canisters, ANLE 4, ANLE 50, and ANLE 51 have been removed from the waste stream because they may contain sodium in addition to that allowed in sodium bonded fuel materials per procedures (References C008, C3991, P067).

Form -880s, completed during repackaging of ANL-E High Gamma TRU waste canisters (Reference U4032, have been reviewed for six (6) repackaged canisters producing 56 55-gallon drums of heterogeneous debris waste. This information was reviewed to verify that the containers are bounded by the existing CCP-AK-INL-500, Revision 10 AK Summary Report for inclusion in waste stream ID-ANLE-S5000.

Waste Generation Location and Process

The Form-880s (Reference U4032) indicated the canisters were repackaged and the drums generated in Building CPP-666 at INTEC. These operations are currently described in CCP-AK-INL-500 for the waste stream. Therefore the generation location and process is bounded by the CCP-AK-INL-500 waste stream AK.

Time Period of Generation

The repackaging operations are currently being conducted as indicated in CCP-AK-INL-500. The 56 drums were packaged from November 2011 through March 2012. Operations continue and additional containers are to be repackaged. Therefore the generation period is bounded by the CCP-AK-INL-500 waste stream AK.

Physical Form compared to the assigned waste material parameters and waste matrix code

The physical descriptions for the waste items identified for the container listed in the FRM-880s (Reference U4032) is consistent with waste materials currently identified for waste stream ID-ANLE-S5000. The waste is primarily debris (S5000) and composed of both organic (cellulosic, plastic, and rubber) and inorganic (metal, glass, ceramics) waste items. Therefore, the physical form for the containers is consistent with the waste stream and bounded by the CCP-AK-INL-500 waste stream AK.

Chemical Content

The FRM-880s (Reference U4032) does not provide information on chemical content. The chemicals identified in the AK are based on an evaluation of all of the operations that generated AGHCF and repackaged heterogeneous debris wastes. No additional RCRA constituents or associated EPA hazardous waste numbers were identified from the FRM-880s (Reference U4032). Therefore, all of the drums are bounded by the CCP-AK-INL-500 waste stream AK.

Radiological Characterization

The FRM-880s (Reference U4032) do not provide information on radionuclides. The radionuclides identified in the AK are based on an evaluation of all of the operations that generated AGHCF and repackaged heterogeneous debris wastes. Therefore, all of the drums are bounded by the by the CCP-AK-INL-500 waste stream AK.

Prohibited Items

The FRM-880s (Reference U4032) documents the absence of prohibited items, the segregation and addition of Met-L-X to fines, and water immersion testing of fuel pieces during repackaging operations. In addition, prohibited items in individual drums will be assessed by CCP characterization activities.

SMS

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PAGE

Attachment 8 – Waste Containers List

Site(s): Idaho National Laboratory

Waste Stream Number(s): IN-ID-BTO-030

Waste Stream Description: Bettis Laboratory Homogeneous RH TRU Waste Stored at INL

Number of Waste Containers in Waste Stream: 4

Total Existing Volume (m^3): 0.832m^3

Is waste expected to be generated in the future?: No

If yes, Estimated Future Volume (m^3): N/A

Assumptions: None

Container Identification Number	Generation Date	Generation Point
See attached list of containers		

Acceptable Knowledge Expert: James Luginbyhl / James Luginbyhl Date: 4/10/2012
Print Sign

CCP RECORDS ORIGINAL
DATE REC'D 5-19-12

Attachment 8 - Waste Containers
Waste Stream IN-ID-NRF-SPC

Container ID	IN Containers	HFEF Container No.	AK Report	Waste Stream	Matrix Code	Cntnr Type	Generation Date	Closure Date	Vent Date
IDBLANL880164A	41-1, 41-82, 41-95	1380, B-364, 88-164	CCP-AK-INL-590	IN-ID-BTO-030	S3150	55-gallon drum	5/79 - 5/83	11/16/2011	11/16/2011
IDBLANL880107A	41-33, 41-42, 41-93	1377, N-146, 88-107	CCP-AK-INL-590	IN-ID-BTO-030	S3150	55-gallon drum	12/78 - 3/84	11/16/2011	11/16/2011
IDBLANL880107B	41-20, 41-83, 41-92	1377, N-146, 88-107	CCP-AK-INL-590	IN-ID-BTO-030	S3150	55-gallon drum	8/77 - 7/87	11/16/2011	11/16/2011
IDBLANL880107C	41-23, 41-67, 41-79, 41-94	1377, N-146, 88-107	CCP-AK-INL-590	IN-ID-BTO-030	S3150	55-gallon drum	6/77 - 3/89	11/16/2011	11/16/2011

Attachment 15 – CCP TRU Waste Correlation and Surrogate Summary Form Page 1 of 1

CCP TRU Waste Correlation and Surrogate Summary Form

Generator/Storage Site: Bettis Laboratory / Idaho National Laboratory

Waste Stream: IN-ID-BTO-030

Waste Used to Correlate: BT-T001

Waste Used as Surrogate: BT-T001

Information	Y/N	Source of Information
Is physical form identified?	Yes	P201, U221, U224, U255, and U276
Are chemicals identified?	Yes	C031, C125, C126, C128, C129, C134, C211, C125, C126, C129, C134, C211, C212, C309, C310, C311, P107, P109, P113, P116, P119, P120, P121, P123, P124, P132, P136, P201, P205, U209, U214, U216, U224, U225, U232, U235, U239, U249, U255, U264, U265, U303, U304
Is the absence of prohibited items confirmed?	Yes	RTR of each drum
Are radiological data described?	Yes	CCP-AK-BAPL-501 and CCP-AK-INL-591

Explain/Justify the Use of Correlating/Surrogate Waste Stream Information:

Both waste streams were generated in the Material Evaluation Lab (MEL) at Bettis Laboratory during the sectioning and metellugical examination of the samples. Waste stream IN-ID-BTO-030 was solidified in Portland cement prior to shipment, to immobilize the respirable fines. Waste stream BT-T001 was planned to be treated the same way but shipments to INL were stopped. BT-T001 was never solidified. Waste stream BT-T001 was sampled to have the radioisotopes analyzed. Because the waste streams were generated by the same processes. The radioisotopic analysis of BT-T001 will be used to characterize IN-ID-BTO-030.

AKE: James Luginbyhl / Jima Luginbyhl Date: 5/19/2011

Print Sign

ORIGINAL

Attachment 3 - Acceptable Knowledge Source Document Summary

Site(s): Idaho National Laboratory	Source Document Tracking Number: DR3004

Waste Stream Number(s): ID-AECHDM, ID-AECHHM
(Applicable only when site library is not in use)

Acceptable Knowledge Documentation Type:	Category:
☑ TRU Waste Management Program Information	☐ C - Correspondence
☑ Waste Stream-Specific Information	☑ DR - Discrepancy Resolution
☑ Additional Information	☐ I - Internal procedures
	☐ M - Miscellaneous
	☐ P - Published plans, documents, and procedures
	☐ U - Unpublished Documents

Title of Source Document: Resolution of Discrepancies Associated with Beryllium Oxide in Container RW48190

Source Document Reference Information (author(s), document and revision number, date, publisher): K. J. Peters, Document Number and Revision: NA, 11/04/2011

AK # [a]	Source Doc. Page # [b]	AK Information Summary
PR7, WS1, WS2, WS3, WS8, S4	Throughout	This discrepancy report describes the review of container documentation for the feed materials placed into drum RW48190, when it was noticed that a photograph of a large bag included in the record for RW74064 was marked with "BeO" (See Attachment 1). Additionally, a WMS printout (See Attachment 2) identified that the beryllium oxide accounted for 5% by volume of the materials. This bag originated from Room G-117 in Building 205. Based on the finding described above, additional review of the container documentation for the feed materials repackaged into waste streams ID-AECHDM and ID-AECHHM was performed. All of the available documentation for materials originating from G-Wing in Building 205 was carefully reviewed, including photographs and other printouts. No other sources of beryllium were identified during this review. Based on the information available, it was estimated that the beryllium oxide in container RW48190 may exceed 1% by weight.

Source Document Data Limitations (if any):

1. Analysis limited to all drums containing G-Wing waste and container RW48190; however, this container was reassigned from debris waste stream ID-AECHDM to ID-AECHHM (See DR3002) and therefore relevant to both streams.

Acceptable Knowlege Expert:

Sherry Auckland, Date: 11/28/2011
Print /Sign

[a] Obtain from Acceptable Knowledge Documentation Checklist
[b] For microfilm or microfiche, identify box, tape, reel number and location.

CCP RECORDS ORIGINAL
DATE REC'D 12-15-11
16 ca 12-16-11

Attachment 11 – Acceptable Knowledge Source Document Discrepancy Resolution

Waste Stream Number(s): ID-AECHDM and ID-AECHHM

Waste Stream Description: Heterogeneous Debris and Homogeneous Waste from Argonne Operations

AK Documentation Type: [X] TRU Waste Management Program Information [X] Waste Stream Specific Information [X] Additional Information							
AK Source Document Discrepancy Form Tracking Number: DR3004 – Resolution of Discrepancies Associated with Beryllium Oxide in Container RW48190							
Tracking #	Category[a]	Title	Document/Rev#	Author	Date	Publisher	Page #
NA	Pub.	Central Characterization Project Acceptable Knowledge Summary Report For Idaho National Laboratory Argonne Contact-Handled Transuranic Waste from Facility Maintenance and Laboratory Operations, Waste Streams: ID-AECHDM, ID-AECHHM	CCP-PK-ANLE-001, Rev. 0	CCP	10/21/2011	CCP	Section 6.4.3.3
NA	Pub.	Central Characterization Project Process Knowledge Summary Report For Argonne Contact-Handled TRU Waste from Facility Maintenance and Laboratory Operations, Waste Streams: AECHDM-PK, AECHHM-PK	CCP-PK-ANLE-001, Rev. 1	CCP	9/1/2011	CCP	Sections 5.3.3.3 and 6.3.3.3
AE-I-050	Pub.	Revised Criticality Hazards Control Statement for IFR Fuels Reprocessing Laboratory G-118 Located in Building 205	ANL-CMTI-9256	R. Wolson	02/01/1993	NA	Pgs. 16, 17, and 23
DR3003	Disc.	Resolution of Discrepancies Associated with Beryllium Oxide Crucible Pieces in Container RW48192	NA	K. Peters	9/12/2011	CCP	All
U3003	Unpub.	Historic WMO-195 Waste Requisitions for containers repackaged into Waste streams AECHDM-PK and AECHHM-PK	NA	WMO	Various	NA	Container RW48190

Nature of Discrepancy:

Section 6.4.3.3 of AK Summary Report CCP-AK-INL-025 states:

"The only sources of beryllium identified in the AK record were samples being analyzed for beryllium and beryllium oxide crucibles used in an electrorefining furnace in the G-118 laboratory in Building 205. Based on the physical form of the samples introduced into the waste generating processes, the waste stream will not meet the definition of P015 waste and beryllium would only be present in trace quantities and could not exceed one percent, by weight, in any payload container. Debris including beryllium oxide crucibles originating from G-118 were not included in this waste stream [referring to waste stream ID-AECHHM]."

As described in Discrepancy Report DR3003, it was determined that a debris container in waste stream ID-AECHDM (RW48192) contained greater than 1% by weight of beryllium oxide crucibles from electrorefining operations conducted in Room G-118 in Building 205. Based on this discovery, a review of the container paperwork for the feed containers repackaged into waste streams ID-AECHDM and ID-AECHHM were reviewed to ensure that these crucibles were accounted for and that there was no other source of beryllium that may have been repackaged into the waste streams. Though all of the feed containers were reviewed, the assessment focused on the review of the WMP-195 Disposal Requisitions that had identified beryllium for container RW48192, especially for debris materials originating from Room G-118 in Building 205.

During a subsequent review of the container documentation for the feed materials placed into drum RW48190, it was noticed that a photograph of a large bag included in the record for RW74064 was marked with "BeO" (See Attachment 1). Additionally, a WMS printout (See Attachment 2) identified that the beryllium oxide accounted for 5% by volume of the materials. This bag originated from Room G-117 in Building 205.

Resolution:

Based on the finding described above, additional review of the container documentation for the feed materials repackaged into waste streams ID-AECHDM and ID-AECHHM was performed. All of the available documentation for materials originating from G-Wing in Building 205 was carefully reviewed, including photographs and other printouts. No other sources of beryllium were identified during this review. Based on the information available, it was estimated that the beryllium oxide in container RW48190 may exceed 1% by weight.

Based on this evaluation, AK Summary Report CCP-AK-INL-025 will be revised to identify that drum RW48190 conservatively contains beryllium in excess of one percent by weight and TRUCONs will be developed to assure that this container is accounted for and managed properly prior to shipment to WIPP.

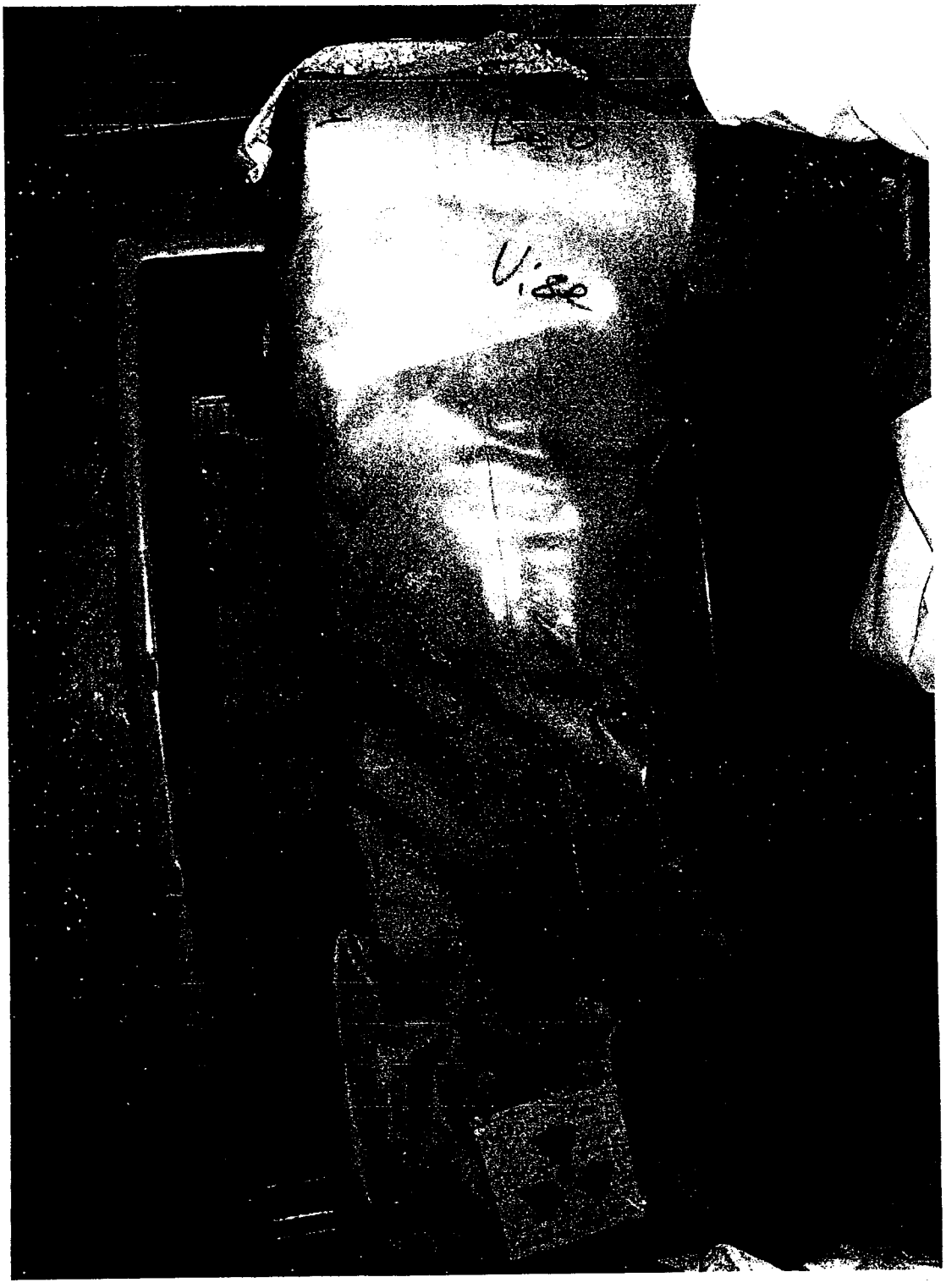
Discrepancy Resolved: [X] Yes [ ] No

Acceptable Knowledge Expert: Kevin J. Peters / _____ Date: 11/4/2011
Print / Sign

Site Project Manager: Jim Vernon / _____ Date: 11-15-11
Print / Sign

[a] Published Document or Controlled Database (Pub.); Unpublished Data (Unpub.); Internal Procedure or Note (Proc.); Correspondence (Corr.) or Discrepancy (Disc.)

Attachment 1 – Photograph Included in RW74064 Documentation



BEST AVAILABLE
08/12/2011

Attachment 2 – WMS Printout Included in RW74064 Documentation

Constituents	% of Total Volume	Volume	Unit of Measure	% of Total Weight	Weight
Acid glass bottles		10			
Analytical balance		50			
Beryllium oxide		5			
Cadmium		1			
Hot plate		10			
Metal vise		1			
Plastic bottles		25			

BEST AVAILABLE

c012/2/11

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Attachment 3 - Acceptable Knowledge Source Document Summary

Site(s): Idaho National Laboratory	Source Document Tracking Number: D004
Waste Stream Number(s): ID-RF-S3114, ID-RF-S3150-A	
Acceptable Knowledge Documentation Type: ☐ TRU Waste Management Program Information ☑ Waste Stream-Specific Information ☑ Additional Information	Category: ☐ C - Correspondence ☑ D - Discrepancy Resolution ☐ M - Miscellaneous Documents ☐ P - Published Documents ☐ U - Unpublished Documents
Title of Source Document: Discrepancy Resolution for Waste Matrix Code Assignments for Waste Streams ID-RF-S3114 and ID-RF-S3150-A	
Source Document Reference Information (author(s), document and revision number, date, publisher): Jeff Harrison, NA, NA, 7/1/2005	

AK # [b]	Source Doc. Page # [c]	AK Information Summary
WS1, WS6, S9	1-2	Resolution of a disagreement in the assignment of different Waste Matrix Codes for Organic Setups and Solidified Organics by RFETS and the AMWTP.

Source Document Data Limitations (if any):

1. None

Acceptable Knowiege Expert:

Scott Smith _____ Date: 8/14/2012

Print /Sign

[a] Provide description for non-titled information (i.e., container paperwork, MSDS sheets, etc.)
[b] Obtain from Acceptable Knowledge Documentation Checklist
[c] For microfilm or microfiche, identify box, tape, reel number and location.

NTPC RECORDS ORIGINAL
DATE REC'D 4/26/13 SP

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Attachment 11 - Acceptable Knowledge Source Document Discrepancy Resolution (CCP-AK-INL-005)

Waste Stream Number(s): ID-RF-S3114 and ID-RF-S3150-A

Waste Stream Description: Organic setups (IDC 003) and Solidified Organics (IDCs 700 and 801)

AK Documentation Type: ☐TRU Waste Management Program Information ☒Waste Stream Specific Information ☒Supplemental Information

AK Source Document Discrepancy Form Tracking Number: **D004**

Tracking #	Category[a]	Title	Document/ Rev#	Author	Date	Publisher	Page #
Ref. 10	Pub.	DOE Waste Treatability Group Guidance	DOE/LLW-217, Rev. 0	INEL	1/95	N/A	5-9 to 5-16
P507	Pub.	Acceptable Knowledge Document for INEEL Stored Transuranic Waste – Rocky Flats Plant Waste	INEL-96/0280, Rev. 3	INEEL	2/28/03	N/A	25-1
P516	Pub.	Advanced Mixed Waste Treatment Project Waste Stream Designations	BNFL-5232-RPT-TRUW-12, Rev. 1	BNFL, Inc.	11/20/03	N/A	11
P521	Pub.	Rocky Flats Environmental Technology Site WIPP Waste Stream Profile Form, TRM Solidified Organic Waste.	RF135.01, Rev. 0	Rocky Flats	3/23/05	N/A	7.47-3
P522	Pub.	Rocky Flats Environmental Technology Site WIPP Waste Stream Profile Form, TRM Solidified Organic Waste.	RF107.04, Rev. 0	Rocky Flats	1/11/05	N/A	7.27-3
U099	Unpub.	Draft Waste Stream Profile Form – Solidified Organics and Supporting Documentation	INW164.001	INEEL	4/10/02	N/A	3

Nature of Discrepancy: The INL 3100 m^3 Project AK Report (P507) included organic setups (IDC 003) and solidified organics (IDCs 700 and 801) in the same section of their report (Section 25.0). The INL 3100 m^3 Project never prepared a waste stream profile for organic setups, but they did prepare a draft profile for solidified organics in 2002 (U099). In the draft profile, solidified organics was assigned Waste Matrix Code S3150 (Solidified Homogeneous Solids). The INL Advanced Mixed Waste Treatment Project has not prepared waste stream profiles for any of these IDCs; however, waste matrix code assignments were made (P516). AMWTP assigned Waste Matrix Code S3114 (Absorbed Organic Liquids) to IDC 003, and Waste Matrix Code S3150 (Solidified Homogeneous Solids) to both IDCs 700 and 801. Rocky Flats delineated separate waste streams for organic setups and solidified organics (P521, P522). Waste Matrix Code S3290 (Unknown/Other Organic Homogeneous Solids) was assigned to organic setups, and Waste Matrix Code S3190 (Unknown/Other Inorganic Homogeneous Solids).

[a] Published Document or Controlled Database (Pub.); Unpublished Data (Unpub.); Internal Procedure or Note (Proc.); Correspondence (Corr.) or Discrepancy (Disc.)

Resolution: The organic setups and solidified organics were generated at Rocky Flats and for many years were shipped to the INL for storage. The physical form of these wastes stored at Rocky Flats and the INL are no different, but were assigned different waste matrix codes by the respective TRU Waste Programs.

Organic Setups

Organic setups consists of organic liquids mixed with a synthetic calcium silicate to form a grease or paste-like material. In the DOE Waste Treatability Group Guidance (Ref. 10), Waste Matrix Code S3290, Unknown/Other Organic Homogeneous Solids, includes waste that is consistent with the definition for the S3200 category, but does not meet the criteria specified for any of the S3210, S3220, or S3230 categories. The general S3200 category includes waste that is at least 50% organic homogeneous solids with a base structure that is primarily organic such that a maximum of approximately 20%, by weight, would remain as residue following incineration. The organic setups consists of 30 gallons of organic liquid (mixture of oils and solvents; primarily carbon tetrachloride) and 100 pounds of synthetic calcium silicate which would likely result in more than 20%, by weight, calcium silicate (which would remain as residue following incineration). Therefore, Waste Matrix Code S3290 is probably not the best choice. Waste Matrix Code S3114, Absorbed Organic Liquids, includes waste that is at least 50%, by volume, inorganic particulate absorbent with absorbed organic liquids. The general S3100 category (of which S3114 is a subcategory of) includes waste with sufficient inorganic solids content such that a minimum of approximately 20%, by weight, would remain as residue following incineration. Therefore, Waste Matrix Code S3114 is the best fit and will be assigned to the organic setups waste stream.

Solidified Organics

Solidified organics consists of organic liquids mixed with water, gypsum cement, emulsifier (polyethylene glycol ether), and accelerator (gypsum and potassium sulfate) that cure into a solid monolith. In the DOE Waste Treatability Group Guidance (Ref. 10), Waste Matrix Code S3190, Unknown/Other Inorganic Homogeneous Solids, includes waste that is consistent with the definition for the S3100 category, but does not meet the criteria specified for any of the S3110 through S3160 categories. The general S3100 category includes waste with sufficient inorganic solids content such that a minimum of approximately 20%, by weight, would remain as residue following incineration. The typical composition of solidified organic waste is 170 pounds of organic liquid waste, 250 pounds of gypsum cement, 25 pounds of emulsifier, 10 pounds of accelerator, and 42 pounds of water which results in about 60%, by weight, inorganic (which would remain as residue following incineration). This waste matrix code therefore could be used; however, the more detailed category S3150 could also be used. Waste Matrix Code S3150, Solidified Homogeneous Solids, includes waste that is at least 50%, by volume, solidified waste forms such as a particulate or sludge that has been immobilized with cement and cured into a solidified form. Therefore, Waste Matrix Code S3150 is the best fit and will be assigned to the solidified organics waste stream.

Discrepancy Resolved: ☒ Yes ☐ No

Acceptable Knowledge Expert: Jeff Harrison (Print) / Jeff Harrison (Sign) Date: 7/1/05

Site Project Manager: Barbara Broomfield (Print) / (Sign) Date: 7/1/05

* Published Document or Controlled Database (Pub.); Unpublished Data (Unpub.); Internal Procedure or Note (Proc.); Correspondence (Corr.) or Discrepancy (Disc.)

07/01/2005 09:30 5266973 INL CCP PAGE 03/06

Attachment 2 - CCP Records Transmittal/Receiving Form

CCP Central Records/Records Custodian, 4021 National Parks Highway - MS: GSA 203, Carlsbad, New Mexico 88220

Telephone Number: 505-234-7523, 505-234-7233, 505-234-7617
Fax Number: 505-234-7014

☒ Original Record
☐ Faxed Record

Attn:	Records Custodian	From:	Jeff Harrison
Ship to:	CCP Central Records/ CCP Records Custodian	Site:	Idaho National Laboratory, CCP-AK-INL-005
	4021 National Parks Highway - MS GSA 203	Company:	Technical Specialists, LLC
	Carlsbad, NM 88220	Telephone Number:	720-977-7042
		Date Sent:	8/24/05
Telephone Number:	505-234-7523		

Document Number	Title/Description	Date	Pages
D004	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-004	7/5/2005	1
	Discrepancy Resolution for Waste Matrix Code Assignments for Waste Streams ID-RF-S3114 and ID-RF-S3150-A	7/1/2005	2
	NA		

Comments
None

CCP Records Center
Acceptance/Rejection Signature and Date

Records Accepted ☒ [signature] Signature [Printed Name] Printed Name 11/28/05 Date

Records Rejected ☐ _____ Signature _____ Printed Name _____ Date

Reason for Rejection: _____

Re-submittal: _____ Signature _____ Printed Name _____ Date

P. 01

TRANSACTION REPORT

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FOR: CCP RECORDS 15052347014

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DATE	START	RECEIVER	TX TIME	PAGES	TYPE	NOTE	M#	DP
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☒ Original Record
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Ship to:	CCP Central Records/ CCP Records Custodian	Site:	Idaho National Laboratory, CCP-AK-INL-005
	4021 National Parks Highway - MS GSA 203	Company:	Technical Specialists, LLC
	Carlsbad, NM 88220	Telephone Number:	720-977-7042
		Date Sent:	8/24/05
Telephone Number:	505-234-7523		

Document Number	Description	Date	Pages
D004	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-004	7/5/2005	1
	Discrepancy Resolution for Waste Matrix Code Assignments for Waste Streams ID-RF-S3114 and ID-RF-S3150-A	7/1/2005	2

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Attachment 3 - Acceptable Knowledge Source Document Summary

Site(s): Idaho National Laboratory	Source Document Tracking Number: D005
Waste Stream Number(s): ID-RF-S3114, ID-RF-S3150-A	
Acceptable Knowledge Documentation Type: ☐ TRU Waste Management Program Information ☑ Waste Stream-Specific Information ☑ Additional Information	Category: ☐ C - Correspondence ☑ D - Discrepancy Resolution ☐ M - Miscellaneous Documents ☐ P - Published Documents ☐ U - Unpublished Documents
Title of Source Document: Discrepancy Resolution for EPA Hazardous Waste Number Assignments for Waste Streams ID-RF-S3114 and ID-RF-S3150-A	
Source Document Reference Information (author(s), document and revision number, date, publisher): Jeff Harrison, NA, Rev. 1, 12/21/2005	

AK # [b]	Source Doc. Page # [c]	AK Information Summary
WS8, WS12, S9	1-3	Resolution of a disagreement in the characterization and Hazardous Waste Number (HWN) assignment for Organic Setups and Solidified Organics in various documents. Revision 1 of this discrepancy resolution removed EPA Code D043 from ID-RF-S3114, and removed EPA Code D027 from ID-RF-S3150-A.

Source Document Data Limitations (if any):

1. None

Acceptable Knowlege Expert:

Scott Smith /Sign Date: 8/14/2012

Print

[a] Provide description for non-titled information (i.e., container paperwork, MSDS sheets, etc.)
[b] Obtain from Acceptable Knowledge Documentation Checklist
[c] For microfilm or microfiche, identify box, tape, reel number and location.

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Attachment 11 - Acceptable Knowledge Source Document Discrepancy Resolution (CCP-AK-INL-005)

Waste Stream Number(s): ID-RF-S3114 and ID-RF-S3150-A

Waste Stream Description: Organic setups (IDC 003) and Solidified Organics (IDCs 700 and 801)

AK Documentation Type: ☐TRU Waste Management Program Information ☒Waste Stream Specific Information ☒Supplemental Information

AK Source Document Discrepancy Form Tracking Number: **D005 (Revision 1)**

Tracking #	Category[a]	Title	Document/ Rev#	Author	Date	Publisher	Page #
P052	Pub.	Backlog Waste Reassessment Baseline Book (BWRBB), Organics	Waste Form 19	Rocky Flats	5/3/04	N/A	WF19-23, WF19-27
P052	Pub.	Backlog Waste Reassessment Baseline Book, Solidified Organics	Waste Form 47	Rocky Flats	11/10/04	N/A	WF47-8 to WF47-12
P077	Pub.	Waste Stream and Residue Identification and Characterization Building 774	774-V3.2	Rocky Flats	1993	N/A	5-13
P081	Pub.	Waste Stream and Residue Identification and Characterization Building 371	371-V3.2	Rocky Flats	1992	N/A	4-7
P507	Pub.	Acceptable Knowledge Document for INEEL Stored Transuranic Waste – Rocky Flats Plant Waste	INEL-96/0280, Rev. 3	INEEL	2/28/03	N/A	25-8 to 25-15
P521	Pub.	Rocky Flats Environmental Technology Site WIPP Waste Stream Profile Form, TRM Solidified Organic Waste.	RF135.01, Rev. 0	Rocky Flats	3/23/05	N/A	1, 7 to 15, 7.47-4 to 7.47-7
P522	Pub.	Rocky Flats Environmental Technology Site WIPP Waste Stream Profile Form, TRM Solidified Organic Waste.	RF107.04, Rev. 0	Rocky Flats	1/11/05	N/A	1, 7 to 15, 7.27-5 to 7.27-8
U099	Unpub.	Draft Waste Stream Profile Form – Solidified Organics and Supporting Documentation	INW164.001	INEEL	4/10/02	N/A	1, 5, 6, and CIS 4 to 9

Nature of Discrepancy: There have been several documents published that characterize organic setups (IDC 003) and solidified organics (IDCs 700 and 801). The EPA hazardous waste numbers assigned to the wastes in these various documents is inconsistent.

Resolution:

Organic Setups

1. BWRBB, Solidified Organics, WF47 (P052): EPA Codes D022, D026, D027, D028, D029, D030, D032, D034, D036, D037, F001, F002
2. Rocky Flats Waste Stream Profile (P521): EPA Codes D022, D026, D027, D029, D030, D032, D034, D036, D037, F001, F002
3. INL 3,100 m^3 Project AK Report (P507): EPA Codes D022, D029, D036, F001, F002, F003, F005

NOTE: A waste stream profile was never prepared by the INL 3,100 m^3 Project for organic setups waste.

As described in the AK Report, sources were identified for chloroform (D022); 1,2-dichloroethane (D028); 1,1-dichloroethylene (D029); nitrobenzene (D036); and several F001, F002, and F005-listed solvents. Homogeneous solids sampling and analysis of organic setups was conducted by both the Rocky Flats and INL 3100 m^3 TRU Waste Programs. Based on the analytical data from one or both programs, the UCL_{90} exceeded the Regulatory Threshold Limit (RTL) for 1,1,1-trichloroethane (F001/F002); 1,1,2-trichloro-1,2,2-trifluorethane (F002), carbon tetrachloride (F001), chloroform (D022), 1,2-dichloroethane (D028), 1,1-dichloroethylene (D029), tetrachloroethylene (F002), and trichloroethylene (F002) in the organic setups waste. Although a specific source for hexachloroethane (D034) was not identified, the UCL_{90} for hexachloroethane also exceeded the RTL in both Rocky Flats and INL 3100 m^3 data. Pyridine is the only F005-listed solvent detected in samples of organic setups from the INL 3100 m^3 Project, and although the UCL_{90} for pyridine is below the RTL, the maximum concentration of pyridine was well above the RTL. Therefore, EPA hazardous waste numbers D022, D028, D029, D034, D036, F001, F002, and F005 are assigned to waste stream ID-RF-S3114 (Ref. P507, P521).

During the analytical data review of the "non-detect" observations for homogeneous solids data, Rocky Flats determined that the method detection limit (MDL) exceeded the program required quantification limit (PRQL) for cresols (D026), 1,4-dichlorobenzene (D027), 2,4-dinitrotoluene (D030), hexachlorobenzene (D032), nitrobenzene (D036), and pentachlorophenol (D037) due to dilution (Ref. P521). The dilution was due to high hydrocarbon content in the waste matrix that caused difficulties in analysis per the required methodology. Subsequent review of the solid sampling data and reconsideration of process knowledge confirms that cresols, 1,4-dichlorobenzene, 2,4-dinitrotoluene, hexachlorobenzene, and pentachlorophenol were not expected contaminants in this waste stream (potential sources for nitrobenzene have been identified as described in the AK Report). As a conservative measure, EPA hazardous waste numbers are also assigned to waste stream ID-RF-S3114.

Several F003-listed solvents were used at Rocky Flats and are potential contaminants of the organic setups waste. However, F003-listed solvents are listed solely for ignitability, and this waste stream does not exhibit the characteristic of ignitability because the solvents are not in liquid form. Therefore, this waste stream is not an F003-listed hazardous waste.

Vinyl chloride (D043) has been specifically identified on drums of organic laboratory solution stored at Rocky Flats (Ref. P052 [WF19, Subpopulation 19BS]). This assignment was based on analysis of the liquid from a sample collected in 1999. The only other AK documentation that identified the use of vinyl chloride was the WSRIC for the Building 371 analytical laboratory (Ref. P081). However, even though the analytical laboratory process (371-4) existed in 1991, the outputs containing vinyl chloride did not (i.e., vinyl chloride was not used until after 1991). Waste shipments to Idaho ceased in 1988. In addition, analytical data from the Rocky Flats TRU Waste Program for the organic setups waste did not detect vinyl chloride (Ref. P521). For this reason, EPA Code D043 is not assigned to waste stream ID-RF-S3114.

Therefore, the EPA hazardous waste numbers that will be assigned to waste stream ID-RF-S3114 are D022, D026, D027, D028, D029, D030, D032, D034, D036, D037, F001, F002, and F005.

Solidified Organics

1. WSRIC Building 774 (P077): EPA Codes D019, F001, F002
2. BWRBB, Solidified Organics, WF47 (P052): EPA Codes D022, D028, D029, D030, D032, D034, F001, F002, F005
3. Rocky Flats Waste Stream Profile (P522): EPA Codes D022, D028, D029, D030, D032, D034, F001, F002, F005
4. INL 3,100 m^3 Project AK (P507): EPA Codes D021, D022, D028, D029, D030, D032, D034, D036, D043, F001, F002, F003
5. INL Draft Waste Stream Profile (U099): EPA Codes D021, D022, D028, D029, D030, D032, D034, D035, D036, D043, F001, F002, F003

As described in the AK Report, sources were identified for chloroform (D022); 1,2-dichloroethane (D028); 1,1-dichloroethylene (D029); nitrobenzene (D036); and several F001, F002, and F005-listed solvents. Homogeneous solids sampling and analysis of solidified organics was conducted by both the Rocky Flats and INL 3100 m^3 TRU Waste Programs. Based on the analytical data from one or both programs, the UCL_{90} exceeded the RTL for 1,1,1-trichloroethane (F001/F002); 1,1,2-trichloro-1,2,2-trifluorethane (F002); carbon tetrachloride (F001); chloroform (D022); 1,1-dichloroethylene (D029); nitrobenzene (D036); and tetrachloroethylene (F002) in the solidified organics waste. Although a specific source for hexachloroethane (D034) was not identified, the UCL_{90} for hexachloroethane also exceeded the RTL in the Rocky Flats data. None of the sampling data detected any F005-lisated solvents, but as previously stated, sources were identified for several F005-listed solvents. Therefore, EPA hazardous waste numbers D022, D028, D029, D034, D036, F001, F002, and F005 are assigned to waste stream ID-RF-S3150-A (Ref. P522, U099).

During the analytical data review of the "non-detect" observations for homogeneous solids data, both the Rocky Flats and INL 3,100 m^3 Project determined that the MDL exceeded the PRQL for 2,4-dinitrotoluene (D030) and hexachlorobenzene (D032) due to dilution. The dilution was due to high hydrocarbon content in the waste matrix that caused difficulties in analysis per the required methodology. This same problem occurred with the INL 3,100 m^3 Project analytical data review for hexachloroethane (D034), nitrobenzene (D036), and vinyl chloride (D043). Subsequent review of the solid sampling data and reconsideration of process knowledge confirms that 2,4-dinitrotoluene, hexachlorobenzene, and vinyl chloride were not expected contaminants in this waste stream. However, because EPA hazardous waste numbers D030, D032, and D043 were assigned by the Rocky Flats and/or INL 3,100 m^3 TRU waste programs, they are also assigned to waste stream ID-RF-S3150-A as a conservative measure (Ref. P522, U099).

Each of the above EPA Codes will collectively be assigned to the solidified organics waste stream (ID-RF-S3150-A) with the exception of F003, D021, and D035 that were assigned by the 3100 m^3 Project, D019 that was historically assigned by Rocky Flats, and D027 which has never been assigned to this waste stream. The basis for not assigning these EPA Codes is as follows:

- Several F003-listed solvents were used at Rocky Flats and are potential contaminants of the solidified organics waste. However, F003-listed solvents are listed solely for ignitability, and this waste stream does not exhibit the characteristic of ignitability because the solvents are not in liquid form. Therefore, this waste stream is not an F003-listed hazardous waste.
- EPA Code D019 (carbon tetrachloride) was assigned in historical Rocky Flats documentation (Ref. P077). Since carbon tetrachloride, which is also an F001-listed solvent, was used for degreasing operations, the F-listed EPA Code is more appropriate, and D019 will not be assigned to ID-RF-S3150-A.
- EPA Codes D021 (chlorobenzene) and D035 (methyl ethyl ketone) were included for the INL 3,100 m^3 Project solidified organics waste stream (Ref. U099) because during the analytical data review of the "non-detect" observations for headspace gas data, it was determined that the MDL exceeded the PRQL for chlorobenzene and methyl ethyl ketone. Since chlorobenzene, which is also an F002-listed solvent, and methyl ethyl ketone, which is also an F005-listed solvent, have been used in analytical laboratory operations as solvents (Ref. P052, P081), the F-listed EPA Codes are more appropriate, and D021 and D035 will not be assigned to waste stream ID-RF-S3150-A.

- 1,4-Dichlorobenzene (D027) has been specifically identified on drums of organic laboratory solution stored at Rocky Flats (Ref. P052 [WF19, Subpopulation 19BS]). This assignment was based on analysis of the liquid from a sample collected in 1999. Waste shipments to Idaho ceased in 1988, and no other AK documentation identified the use of 1,4-dichlorobenzene. In addition, analytical data from both the Rocky Flats and INL 3,100 m^3 TRU Waste Programs for the solidified organics waste did not detect 1,4-dichlorobenzene (Ref. P522, U099). For this reason, EPA Code D027 is not assigned to waste stream ID-RF-S3150-A.

Therefore, the EPA hazardous waste numbers that will be assigned to waste stream ID-RF-S3150-A are D022, D028, D029, D030, D032, D034, D036, D037, D043, F001, F002, and F005.

Discrepancy Resolved: ☒ Yes ☐ No

Acceptable Knowledge Expert: Jeff Harrison (Print) / Jeff Harrison (Sign) Date: 12/21/05

Site Project Manager: Barbara Broomfield (Print) / (Sign) Date: 12/21/05

* Published Document or Controlled Database (Pub.); Unpublished Data (Unpub.); Internal Procedure or Note (Proc.); Correspondence (Corr.) or Discrepancy (Disc.)

12/21/2005 16:33 2085266973 INL CCP PAGE 02/02

Attachment 2 - CCP Records Transmittal/Receiving Form

CCP Central Records/Records Custodian, 4021 National Parks Highway - MS: GSA 203, Carlsbad, New Mexico 88220

Telephone Number: 505-234-7523, 505-234-7233, 505-234-7617
Fax Number: 505-234-7014

☒ Original Record
☐ Faxed Record

Attn:	Records Custodian	From:	Jeff Harrison
Ship to:	CCP Central Records/ CCP Records Custodian	Site:	Idaho National Laboratory, Retrievably Stored Waste
	4021 National Parks Highway - MS GSA 203	Company:	Technical Specialists, LLC
	Carlsbad, NM 88220	Telephone Number:	720-977-7042
		Date Sent:	1/12/06
Telephone Number:	505-234-7523		

D005	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-005	12/21/2005	1
	Discrepancy Resolution for EPA Hazardous Waste Number Assignments for Waste Streams ID-RF-S3114 and ID-RF-S3150-A	12/21/2005	4

~~None~~ 1/12/06 This transmittal supercedes the previous transmittal of D005 for these two streams.

CCP Records Center
Acceptance/Rejection Signature and Date

Records Accepted ☒ Lynda Petrocco — Lynda Petrocco — 1/12/06
Signature — Printed Name — Date

Records Rejected ☐ _____ — _____ — _____
Signature — Printed Name — Date

Reason for Rejection: _____

Re-submittal: _____ — _____ — _____
Signature — Printed Name — Date

P.01

TRANSACTION REPORT

AUG-08-2006 TUE 09:28 AM

FOR: CCP RECORDS 15052347014

SEND

DATE	START	RECEIVER	TX TIME	PAGES	TYPE	NOTE	M#	DP
AUG-08	09:27 AM	LANL _ CBAD	19"	1	FAX TX	OK	145	

TOTAL : 19S PAGES: 1

Controlled Copy

CCP-QP-008, Rev. 11
CCP Records Management

Effective Date: 8/22/2005
Page 28 of 28

Attachment 2 - CCP Records Transmittal/Receiving Form

CCP Central Records/Records Custodian, 4021 National Parks Highway - MS: GSA 203, Carlsbad, New Mexico 88220

Telephone Number: 505-234-7523, 505-234-7233, 505-234-7617
Fax Number: 505-234-7014

☒ Original Record
☐ Faxed Record

Attn:	Records Custodian	From:	Jeff Harrison
Ship to:	CCP Central Records/ CCP Records Custodian	Site:	Idaho National Laboratory, Retrievably Stored Waste
	4021 National Parks Highway - MS GSA 203	Company:	Technical Specialists, LLC
	Carlsbad, NM 88220	Telephone Number:	720-977-7042
		Date Sent:	1/12/06

Telephone Number: 505-234-7523

D005	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-005	12/21/2005	1
	Discrepancy Resolution for EPA Hazardous Waste Number Assignments for Waste Streams ID-RF-S3114 and ID-RF-S3150-A	12/21/2005	4

DIVIDER

PAGE

Attachment 3 - Acceptable Knowledge Source Document Summary

Site(s): Idaho National Laboratory	Source Document Tracking Number: DR014
Waste Stream Number(s): ID-ANLE-S5000 (Applicable only when site library is not in use)	
Acceptable Knowledge Documentation Type: ☑ TRU Waste Management Program Information ☑ Waste Stream-Specific Information ☑ Additional Information	Category: ☐ C - Correspondence ☑ DR - Discrepancy Resolution ☐ I - Internal procedures ☐ M - Miscellaneous ☐ P - Published plans, documents, and procedures ☐ U - Unpublished Documents
Title or Description of Source Document [a]: Discrepancy Report for the RCRA Assignment of EPA HWNS to Waste Stream ID-ANLE-S5000	
Source Document Reference Information (author(s), document and revision number, date, publisher): Kevin J. Peters, DR014, 11/16/2006, N/A	

AK # [b]	Source Doc. Page # [c]	AK Information Summary
PR4, WS8, WS9, S10	Throughout	Nature of Discrepancy: Based on historic waste characterization, certification, and management operations conducted by Argonne and INL, the containers in waste stream ID-ANLE-S5000 have been and will continue to be managed as non-hazardous waste. Argonne has historically characterized this waste as non-hazardous culminating in a March 2003 report certifying a non-hazardous waste determination submitted by the DOE Chicago Operations Office to the Idaho Operations Office in March of 2003. This report concluded that there was no substantive basis for assigning RCRA HWNs to the RH-TRU wastes generated by ANL-E stored at INL (Reference C351). During CCP review of the AK source documentation, several sources identified the use of listed solvents (e.g. toluene and 1,1,1-trichloroethane) and the potential for the waste materials to contain RCRA compounds, especially toxic metals (e.g., lead and mercury). Resolution: To assign EPA HWNs, the available AK documentation was reviewed by CCP to assess chemical usage in the AGHCF and surrounding areas to identify hazardous materials potentially contaminating waste stream ID-ANLE-S5000. In addition, MSDSs and other manufacturer information was obtained for the commercial products to determine the presence of RCRA-regulated compounds. Even though this waste stream will continue to be managed as non-hazardous by INL, the WIPP-WAP requires a conservative assignment of EPA HWNs to TRU waste streams that lack analytical evidence demonstrating that these constituents would have not exceeded the regulatory thresholds; and therefore, the HWNs listed in the AK Summary Report (D004, D005, D006, D007, D008, D009, D010, D011, D019, D028, D029, F002, and F005) will be assigned to the containers in this waste stream prior to shipment to WIPP. The attached table includes the list of chemicals relating to the assigned HWNs and the references supporting the conservative assignment.

CCP RECORDS ORIGINAL
DATE REC'D 12/30/2011

Attachment 3 - Acceptable Knowledge Source Document Summary (continued)

Site(s): Idaho National Laboratory	Source Document Tracking Number: DR014

Waste Stream Number(s): ID-ANLE-S5000
(Applicable only when site library is not in use)

Source Document Data Limitations (if any):

1. None.

Acceptable Knowlege Expert:

Travis Smith / Date: 09/10/2012
Print /Sign

a Provide description for non-titled information (i.e., container paperwork, MSDS sheets, etc)
b Obtain from Acceptable Knowledge Documentation Checklist
c For microfilm or microfiche, identify box, tape, reel number and location.

Attachment 11 – Acceptable Knowledge Source Document Discrepancy Resolution

Waste Stream Number(s): ID-ANLE-S5000

Waste Stream Description: Heterogeneous Debris from Argonne AGHCF Operations

AK Documentation Type: [X] TRU Waste Management Program Information [X] Waste Stream Specific Information [X] Supplemental Information							
AK Source Document Discrepancy Form Tracking Number: DR014							
Tracking #	Category[a]	Title	Document/Rev#	Author	Date	Publisher	Page #
C340	Corr.	IT Shaw Discrepancy Report R3 - RH TRU Waste from ANL-E AGHCF, Re: Possible Presence of HEPA Filters	N/A	Cheryl Shulz	7/15/03	N/A	Throughout
C341	Corr.	IT Shaw Discrepancy Report R4 - RH TRU Waste from ANL-E- AGHCF, Re: Possible Presence of Lead in Waste	N/A	Cheryl Shulz	7/15/03	N/A	Throughout
C351	Corr.	Letter to W.E. Bergholz, DOE-Idaho Operations Office, Argonne National Laboratory-East Remote Handled (RH) Transuranic Waste Stored at the Radioactive Waste Management Complex (RWMC)	AAO.030320.0201	R.C. Wumderlich, DOE-Chicago Operations Office	3/20/2003	N/A	Throughout
N/A	Pub.	Central Characterization Project Acceptable Knowledge Summary Report For REMOTE-HANDLED TRANSURANIC DEBRIS WASTE FROM ARGONNE NATIONAL LABORATORY-EAST STORED AT THE IDAHO NATIONAL LABORATORY WASTE STREAM: ID-ANLE-S5000	CCP-AK-INL-500, Rev. 4	CCP	11/16/06	CCP	Table 4 See attached excerpts from Table 4 with associated references

Nature of Discrepancy:

Based on historic waste characterization, certification, and management operations conducted by Argonne and INL, the containers in waste stream ID-ANLE-S5000 have been and will continue to be managed as non-hazardous waste. Argonne has historically characterized this waste as non-hazardous culminating in a March 2003 report certifying a non-hazardous waste determination submitted by the DOE Chicago Operations Office to the Idaho Operations Office in March of 2003. This report concluded that there was no substantive basis for assigning RCRA HWNs to the RH-TRU wastes generated by ANL-E stored at INL (Reference C351). During CCP review of the AK source documentation, several sources identified the use of listed solvents (e.g. toluene and 1,1,1-trichloroethane) and the potential for the waste materials to contain RCRA compounds, especially toxic metals (e.g., lead and mercury).

Resolution:

To assign EPA HWNs, the available AK documentation was reviewed by CCP to assess chemical usage in the AGHCF and surrounding areas to identify hazardous materials potentially contaminating waste stream ID-ANLE-S5000. In addition, MSDSs and other manufacturer information was obtained for the commercial products to determine the presence of RCRA-regulated compounds.

Even though this waste stream will continue to be managed as non-hazardous by INL, the WIPP-WAP requires a conservative assignment of EPA HWNs to TRU waste streams that lack analytical evidence demonstrating that these constituents would have not exceeded the regulatory thresholds; and therefore, the HWNs listed in the AK Summary Report (D004, D005, D006, D007, D008, D009, D010, D011, D019, D028, D029, F002, and F005) will be assigned to the containers in this waste stream prior to shipment to WIPP. The attached table includes the list of chemicals relating to the assigned HWNs and the references supporting the conservative assignment.

Discrepancy Resolved: [X] Yes [ ] No

Acceptable Knowledge Expert: Kevin J. Peters / _____ Date: 11/16/2006
Print Sign

Site Project Manager: Larry Porter / _____ Date: 8/14/07
Print Sign

[a] Published Document or Controlled Database (Pub.); Unpublished Data (Unpub.); Internal Procedure or Note (Proc.); Correspondence (Corr.) or Discrepancy (Disc.)

Chemical/Material	Use/Description	AK Source	EPA HWNs
1,1,1-trichloroethane	Manipulator arm maintenance and cleaning. Cell cleaning solvent. Component of Hyprez lubricant (10-30%)	C012, C066, C137, C147, U065, U072	F002
1,1-dichloroethylene	Metallurgical reagent – no use specified.	C147	D029
1,2-dichloroethane	Metallurgical reagent – no use specified.	C147	D028
Arsenic	Contaminant of HEPA filters and clay absorbent.	C014, U083	D004
Barium	Contaminant of HEPA filters, clay absorbent, and fluorescent bulbs.	C035, C116, C160, U083, U084	D005
Benzene	Laboratory reagent – no use specified.	C147, U066	F005
Cadmium	Contaminant of HEPA filters. Component of neutron shielding, batteries, photography solutions, and other metal alloys.	C020, C066, C094, C116, C160, U015, U017, U072, U083	D006
Carbon tetrachloride	Immersion density measurements. Metallographic specimen and cell cleaning.	C066, C081, C137, C147	D019
Chromic acid	Metallography etchant acid.	C066, C137, C147, U006	D007
Chromium	Component of chromic acid etchant, fuel, stainless steel cladding, chromium plated measuring tapes, chromic oxide polishing abrasive, and HEPA filters.	C066, C116, C137, C160, U006, U068, U069, U070, U072, U074, U083, U084	D007
Hyprez	Petroleum distillate based lubricant containing 1,4-dioxane (0-1%) and 1,1,1-trichloroethane (10-30%)	C012, C029, C066, P062, P069, U072	F002
Isobutanol	Metallurgical reagent – no use specified.	C147	F005
Lead	Component of manipulator weights, metal scrap, lead-bismuth epoxy, lead solder, flashlight batteries, lead-acid batteries, sodium vapor lamps, drum numbering seals, and HEPA filter contaminant.	C013, C029, C066, C088, C091, C137, C143, C147, C148, C341, P023, P038, P039, U004, U006, U015, U017, U018, U019, U021, U022, U041, U072, U083	D008
Light bulbs	Broken fluorescent and mercury lamps.	U015, U017, U018, U019, U021	D009
Mercury	Component of mercury vapor lights, fluorescent lights, thermometers, and switches.	C013, C035, C066, C137, C147, C143, P070, U015, U017, U018, U019, U021, U022, U041, U083, U085	D009
Selenium	Irradiation experiment reagent. Contaminant of HEPA filter media.	U006, U083	D010
Silver	Component of silver nitrate etchant, mounting epoxy, containers, solder, photographic film and chemicals, and HEPA filter contaminant.	C020, C029, C066, C137, C147, U006, P061, P062, P068, U072, U083	D011
Silver nitrate	Metallography etchant reagent for Zircaloy metals.	C066, C137, P062, U006	D011
Tetrachloroethylene	Manipulator arm maintenance and cleaning. Cell cleaning solvent.	C066, C137, C147, U066	F002
Toluene	Manipulator arm maintenance and cleaning. Metallographic specimen and cell cleaning.	C012, C066, C137, C147, U066, P062	F005

Attachment 2 - CCP Records Transmittal/Receiving Form

CCP Central Records / Records Custodian, 4021 National Parks Highway - MS: GSA 203, Carlsbad, New Mexico 88220

Telephone Number: 505-234-7523, 505-234-7233, 505-234-7617

Fax Number: 505-234-7014

☒ Original Record
☐ Fax Record
☐ E-mail Record

Attn:	Sheila Pearcy	From:	Lisa Price-Watson
Ship to:	CCP Central Records/ CCP Records Custodian	Site:	ANLE Waste at ANLE and INL
	4021 National Parks Highway - MS GSA 203, Carlsbad, NM 88220	Company:	Los Alamos National Laboratory
		Telephone Number:	505-628-8946
Telephone Number:	505-234-7523	Date Sent:	8/16/07

Document Number	Title/Description	Record Date	Total Pages
DR14	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-500 and CCP-AK-ANLE-500	11/16/2007	2
	Discrepancy Report for the RCRA Assignment of EPA HWNs to Waste Stream ID-ANLE-S5000	11/16/2006	3
NA	NA	NA	NA

Comments

None

Acceptance/Rejection Signature and Date

		Signature	Printed Name	Date
Records Accepted	☑	Sonia Gonzalez	Sonia Gonzalez	8-22-07
Records Rejected	☐			

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

P.01

TRANSACTION REPORT

AUG-22-2007 WED 11:11 AM

FOR: CCP RECORDS 15052347014

SEND

DATE	START	RECEIVER	TX TIME	PAGES	TYPE	NOTE	M#	DP
AUG-22	11:10 AM	LANL CARLSBAD	16″	1	FAX TX	OK	891	

TOTAL : 16S PAGES: 1

Controlled Copy

CCP-QP-008, Rev. 13
CCP Records Management

Effective Date: 04/24/2007
Page 28 of 28

Attachment 2 - CCP Records Transmittal/Receiving Form

CCP Central Records / Records Custodian, 4021 National Parks Highway - MS: GSA 203, Carlsbad, New Mexico 88220

Telephone Number: 505-234-7523, 505-234-7233, 505-234-7617

Fax Number: 505-234-7014

☒ Original Record
☐ Fax Record
☐ E-mail Record

Attn: Sheila Pearcy

Ship to: CCP Central Records/ CCP Records Custodian
4021 National Parks Highway - MS GSA 203, Carlsbad, NM 88220

Telephone Number: 505-234-7523

From: Lisa Peace-Watson

Site: ANLE Waste at ANLE and INL

Company: Los Alamos National Laboratory

Telephone Number: 505-628-8946

Date Sent: 8/16/07

Document Number	Title/Description	Record Date	Total Pages
DR14	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-500 and CCP-AK-ANLE-500	11/16/2007	2
	Discrepancy Report for the RCRA Assignment of EPA HWNs to Waste Stream ID-ANLE-S5000	11/16/2006	3
NA	NA	NA	NA

DIVIDER

PAGE

Attachment 3 - Acceptable Knowledge Source Document Summary

Site(s): Idaho National Laboratory	Source Document Tracking Number: DR018
Waste Stream Number(s): ID-ANLE-S5000 (Applicable only when site library is not in use)	
Acceptable Knowledge Documentation Type: ☐ TRU Waste Management Program Information ☑ Waste Stream-Specific Information ☑ Additional Information	Category: ☐ C - Correspondence ☑ DR - Discrepancy Resolution ☐ I - Internal procedures ☐ M - Miscellaneous ☐ P - Published plans, documents, and procedures ☐ U - Unpublished Documents
Title or Description of Source Document [a]: Discrepancy Resolution Regarding: K Cell Waste Packaging	
Source Document Reference Information (author(s), document and revision number, date, publisher): Kevin J. Peters, DR018, 10/24/2007, N/A	

AK # [b]	Source Doc. Page # [c]	AK Information Summary
WS2, WS3, WS9, S7, S16	Throughout	Nature of Discrepancy: An interview with William Kettman was conducted on 7/21/2007 to discuss the extension of AGHCF waste packaging operations he supported in the Building 200 K-1 and K-2 Cells. During this interview he provided the following description of the waste management associated with the K cell waste containers (C380): The AGHCF examination procedures and waste management practices were adopted for the operation in the K Cells and materials were transferred between these operations. RH waste from the K Cells was packaged in K-2. The waste was first packaged into "SAW" containers that Mr. Kettman described as cardboard cans with metal bottoms closed with metal lids (without gaskets) that camped onto the containers. These unsealed containers were bagged out of the area in heat-sealed plastic pouches and then packaged in the same configuration as the waste from the AGHCF before being shipped to Idaho. Mr. Kettman stated that only RH waste from the AGHCF and K Cell operations would be in this configuration and that no RH waste sent to Idaho would have originated from other areas or other operations in Building 200. He supported the only operations generating and sending 30-gallon drums to Idaho. Subsequent RTR prescans of 10 of these containers (U343) was performed to verify the content of the containers and the packaging configuration. These quick scans identified the following inconsistencies with the information provided by Mr. Kettman and packaging configuration identified for the containers from B212 operations: 1)The four containers reviewed from the population of 12 drums (00393, 00394, 00399, and 00400) where the origin was unknown, were packaged completely different from any other containers assessed to date. These 30-gallon drums contained two sealed metal 5-gallon paint cans (buckets) with tabbed tops. The cans contained either impenetrable lead shielding or capped (both ends) pipe containers with internal bottles of homogeneous materials (one with free liquids). 2)The "SAW" containers (fiber paks) described by Mr. Kettman were not observed in the inner waste cans in the cans packaged by Mr. Kettman. 3)Drums 00346 and 00354 have a large fiber pac with a slip lid (unsealed) inside of the rigid liner. 4)Drums 00352, and 00355 have two cardboard liners no lids shorter than fiber pac. 5)Drums 00478, and 00496 do not have a cardboard liner or fiber pac.

CCP RECORDS ORIGINAL
DATE REC'D 12/11/2012

Attachment 3 - Acceptable Knowledge Source Document Summary (continued)

Site(s): Idaho National Laboratory	Source Document Tracking Number: DR018

Waste Stream Number(s): ID-ANLE-S5000
(Applicable only when site library is not in use)

AK # [b]	Source Doc. Page # [c]	AK Information Summary
		Resolution: Additional research was conducted relating to the packaging configuration on "unknown" drums (00393, 00394, 00399, and 00400). AK sources C355 and C357 identify and EPRI/Exxon project involving the examination of MOX (in B212 AGHCF) and urania (in B200) fuels. C.E. Johnson was identified as the researcher and the Nomember 1978 project report discusses the proposed packaging of waste from this project in five gallon containers with lead liners. These fuel pins were also included in a AGHCF sectioning report from 9/20/78. A follow-up discussion at ANL-E was conducted with Mr. Kettman and Mr. John Vanloon on 8/16/07 to discuss these finding and review the video for these containers. He was certain that the AGHCF operations he supported in the K cell operations did not generate these containers. They did not use the 5-gallon paint buckets, lead shielding, or the pipe containers seen in the RTR videos. John Vanloon did remember the use of the 5-gallon buckets in historic waste operations, and in fact had a bucket that was consistent with the RTR video in the hallway being used as a trash bucket. Mr. Kettman did not specifically remember managing any waste for C.E. Johnson's experiments or the EPRI Exxon work at all. Mr. Vanloon thought that this work might have been conducted in the M-4 cell and possibly the source of the 12 unknown containers. They thought that these containers may have originated from AGHCF support operations being managed by operation run out of Building 205. Though Mr. Johnson has since passed away, Mr. Vanloon suggested that we contact Howard Harvey (home phone 865-483-7638) or Jeff Emery (630-252-6448) to inquire about B205 operations. Based on the differences in the physical form of the waste materials and packaging configuration, it was decided to exclude containers 393-400 and 1002-1005 from waste stream CCP-AK-INL-500 until sufficient AK is collected for these containers. The remaining containers will be quick scanned by RTR and additional information will be collected from ANL-E to characterize these containers. In regards to the packaging differences in the packaging configuration reviewed for the other containers from the 56 K-cell drums that Mr. Kettman was involved with generating (00346, 00352, 00354, 00355, 00478, 00496), he confirmed that the packaging was consistent with the drums that he packaged. Though none of these drum contained the fiber paks (in the waste cans) he described in his original interview, he thought that he may have been mistaken, but thought that we may see them in some of the drums that have not been RTRed. For this reason, during the revision of AK Summary Report CCP-AK-INL-500 to add the 56 K cell contains, a discussion relating to the different packaging configuration relating to the debris waste generated in the K cells supporting AGHCF operations will be added to the report. If the fiber packs described by Mr. Kettman are found during RTR in the inner waste cans, an NCR will be initiated to evaluate this packaging configuration and to determine if these container are sealed containers greater than 4 liters.

Attachment 3 - Acceptable Knowledge Source Document Summary (continued)

Site(s): Idaho National Laboratory	Source Document Tracking Number: DR018

Waste Stream Number(s): ID-ANLE-S5000
(Applicable only when site library is not in use)

Source Document Data Limitations (if any):

1. None.

Acceptable Knowlege Expert:

Travis Smith _____ Date: 09/10/2012
Print /Sign

a Provide description for non-titled information (i.e., container paperwork, MSDS sheets, etc)
b Obtain from Acceptable Knowledge Documentation Checklist
c For microfilm or microfiche, identify box, tape, reel number and location.

Attachment 11 – Acceptable Knowledge Source Document Discrepancy Resolution

Waste Stream Number(s): ID-ANLE-S5000

Waste Stream Description: Heterogeneous Debris from AGHCF Operations

AK Documentation Type: [ ] TRU Waste Management Program Information [X] Waste Stream Specific Information [X] Supplemental Information							
AK Source Document Discrepancy Form Tracking Number: DR018 – K Cell Waste Packaging							
Tracking #	Category[a]	Title	Document/Rev#	Author	Date	Publisher	Page #
C355	Corr.	Letter to R.R. Heinrich, J-1/J-2 Burnup/ Isotopic Samples for the EPRI/EXXON Program	NA	C.E. Johnson	12/20/1987	N/A	Page 1 and 2
C357	Corr.	Letter to N.D. Dudey and C.E. Crouthamel (EXXON); Management Summary and Milestone Report for October 1978	N/A	C.E. Johnson	11/30/1978	NA	Throughout
C380	Corr.	Interview with William Kettman; Extension of AGHCF Operations in Building 200 K-1 and K-2 Cells and 10-gallon Waste Cans	N/A	K. Peters	7/21/2007	N/A	Pg. 1 of 2
U042	Unpub.	RH-TRU 1976 to 1982, Book 1	NA	ANL-E	12/16/78	N/A	Pg. 126 of 380
U343	Unpub.	RTR Quick Scan Data	828 Forms	CCP	Various	N/A	Throughout

ORIGINAL

Nature of Discrepancy:

An interview with William Kettman was conducted on 7/21/2007 to discuss the extension of AGHCF waste packaging operations he supported in the Building 200 K-1 and K-2 Cells. During this interview he provided the following description of the waste management associated with the K cell waste containers (C380):

The AGHCF examination procedures and waste management practices were adopted for the operation in the K Cells and materials were transferred between these operations. RH waste from the K Cells was packaged in K-2. The waste was first packaged into "SAW" containers that Mr. Kettman described as cardboard cans with metal bottoms closed with metal lids (without gaskets) that camped onto the containers. These unsealed containers were bagged out of the area in heat-sealed plastic pouches and then packaged in the same configuration as the waste from the AGHCF before being shipped to Idaho. Mr. Kettman stated that only RH waste from the AGHCF and K Cell operations would be in this configuration and that no RH waste sent to Idaho would have originated from other areas or other operations in Building 200. He supported the only operations generating and sending 30-gallon drums to Idaho.

Subsequent RTR prescans of 10 of these containers (U343) was performed to verify the content of the containers and the packaging configuration. These quick scans identified the following inconsistencies with the information provided by Mr. Kettman and packaging configuration identified for the containers from B212 operations:

1) The four containers reviewed from the population of 12 drums (00393, 00394, 00399, and 00400) where the origin was unknown, were packaged completely different from any other containers assessed to date. These 30-gallon drums contained two sealed metal 5-gallon paint cans (buckets) with tabbed tops. The cans contained either impenetrable lead shielding or capped (both ends) pipe containers with internal bottles of homogeneous materials (one with free liquids).
2) The "SAW" containers (fiber paks) described by Mr. Kettman were not observed in the inner waste cans in the cans packaged by Mr. Kettman.
3) Drums 00346 and 00354 have a large fiber pac with a slip lid (unsealed) inside of the rigid liner.
4) Drums 00352, and 00355 have two cardboard liners no lids shorter than fiber pac.
5) Drums 00478, and 00496 do not have a cardboard liner or fiber pac.

Resolution:

Additional research was conducted relating to the packaging configuration on "unknown" drums (00393, 00394, 00399, and 00400). AK sources C355 and C357 identify and EPRI/Exxon project involving the examination of MOX (in B212 AGHCF) and urania (in B200) fuels. C.E. Johnson was identified as the researcher and the Nomember 1978 project report discusses the proposed packaging of waste from this project in five gallon containers with lead liners. These fuel pins were also included in a AGHCF sectioning report from 9/20/78.

A follow-up discussion at ANL-E was conducted with Mr. Kettman and Mr. John Vanloon on 8/16/07 to discuss these finding and review the video for these containers. He was certain that the AGHCF operations he supported in the K cell operations did not generate these containers. They did not use the 5-gallon paint buckets, lead shielding, or the pipe containers seen in the RTR videos. John Vanloon did remember the use of the 5-gallon buckets in historic waste operations, and in fact had a bucket that was consistent with the RTR video in the hallway being used as a trash bucket. Mr. Kettman did not specifically remember managing any waste for C.E. Johnson's experiments or the EPRI Exxon work at all. Mr. Vanloon thought that this work might have been conducted in the M-4 cell and possibly the source of the 12 unknown containers. They thought that these containers may have originated from AGHCF support operations being managed by operation run out of Building 205. Though Mr. Johnson has since passed away, Mr. Vanloon suggested that we contact Howard Harvey (home phone 865-483-7638) or Jeff Emery (630-252-6448) to inquire about B205 operations.

Based on the differences in the physical form of the waste materials and packaging configuration, it was decided to exclude containers 393-400 and 1002-1005 from waste stream CCP-AK-INL-500 until sufficient AK is collected for these containers. The remaining containers will be quick scanned by RTR and additional information will be collected from ANL-E to characterize these containers.

In regards to the packaging differences in the packaging configuration reviewed for the other containers from the 56 K-cell drums that Mr. Kettman was involved with generating (00346, 00352, 00354, 00355, 00478, 00496), he confirmed that the packaging was consistent with the drums that he packaged. Though none of these drum contained the fiber paks (in the waste cans) he described in his original interview, he thought that he may have been mistaken, but thought that we may see them in some of the drums that have not been RTRed.

For this reason, during the revision of AK Summary Report CCP-AK-INL-500 to add the 56 K cell contains, a discussion relating to the different packaging configuration relating to the debris waste generated in the K cells supporting AGHCF operations will be added to the report. If the fiber packs described by Mr. Kettman are found during RTR in the inner waste cans, an NCR will be initiated to evaluate this packaging configuration and to determine if these container are sealed containers greater than 4 liters.

Discrepancy Resolved: [X] Yes [ ] No

Acceptable Knowledge Expert: Kevin J. Peters / _____ Date: 10/23/2007
Print Sign

Site Project Manager: Larry Porter / _____ Date: 10/24/07
Print Sign

[a] Published Document or Controlled Database (Pub); Unpublished Data (Unpub.); Internal Procedure or Note (Proc.); Correspondence (Corr.) or Discrepancy (Disc.)

DR018

Attachment 2 - CCP Records Transmittal/Receiving Form

CCP Central Records / Records Custodian, 4021 National Parks Highway - MS: GSA 203, Carlsbad, New Mexico 88220
Telephone Number: 505-234-7523
Fax Number: 505-234-7014

☒ Original Record
☐ Fax Record
☐ E-mail Record

Attn:	Sheila Pearcy	From:	Lisa Price-Watson
Ship to:	CCP Central Records/ CCP Records Custodian	Site:	ANLE Waste at ANL and INL
	4021 National Parks Highway - MS GSA 203, Carlsbad, NM 88220	Company:	Los Alamos National Laboratory
		Telephone Number:	505-628-8946
Telephone Number:	505-234-7523	Date Sent:	01/14/2008

DR018	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-500 and CCP-AK-ANLE-500	~~10/24/2007~~ 1/14/08 1-14-08	3
	Discrepancy Resolution Regarding: K Cell Waste Packaging	10/24/2007	3
NA	NA	NA	NA

None

Acceptance/Rejection Signature and Date

Records Accepted ☒ _____ GAYLA WHITE 1-14-08
Signature Printed Name Date

Records Rejected ☐ _____ _____ _____
Signature Printed Name Date

Reason for Rejection:

Re-submittal: _____ _____ _____
Signature Printed Name Date

P.01

TRANSACTION REPORT

JAN-15-2008 TUE 07:25 AM

FOR: CCP RECORDS 15052347014

SEND DATE START	RECEIVER	TX TIME	PAGES	TYPE	NOTE	M#	DP
JAN-15 07:24 AM	LANL CARLSBAD	17″	1	FAX TX	OK	902	

TOTAL : 17S PAGES: 1

Controlled Copy

CCP-QP-008, Rev. 14 **Effective Date: 09/19/2007**

CCP Records Management **Page 29 of 29**

Attachment 2 - CCP Records Transmittal/Receiving Form

CCP Central Records / Records Custodian, 4021 National Parks Highway - MS: GSA 203, Carlsbad, New Mexico 88220

Telephone Number: 505-234-7523

Fax Number: 505-234-7014

☒ Original Record
☐ Fax Record
☐ E-mail Record

Attn:	Sheila Pearcy	From:	Lisa Price-Watson
Ship to:	CCP Central Records/ CCP Records Custodian	Site:	ANLE Waste at ANL and INL
	4021 National Parks Highway - MS GSA 203, Carlsbad, NM 88220	Company:	Los Alamos National Laboratory
Telephone Number:	505-234-7523	Telephone Number:	505-828-8946
		Date Sent:	01/14/2008

Document Number	Title/Description	Effective Date	Page Count
DR018	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-500 and CCP-AK-ANLE-500	~~10/24/2007~~ 1/14/08	3
	Discrepancy Resolution Regarding: K Cell Waste Packaging	10/24/2007	3
NA	NA	NA	NA

DIVIDER

PAGE

Attachment 3 - Acceptable Knowledge Source Document Summary

Site(s): Idaho National Laboratory	Source Document Tracking Number: DR3001
Waste Stream Number(s): ID-AECHDM, ID-AECHHM (Applicable only when site library is not in use)	
Acceptable Knowledge Documentation Type: ☑ TRU Waste Management Program Information ☑ Waste Stream-Specific Information ☑ Additional Information	Category: ☐ C - Correspondence ☑ DR - Discrepancy Resolution ☐ I - Internal procedures ☐ M - Miscellaneous ☐ P - Published plans, documents, and procedures ☐ U - Unpublished Documents
Title of Source Document: Resolution of Discrepancies Associated with the Assignment of EPA HWNs to Waste Streams AECHDM-PK and AECHHM-PK	
Source Document Reference Information (author(s), document and revision number, date, publisher): Kevin Peters, 03/23/2011	

AK # [a]	Source Doc. Page # [b]	AK Information Summary
PR5, PR7, WS1, WS6, WS8, WS12, S12	Throughout	The original assignment of EPA HWNs to CH waste streams AECHDM and AECHHM described in AK Summary Report CCP-AK-ANLE-001 was performed during the 2002 to 2003 time frame. Since that time, additional AK documentation was collected to support the subsequent characterization of RH TRU waste generated during Argonne research and development activities associated primarily with irradiated materials examination in hot cell facilities in three of the primary TRU waste generating buildings described in this report (Buildings 200, 205, and 212). These hot cell operations generated RH waste currently being shipped to WIPP from Argonne and the Idaho National Laboratory (CCP-AK-ANLE-500). Because these operations were identified as generators of CH waste, additional chemicals were identified during this extensive research that could potentially contaminate the CH waste remaining at Argonne to be shipped to the Idaho National Laboratory. Additionally, the CCP conventions for assigning EPA HWNs to CH waste has changed (e.g., assignment of HWNs F001 and F003) since the original assignment to these waste streams, and was reevaluated during the assignment of HWNs to the CH waste remaining of site. To update the assignment of EPA HWNs for waste streams AECHDM-PK and AECHHM-PK, the AK documentation collected initially by CCP during the 2002 and 2003 time frame for these waste streams was combined with the AK collected for the Argonne RH waste and additional PK documentation collected during the preparation of PK Summary Report CCP-PK-ANLE-001 for these waste streams. Attachment 1 lists the chemicals identified, use/description, and PK sources identifying these chemicals. Attachment 2 was prepared to compare the original HWN assignment to the CH and RH waste to the HWNs assigned by CCP to the AECHDM-PK and AECHHM-PK waste streams. Based on the assessment performed, the following EPA HWNs are assigned to waste streams AECHDM-PK and AECHHM-PK: D004, D005, D006, D007, D008, D009, D010, D011, D019, D027, D028, D029, D030, D037, F002, F004, and F005.

CCP RECORDS ORIGINAL
DATE REC'D 12-16-11

Attachment 3 - Acceptable Knowledge Source Document Summary (continued)

Site(s): Idaho National Laboratory	Source Document Tracking Number: DR3001

Waste Stream Number(s): ID-AECHDM, ID-AECHHM
(Applicable only when site library is not in use)

Source Document Data Limitations (if any):

1. Assumes that the characterization for the original CH streams correlates with the remaining inventory of CH waste.

Acceptable Knowlege Expert:

Elizabeth Lickliter Date: 10/04/2011
Print /Sign

[a] Obtain from Acceptable Knowledge Documentation Checklist
[b] For microfilm or microfiche, identify box, tape, reel number and location.

Attachment 9 – PK Source Document Discrepancy Resolution

Waste Stream Number(s): AECHDM-PK and AECHHM-PK

Waste Stream Description: Heterogeneous Debris and Homogeneous Waste from Argonne Operations

PK Documentation Type: [X] TRU Waste Management Program Information [X] Waste Stream Specific Information [X] Additional Information							
PK Source Document Discrepancy Form Tracking Number: DR3001 – Resolution of Discrepancies Associated with the Assignment of EPA HWNs to Waste Streams AECHDM-PK and AECHHM-PK							
Tracking #	Category[a]	Title	Document/Rev#	Author	Date	Publisher	Page #
N/A	Pub.	Central Characterization Project Acceptable Knowledge Summary Report for Argonne Remote-Handled Debris Waste, Waste Stream: AERHDM	CCP-AK-ANLE-500, Rev. 5	CCP	1/14/2010	CCP	Section 5.4.2
N/A	Pub.	Central Characterization Project Acceptable Knowledge Summary Report For Argonne National Laboratory-East Contact-Handled TRU Waste Facility Maintenance and Laboratory Operations	CCP-AK-ANLE-001, Rev. 11	CCP	12/31/2003	CCP	Sections 5.1.6 and 5.2.6
NA	Pub.	Central Characterization Project Process Knowledge Summary Report For Argonne Contact-Handled TRU Waste from Facility Maintenance and Laboratory Operations, Waste Streams: AECHDM-PK, AECHHM-PK	CCP-PK-ANLE-001, Rev. 0	CCP	8/10/2010	CCP	Section 5.3.3 and 6.3.3

Nature of Discrepancy:

The original assignment of EPA HWNs to CH waste streams AECHDM and AECHHM described in AK Summary Report CCP-AK-ANLE-001 was performed during the 2002 to 2003 time frame. Since that time, additional AK documentation was collected to support the subsequent characterization of RH TRU waste generated during Argonne research and development activities associated primarily with irradiated materials examination in hot cell facilities in three of the primary TRU waste generating buildings described in this report (Buildings 200, 205, and 212). These hot cell operations generated RH waste currently being shipped to WIPP from Argonne and the Idaho National Laboratory (CCP-AK-ANLE-500). Because these operations were identified as generators of CH waste, additional chemicals were identified during this extensive research that could potentially contaminate the CH waste remaining at Argonne to be shipped to the Idaho National Laboratory. Additionally, the CCP conventions for assigning EPA HWNs to CH waste has changed (e.g., assignment of HWNs F001 and F003) since the original assignment to these waste streams, and was reevaluated during the assignment of HWNs to the CH waste remaining of site, as described below.

Resolution:

To update the assignment of EPA HWNs for waste streams AECHDM-PK and AECHHM-PK, the AK documentation collected initially by CCP during the 2002 and 2003 time frame for these waste streams was combined with the AK collected for the Argonne RH waste and additional PK documentation collected during the preparation of PK Summary Report CCP-PK-ANLE-001 for these waste streams. Attachment 1 lists the chemicals identified, use/description, and PK sources identifying these chemicals. Attachment 2 was prepared to compare the original HWN assignment to the CH and RH waste to the HWNs assigned by CCP to the AECHDM-PK and AECHHM-PK waste streams based on the justification discussed below.

It should be noted that the original assignment of HWNs to the debris and homogeneous waste streams varied based on a review of these streams separately. However, the reaming waste will be packaged in the same area and the secondary waste from the immobilization of the liquids (original bottles, cans, drums, and repackaging debris) will be included in the AECHDM-PK debris waste stream, resulting in the commingling of the debris and homogeneous waste materials. For these reasons, the HWNs assigned are identical. In addition, the following changes to the assignment of HWNs were made to reflect current CCP HWN assignment conventions:

F003 was not assigned for constituents, including acetone, methyl isobutyl ketone, n-butyl alcohol, xylene, ethyl acetate, ethyl benzene, ethyl ether, and methanol. Though F003 was originally assigned, these chemicals are listed solely because these solvents are ignitable in the liquid form. The waste stream does not exhibit the characteristic of ignitability because it is not liquid; therefore, F003 was not assigned.

Although several **F001**-listed solvents were identified in the PK record (i.e., 1,1,1-trichloroethane, 1,1,2-trichloro-1,2,2-trifluoroethane, carbon tetrachloride, methlyene chloride, tetrachloroethylene, and trichloroethylene), EPA has provided a regulatory clarification that the F001 listing is only appropriate when the listed solvents are used in a "large-scale" degreasing operation such as cold cleaning or vapor degreasing on an industrial scale. Argonne laboratory and maintenance operations did not conduct large-scale degreasing operations, and therefore, EPA HWN F001 was not assigned these waste streams.

Resolution (continued):

The PK and AK sources identified the use of organic toxicity characteristic compounds including 1,1-dichloroethylene (D029), 1,2-dichloroethane (D028), 1,4-dichlorobenzene (D027), 2,4-dinitrotoluene (D030), benzene (D018), carbon tetrachloride (D019), chlorobenzene (D021), methyl ethyl ketone (D035), nitrobenzene (D036), pentachlorophenol (D037), and tetrachloroethylene (D039). Benzene, chlorobenzene, methyl ethyl ketone, nitrobenzene, and tetrachloroethylene are identified as F-listed solvents. Because the more specific F-listed EPA HWNs have been assigned for these compounds, assignment of the corresponding toxicity characteristic HWNs (D018, D021, D035, D036, and D039) is not necessary and were not assigned to waste streams AECHDM-PK and AECHHM-PK.

Specifically the following changes were made to the original HWN assignments for waste streams AECHDM-PK and AECHHM-PK:

AECHCM v. AECHCM-PK

- Removal of HWN F003 for solvents listed solely for ignitability in the liquid state.
- Removal of HWN for F001 listed solvents, because large-scale degreasing operations were not conducted in Argonne laboratory operations.
- Addition of HWN D019 and removal of F001 for carbon tetrachloride.
- Removal of HWN D021 (chlorobenzene) and assignment of more specific F002 HWN.
- Addition of D010 for selenium assigned to solidified wastes, because the secondary wastes from the solidification operations will be included in the debris waste stream.
- Addition of HWN D029 for 1,1-dichlorobenzene identified as a potential contaminant during subsequent RH waste characterization.
- Addition of HWN F002 for tetrachloroethylene identified as a potential contaminant during subsequent RH waste characterization.
- Addition of HWN F005 for isobutanol dentified as a potential contaminant during subsequent RH waste characterization.

Resolution (continued):

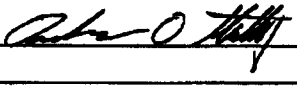
AECHHM v. AECHHM-PK

- Removal of HWN F003 for solvents listed solely for ignitability in the liquid state.
- Removal of HWN for F001 listed solvents, because large-scale degreasing operations were not conducted in Argonne laboratory operations.
- Addition of HWN D019 and removal of F001 for carbon tetrachloride (no large-scale degreasing).
- Removal of HWN D021 (chlorobenzene) and assignment of more specific F002 HWN.
- Addition of D010 for selenium assigned to solidified wastes, because the secondary wastes from the solidification operations included in the debris waste stream.
- Addition of HWN D029, F002, and F005 for 1,1-dichlorobenzene, tetrachloroethylene, and isobutanol identified as a potential contaminant during subsequent RH waste characterization.

Based on the assessment performed, the following EPA HWNs are assigned to waste streams AECHDM-PK and AECHHM-PK: D004, D005, D006, D007, D008, D009, D010, D011, D019, D027, D028, D029, D030, D037, F002, F004, and F005.

Discrepancy Resolved: [X] Yes [ ] No

Acceptable Knowledge Expert: Kevin J. Peters (Print) / (Sign) Date: 3/23/2011

Site Project Manager: Andrew Stallings (Print) /  (Sign) Date: 5/5/2011

[a] Published Document or Controlled Database (Pub.); Unpublished Data (Unpub.); Internal Procedure or Note (Proc.); Correspondence (Corr.) or Discrepancy (Disc.)

Attachment 1 – Argonne TRU Waste Operations Chemical Identification

Chemical/Material	Use/Description	PK Source
α, α'-dibromo-p-xylene	Reagent	AE-I-186
1-decanol	Organic solvent	AE-I-181, AE-I-182, AE-I-193
1-octanol	Organic solvent	AE-I-181, AE-I-182, AE-I-193
1,1,1-trichloroethane	Manipulator arm maintenance and cleaning. Cell cleaning solvent. Ingredient of Hyprez lubricant (10-30%)	AE-C-022, AE-I-008, AE-I-011, AE-I-149, AE-I-150, C012, C066, C137, C147, P327,P389, P416, U065, U072, U321
1,1-dichloroethylene	Metallurgical reagent – no use specified.	C147
1,1,2-trichloro-1,2, 2-trifluoroethane (Freon TA)	Used in the Analytical Chemical Laboratory in cold traps and sample preparation.	AE-D-011, AE-I-032, AE-I-124, AE-I-192
1,2-dichloroethane	Metallurgical reagent and organic solvent.	AE-D-012, AE-I-131, C147
1-(2,2,3,3-tetrafluoropropoxy)-3-(4-sec-butylphenoxy)-2-propanol	Cs-7SB modifier.	C2008, P2028
1,2,4-trichlorobenzene	Spiking solution.	AE-I-148
1,2,4-trimethylbenzene	Waste reagent liquid.	U3001
1,4-bifluorobenzene	Standard solution.	AE-I-131
1,4-dichlorobenzene	Spiking solution.	AE-D-012, AE-I-148
1,4-dioxane	Ingredient of Hyprez lubricant (0-1%).	AE-C-022, AE-I-008, AE-I-011, C012, C029, C066, P389, U072, U321
2-chlorophenol	Spiking solution	AE-I-148
2-ethylhexanol	Organic solvent /contactor cleaning.	C2008, C2009, P2010, P2011, P2013, U2004, U2008, U2009, U2010
2-fluorobiphenyl	Spiking solution.	AE-I-148
2-fluorophenol	Spiking solution.	AE-I-148
2,4-dinitrotoluene	Spiking solution.	AE-D-012, AE-I-148
2,4,6-tribromophenol	Spiking solution.	AE-I-148
4-bromofluorobenzene	Used for tuning GC/MS.	AE-I-131
4-chloro-3-methylphenol	Spiking solution.	AE-I-148
4-nitrophenol	Spiking solution.	AE-I-148
Acenaphthene	Spiking solution.	AE-I-148
Acetic acid	Metallography etchant acid. Electropolishing and etchant acid. Scrub solution. pH control. Degradation product of acetohydroxamic acid.	AE-I-149, C066, C118, C2008, P062, P326, P521, P2022
Acetohydroxamic acid	Pu and Np complexing agent, Np oxidation agent	C2008, P2022, P2023, P2024, P2026, P2028, U2004
Acetone	Metallographic specimen and cell cleaning. Electron microscopy sample preparation. Ingredient in Krylon Spray. Ingredient in Freon TA. Building 205 chemical inventory. Used as a solvent, a reagent, and for cleaning glassware.	AE-C-019, AE-C-022, AE-D-011, AE-I-006, AE-I-015, AE-I-022, AE-I-037, AE-I-057, AE-I-058, AE-I-060, AE-I-061, AE-I-068, AE-I-069, AE-I-078, AE-I-084, AE-I-098, AE-I-107, AE-I-110, AE-I-124, AE-I-126, AE-I-134, AE-I-135, AE-I-147, AE-I-151, AE-I-192, AE-P-044, AE-P-045, AE-P-054, C029, C066, C137, C147, U066, P061, P304, P327, P333, P416, P505, P507, P552, U072, U321
Acetyl cellulose	Electron microscopy sample preparation.	P061
Acid Bond A660 (Acid Bond)	Chemical Sorbent.	C2008, P2010, P2013
Aliquat-336	Quaternary ammonium salt used in solvent extraction	AE-C-023, AE-I-126, AE-I-192
Alumina (aluminum oxide)	Metallurgical sample polishing compound. Mock fuel material in LOCA experiments. Product of UAlx fuel exposed to water. Crucible material.	AE-I-010, AE-I-011, AE-I-047, AE-I-079, AE-I-135, AE-I-195, C025, C137, P509, P2007, U072
Aluminum	Present in leachate solution. Foil. Block-heater material. Alloy.	AE-I-050, AE-I-079, AE-I-195, AE-P-044, C2007
Aluminum chloride	Reagent.	AE-I-186
Aluminum hydroxide	Identified in waste material.	AE-I-051, AE-I-195
Aluminum nitrate	Reagent.	AE-I-126, AE-I-135, AE-I-192, AE-I-195
Aluminum silicate	Present in leachate solution.	P2003
Ammonia	Lithium passivation reagent.	C066
Ammonium acetate	Stripping agent. pH control.	AE-I-149, P2022
Ammonium bioxalate	Eluent.	AE-I-134, AE-I-135
Ammonium carbonate	Reagent used to produce ammonium salt of Cyanex 301.	P2022, P2028

Attachment 1 – Argonne TRU Waste Operations Chemical Identification

Chemical/Material	Use/Description	PK Source
Ammonium hydroxide	pH control. Neutralization agent. Precipitation agent.	AE-C-023, AE-I-060, AE-I-124, AE-I-126, AE-I-134, AE-I-135, AE-I-140, AE-I-149, AE-I-151, AE-I-192, P2022, P2024, P2027
Ammonium molybdate	Catalyst.	AE-I-035, AE-I-036
Ammonium molybdophosphate	Column used to remove Cs.	AE-I-195, P2024
Ammonium nitrate	Feed solution. Reagent. Scrubbing solution.	AE-I-117, AE-126, AE-I-150, AE-I-192, P2022
Ammonium oxalate	Complexing agent for Pu and Np NPEX strip solution. Precipitation agent. Plating solution.	AE-I-124, AE-I-134, AE-I-135, AE-I-147, AE-I-149, C2008, P2010, P2011, P2013, P2028, U2004
Ammonium thiocyanate	Reagent.	AE-I-124, AE-I-134, AE-I-135, AE-I-192
Antimony	Contaminant.	AE-I-034, AE-I-036, AE-I-195
Aquaset II-G	Liquid waste immobilization agent.	AE-I-195, AE-P-101, P2010, P3002, P3003
Arsenazo III	Reagent.	AE-I-184, AE-I-195
Arsenic	Contaminant of HEPA filters and clay absorbent.	AE-I-184, AE-I-195, C014, P412, U083
Asbestos	Insulating materials and Transite waste.	AE-I-195, AE-P-095, AE-P-096, U015, U017, U018, U019, U021
Ascorbic acid	Titrant solution. Reducing agent.	AE-I-134, AE-I-135
Bakelite	Waste material.	AE-C-022
Barium	Contaminant of HEPA filters, clay absorbent, and fluorescent bulbs. Present in dissolved fuel. Component of UREX+1a feed. Reagent.	AE-I-126, AE-I-149, AE-I-150, AE-I-192, AE-I-195, AE-I-199, C035, C116, C160, P412, P416, P2017, P2021, P2022, P2023, P2028, U083, U084
Barium chromate	Waste product	AE-I-149, AE-I-150
Barium chloride	Molten salt solvent	AE-I-028, AE-I-047, AE-I-126
Barium nitrate	Barium carrier	AE-I-149, AE-I-150
Benzene	Laboratory reagent – no use specified. Refluxing solvent for ammonium carbonate and Cyanex 301. Standard solution. Solvent.	AE-D-011, AE-I-131, AE-I-187, AE-I-192, AE-P-044, C147, P2022, U066
Beryllium	Beryllium containing samples.	AE-I-195, C066, C335, P407
Beryllium oxide	Crucible material.	AE-I-050
Beta-uranophane	Corrosion product of spent UO^2 fuel reacted with groundwater.	P2001, P2002, P2004
Bicarbonate salts	Present in leachate solution.	AE-I-069, AE-I-195, P2003, P2020, P2030
Bis(2-ethylhexoxy) phosphinic acid (HDEHP)	Extraction agent.	AE-I-184, C2008, P2024, P2026, P2027, U3001
Bismuth	Waste material.	AE-I-195
Boehmite (Al^2O^3•H^2O)	Aluminum oxide scaling that forms on U-Al fuel reacted with water.	P2007
Boric acid	Zinc-Zircaloy interactions specimen preparation.	AE-I-195, P548
Boron	Present in leachate solution.	P2020
Bromine	Reagent.	AE-I-186, AE-I-187
Bromochloromethane	Standard solution.	AE-I-131
Butyl cellusolve	Microstructural exam etchant reagent. Ingredient of Krylon Spray.	P505, U072
Cadmium	Contaminant of HEPA filters and pelletized clay. Component of neutron shielding, batteries, photography solutions, and other metal alloys. Component of UREX+1a feed. Dosimeter component.	AE-I-028, AE-I-038, AE-I-047, AE-I-50, AE-I-195, AE-P-070, AE-P-095, AE-P-099, C020, C066, C094, C116, C160, P412, P416, P2017, P2021, P2022, P2028, U015, U017, U072, U083
Cadmium chloride	Pu oxidizing agent.	AE-I-028, AE-I-038, AE-I-047, AE-I-050
Calcite	Present in leachate solution.	P2003
Calcium	Reductant.	AE-I-050
Calcium chloride	Molten salt solvent.	AE-I-028
Calcium salts	Present in leachate solution.	P2003, P2004, P2020, P2029, P2030
Calcium silicate	Present in leachate solution.	P2003, P2020
Calcium hydroxide	Soda lime used to neutralize acidic solutions.	P578
Calixarene	Extraction agent	C2008, P2028
Camphor	Coating solution	AE-I-015
Carbon (activated carbon / charcoal / graphite)	Graphite felt, paint, crucibles, containers, and hardware covers. Sorbent. DRA water treatment unit filter media. AGHCP exhaust filtration media.	AE-I-032, AE-I-050, AE-I-054, AE-I-131, AE-I-195, C025, C137, C158, P546, P556, P557, P578, P604, U015, U017, U018, U019, U021, U041, U073

Attachment 1 – Argonne TRU Waste Operations Chemical Identification

Chemical/Material	Use/Description	PK Source
Carbon tetrachloride	Immersion density measurements. Metallographic specimen and cell cleaning solvent. Extraction solvent.	AE-C-019, AE-D-005, AE-D-011, AE-I-030, AE-I-031, AE-I-034, AE-I-186, AE-I-193, C066, C081, C137, C147, P416
Cement, concrete	Waste material.	AE-I-195
Cerium	Reagent and waste material.	AE-I-036, AE-I-195
ChemOil-Away	Sorbent.	AE-I-195
Chloride salts	Present in leachate solution. Electrolyte solutions.	AE-I-035, AE-I-079, AE-I-126, AE-I-186, AE-I-192, AE-I-195, P2020, P2029, P2030
Chlorinated cobalt dicarbollide (CCD)	Extraction agent.	P2022, P2023, P2024, P2026
Chlorobenzene	Standard solution.	AE-D-012, AE-I-131
Chlorophosphonazo	Hardness indicator solution.	AE-I-195
Chromic acid	Metallography etchant acid.	C066, C137, C147, U006
Chromium	Component of chromic acid etchant, fuel, stainless steel cladding, chromium plated measuring tapes, chromic oxide polishing abrasive, pelletized clay and HEPA filters. Present in leachate solution.	AE-I-010, AE-I-011, AE-I-051, AE-I-052, AE-I-034, AE-I-035, AE-I-084, AE-I-106, AE-I-109, AE-I-149, AE-I-150, AE-I-195, AE-I-199, AE-P-044, AE-P-095, AE-P-099, C066, C116, C137, C160, P412, P490, P2003, P2021, P2023, U006, U068, U069, U070, U072, U074, U083, U084
Citric acid	Metallography etchant acid.	AE-I-195, C066, C137, P062
Clay and vermiculite absorbents (Oil Dri)	Absorption of neutralized etchants and alcohol solutions from passivation of reactive materials (i.e., Na and NaK). Crucible material.	AE-C-038, AE-I-042, AE-I-079, AE-I-195, C013, C026, C029, C066, C106, C115, C116, C130, C147, C333, P001, P006, P009, P551, P578, P604, U002, U004, U015, U017, U018, U019, U021, U041, U332
Copper nitrate	Waste material.	AE-I-195
Crown ether (non-specific)	Extraction agent.	AE-I-054, AE-I-181, AE-I-182, AE-I-183, AE-I-193, AE-I-195, P2028
Cyanex 301 (bis (2,4,4-Trimethylpentyl) dithiophosphinic acid)	Organic solvent.	C2008, P2022
Cyclohexane	Organic solvent.	AE-C-019, AE-D-005, AE-I-034
Di(2-ethylhexyl) phosphoric acid (D2EHPA)	Extraction agent. Liquid waste inventory	C2008, U3001
Diallyl phthalate	Waste material.	AE-C-022
Diammonium Diethylene triamine pentaacetate	Stripping agent.	P2022
Diamond paste/powder	Metallurgical sample polishing compound.	AE-C-022, AE-I-008, AE-I-011, AE-I-048, AE-I-052, C137, C2006, P062, P604
Diamyl amylphosphonate	Reagent.	AE-I-054, AE-I-181, AE-I-182, AE-I-183, AE-I-193
Diethylenetriamine pentaacetic acid (DTPA)	Complexing agent.	C2008, P2010, P2011, P2012, P2013, P2022, P2023, P2024, P2026, P2027, P2028, U2004, U3001
Dimethyl ether	Reagent.	AE-I-019, AE-D-005
Diphosphonic acids	Reagents.	AE-I-184, AE-I-193
Dodecane (n-dodecane)	Organic solvent. Standard solution. Liquid waste inventory.	AE-C-026, AE-I-044, AE-I-054, AE-I-131, AE-I-181, AE-I-182, AE-I-193, C2008, P2010, P2011, P2012, P2013, P2018, P2022, P2023, P2024, P2026, P2027, P2028, U2004, U3001
Dri-rite	Desiccant.	AE-I-195
Disodium hydrogen phosphate	Waste material.	AE-I-195
Eichrom TRU SPEC	Column resin.	P2017
Epoxy resin	Used to mount fuel samples. Secondary container.	AE-C-022, AE-I-046, P2004, P2005, P2012, P2019
Ethanol (ethyl alcohol / alcohol)	Metallurgical sample cleaning and etching. Cell decontamination cleaning solvent. Ingredient of Permatex gasket adhesive. Na, NaK, and lithium passivation reagent. Waste material. Solvent.	AE-C-022, AE-I-008, AE-I-010, AE-I-011, AE-I-048, AE-I-052, AE-I-079, AE-I-124, AE-I-126, AE-I-134, AE-I-135, AE-I-147, AE-I-151, AE-I-192, AE-P-044, C008, C011, C029, C039, C066, C137, C147, C316, C2008, P001, P062, P329, P416, P480, P540, P552, P566, P568, P604, P2018, U004, U066, U072, U321
Ethyl acetate	Extraction agent.	AE-D-011,AE-I-140
Ethyl benzene	Component of Krylon Spray. Standard.	AE-D-011, AE-I-131, AE-I-192, P410, U072

Attachment 1 – Argonne TRU Waste Operations Chemical Identification

Chemical/Material	Use/Description	PK Source
Ethylenediamine tetraacetate (EDTA)	Complexing agent. U hand soap component.	AE-P-044, P2017
Ethylene glycol	Metallurgical sample etching. Furnace coolant. Ingredient of Krylon Spray and mounting wax. Waste material.	AE-I-010, AE-I-011, AE-I-079, P062, P516, U072
Ethyl ether	Metallurgical sample preparation. Cell cleaning solvent. Washing solution.	AE-D-011, AE-I-149, AE-I-150, AE-P-045, C066, C147
Ethyl hexanol	Extraction solvent.	C3001
Ethyl violet	Indicator in soda-lime/soda carbonate neutralization filter media.	P578
Europium oxide	Reagent.	AE-I-193
Ferric chloride	Reagent.	AE-C-019, AE-D-005
Ferric hydroxide	Waste product	AE-I-135
Ferric nitrate	Oxidizing agent. Liquid waste inventory.	AE-I-044, AE-I-149, AE-I-150, U3001
Ferrous ammonium sulfate hydrate	Reducing agent.	AE-I-135
Fluoride salts	Present in leachate solution. Reagents.	AE-I-126, AE-I-151, AE-I-195, P2020, P2029, P2030
Fluorinert – FC-43	Clear non-toxic fluorinated electric liquid used in immersion density measurement of cladding samples.	C128, U072
Fluoroboric acid	Waste constituent.	AE-I-048
Fluran	Pyrophosphate fluorescence reagent.	AE-C-023, AE-I-192
Formaldehyde	Preservative for animal remains.	AE-P-095, AE-P-099,
Formate salts	Present in leachate solution.	P2003, P2020
Formic acid	Solvent.	AE-I-134, AE-I-135, AE-I-192
Gadolinium oxide (gadolinium burnable poison)	UO^2 fuel pellet dopant.	P2000, P2021, P2022, P2023
Gold	Dosimeter component. Electrode. Foil.	AE-I-035, AE-I-040, AE-I-195
Grease	Radiation-resistant grease.	AE-I-195
Guanidine carbonate (Guanidinium carbonate)	Oxygen scavenger.	C2008, P2010, P2011, P2013, P2022, P2023, P2026, U2004
Heptane	Metallurgical sample cleaning. Ingredient of Krylon Spray.	C066, C128, C147, P031, P410, P416, P604, U321
Hexadecane	Extraction solvent.	AE-I-131
Hexane	Metallurgical reagent and component of Krylon Spray.	P410, P416, U072
Hydrazine	Reagent.	AE-C-026
Hydrobromic acid	Dissolution agent	P2017, P2024
Hydrochloric acid	Metallography etchant acid. Clean shielding windows.	AE-C-020, AE-I-004, AE-I-009, AE-I-035, AE-I-037, AE-I-044, AE-I-045, AE-I-046, AE-I-053, AE-I-054, AE-I-058, AE-I-059, AE-I-069, AE-I-079, AE-I-124, AE-I-126, AE-I-134, AE-I-135, AE-I-140, AE-I-147, AE-I-151, AE-I-192, AE-I-195, AE-P-044, C066, C137, C344, P034, P344, P475, P521, P602, P2009, P2017, P2021, P2022, P2030, U304, U321
Hydrofluoric acid	Metallography etchant acid. Reagent for cleaning cladding for mechanical testing. Building 205 chemical inventory. Dissolution agent. Liquid waste inventory.	AE-C-020, AE-I-001, AE-I-004, AE-I-005, AE-I-009, AE-I-010, AE-I-011, AE-I-019, AE-I-021, AE-I-023, AE-I-030, AE-I-031, AE-I-034, AE-I-036, AE-I-037, AE-I-041, AE-I-044, AE-I-045, AE-I-053, AE-I-057, AE-I-059, AE-I-061, AE-I-062, AE-I-065, AE-I-066, AE-I-067, AE-I-068, AE-I-069, AE-I-084, AE-I-098, AE-I-121, AE-I-124, AE-I-126, AE-I-134, AE-I-135, AE-I-140, AE-I-142, AE-I-143, AE-I-151, AE-I-191, AE-I-192, AE-P-044, AE-P-054, C066, C137, C357, C2008, P062, P344, P503, P507, P521, P554, P572, P578, P602, P2009, P2017, P2021, P2024, P2025, P2026, P2028, P2030, U030, U304, U321, U2004, U3001
Hydrogen peroxide	Reagent for cleaning cladding for mechanical testing. Radiolysis product. Oxidizing agent. Used to destroy resin.	AE-I-054, AE-I-069, AE-I-099, AE-I-103, AE-I-132, AE-I-135, AE-I-141, AE-I-142, AE-I-151, AE-I-195, AE-P-044, P503, P507, P551, P554, P572, P574, P578, P2001, P2002, P2026, U321
Hydroxylamine	Degradation product of acetohydroxamic acid. PUREX reagent.	AE-C-026, P2022

Attachment 1 – Argonne TRU Waste Operations Chemical Identification

Chemical/Material	Use/Description	PK Source
Hydroxylamine hydrochloride	Additive to zinc bromide shielding window solution.	P380, P486
Hydroxylamine nitrate	Degradation product of acetohydroxamic acid.	P2028
Hyprex	Petroleum distillate based lubricant containing 1, 4-dioxane (0-1%) and 1,1,1-trichloroethane (10-30%) used for specimen cleaning.	C012, C029, C066, P062, P069, P389, U072, U321
Iodine	Carrier.	AE-I-054
Iodomethane	Reagent.	AE-I-186
Iron sulfamate	Stabilizer for Pu and Np (IV) oxidation state	C2008, P2024, P2026
Iron(II) sulfate (ferrous sulfate)	Degradation product. Coprecipitation agent. Reducing agent.	AE-C-023, AE-I-034, AE-I-036, AE-I-053, AE-I-084, AE-I-126, AE-I-151, AE-I-192, AE-I-195, AE-P-009, C2008
Iron (III) sulfate (ferric sulfate)	Coprecipitation agent.	AE-P-009
Isobutanol	Metallurgical reagent – cleaning solvent.	C147, P416
Isopar-L	Kerosene solvent.	AE-I-195, C2008, P2010, P2028, U2004
Isopropyl alcohol	Ingredient of Permatex gasket adhesive and Krylon Spray. Metallurgical reagent – degreaser. Solvent.	AE-I-056, U072, P416
Kerosene	Microprobe sample preparation. Purex solvent.	AE-C-026, C029, U066
Krylon Spray	Used to fix contamination on face of HEPA filters.	P410, U072
Lactate buffer (Ammonium Lactate/Lactic Acid)	pH control. TRUEX strip solution.	C2008, P2010, P2011, P2013, P2022, P2024, P2026, P2027, P2028, U2004, U3001
Lactic acid	Metallurgical etchant.	AE-I-010, AE-I-011
Lanthanum oxide	Reagent.	AE-I-124
Lead	Component of manipulator weights, metal scrap, leaded glass, shielding, leaded gloves and aprons, blocks, shot, lead wool, lead-bismuth epoxy, paint, lead solder, flashlight batteries, lead-acid batteries, sodium vapor lamps, and HEPA filter contaminant. Reference Material. Present in leachate solution.	AE-C-032, AE-C-035, AE-C-036, AE-C-037, AE-D-004, AE-I-030, AE-I-195, AE-I-199, AE-P-095, AE-P-099, C013, C029, C066, C088, C091, C137, C143, C147, C148, C333, C341, P023, P038, P039, P380, P412, P416, P484, P485, P487, P489, P490, P521, P536, P537, P557, P2003, P2017, U004, U006, U015, U017, U018, U019, U021, U041, U072, U083, U332
Light bulbs	Broken fluorescent and mercury lamps.	AE-I-195, P392, P416, U015, U017, U018, U019, U021
Lithium aluminum hydride	Reagent.	AE-I-187
Lithium chloride	Molten salt solvent.	AE-C-024, AE-I-028, AE-I-47
Lithium metal	Coolant removed from fuel pins and cladding. Low-oxygen vanadium alloy testing reagent. Alloy. Reducing agent.	AE-C-024, AE-I-038, AE-I-047, AE-I-050, AE-I-195, C066, P412, P540
Lithium salts	Present in leachate solution. Waste Material.	AE-I-079, AE-I-195, P2020, U3001
Magnesium	Molten salt solvent. Reductant. Alloy.	AE-I-027, AE-I-050
Magnesium salts	Present in water leachant.	P2004, P2029, P2030
Magnesium hydroxide	Neutralization agent. Waste material.	AE-I-195, P2010, P2013, P3002, P3003
Magnesium nitrate	Waste material.	AE-I-195
Magnesium oxide	Crucible material. Waste Material.	AE-I-079, AE-I-195
Mercury	Component of mercury vapor lights, fluorescent lights, batteries, barometers, thermometers, prinometers (density testing), and switches. Used in fuel immersion density testing.	AE-D-004, AE-I-006, AE-I-029, AE-I-078, AE-I-084, AE-I-107, AE-I-195, AE-I-199, AE-P-044, AE-P-095, AE-P-096, AE-P-099, C013, C035, C066, C137, C147, C143, C356, P070, P412, P416, P2011, U015, U017, U018, U019, U021, U022, U041, U083, U085
Metal-X	Fire suppression agent.	P492, P540
Metaschoepite ($UO_3 \cdot 2H_2O$)	Corrosion product of spent UO_2 fuel reacted with groundwater.	P2004
Methanesulfonic acid	Reagent.	AE-I-186, AE-I-187
Methanol	Metallurgical sample preparation. Cell cleaning solvent. Building 205 chemical inventory. Solvent.	AE-C-019, AE-D-011, AE-I-060, AE-I-128, AE-I-131, AE-I-148, AE-I-191, AE-I-192, AE-P-044, AE-P-054, C066, C106, C137, C147, C316, P416, P505, P2017, P2018, U322
Methylene chloride	Solvent. Rinse. Extraction solvent.	AE-D-011, AE-I-130, AE-I-148, AE-I-192
Methyl ethyl ketone (MEK)	Building 205 chemical inventory. Solvent.	AE-D-011, AE-I-128, AE-I-192, AE-P-044, P2018
Methyl isobutyl ketone	Solvent.	AE-D-011, AE-P-054
Molybdenum trioxide	Molybdenum carrier.	AE-I-054
n-bromosuccinimide	Reagent.	AE-I-186

Attachment 1 – Argonne TRU Waste Operations Chemical Identification

Chemical/Material	Use/Description	PK Source
n-butyl alcohol	Metallurgical sample preparation and cleaning solvent. Na and NaK passivation reagent.	C013, C066, C137, C147, P061, P412, P416
N-nitroso-di-n-propylamine	Spiking solution.	AE-C-023, AE-I-148
n-nonane	Standard solution.	AE-I-131
Neodymium oxide	Standard.	P2017
Nickel	Present in leachate solution.	P2003
Nitrate salts	Present in leachate solution.	AE-I-051, AE-I-195, P2003, P2020, P2029, P2030
Nitrite salts	Present in leachate solution.	AE-I-051, AE-P-095, AE-P-099, P2003, P2020
Nitric acid	Metallography etchant and defueling acid. Reagent for cleaning cladding for mechanical testing. Building 205 chemical inventory. Dissolution agent. Liquid waste inventory.	AE-C-020, AE-C-026, AE-I-003, AE-I-004, AE-I-005, AE-I-006, AE-I-009, AE-I-010, AE-I-011, AE-I-018, AE-I-019, AE-I-030, AE-I-034, AE-I-035, AE-I-036, AE-I-037, AE-I-041, AE-I-043, AE-I-044, AE-I-045, AE-I-046, AE-I-049, AE-I-051, AE-I-053, AE-I-054, AE-I-056, AE-I-057, AE-I-058, AE-I-059, AE-I-060, AE-I-061, AE-I-069, AE-I-084, AE-I-098, AE-I-107, AE-I-110, AE-I-124, AE-I-126, AE-I-134, AE-I-135, AE-I-140, AE-I-147, AE-I-149, AE-I-151, AE-I-192, AE-I-195, AE-P-044, AE-P-054, C137, C357, C2004, C2005, C2008, C2009, P031, P062, P329, P331, P344, P387, P503, P507, P551, P554, P556, P566, P572, P574, P578, P602, P2008, P2009, P2010, P2011, P2012, P2013, P2016, P2017, P2018, P2020, P2021, P2022, P2023, P2024, P2025, P2026, P2027, P2028, P2029, P2030, U304, U321, U2002, U2004, U2010, U3001
Nitrobenzene	Spiking solution. Reagent.	AE-D-011, AE-I-148, AE-I-186
Octyl(phenyl)-N,N-diisobutylcarbamoyl methyl phosphine oxide (CMPO)	Extraction agent. Liquid waste inventory.	AE-I-030, AE-I-044, AAE-I-051, AE-I-054, AE-I-181, AE-I-183, AE-I-193, C2008, P2022, P2024, P2026, P2028, U3001
Oil	Lubricant for gear motor.	AE-I-195
Oil Dri	Sorbent.	AE-I-195
Orthophosphoric acid	Supporting electrolyte solution.	AE-I-034, AE-I-035, AE-I-036, AE-I-084
Oxalate salts	Present in leachate solution. Scrub solution.	P2003, P2024
Oxalic acid	Metallography etchant acid. Complexes zirconium.	AE-I-010, AE-I-044, AE-I-056, AE-I-124, AE-I-126, AE-I-134, AE-I-151, AE-I-192, AE-I-195, C066, C118, C137, C2008, P062, P386, P2010, P2011, P2022, P2023, P2024, P2026, P2028
Pentachlorophenol	Spiking solution	AE-D-012, AE-I-148
Perchlorate salts	Reagents.	AE-I-184, AE-I-193
Perchloric acid	Electropolishing acid. Dissolution agent.	AE-I-034, AE-I-036, AE-I-046, AE-I-084, AE-I-117, AE-I-121, AE-I-126, AE-I-141, AE-I-142, AE-I-184, AE-I-192, AE-I-193, AE-P-044, P521, P2017
Pertechnetic acid	Reagent.	P2026
Petro Bond A610	Chemical sorbent.	P2010
Petroset II-G	Chemical sorbent.	AE-P-095, AE-P-101, P2010, P2013
Phenol	Spiking solution.	AE-I-148, AE-I-192
Phenyl trifluoromethyl sulfone (FS-13)	Solvent	P2010, P2011, P2022, P2023, P2026, U2004
Phosphoric acid	Metallography etchant and electropolishing acid. Building 205 chemical inventory. Dissolution agent. Liquid waste inventory.	AE-I-010, AE-I-011, AE-I-034, AE-I-035, AE-I-036, AE-I-054, AE-I-084, AE-I-098, AE-I-195, AE-P-054, C066, C137, P062, P521, P551, P574, P2018, U321, U3001
Phosphorous acid		AE-I-044
Phosphorous trichloride	Reagent	AE-I-186, AE-I-187, AE-193
Photo Flo	Photographic solution in AGHCF.	U322, U072
Phthalate	Waste material	AE-I-195
Plaster of Paris (calcium sulfate hemihydrate)	Solidification agent.	AE-I-079
Platinum	Labware material. Electrode material.	AE-I-022, AE-I-034, AE-I-035, AE-I-037, AE-I-042, AE-I-045, AE-I-060, AE-I-068, AE-I-084, AE-I-098, AE-I-124, AE-I-126, AE-I-151, AE-I-192

Attachment 1 – Argonne TRU Waste Operations Chemical Identification

Chemical/Material	Use/Description	PK Source
Polychlorobiphenyls	Component of ballasts, capacitors, and transformers located outside of the cells.	AE-P-095, AE-P-096, C066, C137, C143, P618
Polyethylene glycol (PEG)	Organic solvent.	AE-I-135, AE-I-195, C2008, P2022, P2023, P2026
Potassium	Waste material.	AE-I-195
Potassium bisulfate (sulfate)	Hydrogen charging solution reagent for auger fracture specimens.	AE-I-126, P521
Potassium carbonate	Cleaning solution.	AE-I-022, AE-I-037, AE-I-058
Potassium chloride	Molten salt solvent.	AE-I-009, AE-I-018, AE-I-028, AE-I-047
Potassium dichromate	Titrant. Test for orthophosphoric acid. Oxidizing agent. Used to oxidize antimony impurity to Sb(V).	AE-C-019, AE-I-034, AE-I-035, AE-I-084, AE-I-106, AE-I-109, AE-I-195
Potassium hexachlorouthenate	Ruthenium carrier.	AE-I-054
Potassium hydroxide	Neutralize acidic etchant and fuel dissolution solutions (soda lime).	AE-I-060, AE-I-124, AE-I-126, AE-I-134, AE-I-135, AE-I-192, P578
Potassium iodide	Reagent.	AE-I-046, AE-I-056
Potassium metabisulfate	Precipitation agent	AE-I-126
Potassium oxalate	Used to complex zirconium. Electrolyte solution.	AE-I-126, AE-I-192, C2008
Potassium permanganate	Decontamination solution. Reagent. Liquid waste inventory. Manganese carrier.	AE-I-034, AE-I-035, AE-I-036, AE-I-054, U3001
Potassium peroxydisulfate (Potassium persulfate)	Tc-99m oxidizing agent.	AE-I-151
Potassium salts	Waste material.	AE-I-051, AE-I-009, AE-I-126, AE-I-192, AE-I-195
Potassium sulfate	Reagent.	AE-I-126
Propane	Building 205 chemical inventory.	AE-P-044
Pyrene	Spiking solution.	AE-I-148
Pyridyl(azo) resorcinol	Reagent.	AE-I-184
Pyrofoam	Fire-resistant sealer.	AE-I-195
QuickStick	Mounting wax used in Bakelite metallographic mount preparation.	C2006, P552, U072
Radiac	Decontamination solution.	AE-P-044
Radsorb	Polymer-based sorbent.	AE-C-038, AE-I-195
Rathenium nitrate	Waste material.	U3001
REACT	Hydrochloric acid-based cleaning solution used to clean manipulators.	P472, U072
Reillex HPQ resin	Anion-exchange resin.	P2023, P2026
Resin (AG-1-X8, AG 1-X8, Bio-Rad AGMP, Bio-Rad Poly-Prep, Diphonix, Dowex, Koldmount, Sr Resin SPS, TRU Resin SPS, TEVA Resin SPS, XAD-7, etc.)	DRA water treatment unit filter media. In-cell vacuum air sweeper filters (Zeolyte). Used in chemical separations. Support material.	AE-I-011, AE-I-046, AE-I-053, AE-I-069, AE-I-124, AE-I-126, AE-I-134, AE-I-135, AE-I-140, AE-I-147, AE-I-181, AE-I-183, AE-I-192, AE-I-193, AE-I-195, C026, P546, P2017U015, U017, U018, U019, U021, U041, U072, U073
Rhodium trichloride	Rhodium carrier.	AE-I-054
Rongalite (sodium formaldehyde sulfoxylate)	Reducing agent.	AE-I-135
Saturated calomel electrode (SCE / mercury – mercury(I) chloride – potassium chloride)	Electrode.	AE-I-034
Schoepite (hydrated/dehydrated)	Corrosion product of spent UO^2 fuel reacted with groundwater.	P2001, P2002, P2003, P2004, P2007, P2020, P2030
Selenium	Irradiation experiment reagent. Contaminant of HEPA filter media. Component of UREX+1a feed.	AE-I-195, U006, U083, P412, P2028
Sky Blue	Cell and glovebox window cleaning detergent.	P487, U321, U072
Silica	Component of a ground water surrogate. Present in leachate solution.	C2004, C2005, P2003, P2020, P2029, P2030
Silicic acid	Naturally-occurring fuel leachate reactant.	P2002
Silicon	Present in water leachant.	P2002, P2003, P2004, P2020

Attachment 1 – Argonne TRU Waste Operations Chemical Identification

Chemical/Material	Use/Description	PK Source
Silicon carbide	Abrasive on paper used to grind down fuel specimens. Boiling chips.	AE-I-010, AE-I-011, AE-I-042, AE-I-126, C2006, P2029
Silicone	Sealant.	AE-I-195
Silver	Component of silver nitrate etchant, mounting epoxy, containers, solder, photographic film and chemicals, and HEPA filter contaminant and screw eyes. Component of UREX+1a feed. Foil.	AE-C-017, AE-C-022, AE-I-040, AE-I-195, C020, C029, C066, C137, C147, U006, P061, P062, P068, P410, P412, P416, P507, P539, P2017, P2021, P2028, U072, U083
Silver iodide	Waste material	AE-I-195
Silver nitrate	Metallography etchant reagent for Zircaloy metals. Chloride ion test agent. Chloride detection.	AE-C-022, AE-I-044, AE-I-054, C066, C137, P062, P539, P2026, U006, U321, U3001
Simple Green	Detergent used to clean hot cells.	C2008, U072
Soddyite	Corrosion product of spent UO_2 fuel reacted with groundwater.	P2004, P2020
Sodium arsenite	Hydrogen charging solution reagent for auger fracture specimens.	P521
Sodium bicarbonate (baking soda)	Component of a ground water surrogate. Neutralization agent.	AE-I-051, AE-I-079, C2004, C2005
Sodium bisulfate	Hydrogen charging solution reagent for auger fracture specimens. Cleaning solution. Buffer.	AE-I-034, AE-I-043, AE-I-060, AE-I-061, AE-I-068, AE-I-124, AE-I-126, AE-I-134, AE-I-135, AE-I-192, P521
Sodium boltwoodite	The major alteration product of UO_2 leached with water containing sodium and silicon.	P2002, P2004
Sodium carbonate	Neutralize acidic etchant and fuel dissolution solutions. U hand soap component. pH control Used to wash PUREX solvent.	AE-C-026, AE-I-044, AE-I-045, AE-I-056, AE-I-061, AE-I-079, AE-I-149, AE-P-044, C066, C147, P551, P578
Sodium chromate	Precipitation agent.	AE-I-149, AE-I-150
Sodium chloride	Molten salt solvent. Standard.	AE-I-028, AE-I-029
Sodium hydride	Reagent.	AE-I-186
Sodium hydroxide	Neutralize acidic etchant and fuel dissolution solutions (soda lime). pH control. Solvent. Used to wash PUREX solvent. Autoradiography film etching. Precipitation agent. Liquid waste inventory.	AE-C-026, AE-I-046, AE-I-054, AE-I-126, AE-I-135, AE-I-149, AE-I-151, AE-I-184, AE-I-192, AE-I-195, AE-P-009, C066, C147, C2008, P061, P578, U3001
Sodium lauryl sulfate	Hand soap ingredient.	AE-P-044
Sodium metal	Component of fuel pins, generated during sectioning.	AE-I-186, AE-I-187, C008, C009, C011, C013, C029, C147, C375, P001, P006, P009, P032, P060, P412, P617, P620, P621, U002, U004
Sodium nitrate	Liquid waste inventory solution.	U3001
Sodium nitrite	Used to ensure tetravalent state for Np and Pu.	AE-I-126, AE-I-192, AE-I-195, P2022
Sodium perchlorate	Reagent.	AE-I-184
Sodium phosphate	Reagent.	AE-I-126
Sodium-potassium alloy	Component of fuel pins, generated during sectioning.	C023, C029, C039, C066, C147, P001, P032, P060, P412, U002
Sodium salts	Resulting from Na and NaK passivation absorbed on mineral (clay) absorbents. Present in water leachant.	AE-I-051, AE-I-124, AE-I-192, AE-I-195, C013, P617, P2002, P2004, P2029, P2030, U3001
Sodium sulfate	Buffer. Filtration material.	AE-I-060, AE-I-126, AE-I-134, AE-I-135, AE-I-148
Solidification Agents	Liquid solidification agents may include Portland cement, Acid Bond, No-Char, Aquaset, or Petroset.	AE-C-006, AE-C-024, P032, P412, P3002, P3003, U3001
Stergo	Absorbent polymer	AE-I-195
Strippable paint / paint chips	Used to decontaminate cell surfaces and equipment.	AE-I-195, AE-P-095, AE-P-099, P489
Strip-X	Paint stripping agent.	AE-I-079
Strontium nitrate	Strontium carrier	AE-I-134, AE-I-147, AE-I-149, AE-I-150
Sulfamic acid	Stabilizes Np(VI) oxidation state and destroys nitrite. Oxidizing agent.	AE-I-009, AE-I-018, AE-I-034, AE-I-036, AE-I-084, AE-I-195, C2008, P2026, P2028
Sulfate salts	Present in leachate solution. Waste materials.	AE-I-126, AE-I-195, P2020, P2029, P2030
Sulfur	Dosimeter component.	AE-I-195
Sulfuric acid (Oil Of Vitriol)	Metallography etchant and electropolishing acid. Cleaning solution. Dissolution agent. Liquid waste inventory.	AE-C-020, AE-I-009, AE-I-018, AE-I-035, AE-I-036, AE-I-043, AE-I-044, AE-I-053, AE-I-054, AE-I-056, AE-I-057, AE-I-068, AE-I-078, AE-I-084, AE-I-107, AE-I-126, AE-I-148, AE-I-151, AE-I-192, AE-I-195, C066, C137, C2008, P031, P505, P521, U3001
Sulfurous acid	Dissolution agent.	AE-I-068
Terphenyl	Spiking solution.	AE-I-148

Attachment 1 – Argonne TRU Waste Operations Chemical Identification

Chemical/Material	Use/Description	PK Source
Tetrachloroethylene (perchlorethylene)	Manipulator arm maintenance and cleaning. Cell cleaning solvent. Test solvent.	AE-C-022, AE-I-044, C066, C137, C147, C2009, P416, U066, U2007, U2008, U2009, U2010
Tetrahydrofuran-2,3,4, 5-tetracarboxylic acid	Reagent.	AE-I-054, AE-I-134, AE-I-135, AE-I-184, AE-I-193
Thorium nitrate	Reagent.	AE-I-146
Titanium	Present in leachate solution.	P2003
Toluene	Manipulator arm maintenance and cleaning. Metallographic specimen and cell cleaning solvent. Component of Krylon Spray. Solvent.	AE-C-022, AE-D-022, AE-I-131, AE -I-181, AE -I-184, AE-I-193, AE-P-044, AE-P-054, C012, C066, C137, C147, U066, P062, P410, P416, P2018, U072, U321
Tri-n-octylamine	Organic solvent.	C2008, P2028
Tributyl phosphate (TBP)	Complexing agent. Extraction agent. Liquid waste inventory.	AE-C-026, AE-I-030, AE-I-034, AE-I-044, AE-I-054, AE-I-151, AE-I-181, AE-I-182, AE-I-183, AE-I-193, AE-I-195, C2008, P2010, P2011, P2012, P2013, P2022, P2023, P2024, P2026, P2028, U2007, U3001
Trichloroethylene	Cleaning solvent.	AE-D-011, AE-I-031, AE-I-032
Triethanolamine	Soluble oil component.	AE-C-019
Trifluoroacetic acid	Reagent.	AE-I-187, AE-I-193
Ultima Gold XP	Scintellation cocktail.	AE-C-023, U3001
Uranium carbide	Product of spent fuel oxide with water under oxidizing conditions.	C2005, P2007
Uranium trihydride (uranium hydride)	Product of metallic uranium reacted with water.	C2005, P2007
Uranyl nitrate	Feed stock.	AE-C-026, AE-I-024, AE-I-044, AE-I-098, AE-I-117, P2026, P2028
Uranyl oxide hydrate	Product of spent fuel oxide with water under oxidizing. conditions.	P2001
Uranyl silicates	Product of spent fuel and silica-containing water.	P2001, P2004
Uranyl sulfate	Waste material.	AE-I-195
Uraplex	Uranium complexing agent.	AE-C-023
Vanadium (salts or acids)	Reagents.	AE-I-034, AE-I-195, C2008, P2023, P2024
Vanadyl nitrate	Oxidizing agent for Np.	P2028
Vanadium pentoxide	Catalyst.	AE-I-135
Vanadyl sulfate	Catalyst for U(IV) titration by potassium dichromate.	AE-C-019, AE-I-034, AE-I-035, AE-I-084
Xylene	Metallography mount and lens cleaner. Cell cleaning solvent. Ingredient of Krylon Spray. Solvent. Standard.	AE-D-011, AE-I-054, AE-I-126, AE-I-131, AE-I-140, AE-I-151, AE-I-181, AE-I-192, AE-I-193, AE -P-044, AE-P-045, AE -P-054, C029, C066, C137, C147, P410, P416, U072, U3001
Yttria (yttrium oxide)	Waste material.	AE-I-195
Zeolite	Waste material.	AE-I-195
Zinc	Reference material. Present in leachate solution. Alloy.	AE-I-050, AE-I-195, P2003, P2017
Zinc bromide	Salt shielding solution in hot cell windows.	P031, P034, P486
Zinc nitrate	Waste material	AE-I-195
Zircaloy	Fuel cladding material. Component of sectioning dust and fines (swarf).	C066, C137, C2005, P001, P062, P032, P304, P372, P396, P412, P548, P557, P568, P580, P1002, P2001, P2002, P2003, P2007, P2021, P2030, U006
Zirconia	Grinding / Milling media.	AE-I-195, P2029
Zirconium and zirconium salts	Present in leachate solution. Waste material.	AE-I-050, AE-I-052, AE-I-195, P2021, P2022, P2023, P2024, P2025, P2026, U3001

Attachment 2 – Comparison of EPA HWNs Assigned to Argonne Waste Streams

EPA HWN	Constituent	Original HWN Assignment		RH Waste (Buildings 200, 205, & 212)	AECHDM-PK AECHHM-PK
		AECHDM (Debris)	AECHHM (Homogeneous)		
D004	Arsenic	X	X	X	X
D005	Barium	X	X	X	X
D006	Cadmium	X	X	X	X
D007	Chromium	X	X	X	X
D008	Lead	X	X	X	X
D009	Mercury	X	X	X	X
D010	Selenium		X	X	X
D011	Silver	X	X	X	X
D018	Benzene		X		
D019	Carbon tetrachloride		X	X	X
D021	Chlorobenzene	X	X		
D027	1,4-Dichlorobenzene	X	X		X
D028	1,2-Dichloroethane	X	X	X	X
D029	1,1-Dichloroethylene			X	X
D030	2,4-Dinitrotoluene	X	X		X
D035	Methyl ethyl ketone		X		
D036	Nitrobenzene		X		
D037	Pentachlorophenol	X	X		X
D039	Tetrachloroethylene				
F001	Solvents	X	X		
F002	1,1,1-Trichloroethane	X	X	X	X
F002	1,1,2-trichloro-1,2,2-trifluoroethane (Freon TA)	X	X		X
F002 (D039)	Tetrachloroethylene			X	X
F002 (D021)	Chlorobenzene				X
F002	Methylene chloride	X	X		X
F002	Trichloroethylene	X			X
F003	F003 Solvents	X	X		
F004 (D036)	Nitrobenzene	X	X		X
F005 (D018)	Benzene	X	X	X	X
F005	Isobutanol			X	X
F005 (D035)	Methyl ethyl ketone	X	X		X
F005	Toluene	X	X	X	X

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Attachment 3 - Acceptable Knowledge Source Document Summary

Waste Stream Number(s): ID-SDA-PIT4-DEBRIS, ID-SDA-PIT4-SLUDGE, ID-SDA-PIT4-SOIL

Site(s): INL

Source Document Tracking Number: RF-D001

Acceptable Knowledge Documentation Type:
- ☐ TRU Waste Management Program Information
- ☑ Waste Stream-Specific Information
- ☐ Supplemental Information

Category:
- ☐ C - Correspondence
- ☑ D - Discrepancy Resolution
- ☐ P - Published Documents
- ☐ U - Unpublished Documents

Title of Source Document: Discrepancy Resolution Concerning the Use of Cyanide Salt Baths for Metal Heat-Treating Operations

Source Document Reference Information (author(s), document and revision number, date, publisher): Jeff Harrison, NA, Rev. 0, 1/5/2006

AK # [a]	Source Doc. Page # [b]	AK Information Summary
WS1, WS2, WS3, WS4, WS6, WS8, WS9	1-5	Discussion concerning the decision not to add EPA Hazardous Waste Numbers F010 (quenching bath residues from oil baths from metal heat-treating operations where cyanides are used in the process) and F011 (spent cyanide solutions from salt bath pot cleaning from metal heat-treating operations) to the waste streams in CCP-AK-INL-001; ID-SDA-PIT4-SLUDGE, ID-SDA-PIT4-SOIL, and ID-SDA-PIT4-DEBRIS.

Source Document Data Limitations (if any):

1. None.

Acceptable Knowlege Expert:

Jeff Harrison / Jeff Harrison Date: 3/3/06
Print /Sign

[a] Obtain from Acceptable Knowledge Documentation Checklist
[b] For microfilm or microfiche, identify box, tape, reel number and location.

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Attachment 11 - Acceptable Knowledge Source Document Discrepancy Resolution

Waste Stream Number(s): ID-SDA-PIT4-SLUDGE, ID-SDA-PIT4-SOIL, ID-SDA-PIT4-DEBRIS

Waste Stream Description: Sludge, Soil, and Debris Buried in the INL Subsurface Disposal Area

AK Documentation Type: ☒TRU Waste Management Program Information ☒Waste Stream Specific Information ☒Supplemental Information

AK Source Document Discrepancy Form Tracking Number: **RF-D001**

Tracking #	Category [a]	Title	Document/ Rev#	Author	Date	Publisher	Page #
RF-C045	Corr.	Notes on telephone conversations with Ed Vejvoda, LATA	N/A	R. Thomas	6/20/01	N/A	55, 141
RF-C114	Corr.	Letter to Rod Thomas re: Waste Drum Generation from the 903 Pad and Mound Area	N/A	E. Vejvoda	1/11/01	N/A	6, 10
RF-C120	Corr.	Letter to Rod Thomas re: Rocky Flats Waste Information	ev-I-99019-thomas	E. Vejvoda	11/29/99	N/A	8, 9
RF-C156	Corr.	Progress Report for the Month of December 1954, Waste Disposal Coordination Group.	N/A	Rocky Flats	1/4/55	N/A	2
RF-C414	Corr.	Letter to L.C. Farrell. Cyanide Waste.	N/A	R. Hawley	3/22/54	N/A	1, 2
RF-C415	Corr.	Compilation of History Reports from Waste Disposal.	N/A	Rocky Flats	4/58 – 9/64	N/A	3 (4/1963)
RF-C416	Corr.	Interview with Ed Vejvoda. Waste Management Practices at Rocky Flats.	N/A	K. Peters, J. Harrison	9/27/04	N/A	2
RF-P051	Pub.	RADWASTE Magazine, Volume B, Number 5, Cleaning up Trench 1 at Rocky Flats.	N/A	Rocky Flats	10/1/99	N/A	5, 6
RF-P063	Pub.	Reconnaissance Level Characterization Report (RLCR) 883 Cluster Closure Project (Buildings 883 and 879)	B883-A-000011, Rev. 0	K. Dorr	10/17/01	N/A	35 – 38
RF-P072	Pub.	Investigation of Salts for Use in Uranium Metal Heat-Treating Baths	RFP-191, Rev. 0	S. Pocsik	7/25/60	N/A	5, 6, 12
RF-P084	Pub.	Building Histories for Bldgs. 371,444,447,461,707,771,776/777,881,883, and 991 Historical Release Report.	N/A	Rocky Flats	11/1/94	N/A	195 – 198
RF-P106	Pub.	Evaluation and Compatibility of Process Materials Used at Rocky Flats Division (History) 7/64 – 5/69	N/A	Rocky Flats	5/27/69	N/A	14

Tracking #	Category [a]	Title	Document/ Rev#	Author	Date	Publisher	Page #
RF-P260	Pub.	Actinide Processing at Rocky Flats	N/A	J. Navratil, F. Miner	7/1/84	N/A	42
RF-P404	Pub.	Omnibus Environmental Assessment for the Rocky Flats Plant of the US Atomic Energy Commission	N/A	Rocky Flats	7/1/74	N/A	2-19
RF-P405	Pub.	Omnibus Environmental Assessment for the Rocky Flats Plant of the US Energy Research and Development Administration	N/A	Rocky Flats	5/1/75	N/A	24
RF-P562	Pub.	Summary of Rocky Flats Plant Waste Buried in the Subsurface Disposal Area	ICP/EXT-04-00717, Rev. 0	E. Vejvoda	04/2005	N/A	18, 19, 66, 67, 83
RF-U416	Unpub.	Packet of documents including: Letter to J. R. Seed, Disposal of Cyanide Compounds.	N/A	J. Hill	11/22/71	N/A	10

Nature of Discrepancy:

During a review of AK documentation, information about the use of cyanide salt baths for metal heat-treating operations at Rocky Flats was discovered. It is known that cyanide salts were at one time set up with cement and shipped to Idaho as contaminated waste.

Based on this information, it is possible that EPA hazardous waste numbers F010 and F011 apply to the waste retrieved from the ARP-I and T-RAD exhumation areas. According to 40 CFR 261.31, F010 is defined as "Quenching bath residues from oil baths from metal heat treating operations where cyanides are used in the process." F011 is defined as "Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations." These EPA hazardous waste numbers are not assigned to the waste streams in CCP-AK-INL-001. Additional documentation was reviewed to assess whether or not EPA hazardous waste numbers F010 and F011 should be added to waste streams ID-SDA-PIT4-SLUDGE, ID-SDA-PIT4-SOIL, and ID-SDA-PIT4-DEBRIS.

Resolution: Numerous AK documents were reviewed on this issue. The following is a summary of the information on cyanide use and disposal:

A 1994 historical release report indicates metal ingots received from either B444 or Building 881 would be placed into a furnace or eutectic salt bath to make the metal suitably malleable for rolling. The ingots were rolled into sheets and annealed in a second salt bath. The rolled sheets were then cleaned in a bath of TCE or PCE. In addition, the molten salt baths would be pumped out annually to recover metal fines that had accumulated in the bottom. This report also states that beryllium ingots, which were cast in Building 444 and placed into stainless steel cans in Building 881, were heated, rolled into sheets then cut out of the stainless steel forms. The sheets were then heat-treated in either the acid and/or eutectic salt baths and then pressed into the desired shape in Building 883 (RF-P084).

A 2005 document describing the history of Rocky Flats indicates cyanide salts were used in Building 444 in heat-treating baths. However, because of potential safety concerns and disposal problems, cyanide heat-treating baths were eliminated in favor of carbonate-based baths (RF-P562).

A 1960 report on investigation of salts for use in uranium metal heat-treating baths states that the purpose of the investigation was to find alternative salts for the presently used Holden 660 mixture in uranium metal annealing baths. The composition of Holden 660 was potassium carbonate, lithium carbonate, and sodium carbonate (RF-P072).

A 1984 report that includes the history of uranium recovery and purification indicates that an eutectic salt mixture of potassium and lithium carbonates was used, in a fused state, to heat uranium metal before rolling (RF-P260).

A 2001 report for the closure of Building 883 describes historical operations. When describing preheating and forming, the report indicates that sometimes the process involved heating the metal with either a torch or a hot oil bath. The description for heat treating says that solid metal parts consisting of depleted uranium, uranium alloy, stainless steel, aluminum, or tantalum were placed in one of six enclosed and liquid cooled furnaces or into one of four salt baths. The salt bath contains sodium, lithium, and potassium carbonates. After heating, the parts were cooled by water, air, or press quenches housed in portable tanks. An oil bath consisting of Dow Corning 550 fluid was occasionally used to cool parts (RF-P063).

An evaluation and compatibility of process materials used at Rocky Flats from 7/64 to 5/69 discusses the use of cyanide for plating. This report does not describe the use of cyanide salt baths for heat-treatment of metals (RF-P106).

Trench 1 at Rocky Flats was used for burial of waste from Building 444 from December 1954 until December 1962 (RF-C114). In December 1954, 10 drums of concreted cyanide from 444 were buried in Trench 1. No other concreted cyanide burials were noted (RF-C114, RF-C156). An article in a 1999 Rocky Flats magazine indicated that the drums of cemented cyanide waste were removed from the trench and should be shipped offsite for treatment this fiscal year (RF-P051). This waste did not go to Idaho as waste shipments to Idaho ceased in 1988.

An August 1963 waste disposal report says disposal of cyanide wastes produced in Building 44 were a potential problem. In the past, these wastes were set-up with Portland cement in Building 44. At the present time (1963), these wastes are being sent to Building 81 for destruction. The presence of fluoride and Building 44 material in the waste makes this method undesirable for Building 81 (RF-C114).

A 1971 internal letter on disposal of cyanide compounds states that various methods have been, or are now being, used for the disposal of cyanide compounds. Large amounts of these salts have been set up with cement and shipped out as contaminated waste. This method disposes mainly of used plating solutions. Small amounts of cyanide salt, no longer needed in other areas, have been used in plating operations in Building 444. Reacting the material with hypochlorite or caustic and sulfur compounds and dumping in the sanitary sewer has been used for small amounts (RF-U416).

In a 2004 interview, Ed Vejvoda indicated that limited amounts of cyanide plating operations were conducted (laboratory and R&D scale operations until the 1980s), and that cyanide heat treating baths were being used up until 1963. He also said that the metallurgical personnel (platers) destroyed their own cyanides by chlorination or oxidation. Some of these solutions were cemented and sent to Idaho (RF-C416).

A logbook from 444 includes waste codes. One of those is "M, cyanide cement, Cl" (RF-C120). In notes from Ed Vejvoda from 1999, he was asked about these 444 waste types. Ed thought that the "Cl" meant chlorine (RF-C045).

A March 1954 internal memo states that 81 Building supervision decided it would be best in the future to destroy all cyanide waste by acidification and evaporation up the stack. Therefore, no more liquid cyanide waste will be released [to 774] from the building. Cyanide waste originates in 4 gallon batches containing about 5 pounds of cyanide. About 15 to 20 gallons per month are handled. It is doubtful if any cyanide problem would develop due to 81 Building operations, but it was decided by supervision to evaporate the cyanide waste to dryness and thus eliminate any cyanide from 81 Building liquid waste. Insofar as 44 Building will shortly be faced with the problem of cyanide waste disposal, it is suggested that careful thought and laboratory study be directed toward proper disposal methods, especially since quantities may be different than that used in 81 Building. Special consideration should be given caustic chlorination as a most desirable and safest method of eliminating the cyanide ion. If this method is used and the metal content is low, the waste may be added to one of the existing waste disposal systems (RF-C414).

According to a 1974 report (and a 1975 update), Product Line Services' precision, machine, and tool grind shops, which are located in non-contaminated areas, fabricate tools, gauges, fixtures, graphite molds, and cutting tools for all areas of the Plant. The precision shop works primarily with tools steels and aluminum. It has complete heat-treating facilities with a cyaniding salt bath, furnaces, and oil-quenching tanks, and has the capability for turning, milling, welding, grinding, and electrical-discharge machining (RF-P404, RF-P405).

A 1994 historical release report states that the primary purpose of the heat treatment process in 444 is to harden tool steel. Materials treated are limited to tool steel, high alloy and other carbon steels; no radioactive materials are allowed in this area. Four heat treating furnaces are used to heat the parts and tools and the parts are then placed in oil quenching baths to cool the parts (RF-P084).

In notes from Ed Vejvoda from 1999, he discussed the use of K and Na cyanide. He said these were used for heat treatment but thought it was related to the precision machine shop and tool & die operation used for commercial steel (e.g., tool making). He said that these operations were not in a radioactive contaminated zones, and that cyanide was not used in Pu operations (RF-C045).

Conclusion

Based on the above documentation, the following conclusions can be made. Cyanide was used for both plating operations and metal heat-treating operations. Salt baths were used for metal heat-treating in several buildings, but only Building 444 specifically describes the use of cyanide salt baths for metal heat-treating. Other heat-treating operations used carbonate-based salt baths rather than cyanide. There is somewhat of a discrepancy as to when cyanide heat-treating baths were eliminated, but this discrepancy is inconsequential because the only operation that has been specifically described as using cyanide for heat-treating is the precision machine shop in Building 444 which did not use radioactive materials. This indicates that any waste from the precision machine shop was not radioactively contaminated and would not have been shipped to Idaho. Therefore, EPA hazardous waste numbers F010 and F011 will not be assigned to waste streams ID-SDA-PIT4-SLUDGE, ID-SDA-PIT4-SOIL, and ID-SDA-PIT4-DEBRIS described in AK Summary Report CCP-AK-INL-001.

Any radioactive waste containing cyanide (e.g., cemented cyanide solutions) that was shipped to Idaho would have been derived from plating operations. Therefore, EPA hazardous waste numbers F006, F007, and F009 would apply but EPA hazardous waste numbers F010 and F011 would not apply. In the first year or two of operations at Rocky Flats, liquid cyanide (un-treated) was released to Building 774 (the liquid waste treatment facility). This practice ceased, and the cyanide was acidified and evaporated. At some point after this, Rocky Flats began sending cyanide wastes to Building 881 for destruction (e.g., chlorination). Until 1962, cemented cyanide was buried at Rocky Flats in Trench 1. The Trench 1 waste was retrieved in the 1990s and was not shipped to Idaho. After 1962 (and possibly earlier), cyanide plating waste was treated to destroy the cyanide ion, cemented, and shipped to Idaho for burial. Based on a query of the WILD (Idaho database with waste disposed in the SDA), there is about 100 cubic feet (14 drums) of cemented cyanide waste in Pits 2, 3, and 5. These pits are not included in the ARP-I and T-RAD exhumation areas.

Discrepancy Resolved: ☒ Yes ☐ No

Acceptable Knowledge Expert: Jeff Harrison / Jeff Harrison Date: 1/5/06
Print Sign

Site Project Manager: Barbara Broomfield Date: 1/5/06
Print Sign

[a] Published Document or Controlled Database (Pub.); Unpublished Data (Unpub.); Internal Procedure or Note (Proc.); Correspondence (Corr.) or Discrepancy (Disc.)

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Attachment 2 - CCP Records Transmittal/Receiving Form

CCP Central Records/Records Custodian, 4021 National Parks Highway - MS: GSA 203, Carlsbad, New Mexico 88220

Telephone Number: 505-234-7523, 505-234-7233, 505-234-7617
Fax Number: 505-234-7014

☒ Original Record
☐ Faxed Record
☐ Electronic Record

Attn:	Records Custodian	From:	Jeff Harrison
Ship to:	CCP Central Records/ CCP Records Custodian	Site:	Idaho National Laboratory, CCP-AK-INL-001
	4021 National Parks Highway - MS GSA 203	Company:	Technical Specialists, LLC
	Carlsbad, NM 88220	Telephone Number:	720-977-7042
		Date Sent:	3/10/06
Telephone Number:	505-234-7523		

Document Number	Title/Description	Record Date	Total Pages
RF-D001	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-001	3/3/2006	1
	Discrepancy Resolution Concerning the Use of Cyanide Salt Baths for Metal Heat-Treating Operations	1/5/2006	5
	N/A		

Comments
None

Acceptance/Rejection Signature and Date

	Signature	Printed Name	Date
Records Accepted ☒	Katie Chester	Katie Chester	3/13/06
Records Rejected ☐			

Reason for Rejection: _____

Re-submittal:

Signature	Printed Name	Date

Attachment 3 - Acceptable Knowledge Source Document Summary

Site(s): Idaho National Laboratory	Source Document Tracking Number: D025
Waste Stream Number(s): ID-RF-S3150-A	
Acceptable Knowledge Documentation Type: ☐ TRU Waste Management Program Information ☑ Waste Stream-Specific Information ☐ Additional Information	Category: ☐ C - Correspondence ☑ D - Discrepancy Resolution ☐ M - Miscellaneous Documents ☐ P - Published Documents ☐ U - Unpublished Documents
Title of Source Document: Acceptable Knowledge Source Document Resolutoin (Addition of EPA Hazardous Waste Number D008 to Waste Stream ID-RF-S3150-A)	
Source Document Reference Information (author(s), document and revision number, date, publisher): Scott Smith, D025, Rev. 0, 2/20/13	

AK # [b]	Source Doc. Page # [c]	AK Information Summary
WS8, WS12	1	One drum was rejecte by RTR because it did not match the waste stream description. Leaded rubber aprons were identified in the container. Waste stream ID-RF-S3150-A is not assigned EPA Hazardous Waste Number D008 for lead.

Source Document Data Limitations (if any):

1. None

Acceptable Knowlege Expert:

Sheri Nance , Sheri Nance Date: 2/21/13
Print /Sign

[a] Provide description for non-titled information (i.e., container paperwork, MSDS sheets, etc.)
[b] Obtain from Acceptable Knowledge Documentation Checklist
[c] For microfilm or microfiche, identify box, tape, reel number and location.

NTPC RECORDS ORIGINAL
DATE REC'D 4/26/13 SP

Attachment 11 - Acceptable Knowledge Source Document Discrepancy Resolution (Addition of EPA Hazardous Waste Number D008 to Waste Stream ID-RF-S3150-A)

Waste Stream Number(s): ID-RF-S3150-A

Waste Stream Description: Solidified Organics (IDCs 700 and 801)

AK Source Document Discrepancy Form Tracking Number: **D025**

Tracking #	Category [a]	Title	Document/ Rev#	Author	Date	Publisher	Page #
D017	Disc.	Discrepancy Resolution. Incorrect EPA Hazardous Waste Number	N/A	Scott Smith	3/11/2008	N/A	All
N/A	N/A	Central Characterization Project Acceptable Knowledge Summary Report For Rocky Flats Immobilized Organic Liquids Stored at the Idaho National Laboratory	CCP-AK-INL-005, Rev. 7	CCP	9/28/2012	N/A	Sections 2, and 5.4.3

Nature of Discrepancy: One drum was rejected by real-time radiography (RTR) (see Discrepancy Resolution D017) because it did not match the waste stream description. Leaded rubber aprons were identified in this container. As described in CCP-AK-INL-005, Revision 7, Central Characterization Project Acceptable Knowledge Summary Report For Rocky Flats Immobilized Organic Liquids Stored at the Idaho National Laboratory (INL-005), waste stream ID-RF-S3150-A is not assigned EPA hazardous waste number (HWN) D008 for lead. The WTS (AMWTP database) drum number, RTR Batch number, NCR number, historical identification number, the current IDC, and waste matrix code (WMC) are as follows:

- 10018191, INRTR5050104, NCR-INL-0501-08, IDRF074318268, IDC 801, WMC S3150.

Resolution:

Although waste management and inspection protocol allowed up to 10 percent of another IDC other than that assigned to the container, lead waste items were not originally identified for the waste stream. RTR identified plastic bags, leaded rubber aprons, absorbent, and predominantly sludge (organic matrix, summary category group S3000). With the exception of the aprons the waste in this drum is consistent with the waste matrix code, time period, area and buildings, and waste generating process for the waste stream. Based on this RTR data, lead (D008) will be added as a potential component of the waste stream. Waste stream ID-RF-S3150-A is therefore assigned EPA HWNs D008, D022, D028, D029, D030, D032, D034, D036, D043, F001, F002, and F005.

Discrepancy Resolved: ☒ Yes ☐ No

Acceptable Knowledge Expert: Scott Smith / [signature] Date: 2/20/2013
Print Sign

Site Project Manager: Jim Vernon / [signature] Date: 2-20-13
Print Sign

[a] Published Document or Controlled Database (Pub.); Unpublished Data (Unpub.); Internal Procedure or Note (Proc.); Correspondence (Corr.) or Discrepancy (Disc.)

Attachment 10 - Acceptable Knowledge Re-evaluation Checklist

Site(s): Idaho National Laboratory
Waste Stream Number(s): ID-RF-S3150-A
Waste Stream Description: Rocky Flats Solidified Organics
NCR numbers(s) if applicable: NCR-INL-0501-08
Inconsistency between waste characterization and acceptable knowledge information (describe): RTR of drum10018191 (Batch No. INRTR5050104) described this waste as containing sludge, plastic bags, absorbent, and leaded rubber aprons. The drum was rejected (NCR-INL-0501-08) because the waste does not match the waste stream description.

Requirements	Completed? Yes/No	Additional Documentation [a]
Review existing information based on the container identification number and document all differences in EPA hazardous waste number assignments. [c]	Yes	AK Discrepancy Resolution D025.
If differences exist in the EPA hazardous waste numbers that were assigned, reassess and document all required AK information associated with the new designation. [b,c]	Yes	AK Discrepancy Resolution D025. This drum is assigned to waste stream ID-RF-S3150-A and EPA hazardous waste numbers (HWNs) D022, D028, D029, D030, D032, D034, D036, D043, F001, F002, F005. RTR identified lead aprons (EPA HWN D008) included in the waste container. Therefore, D008 will be assigned to the waste stream.
Reassess and document all sampling and analytical data associated with the waste. [c]	No	N/A. Analytical data associated with this waste are not discrepant.
Verify and document that the reassigned Waste Matrix Code was generated within the specified time period, area and buildings, waste generating process, and that the process material inputs are consistent with the waste material parameters identified during RTR or VE.	Yes	AK Discrepancy Resolution D025. This drum is assigned to waste stream ID-RF-S3150-A which is defined as >50 vol.% solidified organic liquids. Rocky Flats assigned IDC 801, solidified organics – Building 774 to this drum. Waste management and inspection protocol allowed up to 10 percent of another IDC other than that assigned to the container. The waste is consistent with the waste matrix code, time period, area and buildings, and waste generating process for the waste stream.

NTPC RECORDS ORIGINAL
DATE REC'D 4/25/13 SP

Attachment 10 - Acceptable Knowledge Re-evaluation Checklist (continued)

Waste Stream Number(s): ID-RF-S3150-A

Requirements	Completed? Yes/No	Supporting Documentation [a]
If NDA results indicate the presence of additional or different radionuclides in the waste, reassess and document AK and characterization information associated with the new information. [c]	No	N/A. Radionuclides are not discrepant.
Record all changes to the AK records on the appropriate Attachments and resubmit to the CCP Facility Records Custodian.	Yes	AK Discrepancy Resolution D026. Freeze File will be submitted adding EPA HWN D008 for lead to waste stream ID-RF-S3150-A in CCP-AK-INL-005, Section 6.4.3. Attachment 5, Hazardous Constituents will be updated to identify EPA HWN D008 for lead.
If unresolved discrepancies exist in the AK information for the reassigned Waste Matrix Code, EPA hazardous waste numbers, or radionuclides, document the segregation of this container, and define the actions necessary to fully characterize the waste.	No	N/A. There are no unresolved discrepancies associated with this waste.

a. Cite the source document, nonconformance report number, attachment, or other documentation used to support a change or no change.
b. Ensure that if a toxicity characteristic contaminant is identified, it is not included as a listed waste, and analytical data regarding the concentration are not available, the corresponding EPA Hazardous Waste Number is applied.
c. Not applicable for LANL sealed source waste stream.

Acceptable Knowledge Expert:

Scott Smith _____ Date: 2/20/2013
Print **Sign**

Site Project Manager:

Jim Vernon _____ Date: 2-20-13
Print **Sign**

DIVIDER PAGE

Attachment 3 - Acceptable Knowledge Source Document Summary

Waste Stream Number(s): ID-RF-S3150-A

Site(s): Idaho National Laboratory	**Source Document Tracking Number:** D017
Acceptable Knowledge Documentation Type: ☐ TRU Waste Management Program Information ☑ Waste Stream-Specific Information ☑ Supporting Information	**Category:** ☐ C - Correspondence ☑ D - Discrepancy Resolution ☐ P - Published Documents ☐ U - Unpublished Documents

Title of Source Document: Discrepancy Resolution. Incorrect EPA Hazardous Waste Number.

Source Document Reference Information (author(s), document and revision number, date, publisher): Scott Smith, N/A, N/A, 03/11/2008

AK # [a]	Source Doc. Page #[b]	AK Information Summary
WS8, WS9, WS12, S9	All	One drum was rejected because it does not match the waste stream description. The drum was found by RTR to contain leaded aprons (EPA hazardous waste number D008). This EPA hazardous waste number is not consistent with the waste stream The drum does not fit into any other INL/CCP waste streams and will be returned to AMWTP for characterization.

Source Document Data Limitations (if any):

1. None.

Acceptable Knowlege Expert:

Scott Smith / [signature] Date: 5/5/2008
Print /Sign

[a] Obtain from Acceptable Knowledge Documentation Checklist
[b] For microfilm or microfiche, identify box, tape, reel number and location.

Attachment 11 - Acceptable Knowledge Source Document Discrepancy Resolution (Incorrect Waste Matrix Code)

Waste Stream Number(s): ID-RF-S3150-A

Waste Stream Description: Solidified Organics (IDCs 700 and 801)

AK Documentation Type: ☒TRU Waste Management Program Information ☒Waste Stream Specific Information ☒Supporting Information

AK Source Document Discrepancy Form Tracking Number: **D017**

Tracking #	Category [a]	Title	Document/ Rev#	Author	Date	Publisher	Page #
N/A	N/A	CCP RTR Batch Data Report (BDR)	INRTR5050104	CCP RTR	12/16/2005	N/A	32 to 34
N/A	N/A	CCP Nonconformance Report (NCR)	NCR-INL-0501-08	CCP SPM	1/18/2008	N/A	1 to 2
			N/A SMS	3/12/2008			

Nature of Discrepancy: One drum was rejected (see RTR BDR INRTR5050104 and NCR NCR-INL-0501-08) because it did not match the waste stream description. The WTS (AMWTP database) drum number, historical identification number, the current IDC, waste matrix code (WMC), and waste stream (WS) are as follows:

- 10018191, IDRF074318268, IDC 801, WMC S3150, WS ID-RF-S3150-A, Solidified Organics (IDCs 700 and 801).

Resolution:

10018191
The Attachment 8 – Waste Containers list for WS ID-RF-S3150-A was reviewed which verified that this drum was assigned IDC 801, solidified organics – Building 774. RTR was performed on this drum on 12/165/05 and it was found to contain plastic bags, leaded rubber aprons, absorbent, and predominantly sludge (organic matrix, summary category group S3000). The waste in this drum is consistent with the waste matrix code, time period, area and buildings, and waste generating process for the waste stream. Waste stream ID-RF-S3150-A is assigned EPA hazardous waste numbers (HWNs) D022, D028, D029, D030, D032, D034, D036, D043, F001, F002, and F005. Although waste management and inspection protocol allowed up to 10 percent of another IDC other than that assigned to the container, the leaded rubber aprons (EPA HWN D008) identified by RTR is not consistent with the waste stream. Therefore, this container will be removed from the solidified organics waste stream, ID-RF-S3150-A and returned to the Advanced Mixed Waste Treatment Project (AMWTP) for characterization.

Discrepancy Resolved: ☐ Yes ☒ No

Acceptable Knowledge Expert: Scott Smith / [signature] Date: 3/11/2008
Print Sign

Site Project Manager: Barbara Broomfield / [signature] Date: 3/12/08
Print Sign

[a] Published Document or Controlled Database (Pub.); Unpublished Data (Unpub.); Internal Procedure or Note (Proc.); Correspondence (Corr.) or Discrepancy (Disc.)

Attachment 2 - CCP Records Transmittal/Receiving Form

CCP Central Records / Records Custodian, 4021 National Parks Highway - MS: GSA 203, Carlsbad, New Mexico 88220

Telephone Number: 505-234-7523

Fax Number: 505-234-7014

☒ Original Record
☐ Fax Record
☐ E-mail Record

Attn:	Sheila Pearcy	From:	Scott Smith
Ship to:	CCP Central Records/ CCP Records Custodian	Site:	Idaho National Laboratory, Retrievably Stored Waste
	4021 National Parks Highway - MS	Company:	Technical Specialists, LLC
	GSA 203, Carlsbad, NM 88220	Telephone Number:	715-468-2646
Telephone Number:	505-234-7523	Date Sent:	5/5/2008

Document Number	Title/Description	Record Date	Total Pages
D017	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-005	5/5/2008	1
	Discrepancy Resolution. Incorrect EPA Hazardous Waste Number.	3/11/2008	2
	N/A sms 5/5/2008		

Comments
None

Acceptance/Rejection Signature and Date

Records Accepted ☑	Sonia Gonzalez Signature	SONIA GONZALEZ Printed Name	05-12-08 Date
Records Rejected ☐	_____ Signature	_____ Printed Name	_____ Date

Reason for Rejection:

Re-submittal:	_____ Signature	_____ Printed Name	_____ Date

TRANSACTION REPORT

P.01

MAY-12-2008 MON 06:47 AM

FOR: SPARKS OFFICE SUPPLY 15758851297

SEND

DATE START	RECEIVER	TX TIME	PAGES	TYPE	NOTE	M#	DP
MAY-12 06:46 AM	917154682646	22"	1	FAX TX	OK	656	

TOTAL : 22S PAGES: 1

CCP-QP-008, Rev. 14
CCP Records Management

Effective Date: 09/19/2007
Page 29 of 29

Attachment 2 - CCP Records Transmittal/Receiving Form

CCP Central Records / Records Custodian, 4021 National Parks Highway - MS: GSA 203, Carlsbad, New Mexico 88220
Telephone Number: 505-234-7523
Fax Number: 505-234-7014

☒ Original Record
☐ Fax Record
☐ E-mail Record

Attn: Sheila Pearcy
Ship to: CCP Central Records/ CCP Records Custodian
4021 National Parks Highway - MS
GSA 203, Carlsbad, NM 88220
Telephone Number: 505-234-7523

From: Scott Smith
Site: Idaho National Laboratory, Retrievably Stored Waste
Company: Technical Specialists, LLC
Telephone Number: 715-468-2646
Date Sent: 5/5/2008

Document Number	Title/Description	Record Date	Total Pages
D017	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-005	5/5/2008	1
	Discrepancy Resolution. Incorrect EPA Hazardous Waste Number.	3/11/2008	2
	N/A sms 5/5/2008		

Comments
None

Acceptance/Rejection Signature and Date

Records Accepted ☑ Signature: Sonia Gonzalez — Printed Name: SONIA GONZALEZ — Date: 05-12-08

Records Rejected ☐ Signature _____ — Printed Name _____ — Date _____

Reason for Rejection:

Re-submittal: Signature _____ — Printed Name _____ — Date _____

Attachment 10 - Acceptable Knowledge Re-evaluation Checklist

Site(s): Idaho National Laboratory
Waste Stream Number(s): ID-RF-S3150-A
Waste Stream Description: Rocky Flats Combustibles and Plastic
NCR numbers(s) if applicable: NCR-INL-0501-08
Inconsistency between waste characterization and acceptable knowledge information (describe): RTR of drum 10018191 (Batch No. INRTR5050104) described this waste as containing sludge, plastic bags, absorbent, and leaded rubber aprons. The drum was rejected (NCR-INL-0501-08) because the waste does not match the waste stream description.

Requirements	Completed? Yes/No	Supporting Documentation [a]
Review existing information based on the container identification number and document all differences in EPA hazardous waste number assignments. [c]	Yes	AK Discrepancy Resolution D017.
If differences exist in the EPA hazardous waste numbers that were assigned, reassess and document all required AK information associated with the new designation. [b,c]	Yes	AK Discrepancy Resolution D017. This drum is assigned to waste stream ID-RF-S3150-A and EPA hazardous waste numbers (HWNs) D022, D028, D029, D030, D032, D034, D036, D043, F001, F002, F005. RTR Identified lead aprons included in the waste container. EPA HWN D008 for lead is not assigned to the waste stream.
Reassess and document all sampling and analytical data associated with the waste. [c]	No	N/A. There are no sampling and analytical data associated with this waste.
Verify and document that the reassigned Waste Matrix Code was generated within the specified time period, area and buildings, waste generating process, and that the process material inputs are consistent with the waste material parameters identified during RTR or VE.	Yes	AK Discrepancy Resolution D017. This drum is assigned to waste stream ID-RF-S3150-A which is defined as >50 vol.% solidified organic liquids. Rocky Flats assigned IDC 801, solidified organics – Building 774 to this drum. Waste management and inspection protocol allowed up to 10 percent of another IDC other than that assigned to the container. The waste is consistent with the waste matrix code, time period, area and buildings, and waste generating process for the waste stream.
If NDA results indicate the presence of additional or different radionuclides in the waste, reassess and document AK and characterization information associated with the new information. [c]	No	N/A. Radionuclides are not discrepant.
Record all changes to the AK records on the appropriate Attachments and resubmit to the CCP Facility Records Custodian.	Yes	Drum 10018191 will be removed from the Attachment 8 Waste Containers list.

Attachment 10 - Acceptable Knowledge Re-evaluation Checklist (continued)

Waste Stream Number(s): ~~ID-RF-65300-A~~ ID-RF-53150-A SMS 3/12/08

Requirements	Completed? Yes/No	Supporting Documentation [a]
If unresolved discrepancies exist in the AK information for the reassigned Waste Matrix Code, EPA hazardous waste numbers, or radionuclides, document the segregation of this container, and define the actions necessary to fully characterize the waste.	Yes	There are no INL/CCP waste streams that this drum can be assigned to. This drum will be returned to AMWTP for further investigation as described in AK discrepancy resolution D017.

a. Cite the source document, nonconformance report number, attachment, or other documentation used to support a change or no change.
b. Ensure that if a toxicity characteristic contaminant is identified, it is not included as a listed waste, and analytical data regarding the concentration are not available, the corresponding EPA Hazardous Waste Number is applied.
c. Not applicable for LANL sealed source waste stream.

Acceptable Knowledge Expert:

Scott Smith _____ Date: 3/11/2008
Print **Sign**

Site Project Manager:

Barbara Broomfield _____ Date: 3/12/08
Print **Sign**

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Central Records / Records Custodian, 4021 National Parks Highway - MS: GSA 203, Carlsbad, New Mexico 88220

Telephone Number: 505-234-7523

Fax Number: 505-234-7014

[X] Original Record
[ ] Fax Record
[ ] Electronic Record

Attn:	Records Custodian	From:	Scott Smith
Ship to:	CCP Central Records	Site:	Idaho National Laboratory, CCP-AK-INL-005
	4021 National Parks Highway	Company:	Technical Specialists, LLC
	MS GSA 203	Telephone Number:	715-468-2646
	Carlsbad, NM 88220	Date Sent:	05/05/2008
Telephone Number:	(505) 234-7523		

Document Number	Title / Description	Record Date	Total Pages
N/A	Attachment 10 – Acceptable Knowledge Re-evaluation Checklist. Idaho National Laboratory (CCP-AK-INL-005), Waste Stream Number ID-RF-S3150-A, NCR-INL-0501-08	3/11/2008	2
	N/A GMS 5/5/2008		

Comments

None.

Acceptance/Rejection Signature and Date

Records Accepted [✓] Sonia Gonzalez — SONIA GONZALEZ — 05·12·08

Signature | Printed Name | Date

Records Rejected [ ] _____ _____ _____

Signature | Printed Name | Date

Reason for Rejection:

Re-submittal: _____ _____ _____

Signature | Printed Name | Date

P.01

TRANSACTION REPORT

MAY-12-2008 MON 06:45 AM

FOR: SPARKS OFFICE SUPPLY 15758851297

SEND

DATE START	RECEIVER	TX TIME	PAGES	TYPE	NOTE	M#	DP
MAY-12 06:45 AM	917154682646	26"	1	FAX TX	OK	659	

TOTAL : 26S PAGES: 1

Controlled Copy

CCP-QP-008, Rev. 14
CCP Records Management

Effective Date: 09/19/2007
Page 29 of 29

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Central Records / Records Custodian, 4021 National Parks Highway - MS: GSA 203, Carlsbad, New Mexico 88220
Telephone Number: 505-234-7523
Fax Number: 505-234-7014

[X] Original Record
[ ] Fax Record
[ ] Electronic Record

Attn:	Records Custodian	From:	Scott Smith
Ship to:	CCP Central Records	Site:	Idaho National Laboratory, CCP-AK-INL-005
	4021 National Parks Highway	Company:	Technical Specialists, LLC
	MS GSA 203	Telephone Number:	715-468-2646
	Carlsbad, NM 88220	Date Sent:	05/05/2008
Telephone Number:	(505) 234-7523		

Document Number	Title / Description	Record Date	Total Pages
N/A	Attachment 10 – Acceptable Knowledge Re-evaluation Checklist. Idaho National Laboratory (CCP-AK-INL-005), Waste Stream Number ID-RF-S3150-A, NCR-INL-0501-06	3/11/2008	2
	N/A Encl 5/15/2008		

Comments

None.

Acceptance/Rejection Signature and Date

Records Accepted [✓] Sonia Gonzalez (Signature) SONIA GONZALEZ (Printed Name) 05.12.08 (Date)

Records Rejected [ ] _____ (Signature) _____ (Printed Name) _____ (Date)

Reason for Rejection:

Re-submittal: _____ (Signature) _____ (Printed Name) _____ (Date)

DIVIDER PAGE

Attachment 3 - Acceptable Knowledge Source Document Summary

Site(s): Idaho National Laboratory	Source Document Tracking Number: DR017

Waste Stream Number(s): ID-ANLE-S5000
(Applicable only when site library is not in use)

Acceptable Knowledge Documentation Type:	Category:
☐ TRU Waste Management Program Information	☐ C - Correspondence
☑ Waste Stream-Specific Information	☑ DR - Discrepancy Resolution
☑ Additional Information	☐ I - Internal procedures
	☐ M - Miscellaneous
	☐ P - Published plans, documents, and procedures
	☐ U - Unpublished Documents

Title or Description of Source Document [a] : Discrepancy Involving Free Liquids in Waste

Source Document Reference Information (author(s), document and revision number, date, publisher): Kevin J. Peters, DR017, 05/07/2007, N/A

AK # [b]	Source Doc. Page # [c]	AK Information Summary
WS1, WS2, WS4, WS9, S16	Thorughout	Nature of Discrepancy: Based on a review of the AK documentation Section 5.5 of AK Summary Report CCP-AK-INL-500 states; "Residual liquids are not expected to be present in any waste container in waste stream ID-ANLE-S5000, due to the AGHCF standard practice of evaporating and/or absorbing all liquids as described in Section 5.4.2.3. The absence of liquids is further supported by the fact that safety limits in the AGHCF allowed only 3 liters total of hydrogenous liquids in AGHCF Areas I or III and the INL WAC have prohibited liquids in excess of 1 % since 1975. Additionally, none of the waste requisition forms (or other information provided by generators at the time of waste packaging) identifies liquids in any quantity." During RTR, containers 00683 and 00623 were rejected on NCR-RHINL-0100-07 and NCR-RHINLO101-07, respectively for prohibited amounts of free liquids (1/2 cup and 1 tablespoon) found in small internal bottles in the waste stream (see attached SPM notification and NCRs). Resolution: To resolve this discrepancy, the specific container documentation was reviewed for these containers (AK Reference U022). During the time frame that these containers were generated the Solid Radioactive Waste Disposal Requisitions and Transuranic Packaging and Survey forms completed by the generator identify if the waste is a combustible or noncombustible drum with generic waste descriptions. Containers 00623 and 00683 are both combustible containers described generically as "rags, paper, plastics". The generator marked the "No" box for "Liquids or Absorbed Liquids" on the requisition for both drums. Based on this information, it has been determined that even though the ANL-E waste management practices during this time frame would have prohibited liquids greater than 1 percent in the drum, they did not account for small amounts of free liquids in bottles (greater than 1 inch or 2.5 cm). Even though the amount of liquid does not exceed 1 percent in the payload container, prohibited amounts of esidual liquids exceeding 1 inch or 2.5 cm in internal containers should be expected during future RTR examination of containers in waste stream ID-ANL-S5000. For this reason, a teleconference with the SPM and involved RTR personnel was conducted on 5/2/2007 to verify that prohibited amounts of residual liquids should be expected, and those drums rejected during RTR. The AK Summary Reports relating to AGHCF debris waste (CCP-AK-INL-500 and CCP-AK-ANLE- 500) will be revised to clarify that residual liquids have been observed and are expected in internal containers in waste streams ID-ANLE-S500 and AERHDM,

CCP RECORDS ORIGINAL
DATE REC'D 12/11/2012

Attachment 3 - Acceptable Knowledge Source Document Summary (continued)

Site(s): Idaho National Laboratory		Source Document Tracking Number: DR017
Waste Stream Number(s): ID-ANLE-S5000 (Applicable only when site library is not in use)		
AK # [b]	Source Doc. Page # [c]	AK Information Summary
		and that these containers with prohibited amounts of residual liquids are not eligible for disposal at WIPP (see attached Freeze File Request).

Source Document Data Limitations (if any):

1. None.

Acceptable Knowlege Expert:

Travis Smith /Sign Date: 09/10/2012

Print

[a] Provide description for non-titled information (i.e., container paperwork, MSDS sheets, etc)
[b] Obtain from Acceptable Knowledge Documentation Checklist
[c] For microfilm or microfiche, identify box, tape, reel number and location.

DIVIDER PAGE ONLY

Not part of page count

Attachment 11 – Acceptable Knowledge Source Document Discrepancy Resolution

Waste Stream Number(s): ID-ANLE-S5000, AERHDM

Waste Stream Description: Heterogeneous Debris from AGHCF Operations

AK Documentation Type: [ ] TRU Waste Management Program Information [X] Waste Stream Specific Information [X] Supplemental Information

AK Source Document Discrepancy Form Tracking Number: DR017 – Prohibited Free Liquids in Bottles in Waste Stream ID-ANLE-S5000

Tracking #	Category[a]	Title	Document/Rev#	Author	Date	Publisher	Page #
N/A	Pub.	Central Characterization Project Acceptable Knowledge Summary Report For Remote-Handled Transuranic Debris Waste From Argonne National Laboratory-East Stored at the Idaho National Laboratory; Waste Stream: ID-ANLE-S5000	CCP-AK-INL-500, Rev. 4	CCP	11/16/2006	CCP	Section 5.5, page 47
U022	Unpub.	RH-TRU 1985-1987, Book 3, Drums 617 to 688	N/A	ANL-E	#00623 Oct. 1985 #00683 Dec. 1987	N/A	Pgs. 15, 16, & 22 Pgs. 142, 143, & 151
N/A	Unpub.	CCP Nonconformance Report: NCR-RHINL-0100-07 – Container 00683	Revision 1	Sway Andrews	5/3/07	N/A	1-3
N/A	Unpub.	CCP Nonconformance Report: NCR-RHINL-0101-07 – Container 00623	Revision 1	Lashell Alada	5/3/07	N/A	1-3

Nature of Discrepancy:

Based on a review of the AK documentation Section 5.5 of AK Summary Report CCP-AK-INL-500 states; "Residual liquids are not expected to be present in any waste container in waste stream ID-ANLE-S5000, due to the AGHCF standard practice of evaporating and/or absorbing all liquids as described in Section 5.4.2.3. The absence of liquids is further supported by the fact that safety limits in the AGHCF allowed only 3 liters total of hydrogenous liquids in AGHCF Areas I or III and the INL WAC have prohibited liquids in excess of 1% since 1975. Additionally, none of the waste requisition forms (or other information provided by generators at the time of waste packaging) identifies liquids in any quantity."

During RTR, containers 00683 and 00623 were rejected on NCR-RHINL-0100-07 and NCR-RHINL0101-07, respectively for prohibited amounts of free liquids (1/2 cup and 1 tablespoon) found in small internal bottles in the waste stream (see attached SPM notification and NCRs).

Resolution:

To resolve this discrepancy, the specific container documentation was reviewed for these containers (AK Reference U022). During the time frame that these containers were generated the Solid Radioactive Waste Disposal Requisitions and Transuranic Packaging and Survey forms completed by the generator identify if the waste is a combustible or noncombustible drum with generic waste descriptions. Containers 00623 and 00683 are both combustible containers described generically as "rags, paper, plastics". The generator marked the "No" box for "Liquids or Absorbed Liquids" on the requisition for both drums.

Based on this information, it has been determined that even though the ANL-E waste management practices during this time frame would have prohibited liquids greater than 1 percent in the drum, they did not account for small amounts of free liquids in bottles (greater than 1 inch or 2.5 cm). Even though the amount of liquid does not exceed 1 percent in the payload container, prohibited amounts of residual liquids exceeding 1 inch or 2.5 cm in internal containers should be expected during future RTR examination of containers in waste stream ID-ANLE-S5000.

For this reason, a teleconference with the SPM and involved RTR personnel was conducted on 5/2/2007 to verify that prohibited amounts of residual liquids should be expected, and those drums rejected during RTR. The AK Summary Reports relating to AGHCF debris waste (CCP-AK-INL-500 and CCP-AK-ANLE-500) will be revised to clarify that residual liquids have been observed and are expected in internal containers in waste streams ID-ANLE-S500 and AERHDM, and that these containers with prohibited amounts of residual liquids are not eligible for disposal at WIPP (see attached Freeze File Request).

Discrepancy Resolved: [X] Yes [ ] No

Acceptable Knowledge Expert: Kevin J. Peters (Print) / (Sign) Date: 5/4/2007

Site Project Manager: Larry Porter (Print) / Larry Porter (Sign) Date: 5/2/07

[a] Published Document or Controlled Database (Pub.); Unpublished Data (Unpub.); Internal Procedure or Note (Proc.); Correspondence (Corr.) or Discrepancy (Disc.)

-----Original Message-----
From: Quintana, Irene [mailto:Irene.Quintana@wipp.ws]
Sent: Tuesday, May 01, 2007 10:22 AM
To: Peters, Kevin
Cc: DAmico, Eric
Subject: Containers 00683 and 00623

Kevin,

Containers 00683 and 00623 were rejected on NCR-RHINL-0100-07 and NCR-RHINL0101-07, respectively for liquids. I will be forwarding these NCRs to you once the NCRs are finished being revised to reflect Trend Code L. Because CCP-AK-INL-500 does not anticipate liquids in the waste stream, these NCRs are forwarded to you for further evaluation.

Thank you,

Irene Quintana
720-982-7174

Controlled Copy

Attachment 1 – CCP Nonconformance Report (NCR)		
NCR No. NCR-RHINL-0100-07 Revision 1		
1. Lot No./Heat No. or Serial No.: NA	2. Process (NDA, HSG, NDE, VE, Other): RH_NDE	3. Batch Data Report # (s): INLRHRTR07009 Container #(s): 00683
4. *Order/Work Order/Job Control Number* (as applicable): NA	5. PO #: NA 6. Supplier: NA	

DESCRIPTION OF NONCONFORMANCE

7. (a) CCP HOLD TAGS SHALL BE APPLIED UNLESS JUSTIFIED AS FOLLOWS: Apply hold tag to ISC housing container 00683

☐ < 100 nCi/g ☒ Prohibited Item ☐ >500 ppmv Flamm. VOCs

☐ E-Flag ☐ Receiving Inspection ☐ Transportation ☐ WWIS ☐ Other

(b) Description of Nonconformance
CCP-TP-508, Rev. 1, Section 4.3.3 Step [E.1](a) Record a detailed description of the prohibited item (s) including location and volume of liquid, in the Comments field of Section 5, Waste Summary, of Attachment 2.

(c). Actual Condition
Liquid found in container, APPROX CUP OF LIQUID IN PLASTIC CONTAINER AT BOTTOM OF DRUM.

Reason for revision: Correct Trend Code to L. QJ 5/3/07

8. NCR Originator (Print name, sign, and date) Sway Andrews	9. CCP QA Engineer or Designee Validation (Print name, sign, and date) S.J. FISHER 5/3/07
8. Sway Andrews 5-3-07	

9a. Does this NCR have the potential to impact AK? ☒ YES ☐ NO ☐ INDETERMINATE
If YES or INDETERMINATE, then apply Trend Code L in Block 12.

10. Significant Condition? ☐ YES ☒ NO ☐ NA	11. Recurring Condition? ☐ YES ☒ NO (If YES, List NCRs/CARs)
12. Trend Code: L	13. Responsible Manager: Irene Quintana

DR017

Controlled Copy

Attachment 1 – CCP Nonconformance Report (NCR)		
NCR No. NCR-RHINL-0101-07 Revision 1		
1. Lot No./Heat No. or Serial No.: NA	2. Process (NDA, HSG, NDE, VE, Other): RH_NDE	3. Batch Data Report # (s): INLRHRTRC7010
4. Order/Work Order/Job Control Number (as applicable): NA	5. PO #: NA 6. Supplier: NA	Container #(s): 00623

DESCRIPTION OF NONCONFORMANCE

7. (a) CCP HOLD TAGS SHALL BE APPLIED UNLESS JUSTIFIED AS FOLLOWS: Apply hold tag to ISC housing container 00623.

☐ < 100 nCi/g ☒ Prohibited Item ☐ >500 ppmv Flamm. VOCs

☐ E-Flag ☐ Receiving Inspection ☐ Transportation ☐ WWIS ☐ Other

(b) Description of Nonconformance
CCP-TP-008, Rev. 1, Section 4.3.3 Step [E.1](a) Record a detailed description of the prohibited item (s) including location and volume of liquid, in the Comments field of Section 5, Waste Summary, of Attachment 2.

(c). Actual Condition
Approximately one tablespoon of liquid found in glass bottle, which is greater than residual.

Reason for revision: Correct Trend Code to L.

8. NCR Originator (Print name, sign, and date)	9. CCP QA Engineer or Designee Validation (Print name, sign, and date)
Lashell Alada 5-03-07	A.J. FISHER 5/3/07

8a. Does this NCR have the potential to impact AK? ☒ YES ☐ NO ☐ INDETERMINATE
If YES or INDETERMINATE, then apply Trend Code L in Block 12.

10. Significant Condition?	11. Recurring Condition?
☐ YES ☒ NO ☐ NA	☐ YES ☒ NO (If YES, List NCRs/CARs)
12. Trend Code: L	13. Responsible Manager: Irene Quintana

DR017

-----Original Message-----
From: Kevin Peters [mailto:kpeters44@comcast.net]
Sent: Friday, May 04, 2007 10:23 AM
To: 'Montoya, Jason'
Subject: Freeze File change to CCP-AK-INL-500 and CCP-AK-ANLE-500

Jason,

Please insert this email into the Freeze Files for CCP-AK-INL-500 and CCP-AK-ANLE-500.

Based on RTR finding prohibited amounts of residual liquids in internal waste bottles described in Discrepancy Report DR017, a discussion will be added to the AK Summary Report describing that prohibited amounts of residual liquids have been observed during RTR and should be expected during future examination of containers the AGHCF debris waste streams and that these containers are not eligible for disposal at WIPP.

I will send you a copy of the signed Discrepancy Report once it is approved to also include in the files.

Thank you,

Kevin Peters
(303)980-0543

Attachment 10 - Acceptable Knowledge Re-evaluation Checklist

Site(s): Idaho National Laboratory (INL)
Waste Stream Number(s): ID-ANLE-S5000
Waste Stream Description: Heterogeneous RH Debris from ANL-E AGHCF Operations
NCR numbers(s) if applicable: NCR-RHINL-0100-07 (Rev. 1) and NCR-RHINL-0101-07 (Rev. 1)
Inconsistency between waste characterization and acceptable knowledge information (describe): Contents of the container did not match the Waste Stream Description. Residual liquids identified in internal bottles.

Based on the AK collected for debris waste generated at the ANL-E AGHCF facility, residual liquids were not expected to be present in containers included in waste stream ID-ANLE-S5000. During RTR examination, prohibited amounts of residual liquids were observed in small waste bottles in two drums (00683 and 00623). Because the container contents observed by RTR did not match the Waste Stream Description for waste stream ID-ANLE-S5000, two NCRs (NCR-RHINL-0100-07 and NCR-RHINL-0101-07) were initiated for these drums in accordance with CCP-TP-053, Section 4.4.3.1.1 [CCP Standard Real-Time Radiography (RTR) Inspection Procedure], and the AKE (Kevin Peters) was notified of the discrepancy.

As discussed in ~~DR008~~ DR011, the AK Summary Report for this waste stream states:

"Residual liquids are not expected to be present in any waste container in waste stream ID-ANLE-S5000, due to the AGHCF standard practice of evaporating and/or absorbing all liquids as described in Section 5.4.2.3. The absence of liquids is further supported by the fact that safety limits in the AGHCF allowed only 3 liters total of hydrogenous liquids in AGHCF Areas I or III and the INL WAC have prohibited liquids in excess of 1% since 1975. Additionally, none of the waste requisition forms (or other information provided by generators at the time of waste packaging) identifies liquids in any quantity."

To resolve this discrepancy, the specific container documentation was reviewed for these containers. During the time frame that these containers were generated, the Solid Radioactive Waste Disposal Requisitions and Transuranic Packaging and Survey forms completed by the generator identify if the waste is a combustible or noncombustible drum with generic waste descriptions. Containers 00623 and 00683 are both combustible containers described generically as "rags, paper, plastics". The generator marked the "No" box for "Liquids or Absorbed Liquids" on the requisition for both drums.

Based on this information, it has been determined that the ANL-E waste management practices during this time frame would have prohibited liquids greater than 1% in the drum, but the waste management practices did not account for small amounts of free liquids in bottles (greater than 1 inch or 2.5 cm) in internal containers. Even though the amount of liquid does not exceed 1 percent in the payload container, prohibited amounts of residual liquids exceeding 1 inch or 2.5 cm in internal containers should be expected during future RTR examination of containers in waste stream ID-ANLE-S5000.

For this reason, a teleconference with the SPM and involved RTR personnel was conducted on 5/2/2007 to verify that prohibited amounts of residual liquids should be expected, and those drums rejected during RTR. The AK Summary Reports relating to AGHCF debris waste (CCP-AK-INL-500 and CCP-AK-ANLE-500) will be revised to clarify that residual liquids have been observed and are expected in internal containers in waste streams ID-ANLE-S500 and AERHDM, and that these containers will be rejected and are not eligible for disposal at WIPP.

ORIGINAL

Attachment 10 - Acceptable Knowledge Re-evaluation Checklist (cont.)

Requirements	Completed? Yes/No	Supporting Documentation [a]
Review existing information based on the container identification number and document all differences in EPA hazardous waste number assignments. [c]	YES	Waste Requisitions for Container Nos 00683 and 00623 and Discrepancy Report DR017.
If differences exist in the EPA hazardous waste numbers that were assigned, reassess and document all required AK information associated with the new designation. [b,c]	N/A	No change in EPA HWNs required.
Reassess and document all sampling and analytical data associated with the waste. [c]	N/A	No change in EPA HWNs required
Verify and document that the reassigned Waste Matrix Code was generated within the specified time period, area and buildings, waste generating process, and that the process material inputs are consistent with the waste material parameters identified during RTR or VE.	YES	Waste Matrix Code assigned and waste material parameters described in the AK Summary Report are appropriate for these containers.
If NDA results indicate the presence of additional or different radionuclides in the waste, reassess and document AK and confirmation information associated with the new information. [c]	N/A	Not an NDA-related discrepancy
Record all changes to the AK records on the appropriate Attachments and resubmit to the CCP Facility Records Custodian.	YES	~~DR0017~~ DR017 KP 5/7/07
If unresolved discrepancies exist in the AK information for the reassigned Waste Matrix Code, EPA hazardous waste numbers, or radionuclides, document the segregation of this container, and define the actions necessary to fully characterize the waste.	N/A	Discrepancy resolved. Containers with prohibited amounts of residual liquids in inner containers will be rejected during RTR.

a. Cite the source document, nonconformance report number, attachment, or other documentation used to support a change or no change.
b. Ensure that if a toxicity characteristic contaminant is identified, it is not included as a listed waste, and analytical data regarding the concentration are not available, the corresponding EPA Hazardous Waste Number is applied.
c. Not applicable for LANL sealed source waste stream.

Acceptable Knowledge Expert:

Kevin J. Peters — Date: 5/4/2007
Print — Sign

Site Project Manager:

Larry Porter — Date: 5/7/07
Print — Sign

Attachment 1 – CCP Nonconformance Report (NCR)

NCR No.NCR-INL-3389-11		Revision 0
1. Lot No./Heat No. or Serial No. (as applicable): N/A	2. Process (e.g., NDA, HSG, NDE, VE, Other): NDA, FGA, NDE	3. Batch Data Report #(s): INRTR5110102, INNDAS110152 and AN11FG7004
4. Order/Work Order/Job Control Number (as applicable): N/A	5. PO # (as applicable): N/A	Container #(s): RW48079/10424127
	6. Supplier (as applicable): N/A	

DESCRIPTION OF NONCONFORMANCE

7. (a) NCR Description: ☐ < 100 nCi/g ☒ Prohibited Item ☐ >500 ppmv Flamm. VOCs

☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☐ Other

7. (b) Description of Nonconformance Required Condition (Implementing Procedure, Revision, Section, & Text):
CCP-TP-053, Rev. 11, Section 4.4.2 [H.1] If any hazardous waste (s) NOT identified in the AK Summary Report (s) for the waste stream being characterized OR any nonconforming/prohibited items are noted during the RTR examination. THEN perform the following:
(a) Initiate an NCR in accordance with CCP-QP-005 AND record the NCR number in Section 1 of Attachment 2.

CCP-TP-053, Rev. 11, Table 1. Prohibited Items: Liquid Waste

-Internal containers with more than 60 milliliters or 3 percent by volume observable liquid, whichever is greater, are prohibited.

7. (c) Actual Condition
150ml of liquid within an internal metal can at 24" (Greater than 3% in an internal container).

8. NCR Originator (Print name, sign, and date) Tyson Christensen 10/27/11	9. CCP QA Engineer or Designee Validation (Print name, sign, and date) Rachel Young 10/27/11

9a. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE
If YES or INDETERMINATE, then apply Trend Code L in Block 12.

9b. Have the CCP HOLD TAGS associated with the NCR been applied? ☒ YES ☐ NO If no is marked, provide an explanation.

10. Significant Condition? (If Yes, List CAR) ☐ YES ☒ NO	11. Recurring Condition? ☐ YES ☒ NO (If YES, List NCRs/CARs)
12. Trend Code: K	13. Responsible Manager: Bill Verlanic

CCP RECORDS ORIGINAL
DATE REC'D 12-20-11

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL-3389-11	Revision 0
INTERIM DISPOSITION	
14. Interim Disposition (Check One) ☒ N/A (See Final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort ☐Reinspect/Retest ☐ Remediate (a)	
INTERIM DISPOSITION APPROVALS	
15 .Responsible Manager/Individual (Print, sign, and date)	16. CCP QA Engineer or Designee (Print, sign and date)
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
COMPLETION OF INTERIM DISPOSITION	
17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date)	
18. Interim Disposition Verified CCP QA Engineer: (Print, sign and date)	

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL-3389-11 Revision 0	
FINAL DISPOSITION	
19. Final Disposition (Check One) ☐ Use-As-Is ☒ Reject ☐ Repair ☐ Rework ☐ Scrap	
(a) Technical Justification (Required for Use-As-Is and Repair dispositions, N/A for Reject, Scrap, or Rework dispositions.) N/A	
(b) Disposition Instructions (Required for Reject and Scrap, N/A for Use-As-Is, Rework, and Repair) Return to host site (AMWTP) for remediation.	
(c) Instructions for Completion of the Final Disposition, including Inspection Criteria (Required for Repair and Rework, N/A for Use-As-Is, Reject and Scrap) N/A	
(d) Corrective Actions (Actions to Prevent Recurrence) - as required, N/A if left blank. N/A	
FINAL DISPOSITION APPROVALS	
20. Responsible Manager/Individual: (Print, sign, and date) Bill Verlanic 10-27-11	21. CCP QA Engineer or Designee: (Print, sign, and date) Rachel Young 10/27/11
Additional Approvals: (Print, sign, and date)	Additional Approvals: (Print, sign, and date)
***CLOSURE**	
22. Final Disposition Complete Responsible Manager/Individual: (Print, sign, and date) Bill Verlanic 12/19/11	
23. Attachments: Attachment 1 - AMWTP RUH report	
24. (a) HOLD TAG removal has been validated and reconciled for all nonconforming items on the NCR. ☒ (b) Check if not applicable (N/A) and provide an explanation here or on a continuation sheet. ☐	
25. Final Disposition Verified – NCR Closed **RACHEL YOUNG**	CCP QA Engineer: (Print, sign, and date) 12/19/11

* See attachment 1. 12/19/11

AMWTP
Advanced Mixed Waste Treatment Project

AMWTP
RTR/VE Update Analysis Report

Date: 19-Dec-2011
Time: 11:05

Affected Batch RTR11-00380 **Container Id** 10424127 **Analysis Id** 0000261513 **Analysis Status** Passed

VE Date 15-DEC-11 16:09:56 **Procedure Id** INST-OI-34 **Gross Weight** 179.65 lbs.
Gen-IDC Id AE-230 Argonne CH Debris **Proc Rev** 26 **Net Weight** 116.65 lbs.
Waste Matrix S5400 **Summary Category Group** S5000 **Equipment ID** VE NGW C FAC
Container Type 425 **Affected Analysis ID** 0000079909
Operator 1 MICHAEL KREMIN **Operator 2** NICHOLAS INGLE

General

Rigid Liner Present? No **Liner Punctured?** Yes **Liner Hole Size:** 20" in. **Liner Type** NO LINER
Liner Lid Present No **Fill Factor** 90 %

Liquids

Liquids Present? No **Comment**

Liquid Between Liner and Drum 0 pints
Internal Container with Liquid 0 pints
Containerized Liquid pints
Other Liquids 0 pints
Total Liquid Amount 0 pints

Internal Container with Liquid No
Prohibited Liquids Present No
Containerized Liquid

Contents

Sharp Objects? Yes **Are Sharp Objects Protected?** Yes

	Value	Comment
Prohibited Compressed Gas Present?	No	
Explosives Present?	No	
Pyrophorics Present?	No	
Mercury Contaminated>1000PPM	No	
PCBs Present?	No	
PCB Mass (lbs)	0	
Wet Cell Batteries Present?	No	
Corrosives,Ignitables or Reactives Present?	No	
Beryllium Contaminates Present?	No	
Hazardous-Only Waste Present?	No	
Is Waste Incompatible with backfill, packaging materials, or shipping container materials?	No	
Impenetrable Dense Objects?	Yes, Acceptable	brass hammer head and weight.
Sealed Containers Over 4 liters?	No	

NCR NCR-W1-3389-11 Rev. 0

Attachment 1 Page 1 of 3

AMWTP
Advanced Mixed Waste Treatment Project

AMWTP

RTR/VE Update Analysis Report

Date: 19-Dec-2011

Time: 11:05

Affected Batch RTR11-00380 **Container Id** 10424127 **Analysis Id** 0000261513

IDC Verification

Is IDC correct? Yes **Recommended IDC**

IDC Change Reason

Visual Exam Comment {Contents of this drum is primarily metal debris. Changed the liquid location to containerized liquid > 60 Mil. JSC 11/02/11 - RTR comment from rtr batch RTR11-00380} This RVU is being performed due to treatment of prohibited liquids per NCR #66536 under direction of TOI-005. All remaining waste by weight percent is 100% iron based metals/alloys. MDK 12/15/11

Closure

Closure Date 15-DEC-11 16:09:56 **Closure Method** Twisted and Taped

Layers Of Confinement 1 **Overpack Required?** Yes

New Steel Lid? Yes

IDC CODES

Current Container IDC Code: AE-230 **Recommended IDC Code:**

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt	Item Wt(lbs)
O-ring plastic bag	1.000	EACH	4.000	4.000

Waste Items by Weight

Material Item	Quantity	Unit	Unit Wt	Item Wt(lbs)
vacuum bag, sphincter tubes, and kim wipes	1.000	EACH	0.500	0.500
absorbed liquids for other inorganic matrix	1.000	EACH	1.000	1.000
plastic debris	1.000	EACH	4.000	4.000
Brass metal	1.000	EACH	12.000	12.000
Plastic bag for waste	2.000	EACH	0.250	0.500
Drum Stub Bag (Plastic Waste)	1.000	EACH	2.000	2.000
32-inch Rubber Band	1.000	EACH	0.200	0.200
Metal Drum Filter	1.000	EACH	0.250	0.250

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt	Item Wt(lbs)
Oil-Dri (404 gm/liter) 0.42 lb/pint	12.000	PINTS	0.420	5.040
Aquaset Absorbent	1.270	PINTS	1.200	1.520
Microcel-E	4.000	PINTS	0.120	0.480

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	100.000	89.409
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	12.000
Other Inorganic Materials	0.000	8.040
Cellulosics	0.000	0.500
Rubber	0.000	0.200
Plastic (Waste Materials)	0.000	6.500
Inorganic matrix	0.000	0.000
Organic matrix	0.000	0.000
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	59.000
Plastic (packaging materials)	0.000	4.000
Cellulosics Packaging	0.000	0.000

NCR NCR-WL-3389-11 rev.0

Attachment 1 Page 2 of 3

AMWTP
Advanced Mixed Waste Treatment Project

AMWTP

RTR/VE Update Analysis Report

Date: 19-Dec-2011
Time: 11:05

Affected Batch RTR11-00380 **Container Id** 10424127 **Analysis Id** 0000261513

Container Filters

WDS Filter Code	Event	Event Date	Entered By	Remove	Other Filter Model	Exclude
NF19SD	RTR/VE Update	15-DEC-11	MKREMIN	N		
Filter Comment						
NF19SD	OTHER	22-NOV-10	CROJAS	Y		
Filter Comment						

E-Signature History

Esig Approval Id	User ID	E-signature Date	Comment
2145284	MKREMIN	15-DEC-11 16:09:58	rvu
2145285	NINGLE	15-DEC-11 16:09:59	rvu

End of RTR/VE Update Analysis Report

NCR NCR-INL-3389-11 rev.0

Attachment 1 Page 3 of 3

DIVIDER

PAGE

Attachment 1 – CCP Nonconformance Report (NCR)

NCR No. NCR-INL-2853-11		Revision 0
1. Lot No./Heat No. or Serial No. (as applicable): N/A	2. Process (e.g., NDA, HSG, NDE, VE, Other): NDE	3. Batch Data Report #(s): INRTR5110063
4. Order/Work Order/Job Control Number (as applicable): N/A	5. PO # (as applicable): N/A	Container #(s): See Attachment 1
	6. Supplier (as applicable): N/A	

DESCRIPTION OF NONCONFORMANCE

7. (a) NCR Description: ☐ < 100 nCi/g ☒ Prohibited Item ☐ >500 ppmv Flamm. VOCs
☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☐ Other

7. (b) Description of Nonconformance Required Condition (Implementing Procedure, Revision, Section, & Text):

CCP-TP-053, Rev. 10, Section 4.4.2 [H.1] IF any hazardous waste(s) NOT identified in the AK Summary Report(s) for the waste stream being characterized OR any nonconforming/prohibited items are noted during the RTR examination, THEN perform the following:
(a) Initiate an NCR in accordance with CCP-QP-005 AND record the NCR number in Section 1 of Attachment 2.

CCP-TP-053, Rev. 10, Table 1. Prohibited Items

CCP-AK-INL-005, Rev. 4, Section 5.4.4, Prohibited Items; Since this waste stream contains greater than 50 ppm PCB's, any residual liquids identified during RTR and/or VE are assumed to contain greater than 50 ppm PCB's.

7. (c) Actual Condition

PCB Liquids (see attachment 1)

8. NCR Originator (Print name, sign, and date)	9. CCP QA Engineer or Designee Validation (Print name, sign, and date)
Michael Galbraith 6-1-11	RACHEL YOUNG 6/2/11

9a. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE
If YES or INDETERMINATE, then apply Trend Code L in Block 12.

9b. Have the CCP HOLD TAGS associated with the NCR been applied? ☒ YES ☐ NO If no is marked, provide an explanation.

10. Significant Condition? (If Yes, List CAR)	11. Recurring Condition? ☐ YES☒ NO (If YES, List NCRs/CARs)
☐ YES ☒ NO	
12. Trend Code: K	13. Responsible Manager: Bill Verlanic

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL-2853-11	Revision 0
INTERIM DISPOSITION	
14. Interim Disposition (Check One) ☒ N/A (See Final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort ☐ Reinspect/Retest ☐ Remediate (a) Instructions for Completion of the Interim Disposition:	
INTERIM DISPOSITION APPROVALS	
15 .Responsible Manager/Individual (Print, sign, and date)	16. CCP QA Engineer or Designee (Print, sign and date)
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
COMPLETION OF INTERIM DISPOSITION	
17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date)	
18. Interim Disposition Verified CCP QA Engineer: (Print, sign and date)	

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL-2853-11	Revision 0
FINAL DISPOSITION	
19. Final Disposition (Check One) ☐ Use-As-Is ☒ Reject ☐ Repair ☐ Rework ☐ Scrap	
(a) Technical Justification (Required for Use-As-Is and Repair dispositions, N/A for Reject, Scrap, or Rework dispositions.) NA	
(b) Disposition Instructions (Required for Reject and Scrap, N/A for Use-As-Is, Rework, and Repair) Return to INL.	
(c) Instructions for Completion of the Final Disposition, including Inspection Criteria (Required for Repair and Rework, N/A for Use-As-Is, Reject and Scrap) NA	
(d) Corrective Actions (Actions to Prevent Recurrence) - as required, N/A if left blank. NA	
FINAL DISPOSITION APPROVALS	
20. Responsible Manager/Individual: (Print, sign, and date) Bill Vercame 6-2-11	21. CCP QA Engineer or Designee: (Print, sign, and date) RACHEL YOUNG 6/2/11
Additional Approvals: (Print, sign, and date)	Additional Approvals: (Print, sign, and date)
CLOSURE	
22. Final Disposition Complete Responsible Manager/Individual: (Print, sign, and date)	
23. Attachments:	
24. (a) HOLD TAG removal has been validated and reconciled for all nonconforming items on the NCR. ☐ (b) Check if not applicable (N/A) and provide an explanation here or on a continuation sheet. ☐	
25. Final Disposition Verified – NCR Closed	CCP QA Engineer: (Print, sign, and date)

Attachment 2 – CCP Nonconformance Report (NCR) Continuation Sheet

NCR No. NCR-INL-2853-11 Revision 0 Attachment # 1 Page 1 of 1
10109538: Approximately 1 cup prohibited PCB between the liner and bag at 32"
10394159: Approximately 1 pint prohibited PCB liquid within bagging at 24"
10119952: Approximately 1 tablespoon prohibited PCB liquid within bagging at 32"
Continuation from Section Number: 7(c), 3

DIVIDER

PAGE

Attachment 1 – CCP Nonconformance Report (NCR)

NCR No. NCR –RHINL - 0003 – 06 Revision 2

1. Lot No./Heat No. or Serial No.: N/A	2. Process (NDA, HSG, NDE, VE, Other): RH VE	3. Batch Data Report # (s): RHINLVE060002
4. Order/Work Order/Job Control Number (as applicable): N/A	5. PO #: N/A 6. Supplier: N/A	Container #(s): See continuation sheet

DESCRIPTION OF NONCONFORMANCE

7. (a) CCP HOLD TAGS SHALL BE APPLIED UNLESS JUSTIFIED AS FOLLOWS:
Apply hold tag to Interim Storage Container (ISC) #s TRU-ISC-0011 (Drums 00753, 00754, 00756, 00757), TRU-ISC-0012 (Drums 00751, 00752), TRU-ISC-0013 (Drums 00766, 00767), TRU-ISC-0014 (Drums 00758, 00765, 00774), TRU-ISC-0015 (Drums 00775, 00776), and Shielded Overpack Containers (SOPC) #s TRU-SOPC-004 (Drum 00768), TRU-SOPC-005 (Drum 00772), TRU-SOPC-008 (Drum 00759), TRU-SOPC-014 (Drum 00769).

☐ < 100 nCi/g ☒ Prohibited Item ☐ >500 ppmv Flamm. VOCs

☐ E-Flag ☐ TRAMPAC Criteria ☐ Receiving Inspection ☐ Other

(b) Description of Nonconformance
Required Condition (Implementing Procedure, Section & Revision)
Condition 1: CCP-TP-500, Revs. 1&2, Step 4.1.2[D], requires that all waste items be identified.
Condition 2: CCP-TP-500, Revs. 1&2, Step 4.1.2[G], requires confirmation of NO prohibited items.

(c). Actual Condition
Could not identify all potential waste items packaged and confirm the absence of prohibited items (see continuation sheet for detailed information)

Reason for revision 2: Added container 00753 for condition 2

8. NCR Originator (Print name, sign and date) John Hegsted J.S. Hegsted 8/17/06	9. SPQAO/FQAO Validation (Print name, sign and date) Dean Moore 8/17/06
9a. Does this NCR have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE If YES or INDETERMINATE, then apply Trend Code L in Block 12.	
10. Significant Condition? ☐ YES ☒ NO ☐ NA	11. Recurring Condition? ☐ YES ☒ NO (If YES, List NCRs/CARs)
12. Trend Code: K	13. Responsible Manager: Irene Quintana

Attachment 1 – CCP Nonconformance Report (NCR)	
NCR No. NCR –RHINL - 0003 - 06 Revision 2	
INTERIM DISPOSITION	
14. Interim Disposition (Check One) ☒ N/A (See final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort ☐ Reinspect/Retest ☐ Remediate (a) Instructions for Completion of the Interim Disposition:	
INTERIM DISPOSITION APPROVALS	
15 .Responsible Manager/Individual (Print, sign and date)	16. SPQAO/FQAO (Print, sign and date)
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
COMPLETION OF INTERIM DISPOSITION	
17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date)	
18. Interim Disposition Verified SPQAO/FQAO: (Print, sign and date)	

Copy

Attachment 1 – CCP Nonconformance Report (NCR)	
NCR No. NCR -RHINL- 0003 - 06 Revision 2	
FINAL DISPOSITION	
19. Final Disposition (Check One) ☐ Use-As Is ☒ Reject ☐ Repair ☐ Rework ☐ Scrap	
(a) Technical Justification (Required for "Use-As-is" and "Repair" dispositions, N/A for "Reject," "Scrap," or "Rework" dispositions.) N/A	
(b) Disposition Instructions (Required for "Reject" and "Scrap") Perform RTR on waste containers.	
(c) Instructions for Completion of the Final Disposition, including Inspection Criteria (Required for "Repair" and "Rework") N/A	
(d) Corrective Actions (Actions to Prevent Recurrence) - as required. N/A	
FINAL DISPOSITION APPROVALS	
20. Responsible Manager/Individual: (Print, sign and date) Irene Quintana 8/17/06	21. SPQAO/FQAO: (Print, sign and date) DEAN Moody 8/17/06
Additional Approvals: (Print, sign and date) —	Additional Approvals: (Print, sign and date) —
CLOSURE	
22. Final Disposition Complete Responsible Manager/Individual: (Print, sign and date) Irene Quintana 11/6/06	
23. Final Disposition Verified – NCR Closed A.J. FISHER	SPQAO: (Print, sign and date) 11/06/06

See NCR-RHINL-0504-06 Rev 0 for new disposition

FURTHER HANDLING OF THE DRUMS IN THIS NCR WILL BE TRACKED UNDER NCR-RHINL-0504-06.

A.J.F. 11/06/06

Copy

Attachment 2 – CCP Nonconformance Report (NCR) Continuation Sheet			
NCR No. NCR – RHINL - Attachment # 1	0003 - Page 1 of 1	06	Revision No. 2

Continuation from Section Number: 3 and 7c

Section 3:

Drum IDs 00751, 00752, 00753, 00754, 00756, 00757, 00758, 00759, 00765, 00766, 00767, 00768, 00769, 00772, 00774, 00775, 00776

Section 7c:

Could not verify bottles placed in in cans did not contain <1 inch liquid for Drum 00751/Can 175, Drum 00752/Can 170, Drum 754/Can 135/169, Drum 756/Can 171, Drum 00757/Can 172, Drum 00758/Can 140, Drum 00759/Can 125/168, Drum 00765/Can 134/157, Drum 00766/Can 147/156, Drum 00767/Can 127, Drum 00768/Can 178, Drum 00769/Can 180/181, Drum 00772/Can 158, Drum 00774/Can Can 126/131, Drum 00775/Can 138/162, Drum 00776/Can 137

Could not examine all waste items placed in Drum 00753/Can 142

Attachment 1 – CCP Nonconformance Report (NCR)		
NCR No. NCR –RHINL - 0003 – 06 Revision 1		
1. Lot No./Heat No. or Serial No.: N/A	2. Process (NDA, HSG, NDE, VE, Other): VISUAL RH-VE EXAMINATION	3. Batch Data Report # (s): RHINLVE060002 Container#(s): 00751, 00752, 00754-00756, 00757, 00758, 00759, 00765, 00766, 00767, 00768, 00769, 00772, 00774-00775, 00776
4. Order/Work Order/Job Control Number (as applicable): N/A	5. PO #: N/A 6. Supplier: N/A	

DESCRIPTION OF NONCONFORMANCE

7. (a) Hold Tag Applied? ☒ YES ☐ NO (If NO, explain) Segregation Method(s): ☐ NA
Apply hold tags to the shield overpack or interium storage (ISC) storing the waste containers.

☐ < 100 nCi/g ☒ Prohibited Item ☐ >500 ppmv Flamm. VOCs

☐ E-Flag ☐ TRAMPAC Criteria ☐ Receiving Inspection ☐ Other

(b) Description of Nonconformance
Required Condition (Implementing Procedure, Section & Revision)
CCP-TP-500 Rev. 1 Section 4.1.2 [G] Requires verification that waste containers contain NO prohibited items using ATTACHMENT 1. CCP-TP-500 Rev 1, ATTACHMENT 1 identifies internal containers with greater than or equal to one inch of liquid in the bottom of the container as prohibited items.

(c). Actual Condition
Unable to verify that internal container placed into the package contains less than one inch of liquid. (Could not see inside bottles that have caps on them).

Revision 1 added container 00772.

8. NCR Originator (Print name, sign and date) J. Hegsted 7/17/06	9. SPQAO/FQAO Validation (Print name, sign and date) D. Mooney 7/17/06
10. Significant Condition? ☐ YES ☒ NO ☐ NA	11. Recurring Condition? ☐ YES ☒ NO (If YES, List NCRs/CARs)
12. Trend Code: K	13. Responsible Manager: L. Porter

SUPERSEDED BY Revision 2. C. K. 7/26/06

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Attachment 1 – CCP Nonconformance Report (NCR)	
NCR No. NCR -RHINL - 0003 - 06 Revision 1	
INTERIM DISPOSITION	
14. Interim Disposition (Check One) ☒ N/A (See final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort ☐ Reinspect/Retest ☐ Remediate (a) Instructions for Completion of the Interim Disposition:	
INTERIM DISPOSITION APPROVALS	
15 .Responsible Manager/Individual (Print, sign and date)	16. SPQAO/FQAO (Print, sign and date)
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
COMPLETION OF INTERIM DISPOSITION	
17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date)	
18. Interim Disposition Verified SPQAO/FQAO: (Print, sign and date)	

Attachment 1 – CCP Nonconformance Report (NCR)	
NCR No. NCR -RHINL- 0003 - 06 Revision 1	
FINAL DISPOSITION	
19. Final Disposition (Check One) ☐ Use-As Is ☒ Reject ☐ Repair ☐ Rework ☐ Scrap	
(a) Technical Justification (Required for "Use-As-is" and "Repair" dispositions, N/A for "Reject," "Scrap," or "Rework" dispositions.) N/A	
(b) Disposition Instructions (Required for "Reject" and "Scrap") Perform RTR on waste containers	
(c) Instructions for Completion of the Final Disposition, including Inspection Criteria (Required for "Repair" and "Rework") N/A	
(d) Corrective Actions (Actions to Prevent Recurrence) - as required. N/A	
FINAL DISPOSITION APPROVALS	
20. Responsible Manager/Individual: (Print, sign and date) L. Porter Larry Porter 7/17/06	21. SPQAO/FQAO: (Print, sign and date) D. Mooney 7/17/06
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
CLOSURE	
22. Final Disposition Complete Responsible Manager/Individual: (Print, sign and date)	
23. Final Disposition Verified – NCR Closed	SPQAO: (Print, sign and date)

Attachment 1 – CCP Nonconformance Report (NCR)		
NCR No. NCR –RHINL - 0003 – 06 Revision 0		
1. Lot No./Heat No. or Serial No.: N/A	2. Process (NDA, HSG, NDE, VE, Other): VISUAL RH-VE 6/1/06 EXAMINATION	3. Batch Data Report # (s): RHINLVE060002 Container#(s): 00751, 00752, 00754, 00756 00757, 00758, 00759, 00765 00766, 00767, 00768, 00769 00774, 00775, 00776
4. Order/Work Order/Job Control Number (as applicable): N/A	5. PO #: N/A 6. Supplier: N/A	

DESCRIPTION OF NONCONFORMANCE

7. (a) Hold Tag Applied? ☒ YES ☐ NO (If NO, explain) Segregation Method(s): ☐ NA

Apply hold tags to the shield Overpack of Interim Storage (ISC) storing the waste containers JG 6/1/06

☐ < 100 nCi/g ☒ Prohibited Item ☐ >500 ppmv Flamm. VOCs

☐ E-Flag ☐ TRAMPAC Criteria ☐ Receiving Inspection ☐ Other

(b) Description of Nonconformance
Required Condition (Implementing Procedure, Section & Revision)

CCP-TP-500 Rev. 1 Section 4.1.2 [G] Requires verification that waste containers contain NO prohibited items using ATTACHMENT 1. CCP-TP-500 Rev 1, ATTACHMENT 1 identifies internal containers with greater than or equal to one inch of liquid in the bottom of the container as prohibited items.

(c). Actual Condition

Unable to verify that internal container placed into the package contains less than one inch of liquid. (Could not see inside bottles that have caps on them).

8. NCR Originator (Print name, sign and date)	9. SPQAO/FQAO Validation (Print name, sign and date)
J. Hegsted J. Hegsted 6/1/06	Dean Mowrey
10. Significant Condition? ☐ YES ☒ NO ☐ NA	11. Recurring Condition? ☐ YES ☒ NO (If YES, List NCRs/CARs)
12. Trend Code: K	13. Responsible Manager: L. Porter

Dispositioned By Rev 1 6/7/06

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Attachment 1 – CCP Nonconformance Report (NCR)	
NCR No. NCR -RHINL - 0003 - 06 Revision 0	
INTERIM DISPOSITION	
14. Interim Disposition (Check One) ☒ N/A (See final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort ☐ Reinspect/Retest ☐ Remediate (a) Instructions for Completion of the Interim Disposition:	
INTERIM DISPOSITION APPROVALS	
15 .Responsible Manager/Individual (Print, sign and date) ~~L. Porter~~ 6/1/06	16. SPQAO/FQAO (Print, sign and date)
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
COMPLETION OF INTERIM DISPOSITION	
17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date)	
18. Interim Disposition Verified SPQAO/FQAO: (Print, sign and date)	

Attachment 1 – CCP Nonconformance Report (NCR)	
NCR No. NCR -RHINL- 0003 - 06 Revision 0	
FINAL DISPOSITION	
19. Final Disposition (Check One) ☐ Use-As Is ☒ Reject ☐ Repair ☐ Rework ☐ Scrap	
(a) Technical Justification (Required for "Use-As-is" and "Repair" dispositions, N/A for "Reject," "Scrap," or "Rework" dispositions.) N/A	
(b) Disposition Instructions (Required for "Reject" and "Scrap") Perform RTR on waste containers	
(c) Instructions for Completion of the Final Disposition, including Inspection Criteria (Required for "Repair" and "Rework") N/A	
(d) Corrective Actions (Actions to Prevent Recurrence) - as required. N/A	
FINAL DISPOSITION APPROVALS	
20. Responsible Manager/Individual: (Print, sign and date) L. Porter 6/1/06	21. SPQAO/FQAO: (Print, sign and date) 6/1/06
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
CLOSURE	
22. Final Disposition Complete Responsible Manager/Individual: (Print, sign and date)	
23. Final Disposition Verified – NCR Closed	SPQAO: (Print, sign and date)

DIVIDER

PAGE

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Attachment 1 – CCP Nonconformance Report (NCR)

NCR No. NCR-RHINL-0100-07 Revision 1

1. Lot No./Heat No. or Serial No.: NA	2. Process (NDA, HSG, NDE, VE, Other): RH_NDE	3. Batch Data Report # (s): INLRHRTR07009
4. Order/Work Order/Job Control Number (as applicable): NA	5. PO #: NA 6. Supplier: NA	Container #(s): 00883

DESCRIPTION OF NONCONFORMANCE

7. (a) CCP HOLD TAGS SHALL BE APPLIED UNLESS JUSTIFIED AS FOLLOWS: Apply hold tag to ISC housing container 00883

☐ < 100 nCi/g ☒ Prohibited Item ☐ >500 ppmv Flamm. VOCs

☐ E-Flag ☐ Receiving Inspection ☐ Transportation ☐ WWIS ☐ Other

(b) Description of Nonconformance
CCP-TP-508, Rev. 1, Section 4.3.3 Step [E.1](a) Record a detailed description of the prohibited item (s) including location and volume of liquid, in the Comments field of Section 5, Waste Summary, of Attachment 2.

(c). Actual Condition
Liquid found in container, one-half cup of liquid in plastic container at center bottom of drum.

Reason for revision: Correct Trend Code to L. RJ 5/3/07

8. NCR Originator (Print name, sign. and date) Sway Andrews Sway Andrews 5-3-07	9. CCP QA Engineer or Designee Validation (Print name, sign, and date) S.J. Fisher S.J. Fisher 5/3/07

9a. Does this NCR have the potential to impact AK? ☒ YES ☐ NO ☐ INDETERMINATE
If YES or INDETERMINATE, then apply Trend Code L in Block 12.

10. Significant Condition? ☐ YES ☒ NO ☐ NA	11. Recurring Condition? ☐ YES ☒ NO (If YES, List NCRs/CARs)
12. Trend Code: L	13. Responsible Manager: Irene Quintana

ORIGINAL

Attachment 1 – CCP Nonconformance Report (NCR)	
NCR No. NCr-RHINL-0100-07 Revision 1	
INTERIM DISPOSITION	
14. Interim Disposition (Check One) ☒ N/A (See final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort ☐ Reinspect/Retest ☐ Remediate (a) Instructions for Completion of the Interim Disposition:	
INTERIM DISPOSITION APPROVALS	
15 .Responsible Manager/Individual (Print, sign, and date)	16. CCP QA Engineer or Designee (Print, sign and date)
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
COMPLETION OF INTERIM DISPOSITION	
17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date)	
18. Interim Disposition Verified CCP QA Engineer: (Print, sign and date)	

Attachment 1 – CCP Nonconformance Report (NCR)	
NCR No. NCR-RHINL-0100-07	Revision 1
FINAL DISPOSITION	
19. Final Disposition (Check One) ☐ Use-As-Is ☒ Reject ☐ Repair ☐ Rework ☐ Scrap	
(a) Technical Justification (Required for "Use-As-Is" and "Repair" dispositions, N/A for "Reject," "Scrap," or "Rework" dispositions.) NA	
(b) Disposition Instructions (Required for "Reject" and "Scrap", N/A for "Use-As-Is" and "Repair") Return container to host site.	
(c) Instructions for Completion of the Final Disposition, including Inspection Criteria (Required for "Repair" and "Rework", N/A for "Use-As-Is, "Reject" and "Scrap") NA	
(d) Corrective Actions (Actions to Prevent Recurrence) - as required. NA	
FINAL DISPOSITION APPROVALS	
20. Responsible Manager/Individual: (Print, sign, and date) 5/3/07 4129 5bbr Irene Quintana Irene Q. Tra	21. CCP QA Engineer or Designee: (Print, sign, and date) A.J. FISTER 5/3/07
Additional Approvals: (Print, sign, and date) —	Additional Approvals: (Print, sign, and date) —
CLOSURE	
22. Final Disposition Complete Responsible Manager/Individual: (Print, sign, and date) Craig Simmons 2-27-09	
23. Final Disposition Verified – NCR Closed C.M. Gomez	CCP QA Engineer: (Print, sign, and date) Christine M. Gomez 2/5/09

FRM-880
07/09/08
Rev. 1
Page 1 of 4
Used with TPR-7298

RH TRU DRUM REPACKAGING DATASHEET

This datasheet is used when performing repackaging of RH TRU drums in Bldg. CPP-659. Information from FRM-828 or the Acceptable Knowledge for RH TRU Waste has been incorporated.

Section 1: Review Signatures

Signature(s) below demonstrate concurrence with the remedial actions described in this datasheet for the specific RH TRU drum recorded in Section 2. Hazards have been adequately addressed and safety measures have been implemented.

Reviewer's Name	Discipline	Signature	Date
Charles Chebul	Safety		1/19/09
Curtis Reece	Environmental		1/19/09
Charles Chebul	ES&H		1/19/09
Charles Chebul	Industrial Hygiene		1/19/09
Doug Henderickx	WGS		1/19/09
[illegible]	Programs		1/19/09

NFM Work Approval: [signature] for K. Farmer per telecon KBF 1/20/09 — Signature — Date 1/20/09

Section 2: RH TRU Programs

File location (or DVD#) INLRHRTR07009

A. Drum Characteristics:

1. Drum # 00683 2. Waste Generator ANL-E Lot 2

3. Drum Size ☒ 30 Gal. ☐ 55 Gal. 4. Is drum vented? Yes ☒ No ☐ 5. Percent utilized: 94%

B. Drum Packaging Characteristics:

1. Rigid liner present? Yes ☒ No ☐ 2. Rigid liner vented? Yes ☒ No ☐

3. Drum liner bag(s) present? Yes ☒ No ☐ 4. Combustible ☒ Per EDF-4687 Pg. 36 Non-combustible ☐

C. Drum Inner Packaging Characteristics:

Top inner package: Yes ☒ No ☐

____ 5 Gal. _X_ 7-1/2 Gal. ____ 10 Gal. ____ Other (requires description)

Prohibited item(s) present in top inner package? Yes ☐ No ☒ Describe: Vented.

Bottom inner package: Yes ☒ No ☐

____ 5 Gal. _X_ 7-1/2 Gal. ____ 10 Gal. ____ Other (requires description)

Prohibited item(s) present in bottom inner package? Yes ☒ No ☐ Describe: Vented, Sealed, plastic bottle with approximately 1 cup liquid in middle of 7 Gal. container. Plastic bottle with approximately 1/2 cup liquid at bottom of 7 Gal. container.

RH TRU DRUM REPACKAGING DATASHEET

Other inner packaging: Yes ☐ No ☒

Section 3: RH TRU Operations

A. As Found:

Describe location of prohibited item(s): Lower 7½ gallon can appears to have been rusted through. One bottle with residual liquid was found in lower 7-gallon can.

B. Aerosol Can:

NOTE: *Record information from the can such as brand name, product, stock numbers and other information that identifies product. Estimate and record amount of liquid (if any) that is discharged when punctured.*

Yes ☐ No ☒ Describe: _____

Additional Comments: _____

C. >4 L Container:

Yes ☐ No ☒ Describe: _____

Additional Comments: _____

D. Impenetrable Item:

Yes ☐ No ☒ Describe: _____

Additional Comments: _____

RH TRU DRUM REPACKAGING DATASHEET

E. Liquids:

Yes ☒ No ☐ Describe:

Additional Comments: Found residual liquid in bottle (plastic) in lower 7-gallon can. No free liquid was found. ADDED 1 pound of no-char to 7gallon can.

F. Other:

Yes ☐ No ☒ Describe:

Additional Comments:

G. Repackaging Completion Activities:

1. Record video/DVD#: IDAE000000683RP
2. Record 55 Gal. filter model: WSFEL-01905 Filter serial number: HE-11168
3. Record multiple drum(s), if applicable: N/A
4. Ensure drum bag is breached: Initial CR Date 1/21/09
5. Describe in detail any/all items that were NOT placed back in original container(s) AND where they were relocated to.
30 gallon locking ring will be removed & secondary waist.

Additional Comments: IDAE000000683 THIS is the drum that was overpack lower contain was switch to the upper position & upper can to bottom position in 30gallon drum.

RH TRU DRUM REPACKAGING DATASHEET

Section 3: Remediation Completion Signatures

Remediation of WIPP prohibited items has been completed for this drum.

Operator:	Lashell Wade (Print Name)	Lashell Wade (Signature)	01-21-09 (Date)
Supervisor:	Cody Remsburg (Print Name)	Cody Remsburg (Signature)	1/21/09 (Date)

Attachment 1 – CCP Nonconformance Report (NCR)		
NCR No. NCR-RHINL-0100-07 Revision 0		
1. Lot No./Heat No. or Serial No.: NA	2. Process (NDA, HSG, NDE, VE, Other): RH_RTR	3. Batch Data Report # (s): INLRHRTR07009
4. Order/Work Order/Job Control Number (as applicable): NA	5. PO #: NA 6. Supplier: NA	Container #(s): 00683

DESCRIPTION OF NONCONFORMANCE

7. (a) CCP HOLD TAGS SHALL BE APPLIED UNLESS JUSTIFIED AS FOLLOWS: Place hold tag on interim storage container housing drum 00683

☐ < 100 nCi/g ☒ Prohibited Item ☐ >500 ppmv Flamm. VOCs

☐ E-Flag ☐ Receiving Inspection ☐ Transportation ☐ WWIS ☒ Other A.J.F 4/9/07

(b) Description of Nonconformance
Required Condition (Implementing Procedure, Section & Revision)
CCP-TP-508, Rev. 1, Section 4.3.3, Step [E.1](a) Record a detailed description of the prohibited item(s) including location and volume of liquid, in the Comments field of Section 5, Waste Summary, of Attachment 2.

(c). Actual Condition
Liquid found in container

8. NCR Originator (Print name, sign and date)	9. CCP QA Engineer Validation (Print name, sign and date)
Sway Andrews Sway Andrews 3.29.07	A.J. FISHER A.J.F 4/9/07
9a. Does this NCR have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE If YES or INDETERMINATE, then apply Trend Code L in Block 12.	
10. Significant Condition? ☐ YES ☐ NO ☒ NA	11. Recurring Condition? ☐ YES ☒ NO (If YES, List NCRs/CARs)
12. Trend Code: K	13. Responsible Manager: Irene Quintana

SUPERSEDED BY REV 1 CJ 2/5/09

Attachment 1 – CCP Nonconformance Report (NCR)	
NCR No. NCR-RHINL-0100-07 Revision 0	
INTERIM DISPOSITION	
14. Interim Disposition (Check One) ☒ N/A (See final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort ☐ Reinspect/Retest ☐ Remediate (a) Instructions for Completion of the Interim Disposition:	
INTERIM DISPOSITION APPROVALS	
15 .Responsible Manager/Individual (Print, sign and date)	16. CCP QA Engineer/ (Print, sign and date)
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
COMPLETION OF INTERIM DISPOSITION	
17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date)	
18. Interim Disposition Verified CCP QA Engineer /: (Print, sign and date)	

SUPERSEDED BY REV 1 9/15/09

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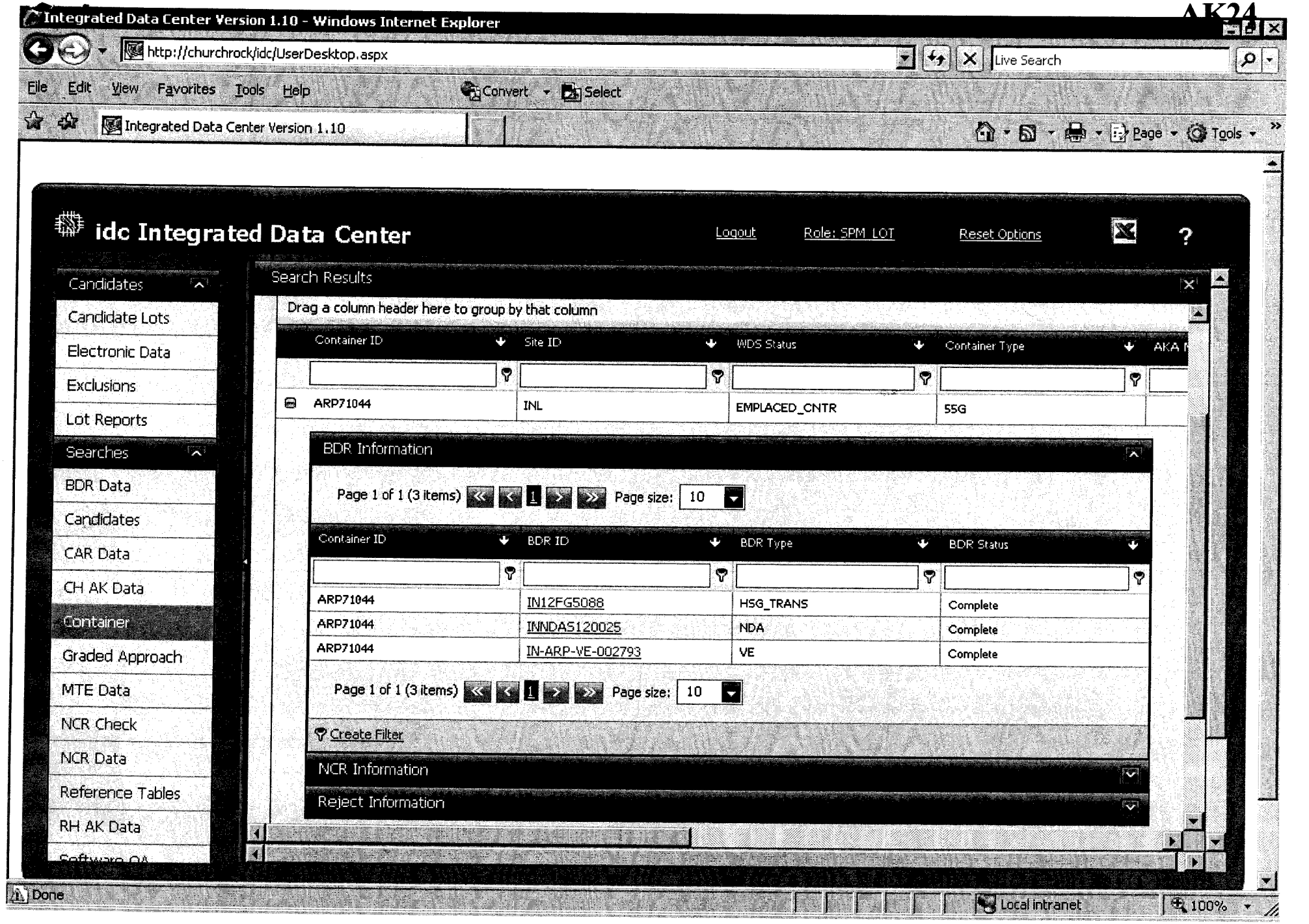
Attachment 1 – CCP Nonconformance Report (NCR)	
NCR No. NCR-RHINL-0100-07 Revision 0	
FINAL DISPOSITION	
19. Final Disposition (Check One) ☐ Use-As Is ☒ Reject ☐ Repair ☐ Rework ☐ Scrap	
(a) Technical Justification (Required for "Use-As-is" and "Repair" dispositions, N/A for "Reject," "Scrap," or "Rework" dispositions.) NA	
(b) Disposition Instructions (Required for "Reject" and "Scrap") Return container to host site	
(c) Instructions for Completion of the Final Disposition, including Inspection Criteria (Required for "Repair" and "Rework") NA	
(d) Corrective Actions (Actions to Prevent Recurrence) - as required. NA	
FINAL DISPOSITION APPROVALS	
20. Responsible Manager/Individual: (Print, sign and date) Irene Quintana Irene Quintana 4/9/07	21. CCP QA Engineer: (Print, sign and date) A.J. FISHER 4/9/07
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
CLOSURE	
22. Final Disposition Complete Responsible Manager/Individual: (Print, sign and date)	
23. Final Disposition Verified – NCR Closed	CCP QA Engineer: (Print, sign and date)

SUPERSEDED BY REV 1 2/5/09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Site ID
WDS Status
Container Type
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55G
BDR Information
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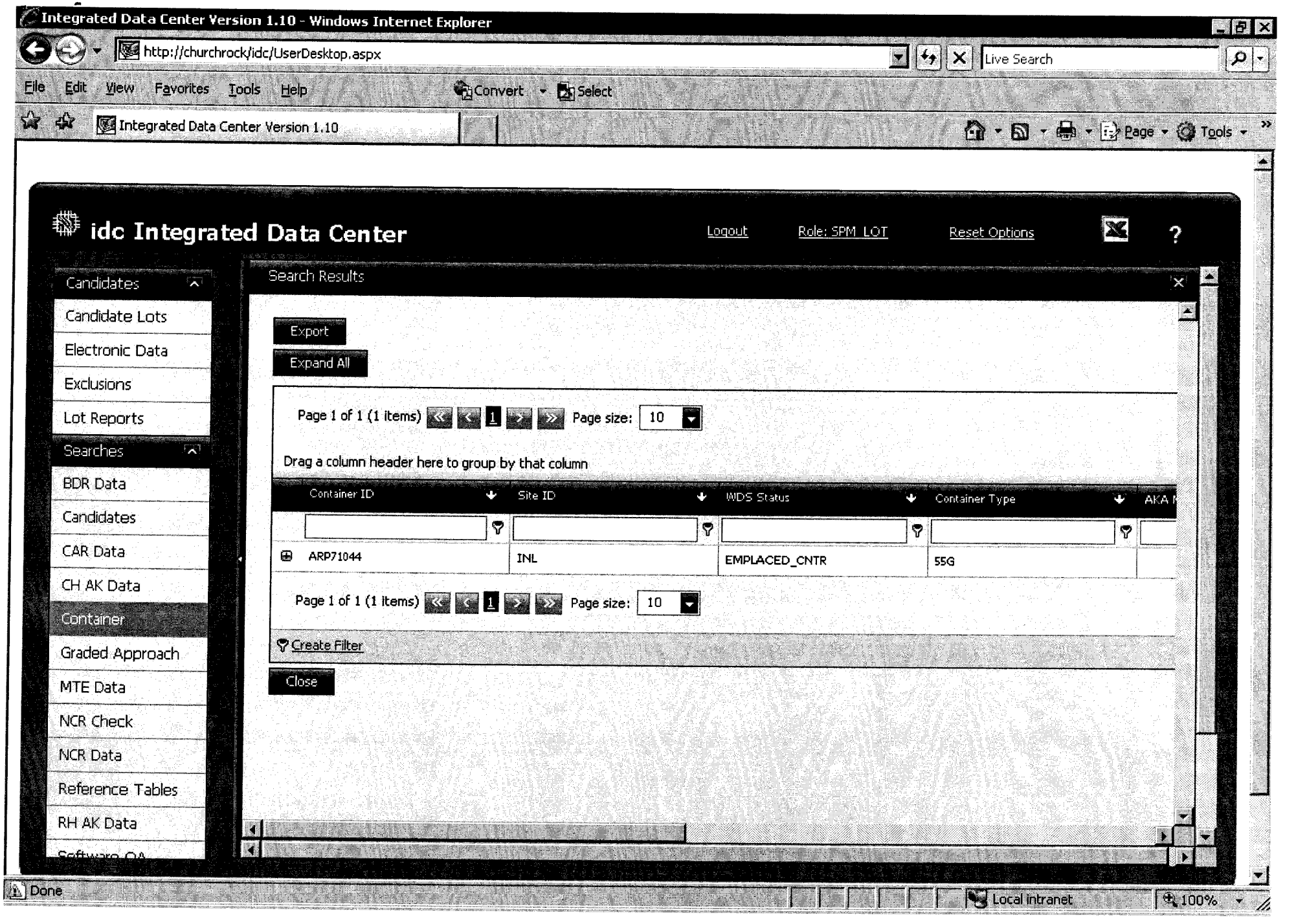
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Graded Approach
MTE Data
NCR Check
NCR Data
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Site ID
WDS Status
Container Type
ARP71044
INL
EMPLACED_CNTR
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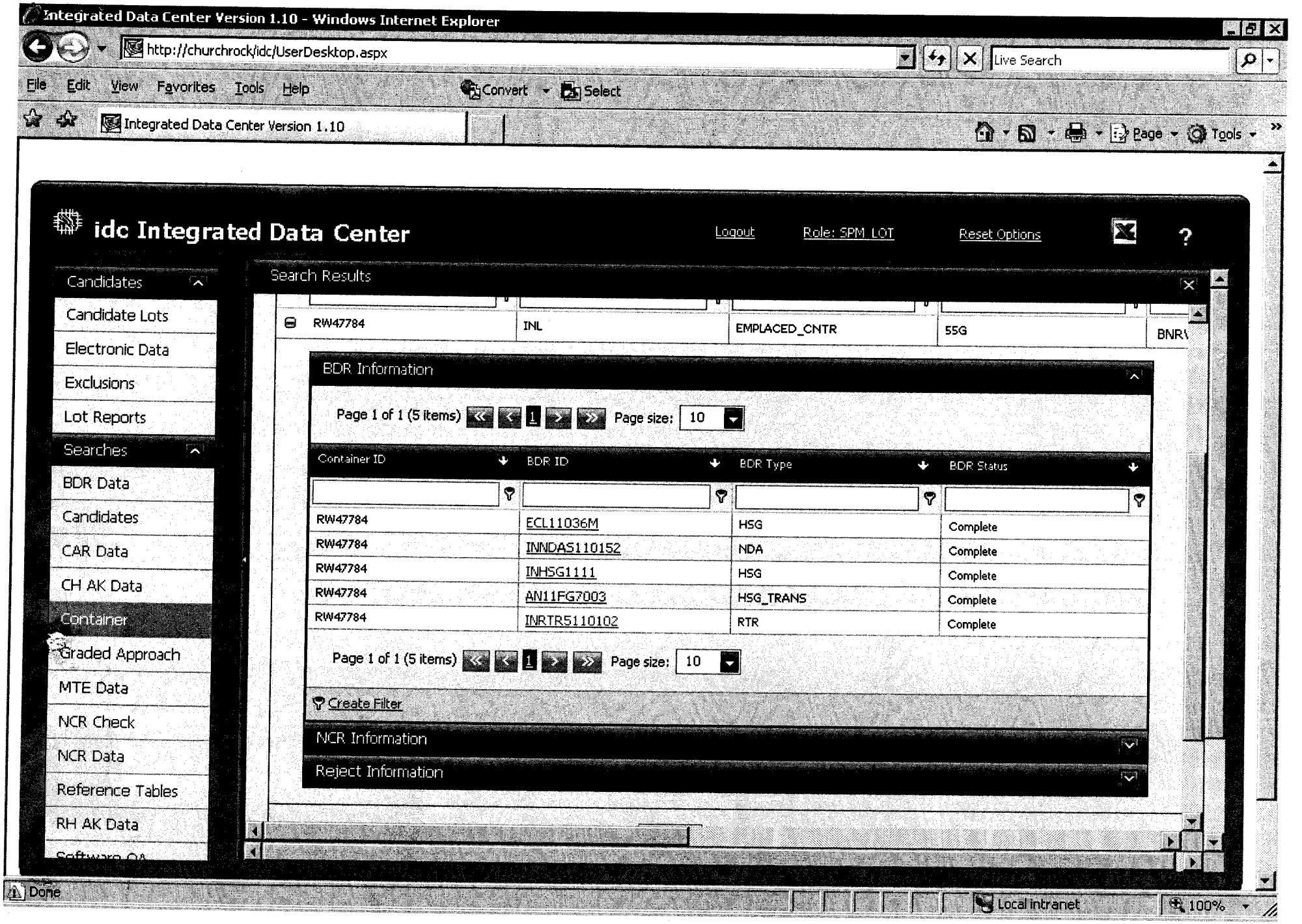
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Logout
Role: SPM_LOT
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Candidates
Candidate Lots
Electronic Data
Exclusions
Lot Reports
Searches
BDR Data
Candidates
CAR Data
CH AK Data
Container
Graded Approach
MTE Data
NCR Check
NCR Data
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RH AK Data
Search Results
RW47784 INL EMPLACED_CNTR 55G
BDR Information
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RW47784 INNDAS110152 NDA Complete
RW47784 INHSG1111 HSG Complete
RW47784 AN11FG7003 HSG_TRANS Complete
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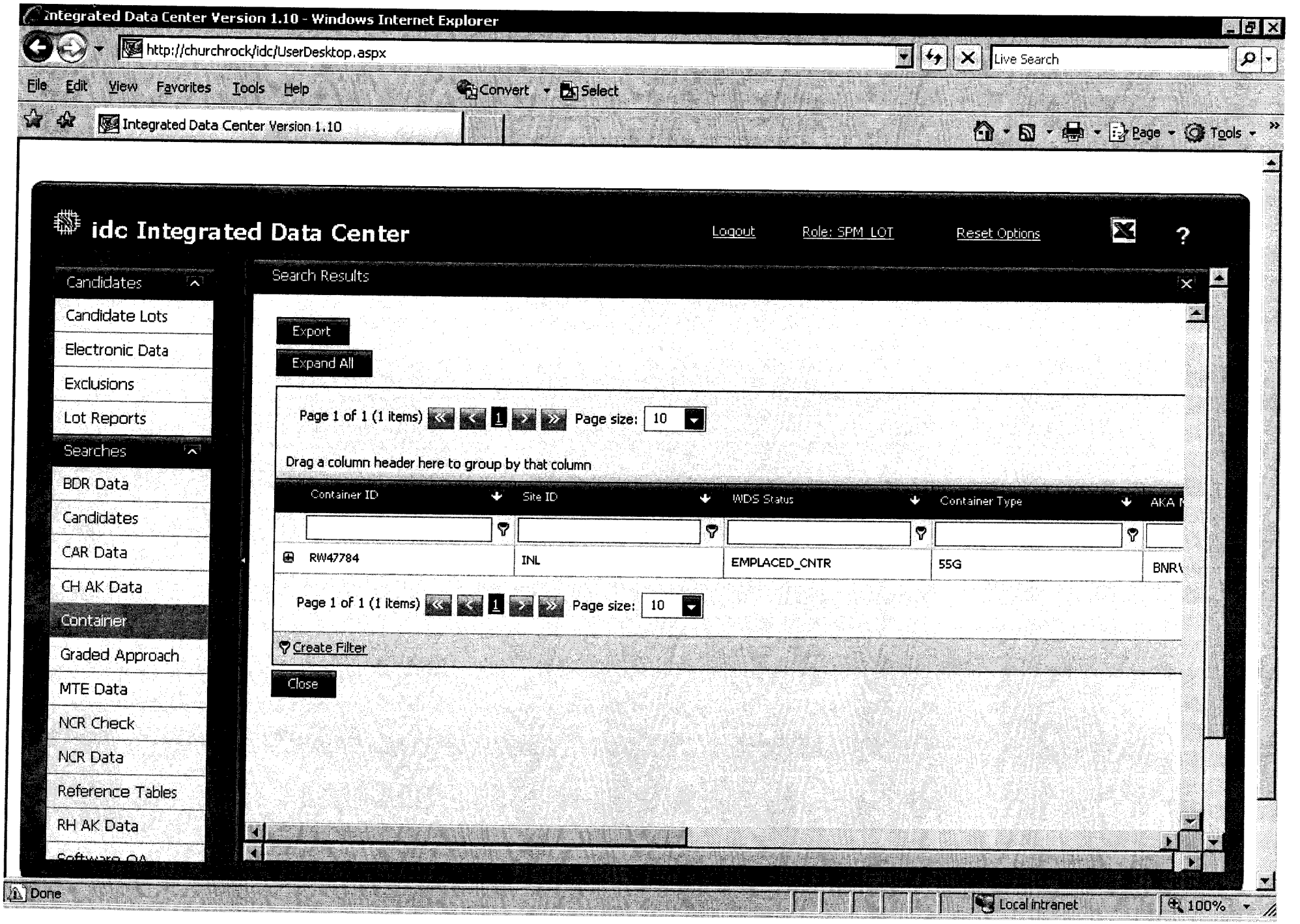
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Candidate Lots
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Lot Reports
Searches
BDR Data
Candidates
CAR Data
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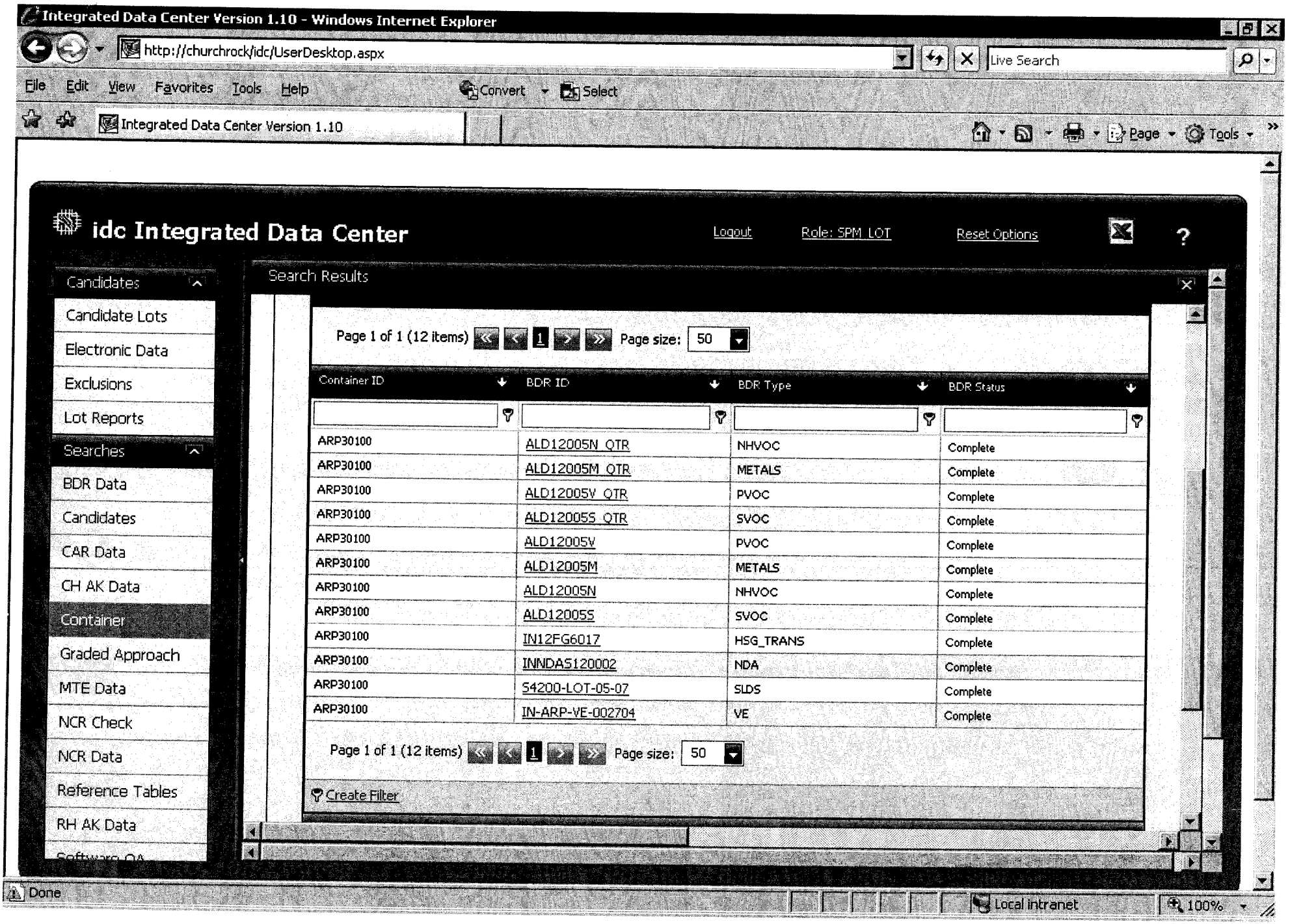
Container
Graded Approach
MTE Data
NCR Check
NCR Data
Reference Tables
RH AK Data
Search Results
Export
Expand All
Page 1 of 1 (1 items) 1 Page size: 10
Drag a column header here to group by that column
Container ID
Site ID
WDS Status
Container Type
RW47784
INL
EMPLACED_CNTR
55G
Page 1 of 1 (1 items) 1 Page size: 10
Create Filter
Close
Done
Local intranet
100%

DIVIDER

PAGE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Tools
idc Integrated Data Center
Logout
Role: SPM_LOT
Reset Options
?
Candidates
Candidate Lots
Electronic Data
Exclusions
Lot Reports
Searches
BDR Data
Candidates
CAR Data
CH AK Data
Container
Graded Approach
MTE Data
NCR Check
NCR Data
Reference Tables
RH AK Data
Search Results
Page 1 of 1 (12 items)
1
Page size: 50
Container ID
BDR ID
BDR Type
BDR Status
ARP30100 ALD12005N_QTR NHVOC Complete
ARP30100 ALD12005M_QTR METALS Complete
ARP30100 ALD12005V_QTR PVOC Complete
ARP30100 ALD12005S_QTR SVOC Complete
ARP30100 ALD12005V PVOC Complete
ARP30100 ALD12005M METALS Complete
ARP30100 ALD12005N NHVOC Complete
ARP30100 ALD12005S SVOC Complete
ARP30100 IN12FG6017 HSG_TRANS Complete
ARP30100 INNDAS120002 NDA Complete
ARP30100 S4200-LOT-05-07 SLDS Complete
ARP30100 IN-ARP-VE-002704 VE Complete
Page 1 of 1 (12 items)
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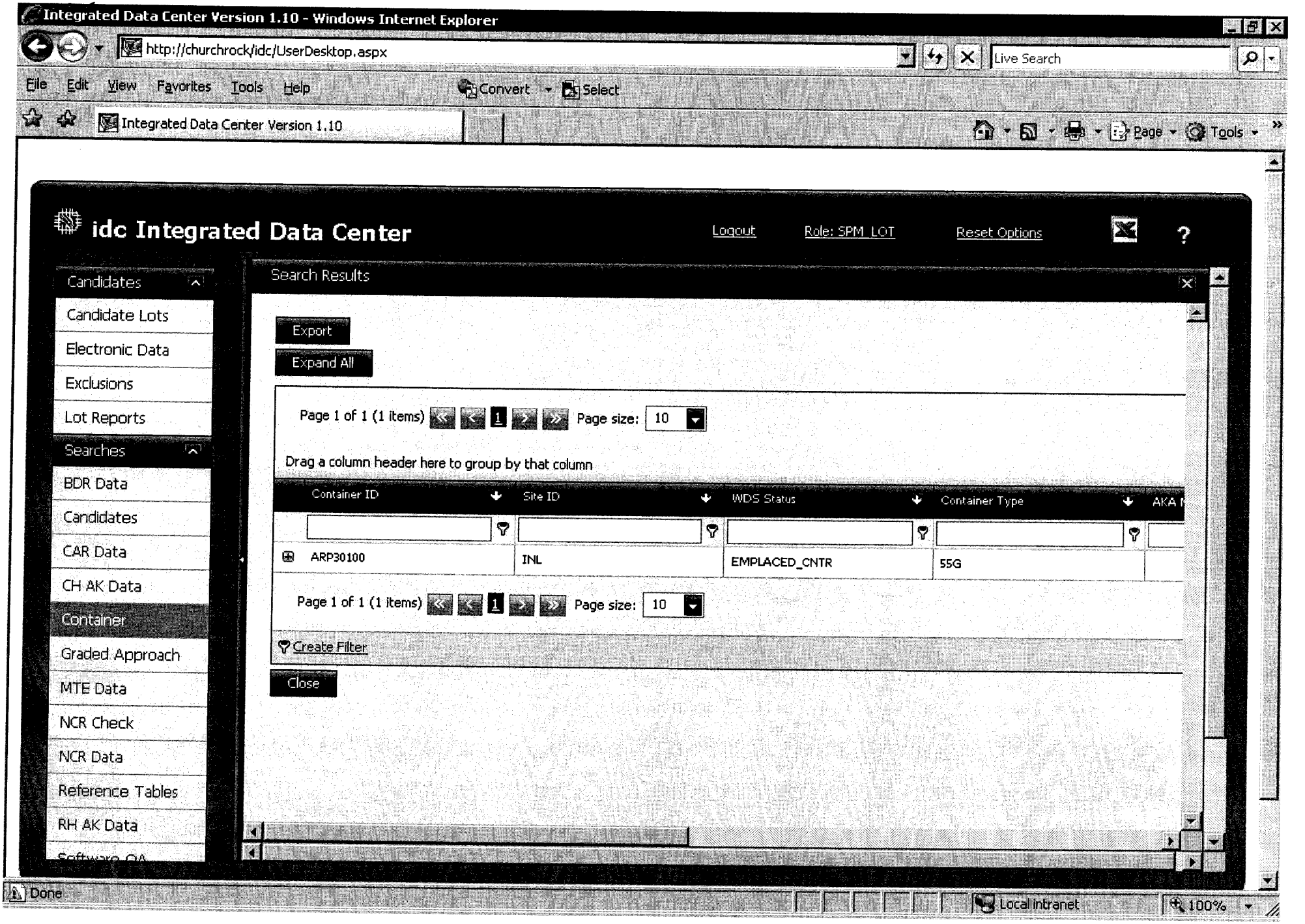
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Role: SPM_LOT
Reset Options
Candidates
Candidate Lots
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Lot Reports
Searches
BDR Data
Candidates
CAR Data
CH AK Data
Container
Graded Approach
MTE Data
NCR Check
NCR Data
Reference Tables
RH AK Data
Search Results
Export
Expand All
Page 1 of 1 (1 items) 1 Page size: 10
Drag a column header here to group by that column
Container ID
Site ID
WDS Status
Container Type
AKA
ARP30100
INL
EMPLACED_CNTR
55G
Page 1 of 1 (1 items) 1 Page size: 10
Create Filter
Close
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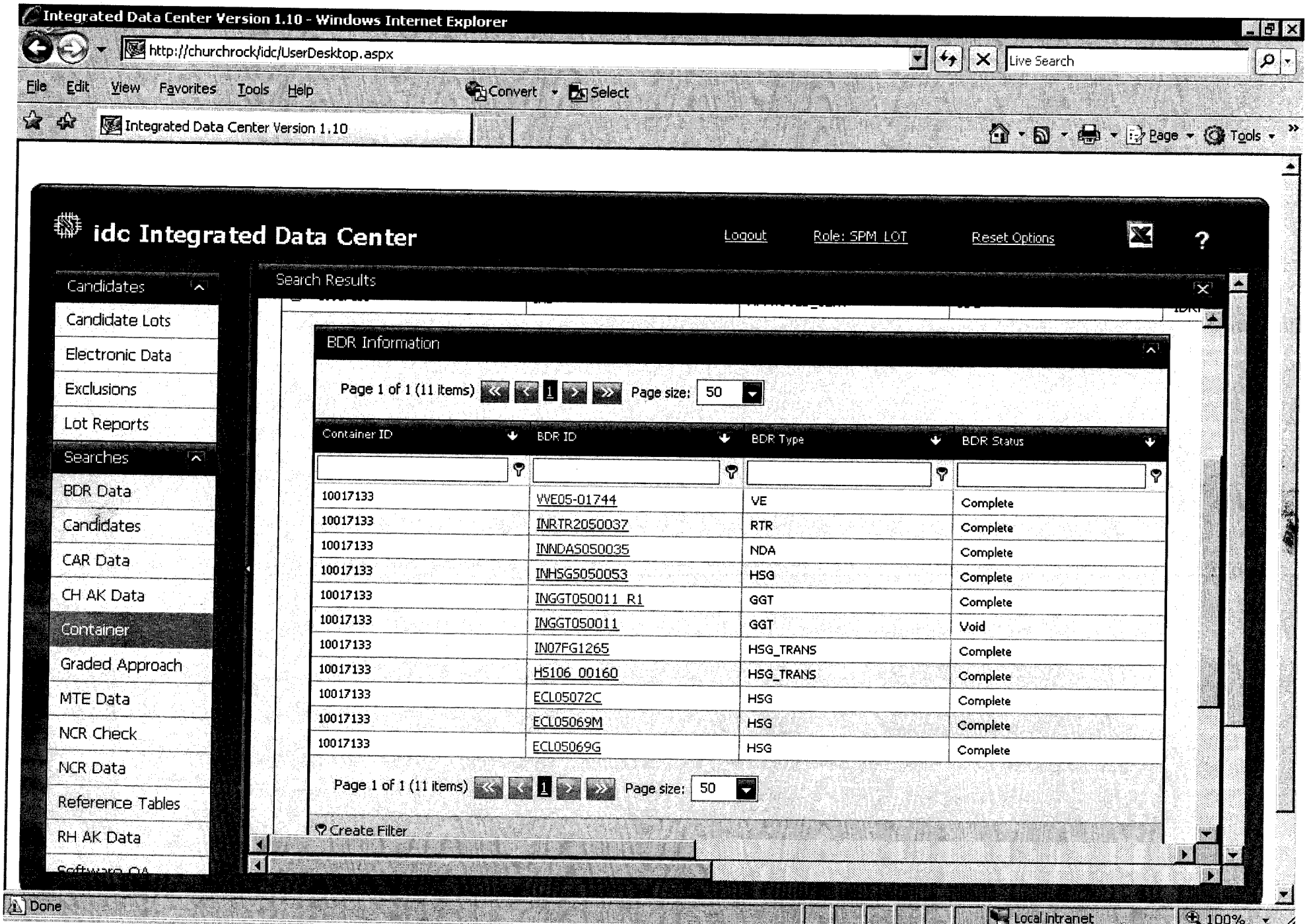
Integrated Data Center Version 1.10 - Windows Internet Explorer
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Page Tools
idc Integrated Data Center
Logout
Role: SPM_LOT
Reset Options
Candidates
Candidate Lots
Electronic Data
Exclusions
Lot Reports
Searches
BDR Data
Candidates
CAR Data
CH AK Data
Container
Graded Approach
MTE Data
NCR Check
NCR Data
Reference Tables
RH AK Data
Search Results
BDR Information
Page 1 of 1 (11 items) 1 Page size: 50
Container ID
BDR ID
BDR Type
BDR Status
10017133 WE05-01744 VE Complete
10017133 INRTR2050037 RTR Complete
10017133 INNDAS050035 NDA Complete
10017133 INHSG5050053 HSG Complete
10017133 INGGT050011_R1 GGT Complete
10017133 INGGT050011 GGT Void
10017133 IN07FG1265 HSG_TRANS Complete
10017133 HS106_00160 HSG_TRANS Complete
10017133 ECL05072C HSG Complete
10017133 ECL05069M HSG Complete
10017133 ECL05069G HSG Complete
Page 1 of 1 (11 items) 1 Page size: 50
Create Filter
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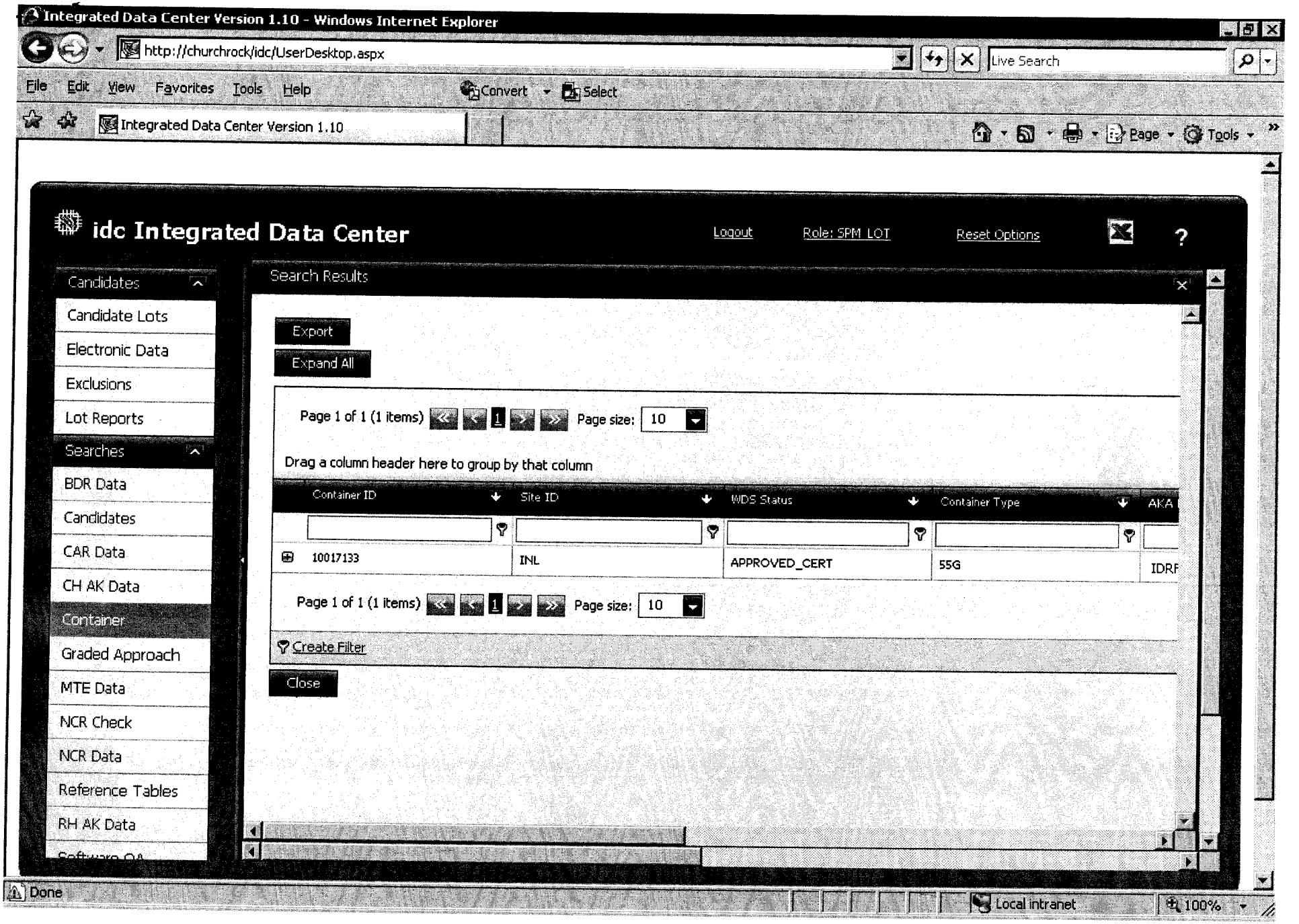
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File Edit View Favorites Tools Help
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Integrated Data Center Version 1.10
Page Tools
idc Integrated Data Center
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Role: SPM_LOT
Reset Options
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Candidates
Candidate Lots
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Exclusions
Lot Reports
Searches
BDR Data
Candidates
CAR Data
CH AK Data
Container
Graded Approach
MTE Data
NCR Check
NCR Data
Reference Tables
RH AK Data
Search Results
Export
Expand All
Page 1 of 1 (1 items) 1 Page size: 10
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Container ID
Site ID
WDS Status
Container Type
AKA
10017133
INL
APPROVED_CERT
55G
IDRF
Page 1 of 1 (1 items) 1 Page size: 10
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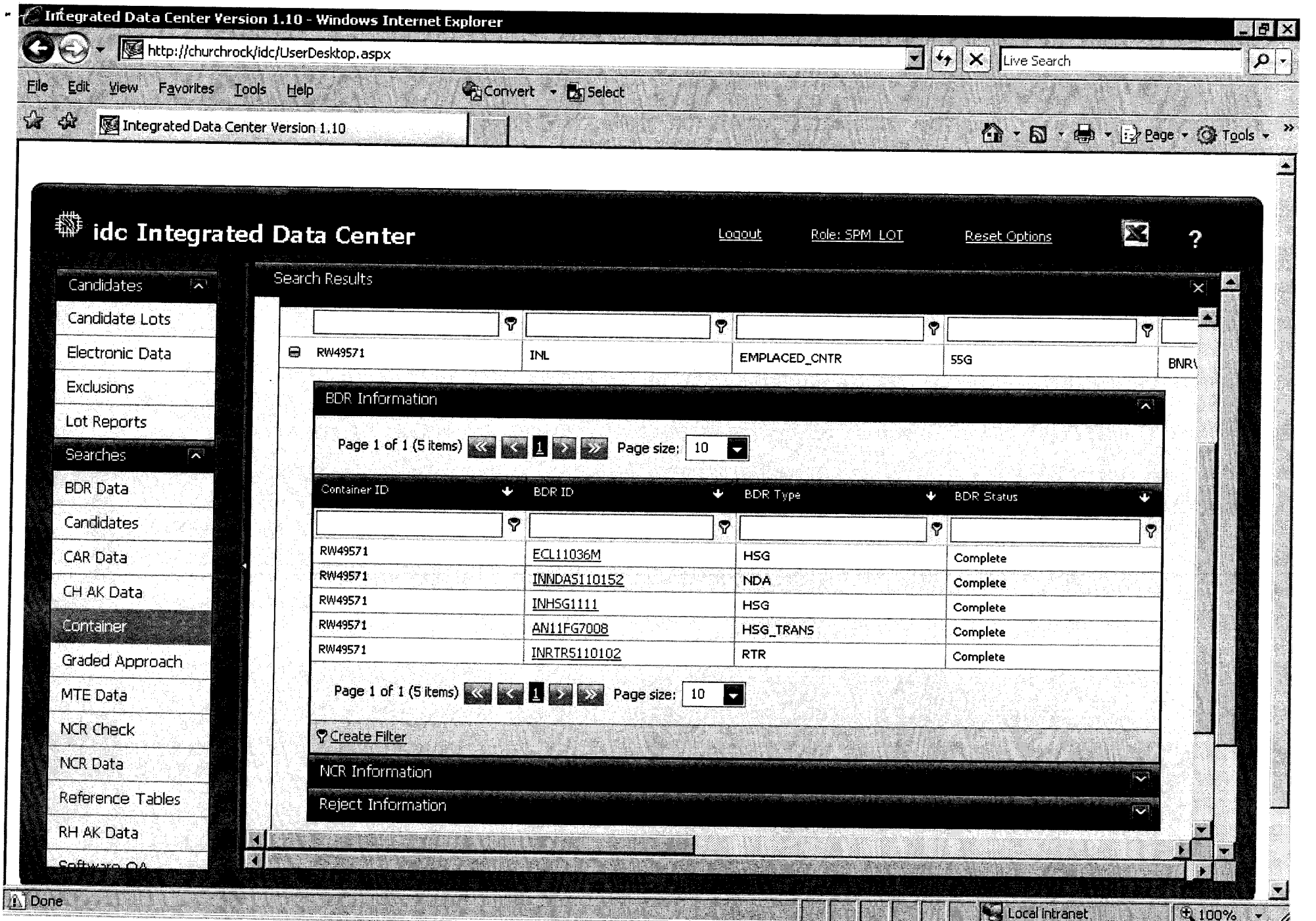
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File Edit View Favorites Tools Help
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Page Tools
idc Integrated Data Center
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Role: SPM_LOT
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Exclusions
Lot Reports
Searches
BDR Data
Candidates
CAR Data
CH AK Data
Container
Graded Approach
MTE Data
NCR Check
NCR Data
Reference Tables
RH AK Data
Search Results
RW49571 INL EMPLACED_CNTR 55G
BDR Information
Page 1 of 1 (5 items) 1 Page size: 10
Container ID BDR ID BDR Type BDR Status
RW49571 ECL11036M HSG Complete
RW49571 INNDAS110152 NDA Complete
RW49571 INHSG1111 HSG Complete
RW49571 AN11FG7008 HSG_TRANS Complete
RW49571 INRTR5110102 RTR Complete
Page 1 of 1 (5 items) 1 Page size: 10
Create Filter
NCR Information
Reject Information
Done
Local intranet
100%

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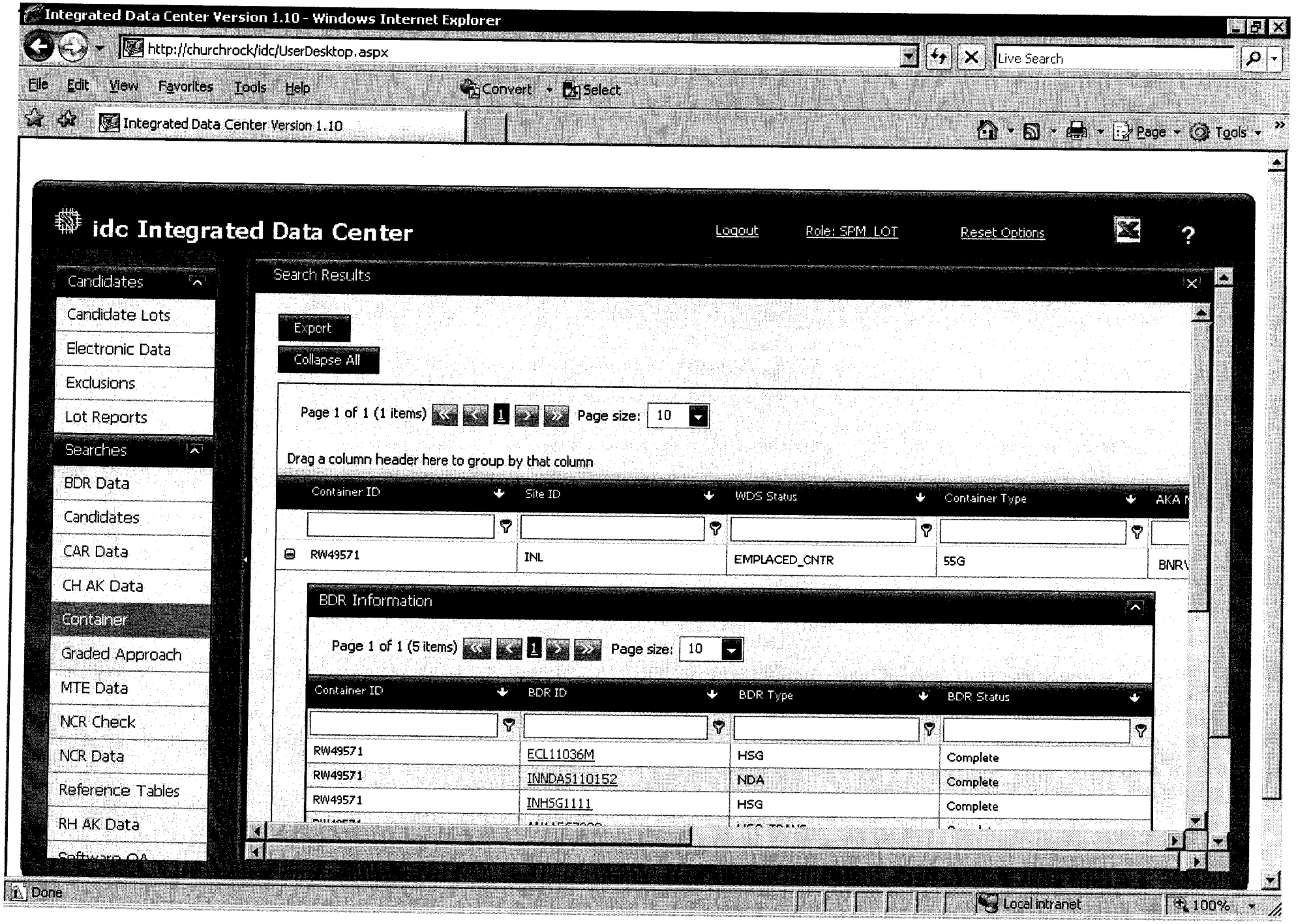
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Candidate Lots
Electronic Data
Exclusions
Lot Reports
Searches
BDR Data
Candidates
CAR Data
CH AK Data
Container
Graded Approach
MTE Data
NCR Check
NCR Data
Reference Tables
RH AK Data
Search Results
Export
Collapse All
Page 1 of 1 (1 items) 1 Page size: 10
Drag a column header here to group by that column
Container ID
Site ID
WDS Status
Container Type
RW49571
INL
EMPLACED_CNTR
55G
BDR Information
Page 1 of 1 (5 items) 1 Page size: 10
Container ID
BDR ID
BDR Type
BDR Status
RW49571 ECL11036M HSG Complete
RW49571 INNDAS110152 NDA Complete
RW49571 INHSG1111 HSG Complete
Done
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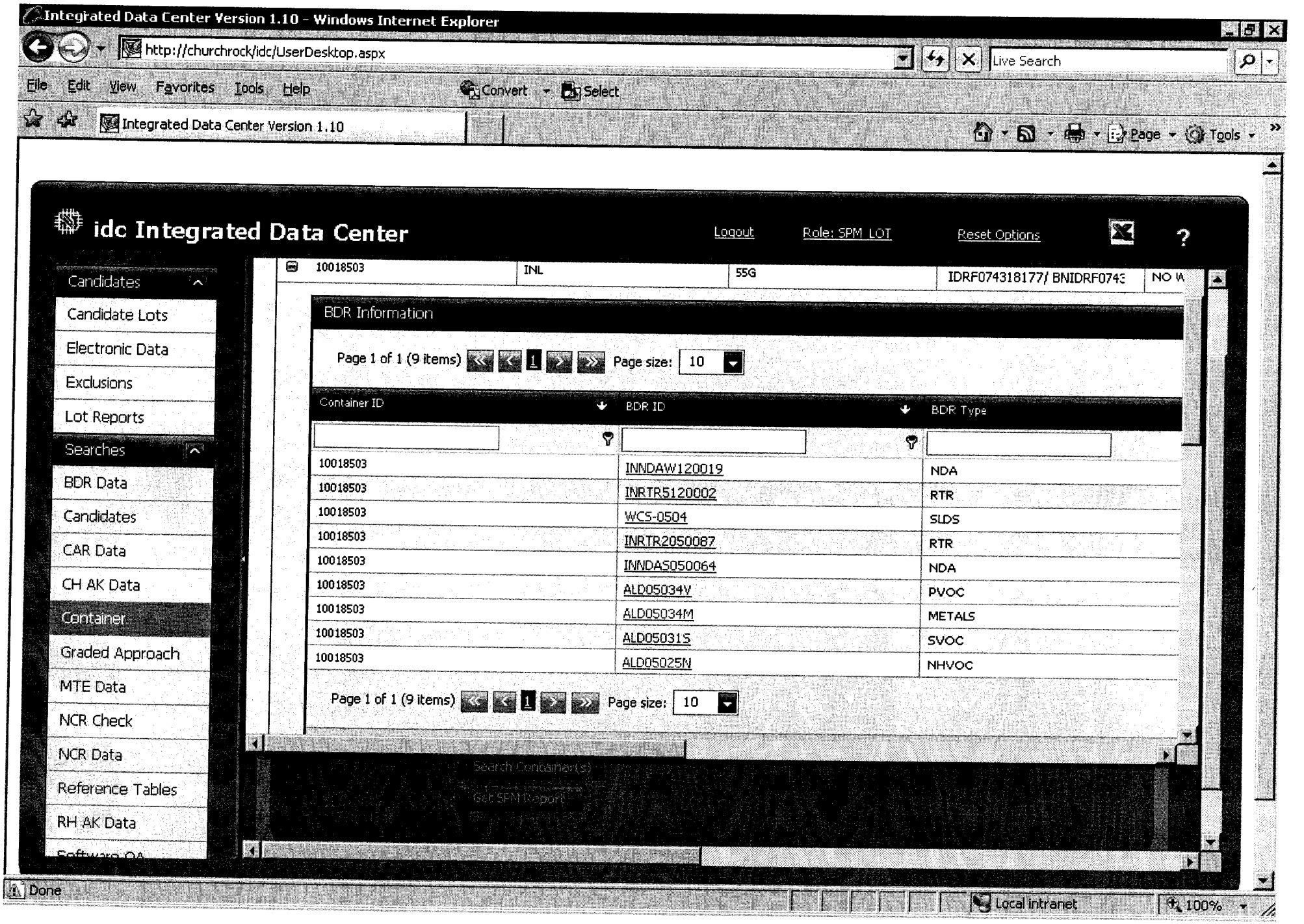
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Reset Options
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Candidate Lots
Electronic Data
Exclusions
Lot Reports
Searches
BDR Data
Candidates
CAR Data
CH AK Data
Container
Graded Approach
MTE Data
NCR Check
NCR Data
Reference Tables
RH AK Data
10018503
INL
55G
IDRF074318177/ BNIDRF074
BDR Information
Page 1 of 1 (9 items)
Page size: 10
Container ID
BDR ID
BDR Type
10018503 INNDAW120019 NDA
10018503 INRTR5120002 RTR
10018503 WCS-0504 SLDS
10018503 INRTR2050087 RTR
10018503 INNDAS050064 NDA
10018503 ALD05034V PVOC
10018503 ALD05034M METALS
10018503 ALD05031S SVOC
10018503 ALD05025N NHVOC
Page 1 of 1 (9 items)
Page size: 10
Search Container(s)
Get SPM Report
Done
Local intranet
100%

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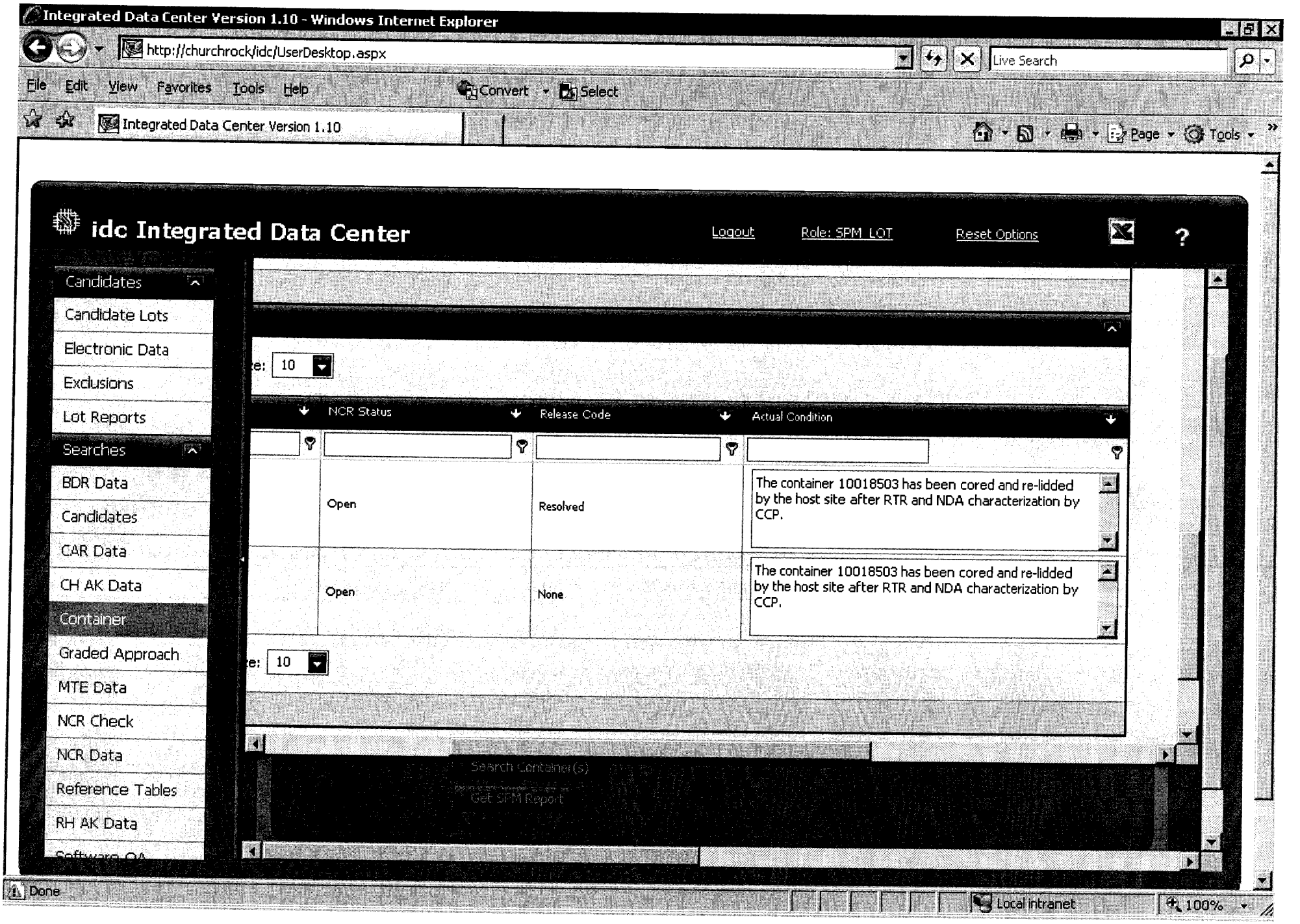
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Page Tools
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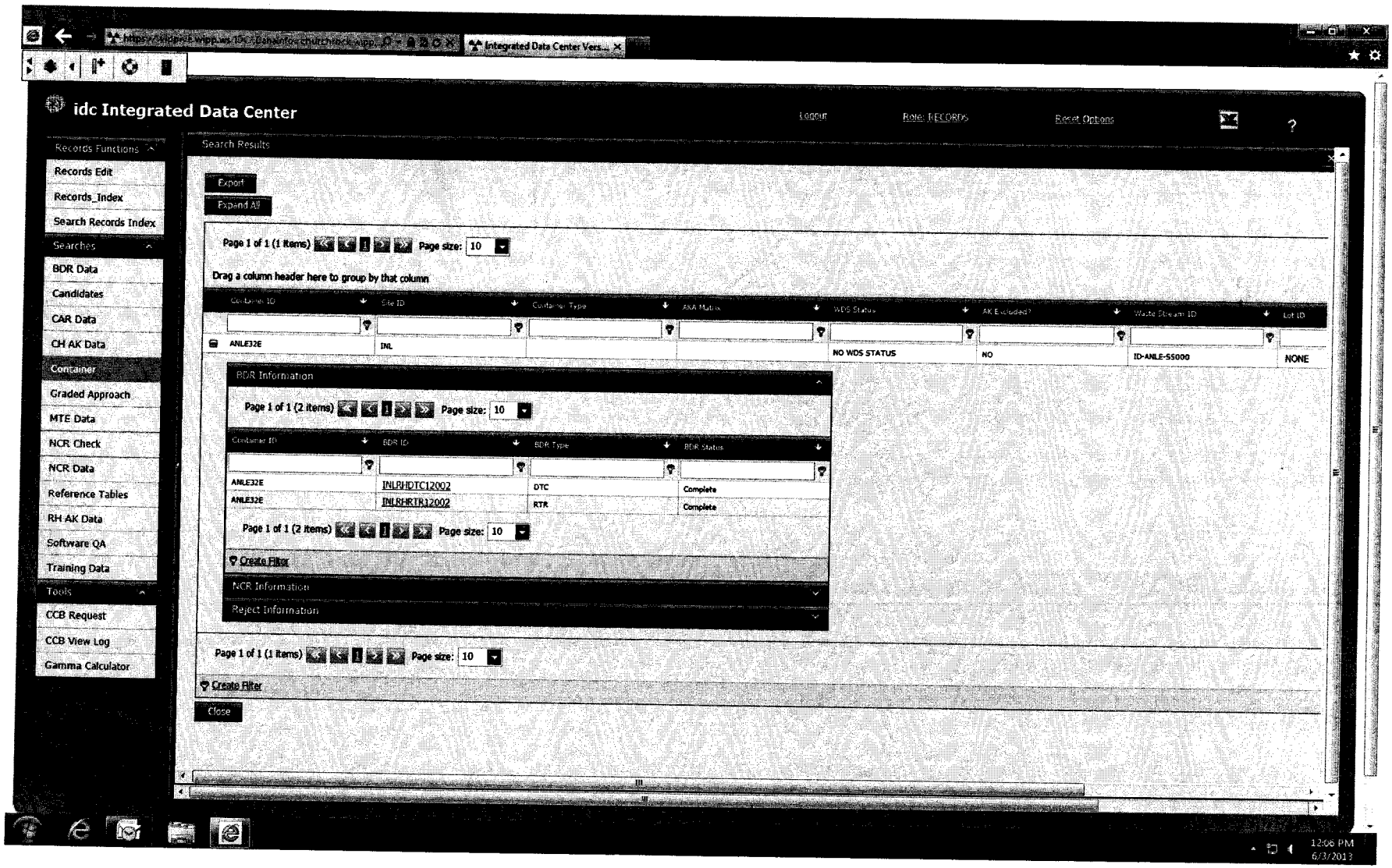
Logout
Role: SPM_LOT
Reset Options
Candidates
Candidate Lots
Electronic Data
Exclusions
Lot Reports
Searches
BDR Data
Candidates
CAR Data
CH AK Data
Container
Graded Approach
MTE Data
NCR Check
NCR Data
Reference Tables
RH AK Data
10
NCR Status
Release Code
Actual Condition
Open
Resolved
The container 10018503 has been cored and re-lidded by the host site after RTR and NDA characterization by CCP.
Open
None
The container 10018503 has been cored and re-lidded by the host site after RTR and NDA characterization by CCP.
10
Search Container(s)
Get SPM Report
Done
Local intranet
100%

DIVIDER PAGE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Logout
Role: RECORDS
Reset Options
Records Functions
Records Edit
Records_Index
Search Records Index
Searches
BDR Data
Candidates
CAR Data
CH AK Data
Container
Graded Approach
MTE Data
NCR Check
NCR Data
Reference Tables
RH AK Data
Software QA
Training Data
Tools
CCB Request
CCB View Log
Gamma Calculator
Search Results
Export
Expand All
Page 1 of 1 (1 items) Page size: 10
Drag a column header here to group by that column
Container ID
Site ID
Container Type
AKA Matrix
WDS Status
AK Excluded?
Waste Stream ID
Lot ID
ANLE32E
INL
NO WDS STATUS
NO
ID-ANLE-55000
NONE
BDR Information
Page 1 of 1 (2 items) Page size: 10
Container ID
BDR ID
BDR Type
BDR Status
ANLE32E
INLRHDTC12002
DTC
Complete
ANLE32E
INLRHRTR12002
RTR
Complete
Page 1 of 1 (2 items) Page size: 10
Create Filter
NCR Information
Reject Information
Page 1 of 1 (1 items) Page size: 10
Create Filter
Close
12:06 PM
6/3/2013

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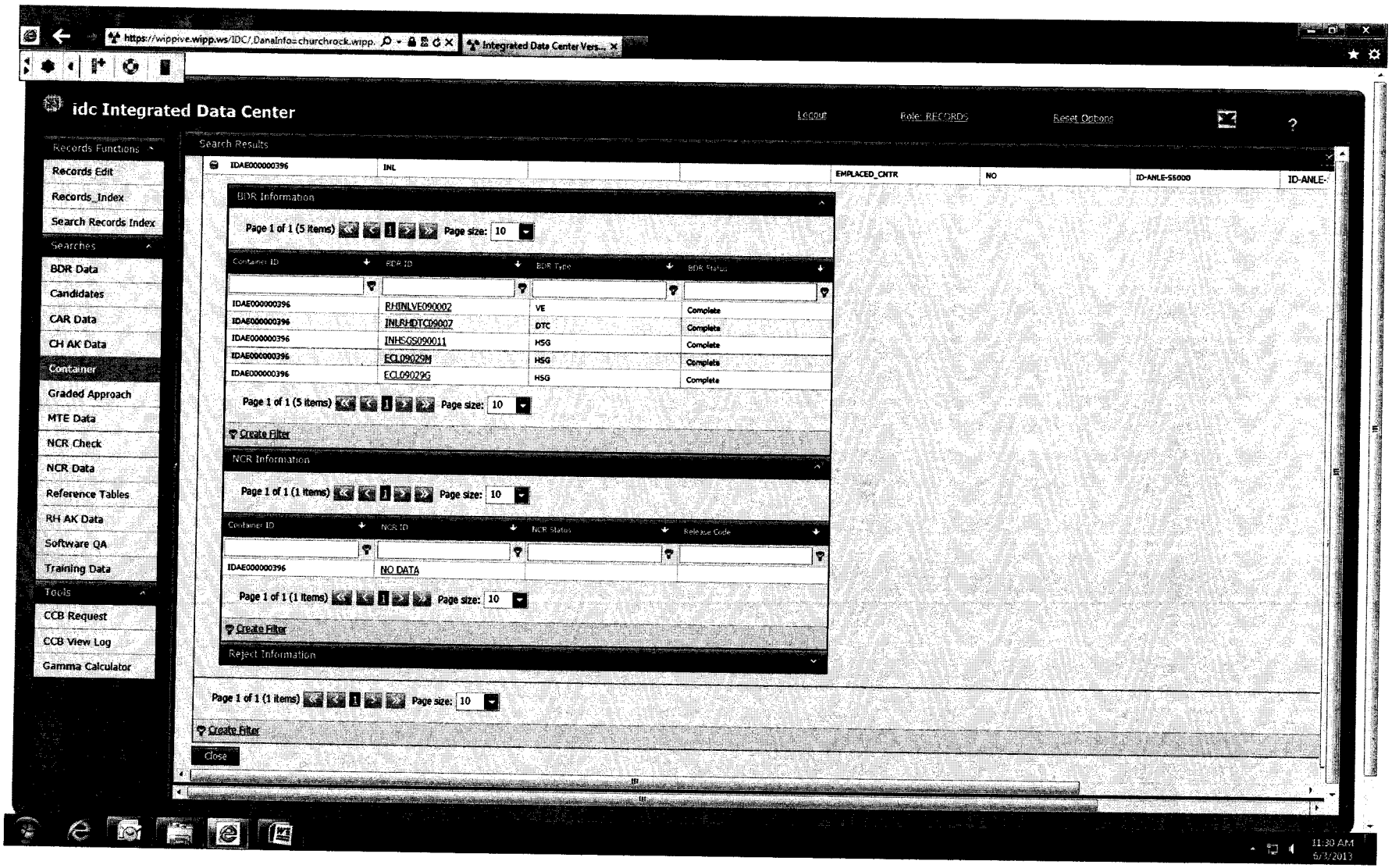
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Role: RECORDS
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Records_Index
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CAR Data
CH AK Data
Container
Graded Approach
MTE Data
NCR Check
NCR Data
Reference Tables
RH AK Data
Software QA
Training Data
Tools
CCB Request
CCB View Log
Gamma Calculator
Search Results
IDAE000000396
INL
EMPLACED_CNTR
NO
ID-ANLE-SS000
BDR Information
Page 1 of 1 (5 items)
Page size: 10
Container ID
BDR ID
BDR Type
BDR Status
IDAE000000396
RHINLVE090002
VE
Complete
IDAE000000396
INLRHDTC09007
DTC
Complete
IDAE000000396
INHSGS090011
HSG
Complete
IDAE000000396
ECL09029M
HSG
Complete
IDAE000000396
ECL09029G
HSG
Complete
Create Filter
NCR Information
Page 1 of 1 (1 items)
Page size: 10
Container ID
NCR ID
NCR Status
Release Code
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NO DATA
Reject Information
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6/3/2013

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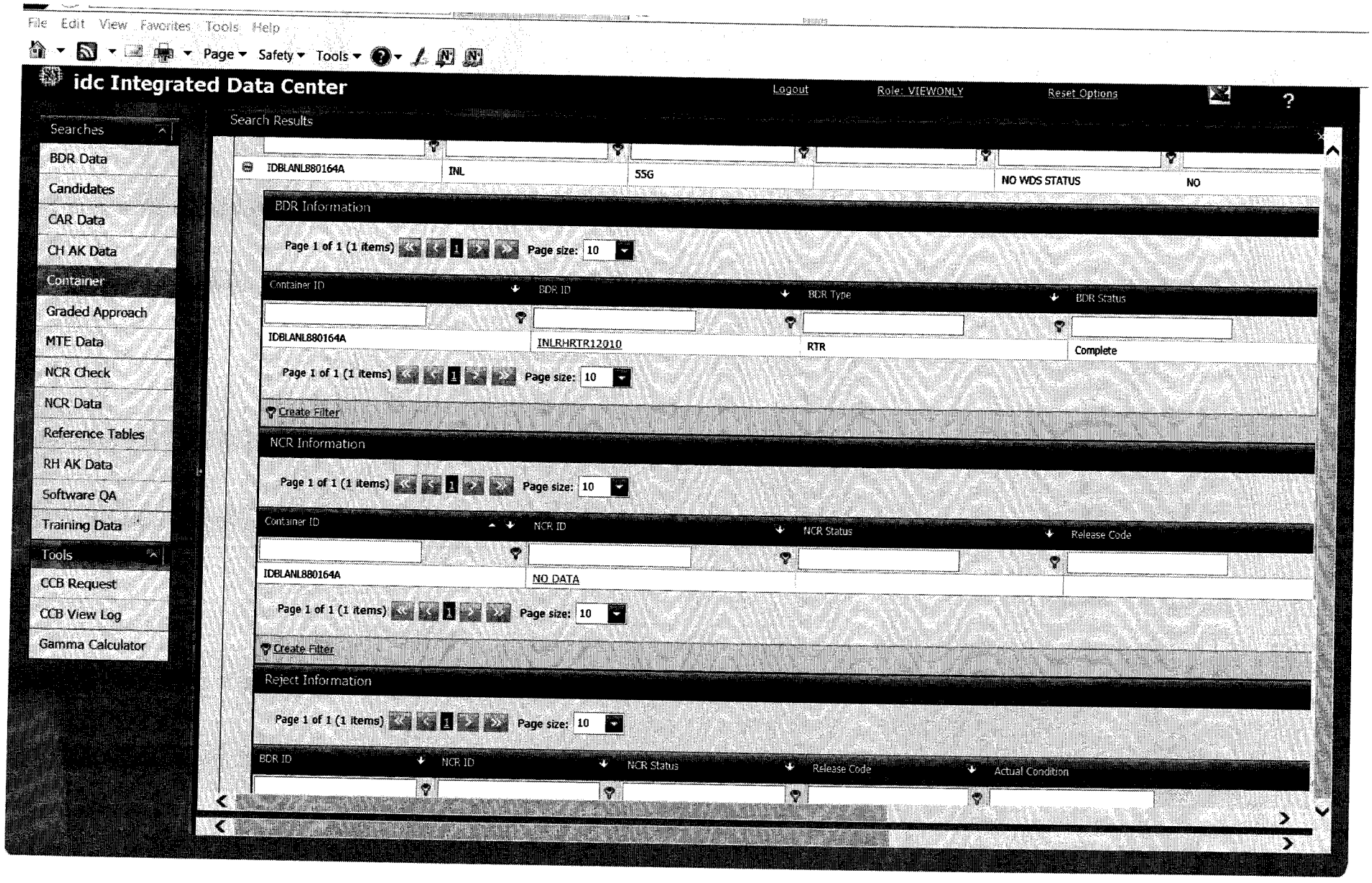
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CH AK Data
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MTE Data
NCR Check
NCR Data
Reference Tables
RH AK Data
Software QA
Training Data
Tools
CCB Request
CCB View Log
Gamma Calculator
Search Results
IDBLANL880164A
INL
55G
NO WDS STATUS
NO
BDR Information
Page 1 of 1 (1 items)
Page size: 10
Container ID
BDR ID
BDR Type
BDR Status
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INLRHRTR12010
RTR
Complete
Create Filter
NCR Information
Container ID
NCR ID
NCR Status
Release Code
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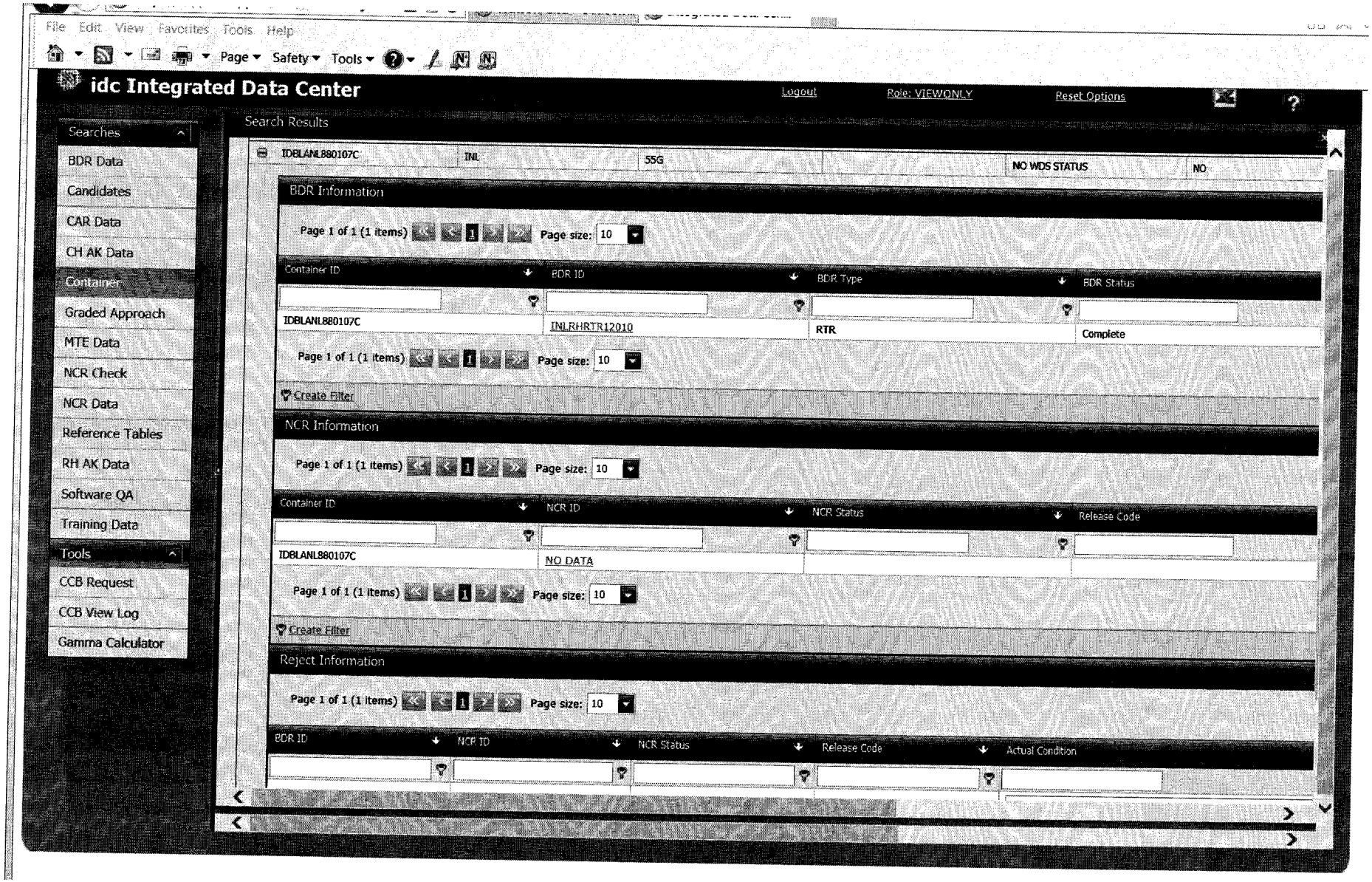
NO DATA
Reject Information
BDR ID
NCR ID
NCR Status
Release Code
Actual Condition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Searches
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CH AK Data
Container
Graded Approach
MTE Data
NCR Check
NCR Data
Reference Tables
RH AK Data
Software QA
Training Data
Tools
CCB Request
CCB View Log
Gamma Calculator
Search Results
IDBLANL880107C
INL
55G
NO WDS STATUS
NO
BDR Information
Page 1 of 1 (1 items)
Page size: 10
Container ID
BDR ID
BDR Type
BDR Status
IDBLANL880107C
INLRHRTR12010
RTR
Complete
Create Filter
NCR Information
Container ID
NCR ID
NCR Status
Release Code
IDBLANL880107C
NO DATA
Reject Information
BDR ID
NCR ID
NCR Status
Release Code
Actual Condition

AK25

	A	B	C	D	E	F	G	I	J
1	CONTAINERID	CONTAINER_TYPE	WDS_STATUS	DISPOSAL_DATE	WASTESTREAM	AK_REPORT	WASTE_MATRIX_CODE	CLOSUREDATE	VENTDATE
2	ARP60021	55G	EMPLACED_CNTR	9/16/2011 12:51	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/27/2011	4/27/2011
3	ARP60025	55G	EMPLACED_CNTR	9/18/2011 12:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/26/2011	4/26/2011
4	ARP60026	55G	EMPLACED_CNTR	9/18/2011 12:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/5/2011	5/5/2011
5	ARP60027	55G	EMPLACED_CNTR	9/18/2011 12:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/26/2011	4/26/2011
6	ARP60028	55G	EMPLACED_CNTR	8/28/2011 9:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/26/2011	4/26/2011
7	ARP60029	55G	EMPLACED_CNTR	9/15/2011 19:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/4/2011	5/4/2011
8	ARP60030	55G	EMPLACED_CNTR	9/18/2011 9:51	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/4/2011	5/4/2011
9	ARP27708	55G	EMPLACED_CNTR	9/21/2011 19:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/9/2011	6/9/2011
10	ARP27709	55G	EMPLACED_CNTR	9/12/2011 19:37	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/8/2011	6/8/2011
11	ARP27711	55G	EMPLACED_CNTR	9/18/2011 9:51	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/9/2011	6/9/2011
12	ARP27713	55G	EMPLACED_CNTR	9/18/2011 9:51	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/13/2011	6/13/2011
13	ARP27718	55G	EMPLACED_CNTR	9/19/2011 20:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/9/2011	6/9/2011
14	10173774	83GOP			ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/28/2005	4/28/2005
15	10182393	83GOP			ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/17/2006	5/17/2006
16	10182396	83GOP			ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/27/2005	10/27/2005
17	10259652	83GOP			ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/11/2007	12/11/2007
18	10260124	83GOP			ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/15/2008	10/15/2008
19	10278001	83GOP			ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/6/2007	12/6/2007
20	ARP00003		EMPLACED_CNTR	7/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/2/2005	2/2/2005
21	ARP00004		EMPLACED_CNTR	7/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/10/2005	2/10/2005
22	ARP00006		EMPLACED_CNTR	9/10/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/26/2005	1/26/2005
23	ARP00008		EMPLACED_CNTR	2/10/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/26/2005	1/26/2005
24	ARP00009		EMPLACED_CNTR	6/14/2010 20:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/10/2005	2/10/2005
25	ARP00010		EMPLACED_CNTR	11/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/25/2005	1/25/2005
26	ARP00011		EMPLACED_CNTR	7/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/2/2005	2/2/2005
27	ARP00013		EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/24/2005	1/24/2005
28	ARP00014	55G	EMPLACED_CNTR	11/17/2010 22:47	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/24/2005	1/24/2005
29	ARP00016		EMPLACED_CNTR	10/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/29/2005	1/29/2005
30	ARP00019		EMPLACED_CNTR	10/11/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/1/2005	2/1/2005
31	ARP00020		EMPLACED_CNTR	7/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/1/2005	2/1/2005
32	ARP00023		EMPLACED_CNTR	2/24/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/28/2005	1/28/2005
33	ARP00025		EMPLACED_CNTR	10/23/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/28/2005	1/28/2005
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36	ARP00028		EMPLACED_CNTR	2/25/2012 14:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/22/2005	2/22/2005
37	ARP00029		EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/2/2005	2/2/2005
38	ARP00032		EMPLACED_CNTR	10/15/2009 13:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/2/2005	2/2/2005
39	ARP00034		EMPLACED_CNTR	11/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/29/2005	1/29/2005

	A	B	C	D	E	F	G	I	J
40	ARP00035		EMPLACED_CNTR	2/5/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/24/2005	1/24/2005
41	ARP00036		EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/26/2005	1/26/2005
42	ARP00039	55G	EMPLACED_CNTR	8/31/2010 21:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/28/2005	2/28/2005
43	ARP00040		EMPLACED_CNTR	7/22/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/7/2005	2/7/2005
44	ARP00044		EMPLACED_CNTR	11/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/2/2005	2/2/2005
45	ARP00045		EMPLACED_CNTR	7/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/7/2005	2/7/2005
46	ARP00049		EMPLACED_CNTR	6/14/2010 20:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/27/2005	1/27/2005
47	ARP00050		EMPLACED_CNTR	6/29/2011 0:18	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/27/2005	3/27/2005
48	ARP00054		EMPLACED_CNTR	10/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/29/2005	1/29/2005
49	ARP00055		EMPLACED_CNTR	11/18/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/27/2005	1/27/2005
50	ARP00056		EMPLACED_CNTR	10/23/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/25/2005	1/25/2005
51	ARP00057		EMPLACED_CNTR	11/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/28/2005	1/28/2005
52	ARP00058		EMPLACED_CNTR	3/3/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/25/2005	1/25/2005
53	ARP00059		EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/25/2005	1/25/2005
54	ARP00060	55G	EMPLACED_CNTR	11/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/28/2005	1/28/2005
55	ARP00061		EMPLACED_CNTR	10/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/26/2005	1/26/2005
56	ARP00065	55G	EMPLACED_CNTR	10/23/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/21/2005	2/21/2005
57	ARP00068	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/2/2005	3/2/2005
58	ARP00069	55G	EMPLACED_CNTR	9/3/2009 22:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/1/2005	3/1/2005
59	ARP00071		EMPLACED_CNTR	10/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/20/2005	2/20/2005
60	ARP00074		EMPLACED_CNTR	7/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/10/2005	2/10/2005
61	ARP00077		EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/26/2005	1/26/2005
62	ARP00081	55G	EMPLACED_CNTR	11/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/2/2005	3/2/2005
63	ARP00082	55G	EMPLACED_CNTR	10/8/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/17/2005	3/17/2005
64	ARP00085		EMPLACED_CNTR	11/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/23/2005	1/23/2005
65	ARP00086	55G	EMPLACED_CNTR	11/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/25/2005	2/25/2005
66	ARP00087	55G	EMPLACED_CNTR	2/5/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/18/2005	2/18/2005
67	ARP00088	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/20/2005	2/20/2005
68	ARP00095	55G	EMPLACED_CNTR	6/24/2010 19:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/6/2005	3/6/2005
69	ARP00100	55G	EMPLACED_CNTR	10/23/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/23/2005	3/23/2005
70	ARP00103	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/14/2005	3/14/2005
71	ARP00106	55G	EMPLACED_CNTR	2/5/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/13/2005	3/13/2005
72	ARP00109	55G	EMPLACED_CNTR	11/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/15/2005	3/15/2005
73	ARP00112		EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/3/2005	2/3/2005
74	ARP00114	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/19/2005	2/19/2005
75	ARP00115	55G	EMPLACED_CNTR	11/18/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/20/2005	2/20/2005
76	ARP00116	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/15/2005	3/15/2005
77	ARP00120		EMPLACED_CNTR	6/17/2010 19:04	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/18/2005	2/18/2005
78	ARP00136		EMPLACED_CNTR	11/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/19/2005	2/19/2005

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79	ARP00144		EMPLACED_CNTR	10/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/27/2005	8/27/2005
80	ARP00145		EMPLACED_CNTR	2/10/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/23/2005	8/23/2005
81	ARP00158	55G	EMPLACED_CNTR	2/5/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/21/2005	2/21/2005
82	ARP00163		EMPLACED_CNTR	11/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/16/2005	3/16/2005
83	ARP00183	55G	EMPLACED_CNTR	3/3/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/16/2005	3/16/2005
84	ARP00184	55G	EMPLACED_CNTR	10/29/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/14/2005	3/14/2005
85	ARP00185		EMPLACED_CNTR	11/8/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/23/2005	2/23/2005
86	ARP00186		EMPLACED_CNTR	2/24/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/21/2005	2/21/2005
87	ARP00194		EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/1/2005	2/1/2005
88	ARP00195		EMPLACED_CNTR	2/23/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/3/2005	2/3/2005
89	ARP00198		EMPLACED_CNTR	10/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/28/2005	8/28/2005
90	ARP00217		EMPLACED_CNTR	9/12/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/10/2005	2/10/2005
91	ARP00218		EMPLACED_CNTR	10/23/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/13/2005	2/13/2005
92	ARP00219		EMPLACED_CNTR	10/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/23/2005	2/23/2005
93	ARP00220		EMPLACED_CNTR	7/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/12/2005	2/12/2005
94	ARP00221		EMPLACED_CNTR	7/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/8/2005	2/8/2005
95	ARP00222		EMPLACED_CNTR	2/23/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/25/2005	1/25/2005
96	ARP00223		EMPLACED_CNTR	2/23/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/2/2005	2/2/2005
97	ARP00225		EMPLACED_CNTR	9/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/2/2005	2/2/2005
98	ARP00226		EMPLACED_CNTR	10/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/27/2005	1/27/2005
99	ARP00228		EMPLACED_CNTR	2/24/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/28/2005	1/28/2005
100	ARP00230	55G	EMPLACED_CNTR	10/23/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/28/2005	1/28/2005
101	ARP00231		EMPLACED_CNTR	9/10/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/2/2005	2/2/2005
102	ARP00232		EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/10/2005	2/10/2005
103	ARP00234		EMPLACED_CNTR	10/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/29/2005	1/29/2005
104	ARP00235		EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/29/2005	1/29/2005
105	ARP00237		EMPLACED_CNTR	2/25/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/5/2005	2/5/2005
106	ARP00238		EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/12/2005	2/12/2005
107	ARP00239	55G	EMPLACED_CNTR	7/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/2/2005	2/2/2005
108	ARP00242		EMPLACED_CNTR	4/26/2010 18:42	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/25/2005	1/25/2005
109	ARP00243		EMPLACED_CNTR	7/22/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/26/2005	1/26/2005
110	ARP00263		EMPLACED_CNTR	10/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/12/2005	3/12/2005
111	ARP00265		EMPLACED_CNTR	2/24/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/9/2005	3/9/2005
112	ARP00268		EMPLACED_CNTR	6/17/2010 19:04	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/13/2005	3/13/2005
113	ARP00272	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/25/2005	3/25/2005
114	ARP00274	55G	EMPLACED_CNTR	2/5/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/6/2005	3/6/2005
115	ARP00297		EMPLACED_CNTR	5/11/2010 19:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/31/2005	7/31/2005
116	ARP00332		EMPLACED_CNTR	7/22/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/28/2005	4/28/2005
117	ARP00344	55G	EMPLACED_CNTR	11/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/15/2005	4/15/2005

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118	ARP00346	55G	EMPLACED_CNTR	10/4/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/27/2005	4/27/2005
119	ARP00349	55G	EMPLACED_CNTR	4/18/2012 15:02	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/28/2005	4/28/2005
120	ARP00362	55G	EMPLACED_CNTR	10/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/8/2005	4/8/2005
121	ARP00384	55G	EMPLACED_CNTR	11/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/8/2005	4/8/2005
122	ARP00385	55G	EMPLACED_CNTR	11/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/20/2005	4/20/2005
123	ARP00388	55G	EMPLACED_CNTR	10/23/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/28/2005	4/28/2005
124	ARP00393		EMPLACED_CNTR	10/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/27/2005	3/27/2005
125	ARP00398		EMPLACED_CNTR	6/15/2010 21:58	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/27/2005	4/27/2005
126	ARP00427	55G	EMPLACED_CNTR	10/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/24/2005	3/24/2005
127	ARP00429	55G	EMPLACED_CNTR	9/2/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/24/2005	3/24/2005
128	ARP00431		EMPLACED_CNTR	9/2/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/25/2005	3/25/2005
129	ARP00434	55G	EMPLACED_CNTR	10/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/24/2005	3/24/2005
130	ARP00501		EMPLACED_CNTR	9/12/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/18/2005	9/18/2005
131	ARP00516	55G	EMPLACED_CNTR	8/31/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/11/2005	4/11/2005
132	ARP00519		EMPLACED_CNTR	8/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/11/2005	4/11/2005
133	ARP00525	55G	EMPLACED_CNTR	9/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/28/2005	4/28/2005
134	ARP00528	55G	EMPLACED_CNTR	8/30/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/11/2005	4/11/2005
135	ARP00543	55G	EMPLACED_CNTR	9/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/7/2005	4/7/2005
136	ARP00550	55G	EMPLACED_CNTR	8/31/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/7/2005	4/7/2005
137	ARP00555	55G	EMPLACED_CNTR	2/3/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/8/2005	4/8/2005
138	ARP00556	55G	EMPLACED_CNTR	8/29/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/8/2005	4/8/2005
139	ARP00564	55G	EMPLACED_CNTR	10/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/8/2005	4/8/2005
140	ARP00567	55G	EMPLACED_CNTR	10/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/7/2005	4/7/2005
141	ARP00571	55G	EMPLACED_CNTR	10/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/8/2005	4/8/2005
142	ARP00585		EMPLACED_CNTR	6/29/2011 0:18	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/28/2005	7/28/2005
143	ARP00592		EMPLACED_CNTR	10/12/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/29/2005	7/29/2005
144	ARP00617	55G	EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/29/2007	1/29/2007
145	ARP00618	55G	EMPLACED_CNTR	7/23/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/29/2007	1/29/2007
146	ARP00619	55G	EMPLACED_CNTR	8/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/29/2007	1/29/2007
147	ARP00621	55G	EMPLACED_CNTR	5/20/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/30/2007	1/30/2007
148	ARP00623	55G	EMPLACED_CNTR	7/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/29/2007	1/29/2007
149	ARP00625	55G	EMPLACED_CNTR	9/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/29/2007	1/29/2007
150	ARP00702	55G	EMPLACED_CNTR	9/20/2010 22:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/18/2005	9/18/2005
151	ARP00722		EMPLACED_CNTR	9/14/2009 20:06	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/7/2005	10/7/2005
152	ARP00735	55G	EMPLACED_CNTR	10/12/2010 21:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/17/2005	9/17/2005
153	ARP00796		EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/8/2005	10/8/2005
154	ARP00808		EMPLACED_CNTR	10/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/24/2005	10/24/2005
155	ARP00826		EMPLACED_CNTR	8/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/26/2005	10/26/2005
156	ARP00842		EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/26/2005	10/26/2005

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157	ARP00894		EMPLACED_CNTR	10/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/25/2005	10/25/2005
158	ARP00896		EMPLACED_CNTR	7/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/26/2005	10/26/2005
159	ARP00920		EMPLACED_CNTR	7/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/2/2005	11/2/2005
160	ARP01075		EMPLACED_CNTR	10/4/2009 10:01	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/12/2006	4/12/2006
161	ARP01116		EMPLACED_CNTR	7/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/11/2006	5/11/2006
162	ARP01129		EMPLACED_CNTR	10/29/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/31/2006	5/31/2006
163	ARP01140		EMPLACED_CNTR	10/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/5/2006	6/5/2006
164	ARP01143		EMPLACED_CNTR	9/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/30/2006	5/30/2006
165	ARP01147		EMPLACED_CNTR	7/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/30/2006	5/30/2006
166	ARP01150	55G	EMPLACED_CNTR	5/24/2011 19:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/1/2006	6/1/2006
167	ARP01158		EMPLACED_CNTR	10/4/2009 10:38	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/1/2006	6/1/2006
168	ARP01191		EMPLACED_CNTR	10/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/30/2006	5/30/2006
169	ARP01203		EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/23/2006	5/23/2006
170	ARP01212		EMPLACED_CNTR	7/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/24/2006	5/24/2006
171	ARP01218		EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/23/2006	5/23/2006
172	ARP01220		EMPLACED_CNTR	7/22/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/23/2006	5/23/2006
173	ARP01226		EMPLACED_CNTR	7/22/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/23/2006	5/23/2006
174	ARP01235		EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/23/2006	5/23/2006
175	ARP01263		EMPLACED_CNTR	7/22/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/13/2006	4/13/2006
176	ARP01269	55G	EMPLACED_CNTR	7/1/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/22/2008	4/22/2008
177	ARP01270		EMPLACED_CNTR	7/22/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/13/2006	4/13/2006
178	ARP01277		EMPLACED_CNTR	8/29/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/11/2006	4/11/2006
179	ARP01319		EMPLACED_CNTR	6/14/2010 20:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/7/2006	6/7/2006
180	ARP01331		EMPLACED_CNTR	7/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/23/2006	8/23/2006
181	ARP01353		EMPLACED_CNTR	10/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/12/2006	6/12/2006
182	ARP01394		EMPLACED_CNTR	9/2/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/13/2006	6/13/2006
183	ARP01398		EMPLACED_CNTR	7/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/13/2006	6/13/2006
184	ARP01407	55G	EMPLACED_CNTR	7/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/15/2007	1/15/2007
185	ARP01408	55G	EMPLACED_CNTR	6/24/2010 19:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/17/2007	1/17/2007
186	ARP01431		EMPLACED_CNTR	9/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/26/2006	6/26/2006
187	ARP01435		EMPLACED_CNTR	7/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/19/2006	6/19/2006
188	ARP01448	55G	EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/29/2007	1/29/2007
189	ARP01450		EMPLACED_CNTR	7/22/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/23/2006	6/23/2006
190	ARP01458		EMPLACED_CNTR	10/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/19/2006	6/19/2006
191	ARP01471		EMPLACED_CNTR	8/31/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/16/2006	8/16/2006
192	ARP01472		EMPLACED_CNTR	8/30/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/16/2006	8/16/2006
193	ARP01473		EMPLACED_CNTR	10/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/15/2006	8/15/2006
194	ARP01474		EMPLACED_CNTR	6/29/2011 0:18	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/16/2006	8/16/2006
195	ARP01477		EMPLACED_CNTR	8/30/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/14/2006	8/14/2006

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196	ARP01475		EMPLACED_CNTR	9/12/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/15/2006	8/15/2006
197	ARP01483		EMPLACED_CNTR	9/12/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/16/2006	8/16/2006
198	ARP01486	55G	EMPLACED_CNTR	7/22/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/11/2007	1/11/2007
199	ARP01487	55G	EMPLACED_CNTR	9/20/2010 18:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/21/2006	8/21/2006
200	ARP01494		EMPLACED_CNTR	10/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/14/2006	8/14/2006
201	ARP01495		EMPLACED_CNTR	10/16/2009 9:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/14/2006	8/14/2006
202	ARP01507		EMPLACED_CNTR	9/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/21/2006	8/21/2006
203	ARP01513		EMPLACED_CNTR	8/30/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/16/2006	8/16/2006
204	ARP01516		EMPLACED_CNTR	6/17/2010 19:04	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/21/2006	8/21/2006
205	ARP01518		EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/15/2006	8/15/2006
206	ARP01521		EMPLACED_CNTR	7/22/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/22/2006	8/22/2006
207	ARP01538		EMPLACED_CNTR	10/11/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/14/2006	8/14/2006
208	ARP01557		EMPLACED_CNTR	10/12/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/8/2006	8/8/2006
209	ARP01571		EMPLACED_CNTR	8/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/8/2006	8/8/2006
210	ARP01573		EMPLACED_CNTR	8/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/8/2006	8/8/2006
211	ARP01580		EMPLACED_CNTR	8/31/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/7/2006	8/7/2006
212	ARP01598		EMPLACED_CNTR	8/31/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/16/2006	8/16/2006
213	ARP01599		EMPLACED_CNTR	9/2/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/17/2006	8/17/2006
214	ARP01633		EMPLACED_CNTR	7/22/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/6/2006	7/6/2006
215	ARP01646		EMPLACED_CNTR	10/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/2/2006	8/2/2006
216	ARP01647		EMPLACED_CNTR	10/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/2/2006	8/2/2006
217	ARP01648		EMPLACED_CNTR	8/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/2/2006	8/2/2006
218	ARP01655		EMPLACED_CNTR	8/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/6/2006	7/6/2006
219	ARP01660		EMPLACED_CNTR	10/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/2/2006	8/2/2006
220	ARP01809	55G	EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/5/2007	2/5/2007
221	ARP01810	55G	EMPLACED_CNTR	9/7/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/31/2007	1/31/2007
222	ARP01815	55G	EMPLACED_CNTR	7/30/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/5/2007	2/5/2007
223	ARP01821	55G	EMPLACED_CNTR	10/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/7/2007	2/7/2007
224	ARP01851	55G	EMPLACED_CNTR	7/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/5/2007	2/5/2007
225	ARP01865	55G	EMPLACED_CNTR	7/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/7/2007	2/7/2007
226	ARP01870	55G	EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/31/2007	1/31/2007
227	ARP01912	55G	EMPLACED_CNTR	7/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/22/2007	1/22/2007
228	ARP01913	55G	EMPLACED_CNTR	7/30/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/22/2007	1/22/2007
229	ARP01915	55G	EMPLACED_CNTR	7/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/23/2007	1/23/2007
230	ARP01916	55G	EMPLACED_CNTR	7/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/19/2007	1/19/2007
231	ARP01917	55G	EMPLACED_CNTR	7/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/22/2007	1/22/2007
232	ARP01919	55G	EMPLACED_CNTR	2/23/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/23/2007	1/23/2007
233	ARP01921	55G	EMPLACED_CNTR	7/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/24/2007	1/24/2007
234	ARP01922	55G	EMPLACED_CNTR	8/31/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/23/2007	1/23/2007

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235	ARP01925	55G	EMPLACED_CNTR	7/22/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/24/2007	1/24/2007
236	ARP01931	55G	EMPLACED_CNTR	9/2/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/31/2007	1/31/2007
237	ARP01932	55G	EMPLACED_CNTR	7/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/1/2007	2/1/2007
238	ARP01933	55G	EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/7/2007	2/7/2007
239	ARP01935	55G	EMPLACED_CNTR	2/23/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/23/2007	1/23/2007
240	ARP01940	55G	EMPLACED_CNTR	7/22/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/30/2007	1/30/2007
241	ARP01943	55G	EMPLACED_CNTR	7/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/7/2007	2/7/2007
242	ARP01945	55G	EMPLACED_CNTR	7/18/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/1/2007	2/1/2007
243	ARP01946	55G	EMPLACED_CNTR	3/15/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/1/2007	2/1/2007
244	ARP01948	55G	EMPLACED_CNTR	7/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/5/2007	2/5/2007
245	ARP01950	55G	EMPLACED_CNTR	7/30/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/1/2007	2/1/2007
246	ARP01951	55G	EMPLACED_CNTR	9/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/29/2007	1/29/2007
247	ARP01952	55G	EMPLACED_CNTR	10/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/30/2007	1/30/2007
248	ARP01953	55G	EMPLACED_CNTR	7/22/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/29/2007	1/29/2007
249	ARP01957	55G	EMPLACED_CNTR	7/22/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/30/2007	1/30/2007
250	ARP01979	55G	EMPLACED_CNTR	11/18/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/22/2007	1/22/2007
251	ARP01982	55G	EMPLACED_CNTR	11/18/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/19/2007	1/19/2007
252	ARP01984	55G	EMPLACED_CNTR	10/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/22/2007	1/22/2007
253	ARP01985	55G	EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/19/2007	1/19/2007
254	ARP01988	55G	EMPLACED_CNTR	7/22/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/30/2007	1/30/2007
255	ARP01990	55G	EMPLACED_CNTR	9/2/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/19/2007	1/19/2007
256	ARP01992	55G	EMPLACED_CNTR	7/22/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/30/2007	1/30/2007
257	ARP02012	55G	EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/18/2007	1/18/2007
258	ARP02013	55G	EMPLACED_CNTR	7/18/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/17/2007	1/17/2007
259	ARP02016	55G	EMPLACED_CNTR	7/22/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/15/2007	1/15/2007
260	ARP02048	55G	EMPLACED_CNTR	10/24/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/17/2007	1/17/2007
261	ARP02049	55G	EMPLACED_CNTR	7/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/17/2007	1/17/2007
262	ARP02106	55G	EMPLACED_CNTR	7/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/24/2007	1/24/2007
263	ARP02108	55G	EMPLACED_CNTR	10/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/5/2007	2/5/2007
264	ARP02111	55G	EMPLACED_CNTR	7/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/7/2007	2/7/2007
265	ARP02119	55G	EMPLACED_CNTR	7/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/24/2007	1/24/2007
266	ARP02124	55G	EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/22/2007	1/22/2007
267	ARP02145	55G	EMPLACED_CNTR	7/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/23/2007	1/23/2007
268	ARP02147	55G	EMPLACED_CNTR	7/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/31/2007	1/31/2007
269	ARP02148	55G	EMPLACED_CNTR	7/22/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/23/2007	1/23/2007
270	ARP02149	55G	EMPLACED_CNTR	7/18/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/1/2007	2/1/2007
271	ARP02151	55G	EMPLACED_CNTR	9/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/31/2007	1/31/2007
272	ARP02154	55G	EMPLACED_CNTR	7/30/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/31/2007	1/31/2007
273	ARP02155	55G	EMPLACED_CNTR	7/18/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/31/2007	1/31/2007

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274	ARP02175	55G	EMPLACED_CNTR	11/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/19/2007	1/19/2007
275	ARP02177	55G	EMPLACED_CNTR	7/22/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/19/2007	1/19/2007
276	ARP02178	55G	EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/18/2007	1/18/2007
277	ARP02186	55G	EMPLACED_CNTR	7/18/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/18/2007	1/18/2007
278	ARP02187	55G	EMPLACED_CNTR	7/22/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/18/2007	1/18/2007
279	ARP02188	55G	EMPLACED_CNTR	7/22/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/16/2007	1/16/2007
280	ARP02189	55G	EMPLACED_CNTR	10/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/16/2007	1/16/2007
281	ARP02190	55G	EMPLACED_CNTR	7/22/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/16/2007	1/16/2007
282	ARP02191	55G	EMPLACED_CNTR	9/23/2010 19:02	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/17/2007	1/17/2007
283	ARP02192	55G	EMPLACED_CNTR	7/22/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/16/2007	1/16/2007
284	ARP02193	55G	EMPLACED_CNTR	7/22/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/18/2007	1/18/2007
285	ARP02194	55G	EMPLACED_CNTR	7/18/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/19/2007	1/19/2007
286	ARP02195	55G	EMPLACED_CNTR	7/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/18/2007	1/18/2007
287	ARP02197	55G	EMPLACED_CNTR	8/31/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/19/2007	1/19/2007
288	ARP02199	55G	EMPLACED_CNTR	7/22/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/19/2007	1/19/2007
289	ARP02251	55G	EMPLACED_CNTR	11/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/25/2007	1/25/2007
290	ARP02255	55G	EMPLACED_CNTR	3/11/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/23/2007	1/23/2007
291	ARP02256	55G	EMPLACED_CNTR	7/22/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/30/2007	1/30/2007
292	ARP02259	55G	EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/30/2007	1/30/2007
293	ARP02652	55G	EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/29/2007	1/29/2007
294	ARP02659	55G	EMPLACED_CNTR	10/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/26/2007	1/26/2007
295	ARP02663	55G	EMPLACED_CNTR	7/22/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/29/2007	1/29/2007
296	ARP02667	55G	EMPLACED_CNTR	7/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/31/2007	1/31/2007
297	ARP02668	55G	EMPLACED_CNTR	8/31/2010 21:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/1/2007	2/1/2007
298	ARP02669	55G	EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/31/2007	1/31/2007
299	ARP02670	55G	EMPLACED_CNTR	7/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/31/2007	1/31/2007
300	ARP02672	55G	EMPLACED_CNTR	11/18/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/5/2007	2/5/2007
301	ARP02675	55G	EMPLACED_CNTR	9/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/7/2007	2/7/2007
302	ARP03000	55G	EMPLACED_CNTR	7/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/7/2007	2/7/2007
303	ARP03003	55G	EMPLACED_CNTR	7/18/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/8/2007	2/8/2007
304	ARP03004	55G	EMPLACED_CNTR	7/18/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/9/2007	2/9/2007
305	ARP03005	55G	EMPLACED_CNTR	7/22/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/12/2007	2/12/2007
306	ARP03008	55G	EMPLACED_CNTR	7/22/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/8/2007	2/8/2007
307	ARP03012	55G	EMPLACED_CNTR	7/22/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/8/2007	2/8/2007
308	ARP03013	55G	EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/8/2007	2/8/2007
309	ARP03018	55G	EMPLACED_CNTR	7/22/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/12/2007	2/12/2007
310	ARP03022	55G	EMPLACED_CNTR	7/22/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/9/2007	2/9/2007
311	ARP03028	55G	EMPLACED_CNTR	10/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/12/2007	2/12/2007
312	ARP03032	55G	EMPLACED_CNTR	7/18/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/13/2007	2/13/2007

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313	ARP03034	55G	EMPLACED_CNTR	7/22/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/12/2007	2/12/2007
314	ARP03036	55G	EMPLACED_CNTR	7/18/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/13/2007	2/13/2007
315	ARP03037	55G	EMPLACED_CNTR	7/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/12/2007	2/12/2007
316	ARP03038	55G	EMPLACED_CNTR	7/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/14/2007	2/14/2007
317	ARP03042	55G	EMPLACED_CNTR	7/22/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/12/2007	2/12/2007
318	ARP03043	55G	EMPLACED_CNTR	7/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/12/2007	2/12/2007
319	ARP03044	55G	EMPLACED_CNTR	7/22/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/12/2007	2/12/2007
320	ARP03046	55G	EMPLACED_CNTR	7/22/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/12/2007	2/12/2007
321	ARP03048	55G	EMPLACED_CNTR	7/22/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/12/2007	2/12/2007
322	ARP03051	55G	EMPLACED_CNTR	7/22/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/14/2007	2/14/2007
323	ARP03053	55G	EMPLACED_CNTR	7/22/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/14/2007	2/14/2007
324	ARP03054	55G	EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/14/2007	2/14/2007
325	ARP03055	55G	EMPLACED_CNTR	7/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/14/2007	2/14/2007
326	ARP03057	55G	EMPLACED_CNTR	11/18/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/14/2007	2/14/2007
327	ARP03058	55G	EMPLACED_CNTR	7/30/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/14/2007	2/14/2007
328	ARP03059	55G	EMPLACED_CNTR	8/29/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/14/2007	2/14/2007
329	ARP03062	55G	EMPLACED_CNTR	7/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/13/2007	2/13/2007
330	ARP03064	55G	EMPLACED_CNTR	11/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/13/2007	2/13/2007
331	ARP03065	55G	EMPLACED_CNTR	8/31/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/13/2007	2/13/2007
332	ARP03071	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/13/2007	2/13/2007
333	ARP03077	55G	EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/14/2007	2/14/2007
334	ARP03078	55G	EMPLACED_CNTR	7/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/14/2007	2/14/2007
335	ARP03080	55G	EMPLACED_CNTR	11/18/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/14/2007	2/14/2007
336	ARP03081	55G	EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/14/2007	2/14/2007
337	ARP03083	55G	EMPLACED_CNTR	7/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/15/2007	2/15/2007
338	ARP03086	55G	EMPLACED_CNTR	7/30/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/14/2007	2/14/2007
339	ARP03098	55G	EMPLACED_CNTR	7/30/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/15/2007	2/15/2007
340	ARP03100	55G	EMPLACED_CNTR	11/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/14/2007	2/14/2007
341	ARP03101	55G	EMPLACED_CNTR	11/18/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/15/2007	2/15/2007
342	ARP03111	55G	EMPLACED_CNTR	5/24/2011 19:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/22/2007	2/22/2007
343	ARP03115	55G	EMPLACED_CNTR	11/18/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/21/2007	2/21/2007
344	ARP03117	55G	EMPLACED_CNTR	5/24/2011 19:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/21/2007	2/21/2007
345	ARP03126	55G	EMPLACED_CNTR	8/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/26/2007	2/26/2007
346	ARP03129	55G	EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/15/2007	2/15/2007
347	ARP03130	55G	EMPLACED_CNTR	7/30/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/16/2007	2/16/2007
348	ARP03137	55G	EMPLACED_CNTR	7/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/15/2007	2/15/2007
349	ARP03138	55G	EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/15/2007	2/15/2007
350	ARP03140	55G	EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/15/2007	2/15/2007
351	ARP03146	55G	EMPLACED_CNTR	11/18/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/15/2007	2/15/2007

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352	ARP03148	55G	EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/16/2007	2/16/2007
353	ARP03151	55G	EMPLACED_CNTR	8/31/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/16/2007	2/16/2007
354	ARP03160	55G	EMPLACED_CNTR	8/29/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/19/2007	2/19/2007
355	ARP03164	55G	EMPLACED_CNTR	7/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/19/2007	2/19/2007
356	ARP03181	55G	EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/26/2007	2/26/2007
357	ARP03184	55G	EMPLACED_CNTR	8/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/1/2007	3/1/2007
358	ARP03186	55G	EMPLACED_CNTR	7/18/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/26/2007	2/26/2007
359	ARP03187	55G	EMPLACED_CNTR	10/29/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/26/2007	2/26/2007
360	ARP03190	55G	EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/26/2007	2/26/2007
361	ARP03200	55G	EMPLACED_CNTR	10/13/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/26/2007	2/26/2007
362	ARP03204	55G	EMPLACED_CNTR	7/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/26/2007	2/26/2007
363	ARP03213	55G	EMPLACED_CNTR	7/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/22/2007	2/22/2007
364	ARP03214	55G	EMPLACED_CNTR	5/23/2011 22:38	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/21/2007	2/21/2007
365	ARP03220	55G	EMPLACED_CNTR	7/18/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/1/2007	3/1/2007
366	ARP03221	55G	EMPLACED_CNTR	7/22/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/1/2007	3/1/2007
367	ARP03222	55G	EMPLACED_CNTR	2/10/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/1/2007	3/1/2007
368	ARP03224	55G	EMPLACED_CNTR	6/14/2010 20:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/1/2007	3/1/2007
369	ARP03233	55G	EMPLACED_CNTR	11/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/28/2007	2/28/2007
370	ARP03236	55G	EMPLACED_CNTR	7/30/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/1/2007	3/1/2007
371	ARP03237	55G	EMPLACED_CNTR	7/22/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/1/2007	3/1/2007
372	ARP03239	55G	EMPLACED_CNTR	11/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/1/2007	3/1/2007
373	ARP03242	55G	EMPLACED_CNTR	5/24/2011 19:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/28/2007	2/28/2007
374	ARP03243	55G	EMPLACED_CNTR	11/18/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/2/2007	3/2/2007
375	ARP03245	55G	EMPLACED_CNTR	7/30/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/2/2007	3/2/2007
376	ARP03248	55G	EMPLACED_CNTR	11/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/2/2007	3/2/2007
377	ARP03252	55G	EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/1/2007	3/1/2007
378	ARP03253	55G	EMPLACED_CNTR	11/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/1/2007	3/1/2007
379	ARP03255	55G	EMPLACED_CNTR	8/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/1/2007	3/1/2007
380	ARP03256	55G	EMPLACED_CNTR	7/18/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/1/2007	3/1/2007
381	ARP03259	55G	EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/1/2007	3/1/2007
382	ARP03262	55G	EMPLACED_CNTR	5/11/2010 19:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/1/2007	3/1/2007
383	ARP03266	55G	EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/2/2007	3/2/2007
384	ARP03271	55G	EMPLACED_CNTR	8/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/14/2007	3/14/2007
385	ARP03275	55G	EMPLACED_CNTR	8/29/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/2/2007	3/2/2007
386	ARP03281	55G	EMPLACED_CNTR	7/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/2/2007	3/2/2007
387	ARP03283	55G	EMPLACED_CNTR	7/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/2/2007	3/2/2007
388	ARP03284	55G	EMPLACED_CNTR	8/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/2/2007	3/2/2007
389	ARP03285	55G	EMPLACED_CNTR	5/24/2011 19:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/2/2007	3/2/2007
390	ARP03287	55G	EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/2/2007	3/2/2007

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391	ARP03291	55G	EMPLACED_CNTR	7/26/2011 23:13	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/2/2007	3/2/2007
392	ARP03292	55G	EMPLACED_CNTR	7/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/2/2007	3/2/2007
393	ARP03295	55G	EMPLACED_CNTR	10/29/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/2/2007	3/2/2007
394	ARP03297	55G	EMPLACED_CNTR	7/30/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/2/2007	3/2/2007
395	ARP03298	55G	EMPLACED_CNTR	11/18/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/2/2007	3/2/2007
396	ARP03302	55G	EMPLACED_CNTR	8/30/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/14/2007	3/14/2007
397	ARP03304	55G	EMPLACED_CNTR	10/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/15/2007	3/15/2007
398	ARP03305	55G	EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/28/2007	3/28/2007
399	ARP03306	55G	EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/12/2007	3/12/2007
400	ARP03307	55G	EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/12/2007	3/12/2007
401	ARP03309	55G	EMPLACED_CNTR	11/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/12/2007	3/12/2007
402	ARP03321	55G	EMPLACED_CNTR	7/30/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/7/2007	3/7/2007
403	ARP03325	55G	EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/15/2007	3/15/2007
404	ARP03326	55G	EMPLACED_CNTR	8/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/14/2007	3/14/2007
405	ARP03330	55G	EMPLACED_CNTR	9/7/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/14/2007	3/14/2007
406	ARP03332	55G	EMPLACED_CNTR	11/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/15/2007	3/15/2007
407	ARP03333	55G	EMPLACED_CNTR	7/30/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/12/2007	3/12/2007
408	ARP03345	55G	EMPLACED_CNTR	9/2/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/15/2007	3/15/2007
409	ARP03350	55G	EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/7/2007	3/7/2007
410	ARP03374	55G	EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/15/2007	3/15/2007
411	ARP03375	55G	EMPLACED_CNTR	9/25/2010 13:58	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/15/2007	3/15/2007
412	ARP03381	55G	EMPLACED_CNTR	7/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/12/2007	3/12/2007
413	ARP03382	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/15/2007	3/15/2007
414	ARP03383	55G	EMPLACED_CNTR	9/7/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/14/2007	3/14/2007
415	ARP03384	55G	EMPLACED_CNTR	10/13/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/14/2007	3/14/2007
416	ARP03389	55G	EMPLACED_CNTR	9/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/12/2007	3/12/2007
417	ARP03394	55G	EMPLACED_CNTR	7/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/9/2007	3/9/2007
418	ARP03396	55G	EMPLACED_CNTR	11/18/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/9/2007	3/9/2007
419	ARP03399	55G	EMPLACED_CNTR	8/30/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/14/2007	3/14/2007
420	ARP03401	55G	EMPLACED_CNTR	8/29/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/12/2007	3/12/2007
421	ARP03408	55G	EMPLACED_CNTR	6/14/2010 20:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/14/2007	3/14/2007
422	ARP03410	55G	EMPLACED_CNTR	9/23/2010 19:02	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/14/2007	3/14/2007
423	ARP03411	55G	EMPLACED_CNTR	7/18/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/12/2007	3/12/2007
424	ARP03413	55G	EMPLACED_CNTR	9/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/15/2007	3/15/2007
425	ARP03414	55G	EMPLACED_CNTR	9/7/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/19/2007	3/19/2007
426	ARP03415	55G	EMPLACED_CNTR	10/29/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/20/2007	3/20/2007
427	ARP03418	55G	EMPLACED_CNTR	6/14/2010 20:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/21/2007	3/21/2007
428	ARP03427	55G	EMPLACED_CNTR	6/24/2010 19:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/14/2007	3/14/2007
429	ARP03429	55G	EMPLACED_CNTR	9/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/14/2007	3/14/2007

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430	ARP03430	55G	EMPLACED_CNTR	8/30/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/14/2007	3/14/2007
431	ARP03431	55G	EMPLACED_CNTR	6/10/2010 13:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/14/2007	3/14/2007
432	ARP03433	55G	EMPLACED_CNTR	10/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/14/2007	3/14/2007
433	ARP03435	55G	EMPLACED_CNTR	8/29/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/14/2007	3/14/2007
434	ARP03437	55G	EMPLACED_CNTR	9/7/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/14/2007	3/14/2007
435	ARP03440	55G	EMPLACED_CNTR	9/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/14/2007	3/14/2007
436	ARP03444	55G	EMPLACED_CNTR	10/24/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/14/2007	3/14/2007
437	ARP03446	55G	EMPLACED_CNTR	8/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/14/2007	3/14/2007
438	ARP03449	55G	EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/14/2007	3/14/2007
439	ARP03454	55G	EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/15/2007	3/15/2007
440	ARP03467	55G	EMPLACED_CNTR	7/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/26/2007	3/26/2007
441	ARP03472	55G	EMPLACED_CNTR	10/18/2011 19:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/20/2007	3/20/2007
442	ARP03480	55G	EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/15/2007	3/15/2007
443	ARP03489	55G	EMPLACED_CNTR	8/30/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/5/2007	4/5/2007
444	ARP03496	55G	EMPLACED_CNTR	9/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/5/2007	4/5/2007
445	ARP03502	55G	EMPLACED_CNTR	6/24/2010 19:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/10/2007	4/10/2007
446	ARP03505	55G	EMPLACED_CNTR	9/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/4/2007	4/4/2007
447	ARP03507	55G	EMPLACED_CNTR	10/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/5/2007	4/5/2007
448	ARP03509	55G	EMPLACED_CNTR	8/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/4/2007	4/4/2007
449	ARP03517	55G	EMPLACED_CNTR	9/12/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/10/2007	4/10/2007
450	ARP03520	55G	EMPLACED_CNTR	7/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/21/2007	3/21/2007
451	ARP03525	55G	EMPLACED_CNTR	11/18/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/15/2007	3/15/2007
452	ARP03542	55G	EMPLACED_CNTR	3/3/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/29/2007	3/29/2007
453	ARP03543	55G	EMPLACED_CNTR	10/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/29/2007	3/29/2007
454	ARP03544	55G	EMPLACED_CNTR	7/30/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/20/2007	3/20/2007
455	ARP03545	55G	EMPLACED_CNTR	8/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/19/2007	3/19/2007
456	ARP03547	55G	EMPLACED_CNTR	5/24/2011 19:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/19/2007	3/19/2007
457	ARP03548	55G	EMPLACED_CNTR	8/30/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/23/2007	3/23/2007
458	ARP03552	55G	EMPLACED_CNTR	10/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/29/2007	3/29/2007
459	ARP03554	55G	EMPLACED_CNTR	10/24/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/3/2007	4/3/2007
460	ARP03559	55G	EMPLACED_CNTR	2/17/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/3/2007	4/3/2007
461	ARP03562	55G	EMPLACED_CNTR	10/12/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/29/2007	3/29/2007
462	ARP03563	55G	EMPLACED_CNTR	8/29/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/4/2007	4/4/2007
463	ARP03566	55G	EMPLACED_CNTR	9/12/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/28/2007	3/28/2007
464	ARP03571	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/29/2007	3/29/2007
465	ARP03581	55G	EMPLACED_CNTR	10/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/23/2007	3/23/2007
466	ARP03587	55G	EMPLACED_CNTR	7/26/2011 23:13	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/3/2007	4/3/2007
467	ARP03588	55G	EMPLACED_CNTR	9/12/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/3/2007	4/3/2007
468	ARP03591	55G	EMPLACED_CNTR	5/11/2010 19:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/23/2007	3/23/2007

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469	ARP03594	55G	EMPLACED_CNTR	10/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/26/2007	3/26/2007
470	ARP03605	55G	EMPLACED_CNTR	10/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/3/2007	4/3/2007
471	ARP03609	55G	EMPLACED_CNTR	4/26/2010 18:42	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/23/2007	3/23/2007
472	ARP03616	55G	EMPLACED_CNTR	11/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/21/2007	3/21/2007
473	ARP03632	55G	EMPLACED_CNTR	9/12/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/15/2007	3/15/2007
474	ARP03636	55G	EMPLACED_CNTR	6/24/2010 19:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/19/2007	3/19/2007
475	ARP03637	55G	EMPLACED_CNTR	9/7/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/15/2007	3/15/2007
476	ARP03638	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/15/2007	3/15/2007
477	ARP03639	55G	EMPLACED_CNTR	8/30/2010 22:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/19/2007	3/19/2007
478	ARP03640	55G	EMPLACED_CNTR	9/2/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/15/2007	3/15/2007
479	ARP03642	55G	EMPLACED_CNTR	6/29/2011 0:18	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/15/2007	3/15/2007
480	ARP03643	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/15/2007	3/15/2007
481	ARP03644	55G	EMPLACED_CNTR	10/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/15/2007	3/15/2007
482	ARP03645	55G	EMPLACED_CNTR	10/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/15/2007	3/15/2007
483	ARP03648	55G	EMPLACED_CNTR	10/13/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/22/2007	3/22/2007
484	ARP03650	55G	EMPLACED_CNTR	10/29/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/20/2007	3/20/2007
485	ARP03651	55G	EMPLACED_CNTR	5/9/2010 10:31	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/20/2007	3/20/2007
486	ARP03655	55G	EMPLACED_CNTR	10/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/19/2007	3/19/2007
487	ARP03657	55G	EMPLACED_CNTR	8/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/20/2007	3/20/2007
488	ARP03658	55G	EMPLACED_CNTR	8/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/20/2007	3/20/2007
489	ARP03660	55G	EMPLACED_CNTR	8/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/20/2007	3/20/2007
490	ARP03661	55G	EMPLACED_CNTR	11/8/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/19/2007	3/19/2007
491	ARP03671	55G	EMPLACED_CNTR	11/8/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/20/2007	3/20/2007
492	ARP03678	55G	EMPLACED_CNTR	10/29/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/20/2007	3/20/2007
493	ARP03682	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/20/2007	3/20/2007
494	ARP03687	55G	EMPLACED_CNTR	10/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/20/2007	3/20/2007
495	ARP03689	55G	EMPLACED_CNTR	10/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/19/2007	3/19/2007
496	ARP03695	55G	EMPLACED_CNTR	8/31/2010 21:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/29/2007	3/29/2007
497	ARP03705	55G	EMPLACED_CNTR	8/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/25/2007	4/25/2007
498	ARP03714	55G	EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/2/2007	5/2/2007
499	ARP03721	55G	EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/25/2007	4/25/2007
500	ARP03725	55G	EMPLACED_CNTR	9/7/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/12/2007	4/12/2007
501	ARP03729	55G	EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/19/2007	4/19/2007
502	ARP03733	55G	EMPLACED_CNTR	11/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/19/2007	4/19/2007
503	ARP03734	55G	EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/19/2007	4/19/2007
504	ARP03738	55G	EMPLACED_CNTR	11/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/12/2007	4/12/2007
505	ARP03739	55G	EMPLACED_CNTR	8/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/12/2007	4/12/2007
506	ARP03741	55G	EMPLACED_CNTR	9/12/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/12/2007	4/12/2007
507	ARP03745	55G	EMPLACED_CNTR	10/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/12/2007	4/12/2007

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508	ARP03746	55G	EMPLACED_CNTR	9/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/12/2007	4/12/2007
509	ARP03747	55G	EMPLACED_CNTR	11/14/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/12/2007	4/12/2007
510	ARP03753	55G	EMPLACED_CNTR	7/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/11/2007	4/11/2007
511	ARP03754	55G	EMPLACED_CNTR	11/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/11/2007	4/11/2007
512	ARP03755	55G	EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/11/2007	4/11/2007
513	ARP03756	55G	EMPLACED_CNTR	9/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/11/2007	4/11/2007
514	ARP03757	55G	EMPLACED_CNTR	7/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/11/2007	4/11/2007
515	ARP03758	55G	EMPLACED_CNTR	9/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/19/2007	4/19/2007
516	ARP03759	55G	EMPLACED_CNTR	9/2/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/11/2007	4/11/2007
517	ARP03761	55G	EMPLACED_CNTR	9/2/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/11/2007	4/11/2007
518	ARP03765	55G	EMPLACED_CNTR	9/2/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/11/2007	4/11/2007
519	ARP03766	55G	EMPLACED_CNTR	8/30/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/11/2007	4/11/2007
520	ARP03769	55G	EMPLACED_CNTR	9/7/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/19/2007	4/19/2007
521	ARP03770	55G	EMPLACED_CNTR	10/12/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/19/2007	4/19/2007
522	ARP03773	55G	EMPLACED_CNTR	10/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/20/2007	4/20/2007
523	ARP03776	55G	EMPLACED_CNTR	8/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/19/2007	3/19/2007
524	ARP03777	55G	EMPLACED_CNTR	9/7/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/20/2007	3/20/2007
525	ARP03786	55G	EMPLACED_CNTR	8/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/26/2007	3/26/2007
526	ARP03806	55G	EMPLACED_CNTR	9/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/9/2007	4/9/2007
527	ARP03809	55G	EMPLACED_CNTR	9/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/4/2007	4/4/2007
528	ARP03817	55G	EMPLACED_CNTR	7/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/4/2007	4/4/2007
529	ARP03818	55G	EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/4/2007	4/4/2007
530	ARP03820	55G	EMPLACED_CNTR	7/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/4/2007	4/4/2007
531	ARP03821	55G	EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/5/2007	4/5/2007
532	ARP03833	55G	EMPLACED_CNTR	11/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/9/2007	4/9/2007
533	ARP03839	55G	EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/9/2007	4/9/2007
534	ARP03841	55G	EMPLACED_CNTR	11/18/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/3/2007	4/3/2007
535	ARP03844	55G	EMPLACED_CNTR	8/29/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/4/2007	4/4/2007
536	ARP03845	55G	EMPLACED_CNTR	11/18/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/4/2007	4/4/2007
537	ARP03848	55G	EMPLACED_CNTR	10/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/10/2007	4/10/2007
538	ARP03856	55G	EMPLACED_CNTR	10/29/2009 19:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/20/2007	4/20/2007
539	ARP03865	55G	EMPLACED_CNTR	10/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/9/2007	4/9/2007
540	ARP03868	55G	EMPLACED_CNTR	7/27/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/9/2007	4/9/2007
541	ARP03872	55G	EMPLACED_CNTR	10/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/4/2007	4/4/2007
542	ARP03874	55G	EMPLACED_CNTR	9/12/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/9/2007	4/9/2007
543	ARP03876	55G	EMPLACED_CNTR	10/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/5/2007	4/5/2007
544	ARP03879	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/4/2007	4/4/2007
545	ARP03880	55G	EMPLACED_CNTR	10/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/4/2007	4/4/2007
546	ARP03883	55G	EMPLACED_CNTR	10/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/11/2007	4/11/2007

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547	ARP03884	55G	EMPLACED_CNTR	8/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/11/2007	4/11/2007
548	ARP03887	55G	EMPLACED_CNTR	10/31/2010 14:01	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/11/2007	4/11/2007
549	ARP03890	55G	EMPLACED_CNTR	8/29/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/11/2007	4/11/2007
550	ARP03894	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/24/2007	4/24/2007
551	ARP03902	55G	EMPLACED_CNTR	10/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/20/2007	4/20/2007
552	ARP03907	55G	EMPLACED_CNTR	9/7/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/25/2007	4/25/2007
553	ARP03911	55G	EMPLACED_CNTR	9/7/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/25/2007	4/25/2007
554	ARP03912	55G	EMPLACED_CNTR	9/12/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/23/2007	4/23/2007
555	ARP03913	55G	EMPLACED_CNTR	8/30/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/23/2007	4/23/2007
556	ARP03915	55G	EMPLACED_CNTR	11/21/2010 13:43	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/23/2007	4/23/2007
557	ARP03916	55G	EMPLACED_CNTR	9/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/23/2007	4/23/2007
558	ARP03917	55G	EMPLACED_CNTR	9/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/20/2007	4/20/2007
559	ARP03920	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/20/2007	4/20/2007
560	ARP03923	55G	EMPLACED_CNTR	9/12/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/20/2007	4/20/2007
561	ARP03924	55G	EMPLACED_CNTR	9/12/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/20/2007	4/20/2007
562	ARP03928	55G	EMPLACED_CNTR	9/3/2009 22:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/24/2007	4/24/2007
563	ARP03930	55G	EMPLACED_CNTR	4/6/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/24/2007	4/24/2007
564	ARP03933	55G	EMPLACED_CNTR	9/23/2009 21:56	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/24/2007	4/24/2007
565	ARP03936	55G	EMPLACED_CNTR	9/30/2009 23:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/25/2007	4/25/2007
566	ARP03937	55G	EMPLACED_CNTR	8/30/2010 22:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/24/2007	4/24/2007
567	ARP03938	55G	EMPLACED_CNTR	2/23/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/23/2007	4/23/2007
568	ARP03940	55G	EMPLACED_CNTR	9/3/2009 22:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/23/2007	4/23/2007
569	ARP03945	55G	EMPLACED_CNTR	8/29/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/20/2007	4/20/2007
570	ARP03947	55G	EMPLACED_CNTR	5/2/2010 13:39	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/24/2007	4/24/2007
571	ARP03950	55G	EMPLACED_CNTR	10/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/2/2007	5/2/2007
572	ARP03963	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/24/2007	4/24/2007
573	ARP03968	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/23/2007	4/23/2007
574	ARP03969	55G	EMPLACED_CNTR	10/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/23/2007	4/23/2007
575	ARP03971	55G	EMPLACED_CNTR	10/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/20/2007	4/20/2007
576	ARP03974	55G	EMPLACED_CNTR	10/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/23/2007	4/23/2007
577	ARP03977	55G	EMPLACED_CNTR	10/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/25/2007	4/25/2007
578	ARP03978	55G	EMPLACED_CNTR	9/7/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/24/2007	4/24/2007
579	ARP03980	55G	EMPLACED_CNTR	9/2/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/23/2007	4/23/2007
580	ARP03985	55G	EMPLACED_CNTR	9/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/1/2007	5/1/2007
581	ARP04008	55G	EMPLACED_CNTR	2/23/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/2/2007	5/2/2007
582	ARP04019	55G	EMPLACED_CNTR	10/29/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/2/2007	5/2/2007
583	ARP04025	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/3/2007	5/3/2007
584	ARP04027	55G	EMPLACED_CNTR	8/30/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/3/2007	5/3/2007
585	ARP04034	55G	EMPLACED_CNTR	7/16/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/3/2007	5/3/2007

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586	ARP04038	55G	EMPLACED_CNTR	9/7/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/3/2007	5/3/2007
587	ARP04048	55G	EMPLACED_CNTR	9/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/4/2007	5/4/2007
588	ARP04054	55G	EMPLACED_CNTR	3/30/2011 22:19	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/27/2007	8/27/2007
589	ARP04065	55G	EMPLACED_CNTR	10/30/2010 10:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/6/2007	9/6/2007
590	ARP04087	55G	EMPLACED_CNTR	9/27/2010 19:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/4/2007	5/4/2007
591	ARP04099	55G	EMPLACED_CNTR	11/24/2010 19:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/6/2007	9/6/2007
592	ARP04113	55G	EMPLACED_CNTR	10/29/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/2/2007	7/2/2007
593	ARP04117	55G	EMPLACED_CNTR	9/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/26/2007	6/26/2007
594	ARP04120	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/26/2007	6/26/2007
595	ARP04137	55G	EMPLACED_CNTR	9/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/2/2007	7/2/2007
596	ARP04160	55G	EMPLACED_CNTR	9/2/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/9/2007	5/9/2007
597	ARP04176	55G	EMPLACED_CNTR	9/10/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/6/2007	12/6/2007
598	ARP04183	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/5/2007	12/5/2007
599	ARP04185	55G	EMPLACED_CNTR	10/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/6/2007	12/6/2007
600	ARP04191	55G	EMPLACED_CNTR	10/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/5/2007	12/5/2007
601	ARP04192	55G	EMPLACED_CNTR	9/10/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/5/2007	12/5/2007
602	ARP04193	55G	EMPLACED_CNTR	8/31/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/29/2007	8/29/2007
603	ARP04251	55G	EMPLACED_CNTR	9/19/2010 13:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/19/2007	6/19/2007
604	ARP04301	55G	EMPLACED_CNTR	11/24/2010 19:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/10/2007	9/10/2007
605	ARP04308	55G	EMPLACED_CNTR	9/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/6/2007	9/6/2007
606	ARP04338	55G	EMPLACED_CNTR	9/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/2/2007	7/2/2007
607	ARP04339	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/24/2007	7/24/2007
608	ARP04343	55G	EMPLACED_CNTR	5/25/2011 19:39	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/26/2007	6/26/2007
609	ARP04344	55G	EMPLACED_CNTR	10/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/26/2007	6/26/2007
610	ARP04401	55G	EMPLACED_CNTR	11/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/9/2007	8/9/2007
611	ARP04429	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/25/2008	2/25/2008
612	ARP04432	55G	EMPLACED_CNTR	11/13/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/26/2008	2/26/2008
613	ARP04450	55G	EMPLACED_CNTR	8/30/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/23/2007	8/23/2007
614	ARP04463	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/24/2007	8/24/2007
615	ARP04488	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/23/2007	8/23/2007
616	ARP04491	55G	EMPLACED_CNTR	8/31/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/21/2007	8/21/2007
617	ARP04524	55G	EMPLACED_CNTR	9/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/21/2007	8/21/2007
618	ARP04537	55G	EMPLACED_CNTR	10/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/27/2007	8/27/2007
619	ARP04569	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/17/2007	9/17/2007
620	ARP04582	55G	EMPLACED_CNTR	11/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/13/2007	9/13/2007
621	ARP04588	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/13/2007	9/13/2007
622	ARP04589	55G	EMPLACED_CNTR	9/12/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/13/2007	9/13/2007
623	ARP04591	55G	EMPLACED_CNTR	10/13/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/13/2007	9/13/2007
624	ARP04592	55G	EMPLACED_CNTR	9/7/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/13/2007	9/13/2007

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625	ARP04593	55G	EMPLACED_CNTR	10/13/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/12/2007	9/12/2007
626	ARP04594	55G	EMPLACED_CNTR	10/13/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/13/2007	9/13/2007
627	ARP04595	55G	EMPLACED_CNTR	9/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/13/2007	9/13/2007
628	ARP04605	55G	EMPLACED_CNTR	10/29/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/24/2007	9/24/2007
629	ARP04615	55G	EMPLACED_CNTR	8/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/26/2007	9/26/2007
630	ARP04622	55G	EMPLACED_CNTR	10/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/26/2007	9/26/2007
631	ARP04634	55G	EMPLACED_CNTR	11/24/2010 19:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/17/2007	9/17/2007
632	ARP04636	55G	EMPLACED_CNTR	11/24/2010 19:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/17/2007	9/17/2007
633	ARP04637	55G	EMPLACED_CNTR	10/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/17/2007	9/17/2007
634	ARP04640	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/19/2007	9/19/2007
635	ARP04648	55G	EMPLACED_CNTR	11/24/2010 19:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/5/2007	11/5/2007
636	ARP04649	55G	EMPLACED_CNTR	9/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/30/2007	10/30/2007
637	ARP04666	55G	EMPLACED_CNTR	10/12/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/19/2007	9/19/2007
638	ARP04669	55G	EMPLACED_CNTR	11/24/2010 19:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/24/2007	9/24/2007
639	ARP04671	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/19/2007	9/19/2007
640	ARP04673	55G	EMPLACED_CNTR	11/24/2010 19:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/20/2007	9/20/2007
641	ARP04674	55G	EMPLACED_CNTR	11/24/2010 19:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/19/2007	9/19/2007
642	ARP04681	55G	EMPLACED_CNTR	8/29/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/27/2007	9/27/2007
643	ARP04685	55G	EMPLACED_CNTR	8/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/27/2007	9/27/2007
644	ARP04686	55G	EMPLACED_CNTR	10/11/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/27/2007	9/27/2007
645	ARP04698	55G	EMPLACED_CNTR	10/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/24/2007	9/24/2007
646	ARP04706	55G	EMPLACED_CNTR	10/29/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/3/2007	10/3/2007
647	ARP04713	55G	EMPLACED_CNTR	8/31/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/3/2007	10/3/2007
648	ARP04714	55G	EMPLACED_CNTR	8/30/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/4/2007	10/4/2007
649	ARP04718	55G	EMPLACED_CNTR	11/24/2010 19:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/3/2007	10/3/2007
650	ARP04728	55G	EMPLACED_CNTR	3/3/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/5/2007	12/5/2007
651	ARP04734	55G	EMPLACED_CNTR	11/24/2010 19:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/5/2007	12/5/2007
652	ARP04744	55G	EMPLACED_CNTR	7/26/2011 23:13	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/8/2007	12/8/2007
653	ARP04749	55G	EMPLACED_CNTR	10/13/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/4/2007	10/4/2007
654	ARP04750	55G	EMPLACED_CNTR	9/2/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/4/2007	10/4/2007
655	ARP04751	55G	EMPLACED_CNTR	10/29/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/5/2007	11/5/2007
656	ARP04757	55G	EMPLACED_CNTR	8/29/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/1/2007	11/1/2007
657	ARP04758	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/31/2007	10/31/2007
658	ARP04762	55G	EMPLACED_CNTR	1/29/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/16/2007	11/16/2007
659	ARP04790	55G	EMPLACED_CNTR	9/20/2010 18:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/7/2007	11/7/2007
660	ARP04829	55G	EMPLACED_CNTR	11/14/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/5/2007	11/5/2007
661	ARP04840	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/30/2007	10/30/2007
662	ARP04841	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/1/2007	11/1/2007
663	ARP04846	55G	EMPLACED_CNTR	8/29/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/1/2007	11/1/2007

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664	ARP04852	55G	EMPLACED_CNTR	11/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/1/2007	11/1/2007
665	ARP04856	55G	EMPLACED_CNTR	10/27/2010 18:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/13/2007	11/13/2007
666	ARP04858	55G	EMPLACED_CNTR	10/29/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/26/2007	11/26/2007
667	ARP04859	55G	EMPLACED_CNTR	11/24/2010 19:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/13/2007	11/13/2007
668	ARP04862	55G	EMPLACED_CNTR	11/24/2010 19:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/14/2007	11/14/2007
669	ARP04865	55G	EMPLACED_CNTR	5/11/2010 19:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/5/2007	11/5/2007
670	ARP04866	55G	EMPLACED_CNTR	11/24/2010 19:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/26/2007	11/26/2007
671	ARP04867	55G	EMPLACED_CNTR	11/13/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/14/2007	11/14/2007
672	ARP04869	55G	EMPLACED_CNTR	8/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/24/2007	10/24/2007
673	ARP04870	55G	EMPLACED_CNTR	11/8/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/5/2007	11/5/2007
674	ARP04877	55G	EMPLACED_CNTR	10/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/30/2007	10/30/2007
675	ARP04890	55G	EMPLACED_CNTR	11/24/2010 19:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/12/2007	11/12/2007
676	ARP04892	55G	EMPLACED_CNTR	10/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/1/2007	11/1/2007
677	ARP04896	55G	EMPLACED_CNTR	1/29/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/16/2007	11/16/2007
678	ARP04902	55G	EMPLACED_CNTR	10/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/15/2007	11/15/2007
679	ARP04907	55G	EMPLACED_CNTR	11/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/13/2007	11/13/2007
680	ARP04912	55G	EMPLACED_CNTR	10/11/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/28/2007	11/28/2007
681	ARP04923	55G	EMPLACED_CNTR	6/10/2010 13:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/28/2007	11/28/2007
682	ARP04928	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/7/2007	11/7/2007
683	ARP04936	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/15/2007	11/15/2007
684	ARP04939	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/16/2007	11/16/2007
685	ARP04944	55G	EMPLACED_CNTR	10/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/6/2007	11/6/2007
686	ARP04959	55G	EMPLACED_CNTR	11/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/5/2007	12/5/2007
687	ARP04961	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/27/2007	11/27/2007
688	ARP04962	55G	EMPLACED_CNTR	11/14/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/29/2007	11/29/2007
689	ARP04965	55G	EMPLACED_CNTR	10/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/28/2007	11/28/2007
690	ARP05009	55G	EMPLACED_CNTR	10/24/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/5/2007	12/5/2007
691	ARP05013	55G	EMPLACED_CNTR	9/10/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/5/2007	12/5/2007
692	ARP05020	55G	EMPLACED_CNTR	11/14/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/5/2007	12/5/2007
693	ARP05025	55G	EMPLACED_CNTR	11/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/6/2007	12/6/2007
694	ARP05031	55G	EMPLACED_CNTR	11/14/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/6/2007	12/6/2007
695	ARP05040	55G	EMPLACED_CNTR	11/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/10/2007	12/10/2007
696	ARP05049	55G	EMPLACED_CNTR	10/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/10/2007	12/10/2007
697	ARP05054	55G	EMPLACED_CNTR	10/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/6/2007	12/6/2007
698	ARP05058	55G	EMPLACED_CNTR	11/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/6/2007	12/6/2007
699	ARP05059	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/6/2007	12/6/2007
700	ARP05074	55G	EMPLACED_CNTR	11/14/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/11/2007	12/11/2007
701	ARP05078	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/27/2007	11/27/2007
702	ARP05079	55G	EMPLACED_CNTR	5/19/2010 18:42	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/26/2007	11/26/2007

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703	ARP05089	55G	EMPLACED_CNTR	9/10/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/3/2007	12/3/2007
704	ARP05096	55G	EMPLACED_CNTR	11/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/4/2007	12/4/2007
705	ARP05098	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/29/2007	11/29/2007
706	ARP05102	55G	EMPLACED_CNTR	11/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/28/2007	11/28/2007
707	ARP05103	55G	EMPLACED_CNTR	11/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/27/2007	11/27/2007
708	ARP05110	55G	EMPLACED_CNTR	11/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/3/2007	12/3/2007
709	ARP05115	55G	EMPLACED_CNTR	11/18/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/3/2007	12/3/2007
710	ARP05118	55G	EMPLACED_CNTR	2/24/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/4/2007	12/4/2007
711	ARP05121	55G	EMPLACED_CNTR	11/18/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/30/2007	11/30/2007
712	ARP05126	55G	EMPLACED_CNTR	3/30/2011 22:19	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/30/2007	11/30/2007
713	ARP05128	55G	EMPLACED_CNTR	11/24/2010 19:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/30/2007	11/30/2007
714	ARP05134	55G	EMPLACED_CNTR	11/24/2010 19:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/3/2007	12/3/2007
715	ARP05135	55G	EMPLACED_CNTR	2/24/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/3/2007	12/3/2007
716	ARP05141	55G	EMPLACED_CNTR	3/3/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/29/2007	11/29/2007
717	ARP05147	55G	EMPLACED_CNTR	10/12/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/27/2007	11/27/2007
718	ARP05154	55G	EMPLACED_CNTR	10/24/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/28/2007	11/28/2007
719	ARP05156	55G	EMPLACED_CNTR	11/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/28/2007	11/28/2007
720	ARP05164	55G			ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/30/2007	11/30/2007
721	ARP05171	55G	EMPLACED_CNTR	10/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/26/2007	11/26/2007
722	ARP05177	55G	EMPLACED_CNTR	9/10/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/4/2007	12/4/2007
723	ARP05179	55G	EMPLACED_CNTR	11/13/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/30/2007	11/30/2007
724	ARP05184	55G	EMPLACED_CNTR	5/21/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/3/2007	12/3/2007
725	ARP05185	55G	EMPLACED_CNTR	11/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/29/2007	11/29/2007
726	ARP05187	55G	EMPLACED_CNTR	11/24/2010 19:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/4/2007	12/4/2007
727	ARP05191	55G	EMPLACED_CNTR	11/24/2010 19:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/30/2007	11/30/2007
728	ARP05212	55G	EMPLACED_CNTR	2/24/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/10/2007	12/10/2007
729	ARP05214	55G	EMPLACED_CNTR	11/14/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/10/2007	12/10/2007
730	ARP05217	55G	EMPLACED_CNTR	11/13/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/10/2007	12/10/2007
731	ARP05222	55G	EMPLACED_CNTR	2/6/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/10/2007	12/10/2007
732	ARP05224	55G	EMPLACED_CNTR	11/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/10/2007	12/10/2007
733	ARP05236	55G	EMPLACED_CNTR	2/24/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/11/2007	12/11/2007
734	ARP05240	55G	EMPLACED_CNTR	11/14/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/11/2007	12/11/2007
735	ARP05260	55G	EMPLACED_CNTR	11/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/12/2007	12/12/2007
736	ARP05268	55G	EMPLACED_CNTR	8/31/2010 21:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/13/2007	12/13/2007
737	ARP05293	55G	EMPLACED_CNTR	10/13/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/7/2008	1/7/2008
738	ARP05299	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/19/2007	12/19/2007
739	ARP05310	55G	EMPLACED_CNTR	9/10/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/12/2007	12/12/2007
740	ARP05312	55G	EMPLACED_CNTR	9/23/2010 19:02	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/11/2007	12/11/2007
741	ARP05314	55G	EMPLACED_CNTR	9/10/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/12/2007	12/12/2007

	A	B	C	D	E	F	G	I	J
742	ARP05315	55G	EMPLACED_CNTR	11/14/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/12/2007	12/12/2007
743	ARP05320	55G	EMPLACED_CNTR	11/14/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/12/2007	12/12/2007
744	ARP05323	55G	EMPLACED_CNTR	11/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/13/2007	12/13/2007
745	ARP05337	55G	EMPLACED_CNTR	11/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/13/2007	12/13/2007
746	ARP05340	55G	EMPLACED_CNTR	9/23/2010 19:02	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/12/2007	12/12/2007
747	ARP05348	55G	EMPLACED_CNTR	10/13/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/13/2007	12/13/2007
748	ARP05351	55G	EMPLACED_CNTR	9/10/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/17/2007	12/17/2007
749	ARP05353	55G	EMPLACED_CNTR	11/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/17/2007	12/17/2007
750	ARP05356	55G	EMPLACED_CNTR	11/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/17/2007	12/17/2007
751	ARP05359	55G	EMPLACED_CNTR	9/10/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/17/2007	12/17/2007
752	ARP05368	55G	EMPLACED_CNTR	10/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/18/2007	12/18/2007
753	ARP05376	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/19/2007	12/19/2007
754	ARP05381	55G	EMPLACED_CNTR	11/14/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/19/2007	12/19/2007
755	ARP05385	55G	EMPLACED_CNTR	11/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/7/2008	1/7/2008
756	ARP05395	55G	EMPLACED_CNTR	11/14/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/8/2008	1/8/2008
757	ARP05398	55G	EMPLACED_CNTR	10/22/2009 19:44	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/8/2008	1/8/2008
758	ARP05401	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/19/2007	12/19/2007
759	ARP05403	55G	EMPLACED_CNTR	11/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/20/2007	12/20/2007
760	ARP05408	55G	EMPLACED_CNTR	10/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/8/2008	1/8/2008
761	ARP05409	55G	EMPLACED_CNTR	11/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/8/2008	1/8/2008
762	ARP05410	55G	EMPLACED_CNTR	10/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/8/2008	1/8/2008
763	ARP05413	55G	EMPLACED_CNTR	10/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/8/2008	1/8/2008
764	ARP05416	55G	EMPLACED_CNTR	10/11/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/9/2008	1/9/2008
765	ARP05418	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/8/2008	1/8/2008
766	ARP05426	55G	EMPLACED_CNTR	10/13/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/18/2007	12/18/2007
767	ARP05427	55G	EMPLACED_CNTR	10/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/18/2007	12/18/2007
768	ARP05432	55G	EMPLACED_CNTR	11/18/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/18/2007	12/18/2007
769	ARP05433	55G	EMPLACED_CNTR	11/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/18/2007	12/18/2007
770	ARP05442	55G	EMPLACED_CNTR	11/8/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/19/2007	12/19/2007
771	ARP05444	55G	EMPLACED_CNTR	10/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/7/2008	1/7/2008
772	ARP05451	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/13/2007	12/13/2007
773	ARP05454	55G	EMPLACED_CNTR	10/11/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/13/2007	12/13/2007
774	ARP05456	55G	EMPLACED_CNTR	11/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/17/2007	12/17/2007
775	ARP05479	55G	EMPLACED_CNTR	11/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/18/2007	12/18/2007
776	ARP05483	55G	EMPLACED_CNTR	5/11/2010 19:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/19/2007	12/19/2007
777	ARP05484	55G	EMPLACED_CNTR	9/10/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/19/2007	12/19/2007
778	ARP05499	55G	EMPLACED_CNTR	11/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/19/2007	12/19/2007
779	ARP05501	55G	EMPLACED_CNTR	11/18/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/7/2008	1/7/2008
780	ARP05503	55G	EMPLACED_CNTR	11/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/20/2007	12/20/2007

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781	ARP05504	55G	EMPLACED_CNTR	10/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/20/2007	12/20/2007
782	ARP05505	55G	EMPLACED_CNTR	11/14/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/20/2007	12/20/2007
783	ARP05508	55G	EMPLACED_CNTR	10/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/7/2008	1/7/2008
784	ARP05509	55G	EMPLACED_CNTR	11/14/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/20/2007	12/20/2007
785	ARP05510	55G	EMPLACED_CNTR	11/13/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/20/2007	12/20/2007
786	ARP05512	55G	EMPLACED_CNTR	11/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/20/2007	12/20/2007
787	ARP05521	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/8/2008	1/8/2008
788	ARP05522	55G	EMPLACED_CNTR	6/13/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/8/2008	1/8/2008
789	ARP05524	55G	EMPLACED_CNTR	9/10/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/9/2008	1/9/2008
790	ARP05528	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/8/2008	1/8/2008
791	ARP05544	55G	EMPLACED_CNTR	10/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/8/2008	1/8/2008
792	ARP05546	55G	EMPLACED_CNTR	11/13/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/9/2008	1/9/2008
793	ARP05547	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/9/2008	1/9/2008
794	ARP05550	55G	EMPLACED_CNTR	10/11/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/8/2008	1/8/2008
795	ARP05555	55G	EMPLACED_CNTR	11/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/10/2008	1/10/2008
796	ARP05556	55G	EMPLACED_CNTR	10/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/10/2008	1/10/2008
797	ARP05561	55G	EMPLACED_CNTR	10/24/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/9/2008	1/9/2008
798	ARP05564	55G	EMPLACED_CNTR	9/24/2011 10:36	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/10/2008	1/10/2008
799	ARP05570	55G	EMPLACED_CNTR	11/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/9/2008	1/9/2008
800	ARP05577	55G	EMPLACED_CNTR	10/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/9/2008	1/9/2008
801	ARP05584	55G	EMPLACED_CNTR	9/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/9/2008	1/9/2008
802	ARP05590	55G	EMPLACED_CNTR	11/14/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/9/2008	1/9/2008
803	ARP05594	55G	EMPLACED_CNTR	10/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/9/2008	1/9/2008
804	ARP05595	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/10/2008	1/10/2008
805	ARP05596	55G	EMPLACED_CNTR	6/10/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/10/2008	1/10/2008
806	ARP05602	55G	EMPLACED_CNTR	10/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/10/2008	1/10/2008
807	ARP05603	55G	EMPLACED_CNTR	11/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/10/2008	1/10/2008
808	ARP05604	55G	EMPLACED_CNTR	10/29/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/10/2008	1/10/2008
809	ARP05605	55G	EMPLACED_CNTR	9/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/10/2008	1/10/2008
810	ARP05606	55G	EMPLACED_CNTR	11/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/10/2008	1/10/2008
811	ARP05626	55G	EMPLACED_CNTR	11/8/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/11/2008	1/11/2008
812	ARP05641	55G	EMPLACED_CNTR	2/24/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/10/2008	1/10/2008
813	ARP05652	55G	EMPLACED_CNTR	11/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/14/2008	1/14/2008
814	ARP05655	55G	EMPLACED_CNTR	11/8/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/14/2008	1/14/2008
815	ARP05658	55G	EMPLACED_CNTR	11/14/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/14/2008	1/14/2008
816	ARP05659	55G	EMPLACED_CNTR	10/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/14/2008	1/14/2008
817	ARP05660	55G	EMPLACED_CNTR	2/6/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/14/2008	1/14/2008
818	ARP05671	55G	EMPLACED_CNTR	2/6/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/14/2008	1/14/2008
819	ARP05695	55G	EMPLACED_CNTR	10/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/11/2008	1/11/2008

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820	ARP05696	55G	EMPLACED_CNTR	9/10/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/11/2008	1/11/2008
821	ARP05697	55G	EMPLACED_CNTR	10/13/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/11/2008	1/11/2008
822	ARP05702	55G	EMPLACED_CNTR	10/13/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/15/2008	1/15/2008
823	ARP05706	55G	EMPLACED_CNTR	3/31/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/16/2008	1/16/2008
824	ARP05710	55G	EMPLACED_CNTR	2/6/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/15/2008	1/15/2008
825	ARP05711	55G	EMPLACED_CNTR	10/29/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/16/2008	1/16/2008
826	ARP05712	55G	EMPLACED_CNTR	10/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/16/2008	1/16/2008
827	ARP05714	55G	EMPLACED_CNTR	10/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/17/2008	1/17/2008
828	ARP05717	55G	EMPLACED_CNTR	9/25/2011 8:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/15/2008	1/15/2008
829	ARP05723	55G	EMPLACED_CNTR	10/29/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/17/2008	1/17/2008
830	ARP05730	55G	EMPLACED_CNTR	11/13/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/17/2008	1/17/2008
831	ARP05732	55G	EMPLACED_CNTR	11/8/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/17/2008	1/17/2008
832	ARP05733	55G	EMPLACED_CNTR	10/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/17/2008	1/17/2008
833	ARP05734	55G	EMPLACED_CNTR	10/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/17/2008	1/17/2008
834	ARP05736	55G	EMPLACED_CNTR	9/17/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/17/2008	1/17/2008
835	ARP05742	55G	EMPLACED_CNTR	10/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/17/2008	1/17/2008
836	ARP05743	55G	EMPLACED_CNTR	11/13/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/17/2008	1/17/2008
837	ARP05746	55G	EMPLACED_CNTR	10/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/17/2008	1/17/2008
838	ARP05748	55G	EMPLACED_CNTR	11/18/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/17/2008	1/17/2008
839	ARP05750	55G	EMPLACED_CNTR	11/13/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/15/2008	1/15/2008
840	ARP05775	55G	EMPLACED_CNTR	10/4/2009 10:38	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/16/2008	1/16/2008
841	ARP05776	55G	EMPLACED_CNTR	1/29/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/16/2008	1/16/2008
842	ARP05777	55G	EMPLACED_CNTR	1/29/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/16/2008	1/16/2008
843	ARP05791	55G	EMPLACED_CNTR	2/3/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/15/2008	1/15/2008
844	ARP05801	55G	EMPLACED_CNTR	9/25/2011 8:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/21/2008	1/21/2008
845	ARP05814	55G	EMPLACED_CNTR	1/29/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/21/2008	1/21/2008
846	ARP05823	55G	EMPLACED_CNTR	11/8/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/21/2008	1/21/2008
847	ARP05824	55G	EMPLACED_CNTR	2/17/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/17/2008	1/17/2008
848	ARP05828	55G	EMPLACED_CNTR	11/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/17/2008	1/17/2008
849	ARP05830	55G	EMPLACED_CNTR	10/29/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/17/2008	1/17/2008
850	ARP05836	55G	EMPLACED_CNTR	11/8/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/21/2008	1/21/2008
851	ARP05846	55G	EMPLACED_CNTR	5/11/2010 19:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/21/2008	1/21/2008
852	ARP05852	55G	EMPLACED_CNTR	11/8/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/17/2008	1/17/2008
853	ARP05866	55G	EMPLACED_CNTR	9/25/2011 8:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/21/2008	1/21/2008
854	ARP05890	55G	EMPLACED_CNTR	11/8/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/23/2008	1/23/2008
855	ARP05897	55G	EMPLACED_CNTR	11/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/23/2008	1/23/2008
856	ARP05900	55G	EMPLACED_CNTR	10/28/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/30/2008	1/30/2008
857	ARP05901	55G	EMPLACED_CNTR	10/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/24/2008	1/24/2008
858	ARP05903	55G	EMPLACED_CNTR	10/28/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/30/2008	1/30/2008

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859	ARP05906	55G	EMPLACED_CNTR	10/13/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/30/2008	1/30/2008
860	ARP05909	55G	EMPLACED_CNTR	10/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/30/2008	1/30/2008
861	ARP05910	55G	EMPLACED_CNTR	10/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/31/2008	1/31/2008
862	ARP05911	55G	EMPLACED_CNTR	1/29/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/30/2008	1/30/2008
863	ARP05915	55G	EMPLACED_CNTR	10/28/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/30/2008	1/30/2008
864	ARP05917	55G	EMPLACED_CNTR	10/28/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/30/2008	1/30/2008
865	ARP05919	55G	EMPLACED_CNTR	11/13/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/31/2008	1/31/2008
866	ARP05923	55G	EMPLACED_CNTR	10/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/23/2008	1/23/2008
867	ARP05932	55G	EMPLACED_CNTR	10/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/30/2008	1/30/2008
868	ARP05938	55G	EMPLACED_CNTR	10/28/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/24/2008	1/24/2008
869	ARP05947	55G	EMPLACED_CNTR	10/28/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/5/2008	2/5/2008
870	ARP05981	55G	EMPLACED_CNTR	1/29/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/6/2008	2/6/2008
871	ARP05990	55G	EMPLACED_CNTR	11/24/2010 19:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/31/2008	1/31/2008
872	ARP06000	55G	EMPLACED_CNTR	1/29/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/24/2008	1/24/2008
873	ARP06006	55G	EMPLACED_CNTR	10/28/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/30/2008	1/30/2008
874	ARP06010	55G	EMPLACED_CNTR	11/8/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/5/2008	2/5/2008
875	ARP06014	55G	EMPLACED_CNTR	10/13/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/5/2008	2/5/2008
876	ARP06015	55G	EMPLACED_CNTR	2/25/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/31/2008	1/31/2008
877	ARP06022	55G	EMPLACED_CNTR	2/10/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/31/2008	1/31/2008
878	ARP06024	55G	EMPLACED_CNTR	6/10/2010 13:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/22/2008	1/22/2008
879	ARP06054	55G	EMPLACED_CNTR	10/28/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/22/2008	1/22/2008
880	ARP06063	55G	EMPLACED_CNTR	11/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/23/2008	1/23/2008
881	ARP06067	55G	EMPLACED_CNTR	11/13/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/23/2008	1/23/2008
882	ARP06071	55G	EMPLACED_CNTR	11/18/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/7/2008	2/7/2008
883	ARP06089	55G	EMPLACED_CNTR	10/13/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/31/2008	1/31/2008
884	ARP06102	55G	EMPLACED_CNTR	1/29/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/31/2008	1/31/2008
885	ARP06105	55G	EMPLACED_CNTR	10/28/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/31/2008	1/31/2008
886	ARP06109	55G	EMPLACED_CNTR	11/13/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/31/2008	1/31/2008
887	ARP06112	55G	EMPLACED_CNTR	10/13/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/12/2008	2/12/2008
888	ARP06127	55G	EMPLACED_CNTR	7/26/2011 23:13	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/12/2008	2/12/2008
889	ARP06137	55G	EMPLACED_CNTR	10/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/12/2008	2/12/2008
890	ARP06140	55G	EMPLACED_CNTR	9/22/2011 20:01	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/11/2008	2/11/2008
891	ARP06151	55G	EMPLACED_CNTR	1/29/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/6/2008	2/6/2008
892	ARP06163	55G	EMPLACED_CNTR	5/11/2010 22:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/11/2008	2/11/2008
893	ARP06173	55G	EMPLACED_CNTR	10/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/12/2008	2/12/2008
894	ARP06174	55G	EMPLACED_CNTR	1/29/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/31/2008	1/31/2008
895	ARP06187	55G	EMPLACED_CNTR	10/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/6/2008	2/6/2008
896	ARP06202	55G	EMPLACED_CNTR	10/13/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/5/2008	2/5/2008
897	ARP06204	55G	EMPLACED_CNTR	2/10/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200		

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898	ARP06210	55G	EMPLACED_CNTR	10/28/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/6/2008	2/6/2008
899	ARP06211	55G	EMPLACED_CNTR	10/28/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/6/2008	2/6/2008
900	ARP06217	55G	EMPLACED_CNTR	1/29/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/6/2008	2/6/2008
901	ARP06218	55G	EMPLACED_CNTR	11/18/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/6/2008	2/6/2008
902	ARP06224	55G	EMPLACED_CNTR	10/13/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/6/2008	2/6/2008
903	ARP06226	55G	EMPLACED_CNTR	5/11/2010 22:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/11/2008	2/11/2008
904	ARP06229	55G	EMPLACED_CNTR	5/16/2010 9:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/11/2008	2/11/2008
905	ARP06232	55G	EMPLACED_CNTR	5/21/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/12/2008	2/12/2008
906	ARP06235	55G	EMPLACED_CNTR	5/16/2010 9:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/11/2008	2/11/2008
907	ARP06237	55G	EMPLACED_CNTR	5/11/2010 19:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/7/2008	2/7/2008
908	ARP06238	55G	EMPLACED_CNTR	10/13/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/11/2008	2/11/2008
909	ARP06252	55G	EMPLACED_CNTR	11/24/2010 19:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/13/2008	2/13/2008
910	ARP06256	55G	EMPLACED_CNTR	6/6/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/14/2008	2/14/2008
911	ARP06266	55G	EMPLACED_CNTR	11/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/13/2008	2/13/2008
912	ARP06275	55G	EMPLACED_CNTR	6/10/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/14/2008	2/14/2008
913	ARP06282	55G	EMPLACED_CNTR	11/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/15/2008	2/15/2008
914	ARP06283	55G	EMPLACED_CNTR	10/28/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/14/2008	2/14/2008
915	ARP06286	55G	EMPLACED_CNTR	9/25/2011 8:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/14/2008	2/14/2008
916	ARP06290	55G	EMPLACED_CNTR	1/29/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/18/2008	2/18/2008
917	ARP06293	55G	EMPLACED_CNTR	10/29/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/15/2008	2/15/2008
918	ARP06294	55G	EMPLACED_CNTR	11/13/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/18/2008	2/18/2008
919	ARP06301	55G	EMPLACED_CNTR	1/29/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/12/2008	2/12/2008
920	ARP06326	55G	EMPLACED_CNTR	10/13/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/13/2008	2/13/2008
921	ARP06329	55G	EMPLACED_CNTR	10/29/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/15/2008	2/15/2008
922	ARP06335	55G	EMPLACED_CNTR	10/28/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/18/2008	2/18/2008
923	ARP06340	55G	EMPLACED_CNTR	3/3/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/19/2008	2/19/2008
924	ARP06341	55G	EMPLACED_CNTR	10/27/2010 18:50	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/20/2008	2/20/2008
925	ARP06347	55G	EMPLACED_CNTR	11/4/2010 22:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/15/2008	2/15/2008
926	ARP06352	55G	EMPLACED_CNTR	2/10/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/12/2008	2/12/2008
927	ARP06353	55G	EMPLACED_CNTR	3/15/2011 22:25	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/15/2008	2/15/2008
928	ARP06364	55G	EMPLACED_CNTR	10/26/2010 19:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/19/2008	2/19/2008
929	ARP06373	55G	EMPLACED_CNTR	10/31/2010 14:01	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/15/2008	2/15/2008
930	ARP06382	55G	EMPLACED_CNTR	2/6/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/15/2008	2/15/2008
931	ARP06385	55G	EMPLACED_CNTR	11/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/19/2008	2/19/2008
932	ARP06408	55G	EMPLACED_CNTR	10/13/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/15/2008	2/15/2008
933	ARP06409	55G	EMPLACED_CNTR	10/29/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/15/2008	2/15/2008
934	ARP06430	55G	EMPLACED_CNTR	3/15/2011 22:25	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/25/2008	2/25/2008
935	ARP06451	55G	EMPLACED_CNTR	11/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/21/2008	2/21/2008
936	ARP06455	55G	EMPLACED_CNTR	10/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/20/2008	2/20/2008

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937	ARP06484	55G	EMPLACED_CNTR	11/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/27/2008	2/27/2008
938	ARP06493	55G	EMPLACED_CNTR	2/24/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/4/2008	3/4/2008
939	ARP06504	55G	EMPLACED_CNTR	10/28/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/26/2008	2/26/2008
940	ARP06512	55G	EMPLACED_CNTR	3/15/2011 22:25	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/3/2008	3/3/2008
941	ARP06528	55G	EMPLACED_CNTR	2/17/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/4/2008	3/4/2008
942	ARP06567	55G	EMPLACED_CNTR	6/13/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/10/2008	3/10/2008
943	ARP06573	55G	EMPLACED_CNTR	6/13/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/5/2008	3/5/2008
944	ARP06584	55G	EMPLACED_CNTR	3/4/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/4/2008	3/4/2008
945	ARP06600	55G	EMPLACED_CNTR	2/6/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/3/2008	3/3/2008
946	ARP06661	55G	EMPLACED_CNTR	2/6/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/4/2008	3/4/2008
947	ARP06665	55G	EMPLACED_CNTR	11/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/5/2008	3/5/2008
948	ARP06717	55G	EMPLACED_CNTR	11/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/13/2008	3/13/2008
949	ARP06721	55G	EMPLACED_CNTR	9/21/2009 19:58	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/13/2008	3/13/2008
950	ARP06723	55G	EMPLACED_CNTR	3/31/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/20/2008	3/20/2008
951	ARP06737	55G	EMPLACED_CNTR	9/14/2009 20:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/6/2008	3/6/2008
952	ARP06750	55G	EMPLACED_CNTR	9/3/2009 22:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/13/2008	3/13/2008
953	ARP06752	55G	EMPLACED_CNTR	11/9/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/20/2008	3/20/2008
954	ARP06753	55G	EMPLACED_CNTR	2/6/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/18/2008	3/18/2008
955	ARP06759	55G	EMPLACED_CNTR	6/10/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/13/2008	3/13/2008
956	ARP06762	55G	EMPLACED_CNTR	7/21/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/17/2008	3/17/2008
957	ARP06764	55G	EMPLACED_CNTR	8/21/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/17/2008	3/17/2008
958	ARP06767	55G	EMPLACED_CNTR	6/13/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/17/2008	3/17/2008
959	ARP06772	55G	EMPLACED_CNTR	6/13/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/18/2008	3/18/2008
960	ARP06773	55G	EMPLACED_CNTR	2/6/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/18/2008	3/18/2008
961	ARP06775	55G	EMPLACED_CNTR	11/3/2010 23:07	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/20/2008	3/20/2008
962	ARP06778	55G	EMPLACED_CNTR	2/6/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/13/2008	3/13/2008
963	ARP06780	55G	EMPLACED_CNTR	2/17/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/11/2008	3/11/2008
964	ARP06783	55G	EMPLACED_CNTR	2/24/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/12/2008	3/12/2008
965	ARP06796	55G	EMPLACED_CNTR	6/10/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/18/2008	3/18/2008
966	ARP06797	55G	EMPLACED_CNTR	2/24/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/18/2008	3/18/2008
967	ARP06798	55G	EMPLACED_CNTR	6/13/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/18/2008	3/18/2008
968	ARP06799	55G	EMPLACED_CNTR	6/24/2010 19:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/18/2008	3/18/2008
969	ARP06817	55G	EMPLACED_CNTR	6/13/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/18/2008	3/18/2008
970	ARP06849	55G	EMPLACED_CNTR	2/3/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/18/2008	3/18/2008
971	ARP06852	55G	EMPLACED_CNTR	6/6/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/25/2008	3/25/2008
972	ARP06856	55G	EMPLACED_CNTR	2/24/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/25/2008	3/25/2008
973	ARP06871	55G	EMPLACED_CNTR	10/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/25/2008	3/25/2008
974	ARP06875	55G	EMPLACED_CNTR	11/5/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/18/2008	3/18/2008
975	ARP06878	55G	EMPLACED_CNTR	11/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/17/2008	3/17/2008

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976	ARP06880	55G	EMPLACED_CNTR	11/5/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/18/2008	3/18/2008
977	ARP06883	55G	EMPLACED_CNTR	2/23/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/26/2008	3/26/2008
978	ARP06889	55G	EMPLACED_CNTR	11/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/24/2008	3/24/2008
979	ARP06893	55G	EMPLACED_CNTR	2/5/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/25/2008	3/25/2008
980	ARP06895	55G	EMPLACED_CNTR	2/24/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/25/2008	3/25/2008
981	ARP06896	55G	EMPLACED_CNTR	5/11/2010 19:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/25/2008	3/25/2008
982	ARP06915	55G	EMPLACED_CNTR	10/23/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/28/2008	3/28/2008
983	ARP06929	55G	EMPLACED_CNTR	2/18/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/27/2008	3/27/2008
984	ARP06942	55G	EMPLACED_CNTR	10/8/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/25/2008	3/25/2008
985	ARP06943	55G	EMPLACED_CNTR	2/15/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/25/2008	3/25/2008
986	ARP06950	55G	EMPLACED_CNTR	2/5/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/27/2008	3/27/2008
987	ARP06951	55G	EMPLACED_CNTR	11/5/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/26/2008	3/26/2008
988	ARP06952	55G	EMPLACED_CNTR	11/5/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/27/2008	3/27/2008
989	ARP06957	55G	EMPLACED_CNTR	3/15/2011 22:25	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/31/2008	3/31/2008
990	ARP06958	55G	EMPLACED_CNTR	11/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/27/2008	3/27/2008
991	ARP06964	55G	EMPLACED_CNTR	10/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/27/2008	3/27/2008
992	ARP06967	55G	EMPLACED_CNTR	2/18/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/27/2008	3/27/2008
993	ARP06971	55G	EMPLACED_CNTR	10/27/2010 18:50	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/27/2008	3/27/2008
994	ARP06979	55G	EMPLACED_CNTR	10/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/26/2008	3/26/2008
995	ARP06988	55G	EMPLACED_CNTR	2/23/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/25/2008	3/25/2008
996	ARP06991	55G	EMPLACED_CNTR	11/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/26/2008	3/26/2008
997	ARP06993	55G	EMPLACED_CNTR	11/5/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/26/2008	3/26/2008
998	ARP06994	55G	EMPLACED_CNTR	11/5/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/26/2008	3/26/2008
999	ARP06995	55G	EMPLACED_CNTR	11/5/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/26/2008	3/26/2008
1000	ARP06998	55G	EMPLACED_CNTR	2/23/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/26/2008	3/26/2008
1001	ARP07000	55G	EMPLACED_CNTR	1/7/2010 21:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/1/2008	4/1/2008
1002	ARP07002	55G	EMPLACED_CNTR	1/7/2010 21:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/31/2008	3/31/2008
1003	ARP07003	55G	EMPLACED_CNTR	6/6/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/31/2008	3/31/2008
1004	ARP07005	55G	EMPLACED_CNTR	1/7/2010 21:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/31/2008	3/31/2008
1005	ARP07011	55G	EMPLACED_CNTR	10/23/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/1/2008	4/1/2008
1006	ARP07012	55G	EMPLACED_CNTR	6/6/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/1/2008	4/1/2008
1007	ARP07019	55G	EMPLACED_CNTR	10/23/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/1/2008	4/1/2008
1008	ARP07022	55G	EMPLACED_CNTR	10/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/1/2008	4/1/2008
1009	ARP07041	55G	EMPLACED_CNTR	10/23/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/1/2008	4/1/2008
1010	ARP07042	55G	EMPLACED_CNTR	6/6/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/31/2008	3/31/2008
1011	ARP07076	55G	EMPLACED_CNTR	1/7/2010 21:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/3/2008	4/3/2008
1012	ARP07125	55G	EMPLACED_CNTR	1/7/2010 22:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/1/2008	4/1/2008
1013	ARP07126	55G	EMPLACED_CNTR	5/19/2010 18:42	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/2/2008	4/2/2008
1014	ARP07127	55G	EMPLACED_CNTR	10/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/2/2008	4/2/2008

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1015	ARP07132	55G	EMPLACED_CNTR	10/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/1/2008	4/1/2008
1016	ARP07133	55G	EMPLACED_CNTR	11/5/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/2/2008	4/2/2008
1017	ARP07135	55G	EMPLACED_CNTR	5/9/2010 10:31	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/2/2008	4/2/2008
1018	ARP07138	55G	EMPLACED_CNTR	11/5/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/2/2008	4/2/2008
1019	ARP07139	55G	EMPLACED_CNTR	5/23/2011 22:38	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/2/2008	4/2/2008
1020	ARP07141	55G	EMPLACED_CNTR	6/3/2010 22:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/2/2008	4/2/2008
1021	ARP07145	55G	EMPLACED_CNTR	6/6/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/2/2008	4/2/2008
1022	ARP07151	55G	EMPLACED_CNTR	11/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/2/2008	4/2/2008
1023	ARP07154	55G	EMPLACED_CNTR	10/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/2/2008	4/2/2008
1024	ARP07219	55G	EMPLACED_CNTR	9/3/2009 22:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/8/2008	4/8/2008
1025	ARP07220	55G	EMPLACED_CNTR	9/3/2009 22:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/8/2008	4/8/2008
1026	ARP07221	55G	EMPLACED_CNTR	10/16/2009 9:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/8/2008	4/8/2008
1027	ARP07249	55G	EMPLACED_CNTR	10/23/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/10/2008	4/10/2008
1028	ARP07259	55G	EMPLACED_CNTR	11/18/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/14/2008	4/14/2008
1029	ARP07265	55G	EMPLACED_CNTR	7/22/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/22/2008	4/22/2008
1030	ARP07266	55G	EMPLACED_CNTR	5/9/2010 10:31	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/22/2008	4/22/2008
1031	ARP07291	55G	EMPLACED_CNTR	10/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/9/2008	4/9/2008
1032	ARP07298	55G	EMPLACED_CNTR	6/6/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/10/2008	4/10/2008
1033	ARP07313	55G	EMPLACED_CNTR	10/23/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/15/2008	4/15/2008
1034	ARP07323	55G	EMPLACED_CNTR	11/5/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/16/2008	4/16/2008
1035	ARP07324	55G	EMPLACED_CNTR	10/23/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/17/2008	4/17/2008
1036	ARP07330	55G	EMPLACED_CNTR	2/15/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/15/2008	4/15/2008
1037	ARP07333	55G	EMPLACED_CNTR	5/11/2010 22:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/21/2008	4/21/2008
1038	ARP07336	55G	EMPLACED_CNTR	11/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/21/2008	4/21/2008
1039	ARP07341	55G	EMPLACED_CNTR	5/2/2010 13:39	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/22/2008	4/22/2008
1040	ARP07342	55G	EMPLACED_CNTR	7/1/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/22/2008	4/22/2008
1041	ARP07347	55G	EMPLACED_CNTR	10/6/2009 23:22	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/22/2008	4/22/2008
1042	ARP07349	55G	EMPLACED_CNTR	8/26/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/22/2008	4/22/2008
1043	ARP07352	55G	EMPLACED_CNTR	11/5/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/21/2008	4/21/2008
1044	ARP07354	55G	EMPLACED_CNTR	10/23/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/17/2008	4/17/2008
1045	ARP07361	55G	EMPLACED_CNTR	11/4/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/17/2008	4/17/2008
1046	ARP07366	55G	EMPLACED_CNTR	11/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/17/2008	4/17/2008
1047	ARP07374	55G	EMPLACED_CNTR	7/29/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/21/2008	4/21/2008
1048	ARP07377	55G	EMPLACED_CNTR	3/4/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/10/2008	4/10/2008
1049	ARP07378	55G	EMPLACED_CNTR	3/4/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/10/2008	4/10/2008
1050	ARP07400	55G	EMPLACED_CNTR	2/15/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/11/2008	4/11/2008
1051	ARP07408	55G	EMPLACED_CNTR	3/4/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/11/2008	4/11/2008
1052	ARP07417	55G	EMPLACED_CNTR	10/23/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/14/2008	4/14/2008
1053	ARP07430	55G	EMPLACED_CNTR	10/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/15/2008	4/15/2008

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1054	ARP07434	55G	EMPLACED_CNTR	2/15/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/14/2008	4/14/2008
1055	ARP07435	55G	EMPLACED_CNTR	2/15/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/14/2008	4/14/2008
1056	ARP07436	55G	EMPLACED_CNTR	10/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/15/2008	4/15/2008
1057	ARP07447	55G	EMPLACED_CNTR	7/1/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/17/2008	4/17/2008
1058	ARP07451	55G	EMPLACED_CNTR	11/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/15/2008	4/15/2008
1059	ARP07452	55G	EMPLACED_CNTR	11/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/15/2008	4/15/2008
1060	ARP07464	55G	EMPLACED_CNTR	11/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/15/2008	4/15/2008
1061	ARP07470	55G	EMPLACED_CNTR	10/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/16/2008	4/16/2008
1062	ARP07475	55G	EMPLACED_CNTR	11/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/17/2008	4/17/2008
1063	ARP07501	55G	EMPLACED_CNTR	2/6/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/17/2008	4/17/2008
1064	ARP07506	55G	EMPLACED_CNTR	11/5/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/21/2008	4/21/2008
1065	ARP07553	55G	EMPLACED_CNTR	11/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/22/2008	4/22/2008
1066	ARP07589	55G	EMPLACED_CNTR	9/3/2009 22:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/23/2008	4/23/2008
1067	ARP07602	55G	EMPLACED_CNTR	11/5/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/24/2008	4/24/2008
1068	ARP07614	55G	EMPLACED_CNTR	10/8/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/1/2008	5/1/2008
1069	ARP07617	55G	EMPLACED_CNTR	6/6/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/30/2008	4/30/2008
1070	ARP07619	55G	EMPLACED_CNTR	6/10/2010 13:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/30/2008	4/30/2008
1071	ARP07621	55G	EMPLACED_CNTR	2/5/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/1/2008	5/1/2008
1072	ARP07623	55G	EMPLACED_CNTR	11/13/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/30/2008	4/30/2008
1073	ARP07633	55G	EMPLACED_CNTR	11/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/28/2008	4/28/2008
1074	ARP07634	55G	EMPLACED_CNTR	10/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/28/2008	4/28/2008
1075	ARP07636	55G	EMPLACED_CNTR	11/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/28/2008	4/28/2008
1076	ARP07645	55G	EMPLACED_CNTR	11/4/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/28/2008	4/28/2008
1077	ARP07648	55G	EMPLACED_CNTR	10/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/28/2008	4/28/2008
1078	ARP07657	55G	EMPLACED_CNTR	2/5/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/1/2008	5/1/2008
1079	ARP07658	55G	EMPLACED_CNTR	11/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/30/2008	4/30/2008
1080	ARP07665	55G	EMPLACED_CNTR	11/21/2010 13:43	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/30/2008	4/30/2008
1081	ARP07673	55G	EMPLACED_CNTR	5/31/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/30/2008	4/30/2008
1082	ARP07675	55G	EMPLACED_CNTR	5/17/2010 18:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/24/2008	4/24/2008
1083	ARP07676	55G	EMPLACED_CNTR	11/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/24/2008	4/24/2008
1084	ARP07677	55G	EMPLACED_CNTR	2/15/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/24/2008	4/24/2008
1085	ARP07678	55G	EMPLACED_CNTR	11/4/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/24/2008	4/24/2008
1086	ARP07679	55G	EMPLACED_CNTR	11/4/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/24/2008	4/24/2008
1087	ARP07683	55G	EMPLACED_CNTR	10/23/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/24/2008	4/24/2008
1088	ARP07699	55G	EMPLACED_CNTR	9/30/2009 21:52	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/30/2008	4/30/2008
1089	ARP07704	55G	EMPLACED_CNTR	3/16/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/5/2008	5/5/2008
1090	ARP07706	55G	EMPLACED_CNTR	5/11/2010 22:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/5/2008	5/5/2008
1091	ARP07710	55G	EMPLACED_CNTR	3/15/2011 22:25	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/5/2008	5/5/2008
1092	ARP07711	55G	EMPLACED_CNTR	11/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/6/2008	5/6/2008

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1093	ARP07713	55G	EMPLACED_CNTR	2/5/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/6/2008	5/6/2008
1094	ARP07714	55G	EMPLACED_CNTR	3/15/2011 22:25	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/6/2008	5/6/2008
1095	ARP07715	55G	EMPLACED_CNTR	11/4/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/7/2008	5/7/2008
1096	ARP07728	55G	EMPLACED_CNTR	3/11/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/11/2008	6/11/2008
1097	ARP07736	55G	EMPLACED_CNTR	2/5/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/12/2008	6/12/2008
1098	ARP07738	55G	EMPLACED_CNTR	11/4/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/11/2008	6/11/2008
1099	ARP07741	55G	EMPLACED_CNTR	10/8/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/11/2008	6/11/2008
1100	ARP07756	55G	EMPLACED_CNTR	10/16/2009 9:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/5/2008	5/5/2008
1101	ARP07759	55G	EMPLACED_CNTR	10/23/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/30/2008	4/30/2008
1102	ARP07763	55G	EMPLACED_CNTR	11/13/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/30/2008	4/30/2008
1103	ARP07764	55G	EMPLACED_CNTR	2/5/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/30/2008	4/30/2008
1104	ARP07765	55G	EMPLACED_CNTR	10/23/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/30/2008	4/30/2008
1105	ARP07770	55G	EMPLACED_CNTR	2/5/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/1/2008	5/1/2008
1106	ARP07772	55G	EMPLACED_CNTR	2/5/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/1/2008	5/1/2008
1107	ARP07786	55G	EMPLACED_CNTR	11/4/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/28/2008	4/28/2008
1108	ARP07794	55G	EMPLACED_CNTR	11/21/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/29/2008	4/29/2008
1109	ARP07808	55G	EMPLACED_CNTR	10/16/2009 9:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/5/2008	5/5/2008
1110	ARP07813	55G	EMPLACED_CNTR	10/18/2011 20:04	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/6/2008	5/6/2008
1111	ARP07817	55G	EMPLACED_CNTR	3/15/2011 22:25	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/5/2008	5/5/2008
1112	ARP07821	55G	EMPLACED_CNTR	11/4/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/6/2008	5/6/2008
1113	ARP07824	55G	EMPLACED_CNTR	11/4/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/6/2008	5/6/2008
1114	ARP07826	55G	EMPLACED_CNTR	5/16/2010 9:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/1/2008	5/1/2008
1115	ARP07828	55G	EMPLACED_CNTR	3/17/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/30/2008	4/30/2008
1116	ARP07829	55G	EMPLACED_CNTR	11/4/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/1/2008	5/1/2008
1117	ARP07837	55G	EMPLACED_CNTR	3/14/2011 22:36	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/5/2008	5/5/2008
1118	ARP07841	55G	EMPLACED_CNTR	3/15/2011 22:25	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/6/2008	5/6/2008
1119	ARP07843	55G	EMPLACED_CNTR	3/15/2011 22:25	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/6/2008	5/6/2008
1120	ARP07847	55G			ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/6/2008	5/6/2008
1121	ARP07849	55G	EMPLACED_CNTR	10/24/2010 9:43	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/6/2008	5/6/2008
1122	ARP07850	55G	EMPLACED_CNTR	11/4/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/5/2008	5/5/2008
1123	ARP07851	55G	EMPLACED_CNTR	3/15/2011 22:25	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/1/2008	5/1/2008
1124	ARP07853	55G	EMPLACED_CNTR	11/4/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/1/2008	5/1/2008
1125	ARP07854	55G	EMPLACED_CNTR	3/14/2011 22:36	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/1/2008	5/1/2008
1126	ARP07861	55G	EMPLACED_CNTR	10/8/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/1/2008	5/1/2008
1127	ARP07862	55G	EMPLACED_CNTR	11/4/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/1/2008	5/1/2008
1128	ARP07865	55G	EMPLACED_CNTR	10/4/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/1/2008	5/1/2008
1129	ARP07867	55G	EMPLACED_CNTR	3/14/2011 22:36	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/1/2008	5/1/2008
1130	ARP07872	55G	EMPLACED_CNTR	10/8/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/5/2008	5/5/2008
1131	ARP07873	55G	EMPLACED_CNTR	3/14/2011 22:36	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/5/2008	5/5/2008

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1132	ARP07874	55G	EMPLACED_CNTR	11/18/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/5/2008	5/5/2008
1133	ARP07875	55G	EMPLACED_CNTR	3/14/2011 22:36	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/6/2008	5/6/2008
1134	ARP07883	55G	EMPLACED_CNTR	3/14/2011 22:36	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/8/2008	5/8/2008
1135	ARP07888	55G	EMPLACED_CNTR	11/13/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/8/2008	5/8/2008
1136	ARP07892	55G	EMPLACED_CNTR	3/14/2011 22:36	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/8/2008	5/8/2008
1137	ARP07898	55G	EMPLACED_CNTR	11/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/8/2008	5/8/2008
1138	ARP07899	55G	EMPLACED_CNTR	11/5/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/13/2008	5/13/2008
1139	ARP07903	55G	EMPLACED_CNTR	10/27/2010 18:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/6/2008	5/6/2008
1140	ARP07904	55G	EMPLACED_CNTR	11/4/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/6/2008	5/6/2008
1141	ARP07907	55G	EMPLACED_CNTR	3/14/2011 22:36	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/6/2008	5/6/2008
1142	ARP07910	55G	EMPLACED_CNTR	6/6/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/12/2008	5/12/2008
1143	ARP07914	55G	EMPLACED_CNTR	10/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/13/2008	5/13/2008
1144	ARP07921	55G	EMPLACED_CNTR	3/14/2011 22:36	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/13/2008	5/13/2008
1145	ARP07922	55G	EMPLACED_CNTR	6/6/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/12/2008	5/12/2008
1146	ARP07924	55G	EMPLACED_CNTR	10/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/12/2008	5/12/2008
1147	ARP07930	55G	EMPLACED_CNTR	3/14/2011 22:36	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/6/2008	5/6/2008
1148	ARP07931	55G	EMPLACED_CNTR	11/4/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/6/2008	5/6/2008
1149	ARP07935	55G	EMPLACED_CNTR	10/23/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/7/2008	5/7/2008
1150	ARP07937	55G	EMPLACED_CNTR	5/31/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/8/2008	5/8/2008
1151	ARP07946	55G	EMPLACED_CNTR	11/4/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/7/2008	5/7/2008
1152	ARP07948	55G	EMPLACED_CNTR	3/14/2011 19:21	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/8/2008	5/8/2008
1153	ARP07952	55G	EMPLACED_CNTR	11/4/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/12/2008	5/12/2008
1154	ARP07953	55G	EMPLACED_CNTR	10/4/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/12/2008	5/12/2008
1155	ARP07956	55G	EMPLACED_CNTR	3/14/2011 19:21	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/13/2008	5/13/2008
1156	ARP07965	55G	EMPLACED_CNTR	10/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/2/2008	6/2/2008
1157	ARP07969	55G	EMPLACED_CNTR	9/14/2009 20:06	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/2/2008	6/2/2008
1158	ARP07972	55G	EMPLACED_CNTR	11/4/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/13/2008	5/13/2008
1159	ARP08012	55G	EMPLACED_CNTR	10/23/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/13/2008	5/13/2008
1160	ARP08013	55G	EMPLACED_CNTR	6/10/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/13/2008	5/13/2008
1161	ARP08026	55G	EMPLACED_CNTR	11/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/13/2008	5/13/2008
1162	ARP08028	55G	EMPLACED_CNTR	11/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/14/2008	5/14/2008
1163	ARP08031	55G	EMPLACED_CNTR	3/14/2011 19:21	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/13/2008	5/13/2008
1164	ARP08034	55G	EMPLACED_CNTR	11/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/13/2008	5/13/2008
1165	ARP08051	55G	EMPLACED_CNTR	3/14/2011 19:21	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/14/2008	5/14/2008
1166	ARP08057	55G	EMPLACED_CNTR	8/21/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/15/2008	5/15/2008
1167	ARP08066	55G	EMPLACED_CNTR	11/13/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/15/2008	5/15/2008
1168	ARP08110	55G	EMPLACED_CNTR	10/23/2010 13:19	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/3/2008	6/3/2008
1169	ARP08162	55G	EMPLACED_CNTR	5/31/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/19/2008	5/19/2008
1170	ARP08206	55G	EMPLACED_CNTR	10/27/2010 18:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/28/2008	5/28/2008

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1171	ARP08231	55G	EMPLACED_CNTR	9/23/2009 22:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/21/2008	5/21/2008
1172	ARP08314	55G	EMPLACED_CNTR	2/24/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/30/2008	5/30/2008
1173	ARP08319	55G	EMPLACED_CNTR	7/1/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/29/2008	5/29/2008
1174	ARP08332	55G	EMPLACED_CNTR	5/31/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/3/2008	6/3/2008
1175	ARP08349	55G	EMPLACED_CNTR	5/31/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/4/2008	6/4/2008
1176	ARP08352	55G	EMPLACED_CNTR	8/21/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/22/2008	5/22/2008
1177	ARP08361	55G	EMPLACED_CNTR	10/24/2010 9:43	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/27/2008	5/27/2008
1178	ARP08365	55G	EMPLACED_CNTR	11/3/2010 23:07	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/28/2008	5/28/2008
1179	ARP08380	55G	EMPLACED_CNTR	10/4/2009 10:02	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/29/2008	5/29/2008
1180	ARP08393	55G	EMPLACED_CNTR	7/1/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/29/2008	5/29/2008
1181	ARP08396	55G	EMPLACED_CNTR	11/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/2/2008	6/2/2008
1182	ARP08400	55G	EMPLACED_CNTR	7/26/2011 23:13	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/4/2008	6/4/2008
1183	ARP08412	55G	EMPLACED_CNTR	6/16/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/4/2008	6/4/2008
1184	ARP08413	55G	EMPLACED_CNTR	11/18/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/4/2008	6/4/2008
1185	ARP08415	55G	EMPLACED_CNTR	11/4/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/4/2008	6/4/2008
1186	ARP08424	55G	EMPLACED_CNTR	6/10/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/4/2008	6/4/2008
1187	ARP08427	55G	EMPLACED_CNTR	2/24/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/4/2008	6/4/2008
1188	ARP08436	55G	EMPLACED_CNTR	11/4/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/5/2008	6/5/2008
1189	ARP08438	55G	EMPLACED_CNTR	2/17/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/5/2008	6/5/2008
1190	ARP08440	55G	EMPLACED_CNTR	10/15/2009 13:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/5/2008	6/5/2008
1191	ARP08443	55G	EMPLACED_CNTR	11/4/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/5/2008	6/5/2008
1192	ARP08446	55G	EMPLACED_CNTR	11/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/5/2008	6/5/2008
1193	ARP08447	55G	EMPLACED_CNTR	7/30/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/6/2008	6/6/2008
1194	ARP08450	55G	EMPLACED_CNTR	5/21/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/5/2008	6/5/2008
1195	ARP08451	55G	EMPLACED_CNTR	11/4/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/5/2008	6/5/2008
1196	ARP08453	55G	EMPLACED_CNTR	10/23/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/5/2008	6/5/2008
1197	ARP08454	55G	EMPLACED_CNTR	2/23/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/5/2008	6/5/2008
1198	ARP08456	55G	EMPLACED_CNTR	4/6/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/5/2008	6/5/2008
1199	ARP08461	55G	EMPLACED_CNTR	3/4/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/5/2008	6/5/2008
1200	ARP08467	55G	EMPLACED_CNTR	5/17/2010 18:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/6/2008	6/6/2008
1201	ARP08470	55G	EMPLACED_CNTR	5/17/2010 18:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/6/2008	6/6/2008
1202	ARP08478	55G	EMPLACED_CNTR	10/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/4/2008	6/4/2008
1203	ARP08493	55G	EMPLACED_CNTR	3/4/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/5/2008	6/5/2008
1204	ARP08505	55G	EMPLACED_CNTR	10/25/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/10/2008	6/10/2008
1205	ARP08508	55G	EMPLACED_CNTR	11/4/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/10/2008	6/10/2008
1206	ARP08509	55G	EMPLACED_CNTR	2/24/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/10/2008	6/10/2008
1207	ARP08520	55G	EMPLACED_CNTR	11/13/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/9/2008	6/9/2008
1208	ARP08521	55G	EMPLACED_CNTR	10/23/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/10/2008	6/10/2008
1209	ARP08535	55G	EMPLACED_CNTR	11/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/9/2008	6/9/2008

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1210	ARP08550	55G	EMPLACED_CNTR	10/4/2009 10:38	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/6/2008	6/6/2008
1211	ARP08551	55G	EMPLACED_CNTR	2/3/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/6/2008	6/6/2008
1212	ARP08555	55G	EMPLACED_CNTR	7/29/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/9/2008	6/9/2008
1213	ARP08559	55G	EMPLACED_CNTR	11/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/9/2008	6/9/2008
1214	ARP08560	55G	EMPLACED_CNTR	11/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/9/2008	6/9/2008
1215	ARP08577	55G	EMPLACED_CNTR	11/4/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/11/2008	6/11/2008
1216	ARP08579	55G	EMPLACED_CNTR	11/4/2010 22:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/11/2008	6/11/2008
1217	ARP08594	55G	EMPLACED_CNTR	11/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/11/2008	6/11/2008
1218	ARP08596	55G	EMPLACED_CNTR	10/27/2010 18:50	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/11/2008	6/11/2008
1219	ARP08602	55G	EMPLACED_CNTR	10/8/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/11/2008	6/11/2008
1220	ARP08620	55G	EMPLACED_CNTR	10/8/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/11/2008	6/11/2008
1221	ARP08637	55G	EMPLACED_CNTR	3/17/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/18/2008	6/18/2008
1222	ARP08653	55G	EMPLACED_CNTR	11/4/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/16/2008	6/16/2008
1223	ARP08654	55G	EMPLACED_CNTR	2/6/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/12/2008	6/12/2008
1224	ARP08663	55G	EMPLACED_CNTR	8/19/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/12/2008	6/12/2008
1225	ARP08669	55G	EMPLACED_CNTR	10/8/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/12/2008	6/12/2008
1226	ARP08682	55G	EMPLACED_CNTR	7/30/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/19/2008	6/19/2008
1227	ARP08688	55G	EMPLACED_CNTR	10/8/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/16/2008	6/16/2008
1228	ARP08690	55G	EMPLACED_CNTR	10/25/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/16/2008	6/16/2008
1229	ARP08698	55G	EMPLACED_CNTR	10/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/16/2008	6/16/2008
1230	ARP08699	55G	EMPLACED_CNTR	10/27/2010 18:50	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/18/2008	6/18/2008
1231	ARP08700	55G	EMPLACED_CNTR	10/23/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/17/2008	6/17/2008
1232	ARP08707	55G	EMPLACED_CNTR	11/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/18/2008	6/18/2008
1233	ARP08717	55G	EMPLACED_CNTR	8/21/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/19/2008	6/19/2008
1234	ARP08724	55G	EMPLACED_CNTR	10/23/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/18/2008	6/18/2008
1235	ARP08727	55G	EMPLACED_CNTR	11/13/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/18/2008	6/18/2008
1236	ARP08730	55G	EMPLACED_CNTR	11/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/18/2008	6/18/2008
1237	ARP08733	55G	EMPLACED_CNTR	10/6/2009 23:22	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/17/2008	6/17/2008
1238	ARP08740	55G	EMPLACED_CNTR	11/15/2009 13:44	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/24/2008	6/24/2008
1239	ARP08741	55G	EMPLACED_CNTR	6/12/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/25/2008	6/25/2008
1240	ARP08749	55G	EMPLACED_CNTR	5/23/2011 22:38	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/23/2008	6/23/2008
1241	ARP08757	55G	EMPLACED_CNTR	10/27/2010 18:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/20/2008	6/20/2008
1242	ARP08758	55G	EMPLACED_CNTR	8/21/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/19/2008	6/19/2008
1243	ARP08760	55G	EMPLACED_CNTR	11/3/2010 23:07	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/19/2008	6/19/2008
1244	ARP08765	55G	EMPLACED_CNTR	7/27/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/18/2008	6/18/2008
1245	ARP08772	55G	EMPLACED_CNTR	10/27/2010 18:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/20/2008	6/20/2008
1246	ARP08775	55G	EMPLACED_CNTR	7/30/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/18/2008	6/18/2008
1247	ARP08781	55G	EMPLACED_CNTR	10/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/17/2008	6/17/2008
1248	ARP08787	55G	EMPLACED_CNTR	10/23/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/19/2008	6/19/2008

	A	B	C	D	E	F	G	I	J
1249	ARP08789	55G	EMPLACED_CNTR	10/8/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/17/2008	6/17/2008
1250	ARP08791	55G	EMPLACED_CNTR	11/12/2010 13:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/17/2008	6/17/2008
1251	ARP08797	55G	EMPLACED_CNTR	7/30/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/18/2008	6/18/2008
1252	ARP08798	55G	EMPLACED_CNTR	11/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/18/2008	6/18/2008
1253	ARP08801	55G	EMPLACED_CNTR	8/21/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/19/2008	6/19/2008
1254	ARP08802	55G	EMPLACED_CNTR	9/22/2011 20:01	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/19/2008	6/19/2008
1255	ARP08803	55G	EMPLACED_CNTR	10/4/2009 10:38	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/19/2008	6/19/2008
1256	ARP08811	55G	EMPLACED_CNTR	10/26/2010 19:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/19/2008	6/19/2008
1257	ARP08822	55G	EMPLACED_CNTR	11/15/2009 13:44	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/24/2008	6/24/2008
1258	ARP08836	55G	EMPLACED_CNTR	8/21/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/19/2008	6/19/2008
1259	ARP08837	55G	EMPLACED_CNTR	11/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/23/2008	6/23/2008
1260	ARP08857	55G	EMPLACED_CNTR	10/26/2010 19:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/20/2008	6/20/2008
1261	ARP08863	55G	EMPLACED_CNTR	10/23/2010 13:19	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/23/2008	6/23/2008
1262	ARP08873	55G	EMPLACED_CNTR	10/24/2010 9:43	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/23/2008	6/23/2008
1263	ARP08877	55G	EMPLACED_CNTR	10/23/2010 13:19	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/25/2008	6/25/2008
1264	ARP08883	55G	EMPLACED_CNTR	10/25/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/27/2008	6/27/2008
1265	ARP08887	55G	EMPLACED_CNTR	2/24/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/26/2008	6/26/2008
1266	ARP08891	55G	EMPLACED_CNTR	10/4/2009 10:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/25/2008	6/25/2008
1267	ARP08897	55G	EMPLACED_CNTR	10/26/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/26/2008	6/26/2008
1268	ARP08902	55G	EMPLACED_CNTR	10/8/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/27/2008	6/27/2008
1269	ARP08904	55G	EMPLACED_CNTR	4/6/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/30/2008	6/30/2008
1270	ARP08907	55G	EMPLACED_CNTR	10/24/2010 9:43	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/27/2008	6/27/2008
1271	ARP08909	55G	EMPLACED_CNTR	8/31/2010 21:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/27/2008	6/27/2008
1272	ARP08912	55G	EMPLACED_CNTR	10/24/2010 9:43	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/27/2008	6/27/2008
1273	ARP08913	55G	EMPLACED_CNTR	1/7/2010 21:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/1/2008	7/1/2008
1274	ARP08923	55G	EMPLACED_CNTR	10/24/2010 9:43	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/30/2008	6/30/2008
1275	ARP08926	55G	EMPLACED_CNTR	11/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/30/2008	6/30/2008
1276	ARP08933	55G	EMPLACED_CNTR	11/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/30/2008	6/30/2008
1277	ARP08940	55G	EMPLACED_CNTR	3/17/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/1/2008	7/1/2008
1278	ARP08955	55G	EMPLACED_CNTR	3/31/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/20/2008	6/20/2008
1279	ARP08967	55G	EMPLACED_CNTR	11/16/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/23/2008	6/23/2008
1280	ARP08968	55G	EMPLACED_CNTR	10/23/2010 13:19	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/23/2008	6/23/2008
1281	ARP08971	55G	EMPLACED_CNTR	11/19/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/23/2008	6/23/2008
1282	ARP08977	55G	EMPLACED_CNTR	10/30/2010 10:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/23/2008	6/23/2008
1283	ARP08979	55G	EMPLACED_CNTR	10/27/2010 18:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/24/2008	6/24/2008
1284	ARP08985	55G	EMPLACED_CNTR	10/30/2010 10:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/23/2008	6/23/2008
1285	ARP08995	55G	EMPLACED_CNTR	7/29/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/25/2008	6/25/2008
1286	ARP08999	55G	EMPLACED_CNTR	7/1/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/24/2008	6/24/2008
1287	ARP09002	55G	EMPLACED_CNTR	4/21/2010 22:18	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/2/2008	7/2/2008

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1288	ARP09003	55G	EMPLACED_CNTR	2/8/2010 22:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/14/2008	7/14/2008
1289	ARP09026	55G	EMPLACED_CNTR	5/23/2011 22:38	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/1/2008	7/1/2008
1290	ARP09030	55G	EMPLACED_CNTR	9/20/2010 18:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/2/2008	7/2/2008
1291	ARP09035	55G	EMPLACED_CNTR	3/14/2011 19:21	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/3/2008	7/3/2008
1292	ARP09045	55G	EMPLACED_CNTR	4/26/2010 18:42	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/2/2008	7/2/2008
1293	ARP09048	55G	EMPLACED_CNTR	1/19/2010 12:46	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/2/2008	7/2/2008
1294	ARP09050	55G	EMPLACED_CNTR	3/4/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/1/2008	7/1/2008
1295	ARP09056	55G	EMPLACED_CNTR	3/16/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/1/2008	7/1/2008
1296	ARP09059	55G	EMPLACED_CNTR	5/11/2010 22:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/2/2008	7/2/2008
1297	ARP09065	55G	EMPLACED_CNTR	8/19/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/1/2008	7/1/2008
1298	ARP09068	55G	EMPLACED_CNTR	8/19/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/1/2008	7/1/2008
1299	ARP09069	55G	EMPLACED_CNTR	10/30/2010 10:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/2/2008	7/2/2008
1300	ARP09071	55G	EMPLACED_CNTR	3/17/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/1/2008	7/1/2008
1301	ARP09074	55G	EMPLACED_CNTR	4/21/2010 22:18	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/2/2008	7/2/2008
1302	ARP09079	55G	EMPLACED_CNTR	11/4/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/30/2008	6/30/2008
1303	ARP09083	55G	EMPLACED_CNTR	11/18/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/30/2008	6/30/2008
1304	ARP09092	55G	EMPLACED_CNTR	11/4/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/30/2008	6/30/2008
1305	ARP09094	55G	EMPLACED_CNTR	11/21/2010 13:43	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/26/2008	6/26/2008
1306	ARP09095	55G	EMPLACED_CNTR	10/23/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/30/2008	6/30/2008
1307	ARP09097	55G	EMPLACED_CNTR	8/31/2010 21:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/2/2008	7/2/2008
1308	ARP09098	55G	EMPLACED_CNTR	3/11/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/1/2008	7/1/2008
1309	ARP09104	55G	EMPLACED_CNTR	10/8/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/30/2008	6/30/2008
1310	ARP09111	55G	EMPLACED_CNTR	10/6/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/30/2008	6/30/2008
1311	ARP09138	55G	EMPLACED_CNTR	10/20/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/24/2008	6/24/2008
1312	ARP09139	55G	EMPLACED_CNTR	6/15/2010 21:58	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/24/2008	6/24/2008
1313	ARP09140	55G	EMPLACED_CNTR	10/30/2010 10:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/24/2008	6/24/2008
1314	ARP09142	55G	EMPLACED_CNTR	10/8/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/30/2008	6/30/2008
1315	ARP09148	55G	EMPLACED_CNTR	10/25/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/30/2008	6/30/2008
1316	ARP09152	55G	EMPLACED_CNTR	8/31/2010 21:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/25/2008	6/25/2008
1317	ARP09155	55G	EMPLACED_CNTR	10/23/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/26/2008	6/26/2008
1318	ARP09156	55G	EMPLACED_CNTR	11/4/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/26/2008	6/26/2008
1319	ARP09157	55G	EMPLACED_CNTR	10/25/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/27/2008	6/27/2008
1320	ARP09163	55G	EMPLACED_CNTR	2/6/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/26/2008	6/26/2008
1321	ARP09168	55G	EMPLACED_CNTR	2/15/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/26/2008	6/26/2008
1322	ARP09173	55G	EMPLACED_CNTR	2/8/2009	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/27/2008	6/27/2008
1323	ARP09174	55G	EMPLACED_CNTR	10/25/2008	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/27/2008	6/27/2008
1324	ARP09192	55G	EMPLACED_CNTR	5/2/2010 13:39	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/7/2008	7/7/2008
1325	ARP09211	55G	EMPLACED_CNTR	7/27/2011 15:30	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/14/2008	7/14/2008
1326	ARP09227	55G	EMPLACED_CNTR	3/16/2012 15:25	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/9/2008	7/9/2008

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1327	ARP09236	55G	EMPLACED_CNTR	4/21/2010 22:18	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/14/2008	7/14/2008
1328	ARP09242	55G	EMPLACED_CNTR	4/27/2010 14:04	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/15/2008	7/15/2008
1329	ARP09250	55G	EMPLACED_CNTR	2/8/2010 22:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/15/2008	7/15/2008
1330	ARP09261	55G	EMPLACED_CNTR	5/24/2011 19:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/2/2008	7/2/2008
1331	ARP09262	55G	EMPLACED_CNTR	10/30/2010 10:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/3/2008	7/3/2008
1332	ARP09283	55G	EMPLACED_CNTR	5/24/2011 19:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/10/2008	7/10/2008
1333	ARP09291	55G	EMPLACED_CNTR	5/15/2010 10:23	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/11/2008	7/11/2008
1334	ARP09300	55G	EMPLACED_CNTR	5/11/2010 22:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/8/2008	7/8/2008
1335	ARP09339	55G	EMPLACED_CNTR	5/10/2010 18:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/7/2008	7/7/2008
1336	ARP09351	55G	EMPLACED_CNTR	5/24/2011 19:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/14/2008	7/14/2008
1337	ARP09355	55G	EMPLACED_CNTR	10/30/2010 10:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/15/2008	7/15/2008
1338	ARP09361	55G	EMPLACED_CNTR	4/21/2010 22:18	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/11/2008	7/11/2008
1339	ARP09367	55G	EMPLACED_CNTR	1/26/2010 21:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/14/2008	7/14/2008
1340	ARP09371	55G	EMPLACED_CNTR	5/23/2011 22:38	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/11/2008	7/11/2008
1341	ARP09374	55G	EMPLACED_CNTR	11/4/2010 22:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/14/2008	7/14/2008
1342	ARP09375	55G	EMPLACED_CNTR	2/8/2010 22:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/10/2008	7/10/2008
1343	ARP09379	55G	EMPLACED_CNTR	4/21/2010 22:18	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/9/2008	7/9/2008
1344	ARP09380	55G	EMPLACED_CNTR	10/30/2010 10:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/9/2008	7/9/2008
1345	ARP09382	55G	EMPLACED_CNTR	4/20/2010 13:11	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/8/2008	7/8/2008
1346	ARP09387	55G	EMPLACED_CNTR	5/9/2010 10:31	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/9/2008	7/9/2008
1347	ARP09388	55G	EMPLACED_CNTR	1/20/2010 12:52	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/9/2008	7/9/2008
1348	ARP09389	55G	EMPLACED_CNTR	4/26/2010 18:42	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/8/2008	7/8/2008
1349	ARP09395	55G	EMPLACED_CNTR	5/11/2010 9:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/9/2008	7/9/2008
1350	ARP09413	55G	EMPLACED_CNTR	8/31/2010 21:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/16/2008	7/16/2008
1351	ARP09419	55G	EMPLACED_CNTR	5/10/2010 18:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/16/2008	7/16/2008
1352	ARP09429	55G	EMPLACED_CNTR	1/26/2010 21:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/16/2008	7/16/2008
1353	ARP09431	55G	EMPLACED_CNTR	5/10/2010 18:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/15/2008	7/15/2008
1354	ARP09432	55G	EMPLACED_CNTR	1/24/2010 12:44	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/17/2008	7/17/2008
1355	ARP09436	55G	EMPLACED_CNTR	4/27/2010 14:04	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/21/2008	7/21/2008
1356	ARP09439	55G	EMPLACED_CNTR	4/27/2010 14:04	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/21/2008	7/21/2008
1357	ARP09442	55G	EMPLACED_CNTR	1/21/2010 19:46	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/21/2008	7/21/2008
1358	ARP09450	55G	EMPLACED_CNTR	5/23/2010 13:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/15/2008	7/15/2008
1359	ARP09451	55G	EMPLACED_CNTR	4/21/2010 22:18	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/17/2008	7/17/2008
1360	ARP09452	55G	EMPLACED_CNTR	11/3/2010 23:07	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/21/2008	7/21/2008
1361	ARP09455	55G	EMPLACED_CNTR	4/21/2010 22:18	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/17/2008	7/17/2008
1362	ARP09457	55G	EMPLACED_CNTR	4/20/2010 13:11	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/16/2008	7/16/2008
1363	ARP09461	55G	EMPLACED_CNTR	4/20/2010 10:43	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/17/2008	7/17/2008
1364	ARP09462	55G	EMPLACED_CNTR	10/26/2010 19:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/17/2008	7/17/2008
1365	ARP09470	55G	EMPLACED_CNTR	10/30/2010 10:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/16/2008	7/16/2008

	A	B	C	D	E	F	G	I	J
1366	ARP09481	55G	EMPLACED_CNTR	4/20/2010 13:11	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/23/2008	7/23/2008
1367	ARP09491	55G	EMPLACED_CNTR	1/21/2010 19:46	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/21/2008	7/21/2008
1368	ARP09498	55G	EMPLACED_CNTR	4/26/2010 18:42	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/22/2008	7/22/2008
1369	ARP09519	55G	EMPLACED_CNTR	4/20/2010 13:11	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/21/2008	7/21/2008
1370	ARP09558	55G	EMPLACED_CNTR	8/30/2010 22:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/16/2008	7/16/2008
1371	ARP09560	55G	EMPLACED_CNTR	4/27/2010 18:07	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/16/2008	7/16/2008
1372	ARP09563	55G	EMPLACED_CNTR	4/27/2010 14:04	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/16/2008	7/16/2008
1373	ARP09582	55G	EMPLACED_CNTR	4/27/2010 18:07	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/23/2008	7/23/2008
1374	ARP09614	55G	EMPLACED_CNTR	3/14/2011 19:21	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/11/2008	8/11/2008
1375	ARP09619	55G	EMPLACED_CNTR	1/20/2010 10:15	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/12/2008	8/12/2008
1376	ARP09620	55G	EMPLACED_CNTR	4/27/2010 18:07	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/11/2008	8/11/2008
1377	ARP09638	55G	EMPLACED_CNTR	1/26/2010 21:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/28/2008	7/28/2008
1378	ARP09668	55G	EMPLACED_CNTR	4/27/2010 14:04	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/11/2008	8/11/2008
1379	ARP09670	55G	EMPLACED_CNTR	11/3/2010 23:07	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/11/2008	8/11/2008
1380	ARP09680	55G	EMPLACED_CNTR	4/27/2010 14:04	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/11/2008	8/11/2008
1381	ARP09704	55G	EMPLACED_CNTR	11/17/2010 22:47	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/30/2008	7/30/2008
1382	ARP09706	55G	EMPLACED_CNTR	5/25/2011 23:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/29/2008	7/29/2008
1383	ARP09711	55G	EMPLACED_CNTR	11/21/2010 13:43	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/29/2008	7/29/2008
1384	ARP09719	55G	EMPLACED_CNTR	1/20/2010 12:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/30/2008	7/30/2008
1385	ARP09731	55G	EMPLACED_CNTR	4/20/2010 10:43	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/30/2008	7/30/2008
1386	ARP09733	55G	EMPLACED_CNTR	1/20/2010 12:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/29/2008	7/29/2008
1387	ARP09735	55G	EMPLACED_CNTR	11/4/2010 22:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/30/2008	7/30/2008
1388	ARP09742	55G	EMPLACED_CNTR	10/31/2010 14:01	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/30/2008	7/30/2008
1389	ARP09746	55G	EMPLACED_CNTR	1/19/2010 12:46	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/30/2008	7/30/2008
1390	ARP09750	55G	EMPLACED_CNTR	5/2/2010 13:39	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/31/2008	7/31/2008
1391	ARP09751	55G	EMPLACED_CNTR	11/12/2010 13:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/31/2008	7/31/2008
1392	ARP09765	55G	EMPLACED_CNTR	5/15/2010 10:23	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/4/2008	8/4/2008
1393	ARP09767	55G	EMPLACED_CNTR	6/15/2010 21:58	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/31/2008	7/31/2008
1394	ARP09780	55G	EMPLACED_CNTR	9/20/2010 18:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/24/2008	7/24/2008
1395	ARP09781	55G	EMPLACED_CNTR	5/2/2010 14:15	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/28/2008	7/28/2008
1396	ARP09786	55G	EMPLACED_CNTR	3/14/2011 19:21	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/24/2008	7/24/2008
1397	ARP09792	55G	EMPLACED_CNTR	1/26/2010 21:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/24/2008	7/24/2008
1398	ARP09794	55G	EMPLACED_CNTR	4/27/2010 18:07	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/28/2008	7/28/2008
1399	ARP09798	55G	EMPLACED_CNTR	10/31/2010 14:01	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/29/2008	7/29/2008
1400	ARP09804	55G	EMPLACED_CNTR	4/20/2010 13:07	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/29/2008	7/29/2008
1401	ARP09813	55G	EMPLACED_CNTR	4/29/2010 22:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/29/2008	7/29/2008
1402	ARP09818	55G	EMPLACED_CNTR	4/27/2010 18:07	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/30/2008	7/30/2008
1403	ARP09826	55G	EMPLACED_CNTR	4/20/2010 13:11	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/30/2008	7/30/2008
1404	ARP09830	55G	EMPLACED_CNTR	1/19/2010 12:46	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/30/2008	7/30/2008

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1405	ARP09832	55G	EMPLACED_CNTR	1/20/2010 10:15	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/31/2008	7/31/2008
1406	ARP09833	55G	EMPLACED_CNTR	4/26/2010 18:42	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/30/2008	7/30/2008
1407	ARP09842	55G	EMPLACED_CNTR	1/20/2010 12:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/4/2008	8/4/2008
1408	ARP09849	55G	EMPLACED_CNTR	11/12/2010 13:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/4/2008	8/4/2008
1409	ARP09861	55G	EMPLACED_CNTR	11/4/2010 22:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/5/2008	8/5/2008
1410	ARP09865	55G	EMPLACED_CNTR	1/20/2010 12:52	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/5/2008	8/5/2008
1411	ARP09880	55G	EMPLACED_CNTR	1/21/2010 19:46	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/31/2008	7/31/2008
1412	ARP09881	55G	EMPLACED_CNTR	4/29/2010 22:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/4/2008	8/4/2008
1413	ARP09882	55G	EMPLACED_CNTR	11/4/2010 22:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/31/2008	7/31/2008
1414	ARP09895	55G	EMPLACED_CNTR	5/10/2010 18:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/4/2008	8/4/2008
1415	ARP09900	55G	EMPLACED_CNTR	10/31/2010 14:01	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/5/2008	8/5/2008
1416	ARP09920	55G	EMPLACED_CNTR	4/27/2010 14:04	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/5/2008	8/5/2008
1417	ARP09922	55G	EMPLACED_CNTR	4/20/2010 13:11	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/5/2008	8/5/2008
1418	ARP09926	55G	EMPLACED_CNTR	1/20/2010 12:58	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/5/2008	8/5/2008
1419	ARP09937	55G	EMPLACED_CNTR	1/20/2010 10:15	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/15/2008	8/15/2008
1420	ARP09939	55G	EMPLACED_CNTR	10/31/2010 14:01	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/8/2008	8/8/2008
1421	ARP09970	55G	EMPLACED_CNTR	9/23/2010 19:02	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/6/2008	8/6/2008
1422	ARP09993	55G	EMPLACED_CNTR	1/20/2010 10:15	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/15/2008	8/15/2008
1423	ARP09994	55G	EMPLACED_CNTR	1/20/2010 12:58	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/8/2008	8/8/2008
1424	ARP10004	55G	EMPLACED_CNTR	11/4/2010 22:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/13/2008	8/13/2008
1425	ARP10006	55G	EMPLACED_CNTR	4/29/2010 22:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/14/2008	8/14/2008
1426	ARP10008	55G	EMPLACED_CNTR	10/31/2010 14:01	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/13/2008	8/13/2008
1427	ARP10020	55G	EMPLACED_CNTR	1/20/2010 10:15	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/14/2008	8/14/2008
1428	ARP10022	55G	EMPLACED_CNTR	2/8/2010 22:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/14/2008	8/14/2008
1429	ARP10023	55G	EMPLACED_CNTR	1/20/2010 12:52	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/14/2008	8/14/2008
1430	ARP10050	55G	EMPLACED_CNTR	1/21/2010 19:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/15/2008	8/15/2008
1431	ARP10052	55G	EMPLACED_CNTR	10/31/2010 14:01	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/8/2008	8/8/2008
1432	ARP10053	55G	EMPLACED_CNTR	5/10/2010 18:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/15/2008	8/15/2008
1433	ARP10058	55G	EMPLACED_CNTR	4/20/2010 10:43	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/11/2008	8/11/2008
1434	ARP10064	55G	EMPLACED_CNTR	3/14/2011 19:21	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/11/2008	8/11/2008
1435	ARP10073	55G	EMPLACED_CNTR	4/27/2010 22:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/13/2008	8/13/2008
1436	ARP10075	55G	EMPLACED_CNTR	5/10/2010 18:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/15/2008	8/15/2008
1437	ARP10077	55G	EMPLACED_CNTR	9/22/2011 21:52	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/14/2008	8/14/2008
1438	ARP10082	55G	EMPLACED_CNTR	5/17/2010 18:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/19/2008	8/19/2008
1439	ARP10090	55G	EMPLACED_CNTR	1/26/2010 21:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/20/2008	8/20/2008
1440	ARP10091	55G	EMPLACED_CNTR	5/10/2010 18:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/20/2008	8/20/2008
1441	ARP10093	55G	EMPLACED_CNTR	5/17/2010 18:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/20/2008	8/20/2008
1442	ARP10106	55G	EMPLACED_CNTR	3/14/2011 19:21	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/14/2008	8/14/2008
1443	ARP10116	55G	EMPLACED_CNTR	5/10/2010 18:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/14/2008	8/14/2008

	A	B	C	D	E	F	G	I	J
1444	ARP10128	55G	EMPLACED_CNTR	1/21/2010 19:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/12/2008	8/12/2008
1445	ARP10147	55G	EMPLACED_CNTR	5/10/2010 18:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/12/2008	8/12/2008
1446	ARP10153	55G	EMPLACED_CNTR	10/27/2010 18:50	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/12/2008	8/12/2008
1447	ARP10157	55G	EMPLACED_CNTR	10/24/2010 9:43	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/12/2008	8/12/2008
1448	ARP10158	55G	EMPLACED_CNTR	5/2/2010 13:39	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/13/2008	8/13/2008
1449	ARP10163	55G	EMPLACED_CNTR	3/14/2011 19:21	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/13/2008	8/13/2008
1450	ARP10169	55G	EMPLACED_CNTR	3/30/2011 22:19	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/14/2008	8/14/2008
1451	ARP10186	55G	EMPLACED_CNTR	5/11/2010 9:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/15/2008	8/15/2008
1452	ARP10191	55G	EMPLACED_CNTR	8/31/2010 21:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/8/2008	8/8/2008
1453	ARP10206	55G	EMPLACED_CNTR	11/3/2010 23:07	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/14/2008	8/14/2008
1454	ARP10207	55G	EMPLACED_CNTR	1/21/2010 19:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/14/2008	8/14/2008
1455	ARP10222	55G	EMPLACED_CNTR	6/15/2010 21:58	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/27/2008	8/27/2008
1456	ARP10238	55G	EMPLACED_CNTR	5/11/2010 9:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/19/2008	8/19/2008
1457	ARP10256	55G	EMPLACED_CNTR	5/11/2010 9:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/15/2008	8/15/2008
1458	ARP10284	55G	EMPLACED_CNTR	5/11/2010 9:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/11/2008	9/11/2008
1459	ARP10297	55G	EMPLACED_CNTR	4/20/2010 10:43	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/27/2008	8/27/2008
1460	ARP10303	55G	EMPLACED_CNTR	5/11/2010 9:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/26/2008	8/26/2008
1461	ARP10310	55G	EMPLACED_CNTR	10/27/2010 18:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/26/2008	8/26/2008
1462	ARP10312	55G	EMPLACED_CNTR	5/15/2010 10:23	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/21/2008	8/21/2008
1463	ARP10325	55G	EMPLACED_CNTR	10/27/2010 18:50	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/5/2008	9/5/2008
1464	ARP10342	55G	EMPLACED_CNTR	5/15/2010 10:23	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/2/2008	9/2/2008
1465	ARP10376	55G	EMPLACED_CNTR	5/17/2010 18:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/21/2008	8/21/2008
1466	ARP10378	55G	EMPLACED_CNTR	5/11/2010 9:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/21/2008	8/21/2008
1467	ARP10386	55G	EMPLACED_CNTR	4/27/2010 22:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/2/2008	9/2/2008
1468	ARP10406	55G	EMPLACED_CNTR	5/11/2010 9:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/21/2008	8/21/2008
1469	ARP10425	55G	EMPLACED_CNTR	4/29/2010 22:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/25/2008	8/25/2008
1470	ARP10450	55G	EMPLACED_CNTR	4/21/2010 22:18	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/8/2008	9/8/2008
1471	ARP10458	55G	EMPLACED_CNTR	10/30/2010 10:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/10/2008	9/10/2008
1472	ARP10465	55G	EMPLACED_CNTR	4/27/2010 22:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/8/2008	9/8/2008
1473	ARP10485	55G	EMPLACED_CNTR	4/27/2010 18:07	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/21/2008	8/21/2008
1474	ARP10505	55G	EMPLACED_CNTR	1/20/2010 10:15	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/21/2008	8/21/2008
1475	ARP10506	55G	EMPLACED_CNTR	5/11/2010 21:41	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/21/2008	8/21/2008
1476	ARP10508	55G	EMPLACED_CNTR	5/19/2010 18:42	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/2/2008	9/2/2008
1477	ARP10512	55G	EMPLACED_CNTR	10/27/2010 18:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/2/2008	9/2/2008
1478	ARP10519	55G	EMPLACED_CNTR	1/20/2010 12:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/2/2008	9/2/2008
1479	ARP10520	55G	EMPLACED_CNTR	11/3/2010 23:07	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/20/2008	8/20/2008
1480	ARP10584	55G	EMPLACED_CNTR	4/27/2010 22:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/11/2008	9/11/2008
1481	ARP10602	55G	EMPLACED_CNTR	5/9/2010 10:31	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/16/2008	9/16/2008
1482	ARP10609	55G	EMPLACED_CNTR	5/11/2010 21:41	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/16/2008	9/16/2008

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1483	ARP10614	55G	EMPLACED_CNTR	5/8/2010 10:56	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/16/2008	9/16/2008
1484	ARP10624	55G	EMPLACED_CNTR	5/16/2010 9:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/11/2008	9/11/2008
1485	ARP10635	55G	EMPLACED_CNTR	4/20/2010 13:11	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/10/2008	9/10/2008
1486	ARP10637	55G	EMPLACED_CNTR	8/30/2010 22:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/10/2008	9/10/2008
1487	ARP10644	55G	EMPLACED_CNTR	4/21/2010 22:18	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/10/2008	9/10/2008
1488	ARP10649	55G	EMPLACED_CNTR	5/2/2010 14:15	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/10/2008	9/10/2008
1489	ARP10666	55G	EMPLACED_CNTR	5/11/2010 21:41	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/8/2008	9/8/2008
1490	ARP10683	55G	EMPLACED_CNTR	10/27/2010 18:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/28/2008	8/28/2008
1491	ARP10701	55G	EMPLACED_CNTR	5/11/2010 21:41	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/3/2008	9/3/2008
1492	ARP10742	55G	EMPLACED_CNTR	10/23/2010 13:19	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/9/2008	9/9/2008
1493	ARP10754	55G	EMPLACED_CNTR	5/2/2010 13:39	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/5/2008	9/5/2008
1494	ARP10762	55G	EMPLACED_CNTR	5/19/2010 18:42	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/8/2008	9/8/2008
1495	ARP10770	55G	EMPLACED_CNTR	10/24/2010 9:43	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/9/2008	9/9/2008
1496	ARP10778	55G	EMPLACED_CNTR	5/11/2010 21:41	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/9/2008	9/9/2008
1497	ARP10813	55G	EMPLACED_CNTR	1/20/2010 12:52	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/16/2008	9/16/2008
1498	ARP10818	55G	EMPLACED_CNTR	5/12/2010 22:15	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/16/2008	9/16/2008
1499	ARP10819	55G	EMPLACED_CNTR	8/30/2010 22:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/17/2008	9/17/2008
1500	ARP10820	55G	EMPLACED_CNTR	5/11/2010 21:41	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/17/2008	9/17/2008
1501	ARP10823	55G	EMPLACED_CNTR	5/9/2010 10:31	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/16/2008	9/16/2008
1502	ARP10826	55G	EMPLACED_CNTR	9/23/2010 19:02	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/10/2008	9/10/2008
1503	ARP10828	55G	EMPLACED_CNTR	4/26/2010 18:42	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/10/2008	9/10/2008
1504	ARP10831	55G	EMPLACED_CNTR	5/11/2010 21:41	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/11/2008	9/11/2008
1505	ARP10837	55G	EMPLACED_CNTR	5/11/2010 22:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/12/2008	9/12/2008
1506	ARP10841	55G	EMPLACED_CNTR	5/17/2010 18:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/11/2008	9/11/2008
1507	ARP10922	55G	EMPLACED_CNTR	1/20/2010 12:52	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/15/2008	9/15/2008
1508	ARP10929	55G	EMPLACED_CNTR	4/20/2010 13:07	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/16/2008	9/16/2008
1509	ARP10940	55G	EMPLACED_CNTR	5/2/2010 13:39	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/16/2008	9/16/2008
1510	ARP10954	55G	EMPLACED_CNTR	1/20/2010 12:58	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/26/2008	9/26/2008
1511	ARP10962	55G	EMPLACED_CNTR	5/11/2010 21:41	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/18/2008	9/18/2008
1512	ARP10981	55G	EMPLACED_CNTR	4/20/2010 10:43	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/30/2008	9/30/2008
1513	ARP11016	55G	EMPLACED_CNTR	11/3/2010 23:07	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/17/2008	9/17/2008
1514	ARP11062	55G	EMPLACED_CNTR	5/11/2010 18:47	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/22/2008	9/22/2008
1515	ARP11066	55G	EMPLACED_CNTR	5/19/2010 18:42	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/23/2008	9/23/2008
1516	ARP11071	55G	EMPLACED_CNTR	1/26/2010 21:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/23/2008	9/23/2008
1517	ARP11084	55G	EMPLACED_CNTR	4/29/2010 22:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/8/2008	10/8/2008
1518	ARP11095	55G	EMPLACED_CNTR	10/26/2010 19:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/2/2008	10/2/2008
1519	ARP11107	55G	EMPLACED_CNTR	5/16/2010 9:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/22/2008	9/22/2008
1520	ARP11141	55G	EMPLACED_CNTR	10/24/2010 9:43	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/8/2008	10/8/2008
1521	ARP11146	55G	EMPLACED_CNTR	4/27/2010 22:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/1/2008	10/1/2008

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1522	ARP11148	55G	EMPLACED_CNTR	6/10/2010 13:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/7/2008	10/7/2008
1523	ARP11173	55G	EMPLACED_CNTR	6/3/2010 21:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/23/2008	9/23/2008
1524	ARP11234	55G	EMPLACED_CNTR	4/27/2010 22:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/8/2008	10/8/2008
1525	ARP11261	55G	EMPLACED_CNTR	4/20/2010 13:11	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/1/2008	10/1/2008
1526	ARP11271	55G	EMPLACED_CNTR	1/19/2010 12:46	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/29/2008	9/29/2008
1527	ARP11277	55G	EMPLACED_CNTR	1/20/2010 12:52	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/29/2008	9/29/2008
1528	ARP11289	55G	EMPLACED_CNTR	5/11/2010 18:47	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/30/2008	9/30/2008
1529	ARP11291	55G	EMPLACED_CNTR	1/20/2010 12:52	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/29/2008	9/29/2008
1530	ARP11312	55G	EMPLACED_CNTR	4/27/2010 14:04	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/13/2008	10/13/2008
1531	ARP11317	55G	EMPLACED_CNTR	9/22/2011 20:01	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/1/2008	10/1/2008
1532	ARP11331	55G	EMPLACED_CNTR	4/27/2010 18:07	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/1/2008	10/1/2008
1533	ARP11346	55G	EMPLACED_CNTR	5/11/2010 18:47	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/6/2008	10/6/2008
1534	ARP11347	55G	EMPLACED_CNTR	1/19/2010 12:46	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/7/2008	10/7/2008
1535	ARP11356	55G	EMPLACED_CNTR	11/3/2010 23:07	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/8/2008	10/8/2008
1536	ARP11361	55G	EMPLACED_CNTR	10/23/2010 13:19	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/2/2008	10/2/2008
1537	ARP11374	55G	EMPLACED_CNTR	4/29/2010 22:02	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/7/2008	10/7/2008
1538	ARP11375	55G	EMPLACED_CNTR	5/11/2010 18:47	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/14/2008	10/14/2008
1539	ARP11378	55G	EMPLACED_CNTR	5/19/2010 18:42	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/6/2008	10/6/2008
1540	ARP11380	55G	EMPLACED_CNTR	4/29/2010 22:02	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/13/2008	10/13/2008
1541	ARP11381	55G	EMPLACED_CNTR	5/19/2010 18:42	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/14/2008	10/14/2008
1542	ARP11385	55G	EMPLACED_CNTR	10/26/2010 19:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/6/2008	10/6/2008
1543	ARP11401	55G	EMPLACED_CNTR	1/19/2010 12:46	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/8/2008	10/8/2008
1544	ARP11411	55G	EMPLACED_CNTR	4/29/2010 22:02	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/7/2008	10/7/2008
1545	ARP11412	55G	EMPLACED_CNTR	5/19/2010 18:42	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/8/2008	10/8/2008
1546	ARP11415	55G	EMPLACED_CNTR	4/27/2010 22:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/9/2008	10/9/2008
1547	ARP11418	55G	EMPLACED_CNTR	4/27/2010 22:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/9/2008	10/9/2008
1548	ARP11425	55G	EMPLACED_CNTR	5/17/2010 18:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/17/2008	10/17/2008
1549	ARP11433	55G	EMPLACED_CNTR	1/20/2010 12:52	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/7/2008	10/7/2008
1550	ARP11434	55G	EMPLACED_CNTR	5/2/2010 13:39	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/8/2008	10/8/2008
1551	ARP11440	55G	EMPLACED_CNTR	11/3/2010 23:07	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/8/2008	10/8/2008
1552	ARP11456	55G	EMPLACED_CNTR	4/20/2010 13:07	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/17/2008	10/17/2008
1553	ARP11464	55G	EMPLACED_CNTR	5/2/2010 14:15	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/9/2008	10/9/2008
1554	ARP11470	55G	EMPLACED_CNTR	4/27/2010 22:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/13/2008	10/13/2008
1555	ARP11474	55G	EMPLACED_CNTR	4/20/2010 13:07	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/13/2008	10/13/2008
1556	ARP11484	55G	EMPLACED_CNTR	4/20/2010 10:43	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/7/2008	10/7/2008
1557	ARP11489	55G	EMPLACED_CNTR	10/23/2010 13:19	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/9/2008	10/9/2008
1558	ARP11495	55G	EMPLACED_CNTR	5/15/2010 10:23	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/9/2008	10/9/2008
1559	ARP11514	55G	EMPLACED_CNTR	5/2/2010 14:15	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/9/2008	10/9/2008
1560	ARP11523	55G	EMPLACED_CNTR	5/19/2010 18:42	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/9/2008	10/9/2008

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1561	ARP11525	55G	EMPLACED_CNTR	10/27/2010 18:50	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/9/2008	10/9/2008
1562	ARP11544	55G	EMPLACED_CNTR	6/3/2010 21:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/22/2008	10/22/2008
1563	ARP11547	55G	EMPLACED_CNTR	4/28/2010 19:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/30/2008	10/30/2008
1564	ARP11551	55G	EMPLACED_CNTR	6/3/2010 21:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/16/2008	10/16/2008
1565	ARP11557	55G	EMPLACED_CNTR	5/9/2010 10:31	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/14/2008	10/14/2008
1566	ARP11558	55G	EMPLACED_CNTR	4/27/2010 22:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/14/2008	10/14/2008
1567	ARP11560	55G	EMPLACED_CNTR	5/11/2010 18:47	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/15/2008	10/15/2008
1568	ARP11562	55G	EMPLACED_CNTR	4/29/2010 22:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/15/2008	10/15/2008
1569	ARP11574	55G	EMPLACED_CNTR	1/20/2010 12:52	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/14/2008	10/14/2008
1570	ARP11578	55G	EMPLACED_CNTR	5/11/2010 18:47	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/13/2008	10/13/2008
1571	ARP11602	55G	EMPLACED_CNTR	4/27/2010 22:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/15/2008	10/15/2008
1572	ARP11619	55G	EMPLACED_CNTR	4/29/2010 22:02	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/15/2008	10/15/2008
1573	ARP11645	55G	EMPLACED_CNTR	1/26/2010 21:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/15/2008	10/15/2008
1574	ARP11647	55G	EMPLACED_CNTR	6/10/2010 13:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/16/2008	10/16/2008
1575	ARP11652	55G	EMPLACED_CNTR	5/2/2010 14:15	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/21/2008	10/21/2008
1576	ARP11653	55G	EMPLACED_CNTR	5/2/2010 14:15	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/21/2008	10/21/2008
1577	ARP11665	55G	EMPLACED_CNTR	4/27/2010 22:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/17/2008	10/17/2008
1578	ARP11667	55G	EMPLACED_CNTR	10/23/2010 13:19	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/17/2008	10/17/2008
1579	ARP11671	55G	EMPLACED_CNTR	10/12/2010 21:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/17/2008	10/17/2008
1580	ARP11673	55G	EMPLACED_CNTR	10/23/2010 13:19	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/17/2008	10/17/2008
1581	ARP11681	55G	EMPLACED_CNTR	4/20/2010 13:07	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/15/2008	10/15/2008
1582	ARP11682	55G	EMPLACED_CNTR	5/11/2010 18:47	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/14/2008	10/14/2008
1583	ARP11689	55G	EMPLACED_CNTR	5/11/2010 18:47	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/14/2008	10/14/2008
1584	ARP11691	55G	EMPLACED_CNTR	1/20/2010 12:58	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/14/2008	10/14/2008
1585	ARP11695	55G	EMPLACED_CNTR	6/3/2010 21:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/16/2008	10/16/2008
1586	ARP11710	55G	EMPLACED_CNTR	5/8/2010 10:56	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/20/2008	10/20/2008
1587	ARP11728	55G	EMPLACED_CNTR	5/12/2010 22:16	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/16/2008	10/16/2008
1588	ARP11729	55G	EMPLACED_CNTR	10/27/2010 18:50	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/16/2008	10/16/2008
1589	ARP11730	55G	EMPLACED_CNTR	6/3/2010 21:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/16/2008	10/16/2008
1590	ARP11734	55G	EMPLACED_CNTR	1/26/2010 21:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/16/2008	10/16/2008
1591	ARP11735	55G	EMPLACED_CNTR	5/12/2010 19:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/21/2008	10/21/2008
1592	ARP11745	55G	EMPLACED_CNTR	5/17/2010 18:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/16/2008	10/16/2008
1593	ARP11750	55G	EMPLACED_CNTR	5/19/2010 19:06	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/15/2008	10/15/2008
1594	ARP11754	55G	EMPLACED_CNTR	4/27/2010 13:31	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/15/2008	10/15/2008
1595	ARP11757	55G	EMPLACED_CNTR	10/24/2010 9:43	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/15/2008	10/15/2008
1596	ARP11760	55G	EMPLACED_CNTR	4/27/2010 13:31	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/15/2008	10/15/2008
1597	ARP11769	55G	EMPLACED_CNTR	4/29/2010 22:02	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/16/2008	10/16/2008
1598	ARP11787	55G	EMPLACED_CNTR	4/26/2010 18:42	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/20/2008	10/20/2008
1599	ARP11790	55G	EMPLACED_CNTR	4/27/2010 22:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/17/2008	10/17/2008

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1600	ARP11794	55G	EMPLACED_CNTR	4/27/2010 13:31	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/17/2008	10/17/2008
1601	ARP11801	55G	EMPLACED_CNTR	4/27/2010 22:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/20/2008	10/20/2008
1602	ARP11811	55G	EMPLACED_CNTR	4/20/2010 13:11	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/21/2008	10/21/2008
1603	ARP11818	55G	EMPLACED_CNTR	5/15/2010 10:23	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/20/2008	10/20/2008
1604	ARP11822	55G	EMPLACED_CNTR	4/27/2010 18:07	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/20/2008	10/20/2008
1605	ARP11829	55G	EMPLACED_CNTR	5/19/2010 19:06	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/20/2008	10/20/2008
1606	ARP11831	55G	EMPLACED_CNTR	4/27/2010 13:31	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/20/2008	10/20/2008
1607	ARP11835	55G	EMPLACED_CNTR	4/20/2010 10:43	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/23/2008	10/23/2008
1608	ARP11837	55G	EMPLACED_CNTR	4/26/2010 18:42	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/20/2008	10/20/2008
1609	ARP11844	55G	EMPLACED_CNTR	5/12/2010 22:15	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/27/2008	10/27/2008
1610	ARP11861	55G	EMPLACED_CNTR	5/12/2010 22:15	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/22/2008	10/22/2008
1611	ARP11862	55G	EMPLACED_CNTR	4/26/2010 18:42	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/22/2008	10/22/2008
1612	ARP11865	55G	EMPLACED_CNTR	4/27/2010 22:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/23/2008	10/23/2008
1613	ARP11877	55G	EMPLACED_CNTR	5/20/2010 18:25	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/20/2008	10/20/2008
1614	ARP11886	55G	EMPLACED_CNTR	1/20/2010 12:52	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/21/2008	10/21/2008
1615	ARP11904	55G	EMPLACED_CNTR	5/12/2010 19:16	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/22/2008	10/22/2008
1616	ARP11922	55G	EMPLACED_CNTR	10/27/2010 18:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/27/2008	10/27/2008
1617	ARP11942	55G	EMPLACED_CNTR	5/12/2010 22:15	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/27/2008	10/27/2008
1618	ARP11958	55G	EMPLACED_CNTR	5/12/2010 22:15	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/23/2008	10/23/2008
1619	ARP11963	55G	EMPLACED_CNTR	4/20/2010 13:07	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/22/2008	10/22/2008
1620	ARP12001	55G	EMPLACED_CNTR	1/19/2010 12:46	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/3/2008	11/3/2008
1621	ARP12017	55G	EMPLACED_CNTR	4/28/2010 19:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/4/2008	12/4/2008
1622	ARP12020	55G	EMPLACED_CNTR	4/28/2010 19:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/30/2008	10/30/2008
1623	ARP12059	55G	EMPLACED_CNTR	5/8/2010 10:56	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/28/2008	10/28/2008
1624	ARP12077	55G	EMPLACED_CNTR	4/28/2010 19:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/29/2008	10/29/2008
1625	ARP12095	55G	EMPLACED_CNTR	5/11/2010 19:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/30/2008	10/30/2008
1626	ARP12127	55G	EMPLACED_CNTR	5/12/2010 22:15	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/4/2008	11/4/2008
1627	ARP12130	55G	EMPLACED_CNTR	1/20/2010 12:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/3/2008	11/3/2008
1628	ARP12132	55G	EMPLACED_CNTR	4/27/2010 22:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/4/2008	11/4/2008
1629	ARP12135	55G	EMPLACED_CNTR	5/2/2010 14:15	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/4/2008	11/4/2008
1630	ARP12143	55G	EMPLACED_CNTR	5/17/2010 18:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/4/2008	11/4/2008
1631	ARP12147	55G	EMPLACED_CNTR	11/12/2010 13:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/4/2008	11/4/2008
1632	ARP12176	55G	EMPLACED_CNTR	1/20/2010 12:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/6/2008	11/6/2008
1633	ARP12180	55G	EMPLACED_CNTR	10/26/2010 19:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/10/2008	11/20/2008
1634	ARP12184	55G	EMPLACED_CNTR	5/20/2010 18:25	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/6/2008	11/6/2008
1635	ARP12201	55G	EMPLACED_CNTR	4/28/2010 19:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/4/2008	12/4/2008
1636	ARP12237	55G	EMPLACED_CNTR	5/12/2010 22:15	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/4/2008	11/4/2008
1637	ARP12251	55G	EMPLACED_CNTR	4/27/2010 13:31	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/6/2008	11/6/2008
1638	ARP12253	55G	EMPLACED_CNTR	1/20/2010 12:52	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/10/2008	11/10/2008

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1639	ARP12259	55G	EMPLACED_CNTR	5/12/2010 22:15	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/6/2008	11/6/2008
1640	ARP12261	55G	EMPLACED_CNTR	4/20/2010 13:07	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/10/2008	11/10/2008
1641	ARP12272	55G	EMPLACED_CNTR	4/27/2010 13:31	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/10/2008	11/10/2008
1642	ARP12335	55G	EMPLACED_CNTR	5/17/2010 18:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/3/2008	12/3/2008
1643	ARP12374	55G	EMPLACED_CNTR	5/16/2010 9:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/20/2008	11/20/2008
1644	ARP12389	55G	EMPLACED_CNTR	5/17/2010 18:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/11/2008	11/11/2008
1645	ARP12425	55G	EMPLACED_CNTR	5/16/2010 9:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/11/2008	11/11/2008
1646	ARP12502	55G	EMPLACED_CNTR	5/17/2010 18:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/13/2008	11/13/2008
1647	ARP12514	55G	EMPLACED_CNTR	5/16/2010 9:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/13/2008	11/13/2008
1648	ARP12538	55G	EMPLACED_CNTR	5/16/2010 9:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/13/2008	11/13/2008
1649	ARP12548	55G	EMPLACED_CNTR	5/16/2010 9:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/13/2008	11/13/2008
1650	ARP12560	55G	EMPLACED_CNTR	5/17/2010 18:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/24/2008	11/24/2008
1651	ARP12567	55G	EMPLACED_CNTR	5/17/2010 18:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/20/2008	11/20/2008
1652	ARP12577	55G	EMPLACED_CNTR	5/12/2010 19:16	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/2/2008	12/2/2008
1653	ARP12587	55G	EMPLACED_CNTR	4/20/2010 13:07	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/20/2008	11/20/2008
1654	ARP12609	55G	EMPLACED_CNTR	5/23/2011 22:38	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/18/2008	11/18/2008
1655	ARP12624	55G	EMPLACED_CNTR	9/22/2011 20:01	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/18/2008	11/18/2008
1656	ARP12626	55G	EMPLACED_CNTR	5/17/2010 18:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/19/2008	11/19/2008
1657	ARP12635	55G	EMPLACED_CNTR	5/17/2010 18:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/20/2008	11/20/2008
1658	ARP12637	55G	EMPLACED_CNTR	5/12/2010 19:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/20/2008	11/20/2008
1659	ARP12642	55G	EMPLACED_CNTR	5/17/2010 18:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/20/2008	11/20/2008
1660	ARP12659	55G	EMPLACED_CNTR	5/17/2010 18:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/25/2008	11/25/2008
1661	ARP12662	55G	EMPLACED_CNTR	11/12/2010 13:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/1/2008	12/1/2008
1662	ARP12663	55G	EMPLACED_CNTR	4/27/2010 13:31	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/25/2008	11/25/2008
1663	ARP12685	55G	EMPLACED_CNTR	4/27/2010 13:31	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/1/2008	12/1/2008
1664	ARP12695	55G	EMPLACED_CNTR	1/19/2010 12:46	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/1/2008	12/1/2008
1665	ARP12700	55G	EMPLACED_CNTR	1/20/2010 12:58	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/25/2008	11/25/2008
1666	ARP12716	55G	EMPLACED_CNTR	5/17/2010 18:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/20/2008	11/20/2008
1667	ARP12726	55G	EMPLACED_CNTR	5/23/2011 22:38	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/24/2008	11/24/2008
1668	ARP12732	55G	EMPLACED_CNTR	5/17/2010 18:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/25/2008	11/25/2008
1669	ARP12733	55G	EMPLACED_CNTR	5/12/2010 19:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/25/2008	11/25/2008
1670	ARP12770	55G	EMPLACED_CNTR	5/12/2010 22:16	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/2/2008	12/2/2008
1671	ARP12774	55G	EMPLACED_CNTR	5/17/2010 18:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/3/2008	12/3/2008
1672	ARP12786	55G	EMPLACED_CNTR	4/28/2010 19:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/1/2008	12/1/2008
1673	ARP12789	55G	EMPLACED_CNTR	6/29/2011 0:18	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/1/2008	12/1/2008
1674	ARP12790	55G	EMPLACED_CNTR	5/17/2010 18:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/1/2008	12/1/2008
1675	ARP12791	55G	EMPLACED_CNTR	4/26/2010 18:42	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/1/2008	12/1/2008
1676	ARP12795	55G	EMPLACED_CNTR	6/3/2010 21:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/2/2008	12/2/2008
1677	ARP12798	55G	EMPLACED_CNTR	5/8/2010 10:56	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/2/2008	12/2/2008

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1678	ARP12815	55G	EMPLACED_CNTR	5/16/2010 9:01	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/2/2008	12/2/2008
1679	ARP12818	55G	EMPLACED_CNTR	5/23/2010 13:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/2/2008	12/2/2008
1680	ARP12820	55G	EMPLACED_CNTR	5/11/2010 18:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/3/2008	12/3/2008
1681	ARP12843	55G	EMPLACED_CNTR	2/8/2010 22:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/4/2008	12/4/2008
1682	ARP12860	55G	EMPLACED_CNTR	5/16/2010 9:01	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/4/2008	12/4/2008
1683	ARP12864	55G	EMPLACED_CNTR	5/16/2010 9:01	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/3/2008	12/3/2008
1684	ARP12868	55G	EMPLACED_CNTR	5/12/2010 19:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/3/2008	12/3/2008
1685	ARP12869	55G	EMPLACED_CNTR	5/11/2010 18:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/4/2008	12/4/2008
1686	ARP12885	55G	EMPLACED_CNTR	5/16/2010 9:01	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/10/2008	12/10/2008
1687	ARP12908	55G	EMPLACED_CNTR	5/8/2010 10:56	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/14/2009	4/14/2009
1688	ARP12910	55G	EMPLACED_CNTR	5/8/2010 10:56	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/8/2008	12/8/2008
1689	ARP12932	55G	EMPLACED_CNTR	4/28/2010 19:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/5/2009	1/5/2009
1690	ARP12940	55G	EMPLACED_CNTR	5/16/2010 9:01	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/4/2008	12/4/2008
1691	ARP12969	55G	EMPLACED_CNTR	5/19/2010 19:06	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/10/2008	12/10/2008
1692	ARP12971	55G	EMPLACED_CNTR	5/9/2010 10:31	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/10/2008	12/10/2008
1693	ARP13003	55G	EMPLACED_CNTR	5/16/2010 9:01	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/8/2008	12/8/2008
1694	ARP13006	55G	EMPLACED_CNTR	5/4/2010 19:07	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/14/2009	4/14/2009
1695	ARP13007	55G	EMPLACED_CNTR	1/26/2010 21:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/15/2009	4/15/2009
1696	ARP13012	55G	EMPLACED_CNTR	4/28/2010 19:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/8/2009	1/8/2009
1697	ARP13013	55G	EMPLACED_CNTR	5/3/2010 22:24	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/16/2008	12/16/2008
1698	ARP13023	55G	EMPLACED_CNTR	10/18/2010 22:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/18/2008	12/18/2008
1699	ARP13024	55G	EMPLACED_CNTR	4/27/2010 19:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/8/2008	12/8/2008
1700	ARP13058	55G	EMPLACED_CNTR	5/3/2010 22:24	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/9/2008	12/9/2008
1701	ARP13080	55G	EMPLACED_CNTR	5/16/2010 9:01	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/11/2008	12/11/2008
1702	ARP13095	55G	EMPLACED_CNTR	5/16/2010 9:01	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/15/2008	12/15/2008
1703	ARP13097	55G	EMPLACED_CNTR	5/8/2010 10:56	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/16/2008	12/16/2008
1704	ARP13124	55G	EMPLACED_CNTR	5/4/2010 19:07	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/15/2008	12/15/2008
1705	ARP13127	55G	EMPLACED_CNTR	4/26/2010 18:42	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/15/2008	12/15/2008
1706	ARP13128	55G	EMPLACED_CNTR	4/27/2010 19:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/15/2008	12/15/2008
1707	ARP13133	55G	EMPLACED_CNTR	5/3/2010 22:24	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/16/2008	12/16/2008
1708	ARP13134	55G	EMPLACED_CNTR	5/3/2010 22:24	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/16/2008	12/16/2008
1709	ARP13141	55G	EMPLACED_CNTR	5/3/2010 22:24	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/16/2008	12/16/2008
1710	ARP13155	55G	EMPLACED_CNTR	4/29/2010 22:02	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/15/2008	12/15/2008
1711	ARP13159	55G	EMPLACED_CNTR	5/23/2011 22:38	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/11/2008	12/11/2008
1712	ARP13166	55G	EMPLACED_CNTR	5/3/2010 22:24	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/15/2008	12/15/2008
1713	ARP13167	55G	EMPLACED_CNTR	4/27/2010 19:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/15/2008	12/15/2008
1714	ARP13170	55G	EMPLACED_CNTR	5/19/2010 19:06	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/11/2008	12/11/2008
1715	ARP13171	55G	EMPLACED_CNTR	5/3/2010 22:24	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/15/2008	12/15/2008
1716	ARP13172	55G	EMPLACED_CNTR	5/19/2010 19:06	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/11/2008	12/11/2008

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1717	ARP13181	55G	EMPLACED_CNTR	5/16/2010 9:01	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/15/2008	12/15/2008
1718	ARP13183	55G	EMPLACED_CNTR	5/4/2010 20:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/16/2008	12/16/2008
1719	ARP13184	55G	EMPLACED_CNTR	5/8/2010 10:56	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/15/2008	12/15/2008
1720	ARP13193	55G	EMPLACED_CNTR	5/11/2010 9:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/15/2008	12/15/2008
1721	ARP13196	55G	EMPLACED_CNTR	5/11/2010 9:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/15/2008	12/15/2008
1722	ARP13278	55G	EMPLACED_CNTR	5/11/2010 18:47	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/18/2008	12/18/2008
1723	ARP13285	55G	EMPLACED_CNTR	5/3/2010 22:24	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/18/2008	12/18/2008
1724	ARP13297	55G	EMPLACED_CNTR	4/29/2010 22:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/29/2009	1/29/2009
1725	ARP13334	55G	EMPLACED_CNTR	5/4/2010 19:07	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/2/2009	2/2/2009
1726	ARP13349	55G	EMPLACED_CNTR	5/11/2010 9:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/6/2009	1/6/2009
1727	ARP13368	55G	EMPLACED_CNTR	6/10/2010 13:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/8/2009	1/8/2009
1728	ARP13376	55G	EMPLACED_CNTR	5/12/2010 19:16	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/7/2009	1/7/2009
1729	ARP13381	55G	EMPLACED_CNTR	5/4/2010 19:07	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/8/2009	1/8/2009
1730	ARP13388	55G	EMPLACED_CNTR	6/10/2010 13:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/8/2009	1/8/2009
1731	ARP13389	55G	EMPLACED_CNTR	6/10/2010 13:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/8/2009	1/8/2009
1732	ARP13394	55G	EMPLACED_CNTR	4/27/2010 19:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/7/2009	1/7/2009
1733	ARP13395	55G	EMPLACED_CNTR	5/4/2010 20:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/12/2009	1/12/2009
1734	ARP13398	55G	EMPLACED_CNTR	5/4/2010 19:07	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/8/2009	1/8/2009
1735	ARP13402	55G	EMPLACED_CNTR	5/4/2010 19:07	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/7/2009	1/7/2009
1736	ARP13411	55G	EMPLACED_CNTR	4/29/2010 22:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/6/2009	1/6/2009
1737	ARP13417	55G	EMPLACED_CNTR	5/4/2010 20:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/2/2009	2/2/2009
1738	ARP13424	55G	EMPLACED_CNTR	5/11/2010 9:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/7/2009	1/7/2009
1739	ARP13432	55G	EMPLACED_CNTR	5/4/2010 19:07	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/7/2009	1/7/2009
1740	ARP13433	55G	EMPLACED_CNTR	5/4/2010 19:07	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/7/2009	1/7/2009
1741	ARP13458	55G	EMPLACED_CNTR	5/4/2010 19:07	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/8/2009	1/8/2009
1742	ARP13461	55G	EMPLACED_CNTR	5/4/2010 20:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/8/2009	1/8/2009
1743	ARP13462	55G	EMPLACED_CNTR	5/10/2010 18:50	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/8/2009	1/8/2009
1744	ARP13467	55G	EMPLACED_CNTR	5/11/2010 9:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/15/2009	4/15/2009
1745	ARP13468	55G	EMPLACED_CNTR	1/26/2010 21:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/15/2009	4/15/2009
1746	ARP13497	55G	EMPLACED_CNTR	5/10/2010 18:50	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/13/2009	1/13/2009
1747	ARP13537	55G	EMPLACED_CNTR	5/19/2010 19:06	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/15/2009	1/15/2009
1748	ARP13562	55G	EMPLACED_CNTR	5/10/2010 18:50	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/20/2009	1/20/2009
1749	ARP13567	55G	EMPLACED_CNTR	5/19/2010 19:06	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/15/2009	1/15/2009
1750	ARP13573	55G	EMPLACED_CNTR	5/4/2010 20:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/19/2009	1/19/2009
1751	ARP13579	55G	EMPLACED_CNTR	8/30/2010 22:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/15/2009	1/15/2009
1752	ARP13603	55G	EMPLACED_CNTR	5/10/2010 18:50	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/12/2009	1/12/2009
1753	ARP13628	55G	EMPLACED_CNTR	5/23/2011 22:38	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/20/2009	1/20/2009
1754	ARP13629	55G	EMPLACED_CNTR	5/4/2010 20:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/20/2009	1/20/2009
1755	ARP13631	55G	EMPLACED_CNTR	5/4/2010 20:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/21/2009	1/21/2009

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1756	ARP13637	55G	EMPLACED_CNTR	1/19/2010 12:46	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/21/2009	1/21/2009
1757	ARP13640	55G	EMPLACED_CNTR	5/10/2010 18:50	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/21/2009	1/21/2009
1758	ARP13675	55G	EMPLACED_CNTR	1/19/2010 12:46	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/21/2009	1/21/2009
1759	ARP13676	55G	EMPLACED_CNTR	5/17/2010 18:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/21/2009	1/21/2009
1760	ARP13691	55G	EMPLACED_CNTR	5/4/2010 20:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/22/2009	1/22/2009
1761	ARP13692	55G	EMPLACED_CNTR	5/11/2010 9:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/22/2009	1/22/2009
1762	ARP13694	55G	EMPLACED_CNTR	5/11/2010 9:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/21/2009	1/21/2009
1763	ARP13698	55G	EMPLACED_CNTR	5/19/2010 19:06	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/21/2009	1/21/2009
1764	ARP13711	55G	EMPLACED_CNTR	4/29/2010 21:35	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/21/2009	1/21/2009
1765	ARP13726	55G	EMPLACED_CNTR	2/8/2010 22:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/21/2009	1/21/2009
1766	ARP13731	55G	EMPLACED_CNTR	4/27/2010 19:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/21/2009	1/21/2009
1767	ARP13732	55G	EMPLACED_CNTR	5/19/2010 18:24	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/20/2009	1/20/2009
1768	ARP13751	55G	EMPLACED_CNTR	6/7/2010 23:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/26/2009	1/26/2009
1769	ARP13753	55G	EMPLACED_CNTR	5/19/2010 18:24	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/21/2009	1/21/2009
1770	ARP13757	55G	EMPLACED_CNTR	5/10/2010 18:50	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/21/2009	1/21/2009
1771	ARP13758	55G	EMPLACED_CNTR	5/10/2010 18:50	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/22/2009	1/22/2009
1772	ARP13766	55G	EMPLACED_CNTR	5/17/2010 18:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/28/2009	1/28/2009
1773	ARP13781	55G	EMPLACED_CNTR	5/11/2010 9:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/26/2009	1/26/2009
1774	ARP13785	55G	EMPLACED_CNTR	4/29/2010 21:35	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/26/2009	1/26/2009
1775	ARP13789	55G	EMPLACED_CNTR	5/20/2010 18:25	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/26/2009	1/26/2009
1776	ARP13794	55G	EMPLACED_CNTR	6/7/2010 23:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/26/2009	1/26/2009
1777	ARP13803	55G	EMPLACED_CNTR	5/10/2010 18:50	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/26/2009	1/26/2009
1778	ARP13808	55G	EMPLACED_CNTR	4/29/2010 21:35	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/27/2009	1/27/2009
1779	ARP13810	55G	EMPLACED_CNTR	5/11/2010 9:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/26/2009	1/26/2009
1780	ARP13811	55G	EMPLACED_CNTR	6/7/2010 23:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/26/2009	1/26/2009
1781	ARP13813	55G	EMPLACED_CNTR	4/29/2010 21:35	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/27/2009	1/27/2009
1782	ARP13815	55G	EMPLACED_CNTR	5/10/2010 18:50	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/26/2009	1/26/2009
1783	ARP13819	55G	EMPLACED_CNTR	6/2/2010 19:12	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/26/2009	1/26/2009
1784	ARP13823	55G	EMPLACED_CNTR	4/29/2010 21:35	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/27/2009	1/27/2009
1785	ARP13824	55G	EMPLACED_CNTR	5/13/2010 19:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/28/2009	1/28/2009
1786	ARP13830	55G	EMPLACED_CNTR	5/3/2010 19:04	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/27/2009	1/27/2009
1787	ARP13834	55G	EMPLACED_CNTR	4/29/2010 21:35	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/27/2009	1/27/2009
1788	ARP13835	55G	EMPLACED_CNTR	4/29/2010 21:35	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/27/2009	1/27/2009
1789	ARP13839	55G	EMPLACED_CNTR	5/3/2010 19:04	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/29/2009	1/29/2009
1790	ARP13841	55G	EMPLACED_CNTR	4/29/2010 21:35	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/28/2009	1/28/2009
1791	ARP13848	55G	EMPLACED_CNTR	5/13/2010 19:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/28/2009	1/28/2009
1792	ARP13868	55G	EMPLACED_CNTR	5/13/2010 19:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/28/2009	1/28/2009
1793	ARP13877	55G	EMPLACED_CNTR	6/2/2010 19:12	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/26/2009	1/26/2009
1794	ARP13880	55G	EMPLACED_CNTR	5/3/2010 19:06	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/26/2009	1/26/2009

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1795	ARP13881	55G	EMPLACED_CNTR	5/5/2010 18:52	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/26/2009	1/26/2009
1796	ARP13897	55G	EMPLACED_CNTR	5/3/2010 19:06	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/28/2009	1/28/2009
1797	ARP13910	55G	EMPLACED_CNTR	5/19/2010 18:24	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/14/2009	4/14/2009
1798	ARP13914	55G	EMPLACED_CNTR	5/15/2010 10:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/4/2009	2/4/2009
1799	ARP13922	55G	EMPLACED_CNTR	5/13/2010 19:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/5/2009	2/5/2009
1800	ARP13924	55G	EMPLACED_CNTR	1/26/2010 21:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/22/2009	1/22/2009
1801	ARP13925	55G	EMPLACED_CNTR	5/20/2010 18:25	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/27/2009	1/27/2009
1802	ARP13926	55G	EMPLACED_CNTR	5/3/2010 19:06	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/28/2009	1/28/2009
1803	ARP13928	55G	EMPLACED_CNTR	5/3/2010 19:06	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/27/2009	1/27/2009
1804	ARP13932	55G	EMPLACED_CNTR	5/3/2010 19:06	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/29/2009	1/29/2009
1805	ARP13939	55G	EMPLACED_CNTR	5/3/2010 19:04	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/2/2009	2/2/2009
1806	ARP13940	55G	EMPLACED_CNTR	5/3/2010 19:04	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/2/2009	2/2/2009
1807	ARP13941	55G	EMPLACED_CNTR	5/12/2010 22:16	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/2/2009	2/2/2009
1808	ARP13945	55G	EMPLACED_CNTR	5/12/2010 22:15	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/2/2009	2/2/2009
1809	ARP13949	55G	EMPLACED_CNTR	8/30/2010 22:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/2/2009	2/2/2009
1810	ARP13950	55G	EMPLACED_CNTR	6/2/2010 19:12	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/27/2009	1/27/2009
1811	ARP13954	55G	EMPLACED_CNTR	5/3/2010 19:06	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/28/2009	1/28/2009
1812	ARP13956	55G	EMPLACED_CNTR	5/3/2010 19:06	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/27/2009	1/27/2009
1813	ARP13962	55G	EMPLACED_CNTR	5/3/2010 19:04	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/28/2009	1/28/2009
1814	ARP13964	55G	EMPLACED_CNTR	5/3/2010 19:04	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/29/2009	1/29/2009
1815	ARP13971	55G	EMPLACED_CNTR	5/3/2010 19:04	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/29/2009	1/29/2009
1816	ARP13976	55G	EMPLACED_CNTR	5/3/2010 19:04	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/29/2009	1/29/2009
1817	ARP13979	55G	EMPLACED_CNTR	5/11/2010 9:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/29/2009	1/29/2009
1818	ARP13981	55G	EMPLACED_CNTR	5/3/2010 19:06	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/28/2009	1/28/2009
1819	ARP13997	55G	EMPLACED_CNTR	5/13/2010 19:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/2/2009	2/2/2009
1820	ARP13998	55G	EMPLACED_CNTR	5/12/2010 19:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/2/2009	2/2/2009
1821	ARP14000	55G	EMPLACED_CNTR	4/28/2010 22:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/2/2009	2/2/2009
1822	ARP14002	55G	EMPLACED_CNTR	6/3/2010 21:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/29/2009	1/29/2009
1823	ARP14010	55G	EMPLACED_CNTR	6/14/2010 20:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/29/2009	1/29/2009
1824	ARP14012	55G	EMPLACED_CNTR	5/5/2010 18:52	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/29/2009	1/29/2009
1825	ARP14016	55G	EMPLACED_CNTR	5/13/2010 19:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/29/2009	1/29/2009
1826	ARP14018	55G	EMPLACED_CNTR	5/5/2010 18:52	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/2/2009	2/2/2009
1827	ARP14029	55G	EMPLACED_CNTR	5/13/2010 19:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/2/2009	2/2/2009
1828	ARP14030	55G	EMPLACED_CNTR	5/17/2010 18:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/3/2009	2/3/2009
1829	ARP14032	55G	EMPLACED_CNTR	5/5/2010 18:52	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/3/2009	2/3/2009
1830	ARP14054	55G	EMPLACED_CNTR	5/11/2010 18:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/2/2009	2/2/2009
1831	ARP14060	55G	EMPLACED_CNTR	5/11/2010 9:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/3/2009	2/3/2009
1832	ARP14080	55G	EMPLACED_CNTR	5/11/2010 9:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/5/2009	2/5/2009
1833	ARP14082	55G	EMPLACED_CNTR	5/11/2010 9:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/5/2009	2/5/2009

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1834	ARP14085	55G	EMPLACED_CNTR	5/15/2010 10:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/5/2009	2/5/2009
1835	ARP14087	55G	EMPLACED_CNTR	5/12/2010 19:16	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/5/2009	2/5/2009
1836	ARP14089	55G	EMPLACED_CNTR	5/11/2010 9:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/5/2009	2/5/2009
1837	ARP14099	55G	EMPLACED_CNTR	5/12/2010 19:16	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/5/2009	2/5/2009
1838	ARP14102	55G	EMPLACED_CNTR	5/5/2010 18:52	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/3/2009	2/3/2009
1839	ARP14114	55G	EMPLACED_CNTR	5/15/2010 10:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/3/2009	2/3/2009
1840	ARP14118	55G	EMPLACED_CNTR	5/15/2010 10:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/3/2009	2/3/2009
1841	ARP14127	55G	EMPLACED_CNTR	5/15/2010 10:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/4/2009	2/4/2009
1842	ARP14133	55G	EMPLACED_CNTR	5/12/2010 22:16	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/4/2009	2/4/2009
1843	ARP14143	55G	EMPLACED_CNTR	5/11/2010 9:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/12/2009	2/12/2009
1844	ARP14145	55G	EMPLACED_CNTR	5/11/2010 9:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/10/2009	2/10/2009
1845	ARP14148	55G	EMPLACED_CNTR	5/11/2010 9:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/10/2009	2/10/2009
1846	ARP14149	55G	EMPLACED_CNTR	5/15/2010 10:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/12/2009	2/12/2009
1847	ARP14153	55G	EMPLACED_CNTR	5/11/2010 9:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/9/2009	2/9/2009
1848	ARP14163	55G	EMPLACED_CNTR	5/11/2010 9:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/4/2009	2/4/2009
1849	ARP14166	55G	EMPLACED_CNTR	5/12/2010 22:16	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/4/2009	2/4/2009
1850	ARP14169	55G	EMPLACED_CNTR	5/24/2011 19:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/4/2009	2/4/2009
1851	ARP14172	55G	EMPLACED_CNTR	5/19/2010 18:24	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/9/2009	2/9/2009
1852	ARP14174	55G	EMPLACED_CNTR	5/11/2010 9:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/4/2009	2/4/2009
1853	ARP14198	55G	EMPLACED_CNTR	5/15/2010 10:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/11/2009	2/11/2009
1854	ARP14200	55G	EMPLACED_CNTR	5/5/2010 18:52	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/3/2009	2/3/2009
1855	ARP14207	55G	EMPLACED_CNTR	4/28/2010 22:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/4/2009	2/4/2009
1856	ARP14219	55G	EMPLACED_CNTR	4/18/2011 21:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/4/2009	2/4/2009
1857	ARP14238	55G	EMPLACED_CNTR	4/28/2010 22:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/12/2009	2/12/2009
1858	ARP14252	55G	EMPLACED_CNTR	5/15/2010 10:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/10/2009	2/10/2009
1859	ARP14253	55G	EMPLACED_CNTR	5/11/2010 22:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/4/2009	2/4/2009
1860	ARP14255	55G	EMPLACED_CNTR	5/11/2010 9:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/9/2009	2/9/2009
1861	ARP14261	55G	EMPLACED_CNTR	5/15/2010 10:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/12/2009	2/12/2009
1862	ARP14274	55G	EMPLACED_CNTR	10/23/2010 13:19	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/12/2009	2/12/2009
1863	ARP14287	55G	EMPLACED_CNTR	5/19/2010 18:24	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/10/2009	2/10/2009
1864	ARP14289	55G	EMPLACED_CNTR	5/11/2010 9:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/9/2009	2/9/2009
1865	ARP14290	55G	EMPLACED_CNTR	5/11/2010 18:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/10/2009	2/10/2009
1866	ARP14296	55G	EMPLACED_CNTR	5/19/2010 18:24	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/9/2009	2/9/2009
1867	ARP14300	55G	EMPLACED_CNTR	5/5/2010 18:52	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/12/2009	2/12/2009
1868	ARP14309	55G	EMPLACED_CNTR	5/16/2010 10:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/12/2009	2/12/2009
1869	ARP14322	55G	EMPLACED_CNTR	4/20/2010 10:43	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/16/2009	2/16/2009
1870	ARP14335	55G	EMPLACED_CNTR	5/2/2010 14:15	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/12/2009	2/12/2009
1871	ARP14343	55G	EMPLACED_CNTR	5/5/2010 18:52	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/16/2009	2/16/2009
1872	ARP14358	55G	EMPLACED_CNTR	4/28/2010 22:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/16/2009	2/16/2009

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1873	ARP14368	55G	EMPLACED_CNTR	5/9/2010 14:26	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/16/2009	2/16/2009
1874	ARP14369	55G	EMPLACED_CNTR	4/28/2010 22:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/16/2009	2/16/2009
1875	ARP14389	55G	EMPLACED_CNTR	5/11/2010 21:41	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/12/2009	2/12/2009
1876	ARP14413	55G	EMPLACED_CNTR	4/27/2010 19:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/16/2009	2/16/2009
1877	ARP14416	55G	EMPLACED_CNTR	5/9/2010 14:26	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/17/2009	2/17/2009
1878	ARP14425	55G	EMPLACED_CNTR	5/9/2010 14:26	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/17/2009	2/17/2009
1879	ARP14433	55G	EMPLACED_CNTR	4/28/2010 22:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/19/2009	3/19/2009
1880	ARP14440	55G	EMPLACED_CNTR	4/26/2010 18:42	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/19/2009	2/19/2009
1881	ARP14468	55G	EMPLACED_CNTR	5/5/2010 18:52	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/18/2009	2/18/2009
1882	ARP14470	55G	EMPLACED_CNTR	4/29/2010 22:02	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/18/2009	2/18/2009
1883	ARP14474	55G	EMPLACED_CNTR	4/29/2010 22:02	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/17/2009	2/17/2009
1884	ARP14476	55G	EMPLACED_CNTR	4/29/2010 22:02	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/18/2009	2/18/2009
1885	ARP14481	55G	EMPLACED_CNTR	6/15/2010 21:58	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/18/2009	2/18/2009
1886	ARP14507	55G	EMPLACED_CNTR	5/11/2010 9:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/19/2009	2/19/2009
1887	ARP14516	55G	EMPLACED_CNTR	5/11/2010 9:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/19/2009	2/19/2009
1888	ARP14554	55G	EMPLACED_CNTR	5/9/2010 14:26	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/18/2009	2/18/2009
1889	ARP14560	55G	EMPLACED_CNTR	5/11/2010 9:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/19/2009	2/19/2009
1890	ARP14564	55G	EMPLACED_CNTR	5/9/2010 14:26	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/19/2009	2/19/2009
1891	ARP14567	55G	EMPLACED_CNTR	5/15/2010 10:01	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/19/2009	2/19/2009
1892	ARP14570	55G	EMPLACED_CNTR	5/12/2010 19:16	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/19/2009	2/19/2009
1893	ARP14597	55G	EMPLACED_CNTR	5/11/2010 19:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/19/2009	2/19/2009
1894	ARP14633	55G	EMPLACED_CNTR	5/9/2010 14:26	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/23/2009	2/23/2009
1895	ARP14646	55G	EMPLACED_CNTR	5/9/2010 14:26	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/23/2009	2/23/2009
1896	ARP14665	55G	EMPLACED_CNTR	5/15/2010 10:01	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/23/2009	3/23/2009
1897	ARP14674	55G	EMPLACED_CNTR	5/20/2010 18:25	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/19/2009	3/19/2009
1898	ARP14689	55G	EMPLACED_CNTR	5/25/2011 23:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/1/2009	4/1/2009
1899	ARP14692	55G	EMPLACED_CNTR	5/11/2010 18:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/31/2009	3/31/2009
1900	ARP14737	55G	EMPLACED_CNTR	5/9/2010 14:26	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/23/2009	2/23/2009
1901	ARP14748	55G	EMPLACED_CNTR	5/11/2010 18:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/30/2009	3/30/2009
1902	ARP14752	55G	EMPLACED_CNTR	6/9/2010 22:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/24/2009	3/24/2009
1903	ARP14754	55G	EMPLACED_CNTR	5/9/2010 14:26	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/24/2009	2/24/2009
1904	ARP14798	55G	EMPLACED_CNTR	5/11/2010 6:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/25/2009	3/25/2009
1905	ARP14811	55G	EMPLACED_CNTR	5/11/2010 22:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/30/2009	3/30/2009
1906	ARP14817	55G	EMPLACED_CNTR	1/21/2010 19:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/17/2009	3/17/2009
1907	ARP14830	55G	EMPLACED_CNTR	6/2/2010 19:12	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/17/2009	3/17/2009
1908	ARP14835	55G	EMPLACED_CNTR	1/20/2010 10:15	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/17/2009	3/17/2009
1909	ARP14853	55G	EMPLACED_CNTR	4/28/2010 22:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/19/2009	3/19/2009
1910	ARP14866	55G	EMPLACED_CNTR	5/11/2010 9:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/18/2009	3/18/2009
1911	ARP14872	55G	EMPLACED_CNTR	4/28/2010 22:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/18/2009	3/18/2009

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1912	ARP14874	55G	EMPLACED_CNTR	4/28/2010 22:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/18/2009	3/18/2009
1913	ARP14879	55G	EMPLACED_CNTR	6/6/2010 13:23	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/17/2009	3/17/2009
1914	ARP14883	55G	EMPLACED_CNTR	5/2/2010 9:53	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/19/2009	3/19/2009
1915	ARP14884	55G	EMPLACED_CNTR	4/28/2010 22:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/19/2009	3/19/2009
1916	ARP14889	55G	EMPLACED_CNTR	5/2/2010 9:53	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/18/2009	3/18/2009
1917	ARP14902	55G	EMPLACED_CNTR	5/2/2010 9:53	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/19/2009	3/19/2009
1918	ARP14914	55G	EMPLACED_CNTR	5/2/2010 9:53	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/31/2009	3/31/2009
1919	ARP14978	55G	EMPLACED_CNTR	5/11/2010 9:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/25/2009	3/25/2009
1920	ARP14993	55G	EMPLACED_CNTR	5/11/2010 9:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/29/2009	4/29/2009
1921	ARP14997	55G	EMPLACED_CNTR	5/2/2010 9:53	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/26/2009	3/26/2009
1922	ARP15037	55G	EMPLACED_CNTR	6/3/2010 21:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/3/2009	4/3/2009
1923	ARP15047	55G	EMPLACED_CNTR	6/6/2010 13:23	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/6/2009	4/6/2009
1924	ARP15054	55G	EMPLACED_CNTR	5/15/2010 10:01	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/23/2009	3/23/2009
1925	ARP15068	55G	EMPLACED_CNTR	5/2/2010 9:53	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/2/2009	4/2/2009
1926	ARP15105	55G	EMPLACED_CNTR	5/11/2010 6:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/30/2009	3/30/2009
1927	ARP15110	55G	EMPLACED_CNTR	5/11/2010 9:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/31/2009	3/31/2009
1928	ARP15113	55G	EMPLACED_CNTR	6/10/2010 14:35	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/30/2009	3/30/2009
1929	ARP15137	55G	EMPLACED_CNTR	5/2/2010 9:53	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/2/2009	4/2/2009
1930	ARP15169	55G	EMPLACED_CNTR	6/6/2010 13:23	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/6/2009	4/6/2009
1931	ARP15183	55G	EMPLACED_CNTR	5/16/2010 10:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/30/2009	3/30/2009
1932	ARP15185	55G	EMPLACED_CNTR	5/4/2010 19:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/2/2009	4/2/2009
1933	ARP15192	55G	EMPLACED_CNTR	5/2/2010 9:53	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/26/2009	3/26/2009
1934	ARP15196	55G	EMPLACED_CNTR	5/23/2011 22:38	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/30/2009	3/30/2009
1935	ARP15240	55G	EMPLACED_CNTR	5/4/2010 19:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/6/2009	4/6/2009
1936	ARP15247	55G	EMPLACED_CNTR	5/4/2010 19:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/13/2009	4/13/2009
1937	ARP15256	55G	EMPLACED_CNTR	10/26/2010 19:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/13/2009	4/13/2009
1938	ARP15271	55G	EMPLACED_CNTR	5/11/2010 9:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/13/2009	4/13/2009
1939	ARP15279	55G	EMPLACED_CNTR	5/4/2010 19:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/27/2009	4/27/2009
1940	ARP15311	55G	EMPLACED_CNTR	6/6/2010 11:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/6/2009	4/6/2009
1941	ARP15313	55G	EMPLACED_CNTR	6/2/2010 19:12	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/3/2009	4/3/2009
1942	ARP15319	55G	EMPLACED_CNTR	5/11/2010 9:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/2/2009	4/2/2009
1943	ARP15322	55G	EMPLACED_CNTR	6/6/2010 11:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/3/2009	4/3/2009
1944	ARP15332	55G	EMPLACED_CNTR	6/6/2010 11:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/6/2009	4/6/2009
1945	ARP15349	55G	EMPLACED_CNTR	6/6/2010 11:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/6/2009	4/6/2009
1946	ARP15357	55G	EMPLACED_CNTR	4/27/2010 19:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/8/2009	4/8/2009
1947	ARP15371	55G	EMPLACED_CNTR	5/16/2010 10:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/8/2009	4/8/2009
1948	ARP15378	55G	EMPLACED_CNTR	5/15/2010 10:01	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/7/2009	4/7/2009
1949	ARP15379	55G	EMPLACED_CNTR	5/16/2010 10:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/18/2009	5/18/2009
1950	ARP15382	55G	EMPLACED_CNTR	5/19/2010 18:24	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/7/2009	4/7/2009

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1951	ARP15402	55G	EMPLACED_CNTR	5/4/2010 19:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/6/2009	4/6/2009
1952	ARP15415	55G	EMPLACED_CNTR	9/27/2010 19:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/7/2009	4/7/2009
1953	ARP15424	55G	EMPLACED_CNTR	5/15/2010 10:01	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/7/2009	4/7/2009
1954	ARP15429	55G	EMPLACED_CNTR	5/11/2010 9:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/8/2009	4/8/2009
1955	ARP15443	55G	EMPLACED_CNTR	5/11/2010 9:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/13/2009	4/13/2009
1956	ARP15444	55G	EMPLACED_CNTR	2/8/2010 22:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/13/2009	4/13/2009
1957	ARP15469	55G	EMPLACED_CNTR	5/16/2010 10:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/28/2009	4/28/2009
1958	ARP15476	55G	EMPLACED_CNTR	5/4/2010 19:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/13/2009	4/13/2009
1959	ARP15496	55G	EMPLACED_CNTR	5/16/2010 10:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/23/2009	4/23/2009
1960	ARP15501	55G	EMPLACED_CNTR	5/11/2010 6:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/9/2009	4/9/2009
1961	ARP15534	55G	EMPLACED_CNTR	5/4/2010 19:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/9/2009	4/9/2009
1962	ARP15543	55G	EMPLACED_CNTR	4/29/2010 20:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/14/2009	4/14/2009
1963	ARP15546	55G	EMPLACED_CNTR	10/27/2010 18:50	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/13/2009	4/13/2009
1964	ARP15557	55G	EMPLACED_CNTR	5/15/2010 10:01	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/15/2009	4/15/2009
1965	ARP15568	55G	EMPLACED_CNTR	10/26/2010 19:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/9/2009	4/9/2009
1966	ARP15596	55G	EMPLACED_CNTR	5/11/2010 6:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/13/2009	4/13/2009
1967	ARP15609	55G	EMPLACED_CNTR	5/4/2010 19:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/15/2009	4/15/2009
1968	ARP15622	55G	EMPLACED_CNTR	5/11/2010 6:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/29/2009	4/29/2009
1969	ARP15641	55G	EMPLACED_CNTR	5/11/2010 6:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/16/2009	4/16/2009
1970	ARP15656	55G	EMPLACED_CNTR	10/18/2011 19:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/20/2009	4/20/2009
1971	ARP15659	55G	EMPLACED_CNTR	5/11/2010 6:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/21/2009	4/21/2009
1972	ARP15660	55G	EMPLACED_CNTR	4/29/2010 20:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/20/2009	4/20/2009
1973	ARP15662	55G	EMPLACED_CNTR	6/3/2010 21:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/21/2009	4/21/2009
1974	ARP15724	55G	EMPLACED_CNTR	5/15/2010 10:01	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/10/2009	6/10/2009
1975	ARP15740	55G	EMPLACED_CNTR	5/10/2010 18:16	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/20/2009	4/20/2009
1976	ARP15755	55G	EMPLACED_CNTR	10/18/2011 19:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/20/2009	4/20/2009
1977	ARP15766	55G	EMPLACED_CNTR	4/26/2010 18:42	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/21/2009	4/21/2009
1978	ARP15782	55G	EMPLACED_CNTR	5/11/2010 6:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/22/2009	4/22/2009
1979	ARP15783	55G	EMPLACED_CNTR	5/11/2010 6:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/21/2009	4/21/2009
1980	ARP15784	55G	EMPLACED_CNTR	4/29/2010 20:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/22/2009	4/22/2009
1981	ARP15797	55G	EMPLACED_CNTR	5/16/2010 10:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/22/2009	4/22/2009
1982	ARP15822	55G	EMPLACED_CNTR	5/16/2010 10:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/22/2009	4/22/2009
1983	ARP15823	55G	EMPLACED_CNTR	5/16/2010 10:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/23/2009	4/23/2009
1984	ARP15827	55G	EMPLACED_CNTR	9/23/2010 19:02	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/22/2009	4/22/2009
1985	ARP15855	55G	EMPLACED_CNTR	1/20/2010 12:58	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/29/2009	4/29/2009
1986	ARP15874	55G	EMPLACED_CNTR	1/20/2010 12:52	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/4/2009	5/4/2009
1987	ARP15949	55G	EMPLACED_CNTR	5/10/2010 18:16	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/4/2009	5/4/2009
1988	ARP15958	55G	EMPLACED_CNTR	5/10/2010 18:16	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/4/2009	5/4/2009
1989	ARP15986	55G	EMPLACED_CNTR	6/6/2010 11:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/11/2009	5/11/2009

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1990	ARP15996	55G	EMPLACED_CNTR	5/10/2010 18:16	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/5/2009	5/5/2009
1991	ARP16036	55G	EMPLACED_CNTR	1/19/2010 12:46	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/6/2009	5/6/2009
1992	ARP16082	55G	EMPLACED_CNTR	5/16/2010 10:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/29/2009	5/29/2009
1993	ARP16113	55G	EMPLACED_CNTR	6/6/2010 11:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/5/2009	5/5/2009
1994	ARP16125	55G	EMPLACED_CNTR	1/20/2010 12:52	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/6/2009	5/6/2009
1995	ARP16131	55G	EMPLACED_CNTR	4/27/2010 19:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/7/2009	5/7/2009
1996	ARP16134	55G	EMPLACED_CNTR	5/15/2010 10:01	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/7/2009	5/7/2009
1997	ARP16153	55G	EMPLACED_CNTR	6/6/2010 11:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/11/2009	5/11/2009
1998	ARP16177	55G	EMPLACED_CNTR	6/6/2010 11:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/11/2009	5/11/2009
1999	ARP16189	55G	EMPLACED_CNTR	1/20/2010 12:58	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/11/2009	5/11/2009
2000	ARP16190	55G	EMPLACED_CNTR	6/10/2010 14:35	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/7/2009	5/7/2009
2001	ARP16233	55G	EMPLACED_CNTR	4/26/2010 18:42	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/30/2009	6/30/2009
2002	ARP16242	55G	EMPLACED_CNTR	5/15/2010 10:01	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/10/2009	6/10/2009
2003	ARP16259	55G	EMPLACED_CNTR	5/16/2010 9:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/28/2009	5/28/2009
2004	ARP16290	55G	EMPLACED_CNTR	5/10/2010 18:16	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/20/2009	5/20/2009
2005	ARP16322	55G	EMPLACED_CNTR	5/16/2010 13:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/20/2009	5/20/2009
2006	ARP16327	55G	EMPLACED_CNTR	5/10/2010 18:16	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/20/2009	5/20/2009
2007	ARP16386	55G	EMPLACED_CNTR	5/16/2010 13:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/6/2009	5/6/2009
2008	ARP16426	55G	EMPLACED_CNTR	5/12/2010 19:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/21/2009	5/21/2009
2009	ARP16428	55G	EMPLACED_CNTR	6/2/2010 19:12	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/14/2009	5/14/2009
2010	ARP16439	55G	EMPLACED_CNTR	6/2/2010 19:12	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/18/2009	5/18/2009
2011	ARP16441	55G	EMPLACED_CNTR	6/6/2010 11:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/18/2009	5/18/2009
2012	ARP16461	55G	EMPLACED_CNTR	4/29/2010 20:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/28/2009	5/28/2009
2013	ARP16471	55G	EMPLACED_CNTR	5/4/2010 19:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/28/2009	5/28/2009
2014	ARP16476	55G	EMPLACED_CNTR	6/2/2010 19:12	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/18/2009	5/18/2009
2015	ARP16487	55G	EMPLACED_CNTR	10/18/2010 22:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/6/2009	7/6/2009
2016	ARP16512	55G	EMPLACED_CNTR	4/29/2010 22:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/27/2009	5/27/2009
2017	ARP16513	55G	EMPLACED_CNTR	5/16/2010 13:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/28/2009	5/28/2009
2018	ARP16520	55G	EMPLACED_CNTR	5/16/2010 9:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/26/2009	5/26/2009
2019	ARP16540	55G	EMPLACED_CNTR	5/10/2010 18:16	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/27/2009	5/27/2009
2020	ARP16543	55G	EMPLACED_CNTR	5/13/2010 19:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/21/2009	5/21/2009
2021	ARP16551	55G	EMPLACED_CNTR	1/19/2010 12:46	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/27/2009	5/27/2009
2022	ARP16584	55G	EMPLACED_CNTR	5/11/2010 9:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/28/2009	5/28/2009
2023	ARP16592	55G	EMPLACED_CNTR	5/16/2010 9:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/27/2009	5/27/2009
2024	ARP16614	55G	EMPLACED_CNTR	4/29/2010 20:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/15/2009	6/15/2009
2025	ARP16639	55G	EMPLACED_CNTR	5/15/2010 14:04	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/4/2009	6/4/2009
2026	ARP16641	55G	EMPLACED_CNTR	5/16/2010 9:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/29/2009	5/29/2009
2027	ARP16649	55G	EMPLACED_CNTR	5/13/2010 19:11	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/8/2009	6/8/2009
2028	ARP16656	55G	EMPLACED_CNTR	5/16/2010 9:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/16/2009	6/16/2009

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2029	ARP16664	55G	EMPLACED_CNTR	5/16/2010 9:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/2/2009	6/2/2009
2030	ARP16666	55G	EMPLACED_CNTR	4/20/2010 13:07	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/16/2009	6/16/2009
2031	ARP16726	55G	EMPLACED_CNTR	4/29/2010 20:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/29/2009	5/29/2009
2032	ARP16746	55G	EMPLACED_CNTR	5/12/2010 22:16	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/29/2009	5/29/2009
2033	ARP16793	55G	EMPLACED_CNTR	4/29/2010 20:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/11/2009	6/11/2009
2034	ARP16850	55G	EMPLACED_CNTR	9/23/2010 19:02	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/8/2009	6/8/2009
2035	ARP16878	55G	EMPLACED_CNTR	5/16/2010 9:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/4/2009	6/4/2009
2036	ARP16881	55G	EMPLACED_CNTR	5/16/2010 13:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/8/2009	6/8/2009
2037	ARP16893	55G	EMPLACED_CNTR	5/15/2010 14:04	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/8/2009	6/8/2009
2038	ARP16895	55G	EMPLACED_CNTR	5/12/2010 19:16	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/3/2009	6/3/2009
2039	ARP16907	55G	EMPLACED_CNTR	5/13/2010 19:11	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/10/2009	6/10/2009
2040	ARP16910	55G	EMPLACED_CNTR	5/12/2010 19:16	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/9/2009	6/9/2009
2041	ARP16911	55G	EMPLACED_CNTR	5/11/2010 9:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/10/2009	6/10/2009
2042	ARP16920	55G	EMPLACED_CNTR	5/16/2010 13:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/10/2009	6/10/2009
2043	ARP16943	55G	EMPLACED_CNTR	5/12/2010 19:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/8/2009	6/8/2009
2044	ARP16946	55G	EMPLACED_CNTR	5/11/2010 18:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/8/2009	6/8/2009
2045	ARP16949	55G	EMPLACED_CNTR	5/11/2010 18:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/8/2009	6/8/2009
2046	ARP16955	55G	EMPLACED_CNTR	5/15/2010 14:04	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/8/2009	6/8/2009
2047	ARP16956	55G	EMPLACED_CNTR	1/26/2010 21:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/9/2009	6/9/2009
2048	ARP16963	55G	EMPLACED_CNTR	5/16/2010 9:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/8/2009	6/8/2009
2049	ARP16964	55G	EMPLACED_CNTR	5/13/2010 19:11	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/10/2009	6/10/2009
2050	ARP16967	55G	EMPLACED_CNTR	5/13/2010 19:11	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/8/2009	6/8/2009
2051	ARP16971	55G	EMPLACED_CNTR	5/16/2010 13:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/11/2009	6/11/2009
2052	ARP16975	55G	EMPLACED_CNTR	5/13/2010 19:11	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/8/2009	6/8/2009
2053	ARP16982	55G	EMPLACED_CNTR	5/16/2010 13:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/10/2009	6/10/2009
2054	ARP17002	55G	EMPLACED_CNTR	4/29/2010 20:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/11/2009	6/11/2009
2055	ARP17010	55G	EMPLACED_CNTR	4/28/2010 21:52	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/15/2009	6/15/2009
2056	ARP17017	55G	EMPLACED_CNTR	5/17/2010 21:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/11/2009	6/11/2009
2057	ARP17021	55G	EMPLACED_CNTR	5/17/2010 21:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/11/2009	6/11/2009
2058	ARP17027	55G	EMPLACED_CNTR	5/17/2010 21:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/11/2009	6/11/2009
2059	ARP17028	55G	EMPLACED_CNTR	5/4/2010 19:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/11/2009	6/11/2009
2060	ARP17030	55G	EMPLACED_CNTR	5/4/2010 19:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/11/2009	6/11/2009
2061	ARP17046	55G	EMPLACED_CNTR	5/4/2010 19:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/11/2009	6/11/2009
2062	ARP17047	55G	EMPLACED_CNTR	4/28/2010 21:52	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/11/2009	6/11/2009
2063	ARP17049	55G	EMPLACED_CNTR	4/28/2010 21:52	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/15/2009	6/15/2009
2064	ARP17053	55G	EMPLACED_CNTR	5/10/2010 18:16	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/25/2009	6/25/2009
2065	ARP17055	55G	EMPLACED_CNTR	8/30/2010 22:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/25/2009	6/25/2009
2066	ARP17060	55G	EMPLACED_CNTR	5/17/2010 21:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/29/2009	6/29/2009
2067	ARP17061	55G	EMPLACED_CNTR	5/4/2010 19:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/29/2009	6/29/2009

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2068	ARP17105	55G	EMPLACED_CNTR	5/19/2010 18:24	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/17/2009	6/17/2009
2069	ARP17120	55G	EMPLACED_CNTR	4/29/2010 20:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/15/2009	6/15/2009
2070	ARP17150	55G	EMPLACED_CNTR	5/4/2010 19:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/25/2009	6/25/2009
2071	ARP17168	55G	EMPLACED_CNTR	5/11/2010 9:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/22/2009	6/22/2009
2072	ARP17174	55G	EMPLACED_CNTR	1/20/2010 12:52	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/6/2009	7/6/2009
2073	ARP17189	55G	EMPLACED_CNTR	5/19/2010 19:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/18/2009	6/18/2009
2074	ARP17190	55G	EMPLACED_CNTR	5/15/2010 14:04	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/17/2009	6/17/2009
2075	ARP17193	55G	EMPLACED_CNTR	5/4/2010 19:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/15/2009	6/15/2009
2076	ARP17216	55G	EMPLACED_CNTR	4/28/2010 21:52	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/16/2009	6/16/2009
2077	ARP17233	55G	EMPLACED_CNTR	5/4/2010 19:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/16/2009	6/16/2009
2078	ARP17247	55G	EMPLACED_CNTR	5/15/2010 14:04	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/17/2009	6/17/2009
2079	ARP17252	55G	EMPLACED_CNTR	5/15/2010 14:04	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/22/2009	6/22/2009
2080	ARP17269	55G	EMPLACED_CNTR	5/19/2010 19:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/18/2009	6/18/2009
2081	ARP17270	55G	EMPLACED_CNTR	5/16/2010 9:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/18/2009	6/18/2009
2082	ARP17310	55G	EMPLACED_CNTR	5/19/2010 19:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/22/2009	6/22/2009
2083	ARP17317	55G	EMPLACED_CNTR	5/17/2010 21:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/22/2009	6/22/2009
2084	ARP17328	55G	EMPLACED_CNTR	5/4/2010 19:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/24/2009	6/24/2009
2085	ARP17342	55G	EMPLACED_CNTR	5/4/2010 19:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/24/2009	6/24/2009
2086	ARP17353	55G	EMPLACED_CNTR	10/26/2010 19:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/26/2009	6/26/2009
2087	ARP17364	55G	EMPLACED_CNTR	5/15/2010 14:04	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/26/2009	6/26/2009
2088	ARP17421	55G	EMPLACED_CNTR	5/4/2010 19:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/29/2009	6/29/2009
2089	ARP17426	55G	EMPLACED_CNTR	5/19/2010 19:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/1/2009	7/1/2009
2090	ARP17466	55G	EMPLACED_CNTR	5/3/2010 21:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/25/2009	6/25/2009
2091	ARP17476	55G	EMPLACED_CNTR	5/13/2010 19:11	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/30/2009	6/30/2009
2092	ARP17481	55G	EMPLACED_CNTR	5/19/2010 19:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/30/2009	6/30/2009
2093	ARP17488	55G	EMPLACED_CNTR	5/3/2010 21:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/21/2009	7/21/2009
2094	ARP17514	55G	EMPLACED_CNTR	5/4/2010 19:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/21/2009	7/21/2009
2095	ARP17522	55G	EMPLACED_CNTR	5/19/2010 19:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/14/2009	7/14/2009
2096	ARP17524	55G	EMPLACED_CNTR	6/15/2010 21:58	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/8/2009	7/8/2009
2097	ARP17542	55G	EMPLACED_CNTR	5/12/2010 22:16	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/7/2009	7/7/2009
2098	ARP17570	55G	EMPLACED_CNTR	5/20/2010 18:25	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/8/2009	7/8/2009
2099	ARP17584	55G	EMPLACED_CNTR	5/19/2010 19:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/2/2009	7/2/2009
2100	ARP17619	55G	EMPLACED_CNTR	5/19/2010 19:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/13/2009	7/13/2009
2101	ARP17654	55G	EMPLACED_CNTR	5/23/2010 13:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/6/2009	7/6/2009
2102	ARP17663	55G	EMPLACED_CNTR	8/30/2010 22:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/7/2009	7/7/2009
2103	ARP17685	55G	EMPLACED_CNTR	5/13/2010 19:11	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/8/2009	7/8/2009
2104	ARP17690	55G	EMPLACED_CNTR	5/17/2010 21:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/7/2009	7/7/2009
2105	ARP17719	55G	EMPLACED_CNTR	4/28/2010 21:52	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/13/2009	7/13/2009
2106	ARP17728	55G	EMPLACED_CNTR	4/26/2010 18:42	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/9/2009	7/9/2009

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2107	ARP17733	55G	EMPLACED_CNTR	5/12/2010 22:16	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/9/2009	7/9/2009
2108	ARP17739	55G	EMPLACED_CNTR	5/15/2010 14:04	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/9/2009	7/9/2009
2109	ARP17791	55G	EMPLACED_CNTR	5/17/2010 21:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/28/2009	7/28/2009
2110	ARP17799	55G	EMPLACED_CNTR	4/28/2010 21:52	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/27/2009	7/27/2009
2111	ARP17830	55G	EMPLACED_CNTR	5/3/2010 21:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/14/2009	7/14/2009
2112	ARP17838	55G	EMPLACED_CNTR	5/3/2010 21:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/16/2009	7/16/2009
2113	ARP17839	55G	EMPLACED_CNTR	5/4/2010 19:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/15/2009	7/15/2009
2114	ARP17844	55G	EMPLACED_CNTR	5/3/2010 21:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/22/2009	7/22/2009
2115	ARP17861	55G	EMPLACED_CNTR	5/3/2010 21:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/21/2009	7/21/2009
2116	ARP17862	55G	EMPLACED_CNTR	5/3/2010 21:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/23/2009	7/23/2009
2117	ARP17864	55G	EMPLACED_CNTR	6/14/2010 20:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/16/2009	7/16/2009
2118	ARP17872	55G	EMPLACED_CNTR	5/3/2010 21:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/22/2009	7/22/2009
2119	ARP17898	55G	EMPLACED_CNTR	5/3/2010 21:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/20/2009	7/20/2009
2120	ARP17899	55G	EMPLACED_CNTR	5/3/2010 21:24	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/22/2009	7/22/2009
2121	ARP17900	55G	EMPLACED_CNTR	4/18/2011 21:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/27/2009	7/27/2009
2122	ARP17903	55G	EMPLACED_CNTR	5/19/2010 19:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/29/2009	7/29/2009
2123	ARP17905	55G	EMPLACED_CNTR	4/28/2010 21:52	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/28/2009	7/28/2009
2124	ARP17912	55G	EMPLACED_CNTR	5/3/2010 21:24	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/20/2009	7/20/2009
2125	ARP17915	55G	EMPLACED_CNTR	5/3/2010 21:24	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/16/2009	7/16/2009
2126	ARP17916	55G	EMPLACED_CNTR	6/2/2010 19:12	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/17/2009	8/17/2009
2127	ARP17924	55G	EMPLACED_CNTR	5/3/2010 21:24	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/23/2009	7/23/2009
2128	ARP17931	55G	EMPLACED_CNTR	5/3/2010 21:24	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/23/2009	7/23/2009
2129	ARP17935	55G	EMPLACED_CNTR	6/2/2010 19:12	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/17/2009	8/17/2009
2130	ARP17936	55G	EMPLACED_CNTR	5/3/2010 21:24	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/23/2009	7/23/2009
2131	ARP17954	55G	EMPLACED_CNTR	5/3/2010 21:24	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/23/2009	7/23/2009
2132	ARP17956	55G	EMPLACED_CNTR	5/3/2010 21:24	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/22/2009	7/22/2009
2133	ARP17990	55G	EMPLACED_CNTR	5/20/2010 18:25	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/28/2009	7/28/2009
2134	ARP18027	55G	EMPLACED_CNTR	5/17/2010 21:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/3/2009	8/3/2009
2135	ARP18036	55G	EMPLACED_CNTR	5/16/2010 13:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/30/2009	7/30/2009
2136	ARP18056	55G	EMPLACED_CNTR	1/20/2010 12:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/30/2009	9/30/2009
2137	ARP18074	55G	EMPLACED_CNTR	5/23/2010 13:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/4/2009	8/4/2009
2138	ARP18101	55G	EMPLACED_CNTR	10/27/2010 18:50	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/3/2009	8/3/2009
2139	ARP18126	55G	EMPLACED_CNTR	6/6/2010 13:23	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/20/2009	8/20/2009
2140	ARP18136	55G	EMPLACED_CNTR	6/9/2010 22:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/15/2009	9/15/2009
2141	ARP18139	55G	EMPLACED_CNTR	6/9/2010 22:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/27/2009	8/27/2009
2142	ARP18149	55G	EMPLACED_CNTR	5/4/2010 19:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/6/2009	8/6/2009
2143	ARP18150	55G	EMPLACED_CNTR	5/11/2010 9:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/18/2009	8/18/2009
2144	ARP18157	55G	EMPLACED_CNTR	5/16/2010 9:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/10/2009	8/10/2009
2145	ARP18158	55G	EMPLACED_CNTR	6/6/2010 13:23	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/26/2009	8/26/2009

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2146	ARP18162	55G	EMPLACED_CNTR	6/6/2010 13:23	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/2/2009	9/2/2009
2147	ARP18163	55G	EMPLACED_CNTR	5/16/2010 9:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/19/2009	8/19/2009
2148	ARP18189	55G	EMPLACED_CNTR	5/9/2010 10:31	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/6/2009	8/6/2009
2149	ARP18190	55G	EMPLACED_CNTR	5/4/2010 19:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/5/2009	8/5/2009
2150	ARP18192	55G	EMPLACED_CNTR	5/9/2010 10:31	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/6/2009	8/6/2009
2151	ARP18194	55G	EMPLACED_CNTR	5/16/2010 9:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/20/2009	8/20/2009
2152	ARP18195	55G	EMPLACED_CNTR	6/10/2010 14:35	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/1/2009	9/1/2009
2153	ARP18205	55G	EMPLACED_CNTR	5/4/2010 19:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/6/2009	8/6/2009
2154	ARP18216	55G	EMPLACED_CNTR	5/4/2010 19:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/6/2009	8/6/2009
2155	ARP18225	55G	EMPLACED_CNTR	6/10/2010 14:35	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/2/2009	9/2/2009
2156	ARP18231	55G	EMPLACED_CNTR	4/28/2010 21:52	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/6/2009	8/6/2009
2157	ARP18241	55G	EMPLACED_CNTR	5/13/2010 19:11	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/17/2009	8/17/2009
2158	ARP18250	55G	EMPLACED_CNTR	5/23/2010 13:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/10/2009	8/10/2009
2159	ARP18254	55G	EMPLACED_CNTR	9/23/2010 19:02	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/10/2009	8/10/2009
2160	ARP18262	55G	EMPLACED_CNTR	5/16/2010 9:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/11/2009	8/11/2009
2161	ARP18298	55G	EMPLACED_CNTR	6/15/2010 21:58	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/14/2009	9/14/2009
2162	ARP18303	55G	EMPLACED_CNTR	5/12/2010 19:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/18/2009	8/18/2009
2163	ARP18304	55G	EMPLACED_CNTR	6/6/2010 13:23	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/31/2009	8/31/2009
2164	ARP18308	55G	EMPLACED_CNTR	5/15/2010 10:23	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/19/2009	8/19/2009
2165	ARP18311	55G	EMPLACED_CNTR	5/16/2010 13:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/11/2009	8/11/2009
2166	ARP18313	55G	EMPLACED_CNTR	10/12/2010 21:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/17/2009	8/17/2009
2167	ARP18318	55G	EMPLACED_CNTR	5/22/2010 12:51	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/21/2009	9/21/2009
2168	ARP18322	55G	EMPLACED_CNTR	5/16/2010 9:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/19/2009	8/19/2009
2169	ARP18339	55G	EMPLACED_CNTR	6/10/2010 14:35	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/3/2009	9/3/2009
2170	ARP18346	55G	EMPLACED_CNTR	6/9/2010 22:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/6/2009	10/6/2009
2171	ARP18365	55G	EMPLACED_CNTR	6/6/2010 13:23	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/20/2009	8/20/2009
2172	ARP18432	55G	EMPLACED_CNTR	6/9/2010 22:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/14/2009	9/14/2009
2173	ARP18475	55G	EMPLACED_CNTR	6/10/2010 14:35	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/8/2009	10/8/2009
2174	ARP18528	55G	EMPLACED_CNTR	5/15/2010 10:23	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/5/2009	10/5/2009
2175	ARP18538	55G	EMPLACED_CNTR	5/23/2010 13:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/21/2009	9/21/2009
2176	ARP18548	55G	EMPLACED_CNTR	6/10/2010 14:35	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/15/2009	9/15/2009
2177	ARP18576	55G	EMPLACED_CNTR	5/17/2010 21:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/30/2009	9/30/2009
2178	ARP18581	55G	EMPLACED_CNTR	5/23/2010 13:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/1/2009	10/1/2009
2179	ARP18606	55G	EMPLACED_CNTR	5/23/2010 13:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/24/2009	9/24/2009
2180	ARP18611	55G	EMPLACED_CNTR	5/16/2010 9:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/29/2009	9/29/2009
2181	ARP18617	55G	EMPLACED_CNTR	5/16/2010 9:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/29/2009	9/29/2009
2182	ARP18625	55G	EMPLACED_CNTR	5/15/2010 10:23	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/5/2009	10/5/2009
2183	ARP18727	55G	EMPLACED_CNTR	5/23/2010 13:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/18/2009	11/18/2009
2184	ARP18750	55G	EMPLACED_CNTR	5/23/2010 13:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/29/2009	9/29/2009

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2185	ARP18757	55G	EMPLACED_CNTR	5/15/2010 10:23	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/29/2009	9/29/2009
2186	ARP18831	55G	EMPLACED_CNTR	6/9/2010 22:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/7/2009	10/7/2009
2187	ARP18833	55G	EMPLACED_CNTR	6/9/2010 22:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/7/2009	10/7/2009
2188	ARP18848	55G	EMPLACED_CNTR	6/9/2010 22:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/6/2009	10/6/2009
2189	ARP18904	55G	EMPLACED_CNTR	6/10/2010 14:35	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/12/2009	10/12/2009
2190	ARP19116	55G	EMPLACED_CNTR	6/3/2010 22:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/4/2010	1/4/2010
2191	ARP19132	55G	EMPLACED_CNTR	6/10/2010 14:35	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/20/2009	10/20/2009
2192	ARP19227	55G	EMPLACED_CNTR	6/10/2010 14:35	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/22/2009	10/22/2009
2193	ARP19265	55G	EMPLACED_CNTR	6/7/2010 23:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/23/2009	11/23/2009
2194	ARP19285	55G	EMPLACED_CNTR	6/7/2010 23:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/17/2009	11/17/2009
2195	ARP19347	55G	EMPLACED_CNTR	6/7/2010 23:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/26/2009	10/26/2009
2196	ARP19422	55G	EMPLACED_CNTR	6/3/2010 22:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/4/2010	1/4/2010
2197	ARP19425	55G	EMPLACED_CNTR	6/7/2010 23:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/10/2009	11/10/2009
2198	ARP19607	55G	EMPLACED_CNTR	5/20/2010 18:25	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/18/2009	11/18/2009
2199	ARP19620	55G	EMPLACED_CNTR	6/7/2010 23:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/18/2009	11/18/2009
2200	ARP19668	55G	EMPLACED_CNTR	6/9/2010 22:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/3/2009	12/3/2009
2201	ARP19703	55G	EMPLACED_CNTR	7/28/2010 18:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/10/2010	2/10/2010
2202	ARP19716	55G	EMPLACED_CNTR	6/3/2010 22:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/12/2010	1/12/2010
2203	ARP19717	55G	EMPLACED_CNTR	6/3/2010 22:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/21/2009	12/21/2009
2204	ARP19731	55G	EMPLACED_CNTR	6/3/2010 23:06	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/23/2009	12/23/2009
2205	ARP19790	55G	EMPLACED_CNTR	6/3/2010 22:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/4/2010	1/4/2010
2206	ARP19822	55G	EMPLACED_CNTR	5/22/2010 14:22	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/8/2010	3/8/2010
2207	ARP19826	55G	EMPLACED_CNTR	6/3/2010 23:06	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/5/2010	1/5/2010
2208	ARP19838	55G	EMPLACED_CNTR	6/3/2010 22:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/5/2010	1/5/2010
2209	ARP19848	55G	EMPLACED_CNTR	8/26/2010 18:43	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/4/2010	2/4/2010
2210	ARP19867	55G	EMPLACED_CNTR	6/6/2010 13:23	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/1/2009	12/1/2009
2211	ARP19887	55G	EMPLACED_CNTR	6/3/2010 23:06	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/5/2010	1/5/2010
2212	ARP19891	55G	EMPLACED_CNTR	6/3/2010 22:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/5/2010	1/5/2010
2213	ARP19892	55G	EMPLACED_CNTR	6/3/2010 22:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/5/2010	1/5/2010
2214	ARP19894	55G	EMPLACED_CNTR	10/31/2010 14:01	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/16/2010	2/16/2010
2215	ARP19897	55G	EMPLACED_CNTR	7/31/2010 13:29	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/4/2010	2/4/2010
2216	ARP19899	55G	EMPLACED_CNTR	8/4/2010 23:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/8/2010	2/8/2010
2217	ARP19920	55G	EMPLACED_CNTR	8/30/2010 18:53	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/16/2010	3/16/2010
2218	ARP19923	55G	EMPLACED_CNTR	6/3/2010 22:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/11/2010	1/11/2010
2219	ARP19925	55G	EMPLACED_CNTR	7/31/2010 13:29	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/26/2010	1/26/2010
2220	ARP19928	55G	EMPLACED_CNTR	7/31/2010 13:29	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/1/2010	2/1/2010
2221	ARP19929	55G	EMPLACED_CNTR	10/26/2010 21:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/1/2010	3/1/2010
2222	ARP19941	55G	EMPLACED_CNTR	6/3/2010 23:06	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/2/2010	3/2/2010
2223	ARP19954	55G	EMPLACED_CNTR	6/3/2010 22:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/11/2010	1/11/2010

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2224	ARP19955	55G	EMPLACED_CNTR	6/15/2010 21:58	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/11/2010	1/11/2010
2225	ARP19957	55G	EMPLACED_CNTR	10/19/2010 22:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/17/2010	5/17/2010
2226	ARP19961	55G	EMPLACED_CNTR	6/17/2010 19:04	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/11/2010	1/11/2010
2227	ARP19966	55G	EMPLACED_CNTR	6/3/2010 22:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/11/2010	1/11/2010
2228	ARP20005	55G	EMPLACED_CNTR	6/3/2010 23:06	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/11/2010	1/11/2010
2229	ARP20006	55G	EMPLACED_CNTR	6/3/2010 22:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/11/2010	1/11/2010
2230	ARP20007	55G	EMPLACED_CNTR	6/3/2010 22:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/11/2010	1/11/2010
2231	ARP20012	55G	EMPLACED_CNTR	8/30/2010 22:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/11/2010	1/11/2010
2232	ARP20018	55G	EMPLACED_CNTR	6/3/2010 22:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/12/2010	1/12/2010
2233	ARP20019	55G	EMPLACED_CNTR	5/22/2010 12:51	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/11/2010	1/11/2010
2234	ARP20045	55G	EMPLACED_CNTR	7/28/2010 18:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/8/2010	2/8/2010
2235	ARP20059	55G	EMPLACED_CNTR	9/20/2010 18:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/4/2010	3/4/2010
2236	ARP20065	55G	EMPLACED_CNTR	5/22/2010 12:51	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/1/2010	2/1/2010
2237	ARP20071	55G	EMPLACED_CNTR	9/12/2010 13:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/8/2010	2/8/2010
2238	ARP20072	55G	EMPLACED_CNTR	7/31/2010 13:29	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/9/2010	2/9/2010
2239	ARP20073	55G	EMPLACED_CNTR	5/22/2010 12:51	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/28/2010	1/28/2010
2240	ARP20075	55G	EMPLACED_CNTR	5/22/2010 12:51	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/17/2010	2/17/2010
2241	ARP20084	55G	EMPLACED_CNTR	7/28/2010 18:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/11/2010	2/11/2010
2242	ARP20086	55G	EMPLACED_CNTR	8/4/2010 23:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/11/2010	2/11/2010
2243	ARP20091	55G	EMPLACED_CNTR	9/20/2010 22:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/3/2010	3/3/2010
2244	ARP20092	55G	EMPLACED_CNTR	6/3/2010 23:06	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/3/2010	3/3/2010
2245	ARP20093	55G	EMPLACED_CNTR	8/4/2010 23:15	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/23/2010	2/23/2010
2246	ARP20094	55G	EMPLACED_CNTR	5/22/2010 14:22	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/3/2010	3/3/2010
2247	ARP20097	55G	EMPLACED_CNTR	8/4/2010 23:15	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/18/2010	2/18/2010
2248	ARP20098	55G	EMPLACED_CNTR	9/27/2010 19:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/18/2010	2/18/2010
2249	ARP20109	55G	EMPLACED_CNTR	8/26/2010 18:43	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/24/2010	2/24/2010
2250	ARP20113	55G	EMPLACED_CNTR	8/4/2010 23:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/24/2010	2/24/2010
2251	ARP20114	55G	EMPLACED_CNTR	7/28/2010 18:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/25/2010	2/25/2010
2252	ARP20117	55G	EMPLACED_CNTR	9/20/2010 22:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/10/2010	3/10/2010
2253	ARP20118	55G	EMPLACED_CNTR	8/4/2010 23:15	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/24/2010	2/24/2010
2254	ARP20123	55G	EMPLACED_CNTR	8/4/2010 23:15	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/25/2010	2/25/2010
2255	ARP20127	55G	EMPLACED_CNTR	8/19/2010 20:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/9/2010	2/9/2010
2256	ARP20128	55G	EMPLACED_CNTR	6/17/2010 19:04	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/11/2010	2/11/2010
2257	ARP20134	55G	EMPLACED_CNTR	7/31/2010 13:29	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/23/2010	2/23/2010
2258	ARP20141	55G	EMPLACED_CNTR	5/22/2010 12:51	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/16/2010	2/16/2010
2259	ARP20143	55G	EMPLACED_CNTR	9/20/2010 22:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/17/2010	2/17/2010
2260	ARP20153	55G	EMPLACED_CNTR	6/17/2010 19:04	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/4/2010	3/4/2010
2261	ARP20154	55G	EMPLACED_CNTR	7/28/2010 18:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/22/2010	2/22/2010
2262	ARP20159	55G	EMPLACED_CNTR	5/22/2010 12:51	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/16/2010	2/16/2010

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2263	ARP20175	55G	EMPLACED_CNTR	7/28/2010 18:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/15/2010	2/15/2010
2264	ARP20178	55G	EMPLACED_CNTR	7/28/2010 18:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/1/2010	3/1/2010
2265	ARP20180	55G	EMPLACED_CNTR	9/28/2010 19:22	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/12/2010	4/12/2010
2266	ARP20181	55G	EMPLACED_CNTR	7/28/2010 18:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/25/2010	2/25/2010
2267	ARP20190	55G	EMPLACED_CNTR	8/22/2010 13:51	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/23/2010	3/23/2010
2268	ARP20192	55G	EMPLACED_CNTR	7/31/2010 13:29	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/25/2010	2/25/2010
2269	ARP20193	55G	EMPLACED_CNTR	8/4/2010 23:15	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/1/2010	3/1/2010
2270	ARP20195	55G	EMPLACED_CNTR	7/28/2010 18:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/25/2010	2/25/2010
2271	ARP20209	55G	EMPLACED_CNTR	11/4/2010 22:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/18/2010	2/18/2010
2272	ARP20211	55G	EMPLACED_CNTR	4/18/2011 21:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/23/2010	2/23/2010
2273	ARP20216	55G	EMPLACED_CNTR	8/4/2010 23:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/23/2010	2/23/2010
2274	ARP20218	55G	EMPLACED_CNTR	6/15/2010 21:58	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/2/2010	3/2/2010
2275	ARP20221	55G	EMPLACED_CNTR	8/4/2010 23:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/23/2010	2/23/2010
2276	ARP20225	55G	EMPLACED_CNTR	8/19/2010 20:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/18/2010	2/18/2010
2277	ARP20231	55G	EMPLACED_CNTR	9/12/2010 10:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/2/2010	3/2/2010
2278	ARP20235	55G	EMPLACED_CNTR	8/19/2010 20:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/1/2010	3/1/2010
2279	ARP20242	55G	EMPLACED_CNTR	8/26/2010 18:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/8/2010	3/8/2010
2280	ARP20246	55G	EMPLACED_CNTR	7/28/2010 18:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/18/2010	2/18/2010
2281	ARP20250	55G	EMPLACED_CNTR	5/22/2011 13:20	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/23/2010	2/23/2010
2282	ARP20253	55G	EMPLACED_CNTR	8/4/2010 23:15	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/22/2010	2/22/2010
2283	ARP20255	55G	EMPLACED_CNTR	5/19/2011 18:06	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/23/2010	2/23/2010
2284	ARP20262	55G	EMPLACED_CNTR	7/31/2010 13:29	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/25/2010	2/25/2010
2285	ARP20269	55G	EMPLACED_CNTR	6/3/2010 22:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/2/2010	3/2/2010
2286	ARP20277	55G	EMPLACED_CNTR	8/5/2010 21:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/14/2010	4/14/2010
2287	ARP20283	55G	EMPLACED_CNTR	9/20/2010 22:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/25/2010	2/25/2010
2288	ARP20284	55G	EMPLACED_CNTR	8/19/2010 20:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/24/2010	2/24/2010
2289	ARP20288	55G	EMPLACED_CNTR	9/20/2010 22:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/23/2010	2/23/2010
2290	ARP20295	55G	EMPLACED_CNTR	11/9/2010 21:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/2/2010	3/2/2010
2291	ARP20300	55G	EMPLACED_CNTR	7/28/2010 18:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/24/2010	2/24/2010
2292	ARP20301	55G	EMPLACED_CNTR	8/4/2010 23:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/2/2010	3/2/2010
2293	ARP20311	55G	EMPLACED_CNTR	8/19/2010 20:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/25/2010	2/25/2010
2294	ARP20314	55G	EMPLACED_CNTR	7/28/2010 18:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/2/2010	3/2/2010
2295	ARP20315	55G	EMPLACED_CNTR	9/20/2010 22:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/8/2010	3/8/2010
2296	ARP20316	55G	EMPLACED_CNTR	9/22/2010 21:41	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/3/2010	3/3/2010
2297	ARP20317	55G	EMPLACED_CNTR	8/19/2010 20:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/2/2010	3/2/2010
2298	ARP20322	55G	EMPLACED_CNTR	9/20/2010 18:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/3/2010	3/3/2010
2299	ARP20328	55G	EMPLACED_CNTR	6/17/2010 19:04	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/3/2010	3/3/2010
2300	ARP20330	55G	EMPLACED_CNTR	8/22/2010 13:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/2/2010	3/2/2010
2301	ARP20334	55G	EMPLACED_CNTR	9/16/2010 22:13	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/22/2010	4/22/2010

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2302	ARP20339	55G	EMPLACED_CNTR	11/12/2010 13:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/2/2010	3/2/2010
2303	ARP20350	55G	EMPLACED_CNTR	8/19/2010 20:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/24/2010	2/24/2010
2304	ARP20352	55G	EMPLACED_CNTR	5/19/2011 18:06	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/24/2010	2/24/2010
2305	ARP20353	55G	EMPLACED_CNTR	7/28/2010 18:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/24/2010	2/24/2010
2306	ARP20357	55G	EMPLACED_CNTR	8/4/2010 23:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/25/2010	2/25/2010
2307	ARP20362	55G	EMPLACED_CNTR	9/12/2010 10:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/25/2010	2/25/2010
2308	ARP20363	55G	EMPLACED_CNTR	7/28/2010 18:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/25/2010	2/25/2010
2309	ARP20364	55G	EMPLACED_CNTR	9/22/2010 21:41	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/25/2010	2/25/2010
2310	ARP20374	55G	EMPLACED_CNTR	11/9/2010 21:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/8/2010	3/8/2010
2311	ARP20380	55G	EMPLACED_CNTR	8/4/2010 23:15	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/2/2010	3/2/2010
2312	ARP20384	55G	EMPLACED_CNTR	8/19/2010 20:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/2/2010	3/2/2010
2313	ARP20387	55G	EMPLACED_CNTR	5/22/2010 12:51	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/2/2010	3/2/2010
2314	ARP20397	55G	EMPLACED_CNTR	6/3/2010 22:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/15/2010	3/15/2010
2315	ARP20403	55G	EMPLACED_CNTR	5/22/2010 14:22	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/9/2010	3/9/2010
2316	ARP20404	55G	EMPLACED_CNTR	6/24/2010 19:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/3/2010	3/3/2010
2317	ARP20406	55G	EMPLACED_CNTR	6/24/2010 19:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/3/2010	3/3/2010
2318	ARP20409	55G	EMPLACED_CNTR	6/3/2010 23:06	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/8/2010	3/8/2010
2319	ARP20412	55G	EMPLACED_CNTR	8/26/2010 18:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/23/2010	3/23/2010
2320	ARP20413	55G	EMPLACED_CNTR	11/12/2010 13:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/8/2010	3/8/2010
2321	ARP20414	55G	EMPLACED_CNTR	11/12/2010 13:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/9/2010	3/9/2010
2322	ARP20415	55G	EMPLACED_CNTR	11/17/2010 22:47	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/8/2010	3/8/2010
2323	ARP20419	55G	EMPLACED_CNTR	9/16/2010 22:13	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/6/2010	5/6/2010
2324	ARP20423	55G	EMPLACED_CNTR	8/30/2010 18:53	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/23/2010	3/23/2010
2325	ARP20424	55G	EMPLACED_CNTR	5/22/2010 14:22	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/15/2010	3/15/2010
2326	ARP20426	55G	EMPLACED_CNTR	10/23/2010 13:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/27/2010	4/27/2010
2327	ARP20430	55G	EMPLACED_CNTR	5/22/2010 14:22	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/15/2010	3/15/2010
2328	ARP20436	55G	EMPLACED_CNTR	8/30/2010 18:53	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/16/2010	3/16/2010
2329	ARP20439	55G	EMPLACED_CNTR	8/26/2010 18:43	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/16/2010	3/16/2010
2330	ARP20455	55G	EMPLACED_CNTR	8/26/2010 18:43	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/23/2010	3/23/2010
2331	ARP20461	55G	EMPLACED_CNTR	8/22/2010 13:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/12/2010	4/12/2010
2332	ARP20471	55G	EMPLACED_CNTR	9/28/2010 19:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/23/2010	3/23/2010
2333	ARP20475	55G	EMPLACED_CNTR	5/22/2010 14:22	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/10/2010	3/10/2010
2334	ARP20477	55G	EMPLACED_CNTR	9/20/2010 22:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/22/2010	3/22/2010
2335	ARP20481	55G	EMPLACED_CNTR	5/22/2010 14:22	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/15/2010	3/15/2010
2336	ARP20482	55G	EMPLACED_CNTR	6/15/2010 21:58	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/16/2010	3/16/2010
2337	ARP20485	55G	EMPLACED_CNTR	9/23/2010 19:21	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/9/2010	3/9/2010
2338	ARP20491	55G	EMPLACED_CNTR	9/2/2010 19:20	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/16/2010	3/16/2010
2339	ARP20497	55G	EMPLACED_CNTR	11/12/2010 13:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/10/2010	3/10/2010
2340	ARP20502	55G	EMPLACED_CNTR	6/17/2010 19:04	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/4/2010	3/4/2010

	A	B	C	D	E	F	G	I	J
2341	ARP20505	55G	EMPLACED_CNTR	9/20/2010 22:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/3/2010	3/3/2010
2342	ARP20509	55G	EMPLACED_CNTR	9/20/2010 18:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/4/2010	3/4/2010
2343	ARP20516	55G	EMPLACED_CNTR	5/22/2010 14:22	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/8/2010	3/8/2010
2344	ARP20517	55G	EMPLACED_CNTR	5/19/2011 18:06	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/8/2010	3/8/2010
2345	ARP20519	55G	EMPLACED_CNTR	6/17/2010 19:04	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/9/2010	3/9/2010
2346	ARP20523	55G	EMPLACED_CNTR	6/24/2010 19:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/8/2010	3/8/2010
2347	ARP20534	55G	EMPLACED_CNTR	8/26/2010 18:43	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/9/2010	3/9/2010
2348	ARP20535	55G	EMPLACED_CNTR	8/5/2010 21:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/14/2010	4/14/2010
2349	ARP20536	55G	EMPLACED_CNTR	10/24/2011 19:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/17/2010	5/17/2010
2350	ARP20544	55G	EMPLACED_CNTR	9/20/2010 22:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/10/2010	3/10/2010
2351	ARP20556	55G	EMPLACED_CNTR	5/25/2011 23:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/20/2010	4/20/2010
2352	ARP20562	55G	EMPLACED_CNTR	10/7/2010 19:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/12/2010	4/12/2010
2353	ARP20565	55G	EMPLACED_CNTR	8/5/2010 21:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/12/2010	4/12/2010
2354	ARP20566	55G	EMPLACED_CNTR	11/17/2010 22:47	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/12/2010	4/12/2010
2355	ARP20567	55G	EMPLACED_CNTR	9/16/2010 22:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/22/2010	4/22/2010
2356	ARP20571	55G	EMPLACED_CNTR	7/27/2010 22:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/6/2010	4/6/2010
2357	ARP20572	55G	EMPLACED_CNTR	7/27/2010 22:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/6/2010	4/6/2010
2358	ARP20576	55G	EMPLACED_CNTR	6/24/2010 19:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/18/2010	3/18/2010
2359	ARP20584	55G	EMPLACED_CNTR	5/22/2010 14:22	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/15/2010	3/15/2010
2360	ARP20585	55G	EMPLACED_CNTR	8/22/2010 13:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/16/2010	3/16/2010
2361	ARP20587	55G	EMPLACED_CNTR	6/17/2010 19:04	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/15/2010	3/15/2010
2362	ARP20593	55G	EMPLACED_CNTR	6/3/2010 23:06	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/15/2010	3/15/2010
2363	ARP20603	55G	EMPLACED_CNTR	10/23/2010 14:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/14/2010	4/14/2010
2364	ARP20604	55G	EMPLACED_CNTR	10/7/2010 19:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/7/2010	4/7/2010
2365	ARP20605	55G	EMPLACED_CNTR	9/1/2010 21:56	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/24/2010	5/24/2010
2366	ARP20626	55G	EMPLACED_CNTR	10/7/2010 19:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/17/2010	5/17/2010
2367	ARP20627	55G	EMPLACED_CNTR	9/2/2010 19:20	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/17/2010	5/17/2010
2368	ARP20629	55G	EMPLACED_CNTR	8/30/2010 18:53	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/16/2010	3/16/2010
2369	ARP20631	55G	EMPLACED_CNTR	8/5/2010 21:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/14/2010	4/14/2010
2370	ARP20632	55G	EMPLACED_CNTR	5/22/2010 14:22	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/10/2010	3/10/2010
2371	ARP20635	55G	EMPLACED_CNTR	9/22/2010 21:41	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/16/2010	3/16/2010
2372	ARP20636	55G	EMPLACED_CNTR	11/12/2010 13:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/10/2010	3/10/2010
2373	ARP20638	55G	EMPLACED_CNTR	9/22/2010 21:41	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/16/2010	3/16/2010
2374	ARP20641	55G	EMPLACED_CNTR	10/19/2010 22:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/18/2010	5/18/2010
2375	ARP20643	55G	EMPLACED_CNTR	8/22/2010 13:51	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/10/2010	3/10/2010
2376	ARP20652	55G	EMPLACED_CNTR	6/3/2010 23:06	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/15/2010	3/15/2010
2377	ARP20653	55G	EMPLACED_CNTR	9/1/2010 21:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/16/2010	3/16/2010
2378	ARP20657	55G	EMPLACED_CNTR	7/27/2010 21:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/5/2010	4/5/2010
2379	ARP20658	55G	EMPLACED_CNTR	10/18/2010 22:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/14/2010	4/14/2010

	A	B	C	D	E	F	G	I	J
2380	ARP20667	55G	EMPLACED_CNTR	10/18/2010 22:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/14/2010	4/14/2010
2381	ARP20676	55G	EMPLACED_CNTR	9/2/2010 19:20	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/18/2010	3/18/2010
2382	ARP20680	55G	EMPLACED_CNTR	8/26/2010 18:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/18/2010	3/18/2010
2383	ARP20681	55G	EMPLACED_CNTR	9/16/2010 22:13	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/3/2010	5/3/2010
2384	ARP20687	55G	EMPLACED_CNTR	11/17/2010 22:47	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/15/2010	4/15/2010
2385	ARP20694	55G	EMPLACED_CNTR	9/1/2010 21:56	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/18/2010	3/18/2010
2386	ARP20699	55G	EMPLACED_CNTR	7/26/2010 23:21	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/13/2010	5/13/2010
2387	ARP20720	55G	EMPLACED_CNTR	8/22/2010 13:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/25/2010	3/25/2010
2388	ARP20736	55G	EMPLACED_CNTR	7/27/2010 21:38	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/5/2010	4/5/2010
2389	ARP20738	55G	EMPLACED_CNTR	7/27/2010 21:38	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/1/2010	4/1/2010
2390	ARP20751	55G	EMPLACED_CNTR	8/26/2010 18:43	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/17/2010	3/17/2010
2391	ARP20753	55G	EMPLACED_CNTR	8/30/2010 18:53	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/18/2010	3/18/2010
2392	ARP20755	55G	EMPLACED_CNTR	8/26/2010 18:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/24/2010	3/24/2010
2393	ARP20760	55G	EMPLACED_CNTR	8/26/2010 18:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/24/2010	3/24/2010
2394	ARP20765	55G	EMPLACED_CNTR	8/26/2010 18:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/24/2010	3/24/2010
2395	ARP20769	55G	EMPLACED_CNTR	8/22/2010 13:51	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/25/2010	3/25/2010
2396	ARP20784	55G	EMPLACED_CNTR	8/30/2010 18:53	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/18/2010	3/18/2010
2397	ARP20789	55G	EMPLACED_CNTR	8/30/2010 18:53	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/18/2010	3/18/2010
2398	ARP20793	55G	EMPLACED_CNTR	8/22/2010 13:51	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/22/2010	3/22/2010
2399	ARP20797	55G	EMPLACED_CNTR	8/22/2010 13:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/24/2010	3/24/2010
2400	ARP20807	55G	EMPLACED_CNTR	9/27/2010 19:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/8/2010	4/8/2010
2401	ARP20833	55G	EMPLACED_CNTR	7/27/2010 21:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/6/2010	4/6/2010
2402	ARP20839	55G	EMPLACED_CNTR	7/27/2010 21:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/5/2010	4/5/2010
2403	ARP20845	55G	EMPLACED_CNTR	7/27/2010 21:38	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/6/2010	4/6/2010
2404	ARP20850	55G	EMPLACED_CNTR	8/5/2010 21:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/8/2010	4/8/2010
2405	ARP20853	55G	EMPLACED_CNTR	7/27/2010 21:38	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/6/2010	4/6/2010
2406	ARP20865	55G	EMPLACED_CNTR	7/27/2010 21:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/7/2010	4/7/2010
2407	ARP20873	55G	EMPLACED_CNTR	8/22/2010 13:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/8/2010	4/8/2010
2408	ARP20883	55G	EMPLACED_CNTR	7/27/2010 22:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/1/2010	4/1/2010
2409	ARP20884	55G	EMPLACED_CNTR	10/23/2010 14:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/1/2010	4/1/2010
2410	ARP20895	55G	EMPLACED_CNTR	11/21/2010 13:43	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/6/2010	4/6/2010
2411	ARP20897	55G	EMPLACED_CNTR	10/23/2010 13:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/6/2010	4/6/2010
2412	ARP20906	55G	EMPLACED_CNTR	9/25/2010 13:58	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/8/2010	4/8/2010
2413	ARP20911	55G	EMPLACED_CNTR	9/12/2010 13:58	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/14/2010	4/14/2010
2414	ARP20918	55G	EMPLACED_CNTR	9/12/2010 13:58	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/8/2010	4/8/2010
2415	ARP20919	55G	EMPLACED_CNTR	10/12/2010 21:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/17/2010	5/17/2010
2416	ARP20930	55G	EMPLACED_CNTR	11/21/2010 13:43	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/8/2010	4/8/2010
2417	ARP20938	55G	EMPLACED_CNTR	8/26/2010 18:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/8/2010	4/8/2010
2418	ARP20943	55G	EMPLACED_CNTR	9/25/2010 13:58	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/7/2010	4/7/2010

	A	B	C	D	E	F	G	I	J
2419	ARP20947	55G	EMPLACED_CNTR	10/12/2010 21:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/6/2010	4/6/2010
2420	ARP20954	55G	EMPLACED_CNTR	8/5/2010 21:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/14/2010	4/14/2010
2421	ARP20956	55G	EMPLACED_CNTR	8/5/2010 21:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/14/2010	4/14/2010
2422	ARP20961	55G	EMPLACED_CNTR	10/18/2010 22:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/15/2010	4/15/2010
2423	ARP20963	55G	EMPLACED_CNTR	7/24/2010 13:31	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/18/2010	5/18/2010
2424	ARP20966	55G	EMPLACED_CNTR	10/18/2010 22:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/14/2010	4/14/2010
2425	ARP20968	55G	EMPLACED_CNTR	11/17/2010 22:47	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/15/2010	4/15/2010
2426	ARP20969	55G	EMPLACED_CNTR	8/5/2010 21:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/15/2010	4/15/2010
2427	ARP20979	55G	EMPLACED_CNTR	7/27/2010 21:38	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/5/2010	4/5/2010
2428	ARP20991	55G	EMPLACED_CNTR	7/27/2010 21:38	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/12/2010	4/12/2010
2429	ARP20995	55G	EMPLACED_CNTR	10/23/2010 14:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/7/2010	4/7/2010
2430	ARP21009	55G	EMPLACED_CNTR	10/10/2010 14:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/12/2010	4/12/2010
2431	ARP21012	55G	EMPLACED_CNTR	8/22/2010 13:51	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/12/2010	4/12/2010
2432	ARP21027	55G	EMPLACED_CNTR	10/7/2010 19:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/7/2010	4/7/2010
2433	ARP21029	55G	EMPLACED_CNTR	10/12/2010 21:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/12/2010	4/12/2010
2434	ARP21035	55G	EMPLACED_CNTR	9/27/2010 19:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/12/2010	4/12/2010
2435	ARP21039	55G	EMPLACED_CNTR	11/17/2010 22:47	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/12/2010	4/12/2010
2436	ARP21046	55G	EMPLACED_CNTR	9/16/2010 22:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/20/2010	4/20/2010
2437	ARP21049	55G	EMPLACED_CNTR	8/22/2010 13:51	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/20/2010	4/20/2010
2438	ARP21050	55G	EMPLACED_CNTR	10/23/2010 13:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/28/2010	4/28/2010
2439	ARP21053	55G	EMPLACED_CNTR	10/19/2010 22:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/21/2010	4/21/2010
2440	ARP21058	55G	EMPLACED_CNTR	11/21/2010 13:43	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/19/2010	4/19/2010
2441	ARP21073	55G	EMPLACED_CNTR	10/19/2010 22:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/21/2010	4/21/2010
2442	ARP21082	55G	EMPLACED_CNTR	9/19/2010 13:42	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/20/2010	4/20/2010
2443	ARP21084	55G	EMPLACED_CNTR	7/26/2010 23:20	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/11/2010	5/11/2010
2444	ARP21085	55G	EMPLACED_CNTR	7/26/2010 23:20	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/11/2010	5/11/2010
2445	ARP21106	55G	EMPLACED_CNTR	8/5/2010 21:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/14/2010	4/14/2010
2446	ARP21107	55G	EMPLACED_CNTR	10/18/2010 22:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/14/2010	4/14/2010
2447	ARP21110	55G	EMPLACED_CNTR	10/19/2010 22:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/19/2010	4/19/2010
2448	ARP21112	55G	EMPLACED_CNTR	10/18/2010 22:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/15/2010	4/15/2010
2449	ARP21129	55G	EMPLACED_CNTR	10/7/2010 19:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/28/2010	4/28/2010
2450	ARP21139	55G	EMPLACED_CNTR	9/12/2010 13:58	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/15/2010	4/15/2010
2451	ARP21141	55G	EMPLACED_CNTR	8/5/2010 21:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/19/2010	4/19/2010
2452	ARP21148	55G	EMPLACED_CNTR	11/21/2010 13:43	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/15/2010	4/15/2010
2453	ARP21168	55G	EMPLACED_CNTR	11/21/2010 13:43	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/19/2010	4/19/2010
2454	ARP21169	55G	EMPLACED_CNTR	11/21/2010 13:43	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/19/2010	4/19/2010
2455	ARP21175	55G	EMPLACED_CNTR	8/22/2010 13:51	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/19/2010	4/19/2010
2456	ARP21178	55G	EMPLACED_CNTR	10/7/2010 19:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/19/2010	4/19/2010
2457	ARP21187	55G	EMPLACED_CNTR	9/16/2010 22:13	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/21/2010	6/21/2010

	A	B	C	D	E	F	G	I	J
2458	ARP21188	55G	EMPLACED_CNTR	8/26/2010 18:43	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/19/2010	4/19/2010
2459	ARP21193	55G	EMPLACED_CNTR	10/19/2010 22:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/19/2010	4/19/2010
2460	ARP21196	55G	EMPLACED_CNTR	8/22/2010 13:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/19/2010	4/19/2010
2461	ARP21217	55G	EMPLACED_CNTR	10/10/2010 14:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/28/2010	4/28/2010
2462	ARP21220	55G	EMPLACED_CNTR	11/17/2010 22:47	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/21/2010	4/21/2010
2463	ARP21221	55G	EMPLACED_CNTR	8/5/2010 21:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/22/2010	4/22/2010
2464	ARP21224	55G	EMPLACED_CNTR	10/11/2010 19:36	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/28/2010	4/28/2010
2465	ARP21228	55G	EMPLACED_CNTR	10/17/2010 13:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/27/2010	4/27/2010
2466	ARP21236	55G	EMPLACED_CNTR	10/19/2010 22:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/17/2010	5/17/2010
2467	ARP21243	55G	EMPLACED_CNTR	10/18/2010 22:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/27/2010	4/27/2010
2468	ARP21249	55G	EMPLACED_CNTR	7/24/2010 13:31	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/10/2010	5/10/2010
2469	ARP21255	55G	EMPLACED_CNTR	10/12/2010 21:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/27/2010	4/27/2010
2470	ARP21262	55G	EMPLACED_CNTR	8/5/2010 21:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/5/2010	5/5/2010
2471	ARP21277	55G	EMPLACED_CNTR	10/23/2010 14:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/5/2010	5/5/2010
2472	ARP21290	55G	EMPLACED_CNTR	10/16/2010 10:37	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/6/2010	5/6/2010
2473	ARP21312	55G	EMPLACED_CNTR	10/23/2010 13:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/29/2010	4/29/2010
2474	ARP21314	55G	EMPLACED_CNTR	10/7/2010 19:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/29/2010	4/29/2010
2475	ARP21319	55G	EMPLACED_CNTR	9/2/2010 19:20	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/18/2010	5/18/2010
2476	ARP21322	55G	EMPLACED_CNTR	8/5/2010 21:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/3/2010	5/3/2010
2477	ARP21325	55G	EMPLACED_CNTR	11/17/2010 22:47	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/10/2010	5/10/2010
2478	ARP21331	55G	EMPLACED_CNTR	7/24/2010 13:31	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/10/2010	5/10/2010
2479	ARP21345	55G	EMPLACED_CNTR	7/26/2010 23:20	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/11/2010	5/11/2010
2480	ARP21346	55G	EMPLACED_CNTR	9/1/2010 21:56	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/17/2010	5/17/2010
2481	ARP21348	55G	EMPLACED_CNTR	9/1/2010 21:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/17/2010	5/17/2010
2482	ARP21359	55G	EMPLACED_CNTR	8/5/2010 21:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/4/2010	5/4/2010
2483	ARP21360	55G	EMPLACED_CNTR	10/23/2010 13:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/29/2010	4/29/2010
2484	ARP21362	55G	EMPLACED_CNTR	10/12/2010 18:46	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/27/2010	4/27/2010
2485	ARP21374	55G	EMPLACED_CNTR	10/18/2010 22:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/28/2010	4/28/2010
2486	ARP21378	55G	EMPLACED_CNTR	11/17/2010 22:47	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/11/2010	5/11/2010
2487	ARP21381	55G	EMPLACED_CNTR	7/24/2010 13:31	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/13/2010	5/13/2010
2488	ARP21404	55G	EMPLACED_CNTR	9/19/2010 13:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/13/2010	5/13/2010
2489	ARP21409	55G	EMPLACED_CNTR	10/12/2010 18:47	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/28/2010	4/28/2010
2490	ARP21441	55G	EMPLACED_CNTR	10/23/2010 13:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/4/2010	5/4/2010
2491	ARP21463	55G	EMPLACED_CNTR	7/26/2010 23:21	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/3/2010	5/3/2010
2492	ARP21468	55G	EMPLACED_CNTR	9/16/2010 22:13	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/3/2010	5/3/2010
2493	ARP21474	55G	EMPLACED_CNTR	7/26/2010 23:21	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/10/2010	5/10/2010
2494	ARP21476	55G	EMPLACED_CNTR	10/12/2010 21:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/5/2010	5/5/2010
2495	ARP21479	55G	EMPLACED_CNTR	10/16/2010 10:37	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/6/2010	5/6/2010
2496	ARP21487	55G	EMPLACED_CNTR	9/25/2010 13:58	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/3/2010	5/3/2010

	A	B	C	D	E	F	G	I	J
2497	ARP21490	55G	EMPLACED_CNTR	9/27/2010 19:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/10/2010	6/10/2010
2498	ARP21497	55G	EMPLACED_CNTR	10/23/2010 14:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/5/2010	5/5/2010
2499	ARP21516	55G	EMPLACED_CNTR	9/16/2010 22:13	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/12/2010	5/12/2010
2500	ARP21518	55G	EMPLACED_CNTR	9/28/2010 19:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/12/2010	5/12/2010
2501	ARP21529	55G	EMPLACED_CNTR	10/7/2010 19:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/5/2010	5/5/2010
2502	ARP21538	55G	EMPLACED_CNTR	9/16/2010 22:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/12/2010	5/12/2010
2503	ARP21539	55G	EMPLACED_CNTR	9/1/2010 21:56	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/13/2010	5/13/2010
2504	ARP21542	55G	EMPLACED_CNTR	7/24/2010 13:31	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/7/2010	5/7/2010
2505	ARP21543	55G	EMPLACED_CNTR	9/28/2010 19:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/12/2010	5/12/2010
2506	ARP21560	55G	EMPLACED_CNTR	9/1/2010 21:56	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/18/2010	5/18/2010
2507	ARP21561	55G	EMPLACED_CNTR	7/26/2010 23:21	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/13/2010	5/13/2010
2508	ARP21562	55G	EMPLACED_CNTR	7/26/2010 23:20	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/13/2010	5/13/2010
2509	ARP21574	55G	EMPLACED_CNTR	9/2/2010 19:20	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/18/2010	5/18/2010
2510	ARP21578	55G	EMPLACED_CNTR	7/26/2010 23:20	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/11/2010	5/11/2010
2511	ARP21579	55G	EMPLACED_CNTR	7/26/2010 23:21	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/17/2010	5/17/2010
2512	ARP21580	55G	EMPLACED_CNTR	9/2/2010 19:20	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/17/2010	5/17/2010
2513	ARP21589	55G	EMPLACED_CNTR	9/2/2010 19:20	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/17/2010	5/17/2010
2514	ARP21591	55G	EMPLACED_CNTR	10/31/2010 14:01	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/17/2010	5/17/2010
2515	ARP21592	55G	EMPLACED_CNTR	9/22/2010 21:41	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/17/2010	5/17/2010
2516	ARP21593	55G	EMPLACED_CNTR	10/19/2010 22:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/17/2010	5/17/2010
2517	ARP21594	55G	EMPLACED_CNTR	10/17/2010 13:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/1/2010	7/1/2010
2518	ARP21595	55G	EMPLACED_CNTR	10/13/2010 22:29	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/28/2010	7/28/2010
2519	ARP21603	55G	EMPLACED_CNTR	7/26/2010 23:20	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/17/2010	5/17/2010
2520	ARP21604	55G	EMPLACED_CNTR	9/27/2010 19:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/17/2010	5/17/2010
2521	ARP21605	55G	EMPLACED_CNTR	10/13/2010 22:29	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/28/2010	7/28/2010
2522	ARP21606	55G	EMPLACED_CNTR	9/22/2010 21:41	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/17/2010	5/17/2010
2523	ARP21608	55G	EMPLACED_CNTR	8/28/2011 9:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/19/2011	4/19/2011
2524	ARP21610	55G	EMPLACED_CNTR	10/12/2010 21:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/17/2010	5/17/2010
2525	ARP21613	55G	EMPLACED_CNTR	9/1/2010 21:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/17/2010	5/17/2010
2526	ARP21614	55G	EMPLACED_CNTR	9/20/2010 18:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/17/2010	5/17/2010
2527	ARP21617	55G	EMPLACED_CNTR	10/19/2010 22:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/17/2010	5/17/2010
2528	ARP21619	55G	EMPLACED_CNTR	5/10/2011 13:31	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/15/2010	7/15/2010
2529	ARP21620	55G	EMPLACED_CNTR	6/4/2011 9:54	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/19/2010	5/19/2010
2530	ARP21629	55G	EMPLACED_CNTR	9/16/2010 22:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/12/2010	5/12/2010
2531	ARP21631	55G	EMPLACED_CNTR	7/26/2010 23:21	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/11/2010	5/11/2010
2532	ARP21643	55G	EMPLACED_CNTR	9/25/2010 13:58	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/13/2010	5/13/2010
2533	ARP21644	55G	EMPLACED_CNTR	9/16/2010 22:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/13/2010	5/13/2010
2534	ARP21655	55G	EMPLACED_CNTR	9/16/2010 22:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/13/2010	5/13/2010
2535	ARP21656	55G	EMPLACED_CNTR	9/19/2010 13:42	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/13/2010	5/13/2010

	A	B	C	D	E	F	G	I	J
2536	ARP21659	55G	EMPLACED_CNTR	7/26/2010 23:20	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/12/2010	5/12/2010
2537	ARP21670	55G	EMPLACED_CNTR	9/1/2010 21:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/19/2010	5/19/2010
2538	ARP21672	55G	EMPLACED_CNTR	7/26/2010 23:21	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/18/2010	5/18/2010
2539	ARP21680	55G	EMPLACED_CNTR	7/24/2010 13:31	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/7/2010	5/7/2010
2540	ARP21693	55G	EMPLACED_CNTR	9/19/2010 13:42	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/13/2010	5/13/2010
2541	ARP21694	55G	EMPLACED_CNTR	5/22/2011 13:20	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/13/2010	5/13/2010
2542	ARP21695	55G	EMPLACED_CNTR	7/24/2010 13:31	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/12/2010	5/12/2010
2543	ARP21697	55G	EMPLACED_CNTR	9/12/2010 13:58	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/13/2010	5/13/2010
2544	ARP21705	55G	EMPLACED_CNTR	10/5/2010 22:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/7/2010	7/7/2010
2545	ARP21723	55G	EMPLACED_CNTR	9/20/2010 22:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/24/2010	5/24/2010
2546	ARP21731	55G	EMPLACED_CNTR	9/1/2010 21:56	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/1/2010	6/1/2010
2547	ARP21734	55G	EMPLACED_CNTR	10/11/2010 19:36	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/24/2010	6/24/2010
2548	ARP21735	55G	EMPLACED_CNTR	10/20/2010 19:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/24/2010	6/24/2010
2549	ARP21769	55G	EMPLACED_CNTR	9/16/2010 22:13	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/3/2010	6/3/2010
2550	ARP21771	55G	EMPLACED_CNTR	10/12/2010 21:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/28/2010	7/28/2010
2551	ARP21780	55G	EMPLACED_CNTR	10/5/2010 21:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/29/2010	6/29/2010
2552	ARP21781	55G	EMPLACED_CNTR	10/13/2010 22:02	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/29/2010	6/29/2010
2553	ARP21783	55G	EMPLACED_CNTR	10/19/2010 22:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/29/2010	6/29/2010
2554	ARP21789	55G	EMPLACED_CNTR	9/22/2010 21:41	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/2/2010	6/2/2010
2555	ARP21803	55G	EMPLACED_CNTR	10/13/2010 22:02	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/29/2010	6/29/2010
2556	ARP21804	55G	EMPLACED_CNTR	11/7/2010 13:53	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/25/2010	8/25/2010
2557	ARP21808	55G	EMPLACED_CNTR	10/13/2010 22:29	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/28/2010	7/28/2010
2558	ARP21815	55G	EMPLACED_CNTR	9/27/2010 19:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/25/2010	5/25/2010
2559	ARP21827	55G	EMPLACED_CNTR	6/4/2011 9:54	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/24/2010	5/24/2010
2560	ARP21830	55G	EMPLACED_CNTR	9/20/2010 22:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/24/2010	5/24/2010
2561	ARP21838	55G	EMPLACED_CNTR	9/1/2010 21:56	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/24/2010	5/24/2010
2562	ARP21839	55G	EMPLACED_CNTR	9/22/2010 21:41	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/25/2010	5/25/2010
2563	ARP21841	55G	EMPLACED_CNTR	9/27/2010 19:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/24/2010	5/24/2010
2564	ARP21842	55G	EMPLACED_CNTR	9/20/2010 18:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/24/2010	5/24/2010
2565	ARP21867	55G	EMPLACED_CNTR	9/1/2010 21:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/1/2010	6/1/2010
2566	ARP21871	55G	EMPLACED_CNTR	5/25/2011 23:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/2/2010	6/2/2010
2567	ARP21889	55G	EMPLACED_CNTR	9/16/2010 22:13	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/15/2010	6/15/2010
2568	ARP21892	55G	EMPLACED_CNTR	9/20/2010 22:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/15/2010	6/15/2010
2569	ARP21894	55G	EMPLACED_CNTR	9/20/2010 22:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/9/2010	6/9/2010
2570	ARP21900	55G	EMPLACED_CNTR	5/19/2011 18:06	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/7/2010	6/7/2010
2571	ARP21901	55G	EMPLACED_CNTR	11/4/2010 22:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/25/2010	5/25/2010
2572	ARP21912	55G	EMPLACED_CNTR	11/4/2010 22:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/2/2010	6/2/2010
2573	ARP21918	55G	EMPLACED_CNTR	9/22/2010 21:41	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/1/2010	6/1/2010
2574	ARP21942	55G	EMPLACED_CNTR	9/19/2010 13:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/8/2010	6/8/2010

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2575	ARP21985	55G	EMPLACED_CNTR	10/3/2010 8:44	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/28/2010	7/28/2010
2576	ARP21986	55G	EMPLACED_CNTR	10/11/2010 19:36	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/1/2010	7/1/2010
2577	ARP21987	55G	EMPLACED_CNTR	5/19/2011 18:06	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/13/2010	7/13/2010
2578	ARP21990	55G	EMPLACED_CNTR	10/13/2010 22:29	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/28/2010	7/28/2010
2579	ARP21992	55G	EMPLACED_CNTR	10/3/2010 8:44	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/7/2010	7/7/2010
2580	ARP21996	55G	EMPLACED_CNTR	3/31/2012 15:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/28/2010	7/28/2010
2581	ARP21997	55G	EMPLACED_CNTR	10/5/2010 21:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/28/2010	7/28/2010
2582	ARP21998	55G	EMPLACED_CNTR	10/20/2010 19:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/28/2010	7/28/2010
2583	ARP22007	55G	EMPLACED_CNTR	9/20/2010 22:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/14/2010	6/14/2010
2584	ARP22015	55G	EMPLACED_CNTR	9/16/2010 22:13	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/15/2010	6/15/2010
2585	ARP22018	55G	EMPLACED_CNTR	9/20/2010 22:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/16/2010	6/16/2010
2586	ARP22024	55G	EMPLACED_CNTR	9/19/2010 13:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/14/2010	6/14/2010
2587	ARP22027	55G	EMPLACED_CNTR	10/3/2010 8:44	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/21/2010	6/21/2010
2588	ARP22029	55G	EMPLACED_CNTR	9/16/2010 22:13	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/15/2010	6/15/2010
2589	ARP22030	55G	EMPLACED_CNTR	6/4/2011 13:21	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/17/2010	6/17/2010
2590	ARP22033	55G	EMPLACED_CNTR	10/19/2010 18:43	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/16/2010	8/16/2010
2591	ARP22038	55G	EMPLACED_CNTR	9/16/2010 22:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/16/2010	6/16/2010
2592	ARP22057	55G	EMPLACED_CNTR	9/19/2010 13:42	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/8/2010	6/8/2010
2593	ARP22062	55G	EMPLACED_CNTR	9/16/2010 22:13	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/14/2010	6/14/2010
2594	ARP22084	55G	EMPLACED_CNTR	9/25/2010 13:58	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/14/2010	6/14/2010
2595	ARP22093	55G	EMPLACED_CNTR	9/20/2010 22:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/8/2010	6/8/2010
2596	ARP22103	55G	EMPLACED_CNTR	9/16/2010 22:13	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/10/2010	6/10/2010
2597	ARP22105	55G	EMPLACED_CNTR	9/20/2010 22:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/14/2010	6/14/2010
2598	ARP22106	55G	EMPLACED_CNTR	9/16/2010 22:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/14/2010	6/14/2010
2599	ARP22107	55G	EMPLACED_CNTR	9/12/2010 13:58	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/14/2010	6/14/2010
2600	ARP22109	55G	EMPLACED_CNTR	9/20/2010 22:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/14/2010	6/14/2010
2601	ARP22116	55G	EMPLACED_CNTR	9/25/2010 13:58	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/21/2010	6/21/2010
2602	ARP22117	55G	EMPLACED_CNTR	9/19/2010 13:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/10/2010	6/10/2010
2603	ARP22119	55G	EMPLACED_CNTR	9/20/2010 22:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/10/2010	6/10/2010
2604	ARP22131	55G	EMPLACED_CNTR	5/24/2011 12:47	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/24/2010	6/24/2010
2605	ARP22135	55G	EMPLACED_CNTR	9/20/2010 22:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/10/2010	6/10/2010
2606	ARP22138	55G	EMPLACED_CNTR	10/11/2010 19:36	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/30/2010	6/30/2010
2607	ARP22141	55G	EMPLACED_CNTR	10/3/2010 8:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/29/2010	6/29/2010
2608	ARP22143	55G	EMPLACED_CNTR	9/20/2010 22:06	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/10/2010	6/10/2010
2609	ARP22160	55G	EMPLACED_CNTR	9/19/2010 13:42	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/14/2010	6/14/2010
2610	ARP22162	55G	EMPLACED_CNTR	5/22/2011 14:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/21/2010	6/21/2010
2611	ARP22175	55G	EMPLACED_CNTR	9/20/2010 18:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/14/2010	6/14/2010
2612	ARP22188	55G	EMPLACED_CNTR	9/19/2010 13:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/17/2010	6/17/2010
2613	ARP22192	55G	EMPLACED_CNTR	9/16/2010 22:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/23/2010	6/23/2010

	A	B	C	D	E	F	G	I	J
2614	ARP22196	55G	EMPLACED_CNTR	10/12/2010 18:46	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/21/2010	6/21/2010
2615	ARP22206	55G	EMPLACED_CNTR	9/25/2010 13:58	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/21/2010	6/21/2010
2616	ARP22209	55G	EMPLACED_CNTR	10/11/2010 19:36	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/24/2010	6/24/2010
2617	ARP22218	55G	EMPLACED_CNTR	9/19/2010 13:42	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/17/2010	6/17/2010
2618	ARP22223	55G	EMPLACED_CNTR	5/25/2011 23:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/21/2010	6/21/2010
2619	ARP22225	55G	EMPLACED_CNTR	5/23/2011 22:38	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/21/2010	6/21/2010
2620	ARP22234	55G	EMPLACED_CNTR	9/16/2010 22:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/16/2010	6/16/2010
2621	ARP22241	55G	EMPLACED_CNTR	5/22/2011 14:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/21/2010	6/21/2010
2622	ARP22249	55G	EMPLACED_CNTR	5/22/2011 14:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/17/2010	6/17/2010
2623	ARP22253	55G	EMPLACED_CNTR	10/5/2010 21:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/6/2010	7/6/2010
2624	ARP22255	55G	EMPLACED_CNTR	10/3/2010 8:44	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/28/2010	6/28/2010
2625	ARP22266	55G	EMPLACED_CNTR	9/16/2010 22:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/22/2010	6/22/2010
2626	ARP22275	55G	EMPLACED_CNTR	10/13/2010 22:02	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/29/2010	6/29/2010
2627	ARP22276	55G	EMPLACED_CNTR	10/12/2010 18:46	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/22/2010	6/22/2010
2628	ARP22278	55G	EMPLACED_CNTR	9/16/2010 22:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/21/2010	6/21/2010
2629	ARP22279	55G	EMPLACED_CNTR	9/16/2010 22:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/22/2010	6/22/2010
2630	ARP22280	55G	EMPLACED_CNTR	10/11/2010 19:36	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/28/2010	6/28/2010
2631	ARP22283	55G	EMPLACED_CNTR	10/5/2010 22:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/21/2010	6/21/2010
2632	ARP22287	55G	EMPLACED_CNTR	5/19/2011 19:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/21/2010	6/21/2010
2633	ARP22289	55G	EMPLACED_CNTR	9/19/2010 13:42	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/21/2010	6/21/2010
2634	ARP22292	55G	EMPLACED_CNTR	10/5/2010 22:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/23/2010	6/23/2010
2635	ARP22296	55G	EMPLACED_CNTR	9/19/2010 13:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/21/2010	6/21/2010
2636	ARP22313	55G	EMPLACED_CNTR	5/22/2011 14:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/24/2010	6/24/2010
2637	ARP22334	55G	EMPLACED_CNTR	6/4/2011 14:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/21/2010	6/21/2010
2638	ARP22336	55G	EMPLACED_CNTR	9/16/2010 22:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/21/2010	6/21/2010
2639	ARP22337	55G	EMPLACED_CNTR	9/25/2010 13:58	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/21/2010	6/21/2010
2640	ARP22345	55G	EMPLACED_CNTR	11/9/2010 21:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/24/2010	6/24/2010
2641	ARP22389	55G	EMPLACED_CNTR	10/20/2010 19:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/24/2010	6/24/2010
2642	ARP22390	55G	EMPLACED_CNTR	9/16/2010 22:13	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/23/2010	6/23/2010
2643	ARP22393	55G	EMPLACED_CNTR	10/17/2010 13:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/6/2010	7/6/2010
2644	ARP22396	55G	EMPLACED_CNTR	11/9/2010 21:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/23/2010	6/23/2010
2645	ARP22400	55G	EMPLACED_CNTR	9/16/2010 22:13	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/23/2010	6/23/2010
2646	ARP22401	55G	EMPLACED_CNTR	10/5/2010 21:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/24/2010	6/24/2010
2647	ARP22409	55G	EMPLACED_CNTR	10/13/2010 22:02	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/24/2010	6/24/2010
2648	ARP22424	55G	EMPLACED_CNTR	10/17/2010 13:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/28/2010	6/28/2010
2649	ARP22425	55G	EMPLACED_CNTR	10/13/2010 22:02	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/28/2010	6/28/2010
2650	ARP22430	55G	EMPLACED_CNTR	10/11/2010 19:36	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/28/2010	6/28/2010
2651	ARP22442	55G	EMPLACED_CNTR	10/13/2010 22:02	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/28/2010	6/28/2010
2652	ARP22469	55G	EMPLACED_CNTR	10/20/2010 19:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/28/2010	6/28/2010

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2653	ARP22497	55G	EMPLACED_CNTR	3/23/2011 19:54	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/21/2010	7/21/2010
2654	ARP22510	55G	EMPLACED_CNTR	10/13/2010 22:29	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/28/2010	7/28/2010
2655	ARP22511	55G	EMPLACED_CNTR	10/5/2010 21:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/28/2010	7/28/2010
2656	ARP22519	55G	EMPLACED_CNTR	5/10/2011 13:31	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/15/2010	7/15/2010
2657	ARP22531	55G	EMPLACED_CNTR	5/10/2011 13:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/19/2010	7/19/2010
2658	ARP22538	55G	EMPLACED_CNTR	3/23/2011 19:54	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/21/2010	7/21/2010
2659	ARP22544	55G	EMPLACED_CNTR	10/26/2010 21:56	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/2/2010	8/2/2010
2660	ARP22546	55G	EMPLACED_CNTR	10/3/2010 8:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/2/2010	8/2/2010
2661	ARP22555	55G	EMPLACED_CNTR	10/13/2010 22:29	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/28/2010	7/28/2010
2662	ARP22556	55G	EMPLACED_CNTR	10/5/2010 22:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/28/2010	7/28/2010
2663	ARP22557	55G	EMPLACED_CNTR	10/20/2010 19:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/26/2010	7/26/2010
2664	ARP22571	55G	EMPLACED_CNTR	10/13/2010 22:29	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/28/2010	7/28/2010
2665	ARP22581	55G	EMPLACED_CNTR	10/3/2010 8:44	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/8/2010	7/8/2010
2666	ARP22582	55G	EMPLACED_CNTR	10/5/2010 21:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/26/2010	7/26/2010
2667	ARP22594	55G	EMPLACED_CNTR	5/10/2011 13:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/19/2010	7/19/2010
2668	ARP22598	55G	EMPLACED_CNTR	10/5/2010 22:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/8/2010	7/8/2010
2669	ARP22603	55G	EMPLACED_CNTR	5/10/2011 13:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/12/2010	7/12/2010
2670	ARP22608	55G	EMPLACED_CNTR	3/29/2011 19:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/21/2010	7/21/2010
2671	ARP22616	55G	EMPLACED_CNTR	3/23/2011 14:23	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/19/2010	7/19/2010
2672	ARP22633	55G	EMPLACED_CNTR	3/22/2011 19:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/1/2010	9/1/2010
2673	ARP22650	55G	EMPLACED_CNTR	10/13/2010 22:29	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/29/2010	7/29/2010
2674	ARP22654	55G	EMPLACED_CNTR	10/5/2010 21:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/28/2010	7/28/2010
2675	ARP22655	55G	EMPLACED_CNTR	10/13/2010 22:29	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/28/2010	7/28/2010
2676	ARP22658	55G	EMPLACED_CNTR	11/23/2010 22:39	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/28/2010	7/28/2010
2677	ARP22659	55G	EMPLACED_CNTR	10/5/2010 22:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/28/2010	7/28/2010
2678	ARP22667	55G	EMPLACED_CNTR	10/20/2010 19:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/29/2010	7/29/2010
2679	ARP22672	55G	EMPLACED_CNTR	11/9/2010 21:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/3/2010	8/3/2010
2680	ARP22675	55G	EMPLACED_CNTR	10/5/2010 21:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/29/2010	7/29/2010
2681	ARP22676	55G	EMPLACED_CNTR	10/3/2010 8:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/4/2010	8/4/2010
2682	ARP22678	55G	EMPLACED_CNTR	10/13/2010 22:29	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/29/2010	7/29/2010
2683	ARP22680	55G	EMPLACED_CNTR	3/30/2011 10:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/3/2010	8/3/2010
2684	ARP22681	55G	EMPLACED_CNTR	10/3/2010 8:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/4/2010	8/4/2010
2685	ARP22686	55G	EMPLACED_CNTR	10/5/2010 21:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/4/2010	8/4/2010
2686	ARP22687	55G	EMPLACED_CNTR	3/30/2011 10:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/3/2010	8/3/2010
2687	ARP22688	55G	EMPLACED_CNTR	10/20/2010 19:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/3/2010	8/3/2010
2688	ARP22690	55G	EMPLACED_CNTR	3/30/2011 9:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/3/2010	8/3/2010
2689	ARP22691	55G	EMPLACED_CNTR	10/5/2010 21:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/4/2010	8/4/2010
2690	ARP22692	55G	EMPLACED_CNTR	10/26/2010 21:56	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/3/2010	8/3/2010
2691	ARP22693	55G	EMPLACED_CNTR	10/20/2010 19:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/4/2010	8/4/2010

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2692	ARP22696	55G	EMPLACED_CNTR	10/5/2010 22:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/4/2010	8/4/2010
2693	ARP22697	55G	EMPLACED_CNTR	10/5/2010 21:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/4/2010	8/4/2010
2694	ARP22705	55G	EMPLACED_CNTR	5/10/2011 13:31	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/12/2010	7/12/2010
2695	ARP22711	55G	EMPLACED_CNTR	10/13/2010 22:02	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/8/2010	7/8/2010
2696	ARP22715	55G	EMPLACED_CNTR	3/29/2011 19:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/21/2010	7/21/2010
2697	ARP22732	55G	EMPLACED_CNTR	10/5/2010 21:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/7/2010	7/7/2010
2698	ARP22735	55G	EMPLACED_CNTR	3/23/2011 19:54	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/27/2010	7/27/2010
2699	ARP22738	55G	EMPLACED_CNTR	3/23/2011 19:54	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/21/2010	7/21/2010
2700	ARP22754	55G	EMPLACED_CNTR	3/23/2011 19:54	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/21/2010	7/21/2010
2701	ARP22756	55G	EMPLACED_CNTR	4/12/2011 21:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/20/2010	7/20/2010
2702	ARP22757	55G	EMPLACED_CNTR	3/30/2011 10:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/7/2010	9/7/2010
2703	ARP22762	55G	EMPLACED_CNTR	6/29/2011 0:18	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/20/2010	7/20/2010
2704	ARP22778	55G	EMPLACED_CNTR	10/7/2010 19:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/27/2010	7/27/2010
2705	ARP22780	55G	EMPLACED_CNTR	10/3/2010 8:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/27/2010	7/27/2010
2706	ARP22782	55G	EMPLACED_CNTR	4/12/2011 21:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/20/2010	7/20/2010
2707	ARP22783	55G	EMPLACED_CNTR	10/3/2010 8:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/27/2010	7/27/2010
2708	ARP22785	55G	EMPLACED_CNTR	10/3/2010 8:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/29/2010	7/29/2010
2709	ARP22795	55G	EMPLACED_CNTR	3/23/2011 19:54	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/21/2010	7/21/2010
2710	ARP22798	55G	EMPLACED_CNTR	10/13/2010 22:29	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/26/2010	7/26/2010
2711	ARP22804	55G	EMPLACED_CNTR	10/19/2010 18:43	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/12/2010	8/12/2010
2712	ARP22807	55G	EMPLACED_CNTR	3/23/2011 19:54	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/1/2010	9/1/2010
2713	ARP22821	55G	EMPLACED_CNTR	10/7/2010 19:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/5/2010	8/5/2010
2714	ARP22828	55G	EMPLACED_CNTR	10/3/2010 8:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/26/2010	7/26/2010
2715	ARP22837	55G	EMPLACED_CNTR	10/13/2010 22:29	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/27/2010	7/27/2010
2716	ARP22839	55G	EMPLACED_CNTR	10/26/2010 21:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/2/2010	8/2/2010
2717	ARP22844	55G	EMPLACED_CNTR	10/3/2010 8:44	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/26/2010	7/26/2010
2718	ARP22846	55G	EMPLACED_CNTR	10/3/2010 8:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/27/2010	7/27/2010
2719	ARP22849	55G	EMPLACED_CNTR	10/5/2010 21:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/27/2010	7/27/2010
2720	ARP22853	55G	EMPLACED_CNTR	10/20/2010 19:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/27/2010	7/27/2010
2721	ARP22860	55G	EMPLACED_CNTR	10/5/2010 22:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/26/2010	7/26/2010
2722	ARP22861	55G	EMPLACED_CNTR	3/22/2011 19:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/16/2010	8/16/2010
2723	ARP22864	55G	EMPLACED_CNTR	10/20/2010 19:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/27/2010	7/27/2010
2724	ARP22873	55G	EMPLACED_CNTR	10/21/2010 14:13	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/17/2010	8/17/2010
2725	ARP22875	55G	EMPLACED_CNTR	10/5/2010 21:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/5/2010	8/5/2010
2726	ARP22881	55G	EMPLACED_CNTR	3/30/2011 9:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/12/2010	8/12/2010
2727	ARP22888	55G	EMPLACED_CNTR	3/30/2011 10:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/10/2010	8/10/2010
2728	ARP22893	55G	EMPLACED_CNTR	4/29/2011 13:56	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/31/2010	8/31/2010
2729	ARP22901	55G	EMPLACED_CNTR	10/3/2010 8:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/4/2010	8/4/2010
2730	ARP22903	55G	EMPLACED_CNTR	10/5/2010 21:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/4/2010	8/4/2010

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2731	ARP22904	55G	EMPLACED_CNTR	10/3/2010 8:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/4/2010	8/4/2010
2732	ARP22905	55G	EMPLACED_CNTR	10/5/2010 22:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/4/2010	8/4/2010
2733	ARP22908	55G	EMPLACED_CNTR	10/26/2010 21:56	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/3/2010	8/3/2010
2734	ARP22909	55G	EMPLACED_CNTR	10/5/2010 21:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/4/2010	8/4/2010
2735	ARP22911	55G	EMPLACED_CNTR	10/26/2010 21:56	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/3/2010	8/3/2010
2736	ARP22912	55G	EMPLACED_CNTR	10/26/2010 21:56	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/3/2010	8/3/2010
2737	ARP22913	55G	EMPLACED_CNTR	3/30/2011 9:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/3/2010	8/3/2010
2738	ARP22914	55G	EMPLACED_CNTR	10/3/2010 8:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/3/2010	8/3/2010
2739	ARP22916	55G	EMPLACED_CNTR	10/23/2010 14:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/3/2010	8/3/2010
2740	ARP22918	55G	EMPLACED_CNTR	10/26/2010 21:56	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/3/2010	8/3/2010
2741	ARP22922	55G	EMPLACED_CNTR	10/3/2010 8:44	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/4/2010	8/4/2010
2742	ARP22924	55G	EMPLACED_CNTR	10/5/2010 22:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/3/2010	8/3/2010
2743	ARP22926	55G	EMPLACED_CNTR	10/26/2010 21:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/2/2010	8/2/2010
2744	ARP22928	55G	EMPLACED_CNTR	10/26/2010 21:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/2/2010	8/2/2010
2745	ARP22931	55G	EMPLACED_CNTR	10/5/2010 21:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/2/2010	8/2/2010
2746	ARP22934	55G	EMPLACED_CNTR	10/23/2010 14:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/2/2010	8/2/2010
2747	ARP22935	55G	EMPLACED_CNTR	4/29/2011 13:56	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/16/2010	8/16/2010
2748	ARP22941	55G	EMPLACED_CNTR	10/26/2010 21:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/2/2010	8/2/2010
2749	ARP22942	55G	EMPLACED_CNTR	10/26/2010 21:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/2/2010	8/2/2010
2750	ARP22943	55G	EMPLACED_CNTR	10/26/2010 21:56	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/2/2010	8/2/2010
2751	ARP22944	55G	EMPLACED_CNTR	10/5/2010 22:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/2/2010	8/2/2010
2752	ARP22945	55G	EMPLACED_CNTR	11/9/2010 21:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/2/2010	8/2/2010
2753	ARP22949	55G	EMPLACED_CNTR	10/5/2010 22:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/5/2010	8/5/2010
2754	ARP22968	55G	EMPLACED_CNTR	10/5/2010 21:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/2/2010	8/2/2010
2755	ARP22969	55G	EMPLACED_CNTR	10/3/2010 8:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/29/2010	7/29/2010
2756	ARP22972	55G	EMPLACED_CNTR	10/26/2010 21:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/2/2010	8/2/2010
2757	ARP22973	55G	EMPLACED_CNTR	10/23/2010 13:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/2/2010	8/2/2010
2758	ARP22977	55G	EMPLACED_CNTR	3/30/2011 9:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/17/2010	8/17/2010
2759	ARP22996	55G	EMPLACED_CNTR	11/7/2010 13:53	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/18/2010	8/18/2010
2760	ARP22997	55G	EMPLACED_CNTR	3/30/2011 9:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/16/2010	8/16/2010
2761	ARP23001	55G	EMPLACED_CNTR	3/30/2011 22:19	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/11/2010	10/11/2010
2762	ARP23017	55G	EMPLACED_CNTR	3/23/2011 19:54	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/15/2010	9/15/2010
2763	ARP23019	55G	EMPLACED_CNTR	4/18/2011 21:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/20/2010	9/20/2010
2764	ARP23024	55G	EMPLACED_CNTR	10/18/2011 19:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/21/2010	9/21/2010
2765	ARP23035	55G	EMPLACED_CNTR	3/30/2011 10:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/16/2010	8/16/2010
2766	ARP23039	55G	EMPLACED_CNTR	3/22/2011 22:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/23/2010	8/23/2010
2767	ARP23040	55G	EMPLACED_CNTR	3/22/2011 19:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/12/2010	8/12/2010
2768	ARP23041	55G	EMPLACED_CNTR	3/22/2011 22:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/12/2010	8/12/2010
2769	ARP23042	55G	EMPLACED_CNTR	3/22/2011 22:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/26/2010	8/26/2010

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2770	ARP23052	55G	EMPLACED_CNTR	3/23/2011 19:54	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/16/2010	8/16/2010
2771	ARP23069	55G	EMPLACED_CNTR	3/22/2011 22:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/26/2010	8/26/2010
2772	ARP23080	55G	EMPLACED_CNTR	10/5/2010 22:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/3/2010	8/3/2010
2773	ARP23084	55G	EMPLACED_CNTR	10/5/2010 21:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/4/2010	8/4/2010
2774	ARP23085	55G	EMPLACED_CNTR	10/5/2010 21:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/3/2010	8/3/2010
2775	ARP23086	55G	EMPLACED_CNTR	10/20/2010 19:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/4/2010	8/4/2010
2776	ARP23087	55G	EMPLACED_CNTR	10/3/2010 8:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/4/2010	8/4/2010
2777	ARP23088	55G	EMPLACED_CNTR	10/5/2010 22:03	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/4/2010	8/4/2010
2778	ARP23097	55G	EMPLACED_CNTR	11/9/2010 21:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/19/2010	8/19/2010
2779	ARP23102	55G	EMPLACED_CNTR	10/5/2010 21:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/4/2010	8/4/2010
2780	ARP23105	55G	EMPLACED_CNTR	10/21/2010 14:13	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/26/2010	8/26/2010
2781	ARP23106	55G	EMPLACED_CNTR	11/7/2010 13:53	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/19/2010	8/19/2010
2782	ARP23110	55G	EMPLACED_CNTR	11/7/2010 13:53	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/19/2010	8/19/2010
2783	ARP23111	55G	EMPLACED_CNTR	3/22/2011 19:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/24/2010	8/24/2010
2784	ARP23116	55G	EMPLACED_CNTR	10/19/2010 18:43	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/19/2010	8/19/2010
2785	ARP23132	55G	EMPLACED_CNTR	3/22/2011 19:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/25/2010	8/25/2010
2786	ARP23144	55G	EMPLACED_CNTR	10/10/2011 22:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/23/2010	9/23/2010
2787	ARP23149	55G	EMPLACED_CNTR	3/30/2011 10:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/26/2010	8/26/2010
2788	ARP23207	55G	EMPLACED_CNTR	3/23/2011 19:54	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/20/2010	9/20/2010
2789	ARP23215	55G	EMPLACED_CNTR	3/22/2011 19:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/8/2010	9/8/2010
2790	ARP23219	55G	EMPLACED_CNTR	3/30/2011 18:44	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/14/2010	10/14/2010
2791	ARP23221	55G	EMPLACED_CNTR	3/23/2011 19:54	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/22/2010	9/22/2010
2792	ARP23230	55G	EMPLACED_CNTR	5/22/2011 13:20	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/19/2010	10/19/2010
2793	ARP23232	55G	EMPLACED_CNTR	6/29/2011 0:18	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/20/2010	10/20/2010
2794	ARP23235	55G	EMPLACED_CNTR	4/18/2011 21:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/16/2010	9/16/2010
2795	ARP23236	55G	EMPLACED_CNTR	3/23/2011 19:54	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/15/2010	9/15/2010
2796	ARP23247	55G	EMPLACED_CNTR	5/22/2011 13:20	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/14/2010	10/14/2010
2797	ARP23249	55G	EMPLACED_CNTR	3/30/2011 10:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/20/2010	9/20/2010
2798	ARP23264	55G	EMPLACED_CNTR	10/19/2010 18:43	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/18/2010	8/18/2010
2799	ARP23268	55G	EMPLACED_CNTR	3/22/2011 19:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/17/2010	8/17/2010
2800	ARP23269	55G	EMPLACED_CNTR	10/19/2010 18:43	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/18/2010	8/18/2010
2801	ARP23292	55G	EMPLACED_CNTR	4/12/2011 21:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/13/2010	10/13/2010
2802	ARP23311	55G	EMPLACED_CNTR	4/12/2011 21:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/13/2010	10/13/2010
2803	ARP23324	55G	EMPLACED_CNTR	4/12/2011 21:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/13/2010	10/13/2010
2804	ARP23328	55G	EMPLACED_CNTR	4/16/2011 10:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/22/2010	9/22/2010
2805	ARP23358	55G	EMPLACED_CNTR	4/16/2011 10:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/15/2010	9/15/2010
2806	ARP23370	55G	EMPLACED_CNTR	4/29/2011 13:56	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/15/2010	9/15/2010
2807	ARP23377	55G	EMPLACED_CNTR	4/29/2011 13:56	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/21/2010	9/21/2010
2808	ARP23379	55G	EMPLACED_CNTR	9/25/2011 8:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/25/2010	10/25/2010

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2809	ARP23382	55G	EMPLACED_CNTR	3/30/2011 22:19	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/16/2010	9/16/2010
2810	ARP23403	55G	EMPLACED_CNTR	11/7/2010 13:53	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/25/2010	8/25/2010
2811	ARP23414	55G	EMPLACED_CNTR	11/7/2010 13:53	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/26/2010	8/26/2010
2812	ARP23429	55G	EMPLACED_CNTR	3/22/2011 19:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/30/2010	9/30/2010
2813	ARP23432	55G	EMPLACED_CNTR	3/29/2011 13:56	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/29/2010	9/29/2010
2814	ARP23437	55G	EMPLACED_CNTR	10/19/2010 18:43	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/26/2010	8/26/2010
2815	ARP23439	55G	EMPLACED_CNTR	5/25/2011 19:39	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/9/2010	12/9/2010
2816	ARP23445	55G	EMPLACED_CNTR	3/30/2011 9:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/14/2010	9/14/2010
2817	ARP23451	55G	EMPLACED_CNTR	4/13/2011 9:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/30/2010	9/30/2010
2818	ARP23463	55G	EMPLACED_CNTR	4/16/2011 10:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/29/2010	9/29/2010
2819	ARP23466	55G	EMPLACED_CNTR	4/29/2011 13:56	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/30/2010	8/30/2010
2820	ARP23477	55G	EMPLACED_CNTR	3/30/2011 9:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/30/2010	8/30/2010
2821	ARP23490	55G	EMPLACED_CNTR	3/23/2011 19:54	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/15/2010	9/15/2010
2822	ARP23511	55G	EMPLACED_CNTR	3/22/2011 19:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/13/2010	10/13/2010
2823	ARP23529	55G	EMPLACED_CNTR	5/10/2011 13:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/27/2010	9/27/2010
2824	ARP23531	55G	EMPLACED_CNTR	3/22/2011 19:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/27/2010	9/27/2010
2825	ARP23539	55G	EMPLACED_CNTR	3/21/2011 23:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/29/2010	9/29/2010
2826	ARP23540	55G	EMPLACED_CNTR	5/10/2011 13:31	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/27/2010	9/27/2010
2827	ARP23541	55G	EMPLACED_CNTR	3/21/2011 23:13	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/30/2010	9/30/2010
2828	ARP23542	55G	EMPLACED_CNTR	3/30/2011 22:19	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/29/2010	9/29/2010
2829	ARP23562	55G	EMPLACED_CNTR	4/18/2011 21:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/20/2010	9/20/2010
2830	ARP23573	55G	EMPLACED_CNTR	10/10/2011 22:51	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/20/2010	9/20/2010
2831	ARP23576	55G	EMPLACED_CNTR	10/26/2011 23:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/20/2010	9/20/2010
2832	ARP23588	55G	EMPLACED_CNTR	3/23/2011 19:54	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/23/2010	9/23/2010
2833	ARP23598	55G	EMPLACED_CNTR	4/12/2011 21:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/29/2010	9/29/2010
2834	ARP23606	55G	EMPLACED_CNTR	3/30/2011 22:19	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/29/2010	9/29/2010
2835	ARP23608	55G	EMPLACED_CNTR	7/7/2011 0:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/19/2011	4/19/2011
2836	ARP23614	55G	EMPLACED_CNTR	3/23/2011 19:20	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/6/2010	10/6/2010
2837	ARP23629	55G	EMPLACED_CNTR	3/30/2011 13:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/4/2010	10/4/2010
2838	ARP23636	55G	EMPLACED_CNTR	7/11/2011 23:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/6/2010	12/6/2010
2839	ARP23646	55G	EMPLACED_CNTR	5/25/2011 23:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/11/2011	1/11/2011
2840	ARP23648	55G	EMPLACED_CNTR	5/22/2011 13:20	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/7/2010	12/7/2010
2841	ARP23655	55G	EMPLACED_CNTR	5/25/2011 19:39	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/12/2011	1/12/2011
2842	ARP23656	55G	EMPLACED_CNTR	7/17/2011 8:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/19/2011	1/19/2011
2843	ARP23682	55G	EMPLACED_CNTR	4/12/2011 21:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/27/2010	9/27/2010
2844	ARP23694	55G	EMPLACED_CNTR	5/26/2011 19:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/4/2011	1/4/2011
2845	ARP23695	55G	EMPLACED_CNTR	3/22/2011 19:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/28/2010	9/28/2010
2846	ARP23704	55G	EMPLACED_CNTR	3/22/2011 19:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/30/2010	9/30/2010
2847	ARP23709	55G	EMPLACED_CNTR	3/23/2011 14:23	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/19/2010	10/19/2010

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2848	ARP23714	55G	EMPLACED_CNTR	3/29/2011 13:56	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/18/2010	10/18/2010
2849	ARP23715	55G	EMPLACED_CNTR	3/30/2011 22:19	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/12/2010	10/12/2010
2850	ARP23719	55G	EMPLACED_CNTR	3/30/2011 22:19	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/12/2010	10/12/2010
2851	ARP23720	55G	EMPLACED_CNTR	4/12/2011 22:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/12/2010	10/12/2010
2852	ARP23724	55G	EMPLACED_CNTR	4/12/2011 21:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/14/2010	10/14/2010
2853	ARP23733	55G	EMPLACED_CNTR	4/12/2011 22:29	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/29/2010	9/29/2010
2854	ARP23734	55G	EMPLACED_CNTR	5/10/2011 13:31	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/28/2010	9/28/2010
2855	ARP23742	55G	EMPLACED_CNTR	4/12/2011 22:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/29/2010	9/29/2010
2856	ARP23743	55G	EMPLACED_CNTR	4/12/2011 22:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/29/2010	9/29/2010
2857	ARP23758	55G	EMPLACED_CNTR	4/12/2011 22:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/11/2010	10/11/2010
2858	ARP23759	55G	EMPLACED_CNTR	4/12/2011 22:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/20/2010	10/20/2010
2859	ARP23783	55G	EMPLACED_CNTR	3/30/2011 22:19	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/12/2010	10/12/2010
2860	ARP23787	55G	EMPLACED_CNTR	3/22/2011 19:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/20/2010	10/20/2010
2861	ARP23790	55G	EMPLACED_CNTR	4/12/2011 22:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/13/2010	10/13/2010
2862	ARP23791	55G	EMPLACED_CNTR	6/29/2011 0:18	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/20/2010	10/20/2010
2863	ARP23796	55G	EMPLACED_CNTR	4/18/2011 21:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/18/2010	10/18/2010
2864	ARP23801	55G	EMPLACED_CNTR	4/12/2011 22:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/5/2010	10/5/2010
2865	ARP23809	55G	EMPLACED_CNTR	4/12/2011 22:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/12/2010	10/12/2010
2866	ARP23810	55G	EMPLACED_CNTR	3/21/2011 23:13	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/18/2010	10/18/2010
2867	ARP23829	55G	EMPLACED_CNTR	6/6/2011 23:15	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/17/2011	1/17/2011
2868	ARP23843	55G	EMPLACED_CNTR	7/27/2011 15:30	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/17/2011	2/17/2011
2869	ARP23850	55G	EMPLACED_CNTR	8/20/2011 9:37	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/19/2011	4/19/2011
2870	ARP23851	55G	EMPLACED_CNTR	7/7/2011 0:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/18/2011	4/18/2011
2871	ARP23852	55G	EMPLACED_CNTR	7/7/2011 0:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/18/2011	4/18/2011
2872	ARP23853	55G	EMPLACED_CNTR	8/24/2011 22:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/19/2011	4/19/2011
2873	ARP23856	55G	EMPLACED_CNTR	8/28/2011 9:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/19/2011	4/19/2011
2874	ARP23857	55G	EMPLACED_CNTR	7/7/2011 0:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/19/2011	4/19/2011
2875	ARP23859	55G	EMPLACED_CNTR	8/22/2011 22:36	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/20/2011	4/20/2011
2876	ARP23860	55G	EMPLACED_CNTR	7/7/2011 0:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/19/2011	4/19/2011
2877	ARP23861	55G	EMPLACED_CNTR	8/18/2011 19:46	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/19/2011	4/19/2011
2878	ARP23862	55G	EMPLACED_CNTR	8/17/2011 22:19	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/19/2011	4/19/2011
2879	ARP23863	55G	EMPLACED_CNTR	7/7/2011 0:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/20/2011	4/20/2011
2880	ARP23864	55G	EMPLACED_CNTR	8/17/2011 22:19	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/18/2011	4/18/2011
2881	ARP23865	55G	EMPLACED_CNTR	7/7/2011 0:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/18/2011	4/18/2011
2882	ARP23867	55G	EMPLACED_CNTR	8/14/2011 10:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/20/2011	4/20/2011
2883	ARP23869	55G	EMPLACED_CNTR	8/28/2011 9:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/19/2011	4/19/2011
2884	ARP23871	55G	EMPLACED_CNTR	7/7/2011 0:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/19/2011	4/19/2011
2885	ARP23872	55G	EMPLACED_CNTR	8/22/2011 23:26	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/19/2011	4/19/2011
2886	ARP23873	55G	EMPLACED_CNTR	8/24/2011 23:07	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/19/2011	4/19/2011

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2887	ARP23874	55G	EMPLACED_CNTR	8/29/2011 23:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/19/2011	4/19/2011
2888	ARP23877	55G	EMPLACED_CNTR	3/21/2011 22:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/20/2010	10/20/2010
2889	ARP23878	55G	EMPLACED_CNTR	3/22/2011 19:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/18/2010	10/18/2010
2890	ARP23880	55G	EMPLACED_CNTR	3/29/2011 19:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/20/2010	10/20/2010
2891	ARP23881	55G	EMPLACED_CNTR	3/29/2011 19:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/19/2010	10/19/2010
2892	ARP23887	55G	EMPLACED_CNTR	5/24/2011 12:47	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/14/2010	10/14/2010
2893	ARP23898	55G	EMPLACED_CNTR	4/12/2011 22:29	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/19/2010	10/19/2010
2894	ARP23900	55G	EMPLACED_CNTR	3/29/2011 13:56	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/18/2010	10/18/2010
2895	ARP23906	55G	EMPLACED_CNTR	3/23/2011 14:23	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/20/2010	10/20/2010
2896	ARP23908	55G	EMPLACED_CNTR	5/25/2011 23:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/28/2010	10/28/2010
2897	ARP23911	55G	EMPLACED_CNTR	3/21/2011 22:28	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/14/2010	10/14/2010
2898	ARP23912	55G	EMPLACED_CNTR	4/18/2011 21:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/13/2010	10/13/2010
2899	ARP23913	55G	EMPLACED_CNTR	4/18/2011 21:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/14/2010	10/14/2010
2900	ARP23915	55G	EMPLACED_CNTR	4/12/2011 22:29	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/13/2010	10/13/2010
2901	ARP23922	55G	EMPLACED_CNTR	3/29/2011 19:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/19/2010	10/19/2010
2902	ARP23925	55G	EMPLACED_CNTR	3/23/2011 19:19	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/20/2010	10/20/2010
2903	ARP23926	55G	EMPLACED_CNTR	5/22/2011 14:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/21/2010	10/21/2010
2904	ARP23927	55G	EMPLACED_CNTR	5/25/2011 23:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/19/2010	10/19/2010
2905	ARP23930	55G	EMPLACED_CNTR	3/30/2011 13:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/19/2010	10/19/2010
2906	ARP23936	55G	EMPLACED_CNTR	7/27/2011 15:30	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/18/2010	10/18/2010
2907	ARP23937	55G	EMPLACED_CNTR	4/12/2011 21:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/14/2010	10/14/2010
2908	ARP23938	55G	EMPLACED_CNTR	5/19/2011 19:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/19/2010	10/19/2010
2909	ARP23942	55G	EMPLACED_CNTR	3/22/2011 19:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/18/2010	10/18/2010
2910	ARP23947	55G	EMPLACED_CNTR	3/28/2011 22:12	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/19/2010	10/19/2010
2911	ARP23952	55G	EMPLACED_CNTR	3/29/2011 19:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/19/2010	10/19/2010
2912	ARP23953	55G	EMPLACED_CNTR	6/29/2011 0:18	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/19/2010	10/19/2010
2913	ARP23957	55G	EMPLACED_CNTR	4/12/2011 22:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/20/2010	10/20/2010
2914	ARP23958	55G	EMPLACED_CNTR	4/18/2011 21:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/14/2010	10/14/2010
2915	ARP23961	55G	EMPLACED_CNTR	4/12/2011 21:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/20/2010	10/20/2010
2916	ARP23965	55G	EMPLACED_CNTR	3/22/2011 19:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/20/2010	10/20/2010
2917	ARP23968	55G	EMPLACED_CNTR	3/23/2011 19:19	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/19/2010	10/19/2010
2918	ARP23972	55G	EMPLACED_CNTR	3/16/2012 15:25	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/28/2010	10/28/2010
2919	ARP23978	55G	EMPLACED_CNTR	4/12/2011 22:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/20/2010	10/20/2010
2920	ARP23979	55G	EMPLACED_CNTR	6/29/2011 0:18	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/21/2010	10/21/2010
2921	ARP23981	55G	EMPLACED_CNTR	3/29/2011 19:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/20/2010	10/20/2010
2922	ARP23984	55G	EMPLACED_CNTR	5/10/2011 13:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/20/2010	10/20/2010
2923	ARP24018	55G	EMPLACED_CNTR	5/10/2011 13:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/26/2010	10/26/2010
2924	ARP24068	55G	EMPLACED_CNTR	6/4/2011 9:54	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/3/2010	11/3/2010
2925	ARP24073	55G	EMPLACED_CNTR	5/25/2011 23:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/28/2010	10/28/2010

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2926	ARP24085	55G	EMPLACED_CNTR	5/19/2011 18:06	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/3/2010	11/3/2010
2927	ARP24111	55G	EMPLACED_CNTR	5/19/2011 18:06	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/8/2010	11/8/2010
2928	ARP24115	55G	EMPLACED_CNTR	5/22/2011 13:20	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/4/2010	11/4/2010
2929	ARP24173	55G	EMPLACED_CNTR	5/10/2011 13:31	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/25/2010	10/25/2010
2930	ARP24215	55G	EMPLACED_CNTR	6/8/2011 19:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/10/2011	1/10/2011
2931	ARP24270	55G	EMPLACED_CNTR	6/28/2011 1:10	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/13/2010	12/13/2010
2932	ARP24282	55G	EMPLACED_CNTR	5/19/2011 18:06	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/6/2010	12/6/2010
2933	ARP24301	55G	EMPLACED_CNTR	6/6/2011 23:15	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/11/2011	1/11/2011
2934	ARP24323	55G	EMPLACED_CNTR	5/25/2011 19:39	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/13/2011	1/13/2011
2935	ARP24348	55G	EMPLACED_CNTR	6/8/2011 19:21	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/3/2011	1/3/2011
2936	ARP24377	55G	EMPLACED_CNTR	5/25/2011 19:39	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/13/2010	12/13/2010
2937	ARP24392	55G	EMPLACED_CNTR	5/25/2011 19:39	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/20/2010	12/20/2010
2938	ARP24418	55G	EMPLACED_CNTR	5/22/2011 13:20	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/2/2010	12/2/2010
2939	ARP24477	55G	EMPLACED_CNTR	5/22/2011 13:20	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/6/2010	12/6/2010
2940	ARP24481	55G	EMPLACED_CNTR	9/22/2011 20:01	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/6/2010	12/6/2010
2941	ARP24482	55G	EMPLACED_CNTR	5/19/2011 18:06	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/2/2010	12/2/2010
2942	ARP24564	55G	EMPLACED_CNTR	7/17/2011 8:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/22/2010	12/22/2010
2943	ARP24580	55G	EMPLACED_CNTR	6/20/2011 19:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/4/2011	1/4/2011
2944	ARP24581	55G	EMPLACED_CNTR	6/20/2011 19:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/5/2011	1/5/2011
2945	ARP24585	55G	EMPLACED_CNTR	6/8/2011 19:21	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/11/2011	1/11/2011
2946	ARP24597	55G	EMPLACED_CNTR	7/7/2011 0:53	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/3/2011	1/3/2011
2947	ARP24598	55G	EMPLACED_CNTR	6/24/2011 15:43	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/5/2011	1/5/2011
2948	ARP24600	55G	EMPLACED_CNTR	6/20/2011 19:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/4/2011	1/4/2011
2949	ARP24605	55G	EMPLACED_CNTR	6/20/2011 21:41	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/6/2011	1/6/2011
2950	ARP24645	55G	EMPLACED_CNTR	6/8/2011 19:20	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/13/2011	1/13/2011
2951	ARP24646	55G	EMPLACED_CNTR	5/25/2011 19:39	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/16/2010	12/16/2010
2952	ARP24647	55G	EMPLACED_CNTR	7/7/2011 0:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/18/2011	4/18/2011
2953	ARP24651	55G	EMPLACED_CNTR	9/15/2011 22:19	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/15/2011	2/15/2011
2954	ARP24652	55G	EMPLACED_CNTR	7/14/2011 19:12	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/15/2011	2/15/2011
2955	ARP24655	55G	EMPLACED_CNTR	8/17/2011 22:19	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/4/2011	5/4/2011
2956	ARP24665	55G	EMPLACED_CNTR	7/10/2011 14:06	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/14/2011	2/14/2011
2957	ARP24682	55G	EMPLACED_CNTR	6/8/2011 19:21	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/20/2010	12/20/2010
2958	ARP24688	55G	EMPLACED_CNTR	5/22/2011 13:20	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/20/2010	12/20/2010
2959	ARP24717	55G	EMPLACED_CNTR	7/12/2011 18:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/6/2011	1/6/2011
2960	ARP24727	55G	EMPLACED_CNTR	6/20/2011 21:41	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/13/2011	1/13/2011
2961	ARP24734	55G	EMPLACED_CNTR	6/20/2011 19:16	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/6/2011	1/6/2011
2962	ARP24740	55G	EMPLACED_CNTR	6/8/2011 19:21	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/13/2011	1/13/2011
2963	ARP24769	55G	EMPLACED_CNTR	5/22/2011 14:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/16/2010	12/16/2010
2964	ARP24806	55G	EMPLACED_CNTR	8/29/2011 23:13	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/16/2011	5/16/2011

	A	B	C	D	E	F	G	I	J
2965	ARP24828	55G	EMPLACED_CNTR	6/8/2011 19:21	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/17/2011	1/17/2011
2966	ARP24842	55G	EMPLACED_CNTR	6/8/2011 19:20	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/19/2011	1/19/2011
2967	ARP24850	55G	EMPLACED_CNTR	5/25/2011 19:39	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/12/2011	1/12/2011
2968	ARP24895	55G	EMPLACED_CNTR	8/18/2011 19:01	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/11/2011	2/11/2011
2969	ARP24897	55G	EMPLACED_CNTR	5/25/2011 19:39	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/12/2011	1/12/2011
2970	ARP24901	55G	EMPLACED_CNTR	6/7/2011 18:38	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/20/2011	1/20/2011
2971	ARP24911	55G	EMPLACED_CNTR	7/26/2011 23:13	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/24/2011	1/24/2011
2972	ARP24956	55G	EMPLACED_CNTR	6/8/2011 19:26	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/18/2011	1/18/2011
2973	ARP24962	55G	EMPLACED_CNTR	7/11/2011 23:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/18/2011	1/18/2011
2974	ARP24967	55G	EMPLACED_CNTR	6/6/2011 23:15	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/18/2011	1/18/2011
2975	ARP24981	55G	EMPLACED_CNTR	7/26/2011 23:13	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/19/2011	1/19/2011
2976	ARP24995	55G	EMPLACED_CNTR	5/25/2011 19:39	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/17/2011	1/17/2011
2977	ARP25000	55G	EMPLACED_CNTR	7/26/2011 23:13	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/20/2011	1/20/2011
2978	ARP25002	55G	EMPLACED_CNTR	8/9/2011 0:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/20/2011	1/20/2011
2979	ARP25009	55G	EMPLACED_CNTR	6/6/2011 23:15	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/24/2011	1/24/2011
2980	ARP25028	55G	EMPLACED_CNTR	3/16/2012 15:25	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/20/2011	1/20/2011
2981	ARP25031	55G	EMPLACED_CNTR	8/9/2011 0:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/19/2011	1/19/2011
2982	ARP25076	55G	EMPLACED_CNTR	8/29/2011 23:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/4/2011	5/4/2011
2983	ARP25103	55G	EMPLACED_CNTR	6/6/2011 23:15	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/24/2011	1/24/2011
2984	ARP25125	55G	EMPLACED_CNTR	8/17/2011 22:19	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/12/2011	5/12/2011
2985	ARP25127	55G	EMPLACED_CNTR	9/1/2011 22:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/17/2011	5/17/2011
2986	ARP25128	55G	EMPLACED_CNTR	8/27/2011 14:29	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/17/2011	5/17/2011
2987	ARP25140	55G	EMPLACED_CNTR	8/22/2011 23:26	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/17/2011	5/17/2011
2988	ARP25141	55G	EMPLACED_CNTR	8/24/2011 20:11	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/17/2011	5/17/2011
2989	ARP25159	55G	EMPLACED_CNTR	8/9/2011 0:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/1/2011	2/1/2011
2990	ARP25160	55G	EMPLACED_CNTR	8/9/2011 0:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/1/2011	2/1/2011
2991	ARP25176	55G	EMPLACED_CNTR	9/15/2011 22:19	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/31/2011	1/31/2011
2992	ARP25198	55G	EMPLACED_CNTR	6/6/2011 23:15	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/31/2011	1/31/2011
2993	ARP25200	55G	EMPLACED_CNTR	7/27/2011 15:30	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/15/2011	2/15/2011
2994	ARP25202	55G	EMPLACED_CNTR	8/9/2011 0:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/8/2011	2/8/2011
2995	ARP25210	55G	EMPLACED_CNTR	7/10/2011 14:06	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/11/2011	2/11/2011
2996	ARP25229	55G	EMPLACED_CNTR	6/6/2011 23:15	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/2/2011	2/2/2011
2997	ARP25231	55G	EMPLACED_CNTR	7/7/2011 0:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/10/2011	2/10/2011
2998	ARP25240	55G	EMPLACED_CNTR	7/10/2011 9:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/21/2011	4/21/2011
2999	ARP25248	55G	EMPLACED_CNTR	7/10/2011 14:06	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/11/2011	2/11/2011
3000	ARP25274	55G	EMPLACED_CNTR	6/6/2011 23:15	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/31/2011	1/31/2011
3001	ARP25278	55G	EMPLACED_CNTR	6/6/2011 23:15	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/7/2011	2/7/2011
3002	ARP25280	55G	EMPLACED_CNTR	8/18/2011 19:02	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/7/2011	2/7/2011
3003	ARP25283	55G	EMPLACED_CNTR	6/6/2011 23:15	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/7/2011	2/7/2011

	A	B	C	D	E	F	G	I	J
3004	ARP25291	55G	EMPLACED_CNTR	7/7/2011 0:53	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/24/2011	3/24/2011
3005	ARP25293	55G	EMPLACED_CNTR	6/7/2011 18:38	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/1/2011	2/1/2011
3006	ARP25297	55G	EMPLACED_CNTR	7/26/2011 23:13	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/1/2011	2/1/2011
3007	ARP25298	55G	EMPLACED_CNTR	8/22/2011 23:26	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/4/2011	5/4/2011
3008	ARP25325	55G	EMPLACED_CNTR	3/16/2012 15:25	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/1/2011	2/1/2011
3009	ARP25341	55G	EMPLACED_CNTR	8/27/2011 14:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/2/2011	2/2/2011
3010	ARP25362	55G	EMPLACED_CNTR	8/27/2011 14:29	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/17/2011	5/17/2011
3011	ARP25365	55G	EMPLACED_CNTR	8/27/2011 14:29	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/17/2011	5/17/2011
3012	ARP25366	55G	EMPLACED_CNTR	6/13/2012 11:04	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/16/2011	5/16/2011
3013	ARP25400	55G	EMPLACED_CNTR	7/10/2011 9:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/11/2011	2/11/2011
3014	ARP25402	55G	EMPLACED_CNTR	7/10/2011 9:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/11/2011	2/11/2011
3015	ARP25405	55G	EMPLACED_CNTR	9/15/2011 19:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/10/2011	2/10/2011
3016	ARP25406	55G	EMPLACED_CNTR	7/7/2011 0:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/10/2011	2/10/2011
3017	ARP25408	55G	EMPLACED_CNTR	8/20/2011 9:37	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/8/2011	2/8/2011
3018	ARP25424	55G	EMPLACED_CNTR	8/18/2011 19:46	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/9/2011	2/9/2011
3019	ARP25456	55G	EMPLACED_CNTR	9/1/2011 22:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/8/2011	2/8/2011
3020	ARP25458	55G	EMPLACED_CNTR	9/26/2011 22:20	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/27/2011	4/27/2011
3021	ARP25462	55G	EMPLACED_CNTR	7/27/2011 15:30	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/8/2011	2/8/2011
3022	ARP25512	55G	EMPLACED_CNTR	7/7/2011 0:53	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/10/2011	2/10/2011
3023	ARP25526	55G	EMPLACED_CNTR	7/11/2011 23:19	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/23/2011	2/23/2011
3024	ARP25541	55G	EMPLACED_CNTR	8/27/2011 14:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/8/2011	2/8/2011
3025	ARP25561	55G	EMPLACED_CNTR	7/10/2012 13:36	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/10/2011	2/10/2011
3026	ARP25566	55G	EMPLACED_CNTR	8/9/2011 0:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/11/2011	2/11/2011
3027	ARP25575	55G	EMPLACED_CNTR	7/10/2011 12:49	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/14/2011	2/14/2011
3028	ARP25579	55G	EMPLACED_CNTR	8/18/2011 19:02	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/10/2011	2/10/2011
3029	ARP25586	55G	EMPLACED_CNTR	7/17/2011 9:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/15/2011	2/15/2011
3030	ARP25607	55G	EMPLACED_CNTR	8/13/2011 7:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/24/2011	3/24/2011
3031	ARP25616	55G	EMPLACED_CNTR	9/15/2011 22:19	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/3/2011	3/3/2011
3032	ARP25734	55G	EMPLACED_CNTR	7/27/2011 15:30	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/18/2011	2/18/2011
3033	ARP25771	55G			ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/21/2011	2/21/2011
3034	ARP25798	55G	EMPLACED_CNTR	7/27/2011 15:30	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/22/2011	2/22/2011
3035	ARP25803	55G	EMPLACED_CNTR	9/15/2011 22:19	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/22/2011	2/22/2011
3036	ARP25814	55G	EMPLACED_CNTR	9/21/2011 22:43	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/22/2011	2/22/2011
3037	ARP25847	55G	EMPLACED_CNTR	7/27/2011 15:30	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/24/2011	2/24/2011
3038	ARP25849	55G	EMPLACED_CNTR	7/26/2011 23:13	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/23/2011	2/23/2011
3039	ARP25855	55G	EMPLACED_CNTR	6/29/2011 0:18	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/2/2011	3/2/2011
3040	ARP25863	55G	EMPLACED_CNTR	7/13/2011 18:39	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/14/2011	3/14/2011
3041	ARP25865	55G	EMPLACED_CNTR	8/9/2011 0:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/2/2011	3/2/2011
3042	ARP25884	55G	EMPLACED_CNTR	7/27/2011 15:30	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/2/2011	3/2/2011

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3043	ARP25889	55G	EMPLACED_CNTR	9/15/2011 22:19	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/1/2011	3/1/2011
3044	ARP25896	55G	EMPLACED_CNTR	9/15/2011 22:19	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/2/2011	3/2/2011
3045	ARP25907	55G	EMPLACED_CNTR	9/15/2011 22:19	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/2/2011	3/2/2011
3046	ARP25932	55G	EMPLACED_CNTR	7/14/2011 19:12	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/28/2011	3/28/2011
3047	ARP25946	55G	EMPLACED_CNTR	8/9/2011 0:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/8/2011	3/8/2011
3048	ARP25951	55G	EMPLACED_CNTR	9/15/2011 22:19	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/8/2011	3/8/2011
3049	ARP25960	55G	EMPLACED_CNTR	8/10/2011 23:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/7/2011	4/7/2011
3050	ARP25984	55G	EMPLACED_CNTR	7/27/2011 15:30	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/3/2011	3/3/2011
3051	ARP25995	55G	EMPLACED_CNTR	8/9/2011 0:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/8/2011	3/8/2011
3052	ARP26011	55G	EMPLACED_CNTR	8/9/2011 0:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/8/2011	3/8/2011
3053	ARP26065	55G	EMPLACED_CNTR	9/15/2011 22:19	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/10/2011	3/10/2011
3054	ARP26087	55G	EMPLACED_CNTR	8/29/2011 23:31	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/3/2011	5/3/2011
3055	ARP26095	55G	EMPLACED_CNTR	7/13/2011 18:39	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/10/2011	3/10/2011
3056	ARP26122	55G	EMPLACED_CNTR	7/11/2011 23:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/13/2011	4/13/2011
3057	ARP26163	55G	EMPLACED_CNTR	9/18/2011 12:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/3/2011	5/3/2011
3058	ARP26164	55G	EMPLACED_CNTR	7/7/2011 0:53	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/24/2011	3/24/2011
3059	ARP26205	55G	EMPLACED_CNTR	7/10/2011 14:06	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/15/2011	3/15/2011
3060	ARP26225	55G	EMPLACED_CNTR	7/14/2011 19:12	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/15/2011	3/15/2011
3061	ARP26241	55G	EMPLACED_CNTR	7/13/2011 18:39	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/30/2011	3/30/2011
3062	ARP26260	55G	EMPLACED_CNTR	7/12/2011 18:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/21/2011	3/21/2011
3063	ARP26280	55G	EMPLACED_CNTR	7/10/2011 9:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/24/2011	3/24/2011
3064	ARP26294	55G	EMPLACED_CNTR	4/18/2012 15:02	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/17/2011	5/17/2011
3065	ARP26299	55G	EMPLACED_CNTR	8/24/2011 22:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/16/2011	5/16/2011
3066	ARP26312	55G	EMPLACED_CNTR	7/7/2011 0:53	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/24/2011	3/24/2011
3067	ARP26329	55G	EMPLACED_CNTR	7/10/2011 9:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/24/2011	3/24/2011
3068	ARP26340	55G	EMPLACED_CNTR	7/11/2011 23:19	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/28/2011	3/28/2011
3069	ARP26353	55G	EMPLACED_CNTR	7/7/2011 0:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/24/2011	3/24/2011
3070	ARP26365	55G	EMPLACED_CNTR	7/10/2011 9:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/24/2011	3/24/2011
3071	ARP26366	55G	EMPLACED_CNTR	7/7/2011 0:53	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/24/2011	3/24/2011
3072	ARP26370	55G	EMPLACED_CNTR	9/19/2011 20:12	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/25/2011	4/25/2011
3073	ARP26384	55G	EMPLACED_CNTR	7/7/2011 0:53	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/28/2011	3/28/2011
3074	ARP26385	55G	EMPLACED_CNTR	7/7/2011 0:53	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/24/2011	3/24/2011
3075	ARP26390	55G	EMPLACED_CNTR	8/22/2011 23:26	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/26/2011	4/26/2011
3076	ARP26397	55G	EMPLACED_CNTR	7/11/2011 23:46	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/13/2011	4/13/2011
3077	ARP26424	55G	EMPLACED_CNTR	8/28/2011 9:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/13/2011	4/13/2011
3078	ARP26453	55G	EMPLACED_CNTR	9/18/2011 9:51	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/18/2011	5/18/2011
3079	ARP26477	55G	EMPLACED_CNTR	7/11/2011 23:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/13/2011	4/13/2011
3080	ARP26489	55G	EMPLACED_CNTR	8/24/2011 22:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/29/2011	3/29/2011
3081	ARP26577	55G	EMPLACED_CNTR	7/11/2011 23:20	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/6/2011	4/6/2011

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3082	ARP26595	55G	EMPLACED_CNTR	7/13/2011 18:39	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/7/2011	4/7/2011
3083	ARP26610	55G	EMPLACED_CNTR	9/26/2011 22:22	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/25/2011	4/25/2011
3084	ARP26611	55G	EMPLACED_CNTR	9/16/2011 12:50	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/25/2011	4/25/2011
3085	ARP26615	55G	EMPLACED_CNTR	9/26/2011 22:22	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/26/2011	4/26/2011
3086	ARP26622	55G	EMPLACED_CNTR	9/25/2011 8:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/26/2011	4/26/2011
3087	ARP26624	55G	EMPLACED_CNTR	9/18/2011 12:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/26/2011	4/26/2011
3088	ARP26625	55G	EMPLACED_CNTR	7/11/2011 23:19	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/6/2011	4/6/2011
3089	ARP26628	55G	EMPLACED_CNTR	7/11/2011 23:19	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/6/2011	4/6/2011
3090	ARP26632	55G	EMPLACED_CNTR	7/13/2011 18:39	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/7/2011	4/7/2011
3091	ARP26643	55G	EMPLACED_CNTR	7/12/2011 20:06	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/7/2011	4/7/2011
3092	ARP26650	55G	EMPLACED_CNTR	7/7/2011 0:53	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/13/2011	4/13/2011
3093	ARP26651	55G	EMPLACED_CNTR	7/12/2011 20:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/13/2011	4/13/2011
3094	ARP26653	55G	EMPLACED_CNTR	7/11/2011 23:46	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/13/2011	4/13/2011
3095	ARP26667	55G	EMPLACED_CNTR	9/26/2011 22:22	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/26/2011	4/26/2011
3096	ARP26671	55G	EMPLACED_CNTR	8/29/2011 23:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/19/2011	4/19/2011
3097	ARP26679	55G	EMPLACED_CNTR	7/12/2011 20:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/7/2011	4/7/2011
3098	ARP26686	55G	EMPLACED_CNTR	8/24/2011 22:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/26/2011	4/26/2011
3099	ARP26693	55G	EMPLACED_CNTR	9/18/2011 12:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/26/2011	4/26/2011
3100	ARP26703	55G	EMPLACED_CNTR	7/12/2011 20:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/13/2011	4/13/2011
3101	ARP26708	55G	EMPLACED_CNTR	9/16/2011 12:50	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/25/2011	4/25/2011
3102	ARP26711	55G	EMPLACED_CNTR	8/24/2011 23:07	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/13/2011	4/13/2011
3103	ARP26720	55G	EMPLACED_CNTR	7/7/2011 0:53	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/14/2011	4/14/2011
3104	ARP26722	55G	EMPLACED_CNTR	8/24/2011 20:11	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/25/2011	4/25/2011
3105	ARP26723	55G	EMPLACED_CNTR	7/10/2011 9:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/14/2011	4/14/2011
3106	ARP26740	55G	EMPLACED_CNTR	8/28/2011 9:56	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/26/2011	4/26/2011
3107	ARP26741	55G	EMPLACED_CNTR	7/11/2011 23:20	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/12/2011	4/12/2011
3108	ARP26742	55G	EMPLACED_CNTR	8/24/2011 22:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/25/2011	4/25/2011
3109	ARP26746	55G	EMPLACED_CNTR	9/16/2011 12:50	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/26/2011	4/26/2011
3110	ARP26757	55G	EMPLACED_CNTR	9/16/2011 12:51	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/26/2011	4/26/2011
3111	ARP26758	55G	EMPLACED_CNTR	9/16/2011 12:51	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/9/2011	5/9/2011
3112	ARP26760	55G	EMPLACED_CNTR	9/1/2011 22:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/5/2011	5/5/2011
3113	ARP26766	55G	EMPLACED_CNTR	8/27/2011 14:29	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/26/2011	4/26/2011
3114	ARP26767	55G	EMPLACED_CNTR	9/18/2011 12:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/25/2011	4/25/2011
3115	ARP26773	55G	EMPLACED_CNTR	8/29/2011 23:13	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/27/2011	4/27/2011
3116	ARP26789	55G	EMPLACED_CNTR	7/7/2011 0:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/19/2011	4/19/2011
3117	ARP26792	55G	EMPLACED_CNTR	8/24/2011 22:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/27/2011	4/27/2011
3118	ARP26808	55G	EMPLACED_CNTR	9/18/2011 12:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/26/2011	4/26/2011
3119	ARP26811	55G	EMPLACED_CNTR	8/24/2011 22:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/9/2011	5/9/2011
3120	ARP26813	55G	EMPLACED_CNTR	8/22/2011 22:36	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/4/2011	5/4/2011

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3121	ARP26820	55G	EMPLACED_CNTR	9/16/2011 12:50	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/27/2011	4/27/2011
3122	ARP26827	55G	EMPLACED_CNTR	8/29/2011 23:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/3/2011	5/3/2011
3123	ARP26828	55G	EMPLACED_CNTR	9/25/2011 8:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/27/2011	4/27/2011
3124	ARP26829	55G	EMPLACED_CNTR	9/26/2011 22:22	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/27/2011	4/27/2011
3125	ARP26834	55G	EMPLACED_CNTR	8/29/2011 23:31	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/2/2011	5/2/2011
3126	ARP26838	55G	EMPLACED_CNTR	8/28/2011 9:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/3/2011	5/3/2011
3127	ARP26840	55G	EMPLACED_CNTR	8/29/2011 23:13	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/4/2011	5/4/2011
3128	ARP26841	55G	EMPLACED_CNTR	8/29/2011 23:13	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/4/2011	5/4/2011
3129	ARP26858	55G	EMPLACED_CNTR	8/18/2011 19:46	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/10/2011	5/10/2011
3130	ARP26862	55G	EMPLACED_CNTR	8/28/2011 9:56	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/3/2011	5/3/2011
3131	ARP26863	55G	EMPLACED_CNTR	3/4/2012 14:29	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/3/2011	5/3/2011
3132	ARP26864	55G	EMPLACED_CNTR	8/28/2011 9:56	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/3/2011	5/3/2011
3133	ARP26870	55G	EMPLACED_CNTR	8/29/2011 23:31	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/3/2011	5/3/2011
3134	ARP26881	55G	EMPLACED_CNTR	8/27/2011 14:29	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/25/2011	4/25/2011
3135	ARP26882	55G	EMPLACED_CNTR	9/19/2011 23:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/25/2011	4/25/2011
3136	ARP26883	55G	EMPLACED_CNTR	9/19/2011 23:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/25/2011	4/25/2011
3137	ARP26885	55G	EMPLACED_CNTR	9/19/2011 23:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/25/2011	4/25/2011
3138	ARP26888	55G	EMPLACED_CNTR	9/16/2011 12:50	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/25/2011	4/25/2011
3139	ARP26890	55G	EMPLACED_CNTR	3/16/2012 15:25	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/25/2011	4/25/2011
3140	ARP26894	55G	EMPLACED_CNTR	8/17/2011 22:19	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/26/2011	4/26/2011
3141	ARP26895	55G	EMPLACED_CNTR	9/26/2011 22:20	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/26/2011	4/26/2011
3142	ARP26897	55G	EMPLACED_CNTR	9/19/2011 23:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/26/2011	4/26/2011
3143	ARP26898	55G	EMPLACED_CNTR	3/4/2012 14:29	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/26/2011	4/26/2011
3144	ARP26901	55G	EMPLACED_CNTR	8/22/2011 22:36	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/3/2011	5/3/2011
3145	ARP26910	55G	EMPLACED_CNTR	9/16/2011 12:51	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/3/2011	5/3/2011
3146	ARP26928	55G	EMPLACED_CNTR	8/22/2011 22:36	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/3/2011	5/3/2011
3147	ARP26935	55G	EMPLACED_CNTR	8/14/2011 10:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/3/2011	5/3/2011
3148	ARP26956	55G	EMPLACED_CNTR	8/28/2011 9:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/4/2011	5/4/2011
3149	ARP26957	55G	EMPLACED_CNTR	8/29/2011 23:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/5/2011	5/5/2011
3150	ARP26958	55G	EMPLACED_CNTR	8/29/2011 23:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/4/2011	5/4/2011
3151	ARP26963	55G	EMPLACED_CNTR	8/28/2011 9:56	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/5/2011	5/5/2011
3152	ARP26964	55G	EMPLACED_CNTR	8/28/2011 9:56	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/5/2011	5/5/2011
3153	ARP26969	55G	EMPLACED_CNTR	8/30/2011 19:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/19/2011	5/19/2011
3154	ARP26971	55G	EMPLACED_CNTR	8/22/2011 22:36	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/5/2011	5/5/2011
3155	ARP26972	55G	EMPLACED_CNTR	8/24/2011 22:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/10/2011	5/10/2011
3156	ARP26974	55G	EMPLACED_CNTR	8/29/2011 23:13	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/4/2011	5/4/2011
3157	ARP26976	55G	EMPLACED_CNTR	7/10/2012 13:36	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/5/2011	5/5/2011
3158	ARP26977	55G	EMPLACED_CNTR	8/28/2011 9:56	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/5/2011	5/5/2011
3159	ARP26980	55G	EMPLACED_CNTR	8/29/2011 23:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/5/2011	5/5/2011

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3160	ARP26983	55G	EMPLACED_CNTR	9/18/2011 12:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/5/2011	5/5/2011
3161	ARP26984	55G	EMPLACED_CNTR	9/1/2011 22:46	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/10/2011	5/10/2011
3162	ARP26991	55G	EMPLACED_CNTR	9/25/2011 8:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/10/2011	5/10/2011
3163	ARP27000	55G	EMPLACED_CNTR	9/1/2011 23:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/5/2011	5/5/2011
3164	ARP27001	55G	EMPLACED_CNTR	9/18/2011 9:51	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/5/2011	5/5/2011
3165	ARP27003	55G	EMPLACED_CNTR	9/1/2011 23:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/5/2011	5/5/2011
3166	ARP27009	55G	EMPLACED_CNTR	9/1/2011 23:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/5/2011	5/5/2011
3167	ARP27011	55G	EMPLACED_CNTR	9/26/2011 22:22	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/10/2011	5/10/2011
3168	ARP27013	55G	EMPLACED_CNTR	10/3/2011 19:37	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/9/2011	5/9/2011
3169	ARP27015	55G	EMPLACED_CNTR	8/29/2011 23:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/5/2011	5/5/2011
3170	ARP27017	55G	EMPLACED_CNTR	9/15/2011 19:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/5/2011	5/5/2011
3171	ARP27020	55G	EMPLACED_CNTR	8/29/2011 22:13	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/10/2011	5/10/2011
3172	ARP27029	55G	EMPLACED_CNTR	8/24/2011 22:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/9/2011	5/9/2011
3173	ARP27036	55G	EMPLACED_CNTR	9/14/2011 22:54	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/10/2011	5/10/2011
3174	ARP27037	55G	EMPLACED_CNTR	9/13/2011 18:55	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/11/2011	5/11/2011
3175	ARP27044	55G	EMPLACED_CNTR	9/18/2011 12:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/10/2011	5/10/2011
3176	ARP27048	55G	EMPLACED_CNTR	9/26/2011 22:20	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/10/2011	5/10/2011
3177	ARP27052	55G	EMPLACED_CNTR	9/1/2011 23:13	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/16/2011	5/16/2011
3178	ARP27080	55G	EMPLACED_CNTR	8/29/2011 22:13	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/10/2011	5/10/2011
3179	ARP27082	55G	EMPLACED_CNTR	8/18/2011 19:46	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/11/2011	5/11/2011
3180	ARP27086	55G	EMPLACED_CNTR	8/25/2011 14:04	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/10/2011	5/10/2011
3181	ARP27095	55G	EMPLACED_CNTR	9/25/2011 10:42	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/11/2011	5/11/2011
3182	ARP27120	55G	EMPLACED_CNTR	10/24/2011 21:53	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/7/2011	6/7/2011
3183	ARP27128	55G	EMPLACED_CNTR	8/22/2011 22:36	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/1/2011	6/1/2011
3184	ARP27151	55G	EMPLACED_CNTR	8/20/2011 9:37	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/24/2011	5/24/2011
3185	ARP27160	55G	EMPLACED_CNTR	8/29/2011 23:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/11/2011	5/11/2011
3186	ARP27212	55G	EMPLACED_CNTR	9/1/2011 22:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/16/2011	5/16/2011
3187	ARP27221	55G	EMPLACED_CNTR	8/24/2011 22:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/17/2011	5/17/2011
3188	ARP27226	55G	EMPLACED_CNTR	9/1/2011 22:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/17/2011	5/17/2011
3189	ARP27235	55G	EMPLACED_CNTR	8/27/2011 14:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/18/2011	5/18/2011
3190	ARP27243	55G	EMPLACED_CNTR	8/27/2011 14:29	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/18/2011	5/18/2011
3191	ARP27245	55G	EMPLACED_CNTR	8/18/2011 19:01	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/16/2011	5/16/2011
3192	ARP27255	55G	EMPLACED_CNTR	8/20/2011 9:37	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/18/2011	5/18/2011
3193	ARP27256	55G	EMPLACED_CNTR	9/18/2011 9:51	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/18/2011	5/18/2011
3194	ARP27259	55G	EMPLACED_CNTR	8/27/2011 14:27	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/18/2011	5/18/2011
3195	ARP27261	55G	EMPLACED_CNTR	8/29/2011 23:31	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/18/2011	5/18/2011
3196	ARP27262	55G	EMPLACED_CNTR	9/1/2011 22:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/18/2011	5/18/2011
3197	ARP27264	55G	EMPLACED_CNTR	8/29/2011 23:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/2/2011	6/2/2011
3198	ARP27299	55G	EMPLACED_CNTR	9/1/2011 23:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/23/2011	5/23/2011

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3199	ARP27305	55G	EMPLACED_CNTR	8/29/2011 23:13	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/2/2011	6/2/2011
3200	ARP27319	55G	EMPLACED_CNTR	9/18/2011 9:51	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/23/2011	5/23/2011
3201	ARP27339	55G	EMPLACED_CNTR	11/23/2011 13:54	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/27/2011	7/27/2011
3202	ARP27345	55G	EMPLACED_CNTR	9/1/2011 22:46	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/24/2011	5/24/2011
3203	ARP27352	55G	EMPLACED_CNTR	8/29/2011 22:13	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/19/2011	5/19/2011
3204	ARP27357	55G	EMPLACED_CNTR	8/29/2011 22:13	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/19/2011	5/19/2011
3205	ARP27361	55G	EMPLACED_CNTR	8/29/2011 22:13	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/19/2011	5/19/2011
3206	ARP27370	55G	EMPLACED_CNTR	9/21/2011 22:43	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/24/2011	5/24/2011
3207	ARP27377	55G	EMPLACED_CNTR	9/1/2011 23:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/31/2011	5/31/2011
3208	ARP27384	55G	EMPLACED_CNTR	9/1/2011 23:16	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/23/2011	5/23/2011
3209	ARP27385	55G	EMPLACED_CNTR	9/25/2011 10:41	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/18/2011	5/18/2011
3210	ARP27426	55G	EMPLACED_CNTR	8/29/2011 23:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/1/2011	6/1/2011
3211	ARP27435	55G	EMPLACED_CNTR	10/11/2011 19:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/7/2011	6/7/2011
3212	ARP27497	55G	EMPLACED_CNTR	10/18/2011 19:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/19/2011	7/19/2011
3213	ARP27514	55G	EMPLACED_CNTR	9/22/2011 20:01	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/14/2011	7/14/2011
3214	ARP27527	55G	EMPLACED_CNTR	9/1/2011 23:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/1/2011	6/1/2011
3215	ARP27538	55G	EMPLACED_CNTR	8/29/2011 23:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/1/2011	6/1/2011
3216	ARP27546	55G	EMPLACED_CNTR	9/25/2011 12:54	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/18/2011	7/18/2011
3217	ARP27549	55G	EMPLACED_CNTR	9/18/2011 9:51	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/11/2011	7/11/2011
3218	ARP27555	55G	EMPLACED_CNTR	10/18/2011 20:04	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/7/2011	6/7/2011
3219	ARP27556	55G	EMPLACED_CNTR	10/10/2011 22:51	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/27/2011	7/27/2011
3220	ARP27557	55G	EMPLACED_CNTR	9/12/2011 22:20	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/9/2011	6/9/2011
3221	ARP27571	55G	EMPLACED_CNTR	9/16/2011 12:50	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/11/2011	7/11/2011
3222	ARP27575	55G	EMPLACED_CNTR	9/19/2011 20:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/9/2011	6/9/2011
3223	ARP27585	55G	EMPLACED_CNTR	9/25/2011 12:54	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/13/2011	7/13/2011
3224	ARP27617	55G	EMPLACED_CNTR	9/12/2011 19:38	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/8/2011	6/8/2011
3225	ARP27620	55G	EMPLACED_CNTR	9/19/2011 20:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/8/2011	6/8/2011
3226	ARP27621	55G	EMPLACED_CNTR	9/24/2011 10:36	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/8/2011	6/8/2011
3227	ARP27622	55G	EMPLACED_CNTR	9/19/2011 20:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/8/2011	6/8/2011
3228	ARP27630	55G	EMPLACED_CNTR	9/11/2011 13:50	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/8/2011	6/8/2011
3229	ARP27631	55G	EMPLACED_CNTR	9/13/2011 22:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/8/2011	6/8/2011
3230	ARP27632	55G	EMPLACED_CNTR	9/15/2011 19:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/14/2011	6/14/2011
3231	ARP27642	55G	EMPLACED_CNTR	9/22/2011 20:01	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/20/2011	6/20/2011
3232	ARP27646	55G	EMPLACED_CNTR	9/15/2011 19:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/15/2011	6/15/2011
3233	ARP27652	55G	EMPLACED_CNTR	9/22/2011 20:02	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/8/2011	6/8/2011
3234	ARP27653	55G	EMPLACED_CNTR	9/19/2011 20:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/7/2011	6/7/2011
3235	ARP27658	55G	EMPLACED_CNTR	9/22/2011 20:01	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/2/2011	6/2/2011
3236	ARP27661	55G	EMPLACED_CNTR	9/19/2011 20:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/7/2011	6/7/2011
3237	ARP27663	55G	EMPLACED_CNTR	9/15/2011 19:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/8/2011	6/8/2011

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3238	ARP27670	55G	EMPLACED_CNTR	9/12/2011 19:37	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/7/2011	6/7/2011
3239	ARP27671	55G	EMPLACED_CNTR	9/18/2011 9:51	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/2/2011	6/2/2011
3240	ARP27672	55G	EMPLACED_CNTR	9/21/2011 19:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/2/2011	6/2/2011
3241	ARP27673	55G	EMPLACED_CNTR	9/24/2011 10:36	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/7/2011	6/7/2011
3242	ARP27681	55G	EMPLACED_CNTR	9/24/2011 10:36	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/13/2011	6/13/2011
3243	ARP27682	55G	EMPLACED_CNTR	9/19/2011 20:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/8/2011	6/8/2011
3244	ARP27685	55G	EMPLACED_CNTR	9/12/2011 19:37	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/9/2011	6/9/2011
3245	ARP27691	55G	EMPLACED_CNTR	9/18/2011 9:51	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/15/2011	6/15/2011
3246	ARP27693	55G	EMPLACED_CNTR	9/18/2011 9:52	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/20/2011	6/20/2011
3247	ARP27699	55G	EMPLACED_CNTR	9/21/2011 22:43	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/9/2011	6/9/2011
3248	ARP27701	55G	EMPLACED_CNTR	9/12/2011 19:37	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/8/2011	6/8/2011
3249	ARP27703	55G	EMPLACED_CNTR	9/12/2011 19:38	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/9/2011	6/9/2011
3250	ARP27733	55G	EMPLACED_CNTR	9/18/2011 9:51	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/15/2011	6/15/2011
3251	ARP27757	55G	EMPLACED_CNTR	9/18/2011 9:52	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/14/2011	6/14/2011
3252	ARP27766	55G	EMPLACED_CNTR	9/18/2011 9:51	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/14/2011	6/14/2011
3253	ARP27806	55G	EMPLACED_CNTR	9/26/2011 22:20	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/29/2011	6/29/2011
3254	ARP27832	55G	EMPLACED_CNTR	9/22/2011 20:01	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/20/2011	6/20/2011
3255	ARP27834	55G	EMPLACED_CNTR	9/14/2011 22:54	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/20/2011	6/20/2011
3256	ARP27837	55G	EMPLACED_CNTR	9/22/2011 20:01	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/23/2011	6/23/2011
3257	ARP28027	55G	EMPLACED_CNTR	3/4/2012 14:29	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/21/2011	6/21/2011
3258	ARP28050	55G	EMPLACED_CNTR	9/26/2011 22:22	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/6/2011	7/6/2011
3259	ARP28058	55G	EMPLACED_CNTR	9/26/2011 22:20	ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/30/2011	6/30/2011
3260	ARP28102	55G	EMPLACED_CNTR	11/23/2011 13:54	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/27/2011	7/27/2011
3261	ARP28116	55G	EMPLACED_CNTR	10/18/2011 20:04	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/25/2011	8/25/2011
3262	ARP28141	55G	EMPLACED_CNTR	9/18/2011 12:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/7/2011	7/7/2011
3263	ARP28164	55G	EMPLACED_CNTR	9/16/2011 12:51	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/7/2011	7/7/2011
3264	ARP28174	55G	EMPLACED_CNTR	10/18/2011 20:04	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/26/2011	7/26/2011
3265	ARP28181	55G	EMPLACED_CNTR	9/25/2011 8:57	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/7/2011	7/7/2011
3266	ARP28182	55G	EMPLACED_CNTR	9/26/2011 23:10	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/6/2011	7/6/2011
3267	ARP28200	55G	EMPLACED_CNTR	10/11/2011 22:24	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/28/2011	7/28/2011
3268	ARP28205	55G	EMPLACED_CNTR	11/17/2011 14:16	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/26/2011	7/26/2011
3269	ARP28226	55G	EMPLACED_CNTR	4/18/2012 15:02	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/20/2011	7/20/2011
3270	ARP28229	55G	EMPLACED_CNTR	10/25/2011 22:23	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/21/2011	7/21/2011
3271	ARP28230	55G	EMPLACED_CNTR	11/17/2011 14:16	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/20/2011	7/20/2011
3272	ARP28232	55G	EMPLACED_CNTR	10/18/2011 19:17	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/21/2011	7/21/2011
3273	ARP28234	55G	EMPLACED_CNTR	10/10/2011 22:51	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/21/2011	7/21/2011
3274	ARP28237	55G	EMPLACED_CNTR	10/25/2011 22:23	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/21/2011	7/21/2011
3275	ARP28238	55G	EMPLACED_CNTR	10/10/2011 22:51	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/25/2011	7/25/2011
3276	ARP28245	55G	EMPLACED_CNTR	11/23/2011 13:54	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/26/2011	7/26/2011

	A	B	C	D	E	F	G	I	J
3277	ARP28250	55G	EMPLACED_CNTR	11/18/2011 14:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/20/2011	7/20/2011
3278	ARP28254	55G	EMPLACED_CNTR	10/10/2011 22:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/19/2011	7/19/2011
3279	ARP28261	55G	EMPLACED_CNTR	10/18/2011 23:19	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/19/2011	7/19/2011
3280	ARP28267	55G	EMPLACED_CNTR	10/26/2011 23:08	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/19/2011	7/19/2011
3281	ARP28270	55G	EMPLACED_CNTR	10/24/2011 21:53	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/19/2011	7/19/2011
3282	ARP28271	55G	EMPLACED_CNTR	10/27/2011 22:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/20/2011	7/20/2011
3283	ARP28297	55G	EMPLACED_CNTR	10/24/2011 22:36	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/2/2011	8/2/2011
3284	ARP28300	55G	EMPLACED_CNTR	10/24/2011 22:36	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/19/2011	7/19/2011
3285	ARP28309	55G	EMPLACED_CNTR	10/10/2011 22:04	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/19/2011	7/19/2011
3286	ARP28313	55G	EMPLACED_CNTR	12/14/2011 13:51	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/19/2011	7/19/2011
3287	ARP28314	55G	EMPLACED_CNTR	10/11/2011 22:25	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/18/2011	7/18/2011
3288	ARP28327	55G	EMPLACED_CNTR	10/27/2011 22:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/20/2011	7/20/2011
3289	ARP28367	55G	EMPLACED_CNTR	10/27/2011 22:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/10/2011	8/10/2011
3290	ARP28386	55G	EMPLACED_CNTR	10/10/2011 22:04	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/27/2011	7/27/2011
3291	ARP28392	55G	EMPLACED_CNTR	10/10/2011 22:51	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/27/2011	7/27/2011
3292	ARP28394	55G	EMPLACED_CNTR	10/10/2011 22:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/28/2011	7/28/2011
3293	ARP28397	55G	EMPLACED_CNTR	10/19/2011 22:12	ID-SDA-SOIL	CCP-AK-INL-001	S4200	7/27/2011	7/27/2011
3294	ARP28447	55G	EMPLACED_CNTR	11/30/2011 13:44	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/17/2011	8/17/2011
3295	ARP28499	55G	EMPLACED_CNTR	11/18/2011 14:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/16/2011	8/16/2011
3296	ARP28501	55G	EMPLACED_CNTR	10/24/2011 21:53	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/1/2011	8/1/2011
3297	ARP28673	55G	EMPLACED_CNTR	11/18/2011 14:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/23/2011	8/23/2011
3298	ARP28677	55G	EMPLACED_CNTR	11/16/2011 9:24	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/15/2011	8/15/2011
3299	ARP28682	55G	EMPLACED_CNTR	11/18/2011 14:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/16/2011	8/16/2011
3300	ARP28705	55G	EMPLACED_CNTR	10/18/2011 20:04	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/16/2011	8/16/2011
3301	ARP28775	55G	EMPLACED_CNTR	10/25/2011 22:23	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/2/2011	8/2/2011
3302	ARP28779	55G	EMPLACED_CNTR	10/24/2011 21:53	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/2/2011	8/2/2011
3303	ARP28783	55G	EMPLACED_CNTR	10/19/2011 22:12	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/3/2011	8/3/2011
3304	ARP28795	55G	EMPLACED_CNTR	10/19/2011 22:12	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/2/2011	8/2/2011
3305	ARP28799	55G	EMPLACED_CNTR	10/19/2011 22:12	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/3/2011	8/3/2011
3306	ARP28823	55G	EMPLACED_CNTR	10/25/2011 22:23	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/5/2011	8/5/2011
3307	ARP28936	55G	EMPLACED_CNTR	11/18/2011 14:32	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/26/2011	8/26/2011
3308	ARP28938	55G	EMPLACED_CNTR	12/11/2011 14:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/23/2011	8/23/2011
3309	ARP28986	55G	EMPLACED_CNTR	10/25/2011 22:23	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/4/2011	8/4/2011
3310	ARP29025	55G	EMPLACED_CNTR	10/19/2011 22:13	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/11/2011	8/11/2011
3311	ARP29058	55G	EMPLACED_CNTR	11/30/2011 13:44	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/23/2011	8/23/2011
3312	ARP29117	55G	EMPLACED_CNTR	3/16/2012 15:25	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/30/2011	8/30/2011
3313	ARP29123	55G	EMPLACED_CNTR	11/30/2011 13:44	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/29/2011	8/29/2011
3314	ARP29182	55G	EMPLACED_CNTR	12/13/2011 13:19	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/31/2011	8/31/2011
3315	ARP29200	55G	EMPLACED_CNTR	11/16/2011 9:24	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/25/2011	8/25/2011

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3316	ARP29276	55G	EMPLACED_CNTR	12/10/2011 10:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/25/2011	8/25/2011
3317	ARP29285	55G	EMPLACED_CNTR	10/26/2011 19:11	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/24/2011	8/24/2011
3318	ARP29327	55G	EMPLACED_CNTR	12/14/2011 13:19	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/29/2011	8/29/2011
3319	ARP29352	55G	EMPLACED_CNTR	3/20/2012 15:11	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/3/2011	11/3/2011
3320	ARP29366	55G	EMPLACED_CNTR	3/22/2012 14:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/3/2011	11/3/2011
3321	ARP29372	55G	EMPLACED_CNTR	3/4/2012 14:29	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/14/2011	11/14/2011
3322	ARP29387	55G	EMPLACED_CNTR	3/22/2012 14:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/3/2011	11/3/2011
3323	ARP29389	55G	EMPLACED_CNTR	3/4/2012 14:30	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/10/2011	11/10/2011
3324	ARP29398	55G	EMPLACED_CNTR	3/22/2012 14:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/7/2011	11/7/2011
3325	ARP29402	55G	EMPLACED_CNTR	3/22/2012 14:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/3/2011	11/3/2011
3326	ARP29404	55G	EMPLACED_CNTR	3/22/2012 14:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/7/2011	11/7/2011
3327	ARP29407	55G	EMPLACED_CNTR	3/4/2012 14:30	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/10/2011	11/10/2011
3328	ARP29408	55G	EMPLACED_CNTR	3/16/2012 15:25	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/14/2011	11/14/2011
3329	ARP29410	55G	EMPLACED_CNTR	3/7/2012 9:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/16/2011	11/16/2011
3330	ARP29414	55G	EMPLACED_CNTR	3/20/2012 15:11	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/8/2011	11/8/2011
3331	ARP29416	55G	EMPLACED_CNTR	2/25/2012 14:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/16/2011	11/16/2011
3332	ARP29421	55G	EMPLACED_CNTR	3/4/2012 14:29	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/10/2011	11/10/2011
3333	ARP29423	55G	EMPLACED_CNTR	3/16/2012 15:25	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/16/2011	11/16/2011
3334	ARP29424	55G	EMPLACED_CNTR	4/1/2012 16:02	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/16/2011	11/16/2011
3335	ARP29437	55G	EMPLACED_CNTR	11/16/2011 9:24	ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/31/2011	8/31/2011
3336	ARP29453	55G	EMPLACED_CNTR	3/16/2012 15:25	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/10/2011	11/10/2011
3337	ARP29456	55G	EMPLACED_CNTR	3/7/2012 9:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/10/2011	11/10/2011
3338	ARP29460	55G	EMPLACED_CNTR	3/4/2012 14:30	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/15/2011	11/15/2011
3339	ARP29461	55G	EMPLACED_CNTR	3/16/2012 15:25	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/16/2011	11/16/2011
3340	ARP29463	55G	EMPLACED_CNTR	3/16/2012 15:25	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/15/2011	11/15/2011
3341	ARP29466	55G	EMPLACED_CNTR	2/29/2012 10:50	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/16/2011	11/16/2011
3342	ARP29468	55G	EMPLACED_CNTR	3/7/2012 9:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/15/2011	11/15/2011
3343	ARP29469	55G	EMPLACED_CNTR	2/29/2012 10:50	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/15/2011	11/15/2011
3344	ARP29540	55G	EMPLACED_CNTR	4/18/2012 15:02	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/6/2011	9/6/2011
3345	ARP29556	55G	EMPLACED_CNTR	11/30/2011 13:44	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/7/2011	9/7/2011
3346	ARP29560	55G	EMPLACED_CNTR	12/11/2011 14:33	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/7/2011	9/7/2011
3347	ARP29640	55G	EMPLACED_CNTR	2/25/2012 14:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/4/2011	10/4/2011
3348	ARP29644	55G	EMPLACED_CNTR	12/16/2011 13:20	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/4/2011	10/4/2011
3349	ARP29735	55G	EMPLACED_CNTR	12/13/2011 13:18	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/14/2011	9/14/2011
3350	ARP29772	55G	EMPLACED_CNTR	12/16/2011 13:21	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/14/2011	9/14/2011
3351	ARP29822	55G	EMPLACED_CNTR	12/14/2011 14:14	ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/15/2011	9/15/2011
3352	ARP29831	55G	EMPLACED_CNTR	12/18/2011 13:47	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/4/2011	10/4/2011
3353	ARP29832	55G	EMPLACED_CNTR	2/29/2012 10:50	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/4/2011	10/4/2011
3354	ARP29836	55G	EMPLACED_CNTR	3/22/2012 14:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/5/2011	10/5/2011

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3355	ARP29851	55G	EMPLACED_CNTR	2/25/2012 14:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/5/2011	10/5/2011
3356	ARP29903	55G	EMPLACED_CNTR	3/20/2012 15:11	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/17/2011	10/17/2011
3357	ARP29910	55G	EMPLACED_CNTR	3/7/2012 9:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/5/2011	10/5/2011
3358	ARP29922	55G	EMPLACED_CNTR	3/22/2012 14:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/5/2011	10/5/2011
3359	ARP29945	55G	EMPLACED_CNTR	3/16/2012 15:25	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/6/2011	12/6/2011
3360	ARP29954	55G	EMPLACED_CNTR	3/20/2012 15:11	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/24/2011	10/24/2011
3361	ARP29964	55G	EMPLACED_CNTR	3/7/2012 9:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/9/2011	11/9/2011
3362	ARP29968	55G	EMPLACED_CNTR	3/22/2012 14:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	10/24/2011	10/24/2011
3363	ARP29997	55G	EMPLACED_CNTR	2/25/2012 14:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/15/2011	11/15/2011
3364	ARP30005	55G	EMPLACED_CNTR	2/25/2012 14:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/16/2011	11/16/2011
3365	ARP30007	55G	EMPLACED_CNTR	3/7/2012 9:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/28/2011	11/28/2011
3366	ARP30008	55G	EMPLACED_CNTR	4/19/2012 14:23	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/21/2011	11/21/2011
3367	ARP30014	55G	EMPLACED_CNTR	4/19/2012 14:23	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/2/2012	2/2/2012
3368	ARP30018	55G	EMPLACED_CNTR	4/18/2012 15:02	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/1/2012	2/1/2012
3369	ARP30019	55G	EMPLACED_CNTR	3/31/2012 15:34	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/1/2011	12/1/2011
3370	ARP30023	55G	EMPLACED_CNTR	3/16/2012 15:25	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/21/2011	11/21/2011
3371	ARP30028	55G	EMPLACED_CNTR	3/4/2012 14:30	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/21/2011	11/21/2011
3372	ARP30037	55G	EMPLACED_CNTR	2/29/2012 10:50	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/15/2011	11/15/2011
3373	ARP30038	55G	EMPLACED_CNTR	3/16/2012 15:25	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/10/2011	11/10/2011
3374	ARP30042	55G	EMPLACED_CNTR	3/4/2012 14:29	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/22/2011	11/22/2011
3375	ARP30046	55G	EMPLACED_CNTR	3/16/2012 15:25	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/10/2011	11/10/2011
3376	ARP30047	55G	EMPLACED_CNTR	3/4/2012 14:30	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/14/2011	11/14/2011
3377	ARP30049	55G	EMPLACED_CNTR	3/16/2012 15:25	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/21/2011	11/21/2011
3378	ARP30052	55G	EMPLACED_CNTR	2/29/2012 10:50	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/15/2011	11/15/2011
3379	ARP30053	55G	EMPLACED_CNTR	2/25/2012 14:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/15/2011	11/15/2011
3380	ARP30054	55G	EMPLACED_CNTR	2/29/2012 10:50	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/14/2011	11/14/2011
3381	ARP30057	55G	EMPLACED_CNTR	2/29/2012 10:50	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/16/2011	11/16/2011
3382	ARP30059	55G	EMPLACED_CNTR	2/25/2012 14:48	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/16/2011	11/16/2011
3383	ARP30076	55G	EMPLACED_CNTR	3/4/2012 14:30	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/21/2011	11/21/2011
3384	ARP30081	55G	EMPLACED_CNTR	4/19/2012 14:24	ID-SDA-SOIL	CCP-AK-INL-001	S4200	2/2/2012	2/2/2012
3385	ARP30082	55G	EMPLACED_CNTR	3/16/2012 15:25	ID-SDA-SOIL	CCP-AK-INL-001	S4200	11/28/2011	11/28/2011
3386	ARP30100	55G	EMPLACED_CNTR	4/19/2012 14:24	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/31/2012	1/31/2012
3387	ARP30103	55G	EMPLACED_CNTR	4/19/2012 14:23	ID-SDA-SOIL	CCP-AK-INL-001	S4200	1/31/2012	1/31/2012
3388	ARP30106	55G	EMPLACED_CNTR	3/7/2012 10:37	ID-SDA-SOIL	CCP-AK-INL-001	S4200	12/8/2011	12/8/2011
3389	ARP60010	55G	EMPLACED_CNTR	9/19/2011 23:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/27/2011	4/27/2011
3390	ARP60011	55G	EMPLACED_CNTR	9/18/2011 12:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/26/2011	4/26/2011
3391	ARP60012	55G	EMPLACED_CNTR	3/4/2012 14:30	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/27/2011	4/27/2011
3392	ARP60014	55G	EMPLACED_CNTR	9/26/2011 22:22	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/27/2011	4/27/2011
3393	ARP60016	55G	EMPLACED_CNTR	9/22/2011 20:02	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/27/2011	4/27/2011

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3394	ARP60037	55G	EMPLACED_CNTR	9/19/2011 23:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/18/2011	5/18/2011
3395	ARP60043	55G	EMPLACED_CNTR	8/22/2011 22:36	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/27/2011	4/27/2011
3396	ARP60044	55G	EMPLACED_CNTR	9/16/2011 12:51	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/3/2011	5/3/2011
3397	ARP60046	55G	EMPLACED_CNTR	9/14/2011 22:54	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/4/2011	5/4/2011
3398	ARP60047	55G	EMPLACED_CNTR	8/28/2011 9:56	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/27/2011	4/27/2011
3399	ARP60048	55G	EMPLACED_CNTR	9/18/2011 12:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/27/2011	4/27/2011
3400	ARP60050	55G	EMPLACED_CNTR	4/19/2012 14:23	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/19/2011	4/19/2011
3401	ARP60051	55G	EMPLACED_CNTR	7/7/2011 0:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/19/2011	4/19/2011
3402	ARP60054	55G	EMPLACED_CNTR	7/7/2011 0:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/19/2011	4/19/2011
3403	ARP60055	55G	EMPLACED_CNTR	8/29/2011 23:31	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/19/2011	4/19/2011
3404	ARP60056	55G	EMPLACED_CNTR	7/7/2011 0:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/19/2011	4/19/2011
3405	ARP60058	55G	EMPLACED_CNTR	8/24/2011 22:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/25/2011	4/25/2011
3406	ARP60060	55G	EMPLACED_CNTR	7/7/2011 0:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/20/2011	4/20/2011
3407	ARP60064	55G	EMPLACED_CNTR	8/24/2011 22:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/25/2011	4/25/2011
3408	ARP60067	55G	EMPLACED_CNTR	8/24/2011 22:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/21/2011	4/21/2011
3409	ARP60068	55G	EMPLACED_CNTR	9/19/2011 19:45	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/25/2011	4/25/2011
3410	ARP60069	55G	EMPLACED_CNTR	9/16/2011 12:51	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/26/2011	4/26/2011
3411	ARP60071	55G	EMPLACED_CNTR	9/22/2011 20:01	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/4/2011	5/4/2011
3412	ARP60072	55G	EMPLACED_CNTR	9/19/2011 20:12	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/25/2011	4/25/2011
3413	ARP60073	55G	EMPLACED_CNTR	8/24/2011 22:05	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/26/2011	4/26/2011
3414	ARP60075	55G	EMPLACED_CNTR	7/7/2011 0:53	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/21/2011	4/21/2011
3415	ARP60076	55G	EMPLACED_CNTR	8/29/2011 23:13	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/21/2011	4/21/2011
3416	ARP60078	55G	EMPLACED_CNTR	9/19/2011 20:12	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/20/2011	4/20/2011
3417	ARP60082	55G	EMPLACED_CNTR	3/4/2012 14:29	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/21/2011	4/21/2011
3418	ARP60083	55G	EMPLACED_CNTR	7/7/2011 0:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/21/2011	4/21/2011
3419	ARP60084	55G	EMPLACED_CNTR	8/27/2011 14:29	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/21/2011	4/21/2011
3420	ARP60087	55G	EMPLACED_CNTR	7/7/2011 0:40	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/21/2011	4/21/2011
3421	ARP60088	55G	EMPLACED_CNTR	7/7/2011 0:53	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/21/2011	4/21/2011
3422	ARP60089	55G	EMPLACED_CNTR	9/19/2011 20:12	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/26/2011	4/26/2011
3423	ARP60090	55G	EMPLACED_CNTR	9/19/2011 20:12	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/26/2011	4/26/2011
3424	ARP60091	55G	EMPLACED_CNTR	9/1/2011 22:00	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/26/2011	4/26/2011
3425	ARP60092	55G	EMPLACED_CNTR	9/19/2011 23:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/25/2011	4/25/2011
3426	ARP60093	55G	EMPLACED_CNTR	9/19/2011 20:12	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/26/2011	4/26/2011
3427	ARP60096	55G	EMPLACED_CNTR	9/16/2011 12:50	ID-SDA-SOIL	CCP-AK-INL-001	S4200	4/25/2011	4/25/2011
3428	ARP60098	55G	EMPLACED_CNTR	9/15/2011 19:09	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/4/2011	5/4/2011
3429	ARP60099	55G	EMPLACED_CNTR	9/18/2011 12:59	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/3/2011	5/3/2011
3430	ARP70061	55G	EMPLACED_CNTR	7/7/2012 13:10	ID-SDA-SOIL	CCP-AK-INL-001	S4200	3/6/2012	3/6/2012
3431	ARP70483	55G	EMPLACED_CNTR	7/10/2012 13:36	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/15/2012	5/15/2012
3432	ARP70494	55G	EMPLACED_CNTR	7/10/2012 13:36	ID-SDA-SOIL	CCP-AK-INL-001	S4200	5/15/2012	5/15/2012

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3433	ARP70685	55G			ID-SDA-SOIL	CCP-AK-INL-001	S4200	6/20/2012	6/20/2012
3434	ARP71016	55G			ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/2/2012	8/2/2012
3435	ARP71044	55G	RECEIVED_SHIP		ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/2/2012	8/2/2012
3436	ARP71056	55G			ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/8/2012	8/8/2012
3437	ARP71061	55G	RECEIVED_SHIP		ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/7/2012	8/7/2012
3438	ARP71136	55G			ID-SDA-SOIL	CCP-AK-INL-001	S4200	8/9/2012	8/9/2012
3439	ARP71219	55G			ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/12/2012	9/12/2012
3440	ARP71225	55G			ID-SDA-SOIL	CCP-AK-INL-001	S4200	9/12/2012	9/12/2012

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1	CONTAINERID	CONTAINER_TYPE	WDS_STATUS	DISPOSAL_DATE	WASTESTREAM	AK_REPORT	WASTE_MATRIX_CODE	CLOSUREDATE	CLOSUREDATE1	VENTDATE	VENTDATE1
2	10005799	55G	EMPLACED_CNTR	6/6/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/20/1988	9/22/2005	12/20/2001	9/22/2005
3	10005805	55G	EMPLACED_CNTR	6/6/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	2/4/1987	9/26/2005	12/20/2001	9/26/2005
4	10005806	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/7/1987	2/1/2006	1/20/2006	2/1/2006
5	10005807	55G	EMPLACED_CNTR	10/20/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/7/1986		12/31/2001	9/24/2005
6	10005808	55G	EMPLACED_CNTR	5/25/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	12/16/1986	9/23/2005	12/31/2001	9/23/2005
7	10005809	55G	EMPLACED_CNTR	5/25/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/3/1986	7/7/2006	9/24/2005	7/7/2006
8	10005810	55G	EMPLACED_CNTR	6/6/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/4/1987	9/22/2005	12/31/2001	9/22/2005
9	10005811	55G	EMPLACED_CNTR	5/26/2012 13:28	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/19/1987	9/22/2005	12/20/2001	9/22/2005
10	10007231	55G	EMPLACED_CNTR	4/20/2011 21:20	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/15/1988			11/6/2004
11	10007232	55G	EMPLACED_CNTR	4/20/2011 21:20	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/7/1988		4/30/1998	
12	10007233	55G	EMPLACED_CNTR	4/20/2011 21:20	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/1/1988			5/14/2004
13	10007234	55G	EMPLACED_CNTR	7/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/4/1987		10/26/1998	5/14/2004
14	10007551	55G	EMPLACED_CNTR	3/30/2011 21:56	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/4/1986	11/13/1998	11/13/1998	11/6/2004
15	10015123	83G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/3/1988	5/14/1996		
16	10015576	55G	EMPLACED_CNTR	10/20/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/19/1986		12/20/2001	
17	10015578	55G	EMPLACED_CNTR	9/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	12/22/1987		12/20/2001	
18	10015579	55G	EMPLACED_CNTR	10/18/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	2/4/1987		12/20/2001	
19	10015580	55G	EMPLACED_CNTR	10/20/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/15/1988		12/20/2001	
20	10016003	55G	EMPLACED_CNTR	6/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/5/1986		12/31/2001	
21	10016004	55G	EMPLACED_CNTR	6/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/31/1986		12/31/2001	
22	10016005	55G	EMPLACED_CNTR	6/1/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/5/1986		12/31/2001	
23	10016006	55G	EMPLACED_CNTR	7/26/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/10/1987		12/31/2001	
24	10016007	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/4/1986		12/31/2001	
25	10016008	55G	EMPLACED_CNTR	6/6/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/22/1988		12/31/2001	
26	10016009	55G	EMPLACED_CNTR	10/12/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/24/1986		12/31/2001	
27	10016010	55G	EMPLACED_CNTR	7/10/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/31/1986		12/31/2001	
28	10016014	55G	EMPLACED_CNTR	7/3/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/24/1986		12/31/2001	
29	10016015	55G	EMPLACED_CNTR	7/13/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/21/1986		12/31/2001	
30	10016133	83GOP			ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/2/1986	4/6/2000	2/21/1998	
31	10016134	83GOP			ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/13/1986	4/6/2000	2/28/1998	
32	10016136	83G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/21/1986	4/9/2000	2/24/1998	
33	10016137	83GOP			ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/5/1988	4/6/2000	2/26/1998	
34	10016221	55G	EMPLACED_CNTR	10/2/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/12/1986			5/31/2004
35	10016234	55G	EMPLACED_CNTR	8/14/2011 13:07	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/23/1987			5/26/2004
36	10016238	55G	EMPLACED_CNTR	9/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/14/1987			5/14/2004
37	10016239	55G	EMPLACED_CNTR	9/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/19/1986			5/22/2004
38	10016240	55G	EMPLACED_CNTR	6/5/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/7/1986			5/14/2004
39	10016304	55G	EMPLACED_CNTR	5/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/24/1986			5/22/2004
40	10016346	55G	EMPLACED_CNTR	7/10/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/7/1986		12/31/2001	
41	10016347	55G	EMPLACED_CNTR	10/18/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/23/1986		12/31/2001	
42	10016397	83G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/7/1986	1/3/1996		
43	10016411	55G	EMPLACED_CNTR	3/30/2011 11:08	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/17/1988		4/11/2002	7/6/2004
44	10016622	55G	EMPLACED_CNTR	9/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/13/1988		12/13/2001	
45	10016623	55G	EMPLACED_CNTR	8/31/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/2/1986		12/15/2001	
46	10016628	55G	EMPLACED_CNTR	5/24/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/12/1986		12/13/2001	
47	10016707	55G	EMPLACED_CNTR	6/8/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/24/1986		3/31/1997	5/16/2004

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48	10016708	55G	EMPLACED_CNTR	5/22/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/17/1986		3/28/1997	5/16/2004
49	10016709	55G	EMPLACED_CNTR	8/31/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/9/1987		12/23/2001	9/11/2004
50	10016710	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/14/1986	6/1/2004	12/17/2001	6/1/2004
51	10016754	55G	EMPLACED_CNTR	7/3/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/16/1988			5/16/2004
52	10016755	55G	EMPLACED_CNTR	9/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/9/1987		3/31/1997	5/16/2004
53	10016756	55G	EMPLACED_CNTR	8/31/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/12/1986		4/3/1997	
54	10016757	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/27/1987		3/29/1997	5/16/2004
55	10016758	55G	EMPLACED_CNTR	8/31/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	12/16/1986		3/29/1997	5/16/2004
56	10016759	55G	EMPLACED_CNTR	7/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/29/1988		3/29/1997	5/16/2004
57	10016760	55G	EMPLACED_CNTR	5/24/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/3/1988		5/19/2004	7/6/2006
58	10016761	55G	EMPLACED_CNTR	6/8/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/25/1987		1/23/1997	5/16/2004
59	10016762	55G	EMPLACED_CNTR	11/9/2011 21:45	ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/21/1987	10/31/2009	3/31/1997	10/31/2009
60	10016763	55G	EMPLACED_CNTR	7/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/17/1986		3/31/1997	5/27/2004
61	10016764	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/19/1988		5/6/1998	5/15/2004
62	10016765	55G	EMPLACED_CNTR	6/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/9/1987		4/30/1998	5/15/2004
63	10016766	55G	EMPLACED_CNTR	7/28/2012 10:48	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/30/1986		10/25/1996	
64	10016767	55G	EMPLACED_CNTR	7/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/25/1987		3/29/1997	5/16/2004
65	10016768	55G	EMPLACED_CNTR	3/30/2011 11:08	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/4/1987		1/14/1997	5/16/2004
66	10016769	55G	EMPLACED_CNTR	7/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/23/1986		3/31/1997	6/1/2004
67	10016770	55G	EMPLACED_CNTR	7/10/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/7/1987		3/31/1997	5/31/2004
68	10016771	55G	EMPLACED_CNTR	7/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/16/1988		4/30/1998	
69	10016772	55G	EMPLACED_CNTR	5/22/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/13/1986		10/25/1996	
70	10016773	55G	EMPLACED_CNTR	7/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/29/1987		4/3/1997	5/16/2004
71	10016774	55G	EMPLACED_CNTR	10/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	2/10/1987		3/31/1997	5/31/2004
72	10016775	55G	EMPLACED_CNTR	8/14/2011 13:07	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/19/1988		5/16/2004	6/22/2006
73	10016776	55G	EMPLACED_CNTR	7/10/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/8/1988		5/9/1994	5/16/2004
74	10016777	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/13/1986		3/31/1997	5/16/2004
75	10016778	55G	EMPLACED_CNTR	6/8/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/12/1986		3/29/1997	5/31/2004
76	10016779	55G	EMPLACED_CNTR	7/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/23/1987			12/31/2005
77	10016780	55G	EMPLACED_CNTR	7/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/16/1988		1/28/1997	1/19/2006
78	10016781	55G	EMPLACED_CNTR	6/8/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/19/1986			5/31/2004
79	10016782	55G	EMPLACED_CNTR	7/1/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/14/1986		3/28/1997	6/1/2004
80	10016783	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/18/1986			5/16/2004
81	10016784	55G	EMPLACED_CNTR	7/10/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/8/1987		1/27/1997	5/16/2004
82	10016785	55G	EMPLACED_CNTR	3/30/2011 11:08	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/12/1986			1/1/2006
83	10016786	55G	EMPLACED_CNTR	8/31/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/12/1986		3/31/1997	6/6/2004
84	10016787	55G	EMPLACED_CNTR	6/21/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/19/1986		5/26/2004	6/28/2006
85	10016788	55G	APPROVED_CERT		ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/12/1986	11/7/2009	5/16/2004	11/7/2009
86	10016789	55G	EMPLACED_CNTR	10/10/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/21/1986		1/28/1997	5/19/2004
87	10016790	55G	EMPLACED_CNTR	3/26/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/14/1986		1/28/1997	6/6/2004
88	10016791	55G	EMPLACED_CNTR	5/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/12/1986		3/31/1997	5/31/2004
89	10016792	55G	EMPLACED_CNTR	3/22/2011 22:44	ID-RF-S3150-A	CCP-AK-INL-005	S3150	12/16/1987		1/28/1997	1/1/2006
90	10016793	55G	EMPLACED_CNTR	8/14/2011 13:07	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/14/1986		1/28/1997	1/1/2006
91	10016866	55G	EMPLACED_CNTR	7/3/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/10/1987		12/30/2001	
92	10016867	55G	EMPLACED_CNTR	5/24/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/25/1988		12/30/2001	
93	10016868	55G	EMPLACED_CNTR	4/27/2011 22:05	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/26/1987	6/4/2004	12/30/2001	6/4/2004
94	10016869	55G	EMPLACED_CNTR	7/11/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/19/1986		12/30/2001	

	A	B	C	D	E	F	G	H	I	J	K
95	10016870	55G	EMPLACED_CNTR	6/7/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/31/1986		12/30/2001	
96	10016871	55G	EMPLACED_CNTR	3/30/2011 21:56	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/30/1986		12/30/2001	
97	10016872	55G	EMPLACED_CNTR	6/6/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/2/1986		12/30/2001	5/26/2004
98	10016881	55G	EMPLACED_CNTR	6/20/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/11/1986		12/30/2001	
99	10016882	55G	EMPLACED_CNTR	5/25/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/23/1986		12/30/2001	1/1/2003
100	10016883	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/23/1986		12/30/2001	
101	10016884	55G	EMPLACED_CNTR	6/5/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/19/1986		12/30/2001	
102	10016885	55G	EMPLACED_CNTR	6/8/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/7/1986		12/30/2001	
103	10016886	55G	EMPLACED_CNTR	9/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/25/1988		12/30/2001	
104	10016887	55G	EMPLACED_CNTR	7/11/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/5/1986		12/30/2001	
105	10016888	55G	EMPLACED_CNTR	7/26/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/19/1987		12/31/2001	
106	10016889	55G	EMPLACED_CNTR	7/13/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/28/1987		12/31/2001	
107	10016890	55G	EMPLACED_CNTR	7/26/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/3/1987		12/31/2001	
108	10016891	55G	EMPLACED_CNTR	7/13/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/11/1987		12/31/2001	
109	10017130	55G	EMPLACED_CNTR	7/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/30/1986	8/17/2005	12/30/2001	8/17/2005
110	10017131	55G	EMPLACED_CNTR	5/25/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/8/2005	9/23/2005	8/8/2005	9/23/2005
111	10017132	55G	EMPLACED_CNTR	7/28/2012 10:48	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/5/1987	9/22/2005	12/30/2001	9/22/2005
112	10017133	55G	APPROVED_CERT		ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/5/1987	9/21/2005	12/30/2001	9/21/2005
113	10017134	55G	EMPLACED_CNTR	6/11/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/8/2005	9/23/2005	8/8/2005	9/23/2005
114	10017135	55G	EMPLACED_CNTR	5/23/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/18/1986		12/30/2001	
115	10017136	55G	EMPLACED_CNTR	6/20/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	2/10/1987		12/30/2001	8/8/2005
116	10017137	55G	EMPLACED_CNTR	6/6/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/25/1988		12/30/2001	
117	10017138	55G	EMPLACED_CNTR	5/23/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/9/1987		12/30/2001	
118	10017139	55G	EMPLACED_CNTR	5/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/4/1988		12/30/2001	
119	10017140	55G	EMPLACED_CNTR	7/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/27/1987		12/30/2001	
120	10017141	55G	EMPLACED_CNTR	5/24/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/27/1987		12/30/2001	
121	10017142	55G	EMPLACED_CNTR	5/10/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/12/1986		12/30/2001	
122	10017143	55G	EMPLACED_CNTR	7/11/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/23/1986		12/30/2001	
123	10017144	55G	EMPLACED_CNTR	5/24/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/4/1986		12/26/2001	
124	10017145	55G	EMPLACED_CNTR	5/26/2012 13:28	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/12/1986		12/30/2001	
125	10017146	55G	EMPLACED_CNTR	5/21/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/7/1986		12/30/2001	
126	10017147	55G	EMPLACED_CNTR	5/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/12/1986		12/30/2001	
127	10017148	55G	EMPLACED_CNTR	5/21/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/30/1986		12/30/2001	
128	10017149	55G	EMPLACED_CNTR	5/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	12/16/1987		12/30/2001	
129	10017150	55G	EMPLACED_CNTR	3/26/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/9/1987			
130	10017199	55G	EMPLACED_CNTR	5/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	2/10/1987		12/30/2001	
131	10017200	55G	EMPLACED_CNTR	5/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/10/1988		12/30/2001	
132	10017201	55G	EMPLACED_CNTR	3/22/2011 22:44	ID-RF-S3150-A	CCP-AK-INL-005	S3150	2/4/1987		12/30/2001	
133	10017202	55G	EMPLACED_CNTR	7/13/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/9/1987		12/30/2001	
134	10017203	55G	EMPLACED_CNTR	6/22/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/27/1988		12/30/2001	
135	10017204	55G	EMPLACED_CNTR	5/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/19/1986		12/30/2001	
136	10017205	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/9/1987		12/30/2001	
137	10017206	55G	EMPLACED_CNTR	5/23/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/26/1986		12/30/2001	
138	10017207	55G	EMPLACED_CNTR	7/26/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/5/1986		12/30/2001	
139	10017208	55G	EMPLACED_CNTR	10/1/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/19/1986		12/30/2001	
140	10017209	55G	EMPLACED_CNTR	6/11/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	2/10/1987		12/30/2001	
141	10017210	55G	EMPLACED_CNTR	10/12/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/9/1987		12/30/2001	

	A	B	C	D	E	F	G	H	I	J	K
142	10017211	55G	EMPLACED_CNTR	3/22/2011 22:44	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/12/1986		12/30/2001	
143	10017212	55G	EMPLACED_CNTR	5/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/4/1987		12/30/2001	
144	10017213	55G	EMPLACED_CNTR	3/22/2011 22:44	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/21/1986		12/30/2001	
145	10017214	55G	EMPLACED_CNTR	5/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/21/1986		12/30/2001	
146	10017215	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/26/1987		12/30/2001	
147	10017216	55G	EMPLACED_CNTR	5/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/27/1987		12/30/2001	
148	10017217	55G	EMPLACED_CNTR	6/21/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/25/1988		12/30/2001	
149	10017225	55G	EMPLACED_CNTR	10/12/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	12/16/1986		12/23/2001	
150	10017226	55G	EMPLACED_CNTR	7/10/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/5/1988		12/23/2001	
151	10017227	55G	EMPLACED_CNTR	7/13/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/7/1987		12/23/2001	
152	10017228	55G	EMPLACED_CNTR	5/22/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/18/1986	9/2/2006	12/23/2001	9/2/2006
153	10017229	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/7/1987		12/18/2001	
154	10017230	55G	EMPLACED_CNTR	5/26/2012 13:28	ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/7/1987	10/31/2009	12/23/2001	10/31/2009
155	10017231	55G	EMPLACED_CNTR	6/14/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/19/1986		12/23/2001	
156	10017232	55G	EMPLACED_CNTR	5/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/18/1987		12/23/2001	
157	10017233	55G	EMPLACED_CNTR	6/1/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/30/1986		12/24/2001	
158	10017234	55G	EMPLACED_CNTR	6/14/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/12/1986		12/24/2001	
159	10017235	55G	EMPLACED_CNTR	9/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/21/1987		12/23/2001	
160	10017236	55G	EMPLACED_CNTR	7/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/23/1986		12/18/2001	
161	10017237	55G	EMPLACED_CNTR	5/23/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/12/1986		12/23/2001	
162	10017238	55G	EMPLACED_CNTR	10/12/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/7/1987		12/23/2001	
163	10017239	55G	EMPLACED_CNTR	10/18/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/7/1987		12/24/2001	
164	10017240	55G	EMPLACED_CNTR	7/13/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/24/1986		12/23/2001	
165	10017241	55G	EMPLACED_CNTR	5/24/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	12/21/1987		12/23/2001	
166	10017242	55G	EMPLACED_CNTR	7/11/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/7/1987		12/24/2001	
167	10017243	55G	EMPLACED_CNTR	6/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/26/1986		12/24/2001	
168	10017244	55G	EMPLACED_CNTR	7/10/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/24/1986		12/24/2001	
169	10017245	55G	EMPLACED_CNTR	6/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/7/1987		12/24/2001	
170	10017246	55G	EMPLACED_CNTR	6/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/26/1986		12/24/2001	
171	10017247	55G	EMPLACED_CNTR	7/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/7/1987		12/23/2001	
172	10017248	55G	EMPLACED_CNTR	7/13/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/21/1987		12/24/2001	
173	10017249	55G	EMPLACED_CNTR	6/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/18/1986		12/23/2001	
174	10017277	55G	EMPLACED_CNTR	7/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/13/1986		12/30/2001	
175	10017278	55G	EMPLACED_CNTR	5/24/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/12/1986			12/30/2001
176	10017279	55G	EMPLACED_CNTR	5/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/23/1986		12/30/2001	
177	10017280	55G	EMPLACED_CNTR	7/26/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/13/1987		12/26/2001	
178	10017281	55G	EMPLACED_CNTR	5/10/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/4/1986		12/26/2001	
179	10017282	55G	EMPLACED_CNTR	6/1/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/24/1986		12/30/2001	
180	10017283	55G	EMPLACED_CNTR	10/12/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/9/1987		12/30/2001	
181	10017284	55G	EMPLACED_CNTR	5/10/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/20/1986		12/26/2001	
182	10017285	55G	EMPLACED_CNTR	6/20/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/31/1986		12/26/2001	
183	10017286	55G	EMPLACED_CNTR	3/30/2011 21:56	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/24/1986		12/26/2001	
184	10017287	55G	EMPLACED_CNTR	6/1/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/20/1986		12/26/2001	
185	10017288	55G	EMPLACED_CNTR	7/13/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/24/1986		12/26/2001	
186	10017289	55G	EMPLACED_CNTR	7/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	2/23/1987		12/26/2001	
187	10017290	55G	EMPLACED_CNTR	5/24/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/5/1987		12/26/2001	
188	10017291	55G	EMPLACED_CNTR	8/9/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/5/1987		12/26/2001	

	A	B	C	D	E	F	G	H	I	J	K
189	10017292	55G	EMPLACED_CNTR	10/12/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	2/23/1987		12/26/2001	4/7/2006
190	10017293	55G	EMPLACED_CNTR	7/7/2011 0:53	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/24/1987		12/24/2001	
191	10017294	55G	EMPLACED_CNTR	10/1/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/7/1987		12/24/2001	
192	10017295	55G	EMPLACED_CNTR	6/5/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/24/1987		12/24/2001	
193	10017296	55G	EMPLACED_CNTR	7/11/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/30/1986		12/24/2001	
194	10017297	55G	EMPLACED_CNTR	6/14/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/30/1986		12/24/2001	
195	10017298	55G	EMPLACED_CNTR	7/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/5/1988		12/24/2001	
196	10017301	55G	EMPLACED_CNTR	7/26/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/24/1986		12/26/2001	
197	10017303	55G	EMPLACED_CNTR	7/7/2011 0:53	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/22/1988		9/24/2001	
198	10017304	55G	EMPLACED_CNTR	5/24/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/14/1988		12/24/2001	
199	10017305	55G	EMPLACED_CNTR	7/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/30/1987		12/21/2001	
200	10017306	55G	EMPLACED_CNTR	10/1/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/1/1988		9/24/2001	
201	10017307	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/4/1988		9/24/2001	
202	10017308	55G	EMPLACED_CNTR	6/11/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	2/24/1988		9/24/2001	
203	10017309	55G	EMPLACED_CNTR	6/22/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/19/1986		12/24/2001	
204	10017310	55G	EMPLACED_CNTR	5/24/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/6/1987		12/21/2001	
205	10017311	55G	EMPLACED_CNTR	6/1/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/13/1988		12/24/2001	
206	10017312	55G	EMPLACED_CNTR	6/22/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/11/1987		12/24/2001	
207	10017313	55G	EMPLACED_CNTR	7/7/2011 0:53	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/9/1987		12/21/2001	
208	10017314	55G	EMPLACED_CNTR	6/22/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/20/1986		12/26/2001	
209	10017315	55G	EMPLACED_CNTR	5/24/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/20/1987		12/21/2001	
210	10017316	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/3/1987		12/24/2001	4/7/2006
211	10017317	55G	EMPLACED_CNTR	6/21/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/12/1988		12/24/2001	
212	10017319	55G	EMPLACED_CNTR	7/10/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/5/1987		9/24/2001	
213	10017320	55G	EMPLACED_CNTR	7/11/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/5/1987		12/26/2001	
214	10017336	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/4/1987		12/24/2001	
215	10017337	55G	EMPLACED_CNTR	6/1/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/2/1986		12/21/2001	
216	10017338	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/5/1987		12/21/2001	
217	10017339	55G	EMPLACED_CNTR	5/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/1/1987		12/21/2001	
218	10017341	55G	EMPLACED_CNTR	6/1/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/25/1987		12/21/2001	
219	10017342	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/18/1986		12/21/2001	
220	10017343	55G	EMPLACED_CNTR	6/7/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	2/23/1987		12/21/2001	
221	10017344	55G	EMPLACED_CNTR	8/31/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/22/1988		9/24/2001	
222	10017402	55G	EMPLACED_CNTR	7/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/14/1987		12/21/2001	
223	10017403	55G	EMPLACED_CNTR	6/14/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/9/1987		12/21/2001	
224	10017404	55G	EMPLACED_CNTR	7/7/2011 0:53	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/9/1987		12/21/2001	
225	10017405	55G	EMPLACED_CNTR	7/3/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/5/1988		9/24/2001	
226	10017406	55G	EMPLACED_CNTR	5/24/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/3/1986		9/24/2001	
227	10017407	55G	EMPLACED_CNTR	7/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/5/1988		9/24/2001	
228	10017408	55G	EMPLACED_CNTR	8/9/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	2/2/1988		9/24/2001	
229	10017409	55G	EMPLACED_CNTR	6/20/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/24/1986		12/23/2001	
230	10017410	55G	EMPLACED_CNTR	6/7/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/7/1987		12/23/2001	
231	10017411	55G	EMPLACED_CNTR	6/19/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/8/1988		9/24/2001	
232	10017412	55G	EMPLACED_CNTR	6/19/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/15/1988		9/24/2001	
233	10017413	55G	EMPLACED_CNTR	6/1/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/18/1986		12/24/2001	
234	10017414	55G	EMPLACED_CNTR	7/11/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	12/16/1986		12/23/2001	
235	10017415	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/20/1987		12/23/2001	

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236	10017416	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/24/1986		12/23/2001	
237	10017417	55G	EMPLACED_CNTR	6/14/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/3/1986		12/21/2001	
238	10017418	55G	EMPLACED_CNTR	4/27/2011 19:51	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/9/1987		12/21/2001	
239	10017419	55G	EMPLACED_CNTR	5/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/4/1987		12/21/2001	
240	10017420	55G	EMPLACED_CNTR	4/27/2011 19:51	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/8/1987		12/21/2001	
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242	10017422	55G	EMPLACED_CNTR	6/1/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/9/1987		12/21/2001	
243	10017423	55G	EMPLACED_CNTR	6/7/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/23/1987		12/21/2001	
244	10017424	55G	EMPLACED_CNTR	5/23/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/20/1987		12/21/2001	
245	10017425	55G	EMPLACED_CNTR	5/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/4/1987		12/21/2001	
246	10017426	55G	EMPLACED_CNTR	8/31/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/13/1987		12/21/2001	
247	10017434	55G	EMPLACED_CNTR	6/19/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/30/1986		12/20/2001	
248	10017436	55G	EMPLACED_CNTR	5/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/21/1986		9/24/2001	
249	10017437	55G	EMPLACED_CNTR	5/24/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/5/1988		12/23/2001	
250	10017438	55G	EMPLACED_CNTR	6/1/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/27/1987		12/20/2001	
251	10017439	55G	EMPLACED_CNTR	6/5/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/16/1988		12/22/2001	
252	10017440	55G	EMPLACED_CNTR	10/10/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	2/23/1987		12/23/2001	
253	10017442	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/23/1987		12/23/2001	
254	10017443	55G	EMPLACED_CNTR	8/9/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/22/1988		12/20/2001	
255	10017444	55G	EMPLACED_CNTR	5/21/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/17/1987		12/23/2001	
256	10017445	55G	EMPLACED_CNTR	5/21/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/7/1986		12/23/2001	
257	10017446	55G	EMPLACED_CNTR	5/23/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/19/1988		12/20/2001	
258	10017447	55G	EMPLACED_CNTR	6/19/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/7/1988		12/23/2001	
259	10017448	55G	EMPLACED_CNTR	6/5/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/30/1986		12/23/2001	
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261	10017450	55G	EMPLACED_CNTR	6/22/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/12/1987		12/23/2001	
262	10017451	55G	EMPLACED_CNTR	5/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/12/1986		12/23/2001	
263	10017452	55G	EMPLACED_CNTR	7/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/20/1988		12/23/2001	
264	10017453	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/4/1987		12/23/2001	
265	10017454	55G	EMPLACED_CNTR	6/5/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/30/1987		12/23/2001	
266	10017455	55G	EMPLACED_CNTR	5/23/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/24/1987		12/23/2001	
267	10017456	55G	EMPLACED_CNTR	6/5/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/19/1988		12/23/2001	
268	10017457	55G	EMPLACED_CNTR	6/5/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/7/1988		12/23/2001	
269	10017458	55G	EMPLACED_CNTR	7/11/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/12/1987		12/23/2001	
270	10017459	55G	EMPLACED_CNTR	6/5/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/20/1987		12/20/2001	
271	10017460	55G	EMPLACED_CNTR	9/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/23/1987		12/23/2001	
272	10017461	55G	EMPLACED_CNTR	7/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	2/2/1988	5/30/2004	9/23/2001	5/30/2004
273	10017462	55G	EMPLACED_CNTR	6/6/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/12/1986		9/24/2001	
274	10017463	55G	EMPLACED_CNTR	6/1/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/11/1987		9/24/2001	
275	10017464	55G	EMPLACED_CNTR	5/24/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/7/1988		9/24/2001	
276	10017465	55G	EMPLACED_CNTR	7/11/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/26/1986		12/22/2001	
277	10017466	55G	EMPLACED_CNTR	6/19/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	2/24/1988		9/24/2001	
278	10017467	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/27/1988		9/24/2001	
279	10017468	55G	EMPLACED_CNTR	6/14/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/29/1987		12/22/2001	
280	10017469	55G	EMPLACED_CNTR	5/24/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/13/1988		12/24/2001	
281	10017470	55G	EMPLACED_CNTR	5/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/2/1988		12/22/2001	
282	10017471	55G	EMPLACED_CNTR	8/9/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/24/1987		9/24/2001	

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283	10017472	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/4/1988		12/22/2001	
284	10017473	55G	EMPLACED_CNTR	6/7/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/11/1987		12/24/2001	
285	10017474	55G	EMPLACED_CNTR	6/15/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/4/1988		12/22/2001	
286	10017475	55G	EMPLACED_CNTR	7/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/1/1987		12/22/2001	
287	10017476	55G	EMPLACED_CNTR	8/9/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/1/1988		12/22/2001	
288	10017477	55G	EMPLACED_CNTR	6/6/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/8/1988		12/22/2001	
289	10017478	55G	EMPLACED_CNTR	6/29/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/1/1987		12/22/2001	
290	10017479	55G	EMPLACED_CNTR	6/5/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/20/1988		12/24/2001	
291	10017480	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/13/1987		12/22/2001	
292	10017481	55G	EMPLACED_CNTR	6/8/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/12/1988		12/22/2001	
293	10017482	55G	EMPLACED_CNTR	6/5/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/27/1988		12/22/2001	
294	10017483	55G	EMPLACED_CNTR	7/11/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/2/1986		12/22/2001	
295	10017484	55G	EMPLACED_CNTR	3/26/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/13/1988		1/12/2006	4/24/2006
296	10017485	55G	EMPLACED_CNTR	5/24/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/1/1988		12/22/2001	
297	10017486	55G	EMPLACED_CNTR	5/10/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/26/1988		12/22/2001	
298	10017487	55G	EMPLACED_CNTR	7/15/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/17/1988		12/22/2001	
299	10017488	55G	EMPLACED_CNTR	6/19/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/19/1988		12/22/2001	
300	10017489	55G	EMPLACED_CNTR	6/6/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/27/1988		12/22/2001	
301	10017490	55G	EMPLACED_CNTR	7/28/2012 10:48	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/23/1987		12/22/2001	
302	10017491	55G	EMPLACED_CNTR	6/21/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/19/1988		12/22/2001	
303	10017492	55G	EMPLACED_CNTR	6/1/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/12/1988		12/22/2001	
304	10017493	55G	EMPLACED_CNTR	7/3/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/19/1986		12/22/2001	
305	10017494	55G	EMPLACED_CNTR	5/21/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	2/1/1988		12/22/2001	
306	10017495	55G	EMPLACED_CNTR	5/21/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/22/1987		12/22/2001	
307	10017496	55G	EMPLACED_CNTR	5/24/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/8/1987		12/22/2001	
308	10017497	55G	EMPLACED_CNTR	6/5/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/29/1988		12/22/2001	
309	10017498	55G	EMPLACED_CNTR	5/21/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/27/1988		9/24/2001	
310	10017499	55G	EMPLACED_CNTR	5/21/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/19/1988		12/22/2001	
311	10017500	55G	EMPLACED_CNTR	4/27/2011 19:51	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/2/1986		12/22/2001	
312	10017501	55G	EMPLACED_CNTR	5/21/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/19/1988		12/22/2001	
313	10017502	55G	EMPLACED_CNTR	5/14/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/1/1988		12/22/2001	
314	10017503	55G	EMPLACED_CNTR	5/21/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/29/1988		12/22/2001	
315	10017504	55G	EMPLACED_CNTR	5/21/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/18/1986		12/22/2001	
316	10017505	55G	EMPLACED_CNTR	5/21/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/25/1988		12/22/2001	
317	10017506	55G	EMPLACED_CNTR	5/21/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/16/1988		12/22/2001	
318	10017507	55G	EMPLACED_CNTR	7/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/22/1988		12/22/2001	
319	10017508	55G	EMPLACED_CNTR	5/24/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/4/1988		12/22/2001	
320	10017509	55G	EMPLACED_CNTR	5/23/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/29/1988		12/22/2001	
321	10017510	55G	EMPLACED_CNTR	10/10/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/28/1988		12/22/2001	
322	10017511	55G	EMPLACED_CNTR	6/8/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/30/1987		9/24/2001	
323	10017512	55G	EMPLACED_CNTR	5/23/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/4/1988		9/24/2001	
324	10017513	55G	EMPLACED_CNTR	7/28/2012 10:48	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/25/1987		12/24/2001	
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326	10017515	55G	EMPLACED_CNTR	8/9/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/7/1987		12/24/2001	
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328	10017517	55G	EMPLACED_CNTR	7/10/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/26/1986		12/24/2001	
329	10017518	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/27/1988		12/18/2001	

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330	10017519	55G	EMPLACED_CNTR	5/23/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/13/1988		12/24/2001	
331	10017520	55G	EMPLACED_CNTR	6/19/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/13/1986		12/18/2001	
332	10017521	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/12/1986		12/18/2001	
333	10017522	55G	EMPLACED_CNTR	6/14/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/13/1987		12/18/2001	
334	10017523	55G	EMPLACED_CNTR	5/23/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/12/1988		12/24/2001	
335	10017524	55G	EMPLACED_CNTR	7/3/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/18/1986		12/18/2001	
336	10017525	55G	EMPLACED_CNTR	7/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/7/1986		12/18/2001	1/22/2006
337	10017526	55G	EMPLACED_CNTR	7/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/12/1986		12/18/2001	
338	10017527	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/12/1986		12/18/2001	
339	10017528	55G	EMPLACED_CNTR	7/15/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/2/1987		12/18/2001	
340	10017529	55G	EMPLACED_CNTR	6/6/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/30/1986		12/24/2001	
341	10017551	55G	EMPLACED_CNTR	5/10/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/19/1988		12/20/2001	5/23/2004
342	10017552	55G	EMPLACED_CNTR	7/10/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/7/1986		12/20/2001	
343	10017553	55G	EMPLACED_CNTR	7/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/12/1987		12/20/2001	1/22/2006
344	10017554	55G	EMPLACED_CNTR	9/30/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/20/1986		12/20/2001	
345	10017555	55G	EMPLACED_CNTR	6/21/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/16/1988		12/20/2001	9/12/2004
346	10017556	55G	EMPLACED_CNTR	6/22/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/13/1986		12/20/2001	
347	10017557	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/14/1987		12/20/2001	9/12/2004
348	10017558	55G	EMPLACED_CNTR	5/23/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/19/1986		12/20/2001	
349	10017559	55G	EMPLACED_CNTR	5/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/12/1987		12/20/2001	
350	10017560	55G	EMPLACED_CNTR	5/23/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/14/1988		12/20/2001	
351	10017561	55G	EMPLACED_CNTR	6/1/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/17/1988		12/20/2001	9/12/2004
352	10017562	55G	EMPLACED_CNTR	4/20/2011 21:20	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/12/1986		12/20/2001	1/1/2003
353	10017563	55G	EMPLACED_CNTR	11/9/2011 21:45	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/23/1987	10/31/2009	9/12/2004	10/31/2009
354	10017564	55G	EMPLACED_CNTR	5/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/5/1986		9/24/2001	
355	10017565	55G	EMPLACED_CNTR	5/23/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/18/1988		12/20/2001	9/12/2004
356	10017566	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/19/1988		12/20/2001	
357	10017567	55G	EMPLACED_CNTR	6/20/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/3/1986		12/20/2001	9/12/2004
358	10017568	55G	EMPLACED_CNTR	4/20/2011 21:20	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/12/1988		12/20/2001	1/1/2003
359	10017569	55G	EMPLACED_CNTR	6/21/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/13/1986		12/21/2001	9/12/2004
360	10017570	55G	EMPLACED_CNTR	6/21/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/21/1988		9/12/2004	6/22/2006
361	10017571	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/12/1986		12/20/2001	
362	10017572	55G	EMPLACED_CNTR	6/11/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/26/1986		12/21/2001	9/11/2004
363	10017573	55G	EMPLACED_CNTR	7/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/16/1988		12/20/2001	
364	10017574	55G	EMPLACED_CNTR	5/22/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/26/1988		12/20/2001	
365	10017575	55G	EMPLACED_CNTR	4/20/2011 21:20	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/18/1986		12/20/2001	
366	10017576	55G	EMPLACED_CNTR	5/22/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/14/1988		12/20/2001	9/12/2004
367	10017577	55G	EMPLACED_CNTR	5/24/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/18/1986		12/20/2001	
368	10017578	55G	EMPLACED_CNTR	4/20/2011 21:20	ID-RF-S3150-A	CCP-AK-INL-005	S3150	2/10/1987		12/20/2001	
369	10017579	55G	EMPLACED_CNTR	5/23/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/24/1987		9/24/2001	
370	10017580	55G	EMPLACED_CNTR	5/21/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/6/1987		12/20/2001	
371	10017581	55G	EMPLACED_CNTR	6/22/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/12/1986		12/20/2001	
372	10017582	55G	EMPLACED_CNTR	5/21/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/19/1988		12/20/2001	
373	10017583	55G	EMPLACED_CNTR	11/2/2011 22:49	ID-RF-S3150-A	CCP-AK-INL-005	S3150	2/4/1987		12/23/2001	
374	10017584	55G	EMPLACED_CNTR	5/9/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/20/1987		12/20/2001	
375	10017585	55G	EMPLACED_CNTR	5/23/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/4/1987		12/20/2001	
376	10017586	55G	EMPLACED_CNTR	5/23/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/19/1988		12/20/2001	

	A	B	C	D	E	F	G	H	I	J	K
377	10017587	55G	EMPLACED_CNTR	5/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	2/4/1987		12/20/2001	
378	10017588	55G	EMPLACED_CNTR	6/15/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/17/1988		12/20/2001	
379	10017589	55G	EMPLACED_CNTR	6/21/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/18/1986		12/20/2001	
380	10017590	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	2/23/1987		12/20/2001	9/12/2004
381	10017591	55G	EMPLACED_CNTR	6/29/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/4/1988		12/20/2001	
382	10017592	55G	EMPLACED_CNTR	5/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/18/1988		12/20/2001	
383	10017593	55G	EMPLACED_CNTR	7/10/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/18/1987		12/20/2001	
384	10017594	55G	EMPLACED_CNTR	6/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/23/1987		1/2/2002	
385	10017595	55G	EMPLACED_CNTR	5/9/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/19/1988		9/12/2004	7/7/2006
386	10017596	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/12/1986		12/20/2001	
387	10017597	55G	EMPLACED_CNTR	9/8/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	2/1/1988		12/20/2001	9/12/2004
388	10017598	55G	EMPLACED_CNTR	8/9/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/22/1988		12/20/2001	
389	10017599	55G	EMPLACED_CNTR	7/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/7/1986		12/20/2001	11/2/2005
390	10017600	55G	EMPLACED_CNTR	5/23/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/30/1988		12/20/2001	
391	10017601	55G	EMPLACED_CNTR	5/10/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/13/1987		12/20/2001	
392	10017602	55G	EMPLACED_CNTR	7/15/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	2/12/1986		12/20/2001	
393	10017603	55G	EMPLACED_CNTR	10/10/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/24/1988		12/20/2001	9/12/2004
394	10017604	55G	EMPLACED_CNTR	6/22/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/23/1986		12/20/2001	
395	10017605	55G	EMPLACED_CNTR	5/23/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/23/1986		12/20/2001	
396	10017606	55G	EMPLACED_CNTR	5/23/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/10/1988		12/20/2001	
397	10017607	55G	EMPLACED_CNTR	5/23/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/27/1988		12/20/2001	
398	10017608	55G	EMPLACED_CNTR	6/21/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/13/1988		12/20/2001	
399	10017609	55G	EMPLACED_CNTR	5/23/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/27/1987		12/20/2001	
400	10017610	55G	EMPLACED_CNTR	6/15/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/27/1987		9/28/2001	
401	10017611	55G	EMPLACED_CNTR	6/8/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/27/1987		12/20/2001	9/12/2004
402	10017612	55G	EMPLACED_CNTR	11/2/2011 22:49	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/5/1988		9/24/2001	
403	10017613	55G	EMPLACED_CNTR	3/26/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/29/1988		12/20/2001	
404	10017614	55G	EMPLACED_CNTR	5/23/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/7/1988		12/23/2001	
405	10017615	55G	EMPLACED_CNTR	5/21/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/30/1986		12/20/2001	
406	10017616	55G	EMPLACED_CNTR	6/2/2011 21:27	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/12/1987		12/23/2001	
407	10017617	55G	EMPLACED_CNTR	5/21/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/9/1987		12/20/2001	
408	10017618	55G	EMPLACED_CNTR	5/21/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/2/1987		12/23/2001	
409	10017619	55G	EMPLACED_CNTR	5/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/20/1988		12/23/2001	
410	10017645	55G	EMPLACED_CNTR	6/19/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/3/1987		1/2/2002	
411	10017646	55G	EMPLACED_CNTR	5/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/12/1988		1/2/2002	
412	10017647	55G	EMPLACED_CNTR	6/29/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/24/1988		1/2/2002	
413	10017650	55G	EMPLACED_CNTR	11/9/2011 21:45	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/1/1987		1/2/2002	
414	10017651	55G	EMPLACED_CNTR	7/10/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/13/1986		1/2/2002	
415	10017652	55G	EMPLACED_CNTR	7/10/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/30/1986		1/2/2002	
416	10017653	55G	EMPLACED_CNTR	3/26/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/22/1988		1/2/2002	
417	10017654	55G	EMPLACED_CNTR	6/15/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/13/1986		1/2/2002	
418	10017655	55G	EMPLACED_CNTR	6/8/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/28/1988		1/2/2002	
419	10017656	55G	EMPLACED_CNTR	5/24/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/12/1988		1/2/2002	
420	10017657	55G	EMPLACED_CNTR	11/2/2011 22:49	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/1/1988		1/2/2002	
421	10017658	55G	EMPLACED_CNTR	6/22/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/24/1986		1/2/2002	
422	10017659	55G	EMPLACED_CNTR	6/1/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/23/1986		1/2/2002	
423	10017660	55G	EMPLACED_CNTR	6/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/16/1988		1/2/2002	

	A	B	C	D	E	F	G	H	I	J	K
424	10017661	55G	EMPLACED_CNTR	7/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/13/1986		1/2/2002	4/9/2006
425	10017662	55G	EMPLACED_CNTR	7/3/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/18/1988		1/2/2002	
426	10017663	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/18/1986		1/2/2002	
427	10017664	55G	EMPLACED_CNTR	6/6/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/9/1987	7/11/2006	7/11/2006	9/8/2006
428	10017665	55G	EMPLACED_CNTR	7/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/30/1987		1/2/2002	
429	10017666	55G	EMPLACED_CNTR	6/15/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/21/1986		1/2/2002	
430	10017667	55G	EMPLACED_CNTR	10/10/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/17/1988		1/2/2002	
431	10017668	55G	EMPLACED_CNTR	5/23/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/17/1988		12/23/2001	
432	10017669	55G	EMPLACED_CNTR	6/1/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/5/1987		9/28/2001	
433	10017671	55G	EMPLACED_CNTR	6/1/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/19/1987		9/27/2001	
434	10017672	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/5/1987		9/28/2001	
435	10017673	55G	EMPLACED_CNTR	5/21/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/13/1987		9/28/2001	
436	10017674	55G	EMPLACED_CNTR	7/3/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/4/1987		9/27/2001	
437	10017675	55G	EMPLACED_CNTR	6/14/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/14/1987		1/2/2002	
438	10017676	55G	EMPLACED_CNTR	7/10/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/29/1988		1/2/2002	
439	10017677	55G	EMPLACED_CNTR	6/22/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/13/1987		9/28/2001	
440	10017678	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/20/1986		9/28/2001	
441	10017679	55G	EMPLACED_CNTR	6/20/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/26/1986		9/27/2001	
442	10017680	55G	EMPLACED_CNTR	5/25/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/22/1988		12/23/2001	
443	10017681	55G	EMPLACED_CNTR	6/29/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	12/16/1986		9/27/2001	
444	10017682	55G	EMPLACED_CNTR	5/23/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/21/1988		12/20/2001	
445	10017683	55G	EMPLACED_CNTR	11/2/2011 22:49	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/11/1987		9/27/2001	1/1/2003
446	10017684	55G	EMPLACED_CNTR	5/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/24/1987		12/20/2001	
447	10017685	55G	EMPLACED_CNTR	6/21/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/13/1986		9/25/2001	
448	10017686	55G	EMPLACED_CNTR	7/3/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/6/1987		12/23/2001	
449	10017687	55G	EMPLACED_CNTR	5/11/2011 19:43	ID-RF-S3150-A	CCP-AK-INL-005	S3150	2/24/1988		9/23/2001	1/1/2003
450	10017688	55G	EMPLACED_CNTR	6/22/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/6/1987		12/23/2001	
451	10017689	55G	EMPLACED_CNTR	6/20/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	2/26/1988		9/23/2001	
452	10017690	55G	EMPLACED_CNTR	7/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/2/1986		12/23/2001	
453	10017691	55G	EMPLACED_CNTR	6/20/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	2/2/1988		9/23/2001	
454	10017692	55G	EMPLACED_CNTR	5/10/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/28/1988		9/27/2001	
455	10017693	55G	EMPLACED_CNTR	6/29/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/5/1988		9/27/2001	
456	10017694	55G	EMPLACED_CNTR	6/21/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/13/1986		9/27/2001	
457	10017695	55G	EMPLACED_CNTR	5/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/20/1987		12/23/2001	
458	10017696	55G	EMPLACED_CNTR	5/11/2011 19:43	ID-RF-S3150-A	CCP-AK-INL-005	S3150	12/16/1986		9/27/2001	
459	10017697	55G	EMPLACED_CNTR	5/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/30/1987		9/23/2001	
460	10017698	55G	EMPLACED_CNTR	5/11/2011 19:43	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/25/1987		12/23/2001	
461	10017699	55G	EMPLACED_CNTR	6/21/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/8/1988		9/23/2001	7/10/2005
462	10017700	55G	EMPLACED_CNTR	5/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/18/1988		12/23/2001	
463	10017701	55G	EMPLACED_CNTR	6/14/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/30/1987		9/27/2001	
464	10017702	55G	EMPLACED_CNTR	6/21/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/23/1987		12/23/2001	
465	10017703	55G	EMPLACED_CNTR	6/14/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/3/1986		9/27/2001	
466	10017704	55G	EMPLACED_CNTR	5/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/19/1988		12/23/2001	
467	10017705	55G	EMPLACED_CNTR	6/8/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/10/1988		9/23/2001	
468	10017706	55G	EMPLACED_CNTR	10/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/4/1988		12/20/2001	
469	10017707	55G	EMPLACED_CNTR	6/20/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/5/1987		9/25/2001	
470	10017708	55G	EMPLACED_CNTR	5/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/29/1988		12/20/2001	

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471	10017709	55G	EMPLACED_CNTR	3/26/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/30/1987		12/20/2001	
472	10017710	55G	EMPLACED_CNTR	5/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	2/4/1987		12/20/2001	
473	10017711	55G	EMPLACED_CNTR	5/24/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/9/1987		11/16/2001	
474	10017713	55G	EMPLACED_CNTR	7/3/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/5/1987		9/25/2001	
475	10017714	55G	EMPLACED_CNTR	5/11/2011 19:43	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/14/1987		12/20/2001	
476	10017715	55G	EMPLACED_CNTR	6/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/1/1988		11/10/2001	
477	10017716	55G	EMPLACED_CNTR	5/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/21/1988		12/20/2001	
478	10017717	55G	EMPLACED_CNTR	5/24/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/17/1988		11/11/2001	
479	10017718	55G	EMPLACED_CNTR	10/2/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/9/1987		12/20/2001	
480	10017719	55G	EMPLACED_CNTR	6/22/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/29/1988		12/20/2001	
481	10017720	55G	EMPLACED_CNTR	6/1/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/1/1987		11/11/2001	
482	10017721	55G	EMPLACED_CNTR	5/22/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/26/1988		12/20/2001	
483	10017722	55G	EMPLACED_CNTR	6/15/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/20/1988		11/12/2001	
484	10017723	55G	EMPLACED_CNTR	5/9/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/14/1988		12/20/2001	
485	10017835	55G	EMPLACED_CNTR	6/21/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/10/1988		9/17/2001	7/6/2004
486	10017837	55G	EMPLACED_CNTR	5/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/16/1988		9/17/2001	
487	10017838	55G	EMPLACED_CNTR	9/30/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	2/26/1988		9/17/2001	7/6/2004
488	10017839	55G	EMPLACED_CNTR	6/6/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/25/1987		12/18/2001	7/5/2004
489	10017840	55G	EMPLACED_CNTR	6/6/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/8/1988		9/28/2001	9/12/2004
490	10017841	55G	EMPLACED_CNTR	5/10/2011 22:06	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/10/1988		9/17/2001	9/12/2004
491	10017842	55G	EMPLACED_CNTR	6/21/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/2/1988		9/17/2001	9/12/2004
492	10017843	55G	EMPLACED_CNTR	8/9/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/21/1986		9/17/2001	9/12/2004
493	10017844	55G	EMPLACED_CNTR	6/6/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/2/1986		12/21/2001	9/12/2004
494	10017845	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/24/1986		12/21/2001	9/12/2004
495	10017846	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/26/1986		12/21/2001	9/12/2004
496	10017847	55G	EMPLACED_CNTR	5/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/21/1986		12/21/2001	9/12/2004
497	10017848	55G	EMPLACED_CNTR	5/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/18/1986		12/20/2001	9/12/2004
498	10017849	55G	EMPLACED_CNTR	5/10/2011 22:06	ID-RF-S3150-A	CCP-AK-INL-005	S3150	12/16/1986		12/21/2001	9/12/2004
499	10017850	55G	EMPLACED_CNTR	6/21/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/30/1986		12/21/2001	9/12/2004
500	10017851	55G	EMPLACED_CNTR	6/20/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/24/1986		12/21/2001	9/12/2004
501	10017852	55G	EMPLACED_CNTR	4/27/2011 22:05	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/25/1987		12/21/2001	9/12/2004
502	10017853	55G	EMPLACED_CNTR	7/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/2/1986		12/21/2001	9/12/2004
503	10017854	55G	EMPLACED_CNTR	8/9/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/9/1987		12/21/2001	9/12/2004
504	10017855	55G	EMPLACED_CNTR	7/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/19/1988		12/21/2001	9/12/2004
505	10017856	55G	EMPLACED_CNTR	6/7/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/17/1988		12/21/2001	9/12/2004
506	10017857	55G	EMPLACED_CNTR	8/9/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/23/1987		12/21/2001	9/12/2004
507	10017858	55G	EMPLACED_CNTR	5/14/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/7/1988		12/21/2001	9/12/2004
508	10017859	55G	EMPLACED_CNTR	5/10/2011 22:06	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/20/1988		12/21/2001	9/12/2004
509	10017860	55G	EMPLACED_CNTR	6/7/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/17/1987		12/21/2001	9/12/2004
510	10017861	55G	EMPLACED_CNTR	10/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/30/1987		12/21/2001	9/12/2004
511	10017862	55G	EMPLACED_CNTR	8/25/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/19/1988		12/21/2001	9/12/2004
512	10017863	55G	EMPLACED_CNTR	10/10/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/24/1987		12/21/2001	9/12/2004
513	10017864	55G	EMPLACED_CNTR	5/25/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/29/1988		12/21/2001	9/12/2004
514	10017865	55G	EMPLACED_CNTR	5/10/2011 22:06	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/18/1988		12/21/2001	9/12/2004
515	10017866	55G	EMPLACED_CNTR	6/21/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/20/1987		12/21/2001	9/12/2004
516	10017867	55G	EMPLACED_CNTR	9/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/12/1988		1/2/2002	
517	10017868	55G	EMPLACED_CNTR	4/27/2011 22:05	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/15/1988		12/21/2001	9/11/2004

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518	10017869	55G	EMPLACED_CNTR	6/15/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/22/1988		1/2/2002	
519	10017870	55G	EMPLACED_CNTR	7/3/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/22/1988		12/21/2001	9/12/2004
520	10017871	55G	EMPLACED_CNTR	6/22/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/24/1986		1/2/2002	
521	10017872	55G	EMPLACED_CNTR	6/10/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/14/1988		12/21/2001	9/11/2004
522	10017873	55G	EMPLACED_CNTR	5/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/8/1988		1/2/2002	
523	10017874	55G	EMPLACED_CNTR	5/23/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/14/1987		12/21/2001	9/11/2004
524	10017875	55G	EMPLACED_CNTR	8/9/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/31/1986		1/2/2002	
525	10017876	55G	EMPLACED_CNTR	5/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/25/1987		12/21/2001	9/11/2004
526	10017877	55G	EMPLACED_CNTR	6/6/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/2/1988		1/2/2002	
527	10017878	55G	EMPLACED_CNTR	6/21/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/14/1988		12/21/2001	9/11/2004
528	10017879	55G	EMPLACED_CNTR	5/10/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/31/1986		1/2/2002	
529	10017880	55G	EMPLACED_CNTR	11/9/2011 21:45	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/1/1986	11/1/2009	9/11/2004	11/1/2009
530	10017881	55G	EMPLACED_CNTR	7/3/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/26/1986		1/2/2002	
531	10017882	55G	EMPLACED_CNTR	5/26/2012 13:28	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/3/1988	5/24/2010	1/2/2002	5/24/2010
532	10017883	55G	EMPLACED_CNTR	6/7/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/9/1987		12/21/2001	9/11/2004
533	10017884	55G	EMPLACED_CNTR	6/21/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/14/1987		12/21/2001	9/11/2004
534	10017885	55G	EMPLACED_CNTR	7/15/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/5/1986		1/2/2002	
535	10017886	55G	EMPLACED_CNTR	11/9/2011 21:45	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/13/1987	10/31/2009	9/12/2004	10/31/2009
536	10017887	55G	EMPLACED_CNTR	6/10/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	12/16/1986		1/2/2002	
537	10017888	55G	EMPLACED_CNTR	4/27/2011 22:05	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/29/1988		12/21/2001	9/11/2004
538	10017889	55G	EMPLACED_CNTR	6/29/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/3/1988		1/2/2002	
539	10017890	Unknown	EMPLACED_CNTR	7/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/7/1986		12/20/2001	9/12/2004
540	10018024	55G	EMPLACED_CNTR	9/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/11/1987		12/17/2001	7/7/2004
541	10018025	55G	EMPLACED_CNTR	7/11/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	12/11/1987		12/17/2001	7/5/2004
542	10018026	55G	EMPLACED_CNTR	11/9/2011 21:45	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/19/1987	10/31/2009	7/6/2004	10/31/2009
543	10018027	55G	EMPLACED_CNTR	6/21/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/11/1987		12/17/2001	7/6/2004
544	10018028	55G	EMPLACED_CNTR	4/27/2011 22:05	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/23/1986		7/7/2004	6/28/2006
545	10018029	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/4/1986		12/17/2001	7/6/2004
546	10018030	55G	EMPLACED_CNTR	10/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/4/1987		12/17/2001	7/7/2004
547	10018031	55G	EMPLACED_CNTR	6/7/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/19/1987		12/17/2001	7/6/2004
548	10018032	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	12/18/1987		12/17/2001	7/5/2004
549	10018033	55G	EMPLACED_CNTR	8/9/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/30/1987			7/5/2004
550	10018034	55G	EMPLACED_CNTR	7/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/5/1988		12/17/2001	7/7/2004
551	10018035	55G	EMPLACED_CNTR	6/21/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/11/1987		12/17/2001	7/7/2004
552	10018036	55G	EMPLACED_CNTR	10/2/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/26/1988		12/17/2001	7/5/2004
553	10018037	55G	EMPLACED_CNTR	6/14/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/1/1987		12/17/2001	7/7/2004
554	10018038	55G	EMPLACED_CNTR	5/23/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/13/1988		12/17/2001	
555	10018039	55G	EMPLACED_CNTR	7/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/13/1986		12/17/2001	7/5/2004
556	10018040	55G	EMPLACED_CNTR	9/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/19/1987		12/17/2001	7/5/2004
557	10018041	55G	EMPLACED_CNTR	7/10/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/11/1987		12/17/2001	7/7/2004
558	10018042	55G	EMPLACED_CNTR	4/27/2011 22:05	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/21/1986		12/17/2001	7/7/2004
559	10018043	55G	EMPLACED_CNTR	8/25/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/18/1986		12/17/2001	5/27/2004
560	10018044	55G	EMPLACED_CNTR	6/6/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/15/1988		12/17/2001	7/5/2004
561	10018045	55G	EMPLACED_CNTR	8/9/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/7/1986		12/17/2001	7/7/2004
562	10018046	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/28/1987		12/17/2001	7/5/2004
563	10018047	55G	EMPLACED_CNTR	6/14/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/19/1987		12/17/2001	7/5/2004
564	10018048	55G	EMPLACED_CNTR	8/9/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/14/1988		12/17/2001	7/7/2004

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565	10018049	55G	EMPLACED_CNTR	10/15/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/12/1988		12/17/2001	7/5/2004
566	10018051	55G	EMPLACED_CNTR	6/15/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/30/1986		12/17/2001	7/5/2004
567	10018052	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/19/1986		12/17/2001	7/7/2004
568	10018053	55G	EMPLACED_CNTR	6/1/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/23/1986		12/17/2001	7/7/2004
569	10018054	55G	EMPLACED_CNTR	8/9/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/4/1986		12/17/2001	7/5/2004
570	10018056	55G	EMPLACED_CNTR	6/11/2011 14:10	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/14/1987		12/17/2001	7/7/2004
571	10018057	55G	EMPLACED_CNTR	6/10/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/30/1986		12/17/2001	7/7/2004
572	10018058	55G	EMPLACED_CNTR	7/3/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/11/1987		12/17/2001	7/7/2004
573	10018059	55G	EMPLACED_CNTR	7/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/3/1986		12/17/2001	7/7/2004
574	10018060	55G	EMPLACED_CNTR	8/9/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/14/1988		12/17/2001	7/5/2004
575	10018061	55G	EMPLACED_CNTR	7/10/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/19/1986		12/17/2001	7/7/2004
576	10018062	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/12/1986		12/18/2001	7/7/2004
577	10018063	55G	EMPLACED_CNTR	6/14/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/16/1988		12/18/2001	7/5/2004
578	10018064	55G	EMPLACED_CNTR	6/14/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/1/1987		12/18/2001	7/7/2004
579	10018065	55G	EMPLACED_CNTR	7/10/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/17/1986		12/17/2001	7/5/2004
580	10018066	55G	EMPLACED_CNTR	9/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/21/1986		12/18/2001	7/5/2004
581	10018067	55G	EMPLACED_CNTR	6/14/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/17/1987		12/18/2001	7/5/2004
582	10018068	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/1/1987		12/18/2001	7/5/2004
583	10018069	55G	EMPLACED_CNTR	8/9/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/30/1987		12/18/2001	7/5/2004
584	10018070	55G	EMPLACED_CNTR	5/23/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/24/1987		12/18/2001	
585	10018071	55G	EMPLACED_CNTR	7/11/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/21/1987		12/18/2001	
586	10018072	55G	EMPLACED_CNTR	5/23/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/20/1988		12/18/2001	
587	10018073	55G	EMPLACED_CNTR	6/20/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/23/1986		12/18/2001	
588	10018074	55G	EMPLACED_CNTR	6/10/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/13/1986		12/18/2001	
589	10018075	55G	EMPLACED_CNTR	6/19/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/13/1986		12/18/2001	
590	10018076	55G	EMPLACED_CNTR	7/11/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/20/1988		12/18/2001	7/6/2004
591	10018096	83G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/25/1987	4/1/1997		
592	10018097	83G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/20/1987	4/14/1997		
593	10018098	83G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/19/1986	3/29/1997		
594	10018167	55G	EMPLACED_CNTR	6/6/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/24/1986	7/3/2006	6/28/2004	7/3/2006
595	10018169	55G	EMPLACED_CNTR	7/10/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/13/1987		1/1/2002	5/28/2004
596	10018170	55G	EMPLACED_CNTR	10/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/2/1988		1/2/2002	6/28/2004
597	10018171	55G	EMPLACED_CNTR	8/9/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/26/1988		1/2/2002	6/28/2004
598	10018172	55G	EMPLACED_CNTR	6/10/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/7/1987		1/2/2002	6/28/2004
599	10018173	55G	EMPLACED_CNTR	6/10/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/20/1987		1/2/2002	6/28/2004
600	10018174	55G	EMPLACED_CNTR	9/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/17/1988		1/2/2002	6/27/2004
601	10018175	55G	EMPLACED_CNTR	8/9/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/14/1987		1/2/2002	6/27/2004
602	10018176	55G	EMPLACED_CNTR	9/8/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/11/1986		1/2/2002	6/27/2004
603	10018177	55G	EMPLACED_CNTR	9/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/24/1986		1/2/2002	6/27/2004
604	10018178	55G	EMPLACED_CNTR	10/2/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/30/1988		1/2/2002	6/27/2004
605	10018179	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/5/1986		1/2/2002	6/27/2004
606	10018180	55G	EMPLACED_CNTR	7/11/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/24/1986		1/2/2002	6/27/2004
607	10018181	55G	EMPLACED_CNTR	6/14/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/22/1988		1/2/2002	6/27/2004
608	10018182	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/24/1987		1/2/2002	6/27/2004
609	10018183	55G	EMPLACED_CNTR	7/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/29/1987		1/2/2002	6/27/2004
610	10018184	55G	EMPLACED_CNTR	6/14/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/29/1987		1/2/2002	6/27/2004
611	10018185	55G	EMPLACED_CNTR	9/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/26/1988		1/2/2002	6/27/2004

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612	10018186	55G	EMPLACED_CNTR	6/14/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/8/1988		1/2/2002	6/27/2004
613	10018187	55G	EMPLACED_CNTR	6/10/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/5/1988		1/2/2002	6/27/2004
614	10018188	55G	EMPLACED_CNTR	6/19/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/12/1988		1/2/2002	6/27/2004
615	10018189	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/12/1986		1/2/2002	6/28/2004
616	10018190	55G	EMPLACED_CNTR	6/21/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/27/1988		1/2/2002	6/28/2004
617	10018191	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/27/1988		1/2/2002	6/28/2004
618	10018264	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/26/1986	6/8/2011	12/18/2001	6/8/2011
619	10018265	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/1/1988		12/18/2001	7/6/2004
620	10018266	55G	EMPLACED_CNTR	5/14/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/28/1986		12/18/2001	7/25/2004
621	10018267	55G	EMPLACED_CNTR	6/8/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/17/1988		12/18/2001	7/6/2004
622	10018268	55G	EMPLACED_CNTR	6/21/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/16/1988		12/18/2001	7/6/2004
623	10018269	55G	EMPLACED_CNTR	6/19/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/1/1987		12/18/2001	7/6/2004
624	10018270	55G	EMPLACED_CNTR	5/21/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/23/1986		12/18/2001	7/25/2004
625	10018271	55G	EMPLACED_CNTR	5/25/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/12/1986	7/22/2005	7/8/2004	7/22/2005
626	10018272	55G	EMPLACED_CNTR	5/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/19/1987		12/18/2001	7/24/2004
627	10018273	55G	EMPLACED_CNTR	11/9/2011 21:45	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/14/1986	8/2/2005	7/25/2004	8/2/2005
628	10018274	55G	EMPLACED_CNTR	5/24/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/16/1988		12/18/2001	7/5/2004
629	10018275	55G	EMPLACED_CNTR	8/25/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/30/1986		12/18/2001	7/6/2004
630	10018276	55G	EMPLACED_CNTR	9/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/19/1986		12/18/2001	7/8/2004
631	10018277	55G	EMPLACED_CNTR	5/10/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/4/1988		12/18/2001	7/6/2004
632	10018278	55G	EMPLACED_CNTR	8/9/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/20/1988		12/18/2001	7/5/2004
633	10018279	55G	EMPLACED_CNTR	10/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/26/1986		12/18/2001	7/8/2004
634	10018280	55G	EMPLACED_CNTR	7/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/14/1986		12/18/2001	7/6/2004
635	10018284	55G	EMPLACED_CNTR	6/14/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/11/1986		12/18/2001	7/6/2004
636	10018285	55G	EMPLACED_CNTR	8/17/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/18/1986		12/18/2001	7/6/2004
637	10018286	55G	EMPLACED_CNTR	6/1/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/14/1988		12/18/2001	7/6/2004
638	10018287	55G	EMPLACED_CNTR	5/9/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/30/1986		12/18/2001	7/6/2004
639	10018288	55G	EMPLACED_CNTR	7/3/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/12/1986		12/18/2001	7/6/2004
640	10018319	55G	EMPLACED_CNTR	9/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/4/1988		12/18/2001	7/6/2004
641	10018320	55G	EMPLACED_CNTR	7/28/2012 10:48	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/26/1986		12/18/2001	7/6/2004
642	10018321	55G	EMPLACED_CNTR	7/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/16/1988		12/18/2001	7/6/2004
643	10018324	55G	EMPLACED_CNTR	8/17/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/18/1986		12/18/2001	7/6/2004
644	10018325	55G	EMPLACED_CNTR	5/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/2/1986		12/18/2001	7/6/2004
645	10018457	55G	EMPLACED_CNTR	8/17/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	12/22/1987		12/18/2001	7/6/2004
646	10018474	55G	EMPLACED_CNTR	7/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/24/1987		12/18/2001	5/27/2004
647	10018485	55G	EMPLACED_CNTR	5/23/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/26/1986		1/1/2002	5/27/2004
648	10018486	55G	EMPLACED_CNTR	9/1/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/24/1986		1/1/2002	5/28/2004
649	10018487	55G	EMPLACED_CNTR	5/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/24/1986		1/1/2002	5/28/2004
650	10018488	55G	EMPLACED_CNTR	6/6/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/14/1988		1/1/2002	6/28/2004
651	10018489	55G	EMPLACED_CNTR	6/19/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/3/1988		1/1/2002	6/28/2004
652	10018490	55G	EMPLACED_CNTR	7/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/16/1988		1/1/2002	5/28/2004
653	10018491	55G	EMPLACED_CNTR	5/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/11/1986		1/1/2002	6/28/2004
654	10018492	55G	EMPLACED_CNTR	8/17/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/24/1986		1/1/2002	6/28/2004
655	10018493	55G	EMPLACED_CNTR	5/23/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/22/1988		1/1/2002	5/28/2004
656	10018494	55G	EMPLACED_CNTR	9/8/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/13/1987		5/28/2004	6/27/2006
657	10018495	55G	EMPLACED_CNTR	7/10/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/21/1986		1/1/2002	6/28/2004
658	10018496	55G	EMPLACED_CNTR	5/25/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	2/26/1988		1/1/2002	6/28/2004

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659	10018497	55G	EMPLACED_CNTR	3/26/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/28/1986		1/1/2002	5/28/2004
660	10018498	55G	EMPLACED_CNTR	5/23/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/14/1988		1/1/2002	5/27/2004
661	10018499	55G	EMPLACED_CNTR	11/9/2011 21:45	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/30/1987	10/31/2009	6/28/2004	10/31/2009
662	10018500	55G	EMPLACED_CNTR	6/15/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/19/1986		1/1/2002	6/28/2004
663	10018501	55G	EMPLACED_CNTR	7/11/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/30/1986		1/1/2002	6/28/2004
664	10018502	55G	APPROVED_CERT		ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/2/1986	6/24/2006	5/28/2004	6/24/2006
665	10018503	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/2/1988	10/4/2005	1/1/2002	10/4/2005
666	10018504	55G	EMPLACED_CNTR	8/17/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/2/1988		1/1/2002	6/28/2004
667	10018505	55G	EMPLACED_CNTR	7/3/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/7/1986		1/1/2002	5/28/2004
668	10018506	55G	EMPLACED_CNTR	6/11/2011 14:10	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/7/1986		1/1/2002	6/28/2004
669	10018507	55G	EMPLACED_CNTR	6/2/2011 21:27	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/3/1988		1/1/2002	5/28/2004
670	10018508	55G	EMPLACED_CNTR	4/27/2011 22:05	ID-RF-S3150-A	CCP-AK-INL-005	S3150	2/23/1987	5/3/2005	5/28/2004	5/3/2005
671	10018509	55G	EMPLACED_CNTR	6/11/2011 14:10	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/4/1986		5/31/2004	1/12/2006
672	10018510	55G	EMPLACED_CNTR	4/27/2011 22:05	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/5/1987	6/6/2004	1/1/2002	6/6/2004
673	10018511	55G	EMPLACED_CNTR	6/20/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/16/1988		1/1/2002	6/27/2004
674	10018512	55G	EMPLACED_CNTR	6/6/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/26/1986		1/1/2002	5/31/2004
675	10018513	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/4/1986		1/1/2002	6/27/2004
676	10018514	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/4/1986		1/1/2002	6/28/2004
677	10018515	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/18/1986		1/1/2002	6/27/2004
678	10018516	55G	EMPLACED_CNTR	5/11/2011 19:43	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/12/1987		1/1/2002	6/27/2004
679	10018517	55G	EMPLACED_CNTR	6/6/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/2/1986		1/1/2002	6/27/2004
680	10018518	55G	EMPLACED_CNTR	6/14/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/3/1988		1/1/2002	6/28/2004
681	10018519	55G	EMPLACED_CNTR	6/21/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/19/1986		1/1/2002	6/28/2004
682	10018520	55G	EMPLACED_CNTR	6/14/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/14/1986		1/1/2002	6/27/2004
683	10018521	55G	EMPLACED_CNTR	6/14/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/3/1988		1/1/2002	6/28/2004
684	10018525	55G	EMPLACED_CNTR	7/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	12/18/1987		12/31/2001	5/30/2004
685	10018526	55G	EMPLACED_CNTR	7/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/5/1986		12/31/2001	5/29/2004
686	10018528	55G	EMPLACED_CNTR	6/20/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/7/1987		12/31/2001	5/29/2004
687	10018529	55G	EMPLACED_CNTR	9/8/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	12/16/1986		12/31/2001	5/30/2004
688	10018530	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/11/1988		1/1/2002	5/30/2004
689	10018531	55G	EMPLACED_CNTR	6/21/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/12/1986		12/31/2001	5/31/2004
690	10018532	55G	EMPLACED_CNTR	7/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	2/23/1987		12/31/2001	5/30/2004
691	10018533	55G	EMPLACED_CNTR	6/2/2011 21:27	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/20/1986		1/1/2002	5/30/2004
692	10018534	55G	EMPLACED_CNTR	5/21/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/13/1987		1/1/2002	5/30/2004
693	10018563	55G	EMPLACED_CNTR	6/7/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	2/10/1987		12/31/2001	5/29/2004
694	10018564	55G	EMPLACED_CNTR	9/1/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	2/23/1987		1/1/2002	5/29/2004
695	10018565	55G	EMPLACED_CNTR	5/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/13/1986		12/31/2001	5/30/2004
696	10018566	55G	EMPLACED_CNTR	7/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/13/1987		12/31/2001	5/27/2004
697	10018567	55G	EMPLACED_CNTR	6/7/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	2/23/1987		12/31/2001	5/28/2004
698	10018568	55G	EMPLACED_CNTR	6/21/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	2/10/1987		12/31/2001	5/31/2004
699	10018569	55G	EMPLACED_CNTR	7/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/31/1986		12/31/2001	5/29/2004
700	10018570	55G	EMPLACED_CNTR	9/1/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/27/1987		12/31/2001	5/30/2004
701	10018571	55G	EMPLACED_CNTR	5/21/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/23/1986		1/1/2002	5/30/2004
702	10018572	55G	EMPLACED_CNTR	8/25/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/23/1986		1/1/2002	5/29/2004
703	10018573	55G	EMPLACED_CNTR	9/30/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/2/1988		1/1/2002	5/30/2004
704	10018574	55G	EMPLACED_CNTR	9/8/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/8/1987		1/1/2002	5/31/2004
705	10018575	55G	EMPLACED_CNTR	6/21/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/11/1986		1/1/2002	5/31/2004

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706	10018576	55G	EMPLACED_CNTR	6/11/2011 14:10	ID-RF-S3150-A	CCP-AK-INL-005	S3150	2/26/1988		5/30/2004	6/27/2006
707	10018577	55G	EMPLACED_CNTR	9/1/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/15/1988		1/1/2002	5/30/2004
708	10018578	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/24/1986		1/1/2002	5/31/2004
709	10018579	55G	EMPLACED_CNTR	6/7/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/15/1988		1/1/2002	5/30/2004
710	10018580	55G	EMPLACED_CNTR	6/20/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/13/1987		1/1/2002	5/30/2004
711	10018581	55G	EMPLACED_CNTR	6/22/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/5/1987		1/1/2002	5/29/2004
712	10018582	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/5/1988		1/1/2002	5/29/2004
713	10018583	55G	EMPLACED_CNTR	8/25/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/5/1987		1/1/2002	5/30/2004
714	10018584	55G	EMPLACED_CNTR	8/17/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	12/16/1986		1/1/2002	5/29/2004
715	10018585	55G	EMPLACED_CNTR	8/14/2011 13:07	ID-RF-S3150-A	CCP-AK-INL-005	S3150	2/23/1987	6/1/2004	1/1/2002	6/1/2004
716	10018587	55G	EMPLACED_CNTR	6/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	12/16/1986		1/1/2002	5/31/2004
717	10018589	55G	EMPLACED_CNTR	7/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/21/1986		1/1/2002	6/28/2004
718	10018590	55G	EMPLACED_CNTR	6/19/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/13/1986		1/1/2002	6/28/2004
719	10018591	55G	EMPLACED_CNTR	7/1/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/13/1986		1/1/2002	6/28/2004
720	10018592	55G	EMPLACED_CNTR	8/25/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/13/1986		1/1/2002	6/28/2004
721	10018593	55G	EMPLACED_CNTR	6/15/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/13/1986		1/1/2002	6/28/2004
722	10018594	55G	EMPLACED_CNTR	7/28/2012 10:48	ID-RF-S3150-A	CCP-AK-INL-005	S3150	2/17/1986		1/1/2002	
723	10018595	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/23/1986		1/2/2002	6/28/2004
724	10018596	55G	EMPLACED_CNTR	8/17/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/4/1986		1/1/2002	6/27/2004
725	10018597	55G	EMPLACED_CNTR	9/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/5/1987		1/1/2002	6/27/2004
726	10018598	55G	EMPLACED_CNTR	6/5/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/18/1986		1/1/2002	6/27/2004
727	10018676	55G	EMPLACED_CNTR	9/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/19/1986		12/29/2001	
728	10018677	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/23/1986		12/31/2001	
729	10018678	55G	EMPLACED_CNTR	5/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/19/1986		12/31/2001	
730	10018679	55G	EMPLACED_CNTR	6/2/2011 21:27	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/31/1986		12/31/2001	
731	10018680	55G	EMPLACED_CNTR	6/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/30/1986		12/30/2001	
732	10018681	55G	EMPLACED_CNTR	6/7/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/2/1986		12/31/2001	
733	10018682	55G	EMPLACED_CNTR	5/26/2012 13:28	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/2/1986	11/1/2009	12/31/2001	11/1/2009
734	10018683	55G	EMPLACED_CNTR	5/26/2012 13:28	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/2/1986		12/31/2001	
735	10018684	55G	EMPLACED_CNTR	7/28/2012 10:48	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/19/1986		12/31/2001	
736	10018685	55G	EMPLACED_CNTR	5/11/2011 19:43	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/19/1986		12/31/2001	1/1/2003
737	10018686	55G	EMPLACED_CNTR	5/11/2011 19:43	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/18/1986		12/31/2001	
738	10018687	55G	EMPLACED_CNTR	10/15/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/2/1986		12/31/2001	
739	10018688	55G	EMPLACED_CNTR	6/2/2011 21:27	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/26/1986		12/31/2001	4/6/2006
740	10018689	55G	EMPLACED_CNTR	6/20/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/18/1986		12/31/2001	
741	10018690	55G	EMPLACED_CNTR	6/2/2011 21:27	ID-RF-S3150-A	CCP-AK-INL-005	S3150	2/17/1986		12/31/2001	
742	10018691	55G	EMPLACED_CNTR	5/23/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/19/1986		12/31/2001	
743	10018692	55G	EMPLACED_CNTR	5/10/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/2/1986		12/31/2001	
744	10018693	55G	EMPLACED_CNTR	8/9/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/2/1986		12/31/2001	
745	10018694	55G	EMPLACED_CNTR	5/23/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/20/1986		12/31/2001	
746	10018695	55G	EMPLACED_CNTR	7/28/2012 10:48	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/30/1986		12/31/2001	
747	10018696	55G	EMPLACED_CNTR	7/11/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/21/1986		12/31/2001	
748	10018698	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/2/1986		12/31/2001	
749	10018699	55G	EMPLACED_CNTR	9/1/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	12/16/1987		12/31/2001	
750	10018700	55G	EMPLACED_CNTR	5/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/4/1986		12/31/2001	
751	10018701	55G	EMPLACED_CNTR	6/15/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/19/1986		12/31/2001	
752	10018702	55G	EMPLACED_CNTR	10/1/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/19/1986		12/31/2001	

	A	B	C	D	E	F	G	H	I	J	K
753	10018703	55G	EMPLACED_CNTR	6/29/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/10/1987		12/31/2001	
754	10018704	55G	EMPLACED_CNTR	7/10/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/2/1986		12/31/2001	
755	10018705	55G	EMPLACED_CNTR	5/23/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/19/1986		12/31/2001	
756	10018706	55G	EMPLACED_CNTR	5/23/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/26/1986		12/31/2001	
757	10018707	55G	EMPLACED_CNTR	7/11/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/23/1986		12/31/2001	
758	10018708	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/28/1986		12/31/2001	
759	10018709	55G	EMPLACED_CNTR	10/15/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/28/1986		12/31/2001	
760	10018710	55G	EMPLACED_CNTR	7/11/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/19/1986		12/31/2001	
761	10018711	55G	EMPLACED_CNTR	5/23/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/20/1986		12/31/2001	
762	10018712	55G	EMPLACED_CNTR	5/14/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/2/1986		12/31/2001	
763	10018713	55G	EMPLACED_CNTR	5/24/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/18/1986		12/31/2001	
764	10018714	55G	EMPLACED_CNTR	6/15/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/26/1986		12/31/2001	
765	10018715	55G	EMPLACED_CNTR	6/8/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/30/1986		12/31/2001	
766	10018716	55G	EMPLACED_CNTR	5/24/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/20/1986		12/31/2001	
767	10018717	55G	EMPLACED_CNTR	7/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/19/1986		12/31/2001	
768	10018718	55G	EMPLACED_CNTR	3/30/2011 11:08	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/26/1986		12/31/2001	
769	10018719	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/10/1987		12/31/2001	5/26/2004
770	10018720	55G	EMPLACED_CNTR	9/8/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/3/1987		12/31/2001	
771	10018721	55G	EMPLACED_CNTR	5/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	12/11/1987		12/31/2001	
772	10018722	55G	EMPLACED_CNTR	7/26/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/11/1987		12/31/2001	
773	10018723	55G	EMPLACED_CNTR	5/11/2011 19:43	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/14/1986		12/31/2001	
774	10018724	55G	EMPLACED_CNTR	7/3/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/23/1986		12/31/2001	
775	10018725	55G	EMPLACED_CNTR	9/1/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/24/1987		12/31/2001	
776	10018726	55G	EMPLACED_CNTR	6/15/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	2/10/1987		12/31/2001	1/1/2003
777	10018727	55G	EMPLACED_CNTR	5/10/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/23/1986		12/31/2001	1/1/2003
778	10018838	55G	EMPLACED_CNTR	5/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/23/1986		12/29/2001	
779	10018839	55G	EMPLACED_CNTR	6/2/2011 21:27	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/21/1986		12/29/2001	5/27/2004
780	10018840	55G	EMPLACED_CNTR	5/23/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/25/1987		12/29/2001	
781	10018841	55G	EMPLACED_CNTR	6/5/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/20/1986		12/29/2001	
782	10018842	55G	EMPLACED_CNTR	5/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	12/11/1987		12/29/2001	
783	10018843	55G	EMPLACED_CNTR	8/25/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/21/1987		12/29/2001	11/1/2005
784	10018844	55G	EMPLACED_CNTR	6/6/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/26/1986		12/29/2001	
785	10018845	55G	EMPLACED_CNTR	5/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/20/1986		12/29/2001	
786	10018846	55G	EMPLACED_CNTR	5/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/21/1987		12/29/2001	
787	10018847	55G	EMPLACED_CNTR	6/2/2011 21:27	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/25/1987		12/29/2001	
788	10018848	55G	EMPLACED_CNTR	9/1/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	7/30/1987		12/29/2001	
789	10018849	55G	EMPLACED_CNTR	7/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/19/1986		12/29/2001	4/9/2006
790	10018850	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/24/1986		12/29/2001	
791	10018851	55G	EMPLACED_CNTR	6/6/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/19/1986		12/29/2001	
792	10018852	55G	EMPLACED_CNTR	5/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/19/1986		12/29/2001	
793	10018853	55G	EMPLACED_CNTR	7/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/20/1988		12/24/2001	4/7/2006
794	10018854	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/18/1987		12/24/2001	
795	10018855	55G	EMPLACED_CNTR	7/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/14/1986		12/29/2001	
796	10018856	55G	EMPLACED_CNTR	7/11/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	12/22/1987		12/29/2001	
797	10018857	55G	EMPLACED_CNTR	5/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/11/1986		12/24/2001	
798	10018858	55G	EMPLACED_CNTR	10/15/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/20/1988		12/24/2001	
799	10018859	55G	EMPLACED_CNTR	7/10/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/20/1986		12/24/2001	

	A	B	C	D	E	F	G	H	I	J	K
800	10018860	55G	EMPLACED_CNTR	5/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/3/1986		12/24/2001	
801	10018861	55G	EMPLACED_CNTR	5/22/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/26/1986		12/24/2001	
802	10018862	55G	EMPLACED_CNTR	9/30/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	2/4/1987		12/24/2001	
803	10018863	55G	EMPLACED_CNTR	6/7/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/11/1988		12/24/2001	
804	10018864	55G	EMPLACED_CNTR	5/22/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/5/1986		12/24/2001	
805	10018865	55G	EMPLACED_CNTR	5/21/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/28/1986		12/31/2001	
806	10018866	55G	EMPLACED_CNTR	6/15/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/13/1986		12/31/2001	1/1/2003
807	10018867	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/26/1987		12/29/2001	
808	10018868	55G	EMPLACED_CNTR	5/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/5/1988		12/24/2001	
809	10018869	55G	EMPLACED_CNTR	5/14/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/7/1986		12/31/2001	
810	10018870	55G	EMPLACED_CNTR	6/20/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/26/1986		12/31/2001	
811	10018871	55G	EMPLACED_CNTR	5/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/26/1986		12/31/2001	
812	10018872	55G	EMPLACED_CNTR	10/20/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/28/1986		12/31/2001	
813	10018873	55G	EMPLACED_CNTR	5/14/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/19/1986		12/29/2001	
814	10018874	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/11/1988		12/29/2001	
815	10018875	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/7/1986		12/31/2001	
816	10018876	55G	EMPLACED_CNTR	3/30/2011 21:56	ID-RF-S3150-A	CCP-AK-INL-005	S3150	12/16/1986		12/31/2001	
817	10018877	55G	EMPLACED_CNTR	5/10/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/28/1986		12/24/2001	
818	10018878	55G	EMPLACED_CNTR	5/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/13/1987		12/24/2001	
819	10018879	55G	EMPLACED_CNTR	5/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/14/1986		12/29/2001	
820	10018880	55G	EMPLACED_CNTR	5/10/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/2/1986		12/29/2001	
821	10018881	55G	EMPLACED_CNTR	4/20/2011 21:20	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/19/1986		12/29/2001	
822	10018882	55G	EMPLACED_CNTR	10/18/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/2/1986		12/29/2001	
823	10018883	55G	EMPLACED_CNTR	5/14/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/13/1986		12/29/2001	
824	10018884	55G	EMPLACED_CNTR	10/12/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/2/1986		12/29/2001	
825	10018885	55G	EMPLACED_CNTR	6/21/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/20/1986		12/29/2001	
826	10018886	55G	EMPLACED_CNTR	8/18/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	12/21/1987		12/30/2001	
827	10018887	55G	EMPLACED_CNTR	10/10/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	12/16/1987		12/29/2001	
828	10018909	55G	EMPLACED_CNTR	7/11/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/26/1986		12/30/2001	
829	10018910	55G	EMPLACED_CNTR	5/24/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/13/1987		12/29/2001	
830	10018911	55G	EMPLACED_CNTR	5/26/2012 13:28	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/4/1986	7/3/2006	12/29/2001	7/3/2006
831	10018912	55G	EMPLACED_CNTR	5/26/2012 13:28	ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/17/1986	6/5/2004	12/29/2001	1/6/2005
832	10018913	55G	EMPLACED_CNTR	10/15/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/13/1987		12/29/2001	
833	10020692	83G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/11/1987	6/10/2000		
834	10023698	83G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/14/1986	4/1/1997		
835	10023791	83G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/20/1988			
836	10023832	83G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/13/1986			
837	10027453	55G	EMPLACED_CNTR	8/18/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/31/1986		12/20/2001	
838	10027454	55G	EMPLACED_CNTR	7/25/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	6/1/1988		12/20/2001	
839	10027455	55G	EMPLACED_CNTR	8/18/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/31/1986		12/20/2001	
840	10027456	55G	EMPLACED_CNTR	7/26/2006	ID-RF-S3150-A	CCP-AK-INL-005	S3150	5/13/1987		12/20/2001	
841	10031734	55G	EMPLACED_CNTR	6/6/2007	ID-RF-S3150-A	CCP-AK-INL-005	S3150	3/19/1986		3/27/1997	11/28/2005
842	10033750	83G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/4/1987			
843	10033751	83G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/5/1988			
844	10033752	83G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/30/1986			
845	10033753	83G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/5/1986			
846	10033754	83G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	11/18/1987			

	A	B	C	D	E	F	G	H	I	J	K
847	10033756	83G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	10/24/1986			
848	10033757	83G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	8/28/1986			
849	10033758	83G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/12/1986			
850	10308665	55G	APPROVED_CERT		ID-RF-S3150-A	CCP-AK-INL-005	S3150	4/22/1988	8/15/2009		8/15/2009
851	10392315	83GOP			ID-RF-S3150-A	CCP-AK-INL-005	S3150	1/7/2011		1/7/2011	
852	10394159	55G			ID-RF-S3150-A	CCP-AK-INL-005	S3150	12/16/1986	1/20/2011		1/20/2011
853	IDRF002500526	Unknown			ID-RF-S3150-A	CCP-AK-INL-005	S3150	9/14/1988		12/17/2001	

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	A	B	C	D	E	F	G	H	I	J	K
1	CONTAINERID	CONTAINER_TYPE	LINER_LID	WDS_STATUS	DISPOSAL_DATE	WASTESTREAM	AK_REPORT	WASTE_MATRIX_CODE	CLOSUREDATE	CLOSUREDATE1	VENTDATE
2	10424127	55G	FALSE	EMPLACED_CNTR	1/7/2012 14:14	ID-AECHDM	CCP-AK-INL-025	S5400	11/22/2010	12/15/2011	11/22/2010
3	RW47763	55G	FALSE	EMPLACED_CNTR	12/23/2011 10:28	ID-AECHDM	CCP-AK-INL-025	S5400	7/21/2010		7/21/2010
4	RW47765	55G	FALSE	EMPLACED_CNTR	12/23/2011 13:31	ID-AECHDM	CCP-AK-INL-025	S5400	7/23/2010		7/23/2010
5	RW47766	55G	FALSE	EMPLACED_CNTR	12/23/2011 13:31	ID-AECHDM	CCP-AK-INL-025	S5400	7/26/2010		7/26/2010
6	RW47768	55G	FALSE	EMPLACED_CNTR	12/23/2011 13:31	ID-AECHDM	CCP-AK-INL-025	S5400	7/29/2010		7/29/2010
7	RW47769	55G	FALSE	EMPLACED_CNTR	12/23/2011 13:31	ID-AECHDM	CCP-AK-INL-025	S5400	8/3/2010		8/3/2010
8	RW47777	55G	FALSE	EMPLACED_CNTR	12/23/2011 13:31	ID-AECHDM	CCP-AK-INL-025	S5400	8/19/2010		8/19/2010
9	RW47778	55G	FALSE	EMPLACED_CNTR	12/23/2011 13:31	ID-AECHDM	CCP-AK-INL-025	S5400	8/23/2010		8/23/2010
10	RW47780	55G	FALSE	EMPLACED_CNTR	12/23/2011 13:31	ID-AECHDM	CCP-AK-INL-025	S5400	8/24/2010		8/24/2010
11	RW47781	55G	FALSE	EMPLACED_CNTR	12/23/2011 13:31	ID-AECHDM	CCP-AK-INL-025	S5400	8/25/2010		8/25/2010
12	RW47783	55G	FALSE	EMPLACED_CNTR	12/23/2011 13:31	ID-AECHDM	CCP-AK-INL-025	S5400	8/30/2010		8/30/2010
13	RW47784	55G	FALSE	EMPLACED_CNTR	12/23/2011 13:31	ID-AECHDM	CCP-AK-INL-025	S5400	8/31/2010		8/31/2010
14	RW47785	55G	FALSE	EMPLACED_CNTR	12/23/2011 13:31	ID-AECHDM	CCP-AK-INL-025	S5400	9/1/2010		9/1/2010
15	RW47786	55G	FALSE	EMPLACED_CNTR	1/7/2012 12:52	ID-AECHDM	CCP-AK-INL-025	S5400	9/8/2010		9/8/2010
16	RW47787	55G	FALSE	EMPLACED_CNTR	1/7/2012 12:52	ID-AECHDM	CCP-AK-INL-025	S5400	9/9/2010		9/9/2010
17	RW47963	55G	FALSE	EMPLACED_CNTR	1/7/2012 12:52	ID-AECHDM	CCP-AK-INL-025	S5400	9/20/2010		9/20/2010
18	RW47969	55G	FALSE	EMPLACED_CNTR	1/7/2012 12:52	ID-AECHDM	CCP-AK-INL-025	S5400	9/27/2010		9/27/2010
19	RW47970	55G	FALSE	EMPLACED_CNTR	1/7/2012 12:52	ID-AECHDM	CCP-AK-INL-025	S5400	9/29/2010		9/29/2010
20	RW47976	55G	FALSE	EMPLACED_CNTR	1/7/2012 12:52	ID-AECHDM	CCP-AK-INL-025	S5400	10/15/2010		10/15/2010
21	RW48074	55G	FALSE	EMPLACED_CNTR	1/7/2012 12:52	ID-AECHDM	CCP-AK-INL-025	S5400	11/2/2010		11/2/2010
22	RW48076	55G	FALSE	EMPLACED_CNTR	1/7/2012 12:52	ID-AECHDM	CCP-AK-INL-025	S5400	11/4/2010		11/4/2010
23	RW48077	55G	FALSE	EMPLACED_CNTR	1/7/2012 12:52	ID-AECHDM	CCP-AK-INL-025	S5400	11/10/2010		11/10/2010
24	RW48080	55G	FALSE	EMPLACED_CNTR	1/7/2012 12:52	ID-AECHDM	CCP-AK-INL-025	S5400	8/12/2011		8/12/2011
25	RW48081	55G	FALSE	EMPLACED_CNTR	1/7/2012 12:52	ID-AECHDM	CCP-AK-INL-025	S5400	11/24/2010		11/24/2010
26	RW48189	55G	FALSE	EMPLACED_CNTR	1/7/2012 12:52	ID-AECHDM	CCP-AK-INL-025	S5400	12/15/2010		12/15/2010
27	RW48191	55G	FALSE	EMPLACED_CNTR	1/7/2012 12:52	ID-AECHDM	CCP-AK-INL-025	S5400	4/29/2011		4/29/2011
28	RW48192	55G	FALSE	EMPLACED_CNTR	12/23/2011 10:28	ID-AECHDM	CCP-AK-INL-025	S5400	12/20/2010		12/20/2010
29	RW48198	55G	FALSE	EMPLACED_CNTR	12/23/2011 10:28	ID-AECHDM	CCP-AK-INL-025	S5400	3/3/2011		3/3/2011
30	RW48199	55G	FALSE	EMPLACED_CNTR	12/23/2011 10:28	ID-AECHDM	CCP-AK-INL-025	S5400	3/28/2011		3/28/2011
31	RW48200	55G	FALSE	EMPLACED_CNTR	12/23/2011 10:26	ID-AECHDM	CCP-AK-INL-025	S5400	3/29/2011		3/29/2011
32	RW48201	55G	FALSE	EMPLACED_CNTR	1/7/2012 12:52	ID-AECHDM	CCP-AK-INL-025	S5400	4/14/2011		4/14/2011
33	RW48202	55G	FALSE	EMPLACED_CNTR	12/23/2011 10:26	ID-AECHDM	CCP-AK-INL-025	S5400	4/15/2011		4/15/2011
34	RW48203	55G	FALSE	EMPLACED_CNTR	12/23/2011 10:28	ID-AECHDM	CCP-AK-INL-025	S5400	8/19/2011		8/19/2011
35	RW48204	55G	FALSE	EMPLACED_CNTR	12/23/2011 10:28	ID-AECHDM	CCP-AK-INL-025	S5400	9/10/2011		9/10/2011
36	RW48205	55G	FALSE	EMPLACED_CNTR	12/23/2011 10:26	ID-AECHDM	CCP-AK-INL-025	S5400	4/22/2011		4/22/2011
37	RW48206	55G	FALSE	EMPLACED_CNTR	12/23/2011 10:26	ID-AECHDM	CCP-AK-INL-025	S5400	4/26/2011		4/26/2011
38	RW48207	55G	FALSE	EMPLACED_CNTR	12/23/2011 10:26	ID-AECHDM	CCP-AK-INL-025	S5400	8/17/2011		8/17/2011
39	RW49571	55G	FALSE	EMPLACED_CNTR	12/23/2011 10:26	ID-AECHDM	CCP-AK-INL-025	S5400	8/18/2011		8/18/2011
40	RW49572	55G	FALSE	EMPLACED_CNTR	12/23/2011 10:26	ID-AECHDM	CCP-AK-INL-025	S5400	8/20/2011		8/20/2011
41	RW49573	55G	FALSE	EMPLACED_CNTR	12/23/2011 10:28	ID-AECHDM	CCP-AK-INL-025	S5400	9/11/2011		9/11/2011

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	A	B	C	D	E	F	N
1	CONTAINERID	WASTESTREAM	AK_REPORT	WASTE_MA	VENTDATE	CLOSUREDATE	COMMENT
2							
3	10052717B	ID-RF-S5410-RH	CCP-AK-INL-640	S5400	4/22/2013	4/22/2013	Hist 83-gal ID: 10053629; Hist 55-gal ID: 10052717; Alt Hist ID: IDRF004101047; HIst Closure Date: 12/14/1979
4	10052717A	ID-RF-S5410-RH	CCP-AK-INL-640	S5400	4/22/2013	4/22/2013	Hist 83-gal ID: 10053629; Hist 55-gal ID: 10052717; Alt Hist ID: IDRF004101047; HIst Closure Date: 12/14/1979
5	10061159B	ID-RF-S5410-RH	CCP-AK-INL-640	S5400	4/18/2013	4/18/2013	Hist 83-gal ID: 10061159; Hist 55-gal ID: 10061159; Alt Hist ID: IDRF004100920; Hist Closure Date: 8/30/1979.
6	FCO100B-3	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	4/3/2013	4/3/2013	Hist ID: FCO100B; Alt Hist ID: SL-019; Hist Closure Date: 4/1/2011.
7	FCO101A-3	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	3/25/2013	3/25/2013	Hist ID: FCO101A; Alt Hist ID: FCO101; Hist Closure Date: 4/1/2011
8	FCO100B-4	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	3/25/2013	3/25/2013	Hist ID: FCO100B; Alt Hist ID: SL-019; Hist Closure Date: 4/1/2011.
9	FCO100B-2	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	3/25/2013	3/25/2013	Hist ID: FCO100B; Alt Hist ID: SL-019; Hist Closure Date: 4/1/2011.
10	FCO100B-1	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	3/25/2013	3/25/2013	Hist ID: FCO100B; Alt Hist ID: SL-019; Hist Closure Date: 4/1/2011.
11	FCO101A-2	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	3/21/2013	3/21/2013	Hist ID: FCO101A; Alt Hist ID: FCO101; Hist Closure Date: 4/1/2011
12	FCO101A-1	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	3/21/2013	3/21/2013	Hist ID: FCO101A; Alt Hist ID: FCO101; Hist Closure Date: 4/1/2011
13	FCO100C-4	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	3/21/2013	3/21/2013	Hist ID: FCO100C; Alt Hist ID: SL-019; Hist Closure Date: 4/1/2011
14	FCO100C-3	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	3/20/2013	3/20/2013	Hist ID: FCO100C; Alt Hist ID: SL-019; Hist Closure Date: 4/1/2011
15	FCO100C-2	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	3/13/2013	3/13/2013	Hist ID: FCO100C; Alt Hist ID: SL-019; Hist Closure Date: 4/1/2011
16	FCO100C-1	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	3/13/2013	3/13/2013	Hist ID: FCO100C; Alt Hist ID: SL-019; Hist Closure Date: 4/1/2011
17	FCO100A-1	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	3/13/2013	3/13/2013	Hist ID: FCO100A; Alt Hist ID: SL-019; Hist Closure Date: 4/1/2011
18	FCO100A-4	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	3/12/2013	3/12/2013	Hist ID: FCO100A; Alt Hist ID: SL-019; Hist Closure Date: 4/1/2011
19	FCO100A-3	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	3/12/2013	3/12/2013	Hist ID: FCO100A; Alt Hist ID: SL-019; Hist Closure Date: 4/1/2011
20	FCO100A-2	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	3/12/2013	3/12/2013	Hist ID: FCO100A; Alt Hist ID: SL-019; Hist Closure Date: 4/1/2011
21	QQ-36A-1	ID-MFC-SOLID-RH	CCP-AK-INL-540	S5400	2/25/2013	2/25/2013	Hist ID: QQ-36; Alt Hist ID: 77-193; Hist Closure Date: 8/23/1977
22	OO-25A-1	ID-MFC-SOLID-RH	CCP-AK-INL-540	S5400	2/25/2013	2/25/2013	Hist ID: OO-25; Alt Hist ID: 77-82; Hist Closure Date: 4/13/1977
23	FF-32A-1	ID-MFC-SOLID-RH	CCP-AK-INL-540	S5400	2/25/2013	2/25/2013	Hist ID: FF-32; Alt Hist ID: 76-16; Hist Closure Date: 11/17/1976
24	DD-51A-1	ID-MFC-SOLID-RH	CCP-AK-INL-540	S5400	2/25/2013	2/25/2013	Hist ID: DD-51; Alt Hist ID: 72-31; Hist Closure Date: 5/9/1972
25	SL18D-1	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	2/11/2013	2/11/2013	Hist ID: SL-18D; Alt Hist ID: SL018; Hist Closure Date: 10/14/2011
26	FCO108C-2	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	2/11/2013	2/11/2013	Hist ID: FCO108C; Alt Hist ID: FCO108; Hist Closure Date: 3/31/2011
27	FCO108C-1	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	2/11/2013	2/11/2013	Hist ID: FCO108C; Alt Hist ID: FCO108; Hist Closure Date: 3/31/2011
28	FCO108A-2	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	2/11/2013	2/11/2013	Hist ID: FCO108A; Alt Hist ID: FCO108; Hist Closure Date: 3/28/2011
29	FCO108A-1	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	2/11/2013	2/11/2013	Hist ID: FCO108A; Alt Hist ID: FCO108; Hist Closure Date: 3/28/2011
30	FCO104B-2	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	2/11/2013	2/11/2013	Hist ID: FCO104B; Alt Hist ID: FCO104; Hist Closure Date: 4/4/2011
31	FCO104B-1	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	2/11/2013	2/11/2013	Hist ID: FCO104B; Alt Hist ID: FCO104; Hist Closure Date: 4/4/2011
32	SL-007C-1	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	1/14/2013	1/14/2013	Hist ID: SL007C; Alt Hist ID: T-38; Hist Closure Date: 10/14/2011
33	PP-30B-1	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	1/10/2013	1/10/2013	Hist ID: PP-30B; Alt Hist ID: HFEF-930; Hist Closure Date: 10/11/2011
34	PP-30A-1	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	1/10/2013	1/10/2013	Hist ID: PP-30A; Alt Hist ID: HFEF-930;
35	Hist Closure Date: 10/11/2011						
36	FCO102B-2	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	1/8/2013	1/8/2013	Hist ID: FCO102B; Hist Closure Date: 3/31/2011
37	FCO102B-1	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	1/8/2013	1/8/2013	Hist ID: FCO102B; Hist Closure Date: 3/31/2011
38	FCO105B-2	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	12/19/2012	12/19/2012	Hist ID: FCO105B; Hist Closure Date: 3/24/2011
39	FCO105B-1	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	12/19/2012	12/19/2012	Hist ID: FCO105B; Hist Closure Date: 3/24/2011
40	FCO105C-2	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	12/17/2012	12/17/2012	Hist ID: FCO105C; Hist Closure Date: 3/24/2011
41	FCO105C-1	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	12/17/2012	12/17/2012	Hist ID: FCO105C; Hist Closure Date: 3/24/2011
42	SN-132B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	12/13/2012	12/13/2012	Hist ID: SN132; Alt Hist ID: C-32; Hist Closure Date: 7/2/1999
43	SN-132A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	12/13/2012	12/13/2012	Hist ID: SN132; Alt Hist ID: C-32; Hist Closure Date: 7/2/1999
44	ANLE13E	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/3/2012	12/3/2012	Hist ID: ANLE13; Hist Closure Date: 11/17/1976
45	ANLE13D	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/3/2012	12/3/2012	Hist ID: ANLE13; Hist Closure Date: 11/17/1976
46	ANLE13C	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/3/2012	12/3/2021	Hist ID: ANLE13; Hist Closure Date: 11/17/1976
47	ANLE13B	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/3/2012	12/3/2012	Hist ID: ANLE13; Hist Closure Date: 11/17/1976
48	ANLE13A	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/3/2012	12/3/2012	Hist ID: ANLE13; Hist Closure Date: 11/17/1976
49	ANLE34B	ID-ANLE-S5000	CCP-AK-INL-500	S5400	11/6/2012	11/6/2012	Hist ID: ANLE34; Hist Closure Date: 3/27/1979
50	ANLE25E	ID-ANLE-S5000	CCP-AK-INL-500	S5400	11/6/2012	11/6/2012	Hist ID: ANLE25; Hist Closure Date: 5/19/1978
51	ANLE25D	ID-ANLE-S5000	CCP-AK-INL-500	S5400	11/6/2012	11/6/2012	Hist ID: ANLE25; Hist Closure Date: 5/19/1978
52	ANLE25B	ID-ANLE-S5000	CCP-AK-INL-500	S5400	11/6/2012	11/6/2012	Hist ID: ANLE25; Hist Closure Date: 5/19/1978

	A	B	C	D	E	F	N
53	ANLE25A	ID-ANLE-S5000	CCP-AK-INL-500	S5400	11/6/2012	11/6/2012	Hist ID: ANLE25; Hist Closure Date: 5/19/1978
54	ANLE34F	ID-ANLE-S5000	CCP-AK-INL-500	S5400	11/5/2012	11/5/2012	Hist ID: ANLE34; Hist Closure Date: 3/27/1979
55	ANLE34D	ID-ANLE-S5000	CCP-AK-INL-500	S5400	11/5/2012	11/5/2012	Hist ID: ANLE34; Hist Closure Date: 3/27/1979
56	ANLE34C	ID-ANLE-S5000	CCP-AK-INL-500	S5400	11/5/2012	11/5/2012	Hist ID: ANLE34; Hist Closure Date: 3/27/1979
57	ANLE34A	ID-ANLE-S5000	CCP-AK-INL-500	S5400	11/5/2012	11/5/2012	Hist ID: ANLE34; Hist Closure Date: 3/27/1979
58	ANLE24G	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/18/2012	10/18/2012	Hist ID: ANLE24; Hist Closure Date: 4/17/1978
59	ANLE24F	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/18/2012	10/18/2012	Hist ID: ANLE24; Hist Closure Date: 4/17/1978
60	ANLE24E	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/17/2012	10/17/2012	Hist ID: ANLE24; Hist Closure Date: 4/17/1978
61	ANLE24D	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/17/2012	10/17/2012	Hist ID: ANLE24; Hist Closure Date: 4/17/1978
62	ANLE24C	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/17/2012	10/17/2012	Hist ID: ANLE24; Hist Closure Date: 4/17/1978
63	ANLE24B	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/17/2012	10/17/2012	Hist ID: ANLE24; Hist Closure Date: 4/17/1978
64	ANLE24A	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/17/2012	10/17/2012	Hist ID: ANLE24; Hist Closure Date: 4/17/1978
65	ANLE18D	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/25/2012	9/25/2012	Hist ID: ANLE18; Hist Closure Date: 8/16/1977
66	ANLE18C	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/25/2012	9/25/2012	Hist ID: ANLE18; Hist Closure Date: 8/16/1977
67	ANLE18B	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/25/2012	9/25/2012	Hist ID: ANLE18; Hist Closure Date: 8/16/1977
68	ANLE18A	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/25/2012	9/25/2012	Hist ID: ANLE18; Hist Closure Date: 8/16/1977
69	ANLE18F	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/20/2012	9/20/2012	Hist ID: ANLE18; Hist Closure Date: 8/16/1977
70	ANLE18E	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/20/2012	9/20/2012	Hist ID: ANLE18; Hist Closure Date: 8/16/1977
71	ANLE36F	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/18/2012	9/18/2012	Hist ID: ANLE36; Hist Closure Date: 5/7/1979
72	ANLE36E	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/18/2012	9/18/2012	Hist ID: ANLE36; Hist Closure Date: 5/7/1979
73	ANLE36D	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/18/2012	9/18/2012	Hist ID: ANLE36; Hist Closure Date: 5/7/1979
74	ANLE36C	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/17/2012	9/17/2012	Hist ID: ANLE36; Hist Closure Date: 5/7/1979
75	ANLE36B	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/17/2012	9/17/2012	Hist ID: ANLE36; Hist Closure Date: 5/7/1979
76	ANLE36A	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/17/2012	9/17/2012	Hist ID: ANLE36; Hist Closure Date: 5/7/1979
77	ANLE27F	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/10/2012	9/10/2012	Hist ID: ANLE27; Hist Closure Date: 7/20/1978
78	ANLE27A	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/10/2012	9/10/2012	Hist ID: ANLE27; Hist Closure Date: 7/20/1978
79	ANLE27C	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/5/2012	9/5/2012	Hist ID: ANLE27; Hist Closure Date: 7/20/1978
80	ANLE16E	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/5/2012	9/5/2012	Hist ID: ANLE16; Hist Closure Date: 4/29/1977
81	ANLE16D	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/5/2012	9/5/2012	Hist ID: ANLE16; Hist Closure Date: 4/29/1977
82	ANLE16C	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/5/2012	9/5/2012	Hist ID: ANLE16; Hist Closure Date: 4/29/1977
83	ANLE16B	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/5/2012	9/5/2012	Hist ID: ANLE16; Hist Closure Date: 4/29/1977
84	ANLE16A	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/5/2012	9/5/2012	Hist ID: ANLE16; Hist Closure Date: 4/29/1977
85	ANLE16G	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/4/2012	9/4/2012	Hist ID: ANLE16; Hist Closure Date: 4/29/1977
86	ANLE16F	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/4/2012	9/4/2012	Hist ID: ANLE16; Hist Closure Date: 4/29/1977
87	ANLE26F	ID-ANLE-S5000	CCP-AK-INL-500	S5400	8/8/2012	8/8/2012	Hist ID: ANLE26; Hist Closure Date: 6/28/1978
88	ANLE26A	ID-ANLE-S5000	CCP-AK-INL-500	S5400	8/7/2012	8/7/2012	Hist ID: ANLE26; Hist Closure Date: 6/28/1978
89	ANLE12G	ID-ANLE-S5000	CCP-AK-INL-500	S5400	8/7/2012	8/7/2012	Hist ID: ANLE12; Hist Closure Date: 7/12/1976
90	ANLE12D	ID-ANLE-S5000	CCP-AK-INL-500	S5400	8/7/2012	8/7/2012	Hist ID: ANLE12; Hist Closure Date: 7/12/1976
91	ANLE12F	ID-ANLE-S5000	CCP-AK-INL-500	S5400	8/6/2012	8/6/2012	Hist ID: ANLE12; Hist Closure Date: 7/12/1976
92	ANLE12E	ID-ANLE-S5000	CCP-AK-INL-500	S5400	8/6/2012	8/6/2012	Hist ID: ANLE12; Hist Closure Date: 7/12/1976
93	ANLE12C	ID-ANLE-S5000	CCP-AK-INL-500	S5400	8/6/2012	8/6/2012	Hist ID: ANLE12; Hist Closure Date: 7/12/1976
94	ANLE12B	ID-ANLE-S5000	CCP-AK-INL-500	S5400	8/6/2012	8/6/2012	Hist ID: ANLE12; Hist Closure Date: 7/12/1976
95	ANLE12A	ID-ANLE-S5000	CCP-AK-INL-500	S5400	8/6/2012	8/6/2012	Hist ID: ANLE12; Hist Closure Date: 7/12/1976
96	ANLE7F	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/19/2012	7/19/2012	Hist ID: ANLE7; Hist Closure Date: 10/14/1975
97	ANLE7E	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/19/2012	7/19/2012	Hist ID: ANLE7; Hist Closure Date: 10/14/1975
98	ANLE7D	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/19/2012	7/19/2012	Hist ID: ANLE7; Hist Closure Date: 10/14/1975
99	ANLE7C	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/18/2012	7/18/2012	Hist ID: ANLE7; Hist Closure Date: 10/14/1975
100	ANLE7A	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/18/2012	7/18/2012	Hist ID: ANLE7; Hist Closure Date: 10/14/1975
101	ANLE7G	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/17/2012	7/17/2012	Hist ID: ANLE7; Hist Closure Date: 10/14/1975
102	ANLE7B	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/17/2012	7/17/2012	Hist ID: ANLE7; Hist Closure Date: 10/14/1975
103	ANLE28H	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/17/2012	7/17/2012	Hist ID: ANLE28; Hist Closure Date: 8/18/1978
104	ANLE28G	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/17/2012	7/17/2012	Hist ID: ANLE28; Hist Closure Date: 8/18/1978

	A	B	C	D	E	F	N
105	ANLE28D	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/17/2012	7/17/2012	Hist ID: ANLE28; Hist Closure Date: 8/18/1978
106	ANLE28C	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/17/2012	7/17/2012	Hist ID: ANLE28; Hist Closure Date: 8/18/1978
107	ANLE28F	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/16/2012	7/16/2012	Hist ID: ANLE28; Hist Closure Date: 8/18/1978
108	ANLE28E	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/16/2012	7/16/2012	Hist ID: ANLE28; Hist Closure Date: 8/18/1978
109	ANLE28B	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/16/2012	7/16/2012	Hist ID: ANLE28; Hist Closure Date: 8/18/1978
110	ANLE28A	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/16/2012	7/16/2012	Hist ID: ANLE28; Hist Closure Date: 8/18/1978
111	ANLE5F	ID-ANLE-S5000	CCP-AK-INL-500	S5400	6/22/2012	6/22/2012	Hist ID: ANLE5; Hist Closure Date: 6/23/1975
112	ANLE5A	ID-ANLE-S5000	CCP-AK-INL-500	S5400	6/22/2012	6/22/2012	Hist ID: ANLE5; Hist Closure Date: 6/23/1975
113	ANLE5B	ID-ANLE-S5000	CCP-AK-INL-500	S5400	6/21/2012	6/21/2012	Hist ID: ANLE5; Hist Closure Date: 6/23/1975
114	ANLE3G	ID-ANLE-S5000	CCP-AK-INL-500	S5400	6/21/2012	6/21/2012	Hist ID: ANLE3; Hist Closure Date: 5/9/1975
115	ANLE3E	ID-ANLE-S5000	CCP-AK-INL-500	S5400	6/21/2012	6/21/2012	Hist ID: ANLE3; Hist Closure Date: 5/9/1975
116	ANLE3C	ID-ANLE-S5000	CCP-AK-INL-500	S5400	6/21/2012	6/21/2012	Hist ID: ANLE3; Hist Closure Date: 5/9/1975
117	ANLE6F	ID-ANLE-S5000	CCP-AK-INL-500	S5400	6/20/2012	6/20/2012	Hist ID: ANLE6; Hist Closure Date: 8/28/1975
118	ANLE3B	ID-ANLE-S5000	CCP-AK-INL-500	S5400	6/20/2012	6/20/2012	Hist ID: ANLE3; Hist Closure Date: 5/9/1975
119	ANLE3A	ID-ANLE-S5000	CCP-AK-INL-500	S5400	6/20/2012	6/20/2012	Hist ID: ANLE3; Hist Closure Date: 5/9/1975
120	ANLE6E	ID-ANLE-S5000	CCP-AK-INL-500	S5400	6/19/2012	6/19/2012	Hist ID: ANLE6; Hist Closure Date: 8/28/1975
121	ANLE6C	ID-ANLE-S5000	CCP-AK-INL-500	S5400	6/19/2012	6/19/2012	Hist ID: ANLE6; Hist Closure Date: 8/28/1975
122	ANLE6B	ID-ANLE-S5000	CCP-AK-INL-500	S5400	6/19/2012	6/19/2012	Hist ID: ANLE6; Hist Closure Date: 8/28/1975
123	ANLE6A	ID-ANLE-S5000	CCP-AK-INL-500	S5400	6/19/2012	6/19/2012	Hist ID: ANLE6; Hist Closure Date: 8/28/1975
124	ANLE10C	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/8/2012	5/8/2012	Hist ID: ANLE10; Hist Closure Date: 4/19/1976
125	ANLE10G	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/7/2012	5/7/2012	Hist ID: ANLE10; Hist Closure Date: 4/19/1976
126	ANLE10B	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/7/2012	5/7/2012	Hist ID: ANLE10; Hist Closure Date: 4/19/1976
127	ANLE10D	ID-ANLE-S5000	CCP-AK-INL-500	S5400	4/23/2012	4/23/2012	Hist ID: ANLE10; Hist Closure Date: 4/19/1976
128	ANLE10A	ID-ANLE-S5000	CCP-AK-INL-500	S5400	4/23/2012	4/23/2012	Hist ID: ANLE10; Hist Closure Dat: 4/19/1976
129	ANLE10E	ID-ANLE-S5000	CCP-AK-INL-500	S5400	4/16/2012	4/16/2012	Hist ID: ANLE10; Hist Closure Date: 4/19/1976
130	ANLE10F	ID-ANLE-S5000	CCP-AK-INL-500	S5400	4/11/2012	4/11/2012	Hist ID: ANLE10; Hist Closure Date: 4/19/1976
131	ANLE9G	ID-ANLE-S5000	CCP-AK-INL-500	S5400	3/28/2012	3/28/2012	Hist ID: ANLE9; Hist Closure Date: 1/22/1976
132	ANLE9A	ID-ANLE-S5000	CCP-AK-INL-500	S5400	3/28/2012	3/28/2012	Hist ID: ANLE9; Hist Closure Date: 1/22/1976
133	ANLE9F	ID-ANLE-S5000	CCP-AK-INL-500	S5400	3/27/2012	3/27/2012	Hist ID: ANLE9; Hist Closure Date: 1/22/1976
134	ANLE9E	ID-ANLE-S5000	CCP-AK-INL-500	S5400	3/27/2012	3/27/2012	Hist ID: ANLE9; Hist Closure Date: 1/22/1976
135	ANLE9D	ID-ANLE-S5000	CCP-AK-INL-500	S5400	3/27/2012	3/27/2012	Hist ID: ANLE9; Hist Closure Date: 1/22/1976
136	ANLE9C	ID-ANLE-S5000	CCP-AK-INL-500	S5400	3/27/2012	3/27/2012	Hist ID: ANLE9; Hist Closure Date: 1/22/1976
137	ANLE9B	ID-ANLE-S5000	CCP-AK-INL-500	S5400	3/27/2012	3/27/2012	Hist ID: ANLE9; Hist Closure Date: 1/22/1976
138	ANLE30T	ID-ANLE-S5000	CCP-AK-INL-500	S5400	3/5/2012	3/5/2012	Hist ID: ANLE30; Hist Closure Date: 12/8/1978
139	ANLE15F-1	ID-ANLE-S5000	CCP-AK-INL-500	S5400	3/5/2012	3/5/2012	Hist ID: ANLE15; Hist Closure Date: 2/16/1977
140	ANLE15H	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/27/2012	2/27/2012	Hist ID: ANLE15; Hist Closure Date: 2/16/1977
141	ANLE15G	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/27/2012	2/27/2012	Hist ID: ANLE15; Hist Closure Date: 2/16/1977
142	ANLE15D	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/27/2012	2/27/2012	Hist ID: ANLE15; Hist Closure Date: 2/16/1977
143	ANLE15E	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/23/2012	2/23/2012	Hist ID: ANLE15; Hist Closure Date: 2/16/1977
144	ANLE15B	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/23/2012	2/23/2012	Hist ID: ANLE15; Hist Closure Date: 2/16/1977
145	ANLE15A	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/23/2012	2/23/2012	Hist ID: ANLE15; Hist Closure Date: 2/16/1977
146	ANLE32G	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/21/2012	2/21/2012	Hist ID: ANLE32; Hist Closure Date: 2/5/1979
147	ANLE30S	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/21/2012	2/21/2012	Hist ID: ANLE30; Hist Closure Date: 12/8/1978
148	ANLE30R	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/21/2012	2/21/2012	Hist ID: ANLE30; Hist Closure Date: 12/8/1978
149	ANLE30H-1	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/21/2012	2/21/2012	Hist ID: ANLE30; Hist Closure Date: 12/8/1978
150	ANLE33E-1	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/16/2012	2/16/2012	Hist ID: ANLE33; Hist Closure Date: 3/1/1979
151	ANLE32F	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/16/2012	2/16/2012	Hist ID: ANLE32; Hist Closure Date: 2/5/1979
152	ANLE32E	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/16/2012	2/16/2012	Hist ID: ANLE32; Hist Closure Date: 2/5/1979
153	ANLE32D-1	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/16/2012	2/16/2012	Hist ID: ANLE32; Hist Closure Date: 2/5/1979
154	ANLE33F	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/15/2012	2/15/2012	Hist ID: ANLE33; Hist Closure Date: 3/1/1979
155	ANLE33D	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/15/2012	2/15/2012	Hist ID: ANLE33; Hist Closure Date: 3/1/1979
156	ANLE29E	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/15/2012	2/15/2012	Hist ID: ANLE29; Hist Closure Date: 11/3/1978

	A	B	C	D	E	F	N
157	ANLE29D	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/15/2012	2/15/2012	Hist ID: ANLE29; Hist Closure Date: 11/3/1978
158	ANLE32H	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/7/2011	12/7/2011	Hist ID: ANLE32; Hist Closure Date: 2/5/1979
159	ANLE32C	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/7/2011	12/7/2011	Hist ID: ANLE32; Hist Closure Date: 2/5/1979
160	ANLE32B	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/7/2011	12/7/2011	Hist ID: ANLE32; Hist Closure Date: 2/5/1979
161	ANLE32A	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/7/2011	12/7/2011	Hist ID: ANLE32; Hist Closure Date: 2/5/1979
162	ANLE30K	ID-ANLE-S5000	CCP-AK-INL-500	S5400	11/28/2011	11/28/2011	Hist ID: ANLE30; Hist Closure Date: 12/8/1978
163	ANLE30J	ID-ANLE-S5000	CCP-AK-INL-500	S5400	11/28/2011	11/28/2011	Hist ID: ANLE30; Hist Closure Date: 12/8/1978
164	ANLE30G	ID-ANLE-S5000	CCP-AK-INL-500	S5400	11/25/2011	11/25/2011	Hist ID: ANLE30; Hist Closure Date: 12/8/1978
165	ANLE30B	ID-ANLE-S5000	CCP-AK-INL-500	S5400	11/25/2011	11/25/2011	Hist ID: ANLE30; Hist Closure Date: 12/8/1978
166	ANLE30Q	ID-ANLE-S5000	CCP-AK-INL-500	S5400	11/23/2011	11/23/2011	Hist ID: ANLE30; Hist Closure Date: 12/8/1978
167	ANLE30P	ID-ANLE-S5000	CCP-AK-INL-500	S5400	11/23/2011	11/23/2011	Hist ID: ANLE30; Hist Closure Date: 12/8/1978
168	ANLE30O	ID-ANLE-S5000	CCP-AK-INL-500	S5400	11/23/2011	11/23/2011	Hist ID: ANLE30; Hist Closure Date: 12/8/1978
169	ANLE30A	ID-ANLE-S5000	CCP-AK-INL-500	S5400	11/23/2011	11/23/2011	Hist ID: ANLE30; Hist Closure Date: 12/8/1978
170	ANLE30F	ID-ANLE-S5000	CCP-AK-INL-500	S5400	11/21/2011	11/21/2011	Hist ID: ANLE30; Hist Closure Date: 12/8/1978
171	ANLE30D	ID-ANLE-S5000	CCP-AK-INL-500	S5400	11/21/2011	11/21/2011	Hist ID: ANLE30; Hist Closure Date: 12/8/1978
172	ANLE30N	ID-ANLE-S5000	CCP-AK-INL-500	S5400	11/20/2011	11/20/2011	Hist ID: ANLE30; Hist Closure Date: 12/8/1978
173	ANLE30M	ID-ANLE-S5000	CCP-AK-INL-500	S5400	11/20/2011	11/20/2011	Hist ID: ANLE30; Hist Closure Date: 12/8/1978
174	ANLE30L	ID-ANLE-S5000	CCP-AK-INL-500	S5400	11/20/2011	11/20/2011	Hist ID: ANLE30; Hist Closure Date: 12/8/1978
175	ANLE30E	ID-ANLE-S5000	CCP-AK-INL-500	S5400	11/20/2011	11/20/2011	Hist ID: ANLE30; Hist Closure Date: 12/8/1978
176	ANLE30C	ID-ANLE-S5000	CCP-AK-INL-500	S5400	11/20/2011	11/20/2011	Hist ID: ANLE30; Hist Closure Date: 12/8/1978
177	ANLE33I	ID-ANLE-S5000	CCP-AK-INL-500	S5400	11/18/2011	11/18/2011	Hist ID: ANLE33; Hist Closure Date: 3/1/1979
178							
179	ANLE33H	ID-ANLE-S5000	CCP-AK-INL-500	S5400	11/18/2011	11/18/2011	Hist ID: ANLE33; Hist Closure Date: 3/1/1979
180							
181	ANLE33G	ID-ANLE-S5000	CCP-AK-INL-500	S5400	11/18/2011	11/18/2011	Hist ID: ANLE33; Hist Closure Date: 3/1/1979
182							
183							
184	ANLE33C	ID-ANLE-S5000	CCP-AK-INL-500	S5400	11/18/2011	11/18/2011	Hist ID: ANLE33; Hist Closure Date: 3/1/1979
185							
186	ANLE33B	ID-ANLE-S5000	CCP-AK-INL-500	S5400	11/17/2011	11/17/2011	Hist ID: ANLE33; Hist Closure Date: 3/1/1979
187							
188	ANLE33A	ID-ANLE-S5000	CCP-AK-INL-500	S5400	11/17/2011	11/17/2011	Hist ID: ANLE33; Hist Closure Date: 3/1/1979
189	ANLE29F	ID-ANLE-S5000	CCP-AK-INL-500	S5400	11/17/2011	11/17/2011	Hist ID: ANLE29; Hist Closure Date: 11/3/1978
190							
191	ANLE29C	ID-ANLE-S5000	CCP-AK-INL-500	S5400	11/17/2011	11/17/2011	Hist ID: ANLE29; Hist Closure Date: 11/3/1978
192							
193	IDBLANL880164A	IN-ID-BTO-030	CCP-AK-INL-590	S3150	11/16/2011	11/16/2011	IN Containers: 41-1, 41-82, 41-95; HFEF Container No: 1380, B-364, 88-164; Generation Date: 5/79 - 5/83 per LWatson 050713.
194	IDBLANL880107C	IN-ID-BTO-030	CCP-AK-INL-590	S3150	11/16/2011	11/16/2011	IN Containers: 41-23, 41-67, 41-79, 41-94; HFEF Container No: 1377, N-146, 88-107; Generation Date: 6/77 - 3/89 per LWatson
195	IDBLANL880107B	IN-ID-BTO-030	CCP-AK-INL-590	S3150	11/16/2011	11/16/2011	IN Containers: 41-20, 41-83, 41-92; HFEF Container No: 1377, N-146, 88-107; Generation Date: 8/77 - 7/87 per LWatson 05071
196	IDBLANL880107A	IN-ID-BTO-030	CCP-AK-INL-590	S3150	11/16/2011	11/16/2011	IN Containers: 41-33, 41-42, 41-93; HFEF Container No: 1377, N-146, 88-107; Generation Date: 12-78 - 3/84 per LWatson 0507
197	ANLE29B	ID-ANLE-S5000	CCP-AK-INL-500	S5400	11/16/2011	11/16/2011	Hist ID: ANLE29; Hist Closure Date: 11/3/1978
198							
199	ANLE29A	ID-ANLE-S5000	CCP-AK-INL-500	S5400	11/16/2011	11/16/2011	Hist ID: ANLE29; Hist Closure Date: 11/3/1978
200	SL-18H	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	10/17/2011	10/17/2011	Hist ID: SL018; Alt Hist ID: T-46; Hist Closure Date: 7/27/1993; SL18H
201	SL-18G	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	10/17/2011	10/17/2011	Hist ID: SL018; Alt Hist ID: T-46; Hist Closure Date: 7/27/1993; SL18G
202	SL-18F	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	10/17/2011	10/17/2011	Hist ID: SL018; Alt Hist ID: T-46; Hist Closure Date: 7/27/1993; SL18F
203	SL-18E	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	10/17/2011	10/17/2011	Hist ID: SL018; Alt Hist ID: T-46; Hist Closure Date: 7/27/1993; SL18E
204	SL-18C	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	10/14/2011	10/14/2011	Hist ID: SL018; Alt Hist ID: T-46; Hist Closure Date: 7/27/1993; SL18C
205	SL-007E	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	10/14/2011	10/14/2011	Hist ID: SL007; Alt Hist ID: T-38; Hist Closure Date: 12/17/1982
206	SL-007C	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	10/14/2011	10/14/2011	Hist ID: SL007; Alt Hist ID: T-38; Hist Closure Date: 12/17/1982
207	SL18B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	10/13/2011	10/13/2011	Hist ID: SL018; Alt Hist ID: T-46; Hist Closure Date: 7/27/1993; SL18B
208	SL18A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	10/13/2011	10/13/2011	Hist ID: SL018; Alt Hist ID: T-46; Hist Closure Date: 7/27/1993; SL18A

	A	B	C	D	E	F	N
209	SL-007F	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	10/13/2011	10/13/2011	Hist ID: SL007; Alt Hist ID: T-38; Hist Closure Date: 12/17/1982
210	SL-007D	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	10/12/2011	10/12/2011	Hist ID: SL007; Alt Hist ID: T-38; Hist Closure Date: 12/17/1982
211	SL-007B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	10/12/2011	10/12/2011	Hist ID: SL007; Alt Hist ID: T-38; Hist Closure Date: 12/17/1982
212	SL-007A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	10/12/2011	10/12/2011	Hist ID: SL007; Alt Hist ID: T-38; Hist Closure Date: 12/17/1982
213	QQ-9B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	10/12/2011	10/12/2011	Hist ID: B40; Alt Hist ID: FCF546; Hist Closure Date: 6/1/1970
214	QQ-9A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	10/11/2011	10/11/2011	Hist ID: B40; Alt Hist ID: FCF546; Hist Closure Date: 6/1/1970
215	PP-30B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	10/11/2011	10/11/2011	Hist ID: B190; Alt Hist ID: HFEF-930; Hist Closure Date: 5/16/1977
216	PP-30A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	10/11/2011	10/11/2011	Hist ID: B190; Alt Hist ID: HFEF-930; Hist Closure Date: 5/16/1977
217	PP-15B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	10/11/2011	10/11/2011	Hist ID: B45; Alt Hist ID: FCF551; Hist Closure Date: 7/21/1970
218	PP-15A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	10/11/2011	10/11/2011	Hist ID: B45; Alt Hist ID: FCF551; Hist Closure Date: 7/21/1970
219	NN-28B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	10/10/2011	10/10/2011	Hist ID: B197; Alt Hist ID: NN-28; Hist Closure Date: 8/30/1977
220	NN-28A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	10/10/2011	10/10/2011	Hist ID: B197; Alt Hist ID: NN-28; Hist Closure Date: 8/30/1977
221	FF-46D	ID-EBR-S5000	CCP-AK-INL-600	S5110	8/1/2011	8/1/2011	Hist ID: FF-46; Alt Hist ID: LL-46; Hist Closure Date: 10/27/1965
222	FF-46C	ID-EBR-S5000	CCP-AK-INL-600	S5110	8/1/2011	8/1/2011	Hist ID: FF-46; Alt Hist ID: LL-46; Hist Closure Date: 10/27/1965
223	FF-46B	ID-EBR-S5000	CCP-AK-INL-600	S5110	8/1/2011	8/1/2011	Hist ID: FF-46; Alt Hist ID: LL-46; Hist Closure Date: 10/27/1965
224	FF-46A	ID-EBR-S5000	CCP-AK-INL-600	S5110	8/1/2011	8/1/2011	Hist ID: FF-46; Alt Hist ID: LL-46; Hist Closure Date: 10/27/1965
225	FF-45D	ID-EBR-S5000	CCP-AK-INL-600	S5110	6/30/2011	6/30/2011	Hist ID: FF-45; Alt Hist ID: LL-45; Hist Closure Date: 8/1/1966
226	DD-45D	ID-EBR-S5000	CCP-AK-INL-600	S5110	6/30/2011	6/30/2011	Hist ID: DD-45; Alt Hist ID: LL-44; Hist Closure Date: 7/13/1966
227	FF-45C	ID-EBR-S5000	CCP-AK-INL-600	S5110	6/29/2011	6/29/2011	Hist ID: FF-45; Alt Hist ID: LL-45; Hist Closure Date: 8/1/1966
228	FF-45B	ID-EBR-S5000	CCP-AK-INL-600	S5110	6/29/2011	6/29/2011	Hist ID: FF-45; Alt Hist ID: LL-45; Hist Closure Date: 8/1/1966
229	FF-45A	ID-EBR-S5000	CCP-AK-INL-600	S5110	6/29/2011	6/29/2011	Hist ID: FF-45; Alt Hist ID: LL-45; Hist Closure Date: 8/1/1966
230	DD-45C	ID-EBR-S5000	CCP-AK-INL-600	S5110	6/29/2011	6/26/2011	Hist ID: DD-45; Alt Hist ID: LL-44; Hist Closure Date: 7/13/1966
231	DD-45B	ID-EBR-S5000	CCP-AK-INL-600	S5110	6/29/2011	6/29/2011	Hist ID: DD-45; Alt Hist ID: LL-44; Hist Closure Date: 7/13/1966
232	DD-45A	ID-EBR-S5000	CCP-AK-INL-600	S5110	6/29/2011	6/29/2011	Hist ID: DD-45; Alt Hist ID: LL-44; Hist Closure Date: 7/13/1966
233	FF-43H	ID-EBR-S5000	CCP-AK-INL-600	S5110	5/19/2011	5/19/2011	Hist ID: FF-43; Alt Hist ID: LL-43; Hist Closure Date: 8/5/1966
234	FF-43G	ID-EBR-S5000	CCP-AK-INL-600	S5110	5/19/2011	5/19/2011	Hist ID: FF-43; Alt Hist ID: LL-43; Hist Closure Date: 8/5/1966
235	FF-43B	ID-EBR-S5000	CCP-AK-INL-600	S5110	5/19/2011	5/19/2011	Hist ID: FF-43; Alt Hist ID: LL-43; Hist Closure Date: 8/5/1966
236	FF-43A	ID-EBR-S5000	CCP-AK-INL-600	S5110	5/19/2011	5/19/2011	Hist ID: FF-43; Alt Hist ID: LL-43; Hist Closure Date: 8/5/1966
237	FF-43F	ID-EBR-S5000	CCP-AK-INL-600	S5110	5/18/2011	5/18/2011	Hist ID: FF-43; Alt Hist ID: LL-43; Hist Closure Date: 8/5/1966
238	FF-43E	ID-EBR-S5000	CCP-AK-INL-600	S5110	5/18/2011	5/18/2011	Hist ID: FF-43; Alt Hist ID: LL-43; Hist Closure Date: 8/5/1966
239	FF-43D	ID-EBR-S5000	CCP-AK-INL-600	S5110	5/18/2011	5/18/2011	Hist ID: FF-43; Alt Hist ID: LL-43; Hist Closure Date: 8/5/1966
240	FF-43C	ID-EBR-S5000	CCP-AK-INL-600	S5110	5/18/2011	5/18/2011	Hist ID: FF-43; Alt Hist ID: LL-43; Hist Closure Date: 8/5/1966
241	FCO104C	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	4/5/2011	4/5/2011	Hist ID: FCO104; Hist Closure Date: 5/22/2003; WSR-096
242	FCO104A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	4/4/2011	4/4/2011	Hist ID: FCO104; Hist Closure Date: 5/22/2003; WSR-068
243	FCO101C	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	4/1/2011	4/1/2011	Hist ID: FCO101; Hist Closure Date: 2/4/2003; WSR069
244	FCO101B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	4/1/2011	4/1/2011	Hist ID: FCO101; Hist Closure Date: 2/4/2003; WSR061
245	FCO108B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	3/31/2011	3/31/2011	Hist ID: FCO108; Hist Closure Date: 8/26/2008; WSR-097
246	FCO102C	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	3/31/2011	3/31/2011	Hist ID: FCO102; Hist Closure Date: 3/5/2003; WSR062
247	D-48A	ID-EBR-S5000	CCP-AK-INL-600	S5110	3/30/2011	3/30/2011	Hist ID: NN-3; Alt Hist ID: D-48; Hist Closure Date: 10/5/1966
248	FCO105A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	3/24/2011	3/24/2011	Hist ID: FCO105; Hist Closure Date: 2/10/2004; WSRA01
249	FCO102A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	3/24/2011	3/24/2011	Hist ID: FCO102; Hist Closure Date: 3/5/2003; WSR051
250	N153C	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	3/23/2011	3/23/2011	Hist ID: N153; Hist Closure Date: 9/17/1999
251	IDAWANL850013C	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	3/23/2011	3/23/2011	Hist ID: IDAWANL850013; Alt Hist ID: B-319; Hist Closure Date: 2/18/1985
252	IDAWANL810002C	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	3/23/2011	3/23/2011	Hist ID: IDAWANL810002; Alt Hist ID: B-293; Hist Closure Date: 12/22/1980
253	MFC070118B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	9/7/2010	9/7/2010	Hist ID: MFC070118; Alt Hist ID: SN-177; Hist Closure Date: 9/4/2007
254	MFC070118A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	9/7/2010	9/7/2010	Hist ID: MFC070118; Alt Hist ID: SN-177; Hist Closure Date: 9/7/2007
255	MFC070119B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	9/6/2010	9/6/2010	Hist ID: MFC070119; Alt Hist ID: SN-178; Hist Closure Date: 11/27/2007
256	MFC070119A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	9/6/2010	9/6/2010	Hist ID: MFC070119; Alt Hist ID: SN-178; Hist Closure Date: 11/27/2007
257	MFC060105B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	9/6/2010	9/6/2010	Hist ID: MFC060105; Alt Hist ID: SN-170; Hist Closure Date: 8/21/2006
258	MFC060105A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	9/6/2010	9/6/2010	Hist ID: MFC060105; Alt Hist ID: SN-170; Hist Closure Date: 8/21/2006
259	SN153A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/28/2010	8/28/2010	Hist ID: SN153; Hist Closure Date: 3/29/2001
260	SN149A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/28/2010	8/28/2010	Hist ID: SN149; Hist Closure Date: 9/6/2000

	A	B	C	D	E	F	N
261	ANLE31E	ID-ANLE-S5000	CCP-AK-INL-500	S5400	8/27/2010	8/27/2010	Hist ID: ANLE31; Hist Closure Date: 1/10/1979
262	ANLE31D	ID-ANLE-S5000	CCP-AK-INL-500	S5400	8/27/2010	8/27/2010	Hist ID: ANLE31; Hist Closure Date: 1/10/1979
263	ANLE31C	ID-ANLE-S5000	CCP-AK-INL-500	S5400	8/27/2010	8/27/2010	Hist ID: ANLE31; Hist Closure Date: 1/10/1979
264	ANLE31B	ID-ANLE-S5000	CCP-AK-INL-500	S5400	8/27/2010	8/27/2010	Hist ID: ANLE31; Hist Closure Date: 1/10/1979
265	ANLE31A	ID-ANLE-S5000	CCP-AK-INL-500	S5400	8/27/2010	8/27/2010	Hist ID: ANLE31; Hist Closure Date: 1/10/1979
266	SN176B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/26/2010	8/26/2010	Hist ID: SN176; Hist Closure Date: 4/30/2007
267	SN176A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/26/2010	8/26/2010	Hist ID: SN176; Hist Closure Date: 4/30/2007
268	SN153B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/26/2010	8/26/2010	Hist ID: SN153; Hist Closure Date: 3/29/2001
269	N153B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/26/2010	8/26/2010	Hist ID: N153; Hist Closure Date: 9/17/1999
270	SN061B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/25/2010	8/25/2010	Hist ID: SN61; Hist Closure Date: 5/6/1993
271	SN061A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/25/2010	8/25/2010	Hist ID: SN61; Hist Closure Date: 5/6/1993
272	N154B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/25/2010	8/25/2010	Hist ID: N154; Hist Closure Date: 9/17/1999
273	N154A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/25/2010	8/25/2010	Hist ID: N154; Hist Closure Date: 9/17/1999
274	ANLE14C	ID-ANLE-S5000	CCP-AK-INL-500	S5400	8/24/2010	8/24/2010	Hist ID: ANLE14; Hist Closure Date: 12/21/1976
275	ANLE14B	ID-ANLE-S5000	CCP-AK-INL-500	S5400	8/24/2010	8/24/2010	Hist ID: ANLE14; Hist Closure Date: 12/21/1976
276	ANLE14A	ID-ANLE-S5000	CCP-AK-INL-500	S5400	8/24/2010	8/24/2010	Hist ID: ANLE14; Hist Closure Date: 12/21/1976
277	SN147B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/23/2010	8/23/2010	Hist ID: SN147; Hist Closure Date: 6/5/2000
278	SN147A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/23/2010	8/23/2010	Hist ID: SN147; Hist Closure Date: 6/5/2000
279	SN146B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/23/2010	8/23/2010	Hist ID: SN146; Hist Closure Date: 5/16/2000
280	SN146A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/23/2010	8/23/2010	Hist ID: SN146; Hist Closure Date: 5/16/2000
281	SN053B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/23/2010	8/23/2010	Hist ID: SN53; Hist Closure Date: 5/6/1993
282	SN053A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/23/2010	8/23/2010	Hist ID: SN53; Hist Closure Date: 5/6/1993
283	B259B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/23/2010	8/23/2010	Hist ID: B259; Hist Closure Date: 1/12/1979
284	SN161B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/17/2010	8/17/2010	Hist ID: SN161; Hist Closure Date: 3/17/2003
285	SN161A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/17/2010	8/17/2010	Hist ID: SN161; Hist Closure Date: 3/17/2003
286	B259A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/17/2010	8/17/2010	Hist ID: B259; Hist Closure Date: 1/12/1979
287	ANLE2D	ID-ANLE-S5000	CCP-AK-INL-500	S5400	8/17/2010	8/17/2010	Hist ID: ANLE2; Hist Closure Date: 4/21/1975
288	ANLE2C	ID-ANLE-S5000	CCP-AK-INL-500	S5400	8/17/2010	8/17/2010	Hist ID: ANLE2; Hist Closure Date: 4/21/1975
289	ANLE2B	ID-ANLE-S5000	CCP-AK-INL-500	S5400	8/17/2010	8/17/2010	Hist ID: ANLE2; Hist Closure Date: 4/21/1975
290	ANLE2A	ID-ANLE-S5000	CCP-AK-INL-500	S5400	8/17/2010	8/17/2010	Hist ID: ANLE2; Hist Closure Date: 4/21/1975
291	SN164B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/16/2010	8/16/2010	Hist ID: SN164; Hist Closure Date: 10/12/2004
292	SN164A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/16/2010	8/16/2010	Hist ID: SN164; Hist Closure Date: 10/12/2004
293	SN127B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/16/2010	8/16/2010	Hist ID: SN127; Hist Closure Date: 7/29/1998
294	SN127A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/16/2010	8/16/2010	Hist ID: SN127; Hist Closure Date: 7/29/1998
295	N153A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/16/2010	8/16/2010	Hist ID: N153; Hist Closure Date: 9/17/1999
296	N152B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/16/2010	8/16/2010	Hist ID: N152; Hist Closure Date: 6/20/1990
297	N152A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/16/2010	8/16/2010	Hist ID: N152; Hist Closure Date: 6/20/1990
298	ANLE1D	ID-ANLE-S5000	CCP-AK-INL-500	S5400	8/13/2010	8/13/2010	Hist ID: ANLE1; Hist Closure Date: 3/10/1975
299	ANLE1C	ID-ANLE-S5000	CCP-AK-INL-500	S5400	8/13/2010	8/13/2010	Hist ID: ANLE1; Hist Closure Date: 3/10/1975
300	ANLE1B	ID-ANLE-S5000	CCP-AK-INL-500	S5400	8/13/2010	8/13/2010	Hist ID: ANLE1; Hist Closure Date: 3/10/1975
301	ANLE1A	ID-ANLE-S5000	CCP-AK-INL-500	S5400	8/13/2010	8/13/2010	Hist ID: ANLE1; Hist Closure Date: 3/10/1975
302	SN167B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/11/2010	8/11/2010	Hist ID: SN167; Hist Closure Date: 9/25/2006
303	SN166B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/10/2010	8/10/2010	Hist ID: SN166; Hist Closure Date: 9/25/2005
304	SN166A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/10/2010	8/10/2010	Hist ID: SN166; Hist Closure Date: 9/25/2005
305	SN115B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/10/2010	8/10/2010	Hist ID: SN115; Hist Closure Date: 7/7/1997
306	SN115A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/9/2010	8/9/2010	Hist ID: SN115; Hist Closure Date: 7/7/1997
307	SN114B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/9/2010	8/9/2010	Hist ID: SN114; Hist Closure Date: 1/19/1998
308	SN114A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/9/2010	8/9/2010	Hist ID: SN114; Hist Closure Date: 1/19/1998
309	B315A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/9/2010	8/9/2010	Hist ID: B315; Hist Closure Date: 5/2/1983
310	SN167A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/8/2010	8/8/2010	Hist ID: SN167; Hist Closure Date: 9/25/2006
311	SN155B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/8/2010	8/8/2010	Hist ID: SN155; Hist Closure Date: 5/1/2001
312	SN155A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/8/2010	8/8/2010	Hist ID: SN155; Hist Closure Date: 5/1/2001

	A	B	C	D	E	F	N
313	SN154B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/8/2010	8/8/2010	Hist ID: SN154; Hist Closure Date: 11/27/2000
314	B315B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/8/2010	8/8/2010	Hist ID: B315; Hist Closure Date: 5/2/1983
315	SN150A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/4/2010	8/4/2010	Hist ID: SN150; Hist Closure Date: 6/26/2000
316	SN150B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/3/2010	8/3/2010	Hist ID: SN150; Hist Closure Date: 6/26/2000
317	SN149B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/3/2010	8/3/2010	Hist ID: SN149; Hist Closure Date: 9/6/2000
318	N24B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/3/2010	8/3/2010	Hist ID: N-24; Hist Closure Date: 2/27/1978; Drum also referenced as N-24B
319	N24A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/3/2010	8/3/2010	Hist ID: N-24; Hist Closure Date: 2/27/1978; Drum also referenced as N-24A
320	ANLE21C	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/30/2010	7/30/2010	Hist ID: ANLE21; Hist Closure Date: 1/12/1978
321	ANLE21B	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/30/2010	7/30/2010	Hist ID: ANLE21; Hist Closure Date: 1/12/1978
322	ANLE21A	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/30/2010	7/30/2010	Hist ID; ANLE21; Hist Closure Date: 1/12/1978
323	ANLE20C	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/30/2010	7/30/2010	Hist ID: ANLE20; Hist Closure Date: 12/13/1977
324	ANLE20B	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/30/2010	7/30/2010	HIst ID: ANLE20; Hist Closure Date: 12/13/1977
325	ANLE20A	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/30/2010	7/30/2010	Hist ID: ANLE20; Hist Closure Date: 12/13/1977
326	SN68B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	7/28/2010	7/28/2010	Hist ID: SN68; Hist Closure Date: 9/13/1993
327	SN68A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	7/28/2010	7/28/2010	Hist ID: SN68; Hist Closure Date: 9/13/1993
328	SN42A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	7/24/2010	7/24/2010	Hist ID: SN42; Hist Closure Date: 4/4/1990
329	SN42B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	6/27/2010	6/27/2010	Hist ID: SN42; Hist Closure Date: 4/4/1990
330	SN131B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	6/27/2010	6/27/2010	Hist ID: SN131; Hist Closure date: 7/1/1999
331	SN131A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	6/27/2010	6/27/2010	Hist ID: SN131; Hist Closure date: 7/1/1999
332	B252B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	6/27/2010	6/27/2010	Hist ID: B252; Hist Closure date: 6/15/1978
333	SN135B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	6/26/2010	6/26/2010	Hist ID: SN135; Hist Closure date: 9/9/1999
334	SN135A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	6/26/2010	6/26/2010	Hist ID: SN135; Hist Closure date: 9/9/1999
335	B252A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	6/26/2010	6/26/2010	Hist ID: B252; Hist Closure date: 6/15/1978
336	ANLE23B	ID-ANLE-S5000	CCP-AK-INL-500	S5400	6/7/2010	6/7/2010	Hist ID: ANLE23; Hist Closure Date: 3/9/1978
337	ANLE23A	ID-ANLE-S5000	CCP-AK-INL-500	S5400	6/7/2010	6/7/2010	Hist ID: ANLE23; Hist Closure Date: 3/9/1978
338	ANLE22C	ID-ANLE-S5000	CCP-AK-INL-500	S5400	6/7/2010	6/7/2010	Hist ID: ANLE22; Hist Closure Date: 2/1/1978
339	ANLE22B	ID-ANLE-S5000	CCP-AK-INL-500	S5400	6/7/2010	6/7/2010	Hist ID: ANLE22; Hist Closure Date: 2/1/1978
340	ANLE22A	ID-ANLE-S5000	CCP-AK-INL-500	S5400	6/7/2010	6/7/2010	Hist ID: ANLE22; Hist Closure Date: 2/1/1978
341	SN163B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	6/1/2010	6/1/2010	Hist ID: SN163; Hist Closure date: 10/12/2004
342	SN163A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	6/1/2010	6/1/2010	Hist ID: SN163; Hist Closure date: 10/12/2004
343	SN141B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	6/1/2010	6/1/2010	Hist ID: SN141; Hist Closure date: 2/14/2000
344	SN141A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	6/1/2010	6/1/2010	Hist ID: SN141; Hist Closure date: 2/14/2000
345	SN174B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	5/31/2010	5/31/2010	Hist ID: SN174; Hist Closure date: 9/10/2007
346	SN174A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	5/31/2010	5/31/2010	Hist ID: SN174; Hist Closure date: 9/10/2007
347	SN165B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	5/31/2010	5/31/2010	Hist ID: SN165; Hist Closure date: 10/26/2004
348	SN165A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	5/31/2010	5/31/2010	Hist ID: SN165; Hist Closure date: 10/26/2004
349	SN145A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	5/31/2010	5/31/2010	Hist ID: SN145; Hist Closure date: 5/16/2000
350	SN125B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	5/31/2010	5/31/2010	Hist ID: SN125; Hist Closure date: 8/13/1998
351	SN152B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	5/30/2010	5/30/2010	Hist ID: SN152; Hist Closure date: 11/27/2000
352	SN152A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	5/30/2010	5/30/2010	Hist ID: SN152; Hist Closure date: 11/27/2000
353	SN133B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	5/30/2010	5/30/2010	Hist ID: SN133; Hist Closure date: 8/5/1999
354	SN125A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	5/30/2010	5/30/2010	Hist ID: SN125; Hist Closure date: 8/13/1998
355	SN154A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	5/25/2010	5/25/2010	Hist ID: SN154; Hist Closure Date: 11/27/2000
356	SN151B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	5/25/2010	5/25/2010	Hist ID: SN151; Hist Closure date: 8/28/2000
357	SN133A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	5/25/2010	5/25/2010	Hist ID: SN133; Hist Closure date: 8/5/1999
358	ANLE19C	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/24/2010	5/24/2010	Hist ID: ANLE19; Hist Closure Date: 10/11/1977
359	ANLE19B	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/24/2010	5/24/2010	Hist ID: ANLE19; Hist Closure Date: 10/11/1977
360	ANLE19A	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/24/2010	5/24/2010	Hist ID: ANLE19; Hist Closure Date: 10/11/1977
361	ANLE17B	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/24/2010	5/24/2010	Hist ID: ANLE17; Hist Closure Date: 6/1/1977
362	ANLE17A	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/24/2010	5/24/2010	Hist ID: ANLE17; Hist Closure Date: 6/1/1977
363	SN157B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	5/23/2010	5/23/2010	Hist ID: SN157; Hist Closure date: 7/24/2001
364	SN151A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	5/23/2010	5/23/2010	Hist ID: SN151; Hist Closure date: 8/28/2000

	A	B	C	D	E	F	N
365	N-20B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	5/23/2010	5/23/2010	Hist ID: N-20; Hist Closure date: 7/7/1977
366	SN19B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	5/9/2010	5/9/2010	Hist ID: SN19; Hist Closure Date: 7/14/1989
367	SN19A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	5/9/2010	5/9/2010	Hist ID: SN19; Hist Closure Date: 7/14/1989
368	SN162B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	5/9/2010	5/9/2010	Hist ID: SN162; Hist Closure Date: 6/8/2004
369	SN157A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	5/9/2010	5/9/2010	Hist ID: SN157; Hist Closure date: 7/24/2001
370	SN162A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	5/7/2010	5/7/2010	Hist ID: SN162; Hist Closure Date: 6/8/2004
371	SN143B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	5/7/2010	5/7/2010	Hist ID: SN143; Hist Closure Date: 4/27/2000
372	SN143A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	5/7/2010	5/7/2010	Hist ID: SN143; Hist Closure Date: 4/27/2000
373	B251B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	5/7/2010	5/7/2010	Hist ID: B251; Hist Closure Date: 5/19/1978
374	B251A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	5/7/2010	5/7/2010	Hist ID: B251; Hist Closure Date: 5/19/1978
375	B255B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	5/6/2010	5/6/2010	Hist ID: B255; Hist Closure Date: 5/19/1978
376	B255A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	5/6/2010	5/6/2010	Hist ID: B255; Hist Closure Date: 5/19/1978
377	SN175B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	5/5/2010	5/5/2010	Hist ID: SN175; Hist closure date: 9/25/2007
378	SN140B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	5/5/2010	5/5/2010	Hist ID: SN140; Hist closure date: 2/14/2000
379	SN140A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	5/5/2010	5/5/2010	Hist ID: SN140; Hist closure date: 2/14/2000
380	SN175A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	5/3/2010	5/3/2010	Hist ID: SN175; Hist closure date: 9/25/2007
381	SN173B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	5/2/2010	5/2/2010	Hist ID: SN173; Hist closure date: 8/30/2007
382	SN173A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	5/2/2010	5/2/2010	Hist ID: SN173; Hist closure date: 8/30/2007
383	SN144B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	5/2/2010	5/2/2010	Hist ID: SN144; Hist closure date: 5/1/2000
384	SN144A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	5/2/2010	5/2/2010	Hist ID: SN144; Hist closure date: 5/1/2000
385	IDAWANL840008B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	4/7/2010	4/7/2010	Hist ID: IDAWANL840008; Alt Hist ID: O-31; Hist closure date: 2/10/1984
386	IDAWANL830004B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	4/7/2010	4/7/2010	Hist ID: IDAWANL830004; Alt Hist ID: N-105; Hist closure date: 1/11/1983
387	IDAWANL830004A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	4/7/2010	4/7/2010	Hist ID: IDAWANL830004; Alt Hist ID: N-105; Hist closure date: 1/11/1983
388	IDAWANL810122A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	4/7/2010	4/7/2010	Hist ID: IDAWANL810122; Alt Hist ID: B-296; Hist closure date: 8/21/1981
389	IDAWANL840008A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	4/6/2010	4/6/2010	Hist ID: IDAWANL840008; Alt Hist ID: O-31; Hist closure date: 2/10/1984
390	IDAWANL830133B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	4/6/2010	4/6/2010	Hist ID: IDAWANL830133; Alt Hist ID: N-111; Hist closure date: 11/30/1983
391	IDAWANL830133A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	4/6/2010	4/6/2010	Hist ID: IDAWANL830133; Alt Hist ID: N-111; Hist closure date: 11/30/1983
392	IDAWANL800081B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	4/6/2010	4/6/2010	Hist ID: IDAWANL800081; Alt Hist ID: B-288; Hist closure date: 5/6/1980
393	IDAWANL800081A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	4/6/2010	4/6/2010	Hist ID: IDAWANL800081; Alt Hist ID: B-288; Hist closure date: 5/6/1980
394	IDAWANL870098B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	4/5/2010	4/5/2010	Hist ID: IDAWANL870098; Alt Hist ID: N-138; Hist closure date: 3/12/1987
395	IDAWANL870098A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	4/5/2010	4/5/2010	Hist ID: IDAWANL870098; Alt Hist ID: N-138; Hist closure date: 3/12/1987
396	IDAWANL880090B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	4/4/2010	4/4/2010	Hist ID: IDAWANL880090; Alt Hist ID: B-360; Hist closure date: 3/3/1988
397	IDAWANL880090A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	4/4/2010	4/4/2010	Hist ID: IDAWANL880090; Alt Hist ID: B-360; Hist closure date: 3/3/1988
398	IDAWANL870114B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	4/1/2010	4/1/2010	Hist ID: IDAWANL870114; Alt Hist ID: N-140; Hist closure date: 7/24/1987
399	IDAWANL870114A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	4/1/2010	4/1/2010	Hist ID: IDAWANL870114; Alt Hist ID: N-140; Hist closure date: 7/24/1987
400	IDAWANL790057B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	4/1/2010	4/1/2010	Hist ID: IDAWANL790057; Alt Hist ID: B-262; Hist closure date: 3/5/1979
401	IDAWANL790057A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	4/1/2010	4/1/2010	Hist ID: IDAWANL790057; Alt Hist ID: B-262; Hist closure date: 3/5/1979
402	IDAWANL880130B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	3/31/2010	3/31/2010	Hist ID: IDAWANL880130; Alt Hist ID: N-136; Hist Closure date: 4/18/1988
403	IDAWANL880130A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	3/31/2010	3/31/2010	Hist ID: IDAWANL880130; Alt Hist ID: N-136; Hist Closure date: 4/18/88
404	IDAWANL790074B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	3/31/2010	3/31/2010	Hist ID: IDAWANL790074; Alt Hist ID: B-266; Hist Closure date: 3/9/1979
405	IDAWANL790074A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	3/31/2010	3/31/2010	Hist ID: IDAWANL790074; Alt Hist ID: B-266; Hist Closure date: 3/8/1979
406	IDAWANL800145B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	3/25/2010	3/25/2010	Hist ID: IDAWANL800145; Alt Hist ID: B-287; Hist Closure Date: 8/18/1980
407	IDAWANL800145A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	3/25/2010	3/25/2010	Hist ID: IDAWANL800145; Alt Hist ID: B-287; Hist Closure Date: 8/18/1980
408	IDAWANL800052B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	3/25/2010	3/25/2010	Hist ID: IDAWANL800052; Alt Hist ID: N-55; Hist Closure Date: 2/28/1980
409	IDAWANL800052A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	3/25/2010	3/25/2010	Hist ID: IDAWANL800052; Alt Hist ID: N-55; Hist Closure Date: 2/28/1980
410	IDAWANL810002B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	3/24/2010	3/24/2010	Hist ID: IDAWANL810002; Alt Hist ID: B-293; Hist Closure Date: 12/22/1980
411	IDAWANL810002A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	3/24/2010	3/24/2010	Hist ID: IDAWANL810002; Alt Hist ID; B-293; Hist Closure Date: 12/22/1980
412	IDAWANL850013B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	3/23/2010	3/23/2010	Hist ID: IDAWANL850013; Alt Hist ID; B-319; Hist Closure Date: 2/18/1985
413	IDAWANL850013A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	3/23/2010	3/23/2010	Hist ID: IDAWANL850013; Alt Hist ID; B-319; Hist Closure Date: 2/18/1985
414	IDAWANL820038B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	3/20/2010	3/20/2010	Hist ID: IDAWANL820038; Alt Hist ID: B-303; Hist Closure Date: 4/6/1982
415	IDAWANL820038A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	3/20/2010	3/20/2010	His ID: IDAWANL820038; Alt His ID: B-303; Hist Closure Date: 4/6/1982
416	IDAWANL830020B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	3/19/2010	3/19/2010	Hist ID: IDAWANL830020; Alt Hist ID: N-104; Hist Closure Date: 2/8/1983

	A	B	C	D	E	F	N
417	IDAWANL830020A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	3/19/2010	3/19/2010	Hist ID: IDAWANL830020; Alt Hist ID: N-104; Hist Closure Date: 2/8/1983
418	IDAWANL810177B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	3/12/2010	3/12/2010	Hist ID: IDWANL810177; Alt Hist ID: N-85; Hist Closure Date: 12/2/1981
419	IDAWANL810177A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	3/11/2010	3/11/2010	Hist ID: IDAWANL810177; Alt Hist ID: N-85; Hist Closure Date: 12/2/1981
420	IDAWANL810122B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	3/11/2010	3/11/2010	Hist ID: IDAWANL810122; Alt Hist ID: B-296; Hist Closure Date: 8/21/1981
421	IDIRTRA8822B	ID-RTC-S3000	CCP-AK-INL-520	S3120	3/8/2010	3/8/2010	Hist ID: IDIRTRA8822; Alt Hist ID: TRA-88-22; Hist Closure Date: 9/28/1987; Hist Vent Date: 4/5/2007
422	IDIRTRA8822A	ID-RTC-S3000	CCP-AK-INL-520	S3120	3/8/2010	3/8/2010	Hist ID: IDIRTRA8822; Alt Hist ID: TRA-88-22; Hist Closure Date: 9/28/1987; Hist Vent Date; 4/5/2007
423	IDIRTRA8821B	ID-RTC-S3000	CCP-AK-INL-520	S3120	3/8/2010	3/8/2010	Hist ID: IDIRTRA8821; Alt Hist ID: TRA-88-21; Hist Closure Date: 9/28/1987; Hist Vent Date: 4/10/2007
424	IDIRTRA8821A	ID-RTC-S3000	CCP-AK-INL-520	S3120	3/8/2010	3/8/2010	Hist ID: IDIRTRA8821; Alt Hist ID: TRA-88-21; Hist Closure Date: 9/28/1987; Hist Vent Date: 4/10/2007
425	SN156B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	2/23/2010	2/23/2010	Hist ID: SN156; Hist Closure Date: 10/2/2001
426	SN156A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	2/23/2010	2/23/2010	Hist ID: SN156; Hist Closure Date: 10/2/2001
427	IDAWANL800158B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	2/19/2010	2/19/2010	Hist ID: IDAWANL800158; Alt Hist ID: N-68; Hist Closure Date: 9/15/1980
428	IDAWANL800158A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	2/19/2010	2/19/2010	Hist ID: IDAWANL800158; Alt Hist ID: N-68; Hist Closure Date: 9/15/1980
429	SN136B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	2/18/2010	2/18/2010	Hist ID: SN136; Hist Closure Date: 10/20/1999
430	SN136A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	2/18/2010	2/18/2010	Hist ID: SN136; Hist Closure Date: 10/20/1999
431	SN158B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	2/17/2010	2/17/2010	Hist ID: SN158; Hist Closure Date: 7/24/2001
432	SN158A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	2/17/2010	2/17/2010	Hist ID: SN158; Hist Closure Date: 7/24/2001
433	SN172B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	2/16/2010	2/16/2010	Hist ID: SN172; Hist Closure Date: 10/18/2006
434	SN172A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	2/16/2010	2/16/2010	Hist ID; SN172; Hist Closure Date: 10/18/2006
435	SN160B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	2/15/2010	2/15/2010	Hist ID: SN160; Hist Closure Date: 2/21/2003
436	SN160A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	2/15/2010	2/15/2010	Hist ID: SN160; Hist Closure Date: 2/21/2003
437	IDAWANL870203B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	1/25/2010	1/25/2010	Hist ID: IDAWANL870203; Alt Hist ID: N-143; Hist Closure Date: 11/4/1987
438	IDAWANL870203A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	1/25/2010	1/25/2010	Hist ID: IDAWANL870203; Alt Hist ID: N-143; Hist Closure Date: 11/4/1987
439	IDAWANL810081B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	1/25/2010	1/25/2010	Hist ID: IDAWANL810081; Alt Hist ID: N-77; Hist Closure Date: 5/21/1981
440	IDAWANL810081A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	1/25/2010	1/25/2010	Hist ID: IDAWANL810081; Alt Hist ID: N-77; Hist Closure Date: 5/21/1981
441	IDAWANL880134B	ID-MFC-S5400-RH	CCP-AK-INL-540	S5400	8/17/2009	8/17/2009	Hist ID: IDAWANL88-134; Alt Hist ID: ANL-880134; Hist Closure Date: 4/4/1988; Hist Vent Date: 3/13/2007
442	IDAWANL880134A	ID-MFC-S5400-RH	CCP-AK-INL-540	S5400	8/17/2009	8/17/2009	Hist ID: IDAWANL88-134; Alt Hist ID: ANL-880134; Hist Closure Date: 4/4/1988; Hist Vent Date: 3/13/2007
443	IDAWANL880068B	ID-MFC-S5400-RH	CCP-AK-INL-540	S5400	8/17/2009	8/17/2009	Hist ID: IDAWANL88-068; Alt HIst ID: ANL-880068; Hist Closure Date: 4/4/1988; Hist Vent Date: 3/13/2007
444	IDAWANL880068A	ID-MFC-S5400-RH	CCP-AK-INL-540	S5400	8/17/2009	8/17/2009	Hist ID: IDAWANL88-068; Alt Hist ID: ANL-880068; HIst Closure Date: 4/4/1988; Hist Vent Date: 3/13/2007
445	IDAWANL880064B	ID-MFC-S5400-RH	CCP-AK-INL-540	S5400	8/17/2009	8/17/2009	Hist ID: IDAWANL88-064; Alt Hist ID: ANL-880064; Hist Closure Date: 3/24/1988; Hist Vent Date: 3/13/2007
446	IDAWANL880064A	ID-MFC-S5400-RH	CCP-AK-INL-540	S5400	8/17/2009	8/17/2009	Hist ID: IDAWANL88-064; Alt Hist ID: ANL-880064; Hist Closure Date: 3/24/1988; Hist Vent Date; 3/13/2007
447	IDAWANL880065B	ID-MFC-S5400-RH	CCP-AK-INL-540	S5400	8/14/2009	8/14/2009	Hist ID: IDAWANL88-065; Alt Hist ID: ANL-88065; Hist Closure Date: 3/24/1988; Hist Vent Date: 3/13/2007
448	IDAWANL880065A	ID-MFC-S5400-RH	CCP-AK-INL-540	S5400	8/14/2009	8/14/2009	Hist ID: IDAWANL88-065; Alt Hist ID: ANL-880065; Hist Closure Date: 3/24/1988; Hist Vent Date: 3/13/2007
449	IDAWANL820066B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/3/2009	8/3/2009	HIST ID: IDAWANL820066; Alt HIST ID: N-94; Hist Closure Date: 6/30/1982
450	IDAWANL820066A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/3/2009	8/3/2009	HIST ID: IDAWANL820066; Alt HIST ID: N-94; Hist Closure Date: 6/30/1982
451	IDAWANL810091B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/3/2009	8/3/2009	HIST ID: IDAWANL810091; Alt HIST ID: N-79; Hist Closure Date: 6/5/1981
452	IDAWANL810091A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	8/3/2009	8/3/2009	HIST ID: IDAWANL810091; Alt HIST ID: N-79; Hist Closure Date: 6/5/1981
453	IDAWANL820118B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	6/10/2009	6/10/2009	Hist ID; IDAWANL820118; Alt Hist ID; N-96; Hist Closure Date: 8/19/1982
454	IDAWANL820118A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	6/10/2009	6/10/2009	Hist ID; IDAWANL820118; Alt Hist ID; N-96; Hist Closure Date: 8/19/1982
455	IDAWANL790203B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	6/4/2009	6/4/2009	Hist ID: IDAWANL790203; Alt Hist ID: N-52; Hist Closure Date: 12/18/1979
456	IDAWANL790203A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	6/4/2009	6/4/2009	Hist ID: IDAWANL790203; Alt Hist ID: N-52; Hist Closure Date: 12/18/1979
457	IDAWANL870105B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	6/3/2009	6/3/2009	Hist ID; IDAWANL870105; Alt Hist ID; B-337; Hist Closure Date: 4/15/1987
458	IDAWANL870107B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	5/21/2009	5/21/2009	Hist ID: IDAWANL870107; Alt Hist ID: N-139; Hist Closure Date: 5/4/1987
459	IDAWANL870107A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	5/21/2009	5/21/2009	Hist ID: IDAWANL870107; Alt Hist ID: N-139; Hist Closure Date: 5/4/1987
460	IDAWANL780204B	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	5/21/2009	5/21/2009	Hist ID: IDAWANL780204; Alt Hist ID: B-254; Hist Closure Date: 8/16/1978
461	IDAWANL780204A	ID-HFEF-S5400-RH	CCP-AK-INL-580	S5400	5/21/2009	5/21/2009	Hist ID: IDAWANL780204; Alt Hist ID: B-254; Hist Closure Date: 8/16/1978
462	IDIC000000460	ID-INTEC-RH	CCP-AK-INL-550	S5400	8/4/2008	9/28/1978	30 gal vented; Remediated Overpacked in 55-gallon
463	IDAERH0001004	ID-ANLE-S5000	CCP-AK-INL-500	S5400	3/17/2008	3/16/1981	Overpacked into 55-gallon for side punch
464	IDAERH0001002	ID-ANLE-S5000	CCP-AK-INL-500	S5400	3/17/2008	3/12/1981	Overpacked into 55-gallon for side punch
465	524	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/5/2008	6/9/1980	30 gal vented 3/5/2007; Overpacked in 55 gal for Headspace Gas Sampling; an H will be added to the container number by the
466	477	ID-ANLE-S5000	CCP-AK-INL-500	S5400	11/7/2007	8/17/1978	30 gal vented 12/12/2006; Overpack into 55-gallon for top filter punch; Overpacked in 55 gal for side punch
467	356	ID-ANLE-S5000	CCP-AK-INL-500	S5400	11/7/2007	12/16/1978	30 gal vented 1/3/2007; Overpack into 55-gallon for top filter punch; Overpacked in 55 gal for side punch
468	475	ID-ANLE-S5000	CCP-AK-INL-500	S5400	11/1/2007	3/24/1978	30 gal vented; Overpack into 55-gallon for top filter punch; Overpacked in 55 gal for side punch

	A	B	C	D	E	F	N
469	NRFTRUSPC096-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	9/11/2007	9/11/2007	Historical ID: 96; 55 Gallon Drum
470	IDIC000000427	ID-INTEC-RH	CCP-AK-INL-550	S5400	8/4/2007	9/28/1978	30 gal vented; Remediated Overpack 55-gallon
471	IDIRTRA008841	ID-RTC-S3000	CCP-AK-INL-520	S3120	4/10/2007	12/18/1987	55 Gallon; TRA-88-41; Drum will not be disposed of as RH.
472	IDIRTRA008832	ID-RTC-S3000	CCP-AK-INL-520	S3120	4/9/2007	9/18/1987	55 gallon; TRA-88-32; Drum will not be disposed of as RH.
473	IDIRTRA008813	ID-RTC-S3000	CCP-AK-INL-520	S3120	4/9/2007	9/21/1987	55 gallon; TRA-88-13; Drum will not be disposed of as RH.
474	IDIRTRA008812	ID-RTC-S3000	CCP-AK-INL-520	S3120	4/9/2007	9/21/1987	55 gallon; TRA-88-12; Drum will not be disposed of as RH.
475	IDIRTRA008811	ID-RTC-S3000	CCP-AK-INL-520	S3120	4/9/2007	9/21/1987	55 gallon; TRA-88-11; Drum will not be disposed of as RH.
476	IDIRTRA008843	ID-RTC-S3000	CCP-AK-INL-520	S3120	4/5/2007	12/18/1987	55 gallon; TRA-88-43; Drum will not be disposed of as RH.
477	IDIRTRA008842	ID-RTC-S3000	CCP-AK-INL-520	S3120	4/5/2007	12/18/1987	55 gallon; TRA-88-42; Drum will not be disposed of as RH.
478	IDIRTRA008831	ID-RTC-S3000	CCP-AK-INL-520	S3120	4/5/2007	9/18/1987	55 gallon; TRA-88-31; Drum will not be disposed of as RH.
479	IDINEC0200007	IN-ID-NRF-153	CCP-AK-INL-560	S5300	3/19/2007	3/9/1979	Overpack 55-gallon
480	IDINEC0200006	IN-ID-NRF-153	CCP-AK-INL-560	S5300	3/19/2007	2/7/1978	30 gal (IDEC0200006) overpacked into 55-gallon
481	IDINEC0100011	IN-ID-NRF-153	CCP-AK-INL-560	S5300	3/19/2007	3/12/1979	Overpack 55-gallon 3/24/2008
482	IDINEC0100009	IN-ID-NRF-153	CCP-AK-INL-560	S5300	3/19/2007	3/8/1979	Overpack 55-gallon
483	IDINEC0100007	IN-ID-NRF-153	CCP-AK-INL-560	S5300	3/19/2007	3/2/1979	Overpack 55-gallon 3/24/2008
484	IDINEC0100006	IN-ID-NRF-153	CCP-AK-INL-560	S5300	3/19/2007	12/19/1978	Overpack 55-gallon
485	IDINEC0300007	IN-ID-NRF-153	CCP-AK-INL-560	S5300	3/15/2007	3/1/1979	Overpack 55-gallon
486	IDINEC0300006	IN-ID-NRF-153	CCP-AK-INL-560	S5300	3/15/2007	2/7/1978	Overpack 55-gallon
487	IDINEC0300005	IN-ID-NRF-153	CCP-AK-INL-560	S5300	3/15/2007	2/6/1978	Overpack 55-gallon 3/18/2008
488	IDINEC0300004	IN-ID-NRF-153	CCP-AK-INL-560	S5300	3/15/2007	2/1/1978	Overpack 55-gallon
489	IDINEC0300003	IN-ID-NRF-153	CCP-AK-INL-560	S5300	3/15/2007	2/3/1978	30 gal drum (EC0300003) overpacked into 55-gallon
490	IDINEC0300002	IN-ID-NRF-153	CCP-AK-INL-560	S5300	3/15/2007	11/2/1977	Overpack 55-gallon
491	IDINEC0200009	IN-ID-NRF-153	CCP-AK-INL-560	S5300	3/15/2007	3/13/1979	Overpack 55-gallon 3/20/2008
492	IDINEC0200005	IN-ID-NRF-153	CCP-AK-INL-560	S5300	3/15/2007	2/6/1978	Overpack 55-gallon
493	IDINEC0200004	IN-ID-NRF-153	CCP-AK-INL-560	S5300	3/15/2007	2/2/1978	Overpack 55-gallon
494	IDINEC0200001	IN-ID-NRF-153	CCP-AK-INL-560	S5300	3/15/2007	2/2/1978	Overpack 55-gallon
495	IDINEC0100013	IN-ID-NRF-153	CCP-AK-INL-560	S5300	3/15/2007	3/1/1979	Overpack 55-gallon
496	IDINEC0100012	IN-ID-NRF-153	CCP-AK-INL-560	S5300	3/15/2007	3/13/1979	Overpack 55-gallon 3/20/2008
497	IDINEC0100008	IN-ID-NRF-153	CCP-AK-INL-560	S5300	3/15/2007	3/2/1979	Overpack 55-gallon
498	IDINEC0100005	IN-ID-NRF-153	CCP-AK-INL-560	S5300	3/15/2007	12/20/1978	Overpack 55-gallon 3/20/2008
499	IDINEC0100004	IN-ID-NRF-153	CCP-AK-INL-560	S5300	3/15/2007	11/4/1977	Overpack 55-gallon
500	IDINEC0100003	IN-ID-NRF-153	CCP-AK-INL-560	S5300	3/15/2007	10/28/1977	Overpack 55-gallon
501	IDINEC0100002	IN-ID-NRF-153	CCP-AK-INL-560	S5300	3/15/2007	10/27/1977	Overpack 55-gallon 3/19/2008
502	IDINEC0100001	IN-ID-NRF-153	CCP-AK-INL-560	S5300	3/15/2007	10/26/1977	Overpack 55-gallon 3/19/2008
503	IDINEC0300001	IN-ID-NRF-153	CCP-AK-INL-560	S5300	3/14/2007	11/1/1977	Overpack 55-gallon 3/18/2008
504	IDINEC0200008	IN-ID-NRF-153	CCP-AK-INL-560	S5300	3/14/2007	3/13/1979	Overpack 55-gallon 3/18/2008
505	545	ID-ANLE-S5000	CCP-AK-INL-500	S5400	3/12/2007	11/6/1980	30 gal vented; Overpack into 55-gallon for top filter punch; Idaho # is IDAEOP0000545
506	544	ID-ANLE-S5000	CCP-AK-INL-500	S5400	3/12/2007	11/9/1980	30 gal vented; Overpack into 55-gallon for top filter punch; Idaho # is IDAEOP0000544
507	528	ID-ANLE-S5000	CCP-AK-INL-500	S5400	3/12/2007	7/17/1980	30 gal vented; Idaho # IDAEOP0000528; Overpacked in 55 gal for side punch
508	660	ID-ANLE-S5000	CCP-AK-INL-500	S5400	3/8/2007	11/22/1986	30 gal vented; Overpack into 55-gallon for top filter punch
509	659	ID-ANLE-S5000	CCP-AK-INL-500	S5400	3/8/2007	11/10/1986	30 gal vented; Overpack into 55-gallon for top filter punch
510	IDAE000000643	ID-ANLE-S5000	CCP-AK-INL-500	S5400	3/7/2007	10/25/1986	30 gal vented; Remediated Overpack 55-gallon
511	554	ID-ANLE-S5000	CCP-AK-INL-500	S5400	3/7/2007	2/6/1981	30 gal vented; Overpack into 55-gallon for top filter punch
512	530	ID-ANLE-S5000	CCP-AK-INL-500	S5400	3/7/2007	7/22/1980	30 gal vented; Overpack into 55-gallon for top filter punch
513	526	ID-ANLE-S5000	CCP-AK-INL-500	S5400	3/7/2007	6/10/1980	30 gal vented; Overpacked in 55 gal for Headspace Gas Sampling; an H will be added to the container number by the WCO for
514	IDAE000000465	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/26/2007	8/19/1977	30 gal vented; Remediated Overpack 55-gallon
515	306	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/26/2007	9/2/1978	30 gal vented; Overpack into 55-gallon for top filter punch
516	1046	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/26/2007	8/21/1982	30 gal vented; Overpack into 55-gallon for top filter punch
517	589	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/22/2007	7/10/1981	30 gal vented; Overpacked in 55 gal for Headspace Gas Sampling; an H will be added to the container number by the WCO for
518	493	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/22/2007	8/12/1978	30 gal vented; Overpack into 55-gallon for top filter punch
519	492	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/22/2007	8/12/1978	30 gal vented; Overpack into 55-gallon for top filter punch
520	340	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/22/2007	10/28/1978	30 gal vented; Overpack into 55-gallon for top filter punch

	A	B	C	D	E	F	N
521	337	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/22/2007	9/30/1978	30 gal vented; Overpack into 55-gallon for top filter punch
522	332	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/22/2007	9/29/1978	30 gal vented; Overpack into 55-gallon for top filter punch
523	594	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/21/2007	7/31/1981	30 gal vented; Overpack into 55-gallon for top filter punch
524	586	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/21/2007	7/9/1981	30 gal vented; Overpack into 55-gallon for top filter punch
525	585	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/21/2007	7/9/1981	30 gal vented; Overpacked in 55 gal for Headspace Gas Sampling; an H will be added to the container number by the WCO for
526	579	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/21/2007	5/21/1981	30 gal vented; Overpack into 55-gallon for top filter punch
527	578	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/21/2007	5/20/1981	30 gal vented; Overpack into 55-gallon for top filter punch
528	577	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/21/2007	5/20/1981	30 gal vented; Overpack into 55-gallon for top filter punch
529	576	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/21/2007	5/19/1981	30 gal vented; Overpack into 55-gallon for top filter punch
530	496	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/21/2007	8/24/1978	30 gal vented; Overpack into 55-gallon for top filter punch
531	478	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/21/2007	8/17/1978	30 gal vented; Overpack into 55-gallon for top filter punch
532	387	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/21/2007	10/13/1979	30 gal vented; Overpacked into 55 gallon
533	314	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/21/2007	9/9/1978	30 gal vented; Overpack into 55-gallon for top filter punch
534	459	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/20/2007	8/10/1977	30 gal vented; Overpack into 55-gallon for top filter punch
535	455	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/20/2007	7/25/1977	30 gal vented; Overpack into 55-gallon for top filter punch
536	453	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/20/2007	6/28/1977	30 gal vented; Overpacked in 55 gal for side punch
537	312	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/20/2007	9/9/1978	30 gal vented; Overpacked in 55 gal for side punch
538	495	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/15/2007	8/12/1978	30 gal vented; Overpacked in 55 gal for side punch
539	454	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/15/2007	6/28/1977	30 gal vented; Overpacked in 55 gal for side punch
540	451	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/15/2007	6/24/1977	30 gal vented; Overpacked in 55 gal for side punch
541	460	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/14/2007	8/11/1977	30 gal vented
542	457	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/14/2007	7/26/1977	30 gal vented; Overpack into 55-gallon for top filter punch
543	445	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/14/2007	4/6/1977	30 gal vented; Overpack into 55-gallon for top filter punch
544	431	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/14/2007	11/15/1976	30 gal vented; Overpack into 55-gallon for top filter punch
545	426	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/14/2007	11/7/1976	30 gal vented; Overpack into 55-gal for top filter punch
546	403	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/14/2007	4/20/1976	30 gal vented; Overpack into 55-gallon for top filter punch
547	318	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/13/2007	9/16/1978	30 gal vented; Overpack into 55-gallon for top filter punch
548	316	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/13/2007	9/9/1978	30 gal vented; Overpack into 55-gallon for top filter punch
549	307	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/13/2007	9/2/1978	30 gal vented; Overpack into 55-gallon for top filter punch
550	303	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/13/2007	8/26/1978	30 gal vented; Overpack into 55-gallon for top filter punch
551	418	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/1/2007	5/24/1976	30 gal vented; Overpack into 55-gallon for top filter punch
552	416	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/1/2007	5/19/1976	30 gal vented; Overpack into 55-gallon for top filter punch
553	410	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/1/2007	4/28/1976	30 gal vented; Overpack into 55-gallon for top filter punch
554	409	ID-ANLE-S5000	CCP-AK-INL-500	S5400	2/1/2007	4/28/1976	Over-packed in 55 gal for Headspace Gas Sampling an H will be added to the container number by the WCO for WWIS entry; I
555	424	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/31/2007	11/7/1976	30 gal vented; Overpacked in 55 gal for side punch
556	421	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/31/2007	11/3/1976	Over-packed in 55 gal for Headspace Gas Sampling an H will be added to the container number by the WCO for WWIS entry; I
557	448	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/30/2007	6/22/1977	30 gal vented; Overpacked in 55 gal for side punch
558	439	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/30/2007	11/22/1976	30 gal vented; Overpacked in 55 gal for side punch
559	IDAE000000427	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/29/2007	11/8/1976	30 gal vented; Overpack into 55-gal for side punch
560	425	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/29/2007	11/7/1976	30 gal vented; Overpack into 55-gallon for top filter punch
561	417	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/25/2007	5/24/1976	30 gal vented; Overpacked in 55 gal for side punch
562	414	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/25/2007	5/4/1976	30 gal vented; Overpacked in 55 gal for side punch
563	408	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/25/2007	4/28/1976	30 gal vented; Overpacked in 55 gal for side punch
564	407	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/25/2007	4/27/1976	30 gal vented; Overpacked in 55 gal for side punch
565	405	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/25/2007	4/26/1976	30 gal vented; Overpacked in 55 gal for side punch
566	1105	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/25/2007	8/10/1983	30 gal vented; Overpack into 55-gallon for top filter punch
567	1035	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/24/2007	11/21/1981	30 gal vented; Overpack into 55-gallon for top filter punch
568	1034	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/24/2007	11/21/1981	30 gal vented; Overpack into 55-gallon for top filter punch
569	566	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/24/2007	4/18/1981	30 gal vented; Overpack into 55-gallon for top filter punch
570	565	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/24/2007	4/18/1981	30 gal vented; Overpack into 55-gallon for top filter punch
571	562	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/24/2007	4/18/1981	30 gal vented; Overpack into 55-gallon for top filter punch
572	561	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/24/2007	4/18/1981	30 gal vented; Overpack into 55-gallon for top filter punch

	A	B	C	D	E	F	N
573	505	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/24/2007	10/26/1979	30 gal vented; Overpacked in 55 gal for side punch
574	502	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/24/2007	10/19/1979	30 gal vented; Overpacked in 55 gal for side punch
575	501	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/24/2007	10/18/1979	30 gal vented; Overpacked in 55 gal for side punch
576	341	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/24/2007	10/28/1978	30 gal vented; Overpacked in 55 gal for side punch
577	IDAE000000509	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/23/2007	11/30/1979	30 gal vented; Remediated Overpack 55-gallon
578	IDAE000000508	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/23/2007	11/20/1979	30 gal vented; Remediated Overpack 55-gallon
579	507	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/23/2007	11/20/1979	30 gal vented; Overpacked in 55 gal for Headspace Gas Sampling; an H will be added to the container number by the WCO for
580	1047	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/23/2007	8/21/1982	30 gal vented; Overpack into 55-gallon for top filter punch
581	355	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/22/2007	12/16/1978	30 gal vented; Overpack into 55-gallon for top filter punch
582	354	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/22/2007	12/16/1978	30 gal vented; Overpack into 55-gallon for top filter punch
583	346	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/22/2007	11/18/1978	30 gal vented; Overpack into 55-gallon for top filter punch
584	558	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/17/2007	2/7/1981	30 gal vented; Overpack into 55-gallon for top filter punch
585	IDAE000000556	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/15/2007	2/7/1981	30 gal vented; Remediated Overpack 55-gallon
586	1078	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/10/2007	7/9/1983	30 gal vented; Overpack into 55-gallon for top filter punch
587	1077	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/10/2007	7/9/1983	30 gal vented; Overpack into 55-gallon for top filter punch
588	1075	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/10/2007	7/8/1983	30 gal vented; Overpack into 55-gallon for top filter punch
589	593	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/10/2007	7/22/1981	30 gal vented; Overpack into 55-gallon for top filter punch
590	557	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/10/2007	2/7/1981	30 gal vented; Overpack into 55-gallon for top filter punch
591	549	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/10/2007	11/22/1980	30 gal vented; Overpack into 55-gallon for top filter punch
592	437	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/10/2007	11/18/1976	30 gal vented; Overpack into 55-gallon for top filter punch
593	IDAE000000463	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/9/2007	8/16/1977	30 gal vented; Remediated, overpacked 55-gallon
594	583	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/9/2007	6/8/1981	30 gal vented; Overpack into 55-gallon for top filter punch
595	582	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/9/2007	5/28/1981	30 gal vented; Overpack into 55-gallon for top filter punch
596	329	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/9/2007	9/23/1978	30 gal vented; Overpacked in 55 gal for side punch
597	323	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/9/2007	9/16/1978	30 gal vented; Overpack into 55-gallon for top filter punch
598	563	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/4/2007	4/18/1981	30 gal vented; Overpack into 55-gallon for top filter punch
599	IDAE000001030	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/3/2007	11/20/1981	30 gal vented; Remediated Overpack 55-gallon
600	349	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/3/2007	11/18/1978	30 gal vented; Overpacked in 55 gal for side punch
601	348	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/3/2007	11/18/1978	30 gal vented; Overpacked in 55 gal for Headspace Gas Sampling; an H will be added to the container number by the WCO for
602	347	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/3/2007	11/18/1978	30 gal vented; Overpacked in 55 gal for side punch
603	1033	ID-ANLE-S5000	CCP-AK-INL-500	S5400	1/3/2007	11/21/1981	30 gal vented; Overpack into 55-gallon for top filter punch
604	546	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/20/2006	11/21/1980	30 gal vented; Overpacked in 55 gal for side punch
605	368	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/20/2006	6/9/1979	30 gal vented; Overpacked in 55 gal for side punch
606	367	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/20/2006	6/9/1979	30 gal vented; Overpacked in 55 gal for side punch
607	364	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/20/2006	3/10/1979	30 gal vented; Overpack into 55-gallon for top filter punch
608	327	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/20/2006	9/23/1978	30 gal vented; Overpack into 55-gallon for top filter punch
609	325	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/20/2006	9/22/1978	30 gal vented; Overpack into 55-gallon for top filter punch
610	321	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/20/2006	9/16/1978	30 gal vented; Overpack into 55-gallon for top filter punch
611	IDAE000000336	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/19/2006	9/30/1978	30 gal vented; Overpack 55-gallon side punch
612	559	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/19/2006	2/7/1981	30 gal vented; Overpack into 55-gallon for top filter punch
613	339	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/19/2006	10/27/1978	30 gal vented; Overpacked in 55 gal for side punch
614	IDAE000000412	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/18/2006	4/30/1976	30 gal vented; Remediated Overpack 55-gallon
615	430	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/18/2006	11/10/1976	30 gal vented; Overpacked in 55 gal for side punch
616	415	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/18/2006	5/18/1976	30 gal vented; Overpack into 55-gallon for top filter punch
617	353	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/18/2006	12/14/1978	30 gal vented; Overpacked in 55 gal for side punch
618	351	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/18/2006	12/14/1978	30 gal vented; Overpacked in 55 gal for side punch
619	452	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/14/2006	6/25/1977	30 gal vented; Overpack into 55-gallon for top filter punch
620	429	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/14/2006	11/9/1976	30 gal vented; Overpacked in 55 gal for side punch
621	419	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/14/2006	5/25/1976	30 gal vented; Overpacked in 55 gal for side punch
622	413	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/14/2006	5/3/1976	30 gal vented; Overpacked in 55 gal for side punch
623	322	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/14/2006	9/16/1978	30 gal vented; Overpack into 55-gallon for top filter punch
624	1031	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/14/2006	11/21/1981	30 gal vented; Overpack into 55-gallon for top filter punch

	A	B	C	D	E	F	N
625	497	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/12/2006	8/24/1978	30 gal vented; Overpack into 55-gallon for top filter punch
626	487	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/12/2006	8/5/1978	30 gal vented; Overpack into 55-gallon for top filter punch
627	481	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/12/2006	8/19/1978	30 gal vented; Overpack into 55-gallon for top filter punch
628	476	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/12/2006	4/18/1978	30 gal vented; Overpack into 55-gallon for top filter punch
629	474	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/12/2006	3/23/1978	30 gal vented; Overpack into 55-gallon for top filter punch
630	432	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/12/2006	11/15/1976	30 gal vented; Overpack into 55-gallon for top filter punch
631	IDAE000000422	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/11/2006	11/4/1976	30 gal vented; Remediated Overpack 55-gallon
632	1136	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/11/2006	5/5/1984	30 gal vented; Overpack into 55-gallon for top filter punch
633	1135	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/11/2006	5/4/1984	30 gal vented; Overpack into 55-gallon for top filter punch
634	1134	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/11/2006	4/26/1984	30 gal vented; Overpack into 55-gallon for top filter punch
635	440	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/11/2006	12/1/1976	30 gal vented; Overpacked in 55 gal for side punch
636	423	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/11/2006	11/6/1976	30 gal vented; Overpacked in 55 gal for side punch
637	1058	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/11/2006	9/3/1982	30 gal vented; Overpack into 55-gallon for top filter punch
638	IDAE000001089	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/7/2006	7/16/1983	(repackage date) 30 gal vented; Remediated Overpack 55-gallon
639	607	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/7/2006	12/15/1984	30 gal vented; Overpack into 55-gallon for top filter punch
640	1059	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/7/2006	9/3/1982	30 gal vented; Overpack into 55-gallon for top filter punch
641	IDAERH0000605	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/6/2006	12/8/1984	30 gal vented; Remediated Overpack 55-gallon
642	1149	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/6/2006	12/1/1984	30 gal vented; Overpack into 55-gallon for top filter punch
643	1116	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/6/2006	8/19/1983	30 gal vented; Overpack into 55-gallon for top filter punch
644	1110	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/6/2006	8/13/1983	30 gal vented; Overpack into 55-gallon for top filter punch
645	1106	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/6/2006	8/10/1983	30 gal vented; Overpack into 55-gallon for top filter punch
646	109	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/6/2006	8/13/1983	DR015 states 001109 is being tracked as 00109; 30 gal vented; Overpack into 55 gal for top filter punch
647	IDAERH0000603	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/5/2006	12/8/1984	30 gal vented; Overpack into 55-gallon for top filter punch
648	IDAE000001138	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/5/2006	5/5/1984	30 gal vented; Remediated Overpack 55-gallon
649	612	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/5/2006	4/13/1985	30 gal vented; Overpack into 55-gallon for top filter punch
650	1125	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/5/2006	8/26/1983	30 gal vented; Overpack into 55-gallon for top filter punch
651	1112	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/5/2006	8/13/1983	30 gal vented; Overpack into 55-gallon for top filter punch
652	IDAERH0000602	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/4/2006	12/8/1984	30 gal vented; Overpack into 55-gallon for top filter punch
653	1147	ID-ANLE-S5000	CCP-AK-INL-500	S5400	12/4/2006	12/1/1984	30 gal vented; Overpack into 55-gallon for top filter punch
654	1129	ID-ANLE-S5000	CCP-AK-INL-500	S5400	11/30/2006	4/21/1984	30 gal vented; Overpack into 55-gallon for top filter punch
655	1127	ID-ANLE-S5000	CCP-AK-INL-500	S5400	11/30/2006	4/20/1984	30 gal vented; Overpack into 55-gallon for top filter punch
656	1126	ID-ANLE-S5000	CCP-AK-INL-500	S5400	11/21/2006	4/20/1984	30 gal vented; Overpack into 55-gallon for top filter punch
657	1107	ID-ANLE-S5000	CCP-AK-INL-500	S5400	11/21/2006	8/10/1983	30 gal vented; Overpack into 55-gallon for top filter punch
658	458	ID-ANLE-S5000	CCP-AK-INL-500	S5400	11/13/2006	7/26/1977	Overpack in 55 gal for HSG- H added to the cont# by the WCO for WWIS entry; Overpack into 55-gal for top filter punch; Idaho
659	NRFTRUSPC095-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	12/11/2001	12/11/2001	Historical ID: 95; 55 Gallon Drum
660	NRFTRUSPC094-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	12/11/2001	12/11/2001	Historical ID: 94; 55 Gallon Drum
661	NRFTRUSPC093-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	5/6/2000	5/6/2000	Historical ID: 93; 55 Gallon Drum
662	NRFTRUSPC092-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	1/30/1999	1/30/1999	Historical ID: 92; 55 Gallon Drum
663	NRFTRUSPC091-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	4/26/1998	4/26/1998	Historical ID: 91; 55 Gallon Drum
664	NRFTRUSPC090-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	1/2/1996	1/2/1996	Historical ID: 90; 55 Gallon Drum
665	809	ID-ANLE-S5000	CCP-AK-INL-500	S5400	11/3/1995	11/3/1995	Over-packed in 55 gal for Headspace Sampling an H will be added to the container number by the WCO for WWIS entry; Idaho
666	808	ID-ANLE-S5000	CCP-AK-INL-500	S5400	11/3/1995	11/3/1995	
667	807	ID-ANLE-S5000	CCP-AK-INL-500	S5400	11/3/1995	11/3/1995	
668	806	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/31/1995	10/31/1995	
669	805	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/31/1995	10/31/1995	
670	804	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/26/1995	10/26/1995	
671	803	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/25/1995	10/25/1995	
672	802	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/25/1995	10/25/1995	
673	801	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/25/1995	10/25/1995	
674	800	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/25/1995	10/25/1995	Over-packed in 55 gal for Headspace Gas Sampling an H will be added to the container number by the WCO for WWIS entry; I
675	799	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/20/1995	10/20/1995	
676	798	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/20/1995	10/20/1995	Over-packed in 55 gal for Headspace Gas Sampling an H will be added to the container number by the WCO for WWIS entry; I

	A	B	C	D	E	F	N
677	789	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/19/1995	10/19/1995	
678	797	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/18/1995	10/18/1995	
679	793	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/18/1995	10/18/1995	
680	796	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/17/1995	10/17/1995	Over-packed in 55 gal for Headspace Gas Sampling an H will be added to the container number by the WCO for WWIS entry; I
681	795	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/17/1995	10/17/1995	
682	794	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/17/1995	10/17/1995	
683	792	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/10/1995	10/10/1995	Over-packed in 55 gal for Headspace Gas Sampling an H will be added to the container number by the WCO for WWIS entry; I
684	791	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/9/1995	10/9/1995	
685	788	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/7/1995	10/7/1995	
686	787	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/7/1995	10/7/1995	
687	785	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/7/1995	10/7/1995	Over-packed in 55 gal for Headspace Gas Sampling an H will be added to the container number by the WCO for WWIS entry; I
688	784	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/7/1995	10/7/1995	
689	783	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/7/1995	10/7/1995	
690	782	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/7/1995	10/7/1995	
691	781	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/7/1995	10/7/1995	
692	780	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/6/1995	10/6/1995	
693	779	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/6/1995	10/6/1995	
694	778	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/5/1995	10/5/1995	
695	NRFTRUSPC089-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	2/3/1995	2/3/1995	Historical ID: 89; 55 Gallon Drum
696	NRFTRUSPC088-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	10/4/1994	10/4/1994	Historical ID: 88; 55 Gallon Drum
697	IDIRTRATRU014	ID-RTC-S5300	CCP-AK-INL-530	S5300	8/31/1994	8/31/1994	55 gallon; TRA/TRU-14
698	IDIRTRATRU013	ID-RTC-S5300	CCP-AK-INL-530	S5300	8/31/1994	8/31/1994	55 gallon; TRA/TRU-13
699	IDIRTRATRU012	ID-RTC-S5300	CCP-AK-INL-530	S5300	8/31/1994	8/31/1994	55 gallon; TRA/TRU-12
700	IDIRTRATRU011	ID-RTC-S5300	CCP-AK-INL-530	S5300	8/31/1994	8/31/1994	55 gallon; TRA/TRU-11
701	IDIRTRATRU010	ID-RTC-S5300	CCP-AK-INL-530	S5300	8/31/1994	8/31/1994	55 gallon; TRA/TRU-10
702	IDIRTRATRU009	ID-RTC-S5300	CCP-AK-INL-530	S5300	8/31/1994	8/31/1994	55 gallon; TRA/TRU-9
703	IDIRTRATRU008	ID-RTC-S5300	CCP-AK-INL-530	S5300	8/31/1994	8/31/1994	55 gallon; TRA/TRU-8
704	IDIRTRATRU007	ID-RTC-S5300	CCP-AK-INL-530	S5300	8/31/1994	8/31/1994	55 gallon; TRA/TRU-7
705	IDIRTRATRU006	ID-RTC-S5300	CCP-AK-INL-530	S5300	8/31/1994	8/31/1994	55 gallon; TRA/TRU-6
706	IDIRTRATRU005	ID-RTC-S5300	CCP-AK-INL-530	S5300	8/31/1994	8/31/1994	55 gallon; TRA/TRU-5
707	IDIRTRATRU004	ID-RTC-S5300	CCP-AK-INL-530	S5300	8/31/1994	8/31/1994	55 gallon; TRA/TRU-4
708	IDIRTRATRU003	ID-RTC-S5300	CCP-AK-INL-530	S5300	8/31/1994	8/31/1994	55 gallon; TRA/TRU-3
709	IDIRTRATRU002	ID-RTC-S5300	CCP-AK-INL-530	S5300	8/31/1994	8/31/1994	55 gallon; TRA/TRU-2
710	IDIRTRATRU001	ID-RTC-S5300	CCP-AK-INL-530	S5300	8/31/1994	8/31/1994	55 gallon; TRA/TRU-1
711	777	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/21/1993	5/21/1993	
712	776	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/21/1993	5/21/1993	
713	775	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/21/1993	5/21/1993	
714	774	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/20/1993	5/20/1993	
715	773	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/20/1993	5/20/1993	
716	772	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/20/1993	5/20/1993	Over-packed in 55 gal for Headspace Gas Sampling an H will be added to the container number by the WCO for WWIS entry; I
717	771	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/20/1993	5/20/1993	Idaho # is IDAEOP0000771
718	770	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/20/1993	5/20/1993	Idaho # is IDAEOP0000770
719	769	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/15/1993	5/15/1993	Over-packed in 55 gal for Headspace Gas Sampling an H will be added to the container number by the WCO for WWIS entry; I
720	768	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/15/1993	5/15/1993	Idaho # is IDAEOP0000768
721	767	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/15/1993	5/15/1993	
722	766	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/15/1993	5/15/1993	
723	765	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/14/1993	5/14/1993	
724	764	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/14/1993	5/14/1993	
725	763	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/14/1993	5/14/1993	Idaho # is IDAEOP0000763
726	762	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/14/1993	5/14/1993	Idaho # is IDAEOP0000762
727	761	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/14/1993	5/14/1993	Over-packed in 55 gal for Headspace Gas Sampling an H will be added to the container number by the WCO for WWIS entry; I
728	760	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/14/1993	5/14/1993	Idaho # is IDAEOP0000760

	A	B	C	D	E	F	N
729	759	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/13/1993	5/13/1993	Idaho # is IDAEOP0000759
730	758	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/13/1993	5/13/1993	
731	757	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/8/1993	5/8/1993	Over-packed in 55 gal for Headspace Gas Sampling an H will be added to the container number by the WCO for WWIS entry; I
732	756	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/8/1993	5/8/1993	
733	755	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/8/1993	5/8/1993	
734	754	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/8/1993	5/8/1993	
735	753	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/8/1993	5/8/1993	
736	752	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/7/1993	5/7/1993	
737	751	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/7/1993	5/7/1993	
738	750	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/7/1993	5/7/1993	
739	749	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/6/1993	5/6/1993	
740	748	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/6/1993	5/6/1993	
741	747	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/1/1993	5/1/1993	Idaho # is IDAEOP0000747
742	746	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/1/1993	5/1/1993	Idaho # is IDAEOP0000746
743	745	ID-ANLE-S5000	CCP-AK-INL-500	S5400	4/30/1993	4/30/1993	Idaho # is IDAEOP0000745
744	744	ID-ANLE-S5000	CCP-AK-INL-500	S5400	4/30/1993	4/30/1993	Idaho # is IDAEOP0000744
745	743	ID-ANLE-S5000	CCP-AK-INL-500	S5400	4/30/1993	4/30/1993	Idaho # is IDAEOP0000743
746	742	ID-ANLE-S5000	CCP-AK-INL-500	S5400	4/30/1993	4/30/1993	Idaho # is IDAEOP0000742
747	741	ID-ANLE-S5000	CCP-AK-INL-500	S5400	4/23/1993	4/23/1993	Idaho # is IDAEOP0000741
748	740	ID-ANLE-S5000	CCP-AK-INL-500	S5400	4/23/1993	4/23/1993	Idaho # is IDAEOP0000740
749	739	ID-ANLE-S5000	CCP-AK-INL-500	S5400	4/22/1993	4/22/1993	Idaho # is IDAEOP0000739
750	738	ID-ANLE-S5000	CCP-AK-INL-500	S5400	4/22/1993	4/17/1993	Idaho # is IDAEOP0000738
751	676	ID-ANLE-S5000	CCP-AK-INL-500	S5400	8/27/1992	12/12/1987	
752	675	ID-ANLE-S5000	CCP-AK-INL-500	S5400	8/27/1992	12/12/1987	
753	674	ID-ANLE-S5000	CCP-AK-INL-500	S5400	8/27/1992	12/12/1987	
754	673	ID-ANLE-S5000	CCP-AK-INL-500	S5400	8/27/1992	12/12/1987	
755	672	ID-ANLE-S5000	CCP-AK-INL-500	S5400	8/27/1992	12/12/1987	
756	671	ID-ANLE-S5000	CCP-AK-INL-500	S5400	8/27/1992	12/12/1987	
757	670	ID-ANLE-S5000	CCP-AK-INL-500	S5400	8/27/1992	12/10/1987	Overpack into 55-gallon for top filter punch
758	624	ID-ANLE-S5000	CCP-AK-INL-500	S5400	8/27/1992	10/12/1985	
759	620	ID-ANLE-S5000	CCP-AK-INL-500	S5400	8/27/1992	4/27/1985	
760	617	ID-ANLE-S5000	CCP-AK-INL-500	S5400	8/27/1992	4/27/1985	
761	737	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/24/1992	5/24/1992	
762	IDAE000000736	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/23/1992	5/23/1992	Remediated Overpack 55-gallon
763	735	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/23/1992	5/23/1992	
764	734	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/23/1992	5/23/1992	
765	IDAE000000733	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/22/1992	5/22/1992	Remediated Overpack 55-gallon
766	732	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/22/1992	5/22/1992	
767	731	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/22/1992	5/22/1992	
768	730	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/21/1992	5/21/1992	
769	729	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/21/1992	5/21/1992	
770	728	ID-ANLE-S5000	CCP-AK-INL-500	S5400	5/21/1992	5/21/1992	
771	NRFTRUSPC087-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	7/12/1991	7/12/1991	Historical ID: 87; 55 Gallon Drum
772	537	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/17/1990	8/23/1980	30 gal vented by ANL-E per individual vent installation data sheets
773	543	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/16/1990	9/6/1980	30 gal vented by ANL-E per individual vent installation data sheets
774	542	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/16/1990	9/6/1980	30 gal vented by ANL-E per individual vent installation data sheets
775	541	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/16/1990	9/6/1980	30 gal vented by ANL-E per individual vent installation data sheets
776	540	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/16/1990	9/6/1980	30 gal vented by ANL-E per individual vent installation data sheets
777	539	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/16/1990	9/6/1980	30 gal vented by ANL-E per individual vent installation data sheets; Overpack into 55-gal for top filter punch
778	538	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/16/1990	9/6/1980	30 gal vented by ANL-E per individual vent installation data sheets
779	727	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/12/1990	10/12/1990	
780	726	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/12/1990	10/12/1990	

	A	B	C	D	E	F	N
781	725	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/12/1990	10/12/1990	
782	724	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/12/1990	10/12/1990	
783	723	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/12/1990	10/12/1990	
784	722	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/11/1990	10/11/1990	
785	721	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/11/1990	10/11/1990	
786	720	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/11/1990	10/11/1990	
787	719	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/6/1990	10/6/1990	
788	718	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/6/1990	10/6/1990	
789	717	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/5/1990	10/5/1990	Over-packed in 55 gal for Headspace Gas Sampling an H will be added to the container number by the WCO for WWIS entry; I
790	716	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/5/1990	10/5/1990	
791	715	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/5/1990	10/5/1990	
792	714	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/5/1990	10/5/1990	
793	713	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/5/1990	10/5/1990	
794	712	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/4/1990	10/4/1990	Overpacked in 55 gal for side punch
795	711	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/4/1990	10/4/1990	
796	710	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/4/1990	10/4/1990	
797	709	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/3/1990	10/3/1990	
798	708	ID-ANLE-S5000	CCP-AK-INL-500	S5400	10/3/1990	10/3/1990	
799	707	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/29/1990	9/29/1990	
800	706	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/29/1990	9/29/1990	
801	705	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/28/1990	9/28/1990	
802	704	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/28/1990	9/28/1990	
803	703	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/28/1990	9/28/1990	
804	702	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/28/1990	9/28/1990	
805	701	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/28/1990	9/28/1990	
806	700	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/28/1990	9/28/1990	
807	699	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/28/1990	9/28/1990	
808	698	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/27/1990	9/27/1990	
809	697	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/26/1990	9/26/1990	
810	696	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/26/1990	9/26/1990	
811	695	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/26/1990	9/26/1990	
812	694	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/25/1990	9/25/1990	
813	693	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/25/1990	9/25/1990	
814	692	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/25/1990	9/25/1990	
815	691	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/25/1990	9/25/1990	
816	690	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/25/1990	9/25/1990	
817	689	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/22/1990	9/22/1990	
818	688	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/22/1990	9/22/1990	
819	687	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/22/1990	9/18/1990	Idaho # is IDAEOP0000687; Overpacked in 55 gal for side punch
820	1108	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/15/1990	8/12/1983	30 gal vented by ANL-E per individual vent installation data sheets
821	1095	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/15/1990	7/29/1983	30 gal vented
822	IDAE000000623	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/8/1990	10/12/1985	Remediated overpacked in 55-gallon
823	636	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/8/1990	10/11/1986	
824	635	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/8/1990	10/11/1986	
825	634	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/8/1990	10/11/1986	
826	618	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/8/1990	4/27/1985	
827	IDAE000000629	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/1/1990	10/19/1985	Remediated Overpack 55-gallon
828	633	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/1/1990	10/10/1986	
829	631	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/1/1990	10/19/1985	
830	630	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/1/1990	10/19/1985	
831	627	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/1/1990	10/19/1985	
832	626	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/1/1990	10/19/1985	

	A	B	C	D	E	F	N
833	619	ID-ANLE-S5000	CCP-AK-INL-500	S5400	9/1/1990	4/27/1985	
834	IDAE000000622	ID-ANLE-S5000	CCP-AK-INL-500	S5400	8/31/1990	10/12/1985	Remediated overpacked in 55-gallon
835	632	ID-ANLE-S5000	CCP-AK-INL-500	S5400	8/31/1990	10/9/1986	
836	628	ID-ANLE-S5000	CCP-AK-INL-500	S5400	8/31/1990	10/19/1985	
837	625	ID-ANLE-S5000	CCP-AK-INL-500	S5400	8/31/1990	10/19/1985	
838	621	ID-ANLE-S5000	CCP-AK-INL-500	S5400	8/31/1990	4/27/1985	
839	678	ID-ANLE-S5000	CCP-AK-INL-500	S5400	8/1/1990	12/12/1987	Overpack into 55-gallon for top filter punch
840	677	ID-ANLE-S5000	CCP-AK-INL-500	S5400	8/1/1990	12/12/1987	Overpack into 55-gallon for top filter punch
841	665	ID-ANLE-S5000	CCP-AK-INL-500	S5400	8/1/1990	12/5/1987	Overpacked in 55 gal for side punch
842	664	ID-ANLE-S5000	CCP-AK-INL-500	S5400	8/1/1990	12/4/1987	
843	653	ID-ANLE-S5000	CCP-AK-INL-500	S5400	8/1/1990	9/11/1987	Overpack into 55-gallon for top filter punch
844	IDAE000000668	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/31/1990	12/5/1987	Remediated Overpack 55-gallon
845	IDAE000000667	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/31/1990	12/5/1987	Remediated Overpack 55-gallon
846	669	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/31/1990	12/5/1987	
847	666	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/31/1990	12/5/1987	
848	663	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/31/1990	12/4/1987	
849	614	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/31/1990	4/13/1985	
850	682	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/30/1990	12/19/1987	
851	681	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/30/1990	12/19/1987	
852	IDAE000000683	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/28/1990	12/19/1987	Remediated, overpacked 55-gallon
853	686	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/28/1990	12/19/1987	
854	685	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/28/1990	12/19/1987	
855	684	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/28/1990	12/19/1987	
856	680	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/28/1990	12/19/1987	
857	679	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/28/1990	12/19/1987	
858	652	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/27/1990	11/3/1986	
859	644	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/27/1990	10/27/1986	Overpack into 55-gallon for top filter punch
860	639	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/27/1990	10/13/1986	
861	616	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/27/1990	4/27/1985	
862	615	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/27/1990	4/27/1985	Overpack into 55-gallon for top filter punch
863	650	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/26/1990	11/3/1986	
864	649	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/26/1990	11/1/1986	
865	648	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/26/1990	11/1/1986	Overpack into 55-gallon for top filter punch
866	647	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/26/1990	11/1/1986	
867	646	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/26/1990	10/28/1986	Overpack into 55-gallon for top filter punch
868	651	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/25/1990	11/3/1986	Overpack into 55-gallon for top filter punch
869	645	ID-ANLE-S5000	CCP-AK-INL-500	S5400	7/25/1990	10/28/1986	Overpack into 55-gallon for top filter punch
870	NRFTRUSPC086-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	5/17/1990	5/17/1990	Historical ID: 86; 55 Gallon Drum
871	NRFTRUSPC085-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	12/7/1989	12/7/1989	Historical ID: 85; 55 Gallon Drum
872	NRFTRUSPC084-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	11/18/1988	11/18/1988	Historical ID: 84; 55 Gallon Drum
873	NRFTRUSPC082-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	8/28/1986	8/28/1986	Historical ID: 82; 55 Gallon Drum
874	NRFTRUSPC081-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	8/6/1986	8/6/1986	Historical ID: 81; 55 Gallon Drum
875	NRFTRUSPC080-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	12/27/1985	12/27/1985	Historical ID: 80; 55 Gallon Drum
876	NRFTRUSPC079-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	5/22/1985	5/22/1985	Historical ID: 79; 55 Gallon Drum
877	NRFTRUSPC078-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	4/3/1985	4/3/1985	Historical ID: 78; 55 Gallon Drum
878	NRFTRUSPC077-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	4/3/1985	4/3/1985	Historical ID: 77; 55 Gallon Drum
879	NRFTRUSPC076-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	1/24/1985	1/24/1985	Historical ID: 76; 55 Gallon Drum
880	NRFTRUSPC075-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	1/9/1985	1/9/1985	Historical ID: 75; 55 Gallon Drum
881	NRFTRUSPC074-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	1/4/1985	1/4/1985	Historical ID: 74; 55 Gallon Drum
882	NRFTRUSPC073-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	11/8/1984	11/8/1984	Historical ID: 73; 55 Gallon Drum
883	NRFTRUSPC072-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	5/12/1983	5/12/1983	Historical ID: 72; 55 Gallon Drum
884	NRFTRUSPC071A-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	5/2/1983	5/2/1983	Historical ID: 071A; 55 Gallon Drum

	A	B	C	D	E	F	N
885	NRFTRUSPC071-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	4/12/1983	4/12/1983	Historical ID: 71; 55 Gallon Drum
886	NRFTRUSPC070-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	9/14/1982	9/14/1982	Historical ID: 70; 55 Gallon Drum
887	NRFTRUSPC069-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	6/24/1982	6/24/1982	Historical ID: 69; 55 Gallon Drum
888	NRFTRUSPC068-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	2/26/1982	2/26/1982	Historical ID: 68; 55 Gallon Drum
889	NRFTRUSPC067-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	2/26/1982	2/26/1982	Historical ID: 67; 55 Gallon Drum
890	NRFTRUSPC066-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	11/17/1981	11/17/1981	Historical ID: 66; 55 Gallon Drum
891	NRFTRUSPC063-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	7/22/1981	7/22/1981	Historical ID: 63; 55 Gallon Drum
892	NRFTRUSPC058-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	8/13/1980	8/13/1980	Historical ID: 58; 55 Gallon Drum
893	NRFTRUSPC057-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	8/12/1980	8/12/1980	Historical ID: 57; 55 Gallon Drum; EXCLUDE per IQuintana email 022112; Un-excluded per LNelson email 031312.
894	527	ID-ANLE-S5000	CCP-AK-INL-500	S5400	6/13/1980	6/13/1980	30 gal vented
895	NRFTRUSPC056-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	5/20/1980	5/20/1980	Historical ID: 56; 55 Gallon Drum
896	NRFTRUSPC039A-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	1/7/1980	1/7/1980	Historical ID: SS-39A; 55-Gallon Drum
897	NRFTRUSPC054-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	12/20/1979	12/20/1979	Historical ID: 54; 55 Gallon Drum
898	NRFTRUSPC053-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	12/9/1979	12/6/1979	Historical ID: 53; 55 Gallon Drum
899	NRFTRUSPC052-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	11/21/1979	11/21/1979	Historical ID: 52; 55 Gallon Drum
900	NRFTRUSPC051-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	11/1/1979	11/1/1979	Historical ID: 51; 55 Gallon Drum
901	NRFTRUSPC050-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	10/8/1979	10/8/1979	Historical ID: 50; 55 Gallon Drum
902	NRFTRUSPC049-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	10/2/1979	10/2/1979	Historical ID: 49; 55 Gallon Drum
903	NRFTRUSPC048-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	9/24/1979	9/24/1979	Historical ID: 48; 55 Gallon Drum
904	NRFTRUSPC045-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	5/2/1979	5/2/1979	Historical ID: 45; 55-Gallon Drum
905	NRFTRUSPC044-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	2/28/1979	2/28/1979	Historical ID: 44; 55-Gallon Drum
906	NRFTRUSPC043-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	1/30/1979	1/30/1979	Historical ID: 43; 55-Gallon Drum
907	NRFTRUSPC041-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	7/13/1978	7/13/1978	Historical ID: 41; 55-Gallon Drum
908	NRFTRUSPC040-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	7/10/1978	7/10/1978	Historical ID: 40; 55-Gallon Drum
909	NRFTRUSPC039-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	6/22/1978	6/22/1978	Historical ID: 39; 55-Gallon Drum
910	NRFTRUSPC037-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	11/10/1977	11/10/1977	Historical ID: 37; 55-Gallon Drum
911	NRFTRUSPC036-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	11/3/1977	11/3/1977	Historical ID: SS-36; 55-Gallon Drum
912	NRFTRUSPC035-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	10/3/1977	10/3/1977	Historical ID: SS-35; 55-Gallon Drum
913	NRFTRUSPC034-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	4/27/1977	4/27/1977	Historical ID: 34; 55-Gallon Drum
914	NRFTRUSPC033-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	1/25/1977	1/25/1977	Historical ID: 33; 55-Gallon Drum
915	NRFTRUSPC032-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	1/5/1977	1/5/1977	Historical ID: 32; 55-Gallon Drum
916	NRFTRUSPC031-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100	11/18/1976	11/18/1976	Historical ID: 31; 55-Gallon Drum
917	NRFTRUSPC083-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100		7/30/1987	Historical ID: 83; 55 Gallon Drum
918	NRFTRUSPC064-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100		8/3/1981	Historical ID: 64; 55 Gallon Drum
919	NRFTRUSPC055-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100		2/21/1980	Historical ID: 55; 55 Gallon Drum
920	NRFTRUSPC047-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100		7/30/1979	Historical ID: 47; 55 Gallon Drum
921	NRFTRUSPC046-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100		5/24/1979	Historical ID: 46; 55-Gallon Drum
922	NRFTRUSPC030-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100		6/22/1976	Hist ID: 30
923	NRFTRUSPC029-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100		9/8/1976	Hist ID: 29
924	NRFTRUSPC028-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100		4/13/1976	Hist ID: 28
925	NRFTRUSPC026-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100		4/13/1976	Hist ID: 26
926	NRFTRUSPC025-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100		4/13/1976	Hist ID: 25
927	NRFTRUSPC024-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100		4/13/1976	Hist ID: 24
928	NRFTRUSPC022-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100		4/13/1976	Hist ID: 22
929	NRFTRUSPC021-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100		4/13/1976	Hist ID: 21
930	NRFTRUSPC018-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100		4/13/1976	Hist ID: 18
931	NRFTRUSPC016-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100		4/13/1976	Hist ID: 16
932	NRFTRUSPC015-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100		4/13/1976	Hist ID: 15
933	NRFTRUSPC014-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100		4/13/1976	Hist ID: 14
934	NRFTRUSPC013-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100		10/29/1976	Hist ID: 13
935	NRFTRUSPC011-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100		10/29/1976	Hist ID: 11
936	NRFTRUSPC009-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100		4/13/1976	Hist ID: 9

	A	B	C	D	E	F	N
937	NRFTRUSPC007-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100		4/13/1976	Hist ID: 7
938	NRFTRUSPC006-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100		4/13/1976	Hist ID: 6
939	NRFTRUSPC005-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100		4/13/1976	Hist ID: 5
940	NRFTRUSPC004-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100		4/13/1976	Hist ID: 4
941	NRFTRUSPC003-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100		4/13/1976	Hist ID: 3
942	NRFTRUSPC002-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100		4/13/1976	Hist ID: 2
943	NRFTRUSPC001-1	IN-ID-NRF-SPC	CCP-AK-INL-570	S5100		4/13/1976	Hist ID: 1
944	JIMRH007	ID-RTC-S3002					
945	JIMRH006	ID-RTC-S3001					
946	IDAERH0001005	ID-ANLE-S5000	CCP-AK-INL-500	S5400		3/13/1981	Overpacked into 55-gallon
947	IDAERH0001003	ID-ANLE-S5000	CCP-AK-INL-500	S5400		3/16/1981	Overpacked into 55-gallon
948	IDAERH0000506	ID-ANLE-S5000	CCP-AK-INL-500	S5400		11/20/1979	30 gal vented
949	IDAE000001063	ID-ANLE-S5000	CCP-AK-INL-500	S5400		9/4/1982	30 gal vented 1/9/2007; Remediated overpacked in 55-gallon
950	IDAE000000400	ID-ANLE-S5000	CCP-AK-INL-500	S5400		10/8/1979	Overpacked in to 55-gallon
951	IDAE000000399	ID-ANLE-S5000	CCP-AK-INL-500	S5400		10/10/1979	Overpacked into 55-gallon
952	IDAE000000398	ID-ANLE-S5000	CCP-AK-INL-500	S5400		1/10/1979	Overpacked into 55-gallon
953	IDAE000000397	ID-ANLE-S5000	CCP-AK-INL-500	S5400		1/9/1979	Overpack 55-gallon
954	IDAE000000396	ID-ANLE-S5000	CCP-AK-INL-500	S5400		1/8/1979	Overpack 55-gallon
955	IDAE000000395	ID-ANLE-S5000	CCP-AK-INL-500	S5400		1/10/1979	Overpacked into 55-gallon
956	IDAE000000394	ID-ANLE-S5000	CCP-AK-INL-500	S5400		10/11/1979	Overpacked into 55-gallon
957	IDAE000000393	ID-ANLE-S5000	CCP-AK-INL-500	S5400		10/11/1979	Overpacked into 55-gallon
958	41-95	IN-ID-BTO-030	CCP-AK-INL-590	S3150		1/20/1988	Container Type: IN-41; Generation Date: 2/1/1981
959	41-94	IN-ID-BTO-030	CCP-AK-INL-590	S3150		4/28/1987	Container Type: IN-41; Generation Date: 11/1/1983
960	41-93	IN-ID-BTO-030	CCP-AK-INL-590	S3150		4/28/1987	Container Type: IN-41; Generation Date: 4/82 - 3/84
961	41-92	IN-ID-BTO-030	CCP-AK-INL-590	S3150		5/6/1987	Container Type: IN-41; Generation Date: 5/79 - 2/85
962	41-83	IN-ID-BTO-030	CCP-AK-INL-590	S3150		7/13/1987	Container Type: IN-41; Generation Date: 8/77 - 7/87
963	41-82	IN-ID-BTO-030	CCP-AK-INL-590	S3150		5/6/1987	Container Type: IN-41; Generation Date: 5/79 - 2/85
964	41-79	IN-ID-BTO-030	CCP-AK-INL-590	S3150		4/17/1987	Container Type: IN-41; Generation Date: 6/77 - 5/78
965	41-67	IN-ID-BTO-030	CCP-AK-INL-590	S3150		4/27/1987	Container Type: IN-41; Generation Date: 9/78 - 1/82
966	41-42	IN-ID-BTO-030	CCP-AK-INL-590	S3150		4/16/1987	Container Type: IN-41; Generation Date: 12/78 - 7/79
967	41-33	IN-ID-BTO-030	CCP-AK-INL-590	S3150		4/17/1987	Container Type: IN-41; Generation Date: 9/80 - 3/81
968	41-23	IN-ID-BTO-030	CCP-AK-INL-590	S3150		4/22/1987	Container Type: IN-41; Generation Date: 3/78 - 3/89
969	41-20	IN-ID-BTO-030	CCP-AK-INL-590	S3150		4/17/1987	Container Type: IN-41; Generation Date: 3/78 - 10/81
970	41-1	IN-ID-BTO-030	CCP-AK-INL-590	S3150		4/24/1987	Container type: IN-41; Generation Date: 11/82 - 5/83
971	10297559	ID-RF-S5300-RH	CCP-AK-INL-640	S5300			55-gallon: 10113386; Hist ID: IDRF000600026 per KPeters 041613.
972	10297558	ID-RF-S5300-RH	CCP-AK-INL-640	S5300			55-gallon: 10108594; Hist ID: IDRF000600017 per KPeters 041613.
973	10294025	ID-RF-S5300-RH	CCP-AK-INL-640	S5300			55-gallon: 10107596; Hist ID: IDRF000600016 per KPeters 041613.
974	10294024	ID-RF-S5300-RH	CCP-AK-INL-640	S5300			55-gallon: 10102504; Hist ID: IDRF000600002 per KPeters 041613.
975	10294023	ID-RF-S5300-RH	CCP-AK-INL-640	S5300			55-gallon: 10100424; Hist ID: IDRF000217140 per KPeters 041613.
976	10293838	ID-RF-S5300-RH	CCP-AK-INL-640	S5300			55-gallon: 10004426; Hist ID: IDRF000600275 per KPeters 041613.
977	10293837	ID-RF-S5100-RH	CCP-AK-INL-640	S5100			55-gallon: 10015986; Hist ID: IDRF005400296 per KPeters 041613.
978	10293836	ID-RF-S5300-RH	CCP-AK-INL-640	S5300			55-gallon: 10032597; Hist ID: IDRF000600076 per KPeters 041613.
979	10293835	ID-RF-S5300-RH	CCP-AK-INL-640	S5300			55-gallon: 10063910; Hist ID: IDRF000600355 per KPeters 041613.
980	10293834	ID-RF-S5300-RH	CCP-AK-INL-640	S5300			55-gallon: 10004349; Hist ID: IDRF000600407 per KPeters 041613.
981	10293832	ID-RF-S5300-RH	CCP-AK-INL-640	S5300			55-gallon: 10004357; Hist ID: IDRF000600067 per KPeters 041613.
982	10290054	ID-RF-S5300-RH	CCP-AK-INL-640	S5300			55-gallon: 10004356; Hist ID: IDRF000600402 per KPeters 041613.
983	10014923	ID-RF-S5300-RH	CCP-AK-INL-640	S5300			55-gallon: IDRFOP0600399 per KPeters 041613.
984	10014920	ID-RF-S5300-RH	CCP-AK-INL-640	S5300			55-gallon: IDRFOP0600315 per KPeters 041613.
985	1148	ID-ANLE-S5000	CCP-AK-INL-500	S5400		12/1/1984	30 gal vented
986	1144	ID-ANLE-S5000	CCP-AK-INL-500	S5400		5/12/1984	30 gal vented
987	1142	ID-ANLE-S5000	CCP-AK-INL-500	S5400		5/12/1984	30 gal vented
988	1101	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/6/1983	Over-packed in 55 gal for Headspace Gas Sampling an H will be added to the container number by the WCO for WWIS entry; I

	A	B	C	D	E	F	N
989	1092	ID-ANLE-S5000	CCP-AK-INL-500	S5400		7/23/1983	30 gal vented
990	1091	ID-ANLE-S5000	CCP-AK-INL-500	S5400		7/22/1983	30 gal vented
991	1090	ID-ANLE-S5000	CCP-AK-INL-500	S5400		7/20/1983	30 gal vented
992	1081	ID-ANLE-S5000	CCP-AK-INL-500	S5400		7/13/1983	(repackage date) 30 gal vented
993	1080	ID-ANLE-S5000	CCP-AK-INL-500	S5400		7/13/1983	(repackage date) 30 gal vented
994	1079	ID-ANLE-S5000	CCP-AK-INL-500	S5400		7/10/1983	(repackage date) Over-packed in 55 gal for Headspace Gas Sampling an H will be added to the container number by the WCO
995	1074	ID-ANLE-S5000	CCP-AK-INL-500	S5400		7/1/1983	(repackage date) 30 gal vented
996	1071	ID-ANLE-S5000	CCP-AK-INL-500	S5400		9/18/1982	30 gal vented
997	1070	ID-ANLE-S5000	CCP-AK-INL-500	S5400		9/18/1982	30 gal vented
998	1067	ID-ANLE-S5000	CCP-AK-INL-500	S5400		9/4/1982	30 gal vented
999	1066	ID-ANLE-S5000	CCP-AK-INL-500	S5400		9/4/1982	30 gal vented
1000	1064	ID-ANLE-S5000	CCP-AK-INL-500	S5400		9/4/1982	30 gal vented
1001	1062	ID-ANLE-S5000	CCP-AK-INL-500	S5400		9/4/1982	30 gal vented
1002	1055	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/28/1982	Over-packed in 55 gal for Headspace Gas Sampling an H will be added to the container number by the WCO for WWIS entry; I
1003	1039	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/20/1982	30 gal vented
1004	1036	ID-ANLE-S5000	CCP-AK-INL-500	S5400		11/21/1981	30 gal vented
1005	662	ID-ANLE-S5000	CCP-AK-INL-500	S5400		11/22/1986	30 gal vented
1006	661	ID-ANLE-S5000	CCP-AK-INL-500	S5400		11/22/1986	30 gal vented
1007	658	ID-ANLE-S5000	CCP-AK-INL-500	S5400		11/10/1986	30 gal vented
1008	657	ID-ANLE-S5000	CCP-AK-INL-500	S5400		11/10/1986	30 gal vented
1009	656	ID-ANLE-S5000	CCP-AK-INL-500	S5400		11/8/1986	30 gal vented
1010	655	ID-ANLE-S5000	CCP-AK-INL-500	S5400		11/8/1986	30 gal vented
1011	654	ID-ANLE-S5000	CCP-AK-INL-500	S5400		11/8/1986	30 gal vented
1012	642	ID-ANLE-S5000	CCP-AK-INL-500	S5400		10/25/1986	30 gal vented
1013	641	ID-ANLE-S5000	CCP-AK-INL-500	S5400		10/25/1986	30 gal vented
1014	640	ID-ANLE-S5000	CCP-AK-INL-500	S5400		10/13/1986	30 gal vented
1015	638	ID-ANLE-S5000	CCP-AK-INL-500	S5400		10/13/1986	30 gal vented
1016	637	ID-ANLE-S5000	CCP-AK-INL-500	S5400		10/11/1986	30 gal vented
1017	613	ID-ANLE-S5000	CCP-AK-INL-500	S5400		4/13/1985	30 gal vented
1018	611	ID-ANLE-S5000	CCP-AK-INL-500	S5400		4/13/1985	30 gal vented
1019	610	ID-ANLE-S5000	CCP-AK-INL-500	S5400		4/13/1985	30 gal vented
1020	609	ID-ANLE-S5000	CCP-AK-INL-500	S5400		12/15/1984	30 gal vented
1021	608	ID-ANLE-S5000	CCP-AK-INL-500	S5400		12/15/1984	30 gal vented
1022	606	ID-ANLE-S5000	CCP-AK-INL-500	S5400		12/14/1984	30 gal vented; Idaho # is IDAEOP0000606
1023	604	ID-ANLE-S5000	CCP-AK-INL-500	S5400		12/8/1984	30 gal vented; Idaho # is IDAERH0000604
1024	601	ID-ANLE-S5000	CCP-AK-INL-500	S5400		12/8/1984	30 gal vented; Idaho # is IDAERH0000601
1025	600	ID-ANLE-S5000	CCP-AK-INL-500	S5400		11/20/1981	30 gal vented
1026	599	ID-ANLE-S5000	CCP-AK-INL-500	S5400		11/20/1981	30 gal vented
1027	598	ID-ANLE-S5000	CCP-AK-INL-500	S5400		11/20/1981	30 gal vented
1028	597	ID-ANLE-S5000	CCP-AK-INL-500	S5400		11/20/1981	30 gal vented
1029	596	ID-ANLE-S5000	CCP-AK-INL-500	S5400		11/19/1981	30 gal vented
1030	595	ID-ANLE-S5000	CCP-AK-INL-500	S5400		11/20/1981	30 gal vented
1031	592	ID-ANLE-S5000	CCP-AK-INL-500	S5400		7/22/1981	30 gal vented
1032	591	ID-ANLE-S5000	CCP-AK-INL-500	S5400		7/22/1981	30 gal vented
1033	590	ID-ANLE-S5000	CCP-AK-INL-500	S5400		7/9/1981	30 gal vented
1034	588	ID-ANLE-S5000	CCP-AK-INL-500	S5400		7/10/1981	30 gal vented
1035	587	ID-ANLE-S5000	CCP-AK-INL-500	S5400		7/9/1981	30 gal vented
1036	584	ID-ANLE-S5000	CCP-AK-INL-500	S5400		6/8/1981	30 gal vented
1037	580	ID-ANLE-S5000	CCP-AK-INL-500	S5400		5/21/1981	30 gal vented
1038	575	ID-ANLE-S5000	CCP-AK-INL-500	S5400		5/19/1981	30 gal vented
1039	574	ID-ANLE-S5000	CCP-AK-INL-500	S5400		5/16/1981	30 gal vented
1040	573	ID-ANLE-S5000	CCP-AK-INL-500	S5400		5/16/1981	30 gal vented

	A	B	C	D	E	F	N
1041	572	ID-ANLE-S5000	CCP-AK-INL-500	S5400		5/16/1981	30 gal vented
1042	571	ID-ANLE-S5000	CCP-AK-INL-500	S5400		5/16/1981	30 gal vented
1043	570	ID-ANLE-S5000	CCP-AK-INL-500	S5400		5/16/1981	30 gal vented
1044	569	ID-ANLE-S5000	CCP-AK-INL-500	S5400		5/16/1981	30 gal vented
1045	568	ID-ANLE-S5000	CCP-AK-INL-500	S5400		5/16/1981	30 gal vented
1046	567	ID-ANLE-S5000	CCP-AK-INL-500	S5400		5/16/1981	30 gal vented
1047	564	ID-ANLE-S5000	CCP-AK-INL-500	S5400		4/18/1981	Over-packed in 55 gal for Headspace Gas Sampling an H will be added to the container number by the WCO for WWIS entry; I
1048	560	ID-ANLE-S5000	CCP-AK-INL-500	S5400		4/17/1981	30 gal vented
1049	555	ID-ANLE-S5000	CCP-AK-INL-500	S5400		2/7/1981	30 gal vented
1050	553	ID-ANLE-S5000	CCP-AK-INL-500	S5400		11/22/1980	30 gal vented
1051	552	ID-ANLE-S5000	CCP-AK-INL-500	S5400		11/22/1980	30 gal vented
1052	551	ID-ANLE-S5000	CCP-AK-INL-500	S5400		11/22/1980	30 gal vented
1053	550	ID-ANLE-S5000	CCP-AK-INL-500	S5400		11/22/1980	30 gal vented
1054	548	ID-ANLE-S5000	CCP-AK-INL-500	S5400		11/22/1980	30 gal vented
1055	547	ID-ANLE-S5000	CCP-AK-INL-500	S5400		11/21/1980	30 gal vented
1056	536	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/23/1980	30 gal vented
1057	535	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/23/1980	30 gal vented
1058	534	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/23/1980	30 gal vented
1059	533	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/23/1980	30 gal vented
1060	532	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/22/1980	30 gal vented
1061	531	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/22/1980	30 gal vented
1062	529	ID-ANLE-S5000	CCP-AK-INL-500	S5400		7/17/1980	30 gal vented
1063	525	ID-ANLE-S5000	CCP-AK-INL-500	S5400		6/10/1980	30 gal vented
1064	523	ID-ANLE-S5000	CCP-AK-INL-500	S5400		5/7/1980	30 gal vented
1065	522	ID-ANLE-S5000	CCP-AK-INL-500	S5400		5/6/1980	30 gal vented
1066	521	ID-ANLE-S5000	CCP-AK-INL-500	S5400		5/6/1980	30 gal vented
1067	520	ID-ANLE-S5000	CCP-AK-INL-500	S5400		5/6/1980	30 gal vented
1068	519	ID-ANLE-S5000	CCP-AK-INL-500	S5400		5/6/1980	30 gal vented
1069	518	ID-ANLE-S5000	CCP-AK-INL-500	S5400		5/6/1980	30 gal vented
1070	517	ID-ANLE-S5000	CCP-AK-INL-500	S5400		5/5/1980	30 gal vented
1071	516	ID-ANLE-S5000	CCP-AK-INL-500	S5400		5/5/1980	30 gal vented
1072	515	ID-ANLE-S5000	CCP-AK-INL-500	S5400		5/5/1980	30 gal vented
1073	513	ID-ANLE-S5000	CCP-AK-INL-500	S5400		3/7/1980	30 gal vented
1074	512	ID-ANLE-S5000	CCP-AK-INL-500	S5400		3/8/1980	30 gal vented
1075	511	ID-ANLE-S5000	CCP-AK-INL-500	S5400		3/7/1980	30 gal vented
1076	510	ID-ANLE-S5000	CCP-AK-INL-500	S5400		11/30/1979	30 gal vented
1077	504	ID-ANLE-S5000	CCP-AK-INL-500	S5400		10/25/1979	30 gal vented
1078	503	ID-ANLE-S5000	CCP-AK-INL-500	S5400		10/24/1979	30 gal vented
1079	500	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/26/1978	Over-packed in 55 gal for Headspace Gas Sampling an H will be added to the container number by the WCO for WWIS entry; I
1080	499	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/26/1978	30 gal vented
1081	498	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/26/1978	30 gal vented
1082	494	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/12/1978	30 gal vented
1083	491	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/12/1978	30 gal vented
1084	490	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/11/1978	30 gal vented
1085	489	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/5/1978	30 gal vented
1086	488	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/5/1978	30 gal vented
1087	486	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/5/1978	30 gal vented
1088	485	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/4/1978	30 gal vented
1089	484	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/19/1978	30 gal vented
1090	483	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/19/1978	30 gal vented
1091	482	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/19/1978	30 gal vented
1092	480	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/19/1978	30 gal vented

	A	B	C	D	E	F	N
1093	479	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/18/1978	30 gal vented
1094	473	ID-ANLE-S5000	CCP-AK-INL-500	S5400		3/21/1978	30 gal vented
1095	472	ID-ANLE-S5000	CCP-AK-INL-500	S5400		9/30/1977	Over-packed in 55 gal for Headspace Gas Sampling an H will be added to the container number by the WCO for WWIS entry; I
1096	471	ID-ANLE-S5000	CCP-AK-INL-500	S5400		9/27/1977	30 gal vented
1097	470	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/23/1977	Overpacked into 55-gallon for container integrity; Idaho # is IDAEOP0000470
1098	469	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/23/1977	30 gal vented
1099	468	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/23/1977	30 gal vented
1100	467	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/23/1977	30 gal vented
1101	466	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/22/1977	30 gal vented
1102	464	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/19/1977	Over-packed in 55 gal for Headspace Gas Sampling an H will be added to the container number by the WCO for WWIS entry; I
1103	462	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/16/1977	30 gal vented
1104	461	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/15/1977	30 gal vented
1105	456	ID-ANLE-S5000	CCP-AK-INL-500	S5400		7/25/1977	30 gal vented
1106	450	ID-ANLE-S5000	CCP-AK-INL-500	S5400		6/23/1977	30 gal vented
1107	449	ID-ANLE-S5000	CCP-AK-INL-500	S5400		6/23/1977	30 gal vented
1108	447	ID-ANLE-S5000	CCP-AK-INL-500	S5400		6/21/1977	30 gal vented
1109	446	ID-ANLE-S5000	CCP-AK-INL-500	S5400		6/21/1977	30 gal vented
1110	444	ID-ANLE-S5000	CCP-AK-INL-500	S5400		4/6/1977	30 gal vented
1111	443	ID-ANLE-S5000	CCP-AK-INL-500	S5400		2/22/1977	30 gal vented
1112	442	ID-ANLE-S5000	CCP-AK-INL-500	S5400		2/22/1977	30 gal vented
1113	441	ID-ANLE-S5000	CCP-AK-INL-500	S5400		2/21/1977	30 gal vented
1114	438	ID-ANLE-S5000	CCP-AK-INL-500	S5400		11/22/1976	30 gal vented
1115	436	ID-ANLE-S5000	CCP-AK-INL-500	S5400		11/18/1976	30 gal vented
1116	435	ID-ANLE-S5000	CCP-AK-INL-500	S5400		11/17/1976	30 gal vented
1117	434	ID-ANLE-S5000	CCP-AK-INL-500	S5400		11/17/1976	30 gal vented
1118	433	ID-ANLE-S5000	CCP-AK-INL-500	S5400		11/16/1976	30 gal vented
1119	428	ID-ANLE-S5000	CCP-AK-INL-500	S5400		11/9/1976	30 gal vented
1120	411	ID-ANLE-S5000	CCP-AK-INL-500	S5400		4/29/1976	30 gal vented
1121	406	ID-ANLE-S5000	CCP-AK-INL-500	S5400		4/27/1976	30 gal vented
1122	404	ID-ANLE-S5000	CCP-AK-INL-500	S5400		4/23/1976	30 gal vented
1123	402	ID-ANLE-S5000	CCP-AK-INL-500	S5400		4/20/1976	30 gal vented
1124	401	ID-ANLE-S5000	CCP-AK-INL-500	S5400		4/16/1976	30 gal vented
1125	391	ID-ANLE-S5000	CCP-AK-INL-500	S5400		10/20/1979	30 gal vented
1126	390	ID-ANLE-S5000	CCP-AK-INL-500	S5400		10/20/1979	30 gal vented
1127	386	ID-ANLE-S5000	CCP-AK-INL-500	S5400		10/13/1979	30 gal vented
1128	379	ID-ANLE-S5000	CCP-AK-INL-500	S5400		9/14/1979	30 gal vented
1129	378	ID-ANLE-S5000	CCP-AK-INL-500	S5400		9/14/1978	30 gal vented
1130	377	ID-ANLE-S5000	CCP-AK-INL-500	S5400		7/21/1979	30 gal vented
1131	376	ID-ANLE-S5000	CCP-AK-INL-500	S5400		7/21/1979	30 gal vented
1132	374	ID-ANLE-S5000	CCP-AK-INL-500	S5400		7/21/1979	30 gal vented
1133	373	ID-ANLE-S5000	CCP-AK-INL-500	S5400		7/21/1979	30 gal vented
1134	371	ID-ANLE-S5000	CCP-AK-INL-500	S5400		6/9/1979	30 gal vented
1135	370	ID-ANLE-S5000	CCP-AK-INL-500	S5400		6/9/1979	30 gal vented
1136	369	ID-ANLE-S5000	CCP-AK-INL-500	S5400		6/9/1979	30 gal vented
1137	365	ID-ANLE-S5000	CCP-AK-INL-500	S5400		6/8/1979	30 gal vented
1138	363	ID-ANLE-S5000	CCP-AK-INL-500	S5400		3/10/1979	30 gal vented
1139	362	ID-ANLE-S5000	CCP-AK-INL-500	S5400		3/10/1979	30 gal vented
1140	361	ID-ANLE-S5000	CCP-AK-INL-500	S5400		3/10/1979	30 gal vented
1141	360	ID-ANLE-S5000	CCP-AK-INL-500	S5400		3/10/1979	30 gal vented
1142	359	ID-ANLE-S5000	CCP-AK-INL-500	S5400		3/10/1979	30 gal vented
1143	358	ID-ANLE-S5000	CCP-AK-INL-500	S5400		3/9/1979	30 gal vented
1144	357	ID-ANLE-S5000	CCP-AK-INL-500	S5400		3/9/1979	30 gal vented

	A	B	C	D	E	F	N
1145	350	ID-ANLE-S5000	CCP-AK-INL-500	S5400		11/18/1978	30 gal vented
1146	345	ID-ANLE-S5000	CCP-AK-INL-500	S5400		11/17/1978	30 gal vented
1147	344	ID-ANLE-S5000	CCP-AK-INL-500	S5400		10/28/1978	30 gal vented
1148	343	ID-ANLE-S5000	CCP-AK-INL-500	S5400		10/28/1978	30 gal vented
1149	342	ID-ANLE-S5000	CCP-AK-INL-500	S5400		10/28/1978	30 gal vented
1150	338	ID-ANLE-S5000	CCP-AK-INL-500	S5400		9/30/1978	30 gal vented
1151	335	ID-ANLE-S5000	CCP-AK-INL-500	S5400		9/30/1978	30 gal vented
1152	334	ID-ANLE-S5000	CCP-AK-INL-500	S5400		9/30/1978	30 gal vented
1153	333	ID-ANLE-S5000	CCP-AK-INL-500	S5400		9/30/1978	30 gal vented
1154	330	ID-ANLE-S5000	CCP-AK-INL-500	S5400		9/23/1978	30 gal vented
1155	328	ID-ANLE-S5000	CCP-AK-INL-500	S5400		9/23/1978	30 gal vented
1156	326	ID-ANLE-S5000	CCP-AK-INL-500	S5400		9/22/1978	30 gal vented
1157	324	ID-ANLE-S5000	CCP-AK-INL-500	S5400		9/16/1978	30 gal vented
1158	320	ID-ANLE-S5000	CCP-AK-INL-500	S5400		9/16/1978	30 gal vented
1159	319	ID-ANLE-S5000	CCP-AK-INL-500	S5400		9/16/1978	30 gal vented
1160	317	ID-ANLE-S5000	CCP-AK-INL-500	S5400		9/9/1978	Over-packed in 55 gal for Headspace Gas Sampling an H will be added to the container number by WCO for WWIS entry; Idah
1161	315	ID-ANLE-S5000	CCP-AK-INL-500	S5400		9/9/1978	30 gal vented
1162	313	ID-ANLE-S5000	CCP-AK-INL-500	S5400		9/9/1978	30 gal vented
1163	311	ID-ANLE-S5000	CCP-AK-INL-500	S5400		9/9/1978	30 gal vented
1164	310	ID-ANLE-S5000	CCP-AK-INL-500	S5400		9/8/1978	30 gal vented
1165	309	ID-ANLE-S5000	CCP-AK-INL-500	S5400		9/8/1978	30 gal vented
1166	308	ID-ANLE-S5000	CCP-AK-INL-500	S5400		9/2/1978	30 gal vented
1167	305	ID-ANLE-S5000	CCP-AK-INL-500	S5400		9/2/1978	30 gal vented
1168	304	ID-ANLE-S5000	CCP-AK-INL-500	S5400		9/2/1978	30 gal vented
1169	302	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/26/1978	30 gal vented
1170	301	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/26/1978	30 gal vented
1171	1150	ID-ANLE-S5000	CCP-AK-INL-500	S5400		12/1/1984	30 gal vented
1172	1146	ID-ANLE-S5000	CCP-AK-INL-500	S5400		5/14/1984	30 gal vented
1173	1145	ID-ANLE-S5000	CCP-AK-INL-500	S5400		5/12/1984	30 gal vented
1174	1143	ID-ANLE-S5000	CCP-AK-INL-500	S5400		5/12/1984	30 gal vented
1175	1141	ID-ANLE-S5000	CCP-AK-INL-500	S5400		5/11/1984	30 gal vented
1176	1140	ID-ANLE-S5000	CCP-AK-INL-500	S5400		5/8/1984	30 gal vented
1177	1139	ID-ANLE-S5000	CCP-AK-INL-500	S5400		5/5/1984	30 gal vented
1178	1137	ID-ANLE-S5000	CCP-AK-INL-500	S5400		5/5/1984	30 gal vented
1179	1133	ID-ANLE-S5000	CCP-AK-INL-500	S5400		4/21/1984	30 gal vented
1180	1132	ID-ANLE-S5000	CCP-AK-INL-500	S5400		4/21/1984	30 gal vented
1181	1131	ID-ANLE-S5000	CCP-AK-INL-500	S5400		4/21/1984	30 gal vented
1182	1130	ID-ANLE-S5000	CCP-AK-INL-500	S5400		4/21/1984	30 gal vented
1183	1128	ID-ANLE-S5000	CCP-AK-INL-500	S5400		4/21/1984	30 gal vented
1184	1124	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/26/1983	30 gal vented
1185	1123	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/26/1983	30 gal vented
1186	1122	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/26/1983	30 gal vented
1187	1121	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/22/1983	30 gal vented
1188	1120	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/20/1983	30 gal vented
1189	1119	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/20/1983	30 gal vented
1190	1118	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/20/1983	30 gal vented
1191	1117	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/19/1983	30 gal vented
1192	1115	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/13/1983	30 gal vented
1193	1114	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/13/1983	30 gal vented
1194	1113	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/13/1983	30 gal vented
1195	1111	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/13/1983	30 gal vented
1196	1104	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/6/1983	30 gal vented

	A	B	C	D	E	F	N
1197	1103	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/6/1983	30 gal vented
1198	1102	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/6/1983	30 gal vented
1199	1099	ID-ANLE-S5000	CCP-AK-INL-500	S5400		7/30/1983	30 gal vented
1200	1098	ID-ANLE-S5000	CCP-AK-INL-500	S5400		7/30/1983	IDAEOP0001098; Overpacked into 55-gallon for container integrity
1201	1097	ID-ANLE-S5000	CCP-AK-INL-500	S5400		7/30/1983	30 gal vented
1202	1096	ID-ANLE-S5000	CCP-AK-INL-500	S5400		7/30/1983	30 gal vented
1203	1094	ID-ANLE-S5000	CCP-AK-INL-500	S5400		7/23/1983	30 gal vented
1204	1093	ID-ANLE-S5000	CCP-AK-INL-500	S5400		7/23/1983	30 gal vented
1205	1088	ID-ANLE-S5000	CCP-AK-INL-500	S5400		7/15/1983	(repackage date) 30 gal vented
1206	1087	ID-ANLE-S5000	CCP-AK-INL-500	S5400		7/15/1983	(repackage date) 30 gal vented
1207	1086	ID-ANLE-S5000	CCP-AK-INL-500	S5400		7/30/1983	30 gal vented
1208	1085	ID-ANLE-S5000	CCP-AK-INL-500	S5400		7/14/1983	(repackage date) 30 gal vented
1209	1084	ID-ANLE-S5000	CCP-AK-INL-500	S5400		7/14/1983	(repackage date) 30 gal vented
1210	1083	ID-ANLE-S5000	CCP-AK-INL-500	S5400		7/14/1983	(repackage date) 30 gal vented
1211	1082	ID-ANLE-S5000	CCP-AK-INL-500	S5400		7/14/1983	(repackage date) 30 gal vented
1212	1076	ID-ANLE-S5000	CCP-AK-INL-500	S5400		7/9/1983	30 gal vented
1213	1073	ID-ANLE-S5000	CCP-AK-INL-500	S5400		6/30/1983	(repackage date) 30 gal vented
1214	1072	ID-ANLE-S5000	CCP-AK-INL-500	S5400		9/18/1982	30 gal vented
1215	1069	ID-ANLE-S5000	CCP-AK-INL-500	S5400		9/18/1982	30 gal vented
1216	1065	ID-ANLE-S5000	CCP-AK-INL-500	S5400		9/4/1982	30 gal vented
1217	1061	ID-ANLE-S5000	CCP-AK-INL-500	S5400		9/4/1982	30 gal vented
1218	1060	ID-ANLE-S5000	CCP-AK-INL-500	S5400		9/4/1982	30 gal vented
1219	1057	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/28/1982	30 gal vented
1220	1056	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/28/1982	30 gal vented
1221	1054	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/28/1982	30 gal vented
1222	1053	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/28/1982	30 gal vented
1223	1052	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/28/1982	30 gal vented
1224	1051	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/28/1982	30 gal vented
1225	1050	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/28/1982	30 gal vented
1226	1049	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/27/1982	30 gal vented
1227	1048	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/27/1982	30 gal vented
1228	1045	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/21/1982	30 gal vented
1229	1044	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/21/1982	30 gal vented
1230	1043	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/21/1982	30 gal vented
1231	1042	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/21/1982	30 gal vented
1232	1041	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/21/1982	30 gal vented
1233	1040	ID-ANLE-S5000	CCP-AK-INL-500	S5400		8/20/1982	Overpacked into 55-gallon for container integrity; Idaho # is IDAEOP0001040
1234	1032	ID-ANLE-S5000	CCP-AK-INL-500	S5400		11/21/1981	30 gal vented

Attachment 4
Waste Container Packaging Form

Section 1: General Information
Unique Container Identification Number: RW49571
DOE or DOE Contract Site Name: Argonne National Laboratory
☐ Initial Waste Packaging ☒ Repackaging
Date(s) of Packaging or Repackaging: 08/17/2011 & 08/18/2011
Audio-Video Recording Number: RW49571, Disks 1 & 2
Site Procedure Number and Revision Used: WCD-10-WM-076, Rev. 1

Section 2: Waste Container Information	
Container Type: ☒ 55-gallon drum ☐ SWB	
☒ Container Verified Empty Prior to Packaging	
Rigid Liner Used? ☐ Yes ☒ No If rigid liner was used, list the type of rigid liner and affirm that the lid was not installed: _____	
Container Filter Vent #1 with sample port septum: Minimum H_2 Diffusivity 1.85E-05 mol/s/mol fraction? ☒ Yes ☐ No Identification of the filter manufacturer: Nuclear Filter Technology, NucFil 019DS Date of manufacture, or lot number, or unique serial number: IK46	
Container Filter Vent #2: (required for SWB only) Minimum H_2 Diffusivity 1.85E-05 mol/s/mol fraction? ☐ Yes ☐ No Identification of the filter manufacturer: _____ Date of manufacture, or lot number, or unique serial number: _____	
Number layers of confinement: ☒ one ☐ two	
Closure Method used for 55-gallon drum or SWB liner bag: drum ring w/bolt, closed & torqued to 60 lbs. per mfr. instructions. Closure Method used for inner bags: Folded over and taped closed.	
All Bag Layers Vented? ☒ Yes ☐ No Minimum H_2 Diffusivity of Bag Filters 1.075E-05 mol/s/mol fraction? ☒ Yes ☐ No	
Waste Container Weight	Container gross wt: 98.7 kg. Container tare wt: 28.15 kg. Waste net wt: 70.55 kg.
Container Fill Percentage: 100 %	
Waste Category Group: ☐ Homogeneous Solids ☐ Soil/gravel ☒ Debris	
Waste Stream Name: CH-TRU Solids Debris	
TID Identification Number(s): ANL000960	

Section 3: Feed Container Information (Repackaging Only)
Feed Container Type: 55-gal Drums
Feed Container ID Number: RW48207, RW48769

Section 4: Container Inventory

If loading bagged, wrapped, or canned waste, the unique identification number for each bag, wrap, or can shall be entered in the "waste item" column. "See attached" may be entered in the "waste description" column if the completed Waste Bag, Wrap, or Can Inventory Form contains the waste description and is attached to this form.

Are "Bag and/or Wrap Inventory Forms" attached for items listed below? ☐ Yes ☒ No

Waste Item or Bag/Wrap/Can ID#	Waste Description (including weight % of iron-based metals/alloys, aluminum-based metals/alloys, other metals, cellulosics, rubber, plastics, inorganic materials, and soil/gravel)
Feed Containers RW48207 & RW48769 and 2 Quicksol Absorbent Pads	Re-packaged CH-TRU Solids Debris Waste:
	39.9% iron-based metals/alloys,
	5% aluminum-based metals/alloys,
	5% other metals,
	10% cellulosics,
	5% rubber,
	25% plastics,
	10% inorganic materials
	0% soil/gravel
	0.1% Absorbent (2 Quicksol pads)

Section 5: Packaging Summary	Yes	No
Does this waste contain any treated liquids? If waste contains treated liquid, describe in the Comments section: • The waste that was treated • Treatment method used • The type of absorbent used, • Solidification agent used, • Product name and manufacturer of any material added to the waste • Results of a Method 9095B Paint Filter Liquids Test for each container tested (including container #).		x
Was any other treatment performed prior to packaging? If yes, describe the treatment in the Comments section.		x
Was this waste packaged in accordance with the "CH TRU Waste Packaging Instructions"? If not, attach the letter from the Director, Office of Disposal Operations, EM Headquarters Office of Regulatory Compliance that approves the variance.	x	
Comments: CH-TRU Solids Debris Waste from feed containers RW48207 and RW48769 was repackaged into new receiving container RW49571. This drum was created due to re-work of drum RW48207, which was reworked due to high density of metals resulting in failed RTR. RW48207 was split in half, with the 2nd half of waste from RW48207 repackaged into this drum. This drum was then topped off with waste from feed RW48769. Two quicksolid pads (76g) used in lieu of 20 lbs. (9.07kg) Aquaset II-G for drum preparation.		

Section 6: Operator Information	
List all personnel loading waste into container: WMO Waste Mechanics: Earl Armand John Buck	
Printed names and signatures of two site personnel who are approving this form and attesting that all items in the container are listed in this form (Section 7: Radiological Properties completion occurs after signature)	
Printed Name: Lou Conley	Printed Name: Earl Armand
Signature: Lou Conley	Signature: Earl Armand
Date: 9-2-2011	Date: 9-7-11

Section 7: Radiological Properties
List the isotopes that contribute to 95% of the radiological hazard including their associated activities and masses:
Fissile gram equivalents (FGEs) in the container: _____ FGEs
Plutonium equivalent curies (PE-Ci) in the container: _____ PE-Ci
Highest measured surface dose rate of the loaded container: _____ mrem/hr
TRU alpha activity of waste in container: _____ nCi/gram
Printed or typed name and phone number of point of contact for radiological characterization information:

CH-TRU Project 55 Gallon Drum Inventory Repack Sheet

Receiving Container #: Rw 49571 — 90 mil liner (check) Yes___ No X

Beginning Fill Date:

Source Container Inventory Number	Volume Percent in Receiving Container	Transfer Date	Waste Type or Description (describe waste and absorbent type and amount used to stabilize waste) Used: 1 quicksol disc at bottom of drum. 1 quicksol disc at bottom of vented Bag.
Rw 48207	50%	08/17/11	Tubes/Pipes/Rods (Metal)
			Gauges (Metal)
			Wire Spools
			Nuts/Bolts/Washers
			Metal Discs
			Aluminum Tubes/Rods/Plates/Foil
			Brass fittings/Copper Wire
			Rags/Wipes/Ceramics
			Paper Manuels/Tape/Card Board
			Leather Gloves/Rubber Gloves/Gaskets
			Wood Blocks/Epoxy Discs/Plastic Tubing
			Broken Glass/Large Plexi Glass Container
Rw 48769	50%	08/18/2011	Plastic Bottles (Aqvaset)/Sep Funnel/Glass Bottle
			Plastic Bags/Rad Bags
			Vials/Paper Manuels/Tape

Absorbent Added

Bottom of drum: N/A lbs Polybag: N/A lbs. Liner (if used): N/A lbs

Weights and Measurements

Torque Wrench Serial #	Calibration Due Date	Torque Value (ft-lbs)	TID # Applied after Torque
AR6 0809110555	12/23/2011	60 ft lbs	ANL000960
Scale ID #	**Calibration Due Date**	**Gross Weight (lbs)**	**Gross Weight (kg)**
001242	09/03/2011	217.5 lbs	

Signatures

Waste Mechanic (Print) John F. Buck	
Waste Mechanic (Sign)	

DIVIDER

PAGE

Attachment 4
Waste Container Packaging Form

Section 1: General Information
Unique Container Identification Number: RW47784
DOE or DOE Contract Site Name: Argonne National Laboratory
☐ Initial Waste Packaging ☒ Repackaging
Date(s) of Packaging or Repackaging: 08/31/2010
Audio-Video Recording Number: RW47784, Disks 1-3
Site Procedure Number and Revision Used: WCD-10-WM-076, Rev. 1

Section 2: Waste Container Information	
Container Type: ☒ 55-gallon drum ☐ SWB	
☒ Container Verified Empty Prior to Packaging	
Rigid Liner Used? ☐ Yes ☒ No If rigid liner was used, list the type of rigid liner and affirm that the lid was not installed: _____	
Container Filter Vent #1 with sample port septum: Minimum H_2 Diffusivity 1.85E-05 mol/s/mol fraction? ☒ Yes ☐ No Identification of the filter manufacturer: Nuclear Filter Technology, NucFil 019DS Date of manufacture, or lot number, or unique serial number: IJ913	
Container Filter Vent #2: (required for SWB only) Minimum H_2 Diffusivity 1.85E-05 mol/s/mol fraction? ☐ Yes ☐ No Identification of the filter manufacturer: _____ Date of manufacture, or lot number, or unique serial number: _____	
Number layers of confinement: ☒ one ☐ two	
Closure Method used for 55-gallon drum or SWB liner bag: drum ring w/bolt, closed & torqued to 60 lbs. per mfr. instructions. Closure Method used for inner bags: Folded over and taped closed.	
All Bag Layers Vented? ☒ Yes ☐ No Minimum H_2 Diffusivity of Bag Filters 1.075E-05 mol/s/mol fraction? ☒ Yes ☐ No	
Waste Container Weight	Container gross wt: 72.6 kg. Container tare wt: 28.15 kg. Waste net wt: 44.45 kg.
Container Fill Percentage: 100 %	
Waste Category Group: ☐ Homogeneous Solids ☐ Soil/gravel ☒ Debris	
Waste Stream Name: CH-TRU Solids Debris	
TID Identification Number(s): ANL000522	

Section 3: Feed Container Information (Repackaging Only)
Feed Container Type: 55-Gal. Drum
Feed Container ID Number: TD98-0225

Section 4: Container Inventory

If loading bagged, wrapped, or canned waste, the unique identification number for each bag, wrap, or can shall be entered in the "waste item" column. "See attached" may be entered in the "waste description" column if the completed Waste Bag, Wrap, or Can Inventory Form contains the waste description and is attached to this form.

Are "Bag and/or Wrap Inventory Forms" attached for items listed below? ☐ Yes ☒ No

Waste Item or Bag/Wrap/Can ID#	Waste Description (including weight % of iron-based metals/alloys, aluminum-based metals/alloys, other metals, cellulosics, rubber, plastics, inorganic materials, and soil/gravel)
Feed Container TD98-0225 and Aquaset II-G Absorbent	Re-packaged CH-TRU Solids Debris Waste:
	8.0% iron-based metals/alloys,
	0.8% aluminum-based metals/alloys,
	15.9% other metals,
	3.2% cellulosics,
	8.0% rubber,
	31.8% plastics,
	11.9% inorganic materials
	0% soil/gravel
	20.4% Absorbent (inorganic materials)

Section 5: Packaging Summary	Yes	No
Does this waste contain any treated liquids? If waste contains treated liquid, describe in the Comments section: • The waste that was treated • Treatment method used • The type of absorbent used, • Solidification agent used, • Product name and manufacturer of any material added to the waste • Results of a Method 9095B Paint Filter Liquids Test for each container tested (including container #).		X
Was any other treatment performed prior to packaging? If yes, describe the treatment in the Comments section.		X
Was this waste packaged in accordance with the "CH TRU Waste Packaging Instructions"? If not, attach the letter from the Director, Office of Disposal Operations, EM Headquarters Office of Regulatory Compliance that approves the variance.	X	
Comments: CH-TRU Solids Debris Waste from feed container TD98-0225 was repackaged into new receiving container RW47784.		

Section 6: Operator Information	
List all personnel loading waste into container: WMO Waste Mechanics: Seth Paul Robert Arriaga Earl Armand	
Printed names and signatures of two site personnel who are approving this form and attesting that all items in the container are listed in this form (Section 7: Radiological Properties completion occurs after signature)	
Printed Name: Lou Conley	Printed Name: Earl Armand
Signature: Lou Conley	Signature: Earl Armand
Date: 3-17-2011	Date: 3-21-11

Section 7: Radiological Properties
List the isotopes that contribute to 95% of the radiological hazard including their associated activities and masses:
Fissile gram equivalents (FGEs) in the container: _____ FGEs
Plutonium equivalent curies (PE-Ci) in the container: _____ PE-Ci
Highest measured surface dose rate of the loaded container: _____ mrem/hr
TRU alpha activity of waste in container: _____ nCi/gram
Printed or typed name and phone number of point of contact for radiological characterization information:

CH-TRU Project 55 Gallon Drum Inventory Repack Sheet

Receiving Container #: RV47784 90 mil liner (check) Yes ___ No V
Beginning Fill Date:

Source Container Inventory Number	Volume Percent in Receiving Container	Transfer Date	Waste Type or Description (describe waste and absorbent type and amount used to stabilize waste)
TD98:0225	100%	8/31/10	clothrags, paper, plastic, glass, steel bandle, rubber gloves, razor blade, duct tape, leatherglove, brass contraption with lead solder, rubber hose, twine, alkaline batteries, plastic oil filters, crushed PCS + lid

Absorbent Added

Bottom of drum: 10 lbs Polybag: 10 lbs. Liner (if used): N/A lbs

Weights and Measurements

Torque Wrench Serial #	Calibration Due Date	Torque Value (ft-lbs)	TID # Applied after Torque
ARG08091100607	3/1/11	60 ft/lbs	ANL000522
Scale ID #	**Calibration Due Date**	**Gross Weight (lbs)**	**Gross Weight (kg)**
001242	12-8-2010	160 lbs	72.6

Signatures

Waste Mechanic (Print)	Kyle Sholes
Waste Mechanic (Sign)	Kyle Sholes

IU-913

Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA

QA:12:00239
UFC:2300.00

INTER-OFFICE CORRESPONDENCE

DATE: December 3, 2012

FROM: J. E. Hoff
W. W. Allen FOR

LOCATION: Quality Assurance

TO: Distribution

LOCATION: Various

SUBJECT: TRANSMITTAL AND CLOSURE OF NWP QUALITY ASSURANCE AUDIT I12-12 CENTRAL CHARACTERIZATION PROJECT QUALITY ASSURANCE PROGRAM

At the time this audit was performed, Washington TRU Solutions LLC (WTS) was the Managing and Operating Contractor of the Waste Isolation Pilot Plant (WIPP). However, on October 1, 2012, Nuclear Waste Partnership LLC (NWP) assumed the role as the Managing and Operating Contractor of the WIPP. Therefore, this report is being issued under the company name of NWP. References to WTS and NWP throughout this document can be considered interchangeable.

Nuclear Waste Partnership LLC (NWP), Quality Assurance (QA) Audit I12-12, *Central Characterization Project Quality Assurance Program*, was performed in two segments (on August 13 through 16 and September 24, 2012 at the Central Characterization Project office in Carlsbad and September 10 through 12, 2012 at Idaho National Laboratory (INL), to evaluate the adequacy and effective implementation of the Central Characterization Project (CCP) QA Program for compliance with DOE/CBFO-94-1012, *U.S. Department of Energy Carlsbad Field Office Quality Assurance Program Document;* WIPP Procedure (WP) 13-1, *WTS Quality Assurance Program Description*; and associated implementing procedure requirements as applicable.

The previous audit of the CCP QA Program (I11-05) resulted in no findings; therefore, an evaluation of the effectiveness of corrective actions was not required.

The results of this audit conclude that the required activities related to the CCP QA Program are adequately and effectively implemented to ensure that program requirements are met. This audit resulted in one finding, one condition corrected during the audit (CDA), and three observations. The finding will be documented on WIPP Form (WF) 12-205 and resultant corrective actions will be tracked and closed through the WIPP Issues Management Process System (IMPS). The CDA and observations require no response. Therefore, this audit is considered closed with the issuance of this report.

A copy of the Audit Report is attached for your information. If you have any questions regarding this audit, please contact Mr. Dale Hood at Extension 8754.

YHS

Attachment

Distribution December 3, 2012 QA:12:00239

NWP:

E. Gulbransen	ED
R. D. Reeves	ED
M. L. Sensibaugh	ED
W. F. Verlanic	ED

cc:

W. W. Allen	ED
V. K. Cannon	ED
R. C. Carrasco	ED
D. W. Freeman	ED
J. J. Garcia	ED
M. S. Hendrickson	ED
L. E. Hernandez	ED
T. D. Hood	ED
F. M. Ito	ED
M. D. Keathley	ED
A. S. Miller	ED
M. A. Mullins	451-27
C. E. Nesser	ED
D. K. Ploetz	ED
T. R. Reynolds	ED
M. F. Sharif	ED
Quality Assurance Audit I12-12 File	

NUCLEAR WASTE PARTNERSHIP LLC
QUALITY ASSURANCE AUDIT REPORT
Central Characterization Project Quality Assurance Program
I12-12

I. EXECUTIVE SUMMARY:

Nuclear Waste Partnership LLC (NWP), Quality Assurance (QA) Audit I12-12, *Central Characterization Project Quality Assurance Program*, was performed in two segments (on August 13 through 16 and September 24, 2012 at the Central Characterization Project office in Carlsbad and September 10 through 12, 2012 at Idaho National Laboratory (INL), to evaluate the adequacy and effective implementation of the Central Characterization Project (CCP) QA Program for compliance with DOE/CBFO-94-1012, *U.S. Department of Energy Carlsbad Field Office Quality Assurance Program Document;* WIPP Procedure (WP) 13-1, *WTS Quality Assurance Program Description*; and associated implementing procedure requirements as applicable. At the time the audit was performed, it was conducted as a Washington TRU Solutions LLC (WTS) audit; subsequent to the audit performance, NWP has assumed the role of managing contractor of the Waste Isolation Pilot Plant (WIPP), therefore this report is being issued under the company name of NWP. References to WTS and NWP throughout this document can be considered interchangeable.

The previous audit of the CCP QA Program (I11-05) resulted in no findings; therefore, an evaluation of the effectiveness of corrective actions was not required.

The results of this audit conclude that the required activities related to the CCP QA Program are adequately and effectively implemented to ensure that program requirements are met. This audit resulted in one finding, one condition corrected during the audit (CDA), and three observations. The finding will be documented on WIPP Form (WF) 12-205 and resultant corrective actions will be tracked and closed through the WIPP Issues Management Process System (IMPS). The CDA and observations require no response. Therefore, this audit is considered closed with the issuance of this report.

II. AUDIT DETAILS:

Purpose and Scope:

The purpose of this audit was to evaluate the adequacy and effective implementation of approximately one half of the CCP QA Program as well as activities associated with Acceptable Knowledge (AK) which are assessed every year. On alternate years, opposite halves of the QA Program are evaluated. The criteria evaluated during this audit included:

- Organization;
- QA Program;
- Document Control;
- Design Control;
- Procurement Document Control;
- Instructions, Procedures, and Drawings;
- Control of Purchased Items and Services;
- QA Records; and,
- Independent Assessment/Audits.

Additionally, each year's audit includes a site visit to one of the waste generating sites at which CCP is active. This audit included an evaluation of the activities at INL. During this portion of the audit, all applicable criteria of the CCP QA Program were evaluated.

The approach to this audit included observation of processes, documentation reviews, personnel interviews, and evaluations of associated procedures in order to determine the adequacy and effective implementation of the related program requirements. Where deemed appropriate, elements of the Integrated Safety Management System (ISMS) and Conduct of Operations were also evaluated.

Criteria Used:

- DOE/CBFO-94-1012, Revision 11, *U.S. Department of Energy Carlsbad Field Office Quality Assurance Program Document*
- ASME/NQA-1-1989
- WIPP Procedure (WP) 13-1, Revision 31, *Washington TRU Solutions LLC Quality Assurance Program Description*
- WP 15-GM.03, Revision 4, *Integrated Safety Management System Description*
- WP 04-CO.01, Revision 1, *Conduct of Operations*

Audit Team:

Lead Auditor:
Mr. T. D. Hood, QA, Oversight Programs

Auditors:
Mr. A. S. Miller, Engineering, Geotechnical and Mine Engineering
Ms. C. E. Nesser, QA, Assurance Programs

Auditor-in-Training:
Ms. L. E. Hernandez, QA, Assurance Programs

Inclusive Dates of Audit:

August 13 through 16 and September 24, 2012 (CCP offices in Carlsbad)
September 10 through 12, 2012 (INL)

Location of Audit:

Skeen-Whitlock Building
Carlsbad, New Mexico

Idaho National Laboratory
Idaho Falls, Idaho

Safety and Security:

The audit activities at the CCP office in Carlsbad, New Mexico, took place in an office environment, with no personal protection equipment (PPE) being necessary. The audit activities at INL involved the NWP Audit Team's presence in areas where PPE consisting of steel-toed shoes, eye protection, orange vests, and/or hard hats was required. The NWP Audit Team members complied with all safety requirements.

During the audit, records storage locations were observed to be adequately designated and their access controlled via authorized access signs and/or locked cabinets.

Conclusions:

The NWP Audit Team concluded that the portions of the CCP QA Program subject to this audit are satisfactorily implemented, with the exceptions documented in Finding I12-12-F-01. This finding is not considered a significant hindrance to overall implementation of the QA Program. The NWP Audit Team commends the professionalism, knowledge, competence, and courtesy displayed by all personnel contacted during the audit.

The NWP Audit Team observed that the CCP organization's structure and responsibilities are established via organization charts and procedural guidance. It was noted that several CCP documents portray a CCP QA. During a recent re-organization of the NWP QA, the CCP QA was merged with QA's Assurance Programs group; therefore, there is no longer a distinct CCP QA. The NWP Audit Team verified that the procedure inaccuracies created as a result of the QA organizational changes were previously recognized and that procedure changes are in process (refer to I12-12-O-01).

The NWP Audit Team verified that the CCP QA Program is established and adequately defined via project plans, interface documents, and procedures. The QA Program was verified to adequately implement applicable upper tier documents, including the CBFO *Quality Assurance Program Document* (QAPD). It was noted that CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan,* is credited for being the document that invokes the CBFO QAPD, but CCP-PO-002, *CCP Transuranic Waste Certification Plan*, better describes the QA programmatic requirements (although it isn't referenced in CCP-PO-001 or otherwise given credit for invoking the QA program). The NWP Audit Team verified that there were efforts underway to update and improve these documents and to more appropriately invoke WP 13-1 (refer to I12-12-O-02).

The NWP Audit Team assessed the Document Control activities conducted by Document Services personnel at the Skeen-Whitlock Building and the generation and control of instructions, procedures and drawings. The NWP Audit Team verified that adequate controls are in place to assure that documents prescribing programmatic requirements and procedural guidance are published and current revisions made available to personnel, the documents are reviewed and approved by appropriate personnel for technical and quality adequacy, and changes to controlled documents receive the same review and approval as the original documents. It was noted that during the review process for proposed changes to controlled documents, the review and approval is not always conducted in accordance with procedural requirements (refer to I12-12-F-01).

The NWP Audit Team confirmed that applicable upper-tier requirements from DOE/CBFO-94-1012 and WP 13-1 are adequately addressed in implementing procedures.

The NWP Audit Team verified that CCP personnel properly maintain design configuration and control for the CCP managed equipment utilized during characterization activities.

The NWP Audit Team assessed the procurement processes associated with CCP, as well as the control of purchased product. The NWP Audit Team verified that procurement documents contain adequate descriptions of procured items and associated requirements, both technical and quality-related. Procurement documents were verified to have the required reviews by interested parties. Procured items were verified to be received, inspected, and utilized according to procedural requirements.

The NWP Audit Team verified that QA records are adequately identified, classified, generated and completed, validated, collected, stored, maintained, protected, and transmitted as necessary. This includes hard copy records as well as electronic records.

The NWP Audit Team verified that assessments (i.e., surveillances and management assessments) are scheduled; conducted by independent, qualified personnel; and reported to interested parties. The process was verified to produce identification of conditions adverse to quality and their resolution. It was noted that audits are not conducted, other than an annual internal audit (which is this audit). It was verified that the combination of the surveillances, management assessments, and annual internal audits provide an adequate assessment of the QA Program's implementation.

The NWP Audit Team reviewed various documents related to AK processes to verify compliance with requirements from CCP-TP-005, Revision 24, *CCP Acceptable Knowledge Documentation* and the WIPP Hazardous Waste Facility Permit. One concern was noted and adequately addressed during the audit (refer to I12-12-CDA-01).

The NWP Audit Team traveled to the INL to assess the CCP activities conducted at INL. For this audit, the NWP Audit Team evaluated personnel qualifications, instructions, procedures, document control, material identification and control, inspection and testing, control of measuring and test equipment, inspection and test status, nonconforming item control, corrective action, software control, and records. The NWP Audit Team verified that the CCP QA Program is effectively implemented in the areas to which it applies at INL. One observation made by the NWP Audit Team, related to measuring equipment control, is documented as I12-12-O-03.

The audit also included evaluations for the appropriate application of the Integrated Safety Management System (ISMS). Evidence was observed during the course of the audit that supports the positive application of three ISMS Core Functions. Specifically, the NWP Audit Team was able to confirm the application of the following ISMS Core Functions:

- Core Function Number 1, *Define the Scope of Work* – Procedures are established for the CCP QA Program;
- Core Function Number 4, *Perform Work Within Controls* - Procedures are established to assure processes are conducted appropriately; and
- Core Function Number 5, *Provide Feedback and Continuous Improvement* – Periodic assessments of the CCP QA Program are conducted, and necessary corrective actions are taken when adverse conditions are identified.

This audit resulted in the identification of one finding, one CDA, and three observations. The finding will be documented on WF 12-205 and resultant corrective actions will be tracked and closed through IMPS. The CDA and observations require no response. Therefore, this audit is considered closed with the issuance of this report.

FINDINGS:

I12-12-F-01

Condition(s) Noted:

Changes to controlled documents are not always conducted in accordance with established requirements. When a revision to a controlled CCP document is proposed, Document Services distributes the revised document as Draft A. If reviewers' comments result in further changes being made, the document is re-distributed as Draft B, then C, etc. until no further comments are made. Some reviewers approve earlier versions than the final draft, and do not always get a chance to review/approve the final draft. In practice, whether to re-distribute updated drafts to all the reviewers is at the originator's discretion. It appears that the strict definition of minor changes (Section 4.5.1 of CCP-QP-010) may not be adhered to during these draft changes. Also, the requirement that QA be an approver of certain minor changes (refer to Section 4.5.4 of CCP-QP-010) is not in compliance in those cases where QA does not approve the final draft version.

Requirement(s) Not Met:

CCP-QP-010, Revision 23, *CCP Document Preparation, Approval, and Control,* Section 4.5.1, states:
"Editorial or minor changes may be made to all CCP documents **except** CCP-PO-001, CCP-PO-002, CCP-PO-003, CCP-PO-016, CCP-PO-401, CCP-PO-505, and CCP-QP-001 without the same level of review and approval as the original document." The following items are considered editorial or minor changes:

- Correcting grammar or spelling (the meaning has not changed);
- Renumbering sections or attachments;
- Updating organization titles;
- Changes to non-quality affecting schedules;
- Revising or reformatting forms, providing the original intent of the form has not been altered;
- Attachments marked "Example," "Sample," or exhibits that are clearly intended to be representative only, in part, "Hard copy records shall be stamped, initialed or signed, and dated."

CCP-QP-010, Revision 23, Section 4.5.4, states: All minor Host site-specific changes shall be evaluated and approved by the Site Project Manager and CCP QA before implementation.

CONDITIONS CORRECTED DURING THE AUDIT (CDAs):

I12-12-CDA-01

Condition(s) Noted:

During characterization activities at Oak Ridge National Laboratory, waste was encountered with contents that didn't match the existing AK, resulting in the reassignment of a drum from one Waste Stream to OR-SWSA-CH-SOIL and stipulation of documentation to be updated. During the audit, it was discovered that the documentation had not been updated.

Requirement(s) Not Met:

CCP-TP-005, Revision 22, *CCP Acceptable Knowledge Documentation,* Section 4.10.4, requires that when updating AK for additional waste stream containers, "If the containers are not bounded by the existing AK Summary Report, but should be included in the waste stream, then revise the AK Summary Report..."

Action(s) Taken and Verification of Completion:

Due to the fact this affects an inactive site, CCP personnel are unable to make the changes at this time. However, the NWP Audit Team verified that the issue was identified in freeze files for the affected documents. Therefore, this issue is documented as a CDA.

OBSERVATION(S):

I12-12-O-01

Condition(s) Noted:

Several CCP documents refer to CCP QA. During a recent re-organization of the NWP QA, the CCP QA was merged with QA's Assurance Programs; therefore, there is no longer a distinct CCP QA. The NWP Audit Team verified that the procedure inaccuracies created as a result of the QA organizational changes were previously recognized and that procedure changes are in process. Marked-up procedure changes were reviewed and observed to include substitution of "CCP QA" with "QA".

I12-12-O-02

Condition(s) Noted:

CCP-PO-001 is credited for being the document that invokes the CBFO QAPD. However, CCP-PO-002 actually describes the QA programmatic requirements (it isn't referenced in CCP-PO-001 or otherwise given credit for invoking the QA program). The NWP Audit Team verified that changes are in progress to update and improve these documents and to more appropriately invoke WP 13-1.

I12-12-O-03

Condition(s) Noted:

Pressure/vacuum gages in use at the leak testing stations at the Mobile Loading Unit at INL were not listed on the Measuring and Test Equipment (M&TE) database viewed on-line during the audit. Investigation shows that the information for the gages had been recently provided to the CCP personnel responsible for generation of the M&TE database and that the information was entered in the database soon after the NWP Audit Team was at INL. Although the gages are now listed in the database, the identification numbers listed on the calibration stickers are slightly different than those listed in the database. The database lists six pressure/vacuum gages with equipment identification numbers VAC-PLP-1801 through VAC-PLP-1806, whereas the gages have calibration labels with equipment identification numbers VAC-PI-1801 through VAC-PI-1806. It was observed that these gages are calibrated via work orders by INL personnel and that the work order documentation (i.e., *Instrument Calibration/Check*) shows both of the numbers – the VAC-PLP-XXXX is a number for the "pressure loop" at each leak test station and the VAC-PI-XXXX is the number shown for the gage that exhibits the pressure/vacuum readout.

III. ATTACHMENTS:

Attachment 1, *Table of Personnel Contacted*
Attachment 2, *Table of Documents Reviewed*

IV. SIGNATURES:

Prepared by: T. D. Hood, Lead Auditor, Oversight Programs — 12-3-12 Date

Approved by: W. W. Allen For V. K. Cannon, Manager, Assurance Programs — 12/3/12 Date

Attachment 1, *Table of Personnel Contacted*

[A] Attended Audit Entrance Meeting
[B] Contacted During the Audit
[C] Attended Audit Exit Meeting

Name	A	B	C
NWP			
V. K. Cannon	X	X	X-1
W. T. Carlson		X	
C. A. Chester	X	X	
R. J. Czyzewski		X	X-2
A. De Bruyn Kops		X	
A. J. Fisher		X	X-1
J. A. Golden		X	
R. Green		X	
L. R. Jones		X	X-1
C. M. Luoma		X	
V. J. Medina		X	
T. L. Mueller	X	X	X-1
M. W. Pearcy	X	X	
M. F. Ramirez		X	
R. D. Reeves			X-1
N. K. Roberts		X	
Y. H. Salmon		X	
W. F. Verlanic		X	X-2
J. A. Vernon			X-1
V. M. Waldram		X	
M. A. Walker		X	X-1
J. T. Yturralde		X	
Idaho National Laboratory			
M. Christensen.		X	
C. Covington		X	
C. Davis		X	
B. Dial		X	
The S. M. Stoller Corporation			
C. A. Armijo		X	
A. K. Atwood		X	
M. L. Billett		X	
V. L. Davis		X	
J. E. Madrid		X	
L. Martin		X	
J. R. Payanes		X	
S. K. Pearcy		X	
S. A. Punchios		X	
J. T. Yturralde		X	
TechSpecs			
C. D. Davis		X	
H. T. Greenwood		X	

X-1 Exit meeting in Carlsbad
X-2 Exit meeting at INL

Attachment 2, *Table of Documents Reviewed*

Document Identification	Document Title
NM4890139088-TSDF	*Waste Isolation Pilot Plant* [WIPP] *Hazardous Waste Facility Permit*
DOE/CBFO-94-1012, Revision 11	*U.S. Department of Energy Carlsbad Field Office Quality Assurance* [QA] *Program Document*
DOE/TRU-11-3425, Revision 0	*Annual Transuranic* [TRU] *Waste Inventory Report – 2011*
DOE/WIPP-02-3122, Revision 7.2	*TRU Waste Acceptance Criteria for the Waste Isolation Pilot Plant*
DOE/WIPP-06-3345, Revision 4	*Flammable Gas Analysis*
WIPP Procedure (WP) 13-1, Revision 31	*Washington TRU Solutions LLC* [WTS] *QA Program Description*
WP 13-1, Revision 32	*Nuclear Waste Partnership LLC* [NWP] *QA Program Description*
WP 04-CO.01, Revision 1	*Conduct of Operations*
WP 04-CO.01, -1 through -16, Revision 1	Conduct of Operations series
WP 13-QA.03, Revision 19	*QA Independent Assessment Program*
WP 15-GM.01, Revision 3	*WTS Project Execution Plans*
WP 15-GM.03, Revision 4	*Integrated Safety Management System* [ISMS] *Description*
CCP-AK-LANL-009, Revision7	*Central Characterization Project* [CCP] *Acceptable Knowledge [AK] Summary Report for Los Alamos National Laboratory* [LANL] *Chemistry And Metallurgy Research Facility Waste Stream LA-MHD03.001*
CCP-AK-SRS-12, Revision 5	*CCP AK Summary Report for Savannah River Site* [SRS] *Solid Waste Management Facility*
CCP-CM-001, Revision 3	*CCP Equipment Change Authorization and Documentation*
CCP-CM-031, Revision 0	*Verification of Designs Produced by External Agencies*
CCP-PO-001, Revision 20	*CCP TRU Waste Characterization QA Project Plan*
CCP-PO-002, Revision 26	*CCP TRU Waste Certification Plan*
CCP-PO-004, Revision 30	*CCP/SRS Interface Document*
CCP-PO-008, Revision 9	*CCP QA Interface with the WTS QA Program*
CCP-PO-012, Revision 10	*CCP/LANL Interface Document*
CCP-PO-024, Revision 11	*CCP/Idaho National Laboratory* [INL] *Interface Document*
CCP-PO-026, Revision 3	*CCP Configuration Management*
CCP-PO-403, Revision 1	*CCP/Advanced Mixed Waste Treatment Project* [AMWTP] *Roles and Responsibilities*
CCP-PO-405, Revision 0	*CCP/Sandia National Laboratory* [SNL] *Roles and Responsibilities*
CCP-QP-001, Revision 7	*CCP Graded Approach*
CCP-QP-002, Revision 33	*CCP Training and Qualification Plan*
CCP-QP-004, Revision 10	*CCP Corrective Action Management*
CCP-QP-005, Revision 21	*CCP TRU Nonconforming Item Reporting and Control*
CCP-QP-008, Revision 20	*CCP Records Management*
CCP-QP-010, Revision 23	*CCP Document Preparation, Approval, and Control*
CCP-QP-011, Revision 10	*CCP Laboratory Logbooks*
CCP-QP-015, Revision 11	*CCP Procurement*
CCP-QP-016, Revision 16	*CCP Control of Measuring and Testing Equipment* [M&TE]
CCP-QP-017, Revision 3	*CCP Identification and Control of Items*
CCP-QP-018, Revision 9	*CCP Management Assessment*
CCP-QP-019, Revision 6	*CCP QA Reporting to Management*
CCP-QP-021, Revision 7	*CCP Surveillance Program*
CCP-QP-028, Revision 14	*CCP Records Filing, Inventorying, Scheduling, and Dispositioning*
CCP-TP-002, Revision 24	*CCP Reconciliation of Data Quality Objectives and Reporting Characterization Data*
CCP-TP-003, Revision 18	*CCP Data Analysis for S3000, S4000, and S5000 Characterization*
CCP-TP-005, Revision 24	CCP AK Documentation
CCP-TP-006, Revision 16	*CCP Visual Examination* [VE] *Technique for INL Newly Generated TRU Waste*
CCP-TP-035, Revision 24	*CCP Container Management*
CCP-TP-053, Revision 12	*CCP Standard Real-Time Radiography* [RTR] *Inspection Procedure*
CCP-TP-068, Revision 8	*CCP Standardized Container Management*

Document Identification	Document Title
CCP-TP-140, Revision 9	*CCP Equipment Maintenance*
CCP-TP-162, Revision 1	*CCP Random Selection of Containers for Solids and Headspace Gas Sampling* [HSGS]
CCP- Standing Order (SO) -010, Revision 0	*Information Only Sampling for Selected Analytes using Ground Control Monitoring System* [GCMS]
CCP-SO-INL-11-002, Revision 1	*48 Hour Drum Heat-up Using Gas Generation Test Canister* [GGTC]
CCP-SO-037 (no date or revision number)	*Additional Review and Approval of iCALs for Flammable Gas Analysis* [FGA]
CCP-SO-074, dated May 11, 2011	*File Transfer Protocol (ftp) Site Replacement*
CCP-SO-082, Revision 1	*Quarterly Inspection for Fillable Forms*
CCP-SO-092, dated February 22, 2012	*Container Characterization After Closure Date*
CCP-SO-093, Revision 3	*Content of Document Record Packages Prepared by CCP Document Services*
RCT-PXP-027, Revision 0	*Project Execution Plan for the TRU Waste Sorting System-1 (TSS-1) Refurbishment Project*
RCT-PXP-026, Revision 0	*Project Execution Plan for the Development and Deployment of a High Energy Real-Time Radiography (HE-RTR) System*
	QA organization chart, dated January 9, 2012
	QA organization chart, dated June 1, 2012
	Semiannual Report on the CCP QA Program, First Half of Calendar Year 2012 (January 1 through June 30, 2012) DRAFT / INFORMATION ONLY
CP:12:01115, dated February 16, 2012	Letter from V. K. Cannon to Mr. R. Unger, subject: *Semiannual Report on the CCP QA Program, Second Half of Calendar Year 2012 (July 1 through December 31, 2011)* (Report was attached to letter)
	CCP 2012 Surveillance Schedule, Attachment 1, August 10, 2012
QA:12:01026, dated April 2, 2012	Interoffice Correspondence from V. K. Cannon to M. L. Sensibaugh, subject: *Information Copy of Completed CCP Surveillance Report SUR-SRS-0002-12, Large Box Nondestructive Assay* [NDA] (Report was attached)
QA:12:01030, dated April 2, 2012	Interoffice Correspondence from V. K. Cannon to M. L. Sensibaugh, subject: *Information Copy of Completed CCP Surveillance Report SUR-LANL-0001-12, Nondestructive Examination* [NDE] *Operations* (Report was attached)
QA:12:01031, dated March 29, 2012	Interoffice Correspondence from V. K. Cannon to M. L. Sensibaugh, subject: *Information Copy of Completed CCP Surveillance Report SUR-CCP-0002-12, CCP Records Management* (Report was attached)
QA:12:01035, dated April 10, 2012	Interoffice Correspondence from V. K. Cannon to M. L. Sensibaugh, subject: *Information Copy of Completed CCP INL Surveillance Report SUR-INL-0001-12, Container Management INL* (Report was attached)
QA:12:01037, dated April 11, 2012	Interoffice Correspondence from V. K. Cannon to M. L. Sensibaugh, subject: *Information Copy of Completed CCP Surveillance Report SUR-CCP-0003-12, Procurement* (Report was attached)
QA:12:01049, dated May 24, 2012	Interoffice Correspondence from V. K. Cannon to M. L. Sensibaugh, subject: *Information Copy of Completed CCP Surveillance Report SUR-SRS-0005-12, Contact-Handled [CH] Headspace Gas Sampling [HSGS] – SUMMA at SRS* (Report was attached)
QA:12:01051, dated May 24, 2012	Interoffice Correspondence from V. K. Cannon to M. L. Sensibaugh, subject: *Information Copy of Completed CCP Surveillance Report SUR-ALD-0001-12, INL Analytical Department* (Report was attached)
QA:12:01055, dated June 12, 2012	Interoffice Correspondence from V. K. Cannon to M. L. Sensibaugh, subject: *Information Copy of Completed CCP Surveillance Report SUR-LANL-0004-12, Standing Orders and Operator Aids* (Report was attached)
QA:12:01060, dated June 28, 2012	Interoffice Correspondence from V. K. Cannon to M. L. Sensibaugh, subject: *Information Copy of Completed CCP INL Surveillance Report SUR-INL-0002-12, RTR, CH Waste Operations* (Report was attached)
SUR-INL-0003-12, July 25, 2012	*Surveillance: NDA*
SUR-INL-0004-12, September 6, 2012	*Surveillance: TRUPACT II Loading; Area: CCP Mobile Loading Unit*
SUR-INL-0005-12, August 12, 2012	*Surveillance: RTR and Dose-to-Curie; Area: RH Waste Characterization*
	CCP 2012 Management Assessment Schedule, Attachment 2, August 13, 2012

Document Identification	Document Title
QA:12:01021, dated February 15, 2012	Interoffice Correspondence from V. K. Cannon to M. L. Sensibaugh, subject: *Transmittal of Management Assessment Report MA-CCP-0003-12, QA Program Document Matrix* (Report was attached)
QA:12:01046, dated May 21, 2012	Interoffice Correspondence from V. K. Cannon to M. L. Sensibaugh, subject: *Transmittal of Management Assessment Report MA-CCP-0004-12, Maintenance, Condition, and Reliability of CCP Characterization Equipment at LANL* (Report was attached)
QA:12:01047, dated May 21, 2012	Interoffice Correspondence from V. K. Cannon to M. L. Sensibaugh, subject: *Transmittal of Management Assessment Report MA-CCP-0006-12, Effectiveness of the Integrated Data Center Training Module* (Report was attached)
QA:12:01054, dated June 11, 2012	Interoffice Correspondence from V. K. Cannon to M. L. Sensibaugh, subject: *Transmittal of Management Assessment Report MA-CCP-0007-12, Data Generation Level Batch Data Report* [BDR] *Processing at SRS* (Report was attached)
QA:12:01058, dated June 29, 2012	Interoffice Correspondence from V. K. Cannon to M. L. Sensibaugh, subject: *Transmittal of Management Assessment Report MA-CCP-0009-12, Length of Time Since Last Revision to CCP Documents* (Report was attached)
QA:12:01068, dated July 18, 2012	Interoffice Correspondence from V. K. Cannon to M. L. Sensibaugh, subject: *Transmittal of Management Assessment Report MA-CCP-0001-12, Time Required to Close CBFO Corrective Action Reports* [CARs] *Issued to the CCP in Calendar Year 2011* (Report was attached)
QA:12:01071, dated July 19, 2012	Interoffice Correspondence from V. K. Cannon to M. L. Sensibaugh, subject: *Transmittal of Management Assessment Report MA-CCP-0010-12, QA Qualification* (Report was attached)
QA:11:00280, dated December 15, 2011	Interoffice Correspondence from W. W. Allen to J. E. Hoff, subject: *Transmittal of Management Assessment Report MA-QA-11-006, Annual QA Department Management Assessment Report* (Report was attached)
Calibration Certificate, INL Calibration Identification 723060, Calibration Date December 14, 2011	GGTC Temperature Controller, GGTS-TC-3571
Calibration Certificate, INL Calibration Identification 718103, Calibration Date August 9, 2012	GGTC Temperature Controller, GGTS-TC-3522
Calibration Certificate, INL Calibration Identification 723068, Calibration Date December 14, 2011	GGTC Temperature Controller, GGTS-TC-3573
Calibration Certificate, INL Calibration Identification 723075, Calibration Date August 9, 2012	GGTC Temperature Controller, GGTS-TC-3552
	MTE List, MTE Updated August 19, 2012 [list from INL]
	Screen shot of excerpt from M&TE database at INL, showing vacuum/pressure gages
	Instrument Calibration/Check for VAC-PLP-1804 and related AMWTP Work Order Number 415867, *Annual Calibration of Pressure Loop, VAC-PLP-1804*
	Reviewed Certificates of Calibration for the following M&TE at INL (identification number and description): • MTE-450, torque wrench, • MTE-243, thermometer, • MTE-555, pressure indicator / barometer, and • MTE-352, calibrated gas/leak standard
Certificate of Accuracy	Air Liquide, Purchase Order (PO) 415043, ALM030804, expires February 8, 2013; certificate signed by D. VonFeldt (Air Liquide)
Certificate of Accuracy	Air Liquide, PO 415557, ALM011632, certificate signed by D. VonFeldt (Air Liquide)
	Reviewed files (included controlled copy of procedure, approvals, comments, etc) for the following procedures: • CCP-PO-001, • CCP-PO-002, • CCP-PO-008,

Document Identification	Document Title
	• CCP-PO-024, • CCP-QP-001, • CCP-QP-010, • CCP-QP-011, • CCP-QP-015, • CCP-QP-017, • CCP-QP-018, • CCP-QP-019, and • CCP-QP-021
	CCP-INL List of Qualified Individuals (LOQI) , September 6, 2012
	INL NDE Personnel Waste Streams Qualified List, September 6, 2012
	Reviewed training/qualification files (included qualification cards, logbooks, eye exams, tests, appointment letters, and/or evaluations) for the following personnel for the listed examination/evaluation process: • Flammable Gas Analysis (FGA) o D. Dover, o A. De Bruyn Kops, and o J. Poirier • Gas Generation Testing o D. Dover, o A. De Bruyn Kops, and o J. Poirier • SuperHENC o S. Cummins, o R. Green, o S. A. McElhaney, and o R. Thompson • NDA Stored Waste Examination Pilot Plant (SWEPP) Gamma-Ray Spectrometer (SGRS) o C. Davis, and o B. Dial • NDA Waste Assay Gamma Spectrometer (WAGS) o C. Davis, o B. Dial, and o R. Green • Leak Testing o M. Christensen, o B. Hebdon, and o L. Seiler • VE o L. Grover, o M. Haderlie, o J. Hegsted, o D. Jackman, o S. Pattee, o J. Poole, o J. Stanton, o B. Stark, and o L. Verlanic • RTR o J. Bowden, o T. Christensen, and o M. Galbraith
	Level III designation letters / qualification files for: • W. Weyerman. Letter (dated September 11, 2012), from V. Cannon • R. Leimenstoll. Letter (dated November 16, 2011), from V. Cannon
CCP-TP-068, Revision 8, *CCP Standardized Container Management*, Attachment 1	*CCP Container Traveler (Label)* Reviewed the completed form for drum numbers: • ARP70800, • ARP70803,

Document Identification	Document Title
	• ARP70805, • ARP70807, • ARP70808, • ARP70835, • ARP70836, • ARP70837, • ARP70838, and • ARP70839
	Reviewed BDRs for VE with the following BDR numbers: • IN-ARP-VE-002776, • IN-ARP-VE-002778, • IN-ARP-VE-002780, • IN-ARP-VE-002782, • IN-ARP-VE-002783, • IN-ARP-VE-002785, • IN-ARP-VE-002788, and • IN-ARP-VE-002790
	Reviewed BDRs for RTR with the following BDR numbers: • INRTR5120001, • INRTR5120004, and • INRTR5120005
	Reviewed BDRs for SuperHENC examination with the following BDR numbers: • INNDAB11001, • INNDAB11004, and • INNDAB12003
Integrated Data Center Database for verification of containers	Container Numbers ARP 71187, ARP 71270, and ARP71197
Nonconformance Report (NCR)-INL-1039-06, December 20, 2006	BDR Number(s): INNDAW060244; Container Number(s): 10129981; NDA, container rejected; returned to INL
NCR-INL-0799-06, August 17, 2006	BDR Number(s): INNDAW060122; Container Number(s): 10101841,10105523, 10102014; NDA, container rejected; returned to INL.
NCR-INL-0781-06, August 1, 2006	BDR Number(s): INNDAW060111; Container Number(s): 10102521, 10099524, 10102272, 10105623, and 10104794; NDA, container rejected; returned to INL
NCR-INL-0725-07, October 2, 2007	BDR Number(s): INRTR5070125; Container Number(s): 10168742; NDE, container rejected; returned to INL; NCR open
NCR-INL-0501-08, Revision 2, May 1, 2008	BDR Number(s): INRTR5050104; Container Number(s): 10018191; NDE, container rejected; returned to Host site; NCR open
NCR-INL-0421-12, May 8, 2012	BDR Number(s): IN12FG5026; Container Number(s): ARP70230, ARP70229, ARP70164, and ARP70158; FGA, container rejected; (1) remove from Lot both hard-copy and electronic copy, if applicable; (2) remove containers from applicable AK Tracking Spreadsheet; (3) return to Accelerated Retrieval Project (ARP); NCR open
NCR-INL-0361-12, September 11, 12	BDR Number(s): INNDAW120076; Container Number(s): ARP71204, ARP70451, ARP71202, ARP71267, ARP71209, ARP71187 ARP71197, and ARP71270; NDA, equipment failure; rework; (1) perform a calibration verification per CCP-TP-019; (2) an NDA Expert Analyst will review the Daily Performance Check data and the data associated with the BDR listed in block 3 and once the data is shown satisfactory, the system may be returned to service; NCR open
NCR-INL-2519-11, May 3, 2011	BDR Number(s): INRTR5110048; Container Number(s): 10066902, 10086727, 10161087, 1 0036200, 10403059, and 10220395; NDE, container rejected; returned to INL; NCR open, container rejected; returned to INL
NCR-INL-0360-12, September 10, 2012	BDR Number(s): INNDAS120031; Container Number(s): ARP71187, ARP71270, and ARP71197; NDA, container rejected; reject from BDR; move the container to WMF-610 and re-assay on WAGS
CBFO CAR 12-026, July 2, 2012	Identified during CBFO Audit A-12-13
CBFO CAR 12-027, July 2, 2012	Identified during CBFO Audit A-12-13

Document Identification	Document Title
OP:12:01365, July 17, 2012	Letter from CCP to CBFO; subject: CCP Corrective Action Plan (CAP) for CBFO CAR 12-026, "Transportation – Related Procedure Violations Due to Inattention to Detail"; CCP CAP for CBFO CAR 12-027, "Multiple Documentation Errors"
CBFO:OQA:CF:CC:12-1441:UFC 2300.00, July 2, 2012	Letter from CBFO to CCP; subject: Issuance of Accelerated CARs 12-026 and 12-027 Identified During Audit A-12-13
Purchase Requisition (PR) 0000416312, April 2, 2012	Spare Parts for Super HENC
PR 0000413321, June 2, 2010	(1500) 019DS Filters for LANL
PR 0000416557, June 20, 2012	Hydrogen for LANL
PR 0000416323, April 4, 2012	Spare Parts for HE-RTR
CCP Equipment Change Authorization (ECA), CM12-0009, [requested] May 1, 2012	INL; NDE-RTR-05; Change tapping on Transformer T1 to configure them for 208 volt input power and make associated adjustments
CCP ECA CM10-0001, [requested] April 21, 2010	LANL TA-54, Area G, Pad 10, Building 54-506; NDA-HENC-01, Manufacture new Drawbridge Lower Actuator Bracket Assemblies per Canberra drawings 10000001550, 10000001551, 10000001552, and 10000001571
	2012 Operator Logbook for FGA area at INL
	2012 Operator Logbook for NDA area at INL
CCP-INL-TRANS-AMWTP-012	2012 Operator Logbook for Mobile Loading Unit area at INL
CP:11:01176	Letter from I. S. Quintana to CCP Records Coordinator; subject: Headspace Gas (HSG) Random Sample Selection Memorandum, for Waste Stream SNL-HCF-S5400-RH, Lot 1, Characterized by the CCP at the SNL; dated May 25, 2011
	LANL VE BDR LA12-OSR-VE-007
	LANL BDR 3LANLDA0005 (Voided)
	INL BDR IN12FG5054
	LA12-OSR [Operational Safety Requirement]-VE-003QTR
	LA-HE-RTR-12-0049
	Disks: • MCS [Mobile Characterization Services]; 3LANDA0081; Unscheduled; NDA 2000, 4.0; dated July 31, 2012; • MCS; 3LANDA0082; Unscheduled; NDA 2000, 4.0; dated July 31, 2012; and • MCS; 3LANDA0083; Unscheduled; NDA 2000, 4.0; dated July 31, 2012
	E-mail from A. Atwood (S.M. Stoller Corporation) to S. Martinez (L&M Technologies, Inc.) at the Records Processing Center (RPC) requesting transmittal numbers on July 24, 2012; and S. Martinez's reply with transmittal numbers on July 25, 2012.
	E-mail from L. Nelson to T. Parker requesting RH SNL 40L90, Lot 2 HSG Summary on July 26, 2012; which was transmitted to L. Nelson as a PDF
CCP Records Inventory and Disposition Schedule (RIDS)	Reviewed the following RIDS: • General, dated February 14, 2012 • All Sites CH, dated August 2, 2012 • All Sites RH, dated July 23, 2012 • Intersite Shipping, dated May 9, 2012
CCP Qualification Cards	Reviewed qualification cards for the following personnel (qualification card information included below): • J. Golden – RCT-CM-01, Revision 0, *Configuration Management Engineer/Coordinator Qualification Card*, effective August 24, 2010; completed November 2010; • J. Vernon – Site Project Manager (SPM)-01, Revision 12, *SPM Qualification Card*, effective February 23, 2009; completed June 2009; • S. Peterman – SPM-01, Revision 1, effective October 9, 2002; completed December 2002; • J. Tenorio – VPM-01, Revision 5, *Vendor Project Manager Qualification Card*, effective March 13, 2009; completed November 2009; • M. Martinez – VPM-01, Revision 3, effective September 21, 2005; completed February 2007; and SPM-01, Revision 8, effective February 14, 2006, completed February 2006; and • B. Verlanic - VPM-01, Revision 4, effective November 16, 2006; completed January 2008

Document Identification	Document Title
Purchase Orders (POs)	Reviewed the following POs: • PO415203, • PO415226, • PO415391, • PO415489, • PO415557, • PO415899, • PO415935, • PO415966, • PO416505, • PO416514, • PO415090, • PO415248, • PO415340, and • PO416439
	Reviewed following Container Tracking Spreadsheets (received August 24, 2012 via email from WTS RCT group): • *LANL LLW-AK-Tracking-Spreadhseet dated August 20,2012 6_2_05 PM.xls,* • *ORNL AKT-AK-Tracking-Spreadsheet dated May 30, 2012 1_33_15 PM.xls,* and • *SRS RH AKT-AK-Tracking-Spreadsheet dated August 23, 2012 2_53_05 PM.xls*
Documents pertaining to Waste Stream LA-MHD03.001	
	CCP-TP-005, *AK Documentation*, Attachment 1, *AK Documentation Checklist*, completed by AK Expert (AKE) A. Johns, dated January 19, 2012
	CCP-TP-005, Attachment 3, *AK Source Document Summary*, form for source document C014, completed by AKE A.Johns, dated August 5, 2009
	CCP-TP-005, Attachment 3, form for source document D043, completed by AKE A. Johns, dated April 19, 2011
	CCP-TP-005, Attachment 3, form for source document P038 completed, by AKE A. Johns, dated October 3, 2011
	CCP-TP-005, Attachment 4, *AK Information List*, completed by AKE A. Johns, dated July 5, 2012
	CCP-TP-005, Attachment 6 *Waste Form, Waste Material Parameters, Prohibited Items, and Packaging*, (AKE not recorded)
	Memo from J. Schoen, CCP AK, dated June 9, 2008. RE: Waste Material Parameter Analysis
	CCP-TP-005, Attachment 5, *Hazardous Constituents*, completed by AKE A. Johns, dated August 25, 2009
	CCP-TP-005, Attachment 7, *Radionuclides*, completed by AKE M. J. Papp, dated November 1, 2011
	Memo from J. M. Schoen, CCP AKE, dated February 18, 2009. RE: Evaluation of Radiological Characterization of the waste stream
	CCP-TP-005, Attachment 8, *Waste Containers List*, (AKE not recorded)
	Memo dated January 9, 2012; Addition of one container
	Memo dated January 12, 2012; Addition of five containers
	Memo dated March 22, 2012; Addition of ten containers
	CCP-TP-005, Attachment 10, *Re-evaluation Checklist*, completed by AKE S. Schafer, dated December 13, 2006. Evaluation of NCRs against 33 drums for potential trend code L assignment.
	Memo from S. Schafer, dated December 13, 2006. RE: review of NDA NCR for waste stream
	CCP-TP-005, Attachment 10, completed by AKE R. Fitzgerald, dated February 1, 2007. Driven by NCR-LANL-0803-06
CCP-TP-053 Revision 4	*RTR Inspection Procedure*
	LANL TRU Waste Storage Record, dated October 13, 1999
	NCR-LANL-0803-06
	CCP-TP-005, Attachment 11, completed by AKE R. Fitzgerald, dated February 1,

Document Identification	Document Title
	2007
	CCP-TP-005, Attachment 3, (source document not recorded) completed by AKE R. Fitzgerald, dated February 14, 2007
	CCP-TP-005, Attachment 10, completed by AKE J. M. Schoen dated January 28, 2008. NCR-0502-07
	Waste Stream Profile Form, (Attachment 2 to CCP-TP-002 Rev.15) dated May 31, 2007; and, Change Notice 1 dated November 16, 2006 and Change Notice 2 dated October 12, 2008
	Memo CP:12:01344 from T.Groover dated June 11, 2012. Subject: AK Accuracy Report for LANL Waste Stream LA-MHD03.001, Lots 45 through60 and CCP Correlation of Container Identification Numbers to BDR Numbers
	CCP-TP-005, Attachment 13, *Waste Stream Characterization Checklist* (Lot 60), completed by AKE M. Papp dated May 16, 2012
	CCP-TP-005, Attachment 14, *CCP AK Accuracy Report* completed by Site Project Manager (SPM) K. Zbryk dated April 19, 2007 Lots 1 through 9 and memo CP:07:01158 April 8, 2008 Accuracy Report
	CCP-TP-005, Attachment 14, completed by SMP K. Zbryk dated April 3, 2008 Lots 10 through 21 and memo CP:08:00224
	CCP-TP-005, Attachment 14, completed by SPM K. Zbryk dated March 30, 2009 Lots 22 through 24 and memo CP:09:01152
	CCP-TP-005, Attachment 14, completed by SMP K. Zbryk dated February 25, 2010 Lots 25 through 33 and memo CP:10:01127
	CCP-TP-005, Attachment 14, completed by SPM S. Peterman dated May 30, 2011 Lots 33 through 44 and memo CP:11:01190
	CCP-TP-005, Attachment 14, completed by SPM T. Groover dated July 11, 2012 Lots 45 through 60 and memo CP:12:01344
Documents pertaining to Waste Stream OR-SWSA-CH-SOIL	
	CCP-TP-005, Attachment 4, completed by AKE C. A. Dickerson dated May 16, 2011
	CCP-TP-005, Attachment 5, completed by AKE C. A. Dickerson dated May 3, 2011
	CCP-TP-005, Attachment 6, completed by AKE C. A. Dickerson dated May 26, 2011
	CCP-TP-005, Attachment 7, completed by AKE C. A. Dickerson dated May 10, 2011
	CCP-TP-005, Attachment 8, completed by AKE C. A. Dickerson dated May 26, 2011
	CCP-TP-005, Attachment 10, completed by AKE J. Harrison date May 15, 2011
	CCP-TP-005, Attachment 1, completed by AKE C. A. Dickerson dated May 31, 2011
	CCP-TP-005, Attachment 3, form for source document DR036, completed by AKE C. A. Dickerson 5/26/11
	CCP-TP-005, Attachment 11, *AK Source Document Discrepancy Resolution,* completed by AKE J. Harrison dated May 25, 2011
Documents pertaining to Waste Stream OR-RF-RH-HET	
	CCP-TP-005, Attachment 1, completed by AKE C. Chancellor dated November 16, 2010
	CCP-TP-005, Attachment 4, completed by AKE C. Chancellor dated November 16, 2010
	CCP-TP-005, Attachment 5, completed by AKE K. J. Peters dated November 12, 2010
	CCP-TP-005, Attachment 6, *Waste Form,* completed by AKE K. J. Peters dated November 30, 2010
	CCP-TP-005, Attachment 8, completed by AKE K. J. Peters dated November 12, 2010
Documents pertaining to Waste Stream SR-SWMF-HET-A	
	CCP-TP-005, Attachment 1, completed by AKE C. A. Dickerson dated September 1, 2011
	CCP-TP-005, Attachment 4, completed by AKE C. A. Dickerson dated September 1, 2011
	CCP-TP-005, Attachment 5, completed by AKE J. Luginbyhl dated October 21,

Document Identification	Document Title
	2008
	CCP-TP-005, Attachment 6, completed by AKE J. Schoen dated September 1, 2011 and memo dated September 21, 2010 RE: waste material parameter analysis
	CCP-TP-005, Attachment 7, completed by AKE J. Schoen September 1, 2011 and memo dated October 5, 2010 RE: Evaluation of radiological characterization
	CCP-TP-005, Attachment 10, completed by AKE J. Luginbyhl 6/2/09 and NCR dated May 3, 2009 Resolution AK: drum SWD071821 to be removed from Attachment 8
	CCP-TP-005, Attachment 8, completed by AKE C. A. Dickerson September 6, 2011 and note stating that drum was deleted on June 2, 2009
	CCP-TP-005, Attachment 13, completed by: • AKE C. Simmons dated April 2, 2008 • AKE J. Luginbyhl dated April 4, 2008 • AKE J. Luginbyhl dated June 20, 2008 • AKE J. Luginbyhl dated July 18, 2008 • AKE J. Luginbyhl dated September 18, 2008 • AKE J. Luginbyhl dated October 24, 2008
	CCP-TP-005, Attachment 14, completed by SPM B. S. Schrock dated September 9, 2011 and memo AK Accuracy Report for Waste Stream, Lots 1-23
Documents pertaining to Waste Stream SR-BCLDP-001.001	
	CCP-TP-005, Attachment 1, completed by AKE L. Price-Watson dated May 13, 2011
	CCP-TP-005, Attachment 4, completed by AKE L. Price-Watson dated May 13, 2011
	CCP-TP-005, Attachment 5, completed by AKE K. J. Peters dated May 18, 2008
	CCP-TP-005, Attachment 6, completed by AKE K. J. Peters dated May 18, 2008
	CCP-TP-005, Attachment 13, completed by AKE K. J. Peters dated August 10, 2010
	CCP-TP-005, Attachment 14, completed by SPM I. S. Quintana dated October 19, 2010 and memo CP:10:01642 RE: Accuracy Report, Lot 1
	CCP-TP-005, Attachment 14, completed by Issued in memo form only dated October 19, 2010 subject: AK Accuracy Report, Lot 1
Documents pertaining to Waste Stream RLCCCPUNIT	
	CCP-TP-005, Attachment 1, completed by AKE T. Greenwood dated May 16, 2012
	CCP-TP-005, Attachment 4, completed by AKE S. Nance dated April 19, 2012
	CCP-TP-005, Attachment 5, completed by AKE M. Doherty dated April 6, 2011
	CCP-TP-005, Attachment 6, completed by AKE M. Doherty dated February 23, 2011 and memo dated February 23, 2011 subject: Calculation of WMPs
	CCP-TP-005, Attachment 7, completed by AKE M. Doherty dated February 23, 2011 and memo dated May 16, 2012 Re: evaluation of radiological characterization
	CCP-TP-005, Attachment 8, completed by AKE S. Nance dated March 1, 2011
	CCP-TP-005, Attachment 13, *Waste Stream Characterization Checklist* form completed by AKE S. Nance, not signed or dated; not required as this waste stream is listed as "not certified"

Attachment 2 – Container Inspection Report

Safe to Handle YES/NO		Container ID Number	Structural Integrity and Distortion Inspection (Circle)		Filters meet requirements YES/NO		Filter Information (Manufacturer, date of manufacture, lot number, unique serial number as applicable)	Rad Survey Label (Circle)	
(YES)	NO	10405814	(SAT)	UNSAT	(YES)	NO	Nuc fil Nucfil-019505 2/11 BL-827	(SAT)	UNSAT
(YES)	NO	10110829	(SAT)	UNSAT	(YES)	NO	Nucfil Nucfil-019505 2/11 BL-637	(SAT)	UNSAT
(YES)	NO	10405961	(SAT)	UNSAT	(YES)	NO	Nucfil Nucfil-019505 2/11 BL-635	(SAT)	UNSAT
(YES)	NO	10037300	(SAT)	UNSAT	(YES)	NO	Nucfil Nucfil-019505 2/11 BL-639	(SAT)	UNSAT
(YES)	NO	10394159	(SAT)	UNSAT	(YES)	NO	Nucfil Nucfil-019505 8/10 HK-1841	(SAT)	UNSAT
(YES)	NO	10402654	(SAT)	UNSAT	(YES)	NO	Nucfil Nucfil-019505 2/11 BL-1262	(SAT)	UNSAT
YES	NO		SAT	UNSAT	YES	NO		SAT	UNSAT
YES	NO		SAT	UNSAT	YES	NO		SAT	UNSAT
YES	NO		SAT	UNSAT	YES	NO	A deBK 6-1-11	SAT	UNSAT
YES	NO		SAT	UNSAT	YES	NO		SAT	UNSAT

Comments: 10394159 is WMC 53150.

Completed by: Aaron deBruyn Kops (Print Name) Aaron deBruyn Kops (Signature) 6-1-11 (Date)

CCP VPM/Designee Verification: Bree Verbeke (Print Name) (Signature) 6-1-11 (Date)

☐ ORIGINAL

Attachment 2 – Container Inspection Report

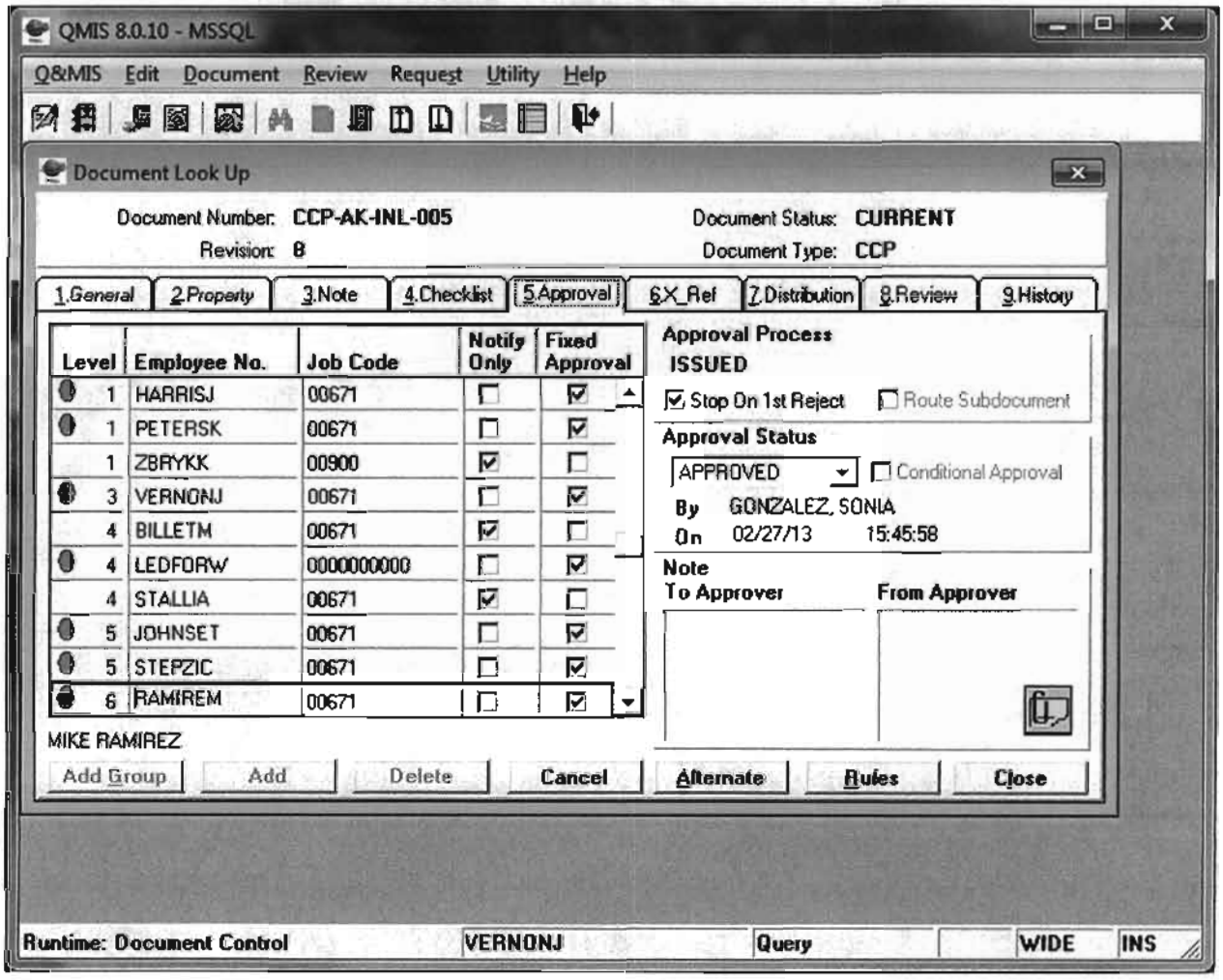
Safe to Handle YES/NO		Container ID Number	Structural Integrity and Distortion Inspection (Circle)		Filters meet requirements YES/NO		Filter Information (Manufacturer, date of manufacture, lot number, unique serial number as applicable)	Rad Survey Label (Circle)	
(YES)	NO	RW19932	(SAT)	UNSAT	(YES)	NO	Nucfil Nucfil-019DS 9/09 IJ-859	(SAT)	UNSAT
(YES)	NO	RW48078	(SAT)	UNSAT	(YES)	NO	Nucfil Nucfil-019DS 8/10 HK-625	(SAT)	UNSAT
(YES)	NO	RW19368	(SAT)	UNSAT	(YES)	NO	Nucfil Nucfil-019DS 9/09 IJ-941	(SAT)	UNSAT
(YES)	NO	RW19929	(SAT)	UNSAT	(YES)	NO	Nucfil Nucfil-019DS 9/09 IJ-868	(SAT)	UNSAT
(YES)	NO	RW19748	(SAT)	UNSAT	(YES)	NO	Nucfil Nucfil-019DS 9/09 IJ-870	(SAT)	UNSAT
(YES)	NO	RW19370	(SAT)	UNSAT	(YES)	NO	Nucfil Nucfil-019DS 9/09 IJ-939	(SAT)	UNSAT
(YES)	NO	RW48191	(SAT)	UNSAT	(YES)	NO	Nucfil Nucfil-019DS 8/10 HK-648	(SAT)	UNSAT
(YES)	NO	RW48076	(SAT)	UNSAT	(YES)	NO	Nucfil Nucfil-019DS 8/10 HK-606	(SAT)	UNSAT
(YES)	NO	RW19927	(SAT)	UNSAT	(YES)	NO	Nucfil Nucfil-019DS 9/09 IJ-873	(SAT)	UNSAT
(YES)	NO	RW48081	(SAT)	UNSAT	(YES)	NO	Nucfil Nucfil-019DS 8/10 HK-645	(SAT)	UNSAT

Comments: None

Completed by: Aaron de Bruyn Kops (Print Name) _____ (Signature) 10-21-11 (Date)

CCP VPM/Designee Verification: TED CARLSON (Print Name) _____ (Signature) 10-21-11 (Date)

CCP RECORDS ORIGINAL
DATE REC'D 10-25-11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Revision: 8
Document Status: CURRENT
Document Type: CCP
1.General 2.Property 3.Note 4.Checklist 5.Approval 6.X_Ref 7.Distribution 8.Review 9.History
Level Employee No. Job Code Notify Only Fixed Approval
1 HARRISJ 00671
1 PETERSK 00671
1 ZBRYKK 00900
3 VERNONJ 00671
4 BILLETM 00671
4 LEDFORW 0000000000
4 STALLIA 00671
5 JOHNSET 00671
5 STEPZIC 00671
6 RAMIREM 00671
MIKE RAMIREZ
Add Group
Add
Delete
Cancel
Approval Process
ISSUED
Stop On 1st Reject
Route Subdocument
Approval Status
APPROVED
Conditional Approval
By GONZALEZ, SONIA
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From Approver
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Close
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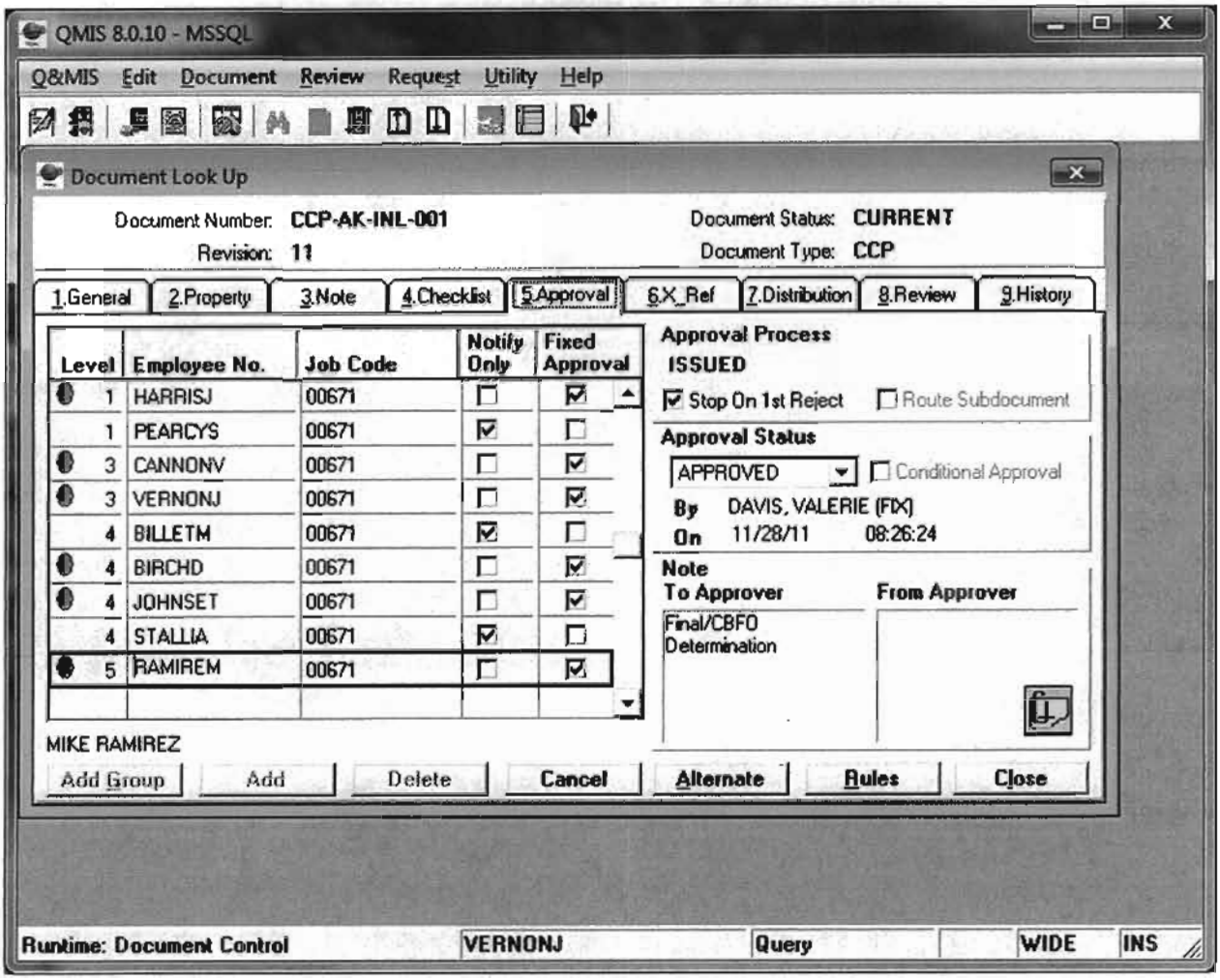
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Document Number: CCP-AK-INL-001
Revision: 11
Document Status: CURRENT
Document Type: CCP
1.General 2.Property 3.Note 4.Checklist 5.Approval 6.X_Ref 7.Distribution 8.Review 9.History
Level Employee No. Job Code Notify Only Fixed Approval
1 HARRISJ 00671
1 PEARCYS 00671
3 CANNONV 00671
3 VERNONJ 00671
4 BILLETM 00671
4 BIRCHD 00671
4 JOHNSET 00671
4 STALLIA 00671
5 RAMIREM 00671
Approval Process
ISSUED
Stop On 1st Reject
Route Subdocument
Approval Status
APPROVED
Conditional Approval
By DAVIS, VALERIE (FIX)
On 11/28/11 08:26:24
Note
To Approver
From Approver
Final/CBFO Determination
MIKE RAMIREZ
Add Group
Add
Delete
Cancel
Alternate
Rules
Close
Runtime: Document Control
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URS

Washington TRU Solutions LLC

INTER-OFFICE CORRESPONDENCE

DATE: January 5, 2012

FROM: J. A. Vernon LOCATION: Certification

TO: W. F. Verlanic ED LOCATION: CCP Project Management
Idaho National Laboratory

SUBJECT: ACCEPTABLE KNOWLEDGE ACCURACY REPORT: IDAHO NATIONAL LABORATORY WASTE STREAM NUMBER ID-AECHDM, REPACKAGED MIXED HETEROGENEOUS DEBRIS GENERATED DURING LABORATORY AND MAINTENANCE OPERATIONS AT ARGONNE LOT 1, LOT 2 AND LOT 3

Purpose

Procedure CCP-TP-005, Central *Characterization Project Acceptable Knowledge Documentation*, requires that Acceptable Knowledge (AK) accuracy be evaluated and documented, either on a subset of containers from the subject waste stream or a waste stream lot. The purpose of this correspondence is to document the results of the AK accuracy determination for waste containers in lots 1 through 3 of waste stream ID-AECHDM.

Methodology

In accordance with CCP-TP-005, applicable CCP Waste Stream Characterization Checklists (CCP-TP-005, Attachment 13) and Acceptable Knowledge Re-Evaluation Checklists (CCP-TP-005, Attachment 10) were reviewed for waste stream ID-AECHDM, to determine if waste containers had waste matrix codes (WMCs) reassigned, Environmental Protection Agency (EPA) hazardous waste numbers reassigned, or were found to have radiological data inconsistent with AK. The total list of waste containers for lots 1 through 3 (40 containers) is provided as an attachment that accompanies this AK Accuracy Report. The results of the AK accuracy determination for this waste container are described in the Results section.

The results of the AK accuracy determination for containers in lots 1 through 3 were combined with the results for containers requiring special consideration, as applicable, to provide the overall AK accuracy for waste stream ID-AECHDM, in terms of accuracy percentage. The results of the AK accuracy evaluation for waste containers comprising lots 1 through 3 are addressed in the Summary section of this memorandum and documented in the attached AK Accuracy Report form (CCP-TP-005, Attachment 14).

Results of AK Accuracy Determination Waste Stream ID-AECHDM, Lot 1 through Lot 3

A review of applicable CCP Waste Stream Characterization Checklists (CCP-TP-005, Attachment 13) and Acceptable Knowledge Re-Evaluation Checklists (CCP-TP-005, Attachment 10) indicates the following:

- There were no WMCs reassigned.

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DATE REC'D 1-31-12

- There were no EPA hazardous waste numbers reassigned.
- Consistent with AK, U-238 and Pu-239 are identified as the two most prevalent isotopes by mass in the waste stream.

Other Considerations

No AK re-evaluations occurred during this AK accuracy evaluation period.

Summary

There are 40 waste containers for which AK accuracy was determined for waste stream ID-AECHDM.

The percentage of waste containers found to be consistent with AK for waste stream ID-AECHDM is therefore:

(40/40) x 100 = 100%

This AK Accuracy will be the one and only AK Accuracy report that will be issued for this waste stream. ID-AECHDM is a closed waste stream and no more drums from this waste stream will be on future lots.

If you have any questions, or if you would like more information about the contents of this AK Accuracy Report, please contact me at Extension 7141.

Attachments: 1. CCP-TP-005, Attachment 14, CCP AK Accuracy Report
2. CCP-TP-002, Attachment 4, CCP Correlation of Container Identification Number to Batch Data Report Numbers, Lot 1, Lot 2

cc: WTS

(without attachments)

R. P. Kantrowitz ED
M. W. Pearcy ED

(with attachments)

CCP Records Custodian GSA-212

TechSpecs

K. Peters ED

Attachment 14 – CCP Acceptable Knowledge Accuracy Report – Example Form

CCP Acceptable Knowledge Accuracy Report

Site(s): Idaho National Laboratory

Waste Stream Number(s): ID-AECHDM

Waste Stream Description: Repackaged Mixed Heterogeneous Debris Generated During Laboratory and Maintenance Operations at Argonne

Waste Containers:	Waste Matrix Code Reassigned? (Y/N)	EPA Hazardous Waste Number Reassigned? (Y/N)	Radiological Data Consistent with AK? (Y/N)
None	N	N	N

Total containers in this report: 40
Total containers consistent with AK: 40
Percent containers consistent with AK: 100%

Site Project Manager:
Jim Vernon
Print

Sign

Date: 01/05/12

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-AECHDM Lot # 1

Container ID Number	NDA BDR	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Headspace Gas BDR				GGT BDR
							Sample	Analysis			
RW47763	INNDAS110152	INRTR5110102	N/A	N/A	N/A	N/A	INHSG1111	ECL11036M	AN11FG7002	N/A	N/A
RW47765	INNDAS110150	INRTR5110101	N/A	N/A	N/A	N/A	INHSG1111	ECL11036M	AN11FG7003	N/A	N/A
RW47784	INNDAS110152	INRTR5110102	N/A	N/A	N/A	N/A	INHSG1111	ECL11036M	AN11FG7003	N/A	N/A
RW47969	INNDAS110152	INRTR5110102	N/A	N/A	N/A	N/A	INHSG1111	ECL11036M	AN11FG7004	N/A	N/A
RW48074	INNDAS110152	INRTR5110102	N/A	N/A	N/A	N/A	INHSG1111	ECL11036M	AN11FG7002	N/A	N/A
RW48081	INNDAS110150	INRTR5110101	N/A	N/A	N/A	N/A	INHSG1111	ECL11036M	AN11FG7003	N/A	N/A
RW48192	INNDAS110152	INRTR5110102	N/A	N/A	N/A	N/A	INHSG1111	ECL11036M	AN11FG7005	N/A	N/A
RW48198	INNDAS110152	INRTR5110102	N/A	N/A	N/A	N/A	INHSG1111	ECL11036M	AN11FG7006	N/A	N/A
RW48201	INNDAS110150	INRTR5110101	N/A	N/A	N/A	N/A	INHSG1111	ECL11036M	AN11FG7006	N/A	N/A
RW49571	INNDAS110152	INRTR5110102	N/A	N/A	N/A	N/A	INHSG1111	ECL11036M	AN11FG7008	N/A	N/A

Signature of Site Project Manager

Jim Vernon
Printed Name

11/11/2011
Date

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-AECHDM Lot # 2

Container ID Number	NDA BDR	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Headspace Gas BDR				GGT BDR
							Sample	Analysis			
RW47766	INNDAS110153	INRTR5110102	N/A	N/A	N/A	N/A	AN11FG7004	N/A	N/A	N/A	N/A
RW47768	INNDAS110152	INRTR5110102	N/A	N/A	N/A	N/A	AN11FG7003	N/A	N/A	N/A	N/A
RW47769	INNDAS110157	INRTR5110104	N/A	N/A	N/A	N/A	AN11FG7003	N/A	N/A	N/A	N/A
RW47777	INNDAS110153	INRTR5110103	N/A	N/A	N/A	N/A	AN11FG7004	N/A	N/A	N/A	N/A
RW47778	INNDAS110153	INRTR5110103	N/A	N/A	N/A	N/A	AN11FG7004	N/A	N/A	N/A	N/A
RW47780	INNDAS110153	INRTR5110103	N/A	N/A	N/A	N/A	AN11FG7002	N/A	N/A	N/A	N/A
RW47781	INNDAS110153	INRTR5110103	N/A	N/A	N/A	N/A	AN11FG7004	N/A	N/A	N/A	N/A
RW47783	INNDAS110153	INRTR5110103	N/A	N/A	N/A	N/A	AN11FG7004	N/A	N/A	N/A	N/A
RW47785	INNDAS110153	INRTR5110103	N/A	N/A	N/A	N/A	AN11FG7003	N/A	N/A	N/A	N/A
RW47786	INNDAS110150	INRTR5110101	N/A	N/A	N/A	N/A	AN11FG7003	N/A	N/A	N/A	N/A
RW47787	INNDAS110153	INRTR5110103	N/A	N/A	N/A	N/A	AN11FG7003	N/A	N/A	N/A	N/A
RW47963	INNDAS110156	INRTR5110104	N/A	N/A	N/A	N/A	AN11FG7002	N/A	N/A	N/A	N/A
RW47970	INNDAS110156	INRTR5110104	N/A	N/A	N/A	N/A	AN11FG7003	N/A	N/A	N/A	N/A
RW47976	INNDAS110156	INRTR5110104	N/A	N/A	N/A	N/A	AN11FG7002	N/A	N/A	N/A	N/A
RW48076	INNDAS110156	INRTR5110104	N/A	N/A	N/A	N/A	AN11FG7003	N/A	N/A	N/A	N/A
RW48077	INNDAS110153	INRTR5110102	N/A	N/A	N/A	N/A	AN11FG7003	N/A	N/A	N/A	N/A
RW48080	INNDAS110156	INRTR5110104	N/A	N/A	N/A	N/A	AN11FG7008	N/A	N/A	N/A	N/A
RW48189	INNDAS110153	INRTR5110103	N/A	N/A	N/A	N/A	AN11FG7003	N/A	N/A	N/A	N/A
RW48191	INNDAS110153	INRTR5110102	N/A	N/A	N/A	N/A	AN11FG7007	N/A	N/A	N/A	N/A
RW48199	INNDAS110150	INRTR5110101	N/A	N/A	N/A	N/A	AN11FG7006	N/A	N/A	N/A	N/A
RW48200	INNDAS110153	INRTR5110102	N/A	N/A	N/A	N/A	AN11FG7006	N/A	N/A	N/A	N/A
RW48202	INNDAS110153	INRTR5110103	N/A	N/A	N/A	N/A	AN11FG7006	N/A	N/A	N/A	N/A
RW48203	INNDAS110150	INRTR5110101	N/A	N/A	N/A	N/A	AN11FG7008	N/A	N/A	N/A	N/A
RW48204	INNDAS110156	INRTR5110104	N/A	N/A	N/A	N/A	AN11FG7008	N/A	N/A	N/A	N/A
RW48205	INNDAS110156	INRTR5110104	N/A	N/A	N/A	N/A	AN11FG7006	N/A	N/A	N/A	N/A
RW48206	INNDAS110153	INRTR5110103	N/A	N/A	N/A	N/A	AN11FG7007	N/A	N/A	N/A	N/A
RW48207	INNDAS110153	INRTR5110103	N/A	N/A	N/A	N/A	AN11FG7008	N/A	N/A	N/A	N/A
RW49572	INNDAS110156	INRTR5110104	N/A	N/A	N/A	N/A	AN11FG7008	N/A	N/A	N/A	N/A
RW49573	INNDAS110153	INRTR5110103	N/A	N/A	N/A	N/A	AN11FG7009	N/A	N/A	N/A	N/A

Signature of Site Project Manager

Jim Vernon
Printed Name

12/14/2011
Date

 SUPPLEMENTAL INFORMATION

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-AECHDM Lot # 3

Container ID Number	Historical Container ID	NDA BDR	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Headspace Gas BDR				GGT BDR
								Sample	Analysis			
RW48079	10424127	INNDAS110179	INRTR5110111	N/A	N/A	N/A	Yes	IN11FG6139	N/A	N/A	N/A	N/A

Signature of Site Project Manager

Jim Vernon
Printed Name

12/21/2011
Date

SUPPLEMENTAL INFORMATION

DIVIDER PAGE

NWP
Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA

CP:13:01178
UFC:5900.0

INTER-OFFICE CORRESPONDENCE

DATE: April 29, 2013

FROM: J.A. Vernon — LOCATION: CCP Certification

TO: W. F. Verlanic ED — LOCATION: CCP Operations
Idaho National Laboratory

SUBJECT: ACCEPTABLE KNOWLEDGE ACCURACY REPORT: IDAHO NATIONAL LABORATORY WASTE STREAM NUMBER ID-SDA-SOIL, INTERSTITAL SOIL FROM THE SUBSURFACE DISPOAL AREA, LOTS 74 - 76, CUMULATIVE FOR LOTS 1 - 76

Purpose

Procedure CCP- TP-005, Central *Characterization Project Acceptable Knowledge Documentation*, requires that Acceptable Knowledge (AK) accuracy be evaluated and documented, either on a subset of containers from the subject waste stream or a waste stream lot. The purpose of this correspondence is twofold. First, it documents the results of the AK accuracy determination for waste containers in waste stream ID-SDA-SOIL, Lots 74 – 76 that were not previously evaluated. Second, it provides a summary of AK accuracy for waste containers in waste stream ID-SDA-SOIL, Lots 1 - 76.

Methodology

In accordance with CCP-TP-005, applicable CCP Waste Stream Characterization Checklists (CCP-TP-005, Attachment 13) and Acceptable Knowledge Re-evaluation Checklists (CCP-TP-005, Attachment 10) were reviewed for waste stream ID-SDA-SOIL, Lots 74 – 76 to determine if waste containers had waste matrix codes (WMCs) reassigned, Environmental Protection Agency (EPA) hazardous waste numbers reassigned, or were found to have radiological data inconsistent with AK. The total list of waste containers for Lots 74 – 76 (5 containers) is provided as an attachment that accompanies this AK Accuracy Report. The results of the AK accuracy determination for these waste containers are described in the Results section.

The results of the AK accuracy determination for containers in Lots 74 – 76 were combined with the results from previous AK accuracy determinations for Lots 1 - 76 and containers requiring special consideration to provide the overall AK accuracy for waste stream ID-SDA-SOIL, Lots 1 – 76 in terms of accuracy percentage. The results of the AK accuracy evaluation for waste containers comprising Lots 1 - 76 are addressed in the Summary section of this memorandum and documented in the attached AK Accuracy Report form (CCP-TP-005, Attachment 14).

Results of AK Accuracy Determination Waste Stream ID-SDA-SOIL, Lots 74 - 76

A review of applicable CCP Waste Stream Characterization Checklists (CCP-TP-005, Attachment 13) and Acceptable Knowledge Re-Evaluation Checklists (CCP-TP-005, Attachment 10) indicates the following:

- There were no WMCs reassigned.
- There were no EPA hazardous waste numbers reassigned.

- Consistent with the current revision of CCP-AK-INL-001 Rev 11, U-238 and Pu-239 are identified as the two most prevalent isotopes by mass for the lots evaluated during this AK accuracy reporting period that were generated, U-235 is identified as the third most prevalent isotope by mass. The isotopic distribution by mass for CCP-AK-INL-001 is based on the entire ARP population and the identification of isotopes for the lots is based on the drums that have been evaluated to date in lots. Pu-239 and U-235 are consistently identified as either the 2nd or 3rd most prevalent isotope by mass in the AK. Therefore, these data are consistent with AK and no containers were eliminated due to isotopic content.

Containers Requiring Special Consideration

No AK re-evaluations occurred during the reporting period.

Summary

There are a total of 3425 waste containers for which AK accuracy was determined in Lots 1 - 76 for waste stream ID-SDA-SOIL.

The percentage of waste containers found to be consistent with AK for waste stream ID-SDA-SOIL is therefore:

(3,425/3,425) x 100 = 100%

If you have any questions, or if you would like more information about the contents of this AK Accuracy Report, please contact me at Extension 7141.

jav:jmc

Attachments:1. CCP-TP-005, Attachment 14, CCP AK Accuracy Report ID-SDA-SOIL

2. CCP-TP-002, Attachment 4, CCP Correlation of Container Identification Number to Batch Data Report Numbers, Lots 74 - 76

cc: NWP
(without attachments)

S. Castro	ED
R. P. Kantrowitz	ED
M. W. Pearcy	ED

(with attachments)

NTPC Records Custodian	GSA-212

INL
(with attachments)

S. Smith	ED

Attachment 14 – CCP Acceptable Knowledge Accuracy Report – Example Form

CCP Acceptable Knowledge Accuracy Report

Site(s): Idaho National Laboratory

Waste Stream Number(s): ID-SDA-SOIL

Waste Stream Description: Interstitial Soils From the Retrieval Area

Waste Containers:	Waste Matrix Code Reassigned? (Y/N)	EPA Hazardous Waste Number Reassigned? (Y/N)	Radiological Data Consistent with AK? (Y/N)
None	N/A	N/A	Y

Total containers in this report: 3425
Total containers consistent with AK: 3425
Percent containers consistent with AK: 100%

Site Project Manager:
Jim Vernon
Print

Sign

Date: 04/26/13

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-SDA-SOIL

Lot # 74

Container ID Number	Historical Container ID	NDA BDR	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Overpack Required	Transportation Headspace Gas BDR				
									Sample	Analysis			GGT
ARP70061	N/A	INNDAS120004	N/A	IN-ARP-VE-002713	N/A	N/A	Yes	No	IN12FG5014	N/A	N/A	N/A	N/A

Signature of Site Project Manager

Roger Whiteaker
Printed Name

6/5/2012
Date

 SUPPLEMENTAL INFORMATION

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-SDA-SOIL Lot # 75

Container ID Number	Historical Container ID	NDA BDR	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Overpack Required	Transportation Headspace Gas BDR				GGT
									Sample	Analysis			
ARP70483	N/A	INNDAW120037	N/A	IN-ARP-VE-002750	N/A	N/A	Yes	Yes	IN12FG5049	N/A	N/A	N/A	N/A
ARP70494	N/A	INNDAW120039	N/A	IN-ARP-VE-002750	N/A	N/A	Yes	Yes	IN12FG5049	N/A	N/A	N/A	N/A

Signature of Site Project Manager

Roger Whiteaker
Printed Name

6/22/2012
Date

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-SDA-SOIL

Lot # 76

Container ID Number	Historical Container ID	NDA BDR	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Overpack Required	Transportation Headspace Gas BDR				GGT
									Sample	Analysis			
ARP71044	N/A	INNDAS120025	N/A	IN-ARP-VE-002793	N/A	N/A	N/A	No	IN12FG5088	N/A	N/A	N/A	N/A
ARP71061	N/A	INNDAS120026	N/A	IN-ARP-VE-002795	N/A	N/A	N/A	No	IN12FG5090	N/A	N/A	N/A	N/A

Signature of Site Project Manager

Jim Vernon
Printed Name

9/19/2012
Date

DIVIDER

PAGE

CP:13:01195
UFC:5900.00

NWP
Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA

INTER-OFFICE CORRESPONDENCE

DATE: May 14, 2013

FROM: J.A. Vernon LOCATION: CCP Certification

TO: W.F. Verlanic ED LOCATION: National TRU Program Certification
Idaho National Laboratory

SUBJECT: ACCEPTABLE KNOWLEDGE ACCURACY REPORT: IDAHO NATIONAL LABORATORY WASTE STREAM NUMBER ID-RF-S3150-A, VARIOUS ORGANIC LIQUIDS IMMOBILIZED INTO A SOLID MONOLITH BY THE ORGANIC AND SLUDGE IMMOBILIZATION SYSTEM (OASIS), LOT 20, CUMULATIVE FOR LOTS 1 - 20

Purpose

Procedure CCP- TP-005, Central *Characterization Project Acceptable Knowledge Documentation*, requires that Acceptable Knowledge (AK) accuracy be evaluated and documented, either on a subset of containers from the subject waste stream or a waste stream lot. The purpose of this correspondence is twofold. First, it documents the results of the AK accuracy determination for waste containers in waste stream ID-RF-S3150-A, Lot 20 that were not previously evaluated. Second, it provides a summary of AK accuracy for waste containers in waste stream ID-RF-S3150-A, Lots 1 - 20.

Methodology

In accordance with CCP-TP-005, applicable CCP Waste Stream Characterization Checklists (CCP-TP-005, Attachment 13) and Acceptable Knowledge Re-evaluation Checklists (CCP-TP-005, Attachment 10) were reviewed for waste stream ID-RF-S3150-A, Lot 20 to determine if waste containers had waste matrix codes (WMCs) reassigned, Environmental Protection Agency (EPA) hazardous waste numbers reassigned, or were found to have radiological data inconsistent with AK. The total list of waste containers for Lot 20 (4 containers) is provided as an attachment that accompanies this AK Accuracy Report. The results of the AK accuracy determination for these waste containers are described in the Results section.

The results of the AK accuracy determination for containers in Lot 20 were combined with the results from previous AK accuracy determinations for Lots 1 - 20 and containers requiring special consideration to provide the overall AK accuracy for waste stream ID-RF-S3150-A, Lots 1 – 20 in terms of accuracy percentage. The results of the AK accuracy evaluation for waste containers comprising Lots 1 - 20 are addressed in the Summary section of this memorandum and documented in the attached AK Accuracy Report form (CCP-TP-005, Attachment 14).

Results of AK Accuracy Determination Waste Stream ID-RF-S3150-A, Lots 20

A review of applicable CCP Waste Stream Characterization Checklists (CCP-TP-005, Attachment 13) and Acceptable Knowledge Re-Evaluation Checklists (CCP-TP-005, Attachment 10) indicates the following:

- There were no WMCs reassigned.
- There were no EPA hazardous waste numbers reassigned.

- Consistent with the current revision of CCP-AK-INL-005 Rev 5, Pu-239 and U-238 are identified as the two most prevalent isotopes by mass for the lots evaluated during this AK accuracy reporting period that were generated. Therefore, these data are consistent with AK and no containers were eliminated due to isotopic content.

Containers Requiring Special Consideration

One AK re-evaluation occurred during the reporting period. The AK re-evaluation was to describe why lead is now acceptable in waste stream ID-RF-S3150-A. Two containers had been previously removed from lots in ID-RF-S3150-A for not matching the waste stream isotopic distribution. The containers were assigned to waste stream ID-RF-S3114. Another occurred AK re-evaluation was issued for a container that was identified with lead. The AK re-evaluation for the container with lead did not occur during the reporting period.

Summary

There are a total of 768 waste containers for which AK accuracy was determined in Lots 1 - 20 for waste stream ID-RF-S3150-A.

The percentage of waste containers found to be consistent with AK for waste stream ID-RF-S3150-A is therefore:

(765/768) x 100 = 99.6%

If you have any questions, or if you would like more information about the contents of this AK Accuracy Report, please contact me at Extension 7141.

jav:jmc

Attachments:1. CCP-TP-005, Attachment 14, CCP AK Accuracy Report ID-RF-S3150-A
2. CCP-TP-002, Attachment 4, CCP Correlation of Container Identification Number to Batch Data Report Numbers, Lots 20

cc: NWP

(without attachments)

S. Castro ED
R. P. Kantrowitz ED
M. W. Pearcy ED

(with attachments)

NTPC Records Custodian GSA-212

INL

(with attachments)

S. Smith ED

Attachment 14 – CCP Acceptable Knowledge Accuracy Report – Example Form

CCP Acceptable Knowledge Accuracy Report

Site(s): Idaho National Laboratory

Waste Stream Number(s): ID-RF-S3150-A

Waste Stream Description: Various Organic Liquids Immobilized Into a Solid Monolith by the Organic and Sludge Immobilization System (OASIS)

Waste Containers:	Waste Matrix Code Reassigned? (Y/N)	EPA Hazardous Waste Number Reassigned? (Y/N)	Radiological Data Consistent with AK? (Y/N)
10017432	Y	Y	N
10017302	Y	Y	N
10018191	N	Y	Y

Total containers in this report: 768
Total containers consistent with AK: 765
Percent containers consistent with AK: 99.6%

Site Project Manager:
Jim Vernon
Print

Sign

Date: 04/30/13

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-RF-S3150-A

Lot # 20

Container ID Number	Historical Container ID	NDA BDR	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Transportation Headspace Gas BDR				GGT BDR
								Sample	Analysis			
10016766	NA	INNDAS050116	INRTR2050160	NA	NA	NA	Yes	IN11FG10018	NA	NA	NA	NA
10018320	NA	INNDAS110172	INRTR5110108	NA	NA	NA	Yes	IN11FG10018	NA	NA	NA	NA
10018594	NA	INNDAS110176	INRTR5110110	NA	NA	NA	Yes	IN12FG9003	NA	NA	NA	NA
10018695	NA	INNDAT060044	INRTR5060114	NA	NA	NA	Yes	IN10FG5081	NA	NA	NA	NA

Signature of Site Project Manager

Roger Whiteaker
Printed Name

6/4/2012
Date

SUPPLEMENTAL INFORMATION

DIVIDER PAGE

Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA

CP:13:01175
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: April 29, 2013

FROM: L.M. Nelson

LOCATION: CCP Certification

TO: NTPC Records Custodian GSA-212

LOCATION: National TRU Program Certification

SUBJECT: ACCEPTABLE KNOWLEDGE ACCURACY REPORT: IDAHO NATIONAL LABORATORY WASTE STREAM NUMBER ID-ANLE-S5000, Lots 1-36

Purpose

CCP-TP-005, Revision 24, *CCP Acceptable Knowledge Documentation*, requires that Acceptable Knowledge (AK) accuracy be evaluated and documented, either on a lot or waste stream basis. The purpose of this correspondence is to document the results of the AL accuracy evaluation for containers in Waste Stream ID-ANLE-S5000, Heterogeneous Debris Waste, Lots 1-36. Prior Accuracy Report issued on Idaho National Laboratory Lots 1-30 in Inter-Office Correspondence letter CP:10:01270, dated May 10, 2010, accounted for 612 containers with an accuracy of 100 percent.

Methodology

In accordance with CCP-TP-005, the CCP Acceptable Knowledge Confirmation Checklist (Attachment 13) for Lots1-36 in Waste Stream ID-ANLE-S5000 subject to this AK Accuracy review was evaluated. One AK re-evaluation Checklist (Attachment 10) was generated for the review of this report.

The results of the AK accuracy evaluation for Waste Stream ID-ANLE-S5000, Lots 1-36 are documented on the attached AK Accuracy Report form (Attachment 14). A total of 742 containers have been evaluated for AK accuracy and none had the Waste Matrix Codes (WMCs) reassigned, Environmental Protections Agency (EPA)Hazardous Waste Numbers (HWNs) reassigned, or were found to have radiological data inconsistent with AK. The results of the AK Accuracy determination for Waste Stream ID-ANLE-S5000 Lots 1-36 are addressed in the following sections of this correspondence.

Results of AK Accuracy Determination

AK Re-Evaluation and confirmation for Waste Stream ID-ANLE-S5000

One AK re-evaluation Checklist was prepared for waste containers in Waste Stream ID-ANLE-S5000, Lots 1-36. The AK Summary Report stated, "Residual liquids are not expected to be present in any waste container in Waste Stream ID-ANLE-S5000, due to the Alpha Gamma Hot Cell Facility standard practice

NTPC RECORDS ORIGINAL
DATE REC'D 5/8/13

of evaporating and/or absorbing all liquids as described in Section 5.4.2.3" During Real-Time Radiography containers were identified to contain residual liquid. Upon the AK re-evaluation of the container documentation was reviewed and noted that the "No" box for "liquids or absorbed liquids" was marked. Waste management practices did not account for small amounts of free liquids in bottles (greater than 1 inch or 2.4 cm) in internal containers. The AK Summary Report has been revised to account for the potential of prohibited residual liquid.

The following parameters were described in AK Accuracy Report ID-ANLE-S5000.

- The AK identifies the waste as mixed heterogeneous debris.
- The waste stream was determined to contain Resource Conservation and Recovery Act regulated constituents and is assigned the following EPS HWNs: F002, F005, D004, D005, D006, D007, D008, D009, D010, D011, D019, D028, D029.

No EPA HWNs were reassigned to this waste stream.

The waste material parameters, EPA HWNs and radionuclides are within reasonable error, as predicted in the AK Summary Report ID-ANLE-S5000. No additional AK re-evaluation is required at this time.

Other Considerations

One Attachment 10 was generated for this waste stream.

No drums were eliminated from Waste Stream ID-ANLE-S5000 due to radioisotopic content.

Based on the criteria for calculating accuracy, the accuracy for the waste stream is 100 percent, as calculated below.

Summary

There are a total of 742 containers in Lots 1-36 for Waste Stream ID-ANLE-S5000 and all containers were determined to be consistent with AK Summary Report ID-ANLE-S5000. The percentage of waste containers found to be consistent with AK is therefore:

742/742= 100%

This AK Accuracy Report has been prepared in accordance with CCP-TP-005. The original Attachment 14, AK Accuracy Report, the supporting list of waste containers in Lots 1-36 for Waste Stream ID-ANLE-S5000 is being provided directly to CCP Records in accordance with CCP-TP-005 requirements.

If you have any questions or if you would like more information about the contents of this AK Accuracy Report, please contact me at (303) 843-2269.

LMN:jmc

Attachments

cc: I. S. Joo ED
M. W. Pearcy ED
M. L. Sensibaugh ED

Attachment 14 – CCP Acceptable Knowledge Accuracy Report – Example Form

CCP Acceptable Knowledge Accuracy Report

Site(s): IDAHO NATIONAL LABORATORY (INL)

Waste Stream Number(s): ID-ANLE-S5000

Waste Stream Description: HETERGENEOUS DEBRIS WASTE

Waste Containers:	Waste Matrix Code Reassigned? (Y/N)	EPA Hazardous Waste Number Reassigned? (Y/N)	Radiological Data Consistent with AK? (Y/N)
See Attachment 2 for listing of Container	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Total containers in this report: 742
Total containers consistent with AK: 742
Percent containers consistent with AK: 100%

Site Project Manager:
Laura Nelson — Laura Nelson — Date: 4/29/13
Print — Sign

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-ANLE-S5000 Sub-Lot # 1

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
00738	NA	NA	NA	RHINLVE080001 R1	NA	NA		NA	NA	NA	NA
00739	NA	NA	NA	RHINLVE080001 R1	NA	NA		NA	NA	NA	NA
00740	NA	NA	NA	RHINLVE080001 R1	NA	NA		NA	NA	NA	NA
00741	NA	NA	NA	RHINLVE080001 R1	NA	NA		NA	NA	NA	NA
00742	NA	NA	NA	RHINLVE080001 R1	NA	NA		NA	NA	NA	NA
00743	NA	NA	NA	RHINLVE080001 R1	NA	NA		NA	NA	NA	NA
00744	NA	NA	NA	RHINLVE080001 R1	NA	NA		NA	NA	NA	NA
00747	NA	NA	NA	RHINLVE080001 R1	NA	NA		NA	NA	NA	NA
00748	NA	NA	NA	RHINLVE080001 R1	NA	NA		NA	NA	NA	NA
00749	NA	NA	NA	RHINLVE080001 R1	NA	NA		NA	NA	NA	NA
00755	NA	NA	NA	RHINLVE080002 R1	NA	NA		NA	NA	NA	NA
00759	NA	NA	NA	RHINLVE080002 R1	NA	NA		NA	NA	NA	NA
00760	NA	NA	NA	RHINLVE080001 R1	NA	NA		NA	NA	NA	NA
00762	NA	NA	NA	RHINLVE080001 R1	NA	NA		NA	NA	NA	NA
00770	NA	NA	NA	RHINLVE080001 R1	NA	NA		NA	NA	NA	NA
00771	NA	NA	NA	RHINLVE080001 R1	NA	NA		NA	NA	NA	NA
00773	NA	NA	NA	RHINLVE080002 R1	NA	NA		NA	NA	NA	NA
00789	NA	NA	NA	RHINLVE080003 R1	NA	NA		NA	NA	NA	NA
00761***	NA	NA	NA	RHINLVE080001 R1	NA	NA		INHSGS080304	ECL084M	ECL084C	ECL084G
00768***	NA	NA	NA	RHINLVE080003 R1	NA	NA		INHSGS080304	ECL084M	ECL084C	ECL084G
00800***	NA	NA	NA	RHINLVE080003 R1	NA	NA		INHSGS080304	ECL084M	ECL084C	ECL084G
00757***	NA	NA	NA	NA	NA	NA		INHSGS080304	ECL084M	ECL084C	ECL084G
00766***	NA	NA	NA	NA	NA	NA		INHSGS080304	ECL084M	ECL084C	ECL084G
00772***	NA	NA	NA	NA	NA	NA		INHSGS080304	ECL084M	ECL084C	ECL084G
00785***	NA	NA	NA	NA	NA	NA		INHSGS080304	ECL084M	ECL084C	ECL084G
00792***	NA	NA	NA	NA	NA	NA		INHSGS080304	ECL084M	ECL084C	ECL084G
00798***	NA	NA	NA	NA	NA	NA		INHSGS080304	ECL084M	ECL084C	ECL084G
00809***	NA	NA	NA	NA	NA	NA		INHSGS080304	ECL084M	ECL084C	ECL084G

***These containers were randomly selected for verifying the assignment of Hazardous Waste Numbers

Irene Quintana
Signature of Site Project Manager

Irene Quintana
Printed Name

12/7/2006
Date

INFORMATION ONLY

CIS 03

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-ANLE-S5000

Sub-Lot # 2

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Lead Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
00748	NA	NA	NA	RHINLVE060001 R1	NA	NA		NA	NA	NA	NA
00766	NA	NA	NA	RHINLVE060002 R1	NA	NA		NA	NA	NA	NA
00767	NA	NA	NA	RHINLVE060002 R1	NA	NA		NA	NA	NA	NA
00775	NA	NA	NA	RHINLVE060002 R1	NA	NA		NA	NA	NA	NA
00776	NA	NA	NA	RHINLVE060002 R1	NA	NA		NA	NA	NA	NA
00777	NA	NA	NA	RHINLVE060003 R1	NA	NA		NA	NA	NA	NA
00778	NA	NA	NA	RHINLVE060003 R1	NA	NA		NA	NA	NA	NA
00779	NA	NA	NA	RHINLVE060003 R1	NA	NA		NA	NA	NA	NA
00781	NA	NA	NA	RHINLVE060003 R1	NA	NA		NA	NA	NA	NA
00782	NA	NA	NA	RHINLVE060003 R1	NA	NA		NA	NA	NA	NA
00785	NA	NA	NA	RHINLVE060004 R1	NA	NA		NA	NA	NA	NA
00787	NA	NA	NA	RHINLVE060003 R1	NA	NA		NA	NA	NA	NA
00789	NA	NA	NA	RHINLVE060004 R1	NA	NA		NA	NA	NA	NA
00801	NA	NA	NA	RHINLVE060003 R1	NA	NA		NA	NA	NA	NA
00802	NA	NA	NA	RHINLVE060004 R1	NA	NA		NA	NA	NA	NA
00804	NA	NA	NA	RHINLVE060004 R1	NA	NA		NA	NA	NA	NA
00805	NA	NA	NA	RHINLVE060004 R1	NA	NA		NA	NA	NA	NA
00807	NA	NA	NA	RHINLVE060003 R1	NA	NA		NA	NA	NA	NA
00808	NA	NA	NA	RHINLVE060004 R1	NA	NA		NA	NA	NA	NA

Signature of Site Project Manager

Irene Quintana
Printed Name

2/9/2007
Date

INFORMATION ONLY

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-ANLE-S5000 Sub-Lot # 3

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Lead Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
00745	NA	NA	NA	RHINLVE080001_R1	NA	NA		NA	NA	NA	NA
00751	NA	NA	NA	RHINLVE080002_R1	NA	NA		NA	NA	NA	NA
00752	NA	NA	NA	RHINLVE080002_R1	NA	NA		NA	NA	NA	NA
00754	NA	NA	NA	RHINLVE080002_R1	NA	NA		NA	NA	NA	NA
00766	NA	NA	NA	RHINLVE080002_R1	NA	NA		NA	NA	NA	NA
00756	NA	NA	NA	RHINLVE080002_R1	NA	NA		NA	NA	NA	NA
00785	NA	NA	NA	RHINLVE080002_R1	NA	NA		NA	NA	NA	NA
00774	NA	NA	NA	RHINLVE080002_R1	NA	NA		NA	NA	NA	NA
00780	NA	NA	NA	RHINLVE080003_R1	NA	NA		NA	NA	NA	NA
00784	NA	NA	NA	RHINLVE080003_R1	NA	NA		NA	NA	NA	NA
00787	NA	NA	NA	RHINLVE080003_R1	NA	NA		NA	NA	NA	NA
00791	NA	NA	NA	RHINLVE080004_R1	NA	NA		NA	NA	NA	NA
00792	NA	NA	NA	RHINLVE080003_R1	NA	NA		NA	NA	NA	NA
00809	NA	NA	NA	RHINLVE080004_R1	NA	NA		NA	NA	NA	NA

***These containers were randomly selected for verifying the assignment of Hazardous Waste Numbers

Signature of Site Project Manager

Irene Quintana
Printed Name

3/7/2007
Date

INFORMATION ONLY

CH 8015

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-ANLE-S5000

Sub-Lot # 4

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
00717**	NA	NA	INLRHRTR07004	NA	NA	NA		INHSG9070003	ECL07028M	ECL07028G	ECL07028C
00750	NA	NA	INLRHRTR07005	NA	NA	NA		NA	NA	NA	NA
00753	NA	NA	INLRHRTR07006	NA	NA	NA		NA	NA	NA	NA
00784	NA	NA	INLRHRTR07006	NA	NA	NA		NA	NA	NA	NA
00786	NA	NA	INLRHRTR07005	NA	NA	NA		NA	NA	NA	NA
00789*	NA	NA	INLRHRTR07006	NA	NA	NA		NA	NA	NA	NA
00783	NA	NA	NA	RHINLVE080003_R1	NA	NA		NA	NA	NA	NA
00788	NA	NA	NA	RHINLVE080003_R1	NA	NA		NA	NA	NA	NA
00793	NA	NA	INLRHRTR07007	NA	NA	NA		NA	NA	NA	NA
00798*	NA	NA	INLRHRTR07006	NA	NA	NA		NA	NA	NA	NA
00803	NA	NA	INLRHRTR07005	NA	NA	NA		NA	NA	NA	NA
00808	NA	NA	INLRHRTR07007	NA	NA	NA		NA	NA	NA	NA

* HSG lot 1

**This container was randomly selected for verifying the assignment of Hazardous Waste Numbers, lot 2.

Irene Quintana
Signature of Site Project Manager

Irene Quintana
Printed Name

3/26/2007
Date

INFORMATION

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-ANLE-S5000 Sub-Lot # 5

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Lead Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
00317**	NA	NA	INLRHRTR07003	NA	NA	NA		INHSGS070003	ECL07028M	ECL07028G	ECL07028C
00464**	NA	NA	INLRHRTR07004	NA	NA	NA		INHSGS070003	ECL07028M	ECL07028G	ECL07028C
00472**	NA	NA	INLRHRTR07004	NA	NA	NA		INHSGS070003	ECL07028M	ECL07028G	ECL07028C
00500**	NA	NA	INLRHRTR07001	NA	NA	NA		INHSGS070003	ECL07028M	ECL07028G	ECL07028C
00564**	NA	NA	INLRHRTR07002	NA	NA	NA		INHSGS070003	ECL07028M	ECL07028G	ECL07028C
00606	NA	NA	INLRHRTR07001	NA	NA	NA		NA	NA	NA	NA
00616	NA	NA	INLRHRTR07008	NA	NA	NA		NA	NA	NA	NA
00666	NA	NA	INLRHRTR07007	NA	NA	NA		NA	NA	NA	NA
00669	NA	NA	INLRHRTR07007	NA	NA	NA		NA	NA	NA	NA
00757*	NA	NA	NA	RHINLVE080002_R1	NA	NA		NA	NA	NA	NA
00772*	NA	NA	NA	RHINLVE080002_R1	NA	NA		NA	NA	NA	NA
00785*	NA	NA	NA	RHINLVE080009_R1	NA	NA		NA	NA	NA	NA
00794	NA	NA	NA	RHINLVE080004_R1	NA	NA		NA	NA	NA	NA
01055**	NA	NA	INLRHRTR07002	NA	NA	NA		INHSGS070003	ECL07028M	ECL07028G	ECL07028C
01079**	NA	NA	INLRHRTR07002	NA	NA	NA		INHSGS070003	ECL07028M	ECL07028G	ECL07028C
01101**	NA	NA	INLRHRTR07004	NA	NA	NA		INHSGS070003	ECL07028M	ECL07028G	ECL07028C

* HSG lot 1 randomly selected for verifying the assignment of Hazardous Waste Numbers.

**HSG lot 2 randomly selected for verifying the assignment of Hazardous Waste Numbers

Signature of Site Project Manager

Irene Quintana
Printed Name

4/4/2007
Date

INFORMATION

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-ANLE-S5000 Sub-Lot # 6

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
00535	NA	NA	INLRHRTR07009	NA	NA	NA		NA	NA	NA	NA
00633	NA	NA	INLRHRTR07010	NA	NA	NA		NA	NA	NA	NA
00634	NA	NA	INLRHRTR07010	NA	NA	NA		NA	NA	NA	NA
00636	NA	NA	INLRHRTR07009	NA	NA	NA		NA	NA	NA	NA
00639	NA	NA	INLRHRTR07009	NA	NA	NA		NA	NA	NA	NA
00649	NA	NA	INLRHRTR07009	NA	NA	NA		NA	NA	NA	NA
00650	NA	NA	INLRHRTR07008	NA	NA	NA		NA	NA	NA	NA
00652	NA	NA	INLRHRTR07008	NA	NA	NA		NA	NA	NA	NA
00664	NA	NA	INLRHRTR07008	NA	NA	NA		NA	NA	NA	NA
00671	NA	NA	INLRHRTR07008	NA	NA	NA		NA	NA	NA	NA
00672	NA	NA	INLRHRTR07008	NA	NA	NA		NA	NA	NA	NA
00673	NA	NA	INLRHRTR07009	NA	NA	NA		NA	NA	NA	NA
00681	NA	NA	INLRHRTR07009	NA	NA	NA		NA	NA	NA	NA
00682	NA	NA	INLRHRTR07010	NA	NA	NA		NA	NA	NA	NA
00686	NA	NA	INLRHRTR07010	NA	NA	NA		NA	NA	NA	NA
00699	NA	NA	INLRHRTR07010	NA	NA	NA		NA	NA	NA	NA
00700	NA	NA	INLRHRTR07008	NA	NA	NA		NA	NA	NA	NA
00720	NA	NA	INLRHRTR07008	NA	NA	NA		NA	NA	NA	NA
00721	NA	NA									
00726	NA										
91106	NA										

Signature of Site Project Manager

Irene Quintana
Printed Name

5/2/2007
Date

INFORMATION

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-ANLE-S5000 Sub-Lot # 7

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Lead Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
00537	NA	NA	INLRHRTR07011	NA	NA	NA		NA	NA	NA	NA
00538	NA	NA	INLRHRTR07011	NA	NA	NA		NA	NA	NA	NA
00543	NA	NA	INLRHRTR07012	NA	NA	NA		NA	NA	NA	NA
00617	NA	NA	INLRHRTR07011	NA	NA	NA		NA	NA	NA	NA
00618	NA	NA	INLRHRTR07011	NA	NA	NA		NA	NA	NA	NA
00620	NA	NA	INLRHRTR07011	NA	NA	NA		NA	NA	NA	NA
00624	NA	NA	INLRHRTR07011	NA	NA	NA		NA	NA	NA	NA
00679	NA	NA	INLRHRTR07011	NA	NA	NA		NA	NA	NA	NA
00680	NA	NA	INLRHRTR07011	NA	NA	NA		NA	NA	NA	NA
00684	NA	NA	INLRHRTR07011	NA	NA	NA		NA	NA	NA	NA
00685	NA	NA	INLRHRTR07011	NA	NA	NA		NA	NA	NA	NA
00690	NA	NA	INLRHRTR07012	NA	NA	NA		NA	NA	NA	NA
00693	NA	NA	INLRHRTR07012	NA	NA	NA		NA	NA	NA	NA
00694	NA	NA	INLRHRTR07012	NA	NA	NA		NA	NA	NA	NA
00695	NA	NA	INLRHRTR07012	NA	NA	NA		NA	NA	NA	NA
00696	NA	NA	INLRHRTR07012	NA	NA	NA		NA	NA	NA	NA
00709	NA	NA	INLRHRTR07012	NA	NA	NA		NA	NA	NA	NA
00710	NA	NA	INLRHRTR07013	NA	NA	NA		NA	NA	NA	NA
00711	NA	NA	INLRHRTR07012	NA	NA	NA		NA	NA	NA	NA
00713	NA	NA	INLRHRTR07013	NA	NA	NA		NA	NA	NA	NA
00714	NA	NA	INLRHRTR07013	NA	NA	NA		NA	NA	NA	NA
00715	NA	NA	INLRHRTR07013	NA	NA	NA		NA	NA	NA	NA
00716	NA	NA	INLRHRTR07013	NA	NA	NA		NA	NA	NA	NA
00722	NA	NA	INLRHRTR07013	NA	NA	NA		NA	NA	NA	NA
00724	NA	NA	INLRHRTR07013	NA	NA	NA		NA	NA	NA	NA
00725	NA	NA	INLRHRTR07013	NA	NA	NA		NA	NA	NA	NA
00726	NA	NA	INLRHRTR07013	NA	NA	NA		NA	NA	NA	NA
00727	NA	NA	INLRHRTR07013	NA	NA	NA		NA	NA	NA	NA

Irene Quintana
Signature of Site Project Manager

Irene Quintana
Printed Name

5/10/2007
Date

INFORMATION

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-ANLE-S5000 Sub-Lot # 6

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
541	NA	NA	INLRHRTR07014	NA	NA	NA		NA	NA	NA	NA
542	NA	NA	INLRHRTR07014	NA	NA	NA		NA	NA	NA	NA
619	NA	NA	INLRHRTR07014	NA	NA	NA		NA	NA	NA	NA
621	NA	NA	INLRHRTR07014	NA	NA	NA		NA	NA	NA	NA
625	NA	NA	INLRHRTR07014	NA	NA	NA		NA	NA	NA	NA
626	NA	NA	INLRHRTR07015	NA	NA	NA		NA	NA	NA	NA
630	NA	NA	INLRHRTR07014	NA	NA	NA		NA	NA	NA	NA
631	NA	NA	INLRHRTR07015	NA	NA	NA		NA	NA	NA	NA
641	NA	NA	INLRHRTR07015	NA	NA	NA		NA	NA	NA	NA
642	NA	NA	INLRHRTR07015	NA	NA	NA		NA	NA	NA	NA
654	NA	NA	INLRHRTR07015	NA	NA	NA		NA	NA	NA	NA
663	NA	NA	INLRHRTR07014	NA	NA	NA		NA	NA	NA	NA
674	NA	NA	INLRHRTR07015	NA	NA	NA		NA	NA	NA	NA
675	NA	NA	INLRHRTR07015	NA	NA	NA		NA	NA	NA	NA
676	NA	NA	INLRHRTR07015	NA	NA	NA		NA	NA	NA	NA
708	NA	NA	INLRHRTR07014	NA	NA	NA		NA	NA	NA	NA
723	NA	NA	INLRHRTR07014	NA	NA	NA		NA	NA	NA	NA
729	NA	NA	INLRHRTR07014	NA	NA	NA		NA	NA	NA	NA
734	NA	NA	INLRHRTR07014	NA	NA	NA		NA	NA	NA	NA
1102	NA	NA	INLRHRTR07016	NA	NA	NA		NA	NA	NA	NA
1104	NA	NA	INLRHRTR07016	NA	NA	NA		NA	NA	NA	NA
1115	NA	NA	INLRHRTR07016	NA	NA	NA		NA	NA	NA	NA
1117	NA	NA	INLRHRTR07016	NA	NA	NA		NA	NA	NA	NA
1119	NA	NA	INLRHRTR07016	NA	NA	NA		NA	NA	NA	NA
1120	NA	NA	INLRHRTR07016	NA	NA	NA		NA	NA	NA	NA
1122	NA	NA	INLRHRTR07016	NA	NA	NA		NA	NA	NA	NA

* HSG lot 1 randomly selected for verifying the assignment of Hazardous Waste Numbers.
**HSG lot 2 randomly selected for verifying the assignment of Hazardous Waste Numbers

Signature of Site Project Manager

Irene Quintana
Printed Name

5/29/2007
Date

INFORMATION ONLY

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-ANLE-S5000

Sub-Lot # 9

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
00357	NA	NA	INLRHRTR07019	NA	NA	NA		NA	NA	NA	NA
00402	NA	NA	INLRHRTR07019	NA	NA	NA		NA	NA	NA	NA
00547	NA	NA	INLRHRTR07018	NA	NA	NA		NA	NA	NA	NA
00551	NA	NA	INLRHRTR07018	NA	NA	NA		NA	NA	NA	NA
00552	NA	NA	INLRHRTR07018	NA	NA	NA		NA	NA	NA	NA
00560	NA	NA	INLRHRTR07018	NA	NA	NA		NA	NA	NA	NA
00588	NA	NA	INLRHRTR07014	NA	NA	NA		NA	NA	NA	NA
00589	NA	NA	INLRHRTR07012	NA	NA	NA		NA	NA	NA	NA
00691	NA	NA	INLRHRTR07012	NA	NA	NA		NA	NA	NA	NA
00692	NA	NA	INLRHRTR07011	NA	NA	NA		NA	NA	NA	NA
00697	NA	NA	INLRHRTR07012	NA	NA	NA		NA	NA	NA	NA
00698	NA	NA	INLRHRTR07013	NA	NA	NA		NA	NA	NA	NA
00701	NA	NA	INLRHRTR07013	NA	NA	NA		NA	NA	NA	NA
00702	NA	NA	INLRHRTR07013	NA	NA	NA		NA	NA	NA	NA
00703	NA	NA	INLRHRTR07014	NA	NA	NA		NA	NA	NA	NA
00704	NA	NA	INLRHRTR07014	NA	NA	NA		NA	NA	NA	NA
00705	NA	NA	INLRHRTR07014	NA	NA	NA		NA	NA	NA	NA
00707	NA	NA	INLRHRTR07014	NA	NA	NA		NA	NA	NA	NA
00708	NA	NA	INLRHRTR07013	NA	NA	NA		NA	NA	NA	NA
00718	NA	NA	INLRHRTR07014	NA	NA	NA		NA	NA	NA	NA
00719	NA	NA	INLRHRTR07014	NA	NA	NA		NA	NA	NA	NA
001060	NA	NA	INLRHRTR07018	NA	NA	NA		NA	NA	NA	NA
001072	NA	NA	INLRHRTR07019	NA	NA	NA		NA	NA	NA	NA
001073	NA	NA	INLRHRTR07017	NA	NA	NA		NA	NA	NA	NA
001082	NA	NA	INLRHRTR07017	NA	NA	NA		NA	NA	NA	NA
001084	NA	NA	INLRHRTR07017	NA	NA	NA		NA	NA	NA	NA
001085	NA	NA	INLRHRTR07017	NA	NA	NA		NA	NA	NA	NA
001094	NA	NA	INLRHRTR07017	NA	NA	NA		NA	NA	NA	NA
001095	NA	NA	INLRHRTR07017	NA	NA	NA		NA	NA	NA	NA
001096	NA	NA	INLRHRTR07017	NA	NA	NA		NA	NA	NA	NA
001096***	NA	NA	INLRHRTR07019	NA	NA	NA		NA	NA	NA	NA
001131	NA	NA	INLRHRTR07017	NA	NA	NA		NA	NA	NA	NA
001132	NA	NA	INLRHRTR07018	NA	NA	NA		NA	NA	NA	NA
001137	NA	NA	INLRHRTR07017	NA	NA	NA		NA	NA	NA	NA
001139	NA	NA	INLRHRTR07017	NA	NA	NA		NA	NA	NA	NA
001140	NA	NA	INLRHRTR07018	NA	NA	NA		NA	NA	NA	NA

INFORMATION ONLY

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-ANLE-S5000 Sub-Lot # 9

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Lead Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
001141	NA	NA	INLRHRTR07016	NA	NA	NA		NA	NA	NA	NA
001143	NA	NA	INLRHRTR07016	NA	NA	NA		NA	NA	NA	NA
001145	NA	NA	INLRHRTR07016	NA	NA	NA		NA	NA	NA	NA
001148	NA	NA	INLRHRTR07016	NA	NA	NA		NA	NA	NA	NA

* HSG lot 1 randomly selected for verifying the assignment of Hazardous Waste Numbers.
**HSG lot 2 randomly selected for verifying the assignment of Hazardous Waste Numbers
***55-gallon overpacked for container integrity.

Signature of Site Project Manager

Irene Quintana
Printed Name

6/11/07
Date

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream. # ID-ANLE-S5000 Sub-Lot # 10

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Lead Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
00305	NA	NA	INLRHRTR07021	NA	NA	NA		NA	NA	NA	NA
00309	NA	NA	INLRHRTR07021	NA	NA	NA		NA	NA	NA	NA
00361	NA	NA	INLRHRTR07020	NA	NA	NA		NA	NA	NA	NA
00362	NA	NA	INLRHRTR07020	NA	NA	NA		NA	NA	NA	NA
00365	NA	NA	INLRHRTR07020	NA	NA	NA		NA	NA	NA	NA
00378	NA	NA	INLRHRTR07020	NA	NA	NA		NA	NA	NA	NA
00386	NA	NA	INLRHRTR07020	NA	NA	NA		NA	NA	NA	NA
00467	NA	NA	INLRHRTR07021	NA	NA	NA		NA	NA	NA	NA
00480	NA	NA	INLRHRTR07021	NA	NA	NA		NA	NA	NA	NA
00490	NA	NA	INLRHRTR07021	NA	NA	NA		NA	NA	NA	NA
00494	NA	NA	INLRHRTR07021	NA	NA	NA		NA	NA	NA	NA
00567	NA	NA	INLRHRTR07020	NA	NA	NA		NA	NA	NA	NA
00569	NA	NA	INLRHRTR07020	NA	NA	NA		NA	NA	NA	NA
00598	NA	NA	INLRHRTR07020	NA	NA	NA		NA	NA	NA	NA
001050	NA	NA	INLRHRTR07020	NA	NA	NA		NA	NA	NA	NA
001051	NA	NA	INLRHRTR07020	NA	NA	NA		NA	NA	NA	NA
001056	NA	NA	INLRHRTR07020	NA	NA	NA		NA	NA	NA	NA
001057	NA	NA	INLRHRTR07020	NA	NA	NA		NA	NA	NA	NA

Signature of Site Project Manager

Irene Quintana
Printed Name

6/8/07
Date

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-ANLE-S5000 Sub-Lot # 11

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
00310	NA	NA	INLRHRTR07024	NA	NA	NA		NA	NA	NA	NA
00319	NA	NA	INLRHRTR07025	NA	NA	NA		NA	NA	NA	NA
00320	NA	NA	INLRHRTR07025	NA	NA	NA		NA	NA	NA	NA
00359	NA	NA	INLRHRTR07024	NA	NA	NA		NA	NA	NA	NA
00374	NA	NA	INLRHRTR07024	NA	NA	NA		NA	NA	NA	NA
00377	NA	NA	INLRHRTR07024	NA	NA	NA		NA	NA	NA	NA
00447	NA	NA	INLRHRTR07023	NA	NA	NA		NA	NA	NA	NA
00461	NA	NA	INLRHRTR07023	NA	NA	NA		NA	NA	NA	NA
00462	NA	NA	INLRHRTR07023	NA	NA	NA		NA	NA	NA	NA
00468	NA	NA	INLRHRTR07023	NA	NA	NA		NA	NA	NA	NA
00473	NA	NA	INLRHRTR07023	NA	NA	NA		NA	NA	NA	NA
00499	NA	NA	INLRHRTR07023	NA	NA	NA		NA	NA	NA	NA
00515	NA	NA	INLRHRTR07025	NA	NA	NA		NA	NA	NA	NA
00517	NA	NA	INLRHRTR07025	NA	NA	NA		NA	NA	NA	NA
00518	NA	NA	INLRHRTR07024	NA	NA	NA		NA	NA	NA	NA
00519	NA	NA	INLRHRTR07024	NA	NA	NA		NA	NA	NA	NA
00521	NA	NA	INLRHRTR07024	NA	NA	NA		NA	NA	NA	NA
00522	NA	NA	INLRHRTR07024	NA	NA	NA		NA	NA	NA	NA
00555	NA	NA	INLRHRTR07009	NA	NA	NA		NA	NA	NA	NA
00614	NA	NA	INLRHRTR07024	NA	NA	NA		NA	NA	NA	NA
00637	NA	NA	INLRHRTR07023	NA	NA	NA		NA	NA	NA	NA
00640	NA	NA	INLRHRTR07023	NA	NA	NA		NA	NA	NA	NA
00647	NA	NA	INLRHRTR07009	NA	NA	NA		NA	NA	NA	NA
00667	NA	NA	INLRHRTR07023	NA	NA	NA		NA	NA	NA	NA
00668	NA	NA	INLRHRTR07024	NA	NA	NA		NA	NA	NA	NA
00670	NA	NA	INLRHRTR07015	NA	NA	NA		NA	NA	NA	NA
00730	NA	NA	INLRHRTR07024	NA	NA	NA		NA	NA	NA	NA
00731	NA	NA	INLRHRTR07024	NA	NA	NA		NA	NA	NA	NA
00732	NA	NA	INLRHRTR07024	NA	NA	NA		NA	NA	NA	NA
00735	NA	NA	INLRHRTR07008	NA	NA	NA		NA	NA	NA	NA
001052	NA	NA	INLRHRTR07023	NA	NA	NA		NA	NA	NA	NA
001053	NA	NA	INLRHRTR07023	NA	NA	NA		NA	NA	NA	NA
001054	NA	NA	INLRHRTR07023	NA	NA	NA		NA	NA	NA	NA
001133	NA	NA	INLRHRTR07017	NA	NA	NA		NA	NA	NA	NA

* HSG lot 1 randomly selected for verifying the assignment of Hazardous Waste Numbers.

**HSG lot 2 randomly selected for verifying the assignment of Hazardous Waste Numbers

***55-gallon overpacked for container integrity.

SID

INFORMATION

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Sub-Lot # 11

Waste Stream: # ID-ANLE-S5000

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR	
								Sample	Analysis

Signature of Site Project Manager

Irene Quintana
Printed Name

7/26/07
Date

INFORMATION

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-ANLE-S5000 Sub-Lot # 12

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
00376	NA	NA	INLRHRTR07026	NA	NA	NA		NA	NA	NA	NA
00379	NA	NA	INLRHRTR07026	NA	NA	NA		NA	NA	NA	NA
00489	NA	NA	INLRHRTR07027	NA	NA	NA		NA	NA	NA	NA
00491	NA	NA	INLRHRTR07027	NA	NA	NA		NA	NA	NA	NA
00600	NA	NA	INLRHRTR07026	NA	NA	NA		NA	NA	NA	NA
00601	NA	NA	INLRHRTR07026	NA	NA	NA		NA	NA	NA	NA
00604	NA	NA	INLRHRTR07027	NA	NA	NA		NA	NA	NA	NA
00611	NA	NA	INLRHRTR07026	NA	NA	NA		NA	NA	NA	NA
00613	NA	NA	INLRHRTR07026	NA	NA	NA		NA	NA	NA	NA
00661	NA	NA	INLRHRTR07027	NA	NA	NA		NA	NA	NA	NA
00662	NA	NA	INLRHRTR07027	NA	NA	NA		NA	NA	NA	NA
00737	NA	NA	INLRHRTR07026	NA	NA	NA		NA	NA	NA	NA
001032	NA	NA	INLRHRTR07026	NA	NA	NA		NA	NA	NA	NA
001083	NA	NA	INLRHRTR07026	NA	NA	NA		NA	NA	NA	NA
001088	NA	NA	INLRHRTR07027	NA	NA	NA		NA	NA	NA	NA
001099	NA	NA	INLRHRTR07026	NA	NA	NA		NA	NA	NA	NA
001103	NA	NA	INLRHRTR07026	NA	NA	NA		NA	NA	NA	NA
001113	NA	NA	INLRHRTR07026	NA	NA	NA		NA	NA	NA	NA
001150	NA	NA	INLRHRTR07026	NA	NA	NA		NA	NA	NA	NA

* HSG lot 1 randomly selected for verifying the assignment of Hazardous Waste Numbers.

**HSG lot 2 randomly selected for verifying the assignment of Hazardous Waste Numbers

***55-gallon overpacked for container integrity.

Signature of Site Project Manager

Irene Quintana
Printed Name

8/27/02
Date

INFORMATION

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-ANLE-S5000

Sub-Lot # 13

Container ID Number	Historical Container ID	MDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
00308	NA	NA	INLRHRTR07030	NA	NA	NA		NA	NA	NA	NA
00450	NA	NA	INLRHRTR07030	NA	NA	NA		NA	NA	NA	NA
00485	NA	NA	INLRHRTR07029	NA	NA	NA		NA	NA	NA	NA
00486	NA	NA	INLRHRTR07029	NA	NA	NA		NA	NA	NA	NA
00513	NA	NA	INLRHRTR07029	NA	NA	NA		NA	NA	NA	NA
00550	NA	NA	INLRHRTR07030	NA	NA	NA		NA	NA	NA	NA
00838	NA	NA	INLRHRTR07030	NA	NA	NA		NA	NA	NA	NA
00855	NA	NA	INLRHRTR07030	NA	NA	NA		NA	NA	NA	NA
00856	NA	NA	INLRHRTR07030	NA	NA	NA		NA	NA	NA	NA
001040***	NA	NA	INLRHRTR07030	NA	NA	NA		NA	NA	NA	NA
001041	NA	NA	INLRHRTR07030	NA	NA	NA		NA	NA	NA	NA
001042	NA	NA	INLRHRTR07030	NA	NA	NA		NA	NA	NA	NA
001045	NA	NA	INLRHRTR07030	NA	NA	NA		NA	NA	NA	NA
001049	NA	NA	INLRHRTR07030	NA	NA	NA		NA	NA	NA	NA
001093	NA	NA	INLRHRTR07030	NA	NA	NA		NA	NA	NA	NA
001097	NA	NA	INLRHRTR07030	NA	NA	NA		NA	NA	NA	NA
001105	NA	NA	INLRHRTR07030	NA	NA	NA		NA	NA	NA	NA
001111	NA	NA	INLRHRTR07028	NA	NA	NA		NA	NA	NA	NA
001114	NA	NA	INLRHRTR07028	NA	NA	NA		NA	NA	NA	NA
001121	NA	NA	INLRHRTR07028	NA	NA	NA		NA	NA	NA	NA
001123	NA	NA	INLRHRTR07028	NA	NA	NA		NA	NA	NA	NA
001128	NA	NA	INLRHRTR07029	NA	NA	NA		NA	NA	NA	NA
001130	NA	NA	INLRHRTR07029	NA	NA	NA		NA	NA	NA	NA

* HSG lot 1 randomly selected for verifying the assignment of Hazardous Waste Numbers.
**HSG lot 2 randomly selected for verifying the assignment of Hazardous Waste Numbers
***55-gallon overpacked for container integrity.

Signature of Site Project Manager

Irene Quintana
Printed Name

9/25/07
Date

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-ANLE-S5000

Sub-Lot # 14

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
00323	NA	NA	INLRHRTR07031	NA	NA	NA		NA	NA	NA	NA
00336	NA	NA	INLRHRTR07031	NA	NA	NA		NA	NA	NA	NA
00486	NA	NA	INLRHRTR07031	NA	NA	NA		NA	NA	NA	NA
00548	NA	NA	INLRHRTR07032	NA	NA	NA		NA	NA	NA	NA
00549	NA	NA	INLRHRTR07032	NA	NA	NA		NA	NA	NA	NA
00595	NA	NA	INLRHRTR07031	NA	NA	NA		NA	NA	NA	NA
00596	NA	NA	INLRHRTR07032	NA	NA	NA		NA	NA	NA	NA
00597	NA	NA	INLRHRTR07032	NA	NA	NA		NA	NA	NA	NA
00599	NA	NA	INLRHRTR07032	NA	NA	NA		NA	NA	NA	NA
001043	NA	NA	INLRHRTR07031	NA	NA	NA		NA	NA	NA	NA
001044	NA	NA	INLRHRTR07030	NA	NA	NA		NA	NA	NA	NA
001048	NA	NA	INLRHRTR07030	NA	NA	NA		NA	NA	NA	NA
001061	NA	NA	INLRHRTR07032	NA	NA	NA		NA	NA	NA	NA
001076	NA	NA	INLRHRTR07032	NA	NA	NA		NA	NA	NA	NA
001086	NA	NA	INLRHRTR07032	NA	NA	NA		NA	NA	NA	NA
001087	NA	NA	INLRHRTR07032	NA	NA	NA		NA	NA	NA	NA
001118	NA	NA	INLRHRTR07032	NA	NA	NA		NA	NA	NA	NA
001124	NA	NA	INLRHRTR07032	NA	NA	NA		NA	NA	NA	NA

* HSG lot 1 randomly selected for verifying the assignment of Hazardous Waste Numbers

**HSG lot 2 randomly selected for verifying the assignment of Hazardous Waste Numbers

***55-gallon overpacked for container integrity

Signature of Site Project Manager

Irene Quintana
Printed Name

10/31/07
Date

INFORMATION ONLY

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-ANLE-S5000

Sub-Lot # 15

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
00458	NA	NA	INLRHRTR07003	NA	NA	NA		NA	NA	NA	NA
00539	NA	NA	INLRHRTR07012	NA	NA	NA		NA	NA	NA	NA
00557	NA	NA	INLRHRTR07031	NA	NA	NA		NA	NA	NA	NA
00558	NA	NA	INLRHRTR07018	NA	NA	NA		NA	NA	NA	NA
00563	NA	NA	INLRHRTR07030	NA	NA	NA		NA	NA	NA	NA
00602	NA	NA	INLRHRTR07028	NA	NA	NA		NA	NA	NA	NA
00615	NA	NA	INLRHRTR07006	NA	NA	NA		NA	NA	NA	NA
00644	NA	NA	INLRHRTR07031	NA	NA	NA		NA	NA	NA	NA
00645	NA	NA	INLRHRTR07009	NA	NA	NA		NA	NA	NA	NA
00646	NA	NA	INLRHRTR07009	NA	NA	NA		NA	NA	NA	NA
00648	NA	NA	INLRHRTR07031	NA	NA	NA		NA	NA	NA	NA
00651	NA	NA	INLRHRTR07009	NA	NA	NA		NA	NA	NA	NA
00653	NA	NA	INLRHRTR07031	NA	NA	NA		NA	NA	NA	NA
00659	NA	NA	INLRHRTR07027	NA	NA	NA		NA	NA	NA	NA
00660	NA	NA	INLRHRTR07027	NA	NA	NA		NA	NA	NA	NA
00670	NA	NA	INLRHRTR07015	NA	NA	NA		NA	NA	NA	NA
001031	NA	NA	INLRHRTR07029	NA	NA	NA		NA	NA	NA	NA
001033	NA	NA	INLRHRTR07028	NA	NA	NA		NA	NA	NA	NA
001046	NA	NA	INLRHRTR07030	NA	NA	NA		NA	NA	NA	NA
001047	NA	NA	INLRHRTR07031	NA	NA	NA		NA	NA	NA	NA
001058	NA	NA	INLRHRTR07019	NA	NA	NA		NA	NA	NA	NA
001059	NA	NA	INLRHRTR07017	NA	NA	NA		NA	NA	NA	NA
001105	NA	NA	INLRHRTR07029	NA	NA	NA		NA	NA	NA	NA
001107	NA	NA	INLRHRTR07028	NA	NA	NA		NA	NA	NA	NA
001112	NA	NA	INLRHRTR07028	NA	NA	NA		NA	NA	NA	NA
001118	NA	NA	INLRHRTR07016	NA	NA	NA		NA	NA	NA	NA
001125	NA	NA	INLRHRTR07028	NA	NA	NA		NA	NA	NA	NA
001126	NA	NA	INLRHRTR07028	NA	NA	NA		NA	NA	NA	NA
001127	NA	NA	INLRHRTR07029	NA	NA	NA		NA	NA	NA	NA
001129	NA	NA	INLRHRTR07029	NA	NA	NA		NA	NA	NA	NA
001147	NA	NA	INLRHRTR07026	NA	NA	NA		NA	NA	NA	NA

Containers in this lot have been punched with filter 407LS and overpacked into 55-gallon containers to reduce layer of confinment.

Signature of Site Project Manager

Printed Name

11/6/02
Date

INFORMATION

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-ANLE-S5000

Sub-Lot # 16

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Lead Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
00301	NA	NA	INLRHRTR07033	NA	NA	NA		NA	NA	NA	NA
00322*	NA	NA	INLRHRTR07033	NA	NA	NA		NA	NA	NA	NA
00360	NA	NA	INLRHRTR07033	NA	NA	NA		NA	NA	NA	NA
00369	NA	NA	INLRHRTR07033	NA	NA	NA		NA	NA	NA	NA
00452*	NA	NA	INLRHRTR07033	NA	NA	NA		NA	NA	NA	NA
00471	NA	NA	INLRHRTR07033	NA	NA	NA		NA	NA	NA	NA
00498	NA	NA	INLRHRTR07033	NA	NA	NA		NA	NA	NA	NA
001085	NA	NA	INLRHRTR07033	NA	NA	NA		NA	NA	NA	NA
001069	NA	NA	INLRHRTR07033	NA	NA	NA		NA	NA	NA	NA

*Containers have been punched with filter 407LS and overpacked into 55-gallon container to reduce layer of confirment.

Signature of Site Project Manager

Irene Quintana
Printed Name

Date

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-ANLE-S5000 Sub-Lot # 17

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
00109* **	NA	NA	INLRHRTR07035	NA	NA	NA		NA	NA	NA	NA
00302	NA	NA	INLRHRTR07035	NA	NA	NA		NA	NA	NA	NA
00304	NA	NA	INLRHRTR07035	NA	NA	NA		NA	NA	NA	NA
00311	NA	NA	INLRHRTR07034	NA	NA	NA		NA	NA	NA	NA
00313	NA	NA	INLRHRTR07034	NA	NA	NA		NA	NA	NA	NA
00315	NA	NA	INLRHRTR07034	NA	NA	NA		NA	NA	NA	NA
00321**	NA	NA	INLRHRTR07031	NA	NA	NA		NA	NA	NA	NA
00323**	NA	NA	INLRHRTR07034	NA	NA	NA		NA	NA	NA	NA
00325**	NA	NA	INLRHRTR07034	NA	NA	NA		NA	NA	NA	NA
00326	NA	NA	INLRHRTR07034	NA	NA	NA		NA	NA	NA	NA
00327**	NA	NA	INLRHRTR07034	NA	NA	NA		NA	NA	NA	NA
00443	NA	NA	INLRHRTR07034	NA	NA	NA		NA	NA	NA	NA
00446	NA	NA	INLRHRTR07034	NA	NA	NA		NA	NA	NA	NA
00492**	NA	NA	INLRHRTR07035	NA	NA	NA		NA	NA	NA	NA
00626	NA	NA	INLRHRTR07035	NA	NA	NA		NA	NA	NA	NA
00627	NA	NA	INLRHRTR07035	NA	NA	NA		NA	NA	NA	NA
00635	NA	NA	INLRHRTR07035	NA	NA	NA		NA	NA	NA	NA
001066	NA	NA	INLRHRTR07035	NA	NA	NA		NA	NA	NA	NA
001067	NA	NA	INLRHRTR07035	NA	NA	NA		NA	NA	NA	NA
001106**	NA	NA	INLRHRTR07035	NA	NA	NA		NA	NA	NA	NA
001110**	NA	NA	INLRHRTR07035	NA	NA	NA		NA	NA	NA	NA

*Container 00109 is also tracked as container number 001109. Please refer to DR015 for full discussion.

**Containers have been punched with filter 407LS and overpacked into 55-gallon container to reduce layer of confinment.

Signature of Site Project Manager

Irene Quintana
Printed Name

11/28/07
Date

INFORMATION ONLY

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-ANLE-S5000

Sub-Lot # 18

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
00401	NA	NA	INLRHRTR07036	NA	NA	NA		NA	NA	NA	NA
00404	NA	NA	INLRHRTR07036	NA	NA	NA		NA	NA	NA	NA
00406	NA	NA	INLRHRTR07036	NA	NA	NA		NA	NA	NA	NA
00444	NA	NA	INLRHRTR07034	NA	NA	NA		NA	NA	NA	NA
00562*	NA	NA	INLRHRTR07036	NA	NA	NA		NA	NA	NA	NA
00566*	NA	NA	INLRHRTR07036	NA	NA	NA		NA	NA	NA	NA
00608	NA	NA	INLRHRTR07037	NA	NA	NA		NA	NA	NA	NA
00609	NA	NA	INLRHRTR07037	NA	NA	NA		NA	NA	NA	NA
00610	NA	NA	INLRHRTR07037	NA	NA	NA		NA	NA	NA	NA
00612	NA	NA	INLRHRTR07037	NA	NA	NA		NA	NA	NA	NA
00677*	NA	NA	INLRHRTR07036	NA	NA	NA		NA	NA	NA	NA
00678*	NA	NA	INLRHRTR07036	NA	NA	NA		NA	NA	NA	NA
001034*	NA	NA	INLRHRTR07036	NA	NA	NA		NA	NA	NA	NA
001035*	NA	NA	INLRHRTR07036	NA	NA	NA		NA	NA	NA	NA
001036	NA	NA	INLRHRTR07036	NA	NA	NA		NA	NA	NA	NA
001090	NA	NA	INLRHRTR07036	NA	NA	NA		NA	NA	NA	NA
001091	NA	NA	INLRHRTR07036	NA	NA	NA		NA	NA	NA	NA
001092	NA	NA	INLRHRTR07036	NA	NA	NA		NA	NA	NA	NA
001148	NA	NA	INLRHRTR07036	NA	NA	NA		NA	NA	NA	NA

*Containers have been punched with filter 407LS and overpacked into 55-gallon container to reduce layer of confinment.

Signature of Site Project Manager

Irene Quintana
Printed Name

12/5/07
Date

INFORMATION ONLY

Page 1 of 1

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-ANLE-S5000 Sub-Lot # 19

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
00333	NA	NA	INLRHRTR07038	NA	NA	NA		NA	NA	NA	NA
00335	NA	NA	INLRHRTR07039	NA	NA	NA		NA	NA	NA	NA
00342	NA	NA	INLRHRTR07038	NA	NA	NA		NA	NA	NA	NA
00436	NA	NA	INLRHRTR07039	NA	NA	NA		NA	NA	NA	NA
00441	NA	NA	INLRHRTR07038	NA	NA	NA		NA	NA	NA	NA
00455*	NA	NA	INLRHRTR07039	NA	NA	NA		NA	NA	NA	NA
00456	NA	NA	INLRHRTR07039	NA	NA	NA		NA	NA	NA	NA
00457*	NA	NA	INLRHRTR07038	NA	NA	NA		NA	NA	NA	NA
00458*	NA	NA	INLRHRTR07039	NA	NA	NA		NA	NA	NA	NA
00460	NA	NA	INLRHRTR07038	NA	NA	NA		NA	NA	NA	NA
00469	NA	NA	INLRHRTR07039	NA	NA	NA		NA	NA	NA	NA
00470**	NA	NA	INLRHRTR07039	NA	NA	NA		NA	NA	NA	NA
00553	NA	NA	INLRHRTR07038	NA	NA	NA		NA	NA	NA	NA
00559*	NA	NA	INLRHRTR07038	NA	NA	NA		NA	NA	NA	NA
00568	NA	NA	INLRHRTR07039	NA	NA	NA		NA	NA	NA	NA
00570	NA	NA	INLRHRTR07039	NA	NA	NA		NA	NA	NA	NA
00573	NA	NA	INLRHRTR07039	NA	NA	NA		NA	NA	NA	NA
001039	NA	NA	INLRHRTR07039	NA	NA	NA		NA	NA	NA	NA
001075*	NA	NA	INLRHRTR07038	NA	NA	NA		NA	NA	NA	NA
001077*	NA	NA	INLRHRTR07038	NA	NA	NA		NA	NA	NA	NA
001078*	NA	NA	INLRHRTR07038	NA	NA	NA		NA	NA	NA	NA
001134*	NA	NA	INLRHRTR07038	NA	NA	NA		NA	NA	NA	NA
001135*	NA	NA	INLRHRTR07038	NA	NA	NA		NA	NA	NA	NA
001136*	NA	NA	INLRHRTR07038	NA	NA	NA		NA	NA	NA	NA
001144	NA	NA	INLRHRTR07038	NA	NA	NA		NA	NA	NA	NA

*Containers have been punched with filter 407LS and overpacked into 55-gallon container to reduce layer of confinment.

**55-gallon overpacked for container integrity.

Signature of Site Project Manager

Irene Quintana
Printed Name

1/4/08
Date

INFORMATION

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-ANLE-S5000

Sub-Lot # 20

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Lead Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
00371	NA	NA	INLRHRTR08001	NA	NA	NA		NA	NA	NA	NA
00373	NA	NA	INLRHRTR08001	NA	NA	NA		NA	NA	NA	NA
00411	NA	NA	INLRHRTR08002	NA	NA	NA		NA	NA	NA	NA
00433	NA	NA	INLRHRTR08002	NA	NA	NA		NA	NA	NA	NA
00436	NA	NA	INLRHRTR08002	NA	NA	NA		NA	NA	NA	NA
00449	NA	NA	INLRHRTR08002	NA	NA	NA		NA	NA	NA	NA

Signature of Site Project Manager

Irene Quintana
Printed Name

Date

INFORMATION ONLY

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-ANLE-S5000 Sub-Lot # 21

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
00343	NA	NA	INLRHRTR08004	NA	NA	NA		NA	NA	NA	NA
00344	NA	NA	INLRHRTR08004	NA	NA	NA		NA	NA	NA	NA
00482	NA	NA	INLRHRTR08004	NA	NA	NA		NA	NA	NA	NA
00516	NA	NA	INLRHRTR08004	NA	NA	NA		NA	NA	NA	NA
00532	NA	NA	INLRHRTR08005	NA	NA	NA		NA	NA	NA	NA
00533	NA	NA	INLRHRTR08005	NA	NA	NA		NA	NA	NA	NA
00534	NA	NA	INLRHRTR08005	NA	NA	NA		NA	NA	NA	NA

Signature of Site Project Manager

Irene Quintana
Printed Name

3/19/08
Date

INFORMATION

215863

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-ANLE-S5000

Sub-Lot # 22

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
00345	NA	NA	INLRHRTR08003	NA	NA	NA		NA	NA	NA	NA
00348*	NA	NA	INLRHRTR08003	NA	NA	NA		INHSGS080002	ECL08003M	ECL08003G	NA
00350	NA	NA	INLRHRTR08006	NA	NA	NA		NA	NA	NA	NA
00391	NA	NA	INLRHRTR08005	NA	NA	NA		NA	NA	NA	NA
00410	NA	NA	INLRHDTC08002	NA	NA	NA		NA	NA	NA	NA
00428	NA	NA	INLRHRTR08005	NA	NA	NA		NA	NA	NA	NA
00434	NA	NA	INLRHRTR08005	NA	NA	NA		NA	NA	NA	NA
00436	NA	NA	INLRHRTR08005	NA	NA	NA		NA	NA	NA	NA
00453**	NA	NA	INLRHRTR07039	NA	NA	NA		NA	NA	NA	NA
00476	NA	NA	INLRHRTR08006	NA	NA	NA		NA	NA	NA	NA
00479	NA	NA	INLRHRTR08006	NA	NA	NA		NA	NA	NA	NA
00481	NA	NA	INLRHRTR08006	NA	NA	NA		NA	NA	NA	NA
00483	NA	NA	INLRHRTR08006	NA	NA	NA		NA	NA	NA	NA
00487	NA	NA	INLRHRTR08004	NA	NA	NA		NA	NA	NA	NA
00497*	NA	NA	INLRHRTR08003	NA	NA	NA		INHSGS080002	ECL08003M	ECL08003G	NA
00501**	NA	NA	INLRHRTR08006	NA	NA	NA		NA	NA	NA	NA
00502**	NA	NA	INLRHRTR08006	NA	NA	NA		NA	NA	NA	NA
00503	NA	NA	INLRHRTR08006	NA	NA	NA		NA	NA	NA	NA
00507*	NA	NA	INLRHRTR08003	NA	NA	NA		INHSGS080002	ECL08003M	ECL08003G	NA
00512	NA	NA	INLRHRTR08006	NA	NA	NA		NA	NA	NA	NA
00524*	NA	NA	INLRHRTR08003	NA	NA	NA		INHSGS080002	ECL08003M	ECL08003G	NA
00526*	NA	NA	INLRHRTR08003	NA	NA	NA		INHSGS080002	ECL08003M	ECL08003G	NA
00527	NA	NA	INLRHRTR08006	NA	NA	NA		NA	NA	NA	NA
00528*	NA	NA	INLRHRTR08001	NA	NA	NA		INHSGS080002	ECL08003M	ECL08003G	NA
00546**	NA	NA	INLRHRTR08006	NA	NA	NA		NA	NA	NA	NA
00549**	NA	NA	INLRHRTR07032	NA	NA	NA		NA	NA	NA	NA
00561	NA	NA	INLRHRTR08006	NA	NA	NA		NA	NA	NA	NA
00565***	NA	NA	INLRHRTR08006	NA	NA	NA		NA	NA	NA	NA
00576*	NA	NA	INLRHRTR08003	NA	NA	NA		INHSGS080002	ECL08003M	ECL08003G	NA
00585*	NA	NA	INLRHRTR08003	NA	NA	NA		INHSGS080002	ECL08003M	ECL08003G	NA
00588	NA	NA	INLRHRTR08003	NA	NA	NA		NA	NA	NA	NA
00589*	NA	NA	INLRHRTR08003	NA	NA	NA		INHSGS080002	ECL08003M	ECL08003G	NA
00594*	NA	NA	INLRHRTR08003	NA	NA	NA		INHSGS080002	ECL08003M	ECL08003G	NA
00603**	NA	NA	INLRHRTR07037	NA	NA	NA		NA	NA	NA	NA
00607**	NA	NA	INLRHRTR07027	NA	NA	NA		NA	NA	NA	NA
00612**	NA	NA	INLRHRTR07037	NA	NA	NA		NA	NA	NA	NA

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-ANLE-S5000

Sub-Lot # 22

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Lead Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
00665**	NA	NA	INLRHRTR07036	NA	NA	NA		NA	NA	NA	NA
001149**	NA	NA	INLRHRTR07037	NA	NA	NA		NA	NA	NA	NA

* HSG lot 3 randomly selected for verifying the assignment of Hazardous Waste Numbers.

** Container has been side punched and overpacked in 55-gallon container.

***Container has been top punched and overpacked in 55-gallon container.

Signature of Site Project Manager

Irene Quintana
Printed Name

5/13/08
Date

INFORMATION ONLY

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-ANLE-S5000

Sub-Lot # 23

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
00303*	NA	NA	INLRHRTR07029	NA	NA	NA		NA	NA	NA	NA
00306*	NA	NA	INLRHRTR07021	NA	NA	NA		NA	NA	NA	NA
00307*	NA	NA	INLRHRTR07029	NA	NA	NA		NA	NA	NA	NA
00312*	NA	NA	INLRHRTR07033	NA	NA	NA		NA	NA	NA	NA
00314*	NA	NA	INLRHDTC07034	NA	NA	NA		NA	NA	NA	NA
00316*	NA	NA	INLRHRTR07021	NA	NA	NA		NA	NA	NA	NA
00318*	NA	NA	INLRHRTR07025	NA	NA	NA		NA	NA	NA	NA
00329*	NA	NA	INLRHRTR07031	NA	NA	NA		NA	NA	NA	NA
00332*	NA	NA	INLRHRTR08001	NA	NA	NA		NA	NA	NA	NA
00337*	NA	NA	INLRHRTR08001	NA	NA	NA		NA	NA	NA	NA
00340*	NA	NA	INLRHRTR08001	NA	NA	NA		NA	NA	NA	NA
00346*	NA	NA	INLRHRTR08001	NA	NA	NA		NA	NA	NA	NA
00341*	NA	NA	INLRHRTR08004	NA	NA	NA		NA	NA	NA	NA
00347*	NA	NA	INLRHRTR08004	NA	NA	NA		NA	NA	NA	NA
00349*	NA	NA	INLRHRTR08004	NA	NA	NA		NA	NA	NA	NA
00354*	NA	NA	INLRHRTR08001	NA	NA	NA		NA	NA	NA	NA
00355*	NA	NA	INLRHRTR08001	NA	NA	NA		NA	NA	NA	NA
00356*	NA	NA	INLRHRTR08004	NA	NA	NA		NA	NA	NA	NA
00364*	NA	NA	INLRHRTR08005	NA	NA	NA		NA	NA	NA	NA
00367*	NA	NA	INLRHRTR08001	NA	NA	NA		NA	NA	NA	NA
00368*	NA	NA	INLRHRTR07033	NA	NA	NA		NA	NA	NA	NA
00403*	NA	NA	INLRHRTR07019	NA	NA	NA		NA	NA	NA	NA
00405*	NA	NA	INLRHRTR07022	NA	NA	NA		NA	NA	NA	NA
00407*	NA	NA	INLRHRTR07036	NA	NA	NA		NA	NA	NA	NA
00408*	NA	NA	INLRHRTR07022	NA	NA	NA		NA	NA	NA	NA
00409*	NA	NA	INLRHRTR07019	NA	NA	NA		NA	NA	NA	NA
00413*	NA	NA	INLRHRTR08005	NA	NA	NA		NA	NA	NA	NA
00414*	NA	NA	INLRHRTR07022	NA	NA	NA		NA	NA	NA	NA
00415*	NA	NA	INLRHRTR08001	NA	NA	NA		NA	NA	NA	NA
00416*	NA	NA	INLRHRTR08002	NA	NA	NA		NA	NA	NA	NA
00417*	NA	NA	INLRHRTR07022	NA	NA	NA		NA	NA	NA	NA
00418*	NA	NA	INLRHRTR08002	NA	NA	NA		NA	NA	NA	NA
00419*	NA	NA	INLRHRTR08005	NA	NA	NA		NA	NA	NA	NA
00421*	NA	NA	INLRHRTR08005	NA	NA	NA		NA	NA	NA	NA
00423*	NA	NA	INLRHRTR08005	NA	NA	NA		NA	NA	NA	NA
00424*	NA	NA	INLRHRTR08005	NA	NA	NA		NA	NA	NA	NA
00425*	NA	NA	INLRHRTR07022	NA	NA	NA		NA	NA	NA	NA
00426*	NA	NA	INLRHRTR07019	NA	NA	NA		NA	NA	NA	NA

UNLY

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-ANLE-S5000

Sub-Lot # 23

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
00427*	NA	NA	INLRHRTR07022	NA	NA	NA		NA	NA	NA	NA
00429*	NA	NA	INLRHRTR08005	NA	NA	NA		NA	NA	NA	NA
00430*	NA	NA	INLRHRTR08001	NA	NA	NA		NA	NA	NA	NA
00431*	NA	NA	INLRHRTR07023	NA	NA	NA		NA	NA	NA	NA
00432*	NA	NA	INLRHRTR07023	NA	NA	NA		NA	NA	NA	NA
00437*	NA	NA	INLRHRTR07030	NA	NA	NA		NA	NA	NA	NA
00439*	NA	NA	INLRHRTR07035	NA	NA	NA		NA	NA	NA	NA
00440*	NA	NA	INLRHRTR08005	NA	NA	NA		NA	NA	NA	NA
00442	NA	NA	INLRHRTR07038	NA	NA	NA		NA	NA	NA	NA
00445*	NA	NA	INLRHRTR07023	NA	NA	NA		NA	NA	NA	NA
00448*	NA	NA	INLRHRTR08002	NA	NA	NA		NA	NA	NA	NA
00451*	NA	NA	INLRHRTR07026	NA	NA	NA		NA	NA	NA	NA
00454*	NA	NA	INLRHRTR07026	NA	NA	NA		NA	NA	NA	NA
00474*	NA	NA	INLRHRTR07023	NA	NA	NA		NA	NA	NA	NA
00475*	NA	NA	INLRHRTR08004	NA	NA	NA		NA	NA	NA	NA
00477*	NA	NA	INLRHRTR08006	NA	NA	NA		NA	NA	NA	NA
00493*	NA	NA	INLRHRTR07035	NA	NA	NA		NA	NA	NA	NA
00495*	NA	NA	INLRHRTR07026	NA	NA	NA		NA	NA	NA	NA
00505*	NA	NA	INLRHRTR08006	NA	NA	NA		NA	NA	NA	NA
00590	NA	NA	INLRHRTR08003	NA	NA	NA		NA	NA	NA	NA

* Container has been side punched and overpacked in 55-gallon container.

Signature of Site Project Manager

Irene Quintana
Printed Name

4/14/08
Date

INFORMATION ONLY

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-ANLE-S5000 Sub-Lot # 24

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
00420*	NA	NA	INLRHRTR08001	NA	NA	NA		NA	NA	NA	NA
00478**	NA	NA	INLRHRTR08009	NA	NA	NA		NA	NA	NA	NA
00496**	NA	NA	INLRHRTR08009	NA	NA	NA		NA	NA	NA	NA
00526	NA	NA	INLRHRTR08008	NA	NA	NA		NA	NA	NA	NA
00529	NA	NA	INLRHRTR08007	NA	NA	NA		NA	NA	NA	NA
00530	NA	NA	INLRHRTR08007	NA	NA	NA		NA	NA	NA	NA
00531	NA	NA	INLRHRTR08007	NA	NA	NA		NA	NA	NA	NA
00544**	NA	NA	INLRHRTR08009	NA	NA	NA		NA	NA	NA	NA
00545**	NA	NA	INLRHRTR08009	NA	NA	NA		NA	NA	NA	NA
00554	NA	NA	INLRHRTR08007	NA	NA	NA		NA	NA	NA	NA
00572	NA	NA	INLRHRTR08007	NA	NA	NA		NA	NA	NA	NA
00574	NA	NA	INLRHRTR08007	NA	NA	NA		NA	NA	NA	NA
00575	NA	NA	INLRHRTR08008	NA	NA	NA		NA	NA	NA	NA
00577	NA	NA	INLRHRTR08007	NA	NA	NA		NA	NA	NA	NA
00578	NA	NA	INLRHRTR08007	NA	NA	NA		NA	NA	NA	NA
00579	NA	NA	INLRHRTR08007	NA	NA	NA		NA	NA	NA	NA
00580	NA	NA	INLRHRTR08007	NA	NA	NA		NA	NA	NA	NA
00582	NA	NA	INLRHRTR08008	NA	NA	NA		NA	NA	NA	NA
00583	NA	NA	INLRHRTR08008	NA	NA	NA		NA	NA	NA	NA
00584	NA	NA	INLRHRTR08008	NA	NA	NA		NA	NA	NA	NA
00586	NA	NA	INLRHRTR08007	NA	NA	NA		NA	NA	NA	NA
00587	NA	NA	INLRHRTR08007	NA	NA	NA		NA	NA	NA	NA
00591	NA	NA	INLRHRTR08008	NA	NA	NA		NA	NA	NA	NA
00592	NA	NA	INLRHRTR08008	NA	NA	NA		NA	NA	NA	NA
00593	NA	NA	INLRHRTR08008	NA	NA	NA		NA	NA	NA	NA
00632	NA	NA	INLRHRTR08009	NA	NA	NA		NA	NA	NA	NA
00687*	NA	NA	INLRHRTR08007	NA	NA	NA		NA	NA	NA	NA
00712*	NA	NA	INLRHRTR08007	NA	NA	NA		NA	NA	NA	NA

* Container has been side punched and overpacked in 55-gallon container.

**Container has been top punched and overpacked in 55-gallon container.

Signature of Site Project Manager

Irene Quintana
Printed Name

4/21/08
Date

INFORMATION

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-ANLE-S5000 Sub-Lot # 25

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
001082	NA	NA	INLRHRTR07033	NA	NA	NA		NA	NA	NA	NA
001079	NA	NA	INLRHRTR07035	NA	NA	NA		NA	NA	NA	NA
00387	NA	NA	INLRHRTR07020	NA	NA	NA		NA	NA	NA	NA
00390	NA	NA	INLRHRTR07026	NA	NA	NA		NA	NA	NA	NA
00486	NA	NA	INLRHRTR07021	NA	NA	NA		NA	NA	NA	NA
00484	NA	NA	INLRHRTR07033	NA	NA	NA		NA	NA	NA	NA
00520	NA	NA	INLRHRTR07025	NA	NA	NA		NA	NA	NA	NA
00523	NA	NA	INLRHRTR07029	NA	NA	NA		NA	NA	NA	NA
00571	NA	NA	INLRHRTR07020	NA	NA	NA		NA	NA	NA	NA
00763	NA	NA	NA	RHINLVE080001_R1	NA	NA		NA	NA	NA	NA

* Container has been side punched and overpacked in 55-gallon container.
**Container has been top punched and overpacked in 55-gallon container.

Rebecca Walker
Signature of Site Project Manager

Rebecca Walker
Printed Name

9-12-08
Date

INFORMA

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-ANLE-S5000 Sub-Lot # 26

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
001071	NA	NA	INLRHRTR07019	NA	NA	NA		NA	NA	NA	NA
001074	NA	NA	INLRHRTR07032	NA	NA	NA		NA	NA	NA	NA
001080	NA	NA	INLRHRTR07018	NA	NA	NA		NA	NA	NA	NA
001081	NA	NA	INLRHRTR07032	NA	NA	NA		NA	NA	NA	NA
001142	NA	NA	INLRHRTR07018	NA	NA	NA		NA	NA	NA	NA
00324	NA	NA	INLRHRTR07033	NA	NA	NA		NA	NA	NA	NA
00328	NA	NA	INLRHRTR07024	NA	NA	NA		NA	NA	NA	NA
00330	NA	NA	INLRHRTR07031	NA	NA	NA		NA	NA	NA	NA
00334	NA	NA	INLRHRTR07039	NA	NA	NA		NA	NA	NA	NA
00351	NA	NA	INLRHRTR08008	NA	NA	NA		NA	NA	NA	NA
00353	NA	NA	INLRHRTR08009	NA	NA	NA		NA	NA	NA	NA
00358	NA	NA	INLRHRTR07024	NA	NA	NA		NA	NA	NA	NA
00363	NA	NA	INLRHRTR08001	NA	NA	NA		NA	NA	NA	NA
00370	NA	NA	INLRHRTR07033	NA	NA	NA		NA	NA	NA	NA
00504	NA	NA	INLRHRTR08006	NA	NA	NA		NA	NA	NA	NA
00510	NA	NA	INLRHRTR08008	NA	NA	NA		NA	NA	NA	NA
00511	NA	NA	INLRHRTR08004	NA	NA	NA		NA	NA	NA	NA
00536	NA	NA	INLRHRTR07009	NA	NA	NA		NA	NA	NA	NA
00540	NA	NA	INLRHRTR07011	NA	NA	NA		NA	NA	NA	NA

* Container has been side punched and overpacked in 55-gallon container.
**Container has been top punched and overpacked in 55-gallon container.

Rebecca J. Walker
Signature of Site Project Manager

Rebecca Walker
Printed Name

9/22/2008
Date

INFORM

3

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-ANLE-S5000

Sub-Lot # 27

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
IDAE000000412 (00412)*	NA	NA	INLRHRTR08010	NA	NA	NA		NA	NA	NA	NA
IDAE000000422 (00422)*	NA	NA	INLRHRTR08010	NA	NA	NA		NA	NA	NA	NA
IDAE000000468 (00468)*	NA	NA	INLRHRTR08010	NA	NA	NA		NA	NA	NA	NA
IDAE000000508 (00508)*	NA	NA	INLRHRTR08010	NA	NA	NA		NA	NA	NA	NA
IDAE000000509 (00509)*	NA	NA	INLRHRTR08010	NA	NA	NA		NA	NA	NA	NA
IDAE000000558 (00558)*	NA	NA	INLRHRTR08010	NA	NA	NA		NA	NA	NA	NA
IDAERH0000806 (00806)*	NA	NA	INLRHRTR08010	NA	NA	NA		NA	NA	NA	NA
IDAE000000829 (00829)*	NA	NA	INLRHRTR08010	NA	NA	NA		NA	NA	NA	NA
IDAE000000843 (00843)*	NA	NA	INLRHRTR08010	NA	NA	NA		NA	NA	NA	NA
IDAE000000867 (00867)*	NA	NA	INLRHRTR08010	NA	NA	NA		NA	NA	NA	NA
IDAE000000868 (00868)*	NA	NA	INLRHRTR08010	NA	NA	NA		NA	NA	NA	NA
IDAE000000733 (00733)*	NA	NA	INLRHRTR08010	NA	NA	NA		NA	NA	NA	NA
IDAE000000736 (00736)*	NA	NA	INLRHRTR08010	NA	NA	NA		NA	NA	NA	NA
IDAE000001030 (001030)*	NA	NA	INLRHRTR08011	NA	NA	NA		NA	NA	NA	NA
IDAE000001089 (001089)*	NA	NA	INLRHRTR08011	NA	NA	NA		NA	NA	NA	NA
IDAE000001138 (001138)*	NA	NA	INLRHRTR08010	NA	NA	NA		NA	NA	NA	NA
IDAE000000339 (00339)**	NA	NA	INLRHRTR07039	NA	NA	NA		NA	NA	NA	NA
001084	NA	NA	INLRHRTR07032	NA	NA	NA		NA	NA	NA	NA

* Container has been remediated and overpacked in 55-gallon container

**Container has been side punched and overpacked in 55-gallon container

Signature of Site Project Manager

Irene Quintana
Printed Name

1/16/2009
Date

INFORMATION ONLY

AIS 003

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-ANLE-S5000

Sub-Lot # 28

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
IDAE000000463 (00463)*	NA	NA	INLRHRTR09001	NA	NA	NA		NA	NA	NA	NA
IDAE000000622 (00622)*	NA	NA	INLRHRTR09001	NA	NA	NA		NA	NA	NA	NA
IDAE000000623 (00623)*	NA	NA	INLRHRTR09001	NA	NA	NA		NA	NA	NA	NA
IDAE000000683 (00683)*	NA	NA	INLRHRTR09001	NA	NA	NA		NA	NA	NA	NA
IDAE000001063 (001063)*	NA	NA	INLRHRTR09001	NA	NA	NA		NA	NA	NA	NA

* Container has been remediated and overpacked in 55-gallon container.

**Container has been side punched and overpacked in 55-gallon container

Signature of Site Project Manager

Craig Simmons

Printed Name

2/5/2009

Date

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-ANLE-S5000

Lot # 29

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
IDAE000000393	NA	NA	NA	RHINLVE090002	NA	NA		INHSGS090011	ECL09029M	ECL09029G	NA
IDAE000000394	NA	NA	NA	RHINLVE090002	NA	NA		INHSGS090011	ECL09029M	ECL09029G	NA
IDAE000000395	NA	NA	NA	RHINLVE090002	NA	NA		INHSGS090011	ECL09029M	ECL09029G	NA
IDAE000000396	NA	NA	NA	RHINLVE090002	NA	NA		INHSGS090011	ECL09029M	ECL09029G	NA
IDAE000000397	NA	NA	NA	RHINLVE090002	NA	NA		INHSGS090011	ECL09029M	ECL09029G	NA
IDAE000000398	NA	NA	NA	RHINLVE090002	NA	NA		INHSGS090011	ECL09029M	ECL09029G	NA
IDAE000000399	NA	NA	NA	RHINLVE090002	NA	NA		INHSGS090011	ECL09029M	ECL09029G	NA
IDAE000000400	NA	NA	NA	RHINLVE090002	NA	NA		INHSGS090011	ECL09029M	ECL09029G	NA
IDAERH0001002	NA	NA	INLRHRTR09007	NA	NA	NA		INHSGS090011	ECL09029M	ECL09029G	NA
IDAERH0001003	NA	NA	NA	RHINLVE090002	NA	NA		NA	NA	NA	NA
IDAERH0001004	NA	NA	INLRHRTR09007	NA	NA	NA		INHSGS090011	ECL09029M	ECL09029G	NA
								INHSGS090011	ECL09029M	ECL09029G	NA

Signature of Site Project Manager

Irene S. Quintana
Printed Name

2/8/2010
Date

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-ANLE-S5000 Lot # 30

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
IDAERH0001005	NA	NA	INLRHRTR1001	NA	NA	NA		NA	NA	NA	NA

Signature of Site Project Manager

Irene S. Quintana
Printed Name

3/23/2010
Date

Attachment 10 - Acceptable Knowledge Re-evaluation Checklist

Site(s): Idaho National Laboratory (INL)
Waste Stream Number(s): ID-ANLE-S5000
Waste Stream Description: Heterogeneous RH Debris from ANL-E AGHCF Operations
NCR numbers(s) if applicable: NCR-RHINL-0100-07 (Rev. 1) and NCR-RHINL-0101-07 (Rev. 1)
Inconsistency between waste characterization and acceptable knowledge information (describe): Contents of the container did not match the Waste Stream Description. Residual liquids identified in internal bottles.

Based on the AK collected for debris waste generated at the ANL-E AGHCF facility, residual liquids were not expected to be present in containers included in waste stream ID-ANLE-S5000. During RTR examination, prohibited amounts of residual liquids were observed in small waste bottles in two drums (00683 and 00823). Because the container contents observed by RTR did not match the Waste Stream Description for waste stream ID-ANLE-S5000, two NCRs (NCR-RHINL-0100-07 and NCR-RHINL-0101-07) were initiated for these drums in accordance with CCP-TP-053, Section 4.4.3.1.1 [CCP Standard Real-Time Radiography (RTR) Inspection Procedure], and the AKE (Kevin Peters) was notified of the discrepancy. DR011 dlp 5/3/07

As discussed in ~~DR008~~, the AK Summary Report for this waste stream states:

"Residual liquids are not expected to be present in any waste container in waste stream ID-ANLE-S5000, due to the AGHCF standard practice of evaporating and/or absorbing all liquids as described in Section 5.4.2.3. The absence of liquids is further supported by the fact that safety limits in the AGHCF allowed only 3 liters total of hydrogenous liquids in AGHCF Areas I or III and the INL WAC have prohibited liquids in excess of 1% since 1975. Additionally, none of the waste requisition forms (or other information provided by generators at the time of waste packaging) identifies liquids in any quantity."

To resolve this discrepancy, the specific container documentation was reviewed for these containers. During the time frame that these containers were generated, the Solid Radioactive Waste Disposal Requisitions and Transuranic Packaging and Survey forms completed by the generator identify if the waste is a combustible or noncombustible drum with generic waste descriptions. Containers 00823 and 00683 are both combustible containers described generically as "rags, paper, plastics". The generator marked the "No" box for "Liquids or Absorbed Liquids" on the requisition for both drums.

Based on this information, it has been determined that the ANL-E waste management practices during this time frame would have prohibited liquids greater than 1% in the drum, but the waste management practices did not account for small amounts of free liquids in bottles (greater than 1 inch or 2.5 cm) in internal containers. Even though the amount of liquid does not exceed 1 percent in the payload container, prohibited amounts of residual liquids exceeding 1 inch or 2.5 cm in internal containers should be expected during future RTR examination of containers in waste stream ID-ANLE-S5000.

For this reason, a teleconference with the SPM and involved RTR personnel was conducted on 5/2/2007 to verify that prohibited amounts of residual liquids should be expected, and those drums rejected during RTR. The AK Summary Reports relating to AGHCF debris waste (CCP-AK-INL-500 and CCP-AK-ANLE-500) will be revised to clarify that residual liquids have been observed and are expected in internal containers in waste streams ID-ANLE-S500 and AERHDM, and that these containers will be rejected and are not eligible for disposal at WIPP.

ORIGINAL

Attachment 10 - Acceptable Knowledge Re-evaluation Checklist (cont.)

Requirements	Completed? Yes/No	Supporting Documentation [a]
Review existing information based on the container identification number and document all differences in EPA hazardous waste number assignments. [c]	YES	Waste Requisitions for Container Nos. 00683 and 00823 and Discrepancy Report DR017.
If differences exist in the EPA hazardous waste numbers that were assigned, reassess and document all required AK information associated with the new designation. [b,c]	N/A	No change in EPA HWNs required.
Reassess and document all sampling and analytical data associated with the waste. [c]	N/A	No change in EPA HWNs required.
Verify and document that the reassigned Waste Matrix Code was generated within the specified time period, area and buildings, waste generating process, and that the process material inputs are consistent with the waste material parameters identified during RTR or VE.	YES	Waste Matrix Code assigned and waste material parameters described in the AK Summary Report are appropriate for these containers.
If NDA results indicate the presence of additional or different radionuclides in the waste, reassess and document AK and confirmation information associated with the new information. [c]	N/A	Not an NDA-related discrepancy
Record all changes to the AK records on the appropriate Attachments and resubmit to the CCP Facility Records Custodian.	YES	~~DR0017~~ DR017 KP 5/7/07
If unresolved discrepancies exist in the AK information for the reassigned Waste Matrix Code, EPA hazardous waste numbers, or radionuclides, document the segregation of this container, and define the actions necessary to fully characterize the waste.	N/A	Discrepancy resolved. Containers with prohibited amounts of residual liquids in inner containers will be rejected during RTR.

a. Cite the source document, nonconformance report number, attachment, or other documentation used to support a change or no change.
b. Ensure that if a toxicity characteristic contaminant is identified, it is not included as a listed waste, and analytical data regarding the concentration are not available, the corresponding EPA Hazardous Waste Number is applied.
c. Not applicable for LANL sealed source waste stream.

Acceptable Knowledge Expert:

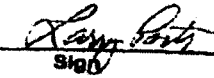
Kevin J. Peters
Print

Sign

Date: 5/4/2007

Site Project Manager:

Larry Porter
Print


Sign

Date: 5/7/07

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-ANLE-S5000 Lot # 31

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
ANLE32F	NA	NA	INLRHRTR12002	N/A	N/A	N/A		NA	NA	NA	
ANLE32D-1	NA	NA	INLRHRTR12002	N/A	N/A	N/A		NA	NA	NA	
ANLE33E-1	NA	NA	INLRHRTR12002	N/A	N/A	N/A		NA	NA	NA	
ANLE29E	NA	NA	INLRHRTR12002	N/A	N/A	N/A		NA	NA	NA	
ANLE29D	NA	NA	INLRHRTR12002	N/A	N/A	N/A		NA	NA	NA	
ANLE33F	NA	NA	INLRHRTR12002	N/A	N/A	N/A		NA	NA	NA	
ANLE33D	NA	NA	INLRHRTR12002	N/A	N/A	N/A		NA	NA	NA	
ANLE29F	NA	NA	INLRHRTR12002	N/A	N/A	N/A		NA	NA	NA	
ANLE29B	NA	NA	INLRHRTR12002	N/A	N/A	N/A		NA	NA	NA	
ANLE29A	NA	NA	INLRHRTR12002	N/A	N/A	N/A		NA	NA	NA	
ANLE29C	NA	NA	INLRHRTR12002	N/A	N/A	N/A		NA	NA	NA	
ANLE33G	NA	NA	INLRHRTR12002	N/A	N/A	N/A		NA	NA	NA	
ANLE33B	NA	NA	INLRHRTR12002	N/A	N/A	N/A		NA	NA	NA	
ANLE33A	NA	NA	INLRHRTR12002	N/A	N/A	N/A		NA	NA	NA	
ANLE33C	NA	NA	INLRHRTR12002	N/A	N/A	N/A		NA	NA	NA	
ANLE30C	NA	NA	INLRHRTR12002	N/A	N/A	N/A		NA	NA	NA	
ANLE30E	NA	NA	INLRHRTR12002	N/A	N/A	N/A		NA	NA	NA	
ANLE33I	NA	NA	INLRHRTR12002	N/A	N/A	N/A		NA	NA	NA	
ANLE33H	NA	NA	INLRHRTR12002	N/A	N/A	N/A		NA	NA	NA	
ANLE32H	NA	NA	INLRHRTR12003	N/A	N/A	N/A		NA	NA	NA	
ANLE32B	NA	NA	INLRHRTR12003	N/A	N/A	N/A		NA	NA	NA	
ANLE32A	NA	NA	INLRHRTR12003	N/A	N/A	N/A		NA	NA	NA	
ANLE32C	NA	NA	INLRHRTR12003	N/A	N/A	N/A		NA	NA	NA	
ANLE32G	NA	NA	INLRHRTR12003	N/A	N/A	N/A		NA	NA	NA	
ANLE15H	NA	NA	INLRHRTR12005	N/A	N/A	N/A		NA	NA	NA	
ANLE15B	NA	NA	INLRHRTR12005	N/A	N/A	N/A		NA	NA	NA	
ANLE15A	NA	NA	INLRHRTR12005	N/A	N/A	N/A		NA	NA	NA	
ANLE30G	NA	NA	INLRHRTR12005	N/A	N/A	N/A		NA	NA	NA	
ANLE30K	NA	NA	INLRHRTR12005	N/A	N/A	N/A		NA	NA	NA	
ANLE30J	NA	NA	INLRHRTR12005	N/A	N/A	N/A		NA	NA	NA	
ANLE30B	NA	NA	INLRHRTR12005	N/A	N/A	N/A		NA	NA	NA	
ANLE30P	NA	NA	INLRHRTR12005	N/A	N/A	N/A		NA	NA	NA	

LIS-802

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-ANLE-S5000 Lot # 31

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
ANLE30O	NA	NA	INLRHRTR12005	N/A	N/A	N/A		NA	NA	NA	
ANLE30Q	NA	NA	INLRHRTR12005	N/A	N/A	N/A		NA	NA	NA	
ANLE30A	NA	NA	INLRHRTR12005	N/A	N/A	N/A		NA	NA	NA	
ANLE30F	NA	NA	INLRHRTR12005	N/A	N/A	N/A		NA	NA	NA	
ANLE30L	NA	NA	INLRHRTR12006	N/A	N/A	N/A		NA	NA	NA	
ANLE30D	NA	NA	INLRHRTR12006	N/A	N/A	N/A		NA	NA	NA	
ANLE30S	NA	NA	INLRHRTR12006	N/A	N/A	N/A		NA	NA	NA	
ANLE30H-1	NA	NA	INLRHRTR12006	N/A	N/A	N/A		NA	NA	NA	
ANLE30R	NA	NA	INLRHRTR12006	N/A	N/A	N/A		NA	NA	NA	
ANLE30T	NA	NA	INLRHRTR12008	N/A	N/A	N/A		NA	NA	NA	
ANLE15D	NA	NA	INLRHRTR12008	N/A	N/A	N/A		NA	NA	NA	
ANLE15G	NA	NA	INLRHRTR12008	N/A	N/A	N/A		NA	NA	NA	
ANLE15F-1	NA	NA	INLRHRTR12008	N/A	N/A	N/A		NA	NA	NA	
ANLE9E	NA	NA	INLRHRTR12008	N/A	N/A	N/A		NA	NA	NA	
ANLE9F	NA	NA	INLRHRTR12008	N/A	N/A	N/A		NA	NA	NA	
ANLE9D	NA	NA	INLRHRTR12008	N/A	N/A	N/A		NA	NA	NA	
ANLE9C	NA	NA	INLRHRTR12008	N/A	N/A	N/A		NA	NA	NA	
ANLE9A	NA	NA	INLRHRTR12011	N/A	N/A	N/A		NA	NA	NA	
ANLE9B	NA	NA	INLRHRTR12011	N/A	N/A	N/A		NA	NA	NA	
ANLE9G	NA	NA	INLRHRTR12011	N/A	N/A	N/A		NA	NA	NA	

CIS-004

CCP-TP-002 Rev. 24
Effective Date: 12/28/2011
CCP Reporting of DQO's and Reporting Characterization Data

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-ANLE-S5000 Lot # 31

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR	
								Sample	Analysis

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

9-5-12
Date

CIS-005

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-ANLE-S5000 Lot # 32

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
ANLE3E	NA	NA	INLRHRTR12013	N/A	N/A	N/A		NA	NA	NA	
ANLE3A	NA	NA	INLRHRTR12013	N/A	N/A	N/A		NA	NA	NA	
ANLE8A	NA	NA	INLRHRTR12013	N/A	N/A	N/A		NA	NA	NA	
ANLE8B	NA	NA	INLRHRTR12013	N/A	N/A	N/A		NA	NA	NA	
ANLE10B	NA	NA	INLRHRTR12013	N/A	N/A	N/A		NA	NA	NA	
ANLE10D	NA	NA	INLRHRTR12013	N/A	N/A	N/A		NA	NA	NA	
ANLE10A	NA	NA	INLRHRTR12013	N/A	N/A	N/A		NA	NA	NA	
ANLE3G	NA	NA	INLRHRTR12013	N/A	N/A	N/A		NA	NA	NA	
ANLE5A	NA	NA	INLRHRTR12013	N/A	N/A	N/A		NA	NA	NA	
ANLE5B	NA	NA	INLRHRTR12013	N/A	N/A	N/A		NA	NA	NA	
ANLE3B	NA	NA	INLRHRTR12014	N/A	N/A	N/A		NA	NA	NA	
ANLE6F	NA	NA	INLRHRTR12014	N/A	N/A	N/A		NA	NA	NA	
ANLE10C	NA	NA	INLRHRTR12014	N/A	N/A	N/A		NA	NA	NA	
ANLE10G	NA	NA	INLRHRTR12014	N/A	N/A	N/A		NA	NA	NA	
ANLE5F	NA	NA	INLRHRTR12014	N/A	N/A	N/A		NA	NA	NA	
ANLE7E	NA	NA	INLRHRTR12014	N/A	N/A	N/A		NA	NA	NA	
ANLE7D	NA	NA	INLRHRTR12014	N/A	N/A	N/A		NA	NA	NA	
ANLE28F	NA	NA	INLRHRTR12014	N/A	N/A	N/A		NA	NA	NA	
ANLE28E	NA	NA	INLRHRTR12014	NA	NA	NA		NA	NA	NA	
ANLE28B	NA	NA	INLRHRTR12014	N/A	N/A	N/A		NA	NA	NA	
ANLE7B	NA	NA	INLRHRTR12014	N/A	N/A	N/A		NA	NA	NA	
ANLE7A	NA	NA	INLRHRTR12014	N/A	N/A	N/A		NA	NA	NA	
ANLE7G	NA	NA	INLRHRTR12014	N/A	N/A	N/A		NA	NA	NA	
ANLE12F	NA	NA	INLRHRTR12015	N/A	N/A	N/A		NA	NA	NA	
ANLE12A	NA	NA	INLRHRTR12015	N/A	N/A	N/A		NA	NA	NA	
ANLE12C	NA	NA	INLRHRTR12015	N/A	N/A	N/A		NA	NA	NA	
ANLE28G	NA	NA	INLRHRTR12015	N/A	N/A	N/A		NA	NA	NA	
ANLE28D	NA	NA	INLRHRTR12015	N/A	N/A	N/A		NA	NA	NA	
ANLE28C	NA	NA	INLRHRTR12015	N/A	N/A	N/A		NA	NA	NA	

CS-004

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-ANLE-S5000 Lot # 32

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Lead Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
ANLE28H	NA	NA	INLRHRTR12015	N/A	N/A	N/A		NA	NA	NA	
ANLE12E	NA	NA	INLRHRTR12015	N/A	N/A	N/A		NA	NA	NA	
ANLE12D	NA	NA	INLRHRTR12015	N/A	N/A	N/A		NA	NA	NA	
ANLE28A	NA	NA	INLRHRTR12015	N/A	N/A	N/A		NA	NA	NA	
ANLE12G	NA	NA	INLRHRTR12015	N/A	N/A	N/A		NA	NA	NA	
ANLE26F	NA	NA	INLRHRTR12015	N/A	N/A	N/A		NA	NA	NA	
ANLE12B	NA	NA	INLRHRTR12015	N/A	N/A	N/A		NA	NA	NA	
ANLE7F	NA	NA	INLRHRTR12016	N/A	N/A	N/A		NA	NA	NA	
ANLE27F	NA	NA	INLRHRTR12016	N/A	N/A	N/A		NA	NA	NA	
ANLE36E	NA	NA	INLRHRTR12016	N/A	N/A	N/A		NA	NA	NA	
ANLE27A	NA	NA	INLRHRTR12016	N/A	N/A	N/A		NA	NA	NA	
ANLE36F	NA	NA	INLRHRTR12016	N/A	N/A	N/A		NA	NA	NA	
ANLE10E	NA	NA	INLRHRTR12013	N/A	N/A	N/A		NA	NA	NA	

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

10-23-12
Date

CIS.005

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-ANLE-S5000 Lot # 33

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
ANLE16B	NA	NA	INLRHRTR12017	N/A	N/A	N/A		NA	NA	NA	
ANLE16C	NA	NA	INLRHRTR12017	N/A	N/A	N/A		NA	NA	NA	
ANLE16D	NA	NA	INLRHRTR12017	N/A	N/A	N/A		NA	NA	NA	
ANLE27C	NA	NA	INLRHRTR12017	N/A	N/A	N/A		NA	NA	NA	
ANLE16G	NA	NA	INLRHRTR12017	N/A	N/A	N/A		NA	NA	NA	
ANLE16A	NA	NA	INLRHRTR12017	N/A	N/A	N/A		NA	NA	NA	
ANLE16E	NA	NA	INLRHRTR12017	N/A	N/A	N/A		NA	NA	NA	
ANLE16F	NA	NA	INLRHRTR12017	N/A	N/A	N/A		NA	NA	NA	

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

11-8-12
Date

CS-004

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-ANLE-S5000 Lot # 34

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
ANLE18A	NA	NA	INLRHRTR12018	N/A	N/A	N/A		NA	NA	NA	
ANLE18D	NA	NA	INLRHRTR12018	N/A	N/A	N/A		NA	NA	NA	
ANLE18F	NA	NA	INLRHRTR12018	N/A	N/A	N/A		NA	NA	NA	
ANLE18E	NA	NA	INLRHRTR12018	N/A	N/A	N/A		NA	NA	NA	
ANLE36A	NA	NA	INLRHRTR12018	N/A	N/A	N/A		NA	NA	NA	
ANLE36C	NA	NA	INLRHRTR12018	N/A	N/A	N/A		NA	NA	NA	

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

11/28/12
Date

+00 S12

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-ANLE-S5000 Lot # 35

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
ANLE24A	NA	NA	INLRHRTR12020	N/A	N/A	N/A		NA	NA	NA	
ANLE24B	NA	NA	INLRHRTR12020	N/A	N/A	N/A		NA	NA	NA	
ANLE24D	NA	NA	INLRHRTR12020	N/A	N/A	N/A		NA	NA	NA	
ANLE24E	NA	NA	INLRHRTR12020	N/A	N/A	N/A		NA	NA	NA	
ANLE24F	NA	NA	INLRHRTR12020	N/A	N/A	N/A		NA	NA	NA	
ANLE24G	NA	NA	INLRHRTR12020	N/A	N/A	N/A		NA	NA	NA	
ANLE34A	NA	NA	INLRHRTR12020	N/A	N/A	N/A		NA	NA	NA	
ANLE25A	NA	NA	INLRHRTR12020	N/A	N/A	N/A		NA	NA	NA	
ANLE25E	NA	NA	INLRHRTR12020	N/A	N/A	N/A		NA	NA	NA	
ANLE34C	NA	NA	INLRHRTR12020	N/A	N/A	N/A		NA	NA	NA	
ANLE34D	NA	NA	INLRHRTR12020	N/A	N/A	N/A		NA	NA	NA	
ANLE34E	NA	NA	INLRHRTR12020	N/A	N/A	N/A		NA	NA	NA	
ANLE34F	NA	NA	INLRHRTR12020	N/A	N/A	N/A		NA	NA	NA	

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

12/17/12
Date

DQO-SD

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-ANLE-S5000

Lot # 36

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
ANLE13B	NA	NA	INLRHRTR13001	N/A	N/A	N/A		NA	NA	NA	
ANLE13C	NA	NA	INLRHRTR13001	N/A	N/A	N/A		NA	NA	NA	
ANLE13D	NA	NA	INLRHRTR13001	N/A	N/A	N/A		NA	NA	NA	
ANLE13E	NA	NA	INLRHRTR13001	N/A	N/A	N/A		NA	NA	NA	
ANLE13A	NA	NA	INLRHRTR13001	N/A	N/A	N/A		NA	NA	NA	
ANLE18B	NA	NA	INLRHRTR13001	N/A	N/A	N/A		NA	NA	NA	
ANLE18C	NA	NA	INLRHRTR13001	N/A	N/A	N/A		NA	NA	NA	
ANLE25B	NA	NA	INLRHRTR13001	N/A	N/A	N/A		NA	NA	NA	
ANLE25D	NA	NA	INLRHRTR13001	N/A	N/A	N/A		NA	NA	NA	

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

2-20-13
Date

CIS-004

COPY AK31

URS

CP:11:01674
UFC: 5900.00

Washington TRU Solutions LLC

INTER-OFFICE CORRESPONDENCE

DATE: October 21, 2011

FROM: T. R. Gatliffe LOCATION: Certification

TO: CCP Records Custodian GSA-212 LOCATION: Retrieval, Characterization and Transportation

SUBJECT: HEADSPACE GAS RANDOM SAMPLE SELECTION MEMORANDUM FOR THE FIRST LOT OF CONTAINERS OF ARGONNE CONTACT-HANDLED TRANSURANIC DEBRIS WASTE FROM FACILITY MAINTENANCE AND LABORATORY OPERATIONS, WASTE STREAM ID-AECHDM, BEING CHARACTERIZED BY THE CENTRAL CHARACTERIZATION PROJECT AT THE IDAHO NATIONAL LABORATORY

Per *CCP Random Selection of Containers for Solids and Headspace Gas Sampling and Analysis*, procedure CCP-TP-162, this memo provides the Headspace Gas (HSG) Sampling Random Selection Listing for Random Selection (RS) Lot 1 of Waste Stream ID-AECHDM being characterized by the Central Characterization Project (CCP) at the Idaho National Laboratory (INL). This RS Lot 1 random selection lot consists of the entire population of 40 containers that have been identified in the Process Knowledge Tracking Database as of October 21, 2011, and five "indeterminate container" placeholder identifiers, designated "DM-01" through "DM-05", for container number assignment in that order should CCP nondestructive examination of the homogeneous Waste Stream ID-AECHHM result in container reassignment to this debris waste stream.

The 10 containers specifically identified for the sample to be used for the required resolution of Environmental Protection Agency hazardous waste number assignment and five contingency container listings selected for the sample, if the calculated required sample size exceeds the 10 primary selections or any of the preliminary selections fail to qualify for sampling for this waste stream, are identified in the table below. The table also includes all other containers within the lot and the correlation of randomly selected numbers with each container identification number. Per Step 4.4.5 of CCP-TP-162, if any selected container cannot be sampled and is replaced by a contingency selection container, the INL site lead Site Project Manager will prepare and submit a Sample Selection Container Replacement Memorandum citing the reason or reasons sampling could not be successfully performed on the identified originally selected container.

CCP RECORDS ORIGINAL
DATE REC'D 10/24/2011

Waste Stream ID-AECHDM HSG RS Lot 1 Random Sample

Selected Containers

Order	Container	Rand. Nr.
(1)	RW48074	0.0354085
(2)	RW47763	0.0455949
(3)	RW47784	0.0628177
(4)	RW48192	0.0707891
(5)	RW49571	0.1386357
(6)	RW47765	0.1512400
(7)	RW47969	0.1785942
(7.1)*	DM-02 *	0.1975201
(8)	RW48201	0.2087655
(9)	RW48081	0.2398846
(10)	RW48198	0.2618781

* Sampled only if container assigned

Contingency Containers

Order	Container	Rand. Nr.
(11)	RW48203	0.2814792
(12)	RW48079	0.2824624
(13)	RW47768	0.4436195
(14)	RW47786	0.4449830
(15)	RW48199	0.5065791

Remaining Containers

(15.1)**	DM-01 **	0.5114142	(28)	RW47970	0.7435352
(16)	RW47783	0.5251831	(29)	RW48189	0.7788765
(17)	RW48200	0.5267379	(30)	RW48202	0.7952454
(17.1)**	DM-03 **	0.5291533	(31)	RW47778	0.7956190
(18)	RW49572	0.5572648	(32)	RW48191	0.8076676
(19)	RW48207	0.5854880	(33)	RW48204	0.8167671
(20)	RW47785	0.5912454	(34)	RW48205	0.8324856
(21)	RW47781	0.6112705	(34.1)**	DM-04 **	0.8681533
(22)	RW48077	0.6360383	(35)	RW47769	0.8797044
(23)	RW47766	0.6506216	(36)	RW47780	0.8899170
(23.1)**	DM-05 **	0.6855734	(37)	RW48206	0.9337779
(24)	RW47777	0.6878118	(38)	RW48076	0.9393922
(25)	RW48080	0.6927649	(39)	RW49573	0.9511177
(26)	RW47787	0.7049783	(40)	RW47976	0.9868416
(27)	RW47963	0.7367315			

* For use only if additional container(s) assigned

If further information is needed, I may be contacted at Extension 7563.

TRG:yhs

cc: WTS

B. J. Broomfield	ED
J. W. Houghton	ED
R. P. Kantrowitz	ED
D. W. Moody	ED
M. W. Pearcy	ED
M. L. Sensibaugh	ED
W. F. Verlanic	ED
J. A. Vernon	ED

WRES

R. R. Chavez	ED
K. Guillermo	ED

DIVIDER

PAGE

Washington
TRU Solutions LLC

CP:09:01326
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: August 19, 2009

FROM: I. S. Quintana — LOCATION: Special Operations and RH Development

TO: CCP Records Custodian GSA-103 — LOCATION: Retrieval, Characterization & Transportation

SUBJECT: HEADSPACE GAS RANDOM SAMPLE SELECTION MEMORANDUM FOR WASTE STREAM ID-ANLE-S5000, LOT 4, BEING CHARACTERIZED BY THE CENTRAL CHARACTERIZATION PROJECT AT THE IDAHO NATIONAL LABORATORY

Per procedure CCP-TP-162, *CCP Random Selection of Containers for Solids and Headspace Gas Sampling and Analysis*, this memorandum provides the enclosed Headspace Gas Random Selection Listing for Lot 4 of Waste Stream ID-ANLE-S5000, which is being characterized by the Central Characterization Project at the Idaho National Laboratory. Twelve additional containers were added to waste stream ID-ANLE-S5000 and ten were randomly selected to be sampled for headspace gas for the resolution of Environmental Protection Agency hazardous waste number assignment.

Headspace Gas Random Sample Selection Listing – Lot 4 – Waste Stream ID-ANLE-S5000

#	Container	Rand. Nr.	#	Container	Rand. Nr.	#	Container	Rand. Nr.
1	IDAE000000394	0.0508	5	IDAE000000399	0.1731	9	IDAE000000395	0.5739
2	IDAERH0001003	0.1105	6	IDAE000000397	0.2556	10	IDAE000000398	0.6553
3	IDAE000000396	0.1148	7	IDAE000000393	0.2607			
4	IDAERH0001004	0.1264	8	IDAE000000400	0.5705			

Contingency Containers – Lot 4 – Waste Stream ID-ANLE-S5000

Container	Rand. Nr.
IDAERH0001002	0.8457
IDAERH0001005	0.8736

If further information is needed, I may be contacted at (720) 982-7174.

ISQ:jmc

Enclosure

cc: WTS

				WRES	
T. R. Gatliffe	ED	G. Smith	ED	R. R. Chavez	ED
H. J. Neely	ED	C. M. Weston	ED		
M. Sensibaugh	ED				

CP0901326 Attachment
Random Selection Lot 4
Waste stream id: ID-ANLE-S5000

Container ID	Random #
IDAE000000394	0.05087917
IDAERH0001003	0.11055135
IDAE000000396	0.11482917
IDAERH0001004	0.12645266
IDAE000000399	0.17316706
IDAE000000397	0.25568024
IDAE000000393	0.26078103
IDAE000000400	0.570513
IDAE000000395	0.57396999
IDAE000000398	0.65533081
IDAERH0001002	0.84578549
IDAERH0001005	0.87367858

AK32

URS

Washington TRU Solutions LLC

CP:11:01799
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: December 21, 2011

FROM: J. A. Vernon LOCATION: Certification

TO: CCP Records Custodian GSA-212 LOCATION: Retrieval, Characterization and Transportation

SUBJECT: TRANSMITTAL OF IDAHO NATIONAL LABORATORY HEADSPACE GAS SUMMARY REPORT FOR WASTE STREAM # ID-AECHDM

Please accept the attached Idaho National Laboratory Headspace Gas Summary Report to be placed in records for waste stream # ID-AECHDM.

JAV:yhs

Attachment

cc: (without attachment)
M. W. Pearcy ED
J. C. Rovansek ED

CCP RECORDS ORIGINAL
DATE REC'D 12/27/2011

HEADSPACE GAS SUMMARY REPORT

WSPF # ID-AECHDM

Lot 1

TABLE OF CONTENTS

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CCP Data Evaluation Narrative/Statistics Package Lot 1 005

CCP Waste Stream Lot Tentatively Identified Compounds..... 009

CCP Waste Stream Tentatively Identified Compounds.... 010

CCP Site Project Manager Data Evaluation Narrative..... 011

CCP Correlation of Container ID Numbers to Headspace Gas Sample ID Numbers

Headspace Gas BDR Number: See Below

WSPF Number: ID-AECHDM

Lot Number: 1

Container ID Number	HSG Sample ID Number	Headspace Gas BDR (Sample)	Headspace Gas BDR (Analysis)		
RW49571	11304002	INHSG1111	ECL11036M	N/A	N/A
RW47969	11304004	INHSG1111	ECL11036M	N/A	N/A
RW47784	11304005	INHSG1111	ECL11036M	N/A	N/A
RW48074	11304006	INHSG1111	ECL11036M	N/A	N/A
RW48192	11304007	INHSG1111	ECL11036M	N/A	N/A
RW48081	11304009	INHSG1111	ECL11036M	N/A	N/A
RW48198	11304008	INHSG1111	ECL11036M	N/A	N/A
RW48201	11304010	INHSG1111	ECL11036M	N/A	N/A
RW47763	11304011	INHSG1111	ECL11036M	N/A	N/A
RW47765	11304012	INHSG1111	ECL11036M	N/A	N/A

Use multiple copies of this attachment as necessary to document all containers discussed in this summary report. Record Waste Stream Profile Form Number and Waste Stream Lot Number on each sheet issued. Number each sheet in the space provided.

Site Project Manager (or designee):

Signature

Jim Vernon
Print Name

11/11/2011
Date

Headspace-002

CCP Headspace Gas UCL_{90} Evaluation Form

WSPF #: ID-AECHDM **Waste Stream Lot Number** 1 through 1

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL [1]	# Samples	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Acetone	Log	10	10	1.8871	-1.6080	1.4241	-0.9852	100	4.6052		
Benzene	SQRT	8	10	0.3000	0.1875	0.0766	0.2210	10	3.1623		
Bromoform	Log	0	10	-4.7677	-5.8051	0.3974	-5.6313	10	2.3026		
Butanol	Log	6	10	0.0000	-2.8172	1.6929	-2.0768	100	4.6052		
Carbon Disulfide[a]	Log	10	10	3.2958	-0.2900	2.2958	0.7140	10	2.3026		
Carbon Tetrachloride	No	9	10	0.0230	0.0169	0.0049	0.0190	10	N/A		
Chlorobenzene	Log	0	10	-4.1352	-5.1500	0.3905	-4.9792	10	2.3026		
Chloroform	Log	3	10	-3.0159	-4.4273	0.8338	-4.0627	10	2.3026		
Chloromethane[a]	Log	4	10	-1.7720	-3.1549	0.8767	-2.7715	10	2.3026		
Cyclohexane[a]	Log	6	10	-2.3645	-4.2196	0.9103	-3.8215	10	2.3026		
1,1-Dichloroethane	Log	0	10	-3.5936	-4.6286	0.3973	-4.4548	10	2.3026		
1,2-Dichloroethane	Log	1	10	-2.4534	-4.0507	0.6802	-3.7532	10	2.3026		
1,1-Dichloroethylene	Log	0	10	-3.4265	-4.4462	0.3908	-4.2753	10	2.3026		
cis-1,2-Dichloroethylene [a]	Log	0	10	-3.9120	-4.9291	0.3923	-4.7575	10	2.3026		
trans-1,2-Dichloroethylene	Log	0	10	-3.6306	-4.6482	0.3887	-4.4782	10	2.3026		
1,2-Dichloropropane[a]	Log	0	10	-5.2030	-6.2521	0.4015	-6.0766	10	2.3026		
Ethyl benzene	Log	5	10	0.9555	-3.8302	2.0139	-2.9494	10	2.3026		
Ethyl Ether	Log	0	10	-2.9004	-3.9577	0.4029	-3.7815	100	2.3026		
Methanol	Log	8	10	2.0015	-0.8700	1.6320	-0.1562	100	4.6052		
Methyl Ethyl Ketone	Log	2	10	0.6419	-3.2211	1.4868	-2.5709	100	4.6052		
Methyl Isobutyl Ketone	SQRT	5	10	0.1581	0.0927	0.0383	0.1095	100	10.0000		
Methylene Chloride	Log	2	10	-1.0788	-3.8844	1.0747	-3.4144	10	2.3026		
1,1,2,2-Tetrachloroethane	Log	0	10	-4.9618	-5.9609	0.3843	-5.7928	10	2.3026		
Tetrachloroethylene	Log	4	10	-2.3752	-5.4132	1.2521	-4.8656	10	2.3026		
Toluene	Log	10	10	1.9459	0.0339	1.1883	0.5536	10	2.3026		
1,1,1-Trichloroethane	SQRT	5	10	0.1342	0.0970	0.0234	0.1073	10	3.1623		
Trichoroethylene	SQRT	7	10	0.1844	0.1157	0.0393	0.1329	10	3.1623		
1,1,2-Trichloro-1,2,2-trifluoroethane	Log	0	10	-4.6565	-5.6627	0.3874	-5.4932	10	2.3026		

Headspace -003

CCP Headspace Gas UCL_{90} Evaluation Form

WSPF #: ID-AECHDM **Waste Stream Lot Number** 1 through 1

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL [1]	# Samples	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
1,3,5-Trimethylbenzene[a]	Log	4	10	-2.4889	-4.6164	1.2607	-4.0650	10	2.3026		
1,2,4-Trimethylbenzene[a]	Log	4	10	-1.6094	-3.9692	1.4912	-3.3170	10	2.3026		
m/p-Xylene[b]	Log	8	10	2.1633	-2.8230	2.3918	-1.7769	10	2.3026		
o-Xylene	Log	6	10	0.4700	-3.3563	2.2837	-2.3575	10	2.3026		

[a] These compounds are from the CH-TRAMPAC or CH-TRUCON and are flammable VOCs that do not appear in the QAPjP or the WIPP WAP. These are not part of the target analyte list, but samples may be analyzed for these compounds.

[b] These xylene isomers cannot be resolved by the analytical methods employed in the program. m-Xylene and p-Xylene will be reported as "Total m-p-Xylene."

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per section C4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

Signature of Site Project Manager

Jim Vernon
Printed Name

11/11/2011
Date

Headspace - CCP

Data Verification Sheet
Supplemental to UCL90 Evaluation Form
(Attachment 2)

Prepared by
Jim Vernon
11/11/2011

INL HSG Lot 1, 10 drums
ID-AECHDM

Waste Stream Number: ID-AECHDM
Site: Idaho National Laboratory
Lot Number: HSG Lot 1
Number of Drums: 10
Preparation Date: 11/11/11

ANALYTE	Valid N	Maximum Value	Mean	Std. Deviation	UCL90 (Upper 80.00% Confidence Interval)	PRQL Values	SW (Highest W Statistic)	P-Value
Acetone, Non-Transform	10	6.60000	0.81740	2.03570	1.70772	100	0.4183	0.00000
Acetone, Sqrt-Transform	10	2.56905	0.61080	0.70264	0.91810	10	0.5520	0.00001
Benzene, Non-Transform	10	0.09000	0.04045	0.02942	0.05332	10	0.9082	0.26912
Benzene, Log-Transform	10	-2.40795	-3.51628	0.89558	-3.12460	2.302585	0.9336	0.48390
Bromoform, Non-Transform	10	0.00850	0.00330	0.00190	0.00413	10	0.5150	0.00001
Bromoform, Sqrt-Transform	10	0.09220	0.05600	0.01349	0.06190	3.162278	0.5477	0.00001
Butanol, Non-Transform	10	1.00000	0.22510	0.37838	0.39059	100	0.6148	0.00008
Butanol, Sqrt-Transform	10	1.00000	0.34879	0.33903	0.49707	10	0.7243	0.00174
Carbon Disulfide, Non-Transform	10	27.00000	5.62190	9.37857	9.72364	10	0.6769	0.00046
Carbon Disulfide, Sqrt-Transform	10	5.19615	1.59866	1.84578	2.40591	3.162278	0.7419	0.00285
Carbon Tetrachloride, Log-Transform	10	-3.77226	-4.12522	0.33393	-3.97918	2.302585	0.8742	0.11189
Carbon Tetrachloride, Sqrt-Transform	10	0.15166	0.12865	0.01999	0.13739	3.162278	0.8990	0.21388
Chlorobenzene, Non-Transform	10	0.01600	0.00633	0.00354	0.00788	10	0.5248	0.00001
Chlorobenzene, Sqrt-Transform	10	0.12649	0.07765	0.01827	0.08564	3.162278	0.5588	0.00002
Chloroform, Non-Transform	10	0.04900	0.01670	0.01528	0.02338	10	0.7597	0.00469
Chloroform, Sqrt-Transform	10	0.22136	0.11873	0.05377	0.14225	3.162278	0.7922	0.01164
Chloromethane, Non-Transform	10	0.17000	0.05890	0.04992	0.08073	10	0.8464	0.05259
Chloromethane, Sqrt-Transform	10	0.41231	0.22465	0.09679	0.26698	3.162278	0.9283	0.43147

Data Verification Sheet
Supplemental to UCL90 Evaluation Form
(Attachment 2)

Prepared by
Jim Vernon
11/11/2011

INL HSG Lot 1, 10 drums
ID-AECHDM

ANALYTE	Valid N	Maximum Value	Mean	Std. Deviation	UCL90 (Upper 80.00% Confidence Interval)	PRQL Values	SW (Highest W Statistic)	P-Value
Cyclohexane, Non-Transform	10	0.09400	0.02260	0.02692	0.03438	10	0.6591	0.00028
Cyclohexane, Sqrt-Transform	10	0.30659	0.13427	0.07127	0.16544	3.162278	0.8032	0.01587
1,1-Dichloroethane, Non-Transform	10	0.02750	0.01070	0.00614	0.01338	10	0.5211	0.00001
1,1-Dichloroethane, Sqrt-Transform	10	0.16583	0.10085	0.02425	0.11146	3.162278	0.5556	0.00002
1,2-Dichloroethane, Non-Transform	10	0.08600	0.02300	0.02376	0.03339	10	0.5650	0.00002
1,2-Dichloroethane, Sqrt-Transform	10	0.29326	0.14028	0.06075	0.16685	3.162278	0.6185	0.00009
1,1-Dichloroethylene, Non-Transform	10	0.03250	0.01280	0.00719	0.01595	10	0.5264	0.00001
1,1-Dichloroethylene, Sqrt-Transform	10	0.18028	0.11041	0.02605	0.12180	3.162278	0.5632	0.00002
cis-1,2-Dichloroethylene, Non-Transform	10	0.02000	0.00790	0.00443	0.00984	10	0.5169	0.00001
cis-1,2-Dichloroethylene, Sqrt-Transform	10	0.14142	0.08673	0.02049	0.09569	3.162278	0.5465	0.00001
trans-1,2-Dichloroethylene, Non-Transform	10	0.02650	0.01045	0.00585	0.01301	10	0.5047	0.00000
trans-1,2-Dichloroethylene, Sqrt-Transform	10	0.16279	0.09978	0.02344	0.11003	3.162278	0.5328	0.00001
1,2-Dichloropropane, Non-Transform	10	0.00550	0.00212	0.00123	0.00265	10	0.5165	0.00001
1,2-Dichloropropane, Sqrt-Transform	10	0.07416	0.04481	0.01093	0.04958	3.162278	0.5510	0.00001
Ethyl benzene, Non-Transform	10	2.60000	0.28495	0.81463	0.64123	10	0.3996	0.00000
Ethyl benzene, Sqrt-Transform	10	1.61245	0.28301	0.47709	0.49167	3.162278	0.5115	0.00000
Ethyl Ether, Non-Transform	10	0.05500	0.02100	0.01236	0.02641	10	0.5123	0.00001
Ethyl Ether, Sqrt-Transform	10	0.23452	0.14114	0.03464	0.15629	3.162278	0.5469	0.00001
Methanol, Non-Transform	10	7.40000	1.39210	2.32393	2.40847	100	0.6460	0.00020
Methanol, Sqrt-Transform	10	2.72029	0.89290	0.81297	1.24846	10	0.7853	0.00959
Methyl Ethyl Ketone, Non-Transform	10	1.90000	0.21930	0.59112	0.47783	100	0.3968	0.00000
Methyl Ethyl Ketone, Sqrt-Transform	10	1.37840	0.29061	0.38707	0.45990	10	0.4794	0.00000
Methyl Isobutyl Ketone, Non-Transform	10	0.02500	0.00993	0.00785	0.01336	100	0.8452	0.05094
Methyl Isobutyl Ketone, Log-Transform	10	-3.68888	-4.90848	0.82221	-4.54888	4.60517	0.8631	0.08310

Hydrogen - ocpc

Data Verification Sheet
Supplemental to UCL90 Evaluation Form
(Attachment 2)

Prepared by
Jim Vernon
11/11/2011

INL HSG Lot 1, 10 drums
ID-AECHDM

ANALYTE	Valid N	Maximum Value	Mean	Std. Deviation	UCL90 (Upper 80.00% Confidence Interval)	PRQL Values	SW (Highest W Statistic)	P-Value
Methylene Chloride, Non-Transform	10	0.34000	0.04905	0.10260	0.09392	10	0.4289	0.00000
Methylene Chloride, Sqrt-Transform	10	0.58310	0.17149	0.14772	0.23610	3.162278	0.5193	0.00001
1,1,2,2-Tetrachloroethane, Non-Transform	10	0.00700	0.00281	0.00154	0.00348	10	0.5226	0.00001
1,1,2,2-Tetrachloroethane, Sqrt-Transform	10	0.08367	0.05173	0.01195	0.05696	3.162278	0.5548	0.00002
Tetrachloroethylene, Non-Transform	10	0.09300	0.01304	0.02835	0.02544	10	0.4552	0.00000
Tetrachloroethylene, Sqrt-Transform	10	0.30496	0.08443	0.08105	0.11987	3.162278	0.5727	0.00003
Toluene, Non-Transform	10	7.00000	1.98200	2.44194	3.04999	10	0.7252	0.00178
Toluene, Sqrt-Transform	10	2.64575	1.20168	0.77314	1.53981	3.162278	0.8228	0.02741
1,1,1-Trichloroethane, Non-Transform	10	0.01800	0.00991	0.00461	0.01193	10	0.9009	0.22438
1,1,1-Trichloroethane, Log-Transform	10	-4.01738	-4.71963	0.49699	-4.50227	2.302585	0.8848	0.14797
Trichoroethylene, Non-Transform	10	0.03400	0.01478	0.00961	0.01898	10	0.9079	0.26678
Trichoroethylene, Log-Transform	10	-3.38139	-4.42522	0.72282	-4.10909	2.302585	0.9255	0.40495
Trichlorofluoromethane, Non-Transform	10	0.02200	0.00802	0.00551	0.01042	10	0.7128	0.00126
Trichlorofluoromethane, Log-Transform	10	-3.81671	-5.07737	0.88622	-4.68978	2.302585	0.6999	0.00088
1,1,2-Trichloro-1,2,2-trifluoroethane, Non-Transform	10	0.00950	0.00379	0.00209	0.00470	10	0.5222	0.00001
1,1,2-Trichloro-1,2,2-trifluoroethane, Sqrt-Transform	10	0.09747	0.06007	0.01400	0.06619	3.162278	0.5542	0.00002
1,3,5-Trimethylbenzene, Non-Transform	10	0.08300	0.02128	0.02804	0.03355	10	0.7053	0.00102
1,3,5-Trimethylbenzene, Sqrt-Transform	10	0.28810	0.12097	0.08593	0.15855	3.162278	0.7431	0.00294
1,2,4-Trimethylbenzene, Non-Transform	10	0.20000	0.05220	0.07251	0.08391	10	0.6908	0.00068
1,2,4-Trimethylbenzene, Sqrt-Transform	10	0.44721	0.18039	0.14779	0.24503	3.162278	0.7175	0.00143
m-Xylene, Non-Transform	10	8.70000	0.99743	2.71952	2.18681	10	0.4265	0.00000
m-Xylene, Sqrt-Transform	10	2.94958	0.53572	0.88846	0.92429	3.162278	0.5825	0.00003
p-Xylene, Non-Transform	10	8.70000	0.99743	2.71952	2.18681	10	0.4265	0.00000
p-Xylene, Sqrt-Transform	10	2.94958	0.53572	0.88846	0.92429	3.162278	0.5825	0.00003
o-Xylene, Non-Transform	10	1.60000	0.28458	0.52383	0.51368	10	0.6310	0.00013
o-Xylene, Sqrt-Transform	10	1.26491	0.34964	0.42470	0.53538	3.162278	0.7262	0.00183

Handsprint - ocr7

CCP Data Evaluation Narrative

WSPF Number: ID-AECHDM Waste Stream Lot Number: HSG Lot 1

A statistical evaluation of 10 containers for the waste stream noted above was performed to verify the hazardous waste code assignments in AK for Headspace Gas Analysis.

The non-transform data was compared with the non-transformed PRQL limits no compounds exceeded the PRQL values.

The container population was evaluated for normality, analyte by analyte. Two transforms were performed on each analyte data, in an attempt to 'normalize' the data sets. A log-normal transform and a square root transform were performed (the arcsine transform mentioned in SW-846, Chapter 9 is only applicable to proportion data [values of 0-1] or % data). Neither the log-normal nor the square root transform resulted in a Gaussian distribution.

Summary descriptive data for the non-transformed and transformed data were prepared and are attached. The "W" statistic, which resulted in the highest "W" value (under the Shapiro-Wilk (SW) test for normality) was used as the metric for which the individual analytes were compared to the PRQL (either transformed or nontransformed) to verify the AK for assigning hazardous waste codes for specific analytes.

All the transformations and comparisons are shown on the attached spreadsheets, and were performed using the Summary Statistics controlled software package.

The following analyte data was used without transformation:

Carbon Tetrachloride

Summary:

In summary, the following data demonstrated conditions of normality in the indicated data sets:

- Benzene – non, log and sq root transform data sets
- Butanol – log transform data set
- Carbon Tetrachloride – non, log, and sq root transform data sets
- Chloromethane – Non and log transform data sets
- Cyclohexane – Log transform data set
- Methanol – Log transform data set
- Methyl Isobutyl Ketone – non, log and transform data sets
- Toluene – Log transform data set
- 1,1,1-Trichloroethane – non, log and transform data sets
- Trichoroethylene – non, log and transform data sets
- m-Xylene – log transform data set
- p-Xylene – log transform data set

Prepared By: Jim Vernon Date: 11/11/11

Approved By:

Signature

Jim Vernon
Print Name

11/11/11
Date

CCP Waste Stream Lot Headspace Gas Tentatively Identified Compounds

WSPF Number: ID-AECHDM Lot Number: 1

Number of samples in this lot: 10

The following TICs were detected during Headspace Gas Analysis of this Waste Stream Lot:

Tentatively Identified Compound	CAS Number	Number of Samples Containing TIC In This Lot	TIC Included in 40CFR261 Appendix VIII Yes/No
NONE			

Approved By:

Signature | Jim Vernon (Print Name) | 11/11/2011 (Date)

Headspace - OC9

CCP Waste Stream Headspace Gas Tentatively Identified Compounds

WSPF Number: ID-AECHDM Lot Number: 1 through 1

Number of samples evaluated to date in the Waste Stream: 10

The following TICs were detected during Headspace Gas Analysis of this Waste Stream:

Tentatively Identified Compound	CAS Number	Maximum Observed Estimated Concentrations (ppmv)	Total Number of Samples Containing TIC	% TIC Detected in Waste Stream	Greater than 25% Yes
NONE					

Data confirm Acceptable Knowledge? Yes: X No: ____

If no, describe the basis for assigning the EPA Hazardous Waste Codes:

Approved By:

Signature | Jim Vernon (Print Name) | 11/11/2011 (Date)

Analyst · CLO

CCP Site Project Manager Data Evaluation Narrative

WSPF Number: ID-AECHDM Waste Stream Lot Number 1

Waste stream ID-AECHDM consists of ten drums, represented in this Headspace Gas Summary Lot.

All Headspace Gas Data for the containers in this Lot has been Validated and Verified and found to be acceptable, and meet the requirements of the WIPP WAP.

Approved By:

Signature	Jim Vernon	11/11/2011
	Print Name	Date

Hanford - 011

DIVIDER

PAGE

URS

Washington TRU Solutions LLC

CP:10:01102
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: February 23, 2010

FROM: H. J. Neely LOCATION: Special Operations and Remote-Handled Development

TO: CCP Records Custodian GSA-212 LOCATION: Retrieval, Characterization & Transportation

SUBJECT: TRANSMITTAL OF HEADSPACE GAS DATA SUMMARY FOR REMOTE-HANDLED LOT 4 ID-ANLE-S5000 AT THE IDAHO NATIONAL LABORATORY

Please accept the attached Headspace Gas Data Summary to be placed in records for the Remote-Handled Idaho National Laboratory Lot 4 ID-ANLE-S5000.

HJN:yhs

Attachment

cc: (without attachment)
I. S. Quintana ED
M. Sensibaugh ED

COPY

HEADSPACE GAS SUMMARY REPORT

WSPF # ID-ANLE-S5000

Lot 4

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CCP Correlation of Container ID Numbers to Headspace Gas Sample ID Numbers

Headspace Gas BDR Number: See Below

WSPF Number: ID-ANLE-S5000 Lot Number: 4

Container ID Number	HSG Sample ID Number	Headspace Gas BDR (Sample)	Headspace Gas BDR (Analysis)		
00761	IN112006EI618	INHSGS060304	ECL06494M	ECL06494C	ECL06494G
00798	IN112006EI656	INHSGS060304	ECL06494M	ECL06494C	ECL06494G
00800	IN112006EI204	INHSGS060304	ECL06494M	ECL06494C	ECL06494G
00757	IN112006EI495	INHSGS060304	ECL06494M	ECL06494C	ECL06494G
00769	IN112006EI425	INHSGS060304	ECL06494M	ECL06494C	ECL06494G
00772	IN112006EI387	INHSGS060304	ECL06494M	ECL06494C	ECL06494G
00785	IN112006EI134	INHSGS060304	ECL06494M	ECL06494C	ECL06494G
00792	IN112006EI414	INHSGS060304	ECL06494M	ECL06494C	ECL06494G
00796	IN112006EI281	INHSGS060304	ECL06494M	ECL06494C	ECL06494G
00809	IN112006EI092	INHSGS060304	ECL06494M	ECL06494C	ECL06494G
00317	IN021207EI007	INHSGS070003	ECL07026M	ECL07026C	ECL07026G
00458	IN021207EI568	INHSGS070003	ECL07026M	ECL07026C	ECL07026G
00464	IN021207EI721	INHSGS070003	ECL07026M	ECL07026C	ECL07026G
00472	IN021207EIA29	INHSGS070003	ECL07026M	ECL07026C	ECL07026G
00500	IN021207EI722	INHSGS070003	ECL07026M	ECL07026C	ECL07026G
00564	IN021207EI828	INHSGS070003	ECL07026M	ECL07026C	ECL07026G
00717	IN021207EI863	INHSGS070003	ECL07026M	ECL07026C	ECL07026G
01055	IN021207EI102	INHSGS070003	ECL07026M	ECL07026C	ECL07026G
01079	IN021207EI370	INHSGS070003	ECL07026M	ECL07026C	ECL07026G
01101	IN021207EI241	INHSGS070003	ECL07026M	ECL07026C	ECL07026G
00589	IN030308EI726	INHSGS080002	ECL08003M	NA	ECL08003G
00348	IN030308EI519	INHSGS080002	ECL08003M	NA	ECL08003G
00526	IN030308EIC75	INHSGS080002	ECL08003M	NA	ECL08003G
00524	IN030308EIA91	INHSGS080002	ECL08003M	NA	ECL08003G
00528	IN030308EIA98	INHSGS080002	ECL08003M	NA	ECL08003G
00576	IN030308EI456	INHSGS080002	ECL08003M	NA	ECL08003G
00594	IN030308EI521	INHSGS080002	ECL08003M	NA	ECL08003G
00507	IN030308EI657	INHSGS080002	ECL08003M	NA	ECL08003G
00585	IN030308EI949	INHSGS080002	ECL08003M	NA	ECL08003G
00497	IN030308EI432	INHSGS080002	ECL08003M	NA	ECL08003G
IDAE000000397	IN083109EI437	INHSGS090011	ECL09029M	NA	ECL09029G
IDAE000000396	IN083109EIA51	INHSGS090011	ECL09029M	NA	ECL09029G
IDAE000000395	IN083109EID25	INHSGS090011	ECL09029M	NA	ECL09029G
IDAE000000398	IN083109EI270	INHSGS090011	ECL09029M	NA	ECL09029G
IDAE000000~~396~~ 399 7/10/13	IN083109EIB11	INHSGS090011	ECL09029M	NA	ECL09029G
IDAE000000400	IN083109EI759	INHSGS090011	ECL09029M	NA	ECL09029G
IDAE000000393	IN083109EIC06	INHSGS090011	ECL09029M	NA	ECL09029G
IDAERH0001004	IN083109EI084	INHSGS090011	ECL09029M	NA	ECL09029G
IDAERH0001003	IN083109EID23	INHSGS090011	ECL09029M	NA	ECL09029G
IDAE000000394	IN083109EI661	INHSGS090011	ECL09029M	NA	ECL09029G

HSG 002

CCP Correlation of Container ID Numbers to Headspace Gas Sample ID Numbers

Headspace Gas BDR Number: See Below

WSPF Number: ID-ANLE-S5000 Lot Number: 4

Container ID Number	HSG Sample ID Number	Headspace Gas BDR (Sample)	Headspace Gas BDR (Analysis)
Use multiple copies of this attachment as necessary to document all containers discussed in this summary report. Record Waste Stream Profile Form Number and Waste Stream Lot Number on each sheet issued. Number each sheet in the space provided.			

Site Project Manager (or designee):

Signature | Hillari J. Neely, Print Name | 2/18/2010, Date

HSG 003

CCP Headspace Gas UCL_{90} Evaluation Form

WSPF #: ID-ANLE-S5000 **Waste Stream Lot Number** 1 through 4

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples (2)	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Benzene	Log	21	40	0.10	-2.22	1.12	-1.99	10	2.30		
Bromoform	Log	0	40	-2.35	-4.22	0.55	-4.11	10	2.30		
Carbon tetrachloride	Log	10	40	-0.94	-3.41	0.75	-3.26	10	2.30		
Chlorobenzene	Log	0	40	-1.86	-3.33	0.46	-3.23	10	2.30		
Chloroform	Log	3	40	-0.16	-3.17	0.77	-3.01	10	2.30		
Cyclohexane [a]	Log	7	40	-0.04	-2.98	0.98	-2.77	10	2.30		
1,1-Dichloroethane	Log	5	40	1.48	-2.85	1.12	-2.62	10	2.30		
1,2-Dichloroethane	Log	0	40	-1.90	-3.16	0.46	-3.07	10	2.30		
1,1-Dichloroethylene	Log	0	40	-2.12	-3.23	0.48	-3.13	10	2.30		
cis-1,2-Dichloroethylene	Log	1	40	-2.00	-3.38	0.48	-3.28	10	2.30		
trans-1,2-Dichloroethylene	Log	0	40	-2.25	-3.39	0.45	-3.29	10	2.30		
Ethyl benzene	Log	17	40	0.18	-2.52	1.08	-2.30	10	2.30		
Ethyl ether	Log	0	40	-1.69	-2.98	0.49	-2.88	10	2.30		
Methylene chloride	Log	7	40	-0.04	-2.79	0.86	-2.61	10	2.30		
1,1,2,2-Tetrachloroethane	Log	0	40	-1.45	-3.50	0.59	-3.38	10	2.30		
Tetrachloroethylene	Log	5	40	0.69	-3.45	1.26	-3.19	10	2.30		
Toluene	Log	33	40	3.00	-0.82	2.07	-0.40	10	2.30		
1,1,1-Trichloroethane	Log	6	40	1.28	-3.41	1.10	-3.18	10	2.30		
Trichloroethylene	Log	6	40	0.34	-3.23	1.09	-3.01	10	2.30		
1,1,2-Trichloro-1,2,2-trifluoroethane	Log	3	40	0.41	-3.48	0.94	-3.29	10	2.30		
1,2,4-Trimethylbenzene [a]	Log	9	40	0.47	-2.85	0.97	-2.65	10	2.30		
1,3,5-Trimethylbenzene [a]	Log	5	40	-0.71	-3.12	0.72	-2.98	10	2.30		
m-Xylene [b]	Log	22	40	1.70	-1.87	1.66	-1.53	10	2.30		
p-Xylene [b]	Log	22	40	1.70	-1.87	1.66	-1.53	10	2.30		
o-Xylene	Log	15	40	1.79	-2.28	1.38	-2.00	10	2.30		
Acetone	Log	40	40	3.95	1.85	1.18	2.09	100	4.61		
1-Butanol	Log	32	40	2.15	-1.36	1.30	-1.09	100	4.61		
Methanol	Log	0	40	2.35	1.90	0.18	1.94	100	4.61		
Methyl ethyl ketone	Log	35	40	1.67	-0.46	1.35	-0.18	100	4.61		
Methyl isobutyl ketone	Log	18	40	-0.22	-2.41	1.21	-2.16	100	4.61		

400 HSG 004

CCP Headspace Gas UCL_{90} Evaluation Form

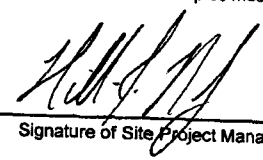
WSPF #: ID-ANLE-S5000 **Waste Stream Lot Number** 1 through 4

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples (2)	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Chloromethane[a]	Log	20	40	1.65	-1.78	1.38	-1.49	10	2.30		
Carbon Disulfide[a]	Log	10	40	-0.80	-2.81	0.62	-2.68	10	2.30		
1,2-Dichloropropane[a]	Log	2	40	-2.41	-3.66	0.50	-3.56	10	2.30		
Trichlorofluoromethane[c]	Log	1	20	3.04	-3.37	1.61	-2.89	10	2.30		

[a] These compounds are from the TRAMPAC and are flammable VOCs that do not appear in the QAPjP or the WIPP WAP. *These are not part of the target analyte list, but* samples may be analyzed for these compounds.
[b] These xylene isomers cannot be resolved by the analytical methods employed in the program. m-Xylene and p-Xylene will be reported as "Total m-p-Xylene."
[c] Compounds are reported as target analytes by the Idaho Laboratory and have been added to the evaluation accordingly.

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per section B4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)



Signature of Site Project Manager

Hillari J. Neely
Printed Name

2/18/2010
Date

HSY 005

Attachment 7 – CCP Data Evaluation Narrative

Page 1 of 1

WSPF Number: ID-ANLE-S5000 Lot Number: 4

A statistical evaluation of 10 containers for the waste stream noted above was performed to verify AK for head space gas analytes.

None of the compounds exceeded the PRQL values.

The container population was evaluated for normality, analyte by analyte. Two transforms were performed on each analyte data, in an attempt to 'normalize' the data sets. A log-normal transform and a square root transform were performed (the arcsine transform mentioned in SW-846, Chapter 9 is only applicable to proportion data [values of 0-1] or % data). Neither the log-normal nor the square root transform resulted in a Gaussian distribution. Due to the large number of non detects (values reported at ½ MDL) throughout the data set, there is a skewing effect which is largely responsible for this non-Gaussian distribution.

Summary descriptive data for the non-transformed and transformed data were prepared and are attached. The "W" statistic, which resulted in the highest "W" value (under the Shapiro-Wilk (SW) test for normality) was used as the metric for which the individual analytes were compared to the PRQL (either transformed or nontransformed) to verify the AK for assigning hazardous waste codes for specific analytes.

This is in strict accordance with Chapter 9 of SW-846 which states, in part, "...If either transformation is required, all subsequent statistical evaluations must be performed on the transformed scale." Thus, if the analyte had the highest "W" Statistic, in a transformed function, these transformed analyte values were compared against the transformed limits. The results are shown in the attached matrices.

All the transformations and comparisons are shown on the attached spreadsheets, and were performed using the Statistica controlled software package, and Excel.

The data for all analytes was used with transformation.

Summary:

In summary, none of the compounds passed the normality test with the exception of:

- Acetone – log and sq root transform data sets
- 1-Butanol – log transform data set
- 1.2-Dichloropropane -- log transform data set

Approved By:

Signature Hillari J. Neely Printed Name 2/18/10 Date

HSG
006

Data Verification Sheet
Supplemental to UCL90 Evaluation Form
(Attachment 2)

Prepared by
Hillari J. Neely

INL, Lot 4, 40 drums
ID-ANLE-S5000

Waste Stream Number: ID-ANLE-S5000
Site: Idaho National Laboratory
Lot Number: 4
Number of Drums: 40
Preparation Date: 1/19/10

ANALYTE	Valid N	Maximum Value	Mean	Std. Deviation	UCL90 (Upper 80.00% Confidence Interval)	PRQL Values	SW (Highest W Statistic) Plus P-Values
10 PRQL, No Transform	********	**********	**********	**********	**********	10	**********
10 PRQL, Log Transform	********	**********	**********	**********	**********	2.3026	**********
10 PRQL, Sq. Root Transform	********	**********	**********	**********	**********	3.1623	**********
100 PRQL, No Transform	********	**********	**********	**********	**********	100	**********
100 PRQL, Log Transform	********	**********	**********	**********	**********	4.6052	**********
100 PRQL, Sq. Root Transform	********	**********	**********	**********	**********	10	**********
Benzene, No Transform	40	1.10000	0.20894	0.269014	0.26439	10	0.6974, p = 0.0000
Benzene, Sq Root Transform	40	1.04881	0.38837	0.244131	0.43869	3.1623	0.8236, p = 0.0000
Bromoform, No Transform	40	0.09500	0.01805	0.016595	0.02147	10	0.5348, p = 0.000
Bromoform, Sq Root Transform	40	0.30822	0.12669	0.045291	0.13602	3.1623	0.644, p = 0.0000
Carbon Tetrachloride, No Transform	40	0.39000	0.04754	0.064321	0.06080	10	0.4792, p = 0.000
Carbon Tetrachloride, Sq Root Transform	40	0.62450	0.19663	0.095408	0.21629	3.1623	0.7182, p = 0.0000
Chlorobenzene, No Transform	40	0.15500	0.04075	0.026981	0.04631	10	0.612, p = 0.0000
Chlorobenzene, Sq Root Transform	40	0.39370	0.19481	0.053574	0.20585	3.1623	0.6938, p = 0.0000
Chloroform, No Transform	40	0.85000	0.06808	0.133637	0.09562	10	0.3261, p = 0.000
Chloroform, Sq Root Transform	40	0.92195	0.22485	0.134041	0.25248	3.1623	0.5452, p = 0.000
Cyclohexane, No Transform	40	0.96000	0.10413	0.201189	0.14559	10	0.4322, p = 0.000
Cyclohexane, Sq Root Transform	40	0.97980	0.26204	0.190709	0.30135	3.1623	0.6091, p = 0.0000
1,1-Dichloroethane, No Transform	40	4.40000	0.19976	0.700836	0.34422	10	0.2513, p = 0.000
1,1-Dichloroethane, Sq Root Transform	40	2.09762	0.30225	0.333450	0.37098	3.1623	0.4485, p = 0.000

Data Verification Sheet
Supplemental to UCL90 Evaluation Form
(Attachment 2)

Prepared by
Hillari J. Neely

INL, Lot 4, 40 drums
ID-ANLE-S5000

ANALYTE	Valid N	Maximum Value	Mean	Std. Deviation	UCL90 (Upper 80.00% Confidence Interval)	PRQL Values	SW (Highest W Statistic) Plus P-Values
1,2-Dichloroethane, No Transform	40	0.15000	0.04738	0.025914	0.05272	10	0.7468, p = 0.0000
1,2-Dichloroethane, Sq Root Transform	40	0.38730	0.21151	0.052027	0.22223	3.1623	0.8516, p = 0.0001
1,1-Dichloroethylene, No Transform	40	0.12000	0.04426	0.022623	0.04893	10	0.8301, p = 0.0000
1,1-Dichloroethylene, Sq Root Transform	40	0.34641	0.20455	0.049859	0.21482	3.1623	0.9023, p = 0.002
cis-1,2-Dichloroethylene, No Transform	40	0.13500	0.03824	0.020576	0.04248	10	0.6944, p = 0.0000
cis-1,2-Dichloroethylene, Sq Root Transform	40	0.36742	0.19011	0.046371	0.19967	3.1623	0.8163, p = 0.0000
trans 1,2-Dichloroethylene, No Transform	40	0.10500	0.03759	0.019715	0.04165	10	0.7855, p = 0.0000
trans 1,2-Dichloroethylene, Sq Root Transform	40	0.32404	0.18863	0.045341	0.19798	3.1623	0.8732, p = 0.000
Ethyl benzene, No Transform	40	1.20000	0.15234	0.216487	0.19696	10	0.6081, p = 0.0000
Ethyl benzene, Sq Root Transform	40	1.09545	0.33121	0.209114	0.37432	3.1623	0.7915, p = 0.0000
Ethyl Ether, No Transform	40	0.18500	0.05758	0.032996	0.06438	10	0.7929, p = 0.0000
Ethyl Ether, Sq Root Transform	40	0.43012	0.23212	0.061576	0.24481	3.1623	0.8579, p = 0.000
Methylene chloride, No Transform	40	0.96000	0.10228	0.162113	0.13569	10	0.4756, p = 0.000
Methylene chloride, Sq Root Transform	40	0.97980	0.27643	0.162867	0.31000	3.1623	0.6572, p = 0.0000
1,1,2,2-Tetrachloroethane, No Transform	40	0.23500	0.03845	0.040601	0.04682	10	0.4977, p = 0.000
1,1,2,2-Tetrachloroethane, Sq Root Transform	40	0.48477	0.18258	0.072416	0.19751	3.1623	0.612, p = 0.0000
Tetrachloroethylene, No Transform	40	2.00000	0.13654	0.409131	0.22087	10	0.3273, p = 0.000
Tetrachloroethylene, Sq Root Transform	40	1.41421	0.23912	0.285297	0.29793	3.1623	0.4679, p = 0.000
Toluene, No Transform	40	20.00000	3.07581	5.727431	4.25637	10	0.5912, p = 0.0000
Toluene, Sq Root Transform	40	4.47214	1.15865	1.333341	1.43348	3.1623	0.7144, p = 0.0000
1,1,1-Trichloroethane, No Transform	40	3.60000	0.14070	0.572537	0.25871	10	0.2177, p = 0.000
1,1,1-Trichloroethane, Sq Root Transform	40	1.89737	0.23309	0.297626	0.29444	3.1623	0.3707, p = 0.000
Trichloroethylene, No Transform	40	1.40000	0.09919	0.232976	0.14721	10	0.3813, p = 0.000
Trichloroethylene, Sq Root Transform	40	1.18322	0.24075	0.205626	0.28314	3.1623	0.5798, p = 0.0000

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Data Verification Sheet
Supplemental to UCL90 Evaluation Form
(Attachment 2)

Prepared by
Hillari J. Neely

INL, Lot 4, 40 drums
ID-ANLE-S5000

ANALYTE	Valid N	Maximum Value	Mean	Std. Deviation	UCL90 (Upper 80.00% Confidence Interval)	PRQL Values	SW (Highest W Statistic) Plus P-Values
Freon 113, No Transform	40	1.50000	0.07735	0.238862	0.12659	10	0.2584, p = 0.000
Freon 113, Sq Root Transform	40	1.22474	0.20643	0.188754	0.24533	3.1623	0.4353, p = 0.000
1,2,4-Trimethylbenzene, No Transform	40	1.60000	0.11875	0.260062	0.17235	10	0.371, p = 0.000
1,2,4-Trimethylbenzene, Sq Root Transform	40	1.26491	0.27851	0.205524	0.32087	3.1623	0.5957, p = 0.0000
1,3,5-Trimethylbenzene, No Transform	40	0.49000	0.06248	0.080949	0.07916	10	0.4938, p = 0.000
1,3,5-Trimethylbenzene, Sq Root Transform	40	0.70000	0.22605	0.108009	0.24832	3.1623	0.6682, p = 0.0000
m,p-Xylenes, No Transform	40	5.50000	0.55128	0.983914	0.75408	10	0.5711, p = 0.0000
m,p-Xylenes, Sq Root Transform	40	2.34521	0.55605	0.498291	0.65876	3.1623	0.7877, p = 0.0000
o-Xylene, No Transform	40	6.00000	0.36426	1.018103	0.57412	10	0.3384, p = 0.000
o-Xylene, Sq Root Transform	40	2.44949	0.42409	0.434898	0.51374	3.1623	0.5967, p = 0.0000
Acetone, No Transform	40	52.00000	10.79600	11.128173	13.08978	100	0.7802, p = 0.0000
Acetone, Sq Root Transform	40	7.21110	2.92270	1.520392	3.23609	10	0.9483, p = 0.066
1-Butanol, No Transform	40	8.60000	0.69705	1.598015	1.02644	100	0.3967, p = 0.000
1-Butanol, Sq Root Transform	40	2.93258	0.63687	0.546737	0.74956	10	0.6715, p = 0.0000
Methanol, No Transform	40	10.50000	6.81250	1.243895	7.06890	100	0.9031, p = 0.002
Methanol, Sq Root Transform	40	3.24037	2.59991	0.233025	2.64795	10	0.9162, p = 0.005
Methyl ethyl ketone, No Transform	40	5.30000	1.25820	1.398716	1.54651	100	0.7731, p = 0.0000
Methyl ethyl ketone, Sq Root Transform	40	2.30217	0.96653	0.576486	1.08535	10	0.9098, p = 0.003
Methyl isobutyl ketone, No Transform	40	0.80000	0.17956	0.206239	0.22207	100	0.7704, p = 0.0000
Methyl isobutyl ketone, Sq Root Transform	40	0.89443	0.36001	0.226349	0.40667	10	0.8304, p = 0.0000
Chloromethane, No Transform	40	5.20000	0.49963	0.963076	0.69814	10	0.5281, p = 0.000
Chloromethane, Sq Root Transform	40	2.28035	0.53635	0.466247	0.63246	3.1623	0.7332, p = 0.0000
Carbon Disulfide, No Transform	40	0.45000	0.07579	0.071365	0.09050	10	0.5889, p = 0.0000
Carbon Disulfide, Sq Root Transform	40	0.67082	0.25858	0.095664	0.27830	3.1623	0.794, p = 0.0000
1.2-Dichloropropane, No Transform	40	0.09000	0.02919	0.016702	0.03263	10	0.8239, p = 0.0000
1.2-Dichloropropane, Sq Root Transform	40	0.30000	0.16521	0.044069	0.17429	3.1623	0.9035, p = 0.002

HSG 069

CCP Waste Stream Lot Headspace Gas Tentatively Identified Compounds

WSPF Number: ID-ANLE-S5000 Lot Number: 4

Number of samples in this lot: 10

The following TICs were detected during Headspace Gas Analysis of this Waste Stream Lot:

Tentatively Identified Compound	CAS Number	Number of Samples Containing TIC In This Lot	TIC Included in 40CFR261 Appendix VIII Yes/No
1,4-Dioxane	123-91-1	0	Yes
2-Methyl-1-propanol	78-83-1	0	Yes

Approved By:

Signature	Hillari J. Neely Print Name	2/18/2010 Date

HSG
610

CCP Waste Stream Headspace Gas Tentatively Identified Compounds

WSPF Number: ID-ANLE-S5000 Lot Number: 1 through 4

Number of samples evaluated to date in the Waste Stream: 40

The following TICs were detected during Headspace Gas Analysis of this Waste Stream:

Tentatively Identified Compound	CAS Number	Maximum Observed Estimated Concentrations (ppmv)	Total Number of Samples Containing TIC	% TIC Detected in Waste Stream	Greater than 25% Yes
1,4-Dioxane	123-91-1	0.04	1	2.50%	No
2-Methyl-1-propanol	78-83-1	0.58	3	7.50%	No

Data Supports EPA Hazardous Waste Numbers Assigned by AK Yes: X No: ____

If no, describe the basis for assigning the EPA Hazardous Waste Numbers:

Approved By: Signature

Hillari J. Neely
Print Name

2/18/2010
Date

HSG
011

CCP Site Project Manager Data Evaluation Narrative

WSPF Number: ID-ANLE-S5000 Waste Stream Lot Number 4

All Headspace Gas Data for the containers in this Lot has been Validated and Verified and found to be acceptable, and meet the requirements of the WIPP WAP.

Approved By:

Signature	Hillari J. Neely	2/18/2010
	Print Name	Date

HSG 012

URS

CP:10:01538
UFC: 5900.00

Washington TRU Solutions LLC

INTER-OFFICE CORRESPONDENCE

DATE: August 12, 2010

FROM: T. R. Gatliffe LOCATION: Certification

TO: CCP Records Custodian GSA-212 LOCATION: Retrieval, Characterization and Transportation

SUBJECT: SUBSEQUENT ~~HEADSPACE GAS~~ SOLID TRG 8/16/10 RANDOM SAMPLE SELECTION CANDIDATE MEMORANDUM FOR THE FIFTH RANDOM SAMPLE LOT OF CONTAINERS OF SUBSURFACE DISPOSAL AREA SOIL WASTE, WASTE STREAM ID-SDA-SOIL, BEING CHARACTERIZED BY THE CENTRAL CHARACTERIZATION PROJECT AT THE IDAHO NATIONAL LABORATORY

Per *CCP Random Selection of Containers for Solids and Headspace Gas Sampling and Analysis*, procedure CCP-TP-162, the accompanying file attachment provides the Subsequent Solids Selection Candidate Listing for Random Selection Lot 5 (RS Lot 5) of Waste Stream ID-SDA-SOIL being characterized by the Central Characterization Project (CCP) at the Idaho National Laboratory. This fifth random selection lot consists of up to 3,426 additional containers that have been projected to be potentially generated during the remaining retrieval and packaging of targeted waste from the Subsurface Disposal Area (SDA). Because these containers have not yet been generated, no actual container identification numbers are known and all are listed only with indeterminate container identifiers, denoted "S4200-2975" through "S4200-6400", continuing the sequential numbering initiated in RS Lot 2 for this waste stream. Specific container identification numbers will be associated with these indeterminate identifiers as waste containers are generated in the Advanced Retrieval Project (ARP). The CCP Program Office will track the container number/indeterminate identifier association and advise the CCP-ARP staff as specific containers are scheduled for sampling.

The five specific container identifiers randomly selected for the sample to be used for the required resolution of Environmental Protection Agency hazardous waste number assignment and 10 contingency container listings selected for the sample if the calculated required sample size exceeds the five preliminary selections or any of the preliminary selections fail to qualify for sampling for this waste stream are identified below and in the accompanying file attachment. The attachment lists all containers within the lot and the correlation of randomly selected numbers with each container identifier number. A listing of currently selected and contingency containers will be maintained in the "Random Sort Lots" directory on the CCP ftp://q.wipp.ws/ web site.

COPY

ORIGINAL

Waste Stream ID-SDA-SOIL Solids RS Lot 5 Random Sample							
Selected Containers				Contingency Containers			
Order	Indeterminate / Container ID		Rand. Nr.	Order	Indeterminate / Container ID		Rand. Nr.
(1)	S4200-5165 /	TBD	0.0000750	(6)	S4200-6166 /	TBD	0.0019554
(2)	S4200-5187 /	TBD	0.0007228	(7)	S4200-5184 /	TBD	0.0019612
(3)	S4200-4806 /	TBD	0.0011211	(8)	S4200-3928 /	TBD	0.0025835
(4)	S4200-5626 /	TBD	0.0014734	(9)	S4200-6016 /	TBD	0.0027020
(5)	S4200-4636 /	TBD	0.0015075	(10)	S4200-4421 /	TBD	0.0030922
				(11)	S4200-4896 /	TBD	0.0032494
				(12)	S4200-6097 /	TBD	0.0034591
				(13)	S4200-2985 /	TBD	0.0039430
				(14)	S4200-3702 /	TBD	0.0043999
				(15)	S4200-5793 /	TBD	0.0048143

If further information is needed, I may be contacted at Extension 7563.

TRG:yhs

Attachment

Cc: WTS
J. W. Houghton ED
R. P. Kantrowitz ED
D. W. Moody ED
M. Pearcy ED
W. F. Verlanic ED
M. R. Walentine ED
C. M. Weston ED

WRES
B. J. Broomfield ED
R. R. Chavez ED

Parent drum	VE/Pack Date	VE BDR	Matrix	Comment	Daughter Drum	Daughter VE/Pack Date	Daughter VE BDR	Daughter Matrix
ARP23897	10/18/2010	IN-ARP-VE-002203	S4200	Contingency # 1	ARP30018	2/1/2012	IN-ARP-VE-002705	S4200
ARP26887	4/25/2011	IN-ARP-VE-002428	S4200	Contingency # 2	ARP30081	2/2/2012	IN-ARP-VE-002706	S4200
ARP24217	11/8/2010	IN-ARP-VE-002224	S4200	Contingency # 3	ARP30100	1/31/2012	IN-ARP-VE-002704	S4200
ARP26744	4/26/2011	IN-ARP-VE-002432	S4200	Contingency # 4	ARP30103	1/31/2012	IN-ARP-VE-002704	S4200
ARP27237	5/18/2011	IN-ARP-VE-002470	S4200	Contingency # 5	ARP30014	2/2/2012	IN-ARP-VE-002706	S4200
ARP26294	5/17/2011	IN-ARP-VE-002467	S4200	Contingency # 6				
ARP28226	7/20/2011	IN-ARP-VE-002541	S4200	Contingency # 7				
ARP30008	11/21/2011	IN-ARP-VE-002697	S4200	Contingency # 8				
ARP25366	5/16/2011	IN-ARP-VE-002463	S4200	Contingency # 9				
ARP60050	4/19/2011	IN-ARP-VE-002419	S4200	Contingency #10				

DIVIDER

PAGE

Washington
TRU Solutions LLC

CP:06:01566
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: November 16, 2006

FROM: T. R. Gatliffe LOCATION: Retrieval, Characterization & Transportation

TO: CCP Records Custodian GSA-103 LOCATION: Retrieval, Characterization & Transportation

SUBJECT: SOLIDS RANDOM SAMPLE SELECTION MEMORANDUM FOR THE FIRST RANDOM SAMPLE LOT OF CONTAINERS OF ROCKY FLATS IMMOBILIZED ORGANIC LIQUIDS WASTE, WASTE STREAM ID-RF-3150-A, BEING CHARACTERIZED BY THE CENTRAL CHARACTERIZATION PROJECT AT THE ADVANCED MIXED WASTE TREATMENT PROJECT AT THE IDAHO NATIONAL LABORATORY

Per the *CCP Random Selection of Containers for Solids Sampling and Analysis* procedure, CCP-TP-161, the accompanying file provides the Solids Random Selection Listing for Lot 1 of waste stream ID-RF-S3150-A being characterized by the Central Characterization Project (CCP) at the Idaho National Laboratory (INL). This initial lot consists of 860 containers that had been identified in the Acceptable Knowledge Tracking Database as of April 27, 2006. The random selection performed at that time and reported in Interoffice Correspondence serial CP:06:01190 was performed using the same methodology directed in CCP-TP-161 and is reproduced for this selection memorandum. All other containers in this waste stream will be subject to potential selection for headspace gas sampling as component members of subsequent lots and will be addressed separately.

The five containers specifically identified for the sample to be used for the required resolution of EPA hazardous waste number assignment and contingency containers selected for the sample if the calculated required sample size exceeds the five preliminary selections are identified below and in the accompanying file enclosure. The enclosure also lists all containers within the lot and the correlation of randomly selected numbers with each Container ID number.

Headspace Gas Random Sample Selection Listing – Lot 1 – Waste Stream ID-RF-S3150-A

#	Container	Rand. Nr.	#	Container	Rand. Nr.	#	Container	Rand. Nr.
1	10018503	0.0002966	3	10018875	0.0026501	5	10018867	0.0029364
2	10016886	0.0005809	4	10018178	0.0027823			

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Contingency Headspace Gas Random Sample Selection Listing – Lot 1 – Waste Stream ID-RF-S3150-A

#	Container	Rand. Nr.	#	Container	Rand. Nr.	#	Container	Rand. Nr.
6	10018183	0.0056880	11	10016793	0.0108553	16	10018685	0.0165435
7	10017407	0.0060188	12	10017279	0.0132254	17	10017439	0.0191701
8	10018029	0.0068734	13	10017495	0.0138679	18	10017438	0.0206723
9	10017521	0.0080269	14	10016015	0.0143695	19	10017715	0.0211687
10	10018840	0.0092264	15	10017444	0.0144445	20	10017562	0.0246960

If further information is needed, I may be contacted at (505) 234-7563.

TRG:jeh

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Solids Random Sample Selection Listing

Waste Stream: ID-RF-S3150-A **Lot Number: 1** **Site: Idaho National Laboratory**

Headspace Gas Random Sample Selection Listing

	Container ID	Rand. Nr.		Container ID	Rand. Nr.		Container ID	Rand. Nr.
1	10018503	0.0002966	3	10018875	0.0026501	5	10018867	0.0029364
2	10016886	0.0005809	4	10018178	0.0027823			

Additional Selections if Calculated Value for *n* Exceeds 10

6	10018183	0.0056880	11	10016793	0.0108553	16	10018685	0.0165435
7	10017407	0.0060188	12	10017279	0.0132254	17	10017439	0.0191701
8	10018029	0.0068734	13	10017495	0.0138679	18	10017438	0.0206723
9	10017521	0.0080269	14	10016015	0.0143695	19	10017715	0.0211687
10	10018840	0.0092264	15	10017444	0.0144445	20	10017562	0.0246960

Container Population Listing

Container ID	Rand. Nr.	Container ID	Rand. Nr.	Container ID	Rand. Nr.
IDRF074317784	0.4481535	10018875	0.0026501	10018838	0.8613461
IDRF002500526	0.9312049	10018874	0.6242374	10018728	0.3140631
10033758	0.2903488	10018873	0.6020402	10018727	0.4933587
10033757	0.2844085	10018872	0.2811563	10018726	0.1799661
10033756	0.2129529	10018871	0.7999263	10018725	0.3081889
10033755	0.2426387	10018870	0.7088232	10018724	0.6651758
10033754	0.6725069	10018869	0.4890587	10018723	0.0618930
10033753	0.7971982	10018868	0.8813089	10018722	0.5590409
10033752	0.4706096	10018867	0.0029364	10018721	0.7830899
10033751	0.2889311	10018866	0.9640334	10018720	0.0389286
10033750	0.7571752	10018865	0.7719523	10018719	0.6615136
10031734	0.4371948	10018864	0.3987098	10018718	0.6741490
10027456	0.5796822	10018863	0.7756310	10018717	0.8832494
10027455	0.6257371	10018862	0.4309808	10018716	0.2198965
10027454	0.1639324	10018861	0.6243002	10018715	0.2815834
10027453	0.0873901	10018860	0.3764676	10018714	0.1089226
10023832	0.3837480	10018859	0.1973661	10018713	0.9565625
10023791	0.3323814	10018858	0.7272907	10018712	0.5935025
10023698	0.1801856	10018857	0.7428954	10018711	0.6792591
10020692	0.9857057	10018856	0.9922860	10018710	0.3039081
10018913	0.2039038	10018855	0.7126416	10018709	0.4604312
10018912	0.6300064	10018854	0.0659926	10018708	0.1263477
10018911	0.4356271	10018853	0.1964971	10018707	0.1850469
10018910	0.2270418	10018852	0.0256945	10018706	0.2856980
10018909	0.9465468	10018851	0.8823153	10018705	0.2283347
10018887	0.0719739	10018850	0.3594776	10018704	0.1238074
10018886	0.3950410	10018849	0.7122146	10018703	0.7335564
10018885	0.6762212	10018848	0.8590937	10018702	0.9372373
10018884	0.8083319	10018847	0.5997031	10018701	0.0781452
10018883	0.7331668	10018846	0.7642421	10018700	0.8095172
10018882	0.4807055	10018845	0.7720086	10018699	0.3507521
10018881	0.0393589	10018844	0.1038286	10018698	0.9234548
10018880	0.0936872	10018843	0.5123920	10018696	0.2734142
10018879	0.2823655	10018842	0.6456583	10018695	0.9887770
10018878	0.7812854	10018841	0.3273800	10018694	0.3561740
10018877	0.5886466	10018840	0.0092264	10018693	0.1828532
10018876	0.3798034	10018839	0.4153654	10018692	0.9379968

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Solids Random Sample Selection Listing

Container Population Listing

Container ID	Rand. Nr.
10018691	0.3122061
10018690	0.2472603
10018689	0.5873785
10018688	0.5951716
10018687	0.5069709
10018686	0.1831619
10018685	0.0165435
10018684	0.7417879
10018683	0.7289041
10018682	0.1498255
10018681	0.7650665
10018680	0.9414493
10018679	0.2177795
10018678	0.1501854
10018677	0.6124485
10018676	0.8764448
10018598	0.4163288
10018597	0.4196619
10018596	0.8932623
10018595	0.1751971
10018594	0.2194556
10018593	0.5787514
10018592	0.4373507
10018591	0.9496933
10018590	0.9559378
10018589	0.2209688
10018587	0.1591539
10018585	0.9364961
10018584	0.4883701
10018583	0.3170256
10018582	0.3606610
10018581	0.5779441
10018580	0.7546304
10018579	0.2940448
10018578	0.8594561
10018577	0.7241221
10018576	0.3190810
10018575	0.4025710
10018574	0.9645163
10018573	0.7747611
10018572	0.6857805
10018571	0.3522149
10018570	0.2174985
10018569	0.9231653
10018568	0.7331819
10018567	0.9904705
10018566	0.1871567
10018565	0.9789030
10018564	0.5441426
10018563	0.6931867
10018534	0.7379907
10018533	0.3188982
10018532	0.7692545
10018531	0.9247664
10018530	0.8115095
10018529	0.3277359
10018528	0.9130170
10018527	0.3265479
10018526	0.7238075
10018525	0.7392122
10018521	0.3191671
10018520	0.9619732
10018519	0.8356904
10018518	0.2151696
10018517	0.6269825
10018516	0.0613560
10018515	0.8237038
10018514	0.7536497
10018513	0.8090043
10018512	0.4286351
10018511	0.4459141
10018510	0.9040479
10018509	0.9064992
10018508	0.5948403
10018507	0.5883414
10018506	0.4317676
10018505	0.7288613
10018504	0.2948615
10018503	0.0002966
10018502	0.8533274
10018501	0.8788227
10018500	0.2859607
10018499	0.6273627
10018498	0.9278521
10018497	0.9219958
10018496	0.4703994
10018495	0.9538671
10018494	0.7708636
10018493	0.1756571
10018492	0.4915604
10018491	0.7882993
10018490	0.0547777
10018489	0.5536062
10018488	0.3309780
10018487	0.3079706
10018486	0.6160341
10018485	0.6342123
10018474	0.2913981
10018457	0.1966768
10018325	0.1041049
10018324	0.5651933
10018321	0.6301999
10018320	0.5174177
10018319	0.9777529
10018288	0.6712015
10018287	0.2902926
10018286	0.3017671
10018285	0.0270531
10018284	0.0323576
10018280	0.1658182
10018279	0.3993618
10018278	0.7904659
10018277	0.7681667
10018276	0.6363837
10018275	0.4296603
10018274	0.0488007
10018273	0.1562341
10018272	0.7226218
10018271	0.0769724
10018270	0.0970922
10018269	0.4139577
10018268	0.0559027
10018267	0.3306575
10018266	0.8161800
10018265	0.6857456
10018264	0.7996980
10018191	0.5314074
10018190	0.5619950
10018189	0.3740325
10018188	0.7092970
10018187	0.4415753
10018186	0.3116483
10018185	0.8413889
10018184	0.9380916
10018183	0.0056880
10018182	0.1877679
10018181	0.0387841
10018180	0.7294058
10018179	0.1006245
10018178	0.0027823
10018177	0.3896702
10018176	0.2832878
10018175	0.0314129
10018174	0.4360579
10018173	0.2456449
10018172	0.2827668
10018171	0.2050860
10018170	0.9257111
10018169	0.4835913
10018168	0.1994806

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Solids Random Sample Selection Listing

Container Population Listing

Container ID	Rand. Nr.	Container ID	Rand. Nr.	Container ID	Rand. Nr.
10018167	0.5108672	10018028	0.2119217	10017845	0.0592109
10018098	0.2685332	10018027	0.3405836	10017844	0.4377839
10018097	0.5707372	10018026	0.5493409	10017843	0.4713756
10018096	0.5866905	10018025	0.4840481	10017842	0.1619814
10018076	0.7902678	10018024	0.2601730	10017841	0.7626130
10018075	0.0679812	10017890	0.4494252	10017840	0.9369484
10018074	0.5115267	10017889	0.9378593	10017839	0.3956053
10018073	0.8305354	10017888	0.3197318	10017838	0.0691000
10018072	0.7462108	10017887	0.7850797	10017837	0.7853833
10018071	0.8129488	10017886	0.8345888	10017835	0.9170347
10018070	0.6057029	10017885	0.0556190	10017723	0.7595942
10018069	0.9663238	10017884	0.4128269	10017722	0.8038292
10018068	0.1825297	10017883	0.9946091	10017721	0.8670112
10018067	0.2618125	10017882	0.9066704	10017720	0.4604809
10018066	0.1111133	10017881	0.1894269	10017719	0.3078151
10018065	0.8285632	10017880	0.3840389	10017718	0.9735009
10018064	0.9233467	10017879	0.9508465	10017717	0.6528113
10018063	0.4998273	10017878	0.0495440	10017716	0.5316034
10018062	0.5336952	10017877	0.2179015	10017715	0.0211687
10018061	0.1537058	10017876	0.7190137	10017714	0.8929851
10018060	0.1754608	10017875	0.6682700	10017713	0.4444574
10018059	0.3985113	10017874	0.4458549	10017712	0.3736092
10018058	0.3515296	10017873	0.6566760	10017711	0.6018039
10018057	0.2966362	10017872	0.0836612	10017710	0.3708461
10018056	0.5960474	10017871	0.8858212	10017709	0.2598499
10018054	0.6913285	10017870	0.9936387	10017708	0.3732046
10018053	0.3108047	10017869	0.2354205	10017707	0.5160043
10018052	0.9021630	10017868	0.6301171	10017706	0.9227297
10018051	0.4091144	10017867	0.7442425	10017705	0.1171686
10018049	0.5779070	10017866	0.9243804	10017704	0.0631945
10018048	0.9592677	10017865	0.6197560	10017703	0.8698917
10018047	0.6621174	10017864	0.9522572	10017702	0.9036800
10018046	0.6279427	10017863	0.5179416	10017701	0.8715860
10018045	0.9570078	10017862	0.9781309	10017700	0.1998909
10018044	0.9607757	10017861	0.5857408	10017699	0.3503623
10018043	0.0533408	10017860	0.6153077	10017698	0.3751696
10018042	0.5785139	10017859	0.9530041	10017697	0.3965610
10018041	0.9732905	10017858	0.3879881	10017696	0.2084898
10018040	0.6571939	10017857	0.9347438	10017695	0.2261956
10018039	0.2319166	10017856	0.2676896	10017694	0.6859322
10018038	0.4688248	10017855	0.1561518	10017693	0.6394410
10018037	0.2834737	10017854	0.3263431	10017692	0.6912792
10018036	0.2487068	10017853	0.7433181	10017691	0.9444169
10018035	0.5144305	10017852	0.4798939	10017690	0.4414231
10018034	0.7036156	10017851	0.5088403	10017689	0.0733806
10018033	0.3434548	10017850	0.0445341	10017688	0.5737365
10018032	0.3339323	10017849	0.5484688	10017687	0.0534173
10018031	0.1366649	10017848	0.8660623	10017686	0.2981328
10018030	0.7972631	10017847	0.1995464	10017685	0.6256484
10018029	0.0068734	10017846	0.7890706	10017684	0.4095904

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Solids Random Sample Selection Listing

Container Population Listing

Container ID	Rand. Nr.	Container ID	Rand. Nr.	Container ID	Rand. Nr.
10017683	0.8194105	10017606	0.2749781	10017556	0.3379809
10017682	0.5484670	10017605	0.2379768	10017555	0.7679971
10017681	0.2184812	10017604	0.2874628	10017554	0.5223740
10017680	0.4785367	10017603	0.7347073	10017553	0.8779634
10017679	0.4619445	10017602	0.7341670	10017552	0.6271611
10017678	0.3434949	10017601	0.2943004	10017551	0.8443098
10017677	0.3746204	10017600	0.8025557	10017529	0.9373986
10017676	0.3960706	10017599	0.1568493	10017528	0.3158158
10017675	0.3536120	10017598	0.0323516	10017527	0.7421711
10017674	0.8234177	10017597	0.7004550	10017526	0.4562487
10017673	0.4264276	10017596	0.4531098	10017525	0.4050303
10017672	0.6149850	10017595	0.0563819	10017524	0.2128965
10017671	0.1101318	10017594	0.7238369	10017523	0.7119978
10017670	0.9042914	10017593	0.9235520	10017522	0.5747618
10017669	0.7947447	10017592	0.7647127	10017521	0.0080269
10017668	0.4073719	10017591	0.7266297	10017520	0.4454144
10017667	0.4092400	10017590	0.7993624	10017519	0.7446329
10017666	0.3301950	10017589	0.4292986	10017518	0.5515946
10017665	0.5606163	10017588	0.5759348	10017517	0.5376616
10017664	0.5040805	10017587	0.9574601	10017516	0.8321688
10017663	0.7885895	10017586	0.4627964	10017515	0.7899679
10017662	0.4694544	10017585	0.6581291	10017514	0.6244733
10017661	0.9714246	10017584	0.8906464	10017513	0.0699077
10017660	0.6818738	10017583	0.2704566	10017512	0.0455079
10017659	0.2647137	10017582	0.1999633	10017511	0.3472163
10017658	0.3888533	10017581	0.5993015	10017510	0.8331437
10017657	0.8241499	10017580	0.4110887	10017509	0.6787301
10017656	0.4576900	10017579	0.3944246	10017508	0.9183531
10017655	0.0517625	10017578	0.8457119	10017507	0.5456542
10017654	0.1525827	10017577	0.3252905	10017506	0.4686113
10017653	0.3531700	10017576	0.5096604	10017505	0.3436769
10017652	0.6376498	10017575	0.6684440	10017504	0.2482288
10017651	0.5680692	10017574	0.9878166	10017503	0.8392374
10017650	0.5215636	10017573	0.4716584	10017502	0.7005682
10017647	0.0525317	10017572	0.4290357	10017501	0.0269871
10017646	0.0757585	10017571	0.4681870	10017500	0.5525177
10017645	0.5646559	10017570	0.4687113	10017499	0.6151824
10017619	0.2325144	10017569	0.2959638	10017498	0.7578479
10017618	0.2704979	10017568	0.2791177	10017497	0.4518536
10017617	0.6377754	10017567	0.1950232	10017496	0.7759557
10017616	0.5240391	10017566	0.7283018	10017495	0.0138679
10017615	0.6976372	10017565	0.1563928	10017494	0.3796849
10017614	0.6755649	10017564	0.6556487	10017493	0.5230176
10017613	0.0445562	10017563	0.6697392	10017492	0.9014857
10017612	0.4195123	10017562	0.0246960	10017491	0.5508962
10017611	0.8338894	10017561	0.7977197	10017490	0.7894023
10017610	0.8634335	10017560	0.9982647	10017489	0.4666693
10017609	0.1503382	10017559	0.7495831	10017488	0.6249206
10017608	0.9003350	10017558	0.7274319	10017487	0.8922352
10017607	0.3440693	10017557	0.7919940	10017486	0.2298185

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Solids Random Sample Selection Listing

Container Population Listing

Container ID	Rand. Nr.	Container ID	Rand. Nr.	Container ID	Rand. Nr.
10017485	0.1621475	10017434	0.1102949	10017305	0.5834237
10017484	0.8713571	10017432	0.5861239	10017304	0.8377925
10017483	0.0783282	10017426	0.7542849	10017303	0.5773092
10017482	0.9611604	10017425	0.6640793	10017302	0.8664621
10017481	0.5923568	10017424	0.0597147	10017301	0.1953710
10017480	0.5791892	10017423	0.8242464	10017298	0.8511469
10017479	0.1502601	10017422	0.3054216	10017297	0.2309700
10017478	0.2298902	10017421	0.8865426	10017296	0.0691249
10017477	0.3999289	10017420	0.4936130	10017295	0.8380960
10017476	0.6598162	10017419	0.9094502	10017294	0.8514461
10017475	0.1295051	10017418	0.2742615	10017293	0.6551193
10017474	0.0472640	10017417	0.8043189	10017292	0.2068009
10017473	0.3007930	10017416	0.8671659	10017291	0.5685527
10017472	0.0480718	10017415	0.4976741	10017290	0.5485544
10017471	0.0739545	10017414	0.4849077	10017289	0.2589879
10017470	0.8877570	10017413	0.5727305	10017288	0.0425287
10017469	0.6059190	10017412	0.2846750	10017287	0.2658413
10017468	0.9803899	10017411	0.9187924	10017286	0.3275622
10017467	0.6015703	10017410	0.8483367	10017285	0.0890575
10017466	0.4726906	10017409	0.5958848	10017284	0.4497347
10017465	0.2568276	10017408	0.4550529	10017283	0.3656129
10017464	0.9064796	10017407	0.0060188	10017282	0.1668486
10017463	0.6995230	10017406	0.0504882	10017281	0.8709012
10017462	0.6255926	10017405	0.9542860	10017280	0.2252024
10017461	0.6357391	10017404	0.8983086	10017279	0.0132254
10017460	0.1100512	10017403	0.0968130	10017278	0.9185820
10017459	0.8964165	10017402	0.5188954	10017277	0.3767116
10017458	0.6790184	10017344	0.3321095	10017249	0.7481306
10017457	0.8708049	10017343	0.3213014	10017248	0.6594910
10017456	0.9295152	10017342	0.1625191	10017247	0.4940493
10017455	0.2890866	10017341	0.3644195	10017246	0.7984559
10017454	0.2052843	10017340	0.8269175	10017245	0.4125961
10017453	0.1744038	10017339	0.3608166	10017244	0.6635820
10017452	0.5561134	10017338	0.6331723	10017243	0.9322775
10017451	0.2972107	10017337	0.8265878	10017242	0.5911633
10017450	0.3932693	10017336	0.2633060	10017241	0.1946657
10017449	0.0792790	10017320	0.4939203	10017240	0.7241755
10017448	0.0259277	10017319	0.0894688	10017239	0.8431821
10017447	0.1447454	10017317	0.4488180	10017238	0.0567431
10017446	0.7521116	10017316	0.8904362	10017237	0.1233628
10017445	0.6351842	10017315	0.1864064	10017236	0.7636904
10017444	0.0144445	10017314	0.2376747	10017235	0.6230505
10017443	0.4017332	10017313	0.1755580	10017234	0.8061578
10017442	0.6630633	10017312	0.3485912	10017233	0.4574375
10017441	0.0429624	10017311	0.5267272	10017232	0.2330211
10017440	0.5929794	10017310	0.5556439	10017231	0.7826519
10017439	0.0191701	10017309	0.7118375	10017230	0.6012114
10017438	0.0206723	10017308	0.1059175	10017229	0.7129401
10017437	0.7739796	10017307	0.9525655	10017228	0.7239495
10017436	0.8345578	10017306	0.4985629	10017227	0.1609645

Enclosure
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Solids Random Sample Selection Listing

Container Population Listing

Container ID	Rand. Nr.
10017226	0.1436361
10017225	0.6005445
10017217	0.8623801
10017216	0.6586745
10017215	0.0725168
10017214	0.8598588
10017213	0.4968940
10017212	0.8546200
10017211	0.4770899
10017210	0.8919244
10017209	0.6987873
10017208	0.0786356
10017207	0.4849435
10017206	0.2078422
10017205	0.0899862
10017204	0.8768979
10017203	0.6776686
10017202	0.6577754
10017201	0.0515034
10017200	0.1483064
10017199	0.4124478
10017150	0.4436508
10017149	0.5659536
10017148	0.6664434
10017147	0.3498123
10017146	0.5908625
10017145	0.3431703
10017144	0.9105530
10017143	0.1269064
10017142	0.6565229
10017141	0.5255519
10017140	0.8189346
10017139	0.8919599
10017138	0.6059344
10017137	0.1320648
10017136	0.8502267
10017135	0.7961639
10017134	0.8719949
10017133	0.9559720
10017132	0.6902097
10017131	0.3860691
10017130	0.3376701
10016891	0.5806457
10016890	0.3762637
10016889	0.2318242
10016888	0.1020251
10016887	0.7846045
10016886	0.0005809
10016885	0.2298100
10016884	0.2665837

Container ID	Rand. Nr.
10016883	0.2390447
10016882	0.3210093
10016881	0.0814404
10016872	0.7340161
10016871	0.7181116
10016870	0.3702265
10016869	0.6619761
10016868	0.6466738
10016867	0.9147525
10016866	0.7318785
10016793	0.0108553
10016792	0.1092953
10016791	0.4842284
10016790	0.1546692
10016789	0.5441861
10016788	0.8412085
10016787	0.6386837
10016786	0.1569518
10016785	0.8588938
10016784	0.4772867
10016783	0.8798608
10016782	0.6047451
10016781	0.4820833
10016780	0.2123459
10016779	0.5275080
10016778	0.2589103
10016777	0.6895700
10016776	0.2794726
10016775	0.0933707
10016774	0.6837416
10016773	0.2570690
10016772	0.7998576
10016771	0.3900183
10016770	0.8954064
10016769	0.1527715
10016768	0.6998281
10016767	0.3050992
10016766	0.9651548
10016765	0.4193352
10016764	0.3463353
10016763	0.1096185
10016762	0.2587687
10016761	0.2402022
10016760	0.7105446
10016759	0.5058103
10016758	0.7757191
10016757	0.2959717
10016756	0.8167713
10016755	0.4220013
10016754	0.4450241

Container ID	Rand. Nr.
10016710	0.1397027
10016709	0.1256371
10016708	0.1179897
10016707	0.4089621
10016628	0.4412325
10016623	0.0646122
10016622	0.6785474
10016411	0.5090960
10016397	0.6854215
10016347	0.4336285
10016346	0.4441342
10016304	0.5887396
10016240	0.3670874
10016239	0.0412043
10016238	0.0591749
10016234	0.3970578
10016221	0.4725358
10016137	0.5538555
10016136	0.8695196
10016134	0.1894666
10016133	0.4932466
10016015	0.0143695
10016014	0.1442505
10016010	0.7115079
10016009	0.9981639
10016008	0.2927197
10016007	0.0470932
10016006	0.4907883
10016005	0.9553255
10016004	0.9858689
10016003	0.5009680
10015580	0.3812775
10015579	0.4037630
10015578	0.2750767
10015576	0.6017120
10015123	0.9319362
10007551	0.5058332
10007234	0.4794396
10007233	0.0774045
10007232	0.6425932
10007231	0.5870586
10005811	0.0680891
10005810	0.0945346
10005809	0.1481275
10005808	0.6647225
10005807	0.9078588
10005806	0.9767201
10005805	0.2198751
10005799	0.6075766

Washington
TRU Solutions LLC

CP:07:01021
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: January 10, 2007

FROM: T. R. Gatliffe LOCATION: Retrieval, Characterization & Transportation

TO: CCP Records Custodian GSA-103 LOCATION: Retrieval, Characterization & Transportation

SUBJECT: SOLIDS RANDOM SAMPLE SELECTION MEMORANDUM FOR THE FIRST RANDOM SAMPLE LOT OF CONTAINERS OF ROCKY FLATS IMMOBILIZED ORGANIC LIQUIDS WASTE, WASTE STREAM ID-RF-3150-A, BEING CHARACTERIZED BY THE CENTRAL CHARACTERIZATION PROJECT AT THE ADVANCED MIXED WASTE TREATMENT PROJECT AT THE IDAHO NATIONAL LABORATORY, REVISION 1

Per the *CCP Random Selection of Containers for Solids Sampling and Analysis* procedure, CCP-TP-161, the accompanying file provides the Solids Random Selection Listing for Lot 1 of waste stream ID-RF-S3150-A being characterized by the Central Characterization Project (CCP) at the Idaho National Laboratory (INL). This memorandum supersedes my previous correspondence memo number CP:06:01566, dated November 16, 2006, to correct typographical errors in the table headings of that document. This initial lot consists of 860 containers that had been identified in the Acceptable Knowledge Tracking Database as of April 27, 2006. The random selection performed at that time and reported in Interoffice Correspondence serial CP:06:01190 was performed using the same methodology directed in CCP-TP-161 and is reproduced for this selection memorandum. All other containers in this waste stream will be subject to potential selection for solids sampling as component members of subsequent lots and will be addressed separately.

The five containers specifically identified for the sample to be used for the required resolution of Environmental Protection Agency hazardous waste number assignment and contingency containers selected for the sample if the calculated required sample size exceeds the five preliminary selections are identified below and in the accompanying file enclosure. The enclosure also lists all containers within the lot and the correlation of randomly selected numbers with each Container ID number.

Solids Random Sample Selection Listing – Lot 1 – Waste Stream ID-RF-S3150-A

#	Container	Rand. Nr.
1	10018503	0.0002966
2	10016886	0.0005809

#	Container	Rand. Nr.
3	10018875	0.0026501
4	10018178	0.0027823

#	Container	Rand. Nr.
5	10018867	0.0029364

Contingency Solids Random Sample Selection Listing
– Lot 1 – Waste Stream ID-RF-S3150-A

#	Container	Rand. Nr.	#	Container	Rand. Nr.	#	Container	Rand. Nr.
6	10018183	0.0056880	11	10016793	0.0108553	16	10018685	0.0165435
7	10017407	0.0060188	12	10017279	0.0132254	17	10017439	0.0191701
8	10018029	0.0068734	13	10017495	0.0138679	18	10017438	0.0206723
9	10017521	0.0080269	14	10016015	0.0143695	19	10017715	0.0211687
10	10018840	0.0092264	15	10017444	0.0144445	20	10017562	0.0246960

If further information is needed, I may be contacted at Extension 7563.

TRG:jm

Enclosure

cc: WTS:

D. S. Adkins ED
R. A. Billet ED
E. Bradford ED
A. M. Cantu ED
K. Day ED
M. Doherty ED
W. S. Heffron ED
R. P. Kantrowitz ED
M. Pearcy ED
L. E. Porter ED
I. S. Quintana ED
W. Rodriguez ED
C. Simmons ED
C. A. Stepzinski ED
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WRES:

B. J. Broomfield ED
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NFT:

T. Groover ED

WASTREN:

D. W. Moody ED

Enclosure
CP:07:01021

Solids Random Sample Selection Listing

Waste Stream: ID-RF-S3150-A **Lot Number: 1** **Site: Idaho National Laboratory**

Solids Random Sample Selection Listing

	Container ID	Rand. Nr.		Container ID	Rand. Nr.		Container ID	Rand. Nr.
1	10018503	0.0002966	3	10018875	0.0026501	5	10018867	0.0029364
2	10016886	0.0005809	4	10018178	0.0027823			

Additional Selections if Calculated Value for *n* Exceeds 10

6	10018183	0.0056880	11	10016793	0.0108553	16	10018685	0.0165435
7	10017407	0.0060188	12	10017279	0.0132254	17	10017439	0.0191701
8	10018029	0.0068734	13	10017495	0.0138679	18	10017438	0.0206723
9	10017521	0.0080269	14	10016015	0.0143695	19	10017715	0.0211687
10	10018840	0.0092264	15	10017444	0.0144445	20	10017562	0.0246960

Container Population Listing

Container ID	Rand. Nr.	Container ID	Rand. Nr.	Container ID	Rand. Nr.
IDRF074317784	0.4481535	10018875	0.0026501	10018838	0.8613461
IDRF002500526	0.9312049	10018874	0.6242374	10018728	0.3140631
10033758	0.2903488	10018873	0.6020402	10018727	0.4933587
10033757	0.2844085	10018872	0.2811563	10018726	0.1799661
10033756	0.2129529	10018871	0.7999263	10018725	0.3081889
10033755	0.2426387	10018870	0.7088232	10018724	0.6651758
10033754	0.6725069	10018869	0.4890587	10018723	0.0618930
10033753	0.7971982	10018868	0.8813089	10018722	0.5590409
10033752	0.4706096	10018867	0.0029364	10018721	0.7830899
10033751	0.2889311	10018866	0.9640334	10018720	0.0389286
10033750	0.7571752	10018865	0.7719523	10018719	0.6615136
10031734	0.4371948	10018864	0.3987098	10018718	0.6741490
10027456	0.5796822	10018863	0.7756310	10018717	0.8832494
10027455	0.6257371	10018862	0.4309808	10018716	0.2198965
10027454	0.1639324	10018861	0.6243002	10018715	0.2815834
10027453	0.0873901	10018860	0.3764676	10018714	0.1089226
10023832	0.3837480	10018859	0.1973661	10018713	0.9565625
10023791	0.3323814	10018858	0.7272907	10018712	0.5935025
10023698	0.1801856	10018857	0.7428954	10018711	0.6792591
10020692	0.9857057	10018856	0.9922860	10018710	0.3039081
10018913	0.2039038	10018855	0.7126416	10018709	0.4604312
10018912	0.6300064	10018854	0.0659926	10018708	0.1263477
10018911	0.4356271	10018853	0.1964971	10018707	0.1850469
10018910	0.2270418	10018852	0.0256945	10018706	0.2856980
10018909	0.9465468	10018851	0.8823153	10018705	0.2283347
10018887	0.0719739	10018850	0.3594776	10018704	0.1238074
10018886	0.3950410	10018849	0.7122146	10018703	0.7335564
10018885	0.6762212	10018848	0.8590937	10018702	0.9372373
10018884	0.8083319	10018847	0.5997031	10018701	0.0781452
10018883	0.7331668	10018846	0.7642421	10018700	0.8095172
10018882	0.4807055	10018845	0.7720086	10018699	0.3507521
10018881	0.0393589	10018844	0.1038286	10018698	0.9234548
10018880	0.0936872	10018843	0.5123920	10018696	0.2734142
10018879	0.2823655	10018842	0.6456583	10018695	0.9887770
10018878	0.7812854	10018841	0.3273800	10018694	0.3561740
10018877	0.5886466	10018840	0.0092264	10018693	0.1828532
10018876	0.3798034	10018839	0.4153654	10018692	0.9379968

Enclosure
CP:07:01021

Solids Random Sample Selection Listing

Container Population Listing

Container ID	Rand. Nr.	Container ID	Rand. Nr.	Container ID	Rand. Nr.
10018691	0.3122061	10018534	0.7379907	10018324	0.5651933
10018690	0.2472603	10018533	0.3188982	10018321	0.6301999
10018689	0.5873785	10018532	0.7692545	10018320	0.5174177
10018688	0.5951716	10018531	0.9247664	10018319	0.9777529
10018687	0.5069709	10018530	0.8115095	10018288	0.6712015
10018686	0.1831619	10018529	0.3277359	10018287	0.2902926
10018685	0.0165435	10018528	0.9130170	10018286	0.3017671
10018684	0.7417879	10018527	0.3265479	10018285	0.0270531
10018683	0.7289041	10018526	0.7238075	10018284	0.0323576
10018682	0.1498255	10018525	0.7392122	10018280	0.1658182
10018681	0.7650665	10018521	0.3191671	10018279	0.3993618
10018680	0.9414493	10018520	0.9619732	10018278	0.7904659
10018679	0.2177795	10018519	0.8356904	10018277	0.7681667
10018678	0.1501854	10018518	0.2151696	10018276	0.6363837
10018677	0.6124485	10018517	0.6269825	10018275	0.4296603
10018676	0.8764448	10018516	0.0613560	10018274	0.0488007
10018598	0.4163288	10018515	0.8237038	10018273	0.1562341
10018597	0.4196619	10018514	0.7536497	10018272	0.7226218
10018596	0.8932623	10018513	0.8090043	10018271	0.0769724
10018595	0.1751971	10018512	0.4286351	10018270	0.0970922
10018594	0.2194556	10018511	0.4459141	10018269	0.4139577
10018593	0.5787514	10018510	0.9040479	10018268	0.0559027
10018592	0.4373507	10018509	0.9064992	10018267	0.3306575
10018591	0.9496933	10018508	0.5948403	10018266	0.8161800
10018590	0.9559378	10018507	0.5883414	10018265	0.6857456
10018589	0.2209688	10018506	0.4317676	10018264	0.7996980
10018587	0.1591539	10018505	0.7288613	10018191	0.5314074
10018585	0.9364961	10018504	0.2948615	10018190	0.5619950
10018584	0.4883701	10018503	0.0002966	10018189	0.3740325
10018583	0.3170256	10018502	0.8533274	10018188	0.7092970
10018582	0.3606610	10018501	0.8788227	10018187	0.4415753
10018581	0.5779441	10018500	0.2859607	10018186	0.3116483
10018580	0.7546304	10018499	0.6273627	10018185	0.8413889
10018579	0.2940448	10018498	0.9278521	10018184	0.9380916
10018578	0.8594561	10018497	0.9219958	10018183	0.0056880
10018577	0.7241221	10018496	0.4703994	10018182	0.1877679
10018576	0.3190810	10018495	0.9538671	10018181	0.0387841
10018575	0.4025710	10018494	0.7708636	10018180	0.7294058
10018574	0.9645163	10018493	0.1756571	10018179	0.1006245
10018573	0.7747611	10018492	0.4915604	10018178	0.0027823
10018572	0.6857805	10018491	0.7882993	10018177	0.3896702
10018571	0.3522149	10018490	0.0547777	10018176	0.2832878
10018570	0.2174985	10018489	0.5536062	10018175	0.0314129
10018569	0.9231653	10018488	0.3309780	10018174	0.4360579
10018568	0.7331819	10018487	0.3079706	10018173	0.2456449
10018567	0.9904705	10018486	0.6160341	10018172	0.2827668
10018566	0.1871567	10018485	0.6342123	10018171	0.2050860
10018565	0.9789030	10018474	0.2913981	10018170	0.9257111
10018564	0.5441426	10018457	0.1966768	10018169	0.4835913
10018563	0.6931867	10018325	0.1041049	10018168	0.1994806

Enclosure
CP:07:01021

Solids Random Sample Selection Listing

Container Population Listing

Container ID	Rand. Nr.
10018167	0.5108672
10018098	0.2685332
10018097	0.5707372
10018096	0.5866905
10018076	0.7902678
10018075	0.0679812
10018074	0.5115267
10018073	0.8305354
10018072	0.7462108
10018071	0.8129488
10018070	0.6057029
10018069	0.9663238
10018068	0.1825297
10018067	0.2618125
10018066	0.1111133
10018065	0.8285632
10018064	0.9233467
10018063	0.4998273
10018062	0.5336952
10018061	0.1537058
10018060	0.1754608
10018059	0.3985113
10018058	0.3515296
10018057	0.2966362
10018056	0.5960474
10018054	0.6913285
10018053	0.3108047
10018052	0.9021630
10018051	0.4091144
10018049	0.5779070
10018048	0.9592677
10018047	0.6621174
10018046	0.6279427
10018045	0.9570078
10018044	0.9607757
10018043	0.0533408
10018042	0.5785139
10018041	0.9732905
10018040	0.6571939
10018039	0.2319166
10018038	0.4688248
10018037	0.2834737
10018036	0.2487068
10018035	0.5144305
10018034	0.7036156
10018033	0.3434548
10018032	0.3339323
10018031	0.1366649
10018030	0.7972631
10018029	0.0068734
10018028	0.2119217
10018027	0.3405836
10018026	0.5493409
10018025	0.4840481
10018024	0.2601730
10017890	0.4494252
10017889	0.9378593
10017888	0.3197318
10017887	0.7850797
10017886	0.8345888
10017885	0.0556190
10017884	0.4128269
10017883	0.9946091
10017882	0.9066704
10017881	0.1894269
10017880	0.3840389
10017879	0.9508465
10017878	0.0495440
10017877	0.2179015
10017876	0.7190137
10017875	0.6682700
10017874	0.4458549
10017873	0.6566760
10017872	0.0836612
10017871	0.8858212
10017870	0.9936387
10017869	0.2354205
10017868	0.6301171
10017867	0.7442425
10017866	0.9243804
10017865	0.6197560
10017864	0.9522572
10017863	0.5179416
10017862	0.9781309
10017861	0.5857408
10017860	0.6153077
10017859	0.9530041
10017858	0.3879881
10017857	0.9347438
10017856	0.2676896
10017855	0.1561518
10017854	0.3263431
10017853	0.7433181
10017852	0.4798939
10017851	0.5088403
10017850	0.0445341
10017849	0.5484688
10017848	0.8660623
10017847	0.1995464
10017846	0.7890706
10017845	0.0592109
10017844	0.4377839
10017843	0.4713756
10017842	0.1619814
10017841	0.7626130
10017840	0.9369484
10017839	0.3956053
10017838	0.0691000
10017837	0.7853833
10017835	0.9170347
10017723	0.7595942
10017722	0.8038292
10017721	0.8670112
10017720	0.4604809
10017719	0.3078151
10017718	0.9735009
10017717	0.6528113
10017716	0.5316034
10017715	0.0211687
10017714	0.8929851
10017713	0.4444574
10017712	0.3736092
10017711	0.6018039
10017710	0.3708461
10017709	0.2598499
10017708	0.3732046
10017707	0.5160043
10017706	0.9227297
10017705	0.1171686
10017704	0.0631945
10017703	0.8698917
10017702	0.9036800
10017701	0.8715860
10017700	0.1998909
10017699	0.3503623
10017698	0.3751696
10017697	0.3965610
10017696	0.2084898
10017695	0.2261956
10017694	0.6859322
10017693	0.6394410
10017692	0.6912792
10017691	0.9444169
10017690	0.4414231
10017689	0.0733806
10017688	0.5737365
10017687	0.0534173
10017686	0.2981328
10017685	0.6256484
10017684	0.4095904

Enclosure
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Solids Random Sample Selection Listing

Container Population Listing

Container ID	Rand. Nr.	Container ID	Rand. Nr.	Container ID	Rand. Nr.
10017683	0.8194105	10017606	0.2749781	10017556	0.3379809
10017682	0.5484670	10017605	0.2379768	10017555	0.7679971
10017681	0.2184812	10017604	0.2874628	10017554	0.5223740
10017680	0.4785367	10017603	0.7347073	10017553	0.8779634
10017679	0.4619445	10017602	0.7341670	10017552	0.6271611
10017678	0.3434949	10017601	0.2943004	10017551	0.8443098
10017677	0.3746204	10017600	0.8025557	10017529	0.9373986
10017676	0.3960706	10017599	0.1568493	10017528	0.3158158
10017675	0.3536120	10017598	0.0323516	10017527	0.7421711
10017674	0.8234177	10017597	0.7004550	10017526	0.4562487
10017673	0.4264276	10017596	0.4531098	10017525	0.4050303
10017672	0.6149850	10017595	0.0563819	10017524	0.2128965
10017671	0.1101318	10017594	0.7238369	10017523	0.7119978
10017670	0.9042914	10017593	0.9235520	10017522	0.5747618
10017669	0.7947447	10017592	0.7647127	10017521	0.0080269
10017668	0.4073719	10017591	0.7266297	10017520	0.4454144
10017667	0.4092400	10017590	0.7993624	10017519	0.7446329
10017666	0.3301950	10017589	0.4292986	10017518	0.5515946
10017665	0.5606163	10017588	0.5759348	10017517	0.5376616
10017664	0.5040805	10017587	0.9574601	10017516	0.8321688
10017663	0.7885895	10017586	0.4627964	10017515	0.7899679
10017662	0.4694544	10017585	0.6581291	10017514	0.6244733
10017661	0.9714246	10017584	0.8906464	10017513	0.0699077
10017660	0.6818738	10017583	0.2704566	10017512	0.0455079
10017659	0.2647137	10017582	0.1999633	10017511	0.3472163
10017658	0.3888533	10017581	0.5993015	10017510	0.8331437
10017657	0.8241499	10017580	0.4110887	10017509	0.6787301
10017656	0.4576900	10017579	0.3944246	10017508	0.9183531
10017655	0.0517625	10017578	0.8457119	10017507	0.5456542
10017654	0.1525827	10017577	0.3252905	10017506	0.4686113
10017653	0.3531700	10017576	0.5096604	10017505	0.3436769
10017652	0.6376498	10017575	0.6684440	10017504	0.2482288
10017651	0.5680692	10017574	0.9878166	10017503	0.8392374
10017650	0.5215636	10017573	0.4716584	10017502	0.7005682
10017647	0.0525317	10017572	0.4290357	10017501	0.0269871
10017646	0.0757585	10017571	0.4681870	10017500	0.5525177
10017645	0.5646559	10017570	0.4687113	10017499	0.6151824
10017619	0.2325144	10017569	0.2959638	10017498	0.7578479
10017618	0.2704979	10017568	0.2791177	10017497	0.4518536
10017617	0.6377754	10017567	0.1950232	10017496	0.7759557
10017616	0.5240391	10017566	0.7283018	10017495	0.0138679
10017615	0.6976372	10017565	0.1563928	10017494	0.3796849
10017614	0.6755649	10017564	0.6556487	10017493	0.5230176
10017613	0.0445562	10017563	0.6697392	10017492	0.9014857
10017612	0.4195123	10017562	0.0246960	10017491	0.5508962
10017611	0.8338894	10017561	0.7977197	10017490	0.7894023
10017610	0.8634335	10017560	0.9982647	10017489	0.4666693
10017609	0.1503382	10017559	0.7495831	10017488	0.6249206
10017608	0.9003350	10017558	0.7274319	10017487	0.8922352
10017607	0.3440693	10017557	0.7919940	10017486	0.2298185

Enclosure
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Solids Random Sample Selection Listing

Container Population Listing

Container ID	Rand. Nr.	Container ID	Rand. Nr.	Container ID	Rand. Nr.
10017485	0.1621475	10017434	0.1102949	10017305	0.5834237
10017484	0.8713571	10017432	0.5861239	10017304	0.8377925
10017483	0.0783282	10017426	0.7542849	10017303	0.5773092
10017482	0.9611604	10017425	0.6640793	10017302	0.8664621
10017481	0.5923568	10017424	0.0597147	10017301	0.1953710
10017480	0.5791892	10017423	0.8242464	10017298	0.8511469
10017479	0.1502601	10017422	0.3054216	10017297	0.2309700
10017478	0.2298902	10017421	0.8865426	10017296	0.0691249
10017477	0.3999289	10017420	0.4936130	10017295	0.8380960
10017476	0.6598162	10017419	0.9094502	10017294	0.8514461
10017475	0.1295051	10017418	0.2742615	10017293	0.6551193
10017474	0.0472640	10017417	0.8043189	10017292	0.2068009
10017473	0.3007930	10017416	0.8671659	10017291	0.5685527
10017472	0.0480718	10017415	0.4976741	10017290	0.5485544
10017471	0.0739545	10017414	0.4849077	10017289	0.2589879
10017470	0.8877570	10017413	0.5727305	10017288	0.0425287
10017469	0.6059190	10017412	0.2846750	10017287	0.2658413
10017468	0.9803899	10017411	0.9187924	10017286	0.3275622
10017467	0.6015703	10017410	0.8483367	10017285	0.0890575
10017466	0.4726906	10017409	0.5958848	10017284	0.4497347
10017465	0.2568276	10017408	0.4550529	10017283	0.3656129
10017464	0.9064796	10017407	0.0060188	10017282	0.1668486
10017463	0.6995230	10017406	0.0504882	10017281	0.8709012
10017462	0.6255926	10017405	0.9542860	10017280	0.2252024
10017461	0.6357391	10017404	0.8983086	10017279	0.0132254
10017460	0.1100512	10017403	0.0968130	10017278	0.9185820
10017459	0.8964165	10017402	0.5188954	10017277	0.3767116
10017458	0.6790184	10017344	0.3321095	10017249	0.7481306
10017457	0.8708049	10017343	0.3213014	10017248	0.6594910
10017456	0.9295152	10017342	0.1625191	10017247	0.4940493
10017455	0.2890866	10017341	0.3644195	10017246	0.7984559
10017454	0.2052843	10017340	0.8269175	10017245	0.4125961
10017453	0.1744038	10017339	0.3608166	10017244	0.6635820
10017452	0.5561134	10017338	0.6331723	10017243	0.9322775
10017451	0.2972107	10017337	0.8265878	10017242	0.5911633
10017450	0.3932693	10017336	0.2633060	10017241	0.1946657
10017449	0.0792790	10017320	0.4939203	10017240	0.7241755
10017448	0.0259277	10017319	0.0894688	10017239	0.8431821
10017447	0.1447454	10017317	0.4488180	10017238	0.0567431
10017446	0.7521116	10017316	0.8904362	10017237	0.1233628
10017445	0.6351842	10017315	0.1864064	10017236	0.7636904
10017444	0.0144445	10017314	0.2376747	10017235	0.6230505
10017443	0.4017332	10017313	0.1755580	10017234	0.8061578
10017442	0.6630633	10017312	0.3485912	10017233	0.4574375
10017441	0.0429624	10017311	0.5267272	10017232	0.2330211
10017440	0.5929794	10017310	0.5556439	10017231	0.7826519
10017439	0.0191701	10017309	0.7118375	10017230	0.6012114
10017438	0.0206723	10017308	0.1059175	10017229	0.7129401
10017437	0.7739796	10017307	0.9525655	10017228	0.7239495
10017436	0.8345578	10017306	0.4985629	10017227	0.1609645

Enclosure
CP:07:01021

Solids Random Sample Selection Listing

Container Population Listing

Container ID	Rand. Nr.
10017226	0.1436361
10017225	0.6005445
10017217	0.8623801
10017216	0.6586745
10017215	0.0725168
10017214	0.8598588
10017213	0.4968940
10017212	0.8546200
10017211	0.4770899
10017210	0.8919244
10017209	0.6987873
10017208	0.0786356
10017207	0.4849435
10017206	0.2078422
10017205	0.0899862
10017204	0.8768979
10017203	0.6776686
10017202	0.6577754
10017201	0.0515034
10017200	0.1483064
10017199	0.4124478
10017150	0.4436508
10017149	0.5659536
10017148	0.6664434
10017147	0.3498123
10017146	0.5908625
10017145	0.3431703
10017144	0.9105530
10017143	0.1269064
10017142	0.6565229
10017141	0.5255519
10017140	0.8189346
10017139	0.8919599
10017138	0.6059344
10017137	0.1320648
10017136	0.8502267
10017135	0.7961639
10017134	0.8719949
10017133	0.9559720
10017132	0.6902097
10017131	0.3860691
10017130	0.3376701
10016891	0.5806457
10016890	0.3762637
10016889	0.2318242
10016888	0.1020251
10016887	0.7846045
10016886	0.0005809
10016885	0.2298100
10016884	0.2665837

Container ID	Rand. Nr.
10016883	0.2390447
10016882	0.3210093
10016881	0.0814404
10016872	0.7340161
10016871	0.7181116
10016870	0.3702265
10016869	0.6619761
10016868	0.6466738
10016867	0.9147525
10016866	0.7318785
10016793	0.0108553
10016792	0.1092953
10016791	0.4842284
10016790	0.1546692
10016789	0.5441861
10016788	0.8412085
10016787	0.6386837
10016786	0.1569518
10016785	0.8588938
10016784	0.4772867
10016783	0.8798608
10016782	0.6047451
10016781	0.4820833
10016780	0.2123459
10016779	0.5275080
10016778	0.2589103
10016777	0.6895700
10016776	0.2794726
10016775	0.0933707
10016774	0.6837416
10016773	0.2570690
10016772	0.7998576
10016771	0.3900183
10016770	0.8954064
10016769	0.1527715
10016768	0.6998281
10016767	0.3050992
10016766	0.9651548
10016765	0.4193352
10016764	0.3463353
10016763	0.1096185
10016762	0.2587687
10016761	0.2402022
10016760	0.7105446
10016759	0.5058103
10016758	0.7757191
10016757	0.2959717
10016756	0.8167713
10016755	0.4220013
10016754	0.4450241

Container ID	Rand. Nr.
10016710	0.1397027
10016709	0.1256371
10016708	0.1179897
10016707	0.4089621
10016628	0.4412325
10016623	0.0646122
10016622	0.6785474
10016411	0.5090960
10016397	0.6854215
10016347	0.4336285
10016346	0.4441342
10016304	0.5887396
10016240	0.3670874
10016239	0.0412043
10016238	0.0591749
10016234	0.3970578
10016221	0.4725358
10016137	0.5538555
10016136	0.8695196
10016134	0.1894666
10016133	0.4932466
10016015	0.0143695
10016014	0.1442505
10016010	0.7115079
10016009	0.9981639
10016008	0.2927197
10016007	0.0470932
10016006	0.4907883
10016005	0.9553255
10016004	0.9858689
10016003	0.5009680
10015580	0.3812775
10015579	0.4037630
10015578	0.2750767
10015576	0.6017120
10015123	0.9319362
10007551	0.5058332
10007234	0.4794396
10007233	0.0774045
10007232	0.6425932
10007231	0.5870586
10005811	0.0680891
10005810	0.0945346
10005809	0.1481275
10005808	0.6647225
10005807	0.9078588
10005806	0.9767201
10005805	0.2198751
10005799	0.6075766

Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA

CP:13:01295
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: July 10, 2013

FROM: J.A. Vernon

LOCATION: CCP Certification

TO: NTPC Records Custodian GSA-212

LOCATION: CCP Operations
Idaho National Laboratory

SUBJECT: TRANSMITTAL OF IDAHO NATIONAL LABORATORY SOLIDS SUMMARY DATA REPORT FOR WASTE STREAM ID-SDA-SOIL, LOT 5

Please accept the attached Idaho National Laboratory Solids Summary Data Report to be placed into records for waste stream ID-SDA-SOIL, Lot 5.

JAV:jmc

Attachment

cc: (without attachment)

S. Castro	ED
R. P. Kantrowitz	ED
M. W. Pearcy	ED

SOLIDS SUMMARY DATA REPORT

WSPF # ID-SDA-SOIL Rev. 1

Lot 5

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CCP Correlation of Container ID Numbers to Solids Sample ID Numbers

Solids BDR Number: See Below

WSPF Number: ID-SDA-SOIL Rev. 1 Solids Summary Waste Stream Lot Number: 5

Container ID Number	Sample BDR	VOC Analysis BDR	VOC Analysis Sample ID	SVOC Analysis BDR	SVOC Analysis Sample ID	Non-Halogenated Analysis BDR VOCs	Sample ID Non-Halogenated VOCs	Metals Analysis BDR	Metals Analysis Sample ID	BN Number
ARP00398	SSC07-00021	ALD07007V	10143027	ALD07005S	10143031	ALD07003N	10143028	ALD07012M	10143031	10128437
ARP01516	SSC07-00021	ALD07007V	10143296	ALD07005S	10143300	ALD07003N	10143297	ALD07012M	10143300	10126249
ARP00007	SSC07-00165	ALD07034V	10182088	ALD07024S	10182091	ALD07013N	10182087	ALD07076M	10182091	10153378
ARP00585	SSC07-00165	ALD07034V	10181809	ALD07024S	10181812	ALD07013N	10181810	ALD07076M	10181812	10137334
ARP01474	SSC07-00165	ALD07034V	10181227	ALD07024S	10181231	ALD07013N	10181228	ALD07076M	10181231	10131289
ARP09283	SSC08-00014	ALD08030V	10261986	ALD08030S	10261990	ALD08022N	10261987	ALD07076M	10261990	10240709
ARP09261	SSC08-00014	ALD08030V	10262195	ALD08030S	10262199	ALD08022N	10262196	ALD07012M	10262199	10245890
ARP09371	SSC08-00014	ALD08030V	10262902	ALD08030S	10262906	ALD08022N	10262903	ALD07076M	10262906	10239882
ARP09351	SSC08-00014	ALD08030V	10263007	ALD08030S	10263011	ALD08022N	10263008	ALD07076M	10263011	10240033
ARP09073	SSC08-00014	ALD08030V	10263151	ALD08030S	10263158	ALD08022N	10263152	ALD07012M	10263158	10246517
ARP03117	SSC08-00003	ALD08021V	10243377	ALD08021S	10243381	ALD08013N	10243378	ALD08044M	10243381	10157016
ARP03111	SSC08-00003	ALD08021V	10242587	ALD08021S	10242602	ALD08013N	10242599	ALD08044M	10242602	10157002
ARP09485	S4200-LOT-04-03	ALD08022V	AR403401V	ALD08022S	AR403401MS	ALD08014N	AR403401N1	ALD08045M	AR403401MS	N/A
ARP05670	SSC09-00006	ALD09011V	10300813DL133	ALD09011S	10300831DL2	ALD09011N	10300822	ALD09011M	10300831	10218516
ARP06228	SSC09-00006	ALD09011V	10300986RA	ALD09011S	10300991	ALD09011N	10300987	ALD09011M	10300991	10225296
ARP09139	SSC09-00006	ALD09011V	10300531	ALD09011S	10300535DL5	ALD09011N	10300532	ALD09011M	10300535	10237628
ARP21900	S4200-LOT-04-04	ALD10019V	AR403701V1	ALD10019S	AR403701MS	ALD10019N	AR403701N1	ALD10019M	ARP403701MS	N/A
ARP22785	S4200-LOT-04-05	ALD10025V	AR403602V1	ALD10025S	AR403602MS	ALD10025N	AR403602N1	ALD10025M	AR4036202MS	N/A
ARP18318	SSC09-00009	ALD09014V	10324743DL4	ALD09014S	10324747DL2	ALD09014N	10324744	ALD09014M	10324747	10318159
ARP23207	S4200-LOT-04-01	ALD10041V	AR404202V1	ALD10041S	AR404202MS	ALD10041N	AR404202N1	ALD10041M	AR404202MS	N/A
ARP30014	S4200-LOT-05-10	ALD12005V	AR405001V1DL80	ALD12005S	AR405001MSDL10	ALD12005N	AR405001N1	ALD12005M	AR405001MS	N/A
ARP30081	S4200-LOT-05-06	ALD12005V	AR405901V1RA	ALD12005S	AR405901MS	ALD12005N	AR405901N1	ALD12005M	AR405901MS	N/A
ARP30100	S4200-LOT-05-07	ALD12005V	AR405701V1	ALD12005S	AR405701MS	ALD12005N	AR405701N2RE	ALD12005M	AR405701MS	N/A
ARP30103	S4200-LOT-05-08	ALD12005V	AR405801V1	ALD12005S	AR405801MS	ALD12005N	AR405801N2RE	ALD12005M	AR405801MS	N/A
ARP30018	S4200-LOT-05-03	ALD12005V	AR406001V1	ALD12005S	AR406001MS	ALD12005N	AR406001N2RE	ALD12005M	AR406001MS	N/A

Use multiple copies of this attachment as necessary to document all containers discussed in this summary report. Record Waste Stream Profile Form Number and Waste Stream Lot Number on each sheet issued. Number each sheet in the space provided.

Site Project Manager (or designee):

Signature

Jim Vernon
Print Name

7/8/2013
Date

Solids - 002

CCP Solids Analysis VOC UCL_{90} Evaluation Form

WSPF #: ID-SDA-SOIL Rev. 1 **Solids Summary Waste Stream Lot Number** 1 through 5

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL [1]	# Samples	Maximum (mg/kg)	Mean (mg/kg)	SD (ppmv)	UCL_{90} (mg/kg)	PRQL (mg/kg)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA HWN [2]
Benzene	Log	0	25[4]	1.3481	-1.8713	1.2636	-1.5232	10	2.30		
Bromoform	Log	0	25[4]	1.3481	-1.9630	1.1133	-1.6563	10	2.30		
Carbon Disulfide	Log	0	25[5]	1.3481	-1.8788	1.1577	-1.5522	10	2.30		
Carbon Tetrachloride	Log	10	25	7.9010	0.8203	3.7594	1.8111	10	2.30		
Chlorobenzene	Log	0	25[4]	1.3481	-1.8713	1.2636	-1.5232	10	2.30		
Chloroform	Log	6	25	4.7005	-0.9003	2.4639	-0.2509	10	2.30		
1,1-Dichloroethylene	Log	0	25[4]	1.2669	-1.7019	1.0170	-1.4150	10	2.30		
1,2-Dichloroethane	Log	0	25[4]	1.3481	-1.7488	1.2739	-1.3979	10	2.30		
Ethylbenzene	Log	0	25[4]	1.3481	-1.8713	1.2636	-1.5232	10	2.30		
Methylene Chloride	Log	0	25[4]	1.3481	-1.7203	1.3133	-1.3585	10	2.30		
m.p-Xylene [b]	Log	0	25[4]	1.3481	-1.7507	1.1685	-1.4211	10	2.30		
o-Xylene	Log	0	25[4]	1.3481	-1.8713	1.2636	-1.5232	10	2.30		
1,1,2,2-Tetrachloroethane	Log	2	25[4]	1.3481	-1.5611	1.3031	-1.2021	10	2.30		
Tetrachloroethylene	Log	12	25	6.5793	0.7043	3.1400	1.5320	10	2.30		
Toluene	Log	4	25[4]	1.3481	-1.6393	1.3052	-1.2797	10	2.30		
Trans-1,2-Dichloroethylene	Log	0	25[4]	1.3481	-1.8713	1.2636	-1.5232	10	2.30		
1,1,1-Trichloroethane	Log	3	25[3]	3.9512	-1.1666	2.1681	-0.5826	10	2.30		
Trichloroethylene	Log	8	25	6.8244	0.1958	3.1063	1.0146	10	2.30		
1,1,2-Trichloro-1,2,2-trifluoroethane	Log	0	25[4]	1.2669	-1.6962	1.0393	-1.4031	10	2.30		
1,1,2-Trichloroethane	Log	0	25[4]	1.3481	-1.7796	1.2470	-1.4360	10	2.30		
Trichlorofluoromethane	Log	0	25[4]	1.3481	-1.6384	1.2289	-1.2998	10	2.30		
Vinyl Chloride	Log	0	25[5]	0.5306	-1.9098	0.8184	-1.6731	10	2.30		

Solids - 003

CCP Solids Analysis VOC UCL_{90} Evaluation Form

WSPF #: ID-SDA-SOIL Rev. 1 **Solids Summary Waste Stream Lot Number** 1 through 5

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL [1]	# Samples	Maximum (mg/kg)	Mean (mg/kg)	SD (ppmv)	UCL_{90} (mg/kg)	PRQL (mg/kg)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA HWN [2]
Acetone	Log	0	25	2.8904	-0.5268	0.7970	-0.3167	4	1.39		
Butanol	Log	2	25	3.5973	-0.0863	1.2337	0.2389	100	4.61		
Methanol	Log	0	25	3.5973	-0.1746	1.0101	0.0916	100	4.61		
Methyl ethyl ketone	Log	0	25	2.8904	-0.4176	0.8003	-0.2067	100	4.61		
Ethyl ether	Log	0	25	3.5973	0.0496	0.9273	0.2940	100	4.61		
Isobutanol	Log	0	25	2.8904	-0.4426	0.7356	-0.2487	100	4.61		
Pyridine	Log	0	25	2.8904	-0.1709	0.8369	0.0497	100	4.61		

[a] Can also be analyzed as an SVOC. If analyzed as an SVOC, the QAO's of CCP-PO-001, Table C3-6 apply.

[b] These xylene isomers cannot be resolved by the analytical methods employed in the program. m-Xylene and p-Xylene will be reported as "Total m-p-Xylene."

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per section C4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

(2) No additional EPA Hazardous Waste Numbers were identified for this waste stream.

(3) As a result of dilution requirements for one of the twenty five samples 1,1,1-Trichloroethane were reported as non-detected with an MDL value in excess of the PRQL. In accordance with the Waste Analysis Plan, Section C4-3d such observations with elevated MDL values due to dilution were not used in calculating the mean concentration. Consequently, the subject analytes were statistically evaluated with 19, rather than 20, usable observations.

(4) As a result of dilution requirements for two of the twenty five samples, Benzene, Bromoform, Chlorobenzene, 1,1-Dichloroethylene, 1,2-Dichloroethane, Ethylbenzene, Methylene Chloride, o-Xylene, 1,1,2,2-Tetrachloroethane, Toluene, Trans-1,2-Dichloroethylene, 1,1,2-Trichloro-1,2,2-trifluoroethane, 1,1,2-Trichloroethane and Trichlorofluoromethane were reported as non-detected with an MDL value in excess of the PRQL. In accordance with the Waste Analysis Plan, Section C4-3d such observations with elevated MDL values due to dilution were not used in calculating the mean concentration. Consequently, the subject analytes were statistically evaluated with 18, rather than 20, usable observations.

(5) As a result of dilution requirements for seventeen of the twenty five samples, Carbon Disulfide, m.p-Xylene, and Vinyl Chloride were reported as non-detected with an MDL value in excess of the PRQL. In accordance with the Waste Analysis Plan, Section C4-3d such observations with elevated MDL values due to dilution were not used in calculating the mean concentration. Consequently, the subject analytes were statistically evaluated with 17, rather than 20, usable observations.

Signature of Site Project Manager	Jim Vernon Printed Name	7/8/2013 Date

Solids-004

CCP Solids Analysis SVOC UCL_{90} Evaluation Form

WSPF #: ID-SDA-SOIL Rev. 1 **Solids Summary Waste Stream Lot Number** 1 through 5

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples	Maximum (mg/kg)	Mean (mg/kg)	SD (mg/kg)	UCL90 (mg/kg)	PRQL (mg/kg)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code (2)
bis(2-Ethylexyl)phthalate[5]	Log	6	12	3.64	0.85	1.78	1.55	41.00	3.71		
1,2-Dichlorobenzene [a]	Log	0	25(3)	2.71	-1.13	1.50	-0.73	40.00	3.69		
1,4-Dichlorobenzene[a]	Log	0	25(3)	2.71	-1.13	1.50	-0.73	40.00	3.69		
2,4-Dinitrophenol	Log	0	25(3)	2.71	-1.50	1.36	-1.14	40.00	3.69		
2,4-Dinitrotoluene	Log	0	25(4)	-0.11	-1.87	0.68	-1.66	40.00	3.69		
Hexachlorobenzene	Log	0	25(4)	-0.11	-1.79	0.74	-1.57	2.60	0.96		
Hexachlorobutadiene[5]	Log	4	12	3.14	0.14	1.93	0.89	4.60	1.53		
Hexachloroethane	Log	11	25(3)	6.02	1.06	3.02	1.87	40.00	3.69		
2-Methylphenol (cresols)	Log	0	25(3)	2.71	-1.31	1.63	-0.87	40.00	3.69		
3&4-Methylphenol (cresols)	Log	0	25(3)	2.71	-1.21	1.49	-0.81	40.00	3.69		
Nitrobenzene	Log	0	25(3)	2.71	-1.13	1.50	-0.73	40.00	3.69		
Pentachlorphenol	Log	0	25(3)	2.71	-1.39	1.51	-0.98	40.00	3.69		

[a] Can also be analyzed as a VOC. If analyzed as a VOC, the QAO's of CCP-PO-001, Table C3-6 apply.

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per C4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

(2) No additional EPA Hazardous Waste Numbers were identified for this waste stream.

(3) As a result of dilution requirements for one of the twenty five samples, 1,2-Dichlorobenzene, 1,4-Dichlorobenzene, 2,4-Dinitrophenol, Hexachloroethane, 2-Methylphenol, 3&4-Methylphenol, Nitrobenzene, and Pentachlorophenol were reported as non-detected with an MDL value in excess of the PRQL. In accordance with the Waste Analysis Plan, Section C4-3d such observations with elevated MDL values due to dilution were not used in calculating the mean concentration. Consequently, the subject analytes were statistically evaluated with 19, rather than 20, usable observations.

(4) As a result of dilution requirements for sixteen of the twenty five samples, 2,4-Dinitrotoluene and Hexachlorobenzene were reported as non-detected with an MDL value in excess of the PRQL. In accordance with the Waste Analysis Plan, Section C4-3d such observations with elevated MDL values due to dilution were not used in calculating the mean concentration. Consequently, the subject analytes were statistically evaluated with 16, rather than 20, usable observations.

(5) bis(2-Ethylexyl)phthalate and Hexachlorobutadiene were added to the target analyte list.

Signature of Site Project Manager

Jim Vernon
Printed Name

7/8/2013
Date

Solids - 005

CCP Solids Analysis Metals UCL_{90} Evaluation Form

WSPF #: ID-SDA-SOIL Rev. 1 **Solids Summary Waste Stream Lot Number** 1 through 5

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples	Maximum (mg/kg)	Mean (mg/kg)	SD (mg/kg)	UCL90 (mg/kg)	PRQL (mg/kg)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Antimony	Log	18	25	2.83	0.59	0.97	0.85	100	4.61		
Arsenic	Log	20	25	2.83	2.25	0.19	2.30	100	4.61		
Barium	Log	20	25	6.63	5.52	0.29	5.59	2000	7.60		
Beryllium	SQRT	20	25	7.14	3.71	2.03	4.24	100	10.00		
Cadmium	Log	20	25	5.01	2.10	1.61	2.53	20	3.00		
Chromium	Log	20	25	5.44	3.93	0.45	4.05	100	4.61		
Lead	Log	20	25	4.87	3.28	0.57	3.43	100	4.61		
Mercury	Log	18	25	1.48	-2.27	1.63	-1.84	4	1.39		
Nickel	Log	20	25	5.63	3.80	0.57	3.95	100	4.61		
Selenium	SQRT	7	25	1.26	0.76	0.26	0.83	20	4.47		
Silver	Log	11	25	1.86	-0.49	1.43	-0.11	100	4.61		
Thallium	Log	11	25	1.36	-0.24	0.95	0.02	100	4.61		
Vanadium	No	20	25	63.00	51.92	8.34	54.12	100	N/A		
Zinc	Log	20	25	6.41	4.92	0.50	5.05	100	4.61	Yes	(2)

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per section C4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

(2) Zinc is not listed under **40CFR** 261.30 or as a toxicity characteristic metal per 40CFR 261.24.

Signature of Site Project Manager

Jim Vernon
Printed Name

7/8/2013
Date

Solids-doc

CCP Data Evaluation Narrative

WSPF Number: ID-SDA-SOIL Solids Summary Number: 5

A statistical evaluation of 25 containers for the waste stream noted above was performed to verify the hazardous waste code assignments in AK for VOC Solids Analysis. The containers analyzed were from random selection lots 1 through 5.

The non-transform data was compared with the non-transformed PRQL limits and the following compounds exceeded the PRQL values:

- Carbon Tetrachloride – sqrt transforms
- Chloroform – non transform
- Tetrachlorethylene – non and sqrt transforms
- Trichlorethylene – non and sqrt transforms

The diluted concentrations reported that exceed PRQL with a U qualifier are not included in the population to calculate statistics.

The container population was evaluated for normality, analyte by analyte. Two transforms were performed on each analyte data, in an attempt to 'normalize' the data sets. A log-normal transform and a square root transform were performed (the arcsine transform mentioned in SW-846, Chapter 9 is only applicable to proportion data [values of 0-1] or % data). Neither the log-normal nor the square root transform resulted in a Gaussian distribution. Due to the large number of non detects (values reported at ½ MDL) throughout the data set, there is a skewing effect which is largely responsible for this non-Gaussian distribution.

Summary descriptive data for the non-transformed and transformed data were prepared and are attached. The "W" statistic, which resulted in the highest "W" value (under the Shapiro-Wilk (SW) test for normality) was used as the metric for which the individual analytes were compared to the PRQL (either transformed or nontransformed) to verify the AK for assigning hazardous waste codes for specific analytes.

All the transformations and comparisons are shown on the attached spreadsheets, and were performed using an Excel controlled software package.

No data was used without transformation.

Summary:

In summary, no analytes demonstrated conditions of normality either in the indicated data sets:

Prepared By: Jim Vernon Date: 7/8/13

Approved By:

Signature

Jim Vernon
Print Name

7/8/13
Date

Solids-007

Data Verification Sheet
Supplemental to UCL90 Evaluation Form

Prepared by
Jim Vernon

INL Lots 1 through 5, 25 drums
ID-SDA-SOIL
Solids Analysis VOC

Waste Stream Number: ID-SDA-SOIL
Site: Idaho National Laboratory
Lot Number: 1 through
Number of Drums: 25
Preparation Date: 7/8/13

ANALYTE	Valid N	Maximum Value	Mean	Std. Deviation	UCL90 (Upper 80.00% Confidence Interval)	PRQL Values	SW (Highest W Statistic)	P-Values
Benzene, Non-Transform	23	3.8500	0.4974	1.0668	0.7913	10.0000	0.45647	0.00000
Benzene, Log-Transform	23	-1.3481	-1.8713	1.2636	-1.5232	2.3026	0.70418	0.00002
Benzene, Sqrt-Transform	23	1.9621	0.5083	0.4998	0.6460	3.1623	0.55378	0.00000
Bromoform, Non-Transform	23	3.8500	0.3739	0.8449	0.6067	10.0000	0.41755	0.00000
Bromoform, Log-Transform	23	-1.3481	-1.9630	1.1183	-1.6663	2.3026	0.71808	0.00002
Bromoform, Sqrt-Transform	23	1.9621	0.4593	0.4128	0.5730	3.1623	0.54876	0.00000
Carbon Disulfide, Non-Transform	22	3.8500	0.4207	0.9285	0.6826	10.0000	0.43085	0.00000
Carbon Disulfide, Log-Transform	22	-1.3481	-1.8788	1.1577	-1.5522	2.3026	0.76481	0.00015
Carbon Disulfide, Sqrt-Transform	22	1.9621	0.4845	0.4414	0.6090	3.1623	0.56753	0.00000
Carbon Tetrachloride, Non-Transform	25	2700.0000	252.5714	638.5865	420.8818	10.0000	0.46961	0.00000
Carbon Tetrachloride, Log-Transform	25	7.9010	0.8203	3.7594	1.8114	2.3026	0.83704	0.00101
Carbon Tetrachloride, Sqrt-Transform	25	51.9615	7.8430	14.1074	11.5613	3.1623	0.61553	0.00000
Chlorobenzene, Non-Transform	23	3.8500	0.4974	1.0668	0.7913	10.0000	0.45647	0.00000
Chlorobenzene, Log-Transform	23	-1.3481	-1.8713	1.2636	-1.5232	2.3026	0.70418	0.00002
Chlorobenzene, Sqrt-Transform	23	1.9621	0.5083	0.4998	0.6460	3.1623	0.55378	0.00000
Chloroform, Non-Transform	25	110.0000	9.8378	26.1562	16.7317	10.0000	0.44082	0.00000
Chloroform, Log-Transform	25	4.7005	0.9003	2.4639	0.2509	2.3026	0.75769	0.00005
Chloroform, Sqrt-Transform	25	10.4881	1.6148	2.7444	2.3381	3.1623	0.57208	0.00000
1,1-Dichloroethylene, Non-Transform	22	3.5500	0.3941	0.7881	0.6164	10.0000	0.44013	0.00000
1,1-Dichloroethylene, Log-Transform	22	1.2669	-1.7019	1.0170	-1.4150	2.3026	0.80180	0.00053
1,1-Dichloroethylene, Sqrt-Transform	22	1.8841	0.5014	0.3866	0.6105	3.1623	0.59638	0.00000
1,2-Dichloroethane, Non-Transform	23	3.8500	0.5250	1.0625	0.8177	10.0000	0.48637	0.00000
1,2-Dichloroethane, Log-Transform	23	-1.3481	-1.7488	1.2739	-1.3979	2.3026	0.77572	0.00016
1,2-Dichloroethane, Sqrt-Transform	23	1.9621	0.5358	0.4987	0.6732	3.1623	0.60767	0.00000
Ethylbenzene, Non-Transform	23	3.8500	0.4974	1.0668	0.7913	10.0000	0.45647	0.00000
Ethylbenzene, Log-Transform	23	-1.3481	-1.8713	1.2636	-1.5232	2.3026	0.70418	0.00002
Ethylbenzene, Sqrt-Transform	23	1.9621	0.5083	0.4998	0.6460	3.1623	0.55378	0.00000

SDA-SOIL-008

Data Verification Sheet
Supplemental to UCL90 Evaluation Form

Prepared by
Jim Vernon

INL Lots 1 through 5, 25 drums
ID-SDA-SOIL
Solids Analysis VOC

ANALYTE	Valid N	Maximum Value	Mean	Std. Deviation	UCL90 (Upper 80.00% Confidence Interval)	PRQL Values	SW (Highest W Statistic)	P-Values
Methylene Chloride, Non-Transform	23	3.8500	0.5533	1.0759	0.8497	10.0000	0.51291	0.00000
Methylene Chloride, Log-Transform	23	1.3481	-1.7208	1.3138	-1.3585	-2.3026	0.76928	0.00013
Methylene Chloride, Sqrt-Transform	23	1.9621	0.5499	0.5121	0.6910	3.1623	0.62109	0.00000
m.p-Xylene, Non-Transform	22	3.8500	0.4493	0.9259	0.7105	10.0000	0.46314	0.00000
m.p-Xylene, Log-Transform	22	1.3481	-1.7507	1.4685	-1.4218	-2.3026	0.82907	0.00148
m.p-Xylene, Sqrt-Transform	22	1.9621	0.5130	0.4416	0.6376	3.1623	0.62203	0.00000
o-Xylene, Non-Transform	23	3.8500	0.4974	1.0668	0.7913	10.0000	0.45647	0.00000
o-Xylene, Log-Transform	23	1.3481	-1.8713	1.2686	-1.5232	-2.3026	0.70418	0.00002
o-Xylene, Sqrt-Transform	23	1.9621	0.5083	0.4998	0.6460	3.1623	0.55378	0.00000
1,1,2,2-Tetrachloroethane, Non-Transform	23	3.8500	0.5824	1.0592	0.8742	10.0000	0.54383	0.00000
1,1,2,2-Tetrachloroethane, Log-Transform	23	1.3481	-1.5611	1.3031	-1.2021	-2.3026	0.84372	0.00210
1,1,2,2-Tetrachloroethane, Sqrt-Transform	23	1.9621	0.5842	0.5021	0.7225	3.1623	0.68557	0.00001
Tetrachloroethylene, Non-Transform	25	720.0000	59.2816	152.8662	99.5721	10.0000	0.44461	0.00000
Tetrachloroethylene, Log-Transform	25	6.5793	-0.7043	3.1400	-0.5320	-2.3026	0.88105	0.00726
Tetrachloroethylene, Sqrt-Transform	25	26.8328	4.3085	6.5127	6.0250	3.1623	0.68351	0.00000
Toluene, Non-Transform	23	3.8500	0.5565	1.0567	0.8476	10.0000	0.52110	0.00000
Toluene, Log-Transform	23	1.3481	-1.6393	1.3052	-1.2797	-2.3026	0.82735	0.00109
Toluene, Sqrt-Transform	23	1.9621	0.5645	0.4987	0.7019	3.1623	0.66678	0.00001
Trans-1,2-Dichloroethylene, Non-Transform	23	3.8500	0.4974	1.0668	0.7913	10.0000	0.45647	0.00000
Trans-1,2-Dichloroethylene, Log-Transform	23	1.3481	-1.8713	1.2686	-1.5232	-2.3026	0.70418	0.00002
Trans-1,2-Dichloroethylene, Sqrt-Transform	23	1.9621	0.5083	0.4998	0.6460	3.1623	0.55378	0.00000
1,1,1-Trichloroethane, Non-Transform	24	52.0000	5.3035	13.4757	8.9330	10.0000	0.45048	0.00000
1,1,1-Trichloroethane, Log-Transform	24	3.9512	-1.1666	2.1681	-0.5826	-2.3026	0.72753	0.00002
1,1,1-Trichloroethane, Sqrt-Transform	24	7.2111	1.2157	1.9980	1.7538	3.1623	0.53798	0.00000
Trichloroethylene, Non-Transform	25	920.0000	65.1104	190.2841	115.2630	10.0000	0.39222	0.00000
Trichloroethylene, Log-Transform	25	6.8244	-0.1958	3.1063	-0.0146	-2.3026	0.82373	0.00058
Trichloroethylene, Sqrt-Transform	25	30.3315	3.9830	7.1623	5.8707	3.1623	0.59463	0.00000
1,1,2-Trichloro-1,2,2-trifluoroethane, Non-Transform	22	3.5500	0.4061	0.7969	0.6309	10.0000	0.45702	0.00000
1,1,2-Trichloro-1,2,2-trifluoroethane, Log-Transform	22	1.2669	-1.6962	1.0398	-1.4031	-2.3026	0.74736	0.00008
1,1,2-Trichloro-1,2,2-trifluoroethane, Sqrt-Transform	22	1.8841	0.5066	0.3958	0.6182	3.1623	0.59150	0.00000
1,1,2-Trichloroethane, Non-Transform	23	3.8500	0.5096	1.0624	0.8023	10.0000	0.46548	0.00000
1,1,2-Trichloroethane, Log-Transform	23	1.3481	-1.7796	1.2470	-1.4360	-2.3026	0.76377	0.00011
1,1,2-Trichloroethane, Sqrt-Transform	23	1.9621	0.5250	0.4946	0.6612	3.1623	0.58238	0.00000

Sol/Sys-004

ANALYTE	Valid N	Maximum Value	Mean	Std. Deviation	UCL90 (Upper 80.00% Confidence Interval)	PRQL Values	SW (Highest W Statistic)	P-Values
Trichlorofluoromethane, Non-Transform	23	3.8500	0.5383	1.0573	0.8296	10.0000	0.49106	0.00000
Trichlorofluoromethane, Log-Transform	23	1.6481	-1.6384	1.2289	-1.2998	2.3026	0.80737	0.00050
Trichlorofluoromethane, Sqrt-Transform	23	1.9621	0.5546	0.4910	0.6899	3.1623	0.62181	0.00000
Vinyl Chloride, Non-Transform	21	1.7000	0.2357	0.3634	0.3408	4.0000	0.47088	0.00000
Vinyl Chloride, Log-Transform	21	0.5306	-1.9098	0.8184	-1.6791	1.3863	0.85269	0.00473
Vinyl Chloride, Sqrt-Transform	21	1.3038	0.4242	0.2419	0.4942	2.0000	0.65107	0.00001
Acetone, Non-Transform	25	18.0000	1.2438	3.4967	2.1654	100.0000	0.24385	0.00000
Acetone, Log-Transform	25	2.8904	-0.5268	0.7970	-0.3167	4.6052	0.59118	0.00000
Acetone, Sqrt-Transform	25	4.2426	0.8677	0.7150	1.0562	10.0000	0.34589	0.00000
Butanol, Non-Transform	25	36.5000	3.4174	8.6005	5.6842	100.0000	0.39508	0.00000
Butanol, Log-Transform	25	3.5973	-0.0863	1.2337	0.2389	4.6052	0.61573	0.00000
Butanol, Sqrt-Transform	25	6.0415	1.2585	1.3820	1.6228	10.0000	0.47267	0.00000
Methanol, Non-Transform	25	36.5000	2.3948	7.2217	4.2982	100.0000	0.28383	0.00000
Methanol, Log-Transform	25	3.5973	-0.1746	1.1101	0.0916	4.6052	0.69297	0.00001
Methanol, Sqrt-Transform	25	6.0415	1.1064	1.1043	1.3975	10.0000	0.42245	0.00000
Methyl ethyl ketone, Non-Transform	25	18.0000	1.3188	3.4857	2.2375	100.0000	0.25863	0.00000
Methyl ethyl ketone, Log-Transform	25	2.8904	-0.4176	0.8003	-0.2067	4.6052	0.64757	0.00000
Methyl ethyl ketone, Sqrt-Transform	25	4.2426	0.9122	0.7121	1.0998	10.0000	0.38314	0.00000
Ethyl ether, Non-Transform	25	36.5000	2.4468	7.1077	4.3201	100.0000	0.25078	0.00000
Ethyl ether, Log-Transform	25	3.5973	-0.0496	0.9273	0.2940	4.6052	0.72352	0.00002
Ethyl ether, Sqrt-Transform	25	6.0415	1.1883	1.0382	1.4619	10.0000	0.39443	0.00000
Isobutanol, Non-Transform	25	18.0000	1.2734	3.4881	2.1927	100.0000	0.23281	0.00000
Isobutanol, Log-Transform	25	2.8904	-0.4426	0.7356	-0.2487	4.6052	0.46776	0.00000
Isobutanol, Sqrt-Transform	25	4.2426	0.8929	0.7042	1.0785	10.0000	0.30146	0.00000

Solids-010

CCP Data Evaluation Narrative

WSPF Number: ID-SDA-SOIL Solids Summary Number: 5

A statistical evaluation of 25 containers for the waste stream noted above was performed to verify the hazardous waste code assignments in AK for SVOC Solids Analysis. The containers analyzed were from random selection lots 1 through 5.

The transformed data was compared with the transformed PRQL limits and no compounds exceeded the PRQL values.

The diluted concentrations reported that exceed PRQL with a U qualifier are not included in the population to calculate statistics.

The container population was evaluated for normality, analyte by analyte. Two transforms were performed on each analyte data, in an attempt to 'normalize' the data sets. A log-normal transform and a square root transform were performed (the arcsine transform mentioned in SW-846, Chapter 9 is only applicable to proportion data [values of 0-1] or % data). Neither the log-normal nor the square root transform resulted in a Gaussian distribution. Due to the large number of non detects (values reported at ½ MDL) throughout the data set, there is a skewing effect which is largely responsible for this non-Gaussian distribution.

Summary descriptive data for the non-transformed and transformed data were prepared and are attached. The "W" statistic, which resulted in the highest "W" value (under the Shapiro-Wilk (SW) test for normality) was used as the metric for which the individual analytes were compared to the PRQL (either transformed or nontransformed) to verify the AK for assigning hazardous waste codes for specific analytes.

All the transformations and comparisons are shown on the attached spreadsheets, and were performed using an Excel controlled software package.

No data was used without transformation.

Summary:

In summary, the following analytes demonstrated conditions of normality either in the indicated data sets:

- Bis (2-Ethylhexyl) phthalate – log, and sqrt transforms
- Hexachlorobutadiene – log, transform

Prepared By: Jim Vernon Date: 7/8/13

Approved By:

Signature	Jim Vernon Print Name	7/8/13 Date

Solids-011

Data Verification Sheet
Supplemental to UCL90 Evaluation Form

Prepared by
Jim Vernon

INL lots 1 through 5, 25 drums
ID-SDA-SOIL
Solids Analysis SVOC

Waste Stream Number: ID-SDA-SOIL
Site: Idaho National Laboratory
Lot Number: 1 through 5
Number of Drums: 25
Preparation Date: 7/8/13

ANALYTE	Valid N	Maximum Value	Mean	Std. Deviation	UCL90 (Upper 80.00% Confidence Interval)	PRQL Values	SW (Highest W Statistic)	P-Values
bis(2-Ethylexyl)phthalate	12	38.0000	7.2888	11.0311	11.6305	10.0000	0.68267	0.00058
bis(2-Ethylexyl)phthalate	12	3.6376	0.8516	1.7800	2.3522	3.6026	0.96829	0.89214
bis(2-Ethylexyl)phthalate	12	6.1644	2.1240	1.7407	2.8091	3.1623	0.87169	0.06867
1,2-Dichlorobenzene, Non-Transform	24	15.0000	1.3885	3.3536	2.2918	40.0000	0.44287	0.00000
1,2-Dichlorobenzene, Log-Transform	24	2.7081	-1.1286	1.4979	-0.7252	3.6889	0.79879	0.00028
1,2-Dichlorobenzene, Sqrt-Transform	24	3.8730	0.8011	0.8828	1.0388	6.3246	0.61556	0.00000
1,4-Dichlorobenzene, Non-Transform	24	15.0000	1.3885	3.3536	2.2918	40.0000	0.44287	0.00000
1,4-Dichlorobenzene, Log-Transform	24	2.7081	-1.1286	1.4979	-0.7252	3.6889	0.79879	0.00028
1,4-Dichlorobenzene, Sqrt-Transform	24	3.8730	0.8011	0.8828	1.0388	6.3246	0.61556	0.00000
2,4-Dinitrophenol, Non-Transform	24	15.0000	1.0148	3.0876	1.8464	40.0000	0.33094	0.00000
2,4-Dinitrophenol, Log-Transform	24	2.7081	-1.3019	1.3584	-1.1361	3.6889	0.68286	0.00001
2,4-Dinitrophenol, Sqrt-Transform	24	3.8730	0.6489	0.7871	0.8609	6.3246	0.49247	0.00000
2,4-Dinitrotoluene, Non-Transform	20	0.9000	0.2073	0.2128	0.2704	2.6000	0.58871	0.00000
2,4-Dinitrotoluene, Log-Transform	20	0.1054	-1.8650	0.6816	-1.6627	0.9555	0.71441	0.00006
2,4-Dinitrotoluene, Sqrt-Transform	20	0.9487	0.4198	0.1808	0.4734	1.6125	0.65560	0.00001
Hexachlorobenzene, Non-Transform	20	0.9000	0.2328	0.2393	0.3038	2.6000	0.62886	0.00001
Hexachlorobenzene, Log-Transform	20	0.1054	-1.7879	0.7484	-1.5672	0.9555	0.73391	0.00010
Hexachlorobenzene, Sqrt-Transform	20	0.9487	0.4410	0.2007	0.5006	1.6125	0.68368	0.00002
Hexachlorobutadiene	12	23.0000	4.7975	7.2114	7.6358	10.0000	0.70583	0.00096
Hexachlorobutadiene	12	3.1355	-0.1352	1.9276	-0.8939	2.3026	0.90096	0.16320
Hexachlorobutadiene	12	4.7958	1.6285	1.5299	2.2306	3.1623	0.80051	0.00949
Hexachloroethane, Non-Transform	24	410.0000	49.7638	95.2635	75.4214	40.0000	0.59965	0.00000
Hexachloroethane, Log-Transform	24	6.0162	-1.0554	3.0218	-2.1693	3.6889	0.86886	0.00500
Hexachloroethane, Sqrt-Transform	24	20.2485	4.4411	5.5988	5.9490	6.3246	0.76822	0.00009
2-Methylphenol, Non-Transform	24	15.0000	1.3269	3.3460	2.2281	40.0000	0.42580	0.00000
2-Methylphenol, Log-Transform	24	2.7081	-1.3090	1.6269	-0.8708	3.6889	0.86859	0.00494
2-Methylphenol, Sqrt-Transform	24	3.8730	0.7623	0.8822	0.9999	6.3246	0.61552	0.00000
3&4-Methylphenol, Non-Transform	24	15.0000	1.3306	3.3445	2.2314	40.0000	0.42296	0.00000
3&4-Methylphenol, Log-Transform	24	2.7081	-1.2131	1.4858	-0.8129	3.6889	0.76881	0.00009
3&4-Methylphenol, Sqrt-Transform	24	3.8730	0.7713	0.8762	1.0073	6.3246	0.58848	0.00000
Nitrobenzene, Non-Transform	24	15.0000	1.3885	3.3536	2.2918	40.0000	0.44287	0.00000
Nitrobenzene, Log-Transform	24	2.7081	-1.1286	1.4979	-0.7252	3.6889	0.79879	0.00028
Nitrobenzene, Sqrt-Transform	24	3.8730	0.8011	0.8828	1.0388	6.3246	0.61556	0.00000
Pentachlorophenol, Non-Transform	24	15.0000	1.2648	3.3502	2.1671	40.0000	0.40294	0.00000
Pentachlorophenol, Log-Transform	24	2.7081	-1.3863	1.5079	-0.9802	3.6889	0.68953	0.00001
Pentachlorophenol, Sqrt-Transform	24	3.8730	0.7249	0.8783	0.9615	6.3246	0.54623	0.00000

S1/S5 - 012

CCP Data Evaluation Narrative

WSPF Number: ID-SDA-SOIL Solids Summary Number: 5

A statistical evaluation of 25 containers for the waste stream noted above was performed to verify the hazardous waste code assignments in AK for Solids Analysis for metals. The containers analyzed were from random selection lots 1 through 5.

The transformed data was compared with the transformed PRQL limits and the following compounds exceeded the PRQL values.

- Cadmium – non and sqrt transform
- Zinc – non, log, and sqrt transform

The container population was evaluated for normality, analyte by analyte. Two transforms were performed on each analyte data, in an attempt to 'normalize' the data sets. A log-normal transform and a square root transform were performed (the arcsine transform mentioned in SW-846, Chapter 9 is only applicable to proportion data [values of 0-1] or % data). Neither the log-normal nor the square root transform resulted in a Gaussian distribution. Due to the large number of non detects (values reported at ½ MDL) throughout the data set, there is a skewing effect which is largely responsible for this non-Gaussian distribution.

Summary descriptive data for the non-transformed and transformed data were prepared and are attached. The "W" statistic, which resulted in the highest "W" value (under the Shapiro-Wilk (SW) test for normality) was used as the metric for which the individual analytes were compared to the PRQL (either transformed or nontransformed) to verify the AK for assigning hazardous waste codes for specific analytes.

All the transformations and comparisons are shown on the attached spreadsheets, and were performed using the Statistica controlled software package, and Excel.

The data for Vanadium was used without transformation.

Summary:

The following compounds demonstrated conditions of normality in the annotated data sets:

- Antimony – log transform.
- Cadmium – log transform
- Lead – log transform
- Mercury – log transform
- Selenium – sqrt transform
- Silver – log transform

Prepared By: Jim Vernon Date: 7/8/13

Approved By:

Signature | Jim Vernon (Print Name) | 7/8/13 (Date)

Solids - 013

Data Verification Sheet
Supplemental to UCL90 Evaluation Form

Prepared by
Jim Vernon

INL Lots 1 through 5, 25 drums
ID-SDA-SOIL
Solids Analysis Metals

Waste Stream Number: ID-SDA-SOIL
Site: Idaho National Laboratory
Lot Number: 1 through 5
Number of Drums: 25
Preparation Date: 7/8/13

ANALYTE	Valid N	Maximum Value	Mean	Std. Deviation	UCL90 (Upper 80.00% Confidence Interval)	PRQL Values	SW (Highest W Statistic)	P-Values
Antimony, Non-Transform	25	17.00000	2.96080	3.82297	3.968410012	100	0.61128	0.00000
Antimony, Log-Transform	25	2.83321	0.59438	0.96904	0.849784331	4.60517	0.96027	0.41985
Antimony, Sqrt-Transform	25	4.12311	1.51444	0.83370	1.734181407	10	0.80933	0.00033
Arsenic, Non-Transform	25	17.00000	9.64000	2.08986	10.19081759	100	0.81959	0.00049
Arsenic, Log-Transform	25	2.83321	2.24705	0.19059	2.297282462	4.60517	0.90661	0.02563
Arsenic, Sqrt-Transform	25	4.12311	3.08965	0.31303	3.172153039	10	0.86688	0.00375
Barium, Non-Transform	25	760.00000	262.00000	112.39810	291.6244515	2000	0.52598	0.00000
Barium, Log-Transform	25	6.63332	5.51792	0.28556	5.599317890	7.6009	0.73588	0.00002
Barium, Sqrt-Transform	25	27.56810	15.95891	2.76007	16.68637123	44.7214	0.62928	0.00000
Beryllium, Non-Transform	25	51.00000	17.68640	16.76999	22.10641955	100	0.82762	0.00068
Beryllium, Log-Transform	25	3.93183	2.25957	1.31606	2.606441981	4.60517	0.88996	0.01116
Beryllium, Sqrt-Transform	25	7.14143	3.70535	2.03019	4.240438682	10	0.91524	0.03997
Cadmium, Non-Transform	25	150.00000	25.09520	40.51003	35.77231547	20	0.62541	0.00000
Cadmium, Log-Transform	25	5.01064	2.10239	1.16067	2.525867917	2.99573	0.95655	0.35003
Cadmium, Sqrt-Transform	25	12.24745	3.88718	3.22507	4.737202319	4.47214	0.82624	0.00064
Chromium, Non-Transform	25	230.00000	58.08000	42.66333	69.32465471	100	0.54009	0.00000
Chromium, Log-Transform	25	5.43808	3.92873	0.45253	4.047951894	4.60517	0.78152	0.00011
Chromium, Sqrt-Transform	25	15.16575	7.33699	2.10373	7.891459109	10	0.65741	0.00000
Lead, Non-Transform	25	130.00000	31.87600	24.18266	38.24975578	100	0.67351	0.00000
Lead, Log-Transform	25	4.86753	3.28418	0.56846	3.434008961	4.60517	0.93214	0.09741
Lead, Sqrt-Transform	25	11.40175	5.38481	1.73201	5.841307199	10	0.82892	0.00072
Mercury, Non-Transform	25	4.40000	0.46464	1.03225	0.736706943	4	0.48794	0.00000
Mercury, Log-Transform	25	1.48160	-2.26507	1.63026	-1.835385675	1.38629	0.92140	0.05514
Mercury, Sqrt-Transform	25	2.09762	0.46825	0.50557	0.601503365	2	0.67643	0.00000
Nickel, Non-Transform	25	280.00000	55.92000	54.83986	70.37398703	100	0.52968	0.00000
Nickel, Log-Transform	25	5.63479	3.80348	0.57268	3.954415105	4.60517	0.79218	0.00017
Nickel, Sqrt-Transform	25	16.73320	7.01812	2.63510	7.712645501	10	0.65826	0.00000

Solids-014

ANALYTE	Valid N	Maximum Value	Mean	Std. Deviation	UCL90 (Upper 80.00% Confidence Interval)	PRQL Values	SW (Highest W Statistic)	P-Values
Selenium, Non-Transform	25	1.60000	0.64800	0.41974	0.758630868	20	0.88006	0.00693
Selenium, Log-Transform	25	0.47000	-0.67483	0.80578	-0.462451288	2.99573	0.86390	0.00327
Selenium, Sqrt-Transform	25	1.26491	0.76820	0.26125	0.832059924	1.47214	0.93525	0.11493
Silver, Non-Transform	25	6.40000	1.40960	1.83794	1.894021671	100	0.71571	0.00001
Silver, Log-Transform	25	1.85630	-0.48774	1.42966	-0.110900635	4.60517	0.97126	0.67726
Silver, Sqrt-Transform	25	2.52982	0.98638	0.67443	1.164134484	10	0.88594	0.00918
Thallium, Non-Transform	25	3.90000	1.19800	1.10383	1.48893	100	0.81470	0.00040
Thallium, Log-Transform	25	1.36098	-0.23631	0.95200	0.01560	4.60517	0.91905	0.04874
Thallium, Sqrt-Transform	25	1.97484	0.99082	0.47464	1.115921215	10	0.88186	0.00755
Vanadium, Non-Transform	25	63.00000	51.92000	8.34126	54.11848319	100	0.91804	0.04623
Vanadium, Log-Transform	25	4.14313	3.93498	0.18399	3.983470786	4.60517	0.84245	0.00127
Vanadium, Sqrt-Transform	25	7.93725	7.18037	0.61432	7.342284623	10	0.88522	0.00887
Zinc, Non-Transform	25	610.00000	160.68000	122.51657	192.9713478	100	0.59931	0.00000
Zinc, Log-Transform	25	6.41346	4.92236	0.50113	5.05443644	4.60517	0.81302	0.00038
Zinc, Sqrt-Transform	25	24.69818	12.13010	3.75564	13.11996498	10	0.70661	0.00001

510-5X1/05

CCP Waste Stream Solids Tentatively Identified Compounds

WSPF Number: ID-SDA-SOIL Rev. 1 Solids Summary Waste Stream Lot 5

Number of samples in this lot: 5

The following TICs were detected during Headspace Gas Analysis of this Waste Stream Lot:

Tentatively Identified Compound	CAS Number	Number of Samples Containing TIC In This Lot	TIC Included in 40CFR261 Appendix VIII Yes/No
None			

Approved By:

Signature	Jim Vernon	7/8/2013
	Print Name	Date

Solids -016

CCP Waste Stream Solids Tentatively Identified Compounds (Cumulative)

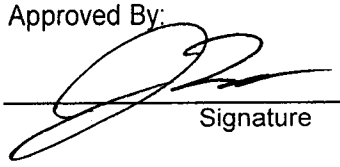
WSPF Number: ID-SDA-SOIL Rev. 1 Solids Summary Waste Stream Lot: 1 through 5

Number of samples evaluated to date in the Waste Stream: 25

The following TICs were detected during Headspace Gas Analysis of this Waste Stream:

Tentatively Identified Compound	CAS Number	Maximum Observed Estimated Concentrations (ppmv)	Total Number of Samples Containing TIC	% TIC Detected in Waste Stream	Greater than 25% Yes
Bis(2-ethylhexyl)phthalate	117-81-7	21.00	6	24.00%	No
Pentachlorobiphenyl	25429-29-2	810.00	9	36.00%	Yes
Tetrachlorobiphenyl	26914-33-0	27.00	5	20.00%	No
Hexachlorobutadiene	87-68-3	71.00	4	16.00%	No
Hexachloropropene	1888-71-7	5.40	3	12.00%	No
1,4-Dioxane	123-91-1	1.10	2	8.00%	No
Diethyl phthalate	84-66-2	2.10	1	4.00%	No
Hexachlorobiphenyl	266601-64-9	9.80	3	12.00%	No
Benzene, 1,2,3,5-tetrachloro	634-90-2	21.00	1	4.00%	No
bis (7-methyloctyl)phthalate	20584-52-3	0.84	1	4.00%	No

Approved By:



Signature | Jim Vernon Print Name | 7/8/2013 Date

Solids -017

CCP Site Project Manager Data Evaluation Narrative

WSPF Number: ID-SDA-SOIL Rev. 1 Solids Summary Waste Stream Lot Number 5

All Solids Analysis Data for the containers in this Lot has been Validated and Verified and found to be acceptable, and meet the requirements of the WIPP WAP.

Solids Summary Waste Stream Lot number 4 consists of containers sampled and analyzed from random selection lot 3 and 4.

During calculations to determine the appropriate number of samples (n) in accordance with CCP-TP-003 step 4.1.2[B], the following analytes were determined to require more than five sample analysis but additional samples are not necessary for the indicated reasons:

Zinc - not listed under 40CFR 261.30 or as a toxicity characteristic metal per 40CFR 261.24.

2 analytes, pentachlorobiphenyl and tetrachlorobiphenyl, are listed in 20.4.1.200 NMAC (incorporating 40 CFR 261) and are present as a TIC in greater than 25% of samples in the waste stream. Although the compounds are listed, there is no EPA HWN associated it. An AK re-evaluation was performed and the compounds will be added to the target analyte list. No additional EPA HWNs are assigned as a result of the addition of this compounds.

The following contingency containers from Solids Summary Waste Stream Lot 5 were solid sampled and repackaged: ARP27237 (ARP30014), ARP26887 (ARP30081), ARP24217 (ARP30100), ARP26744 (ARP30103) and ARP23897 (ARP30018)

Solids Summary Lot 5 was compiled using CCP procedures that were expired after solids sampling was no longer a permit requirement. The Solids Summary Data Report was assembled for completion of Solids Summary Lot 5.

Approved By:

Signature	Jim Vernon	7/8/2013
	Print Name	Date

Solids - 058

DIVIDER

PAGE

COPY

Washington
TRU Solutions LLC

CP:05:01119
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: March 8, 2006

FROM: C. Simmons — LOCATION: Retrieval, Characterization & Transportation

TO: CCP Records Custodian — LOCATION: Retrieval, Characterization & Transportation

SUBJECT: TRANSMITTAL OF SOLIDS SUMMARY DATA REPORT FOR LOT 1 ID-RF-S3150-A WASTE STREAM

Please accept the attached Solids Summary Data Report to be placed in records for Idaho National Laboratory Lot 1 Waste Stream ID-RF-S3150-A.

CS:jm

Enclosure

cc: (without enclosure)
M. Pearcy ED
W. Weyerman ED

SOLIDS SUMMARY DATA REPORT

ID-RF-S3150-A, LOT 1

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CCP Correlation of Container ID Numbers to Solid Sample ID Number

WSPF Number: ID-RF-S3150-A

Waste Stream Lot Number: 1

Container ID Number	Solid Sample ID Number	Solid Batch Number(s)
10016886	1001688611V1DL889	ALD05034V
10018178	1001817811V1DL889	ALD05034V
10018503	1001850311V1DL2667	ALD05034V
10018867	1001886711V1DL1333	ALD05034V
10018875	1001887511V1DL4000	ALD05034V
10016886	1001688611M1	ALD05031S
10018178	1001817811M1	ALD05031S
10018503	1001850311M1	ALD05031S
10018867	1001886711M1DL2	ALD05031S
10018875	1001887511M1	ALD05031S
10016886	1001688611V2DL10	ALD05025N
10018178	1001817811V2DL9	ALD05025N
10018503	1001850311V2DL10	ALD05025N
10018867	1001886711V4RE	ALD05025N
10018875	1001887511V2DL40	ALD05025N
10016886	1001688611M1	ALD05034M
10018178	1001817811M1	ALD05034M
10018503	1001850311M1	ALD05034M
10018867	1001886711M1	ALD05034M
10018875	1001887511M1	ALD05034M

Use multiple copies of this attachment as necessary to document all containers discussed in this summary report. Record Waste Stream Profile Form Number and Waste Stream Lot Number on each sheet issued. Number each sheet in the space provided.

Site Project Manager (or designee):

Mark Pearcy — Signature

Mark Pearcy — Print Name

12/29/05 — Date

Solids

CCP Totals Analysis VOC UCL90 Evaluation Form

WSPF # ID-RF-S3150-A **Waste Stream Lot Number:** 1

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples (2)	# Samples above MDL (1)	Maximum (mg/kg) (2)	Mean (mg/kg) (2)	SD (mg/kg) (2)	UCL 90 (mg/kg) (2)	PRQL (mg/kg)	Transformed PRQL (N/A or Value)	UCL 90 > PRQL YES	EPA Code
Benzene		0	0					10	N/A		
Bromoform		0	0					10	N/A		
Carbon disulfide		0	0					10	N/A		
Carbon tetrachloride	SQRT	5	5	178.89	133.97	35.57	158.36	10	3.162278	Yes	F001
Chlorobenzene		0	0					10	N/A		
Chloroform (3)	No	1	1	270	270	N/A	N/A	10	N/A		D022[4]
1,4-Dichlorobenzene [c]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	10	N/A		
ortho-Dichlorobenzene [c]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	10	N/A		
1,2-Dichloroethane		0	0					10	N/A		
1,1-Dichloroethylene		0	0					10	N/A		
trans 1,2-Dichloroethylene		0	0					10	N/A		
Ethyl benzene		0	0					10	N/A		
Methylene choloride		0	0					10	N/A		
1,1,2,2-Tetrachloroethane		0	0					10	N/A		
Tetrachloroethylene		0	0					10	N/A		
Toluene		0	0					10	N/A		
1,1,1-Trichloroethane	Log	5	5	10.78	9.93	0.7	10.41	10	2.302585	Yes	F001, F002
1,1,2,-Trichloroethane		0	0					10	N/A		
Trichoroethylene		0	0					10	N/A		
Trichlorofluoromethane		0	0					10	N/A		
1,1,2-Trichloro-1,2,2-trifluoroethane		0	0					10	N/A N/A		
Vinyl chloride		0	0					4	N/A		
m-Xylene		0	0					10	N/A		
p-Xylene		0	0					10	N/A		
o-Xylene		0	0					10	N/A		
Acetone	No	4	0	17.5	12.29	7.24	18.21	100	N/A		
Butanol	No	4	0	17.5	12.29	7.24	18.21	100	N/A		
Ethyl ether	No	4	0	17.5	12.2875	7.235	18.212	100	N/A		
Formaldehyde [a]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	100	N/A		

Solids
nz

CCP Totals Analysis VOC UCL90 Evaluation Form

WSPF # ID-RF-S3150-A **Waste Stream Lot Number:** 1

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples (2)	# Samples above MDL (1)	Maximum (mg/kg) (2)	Mean (mg/kg) (2)	SD (mg/kg) (2)	UCL 90 (mg/kg) (2)	PRQL (mg/kg)	Transformed PRQL (N/A or Value)	UCL 90 > PRQL YES	EPA Code
Hydrazine [b]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	100	N/A		
Isobutanol	Log	5	0	3.79549	2.17635	1.32798	3.08691	100	4.60517		
Methanol	SQRT	5	1	6.67083	4.03871	2.32077	5.63	100	10		
Methyl ethyl ketone	No	4	0	17.5	12.2875	7.23514	18.21216	100	N/A		
Pyridine	No	4	0	17.5	12.2875	7.23514	18.21216	100	N/A		

(a) Required only for homogenous solids and soil/gravel waste from Los Alamos National Laboratory and Savannah River Site.
(b) Required only for homogenous solids and soil/gravel waste from Oak Ridge National Laboratory and Savannah River Site.
(c) Can also be analyzed as semi-volatile organic compound. If analyzed as a semi-volatile, the QAOs of Table B3-6 apply.
Comments:

(1) For analytes where the samples measured was below the MDL value, 1/2 of the MDL value was used. (Per section B4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

(2) As a result of dilution requirements, several analytes were reported as non-detected with MDL values in excess of the PRQL. In accordance with Section B4-3d of the WIPP-WAP, such "U" flagged observations with elevated MDL values due to dilution were not used in calculating mean concentration. Consequently, the subject analytes were statistically evaluated using only the useable observations. For analytes with no useable data, there is no corresponding data reported on the UCL90 evaluation form. See the Solids Sampling and Analysis Information section of the AK Summation for assignment of Hazardous Waste Numbers per AK.

(3) For analytes where there is no standard deviation, there is inadequate data to perform the statistical analysis.

(4) For Chloroform there was only one usable data point. Due to the lack of variability of the data no UCL90 value can be calculated. The D022 EPA code has been assigned based on AK.

Solids
AK

CCP Totals Analysis Semi-VOC UCL_{90} Evaluation Form

WSPF #: ID-RF-S3150-A **Waste Stream Lot Number:** 1

ANALYTE	Transform Data Used (No, Data-Log, SQRT,	# Samples (2)	# Samples above MDL (1)	Maximum (mg/kg)	Mean (mg/kg)	SD (mg/kg) (2)	UCL_{90} (mg/kg)	PRQL (mg/kg)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL YES	EPA Code
2-Methylphenol (cresols) (3)	No	1	0	4	4	N/A	N/A	40	N/A		
3&4 -Methylphenol (cresols)(3)	No	1	0	4	4	N/A	N/A	40	N/A		
1,4-Dichlorobenzene [a](3)	No	1	0	10	10	N/A	N/A	40	N/A		
ortho-Dichlorobenzene [a] (3)	No	1	0	2	2	N/A	N/A	40	N/A		
2,4-Dinitrophenol (3)	No	1	0	4	4	N/A	N/A	40	N/A		
2,4-Dinitrotoluene	No	0						2.6	N/A		
Hexachlorobenzene	No	0						2.6	N/A		
Hexachloroethane (3)	No	1	1	180	180	N/A	N/A	40	N/A		D034[4]
Nitrobenzene (3)	No	1	0	2	2	N/A	N/A	40	N/A		
Polychlorinated Biphenyls [b]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	40	N/A		
Aroclor 1016 [b]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	40	N/A		
Aroclor 1221 [b]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	40	N/A		
Aroclor 1232 [b]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	40	N/A		
Aroclor 1242 [b]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	40	N/A		
Aroclor 1248 [b]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	40	N/A		
Aroclor 1254 [b]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	40	N/A		
Aroclor 1260 [b]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	40	N/A		
Pentachlorophenol (3)	No	1	0	2	2	N/A	N/A	40	N/A		
Pyridine [a]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	40	N/A		

[a] Can also be analyzed as a volatile organic compound.

[b] Required only for waste matrix code S3220 (organic sludges).

Comments

(1) For Analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per section B4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration)

(2) As a result of dilution requirements, several analytes were reported as non-detected with MDL values in excess of the PRQL. In accordance with Section B4 3d of the WIPP-WAP, such "U" flagged observations with elevated MDL values due to dilution were not used in calculating mean concentration. Consequently, the subject analytes were statistically evaluated using only the useable observations. For analytes with no useable data, there is no corresponding data reported on the UCL90 evaluation form. See the Solids Sampling and Analysis Information section of the AK Summation for assignment of Hazardous Waste Numbers per AK.

(3) For analytes where there is no standard deviation, there is inadequate date to perform the statistical analysis.

(4) For Hexachloroethane there was only one usable data point. Due to the lack of variability of the data no UCL90 value can be calculated. The D034 EPA code has been assigned based on AK.

Solids
05

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CCP Totals Analysis Metals UCL_{90} Evaluation Form

WSPF #: ID-RF-S3150-A **Waste Stream Lot Number:** 1

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples	# Samples above MDL (1) (2)	Maximum (mg/kg)	Mean (mg/kg)	SD (mg/kg) (2)	UCL_{∞} (mg/kg)	PRQL (mg/kg)	Transformed PRQL (N/A or Value)	UCL_{∞} > PRQL YES	EPA Code
Antimony	No	5	0	0.3	0.3	0	N/A	100	N/A		
Arsenic	No	5	1	1.8	0.68	0.6261	1.1093	100	N/A		
Barium	Log	5	5	3.78419	2.18146	1.32336	3.08885	2000	7.6009		
Beryllium	Log	5	3	0.33647	-1.48776	1.65029	-0.3562	100	4.60517		
Cadmium	No	5	1	2	0.44	0.87207	1.03795	20	N/A		
Chromium	Log	5	5	2.63906	0.59812	1.41729	1.56992	100	4.60517		
Lead	Log	5	3	1.64866	0.66032	0.91919	1.29059	100	4.60517		
Mercury	SQRT	5	2	0.20125	0.11053	0.05887	0.1509	4	2		
Nickel	Log	5	5	2.48491	1.096	0.8989	1.71238	100	4.60517		
Selenium	No	5	1	1.4	0.52	0.49193	0.85731	20	N/A		
Silver	Log	5	5	-0.27444	-0.5816	0.2402	-0.41689	100	4.60517		
Thallium	No	5	0	0.5	0.5	0	N/A	100	N/A		
Vanadium	Log	5	5	3.3322	-0.30707	2.0451	1.0952	100	4.60517		
Zinc	No	5	5	26	20.8	4.54973	23.91961	100	N/A		

Comments:

(1) For analytes where the samples measured was below the MDL value, 1/2 of the MDL value was used. (Per section B4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

(2) For analytes where there is no standard deviation, there is inadequate data to perform the statistical analysis.

Sp,ds

CCP Data Evaluation Narrative

WSPF Number:ID-RF-S3150-A Waste Stream Lot Number: 1

WSPF Number: ID-RF-S3150-A, Waste Stream Lot Number 1 VOC Totals Analysis. A statistical evaluation of 5 containers for the waste stream noted above was performed to confirm the AK.

Benzene, Bromoform, Carbon disulfide, Chlorobenzene, 1,2-Dichloroethane, 1,1-Dichloroethylene, trans-1,2-Dichloroethene, Ethyl benzene, Methylene chloride, 1,1,2,2-Tetrachloroethane, Tetrachloroethylene, Toluene, 1,1,2-Trichloroethane, Trichloroethene, Trichlorofluoromethane, Freon 113, Vinyl Chloride, m,p-Xylenes, and o-Xylene diluted sample results with a U qualifier reported above the PRQL were not utilized to calculate statistics therefore no results are reported. Diluted sample results were also excluded for the other compounds therefore the number of samples in the population vary for each compound.

Carbon Tetrachloride and 1,1,1-Trichloroethane exceeded the PRQL limit in the non, log, and square root transform data set.

The container population was evaluated for normality, analyte by analyte. Two transforms were performed on each analyte data, in an attempt to 'normalize' the data sets. A log-normal transform and a square root transform were performed (the arcsine transform mentioned in SW-846, Chapter 9 is only applicable to proportion data [values of 0-1] or % data). Neither the log-normal nor the square root transform resulted in a Gaussian distribution for Acetone and Butanol. Due to the large number of non detects (values reported at ½ MDL) throughout the data set, there is a skewing effect which is largely responsible for this non-Gaussian distribution.

Summary descriptive data for the non-transformed and transformed data were prepared and are attached. The "W"statistic, which resulted in the highest "W" value (under the Shapiro-Wilk (SW) test for normality) was used as the metric for which the individual analytes were compared to the PRQL (either transformed or nontransformed) to verify the AK for assigning hazardous waste codes for specific analytes.

This is in strict accordance with Chapter 9 of SW-846 which states, in part, "...If either transformation is required, all subsequent statistical evaluations must be performed on the transformed scale." Thus, if the analyte had the highest "W" Statistic, in a transformed function, these transformed analyte values were compared against the transformed limits. The results of the comparison show that the data does not exceed the PRQL. The results are shown in the attached matrices. All the transformations and comparisons are shown on the attached spreadsheets, and were performed using the Statistica controlled software package, and Excel.

The data for Chloroform, Acetone, 1-Butanol, Methyl ethyl ketone, Ethyl ether, and Pyridine was used without transformation.

Solids

CCP Data Evaluation Narrative

WSPF Number: ID-RF-S3150-A

Waste Stream Lot Number: 1

Summary

In summary, Carbon Tetrachloride (non, log, square root), 1,1,1-Trichloroethane (non, log, square root), Acetone (non), 1-Butanol (non), Methanol (non, log, square root), Methyl ethyl ketone (non), Ethyl ether (non), Isobutanol (log, square root), Pyridine (non) exhibited normality in the transformation nonted in paranthesis.

Chloroform had only one observations from the five drums from which data was collected and no meaningful statistics could be calculated. The Shapiro-Wilk Test is restricted to 3<n<2000. The Shapiro-Wilk statistic effectively measures the covariance of the observations. This will not occur when there are three or more values in the data set.

Prepared by Irene Quintana, SPQAO 11-11-05.

Approved By:

Signature	Print Name	Date
Mark Pearcy	Mark Pearcy	12-29-05

Solids
09

CCP Data Evaluation Narrative

WSPF Number: ID-RF-S3150 Waste Stream Lot Number: 1

WSPF Number: ID-RF-S3150 Waste Stream Lot Number 1 Semi-VOC Totals Analysis. A statistical evaluation of 5 containers for the waste stream noted above was performed to confirm the AK.

Diluted concentrations reported above the PRQL with a U qualifier are not used in the population to calculate the statistics.

Only one sample result was reported below the PRQL with the exception of 2,4-Dinitrotolene and Hexachlorobenzene.

The container population was evaluated for normality, analyte by analyte. Two transforms were performed on each analyte data, in an attempt to 'normalize' the data sets. A log-normal transform and a square root transform were performed (the arcsine transform mentioned in SW-846, Chapter 9 is only applicable to proportion data [values of 0-1] or % data). Neither the log-normal nor the square root transform resulted in a Gaussian distribution. Due to the large number of non detects (values reported at ½ MDL) throughout the data set, there is a skewing effect which is largely responsible for this non-Gaussian distribution.

Summary descriptive data for the non-transformed and transformed data were prepared and are attached. The "W"statistic, which resulted in the highest "W" value (under the Shapiro-Wilk (SW) test for normality) was used as the metric for which the individual analytes were compared to the PRQL (either transformed or nontransformed) to verify the AK for assigning hazardous waste codes for specific analytes.

This is in strict accordance with Chapter 9 of SW-846 which states, in part, "...If either transformation is required, all subsequent statistical evaluations must be performed on the transformed scale." Thus, if the analyte had the highest "W" Statistic, in a transformed function, these transformed analyte values were compared against the transformed limits. The results are shown in the attached matrices.

All the transformations and comparisons are shown on the attached spreadsheets, and were performed using the Statistica controlled software package, and Excel.

Summary

Since only one data point was used no meaningful statistic could be calculated.
Prepared 11-11-2005 by Irene Quintana - SPQAO

Approved By:

Mark Pearcy
Signature

Mark Pearcy
Print Name

12/29/05
Date

Solids

CCP Data Evaluation Narrative

WSPF Number:ID-RF-S3150-A

Waste Stream Lot Number: 1

WSPF Number: ID-RF-S3150-A, Waste Stream Lot Number 1 Totals Analysis Metals. A statistical evaluation of 5 containers for the waste stream noted above was performed to confirm the AK.

The data was compared to the PRQL limits and none of the analytes exceeded its limits in the non, log, and square root transformed data set.

The container population was evaluated for normality, analyte by analyte. Two transforms were performed on each analyte data, in an attempt to 'normalize' the data sets. A log-normal transform and a square root transform were performed (the arcsine transform mentioned in SW-846, Chapter 9 is only applicable to proportion data [values of 0-1] or % data). Neither the log-normal nor the square root transform resulted in a Gaussian distribution for Antimony, Arsenic, Chromium, Mercury (square root only), Nickel (square root only), Silver (square root only), and Thallium. Due to the large number of non detects (values reported at ½ IDL) throughout the data set, there is a skewing effect which is largely responsible for this non-Gaussian distribution.

Summary descriptive data for the non-transformed and transformed data were prepared and are attached. The "W"statistic, which resulted in the highest "W" value (under the Shapiro-Wilk (SW) test for normality) was used as the metric for which the individual analytes were compared to the PRQL (either transformed or nontransformed) to verify the AK for assigning hazardous waste codes for specific analytes.

This is in strict accordance with Chapter 9 of SW-846 which states, in part, "...If either transformation is required, all subsequent statistical evaluations must be performed on the transformed scale." Thus, if the analyte had the highest "W" Statistic, in a transformed function, these transformed analyte values were compared against the transformed limits. The results of the comparison show that the data does not exceed the PRQL. The results are shown in the attached matrices.

All the transformations and comparisons are shown on the attached spreadsheets, and were performed using the Statistica controlled software package, and Excel.

Antimony, Arsenic, Cadmium, Selenium, Thallium, and Zinc were used in the non-transformed data set.

Summary

Barium (non, log, square root), Beryllium (log, square root), Chromium (log, square root), Lead (non, log, square root), Mercury (log, square root), Nickel (log, square root), Silver (non, log, square root), and Zinc (non, log, square root) passed the normality test in the transform data set noted in paranthesis.

Solids

CCP Data Evaluation Narrative

WSPF Number: ID-RF-S3150-A Waste Stream Lot Number: 1

Arsenic, Cadmium, and Selenium had only two observations from the five drums from which data was collected. Because of these values, the W statistic produced a value of 0.552181684. The Shapiro-Wilk Test is restricted to 3<n<2000. The Shapiro-Wilk statistic effectively measures the covariance of the observations. With only two values there is no meaningful covariance. As long as there are only two values regardless of the number of observations, the transformed data will have the same calculated "W" number for the transformed or the non-transformed values. This will not occur when there are three or more values in the data set. Antimony and Thallium only had one observation from which data was collected and no meaningful statistics could be calculated.

Prepared by Irene Quintana, SPQAO 11-11-05.

Approved By:

Signature	Print Name	Date
Mark Pearcy	Mark Pearcy	12/29/05

Solids
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CCP Waste Stream Lot Solids Tentatively Identified Compounds

WSPF Number: ID-RF-S3150-A Waste Stream Lot Number 1

Number of samples in the lot: 5

The following TICs were detected during Solids Analysis of this Waste Steam Lot:

Tentatively Identified Compound	CAS Number	Number of Samples Containing TIC In This Lot	TIC Included in 40CFR261 Appendix VIII Yes/No
Phenol	108-95-2	1	Yes
bis(2-ethylhexyl)phthalate	117-81-7	3	Yes
1,2-Benzenedicarboxylic acid, dipentyl ester	131-18-0	1	No

Approved By:

Mark Pearcy Mark Pearcy 12/29/05

Signature Print Name Date

Solids
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CCP Waste Stream Solids Tentatively Identified Compounds

WSPF Number: ID-RF-3150-A Waste Stream Lot Number: 1 through 1

Number of samples evaluated to date in the Waste Stream: 5

The following TICs were detected during Headspace Gas Analysis of this Waste Stream:

Tentatively Identified Compound	CAS Number	Maximum Observed Estimated Concentrations (ppmv)	Total Number of Samples Containing TIC	% TIC Detected in Waste Stream	Greater than 25% Yes
bis(2-ethylhexyl)phthalate	117-81-7	38000	3	60.00%	Yes
Phenol	108-95-2	160	1	20.00%	No
1,2-Benzenedicarboxylic acid, dipentyl ester	131-18-0	110	1	20.00%	No

Data confirm Acceptable Knowledge? Yes: X No: ____

If no, describe the basis for assigning the EPA Hazardous Waste Codes:

Approved By: Mark Pearcy
Signature

Mark Pearcy
Print Name

12/29/05
Date

Solids
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CCP Site Project Manager Data Evaluation Narrative

WSPF Number:ID-RF-S3150-A Waste Stream Lot Number:1

TIC bis(2-ethylhexl)phthalate (CAS# 117-81-7) identified in > 25% of samples and found in 40CFR261 APP VIII. Per CCP-AK-INL-005, section 6.4.3.4 (P- and U-Listed Waste) this compound was specifically identified in the AK Summary Report. AK does indicate that vacuum pump oil used in mass spectrometers may have been composed of this TIC and this oil may have been disposed of in the oil/solvent mixture feed to the Grease Plant process, but not as an unused product. This TIC is also a common plasticizer used in plastic, including the plastic bags/packaging used to package this waste. Accordingly, this waste stream is not a U028-listed hazardous waste. As a source for this TIC can is identified in the AK, and a source for it can be identified, addition of this TIC to the Target Analyte List is not required.

Approved By:

Mark Pearcy	Mark Pearcy	12/29/05
Signature	Print Name	Date

Solids
15

CCP Waste Stream Characterization Checklist

Site(s): INL

Waste Stream Number: ID-AECHDM Lot # (if applicable) 1

Waste Stream Description: Heterogeneous Debris

Acceptable Knowledge Information or other data points[a]	Characterization Method(s)[b]	Acceptable Knowledge Re-evaluation Required? Yes/No[c]?	Comments[d]
Physical waste form/description	RTR	No	RTR Data Sheets indicate consistency with Attachment 6 of CCP-TP-005.
Waste material parameters weights	RTR	No	RTR Data Sheets indicate consistency with CCP-AK-INL-025, Table 4. See additional attached sheets.
Waste percent volume consistent with nondestructive examination or visual examination data and audio/video tapes or equivalent media	RTR	No	RTR Data Sheets indicate consistency with CCP-AK-INL-025. See additional attached sheets.
Summary category group assignment	RTR	No	Summary Category group S5000 is consistent with RTR Data sheets.
Waste matrix code assignment	RTR	No	Waste Matrix Code of S5400 is consitent with data from RTR data sheets.
Absence of prohibited items	RTR	No	RTR did not identify any prohibited items.
Tentatively identified compounds[f]	HSG Analysis	No	No TICs in this waste stream have exceeded 25% of the samples for the entire waste stream.
EPA Hazardous Waste Number assignment [e]	HSG Analysis	No	Characterization results consistent with Section 5 of CCP-AK-INL-025.

CCP RECORDS ORIGINAL
DATE REC'D_____

CCP Waste Stream Characterization Checklist

Site(s): INL

Waste Stream Number: ID-AECHDM Lot # (if applicable) 1

Waste Stream Description: Heterogeneous Debris

Acceptable Knowledge Information or other data points[a]	Characterization Method(s)[b]	Acceptable Knowledge Re-evaluation Required? Yes/No[c]?	Comments[d]
Toxicity characteristic code assignment	HSG Analysis	No	Consistent with CCP Headspace Gas UCL_{90} Evaluation form.
UCL_{90} > PRQL?	HSG Analysis	No	Verified using CCP Headspace Gas UCL_{90} evaluation form. None of the analytes listed, that do not already have the associated EPA HWN applied, have UCL_{90} values > PRQL values, using transformed and non-transformed values for comparison where applicable.
VOCs from packaging materials or radiolysis present	HSG Analysis	No	CCP-TP-005 Attachment 5 does not identify any VOCs associated with packaging or radiolysis.
State Hazardous Waste Number assignment	HSG Analysis	No	No additional State Hazardous Waste codes are identified in CCP-TP-005, Attachment 5.
Radionuclides present	NDA	No	See Additional Comments section and additional sheets attached.
Other radiological parameters: (specify)	NDA	No	No additional radiological parameters identified

CCP Waste Stream Characterization Checklist

Site(s): INL

Waste Stream Number: ID-AECHDM Lot # (if applicable) 1

Waste Stream Description: Heterogeneous Debris

Additional Comments:

U-238 and Pu-239 are identified in AK as the two most prevalent isotopes with WT%s of 97.68% and 1.16% respectively. The two most prevalent isotopes by WT% for the Lot and the Waste Stream to date are 75% U-238, and 20.37% Np-237. No re-evaluation of AK is warranted by this data.

a. Identified in the AK Summary Report or included in the in-process record documentation (e.g., BDR's)
b. Use the *Acceptable Knowledge and Waste Characterization Data Cross-Reference (Attachment 9)* to identify applicable testing, sampling, and analysis information to resolve the acceptable knowledge information, as applicable.
c. If "yes," AKE completes an *Acceptable Knowledge Re-evaluation Checklist*.
d. Identify the source of the waste characterization information (e.g., batch data report). Note if AK sufficiency scenarios 1, 2, or 3 are applicable.
e. Ensure that, if a toxicity characteristic contaminant is identified, it is not included as a listed waste, and if analytical data regarding the concentration are not available, the corresponding EPA Hazardous Waste Number is applied.
f. Tentatively Identified Compounds Identified in the Headspace Gas Summary Report were identified on the Hazardous Constituent List, Attachment 5

Site Project Manager:

Jim Vernon — Print
Sign
12-12-11 — Date:

Acceptable Knowledge Expert:

Kevin J. Peters — Print
Sign
12/12/2011 — Date:

NDA Isotopic Weight Percent
ID-AECHDM
Lot 1

CONTAINERID	NDABDR	SR_90	CS_137	U_232	U_233	U_234	U_235	U_238	NP_237	PU_238	PU_239	PU_240	PU_241	PU_242	AM_241	AM_243	CM_243	EU_154	CF_249
RW48201	INNDAS110150	1.34E-07	2.11E-07			6.09E-04		6.08E+01	6.60E-01	3.01E-03	1.38E+01	1.31E+00	2.53E-02	1.17E-02	2.40E-01	1.78E-05		5.65E-09	
RW48061	INNDAS110150	1.58E-09	2.48E-09						2.69E-01		5.58E-01				1.47E-02	2.29E-04	3.51E-06		
RW47765	INNDAS110150	6.57E-08	1.03E-07						4.33E-03	1.06E-04	2.54E-01	1.66E-02	2.18E-04	6.81E-05	6.10E-01				
RW49571	INNDAS110152	1.09E-06	1.72E-06						6.02E-02	1.84E-03	2.75E+00	2.07E-01	4.45E-03	1.01E-03	1.68E-02				
RW48196	INNDAS110152	2.55E-05	4.01E-05						2.88E-03		4.08E-01								
RW48192	INNDAS110152	2.01E-05	3.17E-05								1.08E+00								
RW48074	INNDAS110152	6.86E-08	1.08E-07			7.31E-04	6.68E-02	1.07E+01	5.53E-03		1.92E-01	1.30E-02							
RW47969	INNDAS110152	1.68E-06	2.64E-06						1.31E-03		1.00E-01								
RW47784	INNDAS110152	2.79E-07	4.39E-07												8.43E-01		5.22E-05		9.00E-04
RW47763	INNDAS110152	2.39E-06	3.76E-06						3.84E-03		2.23E-01						6.98E-07		
		5.14E-05	8.07E-05	0.00E+00	0.00E+00	1.34E-03	6.68E-02	7.15E+01	1.03E+00	4.96E-03	1.94E+01	1.54E+00	3.00E-02	1.26E-02	1.73E+00	2.47E-04	5.66E-05	5.65E-09	9.00E-04
	9.53E+01	9.53E+01	9.53E+01	9.53E+01	9.53E+01	9.53E+01	9.53E+01	9.53E+01	9.53E+01	9.53E+01	9.53E+01	9.53E+01	9.53E+01	9.53E+01	9.53E+01	9.53E+01	9.53E+01	9.53E+01	9.53E+01
	WT%	0.00%	0.00%	0.00%	0.00%	0.00%	0.07%	75.00%	1.08%	0.01%	20.37%	1.62%	0.03%	0.01%	1.81%	0.00%	0.00%	0.00%	0.00%

SUPPORTING DOCUMENTATION

NDA Isotopic Weight Percent Rollup Through Lot 1

ID-AECHDM

	SR_90	CS_137	U_232	U_233	U_234	U_235	U_238	NP_237	PU_238	PU_239	PU_240	PU_241	PU_242	AM_241	AM_243	CM_243	EU_154	CF_249
Total g	5.14E-05	8.07E-05	0.00E+00	0.00E+00	1.34E-03	6.68E-02	7.15E+01	1.03E+00	4.96E-03	1.94E+01	1.54E+00	3.00E-02	1.28E-02	1.73E+00	2.47E-04	5.66E-05	5.65E-09	9.00E-04
WT%	0.00%	0.00%	0.00%	0.00%	0.00%	0.07%	75.00%	1.08%	0.01%	20.37%	1.62%	0.03%	0.01%	1.81%	0.00%	0.00%	0.00%	0.00%

SUPPORTING DOCUMENTATION

CCP Headspace Gas UCL_{90} Evaluation Form

WSPF #: ID-AECHDM **Waste Stream Lot Number** 1 through 1

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL [1]	# Samples	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Acetone	Log	10	10	1.8871	-1.6080	1.4241	-0.9852	100	4.6052		
Benzene	SQRT	8	10	0.3000	0.1875	0.0766	0.2210	10	3.1623		
Bromoform	Log	0	10	-4.7677	-5.8051	0.3974	-5.6313	10	2.3026		
Butanol	Log	6	10	0.0000	-2.5870	1.6045	-1.8852	100	4.6052		
Carbon Disulfide[a]	Log	10	10	3.2958	-0.0598	2.1404	0.8763	10	2.3026		
Carbon Tetrachloride	No	9	10	0.0230	0.0169	0.0049	0.0190	10	N/A		
Chlorobenzene	Log	0	10	-4.1352	-5.1500	0.3905	-4.9792	10	2.3026		
Chloroform	Log	3	10	-3.0159	-4.4273	0.8338	-4.0627	10	2.3026		
Chloromethane[a]	Log	4	10	-1.7720	-2.9246	0.6882	-2.6237	10	2.3026		
Cyclohexane[a]	Log	6	10	-2.3645	-4.2196	0.9103	-3.8215	10	2.3026		
1,1-Dichloroethane	Log	0	10	-3.5936	-4.6286	0.3973	-4.4548	10	2.3026		
1,2-Dichloroethane	Log	1	10	-2.4534	-4.0507	0.6802	-3.7532	10	2.3026		
1,1-Dichloroethylene	Log	0	10	-3.4265	-4.4462	0.3908	-4.2753	10	2.3026		
cis-1,2-Dichloroethylene [a]	Log	0	10	-3.9120	-4.9291	0.3923	-4.7575	10	2.3026		
trans-1,2-Dichloroethylene	Log	0	10	-3.6306	-4.6482	0.3887	-4.4782	10	2.3026		
1,2-Dichloropropane[a]	Log	0	10	-5.2030	-6.2521	0.4015	-6.0766	10	2.3026		
Ethyl benzene	Log	5	10	0.9555	-3.6000	2.1583	-2.6560	10	2.3026		
Ethyl Ether	Log	0	10	-2.9004	-3.9577	0.4029	-3.7815	100	2.3026		
Methanol	Log	8	10	2.0015	-0.6397	1.5439	0.0355	100	4.6052		
Methyl Ethyl Ketone	Log	2	10	0.6419	-3.2211	1.4868	-2.5709	100	4.6052		
Methyl Isobutyl Ketone	SQRT	5	10	0.1581	0.0927	0.0383	0.1095	100	10.0000		
Methylene Chloride	Log	2	10	-1.0788	-3.8844	1.0747	-3.4144	10	2.3026		
1,1,2,2-Tetrachloroethane	Log	0	10	-4.9618	-5.9609	0.3843	-5.7928	10	2.3026		
Tetrachloroethylene	Log	4	10	-2.3752	-5.1829	1.2269	-4.6463	10	2.3026		
Toluene	Log	10	10	1.9459	0.0339	1.1883	0.5536	10	2.3026		
1,1,1-Trichloroethane	SQRT	5	10	0.1342	0.0970	0.0234	0.1073	10	3.1623		
Trichoroethylene	SQRT	7	10	0.1844	0.1157	0.0393	0.1329	10	3.1623		
1,1,2-Trichloro-1,2,2-trifluoroethane	Log	0	10	-4.6565	-5.6627	0.3874	-5.4932	10	2.3026		

SUPPORTING DOCUMENTATION

CCP Headspace Gas UCL_{90} Evaluation Form

WSPF #: ID-AECHDM **Waste Stream Lot Number** 1 through 1

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
1,3,5-Trimethylbenzene[a]	Log	4	10	-2.4889	-4.6164	1.2607	-4.0650	10	2.3026		
1,2,4-Trimethylbenzene[a]	Log	4	10	-1.6094	-3.9692	1.4912	-3.3170	10	2.3026		
m/p-Xylene[b]	Log	8	10	2.1633	-2.8230	2.3918	-1.7769	10	2.3026		
o-Xylene	Log	6	10	0.4700	-3.3563	2.2837	-2.3575	10	2.3026		

[a] These compounds are from the CH-TRAMPAC or CH-TRUCON and are flammable VOCs that do not appear in the QAPjP or the WIPP WAP. These are not part of the target analyte list, but samples may be analyzed for these compounds.

[b] These xylene isomers cannot be resolved by the analytical methods employed in the program. m-Xylene and p-Xylene will be reported as "Total m-p-Xylene."

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per section C4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

Signature of Site Project Manager

Jim Vernon
Printed Name

12/7/2011
Date

SUPPORTING DOCUMENTATION

CCP Headspace Gas Summary Data

Waste Stream Number ID-AECHDM Lot Number (s) 1 through 1

Tentatively Identified Compound	Maximum Observed Estimated Concentrations (ppmv)	# Samples Containing TIC	% Detected
NONE	N/A	N/A	N/A

Data Supports EPA Hazardous Waste Numbers Assigned by AK? Yes ☑ No ☐

If no, describe the basis for assigning the EPA Hazardous Waste Codes:

SPM Signature _____ Date 12/7/2011

SUPPORTING DOCUMENTATION

RTR Data
ID-AECHDM
Lot 1

Batch Data Report No.	Container	Cellulosics (kg)	Plastics (kg)	Rubber (kg)	Organic Matrix (kg)	Inorganic Matrix (kg)	Iron-based Metals (kg)	Aluminum-based Metals (kg)	Other Metals (kg)	Other Inorganics (kg)	Vol. % Organic	Vol. % Inorganic
INRTR5110101	RW47765	28.8	3.0				1.0			4.0	94.02%	5.98%
INRTR5110101	RW48081	0.3	2.7				49.3			5.0	21.88%	78.12%
INRTR5110101	RW48201	0.2	9.0				34.6			6.5	45.32%	54.68%
INRTR5110102	RW47763	3.0	5.0				9.3			12.0	46.29%	53.71%
INRTR5110102	RW47784		6.0				23.2			15.0	24.72%	75.28%
INRTR5110102	RW47969		17.0				0.3			10.0	62.86%	37.14%
INRTR5110102	RW48074		21.3							15.0	58.68%	41.32%
INRTR5110102	RW48192		6.0				14.3			8.0	37.46%	62.54%
INRTR5110102	RW48198	0.1	8.0				10.7			12.0	37.82%	62.18%
INRTR5110102	RW49571	3.0	8.0				48.3			11.0	44.83%	55.17%

SUPPORTING DOCUMENTATION

RTR Data
ID-AECHDM
Lot 1

Batch Data Report No.	Container	Cellulosics Weight %	Plastics Weight %	Rubber Weight %	Organic Matrix Weight %	Inorganic Matrix Weight %	Iron-based Metals Weight %	Aluminum-based Metals Weight %	Other Metals Weight %	Other Inorganics Weight %
INRTR5110101	RW47765	78.26%	8.15%	0.00%	0.00%	0.00%	2.72%	0.00%	0.00%	10.87%
INRTR5110101	RW48081	0.52%	4.71%	0.00%	0.00%	0.00%	86.04%	0.00%	0.00%	8.73%
INRTR5110101	RW48201	0.40%	17.89%	0.00%	0.00%	0.00%	68.79%	0.00%	0.00%	12.92%
INRTR5110102	RW47763	10.24%	17.06%	0.00%	0.00%	0.00%	31.74%	0.00%	0.00%	40.96%
INRTR5110102	RW47784	0.00%	13.57%	0.00%	0.00%	0.00%	52.49%	0.00%	0.00%	33.94%
INRTR5110102	RW47969	0.00%	62.27%	0.00%	0.00%	0.00%	1.10%	0.00%	0.00%	36.63%
INRTR5110102	RW48074	0.00%	58.68%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	41.32%
INRTR5110102	RW48192	0.00%	21.20%	0.00%	0.00%	0.00%	50.53%	0.00%	0.00%	28.27%
INRTR5110102	RW48198	0.32%	25.97%	0.00%	0.00%	0.00%	34.74%	0.00%	0.00%	38.96%
INRTR5110102	RW49571	4.27%	11.38%	0.00%	0.00%	0.00%	68.71%	0.00%	0.00%	15.65%

Total Lot Weight %								
Cellulosics Weight %	Plastics Weight %	Rubber Weight %	Organic Matrix Weight %	Inorganic Matrix Weight %	Iron-based Metals Weight %	Aluminum-based Metals Weight %	Other Metals Weight %	Other Inorganics Weight %
8.62%	20.93%	0.00%	0.00%	0.00%	46.48%	0.00%	0.00%	23.97%

Total Lot % Volume	
Organic	Inorganic
56.41%	43.59%

RTR Density Rollup Data Through Lot: 1
ID-AECHDM

Waste Stream Waste Material Parameter Weight Percent								
Cellulosics	Plastics	Rubber	Organic Matrix	Inorganic Matrix	Iron-based Metals	Aluminum-based Metals	Other Metals	Other Inorganics
8.62%	20.93%	0.00%	0.00%	0.00%	46.48%	0.00%	0.00%	23.97%

Waste Stream Organic/Inorganic Volume Percent	
Vol. % Organic	Vol. % Inorganic
56.41%	43.59%

SUPPORTING DOCUMENTATION

DIVIDER PAGE

Attachment 13 - CCP Waste Stream Characterization Checklist

Site(s): INL

Waste Stream Number: ID-SDA-SOIL Lot # (if applicable) 73

Waste Stream Description: Soils

Acceptable Knowledge Information or other data points[a]	Characterization Method(s)	Acceptable Knowledge Re-evaluation Required? Yes/No[b]?	Comments[c]
Physical waste form/description	VE	No	VE Data Sheets indicate consistency with Attachment 6 of CCP-TP-005.
Waste material parameters weights	VE	No	VE Data Sheets indicate consistency with CCP-AK-INL-001, Table 5-1D. See additional attached sheets.
Waste percent volume consistent with nondestructive examination or visual examination data and audio/video tapes or equivalent media	VE	No	VE Data Sheets indicate consistency with CCP-AK-INL-001. See additional attached sheets.
Summary category group assignment	VE	No	Summary Category group S4000 is consistent with VE Data sheets.
Waste matrix code assignment	VE	No	Waste Matrix Code S4200 is consistent with data from VE data sheets.
Absence of prohibited items	VE	No	VE did not identify any prohibited items.
Tentatively identified compounds[d]	Solids Analysis	No	Any TIC's that exceeded 25% of the sampled containers have been added to the target analyte list for ID-SDA-SOIL.
EPA Hazardous Waste Number assignment [e]	Solids Analysis	No	Characterization results consistent with Section 5 of CCP-AK-INL-001.

CCP RECORDS ORIGINAL
DATE REC'D 6/7/12

Attachment 13 - CCP Waste Stream Characterization Checklist

Site(s): INL

Waste Stream Number: ID-SDA-SOIL Lot # (if applicable) 73

Waste Stream Description: Soils

Acceptable Knowledge Information or other data points[a]	Characterization Method(s)	Acceptable Knowledge Re-evaluation Required? Yes/No[b]?	Comments[c]
Toxicity characteristic code assignment	Solids Analysis	No	Consistent with CCP Solids Analysis VOC UCL_{90} Evaluation form, CCP Solids Analysis SVOC UCL_{90} Evaluation form, and CCP Solids Analysis Metals UCL_{90} Evaluation form.
UCL_{90} > PRQL?	Solids Analysis	No	Verified using CCP Solids Analysis VOC UCL_{90} Evaluation form, CCP Solids Analysis SVOC UCL_{90} Evaluation form, and CCP Solids Analysis Metals UCL_{90} Evaluation form.None of the analytes listed, that do not already have the associated EPA HWN applied, have UCL_{90} values > PRQL values, using transformed and non-transformed values for comparison where applicable.
VOCs from packaging materials or radiolysis present	Solids Analysis	No	CCP-TP-005 Attachment 5 does not identify any VOCs associated with packaging or radiolysis.
State Hazardous Waste Number assignment	Solids Analysis	No	No additional State Hazardous Waste codes are identified in CCP-TP-005, Attachment 5.
Radionuclides present	NDA	No	See Additional Comments section and additional sheets attached.
Other radiological parameters: (specify)	NDA	No	No additional radiological parameters identified

Attachment 13 - CCP Waste Stream Characterization Checklist

Site(s): INL

Waste Stream Number: ID-SDA-SOIL

Lot # (if applicable) 73

Waste Stream Description: Soils

Additional Comments:

- U-238 and U-235 are identified in AK as the two most prevalent isotopes with WT%s of 99.63% and 0.18% (Pu-239 is the third most prevalent isotope at 0.17%). This distribution applies to all three waste streams and is based on a roll-up of all of the buried waste in the retrieval area. The most prevalent isotopes by WT% for this Lot are 99.38% U-238 and 0.32% U-235; Pu-239 is at 0.29%. The two most prevalent isotopes by WT% for the waste stream to date are 99.42% U-238 and 0.41% Pu-239. This is consistent with AK for waste retrieved from ARP-I, ARP-II, ARP-III, ARP-IV, ARP-V, ARP-VI and ARP-VII which comprises all of the containers in the waste stream. Not all containers are expected to contain measurable quantities of U-238, U-235 and Pu-239 as identified in the AK Summary. No re-evaluation of AK is warranted by this data.

a. Identified in the AK Summary Report or included in the in-process record documentation (e.g., BDR's)
b. If "yes," AK Expert completes an *Acceptable Knowledge Re-evaluation Checklist*.
c. Identify the source of the waste characterization information (e.g., batch data report).
d. Tentatively Identified Compounds identified in the Solids Summary Report were identified on the Hazardous Constituent List, Attachment 5.
e. Ensure that, if a toxicity characteristic contaminant is identified, it is not included as a listed waste, and if analytical data regarding the concentration are not available, the corresponding EPA Hazardous Waste Number is applied.

Site Project Manager:

Jim Vernon
Print

Sign

03-29-12
Date:

Acceptable Knowledge Expert:

Carrie J. Johnson
Print

Sign

3/29/2012
Date:

NDA Isotopic Weight Percent
ID-SDA-SOIL
Lot 73

CONTAINERID	NDABDR	Sr-90	Cs-137	U-232	U-233	U-234	U-235	U-238	Np-237	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Am-241
ARP28226	INNDAH110065	1.54E-09	2.20E-09						3.46E-03	1.30E-05	1.28E-01	7.79E-03	1.32E-04	5.86E-05	4.58E-02
ARP23897	INNDAS100171					3.82E-02	3.49E+00	5.02E+03	4.49E-03	6.39E-04	3.02E+00	2.06E-01	1.77E-03	2.16E-03	8.62E-02
ARP24217	INNDAS100182	1.29E-08	1.84E-08			2.52E-03	2.31E-01	1.74E+02	2.92E-03	5.28E-04	5.74E+00	3.56E-01	3.14E-03	1.95E-03	3.79E-02
ARP60050	INNDAS110070					9.08E-03	8.30E-01	2.28E+02	7.67E-03	2.61E-04	2.41E+00	1.53E-01	1.54E-03	2.35E-03	9.82E-02
ARP26744	INNDAS110074								1.15E-03	6.27E-04	3.92E+00	2.39E-01	1.88E-03	1.09E-03	1.91E-02
ARP30008	INNDAS110177					3.44E-03	3.14E-01	2.26E+02	9.90E-04	2.42E-05	2.39E-01	1.45E-02	2.42E-04	1.09E-04	9.22E-03
ARP00349	INNDAS120001					2.21E-01	2.02E+01		8.95E-04	9.33E-05	9.22E-01	5.60E-02	9.30E-04	4.21E-04	6.84E-03
ARP30103	INNDAS120002	6.13E-10	8.77E-10			1.08E-03	9.82E-02	5.20E+01	8.72E-04	1.29E-04	2.51E+00	1.30E-01	1.22E-03	6.13E-04	8.63E-03
ARP30100	INNDAS120002	1.27E-08	1.82E-08			5.40E-03	4.93E-01	3.18E+02	2.96E-03	6.04E-04	5.13E+00	2.93E-01	2.67E-03	1.63E-03	3.23E-02
ARP30081	INNDAS120002					3.32E-02	3.03E+00	1.88E+02	2.08E-03	3.78E-05	3.73E-01	2.27E-02	3.75E-04	1.71E-04	3.49E-02
ARP30018	INNDAS120002	2.77E-09	3.97E-09			3.87E-02	3.53E+00	4.41E+03	3.37E-03	2.17E-04	2.14E+00	1.30E-01	2.15E-03	9.79E-04	2.43E-02
ARP30014	INNDAS120002								1.98E-03	1.02E-05	1.01E-01	6.14E-03	1.02E-04	4.62E-05	2.51E-02
ARP26887	INNDAW110089					2.43E-02	2.22E+00	9.61E+01	1.72E-03	2.73E-05	2.69E-01	1.63E-02	2.80E-04	1.23E-04	2.65E-02
ARP26294	INNDAW110091								3.48E-04	5.55E-05	1.36E+00	8.51E-02	6.85E-04	4.17E-04	6.75E-03
ARP27237	INNDAW110091								2.04E-03	1.42E-05	1.40E-01	8.51E-03	1.46E-04	6.40E-05	3.15E-02
ARP25366	INNDAW110101								6.23E-04	2.05E-04	1.61E+00	1.05E-01	8.95E-04	5.42E-04	8.96E-03
ARP29540	INNDAW110164	4.96E-10	7.08E-10			8.69E-04	7.94E-02	4.42E+01	1.43E-03	1.60E-04	1.90E+00	1.12E-01	1.04E-03	8.53E-04	1.83E-02
		3.10E-08	4.44E-08	0.00E+00	0.00E+00	3.78E-01	3.45E+01	1.08E+04	3.90E-02	3.65E-03	3.19E+01	1.94E+00	1.92E-02	1.36E-02	5.21E-01
	1.08E+04	1.08E+04	1.08E+04	1.08E+04	1.08E+04	1.08E+04	1.08E+04	1.08E+04	1.08E+04	1.08E+04	1.08E+04	1.08E+04	1.08E+04	1.08E+04	1.08E+04
	WT%	0.00%	0.00%	0.00%	0.00%	0.00%	0.32%	99.36%	0.00%	0.00%	0.29%	0.02%	0.00%	0.00%	0.00%

SUPPORTING DOCUMENTATION

NDA Isotopic Weight Percent Rollup
ID-SDA-SOIL
Lots 1 Thru 73

Sr-90	Cs-137	U-232	U-233	U-234	U-235	U-238	Np-237	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Am-241
8.45E-01	1.19E-04	0.00E+00	1.78E-01	2.24E+01	2.02E+03	1.50E+06	1.98E+01	7.79E-01	6.21E+03	3.74E+02	5.50E+00	2.90E+00	1.52E+02
1.51E+06	1.51E+06	1.51E+06	1.51E+06	1.51E+06	1.51E+06	1.51E+06	1.51E+06	1.51E+06	1.51E+06	1.51E+06	1.51E+06	1.51E+06	1.51E+06
0.00%	0.00%	0.00%	0.00%	0.00%	0.13%	99.42%	0.00%	0.00%	0.41%	0.02%	0.00%	0.00%	0.01%

SUPPORTING DOCUMENTATION

CCP Solids Analysis VOC UCL_{90} Evaluation Form

WSPF #: ID-SDA-SOIL Rev. 1 **Solids Summary Waste Stream Lot Number** 1 through 4

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL [1]	# Samples	Maximum (mg/kg)	Mean (mg/kg)	SD (ppmv)	UCL_{90} (mg/kg)	PRQL (mg/kg)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA HWN [2]
Benzene	Log	0	20[4]	1.2669	-1.8671	1.1319	-1.5114	10	2.30		
Bromoform	Log	0	20[4]	0.5596	-1.9842	0.9039	-1.7002	10	2.30		
Carbon Disulfide	Log	0	20[5]	0.9361	-1.8765	0.9618	-1.5647	10	2.30		
Carbon Tetrachloride	Log	10	20	7.9010	0.8031	3.8949	1.9595	10	2.30		
Chlorobenzene	Log	0	20[4]	1.2669	-1.8671	1.1319	-1.5114	10	2.30		
Chloroform	Log	6	20	4.7005	-0.7183	2.5064	0.0258	10	2.30		
1,1-Dichloroethylene	Log	0	20[4]	1.2669	-1.6335	1.1115	-1.2842	10	2.30		
1,2-Dichloroethane	Log	0	20[4]	1.2669	-1.7105	1.1438	-1.3511	10	2.30		
Ethylbenzene	Log	0	20[4]	1.2669	-1.8671	1.1319	-1.5114	10	2.30		
Methylene Chloride	Log	0	20[4]	1.2669	-1.6741	1.1986	-1.2974	10	2.30		
m,p-Xylene [b]	Log	0	20[5]	0.9361	-1.7108	0.9749	-1.3947	10	2.30		
o-Xylene	Log	0	20[4]	1.2669	-1.8671	1.1319	-1.5114	10	2.30		
1,1,2,2-Tetrachloroethane	Log	2	20[4]	1.2669	-1.4706	1.1716	-1.1024	10	2.30		
Tetrachloroethylene	Log	12	20	5.7038	0.6750	3.1245	1.6027	10	2.30		
Toluene	Log	4	20[4]	1.2669	-1.5706	1.1818	-1.1992	10	2.30		
Trans-1,2-Dichloroethylene	Log	0	20[4]	1.2669	-1.8671	1.1319	-1.5114	10	2.30		
1,1,1-Trichloroethane	Log	3	20[3]	3.9512	-1.0869	2.0712	-0.4547	10	2.30		
Trichloroethylene	Log	8	20	6.8244	0.1692	3.2224	1.1259	10	2.30		
1,1,2-Trichloro-1,2,2-trifluoroethane	Log	0	20[4]	1.2669	-1.6266	1.1362	-1.2696	10	2.30		
1,1,2-Trichloroethane	Log	0	20[4]	1.2669	-1.7499	1.1060	-1.4023	10	2.30		
Trichlorofluoromethane	Log	0	20[4]	1.2669	-1.5694	1.0707	-1.2329	10	2.30		
Vinyl Chloride	Log	0	20[5]	0.5306	-1.7249	0.7938	-1.4676	10	2.30		

SUPPORTING DOCUMENTATION

CCP Solids Analysis VOC UCL_{90} Evaluation Form

WSPF #: ID-SDA-SOIL Rev. 1 **Solids Summary Waste Stream Lot Number** 1 through 4

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL [1]	# Samples	Maximum (mg/kg)	Mean (mg/kg)	SD (ppmv)	UCL_{90} (mg/kg)	PRQL (mg/kg)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA HWN [2]
Acetone	Log	0	20	2.8904	-0.3921	0.8234	-0.1476	4	1.39		
Butanol	Log	2	20	3.5973	-0.0160	1.3665	0.3897	100	4.61		
Methanol	Log	0	20	3.5973	-0.1185	0.9424	0.1613	100	4.61		
Methyl ethyl ketone	Log	0	20	2.8904	-0.2556	0.8012	-0.0177	100	4.61		
Ethyl ether	Log	0	20	3.5973	0.3284	0.8051	0.5675	100	4.61		
Isobutanol	Log	0	20	2.8904	-0.4614	0.8077	-0.2216	100	4.61		
Pyridine	Log	0	20	2.8904	0.0528	0.7698	0.2813	100	4.61		

[a] Can also be analyzed as an SVOC. If analyzed as an SVOC, the QAO's of CCP-PO-001, Table C3-6 apply.

[b] These xylene isomers cannot be resolved by the analytical methods employed in the program. m-Xylene and p-Xylene will be reported as "Total m-p-Xylene."

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per section C4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

(2) No additional EPA Hazardous Waste Numbers were identified for this waste stream.

(3) As a result of dilution requirements for one of the twenty samples 1,1,1-Trichloroethane were reported as non-detected with an MDL value in excess of the PRQL. In accordance with the Waste Analysis Plan, Section C4-3d such observations with elevated MDL values due to dilution were not used in calculating the mean concentration. Consequently, the subject analytes were statistically evaluated with 19, rather than 20, usable observations.

(4) As a result of dilution requirements for two of the twenty samples, Benzene, Bromoform, Chlorobenzene, 1,1-Dichloroethylene, 1,2-Dichloroethane, Ethylbenzene, Methylene Chloride, o-Xylene, 1,1,2,2-Tetrachloroethane, Toluene, Trans-1,2-Dichloroethylene, 1,1,2-Trichloro-1,2,2-trifluoroethane, 1,1,2-Trichloroethane and Trichlorofluoromethane were reported as non-detected with an MDL value in excess of the PRQL. In accordance with the Waste Analysis Plan, Section C4-3d such observations with elevated MDL values due to dilution were not used in calculating the mean concentration. Consequently, the subject analytes were statistically evaluated with 18, rather than 20, usable observations.

(5) As a result of dilution requirements for seventeen of the twenty samples, Carbon Disulfide, m.p-Xylene, and Vinyl Chloride were reported as non-detected with an MDL value in excess of the PRQL. In accordance with the Waste Analysis Plan, Section C4-3d such observations with elevated MDL values due to dilution were not used in calculating the mean concentration. Consequently, the subject analytes were statistically evaluated with 17, rather than 20, usable observations.

SUPPORTING DOCUMENTATION

Signature of Site Project Manager	Jim Vernon Printed Name	3/29/2012 Date

CCP Solids Analysis SVOC UCL_{90} Evaluation Form

WSPF #: ID-SDA-SOIL Rev. 1 **Solids Summary Waste Stream Lot Number** 1 through 4

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples	Maximum (mg/kg)	Mean (mg/kg)	SD (mg/kg)	UCL90 (mg/kg)	PRQL (mg/kg)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code [2]
bis(2-Ethylexyl)phthalate[5]	Log	6	7	2.71	0.66	1.74	1.61	41.00	3.71		
1,2-Dichlorobenzene [a]	Log	0	20[3]	2.71	-1.22	1.61	-0.73	40.00	3.69		
1,4-Dichlorobenzene[a]	Log	0	20[3]	2.71	-1.22	1.61	-0.73	40.00	3.69		
2,4-Dinitrophenol	Log	0	20[3]	2.71	-1.41	1.44	-0.97	40.00	3.69		
2,4-Dinitrotoluene	Log	0	20[4]	-0.11	-1.85	0.77	-1.59	40.00	3.69		
Hexachlorobenzene	Log	0	20[4]	-0.11	-1.75	0.83	-1.48	2.60	0.96		
Hexachlorobutadiene[5]	Log	4	7	2.40	-0.20	1.92	0.84	4.60	1.53		
Hexachloroethane	Log	11	20[3]	6.02	1.15	3.22	2.13	40.00	3.69		
2-Methylphenol (cresols)	Log	0	20[3]	2.71	-1.35	1.77	-0.81	40.00	3.69		
3&4-Methylphenol (cresols)	Log	0	20[3]	2.71	-1.22	1.61	-0.73	40.00	3.69		
Nitrobenzene	Log	0	20[3]	2.71	-1.22	1.61	-0.73	40.00	3.69		
Pentachlorphenol	Log	0	20[3]	2.71	-1.26	1.61	-0.77	40.00	3.69		

[a] Can also be analyzed as a VOC. If analyzed as a VOC, the QAO's of CCP-PO-001, Table C3-6 apply.

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per C4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

(2) No additional EPA Hazardous Waste Numbers were identified for this waste stream.

(3) As a result of dilution requirements for one of the twenty samples, 1,2-Dichlorobenzene, 1,4-Dichlorobenzene, 2,4-Dinitrophenol, Hexachloroethane, 2-Methylphenol, 3&4-Methylphenol, Nitrobenzene, and Pentachlorophenol were reported as non-detected with an MDL value in excess of the PRQL. In accordance with the Waste Analysis Plan, Section C4-3d such observations with elevated MDL values due to dilution were not used in calculating the mean concentration. Consequently, the subject analytes were statistically evaluated with 19, rather than 20, usable observations.

(4) As a result of dilution requirements for sixteen of the twenty samples, 2,4-Dinitrotoluene and Hexachlorobenzene were reported as non-detected with an MDL value in excess of the PRQL. In accordance with the Waste Analysis Plan, Section C4-3d such observations with elevated MDL values due to dilution were not used in calculating the mean concentration. Consequently, the subject analytes were statistically evaluated with 16, rather than 20, usable observations.

(5) bis(2-Ethylexyl)phthalate and Hexachlorobutadiene were added to the target analyte list.

SUPPORTING DOCUMENTATION

Signature of Site Project Manager

Jim Vernon
Printed Name

3/29/2012
Date

CCP Solids Analysis Metals UCL_{90} Evaluation Form

WSPF #: ID-SDA-SOIL Rev. 1 **Solids Summary Waste Stream Lot Number** 1 through 4

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples	Maximum (mg/kg)	Mean (mg/kg)	SD (mg/kg)	UCL90 (mg/kg)	PRQL (mg/kg)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Antimony	Log	18	20	2.48	0.37	0.85	0.62	100	4.61		
Arsenic	Log	20	20	2.83	2.22	0.19	2.27	100	4.61		
Barium	Log	20	20	6.63	5.50	0.30	5.59	2000	7.60		
Beryllium	SQRT	20	20	7.14	3.59	2.14	4.23	100	10.00		
Cadmium	Log	20	20	4.94	1.79	1.55	2.26	20	3.00		
Chromium	Log	20	20	5.44	3.95	0.50	4.10	100	4.61		
Lead	Log	20	20	4.87	3.22	0.58	3.39	100	4.61		
Mercury	Log	18	20	1.48	-2.36	1.53	-1.91	4	1.39		
Nickel	Log	20	20	5.63	3.85	0.63	4.03	100	4.61		
Selenium	SQRT	7	20	1.18	0.71	0.24	0.78	20	4.47		
Silver	Log	11	20	1.86	-0.63	1.42	-0.21	100	4.61		
Thallium	SQRT	11	20	1.97	1.06	0.51	1.21	100	10.00		
Vanadium	No	20	20	63.00	52.40	9.08	55.10	100	N/A		
Zinc	Log	20	20	6.41	4.90	0.54	5.06	100	4.61	Yes	(2)

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per section C4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

(2) Zinc is not listed under 40CFR 261.30 or as a toxicity characteristic metal per 40CFR 261.24.

Signature of Site Project Manager	Jim Vernon Printed Name	3/29/2012 Date

SUPPORTING DOCUMENTATION

CCP Solid VOCs Summary Data

Waste Stream Number: ID-SDA-SOIL

Solids Summary Waste Stream Lot Number: 1 through 4

Tentatively Identified Compound	Maximum Observed Estimated Concentrations (mg/kg)	# Samples Containing TIC	% Detected
NONE	N/A	N/A	N/A

Data Supports EPA Hazardous Waste Numbers Assigned by AK? Yes ☑ No ☐

If no, describe the basis for assigning the EPA Hazardous Waste Codes:

SPM Signature _____ Date 3/29/2012

SUPPORTING DOCUMENTATION

CCP Solid SVOCs Summary Data

Waste Stream Number: ID-SDA-SOIL

Solids Summary Waste Stream Lot Number: 1 through 4

Tentatively Identified Compound	Maximum Observed Estimated Concentrations (mg/kg)	# Samples Containing TIC	% Detected
Pentachlorobiphenyl	810.00	9	45.00%
Tetrachlorobiphenyl	27.00	5	25.00%
Hexachloropropene	5.40	3	15.00%
1,4-Dioxane	1.10	2	10.00%
Diethyl phthalate	2.10	1	5.00%
Hexachlorobiphenyl	9.80	3	15.00%
Benzene, 1,2,3,5-tetrachloro	21.00	1	5.00%
bis (7-methyloctyl)phthalate	0.84	1	5.00%

Note: Tetrachlorobiphenyl, and Pentachlorobiphenyl are listed in 20.4.1.200 NMAC (incorporating 40 CFR 261) Appendix VIII, and are present as TICs in greater than 25% of samples in the waste stream. These analytes have been added to the target analyte list for ID-SDA-SOIL.

Data Supports EPA Hazardous Waste Numbers Assigned by AK? Yes ☑ No ☐

If no, describe the basis for assigning the EPA Hazardous Waste Codes:

SPM Signature _____ Date 3/29/2012

SUPPORTING DOCUMENTATION

VE Data
ID-SDA-SOIL
Lot 73

Batch Data Report No.	Container	Cellulosics (kg)	Plastics (kg)	Rubber (kg)	Organic Matrix (kg)	Inorganic Matrix (kg)	Iron-based Metals (kg)	Aluminum-based Metals (kg)	Other Metals (kg)	Other Inorganics (kg)	Soils/gravel (kg)	Total Organic (kg)	Total Inorganic (kg)	Total Waste Weight (kg)
IN-ARP-VE-000144	ARP00349		1.4							2.2	119.8	1.4	122.0	123.40
IN-ARP-VE-002203	ARP23897	0.5	1.4	0.3		10					117.8	2.2	127.8	130.00
IN-ARP-VE-002224	ARP24217	30.2	1.6	0.3						0.5	68.4	32.1	68.9	101.00
IN-ARP-VE-002419	ARP60050	3	1.4	0.3		3					153.3	4.7	156.3	161.00
IN-ARP-VE-002428	ARP26887	8.1	1.4	0.3							97.2	9.8	97.2	107.00
IN-ARP-VE-002432	ARP26744	4	1.4	0.3							136.5	5.7	136.5	142.20
IN-ARP-VE-002463	ARP25366	21	1.4	0.3							59.3	22.7	59.3	82.00
IN-ARP-VE-002467	ARP26294	26	1.4	0.3							112.5	27.7	112.5	140.20
IN-ARP-VE-002470	ARP27237		1.4	0.3	35	7					133.1	36.7	140.1	176.80
IN-ARP-VE-002541	ARP28226		1.4	0.3	9.0						140.5	10.7	140.5	151.20
IN-ARP-VE-002635	ARP29540		1.4	0.3	15.0					0.5	96.3	16.7	96.8	113.50
IN-ARP-VE-002697	ARP30008		3.4		3.0	4.0					127.6	6.4	131.6	138.00
IN-ARP-VE-002704	ARP30100	24.0	2.8	0.6							79.6	27.4	79.6	107.00
IN-ARP-VE-002704	ARP30103		2.3	0.4	2.0						112.8	4.7	112.8	117.50
IN-ARP-VE-002705	ARP30018		2.3	0.3	5.0	1					87.4	7.6	88.4	96.00
IN-ARP-VE-002706	ARP30014		2.3	0.3	5	1					152.4	7.6	153.4	161.00
IN-ARP-VE-002706	ARP30081	21	2.3	0.3							89.4	23.6	89.4	113.00

SUPPORTING DOCUMENTATION

VE Data
ID-SDA-SOIL
Lot 73

Batch Data Report No.	Container	Cellulosics Weight %	Plastics Weight %	Rubber Weight %	Organic Matrix Weight %	Inorganic Matrix Weight %	Iron-based Metals Weight %	Aluminum-based Metals Weight %	Other Metals Weight %	Other Inorganics Weight %	Soils/gravel Weight %
IN-ARP-VE-000144	ARP00349		1.13%								
IN-ARP-VE-002203	ARP23897	0.38%	1.08%	0.23%		7.69%				1.78%	97.08%
IN-ARP-VE-002224	ARP24217	29.90%	1.56%	0.30%							90.62%
IN-ARP-VE-002419	ARP60050	1.86%	0.87%	0.19%		1.86%				0.50%	67.72%
IN-ARP-VE-002428	ARP26887	7.57%	1.31%	0.28%							95.22%
IN-ARP-VE-002432	ARP26744	2.81%	0.98%	0.21%							90.84%
IN-ARP-VE-002463	ARP25366	25.61%	1.71%	0.37%							95.99%
IN-ARP-VE-002467	ARP26294	18.54%	1.00%	0.21%							72.32%
IN-ARP-VE-002470	ARP27237		0.79%	0.17%	19.80%	3.96%					80.24%
IN-ARP-VE-002541	ARP28226		0.93%	0.20%	5.95%						75.28%
IN-ARP-VE-002635	ARP29540		1.23%	0.26%	13.22%						92.92%
IN-ARP-VE-002697	ARP30008		2.46%		2.17%	2.90%				0.44%	84.85%
IN-ARP-VE-002704	ARP30100	22.43%	2.62%	0.56%							92.46%
IN-ARP-VE-002704	ARP30103		1.96%	0.34%	1.70%						74.39%
IN-ARP-VE-002705	ARP30018		2.40%	0.31%	5.21%	1.04%					96.00%
IN-ARP-VE-002706	ARP30014		1.43%	0.19%	3.11%	0.62%					91.04%
IN-ARP-VE-002706	ARP30081	18.58%	2.04%	0.27%							94.66%
											79.12%

Lot	73	Waste Stream Waste Material Parameter Weight Percent Lot Total							
Cellulosics	Plastics	Rubber	Organic Matrix	Inorganic Matrix	Iron-based Metals	Aluminum-based Metals	Other Metals	Other Inorganics	Soils/gravel
6.38%	1.43%	0.23%	3.42%	1.20%	0.00%	0.00%	0.00%	0.15%	87.19%

SUPPORTING DOCUMENTATION

VE Density Rollup Data Through Lot: 73
ID-SDA-SOIL

Waste Stream Waste Material Parameter Weight Percent

Cellulosics	Plastics	Rubber	Organic Matrix	Inorganic Matrix	Iron-based Metals	Aluminum-based Metals	Other Metals	Other Inorganics (Absorbent)	Soils/gravel
1.54%	0.93%	0.01%	0.39%	0.63%	0.11%	0.01%	0.07%	3.91%	92.41%

SUPPORTING DOCUMENTATION

DIVIDER PAGE

Attachment 13 - CCP Waste Stream Characterization Checklist

Site(s): INL

Waste Stream Number: ID-SDA-SOIL Lot # (if applicable) 76

Waste Stream Description: Soils

Acceptable Knowledge Information or other data points[a]	Characterization Method(s)	Acceptable Knowledge Re-evaluation Required? Yes/No[b]?	Comments[c]
Physical waste form/description	VE	No	VE Data Sheets indicate consistency with Attachment 6 of CCP-TP-005.
Waste material parameters weights	VE	No	VE Data Sheets indicate consistency with CCP-AK-INL-001, Table 5-1D See additional attached sheets.
Waste percent volume consistent with nondestructive examination or visual examination data and audio/video tapes or equivalent media	VE	No	VE Data Sheets indicate consistency with CCP-AK-INL-001. See additional attached sheets.
Summary category group assignment	VE	No	Summary Category group S4000 is consistent with VE Data sheets.
Waste matrix code assignment	VE	No	Waste Matrix Code S4200 is consistent with data from VE data sheets
Absence of prohibited items	VE	No	VE did not identify any prohibited items.
Tentatively identified compounds[d]	Solids Analysis	No	Any TIC's that exceeded 25% of the sampled containers have been added to the target analyte list for ID-SDA-SOIL.
EPA Hazardous Waste Number assignment [e]	Solids Analysis	No	Characterization results consistent with Section 5 of CCP-AK-INL-001.
Toxicity characteristic code assignment	Solids Analysis	No	Consistent with CCP Solids Analysis VOC UCL_{90} Evaluation form, CCP Solids Analysis SVOC UCL_{90} Evaluation form, and CCP Solids Analysis Metals UCL_{90} Evaluation form.
UCL_{90} > PRQL?	Solids Analysis	No	Verified using CCP Solids Analysis VOC UCL_{90} Evaluation form, CCP Solids Analysis SVOC UCL_{90} Evaluation form, and CCP Solids Analysis Metals UCL_{90} Evaluation form.None of the analytes listed, that do not already have the associated EPA HWN applied, have UCL_{90} values > PRQL values, using transformed and non-transformed values for comparison where applicable.
VOCs from packaging materials or radiolysis present	Solids Analysis	No	CCP-TP-005 Attachment 5 does not identify any VOCs associated with packaging or radiolysis.
State Hazardous Waste Number assignment	Solids Analysis	No	No additional State Hazardous Waste codes are identified in CCP-TP-005, Attachment 5.
Radionuclides present	NDA	No	See Additional Comments section and additional sheets attached.
Other radiological parameters: (specify)	NDA	No	No additional radiological parameters identified

CCP RECORDS ORIGINAL
DATE REC'D 12-27-12

Attachment 13 - CCP Waste Stream Characterization Checklist

Site(s): INL

Waste Stream Number: ID-SDA-SOIL Lot # (if applicable) 76

Waste Stream Description: Soils

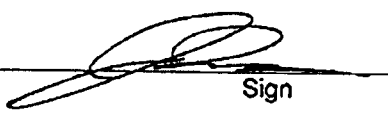
Additional Comments:

- U-238 and U-235 are identified in AK as the two most prevalent isotopes with WT%s of 99.63% and 0.18% (Pu-239 is the third most prevalent isotope at 0.17%). This distribution applies to all three waste streams and is based on a roll-up of all of the buried waste in the retrieval area. The most prevalent isotopes by WT% for this Lot are 99.90% U-238 and 0.10% U-235; Pu-239 is at 0.00%. The two most prevalent isotopes by WT% for the waste stream to date are 99.42% U-238 and 0.41% Pu-23, U-235 is at 0.13%. This is consistent with AK for waste retrieved from ARP-I, ARP-II, ARP-III, ARP-IV, ARP-V, ARP-VI and ARP-VII which comprises all of the containers in the waste stream. Not all containers are expected to contain measurable quantities of U-238, U-235 and Pu-239 as identified in the AK Summary. No re-evaluation of AK is warranted by this data.

a. Identified in the AK Summary Report or included in the in-process record documentation (e.g., BDR's)
b. If "yes," AK Expert completes an *Acceptable Knowledge Re-evaluation Checklist.*
c. Identify the source of the waste characterization information (e.g., batch data report).
d. Tentatively Identified Compounds identified in the Solids Summary Report were identified on the Hazardous Constituent List, Attachment 5.
e. Ensure that, if a toxicity characteristic contaminant is identified, it is not included as a listed waste, and if analytical data regarding the concentration are not available, the corresponding EPA Hazardous Waste Number is applied.

Site Project Manager:

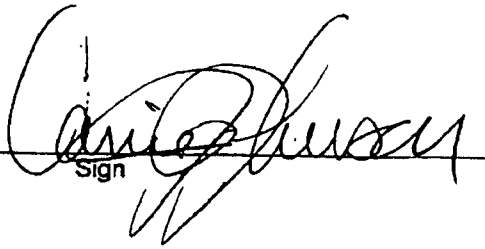
Jim Vernon
Print


Sign

09-19-12
Date:

Acceptable Knowledge Expert:

Carrie J. Johnson
Print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9/19/2012
Date:

NDA Isotopic Weight Percent
ID-SDA-SOIL
Lot 76

CONTAINERID	NDABDR	Sr-90	Cs-137	U-232	U-233	U-234	U-235	U-238	Np-237	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Am-241
ARP71044	INNDAS120025	1.69E-09	2.42E-09			3.35E-02	3.06E+00	3.23E+03							1.43E-02
ARP71061	INNDAS120026					2.76E-03	2.53E-01	1.84E+02	1.16E-03	9.40E-06	9.33E-02	5.67E-03	9.15E-05	4.27E-05	1.44E-02
		1.69E-09	2.42E-09	0.00E+00	0.00E+00	3.63E-02	3.31E+00	3.41E+03	1.16E-03	9.40E-06	9.33E-02	5.67E-03	9.15E-05	4.27E-05	2.87E-02
	3.42E+03	3.42E+03	3.42E+03	3.42E+03	3.42E+03	3.42E+03	3.42E+03	3.42E+03	3.42E+03	3.42E+03	3.42E+03	3.42E+03	3.42E+03	3.42E+03	3.42E+03
	WT%	0.00%	0.00%	0.00%	0.00%	0.00%	0.10%	99.90%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

SUPPORTING DOCUMENTATION

NDA Isotopic Weight Percent Rollup
ID-SDA-SOIL
Lots 1 Thru 76

Sr-90	Cs-137	U-232	U-233	U-234	U-235	U-238	Np-237	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Am-241
8.45E-01	1.19E-04	0.00E+00	1.78E-01	2.23E+01	2.02E+03	1.50E+06	1.98E+01	7.77E-01	6.19E+03	3.73E+02	5.50E+00	2.89E+00	1.52E+02
1.51E+06	1.51E+06	1.51E+06	1.51E+06	1.51E+06	1.51E+06	1.51E+06	1.51E+06	1.51E+06	1.51E+06	1.51E+06	1.51E+06	1.51E+06	1.51E+06
0.00%	0.00%	0.00%	0.00%	0.00%	0.13%	99.42%	0.00%	0.00%	0.41%	0.02%	0.00%	0.00%	0.01%

SUPPORTING DOCUMENTATION

CCP Solids Analysis VOC UCL_{90} Evaluation Form

WSPF #: ID-SDA-SOIL Rev. 1 **Solids Summary Waste Stream Lot Number** 1 through 4

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL [1]	# Samples	Maximum (mg/kg)	Mean (mg/kg)	SD (ppmv)	UCL_{90} (mg/kg)	PRQL (mg/kg)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA HWN [2]
Benzene	Log	0	20[4]	1.2669	-1.8671	1.1319	-1.5114	10	2.30		
Bromoform	Log	0	20[4]	0.5596	-1.9842	0.9039	-1.7002	10	2.30		
Carbon Disulfide	Log	0	20[5]	0.9361	-1.8765	0.9618	-1.5647	10	2.30		
Carbon Tetrachloride	Log	10	20	7.9010	0.8031	3.8949	1.9595	10	2.30		
Chlorobenzene	Log	0	20[4]	1.2669	-1.8671	1.1319	-1.5114	10	2.30		
Chloroform	Log	6	20	4.7005	-0.7183	2.5064	0.0258	10	2.30		
1,1-Dichloroethylene	Log	0	20[4]	1.2669	-1.6335	1.1115	-1.2842	10	2.30		
1,2-Dichloroethane	Log	0	20[4]	1.2669	-1.7105	1.1438	-1.3511	10	2.30		
Ethylbenzene	Log	0	20[4]	1.2669	-1.8671	1.1319	-1.5114	10	2.30		
Methylene Chloride	Log	0	20[4]	1.2669	-1.6741	1.1986	-1.2974	10	2.30		
m,p-Xylene [b]	Log	0	20[5]	0.9361	-1.7108	0.9749	-1.3947	10	2.30		
o-Xylene	Log	0	20[4]	1.2669	-1.8671	1.1319	-1.5114	10	2.30		
1,1,2,2-Tetrachloroethane	Log	2	20[4]	1.2669	-1.4706	1.1716	-1.1024	10	2.30		
Tetrachloroethylene	Log	12	20	5.7038	0.6750	3.1245	1.6027	10	2.30		
Toluene	Log	4	20[4]	1.2669	-1.5706	1.1818	-1.1992	10	2.30		
Trans-1,2-Dichloroethylene	Log	0	20[4]	1.2669	-1.8671	1.1319	-1.5114	10	2.30		
1,1,1-Trichloroethane	Log	3	20[3]	3.9512	-1.0869	2.0712	-0.4547	10	2.30		
Trichloroethylene	Log	8	20	6.8244	0.1692	3.2224	1.1259	10	2.30		
1,1,2-Trichloro-1,2,2-trifluoroethane	Log	0	20[4]	1.2669	-1.6266	1.1362	-1.2696	10	2.30		
1,1,2-Trichloroethane	Log	0	20[4]	1.2669	-1.7499	1.1060	-1.4023	10	2.30		
Trichlorofluoromethane	Log	0	20[4]	1.2669	-1.5694	1.0707	-1.2329	10	2.30		
Vinyl Chloride	Log	0	20[5]	0.5306	-1.7249	0.7938	-1.4676	10	2.30		

SUPPORTING DOCUMENTATION

CCP Solids Analysis VOC UCL_{90} Evaluation Form

WSPF #: ID-SDA-SOIL Rev. 1 **Solids Summary Waste Stream Lot Number** 1 through 4

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL [1]	# Samples	Maximum (mg/kg)	Mean (mg/kg)	SD (ppmv)	UCL_{90} (mg/kg)	PRQL (mg/kg)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA HWN [2]
Acetone	Log	0	20	2.8904	-0.3921	0.8234	-0.1476	4	1.39		
Butanol	Log	2	20	3.5973	-0.0160	1.3665	0.3897	100	4.61		
Methanol	Log	0	20	3.5973	-0.1185	0.9424	0.1613	100	4.61		
Methyl ethyl ketone	Log	0	20	2.8904	-0.2556	0.8012	-0.0177	100	4.61		
Ethyl ether	Log	0	20	3.5973	0.3284	0.8051	0.5675	100	4.61		
Isobutanol	Log	0	20	2.8904	-0.4614	0.8077	-0.2216	100	4.61		
Pyridine	Log	0	20	2.8904	0.0528	0.7698	0.2813	100	4.61		

[a] Can also be analyzed as an SVOC. If analyzed as an SVOC, the QAO's of CCP-PO-001, Table C3-6 apply.

[b] These xylene isomers cannot be resolved by the analytical methods employed in the program. m-Xylene and p-Xylene will be reported as "Total m-p-Xylene."

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per section C4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

(2) No additional EPA Hazardous Waste Numbers were identified for this waste stream.

(3) As a result of dilution requirements for one of the twenty samples 1,1,1-Trichloroethane were reported as non-detected with an MDL value in excess of the PRQL. In accordance with the Waste Analysis Plan, Section C4-3d such observations with elevated MDL values due to dilution were not used in calculating the mean concentration. Consequently, the subject analytes were statistically evaluated with 19, rather than 20, usable observations.

(4) As a result of dilution requirements for two of the twenty samples, Benzene, Bromoform, Chlorobenzene, 1,1-Dichloroethylene, 1,2-Dichloroethane, Ethylbenzene, Methylene Chloride, o-Xylene, 1,1,2,2-Tetrachloroethane, Toluene, Trans-1,2-Dichloroethylene, 1,1,2-Trichloro-1,2,2-trifluoroethane, 1,1,2-Trichloroethane and Trichlorofluoromethane were reported as non-detected with an MDL value in excess of the PRQL. In accordance with the Waste Analysis Plan, Section C4-3d such observations with elevated MDL values due to dilution were not used in calculating the mean concentration. Consequently, the subject analytes were statistically evaluated with 18, rather than 20, usable observations.

(5) As a result of dilution requirements for seventeen of the twenty samples, Carbon Disulfide, m.p-Xylene, and Vinyl Chloride were reported as non-detected with an MDL value in excess of the PRQL. In accordance with the Waste Analysis Plan, Section C4-3d such observations with elevated MDL values due to dilution were not used in calculating the mean concentration. Consequently, the subject analytes were statistically evaluated with 17, rather than 20, usable observations.

SUPPORTING DOCUMENTATION

Signature of Site Project Manager

Jim Vernon
Printed Name

9/19/2012
Date

CCP Solids Analysis SVOC UCL_{90} Evaluation Form

WSPF #: ID-SDA-SOIL Rev. 1 **Solids Summary Waste Stream Lot Number** 1 through 4

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples	Maximum (mg/kg)	Mean (mg/kg)	SD (mg/kg)	UCL90 (mg/kg)	PRQL (mg/kg)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code (2)
bis(2-Ethylexyl)phthalate[5]	Log	6	7	2.71	0.66	1.74	1.61	41.00	3.71		
1,2-Dichlorobenzene [a]	Log	0	20(3)	2.71	-1.22	1.61	-0.73	40.00	3.69		
1,4-Dichlorobenzene[a]	Log	0	20(3)	2.71	-1.22	1.61	-0.73	40.00	3.69		
2,4-Dinitrophenol	Log	0	20(3)	2.71	-1.41	1.44	-0.97	40.00	3.69		
2,4-Dinitrotoluene	Log	0	20(4)	-0.11	-1.85	0.77	-1.59	40.00	3.69		
Hexachlorobenzene	Log	0	20(4)	-0.11	-1.75	0.83	-1.48	2.60	0.96		
Hexachlorobutadiene[5]	Log	4	7	2.40	-0.20	1.92	0.84	4.60	1.53		
Hexachloroethane	Log	11	20(3)	6.02	1.15	3.22	2.13	40.00	3.69		
2-Methylphenol (cresols)	Log	0	20(3)	2.71	-1.35	1.77	-0.81	40.00	3.69		
3&4-Methylphenol (cresols)	Log	0	20(3)	2.71	-1.22	1.61	-0.73	40.00	3.69		
Nitrobenzene	Log	0	20(3)	2.71	-1.22	1.61	-0.73	40.00	3.69		
Pentachlorphenol	Log	0	20(3)	2.71	-1.26	1.61	-0.77	40.00	3.69		

[a] Can also be analyzed as a VOC. If analyzed as a VOC, the QAO's of CCP-PO-001, Table C3-6 apply.

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per C4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

(2) No additional EPA Hazardous Waste Numbers were identified for this waste stream.

(3) As a result of dilution requirements for one of the twenty samples, 1,2-Dichlorobenzene, 1,4-Dichlorobenzene, 2,4-Dinitrophenol, Hexachloroethane, 2-Methylphenol, 3&4-Methylphenol, Nitrobenzene, and Pentachlorophenol were reported as non-detected with an MDL value in excess of the PRQL. In accordance with the Waste Analysis Plan, Section C4-3d such observations with elevated MDL values due to dilution were not used in calculating the mean concentration. Consequently, the subject analytes were statistically evaluated with 19, rather than 20, usable observations.

(4) As a result of dilution requirements for sixteen of the twenty samples, 2,4-Dinitrotoluene and Hexachlorobenzene were reported as non-detected with an MDL value in excess of the PRQL. In accordance with the Waste Analysis Plan, Section C4-3d such observations with elevated MDL values due to dilution were not used in calculating the mean concentration. Consequently, the subject analytes were statistically evaluated with 16, rather than 20, usable observations.

(5) bis(2-Ethylexyl)phthalate and Hexachlorobutadiene were added to the target analyte list.

SUPPORTING DOCUMENTATION

Signature of Site Project Manager

Jim Vernon
Printed Name

9/19/2012
Date

CCP Solids Analysis Metals UCL_{90} Evaluation Form

WSPF #: ID-SDA-SOIL Rev. 1

Solids Summary Waste Stream Lot Number 1 through 4

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples	Maximum (mg/kg)	Mean (mg/kg)	SD (mg/kg)	UCL90 (mg/kg)	PRQL (mg/kg)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Antimony	Log	18	20	2.48	0.37	0.85	0.62	100	4.61		
Arsenic	Log	20	20	2.83	2.22	0.19	2.27	100	4.61		
Barium	Log	20	20	6.63	5.50	0.30	5.59	2000	7.60		
Beryllium	SQRT	20	20	7.14	3.59	2.14	4.23	100	10.00		
Cadmium	Log	20	20	4.94	1.79	1.55	2.26	20	3.00		
Chromium	Log	20	20	5.44	3.95	0.50	4.10	100	4.61		
Lead	Log	20	20	4.87	3.22	0.58	3.39	100	4.61		
Mercury	Log	18	20	1.48	-2.36	1.53	-1.91	4	1.39		
Nickel	Log	20	20	5.63	3.85	0.63	4.03	100	4.61		
Selenium	SQRT	7	20	1.18	0.71	0.24	0.78	20	4.47		
Silver	Log	11	20	1.86	-0.63	1.42	-0.21	100	4.61		
Thallium	SQRT	11	20	1.97	1.06	0.51	1.21	100	10.00		
Vanadium	No	20	20	63.00	52.40	9.08	55.10	100	N/A		
Zinc	Log	20	20	6.41	4.90	0.54	5.06	100	4.61	Yes	(2)

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per section C4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

(2) Zinc is not listed under 40CFR 261.30 or as a toxicity characteristic metal per 40CFR 261.24.

Signature of Site Project Manager

Jim Vernon
Printed Name

9/19/2012
Date

SUPPORTING DOCUMENTATION

CCP Solid VOCs Summary Data

Waste Stream Number: ID-SDA-SOIL

Solids Summary Waste Stream Lot Number: 1 through 4

Tentatively Identified Compound	Maximum Observed Estimated Concentrations (mg/kg)	# Samples Containing TIC	% Detected
NONE	N/A	N/A	N/A

Data Supports EPA Hazardous Waste Numbers Assigned by AK? Yes ☑ No ☐

If no, describe the basis for assigning the EPA Hazardous Waste Codes:

SPM Signature _____ Date 9/19/2012

SUPPORTING DOCUMENTATION

CCP Solid SVOCs Summary Data

Waste Stream Number: ID-SDA-SOIL

Solids Summary Waste Stream Lot Number: 1 through 4

Tentatively Identified Compound	Maximum Observed Estimated Concentrations (mg/kg)	# Samples Containing TIC	% Detected
Pentachlorobiphenyl	810.00	9	45.00%
Tetrachlorobiphenyl	27.00	5	25.00%
Hexachloropropene	5.40	3	15.00%
1,4-Dioxane	1.10	2	10.00%
Diethyl phthalate	2.10	1	5.00%
Hexachlorobiphenyl	9.80	3	15.00%
Benzene, 1,2,3,5-tetrachloro	21.00	1	5.00%
bis (7-methyloctyl)phthalate	0.84	1	5.00%

Note: Tetrachlorobiphenyl, and Pentachlorobiphenyl are listed in 20.4.1.200 NMAC (incorporating 40 CFR 261) Appendix VIII, and are present as TICs in greater than 25% of samples in the waste stream. These analytes have been added to the target analyte list for ID-SDA-SOIL.

Data Supports EPA Hazardous Waste Numbers Assigned by AK? Yes ☑ No ☐

If no, describe the basis for assigning the EPA Hazardous Waste Codes:

SPM Signature _____ Date 9/19/2012

SUPPORTING DOCUMENTATION

VE Data
ID-SDA-SOIL
Lot 76

Batch Data Report No.	Container	Cellulosics (kg)	Plastics (kg)	Rubber (kg)	Organic Matrix (kg)	Inorganic Matrix (kg)	Iron-based Metals (kg)	Aluminum-based Metals (kg)	Other Metals (kg)	Other Inorganics (kg)	Soils/gravel (kg)	Total Organic (kg)	Total Inorganic (kg)	Total Waste Weight (kg)
ARP71044	002793	0.4	1.5		5	0.3	2.2				162.2	6.9	164.7	171.60
ARP71061	002795		1.4	0.3		15					139.3	1.7	154.3	156.00

SUPPORTING DOCUMENTATION

VE Data
ID-SDA-SOIL
Lot 76

Batch Data Report No.	Container	Cellulosics Weight %	Plastics Weight %	Rubber Weight %	Organic Matrix Weight %	Inorganic Matrix Weight %	Iron-based Metals Weight %	Aluminum-based Metals Weight %	Other Metals Weight %	Other Inorganics Weight %	Soils/gravel Weight %
ARP71044	002793	0.23%	0.87%		2.91%	0.17%	1.28%				94.52%
ARP71061	002795		0.90%	0.19%		9.62%					89.29%

Lot	76	Waste Stream Waste Material Parameter Weight Percent Lot Total							
Cellulosics	Plastics	Rubber	Organic Matrix	Inorganic Matrix	Iron-based Metals	Aluminum-based Metals	Other Metals	Other Inorganics	Soils/gravel
0.12%	0.89%	0.09%	1.53%	4.67%	0.67%	0.00%	0.00%	0.00%	92.03%

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VE Density Rollup Data Through Lot: 76
ID-SDA-SOIL

Waste Stream Waste Material Parameter Weight Percent

Celluiosics	Plastics	Rubber	Organic Matrix	Inorganic Matrix	Iron-based Metals	Aluminum-based Metals	Other Metals	Other Inorganics (Absorbent)	Soils/gravel
1.54%	0.93%	0.01%	0.39%	0.63%	0.11%	0.01%	0.07%	3.91%	92.41%

SUPPORTING DOCUMENTATION

DIVIDER PAGE

CCP Waste Stream Characterization Checklist

Site(s): INL

Waste Stream Number: ID-RF-S3150-A Lot # (if applicable) 14

Waste Stream Description: Solidified Organics

Acceptable Knowledge Information or other data points[a]	Characterization Method(s)	Acceptable Knowledge Re-evaluation Required? Yes/No[c]?	Comments[d]
Physical waste form/description	RTR	No	RTR Data Sheets indicate consistency with Attachment 6 of CCP-TP-005.
Waste material parameters weights	RTR	No	RTR Data Sheets indicate consistency with CCP-AK-INL-005, Table 6-1b. See additional attached sheets.
Waste percent volume consistent with nondestructive examination or visual examination data and audio/video tapes or equivalent media	RTR	No	RTR Data sheets indicate con RTR Data Sheets indicate consistency with CCP-AK-INL-005. See additional attached sheets
Summary category group assignment	RTR	No	Summary Category group S3000 is consistent with RTR Data sheets.
Waste matrix code assignment	RTR	No	Waste Matrix Code of S3150 is consitant with data from RTR data sheets
Absence of prohibited items	RTR	No	RTR did not identify any prohibited items.
Tentatively identified compounds[f]	Solids Analysis	No	Attachment 5 of CCP-TP-005 identifies bis (2-ethylhexyl) phthalate and 1,4 dioxane as a TIC in this waste stream. bis(2-ethylhexl)phthalate (CAS# 117-81-7) was identified in > 25% of samples and found in 40CFR261 APP VIII. This TIC will be added to the TAL for further Solids analysis.

CCP Waste Stream Characterization Checklist

Site(s): INL

Waste Stream Number: ID-RF-S3150-A Lot # (if applicable) 14

Waste Stream Description: Solidified Organics

Acceptable Knowledge Information or other data points[a]	Characterization Method(s)	Acceptable Knowledge Re-evaluation Required? Yes/No[c]?	Comments[d]
EPA Hazardous Waste Number assignment [e]	Solids Analysis	No	Characterization results consistent with CCP-AK-INL-005 and Attachment 5 of CCP-TP-005. . bis(2-ethylhexl)phthalate (CAS# 117-81-7) was identified in > 25% of samples and is found in 40CFR261 APP VIII. Per CCP-AK-INL-005, section 6.4.3.4 (P- and U-Listed Waste) this compound was specifically identified in the AK Summary Report. AK does indicate that vacuum pump oil used in mass spectrometers may have been composed of this TIC and this oil may have been disposed of in the oil/solvent mixture feed to the Grease Plant process, but not as an unused product.
Toxicity characteristic code assignment	Solids Analysis	No	Consistent with CCP Solids Analysis UCL_{90} Evaluation forms.
UCL_{90} > PRQL?	Solids Analysis	No	Verified using CCP Solids Analysis UCL_{90} evaluation forms.
VOCs from packaging materials or radiolysis present	Solids Analysis	No	CCP-TP-005 Attachment 5 does not identify any VOCs associated with packaging or radiolysis.
State Hazardous Waste Number assignment	Solids Analysis	No	No additional State Hazardous Waste codes are identified in CCP-TP-005 attachment 5.
Radionuclides present	NDA	No	See Additional Comments section and additional sheets attached.
Other radiological parameters: (specify)	NDA	No	No additional radiological parameters identified

CCP Waste Stream Characterization Checklist

Site(s): INL

Waste Stream Number: ID-RF-S3150-A Lot # (if applicable) 14

Waste Stream Description: Solidified Organics

Additional Comments:

- Pu-239 and U-238 are identified in AK as the two most prevalent isotopes with WT%s of 66.36 and 27.08 respectively. Not all drums are expected to contain measurable quantities of U-238 and Pu-239 as identified in the AK Summary. In this Lot, all drums have measurable amounts of TRU isotopes. The two most prevalent isotopes by WT% for the Lot are 93.39% Pu-239 and 4.47% Pu-240. For the Waste stream to date the two most prevalent isotopes by WT% are Pu-239 and U-238 at 77.13% and 16.49% respectively Pu-240 is at 4.49%. Only a small number of drums are expected to have measurable quantities of U-238.

  a. Identified in the AK Summary Report or included in the in-process record documentation (e.g., BDR's)
  b. Use the *Acceptable Knowledge and Waste Characterization Data Cross-Reference (Attachment 9)* to identify applicable testing, sampling, and analysis information to compare to the acceptable knowledge information.
  c. If "yes," AK Expert completes an *Acceptable Knowledge Re-evaluation Checklist*.
  d. Identify the source of the waste characterization information (e.g., batch data report).
  e. Ensure that, if a toxicity characteristic contaminant is identified, it is not included as a listed waste, and if analytical data regarding the concentration are not available, the corresponding EPA Hazardous Waste Code is applied.
  f. Tentatively Identified Compounds identified in the Headspace Gas Summary Report were identified on the Hazardous Constituent List, Attachment 5

Site Project Manager:

Craig Simmons — Print

— Sign

12/12/2006 — Date:

Acceptable Knowledge Expert:

JEFF HARRISON — Print

— Sign

12/15/2006 — Date:

INL Lot 3150-14
NDA isotopic WT%

CONTAINERID	NDABDR	Isotopes (grams)	Sr-90	Cs-137	U-232	U-233	U-234	U-235	U-238	Np-237	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Am-241
10017658	INNDAH050047									1.60E-03	1.38E-03	4.02E+00	1.61E-01	4.51E-03	5.83E-04	1.22E-02
10016628	INNDAH050056										1.34E-04	1.26E+00	7.65E-02	1.70E-03	5.75E-04	
10017133	INNDAS050035									4.62E-04	1.10E-04	1.31E+00	8.79E-02	2.02E-03	3.96E-04	3.00E-03
10005809	INNDAS050052									9.68E-04	1.92E-04	2.50E+00	1.38E-01	3.47E-03	5.85E-04	5.10E-03
10005808	INNDAS050053		3.73E-10	5.33E-10												
10017485	INNDAS050076		2.62E-10	3.75E-10			1.42E-03	1.29E-01		7.71E-04	1.52E-04	1.06E+00	5.85E-02	1.38E-03	2.45E-04	2.21E-03
10017613	INNDAS050077		2.80E-10	4.00E-10						4.84E-04	2.44E-04	9.96E-01	5.09E-02	1.49E-03	2.18E-04	2.36E-03
10018271	INNDAS050117									2.62E-04	1.58E-04	1.41E+00	7.70E-02	2.01E-03	3.31E-04	3.12E-03
10018679	INNDAS050164									6.19E-04	6.74E-04	2.82E+00	1.61E-01	3.96E-03	6.82E-04	6.60E-03
10017209	INNDAS050170		5.66E-10	8.09E-10						9.76E-04	1.44E-04	2.05E+00	1.06E-01	3.03E-03	4.52E-04	4.78E-03
10018866	INNDAS050173									7.92E-04	4.00E-04	2.13E+00	1.16E-01	2.96E-03	5.02E-04	5.00E-03
10017864	INNDAS050174									1.01E-03	2.67E-06	2.54E+00	1.27E-01	4.12E-03	5.48E-04	6.54E-03
10017859	INNDAS050174		2.48E-10	3.55E-10						2.76E-04	3.43E-04	1.66E+00	9.62E-02	2.51E-03	4.13E-04	2.10E-03
10017570	INNDAS050174									6.15E-04	2.34E-04	1.28E+00	7.48E-02	1.77E-03	3.10E-04	
10017862	INNDAS050174		2.98E-10	4.26E-10						3.49E-04	8.16E-06	1.07E+00	5.24E-02	1.44E-03	2.13E-04	2.52E-03
10016768	INNDAS050174						2.47E-03	2.26E-01		7.68E-04	4.17E-04	4.34E+00	2.55E-01	6.00E-03	1.16E-03	1.28E-02
10018176	INNDAS050174		2.35E-10	3.36E-10						3.05E-04	1.11E-04	7.50E-01	3.84E-02	1.30E-03	1.79E-04	1.99E-03
10018031	INNDAS050180									4.19E-04	1.37E-05	1.12E+00	5.56E-02	1.48E-03	2.24E-04	2.56E-03
10018839	INNDAS050183		3.28E-10	4.68E-10						7.72E-04	1.74E-04	1.27E+00	7.09E-02	1.91E-03	3.25E-04	2.77E-03
10018496	INNDAS050183									6.47E-04	2.44E-05	9.59E-01	5.79E-02	1.41E-03	2.44E-04	2.31E-03
10016775	INNDAS050185		3.89E-10	5.56E-10			8.61E-04	7.86E-02		3.74E-04	5.51E-05	1.05E+00	5.85E-02	1.58E-03	2.54E-04	3.28E-03
10017478	INNDAS050186									6.44E-04	5.10E-04	2.85E+00	1.78E-01	4.33E-03	7.82E-04	5.66E-03
10016888	INNDAS050187									9.54E-04	6.23E-04	2.30E+00	1.20E-01	3.60E-03	5.10E-04	5.30E-03
10017293	INNDAS050187									1.02E-03	4.04E-04	2.79E+00	1.83E-01	4.08E-03	7.76E-04	5.22E-03
10017340	INNDAS050187									8.21E-04	1.49E-04	1.60E+00	8.50E-02	2.41E-03	3.70E-04	3.46E-03
10016007	INNDAS050188						8.21E-03	7.50E-01		4.70E-04	3.00E-04	2.41E+00	1.39E-01	3.25E-03	5.56E-04	3.54E-03
10016890	INNDAS050188									6.64E-04	2.28E-04	2.09E+00	1.28E-01	2.97E-03	5.34E-04	4.19E-03
10017516	INNDAS050188									6.73E-04	4.99E-05	1.86E+00	8.96E-02	2.44E-03	3.55E-04	3.29E-03
10017404	INNDAS050188									7.62E-04	3.12E-04	2.35E+00	1.30E-01	3.27E-03	5.70E-04	5.51E-03
10016792	INNDAT060004										6.22E-04	3.19E+00	2.18E-01	3.12E-03	1.14E-03	1.25E-02
10018274	INNDAT060004											2.52E+00	1.53E-01	4.64E-03	1.15E-03	8.85E-03
10016760	INNDAT060004											7.23E-01		1.33E-03	3.31E-04	2.54E-03
10016785	INNDAT060004											9.84E-01		1.81E-03	4.50E-04	3.45E-03
10016793	INNDAT060004											8.12E-01		1.49E-03	3.71E-04	2.85E-03
10018516	INNDAT060004										6.45E-04	1.51E+00		2.83E-03	2.57E-04	3.79E-03
10018576	INNDAT060004											7.92E-01		1.46E-03	3.62E-04	2.78E-03
10018507	INNDAT060004											8.74E-01		1.61E-03	4.00E-04	3.07E-03
10018028	INNDAT060004											2.74E+00	1.51E-01	3.65E-03	7.76E-04	9.71E-03
10018533	INNDAT060005											2.45E+00	1.49E-01	4.51E-03	1.12E-03	8.60E-03
10018563	INNDAT060005										1.81E-03	2.77E+00	2.33E-01	5.61E-03	1.24E-03	7.96E-03
10018043	INNDAT060005											1.28E+00		1.76E-03	1.92E-04	1.92E-03
10018268	INNDAT060005											3.24E+00	1.84E-01	4.93E-03	8.53E-04	9.32E-03
10018494	INNDAT060005											1.82E+00		3.04E-03	2.14E-04	3.79E-03
			2.98E-09	4.26E-09	0.00E+00	0.00E+00	1.30E-02	1.18E+00	0.00E+00	1.85E-02	1.06E-02	7.95E+01	4.06E+00	1.18E-01	2.17E-02	1.99E-01
	8.52E+01		8.52E+01	8.52E+01	8.52E+01	8.52E+01	8.52E+01	8.52E+01	8.52E+01	8.52E+01	8.52E+01	8.52E+01	8.52E+01	8.52E+01	8.52E+01	8.52E+01
	WT%		0.00%	0.00%	0.00%	0.00%	0.02%	1.39%	0.00%	0.02%	0.01%	93.39%	4.77%	0.14%	0.03%	0.23%

INFORMATION
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3150 NDA Rollup thru Lot 14

CONTAINERID	NDABDR	Sr-90	Cs-137	U-234	U-235	U-238	Np-237	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Am-241

INFORMATION
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RTR Data
ID-RF-S3150-A
Lot 14

Batch Data Report No.	Container	Cellulosics (kg)	Plastics (kg)	Rubber (kg)	Organic Matrix (kg)	Inorganic Matrix (kg)	Iron-based Metals (kg)	Aluminum-based Metals (kg)	Other Metals (kg)	Other Inorganics (Absorbent) (kg)	Vol. % Organic	Vol. % Inorganic
INRTR2050036	10005808		0.5		240.8		2.0			0.5	99.65%	0.35%
INRTR2050037	10017133		1.0		205.8						100.00%	0.00%
INRTR2050067	10005809		1.0		235.3					1.0	99.54%	0.46%
INRTR2050108	10017485		1.0		220.8						100.00%	0.00%
INRTR2050108	10017613		1.0		223.8						100.00%	0.00%
INRTR2050200	10018866		1.0		216.8					1.0	99.50%	0.50%
INRTR2050203	10017862		1.0		221.8						100.00%	0.00%
INRTR2050203	10017864		1.0		226.8						100.00%	0.00%
INRTR5050029	10018271		1.0		201.1					0.2	99.89%	0.11%
INRTR5050075	10017658		1.0		207.3						100.00%	0.00%
INRTR5050081	10018679		1.0		204.8					1.5	99.21%	0.79%
INRTR5050085	10017209		1.0		195.3					1.0	99.45%	0.55%
INRTR5050088	10016768		0.5		169.6					1.7	98.92%	1.08%
INRTR5050088	10017570		1.0		221.8					1.5	99.27%	0.73%
INRTR5050088	10017859		1.0		205.3					2.0	98.95%	1.05%
INRTR5050088	10018176		1.0		198.3					2.0	98.92%	1.08%
INRTR5050093	10018031		1.0		196.1					1.2	99.34%	0.66%
INRTR5050095	10016628		1.0		213.8					2.0	98.99%	1.01%
INRTR5050097	10016888		1.0		199.3					1.5	99.19%	0.81%
INRTR5050098	10016007		1.0		213.8					2.0	98.99%	1.01%
INRTR5050098	10016890		1.0		194.8					2.0	98.90%	1.10%
INRTR5050098	10017293		1.0		196.3					1.5	99.18%	0.82%
INRTR5050098	10017404		1.0		208.3					1.5	99.22%	0.78%
INRTR5050099	10017340		1.0		197.8					2.0	98.91%	1.09%
INRTR5050099	10017516		1.0		203.8					2.0	98.95%	1.05%
INRTR5050102	10017478		1.0		201.3					1.5	99.20%	0.80%
INRTR5050103	10018496		1.0		199.3					1.5	99.19%	0.81%
INRTR5050104	10016775		1.0		219.3						100.00%	0.00%
INRTR5050104	10018839		1.0		207.8						100.00%	0.00%
INRTR5060010	10016793		1.0		208.3					1.5	99.22%	0.78%
INRTR5060013	10016760		1.0		214.8					1.5	99.25%	0.75%
INRTR5060013	10016785		1.0		212.8					1.5	99.24%	0.76%
INRTR5060013	10016792		1.0		199.3					1.5	99.19%	0.81%
INRTR5060013	10018043		1.0		192.3						100.00%	0.00%

INFORMATION ONLY

RTR Data
ID-RF-S3150-A
Lot 14

Batch Data Report No.	Container	Cellulosics (kg)	Plastics (kg)	Rubber (kg)	Organic Matrix (kg)	Inorganic Matrix (kg)	Iron-based Metals (kg)	Aluminum-based Metals (kg)	Other Metals (kg)	Other Inorganics (Absorbent) (kg)	Vol. % Organic	Vol. % Inorganic
INRTR5060013	10018268		1.0		225.3					1.5	99.28%	0.72%
INRTR5060013	10018274		1.0		221.3					1.5	99.27%	0.73%
INRTR5060013	10018494		1.0		193.3					1.5	99.17%	0.83%
INRTR5060013	10018507		1.0		229.8					1.5	99.30%	0.70%
INRTR5060013	10018516		0.5		152.3					2.0	98.59%	1.41%
INRTR5060013	10018533		1.0		225.8					1.5	99.28%	0.72%
INRTR5060013	10018563		1.0		196.8					1.5	99.18%	0.82%
INRTR5060013	10018576		0.5		202.8					1.5	99.20%	0.80%
INRTR5060014	10018028		1.0		242.8						100.00%	0.00%

INFORMATION ONLY

RTR Data
ID-RF-S3150-A
Lot 14

Batch Data Report No.	Container	Cellulosics Weight %	Plastics Weight %	Rubber Weight %	Organic Matrix Weight %	Inorganic Matrix Weight %	Iron-based Metals Weight %	Aluminum-based Metals Weight %	Other Metals Weight %	Other Inorganics (Absorbent) Weight %
INRTR2050036	10005808	0.00%	0.21%	0.00%	98.77%	0.00%	0.82%	0.00%	0.00%	0.21%
INRTR2050037	10017133	0.00%	0.48%	0.00%	99.52%	0.00%	0.00%	0.00%	0.00%	0.00%
INRTR2050067	10005809	0.00%	0.42%	0.00%	99.16%	0.00%	0.00%	0.00%	0.00%	0.42%
INRTR2050108	10017485	0.00%	0.45%	0.00%	99.55%	0.00%	0.00%	0.00%	0.00%	0.00%
INRTR2050108	10017613	0.00%	0.44%	0.00%	99.56%	0.00%	0.00%	0.00%	0.00%	0.00%
INRTR2050200	10018866	0.00%	0.46%	0.00%	99.09%	0.00%	0.00%	0.00%	0.00%	0.46%
INRTR2050203	10017862	0.00%	0.45%	0.00%	99.55%	0.00%	0.00%	0.00%	0.00%	0.00%
INRTR2050203	10017864	0.00%	0.44%	0.00%	99.56%	0.00%	0.00%	0.00%	0.00%	0.00%
INRTR5050029	10018271	0.00%	0.49%	0.00%	99.41%	0.00%	0.00%	0.00%	0.00%	0.10%
INRTR5050075	10017658	0.00%	0.48%	0.00%	99.52%	0.00%	0.00%	0.00%	0.00%	0.00%
INRTR5050081	10018679	0.00%	0.48%	0.00%	98.79%	0.00%	0.00%	0.00%	0.00%	0.72%
INRTR5050085	10017209	0.00%	0.51%	0.00%	98.99%	0.00%	0.00%	0.00%	0.00%	0.51%
INRTR5050088	10016768	0.00%	0.29%	0.00%	98.72%	0.00%	0.00%	0.00%	0.00%	0.99%
INRTR5050088	10017570	0.00%	0.45%	0.00%	98.89%	0.00%	0.00%	0.00%	0.00%	0.67%
INRTR5050088	10017859	0.00%	0.48%	0.00%	98.56%	0.00%	0.00%	0.00%	0.00%	0.96%
INRTR5050088	10018176	0.00%	0.50%	0.00%	98.51%	0.00%	0.00%	0.00%	0.00%	0.99%
INRTR5050093	10018031	0.00%	0.50%	0.00%	98.89%	0.00%	0.00%	0.00%	0.00%	0.61%
INRTR5050095	10016628	0.00%	0.46%	0.00%	98.62%	0.00%	0.00%	0.00%	0.00%	0.92%
INRTR5050097	10016888	0.00%	0.50%	0.00%	98.76%	0.00%	0.00%	0.00%	0.00%	0.74%
INRTR5050098	10016007	0.00%	0.46%	0.00%	98.62%	0.00%	0.00%	0.00%	0.00%	0.92%
INRTR5050098	10016890	0.00%	0.51%	0.00%	98.48%	0.00%	0.00%	0.00%	0.00%	1.01%
INRTR5050098	10017293	0.00%	0.50%	0.00%	98.74%	0.00%	0.00%	0.00%	0.00%	0.75%
INRTR5050098	10017404	0.00%	0.47%	0.00%	98.81%	0.00%	0.00%	0.00%	0.00%	0.71%
INRTR5050099	10017340	0.00%	0.50%	0.00%	98.51%	0.00%	0.00%	0.00%	0.00%	1.00%
INRTR5050099	10017516	0.00%	0.48%	0.00%	98.55%	0.00%	0.00%	0.00%	0.00%	0.97%
INRTR5050102	10017478	0.00%	0.49%	0.00%	98.77%	0.00%	0.00%	0.00%	0.00%	0.74%
INRTR5050103	10018496	0.00%	0.50%	0.00%	98.76%	0.00%	0.00%	0.00%	0.00%	0.74%
INRTR5050104	10016775	0.00%	0.45%	0.00%	99.55%	0.00%	0.00%	0.00%	0.00%	0.00%
INRTR5050104	10018839	0.00%	0.48%	0.00%	99.52%	0.00%	0.00%	0.00%	0.00%	0.00%
INRTR5060010	10016793	0.00%	0.47%	0.00%	98.81%	0.00%	0.00%	0.00%	0.00%	0.71%
INRTR5060013	10016760	0.00%	0.46%	0.00%	98.85%	0.00%	0.00%	0.00%	0.00%	0.69%
INRTR5060013	10016785	0.00%	0.46%	0.00%	98.84%	0.00%	0.00%	0.00%	0.00%	0.70%
INRTR5060013	10016792	0.00%	0.50%	0.00%	98.76%	0.00%	0.00%	0.00%	0.00%	0.74%
INRTR5060013	10018043	0.00%	0.52%	0.00%	99.48%	0.00%	0.00%	0.00%	0.00%	0.00%

INFORMATION ONLY

RTR Data
ID-RF-S3150-A
Lot 14

Batch Data Report No.	Container	Cellulosics Weight %	Plastics Weight %	Rubber Weight %	Organic Matrix Weight %	Inorganic Matrix Weight %	Iron-based Metals Weight %	Aluminum-based Metals Weight %	Other Metals Weight %	Other Inorganics (Absorbent) Weight %
INRTR5060013	10018268	0.00%	0.44%	0.00%	98.90%	0.00%	0.00%	0.00%	0.00%	0.66%
INRTR5060013	10018274	0.00%	0.45%	0.00%	98.88%	0.00%	0.00%	0.00%	0.00%	0.67%
INRTR5060013	10018494	0.00%	0.51%	0.00%	98.72%	0.00%	0.00%	0.00%	0.00%	0.77%
INRTR5060013	10018507	0.00%	0.43%	0.00%	98.92%	0.00%	0.00%	0.00%	0.00%	0.65%
INRTR5060013	10018516	0.00%	0.32%	0.00%	98.39%	0.00%	0.00%	0.00%	0.00%	1.29%
INRTR5060013	10018533	0.00%	0.44%	0.00%	98.90%	0.00%	0.00%	0.00%	0.00%	0.66%
INRTR5060013	10018563	0.00%	0.50%	0.00%	98.75%	0.00%	0.00%	0.00%	0.00%	0.75%
INRTR5060013	10018576	0.00%	0.24%	0.00%	99.02%	0.00%	0.00%	0.00%	0.00%	0.73%
INRTR5060014	10018028	0.00%	0.41%	0.00%	99.59%	0.00%	0.00%	0.00%	0.00%	0.00%

Total Lot Weight %								
Cellulosics Weight %	Plastics Weight %	Rubber Weight %	Organic Matrix Weight %	Inorganic Matrix Weight %	Iron-based Metals Weight %	Aluminum-based Metals Weight %	Other Metals Weight %	Other Inorganics (Absorbent) Weight %
0.00%	0.45%	0.00%	98.98%	0.00%	0.02%	0.00%	0.00%	0.55%

Total Lot % Volume	
Organic	Inorganic
99.40%	0.60%

INFORMATION ONLY

RTR Density Rollup Data Through Lot: 14
ID-RF-S3150-A

Waste Stream Waste Material Parameter Weight Percent								
Cellulosics	Plastics	Rubber	Organic Matrix	Inorganic Matrix	Iron-based Metals	Aluminum-based Metals	Other Metals	Other Inorganics (Absorbent)
0.00%	0.46%	0.00%	98.87%	0.00%	0.02%	0.00%	0.00%	0.65%

Waste Stream Organic/Inorganic Volume Percent	
Vol. % Organic	Vol. % Inorganic
99.29%	0.71%

INFORMATION ONLY

CCP Solids Analysis VOC UCL_{90} Evaluation Form

WSPF #: ID-RF-S3150-A **Waste Stream Lot Number** 1 through 1

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples (2)	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Benzene	No	0	0	0	0	0	0	10	N/A		
Bromoform	No	0	0	0	0	0	0	10	N/A		
Carbon Disulfide	No	0	0	0	0	0	0	10	N/A		
Carbon Tetrachloride	SQRT	5	5	179	134	36	158	10	3.16	Yes	F001
Chlorobenzene	No	0	0	0	0	0	0	10	N/A		
Chloroform	No	1	1	270	270	0	0	10	N/A		
1,2-Dichloroethane	No	0	0	0	0	0	0	10	N/A		
1,1-Dichloroethylene	No	0	0	0	0	0	0	10	N/A		
trans-1,2-Dichloroethylene	No	0	0	0	0	0	0	10	N/A		
Ethyl benzene	No	0	0	0	0	0	0	10	N/A		
Methylene chloride	No	0	0	0	0	0	0	10	N/A		
1,1,2,2-Tetrachloroethane	No	0	0	0	0	0	0	10	N/A		
Tetrachloroethylene	No	0	0	0	0	0	0	10	N/A		
Toluene	No	0	0	0	0	0	0	10	N/A		
1,1,1-Trichloroethane	Log	5	5	11	10	1	10	10	2.30	Yes	F001, F002
1,1,2-Trichloroethane	No	0	0	0	0	0	0	10	N/A		
Trichloroethylene	No	0	0	0	0	0	0	10	N/A		
Trichlorofluoromethane	No	0	0	0	0	0	0	10	N/A		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	No	0	0	0	0	0	0	10	N/A		
Vinyl chloride	No	0	0	0	0	0	0	10	N/A		
m,p-Xylene[d]	No	0	0	0	0	0	0	10	N/A		
o-Xylene	No	0	0	0	0	0	0	10	N/A		
Acetone	No	4	4	18	12	7	18	100	N/A		
Butanol	No	4	4	18	12	7	18	100	N/A		
Methanol	SQRT	5	5	7	4	2	6	100	10.00		
Methyl ethyl ketone	No	4	4	18	12	7	18	100	N/A		

INFORMATION
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CCP Solids Analysis VOC UCL_{90} Evaluation Form

WSPF #: ID-RF-S3150-A **Waste Stream Lot Number** 1 through 1

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples (2)	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Ethyl ether	No	4	4	18	12	7	18	100	N/A		
Isobutanol	Log	5	5	4	2	1	3	100	4.61		
Pyradine	No	4	4	18	12	7	18	100	N/A		
1,4-Dichloroethanebenzene[c]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Ortho-Dichlorobenzene[c]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Formaldehyde[a]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Hydrazine[b]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		

[a] Required only for homogenous solids and soil/gravel waste from Los Alamos National Laboratory and Savannah River Site.

[b] Required only for homogenous solids and soil/gravel wast from Oak Ridge National Laboratory and Savannah River Site.

[c] Can also be analyzed as an SVOC. If analyzed as an SVOC, the QAO's of CCP-TP-001, Table B3-6 apply..

[d] These xylene isomers cannot be resolved by the analytical methods employed in the program. m-Xylene and p-Xylene will be reported as "Total m-p-Xylene."

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per section B4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

(2) As a result of dilution requirements, several analytes were reported as non-detected with MDL values in excess of the PRQL. In accordance with Section B4-3d of the WIPP-WAP, such "U" flagged observations with elevated MDL values due to dilution were not used in calculating mean concentration. Consequently, the subject analytes were statistically evaluated using only the useable observations. For analytes with no useable data, there is no corresponding data reported on the UCL90 evaluation form.

(3) For analytes where there is no standard deviation, there is inadequate data to perform the statistical analysis.

Signature of Site Project Manager

Craig Simmons
Printed Name

12/12/2006
Date

INFORMATION ONLY

CCP Solids Analysis SVOC UCL_{90} Evaluation Form

WSPF #: ID-RF-S3150-A **Waste Stream Lot Number** 1 through 1

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples (2)	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
2-Methylphenol (cresols)	No	1	1	4	4	0	0	40	N/A		
3&4 -Methylphenol (cresols)	No	1	1	4	4	0	0	40	N/A		
1,4-Dichlorobenzene [a]	No	1	1	10	10	0	0	40	N/A		
Ortho-Dichlorobenzene [a]	No	1	1	2	2	0	0	40	N/A		
2,4-Dinitrophenol	No	1	1	4	4	0	0	40	N/A		
2,4-Dinitrotoluene	No	0	0	0	0	0	0	2.6	N/A		
Hexachlorobenzene	No	0	0	0	0	0	0	2.6	N/A		
Hexachloroethane	No	1	1	180	180	0	0	40	N/A		
Nitrobenzene	No	1	1	2	2	0	0	40	N/A		
Pentachlorophenol	No	1	1	2	2	0	0	40	N/A		

[a] Can also be analyzed as an SVOC. If analyzed as an SVOC, the QAO's of CCP-TP-001, Table B3-6 apply..

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per section B4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

Signature of Site Project Manager	Craig Simmons Printed Name	12/12/2006 Date

INFORMATION ONLY

CCP Solids Analysis Metals UCL_{90} Evaluation Form

WSPF #: ID-RF-S3150-A **Waste Stream Lot Number** 1 through 1

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples (2)	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Antimony	No	0	5	0.30	0.30	0.00	0.00	100	N/A		
Arsenic	No	1	5	1.80	0.68	0.63	1.11	100	N/A		
Barium	Log	5	5	3.78	2.18	1.32	3.09	2000	7.60		
Beryllium	Log	3	5	0.34	-1.49	1.65	-0.36	100	4.61		
Cadmium	No	1	5	2.00	0.44	0.87	1.04	20	N/A		
Chromium	Log	5	5	2.64	0.60	1.42	1.57	100	4.61		
Lead	Log	3	5	1.65	0.66	0.92	1.29	100	4.61		
Mercury	SQRT	2	5	0.20	0.11	0.06	0.15	4	2.00		
Nickel	Log	5	5	2.48	1.10	0.90	1.71	100	4.61		
Selenium	No	1	5	1.40	0.52	0.49	0.86	20	N/A		
Silver	Log	5	5	-0.27	-0.58	0.24	-0.42	100	4.61		
Thallium	No	0	5	0.50	0.50	0.00	0.00	100	N/A		
Vanadium	Log	5	5	3.33	-0.31	2.05	1.10	100	4.61		
Zinc	No	5	5	26.00	20.80	4.55	23.92	100	N/A		

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per section B4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

Signature of Site Project Manager

Craig Simmons
Printed Name

12/12/2006
Date

INFORMATION
ONLY

CCP Solid VOCs Summary Data

Waste Stream Number ID-RF-S3150-A Waste Stream Lot Number 1

Tentatively Identified Compound	Maximum Observed Estimated Concentrations (ppmv)	# Samples Containing TIC	% Detected
NONE			

Data Supports EPA Hazardous Waste Numbers Assigned by AK? Yes ☑ No ☐

If no, describe the basis for assigning the EPA Hazardous Waste Codes:

SPM Signature _____ Date 12/12/2006

INFORMATION ONLY

CCP Solid SVOCs Summary Data

Waste Stream Number ID-RF-S3150-A Waste Stream Lot Number 1

Tentatively Identified Compound	Maximum Observed Estimated Concentrations (ppmv)	# Samples Containing TIC	% Detected
bis(2-ethylhexyl)phthalate	38000.00	3	60.00%
Phenol	160.00	1	20.00%

Data Supports EPA Hazardous Waste Numbers Assigned by AK? Yes ☑ No ☐

If no, describe the basis for assigning the EPA Hazardous Waste Codes:

TIC bis(2-ethylhexl)phthalate (CAS# 117-81-7) identified in > 25% of samples and found in 40CFR261 APP VIII. Per CCP-AK-INL-005, section 6.4.3.4 (P- and U-Listed Waste) this compound was specifically identified in the AK Summary Report. AK does indicate that vacuum pump oil used in mass spectrometers may have been composed of this TIC and this oil may have been disposed of in the oil/solvent mixture feed to the Grease Plant process, but not as an unused product. This TIC is also a common plasticizer used in plastic, including the plastic bags/packaging used to package this waste. Accordingly, this waste stream is not a U028-listed hazardous waste. This TIC will be added to the TAL for further Solids analysis.

SPM Signature _____ Date 12/12/2006

INFORMATION ONLY

DIVIDER PAGE

Attachment 13 – CCP Waste Stream Characterization Checklist

CCP Waste Stream Characterization Checklist

Page 1 of 2

Site(s): INL

Waste Stream Number: ID-ANLE-S5000 Lot # (if applicable) 29

Waste Stream Description: Heterogeneous Debris Waste

Acceptable Knowledge Information or other data points[a]	Characterization Method(s)[b]	AK Re-evaluation Required? Yes/No[c]?	Comments[d]
Physical waste form/description	AK, RTR, VE	No	RTR and VE Data Sheets indicate consistency with Attachment 6 of CCP-TP-005 and Section 5.0 of CCP-AK-INL-500.
Waste material parameters weights	AK	No	RTR and VE Data Sheets indicate consistency with Attachment 6 of CCP-TP-005 and Section 5.0 of CCP-AK-INL-500.
Waste percent volume consistent with nondestructive examination or visual examination data and audio/video tapes or equivalent media	AK, RTR, VE	No	RTR and VE Data Sheets indicate consistency with waste stream description in Section 5.0 of CCP-AK-INL-500.
Summary category group assignment	AK, RTR, VE	No	Assignment of Summary Category Group S5000 is consistent with RTR and VE data sheets.
Waste matrix code assignment	AK, RTR, VE	No	Assignment of Waste Matrix Code S5400 is consistent with RTR and VE data sheets.
Absence of prohibited items	AK, RTR, VE	No	RTR and VE confirmed the absence of prohibited items.
Tentatively identified compounds[f]	HSG	No	No TICs were identified in greater than 25% of the waste stream.
EPA Hazardous Waste Number assignment[e]	AK, HSG	No	HSG results did not conflict with EPA HWNs assignment for waste stream.
Toxicity characteristic code assignment	AK, HSG	No	HSG results did not conflict with VOC EPA HWNs assignment for the waste stream.
UCL_{90} > PRQL?	HSG	No	Based on the UCL90 statistical evaluation, no compound in the target analyte list exceeded the PRQL.
VOCs from packaging materials or radiolysis present	AK, HSG	No	No VOCs associated with packaging or radiolysis were identified by AK; CCP-TP-005, Attachment 5.
State Hazardous Waste Number assignment	AK	No	Illinois State HWNs identical to EPA assignment.

COPY

Attachment 13 – CCP Waste Stream Characterization Checklist

CCP Waste Stream Characterization Checklist

Page 2 of 2

Site(s): INL

Waste Stream Number: ID-ANLE-S5000 Lot # (if applicable) 29

Waste Stream Description: Heterogeneous Debris Waste

Acceptable Knowledge Information or other data points[a]	Characterization Method(s)[b]	AK Re-evaluation Required? Yes/No[c]?	Comments[d]
Radionuclides present	AK, DTC	No	Radionuclides present were determined according to CCP-AK-ANLE-501 and quantified using the DTC method.
Other radiological parameters: (specify)	AK, DTC	No	The 14 radionuclides constituting greater than 97% of the hazard were calculated and reported; CCP-AK-ANLE-501.

Additional Comments:
RTR batch data reports: INLRHRTR09007
VE batch data reports: RHINLVE090002
DTC batch data reports: INLRHDTC09007
HSG batch data reports: INHSGS060304, INHSGS070003, INHSGS080002, INHSGS090011, ECL06494M, ECL07026M, ECL08003M, ECL09029M, ECL06494C, ECL07026C, ECL06494G, ECL07026G, ECL08003G, ECL09029G

a. Identified in the AK Summary Report or included in the in-process record documentation (e.g., BDR's)
b. Use the *Acceptable Knowledge and Waste Characterization Data Cross-Reference (Attachment 9)* to identify applicable testing, sampling, and analysis information to resolve the acceptable knowledge information, as applicable.
c. If "yes," AKE completes an *Acceptable Knowledge Re-evaluation Checklist.*
d. Identify the source of the waste characterization information (e.g., batch data report). Note if AK sufficiency scenarios 1, 2, or 3 are applicable.
e. Ensure that, if a toxicity characteristic contaminant is identified, it is not included as a listed waste, and if analytical data regarding the concentration are not available, the corresponding EPA Hazardous Waste Number is applied.
f. Tentatively Identified Compounds identified in the Headspace Gas Summary Report were identified on the Hazardous Constituent List, Attachment 5

Site Project Manager:
Irene Quintana
Print Sign Date: 2/8/10

Acceptable Knowledge Expert:
Kevin Peters
Print Sign Date: 2/5/2010

URS

CP:10:01077
UFC:5900.00

Washington TRU Solutions LLC

INTER-OFFICE CORRESPONDENCE

DATE: February 10, 2010

FROM: I. S. Quintana J. S. Quintana LOCATION: Special Operations & RH Development

TO: CCP Records Custodian GSA-212 LOCATION: Retrieval, Characterization & Transportation

SUBJECT: TRANSMITTAL OF CHARACTERIZATION INFORMATION SUMMARY FOR REMOTE-HANDLED LOT 29 ID-ANLE-S5000 AT THE IDAHO NATIONAL LABORATORY

Please accept the attached Characterization Information Summary for the Remote-Handled Idaho National Laboratory Lot 29 ID-ANLE-S5000.

ISQ:jmc

Attachment

cc: (without enclosure)
M. Sensibaugh ED
H. J. Neely ED

COPY

CHARACTERIZATION INFORMATION SUMMARY

WSPF # ID-ANLE-S5000

Lot 29

TABLE OF CONTENTS

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Headspace Gas Summary Data..... 006

RTR/VE Summary of Prohibited Items and AK Confirmation..... 007

Reconciliation with Data Quality Objectives..... 008

C1S001

CCP Characterization Information Summary Cover Page

Waste Stream # ID-ANLE-S5000 Lot #: 29

AK Expert Review: Kevin Peters Date: 2/5/2010

SPM Review: Irene S. Quintana Date: 2/8/10

SPM signature certifies that through Acceptable Knowledge testing and/or analysis that the waste identified in this summary is not corrosive, ignitable, reactive, or incompatible with the TSDF.

A summary of the Acceptable Knowledge regarding this waste stream containing specific information about the corrosivity, reactivity, and ignitability of the waste stream is included as an attachment to the Waste Stream Profile Form. By reference, that information is included in this lot.

List of procedures used:

Radiography (RTR/NDE)

CCP-TP-508	Rev. 3	04/22/09	CCP RH Standard Real-Time Radiography Inspection Procedure
CCP-TP-508	Rev 2	02/26/08	CCP RH Standard Real-Time Radiography Inspection Procedure
CCP-TP-508	Rev 1	12/13/07	CCP RH Standard Real-Time Radiography Inspection Procedure

Headspace Gas Sampling and Analysis (HSG):

CCP-TP-093	Rev 13	03/19/07	CCP Sampling of TRU Waste Containers
CCP-TP-093	Rev. 11	11/16/06	CCP Sampling of TRU Waste Containers
CCP-TP-106	Rev. 6	07/12/07	CCP Headspace Gas Sampling Batch Data Report Preparation
CCP-TP-106	Rev. 5	11/16/06	CCP Headspace Gas Sampling Batch Data Report Preparation
CCP-TP-173	Rev. 1	09/30/09	CCP Analysis of Gas Samples for VOCs by GC/FID
CCP-TP-173	Rev 0	05/03/07	CCP Analysis of Gas Samples for VOCs by GC/FID
ACMM-9910	Rev. 7	04/24/06	Analysis of Gas Samples for VOCs by GC/FID
ACMM-9925	Rev 2	05/13/06	Analysis of Gas Samples for Hydrogen and Methane by GC/TCD
CCP-TP-175	Rev. 0	05/02/07	CCP Analysis of Gas Samples for VOCs by GC/MS
ACMM-9930	Rev 9	02/16/06	Analysis of Gas Samples for VOCs by GC/MS

Visual Examination (VE):

CCP-TP-500	Rev 8	07/24/08	CCP Remote-Handled Waste Visual Examination

Project Level Data Validation / DQO Reconciliation:

CCP-TP-001	Rev 17	09/24/07	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 16	04/26/07	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 15	11/22/06	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 14	11/16/06	CCP Project Level Data Validation and Verification
CCP-TP-002	Rev. 21	08/04/09	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 20	08/18/08	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 19	12/22/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 18	11/16/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 17	10/10/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-003	Rev 17	11/09/09	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev 16	10/02/07	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev 15	11/16/06	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev 14	09/03/03	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-005	Rev. 18	11/16/06	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 17	06/05/06	CCP Acceptable Knowledge Documentation

WAP Certification:

CCP-PO-001	Rev. 17	06/23/09	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 16	10/31/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 15	08/10/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev 14	03/28/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 13	11/16/06	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 12	03/22/06	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-501	Rev. 3	04/23/08	CCP/INL RH TRU Waste Interface Document

CIS 002

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # ID-ANLE-S5000

Lot # 29

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
IDAE000000393	NA	NA	NA	RHINLVE090002	NA	NA		INHSGS090011	ECL09029M	ECL09029G	NA
IDAE000000394	NA	NA	NA	RHINLVE090002	NA	NA		INHSGS090011	ECL09029M	ECL09029G	NA
IDAE000000395	NA	NA	NA	RHINLVE090002	NA	NA		INHSGS090011	ECL09029M	ECL09029G	NA
IDAE000000396	NA	NA	NA	RHINLVE090002	NA	NA		INHSGS090011	ECL09029M	ECL09029G	NA
IDAE000000397	NA	NA	NA	RHINLVE090002	NA	NA		INHSGS090011	ECL09029M	ECL09029G	NA
IDAE000000398	NA	NA	NA	RHINLVE090002	NA	NA		INHSGS090011	ECL09029M	ECL09029G	NA
IDAE000000399	NA	NA	NA	RHINLVE090002	NA	NA		INHSGS090011	ECL09029M	ECL09029G	NA
IDAE000000400	NA	NA	NA	RHINLVE090002	NA	NA		INHSGS090011	ECL09029M	ECL09029G	NA
IDAERH0001002	NA	NA	INLRHRTR09007	NA	NA	NA		NA	NA	NA	NA
IDAERH0001003	NA	NA	NA	RHINLVE090002	NA	NA		INHSGS090011	ECL09029M	ECL09029G	NA
IDAERH0001004	NA	NA	INLRHRTR09007	NA	NA	NA		INHSGS090011	ECL09029M	ECL09029G	NA

Signature of Site Project Manager

Irene S. Quintana
Printed Name

2/8/2010
Date

CCP Headspace Gas UCL_{90} Evaluation Form

WSPF #: ID-ANLE-S5000 **Waste Stream Lot Number** 1 through 4

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples (2)	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Benzene	Log	21	40	0.10	-2.22	1.12	-1.99	10	2.30		
Bromoform	Log	0	40	-2.35	-4.22	0.55	-4.11	10	2.30		
Carbon tetrachloride	Log	10	40	-0.94	-3.41	0.75	-3.26	10	2.30		
Chlorobenzene	Log	0	40	-1.86	-3.33	0.46	-3.23	10	2.30		
Chloroform	Log	3	40	-0.16	-3.17	0.77	-3.01	10	2.30		
Cyclohexane [a]	Log	7	40	-0.04	-2.98	0.98	-2.77	10	2.30		
1,1-Dichloroethane	Log	5	40	1.48	-2.85	1.12	-2.62	10	2.30		
1,2-Dichloroethane	Log	0	40	-1.90	-3.16	0.46	-3.07	10	2.30		
1,1-Dichloroethylene	Log	0	40	-2.12	-3.23	0.48	-3.13	10	2.30		
cis-1,2-Dichloroethylene	Log	1	40	-2.00	-3.38	0.48	-3.28	10	2.30		
trans-1,2-Dichloroethylene	Log	0	40	-2.25	-3.39	0.45	-3.29	10	2.30		
Ethyl benzene	Log	17	40	0.18	-2.52	1.08	-2.30	10	2.30		
Ethyl ether	Log	0	40	-1.69	-2.98	0.49	-2.88	10	2.30		
Methylene chloride	Log	7	40	-0.04	-2.79	0.86	-2.61	10	2.30		
1,1,2,2-Tetrachloroethane	Log	0	40	-1.45	-3.50	0.59	-3.38	10	2.30		
Tetrachloroethylene	Log	5	40	0.69	-3.45	1.26	-3.19	10	2.30		
Toluene	Log	33	40	3.00	-0.82	2.07	-0.40	10	2.30		
1,1,1-Trichloroethane	Log	6	40	1.28	-3.41	1.10	-3.18	10	2.30		
Trichloroethylene	Log	6	40	0.34	-3.23	1.09	-3.01	10	2.30		
1,1,2-Trichloro-1,2,2-trifluoroethane	Log	3	40	0.41	-3.48	0.94	-3.29	10	2.30		
1,2,4-Trimethylbenzene [a]	Log	9	40	0.47	-2.85	0.97	-2.65	10	2.30		
1,3,5-Trimethylbenzene [a]	Log	5	40	-0.71	-3.12	0.72	-2.98	10	2.30		
m-Xylene [b]	Log	22	40	1.70	-1.87	1.66	-1.53	10	2.30		
p-Xylene [b]	Log	22	40	1.70	-1.87	1.66	-1.53	10	2.30		
o-Xylene	Log	15	40	1.79	-2.28	1.38	-2.00	10	2.30		
Acetone	Log	40	40	3.95	1.85	1.18	2.09	100	4.61		
1-Butanol	Log	32	40	2.15	-1.36	1.30	-1.09	100	4.61		
Methanol	Log	0	40	2.35	1.90	0.18	1.94	100	4.61		
Methyl ethyl ketone	Log	35	40	1.67	-0.46	1.35	-0.18	100	4.61		

C1800

CCP Headspace Gas UCL_{90} Evaluation Form

WSPF #: ID-ANLE-S5000 **Waste Stream Lot Number** 1 through 4

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples (2)	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Methyl isobutyl ketone	Log	18	40	-0.22	-2.41	1.21	-2.16	100	4.61		
Chloromethane[a]	Log	20	40	1.65	-1.78	1.38	-1.49	10	2.30		
Carbon Disulfide[a]	Log	10	40	-0.80	-2.81	0.62	-2.68	10	2.30		
1,2-Dichloropropane[a]	Log	2	40	-2.41	-3.66	0.50	-3.56	10	2.30		
Trichlorofluoromethane[c]	Log	1	20	3.04	-3.37	1.61	-2.89	10	2.30		

[a] These compounds are from the TRAMPAC and are flammable VOCs that do not appear in the QAPjP or the WIPP WAP. These are not part of the target analyte list, but samples may be analyzed for these compounds.

[b] These xylene isomers cannot be resolved by the analytical methods employed in the program. m-Xylene and p-Xylene will be reported as "Total m-p-Xylene."

[c] Compounds are reported as target analytes by the Idaho Laboratory and have been added to the evaluation accordingly.

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per section B4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

Signature of Site Project Manager

Irene S. Quintana
Printed Name

2/8/2010
Date

215 805

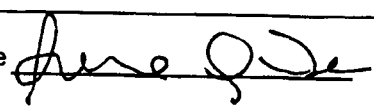
CCP Headspace Gas Summary Data

Waste Stream Number ID-ANLE-S5000 Lot Number (s) 29

Tentatively Identified Compound	Maximum Observed Estimated Concentrations (ppmv)	# Samples Containing TIC	% Detected
1,4-Dioxane	0.04	1	2.50%
2-Methyl-1-propanol	0.58	3	7.50%

Data Supports EPA Hazardous Waste Numbers Assigned by AK? Yes ☑ No ☐

If no, describe the basis for assigning the EPA Hazardous Waste Codes:

SPM Signature  Date 2/8/2010

C 15.006

CCP RTR/VE Summary of Prohibited Items and AK Confirmation

Waste Stream Number: ID-ANLE-S5000 Lot(s)#: 29

Container Number	RTR Prohibited Items [a]	Visual Examination Prohibited Items [a]
See correlation of container ID numbers for list of remaining drum numbers in this Lot.	None of the containers in this lot had prohibited items identified in Radiography.	None of the containers in this lot had prohibited items identified in Visual Examination.

a. See Batch Data Reports

b. If AK has assigned U134 to this waste stream, then any liquids in these containers are prohibited items (not acceptable by the TSDF).

Site Project Manager Signature | Irene S. Quintana Printed Name | 2/8/2010 Date

C15007

CCP Reconcilliation with Data Quality Objectives

WSF# ID-ANLE-S5000 Lot # 29

Sampling Completeness

VE

Number of Valid Samples: 9 Number of Total Samples Analyzed: 9
Percent Complete: 100 (QAO is 100%)

RTR

Number of Valid Samples: 2 Number of Total Samples Analyzed: 2
Percent Complete: 100 (QAO is 100%)

HSG

Number of Valid Samples: 40 Number of Total Samples collected: 40
Percent Complete: 100 (QAO is ≥90%)

Total VOC

Number of Valid Samples: NA Number of Total Samples collected: NA
Percent Complete: NA (QAO is ≥90%)
Number of Valid Samples: NA Number of Total Samples analyzed: NA
Percent Complete: NA (QAO is ≥90%)

Total SVOC

Number of Valid Samples: NA Number of Total Samples collected: NA
Percent Complete: NA (QAO is ≥90%)
Number of Valid Samples: NA Number of Total Samples analyzed: NA
Percent Complete: NA (QAO is ≥90%)

Total Metals

Number of Valid Samples: NA Number of Total Samples collected: NA
Percent Complete: NA (QAO is ≥90%)
Number of Valid Samples: NA Number of Total Samples analyzed: NA
Percent Complete: NA (QAO is ≥90%)

CCP Reconcilliation with Data Quality Objectives

WSF# ID-ANLE-S5000 Lot # 29

	Y/N/NA	Reconcilliation Parameter
1	Y	Waste Matrix Code.
2	Y	Waste Material Parameter Weights.
3	Y	The waste matrix code identified is consistent with the type of sampling and analysis used to characterize the waste.
4	Y	The TRU activity reported in the BDRs for each container demonstrates with a 95% probability that the container of waste contains TRU radioactive waste.
5	NA	AK Sufficiency. Is there an approved AK sufficiency Determination for this waste stream?
6	Y	Mean concentrations, UCL90 values for the mean concentration, standard deviations, and the number of samples collected for each VOC in the HSG of each container were calculated and compared with the program required quantitation limits, as reported in CCP TP 003, Attachment 3, and additional Environmental Protection Agency (EPA) Hazardous Waste Numbers were assigned as required. Samples were randomly collected (when appropriate).
7a	NA	Mean concentrations, UCL90 values for the mean concentration, standard deviations, and the number of samples collected for solids VOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003-Attachment 4, and additional EPA Hazardous Waste Numbers were assigned as required. Samples were randomly collected.
7b	NA	Mean concentrations, UCL90 values for the mean concentration, standard deviations, and the number of samples collected for solids SVOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP TP 003 Attachment 5, and additional EPA Hazardous Waste Numbers were assigned as required. Samples were randomly collected.
7c	NA	Mean concentrations, (UCL90) values for the mean concentration, standard deviations, and the number of samples collected for total metals were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP TP 003 Attachment 6, and additional EPA Hazardous Waste Numbers were assigned as required. Samples were randomly collected.

C 15 009

CCP Reconcilliation with Data Quality Objectives

WSF# ID-ANLE-S5000 Lot # 29

8	Y	The data demonstrates whether the waste stream exhibits a toxicity characteristic under Title 40 Code of Federal Regulations (CFR), Part 261, Identification and Listing of Hazardous Waste, Subpart C, Characteristics of Hazardous Waste.
9	Y	Does the waste stream contain listed waste found in 20.4.1.200 NMAC incorporating 40 CFR Part 261, Subpart D, Lists of Hazardous Wastes.
10	Y	Waste stream can be classified as hazardous or nonhazardous at the 90-percent confidence level.
11	Y	Appropriate packaging configuration and Drum Age Criteria (DAC) is applied and documented in the headspace gas sampling documentation, and the drum age met prior to sampling.
12	Y	TICs were appropriately identified and reported in accordance with the requirements of Section B3-1 of the QAPjP.
13	Y	The PRQLs for headspace gas VOCs were met for all analyses as evidenced by the analytical batch data reports.
14		The overall completeness, comparability, and representativeness QAOs were met for each of the analytical and testing procedures as specified in CCP-PO-001 Sections B3-2 through B3-9 prior to submittal of a waste stream profile form for a waste steam or waste stream lot.

	Completeness	Comparability	Representativeness
Radiography	Y	Y	Y
VE	Y	Y	Y
Headspace Gas Analysis	Y	Y	Y
Solids Sampling	NA	NA	NA
Solids VOCs	NA	NA	NA
Solids SVOCs	NA	NA	NA
Solids Metals	NA	NA	NA

Comments: N/A

Irene S. Quintana — Signature of Site Project Manager

Irene S. Quintana — Printed Name

2/8/2010 — Date

CIS 010

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary

BDR Number: IN-ARP-VE-002704				Examination Date: 01/31/12
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
1. Is the completed, signed and dated Independent Technical Reviewer Checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, C3-10b**	X			
2. Does the BDR contain all items addressed in the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-10b**	X			
3. Does the BDR include a listing of all container numbers in the batch? **Reference Source: CCP-PO-001, C3-10b**	X			
4. List all containers that have met QAOs. **Reference Source: CCP-PO-001, C3-10b**				Container Numbers: ARP30103 ARP30100
5. Is the current implementing procedure and revision number included in the BDR? **Reference Source: CCP-PO-001, C3-4, C3-10b, Table C3-11**	X			
6. Is the BDR date included? **Reference Source: CCP-PO-001, Table C3-11**	X			
7. Is there a reference to or copy of any associated NCRs (if any) in the BDR? **Reference Source: CCP-PO-001, Table C3-11**			X	None generated.
8. Are there 20 or fewer containers in the batch? **Reference Source: CCP-PO-001 C3-10**	X			
9. Are the data properly reported (i.e., data are reported in correct units and with correct significant figures). **Reference Source: CCP-PO-001 C3-10b**	X			
10. Is there evidence of verification that the physical form matches the Waste Matrix Code? **Reference Source: CCP-PO-001, C3-4**	X			
11. Is there evidence of verification that the physical form matches the waste stream description? **Reference Source: CCP-PO-001, C1-4**	X			
12. Are prohibited items absent? **Reference Source: CCP-PO-001, C3-4**	X			

CCP RECORDS ORIGINAL
DATE REC'D 2-7-12

COPY

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-ARP-VE-002704	Examination Date: 01/31/12			
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
13. Does observable liquid, if present, meet the criteria of the TSDF-WAC? **Reference Source: CCP-PO-001, C3-4b**	X			
14. Were discrepancies between the Visual Examination operator and the ITR with regards to identification of waste matrix code, liquids in excess of the TSDF-WAC, or compressed gases reconciled? NA if no discrepancies. **Reference Source: CCP-PO-001, C3-4b**			X	No discrepancies.
15. Are the training requirements met for the VE Expert and VE Operators who have signed the data forms? **Reference Source: CCP-PO-001, C1-4, C3-4**	X			
16. Is evidence of a satisfactory audio/video test included in the BDR? NA [not applicable] for VE Method for Newly Generated Waste. **Reference Source: CCP-PO-001, C1-4**			X	VE for newly generated waste.
17. If the VE was not recorded using audio/video media, does the data sheet contain the signature of two qualified operators who observed for themselves the waste being placed into the container? NA if audio/video used. **Reference Source: CCP-PO-001, C1-4**	X			
18. Are the weights/estimated weights for the 12 waste material parameters reported in kilograms (kg)? **Reference Source: CCP Technical Procedures**	X			
19. Are the descriptions for each waste material parameter included in the BDR? **Reference Source: CCP-PO-001, C1-4**	X			
20. Is the gross weight reported (in kg) for each container included in the BDR? **Reference Source: CCP Technical Procedures**	X			
21. Is the number of layers of confinement recorded? **Reference Source: CCP-PO-001, C-3d**	X			
22. Is sufficient information included in the BDR to determine the packaging configuration? **Reference Source: CCP-PO-001 C-3d**	X			

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-ARP-VE-002704				Examination Date: 01/31/12
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
23. Is the type and number of filters recorded? **Reference Source: CCP-PO-001, C-3d**	X			
24. Is the size of the rigid liner vent hole recorded to determine the appropriate DAC? NA if no liner lid. **Reference Source: CCP-PO-001, C-3d**			X	No liner lid.
25. For Los Alamos National Laboratory (LANL) Sealed Sources, does the characterized waste container meet the definition of sealed sources per Title 10 Code of Federal Regulations (CFR) 30.4 and Title 10 CFR 835.2 (effective January 1, 2004) evidence of which is assembled as part of AK documentation? **Reference Source: CCP Technical Procedures**			X	Not a LANL Sealed Source.
26. For LANL Sealed Sources, are sealed sources the only non-packaging items in the waste container? **Reference Source: CCP Technical Procedures**			X	Not a LANL Sealed Source.
27. For LANL Sealed Sources, are the sealed sources a U.S. Department of Transportation (DOT) Special Form Class 7 (Radioactive Material) per Title 49 CFR 34.27 (effective January 1, 2004) and the certification of which is assembled as part of the AK documentation? **Reference Source: CCP Technical Procedures**			X	Not a LANL Sealed Source.
28. For LANL Sealed Sources, is the integrity of each sealed source validated by documented contamination survey results to meet the requirements of Title 10 CFR 34.27 (effective January 1, 2004), and assembled as part of AK documentation? **Reference Source: CCP Technical Procedures**			X	Not a LANL Sealed Source.

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-ARP-VE-002704			**Examination Date: 01/31/12**	
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
29. For LANL Sealed Sources, is each sealed source a rigid sealed container less than or equal to 4 L in size or in a rigid sealed container less than or equal to 4 L? **Reference Source: CCP Technical Procedures**			X	Not a LANL Sealed Source.
30. For LANL Sealed Sources, AK documentation does not indicate the use of volatile organic compounds (VOCs) or VOC-bearing materials as constituents of sealed sources? **Reference Source: CCP Technical Procedures**			X	Not a LANL Sealed Source.
31. For LANL Sealed Sources, the outer casing of each sealed source is of a non VOC-bearing material which is verified using the VE technique at the time of packaging? **Reference Source: CCP Technical Procedures**			X	Not a LANL Sealed Source.
Comments: None.				
The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.				
Barbara Broomfield				02/06/12
SPM Printed Name		Signature		Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

Attachment 4 – CCP Waste VE Technique Batch Data Report Cover Sheet

Batch Data Report No.: IN-ARP-VE-002704

	Waste Container ID Number
1	ARP 30103
2	ARP 30100
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

1 of 4 29 1/31/12

ITR:

Printed Name	Signature	Date
JOHN HEGSTED	J. Hegsted	2/1/12

VEE:

Printed Name	Signature	Date
Spencer Pattee		2/1/12

CCP RECORDS ORIGINAL
DATE REC'D 2-1-12

001

Attachment 3 – CCP Waste VE Technique Batch Data Report Table of Contents

Batch Data Report No: TAN-ARP-VE-002704 **Batch Data Report Date:** 1/31/12

Table Of Contents		
Item	Description	Page No.
1	Attachment 4, CCP Waste VE Technique Batch Data Report Cover Sheet	1
2	Attachment 3, CCP Waste VE Technique Batch Data Report Table of Contents	2
3	CCP Waste Visual Examination Technique Data Form	3
4	Attachment 2, CCP Waste VE Technique Independent Technical Reviewer Checklist	17
5	Copy of NCRs (NA, If Not Applicable)	N/A

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	ARP30103
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	LG
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location:	IN-RWMC-ARP-3
3.	Batch Number:	IN-ARP-VE-002704
4.	Examination Date:	01/31/12
5.	Procedure CCP-TP-006, Rev.:	16
6.	a. Drum Packing Station (DPS) Number:	10
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	XC0645
	c. Scale Calibration Due Date:	05/18/12
	d. Test Weight ID:	XC0877
	e. Test Weight Calibration Due Date:	07/11/12
	f. Test Weight (kgs):	5.0
	g. Scale Readout of Test Weight (kgs):	5.0
	h. Difference Between Test Weight and Scale Readout (kgs):	0.0
	i. DPS Scale Check SAT (Y):	Y
	Container Scale Check	
	j. Scale Serial/ID Number:	726686
	k. Scale Calibration Due Date:	05/02/12
	l. Test Weight ID:	724677
	m. Test Weight Calibration Due Date:	05/02/12
	n. Test Weight (kg):	227.0
	o. Scale Readout of Test Weight (kgs):	226.5
	p. Difference Between Test Weight and Scale Readout (kgs):	0.5
	q. Container Scale Check SAT (Y):	Y
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	221223
8.	Container Filter Torque Data:	
	a. Filter Torque Wrench Serial/ID Number:	728707
	b. Filter Torque Wrench Calibration Due Date:	04/05/12
	c. Filter Model No.:	NUCFIL-019DS
	d. Filter Serial No.:	GL-324
	e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
	f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP30103							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				METAL (NSW)	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				ALUMINUM (NSW)	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP30103							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
29	l. Other Inorganic materials (OI)				0.0	N/A		0.0
30		j. Graphite			0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p. Inorganic sorbents			0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r. Celluiosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57				FILTER MEDIA (NSW)	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64				WOOD (NSW)	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP30103							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.4	N/A		0.4
67				RUBBER	0.4	0.9 - 2.0	1.1	0.4
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				2.3	N/A		2.6
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				BAG OUT STUB AND TRAY LINER	1.4	0.9		1.6
72				TRAY LINER (WAIP)	0.9	0.9		1.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				2.0	N/A		1.7
75		x1. Sludge			2.0	N/A		1.7
76				PALE YELLOWISH BROWN POWDERY SLUDGE WITH CALCIUM SILICATE	2.0	1.0 - 1.5	1.2	1.7
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				112.8	N/A		94.0
95				SOIL	112.8	1.0 - 1.4	1.2	94.0
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				117.5	N/A		98.7
98	13. (SOIL) weight (112.8) kg was obtained by subtracting the weighed waste weight of (4.7) kg and the container net weight of (34.0) kg from the gross weight (151.5) kg of the waste container. (151.5) - (4.7) - (34.0) = (112.8) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. N/A							
101								

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP30103	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP30103	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	28.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221223
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728540
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	03/01/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1340
22. Measured gross weight of loaded container, fully assembled (kgs):	151.5
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	334.0
23. Container closure date (mm/dd/yy):	01/31/12
24. Percent fill of container:	90.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	117.5
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP30103	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	3.0
31. Total volume of Solidified Organics (L):	1.7
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	94.0
a. Total volume (L):	98.7
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	
c. Soil (S4200):	X
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	1.7%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

J STANTON	Jodi M. Stanton	1/31/12
Enter Name	Signature	Date

Visual Examination Operator 2:

D JACKMAN		1-31-12
Enter Name	Signature	Date

Visual Examination Expert:

L GROVER		1-31-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	ARP30100
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	LG
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location:	IN-RWMC-ARP-3
3.	Batch Number:	IN-ARP-VE-002704
4.	Examination Date:	01/31/12
5.	Procedure CCP-TP-006, Rev.:	16
6.	a. Drum Packing Station (DPS) Number:	8
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	XC0661
	c. Scale Calibration Due Date:	05/18/12
	d. Test Weight ID:	XC0875
	e. Test Weight Calibration Due Date:	07/11/12
	f. Test Weight (kgs):	5.0
	g. Scale Readout of Test Weight (kgs):	5.0
	h. Difference Between Test Weight and Scale Readout (kgs):	0.0
	i. DPS Scale Check SAT (Y):	Y
	Container Scale Check	
	j. Scale Serial/ID Number:	726685
	k. Scale Calibration Due Date:	05/02/12
	l. Test Weight ID:	724677
	m. Test Weight Calibration Due Date:	05/02/12
	n. Test Weight (kg):	227.0
	o. Scale Readout of Test Weight (kgs):	226.5
	p. Difference Between Test Weight and Scale Readout (kgs):	0.5
	q. Container Scale Check SAT (Y):	Y
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	220653
8.	Container Filter Torque Data:	
	a. Filter Torque Wrench Serial/ID Number:	728707
	b. Filter Torque Wrench Calibration Due Date:	04/05/12
	c. Filter Model No.:	NUCFIL-019DS
	d. Filter Serial No.:	DL-379
	e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
	f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP30100							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				N/A	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP30100							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	i.	Other inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31			N/A		N/A	2.2		0.0
32			N/A		N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34			N/A		N/A	2.3		0.0
35			N/A		N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37			N/A		N/A	2.0		0.0
38			N/A		N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40			N/A		N/A	3.0		0.0
41			N/A		N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43			N/A		N/A	2.0 - 5.0	0.0	0.0
44			N/A		N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46			N/A		N/A	2.0		0.0
47			N/A		N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49			N/A		N/A	0.1 - 2.8	0.0	0.0
50			N/A		N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52			N/A		N/A	0.0		0.0
53			N/A		N/A	0.0		0.0
54			N/A		N/A	0.0		0.0
55	r.	Cellulosics (C)			24.0	N/A		26.7
56		s.	Paper		24.0	N/A		26.7
57			FILTER MEDIA		24.0	0.9		26.7
58			N/A		N/A	0.9		0.0
59			N/A		N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61			N/A		N/A	0.8		0.0
62			N/A		N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64			WOOD (NSW)		N/A	1.0		0.0
65			N/A		N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP30100							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4				9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.6	N/A		0.5
67				RUBBER	0.6	0.9 - 2.0	1.1	0.5
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				2.8	N/A		3.1
70				2 BAG OUT STUBS AND 1 TRAY LINER	1.9	0.9		2.1
71				1 TRAY LINER (WAIP)	0.9	0.9		1.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				0.0	N/A		0.0
75		x1. Sludge			0.0	N/A		0.0
76				N/A	N/A	1.0 - 1.5	0.0	0.0
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				79.6	N/A		66.3
95				SOIL	79.6	1.0 - 1.4	1.2	66.3
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				107.0	N/A		96.6
98	13. (SOIL) weight (79.6) kg was obtained by subtracting the weighed waste weight of (27.4) kg and the container net weight of (34.0) kg from the gross weight (141.0) kg of the waste container. (141.0) - (27.4) - (34.0) = (79.6) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b.			N/A				
101								

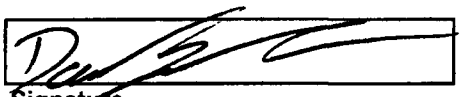
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP30100	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP30100	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	32.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	220653
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728540
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	03/01/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1522
22. Measured gross weight of loaded container, fully assembled (kgs):	141.0
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	310.8
23. Container closure date (mm/dd/yy):	01/31/12
24. Percent fill of container:	100.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	107.0
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

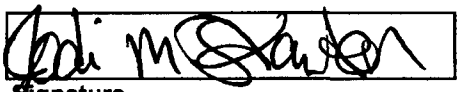
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP30100	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	30.3
31. Total volume of Solidified Organics (L):	0.0
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	66.3
a. Total volume (L):	96.6
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	
c. Soil (S4200):	X
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	0.0%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	N/A

Section 6: Approvals

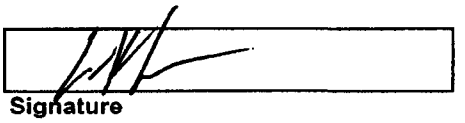
Visual Examination Operator 1:

D. JACKMAN		1-31-12
Enter Name	Signature	Date

Visual Examination Operator 2:

J. STANTON		1/31/12
Enter Name	Signature	Date

Visual Examination Expert:

L. GROVER		1-31-12
Enter Name	Signature	Date

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist

Batch Data Report No.: IN-ARP-VE-002704

Description			
1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods used?	☐ NO	☒ YES	☐ NA
a. Was the description of the waste items adequate?	☐ NO	☒ YES	☐ NA
2. Was the correct revision of operating procedure used? (Attachment 1, Section 1, Line 5)	☐ NO	☒ YES	☐ NA
3. Were the following calculation spot checks performed?			
a. Attachment 1, Section 2: Verify the total waste volume in Column 12, Row aa does not exceed 208 L for a 55-gallon drum or 1456 L for an SWB and verify the estimated weights in Row aa matches the measured net weight of waste in Attachment 1, Section 4, Row 26.	☐ NO	☒ YES	☐ NA
b. Attachment 1, Section 5: Verify the total waste volume in Row 33 a., matches the total waste volume in Section 2, Column 12, Row aa.	☐ NO	☒ YES	☐ NA
c. Attachment 1, Section 1: Check hand calculations in Lines 6h and 6p, and any additional hand calculations recorded in the comments field or in Section 2, Line 13.	☐ NO	☒ YES	☐ NA
4. Is only one waste stream selected in Line 34 of Attachment 1, Section 5, and is it consistent with the values shown in Attachment 1, Section 2, Column 12?	☐ NO	☒ YES	☐ NA
5. Is the data entered in the correct units and correct number of significant figures?	☐ NO	☒ YES	☐ NA
6. Were the data reviewed for transcription errors?	☐ NO	☒ YES	☐ NA
7. Does the BDR include VE for up to 20 containers?	☐ NO	☒ YES	☐ NA
8. Are BDR contents complete and do they match, Attachment 3, CCP Waste VE Batch Data Report Table of Contents?	☐ NO	☒ YES	☐ NA
9. Was completeness verified for data entry on the CCP VE Technique Data Form for the following?			
a. Section 1	☐ NO	☒ YES	☐ NA
b. Section 2	☐ NO	☒ YES	☐ NA
c. Section 3	☐ NO	☒ YES	☐ NA
d. Section 4	☐ NO	☒ YES	☐ NA
e. Section 5	☐ NO	☒ YES	☐ NA

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: IN-ARP-VE-002704

Description			
10. Is all the data signed and dated in Attachment 1, Section 6, using reproducible ink, and by the individual(s) generating it?	☐ NO	☒ YES	☐ NA
11. Is all data entered clearly, legibly, and accurately?	☐ NO	☒ YES	☐ NA
12. Were discrepancies between the operators reconciled?	☐ NO	☐ YES	☒ NA
13. Are all changes to original data lined out, initialed and dated by the individual making the changes?	☐ NO	☐ YES	☒ NA
14. Were data changes made by the individual who originally collected the data or an equally qualified individual?	☐ NO	☐ YES	☒ NA
15. Was the DPS scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
16. Was the daily DPS scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
17. Was the container scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
18. Was the daily container scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
19. Was the torque wrench(es) in calibration prior to VE Technique and documented correctly?	☐ NO	☒ YES	☐ NA
20. Were NCR(s) initiated as indicated in Attachment 1, Section 1, dispositioned, and approved appropriately?	☐ NO	☐ YES	☒ NA
21. Was the correct waste stream and waste matrix code assigned?	☐ NO	☒ YES	☐ NA
22. Is there a valid VE data form for each drum in the batch?	☐ NO	☒ YES	☐ NA
23. Were the operators trained and qualified in accordance with the applicable requirements?	☐ NO	☒ YES	☐ NA

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: IN-ARP-VE-002704

Description			
24. Was precision maintained by reconciling any discrepancies between the operator(s) and the ITR with regard to identification of waste matrix code, liquids in excess of WIPP Hazardous Waste Facility Permit and WIPP Waste Acceptance Criteria limits and compressed gases?	☐ NO	☐ YES	☒ NA

Description

Comments:

ITEMS 12 & 24 THERE WERE NO DISCREPANCIES JBH 2/1/12

ITEMS 13 & 14 THERE WERE NO CHANGES JBH 2/1/12

ITEM 20 THERE WERE NO NCR's. JBH 2/1/12

I have reviewed 100 percent of the container-specific and batch data in this BDR and find it acceptable.

ITR:

JOHN HEGSTED	J.B. Hegsted	2/1/12
Printed Name	Signature	Date

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary

BDR Number: IN-ARP-VE-002793 **Examination Date:** 08/02/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
1. Is the completed, signed and dated Independent Technical Reviewer Checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, C3-10b**	X			
2. Does the BDR contain all items addressed in the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-10b**	X			
3. Does the BDR include a listing of all container numbers in the batch? **Reference Source: CCP-PO-001, C3-10b**	X			
4. List all containers that have met QAOs. **Reference Source: CCP-PO-001, C3-10b**				Container Numbers: ARP70797 ARP70900, ARP70903, ARP70911 ARP70915, ARP70941, ARP70942 ARP71009, ARP71011, ARP71013 ARP71016, ARP71018, ARP71021 ARP71029, ARP71044, ARP71047 ARP71051, ARP71054, ARP71055
5. Is the current implementing procedure and revision number included in the BDR? **Reference Source: CCP-PO-001, C3-4, C3-10b, Table C3-11**	X			
6. Is the BDR date included? **Reference Source: CCP-PO-001, Table C3-11**	X			
7. Is there a reference to or copy of any associated NCRs (if any) in the BDR? **Reference Source: CCP-PO-001, Table C3-11**			X	No NCRs
8. Are there 20 or fewer containers in the batch? **Reference Source: CCP-PO-001 C3-10**	X			
9. Are the data properly reported (i.e., data are reported in correct units and with correct significant figures). **Reference Source: CCP-PO-001 C3-10b**	X			
10. Is there evidence of verification that the physical form matches the Waste Matrix Code? **Reference Source: CCP-PO-001, C3-4**	X			
11. Is there evidence of verification that the physical form matches the waste stream description? **Reference Source: CCP-PO-001, C1-4**	X			
12. Are prohibited items absent? **Reference Source: CCP-PO-001, C3-4**	X			

CCP RECORDS ORIGINAL
DATE REC'D 8-10-12

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-ARP-VE-002793 **Examination Date:** 08/02/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
13. Does observable liquid, if present, meet the criteria of the TSDF-WAC? **Reference Source: CCP-PO-001, C3-4b**	X			
14. Were discrepancies between the Visual Examination operator and the ITR with regards to identification of waste matrix code, liquids in excess of the TSDF-WAC, or compressed gases reconciled? NA if no discrepancies. **Reference Source: CCP-PO-001, C3-4b**			X	No discrepancies
15. Are the training requirements met for the VE Expert and VE Operators who have signed the data forms? **Reference Source: CCP-PO-001, C1-4, C3-4**	X			
16. Is evidence of a satisfactory audio/video test included in the BDR? NA [not applicable] for VE Method for Newly Generated Waste. **Reference Source: CCP-PO-001, C1-4**			X	Newly Generated Waste
17. If the VE was not recorded using audio/video media, does the data sheet contain the signature of two qualified operators who observed for themselves the waste being placed into the container? NA if audio/video used. **Reference Source: CCP-PO-001, C1-4**	X			
18. Are the weights/estimated weights for the 12 waste material parameters reported in kilograms (kg)? **Reference Source: CCP Technical Procedures**	X			
19. Are the descriptions for each waste material parameter included in the BDR? **Reference Source: CCP-PO-001, C1-4**	X			
20. Is the gross weight reported (in kg) for each container included in the BDR? **Reference Source: CCP Technical Procedures**	X			
21. Is the number of layers of confinement recorded? **Reference Source: CCP-PO-001, C-3d**	X			
22. Is sufficient information included in the BDR to determine the packaging configuration? **Reference Source: CCP-PO-001 C-3d**	X			

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-ARP-VE-002793 **Examination Date:** 08/02/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
23. Is the type and number of filters recorded? **Reference Source: CCP-PO-001, C-3d**	X			
24. Is the size of the rigid liner vent hole recorded to determine the appropriate DAC? NA if no liner lid. **Reference Source: CCP-PO-001, C-3d**			X	No liner lid
25. For Los Alamos National Laboratory (LANL) Sealed Sources, does the characterized waste container meet the definition of sealed sources per Title 10 Code of Federal Regulations (CFR) 30.4 and Title 10 CFR 835.2 (effective January 1, 2004) evidence of which is assembled as part of AK documentation? **Reference Source: CCP Technical Procedures**			X	Not from LANL
26. For LANL Sealed Sources, are sealed sources the only non-packaging items in the waste container? **Reference Source: CCP Technical Procedures**			X	Not from LANL
27. For LANL Sealed Sources, are the sealed sources a U.S. Department of Transportation (DOT) Special Form Class 7 (Radioactive Material) per Title 49 CFR 34.27 (effective January 1, 2004) and the certification of which is assembled as part of the AK documentation? **Reference Source: CCP Technical Procedures**			X	Not from LANL
28. For LANL Sealed Sources, is the integrity of each sealed source validated by documented contamination survey results to meet the requirements of Title 10 CFR 34.27 (effective January 1, 2004), and assembled as part of AK documentation? **Reference Source: CCP Technical Procedures**			X	Not from LANL

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-ARP-VE-002793 **Examination Date:** 08/02/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
29. For LANL Sealed Sources, is each sealed source a rigid sealed container less than or equal to 4 L in size or in a rigid sealed container less than or equal to 4 L? **Reference Source: CCP Technical Procedures**			X	Not from LANL
30. For LANL Sealed Sources, AK documentation does not indicate the use of volatile organic compounds (VOCs) or VOC-bearing materials as constituents of sealed sources? **Reference Source: CCP Technical Procedures**			X	Not from LANL
31. For LANL Sealed Sources, the outer casing of each sealed source is of a non VOC-bearing material which is verified using the VE technique at the time of packaging? **Reference Source: CCP Technical Procedures**			X	Not from LANL

Comments: None

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

Steve Castro	Ste Cast	8-10-12
SPM Printed Name	Signature	Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

Attachment 4 – CCP Waste VE Technique Batch Data Report Cover Sheet

Batch Data Report No.: IN-ARP-VE-002793

	Waste Container ID Number
1	ARP71011
2	ARP71054
3	ARP70941
4	ARP71018
5	ARP 71051
6	ARP 70900
7	ARP 71009
8	ARP 71029
9	ARP71016
10	ARP 71055
11	ARP 71044
12	ARP71021
13	ARP70942
14	ARP71013
15	ARP70903
16	ARP 70797
17	ARP 71047
18	ARP70911
19	ARP70915
20	N/A GS 8/2/12

ITR:

Brad Stack — Printed Name
Brad Stack — Signature
8-6-12 — Date

VEE:

Spencer Pattee — Printed Name
Spencer Pattee — Signature
8-6-12 — Date

CCP RECORDS ORIGINAL
DATE REC'D 8-6-12

001

Attachment 3 – CCP Waste VE Technique Batch Data Report Table of Contents

Batch Data Report No.: IN-ARP-VE-002793 **Batch Data Report Date:** 8/2/12

Table Of Contents

Item	Description	Page No.
1	Attachment 4, CCP Waste VE Technique Batch Data Report Cover Sheet	1
2	Attachment 3, CCP Waste VE Technique Batch Data Report Table of Contents	2
3	CCP Waste Visual Examination Technique Data Form	3
4	Attachment 2, CCP Waste VE Technique Independent Technical Reviewer Checklist	136
5	Copy of NCRs (NA, If Not Applicable)	N/A

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	ARP71011
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SDP
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location:	IN-RWMC-ARP-6
3.	Batch Number:	IN-ARP-VE-002793
4.	Examination Date:	08/02/12
5.	Procedure CCP-TP-006, Rev.:	16
6.	a. Drum Packing Station (DPS) Number:	701
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	XC0917
	c. Scale Calibration Due Date:	06/07/13
	d. Test Weight ID:	XC0834
	e. Test Weight Calibration Due Date:	12/16/12
	f. Test Weight (kgs):	5.0
	g. Scale Readout of Test Weight (kgs):	5.0
	h. Difference Between Test Weight and Scale Readout (kgs):	0.0
	i. DPS Scale Check SAT (Y):	Y
	Container Scale Check	
	j. Scale Serial/ID Number:	729255
	k. Scale Calibration Due Date:	11/07/12
	l. Test Weight ID:	722311
	m. Test Weight Calibration Due Date:	11/07/12
	n. Test Weight (kg):	224.0
	o. Scale Readout of Test Weight (kgs):	224.0
	p. Difference Between Test Weight and Scale Readout (kgs):	0.0
	q. Container Scale Check SAT (Y):	Y
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	221224
8.	Container Filter Torque Data:	
	a. Filter Torque Wrench Serial/ID Number:	726775
	b. Filter Torque Wrench Calibration Due Date:	09/19/12
	c. Filter Model No.:	NUCFIL-019DS
	d. Filter Serial No.:	HL-95
	e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
	f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71011							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.3	N/A		0.0
7				METAL	0.3	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71011							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4 5	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
29	i. Other inorganic materials (OI)				9.1	N/A		15.0
30		j. Graphite			0.1	N/A		0.0
31				SMALL GRAPHITE PIECE	0.1	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p. Inorganic sorbents			9.0	N/A		15.0
49				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r. Cellulosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57				PAPER (NSW)	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71011							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
66	v. Rubber (R)				0.0	N/A		0.0
67				N/A	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC (NSW)	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				94.0	N/A		78.3
75		x1. Sludge			94.0	N/A		78.3
76				PALE YELLOWISH BROWN POWDERY SLUDGE WITH CALCIUM SILICATE	94.0	1.0 - 1.5	1.2	78.3
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				14.2	N/A		11.8
83		y1. Sludge			14.0	N/A		11.7
84				LIGHT BROWN CRUMBLY SLUDGE WITH PORTLAND CEMENT	14.0	1.0 - 1.5	1.2	11.7
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.2	N/A		0.1
92				EVAPORATOR SALT	0.2	2.2		0.1
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				6.0	N/A		5.0
95				SOIL	6.0	1.0 - 1.4	1.2	5.0
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				123.6	N/A		110.1
98	13. (ORGANIC SLUDGE) weight (94.0) kg was obtained by subtracting the weighed waste weight of (29.6) kg and the container net weight of (34.0) kg from the gross weight (157.6) kg of the waste container. (157.6) - (29.6) - (34.0) = (94.0) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. REFERENCE LETTER: CP:08:00210 / UFC:2300.00							
101								

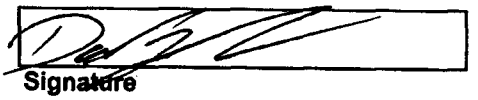
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71011	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71011	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	23.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	720178
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	09/21/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	0915
22. Measured gross weight of loaded container, fully assembled (kgs):	157.6
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	347.4
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	70.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	123.6
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

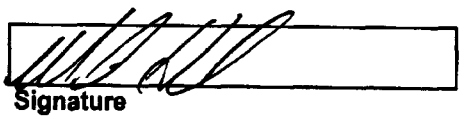
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71011	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.0
31. Total volume of Solidified Organics (L):	78.3
32. Total volume of Solidified Inorganics (L):	26.8
33. Total volume of Soils/Gravel (L):	5.0
a. Total volume (L):	110.1
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	76.1%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

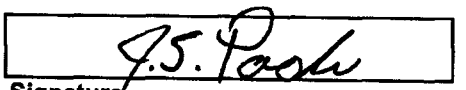
Visual Examination Operator 1:

D. JACKMAN		8-2-12
Enter Name	Signature	Date

Visual Examination Operator 2:

M. HADERLIE		8-2-12
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE		8-2-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	ARP71054
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location:	IN-RWMC-ARP-6
3. Batch Number:	IN-ARP-VE-002793
4. Examination Date:	08/02/12
5. Procedure CCP-TP-006, Rev.:	16
6. a. Drum Packing Station (DPS) Number:	703
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	XC0918
c. Scale Calibration Due Date:	06/07/13
d. Test Weight ID:	XC0842
e. Test Weight Calibration Due Date:	12/20/12
f. Test Weight (kgs):	5.0
g. Scale Readout of Test Weight (kgs):	5.0
h. Difference Between Test Weight and Scale Readout (kgs):	0.0
i. DPS Scale Check SAT (Y):	Y
Container Scale Check	
j. Scale Serial/ID Number:	729257
k. Scale Calibration Due Date:	11/07/12
l. Test Weight ID:	722311
m. Test Weight Calibration Due Date:	11/07/12
n. Test Weight (kg):	224.0
o. Scale Readout of Test Weight (kgs):	224.0
p. Difference Between Test Weight and Scale Readout (kgs):	0.0
q. Container Scale Check SAT (Y):	Y
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	221224
8. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726773
b. Filter Torque Wrench Calibration Due Date:	09/19/12
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	HL-69
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71054							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.1	N/A		0.0
7				METAL	0.1	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71054							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	l. Other inorganic materials (OI)				9.0	N/A		15.0
30		j. Graphite			0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37				GLASS (NSW)	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p. Inorganic sorbents			9.0	N/A		15.0
49				OIL-DRI TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r. Cellulosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57				PAPER (NSW)	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71054							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
66	v. Rubber (R)				0.0	N/A		0.0
67				RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC (NSW)	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				0.0	N/A		0.0
75		x1. Sludge			0.0	N/A		0.0
76				N/A	N/A	1.0 - 1.5	0.0	0.0
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				78.7	N/A		65.6
83		y1. Sludge			78.7	N/A		65.6
84				MODERATE RED CRUMBLY SLUDGE WITH PORTLAND CEMENT	78.7	1.0 - 1.5	1.2	65.6
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				39.0	N/A		32.5
95				SOIL	39.0	1.0 - 1.4	1.2	32.5
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				126.8	N/A		113.1
98	13. (INORGANIC SLUDGE) weight (78.7) kg was obtained by subtracting the weighed waste weight of (48.1) kg and the container net weight of (34.0) kg from the gross weight (160.8) kg of the waste container. (160.8) - (48.1) - (34.0) = (78.7) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. N/A							
101								

013

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71054	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71054	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	21.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728635
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	10/23/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	0919
22. Measured gross weight of loaded container, fully assembled (kgs):	160.8
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	354.5
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	65.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	126.8
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71054	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.0
31. Total volume of Solidified Organics (L):	0.0
32. Total volume of Solidified Inorganics (L):	80.6
33. Total volume of Soils/Gravel (L):	32.5
a. Total volume (L):	113.1
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	0.0%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	N/A

Section 6: Approvals

Visual Examination Operator 1:

L. VERLANIC	L. Verlanic	8-2-12
Enter Name	Signature	Date

Visual Examination Operator 2:

J. STANTON	Jodi M. Stanton	8/2/12
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE	J.S. Poole	8-2-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	ARP70941
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	JSP
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location:	IN-RWMC-ARP-6
3.	Batch Number:	IN-ARP-VE-002793
4.	Examination Date:	08/02/12
5.	Procedure CCP-TP-006, Rev.:	16
6.	a. Drum Packing Station (DPS) Number:	701
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	221224
8.	Container Filter Torque Data:	
	a. Filter Torque Wrench Serial/ID Number:	726775
	b. Filter Torque Wrench Calibration Due Date:	09/19/12
	c. Filter Model No.:	NUCFIL-019DS
	d. Filter Serial No.:	HL-255
	e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
	f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70941							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.2	N/A		0.0
7				METAL	0.2	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70941							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4				9. Waste Material Parameter and Item Description	10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
29	l. Other Inorganic materials (OI)							
30		j. Graphite			9.0	N/A		15.0
31				N/A	0.0	N/A		0.0
32				N/A	N/A	2.2		0.0
33		k. Concrete			N/A	2.2		0.0
34				N/A	0.0	N/A		0.0
35				N/A	N/A	2.3		0.0
36		l. Glass			N/A	2.3		0.0
37				N/A	0.0	N/A		0.0
38				N/A	N/A	2.0		0.0
39		m. Firebrick			N/A	2.0		0.0
40				N/A	0.0	N/A		0.0
41				N/A	N/A	3.0		0.0
42		n. Ceramics			N/A	3.0		0.0
43				N/A	0.0	N/A		0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			N/A	2.0 - 5.0	0.0	0.0
46				N/A	0.0	N/A		0.0
47				N/A	N/A	2.0		0.0
48		p. Inorganic sorbents			N/A	2.0		0.0
49				OIL DRI ON TOP (WAIP)	9.0	N/A		15.0
50				N/A	9.0	0.1 - 2.8	0.6	15.0
51		q. Other (See Note a)			N/A	0.1 - 2.8	0.0	0.0
52				N/A	0.0	N/A		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r. Cellulosics (C)				N/A	0.0		0.0
56		s. Paper			0.0	N/A		0.0
57				PAPER (NSW)	0.0	N/A		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t. Cardboard			N/A	0.9		0.0
61				N/A	0.0	N/A		0.0
62				N/A	N/A	0.8		0.0
63		u. Wood			N/A	0.8		0.0
64				N/A	0.0	N/A		0.0
65				N/A	N/A	1.0		0.0
					N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70941							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
66	v. Rubber (R)				0.0	N/A		0.0
67				RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC (NSW)	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				5.0	N/A		4.2
75		x1. Sludge			5.0	N/A		4.2
76				PALE YELLOWISH BROWN POWDERY SLUDGE WITH CALCIUM SILICATE	5.0	1.0 - 1.5	1.2	4.2
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				69.6	N/A		58.0
83		y1. Sludge			69.6	N/A		58.0
84				MODERATE REDDISH BROWN CRUMBLY SLUDGE WITH PORTLAND CEMENT	69.6	1.0 - 1.5	1.2	58.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				30.0	N/A		25.0
95				SOIL	30.0	1.0 - 1.4	1.2	25.0
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				113.8	N/A		102.2

98 13. (INORGANIC SLUDGE) weight (69.6) kg was obtained by subtracting the weighed waste weight of (44.2) kg and the container net weight of (34.0) kg from the gross weight (147.8) kg of the waste container. (147.8) - (44.2) - (34.0) = (69.6) kg

99 a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.

100 b. N/A

101

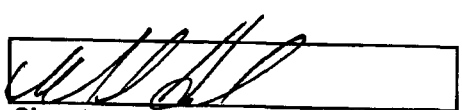
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70941	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70941	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	23.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	720178
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	09/21/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	0945
22. Measured gross weight of loaded container, fully assembled (kgs):	147.8
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	325.8
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	70.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	113.8
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

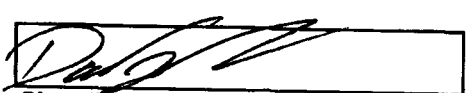
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70941	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.0
31. Total volume of Solidified Organics (L):	4.2
32. Total volume of Solidified Inorganics (L):	73.0
33. Total volume of Soils/Gravel (L):	25.0
a. Total volume (L):	102.2
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	4.4%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

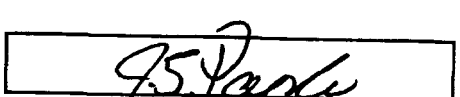
Visual Examination Operator 1:

M. HADERLIE		8-2-12
Enter Name	Signature	Date

Visual Examination Operator 2:

D. JACKMAN		8-2-12
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE		8-2-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	ARP71018
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location:	IN-RWMC-ARP-6
3. Batch Number:	IN-ARP-VE-002793
4. Examination Date:	08/02/12
5. Procedure CCP-TP-006, Rev.:	16
6. a. Drum Packing Station (DPS) Number:	703
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	221224
8. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726773
b. Filter Torque Wrench Calibration Due Date:	09/19/12
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	HL-79
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71018							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				METAL (NSW)	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71018							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4				9. Waste Material Parameter and Item Description	10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5					9.0	N/A		15.0
29	i.	Other inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		N/A	2.2		0.0
31				N/A	N/A	2.2		0.0
32				N/A	0.0	N/A		0.0
33		k.	Concrete		N/A	2.3		0.0
34				N/A	N/A	2.3		0.0
35				N/A	0.0	N/A		0.0
36		l.	Glass		N/A	2.0		0.0
37				N/A	N/A	2.0		0.0
38				N/A	0.0	N/A		0.0
39		m.	Firebrick		N/A	3.0		0.0
40				N/A	N/A	3.0		0.0
41				N/A	0.0	N/A		0.0
42		n.	Ceramics		N/A	2.0 - 5.0	0.0	0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	0.0	N/A		0.0
45		o.	Sand		N/A	2.0		0.0
46				N/A	N/A	2.0		0.0
47				N/A	9.0	N/A		15.0
48		p.	Inorganic sorbents		9.0	0.1 - 2.8	0.6	15.0
49				OIL DRI ON TOP (WAIP)	N/A	0.1 - 2.8	0.0	0.0
50				N/A	0.0	N/A		0.0
51		q.	Other (See Note a)		N/A	0.0		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	0.0	N/A		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		N/A	0.9		0.0
57				PAPER (NSW)	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	0.0	N/A		0.0
60		t.	Cardboard		N/A	0.8		0.0
61				N/A	N/A	0.8		0.0
62				N/A	0.0	N/A		0.0
63		u.	Wood		N/A	1.0		0.0
64				N/A	N/A	1.0		0.0
65				N/A				

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71018							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.0	N/A		0.0
67				N/A	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				PLASTIC (NSW)	N/A	0.9		0.0
71				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				9.0	N/A		7.5
75		x1. Sludge			9.0	N/A		7.5
76				PALE YELLOWISH BROWN POWDERY SLUDGE WITH CALCIUM SILICATE	9.0	1.0 - 1.5	1.2	7.5
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				114.0	N/A		94.8
83		y1. Sludge			113.5	N/A		94.6
84				MODERATE REDDISH BROWN CLAY LIKE SLUDGE WITH PORTLAND CEMENT	113.5	1.0 - 1.5	1.2	94.6
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.5	N/A		0.2
92				EVAPORATOR SALT	0.5	2.2		0.2
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				38.0	N/A		31.7
95				SOIL	38.0	1.0 - 1.4	1.2	31.7
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				170.0	N/A		149.0
98	13. (INORGANIC SLUDGE) weight (113.5) kg was obtained by subtracting the weighed waste weight of (56.5) kg and the container net weight of (34.0) kg from the gross weight (204.0) kg of the waste container. (204.0) - (56.5) - (34.0) = (113.5) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. REFERENCE LETTER: CP:08:00210/UFC:2300.00							
101								

027

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71018	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71018	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	24.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728635
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	10/23/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	0947
22. Measured gross weight of loaded container, fully assembled (kgs):	204.0
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	449.7
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	75.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	170.0
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71018	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.0
31. Total volume of Solidified Organics (L):	7.5
32. Total volume of Solidified Inorganics (L):	109.8
33. Total volume of Soils/Gravel (L):	31.7
a. Total volume (L):	149.0
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	5.3%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:		
J. STANTON	Jodi M. Stanton	8/2/12
Enter Name	Signature	Date
Visual Examination Operator 2:		
L. VERLANIC	L. Verlanic	8-2-12
Enter Name	Signature	Date
Visual Examination Expert:		
J. POOLE	J.S. Poole	8-2-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	ARP71051
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	JSP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location:	IN-RWMC-ARP-6
3. Batch Number:	IN-ARP-VE-002793
4. Examination Date:	08/02/12
5. Procedure CCP-TP-006, Rev.:	16
6. a. Drum Packing Station (DPS) Number:	703
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	221223
8. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726773
b. Filter Torque Wrench Calibration Due Date:	09/19/12
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	HL-51
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71051							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)	12.Volume (L)	
5					0.2	N/A	0.0	
6	a. Iron-based metals/alloys (IM)				0.2	8.0	0.0	
7				METAL	N/A	8.0	0.0	
8				N/A	0.0	N/A	0.0	
9	b. Aluminum-based metals/alloys (AM)				N/A	3.0	0.0	
10				N/A	N/A	3.0	0.0	
11				N/A	0.0	N/A	0.0	
12	c. Other metals (OM)				0.0	N/A	0.0	
13		d. Lead			N/A	11.0	0.0	
14				N/A	N/A	11.0	0.0	
15				N/A	0.0	N/A	0.0	
16		e. Beryllium			N/A	1.8	0.0	
17				N/A	N/A	1.8	0.0	
18				N/A	0.0	N/A	0.0	
19		f. Depleted uranium			N/A	19.1	0.0	
20				N/A	N/A	19.1	0.0	
21				N/A	0.0	N/A	0.0	
22		g. Copper			N/A	9.0	0.0	
23				N/A	N/A	9.0	0.0	
24				N/A	0.0	N/A	0.0	
25		h. Other (See Note a)			N/A	0.0	0.0	
26				N/A	N/A	0.0	0.0	
27				N/A	N/A	0.0	0.0	
28				N/A				

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71051							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5					9.1	N/A		15.1
29	l. Other Inorganic materials (OI)				0.0	N/A		0.0
30		j. Graphite			N/A	2.2		0.0
31				N/A	N/A	2.2		0.0
32				N/A	0.0	N/A		0.0
33		k. Concrete			N/A	2.3		0.0
34				N/A	N/A	2.3		0.0
35				N/A	0.1	N/A		0.1
36		l. Glass			0.1	2.0		0.1
37				GLASS	N/A	2.0		0.0
38				N/A	0.0	N/A		0.0
39		m. Firebrick			N/A	3.0		0.0
40				N/A	N/A	3.0		0.0
41				N/A	0.0	N/A		0.0
42		n. Ceramics			N/A	2.0 - 5.0	0.0	0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	0.0	N/A		0.0
45		o. Sand			N/A	2.0		0.0
46				N/A	N/A	2.0		0.0
47				N/A	9.0	N/A		15.0
48		p. Inorganic sorbents			9.0	0.1 - 2.8	0.6	15.0
49				OIL-DRI TOP (WAIP)	N/A	0.1 - 2.8	0.0	0.0
50				N/A	0.0	N/A		0.0
51		q. Other (See Note a)			N/A	0.0		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	0.0	N/A		0.0
55	r. Celluiosics (C)				0.0	N/A		0.0
56		s. Paper			N/A	0.9		0.0
57				PAPER (NSW)	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	0.0	N/A		0.0
60		t. Cardboard			N/A	0.8		0.0
61				N/A	N/A	0.8		0.0
62				N/A	0.0	N/A		0.0
63		u. Wood			N/A	1.0		0.0
64				N/A	N/A	1.0		0.0
65				N/A				

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71051							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.1	N/A		0.1
67				RUBBER	0.1	0.9 - 2.0	1.1	0.1
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC (NSW)	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				18.0	N/A		15.0
75		x1. Sludge			18.0	N/A		15.0
76				MODERATE YELLOWISH BROWN POWDERY SLUDGE WITH CALCIUM SILICATE	18.0	1.0 - 1.5	1.2	15.0
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				101.0	N/A		84.0
83		y1. Sludge			100.5	N/A		83.8
84				MODERATE REDDISH ORANGE CRUMBLY SLUDGE WITH PORTLAND CEMENT	100.5	1.0 - 1.5	1.2	83.8
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.5	N/A		0.2
92				EVAPORATOR SALT	0.5	2.2		0.2
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				13.0	N/A		10.8
95				SOIL	13.0	1.0 - 1.4	1.2	10.8
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				141.4	N/A		125.0
98	13. (INORGANIC SLUDGE) weight (100.5) kg was obtained by subtracting the weighed waste weight of (40.9) kg and the container net weight of (34.0) kg from the gross weight (175.4) kg of the waste container. (175.4) - (40.9) - (34.0) = (100.5) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. REFERENCE LETTER: CP:08:00210 / UFC:2300.00							
101								

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71051	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71051	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	26.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221223
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728635
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	10/23/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1015
22. Measured gross weight of loaded container, fully assembled (kgs):	175.4
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	386.7
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	80.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	141.4
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71051	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.2
31. Total volume of Solidified Organics (L):	15.0
32. Total volume of Solidified Inorganics (L):	99.0
33. Total volume of Soils/Gravel (L):	10.8
a. Total volume (L):	125.0
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	12.7%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

Enter Name	Signature	Date
L. VERLANIC	L. Verlanic	8-2-12

Visual Examination Operator 2:

Enter Name	Signature	Date
J. STANTON	Jodi M. Stanton	8/2/12

Visual Examination Expert:

Enter Name	Signature	Date
J. POOLE	J.S. Poole	8-2-12

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	ARP70900
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location:	IN-RWMC-ARP-6
3. Batch Number:	IN-ARP-VE-002793
4. Examination Date:	08/02/12
5. Procedure CCP-TP-006, Rev.:	16
6. a. Drum Packing Station (DPS) Number:	701
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	221225
8. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726775
b. Filter Torque Wrench Calibration Due Date:	09/19/12
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	HL-146
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70900							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4				9. Waste Material Parameter and Item Description	10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5					0.2	N/A		0.0
6	a.	Iron-based metals/alloys (IM)			0.2	8.0		0.0
7				METAL	N/A	8.0		0.0
8				N/A	0.0	N/A		0.0
9	b.	Aluminum-based metals/alloys (AM)			N/A	3.0		0.0
10				N/A	N/A	3.0		0.0
11				N/A	0.0	N/A		0.0
12	c.	Other metals (OM)			0.0	N/A		0.0
13		d.	Lead		N/A	11.0		0.0
14				N/A	N/A	11.0		0.0
15				N/A	0.0	N/A		0.0
16		e.	Beryllium		N/A	1.8		0.0
17				N/A	N/A	1.8		0.0
18				N/A	0.0	N/A		0.0
19		f.	Depleted uranium		N/A	19.1		0.0
20				N/A	N/A	19.1		0.0
21				N/A	0.0	N/A		0.0
22		g.	Copper		N/A	9.0		0.0
23				N/A	N/A	9.0		0.0
24				N/A	0.0	N/A		0.0
25		h.	Other (See Note a)		N/A	0.0		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A				

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70900							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	l.	Other Inorganic materials (OI)			9.1	N/A		15.1
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.1	N/A		0.1
37				GLASS	0.1	2.0		0.1
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		9.0	N/A		15.0
49				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70900							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
66	v. Rubber (R)				0.0	N/A		0.0
67				RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC (NSW)	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				98.9	N/A		82.4
75		x1. Sludge			98.9	N/A		82.4
76				PALE YELLOWISH BROWN POWDERY SLUDGE WITH CALCIUM SILICATE	98.9	1.0 - 1.5	1.2	82.4
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				18.2	N/A		15.1
83		y1. Sludge			18.0	N/A		15.0
84				DUSKY RED CRUMBLY SLUDGE WITH WHITE CHUNKS	18.0	1.0 - 1.5	1.2	15.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.2	N/A		0.1
92				EVAPORATOR SALT	0.2	2.2		0.1
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				6.0	N/A		5.0
95				SOIL	6.0	1.0 - 1.4	1.2	5.0
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				132.4	N/A		117.6
98	13. (ORGANIC SLUDGE) weight (98.9) kg was obtained by subtracting the weighed waste weight of (33.5) kg and the container net weight of (34.0) kg from the gross weight (166.4) kg of the waste container. (166.4) - (33.5) - (34.0) = (98.9) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. REFERENCE LETTER: CP:08:00210 / UFC:2300.00							
101								

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70900	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70900	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	27.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221225
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	720178
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	09/21/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1016
22. Measured gross weight of loaded container, fully assembled (kgs):	166.4
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	366.8
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	85.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	132.4
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

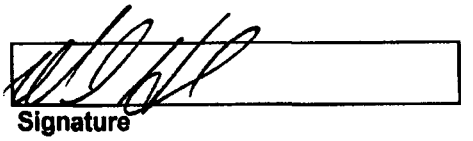
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70900	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.1
31. Total volume of Solidified Organics (L):	82.4
32. Total volume of Solidified Inorganics (L):	30.1
33. Total volume of Soils/Gravel (L):	5.0
a. Total volume (L):	117.6
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	74.7%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

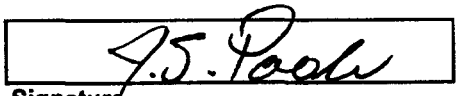
Visual Examination Operator 1:

D. JACKMAN		8-2-12
Enter Name	Signature	Date

Visual Examination Operator 2:

M. HADERLIE		8-2-12
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE		8-2-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	ARP71009
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	~~GS~~
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location:	IN-RWMC-ARP-6
3. Batch Number:	IN-ARP-VE-002793
4. Examination Date:	08/02/12
5. Procedure CCP-TP-006, Rev.:	16
6. a. Drum Packing Station (DPS) Number:	703
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	221224
8. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726773
b. Filter Torque Wrench Calibration Due Date:	09/19/12
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	HL-90
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71009							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				N/A	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71009							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	i. Other inorganic materials (OI)				9.0	N/A		15.0
30		j. Graphite			0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37				GLASS (NSW)	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p. Inorganic sorbents			9.0	N/A		15.0
49				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r. Cellulosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57				PAPER (NSW)	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71009							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5					0.0	N/A		0.0
66	v. Rubber (R)				N/A	0.9 - 2.0	0.0	0.0
67				N/A	N/A	0.9 - 2.0	0.0	0.0
68				N/A	0.0	N/A		0.0
69	w. Plastics (waste materials) (PW)				N/A	0.9		0.0
70				PLASTIC (NSW)	N/A	0.9		0.0
71				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	108.4	N/A		90.3
74	x. Organic matrix (OR)				108.4	N/A		90.3
75		x1. Sludge			108.4	1.0 - 1.5	1.2	90.3
76				PALE YELLOWISH ORANGE POWDERY SLUDGE WITH CALCIUM SILICATE	N/A	1.0 - 1.5	0.0	0.0
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	0.0	N/A		0.0
79		x2. Other (See Note a)			N/A	0.0		0.0
80				N/A	N/A	0.0		0.0
81				N/A	0.0	N/A		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			N/A	1.0 - 1.5	0.0	0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	0.0	N/A		0.0
87		y2. Roaster Oxides			N/A	1.5 - 4.0	0.0	0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	0.0	N/A		0.0
91		y3. Other (See Note a)			N/A	0.0		0.0
92				N/A	N/A	0.0		0.0
93				N/A	4.0	N/A		3.3
94	z. Soils/gravel (S)				4.0	1.0 - 1.4	1.2	3.3
95				SOIL	N/A	1.0 - 1.4	0.0	0.0
96				N/A	121.4	N/A		108.6
97	aa. TOTAL							
98	13. (ORGANIC SLUDGE) weight (108.4) kg was obtained by subtracting the weighed waste weight of (13.0) kg and the container net weight of (34.0) kg from the gross weight (155.4) kg of the waste container. (155.4) - (13.0) - (34.0) = (108.4) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. N/A							
101								

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71009	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71009	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	25.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728635
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	10/23/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1043
22. Measured gross weight of loaded container, fully assembled (kgs):	155.4
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	342.6
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	80.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	121.4
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71009	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.0
31. Total volume of Solidified Organics (L):	90.3
32. Total volume of Solidified Inorganics (L):	15.0
33. Total volume of Soils/Gravel (L):	3.3
a. Total volume (L):	108.6
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	89.3%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

Enter Name	Signature	Date
J. STANTON	Jodi M Stanton	8/2/12

Visual Examination Operator 2:

Enter Name	Signature	Date
L. VERLANIC	L. Verlanic	8-2-12

Visual Examination Expert:

Enter Name	Signature	Date
J. POOLE	J.S. Poole	8-2-12

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	ARP71029
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location:	IN-RWMC-ARP-6
3. Batch Number:	IN-ARP-VE-002793
4. Examination Date:	08/02/12
5. Procedure CCP-TP-006, Rev.:	16
6. a. Drum Packing Station (DPS) Number:	701
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	221224
8. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726773
b. Filter Torque Wrench Calibration Due Date:	09/19/12
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	HL-256
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71029							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.2	N/A		0.0
7				METAL	0.2	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71029							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4				9. Waste Material Parameter and Item Description	10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5					10.0	N/A		15.5
29	l.			Other inorganic materials (OI)	0.0	N/A		0.0
30		j.		Graphite	N/A	2.2		0.0
31				N/A	N/A	2.2		0.0
32				N/A	0.0	N/A		0.0
33		k.		Concrete	N/A	2.3		0.0
34				N/A	N/A	2.3		0.0
35				N/A	1.0	N/A		0.5
36		l.		Glass	1.0	2.0		0.5
37				GLASS	N/A	2.0		0.0
38				N/A	0.0	N/A		0.0
39		m.		Firebrick	N/A	3.0		0.0
40				N/A	N/A	3.0		0.0
41				N/A	0.0	N/A		0.0
42		n.		Ceramics	N/A	2.0 - 5.0	0.0	0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	0.0	N/A		0.0
45		o.		Sand	N/A	2.0		0.0
46				N/A	N/A	2.0		0.0
47				N/A	9.0	N/A		15.0
48		p.		Inorganic sorbents	9.0	0.1 - 2.8	0.6	15.0
49				OIL DRI ON TOP (WAIP)	N/A	0.1 - 2.8	0.0	0.0
50				N/A	0.0	N/A		0.0
51		q.		Other (See Note a)	N/A	0.0		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	0.0	N/A		0.0
55	r.			Cellulosics (C)	0.0	N/A		0.0
56		s.		Paper	N/A	0.9		0.0
57				PAPER (NSW)	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	0.0	N/A		0.0
60		t.		Cardboard	N/A	0.8		0.0
61				N/A	N/A	0.8		0.0
62				N/A	0.0	N/A		0.0
63		u.		Wood	N/A	1.0		0.0
64				N/A	N/A	1.0		0.0
65				N/A				

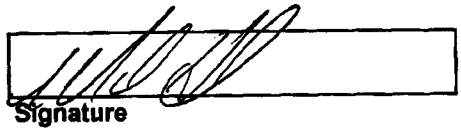
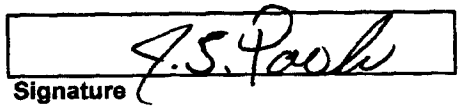
	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71029							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4				9. Waste Material Parameter and Item Description	10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5					0.0	N/A		0.0
66	v.	Rubber (R)			N/A	0.9 - 2.0	0.0	0.0
67				N/A	N/A	0.9 - 2.0	0.0	0.0
68				N/A	0.0	N/A		0.0
69	w.	Plastics (waste materials) (PW)			N/A	0.9		0.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC (NSW)	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	91.5	N/A		76.3
74	x.	Organic matrix (OR)			91.5	N/A		76.3
75		x1.	Sludge		91.5	1.0 - 1.5	1.2	76.3
76				MODERATE OLIVE BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE	N/A	1.0 - 1.5	0.0	0.0
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	0.0	N/A		0.0
79		x2.	Other (See Note a)		N/A	0.0		0.0
80				N/A	N/A	0.0		0.0
81				N/A	25.1	N/A		20.8
82	y.	Inorganic matrix (IN)			25.0	N/A		20.8
83		y1.	Sludge		25.0	1.0 - 1.5	1.2	20.8
84				MODERATE REDDISH BROWN CRUMBLY SLUDGE WITH WHITE CHUNKS	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	0.0	N/A		0.0
87		y2.	Roaster Oxides		N/A	1.5 - 4.0	0.0	0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	0.1	N/A		0.0
91		y3.	Other (See Note a)		0.1	2.2		0.0
92				EVAPORATOR SALT	N/A	0.0		0.0
93				N/A	20.0	N/A		16.7
94	z.	Soils/gravel (S)			20.0	1.0 - 1.4	1.2	16.7
95				SOIL	N/A	1.0 - 1.4	0.0	0.0
96				N/A	146.8	N/A		129.3
97	aa.	TOTAL						
98	13. (ORGANIC SLUDGE) weight (91.5) kg was obtained by subtracting the weighed waste weight of (55.3) kg and the container net weight of (34.0) kg from the gross weight (180.8) kg of the waste container. (180.8) - (55.3) - (34.0) = (91.5) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. REFERENCE LETTER: CP:08:00210/UFC:2300.00							
101								

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71029	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71029	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	24.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	720178
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	09/21/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1043
22. Measured gross weight of loaded container, fully assembled (kgs):	180.8
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	398.6
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	75.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	146.8
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71029	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.5
31. Total volume of Solidified Organics (L):	76.3
32. Total volume of Solidified Inorganics (L):	35.8
33. Total volume of Soils/Gravel (L):	16.7
a. Total volume (L):	129.3
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	62.3%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:		
M. HADERLIE Enter Name	 Signature	8-2-12 Date
Visual Examination Operator 2:		
D. JACKMAN Enter Name	 Signature	8-2-12 Date
Visual Examination Expert:		
J. POOLE Enter Name	 Signature	8-2-12 Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	ARP71016
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	JSP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location:	IN-RWMC-ARP-6
3. Batch Number:	IN-ARP-VE-002793
4. Examination Date:	08/02/12
5. Procedure CCP-TP-006, Rev.:	16
6. a. Drum Packing Station (DPS) Number:	703
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	221224
8. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726773
b. Filter Torque Wrench Calibration Due Date:	09/19/12
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	HL-76
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71016							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
6	a. Iron-based metals/alloys (IM)				0.2	N/A		0.0
7				METAL	0.2	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				ALUMINUM (NSW)	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71016							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	i.	Other inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				GLASS (NSW)	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71016							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4				9. Waste Material Parameter and Item Description	10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5					0.0	N/A		0.0
66	v. Rubber (R)				N/A	0.9 - 2.0	0.0	0.0
67				N/A	N/A	0.9 - 2.0	0.0	0.0
68				N/A	0.9	N/A		1.0
69	w. Plastics (waste materials) (PW)				N/A	0.9		0.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	0.9	0.9		1.0
71				1 TRAY LINER (WAIP)	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	3.0	N/A		2.5
74	x. Organic matrix (OR)				3.0	N/A		2.5
75		x1. Sludge			3.0	1.0 - 1.5	1.2	2.5
76				VERY PALE ORANGE CRUMBLY SLUDGE WITH CALCIUM SILICATE	N/A	1.0 - 1.5	0.0	0.0
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	0.0	N/A		0.0
79		x2. Other (See Note a)			N/A	0.0		0.0
80				N/A	N/A	0.0		0.0
81				N/A	14.0	N/A		8.6
82	y. Inorganic matrix (IN)				6.0	N/A		5.0
83		y1. Sludge			6.0	1.0 - 1.5	1.2	5.0
84				DUSKY RED CRUMBLY SLUDGE	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	0.0	N/A		0.0
87		y2. Roaster Oxides			N/A	1.5 - 4.0	0.0	0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	8.0	N/A		3.6
91		y3. Other (See Note a)			8.0	2.2		3.6
92				EVAPORATOR SALT	N/A	0.0		0.0
93				N/A	133.1	N/A		110.9
94	z. Soils/gravel (S)				133.1	1.0 - 1.4	1.2	110.9
95				SOIL	N/A	1.0 - 1.4	0.0	0.0
96				N/A	151.2	N/A		123.0
97	aa. TOTAL							
98	13. (SOIL) weight (133.1) kg was obtained by subtracting the weighed waste weight of (18.1) kg and the container net weight of (34.0) kg from the gross weight (185.2) kg of the waste container. (185.2) - (18.1) - (34.0) = (133.1) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. REFERENCE LETTER: CP:08:00210 / UFC:2300.00							
101								

062

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71016	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71016	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	30.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728635
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	10/23/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1106
22. Measured gross weight of loaded container, fully assembled (kgs):	185.2
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	408.3
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	95.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	151.2
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71016	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	1.0
31. Total volume of Solidified Organics (L):	2.5
32. Total volume of Solidified Inorganics (L):	8.6
33. Total volume of Soils/Gravel (L):	110.9
a. Total volume (L):	123.0
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	
c. Soil (S4200):	X
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	2.0%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

L. VERLANIC	L. Verlanic	8-3-12
Enter Name	Signature	Date

Visual Examination Operator 2:

J. STANTON	Jodi M. Stanton	8/2/12
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE	J.S. Poole	8-2-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	ARP71055
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	JSP
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location:	IN-RWMC-ARP-6
3.	Batch Number:	IN-ARP-VE-002793
4.	Examination Date:	08/02/12
5.	Procedure CCP-TP-006, Rev.:	16
6.	a. Drum Packing Station (DPS) Number:	701
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	221224
8.	Container Filter Torque Data:	
	a. Filter Torque Wrench Serial/ID Number:	726773
	b. Filter Torque Wrench Calibration Due Date:	09/19/12
	c. Filter Model No.:	NUCFIL-019DS
	d. Filter Serial No.:	HL-70
	e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
	f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:		
NOTHING ADDED TO THE CONTAINER VERIFIED		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71055							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.2	N/A		0.0
7				METAL	0.2	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13			d. Lead		0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16			e. Beryllium		0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19			f. Depleted uranium		0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22			g. Copper		0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25			h. Other (See Note a)		0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71055							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4				9. Waste Material Parameter and Item Description	10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	i.			Other inorganic materials (OI)	9.0	N/A		15.0
30		j.		Graphite	0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.		Concrete	0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.		Glass	0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.		Firebrick	0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.		Ceramics	0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.		Sand	0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.		Inorganic sorbents	9.0	N/A		15.0
49				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.		Other (See Note a)	0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.			Cellulosics (C)	0.0	N/A		0.0
56		s.		Paper	0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.		Cardboard	0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.		Wood	0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

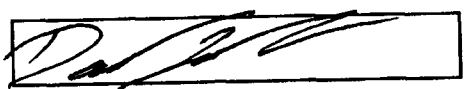
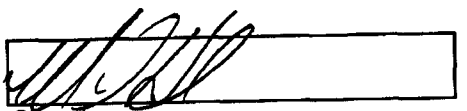
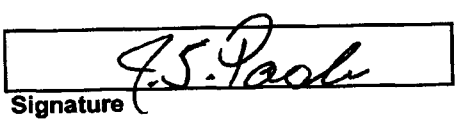
	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71055							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.0	N/A		0.0
67				N/A	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC (NSW)	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				93.8	N/A		78.2
75		x1. Sludge			93.8	N/A		78.2
76				DARK YELLOWISH BROWN POWDERY SLUDGE WITH CALCIUM SILICATE	93.8	1.0 - 1.5	1.2	78.2
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				7.0	N/A		5.8
83		y1. Sludge			7.0	N/A		5.8
84				DUSKY RED CRUMBLY SLUDGE WITH WHITE CHUNKS	7.0	1.0 - 1.5	1.2	5.8
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				9.0	N/A		7.5
95				SOIL	9.0	1.0 - 1.4	1.2	7.5
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				119.0	N/A		106.5
98	13. (ORGANIC SLUDGE) weight (93.8) kg was obtained by subtracting the weighed waste weight of (25.2) kg and the container net weight of (34.0) kg from the gross weight (153.0) kg of the waste container. (153.0) - (25.2) - (34.0) = (93.8) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. N/A							
101								

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71055	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71055	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	22.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	720178
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	09/21/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1236
22. Measured gross weight of loaded container, fully assembled (kgs):	153.0
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	337.3
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	70.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	119.0
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71055	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.0
31. Total volume of Solidified Organics (L):	78.2
32. Total volume of Solidified Inorganics (L):	20.8
33. Total volume of Soils/Gravel (L):	7.5
a. Total volume (L):	106.5
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	78.8%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:		
D. JACKMAN Enter Name	 Signature	8-2-12 Date
Visual Examination Operator 2:		
M. HADERLIE Enter Name	 Signature	8-2-12 Date
Visual Examination Expert:		
J. POOLE Enter Name	 Signature	8-2-12 Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	ARP71044
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location:	IN-RWMC-ARP-6
3. Batch Number:	IN-ARP-VE-002793
4. Examination Date:	08/02/12
5. Procedure CCP-TP-006, Rev.:	16
6. a. Drum Packing Station (DPS) Number:	703
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	221224
8. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726773
b. Filter Torque Wrench Calibration Due Date:	09/19/12
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	HL-206
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71044							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5					2.2	N/A		0.3
6	a. Iron-based metals/alloys (IM)				2.2	8.0		0.3
7				METAL	N/A	8.0		0.0
8				N/A	0.0	N/A		0.0
9	b. Aluminum-based metals/alloys (AM)				N/A	3.0		0.0
10				ALUMINUM (NSW)	N/A	3.0		0.0
11				N/A	0.0	N/A		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			N/A	11.0		0.0
14				N/A	N/A	11.0		0.0
15				N/A	0.0	N/A		0.0
16		e. Beryllium			N/A	1.8		0.0
17				N/A	N/A	1.8		0.0
18				N/A	0.0	N/A		0.0
19		f. Depleted uranium			N/A	19.1		0.0
20				N/A	N/A	19.1		0.0
21				N/A	0.0	N/A		0.0
22		g. Copper			N/A	9.0		0.0
23				N/A	N/A	9.0		0.0
24				N/A	0.0	N/A		0.0
25		h. Other (See Note a)			N/A	0.0		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A				

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71044							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	l.	Other Inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.4	N/A		0.4
56		s.	Paper		0.3	N/A		0.3
57				PAPER	0.3	0.9		0.3
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.1	N/A		0.1
64				WOOD	0.1	1.0		0.1
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71044							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.0	N/A		0.0
67				RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				1.5	N/A		1.7
70				PLASTIC	0.8	0.9		0.7
71				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
72				TRAY LINER (WAIP)	0.9	0.9		1.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				5.0	N/A		4.2
75		x1. Sludge			5.0	N/A		4.2
76				LIGHT BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE	5.0	1.0 - 1.5	1.2	4.2
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.3	N/A		0.1
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.3	N/A		0.1
92				EVAPORATOR SALT	0.3	2.2		0.1
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				162.2	N/A		135.2
95				SOIL	162.2	1.0 - 1.4	1.2	135.2
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				171.6	N/A		141.9
98	13. (SOIL) weight (162.2) kg was obtained by subtracting the weighed waste weight of (9.4) kg and the container net weight of (34.0) kg from the gross weight (205.6) kg of the waste container. (205.6) - (9.4) - (34.0) = (162.2) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. REFERENCE LETTER: CP:08:00210/UFC:2300.00							
101								

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71044	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71044	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	29.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728635
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	10/23/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1332
22. Measured gross weight of loaded container, fully assembled (kgs):	205.6
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	453.3
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	90.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	171.6
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71044	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	2.4
31. Total volume of Solidified Organics (L):	4.2
32. Total volume of Solidified Inorganics (L):	0.1
33. Total volume of Soils/Gravel (L):	135.2
a. Total volume (L):	141.9
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	
c. Soil (S4200):	X
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	2.9%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:		
J. STANTON	Jodi M. Stanton	8/2/12
Enter Name	Signature	Date
Visual Examination Operator 2:		
L. VERLANIC	S. Verlanic	8-2-12
Enter Name	Signature	Date
Visual Examination Expert:		
J. POOLE	J.S. Poole	8-2-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	ARP71021
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location:	IN-RWMC-ARP-6
3. Batch Number:	IN-ARP-VE-002793
4. Examination Date:	08/02/12
5. Procedure CCP-TP-006, Rev.:	16
6. a. Drum Packing Station (DPS) Number:	701
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	221224
8. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	728434
b. Filter Torque Wrench Calibration Due Date:	09/27/12
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	HL-55
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71021							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
6	a. Iron-based metals/alloys (IM)				0.3	N/A		0.0
7				METAL	0.3	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71021							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4				9. Waste Material Parameter and Item Description	10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5					9.0	N/A		15.0
29	l.	Other inorganic materials (OI)			0.0	N/A		0.0
30		l.	Graphite		N/A	2.2		0.0
31				N/A	N/A	2.2		0.0
32				N/A	0.0	N/A		0.0
33		k.	Concrete		N/A	2.3		0.0
34				N/A	N/A	2.3		0.0
35				N/A	0.0	N/A		0.0
36		i.	Glass		N/A	2.0		0.0
37				N/A	N/A	2.0		0.0
38				N/A	0.0	N/A		0.0
39		m.	Firebrick		N/A	3.0		0.0
40				N/A	N/A	3.0		0.0
41				N/A	0.0	N/A		0.0
42		n.	Ceramics		N/A	2.0 - 5.0	0.0	0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	0.0	N/A		0.0
45		o.	Sand		N/A	2.0		0.0
46				N/A	N/A	2.0		0.0
47				N/A	0.0	N/A		15.0
48		p.	Inorganic sorbents		9.0	0.1 - 2.8	0.6	15.0
49				OIL DRI ON TOP (WAIP)	N/A	0.1 - 2.8	0.0	0.0
50				N/A	0.0	N/A		0.0
51		q.	Other (See Note a)		N/A	0.0		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	0.0	N/A		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		N/A	0.9		0.0
57				PAPER (NSW)	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	0.0	N/A		0.0
60		t.	Cardboard		N/A	0.8		0.0
61				N/A	N/A	0.8		0.0
62				N/A	0.0	N/A		0.0
63		u.	Wood		N/A	1.0		0.0
64				N/A	N/A	1.0		0.0
65				N/A				

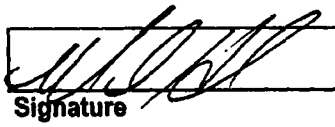
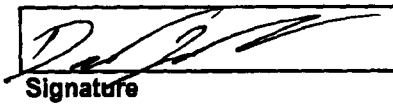
	A B C D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003				
2	Container ID: ARP71021				
3	**Section 2: Waste Material Parameter (WMP) Estimates**				
4	9. Waste Material Parameter and Item Description	10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5					
66	v. Rubber (R)	0.0	N/A		0.0
67	RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
68	N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)	0.0	N/A		0.0
70	NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71	PLASTIC (NSW)	N/A	0.9		0.0
72	N/A	N/A	0.9		0.0
73	N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)	5.0	N/A		4.2
75	x1. Sludge	5.0	N/A		4.2
76	PALE YELLOWISH BROWN POWDERY SLUDGE WITH CALCIUM SILICATE	5.0	1.0 - 1.5	1.2	4.2
77	N/A	N/A	1.0 - 1.5	0.0	0.0
78	N/A	N/A	1.0 - 1.5	0.0	0.0
79	x2. Other (See Note a)	0.0	N/A		0.0
80	N/A	N/A	0.0		0.0
81	N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)	105.5	N/A		87.8
83	y1. Sludge	105.4	N/A		87.8
84	MODERATE REDDISH BROWN CRUMBLY SLUDGE WITH PORTLAND CEMENT	105.4	1.0 - 1.5	1.2	87.8
85	N/A	N/A	1.0 - 1.5	0.0	0.0
86	N/A	N/A	1.0 - 1.5	0.0	0.0
87	y2. Roaster Oxides	0.0	N/A		0.0
88	N/A	N/A	1.5 - 4.0	0.0	0.0
89	N/A	N/A	1.5 - 4.0	0.0	0.0
90	N/A	N/A	1.5 - 4.0	0.0	0.0
91	y3. Other (See Note a)	0.1	N/A		0.0
92	EVAPORATOR SALT	0.1	2.2		0.0
93	N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)	30.0	N/A		25.0
95	SOIL	30.0	1.0 - 1.4	1.2	25.0
96	N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL	149.8	N/A		132.0
98	13. (INORGANIC SLUDGE) weight (105.4) kg was obtained by subtracting the weighed waste weight of (44.4) kg and the container net weight of (34.0) kg from the gross weight (183.8) kg of the waste container. (183.8) - (44.4) - (34.0) = (105.4) kg				
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.				
100	b. REFERENCE LETTER: CP:08:00210/UFC:2300.00				
101					

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71021	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71021	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	27.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	720178
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	09/21/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1339
22. Measured gross weight of loaded container, fully assembled (kgs):	183.8
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	405.2
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	85.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	149.8
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71021	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.0
31. Total volume of Solidified Organics (L):	4.2
32. Total volume of Solidified Inorganics (L):	102.8
33. Total volume of Soils/Gravel (L):	25.0
a. Total volume (L):	132.0
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	3.3%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:		
M. HADERLIE		8-2-12
Enter Name	Signature	Date
Visual Examination Operator 2:		
D. JACKMAN		8-2-12
Enter Name	Signature	Date
Visual Examination Expert:		
J. POOLE		8-2-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	ARP70942
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location:	IN-RWMC-ARP-6
3. Batch Number:	IN-ARP-VE-002793
4. Examination Date:	08/02/12
5. Procedure CCP-TP-006, Rev.:	16
6. a. Drum Packing Station (DPS) Number:	703
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	221224
8. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726773
b. Filter Torque Wrench Calibration Due Date:	09/19/12
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	HL-210
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70942							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
6	a. Iron-based metals/alloys (IM)				0.4	N/A		0.1
7				METAL	0.4	8.0		0.1
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003

Container ID: ARP70942

Section 2: Waste Material Parameter (WMP) Estimates

9. Waste Material Parameter and Item Description	10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
	9.0	N/A		15.0
i. Other inorganic materials (OI)	0.0	N/A		0.0
j. Graphite	N/A	2.2		0.0
N/A	N/A	2.2		0.0
N/A	0.0	N/A		0.0
k. Concrete	N/A	2.3		0.0
N/A	N/A	2.3		0.0
N/A	0.0	N/A		0.0
l. Glass	N/A	2.0		0.0
N/A	N/A	2.0		0.0
N/A	0.0	N/A		0.0
m. Firebrick	N/A	3.0		0.0
N/A	N/A	3.0		0.0
N/A	0.0	N/A		0.0
n. Ceramics	N/A	2.0 - 5.0	0.0	0.0
N/A	N/A	2.0 - 5.0	0.0	0.0
N/A	0.0	N/A		0.0
o. Sand	N/A	2.0		0.0
N/A	N/A	2.0		0.0
N/A	9.0	N/A		15.0
p. Inorganic sorbents	9.0	0.1 - 2.8	0.6	15.0
OIL-DRI TOP (WAIP)	N/A	0.1 - 2.8	0.0	0.0
N/A	0.0	N/A		0.0
q. Other (See Note a)	N/A	0.0		0.0
N/A	N/A	0.0		0.0
N/A	N/A	0.0		0.0
N/A	0.0	N/A		0.0
r. Cellulosics (C)	0.0	N/A		0.0
s. Paper	N/A	0.9		0.0
PAPER (NSW)	N/A	0.9		0.0
N/A	N/A	0.9		0.0
N/A	0.0	N/A		0.0
t. Cardboard	N/A	0.8		0.0
N/A	N/A	0.8		0.0
N/A	0.0	N/A		0.0
u. Wood	N/A	1.0		0.0
N/A	N/A	1.0		0.0
N/A				

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	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70942							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4				9. Waste Material Parameter and Item Description	10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
66	v. Rubber (R)				0.0	N/A		0.0
67				N/A	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC (NSW)	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				0.0	N/A		0.0
75		x1. Sludge			0.0	N/A		0.0
76				N/A	N/A	1.0 - 1.5	0.0	0.0
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				91.0	N/A		75.8
83		y1. Sludge			91.0	N/A		75.8
84				MODERATE BROWN CRUMBLY SLUDGE WITH PORTLAND CEMENT AND WHITE CHUNKS	91.0	1.0 - 1.5	1.2	75.8
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				20.0	N/A		16.7
95				SOIL	20.0	1.0 - 1.4	1.2	16.7
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				120.4	N/A		107.6
98	13. (INORGANIC SLUDGE) weight (91.0) kg was obtained by subtracting the weighed waste weight of (29.4) kg and the container net weight of (34.0) kg from the gross weight (154.4) kg of the waste container. (154.4) - (29.4) - (34.0) = (91.0) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. N/A							
101								

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Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70942	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70942	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	24.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728635
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	10/23/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1357
22. Measured gross weight of loaded container, fully assembled (kgs):	154.4
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	340.4
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	75.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	120.4
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70942	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.1
31. Total volume of Solidified Organics (L):	0.0
32. Total volume of Solidified Inorganics (L):	90.8
33. Total volume of Soils/Gravel (L):	16.7
a. Total volume (L):	107.6
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	0.0%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	N/A

Section 6: Approvals

Visual Examination Operator 1:		
L. VERLANIC	L. Verlanic	8-2-12
Enter Name	Signature	Date
Visual Examination Operator 2:		
J. STANTON	Jodi M. Stanton	8/2/12
Enter Name	Signature	Date
Visual Examination Expert:		
J. POOLE	J.S. Poole	8-2-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	ARP71013
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location:	IN-RWMC-ARP-6
3. Batch Number:	IN-ARP-VE-002793
4. Examination Date:	08/02/12
5. Procedure CCP-TP-006, Rev.:	16
6. a. Drum Packing Station (DPS) Number:	701
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	221224
8. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	728434
b. Filter Torque Wrench Calibration Due Date:	09/27/12
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	HL-83
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71013							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)	12.Volume (L)	
5					0.2	N/A	0.0	
6	a. Iron-based metals/alloys (IM)				0.2	8.0	0.0	
7				METAL	N/A	8.0	0.0	
8				N/A	0.0	N/A	0.0	
9	b. Aluminum-based metals/alloys (AM)				N/A	3.0	0.0	
10				N/A	N/A	3.0	0.0	
11				N/A	0.0	N/A	0.0	
12	c. Other metals (OM)				0.0	N/A	0.0	
13		d. Lead			N/A	11.0	0.0	
14				N/A	N/A	11.0	0.0	
15				N/A	0.0	N/A	0.0	
16		e. Beryllium			N/A	1.8	0.0	
17				N/A	N/A	1.8	0.0	
18				N/A	0.0	N/A	0.0	
19		f. Depleted uranium			N/A	19.1	0.0	
20				N/A	N/A	19.1	0.0	
21				N/A	0.0	N/A	0.0	
22		g. Copper			N/A	9.0	0.0	
23				N/A	N/A	9.0	0.0	
24				N/A	0.0	N/A	0.0	
25		h. Other (See Note a)			N/A	0.0	0.0	
26				N/A	N/A	0.0	0.0	
27				N/A	N/A	0.0	0.0	
28								

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71013							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4				9. Waste Material Parameter and Item Description	10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	i.			Other inorganic materials (OI)	9.0	N/A		15.0
30		j.		Graphite	0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.		Concrete	0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.		Glass	0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.		Firebrick	0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.		Ceramics	0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.		Sand	0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.		Inorganic sorbents	9.0	N/A		15.0
49				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.		Other (See Note a)	0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.			Cellulosics (C)	0.0	N/A		0.0
56		s.		Paper	0.0	N/A		0.0
57				PAPER (NSW)	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.		Cardboard	0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.		Wood	0.0	N/A		0.0
64				WOOD (NSW)	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71013							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
66	v. Rubber (R)				0.0	N/A		0.0
67				N/A	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC (NSW)	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				3.0	N/A		2.5
75		x1. Sludge			3.0	N/A		2.5
76				VERY PALE ORANGE POWDERY SLUDGE WITH CALCIUM SILICATE	3.0	1.0 - 1.5	1.2	2.5
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				110.0	N/A		91.7
83		y1. Sludge			110.0	N/A		91.7
84				DUSKY RED CRUMBLY SLUDGE WITH WHITE CHUNKS AND PORTLAND CEMENT	110.0	1.0 - 1.5	1.2	91.7
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				32.0	N/A		26.7
95				SOIL	32.0	1.0 - 1.4	1.2	26.7
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				154.2	N/A		135.9
98	13. (INORGANIC SLUDGE) weight (110.0) kg was obtained by subtracting the weighed waste weight of (44.2) kg and the container net weight of (34.0) kg from the gross weight (188.2) kg of the waste container. (188.2) - (44.2) - (34.0) = (110.0) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. N/A							
101								

097

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71013	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71013	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	25.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	720178
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	09/21/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1409
22. Measured gross weight of loaded container, fully assembled (kgs):	188.2
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	414.9
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	80.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	154.2
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71013	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.0
31. Total volume of Solidified Organics (L):	2.5
32. Total volume of Solidified Inorganics (L):	106.7
33. Total volume of Soils/Gravel (L):	26.7
a. Total volume (L):	135.9
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	1.9%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

D. JACKMAN	[signature]	8-2-12
Enter Name	Signature	Date

Visual Examination Operator 2:

M. HADERLIE	[signature]	8-2-12
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE	J.S. Poole	8-2-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	ARP70903
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SSP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location:	IN-RWMC-ARP-6
3. Batch Number:	IN-ARP-VE-002793
4. Examination Date:	08/02/12
5. Procedure CCP-TP-006, Rev.:	16
6. a. Drum Packing Station (DPS) Number:	703
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	221224
8. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726773
b. Filter Torque Wrench Calibration Due Date:	09/19/12
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	HL-135
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70903							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
6	a. Iron-based metals/alloys (IM)				0.4	N/A		0.1
7				METAL	0.4	8.0		0.1
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				ALUMINUM (NSW)	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70903							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4				9. Waste Material Parameter and Item Description	10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	l.			Other inorganic materials (OI)	9.0	N/A		15.0
30		j.		Graphite	0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.		Concrete	0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.		Glass	0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.		Firebrick	0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.		Ceramics	0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.		Sand	0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.		Inorganic sorbents	9.0	N/A		15.0
49				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.		Other (See Note a)	0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.			Cellulosics (C)	0.0	N/A		0.0
56		a.		Paper	0.0	N/A		0.0
57				PAPER (NSW)	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.		Cardboard	0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.		Wood	0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70903							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
66	v. Rubber (R)				0.0	N/A		0.0
67	RUBBER (NSW)				N/A	0.9 - 2.0	0.0	0.0
68	N/A				N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70	PLASTIC (NSW)				N/A	0.9		0.0
71	NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED				N/A	0.9		0.0
72	N/A				N/A	0.9		0.0
73	N/A				N/A	0.9		0.0
74	x. Organic matrix (OR)				0.0	N/A		0.0
75	x1. Sludge				0.0	N/A		0.0
76	N/A				N/A	1.0 - 1.5	0.0	0.0
77	N/A				N/A	1.0 - 1.5	0.0	0.0
78	N/A				N/A	1.0 - 1.5	0.0	0.0
79	x2. Other (See Note a)				0.0	N/A		0.0
80	N/A				N/A	0.0		0.0
81	N/A				N/A	0.0		0.0
82	y. Inorganic matrix (IN)				86.2	N/A		71.7
83	y1. Sludge				85.9	N/A		71.6
84	DUSKY RED CRUMBLY SLUDGE WITH PORTLAND CEMENT AND WHITE CHUNKS				85.9	1.0 - 1.5	1.2	71.6
85	N/A				N/A	1.0 - 1.5	0.0	0.0
86	N/A				N/A	1.0 - 1.5	0.0	0.0
87	y2. Roaster Oxides				0.0	N/A		0.0
88	N/A				N/A	1.5 - 4.0	0.0	0.0
89	N/A				N/A	1.5 - 4.0	0.0	0.0
90	N/A				N/A	1.5 - 4.0	0.0	0.0
91	y3. Other (See Note a)				0.3	N/A		0.1
92	EVAPORATOR SALT				0.3	2.2		0.1
93	N/A				N/A	0.0		0.0
94	z. Soils/gravel (S)				30.0	N/A		25.0
95	SOIL				30.0	1.0 - 1.4	1.2	25.0
96	N/A				N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				125.6	N/A		111.8
98	13. (INORGANIC SLUDGE) weight (85.9) kg was obtained by subtracting the weighed waste weight of (39.7) kg and the container net weight of (34.0) kg from the gross weight (159.6) kg of the waste container. (159.6) - (39.7) - (34.0) = (85.9) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. REFERENCE LETTER: CP:08:00210/UFC:2300.00							
101								

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70903	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70903	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	26.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728635
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	10/23/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1424
22. Measured gross weight of loaded container, fully assembled (kgs):	159.6
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	351.9
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	80.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	125.6
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70903	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.1
31. Total volume of Solidified Organics (L):	0.0
32. Total volume of Solidified Inorganics (L):	86.7
33. Total volume of Soils/Gravel (L):	25.0
a. Total volume (L):	111.8
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	0.0%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	N/A

Section 6: Approvals

Visual Examination Operator 1:		
J. STANTON Enter Name	Jodi M. Stanton Signature	8/2/12 Date
Visual Examination Operator 2:		
L. VERLANIC Enter Name	L. Verlanic Signature	8-2-12 Date
Visual Examination Expert:		
J. POOLE Enter Name	J.S. Poole Signature	8-2-12 Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	ARP70797
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location:	IN-RWMC-ARP-6
3. Batch Number:	IN-ARP-VE-002793
4. Examination Date:	08/02/12
5. Procedure CCP-TP-006, Rev.:	16
6. a. Drum Packing Station (DPS) Number:	703
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	223196
8. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726773
b. Filter Torque Wrench Calibration Due Date:	09/19/12
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	HL-182
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70797							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5					0.4	N/A		0.1
6	a. Iron-based metals/alloys (IM)				0.4	8.0		0.1
7				METAL	N/A	8.0		0.0
8				N/A	0.0	N/A		0.0
9	b. Aluminum-based metals/alloys (AM)				N/A	3.0		0.0
10				N/A	N/A	3.0		0.0
11				N/A	0.0	N/A		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			N/A	11.0		0.0
14				N/A	N/A	11.0		0.0
15				N/A	0.0	N/A		0.0
16		e. Beryllium			N/A	1.8		0.0
17				N/A	N/A	1.8		0.0
18				N/A	0.0	N/A		0.0
19		f. Depleted uranium			N/A	19.1		0.0
20				N/A	N/A	19.1		0.0
21				N/A	0.0	N/A		0.0
22		g. Copper			N/A	9.0		0.0
23				N/A	N/A	9.0		0.0
24				N/A	0.0	N/A		0.0
25		h. Other (See Note a)			N/A	0.0		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A				

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70797							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	i. Other inorganic materials (OI)				9.0	N/A		15.0
30		j. Graphite			0.0	N/A		0.0
31			N/A		N/A	2.2		0.0
32			N/A		N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34			N/A		N/A	2.3		0.0
35			N/A		N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37			N/A		N/A	2.0		0.0
38			N/A		N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40			N/A		N/A	3.0		0.0
41			N/A		N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43			N/A		N/A	2.0 - 5.0	0.0	0.0
44			N/A		N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46			N/A		N/A	2.0		0.0
47			N/A		N/A	2.0		0.0
48		p. Inorganic sorbents			9.0	N/A		15.0
49			OIL-DRI TOP (WAIP)		9.0	0.1 - 2.8	0.6	15.0
50			N/A		N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52			N/A		N/A	0.0		0.0
53			N/A		N/A	0.0		0.0
54			N/A		N/A	0.0		0.0
55	r. Cellulosics (C)				0.2	N/A		0.2
56		s. Paper			0.2	N/A		0.2
57			PAPER		0.2	0.9		0.2
58			N/A		N/A	0.9		0.0
59			N/A		N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61			N/A		N/A	0.8		0.0
62			N/A		N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64			N/A		N/A	1.0		0.0
65			N/A		N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70797							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5					0.0	N/A		0.0
66	v. Rubber (R)				N/A	0.9 - 2.0	0.0	0.0
67				RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
68				N/A	0.0	N/A		0.0
69	w. Plastics (waste materials) (PW)				N/A	0.9		0.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC (NSW)	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	8.5	N/A		7.1
74	x. Organic matrix (OR)				8.5	N/A		7.1
75		x1. Sludge			8.5	1.0 - 1.5	1.2	7.1
76				OLIVE GRAY POWDERY SLUDGE WITH CALCIUM SILICATE	N/A	1.0 - 1.5	0.0	0.0
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	0.0	N/A		0.0
79		x2. Other (See Note a)			N/A	0.0		0.0
80				N/A	N/A	0.0		0.0
81				N/A	93.1	N/A		76.8
82	y. Inorganic matrix (IN)				91.1	N/A		75.9
83		y1. Sludge			91.1	1.0 - 1.5	1.2	75.9
84				MODERATE REDDISH BROWN CLAY LIKE SLUDGE WITH PORTLAND CEMENT	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	0.0	N/A		0.0
87		y2. Roaster Oxides			N/A	1.5 - 4.0	0.0	0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	2.0	N/A		0.9
91		y3. Other (See Note a)			2.0	2.2		0.9
92				EVAPORATOR SALT	N/A	0.0		0.0
93				N/A	32.0	N/A		26.7
94	z. Soils/gravel (S)				32.0	1.0 - 1.4	1.2	26.7
95				SOIL	N/A	1.0 - 1.4	0.0	0.0
96				N/A	143.2	N/A		125.9
97	aa. TOTAL							
98	13. (INORGANIC SLUDGE) weight (91.1) kg was obtained by subtracting the weighed waste weight of (52.1) kg and the container net weight of (34.0) kg from the gross weight (177.2) kg of the waste container. (177.2) - (52.1) - (34.0) = (91.1) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. REFERENCE LETTER: CP:08:00210 / UFC:2300.00							
101								

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70797	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70797	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	30.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	223196
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728635
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	10/23/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1451
22. Measured gross weight of loaded container, fully assembled (kgs):	177.2
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	390.7
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	95.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	143.2
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70797	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.3
31. Total volume of Solidified Organics (L):	7.1
32. Total volume of Solidified Inorganics (L):	91.8
33. Total volume of Soils/Gravel (L):	26.7
a. Total volume (L):	125.9
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	5.9%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

L. VERLANIC	S. Verlanic	8-2-12
Enter Name	Signature	Date

Visual Examination Operator 2:

J. STANTON	Jodi M. Stanton	8/2/12
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE	J. Poole	8-2-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	ARP71047
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	[signature]
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location:	IN-RWMC-ARP-6
3. Batch Number:	IN-ARP-VE-002793
4. Examination Date:	08/02/12
5. Procedure CCP-TP-006, Rev.:	16
6. a. Drum Packing Station (DPS) Number:	701
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	221224
8. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	728434
b. Filter Torque Wrench Calibration Due Date:	09/27/12
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	HL-93
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71047							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5					0.1	N/A		0.0
6	a. Iron-based metals/alloys (IM)				0.1	8.0		0.0
7				METAL	N/A	8.0		0.0
8				N/A	0.0	N/A		0.0
9	b. Aluminum-based metals/alloys (AM)				N/A	3.0		0.0
10				N/A	N/A	3.0		0.0
11				N/A	0.0	N/A		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			N/A	11.0		0.0
14				N/A	N/A	11.0		0.0
15				N/A	0.0	N/A		0.0
16		e. Beryllium			N/A	1.8		0.0
17				N/A	N/A	1.8		0.0
18				N/A	0.0	N/A		0.0
19		f. Depleted uranium			N/A	19.1		0.0
20				N/A	N/A	19.1		0.0
21				N/A	0.0	N/A		0.0
22		g. Copper			N/A	9.0		0.0
23				N/A	N/A	9.0		0.0
24				N/A	0.0	N/A		0.0
25		h. Other (See Note a)			N/A	0.0		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A				

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71047							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	l.	Other inorganic materials (OI)			9.0	N/A		15.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				GLASS (NSW)	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		9.0	N/A		15.0
49				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				WOOD (NSW)	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71047							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
66	v. Rubber (R)				0.0	N/A		0.0
67				N/A	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC (NSW)	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				5.0	N/A		4.2
75		x1. Sludge			5.0	N/A		4.2
76				PALE YELLOWISH BROWN POWDERY SLUDGE WITH CALCIUM SILICATE	5.0	1.0 - 1.5	1.2	4.2
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				140.1	N/A		116.8
83		y1. Sludge			140.1	N/A		116.8
84				MODERATE REDDISH BROWN CRUMBLY SLUDGE WITH PORTLAND CEMENT	140.1	1.0 - 1.5	1.2	116.8
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				25.0	N/A		20.8
95				SOIL	25.0	1.0 - 1.4	1.2	20.8
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				179.2	N/A		156.8
98	13. (INORGANIC SLUDGE) weight (140.1) kg was obtained by subtracting the weighed waste weight of (39.1) kg and the container net weight of (34.0) kg from the gross weight (213.2) kg of the waste container. (213.2) - (39.1) - (34.0) = (140.1) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. N/A							
101								

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71047	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71047	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	29.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	720178
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	09/21/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1451
22. Measured gross weight of loaded container, fully assembled (kgs):	213.2
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	470.0
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	90.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	179.2
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71047	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.0
31. Total volume of Solidified Organics (L):	4.2
32. Total volume of Solidified Inorganics (L):	131.8
33. Total volume of Soils/Gravel (L):	20.8
a. Total volume (L):	156.8
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	2.8%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:		
M. HADERLIE Enter Name	Signature	8-2-12 Date
Visual Examination Operator 2:		
D. JACKMAN Enter Name	Signature	8-2-12 Date
Visual Examination Expert:		
J. POOLE Enter Name	Signature J. Poole	8-2-12 Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	ARP70911
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	TSP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location:	IN-RWMC-ARP-6
3. Batch Number:	IN-ARP-VE-002793
4. Examination Date:	08/02/12
5. Procedure CCP-TP-006, Rev.:	16
6. a. Drum Packing Station (DPS) Number:	703
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	221224
8. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726773
b. Filter Torque Wrench Calibration Due Date:	09/19/12
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	HL-150
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70911							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
6	a. Iron-based metals/alloys (IM)				0.4	N/A		0.1
7				METAL	0.4	8.0		0.1
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70911							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
29	l.	Other Inorganic materials (OI)			9.0	N/A		15.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		9.0	N/A		15.0
49				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note s)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.3	N/A		0.3
56		s.	Paper		0.3	N/A		0.3
57				PAPER	0.3	0.9		0.3
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70911							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.0	N/A		0.0
67				N/A	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				PLASTIC (NSW)	N/A	0.9		0.0
71				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				8.0	N/A		6.7
75		x1. Sludge			8.0	N/A		6.7
76				VERY PALE ORANGE PUTTY LIKE SLUDGE WITH CALCIUM SILICATE	8.0	1.0 - 1.5	1.2	6.7
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				116.3	N/A		96.9
83		y1. Sludge			116.3	N/A		96.9
84				DUSKY RED CRUMBLY SLUDGE WITH PORTLAND CEMENT	116.3	1.0 - 1.5	1.2	96.9
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				13.0	N/A		10.8
95				SOIL	13.0	1.0 - 1.4	1.2	10.8
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				147.0	N/A		129.8
98	13. (INORGANIC SLUDGE) weight (116.3) kg was obtained by subtracting the weighed waste weight of (30.7) kg and the container net weight of (34.0) kg from the gross weight (181.0) kg of the waste container. (181.0) - (30.7) - (34.0) = (116.3) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. N/A							
101								

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70911	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70911	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	23.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728635
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	10/23/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1514
22. Measured gross weight of loaded container, fully assembled (kgs):	181.0
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	399.0
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	70.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	147.0
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70911	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.4
31. Total volume of Solidified Organics (L):	6.7
32. Total volume of Solidified Inorganics (L):	111.9
33. Total volume of Soils/Gravel (L):	10.8
a. Total volume (L):	129.8
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	X
b. Homogeneous Solids (S3900):	
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	5.4%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:		
J. STANTON Enter Name	Jodi M. Stanton Signature	8/2/12 Date
Visual Examination Operator 2:		
L. VERLANIC Enter Name	L. Verlanic Signature	8-2-12 Date
Visual Examination Expert:		
J. POOLE Enter Name	J.S. Poole Signature	8-2-12 Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	ARP70915
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	TSP
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location:	IN-RWMC-ARP-6
3.	Batch Number:	IN-ARP-VE-002793
4.	Examination Date:	08/02/12
5.	Procedure CCP-TP-006, Rev.:	16
6.	a. Drum Packing Station (DPS) Number:	701
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	221224
8.	Container Filter Torque Data:	
	a. Filter Torque Wrench Serial/ID Number:	728434
	b. Filter Torque Wrench Calibration Due Date:	09/27/12
	c. Filter Model No.:	NUCFIL-019DS
	d. Filter Serial No.:	HL-233
	e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
	f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70915							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4				9. Waste Material Parameter and Item Description	10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
6	a.			Iron-based metals/alloys (IM)	0.4	N/A		0.1
7				METAL	0.4	8.0		0.1
8				N/A	N/A	8.0		0.0
9	b.			Aluminum-based metals/alloys (AM)	0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c.			Other metals (OM)	0.0	N/A		0.0
13		d.		Lead	0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e.		Beryllium	0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f.		Depleted uranium	0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g.		Copper	0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h.		Other (See Note a)	0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70915							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	l. Other inorganic materials (OI)				9.0	N/A		15.0
30		j. Graphite			0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p. Inorganic sorbents			9.0	N/A		15.0
49				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r. Celluiosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64				WOOD (NSW)	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70915							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4				9. Waste Material Parameter and Item Description	10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5					0.0	N/A		0.0
66	v.	Rubber (R)			N/A	0.9 - 2.0	0.0	0.0
67				N/A	N/A	0.9 - 2.0	0.0	0.0
68				N/A	0.0	N/A		0.0
69	w.	Plastics (waste materials) (PW)			N/A	0.9		0.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC (NSW)	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	7.0	N/A		5.8
74	x.	Organic matrix (OR)			7.0	N/A		5.8
75		x1.	Sludge		7.0	1.0 - 1.5	1.2	5.8
76				VERY PALE ORANGE POWDERY SLUDGE WITH CALCIUM SILICATE	N/A	1.0 - 1.5	0.0	0.0
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	0.0	N/A		0.0
79		x2.	Other (See Note a)		N/A	0.0		0.0
80				N/A	N/A	0.0		0.0
81				N/A	131.0	N/A		109.1
82	y.	Inorganic matrix (IN)			130.8	N/A		109.0
83		y1.	Sludge		130.8	1.0 - 1.5	1.2	109.0
84				LIGHT BROWN CRUMBLY SLUDGE WITH PORTLAND CEMENT	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	0.0	N/A		0.0
87		y2.	Roaster Oxides		N/A	1.5 - 4.0	0.0	0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	0.2	N/A		0.1
91		y3.	Other (See Note a)		0.2	2.2		0.1
92				EVAPORATOR SALT	N/A	0.0		0.0
93				N/A	12.0	N/A		10.0
94	z.	Soils/gravel (S)			12.0	1.0 - 1.4	1.2	10.0
95				SOIL	N/A	1.0 - 1.4	0.0	0.0
96				N/A	159.4	N/A		140.0
97	aa.	TOTAL						
98	13. (INORGANIC SLUDGE) weight (130.8) kg was obtained by subtracting the weighed waste weight of (28.6) kg and the container net weight of (34.0) kg from the gross weight (193.4) kg of the waste container. (193.4) - (28.6) - (34.0) = (130.8) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. REFERENCE LETTER: CP:08:00210 / UFC:2300.00							
101								

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70915	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70915	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	28.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	720178
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	09/21/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1524
22. Measured gross weight of loaded container, fully assembled (kgs):	193.4
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	426.4
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	90.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	159.4
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

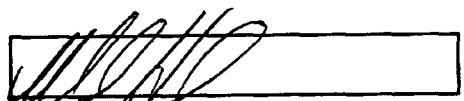
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70915	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.1
31. Total volume of Solidified Organics (L):	5.8
32. Total volume of Solidified Inorganics (L):	124.1
33. Total volume of Soils/Gravel (L):	10.0
a. Total volume (L):	140.0
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	4.4%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

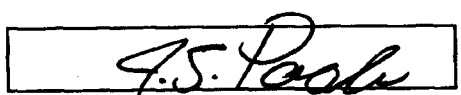
Visual Examination Operator 1:

D. JACKMAN		8-2-12
Enter Name	Signature	Date

Visual Examination Operator 2:

M. HADERLIE		8-2-12
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE		8-2-12
Enter Name	Signature	Date

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist

Batch Data Report No.: IN-ARP-VE-002793

Description			
1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods used?	☐ NO	☑ YES	☐ NA
a. Was the description of the waste items adequate?	☐ NO	☑ YES	☐ NA
2. Was the correct revision of operating procedure used? (Attachment 1, Section 1, Line 5)	☐ NO	☑ YES	☐ NA
3. Were the following calculation spot checks performed?			
a. Attachment 1, Section 2: Verify the total waste volume in Column 12, Row aa does not exceed 208 L for a 55-gallon drum or 1456 L for an SWB and verify the estimated weights in Row aa matches the measured net weight of waste in Attachment 1, Section 4, Row 26.	☐ NO	☑ YES	☐ NA
b. Attachment 1, Section 5: Verify the total waste volume in Row 33 a., matches the total waste volume in Section 2, Column 12, Row aa.	☐ NO	☑ YES	☐ NA
c. Attachment 1, Section 1: Check hand calculations in Lines 6h and 6p, and any additional hand calculations recorded in the comments field or in Section 2, Line 13.	☐ NO	☑ YES	☐ NA
4. Is only one waste stream selected in Line 34 of Attachment 1, Section 5, and is it consistent with the values shown in Attachment 1, Section 2, Column 12?	☐ NO	☑ YES	☐ NA
5. Is the data entered in the correct units and correct number of significant figures?	☐ NO	☑ YES	☐ NA
6. Were the data reviewed for transcription errors?	☐ NO	☑ YES	☐ NA
7. Does the BDR include VE for up to 20 containers?	☐ NO	☑ YES	☐ NA
8. Are BDR contents complete and do they match, Attachment 3, CCP Waste VE Batch Data Report Table of Contents?	☐ NO	☑ YES	☐ NA
9. Was completeness verified for data entry on the CCP VE Technique Data Form for the following?			
a. Section 1	☐ NO	☑ YES	☐ NA
b. Section 2	☐ NO	☑ YES	☐ NA
c. Section 3	☐ NO	☑ YES	☐ NA
d. Section 4	☐ NO	☑ YES	☐ NA
e. Section 5	☐ NO	☑ YES	☐ NA

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: IN-ARP-VE-002793

Description			
10. Is all the data signed and dated in Attachment 1, Section 6, using reproducible ink, and by the individual(s) generating it?	☐ NO	☑ YES	☐ NA
11. Is all data entered clearly, legibly, and accurately?	☐ NO	☑ YES	☐ NA
12. Were discrepancies between the operators reconciled?	☐ NO	☐ YES	☑ NA
13. Are all changes to original data lined out, initialed and dated by the individual making the changes?	☐ NO	☐ YES	☑ NA DJB 8-6-12
14. Were data changes made by the individual who originally collected the data or an equally qualified individual?	☐ NO	☐ YES	☑ NA
15. Was the DPS scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☑ YES	☐ NA
16. Was the daily DPS scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☑ YES	☐ NA
17. Was the container scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☑ YES	☐ NA
18. Was the daily container scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☑ YES	☐ NA
19. Was the torque wrench(es) in calibration prior to VE Technique and documented correctly?	☐ NO	☑ YES	☐ NA
20. Were NCR(s) initiated as indicated in Attachment 1, Section 1, dispositioned, and approved appropriately?	☐ NO	☐ YES	☑ NA
21. Was the correct waste stream and waste matrix code assigned?	☐ NO	☑ YES	☐ NA
22. Is there a valid VE data form for each drum in the batch?	☐ NO	☑ YES	☐ NA
23. Were the operators trained and qualified in accordance with the applicable requirements?	☐ NO	☑ YES	☐ NA

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: EN-ARP-VE-002793

Description			
24. Was precision maintained by reconciling any discrepancies between the operator(s) and the ITR with regard to identification of waste matrix code, liquids in excess of WIPP Hazardous Waste Facility Permit and WIPP Waste Acceptance Criteria limits and compressed gases?	☐ NO	☐ YES	☑ NA

Description

Comments:

12, 24 MARKED N/A DUE TO NO DISCEPANCIES. BRS 8-6-12

13, 14 MARKED N/A DUE TO NO CHANGES MADE BRS 8-6-12

20 MARKED N/A DUE TO NO NCR. BRS 8-6-12

I have reviewed 100 percent of the container-specific and batch data in this BDR and find it acceptable.

ITR: Brad Stark Brad Stark 8-6-12

Printed Name Signature Date

Attachment 5 – CCP Site Project Manager Data Validation Summary

On-Line Headspace Gas Analysis (HSG)			**Visual Examination (VE)**	X
Nondestructive Examination (NDE)			**Nondestructive Assay (NDA)**	
Direct-Canister HSG Analysis			**Homogeneous Waste Analysis (HWA)**	
Radiological Characterization				

BATCH DATA REPORT NUMBER: VVE05-01744 **DATE:** 21 September 2005

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
1. ITR, Tech Sup, and Facility QA checklists are complete and signed. **Reference Source: WAP B3-10b(2) Verification Source: DGL Checklist**	X			
2. The batch data report is complete. **Reference Source: WAP B3-10b(2) and WAC A.5.2 Verification Source: Data Sheets**	X			
3. QAOs have been met. **Reference Source: WAP B3-10b(2) Verification Source: QC Data Sheets**	X			Container Numbers: 10017133
4. Data reported with correct units and significant figures. **Reference Source: WAP B3-10b(2) Verification Source: Data Sheets**	X			
5. Data have been assessed correctly. **Reference Sources: WAP B3-10b(2) and B3-10b(3) Verification Source: Data Sheets**	X			
6. Is there a reference to or copy of the associated NCRS? **Reference Source: WAP Tables B3-11, B3-12 and B3-13 Verification Source: NCR**			X	No CCP NCRs associated with this BDR. AMWTP NCR 18134 generated for A/V test recording.
7. The applicable SPQAO Project Level Validation Checklist is complete, signed, and dated. **Reference Source: WAP B3-10b(2) Verification Source: SPQAO Checklist**	X			
8. **NDA** batch QC checks (e.g., weekly interfering matrix, background, performance, and transmission checks, measurement system checks) were properly performed. **Reference Source: WAC A.4.2 and/or WAC Table A-4.3 Verification Source: QC Data Sheets**			X	This is a VE BDR.
9. **HSG** – All data are reported with the appropriate flags. **Reference Source: WAP B3-10b(2) Verification Source: Data Sheet**			X	This is a VE BDR.

Attachment 5 – CCP Site Project Manager Data Validation Summary (continued)

BATCH DATA REPORT NUMBER: VVE05-01744 **DATE:** 21 September 2005

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers	
10. **HSG** batch QC checks (e.g., on-line blanks, duplicates, and laboratory control samples) were properly performed and meet the established usability criteria. **Reference Sources: WAP B3-10b(2) and Table B3-3 and/or B1-1b Verification Source: QC Data Sheets**			X	This is a VE BDR.	
11. **HSG** DAC assignment is valid based upon an assessment of the data collection and evaluation necessary to make the assignment. **Reference Source: WAP B3-10b(2) Verification Source: Drum Data Form**			X	This is a VE BDR.	
12. **NDE** data are complete and acceptable based on the videotape or equivalent media review (independent observation and replicate scan). **Reference Sources: WAP , B1-3b(2) and B3-10b(2) Verification Source: QC Data Sheets**			X	Container numbers:	This is a VE BDR.
				Rep:	
				IO:	
13. **VE** data is complete and properly reported. **Reference Sources: WAP B1-3b(3) and B3-10b(2) Verification Source: BDR**	X				
14. **HWA** Solid/Soil VOC batch QC checks (e.g., laboratory duplicates, blanks, and control samples) were properly performed and meet the established usability criteria. **Reference Sources: WAP B1-2b, B3-10b(2) and Table B3-5 Verification Source: QC Data Sheets**			X	This is a VE BDR.	
15. **HWA** Solid/Soil Semi-VOC batch QC checks (e.g., laboratory duplicates, blanks, and control samples) were properly performed and meet the established usability criteria. **Reference Sources: WAP B1-2b, B3-10b(2) and Table B3-7 Verification Source: QC Data Sheets**			X	This is a VE BDR.	

Attachment 5 – CCP Site Project Manager Data Validation Summary (continued)

BATCH DATA REPORT NUMBER: VVE05-01744 **DATE:** 21 September 2005

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
16. **HWA Solid/Soil Total Metals Batch QC checks** (e.g., duplicates, blanks, and laboratory control samples) were properly performed and meet the established criteria. **Reference Sources: WAP B1-2b, B3-10b(2), and Table B3-9 Verification Source: QC Data Sheets**			X	This is a VE BDR.
17. **OSR** for LANL Sealed Sources, does the waste meet the definition of sealed sources per 10 CFR 30.4 and 10 CFR 835.2 (effective January 1, 2004) and documentation included with the AK information? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	This is a VE BDR.
18. **OSR** for LANL Sealed Sources, does the Pipe Overpack Container (POC) only contain sources and packaging material (no non-packaging items are allowed in the waste container)? **Reference Source: WAP B-3a(1)(iii) Verification Source: Data Sheet**			X	This is a VE BDR.
19. **OSR** for LANL Sealed Sources, is the sealed source a US DOT Special Form Class 7 (Radioactive Material) per 49 CFR 34.27 (effective January 1, 2004) and is this documented in the AK information? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	This is a VE BDR.
20. For LANL Sealed Sources, is the integrity of each sealed source validated by documented contamination survey results to meet the requirements of 10 CFR 34.27 (effective January 1, 2004), and is assembled as part of AK documentation? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	This is a VE BDR.
21. **OSR** for LANL Sealed Sources, is each source a rigid sealed container or is it in a rigid sealed container less than or equal to 4 L? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	This is a VE BDR.

Attachment 5 – CCP Site Project Manager Data Validation Summary (continued)

BATCH DATA REPORT NUMBER: VVE05-01744 **DATE:** 21 September 2005

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
22. **OSR** for LANL Sealed Sources, does the AK information document that no VOC or VOC-bearing material are constituents of the waste? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information**			X	This is a VE BDR.
23. **OSR** for LANL Sealed Sources, does the AK information document that the outer casing of the sealed source is a non-VOC bearing material and is this verified during VE? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	This is a VE BDR.

The data for all containers in this batch are complete, properly reported, technically reasonable, representative and meet the Quality Assurance Objectives (QAOs). On a per waste container basis, as evidenced by my review of the Batch Data Report, all data have been validated in accordance with the QAPjP (CCP-PO-001) and are acceptable. This validation was accomplished through the generation level and project level data review, validation, and verification of this Batch Data Report.

David W. Moody — Site Project Manager

David W. Moody — Signature

13 October 05 — Date

Attachment 2 – CCP SPQAO Visual Examination Project Level Validation Checklist and Summary

BATCH DATA REPORT NUMBER: VVE05-01744 **EXAMINATION DATE:** 9/21/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
1. Training requirements met for the VE expert and VE operators who have signed the data forms? **Reference Source: WAP B1-3b(3) Verification Source: Training Records**	X			
2. Scale is identified and calibration has been checked? **Reference Source: WAP Table B3-11 Verification Source: Data Sheets**			X	Sludge waste stream (estimated weights)
3. Daily balance check documentation? **Reference Source: WAP Table B3-11 Verification Source: Data Sheets**			X	Sludge waste stream (estimated weights)
4. Video/audio test satisfactory? NA for VE technique for newly generated waste. **Reference Source: WAP Table B3-11 Verification Source: Data Sheets**	X			
5. A video/audio tape for each waste container with identification numbers? NA for VE technique for newly generated waste. **Reference Source: WAP Table B3-11 Verification Source: Video Tape**	X			10017133-092105
6. Batch number? **Reference Source: WAP Table B3-11 Verification Source: Data Sheets**	X			
7. Listing of all container numbers in the batch? **Reference Source: WAP Table B3-11 Verification Source: Cover Sheet and/or Batch Data Report**	X			10017133
8. Batch data report date? **Reference Source: WAP Table B3-11 Verification Source: Cover Sheet**	X			10/5/05
9. Implementing procedure and revision number? **Reference Source: WAP Table B3-11 Verification Source: Data Sheets**	X			INST-OI-34, Rev. 11 FC-1
10. Testing report sheets for each container in the batch? **Reference Source: WAP Table B3-11 Verification Source: Data Sheets**	X			

ORIGINAL

Attachment 2 – CCP SPQAO Visual Examination Project Level Validation Checklist and Summary (continued)

BATCH DATA REPORT NUMBER: VVE05-01744 **EXAMINATION DATE:** 9/21/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
11. Is there a reference to or copy of associated NCRs? **Reference Source: WAP Table B3-11 Verification Source: Batch Narrative**			X	No CCP NCRs associated with this BDR. AMWTP NCR 18134 generated for A/V test recording was recorded over.
12. Twenty or fewer containers in the batch? **Reference Source: WAP B3-10 Verification Source: Data Sheets**	X			1 container
13. Documentation of VE expert decision? **Reference Source: WAP Table B3-11 Verification Source: VE Expert Narrative**	X			
14. Signature and date of VE expert? For VE technique, signature and date of the VE Lead. **Reference Source: WAP Table B3-11 Verification Source: Data Sheets**	X			
15. Independent Technical Reviewer Checklist? **Reference Source: WAP B3-10a Verification Source: DGL Checklist**	X			
16. Technical Supervisor Checklist? **Reference Source: WAP B3-10a Verification Source: DGL Checklist**	X			
17. Facility QA Officer Checklist? **Reference Source: WAP B3-10a Verification Source: DGL Checklist**	X			
18. Waste container number? **Reference Source: WAP B3-11 Verification Source: Data Sheets**	X			
19. TRUCON and/or waste matrix code? **Reference Source: WAP Table B3-11 Verification Source: Data Sheets**	X			
20. Date of visual examination? **Reference Source: WAP Table B3-11 Verification Source: Data Sheets**	X			
21. Description of liner? **Reference Source: WAP Table B3-11 Verification Source: Data Sheets**	X			
22. Number of layers of confinement? **Reference Source: WAP Table B3-11 Verification Source: Data Sheets**	X			

Attachment 2 – CCP SPQAO Visual Examination Project Level Validation Checklist and Summary (continued)

BATCH DATA REPORT NUMBER: VVE05-01744 **EXAMINATION DATE:** 9/21/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
23. Indication of vented rigid liner? **Reference Source: WAP Table B3-11 Verification Source: Data Sheets**	X			
24. Verification that the physical form matches the waste stream description? **Reference Source: WAP Table B3-11 Verification Source: Data Sheets**	X			
25. Verification that the physical form matches the Waste Matrix Code? **Reference Source: WAP Table B3-11 Verification Source: Data Sheets**	X			
26. Indication of sealed container > 4 liters (L)? **Reference Source: WAP Table B3-11 Verification Source: Data Sheets**	X			
27. Amount of residual liquid? **Reference Source: WAP Table B3-11 Verification Source: Data Sheets**	X			
28. Are prohibited items absent? **Reference Source: WAP Table B3-11 Verification Source: Data Sheets and/or Batch Data Report**	X			
29. Comment field available? **Reference Source: WAP Table B3-11 Verification Source: Data Sheets**	X			
30. Weights/estimated weights for the 12 waste material parameters in Kg? **Reference Source: WAP Table B3-11 Verification Source: Data Sheets**	X			
31. Description for each waste material parameter? **Reference Source: WAP Table B3-11 Verification Source: Data Sheets**	X			
32. Container gross weight (Kg)? **Reference Source: WAP Table B3-11 Verification Source: Data Sheets**	X			

Attachment 2 – CCP SPQAO Visual Examination Project Level Validation Checklist and Summary (continued)

BATCH DATA REPORT NUMBER: VVE05-01744 **EXAMINATION DATE:** 9/21/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
33. Operator signature releases and date? Two operator's signature release and dates for VE technique for newly generated waste. **Reference Source: WAP Table B3-11 Verification Source: Data Sheets**	X			
34. For LANL Sealed Sources, does the characterized waste container meet the definition of sealed sources per 10 Code of Federal Regulations (CFR) 30.4 and 10 CFR 835.2 (effective January 1, 2004) evidence of which is assembled as part of Ak documentation? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	Not LANL Sealed Sources
35. For LANL Sealed Sources, are sealed sources the only non packaging items in the waste container? **Reference Source: WAP B-3a(1)(iii) Verification Source: Data Sheet**			X	Not LANL Sealed Sources
36. For LANL Sealed Sources, are the sealed source a US Department of Transportation (DOT) Special Form Class 7 (Radioactive Material) per 49 CFR 34.27 (effective January 1, 2004) and the certification of which is assembled as part of the AK documentation? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	Not LANL Sealed Sources
37. For LANL Sealed Sources, is the integrity of each sealed source validated by documented contamination survey results to meet the requirements of 10 CFR 34.27 (effective January 1, 2004), and is assembled as part of AK documentation? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	Not LANL Sealed Sources

Attachment 2 – CCP SPQAO Visual Examination Project Level Validation Checklist and Summary (continued)

BATCH DATA REPORT NUMBER: VVE05-01744 **EXAMINATION DATE:** 9/21/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
38. For LANL Sealed Sources, is each sealed source a rigid sealed container less than or equal to 4 L in size or is it in a rigid sealed container less than or equal to four liters? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	Not LANL Sealed Sources
39. For LANL Sealed Sources, AK documentation does not indicate the use of VOCs or VOC-bearing materials as constituents of sealed sources? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information**			X	Not LANL Sealed Sources
40. For LANL Sealed Sources, the outer casing of each sealed source is of a non VOC-bearing material which is verified using the VE technique at the time of packaging? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	Not LANL Sealed Sources
41. Is Attachment 6 included?			X	

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

Irene Quintana
Site Project QA Officer

Signature

10/11/05
Date

Attachment 2 – CCP SPQAO Visual Examination Project Level Validation Checklist and Summary (continued)

BATCH DATA REPORT NUMBER: VVE05-01744 **EXAMINATION DATE:** 9/21/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
38. For LANL Sealed Sources, is each sealed source a rigid sealed container less than or equal to 4 L in size or is it in a rigid sealed container less than or equal to four liters? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	Not LANL Sealed Sources
39. For LANL Sealed Sources, AK documentation does not indicate the use of VOCs or VOC-bearing materials as constituents of sealed sources? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information**			X	Not LANL Sealed Sources
40. For LANL Sealed Sources, the outer casing of each sealed source is of a non VOC-bearing material which is verified using the VE technique at the time of packaging? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	Not LANL Sealed Sources
41. Is Attachment 6 included?			X	

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

Irene Quintana — Site Project QA Officer

Signature

10/11/05 — Date

CCP Radiography/Visual Examination Comparison Report

Drum Container Identification: 10017133	VE Batch Number: VVE05-01744	VE Video ID Number: 10017133-092205		VE Date: 9/21/05
	Radiography Batch Number: INRTR2050037	Radiography Video ID Number: INRTR2050037 A		Radiography Date: 6/30/05
WASTE MATERIAL PARAMETER		Radiography (KG)	VISUAL (KG)	RPD
Iron Based Metals/Alloys				
Aluminum Based Metals/Alloys				
Other Metals				
Other Inorganic Materials (**sorbents**)				
Cellulosics				
Rubber				
Plastic		1.0	0.0	200.0
Organic Matrix		205.8	204.76	0.51
Inorganic Matrix				
Soils/Gravel				
Steel Packaging Materials		27.2	26.76	1.63
Plastic Packaging Materials		7.5	9.53	23.84
Is the waste matrix code determined by radiography different than the waste matrix code determined by VE?				Yes☐ No☒
Were prohibited items identified during VE that radiography did not identify?				Yes☐ No☒
Did VE determine that the container did not meet the WIPP WAP and WAC after radiography had determined that the container was acceptable?				Yes ☐ No☒

The RPD is calculated as follows:

$$RPD = \frac{C_1 - C_2}{\frac{(C_1 + C_2)}{2}} \times 100$$

Completed By:

Irene Quintana
Signature Print Name

10/11/05
Date

SRWO-1

VVE05-01744
BATCH DATA REPORT

Report Date: 10/06/05

Narrative:

This report provides test results and documentation for the Miscertification Visual Examinations of the following container(s) using INST-OI-34.

The following Nonconformance Reports are associated with and attached to this Batch Data Report:

NCR 18134

Position	Signature	Date
AMWTP Site Project Manager	NA	NA

Table of Contents
VVE05-01744

Contents
Batch Narrative
Table of Contents
Report Cover Sheet
VVE Analysis Reports
RTR/VE Update Analysis Reports (as applicable)
VVE/RTR Comparison Report
Scale Calibration Checksheet * If Applicable
VE Independent Technical Reviewer Checklist
VE Technical Supervisor Checklist
VE Quality Assurance Checklist
Site Quality Assurance Officer VE Checklist
Acceptable Knowledge VE Checklist
Site Project Manager Checklist
Batch Comments
Nonconformance Reports

AMWTP
Advanced Mixed Waste Treatment Project

AMWTP

Batch Report Coversheet

Date: 05-Oct-2005

Time: 18:21

Batch Type Visual Examination
Batch Report No. VVE05-01744
Batch Id VVE05-01744
Open Date 21-SEP-05 20:19:39
Close Date 21-SEP-05 23:02:55
Batch Status CLOSED
Test Facility Idaho AMWTP
Equipment Id Z-250-801 634-Coring

Container Id	IDC	Analysis Id	Date Examined	QC Type	Analysis Status	Operator
10017133	RF-801	0000017812	21-SEP-05 20:09:43	Original	P	CHRIS NOWACKI
10017133	RF-801	0000017816	21-SEP-05 22:42:31	Supplemental	P	CHRIS NOWACKI

AMWTP

Advanced Mixed Waste Treatment Project

AMWTP

Batch Report Coversheet SUPERSEDED

Date: 03-Oct-2005

Time: 16:20

Batch Type Visual Examination **Batch Report No.** VVE05-01744

Batch Id VVE05-01744 **Open Date** 21-SEP-05 20:19:39 **Close Date** 21-SEP-05 23:02:55

Batch Status CLOSED

Test Facility Idaho AMWTP

Equipment Id Z-250-801 634-Coring

Container Id	IDC	Analysis Id	Date Examined	QC Type	Analysis Status	Operator
10017133	RF-801	0000017812	21-SEP-05 20:09:43	Original	P	DAVEY SUMNERS
10017133	RF-801	0000017816	21-SEP-05 22:42:31	Supplemental	P	DAVEY SUMNERS

SUPERSEDED

AMWTP
Advanced Mixed Waste Treatment Project

AMWTP

VE Analysis Report

Batch Id WE05-01744

Date: 05-Oct-2005

Time: 18:21

Container Id 10017133

Analysis Id 0000017812

VE Date 21-SEP-05 20:09:43

Analysis Status Pass

Gen-IDC Id RF-801 Solidified Organics

Procedure Id INST-OI-34

VE Weight 531.41 lbs.

Equipment Z-250-801

Revision 11 FC-1

Net Weight 451.41 lbs.

Container Type 001 drum, 55 Gallon (17C)

Summary Category Group S3000

Operator CHRIS NOWACKI

VEE JEFFERY SHAINHOLTZ

Waste Matrix S3150

General

Recording Id 10017133-092105 Start Position 00:00:00

End Position 00:22:47

Audio/Visual Check Satisfactory? Yes

Liner Present? Yes

Layers Of Confinement 2 Liner Hole Size >0.3" Liner Punctured? Yes

Liner Type TYPE 3

Fill Factor 95 % Closure Method Twisted and Taped

Liner Lid Present Yes

Liquids

Liquids Present? No Comment

Liquid Between Liner and Drum 0 pints

Liquid In Bags 0 pints

Containerized Liquid 0 pints

Total Liquid Amount 0 pints

Prohibited Liquids Present No

Containerized Liquids Over 1 Inch No

Contents

Sharp Obejcts? No

Are Sharp Objects Protected? Yes

	Value	Comment
Prohibited Compressed Gas Present?	No	
Explosives Present?	No	
Pyrophorics Present?	No	
Mercury Contaminated>1000PPM	No	
Prohibited PCBs Present?	No	
Wet Cell Batteries Present?	No	
Corrosives,Ignitables or Reactives Present?	No	
Beryllium Contaminates Present?	No	
Hazardous-Only Waste Present?	No	
Is Waste Incompatible with backfill, packaging materials, or shipping container materials?	No	
Sealed Containers Present?	No	
Sealed Containers Over 4L?	No	

IDC Verification

Is IDC correct? Yes Recommended IDC

IDC Change Reason

Visual Exam Comment VEE Ben Tanaka, VE Operator in training Jerry Fenwick under the direction on Davie Sumners. Audio Viedo check was performed and satisfactory. There was no evidence of any prohibited items or any liquid in the waste. The liner was vented >0.3. The closure method was twisted and taped. The Drum is WIPP ACCEPT. After the drum was complete reviewing of the tape reviled that the audio viedo check was not there.VEE Ben Tanaka Waste appears to be organic sludge and the VEE also authorized a limited visual exam. Also the liner hole size was updated. CN 10/05/05

AMWTP Advanced Mixed Waste Treatment Project

AMWTP SUPERSEDED Date: 03-Oct-2005

VE Analysis Report

Time: 16:20

Batch Id VVE05-01744 Container Id 10017133 Analysis Id 0000017812

VE Date 21-SEP-05 20:09:43 Analysis Status Pass

Gen-IDC Id RF-801 Solidified Organics Procedure Id INST-OI-34 VE Weight 531.41 lbs.

Equipment Z-250-801 Revision 11 FC-1 Net Weight 451.41 lbs.

Container Type 001 drum, 55 Gallon (17C) Summary Category Group S3000

Operator DAVEY SUMNERS VEE BENJAMIN TANAKA Waste Matrix S3150

General

Recording Id 10017133-092105 Start Position 00:00:00 Audio/Visual Check Satisfactory? Yes

End Position 00:22:47 Liner Present? Yes

Layers Of Confinement 2 Liner Hole Size >0.3 Liner Punctured? Yes Liner Type TYPE 3

Fill Factor 95 % Closure Method Twisted and Taped Liner Lid Present Yes

Liquids

Liquids Present? No Comment

Liquid Between Liner and Drum 0 pints Liquid in Bags 0 pints

Containerized Liquid 0 pints Total Liquid Amount 0 pints

Prohibited Liquids Present No

Containerized Liquids Over 1 Inch No

Contents

Sharp Obejcts? No Are Sharp Objects Protected? Yes

	Value	Comment
Prohibited Compressed Gas Present?	No	
Explosives Present?	No	
Pyrophorics Present?	No	
Mercury Contaminated>1000PPM	No	
Prohibited PCBs Present?	No	
Wet Cell Batteries Present?	No	
Corrosives,Ignitables or Reactives Present?	No	
Beryllium Contaminates Present?	No	
Hazardous-Only Waste Present?	No	
Is Waste Incompatible with backfill, packaging materials, or shipping container materials?	No	
Sealed Containers Present?	No	
Sealed Containers Over 4L?	No	

IDC Verification

Is IDC correct? Yes Recommended IDC

IDC Change Reason

Visual Exam Comment VEE Ben Tanaka, VE Operator in training Jerry Fenwick under the direction on Davie Sumners. Audio Viedo check was performed and satisfactory. There was no evidence of any prohibited items or any liquid in the waste. The liner was vented >0.3. The closure method was twisted and taped. The Drum Is WIPP ACCEPT. After the drum was complete reviewing of the tape reviled that the audio viedo check was not there.VEE Ben Tanaka

IDC EPA CODES

SUPERSEDED

AMWTP
Advanced Mixed Waste Treatment Project

AMWTP

VE Analysis Report

Date: 05-Oct-2005

Time: 18:21

Batch Id VVE05-01744

Container Id 10017133

Analysis Id 0000017812

IDC EPA CODES

Current Container IDC Code: RF-801

Recommended IDC Code:

EPA Code		EPA Code
D021	Chlorobenzene	
D022	Chloroform	
F001	The following spent halogenated solvents used in degreasing: Tetrachloroethylene, trichlorethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride and chlorinated fluorocarbons; all spent solvent mixtures/blends used in degreasing containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those solvents listed in F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	
F002	The following spent halogenated solvents: Tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, trichlorofluoromethane, and 1,1,2,trichloroethane; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those solvents listed in F001, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	
F003	The following spent non-halogenated solvents: Xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol; all spent solvent mixtures/blends containing, before use, only the above spent nonhalogenated solvents; and all spent solvent mixtures/blends containing, before use, one or more of the above nonhalogenated solvents, and a total of ten percent or more (by volume) of one or more of those solvents listed in F001, F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt	Item Wt(lbs)
90 mil liner	1.000	EACH	16.000	16.000
Drum plastic bag	1.000	EACH	1.000	1.000
Box plastic liner	0.000	EACH	5.000	0.000
O-ring plastic bag in sludge, organic setups, etc.	1.000	EACH	4.000	4.000

Current Container IDC Code: RF-801 **Recommended IDC Code:**

EPA Code		EPA Code
D021	Chlorobenzene	
D022	Chloroform	
F001	The following spent halogenated solvents used in degreasing: Tetrachloroethylene, trichlorethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride and chlorinated fluorocarbons; all spent solvent mixtures/blends used in degreasing containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those solvents listed in F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	
F002	The following spent halogenated solvents: Tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, trichlorofluoromethane, and 1,1,2,trichloroethane; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those solvents listed in F001, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	
F003	The following spent non-halogenated solvents: Xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol; all spent solvent mixtures/blends containing, before use, only the above spent nonhalogenated solvents; and all spent solvent mixtures/blends containing, before use, one or more of the above nonhalogenated solvents, and a total of ten percent or more (by volume) of one or more of those solvents listed in F001, F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt	Item Wt(lbs)
90 mil liner	1.000	EACH	16.000	16.000
Drum plastic bag	1.000	EACH	1.000	1.000
Box plastic liner	0.000	EACH	5.000	0.000
O-ring plastic bag in sludge, organic setups, etc.	1.000	EACH	4.000	4.000

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Drum Stub Bag (Plastic Packaging)	0.000	EACH	2.000	0.000
55-GAL DRUM (17c)	0.000	EACH	59.000	0.000
Plywood Spacer (Packaging)	0.000	EACH	7.000	0.000

Waste Item by Weight

Material Item	Quantity	Unit	Unit Wt	Item Wt(lbs)
Cardboard liner	0.000	EACH	4.000	0.000
Fiber pack	0.000	EACH	6.000	0.000
Box fiberboard liner	0.000	EACH	15.000	0.000
55-GAL DRUM (17c)	0.000	EACH	59.000	0.000
Plastic bag for waste	0.000	EACH	0.250	0.000
Lead brick 2 x 4 x 8 in.	0.000	EACH	25.000	0.000
Leaded rubber glove	0.000	EACH	5.500	0.000
Leaded rubber apron	0.000	EACH	5.250	0.000
Drum lead-liner (1/8"x28"x72")(.4lb/in.cubed)	0.000	EACH	100.000	0.000
Drum lead-liner (1/16"x28"x72")	0.000	EACH	50.000	0.000
Poly bottles (1 gal)	0.000	EACH	1.000	0.000
Metal can	0.000	EACH	0.500	0.000
Drum Stub Bag (Plastic Waste)	0.000	EACH	2.000	0.000
Plywood Spacer	0.000	EACH	7.000	0.000
8802 Vollrath Can w/ Lid	0.000	EACH	1.140	0.000
1 Quart Plastic Container w/ Lid	0.000	EACH	0.140	0.000
1/2 Gallon Paint Can	0.000	EACH	0.540	0.000
1 Gallon Produce Can	0.000	EACH	0.820	0.000
1 Gallon Ice Cream Can	0.000	EACH	0.320	0.000
8YLY30 30 mil Glovebox Glove	0.000	EACH	1.880	0.000
8YLY40 40 mil Glovebox Glove	0.000	EACH	2.040	0.000
Glovebox Glove Non-Leaded 8N30	0.000	EACH	1.000	0.000

Waste Item by Volume

Material Item	Quantity	Unit	Unit Wt	Item Wt(lbs)
Vermiculite (95 gm/liter) .125 lb/pint	0.000	PINTS	0.125	0.000
Oil-Dri (404 gm/liter) 0.42 lb/pint	0.000	PINTS	0.420	0.000
Liquids for Inorganic Matrix	0.000	PINTS	1.000	0.000
Liquids for Organic Matrix	0.000	PINTS	1.000	0.000
Liquids for Other Inorganics	0.000	PINTS	1.000	0.000
Aquaset Absorbent	0.000	PINTS	1.200	0.000
Uncured Cement	0.000	PINTS	3.000	0.000
Cured Cement (Other Inorganics)	0.000	PINTS	1.125	0.000
Asphalt	0.000	PINTS	1.354	0.000
Brass	0.000	PINTS	8.890	0.000
Dirt	0.000	PINTS	1.303	0.000
Paper	0.000	PINTS	0.969	0.000
Rubber	0.000	PINTS	1.554	0.000
Tile	0.000	PINTS	0.919	0.000
Wood	0.000	PINTS	0.702	0.000
Aluminum	0.000	PINTS	3.123	0.000
Cardboard	0.000	PINTS	0.833	0.000
Copper	0.000	PINTS	9.369	0.000
Fire Brick	0.000	PINTS	3.123	0.000
Glass	0.000	PINTS	2.082	0.000
Raschig Rings	0.000	PINTS	0.625	0.000
Graphite	0.000	PINTS	0.520	0.000
Gravel	0.000	PINTS	2.082	0.000
Iron	0.000	PINTS	7.807	0.000
Lead	0.000	PINTS	11.451	0.000
Plastic	0.000	PINTS	0.937	0.000
Sand	0.000	PINTS	2.082	0.000
Stainless Steel	0.000	PINTS	8.328	0.000
Tantalum	0.000	PINTS	17.697	0.000
Beryllium (1.85 lbs/pint)	0.000	PINTS	1.850	0.000

Drum Stub Bag (Plastic Packaging)	0.000	EACH	2.000	0.000
55-GAL DRUM (17c)	0.000	EACH	59.000	0.000
Plywood Spacer (Packaging)	0.000	EACH	7.000	0.000

Waste Item by Weight

Material Item	Quantity	Unit	Unit Wt	Item Wt(lbs)
Cardboard liner	0.000	EACH	4.000	0.000
Fiber pack	0.000	EACH	6.000	0.000
Box fiberboard liner	0.000	EACH	15.000	0.000
55-GAL DRUM (17c)	0.000	EACH	59.000	0.000
Plastic bag for waste	0.000	EACH	0.250	0.000
Lead brick 2 x 4 x 8 in.	0.000	EACH	25.000	0.000
Leaded rubber glove	0.000	EACH	5.500	0.000
Leaded rubber apron	0.000	EACH	5.250	0.000
Drum lead-liner (1/8"x28"x72")(.4lb/in.cubed)	0.000	EACH	100.000	0.000
Drum lead-liner (1/16"x28"x72")	0.000	EACH	50.000	0.000
Poly bottles (1 gal)	0.000	EACH	1.000	0.000
Metal can	0.000	EACH	0.500	0.000
Drum Stub Bag (Plastic Waste)	0.000	EACH	2.000	0.000
Plywood Spacer	0.000	EACH	7.000	0.000
8802 Vollrath Can w/ Lid	0.000	EACH	1.140	0.000
1 Quart Plastic Container w/ Lid	0.000	EACH	0.140	0.000
1/2 Gallon Paint Can	0.000	EACH	0.540	0.000
1 Gallon Produce Can	0.000	EACH	0.820	0.000
1 Gallon Ice Cream Can	0.000	EACH	0.320	0.000
8YLY30 30 mil Glovebox Glove	0.000	EACH	1.880	0.000
8YLY40 40 mil Glovebox Glove	0.000	EACH	2.040	0.000
Glovebox Glove Non-Leaded 8N30	0.000	EACH	1.000	0.000

Waste Item by Volume

Material Item	Quantity	Unit	Unit Wt	Item Wt(lbs)
Vermiculite (95 gm/liter) .125 lb/pint	0.000	PINTS	0.125	0.000
Oil-Dri (404 gm/liter) 0.42 lb/pint	0.000	PINTS	0.420	0.000
Liquids for Inorganic Matrix	0.000	PINTS	1.000	0.000
Liquids for Organic Matrix	0.000	PINTS	1.000	0.000
Liquids for Other Inorganics	0.000	PINTS	1.000	0.000
Aquaset Absorbent	0.000	PINTS	1.200	0.000
Uncured Cement	0.000	PINTS	3.000	0.000
Cured Cement (Other Inorganics)	0.000	PINTS	1.125	0.000
Asphalt	0.000	PINTS	1.354	0.000
Brass	0.000	PINTS	8.890	0.000
Dirt	0.000	PINTS	1.303	0.000
Paper	0.000	PINTS	0.969	0.000
Rubber	0.000	PINTS	1.554	0.000
Tile	0.000	PINTS	0.919	0.000
Wood	0.000	PINTS	0.702	0.000
Aluminum	0.000	PINTS	3.123	0.000
Cardboard	0.000	PINTS	0.833	0.000
Copper	0.000	PINTS	9.369	0.000
Fire Brick	0.000	PINTS	3.123	0.000
Glass	0.000	PINTS	2.082	0.000
Raschig Rings	0.000	PINTS	0.625	0.000
Graphite	0.000	PINTS	0.520	0.000
Gravel	0.000	PINTS	2.082	0.000
Iron	0.000	PINTS	7.807	0.000
Lead	0.000	PINTS	11.451	0.000
Plastic	0.000	PINTS	0.937	0.000
Sand	0.000	PINTS	2.082	0.000
Stainless Steel	0.000	PINTS	8.328	0.000
Tantalum	0.000	PINTS	17.697	0.000
Beryllium (1.85 lbs/pint)	0.000	PINTS	1.850	0.000

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VE Analysis Report

Date: 05-Oct-2005

Time: 18:21

Batch Id VVE05-01744 | Container Id 10017133 | Analysis Id 0000017812

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	0.000
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	0.000
Other Inorganic Materials	0.000	0.000
Cellulosics	0.000	0.000
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	0.000
Inorganic matrix	0.000	0.000
Organic matrix	100.000	451.410
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	59.000
Plastic (packaging materials)	0.000	21.000
Cellulosics Packaging	0.000	0.000

QC Check

Description	Scale ID	Tolerance	Weight	QC Weight	QC Status

Container Filters

Exclude	Filter Model	Install Event	Install Date	Installed By	Remove Date	Removed By
	NF19SD	RTR/VE Update	21-SEP-05	DSUMNERS		
	FilterComment					
	NF020	VE Verification	21-SEP-05	DSUMNERS	21-SEP-05	DSUMNERS
	FilterComment					

Esignature History

Esig Approval Id	User Id	E-signature Date	Comment
248289	DSUMNERS	21-SEP-05	
248290	BTANAKA	21-SEP-05	
260216	CNOWACKI	05-OCT-05	Waste appears to be organic sludge and the VEE also authorized a limited visual exam. Also the liner hole size was updated. CN 10/05/05
260218	JSHAINHOLTZ	05-OCT-05	Concur with rework. Reviewed recording and verify VEE B. Tenaka authorized limited VE for this container. JS 10/5/05

End of VE Analysis Report

AMWTP

Advanced Mixed Waste Treatment Project

AMWTP

SUPERSEDED

Date: 03-Oct-2005

VE Analysis Report

Time: 16:20

Batch Id VE05-01744

Container Id 10017133

Analysis Id 0000017812

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	0.000
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	0.000
Other Inorganic Materials	0.000	0.000
Cellulosics	0.000	0.000
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	0.000
Inorganic matrix	0.000	0.000
Organic matrix	100.000	451.410
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	59.000
Plastic (packaging materials)	0.000	21.000
Cellulosics Packaging	0.000	0.000

QC Check

Description	Scale ID	Tolerance	Weight	QC Weight	QC Status

Container Filters

Exclude	Filter Model	Install Event	Install Date	Installed By	Remove Date	Removed By
	NF19SD	RTR/VE Update	21-SEP-05	DSUMNERS		
	FilterComment					
	NF020	VE Verification	21-SEP-05	DSUMNERS	21-SEP-05	DSUMNERS
	FilterComment					

Esignature History

Esig Approval Id	User Id	E-signature Date	Comment
248289	DSUMNERS	21-SEP-05	
248290	BTANAKA	21-SEP-05	

End of VE Analysis Report

SUPERSEDED

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Advanced Mixed Waste Treatment Project

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RTR/VE Update Analysis Report

Date: 05-Oct-2005

Time: 18:21

Affected Batch VVE05-01744 **Container Id** 10017133 **Analysis Id** 0000017816 **Analysis Status** Passed

VE Date 21-SEP-05 22:42:31 **Procedure Id** INST-OI-34 **Gross Weight** 533.71 lbs.

Gen-IDC Id RF-801 Solidified Organics **Proc Rev** 11 FC-1 **Net Weight** 456.71 lbs.

Waste Matrix S3150 **Summary Category Group** S3000 **Equipment ID** Z-250-801

Container Type 001 drum, 55 Gallon (17C) **Affected Analysis ID** 0000017812

Operator 1 CHRIS NOWACKI **Operator 2** JASON BOTTLES

General

Liner Present? Yes **Liner Punctured?** Yes **Liner Hole Size** 20" **Liner Type** TYPE 3

Liner Lid Present Yes **Fill Factor** 95 %

Liquids

Liquids Present? No **Comment**

Liquid Between Liner and Drum 0 pints **Liquid In Bags** 0 pints

Containerized Liquid 0 pints **Total Liquid Amount** 0 pints

Prohibited Liquids Present No

Containerized Liquids Over 1 inch No

Contents

Sharp Obejcts? No **Are Sharp Objects Protected?** Yes

	Value	*Comment*
Prohibited Compressed Gas Present?	No	
Explosives Present?	No	
Pyrophorics Present?	No	
Mercury Contaminated>1000PPM	No	
Prohibited PCBs Present?	No	
Wet Cell Batteries Present?	No	
Corrosives,Ignitables or Reactives Present?	No	
Beryllium Contaminates Present?	No	
Hazardous-Only Waste Present?	No	
Is Waste Incompatible with backfill, packaging materials, or shipping container materials?	No	
Sealed Containers Present?	No	
Sealed Containers Over 4 liters?	No	

IDC Verification

Is IDC correct? Yes **Recommended IDC**

IDC Change Reason

Visual Exam Comment {VEE Ben Tanaka, VE Operator in training Jerry Fenwick under the direction on Davie Sumners. Audio Viedo check was performed and satisfactory. There was no evidence of any prohibited items or any liquid in the waste. The liner was vented >0.3. The closure method was twisted and taped. The Drum is WIPP ACCEPT. After the drum was complete reviewing of the tape reviled that the audio viedo check was not there.VEE Ben Tanaka - VE comment from

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Advanced Mixed Waste Treatment Project

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Date: 03-Oct-2005

RTR/VE Update Analysis Report SUPERSEDED

Time: 16:20

Affected Batch VVE05-01744 **Container Id** 10017133 **Analysis Id** 0000017816 **Analysis Status** Passed

VE Date 21-SEP-05 22:42:31 **Procedure Id** INST-OI-34 **Gross Weight** 533.71 lbs.

Gen-IDC Id RF-801 Solidified Organics **Proc Rev** 11 FC-1 **Net Weight** 456.71 lbs.

Waste Matrix S3150 **Summary Category Group** S3000 **Equipment ID** Z-250-801

Container Type 001 drum, 55 Gallon (17C) **Affected Analysis ID** 0000017812

Operator 1 DAVEY SUMNERS **Operator 2** CONLEY BEEBE

General

Liner Present? Yes **Liner Punctured?** Yes **Liner Hole Size** 20" **Liner Type** TYPE 3

Liner Lid Present Yes **Fill Factor** 95 %

Liquids

Liquids Present? No **Comment**

Liquid Between Liner and Drum 0 pints **Liquid in Bags** 0 pints

Containerized Liquid 0 pints **Total Liquid Amount** 0 pints

Prohibited Liquids Present No

Containerized Liquids Over 1 Inch No

Contents

Sharp Objects? No **Are Sharp Objects Protected?** Yes

	Value	*Comment*
Prohibited Compressed Gas Present?	No	
Explosives Present?	No	
Pyrophorics Present?	No	
Mercury Contaminated>1000PPM	No	
Prohibited PCBs Present?	No	
Wet Cell Batteries Present?	No	
Corrosives,Ignitables or Reactives Present?	No	
Beryllium Contaminates Present?	No	
Hazardous-Only Waste Present?	No	
Is Waste Incompatible with backfill, packaging materials, or shipping container materials?	No	
Sealed Containers Present?	No	
Sealed Containers Over 4 liters?	No	

IDC Verification

Is IDC correct? Yes **Recommended IDC**

IDC Change Reason

Visual Exam Comment (VEE Ben Tanaka, VE Operator in training Jerry Fenwick under the direction on Davie Sumners. Audio Viedo check was performed and satisfactory. There was no evidence of any prohibited items or any liquid in the waste. The liner was vented >0.3. The closure method was twisted and taped [illegible] After the drum was complete reviewing of the tape reviled that the audio viedo check was not there.VEE Ben Tanaka - VE comment from

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Advanced Mixed Waste Treatment Project

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RTR/VE Update Analysis Report

Date: 05-Oct-2005

Time: 18:21

Affected Batch VVE05-01744 **Container Id** 10017133 **Analysis Id** 0000017816

Visual Exam Comment VE batch VVE05-01744) NCR 18134 created for A/V Test recording. RVU for drum closeout. dls 9/21/05 Waste appears to be organic sludge and the VEE also authorized a limited visual exam. CN 10/05/05

Closure

Closure Date 21-SEP-05

Closure Method Twisted and Taped

Layers Of Confinement 1

Overpack Required? No

New Steel Lid? Yes

IDC EPA CODES

Current Container IDC Code: RF-801

Recommended IDC Code:

EPA Code		EPA Code
~~D021~~	~~Chlorobenzene~~ MEJ 10/7/05	
D022	Chloroform	
F001	The following spent halogenated solvents used in degreasing: Tetrachloroethylene, trichlorethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride and chlorinated fluorocarbons; all spent solvent mixtures/blends used in degreasing containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those solvents listed in F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	
F002	The following spent halogenated solvents: Tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, trichlorofluoromethane, and 1,1,2,trichloroethane; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those solvents listed in F001, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	
F003	~~The following spent non-halogenated solvents: Xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol; all spent solvent mixtures/blends containing, before use, only the above spent nonhalogenated solvents; and all spent solvent mixtures/blends containing, before use, one or more of the above nonhalogenated solvents, and a total of ten percent or more (by volume) of one or more of those solvents listed in F001, F002, F004,~~ MEJ 10/7/05	

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RTR/VE Update Analysis Report

Date: 03-Oct-2005

Time: 16:21

Affected Batch VVE05-01744 **Container Id** 10017133 **Analysis Id** 0000017816

Visual Exam Comment VE batch VVE05-01744) NCR 18134 created for A/V Test recording. RVU for drum closeout. dls 9/21/05

Closure

Closure Date 21-SEP-05

Closure Method Twisted and Taped

Layers Of Confinement 1

Overpack Required? No

New Steel Lid? Yes

IDC EPA CODES

Current Container IDC Code: RF-801

Recommended IDC Code:

EPA Code		EPA Code
D021	Chlorobenzene	
D022	Chloroform	
F001	The following spent halogenated solvents used in degreasing: Tetrachloroethylene, trichlorethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride and chlorinated fluorocarbons; all spent solvent mixtures/blends used in degreasing containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those solvents listed in F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	
F002	The following spent halogenated solvents: Tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, trichlorofluoromethane, and 1,1,2,trichloroethane; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those solvents listed in F001, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	
F003	The following spent non-halogenated solvents: Xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol; all spent solvent mixtures/blends containing, before use, only the above spent nonhalogenated solvents; and all spent solvent mixtures/blends containing, before use, one or more of the above nonhalogenated solvents, and a total of ten percent or more (by volume) of one or more of those solvents listed in F001, F002, F004,	SUPERSEDED

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Advanced Mixed Waste Treatment Project

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RTR/VE Update Analysis Report

Date: 05-Oct-2005

Time: 18:21

Affected Batch VVE05-01744 **Container Id** 10017133 **Analysis Id** 0000017816

IDC EPA CODES

Current Container IDC Code: RF-801 **Recommended IDC Code:**

EPA Code	EPA Code
~~and F005~~; and still bottoms from the recovery of these spent solvents and spent solvent mixtures. Mag 10/7/05	

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt	Item Wt(lbs)
90 mil liner	1.000	EACH	16.000	16.000
Drum plastic bag	0.000	EACH	1.000	0.000
Box plastic liner	0.000	EACH	5.000	0.000
O-ring plastic bag in sludge, organic setups, etc.	0.000	EACH	4.000	0.000
Drum Stub Bag (Plastic Packaging)	1.000	EACH	2.000	2.000
55-GAL DRUM (17c)	0.000	EACH	59.000	0.000
Plywood Spacer (Packaging)	0.000	EACH	7.000	0.000

Waste Items by Weight

Material Item	Quantity	Unit	Unit Wt	Item Wt(lbs)
drum filter	1.000	EACH	0.300	0.300
poly drum bag and o-ring bag	1.000	EACH	5.000	5.000
Cardboard liner	0.000	EACH	4.000	0.000
Fiber pack	0.000	EACH	6.000	0.000
Box fiberboard liner	0.000	EACH	15.000	0.000
55-GAL DRUM (17c)	0.000	EACH	59.000	0.000
Plastic bag for waste	0.000	EACH	0.250	0.000
Lead brick 2 x 4 x 8 in.	0.000	EACH	25.000	0.000
Leaded rubber glove	0.000	EACH	5.500	0.000
Leaded rubber apron	0.000	EACH	5.250	0.000
Drum lead-liner (1/8"x28"x72")(.4lb/in.cubed)	0.000	EACH	100.000	0.000
Drum lead-liner (1/16"x28"x72")	0.000	EACH	50.000	0.000
Poly bottles (1 gal)	0.000	EACH	1.000	0.000
Metal can	0.000	EACH	0.500	0.000
Drum Stub Bag (Plastic Waste)	0.000	EACH	2.000	0.000
Plywood Spacer	0.000	EACH	7.000	0.000
8802 Vollrath Can w/ Lid	0.000	EACH	1.140	0.000
1 Quart Plastic Container w/ Lid	0.000	EACH	0.140	0.000
1/2 Gallon Paint Can	0.000	EACH	0.540	0.000
1 Gallon Produce Can	0.000	EACH	0.820	0.000
1 Gallon Ice Cream Can	0.000	EACH	0.320	0.000
8YLY30 30 mil Glovebox Glove	0.000	EACH	1.880	0.000
8YLY40 40 mil Glovebox Glove	0.000	EACH	2.040	0.000
Glovebox Glove Non-Leaded 8N30	0.000	EACH	1.000	0.000

AMWTP Advanced Mixed Waste Treatment Project

AMWTP SUPERSEDED Date: 03-Oct-2005

RTR/VE Update Analysis Report

Time: 16:21

Affected Batch VVE05-01744 **Container Id** 10017133 **Analysis Id** 0000017816

IDC EPA CODES

Current Container IDC Code: RF-801 **Recommended IDC Code:**

EPA Code	EPA Code
and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	

Waste Material Items

Packaging Materials

Material Item	Quantity	Unit	Unit Wt	Item Wt(lbs)
90 mil liner	1.000	EACH	16.000	16.000
Drum plastic bag	0.000	EACH	1.000	0.000
Box plastic liner	0.000	EACH	5.000	0.000
O-ring plastic bag in sludge, organic setups, etc.	0.000	EACH	4.000	0.000
Drum Stub Bag (Plastic Packaging)	1.000	EACH	2.000	2.000
55-GAL DRUM (17c)	0.000	EACH	59.000	0.000
Plywood Spacer (Packaging)	0.000	EACH	7.000	0.000

Waste Items by Weight

Material Item	Quantity	Unit	Unit Wt	Item Wt(lbs)
drum filter	1.000	EACH	0.300	0.300
poly drum bag and o-ring bag	1.000	EACH	5.000	5.000
Cardboard liner	0.000	EACH	4.000	0.000
Fiber pack	0.000	EACH	6.000	0.000
Box fiberboard liner	0.000	EACH	15.000	0.000
55-GAL DRUM (17c)	0.000	EACH	59.000	0.000
Plastic bag for waste	0.000	EACH	0.250	0.000
Lead brick 2 x 4 x 8 in.	0.000	EACH	25.000	0.000
Leaded rubber glove	0.000	EACH	5.500	0.000
Leaded rubber apron	0.000	EACH	5.250	0.000
Drum lead-liner (1/8"x28"x72")(.4lb/in.cubed)	0.000	EACH	100.000	0.000
Drum lead-liner (1/16"x28"x72")	0.000	EACH	50.000	0.000
Poly bottles (1 gal)	0.000	EACH	1.000	0.000
Metal can	0.000	EACH	0.500	0.000
Drum Stub Bag (Plastic Waste)	0.000	EACH	2.000	0.000
Plywood Spacer	0.000	EACH	7.000	0.000
8802 Vollrath Can w/ Lid	0.000	EACH	1.140	0.000
1 Quart Plastic Container w/ Lid	0.000	EACH	0.140	0.000
1/2 Gallon Paint Can	0.000	EACH	0.540	0.000
1 Gallon Produce Can	0.000	EACH	0.820	0.000
1 Gallon Ice Cream Can	0.000	EACH	0.320	0.000
8YLY30 30 mil Glovebox Glove	0.000	EACH	1.880	0.000
8YLY40 40 mil Glovebox Glove	0.000	EACH	2.040	0.000
Glovebox Glove Non-Leaded 8N30	0.000	EACH	1.000	0.000

AMWTP

Advanced Mixed Waste Treatment Project

AMWTP

RTR/VE Update Analysis Report

Date: 05-Oct-2005

Time: 18:21

Affected Batch VVE05-01744 **Container Id** 10017133 **Analysis Id** 0000017816

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt	Item Wt(lbs)
Vermiculite (95 gm/liter) .125 lb/pint	0.000	PINTS	0.125	0.000
Oil-Dri (404 gm/liter) 0.42 lb/pint	0.000	PINTS	0.420	0.000
Liquids for Inorganic Matrix	0.000	PINTS	1.000	0.000
Liquids for Organic Matrix	0.000	PINTS	1.000	0.000
Liquids for Other Inorganics	0.000	PINTS	1.000	0.000
Aquaset Absorbent	0.000	PINTS	1.200	0.000
Uncured Cement	0.000	PINTS	3.000	0.000
Cured Cement (Other Inorganics)	0.000	PINTS	1.125	0.000
Asphalt	0.000	PINTS	1.354	0.000
Brass	0.000	PINTS	8.890	0.000
Dirt	0.000	PINTS	1.303	0.000
Paper	0.000	PINTS	0.969	0.000
Rubber	0.000	PINTS	1.554	0.000
Tile	0.000	PINTS	0.919	0.000
Wood	0.000	PINTS	0.702	0.000
Aluminum	0.000	PINTS	3.123	0.000
Cardboard	0.000	PINTS	0.833	0.000
Copper	0.000	PINTS	9.369	0.000
Fire Brick	0.000	PINTS	3.123	0.000
Glass	0.000	PINTS	2.082	0.000
Raschig Rings	0.000	PINTS	0.625	0.000
Graphite	0.000	PINTS	0.520	0.000
Gravel	0.000	PINTS	2.082	0.000
Iron	0.000	PINTS	7.807	0.000
Lead	0.000	PINTS	11.451	0.000
Plastic	0.000	PINTS	0.937	0.000
Sand	0.000	PINTS	2.082	0.000
Stainless Steel	0.000	PINTS	8.328	0.000
Tantalum	0.000	PINTS	17.697	0.000
Beryllium (1.85 lbs/pint)	0.000	PINTS	1.850	0.000

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	0.300
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	0.000
Other Inorganic Materials	0.000	0.000
Cellulosics	0.000	0.000
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	0.000
Inorganic matrix	0.000	5.000
Organic matrix	0.000	0.000
Soils/gravel	100.000	451.410
Steel (packaging materials)	0.000	0.000
Plastic (packaging materials)	0.000	59.000
Cellulosics Packaging	0.000	18.000
	0.000	0.000

Container Filters

Exclude	Filter Model	Install Event	Install Date	Installed By	Removed Date	Removed By
	NF19SD	RTR/VE Update	21-SEP-05	DSUMNERS		
	Filter Comment					
	NF020	VE Verification	21-SEP-05	DSUMNERS	21-SEP-05	DSUMNERS
	Filter Comment					

E-Signature History

Esig Approval Id	User ID	E-signature Date	Comment
248332	DSUMNERS	21-SEP-05 23:01:17	
248333	CBEEBE	21-SEP-05 23:01:25	
260219	CNOWACKI	05-OCT-05 16:07:05	Waste appears to be organic sludge and the VEE also authorized a limited visual exam. CN 10/05/05

AMWTP Advanced Mixed Waste Treatment Project

AMWTP SUPERSEDED Date: 03-Oct-2005

RTR/VE Update Analysis Report

Time: 16:21

Affected Batch VVE05-01744 **Container Id** 10017133 **Analysis Id** 0000017816

Waste Items by Volume

Material Item	Quantity	Unit	Unit Wt	Item Wt(lbs)
Vermiculite (95 gm/liter) .125 lb/pint	0.000	PINTS	0.125	0.000
Oil-Dri (404 gm/liter) 0.42 lb/pint	0.000	PINTS	0.420	0.000
Liquids for Inorganic Matrix	0.000	PINTS	1.000	0.000
Liquids for Organic Matrix	0.000	PINTS	1.000	0.000
Liquids for Other Inorganics	0.000	PINTS	1.000	0.000
Aquaset Absorbent	0.000	PINTS	1.200	0.000
Uncured Cement	0.000	PINTS	3.000	0.000
Cured Cement (Other Inorganics)	0.000	PINTS	1.125	0.000
Asphalt	0.000	PINTS	1.354	0.000
Brass	0.000	PINTS	8.890	0.000
Dirt	0.000	PINTS	1.303	0.000
Paper	0.000	PINTS	0.969	0.000
Rubber	0.000	PINTS	1.554	0.000
Tile	0.000	PINTS	0.919	0.000
Wood	0.000	PINTS	0.702	0.000
Aluminum	0.000	PINTS	3.123	0.000
Cardboard	0.000	PINTS	0.833	0.000
Copper	0.000	PINTS	9.369	0.000
Fire Brick	0.000	PINTS	3.123	0.000
Glass	0.000	PINTS	2.082	0.000
Raschig Rings	0.000	PINTS	0.625	0.000
Graphite	0.000	PINTS	0.520	0.000
Gravel	0.000	PINTS	2.082	0.000
Iron	0.000	PINTS	7.807	0.000
Lead	0.000	PINTS	11.451	0.000
Plastic	0.000	PINTS	0.937	0.000
Sand	0.000	PINTS	2.082	0.000
Stainless Steel	0.000	PINTS	8.328	0.000
Tantalum	0.000	PINTS	17.697	0.000
Beryllium (1.85 lbs/pint)	0.000	PINTS	1.850	0.000

Waste Parameters

Waste Parameter	Remaining Weight %	Actual Weight Lbs
Iron-based Metals/Alloys	0.000	0.300
Aluminum-based Metals/Alloys	0.000	0.000
Other metals	0.000	0.000
Other Inorganic Materials	0.000	0.000
Cellulosics	0.000	0.000
Rubber	0.000	0.000
Plastic (Waste Materials)	0.000	5.000
Inorganic matrix	0.000	0.000
Organic matrix	100.000	451.410
Soils/gravel	0.000	0.000
Steel (packaging materials)	0.000	59.000
Plastic (packaging materials)	0.000	18.000
Cellulosics Packaging	0.000	0.000

Container Filters

Exclude	Filter Model	Install Event	Install Date	Installed By	Removed Date	Removed By
	NF19SD	RTR/VE Update	21-SEP-05	DSUMNERS		
	Filter Comment					
	NF020	VE Verification	21-SEP-05	DSUMNERS	21-SEP-05	DSUMNERS
	Filter Comment					

E-Signature History

Esig Approval Id	User ID	E-signature Date	Comment
248332	DSUMNERS	21-SEP-05 23:01:17	
248333	CBEEBE	21-SEP-05 23:01:25	

SUPERSEDED

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Advanced Mixed Waste Treatment Project

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RTR/VE Update Analysis Report

Date: 05-Oct-2005

Time: 18:21

Affected Batch VVE05-01744 **Container Id** 10017133 **Analysis Id** 0000017816

E-Signature History

Esig Approval Id	User ID	E-signature Date	Comment
260220	JBOTTLES	05-OCT-05 16:07:15	Waste appears to be organic sludge and the VEE also authorized a limited visual exam. JWB 10/05/05

End of RTR/VE Update Analysis Report

Affected Batch VVE05-01744 **Container Id** 10017133 **Analysis Id** 0000017816

——End of RTR/VE Update Analysis Report——

SUPERSEDED

AMWTP

RTR VE Comparison Report

Date: 05-Oct-2005

Time: 18:21

Container Id: 10017133 **RTR Batch Id:** RTR05-04644 **VE Batch Id:** VVE05-01744

Container Type: drum, 55 Gallon (17C) Gen-IDC: RF-801 Gross Weight: 531.41

	RTR Details		VE Details	
Analysis Id / Date:	0000022176	08-AUG-05	0000017812	21-SEP-05
Equipment Id:	Z-213-101		Z-250-801	
Procedure Id / Rev:	INST-OI-12	22 FC-1	INST-OI-34	11 FC-1
Personnel Name:	KENT KEARN		CHRIS NOWACKI	
Recording Media Id:	1RTR05-00217		10017133-092105	
Audio Visual Ok?:	Y		Y	
IDC Ok?:	Y		Y	
Recommended IDC:				
IDC Change Reason:				
Waste Matrix Code:	S3150		S3150	
Package:				
Liner Present?	Y		Y	
Liner Lid Present?	Y		Y	
Liner Type Code:	TYPE 3		TYPE 3	
Liner Punctured?	Y		Y	
Layers Of Confinement:	2		2	
Sharp Object Protected?	Y		Y	
Bag Closure Method:	Twisted and Taped		Twisted and Taped	
Fill Factor(%):	90		95	
Liquids: (Volume in Pints)				
Liquid Present?:	N		N	
Prohibited Liquids Present?:	N		N	
Liquid Between Liner/Drum:	0		0	
Liquid In Bags:	0		0	
Containerized Liquid:	0		0	
Total Liquid:	0		0	

Contents:	Y/N	Comments	Y/N	Comments
Compressed Gases Present?	N		N	
Mercury Present?	N		N	
Explosives Present?	N		N	
Items With PCB?	N		N	
Non-Radionuclide Pyrophoric Material Present?	N		N	

Signature : _____ **Date:** _____

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Advanced Mixed Waste Treatment Project

AMWTP

RTR VE Comparison Report

Date: 05-Oct-2005

Time: 18:21

Container Id: 10017133 **RTR Batch Id:** RTR05-04644 **VE Batch Id:** VVE05-01744

Contents:	Y/N	Comments	Y/N	Comments
Waste exhibiting the characteristics of ignitability, Corrosivity or Reactivity Present?	N		N	
Wet Cell Batteries Detected?	N		N	
Waste Incompatibles with back fill, seal and panel closure materials, container and packaging materials, shipping container or other wastes?	N		N	
Hazardous Only Waste ?	N		N	
Over One Inch Liquid?	N		N	
Sealed Containers Over 4l?	N		N	

Analysis Comments: Waste appears to be sludge.

VEE Ben Tanaka, VE Operator in training Jerry Fenwick under the direction on Davie Sumners. Audio Viedo check was performed and satisfactory. There was no evidence of any prohibited items or any liquid in the waste. The liner was vented >0.3. The closure method was twisted and taped. The Drum Is WIPP ACCEPT. After the drum was complete reviewing of the tape reviled that the audio viedo check was not there.VEE Ben Tanaka Waste appears to be organic sludge and the VEE also authorized a limited visual exam. Also the liner hole size was updated. CN 10/05/05

Signature : _____ **Date:** _____

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Advanced Mixed Waste Treatment Project

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RTR VE Comparison Report

Date: 05-Oct-2005

Time: 18:21

Container Id: 10017133 **RTR Batch Id:** RTR05-04644 **VE Batch Id:** VVE05-01744

Waste Parameter Weights

Waste Material	Weight in Kgs				Weight in Lbs			
	RTR	VE	Absolute Diff	RPD Weight	RTR	VE	Absolute Diff	RPD Weight
Iron-based Metals/Alloys	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Aluminum-based Metals/Alloys	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Other metals	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Other Inorganic Materials	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cellulosics	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Rubber	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Plastic (Waste Materials)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Inorganic matrix	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Organic matrix	204.760	204.760	0.000	0.000	451.410	451.410	0.000	0.000
Soils/gravel	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steel (packaging materials)	26.762	26.762	0.000	0.000	59.000	59.000	0.000	0.000
Plastic (packaging materials)	9.526	9.526	0.000	0.000	21.000	21.000	0.000	0.000
Cellulosics Packaging	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

----End of RTR VE Comparison Report----

Signature : _____ **Date:** _____

AMWTP
Advanced Mixed Waste Treatment Project

Visual Examination

Independent Technical Reviewer Checklist

Rev. 0

Testing Batch No.: VVE05-01744		Method/Location: Z-250-801 /WMF-634		
Criteria	**Yes**	**No**	**NA**	**Comment**
Visual Examination				
1. Is the QA documentation for the Batch Data Reports complete and includes data reports and QC results? o VE Batch Coversheet o Table of Contents (manual review only) o VE Analysis Reports o RTR/VE Comparison, if applicable o Analytical Balance Calibration Checksheet (Form-1215), if applicable (manual review only) o ITR Checklist (Form-1415) o TS Checklist (Form-1426) o QA Checklist (Form-1427) o Batch Data Report Supplemental Comment Form (Form-1491) o Associated NCRs o Audio/Video Recording References, if applicable		X		Completed TS and QA Checklists will be included after reaching their respective levels.
2. Are there 20 containers or less in the batch?	X			
3. Was the E-signature History review performed?	X			
4. Did either a second operator verify the contents of each waste container for Newly Generated Waste VE Closure, or a VEE agree with characterization data for Miscertification VE and VE (in lieu of RTR)?	X			
5. Was guidance from VEE documented?		X		See Batch Comments.
6. Does every drum reported in the batch have a valid audio/video recording and is the location correctly identified on the drum data report?	X			The recording medium can be identified per information provided in the drum data report.
7. Does the physical form match the waste stream description, waste matrix code and IDC?	X			
8. Did this require an IDC/Waste Matrix Code change? If so, was an NCR initiated?		X		
9. Were the waste material parameters documented correctly?	X			

Rev. 0

Testing Batch No.: VVE05-01744			**Method/Location: Z-250-801 /WMF-634**	
Criteria	**Yes**	**No**	**NA**	**Comment**
10. Was the presence or absence of prohibited items properly identified?	X			
11. For VE Technique, was the drum age criteria entered correctly and completely? o Closure Method(s) o Liner Puncture Status o Layers of Confinement o Closure Date o Packaging Configuration o Type and number of filters o Liner hole presence and diameter	X			DAC pertaining to RVU Analysis Reports are correct and complete. VE Technique not applicable to VVE batch types.
Data Validation				
12. Have filters been installed or removed from drum as recorded in WTS or on Form-1312?	X			
13. Hand calculations and unit conversions are correct? o Sum of the individual items in each Waste Parameter Weight o Unit conversion for items entered by Volume o The packaging weight plus the net weight equal the gross weight of the drum	X			
14. Were all units and significant figures used correct for all reported volumes/weights?	X			
15. Has the data been reviewed for transcription errors as appropriate?	X			
Data Reporting				
16. Was the data generated in a technically correct manner in accordance with INST-OI-34, Visual Examination Operating Procedures and Data Reporting, and INST-FOI-17, Facility Visual Examination Operations, as applicable?		X		See Batch Comments.

AMWTP Advanced Mixed Waste Treatment Project

Visual Examination

Independent Technical Reviewer Checklist

Rev. 0

Testing Batch No.: VVE05-01744		Method/Location: Z-250-801 /WMF-634		
Criteria	**Yes**	**No**	**NA**	**Comment**
Quality Control				
17. Are all container analysis data sheets signed and dated in reproducible black or blue ink labeled with the batch number and each page numbered?			X	Analysis data has been acquired and signed electronically.
18. Was the audio/video check satisfactory?	X			
19. Do personnel performing visual examination have current qualifications?	X			
20. Was the scale or balance check weight event satisfactory?			X	Operators have used estimated weights for this VE event.
21. Are the QC weight checks within the tolerance of the scale or balance?			X	Operators have used estimated weights for this VE event.
22. Were any NCRs generated for drums containing prohibited items, or any non-conforming conditions that failed to meet Data Quality Objectives? o Include the NCRs, as appropriate, in the Batch Data Report.	X			NCR 18134

ITR Print Name: Denny Gasper	ITR Signature: D. Gasper	Date: 10/5/05

AMWTP
Advanced Mixed Waste Treatment Project

Visual Examination

Independent Technical Reviewer Checklist

Rev. 1

Testing Batch No.: VVE05-01744		Method/Location: Z-250-801 /WMF-634		
Criteria	**Yes**	**No**	**NA**	**Comment**
Visual Examination				
1. Is the QA documentation for the Batch Data Reports complete and includes data reports and QC results? o VE Batch Coversheet o Table of Contents (manual review only) o VE Analysis Reports o RTR/VE Comparison, if applicable o Analytical Balance Calibration Checksheet (Form-1215), if applicable (manual review only) o ITR Checklist (Form-1415) o TS Checklist (Form-1426) o QA Checklist (Form-1427) o Batch Data Report Supplemental Comment Form (Form-1491) o Associated NCRs o Audio/Video Recording References, if applicable		X		Completed TS and QA Checklists will be included after reaching their respective levels.
2. Are there 20 containers or less in the batch?	X			
3. Was the E-signature History review performed?	X			
4. Did either a second operator verify the contents of each waste container for Newly Generated Waste VE Closure, or a VEE agree with characterization data for Miscertification VE and VE (in lieu of RTR)?	X			
5. Was guidance from VEE documented?	X			
6. Does every drum reported in the batch have a valid audio/video recording and is the location correctly identified on the drum data report?	X			The recording medium can be identified per information provided in the drum data report.
7. Does the physical form match the waste stream description, waste matrix code and IDC?	X			
8. Did this require an IDC/Waste Matrix Code change? If so, was an NCR initiated?		X		
9. Were the waste material parameters documented correctly?	X			

Rev. 1

Testing Batch No.: VVE05-01744		**Method/Location: Z-250-801 /WMF-634**		
Criteria	**Yes**	**No**	**NA**	**Comment**
10. Was the presence or absence of prohibited items properly identified?	X			
11. For VE Technique, was the drum age criteria entered correctly and completely? o Closure Method(s) o Liner Puncture Status o Layers of Confinement o Closure Date o Packaging Configuration o Type and number of filters o Liner hole presence and diameter	X			DAC pertaining to RVU Analysis Reports are correct and complete. VE Technique not applicable to VVE batch types.
Data Validation				
12. Have filters been installed or removed from drum as recorded in WTS or on Form-1312?	X			
13. Hand calculations and unit conversions are correct? o Sum of the individual items in each Waste Parameter Weight o Unit conversion for items entered by Volume o The packaging weight plus the net weight equal the gross weight of the drum	X			
14. Were all units and significant figures used correct for all reported volumes/weights?	X			
15. Has the data been reviewed for transcription errors as appropriate?	X			
Data Reporting				
16. Was the data generated in a technically correct manner in accordance with INST-OI-34, Visual Examination Operating Procedures and Data Reporting, and INST-FOI-17, Facility Visual Examination Operations, as applicable?	X			

Rev. 1

Testing Batch No.: VVE05-01744		**Method/Location: Z-250-801 /WMF-634**		
Criteria	**Yes**	**No**	**NA**	**Comment**
Quality Control				
17. Are all container analysis data sheets signed and dated in reproducible black or blue ink labeled with the batch number and each page numbered?			X	Analysis data has been acquired and signed electronically.
18. Was the audio/video check satisfactory?	X			
19. Do personnel performing visual examination have current qualifications?	X			
20. Was the scale or balance check weight event satisfactory?			X	Operators have used estimated weights for this VE event.
21. Are the QC weight checks within the tolerance of the scale or balance?			X	Operators have used estimated weights for this VE event.
22. Were any NCRs generated for drums containing prohibited items, or any non-conforming conditions that failed to meet Data Quality Objectives? o Include the NCRs, as appropriate, in the Batch Data Report.	X			NCR 18134

ITR Print Name: Denny Gasper	**ITR Signature:** D. Gasper	**Date: 10/5/05**

AMWTP
Advanced Mixed Waste Treatment Project

Visual Examination

Technical Supervisor Checklist

Testing Batch No.: VVE05-01744		Method/Location: Z-250-801 in WMF-634		
Criteria	**Yes**	**No**	**NA**	**Comment**
1. Has the Independent Technical Review been performed and documented by signature release?	X			
2. Is the QA documentation for the Batch Data Reports complete and includes data reports and QC results? o VE Batch Coversheet o Table of Contents (manual review only) o VE Analysis Reports o RTR/VE Comparison, if applicable o Analytical Balance Calibration Checksheet (Form-1215), if applicable (manual review only) o ITR Checklist (Form-1415) o TS Checklist (Form-1426) o QA Checklist (Form-1427) o Batch Data Report Supplemental Comment Form (Form-1491) o Associated NCRs o Audio/Video Recording References, if applicable		X		The QA Checklist will be included after the QA review. No Analytical Balance Calibration Checksheets (Form 1215) were used; weights were estimated.
3. Was the E-signature History review performed?	X			
4. Does the contents of the waste container confirm the IDC, WMC and waste stream description?	X			
5. Did the operator recommend any IDC/WMC changes and were they evaluated and documented on a NCR as appropriate? If yes, record the waste container(s) and NCR in the comment section.		X		
6. Was the data record complete and signed and dated accordingly?	X			

AMWTP
Advanced Mixed Waste Treatment Project

Visual Examination

Technical Supervisor Checklist

Testing Batch No.: VVE05-01744		Method/Location: Z-250-801 in WMF-634		
Criteria	**Yes**	**No**	**NA**	**Comment**
7. Was the data generated in a technically correct manner in accordance with the current revision of INST-OI-34, Visual Examination Operating Procedures and Data Reporting or INST-FOI-17, Facility Visual Examination Operations?	X			
8. Were there any nonconforming conditions identified which affect data quality, and/or drums that contain prohibited items? If yes, indicate all NCR numbers in the comment section.	X			NCR 18134

TS Print Name: Dave Lord	TS Signature:	Date: 10/06/05

AMWTP
Advanced Mixed Waste Treatment Project

Visual Examination

Quality Assurance Checklist

Testing Batch No.: VVE05-01744	Method/Location: Z-250-801 in WMF-634			
Criteria	**Yes**	**No**	**NA**	**Comment**
1. Has the Independent Technical Review and Technical Supervisor reviews been performed and documented by signature release?	X			
2. Is the QA documentation for the Batch Data Reports complete and includes data reports and QC results? o VE Batch Coversheet o Table of Contents (manual review only) o VE Analysis Reports o RTR/VE Comparison, if applicable o Analytical Balance Calibration Checksheet (Form-1215), if applicable (manual review only) o ITR Checklist (Form-1415) o TS Checklist (Form-1426) o QA Checklist (Form-1427) o Batch Data Report Supplemental Comment Form (Form-1491) o Associated NCRs o Audio/Video Recording References, if applicable	X			No Analytical Balance Calibration Checksheets (Form-1215), were used; weights were estimated.
3. Was the E-signature History review performed?	X			
4. Were all container analysis data sheets signed and dated in reproducible black or blue ink labeled with the batch number and each page numbered?			X	There are no handwritten data sheets in a VVE batch.
5. Was the audio/video check performed satisfactorily? (Miscertification VE or VE [in lieu of RTR])?	X			See NCR 18134
6. Did either a second operator verify the contents of each waste container for Newly Generated Waste VE Closure, or a VEE agree with characterization data for Miscertification VE and VE (in lieu of RTR), as applicable?	X			
7. Was the presence or absence of prohibited items properly identified?	X			
8. Are the waste material parameters documented correctly?	X			
9. Does the physical form match the IDC, WMC and waste stream description?	X			
10. Are all raw data signed and dated in reproducible black or blue ink or unalterable electronic signatures?	X			

AMWTP
Advanced Mixed Waste Treatment Project

Visual Examination

Quality Assurance Checklist

Testing Batch No.: VVE05-01744	Method/Location: Z-250-801 in WMF-634			
Criteria	**Yes**	**No**	**NA**	**Comment**
11. Are all data recorded clearly, legibly and accurately in field records (bench sheets, logbooks)?			X	There are no handwritten data sheets in a VVE batch.
12. Are all changes to original data or forms made by a single line through incorrect entry, initialed, and dated by the person making the change?	X			
13. Was the data reviewed for changes and adequate justifications made?	X			
14. Has data been transferred and reduced from field records completely and accurately?			X	There are no handwritten data sheets in a VVE batch.
15. Was the completion and documentation of the scale calibration (NIST check weight certification, check weight form for scale) verified, as applicable?			X	Estimated weights were used.
16. Was a 2nd weighing check performed on one in ten items and within the scale tolerance, as applicable?			X	Estimated weights were used.
17. Were the following DAC parameters collected? Closure Method Liner puncture status Layers of confinement Closure Date	X			
18. Were there any nonconforming conditions identified which affect data quality, and/or drums that contain prohibited items? If yes, indicate all NCR numbers in the comment section.	X			NCR 18134

Comments:

QA Print Name: Dave Lord	QA Signature:	Date: 10/06/05

AMWTP
Advanced Mixed Waste Treatment Project

Batch Data Report Supplemental Comment Form

AMWTP Form-1491
Rev. 0
Implementing Documents: MP-TRUW-8.8 & 8.9
Effective Date: 9/25/03

Batch Number: VVE05-01744

Item	Date	Name	Comments
1.	9/24/05	Denny Gasper ITR	This batch was validated to MP-TRUW-8.8, Rev 13.
2.	9/24/05	Denny Gasper ITR	VE Analysis Report drum 10017133 (analysis id 0000017812) operators failed to comment on the remainder of the waste by weight percent and the VEE limited examination authorization in the Visual Examination Comment field. The Recording End Position is entered incorrectly, and Liner Hole Size needs measurement designation. Please review and amend.
3.	9/24/05	Denny Gasper ITR	Demote batch to Operations Level for rework.
4.	9/24/05	Denny Gasper ITR	Reviewed operator rework.
5.	9/24/05	Denny Gasper ITR	All VE Analysis Report rework (i.e. data changes, comments, etc.) that pertain to the RVU Analysis Report (RVU analysis id 0000017816) for drum 10017133 (VE analysis id 0000017812) must be copied to the RVU Analysis Report.
6.	10/5/05	Denny Gasper ITR	RVU analysis report for drum 10017133 (analysis id 0000017816) has been validated in batch VVE05-01744.
7.	10/5/05	Denny Gasper ITR	Promote batch to TS Level.

D. Gasper 10/5/05

AMWTP
Advanced Mixed Waste Treatment Project

Batch Data Report Supplemental Comment Form

AMWTP Form-1491
Rev. 0
Implementing Documents: MP-TRUW-8.8 & 8.9
Effective Date: 9/25/03

Batch Number VVE05-01744

Item	Date	Name	Comments
8.	10/06/05	Dave Lord (TS)	Reviewed and approved batch. Promoted to QA.
9.	10/06/05	Dave Lord (QA)	Reviewed and approved batch at QA. Level II validation will be completed by CCP.

Note: Data Validation Reviewers should continue with indicating the Item number in the first column in numerical sequence. This page's Item number column was intentionally left blank in the event a batch may require additional comment pages.

David Lord 10-06-05

AMWTP
Advanced Mixed Waste Treatment Project
Bechtel BWXT Idaho, LLC

NON-CONFORMANCE REPORT

NCR # 18194
PARENT:

Title: Visual Examination , Audio/Visual test recording

Category: Other	**Affected Item:** N/A
Originator: Stacey, Brett	**Affected Item Type:** Container ID
Source Type: Internal	**Date Opened:** 9/21/2005 10:27:00PM
Source: Unplanned Observation	**ORPS No:**
Finding #:	
Requirement Violated: N/A	
Shipment #:	**Payload #:**
Equipment ID:	
Batch #: VVE05-01744	
Container ID: 10017133	

Description of Condition:

A/V test recording for drum 10017133 was done and verified sat. A VE for QC of RTR was performed and the A/V test recording was recorded over. The A/V test was verified sat by 2 VE operators, DAVEY SUMNERS and CONLEY BEEBE , prior to rest of recording.

Supervisor Review By: Ted Griffith	**Supervisor Review Date:** 9/21/2005 11:40:00PM
QA Closed-Cancelled By:	**QA Closed-Cancelled Date:**

Note: QA Closed-Cancelled Signature is based on concurrence between Responsible Manager and Quality Assurance

Is Valid:	**Responsible Manager:** Medina, Vince
Significance:	**Stop Work Order:**
PAAA Applicable:	**PAAA App Standard:**
PAAA Reportable:	**WIPP Submittal Req'd?:**
Tag Applied:	**# of Tags:**
NTS Report Number:	**NTS Report Date:**
ESH & QA Element:	**Is CAR Required:**
Building:	**Quality** (Type Material)**:**
PO Number:	**Responsible Department:**
Operations Group:	**Disposition Due Date:**
QA Mgr Rev Sign By:	**QA Mgr Rev Sign Date:**

AMWTP
Advanced Mixed Waste Treatment Project
Bechtel BWXT Idaho, LLC

NON-CONFORMANCE REPORT

NCR # 18134
PARENT:

	Date Due:
Disposition:	**Assigned Actionee:**
Conditional Use:	**Conditional Use Expiration Date:**
USQ Screen Req'd?:	**USQ Screen No.:**
Priority:	**Root Cause Analysis:**
Root Cause Code:	**Contributing Cause Code:**
Dispostion Desc. / CAP:	
Mgr Disp App By:	**Mgr Disp App Date:**
QA Add'l Disp. Req'd By:	**QA Add'l Disp. Req'd. Date:**
Mgr. Add'l Disp. By:	**Mgr. Add'l Disp. Date:**
QA Mgr Rev Disp Sign By:	**QA Mgr Disp Sign Date:**
Disposition/CAP Action Complete Comments:	
Action Complete By:	**Action Complete Date:**
QA Add'l Action. Req'd By:	**QA Add'l Action. Req'd. Date:**
Add'l Action Complete By:	**Add'l Action Complete Date:**
QA Verification Complete By:	**QA Verification Comp Date:**

Attachment 3 – Visual Examination Site Project Manager Checklist

Batch Data Report No.: RHINLVE090002

1. Has all the data received an independent technical review as evidenced by a completed checklist (Attachment 2) and the appropriate ITR signature?		☐ NO	☒ YES
2. Are BDR contents complete and match the Visual Examination Batch Data Report Table of Contents?		☐ NO	☒ YES
3. Is the BDR complete (appropriately filled in forms for each container)?		☐ NO	☒ YES
4. Have the RH Quality Assurance Objectives (QAOs) for VE been met? Precision – reconciled discrepancies between operators Accuracy – trained operators Representativeness – description of container contents Completeness – completed data form and/or recording Comparability – proper training and adequate AK for unopened containers		☐ NO	☒ YES
5. Were NCRs generated included in the BDR?	☐ NO	☒ YES	☐ N/A

Comments

NCR-RHINL-0506-09

SPM:

ORIGINAL

Hillari J. Neely		7-31-09
Printed Name	Signature	Date

Irene Quintana Irene Quintana 8/4/09
corrected data sheet for container ID AE 000000393
correction completed 8/6/09
Irene Quintana Irene Quintana 8/6/09

Quintana, Irene

From: Smith, Gregory
Sent: Tuesday, August 04, 2009 6:21 AM
To: Quintana, Irene
Subject: FW: Permission

Greg Smith
CCP RH VPM
Office: (208) 533-3455
Cell: (760) 382-4701

From: Kline, W Kenneth [mailto:W.Kline@icp.doe.gov]
Sent: Mon 8/3/2009 3:54 PM
To: Smith, Gregory
Subject: RE: Permission

The answer "NO" should be crossed out, you have my permission to do so. Ken Kline.

From: Smith, Gregory [mailto:Gregory.Smith@wipp.ws]
Sent: Monday, August 03, 2009 3:47 PM
To: Davis, Christopher G; Kline, W Kenneth
Subject: FW: Permission

Chris/Ken,

See Irene's email below. This is an administrative correction and does not require ITR, she can make the correction with your permission. Both the "NO" & "N/A" boxes were checked for that question on the second page data sheet for that drum. Please reply to this email with your response.

Thanks,

Greg Smith
CCP RH VPM
Office: (208) 533-3455
Cell: (760) 382-4701

From: Quintana, Irene
Sent: Mon 8/3/2009 3:31 PM
To: Smith, Gregory
Subject: Permission

Greg,

May I have Ken Kline's or Chris Davis's permission to cross out the answer "NO" for VE data sheet IDAE000000393 for question "Is the total volume of liquid in the container GREATER than 1% of the container?" in BDR RHINLVE090002?

Thank you,

Irene Quintana
RH SPM

Attachment 4 – Visual Examination Batch Data Report Cover Sheet

Batch Data Report No.: RHINL-VE09 0002 Date: 7-21-09

	Waste Container ID Number:
1	IDAE000000 397
2	IDAE000000 396
3	IDAE000000 395
4	IDAE000000 398
5	IDAE000000 399
6	IDAE000000 400
7	IDAE000000 393
8	IDAE000000 394
9	IDAERH0001005
10	IDAERH0001003
11	N/A
12	N/A
13	N/A
14	N/A
15	N/A
16	N/A
17	N/A
18	N/A
19	N/A
20	N/A

ORIGINAL

Attachment 5 – Visual Examination Batch Data Report Table of Contents

Batch Data Report No.: RHINLVE090002 Date: 7-21-09

Item	Description	Page No.
1	Visual Examination Batch Data Report Cover Sheet (Attachment 4)	1
2	Visual Examination Batch Data Report Table of Contents (Attachment 5)	2
3	Visual Examination Data Forms (Attachment 1)	3 - 43
4	Visual Examination Independent Technical Reviewer Checklist (Attachment 2)	44
5	Copy of NCRs (N/A [If not applicable])	45 - 51

Attachment 1 – Visual Examination Data Form

Site ID and Location of Packaging Activity: INL-INTEC-659			
Examination Date: 7-14-09	Batch Number: RHINLVE090002		
Procedure #: CCP-TP-500	Revision #: 8	Video Number: N/A	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: N/A	Recording Stop: N/A	
Initial Container ☒ N/A	Final Container ☐ N/A		
Container or Package ID Number:	Container or Package ID Number: IDAE000000397		
Container Type:	Container Type: 55GAL. DRUM		
Waste Matrix Code:	Waste Matrix Code: S5400		
Waste Stream:	Waste Stream: ID-ANLE-S5000		
	Rigid Liner: ☒Y ☐N Type: 90ml	Rigid Liner Lid: ☐ Y ☒N	
	Rigid Liner Vented or Hole Size: N/A		
	Percent Fill: 67-90%		
Layers of Confinement: Closure Method:	Layers of Confinement: Ø	Closure Method: N/A	
Comments (e.g., filter information, NCRs): FILTER MODEL NUCFIL-01905, SER # CI-2033			
NCR NO. NCR-RHINL-0506-09 KK 7-23-09 ABP 7.23-09			

Waste Description:

(P) 90ml RIGID POLY LINER, PLASTIC BAG, CUT, 30 GALLON NYLON BAG

(IM) 30 GALLON STEEL DRUM, WIRE ROPE WITH METAL HOOK

(R) ONE RUBBER GLOVE

NOTE: 30 GALLON DRUM # 00397

Primary Contents (check one)	☐ Concrete	☒ Steel	☐ Organic Material

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number IDAHO000000397

	YES	NO	N/A
Is there liquid in the container?	☐	☒	
Is there any liquid in the waste, including internal containers, that DOES **NOT** meet the criteria of residual (waste shall contain as little residual liquid as is reasonably achievable by pouring, pumping and/or aspirating, and internal containers shall contain less than 1 inch or 2.5 centimeters of liquid in the bottom of the container)?	☐	☐	☒
Is the total volume of liquid in the container **GREATER** than 1% of the container?	☐	☐	☒
Is there detectable liquid in containers with an Environmental Protection Agency Hazardous Waste Number of U134?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments:
N/A

Visual Examination Operator 1:
KEN KLINE (Print Name) — Ken Kline (Signature) — 7-14-09 (Date)

Visual Examination Operator 2:
J. BRET TARNER (Print Name) — J Bret Tarner (Signature) — 7-14-09 (Date)

Attachment 1 – Visual Examination Data Form

Site ID and Location of Packaging Activity: INL - INTEC - 659			
Examination Date: 6-24-09	Batch Number: RH INLVE 090002		
Procedure #: CCP-TP-500	Revision #: 8	Video Number: N/A	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: N/A	Recording Stop: N/A	

Initial Container ☐ N/A	Final Container ☒ N/A
Container or Package ID Number: 00397	Container or Package ID Number:
Container Type: 30 gallon drum	Container Type:
Waste Matrix Code: S5400	Waste Matrix Code:
Waste Stream: ID-ANLE-S5000	Waste Stream:
	Rigid Liner: ☐Y ☐N Type: / Rigid Liner Lid: ☐ Y ☐N
	Rigid Liner Vented or Hole Size:
	Percent Fill:
Layers of Confinement: 0 / Closure Method: N/A	Layers of Confinement: / Closure Method:

Comments (e.g., filter information, NCRs):

Volume Organic Waste = 10%

Waste Description: (1m) 3.5 gallon metal Container, 5 gallon metal Container.
(P) Rigid poly liner, plastic bag, 2 plastic (no Lids) bottles (wrapped in lead Sheeting.) plastic cap, plastic tape.
(0m) 2 pieces lead sheeting wrapped around 2 plastic bottles. (1/8 inch) (1 piece wrapped six times, 1 wrapped 7 times around bottle.), 4 – 1/4 inch lead lids.
(c) paper Towel
(01m) Absorbent - appears to be Vermiculite. 6-30-09 JBP 7-2-09

NOTE: One bottle with lead sheeting in the 3.5 gallon drum and 1 bottle with lead sheeting in the 5 gallon drum. JBP 7-2-09

NOTE: 5 gallon drum is on bottom, 3.5 gallon drum is on top. 6-30-09 KH 6-30-09

Primary Contents (check one)	☐ Concrete ☒ Steel ☐ Organic Material

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 00397

	YES	NO	N/A
Is there liquid in the container?	☐	☒	
Is there any liquid in the waste, including internal containers, that DOES **NOT** meet the criteria of residual (waste shall contain as little residual liquid as is reasonably achievable by pouring, pumping and/or aspirating, and internal containers shall contain less than 1 inch or 2.5 centimeters of liquid in the bottom of the container)?	☐	☐	☒
Is the total volume of liquid in the container **GREATER** than 1% of the container?	☐	☐	☒
Is there detectable liquid in containers with an Environmental Protection Agency Hazardous Waste Number of U134?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: 5 gallon Can Marking 165 M-9 20 R/2"-H A-6 waste
3.5 gallon Can Markings 165 P-20 15 R/2"H A-4 waste

Visual Examination Operator 1:
Chris G Davis — Print Name
Chris G Davis — Signature
6-24-09 — Date

Visual Examination Operator 2:
J. Bret Palmer — Print Name
J Bret Palmer — Signature
6-24-09 — Date

Attachment 1 – Visual Examination Data Form

Site ID and Location of Packaging Activity: INL - INTEC - 659			
Examination Date: 7-2-09	Batch Number: RH INLVE 090002		
Procedure #: CCP-TP-500	Revision #: 8	Video Number: n/a	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: N/A	Recording Stop: N/A	

Initial Container ☒ N/A	Final Container ☐ N/A
Container or Package ID Number:	Container or Package ID Number: IDAE00000396
Container Type:	Container Type: 55 gallon drum
Waste Matrix Code:	Waste Matrix Code: S5400
Waste Stream:	Waste Stream: ID-ANLE-S5000
	Rigid Liner: ☒Y ☐N Type: 90 mil Rigid Liner Lid: ☐Y ☒N
	Rigid Liner Vented or Hole Size: N/A
	Percent Fill: 67-90 %
Layers of Confinement: Closure Method:	Layers of Confinement: 0 Closure Method: N/A

Comments (e.g., filter information, NCRs):
Filter Model: NUCFIL-019DS Serial # C1-2028
10 % Organic Waste GBP 7-6-09 QBP 7-21-09

Waste Description:
(2) Rigid Polyliner, Plastic bag - cut open, Nylon bag - 30 gallon
(1M) 30 gallon drum; wire rope with metal hook
NOTE: 30 gallon drum # 00396. 7-6-09 GBP QBP 7-21-09

Primary Contents (check one)	☐ Concrete	☒ Steel	☐ Organic Material

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number IDAE000000396

	YES	NO	N/A
Is there liquid in the container?	☐	☒	
Is there any liquid in the waste, including internal containers, that DOES NOT meet the criteria of residual (waste shall contain as little residual liquid as is reasonably achievable by pouring, pumping and/or aspirating, and internal containers shall contain less than 1 inch or 2.5 centimeters of liquid in the bottom of the container)?	☐	☐	☒
Is the total volume of liquid in the container GREATER than 1% of the container?	☐	☐	☒
Is there detectable liquid in containers with an Environmental Protection Agency Hazardous Waste Number of U134?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags NOT defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:
Chris G. Davis — Print Name
[signature] — Signature
7-2-09 — Date

Visual Examination Operator 2:
J. Bret Parmer — Print Name
[signature] — Signature
7-2-09 — Date

Attachment 1 – Visual Examination Data Form

Site ID and Location of Packaging Activity: INL-INTEC-659			
Examination Date: 6-30-09	Batch Number: RHINLVE 090002		
Procedure #: CCP-TP-500	Revision #: 8	Video Number: N/A	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: N/A	Recording Stop: N/A	

Initial Container 00396 ☐ N/A	Final Container ☒ N/A
Container or Package ID Number: 00396	Container or Package ID Number:
Container Type: 30 GALLON DRUM	Container Type:
Waste Matrix Code: S5400	Waste Matrix Code:
Waste Stream: ID-ANLE-S5600	Waste Stream:
	Rigid Liner: ☐Y ☐N Type: / Rigid Liner Lid: ☐ Y ☐N
	Rigid Liner Vented or Hole Size:
	Percent Fill:
Layers of Confinement: 0 / Closure Method: N/A	Layers of Confinement: / Closure Method:
Comments (e.g., filter information, NCRs): VOLUME ORGANIC WASTE = 10%	

Waste Description:
(P) RIGID POLYLINER, PLASTIC BAG, TAPE
(OM) 1/8" LEAD SHEATING WRAPPED AROUND PLASTIC BOTTLES 6 TIMES
(OM) 6 - 1/4" LEAD LIDS
(P) 2 - PLASTIC BOTTLE WITH PLASTIC LID, BOTTLE VERIFIED EMPTY AND BOTTLE WAS BROKEN
(OIM) ABSORBENT APPEARS TO BE VERMICULITE
(IM) 3 1/2 GALLON METAL CONTAINER - TOP OF 30 GAL. DRUM
(IM) 5 GALLON METAL CONTAINER - BOTTOM OF 30 GAL. DRUM
(IM) 3.5 AND 5 GALLON LIDS ON BOTTOM OF 30-GAL DRUM
NOTE: EACH CONTAINER CONTAINS PLASTIC BOTTLE WRAPPED IN LEAD SHEATHING.

Primary Contents (check one)	☐ Concrete	☒ Steel	☐ Organic Material

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 00396

	YES	NO	N/A
Is there liquid in the container?	☐	☒	
Is there any liquid in the waste, including internal containers, that DOES **NOT** meet the criteria of residual (waste shall contain as little residual liquid as is reasonably achievable by pouring, pumping and/or aspirating, and internal containers shall contain less than 1 inch or 2.5 centimeters of liquid in the bottom of the container)?	☐	☐	☒
Is the total volume of liquid in the container **GREATER** than 1% of the container?	☐	☐	☒
Is there detectable liquid in containers with an Environmental Protection Agency Hazardous Waste Number of U134?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: 3.5 GALLON CAN MARKING 165M-14 20R/2"H 6-19-78 A4 WASTE
5 GALLON CAN MARKING 165P-16 20R/2"H 6-26-78 A4 WASTE

Visual Examination Operator 1:
KEN KLINE (Print Name) — Ken Kline (Signature) — 6-30-09 (Date)

Visual Examination Operator 2:
CHRIS G. DAVIS (Print Name) — (Signature) — 6-30-09 (Date)

Attachment 1 – Visual Examination Data Form

Site ID and Location of Packaging Activity: INL - INTEC - 659			
Examination Date: 7-6-09	Batch Number: RH INLVE 090002		
Procedure #: CCP - TP - 500	Revision #: 8	Video Number: N/A	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: N/A	Recording Stop: N/A	

Initial Container ☒ N/A	Final Container ☐ N/A
Container or Package ID Number:	Container or Package ID Number: IDAE000000395
Container Type:	Container Type: 55 GALLON Drum
Waste Matrix Code:	Waste Matrix Code: S5400
Waste Stream:	Waste Stream: ID - ANLE - S5000
	Rigid Liner: ☒Y ☐N Type: 90 mL Rigid Liner Lid: ☐ Y ☒N
	Rigid Liner Vented or Hole Size: N/A
	Percent Fill: 67 - 90 %
Layers of Confinement: Closure Method:	Layers of Confinement: 0 Closure Method: N/A

Comments (e.g., filter information, NCRs):
Filter model # NUCFIL-019DS serial # C1-2038
10% Organic Waste

Waste Description:
(IM) 30 gallon steel drum, wire rope with metal hook.
(P) Rigid Poly liner, Plastic bag - Cut open, 30 gallon Nylon bag.
NOTE: 30 gallon drum # 00395

Primary Contents (check one)	☐ Concrete ☒ Steel ☐ Organic Material

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number IDAE000000395

	YES	NO	N/A
Is there liquid in the container?	☐	☒	
Is there any liquid in the waste, including internal containers, that DOES **NOT** meet the criteria of residual (waste shall contain as little residual liquid as is reasonably achievable by pouring, pumping and/or aspirating, and internal containers shall contain less than 1 inch or 2.5 centimeters of liquid in the bottom of the container)?	☐	☐	☒
Is the total volume of liquid in the container **GREATER** than 1% of the container?	☐	☐	☒
Is there detectable liquid in containers with an Environmental Protection Agency Hazardous Waste Number of U134?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments:
N/A

Visual Examination Operator 1:
Chris G. Davis — Print Name
Chris G. Davis — Signature
7-6-09 — Date

Visual Examination Operator 2:
Ken Klenke — Print Name
Ken Klenke — Signature
7-6-09 — Date

Attachment 1 – Visual Examination Data Form

Site ID and Location of Packaging Activity: INL-INTEC-659			
Examination Date: 7-2-09	Batch Number: RHINLVE090002		
Procedure #: CCP-TP-500	Revision #: 8	Video Number: N/A	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: N/A	Recording Stop: N/A	

Initial Container ☐ N/A	Final Container ☒ N/A
Container or Package ID Number: CC395	Container or Package ID Number:
Container Type: 30 GALLON DRUM	Container Type:
Waste Matrix Code: 5 5400	Waste Matrix Code:
Waste Stream: ID-ANLE-55000	Waste Stream:
	Rigid Liner: ☐Y ☐N Type: / Rigid Liner Lid: ☐Y ☐N
	Rigid Liner Vented or Hole Size:
	Percent Fill:
Layers of Confinement: O / Closure Method: N/A	Layers of Confinement: / Closure Method:

Comments (e.g., filter information, NCRs):

Volume organic waste = 10%

Waste Description:

(1M) 3½ gallon steel can containing (P) plastic bottle broken surrounded by 4 wraps of 1/8 inch (OM) ~~(OIM)~~ lead sheeting, 4 ¼ inch lead discs. filled with (OIM) Vermiculite absorbent.
JSP 7-2-09
KK 5-21-09
(P) rigid poly liner and plastic bag.
(1M) 5 gallon steel can containing, (P) plastic bottle broken, surrounded by 4 wraps of 1/8 inch (OM) lead sheeting. 4 ¼ inch lead discs. (P) Tape.
(OIM) Vermiculite absorbent.

Primary Contents (check one)	☐ Concrete	☒ Steel	☐ Organic Material

3½ and 5 gallon lids placed in the bottom of the 30 gallon drum. 5 gallon can placed on bottom and 3½ gallon can placed on top in the 30 gal. drum.

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 00395

	YES	NO	N/A
Is there liquid in the container?	☐	☒	
Is there any liquid in the waste, including internal containers, that DOES NOT meet the criteria of residual (waste shall contain as little residual liquid as is reasonably achievable by pouring, pumping and/or aspirating, and internal containers shall contain less than 1 inch or 2.5 centimeters of liquid in the bottom of the container)?	☐	☐	☒
Is the total volume of liquid in the container **GREATER** than 1% of the container?	☐	☐	☒
Is there detectable liquid in containers with an Environmental Protection Agency Hazardous Waste Number of U134?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments:
3.5 gallon can marking 165R9 5 gallon can marking 165R6

Visual Examination Operator 1:
J. Bret Parmer (Print Name) — J Bret Parmer (Signature) — 7-2-09 (Date)

Visual Examination Operator 2:
KEN KLINE (Print Name) — Ken Kline (Signature) — 7-2-09 (Date)

Attachment 1 – Visual Examination Data Form

Site ID and Location of Packaging Activity: INL - INTEC - 659	
Examination Date: 7-6-09	Batch Number: RH INLVE 090002
Procedure #: CCP-TP-500	Revision #: 8 / Video Number: N/A
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: N/A / Recording Stop: N/A

Initial Container ☒ N/A	Final Container ☐ N/A
Container or Package ID Number:	Container or Package ID Number: IDAE000000398
Container Type:	Container Type: 55 gallon Drum
Waste Matrix Code:	Waste Matrix Code: S5400
Waste Stream:	Waste Stream: ID-ANLE-S5000
	Rigid Liner: ☒Y ☐N Type: 90 mL / Rigid Liner Lid: ☐Y ☒N
	Rigid Liner Vented or Hole Size: N/A
	Percent Fill: 67-90 %
Layers of Confinement: / Closure Method:	Layers of Confinement: 0 / Closure Method: N/A

Comments (e.g., filter information, NCRs):
Filter model # NUC.FIL-0190S Serial # CI-2030

Waste Description:
(1m) 30 gallon steel drum, wire rope with metal hook.
(P) Poly liner - 90mL Rigid, plastic bag cut open, 30 gallon nylon bag.
NOTE: 30 gallon Drum # 00398

Primary Contents (check one)	☐ Concrete ☒ Steel ☐ Organic Material

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number IDAE000000398

	YES	NO	N/A
Is there liquid in the container?	☐	☒	
Is there any liquid in the waste, including internal containers, that DOES NOT meet the criteria of residual (waste shall contain as little residual liquid as is reasonably achievable by pouring, pumping and/or aspirating, and internal containers shall contain less than 1 inch or 2.5 centimeters of liquid in the bottom of the container)?	☐	☐	☒
Is the total volume of liquid in the container GREATER than 1% of the container?	☐	☐	☒
Is there detectable liquid in containers with an Environmental Protection Agency Hazardous Waste Number of U134?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags NOT defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:
Chris B. Davis (Print Name) — Signature — Date 7-6-09

Visual Examination Operator 2:
Ken Kline (Print Name) — Ken Kline (Signature) — Date 7-6-09

Attachment 1 – Visual Examination Data Form

Site ID and Location of Packaging Activity: INL - INTEC - 659			
Examination Date: 7-6-09	Batch Number: RHINLVE 090002		
Procedure #: CCP-TP-500	Revision #: 8	Video Number: N/A	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: N/A	Recording Stop: N/A	

Initial Container ☐ N/A	Final Container ☒ N/A
Container or Package ID Number: 00398	Container or Package ID Number:
Container Type: 30 GAL STEEL DRUM	Container Type:
Waste Matrix Code: S5400	Waste Matrix Code:
Waste Stream: ID-ANLE-5000	Waste Stream:
	Rigid Liner: ☐Y ☐N Type: / Rigid Liner Lid: ☐Y ☐N
	Rigid Liner Vented or Hole Size:
	Percent Fill:
Layers of Confinement: 0 / Closure Method: N/A	Layers of Confinement: / Closure Method:

Comments (e.g., filter information, NCRs):
Volume organic waste = 50 %

Waste Description: (1M) 3½ GALLON STEEL CAN CONTAINING; (P) Plastic bottle, broken, surrounded by 7 wraps of 1/8 inch (OM) Lead Sheeting, 4 - ¼ inch lead discs; filled with (OIM) Vermiculite Absorbent.
(1M) 5 Gallon steel can containing; (OIM) glass bottles no lid, empty, (P) Plastic bottles, empty, no lid, (OIM) Absorbent - no chars; 1 lb bag (C) Cardboard can, cloth (P) Plastic lids (C) Paper (OM) Tinfoil, wrapped around a (C) cardboard can. (P) Plastic bag, open, empty (1M) metal clamp with (R) rubber hose pieces, (OIM) glass smoke tube, (OIM) glass stopper (5 gallon can contains 5 plastic bottles, 5 plastic lids, and 3 glass bottles; all bottles open and empty)
30 gallon drum contains a (P) Poly Rigid liner and plastic bag, Cut. 3½ and 5 gallon lids placed in the bottom of the 30 gallon drum. 5 gallon can placed on bottom and 3½ gallon can placed on top in the 30 gallon drum.

Primary Contents (check one)	☐ Concrete ☒ Steel ☐ Organic Material

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 00398

	YES	NO	N/A
Is there liquid in the container?	☐	☒	
Is there any liquid in the waste, including internal containers, that DOES **NOT** meet the criteria of residual (waste shall contain as little residual liquid as is reasonably achievable by pouring, pumping and/or aspirating, and internal containers shall contain less than 1 inch or 2.5 centimeters of liquid in the bottom of the container)?	☐	☐	☒
Is the total volume of liquid in the container **GREATER** than 1% of the container?	☐	☐	☒
Is there detectable liquid in containers with an Environmental Protection Agency Hazardous Waste Number of U134?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH-TRU Waste Only			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: 7-6-09 3 ½ gal markings: 165P12
~~NA~~ KK 7-21-09 5 gal markings: NONE

Visual Examination Operator 1:
Chris G. Davis (Print Name) — Chris G. Davis (Signature) — 7-6-09 (Date)

Visual Examination Operator 2:
KEN KLINE (Print Name) — Ken Kline (Signature) — 7-6-09 (Date)

Attachment 1 – Visual Examination Data Form

Site ID and Location of Packaging Activity: INL - INTEC - 669			
Examination Date: 7-7-09	Batch Number: RMINLVE090002		
Procedure #: CCP-TP-500	Revision #: 8	Video Number: N/A	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: N/A	Recording Stop: N/A	
Initial Container ☒ N/A	**Final Container** ☐ N/A		
Container or Package ID Number:	Container or Package ID Number: IDAE000000399		
Container Type:	Container Type: 55 GALLON DRUM		
Waste Matrix Code:	Waste Matrix Code: S5400		
Waste Stream:	Waste Stream: ID-ANLE-S5000		
	Rigid Liner: ☒Y ☐N Type: 90mL	Rigid Liner Lid: ☐ Y ☒N	
	Rigid Liner Vented or Hole Size: N/A		
	Percent Fill: 67-90 %		
Layers of Confinement: Closure Method:	Layers of Confinement: 0	Closure Method: N/A	
Comments (e.g., filter information, NCRs): Filter Model # NUCFIL-019DS ~~SRIEL~~ QAP 7-7-09 Serial # CI-2029 QAP 7-21-09			

Waste Description: (P) 90mL Rigid Poly liner, Plastic bag - cut, 30 gallon Nylon Bag.
(IM) 30 gallon steel drum, wire rope with Metal Hook

NOTE: 30 gallon drum # 00399

Primary Contents (check one)	☐ Concrete	☒ Steel	☐ Organic Material

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number: DAE 000000399

	YES	NO	N/A
Is there liquid in the container?	☐	☒	
Is there any liquid in the waste, including internal containers, that DOES **NOT** meet the criteria of residual (waste shall contain as little residual liquid as is reasonably achievable by pouring, pumping and/or aspirating, and internal containers shall contain less than 1 inch or 2.5 centimeters of liquid in the bottom of the container)?	☐	☐	☒
Is the total volume of liquid in the container **GREATER** than 1% of the container?	☐	☐	☒
Is there detectable liquid in containers with an Environmental Protection Agency Hazardous Waste Number of U134?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:
Chris G. Davis — Print Name
Signature — Date: 7-7-09

Visual Examination Operator 2:
J. Bret Farmer — Print Name
Signature — Date: 7-7-09

Attachment 1 – Visual Examination Data Form

Site ID and Location of Packaging Activity: INL – INTEC – 659			
Examination Date: 7-7-09	Batch Number: RHINLVE 090002		
Procedure #: CCP-TP-500	Revision #: 8	Video Number: N/A	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: N/A	Recording Stop: N/A	
Initial Container ☐ N/A	Final Container ☒ N/A		
Container or Package ID Number: 00399	Container or Package ID Number:		
Container Type: 30 gallon Drum	Container Type:		
Waste Matrix Code: S5400	Waste Matrix Code:		
Waste Stream: ID-ANLE-55000	Waste Stream:		
	Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N	
	Rigid Liner Vented or Hole Size:		
	Percent Fill:		
Layers of Confinement: 0 Closure Method: N/A	Layers of Confinement:	Closure Method:	
Comments (e.g., filter information, NCRs): 10% Organic Waste			

Waste Description: (1m) 3½ gallon metal can Containing; (P) Plastic bottle, Broken, Surrounded by 8 wraps of (om) ⅛ inch lead Sheeting, 4 - ¼ inch lead discs, and 1 (P) Plastic lid, All filled with (01m) Vermiculitie Absorbent.

(1m) 5 gallon metal can containing; (P) Plastic bottle, broken, Surrounded by 8 wraps of (0m) ⅛ in lead sheeting, All filled with Vermiculite Absorbent, (1m) Screw driver, (C) String, (P) plastic Caps x 4 (0m) 4 - ¼ inch lead discs

30 gallon drum contained (P) a rigid poly liner, 2 CUT plastic bags, and plastic Sleeving.

NOTE: 3½ and 5 gallon lids were placed into bottom of 30 gallon drum. 5 gallon drum was placed on bottom and the 3½ gallon drum on top.

Primary Contents (check one)	☐ Concrete	☒ Steel	☐ Organic Material

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 00399

	YES	NO	N/A
Is there liquid in the container?	☐	☒	
Is there any liquid in the waste, including internal containers, that DOES **NOT** meet the criteria of residual (waste shall contain as little residual liquid as is reasonably achievable by pouring, pumping and/or aspirating, and internal containers shall contain less than 1 inch or 2.5 centimeters of liquid in the bottom of the container)?	☐	☐	☒
Is the total volume of liquid in the container **GREATER** than 1% of the container?	☐	☐	☒
Is there detectable liquid in containers with an Environmental Protection Agency Hazardous Waste Number of U134?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: 3 1/2 GALLON CAN MARKINGS 165 P8
5 GALLON CAN MARKINGS 165 MG

Visual Examination Operator 1:
Chris G. Davis (Print Name) — Signature — Date 7-7-09

Visual Examination Operator 2:
KEN KLINE (Print Name) — Signature — Date 7-7-09

Attachment 1 – Visual Examination Data Form

Site ID and Location of Packaging Activity: INL - INTEC - 659			
Examination Date: 7-9-09	Batch Number: RHINLVE090002		
Procedure #: CCP-TP-500	Revision #: 8	Video Number: N/A	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: N/A	Recording Stop: N/A	

Initial Container ☒ N/A	Final Container ☐ N/A
Container or Package ID Number:	Container or Package ID Number: IDAHO000000400
Container Type:	Container Type: 55 gallon drum
Waste Matrix Code:	Waste Matrix Code: S5400
Waste Stream:	Waste Stream: ID-ANLE-S5000
	Rigid Liner: ☒Y ☐N Type: 90mL Rigid Liner Lid: ☐Y ☒N
	Rigid Liner Vented or Hole Size: N/A
	Percent Fill: 67-90 %
Layers of Confinement: Closure Method:	Layers of Confinement: 0 Closure Method: N/A

Comments (e.g., filter information, NCRs):
Filter Model: NUCFIL-0190S SERIAL: CI-2024

Waste Description:
(P) 90mL Rigid Poly liner, Plastic bag, Cut, 30 gallon nylon bag.
(1M) 30 gallon steel drum, wire Rope with metal hook.

NOTE: 30 gallon drum # 00400

Primary Contents (check one)	☐ Concrete ☒ Steel ☐ Organic Material

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1DAE000000400

	YES	NO	N/A
Is there liquid in the container?	☐	☒	
Is there any liquid in the waste, including internal containers, that DOES **NOT** meet the criteria of residual (waste shall contain as little residual liquid as is reasonably achievable by pouring, pumping and/or aspirating, and internal containers shall contain less than 1 inch or 2.5 centimeters of liquid in the bottom of the container)?	☐	☐	☒
Is the total volume of liquid in the container **GREATER** than 1% of the container?	☐	☐	☒
Is there detectable liquid in containers with an Environmental Protection Agency Hazardous Waste Number of U134?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:

Chas C. Davis — Print Name
Signature — Date: 7-9-09

Visual Examination Operator 2:

KEN KLINE — Print Name
Ken Kline — Signature
Date: 7-9-09

Attachment 1 – Visual Examination Data Form

Site ID and Location of Packaging Activity: INL - INTEC - 1659			
Examination Date: 7-7-09	Batch Number: RHINCVE090002		
Procedure #: CCP-TP-500	Revision #: 8	Video Number: N/A	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: N/A	Recording Stop: N/A	

Initial Container ☐ N/A	Final Container ☒ N/A
Container or Package ID Number: 00400	Container or Package ID Number:
Container Type: 30 gallon drum	Container Type:
Waste Matrix Code: 55400	Waste Matrix Code:
Waste Stream: ID - ANLE - 55000	Waste Stream:
	Rigid Liner: ☐Y ☐N Type: / Rigid Liner Lid: ☐ Y ☐N
	Rigid Liner Vented or Hole Size:
	Percent Fill:
Layers of Confinement: 0 / Closure Method: N/A	Layers of Confinement: / Closure Method:

Comments (e.g., filter information, NCRs): ~20 % Organic Waste
Top 3½ gallon drum markings: John Hughes
Bottom 5 gallon drum markings: 165 M 3

Waste Description: (P) 90 mil Rigid Poly liner, 2 cut plastic bags, plastic Sleeving (im) 3½ Gallon metal Can Containing; (P) Broken plastic bottle, (ocm) Solidified organic Sludge, (im) metal Pipe, metal Cap, (P) open plastic bags, (P) Plastic cups (im) another metal pipe, one end capped, other end open, metal cap (P) Plastic bottle, plastic Lid removed from bottle, (ocm) Solidified organic Sludge.
(im) 5 gallon metal Can Containing; (P) plastic bottle, broken, wrapped in 7 layers of (cm) 1/8 inch lead Sheeting. (P) Broken plastic lid, (cm) 4 lead discs - 1/4 inch. (cim) Vermiculite Absorbent

NOTE: Placed 3½ and 5 gallon can lids on bottom of 30 gallon drum, 5 gallon Can on bottom of 30 gallon drum. 3½ gallon drum on top.

Primary Contents (check one)	☐ Concrete ☒ Steel ☐ Organic Material

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 00400

	YES	NO	N/A
Is there liquid in the container?	☐	☒	
Is there any liquid in the waste, including internal containers, that DOES **NOT** meet the criteria of residual (waste shall contain as little residual liquid as is reasonably achievable by pouring, pumping and/or aspirating, and internal containers shall contain less than 1 inch or 2.5 centimeters of liquid in the bottom of the container)?	☐	☐	☒
Is the total volume of liquid in the container **GREATER** than 1% of the container?	☐	☐	☒
Is there detectable liquid in containers with an Environmental Protection Agency Hazardous Waste Number of U134?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:
Chris B. Davis (Print Name) — Signature — Date 7-9-09

Visual Examination Operator 2:
Ken Kline (Print Name) — Ken Kline (Signature) — Date 7-9-09

Attachment 1 – Visual Examination Data Form

Site ID and Location of Packaging Activity: INL-INTEC-659			
Examination Date: 7-10-09	Batch Number: RHINLVE090002		
Procedure #: CCP-TP500	Revision #: 8	Video Number: N/A	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: N/A	Recording Stop: N/A	
Initial Container ☒ N/A	Final Container ☐ N/A		
Container or Package ID Number:	Container or Package ID Number: IDAE000000393		
Container Type:	Container Type: 55 GALLON DRUM		
Waste Matrix Code:	Waste Matrix Code: S5400		
Waste Stream:	Waste Stream: ID ANLE-S5000		
	Rigid Liner: ☒Y ☐N Type: 90mL Rigid Liner Lid: ☐ Y ☒N		
	Rigid Liner Vented or Hole Size: N/A		
	Percent Fill: 67-90%		
Layers of Confinement: 1 Closure Method:	Layers of Confinement: 0 Closure Method: N/A		
Comments (e.g., filter information, NCRs): FILTER MODEL: NUCFIL-019DS, S.N. EH-389			

Waste Description:

(P) 90mL RIGID POLY LINER, PLASTIC BAG, CUT, 30 GALLON NYLON BAG

(EM) 30 GALLON STEEL DRUM, WIRE ROPE WITH METAL HOOK

NOTE: 30 GALLON DRUM #00393

Primary Contents (check one)	☐ Concrete	☒ Steel	☐ Organic Material

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number IDAE000000393

	YES	NO	N/A
Is there liquid in the container?	☐	☒	
Is there any liquid in the waste, including internal containers, that DOES NOT meet the criteria of residual (waste shall contain as little residual liquid as is reasonably achievable by pouring, pumping and/or aspirating, and internal containers shall contain less than 1 inch or 2.5 centimeters of liquid in the bottom of the container)?	☐	☐	☒
Is the total volume of liquid in the container GREATER than 1% of the container?	☐	☒	☒
Is there detectable liquid in containers with an Environmental Protection Agency Hazardous Waste Number of U134?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags NOT defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:
KEN KLEIN (Print Name) — Ken Klein (Signature) — Date: 7-10-09

Visual Examination Operator 2:
Chris A. Davis (Print Name) — Chris A. Davis (Signature) — Date: 7-10-09

Attachment 1 – Visual Examination Data Form

Site ID and Location of Packaging Activity: INL - INTEC - 659			
Examination Date: 7-10-09	Batch Number: RHINLVE090002		
Procedure #: CCP-TP-500	Revision #: 8	Video Number: N/A	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: N/A	Recording Stop: N/A	

Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 00393		Container or Package ID Number:	
Container Type: 30 gallon drum		Container Type:	
Waste Matrix Code: 55400		Waste Matrix Code:	
Waste Stream: ID-ANLE-S5000		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
		Percent Fill:	
Layers of Confinement: 0 Closure Method: n/a		Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): 20% Organic Waste			

Waste Description: (P) 90 mil Rigid Poly liner, 2 cut plastic bags, Plastic Sleeving

(1M) 3½ gallon Can Containing; 3 Metal pipes with one end open and the other end capped, 3 metal pipe caps (P) 3 plastic bottles, broken, 3 Plastic Cups (0GM) solidified organic Sludge (P) torn and empty Plastic bags (0IM) Absorbent - NO Char - 1 lb. (1GM) Solidified inorganic Sludge.

(1M) Bottom 3½ gallon Can Containing; (0M) 5 layers of lead Sheeting wrapped around inside of Can, 24 inch by 6 inch by ¼ inch lead plates (1GM) Cemented inorganic Sludge (P) Broken plastic bottle (0M) 32 - ¼ inch lead discs. (0IM) Vermiculite Absorbent (P) Plastic Lid. GD 9-10-09 ... 9-21-09 GD 07-10-09 KK 9-21-09

NOTE: Placed both 3½ gallon lids on bottom and replaced 3½ gal Cans in Same Configuration.

Primary Contents (check one)	☐ Concrete ☒ Steel ☐ Organic Material

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 00393

	YES	NO	N/A
Is there liquid in the container?	☐	☒	
Is there any liquid in the waste, including internal containers, that DOES **NOT** meet the criteria of residual (waste shall contain as little residual liquid as is reasonably achievable by pouring, pumping and/or aspirating, and internal containers shall contain less than 1 inch or 2.5 centimeters of liquid in the bottom of the container)?	☐	☐	☒
Is the total volume of liquid in the container **GREATER** than 1% of the container?	☐	☐	☒
Is there detectable liquid in containers with an Environmental Protection Agency Hazardous Waste Number of U134?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: Top 3.5 gallon can markings: Hughes 2/28/79 3 STEEL PIPES
Bottom 3.5 gallon can markings: 165M-2 165R-8 4/5/79 H. GOODSPEED

Visual Examination Operator 1:
Chris G. Davis — Print Name
Chris G. Davis — Signature
7-10-09 — Date

Visual Examination Operator 2:
KEN KLINE — Print Name
Ken Kline — Signature
7-10-09 — Date

Attachment 1 – Visual Examination Data Form

Site ID and Location of Packaging Activity: INL-WTEC-659			
Examination Date: 7-16-09	Batch Number: RHINLVE090002		
Procedure #: CCP-TP-500	Revision #: 8	Video Number: N/A	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: N/A	Recording Stop: N/A	

Initial Container ☒ N/A	Final Container ☐ N/A
Container or Package ID Number:	Container or Package ID Number: IDAE000000394
Container Type:	Container Type: 55 gallon drum
Waste Matrix Code:	Waste Matrix Code: S5400
Waste Stream:	Waste Stream: ID-ANLE-S5000
	Rigid Liner: ☒Y ☐N Type: 90 mL Rigid Liner Lid: ☐Y ☒N
	Rigid Liner Vented or Hole Size: N/A
	Percent Fill: 67-90 %
Layers of Confinement: Closure Method:	Layers of Confinement: 0 Closure Method: N/A
Comments (e.g., filter information, NCRs): Filter # NUCFIL-019DS SERIAL # CI-2019	

Waste Description: (P) 90 mL Poly liner, sliced plastic bag, 30 gallon Nylon bag
(1m) 30 gallon steel drum # 00394, wire rope with metal Hook.

Primary Contents (check one)	☐ Concrete ☒ Steel ☐ Organic Material

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number IDAE000000394

	YES	NO	N/A
Is there liquid in the container?	☐	☒	
Is there any liquid in the waste, including internal containers, that DOES **NOT** meet the criteria of residual (waste shall contain as little residual liquid as is reasonably achievable by pouring, pumping and/or aspirating, and internal containers shall contain less than 1 inch or 2.5 centimeters of liquid in the bottom of the container)?	☐	☐	☒
Is the total volume of liquid in the container **GREATER** than 1% of the container?	☐	☐	☒
Is there detectable liquid in containers with an Environmental Protection Agency Hazardous Waste Number of U134?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:
Chris G. Davis — Print Name
Chris G. Davis — Signature
7-16-09 — Date

Visual Examination Operator 2:
Ken Kirk — Print Name
Ken Kirk — Signature
7-16-09 — Date

Attachment 1 – Visual Examination Data Form

Site ID and Location of Packaging Activity: INL - INTEC - 659			
Examination Date: 7-10-09	Batch Number: RH INTVE 090002		
Procedure #: CCP-TP-500	Revision #: 8	Video Number: N/A	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: N/A	Recording Stop: N/A	

Initial Container ☐ N/A	Final Container ☒ N/A
Container or Package ID Number: 00394	Container or Package ID Number:
Container Type: 30 GALLON Drum	Container Type:
Waste Matrix Code: S5400	Waste Matrix Code:
Waste Stream: ID-ANLE-S5000	Waste Stream:
	Rigid Liner: ☐Y ☐N Type: / Rigid Liner Lid: ☐ Y ☐N
	Rigid Liner Vented or Hole Size:
	Percent Fill:
Layers of Confinement: 0 / Closure Method: N/A	Layers of Confinement: / Closure Method:
Comments (e.g., filter information, NCRs): 20 % Organic Waste	

Waste Description: (P) 90 mL Poly Liner, 2 cut plastic bags, plastic sleeving.

(1m) 3½ GALLON METAL CAN CONTAINING; (0m) 4 - ¼" lead discs, ⅛ inch lead sheeting, 7 layers, wrapped around a (P) Broken plastic bottle. (01m) Vermiculite Absorbent.

(1m) 5 GALLON METAL CAN CONTAINING: (P) 4 plastic bags, torn and empty. Plastic bottles, broken and empty (1m) 3 metal Pipes one end capped. 1 metal Pipe with no caps, (01m) NO CHAR Absorbent was added. (P) Plastic Lids (x4) (0Gm) Solidified Organic Sludge. (P) 2 labware plastic stirrers with (1m) magnet cores. (1m) 5 metal caps KK 7-23-09 7-23-09

NOTE: 3½ and 5 gallon lids placed on bottom of 30 gallon drum. 5 gal can on Bottom and 3½ gal can on top in 30 gal drum.

Primary Contents (check one)	☐ Concrete ☒ Steel ☐ Organic Material

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 00394

	YES	NO	N/A
Is there liquid in the container?	☐	☒	
Is there any liquid in the waste, including internal containers, that DOES **NOT** meet the criteria of residual (waste shall contain as little residual liquid as is reasonably achievable by pouring, pumping and/or aspirating, and internal containers shall contain less than 1 inch or 2.5 centimeters of liquid in the bottom of the container)?	☐	☐	☒
Is the total volume of liquid in the container **GREATER** than 1% of the container?	☐	☐	☒
Is there detectable liquid in containers with an Environmental Protection Agency Hazardous Waste Number of U134?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: Top 3.5 gal can markings: 165 PIS
Bottom 5 gal can markings: Hughes 7-6-78

Visual Examination Operator 1:
Chris G. Davis (Print Name) — Signature — Date: 7-16-09

Visual Examination Operator 2:
Ken Kline (Print Name) — Signature — Date: 7-16-09

Attachment 1 – Visual Examination Data Form

Site ID and Location of Packaging Activity: INL - INTEC - 659			
Examination Date: 7-17-09	Batch Number: RHINLVE090002		
Procedure #: CCP-TP-500	Revision #: 8	Video Number: N/A	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: N/A	Recording Stop: N/A	
Initial Container ☒N/A	Final Container ☐ N/A		
Container or Package ID Number:	Container or Package ID Number: ~~IDAERHOOO1005~~ ~~IDAE000000100 5~~ QAP 7-21-09 CAP 7-17-09		
Container Type:	Container Type: 55 gallon drum		
Waste Matrix Code:	Waste Matrix Code: S5400		
Waste Stream:	Waste Stream: ID-ANLE-S5000		
	Rigid Liner: ☒Y ☐N Type: 90mL	Rigid Liner Lid: ☐ Y ☒N	
	Rigid Liner Vented or Hole Size: N/A		
	Percent Fill: 67 - 90 %		
Layers of Confinement: Closure Method:	Layers of Confinement: 0	Closure Method: N/A	
Comments (e.g., filter information, NCRs): Filter model: NUCFIL-019DS SERIAL: HE-1153			

Waste Description:

(P) Rigid 90mL Poly liner, 30 gallon nylon bag, 2 breached plastic bags.

(Im) 30 gallon Steel drum, wire Rope, metal Hook

NOTE: 30 gallon drum # 001005

Primary Contents (check one)	☐ Concrete	☒ Steel	☐ Organic Material

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number IDAERH0001005

	YES	NO	N/A
Is there liquid in the container?	☐	☒	
Is there any liquid in the waste, including internal containers, that DOES **NOT** meet the criteria of residual (waste shall contain as little residual liquid as is reasonably achievable by pouring, pumping and/or aspirating, and internal containers shall contain less than 1 inch or 2.5 centimeters of liquid in the bottom of the container)?	☐	☐	☒
Is the total volume of liquid in the container **GREATER** than 1% of the container?	☐	☐	☒
Is there detectable liquid in containers with an Environmental Protection Agency Hazardous Waste Number of U134?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:
Chris G. Davis — Print Name
Chris G. Davis — Signature
7-17-09 — Date

Visual Examination Operator 2:
J. BRET FARMER — Print Name
J Bret Farmer — Signature
7-17-09 — Date

Attachment 1 – Visual Examination Data Form

Site ID and Location of Packaging Activity: INL - INTEC - 659			
Examination Date: 7-16-09	Batch Number: RHINLVE 090002		
Procedure #: CCP-TP-500	Revision #: 8	Video Number: N/A	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: N/A	Recording Stop: N/A	

Initial Container ☐ N/A	Final Container ☒ N/A
Container or Package ID Number: 001005	Container or Package ID Number:
Container Type: 30 gallon drum	Container Type:
Waste Matrix Code: S 5400	Waste Matrix Code:
Waste Stream: ID-ANLE-35000	Waste Stream:
	Rigid Liner: ☐Y ☐N Type: / Rigid Liner Lid: ☐Y ☐N
	Rigid Liner Vented or Hole Size:
	Percent Fill:
Layers of Confinement: 0 / Closure Method: N/A	Layers of Confinement: / Closure Method:
Comments (e.g., filter information, NCRs): 30 % Organic Waste	

Waste Description: (P) Rigid Poly liner, Plastic bags cut open, plastic disc (1m) 2 7 gallon can Lids and Locking rings on bottom of 30 gallon drum.
(1m) TOP 7 gallon metal can containing: (1m) Metal paint can and lid, lid removed, wire (P) 2 cut plastic bags, 1 Liter broken plastic bottle, Plastic Sheeting, empty plastic bottle, 2 plastic lids, Scrap plastic (c) Sandpaper, Terry towels, cardboard, (R) Rubber Stopper
(1m) Bottom 7 gallon metal can containing: (1m) 3 metal Clamps, 1 gallon metal paint can with no lid, metal lid, 2 - 1 Liter metal cans, empty with lids removed, metal screen, empty stainless steel cap, empty stainless steel tray, steel pipe, 2 metal plugs. (om) lead Chunk (Am) 21 empty aluminum caps, Scrap Aluminum (oim) NC CHAR absorbent (P) Scrap plastic, 3 ripped and empty plastic bags, 4 plastic bottles, empty with no lids, 8 plastic lids, broken Plexi-glass (c) Sponge, Sandpaper, Cardboard (R) Rubber Stopper

Primary Contents (check one)	☐ Concrete	☒ Steel	☐ Organic Material

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 001005

	YES	NO	N/A
Is there liquid in the container?	☐	☒	
Is there any liquid in the waste, including internal containers, that DOES NOT meet the criteria of residual (waste shall contain as little residual liquid as is reasonably achievable by pouring, pumping and/or aspirating, and internal containers shall contain less than 1 inch or 2.5 centimeters of liquid in the bottom of the container)?	☐	☐	☒
Is the total volume of liquid in the container GREATER than 1% of the container?	☐	☐	☒
Is there detectable liquid in containers with an Environmental Protection Agency Hazardous Waste Number of U134?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags NOT defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments:
2 metal cylinders in bottom 7 gal can. Container 1 outside writting: ONE 1

Visual Examination Operator 1:
Chris G. Davis (Print Name) — Signature — Date 7-17-09

Visual Examination Operator 2:
KEN KLINE (Print Name) — Ken Kline (Signature) — Date 7.17.09

ADDITIONAL COMMENTS
NOTE: Second metal cylinder in bottom 7 gallon can markings:
Dickerman B-1, B-2, B-3, C-2, EP-1, EP-2, EP-3

Additional Comments on following Page.

Additional commants
Small Aluminum caps found in Metal cylinder Number on
Contined writting on Them as follows

1 - B-1, Dickerman
2 - 21-2-T-E
3 - 69D-L-13
SON-15
4 - 11A-19
5 - MS-B-5086
4-05
6 - EP-210 Dickerman
7 - EP-3 Dickerman
8 - X-90
9 - 119-B-14
10 - 135-F-2
11 - 59A-13
12 - 173-A19
13 - 45B-10
14 - 15-BHF-613
15 - FAGS-NIR 9-15

Writing on the outside of the Container Also Said
Fuel Samples

7-20-09
7-21-09

Attachment 1 – Visual Examination Data Form

Site ID and Location of Packaging Activity: INL - INTEC - 659			
Examination Date: 7-20-09		Batch Number: RHINLVE090002	
Procedure #: CCP-TP-500		Revision #: 8	Video Number: N/A
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: N/A	Recording Stop: N/A
Initial Container ☒N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: IDAERH 0001003	
Container Type:		Container Type: 55 gallon drum	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: ID-ANL-E-S5000	
		Rigid Liner: ☒Y ☐N Type: 90 mL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: N/A	
		Percent Fill: 67-90%	
Layers of Confinement:	Closure Method:	Layers of Confinement: 0	Closure Method: N/A
Comments (e.g., filter information, NCRs): Filter # NUCFIL-019D5 Serial # CI-2040			

Waste Description: (P) 90mL Rigid Poly Liner, 30 gallon nylon bag, cut plastic bag.

(1M) #001003 30 gallon drum, wire rope, metal Hook.

Primary Contents (check one)	☐ Concrete	☒ Steel	☐ Organic Material

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1DAERH000/003

	YES	NO	N/A
Is there liquid in the container?	☐	☒	
Is there any liquid in the waste, including internal containers, that DOES **NOT** meet the criteria of residual (waste shall contain as little residual liquid as is reasonably achievable by pouring, pumping and/or aspirating, and internal containers shall contain less than 1 inch or 2.5 centimeters of liquid in the bottom of the container)?	☐	☐	☒
Is the total volume of liquid in the container **GREATER** than 1% of the container?	☐	☐	☒
Is there detectable liquid in containers with an Environmental Protection Agency Hazardous Waste Number of U134?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:
Chris G. Davis (Print Name) — Signature — Date 7-20-09

Visual Examination Operator 2:
KEN KLINE (Print Name) — Ken Kline (Signature) — Date 7-20-09

Attachment 1 – Visual Examination Data Form

Site ID and Location of Packaging Activity: INL - INTEC - 659			
Examination Date: 7-17-09	Batch Number: RHINLVE090002		
Procedure #: CCP-TP-500	Revision #: 8	Video Number: N/A	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: N/A	Recording Stop: N/A	

Initial Container ☐ N/A	Final Container ☒ N/A
Container or Package ID Number: 001003	Container or Package ID Number:
Container Type: 30 gallon drum	Container Type:
Waste Matrix Code: S5400	Waste Matrix Code:
Waste Stream: ID-ANLE-55000	Waste Stream:
	Rigid Liner: ☐Y ☐N Type: / Rigid Liner Lid: ☐ Y ☐N
	Rigid Liner Vented or Hole Size:
	Percent Fill:
Layers of Confinement: 0 / Closure Method: N/A	Layers of Confinement: / Closure Method:

Comments (e.g., filter information, NCRs):

20% ORGANIC waste 7-23-09 KK 7-23-09

Waste Description: (P) 90 mL Rigid Poly liner, 2 cut open Plastic bags. (C) Cardboard Liner. (Im) 7 gal and 5 gal metal lids placed in bottom of 30 gallon drum, 2 lock rings ~~Bottom 7~~ TOP 5 gallon metal (Im) Can containing: 3-1/8 inch lead sheets (Om) (Om) 2-1/8 inch lead sheets rolled around ~~a~~ inside of 7 gallon can. (P) 2 empty, Cut, Plastic bags (Im) Small Ultrasonic Cleaner (P) plastic insulation around electric cord to the Cleaner. (Am) Aluminum Lid, 1 pint aluminum can with no lid; 1/2 Pint Aluminum Can with no lid. (P) Plastic bag, Cut; Scrap plastic (C) Terry-Towels (Im) Metal Spring, metal Screw ~~(Om) 17 pieces small metal~~ (R) 17 pieces of Rubber (P) Thin plastic pieces. (Om) 2 pieces 1/8 inch lead discs. (Im) BOTTOM 7 gallon Can containing: (P) 2 empty and cut plastic bags, open, empty ziplock bag; Plastic bottle no lid (Im) 2 Paint can Lids, 2-1 gallon paint cans without lids (C) Grinding papers, Paper towels (P) Plastic bags, open, empty (R) Rubber Gasket (P) Plastic Lids (Im) Scrap metal

Primary Contents (check one)	☐ Concrete ☒ Steel ☐ Organic Material

NOTE: 2 Pieces 1/8 inch lead discs were moved from the top 5 gallon can and placed into the bottom, 7 gallon can.
(P) Plastic disc in 30 gallon drum

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 001003

	YES	NO	N/A
Is there liquid in the container?	☐	☒	
Is there any liquid in the waste, including internal containers, that DOES **NOT** meet the criteria of residual (waste shall contain as little residual liquid as is reasonably achievable by pouring, pumping and/or aspirating, and internal containers shall contain less than 1 inch or 2.5 centimeters of liquid in the bottom of the container)?	☐	☐	☒
Is the total volume of liquid in the container **GREATER** than 1% of the container?	☐	☐	☒
Is there detectable liquid in containers with an Environmental Protection Agency Hazardous Waste Number of U134?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☑	☐	

Comments: 5 gallon can contains 1-1 pint can with markings: 165513 on top and GB-10, 175-AL-8-10 Mounts written on the side. ½ Pint marking: Top: 165 R3, CLadding

Visual Examination Operator 1:
Chas G. Davis (Print Name) — Signature — Date 7-17-09

Visual Examination Operator 2:
KEN KLINE (Print Name) — Signature — Date 7-17-09

Comments continued: ½ Pint Side markings: 165 R16

7 GALLON CAN CONTAINED 2-1 gallon Paint cans. CAN 1 markings: Grinding Papers and kleenex.
Can 2 markings: Plastic bags and kleenex.
2 small plastic vials: Vial 1 markings: PG-7.
Vial 2 markings: PH-5.

Attachment 2 – Visual Examination Independent Technical Reviewer Checklist

Batch Data Report No.: RHNLVE090002

1.	Were data generation and reduction conducted in a technically correct manner in accordance with the methods (procedure) used?	☐ NO	☒ YES	☐ N/A
2.	Was the correct revision of the operating procedure used?	☐ NO	☒ YES	☐ N/A
3.	Were all the transcription errors corrected?	☐ NO	☒ YES	☐ N/A
4.	Are BDR contents complete and match the Visual Examination Batch Data report Table of Contents?	☐ NO	☒ YES	☐ N/A
5.	Does the BDR include VE for no more than 20 containers?	☐ NO	☒ YES	☐ N/A
6.	Is all data recorded signed and dated in reproducible ink?	☐ NO	☒ YES	☐ N/A
7.	Is all raw data recorded clearly, legibly, and accurately?	☐ NO	☒ YES	☐ N/A
8.	Are all changes to original data lined out, initialed and dated by the individual making the changes or an individual authorized to make the change?	☐ NO	☒ YES	☐ N/A
9.	Is there an adequate written description of the contents?	☐ NO	☒ YES	☐ N/A
10.	Were the recording equipment checks satisfactory?	☐ NO	☐ YES	☒ N/A
11.	Has each container in this BDR been evaluated for the presence of prohibited wastes?	☐ NO	☒ YES	☐ N/A
12.	Has the physical waste form in each container in this BDR been evaluated against the Waste Stream Description and the Waste Matrix Code?	☐ NO	☒ YES	☐ N/A
13.	Have the RH Quality Assurance Objectives (QAOs) for VE been met? Precision – reconciled discrepancies between operators or between the operator and ITR. Accuracy – trained operators Representativeness – description of container contents Completeness – completed data form and/or recording Comparability – proper training and adequate AK source documents are available for unopened containers.	☐ NO	☒ YES	☐ N/A
14.	Were NCRs generated included in the BDR?	☐ NO	☒ YES	☐ N/A

Comments: N/A

Independent Technical Reviewer

Caleb Maynard — Printed Name

Signature

7-21-09 — Date

I have reviewed and agree with all changes made.

7-23-09

Attachment 1 – CCP Nonconformance Report (NCR)		
NCR No. NCR-RHINL-0506-09	Revision 1	
1. Lot No./Heat No. or Serial No.: NA	2. Process (NDA, HSG, NDE, VE, Other): RH_VE	3. Batch Data Report # (s): NA Container #(s): 00397 (IDAE000000397)
4. Order/Work Order/Job Control Number (as applicable): NA	5. PO #: NA 6. Supplier: NA	

DESCRIPTION OF NONCONFORMANCE

7. (a) CCP HOLD TAGS SHALL BE APPLIED UNLESS JUSTIFIED AS FOLLOWS: Due to ALARA considerations, NCR tagging will not be applied for this NCR. Administrative control will be applied through container entry in the CCP Data Center. In addition, a listing of containers has been posted on the CCP ftp site, identifying those containers where NCR tagging is not being applied due to ALARA. Container information for this NCR has been included in the listing, which is to alert Mobile Loading Unit personnel as a second control mechanism for non-tagged containers. The current listing has been posted to the ftp site.

☐ < 100 nCi/g ☐ Prohibited Item ☐ >500 ppmv Flamm. VOCs

☐ E-Flag ☐ Receiving Inspection ☐ Transportation ☐ WWIS ☒ Other

(b) Description of Nonconformance
Required Condition (Implementing Procedure, Revision, Section & Text)
DOE/WIPP-02-3214, Rev. 1, Section 4.1.2.3, Quality Assurance Objectives "The following QAOs apply to the VE method:"
Completeness QAO – The relevant waste information must be collected. This information must be documented on a videotape and/or data form, or other unalterable media.

CCP-PO-001, Rev. 17, Section B-4a(1) Data Quality Objectives, Visual Examination "To determine the physical waste form, the absence of prohibited items,..."

(c). Actual Condition
Container 00397 in a 30-gallon configuration was loaded into a 55-gallon container without invoking CCP-TP-500 to complete the data form for the final container; 55-gallon drum.

Reason for revision: Removed the request to verify drum identification on the body.

(d). Attachments:
Attachment 1 – email from Gregory Smith to Thomas Clements and Irene Quintana, dated 6/30/09 describing the events.

8. NCR Originator (Print name, sign, and date)	9. CCP QA Engineer or Designee Validation (Print name, sign, and date)
Irene Quintana Irene Quintana 7/13/09	Louis R. Wade 7/13/09

9a. Does this NCR have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE
If YES or INDETERMINATE, then apply Trend Code L in Block 12.

10. Significant Condition?	11. Recurring Condition?
☐ YES ☒ NO ☐ NA	☐ YES ☒ NO (If YES, List NCRs/CARs)
12. Trend Code: A	13. Responsible Manager: Irene Quintana

Attachment 1 – CCP Nonconformance Report (NCR)	
NCR No. NCR-RHINL-0506-09 Revision 1	
INTERIM DISPOSITION	
14. Interim Disposition (Check One) ☒ N/A (See final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort ☐ Reinspect/Retest ☐ Remediate (a) Instructions for Completion of the Interim Disposition:	
INTERIM DISPOSITION APPROVALS	
15 .Responsible Manager/Individual (Print, sign, and date)	16. CCP QA Engineer or Designee (Print, sign and date)
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
COMPLETION OF INTERIM DISPOSITION	
17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date)	
18. Interim Disposition Verified CCP QA Engineer: (Print, sign and date)	

Attachment 1 – CCP Nonconformance Report (NCR)

NCR No. NCR-RHINL-0506-09 Revision 1

FINAL DISPOSITION

19. Final Disposition (Check One)
☐ Use-As-Is ☐ Reject ☐ Repair ☒ Rework ☐ Scrap

(a) Technical Justification (Required for Use-As-is and Repair dispositions. N/A for Reject, Scrap, or Rework dispositions.)
N/A

(b) Disposition Instructions (Required for Reject and Scrap, N/A for Use-As-Is, Rework, and Repair)
N/A

(c) Instructions for Completion of the Final Disposition, including Inspection Criteria (Required for Repair and Rework, N/A for Use-As-Is, Reject and Scrap)
1. VPM briefing to CCP qualified operators: 1)attention to detail and 2)verbatim compliance with procedure
2. Open 55-gallon container, IDAE000000397, to verify the 30-gallon container number on lid. Verify the absence of prohibited items in the 55-gallon container.
3. Record the Visual Examination process on CCP-TP-500, Attachment 1, Visual Examination Data Form as the final container.

(d) Corrective Actions (Actions to Prevent Recurrence) - as required.

FINAL DISPOSITION APPROVALS

20. Responsible Manager/Individual: (Print, sign, and date)	21. CCP QA Engineer or Designee: (Print, sign, and date)
Irene Quintana Irene Quintana 7/13/09	Louis R. WADE Louis R. Wade 7/13/09
Additional Approvals: (Print, sign, and date)	Additional Approvals: (Print, sign, and date)

CLOSURE

22. Final Disposition Complete Responsible Manager/Individual: (Print, sign, and date)

23. (a) HOLD TAG removal has been validated and reconciled for all nonconforming items on the NCR. ☐
(b) Check if not applicable (N/A) and provide an explanation here or on a continuation sheet ☐

24. Final Disposition Verified – NCR Closed CCP QA Engineer: (Print, sign, and date)

1 of 9 7/13/09

NCL-RHINL-0576-09 R.0 Attachment 1 Page 1 of 1

The sender of this message has requested a read receipt. Click here to send a receipt.

Quintana, Irene

From: Smith, Gregory L [Gregory.Smith@inl.gov] **Sent:** Tue 6/30/2009 9:40 AM
To: Clements, Thomas L; Quintana, Irene
Cc: Smith, Gregory
Subject: VE ANL-E Drum 00397
Attachments:

Tom,

On Wednesday 06/24/09 VE was performed in CPP-659 cell 308 on the packaging of 30 gallon ANL-E drum 00397 using the certified procedure CCP-TP-500, Rev. 8. An attachment 1, Visual Examination Data Form, was completed for the initial container (30 gallon drum). The 30 gallon drum is to be placed into a 55 gallon drum as the final packaging container and documented on an attachment 1 per section 4.2 of CCP-TP-500. However, the 30 gallon drum was left in cell 308 to be removed another day to complete VE of the 30 gallon drum being placed into the 55 gallon drum.

On Monday 06/29/09 at 0715 I called Ken Pierson and asked if they planned on removing 30 gallon drum 00397 from cell 308 so we can complete VE into the 55 gallon drum. He said yes pending crane maintenance and manipulator repairs. I asked him to give me notice when they were ready to remove the drum so that I could provide a CCP Lead VEE to be present to complete the VE of the drum. He said that he would. I did not receive any notification this day.

On Tuesday 06/30/09 at 0751 I called Ken Pierson and asked if they were going to remove the 30 gallon drum 00397 from the cell today. He said they did it yesterday, packing it into a 55 gallon drum and had placed another 30 gallon drum into the cell. I told him that we have a problem because VE was not completed per procedure and a CCP Lead VEE was also not present. He said that the 30 gallon drum was removed and packed into a 55 gallon drum per the direction of Keith Farmer.

Greg Smith

CCP RH VPM

Office: (208) 533-3455

Cell: (760) 382-4701

Attachment 1 – CCP Nonconformance Report (NCR)

NCR No. NCR-RHINL-0506-09 Revision 0

1. Lot No./Heat No. or Serial No.: NA	2. Process (NDA, HSG, NDE, VE, Other): RH_VE	3. Batch Data Report # (s): NA Container #(s): 00397 (IDAE000000397)
4. Order/Work Order/Job Control Number (as applicable): NA	5. PO #: NA 6. Supplier: NA	

DESCRIPTION OF NONCONFORMANCE

7. (a) CCP HOLD TAGS SHALL BE APPLIED UNLESS JUSTIFIED AS FOLLOWS: Due to ALARA considerations, NCR tagging will not be applied for this NCR. Administrative control will be applied through container entry in the CCP Data Center. In addition, a listing of containers has been posted on the CCP ftp site, identifying those containers where NCR tagging is not being applied due to ALARA. Container information for this NCR has been included in the listing, which is to alert Mobile Loading Unit personnel as a second control mechanism for non-tagged containers. The current listing has been posted to the ftp site.

☐ < 100 nCi/g ☐ Prohibited Item ☐ >500 ppmv Flamm. VOCs

☐ E-Flag ☐ Receiving Inspection ☐ Transportation ☐ WWIS ☒ Other

(b) Description of Nonconformance
Required Condition (Implementing Procedure, Revision, Section & Text)
DOE/WIPP-02-3214, Rev. 1, Section 4.1.2.3, Quality Assurance Objectives "The following QAOs apply to the VE method:"
Completeness QAO – The relevant waste information must be collected. This information must be documented on a videotape and/or data form, or other unalterable media.

CCP-PO-001, Rev. 17, Section B-4a(1) Data Quality Objectives, Visual Examination "To determine the physical waste form, the absence of prohibited items,..."

(c). Actual Condition
Container 00397 in a 30-gallon configuration was loaded into a 55-gallon container without invoking CCP-TP-500 to complete the data form for the final container; 55-gallon drum.

(d). Attachments:
Attachment 1 – email from Gregory Smith to Thomas Clements and Irene Quintana, dated 6/30/09 describing the events.

8. NCR Originator (Print name, sign, and date) Irene Quintana 7/1/09	9. CCP QA Engineer or Designee Validation (Print name, sign, and date) CM Gomez 7/1/09
9a. Does this NCR have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE If YES or INDETERMINATE, then apply Trend Code L in Block 12.	
10. Significant Condition? ☐ YES ☒ NO ☐ NA	11. Recurring Condition? ☐ YES ☒ NO (If YES, List NCRs/CARs)
12. Trend Code: A	13. Responsible Manager: Irene Quintana

Requested by CAL
7/13/09

Attachment 1 – CCP Nonconformance Report (NCR)	
NCR No. NCR-RHINL-0506-09	Revision 0
INTERIM DISPOSITION	
14. Interim Disposition (Check One) ☒ N/A (See final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort ☐ Reinspect/Retest ☐ Remediate (a) Instructions for Completion of the Interim Disposition:	
INTERIM DISPOSITION APPROVALS	
15. Responsible Manager/Individual (Print, sign, and date)	16. CCP QA Engineer or Designee (Print, sign and date)
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
COMPLETION OF INTERIM DISPOSITION	
17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date)	
18. Interim Disposition Verified CCP QA Engineer: (Print, sign and date)	

Superseded by Rev. 1
7/13/09

Attachment 1 – CCP Nonconformance Report (NCR)	
NCR No. NCR-RHINL-0506-09	Revision 0
FINAL DISPOSITION	
19. Final Disposition (Check One) ☐ Use-As-Is ☐ Reject ☐ Repair ☒ Rework ☐ Scrap	
(a) Technical Justification (Required for Use-As-Is and Repair dispositions, N/A for Reject, Scrap, or Rework dispositions.) N/A	
(b) Disposition Instructions (Required for Reject and Scrap, N/A for Use-As-Is, Rework, and Repair) N/A	
(c) Instructions for Completion of the Final Disposition, including Inspection Criteria (Required for Repair and Rework, N/A for Use-As-Is, Reject and Scrap) 1. VPM briefing to CCP qualified operators: 1)attention to detail and 2)verbatim compliance with procedure 2. Open 55-gallon container, IDAE000000397, to verify the 30-gallon container number on lid and body. Verify the absence of prohibited items in the 55-gallon container. 3. Record the Visual Examination process on CCP-TP-500, Attachment 1, Visual Examination Data Form as the final container.	
(d) Corrective Actions (Actions to Prevent Recurrence) - as required. N/A	
FINAL DISPOSITION APPROVALS	
20. Responsible Manager/Individual: (Print, sign, and date) Irene Dorrian 7/1/09	21. CCP QA Engineer or Designee: (Print, sign, and date) C D Gomez 7/2/09
Additional Approvals: (Print, sign, and date)	Additional Approvals: (Print, sign, and date)
CLOSURE	
22. Final Disposition Complete Responsible Manager/Individual: (Print, sign, and date)	
23. (a) HOLD TAG removal has been validated and reconciled for all nonconforming items on the NCR. ☐ (b) Check if not applicable (N/A) and provide an explanation here or on a continuation sheet ☐	
24. Final Disposition Verified – NCR Closed	CCP QA Engineer: (Print, sign, and date)

Superseded by Rev. 1
7/15/09

Attachment 7 – CCP Radiography Measurement Control Report

Site Location: INL

Examination Date: 6/30/05

NDE Batch Number: **INRTR2050036**

System Maintenance and Safety Checks:

Audible and Visual Warning Signals Operating	☑ Yes	☐ No
Door Interlocks Operating	☑ Yes	☐ No
Minimum 20 Second Delay Function	☑ Yes	☐ No
Emergency Shutdown Switches	☑ Yes	☐ No

Control Checks:

Lines-Pair Resolution Test (lines-pair/cm) LP/cm 10 ☑ Pass ☐ Fail
(Minimum Acceptable 5 lines-pair/cm)

Audio/Video Check Satisfactory? ☑ Pass ☐ Fail

RTR Operator Approval

Operator's Printed Name: Greg Smith

Signature: Greg Smith Date: 6/30/05

COPY

CCP Nonconformance Report (NCR)

NCR No. NCR – INL - 0275 – 05 Revision 0

1. Lot No./Heat No. or Serial No.:	2. Process (NDA, HSG, NDE, VE, Other):	3. Batch Data Report # (s):
N/A	NDE	INRTR2050037
4. Order/Work Order/Job Control Number (as applicable): N/A	5. PO #: N/A	DRUM #(s):
	Supplier:	10019660
6. E-QA NCR #: N/A	N/A	

DESCRIPTION OF NONCONFORMANCE

7. (a) **Hold Tag Applied?** ☑ YES ☐ NO (If NO, explain) Segregation Method (s): ☐ NA

☐ < 100 n Ci/g ☐ Exceeds Site Limit ☑ Prohibited Item ☐ >500 ppmv Flamm. Vocs

☐ E-Flag ☐ TRAMPAC Criteria ☐ M&TE ☐ Receiving Inspection ☐ Other

(b) **Description of Nonconformance**
Required Condition (Implementing Procedure, Section & Revision)

Sealed container > 4liters is a prohibited item (Reference CCP-TP-102 Rev.7, section 4.7.4 [A.4]).

(c). **Actual Condition**

Sealed plastic containers greater than 4 liters.

8. Originator (Print name, sign and date)	9. SPQAO/FQAO Validation (Print name, sign and date)
Greg Lamb 6/30/05	Geg Smith 6/30/05
10. Significant Condition? ☐ YES ☐ NO ☑ NA	11. Recurring Condition? ☐ YES ☑ NO (If YES, List NCRs)
12. Trend Code: K	13. Responsible Manager: Bob Bill

CCP Nonconformance Report (NCR)

NCR No. NCR - INL - 0275 - 05 Revision 0

INTERIM DISPOSITION

14. Interim Disposition (Check One)

☑ N/A (See final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort
☐ Reinspect/Retest ☐ Remediate

(a) Instructions for Completion of the Interim Disposition:

INTERIM DISPOSITION APPROVALS

15 .Responsible Manager/Individual(Print, sign and date.)	16. SPQAO/FQAO (Print, sign and date.)
Additional Approvals: (Print, sign and date.)	Additional Approvals: (Print, sign and date.)

COMPLETION OF INTERIM DISPOSITION

17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date.)

18. Interim Disposition Verified **SPQAO/FQAO:** (Print, sign and date.)

CCP Nonconformance Report (NCR)

NCR No. NCR - INL - 0275 - 05 Revision 0

FINAL DISPOSITION

19. Final Disposition (Check One)
☐ Use-As Is ☑ Reject ☐ Repair ☐ Rework ☐ Scrap

(A) Technical Justification (**Required for "Use-As-is" and "Repair"** dispositions, N/A for "Reject" or "Rework" dispositions.)

N/A

(B) Disposition (**Required for "Reject" and "Scrap"**)

Return to INL

(C) Instructions for Completion of the Final Disposition, including Inspection Criteria **(Required for "Repair" and "Rework")**

N/A

(D) Corrective Actions (**Actions to Prevent Recurrence**) - as required.

N/A

FINAL DISPOSITION APPROVALS

20. Responsible Manager/Individual (Print, sign and date.)	21. SPQAO/FQAO (Print, sign and date.)
Bob Billett 07/04/05	Greg Smith 7-4-05
Additional Approvals: (Print, sign and date.)	Additional Approvals: (Print, sign and date.)

CLOSURE

22. Final Disposition Complete Responsible Manager/Individual: (Print, sign and date.)

23. Final Disposition Verified **SPQAO/FQAO** (Print, sign and date.)

Attachment 2 – CCP SPM Radiography Project Level Validation Checklist and Summary

BDR Number: INRTR5110102	Examination Date: 10/24/11			
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
1. Is the completed, signed, and dated Independent Technical Reviewer Checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, C3-10b**	X			
2. Does the BDR contain all items addressed in the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-10b**	X			
3. Does the BDR include a listing of all the container numbers in the batch? **Reference Source: CCP-PO-001, C3-10b**	X			
4. List all containers that have met QAOs. **Reference Source: CCP-PO-001, C3-10b**				Container Numbers: RW48198 RW49571 RW48074 RW47768 RW47763 RW47784 RW47969 RW48192 RW47766 RW48190 RW19374 RW48200 RW48077 RW48191
5. Does the BDR identify the current implementing procedure and revision number? **Reference Source: CCP-PO-001, Table C3-11**	X			
6. Is there a reference to or copy of any associated NCRs (if any) in the BDR? NA if no NCRs. **Reference Source: CCP-PO-001, Table C3-11**	X			NCR-INL-3389-11 rejects RW48079 for prohibited amount of liquid.
7. Are there 20 or fewer containers in the batch? **Reference Source: CCP-PO-001, C3-10**	X			
8. Are the data properly reported (i.e., data are reported in correct units and with correct significant figures)? **Reference Source: CCP-PO-001, C3-10b**	X			
9. Is there evidence of verification that the physical form matches the Waste Matrix Code? **Reference Source: CCP-PO-001, C3-4, Table C3-11**	X			

CCP RECORDS ORIGINAL
DATE REC'D 11-1-11

Attachment 2 – CCP SPM Radiography Project Level Validation Checklist and Summary (Continued)

BDR Number: INRTR5110102			Examination Date: 10/24/11	
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
10. Is there evidence of verification that the physical form matches the waste stream description? **Reference Source: CCP-PO-001, C1-3, Table C3-11**	X			
11. Are prohibited items absent? **Reference Source: CCP-PO-001, C3-4a**	X			Except for rejected container.
12. Does observable liquid, if present, meet the criteria of the TSDF-WAC? **Reference Source: CCP-PO-001, C3-4a**	X			Except for rejected container.
13. Were discrepancies between two operators with regard to identification of waste matrix code, liquids in excess of the TSDF-WAC, or compressed gases through replicate scans and independent observations reconciled? NA if no discrepancies. **Reference Source: CCP-PO-001, C3-4a**			X	No discrepancies.
14. Are the training qualifications for all radiography personnel acceptable? **Reference Source: CCP-PO-001, C3-4a**	X			
15. Was evidence of the video/audio check included in the BDR? **Reference Source: CCP-PO-001, C3-4a**	X			
16. Was the Lines-Pair Resolution Test Check included in the BDR? **Reference Source: CCP-PO-001, C3-4a**	X			
17. Was a replicate scan performed once per day, or once per batch, whichever is LESS frequent? **Reference Source: CCP-PO-001, C1-3**	X			
18. Was an independent observation performed once per day, or once per batch, whichever is LESS frequent? **Reference Source: CCP-PO-001, C1-3**	X			

Attachment 2 – CCP SPM Radiography Project Level Validation Checklist and Summary (Continued)

BDR Number: INRTR5110102	Examination Date: 10/24/11			
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
19. Were the replicate scan and independent observation performed on different waste containers? **Reference Source: CCP-PO-001, C1-3**	X			
20. Were the personnel performing the replicate scan and independent observation different from the individual who performed the original? **Reference Source: CCP-PO-001, C1-3**	X			
21. Does the BDR include an estimate of each material parameter weight in kg for each container? **Reference Source: CCP Technical Procedures**	X			
22. Does the BDR include a description of each material parameter for each container? **Reference Source: CCP-PO-001, Table C3-1**	X			
23. Is the container gross weight recorded in kilograms (kg) for each container in the BDR? **Reference Source: CCP Technical Procedures**	X			
24. Was the Scale Weight Calibration Check included in the BDR? **Reference Source: CCP Technical Procedures**			X	Weight obtained independent of RTR.
25. Was the Scale Weight Check included in the BDR? **Reference Source: CCP Technical Procedures**			X	Weight obtained independent of RTR.
Comments: None.				
The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.				
Barbara Broomfield				10/31/11
SPM Printed Name	Signature			Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

Attachment 5 – CCP Radiography Batch Data Report Cover Sheet

Batch Data Report No.: INRTR5110102 Date: 10/24/11

Weld Configuration ID Numbers	
Replicate Scan:	RW48192
Independent Observation:	RW48074
1	RW48198
2	RW49571
3	RW48074
4	RW47768
5	RW47763
6	RW47784
7	RW48079
8	RW47969
9	RW48192
10	RW47766
11	RW48190
12	RW19374
13	RW48200
14	RW48077
15	RW48191
16	N/A
17	N/A
18	N/A
19	N/A
20	N/A

Independent Technical Reviewer:

JERRY BOWDEN — Printed Name

Jerry Bowden — Signature

10-31-11 — Date

CCP RECORDS ORIGINAL
DATE REC'D 10-31-11

Attachment 4 – CCP Radiography Batch Data Report Table of Contents and Batch Narrative

Batch Data Report No.: INRTR5110102 Date: 10/24/11

Table Of Contents		
Item	Description	Page No.
1	CCP Radiography Batch Data Report Cover Sheet	1
2	CCP Radiography Batch Data Report Table Of Contents	2
3	CCP RTR Measurement Control Report	3
4	CCP Radiography Data Sheets	4-54
5	Copy of NCRs (NA, If Not Applicable)	55-57
6	CCP Independent Technical Reviewer Checklist	58-59

Narration

Replicate Scan for this day was conducted and documented in BDR INRTR5110102.
Independent Observation for this day was conducted and documented in BDR INRTR5110102.
All Quality Checks were performed under CCP-TP-053 Rev. 11, CCP Radiography Measurement and Control Report.
There is one NCR associated with this BDR: NCR-INL-3389-11 on drum RW48079

Tyson Christensen — RTR Operator
Tyson Christensen — Signature
10/24/11 — Date

Attachment 1 – CCP RTR Measurement Control Report

Site ID: INL		
Batch Data Report No.: INRTR5110102		
Examination Date: 10/24/11		
Control Checks		
Video/Audio Recorded Media System Check	☑ SAT	☐ UNSAT
Image Test : 13 (Minimum acceptable is 5 lines-pair/cm or #6 Sieve is viewable)	☑ SAT	☐ UNSAT
Comments: N/A		
RTR Operator:		
Tyson Christensen (Printed Name)	Tyson Christensen (Signature)	10/24/11 (Date)

Attachment 2 – CCP Radiography Data Sheet

☐ RTR Examination	☑ RTR Replicate Scan	☐ RTR Independent Observation
Site ID:	INL	
Batch Number:	INRTR5110102	
Examination Date:	10/24/11	
Waste Container ID:	RW48192	
Video/Audio Recorded Media Number:	INRTR5110102 A & B	
Procedure and Revision No.:	CCP-TP-053	Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A NCR No.: N/A	

Container Type:	55 Gallon Drum
TRUCON Code:	AE 116/216, SQ 125/133/225/233
Waste Matrix Code:	S5400
Waste Stream I.D.:	ID-AECHDM
Waste Container Weights:	Gross Wt: 56.5 kg. Tare Wt: 28.2 kg. Net Wt: 28.3 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	No Liner
Number of Layers of Confinement:	Appears to be 0 layers
Volume Utilization Percentage:	85 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: RW48192

Waste Container Contents and Components (Detailed descriptions)
Metal bucket, scrap metal, metal lid, metal cans, metal tubing, electrical device Broken ceramic pieces, absorbent, glass labware Plastic containers, plastic bags, plastic lids, electrical cord, plastic tubing

Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	0.5
Others:	
Total Packaging Weight:	28.2
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	16.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	5.0
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	7.3
Organic Matrix (OR):	
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	28.3

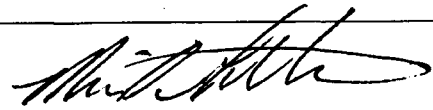
Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: RW48192

	Yes	No
Is there observable liquid?	☐	☑
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: This Replicate Scan agrees with the original scan.

RTR Operator:

Michael Galbraith		10/24/11
Print Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

☐ RTR Examination ☐ RTR Replicate Scan ☑ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5110102
Examination Date:	10/24/11
Waste Container ID:	RW48074
Video/Audio Recorded Media Number:	INRTR5110102 A & B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A NCR No.: N/A

Container Type:	55 Gallon Drum
TRUCON Code:	AE 116/216, SQ 125/133/225/233
Waste Matrix Code:	S5400
Waste Stream I.D.:	ID-AECHDM
Waste Container Weights:	Gross Wt: 64.5 kg. Tare Wt: 28.2 kg. Net Wt: 36.3 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	No Liner
Number of Layers of Confinement:	Appears to be 0 layers
Volume Utilization Percentage:	85 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: RW48074

Detailed Description
Absorbent Plastic containers, plastic lids

Packaging Materials	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	0.5
Others:	
Total Packaging Weight:	28.2
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	12.5
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	23.8
Organic Matrix (OR):	
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	36.3

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: RW48074

	Yes	No
Is there observable liquid?	☐	☑
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: This Independent Observation agrees with the original scan.

RTR Operator:

Tyson Christensen		10/24/11
Print Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5110102
Examination Date:	10/24/11
Waste Container ID:	RW48198
Video/Audio Recorded Media Number:	INRTR5110102 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A NCR No.: N/A

Container Type:	55 Gallon Drum
TRUCON Code:	AE 116/216, SQ 125/133/225/233
Waste Matrix Code:	S5400
Waste Stream I.D.:	ID-AECHDM
Waste Container Weights:	Gross Wt: 59.0 kg. Tare Wt: 28.2 kg. Net Wt: 30.8 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	No Liner
Number of Layers of Confinement:	Appears to be 0 layers
Volume Utilization Percentage:	80 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: RW48198

Section [illegible] (Detailed Descriptions)
Scrap metal, metal wire, 1 gallon open metal paint can, small metal can, metal lids Glass labware, absorbent, glass container Tape roll Plastic lids, plastic containers, plastic respirator filters, Tyvek coveralls, scrap plastic

Section [illegible] Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	0.5
Others:	
Total Packaging Weight:	28.2
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	10.7
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	12.0
Cellulosics (C):	0.1
Rubber (R):	
Plastics (waste materials) (XPM):	8.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	30.8

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: RW48198

	Yes	No
Is there observable liquid?	☐	☑
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: N/A

RTR Operator:

Tyson Christensen	Tyson Christensen	10/24/11
Print Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5110102
Examination Date:	10/24/11
Waste Container ID:	RW49571
Video/Audio Recorded Media Number:	INRTR5110102 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A NCR No.: N/A

Container Type:	55 Gallon Drum
TRUCON Code:	AE 116/216, SQ 125/133/225/233
Waste Matrix Code:	S5400
Waste Stream I.D.:	ID-AECHDM
Waste Container Weights:	Gross Wt: 98.5 kg. Tare Wt: 28.2 kg. Net Wt: 70.3 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	No Liner
Number of Layers of Confinement:	Appears to be 0 layers
Volume Utilization Percentage:	85 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: RW49571

Detailed Description of Contents
Scrap metal, metal lids, metal wire, metal hardware, metal gauges, metal pipe Absorbent, glass container Cardboard, pieces of wood Plastic containers, plastic pipettes, electrical cord, plastic lid, large open plastic container

Packaging Material	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	0.5
Others:	
Total Packaging Weight:	28.2
Waste Material Parameter	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	48.3
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	11.0
Cellulosics (C):	3.0
Rubber (R):	
Plastics (waste materials) (XPM):	8.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	70.3

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: RW49571

	Yes	No
Is there observable liquid?	☐	☑
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: N/A

RTR Operator:

Tyson Christensen	Tyson Christensen	10/24/11
Print Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5110102
Examination Date:	10/24/11
Waste Container ID:	RW48074
Video/Audio Recorded Media Number:	INRTR5110102 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A NCR No.: N/A

Container Type:	55 Gallon Drum
TRUCON Code:	AE 116/216, SQ 125/133/225/233
Waste Matrix Code:	S5400
Waste Stream I.D.:	ID-AECHDM
Waste Container Weights:	Gross Wt: 64.5 kg. Tare Wt: 28.2 kg. Net Wt: 36.3 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	No Liner
Number of Layers of Confinement:	Appears to be 0 layers
Volume Utilization Percentage:	80 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: RW48074

Comments, Concerns, Anomalies, and Deviations (Detailed descriptions):
Absorbent Plastic containers, plastic lids

Packaging Material Parameter:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	0.5
Others:	
Total Packaging Weight:	28.2
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	15.0
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	21.3
Organic Matrix (OR):	
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	36.3

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: RW48074

	Yes	No
Is there observable liquid?	☐	☑
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑
Comments: N/A		
RTR Operator: Tyson Christensen (Print Name) / Tyson Christensen (Signature) / 10/24/11 (Date)		

Attachment 2 – CCP Radiography Data Sheet

☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5110102
Examination Date:	10/24/11
Waste Container ID:	RW47768
Video/Audio Recorded Media Number:	INRTR5110102 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A NCR No.: N/A

Container Type:	55 Gallon Drum
TRUCON Code:	AE 116/216, SQ 125/133/225/233
Waste Matrix Code:	S5400
Waste Stream I.D.:	ID-AECHDM
Waste Container Weights:	Gross Wt: 58.5 kg. Tare Wt: 28.2 kg. Net Wt: 30.3 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	No Liner
Number of Layers of Confinement:	Appears to be 0 layers
Volume Utilization Percentage:	75 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: RW47768

Secondary Container Information (detailed descriptions)
Scrap metal, AA batteries, hand tools, metal wire Absorbent Tape roll(NSW) Scrap plastic, plastic containers, plastic lids

Packaging Material	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	0.5
Others:	
Total Packaging Weight:	28.2
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	8.3
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	12.0
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	10.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	30.3

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: RW47768

	Yes	No
Is there observable liquid?	☐	☑
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: N/A

RTR Operator:

Tyson Christensen	Tyson Christensen	10/24/11
Print Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5110102
Examination Date:	10/24/11
Waste Container ID:	RW47763
Video/Audio Recorded Media Number:	INRTR5110102 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A NCR No.: N/A

Container Type:	55 Gallon Drum
TRUCON Code:	AE 116/216, SQ 125/133/225/233
Waste Matrix Code:	S5400
Waste Stream I.D.:	ID-AECHDM
Waste Container Weights:	Gross Wt: 57.5 kg. Tare Wt: 28.2 kg. Net Wt: 29.3 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	No Liner
Number of Layers of Confinement:	Appears to be 0 layers
Volume Utilization Percentage:	85 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: RW47763

Contents (List and describe)
Large open metal cans, metal lids, 1 gallon metal paint can, scrap metal, metal electrical device Absorbent Cardboard, tape rolls Tyvek coveralls, plastic containers, plastic labware, electrical cord, plastic tubing, plastic lids

Packaging Material Parameter	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	0.5
Others:	
Total Packaging Weight:	28.2
Waste Material Parameter	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	9.3
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	12.0
Cellulosics (C):	3.0
Rubber (R):	
Plastics (waste materials) (XPM):	5.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	29.3

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: RW47763

	Yes	No
Is there observable liquid?	☐	☑
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: N/A

RTR Operator:

Tyson Christensen	Tyson Christensen	10/24/11
Print Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5110102
Examination Date:	10/24/11
Waste Container ID:	RW47784
Video/Audio Recorded Media Number:	INRTR5110102 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A NCR No.: N/A

Container Type:	55 Gallon Drum
TRUCON Code:	AE 116/216, SQ 125/133/225/233
Waste Matrix Code:	S5400
Waste Stream I.D.:	ID-AECHDM
Waste Container Weights:	Gross Wt: 72.4 kg. Tare Wt: 28.2 kg. Net Wt: 44.2 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	No Liner
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	85 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: RW47784

[illegible] (Detailed descriptions)
AA batteries, scrap metal, metal lid, metal tube Glass container, glass labware, absorbent Plastic containers, plastic bag, plastic tubing, large open plastic container

[illegible]

Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	0.5
Others:	
Total Packaging Weight:	28.2
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	23.2
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	15.0
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	44.2

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: RW47784

	Yes	No
Is there observable liquid?	☐	☑
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: N/A

RTR Operator:

Tyson Christensen	Tyson Christensen	10/24/11
Print Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5110102
Examination Date:	10/24/11
Waste Container ID:	RW48079
Video/Audio Recorded Media Number:	INRTR5110102 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☐ NO ☑ YES NCR No.: NCR-INL-3389-11 NCR No.: N/A

Container Type:	55 Gallon Drum
TRUCON Code:	AE 116/216, SQ 125/133/225/233
Waste Matrix Code:	S5400
Waste Stream I.D.:	ID-AECHDM
Waste Container Weights:	Gross Wt: 72.4 kg. Tare Wt: 28.2 kg. Net Wt: 44.2 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	No Liner
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	85 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: RW48079

Section C: Container Contents Description and Comments (Detailed descriptions)
Hand tools, scrap metal, electrical components, 1 gallon open metal paint cans, large open metal container, metal lids Absorbent, broken ceramic Tape rolls, pieces of wood Electrical cord, plastic containers, plastic bag Sludge

Section D: Waste Material Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	0.5
Others:	
Total Packaging Weight:	28.2
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	19.2
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	10.0
Cellulosics (C):	3.0
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	8.0
Soils (S):	
Total WMP Weight:	44.2

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: RW48079

	Yes	No
Is there observable liquid?	☑	☐
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☑	☐
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: During audio/video recording of this drum the operator did not comment what location the prohibited liquid is, which was at 24".
See NCR-INL-3389-11

RTR Operator:

Tyson Christensen	Tyson Christensen	10/24/11
Print Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5110102
Examination Date:	10/24/11
Waste Container ID:	RW47969
Video/Audio Recorded Media Number:	INRTR5110102 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☑NO ☐YES NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Information	
Container Type:	55 Gallon Drum
TRUCON Code:	AE 116/216, SQ 125/133/225/233
Waste Matrix Code:	S5400
Waste Stream I.D.:	ID-AECHDM
Waste Container Weights:	Gross Wt: 55.5 kg. Tare Wt: 28.2 kg. Net Wt: 27.3 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	No Liner
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	80 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: RW47969

[illegible]
Metal wire Absorbent Plastic bags, plastic lids, plastic containers, plastic tubing

[illegible]	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	0.5
Others:	
Total Packaging Weight:	28.2
Waste Material Parameter	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	0.3
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	10.0
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	17.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	27.3

Attachment 2 – CCP Radiography Data Sheet (Continued)

Page 3 of 3

Waste Container ID: RW47969

	Yes	No
Is there observable liquid?	☐	☑
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑
Comments: N/A		
RTR Operator: Tyson Christensen (Print Name) / Signature / 10/24/11 (Date)		

Attachment 2 – CCP Radiography Data Sheet

☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5110102
Examination Date:	10/24/11
Waste Container ID:	RW48192
Video/Audio Recorded Media Number:	INRTR5110102 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☑NO ☐YES NCR No.: N/A NCR No.: N/A

Container Type:	55 Gallon Drum
TRUCON Code:	AE 116/216, SQ 125/133/225/233
Waste Matrix Code:	S5400
Waste Stream I.D.:	ID-AECHDM
Waste Container Weights:	Gross Wt: 56.5 kg. Tare Wt: 28.2 kg. Net Wt: 28.3 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	No Liner
Number of Layers of Confinement:	Appears to be 0 layers
Volume Utilization Percentage:	85 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: RW48192

[illegible] (Detailed Description)
Open metal cans, scrap metal, metal lid, reinforced metal hose Absorbent, broken ceramic Plastic containers, plastic lids, electrical cord, plastic tubing, plastic labware

[illegible]	
Packaging Material	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	0.5
Others:	
Total Packaging Weight:	28.2
Waste Material Parameter	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	14.3
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	8.0
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	28.3

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: RW48192

	Yes	No
Is there observable liquid?	☐	☑
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: N/A

RTR Operator:

Tyson Christensen	Tyson Christensen	10/24/11
Print Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5110102
Examination Date:	10/24/11
Waste Container ID:	RW47766
Video/Audio Recorded Media Number:	INRTR5110102 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☑NO ☐YES NCR No.: N/A NCR No.: N/A

Container Type:	55 Gallon Drum
TRUCON Code:	AE 116/216, SQ 125/133/225/233
Waste Matrix Code:	S5400
Waste Stream I.D.:	ID-AECHDM
Waste Container Weights:	Gross Wt: 63.5 kg. Tare Wt: 28.2 kg. Net Wt: 35.3 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	No Liner
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	85 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: RW47766

[illegible] (Detailed Descriptions)
Scrap metal Absorbent Plastic lids, plastic bags

[illegible] Waste Material Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	0.5
Others:	
Total Packaging Weight	28.2
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	1.5
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	10.0
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	23.8
Organic Matrix (OR):	
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	35.3

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: RW47766

	Yes	No
Is there observable liquid?	☐	☑
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: N/A

RTR Operator:

Tyson Christensen	Tyson Christensen	10/24/11
Print Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5110102
Examination Date:	10/24/11
Waste Container ID:	RW48190
Video/Audio Recorded Media Number:	INRTR5110102 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A NCR No.: N/A

Container Type:	55 Gallon Drum
TRUCON Code:	AE 111/211, SQ 111/211
Waste Matrix Code:	S3110
Waste Stream I.D.:	ID-AECHHM
Waste Container Weights:	Gross Wt: 65.0 kg. Tare Wt: 28.2 kg. Net Wt: 36.8 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	No Liner
Number of Layers of Confinement:	Appears to be 0 layers
Volume Utilization Percentage:	80 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Page 2 of 3

Waste Container ID: RW48190

[illegible] Detailed descriptions)
Scrap metal, metal tubing Absorbent Plastic containers, plastic lids, plastic bags Sludge

[illegible]	
Packaging Material	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP):	0.5
Others:	
Total Packaging Weight:	28.2
Waste Material Parameter	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	6.5
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	10.0
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	18.3
Soils (S):	
Total WMP Weight:	36.8

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: RW48190

	Yes	No
Is there observable liquid?	☐	☑
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: N/A

RTR Operator:

Tyson Christensen	Tyson Christensen	10/24/11
Print Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5110102
Examination Date:	10/24/11
Waste Container ID:	RW19374
Video/Audio Recorded Media Number:	INRTR5110102 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☑NO ☐YES NCR No.: N/A NCR No.: N/A

Container Type:	55 Gallon Drum
TRUCON Code:	AE 111/211, SQ 111/211
Waste Matrix Code:	S3110
Waste Stream I.D.:	ID-AECHHM
Waste Container Weights:	Gross Wt: 159.5 kg. Tare Wt: 28.2 kg. Net Wt: 131.3 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	No Liner
Number of Layers of Confinement:	Appears to be 0 layers
Volume Utilization Percentage:	95 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: RW19374

[illegible]
1 gallon metal paint cans Absorbent Sludge

[illegible]	
Packaging Material Parameter	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	0.5
Others:	
Total Packaging Weight:	28.2
Waste Material Parameter	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	8.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	12.0
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	
Organic Matrix (OR):	
Inorganic Matrix (IN):	111.3
Soils (S):	
Total WMP Weight:	131.3

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: RW19374

	Yes	No
Is there observable liquid?	☐	☑
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: N/A

RTR Operator:

Tyson Christensen	Tyson Christensen	10/24/11
Print Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5110102
Examination Date:	10/24/11
Waste Container ID:	RW48200
Video/Audio Recorded Media Number:	INRTR5110102 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A NCR No.: N/A

Container Type:	55 Gallon Drum
TRUCON Code:	AE 116/216, SQ 125/133/225/233
Waste Matrix Code:	S5400
Waste Stream I.D.:	ID-AECHDM
Waste Container Weights:	Gross Wt: 85.0 kg. Tare Wt: 28.2 kg. Net Wt: 56.8 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	No Liner
Number of Layers of Confinement:	Appears to be 0 layers
Volume Utilization Percentage:	80 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: RW48200

Waste Material Parameter	Description
	Scrap metal, metal wire, metal pipe, metal can, metal tubing, electrical component, saw blade Absorbent Plastic tubing, electrical cord, plastic container

Packaging Material	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	0.5
Others:	
Total Packaging Weight:	28.2
Waste Material Parameter	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	43.8
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	10.0
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	3.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	56.8

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: RW48200

	Yes	No
Is there observable liquid?	☐	☑
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: N/A

RTR Operator:

Tyson Christensen	Tyson Christensen	10/24/11
Print Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5110102
Examination Date:	10/24/11
Waste Container ID:	RW48077
Video/Audio Recorded Media Number:	INRTR5110102 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A NCR No.: N/A

Container Type:	55 Gallon Drum
TRUCON Code:	AE 116/216, SQ 125/133/225/233
Waste Matrix Code:	S5400
Waste Stream I.D.:	ID-AECHDM
Waste Container Weights:	Gross Wt: 64.5 kg. Tare Wt: 28.2 kg. Net Wt: 36.3 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	No Liner
Number of Layers of Confinement:	Appears to be 0 layers
Volume Utilization Percentage:	75 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: RW48077

[illegible]
1 gallon metal paint cans, hand tools, metal tubing Absorbent, glass labware, glass containers Cardboard(NSW) Plastic containers, plastic labware, plastic lids, plastic funnel

[illegible]	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	0.5
Others:	
Total Packaging Weight:	28.2
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	16.3
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	12.0
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	8.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	36.3

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: RW48077

	Yes	No
Is there observable liquid?	☐	☑
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: The drum number on the title screen of the audio/video reads RW4077, when the correct drum number is actually RW48077.

RTR Operator:

Tyson Christensen	Tyson Christensen	10/24/11
Print Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5110102
Examination Date:	10/24/11
Waste Container ID:	RW48191
Video/Audio Recorded Media Number:	INRTR5110102 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A NCR No.: N/A

Container Type:	55 Gallon Drum
TRUCON Code:	AE 116/216, SQ 125/133/225/233
Waste Matrix Code:	S5400
Waste Stream I.D.:	ID-AECHDM
Waste Container Weights:	Gross Wt: 64.0 kg. Tare Wt: 28.2 kg. Net Wt: 35.8 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	No Liner
Number of Layers of Confinement:	Appears to be 0 layers
Volume Utilization Percentage:	75 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: RW48191

[illegible] (Detailed Description)
Scrap metal, saw blade, metal wire, metal pipe, metal lids, metal cans Absorbent, glass container Cardboard Plastic containers, plastic labware

[illegible]	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	0.5
Others:	
Total Packaging Weight:	28.2
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	21.3
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	10.0
Cellulosics (C):	1.0
Rubber (R):	
Plastics (waste materials) (XPM):	3.5
Organic Matrix (OR):	
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	35.8

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: RW48191

	Yes	No
Is there observable liquid?	☐	☑
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: N/A

RTR Operator:

Tyson Christensen	Tyson Christensen	10/24/11
Print Name	Signature	Date

Attachment 1 – CCP Nonconformance Report (NCR)

NCR No.NCR-INL-3389-11	Revision 0	
1. Lot No./Heat No. or Serial No. (as applicable): N/A	2. Process (e.g., NDA, HSG, NDE, VE, Other): NDA, FGA, NDE	3. Batch Data Report #(s): INRTR5110102, INNDAS110152 and AN11FG7004
4. Order/Work Order/Job Control Number (as applicable): N/A	5. PO # (as applicable): N/A	Container #(s): RW48079/10424127
	6. Supplier (as applicable): N/A	

DESCRIPTION OF NONCONFORMANCE

7. (a) NCR Description: ☐ < 100 nCi/g ☒ Prohibited Item ☐ >500 ppmv Flamm. VOCs

☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☐ Other

7. (b) Description of Nonconformance Required Condition (Implementing Procedure, Revision, Section, & Text):
CCP-TP-053, Rev. 11, Section 4.4.2 [H.1] If any hazardous waste (s) NOT identified in the AK Summary Report (s) for the waste stream being characterized OR any nonconforming/prohibited items are noted during the RTR examination. THEN perform the following:

(a) Initiate an NCR in accordance with CCP-QP-005 AND record the NCR number in Section 1 of Attachment 2.

CCP-TP-053, Rev. 11, Table 1. Prohibited Items: Liquid Waste

-Internal containers with more than 60 milliliters or 3 percent by volume observable liquid, whichever is greater, are prohibited.

7. (c) Actual Condition
150ml of liquid within an internal metal can at 24" (Greater than 3% in an internal container).

8. NCR Originator (Print name, sign, and date) Tyson Christensen 10/27/11	9. CCP QA Engineer or Designee Validation (Print name, sign, and date) Rachel Young 10/27/11

9a. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE
If YES or INDETERMINATE, then apply Trend Code L in Block 12.

9b. Have the CCP HOLD TAGS associated with the NCR been applied? ☒ YES ☐ NO If no is marked, provide an explanation.

10. Significant Condition? (If Yes, List CAR) ☐ YES ☒ NO	11. Recurring Condition? ☐ YES ☒ NO (If YES, List NCRs/CARs)
12. Trend Code: K	13. Responsible Manager: Bill Verlanic

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Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL-3389-11	Revision 0
INTERIM DISPOSITION	
14. Interim Disposition (Check One) ☒ N/A (See Final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort ☐ Reinspect/Retest ☐ Remediate (a)	
INTERIM DISPOSITION APPROVALS	
15 .Responsible Manager/Individual (Print, sign, and date)	16. CCP QA Engineer or Designee (Print, sign and date)
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
COMPLETION OF INTERIM DISPOSITION	
17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date)	
18. Interim Disposition Verified CCP QA Engineer: (Print, sign and date)	

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Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL-3389-11 Revision 0	
FINAL DISPOSITION	
19. Final Disposition (Check One) ☐ Use-As-Is ☒ Reject ☐ Repair ☐ Rework ☐ Scrap (a) Technical Justification (Required for Use-As-Is and Repair dispositions, N/A for Reject, Scrap, or Rework dispositions.) N/A	
(b) Disposition Instructions (Required for Reject and Scrap, N/A for Use-As-Is, Rework, and Repair) Return to host site (AMWTP) for remediation.	
(c) Instructions for Completion of the Final Disposition, including Inspection Criteria (Required for Repair and Rework, N/A for Use-As-Is, Reject and Scrap) N/A	
(d) Corrective Actions (Actions to Prevent Recurrence) - as required, N/A if left blank. N/A	
FINAL DISPOSITION APPROVALS	
20. Responsible Manager/Individual: (Print, sign, and date) Bill Verlanic 10-27-11	21. CCP QA Engineer or Designee: (Print, sign, and date) Rachel Young 10/27/11
Additional Approvals: (Print, sign, and date)	Additional Approvals: (Print, sign, and date)
CLOSURE	
22. Final Disposition Complete Responsible Manager/Individual: (Print, sign, and date)	
23. Attachments:	
24. (a) HOLD TAG removal has been validated and reconciled for all nonconforming items on the NCR. ☐ (b) Check if not applicable (N/A) and provide an explanation here or on a continuation sheet. ☐	
25. Final Disposition Verified – NCR Closed	CCP QA Engineer: (Print, sign, and date)

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Attachment 3 – CCP Radiography Independent Technical Reviewer Checklist

Batch Data Report No.: INRTR5110102

1.	Data generation and reduction were conducted in a technically correct manner in accordance with the methods used?	☐NO	☑YES	☐N/A
2.	Was the correct revision of the procedure used? Procedure: CCP-TP-053 Rev.: 11	☐NO	☑YES	☐N/A
3.	Are the WMPs entered correctly?	☐NO	☑YES	☐N/A
4.	Do the estimated weights in Section 4 of Attachment 2 equal the container gross weight?	☐NO	☑YES	☐N/A
5.	Is the data reported in the proper units with the correct number of significant figures (e.g., one tenth of a kilogram)?	☐NO	☑YES	☐N/A
6.	Has the data been verified for transcription errors?	☐NO	☐YES	☑N/A
7.	Does the Testing Batch Report include radiography for up to 20 containers?	☐NO	☑YES	☐N/A
8.	BDR contents are complete and match the CCP Waste RTR Batch Data Report Table of Contents?	☐NO	☑YES	☐N/A
9.	Is all the data signed and dated in reproducible ink and by the individual(s) generating it?	☐NO	☑YES	☐N/A
10.	Is all data recorded clearly, legibly, and accurately?	☐NO	☑YES	☐N/A
11.	All changes to original data lined out, initialed and dated by the individual making the changes?	☐NO	☐YES	☑N/A
12.	Was justification made for changing the original data?	☐NO	☐YES	☑N/A
13.	Were data changes made by the individual who originally collected the data?	☐NO	☐YES	☑N/A
14.	Does the waste match the Waste Matrix Code and Waste Stream description?	☐NO	☑YES	☐N/A
15.	Are the RTR Operator's decisions regarding the Radiography documented?	☐NO	☑YES	☐N/A
16.	Is there an adequate written description of the contents of each item?	☐NO	☑YES	☐N/A
17.	Was the video/audio recording media properly prepared and labeled for each waste container?	☐NO	☑YES	☐N/A
18.	Was the video/audio recording media check performed satisfactorily and recorded on Attachment 1?	☐NO	☑YES	☐N/A

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Attachment 3 – CCP Radiography Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: INRTR5110102

19.	Was the Image Test performed satisfactorily and recorded on Attachment 1?	☐ NO	☑ YES	☐ N/A
20.	Was the Replicate Scan performed and recorded on an Attachment 2? (1 per batch or 1 per day, whichever is less frequent).	☐ NO	☑ YES	☐ N/A
21.	Was the Replicate Scan RTR Operator different from the first RTR Operator?	☐ NO	☑ YES	☐ N/A
22.	Did the Replicate Scan RTR Operator and the first RTR Operator agree on the results?	☐ NO	☑ YES	☐ N/A
23.	Was the Independent Observation performed and recorded on an Attachment 2? (1 per batch or 1 per day, whichever is less frequent).	☐ NO	☑ YES	☐ N/A
24.	Was the Independent Observation RTR Operator different from the first RTR Operator?	☐ NO	☑ YES	☐ N/A
25.	Did the Independent Observation RTR Operator and the first RTR Operator agree on the results?	☐ NO	☑ YES	☐ N/A
26.	Was the data collection performed by qualified individuals?	☐ NO	☑ YES	☐ N/A
27.	Are the NCR(s) associated with the RTR examination included in the BDR?	☐ NO	☑ YES	☐ N/A
28.	QAOs (precision, accuracy, completeness, representativeness) have been met?	☐ NO	☑ YES	☐ N/A

Comments:
N/A

I have reviewed 100% of the container specific and batch data in this report and find it acceptable.

Independent Technical Reviewer:
Jerry Bowden — Printed Name
Jerry Bowden — Signature
10/31/11 — Date

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Attachment 5 – CCP Site Project Manager Data Validation Summary

On-Line Headspace Gas Analysis (HSG)			**Visual Examination (VE)**	
Nondestructive Examination (NDE)	X		**Nondestructive Assay (NDA)**	
Direct-Canister HSG Analysis			**Homogeneous Waste Analysis (HWA)**	
Radiological Characterization				

BATCH DATA REPORT NUMBER: INRTR2050037 **DATE:** 6/30/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
1. ITR, Tech Sup, and Facility QA checklists are complete and signed. **Reference Source: WAP B3-10b(2) Verification Source: DGL Checklist**	X			
2. The batch data report is complete. **Reference Source: WAP B3-10b(2) and WAC A.5.2 Verification Source: Data Sheets**	X			
3. QAOs have been met. **Reference Source: WAP B3-10b(2) Verification Source: QC Data Sheets**	X			10001484 10005255 10019660 10030575 10004869 10005257 10027534 10031213 10005238 10005259 10028663 10032209 10005244 10005810 10028844 10032215 10005247 10017133 10030310
4. Data reported with correct units and significant figures. **Reference Source: WAP B3-10b(2) Verification Source: Data Sheets**	X			
5. Data have been assessed correctly. **Reference Sources: WAP B3-10b(2) and B3-10b(3) Verification Source: Data Sheets**	X			
6. Is there a reference to or copy of the associated NCRS? **Reference Source: WAP Tables B3-11, B3-12 and B3-13 Verification Source: NCR**	X			NCR-INL-0275-05 Ref. to 10019660 ,
7. The applicable SPQAO Project Level Validation Checklist is complete, signed, and dated. **Reference Source: WAP B3-10b(2) Verification Source: SPQAO Checklist**	X			
8. NDA batch QC checks (e.g., weekly interfering matrix, background, performance, and transmission checks, measurement system checks) were properly performed. **Reference Source: WAC A.4.2 and/or WAC Table A-4.3 Verification Source: QC Data Sheets**			X	This is a NDE BDR

ORIGINAL

BATCH DATA REPORT NUMBER: INRTR2050037 DATE: 6/30/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
9. **HSG** – All data are reported with the appropriate flags. **Reference Source: WAP B3-10b(2)** **Verification Source: Data Sheet**			X	This is a NDE BDR

Attachment 5 – CCP Site Project Manager Data Validation Summary (continued)

BATCH DATA REPORT NUMBER: INRTR2050037 **DATE:** 6/30/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers	
10. **HSG** batch QC checks (e.g., on-line blanks, duplicates, and laboratory control samples) were properly performed and meet the established usability criteria. **Reference Sources: WAP B3-10b(2) and Table B3-3 and/or B1-1b Verification Source: QC Data Sheets**			X	This is a NDE BDR	
11. **HSG** DAC assignment is valid based upon an assessment of the data collection and evaluation necessary to make the assignment. **Reference Source: WAP B3-10b(2) Verification Source: Drum Data Form**			X	This is a NDE BDR	
12. **NDE** data are complete and acceptable based on the videotape or equivalent media review (independent observation and replicate scan). **Reference Sources: WAP , B1-3b(2) and B3-10b(2) Verification Source: QC Data Sheets**	X			Container numbers:	
				Rep:	10028663
				IO:	10005238
13. **VE** data is complete and properly reported. **Reference Sources: WAP B1-3b(3) and B3-10b(2) Verification Source: BDR**			X	This is a NDE BDR	
14. **HWA** Solid/Soil VOC batch QC checks (e.g., laboratory duplicates, blanks, and control samples) were properly performed and meet the established usability criteria. **Reference Sources: WAP B1-2b, B3-10b(2) and Table B3-5 Verification Source: QC Data Sheets**			X	This is a NDE BDR	
15. **HWA** Solid/Soil Semi-VOC batch QC checks (e.g., laboratory duplicates, blanks, and control samples) were properly performed and meet the established usability criteria. **Reference Sources: WAP B1-2b, B3-10b(2) and Table B3-7 Verification Source: QC Data Sheets**			X	This is a NDE BDR	

Attachment 5 – CCP Site Project Manager Data Validation Summary (continued)

BATCH DATA REPORT NUMBER: INRTR2050037 **DATE:** 6/30/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
16. **HWA Solid/Soil Total Metals Batch QC checks** (e.g., duplicates, blanks, and laboratory control samples) were properly performed and meet the established criteria. **Reference Sources: WAP B1-2b, B3-10b(2), and Table B3-9 Verification Source: QC Data Sheets**			X	This is a NDE BDR
17. **OSR** for LANL Sealed Sources, does the waste meet the definition of sealed sources per 10 CFR 30.4 and 10 CFR 835.2 (effective January 1, 2004) and documentation included with the AK information? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	This is a NDE BDR
18. **OSR** for LANL Sealed Sources, does the Pipe Overpack Container (POC) only contain sources and packaging material (no non-packaging items are allowed in the waste container)? **Reference Source: WAP B-3a(1)(iii) Verification Source: Data Sheet**			X	This is a NDE BDR
19. **OSR** for LANL Sealed Sources, is the sealed source a US DOT Special Form Class 7 (Radioactive Material) per 49 CFR 34.27 (effective January 1, 2004) and is this documented in the AK information? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	This is a NDE BDR
20. For LANL Sealed Sources, is the integrity of each sealed source validated by documented contamination survey results to meet the requirements of 10 CFR 34.27 (effective January 1, 2004), and is assembled as part of AK documentation? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	This is a NDE BDR
21. **OSR** for LANL Sealed Sources, is each source a rigid sealed container or is it in a rigid sealed container less than or equal to 4 L? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	This is a NDE BDR

Attachment 5 – CCP Site Project Manager Data Validation Summary (continued)

BATCH DATA REPORT NUMBER: INRTR2050037 **DATE:** 6/30/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
22. **OSR** for LANL Sealed Sources, does the AK information document that no VOC or VOC-bearing material are constituents of the waste? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information**			X	This is a NDE BDR
23. **OSR** for LANL Sealed Sources, does the AK information document that the outer casing of the sealed source is a non-VOC bearing material and is this verified during VE? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	This is a NDE BDR

The data for all containers in this batch are complete, properly reported, technically reasonable, representative and meet the Quality Assurance Objectives (QAOs). On a per waste container basis, as evidenced by my review of the Batch Data Report, all data have been validated in accordance with the QAPjP (CCP-PO-001) and are acceptable. This validation was accomplished through the generation level and project level data review, validation, and verification of this Batch Data Report.

David T. Hang — Site Project Manager

David T. Hang — Signature

7-13-05 — Date

Attachment 3 – CCP SPQAO Nondestructive Examination Project Level Validation Checklist and Summary

BATCH DATA REPORT NUMBER: INRTR2050037 **EXAMINATION DATE:** 6/30/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
1. Batch number? **Reference Source: WAP Table B3-11 Verification Source: Cover Sheet**	X			
2. Batch data report date? **Reference Source: WAP Table B3-11 Verification Source: Data Sheets**	X			
3. Implementing procedure and revision number? **Reference Source: WAP Table B3-11 Verification Source: Data Sheets**	X			CCP-TP-102 Rev. 7
4. Listing of all the container numbers in the batch? **Reference Source: WAP Table B3-11 Verification Source: Data Sheets**	X			10017133, 10004869, 10005810, 10001484, 10005244, 10005255, 10031213, 10027534, 10005259, 10005238, 10028663, 10030575, 10032215, 10032209, 10005257, 10028844, 10005247, 10030310, 10019660
5. Twenty or fewer samples in the batch? **Reference Source: WAP B3-10 Verification Source: Data Sheets and or Cover Sheet**	X			
6. Is there a reference to or copy of the associated NCRs? **Reference Source: WAP Table B3-11 Verification Source: NCR**	X			NCR-INL-0275-05
7. Independent Technical Reviewer Checklist?	X			
8. Technical Supervisor Checklist? **Reference Source: WAP B3-10a Verification Source: TS Checklist**	X			
9. Facility QA Officer Checklist? **Reference Source: WAP B3-10a Verification Source: FQAO Checklist**	X			
10. A radiography data form was submitted for each waste container in the batch? **Reference Source: WAP B3-4 Verification Source: Data Sheets**	X			
11. Is each data sheet signed and dated by the operator? **Reference Source: WAP Table B3-11 Verification Source: Data Sheets**	X			
12. Is there a documented reference to the recording media for each container? **Reference Source: WAP Table B3-11 Verification Source: Data Sheets**	X			
13. Date of radiography examination? **Reference Source: WAP Table B3-11 Verification Source: Data Sheets**	X			

Attachment 3 – CCP SPQAO Nondestructive Examination Project Level Validation Checklist and Summary (continued)

BATCH DATA REPORT NUMBER: INRTR2050037 **EXAMINATION DATE:** 6/30/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
14. TRUCON Code? **Reference Source: WAP Table B3-11** **Verification Source: Data Sheets**	X			ID 112/212, ID116/216, ID125/225
15. Waste Matrix Code? **Reference Source: WAP Table B3-11** **Verification Source: Data Sheets**	X			S3150, S5100, S5300
16. Indication of Rigid Liner? **Reference Source: WAP Table B3-11** **Verification Source: Data Sheets**	X			
17. Indication of liner type? **Reference Source: WAP Table B3-11** **Verification Source: Data Sheets**	X			
18. Indication of number of layers of confinement? **Reference Source: WAP Table B3-11** **Verification Source: Data Sheets**	X			
19. Amount of residual liquid? **Reference Source: WAP Table B3-11** **Verification Source: Data Sheets**	X			
20. Indication of sealed containers > 4L? **Reference Source: WAP Table B3-11** **Verification Source: Data Sheets**	X			Ref. NCR-INL-0275-05
21. Absence of prohibited items? **Reference Source: WAP Table B3-11** **Verification Source: Data Sheets**	X			Except for 10019660 Ref NCR-INL-0275-05
22. Indication of vented rigid liner? **Reference Source: WAP Table B3-11** **Verification Source: Data Sheets**	X			
23. Container gross weight recorded? **Reference Source: WAP Table B3-11** **Verification Source: Data Sheets**	X			
24. Indication of heavy and/or sharp object braced? **Reference Source: TRAMPAC 2.7** **Verification Source: Data**			X	No heavy or sharp objects identified.
25. Fill factor reported in percent (%)? **Reference Source: CCP Technical Procedures** **Verification Source: Data Sheets**	X			
26. Verification that the physical form matches the waste stream description? **Reference Source: WAP Table B3-11** **Verification Source: Data Sheets**	X			
27. Verification that the physical form matches the Waste Matrix Code? **Reference Source: WAP Table B3-11** **Verification Source: Data Sheets**	X			

Attachment 3 – CCP SPQAO Nondestructive Examination Project Level Validation Checklist and Summary (continued)

BATCH DATA REPORT NUMBER: INRTR2050037 **EXAMINATION DATE:** 6/30/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
28. Operator signature release and date? **Reference Source: WAP Table B3-11 Verification Source: Data Sheets**	X			
29. Space for comments? **Reference Source: WAP Table B3-11 Verification Source: Data Sheets**	X			
30. Estimate of each material parameter weight? (Kg) **Reference Source: WAP Table B3-11 Verification Source: Data Sheets**	X			
31. Description of each material parameter? **Reference Source: WAP Table B3-11 Verification Source: Data Sheets**	X			
32. The replicate scan and independent observation were performed on different waste containers? **Reference Source: WAP B1-3b(2) Verification Source: Data Sheets and/or BDR**	X			Replicate: 10028663 IO: 10005238
33. Replicate scan was performed once per day, or once per batch, whichever is LESS frequent? **Reference Source: WAP B1-3b(2) Verification Source: Data Sheets**	X			
34. An independent observation was performed once per day, or once per batch, whichever is LESS frequent? **Reference Source: WAP B1-3b(2) Verification Source: Data Sheets**	X			
35. The MPWs of the replicate scan are within ± 50% of the weights of the original scan? **Reference Source: CCP Technical Procedures Verification Source: Data Sheets**	X			
36. The MPWs of the independent observation scan are within ± 50% of the weights of the original scan? **Reference Source: CCP Technical Procedures Verification Source: Data Sheets**	X			
37. Operational checks for the radiography equipment were performed prior to analysis? **Reference Source: WAP B3-4 Verification Source: Data Sheets**	X			

Attachment 3 – CCP SPQAO Nondestructive Examination Project Level Validation Checklist and Summary (continued)

BATCH DATA REPORT NUMBER: INRTR2050037 **EXAMINATION DATE:** 6/30/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
38. Operational checks were performed daily? **Reference Source: WAP B3-4** **Verification Source: Measurement Control Report**	X			
39. All the appropriate QC forms (replicate scan, independent observation, operational checks)? **Reference Source: WAP Table B3-11** **Verification Source: QC Sheets**	X			
40. Weight Scale Calibration Check? **Reference Source: CCP Technical Procedures** **Verification Source: Measurement Control Report**			X	RTR2 has no scale.
41. Scale Weight Check? **Reference Source: CCP Technical Procedures** **Verification Source: Measurement Control Report**			X	RTR2 has no scale.
42. Lines-Pair Resolution Test Check? **Reference Source: WAP Table B3-11** **Verification Source: Measurement Control Report**	X			Performed in INRTR2050036 on 6/30/05
43. DGL Video/audio check? **Reference Source: WAP Table B3-11** **Verification Source: Measurement Control Report**	X			Performed in INRTR2050036 on 6/30/05
44. Was the person performing the replicate scan a qualified radiography operator different from the individual who performed the original scan? **Reference Source: WAP B1-3b(2)** **Verification Source: Data Sheets and/or Training Records**	X			
45. Was the independent observer a qualified radiography operator different from the individual who performed the initial observation? **Reference Source: WAP B1-3b(2)** **Verification Source: Data Sheets**	X			

Attachment 3 – CCP SPQAO Nondestructive Examination Project Level Validation Checklist and Summary (continued)

BATCH DATA REPORT NUMBER: INRTR2050037 **EXAMINATION DATE:** 6/30/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
46. A videotape or equivalent media with a unique identifier was submitted for each waste container in the batch? **Reference Source: WAP B3-4 Verification Source: Data Sheets**	X			
47. Training qualifications for all radiography personnel are acceptable? **Reference Source: WAP Table B3-10 Verification Source: Training Records**	X			
48. Is Attachment 6 included?		X		

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

Michael Walentine — Site Project QA Officer

Signature

7/11/05 — Date

Attachment 1 – CCP Radiography Batch Data Report Cover Sheet

Facility/Site: INL

Batch Number: INRTR2050037

Batch Data Report Date: 6/30/05

Operating Procedure Number/Revision: CCP-TP-102, Rev.7

Waste Container Type: 55 Gallon Drum

Waste Container Identification Numbers:

10017133	10030575
10004869	10032215
10005810	10032209
10001484	10005257
10005244	10028844
10005255	10005247
10031213	10030310
10027534	10019660
10005259	10028663 R
10005238	10005238 IO
10028663	N/A

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000001

ORIGINAL

Attachment 2 – CCP Radiography Batch Narrative

Batch Number: INRTR2050037

Quality Control Summary:

Replicate for this day's operation was conducted and documented in BDR #: INRTR2050037

Independent Observation for this day's operation was conducted and documented in BDR #: INRTR2050037

All Quality Checks were preformed and recorded on Attachment 7 of CCP-TP-102, Rev. 7 "CCP Radiography Measurement Control Report".

Quality Checks were preformed and recorded on Attachment 7 in BDR #: INRTR2050036

RTR Technical Supervisor Approval

RTR TS Printed Name: Greg Smith

Signature: Greg Smith Date: 6/30/05

FQAO Comments:

There is one NCR associated with this Batch Data Report: NCR-INL-0275-05 on drum 10019660.

Facility Quality Assurance Officer Approval

FQAO Printed Name: Greg Smith

Signature: Greg Smith Date: 6/30/05

Attachment 3 – CCP Radiography Independent Technical Reviewer Checklist

Site ID: INL	NDE Batch Number: INRTR2050037
Procedure and Rev. No.: CCP-TP-102, Rev.7	NDE Batch Date: 6/30/05

Description of Criteria Reviewed	Criteria Met (Y/N)
DATA TRANSCRIPTION	
1. Are gross drum weights recorded on the Attachment 6(s), CCP Radiography Data Sheet(s)?	☑ Yes ☐ No
2. Do container numbers on the Attachment 1, CCP Radiography Batch Data Report Cover Sheet correspond with those on the Attachment 6(s)?	☑ Yes ☐ No
3. Did the batch contain not more than 20 containers?	☑ Yes ☐ No
CALCULATIONS	
4. Were the waste material parameter weights in the correct units (Kg) and out to two significant figures?	☑ Yes ☐ No
5. Were the calculations verified by a valid calculation program with a spot check of the verified calculation program and/or was a 100% check of all hand calculations conducted? a. Gross Weight – Packaging List b. Estimated Weights c. Independent Observation and Replicate Scan comparison	☑ Yes ☐ No
6. Do the estimated weights plus packaging material recorded on the Attachment 6(s) total the gross drum weight?	☑ Yes ☐ No
DATA GENERATION AND REDUCTION	
7. Were the operating procedure(s) used verified to be the current version?	☑ Yes ☐ No
8. Data generation was conducted in a technically correct manner in accordance with approved NDE Standard Operating Procedures (SOP).	☑ Yes ☐ No
9. Was the Lines-Pair check satisfactory?	☑ Yes ☐ No
10. Was the audio/video check satisfactory?	☑ Yes ☐ No
11. Do the twelve waste material parameters identified during NDE match those listed for the container contents?	☑ Yes ☐ No
12. Does the physical form match the waste stream description and waste matrix code?	☑ Yes ☐ No
13. Are the layers of confinement recorded?	☑ Yes ☐ No
14. Were prohibited items documented correctly?	☑ Yes ☐ No
15. The data have been reviewed for transcription errors.	☑ Yes ☐ No
16. Have instrument calibration checks been performed at the beginning of each work shift or the beginning of each shift if continuous operation for the period of this batch (i.e., Lines-Pair Resolution Tests, audio/videotape or equivalent media)?	☑ Yes ☐ No
17. Independent Observation on a waste container was performed at a minimum of once per batch or once per day of operation, whichever is less frequent. List batch number of the Independent Observation, if other than this BDR.	☑ Yes ☐ No BDR # INRTR2050037
18. A QC Replicate Scan has been performed on one waste container per day or one waste container per batch, whichever is less frequent. List batch number of the Replicate Scan, if other than this BDR.	☑ Yes ☐ No BDR # INRTR2050037

Attachment 3 – CCP Radiography Independent Technical Reviewer Checklist
(Continued)

Site ID: INL	**NDE Batch Number:** INRTR2050037
Procedure and Rev. No.: CCP-TP-102, Rev.7	**NDE Batch Date:** 6/30/05
Description of Criteria Reviewed	**Criteria Met (Y/N)**
19. Is the Batch Data Report complete as appropriate, to this point? •CCP Radiography Batch Data Report Cover Sheet •CCP Radiography Batch Narrative •CCP Radiography Independent Technical Reviewer Checklist •CCP Radiography Technical Supervisor Checklist •CCP Radiography Facility Quality Assurance Officer Checklist •CCP Radiography Data Sheet(s) •CCP Radiography Measurement Control Report •Associated NCRs	☑ Yes ☐ No
NDE Independent Technical Reviewer Approval	
NDE ITR Printed Name: Kenneth Simpson Signature: K D Simpson Date: 7/7/05	

Attachment 4 – CCP Radiography Technical Supervisor Checklist

Batch Number: INRTR2050037			
No.	**Criteria**	**Criteria Met? Y/N/NA**	**Comments**
I.	**Data Generation and Reduction**		
a.	Were the operating procedure(s) used verified to be the current version? Enter procedure and revision number(s).	Yes	CCP-TP-102, Revision 7
b.	Is the data reasonable based on the technique used?	Yes	
c.	Is the Batch Data Report complete? ☑ CCP Radiography Batch Data Report Cover Sheet ☑ CCP Radiography Batch Narrative ☑ CCP Radiography Independent Technical Reviewer Checklist ☑ CCP Radiography Technical Supervisor Checklist ☑ CCP Radiography Facility Quality Assurance Officer Checklist ☑ CCP Radiography Data Sheet(s) ☑ CCP Radiography Measurement Control Report ☑ Associated NCRs	Yes	
d.	Is the recording media available and complete?	Yes	
e.	Has the Independent Technical Review been performed and signed?	Yes	
II.	**Quality Assurance Documentation**		
a.	Are NCRs and CARs included as appropriate for this Batch Data Report?	Yes	
b.	Independent Observation performed on one container per day or once per batch, whichever is less frequent.	Yes	
c.	Replicate Scan performed on one container per day or once per batch, whichever is less frequent.	Yes	
d.	Did the RTR Operator verify the waste stream for each drum?	Yes	
e.	Did the RTR Operator provide detailed descriptions?	Yes	
Technical Supervisor Approval			
NDE TS Printed Name: Greg Smith Signature: [signature] Date: 7-7-05			

Attachment 5 – CCP Radiography Facility Quality Assurance Officer Checklist

Batch Number: INRTR2050037			
No.	**Criteria**	**Criteria Met? Y/N/NA**	**Comments**
I.	**Quality Assurance Documentation**		
a.	Are Independent Technical Reviewer checklist and Technical Supervisor checklists completed and signed?	Yes	
b.	Is the Batch Data Report complete? ☑ CCP Radiography Batch Data Report Cover Sheet ☑ CCP Radiography Batch Data Report Cover Sheet ☑ CCP Radiography Batch Narrative ☑ CCP Radiography Independent Technical Reviewer Checklist ☑ CCP Radiography Technical Supervisor Checklist ☑ CCP Radiography Facility Quality Assurance Officer Checklist ☑ CCP Radiography Data Sheet(s) ☑ CCP Radiography Measurement Control Report	Yes	
c.	Is the recording media available and complete?	Yes	
d.	Have the QAOs been met? ☑ Completeness-data was collected for all drums in the batch. ☑ Comparability-data was collected using the operating procedure(s) verified to be the current version. ☑ Image quality check was satisfactory. ☑ Personnel were properly trained. ☑ The batch contained not more than 20 Containers.	Yes	

Attachment 5 – CCP Radiography Facility Quality Assurance Officer Checklist (Continued)

Batch Number: INRTR2050037			
No.	**Criteria**	**Criteria Met? Y/N/NA**	**Comments**
II.	**Quality Control Checks**		
a.	Were the quality control checks performed and satisfactory? ☑ Replicate Scan was satisfactory ☑ Independent Observation was satisfactory ☑ Is the audio/video check satisfactory?	Yes	
b.	Are NCRs and CARs included as appropriate for this Batch Data Report? Initiate a NCR if final data does not meet acceptance criteria.	Yes	
c.	Were NCRs and/or CARs closed prior to completion of this review?	No	NCR-INL-0275-05 is open.
Facility Quality Assurance Officer Approval			
FQAO Printed Name: Greg Smith Signature: _____ Date: 7-7-05			

Attachment 6 – CCP Radiography Data Sheet

☐ Replicate Scan ☐ Independent Observation

Site ID: INL

Container Number: **10017133**	NDE Batch Number: **INRTR2050037**
	Examination Date: 06/30/05
TRUCON Code: ID 112/212	Waste Matrix Code: S3150
	Waste Stream ID: ID-RF-S3150-A
Gross Weight (Kg): 241.5	
Tare Weight (Total Packaging Weight) (Kg): 34.7	
Net Weight (Kg): **206.8**	
Waste Container Liner? ☑ Yes ☐ No	Rigid Liner Type: 90 Mil Rigid Liner
Is there an indication of Rigid Liner being vented? ☑ Yes ☐ No	

NDE TASK	Yes or No	Comments (for residual liquids, give volume and location)
Are residual liquids present?	Yes ☑ No ☐	See container inventory.
Residual liquid > 1.0 inch in any internal container(s)	Yes ☐ No ☑	
Total volume of residual liquids > 1% volume of payload container volume	Yes ☐ No ☑	
Indication of sealed containers > 4 liters	Yes ☐ No ☑	
Pressurized containers or compressed gases	Yes ☐ No ☑	
Indication of non-radionuclide pyrophoric materials	Yes ☐ No ☑	
Indication of polychlorinated biphenyls (PCBs) not authorized under EPA PCB Waste Disposal Authorization (for example, liquid PCBs).	Yes ☐ No ☑	
Indication of explosives	Yes ☐ No ☑	
Indication of sharp or heavy objects not adequately blocked, braced, or packaged	Yes ☐ No ☑	
Indication of non-TRU hazardous waste	Yes ☐ No ☑	
Indication of waste incompatibile with backfill, seal and panel closures, material container and packaging materials, shipping container materials, or other wastes (i.e., DOES **NOT** match the TRUPACT-II Content (TRUCON) Code).	Yes ☐ No ☑	
Suspect ignitable, reactive, or corrosive material present	Yes ☐ No ☑	
Layers of Confinement (estimated number of packaging layers): 2 Layers		
Total Volume Percentage of Waste in Container (percent full): 95 Percent		

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10017133

Container Inventory: Provide detailed inventory
Plastic bags. Sludge. 2 tbsp. of liquid in a bag pocket at 30".

Packaging Materials	
Description	**Estimated Weight (Kg)**
Steel	27.2
Plastics	7.5
Tare Weight (Total Packaging Weight)	**34.7**

Waste Material Parameters	
Description	**Estimated Weight (Kg)**
Cellulosics	
Plastics	1.0
Rubber	
Organic Matrix	205.8
Inorganic Matrix	
Iron-based Metals/Alloys	
Aluminum-based Metals/Alloys	
Other Metals	
Soils/Gravel	
Other Inorganic Materials	
Totals:	**206.8**

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10017133

Waste Form
Does physical form match the waste stream description? ☑ Yes ☐ No
Does physical form match the waste matrix code? ☑ Yes ☐ No

NDE Record Information Section
Recording Media/File ID Number: INRTR2050037 A
Start 00000 Stop 00843
Additional Comments: (Reference to associated NCR, etc.)
Comments:
N/A

NDE Operator Approval
NDE Operator's Printed Name: Greg Lamb
Signature: Greg Lamb Date: 06/30/05

Attachment 6 – CCP Radiography Data Sheet

☐ Replicate Scan ☐ Independent Observation

Site ID: INL

Container Number: **10004869**	NDE Batch Number: **INRTR2050037**
	Examination Date: 06/30/05
TRUCON Code: ID 116/216	Waste Matrix Code: S5300
	Waste Stream ID: ID-RF-S5300-A
Gross Weight (Kg): 77.0	
Tare Weight (Total Packaging Weight) (Kg): 34.7	
Net Weight (Kg): **42.3**	
Waste Container Liner? ☑ Yes ☐ No	Rigid Liner Type: 90 Mil Rigid Liner
Is there an indication of Rigid Liner being vented? ☑ Yes ☐ No	

NDE TASK	Yes or No	Comments (for residual liquids, give volume and location)
Are residual liquids present?	Yes ☐ No ☑	
Residual liquid > 1.0 inch in any internal container(s)	Yes ☐ No ☑	
Total volume of residual liquids > 1% volume of payload container volume	Yes ☐ No ☑	
Indication of sealed containers > 4 liters	Yes ☐ No ☑	
Pressurized containers or compressed gases	Yes ☐ No ☑	
Indication of non-radionuclide pyrophoric materials	Yes ☐ No ☑	
Indication of polychlorinated biphenyls (PCBs) not authorized under EPA PCB Waste Disposal Authorization (for example, liquid PCBs).	Yes ☐ No ☑	
Indication of explosives	Yes ☐ No ☑	
Indication of sharp or heavy objects not adequately blocked, braced, or packaged	Yes ☐ No ☑	
Indication of non-TRU hazardous waste	Yes ☐ No ☑	
Indication of waste incompatibile with backfill, seal and panel closures, material container and packaging materials, shipping container materials, or other wastes (i.e., DOES **NOT** match the TRUPACT-II Content (TRUCON) Code).	Yes ☐ No ☑	
Suspect ignitable, reactive, or corrosive material present	Yes ☐ No ☑	
Layers of Confinement (estimated number of packaging layers): 3 Layers		
Total Volume Percentage of Waste in Container (percent full): 90 Percent		

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10004869

Container Inventory: Provide detailed inventory
Paint brush, wire brush, tape rolls, Tyvek coveralls, wipes. Plastic bags, electrical wire, Tygon tubing. Rubber booties. Scrap metal, tie wire, metal cap, bolts, washers, nails. Absorbent, light bulb.

Packaging Materials	
Description	**Estimated Weight (Kg)**
Steel	27.2
Plastics	7.5
Tare Weight (Total Packaging Weight)	**34.7**

Waste Material Parameters	
Description	**Estimated Weight (Kg)**
Cellulosics	9.8
Plastics	25.0
Rubber	3.0
Organic Matrix	
Inorganic Matrix	
Iron-based Metals/Alloys	2.5
Aluminum-based Metals/Alloys	
Other Metals	
Soils/Gravel	
Other Inorganic Materials	2.0
Totals:	**42.3**

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10004869

Waste Form
Does physical form match the waste stream description? ☑ Yes ☐ No
Does physical form match the waste matrix code? ☑ Yes ☐ No

NDE Record Information Section
Recording Media/File ID Number: INRTR2050037 A
Start 00843 Stop 01840
Additional Comments: (Reference to associated NCR, etc.)
Comments: N/A

NDE Operator Approval
NDE Operator's Printed Name: Greg Lamb
Signature: Date: 06/30/05

Attachment 6 – CCP Radiography Data Sheet

☐ Replicate Scan ☐ Independent Observation

Site ID: INL

Container Number: **10005810**	NDE Batch Number: **INRTR2050037**
	Examination Date: 06/30/05
TRUCON Code: ID 112/212	Waste Matrix Code: S3150
	Waste Stream ID: ID-RF-S3150-A
Gross Weight (Kg): 173.5	
Tare Weight (Total Packaging Weight) (Kg): 34.7	
Net Weight (Kg): **138.8**	
Waste Container Liner? ☑ Yes ☐ No	Rigid Liner Type: 90 Mil Rigid Liner
Is there an indication of Rigid Liner being vented? ☑ Yes ☐ No	

NDE TASK	Yes or No	Comments (for residual liquids, give volume and location)
Are residual liquids present?	Yes ☐ No ☑	
Residual liquid > 1.0 inch in any internal container(s)	Yes ☐ No ☑	
Total volume of residual liquids > 1% volume of payload container volume	Yes ☐ No ☑	
Indication of sealed containers > 4 liters	Yes ☐ No ☑	
Pressurized containers or compressed gases	Yes ☐ No ☑	
Indication of non-radionuclide pyrophoric materials	Yes ☐ No ☑	
Indication of polychlorinated biphenyls (PCBs) not authorized under EPA PCB Waste Disposal Authorization (for example, liquid PCBs).	Yes ☐ No ☑	
Indication of explosives	Yes ☐ No ☑	
Indication of sharp or heavy objects not adequately blocked, braced, or packaged	Yes ☐ No ☑	
Indication of non-TRU hazardous waste	Yes ☐ No ☑	
Indication of waste incompatibile with backfill, seal and panel closures, material container and packaging materials, shipping container materials, or other wastes (i.e., DOES **NOT** match the TRUPACT-II Content (TRUCON) Code).	Yes ☐ No ☑	
Suspect ignitable, reactive, or corrosive material present	Yes ☐ No ☑	
Layers of Confinement (estimated number of packaging layers): 1 Layer		
Total Volume Percentage of Waste in Container (percent full): 55 Percent		

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10005810

Container Inventory: Provide detailed inventory
Plastic bag. Sludge.

Packaging Materials	
Description	**Estimated Weight (Kg)**
Steel	27.2
Plastics	7.5
Tare Weight (Total Packaging Weight)	**34.7**

Waste Material Parameters	
Description	**Estimated Weight (Kg)**
Cellulosics	
Plastics	0.5
Rubber	
Organic Matrix	138.3
Inorganic Matrix	
Iron-based Metals/Alloys	
Aluminum-based Metals/Alloys	
Other Metals	
Soils/Gravel	
Other Inorganic Materials	
Totals:	**138.8**

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10005810

Waste Form
Does physical form match the waste stream description? ☑ Yes ☐ No
Does physical form match the waste matrix code? ☑ Yes ☐ No

NDE Record Information Section
Recording Media/File ID Number: INRTR2050037 A
Start 01840 Stop 02707
Additional Comments: (Reference to associated NCR, etc.)
Comments: N/A

NDE Operator Approval
NDE Operator's Printed Name: Greg Lamb
Signature: Greg Lamb Date: 06/30/05

Attachment 6 – CCP Radiography Data Sheet

☐ Replicate Scan ☐ Independent Observation

Site ID: INL

Container Number: **10001484**	NDE Batch Number: **INRTR2050037**
	Examination Date: 06/30/05
TRUCON Code: ID 125/225	Waste Matrix Code: S5100
	Waste Stream ID: ID-RF-S5100-A
Gross Weight (Kg): 74.0	
Tare Weight (Total Packaging Weight) (Kg): 34.7	
Net Weight (Kg): **39.3**	
Waste Container Liner? ☑ Yes ☐ No	Rigid Liner Type: 90 Mil Rigid Liner
Is there an indication of Rigid Liner being vented? ☑ Yes ☐ No	

NDE TASK	Yes or No	Comments (for residual liquids, give volume and location)
Are residual liquids present?	Yes ☐ No ☑	
Residual liquid > 1.0 inch in any internal container(s)	Yes ☐ No ☑	
Total volume of residual liquids > 1% volume of payload container volume	Yes ☐ No ☑	
Indication of sealed containers > 4 liters	Yes ☐ No ☑	
Pressurized containers or compressed gases	Yes ☐ No ☑	
Indication of non-radionuclide pyrophoric materials	Yes ☐ No ☑	
Indication of polychlorinated biphenyls (PCBs) not authorized under EPA PCB Waste Disposal Authorization (for example, liquid PCBs).	Yes ☐ No ☑	
Indication of explosives	Yes ☐ No ☑	
Indication of sharp or heavy objects not adequately blocked, braced, or packaged	Yes ☐ No ☑	
Indication of non-TRU hazardous waste	Yes ☐ No ☑	
Indication of waste incompatibile with backfill, seal and panel closures, material container and packaging materials, shipping container materials, or other wastes (i.e., DOES **NOT** match the TRUPACT-II Content (TRUCON) Code).	Yes ☐ No ☑	
Suspect ignitable, reactive, or corrosive material present	Yes ☐ No ☑	
Layers of Confinement (estimated number of packaging layers): 4 Layers		
Total Volume Percentage of Waste in Container (percent full): 85 Percent		

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10001484

Container Inventory: Provide detailed inventory
Fiber/Cardboard-Paks. Plastic bags. Absorbent, Raschig Rings.

Packaging Materials	
Description	**Estimated Weight (Kg)**
Steel	27.2
Plastics	7.5
Tare Weight (Total Packaging Weight)	**34.7**

Waste Material Parameters	
Description	**Estimated Weight (Kg)**
Cellulosics	~~26.0~~ 5.4 JL 7/7/05
Plastics	3.0
Rubber	
Organic Matrix	
Inorganic Matrix	
Iron-based Metals/Alloys	
Aluminum-based Metals/Alloys	
Other Metals	
Soils/Gravel	
Other Inorganic Materials	~~40.3~~ 30.9 JL 7/7/05
Totals:	**39.3**

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10001484

Waste Form
Does physical form match the waste stream description? ☑ Yes ☐ No
Does physical form match the waste matrix code? ☑ Yes ☐ No

NDE Record Information Section
Recording Media/File ID Number: INRTR2050037 A
Start 02707 Stop 03602
Additional Comments: (Reference to associated NCR, etc.)
Comments:
N/A

NDE Operator Approval
NDE Operator's Printed Name: Greg Lamb
Signature: Greg Lamb Date: 06/30/05

Attachment 6 – CCP Radiography Data Sheet

☐ Replicate Scan ☐ Independent Observation

Site ID: INL

Container Number: **10005244**	NDE Batch Number: **INRTR2050037**
	Examination Date: 06/30/05
TRUCON Code: ID 125/225	Waste Matrix Code: S5100
	Waste Stream ID: ID-RF-S5100-A
Gross Weight (Kg): 105.5	
Tare Weight (Total Packaging Weight) (Kg): 34.7	
Net Weight (Kg): **70.8**	
Waste Container Liner? ☑ Yes ☐ No	Rigid Liner Type: 90 Mil Rigid Liner
Is there an indication of Rigid Liner being vented? ☑ Yes ☐ No	

NDE TASK	Yes or No	Comments (for residual liquids, give volume and location)
Are residual liquids present?	Yes ☐ No ☑	
Residual liquid > 1.0 inch in any internal container(s)	Yes ☐ No ☑	
Total volume of residual liquids > 1% volume of payload container volume	Yes ☐ No ☑	
Indication of sealed containers > 4 liters	Yes ☐ No ☑	
Pressurized containers or compressed gases	Yes ☐ No ☑	
Indication of non-radionuclide pyrophoric materials	Yes ☐ No ☑	
Indication of polychlorinated biphenyls (PCBs) not authorized under EPA PCB Waste Disposal Authorization (for example, liquid PCBs).	Yes ☐ No ☑	
Indication of explosives	Yes ☐ No ☑	
Indication of sharp or heavy objects not adequately blocked, braced, or packaged	Yes ☐ No ☑	
Indication of non-TRU hazardous waste	Yes ☐ No ☑	
Indication of waste incompatibile with backfill, seal and panel closures, material container and packaging materials, shipping container materials, or other wastes (i.e., DOES **NOT** match the TRUPACT-II Content (TRUCON) Code).	Yes ☐ No ☑	
Suspect ignitable, reactive, or corrosive material present	Yes ☐ No ☑	
Layers of Confinement (estimated number of packaging layers): 3 Layers		
Total Volume Percentage of Waste in Container (percent full): 60 Percent		

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10005244

Container Inventory: Provide detailed inventory
Plastic bags. Absorbent, Raschig Rings.

Packaging Materials	
Description	**Estimated Weight (Kg)**
Steel	27.2
Plastics	7.5
Tare Weight (Total Packaging Weight)	**34.7**

Waste Material Parameters	
Description	**Estimated Weight (Kg)**
Cellulosics	
Plastics	4.0
Rubber	
Organic Matrix	
Inorganic Matrix	
Iron-based Metals/Alloys	
Aluminum-based Metals/Alloys	
Other Metals	
Soils/Gravel	
Other Inorganic Materials	66.8
Totals:	**70.8**

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10005244

Waste Form
Does physical form match the waste stream description? ☑ Yes ☐ No
Does physical form match the waste matrix code? ☑ Yes ☐ No

NDE Record Information Section
Recording Media/File ID Number: INRTR2050037 A
Start 03602 Stop 04503
Additional Comments: (Reference to associated NCR, etc.)
Comments:
N/A

NDE Operator Approval
NDE Operator's Printed Name: Greg Lamb
Signature: Greg Lamb Date: 06/30/05

Attachment 6 – CCP Radiography Data Sheet

☐ Replicate Scan ☐ Independent Observation

Site ID: INL

Container Number: **10005255**	NDE Batch Number: **INRTR2050037**
	Examination Date: 06/30/05
TRUCON Code: ID 125/225	Waste Matrix Code: S5100
	Waste Stream ID: ID-RF-S5100-A
Gross Weight (Kg): 77.0	
Tare Weight (Total Packaging Weight) (Kg): 34.7	
Net Weight (Kg): **42.3**	
Waste Container Liner? ☑ Yes ☐ No	Rigid Liner Type: 90 Mil Rigid Liner
Is there an indication of Rigid Liner being vented? ☑ Yes ☐ No	

NDE TASK	Yes or No	Comments (for residual liquids, give volume and location)
Are residual liquids present?	Yes ☐ No ☑	
Residual liquid > 1.0 inch in any internal container(s)	Yes ☐ No ☑	
Total volume of residual liquids > 1% volume of payload container volume	Yes ☐ No ☑	
Indication of sealed containers > 4 liters	Yes ☐ No ☑	
Pressurized containers or compressed gases	Yes ☐ No ☑	
Indication of non-radionuclide pyrophoric materials	Yes ☐ No ☑	
Indication of polychlorinated biphenyls (PCBs) not authorized under EPA PCB Waste Disposal Authorization (for example, liquid PCBs).	Yes ☐ No ☑	
Indication of explosives	Yes ☐ No ☑	
Indication of sharp or heavy objects not adequately blocked, braced, or packaged	Yes ☐ No ☑	
Indication of non-TRU hazardous waste	Yes ☐ No ☑	
Indication of waste incompatibile with backfill, seal and panel closures, material container and packaging materials, shipping container materials, or other wastes (i.e., DOES **NOT** match the TRUPACT-II Content (TRUCON) Code).	Yes ☐ No ☑	
Suspect ignitable, reactive, or corrosive material present	Yes ☐ No ☑	
Layers of Confinement (estimated number of packaging layers): 4 Layers		
Total Volume Percentage of Waste in Container (percent full): 85 Percent		

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10005255

Container Inventory: Provide detailed inventory
Fiber/Cardboard-Paks, tape roll. Plastic bags. Absorbent, Raschig Rings.

Packaging Materials	
Description	**Estimated Weight (Kg)**
Steel	27.2
Plastics	7.5
Tare Weight (Total Packaging Weight)	**34.7**

Waste Material Parameters	
Description	**Estimated Weight (Kg)**
Cellulosics	~~20.1~~ 5.1 NK 7/5/05 NK 7/7/05
Plastics	3.0
Rubber	
Organic Matrix	
Inorganic Matrix	
Iron-based Metals/Alloys	
Aluminum-based Metals/Alloys	
Other Metals	
Soils/Gravel	
Other Inorganic Materials	~~43.2~~ 33.9 NK 7/5/05 NK 7/7/05
Totals:	**42.3**

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10005255

Waste Form
Does physical form match the waste stream description? ☑ Yes ☐ No
Does physical form match the waste matrix code? ☑ Yes ☐ No

NDE Record Information Section
Recording Media/File ID Number: INRTR2050037 A
Start 04503 Stop 05319
Additional Comments: (Reference to associated NCR, etc.)
Comments:
N/A

NDE Operator Approval
NDE Operator's Printed Name: Greg Lamb
Signature: Greg Lamb Date: 06/30/05

Attachment 6 – CCP Radiography Data Sheet

☐ Replicate Scan ☐ Independent Observation

Site ID: INL

Container Number: **10031213**	NDE Batch Number: **INRTR2050037**
	Examination Date: 06/30/05
TRUCON Code: ID 125/225	Waste Matrix Code: S5100
	Waste Stream ID: ID-RF-S5100-A
Gross Weight (Kg): 82.0	
Tare Weight (Total Packaging Weight) (Kg): 34.7	
Net Weight (Kg): **47.3**	
Waste Container Liner? ☑ Yes ☐ No	Rigid Liner Type: 90 Mil Rigid Liner
Is there an indication of Rigid Liner being vented? ☑ Yes ☐ No	

NDE TASK	Yes or No	Comments (for residual liquids, give volume and location)
Are residual liquids present?	Yes ☐ No ☑	
Residual liquid > 1.0 inch in any internal container(s)	Yes ☐ No ☑	
Total volume of residual liquids > 1% volume of payload container volume	Yes ☐ No ☑	
Indication of sealed containers > 4 liters	Yes ☐ No ☑	
Pressurized containers or compressed gases	Yes ☐ No ☑	
Indication of non-radionuclide pyrophoric materials	Yes ☐ No ☑	
Indication of polychlorinated biphenyls (PCBs) not authorized under EPA PCB Waste Disposal Authorization (for example, liquid PCBs).	Yes ☐ No ☑	
Indication of explosives	Yes ☐ No ☑	
Indication of sharp or heavy objects not adequately blocked, braced, or packaged	Yes ☐ No ☑	
Indication of non-TRU hazardous waste	Yes ☐ No ☑	
Indication of waste incompatibile with backfill, seal and panel closures, material container and packaging materials, shipping container materials, or other wastes (i.e., DOES **NOT** match the TRUPACT-II Content (TRUCON) Code).	Yes ☐ No ☑	
Suspect ignitable, reactive, or corrosive material present	Yes ☐ No ☑	
Layers of Confinement (estimated number of packaging layers): 3 Layers		
Total Volume Percentage of Waste in Container (percent full): 85 Percent		

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10031213

Container Inventory: Provide detailed inventory
Fiber/Cardboard-Paks. Plastic bags. Absorbent, Raschig Rings.

Packaging Materials	
Description	**Estimated Weight (Kg)**
Steel	27.2
Plastics	7.5
Tare Weight (Total Packaging Weight)	**34.7**

Waste Material Parameters	
Description	**Estimated Weight (Kg)**
Cellulosics	~~26.0~~ 5.4 HK 7/7/05
Plastics	2.0
Rubber	
Organic Matrix	
Inorganic Matrix	
Iron-based Metals/Alloys	
Aluminum-based Metals/Alloys	
Other Metals	
Soils/Gravel	
Other Inorganic Materials	~~19.3~~ 39.9 HK 7/7/05
Totals:	**47.3**

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10031213

Waste Form
Does physical form match the waste stream description? ☑ Yes ☐ No
Does physical form match the waste matrix code? ☑ Yes ☐ No

NDE Record Information Section
Recording Media/File ID Number: INRTR2050037 A
Start 05319 Stop 10239
Additional Comments: (Reference to associated NCR, etc.)
Comments: N/A

NDE Operator Approval
NDE Operator's Printed Name: Greg Lamb
Signature: Greg Lamb Date: 06/30/05

Attachment 6 – CCP Radiography Data Sheet

☐ Replicate Scan ☐ Independent Observation

Site ID: INL

Container Number: **10027534**	NDE Batch Number: **INRTR2050037**
	Examination Date: 06/30/05
TRUCON Code: ID 125/225	Waste Matrix Code: S5100
	Waste Stream ID: ID-RF-S5100-A
Gross Weight (Kg): 73.5	
Tare Weight (Total Packaging Weight) (Kg): 34.7	
Net Weight (Kg): **38.8**	
Waste Container Liner? ☑ Yes ☐ No	Rigid Liner Type: 90 Mil Rigid Liner
Is there an indication of Rigid Liner being vented? ☑ Yes ☐ No	

NDE TASK	Yes or No	Comments (for residual liquids, give volume and location)
Are residual liquids present?	Yes ☐ No ☑	
Residual liquid > 1.0 inch in any internal container(s)	Yes ☐ No ☑	
Total volume of residual liquids > 1% volume of payload container volume	Yes ☐ No ☑	
Indication of sealed containers > 4 liters	Yes ☐ No ☑	
Pressurized containers or compressed gases	Yes ☐ No ☑	
Indication of non-radionuclide pyrophoric materials	Yes ☐ No ☑	
Indication of polychlorinated biphenyls (PCBs) not authorized under EPA PCB Waste Disposal Authorization (for example, liquid PCBs).	Yes ☐ No ☑	
Indication of explosives	Yes ☐ No ☑	
Indication of sharp or heavy objects not adequately blocked, braced, or packaged	Yes ☐ No ☑	
Indication of non-TRU hazardous waste	Yes ☐ No ☑	
Indication of waste incompatibile with backfill, seal and panel closures, material container and packaging materials, shipping container materials, or other wastes (i.e., DOES **NOT** match the TRUPACT-II Content (TRUCON) Code).	Yes ☐ No ☑	
Suspect ignitable, reactive, or corrosive material present	Yes ☐ No ☑	
Layers of Confinement (estimated number of packaging layers): 5 Layers		
Total Volume Percentage of Waste in Container (percent full): 85 Percent		

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10027534

Container Inventory: Provide detailed inventory
Fiber/Cardboard-Paks. Plastic bags. Absorbent, Raschig Rings.

Packaging Materials	
Description	**Estimated Weight (Kg)**
Steel	27.2
Plastics	7.5
Tare Weight (Total Packaging Weight)	**34.7**

Waste Material Parameters	
Description	**Estimated Weight (Kg)**
Cellulosics	~~26.0~~ 5.4 MT 7/7/05
Plastics	2.5
Rubber	
Organic Matrix	
Inorganic Matrix	
Iron-based Metals/Alloys	
Aluminum-based Metals/Alloys	
Other Metals	
Soils/Gravel	
Other Inorganic Materials	~~10.3~~ 30.9 MT 7/7/05
Totals:	**38.8**

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10027534

Waste Form
Does physical form match the waste stream description? ☑ Yes ☐ No
Does physical form match the waste matrix code? ☑ Yes ☐ No

NDE Record Information Section
Recording Media/File ID Number: INRTR2050037 A
Start 10239 Stop 11120
Additional Comments: (Reference to associated NCR, etc.)
Comments: N/A

NDE Operator Approval
NDE Operator's Printed Name: Greg Lamb
Signature: Greg Lamb Date: 06/30/05

Attachment 6 – CCP Radiography Data Sheet

☐ Replicate Scan ☐ Independent Observation

Site ID: INL

Container Number: **10005259**	NDE Batch Number: **INRTR2050037**
	Examination Date: 06/30/05
TRUCON Code: ID 125/225	Waste Matrix Code: S5100
	Waste Stream ID: ID-RF-S5100-A
Gross Weight (Kg): 120.0	
Tare Weight (Total Packaging Weight) (Kg): 34.7	
Net Weight (Kg): **85.3**	
Waste Container Liner? ☑ Yes ☐ No	Rigid Liner Type: 90 Mil Rigid Liner
Is there an indication of Rigid Liner being vented? ☑ Yes ☐ No	

NDE TASK	Yes or No	Comments (for residual liquids, give volume and location)
Are residual liquids present?	Yes ☐ No ☑	
Residual liquid > 1.0 inch in any internal container(s)	Yes ☐ No ☑	
Total volume of residual liquids > 1% volume of payload container volume	Yes ☐ No ☑	
Indication of sealed containers > 4 liters	Yes ☐ No ☑	
Pressurized containers or compressed gases	Yes ☐ No ☑	
Indication of non-radionuclide pyrophoric materials	Yes ☐ No ☑	
Indication of polychlorinated biphenyls (PCBs) not authorized under EPA PCB Waste Disposal Authorization (for example, liquid PCBs).	Yes ☐ No ☑	
Indication of explosives	Yes ☐ No ☑	
Indication of sharp or heavy objects not adequately blocked, braced, or packaged	Yes ☐ No ☑	
Indication of non-TRU hazardous waste	Yes ☐ No ☑	
Indication of waste incompatibile with backfill, seal and panel closures, material container and packaging materials, shipping container materials, or other wastes (i.e., DOES **NOT** match the TRUPACT-II Content (TRUCON) Code).	Yes ☐ No ☑	
Suspect ignitable, reactive, or corrosive material present	Yes ☐ No ☑	
Layers of Confinement (estimated number of packaging layers): 3 Layers		
Total Volume Percentage of Waste in Container (percent full): 75 Percent		

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10005259

Container Inventory: Provide detailed inventory
Cardboard liner. Plastic bags. Scrap metal (NSW). Absorbent, Raschig Rings.

Packaging Materials	
Description	**Estimated Weight (Kg)**
Steel	27.2
Plastics	7.5
Tare Weight (Total Packaging Weight)	**34.7**

Waste Material Parameters	
Description	**Estimated Weight (Kg)**
Cellulosics	1.5
Plastics	3.0
Rubber	
Organic Matrix	
Inorganic Matrix	
Iron-based Metals/Alloys	
Aluminum-based Metals/Alloys	
Other Metals	
Soils/Gravel	
Other Inorganic Materials	80.8
Totals:	**85.3**

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10005259

Waste Form
Does physical form match the waste stream description? ☑ Yes ☐ No
Does physical form match the waste matrix code? ☑ Yes ☐ No

NDE Record Information Section
Recording Media/File ID Number: INRTR2050037 A
Start 11120 Stop 12038
Additional Comments: (Reference to associated NCR, etc.)
Comments: N/A

NDE Operator Approval
NDE Operator's Printed Name: Greg Lamb
Signature: Greg Lamb Date: 06/30/05

Attachment 6 – CCP Radiography Data Sheet

☐ Replicate Scan ☐ Independent Observation

Site ID: INL

Container Number: **10005238**	NDE Batch Number: **INRTR2050037**
	Examination Date: 06/30/05
TRUCON Code: ID 125/225	Waste Matrix Code: S5100
	Waste Stream ID: ID-RF-S5100-A
Gross Weight (Kg): 82.0	
Tare Weight (Total Packaging Weight) (Kg): 34.7	
Net Weight (Kg): **47.3**	
Waste Container Liner? ☑ Yes ☐ No	Rigid Liner Type: 90 Mil Rigid Liner
Is there an indication of Rigid Liner being vented? ☑ Yes ☐ No	

NDE TASK	Yes or No	Comments (for residual liquids, give volume and location)
Are residual liquids present?	Yes ☐ No ☑	
Residual liquid > 1.0 inch in any internal container(s)	Yes ☐ No ☑	
Total volume of residual liquids > 1% volume of payload container volume	Yes ☐ No ☑	
Indication of sealed containers > 4 liters	Yes ☐ No ☑	
Pressurized containers or compressed gases	Yes ☐ No ☑	
Indication of non-radionuclide pyrophoric materials	Yes ☐ No ☑	
Indication of polychlorinated biphenyls (PCBs) not authorized under EPA PCB Waste Disposal Authorization (for example, liquid PCBs).	Yes ☐ No ☑	
Indication of explosives	Yes ☐ No ☑	
Indication of sharp or heavy objects not adequately blocked, braced, or packaged	Yes ☐ No ☑	
Indication of non-TRU hazardous waste	Yes ☐ No ☑	
Indication of waste incompatibile with backfill, seal and panel closures, material container and packaging materials, shipping container materials, or other wastes (i.e., DOES **NOT** match the TRUPACT-II Content (TRUCON) Code).	Yes ☐ No ☑	
Suspect ignitable, reactive, or corrosive material present	Yes ☐ No ☑	
Layers of Confinement (estimated number of packaging layers): 4 Layers		
Total Volume Percentage of Waste in Container (percent full): 85 Percent		

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10005238

Container Inventory: Provide detailed inventory
Fiber/Cardboard-Paks. Plastic bags. Absorbent, Raschig Rings.

Packaging Materials	
Description	**Estimated Weight (Kg)**
Steel	27.2
Plastics	7.5
Tare Weight (Total Packaging Weight)	**34.7**

Waste Material Parameters	
Description	**Estimated Weight (Kg)**
Cellulosics	~~26.0~~ 5.4 HF 7/7/05
Plastics	3.0
Rubber	
Organic Matrix	
Inorganic Matrix	
Iron-based Metals/Alloys	
Aluminum-based Metals/Alloys	
Other Metals	
Soils/Gravel	
Other Inorganic Materials	~~18.0~~ 38.9 HF 7/7/05
Totals:	**47.3**

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10005238

Waste Form
Does physical form match the waste stream description? ☑ Yes ☐ No
Does physical form match the waste matrix code? ☑ Yes ☐ No

NDE Record Information Section
Recording Media/File ID Number: INRTR2050037 A
Start 12038 Stop 12926
Additional Comments: (Reference to associated NCR, etc.)
Comments: N/A

NDE Operator Approval
NDE Operator's Printed Name: Greg Lamb
Signature: Greg Lamb Date: 06/30/05

Attachment 6 – CCP Radiography Data Sheet

☐ Replicate Scan ☐ Independent Observation

Site ID: INL

Container Number: **10028663**	NDE Batch Number: **INRTR2050037**
	Examination Date: 06/30/05
TRUCON Code: ID 125/225	Waste Matrix Code: S5100
	Waste Stream ID: ID-RF-S5100-A
Gross Weight (Kg): 84.0	
Tare Weight (Total Packaging Weight) (Kg): 34.7	
Net Weight (Kg): **49.3**	
Waste Container Liner? ☑ Yes ☐ No	Rigid Liner Type: 90 Mil Rigid Liner
Is there an indication of Rigid Liner being vented? ☑ Yes ☐ No	

NDE TASK	Yes or No	Comments (for residual liquids, give volume and location)
Are residual liquids present?	Yes ☐ No ☑	
Residual liquid > 1.0 inch in any internal container(s)	Yes ☐ No ☑	
Total volume of residual liquids > 1% volume of payload container volume	Yes ☐ No ☑	
Indication of sealed containers > 4 liters	Yes ☐ No ☑	
Pressurized containers or compressed gases	Yes ☐ No ☑	
Indication of non-radionuclide pyrophoric materials	Yes ☐ No ☑	
Indication of polychlorinated biphenyls (PCBs) not authorized under EPA PCB Waste Disposal Authorization (for example, liquid PCBs).	Yes ☐ No ☑	
Indication of explosives	Yes ☐ No ☑	
Indication of sharp or heavy objects not adequately blocked, braced, or packaged	Yes ☐ No ☑	
Indication of non-TRU hazardous waste	Yes ☐ No ☑	
Indication of waste incompatibile with backfill, seal and panel closures, material container and packaging materials, shipping container materials, or other wastes (i.e., DOES **NOT** match the TRUPACT-II Content (TRUCON) Code).	Yes ☐ No ☑	
Suspect ignitable, reactive, or corrosive material present	Yes ☐ No ☑	
Layers of Confinement (estimated number of packaging layers): 3 Layers		
Total Volume Percentage of Waste in Container (percent full): 85 Percent		

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10028663

Container Inventory: Provide detailed inventory
Fiber/Cardboard-Paks. Plastic bags. Absorbent, Raschig Rings.

Packaging Materials	
Description	**Estimated Weight (Kg)**
Steel	27.2
Plastics	7.5
Tare Weight (Total Packaging Weight)	**34.7**

Waste Material Parameters	
Description	**Estimated Weight (Kg)**
Cellulosics	~~26.0~~ 5.4 JJL 7/7/05
Plastics	2.5
Rubber	
Organic Matrix	
Inorganic Matrix	
Iron-based Metals/Alloys	
Aluminum-based Metals/Alloys	
Other Metals	
Soils/Gravel	
Other Inorganic Materials	~~20.8~~ 41.4 7/7/05
Totals:	**49.3**

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10028663

Waste Form
Does physical form match the waste stream description? ☑ Yes ☐ No
Does physical form match the waste matrix code? ☑ Yes ☐ No

NDE Record Information Section
Recording Media/File ID Number: INRTR2050037 A
Start 12926 Stop 13812
Additional Comments: (Reference to associated NCR, etc.)
Comments:
N/A

NDE Operator Approval
NDE Operator's Printed Name: Greg Lamb
Signature: Greg Lamb Date: 06/30/05

Attachment 6 – CCP Radiography Data Sheet

☐ Replicate Scan ☐ Independent Observation

Site ID: INL

Container Number: **10030575**	NDE Batch Number: **INRTR2050037**
	Examination Date: 06/30/05
TRUCON Code: ID 125/225	Waste Matrix Code: S5100
	Waste Stream ID: ID-RF-S5100-A
Gross Weight (Kg): 86.0	
Tare Weight (Total Packaging Weight) (Kg): 34.7	
Net Weight (Kg): **51.3**	
Waste Container Liner? ☑ Yes ☐ No	Rigid Liner Type: 90 Mil Rigid Liner
Is there an indication of Rigid Liner being vented? ☑ Yes ☐ No	

NDE TASK	Yes or No	Comments (for residual liquids, give volume and location)
Are residual liquids present?	Yes ☐ No ☑	
Residual liquid > 1.0 inch in any internal container(s)	Yes ☐ No ☑	
Total volume of residual liquids > 1% volume of payload container volume	Yes ☐ No ☑	
Indication of sealed containers > 4 liters	Yes ☐ No ☑	
Pressurized containers or compressed gases	Yes ☐ No ☑	
Indication of non-radionuclide pyrophoric materials	Yes ☐ No ☑	
Indication of polychlorinated biphenyls (PCBs) not authorized under EPA PCB Waste Disposal Authorization (for example, liquid PCBs).	Yes ☐ No ☑	
Indication of explosives	Yes ☐ No ☑	
Indication of sharp or heavy objects not adequately blocked, braced, or packaged	Yes ☐ No ☑	
Indication of non-TRU hazardous waste	Yes ☐ No ☑	
Indication of waste incompatibile with backfill, seal and panel closures, material container and packaging materials, shipping container materials, or other wastes (i.e., DOES **NOT** match the TRUPACT-II Content (TRUCON) Code).	Yes ☐ No ☑	
Suspect ignitable, reactive, or corrosive material present	Yes ☐ No ☑	
Layers of Confinement (estimated number of packaging layers): 4 Layers		
Total Volume Percentage of Waste in Container (percent full): 80 Percent		

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10030575

Container Inventory: Provide detailed inventory
Fiber/Cardboard-Paks. Plastic bags. Absorbent, Raschig Rings.

Packaging Materials	
Description	**Estimated Weight (Kg)**
Steel	27.2
Plastics	7.5
Tare Weight (Total Packaging Weight)	**34.7**

Waste Material Parameters	
Description	**Estimated Weight (Kg)**
Cellulosics	~~26.0~~ 5.4 7/7/05
Plastics	3.5
Rubber	
Organic Matrix	
Inorganic Matrix	
Iron-based Metals/Alloys	
Aluminum-based Metals/Alloys	
Other Metals	
Soils/Gravel	
Other Inorganic Materials	~~21.8~~ 42.4 JH 7/7/05
Totals:	**51.3**

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10030575

Waste Form
Does physical form match the waste stream description? ☑ Yes ☐ No
Does physical form match the waste matrix code? ☑ Yes ☐ No

NDE Record Information Section
Recording Media/File ID Number: INRTR2050037 A
Start 14813 Stop 15635
Additional Comments: (Reference to associated NCR, etc.)
Comments: N/A

NDE Operator Approval
NDE Operator's Printed Name: Greg Lamb
Signature: Greg Lamb Date: 06/30/05

Attachment 6 – CCP Radiography Data Sheet

☐ Replicate Scan ☐ Independent Observation

Site ID: INL

Container Number: **10032215**	NDE Batch Number: **INRTR2050037**
	Examination Date: 06/30/05
TRUCON Code: ID 125/225	Waste Matrix Code: S5100
	Waste Stream ID: ID-RF-S5100-A
Gross Weight (Kg): 84.5	
Tare Weight (Total Packaging Weight) (Kg): 34.7	
Net Weight (Kg): **49.8**	
Waste Container Liner? ☑ Yes ☐ No	Rigid Liner Type: 90 Mil Rigid Liner
Is there an indication of Rigid Liner being vented? ☑ Yes ☐ No	

NDE TASK	Yes or No	Comments (for residual liquids, give volume and location)
Are residual liquids present?	Yes ☐ No ☑	
Residual liquid > 1.0 inch in any internal container(s)	Yes ☐ No ☑	
Total volume of residual liquids > 1% volume of payload container volume	Yes ☐ No ☑	
Indication of sealed containers > 4 liters	Yes ☐ No ☑	
Pressurized containers or compressed gases	Yes ☐ No ☑	
Indication of non-radionuclide pyrophoric materials	Yes ☐ No ☑	
Indication of polychlorinated biphenyls (PCBs) not authorized under EPA PCB Waste Disposal Authorization (for example, liquid PCBs).	Yes ☐ No ☑	
Indication of explosives	Yes ☐ No ☑	
Indication of sharp or heavy objects not adequately blocked, braced, or packaged	Yes ☐ No ☑	
Indication of non-TRU hazardous waste	Yes ☐ No ☑	
Indication of waste incompatibile with backfill, seal and panel closures, material container and packaging materials, shipping container materials, or other wastes (i.e., DOES **NOT** match the TRUPACT-II Content (TRUCON) Code).	Yes ☐ No ☑	
Suspect ignitable, reactive, or corrosive material present	Yes ☐ No ☑	
Layers of Confinement (estimated number of packaging layers): 5 Layers		
Total Volume Percentage of Waste in Container (percent full): 85 Percent		

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10032215

Container Inventory: Provide detailed inventory
Fiber/Cardboard-Paks. Plastic bags. Absorbent, Raschig Rings.

Packaging Materials	
Description	**Estimated Weight (Kg)**
Steel	27.2
Plastics	7.5
Tare Weight (Total Packaging Weight)	**34.7**

Waste Material Parameters	
Description	**Estimated Weight (Kg)**
Cellulosics	~~26.0~~ 5.4 7/7/05
Plastics	3.5
Rubber	
Organic Matrix	
Inorganic Matrix	
Iron-based Metals/Alloys	
Aluminum-based Metals/Alloys	
Other Metals	
Soils/Gravel	
Other Inorganic Materials	~~20.3~~ 10.9 MS 7/7/05
Totals:	**49.8**

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10032215

Waste Form
Does physical form match the waste stream description? ☑ Yes ☐ No
Does physical form match the waste matrix code? ☑ Yes ☐ No

NDE Record Information Section
Recording Media/File ID Number: INRTR2050037 A
Start 15635 Stop 20449
Additional Comments: (Reference to associated NCR, etc.)
Comments: N/A

NDE Operator Approval
NDE Operator's Printed Name: Greg Lamb
Signature: Greg Lamb Date: 06/30/05

Attachment 6 – CCP Radiography Data Sheet

☐ Replicate Scan ☐ Independent Observation

Site ID: INL

Container Number: **10032209**	NDE Batch Number: **INRTR2050037**
	Examination Date: 06/30/05
TRUCON Code: ID 125/225	Waste Matrix Code: S5100
	Waste Stream ID: ID-RF-S5100-A
Gross Weight (Kg): 79.5	
Tare Weight (Total Packaging Weight) (Kg): 34.7	
Net Weight (Kg): **44.8**	
Waste Container Liner? ☑ Yes ☐ No	Rigid Liner Type: 90 Mil Rigid Liner
Is there an indication of Rigid Liner being vented? ☑ Yes ☐ No	

NDE TASK	Yes or No	Comments (for residual liquids, give volume and location)
Are residual liquids present?	Yes ☐ No ☑	
Residual liquid > 1.0 inch in any internal container(s)	Yes ☐ No ☑	
Total volume of residual liquids > 1% volume of payload container volume	Yes ☐ No ☑	
Indication of sealed containers > 4 liters	Yes ☐ No ☑	
Pressurized containers or compressed gases	Yes ☐ No ☑	
Indication of non-radionuclide pyrophoric materials	Yes ☐ No ☑	
Indication of polychlorinated biphenyls (PCBs) not authorized under EPA PCB Waste Disposal Authorization (for example, liquid PCBs).	Yes ☐ No ☑	
Indication of explosives	Yes ☐ No ☑	
Indication of sharp or heavy objects not adequately blocked, braced, or packaged	Yes ☐ No ☑	
Indication of non-TRU hazardous waste	Yes ☐ No ☑	
Indication of waste incompatibile with backfill, seal and panel closures, material container and packaging materials, shipping container materials, or other wastes (i.e., DOES **NOT** match the TRUPACT-II Content (TRUCON) Code).	Yes ☐ No ☑	
Suspect ignitable, reactive, or corrosive material present	Yes ☐ No ☑	
Layers of Confinement (estimated number of packaging layers): 4 Layers		
Total Volume Percentage of Waste in Container (percent full): 85 Percent		

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10032209

Container Inventory: Provide detailed inventory
Fiber/Cardboard-Paks. Plastic bags, Tygon tubing. Absorbent, Raschig Rings.

Packaging Materials	
Description	**Estimated Weight (Kg)**
Steel	27.2
Plastics	7.5
Tare Weight (Total Packaging Weight)	**34.7**

Waste Material Parameters	
Description	**Estimated Weight (Kg)**
Cellulosics	~~26.0~~ 5.4 HF 7/7/05
Plastics	3.0
Rubber	
Organic Matrix	
Inorganic Matrix	
Iron-based Metals/Alloys	
Aluminum-based Metals/Alloys	
Other Metals	
Soils/Gravel	
Other Inorganic Materials	~~15.8~~ 36.4 HF 7/7/05
Totals:	**44.8**

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10032209

Waste Form
Does physical form match the waste stream description? ☑ Yes ☐ No
Does physical form match the waste matrix code? ☑ Yes ☐ No

NDE Record Information Section
Recording Media/File ID Number: INRTR2050037 A
Start 20449 Stop 21332
Additional Comments: (Reference to associated NCR, etc.)
Comments: N/A

NDE Operator Approval
NDE Operator's Printed Name: Greg Lamb
Signature: Greg Lamb Date: 06/30/05

Attachment 6 – CCP Radiography Data Sheet

☐ Replicate Scan ☐ Independent Observation

Site ID: INL

Container Number: **10005257**	NDE Batch Number: **INRTR2050037**
	Examination Date: 06/30/05
TRUCON Code: ID 125/225	Waste Matrix Code: S5100
	Waste Stream ID: ID-RF-S5100-A
Gross Weight (Kg): 72.5	
Tare Weight (Total Packaging Weight) (Kg): 34.7	
Net Weight (Kg): **37.8**	
Waste Container Liner? ☑ Yes ☐ No	Rigid Liner Type: 90 Mil Rigid Liner
Is there an indication of Rigid Liner being vented? ☑ Yes ☐ No	

NDE TASK	Yes or No	Comments (for residual liquids, give volume and location)
Are residual liquids present?	Yes ☐ No ☑	
Residual liquid > 1.0 inch in any internal container(s)	Yes ☐ No ☑	
Total volume of residual liquids > 1% volume of payload container volume	Yes ☐ No ☑	
Indication of sealed containers > 4 liters	Yes ☐ No ☑	
Pressurized containers or compressed gases	Yes ☐ No ☑	
Indication of non-radionuclide pyrophoric materials	Yes ☐ No ☑	
Indication of polychlorinated biphenyls (PCBs) not authorized under EPA PCB Waste Disposal Authorization (for example, liquid PCBs).	Yes ☐ No ☑	
Indication of explosives	Yes ☐ No ☑	
Indication of sharp or heavy objects not adequately blocked, braced, or packaged	Yes ☐ No ☑	
Indication of non-TRU hazardous waste	Yes ☐ No ☑	
Indication of waste incompatibile with backfill, seal and panel closures, material container and packaging materials, shipping container materials, or other wastes (i.e., DOES **NOT** match the TRUPACT-II Content (TRUCON) Code).	Yes ☐ No ☑	
Suspect ignitable, reactive, or corrosive material present	Yes ☐ No ☑	
Layers of Confinement (estimated number of packaging layers): 4 Layers		
Total Volume Percentage of Waste in Container (percent full): 85 Percent		

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10005257

Container Inventory: Provide detailed inventory
Fiber/Cardboard-Paks. Plastic bags. Scrap metal (NSW). Absorbent, Raschig Rings.

Packaging Materials	
Description	**Estimated Weight (Kg)**
Steel	27.2
Plastics	7.5
Tare Weight (Total Packaging Weight)	**34.7**

Waste Material Parameters	
Description	**Estimated Weight (Kg)**
Cellulosics	~~26.0~~ 5.4 MZ 7/7/05
Plastics	3.0
Rubber	
Organic Matrix	
Inorganic Matrix	
Iron-based Metals/Alloys	
Aluminum-based Metals/Alloys	
Other Metals	
Soils/Gravel	
Other Inorganic Materials	~~8.8~~ 29.4 MZ 7/7/05
Totals:	**37.8**

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10005257

Waste Form
Does physical form match the waste stream description? ☑ Yes ☐ No
Does physical form match the waste matrix code? ☑ Yes ☐ No

NDE Record Information Section
Recording Media/File ID Number: INRTR2050037 A
Start 21332 Stop 22250
Additional Comments: (Reference to associated NCR, etc.)
Comments: N/A

NDE Operator Approval
NDE Operator's Printed Name: Greg Lamb
Signature: Greg Lamb Date: 06/30/05

Attachment 6 – CCP Radiography Data Sheet

☐ Replicate Scan ☐ Independent Observation

Site ID: INL

Container Number: **10028844**	NDE Batch Number: **INRTR2050037**
	Examination Date: 06/30/05
TRUCON Code: ID 125/225	Waste Matrix Code: S5100
	Waste Stream ID: ID-RF-S5100-A
Gross Weight (Kg): 95.5	
Tare Weight (Total Packaging Weight) (Kg): 34.7	
Net Weight (Kg): **60.8**	
Waste Container Liner? ☑ Yes ☐ No	Rigid Liner Type: 90 Mil Rigid Liner
Is there an indication of Rigid Liner being vented? ☑ Yes ☐ No	

NDE TASK	Yes or No	Comments (for residual liquids, give volume and location)
Are residual liquids present?	Yes ☐ No ☑	
Residual liquid > 1.0 inch in any internal container(s)	Yes ☐ No ☑	
Total volume of residual liquids > 1% volume of payload container volume	Yes ☐ No ☑	
Indication of sealed containers > 4 liters	Yes ☐ No ☑	
Pressurized containers or compressed gases	Yes ☐ No ☑	
Indication of non-radionuclide pyrophoric materials	Yes ☐ No ☑	
Indication of polychlorinated biphenyls (PCBs) not authorized under EPA PCB Waste Disposal Authorization (for example, liquid PCBs).	Yes ☐ No ☑	
Indication of explosives	Yes ☐ No ☑	
Indication of sharp or heavy objects not adequately blocked, braced, or packaged	Yes ☐ No ☑	
Indication of non-TRU hazardous waste	Yes ☐ No ☑	
Indication of waste incompatibile with backfill, seal and panel closures, material container and packaging materials, shipping container materials, or other wastes (i.e., DOES **NOT** match the TRUPACT-II Content (TRUCON) Code).	Yes ☐ No ☑	
Suspect ignitable, reactive, or corrosive material present	Yes ☐ No ☑	
Layers of Confinement (estimated number of packaging layers): 3 Layers		
Total Volume Percentage of Waste in Container (percent full): 85 Percent		

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10028844

Container Inventory: Provide detailed inventory
Fiber/Cardboard-Paks. Plastic bags. Scrap metal (NSW). Absorbent, Raschig Rings.

Packaging Materials	
Description	**Estimated Weight (Kg)**
Steel	27.2
Plastics	7.5
Tare Weight (Total Packaging Weight)	**34.7**

Waste Material Parameters	
Description	**Estimated Weight (Kg)**
Cellulosics	~~26.8~~ 5.4 NE 7/7/05
Plastics	2.5
Rubber	
Organic Matrix	
Inorganic Matrix	
Iron-based Metals/Alloys	
Aluminum-based Metals/Alloys	
Other Metals	
Soils/Gravel	
Other Inorganic Materials	~~32.3~~ 52.9 NE 7/7/05
Totals:	**60.8**

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10028844

Waste Form
Does physical form match the waste stream description? ☑ Yes ☐ No
Does physical form match the waste matrix code? ☑ Yes ☐ No

NDE Record Information Section
Recording Media/File ID Number: INRTR2050037 A
Start 22250 Stop 23156
Additional Comments: (Reference to associated NCR, etc.)
Comments: N/A

NDE Operator Approval
NDE Operator's Printed Name: Greg Lamb
Signature: Greg Lamb Date: 06/30/05

Attachment 6 – CCP Radiography Data Sheet

☐ Replicate Scan ☐ Independent Observation

Site ID: INL

Container Number: **10005247**	NDE Batch Number: **INRTR2050037**
	Examination Date: 06/30/05
TRUCON Code: ID 125/225	Waste Matrix Code: S5100
	Waste Stream ID: ID-RF-S5100-A
Gross Weight (Kg): 124.5	
Tare Weight (Total Packaging Weight) (Kg): 34.7	
Net Weight (Kg): **89.8**	
Waste Container Liner? ☑ Yes ☐ No	Rigid Liner Type: 90 Mil Rigid Liner
Is there an indication of Rigid Liner being vented? ☑ Yes ☐ No	

NDE TASK	Yes or No	Comments (for residual liquids, give volume and location)
Are residual liquids present?	Yes ☐ No ☑	
Residual liquid > 1.0 inch in any internal container(s)	Yes ☐ No ☑	
Total volume of residual liquids > 1% volume of payload container volume	Yes ☐ No ☑	
Indication of sealed containers > 4 liters	Yes ☐ No ☑	
Pressurized containers or compressed gases	Yes ☐ No ☑	
Indication of non-radionuclide pyrophoric materials	Yes ☐ No ☑	
Indication of polychlorinated biphenyls (PCBs) not authorized under EPA PCB Waste Disposal Authorization (for example, liquid PCBs).	Yes ☐ No ☑	
Indication of explosives	Yes ☐ No ☑	
Indication of sharp or heavy objects not adequately blocked, braced, or packaged	Yes ☐ No ☑	
Indication of non-TRU hazardous waste	Yes ☐ No ☑	
Indication of waste incompatibile with backfill, seal and panel closures, material container and packaging materials, shipping container materials, or other wastes (i.e., DOES **NOT** match the TRUPACT-II Content (TRUCON) Code).	Yes ☐ No ☑	
Suspect ignitable, reactive, or corrosive material present	Yes ☐ No ☑	
Layers of Confinement (estimated number of packaging layers): 4 Layers		
Total Volume Percentage of Waste in Container (percent full): 80 Percent		

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10005247

Container Inventory: Provide detailed inventory
Cardboard liner. Plastic bags. Absorbent, Raschig Rings.

Packaging Materials	
Description	**Estimated Weight (Kg)**
Steel	27.2
Plastics	7.5
Tare Weight (Total Packaging Weight)	**34.7**

Waste Material Parameters	
Description	**Estimated Weight (Kg)**
Cellulosics	1.5
Plastics	2.5
Rubber	
Organic Matrix	
Inorganic Matrix	
Iron-based Metals/Alloys	
Aluminum-based Metals/Alloys	
Other Metals	
Soils/Gravel	
Other Inorganic Materials	85.8
Totals:	**89.8**

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10005247

Waste Form
Does physical form match the waste stream description? ☑ Yes ☐ No
Does physical form match the waste matrix code? ☑ Yes ☐ No

NDE Record Information Section
Recording Media/File ID Number: INRTR2050037 A
Start 23156 Stop 24055
Additional Comments: (Reference to associated NCR, etc.)
Comments: N/A

NDE Operator Approval
NDE Operator's Printed Name: Greg Lamb
Signature: Greg Lamb Date: 06/30/05

Attachment 6 – CCP Radiography Data Sheet

☐ Replicate Scan ☐ Independent Observation

Site ID: INL

Container Number: **10030310**	NDE Batch Number: **INRTR2050037**
	Examination Date: 06/30/05
TRUCON Code: ID 125/225	Waste Matrix Code: S5100
	Waste Stream ID: ID-RF-S5100-A
Gross Weight (Kg): 79.5	
Tare Weight (Total Packaging Weight) (Kg): 34.7	
Net Weight (Kg): **44.8**	
Waste Container Liner? ☑ Yes ☐ No	Rigid Liner Type: 90 Mil Rigid Liner
Is there an indication of Rigid Liner being vented? ☑ Yes ☐ No	

NDE TASK	Yes or No	Comments (for residual liquids, give volume and location)
Are residual liquids present?	Yes ☐ No ☑	
Residual liquid > 1.0 inch in any internal container(s)	Yes ☐ No ☑	
Total volume of residual liquids > 1% volume of payload container volume	Yes ☐ No ☑	
Indication of sealed containers > 4 liters	Yes ☐ No ☑	
Pressurized containers or compressed gases	Yes ☐ No ☑	
Indication of non-radionuclide pyrophoric materials	Yes ☐ No ☑	
Indication of polychlorinated biphenyls (PCBs) not authorized under EPA PCB Waste Disposal Authorization (for example, liquid PCBs).	Yes ☐ No ☑	
Indication of explosives	Yes ☐ No ☑	
Indication of sharp or heavy objects not adequately blocked, braced, or packaged	Yes ☐ No ☑	
Indication of non-TRU hazardous waste	Yes ☐ No ☑	
Indication of waste incompatibile with backfill, seal and panel closures, material container and packaging materials, shipping container materials, or other wastes (i.e., DOES **NOT** match the TRUPACT-II Content (TRUCON) Code).	Yes ☐ No ☑	
Suspect ignitable, reactive, or corrosive material present	Yes ☐ No ☑	
Layers of Confinement (estimated number of packaging layers): 4 Layers		
Total Volume Percentage of Waste in Container (percent full): 85 Percent		

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10030310

Container Inventory: Provide detailed inventory
Fiber/Cardboard-Paks. Plastic bags. Absorbent, Raschig Rings.

Packaging Materials	
Description	**Estimated Weight (Kg)**
Steel	27.2
Plastics	7.5
Tare Weight (Total Packaging Weight)	**34.7**

Waste Material Parameters	
Description	**Estimated Weight (Kg)**
Cellulosics	
Plastics	~~26.0~~ 5.4 MK 7/7/05
Rubber	2.5
Organic Matrix	
Inorganic Matrix	
Iron-based Metals/Alloys	
Aluminum-based Metals/Alloys	
Other Metals	
Soils/Gravel	
Other Inorganic Materials	
	~~16.3~~ 36.9 MK 7/7/05
Totals:	**44.8**

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10030310

Waste Form
Does physical form match the waste stream description? ☑ Yes ☐ No
Does physical form match the waste matrix code? ☑ Yes ☐ No

NDE Record Information Section
Recording Media/File ID Number: INRTR2050037 A
Start 24055 Stop 24854
Additional Comments: (Reference to associated NCR, etc.)
Comments: N/A

NDE Operator Approval
NDE Operator's Printed Name: Greg Lamb
Signature: Greg Lamb Date: 06/30/05

Attachment 6 – CCP Radiography Data Sheet

☐ Replicate Scan ☐ Independent Observation

Site ID: INL

Container Number: **10019660**	NDE Batch Number: **INRTR2050037**
	Examination Date: 06/30/05
TRUCON Code: ID 125/225	Waste Matrix Code: S5100
	Waste Stream ID: ID-RF-S5100-A
Gross Weight (Kg): 102.5	
Tare Weight (Total Packaging Weight) (Kg): 34.7	
Net Weight (Kg): **67.8**	
Waste Container Liner? ☑ Yes ☐ No	Rigid Liner Type: 90 Mil Rigid Liner
Is there an indication of Rigid Liner being vented? ☑ Yes ☐ No	

NDE TASK	Yes or No	Comments (for residual liquids, give volume and location)
Are residual liquids present?	Yes ☐ No ☑	
Residual liquid > 1.0 inch in any internal container(s)	Yes ☐ No ☑	
Total volume of residual liquids > 1% volume of payload container volume	Yes ☐ No ☑	
Indication of sealed containers > 4 liters	Yes ☑ No ☐	See additional comments.
Pressurized containers or compressed gases	Yes ☐ No ☑	
Indication of non-radionuclide pyrophoric materials	Yes ☐ No ☑	
Indication of polychlorinated biphenyls (PCBs) not authorized under EPA PCB Waste Disposal Authorization (for example, liquid PCBs).	Yes ☐ No ☑	
Indication of explosives	Yes ☐ No ☑	
Indication of sharp or heavy objects not adequately blocked, braced, or packaged	Yes ☐ No ☑	
Indication of non-TRU hazardous waste	Yes ☐ No ☑	
Indication of waste incompatibile with backfill, seal and panel closures, material container and packaging materials, shipping container materials, or other wastes (i.e., DOES **NOT** match the TRUPACT-II Content (TRUCON) Code).	Yes ☐ No ☑	
Suspect ignitable, reactive, or corrosive material present	Yes ☐ No ☑	
Layers of Confinement (estimated number of packaging layers): 5 Layers		
Total Volume Percentage of Waste in Container (percent full): 85 Percent		

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10019660

Container Inventory: Provide detailed inventory
Plastic bags, sealed plastic containers greater than 4 liters. Nuts, bolts, washers. Scrap lead. Absorbent, Raschig Rings, glass shards.

Packaging Materials	
Description	**Estimated Weight (Kg)**
Steel	27.2
Plastics	7.5
Tare Weight (Total Packaging Weight)	**34.7**

Waste Material Parameters	
Description	**Estimated Weight (Kg)**
Cellulosics	14.0
Plastics	
Rubber	
Organic Matrix	
Inorganic Matrix	
Iron-based Metals/Alloys	0.5
Aluminum-based Metals/Alloys	
Other Metals	0.3
Soils/Gravel	
Other Inorganic Materials	53.0
Totals:	**67.8**

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10019660

Waste Form
Does physical form match the waste stream description? ☑ Yes ☐ No
Does physical form match the waste matrix code? ☑ Yes ☐ No

NDE Record Information Section
Recording Media/File ID Number: INRTR2050037 A
Start 24854 Stop 30255
Additional Comments: (Reference to associated NCR, etc.)
Comments: NCR-INL-0275-05: Sealed plastic containers greater than 4 liters.

NDE Operator Approval
NDE Operator's Printed Name: Greg Lamb
Signature: Greg Lamb Date: 06/30/05

Attachment 6 – CCP Radiography Data Sheet

☑ Replicate Scan ☐ Independent Observation

Site ID: INL

Container Number: **10028663**	NDE Batch Number: **INRTR2050037**
	Examination Date: 06/30/05
TRUCON Code: ID 125/225	Waste Matrix Code: S5100
	Waste Stream ID: ID-RF-S5100-A
Gross Weight (Kg): 84.0	
Tare Weight (Total Packaging Weight) (Kg): 34.7	
Net Weight (Kg): **49.3**	
Waste Container Liner? ☑ Yes ☐ No	Rigid Liner Type: 90 Mil Rigid Liner
Is there an indication of Rigid Liner being vented? ☑ Yes ☐ No	

NDE TASK	Yes or No	Comments (for residual liquids, give volume and location)
Are residual liquids present?	Yes ☐ No ☑	
Residual liquid > 1.0 inch in any internal container(s)	Yes ☐ No ☑	
Total volume of residual liquids > 1% volume of payload container volume	Yes ☐ No ☑	
Indication of sealed containers > 4 liters	Yes ☐ No ☑	
Pressurized containers or compressed gases	Yes ☐ No ☑	
Indication of non-radionuclide pyrophoric materials	Yes ☐ No ☑	
Indication of polychlorinated biphenyls (PCBs) not authorized under EPA PCB Waste Disposal Authorization (for example, liquid PCBs).	Yes ☐ No ☑	
Indication of explosives	Yes ☐ No ☑	
Indication of sharp or heavy objects not adequately blocked, braced, or packaged	Yes ☐ No ☑	
Indication of non-TRU hazardous waste	Yes ☐ No ☑	
Indication of waste incompatibile with backfill, seal and panel closures, material container and packaging materials, shipping container materials, or other wastes (i.e., DOES **NOT** match the TRUPACT-II Content (TRUCON) Code).	Yes ☐ No ☑	
Suspect ignitable, reactive, or corrosive material present	Yes ☐ No ☑	
Layers of Confinement (estimated number of packaging layers): 3 Layers		
Total Volume Percentage of Waste in Container (percent full): 85 Percent		

Attachment 6 – CCP Radiography Data Sheet (Continued)

☑ Replicate Scan ☐ Independent Observation

Container Number: 10028663

Container Inventory: Provide detailed inventory
Fiber/Cardboard-Paks. Plastic bags. Absorbent, Raschig Rings.

Packaging Materials	
Description	**Estimated Weight (Kg)**
Steel	27.2
Plastics	7.5
Tare Weight (Total Packaging Weight)	**34.7**

Waste Material Parameters	
Description	**Estimated Weight (Kg)**
Cellulosics	
Plastics	~~26.0~~ 5.4 BDS 7-7-05
Rubber	2.5
Organic Matrix	
Inorganic Matrix	
Iron-based Metals/Alloys	
Aluminum-based Metals/Alloys	
Other Metals	
Soils/Gravel	
Other Inorganic Materials	
	~~20.8~~ 41.4 BDS 7-7-05
Totals:	**49.3**

Attachment 6 – CCP Radiography Data Sheet (Continued)

☑ Replicate Scan ☐ Independent Observation

Container Number: 10028663

Waste Form
Does physical form match the waste stream description? ☑ Yes ☐ No
Does physical form match the waste matrix code? ☑ Yes ☐ No

NDE Record Information Section
Recording Media/File ID Number: INRTR2050037 A
Start 13812 Stop 14813
Additional Comments: (Reference to associated NCR, etc.)
Comments:
The results of this Replicate Scan were compared to the original scan. The Waste Material Parameter Weight Estimates agreed within +/-50%.

NDE Operator Approval
NDE Operator's Printed Name: Greg Smith
Signature: Greg Smith Date: 06/30/05

Attachment 6 – CCP Radiography Data Sheet

☐ Replicate Scan ☑ Independent Observation

Site ID: INL

Container Number: **10005238**	NDE Batch Number: **INRTR2050037**
	Examination Date: 06/30/05
TRUCON Code: ID 125/225	Waste Matrix Code: S5100
	Waste Stream ID: ID-RF-S5100-A
Gross Weight (Kg): 82.0	
Tare Weight (Total Packaging Weight) (Kg): 34.7	
Net Weight (Kg): **47.3**	
Waste Container Liner? ☑ Yes ☐ No	Rigid Liner Type: 90 Mil Rigid Liner
Is there an indication of Rigid Liner being vented? ☑ Yes ☐ No	

NDE TASK	Yes or No	Comments (for residual liquids, give volume and location)
Are residual liquids present?	Yes ☐ No ☑	
Residual liquid > 1.0 inch in any internal container(s)	Yes ☐ No ☑	
Total volume of residual liquids > 1% volume of payload container volume	Yes ☐ No ☑	
Indication of sealed containers > 4 liters	Yes ☐ No ☑	
Pressurized containers or compressed gases	Yes ☐ No ☑	
Indication of non-radionuclide pyrophoric materials	Yes ☐ No ☑	
Indication of polychlorinated biphenyls (PCBs) not authorized under EPA PCB Waste Disposal Authorization (for example, liquid PCBs).	Yes ☐ No ☑	
Indication of explosives	Yes ☐ No ☑	
Indication of sharp or heavy objects not adequately blocked, braced, or packaged	Yes ☐ No ☑	
Indication of non-TRU hazardous waste	Yes ☐ No ☑	
Indication of waste incompatibile with backfill, seal and panel closures, material container and packaging materials, shipping container materials, or other wastes (i.e., DOES **NOT** match the TRUPACT-II Content (TRUCON) Code).	Yes ☐ No ☑	
Suspect ignitable, reactive, or corrosive material present	Yes ☐ No ☑	
Layers of Confinement (estimated number of packaging layers): 4 Layers		
Total Volume Percentage of Waste in Container (percent full): 85 Percent		

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☑ Independent Observation

Container Number: 10005238

Container Inventory: Provide detailed inventory
Fiber/Cardboard-Paks. Plastic bags. Absorbent, Raschig Rings.

Packaging Materials

Description	Estimated Weight (Kg)
Steel	27.2
Plastics	7.5
Tare Weight (Total Packaging Weight)	**34.7**

Waste Material Parameters

Description	Estimated Weight (Kg)
Cellulosics	
Plastics	~~26.0~~ 5.4 BJS 7-7-05
Rubber	2.5
Organic Matrix	
Inorganic Matrix	
Iron-based Metals/Alloys	
Aluminum-based Metals/Alloys	
Other Metals	
Soils/Gravel	
Other Inorganic Materials	~~18.8~~ 39.4 BJS 7-7-05
Totals:	**47.3**

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☑ Independent Observation

Container Number: 10005238

Waste Form
Does physical form match the waste stream description? ☑ Yes ☐ No
Does physical form match the waste matrix code? ☑ Yes ☐ No

NDE Record Information Section
Recording Media/File ID Number: INRTR2050037 A
Start 12038 Stop 12926
Additional Comments: (Reference to associated NCR, etc.)
Comments: The results of this Independent Observation were compared to the original scan. The Waste Material Parameter Weight Estimates agreed within +/-50%.

NDE Operator Approval
NDE Operator's Printed Name: Greg Smith
Signature: Greg Smith Date: 06/30/05

Attachment 2 – CCP SPM Radiography Project Level Validation Checklist and Summary

BDR Number: INRTR5120002 **Examination Date:** 4/2/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
1. Is the completed, signed, and dated Independent Technical Reviewer Checklist included in the BDR, and the independent technical reviewer was *not* involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, C3-10b**	X			
2. Does the BDR contain all items addressed in the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-10b**	X			
3. Does the BDR include a listing of all the container numbers in the batch? **Reference Source: CCP-PO-001, C3-10b**	X			
4. List all containers that have met QAOs. **Reference Source: CCP-PO-001, C3-10b**				Container Numbers: 10086874 10342598 10088793 10129829 10342570 10109295 10018503
5. Does the BDR identify the current implementing procedure and revision number? **Reference Source: CCP-PO-001, Table C3-11**	X			
6. Is there a reference to or copy of any associated NCRs (if any) in the BDR? NA if no NCRs. **Reference Source: CCP-PO-001, Table C3-11**	X			NCR-INL-0340-12 REJECT 10023575 NCR-INL-0341-12 REJECT 10022324 NCR-INL-0342-12 REJECT 10183984 NCR-INL-0343-12 REJECT 10002715 AND 1007639
7. Are there 20 or fewer containers in the batch? **Reference Source: CCP-PO-001, C3-10**	X			
8. Are the data properly reported (i.e., data are reported in correct units and with correct significant figures)? **Reference Source: CCP-PO-001, C3-10b**	X			
9. Is there evidence of verification that the physical form matches the Waste Matrix Code? **Reference Source: CCP-PO-001, C3-4, Table C3-11**	X			EXCEPT: NCR-INL-0340-12 REJECT 10023575

CCP RECORDS ORIGINAL
DATE REC'D 4/23/12

Attachment 2 – CCP SPM Radiography Project Level Validation Checklist and Summary (Continued)

BDR Number: INRTR5120002 **Examination Date:** 4/2/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
10. Is there evidence of verification that the physical form matches the waste stream description? **Reference Source: CCP-PO-001, C1-3, Table C3-11**	X			EXCEPT: NCR-INL-0340-12 REJECT 10023575
11. Are prohibited items absent? **Reference Source: CCP-PO-001, C3-4a**	X			EXCEPT: NCR-INL-0341-12 REJECT 10022324 NCR-INL-0342-12 REJECT 10183984 NCR-INL-0343-12 REJECT 10002715 AND 1007639
12. Does observable liquid, if present, meet the criteria of the TSDF-WAC? **Reference Source: CCP-PO-001, C3-4a**	X			EXCEPT: NCR-INL-0342-12 REJECT 10183984 NCR-INL-0343-12 REJECT 10002715 AND 1007639
13. Were discrepancies between two operators with regard to identification of waste matrix code, liquids in excess of the TSDF-WAC, or compressed gases through replicate scans and independent observations reconciled? NA if no discrepancies. **Reference Source: CCP-PO-001, C3-4a**			X	NO DISCREPANCIES
14. Are the training qualifications for all radiography personnel acceptable? **Reference Source: CCP-PO-001, C3-4a**	X			
15. Was evidence of the video/audio check included in the BDR? **Reference Source: CCP-PO-001, C3-4a**	X			
16. Was the Lines-Pair Resolution Test Check included in the BDR? **Reference Source: CCP-PO-001, C3-4a**	X			
17. Was a replicate scan performed once per day, or once per batch, whichever is LESS frequent? **Reference Source: CCP-PO-001, C1-3**	X			
18. Was an independent observation performed once per day, or once per batch, whichever is LESS frequent? **Reference Source: CCP-PO-001, C1-3**	X			

Attachment 2 – CCP SPM Radiography Project Level Validation Checklist and Summary (Continued)

BDR Number: INRTR5120002 **Examination Date:** 4/2/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
19. Were the replicate scan and independent observation performed on different waste containers? **Reference Source: CCP-PO-001, C1-3**	X			
20. Were the personnel performing the replicate scan and independent observation different from the individual who performed the original? **Reference Source: CCP-PO-001, C1-3**	X			
21. Does the BDR include an estimate of each material parameter weight in kg for each container? **Reference Source: CCP Technical Procedures**	X			
22. Does the BDR include a description of each material parameter for each container? **Reference Source: CCP-PO-001, Table C3-1**	X			
23. Is the container gross weight recorded in kilograms (kg) for each container in the BDR? **Reference Source: CCP Technical Procedures**	X			
24. Was the Scale Weight Calibration Check included in the BDR? **Reference Source: CCP Technical Procedures**			X	Weight obtained independent of RTR
25. Was the Scale Weight Check included in the BDR? **Reference Source: CCP Technical Procedures**			X	Weight obtained independent of RTR

Comments: NA

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

LAURA NELSON — SPM Printed Name

Laura Nelson — Signature

4-19-12 — Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date

Attachment 5 – CCP Radiography Batch Data Report Cover Sheet

Batch Data Report No.: INRTR5120002 Date: 4/2/12

Waste Container ID Numbers	
Replicate Scan:	10109295
Independent Observation:	10086874
1	10023575
2	10086874
3	10342598
4	10088793
5	10129929
6	10342570
7	10022324
8	10109295
9	10183984
10	10007639
11	10002715
12	10018503
13	N/A
14	N/A
15	N/A
16	N/A
17	N/A
18	N/A
19	N/A
20	N/A

Independent Technical Reviewer:

MICHAEL GALBRAITH — Printed Name

Signature

4/5/12 — Date

CCP RECORDS ORIGINAL
DATE REC'D 4-5-12

Attachment 4 – CCP Radiography Batch Data Report Table of Contents and Batch Narrative

Batch Data Report No.: INRTR5120002 Date: 4/2/12

Table Of Contents

Item	Description	Page No.
1	CCP Radiography Batch Data Report Cover Sheet	1
2	CCP Radiography Batch Data Report Table Of Contents	2
3	CCP RTR Measurement Control Report	3
4	CCP Radiography Data Sheets	4-45
5	Copy of NCRs (NA, If Not Applicable)	46-58
6	CCP Independent Technical Reviewer Checklist	59-60

Batch Narrative

Replicate Scan for this day was conducted and documented in BDR INRTR5120002. Independent Observation for this day was conducted and documented in BDR INRTR5120002.
All Quality Checks were preformed under CCP-TP-053, Rev. 11, CCP Radiography Measurement and Control Report.
There are four NCR's associated with this batch: NCR-INL-0340-12 on drum 10023575, NCR-INL-0341-12 on drum 10022324, NCR-INL-0342-12 on drum 10183984, and NCR-INL-0343-12 on drums 10007639 and 10002715.

Tyson Christensen — RTR Operator
Signature
4/2/12 — Date

Attachment 1 – CCP RTR Measurement Control Report

Site ID: INL		
Batch Data Report No.: INRTR5120002		
Examination Date: 4/2/12		
Control Checks		
Video/Audio Recorded Media System Check	☑ SAT	☐ UNSAT
Image Test : 12 Lines Pair (Minimum acceptable is 5 lines-pair/cm or #6 Sieve is viewable)	☑ SAT	☐ UNSAT
Comments: N/A		
RTR Operator:		
Tyson Christensen	Tyson Christensen	4/2/12
Printed Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☐ RTR Examination ☑ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5120002
Examination Date:	4/2/12
Waste Container ID:	10109295
Video/Audio Recorded Media Number:	INRTR5120002 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	ID 112/212, SQ 154
Waste Matrix Code:	S3114
Waste Stream I.D.:	ID-RF-S3114
Waste Container Weights:	Gross Wt: 197.5 kg. Tare Wt: 35.1 kg. Net Wt: 162.4 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	90mil Liner - Vented
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	85 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10109295

Section 3: Container Inventory and Comments (Detailed descriptions)
Scrap metal (NSW) Absorbent Plastic bag Sludge

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	7.4
Others:	
Total Packaging Weight:	35.1
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	5.0
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	0.5
Organic Matrix (OR):	156.9
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	162.4

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10109295

Section 5: RTR Summary (Questions answered YES will be explained in the Comments block except for Questions 1 & 2)	Yes	No
Is there observable liquid?	☐	☑
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
CH or RH TRAMPAC		
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: This Replicate Scan agrees with the original scan.

RTR Operator:

Jerry Bowden	Jerry Bowden	4/2/12
Print Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☐ RTR Examination ☐ RTR Replicate Scan ☑ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5120002
Examination Date:	4/2/12
Waste Container ID:	10086874
Video/Audio Recorded Media Number:	INRTR5120002 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	ID 112/212, SQ 154
Waste Matrix Code:	S3114
Waste Stream I.D.:	ID-RF-S3114
Waste Container Weights:	Gross Wt: 279.0 kg. Tare Wt: 35.1 kg. Net Wt: 243.9 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	90mil Liner - Vented
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	100 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10086874

Section 3: Container Inventory and Comments (Detailed descriptions)
Metal wire basket Absorbent Plastic bags Sludge

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	7.4
Others:	
Total Packaging Weight:	35.1
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	1.5
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	6.0
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	1.0
Organic Matrix (OR):	235.4
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	243.9

Attachment 2 – CCP Radiography Data Sheet (Continued)

Page 3 of 3

Waste Container ID: 10086874

Section 5: RTR Summary (Questions answered "YES" will be explained in the Comments block, except for Question 1.)	Yes	No
Is there observable liquid?	☐	☑
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
CH or RH TRAMPAC		
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: This Independent Observation agrees with the original scan.

RTR Operator:

Jerry Bowden	Jerry Bowden	4/2/12
Print Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5120002
Examination Date:	4/2/12
Waste Container ID:	10023575
Video/Audio Recorded Media Number:	INRTR5120002 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☐NO ☑YES NCR No.: NCR-INL-0340-12 NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	ID 112/212, SQ 154
Waste Matrix Code:	S3114
Waste Stream I.D.:	ID-RF-S3114
Waste Container Weights:	Gross Wt: 186.0 kg. Tare Wt: 35.1 kg. Net Wt: 150.9 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	90mil Liner - Unvented
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	85 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10023575

Section 3: Container Inventory and Comments (Detailed descriptions)
Absorbent Plastic bag Sludge

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	7.4
Others:	
Total Packaging Weight:	35.1
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	6.5
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	0.5
Organic Matrix (OR):	143.9
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	150.9

Attachment 2 – CCP Radiography Data Sheet (Continued)

Page 3 of 3

Waste Container ID: 10023575

Section 5 – RTR Summary (Questions answered "YES" will be explained in the Comments block except question 1)	Yes	No
Is there observable liquid?	☐	☑
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
CH or RH TRAMPAC		
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☑	☐
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: See NCR-INL-0340-12.

RTR Operator:

Tyson Christensen	Tyson Christensen	4/2/12
Print Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5120002
Examination Date:	4/2/12
Waste Container ID:	10086874
Video/Audio Recorded Media Number:	INRTR5120002 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	ID 112/212, SQ 154
Waste Matrix Code:	S3114
Waste Stream I.D.:	ID-RF-S3114
Waste Container Weights:	Gross Wt: 279.0 kg. Tare Wt: 35.1 kg. Net Wt: 243.9 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	90mil Liner - Vented
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	100 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10086874

Section 3: Container Inventory and Comments (Detailed descriptions)
Metal wire basket Absorbent Plastic bags Sludge

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	7.4
Others:	
Total Packaging Weight:	35.1
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	2.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	8.0
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	1.0
Organic Matrix (OR):	232.9
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	243.9

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10086874

Section 6 RTR Summary (Questions answered YES will be explained in the Comments block except question 1)	Yes	No
Is there observable liquid?	☐	☑
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
CH or RH TRAMPAC		
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: N/A

RTR Operator:

Tyson Christensen	Tyson Christensen	4/2/12
Print Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5120002
Examination Date:	4/2/12
Waste Container ID:	10342598
Video/Audio Recorded Media Number:	INRTR5120002 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	ID 112/212, SQ 154
Waste Matrix Code:	S3114
Waste Stream I.D.:	ID-RF-S3114
Waste Container Weights:	Gross Wt: 241.0 kg. Tare Wt: 28.2 kg. Net Wt: 212.8 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	No Liner
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	95 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10342598

Section 3: Container Inventory and Comments (Detailed descriptions)
Absorbent Plastic bag Sludge

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	.5
Others:	
Total Packaging Weight:	28.2
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	7.5
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	0.5
Organic Matrix (OR):	204.8
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	212.8

Attachment 2 – CCP Radiography Data Sheet (Continued)

Page 3 of 3

Waste Container ID: 10342598

Section 6: RTR Summary (Questions answered YES will be explained in the comments block except for question 1)	Yes	No
Is there observable liquid?	☐	☑
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
CH or RH TRAMPAC [illegible]		
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: N/A

RTR Operator:

Tyson Christensen	[signature]	4/2/12
Print Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5120002
Examination Date:	4/2/12
Waste Container ID:	10088793
Video/Audio Recorded Media Number:	INRTR5120002 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☑NO ☐YES NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	ID116/216, SQ154
Waste Matrix Code:	S5300
Waste Stream I.D.:	ID-RF-S5300-A
Waste Container Weights:	Gross Wt: 86.5 kg. Tare Wt: 34.1 kg. Net Wt: 52.4 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	90mil Liner - No Liner Lid
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	85 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10088793

Section 3: Container Inventory and Comments (Detailed descriptions)
Scrap metal, metal wire, saw blades Absorbent, glass labware Tape rolls, cloth, filter media Plastic bags, plastic liner lid, crushed plastic container

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	6.4
Others:	
Total Packaging Weight:	34.1
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	2.5
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	8.0
Cellulosics (C):	39.4
Rubber (R):	
Plastics (waste materials) (XPM):	2.5
Organic Matrix (OR):	
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	52.4

Controlled Copy

Attachment 2 – CCP Radiography Data Sheet (Continued)

Page 3 of 3

Waste Container ID: 10088793

Section 5 – RTR Summary (Questions answered YES will be explained in the Comments block except for Question 1)	Yes	No
Is there observable liquid?	☐	☑
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
CH or RH TRAMPAC		
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: N/A

RTR Operator:

Tyson Christensen	[signature]	4/2/12
Print Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5120002
Examination Date:	4/2/12
Waste Container ID:	10129929
Video/Audio Recorded Media Number:	INRTR5120002 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☑NO ☐YES NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	ID 112/212, SQ 154
Waste Matrix Code:	S3114
Waste Stream I.D.:	ID-RF-S3114
Waste Container Weights:	Gross Wt: 178.0 kg. Tare Wt: 35.1 kg. Net Wt: 142.9 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	90mil Liner - Vented
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	75 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10129929

Section 3: Container Inventory and Comments* (Detailed descriptions*)
Scrap metal Absorbent Plastic bag Sludge

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	7.4
Others:	
Total Packaging Weight:	35.1
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	4.5
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	8.0
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	0.5
Organic Matrix (OR):	129.9
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	142.9

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10129929

Section 6.0 RTR Summary (Questions answered YES will be explained in the Comments block, except for questions 1 & 2)	Yes	No
Is there observable liquid?	☐	☑
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
CH or RH TRAMPAC		
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: N/A

RTR Operator:

Tyson Christensen		4/2/12
Print Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5120002
Examination Date:	4/2/12
Waste Container ID:	10342570
Video/Audio Recorded Media Number:	INRTR5120002 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☑NO ☐YES NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	ID 112/212, SQ 154
Waste Matrix Code:	S3114
Waste Stream I.D.:	ID-RF-S3114
Waste Container Weights:	Gross Wt: 221.5 kg. Tare Wt: 28.2 kg. Net Wt: 193.3 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	No Liner
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	90 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10342570

Section 3: Container Inventory and Comments (Detailed descriptions)
Absorbent Plastic bag Sludge

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	.5
Others:	
Total Packaging Weight:	28.2
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	9.0
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	0.5
Organic Matrix (OR):	183.8
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	193.3

Attachment 2 – CCP Radiography Data Sheet (Continued)

Page 3 of 3

Waste Container ID: 10342570

Section 6: RTR Summary (Questions answered YES will be explained in the Comments block, except for question(s) [illegible]	Yes	No
Is there observable liquid?	☐	☑
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
CH or RH TRAMPAC		
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: N/A

RTR Operator:

Tyson Christensen	*[signature]*	4/2/12
Print Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5120002
Examination Date:	4/2/12
Waste Container ID:	10022324
Video/Audio Recorded Media Number:	INRTR5120002 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☐ NO ☑ YES NCR No.: NCR-INL-0341-12 NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	ID 112/212, SQ 154
Waste Matrix Code:	S3114
Waste Stream I.D.:	ID-RF-S3114
Waste Container Weights:	Gross Wt: 201.0 kg. Tare Wt: 34.1 kg. Net Wt: 166.9 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	90mil Liner - No Liner Lid
Number of Layers of Confinement:	Appears to be 0 layers
Volume Utilization Percentage:	90 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Page 2 of 3

Waste Container ID: 10022324

Section 3: Container Inventory and Comments (Detailed descriptions)
Metal drum filter, razor knife Absorbent Plastic bag, plastic container Sludge

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	6.4
Others:	
Total Packaging Weight:	34.1
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	1.5
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	7.0
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	1.0
Organic Matrix (OR):	157.4
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	166.9

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10022324

Section 5: RTR Summary (Questions answered "YES" will be explained in the Comments block except for question 1)	Yes	No
Is there observable liquid?	☑	☐
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☑	☐
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☑	☐
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☑	☐
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
CH or RH TRAMPAC		
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☑	☐
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: See NCR-INL-0341-12.

RTR Operator:

Tyson Christensen	Tyson Christensen	4/2/12
Print Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Page 1 of 3

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5120002
Examination Date:	4/2/12
Waste Container ID:	10109295
Video/Audio Recorded Media Number:	INRTR5120002 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☑NO ☐YES NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	ID 112/212, SQ 154
Waste Matrix Code:	S3114
Waste Stream I.D.:	ID-RF-S3114
Waste Container Weights:	Gross Wt: 197.5 kg. Tare Wt: 35.1 kg. Net Wt: 162.4 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	90mil Liner - Vented
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	90 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10109295

Section 3: Container Inventory and Comments (Detailed descriptions)
Scrap metal(NSW) Absorbent Plastic bag Sludge

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	7.4
Others:	
Total Packaging Weight:	35.1
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	7.5
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	0.5
Organic Matrix (OR):	154.4
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	162.4

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10109295

Section 6 – RTR Summary (Questions answered "YES" will be addressed in the Comments block except Question 10)	Yes	No
Is there observable liquid?	☐	☑
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
CH or RH TRAMPAC		
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: N/A

RTR Operator:

Tyson Christensen	Tyson Christensen	4/2/12
Print Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5120002
Examination Date:	4/2/12
Waste Container ID:	10183984
Video/Audio Recorded Media Number:	INRTR5120002 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☐NO ☑YES NCR No.: NCR-INL-0342-12 NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	ID 112/212, SQ 154
Waste Matrix Code:	S3114
Waste Stream I.D.:	ID-RF-S3114
Waste Container Weights:	Gross Wt: 324.5 kg. Tare Wt: 35.1 kg. Net Wt: 289.4 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	90mil Liner - Vented
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	95 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10183984

Section 3: Container Inventory and Comments (Detailed descriptions)
Absorbent Plastic bag Sludge

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	7.4
Others:	
Total Packaging Weight:	35.1
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	6.5
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	0.5
Organic Matrix (OR):	282.4
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	289.4

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10183984

Section 5: RTR Summary (Questions answered YES will be explained in the Comments block, except for Question 1)	Yes	No
Is there observable liquid?	☑	☐
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☑	☐
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☑	☐
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
CH or RH TRAMPAC		
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: See NCR-INL-0342-12

RTR Operator:

Tyson Christensen	Tyson Christensen	4/2/12
Print Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5120002
Examination Date:	4/2/12
Waste Container ID:	10007639
Video/Audio Recorded Media Number:	INRTR5120002 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☐ NO ☑ YES NCR No.: NCR-INL-0343-12 NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	ID 112/212, SQ 154
Waste Matrix Code:	S3114
Waste Stream I.D.:	ID-RF-S3114
Waste Container Weights:	Gross Wt: 197.0 kg. Tare Wt: 35.1 kg. Net Wt: 161.9 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	90mil Liner - Vented
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	80 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10007639

Section 3: Container Inventory and Comments (Detailed descriptions)
Absorbent Plastic bag Sludge

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	7.4
Others:	
Total Packaging Weight:	35.1
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	6.5
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	0.5
Organic Matrix (OR):	154.9
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	161.9

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10007639

Section 5: RTR Summary (Questions answered YES will be explained in the Comments block, except for Question #1)	Yes	No
Is there observable liquid?	☑	☐
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☑	☐
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
CH or RH TRAMPAC		
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: See NCR-INL-0343-12.

RTR Operator:

Tyson Christensen	Tyson Christensen	4/2/12
Print Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5120002
Examination Date:	4/2/12
Waste Container ID:	10002715
Video/Audio Recorded Media Number:	INRTR5120002 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☐ NO ☑ YES NCR No.: NCR-INL-0343-12 NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	ID 112/212, SQ 154
Waste Matrix Code:	S3114
Waste Stream I.D.:	ID-RF-S3114
Waste Container Weights:	Gross Wt: 207.0 kg. Tare Wt: 35.1 kg. Net Wt: 171.9 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	90mil Liner - Vented
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	85 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10002715

Section 3: Container Inventory and Comments (Detailed descriptions)
Absorbent Plastic bag Sludge

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	7.4
Others:	
Total Packaging Weight:	35.1
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	6.0
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	0.5
Organic Matrix (OR):	165.4
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	171.9

Attachment 2 – CCP Radiography Data Sheet (Continued)

Page 3 of 3

Waste Container ID: 10002715

Section 5: RTR Summary (Questions answered "YES" will be explained in the Comments block, except for Question 5)	Yes	No
Is there observable liquid?	☑	☐
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☑	☐
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
CH or RH TRAMPAC		
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: See NCR-INL-0343-12

RTR Operator:

Tyson Christensen	Tyson Christensen	4/2/12
Print Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRTR5120002
Examination Date:	4/2/12
Waste Container ID:	10018503
Video/Audio Recorded Media Number:	INRTR5120002 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☑NO ☐YES NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	ID 112/212, SQ 154
Waste Matrix Code:	S3150
Waste Stream I.D.:	ID-RF-S3150-A
Waste Container Weights:	Gross Wt: 253.0 kg. E 4-5-12 Tare Wt: ~~4-5-12 35.1~~ 35.6 kg. E 4-5-12 Net Wt: ~~4-5-12 217.9~~ 217.4 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	90mil Liner - Vented
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	90 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10018503

Section 3: Container Inventory and Comments (Detailed descriptions)
Absorbent Plastic bags Sludge

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	E 4-5-12 ~~7.4~~ 7.9 E 4-5-12
Others:	
Total Packaging Weight:	E 4-5-12 ~~35.1~~ 35.6 E 4-5-12
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	7.5
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	1.0
Organic Matrix (OR):	~~209.4~~ E 4-5-12
Inorganic Matrix (IN):	208.9 E 4-6-12
Soils (S):	
Total WMP Weight:	E 4-6-12 ~~217.0~~ 217.4 E 4-6-12

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 10018503

Section 5: RTR Summary (Questions answered "YES" will be explained in the Comments block except for Question 11)	Yes	No
Is there observable liquid?	☐	☑
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☐	☑
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
CH or RH TRAMPAC		
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: ~~N/A~~ @ 4-5-12 Operator did not call the plastic bag on the outside of the liner a liner bag on Audio/Video media. @ 4-5-12

RTR Operator:

Tyson Christensen	Tyson Christensen	4/2/12
Print Name	Signature	Date

Attachment 1 – CCP Nonconformance Report (NCR)

NCR No.NCR-INL-0340-12		Revision 0
1. Lot No./Heat No. or Serial No. (as applicable): N/A	2. Process (e.g., NDA, HSG, NDE, VE, Other): NDE	3. Batch Data Report #(s): INRTR5120002
4. Order/Work Order/Job Control Number (as applicable): N/A	5. PO # (as applicable): N/A	Container #(s): 10023575
	6. Supplier (as applicable): N/A	

DESCRIPTION OF NONCONFORMANCE

7. (a) NCR Description: ☐ < 100 nCi/g ☒ Prohibited Item ☐ E-Flag
☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☐ Other

7. (b) Description of Nonconformance Required Condition (Implementing Procedure, Revision, Section, & Text):

CCP-TP-053, Rev. 11, Section 4.4.2 [H.1] IF any hazardous waste(s) NOT identified in the AK Summary Report(s) for the waste stream being characterized OR any nonconforming/prohibited items are noted during the RTR examination, THEN perform the following:
(a) Initiate an NCR in accordance with CCP-QP-005 AND record the NCR number in Section 1 of Attachment 2.

CCP-TP-053, Rev. 11, 4.4.2 [D.6] (a) Describe both the rigid liner AND liner venting method

CCP-AK-INL-005, Rev. 4, Section 5.4.4, Prohibited Items; As the drums are retrieved for characterization, they are vented and aspirated to ensure equilibration of any gases that may have accumulated in the closed container.

7. (c) Actual Condition
Cannot verify liner vent.

8. NCR Originator (Print name, sign, and date) Tyson Christensen Tyson Christensen 4/2/12	9. CCP QA Engineer or Designee Validation (Print name, sign, and date) RACHEL YOUNG 4/3/12

9a. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE
If YES or INDETERMINATE, then apply Trend Code L in Block 12.

9b. Have the CCP HOLD TAGS associated with the NCR been applied? ☒ YES ☐ NO If no is marked, provide an explanation.

10. Significant Condition? (If Yes, List CAR) ☐ YES ☒ NO	11. Recurring Condition? ☐ YES ☒ NO (If YES, List NCRs/CARs)
12. Trend Code: K	13. Responsible Manager: Bill Verlanic

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No.NCR-INL-0340-12 Revision 0	
INTERIM DISPOSITION	
14. Interim Disposition (Check One) ☑ N/A (See Final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort ☐ Reinspect/Retest ☐ Remediate (a) Instructions for Completion of the Interim Disposition:	
INTERIM DISPOSITION APPROVALS	
15 .Responsible Manager/Individual (Print, sign, and date)	16. CCP QA Engineer or Designee (Print, sign and date)
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
COMPLETION OF INTERIM DISPOSITION	
17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date)	
18. Interim Disposition Verified CCP QA Engineer: (Print, sign and date)	

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No.NCR-INL-0340-12	Revision 0
FINAL DISPOSITION	
19. Final Disposition (Check One) ☐ Use-As-Is ☒ Reject ☐ Repair ☐ Rework ☐ Scrap (a) Technical Justification (Required for Use-As-Is and Repair dispositions, Enter N/A for Reject, Scrap, or Rework dispositions.) N/A	
(b) Instructions for Completion (Required for Reject, Repair, Rework and Scrap – Enter N/A for Use-As-Is). Return container to AMWTP for remediation. Install a new filter into the drum. Return the container back to WMF-610 to allow CCP to re-characterize.	
(c) Corrective Actions (Actions to Prevent Recurrence – Required for Repair and Rework; Enter N/A for Use-As-Is-, Reject, and Scrap). N/A	
FINAL DISPOSITION APPROVALS	
20. Responsible Manager/Individual: (Print, sign, and date) Bill Verlanic Bill. 4-3-12	21. CCP QA Engineer or Designee: (Print, sign, and date) Rachel Young Rachel 4/3/12
Additional Approvals: (Print, sign, and date)	Additional Approvals: (Print, sign, and date)
CLOSURE	
22. Final Disposition Complete Responsible Manager/Individual: (Print, sign, and date)	
23. Attachments:	
24. (a) HOLD TAG removal has been validated and reconciled for all nonconforming items on the NCR. ☐ (b) Check if not applicable (N/A) and provide an explanation here or on a continuation sheet. ☐	
25. Final Disposition Verified – NCR Closed	CCP QA Engineer: (Print, sign, and date)

Attachment 1 – CCP Nonconformance Report (NCR)

NCR No.NCR-INL-0341-12	Revision 0	
1. Lot No./Heat No. or Serial No. (as applicable): N/A	2. Process (e.g., NDA, HSG, NDE, VE, Other): NDE	3. Batch Data Report #(s): INRTR5120002
4. Order/Work Order/Job Control Number (as applicable): N/A	5. PO # (as applicable): N/A	Container #(s): 10022324
	6. Supplier (as applicable): N/A	

DESCRIPTION OF NONCONFORMANCE

7. (a) NCR Description: ☐ < 100 nCi/g ☒ Prohibited Item ☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☐ Other

7. (b) Description of Nonconformance Required Condition (Implementing Procedure, Revision, Section, & Text):

CCP-TP-053, Rev. 11, Section 4.4.2 [H.1] IF any hazardous waste(s) NOT identified in the AK Summary Report(s) for the waste stream being characterized OR any nonconforming/prohibited items are noted during the RTR examination, THEN perform the following:
(a) Initiate an NCR in accordance with CCP-QP-005 AND record the NCR number in Section 1 of Attachment 2.

CCP-TP-053, Rev. 11, Table 1. Prohibited Items

CCP-AK-INL-005, Rev. 4, Section 5.4.4, Prohibited Items; Since this waste stream contains greater than 50 ppm PCB's, any residual liquids identified during RTR and/or VE are assumed to contain greater than 50 ppm PCB's.

7. (c) Actual Condition
> 4 liters sealed container with 1 gallon liquid(>60ml/>3% of internal container & >1% of payload container & PCB liquids)

8. NCR Originator (Print name, sign, and date)	9. CCP QA Engineer or Designee Validation (Print name, sign, and date)
Tyson Christensen 4/2/12	RACHEL YOUNG 4/3/12

9a. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE
If YES or INDETERMINATE, then apply Trend Code L in Block 12.

9b. Have the CCP HOLD TAGS associated with the NCR been applied? ☒ YES ☐ NO If no is marked, provide an explanation.

10. Significant Condition? (If Yes, List CAR)	11. Recurring Condition?
☐ YES ☒ NO	☐ YES ☒ NO (If YES, List NCRs/CARs)
12. Trend Code: K	13. Responsible Manager: Bill Verlanic

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No.NCR-INL-0341-12 Revision 0	
INTERIM DISPOSITION	
14. Interim Disposition (Check One) ☑ N/A (See Final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort ☐ Reinspect/Retest ☐ Remediate (a) Instructions for Completion of the Interim Disposition:	
INTERIM DISPOSITION APPROVALS	
15 .Responsible Manager/Individual (Print, sign, and date)	16. CCP QA Engineer or Designee (Print, sign and date)
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
COMPLETION OF INTERIM DISPOSITION	
17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date)	
18. Interim Disposition Verified CCP QA Engineer: (Print, sign and date)	

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No.NCR-INL-0341-12	Revision 0
FINAL DISPOSITION	
19. Final Disposition (Check One) ☐ Use-As-Is ☒ Reject ☐ Repair ☐ Rework ☐ Scrap	
(a) Technical Justification (Required for Use-As-Is and Repair dispositions, Enter N/A for Reject, Scrap, or Rework dispositions.) N/A	
(b) Instructions for Completion (Required for Reject, Repair, Rework and Scrap – Enter N/A for Use-As-Is). Return container to AMWTP for remediation.	
(c) Corrective Actions (Actions to Prevent Recurrence – Required for Repair and Rework; Enter N/A for Use-As-Is-, Reject, and Scrap). N/A	
FINAL DISPOSITION APPROVALS	
20. Responsible Manager/Individual: (Print, sign, and date) Bill Verlanic 4-3-12	21. CCP QA Engineer or Designee: (Print, sign, and date) Rachel Young 4/3/12
Additional Approvals: (Print, sign, and date)	Additional Approvals: (Print, sign, and date)
CLOSURE	
22. Final Disposition Complete Responsible Manager/Individual: (Print, sign, and date)	
23. Attachments:	
24. (a) HOLD TAG removal has been validated and reconciled for all nonconforming items on the NCR: ☐ (b) Check if not applicable (N/A) and provide an explanation here or on a continuation sheet. ☐	
25. Final Disposition Verified – NCR Closed	CCP QA Engineer: (Print, sign, and date)

Attachment 1 – CCP Nonconformance Report (NCR)

NCR No.NCR-INL-0342-12		Revision 0
1. Lot No./Heat No. or Serial No. (as applicable): N/A	2. Process (e.g., NDA, HSG, NDE, VE, Other): NDE	3. Batch Data Report #(s): INRTR5120002
4. Order/Work Order/Job Control Number (as applicable): N/A	5. PO # (as applicable): N/A	Container #(s): 10183984
	6. Supplier (as applicable): N/A	

DESCRIPTION OF NONCONFORMANCE

7. (a) NCR Description: ☐ < 100 nCi/g ☒ Prohibited Item ☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☐ Other

7. (b) Description of Nonconformance Required Condition (Implementing Procedure, Revision, Section, & Text):

CCP-TP-053, Rev. 11, Section 4.4.2 [H.1] IF any hazardous waste(s) NOT identified in the AK Summary Report(s) for the waste stream being characterized OR any nonconforming/prohibited items are noted during the RTR examination, THEN perform the following:
(a) Initiate an NCR in accordance with CCP-QP-005 AND record the NCR number in Section 1 of Attachment 2.

CCP-TP-053, Rev. 11, Table 1. Prohibited Items

CCP-AK-INL-005, Rev. 4, Section 5.4.4, Prohibited Items; Since this waste stream contains greater than 50 ppm PCB's, any residual liquids identified during RTR and/or VE are assumed to contain greater than 50 ppm PCB's.

7. (c) Actual Condition
13 pints at 21", 2 tbsp at 14", and ½ cup on top of liner lid(>1% PCB liquids)

8. NCR Originator (Print name, sign, and date)	9. CCP QA Engineer or Designee Validation (Print name, sign, and date)
Tyson Christensen 4/2/12	RACHEL YOUNG 4/3/12

9a. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE
If YES or INDETERMINATE, then apply Trend Code L in Block 12.

9b. Have the CCP HOLD TAGS associated with the NCR been applied? ☒ YES ☐ NO If no is marked, provide an explanation.

10. Significant Condition? (If Yes, List CAR) ☐ YES ☒ NO	11. Recurring Condition? ☐ YES ☒ NO (If YES, List NCRs/CARs)
12. Trend Code: K	13. Responsible Manager: Bill Verlanic

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No.NCR-INL-0342-12 Revision 0	
INTERIM DISPOSITION	
14. Interim Disposition (Check One) ☑ N/A (See Final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort ☐ Reinspect/Retest ☐ Remediate (a) Instructions for Completion of the Interim Disposition:	
INTERIM DISPOSITION APPROVALS	
15 .Responsible Manager/Individual (Print, sign, and date)	16. CCP QA Engineer or Designee (Print, sign and date)
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
COMPLETION OF INTERIM DISPOSITION	
17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date)	
18. Interim Disposition Verified CCP QA Engineer: (Print, sign and date)	

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No.NCR-INL-0342-12	Revision 0
FINAL DISPOSITION	
19. Final Disposition (Check One) ☐ Use-As-Is ☒ Reject ☐ Repair ☐ Rework ☐ Scrap	
(a) Technical Justification (Required for Use-As-Is and Repair dispositions, Enter N/A for Reject, Scrap, or Rework dispositions.) N/A	
(b) Instructions for Completion (Required for Reject, Repair, Rework and Scrap – Enter N/A for Use-As-Is). Return container to AMWTP for remediation.	
(c) Corrective Actions (Actions to Prevent Recurrence – Required for Repair and Rework; Enter N/A for Use-As-Is-, Reject, and Scrap). N/A	
FINAL DISPOSITION APPROVALS	
20. Responsible Manager/Individual: (Print, sign, and date) Bill Verlanic Bill 4-3-12	21. CCP QA Engineer or Designee: (Print, sign, and date) Rachel Young Rachel 4/3/12
Additional Approvals: (Print, sign, and date)	Additional Approvals: (Print, sign, and date)
CLOSURE	
22. Final Disposition Complete Responsible Manager/Individual: (Print, sign, and date)	
23. Attachments:	
24. (a) HOLD TAG removal has been validated and reconciled for all nonconforming items on the NCR. ☐ (b) Check if not applicable (N/A) and provide an explanation here or on a continuation sheet. ☐	
25. Final Disposition Verified – NCR Closed	CCP QA Engineer: (Print, sign, and date)

Attachment 1 – CCP Nonconformance Report (NCR)

NCR No.NCR-INL-0343-12		Revision 0
1. Lot No./Heat No. or Serial No. (as applicable): N/A	2. Process (e.g., NDA, HSG, NDE, VE, Other): NDE	3. Batch Data Report #(s): INRTR5120002
4. Order/Work Order/Job Control Number (as applicable): N/A	5. PO # (as applicable): N/A	Container #(s): See Attachment 1.
	6. Supplier (as applicable): N/A	

DESCRIPTION OF NONCONFORMANCE

7. (a) NCR Description: ☐ < 100 nCi/g ☒ Prohibited Item ☐ E-Flag
☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☐ Other

7. (b) Description of Nonconformance Required Condition (Implementing Procedure, Revision, Section, & Text):

CCP-TP-053, Rev. 11, Section 4.4.2 [H.1] IF any hazardous waste(s) NOT identified in the AK Summary Report(s) for the waste stream being characterized OR any nonconforming/prohibited items are noted during the RTR examination, THEN perform the following:
(a) Initiate an NCR in accordance with CCP-QP-005 AND record the NCR number in Section 1 of Attachment 2.

CCP-TP-053, Rev. 11, Table 1. Prohibited Items

CCP-AK-INL-005, Rev. 4, Section 5.4.4, Prohibited Items; Since this waste stream contains greater than 50 ppm PCB's, any residual liquids identified during RTR and/or VE are assumed to contain greater than 50 ppm PCB's.

7. (c) Actual Condition
See Attachment 1.

8. NCR Originator (Print name, sign, and date)	9. CCP QA Engineer or Designee Validation (Print name, sign, and date)
Tyson Christensen 4/2/12	RACHEL YOUNG 4/3/12

9a. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE
If YES or INDETERMINATE, then apply Trend Code L in Block 12.

9b. Have the CCP HOLD TAGS associated with the NCR been applied? ☒ YES ☐ NO If no is marked, provide an explanation.

10. Significant Condition? (If Yes, List CAR) ☐ YES ☒ NO	11. Recurring Condition? ☐ YES ☒ NO (If YES, List NCRs/CARs)
12. Trend Code: K	13. Responsible Manager: Bill Verlanic

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No.NCR-INL-0343-12	Revision 0
INTERIM DISPOSITION	
14. Interim Disposition (Check One) ☑ N/A (See Final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort ☐ Reinspect/Retest ☐ Remediate (a) Instructions for Completion of the Interim Disposition:	
INTERIM DISPOSITION APPROVALS	
15 .Responsible Manager/Individual (Print, sign, and date)	16. CCP QA Engineer or Designee (Print, sign and date)
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
COMPLETION OF INTERIM DISPOSITION	
17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date)	
18. Interim Disposition Verified CCP QA Engineer: (Print, sign and date)	

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No.NCR-INL-0343-12	Revision 0
FINAL DISPOSITION	
19. Final Disposition (Check One) ☐ Use-As-Is ☒ Reject ☐ Repair ☐ Rework ☐ Scrap	
(a) Technical Justification (Required for Use-As-Is and Repair dispositions, Enter N/A for Reject, Scrap, or Rework dispositions.) N/A	
(b) Instructions for Completion (Required for Reject, Repair, Rework and Scrap – Enter N/A for Use-As-Is). Return containers to AMWTP for remediation.	
(c) Corrective Actions (Actions to Prevent Recurrence – Required for Repair and Rework; Enter N/A for Use-As-Is-, Reject, and Scrap). N/A	
FINAL DISPOSITION APPROVALS	
20. Responsible Manager/Individual: (Print, sign, and date) Bill Verlanic B. Verl. 4-3-12	21. CCP QA Engineer or Designee: (Print, sign, and date) Rachel Young Rachel Young 4/3/12
Additional Approvals: (Print, sign, and date)	Additional Approvals: (Print, sign, and date)
CLOSURE	
22. Final Disposition Complete Responsible Manager/Individual: (Print, sign, and date)	
23. Attachments:	
24. (a) HOLD TAG removal has been validated and reconciled for all nonconforming items on the NCR. ☐ (b) Check if not applicable (N/A) and provide an explanation here or on a continuation sheet. ☐	
25. Final Disposition Verified – NCR Closed	CCP QA Engineer: (Print, sign, and date)

Attachment 2 – CCP Nonconformance Report (NCR) Continuation Sheet

NCR No. NCR-INL-0343-12 Revision 0 Attachment # 1 Page 1 of 1
10007639: Approximately 1 pint PCB liquid at 31"
10002715: Approximately 1 ½ cups at 30", 1 pint at 25", and 1 tsp PCB liquid at 14"
Continuation from Section Number: 7(c), 3

Attachment 3 – CCP Radiography Independent Technical Reviewer Checklist

Batch Data Report No.: INRTR5120002

1.	Data generation and reduction were conducted in a technically correct manner in accordance with the methods used?	☐ NO	☑ YES	☐ N/A
2.	Was the correct revision of the procedure used? Procedure: CCP-TP-053 Rev.: 11	☐ NO	☑ YES	☐ N/A
3.	Are the WMPs entered correctly?	☐ NO	☑ YES	☐ N/A
4.	Do the estimated weights in Section 4 of Attachment 2 equal the container gross weight?	☐ NO	☑ YES	☐ N/A
5.	Is the data reported in the proper units with the correct number of significant figures (e.g., one tenth of a kilogram)?	☐ NO	☑ YES	☐ N/A
6.	Has the data been verified for transcription errors?	☐ NO	☐ YES	☑ N/A
7.	Does the Testing Batch Report include radiography for up to 20 containers?	☐ NO	☑ YES	☐ N/A
8.	BDR contents are complete and match the CCP Waste RTR Batch Data Report Table of Contents?	☐ NO	☑ YES	☐ N/A
9.	Is all the data signed and dated in reproducible ink and by the individual(s) generating it?	☐ NO	☑ YES	☐ N/A
10.	Is all data recorded clearly, legibly, and accurately?	☐ NO	☑ YES	☐ N/A
11.	All changes to original data lined out, initialed and dated by the individual making the changes?	☐ NO	☑ YES	☐ N/A
12.	Was justification made for changing the original data?	☐ NO	☑ YES	☐ N/A
13.	Were data changes made by the individual who originally collected the data?	☐ NO	☑ YES	☐ N/A
14.	Does the waste match the Waste Matrix Code and Waste Stream description?	☐ NO	☑ YES	☐ N/A
15.	Are the RTR Operator's decisions regarding the Radiography documented?	☐ NO	☑ YES	☐ N/A
16.	Is there an adequate written description of the contents of each item?	☐ NO	☑ YES	☐ N/A
17.	Was the video/audio recording media properly prepared and labeled for each waste container?	☐ NO	☑ YES	☐ N/A
18.	Was the video/audio recording media check performed satisfactorily and recorded on Attachment 1?	☐ NO	☑ YES	☐ N/A

MD 4-5-12

Attachment 3 – CCP Radiography Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: INRTR5120002

19.	Was the Image Test performed satisfactorily and recorded on Attachment 1?	☐ NO	☑ YES	☐ N/A
20.	Was the Replicate Scan performed and recorded on an Attachment 2? (1 per batch or 1 per day, whichever is less frequent).	☐ NO	☑ YES	☐ N/A
21.	Was the Replicate Scan RTR Operator different from the first RTR Operator?	☐ NO	☑ YES	☐ N/A
22.	Did the Replicate Scan RTR Operator and the first RTR Operator agree on the results?	☐ NO	☑ YES	☐ N/A
23.	Was the Independent Observation performed and recorded on an Attachment 2? (1 per batch or 1 per day, whichever is less frequent).	☐ NO	☑ YES	☐ N/A
24.	Was the Independent Observation RTR Operator different from the first RTR Operator?	☐ NO	☑ YES	☐ N/A
25.	Did the Independent Observation RTR Operator and the first RTR Operator agree on the results?	☐ NO	☑ YES	☐ N/A
26.	Was the data collection performed by qualified individuals?	☐ NO	☑ YES	☐ N/A
27.	Are the NCR(s) associated with the RTR examination included in the BDR?	☐ NO	☑ YES	☐ N/A
28.	QAOs (precision, accuracy, completeness, representativeness) have been met?	☐ NO	☑ YES	☐ N/A

Comments:
N/A

I have reviewed 100% of the container specific and batch data in this report and find it acceptable.

Independent Technical Reviewer:

Michael Galbraith		4/5/12
Printed Name	Signature	Date

60
MG 4-5-12

Attachment 20 – Validated BDR Change Control Form

BDR Number: INRTR2050087

Description of Change
Added Revision 1 of NCR-INL-0336-05, which updates the actual condition of drums 10018029 and 10018503 and provides a revised disposition based on updated AK information. The data sheets for drums 10018029 and 10018503 were revised to show two layers of confinement, per revision 1 of the NCR-INL-0336-05.

Barbara Broomfield		3/07/06
SPM Printed Name	SPM Signature	Date

Attachment 1 – CCP Nonconformance Report (NCR)

NCR No. NCR –INL - 0336 – 05 Revision 1

1. Lot No./Heat No. or Serial No.: N/A	2. Process (NDA, HSG, NDE, VE, Other): NDE	3. Batch Data Report # (s): INRTR2050087
4. Order/Work Order/Job Control Number (as applicable): N/A	5. PO #: N/A 6. Supplier: N/A	Container#(s): 10018029, 10018503

DESCRIPTION OF NONCONFORMANCE

7. (a) Hold Tag Applied? ☐ YES ☒ NO (If NO, explain) Segregation Method(s): ☒ NA
Data changes only.

☐ < 100 nCi/g ☐ Prohibited Item ☐ >500 ppmv Flamm. VOCs

☐ E-Flag ☐ TRAMPAC Criteria ☐ Receiving Inspection ☒ Other

(b) Description of Nonconformance
Required Condition (Implementing Procedure, Section & Revision)
CCP-TP-102, Rev. 7, Section 4.7.4 [a.13] requires estimation and recording of number of packaging layers. Per CCP-AK-INL-005 Rev. 0, the maximum layers of confinement is two.

(c). Actual Condition
The original condition stated three layers of confinement were identified.Since the date of this RTR batch, CCP-AK-INL-005 was revised. In the current revision (Rev. 1), there is an explanation why more than two horse-tails can be present in this waste with only two layers of confinement. Thus it is believed there were only two layers of confinement at the time of RTR.

Per the disposition of Rev.0 of this NCR drum 10018503 was continued in assay, and was cored and sampled at MFC, which required breaching the original layers of confinement.
Rev. 1 updates the actual condition and provides a revised disposition based upon the AK revision.

8. NCR Originator (Print name, sign and date) Barbara Broomfield 3/7/06	9. SPQAO/FQAO Validation (Print name, sign and date) Greg Smith 3-7-06
10. Significant Condition? ☐ YES ☐ NO ☒ NA	11. Recurring Condition? ☐ YES ☒ NO (If YES, List NCRs/CARs)
12. Trend Code: K	13. Responsible Manager: Barbara Broomfield

Attachment 1 – CCP Nonconformance Report (NCR)	
NCR No. NCR -INL - 0336 - 05 Revision 1	
INTERIM DISPOSITION	
14. Interim Disposition (Check One) ☒ N/A (See final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort ☐Reinspect/Retest ☐ Remediate (a) Instructions for Completion of the Interim Disposition:	
INTERIM DISPOSITION APPROVALS	
15 .Responsible Manager/Individual (Print, sign and date)	16. SPQAO/FQAO (Print, sign and date)
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
COMPLETION OF INTERIM DISPOSITION	
17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date)	
18. Interim Disposition Verified SPQAO/FQAO: (Print, sign and date)	

Attachment 1 – CCP Nonconformance Report (NCR)	
NCR No. NCR -INL- 0336 - 05 Revision 1	
FINAL DISPOSITION	
19. Final Disposition (Check One) ☐ Use-As Is ☐ Reject ☐ Repair ☒ Rework ☐ Scrap	
(a) Technical Justification (Required for "Use-As-is" and "Repair" dispositions, N/A for "Reject," "Scrap," or "Rework" dispositions.) N/A	
(b) Disposition Instructions (Required for "Reject" and "Scrap") N/A	
(c) Instructions for Completion of the Final Disposition, including Inspection Criteria (Required for "Repair" and "Rework") The data pages in INRTR2050087 for the drums listed in block 3 will be changed to indicate two layers of confinement. The drums will continue through the characterization process in accordance with CCP-TP-068.	
(d) Corrective Actions (Actions to Prevent Recurrence) - as required. N/A	
FINAL DISPOSITION APPROVALS	
20. Responsible Manager/Individual: (Print, sign and date) Barbara Broomfield 3/7/06	21. SPQAO/FQAO: (Print, sign and date) Robert Czyzewski R Czyzewski 03/07/06
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
CLOSURE	
22. Final Disposition Complete Responsible Manager/Individual: (Print, sign and date)	
23. Final Disposition Verified – NCR Closed	SPQAO: (Print, sign and date)

CTS

CCP Nonconformance Report (NCR)

NCR No. NCR – INL - 0336 – 05 Revision 0

1. Lot No./Heat No. or Serial No.: N/A	**2. Process (NDA, HSG, NDE, VE, Other):** NDE	**3. Batch Data Report # (s):** INRTR2050087
4. Order/Work Order/Job Control Number (as applicable): N/A	**5. PO #:** N/A	**DRUM #(s):** 10018029, 10018503
6. E-QA NCR #: N/A	**Supplier:** N/A	

DESCRIPTION OF NONCONFORMANCE

7. (a) **Hold Tag Applied?** ☑ YES ☐ NO (If NO, explain) Segregation Method (s): ☐ NA

☐ < 100 n Ci/g ☐ Exceeds Site Limit ☐ Prohibited Item ☐ >500 ppmv Flamm. Vocs

☐ E-Flag ☐ TRAMPAC Criteria ☐ M&TE ☐ Receiving Inspection ☑ Other

(b) **Description of Nonconformance**
Required Condition (Implementing Procedure, Section & Revision)

" CCP-TP-102, Rev.7, Section 4.7.4 [a.13] States Enter the number of layers of confinement(estimated number of packing layers) determined during the examination.
Per CCP-AK-INL-005 Rev 0. States that the maximum layers of confinement is 2.

(c). **Actual Condition**

3 layers of confinement were identified.

Superceded by Rev. 1

8. Originator (Print name, sign and date) Kenneth Simpson 8/17/05	9. SPQAO/FQAO Validation (Print name, sign and date) Nancy Karas 8/17/05
10. Significant Condition? ☐ YES ☐ NO ☑ NA	11. Recurring Condition? ☐ YES ☑ NO (If YES, List NCRs)
12. Trend Code: K	13. Responsible Manager: Barbara Broomfield

CCP Nonconformance Report (NCR)

NCR No. NCR -INL- 0336 - 05 Revision 0

FINAL DISPOSITION

19. Final Disposition (Check One)
☐ Use-As Is ☐ Reject ☐ Repair ☒ Rework ☐ Scrap

(A) Technical Justification **(Required for "Use-As-is" and "Repair"** dispositions, N/A for "Reject" or "Rework" dispositions.)
N/A

(B) Disposition **(Required for "Reject" and "Scrap")**
N/A

(C) Instructions for Completion of the Final Disposition, including Inspection Criteria **(Required for "Repair" and "Rework")**

1. Continue waste container 10018503 to NDA in accordance with CCP-TP-068.

2. Once the assay is complete, stage this waste container for shipment to MFC for coring and remediation of the identified condition.

3. Upon completion of coring and remediation at MFC and its return to AMWTP, this waste container will be re-characterized in accordance with CCP-TP-068.

4. Waste Container ~~10018829~~ 10018029 BJB 8/18/05 is to be evaluated by the SPM and AK Expert to determine if the condition must be remediated or the AK Summary report changed to allow three layers of confinement.

Steps 1 and 2 will be completed by 08/22/2005.

(D) Corrective Actions **(Actions to Prevent Recurrence)** - as required.
N/A

FINAL DISPOSITION APPROVALS

20. Responsible Manager/Individual (Print, sign and date.)	21. SPQAO/FQAO (Print, sign and date.) Kenneth Simpson
Barbara Broomfield 8/18/05	8/18/05
Additional Approvals: (Print, sign and date.)	Additional Approvals: (Print, sign and date.)

CLOSURE

22. Final Disposition Complete Responsible Manager/Individual: (Print, sign and date.)

23. Final Disposition Verified **SPQAO/FQAO** (Print, sign and date.)

CCP Nonconformance Report (NCR)

NCR No. NCR - INL - 0336 - 05 Revision 0	
INTERIM DISPOSITION	
14. Interim Disposition (Check One) ☑ N/A (See final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort ☐ Reinspect/Retest ☐ Remediate (a) Instructions for Completion of the Interim Disposition:	
INTERIM DISPOSITION APPROVALS	
15 .Responsible Manager/Individual(Print, sign and date.)	16. SPQAO/FQAO (Print, sign and date.)
Additional Approvals: (Print, sign and date.)	Additional Approvals: (Print, sign and date.)
COMPLETION OF INTERIM DISPOSITION	
17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date.)	
18. Interim Disposition Verified **SPQAO/FQAO:** (Print, sign and date.)	

Attachment 5 – CCP Site Project Manager Data Validation Summary

On-Line Headspace Gas Analysis (HSG)			Visual Examination (VE)	
Nondestructive Examination (NDE)	X		Nondestructive Assay (NDA)	
Direct-Canister HSG Analysis			Homogeneous Waste Analysis (HWA)	
Radiological Characterization				

BATCH DATA REPORT NUMBER: INRTR2050087 DATE: 8/15/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
1. ITR, Tech Sup, and Facility QA checklists are complete and signed. **Reference Source: WAP B3-10b(2) Verification Source: DGL Checklist**	X			
2. The batch data report is complete. **Reference Source: WAP B3-10b(2) and WAC A.5.2 Verification Source: Data Sheets**	X			
3. QAOs have been met. **Reference Source: WAP B3-10b(2) Verification Source: QC Data Sheets**	X			10017572 10017407 10018183 10018867 10017576 10017723 10018571
4. Data reported with correct units and significant figures. **Reference Source: WAP B3-10b(2) Verification Source: Data Sheets**	X			
5. Data have been assessed correctly. **Reference Sources: WAP B3-10b(2) and B3-10b(3) Verification Source: Data Sheets**	X			
6. Is there a reference to or copy of the associated NCRS? **Reference Source: WAP Tables B3-11, B3-12 and B3-13 Verification Source: NCR**	X			NCR-INL-0335-05 NCR-INL-0336-05
7. The applicable SPQAO Project Level Validation Checklist is complete, signed, and dated. **Reference Source: WAP B3-10b(2) Verification Source: SPQAO Checklist**	X			
8. **NDA** batch QC checks (e.g., weekly interfering matrix, background, performance, and transmission checks, measurement system checks) were properly performed. **Reference Source: WAC A.4.2 and/or WAC Table A-4.3 Verification Source: QC Data Sheets**			X	NDE BDR
9. **HSG** – All data are reported with the appropriate flags. **Reference Source: WAP B3-10b(2) Verification Source: Data Sheet**			X	NDE BDR

ORIGINAL

Attachment 5 – CCP Site Project Manager Data Validation Summary (continued)

BATCH DATA REPORT NUMBER: INRTR2050087 **DATE:** 8/15/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers	
10. **HSG** batch QC checks (e.g., on-line blanks, duplicates, and laboratory control samples) were properly performed and meet the established usability criteria. **Reference Sources: WAP B3-10b(2) and Table B3-3 and/or B1-1b Verification Source: QC Data Sheets**			X	NDE BDR	
11. **HSG** DAC assignment is valid based upon an assessment of the data collection and evaluation necessary to make the assignment. **Reference Source: WAP B3-10b(2) Verification Source: Drum Data Form**			X	NDE BDR	
12. **NDE** data are complete and acceptable based on the videotape or equivalent media review (independent observation and replicate scan). **Reference Sources: WAP , B1-3b(2) and B3-10b(2) Verification Source: QC Data Sheets**	X			Container numbers:	
				Rep:	10038752 from batch INRTR2050088
				IO:	10039058 from batch INRTR2050088
13. **VE** data is complete and properly reported. **Reference Sources: WAP B1-3b(3) and B3-10b(2) Verification Source: BDR**			X	NDE BDR	
14. **HWA** Solid/Soil VOC batch QC checks (e.g., laboratory duplicates, blanks, and control samples) were properly performed and meet the established usability criteria. **Reference Sources: WAP B1-2b, B3-10b(2) and Table B3-5 Verification Source: QC Data Sheets**			X	NDE BDR	
15. **HWA** Solid/Soil Semi-VOC batch QC checks (e.g., laboratory duplicates, blanks, and control samples) were properly performed and meet the established usability criteria. **Reference Sources: WAP B1-2b, B3-10b(2) and Table B3-7 Verification Source: QC Data Sheets**			X	NDE BDR	

Attachment 5 – CCP Site Project Manager Data Validation Summary (continued)

BATCH DATA REPORT NUMBER: INRTR2050087 **DATE:** 8/15/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
16. **HWA Solid/Soil Total Metals Batch QC checks** (e.g., duplicates, blanks, and laboratory control samples) were properly performed and meet the established criteria. **Reference Sources: WAP B1-2b, B3-10b(2), and Table B3-9 Verification Source: QC Data Sheets**			X	NDE BDR
17. **OSR** for LANL Sealed Sources, does the waste meet the definition of sealed sources per 10 CFR 30.4 and 10 CFR 835.2 (effective January 1, 2004) and documentation included with the AK information? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	NDE BDR
18. **OSR** for LANL Sealed Sources, does the Pipe Overpack Container (POC) only contain sources and packaging material (no non-packaging items are allowed in the waste container)? **Reference Source: WAP B-3a(1)(iii) Verification Source: Data Sheet**			X	NDE BDR
19. **OSR** for LANL Sealed Sources, is the sealed source a US DOT Special Form Class 7 (Radioactive Material) per 49 CFR 34.27 (effective January 1, 2004) and is this documented in the AK information? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	NDE BDR
20. For LANL Sealed Sources, is the integrity of each sealed source validated by documented contamination survey results to meet the requirements of 10 CFR 34.27 (effective January 1, 2004), and is assembled as part of AK documentation? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	NDE BDR
21. **OSR** for LANL Sealed Sources, is each source a rigid sealed container or is it in a rigid sealed container less than or equal to 4 L? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	NDE BDR

Attachment 5 – CCP Site Project Manager Data Validation Summary (continued)

BATCH DATA REPORT NUMBER: INRTR2050087 **DATE:** 8/15/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA	Comments/Qualifiers
22. **OSR** for LANL Sealed Sources, does the AK information document that no VOC or VOC-bearing material are constituents of the waste? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information**	X	NDE BDR
23. **OSR** for LANL Sealed Sources, does the AK information document that the outer casing of the sealed source is a non-VOC bearing material and is this verified during VE? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**	X	NDE BDR

The data for all containers in this batch are complete, properly reported, technically reasonable, representative and meet the Quality Assurance Objectives (QAOs). On a per waste container basis, as evidenced by my review of the Batch Data Report, all data have been validated in accordance with the QAPjP (CCP-PO-001) and are acceptable. This validation was accomplished through the generation level and project level data review, validation, and verification of this Batch Data Report.

Barbara J. Broomfield — Site Project Manager — Signature — 8/31/05 — Date

Re reviewed for revision to NCR-INL-0336-05 and associated changes to BDR. Barbara J. Broomfield 3/14/06

Attachment 3 – CCP SPQAO Nondestructive Examination Project Level Validation Checklist and Summary

BATCH DATA REPORT NUMBER: INRTR2050087 **EXAMINATION DATE:** 8/15/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
1. Batch number? **Reference Source: WAP Table B3-11 Verification Source: Cover Sheet**	X			
2. Batch data report date? **Reference Source: WAP Table B3-11 Verification Source: Data Sheets**	X			
3. Implementing procedure and revision number? **Reference Source: WAP Table B3-11 Verification Source: Data Sheets**	X			CCP-TP-102, Rev. 7.
4. Listing of all the container numbers in the batch? **Reference Source: WAP Table B3-11 Verification Source: Data Sheets**	X			
5. Twenty or fewer samples in the batch? **Reference Source: WAP B3-10 Verification Source: Data Sheets and or Cover Sheet**	X			
6. Is there a reference to or copy of the associated NCRs? **Reference Source: WAP Table B3-11 Verification Source: NCR**	X			NCR-INL-0335-05 and NCR-INL-0336-05.
7. Independent Technical Reviewer Checklist?	X			See p. 3-4.
8. Technical Supervisor Checklist? **Reference Source: WAP B3-10a Verification Source: TS Checklist**	X			See p. 5.
9. Facility QA Officer Checklist? **Reference Source: WAP B3-10a Verification Source: FQAO Checklist**	X			See p. 6-7.
10. A radiography data form was submitted for each waste container in the batch? **Reference Source: WAP B3-4 Verification Source: Data Sheets**	X			
11. Is each data sheet signed and dated by the operator? **Reference Source: WAP Table B3-11 Verification Source: Data Sheets**	X			
12. Is there a documented reference to the recording media for each container? **Reference Source: WAP Table B3-11 Verification Source: Data Sheets**	X			
13. Date of radiography examination? **Reference Source: WAP Table B3-11 Verification Source: Data Sheets**	X			

Attachment 3 – CCP SPQAO Nondestructive Examination Project Level Validation Checklist and Summary (continued)

BATCH DATA REPORT NUMBER: INRTR2050087 **EXAMINATION DATE:** 8/15/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
14. TRUCON Code? **Reference Source: WAP Table B3-11** **Verification Source: Data Sheets**	X			
15. Waste Matrix Code? **Reference Source: WAP Table B3-11** **Verification Source: Data Sheets**	X			
16. Indication of Rigid Liner? **Reference Source: WAP Table B3-11** **Verification Source: Data Sheets**	X			
17. Indication of liner type? **Reference Source: WAP Table B3-11** **Verification Source: Data Sheets**	X			
18. Indication of number of layers of confinement? **Reference Source: WAP Table B3-11** **Verification Source: Data Sheets**	X			
19. Amount of residual liquid? **Reference Source: WAP Table B3-11** **Verification Source: Data Sheets**	X			Residual liquid was noted for 10018875 (NCR-INL-0335-05).
20. Indication of sealed containers > 4L? **Reference Source: WAP Table B3-11** **Verification Source: Data Sheets**	X			Sealed containers greater than 4L were not observed in this batch.
21. Absence of prohibited items? **Reference Source: WAP Table B3-11** **Verification Source: Data Sheets**	X			Except for 10018875.
22. Indication of vented rigid liner? **Reference Source: WAP Table B3-11** **Verification Source: Data Sheets**	X			
23. Container gross weight recorded? **Reference Source: WAP Table B3-11** **Verification Source: Data Sheets**	X			
24. Indication of heavy and/or sharp object braced? **Reference Source: TRAMPAC 2.7** **Verification Source: Data**	X			Heavy and/or sharp objects requiring bracing were not observed in this batch.
25. Fill factor reported in percent (%)? **Reference Source: CCP Technical Procedures** **Verification Source: Data Sheets**	X			
26. Verification that the physical form matches the waste stream description? **Reference Source: WAP Table B3-11** **Verification Source: Data Sheets**	X			
27. Verification that the physical form matches the Waste Matrix Code? **Reference Source: WAP Table B3-11** **Verification Source: Data Sheets**	X			

Attachment 3 – CCP SPQAO Nondestructive Examination Project Level Validation Checklist and Summary (continued)

BATCH DATA REPORT NUMBER: INRTR2050087 **EXAMINATION DATE:** 8/15/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
28. Operator signature release and date? **Reference Source: WAP Table B3-11 Verification Source: Data Sheets**	X			
29. Space for comments? **Reference Source: WAP Table B3-11 Verification Source: Data Sheets**	X			
30. Estimate of each material parameter weight? (Kg) **Reference Source: WAP Table B3-11 Verification Source: Data Sheets**	X			
31. Description of each material parameter? **Reference Source: WAP Table B3-11 Verification Source: Data Sheets**	X			
32. The replicate scan and independent observation were performed on different waste containers? **Reference Source: WAP B1-3b(2) Verification Source: Data Sheets and/or BDR**	X			The replicate scan was performed on 10038752; the independent observation was performed on 10039508. Both are reported in INRTR2050088.
33. Replicate scan was performed once per day, or once per batch, whichever is LESS frequent? **Reference Source: WAP B1-3b(2) Verification Source: Data Sheets**	X			The replicate scan was performed on 10038752; reported in INRTR2050088.
34. An independent observation was performed once per day, or once per batch, whichever is LESS frequent? **Reference Source: WAP B1-3b(2) Verification Source: Data Sheets**	X			The independent observation was performed on 10039508; reported in INRTR2050088.
35. The MPWs of the replicate scan are within ± 50% of the weights of the original scan? **Reference Source: CCP Technical Procedures Verification Source: Data Sheets**	X			
36. The MPWs of the independent observation scan are within ± 50% of the weights of the original scan? **Reference Source: CCP Technical Procedures Verification Source: Data Sheets**	X			
37. Operational checks for the radiography equipment were performed prior to analysis? **Reference Source: WAP B3-4 Verification Source: Data Sheets**	X			

Attachment 3 – CCP SPQAO Nondestructive Examination Project Level Validation Checklist and Summary (continued)

BATCH DATA REPORT NUMBER: INRTR2050087 **EXAMINATION DATE:** 8/15/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
38. Operational checks were performed daily? **Reference Source: WAP B3-4** **Verification Source: Measurement Control Report**	X			See p. 44.
39. All the appropriate QC forms (replicate scan, independent observation, operational checks)? **Reference Source: WAP Table B3-11** **Verification Source: QC Sheets**	X			
40. Weight Scale Calibration Check? **Reference Source: CCP Technical Procedures** **Verification Source: Measurement Control Report**			X	Not in the scope of CCP-TP-102.
41. Scale Weight Check? **Reference Source: CCP Technical Procedures** **Verification Source: Measurement Control Report**			X	Not in the scope of CCP-TP-102.
42. Lines-Pair Resolution Test Check? **Reference Source: WAP Table B3-11** **Verification Source: Measurement Control Report**	X			See p. 44.
43. DGL Video/audio check? **Reference Source: WAP Table B3-11** **Verification Source: Measurement Control Report**	X			See p. 44.
44. Was the person performing the replicate scan a qualified radiography operator different from the individual who performed the original scan? **Reference Source: WAP B1-3b(2)** **Verification Source: Data Sheets and/or Training Records**	X			
45. Was the independent observer a qualified radiography operator different from the individual who performed the initial observation? **Reference Source: WAP B1-3b(2)** **Verification Source: Data Sheets**	X			

Attachment 3 – CCP SPQAO Nondestructive Examination Project Level Validation Checklist and Summary (continued)

BATCH DATA REPORT NUMBER: INRTR2050087 **EXAMINATION DATE:** 8/15/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
46. A videotape or equivalent media with a unique identifier was submitted for each waste container in the batch? **Reference Source: WAP B3-4 Verification Source: Data Sheets**	X			
47. Training qualifications for all radiography personnel are acceptable? **Reference Source: WAP Table B3-10 Verification Source: Training Records**	X			
48. Is Attachment 6 included?	X			

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

Re-reviewed due to revision of NCR-INL-0336-05 MHLeWhite 3/6/06

Laura K. Hubbard
Site Project QA Officer

Laura K. Hubbard
Signature

8/30/05
Date

Attachment 6 – CCP Checklist Addendum

Note: The use of this form may involve multiple pages. See the line below for the total number of pages associated with this BDR.

Page: 1 of 1

Batch Data Report (BDR) Number: INRTR2050087

	Headspace Gas (HSG)		Visual Examination (VE)
	Nondestructive Assay (NDA)	X	Radiography (RTR)
	Homogeneous Waste		Radiological Characterization

Comments	Comment Resolution
p. 7 FQAO Checklist indicates that all NCRs are closed, but NCR-INL-0335-05 and NCR-INL-0336-05 are still open.	Answer to NCR question was corrected.

Additional information provided at time of review?	X	YES		NO

All comments addressed:

Name: Laura K. Hubbard

Signature: Laura K. Hubbard

Date: 8/30/05

Attachment 1 – CCP Radiography Batch Data Report Cover Sheet

Facility/Site: INL

Batch Number: INRTR2050087

Batch Data Report Date: 8/15/05

Operating Procedure Number/Revision: CCP-TP-102, Rev.7

Waste Container Type: 55 Gallon Drum

Waste Container Identification Numbers:

10018875	N/A
10017572	N/A
10018503	N/A
10017407	N/A
10018029	N/A
10018183	N/A
10018867	N/A
10017576	N/A
10017723	N/A
10018571	N/A
N/A	N/A

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CCP Radiography Measurement Control Reports 45
Copies of NCR(s), if applicable .....

ORIGINAL 000001

Attachment 2 – CCP Radiography Batch Narrative

Batch Number: INRTR2050087

Quality Control Summary:

Replicate for this day's operation was conducted and documented in BDR #: INRTR2050088

Independent Observation for this day's operation was conducted and documented in BDR #: INRTR2050088

All Quality Checks were preformed and recorded on Attachment 7 of CCP-TP-102, Rev. 7 "CCP Radiography Measurement Control Report".

RTR Technical Supervisor Approval

RTR TS Printed Name: Nancy Karas

Signature: Nancy Karas Date: 8-15-05

FQAO Comments:

There are two NCR's associated with this BDR. NCR-INL-0335-05 on drum 10018875, NCR-INL-0336-05 on drums 10018503 and 10018029.

Facility Quality Assurance Officer Approval

FQAO Printed Name: Nancy Karas

Signature: Nancy Karas Date: 8-15-05

Attachment 3 – CCP Radiography Independent Technical Reviewer Checklist

Site ID: INL	**NDE Batch Number:** INRTR2050087
Procedure and Rev. No.: CCP-TP-102, Rev.7	**NDE Batch Date:** 8/15/05
Description of Criteria Reviewed	**Criteria Met (Y/N)**
DATA TRANSCRIPTION	
1. Are gross drum weights recorded on the Attachment 6(s), CCP Radiography Data Sheet(s)?	☑ Yes ☐ No
2. Do container numbers on the Attachment 1, CCP Radiography Batch Data Report Cover Sheet correspond with those on the Attachment 6(s)?	☑ Yes ☐ No
3. Did the batch contain not more than 20 containers?	☑ Yes ☐ No
CALCULATIONS	
4. Were the waste material parameter weights in the correct units (Kg) and out to two significant figures?	☑ Yes ☐ No
5. Were the calculations verified by a valid calculation program with a spot check of the verified calculation program and/or was a 100% check of all hand calculations conducted? a. Gross Weight – Packaging List b. Estimated Weights c. Independent Observation and Replicate Scan comparison	☑ Yes ☐ No
6. Do the estimated weights plus packaging material recorded on the Attachment 6(s) total the gross drum weight?	☑ Yes ☐ No
DATA GENERATION AND REDUCTION	
7. Were the operating procedure(s) used verified to be the current version?	☑ Yes ☐ No
8. Data generation was conducted in a technically correct manner in accordance with approved NDE Standard Operating Procedures (SOP).	☑ Yes ☐ No
9. Was the Lines-Pair check satisfactory?	☑ Yes ☐ No
10. Was the audio/video check satisfactory?	☑ Yes ☐ No
11. Do the twelve waste material parameters identified during NDE match those listed for the container contents?	☑ Yes ☐ No
12. Does the physical form match the waste stream description and waste matrix code?	☑ Yes ☐ No
13. Are the layers of confinement recorded?	☑ Yes ☐ No
14. Were prohibited items documented correctly?	☑ Yes ☐ No
15. The data have been reviewed for transcription errors.	☑ Yes ☐ No
16. Have instrument calibration checks been performed at the beginning of each work shift or the beginning of each shift if continuous operation for the period of this batch (i.e., Lines-Pair Resolution Tests, audio/videotape or equivalent media)?	☑ Yes ☐ No
17. Independent Observation on a waste container was performed at a minimum of once per batch or once per day of operation, whichever is less frequent. List batch number of the Independent Observation, if other than this BDR.	☑ Yes ☐ No BDR # INRTR2050088
18. A QC Replicate Scan has been performed on one waste container per day or one waste container per batch, whichever is less frequent. List batch number of the Replicate Scan, if other than this BDR.	☑ Yes ☐ No BDR # INRTR2050088

Attachment 3 – CCP Radiography Independent Technical Reviewer Checklist
(Continued)

Site ID: INL	**NDE Batch Number: INRTR2050087**
Procedure and Rev. No.: CCP-TP-102, Rev.7	**NDE Batch Date:** 8/15/05
Description of Criteria Reviewed	**Criteria Met (Y/N)**
19. Is the Batch Data Report complete as appropriate, to this point? •CCP Radiography Batch Data Report Cover Sheet •CCP Radiography Batch Narrative •CCP Radiography Independent Technical Reviewer Checklist •CCP Radiography Technical Supervisor Checklist •CCP Radiography Facility Quality Assurance Officer Checklist •CCP Radiography Data Sheet(s) •CCP Radiography Measurement Control Report •Associated NCRs	☑ Yes ☐ No
NDE Independent Technical Reviewer Approval	
NDE ITR Printed Name: Greg Smith Signature: Greg Smith Date: 8-18-05	

Greg Smith 3-7-06

I HAVE REVIEWED ALL CHANGES TO THIS BDR AND I AGREE WITH ALL CHANGES TO THIS BDR.

SM 3-7-06

Attachment 4 – CCP Radiography Technical Supervisor Checklist

Batch Number: INRTR2050087			
No.	**Criteria**	**Criteria Met? Y/N/NA**	**Comments**
I.	**Data Generation and Reduction**		
a.	Were the operating procedure(s) used verified to be the current version? Enter procedure and revision number(s).	Yes	CCP-TP-102, Revision 7
b.	Is the data reasonable based on the technique used?	Yes	
c.	Is the Batch Data Report complete? ☑ CCP Radiography Batch Data Report Cover Sheet ☑ CCP Radiography Batch Narrative ☑ CCP Radiography Independent Technical Reviewer Checklist ☑ CCP Radiography Technical Supervisor Checklist ☑ CCP Radiography Facility Quality Assurance Officer Checklist ☑ CCP Radiography Data Sheet(s) ☑ CCP Radiography Measurement Control Report ☑ Associated NCRs	Yes	
d.	Is the recording media available and complete?	Yes	
e.	Has the Independent Technical Review been performed and signed?	Yes	
II.	**Quality Assurance Documentation**		
a.	Are NCRs and CARs included as appropriate for this Batch Data Report?	Yes	
b.	Independent Observation performed on one container per day or once per batch, whichever is less frequent.	Yes	
c.	Replicate Scan performed on one container per day or once per batch, whichever is less frequent.	Yes	
d.	Did the RTR Operator verify the waste stream for each drum?	Yes	
e.	Did the RTR Operator provide detailed descriptions?	Yes	
Technical Supervisor Approval			
NDE TS Printed Name: Nancy Karas Signature: Nancy Karas Date: 8-18-05			

Jerry Bowden 3-7-06
I HAVE RIEVIEWED AND AGREE WITH ALL CHANGES MADE TO THIS BDR,
JB 3-7-06

Attachment 5 – CCP Radiography Facility Quality Assurance Officer Checklist

Batch Number: INRTR2050087			
No.	**Criteria**	**Criteria Met? Y/N/NA**	**Comments**
I.	**Quality Assurance Documentation**		
a.	Are Independent Technical Reviewer checklist and Technical Supervisor checklists completed and signed?	Yes	
b.	Is the Batch Data Report complete? ☑ CCP Radiography Batch Data Report Cover Sheet ☑ CCP Radiography Batch Data Report Cover Sheet ☑ CCP Radiography Batch Narrative ☑ CCP Radiography Independent Technical Reviewer Checklist ☑ CCP Radiography Technical Supervisor Checklist ☑ CCP Radiography Facility Quality Assurance Officer Checklist ☑ CCP Radiography Data Sheet(s) ☑ CCP Radiography Measurement Control Report	Yes	
c.	Is the recording media available and complete?	Yes	
d.	Have the QAOs been met? ☑ Completeness-data was collected for all drums in the batch. ☑ Comparability-data was collected using the operating procedure(s) verified to be the current version. ☑ Image quality check was satisfactory. ☑ Personnel were properly trained. ☑ The batch contained not more than 20 Containers.	Yes	

Attachment 5 – CCP Radiography Facility Quality Assurance Officer Checklist (Continued)

Batch Number: INRTR2050087			
No.	**Criteria**	**Criteria Met? Y/N/NA**	**Comments**
II.	**Quality Control Checks**		
a.	Were the quality control checks performed and satisfactory? ☑ Replicate Scan was satisfactory ☑ Independent Observation was satisfactory ☑ Is the audio/video check satisfactory?	Yes	
b.	Are NCRs and CARs included as appropriate for this Batch Data Report? Initiate a NCR if final data does not meet acceptance criteria.	Yes	
c.	Were NCRs and/or CARs closed prior to completion of this review?	~~NO~~ Yes NK 8-29-05	NK 8-29-05 NCR-INL-~~0335~~ 0336-05 and NCR-INL-~~033~~ 0337-05 are open NK 8-29-05

Facility Quality Assurance Officer Approval

FQAO Printed Name: Nancy Karas

Signature: Nancy Karas Date: 8-18-05

Jerry Bond 3-7-06

I HAVE REVIEWED AND AGREE WITH ALL CHANGES MADE TO THIS EDR.

JBB - 3-7-06

Attachment 6 – CCP Radiography Data Sheet

☐ Replicate Scan ☐ Independent Observation

Site ID: INL

Container Number: **10018875**	NDE Batch Number: **INRTR2050087**
	Examination Date: 08/15/05
TRUCON Code: ID 112/212	Waste Matrix Code: S3150
	Waste Stream ID: ID-RF-S3150-A
Gross Weight (Kg): 238.0	
Tare Weight (Total Packaging Weight) (Kg): 34.7	
Net Weight (Kg): **203.3**	
Waste Container Liner? ☑ Yes ☐ No	Rigid Liner Type: 90 Mil Rigid Liner
Is there an indication of Rigid Liner being vented? ☑ Yes ☐ No	

NDE TASK	Yes or No	Comments (for residual liquids, give volume and location)
Are residual liquids present?	Yes ☑ No ☐	See container inventory.
Residual liquid > 1.0 inch in any internal container(s)	Yes ☑ No ☐	See additional comments.
Total volume of residual liquids > 1% volume of payload container volume	Yes ☐ No ☑	
Indication of sealed containers > 4 liters	Yes ☐ No ☑	
Pressurized containers or compressed gases	Yes ☐ No ☑	
Indication of non-radionuclide pyrophoric materials	Yes ☐ No ☑	
Indication of polychlorinated biphenyls (PCBs) not authorized under EPA PCB Waste Disposal Authorization (for example, liquid PCBs).	Yes ☐ No ☑	
Indication of explosives	Yes ☐ No ☑	
Indication of sharp or heavy objects not adequately blocked, braced, or packaged	Yes ☐ No ☑	
Indication of non-TRU hazardous waste	Yes ☐ No ☑	
Indication of waste incompatibile with backfill, seal and panel closures, material container and packaging materials, shipping container materials, or other wastes (i.e., DOES **NOT** match the TRUPACT-II Content (TRUCON) Code).	Yes ☐ No ☑	
Suspect ignitable, reactive, or corrosive material present	Yes ☐ No ☑	
Layers of Confinement (estimated number of packaging layers): 3 Layers		
Total Volume Percentage of Waste in Container (percent full): 80 Percent		

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10018875

Container Inventory: Provide detailed inventory
Plastic bags. Sludge. Absorbent. Greater than 1 " of liquid in bag at bottom of drum.

Packaging Materials	
Description	**Estimated Weight (Kg)**
Steel	27.2
Plastics	7.5
Tare Weight (Total Packaging Weight)	**34.7**

Waste Material Parameters	
Description	**Estimated Weight (Kg)**
Cellulosics	
Plastics	1.5
Rubber	
Organic Matrix	199.8
Inorganic Matrix	
Iron-based Metals/Alloys	
Aluminum-based Metals/Alloys	
Other Metals	
Soils/Gravel	
Other Inorganic Materials	2.0
Totals:	**203.3**

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10018875

Waste Form
Does physical form match the waste stream description? ☑ Yes ☐ No
Does physical form match the waste matrix code? ☑ Yes ☐ No

NDE Record Information Section
Recording Media/File ID Number: INRTR2050087 A
Start 00042 Stop 01040
Additional Comments: (Reference to associated NCR, etc.)
Comments: NCR-INL-0335-05: Greater than 1 " of liquid in bag at bottom of drum, 3 layers of confinement were identified, Per CCP-AK-INL-005 states a maximum of 2 layers of confinement is allowed.

NDE Operator Approval
NDE Operator's Printed Name: Kenneth Simpson
Signature: [signature] Date: 08/15/05

Attachment 6 – CCP Radiography Data Sheet

☐ Replicate Scan ☐ Independent Observation

Site ID: INL

Container Number: **10017572**	NDE Batch Number: **INRTR2050087**
	Examination Date: 08/15/05
TRUCON Code: ID 112/212	Waste Matrix Code: S3150
	Waste Stream ID: ID-RF-S3150-A
Gross Weight (Kg): 242.0	
Tare Weight (Total Packaging Weight) (Kg): 34.7	
Net Weight (Kg): **207.3**	
Waste Container Liner? ☑ Yes ☐ No	Rigid Liner Type: 90 Mil Rigid Liner
Is there an indication of Rigid Liner being vented? ☑ Yes ☐ No	

NDE TASK	Yes or No	Comments (for residual liquids, give volume and location)
Are residual liquids present?	Yes ☐ No ☑	
Residual liquid > 1.0 inch in any internal container(s)	Yes ☐ No ☑	
Total volume of residual liquids > 1% volume of payload container volume	Yes ☐ No ☑	
Indication of sealed containers > 4 liters	Yes ☐ No ☑	
Pressurized containers or compressed gases	Yes ☐ No ☑	
Indication of non-radionuclide pyrophoric materials	Yes ☐ No ☑	
Indication of polychlorinated biphenyls (PCBs) not authorized under EPA PCB Waste Disposal Authorization (for example, liquid PCBs).	Yes ☐ No ☑	
Indication of explosives	Yes ☐ No ☑	
Indication of sharp or heavy objects not adequately blocked, braced, or packaged	Yes ☐ No ☑	
Indication of non-TRU hazardous waste	Yes ☐ No ☑	
Indication of waste incompatibile with backfill, seal and panel closures, material container and packaging materials, shipping container materials, or other wastes (i.e., DOES **NOT** match the TRUPACT-II Content (TRUCON) Code).	Yes ☐ No ☑	
Suspect ignitable, reactive, or corrosive material present	Yes ☐ No ☑	
Layers of Confinement (estimated number of packaging layers): 2 Layers		
Total Volume Percentage of Waste in Container (percent full): 90 Percent		

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10017572

Container Inventory: Provide detailed inventory
Plastic bags. Sludge. Absorbent.

Packaging Materials	
Description	**Estimated Weight (Kg)**
Steel	27.2
Plastics	7.5
Tare Weight (Total Packaging Weight)	**34.7**

Waste Material Parameters	
Description	**Estimated Weight (Kg)**
Cellulosics	
Plastics	1.0
Rubber	
Organic Matrix	204.8
Inorganic Matrix	
Iron-based Metals/Alloys	
Aluminum-based Metals/Alloys	
Other Metals	
Soils/Gravel	
Other Inorganic Materials	1.5
Totals:	**207.3**

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10017572

Waste Form

Does physical form match the waste stream description? ☑ Yes ☐ No

Does physical form match the waste matrix code? ☑ Yes ☐ No

NDE Record Information Section

Recording Media/File ID Number: INRTR2050087 A

Start 01040 Stop 01851

Additional Comments: (Reference to associated NCR, etc.)

Comments:

N/A

NDE Operator Approval

NDE Operator's Printed Name: Kenneth Simpson

Signature: Kenneth D Simpson Date: 08/15/05

Attachment 6 – CCP Radiography Data Sheet

☐ Replicate Scan ☐ Independent Observation

Site ID: INL

Container Number: **10018503**	NDE Batch Number: **INRTR2050087**
	Examination Date: 08/15/05
TRUCON Code: ID 112/212	Waste Matrix Code: S3150
	Waste Stream ID: ID-RF-S3150-A
Gross Weight (Kg): 253.0	
Tare Weight (Total Packaging Weight) (Kg): 34.7	
Net Weight (Kg): **218.3**	
Waste Container Liner? ☑ Yes ☐ No	Rigid Liner Type: 90 Mil Rigid Liner
Is there an indication of Rigid Liner being vented? ☑ Yes ☐ No	

NDE TASK	Yes or No	Comments (for residual liquids, give volume and location)
Are residual liquids present?	Yes ☐ No ☑	
Residual liquid > 1.0 inch in any internal container(s)	Yes ☐ No ☑	
Total volume of residual liquids > 1% volume of payload container volume	Yes ☐ No ☑	
Indication of sealed containers > 4 liters	Yes ☐ No ☑	
Pressurized containers or compressed gases	Yes ☐ No ☑	
Indication of non-radionuclide pyrophoric materials	Yes ☐ No ☑	
Indication of polychlorinated biphenyls (PCBs) not authorized under EPA PCB Waste Disposal Authorization (for example, liquid PCBs).	Yes ☐ No ☑	
Indication of explosives	Yes ☐ No ☑	
Indication of sharp or heavy objects not adequately blocked, braced, or packaged	Yes ☐ No ☑	
Indication of non-TRU hazardous waste	Yes ☐ No ☑	
Indication of waste incompatibile with backfill, seal and panel closures, material container and packaging materials, shipping container materials, or other wastes (i.e., DOES **NOT** match the TRUPACT-II Content (TRUCON) Code).	Yes ☐ No ☑	
Suspect ignitable, reactive, or corrosive material present	Yes ☐ No ☑	841
Layers of Confinement (estimated number of packaging layers): ~~3~~ 2 Layers 3-7-06		
Total Volume Percentage of Waste in Container (percent full): 85 Percent		

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10018503

Container Inventory: Provide detailed inventory
Plastic bags. Sludge. Absorbent.

Packaging Materials	
Description	**Estimated Weight (Kg)**
Steel	27.2
Plastics	7.5
Tare Weight (Total Packaging Weight)	**34.7**

Waste Material Parameters	
Description	**Estimated Weight (Kg)**
Cellulosics	
Plastics	1.5
Rubber	
Organic Matrix	216.3
Inorganic Matrix	
Iron-based Metals/Alloys	
Aluminum-based Metals/Alloys	
Other Metals	
Soils/Gravel	
Other Inorganic Materials	0.5
Totals:	**218.3**

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10018503

Waste Form

Does physical form match the waste stream description? ☑ Yes ☐ No

Does physical form match the waste matrix code? ☑ Yes ☐ No

NDE Record Information Section

Recording Media/File ID Number: INRTR2050087 A

Start 01851 Stop 02545

Additional Comments: (Reference to associated NCR, etc.)

Comments:

SEE REV. 1 ON NCR-INL-0336-05 3-7-06

NCR-INL-0336-05: ~~3 layers of confinement were identified~~, Per CCP-AK-INL-005 states a maximum of 2 layers of confinement is allowed.

NDE Operator Approval

NDE Operator's Printed Name: Kenneth Simpson

Signature: [signature] Date: 08/15/05

Attachment 6 – CCP Radiography Data Sheet

☐ Replicate Scan ☐ Independent Observation

Site ID: INL

Container Number: **10017407**	NDE Batch Number: **INRTR2050087**
	Examination Date: 08/15/05
TRUCON Code: ID 112/212	Waste Matrix Code: S3150
	Waste Stream ID: ID-RF-S3150-A
Gross Weight (Kg): 253.5	
Tare Weight (Total Packaging Weight) (Kg): 34.7	
Net Weight (Kg): **218.8**	
Waste Container Liner? ☑ Yes ☐ No	Rigid Liner Type: 90 Mil Rigid Liner
Is there an indication of Rigid Liner being vented? ☑ Yes ☐ No	

NDE TASK	Yes or No	Comments (for residual liquids, give volume and location)
Are residual liquids present?	Yes ☐ No ☑	
Residual liquid > 1.0 inch in any internal container(s)	Yes ☐ No ☑	
Total volume of residual liquids > 1% volume of payload container volume	Yes ☐ No ☑	
Indication of sealed containers > 4 liters	Yes ☐ No ☑	
Pressurized containers or compressed gases	Yes ☐ No ☑	
Indication of non-radionuclide pyrophoric materials	Yes ☐ No ☑	
Indication of polychlorinated biphenyls (PCBs) not authorized under EPA PCB Waste Disposal Authorization (for example, liquid PCBs).	Yes ☐ No ☑	
Indication of explosives	Yes ☐ No ☑	
Indication of sharp or heavy objects not adequately blocked, braced, or packaged	Yes ☐ No ☑	
Indication of non-TRU hazardous waste	Yes ☐ No ☑	
Indication of waste incompatibile with backfill, seal and panel closures, material container and packaging materials, shipping container materials, or other wastes (i.e., DOES **NOT** match the TRUPACT-II Content (TRUCON) Code).	Yes ☐ No ☑	
Suspect ignitable, reactive, or corrosive material present	Yes ☐ No ☑	
Layers of Confinement (estimated number of packaging layers): 2 Layers		
Total Volume Percentage of Waste in Container (percent full): 85 Percent		

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10017407

Container Inventory: Provide detailed inventory
Plastic bags. Sludge. Absorbent.

Packaging Materials	
Description	**Estimated Weight (Kg)**
Steel	27.2
Plastics	7.5
Tare Weight (Total Packaging Weight)	**34.7**

Waste Material Parameters	
Description	**Estimated Weight (Kg)**
Cellulosics	
Plastics	1.0
Rubber	
Organic Matrix	215.3
Inorganic Matrix	
Iron-based Metals/Alloys	
Aluminum-based Metals/Alloys	
Other Metals	
Soils/Gravel	
Other Inorganic Materials	2.5
Totals:	**218.8**

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10017407

Waste Form

Does physical form match the waste stream description? ☑ Yes ☐ No

Does physical form match the waste matrix code? ☑ Yes ☐ No

NDE Record Information Section

Recording Media/File ID Number: INRTR2050087 A

Start 02545 Stop 03353

Additional Comments: (Reference to associated NCR, etc.)

Comments:

N/A

NDE Operator Approval

NDE Operator's Printed Name: Kenneth Simpson

Signature: Date: 08/15/05

Attachment 6 – CCP Radiography Data Sheet

☐ Replicate Scan ☐ Independent Observation

Site ID: INL

Container Number: **10018029**	NDE Batch Number: **INRTR2050087**
	Examination Date: 08/15/05
TRUCON Code: ID 112/212	Waste Matrix Code: S3150
	Waste Stream ID: ID-RF-S3150-A
Gross Weight (Kg): 250.0	
Tare Weight (Total Packaging Weight) (Kg): 34.7	
Net Weight (Kg): **215.3**	
Waste Container Liner? ☑ Yes ☐ No	Rigid Liner Type: 90 Mil Rigid Liner
Is there an indication of Rigid Liner being vented? ☑ Yes ☐ No	

NDE TASK	Yes or No	Comments (for residual liquids, give volume and location)
Are residual liquids present?	Yes ☐ No ☑	
Residual liquid > 1.0 inch in any internal container(s)	Yes ☐ No ☑	
Total volume of residual liquids > 1% volume of payload container volume	Yes ☐ No ☑	
Indication of sealed containers > 4 liters	Yes ☐ No ☑	
Pressurized containers or compressed gases	Yes ☐ No ☑	
Indication of non-radionuclide pyrophoric materials	Yes ☐ No ☑	
Indication of polychlorinated biphenyls (PCBs) not authorized under EPA PCB Waste Disposal Authorization (for example, liquid PCBs).	Yes ☐ No ☑	
Indication of explosives	Yes ☐ No ☑	
Indication of sharp or heavy objects not adequately blocked, braced, or packaged	Yes ☐ No ☑	
Indication of non-TRU hazardous waste	Yes ☐ No ☑	
Indication of waste incompatibile with backfill, seal and panel closures, material container and packaging materials, shipping container materials, or other wastes (i.e., DOES **NOT** match the TRUPACT-II Content (TRUCON) Code).	Yes ☐ No ☑	
Suspect ignitable, reactive, or corrosive material present	Yes ☐ No ☑	
Layers of Confinement (estimated number of packaging layers): ~~3~~ 2 Layers		3-7-06
Total Volume Percentage of Waste in Container (percent full): 85 Percent		

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10018029

Container Inventory: Provide detailed inventory
Plastic bags. Sludge. Absorbent.

Packaging Materials	
Description	**Estimated Weight (Kg)**
Steel	27.2
Plastics	7.5
Tare Weight (Total Packaging Weight)	**34.7**

Waste Material Parameters	
Description	**Estimated Weight (Kg)**
Cellulosics	
Plastics	1.5
Rubber	
Organic Matrix	213.3
Inorganic Matrix	
Iron-based Metals/Alloys	
Aluminum-based Metals/Alloys	
Other Metals	
Soils/Gravel	
Other Inorganic Materials	0.5
Totals:	**215.3**

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10018029

Waste Form

Does physical form match the waste stream description? ☑ Yes ☐ No

Does physical form match the waste matrix code? ☑ Yes ☐ No

NDE Record Information Section

Recording Media/File ID Number: INRTR2050087 A

Start 03353 Stop 04121

Additional Comments: (Reference to associated NCR, etc.)

Comments:

SEE REV. 1 OF NCR-INL-0336-05 3-7-06

NCR-INL-0336-05: ~~3 layers of confinement were identified;~~ Per CCP-AK-INL-005 states a maximum of 2 layers of confinement is allowed.

NDE Operator Approval

NDE Operator's Printed Name: Kenneth Simpson

Signature: Kenneth D Simpson Date: 08/15/05

Attachment 6 – CCP Radiography Data Sheet

☐ Replicate Scan ☐ Independent Observation

Site ID: INL

Container Number: **10018183**	NDE Batch Number: **INRTR2050087**
	Examination Date: 08/15/05
TRUCON Code: ID 112/212	Waste Matrix Code: S3150
	Waste Stream ID: ID-RF-S3150-A
Gross Weight (Kg): 228.5	
Tare Weight (Total Packaging Weight) (Kg): 34.7	
Net Weight (Kg): **193.8**	
Waste Container Liner? ☑ Yes ☐ No	Rigid Liner Type: 90 Mil Rigid Liner
Is there an indication of Rigid Liner being vented? ☑ Yes ☐ No	

NDE TASK	Yes or No	Comments (for residual liquids, give volume and location)
Are residual liquids present?	Yes ☐ No ☑	
Residual liquid > 1.0 inch in any internal container(s)	Yes ☐ No ☑	
Total volume of residual liquids > 1% volume of payload container volume	Yes ☐ No ☑	
Indication of sealed containers > 4 liters	Yes ☐ No ☑	
Pressurized containers or compressed gases	Yes ☐ No ☑	
Indication of non-radionuclide pyrophoric materials	Yes ☐ No ☑	
Indication of polychlorinated biphenyls (PCBs) not authorized under EPA PCB Waste Disposal Authorization (for example, liquid PCBs).	Yes ☐ No ☑	
Indication of explosives	Yes ☐ No ☑	
Indication of sharp or heavy objects not adequately blocked, braced, or packaged	Yes ☐ No ☑	
Indication of non-TRU hazardous waste	Yes ☐ No ☑	
Indication of waste incompatibile with backfill, seal and panel closures, material container and packaging materials, shipping container materials, or other wastes (i.e., DOES **NOT** match the TRUPACT-II Content (TRUCON) Code).	Yes ☐ No ☑	
Suspect ignitable, reactive, or corrosive material present	Yes ☐ No ☑	
Layers of Confinement (estimated number of packaging layers): 2 Layers		
Total Volume Percentage of Waste in Container (percent full): 80 Percent		

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10018183

Container Inventory: Provide detailed inventory
Plastic bags. Sludge. Absorbent.

Packaging Materials	
Description	**Estimated Weight (Kg)**
Steel	27.2
Plastics	7.5
Tare Weight (Total Packaging Weight)	**34.7**

Waste Material Parameters	
Description	**Estimated Weight (Kg)**
Cellulosics	
Plastics	1.0
Rubber	
Organic Matrix	191.8
Inorganic Matrix	
Iron-based Metals/Alloys	
Aluminum-based Metals/Alloys	
Other Metals	
Soils/Gravel	
Other Inorganic Materials	1.0
Totals:	**193.8**

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10018183

Waste Form
Does physical form match the waste stream description? ☑ Yes ☐ No
Does physical form match the waste matrix code? ☑ Yes ☐ No

NDE Record Information Section
Recording Media/File ID Number: INRTR2050087 A
Start 04121 Stop 04853
Additional Comments: (Reference to associated NCR, etc.)
Comments: N/A

NDE Operator Approval
NDE Operator's Printed Name: Kenneth Simpson
Signature: [signature] Date: 08/15/05

Attachment 6 – CCP Radiography Data Sheet

☐ Replicate Scan ☐ Independent Observation

Site ID: INL

Container Number: **10018867**	NDE Batch Number: **INRTR2050087**
	Examination Date: 08/15/05
TRUCON Code: ID 112/212	Waste Matrix Code: S3150
	Waste Stream ID: ID-RF-S3150-A
Gross Weight (Kg): 196.0	
Tare Weight (Total Packaging Weight) (Kg): 34.7	
Net Weight (Kg): **161.3**	
Waste Container Liner? ☑ Yes ☐ No	Rigid Liner Type: 90 Mil Rigid Liner
Is there an indication of Rigid Liner being vented? ☑ Yes ☐ No	

NDE TASK	Yes or No	Comments (for residual liquids, give volume and location)
Are residual liquids present?	Yes ☐ No ☑	
Residual liquid > 1.0 inch in any internal container(s)	Yes ☐ No ☑	
Total volume of residual liquids > 1% volume of payload container volume	Yes ☐ No ☑	
Indication of sealed containers > 4 liters	Yes ☐ No ☑	
Pressurized containers or compressed gases	Yes ☐ No ☑	
Indication of non-radionuclide pyrophoric materials	Yes ☐ No ☑	
Indication of polychlorinated biphenyls (PCBs) not authorized under EPA PCB Waste Disposal Authorization (for example, liquid PCBs).	Yes ☐ No ☑	
Indication of explosives	Yes ☐ No ☑	
Indication of sharp or heavy objects not adequately blocked, braced, or packaged	Yes ☐ No ☑	
Indication of non-TRU hazardous waste	Yes ☐ No ☑	
Indication of waste incompatibile with backfill, seal and panel closures, material container and packaging materials, shipping container materials, or other wastes (i.e., DOES **NOT** match the TRUPACT-II Content (TRUCON) Code).	Yes ☐ No ☑	
Suspect ignitable, reactive, or corrosive material present	Yes ☐ No ☑	
Layers of Confinement (estimated number of packaging layers): 2 Layers		
Total Volume Percentage of Waste in Container (percent full): 100 Percent		

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10018867

Container Inventory: Provide detailed inventory
Plastic bags. Sludge. Absorbent.

Packaging Materials	
Description	**Estimated Weight (Kg)**
Steel	27.2
Plastics	7.5
Tare Weight (Total Packaging Weight)	**34.7**

Waste Material Parameters	
Description	**Estimated Weight (Kg)**
Cellulosics	
Plastics	1.0
Rubber	
Organic Matrix	158.3
Inorganic Matrix	
Iron-based Metals/Alloys	
Aluminum-based Metals/Alloys	
Other Metals	
Soils/Gravel	
Other Inorganic Materials	2.0
Totals:	**161.3**

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10018867

Waste Form
Does physical form match the waste stream description? ☑ Yes ☐ No
Does physical form match the waste matrix code? ☑ Yes ☐ No

NDE Record Information Section
Recording Media/File ID Number: INRTR2050087 A
Start 04853 Stop 05625
Additional Comments: (Reference to associated NCR, etc.)
Comments:
N/A

NDE Operator Approval
NDE Operator's Printed Name: Kenneth Simpson
Signature: Kenneth D Simpson Date: 08/15/05

Attachment 6 – CCP Radiography Data Sheet

☐ Replicate Scan ☐ Independent Observation

Site ID: INL

Container Number: **10017576**	NDE Batch Number: **INRTR2050087**
	Examination Date: 08/15/05
TRUCON Code: ID 112/212	Waste Matrix Code: S3150
	Waste Stream ID: ID-RF-S3150-A
Gross Weight (Kg): 259.0	
Tare Weight (Total Packaging Weight) (Kg): 34.7	
Net Weight (Kg): **224.3**	
Waste Container Liner? ☑ Yes ☐ No	Rigid Liner Type: 90 Mil Rigid Liner
Is there an indication of Rigid Liner being vented? ☑ Yes ☐ No	

NDE TASK	Yes or No	Comments (for residual liquids, give volume and location)
Are residual liquids present?	Yes ☐ No ☑	
Residual liquid > 1.0 inch in any internal container(s)	Yes ☐ No ☑	
Total volume of residual liquids > 1% volume of payload container volume	Yes ☐ No ☑	
Indication of sealed containers > 4 liters	Yes ☐ No ☑	
Pressurized containers or compressed gases	Yes ☐ No ☑	
Indication of non-radionuclide pyrophoric materials	Yes ☐ No ☑	
Indication of polychlorinated biphenyls (PCBs) not authorized under EPA PCB Waste Disposal Authorization (for example, liquid PCBs).	Yes ☐ No ☑	
Indication of explosives	Yes ☐ No ☑	
Indication of sharp or heavy objects not adequately blocked, braced, or packaged	Yes ☐ No ☑	
Indication of non-TRU hazardous waste	Yes ☐ No ☑	
Indication of waste incompatibile with backfill, seal and panel closures, material container and packaging materials, shipping container materials, or other wastes (i.e., DOES **NOT** match the TRUPACT-II Content (TRUCON) Code).	Yes ☐ No ☑	
Suspect ignitable, reactive, or corrosive material present	Yes ☐ No ☑	
Layers of Confinement (estimated number of packaging layers): 2 Layers		
Total Volume Percentage of Waste in Container (percent full): 95 Percent		

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10017576

Container Inventory: Provide detailed inventory
Plastic bags. Sludge. Absorbent.

Packaging Materials	
Description	**Estimated Weight (Kg)**
Steel	27.2
Plastics	7.5
Tare Weight (Total Packaging Weight)	**34.7**

Waste Material Parameters	
Description	**Estimated Weight (Kg)**
Cellulosics	
Plastics	1.0
Rubber	
Organic Matrix	221.3
Inorganic Matrix	
Iron-based Metals/Alloys	
Aluminum-based Metals/Alloys	
Other Metals	
Soils/Gravel	
Other Inorganic Materials	2.0
Totals:	**224.3**

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10017576

Waste Form
Does physical form match the waste stream description? ☑ Yes ☐ No
Does physical form match the waste matrix code? ☑ Yes ☐ No

NDE Record Information Section
Recording Media/File ID Number: INRTR2050087 A
Start 05625 Stop 10339
Additional Comments: (Reference to associated NCR, etc.)
Comments: N/A

NDE Operator Approval
NDE Operator's Printed Name: Kenneth Simpson
Signature: Kenneth D Simpson Date: 08/15/05

Attachment 6 – CCP Radiography Data Sheet

☐ Replicate Scan ☐ Independent Observation

Site ID: INL

Container Number: **10017723**	NDE Batch Number: **INRTR2050087**
	Examination Date: 08/15/05
TRUCON Code: ID 112/212	Waste Matrix Code: S3150
	Waste Stream ID: ID-RF-S3150-A
Gross Weight (Kg): 266.0	
Tare Weight (Total Packaging Weight) (Kg): 34.7	
Net Weight (Kg): **231.3**	
Waste Container Liner? ☑ Yes ☐ No	Rigid Liner Type: 90 Mil Rigid Liner
Is there an indication of Rigid Liner being vented? ☑ Yes ☐ No	

NDE TASK	Yes or No	Comments (for residual liquids, give volume and location)
Are residual liquids present?	Yes ☐ No ☑	
Residual liquid > 1.0 inch in any internal container(s)	Yes ☐ No ☑	
Total volume of residual liquids > 1% volume of payload container volume	Yes ☐ No ☑	
Indication of sealed containers > 4 liters	Yes ☐ No ☑	
Pressurized containers or compressed gases	Yes ☐ No ☑	
Indication of non-radionuclide pyrophoric materials	Yes ☐ No ☑	
Indication of polychlorinated biphenyls (PCBs) not authorized under EPA PCB Waste Disposal Authorization (for example, liquid PCBs).	Yes ☐ No ☑	
Indication of explosives	Yes ☐ No ☑	
Indication of sharp or heavy objects not adequately blocked, braced, or packaged	Yes ☐ No ☑	
Indication of non-TRU hazardous waste	Yes ☐ No ☑	
Indication of waste incompatibile with backfill, seal and panel closures, material container and packaging materials, shipping container materials, or other wastes (i.e., DOES **NOT** match the TRUPACT-II Content (TRUCON) Code).	Yes ☐ No ☑	
Suspect ignitable, reactive, or corrosive material present	Yes ☐ No ☑	
Layers of Confinement (estimated number of packaging layers): 1 Layer		
Total Volume Percentage of Waste in Container (percent full): 100 Percent		

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10017723

Container Inventory: Provide detailed inventory
Plastic bag. Sludge. Absorbent.

Packaging Materials	
Description	**Estimated Weight (Kg)**
Steel	27.2
Plastics	7.5
Tare Weight (Total Packaging Weight)	**34.7**

Waste Material Parameters	
Description	**Estimated Weight (Kg)**
Cellulosics	
Plastics	0.5
Rubber	
Organic Matrix	228.3
Inorganic Matrix	
Iron-based Metals/Alloys	
Aluminum-based Metals/Alloys	
Other Metals	
Soils/Gravel	
Other Inorganic Materials	2.5
Totals:	**231.3**

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10017723

Waste Form
Does physical form match the waste stream description? ☑ Yes ☐ No
Does physical form match the waste matrix code? ☑ Yes ☐ No

NDE Record Information Section
Recording Media/File ID Number: INRTR2050087 A
Start 10339 Stop 11139
Additional Comments: (Reference to associated NCR, etc.)
Comments: N/A

NDE Operator Approval
NDE Operator's Printed Name: Kenneth Simpson
Signature: [signature] Date: 08/15/05

Attachment 6 – CCP Radiography Data Sheet

☐ Replicate Scan ☐ Independent Observation

Site ID: INL

Container Number: **10018571**	NDE Batch Number: **INRTR2050087**
	Examination Date: 08/15/05
TRUCON Code: ID 112/212	Waste Matrix Code: S3150
	Waste Stream ID: ID-RF-S3150-A
Gross Weight (Kg): 236.5	
Tare Weight (Total Packaging Weight) (Kg): 34.7	
Net Weight (Kg): **201.8**	
Waste Container Liner? ☑ Yes ☐ No	Rigid Liner Type: 90 Mil Rigid Liner
Is there an indication of Rigid Liner being vented? ☑ Yes ☐ No	

NDE TASK	Yes or No	Comments (for residual liquids, give volume and location)
Are residual liquids present?	Yes ☐ No ☑	
Residual liquid > 1.0 inch in any internal container(s)	Yes ☐ No ☑	
Total volume of residual liquids > 1% volume of payload container volume	Yes ☐ No ☑	
Indication of sealed containers > 4 liters	Yes ☐ No ☑	
Pressurized containers or compressed gases	Yes ☐ No ☑	
Indication of non-radionuclide pyrophoric materials	Yes ☐ No ☑	
Indication of polychlorinated biphenyls (PCBs) not authorized under EPA PCB Waste Disposal Authorization (for example, liquid PCBs).	Yes ☐ No ☑	
Indication of explosives	Yes ☐ No ☑	
Indication of sharp or heavy objects not adequately blocked, braced, or packaged	Yes ☐ No ☑	
Indication of non-TRU hazardous waste	Yes ☐ No ☑	
Indication of waste incompatibile with backfill, seal and panel closures, material container and packaging materials, shipping container materials, or other wastes (i.e., DOES **NOT** match the TRUPACT-II Content (TRUCON) Code).	Yes ☐ No ☑	
Suspect ignitable, reactive, or corrosive material present	Yes ☐ No ☑	
Layers of Confinement (estimated number of packaging layers): 2 Layers		
Total Volume Percentage of Waste in Container (percent full): 80 Percent		

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10018571

Container Inventory: Provide detailed inventory
Plastic bags. Sludge. Absorbent.

Packaging Materials	
Description	**Estimated Weight (Kg)**
Steel	27.2
Plastics	7.5
Tare Weight (Total Packaging Weight)	**34.7**

Waste Material Parameters	
Description	**Estimated Weight (Kg)**
Cellulosics	
Plastics	1.0
Rubber	
Organic Matrix	198.8
Inorganic Matrix	
Iron-based Metals/Alloys	
Aluminum-based Metals/Alloys	
Other Metals	
Soils/Gravel	
Other Inorganic Materials	2.0
Totals:	**201.8**

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☐ Independent Observation

Container Number: 10018571

Waste Form
Does physical form match the waste stream description? ☑ Yes ☐ No
Does physical form match the waste matrix code? ☑ Yes ☐ No

NDE Record Information Section
Recording Media/File ID Number: INRTR2050087 A
Start 11139 Stop 11840
Additional Comments: (Reference to associated NCR, etc.)
Comments:
N/A

NDE Operator Approval
NDE Operator's Printed Name: Kenneth Simpson
Signature: [signature] Date: 08/15/05

Attachment 6 – CCP Radiography Data Sheet

☑ Replicate Scan ☐ Independent Observation

Site ID: INL

Container Number: **10038752**	NDE Batch Number: **INRTR2050088**
	Examination Date: 08/15/05
TRUCON Code: ID 125/225	Waste Matrix Code: S5100
	Waste Stream ID: ID-RF-S5100-A
Gross Weight (Kg): 78.5	
Tare Weight (Total Packaging Weight) (Kg): 34.7	
Net Weight (Kg): **43.8**	
Waste Container Liner? ☑ Yes ☐ No	Rigid Liner Type: 90 Mil Rigid Liner
Is there an indication of Rigid Liner being vented? ☑ Yes ☐ No	

NDE TASK	Yes or No	Comments (for residual liquids, give volume and location)
Are residual liquids present?	Yes ☐ No ☑	
Residual liquid > 1.0 inch in any internal container(s)	Yes ☐ No ☑	
Total volume of residual liquids > 1% volume of payload container volume	Yes ☐ No ☑	
Indication of sealed containers > 4 liters	Yes ☐ No ☑	
Pressurized containers or compressed gases	Yes ☐ No ☑	
Indication of non-radionuclide pyrophoric materials	Yes ☐ No ☑	
Indication of polychlorinated biphenyls (PCBs) not authorized under EPA PCB Waste Disposal Authorization (for example, liquid PCBs).	Yes ☐ No ☑	
Indication of explosives	Yes ☐ No ☑	
Indication of sharp or heavy objects not adequately blocked, braced, or packaged	Yes ☐ No ☑	
Indication of non-TRU hazardous waste	Yes ☐ No ☑	
Indication of waste incompatibile with backfill, seal and panel closures, material container and packaging materials, shipping container materials, or other wastes (i.e., DOES **NOT** match the TRUPACT-II Content (TRUCON) Code).	Yes ☐ No ☑	
Suspect ignitable, reactive, or corrosive material present	Yes ☐ No ☑	
Layers of Confinement (estimated number of packaging layers): 4 Layers		
Total Volume Percentage of Waste in Container (percent full): 85 Percent		

INFORMATION ONLY

Attachment 6 – CCP Radiography Data Sheet (Continued)

☑ Replicate Scan ☐ Independent Observation

Container Number: 10038752

Container Inventory: Provide detailed inventory
Fiber/Cardboard-Paks Plastic bags, liner lid Absorbent, Raschig Rings

Packaging Materials	
Description	**Estimated Weight (Kg)**
Steel	27.2
Plastics	7.5
Tare Weight (Total Packaging Weight)	**34.7**

Waste Material Parameters	
Description	**Estimated Weight (Kg)**
Cellulosics	5.4
Plastics	4.5
Rubber	
Organic Matrix	
Inorganic Matrix	
Iron-based Metals/Alloys	
Aluminum-based Metals/Alloys	
Other Metals	
Soils/Gravel	
Other Inorganic Materials	33.9
Totals:	**43.8**

INFORMATION ONLY

Attachment 6 – CCP Radiography Data Sheet (Continued)

☑ Replicate Scan ☐ Independent Observation

Container Number: 10038752

Waste Form
Does physical form match the waste stream description? ☑ Yes ☐ No
Does physical form match the waste matrix code? ☑ Yes ☐ No

NDE Record Information Section

Recording Media/File ID Number: INRTR2050088 A

Start 12120 Stop 13423

Additional Comments: (Reference to associated NCR, etc.)

Comments:

The results of this Replicate Scan were compared to the original scan. The Waste Material Parameter Weight Estimates agreed within +/-50%.

NDE Operator Approval

NDE Operator's Printed Name: Nancy Karas

Signature: Nancy Karas Date: 08/15/05

INFORMATION ONLY

Attachment 6 – CCP Radiography Data Sheet

☐ Replicate Scan ☑ Independent Observation

Site ID: INL

Container Number: **10039058**	NDE Batch Number: **INRTR2050088**
	Examination Date: 08/15/05
TRUCON Code: ID 125/225	Waste Matrix Code: S5100
	Waste Stream ID: ID-RF-S5100-A
Gross Weight (Kg): 94.0	
Tare Weight (Total Packaging Weight) (Kg): 34.7	
Net Weight (Kg): **59.3**	
Waste Container Liner? ☑ Yes ☐ No	Rigid Liner Type: 90 Mil Rigid Liner
Is there an indication of Rigid Liner being vented? ☑ Yes ☐ No	

NDE TASK	Yes or No	Comments (for residual liquids, give volume and location)
Are residual liquids present?	Yes ☐ No ☑	
Residual liquid > 1.0 inch in any internal container(s)	Yes ☐ No ☑	
Total volume of residual liquids > 1% volume of payload container volume	Yes ☐ No ☑	
Indication of sealed containers > 4 liters	Yes ☐ No ☑	
Pressurized containers or compressed gases	Yes ☐ No ☑	
Indication of non-radionuclide pyrophoric materials	Yes ☐ No ☑	
Indication of polychlorinated biphenyls (PCBs) not authorized under EPA PCB Waste Disposal Authorization (for example, liquid PCBs).	Yes ☐ No ☑	
Indication of explosives	Yes ☐ No ☑	
Indication of sharp or heavy objects not adequately blocked, braced, or packaged	Yes ☐ No ☑	
Indication of non-TRU hazardous waste	Yes ☐ No ☑	
Indication of waste incompatibile with backfill, seal and panel closures, material container and packaging materials, shipping container materials, or other wastes (i.e., DOES **NOT** match the TRUPACT-II Content (TRUCON) Code).	Yes ☐ No ☑	
Suspect ignitable, reactive, or corrosive material present	Yes ☐ No ☑	
Layers of Confinement (estimated number of packaging layers): 5 Layers		
Total Volume Percentage of Waste in Container (percent full): 85 Percent		

INFORMATION ONLY

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☑ Independent Observation

Container Number: 10039058

Container Inventory: Provide detailed inventory
Fiber/Cardboard-Paks Plastic bags Absorbent, Raschig Rings

Packaging Materials	
Description	**Estimated Weight (Kg)**
Steel	27.2
Plastics	7.5
Tare Weight (Total Packaging Weight)	**34.7**

Waste Material Parameters	
Description	**Estimated Weight (Kg)**
Cellulosics	5.4
Plastics	3.5
Rubber	
Organic Matrix	
Inorganic Matrix	
Iron-based Metals/Alloys	
Aluminum-based Metals/Alloys	
Other Metals	
Soils/Gravel	
Other Inorganic Materials	50.4
Totals:	**59.3**

INFORMATION ONLY

Attachment 6 – CCP Radiography Data Sheet (Continued)

☐ Replicate Scan ☑ Independent Observation

Container Number: 10039058

Waste Form
Does physical form match the waste stream description? ☑ Yes ☐ No
Does physical form match the waste matrix code? ☑ Yes ☐ No

NDE Record Information Section
Recording Media/File ID Number: INRTR2050088 A
Start 00844 Stop 01800
Additional Comments: (Reference to associated NCR, etc.)
Comments:
The results of this Independent Observation were compared to the original scan. The Waste Material Parameter Weight Estimates agreed within +/-50%.

NDE Operator Approval
NDE Operator's Printed Name: Nancy Karas
Signature: Nancy Karas Date: 08/15/05

INFORMATION ONLY

Attachment 7 – CCP Radiography Measurement Control Report

Site Location: INL

Examination Date: 8/15/05

NDE Batch Number: INRTR2050087

System Maintenance and Safety Checks:

Audible and Visual Warning Signals Operating	☑ Yes	☐ No
Door Interlocks Operating	☑ Yes	☐ No
Minimum 20 Second Delay Function	☑ Yes	☐ No
Emergency Shutdown Switches	☑ Yes	☐ No

Control Checks:

Lines-Pair Resolution Test (lines-pair/cm) LP/cm 10 ☑ Pass ☐ Fail
(Minimum Acceptable 5 lines-pair/cm)

Audio/Video Check Satisfactory? ☑ Pass ☐ Fail

RTR Operator Approval

Operator's Printed Name: Kenneth Simpson

Signature: Kenneth D Simpson Date: 8/15/05

CCP Nonconformance Report (NCR)

NCR No. NCR – INL - 0335 – 05 Revision 0

1. Lot No./Heat No. or Serial No.: N/A	**2. Process (NDA, HSG, NDE, VE, Other):** NDE	**3. Batch Data Report # (s):** INRTR2050087
4. Order/Work Order/Job Control Number (as applicable): N/A	**5. PO #:** N/A	**DRUM #(s):** 10018875
6. E-QA NCR #: N/A	**Supplier:** N/A	

DESCRIPTION OF NONCONFORMANCE

7. (a) **Hold Tag Applied?** ☑ YES ☐ NO (If NO, explain) Segregation Method (s): ☐ NA

☐ < 100 n Ci/g ☐ Exceeds Site Limit ☑ Prohibited Item ☐ >500 ppmv Flamm. Vocs

☐ E-Flag ☐ TRAMPAC Criteria ☐ M&TE ☐ Receiving Inspection ☐ Other

(b) **Description of Nonconformance**
Required Condition (Implementing Procedure, Section & Revision)

1. "Internal containers (e.g., bottles, cans, etc.) shall be well drained and contain only residual liquids and in all cases it must be less than 1 inch or 2.5 centimeters of liquid in the bottom of the container,..." CCP-TP-102, Rev.6, Section 4.6.4 Note.
2. Per CCP-AK-INL-005 Rev 0. States that the maximum layers of confinement is 2.

(c). **Actual Condition**

1. 3 layers of confinement were identified.

2. Greater than 1" of liquid in bag at bottom of drum.

8. Originator (Print name, sign and date) Kenneth Simpson 8/15/05	9. SPQAO/FQAO Validation (Print name, sign and date) Nancy Karas 8-15-05
10. Significant Condition? ☐ YES ☐ NO ☑ NA	11. Recurring Condition? ☐ YES ☑ NO (If YES, List NCRs)
12. Trend Code: K	13. Responsible Manager: Bob Billett

CCP Nonconformance Report (NCR)

NCR No. NCR - INL - 0335 - 05 Revision 0

INTERIM DISPOSITION

14. Interim Disposition (Check One)

☑ N/A (See final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort
☐ Reinspect/Retest ☐ Remediate

(a) Instructions for Completion of the Interim Disposition:

INTERIM DISPOSITION APPROVALS

15 .Responsible Manager/Individual(Print, sign and date.)	16. SPQAO/FQAO (Print, sign and date.)
Additional Approvals: (Print, sign and date.)	Additional Approvals: (Print, sign and date.)

COMPLETION OF INTERIM DISPOSITION

17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date.)

18. Interim Disposition Verified **SPQAO/FQAO:** (Print, sign and date.)

CCP Nonconformance Report (NCR)

NCR No. NCR -INL- 0335 - 05 Revision 0	
FINAL DISPOSITION	
19. Final Disposition (Check One) ☐ Use-As Is ☐ Reject ☐ Repair ☒ Rework ☐ Scrap	
(A) Technical Justification (**Required for "Use-As-is" and "Repair"** dispositions, N/A for "Reject" or "Rework" dispositions.) N/A	
(B) Disposition (**Required for "Reject" and "Scrap"**) N/A	
(C) Instructions for Completion of the Final Disposition, including Inspection Criteria **(Required for "Repair" and "Rework")** 1. Continue this waste container to NDA in accordance with CCP-TP-068. 2. Once the assay is complete, stage this waste container for shipment to MFC for coring and remediation of the identified condition. 3. Upon completion of coring and remediation at MFC and its return to AMWTP, this waste container will be re-characterized in accordance with CCP-TP-068. Steps 1 and 2 will be completed by 08/22/2005.	
(D) Corrective Actions **(Actions to Prevent Recurrence)** - as required. N/A	
FINAL DISPOSITION APPROVALS	
20. Responsible Manager/Individual (Print, sign and date.) Bob Billett 08/17/05	21. SPQAO/FQAO (Print, sign and date.) Kenneth Simpson 8/18/05
Additional Approvals: (Print, sign and date.)	Additional Approvals: (Print, sign and date.)
CLOSURE	
22. Final Disposition Complete Responsible Manager/Individual: (Print, sign and date.)	
23. Final Disposition Verified **SPQAO/FQAO** (Print, sign and date.)	

CCP Nonconformance Report (NCR)

NCR No. NCR – INL - 0336 – 05 Revision 0

1. Lot No./Heat No. or Serial No.: N/A	**2. Process (NDA, HSG, NDE, VE, Other):** NDE	**3. Batch Data Report # (s):** INRTR2050087
4. Order/Work Order/Job Control Number (as applicable): N/A	**5. PO #:** N/A	**DRUM #(s):** 10018029, 10018503
6. E-QA NCR #: N/A	**Supplier:** N/A	

DESCRIPTION OF NONCONFORMANCE

7. (a) **Hold Tag Applied?** ☑ YES ☐ NO (If NO, explain) Segregation Method (s): ☐ NA

☐ < 100 n Ci/g ☐ Exceeds Site Limit ☐ Prohibited Item ☐ >500 ppmv Flamm. Vocs

☐ E-Flag ☐ TRAMPAC Criteria ☐ M&TE ☐ Receiving Inspection ☑ Other

(b) **Description of Nonconformance**
Required Condition (Implementing Procedure, Section & Revision)

" CCP-TP-102, Rev.7, Section 4.7.4 [a.13] States Enter the number of layers of confinement(estimated number of packing layers) determined during the examination.
Per CCP-AK-INL-005 Rev 0. States that the maximum layers of confinement is 2.

(c). **Actual Condition**

3 layers of confinement were identified.

8. Originator (Print name, sign and date) Kenneth Simpson 8/17/05	9. SPQAO/FQAO Validation (Print name, sign and date) Nancy Karas 8/17/05
10. Significant Condition? ☐ YES ☐ NO ☑ NA	11. Recurring Condition? ☐ YES ☑ NO (If YES, List NCRs)
12. Trend Code: K	13. Responsible Manager: Barbara Broomfield

CCP Nonconformance Report (NCR)

NCR No. NCR - INL - 0336 - 05 Revision 0	
INTERIM DISPOSITION	
14. Interim Disposition (Check One) ☑ N/A (See final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort ☐ Reinspect/Retest ☐ Remediate (a) Instructions for Completion of the Interim Disposition:	
INTERIM DISPOSITION APPROVALS	
15 .Responsible Manager/Individual(Print, sign and date.)	16. SPQAO/FQAO (Print, sign and date.)
Additional Approvals: (Print, sign and date.)	Additional Approvals: (Print, sign and date.)
COMPLETION OF INTERIM DISPOSITION	
17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date.)	
18. Interim Disposition Verified **SPQAO/FQAO:** (Print, sign and date.)	

CCP Nonconformance Report (NCR)

NCR No. NCR -INL- 0336 - 05 Revision 0

FINAL DISPOSITION

19. Final Disposition (Check One)
☐ Use-As Is ☐ Reject ☐ Repair ☒ Rework ☐ Scrap

(A) Technical Justification (**Required for "Use-As-is" and "Repair"** dispositions, N/A for "Reject" or "Rework" dispositions.)
N/A

(B) Disposition (**Required for "Reject" and "Scrap"**)
N/A

(C) Instructions for Completion of the Final Disposition, including Inspection Criteria (**Required for "Repair" and "Rework"**)

1. Continue waste container 10018503 to NDA in accordance with CCP-TP-068.

2. Once the assay is complete, stage this waste container for shipment to MFC for coring and remediation of the identified condition.

3. Upon completion of coring and remediation at MFC and its return to AMWTP, this waste container will be re-characterized in accordance with CCP-TP-068.

4. Waste Container ~~10018829~~ 10018029 BJB 8/18/05 is to be evaluated by the SPM and AK Expert to determine if the condition must be remediated or the AK Summary report changed to allow three layers of confinement.

Steps 1 and 2 will be completed by 08/22/2005.

(D) Corrective Actions (**Actions to Prevent Recurrence**) - as required.
N/A

FINAL DISPOSITION APPROVALS

20. Responsible Manager/Individual (Print, sign and date.)	21. SPQAO/FQAO (Print, sign and date.) Kenneth Simpson
Barbara Broomfield 8/18/05	8/18/05
Additional Approvals: (Print, sign and date.)	Additional Approvals: (Print, sign and date.)

CLOSURE

22. Final Disposition Complete Responsible Manager/Individual: (Print, sign and date.)

23. Final Disposition Verified **SPQAO/FQAO** (Print, sign and date.)

Controlled Copy

Attachment 4 – CCP Radiography Site Project Manager Review Checklist

Batch Data Report No.: INL RH RTR 12010

1. Has all the data received an independent technical review as evidenced by a completed Attachment 3 and the appropriate ITR signature?	☐NO	☑YES
2. Are BDR contents complete and match Attachment 5?	☐NO	☑YES
3. Is the BDR complete (appropriately completed forms for each container)?	☐NO	☑YES
4. Have Quality Assurance Objectives (QAOs) for RTR been met? Waste Characterization Program Implementation Plan (WCPIP) • Precision – Reconciled discrepancies between RTR Operators • Accuracy – Target used to tune the image for maximum sharpness and qualified operators performed the work • Representativeness – Description of container contents • Completeness – Completed data form and recording • Comparability – Training requirements met Quality Assurance Project Plan (QAPjP) • Image test satisfactory (Minimum acceptable is five lines-pair/cm) • Replicate scan performed • Independent observation performed • ITR review complete	☐NO	☑YES

Comments:

No NCR's.

I have reviewed 100 percent of the container-specific and batch data in this BDR and find it acceptable.

SPM:

Laura Nelson (Printed Name) Laura Nelson (Signature) 5/16/2012 (Date)

CCP RECORDS ORIGINAL
DATE REC'D 5-18-12

Attachment 6 – CCP Radiography Batch Data Report Cover Sheet

Batch Data Report No.: INLRHRTR12010 Date: 5-8-12

Waste Container ID Numbers	
Replicate Scan:	IDBLANL880107C
Independent Observation:	IDBLANL880107A
1	IDBLANL880107A
2	IDBLANL880107B
3	IDBLANL880107C
4	IDBLANL880164A
5	N/A
6	N/A
7	N/A
8	N/A
9	N/A
10	N/A
11	N/A
12	N/A
13	N/A
14	N/A
15	N/A
16	N/A
17	N/A
18	N/A
19	N/A
20	N/A

ITR:

Lashell Alade (Printed Name) Lashell Alade (Signature) 5-09-12 (Date)

CCP RECORDS ORIGINAL
DATE REC'D 5-15-12

Attachment 5 – CCP Radiography Batch Data Report Table of Contents

Batch Data Report No.: INLRHRTR12010 Date: 5/8/12

Table Of Contents

Item	Description	Page No.
1	Attachment 6, CCP Radiography Batch Data Report Cover Sheet	1
2	Attachment 5, CCP Radiography Batch Data Report Table of Contents	2
3	Attachment 3, CCP Independent Technical Reviewer Checklist	3-4
4	Attachment 1, CCP RTR Measurement Control Report	5-6
5	Attachment 2(s), CCP Radiography Data Sheets	7-24
6	Copy of NCRs (N/A [Not Applicable])	N/A

Attachment 3 – CCP Radiography Independent Technical Reviewer Checklist

Batch Data Report No.: INLRHRTR12010

Description				
1.	Data generation and reduction were conducted in a technically correct manner in accordance with the methods used?	☐ NO	☒ YES	☐ N/A
2.	Was the correct revision of the procedure used? Procedure: CCP-TP-508 Rev.: 7	☐ NO	☒ YES	☐ N/A
3.	Are there transcription errors?	☒ NO	☐ YES	☐ N/A
4.	Does the BDR include RTR for up to 20 containers?	☐ NO	☒ YES	☐ N/A
5.	Are BDR contents complete and match Attachment 5?	☐ NO	☒ YES	☐ N/A
6.	Is all the data signed and dated in reproducible ink and by the individual(s) generating it?	☐ NO	☒ YES	☐ N/A
7.	Is all data recorded clearly, legibly, and accurately?	☐ NO	☒ YES	☐ N/A
8.	Are all changes to original data lined out, initialed, and dated?	☐ NO	☐ YES	☒ N/A
9.	Were data changes made by the individual who originally collected the data or an individual authorized to change the data?	☐ NO	☐ YES	☒ N/A
10.	Does the waste match the Waste Matrix Code and waste stream description?	☐ NO	☒ YES	☐ N/A
11.	Are the RTR Operator's decisions regarding the RTR documented?	☐ NO	☒ YES	☐ N/A
12.	Is there an adequate written description of the contents of each item?	☐ NO	☒ YES	☐ N/A
13.	Was the audio/video media properly prepared and labeled?	☐ NO	☒ YES	☐ N/A
14.	Was the audio/video check performed satisfactorily and recorded on Attachment 1?	☐ NO	☒ YES	☐ N/A
15.	Was the Image Test Pattern Test performed satisfactorily and recorded on Attachment 1?	☐ NO	☒ YES	☐ N/A
16.	Was the Replicate Scan performed and recorded on an Attachment 2? (Once per batch or once per day, whichever is less frequent).	☐ NO	☒ YES	☐ N/A
17.	Was the Replicate Scan RTR Operator different from the original scan RTR Operator?	☐ NO	☒ YES	☐ N/A
18.	Did the Replicate Scan RTR Operator and the original scan RTR Operator agree on the results?	☐ NO	☒ YES	☐ N/A
19.	Was the IO performed and recorded on an Attachment 2? (Once per batch or once per day, whichever is less frequent).	☐ NO	☒ YES	☐ N/A
20.	Was the IO RTR Operator different from the original scan RTR Operator?	☐ NO	☒ YES	☐ N/A
21.	Did the IO RTR Operator and the first RTR Operator agree on the results?	☐ NO	☒ YES	☐ N/A
22.	Were the operators qualified to perform the tasks by verification of the LOQI?	☐ NO	☒ YES	☐ N/A
23.	Are the NCR(s) associated with the RTR included in the BDR?	☐ NO	☐ YES	☒ N/A

Attachment 3 – CCP Radiography Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: INLRHRTR12010

Comments:

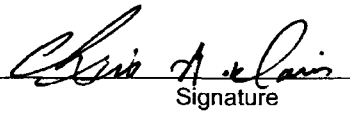
N/A

I have reviewed 100 percent of the container-specific and batch data in this BDR and find it acceptable for SPM review.

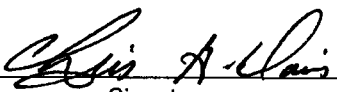
ITR:

Lashell Alade	Lashell Alade	5-09-12
Printed Name	Signature	Date

Attachment 1 – CCP RTR Measurement Control Report

CCP RTR Measurement Control Report		
Site: INL		
Batch Data Report No.: INLRHRTR12010		
Examination Date: 5/7/12		
Control Checks		
Image Test Pattern Test Lines-pair/cm: 8 (Minimum acceptable is five lines-pair/cm)	☑ SAT	☐ UNSAT
Audio/Video Media Recording System - Audio/Video Checks	☑ SAT	☐ UNSAT
Comments: N/A		
RTR Operator: Chris Davis  5/7/12 Printed Name Signature Date		

Attachment 1 – CCP RTR Measurement Control Report

CCP RTR Measurement Control Report		
Site: INL		
Batch Data Report No.: INLRHRTR12010		
Examination Date: 5/8/12		
Control Checks		
Image Test Pattern Test Lines-pair/cm: 9 (Minimum acceptable is five lines-pair/cm)	☑ SAT	☐ UNSAT
Audio/Video Media Recording System - Audio/Video Checks	☑ SAT	☐ UNSAT
Comments: N/A		
RTR Operator:		
Chris Davis		5/8/12
Printed Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☐ RTR Examination ☑ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12010
Examination Date:	05/08/12
Waste Container ID:	IDBLANL880107C
Audio/Video Media Number:	Primary: INLRHRTR12010 A Backup: INLRHRTR12010 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON DRUM
Waste Matrix Code:	S3150
Waste Stream Number:	IN-ID-BTO-030
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	90, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: IDBLANL880107C

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) Wire rope and a metal hook (packaging), 4 metal canisters with solidified material and lids with puncture holes, metal bracing (packaging) (C) Cloth (IN) Solidified material (ST) 30 gallon metal drum (PP) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: IDBLANL880107C

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

For packaging configuration refer to CCP-SO-INLRH-002 REV 0.

Weight of debris materials: 78 pounds

RTR Operator:

Sway Andrews	Sway Andrews	05/08/12
Printed Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☐ RTR Examination ☐ RTR Replicate Scan ☑ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12010
Examination Date:	05/08/12
Waste Container ID:	IDBLANL880107A
Audio/Video Media Number:	Primary: INLRHRTR12010 A Backup: INLRHRTR12010B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON DRUM
Waste Matrix Code:	S3150
Waste Stream Number:	IN-ID-BTO-030
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	90, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: IDBLANL880107A

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) Wire rope with a metal hook (packaging), metal bracing (packaging), 3 metal canisters with solidified material, empty metal canister (packaging), metal canister lids (C) Cloth (IN) Solidified material (ST) 30 gallon metal drum (PP) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: IDBLANL880107A

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

For packaging configuration refer to CCP-SO-INLRH-002 REV 0.
Weight of debris materials: 59 pounds

RTR Operator:

Sway Andrews	Sway Andrews	05/08/12
Printed Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12010
Examination Date:	05/07/12
Waste Container ID:	IDBLANL880107A
Audio/Video Media Number:	Primary: INLRHRTR12010 A Backup: INLRHRTR12010 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON DRUM
Waste Matrix Code:	S3150
Waste Stream Number:	IN-ID-BTO-030
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	90 %, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: IDBLANL880107A

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) Wire rope with metal hook (packaging), metal bracing (packaging), 3 metal canisters with solidified material, metal canister (packaging) metal canister lids (C) Cloth (IN) Solidified material (ST) 30 gallon metal drum (PP) Plastic packaging

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: IDBLANL880107A

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

For packaging configuration refer to CCP-SO-INLRH-002 REV 0.
Weight of debris materials: 59 pounds.

RTR Operator:

Chris Davis	Chris J. Davis	05/07/12
Printed Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12010
Examination Date:	05/07/12
Waste Container ID:	IDBLANL880107B
Audio/Video Media Number:	Primary: INLRHRTR12010 A Backup: INLRHRTR12010 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON DRUM
Waste Matrix Code:	S3150
Waste Stream Number:	IN-ID-BTO-030
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	90 %, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: IDBLANL880107B

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) Wire rope with metal hook (packaging), metal bracing (packaging), 3 metal canisters with solidified material 1 with a lid, 2 without lids, scrap metal, 2 metal canister lids (C) Cloth (IN) Solidified material (ST) 30 gallon metal drum (PP) Plastic packaging

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: IDBLANL880107B

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

For packaging configuration refer to CCP-SO-INLRH-002 REV 0.

Weight of debris materials: 59 pounds

RTR Operator:

Chris Davis	Chris L. Davis	05/07/12
Printed Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12010
Examination Date:	05/08/12
Waste Container ID:	IDBLANL880107C
Audio/Video Media Number:	Primary: INLRHRTR12010 A Backup: INLRHRTR12010 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON DRUM
Waste Matrix Code:	S3150
Waste Stream Number:	IN-ID-BTO-030
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	90%, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: IDBLANL880107C

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) Wire rope with metal hook (packaging), metal bracing (packaging), 4 metal canisters with solidified material with lids (C) Cloth (IN) Solidified material (ST) 30 gallon metal drum (PP) Plastic packaging

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: IDBLANL880107C

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

For packaging configuration refer to CCP-SO-INLRH-002 REV 0.
Weight of the debris materials: 78 pounds

RTR Operator:

Chris Davis	Chris Davis	05/08/12
Printed Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12010
Examination Date:	05/08/12
Waste Container ID:	IDBLANL880164A
Audio/Video Media Number:	Primary: INLRHRTR12010 A Backup: INLRHRTR12010 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON DRUM
Waste Matrix Code:	S3150
Waste Stream Number:	IN-ID-BTO-030
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	90%, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: IDBLANL880164A

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) Wire rope with metal hook (packaging), metal bracing (packaging), 3 metal canisters with lids with solidified material, empty metal canister (packaging) (C) Cloth (IN) Solidified material (ST) 30 gallon metal drum (PP) Plastic packaging

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: IDBLANL880164A

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

For packaging configuration refer to CCP-SO-INLRH-002 REV 0.
Weight of debris material: 59 pounds

RTR Operator:

Chris Davis	C Davis	05/08/12
Printed Name	Signature	Date

DIVIDER PAGE ONLY

Not part of page count

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[ ] Original Record [ ] Copy
[ ] Fax Record
[x] Electronic Record

Attn:	Sheri Punchios	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Hwy	Company:	WTS
	MS:GSA 212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	5/16/12
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
INLRHRTR12010	Spm checklist	5/16/12	1
	N/A		

Comments

na

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [X]	Sheri Punchios (Signature)	SHERI PUNCHIOS (Printed Name)	5-18-12 (Date)
Records Rejected [ ]	(Signature)	(Printed Name)	(Date)

Reason for Rejection:

Re-submittal:	(Signature)	(Printed Name)	(Date)

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	4692
DESTINATION TEL #	913038432208
DESTINATION ID	DENVER
ST. TIME	05/18 08:13
TIME USE	00'15
PAGES SENT	1
RESULT	OK

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220
Telephone Number: 575-234-7523 or 575-234-7431
Fax Number: 575-234-7033

☐ Original Record ☐ Copy
☐ Fax Record
☒ Electronic Record

Attn:	Sheri Punchios	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Hwy	Company:	WTS
	MS:GSA 212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	5/16/12
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
INLRHRTR12010	Spm checklist	5/16/12	1
	N/A		

Comments

ne

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted ☑ [signature] SHERI PUNCHIOS 5/18/12

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record
[ ] Fax Record
[ ] Electronic Record

[ ] Copy

Attn:	RH - SHERI PUNCHIOS	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	05/21/2012
Telephone Number:	575-234-7431		

Document Number	Title / Description	Record Date	Total Pages
INLRHRTR12010	BATCH DATA REPORT RH NDE RTR	05/08/2012	24
INLRHRTR12010A	PRIMARY DVD RH NDE RTR	05/08/2012	N/A
	N/A		

Comments

N/A

(When the Record accepted line has been completed, the rest of the page below may be left blank.)

Acceptance/Rejection Signature and Date

Records Accepted [X]	Sheri Punchios	SHERI PUNCHIOS	6-1-12
	Signature	Printed Name	Date
Records Rejected [ ]			
	Signature	Printed Name	Date

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	1719
DESTINATION TEL #	912085577396
DESTINATION ID	INL
ST. TIME	06/04 08:33
TIME USE	00'20
PAGES SENT	1
RESULT	OK

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	RH - SHERI PUNCHIOS	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	05/21/2012
Telephone Number:	575-234-7431		

Document Number	Title/Description	Record Date	Total Pages
INLRHRTR12010	BATCH DATA REPORT RH NDE RTR	05/08/2012	24
INLRHRTR12010A	PRIMARY DVD RH NDE RTR	05/08/2012	N/A
	N/A		

Comments

N/A

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	RH - SHERI PUNCHIOS	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	05/15/2012
Telephone Number:	575-234-7431		

Document Number	Title / Description	Record Date	Total Pages
INLRHRTR12010B	BACK UP DVD RH NDE RTR	05/08/2012	N/A
	N/A		

Comments

N/A

(When the Record accepted line has been completed, the rest of the page below may be left blank.)

Acceptance/Rejection Signature and Date

Records Accepted [X]	Signature	TAMI PARKER (Printed Name)	6/7/12 (Date)
Records Rejected [ ]	Signature	Printed Name	Date

Reason for Rejection:

Re-submittal:	Signature	Printed Name	Date

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	1839
DESTINATION TEL #	912085577396
DESTINATION ID	INL
ST. TIME	06/07 11:01
TIME USE	00'15
PAGES SENT	1
RESULT	OK

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	RH - SHERI PUNCHIOS	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	05/15/2012
Telephone Number:	575-234-7431		

Document Number	Title / Description	Record Date	Total Pages
INLRHRTR12010B	BACK UP DVD RH NDE RTR	05/08/2012	N/A
	N/A		

Comments

N/A

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Attachment 4 – CCP Radiography Site Project Manager Review Checklist

Batch Data Report No.: INLRHRTR12002

1.	Has all the data received an independent technical review as evidenced by a completed Attachment 3 and the appropriate ITR signature?	☐NO	☑YES
2.	Are BDR contents complete and match Attachment 5?	☐NO	☑YES
3.	Is the BDR complete (appropriately completed forms for each container)?	☐NO	☑YES
4.	Have Quality Assurance Objectives (QAOs) for RTR been met? Waste Characterization Program Implementation Plan (WCPIP) • Precision – Reconciled discrepancies between RTR Operators • Accuracy – Target used to tune the image for maximum sharpness and qualified operators performed the work • *Representativeness* – Description of *container contents* • Completeness – Completed data form and recording • Comparability – Training requirements met Quality Assurance Project Plan (QAPIP) • Image test satisfactory (Minimum acceptable is five lines-pair/cm) • Replicate scan performed • Independent observation performed • ITR review complete	☐NO	☑YES

Comments:

NA

I have reviewed 100 percent of the container-specific and batch data in this BDR and find it acceptable.

SPM:

Printed Name	Signature	Date
LAURA NELSON	Laura Nelson	3-7-12
Irene Quintana inserted correction	Irene Quintana	6/13/12

COPY

CCP RECORDS ORIGINAL
DATE REC'D 3-22-12

Attachment 6 – CCP Radiography Batch Data Report Cover Sheet

Batch Data Report No.: INLRHRTR12002 Date: 3/1/12

Waste Container ID Numbers	
Replicate Scan:	ANLE29F
Independent Observation:	ANLE33H
1	ANLE32F
2	ANLE32D-1
3	ANLE33E-1
4	ANLE32E
5	ANLE29E
6	ANLE29D
7	ANLE33F
8	ANLE33D
9	ANLE29F
10	ANLE29B
11	ANLE29A
12	ANLE29C
13	ANLE33G
14	ANLE33B
15	ANLE33A
16	ANLE33C
17	ANLE30C
18	ANLE30E
19	ANLE33I
20	ANLE33H

ITR:

Lashell Alade	Lashell Alade	3/1/12
Printed Name	Signature	Date

Lashell Alade 6-13-12

CCP RECORDS ORIGINAL
DATE REC'D 3-16-12

Attachment 6 – CCP Radiography Batch Data Report Cover Sheet

Batch Data Report No.: INLRHRTR12002 Date: 3/1/12

Waste Container ID Numbers	
Replicate Scan:	ANLE29F
Independent Observation:	ANLE33H
1	ANLE32F
2	ANLE32D-1
3	ANLE33E-1
4	ANLE32E
5	ANLE29E
6	ANLE29D
7	ANLE33F
8	ANLE33D
9	ANLE29F
10	ANLE29B
11	ANLE29A
12	ANLE29C
13	ANLE33G
14	ANLE33B
15	ANLE33A
16	ANLE33C
17	ANLE30C
18	ANLE30E
19	ANLE33I
20	ANLE33H

ITR:

Lashell Alade	Lashell Alade	3/1/12
Printed Name	Signature	Date

Superseded by page 1
6/13/12

CCP RECORDS ORIGINAL
DATE REC'D 3-6-12

6/13/12
IA

Controlled Copy

Attachment 5 – CCP Radiography Batch Data Report Table of Contents

Batch Data Report No.: INLRHRTR12002 Date: 3/1/12

Table Of Contents

Item	Description	Page No.
1	Attachment 6, CCP Radiography Batch Data Report Cover Sheet	1
2	Attachment 5, CCP Radiography Batch Data Report Table of Contents	2
3	Attachment 3, CCP Independent Technical Reviewer Checklist	3-4
4	Attachment 1, CCP RTR Measurement Control Report	5-7
5	Attachment 2(s), CCP Radiography Data Sheets	8-73
6	Copy of NCRs (N/A [Not Applicable])	N/A

Attachment 3 – CCP Radiography Independent Technical Reviewer Checklist

Batch Data Report No.: INLRHRTR12002

Description				
1.	Data generation and reduction were conducted in a technically correct manner in accordance with the methods used?	☐ NO	☒ YES	☐ N/A
2.	Was the correct revision of the procedure used? Procedure: CCP-TP-508 Rev.: 7	☐ NO	☒ YES	☐ N/A
3.	Are there transcription errors?	☐ NO	☒ YES	☐ N/A
4.	Does the BDR include RTR for up to 20 containers?	☐ NO	☒ YES	☐ N/A
5.	Are BDR contents complete and match Attachment 5?	☐ NO	☒ YES	☐ N/A
6.	Is all the data signed and dated in reproducible ink and by the individual(s) generating it?	☐ NO	☒ YES	☐ N/A
7.	Is all data recorded clearly, legibly, and accurately?	☐ NO	☒ YES	☐ N/A
8.	Are all changes to original data lined out, initialed, and dated?	☐ NO	☒ YES	☐ N/A
9.	Were data changes made by the individual who originally collected the data or an individual authorized to change the data?	☐ NO	☒ YES	☐ N/A
10.	Does the waste match the Waste Matrix Code and waste stream description?	☐ NO	☒ YES	☐ N/A
11.	Are the RTR Operator's decisions regarding the RTR documented?	☐ NO	☒ YES	☐ N/A
12.	Is there an adequate written description of the contents of each item?	☐ NO	☒ YES	☐ N/A
13.	Was the audio/video media properly prepared and labeled?	☐ NO	☒ YES	☐ N/A
14.	Was the audio/video check performed satisfactorily and recorded on Attachment 1?	☐ NO	☒ YES	☐ N/A
15.	Was the Image Test Pattern Test performed satisfactorily and recorded on Attachment 1?	☐ NO	☒ YES	☐ N/A
16.	Was the Replicate Scan performed and recorded on an Attachment 2? (Once per batch or once per day, whichever is less frequent).	☐ NO	☒ YES	☐ N/A
17.	Was the Replicate Scan RTR Operator different from the original scan RTR Operator?	☐ NO	☒ YES	☐ N/A
18.	Did the Replicate Scan RTR Operator and the original scan RTR Operator agree on the results?	☐ NO	☒ YES	☐ N/A
19.	Was the IO performed and recorded on an Attachment 2? (Once per batch or once per day, whichever is less frequent).	☐ NO	☒ YES	☐ N/A
20.	Was the IO RTR Operator different from the original scan RTR Operator?	☐ NO	☒ YES	☐ N/A
21.	Did the IO RTR Operator and the first RTR Operator agree on the results?	☐ NO	☒ YES	☐ N/A
22.	Were the operators qualified to perform the tasks by verification of the LOQI?	☐ NO	☒ YES	☐ N/A
23.	Are the NCR(s) associated with the RTR included in the BDR?	☐ NO	☐ YES	☒ N/A

Attachment 3 – CCP Radiography Independent Technical Reviewer Checklist
(Continued)

Batch Data Report No.: INLRHRTR12002

Comments: ~~N/A~~ LA 6-13-12

I have reviewed and agree with changes made ~~to the BDR number on drum ANLE336 of~~ this BDR. LA 6-13-12 LA 6-13-12

I have reviewed 100 percent of the container-specific and batch data in this BDR and find it acceptable for SPM review.

ITR:

Printed Name	Signature	Date
Lashell Alade	Lashell Alade	3-01-12
	Lashell Alade	6-13-12

Attachment 3 – CCP Radiography Independent Technical Reviewer Checklist
(Continued)

Batch Data Report No.: INLRHRTR12002

Comments: N/A

I have reviewed 100 percent of the container-specific and batch data in this BDR and find it acceptable for SPM review.

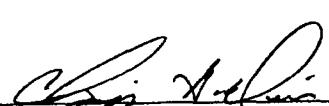
ITR:

Lashell Alade	Lashell Alade	3-01-12
Printed Name	Signature	Date

Replaced by page 4
6/13/12

6/13/12
4A

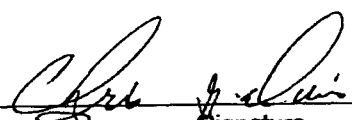
Attachment 1 – CCP RTR Measurement Control Report

CCP RTR Measurement Control Report		
Site: INL		
Batch Data Report No.: INLRHRTR12002		
Examination Date: 2-27-12		
Control Checks		
Image Test Pattern Test Lines-pair/cm: 8 (Minimum acceptable is five lines-pair/cm)	☑ SAT	☐ UNSAT
Audio/Video Media Recording System - Audio/Video Checks	☑ SAT	☐ UNSAT
Comments: N/A		
RTR Operator:		
CHRIS DAVIS  2-27-12		
Printed Name Signature Date		

Attachment 1 – CCP RTR Measurement Control Report

CCP RTR Measurement Control Report		
Site: INL		
Batch Data Report No.: INLRHRTR12002		
Examination Date: 2-28-12		
Control Checks		
Image Test Pattern Test Lines-pair/cm: 8 (Minimum acceptable is five lines-pair/cm)	☑ SAT	☐ UNSAT
Audio/Video Media Recording System - Audio/Video Checks	☑ SAT	☐ UNSAT
Comments: N/A		
RTR Operator:		
Chris Davis (Printed Name)	Signature	2-28-12 (Date)

Attachment 1 – CCP RTR Measurement Control Report

CCP RTR Measurement Control Report		
Site: INL		
Batch Data Report No.: INLRHRTR12002		
Examination Date: 2/29/12		
Control Checks		
Image Test Pattern Test Lines-pair/cm: 10 (Minimum acceptable is five lines-pair/cm)	☑ SAT	☐ UNSAT
Audio/Video Media Recording System - Audio/Video Checks	☑ SAT	☐ UNSAT
Comments: N/A		
RTR Operator:		
Chris Davis		2/29/12
Printed Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☐ RTR Examination ☑ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INRHRTR12002
Examination Date:	02/28/12
Waste Container ID:	ANLE29F
Audio/Video Media Number:	Primary: INLRHRTR12002 A Backup: INLRHRTR12002 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	5, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE29F

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 30 gallon metal drum (OI) Fines and MET-L-X (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE29F

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Sway Andrews — Sway Andrews — 02/28/12

Printed Name — Signature — Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☐ RTR Examination ☐ RTR Replicate Scan ☑ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12002
Examination Date:	03/01/12
Waste Container ID:	ANLE33H
Audio/Video Media Number:	Primary: INLRHRTR12002 A Backup: INLRHRTR12002 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	5, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE33H

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) Scrap metal, 30 gallon metal drum (OI) Fines, MET-L-X (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE33H

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Sway Andrews	Sway Andrews	03/01/12
Printed Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12002
Examination Date:	02/27/12
Waste Container ID:	ANLE32F
Audio/Video Media Number:	Primary: INLRHRTR12002 A Backup: INLRHRTR12002 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	50, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE32F

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 1 gallon metal paint can with lid, wire basket, bolt, metal rod, scrap metal, metal filings, metal container with lifting fixtures, metal spacer, 30 gallon metal drum, metal ring used as a spacer (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE32F

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments: Called filter or screw on video but didn't list in inventory. Item appears to be a screw. 3-1-12 NTA CAL

RTR Operator:

Chris Davis	Chris A Davis	02/27/12
Printed Name	Signature	Date
	Chris A Davis	3-1-12

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12002
Examination Date:	02/27/12
Waste Container ID:	ANLE32D-1
Audio/Video Media Number:	Primary: INLRHRTR12002 A Backup: INLRHRTR12002 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	50, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE32D-1

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) Wire, 1 gallon metal paint can with lid, wire basket, metal tubing with solidified material, bolts, metal filings, metal container with lifting fixtures, metal spacing ring, metal sheeting spacer, 30 gallon metal drum (XPW) Scrap plastic, plastic tubing with solidified material

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE32D-1

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Chris Davis	Chris A. Davis	02/27/12
Printed Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12002
Examination Date:	02/27/12
Waste Container ID:	ANLE33E-1
Audio/Video Media Number:	Primary: INLRHRTR12002 A Backup: INLRHRTR12002 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	50, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE33E-1

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) Wire, 1 gallon metal paint can with lid, wire basket, metal tubing, bolts, metal container with lifting fixtures, metal ring used as a spacer, metal sheeting used as a spacer, 30 gallon metal drum (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE33E-1

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Chris Davis — Printed Name

Signature

02/27/12 — Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12002
Examination Date:	02/27/12
Waste Container ID:	ANLE32E
Audio/Video Media Number:	Primary: INLRHRTR12002 A Backup: INLRHRTR12002 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	50, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE32E

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 1 gallon metal paint can with a lid, wire, wire basket, scrap metal, metal container with metal lifting fixtures, metal ring used as a spacer, metal sheeting used as a spacer, 30 gallon metal drum (XPW) Scrap plastic, plastic tubes with solidified material

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE32E

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments: Called Bolt on video but not listed in inventory.
N/A
3-1-12

RTR Operator:

Chris Davis	Chris A Davis	02/27/12
Printed Name	Signature	Date

Chris A Davis 3-1-12

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12002
Examination Date:	02/27/12
Waste Container ID:	ANLE29E
Audio/Video Media Number:	Primary: INLRHRTR12002 A Backup: INLRHRTR12002 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	50, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE29E

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 1 gallon metal paint can with lid, wire, wire basket, metal tubing with solidified material, scrap metal, metal container with metal lifting fixtures, metal ring used as a spacer, metal sheeting used as a spacer, 30 gallon metal drum (XPW) Scrap plastic, plastic tubing with solidified material

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE29E

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments: ~~N/A~~ Called soft on video but didn't list in inventory.
CHP
3-1-12

RTR Operator:

Chris Davis — Printed Name
Chris Davis — Signature
02/27/12 — Date

Chris Davis 3-1-12

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12002
Examination Date:	02/27/12
Waste Container ID:	ANLE29D
Audio/Video Media Number:	Primary: INLRHRTR12002 A Backup: INLRHRTR12002 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	50, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE29D

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) Wire, 1 gallon metal paint can with a lid, scrap metal, metal tubing, wire basket, metal container with metal lifting fixtures, metal ring, metal sheeting, 30 gallon metal drum (XPW) Scrap plastic, plastic tubing

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE29D

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments: ~~N/A~~ called bolt on video but didn't list in inventory.
CLD
3-1-12

RTR Operator:

Chris Davis	C. Davis	02/27/12
Printed Name	Signature	Date

C. Davis 3-1-12

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12002
Examination Date:	02/27/12
Waste Container ID:	ANLE33F
Audio/Video Media Number:	Primary: INLRHRTR12002 A Backup: INLRHRTR12002 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	50, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE33F

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) Wire, 1 gallon metal paint can with lid, metal tubing with solidified material, scrap metal, metal filings, metal container with metal lifting fixtures, metal ring, metal sheeting, 30 gallon metal drum (OI) Absorbent (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE33F

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments: ~~N/A~~ Called Bolt and wire basket, didn't list in inventory.
CH
3-1-12

RTR Operator:

Chris Davis	Chris A. Davis	02/27/12
Printed Name	Signature	Date

Chris A. Davis 3-1-12

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12002
Examination Date:	02/27/12
Waste Container ID:	ANLE33D
Audio/Video Media Number:	Primary: INLRHRTR12002 A Backup: INLRHRTR12002 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	50, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE33D

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 1 gallon metal paint can with lid, wire, scrap metal, metal tubing with solidified material, metal filings, metal container with metal lifting fixtures, metal ring, metal sheeting, 30 gallon metal drum (XPW) Scrap plastic, plastic tubing with solidified material

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE33D

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments: ~~N/A~~ Called Bolt and wire basket, didn't list in inventory. Listed solidified material in plastic Tubing but didn't call it in the video

3-1-12

RTR Operator:

Chris Davis	Chris A. Davis	02/27/12
Printed Name	Signature	Date
	Chris A. Davis	3-1-12

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	~~INRHRTR12002~~ P 3-7-12 INLRHRTR12002 P 3-7-12
Examination Date:	02/28/12
Waste Container ID:	ANLE29F
Audio/Video Media Number:	Primary: INLRHRTR12002 A Backup: INLRHRTR12002 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	5, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE29F

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 30 gallon metal drum (OI) Fines mixed with MET-L-X (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE29F

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:
N/A

RTR Operator:

Chris Davis	Chris L. Davis	02/28/12
Printed Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	~~INRHRTR12002~~ @ 3-7-12 INLRHRTR12002 @ 3-7-12
Examination Date:	02/28/12
Waste Container ID:	ANLE29B
Audio/Video Media Number:	Primary: INLRHRTR12002 A Backup: INLRHRTR12002 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	10, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE29B

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 30 gallon metal drum, scrap metal (OI) Glass bottles, empty, no lids (XPW) Scrap plastic, plastic tube

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE29B

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO
Section 5: Waste Summary		
Comments: N/A		

RTR Operator:

Chris Davis	Chris L. Davis	02/28/12
Printed Name	Signature	Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	~~INRHRTR12002~~ 3-7-12 INLRHRTR12002 E 3-7-12
Examination Date:	02/28/12
Waste Container ID:	ANLE29A
Audio/Video Media Number:	Primary: INLRHRTR12002 A Backup: INLRHRTR12002 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	95, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE29A

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 1 gallon metal paint cans, paint can lids, scrap metal, metal cylinders, metal rods, metal tubing, bolts, metal sheeting, 30 gallon metal drum, (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE29A

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments: ~~N/A~~ Listed bolts in inventory but didn't call it in The Video.

CGD 3-1-12

RTR Operator:

Chris Davis	Chris A. Davis	02/28/12
Printed Name	Signature	Date
	Chris A. Davis	3-1-12

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	~~INRHRTR12002~~ C 3-7-12 INLRHRTR12002 C 3-7-12
Examination Date:	02/28/12
Waste Container ID:	ANLE29C
Audio/Video Media Number:	Primary: INLRHRTR12002 A Backup: INLRHRTR12002 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	10, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE29C

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) Bolt, scrap metal, wire, metal tubes, 30 gallon metal drum (OI) Glass bottles (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE29C

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags NOT defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Chris Davis — Printed Name

Signature

02/28/12 — Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	~~INRHRTR12002~~ INLRHRTR12002 C 3-7-12 C 3-7-12
Examination Date:	02/28/12
Waste Container ID:	ANLE33G
Audio/Video Media Number:	Primary: INLRHRTR12002 A Backup: INLRHRTR12002 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	50, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE33G

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) Metal container with metal lifting fixtures, metal ring, metal sheeting, bolt, 30 gallon metal drum (OI) Fines, MET-L-X (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE33G

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Chris Davis — Printed Name

Signature

02/28/12 — Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	~~INRHRTR12002~~ INLRHRTR12002 3-7-12 3-7-12
Examination Date:	02/28/12
Waste Container ID:	ANLE33B
Audio/Video Media Number:	Primary: INLRHRTR12002 A Backup: INLRHRTR12002 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	25, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE33B

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 1 gallon metal paint can, no lid, empty, metal paint can lid, metal tubes, scrap metal, bolt, 30 gallon metal drum (OI) Glass bottles (XPW) Scrap plastic, plastic lid

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE33B

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Chris Davis — Printed Name

Signature

02/28/12 — Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12002
Examination Date:	02/29/12
Waste Container ID:	ANLE33A
Audio/Video Media Number:	Primary: INLRHRTR12002 A Backup: INLRHRTR12002 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	50, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE33A

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 1 gallon metal paint cans without lids, scrap metal, wire, metal tubing, metal pipe, hand tools, bolts, metal paint can lids, 30 gallon metal drum (OI) Absorbent, broken glass (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE33A

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags NOT defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO
Section 5: Waste Summary		
Comments: N/A		

RTR Operator:

Chris Davis — Printed Name

Signature

02/29/12 — Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12002
Examination Date:	02/29/12
Waste Container ID:	ANLE33C
Audio/Video Media Number:	Primary: INLRHRTR12002 A Backup: INLRHRTR12002 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	15, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE33C

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 1 gallon metal paint can without lid, empty, scrap metal, metal paint can lid, 30 gallon metal drum (OI) Glass bottles without lids, empty (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE33C

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Chris Davis — Chris A. Davis — 02/29/12

Printed Name — Signature — Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12002
Examination Date:	02/29/12
Waste Container ID:	ANLE30C
Audio/Video Media Number:	Primary: INLRHRTR12002 A Backup: INLRHRTR12002 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	5, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE30C

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) Scrap metal, wire, 30 gallon metal drum (OI) Fines with MET-L-X (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE30C

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Chris Davis — Printed Name

Signature

02/29/12 — Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12002
Examination Date:	02/29/12
Waste Container ID:	ANLE30E
Audio/Video Media Number:	Primary: INLRHRTR12002 A Backup: INLRHRTR12002 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	5, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE30E

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 30 gallon metal drum (OI) Fines with MET-L-X (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE30E

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Chris Davis — Printed Name

Signature

02/29/12 — Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12002
Examination Date:	02/29/12
Waste Container ID:	ANLE331
Audio/Video Media Number:	Primary: INLRHRTR12002 A Backup: INLRHRTR12002 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	5, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE33I

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) 30 gallon metal drum, scrap metal (OI) Fines and MET-L-X (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE33I

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Chris Davis — Printed Name

Signature

02/29/12 — Date

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	INL
Batch Number:	INLRHRTR12002
Examination Date:	02/29/12
Waste Container ID:	ANLE33H
Audio/Video Media Number:	Primary: INLRHRTR12002 A Backup: INLRHRTR12002 B
Procedure and Revision No.:	CCP-TP-508 Rev. 7
NCR(s) associated with the waste container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: N/A Date: N/A
Section 2: Waste Container Data	
Container Type:	55 GALLON
Waste Matrix Code:	S5400
Waste Stream Number:	ID-ANLE-S5000
Is a Rigid Polyethylene Liner present? ☑ NO ☐ YES	
Is there an indication the Rigid Polyethylene Liner is vented or filtered? ☐ NO ☐ YES ☑ NA	☐ VENTED ☐ FILTERED ☐ NO LID
Estimated Number of Layers of Confinement:	0 Layers
Estimated Fill Percent:	85 %
Internal Can Fill Percent:	5, N/A, N/A

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE33H

Page 2 of 3

Section 3: Waste Container Inventory and Comments (Detailed descriptions)
(IM) Scrap metal, 30 gallon metal drum (OI) Fines and MET-L-X (XPW) Scrap plastic

Attachment 2 – CCP Radiography Data Sheet (Continued)

Container ID: ANLE33H

Section 4: RTR Summary		
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or visual examination (VE)?	☐ YES	☑ NO
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐ YES	☑ NO
Does the container have observable liquid containing PCBs?	☐ YES	☑ NO
Does the container have observable liquid with an EPA HWN U134 assigned?	☐ YES	☑ NO
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ YES	☑ NO
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ YES	☑ NO
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*?	☐ YES	☑ NO
Is there an indication of wastes containing explosives or compressed gases?	☐ YES	☑ NO
Is there an indication of PCBs not authorized under an EPA PCB waste disposal authorization?	☐ YES	☑ NO
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA HWNs of D001, D002, or D003)?	☐ YES	☑ NO
Is the physical form of the waste inconsistent with the waste stream Description or the Waste Matrix Code?	☐ YES	☑ NO
RH 72B Criteria		
Were there non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ YES	☑ NO
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐ YES	☑ NO
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐ YES	☑ NO

Section 5: Waste Summary

Comments:

N/A

RTR Operator:

Chris Davis — Printed Name

Signature

02/29/12 — Date

DIVIDER PAGE ONLY

Not part of page count

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

	Original Record
	Fax Record
X	Electronic Record

☐ Copy

Attn:	RH – TAMI PARKER	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	03/06/2012
Telephone Number:	575-234-7431		

Document Number	Title / Description	Record Date	Total Pages
INLRHRTR12002B	BACK UP DVD RH NDE RTR	02/29/2012	N/A
	N/A		

Comments

N/A

(When the Record accepted line has been completed, the rest of the page below may be left blank.)

Acceptance/Rejection Signature and Date

Records Accepted ☒	Sheri Punchios	SHERI PUNCHIOS	3-7-12
	Signature	Printed Name	Date
Records Rejected ☐			
	Signature	Printed Name	Date

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	3822
DESTINATION TEL #	912085577396
DESTINATION ID	INL
ST. TIME	03/22 13:55
TIME USE	00'17
PAGES SENT	1
RESULT	OK

Controlled Copy

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[ ] Original Record [ ] Copy
[ ] Fax Record
[X] Electronic Record

Attn:	RH – TAMI PARKER	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	03/06/2012
Telephone Number:	575-234-7431		

Document Number	Title / Description	Record Date	Total Pages
INLRHRTR12002B	BACK UP DVD RH NDE RTR	02/29/2012	N/A
	N/A		

Comments

N/A

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Fax Record [ ] Electronic Record [ ] Copy

Attn:	RH – SHERI PUNCHIOS	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	83442	Date Sent:	04/16/2012
Telephone Number:	575-234-7431		

Document Number	Title / Description	Record Date	Total Pages
INLRHRTR12002	BATCH DATA REPORT RH NDE RTR	03/01/2012	73
INLRHRTR12002A	PRIMARY DVD RH NDE RTR	02/29/2012	N/A
	N/A		

Comments

SPM CHECKLIST LOCATED IN CARLSBAD

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [X]	Sheri Punchios Signature	SHERI PUNCHIOS Printed Name	4-20-12 Date
Records Rejected [ ]	Signature	Printed Name	Date

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	0347
DESTINATION TEL #	912085577396
DESTINATION ID	INL
ST. TIME	04/20 13:47
TIME USE	00'19
PAGES SENT	1
RESULT	OK

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	RH – SHERI PUNCHIOS	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	83442	Date Sent:	04/16/2012
Telephone Number:	575-234-7431		

Document Number	Title/Description	Record Date	Total Pages
INLRHRTR12002	BATCH DATA REPORT RH NDE RTR	03/01/2012	73
INLRHRTR12002A	PRIMARY DVD RH NDE RTR	02/29/2012	N/A
	N/A		

Comments:

SPM CHECKLIST LOCATED IN CARLSBAD

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[ ] Original Record [ ] Copy
[ ] Fax Record
[X] Electronic Record

Attn:	RH – SHERI PUNCHIOS	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	06/13/2012
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
INLRHRTR12002	BATCH DATA REPORT RH NDE RTR (CORRECTIONS) PAGES 1, 4	03/01/2012	2
	N/A		

Comments

BATCH DATA REPORT LOCATED IN CARLSBAD. PLEASE HAVE SPM INSERT CORRECTIONS

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [X]	Sheri Punchios (Signature)	SHERI PUNCHIOS (Printed Name)	6-13-12 (Date)
Records Rejected [ ]	Signature	Printed Name	Date

Reason for Rejection:

Re-submittal:	Signature	Printed Name	Date

```
*********************
***   TX REPORT   ***
*********************
```

TRANSMISSION OK

TX/RX NO	1928
DESTINATION TEL #	912085577396
DESTINATION ID	INL
ST. TIME	06/13 11:58
TIME USE	00'17
PAGES SENT	1
RESULT	OK

Controlled Copy

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[ ] Original Record
[ ] Fax Record
[X] Electronic Record
[ ] Copy

Attn:	RH – SHERI PUNCHIOS	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	06/13/2012
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
INLRHRTR12002	BATCH DATA REPORT RH NDE RTR (CORRECTIONS) PAGES 1, 4	03/01/2012	2
	N/A		

Comments

BATCH DATA REPORT LOCATED IN CARLSBAD. PLEASE HAVE SPM INSERT CORRECTIONS

Attachment 10 – CCP SPM HSG Summa Sampling Project Level Validation Checklist and Summary

BDR Number: INHSGS090011 **Sampling Date:** 8-31-09

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
1. Does the Batch Data Report (BDR) contain the batch number? **Reference Source: CCP-PO-001, Table B3-12**	X			
2. Is the BDR complete according to the BDR Table of Contents? **Reference Source: CCP-PO-001, B3-10b**	X			
3. Does the BDR contain the BDR date? **Reference Source: CCP-PO-001, Table B3-12**	X			
4. Is the sample matrix and type included for each sample in the BDR? **Reference Source: CCP-PO-001, Table B3-12**	X			
5. Is the BDR complete as defined by the process procedures? **Reference Source: CCP-PO-001, B3-10, CCP Technical Procedures**	X			
6. List all containers that have met QAOs. **Reference Source: CCP-PO-001, Table B3-12**				Container Numbers: IDAE000000397 IDAE000000396 IDAE000000395 IDAE000000398 IDAE000000399 IDAE000000400 IDAE000000393 IDAERH0001004 IDAERH0001003 IDAE000000394
7. Does the BDR include the requested analyses and the name of the laboratory? **Reference Source: CCP-PO-001, Table B3-12**	X			
8. Is there a reference to or copy of any associated NCRs (if any) in the BDR? **Reference Source: CCP-PO-001, Table B3-12**			X	No NCRs associated with this BDR
9. Does the BDR include the point of origin for sampling (e.g., building number, room)? **Reference Source: CCP-PO-001, Table B3-12**	X			
10. Is the sample size included in the BDR? **Reference Source: CCP-PO-001, Table B3-12**	X			

COPY

ORIGINAL

Attachment 10 – CCP SPM HSG Summa Sampling Project Level Validation Checklist and Summary (Continued)

BDR Number: INHSGS090011 **Sampling Date:** 8-31-09

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
11. Does the BDR include the sample location of each container? Note: Location within container is where the sample is taken. The BDR must specify what layer of confinement was sampled (e.g., under the lid). **Reference Source: CCP-PO-001, Table B3-12**	X			
12. Is the person collecting the sample identified in the BDR and qualified? **Reference Source: CCP-PO-001, Table B3-12**	X			
13. Does the BDR contain a chain of custody record? **Reference Source: CCP-PO-001, Table B3-12**	X			
14. Does the chain of custody form correctly identify the Waste Stream ID? **Reference Source: CCP-PO-001, Table B3-12**	X			
15. Is there a reference to sampling equipment numbers or lot numbers for disposable equipment? **Reference Source: CCP-PO-001, Table B3-12**	X			
16. Is there verification of rigid liner venting? **Reference Source: CCP-PO-001, Table B3-12**	X			
17. Does the BDR include the operator/sampler signature and date and time of sampling for each sample? **Reference Source: CCP-PO-001, Table B3-12**	X			
18. Are there 20 samples or less (excluding QC) in the batch and all samples collected within 14 days of the first sample collected? **Reference Source: CCP-PO-001, B1-1b**	X			
19. Are the correct revisions of the procedures used and identified? **Reference Source: CCP-PO-001, Table B3-12**	X			
20. Are all data reporting forms complete with data reported properly (correct units and significant figures)? **Reference Source: CCP-PO-001, B3-10b(1)**	X			

Attachment 10 – CCP SPM HSG Summa Sampling Project Level Validation Checklist and Summary (Continued)

BDR Number: INHSGS090011 **Sampling Date:** 8-31-09

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
21. Is there a cross-reference between waste container number and field sample number? **Reference Source: CCP-PO-001, B1-5**	X			
22. Have the samples been properly preserved (0-40° C)? **Reference Source: CCP-PO-001, Table B1-1**	X			
23. Has the correct DAC scenario and waste packaging configuration been selected? **Reference Source: CCP-PO-001, B3-2**	X			
24. Do the samples meet the required DAC equilibrium times? **Reference Source: CCP-PO-001, B3-2**	X			
25. Prior to canister use was the following performed: equipment blank (or on-line blank), sample canister equipment cleaning and leak check, and field reference standard (or on-line control standard) performed as required? **Reference Source: CCP-PO-001, B1-1b**	X			FRS Memo – CP:05:01128
26. Has one field blank per batch been collected? **Reference Source: CCP-PO-001, Table B1-2**	X			
27. Has a minimum of one equipment blank been collected for the applicable cleaning batch blanks? **Reference Source: CCP-PO-001, Table B1-2**	X			
28. Has one field duplicate per batch been collected? **Reference Source: CCP-PO-001, Table B1-2**	X			
29. Has the canister pressure and ambient temperature and pressure been recorded? **Reference Source: CCP-PO-001, Table B3-12**	X			
30. Before initial use and annually thereafter were the manifold pressure sensors and temperature sensors calibrated? **Reference Source: CCP-PO-001, B3-2**	X			
31. Have all the waste containers equilibrated for a minimum of 72 hours at 18° C or higher? **Reference Source: CCP-PO-001, B1-1**	X			

Attachment 10 – CCP SPM HSG Summa Sampling Project Level Validation Checklist and Summary (Continued)

BDR Number: INHSGS090011 **Sampling Date:** 8-31-09

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
32. Is the completed, signed, and dated Independent Technical Reviewer Checklist in the BDR? **Reference Source: CCP-PO-001, Table B3-12**	X			

Comments: NA

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

Hillari J. Neely		9-23-09
SPM Printed Name	Signature	Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

Attachment 1 – HSG Sampling Batch Data Report Cover Sheet

Page 1 of 1

Headspace Gas Sampling

HSG Sampling Batch Number: INHSGS090011

Waste Matrix Code: S5400

Waste Container Identification Numbers

IDAE000000397	N/A
IDAE000000396	N/A
IDAE000000395	N/A
IDAE000000398	N/A
IDAE000000399	N/A
IDAE000000400	N/A
IDAE000000393	N/A
IDAERH0001004	N/A
IDAERH0001003	N/A
IDAE000000394	N/A

Comments: Waste Stream ID: ID-ANLE-S5000.
Container ID numbers for the COC are identified with the last 9 places of the barcode. The Cover Sheet, Canister Tags, and the Sample Drum Data Form will list all 13 places of the full barcode.
No filter change outs required for this batch.

HSG Independent Technical Reviewer:

Joe Brien
Printed Name

Signature

9/14/07
Date

000001

ORIGINAL

Attachment 2 – HSG Sampling Batch Data Report Table of Contents Page 1 of 1

Section		Page No.
1.	HSG Sampling Batch Data Report Cover Sheet (Attachment 1)	1
2.	HSG Sampling Batch Data Report Table of Contents (Attachment 2)	2
3.	Independent Technical Reviewer (ITR) Review Checklist (Attachment 3)	3
	Sampling Batch Data Report Forms:	
4.	Chain of Custody/Canister Tag Forms (Attachment 1 from CCP-TP-093)	5
5.	Copy of Laboratory Canister Tags	7
6.	Cleanliness Certification for needle assemblies as applicable to the Sampling Batch Data Report (or copy of the certifications from CCP-TP-093)	19
7.	Sample Drum Data Form (Attachment 2 from CCP-TP-093)	21
8.	Copy of Sampling Port Installation Records (CCP-TP-098, Attachment 1), if applicable	N/A
9.	Copy of Drum Filter Changeout Form (Attachment 1 of CCP-TP-082), if applicable.	N/A
10.	Shipment Request Forms, if applicable.	N/A
11.	72-Hour Temperature Equilibration Plots	23
12.	Copy of NCRs, if applicable	N/A

Attachment 3 – Independent Technical Reviewer (ITR) Review Checklist

Page 1 of 2

HSG Sampling Batch Number: INHSGS090011

Description	YES	NO	NA	
1. Is the HSG Sampling BDR complete as specified in step 4.1.2 and are the field sampling records complete?	X			
Sampling Documentation	**YES**	**NO**	**NA**	**Comments**
2. Are calculations correct for the Drum Age Criteria (DAC), temperature equilibrium time, and percent complete?	X			
3. Did the containers meet the DAC?	X			
4. Did the containers meet the temperature equilibrium requirement (stored at 18°C or higher for 72-hours prior to sampling)?	X			
5. Do the temperature plots indicate the drums were stored at 18 °C (64.5 °F) or higher for 72-hours prior to sampling?	X			
5a. Are the waste stream IDs completed correctly on the Chain of Custody (COC) Form?	X			
Quality Control Samples				
Precision	**YES**	**NO**	**NA**	**Comments**
6. Was a Field Duplicate collected once per batch?	X			
Accuracy	**YES**	**NO**	**NA**	**Comments**
7. Was a Field Reference Sample collected?	X			CP:05:01128 UFC:5900.00
8. Was a Field Blank collected one per batch prior to sampling containers?	X			
Completeness	**YES**	**NO**	**NA**	**Comments**
9. Is the percentage of valid samples collected and submitted for analysis greater than or equal to 90 percent?	X			
Additional Checks	**YES**	**NO**	**NA**	**Comments**
10. Is the data technically reasonable based upon the technique used?	X			
11. Was the sampling equipment checked for leaks after sample collection?	X			
12. Was the data generation and reduction conducted in a technically correct manner?	X			
13. Was the data reported in proper units and with the correct number of significant figures?	X			
14. Were the samples maintained at a temperature between 0°C - 40°C?	X			
15. Was the equipment involved in the sampling activities in calibration (i.e., torque wrenches, ambient temperature and pressure gauges, dataloggers, ultrasonic micrometer, min/max thermometers)?	X			

Attachment 3 – Independent Technical Reviewer (ITR) Review Checklist (continued)
Page 2 of 2

HSG Sampling Batch Number: INHSGS090011

Raw Data Collection and Management		YES	NO	NA	Comments
16.	Are there satisfactory equipment blanks, canister cleaning blanks, and needle assembly cleanliness results?	X			
17.	Has the data been reviewed for transcription errors?	X			
18.	Verify all the data is signed and dated, and the data is recorded clearly, legibly, and accurately.	X			
19.	No more than 20 waste containers are in the batch (excluding the QC samples).	X			
20.	Procedure Number: CCP-TP-093 Revision: 13				
21.	Is the procedure number and revision correct?	X			
22.	All changes to original data are lined out, initialed, and dated by the individual making the change, and a justification included. (NOTE: Original data must not be obliterated or otherwise disfigured as not to be readable. Data changes shall only be made by the individual who originally collected the data or an individual authorized to change the data.)	X			

Independent Technical Reviewer:

Joe Poirier — Printed Name
Signature
9/14/09 — Date

Attachment 1 – Chain of Custody/Canister Tag Chain Of Custody # 560 Page 1 of 2

Location: Headspace	Point of Origin: CPP - 659	Sample Matrix is Gas	Ambient Conditions
Field Sample Identification / Sample Number	Field Batch Number: **INHSGS090011**		Temperature (centigrade): 26.2 / Pressure (in. Hg): 25

Site	Date	SUMMA® Canister No.	Size (mL)	TID No.	Container ID /Barcode No.	Waste Stream ID	Cleaning Batch No.	Needle Assembly Batch No.	Type SS CS B D F C (Note 1)	Vent Seal (Y/NA)	Start Time	End Time	Beginning Pressure (in.Hg)	End Pressure (in.Hg or psig)	Sampler's Signature (Note 2)
	*083109	ERW 9-3-09													
IN	8/31/09	EI B32	250	0781151	N/A	N/A	349C	INHSGS080006NB	B	N/A	1321	1324	25	0 in Hg	ERW
IN	8/31/09	EI 437	250	0781152	000000397	ID-ANLE-S5000	349C	INHSGS090007NB	D	Y	1328	1333	24	2 in Hg	ERW
IN	8/31/09	EI 746	250	0781153	000000397	ID-ANLE-S5000	349C	INHSGS090007NB	D	Y	1328	1333	24	1 in Hg	ERW
IN	8/31/09	EI A51	250	0781154	000000396	ID-ANLE-S5000	349C	INHSGS080006NB	SS	Y	1338	1342	25	0 in Hg	ERW
IN	8/31/09	EI D25	250	0781155	000000395	ID-ANLE-S5000	349C	INHSGS080006NB	SS	Y	1404	1407	25	1 in Hg	ERW
IN	8/31/09	EI 270	250	0781156	000000398	ID-ANLE-S5000	349C	INHSGS080006NB	SS	Y	1405	1410	26	2 in Hg	ERW
IN	8/31/09	EI B11	250	0781157	000000399	ID-ANLE-S5000	349C	INHSGS080006NB	SS	Y	1443	1447	25	3 in Hg	ERW
IN	8/31/09	EI 759	250	0781158	000000400	ID-ANLE-S5000	349C	INHSGS080006NB	SS	Y	1443	1448	26	3 in Hg	ERW
IN	8/31/09	EI C06	250	0781159	000000393	ID-ANLE-S5000	349C	INHSGS080006NB	SS	Y	1506	1511	28	3 in Hg	ERW
IN	8/31/09	EI 084	250	0781160	RH0001004	ID-ANLE-S5000	349C	INHSGS080006NB	SS	Y	1529	1533	26	2 in Hg	ERW
IN	8/31/09	EI D23	250	0781161	RH0001003	ID-ANLE-S5000	349C	INHSGS080006NB	SS	Y	1529	1534	24	0 in Hg	ERW
IN	8/31/09	EI 661	250	0781162	000000394	ID-ANLE-S5000	349C	INHSGS080006NB	SS	Y	1605	1610	26	2 in Hg	ERW
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Note 1. Analysis required:
C - Needle Assembly Cleanliness Certification: VOC.
SS - Single Sample: VOC, H_2, CH_4
CS - Composite Sample: VOC, CH_4, H_2
B - Field Blank: VOC
D - Duplicate: VOC, H_2, CH_4
F - Field Reference Standard: VOC

Note 2 Sampler's initials = Sampler's signature

Sampler' Signature: E R Walk

600055

*Correction applies to all dates in date column. ERW 9-3-09

Attachment 1 – Chain of Custody/Canister Tag (Continued) Chain of Custody #: 560 Page 2 of 2

Field Batch Number: INHSGS090011

Comments: N/A

Analyzing Laboratory ECL

Shipment Tracking # 0781163

Method of Shipping
ECL Pickup

Instrument Section	M&TE Serial / ID No.	Calibration Due Date	Initials / Date
Pressure Meter	XC0349	3/18/10	ERW 08/31/09
Thermometer	XC0716	2/16/10	ERW 08/31/09
Min / Max Memory Thermometer	723207 723194	6/25/10 12/09/09	ERW 08/31/09

Preservation Method: 0 - 40°C

Analysis Requested	VOCs	Hydrogen	Methane
	X		

Batch TID Number(s) or NA: # 0781163

Batch TID Initials and date: 08/31/09 ERW

At completion of the above, return a copy of this form to the shipper.

Custody Initiated By: (Sampler Name/Organization) Eddy R Walter / CCP	Date/Time 08/31/09 1324		
Relinquished By: (Name/Organization) Eddy R Walter / CCP	Date/Time 08/31/09 1645	Received By: (Name/Organization)	Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)	Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)	Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)	Date/Time
Final Disposition By: (Name/Organization) (Canister to be cleaned upon notification by Site Project Manager)	Date/Time	Disposition:	

000006

GAS SAMPLE CANISTER TAG

I	N	0	8	3	1	0	9	E	I	B	3	2
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHS6S090011 **Drum Number:** N/A

Sampling Organization: CCP **Sample Description:** FIELD BLANK

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 24	072109	1030	TBL
Cleaning Batch: 349C	M= <5.0E-2	P= 642T			
Field-	C= 25"Hg	T= 26.2			
Before Sample Collection	M=	P= 25	083109	1321	ERW
Field-	C= 0"Hg	T= 26.2			
After Sample Collection	M= ~~0"Hg~~ ERW 9-10-09	P= 25	083109	1324	ERW
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? (Y) / N (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: Eddy R Walt

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

I	N	0	8	3	1	0	9	E	I	4	3	7
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSGS090011 **Drum Number:** IDAE000000397

Sampling Organization: CCP **Sample Description:** DUPLICATE SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 24	072109	1030	TBL
Cleaning Batch: 349C	M= <5.0E-2	P= 642T			
Field-	C= 24 "Hg	T= 26.2			
Before Sample Collection	M=	P= 25	083109	1328	EGW
Field-	C= 2 "Hg	T= 26.2			
After Sample Collection	M=	P= 25	083109	1333	EGW
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: [signature]

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

I	N	0	8	3	1	0	9	E	I	7	4	6
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSGS090011 **Drum Number:** IDAE000000397

Sampling Organization: CCP **Sample Description:** DUPLICATE SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 24	072109	1030	TBL
Cleaning Batch: 349C	M= <5.0E-2	P= 642T			
Field-	C= 24"Hg	T= 26.2			
Before Sample Collection	M=	P= 25	083109	1328	ERW
Field-	C= 1"Hg	T= 26.2	ERW 8-31-09		
After Sample Collection	M=	P= 25	083109	1333	ERW
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: Eddy R Walls

Notes:
(1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

GAS SAMPLE CANISTER TAG

I	N	0	8	3	1	0	9	E	I	A	5	1
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG5090011 **Drum Number:** IDAG000000396

Sampling Organization: CCP **Sample Description:** SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 24	072109	1030	TBL
Cleaning Batch: 349C	M= <5.0E-2	P= 642T			
Field-	C= 25"Hg	T= 26.2			
Before Sample Collection	M=	P= 25	083109	1338	ERW
Field-	C= 0"Hg	T= 26.2		ERW 8-31-09 2	
After Sample Collection	M=	P= 25	083109	1341	ERW
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: Edgar Hall

Notes:
(1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.
(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

I	N	0	8	3	1	0	9	E	I	D	2	5
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHS6S090011 **Drum Number:** IDAE000006395

Sampling Organization: CCP **Sample Description:** SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 24	072109	1030	TBL
Cleaning Batch: 349C	M= <5.0E-2	P= 642T			
Field-	C= 25"Hg	T= 26.2			
Before Sample Collection	M=	P= 25	083109	1404	ERW
Field-	C= 1"Hg	T= 26.2			
After Sample Collection	M=	P= 25	083109	1407	ERW
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: E Walt

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

I	N	0	8	3	1	0	9	E	I	2	7	0
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSGS090011 **Drum Number:** IDAE000000398

Sampling Organization: CCP **Sample Description:** SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 24	072109	1030	TBL
Cleaning Batch: 349C	M= <5.0E-2	P= 642T			
Field-	C= 26 "Hg	T= 26.2			
Before Sample Collection	M=	P= 25	083109	1405	ERW
Field-	C= 2 "Hg	T= 26.2			
After Sample Collection	M=	P= 25	083109	1410	ERW
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: Eddy R Walt

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	W	0	8	3	1	0	9	E	I	B	1	1
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: NHSGAS090011 **Drum Number:** IDAE000000399

Sampling Organization: CAP **Sample Description:** Sample

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 24	072109	1030	TBL
Cleaning Batch: 349C	M= <5.0E-2	P= 642T			
Field-	C= 25 "Hg	T= 26.2			
Before Sample Collection	M=	P= 25	083109	1443	ERW
Field-	C= 3 "Hg	T= 26.2			
After Sample Collection	M=	P= 25	083109	1447	ERW
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: [signature]

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

/	W	0	8	3	1	0	9	E	I	7	5	9
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: /NHSGS090011 **Drum Number:** /DAE0000000400

Sampling Organization: CCP **Sample Description:** Sample

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 24	072109	1030	TBL
Cleaning Batch: 349C	M= <5.0E-2	P= 642T			
Field-	C= 26 "Hg	T= 26.2			
Before Sample Collection	M=	P= 25	083109	1443	ERW
Field-	C= 3 "Hg	T= 26.2			
After Sample Collection	M=	P= 25	083109	1448	ERW
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: Edgar Walt

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

L	W	0	8	3	1	0	9	E	I	C	0	6
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: WHSG5090011 Drum Number: IDAE000000393

Sampling Organization: CCP Sample Description: Sample

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 24	072109	1030	TBL
Cleaning Batch: 349C	M= <5.0E-2	P= 642T			
Field-	C= 28 "Hg	T= 26.2			
Before Sample Collection	M=	P= 25	083109	1506	ERW
Field-	C= 3 "Hg	T= 26.2			
After Sample Collection	M=	P= 25	083109	1511	ERW
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: Eddy R Walt

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	W	0	8	3	1	0	9	E	I	0	8	4
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: NHSGS090011 Drum Number: IDAERH000/004

Sampling Organization: CCP Sample Description: Sample

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 24	072109	1030	TBL
Cleaning Batch: 349C	M= <5.0E-2	P= 642T			
Field-	C= 26 "Hg	T= 26.2			
Before Sample Collection	M=	P= 25	083109	1529	ERW
Field-	C= 2 "Hg	T= 26.2			
After Sample Collection	M=	P= 25	083109	1533	ERW
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: Shelly R Walt

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	8	3	1	0	9	E	I	D	2	3
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG5090011 Drum Number: IDAERH0001003

Sampling Organization: CCP Sample Description: Sample

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 24	072109	1030	TBL
Cleaning Batch: 349C	M= <5.0E-2	P= 642T			
Field-	C= 24"Hg	T= 26.2			
Before Sample Collection	M=	P= 25	083109	1529	ERW
Field-	C= 0"Hg	T= 26.2			
After Sample Collection	M=	P= 25	083109	1534	ERW
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: Eddy R Walt

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	8	3	1	0	9	E	I	6	6	1
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: /NHSGS090011 **Drum Number:** /DAE000000394

Sampling Organization: CCP **Sample Description:** Sample

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 24	072109	1030	TBL
Cleaning Batch: 349C	M= <5.0E-2	P= 642T			
Field-	C= 26"Hg	T= 26.2			
Before Sample Collection	M= J	P= 25	083109	1605	ERW
Field-	C= 2"Hg	T= 26.2			
After Sample Collection	M= J	P= 25	083109	1610	ERW
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: Eddy R Walt

Notes:

(1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

You forwarded this message on 9/4/2008 10:15 AM.

Walters, Ed E.

From: Catherine A Crowder [Catherine.Crowder@inl.gov] **Sent:** Thu 9/4/2008 8:08 AM
To: Broomfield, Barbara J.; Stepzinski, Charles A.
Cc: Stepzinski, Debbie; Walters, Ed E.; charles.turner@wipp.ws
Subject: Needle Assembly Blanks
Attachments:

Analytical results for needle assembly equipment blanks in field batch INHSGS080006NB were acceptable. Concentrations of all VOC target analytes were less than or equal to three times the MDLs listed in Table B3-2 in Permit Attachment B3.

You forwarded this message on 7/2/2009 3:47 PM.

Walters, Ed E.

From: Catherine A Crowder [Catherine.Crowder@inl.gov] **Sent:** Thu 7/2/2009 2:50 PM
To: Broomfield, Barbara J.; Walters, Ed E.; charles.turner@wipp.ws
Cc:
Subject: Needle Assembly Blanks
Attachments:

Analytical results for needle assembly equipment blanks in field batch INHSGS090007NB were acceptable. Concentrations of all VOC target analytes were less than or equal to three times the MDLs listed in Table B3-2 in Permit Attachment B3.

Attachment 2 – Sample Drum Data Form

Field Batch Number: **INHSGS090011**

	Container ID	Sampling Scenario	Summary Category Group	Rigid Liner (Y/N/NA)	Rigid Liner Lid (Y/N/N/A)	Rigid Liner Lid Hole Diameter	Number of Inner Bags	Number of Liner Bags	Filter Model No.	Number of Filters	Restrictive Hydrogen Diffusivity (m/s/mf)	Package Configuration Group No.
1	IDAE000000397	3	S5000	Y	N	N/A	0	0	NucFil-019DS	1	3.7E-6	1
2	IDAE000000396	3	S5000	Y	N	N/A	0	0	NucFil-019DS	1	3.7E-6	1
3	IDAE000000395	3	S5000	Y	N	N/A	0	0	NucFil-019DS	1	3.7E-6	1
4	IDAE000000398	3	S5000	Y	N	N/A	0	0	NucFil-019DS	1	3.7E-6	1
5	IDAE000000399	3	S5000	Y	N	N/A	0	0	NucFil-019DS	1	3.7E-6	1
6	IDAE000000400	3	S5000	Y	N	N/A	0	0	NucFil-019DS	1	3.7E-6	1
7	IDAE000000393	3	S5000	Y	N	N/A	0	0	NucFil-019DS	1	3.7E-6	1
8	IDAERH0001004	3	S5000	N	N	N/A	0	1	NucFil-019DS	1	3.7E-6	2
9	IDAERH0001003	3	S5000	Y	N	N/A	0	0	NucFil-019DS	1	3.7E-6	1
10	IDAE000000394	3	S5000	Y	N	N/A	0	0	NucFil-019DS	1	3.7E-6	1
11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
22	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

000021

Attachment 2 – Sample Drum Data Form (Continued)

Field Batch Number: **INHSGS090011**

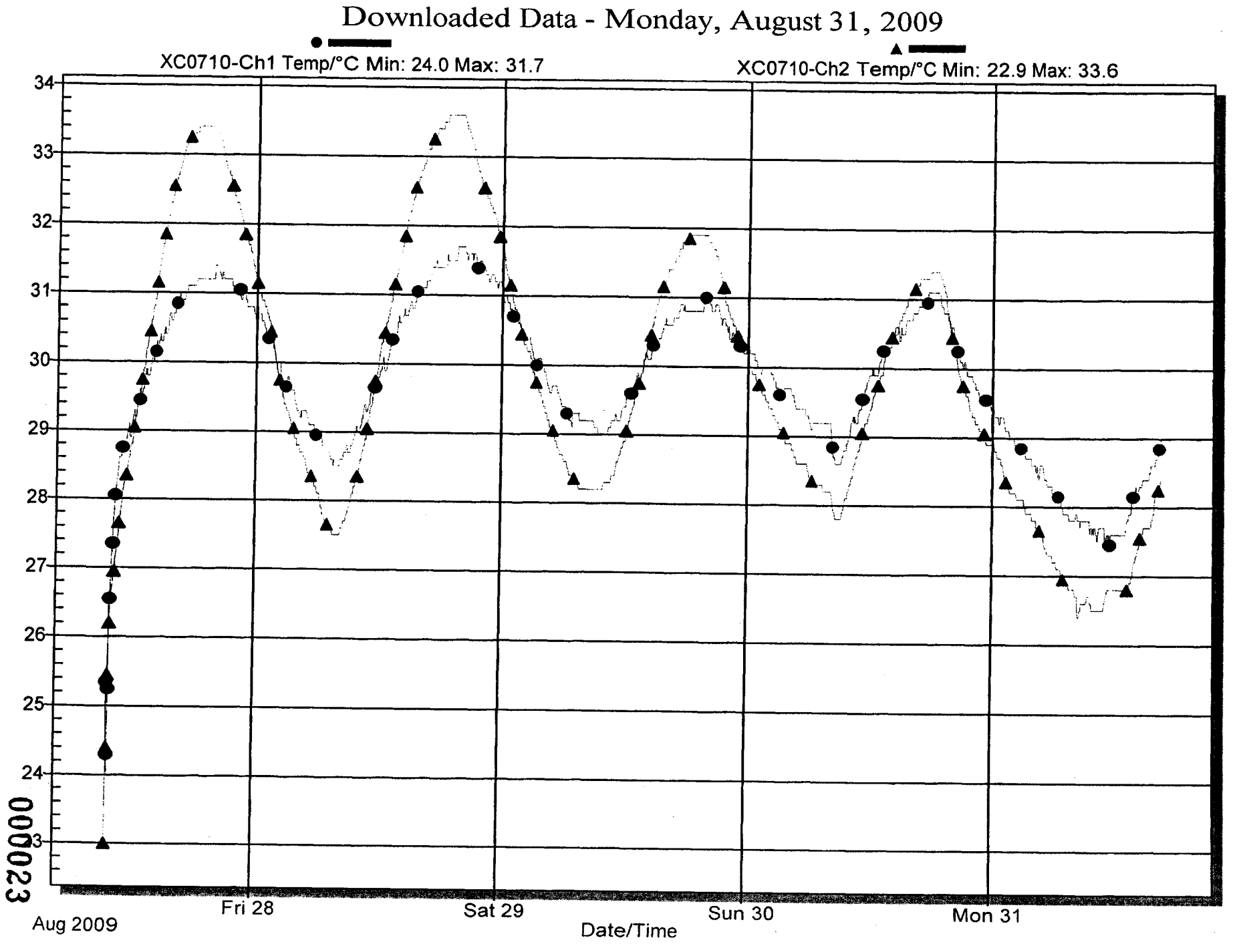
	Container ID	Closure Date	Vent Date	Permit Required Equilibrium Time (Days)	Container Age (Days)	Container Fill Factor (%)	Can This Container Be Sampled? (Y / N)	Datalogger M&TE Serial/ID No.: XC0710, XC0711			
								72 – Hour Drum Equilibrium			
								Start Date/Time		End Date/Time	
1	IDAE000000397	6/30/09	6/30/09	4	62	90	Y	8/27/09	1600	8/31/09	1333
2	IDAE000000396	7/2/09	7/2/09	4	60	90	Y	8/27/09	1600	8/31/09	1342
3	IDAE000000395	7/6/09	7/6/09	4	56	90	Y	8/27/09	1600	8/31/09	1407
4	IDAE000000398	7/6/09	7/6/09	4	56	90	Y	8/27/09	1600	8/31/09	1410
5	IDAE000000399	7/7/09	7/7/09	4	55	90	Y	8/27/09	1600	8/31/09	1447
6	IDAE000000400	7/9/09	7/9/09	4	53	90	Y	8/27/09	1600	8/31/09	1448
7	IDAE000000393	7/10/09	7/10/09	4	52	90	Y	8/27/09	1600	8/31/09	1511
8	IDAERH0001004	7/15/09	7/15/09	11	47	90	Y	8/27/09	1600	8/31/09	1533
9	IDAERH0001003	7/20/09	7/20/09	4	42	90	Y	8/27/09	1600	8/31/09	1534
10	IDAE000000394	7/16/09	7/16/09	4	46	90	Y	8/27/09	1600	8/31/09	1610
11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A	
12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A	
13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A	
14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A	
15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A	
16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A	
17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A	
18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A	
19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A	
20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A	
21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A	
22	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A	

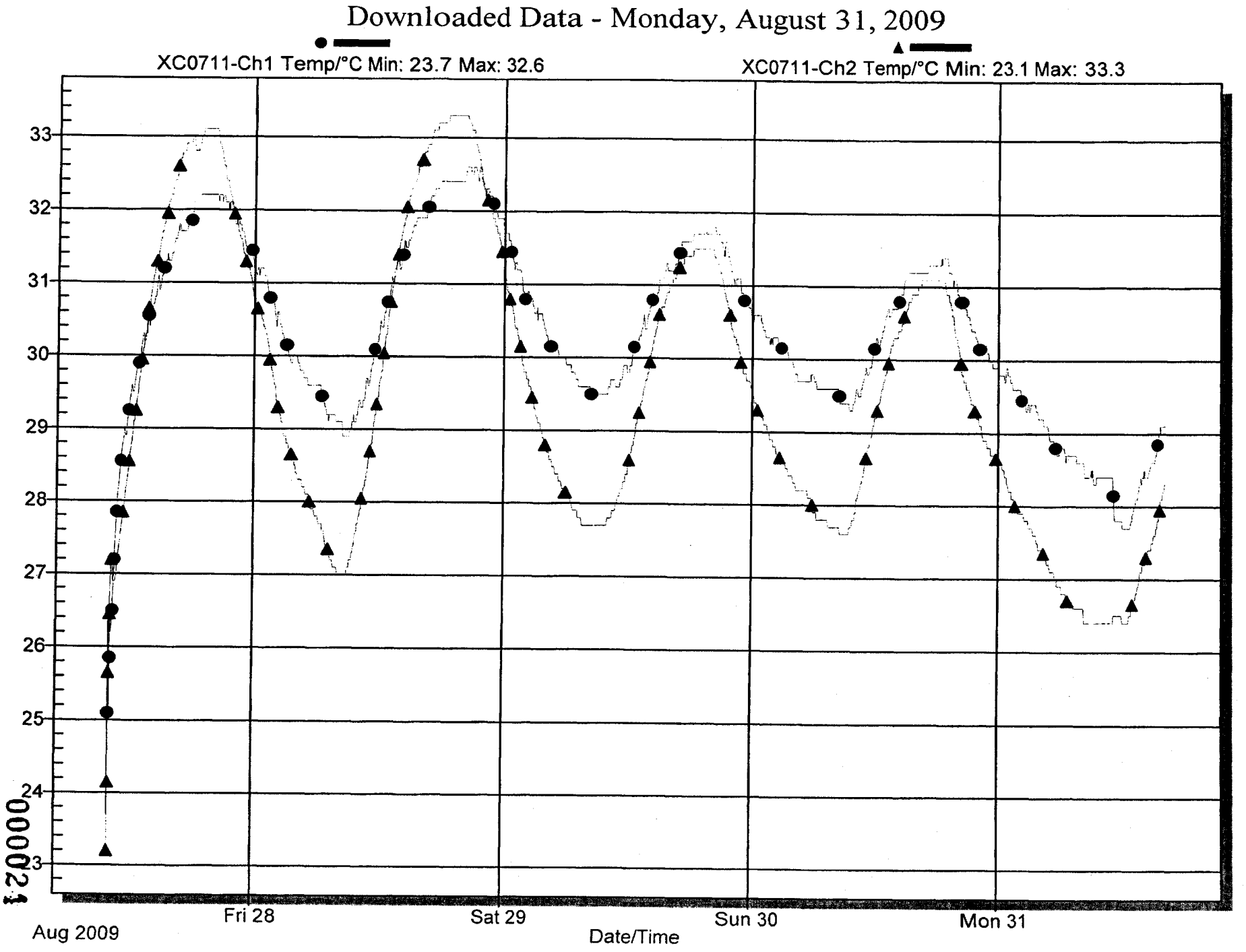
HSG Sampler: EDDY R WALTERS
Print Name

Signature

8/31/09
Date

000022


Downloaded Data - Monday, August 31, 2009
XC0710-Ch1 Temp/°C Min: 24.0 Max: 31.7
XC0710-Ch2 Temp/°C Min: 22.9 Max: 33.6
34
33
32
31
30
29
28
27
26
25
24
3
Aug 2009
Fri 28
Sat 29
Sun 30
Mon 31
Date/Time
000023


Downloaded Data - Monday, August 31, 2009
XC0711-Ch1 Temp/°C Min: 23.7 Max: 32.6
XC0711-Ch2 Temp/°C Min: 23.1 Max: 33.3
33
32
31
30
29
28
27
26
25
24
23
120002
Aug 2009
Fri 28
Sat 29
Sun 30
Mon 31
Date/Time

Attachment 11 – CCP SPM Summa HSG Analysis Project Level Validation Checklist and Summary

BDR Number: ECL09029M				Analysis Date: 9-10-09 & 9-15-09
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
1. Does the Batch Data Report (BDR) contain the batch number, laboratory name, and the date of the batch report? **Reference Source: CCP-PO-001, Table B3-13**	X			
2. Is the BDR complete according to the BDR Table of Contents? **Reference Source: CCP-PO-001, B3-10b**	X			
3. Has a BDR Narrative been included with the BDR? **Reference Source : CCP-PO-001, Table B3-13**	X			
4. Are the correct revisions of the procedures used and identified? **Reference Source: CCP-PO-001, Table B3-13**	X			
5. List all containers that have met the QAOs. **Reference Source: CCP-PO-001, B3-10b**				Container Numbers: IDAERH0001004 IDAERH0001003 IDAE000000400 IDAE000000399 IDAE000000398 IDAE000000397 IDAE000000396 IDAE000000395 IDAE000000394 IDAE000000393
6. Is there a reference to or copy of any associated NCRs (if any) in the BDR? **Reference Source: CCP-PO-001, Table B3-13**			X	No NCRs
7. Is the completed, signed, and dated Independent Technical Reviewer checklist included in the BDR? **Reference Source: CCP-PO-001, Table B3-13**	X			
8. Does the BDR include the operator's signature and analysis date? **Reference Source: CCP-PO-001, Table B3-13**	X			
9. Are there 20 laboratory samples or less in the analytical batch (excluding QC)? **Reference Source: CCP-PO-001, B3-10**	X			
10. Does the chain of custody (COC) form correctly identify the Waste Stream ID? **Reference Source: CCP-PO-001, Table B3-13**	X			
11. Does the BDR contain a complete and signed copy of the COC form? **Reference Source: CCP-PO-001, Table B3-13**	X			

COPY

Attachment 11 – CCP SPM Summa HSG Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: ECL09029M				Analysis Date: 9-10-09 & 9-15-09
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
12. If the analysis BDR includes composited samples, are all of the containers in the composited sample from the same waste stream? **Reference Source: CCP Technical Procedures**			X	No composited samples
13. Is there a cross-reference between waste container number, field sample number, and lab sample number ID; and signature release by lab personnel in the batch report? **Reference Source: CCP-PO-001, B1-5**	X			
14. Does the BDR contain gas sample canister tags for each sample that are properly filled out? **Reference Source: CCP-PO-001, Table B3-13**	X			
15. Have the samples been properly preserved (0-40° C)? **Reference Source: CCP-PO-001, Table B1-1**	X			
16. Are holding times between collection and analysis within the 14-day requirement? **Reference Source: CCP-PO-001, Table B1-2**			X	There is not a 14-day requirement between collection & analysis for Summa HSG Analysis
17. Does the BDR include the date and time of analysis for each sample? **Reference Source: CCP-PO-001, Table B3-13**	X			
18. Have data reporting flags been assigned properly? **Reference Source: CCP-PO-001, Table B3-13**	X			
19. Did the batch report analysis consist of all the target compounds? **Reference Source: CCP-PO-001, Table B3-2**	X			
20. Is there a minimum of one laboratory (method) blank per analytical batch with all analytes $\leq$ 3 x MDL? **Reference Source: CCP-PO-001, Table B3-3**	X			
21. Are all target analytes in field blanks and equipment blanks (if any) < 3 x instrument MDL as listed in CCP-PO-001 Table B3-2? **Reference Source: CCP-PO-001, Table B1-3**	X			

Attachment 11 – CCP SPM Summa HSG Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: ECL09029M				Analysis Date: 9-10-09 & 9-15-09
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
22. For field sample and field duplicate results that are both > PRQL, are the relative percent differences (RPDs) within the acceptance criteria? **Reference Source: CCP-PO-001, Table B3-2**	X			
23. Is there a minimum of one laboratory duplicate (LD) analyzed per analytical batch? **Reference Source: CCP-PO-001, Table B3-3**	X			
24. Is there a minimum of one field duplicate analyzed per sampling batch including in the analytical batch? **Reference Source: CCP-PO-001, Table B1-3**	X			
25. For laboratory duplicate results that are > PRQL (or for laboratory control standard and replicate laboratory control standard results > PRQL), is the RPD ≤ 25%? **Reference Source: CCP-PO-001, Table B3-3**	X			
26. For sample/field duplicate results that are > PRQL (or for laboratory control standard and replicate laboratory control standard results > PRQL), is the RPD ≤ 25%? **Reference Source: CCP-PO-001, Table B1-3**	X			
27. If no target analytes were present greater than the PRQL, was a replicate LCS satisfactorily performed? **Reference Source: CCP-PO-001, Table B3-3**			X	Only applicable to on-line system
28. Is a minimum of one laboratory control standard (LCS) analyzed per analytical batch and are the percent recoveries (%Rs) within 70-130%? **Reference Source: CCP-PO-001, Table B3-3**	X			
29. For GC/MS and methanol analyses, does the field reference standard (FRS) contain at least six analytes and are the %Rs within 70-130%? **Reference Source: CCP-PO-001, B1-1b and Table B1-3**	X			FRS Memo – CP:05:01128

Attachment 11 – CCP SPM Summa HSG Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: ECL09029M				Analysis Date: 9-10-09 & 9-15-09
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
30. For GC/MS analyses, was the BFB tune performed at a minimum of every 12 hours and were the ion abundance criteria satisfied? **Reference Source: CCP-PO-001, Table B3-5**	X			
31. For GC/MS analyses, for the five-point initial calibration, is the %RSD for all compounds < 35%? **Reference Source: SW-846 8260**	X			
32. For GC/MS analyses, is one of the calibration standards less than the PRQL? **Reference Source: CCP-PO-001, Table B3-3**	X			
33. For GC/MS analyses, is the continuing calibration performed at a minimum frequency of every 12 hours of operation? **Reference Source: SW-846 8260**	X			
34. For GC/MS analyses, are the continuing calibration internal standard area counts between 50-200%? **Reference Source: CCP-PO-001, Table B3-5**	X			
35. For GC/MS analyses, are non-target compounds identified as Tentatively Identified Compounds (TICs)? **Reference Source: CCP-PO-001, B-3a**			X	No TICs
36. Does the BDR contain all of the target compounds appropriate for the waste stream? **Reference Source: CCP-PO-001, Table B3-2/AK Summary Report**	X			
37. For GC/MS analyses, is the continuing calibration %D for all compounds ≤ 30% of the ICAL? **Reference Source: SW-846 8260**	X			
38. For methanol analysis by GC/FID, does the initial calibration (ICAL) have a minimum of five points, is the %R within 85-115%, and is the correlation coefficient ≥ 0.990? **Reference Source: SW-846 8015**			X	Analysis not performed
39. For methanol analysis by GC/FID, is the continuing calibration (CC) analyzed every 12 hours, is the %D ≤ 15%, is the %R within 85-115%, and is the CC retention time within the ICAL window? **Reference Source: SW-846 8015**			X	Analysis not performed

Attachment 11 – CCP SPM Summa HSG Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: ECL09029M				Analysis Date: 9-10-09 & 9-15-09
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
40. For methanol analysis by GC/FID, is one of the calibration standards less than the PRQL? **Reference Source: SW-846 8015**			X	Analysis not performed
41. Are all data reporting forms complete with data reported properly (correct units and significant figures)? **Reference Source: CCP-PO-001, B3-10b**	X			
42. Is the BDR complete according to the BDR Table of Contents? *Note: For each BDR from INL ECL, ensure all items listed in Section 2 of the appropriate checklist.* **Reference Source: CCP-PO-001, B3-10b**	X			
43. Has the laboratory successfully participated in the latest PDP? **Reference Source: CCP-PO-001, B3-5**	X			
44. Has the laboratory met the 90% completeness requirement? **Reference Source: CCP-PO-001, Table B3-2**	X			
45. Does the laboratory use traceable standards? **Reference Source: CCP-PO-001, B3-5**	X			
46. Has the laboratory had acceptable demonstration of precision, accuracy, and MDLs [method performance samples] performed within the last 6 months? **Reference Source: CCP-PO-001, Table B3-5**	X			
47. Have QC designations for samples been applied as appropriate? **Reference Source: CCP-PO-001, Table B3-13**	X			
Comments: NA				
The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.				
Hillari J. Neely				10-26-09
SPM Printed Name		Signature		Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date

Attachment 11 – CCP SPM Summa HSG Analysis Project Level Validation Checklist and Summary (Continued)

SPM Printed Name	Signature	Reason	Date

Idaho National Laboratory

Analytical Chemistry and Instrumentation Department

Environmental Chemistry Laboratory

Gas Headspace Analysis Data Report

ISSUED TO:

Records Coordinator
Central Characterization Program

REPORT IDENTIFICATION:

Report Number: ECL09029M
Analysis Method: CCP-TP-175
Analyte: VOCs
Revision Number: 0
Change Number: 0
Issue Date: 09/22/2009

SUMMARY: This report provides analysis results and associated documentation for volatile organic compounds (VOCs) analyses of samples received 09/02/2009 from data batch INHSGS090011. Because one of these samples contained analytes at high concentrations, a different dilution for this sample was analyzed and reported (more than one analysis data sheet for this sample).

Report Content:

Section	Content	Page #
1.0	Sample Identification Table/Analysis Request Form	0002-0003
2.0	Sample Custody Documents and Sample Tags	0004-0018
3.0	Analysis Results	0019-0046
4.0	Quality Control Measurements Results	0047-0057
5.0	Calibration Results	0058-0064
6.0	Data Review Checklists	0065-0072
7.0	GC VOC Raw Data	0073-0217
8.0	Miscellaneous Supporting Data	0218-0253

Release Authorization:

Name & Position	Signature	Date
Catherine A. Crowder ECL Group/Technical Leader	Catherine A. Crowder	9/22/09

SECTION 1.0

SAMPLE IDENTIFICATION TABLE/ ANALYSIS REQUEST FORM

ENVIRONMENTAL CHEMISTRY LABORATORY

ANALYTICAL REQUEST FORM

PAGE: 1 RECEIVING GROUP NO. ECL09029 ANALYSES REQUIRED:

FIELD SITE: INTEC GC-VOC: X GC-H2:

SAMPLE TYPE: GAS GC/MS: X GC-CH4:

NUMBER OF SAMPLES: 12 VTSR: 1135 09/02/09

	LAB ID.	FIELD ID.	FIELD BATCH #	FIELD COC #	CANISTER SIZE (mL)	BLANK?
1	09245013	IN083109EIB32	INHSGS090011	560	250	Y
2	09245014	IN083109EI437	INHSGS090011	560	250	N
3	09245015	IN083109EI746	INHSGS090011	560	250	N
4	09245016	IN083109EIA51	INHSGS090011	560	250	N
5	09245017	IN083109EID25	INHSGS090011	560	250	N
6	09245018	ID083109EI270	INHSGS090011	560	250	N
7	09245019	IN083109EIB11	INHSGS090011	560	250	N
8	09245020	IN083109EI759	INHSGS090011	560	250	N
9	09245021	ID083109EIC06	INHSGS090011	560	250	N
10	09245022	IN083109EI084	INHSGS090011	560	250	N
11	09245023	IN083109EID23	INHSGS090011	560	250	N
12	09245024	IN083109EI661	INHSGS090011	560	250	N

SECTION 20

SAMPLE CUSTODY DOCUMENTS AND SAMPLE TAGS

Attachment 1 – Chain of Custody/Canister Tag Chain Of Custody # 560 Page 1 of 2

Location: Headspace	Point of Origin: CPP - 659	Sample Matrix is Gas	Ambient Conditions
Field Sample Identification / Sample Number	Field Batch Number: INHSGS090011		Temperature (centigrade): 26.2 Pressure (in. Hg): 25

Site	Date	SUMMA® Canister No.	Size (mL)	TID No.	Container ID /Barcode No.	Waste Stream ID	Cleaning Batch No.	Needle Assembly Batch No.	Type SS CS B D F C (Note 1)	Vent Seal (Y/NA)	Start Time	End Time	Beginning Pressure (in.Hg)	End Pressure (in.Hg or psig)	Sampler's Signature (Note 2)
IN	8/31/09	EI B32	250	0781151	N/A	N/A	349C	INHSGS080006NB	B	N/A	1321	1324	25	0 in Hg	ERW
IN	8/31/09	EI 437	250	0781152	000000397	ID-ANLE-S5000	349C	INHSGS090007NB	D	Y	1328	1333	24	2 in Hg	ERW
IN	8/31/09	EI 746	250	0781153	000000397	ID-ANLE-S5000	349C	INHSGS090007NB	D	Y	1328	1333	24	1 in Hg	ERW
IN	8/31/09	EI A51	250	0781154	000000396	ID-ANLE-S5000	349C	INHSGS080006NB	SS	Y	1338	1342	25	0 in Hg	ERW
IN	8/31/09	EI D25	250	0781155	000000395	ID-ANLE-S5000	349C	INHSGS080006NB	SS	Y	1404	1407	25	1 in Hg	ERW
IN	8/31/09	EI 270	250	0781156	000000398	ID-ANLE-S5000	349C	INHSGS080006NB	SS	Y	1405	1410	26	2 in Hg	ERW
IN	8/31/09	EI B11	250	0781157	000000399	ID-ANLE-S5000	349C	INHSGS080006NB	SS	Y	1443	1447	25	3 in Hg	ERW
IN	8/31/09	EI 759	250	0781158	000000400	ID-ANLE-S5000	349C	INHSGS080006NB	SS	Y	1443	1448	26	3 in Hg	ERW
IN	8/31/09	EI C06	250	0781159	000000393	ID-ANLE-S5000	349C	INHSGS080006NB	SS	Y	1506	1511	28	3 in Hg	ERW
IN	8/31/09	EI 084	250	0781160	RH0001004	ID-ANLE-S5000	349C	INHSGS080006NB	SS	Y	1529	1533	26	2 in Hg	ERW
IN	8/31/09	EI D23	250	0781161	RH0001003	ID-ANLE-S5000	349C	INHSGS080006NB	SS	Y	1529	1534	24	0 in Hg	ERW
IN	8/31/09	EI 661	250	0781162	000000394	ID-ANLE-S5000	349C	INHSGS080006NB	SS	Y	1605	1610	26	2 in Hg	ERW
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Note 1. Analysis required:

C - Needle Assembly Cleanliness Certification: VOC.
SS - Single Sample: VOC, H_2, CH_4
CS - Composite Sample: VOC, CH_4, H_2
B - Field Blank: VOC
D - Duplicate: VOC, H_2, CH_4
F - Field Reference Standard: VOC

Note 2. Sampler's initials = Sampler's signature

Sampler' Signature: ERW

Attachment 1 – Chain of Custody/Canister Tag (Continued) Chain of Custody #: 560 Page 2 of 2

Field Batch Number: INHSGS090011

Comments: ~~N/A~~ ORE 9/22/09 Tags have a prefix of ~~NT~~ IDAE in front of container number and coc does not.

Analyzing Laboratory ECL

Instrument Section	M&TE Serial / ID No.	Calibration Due Date	Initials / Date
Pressure Meter	XC0349	3/18/10	ERW 08/31/09
Thermometer	XC0716	2/16/10	ERW 08/31/09
Min / Max Memory Thermometer	723207 723194	6/25/10 12/09/09	ERW 08/31/09

Preservation Method: 0 - 40°C

Shipment Tracking # 0781163

900000

Method of Shipping
ECL Pickup

Analysis Requested	VOCs	Hydrogen	Methane
	X		

Batch TID Number(s) or NA: # 0781163

Batch TID Initials and date: 08/31/09 ERW

At completion of the above, return a copy of this form to the shipper.

Custody Initiated By: (Sampler Name/Organization) Eddy R Walter / CCP	Date/Time 08/31/09 1324		
Relinquished By: (Name/Organization) Eddy R Walter / CCP	Date/Time 08/31/09 1645	Received By: (Name/Organization) Thomas B Lintz INL	Date/Time 090209 1135
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)	Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)	Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)	Date/Time
Final Disposition By: (Name/Organization) C. A. Crowder / ECL (Canister to be cleaned upon notification by Site Project Manager)	Date/Time 092109 1130	Disposition: Cleaning	

GAS SAMPLE CANISTER TAG

I	N	0	8	3	1	0	9	E	I	B	3	2
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHS650900II **Drum Number:** N/A

Sampling Organization: CCP **Sample Description:** FIELD BLANK

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 24	072109	1030	TBL
Cleaning Batch: 349C	M= <5.0E-2	P= 642T			
Field-	C= 25 "Hg	T= 26.2			
Before Sample Collection	M=	P= 25	083109	1321	ERW
Field-	C= 0" Hg	T= 26.2			
After Sample Collection	M= ~~0" Hg~~	P= 25	083109	1324	ERW
Analytical Laboratory	C= 2" Hg	T= 24			~~HG~~
	M=	P= 621ST	090209	1011	

Blank Sample? (Y) / N (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: Edgar Walk

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

I	N	0	8	3	1	0	9	E	I	4	3	7
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSGS090011 **Drum Number:** IDAE000000397

Sampling Organization: CCP **Sample Description:** DUPLICATE SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 24	072109	1030	TBL
Cleaning Batch: 349C	M= <5.0E-2	P= 642T			
Field-	C= 24 "Hg	T= 26.2			
Before Sample Collection	M=	P= 25	083109	1328	ECW
Field-	C= 2 "Hg	T= 26.2			
After Sample Collection	M=	P= 25	083109	1333	ECW
Analytical Laboratory	C= 2 "Hg	T= 24			
	M=	P= 645T	090309	1212	JBH

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: [signature]

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

GAS SAMPLE CANISTER TAG

I	N	0	8	3	1	0	9	E	I	7	4	6
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X
Sampling Site				Date						Canister ID		

Batch Number: INHSGS090011 **Drum Number:** IOAE000000397

Sampling Organization: CCP **Sample Description:** DUPLICATE SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 24	072109	1030	TBL
Cleaning Batch: 349C	M= <5.0E-2	P= 642T			
Field-	C= 24"Hg	T= 26.2			
Before Sample Collection	M=	P= 25	083109	1328	ERW
Field-	C= 1"Hg	T= 26.2	ERW 8-31-09		
After Sample Collection	M=	P= 25	083109	1333	ERW
Analytical Laboratory	C= 2" Hg	T= 24			
	M=	P= 645T	090209	1213	JBB

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: Eddy R Walls

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

I	N	0	8	3	1	0	9	E	I	A	5	1
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG5090011 **Drum Number:** IDA5000000396

Sampling Organization: CCP **Sample Description:** SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 24	072109	1030	TBL
Cleaning Batch: 349C	M= <5.0E-2	P= 642T			
Field-	C= 25"Hg	T= 26.2			
Before Sample Collection	M=	P= 25	083109	1338	ERW
Field-	C= 0"Hg	T= 26.2	ERW 9-31-09		
After Sample Collection	M=	P= 25	083109	1340	ERW
Analytical Laboratory	C= 1"Hg	T= 24			
	M=	P= 645T	090209	1214	TBL

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: Edgar Blalt

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

I	N	0	8	3	1	0	9	E	I	D	2	5
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHS6509011 **Drum Number:** IDAE000006395

Sampling Organization: CCP **Sample Description:** SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 24	072109	1030	TBL
Cleaning Batch: 349C	M= <5.0E-2	P= 642T			
Field-	C= 25 "Hg	T= 26.2			
Before Sample Collection	M=	P= 25	083109	1404	ERW
Field-	C= 1 "Hg	T= 26.2			
After Sample Collection	M=	P= 25	083109	1407	ERW
Analytical Laboratory	C= 1 "Hg	T= 24	090209	1215	[illegible]
	M=	P= 645T			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: [signature]

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

I	N	0	8	3	1	0	9	E	I	2	7	0
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSGS090011 **Drum Number:** IDAE000000398

Sampling Organization: CCP **Sample Description:** SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 24	072109	1030	TBL
Cleaning Batch: 349C	M= <5.0E-2	P= 642T			
Field-	C= 26"Hg	T= 26.2			
Before Sample Collection	M=	P= 25	083109	1405	ERW
Field-	C= 2"Hg	T= 26.2			
After Sample Collection	M=	P= 25	083109	1410	ERW
Analytical Laboratory	C= 2"Hg	T= 24			
	M=	P= 645T	090209	1216	JBW

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: Eddy R Walt

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

GAS SAMPLE CANISTER TAG

1	N	0	8	3	1	0	9	E	I	B	1	1
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSGS090011 **Drum Number:** IDAE000000399

Sampling Organization: CAP **Sample Description:** Sample

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory Cleaning Batch: 349C	C= M= <5.0E-2	T= 24 P= 642T	072109	1030	TBL
Field- Before Sample Collection	C= 25 "Hg M=	T= 26.2 P= 25	083109	1443	ERW
Field- After Sample Collection	C= 3 "Hg M=	T= 26.2 P= 25	083109	1447	ERW
Analytical Laboratory	C= 3" Hg M=	T= 24 P= 645T	090209	1217	TBL

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: Eddy R White

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	W	0	8	3	1	0	9	E	I	7	5	9
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG5090011 **Drum Number:** IDAE00000400

Sampling Organization: CCP **Sample Description:** Sample

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 24	072109	1030	TBL
Cleaning Batch: 349C	M= <5.0E-2	P= 642T			
Field-	C= 26 "Hg	T= 26.2			
Before Sample Collection	M=	P= 25	083109	1443	ERW
Field-	C= 3 "Hg	T= 26.2			
After Sample Collection	M=	P= 25	083109	1448	ERW
Analytical Laboratory	C= 4"Hg	T= 24			
	M=	P= 645T	090203	1218	JRH

Blank Sample? Y / (N) **(Circle one)**

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: Evelyn Walker

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

L	W	0	8	3	1	0	9	E	I	C	0	6
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: NHSGS090011 Drum Number: IDAE000000393

Sampling Organization: CCP Sample Description: Sample

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 24	072109	1030	TBL
Cleaning Batch: 349C	M= <5.0E-2	P= 642T			
Field-	C= 28 "Hg	T= 26.2			
Before Sample Collection	M=	P= 25	083109	1506	ERW
Field-	C= 3 "Hg	T= 26.2			
After Sample Collection	M=	P= 25	083109	1511	ERW
Analytical Laboratory	C= 3" Hg	T= 24			
	M= 0	P= 645T	090209	1219	JBP

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: E Glynn Walt

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

/	W	0	B	3	1	0	9	E	I	0	8	4
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG090011 **Drum Number:** IDAERH000/004

Sampling Organization: CCP **Sample Description:** Sample

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 24	072109	1030	TBL
Cleaning Batch: 349C	M= <5.0E-2	P= 642T			
Field-	C= 26 "Hg	T= 26.2			
Before Sample Collection	M=	P= 25	083109	1529	ERW
Field-	C= 2 "Hg	T= 26.2			
After Sample Collection	M=	P= 25	083109	1533	ERW
Analytical Laboratory	C= 3 "Hg	T= 24			
	M=	P= 645T	090209	1220	[illegible]

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: Edgar Walt

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	8	3	1	0	9	E	I	D	2	3
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site — Date — Canister ID

Batch Number: INHSGS090011 **Drum Number:** IDAERH0001003

Sampling Organization: CCP **Sample Description:** Sample

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 24	072109	1030	TBL
Cleaning Batch: 349C	M= <5.0E-2	P= 642T			
Field-	C= 24" Hg	T= 26.2			
Before Sample Collection	M=	P= 25	083109	1529	ERW
Field-	C= 0" Hg	T= 26.2			
After Sample Collection	M=	P= 25	083109	1534	ERW
Analytical Laboratory	C= 1" Hg	T= 24			
	M=	P= 645T	090209	1221	JBL

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: Eddy R Walt

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	8	3	1	0	9	E	I	6	6	1
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSGS090011 **Drum Number:** IDAE000000394

Sampling Organization: CCP **Sample Description:** Sample

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 24	072109	1030	TBL
Cleaning Batch: 349C	M= <5.0E-2	P= 642T			
Field-	C= 26"Hg	T= 26.2			
Before Sample Collection	M=	P= 25	083109	1605	ERW
Field-	C= 2"Hg	T= 26.2			
After Sample Collection	M=	P= 25	083109	1610	ERW
Analytical Laboratory	C= 2"Hg	T= 24			
	M=	P= 645T	090209	1228	[illegible]

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: [signature]

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

SECTION 3.0

ANALYSIS RESULTS

- DATA QUALIFIERS
- FORM 1s

DATA QUALIFIERS

IDAHO NATIONAL LABORATORY
ENVIRONMENTAL CHEMISTRY LABORATORY

Data qualifiers (flags) are as follows:

U - This flag indicates that the analyte was either not detected or found to be less than the MDL.

J - This flag is used when the data indicates the presence of a compound that meets the identification criteria and the result is $\geq$ MDL but less than the PRQL. For example, if the PRQL is 10 ppmv and if the MDL is 0.05 ppmv, and a sample analyte concentration of 0.30 ppmv is calculated, the data are reported as 0.30 J.

This flag is also used when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response compared to the closest eluting internal standard is assumed for quantitation of GC/MS analysis.

B - This flag is used when an analyte is found in the associated blank. It indicates possible/probable blank contamination and warns the data user to take appropriate action. This flag must be used for a TIC as well as for a positively identified target compound.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample is reanalyzed at a higher dilution factor, as in the "E" flag below, the suffix "DL" is appended to the sample number on the reporting form for the diluted sample, and all concentration values reported on that form are flagged with the "D" flag. This flag alerts data user that any discrepancies between the concentration reported may be due to dilution of the sample.

E - This flag identifies compounds whose concentrations exceed the calibration range of GC/MS or GC instruments for specific analysis. If one or more compounds have a response greater than full scale, the sample must be diluted and reanalyzed. All such compounds with a response greater than full scale have the concentration flagged with an "E" for the original analysis. If the dilution causes any compounds identified in the analysis to be below the calibration range in the second analysis, then the results of both analyses are reported separately. The reporting form for the diluted sample has the suffix "DL" appended to the sample number.

NOTE: For total xylenes, in GC/MS analysis, where three isomers are quantified, as two peaks, the calibration range of each peak is considered separately, e.g., a diluted analysis is not required for total zylenes unless the concentration of either peak separately exceeds the high standard.

N - This flag is used with TICs to indicate presumptive evidence of a compound's identification, based on a mass spectral library search.

Z - One or more QC samples do not meet acceptance criteria.

NR - Not Reported

Form Date (07/12/05)

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	09245013		Field Sample ID:	IN083109EIB32	
Analytical Batch:	ECL09029M		Sampling Batch:	INHSGS090011	
Data Report:	ECL09029M		Method:	CCP-TP-175	Rev. 0
Date/Time Analyzed:	9/10/2009	1207	Date Sampled:	8/31/2009	
Lab File ID:	S10HH		Date Received:	09/02/09	
Instrument ID:	GCMS-H		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	0.077	U
Benzene	0.047	U
Bromoform	0.014	U
Butanol	0.084	U
Carbon disulfide	0.052	U
Carbon tetrachloride	0.032	U
Chlorobenzene	0.038	U
Chloroform	0.048	U
Chloromethane	0.065	U
Cyclohexane	0.054	U
1,1-Dichloroethane	0.082	U
1,2-Dichloroethane	0.048	U
1,1-Dichloroethylene	0.055	U
cis-1,2-Dichloroethylene	0.033	U
trans-1,2-Dichloroethylene	0.035	U
1,2-Dichloropropane	0.020	U
Ethyl benzene	0.038	U
Ethyl ether	0.068	U
Methyl ethyl ketone	0.068	U
Methyl isobutyl ketone	0.049	U
Methylene chloride	0.053	U
1,1,2,2-Tetrachloroethane	0.029	U
Tetrachloroethylene	0.031	U
Toluene	0.043	J
1,1,1-Trichloroethane	0.024	U
Trichloroethylene	0.027	U
Trichlorofluoromethane	0.042	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.029	U
1,3,5-Trimethylbenzene	0.037	U
1,2,4-Trimethylbenzene	0.036	U
p/m-Xylene	0.033	U
o-Xylene	0.045	U

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	09245013		Field Sample ID:	IN083109EIB32	
Analytical Batch:	ECL09029M		Sampling Batch:	INHSGS090011	
Data Report:	ECL09029M		Method:	CCP-TP-175	Rev. 0
Date/Time Analyzed:	9/10/2009	1207	Date Sampled:	8/31/2009	
Lab File ID:	S10HH		Date Received:	09/02/09	
Instrument ID:	GCMS-H		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	09245014		Field Sample ID:	IN083109EI437	
Analytical Batch:	ECL09029M		Sampling Batch:	INHSGS090011	
Data Report:	ECL09029M		Method:	CCP-TP-175	Rev. 0
Date/Time Analyzed:	9/10/2009	1249	Date Sampled:	8/31/2009	
Lab File ID:	S10HI		Date Received:	09/02/09	
Instrument ID:	GCMS-H		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	8.2	J
Benzene	0.16	U
Bromoform	0.046	U
Butanol	0.29	U
Carbon disulfide	0.18	U
Carbon tetrachloride	0.11	U
Chlorobenzene	0.13	U
Chloroform	0.16	U
Chloromethane	0.22	U
Cyclohexane	0.19	U
1,1-Dichloroethane	0.28	U
1,2-Dichloroethane	0.16	U
1,1-Dichloroethylene	0.19	U
cis-1,2-Dichloroethylene	0.11	U
trans-1,2-Dichloroethylene	0.12	U
1,2-Dichloropropane	0.066	U
Ethyl benzene	0.34	J
Ethyl ether	0.23	U
Methyl ethyl ketone	0.60	J
Methyl isobutyl ketone	0.17	U
Methylene chloride	0.18	U
1,1,2,2-Tetrachloroethane	0.10	U
Tetrachloroethylene	0.11	U
Toluene	20	
1,1,1-Trichloroethane	0.083	U
Trichloroethylene	0.091	U
Trichlorofluoromethane	0.14	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.099	U
1,3,5-Trimethylbenzene	0.13	U
1,2,4-Trimethylbenzene	0.12	U
p/m-Xylene	1.3	J
o-Xylene	0.25	J

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	09245014		Field Sample ID:	IN083109EI437	
Analytical Batch:	ECL09029M		Sampling Batch:	INHSGS090011	
Data Report:	ECL09029M		Method:	CCP-TP-175	Rev. 0
Date/Time Analyzed:	9/10/2009	1249	Date Sampled:	8/31/2009	
Lab File ID:	S10HI		Date Received:	09/02/09	
Instrument ID:	GCMS-H		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	09245015		Field Sample ID:	IN083109EI746	
Analytical Batch:	ECL09029M		Sampling Batch:	INHSGS090011	
Data Report:	ECL09029M		Method:	CCP-TP-175	Rev. 0
Date/Time Analyzed:	9/10/2009	1330	Date Sampled:	8/31/2009	
Lab File ID:	S10HJ		Date Received:	09/02/09	
Instrument ID:	GCMS-H		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	8.3	J
Benzene	0.16	U
Bromoform	0.047	U
Butanol	0.29	U
Carbon disulfide	0.18	U
Carbon tetrachloride	0.11	U
Chlorobenzene	0.13	U
Chloroform	0.17	U
Chloromethane	0.22	U
Cyclohexane	0.19	U
1,1-Dichloroethane	0.28	U
1,2-Dichloroethane	0.17	U
1,1-Dichloroethylene	0.19	U
cis-1,2-Dichloroethylene	0.11	U
trans-1,2-Dichloroethylene	0.12	U
1,2-Dichloropropane	0.067	U
Ethyl benzene	0.34	J
Ethyl ether	0.23	U
Methyl ethyl ketone	0.55	J
Methyl isobutyl ketone	0.17	U
Methylene chloride	0.18	U
1,1,2,2-Tetrachloroethane	0.10	U
Tetrachloroethylene	0.11	U
Toluene	19	
1,1,1-Trichloroethane	0.084	U
Trichloroethylene	0.092	U
Trichlorofluoromethane	0.15	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.10	U
1,3,5-Trimethylbenzene	0.13	U
1,2,4-Trimethylbenzene	0.12	U
p/m-Xylene	1.2	J
o-Xylene	0.23	J

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	09245015		Field Sample ID:	IN083109EI746	
Analytical Batch:	ECL09029M		Sampling Batch:	INHSGS090011	
Data Report:	ECL09029M		Method:	CCP-TP-175	Rev. 0
Date/Time Analyzed:	9/10/2009	1330	Date Sampled:	8/31/2009	
Lab File ID:	S10HJ		Date Received:	09/02/09	
Instrument ID:	GCMS-H		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	09245016		Field Sample ID:	IN083109EIA51	
Analytical Batch:	ECL09029M		Sampling Batch:	INHSGS090011	
Data Report:	ECL09029M		Method:	CCP-TP-175	Rev. 0
Date/Time Analyzed:	9/10/2009	1409	Date Sampled:	8/31/2009	
Lab File ID:	S10HK		Date Received:	09/02/09	
Instrument ID:	GCMS-H		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	8.4	J
Benzene	0.099	U
Bromoform	0.028	U
Butanol	0.49	J
Carbon disulfide	0.11	U
Carbon tetrachloride	0.070	J
Chlorobenzene	0.080	U
Chloroform	0.10	U
Chloromethane	0.13	U
Cyclohexane	0.11	U
1,1-Dichloroethane	0.17	U
1,2-Dichloroethane	0.10	U
1,1-Dichloroethylene	0.11	U
cis-1,2-Dichloroethylene	0.068	U
trans-1,2-Dichloroethylene	0.074	U
1,2-Dichloropropane	0.041	U
Ethyl benzene	0.40	J
Ethyl ether	0.14	U
Methyl ethyl ketone	0.84	J
Methyl isobutyl ketone	0.80	J
Methylene chloride	0.11	U
1,1,2,2-Tetrachloroethane	0.061	U
Tetrachloroethylene	0.064	U
Toluene	15	
1,1,1-Trichloroethane	0.051	U
Trichloroethylene	0.056	U
Trichlorofluoromethane	0.088	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.061	U
1,3,5-Trimethylbenzene	0.076	U
1,2,4-Trimethylbenzene	0.075	U
p/m-Xylene	1.7	J
o-Xylene	0.42	J

Form Rev 05-07

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	09245016		Field Sample ID:	IN083109EIA51	
Analytical Batch:	ECL09029M		Sampling Batch:	INHSGS090011	
Data Report:	ECL09029M		Method:	CCP-TP-175	Rev. 0
Date/Time Analyzed:	9/10/2009	1409	Date Sampled:	8/31/2009	
Lab File ID:	S10HK		Date Received:	09/02/09	
Instrument ID:	GCMS-H		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

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GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	09245017		Field Sample ID:	IN083109EID25	
Analytical Batch:	ECL09029M		Sampling Batch:	INHSGS090011	
Data Report:	ECL09029M		Method:	CCP-TP-175	Rev. 0
Date/Time Analyzed:	9/10/2009	1452	Date Sampled:	8/31/2009	
Lab File ID:	S10HL		Date Received:	09/02/09	
Instrument ID:	GCMS-H		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	6.3	J
Benzene	0.049	U
Bromoform	0.014	U
Butanol	0.44	J
Carbon disulfide	0.097	J
Carbon tetrachloride	0.046	J
Chlorobenzene	0.039	U
Chloroform	0.049	U
Chloromethane	0.066	U
Cyclohexane	0.056	U
1,1-Dichloroethane	0.084	U
1,2-Dichloroethane	0.049	U
1,1-Dichloroethylene	0.056	U
cis-1,2-Dichloroethylene	0.034	U
trans-1,2-Dichloroethylene	0.036	U
1,2-Dichloropropane	0.020	U
Ethyl benzene	0.039	U
Ethyl ether	0.070	U
Methyl ethyl ketone	0.66	J
Methyl isobutyl ketone	0.051	U
Methylene chloride	0.054	U
1,1,2,2-Tetrachloroethane	0.030	U
Tetrachloroethylene	0.032	U
Toluene	6.7	J
1,1,1-Trichloroethane	0.025	U
Trichloroethylene	0.028	U
Trichlorofluoromethane	0.043	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.030	U
1,3,5-Trimethylbenzene	0.038	U
1,2,4-Trimethylbenzene	0.037	U
p/m-Xylene	0.040	J
o-Xylene	0.046	U

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	09245017		Field Sample ID:	IN083109EID25	
Analytical Batch:	ECL09029M		Sampling Batch:	INHSGS090011	
Data Report:	ECL09029M		Method:	CCP-TP-175	Rev. 0
Date/Time Analyzed:	9/10/2009	1452	Date Sampled:	8/31/2009	
Lab File ID:	S10HL		Date Received:	09/02/09	
Instrument ID:	GCMS-H		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

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GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	09245018		Field Sample ID:	ID083109EI270	
Analytical Batch:	ECL09029M		Sampling Batch:	INHSGS090011	
Data Report:	ECL09029M		Method:	CCP-TP-175	Rev. 0
Date/Time Analyzed:	9/10/2009	1531	Date Sampled:	8/31/2009	
Lab File ID:	S10HM		Date Received:	09/02/09	
Instrument ID:	GCMS-H		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	0.75	J
Benzene	0.099	U
Bromoform	0.028	U
Butanol	0.23	J
Carbon disulfide	0.11	U
Carbon tetrachloride	0.066	U
Chlorobenzene	0.080	U
Chloroform	0.10	U
Chloromethane	0.13	U
Cyclohexane	0.12	J
1,1-Dichloroethane	0.17	U
1,2-Dichloroethane	0.10	U
1,1-Dichloroethylene	0.11	U
cis-1,2-Dichloroethylene	0.068	U
trans-1,2-Dichloroethylene	0.074	U
1,2-Dichloropropane	0.041	U
Ethyl benzene	0.080	U
Ethyl ether	0.14	U
Methyl ethyl ketone	0.14	U
Methyl isobutyl ketone	0.10	U
Methylene chloride	0.11	U
1,1,2,2-Tetrachloroethane	0.061	U
Tetrachloroethylene	0.064	U
Toluene	16	
1,1,1-Trichloroethane	0.051	U
Trichloroethylene	0.056	U
Trichlorofluoromethane	0.088	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.061	U
1,3,5-Trimethylbenzene	0.076	U
1,2,4-Trimethylbenzene	0.075	U
p/m-Xylene	0.069	U
o-Xylene	0.093	U

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	09245018		Field Sample ID:	ID083109EI270	
Analytical Batch:	ECL09029M		Sampling Batch:	INHSGS090011	
Data Report:	ECL09029M		Method:	CCP-TP-175	Rev. 0
Date/Time Analyzed:	9/10/2009	1531	Date Sampled:	8/31/2009	
Lab File ID:	S10HM		Date Received:	09/02/09	
Instrument ID:	GCMS-H		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

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GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	09245019		Field Sample ID:	IN083109EIB11	
Analytical Batch:	ECL09029M		Sampling Batch:	INHSGS090011	
Data Report:	ECL09029M		Method:	CCP-TP-175	Rev. 0
Date/Time Analyzed:	9/10/2009	1617	Date Sampled:	8/31/2009	
Lab File ID:	S10HN		Date Received:	09/02/09	
Instrument ID:	GCMS-H		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	20	J
Benzene	0.062	U
Bromoform	0.018	U
Butanol	0.42	J
Carbon disulfide	0.068	U
Carbon tetrachloride	0.057	J
Chlorobenzene	0.050	U
Chloroform	0.063	U
Chloromethane	0.085	U
Cyclohexane	0.13	J
1,1-Dichloroethane	0.11	U
1,2-Dichloroethane	0.063	U
1,1-Dichloroethylene	0.071	U
cis-1,2-Dichloroethylene	0.043	U
trans-1,2-Dichloroethylene	0.046	U
1,2-Dichloropropane	0.026	U
Ethyl benzene	0.050	U
Ethyl ether	0.089	U
Methyl ethyl ketone	3.9	J
Methyl isobutyl ketone	0.31	J
Methylene chloride	0.069	U
1,1,2,2-Tetrachloroethane	0.039	U
Tetrachloroethylene	0.040	U
Toluene	8.7	J
1,1,1-Trichloroethane	0.032	U
Trichloroethylene	0.035	U
Trichlorofluoromethane	0.055	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.038	U
1,3,5-Trimethylbenzene	0.048	U
1,2,4-Trimethylbenzene	0.047	U
p/m-Xylene	0.043	U
o-Xylene	0.059	U

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GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	09245019		Field Sample ID:	IN083109EIB11	
Analytical Batch:	ECL09029M		Sampling Batch:	INHSGS090011	
Data Report:	ECL09029M		Method:	CCP-TP-175	Rev. 0
Date/Time Analyzed:	9/10/2009	1617	Date Sampled:	8/31/2009	
Lab File ID:	S10HN		Date Received:	09/02/09	
Instrument ID:	GCMS-H		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

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GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	09245020		Field Sample ID:	IN083109EI759	
Analytical Batch:	ECL09029M		Sampling Batch:	INHSGS090011	
Data Report:	ECL09029M		Method:	CCP-TP-175	Rev. 0
Date/Time Analyzed:	9/10/2009	1752	Date Sampled:	8/31/2009	
Lab File ID:	S10HP		Date Received:	09/02/09	
Instrument ID:	GCMS-H		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	13	J
Benzene	0.12	U
Bromoform	0.035	U
Butanol	0.27	J
Carbon disulfide	0.14	U
Carbon tetrachloride	0.082	U
Chlorobenzene	0.10	U
Chloroform	0.12	U
Chloromethane	0.17	U
Cyclohexane	0.14	U
1,1-Dichloroethane	0.21	U
1,2-Dichloroethane	0.13	U
1,1-Dichloroethylene	0.14	U
cis-1,2-Dichloroethylene	0.085	U
trans-1,2-Dichloroethylene	0.092	U
1,2-Dichloropropane	0.051	U
Ethyl benzene	0.099	U
Ethyl ether	0.18	U
Methyl ethyl ketone	0.92	J
Methyl isobutyl ketone	0.13	U
Methylene chloride	0.14	U
1,1,2,2-Tetrachloroethane	0.076	U
Tetrachloroethylene	0.080	U
Toluene	20	
1,1,1-Trichloroethane	0.064	U
Trichloroethylene	0.070	U
Trichlorofluoromethane	0.11	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.076	U
1,3,5-Trimethylbenzene	0.095	U
1,2,4-Trimethylbenzene	0.093	U
p/m-Xylene	0.086	U
o-Xylene	0.12	U

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	09245020		Field Sample ID:	IN083109EI759	
Analytical Batch:	ECL09029M		Sampling Batch:	INHSGS090011	
Data Report:	ECL09029M		Method:	CCP-TP-175	Rev. 0
Date/Time Analyzed:	9/10/2009	1752	Date Sampled:	8/31/2009	
Lab File ID:	S10HP		Date Received:	09/02/09	
Instrument ID:	GCMS-H		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

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GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	09245021		Field Sample ID:	ID083109EIC06	
Analytical Batch:	ECL09029M		Sampling Batch:	INHSGS090011	
Data Report:	ECL09029M		Method:	CCP-TP-175	Rev. 0
Date/Time Analyzed:	9/15/2009	1022	Date Sampled:	8/31/2009	
Lab File ID:	S15HB		Date Received:	09/02/09	
Instrument ID:	GCMS-H		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	5.8	J
Benzene	0.073	U
Bromoform	0.021	U
Butanol	0.40	J
Carbon disulfide	0.080	U
Carbon tetrachloride	0.049	U
Chlorobenzene	0.059	U
Chloroform	0.26	J
Chloromethane	0.50	J
Cyclohexane	0.084	U
1,1-Dichloroethane	0.13	U
1,2-Dichloroethane	0.074	U
1,1-Dichloroethylene	0.084	U
cis-1,2-Dichloroethylene	0.051	U
trans-1,2-Dichloroethylene	0.055	U
1,2-Dichloropropane	0.049	J
Ethyl benzene	0.059	U
Ethyl ether	0.10	U
Methyl ethyl ketone	0.49	J
Methyl isobutyl ketone	0.15	J
Methylene chloride	0.082	U
1,1,2,2-Tetrachloroethane	0.045	U
Tetrachloroethylene	0.048	U
Toluene	11	
1,1,1-Trichloroethane	0.038	U
Trichloroethylene	0.041	U
Trichlorofluoromethane	0.065	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.045	U
1,3,5-Trimethylbenzene	0.057	U
1,2,4-Trimethylbenzene	0.056	U
p/m-Xylene	0.051	U
o-Xylene	0.069	U

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GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	09245021		Field Sample ID:	ID083109EIC06	
Analytical Batch:	ECL09029M		Sampling Batch:	INHSGS090011	
Data Report:	ECL09029M		Method:	CCP-TP-175	Rev. 0
Date/Time Analyzed:	9/15/2009	1022	Date Sampled:	8/31/2009	
Lab File ID:	S15HB		Date Received:	09/02/09	
Instrument ID:	GCMS-H		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

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GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	09245022		Field Sample ID:	IN083109EI084	
Analytical Batch:	ECL09029M		Sampling Batch:	INHSGS090011	
Data Report:	ECL09029M		Method:	CCP-TP-175	Rev. 0
Date/Time Analyzed:	9/15/2009	1105	Date Sampled:	8/31/2009	
Lab File ID:	S15HC		Date Received:	09/02/09	
Instrument ID:	GCMS-H		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers	
Acetone	14	J	
Benzene	0.53	J	
Bromoform	0.014	U	
Butanol	1.4	J	
Carbon disulfide	0.12	J	
Carbon tetrachloride	0.033	U	
Chlorobenzene	0.040	U	
Chloroform	0.050	U	
Chloromethane	0.068	U	
Cyclohexane	0.59	J	
1,1-Dichloroethane	0.086	U	
1,2-Dichloroethane	0.050	U	
1,1-Dichloroethylene	0.057	U	
cis-1,2-Dichloroethylene	0.034	U	
trans-1,2-Dichloroethylene	0.037	U	
1,2-Dichloropropane	0.045	J	
Ethyl benzene	0.040	U	
Ethyl ether	0.071	U	
Methyl ethyl ketone	1.4	J	
Methyl isobutyl ketone	0.052	U	
Methylene chloride	0.23	J	
1,1,2,2-Tetrachloroethane	0.031	U	
Tetrachloroethylene	0.032	U	
Toluene	0.19	J	
1,1,1-Trichloroethane	0.028	J	
Trichloroethylene	0.028	U	
Trichlorofluoromethane	12		E
1,1,2-Trichloro-1,2,2-trifluoroethane	1.6	J	
1,3,5-Trimethylbenzene	0.065	J	
1,2,4-Trimethylbenzene	0.12	J	
p/m-Xylene	0.059	J	
o-Xylene	0.047	U	

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	09245022		Field Sample ID:	IN083109EI084	
Analytical Batch:	ECL09029M		Sampling Batch:	INHSGS090011	
Data Report:	ECL09029M		Method:	CCP-TP-175	Rev. 0
Date/Time Analyzed:	9/15/2009	1105	Date Sampled:	8/31/2009	
Lab File ID:	S15HC		Date Received:	09/02/09	
Instrument ID:	GCMS-H		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

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GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	09245022DL		Field Sample ID:	IN083109EI084DL	
Analytical Batch:	ECL09029M		Sampling Batch:	INHSGS090011	
Data Report:	ECL09029M		Method:	CCP-TP-175	Rev. 0
Date/Time Analyzed:	9/15/2009	1146	Date Sampled:	8/31/2009	
Lab File ID:	S15HD		Date Received:	09/02/09	
Instrument ID:	GCMS-H		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers	
Acetone	13	J	D
Benzene	0.51	J	D
Bromoform	0.028	U	
Butanol	1.4	J	D
Carbon disulfide	0.11	U	
Carbon tetrachloride	0.066	U	
Chlorobenzene	0.080	U	
Chloroform	0.10	U	
Chloromethane	0.14	U	
Cyclohexane	0.56	J	D
1,1-Dichloroethane	0.17	U	
1,2-Dichloroethane	0.10	U	
1,1-Dichloroethylene	0.11	U	
cis-1,2-Dichloroethylene	0.069	U	
trans-1,2-Dichloroethylene	0.074	U	
1,2-Dichloropropane	0.042	J	D
Ethyl benzene	0.080	U	
Ethyl ether	0.14	U	
Methyl ethyl ketone	1.7	J	D
Methyl isobutyl ketone	0.10	U	
Methylene chloride	0.35	J	D
1,1,2,2-Tetrachloroethane	0.062	U	
Tetrachloroethylene	0.065	U	
Toluene	0.19	J	D
1,1,1-Trichloroethane	0.051	U	
Trichloroethylene	0.056	U	
Trichlorofluoromethane	12		D
1,1,2-Trichloro-1,2,2-trifluoroethane	1.5	J	D
1,3,5-Trimethylbenzene	0.077	U	
1,2,4-Trimethylbenzene	0.12	J	D
p/m-Xylene	0.070	U	
o-Xylene	0.094	U	

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	09245022DL		Field Sample ID:	IN083109EI084DL	
Analytical Batch:	ECL09029M		Sampling Batch:	INHSGS090011	
Data Report:	ECL09029M		Method:	CCP-TP-175	Rev. 0
Date/Time Analyzed:	9/15/2009	1146	Date Sampled:	8/31/2009	
Lab File ID:	S15HD		Date Received:	09/02/09	
Instrument ID:	GCMS-H		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

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GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	09245023		Field Sample ID:	IN083109EID23	
Analytical Batch:	ECL09029M		Sampling Batch:	INHSGS090011	
Data Report:	ECL09029M		Method:	CCP-TP-175	Rev. 0
Date/Time Analyzed:	9/15/2009	1227	Date Sampled:	8/31/2009	
Lab File ID:	S15HE		Date Received:	09/02/09	
Instrument ID:	GCMS-H		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	13	J
Benzene	1.1	J
Bromoform	0.027	U
Butanol	1.0	J
Carbon disulfide	0.10	U
Carbon tetrachloride	0.062	U
Chlorobenzene	0.076	U
Chloroform	0.094	U
Chloromethane	0.13	U
Cyclohexane	0.80	J
1,1-Dichloroethane	0.16	U
1,2-Dichloroethane	0.095	U
1,1-Dichloroethylene	0.11	U
cis-1,2-Dichloroethylene	0.064	U
trans-1,2-Dichloroethylene	0.070	U
1,2-Dichloropropane	0.038	U
Ethyl benzene	0.075	U
Ethyl ether	0.13	U
Methyl ethyl ketone	2.2	J
Methyl isobutyl ketone	0.097	U
Methylene chloride	0.17	J
1,1,2,2-Tetrachloroethane	0.058	U
Tetrachloroethylene	0.061	U
Toluene	0.074	J
1,1,1-Trichloroethane	0.048	U
Trichloroethylene	0.053	U
Trichlorofluoromethane	0.083	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.39	J
1,3,5-Trimethylbenzene	0.072	U
1,2,4-Trimethylbenzene	0.071	U
p/m-Xylene	0.065	U
o-Xylene	0.088	U

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GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	09245023		Field Sample ID:	IN083109EID23	
Analytical Batch:	ECL09029M		Sampling Batch:	INHSGS090011	
Data Report:	ECL09029M		Method:	CCP-TP-175	Rev. 0
Date/Time Analyzed:	9/15/2009	1227	Date Sampled:	8/31/2009	
Lab File ID:	S15HE		Date Received:	09/02/09	
Instrument ID:	GCMS-H		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

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GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	09245024		Field Sample ID:	IN083109EI661	
Analytical Batch:	ECL09029M		Sampling Batch:	INHSGS090011	
Data Report:	ECL09029M		Method:	CCP-TP-175	Rev. 0
Date/Time Analyzed:	9/15/2009	1308	Date Sampled:	8/31/2009	
Lab File ID:	S15HF		Date Received:	09/02/09	
Instrument ID:	GCMS-H		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	5.9	J
Benzene	0.071	U
Bromoform	0.020	U
Butanol	0.21	J
Carbon disulfide	0.11	J
Carbon tetrachloride	0.047	U
Chlorobenzene	0.058	U
Chloroform	0.072	U
Chloromethane	0.097	U
Cyclohexane	0.082	U
1,1-Dichloroethane	0.12	U
1,2-Dichloroethane	0.072	U
1,1-Dichloroethylene	0.082	U
cis-1,2-Dichloroethylene	0.049	U
trans-1,2-Dichloroethylene	0.053	U
1,2-Dichloropropane	0.029	U
Ethyl benzene	0.057	U
Ethyl ether	0.10	U
Methyl ethyl ketone	0.63	J
Methyl isobutyl ketone	0.074	U
Methylene chloride	0.080	U
1,1,2,2-Tetrachloroethane	0.044	U
Tetrachloroethylene	0.046	U
Toluene	10	
1,1,1-Trichloroethane	0.037	U
Trichloroethylene	0.040	U
Trichlorofluoromethane	0.064	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.044	U
1,3,5-Trimethylbenzene	0.055	U
1,2,4-Trimethylbenzene	0.054	U
p/m-Xylene	0.050	U
o-Xylene	0.067	U

Form Rev 05-07

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	09245024		Field Sample ID:	IN083109EI661	
Analytical Batch:	ECL09029M		Sampling Batch:	INHSGS090011	
Data Report:	ECL09029M		Method:	CCP-TP-175	Rev. 0
Date/Time Analyzed:	9/15/2009	1308	Date Sampled:	8/31/2009	
Lab File ID:	S15HF		Date Received:	09/02/09	
Instrument ID:	GCMS-H		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

SECTION 4.0

QUALITY CONTROL MEASUREMENTS RESULTS

- **Laboratory Duplicate Comparison Form**
- **Laboratory Blank Summary Form**
- **Laboratory Blank Results Form**
- **Internal Standard Area Form**
- **Laboratory Control Sample Results Form**

LABORATORY DUPLICATE FORM
GAS VOC ANALYSIS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Method:	CCP-TP-175	Rev. 0	Data Report:	ECL09029M	
Instrument ID:	GCMS-H		Analytical Batch:	ECL09029M	
Lab Sample ID:	09245014		Dup Lab Sample ID:	09245014D	
Field Sample ID:	IN083109EI437		Dup Field Sample ID:	IN083109EI437D	
Date/Time Analyzed:	9/10/2009	1249	Date/Time Dup Analyzed:	9/10/2009	1703
Lab File ID:	S10HI		Dup Lab File ID:	S10HO	

COMPOUND	SAMPLE CONCENTRATION (PPMV)	FLAG(S)	DUPLICATE CONCENTRATION (PPMV)	FLAG(S)	RPD* (%)
Acetone	8.24242	J	7.48694	J	9.61
Benzene	0.16	U	0.16	U	NC
Bromoform	0.046	U	0.046	U	NC
Butanol	0.29	U	0.29	U	NC
Carbon disulfide	0.18	U	0.18	U	NC
Carbon tetrachloride	0.11	U	0.11	U	NC
Chlorobenzene	0.13	U	0.13	U	NC
Chloroform	0.16	U	0.16	U	NC
Chloromethane	0.22	U	0.22	U	NC
Cyclohexane	0.19	U	0.19	U	NC
1,1-Dichloroethane	0.28	U	0.28	U	NC
1,2-Dichloroethane	0.16	U	0.16	U	NC
1,1-Dichloroethylene	0.19	U	0.19	U	NC
cis-1,2-Dichloroethylene	0.11	U	0.11	U	NC
trans-1,2-Dichloroethylene	0.12	U	0.12	U	NC
1,2-Dichloropropane	0.066	U	0.066	U	NC
Ethyl benzene	0.34053	J	0.33996	J	0.17
Ethyl ether	0.23	U	0.23	U	NC
Methyl ethyl ketone	0.59682	J	0.41469	J	36.01
Methyl isobutyl ketone	0.17	U	0.17	U	NC
Methylene chloride	0.18	U	0.18	U	NC
1,1,2,2-Tetrachloroethane	0.10	U	0.10	U	NC
Tetrachloroethylene	0.11	U	0.11	U	NC
Toluene	19.52113		19.08868		2.24
1,1,1-Trichloroethane	0.083	U	0.083	U	NC
Trichloroethylene	0.091	U	0.091	U	NC
Trichlorofluoromethane	0.14	U	0.14	U	NC
1,1,2-Trichloro-1,2,2-trifluoroethane	0.099	U	0.099	U	NC
1,3,5-Trimethylbenzene	0.13	U	0.13	U	NC
1,2,4-Trimethylbenzene	0.12	U	0.12	U	NC
p/m-Xylene	1.28711	J	1.22257	J	5.14
o-Xylene	0.25080	J	0.23268	J	7.49

NC = NOT CALCULABLE

* Specification limit <= 25% for analytes present in the sample and duplicate at concentrations greater than or equal to the PRQL

Form Rev 05-07

LABORATORY BLANK SUMMARY FORM
GAS VOC ANALYSIS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

METHOD:	CCP-TP-175	Rev. 0	ANALYTICAL BATCH:	ECL09029M
INSTRUMENT:	GCMS-H		DATA REPORT:	ECL09029M
LAB SAMPLE ID:	LBMHS10		FIELD SAMPLE ID:	LB31718S02
LAB FILE ID:	S10HA			
DATE/TIME ANALYZED:	9/10/2009	0706		

THIS LABORATORY BLANK APPLIES TO THE FOLLOWING SAMPLES:

FIELD SAMPLE ID	LAB SAMPLE ID	DATE/TIME ANALYZED
LCS30438SA08	LCSMHS10	9/10/2009 1125
IN083109EIB32	09245013	9/10/2009 1207
IN083109EI437	09245014	9/10/2009 1249
IN083109EI746	09245015	9/10/2009 1330
IN083109EIA51	09245016	9/10/2009 1409
IN083109EID25	09245017	9/10/2009 1452
ID083109EI270	09245018	9/10/2009 1531
IN083109EIB11	09245019	9/10/2009 1617
IN083109EI437D	09245014D	9/10/2009 1703
IN083109EI759	09245020	9/10/2009 1752

LABORATORY BLANK SUMMARY FORM
GAS VOC ANALYSIS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

METHOD:	CCP-TP-175	Rev. 0	ANALYTICAL BATCH:	ECL09029M
INSTRUMENT:	GCMS-H		DATA REPORT:	ECL09029M
LAB SAMPLE ID:	LBMHS15		FIELD SAMPLE ID:	LB04127S02
LAB FILE ID:	S15HA			
DATE/TIME ANALYZED:	9/15/2009	0942		

THIS LABORATORY BLANK APPLIES TO THE FOLLOWING SAMPLES:

FIELD SAMPLE ID	LAB SAMPLE ID	DATE/TIME ANALYZED
ID083109EIC06	09245021	9/15/2009 1022
IN083109EI084	09245022	9/15/2009 1105
IN083109EI084DL	09245022DL	9/15/2009 1146
IN083109EID23	09245023	9/15/2009 1227
IN083109EI661	09245024	9/15/2009 1308

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	LBMHS10		Field Sample ID:	LB31718S02	
Analytical Batch:	ECL09029M		Sampling Batch:		
Data Report:	ECL09029M		Method:	CCP-TP-175	Rev. 0
Date/Time Analyzed:	9/10/2009	0706	Date Sampled:		
Lab File ID:	S10HA		Date Received:		
Instrument ID:	GCMS-H		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	0.022	U
Benzene	0.013	U
Bromoform	0.0038	U
Butanol	0.023	U
Carbon disulfide	0.014	U
Carbon tetrachloride	0.0088	U
Chlorobenzene	0.011	U
Chloroform	0.013	U
Chloromethane	0.018	U
Cyclohexane	0.015	U
1,1-Dichloroethane	0.023	U
1,2-Dichloroethane	0.013	U
1,1-Dichloroethylene	0.015	U
cis-1,2-Dichloroethylene	0.0091	U
trans-1,2-Dichloroethylene	0.0098	U
1,2-Dichloropropane	0.0054	U
Ethyl benzene	0.011	U
Ethyl ether	0.019	U
Methyl ethyl ketone	0.019	U
Methyl isobutyl ketone	0.014	U
Methylene chloride	0.015	U
1,1,2,2-Tetrachloroethane	0.0082	U
Tetrachloroethylene	0.0086	U
Toluene	0.010	U
1,1,1-Trichloroethane	0.0068	U
Trichloroethylene	0.0074	U
Trichlorofluoromethane	0.012	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.0081	U
1,3,5-Trimethylbenzene	0.010	U
1,2,4-Trimethylbenzene	0.010	U
p/m-Xylene	0.0092	U
o-Xylene	0.012	U

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	LBMHS10		Field Sample ID:	LB31718S02	
Analytical Batch:	ECL09029M		Sampling Batch:		
Data Report:	ECL09029M		Method:	CCP-TP-175	Rev. 0
Date/Time Analyzed:	9/10/2009	0706	Date Sampled:		
Lab File ID:	S10HA		Date Received:		
Instrument ID:	GCMS-H		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	LBMHS15		Field Sample ID:	LB04127S02	
Analytical Batch:	ECL09029M		Sampling Batch:		
Data Report:	ECL09029M		Method:	CCP-TP-175	Rev. 0
Date/Time Analyzed:	9/15/2009	0942	Date Sampled:		
Lab File ID:	S15HA		Date Received:		
Instrument ID:	GCMS-H		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	0.022	U
Benzene	0.013	U
Bromoform	0.0038	U
Butanol	0.023	U
Carbon disulfide	0.014	U
Carbon tetrachloride	0.0088	U
Chlorobenzene	0.011	U
Chloroform	0.013	U
Chloromethane	0.018	U
Cyclohexane	0.015	U
1,1-Dichloroethane	0.023	U
1,2-Dichloroethane	0.013	U
1,1-Dichloroethylene	0.015	U
cis-1,2-Dichloroethylene	0.0091	U
trans-1,2-Dichloroethylene	0.0098	U
1,2-Dichloropropane	0.0054	U
Ethyl benzene	0.011	U
Ethyl ether	0.019	U
Methyl ethyl ketone	0.019	U
Methyl isobutyl ketone	0.014	U
Methylene chloride	0.015	U
1,1,2,2-Tetrachloroethane	0.0082	U
Tetrachloroethylene	0.0086	U
Toluene	0.010	U
1,1,1-Trichloroethane	0.0068	U
Trichloroethylene	0.0074	U
Trichlorofluoromethane	0.012	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.0081	U
1,3,5-Trimethylbenzene	0.010	U
1,2,4-Trimethylbenzene	0.010	U
p/m-Xylene	0.0092	U
o-Xylene	0.012	U

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	LBMHS15		Field Sample ID:	LB04127S02	
Analytical Batch:	ECL09029M		Sampling Batch:		
Data Report:	ECL09029M		Method:	CCP-TP-175	Rev. 0
Date/Time Analyzed:	9/15/2009	0942	Date Sampled:		
Lab File ID:	S15HA		Date Received:		
Instrument ID:	GCMS-H		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name : ECL
Project : NA
Site : INL
Lab File ID (Standard): WH09061.D
Instrument ID : GC/MS H
GC Column : DB-624
ID : 0.53
Contract : CCP
Location : IDAHO
Group : NA
Date Analyzed : 10 Sep 2009
Time Analyzed : 6:26 am
Heated Purge (Y:N) : N

	IS1		IS2		IS3	
	Area #	RT #	Area #	RT #	Area #	RT #
12 HOUR STD	1905550	13.11	1216207	19.73	0	0.00
UPPER LIMIT	3811100	13.61	2432414	20.23	0	0.00
LOWER LIMIT	952775	12.61	608104	19.23	0	0.00
File ID Sample						
S10HA LBMHS10	1838947	13.08	1174359	19.71	0	0.00
S10HG LCSMHS10	1705153	13.07	1150276	19.71	0	0.00
S10HH 09245013	1689120	13.06	1141725	19.70	0	0.00
S10HI 09245014	1666207	13.07	1089760	19.70	0	0.00
S10HJ 09245015	1621535	13.07	1119547	19.70	0	0.00
S10HK 09245016	1624972	13.08	1105764	19.71	0	0.00
S10HL 09245017	1748283	13.07	1145365	19.71	0	0.00
S10HM 09245018	1708192	13.08	1136177	19.71	0	0.00
S10HN 09245019	1760278	13.06	1164144	19.71	0	0.00
S10HO 09245014D	1759636	13.08	1165441	19.71	0	0.00
S10HP 09245020	1754497	13.08	1129604	19.73	0	0.00

IS1 = Fluorobenzene
IS2 = Chlorobenzene-d5
IS3 =
AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = 0.5 minutes of internal standard RT
RT LOWER LIMIT = -0.5 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk
* Values outside of contract required QC limits

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name : ECL | Contract : CCP
Project : NA | Site : INL | Location : IDAHO | Group : NA
Lab File ID (Standard): WH09062.D | Date Analyzed : 15 Sep 2009
Instrument ID : GC/MS H | Time Analyzed : 9:00 am
GC Column : DB-624 | ID : 0.53 | Heated Purge (Y:N) : N

	IS1		IS2		IS3	
	Area	RT	Area	RT	Area	RT
12 HOUR STD	2358418	13.10	1660237	19.73	0	0.00
UPPER LIMIT	4716836	13.60	3320474	20.23	0	0.00
LOWER LIMIT	1179209	12.60	830119	19.23	0	0.00
File ID Sample						
S15HA LBMHS15	2338018	13.10	1512506	19.73	0	0.00
S15HB 09245021	2387400	13.10	1501798	19.73	0	0.00
S15HC 09245022	2398351	13.10	1536594	19.73	0	0.00
S15HD 09245022DL	2424735	13.09	1553366	19.73	0	0.00
S15HE 09245023	2371802	13.10	1550625	19.73	0	0.00
S15HF 09245024	2301609	13.10	1511762	19.73	0	0.00

IS1 = Fluorobenzene
IS2 = Chlorobenzene-d5
IS3 =
AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = 0.5 minutes of internal standard RT
RT LOWER LIMIT = -0.5 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk
* Values outside of contract required QC limits

LABORATORY CONTROL SAMPLE FORM
GAS VOC ANALYSIS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Method:	CCP-TP-175	Rev. 0	Data Report:	ECL09029M
Instrument ID:	GCMS-H		Analytical Batch:	ECL09029M

Lab Sample ID:	LCSMHS10
Field Sample ID:	LCS30438SA08
Date/Time Analyzed:	9/10/2009 1125
Lab File ID:	S10HG

COMPOUND	FOUND CONCENTRATION (PPMV)	KNOWN CONCENTRATION (PPMV)	Recovery* (%)
Benzene	97.7013	94.87	102.98
Carbon tetrachloride	100.6408	94.80	106.16
Chloromethane	91.7258	97.52	94.06
Methyl isobutyl ketone	81.2235	94.90	85.59
Toluene	87.3545	94.79	92.16
1,1,1-Trichloroethane	94.4010	94.99	99.38
Trichloroethylene	97.7180	94.91	102.96

* Recovery specification limits 70 - 130%

Form Rev 05-07

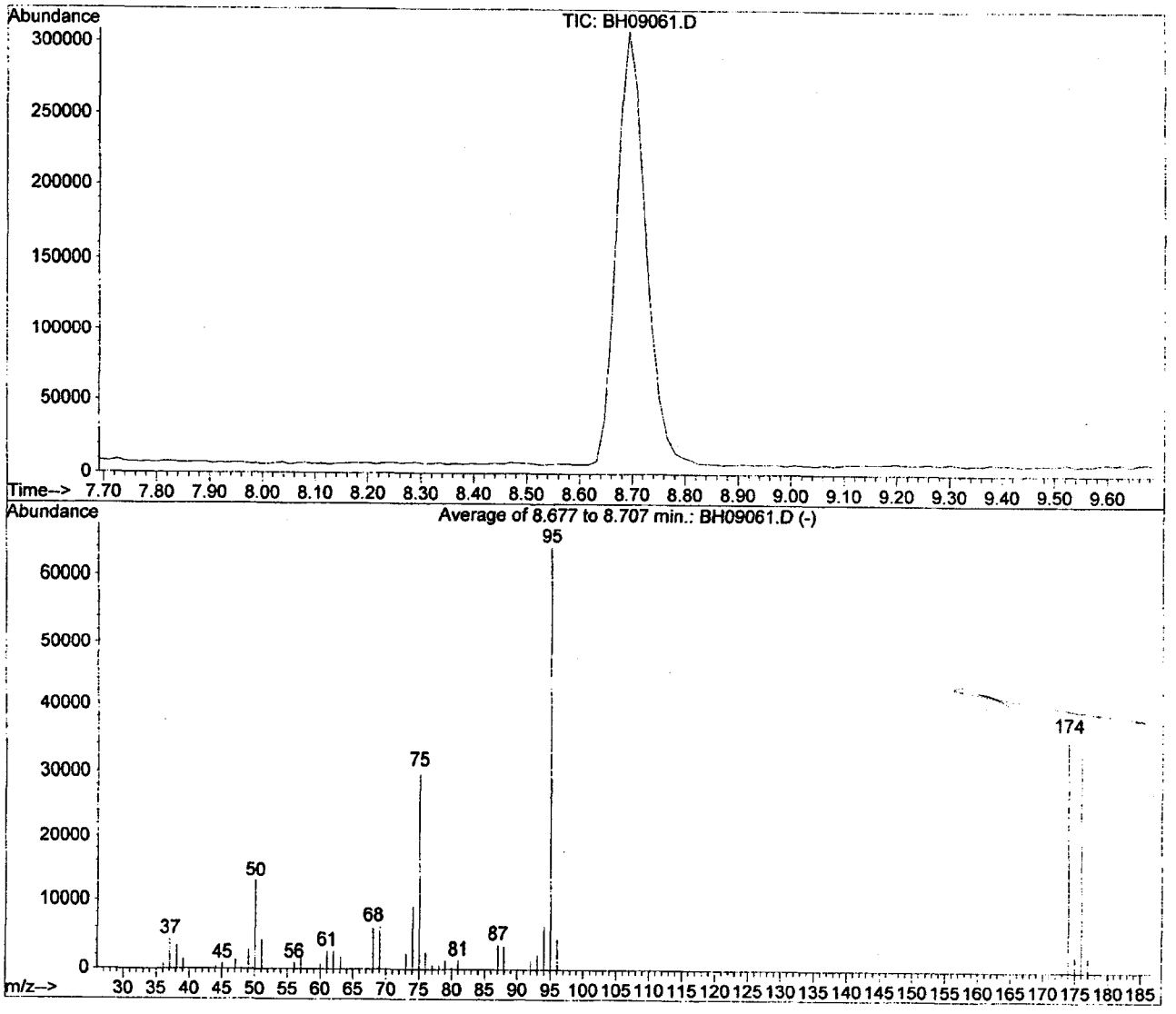
SECTION 5.0

CALIBRATION RESULTS

- **BFB Tune Form**
- **Initial Calibration Form**
- **Continuing Calibration Form**
- **MDL Reporting Form**

BFB Tune Evaluation

Data File : C:\INSTR_H\ECL09029\BH09061.D Vial: 1
Acq On : 10 Sep 2009 6:09 am Operator:
Sample : 50 NG BFB Inst : GC/MS H
Misc : VOA-BF-24-25-04 Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\HPCHEM\1\METHODS\WPHD033.M (RTE Integrator)
Title : GC/MS-H Wipp Initial Calibration #033 CCP-TP-175



Peak Apex is scan: 180 (8.69 min)
Average of 3 scans: 179,180,181 minus background scan 160 (8.39 min)

Target Mass	Rel. to Mass	Lower Limit,%	Upper Limit,%	Rel. Abn,%	Raw Abn	Result Pass/Fail
50	95	15	40	20.4	13091	PASS
75	95	30	60	47.2	30320	PASS
95	95	100	100	100.0	64277	PASS
96	95	5	9	6.9	4431	PASS
173	174	0	2	0.0	0	PASS
174	95	50	100	55.9	35931	PASS
175	174	5	9	7.3	2628	PASS
176	174	95	101	97.4	34984	PASS
177	176	5	9	6.4	2256	PASS

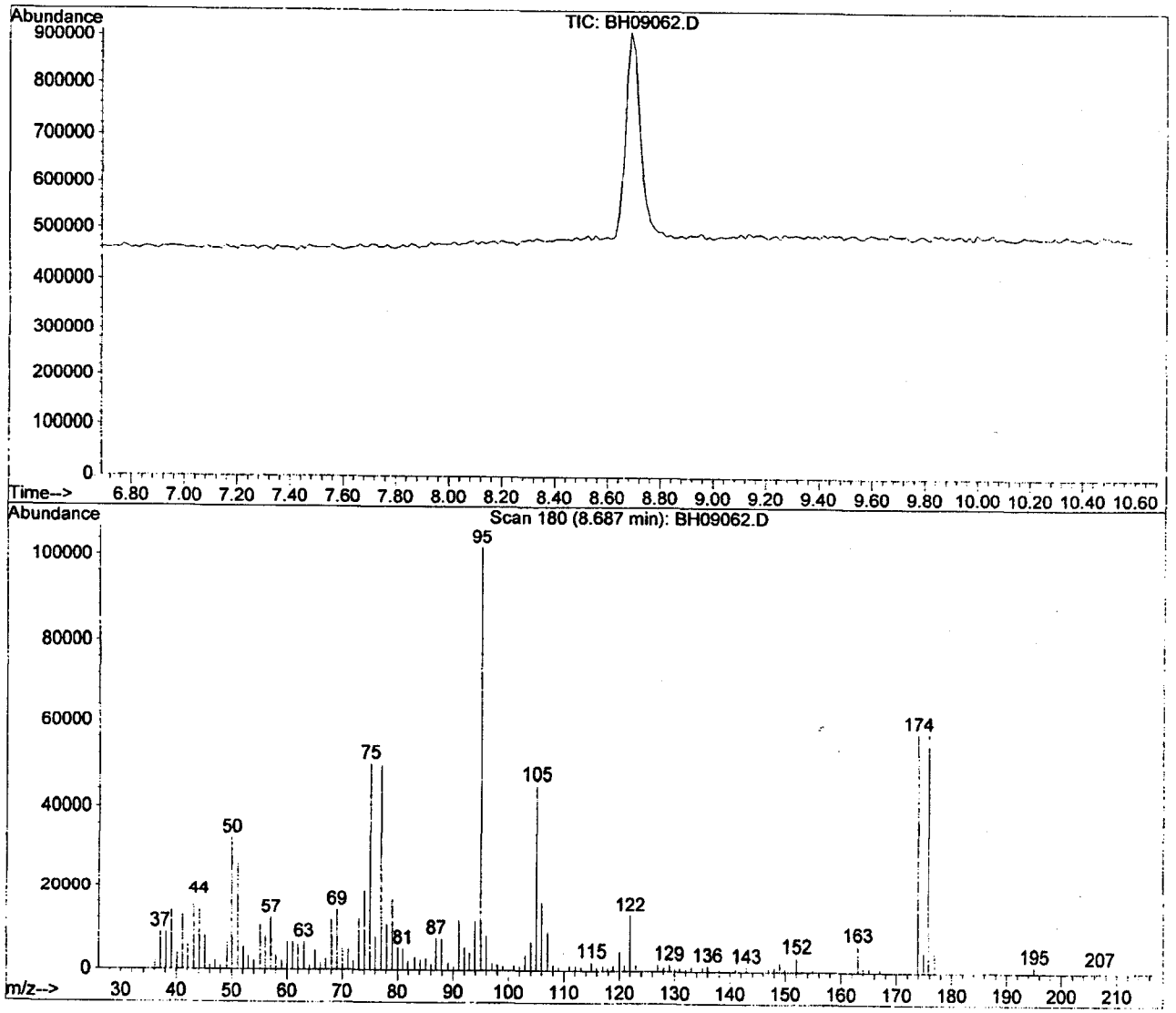
BH09061.D WPHD033.M Thu Sep 10 16:18:14 2009 **C00059**

4/10/09

BFB

Data File : C:\INSTR_H\ECL09029\BH09062.D
Acq On : 15 Sep 2009 8:36 am
Sample : 50 NG BFB
Misc : VOA-BF-24-25-04
MS Integration Params: RTEINT.P
Method : C:\HPCHEM\1\METHODS\WPHD033.M (RTE Integrator)
Title : GC/MS-H Wipp Initial Calibration #033 CCP-TP-175

Vial: 1
Operator:
Inst : GC/MS H
Multiplr: 1.00



Spectrum Information: Scan 180

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	32.0	32752	PASS
75	95	30	60	48.8	49896	PASS
95	95	100	100	100.0	102224	PASS
96	95	5	9	7.7	7907	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	56.4	57688	PASS
175	174	5	9	8.1	4649	PASS
176	174	95	101	99.9	57656	PASS
177	176	5	9	8.4	4864	PASS

9/15/09

Response Factor Report GC/MS H

Method : C:\HPCHEM\1\METHODS\WPHD033.M (RTE Integrator)
Title : GC/MS-H Wipp Initial Calibration #033 CCP-TP-175
Last Update : Thu Jun 04 15:40:20 2009
Response via : Initial Calibration

Calibration Files
75 =U04HF.D 250 =U04HE.D 500 =U04HD.D
750 =U04HC.D 1000 =U04HB.D 1250 =U04HA.D

		Compound	75	250	500	750	1000	1250	Avg	%RSD
1)	I	Fluorobenzene	----------ISTD----------							
2)	T	Ethyl Ether	0.151	0.142	0.121	0.169	0.164	0.154	0.150	11.43
3)	T	Methylene Chloride	0.245	0.293	0.301	0.290	0.288	0.284	0.283	6.85
4)	T	1,1,2-Trichlorotrif	0.523	0.562	0.569	0.550	0.543	0.553	0.550	2.96
5)	T	1,1 Dichloroethene	0.218	0.250	0.247	0.239	0.236	0.237	0.238	4.74
6)	T	1,1-Dichloroethane	0.519	0.559	0.520	0.475	0.447	0.387	0.484	12.76
7)	T	cis-1,2-Dichloroeth	0.253	0.280	0.258	0.254	0.255	0.251	0.258	4.11
8)	T	Chloroform	0.458	0.491	0.479	0.433	0.408	0.347	0.436	12.15
9)	T	1,2-Dichloroethane	0.288	0.288	0.269	0.300	0.295	0.275	0.286	4.05
10)	T	1,1,1-Trichloroetha	0.377	0.418	0.426	0.422	0.419	0.415	0.413	4.33
11)	T	Carbon Tetrachlorid	0.292	0.342	0.355	0.349	0.346	0.348	0.339	6.81
12)	T	Trichloroethene	0.251	0.279	0.289	0.279	0.278	0.280	0.276	4.58
13)	T	Cyclohexane	0.460	0.505	0.518	0.508	0.500	0.476	0.494	4.41
14)	T	Benzene	0.709	0.759	0.785	0.762	0.754	0.736	0.751	3.47
15)	T	Acetone	0.452	0.480	0.488	0.478	0.466	0.435	0.467	4.23
16)	T	2-Butanone	0.123	0.125	0.120	0.107	0.102	0.092	0.112	11.99
17)	T	1-Butanol	0.176	0.223	0.231	0.225	0.219	0.190	0.211	10.53
18)	T	trans-1,2-dichloroe	0.272	0.251	0.265	0.259	0.259	0.257	0.261	2.73
19)	T	Chloromethane	0.295	0.322	0.324	0.312	0.303	0.297	0.309	3.97
20)	T	Carbon Disulfide	0.812	0.937	0.964	0.943	0.945	0.949	0.925	6.07
21)	T	1,2-Dichloropropane	0.328	0.358	0.365	0.360	0.355	0.340	0.351	4.01
22)	T	Tricholorofluoromet	0.457	0.504	0.521	0.472	0.445	0.418	0.469	8.09
23)	I	Chlorobenzene-d5	----------ISTD----------							
24)	T	Bromoform	0.303	0.414	0.456	0.468	0.468	0.456	0.428	14.97
25)	T	Tetrachloroethene	0.313	0.356	0.353	0.347	0.344	0.345	0.343	4.45
26)	T	1,1,2,2-Tetrachloro	0.737	0.936	0.995	0.990	0.994	0.949	0.934	10.68
27)	T	Toluene	0.727	0.810	0.813	0.794	0.788	0.774	0.784	4.02
28)	T	Chlorobenzene	0.775	0.886	0.907	0.896	0.888	0.862	0.869	5.58
29)	T	Ethylbenzene	0.390	0.446	0.459	0.450	0.448	0.439	0.439	5.70
30)	T	Xylene (meta & para	0.454	0.537	0.557	0.545	0.545	0.532	0.528	7.05
31)	T	Xylene (ortho)	0.416	0.502	0.529	0.519	0.520	0.504	0.498	8.37
32)	T	1,3,5-Trimethylbenz	0.906	1.114	1.193	1.175	1.190	1.144	1.120	9.76
33)	T	1,2,4-Trimethylbenz	0.825	1.046	1.129	1.127	1.134	1.090	1.059	11.26
34)	T	4-Methyl-2-Pentanon	1.228	1.442	1.460	1.438	1.401	1.291	1.377	6.88

L = Linear LO = Linear+Origin Q = Quad QO = Quad+Origin R = Corr. Coef
(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\INSTR_H\ECL09029\WH09061.D Vial: 1
Acq On : 10 Sep 2009 6:26 am Operator:
Sample : CCP-TP-175 CCAL Inst : GC/MS H
Misc : VOA-WC-23-5-83 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\HPCHEM\1\METHODS\WPHD033.M (RTE Integrator)
Title : GC/MS-H Wipp Initial Calibration #033 CCP-TP-175
Last Update : Thu Jun 04 15:40:20 2009
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	1.000	1.000	0.0	87	0.01
2	T	Ethyl Ether	0.150	0.149	0.7	107	0.04
3	T	Methylene Chloride	0.283	0.278	1.8	80	0.06
4	T	1,1,2-Trichlorotrifluoroeth	0.550	0.568	-3.3	87	0.04
5	T	1,1 Dichloroethene	0.238	0.221	7.1	77	0.04
6	T	1,1-Dichloroethane	0.484	0.461	4.8	77	0.03
7	T	cis-1,2-Dichloroethene	0.258	0.230	10.9	77	0.01
8	T	Chloroform	0.436	0.475	-8.9	86	0.01
9	T	1,2-Dichloroethane	0.286	0.241	15.7	78	0.01
10	T	1,1,1-Trichloroethane	0.413	0.421	-1.9	86	0.01
11	T	Carbon Tetrachloride	0.339	0.362	-6.8	89	0.01
12	T	Trichloroethene	0.276	0.295	-6.9	89	0.00
13	T	Cyclohexane	0.494	0.453	8.3	76	0.01
14	T	Benzene	0.751	0.738	1.7	82	0.00
15	T	Acetone	0.467	0.412	11.8	73	0.04
16	T	2-Butanone	0.112	0.102	8.9	74	0.01
17	T	1-Butanol	0.211	0.199	5.7	75	0.00
18	T	trans-1,2-dichloroethene	0.261	0.246	5.7	81	0.03
19	T	Chloromethane	0.309	0.291	5.8	78	0.03
20	T	Carbon Disulfide	0.925	0.892	3.6	80	0.04
21	T	1,2-Dichloropropane	0.351	0.330	6.0	78	0.00
22	T	Tricholorofluoromethane	0.469	0.503	-7.2	84	0.03
23	I	Chlorobenzene-d5	1.000	1.000	0.0	87	0.00
24	T	Bromoform	0.428	0.464	-8.4	89	0.00
25	T	Tetrachloroethene	0.343	0.376	-9.6	93	0.00
26	T	1,1,2,2-Tetrachloroethane	0.934	0.939	-0.5	82	0.00
27	T	Toluene	0.784	0.792	-1.0	85	0.00
28	T	Chlorobenzene	0.869	0.923	-6.2	89	0.00
29	T	Ethylbenzene	0.439	0.458	-4.3	87	0.00
30	T	Xylene (meta & para)	0.528	0.540	-2.3	84	0.01
31	T	Xylene (ortho)	0.498	0.518	-4.0	85	0.00
32	T	1,3,5-Trimethylbenzene	1.120	1.155	-3.1	84	0.00
33	T	1,2,4-Trimethylbenzene	1.059	1.102	-4.1	85	0.00
34	T	4-Methyl-2-Pentanone	1.377	1.238	10.1	74	0.00

CRL 9/10/09

(#) = Out of Range SPCC's out = 0 CCC's out = 0
WH09061.D WPHD033.M Thu Sep 10 16:19:05 2009 Page 1

Evaluate Continuing Calibration Report

Data File : C:\INSTR_H\ECL09029\WH09062.D Vial: 1
Acq On : 15 Sep 2009 9:00 am Operator:
Sample : CCP-TP-175 CCAL Inst : GC/MS H
Misc : VOA-WC-23-5-83 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\HPCHEM\1\METHODS\WPHD033.M (RTE Integrator)
Title : GC/MS-H Wipp Initial Calibration #033 CCP-TP-175
Last Update : Thu Jun 04 15:40:20 2009
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	1.000	1.000	0.0	107	0.00
2	T	Ethyl Ether	0.150	0.114	24.0	101	0.01
3	T	Methylene Chloride	0.283	0.290	-2.5	104	0.03
4	T	1,1,2-Trichlorotrifluoroeth	0.550	0.549	0.2	104	0.01
5	T	1,1 Dichloroethene	0.238	0.221	7.1	96	0.01
6	T	1,1-Dichloroethane	0.484	0.510	-5.4	105	0.01
7	T	cis-1,2-Dichloroethene	0.258	0.230	10.9	95	0.00
8	T	Chloroform	0.436	0.507	-16.3	114	0.00
9	T	1,2-Dichloroethane	0.286	0.258	9.8	103	0.01
10	T	1,1,1-Trichloroethane	0.413	0.414	-0.2	104	0.01
11	T	Carbon Tetrachloride	0.339	0.377	-11.2	114	0.01
12	T	Trichloroethene	0.276	0.304	-10.1	113	0.00
13	T	Cyclohexane	0.494	0.447	9.5	93	0.00
14	T	Benzene	0.751	0.810	-7.9	111	0.00
15	T	Acetone	0.467	0.427	8.6	94	0.04
16	T	2-Butanone	0.112	0.119	-6.2	106	0.00
17	T	1-Butanol	0.211	0.214	-1.4	99	0.00
18	T	trans-1,2-dichloroethene	0.261	0.244	6.5	99	0.03
19	T	Chloromethane	0.309	0.287	7.1	95	0.01
20	T	Carbon Disulfide	0.925	0.996	-7.7	111	0.03
21	T	1,2-Dichloropropane	0.351	0.345	1.7	101	0.00
22	T	Tricholorofluoromethane	0.469	0.483	-3.0	100	0.01
23	I	Chlorobenzene-d5	1.000	1.000	0.0	119	0.00
24	T	Bromoform	0.428	0.483	-12.9	126	0.00
25	T	Tetrachloroethene	0.343	0.346	-0.9	116	0.00
26	T	1,1,2,2-Tetrachloroethane	0.934	0.947	-1.4	113	0.01
27	T	Toluene	0.784	0.769	1.9	112	0.01
28	T	Chlorobenzene	0.869	0.926	-6.6	121	0.00
29	T	Ethylbenzene	0.439	0.443	-0.9	115	0.00
30	T	Xylene (meta & para)	0.528	0.536	-1.5	114	0.01
31	T	Xylene (ortho)	0.498	0.510	-2.4	114	0.00
32	T	1,3,5-Trimethylbenzene	1.120	1.134	-1.2	113	0.01
33	T	1,2,4-Trimethylbenzene	1.059	1.120	-5.8	118	0.01
34	T	4-Methyl-2-Pentanone	1.377	1.110	19.4	90	0.00

9/15/09

MDL REPORTING FORM
GAS VOC ANALYSIS

IDAHO NATIONAL LABORATORY
ENVIRONMENTAL CHEMISTRY LABORATORY

METHOD: CCP-TP-175 Rev. 0
Instrument ID: GCMS-H MDL Determination Date: 3/17/2009

ANALYTE	MOLECULAR WEIGHT	MDL (ng)	PRQL (ppmv)
Acetone	58.08	5.1	100
Benzene	78.12	4.2	10
Bromoform	252.75	3.9	10
Butanol	74.12	7.1	100
Carbon disulfide	76.14	4.5	10
Carbon tetrachloride	153.82	5.5	10
Chlorobenzene	112.56	4.9	10
Chloroform	119.38	6.5	10
Chloromethane	50.49	3.7	10
Cyclohexane	84.16	5.2	10
1,1-Dichloroethane	98.94	9.2	10
1,2-Dichloroethane	98.94	5.4	10
1,1-Dichloroethylene	96.94	6.0	10
cis-1,2-Dichloroethylene	96.94	3.6	10
trans-1,2-Dichloroethylene	96.94	3.9	10
1,2-Dichloropropane	112.99	2.5	10
Ethyl benzene	106.17	4.6	10
Ethyl ether	74.12	5.7	10
Methyl ethyl ketone	72.11	5.6	100
Methyl isobutyl ketone	100.16	5.6	100
Methylene chloride	84.93	5.1	10
1,1,2,2-Tetrachloroethane	167.85	5.6	10
Tetrachloroethylene	165.83	5.8	10
Toluene	92.15	3.8	10
1,1,1-Trichloroethane	133.41	3.7	10
Trichloroethylene	131.39	4.0	10
Trichlorofluoromethane	137.37	6.6	10
1,1,2-Trichloro-1,2,2-trifluoroethane	187.38	6.2	10
1,3,5-Trimethylbenzene	120.2	5.0	10
1,2,4-Trimethylbenzene	120.2	4.9	10
p/m-Xylene	106.17	4.0	10
o-Xylene	106.17	5.4	10

SECTION 6.0

DATA REVIEW CHECKLISTS

- SAMPLE RECEIVING & CUSTODY REVIEW CHECKLIST
- DATA GENERATOR CHECKLIST
- INDEPENDENT REVIEW CHECKLIST

Environmental Chemistry Laboratory
Sample Receiving & Custody Review Checklist

Receiving Group: ECL 09029	Nonconformance Report Initiation Required? Yes or (No) NCR Number:
Reviewer Signature: Thomas B. Lintz	Date: 090209

Instructions: Complete one checklist per Report Group. Enter appropriate response for each question. Each "NO" response requires explanation. A "NO" response to a question may require initiation of an NCR.

REQUIREMENT	YES	NO	COMMENTS
1. FIELD CHAIN OF CUSTODY (COC)			
a. Are all field samples listed on the accompanying COC form included in the shipment?	✓		NA
b. Are all samples included in the shipment listed on the COC form?	✓		NA
c. Are all custody transfers completely documented by signatures of relinquishers and acceptors, time, and date of transfer?	✓		NA
d. Does all sample information (e.g., sample ID, sampling date and time, sample location, field batch, analytical request) listed on the COC correspond with the information on the sample tags?	✓		NA
e. Are any corrections on the COC appropriately made [a single line through the incorrect data, correct data written in (not overwritten), initialed and dated]?	✓		NA
2. SAMPLE TAGS			
a. Is each sample accompanied by a corresponding sample tag?	✓		NA
b. Do the field IDs on the sample tags correspond with those on the COC?	✓		NA
c. Does the sampling date and time correspond with the date and time on the COC?	✓		NA
d. Is the field batch number recorded on each sample tag, and does it correspond with that recorded on the COC?	✓		NA
e. Are the Sampling Organization and Sample Description fields completed?	✓		NA
f. Are ambient pressure and temperature, date and time and sampler initials recorded on each tag?	✓		NA
g. Are VOCs, H_2 and CH_4 analyses requested as appropriate for each sample?	✓		NA
h. Are VOCs and/or CH_4 and H_2 analyses requested for each field blank sample?	✓		NA
i. Did the sampler sign each sample tag?	✓		NA
j. Are any corrections on the sample tag appropriately made [a single line through the incorrect data, correct data written in (not overwritten), initialed and dated]?	✓		NA
k. Is the SUMMA® canister ID listed on the sample tag and/or COC?	✓		NA
3. ANALYSIS REQUEST FORM (ANRF)			
a. Do all field sample numbers correspond to those on the field COC?	✓		NA
b. Do the listed sample sizes correspond with the SUMMA® canisters?	✓		NA
c. Do VTSR and the Field Batch number match those on the COC?	✓		NA
d. If there is a COC number does it match the COC form number?	✓		NA
e. Are the correct analysis requests checked?	✓		NA
f. If forming a composited sample are all drum samples from the same waste stream?	✓		NA
4. SAMPLE INTEGRITY			
a. Is a signed and dated or otherwise traceable custody seal present on the shipping container?	✓		NA
b. Is the shipping container custody seal intact and undamaged upon receipt at the laboratory?	✓		NA
c. Is the shipping container custody seal placed such that the container cannot be opened without breaking the seal?	✓		NA
d. Is a custody seal present on the valve of each sample canister?	✓		NA
e. Is the custody seal on each SUMMA® canister intact and undamaged upon receipt at the laboratory?	✓		NA
f. Is each custody seal placed such that the valve cannot be opened without breaking the seal?	✓		NA
g. Has physical integrity of all samples been preserved (such as, no dents, no missing connectors)?	✓		NA
h. Are the canister gauge pressure and ambient temperature and pressure recorded on the sample tag by ECL after canister receipt and equilibration to room temperature?	✓		NA
i. Did all of the SUMMA® canisters maintain pressure during shipment?	✓		NA
j. Does each sample have an ECL Sample ID tag corresponding to the ANRF?	✓		NA

The field sampling organization must be contacted if any discrepancies are found in the sample COC and tag documentation. This contact must be documented in writing.

000066

Form Revision: 13

Created on 10/21/08

TWCP SAMPLE RECEIVING & CUSTODY REVIEW CHECKLIST ATTACHMENT

FIELD BATCH: iNHSGS090011

LABORATORY RECEIVING GROUP: ECL09029

Temperature Probe Identification Number: 723207

Expiration Date: 062510

The temperature probe associated with the samples registered 22.3°C upon receipt at the laboratory. The minimum temperature registered by the probe during transport was 19.6°C and the maximum was 24.0°C.

Temperature Probe Identification Number: 723194

Expiration Date: 120909

The temperature probe associated with the samples registered 22.3°C upon receipt at the laboratory. The minimum temperature registered by the probe during transport was 19.6°C and the maximum was 27.7°C.

Signature of Sample Custodian: Thomas R. Lints Date: 090209

C00067

Form Date: 08/14/2006

Environmental Chemistry Laboratory
Data Generator Checklist

CCP-TP-175 (VOCs by GC/MS)

Analytical Batch#:	Procedure Revision:
EC109029M	0
Analyst Signature: Carlton A. Crowder	Analysis Date: 9/10/09

Criteria	Yes	No	N/A	Comments
1. Samples analyzed in accordance with CCP-TP-175 requirements.	✓			NA
2. BFB tune analyzed at the beginning of the run (once every 12 hours of instrument operation), and meets acceptance criteria.	✓			NA
3. CCAL analyzed at the beginning of the run (once every 12 hours of instrument operation), and meets acceptance criteria.	✓			NA
4. LB analyzed after the CCAL, and meets acceptance criteria.	✓			NA
5. Analytical batch QC (LCS, laboratory duplicate or LCS duplicate) analyzed if appropriate, and meet acceptance criteria. [N/A if these analyses are performed on another day within the batch.]	✓			NA
6. All samples quantitated within the calibration range for all target analytes, diluted and reanalyzed, or scheduled for reanalysis within the batch.	✓			NA
7. All non-target analyte peaks having total ion areas >0.5% of the nearest internal standard evaluated against a NIST Appendix VIII VOC mass spectral library for tentative identification.	✓			NA
8. All TICs identified using criteria defined in CCP-TP-175.	✓			NA
9. All logbook entries completed in accordance with CCP-QP-011.	✓			NA
10. All raw data corrections made per CCP-TP-188 requirements [lined out, initialed, dated, and justified (as necessary)].	✓			NA
11. All raw data evaluated, signed/initialed and dated in indelible black ink.	✓			NA
12. Raw data reviewed for completeness and accuracy.	✓			NA

Environmental Chemistry Laboratory
Data Generator Checklist

CCP-TP-175 (VOCs by GC/MS)

Analytical Batch#:	Procedure Revision:
EC090294M	0
Analyst Signature: Cathie A. Crowder	Analysis Date: 9/15/09

Criteria	Yes	No	N/A	Comments
1. Samples analyzed in accordance with CCP-TP-175 requirements.	✓			NA
2. BFB tune analyzed at the beginning of the run (once every 12 hours of instrument operation), and meets acceptance criteria.	✓			NA
3. CCAL analyzed at the beginning of the run (once every 12 hours of instrument operation), and meets acceptance criteria.	✓			NA
4. LB analyzed after the CCAL, and meets acceptance criteria.	✓			NA
5. Analytical batch QC (LCS, laboratory duplicate or LCS duplicate) analyzed if appropriate, and meet acceptance criteria. [N/A if these analyses are performed on another day within the batch.]			✓	NA
6. All samples quantitated within the calibration range for all target analytes, diluted and reanalyzed, or scheduled for reanalysis within the batch.	✓			NA
7. All non-target analyte peaks having total ion areas >0.5% of the nearest internal standard evaluated against a NIST Appendix VIII VOC mass spectral library for tentative identification.	✓			NA
8. All TICs identified using criteria defined in CCP-TP-175.	✓			NA
9. All logbook entries completed in accordance with CCP-QP-011.	✓			NA
10. All raw data corrections made per CCP-TP-188 requirements [lined out, initialed, dated, and justified (as necessary)].	✓			NA
11. All raw data evaluated, signed/initialed and dated in indelible black ink.	✓			NA
12. Raw data reviewed for completeness and accuracy.	✓			NA

Environmental Chemistry Laboratory Independent Technical Review (ITR) Checklist

Analytical Batch:	Data Report Number:	Method : CCP-TP-175
FCL09029M	ECL09029M	

Run#	Analysis Date	Data Generator	ITR Signature	Sections Reviewed	Date of Review
1	9-14-09 9-17-09	Catherine Crowder	[signature]	1-7	9-17-09
2	9-15-09	Catherine Crowder	[signature]	1-7	9-17-09
3	NA	NA	NA	NA	NA

Final Independent Technical Reviewer Release Signature: [signature] Sections Reviewed: 1-10 Date: 9/21/09

Instructions: Complete one checklist per analytical batch. If more than three instrument runs were needed to complete the batch analysis, use a second checklist. Enter the appropriate response for each question. Each "No" response requires explanation.

Requirement	Run #1		Run #2		Run #3		Comments
	Yes	No	Yes	No	Yes	No	
1. Instrument Performance Check (BFB Tune)	///	///	///	///	///	///	
a. Was a BFB tune performed each day prior to analysis of samples?	/		/		NA	NA	NA
b. Is the raw data present, and signed/initialed and dated by the analyst, for each BFB tune?	/		/		NA	NA	NA
c. Do all the BFB tunes meet CCP-TP-175 requirements [Table 2]?	/		/		NA	NA	NA
2. Continuing Calibration Verification (CCAL)	///	///	///	///	///	///	
a. Was a CCAL performed each day after the BFB tune and prior to analysis of samples?	/		/		NA	NA	NA
b. Is the raw data present, and signed/initialed and dated by the analyst, for each CCAL?	/		/		NA	NA	NA
c. Is the %D less than or equal to 30% for all target analytes?	/		/		NA	NA	NA
d. Are the retention times of the internal standards within 30 seconds of those in the associated ICAL?	/		/		NA	NA	NA
e. Are the internal standard areas within a factor of 2 (i.e., 50 to 200%) of those in the associated ICAL?	/		/		NA	NA	NA
3. Laboratory Blanks (LBs)	///	///	///	///	///	///	
a. Was a laboratory blank analyzed daily after the CCAL and prior to analysis of samples?	/		/		NA	NA	NA
b. Are all laboratory blank results ≤3 times the program-required MDLs for all target analytes ?	/		/		NA	NA	NA
4. Samples (including LCSs, Blanks and Duplicates)	///	///	///	///	///	///	
a. Are the raw data present, and signed/initialed and dated by the analyst, for all samples listed on the Analysis Request Form, and for all associated LCSs, blanks and duplicates?	/		/		NA	NA	NA
b. Are the internal standard areas within a factor of 2 (i.e., 50% to 200%) of those in the associated CCAL?	/		/		NA	NA	NA
c. Do the sample component RRT's compare within ± 0.06 RRT units of the standard component in the continuing calibration?	/		/		NA	NA	NA
d. Are all analytes found below the MDLs marked with an "X" to the right or left of the concentration on the Quant Report and marked with "No, <MDL", initialed and dated on the following spectral data sheets?	/		/		NA	NA	NA
e. Are all positive hits identified by a "Yes", initialed and dated on the spectral data sheets?	/		/		NA	NA	NA
f. Are negative hits identified by an "X" on the Quant Report, and by "No", justified, initialed and dated on the data sheets?	/		/		NA	NA	NA
g. Were all samples analyzed within 12 hours of the daily BFB tune?	/		/		NA	NA	NA
h. In your opinion, do the sample spectra for positive hits match the reference spectra?	/		/		NA	NA	NA
i. Was a TIC search conducted on each sample, blank, duplicate and LCS in the batch, using a NIST library containing Appendix VIII VOCs?	/		/		NA	NA	NA
j. Were the TICs reviewed and identified using the guidelines defined in CCP-TP-175, initialed and dated?	/		/		NA	NA	NA
k. Were all samples having analytes detected in amounts exceeding the upper calibration range reanalyzed at a different dilution or at a lower volume?	/		/		NA	NA	NA
l. Were all dilutions factors for all samples calculated correctly?	/		/		NA	NA	NA

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Environmental Chemistry Laboratory Independent Technical Review (ITR) Checklist

Analytical Batch:	Data Report Number:	Method : CCP-TP-175
ECL09029M	ECL09029M	

	Requirement	Yes	No	Comments
	5. Initial Calibration	///	///	
a.	Does the BFB tune meet CCP-TP-175 requirements [Table 2]?	/		NA
b.	Are the %RSDs less than 35% for all target analytes?	/		NA
c.	Is at least one of the calibration standards at a concentration below the PRQL?	/		NA
d.	Are the correct ions used for quantitation?	/		NA
e.	Is the ICAL raw data signed/initialed and dated by the analyst and included, or referenced, as appropriate for the report?	/		NA
f.	Does the ICAL use at least 5 points (at least one below the PRQL), with %RSD < 35% for all target analytes?	/		NA
	6. Laboratory Control Samples (LCSs)	///	///	
a.	Was at least one unique LCS analyzed with the analytical batch?	/		NA
b.	Is the LCS second-source from the ICAL standard source?	/		NA
c.	Do the recoveries for all target analytes in each LCS fall between 70% and 130%?	/		NA
d.	IF a duplicate LCS was analyzed, are all RPDs for all analytes greater than the PRQL ≤25%?	/		NA
	7. Duplicate Sample	///	///	
a.	Was at least one field sample from the analytical batch analyzed in duplicate?	/		NA
b.	Do the RPDs for analytes above the PRQL meet the ≤25% precision requirement?	/		NA
	8. Sample Integrity Verification	///	///	
a.	Is COC documentation complete and accurate for all reported samples?	✓		NA
b.	Was physical integrity of all samples maintained?	✓		NA
c.	Were all samples stored at temperatures between 0 and 40° C?	✓		NA
	9. Instrument, Method and Personnel Qualification Verification	///	///	
a.	Were all analyses conducted by analysts having current CCP qualification records on file?	✓		NA
b.	Was acceptable demonstration of precision, accuracy, and MDLs performed within the last 6 months?	✓		NA
	10. Data Report Validation and Completeness	///	///	
a.	Are all changes to original data or forms made by a single line through of incorrect data, initialed/signed and dated by the person making the change?	✓		NA
b.	Does the report contain a Cover Page with Table of Contents?	✓		NA
c.	Does the report contain a Sample Number Cross-Reference Table?	✓		NA
d.	Does the report contain copies of the COC and Gas Sample Canister Tags?	✓		NA
e.	Are Analysis Data Sheets and TIC Analysis Data Sheets present and accurate for all samples in the analytical batch?	✓		NA
f.	Are Lab Blank Summary Forms present for all lab blanks associated with the reported samples?	✓		NA
g.	Are Lab Blank Results Forms present for all lab blanks associated with the reported samples?	✓		NA
h.	Are BFB Tune Reports present for each continuing calibration associated with the reported samples?	✓		NA
i.	Are Initial Calibration Forms present for all Initial Calibrations associated with the reported samples?	✓		NA
j.	Are Continuing Calibration Forms present for each Continuing Calibration associated with the reported samples?	✓		NA
k.	Are Internal Standard Area Summary Forms present for each daily calibration and associated sample analyses?	✓		NA
l.	Are Lab Control Sample Forms present for each LCS associated with the reported samples?	✓		NA
m.	Are Lab Duplicate Forms present for each duplicate analysis associated with the reported samples?	✓		NA
n.	Does the report contain an MDL reporting form?	✓		NA
o.	Does the report contain Quantitation Reports for every standard, sample, and QC sample reported?	✓		NA
p.	Are Mass Spectra for all detected analytes and reported TICs present?	✓		NA
q.	Are copies of Gas Transfer Manifold logs showing all sample pressurizations/dilutions included for all reported samples?	✓		NA

000071

Environmental Chemistry Laboratory Independent Technical Review (ITR) Checklist

Analytical Batch:	Data Report Number:	Method : CCP-TP-175
ECL29029M	ECL29029M	

	Requirement	Yes	No	Comments
r.	Are copies of analysis run logs for every standard, sample and QC sample present and accurate?	✓		NA
s.	Are U, J, B, D, E, H, Z, and N qualifying flags correctly assigned on the reporting forms?	✓		NA
t.	Are all data reporting forms completely and correctly filled out (e.g., correct batch numbers, analyst IDs, analysis times and dates, dilution factors, sample ID numbers and file IDs)?	✓		NA
u.	If there were any NCRs associated with the data are copies included?	✓		NA
v.	Are the analyte concentrations on the Analysis Data Sheets reported in units of ppm, and correctly rounded to 2 significant figures?	✓		NA
w.	Have all data received documented data generator review and signature?	✓		NA
x.	Were all calculations verified by a valid calculation program or a spot check of verified calculation programs?	✓		NA
y.	Have the data been reviewed for transcription errors?	✓		NA
z.	Are all pages in the data report legible and correctly paginated?	✓		NA

240072

SECTION 8.0

MISCELLANEOUS SUPPORTING DATA

000218

CALCULATION FORMULAS
GAS VOC ANALYSIS

IDAHO NATIONAL LABORATORY
ENVIRONMENTAL CHEMISTRY LABORATORY

METHOD: CCP-TP-175

$$\text{Sample Results (ppmv)} = \frac{ng * D * Rt}{V * C * MW} \qquad \text{Sample Specific MDL} = \frac{MDL * D * RT}{V * C * MW}$$

ppmv = **Parts per million volume**

C = **Correction factor for volume at STP (= to 1.00 for Modified Method Acmm-9930)**

D = **Dilution factor (result of canister pressurization) reported as number of times diluted**

ng = **Nanograms of analyte found in the sample (found on instrument quantitation report)**

Rt = **24.5 at 25°C**

MDL = **Method Detection Limit in nanograms (found on Method Detection Limit reporting form)**

MW = **Molecular Weight of analyte**

V = **Volume of sample injected onto instrument (mLs)**

Results for samples with analytes detected are calculated using the sample results (ppmv) equation. The sample specific MDL (analyte MDL corrected for sample volume, dilutions, etc.) is calculated using the sample specific MDL equation.

Revised Form Date (07/12/05)

WIPP DUPLICATE SAMPLE CALCULATIONS

Instrument H

Method CCP-TP-175

		09245014 *IN083109EI437*				09245014D *IN083109EI437D*					
		Instrument Filename: S10HI	Date of Analysis: 10-Sep-09			Instrument Filename: S10HO	Date of Analysis: 10-Sep-09				
Analyte	Molecular Weight	Sample Amt. Found (ng)	Injection Volume (mL)	Dilution Factor (X)	Sample Calculated Amount (ppmv)	Duplicate Amt. Found (ng)	Injection Volume (mL)	Dilution Factor (X)	Duplicate Calculated Amount (ppmv)	Sample & Duplicate Mean (ppmv)	**% RPD**
Ethyl Ether	74.12	0.00				0.00					
Methylene Chloride	84.93	0.00				0.00					
Freon 113	187.38	0.00				0.00					
1,1-Dichloroethene	96.94	0.00				0.00					
1,1-Dichloroethane	98.94	0.00				0.00					
cis-1,2-Dichloroethene	96.94	0.00				0.00					
Chloroform	119.38	0.00				0.00					
1,2-Dichloroethane	98.94	0.00				0.00					
1,1,1-Trichlorethane	133.41	0.00				0.00					
Carbon Tetrachloride	153.82	0.00				0.00					
Trichloroethene	131.39	0.00				0.00					
Cyclohexane	84.16	0.00				0.00					
Benzene	78.12	0.00				0.00					
Acetone	58.08	159.29	30	3.68	**8.24**	144.69	30	3.68	**7.49**	7.86	**9.61**
2-Butanone	72.11	14.32	30	3.68	**0.60**	9.95	30	3.68	**0.41**	0.51	**36.01**
1-Butanol	74.12	0.00				0.00					
trans-1,2-Dichloroethene	96.94	0.00				0.00					
Chloromethane	50.49	0.00				0.00					
Carbon Disulfide	76.14	0.00				0.00					
1,2-Dichloropropane	112.99	0.00				0.00					
Trichlorofluoromethane	137.37	0.00				0.00					
Bromoform	252.75	0.00				0.00					
Tetrachloroethene	165.83	0.00				0.00					
1,1,2,2,-Tetrachloroethane	167.85	0.00				0.00					
Toluene	92.15	598.56	30	3.68	**19.52**	585.30	30	3.68	**19.09**	19.30	**2.24**
Chlorobenzene	112.56	0.00				0.00					
Ethylbenzene	106.17	12.03	30	3.68	**0.34**	12.01	30	3.68	**0.34**	0.34	**0.17**
p/m - Xylene	106.17	45.47	30	3.68	**1.29**	43.19	30	3.68	**1.22**	1.25	**5.14**
o-Xylene	106.17	8.86	30	3.68	**0.25**	8.22	30	3.68	**0.23**	0.24	**7.49**
1,3,5-Trimethylbenzene	120.20	0.00				0.00					
1,2,4-Trimethylbenzene	120.20	0.00				0.00					
4-Methyl -2- Pentanone	100.16	0.00				0.00					

002260

WIPP LABORATORY CONTROL SAMPLE CALCULATIONS

Instrument H

Method CCP-TP-175

Lab Sample ID: **LCSMHS10**
Field Sample ID: **LCS30438SA08**
File Name : **S10HG**
Date of Analysis: **10-Sep-09**

Analyte	Molecular Weight	Sample Amt. Found (ng)	Injection Volume (mL)	Dilution Factor (X)	Calculated Value (ppmv)	True Value (ppmv)	Recovery (%)	IN if Between 70% & 130% (Comp.)
1,1,1-Trichlorethane	133.41	685.39	40	30.0000	**94.40**	94.99	99.38	**IN**
Carbon Tetrachloride	153.82	842.48	40	30.0000	**100.64**	94.80	106.16	**IN**
Trichloroethene	131.39	698.73	40	30.0000	**97.72**	94.91	102.96	**IN**
Benzene	78.12	415.37	40	30.0000	**97.70**	94.87	102.98	**IN**
Chloromethane	50.49	252.04	40	30.0000	**91.73**	97.52	94.06	**IN**
Toluene	92.15	438.08	40	30.0000	**87.35**	94.79	92.16	**IN**
4-methyl-2-pentanone	100.16	442.74	40	30.0000	**81.22**	94.90	85.59	**IN**

C00221

"Walters, Ed E." <WALTER@amwtp.inl.gov>
09/03/2009 02:24 PM

To "Crowder, Catherine A" <Catherine.Crowder@inl.gov>
cc
bcc
Subject Correctios to INHSGS090011

Catherine
Would you make corrections to page 1 of COC for batch INHSGS090011, Date should have no slashes 083109. I will make corrections at my end.

Eddy R Walters
HSGS LO / SME
FGA Operator
walter@amwtp.inl.gov
RWMC / 610
526-6962

"Walters, Ed E." <WALTER@amwtp.inl.gov>
09/10/2009 01:50 PM

To "Crowder, Catherine A" <Catherine.Crowder@inl.gov>
cc
bcc
Subject

History: This message has been replied to.

Catherine
would you make a correction to batch INHSGS090011 canister tag B32 (Field after sample collection) should be 0"hg in the canister pressure box (C=) I will do the same on my end.
thanks Eddy

Eddy R Walters
HSGS LO / SME
FGA Operator
walter@amwtp.inl.gov
RWMC / 610
526-6962

GAS SAMPLE PREPARATION LOGBOOK
ENVIRONMENTAL CHEMISTRY LABORATORY

REPORT GROUP # ECL09028

PAGE # UT2-24- 0034

SUMMA CANISTER LABORATORY SAMPLE IDENTIFICATION	SIZE (mL)	AMBIENT CONDITIONS (Torr) PRESS	AMBIENT CONDITIONS (C) TEMP	CANISTER PRESSURE (Torr) START (A)	CANISTER PRESSURE (Torr) FINAL (B)	DILUTION FACTOR (B/A)	SAMPLE PREP DATE	BY INITIALS
Lab Blank/LB31718502	500	645	24	25.0×10^{-1}	2158.0	NA	090209	
09245001	250	645	24	537.6	1952.0	3.6350	090209	
09245002	250	645	24	488.5	1877.5	3.8434	090209	
09245003	250	645	24	506.0	1907.0	3.7685	090209	
09245004	250	645	24	518.0	1954.0	3.7722	090209	
09245005	250	645	24	500.0	1814.0	3.6280	090209	
09245006	250	645	24	547.0	1972.0	3.6051	090209	
09245007	250	645	24	507.0	1857.5	3.6637	090209	
09245008	250	645	24	523.0	1898.0	3.6291	090209	
09245009	250	645	24	503.5	1859.0	3.6922	090209	
09245010	250	645	24	502.5	1845.5	3.6726	090209	
09245011	250	645	24	485.5	1783.0	3.6725	090209	
09245012	250	645	24	508.5	1853.0	3.6441	090209	
09245013	250	642.5	23	630.5	1894.0	3.0040	9/8/09	
09245011	250	646.5	24	605.5	1828.0	3.0190	9/10/09	
				NA				

C00224

GAS SAMPLE PREPARATION LOGBOOK
ENVIRONMENTAL CHEMISTRY LABORATORY

REPORT GROUP # ECZ09029 PAGE # UT2-24- 0035

SUMMA CANISTER LABORATORY SAMPLE IDENTIFICATION	SIZE (mL)	AMBIENT CONDITIONS (Torr) / (C)		CANISTER PRESSURE (Torr)		DILUTION FACTOR (B/A)	SAMPLE PREP DATE	BY INITIALS
		PRESS	TEMP	START (A)	FINAL (B)			
Lab Blank/IC804127802	500	645	24	1.50x10^-7	2122.5	NA	090209	
09245013	250	645	24	533.0	1917.0	3.5966	090209	
09245014	250	645	24	509.0	1892.0	3.6778	090209	
09245015	250	645	24	514.5	1914.0	3.7201	090209	
09245016	250	645	24	533.5	1994.5	3.7385	090209	
09245017	250	645	24	519.5	1917.5	3.6910	090209	
09245018	250	645	24	503.0	1885.0	3.7475	090209	
09245019	250	645	24	493.0	1857.0	3.7667	090209	
09245020	250	645	24	495.5	1855.0	3.7439	090209	
09245021	250	645	24	502.0	1952.5	3.8894	090209	
09245022	250	645	24	486.0	1834.0	3.7737	090209	
09245023	250	645	24	541.0	1915.0	3.5397	090209	
09245024	250	645	24	511.5	1940.0	3.7928	090209	
				NA				

000225

GAS SAMPLE PREPARATION LOGBOOK
ENVIRONMENTAL CHEMISTRY LABORATORY

REPORT GROUP # NA LCS Std (GC/MS)

PAGE # UT2-24- 0012

SUMMA CANISTER LABORATORY SAMPLE IDENTIFICATION	SIZE (mL)	AMBIENT CONDITIONS (Torr) PRESS	AMBIENT CONDITIONS (C) TEMP	CANISTER PRESSURE (Torr) START (A)	CANISTER PRESSURE (Torr) FINAL (B)	DILUTION FACTOR (B/A)	SAMPLE PREP DATE	BY INITIALS
LCS30438SA08	6000	~~23~~ 629	23	63	1890	30.0000	4/8/09	ORA
			NA					

C00226

ENVIRONMENTAL CHEMISTRY LABORATORY

INTERNAL SAMPLE TRACKING FORM

ECL09029

RECEIVING GROUP # AMWTP / INTEC

000277

LAB SAMPLE ID	SAMPLE(S) REMOVED			ANALYSIS OR PROCESS	SAMPLE(S) RETURNED		
	DATE	TIME	SIGNATURE OR INITIALS		DATE	TIME	SIGNATURE OR INITIALS
09245013-024	NA	NA	NA	Samples Received	090209	1135	~~JSB~~
09245013-024	090209	1400	~~JSB~~ CAR SJM	Sample Prep & Analysis	091509	1630	CAR
09245013-024	092109	1130	CAR	Cleaning	NA	NA	NA

FORM DATE: 08/17//2009

SUPPLEMENTAL REPORTING DATA

INPUT/UPDATE RECORDS SCREEN

9/17/2009

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
09245013	IN083109EIB32	No	CCP-TP-175	9/17/2009

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-H	3/17/2009	09/02/09	8/31/2009	9/10/2009 1207	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
S10HH	3.6	100	24.5	LBMHS10

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL09029M	1	INHSGS090011

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
09245014	IN083109EI437	No	CCP-TP-175	9/17/2009

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-H	3/17/2009	09/02/09	8/31/2009	9/10/2009 1249	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
S10HI	3.68	30	24.5	LBMHS10

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL09029M	1	INHSGS090011

000228

SUPPLEMENTAL REPORTING DATA

INPUT/UPDATE RECORDS SCREEN

9/17/2009

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
09245014D	IN083109EI437D	No	CCP-TP-175	9/17/2009

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-H	3/17/2009	09/02/09	8/31/2009	9/10/2009 1703	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
S10HO	3.68	30	24.5	LBMHS10

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL09029M	1	INHSGS090011

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
09245015	IN083109EI746	No	CCP-TP-175	9/17/2009

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-H	3/17/2009	09/02/09	8/31/2009	9/10/2009 1330	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
S10HJ	3.72	30	24.5	LBMHS10

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL09029M	1	INHSGS090011

C00229

SUPPLEMENTAL REPORTING DATA

INPUT/UPDATE RECORDS SCREEN

9/17/2009

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
09245016	IN083109EIA51	No	CCP-TP-175	9/17/2009

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-H	3/17/2009	09/02/09	8/31/2009	9/10/2009 1409	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
S10HK	3.74	50	24.5	LBMHS10

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL09029M	1	INHSGS090011

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
09245017	IN083109EID25	No	CCP-TP-175	9/17/2009

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-H	3/17/2009	09/02/09	8/31/2009	9/10/2009 1452	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
S10HL	3.69	100	24.5	LBMHS10

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH	
ECL09029M	1	INHSGS090011	C00230

SUPPLEMENTAL REPORTING DATA

INPUT/UPDATE RECORDS SCREEN

9/17/2009

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
09245018	ID083109EI270	No	CCP-TP-175	9/17/2009

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-H	3/17/2009	09/02/09	8/31/2009	9/10/2009 1531	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
S10HM	3.75	50	24.5	LBMHS10

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL09029M	1	INHSGS090011

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
09245019	IN083109EIB11	No	CCP-TP-175	9/17/2009

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-H	3/17/2009	09/02/09	8/31/2009	9/10/2009 1617	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
S10HN	3.77	80	24.5	LBMHS10

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL09029M	1	INHSGS090011

000231

SUPPLEMENTAL REPORTING DATA

INPUT/UPDATE RECORDS SCREEN

9/17/2009

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
09245020	IN083109EI759	No	CCP-TP-175	9/17/2009

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-H	3/17/2009	09/02/09	8/31/2009	9/10/2009 1752	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
S10HP	3.74	40	24.5	LBMHS10

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL09029M	1	INHSGS090011

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
09245021	ID083109EIC06	No	CCP-TP-175	9/17/2009

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-H	3/17/2009	09/02/09	8/31/2009	9/15/2009 1022	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
S15HB	3.89	70	24.5	LBMHS15

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL09029M	1	INHSGS090011

000232

SUPPLEMENTAL REPORTING DATA

INPUT/UPDATE RECORDS SCREEN

9/17/2009

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
09245022	IN083109EI084	No	CCP-TP-175	9/17/2009

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-H	3/17/2009	09/02/09	8/31/2009	9/15/2009 1105	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
S15HC	3.77	100	24.5	LBMHS15

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL09029M	1	INHSGS090011

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
09245022DL	IN083109EI084DL	No	CCP-TP-175	9/17/2009

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-H	3/17/2009	09/02/09	8/31/2009	9/15/2009 1146	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
S15HD	3.77	50	24.5	LBMHS15

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL09029M	1	INHSGS090011

000233

SUPPLEMENTAL REPORTING DATA

INPUT/UPDATE RECORDS SCREEN

9/17/2009

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
09245023	IN083109EID23	No	CCP-TP-175	9/17/2009

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-H	3/17/2009	09/02/09	8/31/2009	9/15/2009 1227	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
S15HE	3.54	50	24.5	LBMHS15

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL09029M	1	INHSGS090011

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
09245024	IN083109EI661	No	CCP-TP-175	9/17/2009

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-H	3/17/2009	09/02/09	8/31/2009	9/15/2009 1308	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
S15HF	3.79	70	24.5	LBMHS15

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL09029M	1	INHSGS090011

000234

SUPPLEMENTAL REPORTING DATA

INPUT/UPDATE RECORDS SCREEN

9/17/2009

LAB SAMPLE ID	FIELD SAMPLE ID		BLANK	METHOD	LOG DATE
LBMHS10	LB31718S02		Yes	CCP-TP-175	9/17/2009

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-H	3/17/2009			9/10/2009 0706	CROWDER

DATA FILE	DILUTION FACTOR		VOLUME	RT	ASSOCIATED BLANK
S10HA	1		100	24.5	

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL09029M	1	

LAB SAMPLE ID	FIELD SAMPLE ID		BLANK	METHOD	LOG DATE
LBMHS15	LB04127S02		Yes	CCP-TP-175	9/17/2009

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-H	3/17/2009			9/15/2009 0942	CROWDER

DATA FILE	DILUTION FACTOR		VOLUME	RT	ASSOCIATED BLANK
S15HA	1		100	24.5	

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL09029M	1	

C00235

SUPPLEMENTAL REPORTING DATA

INPUT/UPDATE RECORDS SCREEN

9/17/2009

LAB SAMPLE ID	FIELD SAMPLE ID		BLANK	METHOD	LOG DATE
LCSMHS10	LCS30438SA08		No	CCP-TP-175	9/17/2009

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-H	3/17/2009			9/10/2009 1125	CROWDER

DATA FILE	DILUTION FACTOR		VOLUME	RT	ASSOCIATED BLANK
S10HG	30		40	24.5	LBMHS10

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL09029M	1	

000236

RESULTS SUMMARY

9/17/2009

LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
09245013	CCP-TP-175	1	ECL09029M	0.04238	
09245013	CCP-TP-175	2	ECL09029M	0.06783	
09245013	CCP-TP-175	3	ECL09029M	0.05296	
09245013	CCP-TP-175	4	ECL09029M	0.02918	
09245013	CCP-TP-175	5	ECL09029M	0.05459	
09245013	CCP-TP-175	6	ECL09029M	0.08201	
09245013	CCP-TP-175	7	ECL09029M	0.03275	
09245013	CCP-TP-175	8	ECL09029M	0.04802	
09245013	CCP-TP-175	9	ECL09029M	0.04814	
09245013	CCP-TP-175	10	ECL09029M	0.02446	
09245013	CCP-TP-175	11	ECL09029M	0.03154	
09245013	CCP-TP-175	12	ECL09029M	0.02685	
09245013	CCP-TP-175	13	ECL09029M	0.05450	
09245013	CCP-TP-175	14	ECL09029M	0.04742	
09245013	CCP-TP-175	15	ECL09029M	0.01952	
09245013	CCP-TP-175	16	ECL09029M	0.01361	
09245013	CCP-TP-175	17	ECL09029M	0.03085	
09245013	CCP-TP-175	18	ECL09029M	0.02943	
09245013	CCP-TP-175	19	ECL09029M	0.04288	4.48
09245013	CCP-TP-175	20	ECL09029M	0.03840	
09245013	CCP-TP-175	21	ECL09029M	0.03821	
09245013	CCP-TP-175	22	ECL09029M	0.03323	
09245013	CCP-TP-175	23	ECL09029M	0.04486	
09245013	CCP-TP-175	24	ECL09029M	0.03669	
09245013	CCP-TP-175	25	ECL09029M	0.03596	
09245013	CCP-TP-175	26	ECL09029M	0.03548	
09245013	CCP-TP-175	27	ECL09029M	0.06463	
09245013	CCP-TP-175	28	ECL09029M	0.05213	
09245013	CCP-TP-175	29	ECL09029M	0.07745	
09245013	CCP-TP-175	30	ECL09029M	0.06850	
09245013	CCP-TP-175	31	ECL09029M	0.08449	
09245013	CCP-TP-175	32	ECL09029M	0.04931	

RESULTS SUMMARY

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LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
09245014	CCP-TP-175	1	ECL09029M	0.14439	
09245014	CCP-TP-175	2	ECL09029M	0.23112	
09245014	CCP-TP-175	3	ECL09029M	0.18047	
09245014	CCP-TP-175	4	ECL09029M	0.09944	
09245014	CCP-TP-175	5	ECL09029M	0.18601	
09245014	CCP-TP-175	6	ECL09029M	0.27945	
09245014	CCP-TP-175	7	ECL09029M	0.11161	
09245014	CCP-TP-175	8	ECL09029M	0.16363	
09245014	CCP-TP-175	9	ECL09029M	0.16403	
09245014	CCP-TP-175	10	ECL09029M	0.08335	
09245014	CCP-TP-175	11	ECL09029M	0.10746	
09245014	CCP-TP-175	12	ECL09029M	0.09149	
09245014	CCP-TP-175	13	ECL09029M	0.18569	
09245014	CCP-TP-175	14	ECL09029M	0.16158	
09245014	CCP-TP-175	15	ECL09029M	0.06650	
09245014	CCP-TP-175	16	ECL09029M	0.04637	
09245014	CCP-TP-175	17	ECL09029M	0.10511	
09245014	CCP-TP-175	18	ECL09029M	0.10027	
09245014	CCP-TP-175	19	ECL09029M	19.52113	598.56
09245014	CCP-TP-175	20	ECL09029M	0.13083	
09245014	CCP-TP-175	21	ECL09029M	0.34053	12.03
09245014	CCP-TP-175	22	ECL09029M	1.28711	45.47
09245014	CCP-TP-175	23	ECL09029M	0.25080	8.86
09245014	CCP-TP-175	24	ECL09029M	0.12501	
09245014	CCP-TP-175	25	ECL09029M	0.12251	
09245014	CCP-TP-175	26	ECL09029M	0.12091	
09245014	CCP-TP-175	27	ECL09029M	0.22024	
09245014	CCP-TP-175	28	ECL09029M	0.17762	
09245014	CCP-TP-175	29	ECL09029M	8.24242	159.29
09245014	CCP-TP-175	30	ECL09029M	0.59682	14.32
09245014	CCP-TP-175	31	ECL09029M	0.28788	
09245014	CCP-TP-175	32	ECL09029M	0.16803	

RESULTS SUMMARY

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LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
09245014D	CCP-TP-175	1	ECL09029M	0.14439	
09245014D	CCP-TP-175	2	ECL09029M	0.23112	
09245014D	CCP-TP-175	3	ECL09029M	0.18047	
09245014D	CCP-TP-175	4	ECL09029M	0.09944	
09245014D	CCP-TP-175	5	ECL09029M	0.18601	
09245014D	CCP-TP-175	6	ECL09029M	0.27945	
09245014D	CCP-TP-175	7	ECL09029M	0.11161	
09245014D	CCP-TP-175	8	ECL09029M	0.16363	
09245014D	CCP-TP-175	9	ECL09029M	0.16403	
09245014D	CCP-TP-175	10	ECL09029M	0.08335	
09245014D	CCP-TP-175	11	ECL09029M	0.10746	
09245014D	CCP-TP-175	12	ECL09029M	0.09149	
09245014D	CCP-TP-175	13	ECL09029M	0.18569	
09245014D	CCP-TP-175	14	ECL09029M	0.16158	
09245014D	CCP-TP-175	15	ECL09029M	0.06650	
09245014D	CCP-TP-175	16	ECL09029M	0.04637	
09245014D	CCP-TP-175	17	ECL09029M	0.10511	
09245014D	CCP-TP-175	18	ECL09029M	0.10027	
09245014D	CCP-TP-175	19	ECL09029M	19.08868	585.3
09245014D	CCP-TP-175	20	ECL09029M	0.13083	
09245014D	CCP-TP-175	21	ECL09029M	0.33996	12.01
09245014D	CCP-TP-175	22	ECL09029M	1.22257	43.19
09245014D	CCP-TP-175	23	ECL09029M	0.23268	8.22
09245014D	CCP-TP-175	24	ECL09029M	0.12501	
09245014D	CCP-TP-175	25	ECL09029M	0.12251	
09245014D	CCP-TP-175	26	ECL09029M	0.12091	
09245014D	CCP-TP-175	27	ECL09029M	0.22024	
09245014D	CCP-TP-175	28	ECL09029M	0.17762	
09245014D	CCP-TP-175	29	ECL09029M	7.48694	144.69
09245014D	CCP-TP-175	30	ECL09029M	0.41469	9.95
09245014D	CCP-TP-175	31	ECL09029M	0.28788	
09245014D	CCP-TP-175	32	ECL09029M	0.16803	

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RESULTS SUMMARY

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LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
09245015	CCP-TP-175	1	ECL09029M	0.14596	
09245015	CCP-TP-175	2	ECL09029M	0.23363	
09245015	CCP-TP-175	3	ECL09029M	0.18243	
09245015	CCP-TP-175	4	ECL09029M	0.10052	
09245015	CCP-TP-175	5	ECL09029M	0.18803	
09245015	CCP-TP-175	6	ECL09029M	0.28249	
09245015	CCP-TP-175	7	ECL09029M	0.11282	
09245015	CCP-TP-175	8	ECL09029M	0.16541	
09245015	CCP-TP-175	9	ECL09029M	0.16581	
09245015	CCP-TP-175	10	ECL09029M	0.08426	
09245015	CCP-TP-175	11	ECL09029M	0.10863	
09245015	CCP-TP-175	12	ECL09029M	0.09249	
09245015	CCP-TP-175	13	ECL09029M	0.18771	
09245015	CCP-TP-175	14	ECL09029M	0.16333	
09245015	CCP-TP-175	15	ECL09029M	0.06722	
09245015	CCP-TP-175	16	ECL09029M	0.04688	
09245015	CCP-TP-175	17	ECL09029M	0.10626	
09245015	CCP-TP-175	18	ECL09029M	0.10136	
09245015	CCP-TP-175	19	ECL09029M	19.32781	586.26
09245015	CCP-TP-175	20	ECL09029M	0.13225	
09245015	CCP-TP-175	21	ECL09029M	0.33765	11.8
09245015	CCP-TP-175	22	ECL09029M	1.24473	43.5
09245015	CCP-TP-175	23	ECL09029M	0.22892	8
09245015	CCP-TP-175	24	ECL09029M	0.12637	
09245015	CCP-TP-175	25	ECL09029M	0.12385	
09245015	CCP-TP-175	26	ECL09029M	0.12222	
09245015	CCP-TP-175	27	ECL09029M	0.22263	
09245015	CCP-TP-175	28	ECL09029M	0.17955	
09245015	CCP-TP-175	29	ECL09029M	8.33985	159.44
09245015	CCP-TP-175	30	ECL09029M	0.54769	13
09245015	CCP-TP-175	31	ECL09029M	0.29101	
09245015	CCP-TP-175	32	ECL09029M	0.16986	

RESULTS SUMMARY

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LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
09245016	CCP-TP-175	1	ECL09029M	0.08805	
09245016	CCP-TP-175	2	ECL09029M	0.14093	
09245016	CCP-TP-175	3	ECL09029M	0.11005	
09245016	CCP-TP-175	4	ECL09029M	0.06064	
09245016	CCP-TP-175	5	ECL09029M	0.11343	
09245016	CCP-TP-175	6	ECL09029M	0.17041	
09245016	CCP-TP-175	7	ECL09029M	0.06806	
09245016	CCP-TP-175	8	ECL09029M	0.09978	
09245016	CCP-TP-175	9	ECL09029M	0.10002	
09245016	CCP-TP-175	10	ECL09029M	0.05083	
09245016	CCP-TP-175	11	ECL09029M	0.07017	5.89
09245016	CCP-TP-175	12	ECL09029M	0.05579	
09245016	CCP-TP-175	13	ECL09029M	0.11323	
09245016	CCP-TP-175	14	ECL09029M	0.09853	
09245016	CCP-TP-175	15	ECL09029M	0.04055	
09245016	CCP-TP-175	16	ECL09029M	0.02828	
09245016	CCP-TP-175	17	ECL09029M	0.06410	
09245016	CCP-TP-175	18	ECL09029M	0.06114	
09245016	CCP-TP-175	19	ECL09029M	15.36023	772.37
09245016	CCP-TP-175	20	ECL09029M	0.07978	
09245016	CCP-TP-175	21	ECL09029M	0.39769	23.04
09245016	CCP-TP-175	22	ECL09029M	1.72852	100.14
09245016	CCP-TP-175	23	ECL09029M	0.41599	24.1
09245016	CCP-TP-175	24	ECL09029M	0.07623	
09245016	CCP-TP-175	25	ECL09029M	0.07471	
09245016	CCP-TP-175	26	ECL09029M	0.07373	
09245016	CCP-TP-175	27	ECL09029M	0.13430	
09245016	CCP-TP-175	28	ECL09029M	0.10831	
09245016	CCP-TP-175	29	ECL09029M	8.39374	266.02
09245016	CCP-TP-175	30	ECL09029M	0.83866	33
09245016	CCP-TP-175	31	ECL09029M	0.48881	19.77
09245016	CCP-TP-175	32	ECL09029M	0.79792	43.61

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RESULTS SUMMARY

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LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
09245017	CCP-TP-175	1	ECL09029M	0.04344	
09245017	CCP-TP-175	2	ECL09029M	0.06952	
09245017	CCP-TP-175	3	ECL09029M	0.05429	
09245017	CCP-TP-175	4	ECL09029M	0.02991	
09245017	CCP-TP-175	5	ECL09029M	0.05596	
09245017	CCP-TP-175	6	ECL09029M	0.08406	
09245017	CCP-TP-175	7	ECL09029M	0.03357	
09245017	CCP-TP-175	8	ECL09029M	0.04922	
09245017	CCP-TP-175	9	ECL09029M	0.04934	
09245017	CCP-TP-175	10	ECL09029M	0.02507	
09245017	CCP-TP-175	11	ECL09029M	0.04567	7.77
09245017	CCP-TP-175	12	ECL09029M	0.02752	
09245017	CCP-TP-175	13	ECL09029M	0.05586	
09245017	CCP-TP-175	14	ECL09029M	0.04860	
09245017	CCP-TP-175	15	ECL09029M	0.02000	
09245017	CCP-TP-175	16	ECL09029M	0.01395	
09245017	CCP-TP-175	17	ECL09029M	0.03162	
09245017	CCP-TP-175	18	ECL09029M	0.03016	
09245017	CCP-TP-175	19	ECL09029M	6.74628	687.65
09245017	CCP-TP-175	20	ECL09029M	0.03936	
09245017	CCP-TP-175	21	ECL09029M	0.03917	
09245017	CCP-TP-175	22	ECL09029M	0.04019	4.72
09245017	CCP-TP-175	23	ECL09029M	0.04598	
09245017	CCP-TP-175	24	ECL09029M	0.03761	
09245017	CCP-TP-175	25	ECL09029M	0.03685	
09245017	CCP-TP-175	26	ECL09029M	0.03637	
09245017	CCP-TP-175	27	ECL09029M	0.06625	
09245017	CCP-TP-175	28	ECL09029M	0.09736	8.2
09245017	CCP-TP-175	29	ECL09029M	6.32010	406.03
09245017	CCP-TP-175	30	ECL09029M	0.65619	52.34
09245017	CCP-TP-175	31	ECL09029M	0.44373	36.38
09245017	CCP-TP-175	32	ECL09029M	0.05055	

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RESULTS SUMMARY

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LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
09245018	CCP-TP-175	1	ECL09029M	0.08828	
09245018	CCP-TP-175	2	ECL09029M	0.14131	
09245018	CCP-TP-175	3	ECL09029M	0.11034	
09245018	CCP-TP-175	4	ECL09029M	0.06080	
09245018	CCP-TP-175	5	ECL09029M	0.11373	
09245018	CCP-TP-175	6	ECL09029M	0.17086	
09245018	CCP-TP-175	7	ECL09029M	0.06824	
09245018	CCP-TP-175	8	ECL09029M	0.10005	
09245018	CCP-TP-175	9	ECL09029M	0.10029	
09245018	CCP-TP-175	10	ECL09029M	0.05096	
09245018	CCP-TP-175	11	ECL09029M	0.06570	
09245018	CCP-TP-175	12	ECL09029M	0.05594	
09245018	CCP-TP-175	13	ECL09029M	0.11965	5.48
09245018	CCP-TP-175	14	ECL09029M	0.09879	
09245018	CCP-TP-175	15	ECL09029M	0.04066	
09245018	CCP-TP-175	16	ECL09029M	0.02835	
09245018	CCP-TP-175	17	ECL09029M	0.06427	
09245018	CCP-TP-175	18	ECL09029M	0.06130	
09245018	CCP-TP-175	19	ECL09029M	15.66152	785.42
09245018	CCP-TP-175	20	ECL09029M	0.07999	
09245018	CCP-TP-175	21	ECL09029M	0.07961	
09245018	CCP-TP-175	22	ECL09029M	0.06923	
09245018	CCP-TP-175	23	ECL09029M	0.09346	
09245018	CCP-TP-175	24	ECL09029M	0.07644	
09245018	CCP-TP-175	25	ECL09029M	0.07491	
09245018	CCP-TP-175	26	ECL09029M	0.07392	
09245018	CCP-TP-175	27	ECL09029M	0.13466	
09245018	CCP-TP-175	28	ECL09029M	0.10860	
09245018	CCP-TP-175	29	ECL09029M	0.74917	23.68
09245018	CCP-TP-175	30	ECL09029M	0.14270	
09245018	CCP-TP-175	31	ECL09029M	0.22783	9.19
09245018	CCP-TP-175	32	ECL09029M	0.10274	

RESULTS SUMMARY

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LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
09245019	CCP-TP-175	1	ECL09029M	0.05547	
09245019	CCP-TP-175	2	ECL09029M	0.08879	
09245019	CCP-TP-175	3	ECL09029M	0.06933	
09245019	CCP-TP-175	4	ECL09029M	0.03820	
09245019	CCP-TP-175	5	ECL09029M	0.07146	
09245019	CCP-TP-175	6	ECL09029M	0.10736	
09245019	CCP-TP-175	7	ECL09029M	0.04288	
09245019	CCP-TP-175	8	ECL09029M	0.06286	
09245019	CCP-TP-175	9	ECL09029M	0.06301	
09245019	CCP-TP-175	10	ECL09029M	0.03202	
09245019	CCP-TP-175	11	ECL09029M	0.05705	7.6
09245019	CCP-TP-175	12	ECL09029M	0.03515	
09245019	CCP-TP-175	13	ECL09029M	0.13170	9.6
09245019	CCP-TP-175	14	ECL09029M	0.06207	
09245019	CCP-TP-175	15	ECL09029M	0.02555	
09245019	CCP-TP-175	16	ECL09029M	0.01782	
09245019	CCP-TP-175	17	ECL09029M	0.04038	
09245019	CCP-TP-175	18	ECL09029M	0.03852	
09245019	CCP-TP-175	19	ECL09029M	8.68334	693.05
09245019	CCP-TP-175	20	ECL09029M	0.05026	
09245019	CCP-TP-175	21	ECL09029M	0.05002	
09245019	CCP-TP-175	22	ECL09029M	0.04350	
09245019	CCP-TP-175	23	ECL09029M	0.05872	
09245019	CCP-TP-175	24	ECL09029M	0.04803	
09245019	CCP-TP-175	25	ECL09029M	0.04707	
09245019	CCP-TP-175	26	ECL09029M	0.04645	
09245019	CCP-TP-175	27	ECL09029M	0.08461	
09245019	CCP-TP-175	28	ECL09029M	0.06824	
09245019	CCP-TP-175	29	ECL09029M	20.42550	1027.5
09245019	CCP-TP-175	30	ECL09029M	3.85500	240.77
09245019	CCP-TP-175	31	ECL09029M	0.41746	26.8
09245019	CCP-TP-175	32	ECL09029M	0.30674	26.61

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RESULTS SUMMARY

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LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
09245020	CCP-TP-175	1	ECL09029M	0.11006	
09245020	CCP-TP-175	2	ECL09029M	0.17616	
09245020	CCP-TP-175	3	ECL09029M	0.13756	
09245020	CCP-TP-175	4	ECL09029M	0.07580	
09245020	CCP-TP-175	5	ECL09029M	0.14178	
09245020	CCP-TP-175	6	ECL09029M	0.21301	
09245020	CCP-TP-175	7	ECL09029M	0.08507	
09245020	CCP-TP-175	8	ECL09029M	0.12473	
09245020	CCP-TP-175	9	ECL09029M	0.12503	
09245020	CCP-TP-175	10	ECL09029M	0.06353	
09245020	CCP-TP-175	11	ECL09029M	0.08191	
09245020	CCP-TP-175	12	ECL09029M	0.06974	
09245020	CCP-TP-175	13	ECL09029M	0.14154	
09245020	CCP-TP-175	14	ECL09029M	0.12316	
09245020	CCP-TP-175	15	ECL09029M	0.05068	
09245020	CCP-TP-175	16	ECL09029M	0.03535	
09245020	CCP-TP-175	17	ECL09029M	0.08012	
09245020	CCP-TP-175	18	ECL09029M	0.07643	
09245020	CCP-TP-175	19	ECL09029M	19.84438	798.28
09245020	CCP-TP-175	20	ECL09029M	0.09972	
09245020	CCP-TP-175	21	ECL09029M	0.09925	
09245020	CCP-TP-175	22	ECL09029M	0.08630	
09245020	CCP-TP-175	23	ECL09029M	0.11651	
09245020	CCP-TP-175	24	ECL09029M	0.09529	
09245020	CCP-TP-175	25	ECL09029M	0.09338	
09245020	CCP-TP-175	26	ECL09029M	0.09216	
09245020	CCP-TP-175	27	ECL09029M	0.16787	
09245020	CCP-TP-175	28	ECL09029M	0.13539	
09245020	CCP-TP-175	29	ECL09029M	12.59400	319.31
09245020	CCP-TP-175	30	ECL09029M	0.91713	28.87
09245020	CCP-TP-175	31	ECL09029M	0.26950	8.72
09245020	CCP-TP-175	32	ECL09029M	0.12808	

RESULTS SUMMARY

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LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
09245021	CCP-TP-175	1	ECL09029M	0.06541	
09245021	CCP-TP-175	2	ECL09029M	0.10470	
09245021	CCP-TP-175	3	ECL09029M	0.08176	
09245021	CCP-TP-175	4	ECL09029M	0.04505	
09245021	CCP-TP-175	5	ECL09029M	0.08427	
09245021	CCP-TP-175	6	ECL09029M	0.12660	
09245021	CCP-TP-175	7	ECL09029M	0.05056	
09245021	CCP-TP-175	8	ECL09029M	0.25775	22.6
09245021	CCP-TP-175	9	ECL09029M	0.07431	
09245021	CCP-TP-175	10	ECL09029M	0.03776	
09245021	CCP-TP-175	11	ECL09029M	0.04868	
09245021	CCP-TP-175	12	ECL09029M	0.04145	
09245021	CCP-TP-175	13	ECL09029M	0.08412	
09245021	CCP-TP-175	14	ECL09029M	0.07320	
09245021	CCP-TP-175	15	ECL09029M	0.04928	4.09
09245021	CCP-TP-175	16	ECL09029M	0.02101	
09245021	CCP-TP-175	17	ECL09029M	0.04762	
09245021	CCP-TP-175	18	ECL09029M	0.04542	
09245021	CCP-TP-175	19	ECL09029M	10.70953	724.85
09245021	CCP-TP-175	20	ECL09029M	0.05927	
09245021	CCP-TP-175	21	ECL09029M	0.05899	
09245021	CCP-TP-175	22	ECL09029M	0.05130	
09245021	CCP-TP-175	23	ECL09029M	0.06925	
09245021	CCP-TP-175	24	ECL09029M	0.05663	
09245021	CCP-TP-175	25	ECL09029M	0.05550	
09245021	CCP-TP-175	26	ECL09029M	0.05477	
09245021	CCP-TP-175	27	ECL09029M	0.49833	18.48
09245021	CCP-TP-175	28	ECL09029M	0.08047	
09245021	CCP-TP-175	29	ECL09029M	5.84264	249.24
09245021	CCP-TP-175	30	ECL09029M	0.49222	26.07
09245021	CCP-TP-175	31	ECL09029M	0.39603	21.56
09245021	CCP-TP-175	32	ECL09029M	0.15496	11.4

RESULTS SUMMARY

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LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
09245022	CCP-TP-175	1	ECL09029M	11.65068	1732.75
09245022	CCP-TP-175	2	ECL09029M	0.07103	
09245022	CCP-TP-175	3	ECL09029M	0.22795	20.96
09245022	CCP-TP-175	4	ECL09029M	1.60734	326.08
09245022	CCP-TP-175	5	ECL09029M	0.05717	
09245022	CCP-TP-175	6	ECL09029M	0.08589	
09245022	CCP-TP-175	7	ECL09029M	0.03430	
09245022	CCP-TP-175	8	ECL09029M	0.05029	
09245022	CCP-TP-175	9	ECL09029M	0.05041	
09245022	CCP-TP-175	10	ECL09029M	0.02839	4.1
09245022	CCP-TP-175	11	ECL09029M	0.03303	
09245022	CCP-TP-175	12	ECL09029M	0.02812	
09245022	CCP-TP-175	13	ECL09029M	0.58935	53.7
09245022	CCP-TP-175	14	ECL09029M	0.53383	45.15
09245022	CCP-TP-175	15	ECL09029M	0.04512	5.52
09245022	CCP-TP-175	16	ECL09029M	0.01425	
09245022	CCP-TP-175	17	ECL09029M	0.03231	
09245022	CCP-TP-175	18	ECL09029M	0.03082	
09245022	CCP-TP-175	19	ECL09029M	0.19225	19.18
09245022	CCP-TP-175	20	ECL09029M	0.04021	
09245022	CCP-TP-175	21	ECL09029M	0.04002	
09245022	CCP-TP-175	22	ECL09029M	0.05898	6.78
09245022	CCP-TP-175	23	ECL09029M	0.04698	
09245022	CCP-TP-175	24	ECL09029M	0.06470	8.42
09245022	CCP-TP-175	25	ECL09029M	0.12326	16.04
09245022	CCP-TP-175	26	ECL09029M	0.03716	
09245022	CCP-TP-175	27	ECL09029M	0.06769	
09245022	CCP-TP-175	28	ECL09029M	0.11537	9.51
09245022	CCP-TP-175	29	ECL09029M	13.83408	869.9
09245022	CCP-TP-175	30	ECL09029M	1.36671	106.7
09245022	CCP-TP-175	31	ECL09029M	1.40903	113.07
09245022	CCP-TP-175	32	ECL09029M	0.05164	

RESULTS SUMMARY

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LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
09245022DL	CCP-TP-175	1	ECL09029M	11.98883	891.52
09245022DL	CCP-TP-175	2	ECL09029M	0.14206	
09245022DL	CCP-TP-175	3	ECL09029M	0.34606	15.91
09245022DL	CCP-TP-175	4	ECL09029M	1.53804	156.01
09245022DL	CCP-TP-175	5	ECL09029M	0.11434	
09245022DL	CCP-TP-175	6	ECL09029M	0.17177	
09245022DL	CCP-TP-175	7	ECL09029M	0.06860	
09245022DL	CCP-TP-175	8	ECL09029M	0.10058	
09245022DL	CCP-TP-175	9	ECL09029M	0.10082	
09245022DL	CCP-TP-175	10	ECL09029M	0.05123	
09245022DL	CCP-TP-175	11	ECL09029M	0.06605	
09245022DL	CCP-TP-175	12	ECL09029M	0.05624	
09245022DL	CCP-TP-175	13	ECL09029M	0.56214	25.61
09245022DL	CCP-TP-175	14	ECL09029M	0.51243	21.67
09245022DL	CCP-TP-175	15	ECL09029M	0.04234	2.59
09245022DL	CCP-TP-175	16	ECL09029M	0.02850	
09245022DL	CCP-TP-175	17	ECL09029M	0.06461	
09245022DL	CCP-TP-175	18	ECL09029M	0.06163	
09245022DL	CCP-TP-175	19	ECL09029M	0.18904	9.43
09245022DL	CCP-TP-175	20	ECL09029M	0.08042	
09245022DL	CCP-TP-175	21	ECL09029M	0.08004	
09245022DL	CCP-TP-175	22	ECL09029M	0.06960	
09245022DL	CCP-TP-175	23	ECL09029M	0.09396	
09245022DL	CCP-TP-175	24	ECL09029M	0.07684	
09245022DL	CCP-TP-175	25	ECL09029M	0.11573	7.53
09245022DL	CCP-TP-175	26	ECL09029M	0.07432	
09245022DL	CCP-TP-175	27	ECL09029M	0.13537	
09245022DL	CCP-TP-175	28	ECL09029M	0.10918	
09245022DL	CCP-TP-175	29	ECL09029M	13.30355	418.27
09245022DL	CCP-TP-175	30	ECL09029M	1.70717	66.64
09245022DL	CCP-TP-175	31	ECL09029M	1.43059	57.4
09245022DL	CCP-TP-175	32	ECL09029M	0.10328	

RESULTS SUMMARY

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LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
09245023	CCP-TP-175	1	ECL09029M	0.08334	
09245023	CCP-TP-175	2	ECL09029M	0.13339	
09245023	CCP-TP-175	3	ECL09029M	0.17401	8.52
09245023	CCP-TP-175	4	ECL09029M	0.38584	41.68
09245023	CCP-TP-175	5	ECL09029M	0.10736	
09245023	CCP-TP-175	6	ECL09029M	0.16129	
09245023	CCP-TP-175	7	ECL09029M	0.06442	
09245023	CCP-TP-175	8	ECL09029M	0.09445	
09245023	CCP-TP-175	9	ECL09029M	0.09467	
09245023	CCP-TP-175	10	ECL09029M	0.04811	
09245023	CCP-TP-175	11	ECL09029M	0.06202	
09245023	CCP-TP-175	12	ECL09029M	0.05281	
09245023	CCP-TP-175	13	ECL09029M	0.80444	39.03
09245023	CCP-TP-175	14	ECL09029M	1.11865	50.38
09245023	CCP-TP-175	15	ECL09029M	0.03838	
09245023	CCP-TP-175	16	ECL09029M	0.02677	
09245023	CCP-TP-175	17	ECL09029M	0.06067	
09245023	CCP-TP-175	18	ECL09029M	0.05787	
09245023	CCP-TP-175	19	ECL09029M	0.07398	3.93
09245023	CCP-TP-175	20	ECL09029M	0.07551	
09245023	CCP-TP-175	21	ECL09029M	0.07515	
09245023	CCP-TP-175	22	ECL09029M	0.06535	
09245023	CCP-TP-175	23	ECL09029M	0.08822	
09245023	CCP-TP-175	24	ECL09029M	0.07215	
09245023	CCP-TP-175	25	ECL09029M	0.07071	
09245023	CCP-TP-175	26	ECL09029M	0.06978	
09245023	CCP-TP-175	27	ECL09029M	0.12711	
09245023	CCP-TP-175	28	ECL09029M	0.10252	
09245023	CCP-TP-175	29	ECL09029M	13.05042	436.97
09245023	CCP-TP-175	30	ECL09029M	2.15364	89.53
09245023	CCP-TP-175	31	ECL09029M	1.04142	44.5
09245023	CCP-TP-175	32	ECL09029M	0.09698	

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RESULTS SUMMARY

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LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
09245024	CCP-TP-175	1	ECL09029M	0.06373	
09245024	CCP-TP-175	2	ECL09029M	0.10201	
09245024	CCP-TP-175	3	ECL09029M	0.07966	
09245024	CCP-TP-175	4	ECL09029M	0.04389	
09245024	CCP-TP-175	5	ECL09029M	0.08210	
09245024	CCP-TP-175	6	ECL09029M	0.12335	
09245024	CCP-TP-175	7	ECL09029M	0.04926	
09245024	CCP-TP-175	8	ECL09029M	0.07223	
09245024	CCP-TP-175	9	ECL09029M	0.07240	
09245024	CCP-TP-175	10	ECL09029M	0.03679	
09245024	CCP-TP-175	11	ECL09029M	0.04743	
09245024	CCP-TP-175	12	ECL09029M	0.04038	
09245024	CCP-TP-175	13	ECL09029M	0.08196	
09245024	CCP-TP-175	14	ECL09029M	0.07132	
09245024	CCP-TP-175	15	ECL09029M	0.02935	
09245024	CCP-TP-175	16	ECL09029M	0.02047	
09245024	CCP-TP-175	17	ECL09029M	0.04640	
09245024	CCP-TP-175	18	ECL09029M	0.04426	
09245024	CCP-TP-175	19	ECL09029M	10.19210	708.03
09245024	CCP-TP-175	20	ECL09029M	0.05775	
09245024	CCP-TP-175	21	ECL09029M	0.05747	
09245024	CCP-TP-175	22	ECL09029M	0.04998	
09245024	CCP-TP-175	23	ECL09029M	0.06747	
09245024	CCP-TP-175	24	ECL09029M	0.05518	
09245024	CCP-TP-175	25	ECL09029M	0.05408	
09245024	CCP-TP-175	26	ECL09029M	0.05337	
09245024	CCP-TP-175	27	ECL09029M	0.09721	
09245024	CCP-TP-175	28	ECL09029M	0.10505	6.03
09245024	CCP-TP-175	29	ECL09029M	5.92403	259.38
09245024	CCP-TP-175	30	ECL09029M	0.62526	33.99
09245024	CCP-TP-175	31	ECL09029M	0.20921	11.69
09245024	CCP-TP-175	32	ECL09029M	0.07417	

RESULTS SUMMARY

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LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
LBMHS10	CCP-TP-175	1	ECL09029M	0.01177	
LBMHS10	CCP-TP-175	2	ECL09029M	0.01884	
LBMHS10	CCP-TP-175	3	ECL09029M	0.01471	
LBMHS10	CCP-TP-175	4	ECL09029M	0.00811	
LBMHS10	CCP-TP-175	5	ECL09029M	0.01516	
LBMHS10	CCP-TP-175	6	ECL09029M	0.02278	
LBMHS10	CCP-TP-175	7	ECL09029M	0.00910	
LBMHS10	CCP-TP-175	8	ECL09029M	0.01334	
LBMHS10	CCP-TP-175	9	ECL09029M	0.01337	
LBMHS10	CCP-TP-175	10	ECL09029M	0.00679	
LBMHS10	CCP-TP-175	11	ECL09029M	0.00876	
LBMHS10	CCP-TP-175	12	ECL09029M	0.00746	
LBMHS10	CCP-TP-175	13	ECL09029M	0.01514	
LBMHS10	CCP-TP-175	14	ECL09029M	0.01317	
LBMHS10	CCP-TP-175	15	ECL09029M	0.00542	
LBMHS10	CCP-TP-175	16	ECL09029M	0.00378	
LBMHS10	CCP-TP-175	17	ECL09029M	0.00857	
LBMHS10	CCP-TP-175	18	ECL09029M	0.00817	
LBMHS10	CCP-TP-175	19	ECL09029M	0.01010	
LBMHS10	CCP-TP-175	20	ECL09029M	0.01067	
LBMHS10	CCP-TP-175	21	ECL09029M	0.01062	
LBMHS10	CCP-TP-175	22	ECL09029M	0.00923	
LBMHS10	CCP-TP-175	23	ECL09029M	0.01246	
LBMHS10	CCP-TP-175	24	ECL09029M	0.01019	
LBMHS10	CCP-TP-175	25	ECL09029M	0.00999	
LBMHS10	CCP-TP-175	26	ECL09029M	0.00986	
LBMHS10	CCP-TP-175	27	ECL09029M	0.01795	
LBMHS10	CCP-TP-175	28	ECL09029M	0.01448	
LBMHS10	CCP-TP-175	29	ECL09029M	0.02151	
LBMHS10	CCP-TP-175	30	ECL09029M	0.01903	
LBMHS10	CCP-TP-175	31	ECL09029M	0.02347	
LBMHS10	CCP-TP-175	32	ECL09029M	0.01370	

RESULTS SUMMARY

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LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
LBMHS15	CCP-TP-175	1	ECL09029M	0.01177	
LBMHS15	CCP-TP-175	2	ECL09029M	0.01884	
LBMHS15	CCP-TP-175	3	ECL09029M	0.01471	
LBMHS15	CCP-TP-175	4	ECL09029M	0.00811	
LBMHS15	CCP-TP-175	5	ECL09029M	0.01516	
LBMHS15	CCP-TP-175	6	ECL09029M	0.02278	
LBMHS15	CCP-TP-175	7	ECL09029M	0.00910	
LBMHS15	CCP-TP-175	8	ECL09029M	0.01334	
LBMHS15	CCP-TP-175	9	ECL09029M	0.01337	
LBMHS15	CCP-TP-175	10	ECL09029M	0.00679	
LBMHS15	CCP-TP-175	11	ECL09029M	0.00876	
LBMHS15	CCP-TP-175	12	ECL09029M	0.00746	
LBMHS15	CCP-TP-175	13	ECL09029M	0.01514	
LBMHS15	CCP-TP-175	14	ECL09029M	0.01317	
LBMHS15	CCP-TP-175	15	ECL09029M	0.00542	
LBMHS15	CCP-TP-175	16	ECL09029M	0.00378	
LBMHS15	CCP-TP-175	17	ECL09029M	0.00857	
LBMHS15	CCP-TP-175	18	ECL09029M	0.00817	
LBMHS15	CCP-TP-175	19	ECL09029M	0.01010	
LBMHS15	CCP-TP-175	20	ECL09029M	0.01067	
LBMHS15	CCP-TP-175	21	ECL09029M	0.01062	
LBMHS15	CCP-TP-175	22	ECL09029M	0.00923	
LBMHS15	CCP-TP-175	23	ECL09029M	0.01246	
LBMHS15	CCP-TP-175	24	ECL09029M	0.01019	
LBMHS15	CCP-TP-175	25	ECL09029M	0.00999	
LBMHS15	CCP-TP-175	26	ECL09029M	0.00986	
LBMHS15	CCP-TP-175	27	ECL09029M	0.01795	
LBMHS15	CCP-TP-175	28	ECL09029M	0.01448	
LBMHS15	CCP-TP-175	29	ECL09029M	0.02151	
LBMHS15	CCP-TP-175	30	ECL09029M	0.01903	
LBMHS15	CCP-TP-175	31	ECL09029M	0.02347	
LBMHS15	CCP-TP-175	32	ECL09029M	0.01370	

RESULTS SUMMARY

9/17/2009

LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
LCSMHS10	CCP-TP-175	1	ECL09029M	0.88283	
LCSMHS10	CCP-TP-175	2	ECL09029M	1.41308	
LCSMHS10	CCP-TP-175	3	ECL09029M	1.10341	
LCSMHS10	CCP-TP-175	4	ECL09029M	0.60799	
LCSMHS10	CCP-TP-175	5	ECL09029M	1.13730	
LCSMHS10	CCP-TP-175	6	ECL09029M	1.70861	
LCSMHS10	CCP-TP-175	7	ECL09029M	0.68238	
LCSMHS10	CCP-TP-175	8	ECL09029M	1.00048	
LCSMHS10	CCP-TP-175	9	ECL09029M	1.00288	
LCSMHS10	CCP-TP-175	10	ECL09029M	94.40103	685.39
LCSMHS10	CCP-TP-175	11	ECL09029M	100.64081	842.48
LCSMHS10	CCP-TP-175	12	ECL09029M	97.71797	698.73
LCSMHS10	CCP-TP-175	13	ECL09029M	1.13534	
LCSMHS10	CCP-TP-175	14	ECL09029M	97.70128	415.37
LCSMHS10	CCP-TP-175	15	ECL09029M	0.40656	
LCSMHS10	CCP-TP-175	16	ECL09029M	0.28353	
LCSMHS10	CCP-TP-175	17	ECL09029M	0.64268	
LCSMHS10	CCP-TP-175	18	ECL09029M	0.61305	
LCSMHS10	CCP-TP-175	19	ECL09029M	87.35453	438.08
LCSMHS10	CCP-TP-175	20	ECL09029M	0.79991	
LCSMHS10	CCP-TP-175	21	ECL09029M	0.79613	
LCSMHS10	CCP-TP-175	22	ECL09029M	0.69229	
LCSMHS10	CCP-TP-175	23	ECL09029M	0.93459	
LCSMHS10	CCP-TP-175	24	ECL09029M	0.76435	
LCSMHS10	CCP-TP-175	25	ECL09029M	0.74906	
LCSMHS10	CCP-TP-175	26	ECL09029M	0.73925	
LCSMHS10	CCP-TP-175	27	ECL09029M	91.72579	252.04
LCSMHS10	CCP-TP-175	28	ECL09029M	1.08599	
LCSMHS10	CCP-TP-175	29	ECL09029M	1.61351	
LCSMHS10	CCP-TP-175	30	ECL09029M	1.42699	
LCSMHS10	CCP-TP-175	31	ECL09029M	1.76015	
LCSMHS10	CCP-TP-175	32	ECL09029M	81.22352	442.74

Attachment 9 – CCP SPM HSG Summa Sampling Project Level Validation Checklist and Summary

BDR Number: INHSG1111	Sampling Date: 10/27/11			
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
1. Does the Batch Data Report (BDR) contain the batch number? **Reference Source: CCP-PO-001, Table C3-12**	X			
2. Is the BDR complete according to the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-10b**	X			
3. Does the BDR contain the BDR date? **Reference Source: CCP-PO-001, Table C3-12**	X			
4. Is the sample matrix and type included for each sample in the BDR? **Reference Source: CCP-PO-001, Table C3-12**	X			
5. Is the BDR complete as defined by the process procedures? **Reference Source: CCP-PO-001, C3-10, CCP Technical Procedures**	X			
6. List all containers that have met QAOs. **Reference Source: CCP-PO-001, Table C3-12**				Container Numbers: RW49571 RW47969 RW47784 RW48074 RW48192 RW48198 RW48081 RW48201 RW47763 RW47765
7. Does the BDR include the requested analyses and the name of the laboratory? **Reference Source: CCP-PO-001, Table C3-12**	X			
8. Is there a reference to or copy of any associated NCRs (if any) in the BDR? NA if no NCRs associated with the BDR. **Reference Source: CCP-PO-001, Table C3-12**			X	None generated.
9. Does the BDR include the point of origin for sampling (e.g., building number, room)? **Reference Source: CCP-PO-001, Table C3-12**	X			
10. Is the sample size included in the BDR? **Reference Source: CCP-PO-001, Table C3-12**	X			
11. Does the BDR include the sample location of each container? Note: Location within container is where the sample is taken. The BDR must specify what layer of confinement was sampled (e.g., under the lid). **Reference Source: CCP-PO-001, Table C3-12**	X			

COPY

CCP RECORDS ORIGINAL
DATE REC'D 11-9-11

Attachment 9 – CCP SPM HSG Summa Sampling Project Level Validation Checklist and Summary (Continued)

BDR Number: INHSG1111	Sampling Date: 10/27/11			
Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
12. Is the person collecting the sample identified in the BDR and qualified? **Reference Source: CCP-PO-001, Table C3-12**	X			
13. Does the BDR contain a chain of custody record? **Reference Source: CCP-PO-001, Table C3-12**	X			
14. Does the chain of custody form correctly identify the Waste Stream ID? **Reference Source: CCP-PO-001, Table C3-12**	X			
15. Is there a reference to sampling equipment numbers or lot numbers for disposable equipment? **Reference Source: CCP-PO-001, Table C3-12**	X			
16. Is there verification of rigid liner venting? **Reference Source: CCP-PO-001, Table C3-12**	X			
17. Does the BDR include the operator/sampler signature and date and time of sampling for each sample? **Reference Source: CCP-PO-001, Table C3-12**	X			
18. Are there 20 samples or less (excluding QC) in the batch and all samples collected within 14 days of the first sample collected? **Reference Source: CCP-PO-001, C1-1b**	X			
19. Are the correct revisions of the procedures used and identified? **Reference Source: CCP-PO-001, Table C3-12**	X			
20. Are all data reporting forms complete with data reported properly (correct units and significant figures)? **Reference Source: CCP-PO-001, C3-10b(1)**	X			
21. Is there a cross-reference between waste container number and field sample number? **Reference Source: CCP-PO-001, C1-5**	X			
22. Have the samples been properly preserved (0-40° C)? **Reference Source: CCP-PO-001, Table C1-1**	X			

Attachment 9 – CCP SPM HSG Summa Sampling Project Level Validation Checklist and Summary (Continued)

BDR Number: INHSG1111				Sampling Date: 10/27/11
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
23. Have the samples been properly preserved (0-40° C)? **Reference Source: CCP-PO-001, Table C1-1**	X			
24. Has the correct DAC scenario and waste packaging configuration been selected? **Reference Source: CCP-PO-001, C3-2**	X			
25. Do the samples meet the required DAC equilibrium times? **Reference Source: CCP-PO-001, C3-2**	X			
26. Prior to canister use was the following performed: equipment blank, sample canister equipment cleaning and leak check, and field reference standard (or on-line control standard) performed as required? **Reference Source: CCP-PO-001, C1-1b**	X			
27. Has one field blank per batch been collected? **Reference Source: CCP-PO-001, Table C1-2**	X			
28. Has a minimum of one equipment blank been collected for the applicable cleaning batch blanks? **Reference Source: CCP-PO-001, Table C1-2**	X			
29. Has one field duplicate per batch been collected? **Reference Source: CCP-PO-001, Table C1-2**	X			
30. Has the canister pressure and ambient temperature and pressure been recorded? **Reference Source: CCP-PO-001, Table C3-12**	X			
31. Have the ambient pressure and temperature sensors been calibrated? **Reference Source: CCP-PO-001, C1-1d**	X			
32. Have all the waste containers equilibrated for a minimum of 72 hours at 18° C or higher? **Reference Source: CCP-PO-001, C1-1a**	X			
33. Is the completed, signed, and dated Independent Technical Reviewer Checklist in the BDR? **Reference Source: CCP-PO-001, Table C3-12**	X			

Attachment 9 – CCP SPM HSG Summa Sampling Project Level Validation Checklist and Summary (Continued)

BDR Number: INHSG1111	Sampling Date: 10/27/11			
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
34. Is the completed, signed, and dated Independent Technical Reviewer Checklist in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, Table C3-12**	X			
Comments: None.				
The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.				
Barbara Broomfield				11/08/11
SPM Printed Name	Signature			Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

Attachment 1 – HSG Sampling Batch Data Report Cover Sheet

Page 1 of 1

Headspace Gas Sampling

HSG Sampling Batch Number: INHSG1111

Waste Matrix Code: S5400

Waste Container Identification Numbers

RW49571	N/A
RW47969	N/A
RW47784	N/A
RW48074	N/A
RW48192	N/A
RW48198	N/A
RW48081	N/A
RW48201	N/A
RW47763	N/A
RW47765	N/A

Comments: Waste Stream ID for this batch is ID-AECHDM, No filter change out required.

HSG Independent Technical Reviewer:

Valerie D. Vaughn-Martin (Printed Name) Valerie D. Vaughn-Martin (Signature) 07 NOV 11 (Date)

CCP RECORDS ORIGINAL
DATE REC'D 11-7-11

Attachment 1 – HSG Sampling Batch Data Report Cover Sheet Page 1 of 1

Headspace Gas Sampling

HSG Sampling Batch Number: INHSG1111

Waste Matrix Code: S5400

Waste Container Identification Numbers

RW49571	N/A
RW47969	N/A
RW47784	N/A
RW48074	N/A
RW48192	N/A
RW48198	N/A
RW48081	N/A
RW48201	N/A
RW47763	N/A
RW47763	N/A

Comments: Waste Stream ID for this batch is ID-AECHDM, No filter change out required.

Valerie 07 NOV 11

HSG Independent Technical Reviewer:

Valerie D. Vaughn-Martin — Valerie D. Vaughn-Martin — 03 NOV 11

Printed Name — Signature — Date

CCP RECORDS ORIGINAL
DATE REC'D 11-7-11

Valerie 07 NOV 11

000001A

Attachment 2 – HSG Sampling Batch Data Report Table of Contents Page 1 of 1

Section		Page No.
1.	HSG Sampling Batch Data Report Cover Sheet (Attachment 1)	1
2.	HSG Sampling Batch Data Report Table of Contents (Attachment 2)	2
3.	Independent Technical Reviewer (ITR) Review Checklist (Attachment 3)	3
	Sampling Batch Data Report Forms:	
4.	Chain of Custody/Canister Tag Forms (Attachment 1 from CCP-TP-093)	5
5.	Copy of Laboratory Canister Tags	7
6.	Cleanliness Certification for needle assemblies as applicable to the Sampling Batch Data Report (or copy of the certifications from CCP-TP-093)	19
7.	Sample Drum Data Form (Attachment 2 from CCP-TP-093)	21
8.	Copy of Sampling Port Installation Records (CCP-TP-098, Attachment 1), if applicable	N/A
9.	Copy of Drum Filter Changeout Form (Attachment 1 of CCP-TP-082), if applicable.	N/A
10.	Shipment Request Forms, if applicable.	N/A
11.	72-Hour Temperature Equilibration Plots	23
12.	Copy of NCRs, if applicable	N/A

Attachment 3 – Independent Technical Reviewer (ITR) Review Checklist

HSG Sampling Batch Number: INHSG1111

1.	Is the HSG Sampling BDR complete as specified in step 4.1.2 and are the field sampling records complete?	X			
2.	Are calculations correct for the Drum Age Criteria (DAC), temperature equilibrium time, and percent complete?	X			
3.	Did the containers meet the DAC?	X			
4.	Did the containers meet the temperature equilibrium requirement (stored at 18°C or higher for 72-hours prior to sampling)?	X			
5.	Do the temperature plots indicate the drums were stored at 18 °C (64.5 °F) or higher for 72-hours prior to sampling?	X			
5a.	Are the waste stream IDs completed correctly on the Chain of Custody (COC) Form?	X			
6.	Was a Field Duplicate collected once per batch?	X			
7.	Was a Field Reference Sample collected?	X			CP:05:01128 UFC:5900.00
8.	Was a Field Blank collected one per batch prior to sampling containers?	X			
9.	Is the percentage of valid samples collected and submitted for analysis greater than or equal to 90 percent?	X			
10.	Is the data technically reasonable based upon the technique used?	X			
11.	Was the sampling equipment checked for leaks after sample collection?	X			
12.	Was the data generation and reduction conducted in a technically correct manner?	X			
13.	Was the data reported in proper units and with the correct number of significant figures?	X			
14.	Were the samples maintained at a temperature between 0°C - 40°C?	X			
15.	Was the equipment involved in the sampling activities in calibration (i.e., torque wrenches, ambient temperature and pressure gauges, dataloggers, ultrasonic micrometer, min/max thermometers)?	X			

Attachment 3 – Independent Technical Reviewer (ITR) Review Checklist

HSG Sampling Batch Number: INHSG1111

1.	Is the HSG Sampling BDR complete as specified in step 4.1.2 and are the field sampling records complete?	X				
2.	Are calculations correct for the Drum Age Criteria (DAC), temperature equilibrium time, and percent complete?	X				
3.	Did the containers meet the DAC?	X				
4.	Did the containers meet the temperature equilibrium requirement (stored at 18°C or higher for 72-hours prior to sampling)?	X				
5.	Do the temperature plots indicate the drums were stored at 18 °C (64.5 °F) or higher for 72-hours prior to sampling?	X				
5a.	Are the waste stream IDs completed correctly on the Chain of Custody (COC) Form?	X				
6.	Was a Field Duplicate collected once per batch?	X				
7.	Was a Field Reference Sample collected?	X				CP:05:01128 UFC:5900.00
8.	Was a Field Blank collected one per batch prior to sampling containers?	X				
9.	Is the percentage of valid samples collected and submitted for analysis greater than or equal to 90 percent?	X				
10.	Is the data technically reasonable based upon the technique used?	X				
11.	Was the sampling equipment checked for leaks after sample collection?	X				
12.	Was the data generation and reduction conducted in a technically correct manner?	X				
13.	Was the data reported in proper units and with the correct number of significant figures?	X				
14.	Were the samples maintained at a temperature between 0°C - 40°C?	X				
15.	Was the equipment involved in the sampling activities in calibration (*i.e., torque wrenches, ambient temperature and* pressure gauges, dataloggers, ultrasonic micrometer, min/max thermometers)?	X				

vdm 07 NOV 11

Attachment 3 – Independent Technical Reviewer (ITR) Review Checklist (continued)

HSG Sampling Batch Number: INHSG1111

16.	Are there satisfactory equipment blanks, canister cleaning blanks, and needle assembly cleanliness results?	X			
17.	Has the data been reviewed for transcription errors?	X			
18.	Verify all the data is signed and dated, and the data is recorded clearly, legibly, and accurately.	X			
19.	No more than 20 waste containers are in the batch (excluding the QC samples).	X			
20.	Procedure Number: CCP-TP-093				Revision: 16
21.	Is the procedure number and revision correct?	X			
22.	All changes to original data are lined out, initialed, and dated by the individual making the change, and a justification included. (NOTE: Original data must not be obliterated or otherwise disfigured as not to be readable. Data changes shall only be made by the individual who originally collected the data or an individual authorized to change the data.)	X			

Independent Technical Reviewer:

Valerie D. Vaughn-Martin
Printed Name

Valerie D. Vaughn-Martin 07Nov11
Signature Date

Attachment 3 – Independent Technical Reviewer (ITR) Review Checklist (continued)

HSG Sampling Batch Number: INHSG1111

16.	Are there satisfactory equipment blanks, canister cleaning blanks, and needle assembly cleanliness results?	X			
17.	Has the data been reviewed for transcription errors?	X			
18.	Verify all the data is signed and dated, and the data is recorded clearly, legibly, and accurately.	X			
19.	No more than 20 waste containers are in the batch (excluding the QC samples).	X			
20.	Procedure Number: CCP-TP-093				Revision: 16
21.	Is the procedure number and revision correct?	X			
22.	All changes to original data are lined out, initialed, and dated by the individual making the change, and a justification included. (NOTE: Original data must not be obliterated or otherwise disfigured as not to be readable. Data changes shall only be made by the individual who originally collected the data or an individual authorized to change the data.)	X			

Independent Technical Reviewer:

Valerie D. Vaughn-Martin
Printed Name

Valerie D. Vaughn-Martin
Signature

03Nov11
Date

07 NOV 11

07NOV11
000004A

Attachment 1 – Chain of Custody/Canister Tag Chain of Custody # 585 Page 1 of 2

Location: Under Lid		Point of Origin: WMF 628	Sample Matrix is Gas	Ambient Conditions
		Field Batch Number:INHSG1111		Temperature (centigrade):24.8
				Pressure (in. Hg): 25

Site	Date	SUMMA® Canister No.	Size (mL)	TID No.	Container ID /Barcode No.	Waste Stream ID	Cleaning Batch No.	Needle Assembly Batch No.	Type SS B D F C (Note 1)	Vent Seal (Y/NA)	Start Time	End Time	Beginning Pressure (in.Hg or psig)	End Pressure (in.Hg or psig)	Sampler's Initials
IN	102711	EI 862	250	0817212	N/A	N/A	412C	INHSG1106NB	B	N/A	1522	1526	25 in.Hg	0 in.Hg	ERW
IN	102711	EI 856	250	0817213	RW49571	ID-AECHDM	412C	INHSG1102NB	D	Y	1532	1537	24 in.Hg	0 in.Hg	ERW
IN	102711	EI 901	250	0817214	RW49571	ID-AECHDM	412C	INHSG1102NB	D	Y	1532	1537	24 in.Hg	2 in.Hg	ERW
IN	102711	EI C72	250	0817215	RW47969	ID-AECHDM	412C	INHSG1106NB	SS	Y	1540	1543	25 in.Hg	0 in.Hg	ERW
IN	102711	EI 575	250	0817216	RW47784	ID-AECHDM	412C	INHSG1106NB	SS	Y	1541	1546	26 in.Hg	0 in.Hg	ERW
IN	102711	EI 454	250	0817217	RW48074	ID-AECHDM	412C	INHSG1106NB	SS	Y	1541	1546	26 in.Hg	2 in.Hg	ERW
IN	102711	EI 439	250	0817218	RW48192	ID-AECHDM	412C	INHSG1106NB	SS	Y	1548	1552	26 in.Hg	1 in.Hg	ERW
IN	102711	EI 909	250	0817219	RW48198	ID-AECHDM	412C	INHSG1106NB	SS	Y	1549	1554	26 in.Hg	1 in.Hg	ERW
IN	102711	EI 581	250	0817220	RW48081	ID-AECHDM	412C	INHSG1106NB	SS	Y	1549	1554	26 in.Hg	2 in.Hg	ERW
IN	102711	EI 336	250	0817161	RW48201	ID-AECHDM	412C	INHSG1106NB	SS	Y	1557	1602	26 in.Hg	3 in.Hg	ERW
IN	102711	EI C78	250	0817162	RW47763	ID-AECHDM	412C	INHSG1106NB	SS	Y	1558	1602	26 in.Hg	0 in.Hg	ERW
IN	102711	EI 802	250	0817163	RW47765	ID-AECHDM	412C	INHSG1106NB	SS	Y	1559	1604	26 in.Hg	2 in.Hg	ERW
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Note 1 Analysis required:
C - Needle Assembly Cleanliness Certification: VOC.
SS - Single Sample: VOC, H_2, CH_4
B - Field Blank: VOC
D - Duplicate: VOC, H_2, CH_4
F - Field Reference Standard: VOC

Sampler's Signature: [signature]

500005

Attachment 1 – Chain of Custody/Canister Tag (Continued) Chain of Custody # 585

Field Batch Number: INHSG1111					
Comments: N/A		Instrument Section	M&TE ID No.	Calibration Due Date	Initials/Date
Analytical Laboratory - ECL		Pressure Meter	XC0567	12-08-11	ERW 10-27-11
Shipping Tracking # N/A	Method of Shipping ECL Pick up	Thermometer	XC0717	05-03-12	ERW 10-27-11
		Min /Max Thermometer	XC0688 XC0680	02-23-12 01-25-12	ERW 10-27-11
Analysis Requested VOC		Preservation Method: 0 - 40°C			
TID Number(s) 0817181		TID Initials and date: ERW 10-27-11			
Custody Initiated By: (Sampler Name/Organization) [signature] CCP	Date/Time 10-27-11 1526	[redacted]			
Relinquished By: (Name/Organization) [signature] CCP	Date/Time 10-27-11 1645	Received By: (Name/Organization)			Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)			Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)			Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)			Date/Time
Final Disposition By: (Name/Organization)	Date/Time	Disposition:			

900000

GAS SAMPLE CANISTER TAG

I	N	1	0	2	7	1	1	E	I	8	6	2
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1111 **Drum Number:** N/A

Sampling Organization: CCP **Sample Description:** FIELD BLANK

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	100611	1345	TBL
Cleaning Batch: 412C	M= <5.0E-2	P= 632T			
Field-	C= 25 "Hg	T= 24.8			
Before Sample Collection	M=	P= 25	102711	1522	ERW
Field-	C= 0 "Hg	T= 24.8			
After Sample Collection	M=	P= 25	102711	1526	ERW
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? (Y) / N (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: Ellen R White

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

I	N	1	0	2	7	1	1	E	I	8	5	6
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG11111 Drum Number: RW49571 R
ERW 10-27-11

Sampling Organization: CCP Sample Description: DUPLICATE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	100611	1345	TBL
Cleaning Batch: 412C	M= <5.0E-2	P= 632T			
Field-	C= 24 "Hg	T= 24.8			
Before Sample Collection	M=	P= 25	102711	1532	ERW
Field-	C= 0 "Hg	T= 24.8			
After Sample Collection	M=	P= 25	102711	1537	ERW
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: Ellyx Walter

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

I	N	1	0	2	7	1	1	E	I	9	0	1
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1111 Drum Number: RBW49571
ERW 10-27-11

Sampling Organization: CCP Sample Description: DUPLICATE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	100611	1345	TBL
Cleaning Batch: 412C	M= <5.0E-2	P= 632T			
Field-	C= 24"Hg	T= 24.8			
Before Sample Collection	M=	P= 25	102711	1532	ERW
Field-	C= 2"Hg	T= 24.8			
After Sample Collection	M=	P= 25	102711	1537	ERW
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: [signature]

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

GAS SAMPLE CANISTER TAG

I	N	1	0	2	7	1	1	E	I	C	7	2
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1111 Drum Number: BW47969 R
EBW 10-27-11

Sampling Organization: CCP Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	100611	1345	TBL
Cleaning Batch: 412C	M= <5.0E-2	P= 632T			
Field-	C= 25"Hg	T= 24.8			
Before Sample Collection	M=	P= 25	102711	1540	EBW
Field-	C= 0"Hg	T= 24.8			
After Sample Collection	M=	P= 25	102711	1543	EBW
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: Eddy R Walt

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

I	N	1	0	2	7	1	1	E	I	5	7	5
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1111 Drum Number: BW47784R
ERW 10-27-11

Sampling Organization: CCP Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	100611	1345	TBL
Cleaning Batch: 412C	M= <5.0E-2	P= 632T			
Field-	C= 26"Hg	T= 24.8			
Before Sample Collection	M=	P= 25	102711	1541	ERW
Field-	C= 0"Hg	T= 24.8			
After Sample Collection	M=	P= 25	102711	1546	ERW
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: Eddy R White

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

I	N	1	0	2	7	1	1	E	I	4	5	4
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1111 Drum Number: RBW 48074
ERW 10-27-11

Sampling Organization: CCP Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	100611	1345	TBL
Cleaning Batch: 412C	M= <5.0E-2	P= 632T			
Field-	C= 26 "Hg	T= 24.8			
Before Sample Collection	M=	P= 25	102711	1541	ERW
Field-	C= 2 "Hg	T= 24.8			
After Sample Collection	M=	P= 25	102711	1546	ERW
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: Eddy R Walt

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

I	N	1	6	2	7	1	1	E	I	4	3	9
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1111 Drum Number: R BW48192
ERW 10-27-11

Sampling Organization: CCP Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	100611	1345	TBL
Cleaning Batch: 412C	M= <5.0E-2	P= 632T			
Field-	C= 26"Hg	T= 24.8			
Before Sample Collection	M=	P= 25	102711	1548	ERW
Field-	C= 1"Hg	T= 24.8			
After Sample Collection	M=	P= 25	102711	1552	ERW
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: [signature]

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

I	N	1	0	2	7	1	1	E	I	9	0	9
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHS61111 **Drum Number:** RW48198

Sampling Organization: CCP **Sample Description:** SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	100611	1345	TBL
Cleaning Batch: 412C	M= <5.0E-2	P= 632T			
Field-	C= 26 "Hg	T= 24.8			
Before Sample Collection	M=	P= 25	102711	1549	ERW
Field-	C= 1 "Hg	T= 24.8			
After Sample Collection	M=	P= 25	102711	1554	ERW
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: Edgar Valdez

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

Z	Z	M	M	D	D	Y	Y	A	A	X	X	X
I	N	1	0	2	7	1	1	E	I	5	8	1

Sampling Site **Date** **Canister ID**

Batch Number: INHSG1111 **Drum Number:** RW48081

Sampling Organization: CCP **Sample Description:** Sample

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	100611	1345	TBL
Cleaning Batch: 412C	M= <5.0E-2	P= 632T			
Field-	C= 26 "Hg	T= 24.8			
Before Sample Collection	M=	P= 25	102711	1549	ERW
Field-	C= 2 "Hg	T= 24.8			
After Sample Collection	M=	P= 25	102711	1554	ERW
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) **(Circle one)**

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: Eddie Watt

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

I	N	1	0	2	7	1	1	E	I	3	3	6
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1111 Drum Number: RW48201

Sampling Organization: CCP Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	100611	1345	TBL
Cleaning Batch: 412C	M= <5.0E-2	P= 632T			
Field-	C= 26 "Hg	T= 24.8			
Before Sample Collection	M=	P= 25	102711	1557	ERW
Field-	C= 3 "Hg	T= 24.8			
After Sample Collection	M=	P= 25	102711	1602	ERW
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: [signature]

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

I	N	1	0	2	7	1	1	E	I	C	7	8
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1111 **Drum Number:** RW47763

Sampling Organization: CCP **Sample Description:** SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	100611	1345	TBL
Cleaning Batch: 412C	M= <5.0E-2	P= 632T			
Field-	C= 26 "Hg	T= 24.8			
Before Sample Collection	M=	P= 25	102711	1558	EMW
Field-	C= 0 "Hg	T= 24.8			
After Sample Collection	M=	P= 25	102711	1602	EMW
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: Eddy R Walt

Notes:
(1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

I	N	1	0	2	7	1	1	E	I	8	0	2
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1111 **Drum Number:** RW47765

Sampling Organization: CCP **Sample Description:** Sample

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	100611	1345	TBL
Cleaning Batch: 412C	M= <5.0E-2	P= 632T			
Field-	C= 26"Hg	T= 24.8			
Before Sample Collection	M=	P= 25	102711	1559	ERW
Field-	C= 2"Hg	T= 24.8			
After Sample Collection	M=	P= 25	102711	1604	ERW
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: Edgar Mata

Notes:
(1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

Walters, Ed E.

From: Catherine A Crowder [Catherine.Crowder@inl.gov]
Sent: Monday, March 28, 2011 1:00 PM
To: Broomfield, Barbara J.; Walters, Ed E.; charles.turner@wipp.ws
Subject: Needle Assembly Blanks

Analytical results for needle assembly equipment blanks in field batch INHSG1102NB were acceptable. Concentrations of all VOC target analytes were less than or equal to three times the MDLs listed in Table B3-2 in Permit Attachment B3.

Walters, Ed E.

From: Catherine A Crowder [Catherine.Crowder@inl.gov]
Sent: Tuesday, July 12, 2011 11:28 AM
To: charles.turner@wipp.ws; Walters, Ed E.
Subject: Needle Assembly Blanks

Analytical results for needle assembly equipment blanks in field batch INHSG1106NB were acceptable. Concentrations of all VOC target analytes were less than or equal to three times the MDLs listed in Table B3-2 in Permit Attachment B3.

Attachment 2 – Sample Container Data Form

Field Batch Number: INHSG1111

Container ID		Sampling Scenario	Summary Category Group	Rigid Liner (Y/N/)	Rigid Liner Lid (Y/N)	Rigid Liner Lid Hole Diameter (in.)	Number of Inner Bags	Number of Liner Bags	Filter Model No.	Number of Filters	Restrictive Hydrogen Diffusivity (m/s/mf)	Package Configuration Group No.
1	RW49571	3	S5000	N	N	N/A	0	0	NucFil-019DS	1	3.70E-6	1
2	RW47969	3	S5000	N	N	N/A	0	1	NucFil-019DS	1	3.70E-6	2
3	RW47784	3	S5000	N	N	N/A	0	1	NucFil-019DS	1	3.70E-6	2
4	RW48074	3	S5000	N	N	N/A	0	0	NucFil-019DS	1	3.70E-6	1
5	RW48192	3	S5000	N	N	N/A	0	0	NucFil-019DS	1	3.70E-6	1
6	RW48198	3	S5000	N	N	N/A	0	0	NucFil-019DS	1	3.70E-6	1
7	RW48081	3	S5000	N	N	N/A	0	1	NucFil-019DS	1	3.70E-6	2
8	RW48201	3	S5000	N	N	N/A	1	1	NucFil-019DS	1	3.70E-6	2
9	RW47763	3	S5000	N	N	N/A	0	0	NucFil-019DS	1	3.70E-6	1
10	RW47765	3	S5000	N	N	N/A	1	1	NucFil-019DS	1	3.70E-6	2
11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
22	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

000021

Attachment 2 – Sample Container Data Form (Continued)

Field Batch Number: INHSG1111

	Container ID	Closure Date	Vent Date	Permit Required Equilibrium Time (Days)	Container Age (Days)	Container Fill Factor (%)	Can This Container Be Sampled? (Y / N)	Temperature Recorder M&TE /ID No.: XC0709 11-22-11 XC0706 12-16-11 Temperature Recorder Calibration Due Date: 72 – Hour Container Equilibrium Start Date/Time	End Date/Time
1	RW49571	08-18-11	08-18-11	4	70	85	Y	10-24-11 1500	10-27-11 1515
2	RW47969	09-27-10	09-27-10	11	395	80	Y	10-24-11 1500	10-27-11 1515
3	RW47784	08-31-10	08-31-10	11	422	85	Y	10-24-11 1500	10-27-11 1515
4	RW48074	11-02-10	11-02-10	4	359	80	Y	10-24-11 1500	10-27-11 1515
5	RW48192	12-20-10	12-20-10	4	311	85	Y	10-24-11 1500	10-27-11 1515
6	RW48198	03-03-11	03-03-11	4	238	80	Y	10-24-11 1500	10-27-11 1515
7	RW48081	11-24-10	11-24-10	11	337	60	Y	10-24-11 1500	10-27-11 1515
8	RW48201	04-14-11	04-14-11	11	196	80	Y	10-24-11 1500	10-27-11 1515
9	RW47763	07-21-10	07-21-10	4	463	85	Y	10-24-11 1500	10-27-11 1515
10	RW47765	07-23-10	07-23-10	11	461	75	Y	10-24-11 1500	10-27-11 1515
11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
22	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

HSG Sampler: Eddy R WALTERS
Print Name

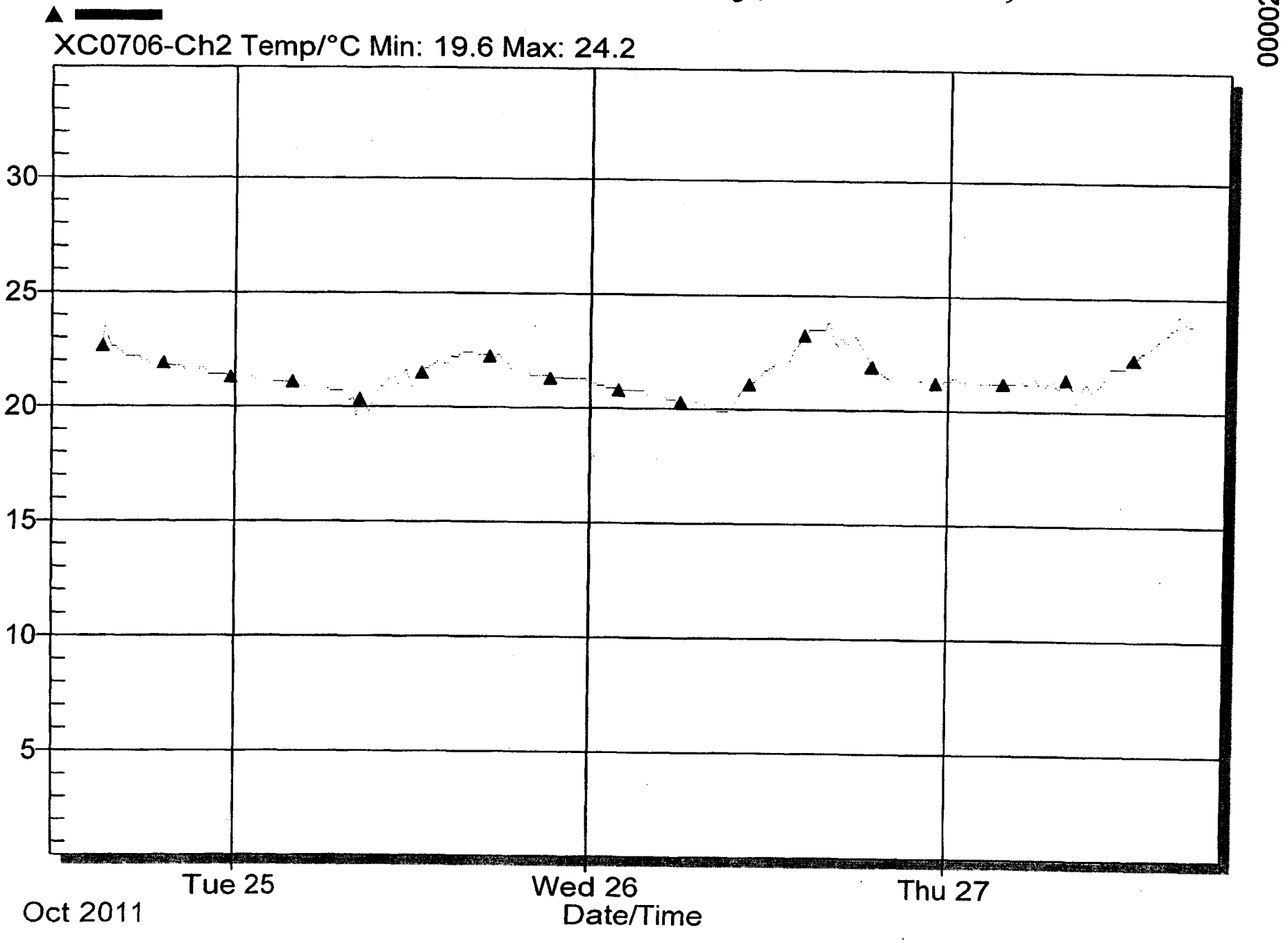
Eddy R Walters
Signature

10-27-11
Date

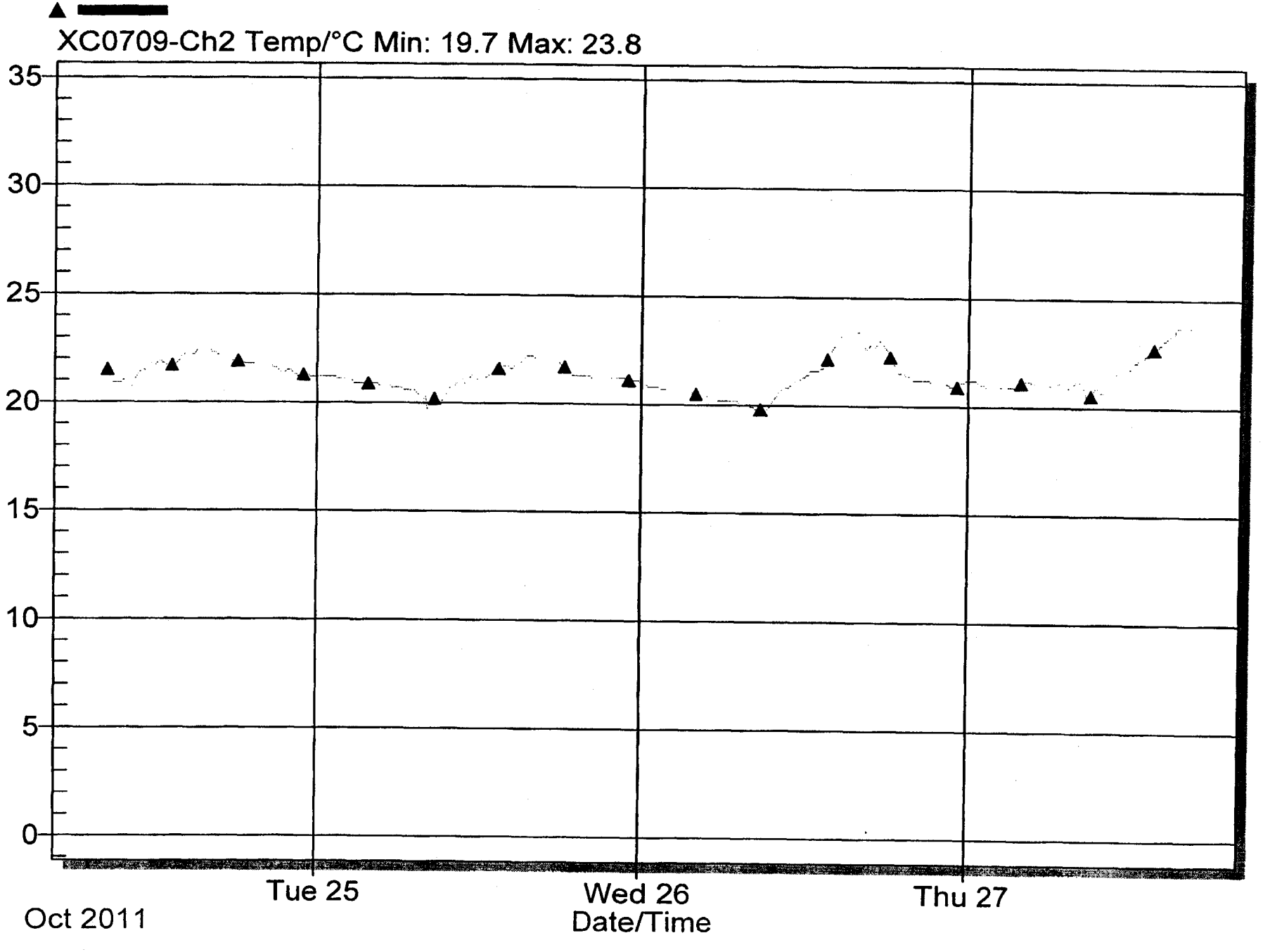
000022

Downloaded Data - Thursday, October 27, 2011

000023



Downloaded Data - Thursday, October 27, 2011



Attachment 10 – CCP SPM Summa HSG Analysis Project Level Validation Checklist and Summary

BDR Number: ECL11036M **Analysis Date:** 11-2, 11-3-2011

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
1. Does the Batch Data Report (BDR) contain the batch number, laboratory name, and the date of the batch report? **Reference Source: CCP-PO-001, Table C3-13**	X			
2. Is the BDR complete according to the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-10b**	X			
3. Has a BDR Narrative been included with the BDR? **Reference Source: CCP-PO-001, Table C3-13**	X			
4. Are the correct revisions of the procedures used and identified? **Reference Source: CCP-PO-001, Table C3-13**	X			
5. List all containers that have met the QAOs. **Reference Source: CCP-PO-001, C3-10b**				Container Numbers: RW49571, RW47969, RW47784, RW48074, RW48192, RW48198, RW48081, RW48201, RW47763, RW47765
6. Is there a reference to or copy of any associated NCRs (if any) in the BDR? NA if no NCRS associated with the BDR. **Reference Source: CCP-PO-001, Table C3-13**			X	
7. Is the completed, signed, and dated Independent Technical Reviewer checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, Table C3-13**	X			
8. Does the BDR include the operator's signature and analysis date? **Reference Source: CCP-PO-001, Table C3-13**	X			
9. Are there 20 laboratory samples or less in the analytical batch (excluding QC)? **Reference Source: CCP-PO-001, C3-10**	X			
10. Does the chain of custody (COC) form correctly identify the Waste Stream ID? **Reference Source: CCP-PO-001, Table C3-13**	X			
11. Does the BDR contain a complete and signed copy of the COC form? **Reference Source: CCP-PO-001, Table C3-13**	X			

11-11-11

Attachment 10 – CCP SPM Summa HSG Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: ECL11036M **Analysis Date:** 11-2, 11-3-2011

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
12. Is there a cross-reference between waste container number, field sample number, and lab sample number ID; and signature release by lab personnel in the batch report? **Reference Source: CCP-PO-001, C1-5**	X			
13. Does the BDR contain gas sample canister tags for each sample that are properly filled out? **Refere nce Source: CCP-PO-001, Table C3-13**	X			
14. Have the samples been properly preserved (0-40° C)? **Reference Source: CCP-PO-001, Table C1-1**	X			
15. Does the BDR include the date and time of analysis for each sample? **Reference Source: CCP-PO-001, Table C3-13**	X			
16. Have data reporting flags been assigned properly? **Reference Source: CCP-PO-001, Table C3-13**	X			
17. Did the batch report analysis consist of all the target compounds? **Reference Source: CCP-PO-001, Table C3-2**	X			
18. Is there a minimum of one laboratory (method) blank per analytical batch with all analytes $\leq$ 3 x MDL? **Reference Source: CCP-PO-001, Table C3-3**	X			
19. Are all target analytes in field blanks and equipment blanks (if any) $\leq$ 3 x instrument MDL as listed in CCP-PO-001 Table C3-2? **Reference Source: CCP-PO-001, Table C1-3**	X			
20. Is a minimum of one laboratory control standard (LCS) analyzed per analytical batch and are the percent recoveries (%Rs) within 70-130%? **Reference Source: CCP-PO-001,Table C3-3**	X			
21. Is there a minimum of one field duplicate analyzed per sampling batch including in the analytical batch? **Reference Source: CCP-PO-001, Table C1-3**	X			

Attachment 10 – CCP SPM Summa HSG Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: ECL11036M **Analysis Date:** 11-2, 11-3-2011

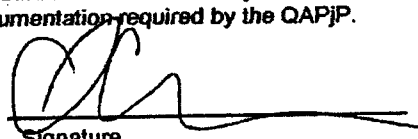
Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
22. For field sample and field duplicate results that are both > PRQL, are the relative percent differences (RPDs) ≤ 25%? **Reference Source: CCP-PO-001, Table C3-2**			X	No target >PRQL
23. Is there a minimum of one laboratory duplicate (LD) analyzed per analytical batch? **Reference Source: CCP-PO-001, Table C3-3**	X			
24. For laboratory duplicate results that are > PRQL (or for laboratory control standard and replicate laboratory control standard results > PRQL), is the RPD ≤ 25%? **Reference Source: CCP-PO-001, Table C3-3**	X			
25. If no target analytes were present greater than the PRQL, was a replicate LCS satisfactorily performed? **Reference Source: CCP-PO-001, Table C3-3**			X	Target >PRQL
26. Does the field reference standard (FRS) contain at least six analytes and are the %Rs within 70-130%? **Reference Source: CCP-PO-001, C1-1b and Table C1-3**			X	FRS has been successfully completed.
27. For GC/MS analyses, was the BFB tune performed at a minimum of every 12 hours and were the ion abundance criteria satisfied? **Reference Source: CCP-PO-001, Table C3-3**	X			
28. For GC/MS analyses, for the five-point initial calibration, is the %RSD for all compounds < 35%? **Reference Source: CCP-PO-001, Table C3-3**	X			
29. For GC/MS analyses, is one of the calibration standards less than the PRQL? **Reference Source: CCP-PO-001, Section C3-5**	X			
30. For GC/MS analyses, is the continuing calibration performed at a minimum frequency of every 12 hours of operation? **Reference Source: CCP-PO-001, Table C3-3**	X			

Attachment 10 – CCP SPM Summa HSG Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: ECL11036M **Analysis Date:** 11-2, 11-3-2011

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
31. For GC/MS analyses, are the continuing calibration internal standard area counts between 50-200% of ICAL? **Reference Source: CCP-PO-001, Table C3-3**	X			
32. For GC/MS analyses, are non-target compounds identified as Tentatively Identified Compounds (TICs)? **Reference Source: CCP-PO-001, C-3a**	X			
33. Does the BDR contain all of the target compounds appropriate for the waste stream? **Reference Source: CCP-PO-001, Table C3-2/AK Summary Report**	X			
34. For GC/MS analyses, is the continuing calibration %D for all compounds ≤ 30% of the ICAL? **Reference Source: CCP-PO-001, Table C3-3**	X			
35. For methanol analysis by GC/FID, does the initial calibration (ICAL) have a minimum of five points, is the %R within 70-130%, and is the correlation coefficient ≥ 0.990? NA if not methanol analysis by GC/FID. **Reference Source: CCP-PO-001, Table C3-3**			X	Not methanol analysis by GC/FID
36. For methanol analysis by GC/FID, is the continuing calibration (CC) analyzed every 12 hours, is the %D ≤ 15%, is the %R within 85-115%, and is the CC retention time within the ICAL window? NA if not methanol analysis by GC/FID. **Reference Source: CCP-PO-001, Table C3-2**			X	Not methanol analysis by GC/FID
37. For methanol analysis by GC/FID, is one of the calibration standards less than the PRQL? **Reference Source: CCP-PO-001, C3-5**			X	Not methanol analysis by GC/FID
38. Are all data reporting forms complete with data reported properly (correct units and significant figures)? **Reference Source: CCP-PO-001, C3-10b**	X			
39. Has the laboratory successfully participated in the latest PDP? **Reference Source: CCP-PO-001, C3-5**	X			

Attachment 10 – CCP SPM Summa HSG Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: ECL11036M	Analysis Date: 11-2, 11-3-2011			
Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
40. Has the laboratory met the 90% completeness requirement? **Reference Source: CCP-PO-001, Table C3-2**	X			
41. Does the laboratory use traceable standards? **Reference Source: CCP-PO-001, C3-5**	X			
42. Has the laboratory had acceptable demonstration of precision, accuracy, and MDLs [method performance samples] performed within the last 6 months? **Reference Source: CCP-PO-001, Table C3-3**	X			
43. Have QC designations for samples been applied as appropriate? **Reference Source: CCP-PO-001, Table C3-13**	X			
Comments: none				
The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.				
Charles Turner				11-10-2011
SPM Printed Name	Signature			Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

Idaho National Laboratory

Chemical and Radiation Measurement Department

Environmental Chemistry Laboratory

Gas Headspace Analysis Data Report

ISSUED TO:

Records Coordinator
Central Characterization Program

REPORT IDENTIFICATION:

Report Number: ECL11036M
Analysis Method: CCP-TP-175
Analyte: VOCs
Revision Number: 0
Change Number: 0
Issue Date: 11-09-2011

SUMMARY: This report provides analysis results and associated documentation for volatile organic compounds (VOCs) analyses of samples received 10/31/2011 from field batch INHSG1111.

Report Content:

Section	Content	Page #
1.0	Sample Identification Table/Analysis Request Form	0002-0003
2.0	Sample Custody Documents and Sample Tags	0004-0018
3.0	Analysis Results	0019-0044
4.0	Quality Control Measurements Results	0045-0055
5.0	Calibration Results	0056-0062
6.0	Data Review Checklists	0063-0070
7.0	GC VOC Raw Data	0071-0281
8.0	Miscellaneous Supporting Data	0282-0313

Release Authorization:

Name & Position	Signature	Date
Catherine A. Crowder ECL Group/Technical Leader	Catherine A. Crowder	11-9-11

CCP RECORDS (ORIGINAL)
DATE RECD 11-10-11

SECTION 1.0

SAMPLE IDENTIFICATION TABLE/ ANALYSIS REQUEST FORM

ENVIRONMENTAL CHEMISTRY LABORATORY

ANALYTICAL REQUEST FORM

PAGE: 1 RECEIVING GROUP NO. ECL11036 ANALYSES REQUIRED:

FIELD SITE: INL GC-VOC: X GC-H2:

SAMPLE TYPE: GAS GC/MS: X GC-CH4:

NUMBER OF SAMPLES: 12 VTSR: 1015 10/31/11

	LAB ID.	FIELD ID.	FIELD BATCH #	FIELD COC #	CANISTER SIZE (mL)	BLANK?
1	11304001	IN102711EI862	INHSG1111	585	250	Y
2	11304002	IN102711EI856	INHSG1111	585	250	N
3	11304003	IN102711EI901	INHSG1111	585	250	N
4	11304004	IN102711EIC72	INHSG1111	585	250	N
5	11304005	IN102711EI575	INHSG1111	585	250	N
6	11304006	IN102711EI454	INHSG1111	585	250	N
7	11304007	IN102711EI439	INHSG1111	585	250	N
8	11304008	IN102711EI909	INHSG1111	585	250	N
9	11304009	IN102711EI581	INHSG1111	585	250	N
10	11304010	IN102711EI336	INHSG1111	585	250	N
11	11304011	IN102711EIC78	INHSG1111	585	250	N
12	11304012	IN102711EI802	INHSG1111	585	250	N

SECTION 2.0

SAMPLE CUSTODY DOCUMENTS AND SAMPLE TAGS

Attachment 1 – Chain of Custody/Canister Tag Chain of Custody # 585 Page 1 of 2

Location: Under Lid		Point of Origin: WMF 628	Sample Matrix is Gas	Ambient Conditions	
		Field Batch Number:INHSG1111		Temperature (centigrade):24.8	
				Pressure (in. Hg): 25	

Site	Date	SUMMA® Canister No.	Size (mL)	TID No.	Container ID /Barcode No.	Waste Stream ID	Cleaning Batch No.	Needle Assembly Batch No.	Type SS B D F C (Note 1)	Vent Seal (Y/NA)	Start Time	End Time	Beginning Pressure (in.Hg or psig)	End Pressure (in.Hg or psig)	Sampler's Initials
IN	102711	EI 862	250	0817212	N/A	N/A	412C	INHSG1106NB	B	N/A	1522	1526	25 in.Hg	0 in.Hg	ERW
IN	102711	EI 856	250	0817213	RW49571	ID-AECHDM	412C	INHSG1102NB	D	Y	1532	1537	24 in.Hg	0 in.Hg	ERW
IN	102711	EI 901	250	0817214	RW49571	ID-AECHDM	412C	INHSG1102NB	D	Y	1532	1537	24 in.Hg	2 in.Hg	ERW
IN	102711	EI C72	250	0817215	RW47969	ID-AECHDM	412C	INHSG1106NB	SS	Y	1540	1543	25 in.Hg	0 in.Hg	ERW
IN	102711	EI 575	250	0817216	RW47784	ID-AECHDM	412C	INHSG1106NB	SS	Y	1541	1546	26 in.Hg	0 in.Hg	ERW
IN	102711	EI 454	250	0817217	RW48074	ID-AECHDM	412C	INHSG1106NB	SS	Y	1541	1546	26 in.Hg	2 in.Hg	ERW
IN	102711	EI 439	250	0817218	RW48192	ID-AECHDM	412C	INHSG1106NB	SS	Y	1548	1552	26 in.Hg	1 in.Hg	ERW
IN	102711	EI 909	250	0817219	RW48198	ID-AECHDM	412C	INHSG1106NB	SS	Y	1549	1554	26 in.Hg	1 in.Hg	ERW
IN	102711	EI 581	250	0817220	RW48081	ID-AECHDM	412C	INHSG1106NB	SS	Y	1549	1554	26 in.Hg	2 in.Hg	ERW
IN	102711	EI 336	250	0817161	RW48201	ID-AECHDM	412C	INHSG1106NB	SS	Y	1557	1602	26 in.Hg	3 in.Hg	ERW
IN	102711	EI C78	250	0817162	RW47763	ID-AECHDM	412C	INHSG1106NB	SS	Y	1558	1602	26 in.Hg	0 in.Hg	ERW
IN	102711	EI 802	250	0817163	RW47765	ID-AECHDM	412C	INHSG1106NB	SS	Y	1559	1604	26 in.Hg	2 in.Hg	ERW
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Note 1 Analysis required:
C - Needle Assembly Cleanliness Certification: VOC.
SS - Single Sample: VOC, H_2, CH_4
B - Field Blank: VOC
D - Duplicate: VOC, H_2, CH_4
F - Field Reference Standard: VOC

Sampler's Signature: Eddie Walt

5900065

Attachment 1 – Chain of Custody/Canister Tag (Continued) Chain of Custody # 585 Page 2 of 2

Field Batch Number: INHSG1111					
Comments: N/A		Instrument Section	M&TE ID No.	Calibration Due Date	Initials/Date
Analytical Laboratory - ECL		Pressure Meter	XC0567	12-08-11	ERW 10-27-11
Shipping Tracking # N/A	Method of Shipping ECL Pick up	Thermometer	XC0717	05-03-12	ERW 10-27-11
		Min /Max Thermometer	XC0688 XC0680	02-23-12 01-25-12	ERW 10-27-11
Analysis Requested VOC		Preservation Method: 0 - 40°C			
TID Number(s) 0817181		TID Initials and date: ERW 10-27-11			
Custody Initiated By: (Sampler Name/Organization) Edward R Walt CCP	Date/Time 10-27-11 1526				
Relinquished By: (Name/Organization) Edward R Walt CCP	Date/Time 10-27-11 1645	Received By: (Name/Organization) Thomas B. Lento INL/ECL			Date/Time 10-31-11 10:15
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)			Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)			Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)			Date/Time
Final Disposition By: (Name/Organization) Catherine A. Church /ECL	Date/Time 110711 1015	Disposition: Cleaning			

9000000

GAS SAMPLE CANISTER TAG

I	N	1	0	2	7	1	1	E	I	8	6	2
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1111 **Drum Number:** N/A

Sampling Organization: CCP **Sample Description:** FIELD BLANK

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	100611	1345	TBL
Cleaning Batch: 412C	M= <5.0E-2	P= 632T			
Field-	C= 25"Hg	T= 24.8			
Before Sample Collection	M=	P= 25	102711	1522	ERW
Field-	C= 0"Hg	T= 24.8			
After Sample Collection	M=	P= 25	102711	1526	ERW
Analytical Laboratory	C= 0"Hg	T= 22			
	M=	P= 643T	103111	1047	FBL

Blank Sample? (Y) / N (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: Eddy R Walt

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

I	N	1	0	2	7	1	1	E	I	8	5	6
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1111 Drum Number: R BW149571
ERW 10-27-11

Sampling Organization: CCP Sample Description: DUPLICATE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	100611	1345	TBL
Cleaning Batch: 412C	M= <5.0E-2	P= 632T			
Field-	C= 24 "Hg	T= 24.8			
Before Sample Collection	M=	P= 25	102711	1532	ERW
Field-	C= 0 "Hg	T= 24.8			
After Sample Collection	M=	P= 25	102711	1537	ERW
Analytical Laboratory	C= 0 "Hg	T= 22			
	M=	P= 643T	103111	1048	TBL

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: Eddie Watts

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

I	N	1	0	2	7	1	1	E	I	9	0	1
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSC1111 Drum Number: RBW49571
ERW 10-27-11

Sampling Organization: CCP Sample Description: DUPLICATE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	100611	1345	TBL
Cleaning Batch: 412C	M= <5.0E-2	P= 632T			
Field-	C= 24"Hg	T= 24.8			
Before Sample Collection	M=	P= 25	102711	1532	ERW
Field-	C= 2"Hg	T= 24.8			
After Sample Collection	M=	P= 25	102711	1537	ERW
Analytical Laboratory	C= 2"Hg	T= 22			
	M= 0	P= 643T	103111	1049	[illegible]

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: [signature]

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

I	N	1	0	2	7	1	1	E	I	C	7	2
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1111 Drum Number: RBW47969
EAW 10-27-11

Sampling Organization: CCP Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	100611	1345	TBL
Cleaning Batch: 412C	M= <5.0E-2	P= 632T			
Field-	C= 25"Hg	T= 24.8			
Before Sample Collection	M=	P= 25	102711	1540	EAW
Field-	C= 0"Hg	T= 24.8			
After Sample Collection	M=	P= 25	102711	1543	EAW
Analytical Laboratory	C= 1"Hg	T= 22.2			
	M=	P= 648T	103111	1051	TBL

103111 TBL

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: Eddy R Walt

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

I	N	1	0	2	7	1	1	E	I	5	7	5
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1111 Drum Number: R BW47784
ERW 10-27-11

Sampling Organization: CCP Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	100611	1345	TBL
Cleaning Batch: 412C	M= <5.0E-2	P= 632T			
Field-	C= 26 "Hg	T= 24.8			
Before Sample Collection	M=	P= 25	102711	1541	ERW
Field-	C= 0 "Hg	T= 24.8			
After Sample Collection	M=	P= 25	102711	1546	ERW
Analytical Laboratory	C= 1" Hg	T= 22			
	M= 0	P= 6435	103111	1052	JBK

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: Eddy R White

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

I	N	1	0	2	7	1	1	E	I	4	5	4
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1111 Drum Number: RBW48074
EAW 10-27-11

Sampling Organization: CCP Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	100611	1345	TBL
Cleaning Batch: 412C	M= <5.0E-2	P= 632T			
Field-	C= 26"Hg	T= 24.8			
Before Sample Collection	M=	P= 25	102711	1541	EAW
Field-	C= 2"Hg	T= 24.8			
After Sample Collection	M=	P= 25	102711	1546	EAW
Analytical Laboratory	C= 3" Hg	T= 22			
	M= 0	P= 643T	103111	1053	BBF

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: Edgar Walt

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

I	N	1	6	2	7	1	1	E	I	4	3	9
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1111 Drum Number: RBW48192
ERW 10-27-11

Sampling Organization: CCP Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	100611	1345	TBL
Cleaning Batch: 412C	M= <5.0E-2	P= 632T			
Field-	C= 26 "Hg	T= 24.8			
Before Sample Collection	M=	P= 25	102711	1548	ERW
Field-	C= 1 "Hg	T= 24.8			
After Sample Collection	M=	P= 25	102711	1552	ERW
Analytical Laboratory	C= 1" Hg	T= 22			
	M=	P= 643T	103111	1055	[illegible]

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: [signature]

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

I	N	1	0	2	7	1	1	E	I	9	0	9
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHS61111 **Drum Number:** RW48198

Sampling Organization: CCP **Sample Description:** SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	100611	1345	TBL
Cleaning Batch: 412C	M= <5.0E-2	P= 632T			
Field-	C= 26"Hg	T= 24.8			
Before Sample Collection	M=	P= 25	102711	1549	ERW
Field-	C= 1"Hg	T= 24.8			
After Sample Collection	M=	P= 25	102711	1554	ERW
Analytical Laboratory	C= 2"Hg	T= 22			
	M= 0	P= 643T	103111	1056	TBL

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: Edgar Walter

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

I	N	1	0	2	7	1	1	E	I	5	8	1
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1111 Drum Number: RW48081

Sampling Organization: CCP Sample Description: Sample

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	100611	1345	TBL
Cleaning Batch: 412C	M= <5.0E-2	P= 632T			
Field-	C= 26 "Hg	T= 24.8			
Before Sample Collection	M=	P= 25	102711	1549	ERW
Field-	C= 2 "Hg	T= 24.8			
After Sample Collection	M=	P= 25	102711	1554	ERW
Analytical Laboratory	C= 3 "Hg	T= 22			
	M=	P= 643T	103111	1057	TBL

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: Eddie Watt

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

I	N	1	0	2	7	1	1	E	I	3	3	6
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1111 **Drum Number:** RW48201

Sampling Organization: CCP **Sample Description:** SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	100611	1345	TBL
Cleaning Batch: 412C	M= <5.0E-2	P= 632T			
Field-	C= 26 "Hg	T= 24.8			
Before Sample Collection	M=	P= 25	102711	1557	ERW
Field-	C= 3 "Hg	T= 24.8			
After Sample Collection	M=	P= 25	102711	1602	ERW
Analytical Laboratory	C= 3 "Hg	T= 22			
	M=	P= 643T	103111	1859	[illegible]

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: [signature]

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

I	N	1	0	2	7	1	1	E	I	C	7	8
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1111 **Drum Number:** RW47763

Sampling Organization: CCP **Sample Description:** SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	100611	1345	TBL
Cleaning Batch: 412C	M= <5.0E-2	P= 632T			
Field-	C= 26 "Hg	T= 24.8			
Before Sample Collection	M=	P= 25	102711	1558	ERW
Field-	C= 0 "Hg	T= 24.8			
After Sample Collection	M=	P= 25	102711	1602	ERW
Analytical Laboratory	C= 2 "Hg	T= 22			
	M=	P= 643T	103111	1100	HBF

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: Eddy R Walt

Notes:
(1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

I	N	1	0	2	7	1	1	E	I	8	0	2
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1111 **Drum Number:** RW 47765

Sampling Organization: CCP **Sample Description:** SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	100611	1345	TBL
Cleaning Batch: 412C	M= <5.0E-2	P= 632T			
Field-	C= 26"Hg	T= 24.8			
Before Sample Collection	M=	P= 25	102711	1559	ERW
Field-	C= 2"Hg	T= 24.8			
After Sample Collection	M=	P= 25	102711	1604	ERW
Analytical Laboratory	C= 2" Hg	T= 22	103111	1102	[illegible]
	M= 0	P= 643T			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: [signature]

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

SECTION 3.0

ANALYSIS RESULTS

- DATA QUALIFIERS
- FORM 1s

DATA QUALIFIERS

IDAHO NATIONAL LABORATORY
ENVIRONMENTAL CHEMISTRY LABORATORY

Data qualifiers (flags) are as follows:

U - This flag indicates that the analyte was either not detected or found to be less than the MDL.

J - This flag is used when the data indicates the presence of a compound that meets the identification criteria and the result is $\geq$ MDL but less than the PRQL. For example, if the PRQL is 10 ppmv and if the MDL is 0.05 ppmv, and a sample analyte concentration of 0.30 ppmv is calculated, the data are reported as 0.30 J.

This flag is also used when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response compared to the closest eluting internal standard is assumed for quantitation of GC/MS analysis.

B - This flag is used when an analyte is found in the associated blank. It indicates possible/probable blank contamination and warns the data user to take appropriate action. This flag must be used for a TIC as well as for a positively identified target compound.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample is reanalyzed at a higher dilution factor, as in the "E" flag below, the suffix "DL" is appended to the sample number on the reporting form for the diluted sample, and all concentration values reported on that form are flagged with the "D" flag. This flag alerts data user that any discrepancies between the concentration reported may be due to dilution of the sample.

E - This flag identifies compounds whose concentrations exceed the calibration range of GC/MS or GC instruments for specific analysis. If one or more compounds have a response greater than full scale, the sample must be diluted and reanalyzed. All such compounds with a response greater than full scale have the concentration flagged with an "E" for the original analysis. If the dilution causes any compounds identified in the analysis to be below the calibration range in the second analysis, then the results of both analyses are reported separately. The reporting form for the diluted sample has the suffix "DL" appended to the sample number.

NOTE: For total xylenes, in GC/MS analysis, where three isomers are quantified, as two peaks, the calibration range of each peak is considered separately, e.g., a diluted analysis is not required for total zylenes unless the concentration of either peak separately exceeds the high standard.

N - This flag is used with TICs to indicate presumptive evidence of a compound's identification, based on a mass spectral library search.

Z - One or more QC samples do not meet acceptance criteria.

NR - Not Reported

Form Date (07/12/05)

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	11304001		Field Sample ID:	IN102711EI862	
Analytical Batch:	ECL11036M		Sampling Batch:	INHSG1111	
Data Report:	ECL11036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	11/3/2011	1019	Date Sampled:	10/27/2011	
Lab File ID:	N03IB		Date Received:	10/31/11	
Instrument ID:	GCMS-I		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers	
Acetone	0.028	U	
Benzene	0.011	U	
Bromoform	0.0050	U	
Butanol	0.022	U	
Carbon disulfide	0.023	U	B
Carbon tetrachloride	0.080	J	
Chlorobenzene	0.0095	U	
Chloroform	0.012	U	
Chloromethane	0.051	U	
Cyclohexane	0.011	U	
1,1-Dichloroethane	0.016	U	
1,2-Dichloroethane	0.023	U	
1,1-Dichloroethylene	0.019	U	
cis-1,2-Dichloroethylene	0.012	U	
trans-1,2-Dichloroethylene	0.016	U	
1,2-Dichloropropane	0.0032	U	
Ethyl benzene	0.010	U	
Ethyl ether	0.031	U	
Methyl ethyl ketone	0.035	U	
Methyl isobutyl ketone	0.0062	U	
Methylene chloride	0.022	U	
1,1,2,2-Tetrachloroethane	0.0043	U	
Tetrachloroethylene	0.027	J	
Toluene	0.0058	U	B
1,1,1-Trichloroethane	0.012	J	
Trichloroethylene	0.072	J	
Trichlorofluoromethane	0.013	U	
1,1,2-Trichloro-1,2,2-trifluoroethane	0.0057	U	
1,3,5-Trimethylbenzene	0.0074	U	
1,2,4-Trimethylbenzene	0.012	U	
p/m-Xylene	0.0076	U	B
o-Xylene	0.0084	U	
Methanol	0.11	U	B

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	11304001		Field Sample ID:	IN102711EI862	
Analytical Batch:	ECL11036M		Sampling Batch:	INHSG1111	
Data Report:	ECL11036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	11/3/2011	1019	Date Sampled:	10/27/2011	
Lab File ID:	N03IB		Date Received:	10/31/11	
Instrument ID:	GCMS-I		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

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GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	11304002		Field Sample ID:	IN102711EI856	
Analytical Batch:	ECL11036M		Sampling Batch:	INHSG1111	
Data Report:	ECL11036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	11/3/2011	1102	Date Sampled:	10/27/2011	
Lab File ID:	N03IC		Date Received:	10/31/11	
Instrument ID:	GCMS-I		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	0.47	J
Benzene	0.021	J
Bromoform	0.0050	U
Butanol	0.12	J
Carbon disulfide	0.11	J B
Carbon tetrachloride	0.019	J
Chlorobenzene	0.0096	U
Chloroform	0.037	J
Chloromethane	0.070	J
Cyclohexane	0.015	J
1,1-Dichloroethane	0.016	U
1,2-Dichloroethane	0.024	U
1,1-Dichloroethylene	0.019	U
cis-1,2-Dichloroethylene	0.012	U
trans-1,2-Dichloroethylene	0.016	U
1,2-Dichloropropane	0.0032	U
Ethyl benzene	0.014	J
Ethyl ether	0.031	U
Methyl ethyl ketone	0.097	J
Methyl isobutyl ketone	0.0063	U
Methylene chloride	0.34	J
1,1,2,2-Tetrachloroethane	0.0043	U
Tetrachloroethylene	0.0049	U
Toluene	0.84	J B
1,1,1-Trichloroethane	0.011	J
Trichloroethylene	0.011	J
Trichlorofluoromethane	0.013	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.0057	U
1,3,5-Trimethylbenzene	0.0075	U
1,2,4-Trimethylbenzene	0.012	U
p/m-Xylene	0.037	J B
o-Xylene	0.024	J
Methanol	2.8	J B

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	11304002		Field Sample ID:	IN102711EI856	
Analytical Batch:	ECL11036M		Sampling Batch:	INHSG1111	
Data Report:	ECL11036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	11/3/2011	1102	Date Sampled:	10/27/2011	
Lab File ID:	N03IC		Date Received:	10/31/11	
Instrument ID:	GCMS-I		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

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GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	11304003		Field Sample ID:	IN102711EI901	
Analytical Batch:	ECL11036M		Sampling Batch:	INHSG1111	
Data Report:	ECL11036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	11/3/2011	1146	Date Sampled:	10/27/2011	
Lab File ID:	N03ID		Date Received:	10/31/11	
Instrument ID:	GCMS-I		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	0.47	J
Benzene	0.041	J
Bromoform	0.0051	U
Butanol	0.12	J
Carbon disulfide	0.12	J B
Carbon tetrachloride	0.033	J
Chlorobenzene	0.0097	U
Chloroform	0.034	J
Chloromethane	0.082	J
Cyclohexane	0.014	J
1,1-Dichloroethane	0.017	U
1,2-Dichloroethane	0.024	U
1,1-Dichloroethylene	0.020	U
cis-1,2-Dichloroethylene	0.012	U
trans-1,2-Dichloroethylene	0.016	U
1,2-Dichloropropane	0.0032	U
Ethyl benzene	0.010	U
Ethyl ether	0.032	U
Methyl ethyl ketone	0.094	J
Methyl isobutyl ketone	0.029	J
Methylene chloride	0.34	J
1,1,2,2-Tetrachloroethane	0.0044	U
Tetrachloroethylene	0.0050	U
Toluene	0.87	J B
1,1,1-Trichloroethane	0.022	J
Trichloroethylene	0.048	J
Trichlorofluoromethane	0.013	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.0058	U
1,3,5-Trimethylbenzene	0.0076	U
1,2,4-Trimethylbenzene	0.012	U
p/m-Xylene	0.015	J B
o-Xylene	0.011	J
Methanol	2.9	J B

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	11304003		Field Sample ID:	IN102711EI901	
Analytical Batch:	ECL11036M		Sampling Batch:	INHSG1111	
Data Report:	ECL11036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	11/3/2011	1146	Date Sampled:	10/27/2011	
Lab File ID:	N03ID		Date Received:	10/31/11	
Instrument ID:	GCMS-I		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

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GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	11304004		Field Sample ID:	IN102711EIC72	
Analytical Batch:	ECL11036M		Sampling Batch:	INHSG1111	
Data Report:	ECL11036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	11/3/2011	1226	Date Sampled:	10/27/2011	
Lab File ID:	N03IE		Date Received:	10/31/11	
Instrument ID:	GCMS-I		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	0.16	J
Benzene	0.039	U
Bromoform	0.017	U
Butanol	0.073	U
Carbon disulfide	27	B
Carbon tetrachloride	0.024	U
Chlorobenzene	0.032	U
Chloroform	0.040	U
Chloromethane	0.17	U
Cyclohexane	0.094	J
1,1-Dichloroethane	0.055	U
1,2-Dichloroethane	0.079	U
1,1-Dichloroethylene	0.065	U
cis-1,2-Dichloroethylene	0.040	U
trans-1,2-Dichloroethylene	0.053	U
1,2-Dichloropropane	0.011	U
Ethyl benzene	0.25	J
Ethyl ether	0.11	U
Methyl ethyl ketone	0.12	U
Methyl isobutyl ketone	0.021	U
Methylene chloride	0.075	U
1,1,2,2-Tetrachloroethane	0.014	U
Tetrachloroethylene	0.093	J
Toluene	7.0	J B
1,1,1-Trichloroethane	0.032	U
Trichloroethylene	0.025	U
Trichlorofluoromethane	0.044	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.019	U
1,3,5-Trimethylbenzene	0.041	J
1,2,4-Trimethylbenzene	0.13	J
p/m-Xylene	0.87	J B
o-Xylene	0.73	J
Methanol	0.37	U B

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GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	11304004		Field Sample ID:	IN102711EIC72	
Analytical Batch:	ECL11036M		Sampling Batch:	INHSG1111	
Data Report:	ECL11036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	11/3/2011	1226	Date Sampled:	10/27/2011	
Lab File ID:	N03IE		Date Received:	10/31/11	
Instrument ID:	GCMS-I		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

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GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	11304005		Field Sample ID:	IN102711EI575	
Analytical Batch:	ECL11036M		Sampling Batch:	INHSG1111	
Data Report:	ECL11036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	11/3/2011	1351	Date Sampled:	10/27/2011	
Lab File ID:	N03IG		Date Received:	10/31/11	
Instrument ID:	GCMS-I		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	0.085	J
Benzene	0.061	J
Bromoform	0.0050	U
Butanol	0.055	J
Carbon disulfide	1.2	J B
Carbon tetrachloride	0.022	J
Chlorobenzene	0.0096	U
Chloroform	0.012	U
Chloromethane	0.052	U
Cyclohexane	0.018	J
1,1-Dichloroethane	0.016	U
1,2-Dichloroethane	0.024	U
1,1-Dichloroethylene	0.019	U
cis-1,2-Dichloroethylene	0.012	U
trans-1,2-Dichloroethylene	0.016	U
1,2-Dichloropropane	0.0032	U
Ethyl benzene	0.010	U
Ethyl ether	0.032	U
Methyl ethyl ketone	0.035	U
Methyl isobutyl ketone	0.019	J
Methylene chloride	0.022	U
1,1,2,2-Tetrachloroethane	0.0043	U
Tetrachloroethylene	0.014	J
Toluene	1.0	J B
1,1,1-Trichloroethane	0.0094	U
Trichloroethylene	0.012	J
Trichlorofluoromethane	0.013	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.0058	U
1,3,5-Trimethylbenzene	0.053	J
1,2,4-Trimethylbenzene	0.13	J
p/m-Xylene	0.026	J B
o-Xylene	0.027	J
Methanol	0.13	J B

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	11304005		Field Sample ID:	IN102711EI575	
Analytical Batch:	ECL11036M		Sampling Batch:	INHSG1111	
Data Report:	ECL11036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	11/3/2011	1351	Date Sampled:	10/27/2011	
Lab File ID:	N03IG		Date Received:	10/31/11	
Instrument ID:	GCMS-I		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

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GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	11304006		Field Sample ID:	IN102711EI454	
Analytical Batch:	ECL11036M		Sampling Batch:	INHSG1111	
Data Report:	ECL11036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	11/3/2011	1432	Date Sampled:	10/27/2011	
Lab File ID:	N03IH		Date Received:	10/31/11	
Instrument ID:	GCMS-I		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	0.054	J
Benzene	0.017	J
Bromoform	0.0056	U
Butanol	0.025	U
Carbon disulfide	11	B
Carbon tetrachloride	0.019	J
Chlorobenzene	0.011	U
Chloroform	0.021	J
Chloromethane	0.058	U
Cyclohexane	0.012	U
1,1-Dichloroethane	0.018	U
1,2-Dichloroethane	0.027	U
1,1-Dichloroethylene	0.022	U
cis-1,2-Dichloroethylene	0.014	U
trans-1,2-Dichloroethylene	0.018	U
1,2-Dichloropropane	0.0036	U
Ethyl benzene	0.15	J
Ethyl ether	0.036	U
Methyl ethyl ketone	0.039	U
Methyl isobutyl ketone	0.025	J
Methylene chloride	0.025	U
1,1,2,2-Tetrachloroethane	0.0048	U
Tetrachloroethylene	0.0055	U
Toluene	0.19	J B
1,1,1-Trichloroethane	0.011	J
Trichloroethylene	0.027	J
Trichlorofluoromethane	0.015	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.0065	U
1,3,5-Trimethylbenzene	0.011	J
1,2,4-Trimethylbenzene	0.022	J
p/m-Xylene	0.24	J B
o-Xylene	0.43	J
Methanol	0.12	U B

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	11304006		Field Sample ID:	IN102711EI454	
Analytical Batch:	ECL11036M		Sampling Batch:	INHSG1111	
Data Report:	ECL11036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	11/3/2011	1432	Date Sampled:	10/27/2011	
Lab File ID:	N03IH		Date Received:	10/31/11	
Instrument ID:	GCMS-I		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

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GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	11304007		Field Sample ID:	IN102711EI439	
Analytical Batch:	ECL11036M		Sampling Batch:	INHSG1111	
Data Report:	ECL11036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	11/3/2011	1516	Date Sampled:	10/27/2011	
Lab File ID:	N03II		Date Received:	10/31/11	
Instrument ID:	GCMS-I		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	0.048	J
Benzene	0.012	J
Bromoform	0.0049	U
Butanol	0.022	U
Carbon disulfide	0.16	J B
Carbon tetrachloride	0.019	J
Chlorobenzene	0.0094	U
Chloroform	0.049	J
Chloromethane	0.080	J
Cyclohexane	0.011	U
1,1-Dichloroethane	0.016	U
1,2-Dichloroethane	0.023	U
1,1-Dichloroethylene	0.019	U
cis-1,2-Dichloroethylene	0.012	U
trans-1,2-Dichloroethylene	0.016	U
1,2-Dichloropropane	0.0031	U
Ethyl benzene	0.010	U
Ethyl ether	0.031	U
Methyl ethyl ketone	0.034	U
Methyl isobutyl ketone	0.0080	J
Methylene chloride	0.026	J
1,1,2,2-Tetrachloroethane	0.0042	U
Tetrachloroethylene	0.0048	U
Toluene	0.82	J B
1,1,1-Trichloroethane	0.0093	U
Trichloroethylene	0.019	J
Trichlorofluoromethane	0.013	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.0057	U
1,3,5-Trimethylbenzene	0.0074	U
1,2,4-Trimethylbenzene	0.012	U
p/m-Xylene	0.0075	U B
o-Xylene	0.0084	U
Methanol	0.19	J B

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	11304007		Field Sample ID:	IN102711EI439	
Analytical Batch:	ECL11036M		Sampling Batch:	INHSG1111	
Data Report:	ECL11036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	11/3/2011	1516	Date Sampled:	10/27/2011	
Lab File ID:	N03II		Date Received:	10/31/11	
Instrument ID:	GCMS-I		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

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GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	11304008		Field Sample ID:	IN102711EI909	
Analytical Batch:	ECL11036M		Sampling Batch:	INHSG1111	
Data Report:	ECL11036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	11/3/2011	1559	Date Sampled:	10/27/2011	
Lab File ID:	N03IJ		Date Received:	10/31/11	
Instrument ID:	GCMS-I		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	0.087	J
Benzene	0.012	U
Bromoform	0.0050	U
Butanol	0.066	J
Carbon disulfide	0.69	J B
Carbon tetrachloride	0.012	J
Chlorobenzene	0.0097	U
Chloroform	0.012	U
Chloromethane	0.052	U
Cyclohexane	0.015	J
1,1-Dichloroethane	0.016	U
1,2-Dichloroethane	0.024	U
1,1-Dichloroethylene	0.020	U
cis-1,2-Dichloroethylene	0.012	U
trans-1,2-Dichloroethylene	0.016	U
1,2-Dichloropropane	0.0032	U
Ethyl benzene	0.010	U
Ethyl ether	0.032	U
Methyl ethyl ketone	0.035	U
Methyl isobutyl ketone	0.0063	U
Methylene chloride	0.022	U
1,1,2,2-Tetrachloroethane	0.0043	U
Tetrachloroethylene	0.0049	U
Toluene	0.38	J B
1,1,1-Trichloroethane	0.0095	U
Trichloroethylene	0.0076	U
Trichlorofluoromethane	0.013	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.0058	U
1,3,5-Trimethylbenzene	0.0075	U
1,2,4-Trimethylbenzene	0.012	U
p/m-Xylene	0.013	J B
o-Xylene	0.0085	U
Methanol	0.25	J B

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	11304008		Field Sample ID:	IN102711EI909	
Analytical Batch:	ECL11036M		Sampling Batch:	INHSG1111	
Data Report:	ECL11036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	11/3/2011	1559	Date Sampled:	10/27/2011	
Lab File ID:	N03IJ		Date Received:	10/31/11	
Instrument ID:	GCMS-I		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

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GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	11304009		Field Sample ID:	IN102711EI581	
Analytical Batch:	ECL11036M		Sampling Batch:	INHSG1111	
Data Report:	ECL11036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	11/3/2011	1643	Date Sampled:	10/27/2011	
Lab File ID:	N03IK		Date Received:	10/31/11	
Instrument ID:	GCMS-I		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	0.20	J
Benzene	0.075	J
Bromoform	0.0050	U
Butanol	0.87	J
Carbon disulfide	0.19	J B
Carbon tetrachloride	0.0081	J
Chlorobenzene	0.0097	U
Chloroform	0.012	U
Chloromethane	0.17	J
Cyclohexane	0.020	J
1,1-Dichloroethane	0.016	U
1,2-Dichloroethane	0.086	J
1,1-Dichloroethylene	0.020	U
cis-1,2-Dichloroethylene	0.012	U
trans-1,2-Dichloroethylene	0.016	U
1,2-Dichloropropane	0.0032	U
Ethyl benzene	0.032	J
Ethyl ether	0.032	U
Methyl ethyl ketone	0.035	U
Methyl isobutyl ketone	0.0063	U
Methylene chloride	0.022	U
1,1,2,2-Tetrachloroethane	0.0043	U
Tetrachloroethylene	0.0049	U
Toluene	2.9	J B
1,1,1-Trichloroethane	0.018	J
Trichloroethylene	0.0076	U
Trichlorofluoromethane	0.013	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.0058	U
1,3,5-Trimethylbenzene	0.0075	U
1,2,4-Trimethylbenzene	0.012	U
p/m-Xylene	0.062	J B
o-Xylene	0.015	J
Methanol	2.2	J B

060037

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	11304009		Field Sample ID:	IN102711EI581	
Analytical Batch:	ECL11036M		Sampling Batch:	INHSG1111	
Data Report:	ECL11036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	11/3/2011	1643	Date Sampled:	10/27/2011	
Lab File ID:	N03IK		Date Received:	10/31/11	
Instrument ID:	GCMS-I		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	11304010		Field Sample ID:	IN102711EI336	
Analytical Batch:	ECL11036M		Sampling Batch:	INHSG1111	
Data Report:	ECL11036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	11/2/2011	1645	Date Sampled:	10/27/2011	
Lab File ID:	N02II		Date Received:	10/31/11	
Instrument ID:	GCMS-I		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	0.21	J B
Benzene	0.059	J
Bromoform	0.0051	U
Butanol	0.17	J
Carbon disulfide	0.11	J
Carbon tetrachloride	0.015	J
Chlorobenzene	0.0098	U
Chloroform	0.012	U
Chloromethane	0.11	J
Cyclohexane	0.011	U
1,1-Dichloroethane	0.017	U
1,2-Dichloroethane	0.024	U
1,1-Dichloroethylene	0.020	U
cis-1,2-Dichloroethylene	0.012	U
trans-1,2-Dichloroethylene	0.016	U
1,2-Dichloropropane	0.0033	U
Ethyl benzene	0.010	U
Ethyl ether	0.032	U
Methyl ethyl ketone	0.036	U
Methyl isobutyl ketone	0.0071	J
Methylene chloride	0.023	U
1,1,2,2-Tetrachloroethane	0.0044	U
Tetrachloroethylene	0.0050	U
Toluene	0.46	J B
1,1,1-Trichloroethane	0.011	J
Trichloroethylene	0.0097	J
Trichlorofluoromethane	0.013	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.0059	U
1,3,5-Trimethylbenzene	0.0077	U
1,2,4-Trimethylbenzene	0.012	U
p/m-Xylene	0.016	J
o-Xylene	0.0087	U
Methanol	0.62	J B

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	11304010		Field Sample ID:	IN102711EI336	
Analytical Batch:	ECL11036M		Sampling Batch:	INHSG1111	
Data Report:	ECL11036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	11/2/2011	1645	Date Sampled:	10/27/2011	
Lab File ID:	N02II		Date Received:	10/31/11	
Instrument ID:	GCMS-I		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
None				

Number of TICs Found: 0

Form Rev 05-07

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	11304011		Field Sample ID:	IN102711EIC78	
Analytical Batch:	ECL11036M		Sampling Batch:	INHSG1111	
Data Report:	ECL11036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	11/2/2011	1726	Date Sampled:	10/27/2011	
Lab File ID:	N02IJ		Date Received:	10/31/11	
Instrument ID:	GCMS-I		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	0.26	J B
Benzene	0.044	J
Bromoform	0.0083	U
Butanol	0.036	U
Carbon disulfide	16	
Carbon tetrachloride	0.020	J
Chlorobenzene	0.016	U
Chloroform	0.020	U
Chloromethane	0.086	U
Cyclohexane	0.018	U
1,1-Dichloroethane	0.027	U
1,2-Dichloroethane	0.039	U
1,1-Dichloroethylene	0.032	U
cis-1,2-Dichloroethylene	0.020	U
trans-1,2-Dichloroethylene	0.026	U
1,2-Dichloropropane	0.0053	U
Ethyl benzene	0.017	U
Ethyl ether	0.052	U
Methyl ethyl ketone	0.058	U
Methyl isobutyl ketone	0.017	J
Methylene chloride	0.037	U
1,1,2,2-Tetrachloroethane	0.0071	U
Tetrachloroethylene	0.014	J
Toluene	0.53	J B
1,1,1-Trichloroethane	0.016	U
Trichloroethylene	0.034	J
Trichlorofluoromethane	0.022	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.0096	U
1,3,5-Trimethylbenzene	0.012	U
1,2,4-Trimethylbenzene	0.020	U
p/m-Xylene	0.013	U
o-Xylene	0.014	U
Methanol	0.86	J B

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	11304011		Field Sample ID:	IN102711EIC78	
Analytical Batch:	ECL11036M		Sampling Batch:	INHSG1111	
Data Report:	ECL11036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	11/2/2011	1726	Date Sampled:	10/27/2011	
Lab File ID:	N02IJ		Date Received:	10/31/11	
Instrument ID:	GCMS-I		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	11304012		Field Sample ID:	IN102711EI802	
Analytical Batch:	ECL11036M		Sampling Batch:	INHSG1111	
Data Report:	ECL11036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	11/2/2011	1809	Date Sampled:	10/27/2011	
Lab File ID:	N02IK		Date Received:	10/31/11	
Instrument ID:	GCMS-I		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	6.6	J B
Benzene	0.090	J
Bromoform	0.0051	U
Butanol	1.0	J
Carbon disulfide	0.38	J
Carbon tetrachloride	0.023	J
Chlorobenzene	0.0098	U
Chloroform	0.012	U
Chloromethane	0.053	U
Cyclohexane	0.038	J
1,1-Dichloroethane	0.017	U
1,2-Dichloroethane	0.024	U
1,1-Dichloroethylene	0.020	U
cis-1,2-Dichloroethylene	0.012	U
trans-1,2-Dichloroethylene	0.016	U
1,2-Dichloropropane	0.0032	U
Ethyl benzene	2.6	J
Ethyl ether	0.032	U
Methyl ethyl ketone	1.9	J
Methyl isobutyl ketone	0.0064	U
Methylene chloride	0.023	U
1,1,2,2-Tetrachloroethane	0.0044	U
Tetrachloroethylene	0.0070	J
Toluene	5.7	J B
1,1,1-Trichloroethane	0.010	J
Trichloroethylene	0.015	J
Trichlorofluoromethane	0.013	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.0059	U
1,3,5-Trimethylbenzene	0.083	J
1,2,4-Trimethylbenzene	0.20	J
p/m-Xylene	8.7	J
o-Xylene	1.6	J
Methanol	7.4	J B

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	11304012		Field Sample ID:	IN102711EI802	
Analytical Batch:	ECL11036M		Sampling Batch:	INHSG1111	
Data Report:	ECL11036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	11/2/2011	1809	Date Sampled:	10/27/2011	
Lab File ID:	N02IK		Date Received:	10/31/11	
Instrument ID:	GCMS-I		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

SECTION 4.0

QUALITY CONTROL MEASUREMENTS RESULTS

- **Laboratory Duplicate Comparison Form**
- **Laboratory Blank Summary Form**
- **Laboratory Blank Results Form**
- **Internal Standard Area Form**
- **Laboratory Control Sample Results Form**

LABORATORY DUPLICATE FORM
GAS VOC ANALYSIS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Method:	CCP-TP-175	Rev. 3	Data Report:	ECL11036M	
Instrument ID:	GCMS-I		Analytical Batch:	ECL11036M	
Lab Sample ID:	11304011		Dup Lab Sample ID:	11304011D	
Field Sample ID:	IN102711EIC78		Dup Field Sample ID:	IN102711EIC78D	
Date/Time Analyzed:	11/2/2011	1726	Date/Time Dup Analyzed:	11/3/2011	1307
Lab File ID:	N02IJ		Dup Lab File ID:	N03IF	

COMPOUND	SAMPLE CONCENTRATION (PPMV)	FLAG(S)	DUPLICATE CONCENTRATION (PPMV)	FLAG(S)	RPD* (%)
Acetone	0.25655	JB	0.27456	J	6.78
Benzene	0.04400	J	0.04859	J	9.92
Bromoform	0.0083	U	0.0083	U	NC
Butanol	0.036	U	0.036	U	NC
Carbon disulfide	15.56938		15.24826	B	2.08
Carbon tetrachloride	0.01992	J	0.02371	J	17.37
Chlorobenzene	0.016	U	0.016	U	NC
Chloroform	0.020	U	0.020	U	NC
Chloromethane	0.086	U	0.086	U	NC
Cyclohexane	0.018	U	0.018	U	NC
1,1-Dichloroethane	0.027	U	0.027	U	NC
1,2-Dichloroethane	0.039	U	0.039	U	NC
1,1-Dichloroethylene	0.032	U	0.032	U	NC
cis-1,2-Dichloroethylene	0.020	U	0.020	U	NC
trans-1,2-Dichloroethylene	0.026	U	0.026	U	NC
1,2-Dichloropropane	0.0053	U	0.0053	U	NC
Ethyl benzene	0.017	U	0.017	U	NC
Ethyl ether	0.052	U	0.052	U	NC
Methyl ethyl ketone	0.058	U	0.058	U	NC
Methyl isobutyl ketone	0.01671	J	0.01895	J	12.55
Methylene chloride	0.037	U	0.037	U	NC
1,1,2,2-Tetrachloroethane	0.0071	U	0.0071	U	NC
Tetrachloroethylene	0.01433	J	0.01730	J	18.80
Toluene	0.52725	JB	0.52741	JB	0.03
1,1,1-Trichloroethane	0.016	U	0.016	U	NC
Trichloroethylene	0.03378	J	0.03719	J	9.62
Trichlorofluoromethane	0.022	U	0.022	U	NC
1,1,2-Trichloro-1,2,2-trifluoroethane	0.0096	U	0.0096	U	NC
1,3,5-Trimethylbenzene	0.012	U	0.012	U	NC
1,2,4-Trimethylbenzene	0.020	U	0.020	U	NC
p/m-Xylene	0.013	U	0.013	BU	NC
o-Xylene	0.014	U	0.014	U	NC
Methanol	0.86106	JB	0.82934	JB	3.75

NC = NOT CALCULABLE

* Specification limit <= 25% for analytes present in the sample and duplicate at concentrations greater than or equal to the PRQL

LABORATORY BLANK SUMMARY FORM
GAS VOC ANALYSIS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

METHOD:	CCP-TP-175	Rev. 3	ANALYTICAL BATCH:	ECL11036M
INSTRUMENT:	GCMS-I		DATA REPORT:	ECL11036M
LAB SAMPLE ID:	LBMIN02		FIELD SAMPLE ID:	LB31730O20
LAB FILE ID:	N02IA			
DATE/TIME ANALYZED:	11/2/2011	0922		

THIS LABORATORY BLANK APPLIES TO THE FOLLOWING SAMPLES:

FIELD SAMPLE ID	LAB SAMPLE ID	DATE/TIME ANALYZED
LCS30438SU30	LCSMIN02	11/2/2011 1602
IN102711EI336	11304010	11/2/2011 1645
IN102711EIC78	11304011	11/2/2011 1726
IN102711EI802	11304012	11/2/2011 1809

LABORATORY BLANK SUMMARY FORM
GAS VOC ANALYSIS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

METHOD:	CCP-TP-175	Rev. 3	ANALYTICAL BATCH:	ECL11036M
INSTRUMENT:	GCMS-I		DATA REPORT:	ECL11036M
LAB SAMPLE ID:	LBMIN03		FIELD SAMPLE ID:	LB31705O31
LAB FILE ID:	N03IA			
DATE/TIME ANALYZED:	11/3/2011	0918		

THIS LABORATORY BLANK APPLIES TO THE FOLLOWING SAMPLES:

FIELD SAMPLE ID	LAB SAMPLE ID	DATE/TIME ANALYZED
IN102711EI862	11304001	11/3/2011 1019
IN102711EI856	11304002	11/3/2011 1102
IN102711EI901	11304003	11/3/2011 1146
IN102711EIC72	11304004	11/3/2011 1226
IN102711EIC78D	11304011D	11/3/2011 1307
IN102711EI575	11304005	11/3/2011 1351
IN102711EI454	11304006	11/3/2011 1432
IN102711EI439	11304007	11/3/2011 1516
IN102711EI909	11304008	11/3/2011 1559
IN102711EI581	11304009	11/3/2011 1643

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	LBMIN02		Field Sample ID:	LB31730O20	
Analytical Batch:	ECL11036M		Sampling Batch:		
Data Report:	ECL11036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	11/2/2011	0922	Date Sampled:		
Lab File ID:	N02IA		Date Received:		
Instrument ID:	GCMS-I		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	0.0078	J
Benzene	0.0031	U
Bromoform	0.0014	U
Butanol	0.0059	U
Carbon disulfide	0.0064	U
Carbon tetrachloride	0.0019	U
Chlorobenzene	0.0026	U
Chloroform	0.0033	U
Chloromethane	0.014	U
Cyclohexane	0.0029	U
1,1-Dichloroethane	0.0044	U
1,2-Dichloroethane	0.0064	U
1,1-Dichloroethylene	0.0053	U
cis-1,2-Dichloroethylene	0.0033	U
trans-1,2-Dichloroethylene	0.0043	U
1,2-Dichloropropane	0.00086	U
Ethyl benzene	0.0028	U
Ethyl ether	0.0086	U
Methyl ethyl ketone	0.0095	U
Methyl isobutyl ketone	0.0017	U
Methylene chloride	0.0060	U
1,1,2,2-Tetrachloroethane	0.0012	U
Tetrachloroethylene	0.0013	U
Toluene	0.0016	J
1,1,1-Trichloroethane	0.0026	U
Trichloroethylene	0.0020	U
Trichlorofluoromethane	0.0036	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.0016	U
1,3,5-Trimethylbenzene	0.0020	U
1,2,4-Trimethylbenzene	0.0033	U
p/m-Xylene	0.0021	U
o-Xylene	0.0023	U
Methanol	0.041	J

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	LBMIN02		Field Sample ID:	LB31730O20	
Analytical Batch:	ECL11036M		Sampling Batch:		
Data Report:	ECL11036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	11/2/2011	0922	Date Sampled:		
Lab File ID:	N02IA		Date Received:		
Instrument ID:	GCMS-I		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

GAS VOC ANALYSIS DATA SHEET

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	LBMIN03		Field Sample ID:	LB31705O31	
Analytical Batch:	ECL11036M		Sampling Batch:		
Data Report:	ECL11036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	11/3/2011	0918	Date Sampled:		
Lab File ID:	N03IA		Date Received:		
Instrument ID:	GCMS-I		Composite:	No	

Compound Name	Concentration (ppmv)	Qualifiers
Acetone	0.0076	U
Benzene	0.0031	U
Bromoform	0.0014	U
Butanol	0.0059	U
Carbon disulfide	0.0099	J
Carbon tetrachloride	0.0019	U
Chlorobenzene	0.0026	U
Chloroform	0.0033	U
Chloromethane	0.014	U
Cyclohexane	0.0029	U
1,1-Dichloroethane	0.0044	U
1,2-Dichloroethane	0.0064	U
1,1-Dichloroethylene	0.0053	U
cis-1,2-Dichloroethylene	0.0033	U
trans-1,2-Dichloroethylene	0.0043	U
1,2-Dichloropropane	0.00086	U
Ethyl benzene	0.0028	U
Ethyl ether	0.0086	U
Methyl ethyl ketone	0.0095	U
Methyl isobutyl ketone	0.0017	U
Methylene chloride	0.0060	U
1,1,2,2-Tetrachloroethane	0.0012	U
Tetrachloroethylene	0.0013	U
Toluene	0.0028	J
1,1,1-Trichloroethane	0.0026	U
Trichloroethylene	0.0020	U
Trichlorofluoromethane	0.0036	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.0016	U
1,3,5-Trimethylbenzene	0.0020	U
1,2,4-Trimethylbenzene	0.0033	U
p/m-Xylene	0.0024	J
o-Xylene	0.0023	U
Methanol	0.040	J

GAS VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Lab Sample ID:	LBMIN03		Field Sample ID:	LB31705O31	
Analytical Batch:	ECL11036M		Sampling Batch:		
Data Report:	ECL11036M		Method:	CCP-TP-175	Rev. 3
Date/Time Analyzed:	11/3/2011	0918	Date Sampled:		
Lab File ID:	N03IA		Date Received:		
Instrument ID:	GCMS-I		Composite:	No	

CAS Number	Compound Name	Concentration (ppmv)	Qualifiers	Retention Time (Minutes)
	None			

Number of TICs Found: 0

Form Rev 05-07

Internal Standard Area Summary Report

Instrument ID : GCMS-I

Tune File : D:\ECL11036\BI11018.D
Tune Time : 2 Nov 2011 8:00 am

Daily Calibration File : D:\ECL11036\WI11018.D
Date Acquired : 2 Nov 2011 8:39 am

	IS1	IS2
Daily Calibration IS Areas:	1809461	1261877

File	Sample	IS1	IS2
N02IA.D	LBMIN02	1794138	1236790
N02IH.D	LCSMIN02	1774594	1215227
N02II.D	11304010	1733069	1192676
N02IJ.D	11304011	1749452	1201319
N02IK.D	11304012	1781589	1270559

(fails) - fails 12hr time check * - fails criteria

IS1 = Fluorobenzene
IS2 = Chlorobenzene-d5

Area UPPER limit = 200 percent of IS Area
Area LOWER limit = 50 percent of IS Area

Created: Tue Nov 08 12:14:16 2011

Internal Standard Area Summary Report

Instrument ID : GCMS-I

Tune File : D:\ECL11036\BI11019.D
Tune Time : 3 Nov 2011 8:02 am

Daily Calibration File : D:\ECL11036\WI11019.D
Date Acquired : 3 Nov 2011 8:34 am

	IS1	IS2
Daily Calibration IS Areas:	1925891	1378283

File	Sample	IS1	IS2
N03IA.D	LBMIN03	1915217	1335649
N03IB.D	11304001	1883164	1283924
N03IC.D	11304002	1845690	1284243
N03ID.D	11304003	1839064	1266845
N03IE.D	11304004	1861062	1300323
N03IF.D	11304011D	1878802	1293404
N03IG.D	11304005	1859754	1331119
N03IH.D	11304006	1909060	1322253
N03II.D	11304007	1888919	1305809
N03IJ.D	11304008	1907613	1291678
N03IK.D	11304009	1868419	1327217

(fails) - fails 12hr time check * - fails criteria

IS1 = Fluorobenzene
IS2 = Chlorobenzene-d5

Area UPPER limit = 200 percent of IS Area
Area LOWER limit = 50 percent of IS Area

Created: Mon Nov 07 10:05:04 2011

LABORATORY CONTROL SAMPLE FORM
GAS VOC ANALYSIS

IDAHO NATIONAL LABORATORY

ENVIRONMENTAL CHEMISTRY LABORATORY

Method:	CCP-TP-175	Rev. 3	Data Report:	ECL11036M
Instrument ID:	GCMS-I		Analytical Batch:	ECL11036M

Lab Sample ID:	LCSMIN02	
Field Sample ID:	LCS30438SU30	
Date/Time Analyzed:	11/2/2011	1602
Lab File ID:	N02IH	

COMPOUND	FOUND CONCENTRATION (PPMV)	KNOWN CONCENTRATION (PPMV)	Recovery* (%)
Benzene	92.5077	94.87	97.51
Carbon tetrachloride	98.9063	94.80	104.33
Chloromethane	85.5790	97.52	87.76
Methyl isobutyl ketone	96.3532	94.90	101.53
Toluene	90.8481	94.79	95.84
1,1,1-Trichloroethane	96.7480	94.99	101.85
Trichloroethylene	92.7435	94.91	97.72

* Recovery specification limits 70 - 130%

SECTION 5.0

CALIBRATION RESULTS

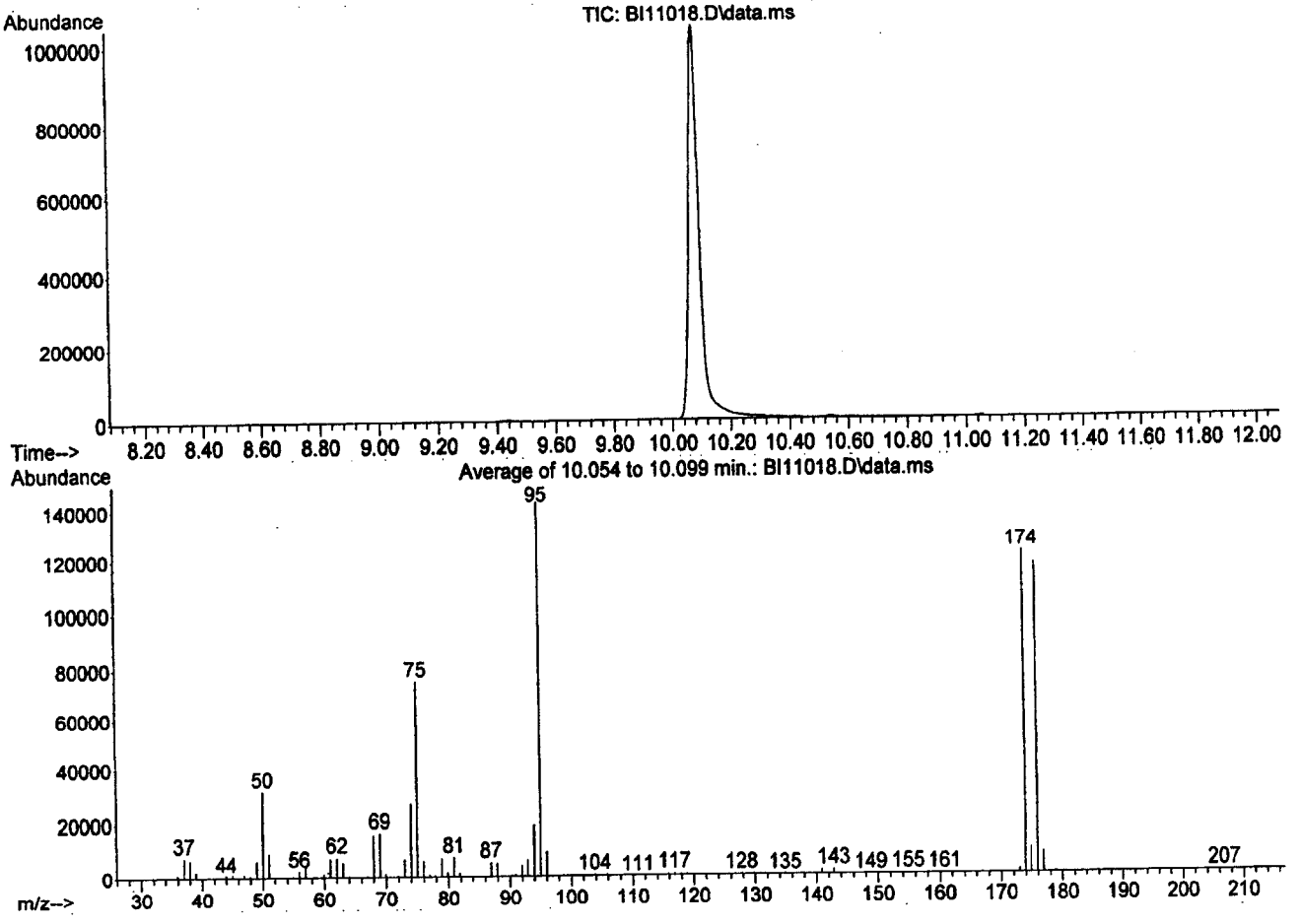
- **BFB Tune Form**
- **Initial Calibration Form**
- **Continuing Calibration Form**
- **MDL Reporting Form**

BFB

Data Path : D:\ECL11036\
Data File : BI11018.D
Acq On : 2 Nov 2011 8:00 am
Operator :
Sample : 50 NG BFB
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\GCMS-I Methods\WPID007.M
Title : WPID007 CCP-TP-175 ICAL
Last Update : Tue Nov 01 14:49:47 2011



Spectrum Information: Average of 10.054 to 10.099 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	22.1	31614	PASS
75	95	30	60	52.6	75325	PASS
95	95	100	100	100.0	143145	PASS
96	95	5	9	6.6	9462	PASS
173	174	0.00	2	1.3	1618	PASS
174	95	50	100	85.5	122352	PASS
175	174	5	9	7.5	9222	PASS
176	174	95	101	95.9	117276	PASS
177	176	5	9	6.5	7584	PASS

11/2/11

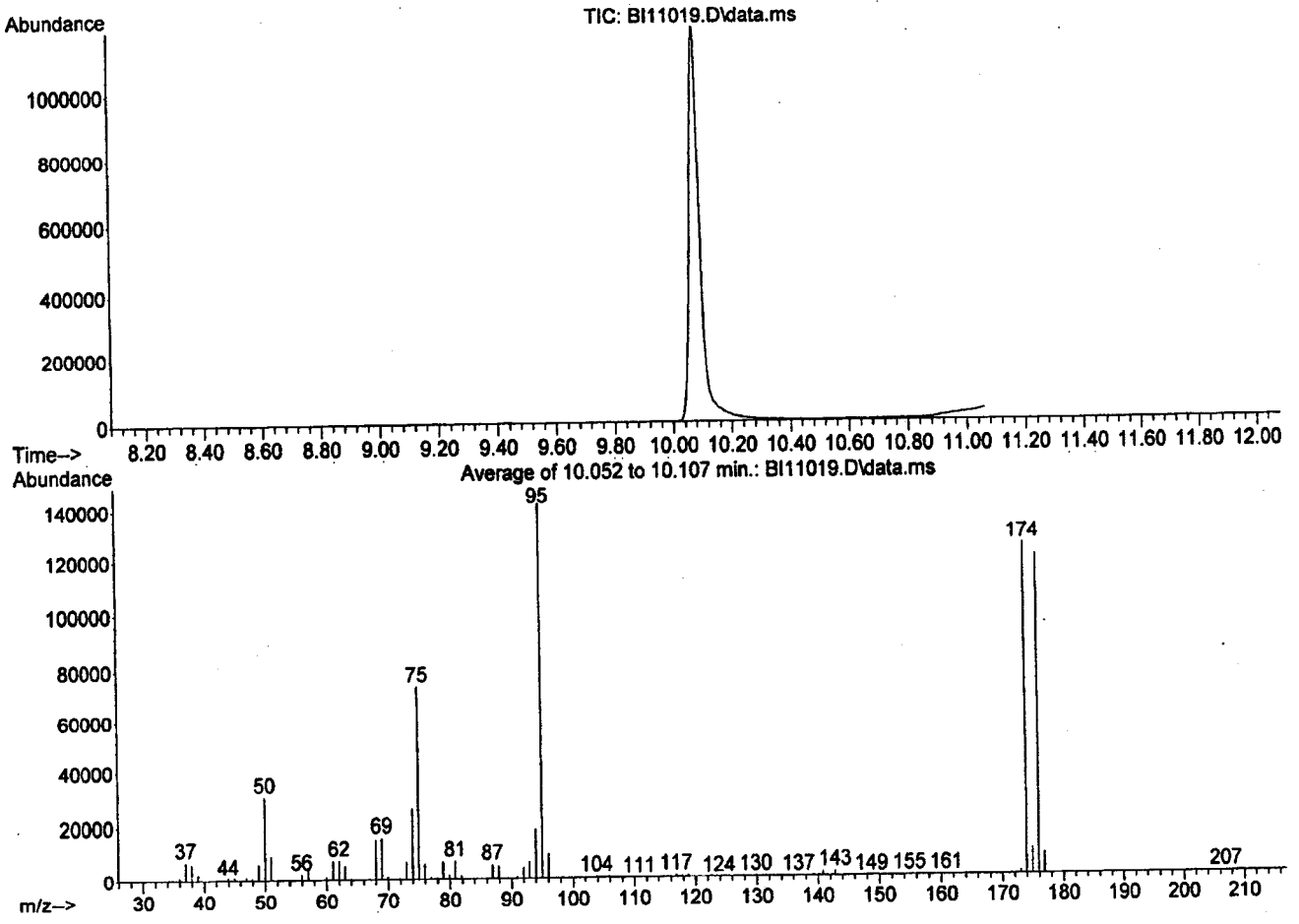
000057

BFB

Data Path : D:\ECL11036\
Data File : BI11019.D
Acq On : 3 Nov 2011 8:02 am
Operator :
Sample : 50 NG BFB
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\GCMS-I Methods\WPID007.M
Title : WPID007 CCP-TP-175 ICAL
Last Update : Tue Nov 01 14:49:47 2011



Spectrum Information: Average of 10.052 to 10.107 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.5	30614	PASS
75	95	30	60	51.9	73799	PASS
95	95	100	100	100.0	142261	PASS
96	95	5	9	6.5	9220	PASS
173	174	0.00	2	1.2	1554	PASS
174	95	50	100	87.9	124990	PASS
175	174	5	9	7.5	9435	PASS
176	174	95	101	96.3	120351	PASS
177	176	5	9	6.5	7796	PASS

cme 11/8/11
~~000058~~
000058

cme 11/8/11

Response Factor Report GCMS-I

Method Path : C:\GCMS-I Methods\
Method File : WPID007.M
Title : WPID007 CCP-TP-175 ICAL
Last Update : Tue Nov 01 14:49:47 2011
Response Via : Initial Calibration

Calibration Files
1250=N01IA.D 1000=N01IB.D 750 =N01IC.D 500 =N01ID.D 250 =N01IE.D 125 =N01IF.D

		Compound	1250	1000	750	500	250	125	Avg	%RSD
1)	I	Fluorobenzene	----------ISTD----------							
2)	T	Ethyl Ether	0.269	0.272	0.272	0.268	0.270	0.271	0.270	0.67
3)	T	Methylene Chlo...	0.272	0.276	0.274	0.271	0.275	0.281	0.275	1.35
4)	T	1,1,2-Trichlor...	0.330	0.330	0.329	0.324	0.325	0.329	0.328	0.70
5)	T	1,1-Dichloroet...	0.288	0.290	0.290	0.281	0.283	0.287	0.287	1.25
6)	T	1,1-Dichloroet...	0.520	0.526	0.517	0.522	0.514	0.532	0.522	1.23
7)	T	cis-1,2-Dichlo...	0.313	0.309	0.307	0.300	0.298	0.303	0.305	1.78
8)	T	Chloroform	0.497	0.489	0.485	0.479	0.474	0.485	0.485	1.63
9)	T	1,2-Dichloroet...	0.432	0.427	0.422	0.417	0.413	0.421	0.422	1.58
10)	T	1,1,1-Trichlor...	0.474	0.470	0.466	0.458	0.457	0.465	0.465	1.42
11)	T	Carbon Tetrach...	0.441	0.438	0.435	0.427	0.424	0.433	0.433	1.51
12)	T	Trichloroethene	0.316	0.308	0.301	0.285	0.279	0.278	0.295	5.41
13)	T	Cyclohexane	0.577	0.554	0.548	0.527	0.519	0.524	0.542	4.09
14)	T	Benzene	1.127	1.086	1.062	1.016	0.991	0.999	1.047	5.15
15)	T	Acetone	0.743	0.753	0.754	0.755	0.761	0.769	0.756	1.17
16)	T	2-Butanone	0.195	0.194	0.190	0.186	0.174	0.179	0.186	4.53
17)	T	1-Butanol	0.368	0.356	0.343	0.329	0.313	0.304	0.336	7.37
18)	T	Methanol	0.252	0.260	0.255	0.249	0.251	0.244	0.252	2.14
19)	T	trans-1,2-Dich...	0.303	0.302	0.300	0.298	0.294	0.301	0.300	1.11
20)	T	Chloromethane	0.553	0.574	0.595	0.589	0.593	0.598	0.584	2.99
21)	T	Carbon Disulfide	1.082	1.091	1.088	1.072	1.090	1.095	1.086	0.77
22)	T	1,2-Dichloropr...	0.293	0.283	0.276	0.267	0.263	0.264	0.274	4.33
23)	T	Trichlorofluor...	0.512	0.529	0.536	0.533	0.541	0.554	0.534	2.60
24)	I	Chlorobenzene-d5	----------ISTD----------							
25)	T	Bromoform	0.471	0.441	0.434	0.409	0.392	0.380	0.421	8.07
26)	T	Tetrachloroethene	0.390	0.375	0.358	0.339	0.325	0.325	0.352	7.63
27)	T	1,1,2,2-Tetrac...	0.671	0.633	0.616	0.580	0.575	0.577	0.609	6.36
28)	T	Toluene	1.149	1.092	1.043	0.961	0.921	0.919	1.014	9.43
29)	T	Chlorobenzene	1.156	1.097	1.064	1.010	0.986	0.982	1.049	6.58
30)	T	Ethylbenzene	0.638	0.596	0.576	0.540	0.519	0.514	0.564	8.64
31)	T	Xylene (meta &...	0.846	0.781	0.745	0.689	0.651	0.637	0.725	11.13
32)	T	Xylene (ortho)	0.746	0.691	0.665	0.620	0.585	0.575	0.647	10.25
33)	T	1,3,5-Trimethy...	1.840	1.702	1.591	1.434	1.336	1.288	1.532	14.15
34)	T	1,2,4-Trimethy...	1.911	1.768	1.633	1.457	1.354	1.289	1.569	15.56
35)	T	4-Methyl-2-Pen...	1.146	1.104	1.064	0.998	0.983	0.971	1.044	6.87

(#) = Out of Range

Evaluate Continuing Calibration Report

Data Path : D:\ECL11036\
Data File : WI11018.D
Acq On : 2 Nov 2011 8:39 am
Operator :
Sample : WI11018
Misc : CCP-TP-175 CCAL
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 02 09:06:20 2011
Quant Method : C:\GCMS-I METHODS\WPID007.M
Quant Title : WPID007 CCP-TP-175 ICAL
QLast Update : Tue Nov 01 14:49:47 2011
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	1.000	1.000	0.0	94	0.00
2	T	Ethyl Ether	0.270	0.262	3.0	92	0.00
3	T	Methylene Chloride	0.275	0.268	2.5	93	0.00
4	T	1,1,2-Trichlorofluoroethane	0.328	0.319	2.7	93	-0.01
5	T	1,1-Dichloroethene	0.287	0.278	3.1	93	0.00
6	T	1,1-Dichloroethane	0.522	0.508	2.7	92	0.01
7	T	cis-1,2-Dichloroethene	0.305	0.297	2.6	93	0.02
8	T	Chloroform	0.485	0.479	1.2	94	0.01
9	T	1,2-Dichloroethane	0.422	0.412	2.4	93	0.00
10	T	1,1,1-Trichloroethane	0.465	0.455	2.2	94	0.01
11	T	Carbon Tetrachloride	0.433	0.426	1.6	94	0.01
12	T	Trichloroethene	0.295	0.288	2.4	95	0.00
13	T	Cyclohexane	0.542	0.532	1.8	95	0.00
14	T	Benzene	1.047	1.021	2.5	95	0.00
15	T	Acetone	0.756	0.737	2.5	92	-0.01
16	T	2-Butanone	0.186	0.183	1.6	93	0.02
17	T	1-Butanol	0.336	0.328	2.4	94	0.00
18	T	Methanol	0.252	0.239	5.2	90	0.00
19	T	trans-1,2-Dichloroethene	0.300	0.290	3.3	92	0.00
20	T	Chloromethane	0.584	0.566	3.1	91	0.00
21	T	Carbon Disulfide	1.086	1.064	2.0	94	-0.01
22	T	1,2-Dichloropropane	0.274	0.268	2.2	95	0.00
23	T	Trichlorofluoromethane	0.534	0.518	3.0	92	0.00
24	I	Chlorobenzene-d5	1.000	1.000	0.0	91	-0.01
25	T	Bromoform	0.421	0.413	1.9	92	-0.02
26	T	Tetrachloroethene	0.352	0.336	4.5	91	-0.02
27	T	1,1,2,2-Tetrachloroethane	0.609	0.598	1.8	94	-0.03
28	T	Toluene	1.014	0.981	3.3	93	-0.01
29	T	Chlorobenzene	1.049	1.016	3.1	92	0.00
30	T	Ethylbenzene	0.564	0.544	3.5	92	-0.01
31	T	Xylene (meta & para)	0.725	0.698	3.7	92	-0.01
32	T	Xylene (ortho)	0.647	0.625	3.4	92	-0.01
33	T	1,3,5-Trimethylbenzene	1.532	1.461	4.6	93	-0.03
34	T	1,2,4-Trimethylbenzene	1.569	1.488	5.2	93	-0.04
35	T	4-Methyl-2-Pentanone	1.044	1.033	1.1	94	-0.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0

CAC 11/2/11

000080

Evaluate Continuing Calibration Report

Data Path : D:\ECL11036\
Data File : WI11019.D
Acq On : 3 Nov 2011 8:34 am
Operator :
Sample : WI11019
Misc : CCP-TP-175 CCAL
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 03 09:01:36 2011
Quant Method : C:\GCMS-I METHODS\WPID007.M
Quant Title : WPID007 CCP-TP-175 ICAL
QLast Update : Tue Nov 01 14:49:47 2011
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	1.000	1.000	0.0	100	0.00
2	T	Ethyl Ether	0.270	0.267	1.1	100	0.01
3	T	Methylene Chloride	0.275	0.272	1.1	101	0.00
4	T	1,1,2-Trichlorofluoroethane	0.328	0.323	1.5	100	0.00
5	T	1,1-Dichloroethene	0.287	0.282	1.7	100	0.01
6	T	1,1-Dichloroethane	0.522	0.513	1.7	99	0.01
7	T	cis-1,2-Dichloroethene	0.305	0.298	2.3	100	0.03
8	T	Chloroform	0.485	0.476	1.9	100	0.03
9	T	1,2-Dichloroethane	0.422	0.415	1.7	100	0.02
10	T	1,1,1-Trichloroethane	0.465	0.463	0.4	101	0.03
11	T	Carbon Tetrachloride	0.433	0.430	0.7	101	0.02
12	T	Trichloroethene	0.295	0.289	2.0	102	0.00
13	T	Cyclohexane	0.542	0.529	2.4	101	0.03
14	T	Benzene	1.047	1.022	2.4	101	0.01
15	T	Acetone	0.756	0.748	1.1	99	0.00
16	T	2-Butanone	0.186	0.183	1.6	99	0.03
17	T	1-Butanol	0.336	0.327	2.7	100	0.00
18	T	Methanol	0.252	0.239	5.2	96	0.00
19	T	trans-1,2-Dichloroethene	0.300	0.296	1.3	99	0.00
20	T	Chloromethane	0.584	0.574	1.7	98	0.00
21	T	Carbon Disulfide	1.086	1.067	1.7	100	0.00
22	T	1,2-Dichloropropane	0.274	0.268	2.2	101	0.00
23	T	Trichlorofluoromethane	0.534	0.533	0.2	100	0.02
24	I	Chlorobenzene-d5	1.000	1.000	0.0	100	-0.01
25	T	Bromoform	0.421	0.415	1.4	101	-0.02
26	T	Tetrachloroethene	0.352	0.336	4.5	99	-0.01
27	T	1,1,2,2-Tetrachloroethane	0.609	0.589	3.3	101	-0.03
28	T	Toluene	1.014	0.961	5.2	100	0.00
29	T	Chlorobenzene	1.049	1.007	4.0	99	0.00
30	T	Ethylbenzene	0.564	0.537	4.8	99	-0.01
31	T	Xylene (meta & para)	0.725	0.685	5.5	99	-0.01
32	T	Xylene (ortho)	0.647	0.620	4.2	100	-0.01
33	T	1,3,5-Trimethylbenzene	1.532	1.443	5.8	100	-0.03
34	T	1,2,4-Trimethylbenzene	1.569	1.468	6.4	100	-0.04
35	T	4-Methyl-2-Pentanone	1.044	0.996	4.6	99	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

11/7/11

000061

MDL REPORTING FORM
GAS VOC ANALYSIS

IDAHO NATIONAL LABORATORY
ENVIRONMENTAL CHEMISTRY LABORATORY

METHOD: CCP-TP-175 Rev. 3
Instrument ID: GCMS-I
MDL Determination Date: 9/12/2011

ANALYTE	MOLECULAR WEIGHT	MDL (ng)	PRQL (ppmv)
Acetone	58.08	1.8	100
Benzene	78.12	1.0	10
Bromoform	252.75	1.4	10
Butanol	74.12	1.8	100
Carbon disulfide	76.14	2.0	10
Carbon tetrachloride	153.82	1.2	10
Chlorobenzene	112.56	1.2	10
Chloroform	119.38	1.6	10
Chloromethane	50.49	2.9	10
Cyclohexane	84.16	1.0	10
1,1-Dichloroethane	98.94	1.8	10
1,2-Dichloroethane	98.94	2.6	10
1,1-Dichloroethylene	96.94	2.1	10
cis-1,2-Dichloroethylene	96.94	1.3	10
trans-1,2-Dichloroethylene	96.94	1.7	10
1,2-Dichloropropane	112.99	0.4	10
Ethyl benzene	106.17	1.2	10
Ethyl ether	74.12	2.6	10
Methyl ethyl ketone	72.11	2.8	100
Methyl isobutyl ketone	100.16	0.7	100
Methylene chloride	84.93	2.1	10
1,1,2,2-Tetrachloroethane	167.85	0.8	10
Tetrachloroethylene	165.83	0.9	10
Toluene	92.15	0.6	10
1,1,1-Trichloroethane	133.41	1.4	10
Trichloroethylene	131.39	1.1	10
Trichlorofluoromethane	137.37	2.0	10
1,1,2-Trichloro-1,2,2-trifluoroethane	187.38	1.2	10
1,3,5-Trimethylbenzene	120.2	1.0	10
1,2,4-Trimethylbenzene	120.2	1.6	10
p/m-Xylene	106.17	0.9	10
o-Xylene	106.17	1.0	10
Methanol	32.04	3.9	100

SECTION 6.0

DATA REVIEW CHECKLISTS

- SAMPLE RECEIVING & CUSTODY REVIEW CHECKLIST
- DATA GENERATOR CHECKLIST
- INDEPENDENT REVIEW CHECKLIST

Environmental Chemistry Laboratory
Sample Receiving & Custody Review Checklist

Receiving Group: **ECL** 11036	Nonconformance Report Initiation Required? Yes or (No) NCR Number:
Reviewer Signature: Thomas B. Lints	Date: 10-31-11

Instructions: Complete one checklist per Report Group. Enter appropriate response for each question. Each "NO" response requires explanation. A "NO" response to a question may require initiation of an NCR.

REQUIREMENT	YES	NO	COMMENTS
1. FIELD CHAIN OF CUSTODY (COC)			
a. Are all field samples listed on the accompanying COC form included in the shipment?	✓		NA
b. Are all samples included in the shipment listed on the COC form?	✓		NA
c. Are all custody transfers completely documented by signatures of relinquishers and acceptors, time, and date of transfer?	✓		NA
d. Does all sample information (e.g., sample ID, sampling date and time, sample location, field batch, analytical request) listed on the COC correspond with the information on the sample tags?	✓		NA
e. Are any corrections on the COC appropriately made [a single line through the incorrect data, correct data written in (not overwritten), initialed and dated]?	✓		NA
2. SAMPLE TAGS			
a. Is each sample accompanied by a corresponding sample tag?	✓		NA
b. Do the field IDs on the sample tags correspond with those on the COC?	✓		NA
c. Does the sampling date and time correspond with the date and time on the COC?	✓		NA
d. Is the field batch number recorded on each sample tag, and does it correspond with that recorded on the COC?	✓		NA
e. Are the Sampling Organization and Sample Description fields completed?	✓		NA
f. Are ambient pressure and temperature, date and time and sampler initials recorded on each tag?	✓		NA
g. Are VOCs, H_2 and CH_4 analyses requested as appropriate for each sample?	✓		NA
h. Are VOCs and/or CH_4 and H_2 analyses requested for each field blank sample?	✓		NA
i. Did the sampler sign each sample tag?	✓		NA
j. Are any corrections on the sample tag appropriately made [a single line through the incorrect data, correct data written in (not overwritten), initialed and dated]?	✓		NA
k. Is the SUMMA® canister ID listed on the sample tag and/or COC?	✓		NA
3. ANALYSIS REQUEST FORM (ANRF)			
a. Do all field sample numbers correspond to those on the field COC?	✓		NA
b. Do the listed sample sizes correspond with the SUMMA® canisters?	✓		NA
c. Do VTSR and the Field Batch number match those on the COC?	✓		NA
d. If there is a COC number does it match the COC form number?	✓		NA
e. Are the correct analysis requests checked?	✓		NA
f. If forming a composited sample are all drum samples from the same waste stream?	✓		NA
4. SAMPLE INTEGRITY			
a. Is a signed and dated or otherwise traceable custody seal present on the shipping container?	✓		NA
b. Is the shipping container custody seal intact and undamaged upon receipt at the laboratory?	✓		NA
c. Is the shipping container custody seal placed such that the container cannot be opened without breaking the seal?	✓		NA
d. Is a custody seal present on the valve of each sample canister?	✓		NA
e. Is the custody seal on each SUMMA® canister intact and undamaged upon receipt at the laboratory?	✓		NA
f. Is each custody seal placed such that the valve cannot be opened without breaking the seal?	✓		NA
g. Has physical integrity of all samples been preserved (such as, no dents, no missing connectors)?	✓		NA
h. Are the canister gauge pressure and ambient temperature and pressure recorded on the sample tag by ECL after canister receipt and equilibration to room temperature?	✓		NA
i. Did all of the SUMMA® canisters maintain pressure during shipment?	✓		NA
j. Does each sample have an ECL Sample ID tag corresponding to the ANRF?	✓		NA

The field sampling organization must be contacted if any discrepancies are found in the sample COC and tag documentation. This contact must be documented in writing.

TWCP SAMPLE RECEIVING & CUSTODY REVIEW
CHECKLIST ATTACHMENT

FIELD BATCH: INHSG1111

LABORATORY RECEIVING GROUP: ECL11036

Temperature Probe Identification Number: XC0680

Expiration Date: 01-25-12

The temperature probe associated with the samples registered 19.3°C upon receipt at the laboratory. The minimum temperature registered by the probe during transport was 19.3°C and the maximum was 25.5°C.

Temperature Probe Identification Number: XC0688

Expiration Date: 02-23-12

The temperature probe associated with the samples registered 19.9°C upon receipt at the laboratory. The minimum temperature registered by the probe during transport was 19.9°C and the maximum was 21.6°C.

Signature of Sample Custodian: Thomas B. Linto Date: 10-31-11

Environmental Chemistry Laboratory
Data Generator Checklist

CCP-TP-175 (VOCs by GC/MS)

Analytical Batch#:	Procedure Revision:
ECL110361M	3
Analyst Signature: Cathie A. Crowder	Analysis Date: 11-2-11

Criteria	Yes	No	N/A	Comments
1. Samples analyzed in accordance with CCP-TP-175 requirements.	✓			NA
2. BFB tune analyzed at the beginning of the run (once every 12 hours of instrument operation), and meets acceptance criteria.	✓			NA
3. CCAL analyzed at the beginning of the run (once every 12 hours of instrument operation), and meets acceptance criteria.	✓			NA
4. LB analyzed after the CCAL, and meets acceptance criteria.	✓			NA
5. Analytical batch QC (LCS, laboratory duplicate or LCS duplicate) analyzed if appropriate, and meet acceptance criteria. [N/A if these analyses are performed on another day within the batch.]	✓			NA
6. All samples quantitated within the calibration range for all target analytes, diluted and reanalyzed, or scheduled for reanalysis within the batch.	✓			NA
7. All non-target analyte peaks having total ion areas >0.5% of the nearest internal standard evaluated against a NIST Appendix VIII VOC mass spectral library for tentative identification.	✓			NA
8. All TICs identified using criteria defined in CCP-TP-175.	✓			NA
9. All logbook entries completed in accordance with CCP-QP-011.	✓			NA
10. All raw data corrections made per CCP-TP-188 requirements [lined out, initialed, dated, and justified (as necessary)].	✓			NA
11. All raw data evaluated, signed/initialed and dated in indelible black ink.	✓			NA
12. Raw data reviewed for completeness and accuracy.	✓			NA

Environmental Chemistry Laboratory
Data Generator Checklist

CCP-TP-175 (VOCs by GC/MS)

Analytical Batch#: ECL11036M	Procedure Revision: 3
Analyst Signature: Cathie A. Crowder	Analysis Date: 11-3-11

Criteria	Yes	No	N/A	Comments
1. Samples analyzed in accordance with CCP-TP-175 requirements.	✓			NA
2. BFB tune analyzed at the beginning of the run (once every 12 hours of instrument operation), and meets acceptance criteria.	✓			NA
3. CCAL analyzed at the beginning of the run (once every 12 hours of instrument operation), and meets acceptance criteria.	✓			NA
4. LB analyzed after the CCAL, and meets acceptance criteria.	✓			NA
5. Analytical batch QC (LCS, laboratory duplicate or LCS duplicate) analyzed if appropriate, and meet acceptance criteria. [N/A if these analyses are performed on another day within the batch.]	✓			NA
6. All samples quantitated within the calibration range for all target analytes, diluted and reanalyzed, or scheduled for reanalysis within the batch.	✓			NA
7. All non-target analyte peaks having total ion areas >0.5% of the nearest internal standard evaluated against a NIST Appendix VIII VOC mass spectral library for tentative identification.	✓			NA
8. All TICs identified using criteria defined in CCP-TP-175.	✓			NA
9. All logbook entries completed in accordance with CCP-QP-011.	✓			NA
10. All raw data corrections made per CCP-TP-188 requirements [lined out, initialed, dated, and justified (as necessary)].	✓			NA
11. All raw data evaluated, signed/initialed and dated in indelible black ink.	✓			NA
12. Raw data reviewed for completeness and accuracy.	✓			NA

Environmental Chemistry Laboratory Independent Technical Review (ITR) Checklist

Analytical Batch:	Data Report Number:	Method : CCP-TP-175
ECL110364	ECL110364	

Run#	Analysis Date	Data Generator	ITR Signature	Sections Reviewed	Date of Review
1	11-2-11	Catherine Crowder	[signature]	1-7	11-8-11
2	11-3-11	Catherine Crowder	[signature]	1-7	11-8-11
3	NA	NA	NA	NA	NA

Final Independent Technical Reviewer Release Signature: [signature] Sections Reviewed: 1-10 Date: 11/8/11

Instructions: Complete one checklist per analytical batch. If more than three instrument runs were needed to complete the batch analysis, use a second checklist. Enter the appropriate response for each question. Each "No" response requires explanation.

Requirement	Run #1		Run #2		Run #3		Comments
	Yes	No	Yes	No	Yes	No	
1. Instrument Performance Check (BFB Tune)	///	///	///	///	///	///	
a. Was a BFB tune performed each day prior to analysis of samples?	/		/		NA	NA	NA
b. Is the raw data present, and signed/initialed and dated by the analyst, for each BFB tune?	/		/		NA	NA	NA
c. Do all the BFB tunes meet CCP-TP-175 requirements [Table 2]?	/		/		NA	NA	NA
2. Continuing Calibration Verification (CCAL)	///	///	///	///	///	///	
a. Was a CCAL performed each day after the BFB tune and prior to analysis of samples?	/		/		NA	NA	NA
b. Is the raw data present, and signed/initialed and dated by the analyst, for each CCAL?	/		/		NA	NA	NA
c. Is the %D less than or equal to 30% for all target analytes?	/		/		NA	NA	NA
d. Are the retention times of the internal standards within 30 seconds of those in the associated ICAL?	/		/		NA	NA	NA
e. Are the internal standard areas within a factor of 2 (i.e., 50 to 200%) of those in the associated ICAL?	/		/		NA	NA	NA
3. Laboratory Blanks (LBs)	///	///	///	///	///	///	
a. Was a laboratory blank analyzed daily after the CCAL and prior to analysis of samples?	/		/		NA	NA	NA
b. Are all laboratory blank results ≤3 times the program-required MDLs for all target analytes ?	/		/		NA	NA	NA
4. Samples (Including LCSs, Blanks and Duplicates)	///	///	///	///	///	///	
a. Are the raw data present, and signed/initialed and dated by the analyst, for all samples listed on the Analysis Request Form, and for all associated LCSs, blanks and duplicates?	/		/		NA	NA	NA
b. Are the internal standard areas within a factor of 2 (i.e., 50% to 200%) of those in the associated CCAL?	/		/		NA	NA	NA
c. Do the sample component RRT's compare within ± 0.06 RRT units of the standard component in the continuing calibration?	/		/		NA	NA	NA
d. Are all analytes found below the MDLs marked with an "X" to the right or left of the concentration on the Quant Report and marked with "No, <MDL", initialed and dated on the following spectral data sheets?	/		/		NA	NA	NA
e. Are all positive hits identified by a "Yes", initialed and dated on the spectral data sheets?	/		/		NA	NA	NA
f. Are negative hits identified by an "X" on the Quant Report, and by "No", justified, initialed and dated on the data sheets?	/		/		NA	NA	NA
g. Were all samples analyzed within 12 hours of the daily BFB tune?	/		/		NA	NA	NA
h. In your opinion, do the sample spectra for positive hits match the reference spectra?	/		/		NA	NA	NA
i. Was a TIC search conducted on each sample, blank, duplicate and LCS in the batch, using a NIST library containing Appendix VIII VOCs?	/		/		NA	NA	NA
j. Were the TICs reviewed and identified using the guidelines defined in CCP-TP-175, initialed and dated?	/		/		NA	NA	NA
k. Were all samples having analytes detected in amounts exceeding the upper calibration range reanalyzed at a different dilution or at a lower volume?	/		/		NA	NA	NA
l. Were all dilutions factors for all samples calculated correctly?	/		/		NA	NA	NA

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Environmental Chemistry Laboratory Independent Technical Review (ITR) Checklist

Analytical Batch:	Data Report Number:	Method : CCP-TP-175
ECL11036-M	ECL11036-M	

	Requirement	Yes	No	Comments
	5. Initial Calibration	///	///	
a.	Does the BFB tune meet CCP-TP-175 requirements [Table 2]?	/		NA
b.	Are the %RSDs less than 35% for all target analytes?	/		NA
c.	Is at least one of the calibration standards at a concentration below the PRQL?	/		NA
d.	Are the correct ions used for quantitation?	/		NA
e.	Is the ICAL raw data signed/initialed and dated by the analyst and included, or referenced, as appropriate for the report?	/		NA
f.	Does the ICAL use at least 5 points (at least one below the PRQL), with %RSD < 35% for all target analytes?	/		NA
	6. Laboratory Control Samples (LCSs)	///	///	
a.	Was at least one unique LCS analyzed with the analytical batch?	/		NA
b.	Is the LCS second-source from the ICAL standard source?	/		NA
c.	Do the recoveries for all target analytes in each LCS fall between 70% and 130%?	/		NA
d.	IF a duplicate LCS was analyzed, are all RPDs for all analytes greater than the PRQL ≤25%?	/		NA
	7. Duplicate Sample	///	///	
a.	Was at least one field sample from the analytical batch analyzed in duplicate?	/		NA
b.	Do the RPDs for analytes above the PRQL meet the ≤25% precision requirement?	/		NA
	8. Sample Integrity Verification	///	///	
a.	Is COC documentation complete and accurate for all reported samples?	✓		NA
b.	Was physical integrity of all samples maintained?	✓		NA
c.	Were all samples stored at temperatures between 0 and 40° C?	✓		NA
	9. Instrument, Method and Personnel Qualification Verification	///	///	
a.	Were all analyses conducted by analysts having current CCP qualification records on file?	✓		NA
b.	Were acceptable demonstrations of precision, accuracy, and MDLs performed semiannually?	✓		NA
	10. Data Report Validation and Completeness	///	///	
a.	Are all changes to original data or forms made by a single line through of incorrect data, initialed/signed and dated by the person making the change?	✓		NA
b.	Does the report contain a Cover Page with Table of Contents?	✓		NA
c.	Does the report contain a Sample Number Cross-Reference Table?	✓		NA
d.	Does the report contain copies of the COC and Gas Sample Canister Tags?	✓		NA
e.	Are Analysis Data Sheets and TIC Analysis Data Sheets present and accurate for all samples in the analytical batch?	✓		NA
f.	Are Lab Blank Summary Forms present for all lab blanks associated with the reported samples?	✓		NA
g.	Are Lab Blank Results Forms present for all lab blanks associated with the reported samples?	✓		NA
h.	Are BFB Tune Reports present for each continuing calibration associated with the reported samples?	✓		NA
i.	Are Initial Calibration Forms present for all Initial Calibrations associated with the reported samples?	✓		NA
j.	Are Continuing Calibration Forms present for each Continuing Calibration associated with the reported samples?	✓		NA
k.	Are Internal Standard Area Summary Forms present for each daily calibration and associated sample analyses?	✓		NA
l.	Are Lab Control Sample Forms present for each LCS associated with the reported samples?	✓		NA
m.	Are Lab Duplicate Forms present for each duplicate analysis associated with the reported samples?	✓		NA
n.	Does the report contain an MDL reporting form?	✓		NA
o.	Does the report contain Quantitation Reports for every standard, sample, and QC sample reported?	✓		NA
p.	Are Mass Spectra for all detected analytes and reported TICs present?	✓		NA
q.	Are copies of Gas Transfer Manifold logs showing all sample pressurizations/dilutions included for all reported samples?	✓		NA

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Environmental Chemistry Laboratory Independent Technical Review (ITR) Checklist

Analytical Batch:	Data Report Number:	Method : CCP-TP-175
ECL11036.m	ECL11036.m	

	Requirement	Yes	No	Comments
r.	Are copies of analysis run logs for every standard, sample and QC sample present and accurate?	✓		NA
s.	Are U, J, B, D, E, H, Z, and N qualifying flags correctly assigned on the reporting forms?	✓		NA
t.	Are all data reporting forms completely and correctly filled out (e.g., correct batch numbers, analyst IDs, analysis times and dates, dilution factors, sample ID numbers and file IDs)?	✓		NA
u.	If there were any NCRs associated with the data are copies included?	✓		NA
v.	Are the analyte concentrations on the Analysis Data Sheets reported in units of ppm, and correctly rounded to 2 significant figures?	✓		NA
w.	Have all data received documented data generator review and signature?	✓		NA
x.	Were all calculations verified by a valid calculation program or a spot check of verified calculation programs?	✓		NA
y.	Have the data been reviewed for transcription errors?	✓		NA
z.	Are all pages in the data report legible and correctly paginated?	✓		NA

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SECTION 8.0

MISCELLANEOUS SUPPORTING DATA

CALCULATION FORMULAS
GAS VOC ANALYSIS

IDAHO NATIONAL LABORATORY
ENVIRONMENTAL CHEMISTRY LABORATORY

METHOD: CCP-TP-175

$$\text{Sample Results (ppmv)} = \frac{ng * D * Rt}{V * C * MW} \qquad \text{Sample Specific MDL} = \frac{MDL * D * RT}{V * C * MW}$$

ppmv = **Parts per million volume**

C = **Correction factor for volume at STP (= to 1.00 for Modified Method Acmm-9930)**

D = **Dilution factor (result of canister pressurization) reported as number of times diluted**

ng = **Nanograms of analyte found in the sample (found on instrument quantitation report)**

Rt = **24.5 at 25°C**

MDL = **Method Detection Limit in nanograms (found on Method Detection Limit reporting form)**

MW = **Molecular Weight of analyte**

V = **Volume of sample injected onto instrument (mLs)**

Results for samples with analytes detected are calculated using the sample results (ppmv) equation. The sample specific MDL (analyte MDL corrected for sample volume, dilutions, etc.) is calculated using the sample specific MDL equation.

WIPP DUPLICATE SAMPLE CALCULATIONS

Instrument I

Method CCP-TP-175

		11204011 *IN102711EIC78*				11204011D *IN102711EIC78D*					
		Instrument Filename	Date of Analysis			Instrument Filename	Date of Analysis				
		N02IJ	02-Nov-11			N03IF	03-Nov-11				
Analyte	Molecular Weight	Sample Amt. Found (ng)	Injection Volume (mL)	Dilution Factor (X)	Sample Calculated Amount (ppmv)	Duplicate Amt. Found (ng)	Injection Volume (mL)	Dilution Factor (X)	Duplicate Calculated Amount (ppmv)	Sample & Duplicate Mean (ppmv)	**% RPD**
Ethyl Ether	74.12	0.00				0.00					
Methylene Chloride	84.93	0.00				0.00					
Freon 113	187.38	0.00				0.00					
1,1-Dichloroethene	96.94	0.00				0.00					
1,1-Dichloroethane	98.94	0.00				0.00					
cis-1,2-Dichloroethene	96.94	0.00				0.00					
Chloroform	119.38	0.00				0.00					
1,2-Dichloroethane	98.94	0.00				0.00					
1,1,1-Trichlorethane	133.41	0.00				0.00					
Carbon Tetrachloride	153.82	2.05	60	3.66	**0.02**	2.44	60	3.66	**0.02**	0.02	**17.37**
Trichloroethene	131.39	2.97	60	3.66	**0.03**	3.27	60	3.66	**0.04**	0.04	**9.62**
Cyclohexane	84.16	0.00				0.00					
Benzene	78.12	2.30	60	3.66	**0.04**	2.54	60	3.66	**0.05**	0.05	**9.92**
Acetone	58.08	9.97	60	3.66	**0.26**	10.67	60	3.66	**0.27**	0.27	**6.78**
2-Butanone	72.11	0.00				0.00					
1-Butanol	74.12	0.00				0.00					
Methanol	32.04	18.46	60	3.66	**0.86**	17.78	60	3.66	**0.83**	0.85	**3.75**
trans-1,2-Dichloroethene	96.94	0.00				0.00					
Chloromethane	50.49	0.00				0.00					
Carbon Disulfide	76.14	793.21	60	3.66	**15.57**	776.85	60	3.66	**15.25**	15.41	**2.08**
1,2-Dichloropropane	112.99	0.00				0.00					
Trichlorofluoromethane	137.37	0.00				0.00					
Bromoform	252.75	0.00				0.00					
Tetrachloroethene	165.83	1.59	60	3.66	**0.01**	1.92	60	3.66	**0.02**	0.02	**18.80**
1,1,2,2,-Tetrachloroethane	167.85	0.00				0.00					
Toluene	92.15	32.51	60	3.66	**0.53**	32.52	60	3.66	**0.53**	0.53	**0.03**
Chlorobenzene	112.56	0.00				0.00					
Ethylbenzene	106.17	0.00				0.00					
p/m - Xylene	106.17	0.00				0.00					
o-Xylene	106.17	0.00				0.00					
1,3,5-Trimethylbenzene	120.20	0.00				0.00					
1,2,4-Trimethylbenzene	120.20	0.00				0.00					
4-Methyl -2- Pentanone	100.16	1.12	60	3.66	**0.02**	1.27	60	3.66	**0.02**	0.02	**12.55**

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WIPP LABORATORY CONTROL SAMPLE CALCULATIONS

Instrument I

Method CCP-TP-175

Lab Sample ID: **LCSMIN02**
Field Sample ID: **LCS30438SU30**
File Name : **N02IH**
Date of Analysis: **02-Nov-11**

Analyte	Molecular Weight	Sample Amt. Found (ng)	Injection Volume (mL)	Dilution Factor (X)	Calculated Value (ppmv)	True Value (ppmv)	Recovery (%)	IN if Between 70% & 130% (Comp.)
1,1,1-Trichlorethane	133.41	702.43	40	30.0000	**96.75**	94.99	101.85	**IN**
Carbon Tetrachloride	153.82	827.96	40	30.0000	**98.91**	94.80	104.33	**IN**
Trichloroethene	131.39	663.16	40	30.0000	**92.74**	94.91	97.72	**IN**
Benzene	78.12	393.29	40	30.0000	**92.51**	94.87	97.51	**IN**
Chloromethane	50.49	235.15	40	30.0000	**85.58**	97.52	87.76	**IN**
Toluene	92.15	455.60	40	30.0000	**90.85**	94.79	95.84	**IN**
4-methyl-2-pentanone	100.16	525.21	40	30.0000	**96.35**	94.90	101.53	**IN**

000285

GAS SAMPLE PREPARATION LOGBOOK
ENVIRONMENTAL CHEMISTRY LABORATORY

REPORT GROUP # ECL 11034

PAGE # UT2-26- 0025

SUMMA CANISTER LABORATORY SAMPLE IDENTIFICATION	SIZE (mL)	AMBIENT CONDITIONS (Torr) PRESS	AMBIENT CONDITIONS (C) TEMP	CANISTER PRESSURE (Torr) START (A)	CANISTER PRESSURE (Torr) FINAL (B)	DILUTION FACTOR (B/A)	SAMPLE PREP DATE	BY INITIALS
LAB BLANK/LB31736026	500	644	22	$<50 \times 10^{-3}$ T	2065.0	NA	102011	JBL
11293001	250	644	22	414.0	1536.0	3.7101	102011	JBL
11293002	250	644	22	447.5	1680.0	3.7542	102011	JBL
11293003	250	644	22	517.5	1876.0	3.6251	102011	JBL
11293004	250	644	22	485.0	1771.0	3.6515	102011	JBL
11293005	250	644	22	480.0	1703.0	3.5479	102011	JBL
11293006	250	644	22	499.0	1846.5	3.7004	102011	JBL
11293007	250	644	22	492.5	1822.0	3.6995	102011	JBL
11293008	250	644	22	512.5	1881.5	3.6712	102011	JBL
11293009	250	644	22	478.5	1769.5	3.6980	102011	JBL
11293010	250	644	22	494.0	1858.5	3.7621	102011	JBL
11293011	250	644	22	497.5	1814.0	3.6467	102011	JBL
11293012	250	644	22	498.0	1837.5	3.6898	102011	JBL
				NA				
				JBL 10-27-11				

000286

GAS SAMPLE PREPARATION LOGBOOK
ENVIRONMENTAL CHEMISTRY LABORATORY

REPORT GROUP # ECZ11036 PAGE # UT2-26- 0027

SUMMA CANISTER LABORATORY SAMPLE IDENTIFICATION	SIZE (mL)	AMBIENT CONDITIONS (Torr) PRESS	AMBIENT CONDITIONS (C) TEMP	CANISTER PRESSURE (Torr) START (A)	CANISTER PRESSURE (Torr) FINAL (B)	DILUTION FACTOR (B/A)	SAMPLE PREP DATE	BY INITIALS
LAB BLANK/LB31705031	500	643	22	$<5.0 \times 10^{-2}$	2064.5	NA	10-31-11	JBL
11304001	250	643	22	523.0	1909.0	3.6501	10-31-11	JBL
11304002	250	643	22	498.5	1822.0	3.6550	10-31-11	JBL
11304003	250	643	22	501.0	1867.0	3.7265	10-31-11	JBL
11304004	250	643	22	519.0	1912.5	3.6850	10-31-11	JBL
11304005	250	643	22	531.0	1949.5	3.6714	10-31-11	JBL
11304006	250	643	22	478.5	1779.0	3.7179	10-31-11	JBL
11304007	250	643	22	531.5	1922.0	3.6162	10-31-11	JBL
11304008	250	643	22	508.5	1882.0	3.7011	10-31-11	JBL
11304009	250	643	22	484.0	1789.0	3.69603	10-31-11	JBL
11304010	250	643	22	488.0	1836.0	3.7623	10-31-11	JBL
11304011	250	643	22	533.5	1950.0	3.6551	10-31-11	JBL
11304012	250	643	22	501.6	1874.0	3.7405	10-31-11	JBL

NA
MC 11/7/11

GAS SAMPLE PREPARATION LOGBOOK
ENVIRONMENTAL CHEMISTRY LABORATORY

REPORT GROUP # NA

PAGE # UT2-26- 0114

SUMMA CANISTER LABORATORY SAMPLE IDENTIFICATION	SIZE (mL)	AMBIENT CONDITIONS (Torr) PRESS	AMBIENT CONDITIONS (C) TEMP	CANISTER PRESSURE (Torr) START (A)	CANISTER PRESSURE (Torr) FINAL (B)	DILUTION FACTOR (B/A)	SAMPLE PREP DATE	BY INITIALS
LCS304385U30	6000	638	22	63.0	1890.0	30.0000	6/30/11	CAR
				CAR				
				6/30/14				

000288

000287

SSM 11-8-11

ENVIRONMENTAL CHEMISTRY LABORATORY

INTERNAL SAMPLE TRACKING FORM

RECEIVING GROUP # ECL 11036

LAB SAMPLE ID	SAMPLE(S) REMOVED			ANALYSIS OR PROCESS	SAMPLE(S) RETURNED		
	DATE	TIME	SIGNATURE OR INITIALS		DATE	TIME	SIGNATURE OR INITIALS
11304001-012	NA	NA	NA	Samples Received	10-31-11	10:15	DBF
11304001-012	10-31-11	12:00	DBF CAR	Samples Preps & Analysis	1 count 17 11-07-11	10:15	CAR
11304001-012	110711	1015	CAR	Cleaning	NA	NA	NA

682000

FORM DATE: 08/17//2009

SUPPLEMENTAL REPORTING DATA

INPUT/UPDATE RECORDS SCREEN

11/8/2011

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
11304001	IN102711EI862	No	CCP-TP-175	11/8/2011

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-I	9/12/2011	10/31/11	10/27/2011	11/3/2011 1019	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
N03IB	3.65	100	24.5	LBMIN03

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL11036M	1	INHSG1111

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
11304002	IN102711EI856	No	CCP-TP-175	11/8/2011

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-I	9/12/2011	10/31/11	10/27/2011	11/3/2011 1102	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
N03IC	3.66	100	24.5	LBMIN03

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL11036M	1	INHSG1111

000290

SUPPLEMENTAL REPORTING DATA

INPUT/UPDATE RECORDS SCREEN

11/8/2011

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
11304003	IN102711EI901	No	CCP-TP-175	11/8/2011

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-I	9/12/2011	10/31/11	10/27/2011	11/3/2011 1146	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
N03ID	3.73	100	24.5	LBMIN03

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL11036M	1	INHSG1111

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
11304004	IN102711EIC72	No	CCP-TP-175	11/8/2011

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-I	9/12/2011	10/31/11	10/27/2011	11/3/2011 1226	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
N03IE	3.69	30	24.5	LBMIN03

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL11036M	1	INHSG1111

000291

SUPPLEMENTAL REPORTING DATA

INPUT/UPDATE RECORDS SCREEN

11/8/2011

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
11304005	IN102711EI575	No	CCP-TP-175	11/8/2011

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-I	9/12/2011	10/31/11	10/27/2011	11/3/2011 1351	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
N03IG	3.67	100	24.5	LBMIN03

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL11036M	1	INHSG1111

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
11304006	IN102711EI454	No	CCP-TP-175	11/8/2011

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-I	9/12/2011	10/31/11	10/27/2011	11/3/2011 1432	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
N03IH	3.72	90	24.5	LBMIN03

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL11036M	1	INHSG1111

000292

SUPPLEMENTAL REPORTING DATA

INPUT/UPDATE RECORDS SCREEN

11/8/2011

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
11304007	IN102711EI439	No	CCP-TP-175	11/8/2011

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-I	9/12/2011	10/31/11	10/27/2011	11/3/2011 1516	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
N03II	3.62	100	24.5	LBMIN03

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL11036M	1	INHSG1111

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
11304008	IN102711EI909	No	CCP-TP-175	11/8/2011

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-I	9/12/2011	10/31/11	10/27/2011	11/3/2011 1559	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
N03IJ	3.7	100	24.5	LBMIN03

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL11036M	1	INHSG1111

000293

SUPPLEMENTAL REPORTING DATA

INPUT/UPDATE RECORDS SCREEN

11/8/2011

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
11304009	IN102711EI581	No	CCP-TP-175	11/8/2011

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-I	9/12/2011	10/31/11	10/27/2011	11/3/2011 1643	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
N03IK	3.7	100	24.5	LBMIN03

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL11036M	1	INHSG1111

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
11304010	IN102711EI336	No	CCP-TP-175	11/8/2011

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-I	9/12/2011	10/31/11	10/27/2011	11/2/2011 1645	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
N02II	3.76	100	24.5	LBMIN02

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL11036M	1	INHSG1111

000294

SUPPLEMENTAL REPORTING DATA

INPUT/UPDATE RECORDS SCREEN

11/8/2011

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
11304011	IN102711EIC78	No	CCP-TP-175	11/8/2011

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-I	9/12/2011	10/31/11	10/27/2011	11/2/2011 1726	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
N02IJ	3.66	60	24.5	LBMIN02

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL11036M	1	INHSG1111

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
11304011D	IN102711EIC78D	No	CCP-TP-175	11/8/2011

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-I	9/12/2011	10/31/11	10/27/2011	11/3/2011 1307	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
N03IF	3.66	60	24.5	LBMIN03

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL11036M	1	INHSG1111

000295

SUPPLEMENTAL REPORTING DATA

INPUT/UPDATE RECORDS SCREEN

11/8/2011

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
11304012	IN102711EI802	No	CCP-TP-175	11/8/2011

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-I	9/12/2011	10/31/11	10/27/2011	11/2/2011 1809	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
N02IK	3.74	100	24.5	LBMIN02

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL11036M	1	INHSG1111

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
LBMIN02	LB31730O20	Yes	CCP-TP-175	11/8/2011

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-I	9/12/2011			11/2/2011 0922	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
N02IA	1	100	24.5	

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL11036M	1	

000296

SUPPLEMENTAL REPORTING DATA

INPUT/UPDATE RECORDS SCREEN

11/8/2011

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
LBMIN03	LB31705O31	Yes	CCP-TP-175	11/8/2011

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-I	9/12/2011			11/3/2011 0918	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
N03IA	1	100	24.5	

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL11036M	1	

LAB SAMPLE ID	FIELD SAMPLE ID	BLANK	METHOD	LOG DATE
LCSMIN02	LCS30438SU30	No	CCP-TP-175	11/8/2011

INSTRUMENT	MDL DATE	DATE RECD	DATE SAMPLED	DATE/TIME ANALYZED	ANALYST
GCMS-I	9/12/2011			11/2/2011 1602	CROWDER

DATA FILE	DILUTION FACTOR	VOLUME	RT	ASSOCIATED BLANK
N02IH	30	40	24.5	LBMIN02

BATCH NUMBER	CORRECTION FACTOR	SAMPLING BATCH
ECL11036M	1	

000297

RESULTS SUMMARY

11/8/2011

LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
11304001	CCP-TP-175	1	ECL11036M	0.01302	
11304001	CCP-TP-175	2	ECL11036M	0.03137	
11304001	CCP-TP-175	3	ECL11036M	0.02211	
11304001	CCP-TP-175	4	ECL11036M	0.00573	
11304001	CCP-TP-175	5	ECL11036M	0.01937	
11304001	CCP-TP-175	6	ECL11036M	0.01627	
11304001	CCP-TP-175	7	ECL11036M	0.01199	
11304001	CCP-TP-175	8	ECL11036M	0.01199	
11304001	CCP-TP-175	9	ECL11036M	0.02350	
11304001	CCP-TP-175	10	ECL11036M	0.01227	1.83
11304001	CCP-TP-175	11	ECL11036M	0.07953	13.68
11304001	CCP-TP-175	12	ECL11036M	0.07228	10.62
11304001	CCP-TP-175	13	ECL11036M	0.01063	
11304001	CCP-TP-175	14	ECL11036M	0.01145	
11304001	CCP-TP-175	15	ECL11036M	0.00317	
11304001	CCP-TP-175	16	ECL11036M	0.00495	
11304001	CCP-TP-175	17	ECL11036M	0.02675	4.96
11304001	CCP-TP-175	18	ECL11036M	0.00426	
11304001	CCP-TP-175	19	ECL11036M	0.00582	
11304001	CCP-TP-175	20	ECL11036M	0.00953	
11304001	CCP-TP-175	21	ECL11036M	0.01011	
11304001	CCP-TP-175	22	ECL11036M	0.00758	
11304001	CCP-TP-175	23	ECL11036M	0.00842	
11304001	CCP-TP-175	24	ECL11036M	0.00744	
11304001	CCP-TP-175	25	ECL11036M	0.01190	
11304001	CCP-TP-175	26	ECL11036M	0.01568	
11304001	CCP-TP-175	27	ECL11036M	0.05136	
11304001	CCP-TP-175	28	ECL11036M	0.02349	
11304001	CCP-TP-175	29	ECL11036M	0.02771	
11304001	CCP-TP-175	30	ECL11036M	0.03472	
11304001	CCP-TP-175	31	ECL11036M	0.02172	
11304001	CCP-TP-175	32	ECL11036M	0.00625	
11304001	CCP-TP-175	33	ECL11036M	0.10885	

RESULTS SUMMARY

11/8/2011

LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
11304002	CCP-TP-175	1	ECL11036M	0.01306	
11304002	CCP-TP-175	2	ECL11036M	0.03145	
11304002	CCP-TP-175	3	ECL11036M	0.33733	31.95
11304002	CCP-TP-175	4	ECL11036M	0.00574	
11304002	CCP-TP-175	5	ECL11036M	0.01943	
11304002	CCP-TP-175	6	ECL11036M	0.01631	
11304002	CCP-TP-175	7	ECL11036M	0.01203	
11304002	CCP-TP-175	8	ECL11036M	0.03696	4.92
11304002	CCP-TP-175	9	ECL11036M	0.02356	
11304002	CCP-TP-175	10	ECL11036M	0.01122	1.67
11304002	CCP-TP-175	11	ECL11036M	0.01947	3.34
11304002	CCP-TP-175	12	ECL11036M	0.01071	1.57
11304002	CCP-TP-175	13	ECL11036M	0.01460	1.37
11304002	CCP-TP-175	14	ECL11036M	0.02066	1.8
11304002	CCP-TP-175	15	ECL11036M	0.00317	
11304002	CCP-TP-175	16	ECL11036M	0.00497	
11304002	CCP-TP-175	17	ECL11036M	0.00487	
11304002	CCP-TP-175	18	ECL11036M	0.00427	
11304002	CCP-TP-175	19	ECL11036M	0.83968	86.29
11304002	CCP-TP-175	20	ECL11036M	0.00956	
11304002	CCP-TP-175	21	ECL11036M	0.01368	1.62
11304002	CCP-TP-175	22	ECL11036M	0.03674	4.35
11304002	CCP-TP-175	23	ECL11036M	0.02373	2.81
11304002	CCP-TP-175	24	ECL11036M	0.00746	
11304002	CCP-TP-175	25	ECL11036M	0.01194	
11304002	CCP-TP-175	26	ECL11036M	0.01573	
11304002	CCP-TP-175	27	ECL11036M	0.07033	3.96
11304002	CCP-TP-175	28	ECL11036M	0.10917	9.27
11304002	CCP-TP-175	29	ECL11036M	0.46703	30.25
11304002	CCP-TP-175	30	ECL11036M	0.09724	7.82
11304002	CCP-TP-175	31	ECL11036M	0.11747	9.71
11304002	CCP-TP-175	32	ECL11036M	0.00627	
11304002	CCP-TP-175	33	ECL11036M	2.79869	100

RESULTS SUMMARY

11/8/2011

LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
11304003	CCP-TP-175	1	ECL11036M	0.01330	
11304003	CCP-TP-175	2	ECL11036M	0.03206	
11304003	CCP-TP-175	3	ECL11036M	0.33561	31.19
11304003	CCP-TP-175	4	ECL11036M	0.00585	
11304003	CCP-TP-175	5	ECL11036M	0.01980	
11304003	CCP-TP-175	6	ECL11036M	0.01663	
11304003	CCP-TP-175	7	ECL11036M	0.01226	
11304003	CCP-TP-175	8	ECL11036M	0.03437	4.49
11304003	CCP-TP-175	9	ECL11036M	0.02401	
11304003	CCP-TP-175	10	ECL11036M	0.02151	3.14
11304003	CCP-TP-175	11	ECL11036M	0.03291	5.54
11304003	CCP-TP-175	12	ECL11036M	0.04827	6.94
11304003	CCP-TP-175	13	ECL11036M	0.01422	1.31
11304003	CCP-TP-175	14	ECL11036M	0.04071	3.48
11304003	CCP-TP-175	15	ECL11036M	0.00324	
11304003	CCP-TP-175	16	ECL11036M	0.00506	
11304003	CCP-TP-175	17	ECL11036M	0.00496	
11304003	CCP-TP-175	18	ECL11036M	0.00436	
11304003	CCP-TP-175	19	ECL11036M	0.87071	87.8
11304003	CCP-TP-175	20	ECL11036M	0.00974	
11304003	CCP-TP-175	21	ECL11036M	0.01033	
11304003	CCP-TP-175	22	ECL11036M	0.01532	1.78
11304003	CCP-TP-175	23	ECL11036M	0.01085	1.26
11304003	CCP-TP-175	24	ECL11036M	0.00760	
11304003	CCP-TP-175	25	ECL11036M	0.01216	
11304003	CCP-TP-175	26	ECL11036M	0.01603	
11304003	CCP-TP-175	27	ECL11036M	0.08199	4.53
11304003	CCP-TP-175	28	ECL11036M	0.12242	10.2
11304003	CCP-TP-175	29	ECL11036M	0.47014	29.88
11304003	CCP-TP-175	30	ECL11036M	0.09378	7.4
11304003	CCP-TP-175	31	ECL11036M	0.12107	9.82
11304003	CCP-TP-175	32	ECL11036M	0.02865	3.14
11304003	CCP-TP-175	33	ECL11036M	2.90184	101.74

RESULTS SUMMARY

11/8/2011

LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
11304004	CCP-TP-175	1	ECL11036M	0.04387	
11304004	CCP-TP-175	2	ECL11036M	0.10571	
11304004	CCP-TP-175	3	ECL11036M	0.07451	
11304004	CCP-TP-175	4	ECL11036M	0.01930	
11304004	CCP-TP-175	5	ECL11036M	0.06528	
11304004	CCP-TP-175	6	ECL11036M	0.05482	
11304004	CCP-TP-175	7	ECL11036M	0.04041	
11304004	CCP-TP-175	8	ECL11036M	0.04039	
11304004	CCP-TP-175	9	ECL11036M	0.07919	
11304004	CCP-TP-175	10	ECL11036M	0.03162	
11304004	CCP-TP-175	11	ECL11036M	0.02351	
11304004	CCP-TP-175	12	ECL11036M	0.02523	
11304004	CCP-TP-175	13	ECL11036M	0.09381	2.62
11304004	CCP-TP-175	14	ECL11036M	0.03858	
11304004	CCP-TP-175	15	ECL11036M	0.01067	
11304004	CCP-TP-175	16	ECL11036M	0.01669	
11304004	CCP-TP-175	17	ECL11036M	0.09341	5.14
11304004	CCP-TP-175	18	ECL11036M	0.01436	
11304004	CCP-TP-175	19	ECL11036M	6.95934	212.81
11304004	CCP-TP-175	20	ECL11036M	0.03213	
11304004	CCP-TP-175	21	ECL11036M	0.25262	8.9
11304004	CCP-TP-175	22	ECL11036M	0.87223	30.73
11304004	CCP-TP-175	23	ECL11036M	0.73287	25.82
11304004	CCP-TP-175	24	ECL11036M	0.04061	1.62
11304004	CCP-TP-175	25	ECL11036M	0.12611	5.03
11304004	CCP-TP-175	26	ECL11036M	0.05285	
11304004	CCP-TP-175	27	ECL11036M	0.17309	
11304004	CCP-TP-175	28	ECL11036M	26.56265	671.14
11304004	CCP-TP-175	29	ECL11036M	0.16292	3.14
11304004	CCP-TP-175	30	ECL11036M	0.11701	
11304004	CCP-TP-175	31	ECL11036M	0.07318	
11304004	CCP-TP-175	32	ECL11036M	0.02106	
11304004	CCP-TP-175	33	ECL11036M	0.36681	

RESULTS SUMMARY

11/8/2011

LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
11304005	CCP-TP-175	1	ECL11036M	0.01309	
11304005	CCP-TP-175	2	ECL11036M	0.03154	
11304005	CCP-TP-175	3	ECL11036M	0.02223	
11304005	CCP-TP-175	4	ECL11036M	0.00576	
11304005	CCP-TP-175	5	ECL11036M	0.01948	
11304005	CCP-TP-175	6	ECL11036M	0.01636	
11304005	CCP-TP-175	7	ECL11036M	0.01206	
11304005	CCP-TP-175	8	ECL11036M	0.01205	
11304005	CCP-TP-175	9	ECL11036M	0.02363	
11304005	CCP-TP-175	10	ECL11036M	0.00944	
11304005	CCP-TP-175	11	ECL11036M	0.02204	3.77
11304005	CCP-TP-175	12	ECL11036M	0.01184	1.73
11304005	CCP-TP-175	13	ECL11036M	0.01848	1.73
11304005	CCP-TP-175	14	ECL11036M	0.06054	5.26
11304005	CCP-TP-175	15	ECL11036M	0.00318	
11304005	CCP-TP-175	16	ECL11036M	0.00498	
11304005	CCP-TP-175	17	ECL11036M	0.01404	2.59
11304005	CCP-TP-175	18	ECL11036M	0.00429	
11304005	CCP-TP-175	19	ECL11036M	1.03702	106.28
11304005	CCP-TP-175	20	ECL11036M	0.00959	
11304005	CCP-TP-175	21	ECL11036M	0.01016	
11304005	CCP-TP-175	22	ECL11036M	0.02583	3.05
11304005	CCP-TP-175	23	ECL11036M	0.02693	3.18
11304005	CCP-TP-175	24	ECL11036M	0.05334	7.13
11304005	CCP-TP-175	25	ECL11036M	0.13293	17.77
11304005	CCP-TP-175	26	ECL11036M	0.01577	
11304005	CCP-TP-175	27	ECL11036M	0.05164	
11304005	CCP-TP-175	28	ECL11036M	1.21209	102.64
11304005	CCP-TP-175	29	ECL11036M	0.08499	5.49
11304005	CCP-TP-175	30	ECL11036M	0.03491	
11304005	CCP-TP-175	31	ECL11036M	0.05544	4.57
11304005	CCP-TP-175	32	ECL11036M	0.01903	2.12
11304005	CCP-TP-175	33	ECL11036M	0.12909	4.6

RESULTS SUMMARY

11/8/2011

LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
11304006	CCP-TP-175	1	ECL11036M	0.01474	
11304006	CCP-TP-175	2	ECL11036M	0.03552	
11304006	CCP-TP-175	3	ECL11036M	0.02504	
11304006	CCP-TP-175	4	ECL11036M	0.00649	
11304006	CCP-TP-175	5	ECL11036M	0.02194	
11304006	CCP-TP-175	6	ECL11036M	0.01842	
11304006	CCP-TP-175	7	ECL11036M	0.01358	
11304006	CCP-TP-175	8	ECL11036M	0.02070	2.44
11304006	CCP-TP-175	9	ECL11036M	0.02661	
11304006	CCP-TP-175	10	ECL11036M	0.01108	1.46
11304006	CCP-TP-175	11	ECL11036M	0.01883	2.86
11304006	CCP-TP-175	12	ECL11036M	0.02674	3.47
11304006	CCP-TP-175	13	ECL11036M	0.01203	
11304006	CCP-TP-175	14	ECL11036M	0.01724	1.33
11304006	CCP-TP-175	15	ECL11036M	0.00358	
11304006	CCP-TP-175	16	ECL11036M	0.00561	
11304006	CCP-TP-175	17	ECL11036M	0.00550	
11304006	CCP-TP-175	18	ECL11036M	0.00483	
11304006	CCP-TP-175	19	ECL11036M	0.18605	16.93
11304006	CCP-TP-175	20	ECL11036M	0.01080	
11304006	CCP-TP-175	21	ECL11036M	0.15213	15.95
11304006	CCP-TP-175	22	ECL11036M	0.23674	24.82
11304006	CCP-TP-175	23	ECL11036M	0.42912	44.99
11304006	CCP-TP-175	24	ECL11036M	0.01121	1.33
11304006	CCP-TP-175	25	ECL11036M	0.02216	2.63
11304006	CCP-TP-175	26	ECL11036M	0.01776	
11304006	CCP-TP-175	27	ECL11036M	0.05816	
11304006	CCP-TP-175	28	ECL11036M	11.21129	842.95
11304006	CCP-TP-175	29	ECL11036M	0.05370	3.08
11304006	CCP-TP-175	30	ECL11036M	0.03932	
11304006	CCP-TP-175	31	ECL11036M	0.02459	
11304006	CCP-TP-175	32	ECL11036M	0.02548	2.52
11304006	CCP-TP-175	33	ECL11036M	0.12326	

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RESULTS SUMMARY

11/8/2011

LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
11304007	CCP-TP-175	1	ECL11036M	0.01291	
11304007	CCP-TP-175	2	ECL11036M	0.03111	
11304007	CCP-TP-175	3	ECL11036M	0.02611	2.5
11304007	CCP-TP-175	4	ECL11036M	0.00568	
11304007	CCP-TP-175	5	ECL11036M	0.01921	
11304007	CCP-TP-175	6	ECL11036M	0.01614	
11304007	CCP-TP-175	7	ECL11036M	0.01189	
11304007	CCP-TP-175	8	ECL11036M	0.04903	6.6
11304007	CCP-TP-175	9	ECL11036M	0.02331	
11304007	CCP-TP-175	10	ECL11036M	0.00931	
11304007	CCP-TP-175	11	ECL11036M	0.01914	3.32
11304007	CCP-TP-175	12	ECL11036M	0.01890	2.8
11304007	CCP-TP-175	13	ECL11036M	0.01054	
11304007	CCP-TP-175	14	ECL11036M	0.01249	1.1
11304007	CCP-TP-175	15	ECL11036M	0.00314	
11304007	CCP-TP-175	16	ECL11036M	0.00491	
11304007	CCP-TP-175	17	ECL11036M	0.00481	
11304007	CCP-TP-175	18	ECL11036M	0.00423	
11304007	CCP-TP-175	19	ECL11036M	0.82059	85.26
11304007	CCP-TP-175	20	ECL11036M	0.00946	
11304007	CCP-TP-175	21	ECL11036M	0.01002	
11304007	CCP-TP-175	22	ECL11036M	0.00752	
11304007	CCP-TP-175	23	ECL11036M	0.00835	
11304007	CCP-TP-175	24	ECL11036M	0.00738	
11304007	CCP-TP-175	25	ECL11036M	0.01181	
11304007	CCP-TP-175	26	ECL11036M	0.01555	
11304007	CCP-TP-175	27	ECL11036M	0.07992	4.55
11304007	CCP-TP-175	28	ECL11036M	0.16075	13.8
11304007	CCP-TP-175	29	ECL11036M	0.04810	3.15
11304007	CCP-TP-175	30	ECL11036M	0.03444	
11304007	CCP-TP-175	31	ECL11036M	0.02154	
11304007	CCP-TP-175	32	ECL11036M	0.00806	0.91
11304007	CCP-TP-175	33	ECL11036M	0.19211	6.94

RESULTS SUMMARY

11/8/2011

LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
11304008	CCP-TP-175	1	ECL11036M	0.01320	
11304008	CCP-TP-175	2	ECL11036M	0.03180	
11304008	CCP-TP-175	3	ECL11036M	0.02241	
11304008	CCP-TP-175	4	ECL11036M	0.00581	
11304008	CCP-TP-175	5	ECL11036M	0.01964	
11304008	CCP-TP-175	6	ECL11036M	0.01649	
11304008	CCP-TP-175	7	ECL11036M	0.01216	
11304008	CCP-TP-175	8	ECL11036M	0.01215	
11304008	CCP-TP-175	9	ECL11036M	0.02382	
11304008	CCP-TP-175	10	ECL11036M	0.00951	
11304008	CCP-TP-175	11	ECL11036M	0.01232	2.09
11304008	CCP-TP-175	12	ECL11036M	0.00759	
11304008	CCP-TP-175	13	ECL11036M	0.01486	1.38
11304008	CCP-TP-175	14	ECL11036M	0.01160	
11304008	CCP-TP-175	15	ECL11036M	0.00321	
11304008	CCP-TP-175	16	ECL11036M	0.00502	
11304008	CCP-TP-175	17	ECL11036M	0.00492	
11304008	CCP-TP-175	18	ECL11036M	0.00432	
11304008	CCP-TP-175	19	ECL11036M	0.37952	38.58
11304008	CCP-TP-175	20	ECL11036M	0.00966	
11304008	CCP-TP-175	21	ECL11036M	0.01025	
11304008	CCP-TP-175	22	ECL11036M	0.01281	1.5
11304008	CCP-TP-175	23	ECL11036M	0.00854	
11304008	CCP-TP-175	24	ECL11036M	0.00754	
11304008	CCP-TP-175	25	ECL11036M	0.01207	
11304008	CCP-TP-175	26	ECL11036M	0.01590	
11304008	CCP-TP-175	27	ECL11036M	0.05207	
11304008	CCP-TP-175	28	ECL11036M	0.69267	58.18
11304008	CCP-TP-175	29	ECL11036M	0.08725	5.59
11304008	CCP-TP-175	30	ECL11036M	0.03520	
11304008	CCP-TP-175	31	ECL11036M	0.06641	5.43
11304008	CCP-TP-175	32	ECL11036M	0.00634	
11304008	CCP-TP-175	33	ECL11036M	0.25067	8.86

RESULTS SUMMARY

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LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
11304009	CCP-TP-175	1	ECL11036M	0.01320	
11304009	CCP-TP-175	2	ECL11036M	0.03180	
11304009	CCP-TP-175	3	ECL11036M	0.02241	
11304009	CCP-TP-175	4	ECL11036M	0.00581	
11304009	CCP-TP-175	5	ECL11036M	0.01964	
11304009	CCP-TP-175	6	ECL11036M	0.01649	
11304009	CCP-TP-175	7	ECL11036M	0.01216	
11304009	CCP-TP-175	8	ECL11036M	0.01215	
11304009	CCP-TP-175	9	ECL11036M	0.08622	9.41
11304009	CCP-TP-175	10	ECL11036M	0.01841	2.71
11304009	CCP-TP-175	11	ECL11036M	0.00807	1.37
11304009	CCP-TP-175	12	ECL11036M	0.00759	
11304009	CCP-TP-175	13	ECL11036M	0.02047	1.9
11304009	CCP-TP-175	14	ECL11036M	0.07473	6.44
11304009	CCP-TP-175	15	ECL11036M	0.00321	
11304009	CCP-TP-175	16	ECL11036M	0.00502	
11304009	CCP-TP-175	17	ECL11036M	0.00492	
11304009	CCP-TP-175	18	ECL11036M	0.00432	
11304009	CCP-TP-175	19	ECL11036M	2.87326	292.08
11304009	CCP-TP-175	20	ECL11036M	0.00966	
11304009	CCP-TP-175	21	ECL11036M	0.03193	3.74
11304009	CCP-TP-175	22	ECL11036M	0.06182	7.24
11304009	CCP-TP-175	23	ECL11036M	0.01520	1.78
11304009	CCP-TP-175	24	ECL11036M	0.00754	
11304009	CCP-TP-175	25	ECL11036M	0.01207	
11304009	CCP-TP-175	26	ECL11036M	0.01590	
11304009	CCP-TP-175	27	ECL11036M	0.16715	9.31
11304009	CCP-TP-175	28	ECL11036M	0.18537	15.57
11304009	CCP-TP-175	29	ECL11036M	0.19884	12.74
11304009	CCP-TP-175	30	ECL11036M	0.03520	
11304009	CCP-TP-175	31	ECL11036M	0.86761	70.94
11304009	CCP-TP-175	32	ECL11036M	0.00634	
11304009	CCP-TP-175	33	ECL11036M	2.15930	76.32

RESULTS SUMMARY

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LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
11304010	CCP-TP-175	1	ECL11036M	0.01341	
11304010	CCP-TP-175	2	ECL11036M	0.03231	
11304010	CCP-TP-175	3	ECL11036M	0.02278	
11304010	CCP-TP-175	4	ECL11036M	0.00590	
11304010	CCP-TP-175	5	ECL11036M	0.01996	
11304010	CCP-TP-175	6	ECL11036M	0.01676	
11304010	CCP-TP-175	7	ECL11036M	0.01235	
11304010	CCP-TP-175	8	ECL11036M	0.01235	
11304010	CCP-TP-175	9	ECL11036M	0.02421	
11304010	CCP-TP-175	10	ECL11036M	0.01146	1.66
11304010	CCP-TP-175	11	ECL11036M	0.01479	2.47
11304010	CCP-TP-175	12	ECL11036M	0.00968	1.38
11304010	CCP-TP-175	13	ECL11036M	0.01095	
11304010	CCP-TP-175	14	ECL11036M	0.05931	5.03
11304010	CCP-TP-175	15	ECL11036M	0.00326	
11304010	CCP-TP-175	16	ECL11036M	0.00510	
11304010	CCP-TP-175	17	ECL11036M	0.00500	
11304010	CCP-TP-175	18	ECL11036M	0.00439	
11304010	CCP-TP-175	19	ECL11036M	0.45655	45.67
11304010	CCP-TP-175	20	ECL11036M	0.00982	
11304010	CCP-TP-175	21	ECL11036M	0.01041	
11304010	CCP-TP-175	22	ECL11036M	0.01562	1.8
11304010	CCP-TP-175	23	ECL11036M	0.00868	
11304010	CCP-TP-175	24	ECL11036M	0.00766	
11304010	CCP-TP-175	25	ECL11036M	0.01226	
11304010	CCP-TP-175	26	ECL11036M	0.01615	
11304010	CCP-TP-175	27	ECL11036M	0.11385	6.24
11304010	CCP-TP-175	28	ECL11036M	0.11203	9.26
11304010	CCP-TP-175	29	ECL11036M	0.20714	13.06
11304010	CCP-TP-175	30	ECL11036M	0.03577	
11304010	CCP-TP-175	31	ECL11036M	0.16965	13.65
11304010	CCP-TP-175	32	ECL11036M	0.00708	0.77
11304010	CCP-TP-175	33	ECL11036M	0.62103	21.6

RESULTS SUMMARY

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LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
11304011	CCP-TP-175	1	ECL11036M	0.02176	
11304011	CCP-TP-175	2	ECL11036M	0.05242	
11304011	CCP-TP-175	3	ECL11036M	0.03695	
11304011	CCP-TP-175	4	ECL11036M	0.00957	
11304011	CCP-TP-175	5	ECL11036M	0.03238	
11304011	CCP-TP-175	6	ECL11036M	0.02719	
11304011	CCP-TP-175	7	ECL11036M	0.02004	
11304011	CCP-TP-175	8	ECL11036M	0.02003	
11304011	CCP-TP-175	9	ECL11036M	0.03927	
11304011	CCP-TP-175	10	ECL11036M	0.01568	
11304011	CCP-TP-175	11	ECL11036M	0.01992	2.05
11304011	CCP-TP-175	12	ECL11036M	0.03378	2.97
11304011	CCP-TP-175	13	ECL11036M	0.01776	
11304011	CCP-TP-175	14	ECL11036M	0.04400	2.3
11304011	CCP-TP-175	15	ECL11036M	0.00529	
11304011	CCP-TP-175	16	ECL11036M	0.00828	
11304011	CCP-TP-175	17	ECL11036M	0.01433	1.59
11304011	CCP-TP-175	18	ECL11036M	0.00712	
11304011	CCP-TP-175	19	ECL11036M	0.52725	32.51
11304011	CCP-TP-175	20	ECL11036M	0.01593	
11304011	CCP-TP-175	21	ECL11036M	0.01689	
11304011	CCP-TP-175	22	ECL11036M	0.01267	
11304011	CCP-TP-175	23	ECL11036M	0.01408	
11304011	CCP-TP-175	24	ECL11036M	0.01243	
11304011	CCP-TP-175	25	ECL11036M	0.01989	
11304011	CCP-TP-175	26	ECL11036M	0.02621	
11304011	CCP-TP-175	27	ECL11036M	0.08584	
11304011	CCP-TP-175	28	ECL11036M	15.56938	793.21
11304011	CCP-TP-175	29	ECL11036M	0.25655	9.97
11304011	CCP-TP-175	30	ECL11036M	0.05803	
11304011	CCP-TP-175	31	ECL11036M	0.03629	
11304011	CCP-TP-175	32	ECL11036M	0.01671	1.12
11304011	CCP-TP-175	33	ECL11036M	0.86106	18.46

RESULTS SUMMARY

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LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
11304011D	CCP-TP-175	1	ECL11036M	0.02176	
11304011D	CCP-TP-175	2	ECL11036M	0.05242	
11304011D	CCP-TP-175	3	ECL11036M	0.03695	
11304011D	CCP-TP-175	4	ECL11036M	0.00957	
11304011D	CCP-TP-175	5	ECL11036M	0.03238	
11304011D	CCP-TP-175	6	ECL11036M	0.02719	
11304011D	CCP-TP-175	7	ECL11036M	0.02004	
11304011D	CCP-TP-175	8	ECL11036M	0.02003	
11304011D	CCP-TP-175	9	ECL11036M	0.03927	
11304011D	CCP-TP-175	10	ECL11036M	0.01568	
11304011D	CCP-TP-175	11	ECL11036M	0.02371	2.44
11304011D	CCP-TP-175	12	ECL11036M	0.03719	3.27
11304011D	CCP-TP-175	13	ECL11036M	0.01776	
11304011D	CCP-TP-175	14	ECL11036M	0.04859	2.54
11304011D	CCP-TP-175	15	ECL11036M	0.00529	
11304011D	CCP-TP-175	16	ECL11036M	0.00828	
11304011D	CCP-TP-175	17	ECL11036M	0.01730	1.92
11304011D	CCP-TP-175	18	ECL11036M	0.00712	
11304011D	CCP-TP-175	19	ECL11036M	0.52741	32.52
11304011D	CCP-TP-175	20	ECL11036M	0.01593	
11304011D	CCP-TP-175	21	ECL11036M	0.01689	
11304011D	CCP-TP-175	22	ECL11036M	0.01267	
11304011D	CCP-TP-175	23	ECL11036M	0.01408	
11304011D	CCP-TP-175	24	ECL11036M	0.01243	
11304011D	CCP-TP-175	25	ECL11036M	0.01989	
11304011D	CCP-TP-175	26	ECL11036M	0.02621	
11304011D	CCP-TP-175	27	ECL11036M	0.08584	
11304011D	CCP-TP-175	28	ECL11036M	15.24826	776.85
11304011D	CCP-TP-175	29	ECL11036M	0.27456	10.67
11304011D	CCP-TP-175	30	ECL11036M	0.05803	
11304011D	CCP-TP-175	31	ECL11036M	0.03629	
11304011D	CCP-TP-175	32	ECL11036M	0.01895	1.27
11304011D	CCP-TP-175	33	ECL11036M	0.82934	17.78

RESULTS SUMMARY

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LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
11304012	CCP-TP-175	1	ECL11036M	0.01334	
11304012	CCP-TP-175	2	ECL11036M	0.03214	
11304012	CCP-TP-175	3	ECL11036M	0.02266	
11304012	CCP-TP-175	4	ECL11036M	0.00587	
11304012	CCP-TP-175	5	ECL11036M	0.01985	
11304012	CCP-TP-175	6	ECL11036M	0.01667	
11304012	CCP-TP-175	7	ECL11036M	0.01229	
11304012	CCP-TP-175	8	ECL11036M	0.01228	
11304012	CCP-TP-175	9	ECL11036M	0.02408	
11304012	CCP-TP-175	10	ECL11036M	0.01037	1.51
11304012	CCP-TP-175	11	ECL11036M	0.02311	3.88
11304012	CCP-TP-175	12	ECL11036M	0.01534	2.2
11304012	CCP-TP-175	13	ECL11036M	0.03789	3.48
11304012	CCP-TP-175	14	ECL11036M	0.09043	7.71
11304012	CCP-TP-175	15	ECL11036M	0.00324	
11304012	CCP-TP-175	16	ECL11036M	0.00508	
11304012	CCP-TP-175	17	ECL11036M	0.00702	1.27
11304012	CCP-TP-175	18	ECL11036M	0.00437	
11304012	CCP-TP-175	19	ECL11036M	5.69210	572.44
11304012	CCP-TP-175	20	ECL11036M	0.00977	
11304012	CCP-TP-175	21	ECL11036M	2.61029	302.45
11304012	CCP-TP-175	22	ECL11036M	8.69557	1007.54
11304012	CCP-TP-175	23	ECL11036M	1.61244	186.83
11304012	CCP-TP-175	24	ECL11036M	0.08340	10.94
11304012	CCP-TP-175	25	ECL11036M	0.19630	25.75
11304012	CCP-TP-175	26	ECL11036M	0.01607	
11304012	CCP-TP-175	27	ECL11036M	0.05263	
11304012	CCP-TP-175	28	ECL11036M	0.38005	31.58
11304012	CCP-TP-175	29	ECL11036M	6.56114	415.88
11304012	CCP-TP-175	30	ECL11036M	1.88991	148.73
11304012	CCP-TP-175	31	ECL11036M	1.03399	83.64
11304012	CCP-TP-175	32	ECL11036M	0.00640	
11304012	CCP-TP-175	33	ECL11036M	7.42649	259.68

RESULTS SUMMARY

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LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
LBMIN02	CCP-TP-175	1	ECL11036M	0.00357	
LBMIN02	CCP-TP-175	2	ECL11036M	0.00859	
LBMIN02	CCP-TP-175	3	ECL11036M	0.00606	
LBMIN02	CCP-TP-175	4	ECL11036M	0.00157	
LBMIN02	CCP-TP-175	5	ECL11036M	0.00531	
LBMIN02	CCP-TP-175	6	ECL11036M	0.00446	
LBMIN02	CCP-TP-175	7	ECL11036M	0.00329	
LBMIN02	CCP-TP-175	8	ECL11036M	0.00328	
LBMIN02	CCP-TP-175	9	ECL11036M	0.00644	
LBMIN02	CCP-TP-175	10	ECL11036M	0.00257	
LBMIN02	CCP-TP-175	11	ECL11036M	0.00191	
LBMIN02	CCP-TP-175	12	ECL11036M	0.00205	
LBMIN02	CCP-TP-175	13	ECL11036M	0.00291	
LBMIN02	CCP-TP-175	14	ECL11036M	0.00314	
LBMIN02	CCP-TP-175	15	ECL11036M	0.00087	
LBMIN02	CCP-TP-175	16	ECL11036M	0.00136	
LBMIN02	CCP-TP-175	17	ECL11036M	0.00133	
LBMIN02	CCP-TP-175	18	ECL11036M	0.00117	
LBMIN02	CCP-TP-175	19	ECL11036M	0.00165	0.62
LBMIN02	CCP-TP-175	20	ECL11036M	0.00261	
LBMIN02	CCP-TP-175	21	ECL11036M	0.00277	
LBMIN02	CCP-TP-175	22	ECL11036M	0.00208	
LBMIN02	CCP-TP-175	23	ECL11036M	0.00231	
LBMIN02	CCP-TP-175	24	ECL11036M	0.00204	
LBMIN02	CCP-TP-175	25	ECL11036M	0.00326	
LBMIN02	CCP-TP-175	26	ECL11036M	0.00430	
LBMIN02	CCP-TP-175	27	ECL11036M	0.01407	
LBMIN02	CCP-TP-175	28	ECL11036M	0.00644	
LBMIN02	CCP-TP-175	29	ECL11036M	0.00780	1.85
LBMIN02	CCP-TP-175	30	ECL11036M	0.00951	
LBMIN02	CCP-TP-175	31	ECL11036M	0.00595	
LBMIN02	CCP-TP-175	32	ECL11036M	0.00171	
LBMIN02	CCP-TP-175	33	ECL11036M	0.04076	5.33

RESULTS SUMMARY

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LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
LBMIN03	CCP-TP-175	1	ECL11036M	0.00357	
LBMIN03	CCP-TP-175	2	ECL11036M	0.00859	
LBMIN03	CCP-TP-175	3	ECL11036M	0.00606	
LBMIN03	CCP-TP-175	4	ECL11036M	0.00157	
LBMIN03	CCP-TP-175	5	ECL11036M	0.00531	
LBMIN03	CCP-TP-175	6	ECL11036M	0.00446	
LBMIN03	CCP-TP-175	7	ECL11036M	0.00329	
LBMIN03	CCP-TP-175	8	ECL11036M	0.00328	
LBMIN03	CCP-TP-175	9	ECL11036M	0.00644	
LBMIN03	CCP-TP-175	10	ECL11036M	0.00257	
LBMIN03	CCP-TP-175	11	ECL11036M	0.00191	
LBMIN03	CCP-TP-175	12	ECL11036M	0.00205	
LBMIN03	CCP-TP-175	13	ECL11036M	0.00291	
LBMIN03	CCP-TP-175	14	ECL11036M	0.00314	
LBMIN03	CCP-TP-175	15	ECL11036M	0.00087	
LBMIN03	CCP-TP-175	16	ECL11036M	0.00136	
LBMIN03	CCP-TP-175	17	ECL11036M	0.00133	
LBMIN03	CCP-TP-175	18	ECL11036M	0.00117	
LBMIN03	CCP-TP-175	19	ECL11036M	0.00282	1.06
LBMIN03	CCP-TP-175	20	ECL11036M	0.00261	
LBMIN03	CCP-TP-175	21	ECL11036M	0.00277	
LBMIN03	CCP-TP-175	22	ECL11036M	0.00235	1.02
LBMIN03	CCP-TP-175	23	ECL11036M	0.00231	
LBMIN03	CCP-TP-175	24	ECL11036M	0.00204	
LBMIN03	CCP-TP-175	25	ECL11036M	0.00326	
LBMIN03	CCP-TP-175	26	ECL11036M	0.00430	
LBMIN03	CCP-TP-175	27	ECL11036M	0.01407	
LBMIN03	CCP-TP-175	28	ECL11036M	0.00991	3.08
LBMIN03	CCP-TP-175	29	ECL11036M	0.00759	
LBMIN03	CCP-TP-175	30	ECL11036M	0.00951	
LBMIN03	CCP-TP-175	31	ECL11036M	0.00595	
LBMIN03	CCP-TP-175	32	ECL11036M	0.00171	
LBMIN03	CCP-TP-175	33	ECL11036M	0.04022	5.26

RESULTS SUMMARY

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LAB SAMPLE ID	METHOD	COMP NO.	BATCH NO.	FINAL RESULT	NG AMOUNT
LCSMIN02	CCP-TP-175	1	ECL11036M	0.26753	
LCSMIN02	CCP-TP-175	2	ECL11036M	0.64456	
LCSMIN02	CCP-TP-175	3	ECL11036M	0.45434	
LCSMIN02	CCP-TP-175	4	ECL11036M	0.11768	
LCSMIN02	CCP-TP-175	5	ECL11036M	0.39806	
LCSMIN02	CCP-TP-175	6	ECL11036M	0.33429	
LCSMIN02	CCP-TP-175	7	ECL11036M	0.24642	
LCSMIN02	CCP-TP-175	8	ECL11036M	0.24627	
LCSMIN02	CCP-TP-175	9	ECL11036M	0.48287	
LCSMIN02	CCP-TP-175	10	ECL11036M	96.74800	702.43
LCSMIN02	CCP-TP-175	11	ECL11036M	98.90629	827.96
LCSMIN02	CCP-TP-175	12	ECL11036M	92.74347	663.16
LCSMIN02	CCP-TP-175	13	ECL11036M	0.21833	
LCSMIN02	CCP-TP-175	14	ECL11036M	92.50773	393.29
LCSMIN02	CCP-TP-175	15	ECL11036M	0.06505	
LCSMIN02	CCP-TP-175	16	ECL11036M	0.10178	
LCSMIN02	CCP-TP-175	17	ECL11036M	0.09973	
LCSMIN02	CCP-TP-175	18	ECL11036M	0.08758	
LCSMIN02	CCP-TP-175	19	ECL11036M	90.84807	455.6
LCSMIN02	CCP-TP-175	20	ECL11036M	0.19590	
LCSMIN02	CCP-TP-175	21	ECL11036M	0.20769	
LCSMIN02	CCP-TP-175	22	ECL11036M	0.15576	
LCSMIN02	CCP-TP-175	23	ECL11036M	0.17307	
LCSMIN02	CCP-TP-175	24	ECL11036M	0.15287	
LCSMIN02	CCP-TP-175	25	ECL11036M	0.24459	
LCSMIN02	CCP-TP-175	26	ECL11036M	0.32224	
LCSMIN02	CCP-TP-175	27	ECL11036M	85.57895	235.15
LCSMIN02	CCP-TP-175	28	ECL11036M	0.48266	
LCSMIN02	CCP-TP-175	29	ECL11036M	0.56947	
LCSMIN02	CCP-TP-175	30	ECL11036M	0.71349	
LCSMIN02	CCP-TP-175	31	ECL11036M	0.44624	
LCSMIN02	CCP-TP-175	32	ECL11036M	96.35317	525.21
LCSMIN02	CCP-TP-175	33	ECL11036M	2.23666	

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Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[x] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	Sheila Pearcy	From:	Charles Turner
Ship to:	CCP Records	Site:	INL – HSG
	4021 National Parks Highway	Company:	WTS
	GSA-212	Telephone Number:	720-497-1093
	Carlsbad, NM 88220	Date Sent:	11-10-2011
Telephone Number:	NA		

Document Number	Title / Description	Record Date	Total Pages
ECL11036M	BDR	11-10-2011	5
NA	NA	NA	NA
NA	NA	NA	NA
NA	NA	NA	NA
NA	NA	NA	NA
NA	NA	NA	NA

Comments

None

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted	[X]	Susan Keathley (Signature)	SUZANNE KEATHLEY (Printed Name)	11-11-11 (Date)
Records Rejected	[ ]	(Signature)	(Printed Name)	(Date)

Reason for Rejection:

Re-submittal:

(Signature)	(Printed Name)	(Date)

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	1342
DESTINATION TEL #	917204971093
DESTINATION ID	CHARLIE TURNER
ST. TIME	11/11 09:03
TIME USE	00'38
PAGES SENT	1
RESULT	OK

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	Sheila Pearcy	From:	Charles Turner
Ship to:	CCP Records	Site:	INL – HSG
	4021 National Parks Highway	Company:	WTS
	GSA-212	Telephone Number:	720-497-1093
	Carlsbad, NM 88220	Date Sent:	11-10-2011
Telephone Number:	NA		

Document Number	Description	Date	Pages
ECL11036M	BDR	11-10-2011	5
NA	NA	NA	NA
NA	NA	NA	NA
NA	NA	NA	NA
NA	NA	NA	NA
NA	NA	NA	NA

Comments

None

(When the Record accepted line has been completed, the rest of the page below may be left blank.)

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[x] Original Record [ ] Fax Record [ ] Electronic Record [ ] Copy

Attn:	Sheila Pearcy	From:	Catherine Crowder
Ship to:	CCP Records	Site:	INL
	4021 National Parks Highway	Company:	Battelle Energy Alliance
	GSA-212	Telephone Number:	208-526-3314
	Carlsbad, NM 88220	Date Sent:	11/09/2011
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ECL11036M	INL Batch Data Report	11/09/2011	313
NA	NA	NA	NA
NA	NA	NA	NA
NA	NA	NA	NA
NA	NA	NA	NA
NA	NA	NA	NA

Comments

Please send acceptance to **fax number 208-526-8541.**

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [X]	Suzanne Keathley (Signature)	SUZANNE KEATHLEY (Printed Name)	11-10-11 (Date)
Records Rejected [ ]	(Signature)	(Printed Name)	(Date)

Reason for Rejection:

Re-submittal:

(Signature)	(Printed Name)	(Date)

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	1340
DESTINATION TEL #	912085268541
DESTINATION ID	CATHERINE CROWDE
ST. TIME	11/10 15:13
TIME USE	00'20
PAGES SENT	1
RESULT	OK

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	Sheila Pearcy	From:	Catherine Crowder
Ship to:	CCP Records	Site:	INL
	4021 National Parks Highway	Company:	Battelle Energy Alliance
	GSA-212	Telephone Number:	208-526-3314
	Carlsbad, NM 88220	Date Sent:	11/09/2011
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ECL11036M	INL Batch Data Report	11/09/2011	313
NA	NA	NA	NA
NA	NA	NA	NA
NA	NA	NA	NA
NA	NA	NA	NA
NA	NA	NA	NA

Comments

Please send acceptance to fax number 208-526-8541.

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Attachment 5 – CCP Site Project Manager Data Validation Summary

On-Line Headspace Gas Analysis (HSG)			Visual Examination (VE)	
Nondestructive Examination (NDE)			Nondestructive Assay (NDA)	
Direct-Canister HSG Analysis			Homogeneous Waste Analysis (HWA)	X
Radiological Characterization				

BATCH DATA REPORT NUMBER: WCS-0504 **DATE:** 4, 6, 7, 10 & 11 October 2005

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
1. ITR, Tech Sup, and Facility QA checklists are complete and signed. **Reference Source: WAP B3-10b(2)** **Verification Source: DGL Checklist**	X			
2. The batch data report is complete. **Reference Source: WAP B3-10b(2) and WAC A.5.2** **Verification Source: Data Sheets**	X			
3. QAOs have been met. **Reference Source: WAP B3-10b(2)** **Verification Source: QC Data Sheets**	X			**Container Numbers:** 10016886, 10018178, 10018503, 10018867, 10018875
4. Data reported with correct units and significant figures. **Reference Source: WAP B3-10b(2)** **Verification Source: Data Sheets**	X			
5. Data have been assessed correctly. **Reference Sources: WAP B3-10b(2) and B3-10b(3)** **Verification Source: Data Sheets**	X			
6. Is there a reference to or copy of the associated NCRS? **Reference Source: WAP Tables B3-11, B3-12 and B3-13** **Verification Source: NCR**			X	No NCRs are associated with this BDR.
7. The applicable SPQAO Project Level Validation Checklist is complete, signed, and dated. **Reference Source: WAP B3-10b(2)** **Verification Source: SPQAO Checklist**	X			
8. NDA batch QC checks (e.g., weekly interfering matrix, background, performance, and transmission checks, measurement system checks) were properly performed. **Reference Source: WAC A.4.2 and/or WAC Table A-4.3** **Verification Source: QC Data Sheets**			X	This is a solid waste sampling BDR.

COPY

Attachment 5 – CCP Site Project Manager Data Validation Summary (continued)

BATCH DATA REPORT NUMBER: WCS-0504 DATE: 4, 6, 7, 10 & 11 October 2005

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers	
9. **HSG** – All data are reported with the appropriate flags. **Reference Source: WAP B3-10b(2) Verification Source: Data Sheet**			X	This is a solid waste sampling BDR.	
10. **HSG** batch QC checks (e.g., on-line blanks, duplicates, and laboratory control samples) were properly performed and meet the established usability criteria. **Reference Sources: WAP B3-10b(2) and Table B3-3 and/or B1-1b Verification Source: QC Data Sheets**			X	This is a solid waste sampling BDR.	
11. **HSG** DAC assignment is valid based upon an assessment of the data collection and evaluation necessary to make the assignment. **Reference Source: WAP B3-10b(2) Verification Source: Drum Data Form**			X	This is a solid waste sampling BDR.	
12. **NDE** data are complete and acceptable based on the videotape or equivalent media review (independent observation and replicate scan). **Reference Sources: WAP , B1-3b(2) and B3-10b(2) Verification Source: QC Data Sheets**			X	Container numbers:	This is a solid waste sampling BDR.
				Rep:	
				IO:	
13. **VE** data is complete and properly reported. **Reference Sources: WAP B1-3b(3) and B3-10b(2) Verification Source: BDR**			X	This is a solid waste sampling BDR.	
14. **HWA** Solid/Soil VOC batch QC checks (e.g., laboratory duplicates, blanks, and control samples) were properly performed and meet the established usability criteria. **Reference Sources: WAP B1-2b, B3-10b(2) and Table B3-5 Verification Source: QC Data Sheets**			X	This is a solid waste sampling BDR.	
15. **HWA** Solid/Soil Semi-VOC batch QC checks (e.g., laboratory duplicates, blanks, and control samples) were properly performed and meet the established usability criteria. **Reference Sources: WAP B1-2b, B3-10b(2) and Table B3-7 Verification Source: QC Data Sheets**			X	This is a solid waste sampling BDR.	

Attachment 5 – CCP Site Project Manager Data Validation Summary (continued)

BATCH DATA REPORT NUMBER: WCS-0504 DATE: 4, 6, 7, 10 & 11 October 2005

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
16. **HWA Solid/Soil Total Metals Batch QC checks** (e.g., duplicates, blanks, and laboratory control samples) were properly performed and meet the established criteria. **Reference Sources: WAP B1-2b, B3-10b(2), and Table B3-9 Verification Source: QC Data Sheets**			X	This is a solid waste sampling BDR.
17. **OSR** for LANL Sealed Sources, does the waste meet the definition of sealed sources per 10 CFR 30.4 and 10 CFR 835.2 (effective January 1, 2004) and documentation included with the AK information? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	This is a solid waste sampling BDR.
18. **OSR** for LANL Sealed Sources, does the Pipe Overpack Container (POC) only contain sources and packaging material (no non-packaging items are allowed in the waste container)? **Reference Source: WAP B-3a(1)(iii) Verification Source: Data Sheet**			X	This is a solid waste sampling BDR.
19. **OSR** for LANL Sealed Sources, is the sealed source a US DOT Special Form Class 7 (Radioactive Material) per 49 CFR 34.27 (effective January 1, 2004) and is this documented in the AK information? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	This is a solid waste sampling BDR.
20. For LANL Sealed Sources, is the integrity of each sealed source validated by documented contamination survey results to meet the requirements of 10 CFR 34.27 (effective January 1, 2004), and is assembled as part of AK documentation? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	This is a solid waste sampling BDR.

Attachment 5 – CCP Site Project Manager Data Validation Summary (continued)

BATCH DATA REPORT NUMBER: WCS-0504 **DATE:** 4, 6, 7, 10 & 11 October 2005

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
21. **OSR** for LANL Sealed Sources, is each source a rigid sealed container or is it in a rigid sealed container less than or equal to 4 L? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	This is a solid waste sampling BDR.
22. **OSR** for LANL Sealed Sources, does the AK information document that no VOC or VOC-bearing material are constituents of the waste? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information**			X	This is a solid waste sampling BDR.
23. **OSR** for LANL Sealed Sources, does the AK information document that the outer casing of the sealed source is a non-VOC bearing material and is this verified during VE? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	This is a solid waste sampling BDR.

The data for all containers in this batch are complete, properly reported, technically reasonable, representative and meet the Quality Assurance Objectives (QAOs). On a per waste container basis, as evidenced by my review of the Batch Data Report, all data have been validated in accordance with the QAPjP (CCP-PO-001) and are acceptable. This validation was accomplished through the generation level and project level data review, validation, and verification of this Batch Data Report.

David W. Moody — Site Project Manager

Signature

25 October 05 — Date

Attachment 8 – CCP SPQAO Homogeneous Waste Sampling Checklist and Summary

BATCH DATA REPORT NUMBER: WCS-0504 **SAMPLE DATE:** 10/4/05, 10/6/05, 10/7/05, 10/10/05, 10/11/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
1. Does the Batch Data Report have a Table of Contents? **Reference Source: WAP B3-12c(3) Verification Source: ANL-W TWP Data Package Table of Contents and Sample Batch Summary Sheet**	X			
2. Does the Batch Data Report contain the sampling Batch Data Report number, Batch Data Report date, and facility name? **Reference Source: WAP Table B3-12 Verification Source: ANL-W TWP Data Package Table of Contents and Sample Batch Summary Sheet**	X			
3. Does the Batch Data Report contain the identification number(s) and container numbers for the waste packages represented in this Batch Data Report? **References Source: WAP Table B3-13 Verification Source: ANL-W TWP Data Package Table of Contents and Sample Batch Summary Sheet**	X			
4. Are there 20 or less field samples per batch, excluding permanently rejected drums? **Reference Source: WAP B3-10 Verification Source: Sample Batch Report Summary Sheet**	X			
5. Are the chain-of-custody (COC) forms and appropriate data sheets for each waste package included in this Batch Data Report? **Reference Source: WAP Table B3-12 Verification Source: COC Form and associated data sheets/package in batch**	X			
6. Does the Batch Data Report contain the sampling ID numbers and location (physical location within the container)? **Reference Source: WAP Table B3-12 Verification Source: COC Form**	X			
7. Does the waste package Batch Data Report contain the sampling date and time? **Reference Source: WAP Table B3-12 Verification Source: COC Form**	X			

Attachment 8 – CCP SPQAO Homogeneous Waste Sampling Checklist and Summary (continued)

BATCH DATA REPORT NUMBER: WCS-0504 SAMPLE DATE: 10/4/05, 10/6/05, 10/7/05, 10/10/05, 10/11/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
8. Does the waste package Batch Data Report contain the sampler's signature? **Reference Source: WAP Table B3-12 Verification Source: COC Form**	X			
9. Is the sample matrix and type identified within the sampling Batch Data Report? **Reference Source: WAP Table B1-2 Verification Source: COC Form**	X			
10. Does the Batch Data Report identify the sample number and size? **Reference Source: WAP Table B3-12 Verification Source: COC Form**	X			
11. Does the Batch Data Report identify the waste matrix code? **Reference Source: WAP Table B3-12 Verification Source: COC Form**	X			~~S3114~~ S3150 10/25/05
12. Were the core samples collected? Is there a minimum of one collected core sample collected per sample batch or one per week during sampling operation, and is a description of the collected core included in the Batch Data Report? **Reference Source: WAP B3-3b Verification Source: Sample Batch Report Summary Sheet and WCA Collocated Solid Sample Record Sheet**	X			
13. Is there a minimum of one equipment blank for coring tools collected per equipment cleaning batch when sampling with compactor/coring unit? **Reference Source: WAP B1-2b(2) Verification Source: Data Sheet Coring and Sampling Equipment Cleaning**	X			
14. Is there a minimum of one equipment blank for coring tools cleaned when sampling with single coring unit? **Reference Source: WAP B1-2b(2) Verification Source: (Coring tools that come in contact with the core or sample are not reused.)**	X			

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Attachment 8 – CCP SPQAO Homogeneous Waste Sampling Checklist and Summary (continued)

BATCH DATA REPORT NUMBER: WCS-0504 **SAMPLE DATE:** 10/4/05, 10/6/05, 10/7/05, 10/10/05, 10/11/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
15. Is there a minimum of one equipment blank for liners collected per equipment cleaning batch? **Reference Source: WAP B1-2b(2) Verification Source: Data Sheet Coring and Sampling Equipment Cleaning**	X			
16. Are samples preserved by keeping them at a temperature of 4°C (∀2°C)? **Reference Source: WAP Table B1-4 Verification Source: COC Form and QADR Sampling Container Checklist**	X			
17. Were proper procedures, including revision number, used and referenced in Batch Data Report? **Reference Source: WAP Table B3-12 Verification Source: CCP Technical Procedures**	X			
18. Were samples collected within 14 days, and is a time given between coring and sub-sampling? **Reference Source: WAP Table B3-12 Verification Source: COC Form, WCA Core-Drilling Record Sheet, and WCA Normal Solid Sample Record Sheet**	X			
19. Were the samples transferred to the lab within the maximum holding times? **Reference Source: WAP Table B3-3 Verification Source: COC Form and Sampling Core Container Checklist**	X			
20. Are sampling equipment numbers (lot number for disposable equipment) included in the Batch Data Report? **Reference Source: WAP Table B3-12 Verification Source: WCA Core-Drilling Record Sheet (see Cleaning Batch No.)**	X			

Attachment 8 – CCP SPQAO Homogeneous Waste Sampling Checklist and Summary (continued)

BATCH DATA REPORT NUMBER: WCS-0504

SAMPLE DATE: 10/4/05, 10/6/05, 10/7/05, 10/10/05, 10/11/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
21. Are field records present in the Batch Data Report? Field records include: collecting problems (if applicable), sequence of sampling collection, inspection of the solids sampling area, inspection of the solids sampling equipment, coring tool test, and random location of sub-sample? **Reference Source: WAP Table B3-12 Verification Source: WCA Core-Drilling Record Sheet (collection problems and inspection of the solids sampling equipment), COC Form (sequence of sampling), WCA Normal Solid Sample Record Sheet (inspection of solid sampling area and random location of sub-sample), coring tool test**	X			
22. Is the location (point of origin) where each sample was taken included in the Batch Data Report? **Reference Source: WAP Table B3-12 Verification Source: COC Form**	X			
23. Are the Batch Data Generation Level ITR, TS, and QA checklists complete, accurate, and signed? **Reference Source: WAP Table B3-12 Verification Source: DGL Checklists**	X			
24. Does the Batch Data Report include a record of analysis requested and the laboratory? **Reference Source: WAP Table B3-12 Verification Source: COC Form**	X			
25. Is there a cross-reference of sampling equipment numbers with associated cleaning batch numbers in the Batch Data Report? **Reference Source: WAP Table B3-12 Verification Source: WCA Core-Drilling Record Sheet (see cleaning batch numbers) and Data Sheet-Coring and sampling equipment cleaning (see equipment cleaning batch numbers).**	X			

53 10/24/05

Attachment 8 – CCP SPQAO Homogeneous Waste Sampling Checklist and Summary (continued)

BATCH DATA REPORT NUMBER: WCS-0504 **SAMPLE DATE:** 10/4/05, 10/6/05, 10/7/05, 10/10/05, 10/11/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
26. Is the depth of waste included for each waste container? **Reference Source: WAP Table B3-12 Verification Source: WCA Core-Drilling Record Sheet**	X			
27. Are the calculations of core recovery and collocated core description included in the Batch Data Report? **Reference Source: WAP B3-12 Verification Source: WCA Core-Drilling Record Sheet**	X			
28. Is Attachment 6 included?			X	

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAO). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

Irene Quintana — Site Project QA Officer

Irene Quintana — Signature

10/24/05 — Date

Irene Quintana Irene Quintana 10/25/05
Corrected waste matrix code question 11

BATTELLE ENERGY ALLIANCE
P. O. Box 2528, Idaho Falls, Idaho 83403-2528

TELEPHONE: 208/533-7829

October 21, 2005

CCP Records Custodian
Washington TRU Solutions
BBWXT Idaho
RWMC MS 4201
Idaho Falls Id 83415

SUBJECT: **SOLIDS SAMPLE BATCH REPORT WCS-0503 AND WCS-0504**

Dear Records Custodian,

The attached document contains two Solids Sample Batch Reports for WCS-0503 and WCS-0504. Please enter these Solids Sample Batch Reports into your document tracking system and complete your Level II review and maintain them as WIPP records in accordance with their approved procedures.

If you have questions associated with this letter please contact Mr. Scott Lee at 533-7829.

Sincerely,

Scott Lee
TRU Programs Group Leader

:sdl

cc:
K. M. Coburn
S. D. Lee
T. A. Miller

Appendix C
Page 1 of 1

WCA SAMPLE-BATCH REPORT SUMMARY SHEET

Sample batch No.[1]: WCS- 0504

Containers in Batch

Container No.	Date Cored/Sampled (mm/dd/yr)	Number of Cores Drilled for Container	Colocated Core Collected	Total Samples Collected (including QC) for all Cores from Container
10018503	10/4/05	2	☒ Yes ☐ No	~~15~~ 14
100 16 886	10/6/05	1	☐ Yes ☒ No	5
100 18875	10/7/05	1	☐ Yes ☒ No	5
100 18178	10/10/05	1	☐ Yes ☒ No	5
100 18867	10/11/05	2	☒ Yes ☐ No	14
			☐ Yes ☐ No	
			☐ Yes ☐ No	
			☐ Yes ☐ No	
			☐ Yes ☐ No	
			☐ Yes ☐ No	
			☐ Yes ☐ No	
			☐ Yes ☐ No	
			☐ Yes ☐ No	

Technician	Printed Name:	J. M. MAGNAN	
	Signature:	J M Magnan	Date: 10/11/05

Item	Total Number Collected (a)	Total Number Valid Collected (b)	Completeness (%) [(b)/(a)]
Samples	43	43 Preservation (4 ± 2 °C) and holding times met through delivery to lab	100 %

Associated IDR No(s)[2]: NA

Comments[3]: NA

The remaining information to be submitted in the sample-batch report (required by the waste analysis plan) is included in individual container reports for each container listed above. Each container report includes a table of contents that identifies specific items in the container report. These container reports are considered part of this sample-batch report. This report is hereby released.

Quality Assurance DR: Bob Lee Date: 10-20-05

[1] Each sample batch will be numbered as WCSXXNNNN (where XX = last two digits of the calendar year and NNNN is sequential serial number beginning within 0001 at the start of each calendar year).
[2] Identify IDRs associated with this batch or any containers in batch:
[3] Comments from data review performed in accordance with TWCP NT-AP-03.

★

Batch Report # : WCS-0504

TWCP SAMPLING BATCH DATA PACKAGE
TABLE OF CONTENTS

Item No.	Description of Item	# of Pages	Page #s
1.	Sampling Batch Report Summary Sheet	1	1
2.	Table of Contents	2	2-3
3.	Generator Site Sample Guidance	5	4-8
	Container # 10018503		
4.	WCA Core Drilling Record Sheets (Normal and co-located)	2	9-10
5.	WCA Solid Sample Record Sheets (Normal and co-located)	4	11-14
6.	Chain of Custody forms (Normal and co-located)	2	15-16
7.	Independent Technical Review Sampling Container Checklist	4	17-20
8.	Quality Assurance Data Review Sampling Container Checklist	3	21-23
	Container # 10016886		
9.	WCA Core Drilling Record Sheet (Normal)	1	24
10.	WCA Solid Sample Record Sheets (Normal	2	25-26
11.	Chain of Custody	1	27
12.	Independent Technical Review Sampling Container Checklist	4	28-31
13.	Quality Assurance Data Review Sampling Container Checklist	3	32-34
	Container # 10018875		
14.	WCA Core Drilling Record Sheet (Normal)	1	35
15.	WCA Solid Sample Record Sheets (Normal)	2	36-37
16.	Chain of Custody	1	38
17.	Independent Technical Review Sampling Container Checklist	4	39-42
18.	Quality Assurance Data Review Sampling Container Checklist	3	43-45
	Container # 10018178		
19.	WCA Core Drilling Record Sheet (Normal)	1	46
20.	WCA Solid Sample Record Sheets (Normal)	2	47-48
21.	Chain of Custody	1	49
22.	Independent Technical Review Sampling Container Checklist	4	50-53
23.	Quality Assurance Data Review Sampling Container Checklist	3	54-56
	Container # 10018867		
24.	WCA Core Drilling Record Sheets (Normal and co-located)	2	57-58
25.	WCA Solid Sample Record Sheets (Normal and co-located)	4	59-62
26.	Chain of Custody forms (Normal and co-located)	2	63-64
27.	Independent Technical Review Sampling Container Checklist	4	65-68
28.	Quality Assurance Data Review Sampling Container Checklist	3	69-71
	Batch Data/Review Checklists		
29.	Scale Calibration Input Data	6	72-77
30.	Data Sheets Coring and Sampling Equipment Cleaning	12	78-89
31.	Sample Bottle Certification	2	90-91
32.	Independent Technical Review Sampling Batch Checklist	1	92

Batch Report # : WCS-0504

33.	Technical Supervisory Sampling Batch Checklist	2	93-94
34.	Quality Assurance Data Review Sampling Batch Checklist	2	95-96
---	**TOTAL PAGES IN PACKAGE**	**96**	---

Washington
TRU Solutions LLC

CP:05:01291
UFC:5900.00

August 23, 2005

Mr. S. D. Lee
Idaho National Laboratory
Materials and Fuels Complex
Building 785
Scoville, ID 83415

Subject: TRANSMITTAL OF CORING GUIDANCE AND VEP/DR

Dear Mr. Lee:

This letter formally transmits a list of Central Characterization Project Idaho National Laboratory-Advanced Mixed Waste Treatment Plant drums that require Coring at Materials and Fuels Complex (MFC)-BEA Idaho (formerly ANL-W, Idaho). This is required pursuant to the Waste Isolation Pilot Plant Hazardous Waste Permit Waste Analysis Plan. Attached, MFC will receive a completed (Sections 1-5) and signed copy of an Appendix B of ANL-W Document No.W0102-0168-AP-05 for these drums.

Set 1:

AMWTP Container No.	Reported Weight (kg.)	Container Fill (%)	Waste Stream	Coring Only
10024871	170	80	ID-RF-S3114	Yes
10008215	222.5	80	ID-RF-S3114	Yes
10001220	196.0	80	ID-RF-S3114	Yes
10045820	226.5	85	ID-RF-S3114	Yes
10036807	224.0	75	ID-RF-S3114	Yes
10033038	214.0	80	ID-RF-S3114	Yes
10019358	214.5	75	ID-RF-S3114	Yes

Set 2:

AMWTP Container No.	Reported Weight (kg.)	Container Fill (%)	Waste Stream	Coring Only
10018503	253.0	85	ID-RF-S3150-A	Yes
10016886	254.0	85	ID-RF-S3150-A	Yes
10018875	238.0	80	ID-RF-S3150-A	Yes
10018178	258.0	85	ID-RF-S3150-A	Yes
10018867	196.0	100	ID-RF-S3150-A	Yes
10018183	228.5	80	ID-RF-S3150-A	Yes
10017407	253.5	85	ID-RF-S3150-A	Yes

P.O. Box 2078 • Carlsbad, New Mexico USA 88221-2078
Phone: (505) 234-7200 • Fax: (505) 234-7083

If you have any questions, please contact me at (505) 234-7535.

Sincerely,

P. C. Gomez
Site Project Manager
Retrieval, Characterization and Transportation

Enclosures (16)

P.O. Box 2078 • Carlsbad, New Mexico USA 88221-2078
Phone: (505) 234-7200 • Fax: (505) 234-7083

Rocky Flats Building 774 Sludge Stored at INL (WS: ID-RF-S3114)

Affected Drums: 10024871
10008215
10001220
10045820
10036807
10033038
10019358

Waste Generation Process: Organic Liquids were transferred to Building 774 by pipeline or in containers. These liquids originated in Buildings 334, 371, 443, 444, 447, 559, 707, 776, 777, 778, 779, 865, 881, 883, and 991. In 1985, the organic wastes were segregated into either low-level or transuranic tank systems. Prior to 1985, these liquids were collected together.

Waste oils and solvents were generated primarily in Buildings 707 and 777. Cutting oil, usually Texaco Regal A flowed onto parts during machining. The part was rinsed to remove residual oil. Solvents such as carbon tetrachloride, 1, 1, 2-trichloro-1, 2, 2-trifluorethane, 1, 1, 1-trichloroethane, trichloroethylene, and tetrachloroethylene were used to degrease parts.

Sources: Central Characterization Program-Acceptable Knowledge-INL-005 (Rev. 0) June 13, 2005

Typical Packaging Configuration: TRUCON Code ID 112/212 (Immobilized various organic liquids (using Mico-cel E, a synthetic calcium silicate) to form a grease or paste-like material, The organic liquids were primarily a mixture of oils and chlorinated solvents, small amounts of Oil-Dri were sometimes added to the mixture as well, and a maximum of 2 layers of confinement). This waste is assigned Item Description Code (IDC) 003, Organic Setups.

Source: TRUPACT-II Content Codes (TRUCON), Waste Isolation Pilot Plant, DOE/WIPP 89-004, Revision 14. December 2002

Waste Material Parameters Expected: Absorbed Organic Liquids

Source: Central Characterization Program-Acceptable Knowledge-INL-005 (Rev. 0) June 13, 2005

Rocky Flats Building 774 Sludge Stored at INL (WS: ID-RF-S3150-A)

Affected Drums: 10018503
10016886
10018875
10018178
10018867
10018183
10017407

Waste Generation Process: Organic Liquids were transferred to Building 774 by pipeline or in containers. These liquids originated in Buildings 334, 371, 443, 444, 447, 559, 707, 776, 777, 778, 779, 865, 881, 883, and 991. In 1985, the organic wastes were segregated into either low-level or transuranic tank systems. Prior to 1985, these liquids were collected together.

Waste oils and solvents were generated primarily in Buildings 707 and 777. Cutting oil, usually Texaco Regal A flowed onto parts during machining. The part was rinsed to remove residual oil. Solvents such as carbon tetrachloride, 1, 1, 2-trichloro-1, 2, 2-trifluorethane, 1, 1, 1-trichloroethane, trichloroethylene, and tetrachloroethylene were used to degrease parts.

Sources: Central Characterization Program-Acceptable Knowledge-INL-005 (Rev. 0) June 13, 2005

Typical Packaging Configuration: TRUCON Code ID 112/212 (Immobilized solid monolith by the Organic and Sludge Immobilization System (OASIS) in building 774. Oil and chlorinated solvent mixtures were treated by OASIS.) The organic liquids were immobilized by mixing with water, ENVIROSTONE emulsifier, accelerator, and gypsum cement. The emulsifier was polyethylene glycol ether, and the accelerator contained gypsum and potassium sulfate. This waste may include small amounts of metal. This waste is assigned Item Description Code (IDC) 700, OASIS waste, and IDC 801 Solidified Organics – Building 774.

Source: TRUPACT-II Content Codes (TRUCON), Waste Isolation Pilot Plant, DOE/WIPP 89-004, Revision 14. December 2002

Waste Material Parameters Expected: Solidified Homogeneous Solids

Source: Central Characterization Program-Acceptable Knowledge-INL-005 (Rev. 0) June 13, 2005

Sludge Density Calculation
CCP-INL-AMWTP-MFC-BEA
pursuant to the WIPP WAP

Non-Waste Constants	Weight of Steel Drum	26.8 kg	1 gallon = 3785.4 cubic centimeters
	Weight of Rigid Liner	7.3 kg	1 cc = 0.061 cubic inches
	Weight of PVC Drum Bag	1.8 kg	
	SUM	35.9 kg	

Weight (lbs) or (kg) and Utilization entered from drum profile sheet

Formulas

Net Weight of Sludge (grams) = Weight of Drum - 35.9 kg X 1000

Volume (in^3) = 55 Gallons X 3785.4 cc/gal X 0.061in^3/cc X Utilization X 100

Density [g/in^3] = Net Weight of Sludge / Volume

Drum #	Density [g/in^3]	Weight (lbs.)	WEIGHT (kg)	Utilization (%)	Net Weight of Sludge (grams)	Volume (in^3)
10024871	13.199	374.786	170.000	80	134100	10160.014
10008215	18.366	490.529	222.500	80	186600	10160.014
10001220	15.758	432.106	196.000	80	160100	10160.014
10045820	17.656	499.347	226.500	85	190600	10795.014
10036807	19.748	493.836	224.000	75	188100	9525.013
10033038	17.530	471.789	214.000	80	178100	10160.014
10019358	18.751	472.892	214.500	75	178600	9525.013
10018503	20.111	557.770	253.000	85	217100	10795.014
10016886	20.204	559.974	254.000	85	218100	10795.014
10018875	19.892	524.700	238.000	80	202100	10160.014
10018178	20.574	568.793	258.000	85	222100	10795.014
10018867	12.606	432.106	196.000	100	160100	12700.017
10018183	18.957	503.756	228.500	80	192600	10160.014
10017407	20.157	558.872	253.500	85	217600	10795.014

Checked by SL 9-19-05

Appendix B
Page 1 of 1

WCA CORE-DRILLING RECORD SHEET

Date:	10/3/2005	Container ID No.:	10018503
Sample batch No.:	WCS-0504	Drum Verified:	☒ Yes

Drilling Equipment and Tools

Tool	Serial No.	Cleaning Batch No.	Pkg. Mtl. Intact/ Not Damaged	Item Clean
Caps & disks	NA	AWEB-20	☒ Sat	
Auger bit/tip	NA	AWEB-23	☒ Sat	
Teflon liner	NA	AWEB-18	☒ Sat	
Liner cutter	NA	AWEB-19	☒ Sat	
Auger	1	AWEB-22	☐ Sat ☒ NA	☒ Sat ☐ NA
Core barrel	1	AWEB-21	☐ Sat ☒ NA	☒ Sat ☐ NA

Drilling Information

Drill-guide hole No.:	4	Waste matrix type:	SOLID
Sludge hardness:	☐ Soft ☒ Medium ☐ Hard ☐ N/A		
Top of sludge (T) height (in.):	27.2	Feed rate (in./min):	20
Spindle speed (rpm):	125	Feed force (lb):	350
Spindle torque (ft-lb) (N/A in Auto):	40	Actual drilling depth (in.):	53.0
Core extraction time: 1328	Time liner capped: 1400	Elapsed time (min.):	12

Heat and dust generation noted during the coring operation:	NONE
Visual observations of the core/container (e.g., stratification, undisturbed or pulverized, moist or dry, core texture and color) (use Comments Section if necessary):	Undisturbed, Dry sandy paste texture, Yellow color.
If colocated, visual comparison with original core/container:	NA

Measured length of core (Y) (in.):	27	% Recovery (R) [R = Y/(54 -T) x 100%]:	100.7

Comments

Spindle speed not consistent (indication of drive belt slipping) Had to stop & start feed to let rpm come back up to speed. Had to increase UP Feed Force to 500 lbs to remove auger.

WCA core drilling has been satisfactorily completed.

Position	Printed Name	Signature	Date
Waste Characterization Operator	J. M. MAGNAN	J M Magnan	10/3/05

★

Appendix B
Page 1 of 1

WCA CORE-DRILLING RECORD SHEET					
Date:	10/ 3 and 4 /2005	Container ID No.:	10018503		
Sample batch No.:	WCS-0504	Drum Verified:	☒ Yes		
Drilling Equipment and Tools					
Tool	Serial No.	Cleaning Batch No.	Pkg. Mtl. Intact/ Not Damaged	Item Clean	
Caps & disks	NA	AWEB-20	☒ Sat		
Auger bit/tip	NA	AWEB-23	☒ Sat		
Teflon liner	NA	AWEB-18	☒ Sat		
Liner cutter	NA	AWEB-19	☒ Sat		
Auger	3	AWEB-22	☐ Sat ☒ NA	☒ Sat ☐ NA	
Core barrel	3	AWEB-21	☐ Sat ☒ NA	☒ Sat ☐ NA	

Drilling Information			
Drill-guide hole No.:	7	Waste matrix type:	SOLID
Sludge hardness:	☐ Soft ☒ Medium ☐ Hard ☐ N/A		
Top of sludge (T) height (in.):	30.3	Feed rate (in./min):	20
Spindle speed (rpm):	125	Feed force (lb):	350
Spindle torque (ft-lb) (N/A in Auto):	40	Actual drilling depth (in.):	53.0
Core extraction time: 1250	Time liner capped: 1257	Elapsed time (min.):	7

Heat and dust generation noted during the coring operation:	NONE
Visual observations of the core/container (e.g., stratification, undisturbed or pulverized, moist or dry, core texture and color) (use Comments Section if necessary):	Undisturbed, Dry sandy paste texture, Yellow color.
If colocated, visual comparison with original core/container:	Same as original core

Measured length of core (Y) (in.):	24 1/2	% Recovery (R) [R = Y/(54 -T) x 100%]:	103.3

Comments
Spindle speed not consistent (indication of drive belt slipping) Had to stop & start feed to let rpm come back up
to speed. Increase UP Feed Force to 750 lbs to remove auger. Would not move up. Auger left in drum on 10/3/05
Disconnected drive motor and manually lifted the drive train to retrieve auger and core on 10/4/05
WCA core drilling has been satisfactorily completed.

Position	Printed Name	Signature	Date
Waste Characterization Operator	S. M. MAGNAN	J M Magnan	10/4/05

★

Appendix A
Page 1 of 2

WCA NORMAL SOLID SAMPLE RECORD SHEET			
Date:	10/4/2005		
Sample-batch No.:	WCS 0504	Container ID No.:	10018503

PART 1 — GENERAL INFORMATION

Item			Completed
Sampling guidance has been reviewed (WCO initials):			JMM
Item	Identification No.	Calibration Due Date	
Scale	720414	11/2/05	
Test weight No. 1	721454	5/18/06	
Test weight No. 2	721455	5/18/06	
The scale daily operational check has been satisfactorily completed (✓) (WCO).			☒ Sat
The WCC and SPB are clean — no visible dust, dirt, or oil.			☒ Sat

Sampling Equipment and Tools		
Item Description	Cleaning-Batch No.	Packaging Intact/ Not Damaged
Spatula	AWEB-25	☒ Sat
Liner cutter	AWEB-19	☒ Sat
		☐ Sat
		☐ Sat
		☐ Sat
		☐ Sat
Normal core drill guide No.:	4	

Sample type (check one):	☒ Core ☐ 1-gal size ☐ 1/2-gal size	☐ Other	
(L) Measured length of core (in.):			27
(d) Waste density (g/in.^{3}) (provided in writing by the TWCP Project Manager):			20.111
(N) Number of samples available [(N) = (d)(L)(3.14 in.^{2}) ÷ 44 g]:			38.75
(l) Sample increment length [(l) = (L) ÷ (N)] (in.):			0.69
(R) Random number selected [enter (N) rounded to next higher whole number]:			39/ 30
(s) Actual sample location [(s) = (R) x (l)] (in.):			20.7
(s) Actual sample location using conversion table (in.):			20 3/4
Signature:	J M Magnan	**Date:**	10/4/05

Appendix A

Page 2 of 2

WCA NORMAL SOLID SAMPLE RECORD SHEET (cont.)				
Container ID No.:	10018503			
PART 2 — CORE SAMPLING				
Analysis Type	Container Size/Certification No.	Sample Identification No.	Container Tare Weight (grams)	Sample Weight (grams)
VOCs	20 ml / 473849	10018503 11V1	18.37	2.57
NHVOCs	20 ml / 473849	10018503 11V2	18.29	2.64
Spare	20 ml / 473849	10018503 11V3	18.28	2.67
Spare	20 ml / 473849	10018503 11V4	18.21	2.74
Metals, semi-VOCs	250 ml / 6145072	10018503 11M1	210.49	33.34
Time Teflon liner cut and opened:	1302	Time last sample collected and container sealed:		1312
Sampling elapsed time (min):	10			
Coring elapsed time (min):	12	As determined in accordance with HFEF-OI-6910 and recorded on the WCA Core-Drilling Record Sheet.		
Total elapsed time (min):	22	Total elapsed time should be < 60 min.		
PART 3 — POSTSAMPLING				
Chain-of-custody serial No.:	WCA-936			
Comments:	Teflon liner capped on 10/3/05. Co-located core was attempted but the Core Drilling Machine would not move in the up direction. On 10/4/05 the co-located auger and Teflon liner were retrieved. The Normal Core Teflon liner was cut and samples taken on 10/4/05. Removing samples from the glovebox is very difficult with the whole assembled drilling drive train still in the drum.			
Appendix A has been reviewed; it is complete and accurate.				
Position	**Printed Name**	**Signature**		**Date**
Waste Char. Operator	J. M. MAGNAN	J M Magnan		10/4/05

★

Appendix B
Page 1 of 2

WCA CO-LOCATED SOLID SAMPLE RECORD SHEET			
Date:	10/4/2005		
Sample-batch No.:	WCS 0504	Container ID No.:	10018503

PART 1 — GENERAL INFORMATION

Item	Completed
Sampling guidance has been reviewed (WCO initials).	JMM

Item	Identification No.	Calibration Due Date
Scale	720414	11/2/05
Test weight No. 1	721454	5/18/06
Test weight No. 2	721455	5/18/06

The scale daily operational check has been satisfactorily completed (✓) (WCO).	☒ Sat ☐ Unsat
The WCC and SPB are clean — no visible dust, dirt, or oil.	☒ Sat ☐ Unsat

Sampling Equipment and Tools

Item Description	Cleaning-Batch No.	Packaging Intact/ Not Damaged
Spatula	AWEB- 25	☒ Sat
Liner cutter	AWEB- 19	☒ Sat
		☐ Sat
		☐ Sat
		☐ Sat
		☐ Sat
		☐ Sat

Sample type (check one):	☒ Core ☐ 1-gal size ☐ 1/2-gal size	☐ Other	
Normal-coredrill-guideNo.:	4	Co-located-core drill-guide No.:	7
(S) Actual sample location of original core and this co-located core (in.):		20 3/4	
Original and co-located cores visually similar:	☒ Yes ☐ No		
Signature:	JM Maynard	**Date:**	10/4/05

Appendix B
Page 2 of 2

WCA CO-LOCATED SOLID SAMPLE RECORD SHEET (cont.)				
Container ID No.:	10018503			
PART 2 — CORE SAMPLING				
Analysis Type	Container Size/Certification No.	Sample Identification No.	Container Tare Weight (grams)	Sample Weight (grams)
VOCs	20 ml / 473849	10018503 21V1	18.25	2.99
	20 ml / 473849	10018503 21V2	18.30	2.87
	20 ml / 473849	10018503 21V3	18.30	2.95
NHVOCs	20 ml / 473849	10018503 21V4	18.26	2.93
	20 ml / 473849	10018503 21V5	18.20	2.68
	20 ml / 473849	10018503 21V6	18.24	2.92
Spare	20 ml / 473849	10018503 21V7	18.37	2.59
Spare	20 ml / 473849	10018503 21V8	18.47	2.66
Metals, semi-VOCs	250 ml / 6145072	10018503 21M1	209.67	37.02
Time Teflon liner cut and opened:	1315	Time last sample collected:	1333	
Sampling elapsed time (min):	18			
Coring elapsed time (min):	7	As determined in accordance with HFEF-OI-6910 and recorded on the WCA Core-Drilling Record Sheet.		
Total elapsed time (min):	25	Total elapsed time should be < 60 min.		
PART 3 — POSTSAMPLING				
Chain-of-custody serial No.:	WCA-937			
Comments:	Co-located core drilled on 10/3/05. Could not retract the auger, a delay of more than 60 minutes was expected			
so the auger left in drum until decision made about retracting the auger. Auger was manually lifted on 10/4/05 and the Teflon				
liner retrieved. When the drilling drive train, including the auger were moved to normal conditions, the samples were taken				
from the both the normal core and co-located cores. NOTE: The normal core was capped and left in the Teflon liner on				
10/3/05 and the co-located core was left in the drum in the full down position (53 inches) also on 10/3/05.				
Appendix B has been reviewed; it is complete and accurate.				
Position	**Printed Name**	**Signature**		**Date**
Waste Char. Operator	J M. MAGNAN	J M Magnan		10/4/05

★

Idaho National Laboratory - Waste Characterization Area - TWCP Chain-of-Custody

COC No. WCA-936

[HFEF-OI-6921, Rev. 3e, 5/11/04

Sampling Location: MFC / HFEF / WCA | Analytical Location INL - INTEC | Sample Batch No. WCS-05-04

Container Identification No. 10018503 | Container I.D.C. ID-RF-S3150-A* | Sample Matrix: SOLID

Chain of Custody Initiated: Signature: JM Magnuson 10/4/05 1303 Date / Time:

Sample ID Number	Sample Date	Sample Time	Container Size	Sample Weight (gm)	VOC	NHVOC	Semi VOC	Metals	Other	Comments	Disposition
10018503 11V1	10/4/2005	1303	20-ml	2.57	X						
10018503 11V2	10/4/2005	1305	20-ml	2.64		X					
10018503 11V3	10/4/2005	1307	20-ml	2.67						SPARE	
10018503 11V4	10/4/2005	1309	20-ml	2.74						SPARE	
10018503 11M1	10/4/2005	1312	250-ml	33.34			X	X			
TB 93a	10/4/2005	1512	20-ml	2.89	X					TRIP BLANK	
TB 93b	10/4/2005	1512	20-ml	2.77		X				TRIP BLANK	
TB 93c	10/4/2005	1512	20-ml	2.79						TRIP BLANK/SPARE	

NOTE: For preservation, all samples were stored at a controlled temperature of 4° C and then packed in chemical ice for shipment.

ALD LOG # 05100066

1 of 1

Sampler Relinquishment to HFEF TWCP Sample Custodian: Signature: JM Magnuson

Sample Custodian receipt: JM Magnuson 10/4/05 1515 Signature: Date / Time:

Samples placed in locked storage: JM Magnuson 10/4/05 1515 Signature: Date / Time:

Samples retrieved from locked storage: B. Adams 10-6-05 0840 Signature: Date / Time:

Shipping TID #: 4700

Relinquished By:			Discrepancies / Comments 50A BET 10/12/05
B Adams	10-6-05	1018	*Waste Stream ID-RF-S3114 includes IDCs ~~009~~, 700, & 801 CORRECTED PER CCP-AK-WL-005.
Received By:	Date	Time	BET 10/12/05
BOP	10/06/05	1230	
Relinquished By:			
Received By:	Date	Time	

All sample analysis complete and samples removed from custody control and dispositioned. _____

Signature Date

Idaho National Laboratory - Waste Characterization Area - TWCP Chain-of-Custody

COC No. WCA-937

[HFEF-OI-6921, Rev. 3e, 5/11/04]

Sampling Location: MFC / HFEF / WCA | Analytical Location: INL - INTEC | Sample Batch No.: WCS-05-04

Container Identification No.: 10018503 | Container I.D.C.: ID-RF-S3150-A* | Sample Matrix: SOLID

Chain of Custody Initiated: JMMagnuson (Signature:) 10/4/05 (Date) 1318 (Time)

Sample ID Number	Sample Date	Sample Time	Container Size	Sample Weight (gm)	VOC	NHVOC	Semi VOC	Metals	Other	Comments	Disposition
10018503 21V1	10/4/2005	1318	20-ml	2.99	X					QC	
10018503 21V2	10/4/2005	1319	20-ml	2.87	X					QC	
10018503 21V3	10/4/2005	1321	20-ml	2.95	X					QC	
10018503 21V4	10/4/2005	1323	20-ml	2.93		X				QC	
10018503 21V5	10/4/2005	1325	20-ml	2.68		X				QC	
10018503 21V6	10/4/2005	1327	20-ml	2.92		X				QC	
10018503 21V7	10/4/2005	1328	20-ml	2.59						SPARE/QC	
10018503 21V8	10/4/2005	1330	20-ml	2.66						SPARE/QC	
10018503 21M1	10/4/2005	1333	250-ml	37.02			X	X		QC	
TB NA	SEE COMMENTS				X						
						X					

NOTE: For preservation, all samples were stored at a controlled temperature of 4° C and then packed in chemical ice for shipment.

ALD LOG # 0510066 1 of 1

Sampler Relinquishment to HFEF TWCP Sample Custodian: JMMagnuson (Signature:)

Sample Custodian receipt: JMMagnuson (Signature:) 10/4/05 1543 (Date / Time:)

Samples placed in locked storage: JMMagnuson (Signature:) 10/4/05 1543 (Date / Time.)

Samples retrieved from locked storage: B. A... (Signature) 10-6-05 0840 (Date / Time)

Shipping TID #: 4700

Relinquished By:			Discrepancies / Comments Samples listed on this COC will be shipped with samples listed on COC 936.
B. A...	10-6-05	1018	Trip Blanks are listed on COC 936. COC 936 & 937 will sent in same shipping container. JMM 10/4/05
Received By:	Date	Time	Quality Control Samples. BET 10/12/05
BEP	10/10/05	1230	50A BET 10/12/05
Relinquished By:			*Waste Stream ID-RF-S3134 includes IDCs ~~003~~, 700, & 801 CORRECTED PER CCP-AK-WL-005. BEP 10/12/05
Received By:	Date	Time	

All sample analysis complete and samples removed from custody control and dispositioned. _____ (Signature) _____ (Date)

INDEPENDENT TECHNICAL REVIEW (ITR)

SAMPLING CONTAINER CHECKLIST

Solid Sampling Batch No.: **WCS-** 0504

Drum No.: 10018503

Record the container and batch number on each page of this checklist. Fill in the right-hand column of the following table for the batch under review. To make specific comments on any item, provide reference in the box to specifically identified notes at the end of the checklist. If an item is not applicable, write "NA" in the box. Do not leave any boxes blank.

ITEM NO.	DESCRIPTION OF ITEM BEING REVIEWED	INDICATION THAT CHECK IS COMPLETE (Initial each blank box indicating that the requirement has been satisfactorily met, or provide the information otherwise requested.)	
1	Name of reviewer		RHETT BRADFORD
2	Date review starts		10/11/05
3	You are a qualified ITR per MCP-2610		RB
4	Data were reported in the proper units and correct number of significant figures [CDRS, SSRS, COC] [WAP B3-10]		RB
5	Calculations have been verified by a 100 % check [WAP B3-10]		RB
6	The data have been reviewed for transcription errors [WAP B3-10]		RB
7	The sampling data QA documentation is complete as appropriate for the point of data review and includes raw data, calculation records, COC forms, calibration records, and QC sample results, if applicable. ITR shall not be completed until the data is complete. [WAP B3-10] [Verify that each of the items indicated in the right-hand column is complete—this is not a check of the accuracy of these items, simply a check that each form in included in the data package and that each form is complete. Accuracy is checked by item 32 in which data generation and reduction is verified to be conducted in a technically correct manner in accordance with the methods used.]	G.S. Directed Sample Guidance	RB
		Core-Drilling Record Sheet (CDRS)	RB
		Solid Sample Record Sheet (SSRS)	RB
		Chain Of Custody forms (COC)	RB
		Balance Calibration Report	RB
		Equipment Cleaning Data Sheets (ECDS)	RB
		Initial deficiency reports – Identified on SBRSS (mark "NA" if none)	NA

INDEPENDENT TECHNICAL REVIEW (ITR)

SAMPLING CONTAINER CHECKLIST

Solid Sampling Batch No.: **WCS-** 0504

Drum No.: 10018503

ITEM NO.	DESCRIPTION OF ITEM BEING REVIEWED	INDICATION THAT CHECK IS COMPLETE (Initial each blank box indicating that the requirement has been satisfactorily met, or provide the information otherwise requested.)
QC sample results are within established control limits, and if not, the data have been appropriately qualified: (addressed by items 8 -10)		
8	An equipment blank was collected on a fully assembled coring tool and met requirements specified in the WAP for applicable cleaning batch. (ECDS) [WAP B1-2b(2,3)]	
9	The auger bit and liners used in cores for this container were cleaned and met WAP requirements. (ECDS) [WAP B1-2b(2,3)]	
10	The sampling equipment and containers (e.g., spoons, chisels, sub-samplers, vials) used for all samples from this container were cleaned (or purchased clean) and met WAP requirements. (ECDS) [WAP B1-2b(2,3)]	
11	Time between coring and sub-sampling is reported. (CDRC, SSRC) [WAP B1-2a(2), Table B3-14]	
12	Sample holding time and preservation requirements were met, or exceptions documented. (COC) [WAP B3-10] [Samples placed in refrigerator; refrigerator temp. 4 ° ± 2 ° C while samples in refrigerator; Samples shipped within 4 days from collection, or exceptions noted]	
Field sampling records are complete (i.e., they include the information specified below) [WAP B3-10] [For items 13-32, initial in the right-hand column to indicate only that the information is provided in the data package (on the form listed) and that the forms are complete — **not** to indicate your judgement of the accuracy of the information.]		
13	Name of sampling or examining facility (CDRS, SSRS, COC) [WAP B1-4]	
14	Waste container ID number (CDRS, SSRS, COC) [WAP B1-4]	
15	Sample ID number of each sample referenced to the waste container from which it was collected (SSRS, COC) [WAP B1-4]	
16	Type of sample matrix (i.e., solid) (CDRS, SSRS, COC) [WAP B1-4]	
17	Type of sampling equipment used (e.g., scoop, chisel) (SSRS)	
18	Quantity of sample collected (SSRS, COC)	
19	Type of sample container used (e.g., 20 mL VOA vial) and the equipment cleaning batch or manufacturer's lot number assigned to that container (SSRS, COC) [WAP B1-4]	
20	Sample preservation applied (i.e., 4°C) (COC) [WAP B1-4]	

INDEPENDENT TECHNICAL REVIEW (ITR)

SAMPLING CONTAINER CHECKLIST

Solid Sampling Batch No.: WCS- 0504

Drum No.: 10018503

ITEM NO.	DESCRIPTION OF ITEM BEING REVIEWED	INDICATION THAT CHECK IS COMPLETE (Initial each blank box indicating that the requirement has been satisfactorily met, or provide the information otherwise requested.)
21	Analysis requested (SSRS, COC) [WAP B1-4]	
22	QC designation, if applicable (e.g., trip blank, field duplicate - co-located) (SSRS, COC)	
23	COC record number (SSRS, COC)	
24	Analytical lab requested to perform the analysis (COC)	
25	Names, signatures, dates, times of sample handlers (from sample collection (initiation of custody) through acceptance by the lab doing the analysis) (COC) [B1-4]	
26	SOP document number and revision (CDRS, SSRS)	
27	Comments pertinent to coring and sampling activities (CDRS, SSRS)	
28	Coring tool identification (CDRS)	
29	Randomly selected coring location (CDRS)	
30	Depth of waste and core recovery (CDRS)	
31	Visual observations of waste and core recovery (CDRS)	
32	Randomly selected sample location(s) (SSRS)	
33	Data generation and reduction were conducted in a technically correct manner in accordance with the methods used [WAP B3-10] [The implementing procedures for the characterization methods have been deemed technically correct via specification of the method(s) in the WAP and via adequacy reviews of WAP requirements in generator site procedures by CBFO. Therefore, this check is to make sure that the procedures which were used to produce the data were followed as judged by the data product]	

NOTES: (If none, indicate NA.)

NA

INDEPENDENT TECHNICAL REVIEW (ITR)

SAMPLING CONTAINER CHECKLIST

Solid Sampling Batch No.: **WCS-** 0504

Drum No.: 10018503

REVIEWED BY: RHETT BRADFORD (Printed Name) Rhett Bradford (Signature) 10/11/05 (Date)

QUALITY ASSURANCE DATA REVIEW (QADR)

SAMPLING CONTAINER CHECKLIST

Solids Sampling Exam Batch No.: WCS- 0504

Drum No.: 10018503

Record the batch number on each page of this checklist. Fill in the right-hand column of the following table for the batch under review. To make specific comments on any item, provide reference in the box to specifically identified notes at the end of the checklist. If an item is not applicable, write "NA" in the box. Do not leave any boxes blank.

ITEM NO.	DESCRIPTION OF ITEM BEING REVIEWED	INDICATION THAT CHECK IS COMPLETE (Initial each blank box indicating that the requirement has been satisfactorily met, or provide the information otherwise requested.)	
1.	Name of reviewer		Scott Lee
2.	Date review starts		10-20-05
3.	You are a qualified QADR per MCP-2610		S.L.
4.	ITR for this container has been performed as evidenced by the signature release on the ITR checklist [WAP B3-10]		S.L.
5.	The sampling QA documentation is complete as apropriate for the point of data generation [WAP B-3-10] [Verify that each of the items indicated in the right-hand column is complete—this is not a check of the accuracy of the items.]	G. S. Directed Sample Guidance	S.L
		Core-Drilling Record Sheet (CDRS)	S.L.
		Solid Sample Record Sheet (SSRS)	S.L
		Chain of custody forms (COC)	S.L
		Balance calibration report	S.L.
		Equipment Cleaning Data Sheets (ECDS)	S.L.
		Initial Deficiency Reports (IDR)s (mark "NA" if none)	NA

Sampling QC checks have been properly performed; QC criteria that were not met are documented: [WAP B3-10] (addressed by items 6-9)

QUALITY ASSURANCE DATA REVIEW (QADR)

SAMPLING CONTAINER CHECKLIST

Solids Sampling Exam Batch No.: WCS- 0504

Drum No.: 1001 8503

ITEM NO.	DESCRIPTION OF ITEM BEING REVIEWED	INDICATION THAT CHECK IS COMPLETE (Initial each blank box indicating that the requirement has been satisfactorily met, or provide the information otherwise requested.)
6	An equipment blank was collected on a fully assembled coring tool and met requirements specified in the WAP for applicable cleaning batch (ECDS) [WAP B1-2b(2,3)]	BL
7	The auger bit and liners used in cores for this container were cleaned and met WAP requirements (CDRS, ECDS) [WAP B1-2b(2,3)]	BL
8	The sampling equipment and containers (e.g., spoons, chisels, sub-samplers, vials) used for all samples from this container were cleaned (or purchased clean) and met WAP requirements (SSRS, ECDS) [WAP B1-2b(2,3)]	BL
9	Time between coring and sub-sampling is reported. (CDRC, SSRC) [WAP B1-2a(2), Table B3-14]	BL
10	Sample holding time and preservation requirements were met, or exceptions documented. (COC) [WAP B3-10a] [Samples placed in refrigerator with temperature of 4° C; Samples shipped within 4 days from collection, or exceptions noted]	BL
QAOs have been met according to the methods outlined in Section B3-3 of the WAP: [WAP B3-10] (addressed by items 11-13)		
11	Sampling accuracy as a function of sampling cross-contamination; equipment blanks met requirements for: fully assembled coring tools; auger bit and liners cleaned separately from coring tools; misc. sampling equipment that is reused [WAP B3-3] - Verified by items 6-8 of this checklist.	
12	Representativeness based on random selection of samples in both the horizontal and vertical planes of each container's waste (CDRS, SSRS)	BL
13	Representativeness based on 50% core recovery (core length/entire waste depth); if core recovery < 50%, a second location shall be selected—core with greatest recovered shall be sampled [Verify that core recovery for sampled core was > 50%.] [WAP B3-3]	BL
Requirements for raw data collection and management were met: [WAP B3-10] (addressed by items 14-20)		
14	Procedures, forms, and checklists used are current (i.e., they are from the version of the procedure in use at the time of completion) [Check headers against controlled procedures]	BL
15	IDRs identified IDRs associated with this container: NA (If None indicate NA)	NA
16	All raw data are signed and dated in reproducible ink by the person generating it	BL
17	All data are recorded clearly, legibly, and accurately, including applicable sample identification numbers	BL

QUALITY ASSURANCE DATA REVIEW (QADR)

SAMPLING CONTAINER CHECKLIST

Solids Sampling Exam Batch No.: WCS- 0504

Drum No.: 10018503

ITEM NO.	DESCRIPTION OF ITEM BEING REVIEWED	INDICATION THAT CHECK IS COMPLETE (Initial each blank box indicating that the requirement has been satisfactorily met, or provide the information otherwise requested.)
18	All changes to original data are lined out, initialed, and dated by the individual who originally collected the data or an individual authorized to change the data. The justification for the change is included as necessary to understand why the change was made and. The original data is not obliterated or otherwise disfigured so as not to be readable	SL
19	All data are transferred and reduced completely and accurately [check container and batch numbers on each page; check sample numbers and COC numbers]	SL

NOTES: (If none, indicate NA.)

Req + Co-located Sheets reviewed

REVIEWED BY: Scott Lee Scott Lee 10-20-05
Printed Name Signature Date

Appendix B
Page 1 of 1

WCA CORE-DRILLING RECORD SHEET

Date: 10/6/05	Container ID No.: 10016886		
Sample batch No.: WCS-0504		Drum Verified: ☒ Yes	

Drilling Equipment and Tools

Tool	Serial No.	Cleaning Batch No.	Pkg. Mtl. Intact/ Not Damaged	Item Clean
Caps & disks	NA	AWEB 20	☒ Sat	
Auger bit/tip	NA	AWEB 23	☒ Sat	
Teflon liner	NA	AWEB 18	☒ Sat	
Liner cutter	NA	AWEB 19	☒ Sat	
Auger	1	AWEB 22	☐ Sat ☒ NA	☒ Sat ☐ NA
Core barrel	1	AWEB 21	☐ Sat ☒ NA	☒ Sat ☐ NA

Drilling Information

Drill-guide hole No.:	1	Waste matrix type:	SOLID
Sludge hardness:	☐ Soft ☒ Medium ☐ Hard ☐ N/A		
Top of sludge (T) height (in.):	28.2	Feed rate (in./min):	20
Spindle speed (rpm):	125	Feed force (lb):	350
Spindle torque (ft-lb) (N/A in Auto):	40	Actual drilling depth (in.):	52.9
Core extraction time: 1335	Time liner capped: 1343	Elapsed time (min.):	8

Heat and dust generation noted during the coring operation:	NONE
Visual observations of the core/container (e.g., stratification, undisturbed or pulverized, moist or dry, core texture and color) (use Comments Section if necessary):	UNDISTURBED, DRY, SANDY SOLID TEXTURE, YELLOW COLOR.
If colocated, visual comparison with original core/container:	NA

Measured length of core (Y) (in.):	25 1/2	% Recovery (R) [R = Y/(54 -T) x 100%]:	98.8

Comments

NA

WCA core drilling has been satisfactorily completed.

Position	Printed Name	Signature	Date
Waste Characterization Operator	S. M. MAGNAN	J M Magnan	10/6/05

★

Appendix A
Page 1 of 2

WCA NORMAL SOLID SAMPLE RECORD SHEET			
Date:	10/6/05		
Sample-batch No.:	WCS 0504	Container ID No.:	10016886

PART 1 — GENERAL INFORMATION

Item	Completed
Sampling guidance has been reviewed (WCO initials):	JMM

Item	Identification No.	Calibration Due Date
Scale	720414	11/2/05
Test weight No. 1	721 454	5/18/06
Test weight No. 2	721 455	5/18/06

The scale daily operational check has been satisfactorily completed (✓) (WCO).	☒ Sat
The WCC and SPB are clean — no visible dust, dirt, or oil.	☒ Sat

Sampling Equipment and Tools

Item Description	Cleaning-Batch No.	Packaging Intact/ Not Damaged
Spatula	AWEB 25	☒ Sat
Liner cutter	AWEB 19	☒ Sat
		☐ Sat
		☐ Sat
		☐ Sat
		☐ Sat
Normal core drill guide No.:	1	

Sample type (check one): ☒ Core ☐ 1-gal size ☐ 1/2-gal size ☐ Other

(L) Measured length of core (in.):	25 1/2
(d) Waste density (g/in.^{3}) (provided in writing by the TWCP Project Manager):	20.204
(N) Number of samples available [(N) = (d)(L)(3.14 in.^{2}) ÷ 44 g]:	36.766
(*l*) Sample increment length [(*l*) = (L) ÷ (N)] (in.):	0.693
(R) Random number selected [enter (N) rounded to next higher whole number]:	37 / 17
(s) Actual sample location [(s) = (R) x (*l*)] (in.):	11.78
(s) Actual sample location using conversion table (in.):	11 3/4

Signature: J M Magnan **Date:** 10/6/05

Appendix A
Page 2 of 2

WCA NORMAL SOLID SAMPLE RECORD SHEET (cont.)				
Container ID No.:	10016886			
PART 2 — CORE SAMPLING				
Analysis Type	Container Size/Certification No.	Sample Identification No.	Container Tare Weight (grams)	Sample Weight (grams)
VOCs	20ml/ 473849	10016886 1IV1	18.33	2.77
NHVOCs	20ml/ 473849	10016886 1IV2	18.28	2.84
Spare	20ml/ 473849	10016886 1IV3	18.31	2.85
Spare	20ml/ 473849	10016886 1IV4	18.32	2.66
Metals, semi-VOCs	250ml/ 6145072	10016886 1IM1	209.47	31.53
Time Teflon liner cut and opened:	1349	Time last sample collected and container sealed:		1408
Sampling elapsed time (min):	19			
Coring elapsed time (min):	8	As determined in accordance with HFEF-OI-6910 and recorded on the WCA Core-Drilling Record Sheet.		
Total elapsed time (min):	27	Total elapsed time should be < 60 min.		
PART 3 — POSTSAMPLING				
Chain-of-custody serial No.:	WCA- 938			
Comments:	NA			

Appendix A has been reviewed; it is complete and accurate.

Position	Printed Name	Signature	Date
Waste Char. Operator	J.M. MAGHAN	J M Maghan	10/6/05

★

Idaho National Laboratory - Waste Characterization Area - TWCP Chain-of-Custody

COC No. WCA-938

[HFEF-OI-6921, Rev. 3e, 5/11/04

Sampling Location: MFC / HFEF / WCA | Analytical Location: INL - INTEC | Sample Batch No.: WCS-05-04

Container Identification No.: 10016886 | Container I.D.C.: ID-RF-S3150-A* | Sample Matrix: SOLID

Chain of Custody Initiated: Signature: J M Magnuson 10/6/05 1358 Date / Time:

Sample ID Number	Sample Date	Sample Time	Container Size	Sample Weight (gm)	VOC	NHVOC	Semi VOC	Metals	Other	Comments	Disposition
10016886 11V1	10/6/05	1358	20-ml	2.77	X						
10016886 11V2	10/6/05	1400	20-ml	2.84		X					
10016886 11V3	10/6/05	1402	20-ml	2.85						SPARE	
10016886 11V4	10/6/05	1404	20-ml	2.66						SPARE	
10016886 11M1	10/6/05	1408	250-ml	31.53			X	X			
TB 94a	10/6/05	1511	20-ml	2.81	X					TRIP BLANK	
TB 94b	10/6/05	1511	20-ml	2.90		X				TRIP BLANK	
TB 94c	10/6/05	1511	20-ml	2.76						TRIP BLANK/SPARE	

OTE: For preservation, all samples were stored at a controlled temperature of 4° C and then packed in chemical ice for shipment.

ALD LOG # 051010 6 1 of 1

Sampler Relinquishment to HFEF TWCP Sample Custodian: Signature: J M Magnuson

Sample Custodian receipt: Signature: J M Magnuson 10/6/05 1515 Date / Time:

amples placed in locked storage: Signature: J M Magnuson 10/6/05 1515 Date / Time:

Samples retrieved from locked storage: Signature: B. A... 10/10/05 0800 Date / Time:

Shipping TID #: 4699

Relinquished By:			Discrepancies / Comments
B. A...	10-10-05	1015	*Waste Stream ID-RF-S3150-A includes IDCs 700, & 801
Received By:	Date	Time	
J. Dalley	10-10-05	1130	
Relinquished By:			
Received By:	Date	Time	

All sample analysis complete and samples removed from custody control and dispositioned. _____ Signature Date

INDEPENDENT TECHNICAL REVIEW (ITR)

SAMPLING CONTAINER CHECKLIST

Solid Sampling Batch No.: **WCS-** 0504

Drum No.: 10016886

Record the container and batch number on each page of this checklist. Fill in the right-hand column of the following table for the batch under review. To make specific comments on any item, provide reference in the box to specifically identified notes at the end of the checklist. If an item is not applicable, write "NA" in the box. Do not leave any boxes blank.

ITEM NO.	DESCRIPTION OF ITEM BEING REVIEWED	INDICATION THAT CHECK IS COMPLETE (Initial each blank box indicating that the requirement has been satisfactorily met, or provide the information otherwise requested.)	
1	Name of reviewer		RHETT BRADFORD
2	Date review starts		10/11/05
3	You are a qualified ITR per MCP-2610		RB
4	Data were reported in the proper units and correct number of significant figures [CDRS, SSRS, COC] [WAP B3-10]		RB
5	Calculations have been verified by a 100 % check [WAP B3-10]		RB
6	The data have been reviewed for transcription errors [WAP B3-10]		RB
7	The sampling data QA documentation is complete as appropriate for the point of data review and includes raw data, calculation records, COC forms, calibration records, and QC sample results, if applicable. ITR shall not be completed until the data is complete. [WAP B3-10] [Verify that each of the items indicated in the right-hand column is complete—this is not a check of the accuracy of these items, simply a check that each form in included in the data package and that each form is complete. Accuracy is checked by item 32 in which data generation and reduction is verified to be conducted in a technically correct manner in accordance with the methods used.]	G.S. Directed Sample Guidance	RB
		Core-Drilling Record Sheet (CDRS)	RB
		Solid Sample Record Sheet (SSRS)	RB
		Chain Of Custody forms (COC)	RB
		Balance Calibration Report	RB
		Equipment Cleaning Data Sheets (ECDS)	RB
		Initial deficiency reports – Identified on SBRSS (mark "NA" if none)	NA

INDEPENDENT TECHNICAL REVIEW (ITR)

SAMPLING CONTAINER CHECKLIST

Solid Sampling Batch No.: WCS- 0504

Drum No.: 10016886

ITEM NO.	DESCRIPTION OF ITEM BEING REVIEWED	INDICATION THAT CHECK IS COMPLETE (Initial each blank box indicating that the requirement has been satisfactorily met, or provide the information otherwise requested.)
QC sample results are within established control limits, and if not, the data have been appropriately qualified: (addressed by items 8 -10)		
8	An equipment blank was collected on a fully assembled coring tool and met requirements specified in the WAP for applicable cleaning batch. (ECDS) [WAP B1-2b(2,3)]	
9	The auger bit and liners used in cores for this container were cleaned and met WAP requirements. (ECDS) [WAP B1-2b(2,3)]	
10	The sampling equipment and containers (e.g., spoons, chisels, sub-samplers, vials) used for all samples from this container were cleaned (or purchased clean) and met WAP requirements. (ECDS) [WAP B1-2b(2,3)]	
11	Time between coring and sub-sampling is reported. (CDRC, SSRC) [WAP B1-2a(2), Table B3-14]	
12	Sample holding time and preservation requirements were met, or exceptions documented. (COC) [WAP B3-10] [Samples placed in refrigerator; refrigerator temp. 4 ° ± 2 ° C while samples in refrigerator; Samples shipped within 4 days from collection, or exceptions noted]	
Field sampling records are complete (i.e., they include the information specified below) [WAP B3-10] [For items 13-32, initial in the right-hand column to indicate only that the information is provided in the data package (on the form listed) and that the forms are complete — not to indicate your judgement of the accuracy of the information.]		
13	Name of sampling or examining facility (CDRS, SSRS, COC) [WAP B1-4]	
14	Waste container ID number (CDRS, SSRS, COC) [WAP B1-4]	
15	Sample ID number of each sample referenced to the waste container from which it was collected (SSRS, COC) [WAP B1-4]	
16	Type of sample matrix (i.e., solid) (CDRS, SSRS, COC) [WAP B1-4]	
17	Type of sampling equipment used (e.g., scoop, chisel) (SSRS)	
18	Quantity of sample collected (SSRS, COC)	
19	Type of sample container used (e.g., 20 mL VOA vial) and the equipment cleaning batch or manufacturer's lot number assigned to that container (SSRS, COC) [WAP B1-4]	
20	Sample preservation applied (i.e., 4°C) (COC) [WAP B1-4]	

INDEPENDENT TECHNICAL REVIEW (ITR)

SAMPLING CONTAINER CHECKLIST

Solid Sampling Batch No.: WCS- 0504

Drum No.: 10016886

ITEM NO.	DESCRIPTION OF ITEM BEING REVIEWED	INDICATION THAT CHECK IS COMPLETE (Initial each blank box indicating that the requirement has been satisfactorily met, or provide the information otherwise requested.)
21	Analysis requested (SSRS, COC) [WAP B1-4]	
22	QC designation, if applicable (e.g., trip blank, field duplicate - co-located) (SSRS, COC)	
23	COC record number (SSRS, COC)	
24	Analytical lab requested to perform the analysis (COC)	
25	Names, signatures, dates, times of sample handlers (from sample collection (initiation of custody) through acceptance by the lab doing the analysis) (COC) [B1-4]	
26	SOP document number and revision (CDRS, SSRS)	
27	Comments pertinent to coring and sampling activities (CDRS, SSRS)	
28	Coring tool identification (CDRS)	
29	Randomly selected coring location (CDRS)	
30	Depth of waste and core recovery (CDRS)	
31	Visual observations of waste and core recovery (CDRS)	
32	Randomly selected sample location(s) (SSRS)	
33	Data generation and reduction were conducted in a technically correct manner in accordance with the methods used [WAP B3-10] [The implementing procedures for the characterization methods have been deemed technically correct via specification of the method(s) in the WAP and via adequacy reviews of WAP requirements in generator site procedures by CBFO. Therefore, this check is to make sure that the procedures which were used to produce the data were followed as judged by the data product]	

NOTES: (If none, indicate NA.)

NA

INDEPENDENT TECHNICAL REVIEW (ITR)

SAMPLING CONTAINER CHECKLIST

Solid Sampling Batch No.: **WCS-** 0504

Drum No.: 10016886

REVIEWED BY: RHETT BRADFORD (Printed Name) Rhett Bradford (Signature) 10/11/05 (Date)

QUALITY ASSURANCE DATA REVIEW (QADR)

SAMPLING CONTAINER CHECKLIST

Solids Sampling Exam Batch No.: WCS- 0504

Drum No.: 10016846

Record the batch number on each page of this checklist. Fill in the right-hand column of the following table for the batch under review. To make specific comments on any item, provide reference in the box to specifically identified notes at the end of the checklist. If an item is not applicable, write "NA" in the box. Do not leave any boxes blank.

ITEM NO.	DESCRIPTION OF ITEM BEING REVIEWED	INDICATION THAT CHECK IS COMPLETE (Initial each blank box indicating that the requirement has been satisfactorily met, or provide the information otherwise requested.)	
1.	Name of reviewer		B Lee
2.	Date review starts		10-20-05
3.	You are a qualified QADR per MCP-2610		B.L.
4.	ITR for this container has been performed as evidenced by the signature release on the ITR checklist [WAP B3-10]		B.L.
5.	The sampling QA documentation is complete as appropriate for the point of data generation [WAP B-3-10] [Verify that each of the items indicated in the right-hand column is complete—this is not a check of the accuracy of the items.]	G. S. Directed Sample Guidance	B.L.
		Core-Drilling Record Sheet (CDRS)	B.L
		Solid Sample Record Sheet (SSRS)	B.L
		Chain of custody forms (COC)	B.L
		Balance calibration report	B.L.
		Equipment Cleaning Data Sheets (ECDS)	B_L
		Initial Deficiency Reports (IDR)s (mark "NA" if none)	NA

Sampling QC checks have been properly performed: QC criteria that were not met are documented: [WAP B3-10] (addressed by items 6-9)

QUALITY ASSURANCE DATA REVIEW (QADR)

SAMPLING CONTAINER CHECKLIST

Solids Sampling Exam Batch No.: WCS- 0504

Drum No.: 10016886

ITEM NO.	DESCRIPTION OF ITEM BEING REVIEWED	INDICATION THAT CHECK IS COMPLETE (Initial each blank box indicating that the requirement has been satisfactorily met, or provide the information otherwise requested.)
6	An equipment blank was collected on a fully assembled coring tool and met requirements specified in the WAP for applicable cleaning batch (ECDS) [WAP B1-2b(2,3)]	SL
7	The auger bit and liners used in cores for this container were cleaned and met WAP requirements (CDRS, ECDS) [WAP B1-2b(2,3)]	SL
8	The sampling equipment and containers (e.g., spoons, chisels, sub-samplers, vials) used for all samples from this container were cleaned (or purchased clean) and met WAP requirements (SSRS, ECDS) [WAP B1-2b(2,3)]	SL
9	Time between coring and sub-sampling is reported. (CDRC, SSRC) [WAP B1-2a(2), Table B3-14]	SL
10	Sample holding time and preservation requirements were met, or exceptions documented. (COC) [WAP B3-10a] [Samples placed in refrigerator with temperature of 4° C; Samples shipped within 4 days from collection, or exceptions noted]	SL
QAOs have been met according to the methods outlined in Section B3-3 of the WAP: [WAP B3-10] (addressed by items 11-13)		
11	Sampling accuracy as a function of sampling cross-contamination: equipment blanks met requirements for: fully assembled coring tools; auger bit and liners cleaned separately from coring tools; misc. sampling equipment that is reused [WAP B3-3] - Verified by items 6-8 of this checklist.	
12	Representativeness based on random selection of samples in both the horizontal and vertical planes of each container's waste (CDRS, SSRS)	SL
13	Representativeness based on 50% core recovery (core length/entire waste depth); if core recovery < 50%, a second location shall be selected—core with greatest recovered shall be sampled [Verify that core recovery for sampled core was > 50%.] [WAP B3-3]	SL
Requirements for raw data collection and management were met: [WAP B3-10] (addressed by items 14-20)		
14	Procedures, forms, and checklists used are current (i.e., they are from the version of the procedure in use at the time of completion) [Check headers against controlled procedures]	SL
15	IDRs identified IDRs associated with this container: NA (If None indicate NA)	NA
16	All raw data are signed and dated in reproducible ink by the person generating it	SL
17	All data are recorded clearly, legibly, and accurately, including applicable sample identification numbers	SL

QUALITY ASSURANCE DATA REVIEW (QADR)

SAMPLING CONTAINER CHECKLIST

Solids Sampling Exam Batch No.: WCS- 0504

Drum No.: 10016886

ITEM NO.	DESCRIPTION OF ITEM BEING REVIEWED	INDICATION THAT CHECK IS COMPLETE (Initial each blank box indicating that the requirement has been satisfactorily met, or provide the information otherwise requested.)
18	All changes to original data are lined out, initialed, and dated by the individual who originally collected the data or an individual authorized to change the data. The justification for the change is included as necessary to understand why the change was made and. The original data is not obliterated or otherwise disfigured so as not to be readable	SL
19	All data are transferred and reduced completely and accurately [check container and batch numbers on each page; check sample numbers and COC numbers]	SL

NOTES: (If none, indicate NA.)

NA

REVIEWED BY: Scott Lee _____ 10-20-05
Printed Name Signature Date

Appendix B
Page 1 of 1

WCA CORE-DRILLING RECORD SHEET

Date: 10/7/05	Container ID No.: 10018875		
Sample batch No.: WCS- 0504		Drum Verified: ☒ Yes	

Drilling Equipment and Tools

Tool	Serial No.	Cleaning Batch No.	Pkg. Mtl. Intact/ Not Damaged	Item Clean
Caps & disks	NA	AWEB 20	☒ Sat	
Auger bit/tip	NA	AWEB 23	☒ Sat	
Teflon liner	NA	AWEB 18	☒ Sat	
Liner cutter	NA	AWEB 19	☒ Sat	
Auger	1	AWEB 22	☐ Sat ☒ NA	☒ Sat ☐ NA
Core barrel	1	AWEB 21	☐ Sat ☒ NA	☒ Sat ☐ NA

Drilling Information

Drill-guide hole No.:	5	Waste matrix type:	SOLID
Sludge hardness:	☐ Soft ☒ Medium ☐ Hard ☐ N/A		
Top of sludge (T) height (in.):	29.2	Feed rate (in./min):	20
Spindle speed (rpm):	125	Feed force (lb):	350
Spindle torque (ft-lb) (N/A in Auto):	40	Actual drilling depth (in.):	52.9
Core extraction time: 1100	Time liner capped: 1106	Elapsed time (min.):	6

Heat and dust generation noted during the coring operation:	NONE
Visual observations of the core/container (e.g., stratification, undisturbed or pulverized, moist or dry, core texture and color) (use Comments Section if necessary):	UNDISTURBED, MOIST SANDY PASTE. YELLOW COLOR
If colocated, visual comparison with original core/container:	NA

Measured length of core (Y) (in.):	24	% Recovery (R) [R = Y/(54 -T) x 100%]:	96.8

Comments

NA

WCA core drilling has been satisfactorily completed.

Position	Printed Name	Signature	Date
Waste Characterization Operator	J. M. MAGNAN	JM Magnan	10/7/05

★

Appendix A
Page 1 of 2

WCA NORMAL SOLID SAMPLE RECORD SHEET			
Date:	10/7/05		
Sample-batch No.:	WCS 0504	Container ID No.:	10018875

PART 1 — GENERAL INFORMATION

Item	Completed
Sampling guidance has been reviewed (WCO initials):	JMM

Item	Identification No.	Calibration Due Date
Scale	720414	11/2/05
Test weight No. 1	721454	5/18/06
Test weight No. 2	721455	5/18/06

The scale daily operational check has been satisfactorily completed (✓) (WCO).	☒ Sat
The WCC and SPB are clean — no visible dust, dirt, or oil.	☒ Sat

Sampling Equipment and Tools

Item Description	Cleaning-Batch No.	Packaging Intact/ Not Damaged
Spatula	AWEB 25	☒ Sat
Liner cutter	AWEB 19	☒ Sat
		☐ Sat
		☐ Sat
		☐ Sat
		☐ Sat
Normal core drill guide No.:	5	

Sample type (check one): ☒ Core ☐ 1-gal size ☐ 1/2-gal size ☐ Other

(L) Measured length of core (in.):	24
(d) Waste density (g/in.^{3}) (provided in writing by the TWCP Project Manager):	19.892
(N) Number of samples available [(N) = (d)(L)(3.14 in.^{2}) ÷ 44 g]:	34.069
(l) Sample increment length [(l) = (L) ÷ (N)] (in.):	0.704
(R) Random number selected [enter (N) rounded to next higher whole number]:	35/10
(s) Actual sample location [(s) = (R) x (l)] (in.):	7.04
(s) Actual sample location using conversion table (in.):	7

Signature: J M Magnuson Date: 10/7/05

Appendix A
Page 2 of 2

WCA NORMAL SOLID SAMPLE RECORD SHEET (cont.)				
Container ID No.:	10018875			
PART 2 — CORE SAMPLING				
Analysis Type	Container Size/Certification No.	Sample Identification No.	Container Tare Weight (grams)	Sample Weight (grams)
VOCs	20ml / 473849	10018875 11V1	18.31	2.96
NHVOCs	20ml / 473849	10018875 11V2	18.27	2.69
Spare	20ml / 473849	10018875 11V3	18.26	2.65
Spare	20ml / 473849	10018875 11V4	18.42	2.62
Metals, semi-VOCs	250ml / 1645072	10018875 11M1	208.87	38.46
Time Teflon liner cut and opened:	1253	Time last sample collected and container sealed:		1301
Sampling elapsed time (min):	8			
Coring elapsed time (min):	6	As determined in accordance with HFEF-OI-6910 and recorded on the WCA Core-Drilling Record Sheet.		
Total elapsed time (min):	14	Total elapsed time should be < 60 min.		
PART 3 — POSTSAMPLING				
Chain-of-custody serial No.:	WCA- 939			
Comments:	NA			

Appendix A has been reviewed; it is complete and accurate.

Position	Printed Name	Signature	Date
Waste Char. Operator	S. M. MAGNAN	/M Magnan	10/7/05

★

Idaho National Laboratory - Waste Characterization Area - TWCP Chain-of-Custody

COC No. WCA-939

[HFEF-OI-6921, Rev. 3e, 5/11/04

Sampling Location: MFC / HFEF / WCA | Analytical Location: INL - INTEC | Sample Batch No.: WCS-05-04

Container Identification No.: 10018875 | Container I.D.C.: ID-RF-S3150-A* | Sample Matrix: SOLID

Chain of Custody Initiated: Signature: J M Magnuson 10/7/05 1253 Date / Time:

Sample ID Number	Sample Date	Sample Time	Container Size	Sample Weight (gm)	VOC	NHVOC	Semi VOC	Metals	Other	Comments	Disposition
10018875 11V1	10/7/05	1253	20-ml	2.96	X						
10018875 11V2	10/7/05	1255	20-ml	2.69		X					
10018875 11V3	10/7/05	1257	20-ml	2.65						SPARE	
10018875 11V4	10/7/05	1259	20-ml	2.62						SPARE	
10018875 11M1	10/7/05	1301	250-ml	38.46			X	X			
TB			20-ml		X					TRIP BLANK	
TB 3 SEE COMMENTS			20-ml			X				TRIP BLANK	
TB			20-ml							TRIP BLANK/SPARE	

NOTE: For preservation, all samples were stored at a controlled temperature of 4° C and then packed in chemical ice for shipment.

Sampler Relinquishment to HFEF TWCP Sample Custodian: Signature: J M Magnuson

ALD LOG # 057010 60 1 of 1

Sample Custodian receipt: Signature: J M Magnuson 10/7/05 1413 Date / Time:

Samples placed in locked storage: Signature: J M Magnuson 10/7/05 1413 Date / Time:

Samples retrieved from locked storage: Signature: B. A[illegible] 10/10/05 0800 Date / Time:

Shipping TID #: 4699

Relinquished By:			Discrepancies / Comments
B. A[illegible]	10-10-05	1015	*Waste Stream ID-RF-S3150-A includes IDCs 700, & 801
Received By:	Date	Time	
J Dolley	10-10-05	1130	THIS COC AND COC 938 WILL BE SHIPPED IN THE SAME CONTAINER. COC 938 HAS THE TRIP BLANKS
Relinquished By:			J M Magnuson 10/7/05
Received By:	Date	Time	

All sample analysis complete and samples removed from custody control and dispositioned. _____ Signature Date

INDEPENDENT TECHNICAL REVIEW (ITR)

SAMPLING CONTAINER CHECKLIST

Solid Sampling Batch No.: **WCS-** 0504

Drum No.: 10018875

Record the container and batch number on each page of this checklist. Fill in the right-hand column of the following table for the batch under review. To make specific comments on any item, provide reference in the box to specifically identified notes at the end of the checklist. If an item is not applicable, write "NA" in the box. Do not leave any boxes blank.

ITEM NO.	DESCRIPTION OF ITEM BEING REVIEWED		INDICATION THAT CHECK IS COMPLETE (Initial each blank box indicating that the requirement has been satisfactorily met, or provide the information otherwise requested.)
1	Name of reviewer		RHETT BRADFORD
2	Date review starts		10/11/05
3	You are a qualified ITR per MCP-2610		
4	Data were reported in the proper units and correct number of significant figures [CDRS, SSRS, COC] [WAP B3-10]		
5	Calculations have been verified by a 100 % check [WAP B3-10]		
6	The data have been reviewed for transcription errors [WAP B3-10]		
7	The sampling data QA documentation is complete as appropriate for the point of data review and includes raw data, calculation records, COC forms, calibration records, and QC sample results, if applicable. ITR shall not be completed until the data is complete. [WAP B3-10] [Verify that each of the items indicated in the right-hand column is complete—this is not a check of the accuracy of these items, simply a check that each form in included in the data package and that each form is complete. Accuracy is checked by item 32 in which data generation and reduction is verified to be conducted in a technically correct manner in accordance with the methods used.]	G.S. Directed Sample Guidance	
		Core-Drilling Record Sheet (CDRS)	
		Solid Sample Record Sheet (SSRS)	
		Chain Of Custody forms (COC)	
		Balance Calibration Report	
		Equipment Cleaning Data Sheets (ECDS)	
		Initial deficiency reports – Identified on SBRSS (mark "NA" if none)	NA

INDEPENDENT TECHNICAL REVIEW (ITR)

SAMPLING CONTAINER CHECKLIST

Solid Sampling Batch No.: **WCS-** 0504

Drum No.: 10018875

ITEM NO.	DESCRIPTION OF ITEM BEING REVIEWED	INDICATION THAT CHECK IS COMPLETE (Initial each blank box indicating that the requirement has been satisfactorily met, or provide the information otherwise requested.)
QC sample results are within established control limits, and if not, the data have been appropriately qualified: (addressed by items 8 -10)		
8	An equipment blank was collected on a fully assembled coring tool and met requirements specified in the WAP for applicable cleaning batch. (ECDS) [WAP B1-2b(2,3)]	
9	The auger bit and liners used in cores for this container were cleaned and met WAP requirements. (ECDS) [WAP B1-2b(2,3)]	
10	The sampling equipment and containers (e.g., spoons, chisels, sub-samplers, vials) used for all samples from this container were cleaned (or purchased clean) and met WAP requirements. (ECDS) [WAP B1-2b(2,3)]	
11	Time between coring and sub-sampling is reported. (CDRC, SSRC) [WAP B1-2a(2), Table B3-14]	
12	Sample holding time and preservation requirements were met, or exceptions documented. (COC) [WAP B3-10] [Samples placed in refrigerator; refrigerator temp. 4 ° ± 2 ° C while samples in refrigerator; Samples shipped within 4 days from collection, or exceptions noted]	
Field sampling records are complete (i.e., they include the information specified below) [WAP B3-10] [For items 13-32, initial in the right-hand column to indicate only that the information is provided in the data package (on the form listed) and that the forms are complete — not to indicate your judgement of the accuracy of the information.]		
13	Name of sampling or examining facility (CDRS, SSRS, COC) [WAP B1-4]	
14	Waste container ID number (CDRS, SSRS, COC) [WAP B1-4]	
15	Sample ID number of each sample referenced to the waste container from which it was collected (SSRS, COC) [WAP B1-4]	
16	Type of sample matrix (i.e., solid) (CDRS, SSRS, COC) [WAP B1-4]	
17	Type of sampling equipment used (e.g., scoop, chisel) (SSRS)	
18	Quantity of sample collected (SSRS, COC)	
19	Type of sample container used (e.g., 20 mL VOA vial) and the equipment cleaning batch or manufacturer's lot number assigned to that container (SSRS, COC) [WAP B1-4]	
20	Sample preservation applied (i.e., 4°C) (COC) [WAP B1-4]	

INDEPENDENT TECHNICAL REVIEW (ITR)

SAMPLING CONTAINER CHECKLIST

Solid Sampling Batch No.: **WCS-** 0504

Drum No.: 10018875

ITEM NO.	DESCRIPTION OF ITEM BEING REVIEWED	INDICATION THAT CHECK IS COMPLETE (Initial each blank box indicating that the requirement has been satisfactorily met, or provide the information otherwise requested.)
21	Analysis requested (SSRS, COC) [WAP B1-4]	
22	QC designation, if applicable (e.g., trip blank, field duplicate - co-located) (SSRS, COC)	
23	COC record number (SSRS, COC)	
24	Analytical lab requested to perform the analysis (COC)	
25	Names, signatures, dates, times of sample handlers (from sample collection (initiation of custody) through acceptance by the lab doing the analysis) (COC) [B1-4]	
26	SOP document number and revision (CDRS, SSRS)	
27	Comments pertinent to coring and sampling activities (CDRS, SSRS)	
28	Coring tool identification (CDRS)	
29	Randomly selected coring location (CDRS)	
30	Depth of waste and core recovery (CDRS)	
31	Visual observations of waste and core recovery (CDRS)	
32	Randomly selected sample location(s) (SSRS)	
33	Data generation and reduction were conducted in a technically correct manner in accordance with the methods used [WAP B3-10] [The implementing procedures for the characterization methods have been deemed technically correct via specification of the method(s) in the WAP and via adequacy reviews of WAP requirements in generator site procedures by CBFO. Therefore, this check is to make sure that the procedures which were used to produce the data were followed as judged by the data product]	

NOTES: (If none, indicate NA.)

NA

INDEPENDENT TECHNICAL REVIEW (ITR)

SAMPLING CONTAINER CHECKLIST

Solid Sampling Batch No.: **WCS-** 0504

Drum No.: 10018875

REVIEWED BY: RHETT BRADFORD (Printed Name) Rhett Bradford (Signature) 10/11/05 (Date)

QUALITY ASSURANCE DATA REVIEW (QADR)

SAMPLING CONTAINER CHECKLIST

Solids Sampling Exam Batch No.: WCS- 0504

Drum No.: 10018875

Record the batch number on each page of this checklist. Fill in the right-hand column of the following table for the batch under review. To make specific comments on any item, provide reference in the box to specifically identified notes at the end of the checklist. If an item is not applicable, write "NA" in the box. Do not leave any boxes blank.

ITEM NO.	DESCRIPTION OF ITEM BEING REVIEWED	INDICATION THAT CHECK IS COMPLETE (Initial each blank box indicating that the requirement has been satisfactorily met, or provide the information otherwise requested.)	
1.	Name of reviewer		SL
2.	Date review starts		10-20-05
3.	You are a qualified QADR per MCP-2610		SL
4.	ITR for this container has been performed as evidenced by the signature release on the ITR checklist [WAP B3-10]		SL
5.	The sampling QA documentation is complete as appropriate for the point of data generation [WAP B-3-10] [Verify that each of the items indicated in the right-hand column is complete—this is not a check of the accuracy of the items.]	G. S. Directed Sample Guidance	SL
		Core-Drilling Record Sheet (CDRS)	SL
		Solid Sample Record Sheet (SSRS)	SL
		Chain of custody forms (COC)	SL
		Balance calibration report	SL
		Equipment Cleaning Data Sheets (ECDS)	SL
		Initial Deficiency Reports (IDR)s (mark "NA" if none)	NA
Sampling QC checks have been properly performed; QC criteria that were not met are documented: [WAP B3-10] (addressed by items 6-9)			

QUALITY ASSURANCE DATA REVIEW (QADR)

SAMPLING CONTAINER CHECKLIST

Solids Sampling Exam Batch No.: WCS- 0504

Drum No.: 100 18875

ITEM NO.	DESCRIPTION OF ITEM BEING REVIEWED	INDICATION THAT CHECK IS COMPLETE (Initial each blank box indicating that the requirement has been satisfactorily met, or provide the information otherwise requested.)
6	An equipment blank was collected on a fully assembled coring tool and met requirements specified in the WAP for applicable cleaning batch (ECDS) [WAP B1-2b(2,3)]	BL
7	The auger bit and liners used in cores for this container were cleaned and met WAP requirements (CDRS, ECDS) [WAP B1-2b(2,3)]	BL
8	The sampling equipment and containers (e.g., spoons, chisels, sub-samplers, vials) used for all samples from this container were cleaned (or purchased clean) and met WAP requirements (SSRS, ECDS) [WAP B1-2b(2,3)]	BL
9	Time between coring and sub-sampling is reported. (CDRC, SSRC) [WAP B1-2a(2), Table B3-14]	BL
10	Sample holding time and preservation requirements were met, or exceptions documented. (COC) [WAP B3-10a] [Samples placed in refrigerator with temperature of 4° C; Samples shipped within 4 days from collection, or exceptions noted]	BL
QAOs have been met according to the methods outlined in Section B3-3 of the WAP: [WAP B3-10] (addressed by items 11-13)		
11	Sampling accuracy as a function of sampling cross-contamination; equipment blanks met requirements for: fully assembled coring tools; auger bit and liners cleaned separately from coring tools; misc. sampling equipment that is reused [WAP B3-3] - Verified by items 6-8 of this checklist.	
12	Representativeness based on random selection of samples in both the horizontal and vertical planes of each container's waste (CDRS, SSRS)	BL
13	Representativeness based on 50% core recovery (core length/entire waste depth); if core recovery < 50%, a second location shall be selected—core with greatest recovered shall be sampled [Verify that core recovery for sampled core was > 50%.] [WAP B3-3]	BL
Requirements for raw data collection and management were met: [WAP B3-10] (addressed by items 14-20)		
14	Procedures, forms, and checklists used are current (i.e., they are from the version of the procedure in use at the time of completion) [Check headers against controlled procedures]	BL
15	IDRs identified IDRs associated with this container: NA (If None indicate NA)	NA
16	All raw data are signed and dated in reproducible ink by the person generating it	BL
17	All data are recorded clearly, legibly, and accurately, including applicable sample identification numbers	BL

QUALITY ASSURANCE DATA REVIEW (QADR)

SAMPLING CONTAINER CHECKLIST

Solids Sampling Exam Batch No.: WCS- 0504

Drum No.: 10018875

ITEM NO.	DESCRIPTION OF ITEM BEING REVIEWED	INDICATION THAT CHECK IS COMPLETE (Initial each blank box indicating that the requirement has been satisfactorily met, or provide the information otherwise requested.)
18	All changes to original data are lined out, initialed, and dated by the individual who originally collected the data or an individual authorized to change the data. The justification for the change is included as necessary to understand why the change was made and. The original data is not obliterated or otherwise disfigured so as not to be readable	SL
19	All data are transferred and reduced completely and accurately [check container and batch numbers on each page; check sample numbers and COC numbers]	SL

NOTES: (If none, indicate NA.)

NA

REVIEWED BY: Scott Lee Scott Lee 10-20-05
Printed Name Signature Date

Appendix B
Page 1 of 1

WCA CORE-DRILLING RECORD SHEET

Date: 10/10/05	Container ID No.: 10018178		
Sample batch No.: WCS- 0504		Drum Verified: ☒ Yes	

Drilling Equipment and Tools

Tool	Serial No.	Cleaning Batch No.	Pkg. Mtl. Intact/ Not Damaged	Item Clean
Caps & disks	NA	AWEB - 20	☒ Sat	
Auger bit/tip	NA	AWEB - 23	☒ Sat	
Teflon liner	NA	AWEB - 18	☒ Sat	
Liner cutter	NA	AWEB - 19	☒ Sat	
Auger	1	AWEB - 22	☐ Sat ☒ NA	☒ Sat ☐ NA
Core barrel	1	AWEB - 21	☐ Sat ☒ NA	☒ Sat ☐ NA
\				

Drilling Information

Drill-guide hole No.: 3		Waste matrix type: SOLID	
Sludge hardness: ☐ Soft ☒ Medium ☐ Hard ☐ N/A			
Top of sludge (T) height (in.): 28.5		Feed rate (in./min): 20	
Spindle speed (rpm): 125		Feed force (lb): 350	
Spindle torque (ft-lb) (N/A in Auto): 40		Actual drilling depth (in.): 52.8	
Core extraction time: 1307	Time liner capped: 1313	Elapsed time (min.): 6	

Heat and dust generation noted during the coring operation:	NONE
Visual observations of the core/container (e.g., stratification, undisturbed or pulverized, moist or dry, core texture and color) (use Comments Section if necessary):	UNDISTURBED MOIST (ALMOST SATURATED) YELLOW WASTE, FINE SAND TEXTURE
If colocated, visual comparison with original core/container:	NA

Measured length of core (Y) (in.):	16	% Recovery (R) [R = Y/(54 -T) x 100%]:	62.7

Comments

NONE

WCA core drilling has been satisfactorily completed.

Position	Printed Name	Signature	Date
Waste Characterization Operator	J. M. MAGNAN	J M Magnan	10/10/05

★

Appendix A
Page 1 of 2

WCA NORMAL SOLID SAMPLE RECORD SHEET			
Date:	10/10/05		
Sample-batch No.:	WCS 0504	Container ID No.:	100018178

PART 1 — GENERAL INFORMATION

Item	Completed
Sampling guidance has been reviewed (WCO initials):	JMM

Item	Identification No.	Calibration Due Date
Scale	720414	11/02/05
Test weight No. 1	721454	05/18/06
Test weight No. 2	721455	05/18/06

The scale daily operational check has been satisfactorily completed (✓) (WCO).	☒ Sat
The WCC and SPB are clean — no visible dust, dirt, or oil.	☒ Sat

Sampling Equipment and Tools

Item Description	Cleaning-Batch No.	Packaging Intact/ Not Damaged
Spatula	AWEB - 25	☒ Sat
Liner cutter	AWEB - 19	☒ Sat
		☐ Sat
		☐ Sat
		☐ Sat
		☐ Sat
Normal core drill guide No.:	3	

Sample type (check one):	☒ Core ☐ 1-gal size ☐ 1/2-gal size	☐ Other	
(L) Measured length of core (in.):		16	
(d) Waste density (g/in.^{3}) (provided in writing by the TWCP Project Manager):		20.574	
(N) Number of samples available [(N) = (d)(L)(3.14 in.^{2}) ÷ 44 g]:		JMM 10/10/05 ~~0.92~~ + 23.49	
(l) Sample increment length [(l) = (L) ÷ (N)] (in.):		0.681	
(R) Random number selected [enter (N) rounded to next higher whole number]:		24 / 21	
(s) Actual sample location [(s) = (R) x (l)] (in.):		14.3	
(s) Actual sample location using conversion table (in.):		14 1/4	
Signature:	JM Magnuson	**Date:**	10/10/05

Appendix A
Page 2 of 2

WCA NORMAL SOLID SAMPLE RECORD SHEET (cont.)				
Container ID No.:	10018178			
PART 2 — CORE SAMPLING				
Analysis Type	Container Size/Certification No.	Sample Identification No.	Container Tare Weight (grams)	Sample Weight (grams)
VOCs	20 ml / 473849	10018178 11V1	18.30	2.85
NHVOCs	20 ml / 473849	10018178 11V2	18.17	2.95
Spare	20 ml / 473849	10018178 11V3	18.28	2.71
Spare	20 ml / 473849	10018178 11V4	18.26	2.68
Metals, semi-VOCs	250 ml / 6145072	10018178 11M1	210.39	32.28
Time Teflon liner cut and opened:	1319	Time last sample collected and container sealed:		1333
Sampling elapsed time (min):	6			
Coring elapsed time (min):	14	As determined in accordance with HFEF-OI-6910 and recorded on the WCA Core-Drilling Record Sheet.		
Total elapsed time (min):	20	Total elapsed time should be < 60 min.		
PART 3 — POSTSAMPLING				
Chain-of-custody serial No.:	WCA-940			
Comments:	NONE			
Appendix A has been reviewed; it is complete and accurate.				
Position	**Printed Name**	**Signature**		**Date**
Waste Char. Operator	J.M. MAGNAN	J M Magnan		10/10/05

★

ALL LOAD # 0510134 1 of 1

Idaho National Laboratory - Waste Characterization Area - TWCP Chain-of-Custody

COC No. WCA-940

[HFEF-OI-6921, Rev. 3e, 5/11/04

Sampling Location: MFC / HFEF / WCA | Analytical Location: INL - INTEC | Sample Batch No.: WCS-05-04

Container Identification No.: 10018178 | Container I.D.C.: ID-RF-S315-A* | Sample Matrix: SOLID

Chain of Custody Initiated: Signature: JM Magnuson 10/10/05 1323

Date / Time: 10/19/05 **

Sample ID Number	Sample Date	Sample Time	Container Size	Sample Weight (gm)	VOC	NHVOC	Semi VOC	Metals	Other	Comments	Disposition
10018178 11V1	10/10/05	1323	20-ml	2.85	X						
10018178 11V2	10/10/05	1326	20-ml	2.95		X					
10018178 11V3	10/10/05	1327	20-ml	2.71						SPARE	
10018178 11V4	10/10/05	1331	20-ml	2.68						SPARE	
10018178 11M1	10/10/05	1333	250-ml	32.28			X	X			
TB 95a	10/10/05	1438	20-ml	2.79	X					TRIP BLANK	
TB 95b	10/10/05	1438	20-ml	2.88		X				TRIP BLANK	
TB 95c	10/10/05	1438	20-ml	2.71						TRIP BLANK/SPARE	

NOTE: For preservation, all samples were stored at a controlled temperature of 4° C and then packed in chemical ice for shipment.

Sampler Relinquishment to HFEF TWCP Sample Custodian: Signature: JM Magnuson

Sample Custodian receipt: Signature: JM Magnuson 10/10/05 1440 Date / Time:

Samples placed in locked storage: JM Magnuson 10/10/05 1440 Signature: Date / Time:

Samples retrieved from locked storage: B. A... 10-13-05 1000 Signature: Date / Time:

Shipping TID #: 4692

Relinquished By:			Discrepancies / Comments
B. A...	10-13-05	1010	*Waste Stream ID-RF-S3150-A includes IDCs 700, & 801
Received By:	Date	Time	** CORRECTED CONSISTENT WITH OTHER FIELD DATA. BET 10/19/05
B...	10/13/05	1259	
Relinquished By:			
Received By:	Date	Time	

All sample analysis complete and samples removed from custody control and dispositioned. _____

Signature Date

INDEPENDENT TECHNICAL REVIEW (ITR)

SAMPLING CONTAINER CHECKLIST

Solid Sampling Batch No.: WCS- 0504

Drum No.: 10018178

Record the container and batch number on each page of this checklist. Fill in the right-hand column of the following table for the batch under review. To make specific comments on any item, provide reference in the box to specifically identified notes at the end of the checklist. If an item is not applicable, write "NA" in the box. Do not leave any boxes blank.

ITEM NO.	DESCRIPTION OF ITEM BEING REVIEWED	INDICATION THAT CHECK IS COMPLETE (Initial each blank box indicating that the requirement has been satisfactorily met, or provide the information otherwise requested.)	
1	Name of reviewer		RHETT BRADFORD
2	Date review starts		10/17/05
3	You are a qualified ITR per MCP-2610		
4	Data were reported in the proper units and correct number of significant figures [CDRS, SSRS, COC] [WAP B3-10]		
5	Calculations have been verified by a 100 % check [WAP B3-10]		
6	The data have been reviewed for transcription errors [WAP B3-10]		
7	The sampling data QA documentation is complete as appropriate for the point of data review and includes raw data, calculation records, COC forms, calibration records, and QC sample results, if applicable. ITR shall not be completed until the data is complete. [WAP B3-10] [Verify that each of the items indicated in the right-hand column is complete—this is not a check of the accuracy of these items, simply a check that each form in included in the data package and that each form is complete. Accuracy is checked by item 32 in which data generation and reduction is verified to be conducted in a technically correct manner in accordance with the methods used.]	G.S. Directed Sample Guidance	
		Core-Drilling Record Sheet (CDRS)	
		Solid Sample Record Sheet (SSRS)	
		Chain Of Custody forms (COC)	
		Balance Calibration Report	
		Equipment Cleaning Data Sheets (ECDS)	
		Initial deficiency reports – Identified on SBRSS (mark "NA" if none)	NA

INDEPENDENT TECHNICAL REVIEW (ITR)

SAMPLING CONTAINER CHECKLIST

Solid Sampling Batch No.: **WCS-** 0504

Drum No.: 10018178

ITEM NO.	DESCRIPTION OF ITEM BEING REVIEWED	INDICATION THAT CHECK IS COMPLETE (Initial each blank box indicating that the requirement has been satisfactorily met, or provide the information otherwise requested.)
QC sample results are within established control limits, and if not, the data have been appropriately qualified: (addressed by items 8 -10)		
8	An equipment blank was collected on a fully assembled coring tool and met requirements specified in the WAP for applicable cleaning batch. (ECDS) [WAP B1-2b(2,3)]	
9	The auger bit and liners used in cores for this container were cleaned and met WAP requirements. (ECDS) [WAP B1-2b(2,3)]	
10	The sampling equipment and containers (e.g., spoons, chisels, sub-samplers, vials) used for all samples from this container were cleaned (or purchased clean) and met WAP requirements. (ECDS) [WAP B1-2b(2,3)]	
11	Time between coring and sub-sampling is reported. (CDRC, SSRC) [WAP B1-2a(2), Table B3-14]	
12	Sample holding time and preservation requirements were met, or exceptions documented. (COC) [WAP B3-10] [Samples placed in refrigerator; refrigerator temp. 4 ° ± 2 ° C while samples in refrigerator; Samples shipped within 4 days from collection, or exceptions noted]	
Field sampling records are complete (i.e., they include the information specified below) [WAP B3-10] [For items 13-32, initial in the right-hand column to indicate only that the information is provided in the data package (on the form listed) and that the forms are complete — not to indicate your judgement of the accuracy of the information.]		
13	Name of sampling or examining facility (CDRS, SSRS, COC) [WAP B1-4]	
14	Waste container ID number (CDRS, SSRS, COC) [WAP B1-4]	
15	Sample ID number of each sample referenced to the waste container from which it was collected (SSRS, COC) [WAP B1-4]	
16	Type of sample matrix (i.e., solid) (CDRS, SSRS, COC) [WAP B1-4]	
17	Type of sampling equipment used (e.g., scoop, chisel) (SSRS)	
18	Quantity of sample collected (SSRS, COC)	
19	Type of sample container used (e.g., 20 mL VOA vial) and the equipment cleaning batch or manufacturer's lot number assigned to that container (SSRS, COC) [WAP B1-4]	
20	Sample preservation applied (i.e., 4°C) (COC) [WAP B1-4]	

INDEPENDENT TECHNICAL REVIEW (ITR)

SAMPLING CONTAINER CHECKLIST

Solid Sampling Batch No.: WCS- 0504

Drum No.: 10018178

ITEM NO.	DESCRIPTION OF ITEM BEING REVIEWED	INDICATION THAT CHECK IS COMPLETE (Initial each blank box indicating that the requirement has been satisfactorily met, or provide the information otherwise requested.)
21	Analysis requested (SSRS, COC) [WAP B1-4]	
22	QC designation, if applicable (e.g., trip blank, field duplicate - co-located) (SSRS, COC)	
23	COC record number (SSRS, COC)	
24	Analytical lab requested to perform the analysis (COC)	
25	Names, signatures, dates, times of sample handlers (from sample collection (initiation of custody) through acceptance by the lab doing the analysis) (COC) [B1-4]	
26	SOP document number and revision (CDRS, SSRS)	
27	Comments pertinent to coring and sampling activities (CDRS, SSRS)	
28	Coring tool identification (CDRS)	
29	Randomly selected coring location (CDRS)	
30	Depth of waste and core recovery (CDRS)	
31	Visual observations of waste and core recovery (CDRS)	
32	Randomly selected sample location(s) (SSRS)	
33	Data generation and reduction were conducted in a technically correct manner in accordance with the methods used [WAP B3-10] [The implementing procedures for the characterization methods have been deemed technically correct via specification of the method(s) in the WAP and via adequacy reviews of WAP requirements in generator site procedures by CBFO. Therefore, this check is to make sure that the procedures which were used to produce the data were followed as judged by the data product]	

NOTES: (If none, indicate NA.)

NA

INDEPENDENT TECHNICAL REVIEW (ITR)

SAMPLING CONTAINER CHECKLIST

Solid Sampling Batch No.: **WCS-** 0504

Drum No.: 100181782

REVIEWED BY: RHETT BRADFORD (Printed Name) (Signature) 10/17/05 (Date)

QUALITY ASSURANCE DATA REVIEW (QADR)

SAMPLING CONTAINER CHECKLIST

Solids Sampling Exam Batch No.: WCS- 0504

Drum No.: 10018178

Record the batch number on each page of this checklist. Fill in the right-hand column of the following table for the batch under review. To make specific comments on any item, provide reference in the box to specifically identified notes at the end of the checklist. If an item is not applicable, write "NA" in the box. Do not leave any boxes blank.

ITEM NO.	DESCRIPTION OF ITEM BEING REVIEWED	INDICATION THAT CHECK IS COMPLETE (Initial each blank box indicating that the requirement has been satisfactorily met, or provide the information otherwise requested.)	
1.	Name of reviewer		Scott Lee
2.	Date review starts		10-20-05
3.	You are a qualified QADR per MCP-2610		SL
4.	ITR for this container has been performed as evidenced by the signature release on the ITR checklist [WAP B3-10]		SL
5.	The sampling QA documentation is complete as appropriate for the point of data generation [WAP B-3-10]	G. S. Directed Sample Guidance	SL
	[Verify that each of the items indicated in the right-hand column is complete—this is not a check of the accuracy of the items.]	Core-Drilling Record Sheet (CDRS)	SL
		Solid Sample Record Sheet (SSRS)	SL
		Chain of custody forms (COC)	SL
		Balance calibration report	SL
		Equipment Cleaning Data Sheets (ECDS)	SL
		Initial Deficiency Reports (IDR)s (mark "NA" if none)	NA
	Sampling QC checks have been properly performed: QC criteria that were not met are documented: [WAP B3-10] (addressed by items 6-9)		

QUALITY ASSURANCE DATA REVIEW (QADR)

SAMPLING CONTAINER CHECKLIST

Solids Sampling Exam Batch No.: WCS- 0504

Drum No.: 10018178

ITEM NO.	DESCRIPTION OF ITEM BEING REVIEWED	INDICATION THAT CHECK IS COMPLETE (Initial each blank box indicating that the requirement has been satisfactorily met, or provide the information otherwise requested.)
6	An equipment blank was collected on a fully assembled coring tool and met requirements specified in the WAP for applicable cleaning batch (ECDS) [WAP B1-2b(2,3)]	SL
7	The auger bit and liners used in cores for this container were cleaned and met WAP requirements (CDRS, ECDS) [WAP B1-2b(2,3)]	SL
8	The sampling equipment and containers (e.g., spoons, chisels, sub-samplers, vials) used for all samples from this container were cleaned (or purchased clean) and met WAP requirements (SSRS, ECDS) [WAP B1-2b(2,3)]	SL
9	Time between coring and sub-sampling is reported. (CDRC, SSRC) [WAP B1-2a(2), Table B3-14]	SL
10	Sample holding time and preservation requirements were met, or exceptions documented. (COC) [WAP B3-10a] [Samples placed in refrigerator with temperature of 4° C; Samples shipped within 4 days from collection, or exceptions noted]	SL
QAOs have been met according to the methods outlined in Section B3-3 of the WAP: [WAP B3-10] (addressed by items 11-13)		
11	Sampling accuracy as a function of sampling cross-contamination; equipment blanks met requirements for: fully assembled coring tools; auger bit and liners cleaned separately from coring tools; misc. sampling equipment that is reused [WAP B3-3] - Verified by items 6-8 of this checklist.	
12	Representativeness based on random selection of samples in both the horizontal and vertical planes of each container's waste (CDRS, SSRS)	SL
13	Representativeness based on 50% core recovery (core length/entire waste depth); if core recovery < 50%, a second location shall be selected—core with greatest recovered shall be sampled [Verify that core recovery for sampled core was > 50%.] [WAP B3-3]	SL
Requirements for raw data collection and management were met: [WAP B3-10] (addressed by items 14-20)		
14	Procedures, forms, and checklists used are current (i.e., they are from the version of the procedure in use at the time of completion) [Check headers against controlled procedures]	SL
15	IDRs identified IDRs associated with this container: NA (If None indicate NA)	NA
16	All raw data are signed and dated in reproducible ink by the person generating it	SL
17	All data are recorded clearly, legibly, and accurately, including applicable sample identification numbers	SL

QUALITY ASSURANCE DATA REVIEW (QADR)

SAMPLING CONTAINER CHECKLIST

Solids Sampling Exam Batch No.: WCS- 0504

Drum No.: 10018178

ITEM NO.	DESCRIPTION OF ITEM BEING REVIEWED	INDICATION THAT CHECK IS COMPLETE (Initial each blank box indicating that the requirement has been satisfactorily met, or provide the information otherwise requested.)
18	All changes to original data are lined out, initialed, and dated by the individual who originally collected the data or an individual authorized to change the data. The justification for the change is included as necessary to understand why the change was made and. The original data is not obliterated or otherwise disfigured so as not to be readable	SL
19	All data are transferred and reduced completely and accurately [check container and batch numbers on each page; check sample numbers and COC numbers]	SL

NOTES: (If none, indicate NA.)

NA

10-20-05
SL

REVIEWED BY: Scott Lee SL 10-20-05 10-20-05

Printed Name Signature Date

Appendix B
Page 1 of 1

WCA CORE-DRILLING RECORD SHEET

Date: 10/11/05	Container ID No.:	10018867	
Sample batch No.: WCS- 0504	Drum Verified:	☒ Yes	

Drilling Equipment and Tools

Tool	Serial No.	Cleaning Batch No.	Pkg. Mtl. Intact/ Not Damaged	Item Clean
Caps & disks	NA	AWEB - 20	☒ Sat	
Auger bit/tip	NA	AWEB - 23	☒ Sat	
Teflon liner	NA	AWEB - 18	☒ Sat	
Liner cutter	NA	AWEB - 19	☒ Sat	
Auger	1	AWEB - 22	☐ Sat ☒ NA	☒ Sat ☐ NA
Core barrel	1	AWEB - 21	☐ Sat ☒ NA	☒ Sat ☐ NA

Drilling Information

Drill-guide hole No.:	7	Waste matrix type:	SOLID
Sludge hardness:	☐ Soft ☒ Medium ☐ Hard ☐ N/A		
Top of sludge (T) height (in.):	26.5	Feed rate (in./min):	20
Spindle speed (rpm):	125	Feed force (lb):	350
Spindle torque (ft-lb) (N/A in Auto):	40	Actual drilling depth (in.):	52.9
Core extraction time: 1239	Time liner capped:	1248	Elapsed time (min.): 9

Heat and dust generation noted during the coring operation:	NONE
Visual observations of the core/container (e.g., stratification, undisturbed or pulverized, moist or dry, core texture and color) (use Comments Section if necessary):	UNDISTURBED, DRY SANDY TEXTURE, YELLOW COLOR
If colocated, visual comparison with original core/container:	NA

Measured length of core (Y) (in.):	16	% Recovery (R) [R = Y/(54 -T) x 100%]:	58.2

Comments

NONE

WCA core drilling has been satisfactorily completed.

Position	Printed Name	Signature	Date
Waste Characterization Operator	S. M. MAGNAN	J M Magnan	10/11/05

Appendix B
Page 1 of 1

WCA CORE-DRILLING RECORD SHEET

Date:	10/11/05	Container ID No.:	10018867
Sample batch No.:	WCS-0504	Drum Verified:	☒ Yes

Drilling Equipment and Tools

Tool	Serial No.	Cleaning Batch No.	Pkg. Mtl. Intact/ Not Damaged	Item Clean
Caps & disks	NA	AWEB - 20	☒ Sat	
Auger bit/tip	NA	~~AWEB - 23~~ HFEB-1 10/10/05	☒ Sat	
Teflon liner	NA	AWEB - 18	☒ Sat	
Liner cutter	NA	AWEB - 19	☒ Sat	
Auger	3	AWEB - 22	☐ Sat ☒ NA	☒ Sat ☐ NA
Core barrel	3	AWEB - 21	☐ Sat ☒ NA	☒ Sat ☐ NA

Drilling Information

Drill-guide hole No.:	4		Waste matrix type:	SOLID	
Sludge hardness:	☐ Soft ☒ Medium ☐ Hard ☐ N/A				
~~Top of sludge (T) height (in.):~~	26.4		Feed rate (in./min):	20	
Spindle speed (rpm):	125		Feed force (lb):	350	
Spindle torque (ft-lb) (N/A in Auto):	40		Actual drilling depth (in.):	52.8	
Core extraction time:	1312	Time liner capped:	1318	Elapsed time (min.):	6

Heat and dust generation noted during the coring operation:	NONE
Visual observations of the core/container (e.g., stratification, undisturbed or pulverized, moist or dry, core texture and color) (use Comments Section if necessary):	UNDISTURBED, DRY SANDY TEXTURE, YELLOW COLOR
If colocated, visual comparison with original core/container:	SAME AS ORIGINAL

Measured length of core (Y) (in.):	16	% Recovery (R) [R = Y/(54 -T) x 100%]:	57.97

Comments

NONE

WCA core drilling has been satisfactorily completed.

Position	Printed Name	Signature	Date
Waste Characterization Operator	J. M. MAGNAN	J M Magnan	10/11/05

★

Appendix A
Page 1 of 2

WCA NORMAL SOLID SAMPLE RECORD SHEET			
Date:	10/11/05		
Sample-batch No.:	WCS 0504	Container ID No.:	100018867

PART 1 — GENERAL INFORMATION

Item	Completed
Sampling guidance has been reviewed (WCO initials):	JMM

Item	Identification No.	Calibration Due Date
Scale	720414	11/02/05
Test weight No. 1	721454	05/18/06
Test weight No. 2	721455	05/18/06

The scale daily operational check has been satisfactorily completed (✓) (WCO).	☒ Sat
The WCC and SPB are clean — no visible dust, dirt, or oil.	☒ Sat

Sampling Equipment and Tools

Item Description	Cleaning-Batch No.	Packaging Intact/ Not Damaged
Spatula	AWEB - 25	☒ Sat
Liner cutter	AWEB - 19	☒ Sat
		☐ Sat
		☐ Sat
		☐ Sat
		☐ Sat
Normal core drill guide No.:	7	

Sample type (check one): ☒ Core ☐ 1-gal size ☐ 1/2-gal size ☐ Other

(L) Measured length of core (in.):	16
(d) Waste density (g/in.^{3}) (provided in writing by the TWCP Project Manager):	12.606
(N) Number of samples available [(N) = (d)(L)(3.14 in.^{2}) ÷ 44 g]:	14.39
(l) Sample increment length [(l) = (L) ÷ (N)] (in.):	1.119
(R) Random number selected [enter (N) rounded to next higher whole number]:	15/ 13
(s) Actual sample location [(s) = (R) x (l)] (in.):	14.5
(s) Actual sample location using conversion table (in.):	14 1/2

Signature: JM Magnan **Date:** 10/11/05

Appendix A
Page 2 of 2

WCA NORMAL SOLID SAMPLE RECORD SHEET (cont.)				
Container ID No.:	10018867			
PART 2 — CORE SAMPLING				
Analysis Type	Container Size/Certification No.	Sample Identification No.	Container Tare Weight (grams)	Sample Weight (grams)
VOCs	20 ml / 473849	10018867 11V1	18.09	2.56
NHVOCs	20 ml / 473849	10018867 11V2	18.33	2.58
Spare	20 ml / 473849	10018867 11V3	18.17	2.56
Spare	20 ml / 473849	10018867 11V4	18.23	2.68
Metals, semi-VOCs	250 ml / 6145072	10018867 11M1	209.43	30.45

Time Teflon liner cut and opened:	1256	Time last sample collected and container sealed:	1308
Sampling elapsed time (min):	12		
Coring elapsed time (min):	9	As determined in accordance with HFEF-OI-6910 and recorded on the WCA Core-Drilling Record Sheet.	
Total elapsed time (min):	21	Total elapsed time should be < 60 min.	

PART 3 — POSTSAMPLING	
Chain-of-custody serial No.:	WCA-941
Comments:	NONE

Appendix A has been reviewed; it is complete and accurate.

Position	Printed Name	Signature	Date
Waste Char. Operator	J. M. MAGNAN	J M Magnan	10/11/05

★

Appendix B
Page 1 of 2

WCA CO-LOCATED SOLID SAMPLE RECORD SHEET			
Date:	10/11/05		
Sample-batch No.:	WCS0504	Container ID No.:	10018867

PART 1 — GENERAL INFORMATION

Item			Completed
Sampling guidance has been reviewed (WCO initials).			JMM
Item	Identification No.	Calibration Due Date	
Scale	720414	11/02/05	
Test weight No. 1	721454	05/18/06	
Test weight No. 2	721455	05/18/06	
The scale daily operational check has been satisfactorily completed (✓) (WCO).			☒ Sat ☐ Unsat
The WCC and SPB are clean — no visible dust, dirt, or oil.			☒ Sat ☐ Unsat

Sampling Equipment and Tools

Item Description	Cleaning-Batch No.	Packaging Intact/ Not Damaged
Spatula	AWEB - 25	☒ Sat
Liner cutter	AWEB - 19	☒ Sat
		☐ Sat
		☐ Sat
		☐ Sat
		☐ Sat
		☐ Sat

Sample type (check one):	☒ Core ☐ 1-gal size ☐ 1/2-gal size	☐ Other	
Normal-coredrill-guideNo.:	7	Co-located-core drill-guide No.:	4
(S) Actual sample location of original core and this co-located core (in.):	14 1/2		
Original and co-located cores visually similar:	☒ Yes ☐ No		
Signature:	JM Magnan	Date:	10/11/05

Appendix B
Page 2 of 2

WCA CO-LOCATED SOLID SAMPLE RECORD SHEET (cont.)				
Container ID No.:	10018867			
PART 2 — CORE SAMPLING				
Analysis Type	Container Size/Certification No.	Sample Identification No.	Container Tare Weight (grams)	Sample Weight (grams)
VOCs	20 ML / 473849	10018867 21V1	18.34	2.69
	20 ML / 473849	10018867 21V2	18.14	2.92
	20 ML / 473849	10018867 21V3	18.30	2.84
NHVOCs	20 ML / 473849	10018867 21V4	18.16	2.69
	20 ML / 473849	10018867 21V5	18.21	2.73
	20 ML / 473849	10018867 21V6	18.29	2.51
Spare	20 ML / 473849	10018867 21V7	18.21	2.65
Spare	20 ML / 473849	10018867 21V8	18.31	2.64
Metals, semi-VOCs	250 ML / 6145072	10018867 21M1	207.61	31.75
Time Teflon liner cut and opened:	1320	Time last sample collected:	1339	
Sampling elapsed time (min):	19			
Coring elapsed time (min):	6	As determined in accordance with HFEF-OI-6910 and recorded on the WCA Core-Drilling Record Sheet.		
Total elapsed time (min):	25	Total elapsed time should be < 60 min.		
PART 3 — POSTSAMPLING				
Chain-of-custody serial No.:	WCA- 942			
Comments:	NONE			
Appendix B has been reviewed; it is complete and accurate.				
Position	**Printed Name**	**Signature**	**Date**	
Waste Char. Operator	J. M. MAGNAN	J M Magnan	10/11/05	

★

Idaho National Laboratory - Waste Characterization Area - TWCP Chain-of-Custody

[HFEF-OI-6921, Rev. 3e, 5/11/04

ALDOG # 05-0134

COC No. WCA-941

Sampling Location: MFC / HFEF / WCA | Analytical Location: INL - INTEC | Sample Batch No.: WCS-05-04

Container Identification No.: 10018867 | Container I.D.C.: ID-RF-S3150-A* | Sample Matrix: ~~SOLID~~

Chain of Custody Initiated: Signature: J M Magnuson 10/11/05 1257 Date / Time:

Sample ID Number	Sample Date	Sample Time	Container Size	Sample Weight (gm)	VOC	NHVOC	Semi VOC	Metals	Other	Comments	Disposition
10018867 11V1	10/11/05	1257	20-ml	2.56	X						
10018867 11V2	10/11/05	1300	20-ml	2.58		X					
10018867 11V3	10/11/05	1303	20-ml	2.56						SPARE	
10018867 11V4	10/11/05	1305	20-ml	2.68						SPARE	
10018867 11M1	10/11/05	1308	250-ml	30.45			X	X			
TB SEE COC	940		20-ml		X					TRIP BLANK	
TB			20-ml			X				TRIP BLANK	
TB FOR TRIP	BLANKS		20-ml							TRIP BLANK/SPARE	

NOTE: For preservation, all samples were stored at a controlled temperature of 4° C and then packed in chemical ice for shipment.

Sampler Relinquishment to HFEF TWCP Sample Custodian: Signature: J M Magnuson

Sample Custodian receipt: Signature: J M Magnuson 10/11/05 1526 Date / Time:

Samples placed in locked storage: Signature: J M Magnuson 10/11/05 1526 Date / Time:

Samples retrieved from locked storage: Signature: B Adams 10-13-05 1000 Date / Time:

Shipping TID #: 4692

Relinquished By:			Discrepancies / Comments
B. Adams	10-13-05	1010	*Waste Stream ID-RF-S3150-A includes IDCs 700, & 801
Received By:	Date	Time	
BEP	10/13/05	1259	
Relinquished By:			
Received By:	Date	Time	

All sample analysis complete and samples removed from custody control and dispositioned. _____

Signature Date

Idaho National Laboratory - Waste Characterization Area - TWCP Chain-of-Custody

ALD LOG # 051013 4 1 of 1

COC No. WCA-942

[HFEF-OI-6921, Rev. 3e, 5/11/04]

Sampling Location: MFC / HFEF / WCA | Analytical Location: INL - INTEC | Sample Batch No.: WCS-05-04

Container Identification No.: 10018867 | Container I.D.C.: ID-RF-S3150-A* | Sample Matrix: SOLID

Chain of Custody Initiated: Signature: JM Magnuson 10/11/05 1323 Date / Time:

Sample ID Number	Sample Date	Sample Time	Container Size	Sample Weight (gm)	VOC	NHVOC	Semi VOC	Metals	Other	Comments	Disposition
10018867 21V1	10/11/05	1323	20-ml	2.69	X					QC	
10018867 21V2	10/11/05	1325	20-ml	2.92	X					QC	
10018867 21V3	10/11/05	1328	20-ml	2.84	X					QC	
10018867 21V4	10/11/05	1329	20-ml	2.69		X				QC	
10018867 21V5	10/11/05	1331	20-ml	2.738		X				QC	
10018867 21V6	10/11/05	1333	20-ml	2.51		X				QC	
10018867 21V7	10/11/05	1334	20-ml	2.65						SPARE/QC	
10018867 21V8	10/11/05	1336	20-ml	2.64						SPARE/QC	
10018867 21M1	10/11/05	1339	250-ml	31.75			X	X		QC	
TB			20-ml		X					TRIP BLANK	
TB SEE COC 940			20-ml			X				TRIP BLANK	
TB FOR TRIP BLANKS			20-ml							TRIP BLANK/SPARE	

NOTE: For preservation, all samples were stored at a controlled temperature of 4° C and then packed in chemical ice for shipment.

Sampler Relinquishment to HFEF TWCP Sample Custodian: Signature: JM Magnuson

Sample Custodian receipt: Signature: JM Magnuson 10/11/05 1526 Date / Time:

Samples placed in locked storage: Signature: JM Magnuson 10/11/05 1526 Date / Time:

Samples retrieved from locked storage: Signature: B. Ahlers 10-13-05 0725 Date / Time

1000 QA 10/13/05

Shipping TID #: 4692

Relinquished By:			Discrepancies / Comments
B. Ahlers	10-13-05	1010	
Received By:	Date	Time	Quality Control Samples.
BOP	10/13/05	1259	1) INNER LABLE HAS WRONG SAMPLE WEIGHT
Relinquished By:			*Waste Stream ID-RF-S3150-A Includes IDCs 700, & 801
Received By:	Date	Time	

All sample analysis complete and samples removed from custody control and dispositioned. _____ Signature Date

INDEPENDENT TECHNICAL REVIEW (ITR)

SAMPLING CONTAINER CHECKLIST

Solid Sampling Batch No.: WCS- 0504

Drum No.: 10018867

Record the container and batch number on each page of this checklist. Fill in the right-hand column of the following table for the batch under review. To make specific comments on any item, provide reference in the box to specifically identified notes at the end of the checklist. If an item is not applicable; write "NA" in the box. Do not leave any boxes blank.

ITEM NO.	DESCRIPTION OF ITEM BEING REVIEWED		INDICATION THAT CHECK IS COMPLETE (Initial each blank box indicating that the requirement has been satisfactorily met, or provide the information otherwise requested.)
1	Name of reviewer		RHETT BRADFORD
2	Date review starts		10/17/05
3	You are a qualified ITR per MCP-2610		RB
4	Data were reported in the proper units and correct number of significant figures [CDRS, SSRS, COC] [WAP B3-10]		RB
5	Calculations have been verified by a 100 % check [WAP B3-10]		RB
6	The data have been reviewed for transcription errors [WAP B3-10]		RB
7	The sampling data QA documentation is complete as appropriate for the point of data review and includes raw data, calculation records, COC forms, calibration records, and QC sample results, if applicable. ITR shall not be completed until the data is complete. [WAP B3-10] [Verify that each of the items indicated in the right-hand column is complete—this is not a check of the accuracy of these items, simply a check that each form in included in the data package and that each form is complete. Accuracy is checked by item 32 in which data generation and reduction is verified to be conducted in a technically correct manner in accordance with the methods used.]	G.S. Directed Sample Guidance	RB
		Core-Drilling Record Sheet (CDRS)	RB
		Solid Sample Record Sheet (SSRS)	RB
		Chain Of Custody forms (COC)	RB
		Balance Calibration Report	RB
		Equipment Cleaning Data Sheets (ECDS)	RB
		Initial deficiency reports – Identified on SBRSS (mark "NA" if none)	NA

INDEPENDENT TECHNICAL REVIEW (ITR)

SAMPLING CONTAINER CHECKLIST

Solid Sampling Batch No.: WCS- 0504

Drum No.: 100 18867

ITEM NO.	DESCRIPTION OF ITEM BEING REVIEWED	INDICATION THAT CHECK IS COMPLETE (Initial each blank box indicating that the requirement has been satisfactorily met, or provide the information otherwise requested.)
QC sample results are within established control limits, and if not, the data have been appropriately qualified: (addressed by items 8 -10)		
8	An equipment blank was collected on a fully assembled coring tool and met requirements specified in the WAP for applicable cleaning batch. (ECDS) [WAP B1-2b(2,3)]	
9	The auger bit and liners used in cores for this container were cleaned and met WAP requirements. (ECDS) [WAP B1-2b(2,3)]	
10	The sampling equipment and containers (e.g., spoons, chisels, sub-samplers, vials) used for all samples from this container were cleaned (or purchased clean) and met WAP requirements. (ECDS) [WAP B1-2b(2,3)]	
11	Time between coring and sub-sampling is reported. (CDRC, SSRC) [WAP B1-2a(2), Table B3-14]	
12	Sample holding time and preservation requirements were met, or exceptions documented. (COC) [WAP B3-10] [Samples placed in refrigerator; refrigerator temp. 4 ° ± 2 ° C while samples in refrigerator; Samples shipped within 4 days from collection, or exceptions noted]	
Field sampling records are complete (i.e., they include the information specified below) [WAP B3-10] [For items 13-32, initial in the right-hand column to indicate only that the information is provided in the data package (on the form listed) and that the forms are complete — not to indicate your judgement of the accuracy of the information.]		
13	Name of sampling or examining facility (CDRS, SSRS, COC) [WAP B1-4]	
14	Waste container ID number (CDRS, SSRS, COC) [WAP B1-4]	
15	Sample ID number of each sample referenced to the waste container from which it was collected (SSRS, COC) [WAP B1-4]	
16	Type of sample matrix (i.e., solid) (CDRS, SSRS, COC) [WAP B1-4]	
17	Type of sampling equipment used (e.g., scoop, chisel) (SSRS)	
18	Quantity of sample collected (SSRS, COC)	
19	Type of sample container used (e.g., 20 mL VOA vial) and the equipment cleaning batch or manufacturer's lot number assigned to that container (SSRS, COC) [WAP B1-4]	
20	Sample preservation applied (i.e., 4°C) (COC) [WAP B1-4]	

INDEPENDENT TECHNICAL REVIEW (ITR)

SAMPLING CONTAINER CHECKLIST

Solid Sampling Batch No.: WCS- 0504

Drum No.: 10018867

ITEM NO.	DESCRIPTION OF ITEM BEING REVIEWED	INDICATION THAT CHECK IS COMPLETE (Initial each blank box indicating that the requirement has been satisfactorily met, or provide the information otherwise requested.)
21	Analysis requested (SSRS, COC) [WAP B1-4]	
22	QC designation, if applicable (e.g., trip blank, field duplicate - co-located) (SSRS, COC)	
23	COC record number (SSRS, COC)	
24	Analytical lab requested to perform the analysis (COC)	
25	Names, signatures, dates, times of sample handlers (from sample collection (initiation of custody) through acceptance by the lab doing the analysis) (COC) [B1-4]	
26	SOP document number and revision (CDRS, SSRS)	
27	Comments pertinent to coring and sampling activities (CDRS, SSRS)	
28	Coring tool identification (CDRS)	
29	Randomly selected coring location (CDRS)	
30	Depth of waste and core recovery (CDRS)	
31	Visual observations of waste and core recovery (CDRS)	
32	Randomly selected sample location(s) (SSRS)	
33	Data generation and reduction were conducted in a technically correct manner in accordance with the methods used [WAP B3-10] [The implementing procedures for the characterization methods have been deemed technically correct via specification of the method(s) in the WAP and via adequacy reviews of WAP requirements in generator site procedures by CBFO. Therefore, this check is to make sure that the procedures which were used to produce the data were followed as judged by the data product]	

NOTES: (If none, indicate NA.)

NA

INDEPENDENT TECHNICAL REVIEW (ITR)

SAMPLING CONTAINER CHECKLIST

Solid Sampling Batch No.: **WCS-** 0504

Drum No.: 10018867

REVIEWED BY: RHETT BRADFORD (Printed Name) Rhett Bradford (Signature) 10/17/05 (Date)

QUALITY ASSURANCE DATA REVIEW (QADR)

SAMPLING CONTAINER CHECKLIST

Solids Sampling Exam Batch No.: WCS- 0504

Drum No.: 10018867

Record the batch number on each page of this checklist. Fill in the right-hand column of the following table for the batch under review. To make specific comments on any item, provide reference in the box to specifically identified notes at the end of the checklist. If an item is not applicable, write "NA" in the box. Do not leave any boxes blank.

ITEM NO.	DESCRIPTION OF ITEM BEING REVIEWED	INDICATION THAT CHECK IS COMPLETE (Initial each blank box indicating that the requirement has been satisfactorily met, or provide the information otherwise requested.)	
1.	Name of reviewer		BL
2.	Date review starts		10-20-05
3.	You are a qualified QADR per MCP-2510		BL
4.	ITR for this container has been performed as evidenced by the signature release on the ITR checklist [WAP B3-10]		BL
5.	The sampling QA documentation is complete as appropriate for the point of data generation [WAP B-3-10] [Verify that each of the items indicated in the right-hand column is complete—this is not a check of the accuracy of the items.]	G. S. Directed Sample Guidance	BL
		Core-Drilling Record Sheet (CDRS)	BL
		Solid Sample Record Sheet (SSRS)	BL
		Chain of custody forms (COC)	BL
		Balance calibration report	BL
		Equipment Cleaning Data Sheets (ECDS)	BL
		Initial Deficiency Reports (IDR)s (mark "NA" if none)	NA
Sampling QC checks have been properly performed: QC criteria that were not met are documented: [WAP B3-10] (addressed by items 6-9)			

QUALITY ASSURANCE DATA REVIEW (QADR)

SAMPLING CONTAINER CHECKLIST

Solids Sampling Exam Batch No.: WCS- 0504

Drum No.: 10018867

ITEM NO.	DESCRIPTION OF ITEM BEING REVIEWED	INDICATION THAT CHECK IS COMPLETE (Initial each blank box indicating that the requirement has been satisfactorily met, or provide the information otherwise requested.)
6	An equipment blank was collected on a fully assembled coring tool and met requirements specified in the WAP for applicable cleaning batch (ECDS) [WAP B1-2b(2,3)]	BL
7	The auger bit and liners used in cores for this container were cleaned and met WAP requirements (CDRS, ECDS) [WAP B1-2b(2,3)]	BL
8	The sampling equipment and containers (e.g., spoons, chisels, sub-samplers, vials) used for all samples from this container were cleaned (or purchased clean) and met WAP requirements (SSRS, ECDS) [WAP B1-2b(2,3)]	BL
9	Time between coring and sub-sampling is reported. (CDRC, SSRC) [WAP B1-2a(2), Table B3-14]	BL
10	Sample holding time and preservation requirements were met, or exceptions documented. (COC) [WAP B3-10a] [Samples placed in refrigerator with temperature of 4° C; Samples shipped within 4 days from collection, or exceptions noted]	BL
QAOs have been met according to the methods outlined in Section B3-3 of the WAP: [WAP B3-10] (addressed by items 11-13)		
11	Sampling accuracy as a function of sampling cross-contamination; equipment blanks met requirements for: fully assembled coring tools; auger bit and liners cleaned separately from coring tools; misc. sampling equipment that is reused [WAP B3-3] - Verified by items 6-8 of this checklist.	
12	Representativeness based on random selection of samples in both the horizontal and vertical planes of each container's waste (CDRS, SSRS)	BL
13	Representativeness based on 50% core recovery (core length/entire waste depth): if core recovery < 50%, a second location shall be selected—core with greatest recovered shall be sampled [Verify that core recovery for sampled core was > 50%.] [WAP B3-3]	BL
Requirements for raw data collection and management were met: [WAP B3-10] (addressed by items 14-20)		
14	Procedures, forms, and checklists used are current (i.e., they are from the version of the procedure in use at the time of completion) [Check headers against controlled procedures]	BL
15	IDRs identified IDRs associated with this container: NA (If None indicate NA)	NA
16	All raw data are signed and dated in reproducible ink by the person generating it	BL
17	All data are recorded clearly, legibly, and accurately, including applicable sample identification numbers	BL

QUALITY ASSURANCE DATA REVIEW (QADR)

SAMPLING CONTAINER CHECKLIST

Solids Sampling Exam Batch No.: WCS- 0504

Drum No.: 10018867

ITEM NO.	DESCRIPTION OF ITEM BEING REVIEWED	INDICATION THAT CHECK IS COMPLETE (Initial each blank box indicating that the requirement has been satisfactorily met, or provide the information otherwise requested.)
18	All changes to original data are lined out, initialed, and dated by the individual who originally collected the data or an individual authorized to change the data. The justification for the change is included as necessary to understand why the change was made and. The original data is not obliterated or otherwise disfigured so as not to be readable	SL
19	All data are transferred and reduced completely and accurately [check container and batch numbers on each page; check sample numbers and COC numbers]	SL

NOTES: (If none, indicate NA.)

NA for Both Normal + Co-Located

REVIEWED BY: Scott Lee (Printed Name) Scott Lee (Signature) 10-20-05 (Date)

INEEL
CALIBRATION INPUT DATA

11/2/2004

NAME: JOHN SILVA	BADGE: 31614	PH: 533-7614	AREA: EBRII	BLDG: 791	RM: A-16

ID Number: 720414 Mfr: OHAUS Model: E0D120 Noun Name: ELECTRONIC BALANCE

Calibration Date: 11/2/2004

Next Cal Due Date: 11/2/2005

Charge Level: 4

Repair Charge Level: 0

Material Amount: 0

Charge Number: 200100418

Cal Work Inst ID: 3057L

Outside Vendor:

	ACTION CODE	AS FOUND
1	☐ Acceptance Test	1 ◉ In Tolerance
2	☐ Special Test	2 ○ Out of Tolerance >1x <2x
3	☑ Calibration to MFG Specs	3 ○ Out of Tolerance >2x <3x
4	☐ Clean	4 ○ Out of Tolerance >3x <5x
5	☐ Limited Calibration	5 ○ Out of Tolerance >5x
6	☐ Functional Check	6 ○ Out of Tolerance-Undetermined
7	☐ Performance Check	7 ☐ Inoperative
8	☐ Modify	8 ☐ Damaged
9	☐ Repair-needs Charge Level	9 ☐ Not Used
10	☐ Other	10 ☐ Not Determined
		11 ☐ Excessed
		12 ☐ Update

Calibrated By: Steve Palmer S#: 56710 Phone: 526-2761

CALIBRATION STANDARDS USED

714860							

STANDARDS USED ARE TRACEABLE TO THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY DERIVED FROM ACCEPTED VALUES FOR NATURAL PHYSICAL CONSTANTS, OR DERIVED FROM THE RATIO TYPE OF SELF CALIBRATION TECHNIQUES

LABORATORY TEMPERATURE AND HUMIDITY

Physical	STD. 23.0 ° +/-0.3 ° C (40-55% RH)	Electronic	STD. 23.0 ° +/-0.5 ° C (30-45% RH)
Dimensional	STD. 20.0 ° +/-0.25 ° C (30-45% RH)		STD. 23.0 ° +/-2.0 ° C (20-50% RH)
	CAL. 20.0 ° +/-1.0 ° C (20-50% RH)		

Manufacturer's environmental specifications are evaluated for conformance when calibrations are performed outside the above stated conditions.

OUT OF TOLERANCE CONDITIONS FOUND DURING CALIBRATION

NOMINAL (STD)	UNITS	AS FOUND (UUT)	MFG. ACCURACY

COMMENTS

BALANCE / SCALE UNCERTAINTY

PROPERTY #: 720414 DATE: 11/2/04 TECH: PALMER

REPEATABILITY TEST		
ZERO READING		F/S READING
0		4000.02
0		4000.02
0		4000.03
0		4000.03
0		4000.03
0		4000.03
0		4000.02
0		4000.02
0		4000.02
0		4000.04

$\sigma_1 = \sqrt{\frac{\sum d^2}{N-1}}$

$\sigma_1 =$ 0

$\sigma_2 = \sqrt{\frac{\sum d^2}{N-1}}$

$\sigma_2 =$ .006992058

$\sigma_{REPEATABILITY} = \sqrt{\frac{(\sigma_1)^2 + (\sigma_2)^2}{2}} =$ .00494413 (ONE STANDARD DEVIATION)

MFG REPEATABILITY SPECIFICATION = ± .005 PASS ☐ FAIL ☐

LINEARITY TEST	
0.10	2000.00
0.50	3000.00
1.00	4000.02
5.00	
10.00	
50.00	
100.00	
500.00	
999.99	

LINEARITY ERROR = ± .02 - .01

MFG LINEARITY SPECIFICATIONS = ± .02 PASS ☐ FAIL ☐

TOTAL UNCERTAINTY FOR DIRECT READING

2 X MFG REPEATABILITY SPEC.	+	MFG LINEARITY SPEC.	+	ONE DIVISION	=	TOTAL ASSIGNED UNCERTAINTY
± .01	+	± .02	+	± .01	=	± .04g

INEEL
CALIBRATION INPUT DATA

11/22/2004

NAME: JOHN SILVA	BADGE: 31614	PH: 533-7614	AREA: EBRII	BLDG: 791	RM: A-16

ID Number: 721455 Mfr: TROEMNER Model: 2 KG Noun Name: WEIGHT

Calibration Date: 11/18/2004

Next Cal Due Date: 5/18/2006

Charge Level: 4

Repair Charge Level: 0

Material Amount: 0

Charge Number: 200100418

Cal Work Inst ID: 3118G

Outside Vendor:

	ACTION CODE		AS FOUND
1	☐ Acceptance Test	1	◉ In Tolerance
2	☐ Special Test	2	○ Out of Tolerance >1x <2x
3	☑ Calibration to MFG Specs	3	○ Out of Tolerance >2x <3x
4	☐ Clean	4	○ Out of Tolerance >3x <5x
5	☐ Limited Calibration	5	○ Out of Tolerance >5x
6	☐ Functional Check	6	○ Out of Tolerance-Undetermined
7	☐ Performance Check	7	☐ Inoperative
8	☐ Modify	8	☐ Damaged
9	☐ Repair-needs Charge Level	9	☐ Not Used
10	☐ Other	10	☐ Not Determined
		11	☐ Excessed
		12	☐ Update

Calibrated By: Ken Anderson S#: 36869 Phone: 526-2761

CALIBRATION STANDARDS USED

336156	714982	716140	706685	713993			

STANDARDS USED ARE TRACEABLE TO THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY DERIVED FROM ACCEPTED VALUES FOR NATURAL PHYSICAL CONSTANTS. OR DERIVED FROM THE RATIO TYPE OF SELF CALIBRATION TECHNIQUES

LABORATORY TEMPERATURE AND HUMIDITY

Physical	STD. 23.0 ° +/-0.3 ° C (40-55% RH)	Electronic	STD. 23.0 ° +/-0.5 ° C (30-45% RH)
Dimensional	STD. 20.0 ° +/-0.25 ° C (30-45% RH)		STD. 23.0 ° +/-2.0 ° C (20-50% RH)
	CAL. 20.0 ° +/-1.0 ° C (20-50% RH)		

Manufacturer's environmental specifications are evaluated for conformance when calibrations are performed outside the above stated conditions.

OUT OF TOLERANCE CONDITIONS FOUND DURING CALIBRATION

NOMINAL (STD)	UNITS	AS FOUND (UUT)	MFG. ACCURACY

COMMENTS

INEEL
Standards and Calibration Laboratory
Calibration Data Sheet
Date: 11/18/2004
Property # : 721455

MANUFACTURER : TROEMNER

DUE DATE : 5/18/2006

CLASS : 1

CWI : 3118G

NOMINAL MASS DESIGNATION (GRAMS)	TRUE DENSITY (g/cu cm)	TRUE MASS CORRECTION (MILLIGRAMS)	APP. MASS CORRECTION 8.4g/cu cm (MILLIGRAMS)	APP. MASS CORRECTION 8.0g/cu cm (MILLIGRAMS)
2000.000000	7.850000	7.714587	-11.997936	1.981221

TECHNICIAN: K.ANDERSON

TECH SIGNATURE: K Anderson

CAL 10 SET

NOTE: WEIGHTS ADJUSTED TO AN APPARENT DENSITY OF 8.0 g/cu cm

SERIAL #2

INEEL
CALIBRATION INPUT DATA

11/22/2004

NAME: JOHN SILVA	BADGE: 31614	PH: 533-7614	AREA: EBRII	BLDG: 791	RM: A-16

ID Number: 721454 Mfr: TROEMNER Model: 2 KG Noun Name: WEIGHT

Calibration Date: 11/18/2004

Next Cal Due Date: 5/18/2006

Charge Level: 4

Repair Charge Level: 0

Material Amount: 0

Charge Number: 200100418

Cal Work Inst ID: 3118G

Outside Vendor:

Calibrated By: Ken Anderson S#: 36869 Phone: 526-2761

ACTION CODE			AS FOUND	
1	☐	Acceptance Test	1	• In Tolerance
2	☐	Special Test	2	○ Out of Tolerance >1x <2x
3	☑	Calibration to MFG Specs	3	○ Out of Tolerance >2x <3x
4	☐	Clean	4	○ Out of Tolerance >3x <5x
5	☐	Limited Calibration	5	○ Out of Tolerance >5x
6	☐	Functional Check	6	○ Out of Tolerance-Undetermined
7	☐	Performance Check	7	☐ Inoperative
8	☐	Modify	8	☐ Damaged
9	☐	Repair-needs Charge Level	9	☐ Not Used
10	☐	Other	10	☐ Not Determined
			11	☐ Excessed
			12	☐ Update

CALIBRATION STANDARDS USED

336156	714982	716140	706685	713993			

STANDARDS USED ARE TRACEABLE TO THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY DERIVED FROM ACCEPTED VALUES FOR NATURAL PHYSICAL CONSTANTS. OR DERIVED FROM THE RATIO TYPE OF SELF CALIBRATION TECHNIQUES

LABORATORY TEMPERATURE AND HUMIDITY

Physical	STD. 23.0 ° +/-0.3 ° C (40-55% RH)	Electronic	STD. 23.0 ° +/-0.5 ° C (30-45% RH)
Dimensional	STD. 20.0 ° +/-0.25 ° C (30-45% RH)		STD. 23.0 ° +/-2.0 ° C (20-50% RH)
	CAL. 20.0 ° +/-1.0 ° C (20-50% RH)		

Manufacturer's environmental specifications are evaluated for conformance when calibrations are performed outside the above stated conditions.

OUT OF TOLERANCE CONDITIONS FOUND DURING CALIBRATION

NOMINAL (STD)	UNITS	AS FOUND (UUT)	MFG. ACCURACY

COMMENTS

INEEL
Standards and Calibration Laboratory
Calibration Data Sheet
Date: 11/18/2004
Property # : 721454

MANUFACTURER : TROEMNER

DUE DATE : 5/18/2006

CLASS : 1

CWI : 3118G

NOMINAL MASS DESIGNATION (GRAMS)	TRUE DENSITY (g/cu cm)	TRUE MASS CORRECTION (MILLIGRAMS)	APP. MASS CORRECTION 8.4g/cu cm (MILLIGRAMS)	APP. MASS CORRECTION 8.0g/cu cm (MILLIGRAMS)
2000.000000	7.850000	7.715649	-11.996874	1.982283

TECHNICIAN: K.ANDERSON

TECH SIGNATURE: K Anderson

CAL ID SERIAL

NOTE: WEIGHTS ADJUSTED TO AN APPARENT DENSITY OF 8.0 g/cu cm

SERIAL #1

Appendix E
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CORING AND SAMPLING EQUIPMENT CLEANING — DATA SHEET	
Equipment cleaning-batch No.:	AWEB 18
Description of items cleaned:	TEFLON LINERS
Number of items cleaned:	312
Serial Nos. assigned to reusable (auger or core barrel) items cleaned:	NA
Item selected for collecting equipment blank sample:	312

All cleaned items have been placed in Ziplok® storage bags (or equivalent).			
Signature:	J M Magnuson	**Date:**	4/2/03

Each package has been labeled with the unique cleaning-batch identification number.			
Signature:	J M Magnuson	**Date:**	4/2/03

All items have been segregated pending analysis results.			
Signature:	J M Magnuson	**Date:**	4/11/03

Analysis results have been reviewed and are satisfactory (notice of confirmation attached). The items have been released for use and the backup sample discarded.			
WCA Systems Engineer	J M Magnuson	**Date:**	5/8/03

Appendix E

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CORING AND SAMPLING EQUIPMENT CLEANING — DATA SHEET	
Equipment cleaning-batch No.:	AWEB 19
Description of items cleaned:	TEFLON LINER CUTTER
Number of items cleaned:	311
Serial Nos. assigned to reusable (auger or core barrel) items cleaned:	NA
Item selected for collecting equipment blank sample:	201

All cleaned items have been placed in Ziplok® storage bags (or equivalent).			
Signature:	J M Magnan	**Date:**	4/2/03

Each package has been labeled with the unique cleaning-batch identification number.			
Signature:	J M Magnan	**Date:**	4/2/03

All items have been segregated pending analysis results.			
Signature:	J M Magnan	**Date:**	4/11/03

Analysis results have been reviewed and are satisfactory (notice of confirmation attached). The items have been released for use and the backup sample discarded.			
WCA Systems Engineer	J M Magnan	**Date:**	5/8/03

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CORING AND SAMPLING EQUIPMENT CLEANING — DATA SHEET	
Equipment cleaning-batch No.:	AWEB 20
Description of items cleaned:	LARGE AND SMALL CAPS
	A DISKS
Number of items cleaned:	50 LARGE 250 SMALL
Serial Nos. assigned to reusable (auger or core barrel) items cleaned:	NA
Item selected for collecting equipment blank sample:	32(L) + 201(S)

All cleaned items have been placed in Ziplok® storage bags (or equivalent).			
Signature:	J M Magnan	**Date:**	4/2/03

Each package has been labeled with the unique cleaning-batch identification number.			
Signature:	J M Magnan	**Date:**	4/2/03

All items have been segregated pending analysis results.			
Signature:	J M Magnan	**Date:**	4/11/03

Analysis results have been reviewed and are satisfactory (notice of confirmation attached). The items have been released for use and the backup sample discarded.			
WCA Systems Engineer	J M Magnan	**Date:**	5/8/03

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CORING AND SAMPLING EQUIPMENT CLEANING — DATA SHEET	
Equipment cleaning-batch No.:	AWEB 21
Description of items cleaned:	CORE BARREL
Number of items cleaned:	6
Serial Nos. assigned to reusable (auger or core barrel) items cleaned:	1, 2, 3, 4, 5, & 6
Item selected for collecting equipment blank sample:	3

All cleaned items have been placed in Ziplok® storage bags (or equivalent).			
Signature:	J M Magnuson	**Date:**	4/2/03

Each package has been labeled with the unique cleaning-batch identification number.			
Signature:	J M Magnuson	**Date:**	4/2/03

All items have been segregated pending analysis results.			
Signature:	J M Magnuson	**Date:**	4/11/03

Analysis results have been reviewed and are satisfactory (notice of confirmation attached). The items have been released for use and the backup sample discarded.			
WCA Systems Engineer	J M Magnuson	**Date:**	5/8/03

Appendix E
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CORING AND SAMPLING EQUIPMENT CLEANING — DATA SHEET	
Equipment cleaning-batch No.:	AWEB 22
Description of items cleaned:	AUGER
Number of items cleaned:	3
Serial Nos. assigned to reusable (auger or core barrel) items cleaned:	1, 2, & 3
Item selected for collecting equipment blank sample:	1

All cleaned items have been placed in Ziplok® storage bags (or equivalent).			
Signature:	J M Maynard	**Date:**	4/2/03

Each package has been labeled with the unique cleaning-batch identification number.			
Signature:	J M Maynard	**Date:**	4/2/03

All items have been segregated pending analysis results.			
Signature:	J M Maynard	**Date:**	4/11/03

Analysis results have been reviewed and are satisfactory (notice of confirmation attached). The items have been released for use and the backup sample discarded.			
WCA Systems Engineer	J M Maynard	**Date:**	5/8/03

Appendix E
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CORING AND SAMPLING EQUIPMENT CLEANING — DATA SHEET	
Equipment cleaning-batch No.:	AWEB 23
Description of items cleaned:	AUGER BIT AND BUTTON HEAD SCREWS
Number of items cleaned:	107
Serial Nos. assigned to reusable (auger or core barrel) items cleaned:	NA
Item selected for collecting equipment blank sample:	36

All cleaned items have been placed in Ziplok® storage bags (or equivalent).			
Signature:	J M Magnan	**Date:**	4/2/03

Each package has been labeled with the unique cleaning-batch identification number.			
Signature:	J M Magnan	**Date:**	4/2/03

All items have been segregated pending analysis results.			
Signature:	J M Magnan	**Date:**	4/11/03

Analysis results have been reviewed and are satisfactory (notice of confirmation attached). The items have been released for use and the backup sample discarded.			
WCA Systems Engineer	J M Magnan	**Date:**	5/8/03

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CORING AND SAMPLING EQUIPMENT CLEANING — DATA SHEET	
Equipment cleaning-batch No.:	AWEB 24
Description of items cleaned:	FULLY ASSEMBLED CORING TOOL
AUGER #1, CORE BARREL #3, TEFLON LINER,	
AUGER BIT + BUTTON HEAD SCREWS	
Number of items cleaned:	1 UNIT
Serial Nos. assigned to reusable (auger or core barrel) items cleaned:	SEE ABOVE
Item selected for collecting equipment blank sample:	SEE ABOVE

All cleaned items have been placed in Ziplok® storage bags (or equivalent).			
Signature:	J M Magnan	Date:	4/2/03

Each package has been labeled with the unique cleaning-batch identification number.			
Signature:	J M Magnan	Date:	4/2/03

All items have been segregated pending analysis results.			
Signature:	J M Magnan	Date:	4/11/03

Analysis results have been reviewed and are satisfactory (notice of confirmation attached). The items have been released for use and the backup sample discarded.			
WCA Systems Engineer	J M Magnan	Date:	5/8/03

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CORING AND SAMPLING EQUIPMENT CLEANING — DATA SHEET	
Equipment cleaning-batch No.:	AWEB 25
Description of items cleaned:	SAMPLE SCOOPS
3 BOXES OF 100, PURCHASED STERILE + INDIVIDUALLY PACKAGED	
Number of items cleaned:	NA
Serial Nos. assigned to reusable (auger or core barrel) items cleaned:	NA
Item selected for collecting equipment blank sample:	13(BOX 1) 37(BOX 2) 73(BOX 3)

All cleaned items have been placed in Ziplok® storage bags (or equivalent).			
Signature:	NA	**Date:**	

Each package has been labeled with the unique cleaning-batch identification number.			
Signature:	BOXES LABELED JM Magnan	**Date:**	4/2/03

All items have been segregated pending analysis results.			
Signature:	JM Magnan	**Date:**	4/11/03

Analysis results have been reviewed and are satisfactory (notice of confirmation attached). The items have been released for use and the backup sample discarded.			
WCA Systems Engineer	JM Magnan	**Date:**	5/8/03

Appendix E
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CORING AND SAMPLING EQUIPMENT CLEANING — DATA SHEET	
Equipment cleaning-batch No.:	AWEB 26
Description of items cleaned:	CHISELS
Number of items cleaned:	27
Serial Nos. assigned to reusable (auger or core barrel) items cleaned:	NA
Item selected for collecting equipment blank sample:	9

All cleaned items have been placed in Ziplok® storage bags (or equivalent).			
Signature:	J M Magnan	**Date:**	4/2/03

Each package has been labeled with the unique cleaning-batch identification number.			
Signature:	J M Magnan	**Date:**	4/2/03

All items have been segregated pending analysis results.			
Signature:	J M Magnan	**Date:**	4/11/03

Analysis results have been reviewed and are satisfactory (notice of confirmation attached). The items have been released for use and the backup sample discarded.			
WCA Systems Engineer	J M Magnan	**Date:**	5/8/03

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CORING AND SAMPLING EQUIPMENT CLEANING — DATA SHEET	
Equipment cleaning-batch No.:	AWEB27
Description of items cleaned:	TEFLON LINER EXTRUDER DOES NOT TOUCH SAMPLE BUT CLEANED AND BLANK TAKEN
Number of items cleaned:	3
Serial Nos. assigned to reusable (auger or core barrel) items cleaned:	NA
Item selected for collecting equipment blank sample:	1

All cleaned items have been placed in Ziplok® storage bags (or equivalent).			
Signature:	J M Magnan	Date:	4/2/03

Each package has been labeled with the unique cleaning-batch identification number.			
Signature:	J M Magnan	Date:	4/2/03

All items have been segregated pending analysis results.			
Signature:	J M Magnan	Date:	4/11/03

Analysis results have been reviewed and are satisfactory (notice of confirmation attached). The items have been released for use and the backup sample discarded.			
WCA Systems Engineer	J M Magnan	Date:	5/8/03

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CORING AND SAMPLING EQUIPMENT CLEANING — DATA SHEET	
Equipment cleaning-batch No.:	AWGB 28
Description of items cleaned:	DI WATER USED TO CLEAN AND COLLECT EQUIPMENT BLANKS
Number of items cleaned:	NA
Serial Nos. assigned to reusable (auger or core barrel) items cleaned:	NA
Item selected for collecting equipment blank sample:	NA

All cleaned items have been placed in Ziplok® storage bags (or equivalent).			
Signature:	NA	**Date:**	NA

Each package has been labeled with the unique cleaning-batch identification number.			
Signature:	NA	**Date:**	NA

All items have been segregated pending analysis results.			
Signature:	NA	**Date:**	NA

Analysis results have been reviewed and are satisfactory (notice of confirmation attached). The items have been released for use and the backup sample discarded.			
WCA Systems Engineer	J M Magnan	**Date:**	5/8/03

Appendix E
Page 1 of 1

CORING AND SAMPLING EQUIPMENT CLEANING — DATA SHEET	
Equipment cleaning-batch No.:	MFEB-1
Description of items cleaned:	AUGER BITS
CLEANING SOLUTION WAS AQUET, LIQUID LABORATORY DETERGENT	
Number of items cleaned:	84
Serial Nos. assigned to reusable (auger or core barrel) items cleaned:	NA
Item selected for collecting equipment blank sample:	43

All cleaned items have been placed in Ziplok® storage bags (or equivalent).			
Signature:	J M Magnan	**Date:**	8/16/05

Each package has been labeled with the unique cleaning-batch identification number.			
Signature:	J M Magnan	**Date:**	8/16/05

All items have been segregated pending analysis results.			
Signature:	J M Magnan	**Date:**	8/16/05

BLANKS COLLECTED 9/21/05 SENT OUT 9/22/05

Analysis results have been reviewed and are satisfactory (notice of confirmation attached). The items have been released for use and the backup sample discarded.			
WCA Systems Engineer	NOTE 1: J M Magnan	**Date:**	10/10/05

20ml / 473849

40ml / 196700

500ml AMBER / 406039

HCl - LOT# 4205030

NHO_3 - LOT# 1205020

NOTE 1: CONDITIONALLY RELEASED BASE ON ATTACHED INFORMATION/ COPY

Released J M Magnan 10/12/05

Nalge Nunc International

I-CHEM™ Brand Products

CERTIFICATE OF ANALYSIS

PRODUCTION NUMBER: 473849 | **Item Number: S326-0020** | **Item Description: VIAL CLEAR BOROSILICATE** | **Group 3 is applicable**

This is your Certificate of Analysis for I-CHEM Certified™ product which has been prepared in accordance with I-CHEM Performance-Based Specifications. This product meets or exceeds analyte specifications established in the U.S. EPA "Specification and Guidance for Contaminant-free Sample Containers" for use in Superfund and other hazardous waste programs.

Group 1. Glass and HDPE/LDPE Sample containers for use in the analysis of Metals

Analyte	Detection Limit (µg L)	Analyte	Detection Limit (µg L)	Analyte	Detection Limit (µg L)	Analyte	Detection Limit (µg L)
Aluminum	<80	Calcium (all HDPE)	<100	Magnesium	<100	Selenium	<2
Antimony	<5	Chromium	<10	Manganese	<10	Silver	<5
Arsenic	<2	Cobalt	<10	Mercury	<0.2	Sodium	<5000
Barium	<20	Copper	<10	Nickel	<20	Sodium (all HDPE)	<100
Beryllium	<0.5	Iron	<50	Potassium	<750	Thallium	<5
Cadmium	<1	Lead	<2	Potassium (all HDPE)	<100	Vanadium	<10
Calcium	<500					Zinc	<10

In addition to the above analytes, NALGENE® containers are certified for these analytes:

Analyte	Detection Limit (µg L)	Analyte	Detection Limit (µg L)	Analyte	Detection Limit (µg L)	Analyte	Detection Limit (µg L)
Chloride	<100	Fluoride	<20	Nitrite	<50	Sulfate	<100
Cyanide	<10	Nitrate	<20	Paraquat (amber only)	<0.4	Sulfide	<30
Diquat (amber only)	<1.0					Sulfite	<1000

Group 2. Glass Sample Containers for use in the analysis of Semivolatiles and Pesticides/PCBs

Compound	Quantitation Limit (µg L)	Compound	Quantitation Limit (µg L)	Compound	Quantitation Limit (µg L)
Acenaphthene	<5	Acenaphthylene	<5	Anthracene	<5
Benzo(a)anthracene	<5	Benzo(a)pyrene	<5	Benzo(b)fluoranthene	<5
Benzo(k)fluoranthene	<5	Benzo(g,h,i)perylene	<5	Benzoic Acid	<20
Benzyl Alcohol	<5	4-Bromophenyl-phenylether	<5	Butylbenzylphthalate	<5
4-Chloroaniline	<5	4-Chloro-3-methylphenol	<5	bis(2-	<5
bis(2-Chloroethyl)ether	<5	bis(2-Chloroisopropyl)ether	<5	Chloroethoxy)methane	<5
2-Chlorophenol	<5	4-Chlorophenyl-phenylether	<5	2-Chloronaphthalene	<5
Di-n-butylphthalate	<5	Di-n-octylphthalate	<5	Chrysene	<5
Dibenzofuran	<5	1,2-Dichlorobenzene	<5	Dibenzo(a,h)anthracene	<5
1,3-Dichlorobenzene	<5	3,3'-Dichlorobenzidine	<5	1,4-Dichlorobenzene	<5
Diethylphthalate	<5	Dimethylphthalate	<5	2,4-Dichlorophenol	<5
4,6-Dinitro-2-methylphenol	<20	2,4-Dinitrophenol	<20	2,4-Dinitrotoluene	<5
2,6-Dinitrotoluene	<5	bis (2-Ethylhexyl)phthalate	<5	Fluoranthene	<5
Fluorene	<5	Hexachlorobenzene	<5	Hexachlorobutadiene	<5
Hexachlorocyclopentadiene	<5	Hexachloroethane	<5	Indeno(1,2,3-cd)pyrene	<5
Isophorone	<5	2-Methylnaphthalene	<5	2-Methylphenol	<5
4-Methylphenol	<5	3-Nitroaniline	<20	3-Nitroaniline	<20
4-Nitroaniline	<20	N-Nitroso-di-n-propylamine	<5	N-Nitrosodimethylamine	<5
N-Nitrosodiphenylamine	<5	Naphthlene	<5	Nitrobenzene	<5
2-Nitrophenol	<5	4-Nitrophenol	<20	Pentachlorophenol	<20
Phenanthrene	<5	Phenol	<5	Pyrene	<5
1,2,4-Trichlorobenzene	<5	2,4,5-Trichlorophenol	<20	2,4,6-Trichlorophenol	<5
Azobenzene	<5	Carbazole	<5	Aldrin	<0.01
4,4-DDD	<0.02	Endosulfan II	<0.02	Alpha-BHC	<0.01
4,4-DDE	<0.02	Endosulfan Sulfate	<0.02	Beta-BHC	<0.01
4,4-DDT	<0.02	Endrin	<0.02	Delta-BHC	<0.01
Dieldrin	<0.02	Endrin Aldehyde	<0.02	Gamma-BHC	<0.01
Endosulfan I	<0.01	Heptachlor	<0.01	Heptachlor Epoxide	<0.01
Methoxychlor	<0.10	Endrin Ketone	<0.02	Alpha-Chlordane	<0.01
Gamma-Chlordane	<0.01	Toxaphene	<0.30	Aroclor-1016	<0.20
Aroclor-1221	<0.20	Aroclor-1232	<0.20	Aroclor-1242	<0.20
Aroclor-1248	<0.20	Aroclor-1254	<0.20	Aroclor-1260	<0.20
Aroclor-1262	<0.20	Aroclor-1268	<0.20		

Group 3. Glass Sample Containers for use in the analysis of Volatiles

Compound	Quantitation Limit (µg L)	Compound	Quantitation Limit (µg L)	Compound	Quantitation Limit (µg L)
Acetone	<5	1,3-Dichloropropane	<1	Benzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1	1,2-Dichloropropane	<1
Bromodichloromethane	<1	trans-1,3-Dichloropropene	<1	Bromoform	<1
cis-1,3-Dichloropropene	<1	Bromomethane	<1	1,1-Dichloropropene	<1
2-Butanone	<5	Ethylbenzene	<1	tert-Butylbenzene	<1
Hexachlorobutadiene	<1	sec-Butylbenzene	<1	2-Hexanone	<5
n-Butylbenzene	<1	Isopropylbenzene	<1	Carbon Disulfide	<1
p-Isopropyltoluene	<1	Carbon Tetrachloride	<1	4-Methyl-2-pentanone	<5
Chlorobenzene	<1	Methylene Chloride	<2	Chloroethane	<1
Naphthalene	<1	Chloroform	<1	n-Propylbenzene	<1
Chloromethane	<1	Styrene	<1	2 & 4 Chlorotoluene	<1
1,1,2,2-Tetrachloroethane	<1	1,1,2-Dibromo-3-chloropropane	<1	Tetrachloroethene	<1
Dibromochloromethane	<1	Toluene	<1	1,2-Dibromoethane (EDB)	<1
1,2,3-Trichlorobenzene	<1	Dibromomethane	<1	1,2,4-Trichlorobenzene	<1
1,1-Dichloroethene	<1	1,1,2-Trichloroethane	<1	1,3-Dichlorobenzene	<1
1,1,1-Trichloroethane	<1	1,2-Dichlorobenzene	<1	Trichloroethene	<1
Dichlorodifluoromethane	<1	Trichlorofluoromethane	<1	1,2-Dichloroethene	<1
1,2,3-Trichloropropane	<1	1,1-Dichloroethane	<1	Bromochloromethane	<1
trans-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1		
Vinyl Acetate	<5	1,1-Dichloroethene	<1		
Xylenes (total)	<1				

Nalge Process Technologies Group
A Business of Nalge Nunc International

I-CHEM® Products

CERTIFICATE OF ANALYSIS

PRODUCTION NUMBER 6145072

Item Number 320-0250

Item Description: JAR SHORT CLEAR WM
Groups 1 and 2 are applicable

This is your Certificate of Analysis for I-CHEM Certified™ product which has been prepared in accordance with I-CHEM Performance-Based Specifications. This product meets or exceeds analyte specifications established in the U.S. EPA "Specifications and Guidance for Contaminant-Free Sample Containers" for use in Superfund and other hazardous waste programs.

Group 1. Glass and HDPE Sample Containers for use in the analysis of Metals

Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)
Aluminum	< 80	Calcium (all HDPE)	< 100	Magnesium	< 100	Selenium	< 2
Antimony	< 5	Chromium	< 10	Manganese	< 10	Silver	< 5
Arsenic	< 2	Cobalt	< 10	Mercury	< 0.2	Sodium	< 5000
Barium	< 20	Copper	< 10	Nickel	< 20	Sodium (all HDPE)	< 100
Beryllium	< 0.5	Iron	< 50	Potassium	< 750	Thallium	< 5
Cadmium	< 1	Lead	< 2	Potassium (all HDPE)	< 100	Vanadium	< 10
Calcium	< 500					Zinc	< 10

In addition to the above analytes, NALGENE® containers are certified for these analytes:

Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)
Chloride	< 100	Fluoride	< 20	Nitrite	< 50	Sulfate	< 100
Cyanide	< 10	Nitrate	< 20	Paraquat (amber only)	< 0.4	Sulfide	< 40
Diquat (amber only)	< 1.0					Sulfite	< 1000

Group 2. Glass Sample Containers for use in the analysis of Semivolatiles and Pesticides/PCBs

Compound	Quantitation Limit (µg/L)	Compound	Quantitation Limit (µg/L)	Compound	Quantitation Limit (µg/L)
Acenaphthene	< 5	Acenaphthylene	< 5	Anthracene	< 5
Benzo(a)anthracene	< 5	Benzo(a)pyrene	< 5	Benzo(b)fluoranthene	< 5
Benzo(k)fluoranthene	< 5	Benzo(g,h,i)perylene	< 5	Benzoic Acid	< 20
Benzyl Alcohol	< 5	4-Bromophenyl-phenylether	< 5	Butylbenzylphthalate	< 5
4-Chloroaniline	< 5	4-Chloro-3-methylphenol	< 5	bis-(2-Chloroethoxy)methane	< 5
bis-(2-Chloroethyl)ether	< 5	bis-(2-Chloroisopropyl)ether	< 5	2-Chloronaphthalene	< 5
2-Chlorophenol	< 5	4-Chlorophenyl-phenylether	< 5	Chrysene	< 5
Di-n-butylphthalate	< 5	Di-n-octylphthalate	< 5	Dibenzo(a,h)anthracene	< 5
Dibenzofuran	< 5	1,2-Dichlorobenzene	< 5	1,4-Dichlorobenzene	< 5
1,3-Dichlorobenzene	< 5	3,3'-Dichlorobenzidine	< 5	2,4-Dichlorophenol	< 5
Diethylphthalate	< 5	Dimethylphthalate	< 5	2,4-Dimethylphenol	< 5
4,6-Dinitro-2-methylphenol	< 20	2,4-Dinitrophenol	< 20	2,4-Dinitrotoluene	< 5
2,6-Dinitrotoluene	< 5	bis-(2-Ethylhexyl)phthalate	< 5	Fluoranthene	< 5
Fluorene	< 5	Hexachlorobenzene	< 5	Hexachlorobutadiene	< 5
Hexachlorocyclopentadiene	< 5	Hexachloroethane	< 5	Indeno(1,2,3-cd)pyrene	< 5
Isophorone	< 5	2-Methylnaphthalene	< 5	2-Methylphenol	< 5
4-Methylphenol	< 5	2-Nitroaniline	< 20	3-Nitroaniline	< 20
4-Nitroaniline	< 20	N-Nitroso-di-n-propylamine	< 5	N-Nitrosodimethylamine	< 5
N-Nitrosodiphenylamine	< 5	Naphthalene	< 5	Nitrobenzene	< 5
2-Nitrophenol	< 5	4-Nitrophenol	< 20	Pentachlorophenol	< 20
Phenanthrene	< 5	Phenol	< 5	Pyrene	< 5
1,2,4-Trichlorobenzene	< 5	2,4,5-Trichlorophenol	< 20	2,4,6-Trichlorophenol	< 5
Azobenzene	< 5	Carbazole	< 5	Aldrin	< 0.01
4,4'-DDD	< 0.02	Endosulfan II	< 0.02	Alpha-BHC	< 0.01
4,4'-DDE	< 0.02	Endosulfan Sulfate	< 0.02	Beta-BHC	< 0.01
4,4'-DDT	< 0.02	Endrin	< 0.02	Delta-BHC	< 0.01
Dieldrin	< 0.02	Endrin Aldehyde	< 0.02	Gamma-BHC	< 0.01
Endosulfan I	< 0.01	Heptachlor	< 0.01	Heptachlor Epoxide	< 0.01
Methoxychlor	< 0.10	Endrin Ketone	< 0.02	Alpha-Chlordane	< 0.01
Gamma-Chlordane	< 0.01	Toxaphene	< 0.30	Aroclor 1016	< 0.20
Aroclor-1221	< 0.20	Aroclor-1232	< 0.20	Aroclor 1242	< 0.20
Aroclor-1248	< 0.20	Aroclor-1254	< 0.20	Aroclor-1260	< 0.20
Aroclor-1262	< 0.20	Aroclor-1268	< 0.20		

Group 3. Glass Sample Containers for use in the analysis of Volatiles

Compound	Quantitation Limit (µg/L)	Compound	Quantitation Limit (µg/L)	Compound	Quantitation Limit (µg/L)
Acetone	< 5	1,3-Dichloropropane	< 1	Benzene	< 1
2,2-Dichloropropane	< 1	Bromobenzene	< 1	1,2-Dichloropropane	< 1
Bromodichloromethane	< 1	trans-1,3-Dichloropropene	< 1	Bromoform	< 1
cis-1,3-Dichloropropene	< 1	Bromomethane	< 1	1,1-Dichloropropene	< 1
2-Butanone	< 5	Ethylbenzene	< 1	tert-Butylbenzene	< 1
Hexachlorobutadiene	< 1	sec-Butylbenzene	< 1	2-Hexanone	< 5
n-Butylbenzene	< 1	Isopropylbenzene	< 1	Carbon Disulfide	< 1
p-Isopropyltoluene	< 1	Carbon Tetrachloride	< 1	4-Methyl-2-pentanone	< 5
Chlorobenzene	< 1	Methylene Chloride	< 2	Chloroethane	< 1
Naphthalene	< 1	Chloroform	< 1	n-Propylbenzene	< 1
Chloromethane	< 1	Styrene	< 1	2- & 4-Chlorotoluene	< 1
1,1,2,2-Tetrachloroethane	< 1	1,2-Dibromo-3-chloropropane	< 1	Tetrachloroethene	< 1
Dibromochloromethane	< 1	Toluene	< 1	1,2-Dibromoethane (EDB)	< 1
1,2,3-Trichlorobenzene	< 1	Dibromomethane	< 1	1,2,4-Trichlorobenzene	< 1
1,3-Dichlorobenzene	< 1	1,1,2-Trichloroethane	< 1	1,3-Dichlorobenzene	< 1
1,1,1-Trichloroethane	< 1	1,2-Dichlorobenzene	< 1	Trichloroethene	< 1
Dichlorodifluoromethane	< 1	Trichlorofluoromethane	< 1	1,2-Dichloroethane	< 1
1,2,3-Trichloropropane	< 1	1,1-Dichloroethane	< 1	Bromochloromethane	< 1
trans-1,2-Dichloroethene	< 1	1,3,5-Trimethylbenzene	< 1		
Vinyl Acetate	< 5	1,1-Dichloroethene	< 1		
Xylenes (total)	< 1	1,2,4-Trimethylbenzene	< 1		
Vinyl Chloride	< 1	cis-1,2-Dichloroethene	< 1		

INDEPENDENT TECHNICAL REVIEW (ITR)

SAMPLING BATCH CHECKLIST

Solid Sampling Batch No.: WCS- 0504

Record the batch number on each page of this checklist. Fill in the right-hand column of the following table for the batch under review. To make specific comments on any item, provide reference in the box to specifically identified notes at the end of the checklist. If an item is not applicable, write "NA" in the box. Do not leave any boxes blank.

ITEM NO.	DESCRIPTION OF ITEM BEING REVIEWED	INDICATION THAT CHECK IS COMPLETE (Initial each blank box indicating that the requirement has been satisfactorily met, or provide the information otherwise requested.)
1	Name of reviewer	RHETT BRADFORD
2	Date review starts	10/17/05
3	You are a qualified ITR per MCP-2610	
4	An ITR sampling container checklist has been completed for each container in this batch	
5	The sampling data QA documentation is complete as appropriate for the point of data review and includes raw data, calculation records, COC forms, calibration records, and QC sample results, if applicable. ITR shall not be completed until the data is complete. (SBRSS) [WAP B3-10] [This is not a check of the accuracy of this item, simply a check that the form is included in the data package and that it is complete.]	
QC results are within established control limits, and if not, the data have been appropriately qualified: [WAP B3-10] (addressed by items 6-7)		
6	Co-located core was collected once per sampling batch or seven calendar days (whichever is more frequent), for precision [WAP B1-2b(1)]	
7	The co-located core was consistent with the adjacent core in terms of color, texture, or waste type [WAP B1-2b(1)] [If not, reference applicable IDR (CRSS]	
8	The sampling data QA documentation is complete as appropriate for the point of data review and includes Initial deficiency reports - Identified on SBRSS (mark "NA" if none)	

NOTES: (If none, indicate NA.)

NA

RELEASED BY: RHETT BRADFORD (Printed Name) Rhett Bradford (Signature) 10/17/05 (Date)

TECHNICAL SUPERVISORY REVIEW (TSR)
SAMPLING BATCH CHECKLIST

Solids Sampling Batch No.: WCS- 0504

Record the batch number on each page of this checklist. Fill in the right-hand column of the following table for the batch under review. To make specific comments on any item, provide reference in the box to specifically identified notes at the end of the checklist. If an item is not applicable, write "NA" in the box. Do not leave any boxes blank.

ITEM NO.	DESCRIPTION OF ITEM BEING REVIEWED		INDICATION THAT CHECK IS COMPLETE (Initial each blank box indicating that the requirement has been satisfactorily met, or provide the information otherwise requested.)
1	Name of reviewer		Bevin A. Brush
2	Date review starts		10/20/05
3	You are a qualified TSR per MCP-2610		BB
4	All data have received container and batch independent technical review [WAP B3-10] [Verify that all ITR checklists are complete for this batch]		BB
5	The sampling data QA documentation is complete and includes raw data, calculation records, COC forms, calibration records, and QC sample results, if applicable. Field sampling records are complete [Verify that each of the items indicated in the right-hand column is complete—this is not a check of the accuracy of these items, simply a check that each form in included in the data package and that each form is complete for the identified containers or batch, as appropriate.]	Sample Batch Report Summary Sheet (SBRSS)	BB
		Core-Drilling Record Sheets (CSRS)	BB
		Solid Sample Record Sheets (SSRS)	BB
		Chain of custody forms (COC)	BB
		Balance calibration reports	BB
		Initial deficiency reports - Identified on SBRSS (mark "NA" if none)	N/A
6	Sample holding time requirements were met, or exceptions documented [WAP B3-10] [Verify that the time between sample collection and relinquishment to the lab noted on the COC is not longer than 4 days for each sample.]		BB
7	The data are technically reasonable based on the technique used [WAP B3-10] [The implementing procedures for the characterization methods have been deemed technically correct via specification of the method(s) in the WAP and via adequacy reviews of WAP requirements in generator site procedures by CBFO.]		BB

TECHNICAL SUPERVISORY REVIEW (TSR)
SAMPLING BATCH CHECKLIST

Solids Sampling Batch No.: **WCS- 0504**

NOTES: (If none, indicate NA.)

NA

RELEASED BY: Bevin A. Brush (Printed Name) Bevin A. Brush (Signature) 10/20/05 (Date)

QUALITY ASSURANCE DATA REVIEW (QADR)

SAMPLING BATCH CHECKLIST

Solids Sampling Batch No.: **WCS-** 0504

Record the batch number on each page of this checklist. Fill in the right-hand column of the following table for the batch under review. To make specific comments on any item, provide reference in the box to specifically identified notes at the end of the checklist. If an item is not applicable, write "NA" in the box. Do not leave any boxes blank.

ITEM NO.	DESCRIPTION OF ITEM BEING REVIEWED	INDICATION THAT CHECK IS COMPLETE (Initial each blank box indicating that the requirement has been satisfactorily met, or provide the information otherwise requested.
1	Name of reviewer	S. Lee
2	Date review starts	10-20-05
3	You are a qualified QADR per MCP-2610	S.L.
4	ITR and TSR have been performed as evidenced by the appropriate signatures on the ITR and TSR checklists [WAP B3-10]	S.L.
Sampling data QA documentation is complete as appropriate for the point of data generation [WAP B3-10] (addressed by items 5-7)		
5	A QADR sampling container checklist has been completed for each container in this batch	S.L.
6	The Sample Batch Report Summary Sheet (SBRSS) is complete as appropriate for the point of data generation	S.L.
7	Sampling checks have been properly performed; QC criteria that were not met are documented: [WAP B3-10] Co-located cores were collected once per sampling batch or once per week during sampling operations, whichever is more frequent, for precision [WAP B1-2]	S.L.
QAOs have been met according to the methods outlined in Section B3-3 of the WAP: [WAP B3-10] (addressed by items 8-14)		
8	Sampling accuracy as a function of sampling cross-contamination; equipment blank requirements met for: • fully assembled coring tools • auger bit and liners cleaned separately from coring tools • misc. sampling equipment that is reused [WAP B3-3] -Verified by items 6-8 of the QADR sampling container checklist.	
9	Precision of co-located cores [WAP B3-3] - G.S. calculates precision based on analytical results.	
10	Sampling completeness ≥ 90% for batch (SBRSS) [WAP B3-3]	S.L
11	Comparability (consistent use and application of uniform procedures, sampling equipment, and measurement units) [WAP B3-3] Use of approved procedures ensures this QAO is met -Verified by item 14 of the QADR sampling container checklist	
12	Representativeness: coring tools and sampling equipment must be clean prior to sampling [WAP B3-3] -Verified by items 6-8 of the QADR sampling container checklists.	

QUALITY ASSURANCE DATA REVIEW (QADR)

SAMPLING BATCH CHECKLIST

Solids Sampling Batch No.: **WCS-** 0504

ITEM NO.	DESCRIPTION OF ITEM BEING REVIEWED	INDICATION THAT CHECK IS COMPLETE (Initial each blank box indicating that the requirement has been satisfactorily met, or provide the information otherwise requested.
13	Representativeness based on random selection of samples in both the horizontal and vertical planes of each container's waste -Verified by item 12 of the QADR container sampling checklists	
14	Representativeness: core recovery ≥ 50% [WAP B3-3] -Verified by item 13 of the QADR container sampling checklists.	

NOTES: (If none indicate NA.)

NA

RELEASED BY: Scott Lee _____ 10-20-05
Printed Name Signature Date

Attachment 5 – CCP Site Project Manager Data Validation Summary

On-Line Headspace Gas Analysis (HSG)			Visual Examination (VE)	
Nondestructive Examination (NDE)			Nondestructive Assay (NDA)	
Direct-Canister HSG Analysis			Homogeneous Waste Analysis (HWA)	X
Radiological Characterization				

BATCH DATA REPORT NUMBER: ALD05034V **DATE:** 15 & 23 October 2005

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
1. ITR, Tech Sup, and Facility QA checklists are complete and signed. **Reference Source: WAP B3-10b(2)** **Verification Source: DGL Checklist**	X			
2. The batch data report is complete. **Reference Source: WAP B3-10b(2) and WAC A.5.2** **Verification Source: Data Sheets**	X			
3. QAOs have been met. **Reference Source: WAP B3-10b(2)** **Verification Source: QC Data Sheets**	X			**Container Numbers:** 10016886, 10018178, 10018503, 10018867, 10018875
4. Data reported with correct units and significant figures. **Reference Source: WAP B3-10b(2)** **Verification Source: Data Sheets**	X			
5. Data have been assessed correctly. **Reference Sources: WAP B3-10b(2) and B3-10b(3)** **Verification Source: Data Sheets**	X			
6. Is there a reference to or copy of the associated NCRS? **Reference Source: WAP Tables B3-11, B3-12 and B3-13** **Verification Source: NCR**			X	No NCRs are associated with this BDR.
7. The applicable SPQAO Project Level Validation Checklist is complete, signed, and dated. **Reference Source: WAP B3-10b(2)** **Verification Source: SPQAO Checklist**	X			
8. NDA batch QC checks (e.g., weekly interfering matrix, background, performance, and transmission checks, measurement system checks) were properly performed. **Reference Source: WAC A.4.2 and/or WAC Table A-4.3** **Verification Source: QC Data Sheets**			X	This is a VOC analytical BDR.

COPY

Attachment 5 – CCP Site Project Manager Data Validation Summary (continued)

BATCH DATA REPORT NUMBER: ALD05034V **DATE:** 15 & 23 October 2005

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers	
9. **HSG** – All data are reported with the appropriate flags. **Reference Source: WAP B3-10b(2) Verification Source: Data Sheet**			X	This is a VOC analytical BDR.	
10. **HSG** batch QC checks (e.g., on-line blanks, duplicates, and laboratory control samples) were properly performed and meet the established usability criteria. **Reference Sources: WAP B3-10b(2) and Table B3-3 and/or B1-1b Verification Source: QC Data Sheets**			X	This is a VOC analytical BDR.	
11. **HSG** DAC assignment is valid based upon an assessment of the data collection and evaluation necessary to make the assignment. **Reference Source: WAP B3-10b(2) Verification Source: Drum Data Form**			X	This is a VOC analytical BDR.	
12. **NDE** data are complete and acceptable based on the videotape or equivalent media review (independent observation and replicate scan). **Reference Sources: WAP , B1-3b(2) and B3-10b(2) Verification Source: QC Data Sheets**			X	Container numbers:	This is a VOC analytical BDR.
				Rep:	
				IO:	
13. **VE** data is complete and properly reported. **Reference Sources: WAP B1-3b(3) and B3-10b(2) Verification Source: BDR**			X	This is a VOC analytical BDR.	
14. **HWA** Solid/Soil VOC batch QC checks (e.g., laboratory duplicates, blanks, and control samples) were properly performed and meet the established usability criteria. **Reference Sources: WAP B1-2b, B3-10b(2) and Table B3-5 Verification Source: QC Data Sheets**		X		▪ Tetrachloroethene was identified in MBV101505A ▪ %Rs and associated for the MS/MSD were 0% due to sample dilution. ▪ MS/MSD RPDs for the compounds of interest were 0 due to the MS/MSD %Rs. ▪ Linear regression used for bromoform ICAL. ▪ All MDLs exceeded PRQLs due to dilutions.	
15. **HWA** Solid/Soil Semi-VOC batch QC checks (e.g., laboratory duplicates, blanks, and control samples) were properly performed and meet the established usability criteria. **Reference Sources: WAP B1-2b, B3-10b(2) and Table B3-7 Verification Source: QC Data Sheets**			X	This is a VOC analytical BDR.	

Attachment 5 – CCP Site Project Manager Data Validation Summary (continued)

BATCH DATA REPORT NUMBER: ALD05034V **DATE:** 15 & 23 October 2005

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
16. **HWA Solid/Soil Total Metals Batch QC checks** (e.g., duplicates, blanks, and laboratory control samples) were properly performed and meet the established criteria. **Reference Sources: WAP B1-2b, B3-10b(2), and Table B3-9 Verification Source: QC Data Sheets**			X	This is a solids VOC analytical BDR.
17. **OSR** for LANL Sealed Sources, does the waste meet the definition of sealed sources per 10 CFR 30.4 and 10 CFR 835.2 (effective January 1, 2004) and documentation included with the AK information? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	This is not an LANL OSR BDR.
18. **OSR** for LANL Sealed Sources, does the Pipe Overpack Container (POC) only contain sources and packaging material (no non-packaging items are allowed in the waste container)? **Reference Source: WAP B-3a(1)(iii) Verification Source: Data Sheet**			X	This is not an LANL OSR BDR.
19. **OSR** for LANL Sealed Sources, is the sealed source a US DOT Special Form Class 7 (Radioactive Material) per 49 CFR 34.27 (effective January 1, 2004) and is this documented in the AK information? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	This is not an LANL OSR BDR.
20. For LANL Sealed Sources, is the integrity of each sealed source validated by documented contamination survey results to meet the requirements of 10 CFR 34.27 (effective January 1, 2004), and is assembled as part of AK documentation? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	This is not an LANL OSR BDR.
21. **OSR** for LANL Sealed Sources, is each source a rigid sealed container or is it in a rigid sealed container less than or equal to 4 L? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	This is not an LANL OSR BDR.

Attachment 5 – CCP Site Project Manager Data Validation Summary (continued)

BATCH DATA REPORT NUMBER: ALD05034V **DATE:** 15 & 23 October 2005

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
22. **OSR** for LANL Sealed Sources, does the AK information document that no VOC or VOC-bearing material are constituents of the waste? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information**			X	This is not an LANL OSR BDR.
23. **OSR** for LANL Sealed Sources, does the AK information document that the outer casing of the sealed source is a non-VOC bearing material and is this verified during VE? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	This is not an LANL OSR BDR.

The data for all containers in this batch are complete, properly reported, technically reasonable, representative and meet the Quality Assurance Objectives (QAOs). On a per waste container basis, as evidenced by my review of the Batch Data Report, all data have been validated in accordance with the QAPjP (CCP-PO-001) and are acceptable. This validation was accomplished through the generation level and project level data review, validation, and verification of this Batch Data Report.

David W. Moody — Site Project Manager | Signature | 14 November 05 — Date

Attachment 11 – CCP SPQAO Solid/Soil Total Volatile Organic Compound Analysis Project Level Validation Checklist and Summary

BATCH DATA REPORT NUMBER: ALD05034V **ANALYSIS DATE:** 10/15/05, 10/23/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
1. Does the Batch Data Report contain the batch number, laboratory name, and the date of the batch report? **Reference Source: WAP Table B3-13 Verification Source: Cover Page**	X			
2. Has a Batch Data Report narrative been included with the Batch Data Report? **Reference Source: WAP Table B3-13 Verification Source: Report Narrative and comments**	X			
3. Is there a cross reference between waste container number, field sample number, and lab sample number ID; and signature release by lab personnel in the Batch Data Report? **References Source: WAP Table B3-13 Verification Source: Cover Page and/or Total VOC Analysis Sample Cross-Reference Table**	X			
4. Does the Batch Data Report contain a table of contents? **References Source: CCP-TP-001 Verification Source: Batch Data Report**	X			
5. Are there 20 or less samples per analytical batch? **Reference Source: WAP Section B3-10 Verification Source: Total VOC Analysis Sample Cross-Reference Table**	X			7 samples (2 co-located samples) and 3 trip blanks.
6. Does the Batch Data Report contain a complete and signed copy of the COC form? **Reference Source: WAP Table B3-13 Verification Source: COC Form**	X			
7. Does the Batch Data Report include the date and time of analysis for each sample? **Reference Source: WAP Table B3-13 Verification Source: Total VOC Analysis Data Sheets**	X			

Attachment 11 – CCP SPQAO Solid/Soil Total Volatile Organic Compound Analysis Project Level Validation Checklist and Summary (continued)

BATCH DATA REPORT NUMBER: ALD05034V **ANALYSIS DATE:** 10/15/05, 10/23/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
8. Are holding times between collection and analysis within the 14-day requirement? **Reference Source: WAP Table B1-4 Verification Source: Total VOC Analysis Data Sheets**	X			The 14-day holding time between sample collection and extraction was met. The 40-day holding time between sample extraction and analysis was also met.
9. Have QC designations for samples been applied as appropriate? **Reference Source: WAP Table B3-13 Verification Source: Total VOC Analysis Sample Cross-Reference Table and/or QC Sample Section of Batch Data Report**	X			
10. Is there a minimum of one laboratory control sample (LCS) analyzed per analytical batch? **Reference Source: WAP Table B3-5 Verification Source: Laboratory Control Sample**	X			
11. Are the percent recoveries (%Rs) for all LCS analytes within the Table B3-4 acceptable range? **Reference Source: WAP Table B3-5 Verification Source: Laboratory Control Sample**	X			
12. Is a minimum of one matrix spike (MS) analyzed per analytical batch? **Reference Source: WAP Table B3-5 Verification Source: Matrix Spike/Matrix Spike Duplicate Reporting Form**	X			
13. Are the %Rs for all MS compounds within the Table B3-4 and B3-5 acceptance range? **Reference Source: WAP Table B3-5 Verification Source: Matrix Spike/Matrix Spike Duplicate Reporting Form**	X			All matrix spike recoveries were 0% due to the matrix spikes being diluted out of the sample as a result of the high dilutions required to bring several analytes within calibration.
14. Is a minimum of one matrix spike duplicate (MSD) analyzed per analytical batch? *Note: The MSD is used in place of the laboratory duplicate.* **Reference Source: WAP Table B3-5 Verification Source: Matrix Spike/Matrix Spike Duplicate Reporting Form Reporting Form**	X			

Attachment 11 – CCP SPQAO Solid/Soil Total Volatile Organic Compound Analysis Project Level Validation Checklist and Summary (continued)

BATCH DATA REPORT NUMBER: ALD05034V **ANALYSIS DATE:** 10/15/05, 10/23/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
15. Are the %Rs for all MSD compounds within the Table B3-4 and B3-5 acceptance range? Note: The MSD is used in place of the laboratory duplicate **Reference Source: WAP Table B3-5 Verification Source: Matrix Spike/Matrix Spike Duplicate Reporting Form**	X			All matrix spike duplicate recoveries were 0% due to the matrix spikes being diluted out of the sample as a result of the high dilutions required to bring several analytes within calibration.
16. Do the MS/MSD relative percent differences (RPDs) for all analytes meet the requirements listed in Table B3-4? **Reference Source: WAP Table B3-5 Verification Source: Matrix Spike/Matrix Spike Duplicate Reporting Form**	X			All MS/MSD RPDs were 0.0 due to all MS/MSD recoveries being 0%.
17. Is a minimum of one trip blank analyzed per analytical batch? **Reference Source: EPA Method SW-846 8260 Verification Source: Total VOC Analysis Data Sheets**	X			
18. Are the results of the trip blank ≤3* the program-required MDL? **Reference Source: EPA Method SW-846 8260 Verification Source: Total VOC Analysis Data Sheets**	X			
19. Is there a minimum of one lab blank analyzed per analytical batch? **Reference Source: WAP Table B3-5 Verification Source: Blank Form and Laboratory Blank Summary**	X			
20. Are all lab blank compounds ≤3* the program-required MDL? **Reference Source: WAP Table B3-5 Verification Source: Blank Form**	X			Tetrachloroethene was detected in one daily lab blank. The only associated samples were the MS/MSD. No action taken.
21. Are the analytical samples spiked with surrogate matrix compounds (SMCs)? **Reference Source: WAP Table B3-5 Verification Source: Surrogate Recovery Form**	X			

Attachment 11 – CCP SPQAO Solid/Soil Total Volatile Organic Compound Analysis Project Level Validation Checklist and Summary (continued)

BATCH DATA REPORT NUMBER: ALD05034V **ANALYSIS DATE:** 10/15/05, 10/23/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
22. Are the SMCs %R values within specified criteria? **Reference Source: WAP Table B3-5 Verification Source: Surrogate Recovery Form**	X			All surrogate recoveries were 0% due to the surrogates being diluted out of the solid samples as a result of the high dilutions required to bring several analytes within calibration. The trip blank surrogate recoveries met criteria.
23. Is the five-point (minimum) initial calibration complete? **Reference Source: WAP Table B3-5 Verification Source: Initial Calibration Data**	X			
24. Is the correlation coefficient (r) ≥ 0.990? **Reference Source: WAP Table B3-5 Verification Source: Initial Calibration Data**	X			
25. Are the percent relative standard deviations (%RSDs) for all target analytes calibration check compounds (CCCs) less than or equal to 30%? **Reference Source: WAP Table B3-5 Verification Source: Initial Calibration Data**	X			
26. Are the relative response factors for all target analytes System Performance Check Compounds (SPCCs) OK? 1,1-Dichloroethane: ≥ 0.10 Bromoform: ≥ 0.10 Chlorobenzene: ≥ 0.30 1, 1, 2, 2-Tetrachloroethane: ≥ 0.30 SW-846 Method 8260B, Section 7.3.5.4 **Reference Source: WAP Table B3-5 Verification Source: Initial Calibration Data**	X			
27. If %RSD is less than or equal to 15, is average relative response factor used? **Reference Source: WAP Table B3-5 Verification Source: Initial Calibration Data**	X			
28. If %RSD is greater than 15, is regression equation generated and used? **Reference Source: WAP Table B3-5 Verification Source: Initial Calibration Data**	X			Bromoform had a %RSD greater than 15, regression was used.
29. Is RRF for all non-SPCCs ≥0.01? **Reference Source: WAP Table B3-5 Verification Source: Initial Calibration Data**	X			

Attachment 11 – CCP SPQAO Solid/Soil Total Volatile Organic Compound Analysis Project Level Validation Checklist and Summary (continued)

BATCH DATA REPORT NUMBER: ALD05034V

ANALYSIS DATE: 10/15/05, 10/23/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
30. Were the Bromofluorobenzene (BFB) ion abundance criteria satisfied? **Reference Source: WAP Table B3-5 Verification Source: Instrument and Performance Check**	X			
31. Is BFB tune performed at a minimum frequency of every 12 hours of operation? **Reference Source: WAP Table B3-5 Verification Source: Instrument and Performance Check**	X			
32. Is continuing calibration performed at a minimum frequency of every 12 hours of operation? **Reference Source: WAP Table B3-5 Verification Source: Continuing Calibration Verification, Blank Summary**	X			
33. Are the %Ds less than or equal to 20% for target analytes CCCs? **Reference Source: WAP Table B3-5 Verification Source: Continuing Calibration Check**	X			
34. Are the relative response factors (RRFs) for all target analytes SPCCs OK? 1,1-Dichloroethane: ≥ 0.10 Bromoform: ≥ 0.10 Chlorobenzene: ≥ 0.30 1, 1, 2, 2-Tetrachloroethane: ≥ 0.30 SW-846 Method 8260B, Section 7.3.5.4 **Reference Source: WAP Table B3-5 Verification Source: Continuing Calibration Check, CCAL Internal Standard Area, and RT Summary**	X			
35. Is RRF for all non-SPCCs ≥ 0.01? **Reference Source: WAP Table B3-5 Verification Source: Continuing Calibration Check**	X			
36. Is the retention time (RT) for internal standards ±30 seconds from last daily calibration check? **Reference Source: WAP Table B3-5 Verification Source: Continuing Calibration Check and CCAL Internal Standard Area and RT Summary**	X			

Attachment 11 – CCP SPQAO Solid/Soil Total Volatile Organic Compound Analysis Project Level Validation Checklist and Summary (continued)

BATCH DATA REPORT NUMBER: ALD05034V **ANALYSIS DATE:** 10/15/05, 10/23/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
37. Is internal standard area count >50% and <200% of the last daily calibration? **Reference Source: WAP Table B3-5 Verification Source: CCAL Internal Standard Area and RT Summary**	X			
38. Are the RTs for the continuing calibrations ±3 standard deviations from the initial calibration per applicable SW-846 method? **Reference Source: WAP Table B3-5 Verification Source: Continuing Calibration Verification**	X			
39. Does the Batch Data Report include MDLs (mg/kg) that are ≤PRQL in Table B3-4? **Reference Source: WAP Table B3-4 Verification Source: MDL Reporting Form**	X			
40. Are analytical procedures (including data revision) used to develop the data referenced in the Batch Data Report? **Reference Source: WAP Table B3-13 Verification Source: Data Generator Checklist for TWCP**	X			ACMM-9260, Rev. 13 – Preparation and analysis.
41. Does the Batch Data Report include the operator's signature and analysis date? **Reference Source: WAP Table B3-13 Verification Source: Data Generator Checklist for TWCP**	X			
42. Are data reporting forms complete with data reported properly (i.e., data is reported in correct units, with correct significant figures, and with correct qualifying flags)? **Reference Source: WAP Table B3-13, B3-10b(1) Verification Source: Batch Data Report**	X			
43. Have data reporting flags been assigned properly? **Reference Source: WAP Table B3-13 Verification Source: DGL Checklists**	X			

Attachment 11 – CCP SPQAO Solid/Soil Total Volatile Organic Compound Analysis Project Level Validation Checklist and Summary (continued)

BATCH DATA REPORT NUMBER: ALD05034V **ANALYSIS DATE:** 10/15/05, 10/23/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
44. Have the batch samples been properly preserved (4° ∀2°C)? **Reference Source: WAP Table B1-4 Verification Source: COC Form, Sample Receipt Checklist, and/or QA Data Review Checklist**	X			
45. Are there any NCR(s) associated with this batch? Identify the NCR(s). **Reference Source: WAP B3-13 Verification Source: DGL Checklists, Batch Data Report Narrative, and/or batch comments**			X	No NCRs associated with this BDR.
46. Are Batch Data Generation Level ITR, TS, and QA Data Review Checklists complete, accurate, and signed? **Reference Source: WAP Table B3-13 Verification Source: DGL Checklists**	X			
47. Is Attachment 6 included?		X		

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

Richard Kantrowitz
Site Project QA Officer

Signature

11/11/05
Date

CH2M•WG IDAHO, LLC

Analytical Laboratories Department

Idaho Cleanup Project

Transuranic Waste Characterization Program

RCRA Analysis Data Report

Batch Data Report Number: ALD05034V
Revision Number: 0
Issue Date: November 7, 2005

Analytical Method: ACMM-9260
Analyte(s): VOCs

Issued to: Mr. Robert Billett, SPM
C/O CCP Records Coordinator
4021 National Parks Highway
Carlsbad, NM 88220

Summary: This data report contains analysis results for 7 samples and 3 trip blanks from Sampling Batch WCS-05-04.

Report Content:

Section	Content	Pages
1	Sample Identification Table	0002 – 0003
2	Sample Custody and Tracking Documents	0004 – 0017
3	Analysis Results	0018 – 0048
4	Batch QC Sample Results	0049 – 0065
5	Instrument QC Data	0066 – 0084
6	Data Review Checklists	0085 – 0093

Release Authorization:

Name & Position	Signature	Date
Faye E. Srala Acting Technical Leader		11/7/05
Jeffrey L. Jeter Acting Supervisor		11/7/05
Shelly J. Sailer Quality Assurance Officer		11/07/05

Section 1

Sample Identification Table

TOTAL VOC ANALYSIS
SAMPLE CROSS-REFERENCE TABLE

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Preparation Method: ACMM-9260-R13 Data Report Number: ALD05034V

Analytical Method: ACMM-9260-R13 Analytical Batch ID: 0510066

Field Sample ID	Lab Sample ID
NA	LBV101305A
NA	LCSV0510066A
TB93A	5CY98
TB94A	5CZ78
1001850311V1DL2667	5CY96DL2667
1001850321V1DL2667	5CY99DL2667
1001688611V1DL889	5CZ76DL889
1001887511V1DL4000	5CZ79DL4000
1001850311V1DL667	5CY96DL667
1001850321V1DL1066	5CY99DL1066
1001688611V1DL320	5CZ76DL320
1001887511V1DL1333	5CZ79DL1333
NA	MBV101505A
1001850321V2MSDL2667	5CY99MSDL2667
1001850321V3MSDDL2667	5CY99MSDDL2667
NA	LBV101805A
TB95A	5DB28
1001817811V1DL889	5DB26DL889
1001886711V1DL1333	5DB29DL1333
1001886721V1DL1333	5DB31DL1333
1001817811V1DL296	5DB26DL296
1001886711V1DL533	5DB29DL533
1001886721V1DL533	5DB31DL533

Section 2

Sample Custody and Tracking Documents

Idaho National Laboratory - Waste Characterization Area - TWCP Chain-of-Custody

COC No. WCA-936

(HFEF-OI-6921, Rev. 3e, 5/11/04

Sampling Location: MFC / HFEF / WCA Analytical Location INL - INTEC Sample Batch No. WCS-05-04

Container Identification No. 10018503 Container I.D.C. ID-RF-S3150-A* Sample Matrix: SOLID

Chain of Custody Initiated: /M Magnuson 10/4/05 1303

Signature: Date / Time:

Sample ID Number	Sample Date	Sample Time	Container Size	Sample Weight (gm)	VOC	NHVOC	Semi VOC	Metals	Other	Comments	Disposition
10018503 11V1	10/4/2005	1303	20-ml	2.57	X						
10018503 11V2	10/4/2005	1305	20-ml	2.64		X					
10018503 11V3	10/4/2005	1307	20-ml	2.67						SPARE	
10018503 11V4	10/4/2005	1309	20-ml	2.74						SPARE	
10018503 11M1	10/4/2005	1312	250-ml	33.34			X	X			
TB 93a	10/4/2005	1512	20-ml	2.89	X					TRIP BLANK	
TB 93b	10/4/2005	1512	20-ml	2.77		X				TRIP BLANK	
TB 93c	10/4/2005	1512	20-ml	2.79						TRIP BLANK/SPARE	

NOTE: For preservation, all samples were stored at a controlled temperature of 4° C and then packed in chemical ice for shipment.

ALD LOG # 05,0066

1 of 1

Sampler Relinquishment to HFEF TWCP Sample Custodian: /M Magnuson

Signature:

Sample Custodian receipt: /M Magnuson 10/4/05 1515

Signature: Date / Time:

Samples placed in locked storage: /M Magnuson 10/4/05 1515

Signature: Date / Time:

Samples retrieved from locked storage: B. [illegible] 10-6-05 0840

Signature: Date / Time:

Shipping TID #: 4700

Relinquished By:			Discrepancies / Comments 50A BET 10/12/05
BAL	10-6-05	1018	*Waste Stream ID-RF-S3150 includes IDCs ~~008~~ 700, & 801 CORRECTED PER CCP-AK-WL-005.
Received By:	Date	Time	BET 10/12/05
BEP	10/06/05	1230	
Relinquished By:			
Received By:	Date	Time	

All sample analysis complete and samples removed from custody control and dispositioned.

Signature Date

0005

Idaho National Laboratory - Waste Characterization Area - TWCP Chain-of-Custody

COC No. WCA-937

[HFEF-OI-6921, Rev. 3e, 5/11/04]

Sampling Location: MFC / HFEF / WCA | Analytical Location: INL - INTEC | Sample Batch No.: WCS-05-04

Container Identification No.: 10018503 | Container I.D.C.: ID-RF-S3150-A* | Sample Matrix: SOLID

Chain of Custody Initiated: JM Magnuson (Signature:) 10/4/05 (Date) 1318 (Time)

Sample ID Number	Sample Date	Sample Time	Container Size	Sample Weight (gm)	VOC	NHVOC	Semi VOC	Metals	Other	Comments	Disposition
10018503 21V1	10/4/2005	1318	20-ml	2.99	X					QC	
10018503 21V2	10/4/2005	1319	20-ml	2.87	X					QC	
10018503 21V3	10/4/2005	1321	20-ml	2.95	X					QC	
10018503 21V4	10/4/2005	1323	20-ml	2.93		X				QC	
10018503 21V5	10/4/2005	1325	20-ml	2.68		X				QC	
10018503 21V6	10/4/2005	1327	20-ml	2.92		X				QC	
10018503 21V7	10/4/2005	1328	20-ml	2.59						SPARE/QC	
10018503 21V8	10/4/2005	1330	20-ml	2.66						SPARE/QC	
10018503 21M1	10/4/2005	1333	250-ml	37.02			X	X		QC	
TB NA	SEE COMMENTS				X						
						X					

NOTE: For preservation, all samples were stored at a controlled temperature of 4° C and then packed in chemical ice for shipment.

ALD LOG # 0510066
1 of 1

Sampler Relinquishment to HFEF TWCP Sample Custodian: JM Magnuson (Signature:)

Sample Custodian receipt: JM Magnuson (Signature:) 10/4/05 (Date) 1543 (Time)

Samples placed in locked storage: JM Magnuson (Signature:) 10/4/05 (Date / Time:) 1543

Samples retrieved from locked storage: B. [illegible] (Signature) 10-6-05 (Date) 0840 (Time)

Shipping TID #: 4700

Relinquished By:			Discrepancies / Comments Samples listed on this COC will be shipped with samples listed on COC 936.
B. [illegible]	10-6-05	1018	Trip Blanks are listed on COC 936. COC 936 & 937 will sent in same shipping container. JM M 10/4/05
Received By:	Date	Time	Quality Control Samples. BET 10/12/05
BSP	10/12/05	1230	50A BET 10/12/05
Relinquished By:			*Waste Stream ID-RF-S3150 includes IDCs ~~009~~ 700, & 801 CORRECTED PER CCP-AK-WL-005. BSP 10/12/05
Received By:	Date	Time	

All sample analysis complete and samples removed from custody control and dispositioned. _____ (Signature) _____ (Date)

9000

ALD Document: Log 0510066 TWCP-RF_S3150-A.tif - Scanned:10/12/2005 1:54:06 PM

Idaho National Laboratory - Waste Characterization Area - TWCP Chain-of-Custody COC No. WCA-938

[HFEF-OI-6921, Rev. 3e, 5/11/04

Sampling Location: MFC / HFEF / WCA Analytical Location INL - INTEC Sample Batch No. WCS-05-04

Container Identification No. 10016886 Container I.D.C. ID-RF-S3150-A* Sample Matrix: SOLID

Chain of Custody Initiated: Signature: J M Magnuson 10/6/05 13:58 Date / Time:

Sample ID Number	Sample Date	Sample Time	Container Size	Sample Weight (gm)	VOC	NHVOC	Semi VOC	Metals	Other	Comments	Disposition
10016886 11V1	10/6/05	1358	20-ml	2.77	X						
10016886 11V2	10/6/05	1400	20-ml	2.84		X					
10016886 11V3	10/6/05	1402	20-ml	2.85						SPARE	
10016886 11V4	10/6/05	1404	20-ml	2.66						SPARE	
10016886 11M1	10/6/05	1408	250-ml	31.53			X	X			
TB 94a	10/6/05	1511	20-ml	2.81	X					TRIP BLANK	
TB 94b	10/6/05	1511	20-ml	2.90		X				TRIP BLANK	
TB 94c	10/6/05	1511	20-ml	2.76						TRIP BLANK/SPARE	

NOTE: For preservation, all samples were stored at a controlled temperature of 4° C and then packed in chemical ice for shipment.

Sampler Relinquishment to HFEF TWCP Sample Custodian: Signature: J M Magnuson

ALD LOG # 0510106 Lot 1

Sample Custodian receipt: Signature: J M Magnuson 10/6/05 1515 Date / Time:

Samples placed in locked storage: Signature: J M Magnuson 10/6/05 1515 Date / Time:

Samples retrieved from locked storage: Signature: B. Adams 10/10/05 0800 Date / Time:

Shipping TID #: 4699

Relinquished By:			Discrepancies / Comments
B. Adams	10-10-05	1015	*Waste Stream ID-RF-S3150-A includes IDCs 700, & 801
Received By:	Date	Time	
S Dalley	101005	1130	
Relinquished By:			
Received By:	Date	Time	

All sample analysis complete and samples removed from custody control and dispositioned. _____ Signature Date

2000

Idaho National Laboratory - Waste Characterization Area - TWCP Chain-of-Custody COC No. WCA-939

[HFEF-OI-6921, Rev. 3e, 5/11/04

Sampling Location: MFC / HFEF / WCA Analytical Location INL - INTEC Sample Batch No. WCS-05-04

Container Identification No. 10018875 Container I.D.C. ID-RF-S3150-A* Sample Matrix: SOLID

Chain of Custody Initiated: Signature: J M Magnuson 10/7/05 1253 Date / Time:

Sample ID Number	Sample Date	Sample Time	Container Size	Sample Weight (gm)	VOC	NHVOC	Semi VOC	Metals	Other	Comments	Disposition
10018875 11V1	10/7/05	1253	20-ml	2.96	X						
10018875 11V2	10/7/05	1255	20-ml	2.69		X					
10018875 11V3	10/7/05	1257	20-ml	2.65						SPARE	
10018875 11V4	10/7/05	1259	20-ml	2.62						SPARE	
10018875 11M1	10/7/05	1301	250-ml	38.46			X	X			
TB			20-ml		X						
TB 3 SEE COMMENTS			20-ml			X				TRIP BLANK	
TB			20-ml							TRIP BLANK	
										TRIP BLANK/SPARE	

NOTE: For preservation, all samples were stored at a controlled temperature of 4° C and then packed in chemical ice for shipment.

Sampler Relinquishment to HFEF TWCP Sample Custodian: Signature: J M Magnuson

Sample Custodian receipt: Signature: J M Magnuson 10/7/05 1415 Date / Time:

Samples placed in locked storage: Signature: J M Magnuson 10/7/05 1415 Date / Time:

Samples retrieved from locked storage: Signature: B. A[illegible] 10/10/05 0800 Date / Time:

ALD LOG # 051010 60 1 of 1

Shipping TID #: 4699

Relinquished By:			Discrepancies / Comments
B. A[illegible]	10-10-05	1015	*Waste Stream ID-RF-S3150-A includes IDCs 700, & 801
Received By:	Date	Time	
[illegible]	10/10/05	1130	THIS COC AND COC 938 WILL BE SHIPPED IN THE
Relinquished By:			SAME CONTAINER. COC 938 HAS THE TRIP BLANKS
			J M Magnuson 10/7/05
Received By:	Date	Time	

All sample analysis complete and samples removed from custody control and dispositioned. _____ Signature Date

0008

ALD Log # 0510134
1 of 1

Idaho National Laboratory - Waste Characterization Area - TWCP Chain-of-Custody

COC No. WCA-940

[HFEF-OI-6921, Rev. 3e, 5/11/04

Sampling Location: MFC / HFEF / WCA | Analytical Location: INL - INTEC | Sample Batch No.: WCS-05-04

Container Identification No.: 10018178 | Container I.D.C.: ID-RF-S315-A* | Sample Matrix: SOLID

Chain of Custody Initiated: Signature: JM Magnuson 10/10/05 1323

Date / Time: 10/19/05 **

Sample ID Number	Sample Date	Sample Time	Container Size	Sample Weight (gm)	VOC	NHVOC	Semi VOC	Metals	Other	Comments	Disposition
10018178 11V1	10/10/05	1323	20-ml	2.85	X						
10018178 11V2	10/10/05	1326	20-ml	2.95		X					
10018178 11V3	10/10/05	1327	20-ml	2.71						SPARE	
10018178 11V4	10/10/05	1331	20-ml	2.68						SPARE	
10018178 11M1	10/10/05	1333	250-ml	32.28			X	X			
TB 95a	10/10/05	1438	20-ml	2.79	X					TRIP BLANK	
TB 95b	10/10/05	1438	20-ml	2.88		X				TRIP BLANK	
TB 95c	10/10/05	1438	20-ml	2.71						TRIP BLANK/SPARE	

NOTE: For preservation, all samples were stored at a controlled temperature of 4° C and then packed in chemical ice for shipment.

Sampler Relinquishment to HFEF TWCP Sample Custodian: Signature: JM Magnuson

Sample Custodian receipt: Signature: JM Magnuson 10/10/05 1440 Date / Time:

Samples placed in locked storage: Signature: JM Magnuson 10/10/05 1440 Date / Time:

Samples retrieved from locked storage: B. Ad[illegible] 10-13-05 1000 Signature: Date / Time:

Shipping TID #: 4692

Relinquished By:			Discrepancies / Comments
B. Ad[illegible]	10-13-05	1010	*Waste Stream ID-RF-S3150-A includes IDCs 700, & 801
Received By:	Date	Time	** CORRECTED CONSISTENT WITH OTHER FIELD DATA. BET 10/19/05
B[illegible]	10/13/05	1259	
Relinquished By:			
Received By:	Date	Time	

All sample analysis complete and samples removed from custody control and dispositioned. _____

Signature Date

6000

ALD Document: Log 0510134 TWCP-RF_S3150-A.tif - Scanned:10/19/2005 11:29:28 AM

Idaho National Laboratory - Waste Characterization Area - TWCP Chain-of-Custody

ALD LOG # 05-0134

COC No. WCA-941

[HFEF-OI-6921, Rev. 3e, 5/11/04

Sampling Location: MFC / HFEF / WCA | Analytical Location: INL - INTEC | Sample Batch No.: WCS-05-04

Container Identification No.: 10018867 | Container I.D.C.: ID-RF-S3150-A* | Sample Matrix: ~~SOLID~~

Chain of Custody Initiated: Signature: J M Magnuson 10/11/05 1257 Date / Time:

Sample ID Number	Sample Date	Sample Time	Container Size	Sample Weight (gm)	VOC	NHVOC	Semi VOC	Metals	Other	Comments	Disposition
10018867 11V1	10/11/05	1257	20-ml	2.56	X						
10018867 11V2	10/11/05	1300	20-ml	2.58		X					
10018867 11V3	10/11/05	1303	20-ml	2.56						SPARE	
10018867 11V4	10/11/05	1305	20-ml	2.68						SPARE	
10018867 11M1	10/11/05	1308	250-ml	30.45			X	X			
TB			20-ml		X					TRIP BLANK	
TB SEE COC	940		20-ml			X				TRIP BLANK	
TB FOR TRIP	BLANKS		20-ml							TRIP BLANK/SPARE	

NOTE: For preservation, all samples were stored at a controlled temperature of 4° C and then packed in chemical ice for shipment.

Sampler Relinquishment to HFEF TWCP Sample Custodian: Signature: J M Magnuson

Sample Custodian receipt: Signature: J M Magnuson 10/11/05 1526 Date / Time:

Samples placed in locked storage: Signature: J M Magnuson 10/11/05 1526 Date / Time:

Samples retrieved from locked storage: Signature: B Adams 10-13-05 1000 Date / Time:

Shipping TID #: 4692

Relinquished By:			Discrepancies / Comments
B. Adams	10-13-05	1010	*Waste Stream ID-RF-S3150-A includes IDCs 700, & 801
Received By:	Date	Time	
B	10/13/05	1259	
Relinquished By:			
Received By:	Date	Time	

All sample analysis complete and samples removed from custody control and dispositioned. _____

Signature Date

0010

ALD Document: Log 0510134 TWCP-RF_S3150-A.tif - Scanned:10/19/2005 11:29:28 AM

ALD LOG # 0510134 TWCP

Idaho National Laboratory - Waste Characterization Area - TWCP Chain-of-Custody

COC No. WCA-942

[HFEF-OI-6921, Rev. 3e, 5/11/04]

Sampling Location: MFC / HFEF / WCA | Analytical Location: INL - INTEC | Sample Batch No.: WCS-05-04

Container identification No.: 10018867 | Container I.D.C.: ID-RF-S3150-A* | Sample Matrix: SOLID

Chain of Custody Initiated: JM Magnuson (Signature) 10/11/05 (Date) 1383 (Time)

Sample ID Number	Sample Date	Sample Time	Container Size	Sample Weight (gm)	VOC	NHVOC	Semi VOC	Metals	Other	Comments	Disposition
10018867 21V1	10/11/05	1323	20-ml	2.69	X					QC	
10018867 21V2	10/11/05	1325	20-ml	2.98	X					QC	
10018867 21V3	10/11/05	1328	20-ml	2.84	X					QC	
10018867 21V4	10/11/05	1329	20-ml	2.69		X				QC	
10018867 21V5	10/11/05	1331	20-ml	2.738		X				QC	
10018867 21V6	10/11/05	1333	20-ml	2.51		X				QC	
10018867 21V7	10/11/05	1334	20-ml	2.65						SPARE/QC	
10018867 21V8	10/11/05	1336	20-ml	2.64						SPARE/QC	
10018867 21M1	10/11/05	1339	250-ml	31.75			X	X		QC	
TB			20-ml		X					TRIP BLANK	
TB SEE COC 940			20-ml			X				TRIP BLANK	
TB FOR TRIP BLANKS			20-ml							TRIP BLANK/SPARE	

NOTE: For preservation, all samples were stored at a controlled temperature of 4° C and then packed in chemical ice for shipment.

Sampler Relinquishment to HFEF TWCP Sample Custodian: JM Magnuson (Signature)

Sample Custodian receipt: JM Magnuson (Signature) 10/11/05 (Date) 1526 (Time)

Samples placed in locked storage: JM Magnuson (Signature) 10/11/05 (Date) 1526 (Time)

Samples retrieved from locked storage: B. Ahrens (Signature) 10-13-05 (Date) 0725 (Time) 1000 QA 10/13/05

Shipping TID #: 4692

Relinquished By:			Discrepancies / Comments
B. Ahrens	10-13-05	1010	
Received By:	Date	Time	Quality Control Samples.
BOP	10/13/05	1259	1) INNER LABLE HAS WRONG SAMPLE WEIGHT
Relinquished By:			*Waste Stream ID-RF-S3150-A includes IDCs 700, & 801
Received By:	Date	Time	

All sample analysis complete and samples removed from custody control and dispositioned. _____ (Signature) _____ (Date)

0011

ALD CUSTODY AREA Sample Tracking Form

Project Name: TWCP-RF/S3150-A Analytical Log #: 051006_6

Custody Area: 209 Environmental/Regulatory Sample: YES

*Lab Sample ID(s)	Date / Time Removed	Relinquished By	Received By	To Lab	Analysis / Procedure	Date / Time Returned	Returned By	Received By	**Comments
5CY99-8	10/10/05 14:20			242	Hazard Index	10/10/05 16:10			
5CY96-1, 5CY98-1, 5CY99-1, 5CY99-2, 5CY99-3	10/13/05 08:44			214	VOC Analysis	10/18/05 13:40			Consumed in Analysis
5CY96-2, 5CY98-2, 5CY99-4, 5CY99-5, 5CY99-6 ~~10/12/05 13:30~~	10/12/05 12:24			211	NHVOC Analysis	10/13/05 13:05			Consumed in Analysis
5CY97-1, 5CZ01-1	10/13/05 08:20			207 / 211	SemiVol Analysis	10/13/05 15:45			
5CY97-1, 5CZ01-1	/ / :			207 / 211	Mercury	/ / :			
5CY97-1, 5CZ01-1	10/19/05 08:33			207 / 211	Metals	10/19/05 15:36			
	/ / :			207 / 211		/ / :			
5cy99-8	10/17/05 08:20			211	NHVOC ANALYSIS	10/17/05 13:50			CONSUMED IN ANALYSIS
	/ / :					/ / :			
	/ / :					/ / :			

0012

* Multi Lab Sample IDs can be listed on a single line IF and ONLY IF they will be maintained and handled the same; otherwise a separate line should be used for each sample set.

** If consumed in Analysis, document in Comments field.

ALD INTERNAL LAB Sample Tracking Form

Custody Area: 209 Project Name: TWCP-RF/S3150-A Analytical Log #: 051006 6

Environmental/Regulatory Sample: YES

*Lab Spl ID(s): 5CY96-1, 5CY98-1, 5CY99-1, 5CY99-2, 5CY99-3

Sample Type: ☒ Original Sample ☐ TCLP Extract ☐ Sample Prep ☐ Other: _____

Location From	Location To	Date Time	Relinquished By	Received By	Analysis / Procedure	**Comments
209	214	10/13/05 13:30	[signature]	[signature]	VOC Analysis	Consumed in Analysis VOC extracts were created and consumed in analysis.
214	209	10/18/05 13:40	[signature]	[signature]	—	Returned paper
		/ / :				
		/ / :				
		/ / :				
		/ / :				
		/ / :				

* All Sample codes listed on the line above must be maintained and handled as a batch. If any sample is going to be handled differently, a separate tracking form must be used.

** If consumed in Analysis, document in Comments field.

NOTE: Return this form to Custody Area when samples are returned, relinquished, consumed, or disposed.

0013

ALD CUSTODY AREA Sample Tracking Form

Project Name: TWCP-RF/S3150-A Analytical Log #: 051010 6

Custody Area: 209 Environmental/Regulatory Sample: YES

*Lab Sample ID(s)	Date / Time Removed	Relinquished By	Received By	To Lab	Analysis / Procedure	Date / Time Returned	Returned By	Received By	**Comments
5CZ76-4	10/10/05 14:32	BSP	[illegible]	242	Hazard Index	10/10/05 16:10	[illegible]	[illegible]	
5CZ76-1, 5CZ78-1, 5CZ79-1	10/13/05 08:45	[illegible]	[illegible]	214	VOC Analysis	10/13/05 13:40	[illegible]	[illegible]	Consumed in Analysis
5CZ76-2, 5CZ78-2, 5CZ79-2	10/12/05 12:24	BSP	[illegible]	211	NHVOC Analysis	10/13/05 13:05	[illegible]	[illegible]	Consumed in Analysis
5CZ77-1, 5CZ80-1	10/13/05 08:20	[illegible]	[illegible]	207/211	SemiVol Analysis	10/13/05 15:45	[illegible]	[illegible]	N/A
5CZ77-1, 5CZ80-1	/ / :			207 / 211	Mercury	/ / :			
5CZ77-1, 5CZ80-1	10/19/05 08:35	BSP	[illegible]	207 / 211	Metals	10/19/05 15:37	[illegible]	BSP	
	/ / :			207 / 211		/ / :			
5CZ79-4	10/17/05 08:22	BSP	[illegible]	211	NHVOC ANALYSIS	10/17/05 13:50	[illegible]	[illegible]	CONSUMED IN ANALYSIS
	/ / :					/ / :			
	/ / :					/ / :			

* Multi Lab Sample IDs can be listed on a single line IF and ONLY IF they will be maintained and handled the same; otherwise a separate line should be used for each sample set.

0014

ALD INTERNAL LAB Sample Tracking Form

Custody Area: 209 Project Name: TWCP-RF/S3150-A Analytical Log #: 051010_6

Environmental/Regulatory Sample: YES

*Lab Spl ID(s): 5CZ76-1, 5CZ78-1, 5CZ79-1

Sample Type: ☒ Original Sample ☐ TCLP Extract ☐ Sample Prep ☐ Other: _____

Location From	Location To	Date Time	Relinquished By	Received By	Analysis / Procedure	**Comments
209	214	10/13/05 08:45	Sally	Linda	VOC Analysis	Consumed in Analysis VOC extracts were created and consumed in analysis.
214	209	10/18/05 13:40	Linda	J. DeCou	—	Returned pages
		/ / :				
		/ / :				
		/ / :				
		/ / :				
		/ / :				

* All Sample codes listed on the line above must be maintained and handled as a batch. If any sample is going to be handled differently, a separate tracking form must be used.

NOTE: Return this form to Custody Area when samples are returned, relinquished, consumed, or disposed.

0015

ALD CUSTODY AREA Sample Tracking Form

Project Name: TWCP-RF/S3150-A Analytical Log #: 051013_4

Custody Area: 209 Environmental/Regulatory Sample: YES

*Lab Sample ID(s)	Date / Time Removed	Relinquished By	Received By	To Lab	Analysis / Procedure	Date / Time Returned	Returned By	Received By	**Comments
SDB29-4	10/17/05 08:15			242	Hazard Index	10/17/05 16:35			
SDB26-1, SDB28-1, SDB29-1, SDB31-1, SDB31-2, SDB31-3	10/18/05 10:05			214	VOC Analysis	10/18/05 13:40			Consumed in Analysis
SDB26-2, SDB28-2, SDB29-2, SDB31-4, SDB31-5, SDB31-6	10/17/05 09:38	BOP		211	NHVOC Analysis	10/17/05 13:50			Returned Consumed in Analysis
SDB27-1, SDB30-1, SDB32-1	10/18/05 08:40			~~207/211~~	SemiVol Analysis	10/17/05 15:50			
SDB27-1, SDB30-1, SDB32-1	/ / :			207/211	Mercury	/ / :			
SDB27-1, SDB30-1, SDB32-1	10/19/05 08:28	BOP		~~207~~/211	Metals	10/19/05 15:38			
SDB29-4, SDB31-8	10/19/05 07:53	BOP		~~SET 10/19/05~~ ~~207~~/211 NHVOC ANALYSIS		10/19/05 09:10			CONSUMED IN ANALYSIS
	/ / :					/ / :			
	/ / :					/ / :			
	/ / :					/ / :			

* Multi Lab Sample IDs can be listed on a single line IF and ONLY IF they will be maintained and handled the same; otherwise a separate line should be used for each sample set.

0016

ALD INTERNAL LAB Sample Tracking Form

Custody Area: 209 Project Name: TWCP-RF/S3150-A Analytical Log #: 051013_4

Environmental/Regulatory Sample: YES

*Lab Spl ID(s): 5DB26-1, 5DB28-1, 5DB29-1, 5DB31-1, 5DB31-2, 5DB31-3

Sample Type: ☒ Original Sample ☐ TCLP Extract ☐ Sample Prep ☐ Other: _____

Location From	Location To	Date Time	Relinquished By	Received By	Analysis / Procedure	**Comments
209	214	10/18/05 10:05	[signature]	[signature]	VOC Analysis	Consumed in Analysis VOC extracts were created and consumed in analysis.
214	209	10/18/05 13:40	[signature]	[signature]	—	5DB31-213 returned
		/ / :				
		/ / :				
		/ / :				
		/ / :				
		/ / :				

* All Sample codes listed on the line above must be maintained and handled as a batch. If any sample is going to be handled differently, a separate tracking form must be used.

NOTE: Return this form to Custody Area when samples are returned, relinquished, consumed, or disposed.

0017

Section 3

Analysis Results

Idaho Cleanup Project
Analytical Laboratories Department

Data Report Narrative for ALD05034V

This data report contains volatile organic compounds (VOCs) results for seven waste samples and three associated trip blanks, received 10/06/05, 10/10/05 and 10/13/2005 from CCP-INL for the TRU Waste Characterization Program.

Sample preparation and analyses were performed using ACMM-9260 Revision 13, which implements the requirements of SW-846 Method 8260B.

Holding times for solid samples are 14 days from collection to extraction and 40 days from extraction to analysis. All samples were analyzed within the required holding times.

One initial calibration, IV405W19, is associated with these analyses. Bromoform has a %RSD greater than 15 and therefore uses a linear regression model for quantitation. The %D for modeled compounds for the continuing calibration (CCAL) is calculated as the difference between the known value of the standard (50 µg/L) and the quantitated value of the standard. Bromoform is flagged as a modeled compound on the ICAL reporting form. All other compounds have %RSDs less than 15 and use average relative response factors for quantitation.

The results of the non-halogenated volatiles analyses indicated high levels of chlorinated compounds. Based on these results, the sample extracts were diluted before analysis. Due to the high concentrations of 1,1,1-trichloroethane and carbon tetrachloride in all waste samples, analyses were performed at two dilution levels. The target analyte results of both dilutions are reported. The sample extracts were not analyzed neat in order to avoid instrument damage. Surrogates and MS/MSD spikes were diluted out for these samples, and sample specific MDLs are elevated above the PRQLs for other target analytes. TIC searches were performed and reported on the lesser of the two dilutions.

Clean-out blanks were not run after samples 5CY99DL1066 and 5CZ76DL320, even though 1,1,1-trichloroethane exceeded the calibration range by more than a factor of 2. This has no adverse impact on the concentration reported for 1,1,1-trichloroethane for sample 5CZ76 and 5CZ79. Sample 5CZ76DL889 and 5CZ79DL4000 were analyzed earlier in the run to get 1,1,1-trichloroethane within calibration range, and these values are considered the true concentrations found in the samples. The Form 1s for 5CZ76DL320 and 5CZ79DL1333 have 1,1,1-trichloroethane reported with E flags, which makes those values estimated at best.

Although MS and MSD spikes were diluted out, comparison of detected concentrations of non-spiked analytes 1,1,1-trichloroethane and carbon tetrachloride in the MS and MSD (RPDs < 5%) indicates that analytical precision for the batch is acceptable.

Idaho Cleanup Project
Analytical Laboratories Department

Data Report Narrative for ALD05034V

The sample results for 5CY96DL2667 show surrogate 4-bromofluorobenzene (4-BFB) at 1.00 ug/L at the detector (MDL is 1 ug/L). The surrogate was diluted well below the MDL; analysis of a blank without surrogates indicates that this detection is due to a memory effect (i.e., contamination) in the instrument.

Tetrachloroethene was detected at <3x the program-required MDL in the daily blank associated with sample 5CY99MSDL2667 and 5CY99MSDDL2667. This compound was also found in the blank check run to check to look for 4-BFB memory effects. The results are not flagged with a "B" qualifier since form I's are not generated for the MS and MSD samples.

All other quality control parameters meet acceptance criteria for this analytical batch.

The CAS number used for m/p-xylene on the Form I (1330-20-7) is the CAS number for xylenes in general. The CAS numbers for m-xylene and p-xylene are 108-38-3 and 106-42-3, respectively.

Idaho Completion Project
Analytical Laboratories Department

TRU Waste Characterization Program

Data Qualifier Flag Definitions for VOCs

Flag	Definition
B	Analyte detected in associated laboratory blank or method blank
E	Reported analyte concentration exceeds the calibration range
D	Reported analyte concentration is from a secondary dilution of the sample
H	Holding time exceeded
J	Target Analyte concentration <PRQL but ≥ MDL
J	TIC concentration is estimated by comparison to nearest internal standard, and has high analytical uncertainty.
N	Presumptive evidence of a compound, based on a mass spectral library search (TICs only)
U	Analyte was undetected (reported as sample-specific MDL)
Z	One or more QC sample results do not meet acceptance criteria

TOTAL VOC ANALYSIS DATA SHEET

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	1001850311V1DL667	Lab Sample ID:	5CY96DL667
Sampling Batch No:	WCS-05-04	Lab File ID:	SV403149
Date Sampled:	10/04/2005	Data Report Number:	ALD05034V
Date Extracted:	10/13/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	9 days		
Date/Time Analyzed:	10/15/2005 17:55	Instrument ID:	VOA-4
Analysis Holding Time:	2 days	Matrix:	SOLID
Preparation Method:	ACMM-9260-R13	Dilution Factor:	667
Analytical Method:	ACMM-9260-R13		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	130	UD
75-25-2	Bromoform	130	UD
75-15-0	Carbon Disulfide	260	UD
56-23-5	Carbon Tetrachloride	10000	D
108-90-7	Chlorobenzene	130	UD
67-66-3	Chloroform	130	UD
75-35-4	1,1-Dichloroethene	130	UD
107-06-2	1,2-Dichloroethane	130	UD
100-41-4	Ethylbenzene	130	UD
75-09-2	Methylene Chloride	260	UD
1330-20-7	m-Xylene and p-Xylene mix	260	UD
95-47-6	o-Xylene	130	UD
79-34-5	1,1,2,2-Tetrachloroethane	130	UD
127-18-4	Tetrachloroethene	130	UD
108-88-3	Toluene	130	UD
156-60-5	trans-1,2-Dichloroethene	130	UD
71-55-6	1,1,1-Trichloroethane	41000	DE
79-01-6	Trichloroethene	130	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	520	UD
79-00-5	1,1,2-Trichloroethane	130	UD
75-69-4	Trichlorofluoromethane	260	UD
75-01-4	Vinyl Chloride	130	UD

TOTAL VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	1001850311V1DL667	Lab Sample ID:	5CY96DL667
Sampling Batch No:	WCS-05-04	Lab File ID:	SV403149
Date Sampled:	10/04/2005	Data Report Number:	ALD05034V
Date Extracted:	10/13/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	9 days		
Date/Time Analyzed:	10/15/2005 17:55	Instrument ID:	VOA-4
Analysis Holding Time:	2 days	Matrix:	SOLID
Preparation Method:	ACMM-9260-R13	Dilution Factor:	667
Analytical Method:	ACMM-9260-R13		

Number of TICs Found: 0

	CAS Number	Tentatively Identified VOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

TOTAL VOC ANALYSIS DATA SHEET

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	1001850311V1DL2667	Lab Sample ID:	5CY96DL2667
Sampling Batch No:	WCS-05-04	Lab File ID:	SV403145
Date Sampled:	10/04/2005	Data Report Number:	ALD05034V
Date Extracted:	10/13/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	9 days		
Date/Time Analyzed:	10/15/2005 15:06	Instrument ID:	VOA-4
Analysis Holding Time:	2 days	Matrix:	SOLID
Preparation Method:	ACMM-9260-R13	Dilution Factor:	2667
Analytical Method:	ACMM-9260-R13		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	520	UD
75-25-2	Bromoform	520	UD
75-15-0	Carbon Disulfide	1000	UD
56-23-5	Carbon Tetrachloride	8800	D
108-90-7	Chlorobenzene	520	UD
67-66-3	Chloroform	520	UD
75-35-4	1,1-Dichloroethene	520	UD
107-06-2	1,2-Dichloroethane	520	UD
100-41-4	Ethylbenzene	520	UD
75-09-2	Methylene Chloride	1000	UD
1330-20-7	m-Xylene and p-Xylene mix	1000	UD
95-47-6	o-Xylene	520	UD
79-34-5	1,1,2,2-Tetrachloroethane	520	UD
127-18-4	Tetrachloroethene	520	UD
108-88-3	Toluene	520	UD
156-60-5	trans-1,2-Dichloroethene	520	UD
71-55-6	1,1,1-Trichloroethane	37000	D
79-01-6	Trichloroethene	520	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	2100	UD
79-00-5	1,1,2-Trichloroethane	520	UD
75-69-4	Trichlorofluoromethane	1000	UD
75-01-4	Vinyl Chloride	520	UD

TOTAL VOC ANALYSIS DATA SHEET

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	TB93A	Lab Sample ID:	5CY98
Sampling Batch No:	WCS-05-04	Lab File ID:	SV403143
Date Sampled:	10/04/2005	Data Report Number:	ALD05034V
Date Extracted:	10/13/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	9 days		
Date/Time Analyzed:	10/15/2005 13:41	Instrument ID:	VOA-4
Analysis Holding Time:	2 days	Matrix:	SOLID
Preparation Method:	ACMM-9260-R13	Dilution Factor:	1
Analytical Method:	ACMM-9260-R13		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	0.17	U
75-25-2	Bromoform	0.17	U
75-15-0	Carbon Disulfide	0.35	U
56-23-5	Carbon Tetrachloride	0.17	U
108-90-7	Chlorobenzene	0.17	U
67-66-3	Chloroform	0.17	U
75-35-4	1,1-Dichloroethene	0.17	U
107-06-2	1,2-Dichloroethane	0.17	U
100-41-4	Ethylbenzene	0.17	U
75-09-2	Methylene Chloride	0.35	U
1330-20-7	m-Xylene and p-Xylene mix	0.35	U
95-47-6	o-Xylene	0.17	U
79-34-5	1,1,2,2-Tetrachloroethane	0.17	U
127-18-4	Tetrachloroethene	0.17	U
108-88-3	Toluene	0.17	U
156-60-5	trans-1,2-Dichloroethene	0.17	U
71-55-6	1,1,1-Trichloroethane	0.35	U
79-01-6	Trichloroethene	0.17	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.69	U
79-00-5	1,1,2-Trichloroethane	0.17	U
75-69-4	Trichlorofluoromethane	0.35	U
75-01-4	Vinyl Chloride	0.17	U

TOTAL VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	TB93A	Lab Sample ID:	5CY98
Sampling Batch No:	WCS-05-04	Lab File ID:	SV403143
Date Sampled:	10/04/2005	Data Report Number:	ALD05034V
Date Extracted:	10/13/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	9 days		
Date/Time Analyzed:	10/15/2005 13:41	Instrument ID:	VOA-4
Analysis Holding Time:	2 days	Matrix:	SOLID
Preparation Method:	ACMM-9260-R13	Dilution Factor:	1
Analytical Method:	ACMM-9260-R13		

Number of TICs Found: 0

	CAS Number	Tentatively Identified VOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

TOTAL VOC ANALYSIS DATA SHEET

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	1001850321V1DL1066	Lab Sample ID:	5CY99DL1066
Sampling Batch No:	WCS-05-04	Lab File ID:	SV403150
Date Sampled:	10/04/2005	Data Report Number:	ALD05034V
Date Extracted:	10/13/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	9 days		
Date/Time Analyzed:	10/15/2005 18:38	Instrument ID:	VOA-4
Analysis Holding Time:	2 days	Matrix:	SOLID
Preparation Method:	ACMM-9260-R13	Dilution Factor:	1066
Analytical Method:	ACMM-9260-R13		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	180	UD
75-25-2	Bromoform	180	UD
75-15-0	Carbon Disulfide	360	UD
56-23-5	Carbon Tetrachloride	11000	D
108-90-7	Chlorobenzene	180	UD
67-66-3	Chloroform	180	UD
75-35-4	1,1-Dichloroethene	180	UD
107-06-2	1,2-Dichloroethane	180	UD
100-41-4	Ethylbenzene	180	UD
75-09-2	Methylene Chloride	360	UD
1330-20-7	m-Xylene and p-Xylene mix	360	UD
95-47-6	o-Xylene	180	UD
79-34-5	1,1,2,2-Tetrachloroethane	180	UD
127-18-4	Tetrachloroethene	180	UD
108-88-3	Toluene	180	UD
156-60-5	trans-1,2-Dichloroethene	180	UD
71-55-6	1,1,1-Trichloroethane	46000	DE
79-01-6	Trichloroethene	180	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	710	UD
79-00-5	1,1,2-Trichloroethane	180	UD
75-69-4	Trichlorofluoromethane	360	UD
75-01-4	Vinyl Chloride	180	UD

TOTAL VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	1001850321V1DL1066	Lab Sample ID:	5CY99DL1066
Sampling Batch No:	WCS-05-04	Lab File ID:	SV403150
Date Sampled:	10/04/2005	Data Report Number:	ALD05034V
Date Extracted:	10/13/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	9 days		
Date/Time Analyzed:	10/15/2005 18:38	Instrument ID:	VOA-4
Analysis Holding Time:	2 days	Matrix:	SOLID
Preparation Method:	ACMM-9260-R13	Dilution Factor:	1066
Analytical Method:	ACMM-9260-R13		

Number of TICs Found: 0

	CAS Number	Tentatively Identified VOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

TOTAL VOC ANALYSIS DATA SHEET

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	1001850321V1DL2667	Lab Sample ID:	5CY99DL2667
Sampling Batch No:	WCS-05-04	Lab File ID:	SV403146
Date Sampled:	10/04/2005	Data Report Number:	ALD05034V
Date Extracted:	10/13/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	9 days		
Date/Time Analyzed:	10/15/2005 15:48	Instrument ID:	VOA-4
Analysis Holding Time:	2 days	Matrix:	SOLID
Preparation Method:	ACMM-9260-R13	Dilution Factor:	2667
Analytical Method:	ACMM-9260-R13		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	450	UD
75-25-2	Bromoform	450	UD
75-15-0	Carbon Disulfide	890	UD
56-23-5	Carbon Tetrachloride	10000	D
108-90-7	Chlorobenzene	450	UD
67-66-3	Chloroform	450	UD
75-35-4	1,1-Dichloroethene	450	UD
107-06-2	1,2-Dichloroethane	450	UD
100-41-4	Ethylbenzene	450	UD
75-09-2	Methylene Chloride	890	UD
1330-20-7	m-Xylene and p-Xylene mix	890	UD
95-47-6	o-Xylene	450	UD
79-34-5	1,1,2,2-Tetrachloroethane	450	UD
127-18-4	Tetrachloroethene	450	UD
108-88-3	Toluene	450	UD
156-60-5	trans-1,2-Dichloroethene	450	UD
71-55-6	1,1,1-Trichloroethane	42000	D
79-01-6	Trichloroethene	450	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1800	UD
79-00-5	1,1,2-Trichloroethane	450	UD
75-69-4	Trichlorofluoromethane	890	UD
75-01-4	Vinyl Chloride	450	UD

TOTAL VOC ANALYSIS DATA SHEET

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	1001688611V1DL320	Lab Sample ID:	5CZ76DL320
Sampling Batch No:	WCS-05-04	Lab File ID:	SV403151
Date Sampled:	10/06/2005	Data Report Number:	ALD05034V
Date Extracted:	10/13/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	7 days		
Date/Time Analyzed:	10/15/2005 19:20	Instrument ID:	VOA-4
Analysis Holding Time:	2 days	Matrix:	SOLID
Preparation Method:	ACMM-9260-R13	Dilution Factor:	320
Analytical Method:	ACMM-9260-R13		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	58	UD
75-25-2	Bromoform	58	UD
75-15-0	Carbon Disulfide	120	UD
56-23-5	Carbon Tetrachloride	12000	DE
108-90-7	Chlorobenzene	58	UD
67-66-3	Chloroform	58	UD
75-35-4	1,1-Dichloroethene	58	UD
107-06-2	1,2-Dichloroethane	58	UD
100-41-4	Ethylbenzene	58	UD
75-09-2	Methylene Chloride	120	UD
1330-20-7	m-Xylene and p-Xylene mix	120	UD
95-47-6	o-Xylene	58	UD
79-34-5	1,1,2,2-Tetrachloroethane	58	UD
127-18-4	Tetrachloroethene	58	UD
108-88-3	Toluene	58	UD
156-60-5	trans-1,2-Dichloroethene	58	UD
71-55-6	1,1,1-Trichloroethane	18000	DE
79-01-6	Trichloroethene	58	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	230	UD
79-00-5	1,1,2-Trichloroethane	58	UD
75-69-4	Trichlorofluoromethane	120	UD
75-01-4	Vinyl Chloride	58	UD

TOTAL VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	1001688611V1DL320	Lab Sample ID:	5CZ76DL320
Sampling Batch No:	WCS-05-04	Lab File ID:	SV403151
Date Sampled:	10/06/2005	Data Report Number:	ALD05034V
Date Extracted:	10/13/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	7 days		
Date/Time Analyzed:	10/15/2005 19:20	Instrument ID:	VOA-4
Analysis Holding Time:	2 days	Matrix:	SOLID
Preparation Method:	ACMM-9260-R13	Dilution Factor:	320
Analytical Method:	ACMM-9260-R13		

Number of TICs Found: 0

	CAS Number	Tentatively Identified VOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

TOTAL VOC ANALYSIS DATA SHEET

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	1001688611V1DL889	Lab Sample ID:	5CZ76DL889
Sampling Batch No:	WCS-05-04	Lab File ID:	SV403147
Date Sampled:	10/06/2005	Data Report Number:	ALD05034V
Date Extracted:	10/13/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	7 days		
Date/Time Analyzed:	10/15/2005 16:31	Instrument ID:	VOA-4
Analysis Holding Time:	2 days	Matrix:	SOLID
Preparation Method:	ACMM-9260-R13	Dilution Factor:	889
Analytical Method:	ACMM-9260-R13		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	160	UD
75-25-2	Bromoform	160	UD
75-15-0	Carbon Disulfide	320	UD
56-23-5	Carbon Tetrachloride	11000	D
108-90-7	Chlorobenzene	160	UD
67-66-3	Chloroform	160	UD
75-35-4	1,1-Dichloroethene	160	UD
107-06-2	1,2-Dichloroethane	160	UD
100-41-4	Ethylbenzene	160	UD
75-09-2	Methylene Chloride	320	UD
1330-20-7	m-Xylene and p-Xylene mix	320	UD
95-47-6	o-Xylene	160	UD
79-34-5	1,1,2,2-Tetrachloroethane	160	UD
127-18-4	Tetrachloroethene	160	UD
108-88-3	Toluene	160	UD
156-60-5	trans-1,2-Dichloroethene	160	UD
71-55-6	1,1,1-Trichloroethane	16000	D
79-01-6	Trichloroethene	160	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	640	UD
79-00-5	1,1,2-Trichloroethane	160	UD
75-69-4	Trichlorofluoromethane	320	UD
75-01-4	Vinyl Chloride	160	UD

TOTAL VOC ANALYSIS DATA SHEET

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	TB94A	Lab Sample ID:	5CZ78
Sampling Batch No:	WCS-05-04	Lab File ID:	SV403144
Date Sampled:	10/06/2005	Data Report Number:	ALD05034V
Date Extracted:	10/13/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	7 days		
Date/Time Analyzed:	10/15/2005 14:24	Instrument ID:	VOA-4
Analysis Holding Time:	2 days	Matrix:	SOLID
Preparation Method:	ACMM-9260-R13	Dilution Factor:	1
Analytical Method:	ACMM-9260-R13		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	0.18	U
75-25-2	Bromoform	0.18	U
75-15-0	Carbon Disulfide	0.36	U
56-23-5	Carbon Tetrachloride	0.18	U
108-90-7	Chlorobenzene	0.18	U
67-66-3	Chloroform	0.18	U
75-35-4	1,1-Dichloroethene	0.18	U
107-06-2	1,2-Dichloroethane	0.18	U
100-41-4	Ethylbenzene	0.18	U
75-09-2	Methylene Chloride	0.36	U
1330-20-7	m-Xylene and p-Xylene mix	0.36	U
95-47-6	o-Xylene	0.18	U
79-34-5	1,1,2,2-Tetrachloroethane	0.18	U
127-18-4	Tetrachloroethene	0.18	U
108-88-3	Toluene	0.18	U
156-60-5	trans-1,2-Dichloroethene	0.18	U
71-55-6	1,1,1-Trichloroethane	0.36	U
79-01-6	Trichloroethene	0.18	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.71	U
79-00-5	1,1,2-Trichloroethane	0.18	U
75-69-4	Trichlorofluoromethane	0.36	U
75-01-4	Vinyl Chloride	0.18	U

TOTAL VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	TB94A	Lab Sample ID:	5CZ78
Sampling Batch No:	WCS-05-04	Lab File ID:	SV403144
Date Sampled:	10/06/2005	Data Report Number:	ALD05034V
Date Extracted:	10/13/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	7 days		
Date/Time Analyzed:	10/15/2005 14:24	Instrument ID:	VOA-4
Analysis Holding Time:	2 days	Matrix:	SOLID
Preparation Method:	ACMM-9260-R13	Dilution Factor:	1
Analytical Method:	ACMM-9260-R13		

Number of TICs Found: 0

	CAS Number	Tentatively Identified VOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

TOTAL VOC ANALYSIS DATA SHEET

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	1001887511V1DL1333	Lab Sample ID:	5CZ79DL1333
Sampling Batch No:	WCS-05-04	Lab File ID:	SV403152
Date Sampled:	10/07/2005	Data Report Number:	ALD05034V
Date Extracted:	10/13/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	6 days		
Date/Time Analyzed:	10/15/2005 20:03	Instrument ID:	VOA-4
Analysis Holding Time:	2 days	Matrix:	SOLID
Preparation Method:	ACMM-9260-R13	Dilution Factor:	1333
Analytical Method:	ACMM-9260-R13		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	230	UD
75-25-2	Bromoform	230	UD
75-15-0	Carbon Disulfide	450	UD
56-23-5	Carbon Tetrachloride	28000	D
108-90-7	Chlorobenzene	230	UD
67-66-3	Chloroform	230	UD
75-35-4	1,1-Dichloroethene	230	UD
107-06-2	1,2-Dichloroethane	230	UD
100-41-4	Ethylbenzene	230	UD
75-09-2	Methylene Chloride	450	UD
1330-20-7	m-Xylene and p-Xylene mix	450	UD
95-47-6	o-Xylene	230	UD
79-34-5	1,1,2,2-Tetrachloroethane	230	UD
127-18-4	Tetrachloroethene	230	UD
108-88-3	Toluene	230	UD
156-60-5	trans-1,2-Dichloroethene	230	UD
71-55-6	1,1,1-Trichloroethane	52000	DE
79-01-6	Trichloroethene	230	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	900	UD
79-00-5	1,1,2-Trichloroethane	230	UD
75-69-4	Trichlorofluoromethane	450	UD
75-01-4	Vinyl Chloride	230	UD

TOTAL VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	1001887511V1DL1333	Lab Sample ID:	5CZ79DL1333
Sampling Batch No:	WCS-05-04	Lab File ID:	SV403152
Date Sampled:	10/07/2005	Data Report Number:	ALD05034V
Date Extracted:	10/13/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	6 days		
Date/Time Analyzed:	10/15/2005 20:03	Instrument ID:	VOA-4
Analysis Holding Time:	2 days	Matrix:	SOLID
Preparation Method:	ACMM-9260-R13	Dilution Factor:	1333
Analytical Method:	ACMM-9260-R13		

Number of TICs Found: 0

	CAS Number	Tentatively Identified VOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

TOTAL VOC ANALYSIS DATA SHEET

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	1001887511V1DL4000	Lab Sample ID:	5CZ79DL4000
Sampling Batch No:	WCS-05-04	Lab File ID:	SV403148
Date Sampled:	10/07/2005	Data Report Number:	ALD05034V
Date Extracted:	10/13/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	6 days		
Date/Time Analyzed:	10/15/2005 17:13	Instrument ID:	VOA-4
Analysis Holding Time:	2 days	Matrix:	SOLID
Preparation Method:	ACMM-9260-R13	Dilution Factor:	4000
Analytical Method:	ACMM-9260-R13		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	680	UD
75-25-2	Bromoform	680	UD
75-15-0	Carbon Disulfide	1400	UD
56-23-5	Carbon Tetrachloride	25000	D
108-90-7	Chlorobenzene	680	UD
67-66-3	Chloroform	680	UD
75-35-4	1,1-Dichloroethene	680	UD
107-06-2	1,2-Dichloroethane	680	UD
100-41-4	Ethylbenzene	680	UD
75-09-2	Methylene Chloride	1400	UD
1330-20-7	m-Xylene and p-Xylene mix	1400	UD
95-47-6	o-Xylene	680	UD
79-34-5	1,1,2,2-Tetrachloroethane	680	UD
127-18-4	Tetrachloroethene	680	UD
108-88-3	Toluene	680	UD
156-60-5	trans-1,2-Dichloroethene	680	UD
71-55-6	1,1,1-Trichloroethane	48000	D
79-01-6	Trichloroethene	680	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	2700	UD
79-00-5	1,1,2-Trichloroethane	680	UD
75-69-4	Trichlorofluoromethane	1400	UD
75-01-4	Vinyl Chloride	680	UD

TOTAL VOC ANALYSIS DATA SHEET

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	1001817811V1DL296	Lab Sample ID:	5DB26DL296
Sampling Batch No:	WCS-05-04	Lab File ID:	SV403242
Date Sampled:	10/10/2005	Data Report Number:	ALD05034V
Date Extracted:	10/18/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	8 days		
Date/Time Analyzed:	10/23/2005 17:08	Instrument ID:	VOA-4
Analysis Holding Time:	5 days	Matrix:	SOLID
Preparation Method:	ACMM-9260-R13	Dilution Factor:	296
Analytical Method:	ACMM-9260-R13		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	52	UD
75-25-2	Bromoform	52	UD
75-15-0	Carbon Disulfide	100	UD
56-23-5	Carbon Tetrachloride	20000	DE
108-90-7	Chlorobenzene	52	UD
67-66-3	Chloroform	52	UD
75-35-4	1,1-Dichloroethene	52	UD
107-06-2	1,2-Dichloroethane	52	UD
100-41-4	Ethylbenzene	52	UD
75-09-2	Methylene Chloride	100	UD
1330-20-7	m-Xylene and p-Xylene mix	100	UD
95-47-6	o-Xylene	52	UD
79-34-5	1,1,2,2-Tetrachloroethane	52	UD
127-18-4	Tetrachloroethene	52	UD
108-88-3	Toluene	52	UD
156-60-5	trans-1,2-Dichloroethene	52	UD
71-55-6	1,1,1-Trichloroethane	15000	DE
79-01-6	Trichloroethene	52	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	210	UD
79-00-5	1,1,2-Trichloroethane	52	UD
75-69-4	Trichlorofluoromethane	100	UD
75-01-4	Vinyl Chloride	52	UD

TOTAL VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	1001817811V1DL296	Lab Sample ID:	5DB26DL296
Sampling Batch No:	WCS-05-04	Lab File ID:	SV403242
Date Sampled:	10/10/2005	Data Report Number:	ALD05034V
Date Extracted:	10/18/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	8 days		
Date/Time Analyzed:	10/23/2005 17:08	Instrument ID:	VOA-4
Analysis Holding Time:	5 days	Matrix:	SOLID
Preparation Method:	ACMM-9260-R13	Dilution Factor:	296
Analytical Method:	ACMM-9260-R13		

Number of TICs Found: 0

	CAS Number	Tentatively Identified VOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

TOTAL VOC ANALYSIS DATA SHEET

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	1001817811V1DL889	Lab Sample ID:	5DB26DL889
Sampling Batch No:	WCS-05-04	Lab File ID:	SV403239
Date Sampled:	10/10/2005	Data Report Number:	ALD05034V
Date Extracted:	10/18/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	8 days		
Date/Time Analyzed:	10/23/2005 15:01	Instrument ID:	VOA-4
Analysis Holding Time:	5 days	Matrix:	SOLID
Preparation Method:	ACMM-9260-R13	Dilution Factor:	889
Analytical Method:	ACMM-9260-R13		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	160	UD
75-25-2	Bromoform	160	UD
75-15-0	Carbon Disulfide	310	UD
56-23-5	Carbon Tetrachloride	18000	D
108-90-7	Chlorobenzene	160	UD
67-66-3	Chloroform	160	UD
75-35-4	1,1-Dichloroethene	160	UD
107-06-2	1,2-Dichloroethane	160	UD
100-41-4	Ethylbenzene	160	UD
75-09-2	Methylene Chloride	310	UD
1330-20-7	m-Xylene and p-Xylene mix	310	UD
95-47-6	o-Xylene	160	UD
79-34-5	1,1,2,2-Tetrachloroethane	160	UD
127-18-4	Tetrachloroethene	160	UD
108-88-3	Toluene	160	UD
156-60-5	trans-1,2-Dichloroethene	160	UD
71-55-6	1,1,1-Trichloroethane	14000	D
79-01-6	Trichloroethene	160	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	620	UD
79-00-5	1,1,2-Trichloroethane	160	UD
75-69-4	Trichlorofluoromethane	310	UD
75-01-4	Vinyl Chloride	160	UD

TOTAL VOC ANALYSIS DATA SHEET

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	TB95A	Lab Sample ID:	5DB28
Sampling Batch No:	WCS-05-04	Lab File ID:	SV403235
Date Sampled:	10/10/2005	Data Report Number:	ALD05034V
Date Extracted:	10/18/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	8 days		
Date/Time Analyzed:	10/23/2005 12:14	Instrument ID:	VOA-4
Analysis Holding Time:	5 days	Matrix:	SOLID
Preparation Method:	ACMM-9260-R13	Dilution Factor:	1
Analytical Method:	ACMM-9260-R13		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	0.18	U
75-25-2	Bromoform	0.18	U
75-15-0	Carbon Disulfide	0.36	U
56-23-5	Carbon Tetrachloride	0.18	U
108-90-7	Chlorobenzene	0.18	U
67-66-3	Chloroform	0.18	U
75-35-4	1,1-Dichloroethene	0.18	U
107-06-2	1,2-Dichloroethane	0.18	U
100-41-4	Ethylbenzene	0.18	U
75-09-2	Methylene Chloride	0.36	U
1330-20-7	m-Xylene and p-Xylene mix	0.36	U
95-47-6	o-Xylene	0.18	U
79-34-5	1,1,2,2-Tetrachloroethane	0.18	U
127-18-4	Tetrachloroethene	0.18	U
108-88-3	Toluene	0.18	U
156-60-5	trans-1,2-Dichloroethene	0.18	U
71-55-6	1,1,1-Trichloroethane	0.36	U
79-01-6	Trichloroethene	0.18	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.72	U
79-00-5	1,1,2-Trichloroethane	0.18	U
75-69-4	Trichlorofluoromethane	0.36	U
75-01-4	Vinyl Chloride	0.18	U

TOTAL VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	TB95A	Lab Sample ID:	5DB28
Sampling Batch No:	WCS-05-04	Lab File ID:	SV403235
Date Sampled:	10/10/2005	Data Report Number:	ALD05034V
Date Extracted:	10/18/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	8 days		
Date/Time Analyzed:	10/23/2005 12:14	Instrument ID:	VOA-4
Analysis Holding Time:	5 days	Matrix:	SOLID
Preparation Method:	ACMM-9260-R13	Dilution Factor:	1
Analytical Method:	ACMM-9260-R13		

Number of TICs Found: 0

	CAS Number	Tentatively Identified VOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

TOTAL VOC ANALYSIS DATA SHEET

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	1001886711V1DL533	Lab Sample ID:	5DB29DL533
Sampling Batch No:	WCS-05-04	Lab File ID:	SV403243
Date Sampled:	10/11/2005	Data Report Number:	ALD05034V
Date Extracted:	10/18/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	7 days		
Date/Time Analyzed:	10/23/2005 17:50	Instrument ID:	VOA-4
Analysis Holding Time:	5 days	Matrix:	SOLID
Preparation Method:	ACMM-9260-R13	Dilution Factor:	533
Analytical Method:	ACMM-9260-R13		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	100	UD
75-25-2	Bromoform	100	UD
75-15-0	Carbon Disulfide	210	UD
56-23-5	Carbon Tetrachloride	37000	DE
108-90-7	Chlorobenzene	100	UD
67-66-3	Chloroform	280	D
75-35-4	1,1-Dichloroethene	100	UD
107-06-2	1,2-Dichloroethane	100	UD
100-41-4	Ethylbenzene	100	UD
75-09-2	Methylene Chloride	210	UD
1330-20-7	m-Xylene and p-Xylene mix	210	UD
95-47-6	o-Xylene	100	UD
79-34-5	1,1,2,2-Tetrachloroethane	100	UD
127-18-4	Tetrachloroethene	100	D
108-88-3	Toluene	100	UD
156-60-5	trans-1,2-Dichloroethene	100	UD
71-55-6	1,1,1-Trichloroethane	9900	D
79-01-6	Trichloroethene	100	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	420	UD
79-00-5	1,1,2-Trichloroethane	100	UD
75-69-4	Trichlorofluoromethane	210	UD
75-01-4	Vinyl Chloride	100	UD

TOTAL VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	1001886711V1DL533	Lab Sample ID:	5DB29DL533
Sampling Batch No:	WCS-05-04	Lab File ID:	SV403243
Date Sampled:	10/11/2005	Data Report Number:	ALD05034V
Date Extracted:	10/18/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	7 days		
Date/Time Analyzed:	10/23/2005 17:50	Instrument ID:	VOA-4
Analysis Holding Time:	5 days	Matrix:	SOLID
Preparation Method:	ACMM-9260-R13	Dilution Factor:	533
Analytical Method:	ACMM-9260-R13		

Number of TICs Found: 0

	CAS Number	Tentatively Identified VOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

TOTAL VOC ANALYSIS DATA SHEET

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	1001886711V1DL1333	Lab Sample ID:	5DB29DL1333
Sampling Batch No:	WCS-05-04	Lab File ID:	SV403240
Date Sampled:	10/11/2005	Data Report Number:	ALD05034V
Date Extracted:	10/18/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	7 days		
Date/Time Analyzed:	10/23/2005 15:43	Instrument ID:	VOA-4
Analysis Holding Time:	5 days	Matrix:	SOLID
Preparation Method:	ACMM-9260-R13	Dilution Factor:	1333
Analytical Method:	ACMM-9260-R13		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	260	UD
75-25-2	Bromoform	260	UD
75-15-0	Carbon Disulfide	520	UD
56-23-5	Carbon Tetrachloride	32000	D
108-90-7	Chlorobenzene	260	UD
67-66-3	Chloroform	270	D
75-35-4	1,1-Dichloroethene	260	UD
107-06-2	1,2-Dichloroethane	260	UD
100-41-4	Ethylbenzene	260	UD
75-09-2	Methylene Chloride	520	UD
1330-20-7	m-Xylene and p-Xylene mix	520	UD
95-47-6	o-Xylene	260	UD
79-34-5	1,1,2,2-Tetrachloroethane	260	UD
127-18-4	Tetrachloroethene	260	UD
108-88-3	Toluene	260	UD
156-60-5	trans-1,2-Dichloroethene	260	UD
71-55-6	1,1,1-Trichloroethane	9100	D
79-01-6	Trichloroethene	260	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1000	UD
79-00-5	1,1,2-Trichloroethane	260	UD
75-69-4	Trichlorofluoromethane	520	UD
75-01-4	Vinyl Chloride	260	UD

TOTAL VOC ANALYSIS DATA SHEET

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	1001886721V1DL533	Lab Sample ID:	5DB31DL533
Sampling Batch No:	WCS-05-04	Lab File ID:	SV403244
Date Sampled:	10/11/2005	Data Report Number:	ALD05034V
Date Extracted:	10/18/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	7 days		
Date/Time Analyzed:	10/23/2005 18:32	Instrument ID:	VOA-4
Analysis Holding Time:	5 days	Matrix:	SOLID
Preparation Method:	ACMM-9260-R13	Dilution Factor:	533
Analytical Method:	ACMM-9260-R13		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	99	UD
75-25-2	Bromoform	99	UD
75-15-0	Carbon Disulfide	200	UD
56-23-5	Carbon Tetrachloride	34000	DE
108-90-7	Chlorobenzene	99	UD
67-66-3	Chloroform	260	D
75-35-4	1,1-Dichloroethene	99	UD
107-06-2	1,2-Dichloroethane	99	UD
100-41-4	Ethylbenzene	99	UD
75-09-2	Methylene Chloride	200	UD
1330-20-7	m-Xylene and p-Xylene mix	200	UD
95-47-6	o-Xylene	99	UD
79-34-5	1,1,2,2-Tetrachloroethane	99	UD
127-18-4	Tetrachloroethene	100	D
108-88-3	Toluene	99	UD
156-60-5	trans-1,2-Dichloroethene	99	UD
71-55-6	1,1,1-Trichloroethane	9400	D
79-01-6	Trichloroethene	99	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	400	UD
79-00-5	1,1,2-Trichloroethane	99	UD
75-69-4	Trichlorofluoromethane	200	UD
75-01-4	Vinyl Chloride	99	UD

TOTAL VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	1001886721V1DL533	Lab Sample ID:	5DB31DL533
Sampling Batch No:	WCS-05-04	Lab File ID:	SV403244
Date Sampled:	10/11/2005	Data Report Number:	ALD05034V
Date Extracted:	10/18/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	7 days		
Date/Time Analyzed:	10/23/2005 18:32	Instrument ID:	VOA-4
Analysis Holding Time:	5 days	Matrix:	SOLID
Preparation Method:	ACMM-9260-R13	Dilution Factor:	533
Analytical Method:	ACMM-9260-R13		

Number of TICs Found: 0

	CAS Number	Tentatively Identified VOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

TOTAL VOC ANALYSIS DATA SHEET

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	1001886721V1DL1333	Lab Sample ID:	5DB31DL1333
Sampling Batch No:	WCS-05-04	Lab File ID:	SV403241
Date Sampled:	10/11/2005	Data Report Number:	ALD05034V
Date Extracted:	10/18/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	7 days		
Date/Time Analyzed:	10/23/2005 16:26	Instrument ID:	VOA-4
Analysis Holding Time:	5 days	Matrix:	SOLID
Preparation Method:	ACMM-9260-R13	Dilution Factor:	1333
Analytical Method:	ACMM-9260-R13		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	250	UD
75-25-2	Bromoform	250	UD
75-15-0	Carbon Disulfide	500	UD
56-23-5	Carbon Tetrachloride	29000	D
108-90-7	Chlorobenzene	250	UD
67-66-3	Chloroform	250	UD
75-35-4	1,1-Dichloroethene	250	UD
107-06-2	1,2-Dichloroethane	250	UD
100-41-4	Ethylbenzene	250	UD
75-09-2	Methylene Chloride	500	UD
1330-20-7	m-Xylene and p-Xylene mix	500	UD
95-47-6	o-Xylene	250	UD
79-34-5	1,1,2,2-Tetrachloroethane	250	UD
127-18-4	Tetrachloroethene	250	UD
108-88-3	Toluene	250	UD
156-60-5	trans-1,2-Dichloroethene	250	UD
71-55-6	1,1,1-Trichloroethane	8300	D
79-01-6	Trichloroethene	250	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	990	UD
79-00-5	1,1,2-Trichloroethane	250	UD
75-69-4	Trichlorofluoromethane	500	UD
75-01-4	Vinyl Chloride	250	UD

Section 4

Batch QC Sample Results

TOTAL VOC ANALYSIS
SURROGATE RECOVERY FORM

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Preparation Method: ACMM-9260-R13

Analytical Method: ACMM-9260-R13

Data Report Number: ALD05034V

Analytical Batch ID: 0510066

Instrument ID: VOA-4

Matrix: SOLID

	LAB SAMPLE ID	SMC1 %R (BFB)		SMC2 %R (DCE)		SMC3 %R (TOL)		TOTAL OUT
1	LBV101305A	105		106		107		0
2	LCSV0510066A	107		107		110		0
3	5CY98	107		107		108		0
4	5CZ78	106		106		107		0
5	5CY96DL2667	5330	D	0	D	0	D	0
6	5CY99DL2667	0	D	0	D	0	D	0
7	5CZ76DL889	0	D	0	D	0	D	0
8	5CZ79DL4000	0	D	0	D	0	D	0
9	5CY96DL667	0	D	0	D	0	D	0
10	5CY99DL1066	0	D	0	D	0	D	0
11	5CZ76DL320	0	D	0	D	0	D	0
12	5CZ79DL1333	0	D	0	D	0	D	0
13	MBV101505A	99		104		103		0
14	5CY99MSDL2667	0	D	0	D	0	D	0
15	5CY99MSDDL2667	0	D	0	D	0	D	0
16	LBV101805A	106		97		106		0
17	5DB28	106		99		106		0
18	5DB26DL889	0	D	0	D	0	D	0
19	5DB29DL1333	0	D	0	D	0	D	0
20	5DB31DL1333	0	D	0	D	0	D	0
21	5DB26DL296	0	D	0	D	0	D	0
22	5DB29DL533	0	D	0	D	0	D	0
23	5DB31DL533	0	D	0	D	0	D	0

TOTAL VOC ANALYSIS
SURROGATE RECOVERY FORM

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Preparation Method: ACMM-9260-R13

Analytical Method: ACMM-9260-R13

Data Report Number: ALD05034V

Analytical Batch ID: 0510066

Instrument ID: VOA-4

Matrix: SOLID

LAB SAMPLE ID	SMC1 %R (BFB)	SMC2 %R (DCE)	SMC3 %R (TOL)	TOTAL OUT

Control Limits for samples (%R)

Solids

S1 (BFB) = 4-Bromofluorobenzene 56 - 122

S2 (DCE) = 1,2,-Dichloroethane-d4 70 - 112

S3 (TOL) = Toluene-d8 64 - 129

Z = Values outside of acceptance criteria

D = Surrogates diluted out

TOTAL VOC ANALYSIS
MATRIX SPIKE/MATRIX SPIKE DUPLICATE REPORTING FORM

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Preparation Method:	ACMM-9260-R13			Data Report Number:	ALD05034V
Analytical Method:	ACMM-9260-R13			Analytical Batch ID:	0510066
Instrument ID:	VOA-4			Matrix:	SOLID
Lab Sample ID:	5CY99DL2667	MS Lab Sample ID:	5CY99MSDL2667	MSD Lab Sample ID:	5CY99MSDDL2667
Field Sample ID:	1001850321V1DL2667	MS Field Sample ID:	1001850321V2MSDL2667	MSD Field Sample ID:	1001850321V3MSDDL2667
Lab File ID:	SV403146	MS Lab File ID:	SV403157	MSD Lab File ID:	SV403158
Date Analyzed:	10/15/2005	MS Date Analyzed:	10/15/2005	MSD Date Analyzed:	10/16/2005

TARGET ANALYTE	SPIKE ADDED mg/kg	SAMPLE CONCENTRATION mg/kg		SPIKED SAMPLE CONCENTRATION mg/kg		MS % RECOVERY		ACCEPTANCE CRITERIA % RECOVERY
Benzene	8.71	445.99	U	464.63	U	0	D	37 - 151
Chlorobenzene	8.71	445.99	U	464.63	U	0	D	37 - 160
1,1-Dichloroethene	8.71	445.99	U	464.63	U	0	D	D - 234
Toluene	8.71	445.99	U	464.63	U	0	D	47 - 150
Trichloroethene	8.71	445.99	U	464.63	U	0	D	71 - 157

TARGET ANALYTE	SPIKE ADDED mg/kg	DUPLICATE SPIKED SAMPLE CONCENTRATION mg/kg		MSD % RECOVERY		RPD		ACCEPTANCE CRITERIA RPD
Benzene	8.47	452.03	U	0	D	0.0	D	≤ 45
Chlorobenzene	8.47	452.03	U	0	D	0.0	D	≤ 38
1,1-Dichloroethene	8.47	452.03	U	0	D	0.0	D	≤ 250
Toluene	8.47	452.03	U	0	D	0.0	D	≤ 29
Trichloroethene	8.47	452.03	U	0	D	0.0	D	≤ 36

Z = Did not meet acceptance criteria

D = Spiked Analytes Diluted out

RPD:	0	out of	0	outside limits
Spike Recovery:	0	out of	0	outside limits

TOTAL VOC ANALYSIS DATA SHEET

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	NA	Lab Sample ID:	LBV101305A
Sampling Batch No:	NA	Lab File ID:	BV403141
Date Sampled:	NA	Data Report Number:	ALD05034V
Date Extracted:	10/13/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	<1 day		
Date/Time Analyzed:	10/15/2005 12:16	Instrument ID:	VOA-4
Analysis Holding Time:	2 days	Matrix:	SOLID
Preparation Method:	ACMM-9260-R13	Dilution Factor:	1
Analytical Method:	ACMM-9260-R13		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	0.17	U
75-25-2	Bromoform	0.17	U
75-15-0	Carbon Disulfide	0.33	U
56-23-5	Carbon Tetrachloride	0.17	U
108-90-7	Chlorobenzene	0.17	U
67-66-3	Chloroform	0.17	U
75-35-4	1,1-Dichloroethene	0.17	U
107-06-2	1,2-Dichloroethane	0.17	U
100-41-4	Ethylbenzene	0.17	U
75-09-2	Methylene Chloride	0.33	U
1330-20-7	m-Xylene and p-Xylene mix	0.33	U
95-47-6	o-Xylene	0.17	U
79-34-5	1,1,2,2-Tetrachloroethane	0.17	U
127-18-4	Tetrachloroethene	0.17	U
108-88-3	Toluene	0.17	U
156-60-5	trans-1,2-Dichloroethene	0.17	U
71-55-6	1,1,1-Trichloroethane	0.33	U
79-01-6	Trichloroethene	0.17	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.67	U
79-00-5	1,1,2-Trichloroethane	0.17	U
75-69-4	Trichlorofluoromethane	0.33	U
75-01-4	Vinyl Chloride	0.17	U

TOTAL VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	NA	Lab Sample ID:	LBV101305A
Sampling Batch No:	NA	Lab File ID:	BV403141
Date Sampled:	NA	Data Report Number:	ALD05034V
Date Extracted:	10/13/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	<1 day		
Date/Time Analyzed:	10/15/2005 12:16	Instrument ID:	VOA-4
Analysis Holding Time:	2 days	Matrix:	SOLID
Preparation Method:	ACMM-9260-R13	Dilution Factor:	1
Analytical Method:	ACMM-9260-R13		

Number of TICs Found: 0

	CAS Number	Tentatively Identified VOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

TOTAL VOC ANALYSIS DATA SHEET

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	NA	Lab Sample ID:	MBV101505A
Sampling Batch No:	NA	Lab File ID:	BV403156
Date Sampled:	NA	Data Report Number:	ALD05034V
Date Extracted:	NA	Analytical Batch ID:	0510066
Extraction Holding Time:	NA		
Date/Time Analyzed:	10/15/2005 22:53	Instrument ID:	VOA-4
Analysis Holding Time:	NA	Matrix:	SOLID
Preparation Method:	NA	Dilution Factor:	1
Analytical Method:	ACMM-9260-R13		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	0.17	U
75-25-2	Bromoform	0.17	U
75-15-0	Carbon Disulfide	0.33	U
56-23-5	Carbon Tetrachloride	0.17	U
108-90-7	Chlorobenzene	0.17	U
67-66-3	Chloroform	0.17	U
75-35-4	1,1-Dichloroethene	0.17	U
107-06-2	1,2-Dichloroethane	0.17	U
100-41-4	Ethylbenzene	0.17	U
75-09-2	Methylene Chloride	0.33	U
1330-20-7	m-Xylene and p-Xylene mix	0.33	U
95-47-6	o-Xylene	0.17	U
79-34-5	1,1,2,2-Tetrachloroethane	0.17	U
127-18-4	Tetrachloroethene	0.18	J
108-88-3	Toluene	0.17	U
156-60-5	trans-1,2-Dichloroethene	0.17	U
71-55-6	1,1,1-Trichloroethane	0.33	U
79-01-6	Trichloroethene	0.17	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.67	U
79-00-5	1,1,2-Trichloroethane	0.17	U
75-69-4	Trichlorofluoromethane	0.33	U
75-01-4	Vinyl Chloride	0.17	U

Method Blanks calculated assuming 3.00g sample and 10mL extraction volume.

TOTAL VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	NA	Lab Sample ID:	MBV101505A
Sampling Batch No:	NA	Lab File ID:	BV403156
Date Sampled:	NA	Data Report Number:	ALD05034V
Date Extracted:	NA	Analytical Batch ID:	0510066
Extraction Holding Time:	NA		
Date/Time Analyzed:	10/15/2005 22:53	Instrument ID:	VOA-4
Analysis Holding Time:	NA	Matrix:	SOLID
Preparation Method:	NA	Dilution Factor:	1
Analytical Method:	ACMM-9260-R13		

Number of TICs Found: 0

	CAS Number	Tentatively Identified VOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

TOTAL VOC ANALYSIS DATA SHEET

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	NA	Lab Sample ID:	LBV101805A
Sampling Batch No:	NA	Lab File ID:	BV403234
Date Sampled:	NA	Data Report Number:	ALD05034V
Date Extracted:	10/18/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	<1 day		
Date/Time Analyzed:	10/23/2005 11:32	Instrument ID:	VOA-4
Analysis Holding Time:	5 days	Matrix:	SOLID
Preparation Method:	ACMM-9260-R13	Dilution Factor:	1
Analytical Method:	ACMM-9260-R13		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	0.17	U
75-25-2	Bromoform	0.17	U
75-15-0	Carbon Disulfide	0.33	U
56-23-5	Carbon Tetrachloride	0.17	U
108-90-7	Chlorobenzene	0.17	U
67-66-3	Chloroform	0.17	U
75-35-4	1,1-Dichloroethene	0.17	U
107-06-2	1,2-Dichloroethane	0.17	U
100-41-4	Ethylbenzene	0.17	U
75-09-2	Methylene Chloride	0.33	U
1330-20-7	m-Xylene and p-Xylene mix	0.33	U
95-47-6	o-Xylene	0.17	U
79-34-5	1,1,2,2-Tetrachloroethane	0.17	U
127-18-4	Tetrachloroethene	0.17	U
108-88-3	Toluene	0.17	U
156-60-5	trans-1,2-Dichloroethene	0.17	U
71-55-6	1,1,1-Trichloroethane	0.33	U
79-01-6	Trichloroethene	0.17	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.67	U
79-00-5	1,1,2-Trichloroethane	0.17	U
75-69-4	Trichlorofluoromethane	0.33	U
75-01-4	Vinyl Chloride	0.17	U

TOTAL VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	NA	Lab Sample ID:	LBV101805A
Sampling Batch No:	NA	Lab File ID:	BV403234
Date Sampled:	NA	Data Report Number:	ALD05034V
Date Extracted:	10/18/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	<1 day		
Date/Time Analyzed:	10/23/2005 11:32	Instrument ID:	VOA-4
Analysis Holding Time:	5 days	Matrix:	SOLID
Preparation Method:	ACMM-9260-R13	Dilution Factor:	1
Analytical Method:	ACMM-9260-R13		

Number of TICs Found: 0

	CAS Number	Tentatively Identified VOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

TOTAL VOC ANALYSIS
LABORATORY BLANK SUMMARY

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Date Extracted:	10/13/2005	Lab Sample ID:	LBV101305A
Date/Time Analyzed:	10/15/2005 12:16	Lab File ID:	BV403141
Preparation Method:	ACMM-9260-R13	Data Report Number:	ALD05034V
Analytical Method:	ACMM-9260-R13	Analytical Batch ID:	0510066
		Instrument ID:	VOA-4
		Sample Matrix:	SOLID

THIS BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, AND MSD AND STANDARDS

FIELD ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
NA	LCSV0510066A	LV403142	10/15/2005	12:58
TB93A	5CY98	SV403143	10/15/2005	13:41
TB94A	5CZ78	SV403144	10/15/2005	14:24
1001850311V1DL2667	5CY96DL2667	SV403145	10/15/2005	15:06
1001850321V1DL2667	5CY99DL2667	SV403146	10/15/2005	15:48
1001688611V1DL889	5CZ76DL889	SV403147	10/15/2005	16:31
1001887511V1DL4000	5CZ79DL4000	SV403148	10/15/2005	17:13
1001850311V1DL667	5CY96DL667	SV403149	10/15/2005	17:55
1001850321V1DL1066	5CY99DL1066	SV403150	10/15/2005	18:38
1001688611V1DL320	5CZ76DL320	SV403151	10/15/2005	19:20
1001887511V1DL1333	5CZ79DL1333	SV403152	10/15/2005	20:03
1001850321V2MSDL2667	5CY99MSDL2667	SV403157	10/15/2005	23:35
1001850321V3MSDDL2667	5CY99MSDDL2667	SV403158	10/16/2005	00:17

Samples using this Laboratory Blank as the daily Method Blank are identified on the associated Form V (TV403139).

TOTAL VOC ANALYSIS
METHOD BLANK SUMMARY

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Date Extracted:	NA	Lab Sample ID:	MBV101505A
Date/Time Analyzed:	10/15/2005 22:53	Lab File ID:	BV403156
Preparation Method:	NA	Data Report Number:	ALD05034V
Analytical Method:	ACMM-9260-R13	Analytical Batch ID:	0510066
		Instrument ID:	VOA-4
		Sample Matrix:	SOLID

THIS BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, AND MSD AND STANDARDS

FIELD ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1001850321V2MSDL2667	5CY99MSDL2667	SV403157	10/15/2005	23:35
1001850321V3MSDDL2667	5CY99MSDDL2667	SV403158	10/16/2005	00:17

TOTAL VOC ANALYSIS
LABORATORY BLANK SUMMARY

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Date Extracted:	10/18/2005	Lab Sample ID:	LBV101805A
Date/Time Analyzed:	10/23/2005 11:32	Lab File ID:	BV403234
Preparation Method:	ACMM-9260-R13	Data Report Number:	ALD05034V
Analytical Method:	ACMM-9260-R13	Analytical Batch ID:	0510066
		Instrument ID:	VOA-4
		Sample Matrix:	SOLID

THIS BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, AND MSD AND STANDARDS

FIELD ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
TB95A	5DB28	SV403235	10/23/2005	12:14
1001817811V1DL889	5DB26DL889	SV403239	10/23/2005	15:01
1001886711V1DL1333	5DB29DL1333	SV403240	10/23/2005	15:43
1001886721V1DL1333	5DB31DL1333	SV403241	10/23/2005	16:26
1001817811V1DL296	5DB26DL296	SV403242	10/23/2005	17:08
1001886711V1DL533	5DB29DL533	SV403243	10/23/2005	17:50
1001886721V1DL533	5DB31DL533	SV403244	10/23/2005	18:32

Samples using this Laboratory Blank as the daily Method Blank are identified on the associated Form V (TV403231).

TOTAL VOC ANALYSIS
LABORATORY CONTROL SAMPLE FORM
(QC REFERENCE CHECK)

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Date Extracted:	10/13/2005	Lab Sample ID:	LCSV0510066A
Date/Time Analyzed:	10/15/2005 12:58	Lab File ID:	LV403142
Preparation Method:	ACMM-9260-R13	Data Report Number:	ALD05034V
Analytical Method:	ACMM-9260-R13	Analytical Batch ID:	0510066
		Instrument ID:	VOA-4
		Matrix:	SOLID

TARGET ANALYTE	MEASURED CONCENTRATION (mg/kg)	KNOWN CONCENTRATION (mg/kg)	PERCENT RECOVERY	ACCEPTANCE CRITERIA %RECOVERY
Benzene	8.26	8.33	99	37 - 151
Chlorobenzene	8.31	8.33	100	37 - 160
1,1-Dichloroethene	8.52	8.33	102	D - 234
Toluene	8.60	8.33	103	47 - 150
Trichloroethene	7.90	8.33	95	71 - 157

Z = Did not meet acceptance criteria

TOTAL VOC ANALYSIS
INTERNAL STANDARD AREA AND RT SUMMARY

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Date/Time Analyzed: 10/15/2005 11:23

Analytical Method: ACMM-9260-R13

Heated Purge (yes/no): no

Daily CCAL Sample ID CC101505A

Daily CCAL Lab File ID: CV403140

Data Report Number: ALD05034V

Analytical Batch ID: 0510066

Instrument ID: VOA-4

	IS1 (BCM) Area	RT MIN.	IS2 (DFB) Area	RT MIN.	IS3 (CBZ) Area	RT MIN.
12 HOUR STANDARD	694826	12.13	4267513	13.21	4411592	17.53
UPPER LIMIT	1389652	12.63	8535026	13.71	8823184	18.03
LOWER LIMIT	347413	11.63	2133756	12.71	2205796	17.03

	Lab Sample ID						
1	LBV101305A	777119	12.13	4590422	13.21	4639430	17.53
2	LCSV0510066A	767393	12.13	4564172	13.20	4663716	17.53
3	5CY98	783658	12.13	4701569	13.21	4784765	17.53
4	5CZ78	780903	12.13	4713400	13.20	4791183	17.53
5	5CY96DL2667	779751	12.13	4791253	13.21	4674105	17.53
6	5CY99DL2667	752467	12.13	4635355	13.21	4532850	17.53
7	5CZ76DL889	740684	12.13	4602924	13.21	4471451	17.53
8	5CZ79DL4000	720136	12.13	4488188	13.21	4387505	17.53
9	5CY96DL667	723718	12.13	4472877	13.21	4385545	17.53
10	5CY99DL1066	719268	12.13	4442566	13.21	4349558	17.53
11	5CZ76DL320	680681	12.13	4226792	13.20	4163122	17.53
12	5CZ79DL1333	696428	12.13	4294729	13.21	4240755	17.53

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene-d4
IS3 (CBZ) = Chlorobenzene-d5

Z = Values outside of Acceptance Criteria

Area upper limit = +100% of internal standard area
Area lower limit = -50% of internal standard area

RT upper limit = +30 seconds of internal standard RT
RT lower limit = -30 seconds of internal standard RT

TOTAL VOC ANALYSIS
INTERNAL STANDARD AREA AND RT SUMMARY

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Date/Time Analyzed: 10/15/2005 22:10
Analytical Method: ACMM-9260-R13
Heated Purge (yes/no): no

Daily CCAL Sample ID CC101505B
Daily CCAL Lab File ID: CV403155
Data Report Number: ALD05034V
Analytical Batch ID: 0510066
Instrument ID: VOA-4

	IS1 (BCM) Area	RT MIN.	IS2 (DFB) Area	RT MIN.	IS3 (CBZ) Area	RT MIN.
12 HOUR STANDARD	674043	12.13	4101808	13.21	4245490	17.53
UPPER LIMIT	1348086	12.63	8203616	13.71	8490980	18.03
LOWER LIMIT	337022	11.63	2050904	12.71	2122745	17.03

	Lab Sample ID						
1	MBV101505A	667940	12.14	4133965	13.21	4095806	17.53
2	5CY99MSDL2667	661402	12.13	4135892	13.21	4053515	17.53
3	5CY99MSDDL2667	655964	12.14	4097518	13.21	4054136	17.53

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene-d4
IS3 (CBZ) = Chlorobenzene-d5

Z = Values outside of Acceptance Criteria

Area upper limit = +100% of internal standard area
Area lower limit = -50% of internal standard area

RT upper limit = +30 seconds of internal standard RT
RT lower limit = -30 seconds of internal standard RT

TOTAL VOC ANALYSIS
INTERNAL STANDARD AREA AND RT SUMMARY

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Date/Time Analyzed: 10/23/2005 10:50
Analytical Method: ACMM-9260-R13
Heated Purge (yes/no): no

Daily CCAL Sample ID CC102305B
Daily CCAL Lab File ID: CV403233
Data Report Number: ALD05034V
Analytical Batch ID: 0510066
Instrument ID: VOA-4

	IS1 (BCM) Area	RT MIN.	IS2 (DFB) Area	RT MIN.	IS3 (CBZ) Area	RT MIN.
12 HOUR STANDARD	729567	12.14	4490501	13.21	4373188	17.53
UPPER LIMIT	1459134	12.64	8981002	13.71	8746376	18.03
LOWER LIMIT	364784	11.64	2245250	12.71	2186594	17.03

	Lab Sample ID						
1	LBV101805A	746247	12.14	4593337	13.21	4347762	17.53
2	5DB28	767390	12.13	4747853	13.21	4510648	17.53
3	5DB26DL889	714018	12.13	4345881	13.21	4033310	17.53
4	5DB29DL1333	705101	12.13	4333346	13.21	4049156	17.53
5	5DB31DL1333	687360	12.14	4130504	13.21	3837410	17.53
6	5DB26DL296	717172	12.14	4434018	13.21	4084356	17.53
7	5DB29DL533	718062	12.13	4396506	13.21	4079935	17.53
8	5DB31DL533	698454	12.13	4311953	13.21	3975935	17.53

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene-d4
IS3 (CBZ) = Chlorobenzene-d5

Z = Values outside of Acceptance Criteria

Area upper limit = +100% of internal standard area
Area lower limit = -50% of internal standard area

RT upper limit = +30 seconds of internal standard RT
RT lower limit = -30 seconds of internal standard RT

Section 5

Instrument QC Data

TOTAL VOC ANALYSIS
INSTRUMENT PERFORMANCE CHECK

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

BFB Injection Date/Time: 10/15/2005 10:39

Analytical Method: ACMM-9260-R13

Heated Purge (yes/no): no

Lab Sample ID: BFB101505B

Lab File ID: TV403139

Data Report Number: ALD05034V

Analytical Batch ID: 0510066

Instrument ID: VOA-4

m/z	Ion Abundance Criteria	% Rel Abundance
50	15.0 - 40.0% of mass 95	17.6
75	30.0 - 60.0% of mass 95	50.7
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.2 (1)
174	Greater than 50.0% of mass 95	63.2
175	5.0 - 9.0% of mass 174	6.8 (1)
176	95.0 - 101.0% of mass 174	98.0 (1)
177	5.0 - 9.0% of mass 176	6.9 (2)

1 - Value is % mass 174 2 - Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS

FIELD ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
NA	CC101505A	CV403140	10/15/2005	11:23
NA	LBV101305A	BV403141	10/15/2005	12:16
NA	LCSV0510066A	LV403142	10/15/2005	12:58
TB93A	5CY98	SV403143	10/15/2005	13:41
TB94A	5CZ78	SV403144	10/15/2005	14:24
1001850311V1DL2667	5CY96DL2667	SV403145	10/15/2005	15:06
1001850321V1DL2667	5CY99DL2667	SV403146	10/15/2005	15:48
1001688611V1DL889	5CZ76DL889	SV403147	10/15/2005	16:31
1001887511V1DL4000	5CZ79DL4000	SV403148	10/15/2005	17:13
1001850311V1DL667	5CY96DL667	SV403149	10/15/2005	17:55
1001850321V1DL1066	5CY99DL1066	SV403150	10/15/2005	18:38
1001688611V1DL320	5CZ76DL320	SV403151	10/15/2005	19:20
1001887511V1DL1333	5CZ79DL1333	SV403152	10/15/2005	20:03

TOTAL VOC ANALYSIS
INSTRUMENT PERFORMANCE CHECK

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

BFB Injection Date/Time: 10/15/2005 21:28

Analytical Method: ACMM-9260-R13

Heated Purge (yes/no): no

Lab Sample ID: BFB101505D

Lab File ID: TV403154

Data Report Number: ALD05034V

Analytical Batch ID: 0510066

Instrument ID: VOA-4

m/z	Ion Abundance Criteria	% Rel Abundance
50	15.0 - 40.0% of mass 95	17.3
75	30.0 - 60.0% of mass 95	49.4
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.1
173	Less than 2.0% of mass 174	0.5 (1)
174	Greater than 50.0% of mass 95	60.7
175	5.0 - 9.0% of mass 174	7.2 (1)
176	95.0 - 101.0% of mass 174	96.2 (1)
177	5.0 - 9.0% of mass 176	6.7 (2)

1 - Value is % mass 174 2 - Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS

FIELD ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
NA	CC101505B	CV403155	10/15/2005	22:10
NA	MBV101505A	BV403156	10/15/2005	22:53
1001850321V2MSDL2667	5CY99MSDL2667	SV403157	10/15/2005	23:35
1001850321V3MSDDL2667	5CY99MSDDL2667	SV403158	10/16/2005	00:17

TOTAL VOC ANALYSIS
INSTRUMENT PERFORMANCE CHECK

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

BFB Injection Date/Time: 10/23/2005 08:15

Analytical Method: ACMM-9260-R13

Heated Purge (yes/no): no

Lab Sample ID: BFB102305A

Lab File ID: TV403231

Data Report Number: ALD05034V

Analytical Batch ID: 0510066

Instrument ID: VOA-4

m/z	Ion Abundance Criteria	% Rel Abundance
50	15.0 - 40.0% of mass 95	18.0
75	30.0 - 60.0% of mass 95	49.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.6 (1)
174	Greater than 50.0% of mass 95	59.3
175	5.0 - 9.0% of mass 174	7.3 (1)
176	95.0 - 101.0% of mass 174	95.9 (1)
177	5.0 - 9.0% of mass 176	6.6 (2)

1 - Value is % mass 174 2 - Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS

FIELD ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
NA	CC102305B	CV403233	10/23/2005	10:50
NA	LBV101805A	BV403234	10/23/2005	11:32
TB95A	5DB28	SV403235	10/23/2005	12:14
1001817811V1DL889	5DB26DL889	SV403239	10/23/2005	15:01
1001886711V1DL1333	5DB29DL1333	SV403240	10/23/2005	15:43
1001886721V1DL1333	5DB31DL1333	SV403241	10/23/2005	16:26
1001817811V1DL296	5DB26DL296	SV403242	10/23/2005	17:08
1001886711V1DL533	5DB29DL533	SV403243	10/23/2005	17:50
1001886721V1DL533	5DB31DL533	SV403244	10/23/2005	18:32

TOTAL VOC ANALYSIS
INITIAL CALIBRATION DATA

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Calibration Dates/Times: 10/12/2005 19:58 - 10/12/2005 22:46
Analytical Method: ACMM-9260-R13
Heated Purge (yes/no): no

ICAL File ID: IV405W19
Data Report Number: ALD05034V
Analytical Batch ID: 0510066
Instrument ID: VOA-4

LAB FILE ID	RRF 1 = IV403113	RRF 3 = IV403115	RRF 5 = IV403117
	RRF 2 = IV403114	RRF 4 = IV403116	

TARGET ANALYTE	RRF 1	RRF 2	RRF 3	RRF 4	RRF 5	AVE RRF	% RSD	#
Benzene	1.405	1.366	1.482	1.508	1.447	1.442	3.97	
4-Bromofluorobenzene	0.452	0.416	0.454	0.462	0.460	0.449	4.15	
Bromoform **	0.167	0.181	0.222	0.251	0.266	0.217	19.64	M
Carbon Disulfide	5.776	5.640	6.041	6.140	5.987	5.917	3.45	
Carbon Tetrachloride	0.330	0.337	0.386	0.415	0.423	0.378	11.37	
Chlorobenzene **	0.929	0.906	0.978	1.013	1.004	0.966	4.85	
Chloroform *	3.712	3.670	3.931	4.010	3.934	3.851	3.91	
Chloromethane **	2.536	2.412	2.473	2.421	2.301	2.429	3.57	
1,1-Dichloroethane **	3.851	3.748	4.026	4.082	3.999	3.941	3.49	
1,1-Dichloroethene *	1.719	1.692	1.826	1.866	1.858	1.792	4.52	
1,2-Dichloroethane	0.487	0.468	0.501	0.510	0.495	0.492	3.24	
1,2-Dichloroethane-d4	0.087	0.082	0.089	0.093	0.093	0.089	5.05	
1,2-Dichloropropane *	0.357	0.346	0.376	0.391	0.391	0.372	5.46	
Ethylbenzene *	1.576	1.525	1.646	1.654	1.512	1.583	4.16	
Methylene Chloride	2.864	2.762	2.925	2.972	2.941	2.893	2.87	
m-Xylene and p-Xylene mix	0.567	0.557	0.619	0.624	0.605	0.594	5.16	
o-Xylene	0.569	0.568	0.626	0.646	0.649	0.612	6.60	
1,1,2,2-Tetrachloroethane **	0.473	0.464	0.513	0.536	0.538	0.505	6.90	
Tetrachloroethene	0.172	0.171	0.187	0.193	0.197	0.184	6.52	
Toluene *	0.872	0.854	0.909	0.925	0.911	0.894	3.36	
Toluene-d8	1.194	1.161	1.285	1.320	1.283	1.249	5.38	
trans-1,2-Dichloroethene	1.941	1.907	2.064	2.115	2.101	2.026	4.71	
1,1,1-Trichloroethane	2.976	2.948	3.223	3.367	3.335	3.170	6.22	
Trichloroethene	0.328	0.312	0.337	0.347	0.347	0.334	4.40	
1,1,2-Trichloro-1,2,2-trifluoroethane	0.998	0.938	1.034	1.045	1.034	1.010	4.35	
1,1,2-Trichloroethane	0.299	0.288	0.304	0.314	0.309	0.303	3.32	
Trichlorofluoromethane	2.692	2.544	2.759	2.789	2.724	2.701	3.54	
Vinyl Chloride *	1.925	1.778	1.748	1.619	1.449	1.704	10.51	

CC70

TOTAL VOC ANALYSIS
INITIAL CALIBRATION DATA

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Calibration Dates/Times:	10/12/2005 19:58 - 10/12/2005 22:46	ICAL File ID:	IV405W19
Analytical Method:	ACMM-9260-R13	Data Report Number:	ALD05034V
Heated Purge (yes/no):	no	Analytical Batch ID:	0510066
		Instrument ID:	VOA-4

LAB FILE ID	RRF 1 = IV403113	RRF 3 = IV403115	RRF 5 = IV403117
	RRF 2 = IV403114	RRF 4 = IV403116	

TARGET ANALYTE	RRF 1	RRF 2	RRF 3	RRF 4	RRF 5	AVE RRF	% RSD	#

%CCC RSD $\leq$ 30%

CCC - Calibration Check Compounds (*)

SPCC - System Performance Check Compounds(**)

Column used to flag modeled compounds

M = Modeled compound.

Z = Did not meet acceptance criteria

SPCC RRF	
Chloromethane	$\geq$ 0.10
1,1 - Dichloroethane	$\geq$ 0.10
Bromoform	$\geq$ 0.10
Chlorobenzene	$\geq$ 0.30
1,1,2,2-Tetrachloroethane	$\geq$ 0.30
All Other Analytes	$\geq$ 0.01

TOTAL VOC ANALYSIS
CONTINUING CALIBRATION CHECK

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Calibration Date/Time:	10/15/2005 11:23	Lab Sample ID:	CC101505A
Analytical Method:	ACMM-9260-R13	Lab File ID:	CV403140
Heated Purge (yes/no):	no	Data Report Number:	ALD05034V
Initial Calibration Date(s):	10/12/2005 19:58 - 10/12/2005 22:46	Analytical Batch ID:	0510066
		Instrument ID:	VOA-4

TARGET ANALYTE	AVE RRF	CCAL RRF	%D
Benzene	1.442	1.628	12.9
4-Bromofluorobenzene	0.449	0.499	11.1
Carbon Disulfide	5.917	7.290	23.2
Carbon Tetrachloride	0.378	0.433	14.6
Chlorobenzene **	0.966	1.072	11.0
Chloroform *	3.851	4.275	11.0
Chloromethane **	2.429	2.721	12.0
1,1-Dichloroethane **	3.941	4.405	11.8
1,1-Dichloroethene *	1.792	2.039	13.8
1,2-Dichloroethane	0.492	0.560	13.8
1,2-Dichloroethane-d4	0.089	0.099	11.2
1,2-Dichloropropane *	0.372	0.419	12.6
Ethylbenzene *	1.583	1.819	14.9
Methylene Chloride	2.893	3.288	13.7
m-Xylene and p-Xylene mix	0.594	0.681	14.6
o-Xylene	0.612	0.696	13.7
1,1,2,2-Tetrachloroethane **	0.505	0.611	21.0
Tetrachloroethene	0.184	0.206	12.0
Toluene *	0.894	0.979	9.5
Toluene-d8	1.249	1.425	14.1
trans-1,2-Dichloroethene	2.026	2.310	14.0
1,1,1-Trichloroethane	3.170	3.548	11.9
Trichloroethene	0.334	0.376	12.6
1,1,2-Trichloro-1,2,2-trifluoroethane	1.010	1.177	16.5
1,1,2-Trichloroethane	0.303	0.333	9.9
Trichlorofluoromethane	2.701	3.071	13.7

TOTAL VOC ANALYSIS
CONTINUING CALIBRATION CHECK

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Calibration Date/Time:	10/15/2005 11:23	Lab Sample ID:	CC101505A
Analytical Method:	ACMM-9260-R13	Lab File ID:	CV403140
Heated Purge (yes/no):	no	Data Report Number:	ALD05034V
Initial Calibration Date(s):	10/12/2005 19:58 - 10/12/2005 22:46	Analytical Batch ID:	0510066
		Instrument ID:	VOA-4

TARGET ANALYTE	AVE RRF	CCAL RRF	%D
Vinyl Chloride *	1.704	1.786	4.8

CCC %D ≤ 20%

CCC - Calibration Check Compounds (*)

SPCC - System Performance Check Compounds(**)

Z = Did not meet acceptance criteria

SPCC RRF	
Chloromethane	≥ 0.10
1,1 - Dichloroethane	≥ 0.10
Bromoform	≥ 0.10
Chlorobenzene	≥ 0.30
1,1,2,2-Tetrachloroethane	≥ 0.30
All Other Analytes	≥ 0.01

0073

TOTAL VOC ANALYSIS
MODELED COMPOUND REPORT

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Calibration Date/Time:	10/15/2005 11:23	Lab Sample ID:	CC101505A
Analytical Method:	ACMM-9260-R13	Lab File ID:	CV403140
Heated Purge (yes/no):	no	Data Report Number:	ALD05034V
Initial Calibration Date(s):	10/12/2005 19:58 - 10/12/2005 22:46	Analytical Batch ID:	0510066
		Instrument ID:	VOA-4

TARGET ANALYTE	CCAL RRF	CALCULATED RESULT (ug/L)	KNOWN CONCENTRATION (ug/L)	%D
Bromoform **	0.254	52.94	50.000	5.9

CCC %D $\leq$ 20%

CCC - Calibration Check Compounds (*)

SPCC - System Performance Check Compounds(**)

Z = Did not meet acceptance criteria

SPCC RRF	
Chloromethane	$\geq$ 0.10
1,1 - Dichloroethane	$\geq$ 0.10
Bromoform	$\geq$ 0.10
Chlorobenzene	$\geq$ 0.30
1,1,2,2-Tetrachloroethane	$\geq$ 0.30
All Other Analytes	$\geq$ 0.01

TOTAL VOC ANALYSIS
CONTINUING CALIBRATION CHECK

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Calibration Date/Time:	10/15/2005 22:10	Lab Sample ID:	CC101505B
Analytical Method:	ACMM-9260-R13	Lab File ID:	CV403155
Heated Purge (yes/no):	no	Data Report Number:	ALD05034V
Initial Calibration Date(s):	10/12/2005 19:58 - 10/12/2005 22:46	Analytical Batch ID:	0510066
		Instrument ID:	VOA-4

TARGET ANALYTE	AVE RRF	CCAL RRF	%D
Benzene	1.442	1.584	9.8
4-Bromofluorobenzene	0.449	0.473	5.3
Carbon Disulfide	5.917	6.218	5.1
Carbon Tetrachloride	0.378	0.419	10.8
Chlorobenzene **	0.966	1.013	4.9
Chloroform *	3.851	4.119	7.0
Chloromethane **	2.429	2.542	4.7
1,1-Dichloroethane **	3.941	4.257	8.0
1,1-Dichloroethene *	1.792	1.907	6.4
1,2-Dichloroethane	0.492	0.554	12.6
1,2-Dichloroethane-d4	0.089	0.097	9.0
1,2-Dichloropropane *	0.372	0.412	10.8
Ethylbenzene *	1.583	1.701	7.5
Methylene Chloride	2.893	3.159	9.2
m-Xylene and p-Xylene mix	0.594	0.632	6.4
o-Xylene	0.612	0.650	6.2
1,1,2,2-Tetrachloroethane **	0.505	0.603	19.4
Tetrachloroethene	0.184	0.184	0.0
Toluene *	0.894	0.936	4.7
Toluene-d8	1.249	1.357	8.6
trans-1,2-Dichloroethene	2.026	2.106	3.9
1,1,1-Trichloroethane	3.170	3.438	8.5
Trichloroethene	0.334	0.364	9.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.010	1.029	1.9
1,1,2-Trichloroethane	0.303	0.331	9.2
Trichlorofluoromethane	2.701	2.879	6.6

TOTAL VOC ANALYSIS
CONTINUING CALIBRATION CHECK

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Calibration Date/Time:	10/15/2005 22:10	Lab Sample ID:	CC101505B
Analytical Method:	ACMM-9260-R13	Lab File ID:	CV403155
Heated Purge (yes/no):	no	Data Report Number:	ALD05034V
Initial Calibration Date(s):	10/12/2005 19:58 - 10/12/2005 22:46	Analytical Batch ID:	0510066
		Instrument ID:	VOA-4

TARGET ANALYTE	AVE RRF	CCAL RRF	%D
Vinyl Chloride *	1.704	1.570	7.9

CCC %D ≤ 20%

CCC - Calibration Check Compounds (*)

SPCC - System Performance Check Compounds(**)

Z = Did not meet acceptance criteria

SPCC RRF	
Chloromethane	≥ 0.10
1,1 - Dichloroethane	≥ 0.10
Bromoform	≥ 0.10
Chlorobenzene	≥ 0.30
1,1,2,2-Tetrachloroethane	≥ 0.30
All Other Analytes	≥ 0.01

0076

TOTAL VOC ANALYSIS
MODELED COMPOUND REPORT

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Calibration Date/Time:	10/15/2005 22:10	Lab Sample ID:	CC101505B
Analytical Method:	ACMM-9260-R13	Lab File ID:	CV403155
Heated Purge (yes/no):	no	Data Report Number:	ALD05034V
Initial Calibration Date(s):	10/12/2005 19:58 - 10/12/2005 22:46	Analytical Batch ID:	0510066
		Instrument ID:	VOA-4

TARGET ANALYTE	CCAL RRF	CALCULATED RESULT (ug/L)	KNOWN CONCENTRATION (ug/L)	%D
Bromoform **	0.250	52.33	50.000	4.7

CCC %D ≤ 20%

SPCC RRF

Chloromethane	≥ 0.10
1,1 - Dichloroethane	≥ 0.10
Bromoform	≥ 0.10
Chlorobenzene	≥ 0.30
1,1,2,2-Tetrachloroethane	≥ 0.30
All Other Analytes	≥ 0.01

CCC - Calibration Check Compounds (*)

SPCC - System Performance Check Compounds(**)

Z = Did not meet acceptance criteria

TOTAL VOC ANALYSIS
CONTINUING CALIBRATION CHECK

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Calibration Date/Time:	10/23/2005 10:50	Lab Sample ID:	CC102305B
Analytical Method:	ACMM-9260-R13	Lab File ID:	CV403233
Heated Purge (yes/no):	no	Data Report Number:	ALD05034V
Initial Calibration Date(s):	10/12/2005 19:58 - 10/12/2005 22:46	Analytical Batch ID:	0510066
		Instrument ID:	VOA-4

TARGET ANALYTE	AVE RRF	CCAL RRF	%D
Benzene	1.442	1.598	10.8
4-Bromofluorobenzene	0.449	0.487	8.5
Carbon Disulfide	5.917	7.097	19.9
Carbon Tetrachloride	0.378	0.432	14.3
Chlorobenzene **	0.966	1.070	10.8
Chloroform *	3.851	4.166	8.2
Chloromethane **	2.429	2.622	7.9
1,1-Dichloroethane **	3.941	4.346	10.3
1,1-Dichloroethene *	1.792	1.960	9.4
1,2-Dichloroethane	0.492	0.536	8.9
1,2-Dichloroethane-d4	0.089	0.092	3.4
1,2-Dichloropropane *	0.372	0.411	10.5
Ethylbenzene *	1.583	1.846	16.6
Methylene Chloride	2.893	3.393	17.3
m-Xylene and p-Xylene mix	0.594	0.669	12.6
o-Xylene	0.612	0.676	10.5
1,1,2,2-Tetrachloroethane **	0.505	0.510	1.0
Tetrachloroethene	0.184	0.212	15.2
Toluene *	0.894	0.997	11.5
Toluene-d8	1.249	1.357	8.6
trans-1,2-Dichloroethene	2.026	2.271	12.1
1,1,1-Trichloroethane	3.170	3.436	8.4
Trichloroethene	0.334	0.366	9.6
1,1,2-Trichloro-1,2,2-trifluoroethane	1.010	1.158	14.7
1,1,2-Trichloroethane	0.303	0.326	7.6
Trichlorofluoromethane	2.701	2.956	9.4

TOTAL VOC ANALYSIS
CONTINUING CALIBRATION CHECK

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Calibration Date/Time:	10/23/2005 10:50	Lab Sample ID:	CC102305B
Analytical Method:	ACMM-9260-R13	Lab File ID:	CV403233
Heated Purge (yes/no):	no	Data Report Number:	ALD05034V
Initial Calibration Date(s):	10/12/2005 19:58 - 10/12/2005 22:46	Analytical Batch ID:	0510066
		Instrument ID:	VOA-4

TARGET ANALYTE	AVE RRF	CCAL RRF	%D
Vinyl Chloride *	1.704	1.963	15.2

CCC %D $\leq$ 20%

CCC - Calibration Check Compounds (*)

SPCC - System Performance Check Compounds(**)

Z = Did not meet acceptance criteria

SPCC RRF	
Chloromethane	$\geq$ 0.10
1,1 - Dichloroethane	$\geq$ 0.10
Bromoform	$\geq$ 0.10
Chlorobenzene	$\geq$ 0.30
1,1,2,2-Tetrachloroethane	$\geq$ 0.30
All Other Analytes	$\geq$ 0.01

0079

TOTAL VOC ANALYSIS
MODELED COMPOUND REPORT

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Calibration Date/Time:	10/23/2005 10:50	Lab Sample ID:	CC102305B
Analytical Method:	ACMM-9260-R13	Lab File ID:	CV403233
Heated Purge (yes/no):	no	Data Report Number:	ALD05034V
Initial Calibration Date(s):	10/12/2005 19:58 - 10/12/2005 22:46	Analytical Batch ID:	0510066
		Instrument ID:	VOA-4

TARGET ANALYTE	CCAL RRF	CALCULATED RESULT (ug/L)	KNOWN CONCENTRATION (ug/L)	%D
Bromoform **	0.229	48.41	50.000	3.2

CCC %D ≤ 20%

CCC - Calibration Check Compounds (*)

SPCC - System Performance Check Compounds(**)

Z = Did not meet acceptance criteria

SPCC RRF	
Chloromethane	≥ 0.10
1,1 - Dichloroethane	≥ 0.10
Bromoform	≥ 0.10
Chlorobenzene	≥ 0.30
1,1,2,2-Tetrachloroethane	≥ 0.30
All Other Analytes	≥ 0.01

TOTAL VOC ANALYSIS
CCAL INTERNAL STANDARD AREA AND RT SUMMARY

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Date/Time Analyzed:	10/15/2005 11:23	Daily CCAL Sample ID	CC101505A
Analytical Method:	ACMM-9260-R13	Daily CCAL Lab File ID:	CV403140
Heated Purge (yes/no):	no	Data Report Number:	ALD05034V
ICAL/CCAL Sample ID	CC101305B	Analytical Batch ID:	0510066
ICAL/CCAL Lab File ID:	CV403124	Instrument ID:	VOA-4
Date Analyzed:	10/13/2005		

		IS1 (BCM) Area	RT MIN.	IS2 (DFB) Area	RT MIN.	IS3 (CBZ) Area	RT MIN.
Previous ICAL/CCAL	12 HOUR STANDARD	777014	12.13	4821998	13.21	4818654	17.53
	UPPER LIMIT	1554028	12.63	9643996	13.71	9637308	18.03
	LOWER LIMIT	388507	11.63	2410999	12.71	2409327	17.03
Continuing Calibration Check		694826	12.13	4267513	13.21	4411592	17.53

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene-d4
IS3 (CBZ) = Chlorobenzene-d5

Z = Values outside of Acceptance Criteria

Area upper limit = +100% of internal standard area
Area lower limit = -50% of internal standard area

RT upper limit = +30 seconds of internal standard RT
RT lower limit = -30 seconds of internal standard RT

TOTAL VOC ANALYSIS
CCAL INTERNAL STANDARD AREA AND RT SUMMARY

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Date/Time Analyzed:	10/15/2005 22:10	Daily CCAL Sample ID	CC101505B
Analytical Method:	ACMM-9260-R13	Daily CCAL Lab File ID:	CV403155
Heated Purge (yes/no):	no	Data Report Number:	ALD05034V
ICAL/CCAL Sample ID	CC101505A	Analytical Batch ID:	0510066
ICAL/CCAL Lab File ID:	CV403140	Instrument ID:	VOA-4
Date Analyzed:	10/15/2005		

		IS1 (BCM) Area	RT MIN.	IS2 (DFB) Area	RT MIN.	IS3 (CBZ) Area	RT MIN.
Previous ICAL/CCAL	12 HOUR STANDARD	694826	12.13	4267513	13.21	4411592	17.53
	UPPER LIMIT	1389652	12.63	8535026	13.71	8823184	18.03
	LOWER LIMIT	347413	11.63	2133756	12.71	2205796	17.03
Continuing Calibration Check		674043	12.13	4101808	13.21	4245490	17.53

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene-d4
IS3 (CBZ) = Chlorobenzene-d5

Z = Values outside of Acceptance Criteria

Area upper limit = +100% of internal standard area
Area lower limit = -50% of internal standard area

RT upper limit = +30 seconds of internal standard RT
RT lower limit = -30 seconds of internal standard RT

TOTAL VOC ANALYSIS
CCAL INTERNAL STANDARD AREA AND RT SUMMARY

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Date/Time Analyzed:	10/23/2005 10:50	Daily CCAL Sample ID	CC102305B
Analytical Method:	ACMM-9260-R13	Daily CCAL Lab File ID:	CV403233
Heated Purge (yes/no):	no	Data Report Number:	ALD05034V
ICAL/CCAL Sample ID	CC102005B	Analytical Batch ID:	0510066
ICAL/CCAL Lab File ID:	CV403219	Instrument ID:	VOA-4
Date Analyzed:	10/20/2005		

		IS1 (BCM) Area	RT MIN.	IS2 (DFB) Area	RT MIN.	IS3 (CBZ) Area	RT MIN.
Previous ICAL/CCAL	12 HOUR STANDARD	664356	12.14	4391205	13.21	4740724	17.53
	UPPER LIMIT	1328712	12.64	8782410	13.71	9481448	18.03
	LOWER LIMIT	332178	11.64	2195602	12.71	2370362	17.03
Continuing Calibration Check		729567	12.14	4490501	13.21	4373188	17.53

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene-d4
IS3 (CBZ) = Chlorobenzene-d5

Z = Values outside of Acceptance Criteria

Area upper limit = +100% of internal standard area
Area lower limit = -50% of internal standard area

RT upper limit = +30 seconds of internal standard RT
RT lower limit = -30 seconds of internal standard RT

TOTAL VOC ANALYSIS
MDL REPORTING FORM

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

MDL Determination Date: 04/13/2005 Instrument ID: VOA-4

Preparation Method: ACMM-9260-R13 Matrix: SOLID

Analytical Method: ACMM-9260-R13

TARGET ANALYTE	Reported MDL mg/kg	PROGRAM REQUIRED MDL mg/kg	PRQL mg/kg
Benzene	0.17	1	10
4-Bromofluorobenzene	0.17	1	10
Bromoform	0.17	1	10
Carbon Disulfide	0.33	1	10
Carbon Tetrachloride	0.17	1	10
Chlorobenzene	0.17	1	10
Chloroform	0.17	1	10
1,1-Dichloroethene	0.17	1	10
1,2-Dichloroethane	0.17	1	10
1,2-Dichloroethane-d4	0.33	1	10
Ethylbenzene	0.17	1	10
Methylene Chloride	0.33	1	10
m-Xylene and p-Xylene mix	0.33	1	10
o-Xylene	0.17	1	10
1,1,2,2-Tetrachloroethane	0.17	1	10
Tetrachloroethene	0.17	1	10
Toluene	0.17	1	10
Toluene-d8	0.17	1	10
trans-1,2-Dichloroethene	0.17	1	10
1,1,1-Trichloroethane	0.33	1	10
Trichloroethene	0.17	1	10
1,1,2-Trichloro-1,2,2-trifluoroethane	0.67	1	10
1,1,2-Trichloroethane	0.17	1	10
Trichlorofluoromethane	0.33	1	10
Vinyl Chloride	0.17	1	4

SOLIDS: MDLs calculated assuming 3.00g sample and 10mL extraction volume.

Section 6

Data Review Checklists

TWCP SAMPLE RECEIVING & CUSTODY REVIEW CHECKLIST
INEEL ANALYTICAL LABORATORIES DEPARTMENT

Log Number: 051006 6	IDC #: TWCP-RF/S3150-A	NCR Initiation Required? ☐ Yes ☒ No
COC #(s):	WCA-936, WCA-937	If Yes NCR Number: _____
Reviewer: Julie Daley (Printed Name/Signature)	10/10/2005 (Date)	

Instructions:

Complete one checklist per log. Enter appropriate response for each question. Each "No" response requires explanation. A "No" response to a question may require initiation of an NCR

Requirement	Yes	No	Comments
1. FIELD CHAIN-OF-CUSTODY (COC)			
a. Was a COC form received with each shipping container?	☒	☐	
b. Did the content of each shipping container match that listed on the associated COC form?	☒	☐	
c. Were all custody transfers completely documented by signatures of relinquishers and receivers, with date and time of transfer?	☒	☐	
d. Does all sample information (e.g., sample ID, sampling date and time, sampling batch) listed on the COC form corresponds with the information on the sample labels?	☒	☐	
e. Is the correct analysis requested for each sample?	☒	☐	
f. Were any corrections on the COC appropriately made (a single line through the incorrect entry and correct data written in (not overwritten), initialed and dated)?	☒	☐	
2. SAMPLE LABELS			
a. Was each sample received with a completed sample label?	☒	☐	
b. Do the field IDs on the sample labels correspond to those on the field COC form?	☒	☐	
c. Were the sampling batch number, sampling date, time and requested analysis recorded on each sample label, and they correspond with those recorded on the COC?	☒	☐	
d. Are the sampler initials, organization and sample description recorded on each sample label?	☒	☐	
e. Are any corrections on the sample labels appropriately made (a single line through the incorrect entry and correct data written in (not overwritten), initialed and dated)?	☒	☐	
3. SAMPLE INTEGRITY			
a. Were custody seals used on the shipping container?	☒	☐	
b. Were custody seals used on each individual sample container?	☒	☐	
c. Were all custody seals intact and undamaged upon receipt at ALD?	☒	☐	
d. Were all custody seals placed such that the container could not be opened without damaging the seal?	☒	☐	
e. Has the physical integrity of all samples been maintained (i.e., no cracks)?	☒	☐	
f. Were all samples preserved during shipment with "Blue Ice" or equivalent cooling mechanism?	☒	☐	
g. Were all samples placed in refrigerated storage (4° ± 2° C) after login?	☒	☐	
4. INTERNAL SAMPLE TRACKING			
a. Were all samples logged into the Analytical Computer System?	☒	☐	
b. Was all sample information correctly transcribed from the field documentation into the ACS?	☒	☐	
c. Were all sample bottles labeled with the ACS log number and the laboratory sample ID?	☒	☐	
d. Were internal tracking forms prepared for each log?	☒	☐	

Contact the sampling organization if any discrepancies are found in the field COC and sample label documentation. Document the name of the person Contacting the sampling organization, the name of the person contacted, the date and time of the contact, and the resolution of the problem.

Notes:

Form effective Date 10Mar05

ALD Document: Log 0510066 TWCP-RF_S3150-A.tif - Scanned:10/12/2005 1:54:06 PM

TWCP SAMPLE RECEIVING & CUSTODY REVIEW CHECKLIST
INEEL ANALYTICAL LABORATORIES DEPARTMENT

Log Number: 0510106	IDC #: TWCP-RF/S3150-A	NCR Initiation Required? ☐ Yes ☒ No
COC #(s):	WCA-938, WCA-939	If Yes NCR Number: _____
Reviewer: Julie Daley	10/10/2005	
Printed Name/Signature	Date	

Instructions:
Complete one checklist per log. Enter appropriate response for each question. Each "No" response requires explanation. A "No" response to a question may require initiation of an NCR

Requirement	Yes	No	Comments
1. FIELD CHAIN-OF-CUSTODY (COC)			
a. Was a COC form received with each shipping container?	☒	☐	
b. Did the contents of each shipping container match that listed on the associated COC form?	☒	☐	
c. Were all custody transfers completely documented by signatures of relinquishers and receivers, with date and time of transfer?	☒	☐	
d. Does all sample information (e.g., sample ID, sampling date and time, sampling batch) listed on the COC form corresponds with the information on the sample labels?	☒	☐	
e. Is the correct analysis requested for each sample?	☒	☐	
f. Were any corrections on the COC appropriately made (a single line through the incorrect entry and correct data written in [not overwritten], initialed and dated)?	☒	☐	
2. SAMPLE LABELS			
a. Was each sample received with a completed sample label?	☒	☐	
b. Do the field IDs on the sample labels correspond to those on the field COC form?	☒	☐	
c. Were the sampling batch number, sampling date, time and requested analysis recorded on each sample label, and they correspond with those recorded on the COC?	☒	☐	
d. Are the sampler initials, organization and sample description recorded on each sample label?	☒	☐	
e. Are any corrections on the sample labels appropriately made (a single line through the incorrect entry and correct data written in [not overwritten], initialed and dated)?	☒	☐	
3. SAMPLE INTEGRITY			
a. Were custody seals used on the shipping container?	☒	☐	
b. Were custody seals used on each individual sample container?	☒	☐	
c. Were all custody seals intact and undamaged upon receipt at ALD?	☒	☐	
d. Were all custody seals placed such that the container could not be opened without damaging the seal?	☒	☐	
e. Has the physical integrity of all samples been maintained (i.e., no cracks)?	☒	☐	
f. Were all samples preserved during shipment with "Blue Ice" or equivalent cooling mechanism?	☒	■	
g. Were all samples placed in refrigerated storage (4° ± 2° C) after login?	☒	☐	
4. INTERNAL SAMPLE TRACKING			
a. Were all samples logged into the Analytical Computer System?	☒	☐	
b. Was all sample information correctly transcribed from the field documentation into the ACS?	☒	☐	
c. Were all sample bottles labeled with the ACS log number and the laboratory sample ID?	☒	☐	
d. Were internal tracking forms prepared for each log?	☒	☐	

Contact the sampling organization if any discrepancies are found in the field COC and sample label documentation. Document the name of the person Contacting the sampling organization, the name of the person contacted, the date and time of the contact, and the resolution of the problem.

Notes:

Form effective Date 10Mar05

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TWCP SAMPLE RECEIVING & CUSTODY REVIEW CHECKLIST
INEEL ANALYTICAL LABORATORIES DEPARTMENT

Log Number: 051013 4	IDC #: ID-RF-S3150-A (IDC's 700, 801)	NCR Initiation Required? ☐ Yes ☒ No
COC #(s): WCA-940, WCA-941, WCA-942		If Yes NCR Number: _____
Reviewer: Blane Teckmeyer / BTP (Printed Name/Signature)	10/17/2005 (Date)	

Instructions:
Complete one checklist per log. Enter appropriate response for each question. Each "No" response requires explanation. A "No" response to a question may require initiation of an NCR

	Requirement	Yes	No	Comments
	1. FIELD CHAIN-OF-CUSTODY (COC)			
a.	Was a COC form received with each shipping container?	☒	☐	
b.	Did the content of each shipping container match that listed on the associated COC form?	☒	☐	
c.	Were all custody transfers completely documented by signatures of relinquishers and receivers, with date and time of transfer?	☒	☐	
d.	Does all sample information (e.g., sample ID, sampling date and time, sampling batch) listed on the COC form corresponds with the information on the sample labels?	☒	☐	Note 1
e.	Is the correct analysis requested for each sample?	☒	☐	
f.	Were any corrections on the COC appropriately made (a single line through the incorrect entry and correct data written in [not overwritten], initialed and dated)?	☒	☐	
	2. SAMPLE LABELS			
a.	Was each sample received with a completed sample label?	☒	☐	
b.	Do the field IDs on the sample labels correspond to those on the field COC form?	☒	☐	
c.	Were the sampling batch number, sampling date, time and requested analysis recorded on each sample label, and they correspond with those recorded on the COC?	☒	☐	~~Note 1~~ BET 10/19/05
d.	Are the sampler initials, organization and sample description recorded on each sample label?	☒	☐	
e.	Are any corrections on the sample labels appropriately made (a single line through the incorrect entry and correct data written in [not overwritten], initialed and dated)?	☒	☐	
	3. SAMPLE INTEGRITY			
a.	Were custody seals used on the shipping container?	☒	☐	
b.	Were custody seals used on each individual sample container?	☒	☐	
c.	Were all custody seals intact and undamaged upon receipt at ALD?	☒	☐	
d.	Were all custody seals placed such that the container could not be opened without damaging the seal?	☒	☐	
e.	Has the physical integrity of all samples been maintained (i.e., no cracks)?	☒	☐	
f.	Were all samples preserved during shipment with "Blue Ice" or equivalent cooling mechanism?	☒	☐	
g.	Were all samples placed in refrigerated storage (4° ± 2° C) after login?	☒	☐	
	4. INTERNAL SAMPLE TRACKING			
a.	Were all samples logged into the Analytical Computer System?	☒	☐	
b.	Was all sample information correctly transcribed from the field documentation into the ACS?	☒	☐	
c.	Were all sample bottles labeled with the ACS log number and the laboratory sample ID?	☒	☐	
d.	Were internal tracking forms prepared for each log?	☒	☐	

Contact the sampling organization if any discrepancies are found in the field COC and sample label documentation. Document the name of the person Contacting the sampling organization, the name of the person contacted, the date and time of the contact, and the resolution of the problem.

Notes:

1 WCA-942, Sample ID Number: 10018867 21V5, Sample Weight: 2.73g on the COC, Sample Label: 2.69g; ~~WCA-940, Container I.D.C. ID-RF-0315-A*, should be ID-RF-S3150-A*.~~ BET 10/19/05 CORRECT WEIGHT ON COC PER COC COMMENT. BET 10/19/05

Form effective Date 10Mar05

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ICP Analytical Laboratories Department

Data Generator Checklist for TWCP

Data Report Number: ALD05034V	Analytical Batch: 0510066
Analysis Procedure: ACMM-9260	Procedure Revision: 13
Analysis Date(s): 10/15/05, 10/16/05, 10/23/05	
Data Generator Signature: 11/3/05	

Criteria	Yes	No	Comments
1. Samples analyzed in accordance with cited analytical method.	✓		
2. All logbook entries completed in accordance with MCP-2011.	✓		
3. All data entry and corrections made in accordance with MCP-2008.	✓		
4. All raw data signed/initialed and dated in indelible black ink.	✓		
5. Data reviewed for completeness and accuracy.	✓		

ICP Analytical Laboratories Department
Independent Technical Review Checklist for TWCP
Total VOCs in Homogeneous Solids and Soil/Gravel by GC/MS

Analytical Batch: **0510066**			Method: **ACMM-9260**	
Run # and Analysis Date	Data Generator	Independent Reviewer Signature	Review Date	OK for Release?
#1 10-15-05	**Faye Srala**	B. Hamil	10-27-05	(Yes) or No
#2 10-15-05 & 10-16-05	**Faye Srala**	B. Hamil	10-27-05	(Yes) or No
#3 10-23-05	**Faye Srala**	B. Hamil	10-27-05	(Yes) or No
#4				Yes or No

Instructions: Complete one checklist per analytical batch. If more than four instrument runs were needed to complete the batch analysis, use a second checklist. Enter the appropriate response for each question. Each "No" response requires explanation.

Requirement	Run #1		Run #2		Run #3		Run #4		Comments
	Yes	No	Yes	No	Yes	No	Yes	No	
1. Instrument Performance Check (BFB Tune)	///	///	///	///	///	///	///	///	
a. Was a BFB tune performed at the beginning of each 12-hour analytical shift, before analysis of standards or samples?	X		X		X				
b. Does the BFB tune meet ACMM-9260 acceptance criteria?	X		X		X				
2. Initial Calibration (ICAL)	///	///	///	///	///	///	///	///	
a. Have all ICALs used with this analytical batch been verified and approved for use as documented by a completed Initial Calibration Independent Technical Review Checklist?	X		X		X				
3. Continuing Calibration Verification (CCAL)	///	///	///	///	///	///	///	///	
a. Was a CCAL standard analyzed at the beginning of each 12-hour analytical shift, after the BFB tune but before sample analysis?	X		X		X				
b. Are all CCC RRF or concentration (for modeled compounds) %Ds ≤20?	X		X		X				
c. Are the RRFs ≥0.300 for SPCCs chlorobenzene and 1,1,2,2-tetrachloroethane, ≥0.100 for all other SPCCs, and ≥ 0.01 for non-SPCCs?	X		X		X				
d. Are internal standard areas within 50 to 200% of the areas in the last daily calibration standard (CCAL or midpoint ICAL standard)?	X		X		X				
e. Are internal standard retention times (RTs) within 30 seconds of the RT in the last daily calibration standard (CCAL or midpoint ICAL standard)?	X		X		X				
4. Samples (Including LCSs, Blanks, MS and MSDs)	///	///	///	///	///	///	///	///	
a. Were all samples extracted within 14 days of sample collection?	X		X		X				
b. Were all analyses of sample extracts (including dilutions and reanalyses) performed within 40 days of extraction?	X		X		X				
c. Were all samples analyzed within 6 months of valid MDL and P&A determinations?	X		X		X				
d. Were all samples analyzed within 12 hours of a valid BFB tune?	X		X		X				
e. Are the internal standard areas within 50 to 200% of those in the associated CCAL?	X		X		X				
f. Are the internal standard retention times within 30 seconds of those in the associated CCAL?	X		X		X				
g. Do all surrogate compound recoveries meet ACMM-9260 TWCP acceptance criteria?	X		X		X				Most were diluted out - See narrative
h. Were all samples having analytes detected in amounts exceeding the calibration range reanalyzed on a dilution?	X		X		X				
i. Are detected target analyte RRTs within 0.06 RRT units of the associated CCAL RRT, or is the qualitative identification justified by the analyst?	X		X		X				
j. In your opinion, do the sample spectra for positive hits match the reference spectra?	X		X		X				
k. In your opinion, are the quantitation ion peak areas correctly integrated?	X		X		X				
l. Was a TIC search conducted on each sample and blank in the analytical batch?	X		X		X				
m. Are TIC identities appropriately assigned per the identification criteria of ACMM-9260?	X		X		X				

0090

ICP Analytical Laboratories Department
Independent Technical Review Checklist for TWCP
Total VOCs in Homogeneous Solids and Soil/Gravel by GC/MS

Analytical Batch: 0510066

Requirement	Yes	No	Comments
5. Blanks	///	///	
a. Was at least one unique laboratory blank extracted and analyzed with the analytical batch?	X		
b. Was a blank (method or laboratory) analyzed daily prior to analysis of samples?	X		
c. Are all laboratory and method blank results ≤3 × program-required MDLs for all target analytes?	X		
6. Laboratory Control Samples (LCSs)	///	///	
a. Was at least one unique LCS extracted and analyzed with the analytical batch?	X		
b. Are all LCSs prepared from a standard source different from that used for the ICAL standards?	X		
c. Do percent recoveries for all spiked analytes in each LCS meet ACMM-9260 TWCP acceptance criteria?	X		
7. Matrix Spike and Matrix Spike Duplicate Samples (MS/MSD)	///	///	
a. Was at least one matrix spike sample (MS) analyzed with the analytical batch?	X		
b. Was at least one matrix spike duplicate sample (MSD) analyzed with the analytical batch?	X		
c. Do all percent recoveries for the MS and MSD meet ACMM-9260 TWCP acceptance criteria?	X		BJH 11-27-05 All were diluted out - see narrative
d. Do the RPDs between the MS and MSD meet ACMM-9260 TWCP acceptance criteria?	X		All were diluted out - see narrative
8. Data Report & Supporting Raw Data Package	///	///	
a. Does the report contain a Data Report Narrative that addresses, at a minimum: 1) any deviations from ACMM-9260 and the justification for the deviations; 2) any QC samples that failed the acceptance criteria, and their impact on data quality; 3) any NCRs associated with the reported samples; and 4) any problems or unusual conditions encountered during the analysis?	X		
b. Are Analysis Data Sheets and TIC Analysis Data Sheets present in the data report and accurate for all samples in the analytical batch?	X		
c. Are the analyte concentrations on the Analysis Data Sheets reported in units of mg/kg and correctly rounded to 2 significant figures?	X		
d. Are reporting forms present and accurate for surrogate recoveries, MS/MSDs, LBs, MBs, ISA&RTs, LCSs, BFB tunes, ICALs, CCALs, CCAL ISA&RTs, and MDLs?	X		
e Are U, J, B, D, E, H, Z, and N qualifying flags correctly assigned on the reporting forms?	X		
f. Were all samples, associated method performance, and ICALs supporting this analytical batch run by personnel having current TWCP qualifications?	X		
g. Are copies of all COC documentation, sample preparation logs, and sample analysis logs included in the data package?	X		
h. Are all raw data and instrument printouts signed/initialed and dated by the analyst, and included in the data package?	X		
i. Were all calculations performed using validated software or 100% manually-verified?	X		
j. Have the data been reviewed for transcription errors?	X		

Additional Comments: Corrections reviewed & approved BJH 11-7-05

0091

Technical Supervisory Data Review Checklist for TWCP

ICP Analytical Laboratories Department

Analytical Batch Data Report Number:	Method(s):
ALD05034V	ACMM-9260 Revision 13
Technical Supervisory Signature Release:	**Date:**
	10/27/05

Requirement	Yes	No	Comments
a. Data are technically reasonable based on method(s) used	✓		
b. All data have received independent technical review	✓		
c. QC documentation is accurate and complete per PLN-600	✓		
d. Raw data/supporting data are complete	✓		
e. Sample holding time requirements are met, or exceptions documented	✓		
f. Chain-of custody (COC) documentation is complete	✓		

RESOLUTIONS ACCEPTED 11/7/05

Quality Assurance Data Review Checklist for TWCP
ICP Analytical Laboratories Department

Total VOCs in Homogeneous Solids and Soil/Gravel

Analytical Batch Data Report Number: ALD05034V	Method: ACMM-9260
QA Officer Signature Release: [signature]	Date: 11/07/05

Requirement	Yes	No	Comment
Section 1: Sample Integrity Verification			
1a. COC documentation present, complete, and accurate for all reported samples	✓		
1b. Physical integrity of all samples verified as satisfactory at VTSR	✓		
1c. All samples stored at 4 ± 2 °C between receipt and analysis	✓		
1d. All samples extracted within 14 days of collection and analyzed within 40 days of extraction	✓		
Section 2: Data Report (DR) Completeness Verification			
2a. Cover Page including Table of Contents	✓		
2b. Cross Reference Table identifying field sample IDs and laboratory sample IDs	✓		
2c. Copy of Field COC Form(s)	✓		
2d. Narrative	✓		
2e. Analysis Data Sheet and TIC Analysis Data Sheet for each sample	✓		
2f. Laboratory Control Sample Form(s) for all LCSs associated with reported data	✓		
2g. Matrix Spike and Matrix Spike Duplicate Reporting Form(s) for all MS/MSDs associated with reported samples	✓		
2h. Surrogate Recovery form(s) including all reported samples	✓		
2i. Laboratory Blank Summary and results forms for all lab blanks associated with the reported samples	✓		
2j. Method Blank Summary and results forms for method blanks associated with the reported samples	✓		
2k. Internal Standard Area and RT Summary form(s) for continuing calibration(s) and associated sample analyses	✓		
2l. Instrument Performance Check form for each initial calibration and continuing calibration associated with the reported samples	✓		
2m. Initial Calibration Data form(s) for all ICALs associated with reported data	✓		
2n. Continuing Calibration forms for all CCALs associated with reported data	✓		
2o. MDL Reporting Form(s) for all instruments used for analysis	✓		
Section 3: Supporting Data Package Completeness Verification			
3a. Quantitation Reports for every standard, sample, and QC sample reported	✓		
3b. Mass Spectra for all detected target analytes and reported TICs	✓		
3c. Copies of extraction/preparation log books for all extracted samples	✓		
3d. Copies of analysis run logs for every standard, sample, and QC sample reported	✓		
3e. Copies of standard preparation log books and QC Lab documentation for all working standards and intermediate stock standards associated with reported data	✓		
Section 4: QC Results Verification			
4a. All BFB tune (Instrument Performance Check) data within specifications	✓		
4b. All ICALs within specifications	✓		
4c. All CCALs within specifications	✓		
4d. All LCS recoveries within specifications	✓		
4e. All Laboratory Blank results within specifications	✓		
4f. All Method Blank results within specifications	✓		
4g. Internal Standard Areas and RTs within specifications	✓		
4h. All MS and MSD percent recoveries within specifications	–		See Narrative
4i. All RPDs for MSD analyses within specifications	✓		See Narrative
4j. All surrogate recoveries within specifications	✓		See Narrative
Section 5: Instrument, Method and Personnel Qualification Verification			
5a. All analytical tasks conducted by personnel having current qualifications	✓		
5b. Acceptable demonstration of precision, accuracy, and MDLs performed within the last 6 months	✓		
5c. All deviations from ACMM-9260 clearly stated and explained on raw data or in DR narrative and all required NCRs issued	✓		
5d. All noncompliant QC discussed in DR narrative, and all required NCRs issued	✓		
Section 6: Data Recording and Review Verification			
6a. All changes to original data or forms made by line-out of incorrect entry, initialed/signed and dated by the person making the change	✓		
6b. All raw data initialed/signed and dated by generator in permanent black ink	✓		
6c. All pages in data package legible, correctly paginated, and copied pages complete (e.g., margins not cut off)	✓		
6d. All data received documented data generator review and signature	✓		
6e. All data received documented independent technical review and signature	✓		
6f. All data received documented technical supervisory review and signature	✓		

Attachment 5 – CCP Site Project Manager Data Validation Summary

On-Line Headspace Gas Analysis (HSG)			Visual Examination (VE)	
Nondestructive Examination (NDE)			Nondestructive Assay (NDA)	
Direct-Canister HSG Analysis			Homogeneous Waste Analysis (HWA)	X
Radiological Characterization				

BATCH DATA REPORT NUMBER: ALD05031S **DATE:** 18, 20 & 24 October 2005

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
1. ITR, Tech Sup, and Facility QA checklists are complete and signed. **Reference Source: WAP B3-10b(2)** **Verification Source: DGL Checklist**	X			
2. The batch data report is complete. **Reference Source: WAP B3-10b(2) and WAC A.5.2** **Verification Source: Data Sheets**	X			
3. QAOs have been met. **Reference Source: WAP B3-10b(2)** **Verification Source: QC Data Sheets**	X			**Container Numbers:** 10016886, 10018178, 10018503, 10018867, 10018875
4. Data reported with correct units and significant figures. **Reference Source: WAP B3-10b(2)** **Verification Source: Data Sheets**	X			
5. Data have been assessed correctly. **Reference Sources: WAP B3-10b(2) and B3-10b(3)** **Verification Source: Data Sheets**	X			
6. Is there a reference to or copy of the associated NCRS? **Reference Source: WAP Tables B3-11, B3-12 and B3-13** **Verification Source: NCR**	X			NCR-CCP-0505-05 (Lab NCR 100077): Balance 721549 used for weighing lab blank and laboratory control sample solid matrix was used beyond the calibration expiration.
7. The applicable SPQAO Project Level Validation Checklist is complete, signed, and dated. **Reference Source: WAP B3-10b(2)** **Verification Source: SPQAO Checklist**	X			
8. **NDA** batch QC checks (e.g., weekly interfering matrix, background, performance, and transmission checks, measurement system checks) were properly performed. **Reference Source: WAC A.4.2 and/or WAC Table A-4.3** **Verification Source: QC Data Sheets**			X	This is an SVOC analytical BDR.

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Attachment 5 – CCP Site Project Manager Data Validation Summary (continued)

BATCH DATA REPORT NUMBER: ALD05031S **DATE:** 18, 20 & 24 October 2005

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers	
9. **HSG** – All data are reported with the appropriate flags. **Reference Source: WAP B3-10b(2) Verification Source: Data Sheet**			X	This is an SVOC analytical BDR.	
10. **HSG** batch QC checks (e.g., on-line blanks, duplicates, and laboratory control samples) were properly performed and meet the established usability criteria. **Reference Sources: WAP B3-10b(2) and Table B3-3 and/or B1-1b Verification Source: QC Data Sheets**			X	This is an SVOC analytical BDR.	
11. **HSG** DAC assignment is valid based upon an assessment of the data collection and evaluation necessary to make the assignment. **Reference Source: WAP B3-10b(2) Verification Source: Drum Data Form**			X	This is an SVOC analytical BDR.	
12. **NDE** data are complete and acceptable based on the videotape or equivalent media review (independent observation and replicate scan). **Reference Sources: WAP , B1-3b(2) and B3-10b(2) Verification Source: QC Data Sheets**			X	Container numbers:	This is an SVOC analytical BDR.
				Rep:	
				IO:	
13. **VE** data is complete and properly reported. **Reference Sources: WAP B1-3b(3) and B3-10b(2) Verification Source: BDR**			X	This is an SVOC analytical BDR.	
14. **HWA** Solid/Soil VOC batch QC checks (e.g., laboratory duplicates, blanks, and control samples) were properly performed and meet the established usability criteria. **Reference Sources: WAP B1-2b, B3-10b(2) and Table B3-5 Verification Source: QC Data Sheets**			X	This is an SVOC analytical BDR.	
15. **HWA** Solid/Soil Semi-VOC batch QC checks (e.g., laboratory duplicates, blanks, and control samples) were properly performed and meet the established usability criteria. **Reference Sources: WAP B1-2b, B3-10b(2) and Table B3-7 Verification Source: QC Data Sheets**	X			▪ %Rs and associated for the MS/MSD were 0% due to sample dilution for matrix affects. ▪ MS/MSD RPDs for the compounds of interest were 0. ▪ Surrogate recoveries were 0 due to sample dilution for matrix affects.	

Attachment 5 – CCP Site Project Manager Data Validation Summary (continued)

BATCH DATA REPORT NUMBER: ALD05031S **DATE:** 18, 20 & 24 October 2005

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
16. **HWA Solid/Soil Total Metals Batch QC checks** (e.g., duplicates, blanks, and laboratory control samples) were properly performed and meet the established criteria. **Reference Sources: WAP B1-2b, B3-10b(2), and Table B3-9 Verification Source: QC Data Sheets**			X	This is an SVOC analytical BDR.
17. **OSR** for LANL Sealed Sources, does the waste meet the definition of sealed sources per 10 CFR 30.4 and 10 CFR 835.2 (effective January 1, 2004) and documentation included with the AK information? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	This is not an LANL OSR BDR.
18. **OSR** for LANL Sealed Sources, does the Pipe Overpack Container (POC) only contain sources and packaging material (no non-packaging items are allowed in the waste container)? **Reference Source: WAP B-3a(1)(iii) Verification Source: Data Sheet**			X	This is not an LANL OSR BDR.
19. **OSR** for LANL Sealed Sources, is the sealed source a US DOT Special Form Class 7 (Radioactive Material) per 49 CFR 34.27 (effective January 1, 2004) and is this documented in the AK information? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	This is not an LANL OSR BDR.
20. For LANL Sealed Sources, is the integrity of each sealed source validated by documented contamination survey results to meet the requirements of 10 CFR 34.27 (effective January 1, 2004), and is assembled as part of AK documentation? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	This is not an LANL OSR BDR.
21. **OSR** for LANL Sealed Sources, is each source a rigid sealed container or is it in a rigid sealed container less than or equal to 4 L? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	This is not an LANL OSR BDR.

Attachment 5 – CCP Site Project Manager Data Validation Summary (continued)

BATCH DATA REPORT NUMBER: ALD05031S **DATE:** 18, 20 & 24 October 2005

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
22. **OSR** for LANL Sealed Sources, does the AK information document that no VOC or VOC-bearing material are constituents of the waste? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information**			X	This is not an LANL OSR BDR.
23. **OSR** for LANL Sealed Sources, does the AK information document that the outer casing of the sealed source is a non-VOC bearing material and is this verified during VE? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	This is not an LANL OSR BDR.

The data for all containers in this batch are complete, properly reported, technically reasonable, representative and meet the Quality Assurance Objectives (QAOs). On a per waste container basis, as evidenced by my review of the Batch Data Report, all data have been validated in accordance with the QAPjP (CCP-PO-001) and are acceptable. This validation was accomplished through the generation level and project level data review, validation, and verification of this Batch Data Report.

David W. Moody David W. Moody 22 November 05

Site Project Manager Signature Date

Attachment 12 – CCP SPQAO Solid/Soil Total Semi-Volatile Organic Compound Analysis Project Level Validation Checklist and Summary

BATCH DATA REPORT NUMBER: ALD05031S **ANALYSIS DATE:** 10/18/05, 10/20/05, 10/24/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
1. Does the Batch Data Report contain the batch number, laboratory name, and the date of the batch report? **Reference Source: WAP Table B3-13 Verification Source: Cover Page**	X			
2. Has a Batch Data Report narrative been included with the Batch Data Report? **Reference Source: WAP Table B3-13 Verification Source: Report Narrative and comments**	X			
3. Is there a cross reference between waste container number, field sample number, and lab sample number ID; and signature release by lab personnel in the Batch Data Report? **References Source: WAP Table B3-13 Verification Source: Cover Page and/or Total SVOC Analysis Sample Cross-Reference Table**	X			
4. Does the Batch Data Report contain a table of contents? **Reference Source: CCP-TP-001 Verification Source: Batch Data Report**	X			
5. Are there 20 or less samples per analytical batch? **Reference Source: WAP Section B3-10 Verification Source: Total SVOC Analysis Sample Cross-Reference Table**	X			7 samples (2 co-located samples).
6. Does the Batch Data Report contain a complete and signed copy of the COC form? **Reference Source: WAP Table B3-13 Verification Source: COC Form**	X			
7. Does the Batch Data Report include the date and time of analysis for each sample? **Reference Source: WAP Table B3-13 Verification Source: Total SVOC Analysis Data Sheets**	X			

Attachment 12 – CCP SPQAO Solid/Soil Total Semi-Volatile Organic Compound Analysis Project Level Validation Checklist and Summary (continued)

BATCH DATA REPORT NUMBER: ALD05031S **ANALYSIS DATE:** 10/18/05, 10/20/05, 10/24/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
8. Are holding times between collection and analysis within the 14-day requirement? **Reference Source: WAP Table B1-4 Verification Source: Total SVOC Analysis Data Sheets**	X			The laboratory met the WAP requirement of 14 days between sampling and extraction and 40 days between extraction and analysis.
9. Have QC designations for samples been applied as appropriate? **Reference Source: WAP Table B3-13 Verification Source: Total SVOC Analysis Sample Cross-Reference Table and/or QC Sample Section of Batch Data Report**	X			
10. Is there a minimum of one laboratory control sample (LCS) analyzed per analytical batch? **Reference Source: WAP Table B3-7 Verification Source: Laboratory Control Sample**	X			
11. Are the percent recoveries (%Rs) for all LCS analytes within the Table B3-6 acceptable range? **Reference Source: WAP Table B3-6 Verification Source: Laboratory Control Sample**	X			
12. Is a minimum of one matrix spike (MS) analyzed per analytical batch? **Reference Source: WAP Table B3-6 Verification Source: Matrix Spike/Matrix Spike Duplicate Reporting Form**	X			
13. Are the %Rs for all MS compounds within the Table B3-6 acceptance range? **Reference Source: WAP Table B3-7 Verification Source: Matrix Spike/Matrix Spike Duplicate Reporting Form**	X			All matrix spike recoveries were zero percent due to all the compounds being diluted out. No NCR is required as the laboratory attributed the dilutions to matrix effects associated with the inability to reduce the sample volume due to oils in the sample.

Attachment 12 – CCP SPQAO Solid/Soil Total Semi-Volatile Organic Compound Analysis Project Level Validation Checklist and Summary (continued)

BATCH DATA REPORT NUMBER: ALD05031S **ANALYSIS DATE:** 10/18/05, 10/20/05, 10/24/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
14. Is a minimum of one matrix spike duplicate (MSD) analyzed per analytical batch? Note: The MSD is used in place of the laboratory duplicate. **Reference Source: WAP Table B3-6 Verification Source: Matrix Spike/Matrix Spike Duplicate Reporting Form Reporting Form**	X			
15. Are the %Rs for all MSD compounds within the Table B3-6 acceptance range? Note: The MSD is used in place of the laboratory duplicate. **Reference Source: WAP Table B3-7 Verification Source: Matrix Spike/Matrix Spike Duplicate Reporting Form Reporting Form**	X			All matrix spike recoveries were zero percent due to all the compounds being diluted out. No NCR is required as the laboratory attributed the dilutions to matrix effects associated with the inability to reduce the sample volume due to oils in the sample.
16. Do the MS/MSD relative percent differences (RPDs) for all analytes meet the requirements listed in Table B3-6? **Reference Source: WAP Table B3-6 Verification Source: Matrix Spike/Matrix Spike Duplicate Reporting Form**			X	MS/MSD RPDs are not applicable as recoveries are zero.
17. Is there a minimum of one lab blank analyzed per analytical batch? **Reference Source: WAP Table B3-7 Verification Source: Blank Form and Laboratory Blank Summary**	X			
18. Are all lab blank compounds ≤3* the program-required MDL? **Reference Source: WAP Table B3-7 Verification Source: Blank Form**	X			
19. Are the analytical samples spiked with surrogate matrix compounds (SMCs)? **Reference Source: WAP Table B3-7 Verification Source: Surrogate Recovery Form**	X			
20. Are the SMCs %R values within specified criteria? **Reference Source: WAP Table B3-7 Verification Source: Surrogate Recovery Form**	X			The majority of the surrogates had a zero percent recovery. An NCR is not required as the recoveries are a result of matrix effects. Surrogate recoveries in the lab blanks and ICS were within acceptance criteria.

Attachment 12 – CCP SPQAO Solid/Soil Total Semi-Volatile Organic Compound Analysis Project Level Validation Checklist and Summary (continued)

BATCH DATA REPORT NUMBER: ALD05031S **ANALYSIS DATE:** 10/18/05, 10/20/05, 10/24/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
21. Is the five-point (minimum) initial calibration complete? **Reference Source: WAP Table B3-7 Verification Source: Initial Calibration Data**	X			
22. Is the correlation coefficient (r) ≥0.990? **Reference Source: WAP Table B3-7 Verification Source: Initial Calibration Data**	X			
23. Are the percent relative standard deviations (%RSDs) for all target analytes calibration check compounds (CCCs) less than or equal to 30%? **Reference Source: WAP Table B3-7 Verification Source: Initial Calibration Data**	X			
24. Are the relative response factors (RRFs) for all target analytes System Performance Check Compounds (SPCCs) ≥ 0.05? **Reference Source: WAP Table B3-7 Verification Source: Initial Calibration Data**	X			
25. If %RSD is less than or equal to 15, is average relative response factor used? **Reference Source: WAP Table B3-7 Verification Source: Initial Calibration Data**	X			
26. If %RSD is greater than 15, is regression equation generated and used? **Reference Source: WAP Table B3-7 Verification Source: Initial Calibration Data**	X			All %RSDs are less than 15.
27. Is RRF for all non-SPCCs ≥0.01? **Reference Source: WAP Table B3-7 Verification Source: Initial Calibration Data**	X			
28. Were the decafluorotriphenylphosphine (DFTPP) ion abundance criteria satisfied? **Reference Source: WAP Table B3-7 Verification Source: Instrument and Performance Check**	X			

Attachment 12 – CCP SPQAO Solid/Soil Total Semi-Volatile Organic Compound Analysis Project Level Validation Checklist and Summary (continued)

BATCH DATA REPORT NUMBER: ALD05031S **ANALYSIS DATE:** 10/18/05, 10/20/05, 10/24/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
29. Is DFTPP tune performed at a minimum frequency of every 12 hours of operation? **Reference Source: WAP Table B3-7 Verification Source: Instrument and Performance Check**	X			
30. Is continuing calibration performed at a minimum frequency of every 12 hours of operation? **Reference Source: WAP Table B3-7 Verification Source: Continuing Calibration Verification, Blank Summary**	X			
31. Are the %Ds less than or equal to 20% for target analytes CCCs? **Reference Source: WAP Table B3-7 Verification Source: Continuing Calibration Check**	X			
32. Are the relative response factors (RRFs) for all target analytes SPCCs ≥0.05? **Reference Source: WAP Table B3-7 Verification Source: Continuing Calibration Check, CCAL Internal Standard Area, and RT Summary**	X			
33. Is RRF for all non-SPCCs ≥ 0.01? **Reference Source: WAP Table B3-7 Verification Source: Continuing Calibration Check**	X			
34. Is the RT for internal standards ±30 seconds from last daily calibration check? **Reference Source: WAP Table B3-7 Verification Source: Continuing Calibration Check and CCAL Internal Standard Area and RT Summary**	X			
35. Is internal standard area count >50% and <200% of the last daily calibration? **Reference Source: WAP Table B3-7 Verification Source: CCAL Internal Standard Area and RT Summary**	X			
36. Are the retention times (RTs) for the continuing calibrations ±3 standard deviations from the initial calibration per applicable SW-846 method? **Reference Source: WAP Table B3-7 Verification Source: Continuing Calibration Verification**	X			

Attachment 12 – CCP SPQAO Solid/Soil Total Semi-Volatile Organic Compound Analysis Project Level Validation Checklist and Summary (continued)

BATCH DATA REPORT NUMBER: ALD05031S **ANALYSIS DATE:** 10/18/05, 10/20/05, 10/24/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
37. Does the Batch Data Report include MDLs (mg/kg) that are ≤PRQL in Table B3-6? **Reference Source: WAP Table B3-6 Verification Source: MDL Reporting Form**	X			Several non-detected sample results are reported at a level above the PRQLs, due to required dilutions and matrix effects.
38. Are analytical procedures (including data revision) used to develop the data referenced in the Batch Data Report? **Reference Source: WAP Table B3-13 Verification Source: Data Generator Checklist for TWCP**	X			ACMM-9500 Rev. 11 – extraction ACMM-9270 Rev. 8 - analysis.
39. Does the Batch Data Report include the operator's signature and analysis date? **Reference Source: WAP Table B3-13 Verification Source: Data Generator Checklist for TWCP**	X			
40. Are data reporting forms complete with data reported properly (i.e., data is reported in correct units, with correct significant figures, and with correct qualifying flags)? **Reference Source: WAP Table B3-13, B3-10b(1) Verification Source: Batch Data Report**	X			
41. Have data reporting flags been assigned properly? **Reference Source: WAP Table B3-13 Verification Source: DGL Checklists**	X			
42. Have the batch samples been properly preserved (4° ∀ 2°C)? **Reference Source: WAP Table B1-4 Verification Source: COC Form, Sample Receipt Checklist, and/or QA Data Review Checklist**	X			
43. Are there any NCR(s) associated with this batch? Identify the NCR(s). **Reference Source: WAP B3-13 Verification Source: DGL Checklists, Batch Data Report Narrative, and/or batch comments**	X			NCR-CCP-0505-05, Rev. 0 was initiated to bring laboratory NCR 100077 into CCP's tracking system. The NCR was issued due to a balance and check weight having an expired calibration. Since the recalibration was within tolerance, the NCR was dispositioned as "Use-As-Is".

Attachment 12 – CCP SPQAO Solid/Soil Total Semi-Volatile Organic Compound Analysis Project Level Validation Checklist and Summary (continued)

BATCH DATA REPORT NUMBER: ALD05031S **ANALYSIS DATE:** 10/18/05, 10/20/05, 10/24/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
44. Are Batch Data Generation Level ITR, TS, and QA Data Review Checklists complete, accurate, and signed? **Reference Source: WAP Table B3-13** **Verification Source: DGL Checklists**	X			
45. Is Attachment 6 included?	X			

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

Richard Kantrowitz
Site Project QA Officer

Signature

11/11/05
Date

Reviewed changes to pages 1 and 90. 11/22/05

Attachment 6 – CCP Checklist Addendum

Note: The use of this form may involve multiple pages. See the line below for the total number of pages associated with this BDR.

Page: 1 of 1

Batch Data Report (BDR) Number: ALD05031S

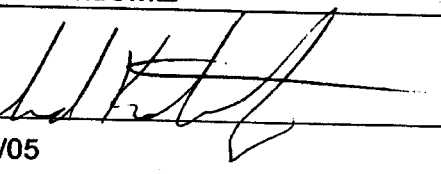
	Headspace Gas (HSG)		Visual Examination (VE)
	Nondestructive Assay (NDA)		Radiography (RTR)
X	Homogeneous Waste		Radiological Characterization

Comments	Comment Resolution
NCR-CCP-0505-05, Rev. 0 was initiated to bring laboratory NCR 100077 into CCP's tracking system. The NCR was issued due to a balance and check weight having an expired calibration.	Refer to attached NCR.

Additional information provided at time of review?	X	YES		NO

All comments addressed:

Name: Richard Kantrowitz

Signature: 

Date: 11/11/05

Attachment 1 – CCP Nonconformance Report (NCR)		
NCR No. NCR –CCP - 0505 – 05 Revision 0		
1. Lot No./Heat No. or Serial No.: N/A	2. Process (NDA, HSG, NDE, VE, Other): Other	3. Batch Data Report # (s): ALD05025N, ALD05026N ALD05031S, ALD05032S
4. Order/Work Order/Job Control Number (as applicable): INL NCR number 100077	5. PO #: N/A	Container#(s): See Attachment 2
	6. Supplier: N/A	

DESCRIPTION OF NONCONFORMANCE

7. (a) Hold Tag Applied? ☐ YES ☒ NO (If NO, explain) Segregation Method(s): ☐ NA
CCP administrative NCR to document INL NCR number 100077

☐ < 100 nCi/g ☐ Prohibited Item ☐ >500 ppmv Flamm. VOCs

☐ E-Flag ☐ TRAMPAC Criteria ☐ Receiving Inspection ☒ Other

COPY

(b) Description of Nonconformance
Required Condition (Implementing Procedure, Section & Revision)
MCP-2610, REv. 4, Section 4.8.5 "M&TE User: Use only M&TE with current and reliable calibration...Do NOT use or continue to use any M&TE if the calibration due date or interval has passed without recalibration or if the device produces results known to be in error.

(c). Actual Condition
Balance (721549) used for weighing lab blank and laboratory control samples solid matrix was used beyond the calibration expiration date of 10/12/05. Check weight (721550) used for checking balance 721549 was used beyond the calibration expiration date of 10/14/05.

See continuation sheet (Attachment 2)

8. NCR Originator (Print name, sign and date) 11/11/05 Irene Quintana Irene Quintana	9. SPQAO/FQAO Validation (Print name, sign and date) Richard Kantrowitz 11/11/05
10. Significant Condition? ☐ YES ☐ NO ☒ NA	11. Recurring Condition? ☐ YES ☒ NO (If YES, List NCRs/CARs)
12. Trend Code: A	13. Responsible Manager: R. A. Billett / C.A. STEPZINSKI

SPQAO-2

Attachment 1 – CCP Nonconformance Report (NCR)	
NCR No. NCR -CCP - 0505 - 05 Revision 0	
INTERIM DISPOSITION	
14. Interim Disposition (Check One) ☒ N/A (See final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort ☐ Reinspect/Retest ☐ Remediate (a) Instructions for Completion of the Interim Disposition:	
INTERIM DISPOSITION APPROVALS	
15 .Responsible Manager/Individual (Print, sign and date)	16. SPQAO/FQAO (Print, sign and date)
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
COMPLETION OF INTERIM DISPOSITION	
17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date)	
18. Interim Disposition Verified SPQAO/FQAO: (Print, sign and date)	

SPQAO-3

Attachment 1 – CCP Nonconformance Report (NCR)	
NCR No. NCR –CCP- 0505 - 05 Revision 0	
FINAL DISPOSITION	
19. Final Disposition (Check One) ☒ Use-As Is ☐ Reject ☐ Repair ☐ Rework ☐ Scrap (a) Technical Justification (Required for "Use-As-is" and "Repair" dispositions, N/A for "Reject," "Scrap," or "Rework" dispositions.) Balance in question was recalibrated on 10/31/05 and found to be in tolerance.	
(b) Disposition Instructions (Required for "Reject" and "Scrap") N/A	
(c) Instructions for Completion of the Final Disposition, including Inspection Criteria (Required for "Repair" and "Rework") N/A	
(d) Corrective Actions (Actions to Prevent Recurrence) - as required. N/A	
FINAL DISPOSITION APPROVALS	
20. Responsible Manager/Individual: (Print, sign and date) R. A. Billett 11/11/05 C.A. STEPZINSKI FOR BOB BILLETT	21. SPQAO/FQAO: (Print, sign and date) Robert Czyzewski R Czyzewski 11/11/05
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
CLOSURE	
22. Final Disposition Complete Responsible Manager/Individual: (Print, sign and date) C.A. STEPZINSKI 11/11/05	
23. Final Disposition Verified – NCR Closed * R. Czyzewski SPQAO: (Print, sign and date) R Czyzewski 11/11/05	

*CTS was updated to indicate closed this date.

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Attachment 1 to NCR-CCP-0505-05, Rev. 0 Page 1 of 5

CH2M-WG

230.01
Revision date
09/30/2003

Control of Nonconforming Items
Nonconformance Documentation

Initiator:	S Number:	Work Org.:	Work Phone:
Jeter, Jeffrey L	077565	5384	6-1988

Documentation

NCR Number:	Date Identified:	*SSC:	*Facility:INTEC *Location:602 Description:Analytical Laboratories Department
100077	10/27/2005	N/A	

*Item Name:	Req. No/P.O. No./SC and/or Project No.:
TRU Waste Characterization Samples	N/A
Supplier Name/Address: N/A	*This NCR is for: ☒ ICP ☐ INEEL ☐ Other

*Is the non-conformance under the requirement of SNF or NRC-licensed activities (DOE/RW-0333P)? ○ Yes ● No

*Specification to which item does not perform:

MCP-2610, Rev. 4, Section 4.8.5: "M&TE User: Use only M&TE with current and reliable calibration.....Do NOT use or continue to use any M&TE if the calibration due date or interval has passed without recalibration or if the device produces results known to be in error.

Associated Documents:
Data Reports ALD05025N, ALD05026N, ALD05031S, ALD05032S

*Non-Conformance Description:

Balance (721549) used for weighing lab blank and laboratory control sample solid matrix was used beyond the calibration expiration date of 10/12/05. Check weight (721550) used for checking balance 721549 was used beyond the calibration expiration date of 10/14/05.

Affected samples include:

1) ALD05025N, analytical batch 0510086, samples LBN101705, LBN101905, ALD log number 051006-8, sample 5CY99MSRE, ALD log number 051010-8, sample 5CZ79RE, ALD log number 051013-4, samples 5DB26, 5DB28, 5DB29, 5DB29RE, 5DB31, and 5DB31RE

2) ALD05026N analytical batch 0510108 samples LBN101305, LBN101805, ALD log number 051010-8 samples 5DA06RE and 5DA11RE, ALD log number 051010-10, samples 5DA35, 5DA35RE, 5DA36, 5DA40, 5DA40RE, 5DA41, 5DA45, 5DA45RE, 5DA46, 5DA50, and 5DA51, ALD log number 051012-11, samples 55DB17, 5DB18, 5DB22, and 5DB23

3) ALD05031S, analytical batch 0510085, samples LBS101305A, LBS101805A, LBS102405A, and LCSS051D188A, ALD log number 5CY97, 5CZ01, 5CZ01MS, and 5CZ01MSD, ALD log number 5CZ77 and 5CZ80, ALD log number 051013-4, 5DB27, 5DB30, 5DB30RE, 5DB32, and 5DB32RE

4) ALD05032S, analytical batch 0510108, sample LBS101705A, ALD log number 051010-10, samples 5DA37, 5DA42, 5DA47, and 5DA52, ALD lognumber 051012-11, samples 5DB19 and 5DB24

*Responsible Manager (RM):	*Responsible Quality Engineer (QE):
Brewer, Ken N	Dunhour, Frederick J
Alternate RM for processing NCR: Saller Siemer, Shelly J	

Next Activity: NCR Closed
Actionee: N/A
Date Due:

Screening - Responsible Manager

0021

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19 11/4/05

Attachment 1 of to NCR-CCP-0505-05, Rev. 0 Page 2 of 5

ICP ICARE NCR System

Responsible Manager (RM):	Organization	Phone:	Date Screened:
Seiler Siemer, Shelly J	5360	6-5968	10/27/2005

*Initiator has selected "No" to the non-conformance under the requirement of SNF or NRC-licensed activities (DOE/RW-0333P). Is this Correct?
● Yes ○ No

*Does the NCR require Stop Work?
○ Yes ● No

*Safety Category or (Quality Level) of Material/Equipment/Components:
○ SC(1) ● LSC(3)
○ SS(2) ○ CG(4)

*Does this NCR support Environmental Requirements? ○ Yes ● No

RM Comments:
N/A

Screening - Quality Engineer

Quality Engineer (QE):	Organization	Phone:	Date Screened:
Dunhour, Frederick J		6-2484	10/27/2005

*Is the NCR valid? ● Yes ○ No

Quality Comments:
Quality Level -3 assignment is based on regulatory significance of these samples for the DOE-CBFO customer, and supported through application of the CBFO-approved INL TWCP QA Program.

Notification - RM

Responsible Manager (RM):	Organization	Phone:	Date Notified:
Seiler Siemer, Shelly J	5360	6-5968	10/27/2005

ORPS Report Number:
N/A

*Is the NCR operational equipment needed for Conditional Use?
○ Yes ● No

*Area of Responsibility:
ICP - INL TRU Waste Characterization Program

Optional Internal Area of Responsibility:
N/A

Cognizant Director:
Brewer, Ken N

*Facility Manager:
Brewer, Ken N

Cognizant Director's Alternate(s):
Dunhour, Frederick J; Seiler Siemer, Shelly J

Compliance Coordinator(s) to determine Price Anderson (PAAA) applicability:
Dunhour, Frederick J

*Does the non-conformance involve suspect/counterfeit items?
○ Yes ● No

*Does this NCR pertain to Waste Containers, Waste Packaging, or Packaging and Transportation activities? ○ Yes ● No

Method of Segregation:
Administratively controlled by the TWCP sample management and data review processes.

Method of Identification:
Administratively controlled by the TWCP sample management and data review processes.

*Lead Disposition Evaluator:
Jeter, Jeffrey L

Additional Disposition Evaluator(s):
(These evaluators verify and concur the disposition of NCR.)

This block is intentionally left blank.

Additional Notification:
Amy M Sumariwalla; Adrian D Chapman; David W Lodman; Thomas G Moffett; Faye E Sraia; Wendy L Rice

QE Red Tag Process

Quality Engineer (QE):	Organization	Phone:	Date Processed:
Dunhour, Frederick J		6-2484	10/27/2005

Tagging Information/Other Methods:
Administratively controlled by the TWCP sample management and data review processes.

Other means of Tag Identification:
Administratively controlled by the TWCP sample management and data review processes.

Disposition

Lead Disposition Evaluator:	Organization:	Phone:	Date Disposition sent for approval:
Jeter, Jeffrey L	5364	6-1966	11/03/2005

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Dg 11/11/05

Attachment 1 of to NCR-CCP-0505-05, Rev. 0

Page 3 of 5

ICP ICARE NCR System

*NCR Disposition: ● Use As Is ○ Reject ○ Repair ○ Multiple Disposition ○ Rework	This block is intentionally left blank.
*Does Disposition represent Design Change? ○ Yes ● No	*Does this item require a Unreviewed Safety Question (USQ) screening and evaluation? ○ Yes ● No

Identify as-built drawings and other documentation(*For Use-As-Is and Repair)
N/A

Method of Disposal:(*For Reject)
N/a

Technical Justification(*For Use-As-Is and Repair)
Balance in question was recalibrated on 10/31/05 and found to be in tolerance. See attached.

Technical requirements and acceptance criteria to be used for repair work:
n/a

Inspections and Verification Criteria for acceptability of repair or rework:
N/A

Other Documents or QA records requiring the change:
N/A

If this nonconforming item is associated with, or caused by, a program, procedure, or process problem, document the issue in accordance with MCP-598:

N/A

Disposition Concurrence/Approval

Approval RM(Signature) Seiler Siemer, Shelly J *Shelly J Seiler Siemer* 11/03/2005	Concurrence/Approval QE(Signature) Dunhour, Frederick J *Frederick J Dunhour* 11/03/2005	This block is intentionally left blank.	This block is intentionally left blank.

Implementation Completion - RM

Responsible Manager (RM): Seiler Siemer, Shelly J	Organization 5360	Phone: 6-5988	Date Completion: 11/03/2005

The Disposition as approved has been completed and implemented: ○ Yes ● N/A

*Provide Justification for N/A:
No implementation actions required for approved "use-as-is" disposition.

Implementing Documentation:
N/A

Implementation Verification - QE

Quality Engineer (QE): Dunhour, Frederick J	Organization	Phone: 6-2484	Date Verified: 11/03/2005
*Verifier/Inspector: Dunhour, Frederick J	*Organization: 5360 Phone: 6-2484		

*Identify any reference documents by number and name, and if available, reference them here or attach in Attachment Section:
N/A

Verification Comments:
No disposition actions were required based on the approved "use-as-is" disposition.

Closure - RM

Responsible Manager (RM): Seiler Siemer, Shelly J	Organization 5360	Phone: 6-5988	Date Closed: 11/03/2005

*1. Verified that the NCR inspection/verification activities have been performed as required, and are properly documented, signed off on the NCR, and attachments or references to document supporting completion of those actions are provided as necessary.	○ Yes ● N/A

SPAO-7

Attachment 1 to NCR-CCP-0505-05, Rev. 0.

ICP ICARE NCR System

*2. Verified that as-built documents identified in the disposition have been revised, or their change control forms have been approved.	○ Yes ● N/A
*3. I have reviewed the NCR to ensure that all attachments are legible within the electronic system.	● Yes ○ N/A
*4. I have started to process any Lessons Learned from the investigation, disposition and resolution of the NCR per MCP-192, "Lessons Learned System." NOTE: Lessons Learned is not part of the electronic NCR process. This should be completed in parallel with the NCR process and could be on-going after NCR closure.	○ Yes ● N/A
*5. I verified that all other attachments such as USQ Evaluation and Disposition Calculations are attached to the NCR.	○ Yes ● N/A
Closure Comment: This NCR and the records cited therein contain adequate documentation of the nonconformance and justification for its "use-as-is" disposition.	
Closure Signature (RM): *Shelly J Sailer Siemer*	

Closure Validation QE

Quality Engineer (QE):	Organization	Phone:	Date Validated:
Dunhour, Frederick J		6-2484	11/03/2005
*1. I have reviewed the NCR and found it as complete, with all documents attached as necessary.			● Yes ○ N/A
*2. I verify that all the NCR Red tags have been removed and destroyed.			○ Yes ● N/A
*3. I verify that Quality Accepted (Green) tags have been attached as necessary to maintain traceability of the item.			○ Yes ● N/A
*4. I verify that Conditional Use (White) tags have been removed.			○ Yes ● N/A
*5. The NCR is validated as complete.			● Yes ○ N/A
Closure Comment: This NCR and the records cited therein contain adequate documentation of the nonconformance and justification for its "use-as-is" disposition.			
Closure Signature (QE): *Frederick J Dunhour*			

Attachments/Comments

721549calpt.pdf

Revision History

11/03/2005 01:20 PM : Frederick J Dunhour as a QE closed the NCR.The following people were notified about the NCR Closer:
Jeter, Jeffrey L; Sailer Siemer, Shelly J; Brewer, Ken N; Brewer, Ken N; Dunhour, Frederick J; Sailer Siemer, Shelly J; Dunhour, Frederick J; Jeter, Jeffrey L; Amy M Sumariwalla; Adrian D Chapman; David W Lodman; Thomas G Moffett; Faye E Sraia; Wendy L Rice
11/03/2005 01:15 PM : Shelly J Sailer Siemer as an RM completed closure process and submitted to Dunhour, Frederick J for QE for final closure.
11/03/2005 12:51 PM : Frederick J Dunhour completed implementation and verification and forwarded for closure to Sailer Siemer, Shelly J
11/03/2005 12:38 PM : Shelly J Sailer Siemer completed implementation and forwarded for verfication to Dunhour, Frederick J
11/03/2005 12:34 PM : Shelly J Sailer Siemer as an RM concurred the Disposition and signed off.
11/03/2005 12:01 PM : Frederick J Dunhour as a QE concurred the Disposition and signed off.
11/03/2005 11:45 AM : Jeffrey L Jeter made the changes to the document as follows:
The previous Technical Justification was
Balance in question was recalibrated on 10/31/05 and found to be in tolerance.

11/03/2005 11:44 AM : Jeffrey L Jeter completed NCR Disposition and submitted to Sailer Siemer, Shelly J; Dunhour, Frederick J for their concurrence and approval.
10/27/2005 03:20 PM : Shelly J Sailer Siemer completed Notification Process and notified Dunhour, Frederick J; Brewer, Ken N; Dunhour, Frederick J; Sailer Siemer, Shelly J; Dunhour, Frederick J; Brewer, Ken N; Jeter, Jeffrey L; Amy M Sumariwalla; Adrian D Chapman; David W Lodman; Thomas G Moffett; Faye E Sraia; Wendy L Rice
10/27/2005 02:38 PM : Frederick J Dunhour completed screening and forwarded to Sailer Siemer, Shelly J for Notification process.
10/27/2005 02:24 PM : Shelly J Sailer Siemer completed screening and forwarded to Dunhour, Frederick J for QE Screening.
10/27/2005 02:08 PM : Jeffrey L Jeter resubmitted NCR to RM Sailer Siemer, Shelly J for screening.

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Attachment 1 to NCR-CLP-0505-05, Rev. 0

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ICP ICARE NCR System

10/27/2005 02:06 PM : Shelly J Sailer Siemer returned to initiator Jeter, Jeffrey L for additional modification/correction.
10/27/2005 01:58 PM : Jeffrey L Jeter made the changes to the document as follows:
The previous Nonconformance Description was
Balance (721549) used for weighing lab blank and laboratory control sample solid matrix was used beyond the calibration expiration date of 10/12/05. Check weight (721550) used for checking balance 721549 was used beyond the calibration expiration date of 10/14/05.

Affected samples include:

1) ALD05025N, analytical batch 0510066, samples LBN101705, LBN101905, ALD log number 051006-6, sample 5CY99MSRE, ALD log number 051010-6, sample 5CZ79RE, ALD log number 051013-4, samples 5DB26, 5DB28, 5DB29, 5DB29RE, 5DB31, and 5DB31RE

2) ALD05026N analytical batch 0510108 samples LBN101305, LBN101805, ALD log number 051010-8 samples 5DA06RE and 5DA11RE, ALD log number 051010-10, samples 5DA35, 5DA35RE, 5DA36, 5DA40, 5DA40RE, 5DA41, 5DA45, 5DA45RE, 5DA46, 5DA50, and 5DA51, ALD log number 051012-11, samples 55DB17, 5DB18, 5DB22, and 5DB23

3)ALD05029S, analytical batch 0509281, sample LB101205B, ALD log number050929-5, sample 5CW19RE

4) ALD05031S, analytical batch 0510066, samples LBS101305A, LBS101805A, LBS102405A, and LCSS0510166A, ALD log number 5CY97, 5CZ01, 5CZ01MS, and 5CZ01MSD, ALD log number 5CZ77 and 5CZ80, ALD log number 051013-4, 5DB27, 5DB30, 5DB30RE, 5DB32, and 5DB32RE

5) ALD05032S, analytical batch 0510108, samples LBS101205A, LBS101705A, and LCSS0510108A, ALD log number 051010-8, samples 5DA08, 5DA13, 5DA13MS, and 5DA13MSD, ALD log number 051010-10, samples 5DA37, 5DA42, 5DA47, and 5DA52, ALD lognumber 051012-11, samples 5DB19 and 5DB24

10/27/2005 01:58 PM : Jeffrey L Jeter resubmitted NCR to RM Sailer Siemer, Shelly J for screening.
10/27/2005 01:40 PM : Shelly J Sailer Siemer returned to initiator Jeter, Jeffrey L for additional modification/correction.
10/27/2005 11:50 AM : Jeffrey L Jeter submitted NCR to RM and his alternate Brewer, Ken N, Sailer Siemer, Shelly J for screening.

The following fields are general purpose public use. Any data entered here is not related to NCR process and solely used for one's individual need. Integrity of the data is not guarantied since it can be replaced by any user randomly.

FIELD A:
(Field Name: FIELDA, type Text)
FIELD B:
(Field Name: FIELDb, type Text)

0025

SPQAO-9

Attachment 2 – CCP Nonconformance Report (NCR) Continuation Sheet

NCR No. NCR – CCP - 0505 - 05 Revision No. 0 Attachment # 1 Page 1 of 1

Continuation from Section Number: 3 and 7(b)
Affected samples include:
1) ALD05025N, analytical batch 0510066, samples LBN101705, LBN101905, ALD log number 051006-6, sample 5CY99MSRE (container 10018503), ALD log number 051010-6 sample 5CZ79RE (container 10018875), ALD log number 051013-4, samples 5DB26 (container 10018178), 5DB28, 5DB29 (container 10018867), 5DB29RE (container 10018867), 5DB31, and 5DB31RE.

2) ALD05026N analytical batch 0510108 samples LBN101305, LBN101805, ALD log number 051010-8 samples 5DA06RE and 5DA11RE ALD log number 051010-10, samples 5DA35, 5DA35RE, 5DA36, 5DA40, 5DA40RE, 5DA41, 5DA45, 5DA45RE, 5DA46, 5DA50, and 5DA51, ALD log number 051012-11, samples 55DB17, 5DB18, 5DB22, and 5DB23.

3) ALD05031S, analytical batch 0510066, samples LBS101305A, LBS101805A, LBS102405A, and LCSS0510066A, ALD log number 5CY97 (container 10018503), 5CZ01, 5CZ01MS, and 5CZ01MSD, ALD log number 5CZ77 (container 10016886) and 5CZ80 (container 10018875), ALD log number 051013-4, 5DB27 (container 10018178), 5DB30 (container 10018867), 5DB30RE, 5DB32, and 5DB32RE.

4) ALD05032S, analytical batch 0510108, sample LBS101705 A, ALD log number 0510-10, samples 5DA37, 5DA42, 5DA47, and 5DA52, ALD log number 051012-11, samples 5DB19, and 5DB24.

This NCR is created to document INL NCR 100077 under the CCP program.

SPQAO-10

CH2M•WG IDAHO, LLC

Analytical Laboratories Department

Idaho Cleanup Project

Transuranic Waste Characterization Program

RCRA Analysis Data Report

Batch Data Report Number: ALD05031S
Revision Number: 1
Issue Date: November 15, 2005

Analytical Method: ACMM-9270
Analyte(s): SVOCs

Issued to: Mr. Robert Billett, SPM
C/O CCP Records Coordinator
4021 National Parks Highway
Carlsbad, NM 88220

Summary: This data report contains analysis results for 7 samples from Sampling Batch WCS-05-04. Revision 1 of this report includes changes to the Quality Assurance Data Review Checklist noting NCR 100077 on line item 5c. Revised pages are paginated with "-R1" after the page number.

Report Content:

Section	Content	Pages
1	Sample Identification Table	0002 – 0003
2	Sample Custody and Tracking Documents	0004 – 0017
3	Analysis Results	0018 – 0044
4	Batch QC Sample Results	0045 – 0063
5	Instrument QC Data	0064 – 0081
6	Data Review Checklists	0082 – 0090

Release Authorization:

Name & Position	Signature	Date
Thomas G. Moffett Acting Technical Leader	Thomas G. Moffett	11/15/05
Jeffrey L. Jeter Acting Supervisor		TGM 11/15/05 11/15/05
Shelly J. Sailer Quality Assurance Officer		11/15/05

CH2M•WG IDAHO, LLC

Analytical Laboratories Department

SUPERSEDED
WSK 11/15/05

Idaho Cleanup Project

Transuranic Waste Characterization Program

RCRA Analysis Data Report

Batch Data Report Number: ALD05031S
Revision Number: 0
Issue Date: November 3, 2005

Analytical Method: ACMM-9270
Analyte(s): SVOCs

Issued to: Mr. Robert Billett, SPM
C/O CCP Records Coordinator
4021 National Parks Highway
Carlsbad, NM 88220

Summary: This data report contains analysis results for 7 samples from Sampling Batch WCS-05-04.

Report Content:

Section	Content	Pages
1	Sample Identification Table	0002 – 0003
2	Sample Custody and Tracking Documents	0004 – 0017
3	Analysis Results	0018 – 0044
4	Batch QC Sample Results	0045 – 0063
5	Instrument QC Data	0064 – 0081
6	Data Review Checklists	0082 – 0090

Release Authorization:

Name & Position	Signature	Date
Thomas G. Moffett Acting Technical Leader	Thomas G. Moffett	11/3/05
Jeffrey L. Jeter Acting Supervisor		11/3/05
Shelly J. Sailer Quality Assurance Officer		11/03/05

CH2M•WG IDAHO, LLC

Analytical Laboratories Department

SUPERSEDED
WBK 11/13/05

Idaho Cleanup Project

Transuranic Waste Characterization Program

RCRA Analysis Data Report

Batch Data Report Number: ALD05031S
Revision Number: 0
Issue Date: November 3, 2005

Analytical Method: ACMM-9270
Analyte(s): SVOCs

Issued to: Mr. Robert Billett, SPM
C/O CCP Records Coordinator
4021 National Parks Highway
Carlsbad, NM 88220

RK 11/22/05

Summary: This data report contains analysis results for 7 samples from Sampling Batch WCS-05-04.

Report Content:

Section	Content	Pages
1	Sample Identification Table	0002 – 0003
2	Sample Custody and Tracking Documents	0004 – 0017
3	Analysis Results	0018 – 0044
4	Batch QC Sample Results	0045 – 0063
5	Instrument QC Data	0064 – 0081
6	Data Review Checklists	0082 – 0090

Release Authorization:

Name & Position	Signature	Date
Thomas G. Moffett Acting Technical Leader	Thomas G. Moffett	11/3/05
Jeffrey L. Jeter Acting Supervisor	Jeffrey L. Jeter	11/3/05
Shelly J. Sailer Quality Assurance Officer	Shelly J. Sailer	11/08/05

Section 1

Sample Identification Table

TOTAL SVOC ANALYSIS
SAMPLE CROSS-REFERENCE TABLE

Idaho Cleanup Project

Analytical Laboratories Department
TRU Waste Characterization Program

Preparation Method: ACMM-9500-R11
Analytical Method: ACMM-9270-R8

Data Report Number: ALD05031S
Analytical Batch ID: 0510066

Field Sample ID	Lab Sample ID
NA	LBS101305A
NA	LCSS0510066A
1001850311M1	5CY97
1001850321M1	5CZ01
1001850321M1MS	5CZ01MS
1001850321M1MSD	5CZ01MSD
1001688611M1	5CZ77
1001887511M1	5CZ80
NA	LBS101805A
1001817811M1	5DB27
1001886711M1DL2	5DB30DL2
1001886721M1DL2	5DB32DL2
NA	LBS102405A
1001886711M1REDL10	5DB30REDL10
1001886721M1REDL10	5DB32REDL10

Section 2

Sample Custody and Tracking Documents

Idaho National Laboratory - Waste Characterization Area - TWCP Chain-of-Custody

COC No. WCA-936

[HFEF-OI-6921, Rev. 3e, 5/11/04

Sampling Location: MFC / HFEF / WCA | Analytical Location: INL - INTEC | Sample Batch No.: WCS-05-04

Container Identification No.: 10018503 | Container I.D.C.: ID-RF-S3150-A* | Sample Matrix: SOLID

Chain of Custody Initiated: Signature: JM Magnuson 10/4/05 1303 Date / Time:

Sample ID Number	Sample Date	Sample Time	Container Size	Sample Weight (gm)	VOC	NHVOC	Semi VOC	Metals	Other	Comments	Disposition
10018503 11V1	10/4/2005	1303	20-ml	2.57	X						
10018503 11V2	10/4/2005	1305	20-ml	2.64		X					
10018503 11V3	10/4/2005	1307	20-ml	2.67						SPARE	
10018503 11V4	10/4/2005	1309	20-ml	2.74						SPARE	
10018503 11M1	10/4/2005	1312	250-ml	33.34			X	X			
TB 93a	10/4/2005	1512	20-ml	2.89	X					TRIP BLANK	
TB 93b	10/4/2005	1512	20-ml	2.77		X				TRIP BLANK	
TB 93c	10/4/2005	1512	20-ml	2.79						TRIP BLANK/SPARE	

NOTE: For preservation, all samples were stored at a controlled temperature of 4° C and then packed in chemical ice for shipment.

ALD LOG # 0510066 1 of 1

Sampler Relinquishment to HFEF TWCP Sample Custodian: Signature: JM Magnuson

Sample Custodian receipt: Signature: JM Magnuson 10/4/05 1515 Date / Time:

Samples placed in locked storage: Signature: JM Magnuson 10/4/05 1515 Date / Time:

Samples retrieved from locked storage: Signature: B. Adams 10-6-05 0840 Date / Time:

Shipping TID #: 4700

Relinquished By:			Discrepancies / Comments 50A BET 10/12/05
B Adams	10-6-05	1018	*Waste Stream ID-RF-S3114 includes IDCs ~~008~~ 700, & 801 CORRECTED PER CCP-AK-INL-005.
Received By:	Date	Time	BGP 10/12/05
BGP	10/06/05	1230	
Relinquished By:			
Received By:	Date	Time	

All sample analysis complete and samples removed from custody control and dispositioned. _____

Signature Date

0005

ALD Document: Log 0510066 TWCP-RF_S3150-A.tif - Scanned:10/12/2005 1:54:06 PM

Idaho National Laboratory - Waste Characterization Area - TWCP Chain-of-Custody

COC No. WCA-937

[HFEF-OI-6921, Rev. 3e, 5/11/04]

Sampling Location: MFC / HFEF / WCA
Analytical Location: INL - INTEC
Sample Batch No.: WCS-05-04
Container identification No.: 10018503
Container I.D.C.: ID-RF-S3150-A*
Sample Matrix: SOLID
Chain of Custody Initiated: JM Magnuson (Signature:) 10/4/05 (Date) 1318 (Time)

Sample ID Number	Sample Date	Sample Time	Container Size	Sample Weight (gm)	VOC	NHVOC	Semi VOC	Metals	Other	Comments	Disposition
10018503 21V1	10/4/2005	1318	20-ml	2.99	X					QC	
10018503 21V2	10/4/2005	1319	20-ml	2.87	X					QC	
10018503 21V3	10/4/2005	1321	20-ml	2.95	X					QC	
10018503 21V4	10/4/2005	1323	20-ml	2.93		X				QC	
10018503 21V5	10/4/2005	1325	20-ml	2.68		X				QC	
10018503 21V6	10/4/2005	1327	20-ml	2.92		X				QC	
10018503 21V7	10/4/2005	1328	20-ml	2.59						SPARE/QC	
10018503 21V8	10/4/2005	1330	20-ml	2.66						SPARE/QC	
10018503 21M1	10/4/2005	1333	250-ml	37.02			X	X		QC	
TB NA	SEE COMMENTS				X						
						X					

NOTE: For preservation, all samples were stored at a controlled temperature of 4° C and then packed in chemical ice for shipment.

Sampler Relinquishment to HFEF TWCP Sample Custodian: JM Magnuson (Signature:)

ALD LOG # 0510066 1 of 1

Sample Custodian receipt: JM Magnuson (Signature:) 10/4/05 1543 (Date / Time:)

Samples placed in locked storage: JM Magnuson (Signature:) 10/4/05 1543 (Date / Time:)

Samples retrieved from locked storage: B. [illegible]s (Signature) 10-6-05 0840 (Date / Time)

Shipping TID #: 4700

Relinquished By:			Discrepancies / Comments Samples listed on this COC will be shipped with samples listed on COC 936.
B. [illegible]s	10-6-05	1018	Trip Blanks are listed on COC 936. COC 936 & 937 will sent in same shipping container. JM M 10/4/05
Received By: BEP	Date	Time	**Quality Control Samples.** BET 10/12/05
	10/6/05	1230	50A BET 10/12/05
Relinquished By:			*Waste Stream ID-RF-S3134 includes IDCs ~~009~~, 700, & 801 CORRECTED PER CCP-AK-WL-005. BEP 10/12/05
Received By:	Date	Time	

All sample analysis complete and samples removed from custody control and dispositioned. _____ (Signature) _____ (Date)

9000

ALD Document: Log 0510066 TWCP-RF_S3150-A.tif - Scanned:10/12/2005 1:54:06 PM

Idaho National Laboratory - Waste Characterization Area - TWCP Chain-of-Custody COC No. WCA-938

[HFEF-OI-6921, Rev. 3e, 5/11/04

Sampling Location: MFC / HFEF / WCA Analytical Location INL - INTEC Sample Batch No. WCS-05-04

Container Identification No. 10016886 Container I.D.C. ID-RF-S3150-A* Sample Matrix: SOLID

Chain of Custody Initiated: Signature: J M Magnuson 10/6/05 1358 Date / Time:

Sample ID Number	Sample Date	Sample Time	Container Size	Sample Weight (gm)	VOC	NHVOC	Semi VOC	Metals	Other	Comments	Disposition
10016886 11V1	10/6/05	1358	20-ml	2.77	X						
10016886 11V2	10/6/05	1400	20-ml	2.84		X					
10016886 11V3	10/6/05	1402	20-ml	2.85						SPARE	
10016886 11V4	10/6/05	1404	20-ml	2.66						SPARE	
10016886 11M1	10/6/05	1408	250-ml	31.53			X	X			
TB 94a	10/6/05	1511	20-ml	2.81	X					TRIP BLANK	
TB 94b	10/6/05	1511	20-ml	2.90		X				TRIP BLANK	
TB 94c	10/6/05	1511	20-ml	2.76						TRIP BLANK/SPARE	

NOTE: For preservation, all samples were stored at a controlled temperature of 4° C and then packed in chemical ice for shipment.

Sampler Relinquishment to HFEF TWCP Sample Custodian: Signature: J M Magnuson

ALD LOG # 0510106 1 of 1

Sample Custodian receipt: Signature: J M Magnuson 10/6/05 1515 Date / Time:

Samples placed in locked storage: Signature: J M Magnuson 10/6/05 1515 Date / Time:

Samples retrieved from locked storage: Signature: B. A. Sims 10/10/05 0800 Date / Time:

Shipping TID #: 4699

Relinquished By:			Discrepancies / Comments
B. A. Sims	10-10-05	1015	*Waste Stream ID-RF-S3150-A includes IDCs 700, & 801
Received By:	Date	Time	
J. Dooley	10-10-05	1130	
Relinquished By:			
Received By:	Date	Time	

All sample analysis complete and samples removed from custody control and dispositioned. _____ Signature Date

2007

8000

Idaho National Laboratory - Waste Characterization Area - TWCP Chain-of-Custody

COC No. WCA-939

[HFEF-OI-8921, Rev. 3e, 5/11/04

Sampling Location: MFC / HFEF / WCA
Analytical Location: INL - INTEC
Sample Batch No.: WCS-05-04
Container Identification No.: 10018875
Container I.D.C.: ID-RF-S3150-A*
Sample Matrix: SOLID
Chain of Custody Initiated: Signature: J M Magnuson 10/7/05 1253 Date / Time:

Sample ID Number	Sample Date	Sample Time	Container Size	Sample Weight (gm)	VOC	NHVOC	Semi VOC	Metals	Other	Comments	Disposition
10018875 11V1	10/7/05	1253	20-ml	2.96	X						
10018875 11V2	10/7/05	1255	20-ml	2.69		X					
10018875 11V3	10/7/05	1257	20-ml	2.65						SPARE	
10018875 11V4	10/7/05	1259	20-ml	2.62						SPARE	
10018875 11M1	10/7/05	1301	250-ml	38.46			X	X			
TB			20-ml		X						
TB SEE COMMENTS			20-ml			X				TRIP BLANK	
TB			20-ml							TRIP BLANK	
										TRIP BLANK/SPARE	

NOTE: For preservation, all samples were stored at a controlled temperature of 4° C and then packed in chemical ice for shipment.

Sampler Relinquishment to HFEF TWCP Sample Custodian: Signature: J M Magnuson

ALD LOG # 050106 0 1 of 1

Sample Custodian receipt: Signature: J M Magnuson 10/7/05 1415 Date / Time:

Samples placed in locked storage: Signature: J M Magnuson 10/7/05 1415 Date / Time:

Samples retrieved from locked storage: Signature: B.A. 10/10/05 0800 Date / Time:

Shipping TID #: 4699

Relinquished By:			Discrepancies / Comments
B.A.	10-10-05	1015	*Waste Stream ID-RF-S3150-A includes IDCs 700, & 801
Received By:	Date	Time	
	10/7/05	1130	THIS COC AND COC 938 WILL BE SHIPPED IN THE
Relinquished By:			SAME CONTAINER. COC 938 HAS THE TRIP BLANKS
			J M Magnuson 10/7/05
Received By:	Date	Time	

All sample analysis complete and samples removed from custody control and dispositioned.

Signature Date

ALD Document: Log 0510106 TWCP-RF_S3150-A.tif - Scanned:10/10/2005 5:04:40 PM

ALD Log # 0510134
1 of 1

Idaho National Laboratory - Waste Characterization Area - TWCP Chain-of-Custody

COC No. WCA-940

[HFEF-OI-6921, Rev. 3e, 5/11/04

Sampling Location: MFC / HFEF / WCA
Analytical Location: INL - INTEC
Sample Batch No.: WCS-05-04
Container Identification No.: 10018178
Container I.D.C.: ID-RF-S315-A*
Sample Matrix: SOLID
Chain of Custody Initiated: Signature: JM Magnuson 10/10/05 1323

0 Date / Time: 10/19/05 **

Sample ID Number	Sample Date	Sample Time	Container Size	Sample Weight (gm)	VOC	NHVOC	Semi VOC	Metals	Other	Comments	Disposition
10018178 11V1	10/10/05	1323	20-ml	2.85	X						
10018178 11V2	10/10/05	1326	20-ml	2.95		X					
10018178 11V3	10/10/05	1327	20-ml	2.71						SPARE	
10018178 11V4	10/10/05	1331	20-ml	2.68						SPARE	
10018178 11M1	10/10/05	1333	250-ml	32.28			X	X			
TB 95a	10/10/05	1438	20-ml	2.79	X					TRIP BLANK	
TB 95b	10/10/05	1438	20-ml	2.98		X				TRIP BLANK	
TB 95c	10/10/05	1438	20-ml	2.71						TRIP BLANK/SPARE	

NOTE: For preservation, all samples were stored at a controlled temperature of 4° C and then packed in chemical ice for shipment.

Sampler Relinquishment to HFEF TWCP Sample Custodian: Signature: JM Magnuson

Sample Custodian receipt: Signature: JM Magnuson 10/10/05 1440 Date / Time:

Samples placed in locked storage: Signature: JM Magnuson 10/10/05 1440 Date / Time:

Samples retrieved from locked storage: Signature: B. Ap... 10-13-05 1000 Date / Time:

Shipping TID #: 4692

Relinquished By:			Discrepancies / Comments
B. Ap...	10-13-05	1010	*Waste Stream ID-RF-S3150-A includes IDCs 700, & 801
Received By:	Date	Time	** CORRECTED CONSISTENT WITH OTHER FIELD DATA. BET 10/19/05
B	10/13/05	1259	
Relinquished By:			
Received By:	Date	Time	

All sample analysis complete and samples removed from custody control and dispositioned. _____ Signature Date

6000

ALD Document: Log 0510134 TWCP-RF_S3150-A.tif - Scanned:10/19/2005 11:29:28 AM

Idaho National Laboratory - Waste Characterization Area - TWCP Chain-of-Custody

[HFEF-OI-6921, Rev. 3e, 5/11/04

ALD LOG # 05-0134

COC No. **WCA-941**

Sampling Location: MFC / HFEF / WCA

Analytical Location: INL - INTEC

Sample Batch No.: 1 WCS-05-04

Container Identification No.: 10018867

Container I.D.C.: ID-RF-S3150-A*

Sample Matrix: ~~SOLID~~

Chain of Custody Initiated: Signature: J M Magnuson 10/11/05 1257 Date / Time:

Sample ID Number	Sample Date	Sample Time	Container Size	Sample Weight (gm)	VOC	NHVOC	Semi VOC	Metals	Other	Comments	Disposition
10018867 11V1	10/4/05	1257	20-ml	2.56	X						
10018867 11V2	10/4/05	1300	20-ml	2.58		X					
10018867 11V3	10/4/05	1303	20-ml	2.56						SPARE	
10018867 11V4	10/4/05	1305	20-ml	2.68						SPARE	
10018867 11M1	10/4/05	1308	250-ml	30.45			X	X			
TB 1			20-ml		X						
TB 2 SEE COC	940		20-ml			X				TRIP BLANK	
TB 3 FOR TRIP	BLANKS		20-ml							TRIP BLANK	
										TRIP BLANK/SPARE	

NOTE: For preservation, all samples were stored at a controlled temperature of 4° C and then packed in chemical ice for shipment.

Sampler Relinquishment to HFEF TWCP Sample Custodian: Signature: J M Magnuson

Sample Custodian receipt: Signature: J M Magnuson 10/11/05 1526 Signature: Date / Time:

Samples placed in locked storage: J M Magnuson 10/11/05 1526 Signature: Date / Time:

Samples retrieved from locked storage: B Adams 10-13-05 1000 Signature: Date / Time:

Shipping TID #: 4692

Relinquished By:			Discrepancies / Comments
B. Adams	10-13-05	1010	*Waste Stream ID-RF-S3150-A includes IDCs 700, & 801
Received By:	Date	Time	
B	10/13/05	1259	
Relinquished By:			
Received By:	Date	Time	

All sample analysis complete and samples removed from custody control and dispositioned. _____ Signature Date

0010

ALD Document: Log 0510134 TWCP-RF_S3150-A.tif - Scanned:10/19/2005 11:29:28 AM

ALD LOG # 0510134 TM1

Idaho National Laboratory - Waste Characterization Area - TWCP Chain-of-Custody

COC No. WCA-942

[HFEF-OI-6921, Rev. 3e, 5/11/04]

Sampling Location: MFC / HFEF / WCA Analytical Location: INL - INTEC Sample Batch No.: WCS-05-04

Container identification No.: 10018867 Container I.D.C.: ID-RF-S3150-A* Sample Matrix: SOLID

Chain of Custody Initiated: JM Magnuson (Signature) 10/11/05 1383 (Date / Time)

Sample ID Number	Sample Date	Sample Time	Container Size	Sample Weight (gm)	VOC	NHVOC	Semi VOC	Metals	Other	Comments	Disposition
10018867 21V1	10/11/05	1323	20-ml	2.69	X					QC	
10018867 21V2	10/11/05	1325	20-ml	2.92	X					QC	
10018867 21V3	10/11/05	1328	20-ml	2.84	X					QC	
10018867 21V4	10/11/05	1329	20-ml	2.69		X				QC	
10018867 21V5	10/11/05	1331	20-ml	2.738		X				QC	
10018867 21V6	10/11/05	1333	20-ml	2.51		X				QC	
10018867 21V7	10/11/05	1334	20-ml	2.65						SPARE/QC	
10018867 21V8	10/11/05	1336	20-ml	2.64						SPARE/QC	
10018867 21M1	10/11/05	1339	250-ml	31.75			X	X		QC	
TB			20-ml		X					TRIP BLANK	
TB SEE COC 940			20-ml			X				TRIP BLANK	
TB FOR TRIP BLANKS			20-ml							TRIP BLANK/SPARE	

NOTE: For preservation, all samples were stored at a controlled temperature of 4° C and then packed in chemical ice for shipment.

Sampler Relinquishment to HFEF TWCP Sample Custodian: JM Magnuson (Signature:)

Sample Custodian receipt: JM Magnuson (Signature:) 10/11/05 1526 (Date / Time:)

Samples placed in locked storage: JM Magnuson (Signature:) 10/11/05 1526 (Date / Time:)

Samples retrieved from locked storage: B. Ahlers (Signature) 10-13-05 0725 (Date / Time) 1000 QA 10/13/05

Shipping TID #: 4692

Relinquished By:			Discrepancies / Comments
B. Ahlers	10-13-05	1010	
Received By:	Date	Time	Quality Control Samples.
BOP	10/13/05	1259	1) INNER LABLE HAS WRONG SAMPLE WEIGHT
Relinquished By:			*Waste Stream ID-RF-S3150-A includes IDCs 700, & 801
Received By:	Date	Time	

All sample analysis complete and samples removed from custody control and dispositioned. _____ (Signature) _____ (Date)

0011

ALD Document: Log 0510134 TWCP-RF_S3150-A.tif - Scanned:10/19/2005 11:29:28 AM

ALD CUSTODY AREA Sample Tracking Form

Project Name: TWCP-RF/S3150-A Analytical Log #: 051006_6

Custody Area: 209 Environmental/Regulatory Sample: YES

*Lab Sample ID(s)	Date / Time Removed	Relinquished By	Received By	To Lab	Analysis / Procedure	Date / Time Returned	Returned By	Received By	**Comments
5CY99-8 5CY96-1, 5CY98-1, 5CY99-1, 5CY99-2, 5CY99-3	10/10/05 14:20			242	Hazard Index	10/10/05 16:10			
5CY96-2, 5CY98-2, 5CY99-4, 5CY99-5, 5CY99-6	10/13/05 08:47			214	VOC Analysis	10/18/05 13:40			Consumed in Analysis
5CY97-1, 5CZ01-1	10/12/05 12:24			211	NHVOC Analysis	10/13/05 13:05			Consumed in Analysis
5CY97-1, 5CZ01-1	10/13/05 08:20			207 / 211	SemiVol Analysis	10/13/05 15:45			
5CY97-1, 5CZ01-1	/ / :			207 / 211	Mercury	/ / :			
	10/19/05 08:33			207 / 211	Metals	10/19/05 15:36			
	/ / :			207 / 211		/ / :			
5CY99-8	10/17/05 08:20			211	NHVOC ANALYSIS	10/17/05 13:50			CONSUMED IN ANALYSIS
	/ / :					/ / :			
	/ / :					/ / :			

* Multi Lab Sample IDs can be listed on a single line IF and ONLY IF they will be maintained and handled the same; otherwise a separate line should be used for each sample set.

** If consumed in Analysis, document in Comments field.

0012

ALD INTERNAL LAB Sample Tracking Form

Custody Area: 209 Project Name: TWCP-RF/S3150-A Analytical Log #: 051006_6

Environmental/Regulatory Sample: YES

*Lab Spl ID(s): 5CY97-1, 5CZ01-1

Sample Type: ☒ Original Sample ☐ TCLP Extract ☐ Sample Prep ☐ Other: _____

Location From	Location To	Date Time	Relinquished By	Received By	Analysis / Procedure	**Comments
209	207 / 211	10/13/05 08:20	Daley	Daley	SemiVol Analysis	NA
207 / 211	209	10/13/05 15:45	Daley	Daley	Return Samples	Prep'ed the sample and returned originals. Left SemiVol Extracts (Spl's w/ '-S' extension) in 211 freezer.
		/ / :				
		/ / :				
		/ / :				
		/ / :				
		/ / :				

* All Sample codes listed on the line above must be maintained and handled as a batch. If any sample is going to be handled differently, a separate tracking form must be used.

** If consumed in Analysis, document in Comments field.

NOTE: Return this form to Custody Area when samples are returned, relinquished, consumed, or disposed.

0013

ALD CUSTODY AREA Sample Tracking Form

Project Name: TWCP-RF/S3150-A Analytical Log #: 051010_6

Custody Area: 209 Environmental/Regulatory Sample: YES

*Lab Sample ID(s)	Date / Time Removed	Relinquished By	Received By	To Lab	Analysis / Procedure	Date / Time Returned	Returned By	Received By	**Comments
5CZ76-4	10/10/05 14:32	BSP		242	Hazard Index	10/10/05 16:10			
5CZ76-1, 5CZ78-1, 5CZ79-1	10/13/05 08:45			214	VOC Analysis	10/18/05 13:40			Consumed in Analysis
5CZ76-2, 5CZ78-2, 5CZ79-2	10/12/05 12:24	BSP		211	NHVOC Analysis	10/13/05 13:05			Consumed in Analysis
5CZ77-1, 5CZ80-1	10/13/05 08:20		SRL/C	207/211	SemiVol Analysis	10/13/05 15:45			N/A
5CZ77-1, 5CZ80-1	/ / :			207 / 211	Mercury	/ / :			
	10/19/05 08:35	BSP		207 / 211	Metals	10/19/05 15:37			
	/ / :			207 / 211		/ / :			
5CZ79-4	10/17/05 08:22	BSP		211	NHVOC ANALYSIS	10/17/05 13:50			CONSUMED IN ANALYSIS
	/ / :					/ / :			
	/ / :					/ / :			

* Multi Lab Sample IDs can be listed on a single line IF and ONLY IF they will be maintained and handled the same; otherwise a separate line should be used for each sample set.

0014

ALD INTERNAL LAB Sample Tracking Form

Custody Area: 209 Project Name: TWCP-RF/S3150-A Analytical Log #: 051010_6

Environmental/Regulatory Sample: YES

*Lab Spl ID(s): 5CZ77-1, 5CZ80-1

Sample Type: ☒ Original Sample ☐ TCLP Extract ☐ Sample Prep ☐ Other: _____

Location From	Location To	Date Time	Relinquished By	Received By	Analysis / Procedure	**Comments
209	207 / 211	10/13/05 09:20	J. Daley	S. Taylor	SemiVol Analysis	NA
207 / 211	209	10/13/05 15:45	S. Taylor	J. Daley	Return Samples	Prep'ed the sample and returned originals. Left SemiVol Extracts (Spl's w/ '-S' extension) in 211 freezer.
		/ / :				
		/ / :				
		/ / :				
		/ / :				
		/ / :				

* All Sample codes listed on the line above must be maintained and handled as a batch. If any sample is going to be handled differently, a separate tracking form must be used.

NOTE: Return this form to Custody Area when samples are returned, relinquished, consumed, or disposed.

0015

ALD CUSTODY AREA Sample Tracking Form

Project Name: TWCP-RF/S3150-A Analytical Log #: 051013_4

Custody Area: 209 Environmental/Regulatory Sample: YES

*Lab Sample ID(s)	Date / Time Removed	Relinquished By	Received By	To Lab	Analysis / Procedure	Date / Time Returned	Returned By	Received By	**Comments
5DB29-4	10/17/05 08:15			242	Hazard Index	10/17/05 11a:35			
5DB26-1, 5DB28-1, 5DB29-1, 5DB31-1, 5DB31-2, 5DB31-3	10/18/05 10:05			214	VOC Analysis	10/18/05 13:40			Consumed in Analysis
5DB26-2, 5DB28-2, 5DB29-2, 5DB31-4, 5DB31-5, 5DB31-6	10/17/05 09:38	BOF		211	NHVOC Analysis	10/17/05 13:5[illegible]			Returned ~~Consumed in Analysis~~
5DB27-1, 5DB30-1, 5DB32-1	10/18/05 08:40			~~207~~/211	SemiVol Analysis	10/18/05 10/17/05 1410 13:50	BOF 10/18/05		
5DB27-1, 5DB30-1, 5DB32-1	/ / :			207 / 211	Mercury	/ / :			
5DB27-1, 5DB30-1, 5DB32-1	10/19/05 08:28	BOF		~~207~~/211	Metals	10/19/05 15:38			
5DB29-4, 5DB31-8	10/19/05 07:53	BOF		GET 10/19/05 ~~207~~/211	NHVOC ANALYSIS	10/19/05 09:10			CONSUMED IN ANALYSIS
	/ / :					/ / :			
	/ / :					/ / :			
	/ / :					/ / :			

* Multi Lab Sample IDs can be listed on a single line IF and ONLY IF they will be maintained and handled the same; otherwise a separate line should be used for each sample set.

0016

ALD INTERNAL LAB Sample Tracking Form

Custody Area: 209 Project Name: TWCP-RF/S3150-A Analytical Log #: 051013_4

Environmental/Regulatory Sample: YES

*Lab Spl ID(s): 5DB27-1, 5DB30-1, 5DB32-1

Sample Type: ☑ Original Sample ☐ TCLP Extract ☐ Sample Prep ☐ Other: _____

Location From	Location To	Date Time	Relinquished By	Received By	Analysis / Procedure	**Comments
209	207 / 211	10/18/05 08:40	[signature]	[signature]	SemiVol Analysis	NA
207 / 211	209	10/18/05 14:10	[signature]	[signature]	Return Samples	Prep'ed the sample and returned originals. Left SemiVol Extracts (Spl's w/ '-S' extension) in 211 freezer.
		/ / :				
		/ / :				
		/ / :				
		/ / :				
		/ / :				

* All Sample codes listed on the line above must be maintained and handled as a batch. If any sample is going to be handled differently, a separate tracking form must be used.

NOTE: Return this form to Custody Area when samples are returned, relinquished, consumed, or disposed.

0017

Section 3

Analysis Results

Idaho Cleanup Project
Analytical Laboratories Department

Data Report Narrative for ALD05031S

Seven solid samples from CCP-INL were extracted and analyzed for semivolatile organic compounds (SVOCs) by methods ACMM-9500 Revision 11 and ACMM-9270 Revision 8, which implement the requirements of SW-846 Methods 3550B and 8270C, respectively. All applicable holding times were met.

One initial calibration (ICAL IS605W08) is associated with the analyses. All compounds use average response factors for quantitation.

The sample matrix caused difficulty during sample preparation and analysis. During preparation, the sample extracts could not be blown down to 1-mL final volume due to high oil content. The extracts for samples 5CY97, 5CZ01, 5CZ01MS, 5CZ01MSD, 5CZ77, 5CZ80 and 5DB27 were then further diluted to reduce their radioactivity to levels acceptable for instrument analysis. Extracts for samples 5DB30 and 5DB32 were diluted at instrument analysis (dilution factor on Form I) due to hydrocarbon content. The combination of preparation and instrument dilutions and the larger final extract volumes resulted in elevation of sample-specific MDLs by factors ranging from 20 to 20000. All sample-specific MDLs for 2,4-dinitrotoluene and hexachlorobenzene are elevated above the 2.6 mg/kg PRQLs. Sample-specific MDLs for other target analytes in 5CY97, 5CZ01, 5CZ77, 5CZ80, and 5DB27 are also elevated above the PRQLs for all target analytes. Sample-specific MDLs for other target analytes in 5DB30DL2, 5DB30REDL10, 5DB32DL2, and 5DB32REDL10 are less than or equal to the PRQLs, and for the 2x dilutions, less than the program-required MDLs for 2,4-dinitrophenol and 3&4-methylphenol.

Samples 5DB30DL2 and 5DB32DL2 were re-extracted due to surrogate failure. However, the surrogates were diluted out on the re-extractions; therefore both results are reported for these samples.

MS and MSD recoveries were diluted out due to the required dilutions for radioactivity concerns.

Several of the samples contain compounds tentatively identified as phthalate compounds (1,2-benzene dicarboxylic acid esters, or phthalic acid esters) via mass spectral library search. Identification of bis(2-ethylhexyl) phthalate is supported by known retention times and spectra (it is present in the CCAL standard solution). The identifications assigned to the other phthalate TICs in these samples are highly uncertain; mass spectra for many phthalates are very similar, and specific identification cannot be performed without analysis of a known standard for comparison of retention times and spectra.

0019

Idaho Cleanup Project
Analytical Laboratories Department

Data Report Narrative for ALD05031S

The analytical balance used to weigh sand aliquots for the LCS and the laboratory blanks in this batch was used beyond it's calibration expiration date of 10/12/05 (a different balance is used to weigh the sample aliquots). NCR 100077 was issued to document this nonconformance (see copy after narrative). The balance was recalibrated on 10/31/05 and found to be in tolerance. The NCR was therefore dispositioned "use-as-is".

The CAS number for 3&4-methylphenol on Form I is the CAS number for 4-methylphenol. The CAS number for 3-methylphenol is 108-39-4.

All other analytical QC meets acceptance criteria for this analytical batch.

CH2M•WG

230.01
Revision date
09/30/2003

Control of Nonconforming Items

Nonconformance Documentation

Initiator:	S Number:	Work Org.:	Work Phone:
Jeter, Jeffrey L	077565	5364	6-1966

Documentation

NCR Number:	Date Identified:	*SSC:	*Facility:INTEC
100077	10/27/2005	N/A	*Location:602 Description:Analytical Laboratories Department

*Item Name:	Req. No/P.O. No./SC and/or Project No.:
TRU Waste Characterization Samples	N/A
Supplier Name/Address: N/A	*This NCR is for: ☒ ICP ☐ INEEL ☐ Other

*Is the non-conformance under the requirement of SNF or NRC-licensed activities (DOE/RW-0333P)? ○ Yes ● No

*Specification to which Item does not perform:

MCP-2610, Rev. 4, Section 4.8.5: "M&TE User: Use only M&TE with current and reliable calibration.....Do NOT use or continue to use any M&TE if the calibration due date or interval has passed without recalibration or if the device produces results known to be in error.

Associated Documents:

Data Reports ALD05025N, ALD05026N, ALD05031S, ALD05032S

*Non-Conformance Description:

Balance (721549) used for weighing lab blank and laboratory control sample solid matrix was used beyond the calibration expiration date of 10/12/05. Check weight (721550) used for checking balance 721549 was used beyond the calibration expiration date of 10/14/05.

Affected samples include:

1) ALD05025N, analytical batch 0510066, samples LBN101705, LBN101905, ALD log number 051006-6, sample 5CY99MSRE, ALD log number 051010-6, sample 5CZ79RE, ALD log number 051013-4, samples 5DB26, 5DB28, 5DB29, 5DB29RE, 5DB31, and 5DB31RE

2) ALD05026N analytical batch 0510108 samples LBN101305, LBN101805, ALD log number 051010-8 samples 5DA06RE and 5DA11RE, ALD log number 051010-10, samples 5DA35, 5DA35RE, 5DA36, 5DA40, 5DA40RE, 5DA41, 5DA45, 5DA45RE, 5DA46, 5DA50, and 5DA51, ALD log number 051012-11, samples 55DB17, 5DB18, 5DB22, and 5DB23

3) ALD05031S, analytical batch 0510066, samples LBS101305A, LBS101805A, LBS102405A, and LCSS0510166A, ALD log number 5CY97, 5CZ01, 5CZ01MS, and 5CZ01MSD, ALD log number 5CZ77 and 5CZ80, ALD log number 051013-4, 5DB27, 5DB30, 5DB30RE, 5DB32, and 5DB32RE

4) ALD05032S, analytical batch 0510108, sample LBS101705A, ALD log number 051010-10, samples 5DA37, 5DA42, 5DA47, and 5DA52, ALD lognumber 051012-11, samples 5DB19 and 5DB24

*Responsible Manager (RM):	*Responsible Quality Engineer (QE):
Brewer, Ken N Alternate RM for processing NCR: Sailer Siemer, Shelly J	Dunhour, Frederick J

Next Activity: NCR Closed
Actionee: N/A
Date Due:

Screening - Responsible Manager

Responsible Manager (RM):	Organization	Phone:	Date Screened:
Sailer Siemer, Shelly J	5360	6-5988	10/27/2005

*Initiator has selected "No" to the non-conformance under the requirement of SNF or NRC-licensed activities (DOE/RW-0333P). Is this Correct?
● Yes ○ No

*Does the NCR require Stop Work?
○ Yes ● No

*Safety Category or (Quality Level) of Material/Equipment/Components:
○ SC(1) ● LSC(3)
○ SS(2) ○ CG(4)

*Does this NCR support Environmental Requirements? ○ Yes ● No

RM Comments:
N/A

Screening - Quality Engineer

Quality Engineer (QE):	Organization	Phone:	Date Screened:
Dunhour, Frederick J		6-2484	10/27/2005

*Is the NCR valid? ● Yes ○ No

Quality Comments:
Quality Level -3 assignment is based on regulatory significance of these samples for the DOE-CBFO customer, and supported through application of the CBFO-approved INL TWCP QA Program.

Notification - RM

Responsible Manager (RM):	Organization	Phone:	Date Notified:
Sailer Siemer, Shelly J	5360	6-5988	10/27/2005

ORPS Report Number:
N/A

*Is the NCR operational equipment needed for Conditional Use?
○ Yes ● No

*Area of Responsibility:
ICP - INL TRU Waste Characterization Program

Optional Internal Area of Responsibility:
N/A

Cognizant Director:
Brewer, Ken N

Cognizant Director's Alternate(s):
Dunhour, Frederick J; Sailer Siemer, Shelly J

*Facility Manager:
Brewer, Ken N

Compliance Coordinator(s) to determine Price Anderson (PAAA) applicability:
Dunhour, Frederick J

*Does the non-conformance involve suspect/counterfeit items?
○ Yes ● No

*Does this NCR pertain to Waste Containers, Waste Packaging, or Packaging and Transportation activities? ○ Yes ● No

Method of Segregation:
Administratively controlled by the TWCP sample management and data review processes.

Method of Identification:
Administratively controlled by the TWCP sample management and data review processes.

*Lead Disposition Evaluator:
Jeter, Jeffrey L

Additional Disposition Evaluator(s):
(These evaluators verify and concur the disposition of NCR.)

This block is intentionally left blank.

Additional Notification:
Amy M Sumariwalla; Adrian D Chapman; David W Lodman; Thomas G Moffett; Faye E Srala; Wendy L Rice

QE Red Tag Process

Quality Engineer (QE):	Organization	Phone:	Date Processed:
Dunhour, Frederick J		6-2484	10/27/2005

Tagging information/Other Methods:
Administratively controlled by the TWCP sample management and data review processes.

Other means of Tag Identification:
Administratively controlled by the TWCP sample management and data review processes.

Disposition

Lead Disposition Evaluator:	Organization:	Phone:	Date Disposition sent for approval:
Jeter, Jeffrey L	5364	6-1966	11/03/2005

*NCR Disposition: ● Use As Is ○ Reject ○ Repair ○ Multiple Disposition ○ Rework	This block is intentionally left blank.
*Does Disposition represent Design Change? ○ Yes ● No	*Does this item require a Unreviewed Safety Question (USQ) screening and evaluation? ○ Yes ● No

Identify as-built drawings and other documentation:(*For Use-As-Is and Repair)
N/A

Method of Disposal:(*For Reject)
N/a

Technical Justification:(*For Use-As-Is and Repair)
Balance in question was recalibrated on 10/31/05 and found to be in tolerance. See attached.

Technical requirements and acceptance criteria to be used for repair work:
n/a

Inspections and Verification Criteria for acceptability of repair or rework:
N/A

Other Documents or QA records requiring the change:
N/A

If this nonconforming item is associated with, or caused by, a program, procedure, or process problem, document the issue in accordance with MCP-598:
N/A

Disposition Concurrence/Approval

Approval RM(Signature)	Concurrence/Approval QE(Signature)	This block is intentionally left blank.	This block is intentionally left blank.
Sailer Siemer, Shelly J *Shelly J Sailer Siemer* 11/03/2005	Dunhour, Frederick J *Frederick J Dunhour* 11/03/2005		

Implementation Completion - RM

Responsible Manager (RM):	Organization	Phone:	Date Completion:
Sailer Siemer, Shelly J	5360	6-5988	11/03/2005

The Disposition as approved has been completed and implemented: ○ Yes ● N/A

*Provide Justification for N/A:
No implementation actions required for approved "use-as-is" disposition.

Implementing Documentation:
N/A

Implementation Verification - QE

Quality Engineer (QE):	Organization	Phone:	Date Verified:
Dunhour, Frederick J		6-2484	11/03/2005
*Verifier/Inspector: Dunhour, Frederick J	*Organization: 5360 Phone: 6-2484		

*Identify any reference documents by number and name, and if available, reference them here or attach in Attachment Section:
N/A

Verification Comments:
No disposition actions were required based on the approved "use-as-is" disposition.

Closure - RM

Responsible Manager (RM):	Organization	Phone:	Date Closed:
Sailer Siemer, Shelly J	5360	6-5988	11/03/2005
*1. Verified that the NCR inspection/verification activities have been performed as required, and are properly documented, signed off on the NCR, and attachments or references to document supporting completion of those actions are provided as necessary.			○ Yes ● N/A

*2. Verified that as-built documents identified in the disposition have been revised, or their change control forms have been approved.	○ Yes ● N/A
*3. I have reviewed the NCR to ensure that all attachments are legible within the electronic system.	● Yes ○ N/A
*4. I have started to process any Lessons Learned from the investigation, disposition and resolution of the NCR per MCP-192, "Lessons Learned System." NOTE: Lessons Learned is not part of the electronic NCR process. This should be completed in parallel with the NCR process and could be on-going after NCR closure.	○ Yes ● N/A
*5. I verifed that all other attachments such as USQ Evaluation and Disposition Calculations are attached to the NCR.	○ Yes ● N/A
Closure Comment: This NCR and the records cited therein contain adequate documentation of the nonconformance and justification for its "use-as-is" disposition.	
Closure Signature (RM): *Shelly J Sailer Siemer*	

Closure Validation QE

Quality Engineer (QE):	Organization	Phone:	Date Validated:
Dunhour, Frederick J		6-2484	11/03/2005

*1. I have reviewed the NCR and found it as complete, with all documents attached as necessary.	● Yes ○ N/A
*2. I verify that all the NCR Red tags have been removed and destroyed.	○ Yes ● N/A
*3. I verify that Quality Accepted (Green) tags have been attached as necessary to maintain traceability of the item.	○ Yes ● N/A
*4. I verify that Conditional Use (White) tags have been removed.	○ Yes ● N/A
*5. The NCR is validated as complete.	● Yes ○ N/A
Closure Comment: This NCR and the records cited therein contain adequate documentation of the nonconformance and justification for its "use-as-is" disposition.	
Closure Signature (QE): *Frederick J Dunhour*	

Attachments/Comments

721549calrpt.pdf

Revision History

11/03/2005 01:20 PM : Frederick J Dunhour as a QE closed the NCR.The following people were notified about the NCR Closer:
Jeter, Jeffrey L; Sailer Siemer, Shelly J; Brewer, Ken N; Brewer, Ken N; Dunhour, Frederick J; Sailer Siemer, Shelly J; Dunhour, Frederick J; Jeter, Jeffrey L; Amy M Sumariwalla; Adrian D Chapman; David W Lodman; Thomas G Moffett; Faye E Srala; Wendy L Rice
11/03/2005 01:15 PM : Shelly J Sailer Siemer as an RM completed closure process and submitted to Dunhour, Frederick J for QE for final closure.
11/03/2005 12:51 PM : Frederick J Dunhour completed implementation and verification and forwarded for closure to Sailer Siemer, Shelly J
11/03/2005 12:38 PM : Shelly J Sailer Siemer completed implementation and forwarded for verfication to Dunhour, Frederick J
11/03/2005 12:34 PM : Shelly J Sailer Siemer as an RM concurred the Disposition and signed off.
11/03/2005 12:01 PM : Frederick J Dunhour as a QE concurred the Disposition and signed off.
11/03/2005 11:45 AM : Jeffrey L Jeter made the changes to the document as follows:
The previous Technical Justification was
Balance in question was recalibrated on 10/31/05 and found to be in tolerance.

11/03/2005 11:44 AM : Jeffrey L Jeter completed NCR Disposition and submitted to Sailer Siemer, Shelly J; Dunhour, Frederick J for their concurrence and approval.
10/27/2005 03:20 PM : Shelly J Sailer Siemer completed Notification Process and notified Dunhour, Frederick J; Brewer, Ken N; Dunhour, Frederick J; Sailer Siemer, Shelly J; Dunhour, Frederick J; Brewer, Ken N; Jeter, Jeffrey L; Amy M Sumariwalla; Adrian D Chapman; David W Lodman; Thomas G Moffett; Faye E Srala; Wendy L Rice
10/27/2005 02:38 PM : Frederick J Dunhour completed screening and forwarded to Sailer Siemer, Shelly J for Notification process.
10/27/2005 02:24 PM : Shelly J Sailer Siemer completed screening and forwarded to Dunhour, Frederick J for QE Screening.
10/27/2005 02:08 PM : Jeffrey L Jeter resubmitted NCR to RM Sailer Siemer, Shelly J for screening.

10/27/2005 02:06 PM : Shelly J Sailer Siemer returned to initiator Jeter, Jeffrey L for additional modification/correction.
10/27/2005 01:58 PM : Jeffrey L Jeter made the changes to the document as follows:
The previous Nonconformance Description was
Balance (721549) used for weighing lab blank and laboratory control sample solid matrix was used beyond the calibration expiration date of 10/12/05. Check weight (721550) used for checking balance 721549 was used beyond the calibration expiration date of 10/14/05.

Affected samples include:

1) ALD05025N, analytical batch 0510066, samples LBN101705, LBN101905, ALD log number 051006-6, sample 5CY99MSRE, ALD log number 051010-6, sample 5CZ79RE, ALD log number 051013-4, samples 5DB26, 5DB28, 5DB29, 5DB29RE, 5DB31, and 5DB31RE

2) ALD05026N analytical batch 0510108 samples LBN101305, LBN101805, ALD log number 051010-8 samples 5DA06RE and 5DA11RE, ALD log number 051010-10, samples 5DA35, 5DA35RE, 5DA36, 5DA40, 5DA40RE, 5DA41, 5DA45, 5DA45RE, 5DA46, 5DA50, and 5DA51, ALD log number 051012-11, samples 55DB17, 5DB18, 5DB22, and 5DB23

3)ALD05029S, analytical batch 0509281, sample LB101205B, ALD log number050929-5, sample 5CW19RE

4) ALD05031S, analytical batch 0510066, samples LBS101305A, LBS101805A, LBS102405A, and LCSS0510166A, ALD log number 5CY97, 5CZ01, 5CZ01MS, and 5CZ01MSD, ALD log number 5CZ77 and 5CZ80, ALD log number 051013-4, 5DB27, 5DB30, 5DB30RE, 5DB32, and 5DB32RE

5) ALD05032S, analytical batch 0510108, samples LBS101205A, LBS101705A, and LCSS0510108A, ALD log number 051010-8, samples 5DA08, 5DA13, 5DA13MS, and 5DA13MSD, ALD log number 051010-10, samples 5DA37, 5DA42, 5DA47, and 5DA52, ALD lognumber 051012-11, samples 5DB19 and 5DB24

10/27/2005 01:58 PM : Jeffrey L Jeter resubmitted NCR to RM Sailer Siemer, Shelly J for screening.
10/27/2005 01:40 PM : Shelly J Sailer Siemer returned to initiator Jeter, Jeffrey L for additional modification/correction.
10/27/2005 11:50 AM : Jeffrey L Jeter submitted NCR to RM and his alternate Brewer, Ken N, Sailer Siemer, Shelly J for screening.

The following fields are general purpose public use. Any data entered here is not related to NCR process and solely used for one's individual need. Integrity of the data is not guarantied since it can be replaced by any user randomly.

FIELD A:
(Field Name: FIELDA, type Text)

FIELD B:
(Field Name: FIELDb, type Text)

Idaho Cleanup Project
Analytical Laboratories Department

TRU Waste Characterization Program

Data Qualifier Flag Definitions for SVOCs

Flag	Definition
B	Analyte detected in associated laboratory blank
E	Reported analyte concentration exceeds the calibration range
D	Reported analyte concentration is from a secondary dilution of the sample
H	Holding time exceeded
J	Target Analyte concentration <PRQL but ≥ MDL
J	TIC concentration is estimated by comparison to nearest internal standard, and has high analytical uncertainty.
N	Presumptive evidence of a compound, based on a mass spectral library search (TICs only)
U	Analyte was undetected (reported as sample-specific MDL)
Z	One or more QC sample results do not meet acceptance criteria

TOTAL SVOC ANALYSIS DATA SHEET

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	1001850311M1	Lab Sample ID:	5CY97
Sampling Batch No:	WCS-05-04	Lab File ID:	SS602618
Date Sampled:	10/4 /2005	Data Report Number:	ALD05031S
Date Extracted:	10/13/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	9 days		
Date/Time Analyzed:	10/18/2005 12:07	Instrument ID:	SV-6
Analysis Holding Time:	5 days	Matrix:	SOLID
Preparation Method:	ACMM-9500-R11	Dilution Factor:	1
Analytical Method:	ACMM-9270-R8		

CAS #	TARGET ANALYTE	CONCENTRATION mg/kg	Q
95-50-1	1,2-Dichlorobenzene	800	UD
106-46-7	1,4-Dichlorobenzene	800	UD
51-28-5	2,4-Dinitrophenol	1600	UD
121-14-2	2,4-Dinitrotoluene	800	UD
118-74-1	Hexachlorobenzene	800	UD
67-72-1	Hexachloroethane	800	UD
95-48-7	2-Methylphenol	800	UD
106-44-5	3&4-Methylphenol	1600	UD
98-95-3	Nitrobenzene	800	UD
87-86-5	Pentachlorophenol	800	UD

TOTAL SVOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	1001850311M1	Lab Sample ID:	5CY97
Sampling Batch No:	WCS-05-04	Lab File ID:	SS602618
Date Sampled:	10/4 /2005	Data Report Number:	ALD05031S
Date Extracted:	10/13/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	9 days		
Date/Time Analyzed:	10/18/2005 12:07	Instrument ID:	SV-6
Analysis Holding Time:	5 days	Matrix:	SOLID
Preparation Method:	ACMM-9500-R11	Dilution Factor:	1
Analytical Method:	ACMM-9270-R8		

Number of TICs Found: 0

	CAS Number	Tentatively Identified SVOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

TOTAL SVOC ANALYSIS DATA SHEET

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	1001850321M1	Lab Sample ID:	5CZ01
Sampling Batch No:	WCS-05-04	Lab File ID:	SS602619
Date Sampled:	10/4 /2005	Data Report Number:	ALD05031S
Date Extracted:	10/13/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	9 days		
Date/Time Analyzed:	10/18/2005 12:52	Instrument ID:	SV-6
Analysis Holding Time:	5 days	Matrix:	SOLID
Preparation Method:	ACMM-9500-R11	Dilution Factor:	1
Analytical Method:	ACMM-9270-R8		

CAS #	TARGET ANALYTE	CONCENTRATION mg/kg	Q
95-50-1	1,2-Dichlorobenzene	4000	UD
106-46-7	1,4-Dichlorobenzene	4000	UD
51-28-5	2,4-Dinitrophenol	8000	UD
121-14-2	2,4-Dinitrotoluene	4000	UD
118-74-1	Hexachlorobenzene	4000	UD
67-72-1	Hexachloroethane	4000	UD
95-48-7	2-Methylphenol	4000	UD
106-44-5	3&4-Methylphenol	8000	UD
98-95-3	Nitrobenzene	4000	UD
87-86-5	Pentachlorophenol	4000	UD

TOTAL SVOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	1001850321M1	Lab Sample ID:	5CZ01
Sampling Batch No:	WCS-05-04	Lab File ID:	SS602619
Date Sampled:	10/4 /2005	Data Report Number:	ALD05031S
Date Extracted:	10/13/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	9 days		
Date/Time Analyzed:	10/18/2005 12:52	Instrument ID:	SV-6
Analysis Holding Time:	5 days	Matrix:	SOLID
Preparation Method:	ACMM-9500-R11	Dilution Factor:	1
Analytical Method:	ACMM-9270-R8		

Number of TICs Found: 0

	CAS Number	Tentatively Identified SVOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

TOTAL SVOC ANALYSIS DATA SHEET

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	1001688611M1	Lab Sample ID:	5CZ77
Sampling Batch No:	WCS-05-04	Lab File ID:	SS602622
Date Sampled:	10/6 /2005	Data Report Number:	ALD05031S
Date Extracted:	10/13/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	7 days		
Date/Time Analyzed:	10/18/2005 15:08	Instrument ID:	SV-6
Analysis Holding Time:	5 days	Matrix:	SOLID
Preparation Method:	ACMM-9500-R11	Dilution Factor:	1
Analytical Method:	ACMM-9270-R8		

CAS #	TARGET ANALYTE	CONCENTRATION mg/kg	Q
95-50-1	1,2-Dichlorobenzene	2000	UD
106-46-7	1,4-Dichlorobenzene	2000	UD
51-28-5	2,4-Dinitrophenol	4000	UD
121-14-2	2,4-Dinitrotoluene	2000	UD
118-74-1	Hexachlorobenzene	2000	UD
67-72-1	Hexachloroethane	2000	UD
95-48-7	2-Methylphenol	2000	UD
106-44-5	3&4-Methylphenol	4000	UD
98-95-3	Nitrobenzene	2000	UD
87-86-5	Pentachlorophenol	2000	UD

TOTAL SVOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	1001688611M1	Lab Sample ID:	5CZ77
Sampling Batch No:	WCS-05-04	Lab File ID:	SS602622
Date Sampled:	10/6 /2005	Data Report Number:	ALD05031S
Date Extracted:	10/13/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	7 days		
Date/Time Analyzed:	10/18/2005 15:08	Instrument ID:	SV-6
Analysis Holding Time:	5 days	Matrix:	SOLID
Preparation Method:	ACMM-9500-R11	Dilution Factor:	1
Analytical Method:	ACMM-9270-R8		

Number of TICs Found: 1

	CAS Number	Tentatively Identified SVOCs	Concentration mg/kg	Q	Retention Time (min)
1	117-81-7	bis(2-ethylhexyl)phthalate	38000	JDN	22.52

TOTAL SVOC ANALYSIS DATA SHEET

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	1001887511M1	Lab Sample ID:	5CZ80
Sampling Batch No:	WCS-05-04	Lab File ID:	SS602623
Date Sampled:	10/7 /2005	Data Report Number:	ALD05031S
Date Extracted:	10/13/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	6 days		
Date/Time Analyzed:	10/18/2005 15:54	Instrument ID:	SV-6
Analysis Holding Time:	5 days	Matrix:	SOLID
Preparation Method:	ACMM-9500-R11	Dilution Factor:	1
Analytical Method:	ACMM-9270-R8		

CAS #	TARGET ANALYTE	CONCENTRATION mg/kg	Q
95-50-1	1,2-Dichlorobenzene	4000	UD
106-46-7	1,4-Dichlorobenzene	4000	UD
51-28-5	2,4-Dinitrophenol	8000	UD
121-14-2	2,4-Dinitrotoluene	4000	UD
118-74-1	Hexachlorobenzene	4000	UD
67-72-1	Hexachloroethane	4000	UD
95-48-7	2-Methylphenol	4000	UD
106-44-5	3&4-Methylphenol	8000	UD
98-95-3	Nitrobenzene	4000	UD
87-86-5	Pentachlorophenol	4000	UD

TOTAL SVOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	1001887511M1	Lab Sample ID:	5CZ80
Sampling Batch No:	WCS-05-04	Lab File ID:	SS602623
Date Sampled:	10/7 /2005	Data Report Number:	ALD05031S
Date Extracted:	10/13/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	6 days		
Date/Time Analyzed:	10/18/2005 15:54	Instrument ID:	SV-6
Analysis Holding Time:	5 days	Matrix:	SOLID
Preparation Method:	ACMM-9500-R11	Dilution Factor:	1
Analytical Method:	ACMM-9270-R8		

Number of TICs Found: 0

	CAS Number	Tentatively Identified SVOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

TOTAL SVOC ANALYSIS DATA SHEET

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	1001817811M1	Lab Sample ID:	5DB27
Sampling Batch No:	WCS-05-04	Lab File ID:	SS602634
Date Sampled:	10/10/2005	Data Report Number:	ALD05031S
Date Extracted:	10/18/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	8 days		
Date/Time Analyzed:	10/20/2005 14:58	Instrument ID:	SV-6
Analysis Holding Time:	2 days	Matrix:	SOLID
Preparation Method:	ACMM-9500-R11	Dilution Factor:	1
Analytical Method:	ACMM-9270-R8		

CAS #	TARGET ANALYTE	CONCENTRATION mg/kg	Q
95-50-1	1,2-Dichlorobenzene	200	UD
106-46-7	1,4-Dichlorobenzene	200	UD
51-28-5	2,4-Dinitrophenol	400	UD
121-14-2	2,4-Dinitrotoluene	200	UD
118-74-1	Hexachlorobenzene	200	UD
67-72-1	Hexachloroethane	200	UD
95-48-7	2-Methylphenol	200	UD
106-44-5	3&4-Methylphenol	400	UD
98-95-3	Nitrobenzene	200	UD
87-86-5	Pentachlorophenol	200	UD

TOTAL SVOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	1001817811M1	Lab Sample ID:	5DB27
Sampling Batch No:	WCS-05-04	Lab File ID:	SS602634
Date Sampled:	10/10/2005	Data Report Number:	ALD05031S
Date Extracted:	10/18/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	8 days		
Date/Time Analyzed:	10/20/2005 14:58	Instrument ID:	SV-6
Analysis Holding Time:	2 days	Matrix:	SOLID
Preparation Method:	ACMM-9500-R11	Dilution Factor:	1
Analytical Method:	ACMM-9270-R8		

Number of TICs Found: 1

	CAS Number	Tentatively Identified SVOCs	Concentration mg/kg	Q	Retention Time (min)
1	117-81-7	bis(2-ethylhexyl)phthalate	18000	JDN	22.53

TOTAL SVOC ANALYSIS DATA SHEET

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	1001886711M1DL2	Lab Sample ID:	5DB30DL2
Sampling Batch No:	WCS-05-04	Lab File ID:	SS602635
Date Sampled:	10/11/2005	Data Report Number:	ALD05031S
Date Extracted:	10/18/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	7 days		
Date/Time Analyzed:	10/20/2005 15:42	Instrument ID:	SV-6
Analysis Holding Time:	2 days	Matrix:	SOLID
Preparation Method:	ACMM-9500-R11	Dilution Factor:	2
Analytical Method:	ACMM-9270-R8		

CAS #	TARGET ANALYTE	CONCENTRATION mg/kg	Q
95-50-1	1,2-Dichlorobenzene	4.0	UD
106-46-7	1,4-Dichlorobenzene	4.0	UD
51-28-5	2,4-Dinitrophenol	8.0	UD
121-14-2	2,4-Dinitrotoluene	4.0	UD
118-74-1	Hexachlorobenzene	4.0	UD
67-72-1	Hexachloroethane	180	D
95-48-7	2-Methylphenol	4.0	UD
106-44-5	3&4-Methylphenol	8.0	UD
98-95-3	Nitrobenzene	4.0	UD
87-86-5	Pentachlorophenol	4.0	UD

TOTAL SVOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	1001886711M1DL2	Lab Sample ID:	5DB30DL2
Sampling Batch No:	WCS-05-04	Lab File ID:	SS602635
Date Sampled:	10/11/2005	Data Report Number:	ALD05031S
Date Extracted:	10/18/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	7 days		
Date/Time Analyzed:	10/20/2005 15:42	Instrument ID:	SV-6
Analysis Holding Time:	2 days	Matrix:	SOLID
Preparation Method:	ACMM-9500-R11	Dilution Factor:	2
Analytical Method:	ACMM-9270-R8		

Number of TICs Found: 3

	CAS Number	Tentatively Identified SVOCs	Concentration mg/kg	Q	Retention Time (min)
1	108-95-2	phenol	160	JDN	8.24
2	117-81-7	bis(2-ethylhexyl)phthalate	100	JDN	22.62
3	131-18-0	1,2-Benzenedicarboxylic acid, dipentyl ester	110	JDN	27.23

TOTAL SVOC ANALYSIS DATA SHEET

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	1001886711M1REDL10	Lab Sample ID:	5DB30REDL10
Sampling Batch No:	WCS-05-04	Lab File ID:	SS602641
Date Sampled:	10/11/2005	Data Report Number:	ALD05031S
Date Extracted:	10/24/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	13 days		
Date/Time Analyzed:	10/24/2005 17:26	Instrument ID:	SV-6
Analysis Holding Time:	< 1 day	Matrix:	SOLID
Preparation Method:	ACMM-9500-R11	Dilution Factor:	10
Analytical Method:	ACMM-9270-R8		

CAS #	TARGET ANALYTE	CONCENTRATION mg/kg	Q
95-50-1	1,2-Dichlorobenzene	20	UD
106-46-7	1,4-Dichlorobenzene	20	UD
51-28-5	2,4-Dinitrophenol	40	UD
121-14-2	2,4-Dinitrotoluene	20	UD
118-74-1	Hexachlorobenzene	20	UD
67-72-1	Hexachloroethane	230	D
95-48-7	2-Methylphenol	20	UD
106-44-5	3&4-Methylphenol	40	UD
98-95-3	Nitrobenzene	20	UD
87-86-5	Pentachlorophenol	20	UD

TOTAL SVOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	1001886711M1REDL10	Lab Sample ID:	5DB30REDL10
Sampling Batch No:	WCS-05-04	Lab File ID:	SS602641
Date Sampled:	10/11/2005	Data Report Number:	ALD05031S
Date Extracted:	10/24/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	13 days		
Date/Time Analyzed:	10/24/2005 17:26	Instrument ID:	SV-6
Analysis Holding Time:	< 1 day	Matrix:	SOLID
Preparation Method:	ACMM-9500-R11	Dilution Factor:	10
Analytical Method:	ACMM-9270-R8		

Number of TICs Found: 3

	CAS Number	Tentatively Identified SVOCs	Concentration mg/kg	Q	Retention Time (min)
1	605-45-8	1,2-Benzenedicarboxylic acid, bis (1-methylethyl) ester	130	JDN	22.49
2	605-45-8	1,2-Benzenedicarboxylic acid, bis (1-methylethyl) ester	450	JDN	22.55
3	28553-12-0	1,2-Benzenedicarboxylic acid, diisononyl ester	600	JDN	25.38

TOTAL SVOC ANALYSIS DATA SHEET

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	1001886721M1DL2	Lab Sample ID:	5DB32DL2
Sampling Batch No:	WCS-05-04	Lab File ID:	SS602636
Date Sampled:	10/11/2005	Data Report Number:	ALD05031S
Date Extracted:	10/18/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	7 days		
Date/Time Analyzed:	10/20/2005 16:26	Instrument ID:	SV-6
Analysis Holding Time:	2 days	Matrix:	SOLID
Preparation Method:	ACMM-9500-R11	Dilution Factor:	2
Analytical Method:	ACMM-9270-R8		

CAS #	TARGET ANALYTE	CONCENTRATION mg/kg	Q
95-50-1	1,2-Dichlorobenzene	4.0	UD
106-46-7	1,4-Dichlorobenzene	4.0	UD
51-28-5	2,4-Dinitrophenol	8.0	UD
121-14-2	2,4-Dinitrotoluene	4.0	UD
118-74-1	Hexachlorobenzene	4.0	UD
67-72-1	Hexachloroethane	150	D
95-48-7	2-Methylphenol	4.0	UD
106-44-5	3&4-Methylphenol	8.0	UD
98-95-3	Nitrobenzene	4.0	UD
87-86-5	Pentachlorophenol	4.0	UD

TOTAL SVOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	1001886721M1DL2	Lab Sample ID:	5DB32DL2
Sampling Batch No:	WCS-05-04	Lab File ID:	SS602636
Date Sampled:	10/11/2005	Data Report Number:	ALD05031S
Date Extracted:	10/18/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	7 days		
Date/Time Analyzed:	10/20/2005 16:26	Instrument ID:	SV-6
Analysis Holding Time:	2 days	Matrix:	SOLID
Preparation Method:	ACMM-9500-R11	Dilution Factor:	2
Analytical Method:	ACMM-9270-R8		

Number of TICs Found: 0

	CAS Number	Tentatively Identified SVOCs	Concentration mg/kg	Q	Retention Time (min)
1	108-95-2	phenol	130	JD	8.24

TOTAL SVOC ANALYSIS DATA SHEET

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	1001886721M1REDL10	Lab Sample ID:	5DB32REDL10
Sampling Batch No:	WCS-05-04	Lab File ID:	SS602642
Date Sampled:	10/11/2005	Data Report Number:	ALD05031S
Date Extracted:	10/24/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	13 days		
Date/Time Analyzed:	10/24/2005 18:12	Instrument ID:	SV-6
Analysis Holding Time:	< 1 day	Matrix:	SOLID
Preparation Method:	ACMM-9500-R11	Dilution Factor:	10
Analytical Method:	ACMM-9270-R8		

CAS #	TARGET ANALYTE	CONCENTRATION mg/kg	Q
95-50-1	1,2-Dichlorobenzene	20	UD
106-46-7	1,4-Dichlorobenzene	20	UD
51-28-5	2,4-Dinitrophenol	40	UD
121-14-2	2,4-Dinitrotoluene	20	UD
118-74-1	Hexachlorobenzene	20	UD
67-72-1	Hexachloroethane	220	D
95-48-7	2-Methylphenol	20	UD
106-44-5	3&4-Methylphenol	40	UD
98-95-3	Nitrobenzene	20	UD
87-86-5	Pentachlorophenol	20	UD

TOTAL SVOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	1001886721M1REDL10	Lab Sample ID:	5DB32REDL10
Sampling Batch No:	WCS-05-04	Lab File ID:	SS602642
Date Sampled:	10/11/2005	Data Report Number:	ALD05031S
Date Extracted:	10/24/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	13 days		
Date/Time Analyzed:	10/24/2005 18:12	Instrument ID:	SV-6
Analysis Holding Time:	< 1 day	Matrix:	SOLID
Preparation Method:	ACMM-9500-R11	Dilution Factor:	10
Analytical Method:	ACMM-9270-R8		

Number of TICs Found: 1

	CAS Number	Tentatively Identified SVOCs	Concentration mg/kg	Q	Retention Time (min)
1	88216-58-4	1,2-Benzenedicarboxylic acid, heptyl octyl ester	68	JDN	22.49
2	117-81-7	bis(2-ethylhexyl)phthalate	200	JDN	22.55

Section 4

Batch QC Sample Results

TOTAL SVOC ANALYSIS
SURROGATE RECOVERY FORM

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Preparation Method: ACMM-9270-R8

Analytical Method: ACMM-9500-R11

Data Report Number: ALD05031S

Analytical Batch ID: 0510066

Instrument ID: SV-6

Sample Matrix: SOLID

	LAB SAMPLE ID	SMC1 %R (2FP)	SMC2 %R (PHL)	SMC3 %R (NBZ)	SMC4 %R (FBP)	SMC5 %R (TBP)	SMC6 %R (TPH)	TOTAL OUT
1	LBS101305A	48	50	50	51	54	85	0
2	LCSS0510066A	63	65	65	67	68	88	0
3	5CY97	0 D	0 D	0 D	0 D	0 D	0 D	0
4	5CZ01	0 D	0 D	0 D	0 D	0 D	0 D	0
5	5CZ01MS	0 D	0 D	0 D	0 D	0 D	0 D	0
6	5CZ01MSD	0 D	0 D	0 D	0 D	0 D	0 D	0
7	5CZ77	0 D	0 D	0 D	0 D	0 D	0 D	0
8	5CZ80	0 D	0 D	0 D	0 D	0 D	0 D	0
9	LBS101805A	48	50	51	52	56	80	0
10	5DB27	0 D	0 D	0 D	0 D	0 D	0 D	0
11	5DB30DL2	47	0 Z	0 Z	0 Z	67	106	3
12	5DB32DL2	40	0 Z	0 Z	0 Z	62	86	3
13	LBS102405A	61	62	63	65	67	86	0
14	5DB30REDL10	0 D	0 D	0 D	0 D	0 D	0 D	0
15	5DB32REDL10	0 D	0 D	0 D	0 D	0 D	0 D	0

Acceptance Criteria

S1 (2FP) = 2-Fluorophenol	Detected - 106
S2 (PHL) = Phenol-d6	14 - 94
S3 (NBZ) = Nitrobenzene-d5	23 - 90
S4 (FBP) = 2-Fluorobiphenyl	25 - 95
S5 (TBP) = 2,4,6-Tribromophenol	Detected - 121
S6 (TPH) = p-Terphenyl-d14	35 - 113

Z =Values Outside of Acceptance Criteria

D = Surrogates diluted out

TOTAL SVOC ANALYSIS
MATRIX SPIKE/MATRIX SPIKE DUPLICATE REPORTING FORM

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Preparation Method:	ACMM-9500-R11			Data Report Number:	ALD05031S
Analytical Method:	ACMM-9270-R8			Analytical Batch ID:	0510066
Instrument ID:	SV-6			Matrix:	SOLID
Lab Sample ID:	5CZ01	MS Lab Sample ID:	5CZ01MS	MSD Lab Sample ID:	5CZ01MSD
Field Sample ID:	1001850321M1	MS Field Sample ID:	1001850321M1MS	MSD Field Sample ID:	1001850321M1MSD
Lab File ID:	SS602619	MS Lab File ID:	SS602620	MSD Lab File ID:	SS602621
Date Analyzed:	10/18/2005	MS Date Analyzed:	10/18/2005	MSD Date Analyzed:	10/18/2005

TARGET ANALYTE	SPIKE ADDED mg/kg	SAMPLE CONCENTRATION mg/kg	SPIKED SAMPLE CONCENTRATION mg/kg	MS % RECOVERY	ACCEPTANCE CRITERIA % RECOVERY
1,4-Dichlorobenzene	4.99	4000.00 U	2000.00 U	0 D	20 - 124
2,4-Dinitrotoluene	4.99	4000.00 U	2000.00 U	0 D	39 - 139
Pentachlorophenol	9.98	4000.00 U	2000.00 U	0 D	14 - 176

TARGET ANALYTE	SPIKE ADDED mg/kg	DUPLICATE SPIKED SAMPLE CONCENTRATION mg/kg	%RPD	MSD % RECOVERY	QC LIMITS RPD
1,4-Dichlorobenzene	4.97	2000.00 U	0.0	0 D	≤ 86
2,4-Dinitrotoluene	4.97	2000.00 U	0.0	0 D	≤ 46
Pentachlorophenol	9.94	2000.00 U	0.0	0 D	≤ 128

Z =Values Outside of Acceptance Criteria

D = Spiked Analytes Diluted Out

RPD: 0 out of 3 outside limits

Spike Recovery: 0 out of 6 outside limits

TOTAL SVOC ANALYSIS DATA SHEET

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	NA	Lab Sample ID:	LBS101305A
Sampling Batch No:	NA	Lab File ID:	BS602616
Date Sampled:	NA	Data Report Number:	ALD05031S
Date Extracted:	10/13/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	NA		
Date/Time Analyzed:	10/18/2005 10:36	Instrument ID:	SV-6
Analysis Holding Time:	5 days	Matrix:	SOLID
Preparation Method:	ACMM-9500-R11	Dilution Factor:	1
Analytical Method:	ACMM-9270-R8		

CAS #	TARGET ANALYTE	CONCENTRATION mg/kg	Q
95-50-1	1,2-Dichlorobenzene	0.20	U
106-46-7	1,4-Dichlorobenzene	0.20	U
51-28-5	2,4-Dinitrophenol	0.40	U
121-14-2	2,4-Dinitrotoluene	0.20	U
118-74-1	Hexachlorobenzene	0.20	U
67-72-1	Hexachloroethane	0.20	U
95-48-7	2-Methylphenol	0.20	U
106-44-5	3&4-Methylphenol	0.40	U
98-95-3	Nitrobenzene	0.20	U
87-86-5	Pentachlorophenol	0.20	U

TOTAL SVOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	NA	Lab Sample ID:	LBS101305A
Sampling Batch No:	NA	Lab File ID:	BS602616
Date Sampled:	NA	Data Report Number:	ALD05031S
Date Extracted:	10/13/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	NA		
Date/Time Analyzed:	10/18/2005 10:36	Instrument ID:	SV-6
Analysis Holding Time:	5 days	Matrix:	SOLID
Preparation Method:	ACMM-9500-R11	Dilution Factor:	1
Analytical Method:	ACMM-9270-R8		

Number of TICs Found: 0

	CAS Number	Tentatively Identified SVOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

TOTAL SVOC ANALYSIS DATA SHEET

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	NA	Lab Sample ID:	LBS101805A
Sampling Batch No:	NA	Lab File ID:	BS602633
Date Sampled:	NA	Data Report Number:	ALD05031S
Date Extracted:	10/18/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	NA		
Date/Time Analyzed:	10/20/2005 14:14	Instrument ID:	SV-6
Analysis Holding Time:	2 days	Matrix:	SOLID
Preparation Method:	ACMM-9500-R11	Dilution Factor:	1
Analytical Method:	ACMM-9270-R8		

CAS #	TARGET ANALYTE	CONCENTRATION mg/kg	Q
95-50-1	1,2-Dichlorobenzene	0.20	U
106-46-7	1,4-Dichlorobenzene	0.20	U
51-28-5	2,4-Dinitrophenol	0.40	U
121-14-2	2,4-Dinitrotoluene	0.20	U
118-74-1	Hexachlorobenzene	0.20	U
67-72-1	Hexachloroethane	0.20	U
95-48-7	2-Methylphenol	0.20	U
106-44-5	3&4-Methylphenol	0.40	U
98-95-3	Nitrobenzene	0.20	U
87-86-5	Pentachlorophenol	0.20	U

TOTAL SVOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	NA	Lab Sample ID:	LBS101805A
Sampling Batch No:	NA	Lab File ID:	BS602633
Date Sampled:	NA	Data Report Number:	ALD05031S
Date Extracted:	10/18/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	NA		
Date/Time Analyzed:	10/20/2005 14:14	Instrument ID:	SV-6
Analysis Holding Time:	2 days	Matrix:	SOLID
Preparation Method:	ACMM-9500-R11	Dilution Factor:	1
Analytical Method:	ACMM-9270-R8		

Number of TICs Found: 0

	CAS Number	Tentatively Identified SVOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

TOTAL SVOC ANALYSIS DATA SHEET

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	NA	Lab Sample ID:	LBS102405A
Sampling Batch No:	NA	Lab File ID:	BS602640
Date Sampled:	NA	Data Report Number:	ALD05031S
Date Extracted:	10/24/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	NA		
Date/Time Analyzed:	10/24/2005 16:41	Instrument ID:	SV-6
Analysis Holding Time:	< 1 day	Matrix:	SOLID
Preparation Method:	ACMM-9500-R11	Dilution Factor:	1
Analytical Method:	ACMM-9270-R8		

CAS #	TARGET ANALYTE	CONCENTRATION mg/kg	Q
95-50-1	1,2-Dichlorobenzene	0.20	U
106-46-7	1,4-Dichlorobenzene	0.20	U
51-28-5	2,4-Dinitrophenol	0.40	U
121-14-2	2,4-Dinitrotoluene	0.20	U
118-74-1	Hexachlorobenzene	0.20	U
67-72-1	Hexachloroethane	0.20	U
95-48-7	2-Methylphenol	0.20	U
106-44-5	3&4-Methylphenol	0.40	U
98-95-3	Nitrobenzene	0.20	U
87-86-5	Pentachlorophenol	0.20	U

TOTAL SVOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	NA	Lab Sample ID:	LBS102405A
Sampling Batch No:	NA	Lab File ID:	BS602640
Date Sampled:	NA	Data Report Number:	ALD05031S
Date Extracted:	10/24/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	NA		
Date/Time Analyzed:	10/24/2005 16:41	Instrument ID:	SV-6
Analysis Holding Time:	< 1 day	Matrix:	SOLID
Preparation Method:	ACMM-9500-R11	Dilution Factor:	1
Analytical Method:	ACMM-9270-R8		

Number of TICs Found: 0

	CAS Number	Tentatively Identified SVOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

TOTAL SVOC ANALYSIS
LABORATORY BLANK SUMMARY

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Date Extracted:	10/13/2005	Lab Sample ID:	LBS101305A
Date/Time Analyzed:	10/18/2005 10:36	Lab File ID:	BS602616
Preparation Method:	ACMM-9500-R11	Data Report Number:	ALD05031S
Analytical Method:	ACMM-9270-R8	Analytical Batch ID:	0510066
		Instrument ID:	SV-6
		Matrix:	SOLID

THIS BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD AND STANDARDS

FIELD ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
NA	LCSS0510066A	LS602617	10/18/2005	11:21
1001850311M1	5CY97	SS602618	10/18/2005	12:07
1001850321M1	5CZ01	SS602619	10/18/2005	12:52
1001850321M1MS	5CZ01MS	SS602620	10/18/2005	13:37
1001850321M1MSD	5CZ01MSD	SS602621	10/18/2005	14:22
1001688611M1	5CZ77	SS602622	10/18/2005	15:08
1001887511M1	5CZ80	SS602623	10/18/2005	15:54

TOTAL SVOC ANALYSIS
LABORATORY BLANK SUMMARY

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Date Extracted:	10/18/2005	Lab Sample ID:	LBS101805A
Date/Time Analyzed:	10/20/2005 14:14	Lab File ID:	BS602633
Preparation Method:	ACMM-9500-R11	Data Report Number:	ALD05031S
Analytical Method:	ACMM-9270-R8	Analytical Batch ID:	0510066
		Instrument ID:	SV-6
		Matrix:	SOLID

THIS BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD AND STANDARDS

FIELD ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1001817811M1	5DB27	SS602634	10/20/2005	14:58
1001886711M1DL2	5DB30DL2	SS602635	10/20/2005	15:42
1001886721M1DL2	5DB32DL2	SS602636	10/20/2005	16:26

TOTAL SVOC ANALYSIS
LABORATORY BLANK SUMMARY

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Date Extracted:	10/24/2005	Lab Sample ID:	LBS102405A
Date/Time Analyzed:	10/24/2005 16:41	Lab File ID:	BS602640
Preparation Method:	ACMM-9500-R11	Data Report Number:	ALD05031S
Analytical Method:	ACMM-9270-R8	Analytical Batch ID:	0510066
		Instrument ID:	SV-6
		Matrix:	SOLID

THIS BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD AND STANDARDS

FIELD ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1001886711M1REDL10	5DB30REDL10	SS602641	10/24/2005	17:26
1001886721M1REDL10	5DB32REDL10	SS602642	10/24/2005	18:12

TOTAL SVOC ANALYSIS
LABORATORY CONTROL SAMPLE FORM
(QC REFERENCE CHECK)

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Date Extracted:	10/13/2005	Lab Sample ID:	LCSS0510066A
Date/Time Analyzed:	10/18/2005 11:21	Lab File ID:	LS602617
Preparation Method:	ACMM-9500-R11	Data Report Number:	ALD05031S
Analytical Method:	ACMM-9270-R8	Analytical Batch ID:	0510066
		Instrument ID:	SV-6
		Matrix:	SOLID

TARGET ANALYTE	MEASURED CONCENTRATION mg/kg	KNOWN CONCENTRATION mg/kg	PERCENT RECOVERY	ACCEPTANCE CRITERIA % RECOVERY
1,4-Dichlorobenzene	3.34	5.00	67	20 - 124
2,4-Dinitrotoluene	3.31	5.00	66	39 - 139
Pentachlorophenol	7.49	10.00	75	14 - 176

Z =Values Outside of Acceptance Criteria

TOTAL SVOC ANALYSIS
INTERNAL STANDARD AREA AND RT SUMMARY

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Date/Time Analyzed: 10/18/2005 09:49
Analytical Method: ACMM-9270-R8

Daily CCAL Sample ID CC101805A
Daily CCAL Lab File ID: CS602615
Data Report Number: ALD05031S
Analytical Batch ID: 0510066
Instrument ID: SV-6

	IS1 (DCB) Area	RT (min.)	IS2 (NPT) Area	RT (min.)	IS3 (ANT) Area	RT (min.)
12 HOUR STANDARD	338308	8.75	1296973	11.13	684431	14.44
UPPER LIMIT	676616	9.25	2593946	11.63	1368862	14.94
LOWER LIMIT	169154	8.25	648486	10.63	342216	13.94

	Lab Sample ID						
1	LBS101305A	382145	8.75	1465250	11.13	780192	14.45
2	LCSS0510066A	358611	8.75	1373531	11.13	721581	14.45
3	5CY97	386241	8.75	1465634	11.13	775430	14.44
4	5CZ01	382749	8.75	1459550	11.13	776677	14.45
5	5CZ01MS	367915	8.75	1398188	11.13	742038	14.45
6	5CZ01MSD	367618	8.75	1384021	11.13	728638	14.45
7	5CZ77	339634	8.75	1274967	11.13	670411	14.45
8	5CZ80	342281	8.75	1308717	11.13	691244	14.44

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

Z = Values outside of Acceptance Criteria

Area upper limit = +100% of internal standard area
Area lower limit = -50% of internal standard area

RT upper limit = +30 seconds of internal standard RT
RT lower limit = -30 seconds of internal standard RT

TOTAL SVOC ANALYSIS
INTERNAL STANDARD AREA AND RT SUMMARY

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Date/Time Analyzed: 10/18/2005 09:49

Analytical Method: ACMM-9270-R8

Daily CCAL Sample ID CC101805A

Daily CCAL Lab File ID: CS602615

Data Report Number: ALD05031S

Analytical Batch ID: 0510066

Instrument ID: SV-6

	IS4 (PHN) Area	RT (min.)	IS5 (CRY) Area	RT (min.)	IS6 (PRY) Area	RT (min.)
12 HOUR STANDARD	1211403	17.20	978957	22.28	811765	25.96
UPPER LIMIT	2422806	17.70	1957914	22.78	1623530	26.46
LOWER LIMIT	605702	16.70	489478	21.78	405882	25.46

	Lab Sample ID						
1	LBS101305A	1395706	17.20	1264250	22.28	1034382	25.96
2	LCSS0510066A	1276209	17.20	1086712	22.27	863870	25.96
3	5CY97	1343202	17.20	1180151	22.28	1025937	25.96
4	5CZ01	1336589	17.20	1152376	22.27	967101	25.96
5	5CZ01MS	1313365	17.20	1197999	22.27	958678	25.96
6	5CZ01MSD	1267135	17.20	1139374	22.27	946958	25.96
7	5CZ77	1128187	17.20	904217	22.27	722595	25.96
8	5CZ80	1216954	17.20	1077652	22.27	936747	25.96

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

Z = Values outside of Acceptance Criteria

Area upper limit = +100% of internal standard area
Area lower limit = -50% of internal standard area

RT upper limit = +30 seconds of internal standard RT
RT lower limit = -30 seconds of internal standard RT

TOTAL SVOC ANALYSIS
INTERNAL STANDARD AREA AND RT SUMMARY

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Date/Time Analyzed: 10/20/2005 13:25

Analytical Method: ACMM-9270-R8

Daily CCAL Sample ID CC102005A

Daily CCAL Lab File ID: CS602632

Data Report Number: ALD05031S

Analytical Batch ID: 0510066

Instrument ID: SV-6

	IS1 (DCB) Area	RT (min.)	IS2 (NPT) Area	RT (min.)	IS3 (ANT) Area	RT (min.)
12 HOUR STANDARD	335880	8.75	1265786	11.13	676424	14.44
UPPER LIMIT	671760	9.25	2531572	11.63	1352848	14.94
LOWER LIMIT	167940	8.25	632893	10.63	338212	13.94

	Lab Sample ID						
1	LBS101805A	345488	8.75	1313837	11.13	695478	14.44
2	5DB27	336976	8.75	1282036	11.13	680298	14.44
3	5DB30DL2	351705	8.75	1348572	11.12	717361	14.44
4	5DB32DL2	391967	8.75	1532935	11.12	854871	14.45

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

Z = Values outside of Acceptance Criteria

Area upper limit = +100% of internal standard area
Area lower limit = -50% of internal standard area

RT upper limit = +30 seconds of internal standard RT
RT lower limit = -30 seconds of internal standard RT

TOTAL SVOC ANALYSIS
INTERNAL STANDARD AREA AND RT SUMMARY

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Date/Time Analyzed: 10/20/2005 13:25

Analytical Method: ACMM-9270-R8

Daily CCAL Sample ID CC102005A

Daily CCAL Lab File ID: CS602632

Data Report Number: ALD05031S

Analytical Batch ID: 0510066

Instrument ID: SV-6

	IS4 (PHN) Area	RT (min.)	IS5 (CRY) Area	RT (min.)	IS6 (PRY) Area	RT (min.)
12 HOUR STANDARD	1173330	17.20	975079	22.27	777433	25.96
UPPER LIMIT	2346660	17.70	1950158	22.77	1554866	26.46
LOWER LIMIT	586665	16.70	487540	21.77	388716	25.46

	Lab Sample ID						
1	LBS101805A	1219622	17.20	1016298	22.27	813767	25.96
2	5DB27	1204128	17.20	1069741	22.27	895204	25.96
3	5DB30DL2	1077344	17.21	709430	22.38	577067	26.07
4	5DB32DL2	1309152	17.21	860711	22.40	721049	26.08

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

Z = Values outside of Acceptance Criteria

Area upper limit = +100% of internal standard area
Area lower limit = -50% of internal standard area

RT upper limit = +30 seconds of internal standard RT
RT lower limit = -30 seconds of internal standard RT

TOTAL SVOC ANALYSIS
INTERNAL STANDARD AREA AND RT SUMMARY

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Date/Time Analyzed: 10/24/2005 15:55

Analytical Method: ACMM-9270-R8

Daily CCAL Sample ID CC102805A

Daily CCAL Lab File ID: CS602639

Data Report Number: ALD05031S

Analytical Batch ID: 0510066

Instrument ID: SV-6

	IS1 (DCB) Area	RT (min.)	IS2 (NPT) Area	RT (min.)	IS3 (ANT) Area	RT (min.)
12 HOUR STANDARD	315084	8.75	1179989	11.13	621759	14.45
UPPER LIMIT	630168	9.25	2359978	11.63	1243518	14.95
LOWER LIMIT	157542	8.25	589994	10.63	310880	13.95

	Lab Sample ID						
1	LBS102405A	369896	8.75	1391316	11.13	747340	14.45
2	5DB30REDL10	361061	8.75	1371292	11.13	737867	14.45
3	5DB32REDL10	348623	8.75	1329669	11.13	723003	14.45

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

Z = Values outside of Acceptance Criteria

Area upper limit = +100% of internal standard area
Area lower limit = -50% of internal standard area

RT upper limit = +30 seconds of internal standard RT
RT lower limit = -30 seconds of internal standard RT

TOTAL SVOC ANALYSIS
INTERNAL STANDARD AREA AND RT SUMMARY

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Date/Time Analyzed: 10/24/2005 15:55

Analytical Method: ACMM-9270-R8

Daily CCAL Sample ID CC102805A

Daily CCAL Lab File ID: CS602639

Data Report Number: ALD05031S

Analytical Batch ID: 0510066

Instrument ID: SV-6

	IS4 (PHN) Area	RT (min.)	IS5 (CRY) Area	RT (min.)	IS6 (PRY) Area	RT (min.)
12 HOUR STANDARD	1076876	17.21	878393	22.28	724950	25.96
UPPER LIMIT	2153752	17.71	1756786	22.78	1449900	26.46
LOWER LIMIT	538438	16.71	439196	21.78	362475	25.46

	Lab Sample ID						
1	LBS102405A	1308251	17.20	1111822	22.28	922451	25.96
2	5DB30REDL10	1258954	17.20	962827	22.31	807438	26.00
3	5DB32REDL10	1249520	17.21	933608	22.31	789220	26.00

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

Z = Values outside of Acceptance Criteria

Area upper limit = +100% of internal standard area
Area lower limit = -50% of internal standard area

RT upper limit = +30 seconds of internal standard RT
RT lower limit = -30 seconds of internal standard RT

Section 5

Instrument QC Data

TOTAL SVOC ANALYSIS
INSTRUMENT PERFORMANCE CHECK

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

DFTPP Injection Date/Time 10/18/2005 09:24

Analytical Method: ACMM-9270-R8

Lab Sample ID: DFT101805A

Lab File ID: TS602614

Data Report Number: ALD05031S

Analytical Batch ID: 0510066

Instrument ID: SV-6

m/z	Ion Abundance Criteria	% Rel Abundance
51	30.0 - 60.0% of mass 198	37.8
68	Less than 2.0% of mass 69	1.3 (1)
69	Mass 69 relative abundance	34.6
70	Less than 2.0% of mass 69	0.5 (1)
127	40.0 - 60.0% of mass 198	45.8
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 - 9.0% of mass 198	6.9
275	10.0 - 30.0% of mass 198	22.8
365	Greater than 1.0% of mass 198	2.2
441	Present, but less than mass 443	73.8 (3)
442	Greater than 40.0% of mass 198	72.4
443	17.0 - 23.0% of mass 442	19.7 (2)

1 - Value is % mass 69 2 - Value is % mass 442 3 - Value is % mass 443

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS

FIELD ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
NA	CC101805A	CS602615	10/18/2005	09:49
NA	LBS101305A	BS602616	10/18/2005	10:36
NA	LCSS0510066A	LS602617	10/18/2005	11:21
1001850311M1	5CY97	SS602618	10/18/2005	12:07
1001850321M1	5CZ01	SS602619	10/18/2005	12:52
1001850321M1MS	5CZ01MS	SS602620	10/18/2005	13:37
1001850321M1MSD	5CZ01MSD	SS602621	10/18/2005	14:22
1001688611M1	5CZ77	SS602622	10/18/2005	15:08
1001887511M1	5CZ80	SS602623	10/18/2005	15:54

TOTAL SVOC ANALYSIS
INSTRUMENT PERFORMANCE CHECK

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

DFTPP Injection Date/Time 10/20/2005 13:01

Analytical Method: ACMM-9270-R8

Lab Sample ID: DFT102005A

Lab File ID: TS602631

Data Report Number: ALD05031S

Analytical Batch ID: 0510066

Instrument ID: SV-6

m/z	Ion Abundance Criteria	% Rel Abundance
51	30.0 - 60.0% of mass 198	36.1
68	Less than 2.0% of mass 69	0.4 (1)
69	Mass 69 relative abundance	34.7
70	Less than 2.0% of mass 69	0.4 (1)
127	40.0 - 60.0% of mass 198	45.4
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 - 9.0% of mass 198	6.2
275	10.0 - 30.0% of mass 198	22.8
365	Greater than 1.0% of mass 198	2.5
441	Present, but less than mass 443	69.1 (3)
442	Greater than 40.0% of mass 198	72.8
443	17.0 - 23.0% of mass 442	20.4 (2)

1 - Value is % mass 69 2 - Value is % mass 442 3 - Value is % mass 443

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS

FIELD ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
NA	CC102005A	CS602632	10/20/2005	13:25
NA	LBS101805A	BS602633	10/20/2005	14:14
1001817811M1	5DB27	SS602634	10/20/2005	14:58
1001886711M1DL2	5DB30DL2	SS602635	10/20/2005	15:42
1001886721M1DL2	5DB32DL2	SS602636	10/20/2005	16:26

TOTAL SVOC ANALYSIS
INSTRUMENT PERFORMANCE CHECK

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

DFTPP Injection Date/Time 10/24/2005 15:29

Analytical Method: ACMM-9270-R8

Lab Sample ID: DFT102405A

Lab File ID: TS602638

Data Report Number: ALD05031S

Analytical Batch ID: 0510066

Instrument ID: SV-6

m/z	Ion Abundance Criteria	% Rel Abundance
51	30.0 - 60.0% of mass 198	36.0
68	Less than 2.0% of mass 69	1.0 (1)
69	Mass 69 relative abundance	34.8
70	Less than 2.0% of mass 69	0.6 (1)
127	40.0 - 60.0% of mass 198	45.0
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 - 9.0% of mass 198	7.1
275	10.0 - 30.0% of mass 198	23.9
365	Greater than 1.0% of mass 198	2.8
441	Present, but less than mass 443	70.7 (3)
442	Greater than 40.0% of mass 198	76.2
443	17.0 - 23.0% of mass 442	20.3 (2)

1 - Value is % mass 69 2 - Value is % mass 442 3 - Value is % mass 443

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS

FIELD ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
NA	CC102405A	CS602639	10/24/2005	15:55
NA	LBS102405A	BS602640	10/24/2005	16:41
1001886711M1REDL10	5DB30REDL10	SS602641	10/24/2005	17:26
1001886721M1REDL10	5DB32REDL10	SS602642	10/24/2005	18:12

TOTAL SVOC ANALYSIS
INITIAL CALIBRATION DATA

Idaho Cleanup Project
Analytical Laboratories Department
TRU Waste Characterization Program

Calibration Dates/Times: 09/13/2005 2:55: - 09/13/2005 19:36
Analytical Method: ACMM-9270-R8

ICAL File ID: IS605W08
Data Report Number: ALD05031S
Analytical Batch ID: 0510066
Instrument ID: SV-6

LAB FILE ID	RRF 1 = IS602509	RRF 3 = IS602511	RRF 5 = IS602513
	RRF 2 = IS602510	RRF 4 = IS602512	RRF 6 = IS602514

TARGET ANALYTE	RRF 1	RRF 2	RRF 3	RRF 4	RRF 5	RRF 6	AVE RRF	% RSD	#
2-Fluorophenol	1.378	1.431	1.388	1.422	1.336	1.485	1.407	3.64	
Phenol-d6	1.674	1.778	1.689	1.752	1.648	1.784	1.721	3.37	
1,4-Dichlorobenzene *	1.613	1.699	1.628	1.678	1.600	1.740	1.660	3.31	
1,2-Dichlorobenzene	1.507	1.591	1.529	1.583	1.502	1.643	1.559	3.57	
2-Methylphenol	1.099	1.176	1.101	1.144	1.068	1.155	1.124	3.63	
3&4-Methylphenol	1.321	1.412	1.342	1.393	1.305	1.423	1.366	3.65	
N-Nitroso-di-n-propylamine **	0.907	0.968	0.892	0.924	0.876	0.979	0.924	4.49	
Hexachloroethane	0.571	0.591	0.568	0.586	0.550	0.605	0.578	3.39	
Nitrobenzene-d5	1.413	1.499	1.412	1.460	1.379	1.498	1.444	3.45	
Nitrobenzene	1.339	1.422	1.339	1.385	1.303	1.417	1.368	3.52	
2-Nitrophenol *	0.210	0.224	0.212	0.218	0.203	0.220	0.214	3.70	
2,4-Dichlorophenol *	0.307	0.333	0.312	0.325	0.303	0.327	0.318	3.78	
Hexachlorobutadiene *	0.173	0.185	0.177	0.183	0.174	0.193	0.181	4.18	
4-Chloro-3-methylphenol *	0.293	0.316	0.296	0.314	0.282	0.312	0.302	4.59	
Hexachlorocyclopentadiene **	0.235	0.261	0.247	0.251	0.202	0.213	0.235	9.93	
2,4,6-Trichlorophenol *	0.443	0.457	0.423	0.436	0.401	0.441	0.433	4.47	
2-Fluorobiphenyl	1.437	1.531	1.433	1.501	1.420	1.571	1.482	4.17	
Acenaphthene *	1.194	1.283	1.202	1.244	1.180	1.330	1.239	4.72	
2,4-Dinitrophenol **	0.207	0.229	0.208	0.207	0.173		0.205	9.75	
4-Nitrophenol **	0.229	0.262	0.243	0.235	0.216		0.237	7.15	
2,4-Dinitrotoluene	0.427	0.476	0.443	0.460	0.421	0.458	0.447	4.72	
N-nitrosodiphenylamine *	1.953	2.128	2.001	2.070	1.968	2.193	2.052	4.66	
2,4,6-Tribromophenol	0.118	0.123	0.117	0.123	0.109	0.118	0.118	4.44	
Hexachlorobenzene	0.221	0.233	0.220	0.235	0.216	0.241	0.228	4.26	
Pentachlorophenol *	0.140	0.153	0.148	0.152	0.135	0.130	0.143	6.52	
Terphenyl-d14	0.871	0.941	0.905	0.967	0.860	0.977	0.920	5.36	
Di-n-octylphthalate *	1.701	1.798	1.673	1.806	1.566	1.667	1.702	5.30	
Benzo(a)pyrene *	1.187	1.281	1.201	1.283	1.145	1.247	1.224	4.55	

CCC %RSD $\leq$ 30%

SPCC Average RRF $\geq$ 0.050

Non-SPCC Average RRF $\geq$ 0.010

* = CCC - Calibration Check Compounds

** = SPCC - System Performance Check Compounds

Column used to flag modeled compounds

M = Modeled compound.

Z =Values Outside of Acceptance Criteria

TOTAL SVOC ANALYSIS
CONTINUING CALIBRATION CHECK

Idaho Cleanup Project
Analytical Laboratories Department
TRU Waste Characterization Program

Date/Time Analyzed: 10/18/2005 09:49
Analytical Method: ACMM-9270-R8

Initial Calibration Date/Time 09/13/2005 2:55: -
09/13/2005 19:36

Lab Sample ID: CC101805A
Lab File ID: CS602615
Data Report Number: ALD05031S
Analytical Batch ID: 0510066
Instrument ID: SV-6

TARGET ANALYTE	AVE RRF	CCAL RRF	%D
2-Fluorophenol	1.407	1.356	3.6
Phenol-d6	1.721	1.606	6.7
1,4-Dichlorobenzene *	1.660	1.685	1.5
1,2-Dichlorobenzene	1.559	1.580	1.3
2-Methylphenol	1.124	1.117	0.6
3&4-Methylphenol	1.366	1.352	1.0
N-Nitroso-di-n-propylamine **	0.924	0.936	1.3
Hexachloroethane	0.578	0.589	1.9
Nitrobenzene-d5	1.444	1.372	5.0
Nitrobenzene	1.368	1.353	1.1
2-Nitrophenol *	0.214	0.211	1.4
2,4-Dichlorophenol *	0.318	0.316	0.6
Hexachlorobutadiene *	0.181	0.179	1.1
4-Chloro-3-methylphenol *	0.302	0.299	1.0
Hexachlorocyclopentadiene **	0.235	0.266	13.2
2,4,6-Trichlorophenol *	0.433	0.423	2.3
2-Fluorobiphenyl	1.482	1.443	2.6
Acenaphthene *	1.239	1.237	0.2
2,4-Dinitrophenol **	0.205	0.171	16.6
4-Nitrophenol **	0.237	0.216	8.9
2,4-Dinitrotoluene	0.447	0.436	2.5
N-nitrosodiphenylamine *	2.052	2.054	0.1
2,4,6-Tribromophenol	0.118	0.115	2.5
Hexachlorobenzene	0.228	0.249	9.2
Pentachlorophenol *	0.143	0.145	1.4
Terphenyl-d14	0.920	0.996	8.3

TOTAL SVOC ANALYSIS
CONTINUING CALIBRATION CHECK

Idaho Cleanup Project
Analytical Laboratories Department
TRU Waste Characterization Program

Date/Time Analyzed:	10/18/2005 09:49	Lab Sample ID:	CC101805A
Analytical Method:	ACMM-9270-R8	Lab File ID:	CS602615
		Data Report Number:	ALD05031S
Initial Calibration Date/Time	09/13/2005 2:55: - 09/13/2005 19:36	Analytical Batch ID:	0510066
		Instrument ID:	SV-6

TARGET ANALYTE	AVE RRF	CCAL RRF	%D
Di-n-octylphthalate *	1.702	1.733	1.8
Benzo(a)pyrene *	1.224	1.236	1.0

CCC %D $\leq$ 20%

SPCC Average RRF $\geq$ 0.050
Non-SPCC Average RRF $\geq$ 0.010

* = CCC - Calibration Check Compounds
** = SPCC - System Performance Check Compounds

Z =Values Outside of Acceptance Criteria

TOTAL SVOC ANALYSIS
CONTINUING CALIBRATION CHECK

Idaho Cleanup Project
Analytical Laboratories Department
TRU Waste Characterization Program

Date/Time Analyzed: 10/20/2005 13:25
Analytical Method: ACMM-9270-R8

Initial Calibration Date/Time 09/13/2005 2:55: -
09/13/2005 19:36

Lab Sample ID: CC102005A
Lab File ID: CS602632
Data Report Number: ALD05031S
Analytical Batch ID: 0510066
Instrument ID: SV-6

TARGET ANALYTE	AVE RRF	CCAL RRF	%D
2-Fluorophenol	1.407	1.399	0.6
Phenol-d6	1.721	1.685	2.1
1,4-Dichlorobenzene *	1.660	1.747	5.2
1,2-Dichlorobenzene	1.559	1.613	3.5
2-Methylphenol	1.124	1.170	4.1
3&4-Methylphenol	1.366	1.403	2.7
N-Nitroso-di-n-propylamine **	0.924	0.972	5.2
Hexachloroethane	0.578	0.606	4.8
Nitrobenzene-d5	1.444	1.431	0.9
Nitrobenzene	1.368	1.400	2.3
2-Nitrophenol *	0.214	0.221	3.3
2,4-Dichlorophenol *	0.318	0.330	3.8
Hexachlorobutadiene *	0.181	0.191	5.5
4-Chloro-3-methylphenol *	0.302	0.314	4.0
Hexachlorocyclopentadiene **	0.235	0.274	16.6
2,4,6-Trichlorophenol *	0.433	0.437	0.9
2-Fluorobiphenyl	1.482	1.500	1.2
Acenaphthene *	1.239	1.285	3.7
2,4-Dinitrophenol **	0.205	0.173	15.6
4-Nitrophenol **	0.237	0.227	4.2
2,4-Dinitrotoluene	0.447	0.441	1.3
N-nitrosodiphenylamine *	2.052	2.122	3.4
2,4,6-Tribromophenol	0.118	0.122	3.4
Hexachlorobenzene	0.228	0.258	13.2
Pentachlorophenol *	0.143	0.151	5.6
Terphenyl-d14	0.920	1.020	10.9

TOTAL SVOC ANALYSIS
CONTINUING CALIBRATION CHECK

Idaho Cleanup Project
Analytical Laboratories Department
TRU Waste Characterization Program

Date/Time Analyzed: 10/20/2005 13:25
Analytical Method: ACMM-9270-R8

Initial Calibration Date/Time 09/13/2005 2:55: - 09/13/2005 19:36

Lab Sample ID: CC102005A
Lab File ID: CS602632
Data Report Number: ALD05031S
Analytical Batch ID: 0510066
Instrument ID: SV-6

TARGET ANALYTE	AVE RRF	CCAL RRF	%D
Di-n-octylphthalate *	1.702	1.806	6.1
Benzo(a)pyrene *	1.224	1.292	5.6

CCC %D ≤ 20%

SPCC Average RRF ≥ 0.050
Non-SPCC Average RRF ≥ 0.010

* = CCC - Calibration Check Compounds
** = SPCC - System Performance Check Compounds

Z =Values Outside of Acceptance Criteria

TOTAL SVOC ANALYSIS
CONTINUING CALIBRATION CHECK

Idaho Cleanup Project
Analytical Laboratories Department
TRU Waste Characterization Program

Date/Time Analyzed: 10/24/2005 15:55
Analytical Method: ACMM-9270-R8

Initial Calibration Date/Time 09/13/2005 2:55: - 09/13/2005 19:36

Lab Sample ID: CC102405A
Lab File ID: CS602639
Data Report Number: ALD05031S
Analytical Batch ID: 0510066
Instrument ID: SV-6

TARGET ANALYTE	AVE RRF	CCAL RRF	%D
2-Fluorophenol	1.407	1.409	0.1
Phenol-d6	1.721	1.669	3.0
1,4-Dichlorobenzene *	1.660	1.753	5.6
1,2-Dichlorobenzene	1.559	1.654	6.1
2-Methylphenol	1.124	1.162	3.4
3&4-Methylphenol	1.366	1.407	3.0
N-Nitroso-di-n-propylamine **	0.924	0.967	4.7
Hexachloroethane	0.578	0.604	4.5
Nitrobenzene-d5	1.444	1.428	1.1
Nitrobenzene	1.368	1.390	1.6
2-Nitrophenol *	0.214	0.228	6.5
2,4-Dichlorophenol *	0.318	0.339	6.6
Hexachlorobutadiene *	0.181	0.197	8.8
4-Chloro-3-methylphenol *	0.302	0.318	5.3
Hexachlorocyclopentadiene **	0.235	0.289	23.0
2,4,6-Trichlorophenol *	0.433	0.459	6.0
2-Fluorobiphenyl	1.482	1.569	5.9
Acenaphthene *	1.239	1.305	5.3
2,4-Dinitrophenol **	0.205	0.186	9.3
4-Nitrophenol **	0.237	0.229	3.4
2,4-Dinitrotoluene	0.447	0.458	2.5
N-nitrosodiphenylamine *	2.052	2.176	6.0
2,4,6-Tribromophenol	0.118	0.127	7.6
Hexachlorobenzene	0.228	0.269	18.0
Pentachlorophenol *	0.143	0.159	11.2
Terphenyl-d14	0.920	1.059	15.1

TOTAL SVOC ANALYSIS
CONTINUING CALIBRATION CHECK

Idaho Cleanup Project
Analytical Laboratories Department
TRU Waste Characterization Program

Date/Time Analyzed: 10/24/2005 15:55
Analytical Method: ACMM-9270-R8

Initial Calibration Date/Time 09/13/2005 2:55: - 09/13/2005 19:36

Lab Sample ID: CC102405A
Lab File ID: CS602639
Data Report Number: ALD05031S
Analytical Batch ID: 0510066
Instrument ID: SV-6

TARGET ANALYTE	AVE RRF	CCAL RRF	%D
Di-n-octylphthalate *	1.702	1.930	13.4
Benzo(a)pyrene *	1.224	1.349	10.2

CCC %D ≤ 20%

SPCC Average RRF ≥ 0.050
Non-SPCC Average RRF ≥ 0.010

* = CCC - Calibration Check Compounds
** = SPCC - System Performance Check Compounds

Z =Values Outside of Acceptance Criteria

TOTAL SVOC ANALYSIS
CCAL INTERNAL STANDARD AREA AND RT SUMMARY

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Date/Time Analyzed:	10/18/2005 09:49	Daily CCAL Sample ID	CC101805A
Analytical Method:	ACMM-9270-R8	Daily CCAL Lab File ID:	CS602615
ICAL/CCAL Sample ID	CC101305A	Data Report Number:	ALD05031S
ICAL/CCAL Lab File ID:	CS602605	Analytical Batch ID:	0510066
Date Analyzed:	10/13/2005	Instrument ID:	SV-6

		IS1 (DCB) Area	RT (MIN)	IS2 (NPT) Area	RT (MIN)	IS3 (ANT) Area	RT (MIN)
Previous ICAL/CCAL	12 HOUR STANDARD	337206	8.75	1270951	11.13	674476	14.45
	UPPER LIMIT	674412	9.25	2541902	11.63	1348952	14.95
	LOWER LIMIT	168603	8.25	635476	10.63	337238	13.95
Continuing Calibration Check		338308	8.75	1296973	11.13	684431	14.44

IS1 (DCB) = 1,4-Dichlorobenzene-d4

IS2 (NPT) = Naphthalene-d8

IS3 (ANT) = Acenaphthene-d10

Z = Values outside of Acceptance Criteria

Area upper limit = +100% of internal standard area

Area lower limit = -50% of internal standard area

RT upper limit = +30 seconds of internal standard RT

RT lower limit = -30 seconds of internal standard RT

TOTAL SVOC ANALYSIS
CCAL INTERNAL STANDARD AREA AND RT SUMMARY

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Date/Time Analyzed:	10/18/2005 09:49	Daily CCAL Sample ID	CC101805A
Analytical Method:	ACMM-9270-R8	Daily CCAL Lab File ID:	CS602615
ICAL/CCAL Sample ID	CC101305A	Data Report Number:	ALD05031S
ICAL/CCAL Lab File ID:	CS602605	Analytical Batch ID:	0510066
Date Analyzed:	10/13/2005	Instrument ID:	SV-6

		IS4 (PHN) Area	RT (MIN)	IS5 (CRY) Area	RT (MIN)	IS6 (PRY) Area	RT (MIN)
Previous ICAL/CCAL	12 HOUR STANDARD	1173557	17.21	967308	22.28	780934	25.96
	UPPER LIMIT	2347114	17.71	1934616	22.78	1561868	26.46
	LOWER LIMIT	586778	16.71	483654	21.78	390467	25.46
Continuing Calibration Check		1211403	17.20	978957	22.28	811765	25.96

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

Z = Values outside of Acceptance Criteria

Area upper limit = +100% of internal standard area
Area lower limit = -50% of internal standard area

RT upper limit = +30 seconds of internal standard RT
RT lower limit = -30 seconds of internal standard RT

TOTAL SVOC ANALYSIS
CCAL INTERNAL STANDARD AREA AND RT SUMMARY

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Date/Time Analyzed: 10/20/2005 13:25
Analytical Method: ACMM-9270-R8
ICAL/CCAL Sample ID CC101805A
ICAL/CCAL Lab File ID: CS602615
Date Analyzed: 10/18/2005

Daily CCAL Sample ID CC102005A
Daily CCAL Lab File ID: CS602632
Data Report Number: ALD05031S
Analytical Batch ID: 0510066
Instrument ID: SV-6

		IS1 (DCB) Area	RT (MIN)	IS2 (NPT) Area	RT (MIN)	IS3 (ANT) Area	RT (MIN)
Previous ICAL/CCAL	12 HOUR STANDARD	338308	8.75	1296973	11.13	684431	14.44
	UPPER LIMIT	676616	9.25	2593946	11.63	1368862	14.94
	LOWER LIMIT	169154	8.25	648486	10.63	342216	13.94
Continuing Calibration Check		335880	8.75	1265786	11.13	676424	14.44

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

Z = Values outside of Acceptance Criteria

Area upper limit = +100% of internal standard area
Area lower limit = -50% of internal standard area

RT upper limit = +30 seconds of internal standard RT
RT lower limit = -30 seconds of internal standard RT

TOTAL SVOC ANALYSIS
CCAL INTERNAL STANDARD AREA AND RT SUMMARY

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Date/Time Analyzed:	10/20/2005 13:25	Daily CCAL Sample ID	CC102005A
Analytical Method:	ACMM-9270-R8	Daily CCAL Lab File ID:	CS602632
ICAL/CCAL Sample ID	CC101805A	Data Report Number:	ALD05031S
ICAL/CCAL Lab File ID:	CS602615	Analytical Batch ID:	0510066
Date Analyzed:	10/18/2005	Instrument ID:	SV-6

		IS4 (PHN) Area	RT (MIN)	IS5 (CRY) Area	RT (MIN)	IS6 (PRY) Area	RT (MIN)
Previous ICAL/CCAL	12 HOUR STANDARD	1211403	17.20	978957	22.28	811765	25.96
	UPPER LIMIT	2422806	17.70	1957914	22.78	1623530	26.46
	LOWER LIMIT	605702	16.70	489478	21.78	405882	25.46
Continuing Calibration Check		1173330	17.20	975079	22.27	777433	25.96

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

Z = Values outside of Acceptance Criteria

Area upper limit = +100% of internal standard area
Area lower limit = -50% of internal standard area

RT upper limit = +30 seconds of internal standard RT
RT lower limit = -30 seconds of internal standard RT

TOTAL SVOC ANALYSIS
CCAL INTERNAL STANDARD AREA AND RT SUMMARY

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Date/Time Analyzed: 10/24/2005 15:55
Analytical Method: ACMM-9270-R8
ICAL/CCAL Sample ID: CC102005A
ICAL/CCAL Lab File ID: CS602632
Date Analyzed: 10/20/2005

Daily CCAL Sample ID: CC102405A
Daily CCAL Lab File ID: CS602639
Data Report Number: ALD05031S
Analytical Batch ID: 0510066
Instrument ID: SV-6

		IS1 (DCB) Area	RT (MIN)	IS2 (NPT) Area	RT (MIN)	IS3 (ANT) Area	RT (MIN)
Previous ICAL/CCAL	12 HOUR STANDARD	335880	8.75	1265786	11.13	676424	14.44
	UPPER LIMIT	671760	9.25	2531572	11.63	1352848	14.94
	LOWER LIMIT	167940	8.25	632893	10.63	338212	13.94
Continuing Calibration Check		315084	8.75	1179989	11.13	621759	14.45

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

Z = Values outside of Acceptance Criteria

Area upper limit = +100% of internal standard area
Area lower limit = -50% of internal standard area

RT upper limit = +30 seconds of internal standard RT
RT lower limit = -30 seconds of internal standard RT

TOTAL SVOC ANALYSIS
CCAL INTERNAL STANDARD AREA AND RT SUMMARY

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Date/Time Analyzed: 10/24/2005 15:55
Analytical Method: ACMM-9270-R8
ICAL/CCAL Sample ID: CC102005A
ICAL/CCAL Lab File ID: CS602632
Date Analyzed: 10/20/2005

Daily CCAL Sample ID: CC102405A
Daily CCAL Lab File ID: CS602639
Data Report Number: ALD05031S
Analytical Batch ID: 0510066
Instrument ID: SV-6

		IS4 (PHN) Area	RT (MIN)	IS5 (CRY) Area	RT (MIN)	IS6 (PRY) Area	RT (MIN)
Previous ICAL/CCAL	12 HOUR STANDARD	1173330	17.20	975079	22.27	777433	25.96
	UPPER LIMIT	2346660	17.70	1950158	22.77	1554866	26.46
	LOWER LIMIT	586665	16.70	487540	21.77	388716	25.46
Continuing Calibration Check		1076876	17.21	878393	22.28	724950	25.96

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

Z = Values outside of Acceptance Criteria

Area upper limit = +100% of internal standard area
Area lower limit = -50% of internal standard area

RT upper limit = +30 seconds of internal standard RT
RT lower limit = -30 seconds of internal standard RT

TOTAL SVOC ANALYSIS
MDL REPORTING FORM

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

MDL Determination Date: 7/18/2005 Instrument ID: SV-6

Preparation Method: ACMM-9500-R11 Matrix: SOLID

Analytical Method: ACMM-9270-R8

TARGET ANALYTE	Reported MDL mg/kg	Program Required MDL mg/kg	PRQL mg/kg
1,2-Dichlorobenzene	0.20	5	40
1,4-Dichlorobenzene	0.20	5	40
2,4-Dinitrophenol	0.40	5	40
2,4-Dinitrotoluene	0.20	0.3	2.6
Hexachlorobenzene	0.20	0.3	2.6
Hexachloroethane	0.20	5	40
2-Methylphenol	0.20	5	40
3&4-Methylphenol	0.40	5	40
Nitrobenzene	0.20	5	40
Pentachlorophenol	0.20	5	40

Section 6

Data Review Checklists

TWCP SAMPLE RECEIVING & CUSTODY REVIEW CHECKLIST
INEEL ANALYTICAL LABORATORIES DEPARTMENT

Log Number: 051006 6	IDC #: TWCP-RF/S3150-A	NCR Initiation Required? ☐ Yes ☒ No
COC #(s):	WCA-936, WCA-937	If Yes NCR Number: _____
Reviewer: Julie Daley	10/10/2005	
Printed Name/Signature	Date	

Instructions:
Complete one checklist per log. Enter appropriate response for each question. Each "No" response requires explanation. A "No" response to a question may require initiation of an NCR

Requirement		Yes	No	Comments
1. FIELD CHAIN-OF-CUSTODY (COC)				
a.	Was a COC form received with each shipping container?	☒	☐	
b.	Did the content of each shipping container match that listed on the associated COC form?	☒	☐	
c.	Were all custody transfers completely documented by signatures of relinquishers and receivers, with date and time of transfer?	☒	☐	
d.	Does all sample information (e.g., sample ID, sampling date and time, sampling batch) listed on the COC form corresponds with the information on the sample labels?	☒	☐	
e.	Is the correct analysis requested for each sample?	☒	☐	
f.	Were any corrections on the COC appropriately made (a single line through the incorrect entry and correct data written in [not overwritten], initialed and dated)?	☒	☐	
2. SAMPLE LABELS				
a.	Was each sample received with a completed sample label?	☒	☐	
b.	Do the field IDs on the sample labels correspond to those on the field COC form?	☒	☐	
c.	Were the sampling batch number, sampling date, time and requested analysis recorded on each sample label, and they correspond with those recorded on the COC?	☒	☐	
d.	Are the sampler initials, organization and sample description recorded on each sample label?	☒	☐	
e.	Are any corrections on the sample labels appropriately made (a single line through the incorrect entry and correct data written in [not overwritten], initialed and dated)?	☒	☐	
3. SAMPLE INTEGRITY				
a.	Were custody seals used on the shipping container?	☒	☐	
b.	Were custody seals used on each individual sample container?	☒	☐	
c.	Were all custody seals intact and undamaged upon receipt at ALD?	☒	☐	
d.	Were all custody seals placed such that the container could not be opened without damaging the seal?	☒	☐	
e.	Has the physical integrity of all samples been maintained (i.e., no cracks)?	☒	☐	
f.	Were all samples preserved during shipment with "Blue Ice" or equivalent cooling mechanism?	☒	☐	
g.	Were all samples placed in refrigerated storage (4° ± 2° C) after login?	☒	☐	
4. INTERNAL SAMPLE TRACKING				
a.	Were all samples logged into the Analytical Computer System?	☒	☐	
b.	Was all sample information correctly transcribed from the field documentation into the ACS?	☒	☐	
c.	Were all sample bottles labeled with the ACS log number and the laboratory sample ID?	☒	☐	
d.	Were internal tracking forms prepared for each log?	☒	☐	

Contact the sampling organization if any discrepancies are found in the field COC and sample label documentation. Document the name of the person Contacting the sampling organization, the name of the person contacted, the date and time of the contact, and the resolution of the problem.

Notes:

Form effective Date 10Mar05

ALD Document: Log 0510066 TWCP-RF_S3150-A.tif - Scanned:10/12/2005 1:54:06 PM

TWCP SAMPLE RECEIVING & CUSTODY REVIEW CHECKLIST
INEEL ANALYTICAL LABORATORIES DEPARTMENT

Log Number: 0510106	IDC #: TWCP-RF/S3150-A	NCR Initiation Required? ☐ Yes ☒ No
COC #(s):	WCA-938, WCA-939	If Yes NCR Number: _____
Reviewer: Julie Daley (Printed Name/Signature)	10/10/2005 (Date)	

Instructions:
Complete one checklist per log. Enter appropriate response for each question. Each "No" response requires explanation. A "No" response to a question may require initiation of an NCR

Requirement		Yes	No	Comments
1. FIELD CHAIN-OF-CUSTODY (COC)				
a.	Was a COC form received with each shipping container?	☒	☐	
b.	Did the content of each shipping container match that listed on the associated COC form?	☒	☐	
c.	Were all custody transfers completely documented by signatures of relinquishers and receivers, with date and time of transfer?	☒	☐	
d.	Does all sample information (e.g., sample ID, sampling date and time, sampling batch) listed on the COC form corresponds with the information on the sample labels?	☒	☐	
e.	Is the correct analysis requested for each sample?	☒	☐	
f.	Were any corrections on the COC appropriately made (a single line through the incorrect entry and correct data written in [not overwritten], initialed and dated)?	☒	☐	
2. SAMPLE LABELS				
a.	Was each sample received with a completed sample label?	☒	☐	
b.	Do the field IDs on the sample labels correspond to those on the field COC form?	☒	☐	
c.	Were the sampling batch number, sampling date, time and requested analysis recorded on each sample label, and they correspond with those recorded on the COC?	☒	☐	
d.	Are the sampler initials, organization and sample description recorded on each sample label?	☒	☐	
e.	Are any corrections on the sample labels appropriately made (a single line through the incorrect entry and correct data written in [not overwritten], initialed and dated)?	☒	☐	
3. SAMPLE INTEGRITY				
a.	Were custody seals used on the shipping container?	☒	☐	
b.	Were custody seals used on each individual sample container?	☒	☐	
c.	Were all custody seals intact and undamaged upon receipt at ALD?	☒	☐	
d.	Were all custody seals placed such that the container could not be opened without damaging the seal?	☒	☐	
e.	Has the physical integrity of all samples been maintained (i.e., no cracks)?	☒	☐	
f.	Were all samples preserved during shipment with "Blue Ice" or equivalent cooling mechanism?	☒	☐	
g.	Were all samples placed in refrigerated storage (4° ± 2° C) after login?	☒	☐	
4. INTERNAL SAMPLE TRACKING				
a.	Were all samples logged into the Analytical Computer System?	☒	☐	
b.	Was all sample information correctly transcribed from the field documentation into the ACS?	☒	☐	
c.	Were all sample bottles labeled with the ACS log number and the laboratory sample ID?	☒	☐	
d.	Were internal tracking forms prepared for each log?	☒	☐	

Contact the sampling organization if any discrepancies are found in the field COC and sample label documentation. Document the name of the person Contacting the sampling organization, the name of the person contacted, the date and time of the contact, and the resolution of the problem.

Notes:

Form effective Date 10Mar05

ALD Document: Log 0510106 TWCP-RF_S3150-A.tif - Scanned:10/10/2005 5:04:40 PM

TWCP SAMPLE RECEIVING & CUSTODY REVIEW CHECKLIST
INEEL ANALYTICAL LABORATORIES DEPARTMENT

Log Number: 051013 4	IDC #: ID-RF-S3150-A (IDC's 700, 801)	NCR Initiation Required? ☐ Yes ☒ No
COC #(s): WCA-940, WCA-941, WCA-942		If Yes NCR Number: _____
Reviewer: Blane Teckmeyer / BET (Printed Name/Signature)	10/17/2005 (Date)	

Instructions:
Complete one checklist per log. Enter appropriate response for each question. Each "No" response requires explanation. A "No" response to a question may require initiation of an NCR

	Requirement	Yes	No	Comments
	1. FIELD CHAIN-OF-CUSTODY (COC)			
a.	Was a COC form received with each shipping container?	☒	☐	
b.	Did the content of each shipping container match that listed on the associated COC form?	☒	☐	
c.	Were all custody transfers completely documented by signatures of relinquishers and receivers, with date and time of transfer?	☒	☐	
d.	Does all sample information (e.g., sample ID, sampling date and time, sampling batch) listed on the COC form corresponds with the information on the sample labels?	☒	☐	Note 1
e.	Is the correct analysis requested for each sample?	☒	☐	
f.	Were any corrections on the COC appropriately made (a single line through the incorrect entry and correct data written in [not overwritten], initialed and dated)?	☒	☐	
	2. SAMPLE LABELS			
a.	Was each sample received with a completed sample label?	☒	☐	
b.	Do the field IDs on the sample labels correspond to those on the field COC form?	☒	☐	
c.	Were the sampling batch number, sampling date, time and requested analysis recorded on each sample label, and they correspond with those recorded on the COC?	☒	☐	~~Note 1~~ BET 10/19/05
d.	Are the sampler initials, organization and sample description recorded on each sample label?	☒	☐	
e.	Are any corrections on the sample labels appropriately made (a single line through the incorrect entry and correct data written in [not overwritten], initialed and dated)?	☒	☐	
	3. SAMPLE INTEGRITY			
a.	Were custody seals used on the shipping container?	☒	☐	
b.	Were custody seals used on each individual sample container?	☒	☐	
c.	Were all custody seals intact and undamaged upon receipt at ALD?	☒	☐	
d.	Were all custody seals placed such that the container could not be opened without damaging the seal?	☒	☐	
e.	Has the physical integrity of all samples been maintained (i.e., no cracks)?	☒	☐	
f.	Were all samples preserved during shipment with "Blue Ice" or equivalent cooling mechanism?	☒	☐	
g.	Were all samples placed in refrigerated storage (4° ± 2° C) after login?	☒	☐	
	4. INTERNAL SAMPLE TRACKING			
a.	Were all samples logged into the Analytical Computer System?	☒	☐	
b.	Was all sample information correctly transcribed from the field documentation into the ACS?	☒	☐	
c.	Were all sample bottles labeled with the ACS log number and the laboratory sample ID?	☒	☐	
d.	Were internal tracking forms prepared for each log?	☒	☐	

Contact the sampling organization if any discrepancies are found in the field COC and sample label documentation. Document the name of the person Contacting the sampling organization, the name of the person contacted, the date and time of the contact, and the resolution of the problem.

Notes:

1 WCA-942, Sample ID Number: 10018867 21V5, Sample Weight: 2.73g on the COC, Sample Label: 2.69g; CORRECT WEIGHT ON COC PER COC. ~~WCA-940, Container I.D.C.: ID-RF-S315-A*, should be ID-RF-S3150-A*.~~ BET 10/19/05 COMMENT. BET 10/19/05

Form effective Date 10Mar05

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ICP Analytical Laboratories Department

Data Generator Checklist for TWCP

Data Report Number: ALD05031S	Analytical Batch: 0510066
Analysis Procedure: ACMM-9270	Procedure Revision: 8
Analysis Date(s): 10/18/05, 10/20/05, 10/24/05	
Data Generator Signature: Thomas L. Moffett	

Criteria	Yes	No	Comments
1. Samples analyzed in accordance with cited analytical method.	X		
2. All logbook entries completed in accordance with MCP-2011.	X		
3. All data entry and corrections made in accordance with MCP-2008.	X		
4. All raw data signed/initialed and dated in indelible black ink.	X		
5. Data reviewed for completeness and accuracy.	X		

ICP Analytical Laboratories Department
Independent Technical Review Checklist for TWCP
Total SVOCs in Homogeneous Solids and Soil/Gravel by GC/MS

Analytical Batch: 0510066				**Methods: ACMM-9270 and ACMM-9500**	
Run # and Analysis Date		Data Generator	Independent Reviewer Signature	Review Date	OK for Release?
#1	10-18-05	Tom Moffett & Richard Wells		11-01-05	(Yes) or No
#2	10-20-05	↓		11-01-05	(Yes) or No
#3	10-24-05	↓		11-01-05	(Yes) or No
#4					Yes or No

Instructions: Complete one checklist per analytical batch. If more than four instrument runs were needed to complete the batch analysis, use a second checklist. Enter the appropriate response for each question. Each "No" response requires explanation.

Requirement	Run #1		Run #2		Run #3		Run #4		Comments
	Yes	No	Yes	No	Yes	No	Yes	No	
1. Instrument Performance Check (DFTPP Tune)	///	///	///	///	///	///	///	///	
a. Was a DFTPP tune performed at the beginning of each 12-hour analytical shift, before analysis of standards or samples?	✓		✓		✓				
b. Does the DFTPP tune meet ACMM-9270 acceptance criteria?	✓		✓		✓				
2. Initial Calibration (ICAL)	///	///	///	///	///	///	///	///	
a. Have all ICALs used with this analytical batch been verified and approved for use as documented by a completed Initial Calibration Independent Technical Review Checklist?	✓		✓		✓				
3. Continuing Calibration Verification (CCAL)	///	///	///	///	///	///	///	///	
a. Was a CCAL standard analyzed at the beginning of each 12-hour analytical shift, after the DFTPP tune but before sample analysis?	✓		✓		✓				
b. Are all CCC RRF or concentration (for modeled compounds) %Ds ≤20?	✓		✓		✓				
c. Are the RRFs ≥0.050 for all SPCCs and ≥ 0.01 for non-SPCCs?	✓		✓		✓				
d. Are internal standard areas within 50 to 200% of the areas in the last daily calibration standard (CCAL or midpoint ICAL standard)?	✓		✓		✓				
e. Are internal standard retention times (RTs) within 30 seconds of the RT in the last daily calibration standard (CCAL or midpoint ICAL standard)?	✓		✓		✓				
4. Samples (Including LCSs, Blanks, MS and MSDs)	///	///	///	///	///	///	///	///	
a. Were all samples extracted within 14 days of sample collection?	✓		✓		✓				
b. Were all analyses of sample extracts (including dilutions and reanalyses) performed within 40 days of extraction?	✓		✓		✓				
c. Were all samples analyzed within 6 months of valid MDL and P&A determinations?	✓		✓		✓				
d. Were all samples analyzed within 12 hours of a valid DFTPP tune?	✓		✓		✓				
e. Are the internal standard areas within 50 to 200% of those in the associated CCAL?	✓		✓		✓				
f. Are the internal standard retention times within 30 seconds of those in the associated CCAL?	✓		✓		✓				
g. Do all surrogate compound recoveries meet ACMM-9270 TWCP acceptance criteria?	✓		10-27-05 ✓	✓	✓				See Narrative
h. Were all samples having analytes detected in amounts exceeding the calibration range reanalyzed on a dilution?	NA		NA		NA				
i. Are detected target analyte RRTs within 0.06 RRT units of the associated CCAL RRT, or is the qualitative identification justified by the analyst?	✓		✓		✓				
j. In your opinion, do the sample spectra for positive hits match the reference spectra?	✓		✓		✓				
k. In your opinion, are the quantitation ion peak areas correctly integrated?	✓		✓		✓				
l. Was a TIC search conducted on each sample and blank in the analytical batch?	✓		✓		✓				
m. Are TIC identities appropriately assigned per the identification criteria of ACMM-9270?	✓		✓		✓				

0800

ICP Analytical Laboratories Department
Independent Technical Review Checklist for TWCP
Total SVOCs in Homogeneous Solids and Soil/Gravel by GC/MS

Analytical Batch: 0510066

	Requirement	Yes	No	Comments
	5. Blanks	///	///	
a.	Was at least one unique laboratory blank extracted and analyzed with the analytical batch?	✓		
b.	Are all laboratory blank results ≤3 x program-required MDLs for all target analytes?	✓		
	6. Laboratory Control Samples (LCSs)	///	///	
a.	Was at least one unique LCS extracted and analyzed with the analytical batch?	✓		
b.	Are all LCSs prepared from a standard source different from that used for the ICAL standards?	✓		
c.	Do percent recoveries for all spiked analytes in each LCS meet ACMM-9270 TWCP acceptance criteria?	✓		
	7. Matrix Spike and Matrix Spike Duplicate Samples (MS/MSD)	///	///	
a.	Was at least one matrix spike sample (MS) analyzed with the analytical batch?	✓		
b.	Was at least one matrix spike duplicate sample (MSD) analyzed with the analytical batch?	✓		
c.	Do all percent recoveries for the MS and MSD meet ACMM-9270 TWCP acceptance criteria?	✓		Spikes all diluted out. See Narrative
d.	Do the RPDs between the MS and MSD meet ACMM-9270 TWCP acceptance criteria?	✓		" "
	8. Data Report & Supporting Raw Data Package	///	///	
a.	Does the report contain a Data Report Narrative that addresses, at a minimum: 1) any deviations from ACMM-9270 or ACMM-9500 and the justification for the deviations; 2) any QC samples that failed the acceptance criteria, and their impact on data quality; 3) any NCRs associated with the reported samples; and 4) any problems or unusual conditions encountered during the analysis?	✓		NCR 100077
b.	Are Analysis Data Sheets and TIC Analysis Data Sheets present in the data report and accurate for all samples in the analytical batch?	✓		
c.	Are the analyte concentrations on the Analysis Data Sheets reported in units of mg/kg and correctly rounded to 2 significant figures?	✓		
d.	Are reporting forms present and accurate for surrogate recoveries, MS/MSDs, LBs, MBs, ISA&RTs, LCSs, DFTPP tunes, ICALs, CCALs, CCAL ISA&RTs, and MDLs?	✓		
e	Are U, J, B, D, E, H, Z, and N qualifying flags correctly assigned on the reporting forms?	✓		
f.	Were all samples, associated method performance, and ICALs supporting this analytical batch run by personnel having current TWCP qualifications?	✓		
g.	Are copies of all COC documentation, sample preparation logs, and sample analysis logs included in the data package?	✓		
h.	Are all raw data and instrument printouts signed/initialed and dated by the analyst, and included in the data package?	✓		
i.	Were all calculations performed using validated software or 100% manually verified?	✓		
j.	Have the data been reviewed for transcription errors?	✓		

Additional Comments: Corrections have been reviewed and accepted. BCJ 11-03-05

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Technical Supervisory Data Review Checklist for TWCP

ICP Analytical Laboratories Department

Analytical Batch Data Report Number:	Method(s):
ALD05031S	ACMM-9500 Revision 11 ACMM-9270 Revision 8
Technical Supervisory Signature Release:	Date: 11/1/05

Requirement	Yes	No	Comments
a. Data are technically reasonable based on method(s) used	✓		
b. All data have received independent technical review	✓		
c. QC documentation is accurate and complete per PLN-600	✓		NCR100077
d. Raw data/supporting data are complete	✓		
e. Sample holding time requirements are met, or exceptions documented	✓		
f. Chain-of custody (COC) documentation is complete	✓		

RESOLUTIONS ACCEPTED 11/3/05

Quality Assurance Data Review Checklist for TWCP
ICP Analytical Laboratories Department

Total SVOCs in Homogeneous Solids and Soil/Gravel

Analytical Batch Data Report Number: ALD05031S	Methods: ACMM-9500 & ACMM-9270
QA Officer Signature Release: Adam Ungem	Date: 11/03/05

Requirement	Yes	No	Comment
Section 1: Sample Integrity Verification			
1a. COC documentation present, complete, and accurate for all reported samples	✓		
1b. Physical integrity of all samples verified as satisfactory at VTSR	✓		
1c. All samples stored at 4 ± 2 °C between receipt and analysis	✓		
1d. All samples extracted within 14 days of collection and analyzed within 40 days of extraction	✓		
Section 2: Data Report (DR) Completeness Verification			
2a. Cover Page including Table of Contents	✓		
2b. Cross Reference Table identifying field sample IDs and laboratory sample IDs	✓		
2c. Copy of Field COC Form(s)	✓		
2d. Narrative	✓		
2e. Analysis Data Sheet and TIC Analysis Data Sheet for each sample	✓		
2f. Laboratory Control Sample Form(s) for all LCSs associated with reported data	✓		
2g. Matrix Spike and Matrix Spike Duplicate Reporting Form(s) for all MS/MSDs associated with reported samples	✓		
2h. Surrogate Recovery form(s) including all reported samples	✓		
2i. Laboratory Blank Summary and results forms for all lab blanks associated with the reported samples	✓		
2j. Internal Standard Area and RT Summary form(s) for continuing calibration(s) and associated sample analyses	✓		
2k. Instrument Performance Check form for each initial calibration and continuing calibration associated with the reported samples	✓		
2l. Initial Calibration Data form(s) for all ICALs associated with reported data	✓		
2m. Continuing Calibration forms for all CCALs associated with reported data	✓		
2n. MDL Reporting Form(s) for all instruments used for analysis	✓		
Section 3: Supporting Data Package Completeness Verification			
3a. Quantitation Reports for every standard, sample, and QC sample reported	✓		
3b. Mass Spectra for all detected target analytes and reported TICs	✓		
3c. Copies of extraction/preparation log books for all extracted samples	✓		
3d. Copies of analysis run logs for each standard, sample, and QC sample reported	✓		
3e. Copies of standard preparation log books and QC Lab documentation for all working standards and intermediate stock standards associated with reported data	✓		
Section 4: QC Results Verification			
4a. All DFTPP tune (Instrument Performance Check) data within specifications	✓		
4b. All ICALs within specifications	✓		
4c. All CCALs within specifications	✓		
4d. All LCS recoveries within specifications	✓		
4e. All Laboratory Blank results within specifications	✓		
4f. Internal Standard Areas and RTs within specifications	✓		
4g. All MS and MSD percent recoveries within specifications	✓		See Narrative
4h. All RPDs for MSD analyses within specifications	✓		See Narrative
4i. All surrogate recoveries within specifications		✓	See Narrative
Section 5: Instrument, Method and Personnel Qualification Verification			
5a. All analytical tasks conducted by personnel having current qualifications	✓		
5b. Acceptable demonstration of precision, accuracy, and MDLs performed within the last 6 months	✓		
5c. All deviations from ACMM-9500 and ACMM-9270 clearly stated and explained on raw data or in DR narrative and all required NCRs issued	✓		See NCR 100077, CC. No NCR issued 11/15/05
5d. All noncompliant QC discussed in DR narrative, and all required NCRs issued	✓		No NCRs issued
Section 6: Data Recording and Review Verification			
6a. All changes to original data or forms made by line-out of incorrect entry, initialed/signed and dated by the person making the change	✓		
6b. All raw data initialed/signed and dated by generator in permanent black ink	✓		
6c. All pages in data package legible, correctly paginated, and copied pages complete (e.g., margins not cut off)	✓		
6d. All data received documented data generator review and signature	✓		
6e. All data received documented independent technical review and signature	✓		
6f. All data received documented technical supervisory review and signature	✓		

Revision 1 changes reviewed and approved AC 11/15/05

0090-R1

Quality Assurance Data Review Checklist for TWCP
ICP Analytical Laboratories Department

Total SVOCs in Homogeneous Solids and Soil/Gravel

SUPERSEDED
WOR 11/15/05

Analytical Batch Data Report Number: ALD05031S	Methods: ACMM-9500 & ACMM-9270
QA Officer Signature Release: Debra Clayton	Date: 11/03/05

Requirement	Yes	No	Comment
Section 1: Sample Integrity Verification			
1a. COC documentation present, complete, and accurate for all reported samples	✓		
1b. Physical integrity of all samples verified as satisfactory at VTSR	✓		
1c. All samples stored at 4 ± 2 °C between receipt and analysis	✓		
1d. All samples extracted within 14 days of collection and analyzed within 40 days of extraction	✓		
Section 2: Data Report (DR) Completeness Verification			
2a. Cover Page including Table of Contents	✓		
2b. Cross Reference Table identifying field sample IDs and laboratory sample IDs	✓		
2c. Copy of Field COC Form(s)	✓		
2d. Narrative	✓		
2e. Analysis Data Sheet and TIC Analysis Data Sheet for each sample	✓		
2f. Laboratory Control Sample Form(s) for all LCSs associated with reported data	✓		
2g. Matrix Spike and Matrix Spike Duplicate Reporting Form(s) for all MS/MSDs associated with reported samples	✓		
2h. Surrogate Recovery form(s) including all reported samples	✓		
2i. Laboratory Blank Summary and results forms for all lab blanks associated with the reported samples	✓		
2j. Internal Standard Area and RT Summary form(s) for continuing calibration(s) and associated sample analyses	✓		
2k. Instrument Performance Check form for each initial calibration and continuing calibration associated with the reported samples	✓		
2l. Initial Calibration Data form(s) for all ICALs associated with reported data	✓		
2m. Continuing Calibration forms for all CCALs associated with reported data	✓		
2n. MDL Reporting Form(s) for all instruments used for analysis	✓		
Section 3: Supporting Data Package Completeness Verification			
3a. Quantitation Reports for every standard, sample, and QC sample reported	✓		
3b. Mass Spectra for all detected target analytes and reported TICs	✓		
3c. Copies of extraction/preparation log books for all extracted samples	✓		
3d. Copies of analysis run logs for each standard, sample, and QC sample reported	✓		
3e. Copies of standard preparation log books and QC Lab documentation for all working standards and intermediate stock standards associated with reported data	✓		
Section 4: QC Results Verification			
4a. All DFTPP tune (Instrument Performance Check) data within specifications	✓		
4b. All ICALs within specifications	✓		
4c. All CCALs within specifications	✓		
4d. All LCS recoveries within specifications	✓		
4e. All Laboratory Blank results within specifications	✓		
4f. Internal Standard Areas and RTs within specifications	✓		
4g. All MS and MSD percent recoveries within specifications	✓		See Narrative
4h. All RPDs for MSD analyses within specifications	✓		See Narrative
4i. All surrogate recoveries within specifications		✓	See Narrative
Section 5: Instrument, Method and Personnel Qualification Verification			
5a. All analytical tasks conducted by personnel having current qualifications	✓		
5b. Acceptable demonstration of precision, accuracy, and MDLs performed within the last 6 months	✓		
5c. All deviations from ACMM-9500 and ACMM-9270 clearly stated and explained on raw data or in DR narrative and all required NCRs issued	✓		No NCR issued
5d. All noncompliant QC discussed in DR narrative, and all required NCRs issued	✓		No NCRs issued
Section 6: Data Recording and Review Verification			
6a. All changes to original data or forms made by line-out of incorrect entry, initialed/signed and dated by the person making the change	✓		
6b. All raw data initialed/signed and dated by generator in permanent black ink	✓		
6c. All pages in data package legible, correctly paginated, and copied pages complete (e.g., margins not cut off)	✓		
6d. All data received documented data generator review and signature	✓		
6e. All data received documented independent technical review and signature	✓		
6f. All data received documented technical supervisory review and signature	✓		

0090

Quality Assurance Data Review Checklist for TWCP
ICP Analytical Laboratories Department

Total SVOCs in Homogeneous Solids and Soil/Gravel

SUPERSEDED
work 11/15/05

Analytical Batch Data Report Number: ALD05031$	**Methods:** ACMM-9500 & ACMM-9270
QA Officer Signature Release: Debra Ungson	**Date:** 11/03/05

Requirement	Yes	No	Comment
Section 1: Sample Integrity Verification			
1a. COC documentation present, complete, and accurate for all reported samples	✓		
1b. Physical integrity of all samples verified as satisfactory at VTSR	✓		
1c. All samples stored at 4 ± 2 °C between receipt and analysis	✓		
1d. All samples extracted within 14 days of collection and analyzed within 40 days of extraction	✓		
Section 2: Data Report (DR) Completeness Verification			
2a. Cover Page including Table of Contents	✓		
2b. Cross Reference Table identifying field sample IDs and laboratory sample IDs	✓		
2c. Copy of Field COC Form(s)	✓		
2d. Narrative	✓		
2e. Analysis Data Sheet and TIC Analysis Data Sheet for each sample	✓		
2f. Laboratory Control Sample Form(s) for all LCSs associated with reported data	✓		
2g. Matrix Spike and Matrix Spike Duplicate Reporting Form(s) for all MS/MSDs associated with reported samples	✓		
2h. Surrogate Recovery form(s) including all reported samples	✓		
2i. Laboratory Blank Summary and results forms for all lab blanks associated with the reported samples	✓		
2j. Internal Standard Area and RT Summary form(s) for continuing calibration(s) and associated sample analyses	✓		
2k. Instrument Performance Check form for each initial calibration and continuing calibration associated with the reported samples	✓		
2l. Initial Calibration Data form(s) for all ICALs associated with reported data	✓		
2m. Continuing Calibration forms for all CCALs associated with reported data	✓		
2n. MDL Reporting Form(s) for all instruments used for analysis	✓		
Section 3: Supporting Data Package Completeness Verification			
3a. Quantitation Reports for every standard, sample, and QC sample reported	✓		
3b. Mass Spectra for all detected target analytes and reported TICs	✓		
3c. Copies of extraction/preparation log books for all extracted samples	✓		
3d. Copies of analysis run logs for each standard, sample, and QC sample reported	✓		
3e. Copies of standard preparation log books and QC Lab documentation for all working standards and intermediate stock standards associated with reported data	✓		
Section 4: QC Results Verification			
4a. All DFTPP tune (Instrument Performance Check) data within specifications	✓		
4b. All ICALs within specifications	✓		
4c. All CCALs within specifications	✓		
4d. All LCS recoveries within specifications	✓		
4e. All Laboratory Blank results within specifications	✓		
4f. Internal Standard Areas and RTs within specifications	✓		
4g. All MS and MSD percent recoveries within specifications	✓		See Narrative
4h. All RPDs for MSD analyses within specifications		✓	See Narrative
4i. All surrogate recoveries within specifications		✓	See Narrative
Section 5: Instrument, Method and Personnel Qualification Verification			
5a. All analytical tasks conducted by personnel having current qualifications	✓		
5b. Acceptable demonstration of precision, accuracy, and MDLs performed within the last 6 months	✓		
5c. All deviations from ACMM-9500 and ACMM-9270 clearly stated and explained on raw data or in DR narrative and all required NCRs issued	✓		No NCR issued
5d. All noncompliant QC discussed in DR narrative, and all required NCRs issued	✓		No NCRs issued
Section 6: Data Recording and Review Verification			
6a. All changes to original data or forms made by line-out of incorrect entry, initialed/signed and dated by the person making the change	✓		
6b. All raw data initialed/signed and dated by generator in permanent black ink	✓		
6c. All pages in data package legible, correctly paginated, and copied pages complete (e.g., margins not cut off)	✓		
6d. All data received documented data generator review and signature	✓		
6e. All data received documented independent technical review and signature	✓		
6f. All data received documented technical supervisory review and signature	✓		

0090

Attachment 5 – CCP Site Project Manager Data Validation Summary

On-Line Headspace Gas Analysis (HSG)			Visual Examination (VE)	
Nondestructive Examination (NDE)			Nondestructive Assay (NDA)	
Direct-Canister HSG Analysis			Homogeneous Waste Analysis (HWA)	X
Radiological Characterization				

BATCH DATA REPORT NUMBER: ALD05034M **DATE:** 25 October 2005
27 October 2005 (Hg)

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
1. ITR, Tech Sup, and Facility QA checklists are complete and signed. **Reference Source: WAP B3-10b(2)** **Verification Source: DGL Checklist**	X			
2. The batch data report is complete. **Reference Source: WAP B3-10b(2) and WAC A.5.2** **Verification Source: Data Sheets**	X			
3. QAOs have been met. **Reference Source: WAP B3-10b(2)** **Verification Source: QC Data Sheets**	X			**Container Numbers:** 10016886, 10018178, 10018503, 10018867, 10018875
4. Data reported with correct units and significant figures. **Reference Source: WAP B3-10b(2)** **Verification Source: Data Sheets**	X			
5. Data have been assessed correctly. **Reference Sources: WAP B3-10b(2) and B3-10b(3)** **Verification Source: Data Sheets**	X			
6. Is there a reference to or copy of the associated NCRS? **Reference Source: WAP Tables B3-11, B3-12 and B3-13** **Verification Source: NCR**			X	No NCRs are associated with this BDR.
7. The applicable SPQAO Project Level Validation Checklist is complete, signed, and dated. **Reference Source: WAP B3-10b(2)** **Verification Source: SPQAO Checklist**	X			
8. NDA batch QC checks (e.g., weekly interfering matrix, background, performance, and transmission checks, measurement system checks) were properly performed. **Reference Source: WAC A.4.2 and/or WAC Table A-4.3** **Verification Source: QC Data Sheets**			X	This is a metals analytical BDR.

COPY

Attachment 5 – CCP Site Project Manager Data Validation Summary (continued)

BATCH DATA REPORT NUMBER: ALD05034M DATE: 27 October 2005 (Hg) 25 October 2005

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers	
9. **HSG** – All data are reported with the appropriate flags. **Reference Source: WAP B3-10b(2) Verification Source: Data Sheet**			X	This is a metals analytical BDR.	
10. **HSG** batch QC checks (e.g., on-line blanks, duplicates, and laboratory control samples) were properly performed and meet the established usability criteria. **Reference Sources: WAP B3-10b(2) and Table B3-3 and/or B1-1b Verification Source: QC Data Sheets**			X	This is a metals analytical BDR.	
11. **HSG** DAC assignment is valid based upon an assessment of the data collection and evaluation necessary to make the assignment. **Reference Source: WAP B3-10b(2) Verification Source: Drum Data Form**			X	This is a metals analytical BDR.	
12. **NDE** data are complete and acceptable based on the videotape or equivalent media review (independent observation and replicate scan). **Reference Sources: WAP , B1-3b(2) and B3-10b(2) Verification Source: QC Data Sheets**			X	Container numbers:	This is a metals analytical BDR.
				Rep:	
				IO:	
13. **VE** data is complete and properly reported. **Reference Sources: WAP B1-3b(3) and B3-10b(2) Verification Source: BDR**			X	This is a metals analytical BDR.	
14. **HWA** Solid/Soil VOC batch QC checks (e.g., laboratory duplicates, blanks, and control samples) were properly performed and meet the established usability criteria. **Reference Sources: WAP B1-2b, B3-10b(2) and Table B3-5 Verification Source: QC Data Sheets**			X	This is a metals analytical BDR.	
15. **HWA** Solid/Soil Semi-VOC batch QC checks (e.g., laboratory duplicates, blanks, and control samples) were properly performed and meet the established usability criteria. **Reference Sources: WAP B1-2b, B3-10b(2) and Table B3-7 Verification Source: QC Data Sheets**			X	This is a metals analytical BDR.	

Attachment 5 – CCP Site Project Manager Data Validation Summary (continued)

27 October 2005 (Hg)

BATCH DATA REPORT NUMBER: ALD05034M **DATE:** 25 October 2005

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
16. **HWA Solid/Soil Total Metals Batch QC checks** (e.g., duplicates, blanks, and laboratory control samples) were properly performed and meet the established criteria. **Reference Sources: WAP B1-2b, B3-10b(2), and Table B3-9 Verification Source: QC Data Sheets**		X		▪ Ni & Zn were identified in lab blank > 5*IDL. ▪ Ni results for 10016886, 10018178 & 10018875 were flagged 'B' due to blank concentrations >20% sample concentration. ▪ Zn results for 10018867 were flagged 'B' due to blank concentrations >20% sample concentration. ▪ Ni and Zn results for 10018503 were flagged 'B' due to blank concentrations >20% sample concentration.
17. **OSR** for LANL Sealed Sources, does the waste meet the definition of sealed sources per 10 CFR 30.4 and 10 CFR 835.2 (effective January 1, 2004) and documentation included with the AK information? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	This is not an LANL OSR BDR.
18. **OSR** for LANL Sealed Sources, does the Pipe Overpack Container (POC) only contain sources and packaging material (no non-packaging items are allowed in the waste container)? **Reference Source: WAP B-3a(1)(iii) Verification Source: Data Sheet**			X	This is not an LANL OSR BDR.
19. **OSR** for LANL Sealed Sources, is the sealed source a US DOT Special Form Class 7 (Radioactive Material) per 49 CFR 34.27 (effective January 1, 2004) and is this documented in the AK information? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	This is not an LANL OSR BDR.
20. For LANL Sealed Sources, is the integrity of each sealed source validated by documented contamination survey results to meet the requirements of 10 CFR 34.27 (effective January 1, 2004), and is assembled as part of AK documentation? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	This is not an LANL OSR BDR.

Attachment 5 – CCP Site Project Manager Data Validation Summary (continued)

27 October 2005 (Hg)

BATCH DATA REPORT NUMBER: ALD05034M **DATE:** 25 October 2005

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
21. **OSR** for LANL Sealed Sources, is each source a rigid sealed container or is it in a rigid sealed container less than or equal to 4 L? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	This is not an LANL OSR BDR.
22. **OSR** for LANL Sealed Sources, does the AK information document that no VOC or VOC-bearing material are constituents of the waste? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information**			X	This is not an LANL OSR BDR.
23. **OSR** for LANL Sealed Sources, does the AK information document that the outer casing of the sealed source is a non-VOC bearing material and is this verified during VE? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	This is not an LANL OSR BDR.

The data for all containers in this batch are complete, properly reported, technically reasonable, representative and meet the Quality Assurance Objectives (QAOs). On a per waste container basis, as evidenced by my review of the Batch Data Report, all data have been validated in accordance with the QAPjP (CCP-PO-001) and are acceptable. This validation was accomplished through the generation level and project level data review, validation, and verification of this Batch Data Report.

David W. Moody David W. Moody 14 November 05

Site Project Manager Signature Date

Attachment 9 – CCP SPQAO Solid/Soil Total Metals Analysis Project Level Validation Checklist and Summary

BATCH DATA REPORT NUMBER: ALD05034M **ANALYSIS DATE:** 10/25/05, 10/27/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
1. Does the Batch Data Report contain the batch number, laboratory name, and the date of the batch report? **Reference Source: WAP Table B3-13 Verification Source: Cover Page**	X			
2. Has a Batch Data Report narrative been included with the Batch Data Report? **Reference Source: WAP Table B3-13 Verification Source: Report Narrative and comments**	X			
3. Is there a cross reference between waste container number, field sample number, and lab sample number ID; and signature release by lab personnel in the Batch Data Report? **References Source: B3-10b(1), Table B3-13 Verification Source: Cover Page and/or Total Metals Analysis Sample Cross-Reference Table**	X			
4. Does the Batch Data Report contain a table of contents? **Reference Source: CCP-TP-001 Verification Source: Batch Data Report**	X			
5. Are there 20 or less samples per analytical batch? **Reference Source: WAP Section B3-10 Verification Source: Total Metals Analysis Sample Cross-Reference Table**	X			7 samples (2 co-located samples).
6. Does the Batch Data Report contain a complete and signed copy of the COC form? **Reference Source: WAP Table B3-13 Verification Source: COC Form**	X			
7. Does the Batch Data Report include the date and time of analysis for each sample? **Reference Source: WAP Table B3-13 Verification Source: Total Metals Analysis Data Sheets**	X			

Attachment 9 – CCP SPQAO Solid/Soil Total Metals Analysis Project Level Validation Checklist and Summary (continued)

BATCH DATA REPORT NUMBER: ALD05034M **ANALYSIS DATE:** 10/25/05, 10/27/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
8. Are holding times within the 180-day requirement (except Mercury)? **Reference Source: WAP Table B1-4 Verification Source: Total Metals Analysis Data Sheets**	X			
9. Are holding times within the 28-day requirement for Mercury? **Reference Source: WAP Table B1-4 Verification Source: Total Metals Analysis Data Sheets**	X			
10. Have QC designations for samples been applied as appropriate? **Reference Source: WAP Table B3-13 Verification Source: Total Metals Analysis Sample Cross-Reference Table and/or QC Sample Section of Batch Data Report**	X			
11. Is there a minimum of one laboratory control sample (LCS) analyzed per analytical batch? **Reference Source: WAP Table B3-9 Verification Source: Laboratory Control Sample**	X			
12. Are the percent recoveries (%Rs) for all LCS analytes within the Table B3-8 acceptable range? *Note: If an established solid LCS is used, then the established control limits for that material are used for accuracy requirements.* **Reference Source: WAP Table B3-9 Verification Source: Laboratory Control Sample**	X			
13. Is there a minimum of one matrix spike (MS) analyzed per analytical batch? **Reference Source: WAP Table B3-9 Verification Source: Matrix Spike Recovery**	X			
14. Do the %Rs for all MS analytes meet the Table B3-8 requirements? **Reference Source: WAP Table B3-9 Verification Source: Matrix Spike Recovery**	X			

Attachment 9 – CCP SPQAO Solid/Soil Total Metals Analysis Project Level Validation Checklist and Summary (continued)

BATCH DATA REPORT NUMBER: ALD05034M **ANALYSIS DATE:** 10/25/05, 10/27/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
15. Is a minimum of one matrix spike duplicate (MSD) analyzed per analytical batch? *Note: The MSD is used in place of the laboratory duplicate.* **Reference Source: WAP Table B3-9 Verification Source: Matrix Spike Recovery**	X			
16. Are the %Rs for all MSD analytes within the Table B3-8 acceptance range? *Note: The MSD is used in place of the laboratory duplicate.* **Reference Source: WAP Table B3-9 Verification Source: Matrix Spike Recovery**	X			
17. Are the MS/MSD relative percent differences (RPDs) for all analytes less than or equal to 30? **Reference Source: WAP Table B3-9 Verification Source: Matrix Spike Duplicate Agreement**	X			
18. Is serial dilution performed once per analytical batch? *Note: This applies only to inductively coupled plasma (ICP) analysis.* **Reference Source: WAP Table B3-9 Verification Source: Serial Dilution Agreement**	X			
19. Is the serial dilution result ≤10% D for initial sample results >50 x IDL? If no, sample results must be "Z" flagged for sample results >10% D and >50 x IDL? *Note: This applies only to ICP analysis.* **Reference Source: WAP Table B3-9 Verification Source: Serial Dilution Agreement**	X			
20. Is the ICP initial calibration performed each day of operation? *Note: This is a one standard and one blank calibration.* **Reference Source: WAP Table B3-9 Verification Source: Initial and Continuing Calibration Verification**	X			

Attachment 9 – CCP SPQAO Solid/Soil Total Metals Analysis Project Level Validation Checklist and Summary (continued)

BATCH DATA REPORT NUMBER: ALD05034M **ANALYSIS DATE:** 10/25/05, 10/27/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
21. Is the ICP %R for the initial calibration verification (ICV) check standard within the 90% to 110% acceptance range? **Reference Source: WAP Table B3-9 Verification Source: Initial and Continuing Calibration Verification**	X			
22. Is Mercury initial calibration performed each day of operation? *Note: This is a five-standard and one blank calibration* **Reference Source: WAP Table B3-9 Verification Source: CVAA, ITR Checklist, and/or Initial and Continuing Calibration Verification Form**	X			
23. Is the Mercury %R for the ICV within the 80 to 120% acceptance range? **Reference Source: WAP Table B3-9 Verification Source: Initial and Continuing Calibration Verification**	X			
24. Is the Mercury regression coefficient (r) greater than or equal to 0.995? **Reference Source: WAP Table B3-9 Verification Source: CVAA, ITR Checklist**	X			
25. Is continuing calibration verification (CCV) performed every 10 samples, and at the beginning and end of the run? **Reference Source: WAP Table B3-9 Verification Source: ICP-AES, ITR Checklist and/or CVAA, ITR Checklist**	X			
26. Is the ICP %R for the CCV within the 90 to 110% acceptance range? **Reference Source: WAP Table B3-9 Verification Source: Initial and Continuing Calibration Verification**	X			
27. Is the Mercury %R for the CCV within the 80 to 120% acceptance range? **Reference Source: WAP Table B3-9 Verification Source: Initial and Continuing Calibration Verification**	X			
28. Is there a minimum of one lab blank analyzed per analytical batch? **Reference Source: WAP Table B3-9 Verification Source: Blanks**	X			

Attachment 9 – CCP SPQAO Solid/Soil Total Metals Analysis Project Level Validation Checklist and Summary (continued)

BATCH DATA REPORT NUMBER: ALD05034M **ANALYSIS DATE:** 10/25/05, 10/27/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
29. Are all lab blanks analytes ≤3* the IDL? **Reference Source: WAP Table B3-9 Verification Source: Blanks and/or ITR Checklist**	X			The laboratory blank contained nickel and zinc. All appropriate results are flagged with a "B".
30. Is interference correction verification performed at the beginning and end of the analytical batch or every 8 hours, whichever is more frequent? **Reference Source: WAP Table B3-9 Verification Source: ICP Interference Check Sample, ICP-AES and/or ITR Checklist**	X			
31. Are solutions containing interference plus analytes within the 80 to 120% acceptance range for all analytes? *Note: If response is no AND sample interferents are reported on the Total Metals Analysis Data Sheets at levels ≥ levels in the ICS(A) solution and an NCR has not already been produced at the DGL, write an NCR.* **Reference Source: WAP Table B3-9 Verification Source: ICP Interference Check Sample, ICP-AES**	X			
32. Does the Batch Data Report include IDLs (µg/L) that are ≤ PRDL in Table B3-8? **Reference Source: WAP Table B3-8 Verification Source: Instrument Detection Limits**	X			
33. Are analytical procedures (including data revision) used to develop these data referenced in the Batch Data Report? **Reference Source: WAP Table B3-13 Verification Source: Data Generator Checklist for TWCP**	X			ACMM-8909 Rev. 9 – metals prep ACMM-2810 Rev. 3 – mercury analysis ACMM-2901 Rev. 3 – metals (plasma) analysis.
34. Does the Batch Data Report include the operator's signature and analysis date? **Reference Source: WAP Table B3-13 Verification Source: Data Generator Checklist for TWCP**	X			

Attachment 9 – CCP SPQAO Solid/Soil Total Metals Analysis Project Level Validation Checklist and Summary (continued)

BATCH DATA REPORT NUMBER: ALD05034M **ANALYSIS DATE:** 10/25/05, 10/27/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
35. Are data reporting forms complete with data reported properly (i.e., data is reported in correct units, with correct significant figures, and with correct qualifying flags)? **Reference Source: WAP Table B3-13, B3-10b(1) Verification Source: Batch Data Report**	X			
36. Have data reporting flags been assigned properly? **Reference Source: WAP Table B3-13 Verification Source: DGL Checklists**	X			
37. Have the batch samples been properly preserved (±2°C)? **Reference Source: WAP Table B1-4 Verification Source: COC Form, Sample Receipt Checklist, and/or QA Data Review Checklist**	X			
38. Are there any NCR(s) associated with this batch? Identify the NCR(s). **Reference Source: WAP B3-13 Verification Source: DGL Checklists, Batch Data Report Narrative, and/or batch comments**			X	No NCRs associated with this BDR.
39. Are Batch Data Generation Level ITR, TS, and QA Data Review Checklists complete, accurate, and signed? **Reference Source: WAP Table B3-13 Verification Source: DGL Checklists**	X			
40. Is Attachment 6 included?		X		

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAO). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

Richard Kantrowitz
Site Project QA Officer

Signature

11/10/05
Date

CH2M•WG IDAHO, LLC

Analytical Laboratories Department

Idaho Cleanup Project

Transuranic Waste Characterization Program

RCRA Analysis Data Report

Batch Data Report Number: ALD05034M
Revision Number: 0
Issue Date: 11/07/05

Analytical Method: ACMM-2901, -2810
Analyte(s): Metals

Issued to: Mr. Robert Billett, SPM
C/o CCP Records Coordinator
4021 National Parks Highway
Carlsbad, NM 88220

Summary: This data report contains analysis results for 7 samples from Sampling Batch WCS-05-04.

Report Content:

Section	Content	Pages
1	Sample Identification Table	0002 – 0003
2	Sample Custody and Tracking Documents	0004 – 0020
3	Analysis Results	0021 – 0031
4	Batch QC Sample Results	0032 – 0038
5	Instrument QC Data	0039 – 0047
6	Data Review Checklists	0048 – 0060

Release Authorization:

Name & Position	Signature	Date
Jeffrey S. Laug Technical Leader		11/07/05
Jeffrey S. Laug Technical Supervisor		11/07/05
Shelly J. Sailer Quality Assurance Officer		11/07/05

Section 1

Sample Identification Table

TOTAL METALS SAMPLE CROSS-REFERENCE TABLE

IDAHO CLEANUP PROJECT
ANALYTICAL LABORATORIES DEPARTMENT

TRANSURANIC WASTE CHARACTERIZATION PGM

Method, CVAA: ACMM-2810-R3
Method, ICP-AES Prep.: ACMM-8909-R9
Method, ICP-AES Analysis: ACMM-2901-R3

Data Report Number: ALD05034M
Analytical Batch ID: 0510066

Field Sample ID	Lab Sample ID
1001688611M1	5CZ77
1001817811M1	5DB27
1001887511M1	5CZ80
1001886721M1	5DB32
1001886711M1	5DB30
1001850321M1	5CZ01
1001850311M1	5CY97

Section 2

Sample Custody Documents

Idaho National Laboratory - Waste Characterization Area - TWCP Chain-of-Custody

COC No. WCA-936

(HFEF-OI-6921, Rev. 3e, 5/11/04

Sampling Location: MFC / HFEF / WCA | Analytical Location: INL - INTEC | Sample Batch No.: WCS-05-04

Container Identification No.: 10018503 | Container I.D.C.: ID-RF-S3150-A* | Sample Matrix: SOLID

Chain of Custody Initiated: Signature: J M Magnuson 10/4/05 1303 Date / Time:

Sample ID Number	Sample Date	Sample Time	Container Size	Sample Weight (gm)	VOC	NHVOC	Semi VOC	Metals	Other	Comments	Disposition
10018503 11V1	10/4/2005	1303	20-ml	2.57	X						
10018503 11V2	10/4/2005	1305	20-ml	2.64		X					
10018503 11V3	10/4/2005	1307	20-ml	2.67						SPARE	
10018503 11V4	10/4/2005	1309	20-ml	2.74						SPARE	
10018503 11M1	10/4/2005	1312	250-ml	33.34			X	X			
TB 93a	10/4/2005	1512	20-ml	2.89	X					TRIP BLANK	
TB 93b	10/4/2005	1512	20-ml	2.77		X				TRIP BLANK	
TB 93c	10/4/2005	1512	20-ml	2.79						TRIP BLANK/SPARE	

S00005

NOTE: For preservation, all samples were stored at a controlled temperature of 4° C and then packed in chemical ice for shipment.

ALD LOG # 0510066

1 of 1

Sampler Relinquishment to HFEF TWCP Sample Custodian: Signature: J M Magnuson

Sample Custodian receipt: Signature: J M Magnuson 10/4/05 1515 Date / Time:

Samples placed in locked storage: Signature: J M Magnuson 10/4/05 1515 Date / Time:

Samples retrieved from locked storage: Signature: B. Adams 10-6-05 0840 Date / Time:

Shipping TID #: 4700

BET 10/12/05

Relinquished By:			Discrepancies / Comments 50A BET 10/12/05
B Adams	10-6-05	1018	*Waste Stream ID-RF-S3114 includes IDCs ~~008~~, 700, & 801 CORRECTED PER CCP-AK-WL-005.
Received By:	Date	Time	BGD 10/12/05
BGP	10/06/05	1230	
Relinquished By:			
Received By:	Date	Time	

All sample analysis complete and samples removed from custody control and dispositioned. _____ Signature Date

Idaho National Laboratory - Waste Characterization Area - TWCP Chain-of-Custody

COC No. WCA-937

[HFEF-OI-6921, Rev. 3e, 5/11/04]

Sampling Location: MFC / HFEF / WCA | Analytical Location: INL - INTEC | Sample Batch No.: WCS-05-04

Container identification No.: 10018503 | Container I.D.C.: ID-RF-S3150-A* | Sample Matrix: SOLID

Chain of Custody Initiated: JM Magnuson (Signature:) 10/4/05 (Date) 1318 (Time)

Sample ID Number	Sample Date	Sample Time	Container Size	Sample Weight (gm)	VOC	NHVOC	Semi VOC	Metals	Other	Comments	Disposition
10018503 21V1	10/4/2005	1318	20-ml	2.99	X					QC	
10018503 21V2	10/4/2005	1319	20-ml	2.87	X					QC	
10018503 21V3	10/4/2005	1321	20-ml	2.95	X					QC	
10018503 21V4	10/4/2005	1323	20-ml	2.93		X				QC	
10018503 21V5	10/4/2005	1325	20-ml	2.68		X				QC	
10018503 21V6	10/4/2005	1327	20-ml	2.92		X				QC	
10018503 21V7	10/4/2005	1328	20-ml	2.59						SPARE/QC	
10018503 21V8	10/4/2005	1330	20-ml	2.66						SPARE/QC	
10018503 21M1	10/4/2005	1333	250-ml	37.02			X	X		QC	
TB NA	SEE COMMENTS				X						
						X					

NOTE: For preservation, all samples were stored at a controlled temperature of 4° C and then packed in chemical ice for shipment.

ALD LOG # 0510066 1 of 1

Sampler Relinquishment to HFEF TWCP Sample Custodian: JM Magnuson (Signature:)

Sample Custodian receipt: JM Magnuson (Signature:) 10/4/05 (Date) 1543 (Time)

Samples placed in locked storage: JM Magnuson (Signature:) 10/4/05 (Date) 1543 (Time)

Samples retrieved from locked storage: B. A... (Signature) 10-6-05 (Date) 0840 (Time)

Shipping TID #: 4700

Relinquished By:			Discrepancies / Comments Samples listed on this COC will be shipped with samples listed on COC 936.
B. A...	10-6-05	1018	Trip Blanks are listed on COC 936. COC 936 & 937 will sent in same shipping container. JMM 10/4/05
Received By:	Date	Time	Quality Control Samples. BET 10/12/05
BEP	10/12/05	1230	50A BET 10/12/05
Relinquished By:			*Waste Stream ID-RF-S3150 includes IDCs ~~008~~ 700, & 801 CORRECTED PER CCP-AK-WL-005, BEP 10/12/05
Received By:	Date	Time	

All sample analysis complete and samples removed from custody control and dispositioned. _____ Signature _____ Date

900000

Idaho National Laboratory - Waste Characterization Area - TWCP Chain-of-Custody COC No. WCA-939

[HFEF-OI-6921, Rev. 3e, 5/11/04

Sampling Location: MFC / HFEF / WCA | Analytical Location: INL - INTEC | Sample Batch No.: WCS-05-04

Container Identification No.: 10018875 | Container I.D.C.: ID-RF-S3150-A* | Sample Matrix: SOLID

Chain of Custody Initiated: J M Magnuson (Signature:) 10/7/05 1253 (Date / Time:)

Sample ID Number	Sample Date	Sample Time	Container Size	Sample Weight (gm)	VOC	NHVOC	Semi VOC	Metals	Other	Comments	Disposition
10018875 11V1	10/7/05	1253	20-ml	2.96	X						
10018875 11V2	10/7/05	1255	20-ml	2.69		X					
10018875 11V3	10/7/05	1257	20-ml	2.65						SPARE	
10018875 11V4	10/7/05	1259	20-ml	2.62						SPARE	
10018875 11M1	10/7/05	1301	250-ml	38.46			X	X			
TB 3			20-ml		X					TRIP BLANK	
TB 3 SEE COMMENTS			20-ml			X				TRIP BLANK	
TB			20-ml							TRIP BLANK/SPARE	

NOTE: For preservation, all samples were stored at a controlled temperature of 4° C and then packed in chemical ice for shipment.

Sampler Relinquishment to HFEF TWCP Sample Custodian: J M Magnuson (Signature:)

ALD LOG # 051010 6 1 of 1

Sample Custodian receipt: J M Magnuson (Signature:) 10/7/05 (Date / Time:) 1415

Samples placed in locked storage: J M Magnuson (Signature:) 10/7/05 (Date / Time:) 1415

Samples retrieved from locked storage: B. Al-s (Signature:) 10/10/05 (Date / Time:) 0800

Shipping TID #: 4699

Relinquished By:			Discrepancies / Comments
B. Al-s	10-10-05	1015	*Waste Stream ID-RF-S3150-A includes IDCs 700, & 801
Received By:	Date	Time	
[illegible]	10/7/05	1130	THIS COC AND COC 938 WILL BE SHIPPED IN THE
Relinquished By:			SAME CONTAINER. COC 938 HAS THE TRIP BLANKS
			J M Magnuson 10/7/05
Received By:	Date	Time	

All sample analysis complete and samples removed from custody control and dispositioned. _____ Signature Date

ALD Document: Log 0510106 TWCP-RF_S3150-A.tif - Scanned:10/10/2005 5:04:40 PM

Idaho National Laboratory - Waste Characterization Area - TWCP Chain-of-Custody COC No. WCA-938

[HFEF-OI-6921, Rev. 3e, 5/11/04

Sampling Location: MFC / HFEF / WCA Analytical Location INL - INTEC Sample Batch No. WCS-05-04

Container Identification No. 10016886 Container I.D.C. ID-RF-S3150-A* Sample Matrix: SOLID

Chain of Custody Initiated: Signature: J M Magnuson 10/6/05 1358 Date / Time:

Sample ID Number	Sample Date	Sample Time	Container Size	Sample Weight (gm)	VOC	NHVOC	Semi VOC	Metals	Other	Comments	Disposition
10016886 11V1	10/6/05	1358	20-ml	2.77	X						
10016886 11V2	10/6/05	1400	20-ml	2.84		X					
10016886 11V3	10/6/05	1402	20-ml	2.85						SPARE	
10016886 11V4	10/6/05	1404	20-ml	2.66						SPARE	
10016886 11M1	10/6/05	1408	250-ml	31.53			X	X			
TB 94a	10/6/05	1511	20-ml	2.81	X					TRIP BLANK	
TB 94b	10/6/05	1511	20-ml	2.90		X				TRIP BLANK	
TB 94c	10/6/05	1511	20-ml	2.76						TRIP BLANK/SPARE	

NOTE: For preservation, all samples were stored at a controlled temperature of 4° C and then packed in chemical ice for shipment.

ALD LOG # 0510106 1 of 1

Sampler Relinquishment to HFEF TWCP Sample Custodian: Signature: J M Magnuson

Sample Custodian receipt: J M Magnuson 10/6/05 1515 Signature: Date / Time:

Samples placed in locked storage: J M Magnuson 10/6/05 1515 Signature: Date / Time:

Samples retrieved from locked storage: B. Adams 10/10/05 0800 Signature: Date / Time:

Shipping TID #: 4699

Relinquished By:			Discrepancies / Comments
B. Adams	10-10-05	1015	*Waste Stream ID-RF-S3150-A includes IDCs 700, & 801
Received By:	Date	Time	
S Dooley	10-10-05	1130	
Relinquished By:			
Received By:	Date	Time	

All sample analysis complete and samples removed from custody control and dispositioned. Signature Date

800000

ALD Log # 0510134 1 of 1

Idaho National Laboratory - Waste Characterization Area - TWCP Chain-of-Custody

COC No. WCA-940

[HFEF-OI-6921, Rev. 3e, 5/11/04

Sampling Location: MFC / HFEF / WCA | Analytical Location: INL - INTEC | Sample Batch No.: WCS-05-04

Container Identification No.: 10018178 | Container I.D.C.: ID-RF-S315-A* | Sample Matrix: SOLID

Chain of Custody Initiated: Signature: JM Magnuson 10/10/05 1323 Date / Time: 10/19/05 **

Sample ID Number	Sample Date	Sample Time	Container Size	Sample Weight (gm)	VOC	NHVOC	Semi VOC	Metals	Other	Comments	Disposition
10018178 11V1	10/10/05	1323	20-ml	2.85	X						
10018178 11V2	10/10/05	1325	20-ml	2.95		X					
10018178 11V3	10/10/05	1327	20-ml	2.71						SPARE	
10018178 11V4	10/10/05	1331	20-ml	2.68						SPARE	
10018178 11M1	10/10/05	1333	250-ml	32.28			X	X			
TB 95a	10/10/05	1438	20-ml	2.79	X					TRIP BLANK	
TB 95b	10/10/05	1438	20-ml	2.88		X				TRIP BLANK	
TB 95c	10/10/05	1438	20-ml	2.71						TRIP BLANK/SPARE	

NOTE: For preservation, all samples were stored at a controlled temperature of 4° C and then packed in chemical ice for shipment.

Sampler Relinquishment to HFEF TWCP Sample Custodian: Signature: JM Magnuson

Sample Custodian receipt: Signature: JM Magnuson 10/10/05 1440 Date / Time:

Samples placed in locked storage: Signature: JM Magnuson 10/10/05 1440 Date / Time:

Samples retrieved from locked storage: Signature: B. A... 10-13-05 1000 Date / Time:

Shipping TID #: 4692

Relinquished By:			Discrepancies / Comments
B. A...	10-13-05	1010	*Waste Stream ID-RF-S3150-A includes IDCs 700, & 801
Received By:	Date	Time	** CORRECTED CONSISTENT WITH OTHER FIELD DATA. BGT 10/19/05
B...	10/13/05	1259	
Relinquished By:			
Received By:	Date	Time	

All sample analysis complete and samples removed from custody control and dispositioned. _____ Signature Date

600000

ALD Document: Log 0510134 TWCP-RF_S3150-A.tif - Scanned:10/19/2005 11:29:28 AM

Idaho National Laboratory - Waste Characterization Area - TWCP Chain-of-Custody

[HFEF-OI-6921, Rev. 3e, 5/11/04

LOG # 0510134

COC No. WCA-941

Sampling Location: MFC / HFEF / WCA Analytical Location INL - INTEC Sample Batch No. WCS-05-04

Container Identification No. 10018867 Container I.D.C. ID-RF-S3150-A* Sample Matrix: ~~SOLID~~

Chain of Custody Initiated: Signature J M Magnuson 10/11/05 1257 Date / Time:

Sample ID Number	Sample Date	Sample Time	Container Size	Sample Weight (gm)	VOC	NHVOC	Semi VOC	Metals	Other	Comments	Disposition
10018867 11V1	10/4/05	1257	20-ml	2.56	X						
10018867 11V2	10/11/05	1300	20-ml	2.58		X					
10018867 11V3	10/11/05	1303	20-ml	2.56						SPARE	
10018867 11V4	10/11/05	1305	20-ml	2.68						SPARE	
10018867 11M1	10/11/05	1308	250-ml	30.45			X	X			
TB			20-ml		X					TRIP BLANK	
TB SEE COC	940		20-ml			X				TRIP BLANK	
TB FOR TRIP	BLANKS		20-ml							TRIP BLANK/SPARE	

000010

NOTE: For preservation, all samples were stored at a controlled temperature of 4° C and then packed in chemical ice for shipment.

Sampler Relinquishment to HFEF TWCP Sample Custodian: Signature J M Magnuson

Sample Custodian receipt: Signature: J M Magnuson 10/11/05 1526 Date / Time:

Samples placed in locked storage: Signature: J M Magnuson 10/11/05 1526 Date / Time:

Samples retrieved from locked storage: Signature: B Adams 10-13-05 1000 Date / Time:

Shipping TID #: 4692

Relinquished By:			Discrepancies / Comments
B Adams	10-13-05	1010	*Waste Stream ID-RF-S3150-A includes IDCs 700, & 801
Received By:	Date	Time	
B Eldridge	10/13/05	1259	
Relinquished By:			
Received By:	Date	Time	

All sample analysis complete and samples removed from custody control and dispositioned. _____ Signature Date

ALD Document: Log 0510134 TWCP-RF_S3150-A.tif - Scanned:10/19/2005 11:29:28 AM

ALD LOG # 0510134 TM1

Idaho National Laboratory - Waste Characterization Area - TWCP Chain-of-Custody

COC No. WCA-942

[HFEF-OI-6921, Rev. 3e, 5/11/04]

Sampling Location: MFC / HFEF / WCA | Analytical Location: INL - INTEC | Sample Batch No.: WCS-05-04

Container identification No.: 10018867 | Container I.D.C.: ID-RF-S3150-A* | Sample Matrix: SOLID

Chain of Custody Initiated: Signature: JM Magnuson 10/11/05 1383 Date / Time:

Sample ID Number	Sample Date	Sample Time	Container Size	Sample Weight (gm)	VOC	NHVOC	Semi VOC	Metals	Other	Comments	Disposition
10018867 21V1	10/11/05	1323	20-ml	2.69	X					QC	
10018867 21V2	10/11/05	1325	20-ml	2.92	X					QC	
10018867 21V3	10/11/05	1328	20-ml	2.84	X					QC	
10018867 21V4	10/11/05	1329	20-ml	2.69		X				QC	
10018867 21V5	10/11/05	1331	20-ml	2.73		X				QC	
10018867 21V6	10/11/05	1333	20-ml	2.51		X				QC	
10018867 21V7	10/11/05	1334	20-ml	2.65						SPARE/QC	
10018867 21V8	10/11/05	1336	20-ml	2.64						SPARE/QC	
10018867 21M1	10/11/05	1339	250-ml	31.75			X	X		QC	
TB			20-ml		X					TRIP BLANK	
TB SEE COC 940			20-ml			X				TRIP BLANK	
TB FOR TRIP BLANKS			20-ml							TRIP BLANK/SPARE	

0000011

NOTE: For preservation, all samples were stored at a controlled temperature of 4° C and then packed in chemical ice for shipment.

Sampler Relinquishment to HFEF TWCP Sample Custodian: Signature: JM Magnuson

Sample Custodian receipt: Signature: JM Magnuson 10/11/05 1526 Date / Time:

Samples placed in locked storage: Signature: JM Magnuson 10/11/05 1526 Date / Time:

Samples retrieved from locked storage: B. Adams 10-13-05 0725 Signature Date / Time

1000 QA 10/13/05

Shipping TID #: 4692

Relinquished By:			Discrepancies / Comments
B. Adams	10-13-05	1010	
Received By:	Date	Time	Quality Control Samples.
	10/13/05	1259	1) INNER LABEL HAS WRONG SAMPLE WEIGHT
Relinquished By:			*Waste Stream ID-RF-S3150-A includes IDCs 700, & 801
Received By:	Date	Time	

All sample analysis complete and samples removed from custody control and dispositioned. Signature Date

ALD Document: Log 0510134 TWCP-RF_S3150-A.tif - Scanned:10/19/2005 11:29:28 AM

ALD CUSTODY AREA Sample Tracking Form

Project Name: TWCP-RF/S3150-A Analytical Log #: 051006_6

Custody Area: 209 Environmental/Regulatory Sample: YES

*Lab Sample ID(s)	Date / Time Removed	Relinquished By	Received By	To Lab	Analysis / Procedure	Date / Time Returned	Returned By	Received By	**Comments
5CY99-8	10/10/05 14:20			242	Hazard Index	10/10/05 16:10			
5CY96-1, 5CY98-1, 5CY99-1, 5CY99-2, 5CY99-3	10/13/05 08:44			214	VOC Analysis	10/13/05 13:40			Consumed in Analysis
5CY96-2, 5CY98-2, 5CY99-4, 5CY99-5, 5CY99-6	10/12/05 12:24			211	NHVOC Analysis	10/13/05 13:05			Consumed in Analysis
5CY97-1, 5CZ01-1	10/13/05 08:20			207 / 211	SemiVol Analysis	10/13/05 15:45			
5CY97-1, 5CZ01-1	10/12/05 14:05			207 / 211	Mercury	10/14/05 16:50			
5CY97-1, 5CZ01-1	10/19/05 08:33			207 / 211	Metals	10/19/05 15:36			
	/ / :			207 / 211		/ / :			
5CY99-8	10/17/05 08:20			211	NHVOC ANALYSIS	10/17/05 13:50			CONSUMED IN ANALYSIS
	/ / :					/ / :			
	/ / :					/ / :			

* Multi Lab Sample IDs can be listed on a single line IF and ONLY IF they will be maintained and handled the same; otherwise a separate line should be used for each sample set.

** If consumed in Analysis, document in Comments field.

ALD INTERNAL LAB Sample Tracking Form

Custody Area: 209 Project Name: TWCP-RF/S3150-A Analytical Log #: 051006_6

Environmental/Regulatory Sample: YES

*Lab Spl ID(s): 5CY97-1, 5CZ01-1

Sample Type: ☒ Original Sample ☐ TCLP Extract ☐ Sample Prep ☐ Other: _____

Location From	Location To	Date Time	Relinquished By	Received By	Analysis / Procedure	**Comments
209	207 / 211	10 A 4/05 14:05			Mercury	NA
207 / 211	209	10 P 4/05 14:52			Return Samples	NA
		/ / :				
		/ / :				
		/ / :				
		/ / :				
		/ / :				

* All Sample codes listed on the line above must be maintained and handled as a batch. If any sample is going to be handled differently, a separate tracking form must be used.

** If consumed in Analysis, document in Comments field.

NOTE: Return this form to Custody Area when samples are returned, relinquished, consumed, or disposed.

000013

ALD INTERNAL LAB Sample Tracking Form

Custody Area: 209 Project Name: TWCP-RF/S3150-A Analytical Log #: 051006 6

Environmental/Regulatory Sample: YES

*Lab Spl ID(s): 5CY97-1, 5CZ01-1

Sample Type: ☒ Original Sample ☐ TCLP Extract ☐ Sample Prep ☐ Other: _____

Location From	Location To	Date Time	Relinquished By	Received By	Analysis / Procedure	**Comments
209	207 / 211	10/19/05 08:33	BOP	Kp Madden	Metals	NA
207 / 211	209	10/19/05 15:36	Kp Madden	BOP	Return Samples	NA
		/ / :				
		/ / :				
		/ / :				
		/ / :				
		/ / :				

000014

* All Sample codes listed on the line above must be maintained and handled as a batch. If any sample is going to be handled differently, a separate tracking form must be used.

** If consumed in Analysis, document in Comments field.

NOTE: Return this form to Custody Area when samples are returned, relinquished, consumed, or disposed.

ALD CUSTODY AREA Sample Tracking Form

Project Name: TWCP-RF/S3150-A Analytical Log #: 051010_6

Custody Area: 209 Environmental/Regulatory Sample: YES

*Lab Sample ID(s)	Date / Time Removed	Relinquished By	Received By	To Lab	Analysis / Procedure	Date / Time Returned	Returned By	Received By	**Comments
5CZ76-4	10/10/05 14:32	BCP	[illegible]	242	Hazard Index	10/10/05 16:10	[illegible]	[illegible]	
5CZ76-1, 5CZ78-1, 5CZ79-1	10/13/05 08:45	[illegible]	[illegible]	214	VOC Analysis	10/13/05 13:40	[illegible]	[illegible]	Consumed in Analysis
5CZ76-2, 5CZ78-2, 5CZ79-2	10/12/05 12:24	BCP	[illegible]	211	NHVOC Analysis	10/13/05 13:05	[illegible]	[illegible]	Consumed in Analysis
5CZ77-1, 5CZ80-1	10/13/05 08:20	[illegible]	SRL	207/211	SemiVol Analysis	10/13/05 15:45	[illegible]	[illegible]	N/A
5CZ77-1, 5CZ80-1	10/26/05 14:05	[illegible]	[illegible]	207 / 211	Mercury	10/26/05 16:50	[illegible]	[illegible]	
5CZ77-1, 5CZ80-1	10/19/05 08:35	BCP	[illegible]	207 / 211	Metals	10/19/05 15:37	[illegible]	[illegible]	
	/ / :			207 / 211		/ / :			
5CZ79-4	10/17/05 08:22	BCP	[illegible]	211	NHVOC ANALYSIS	10/17/05 13:50	[illegible]	[illegible]	CONSUMED IN ANALYSIS
	/ / :					/ / :			
	/ / :					/ / :			

* Multi Lab Sample IDs can be listed on a single line IF and ONLY IF they will be maintained and handled the same; otherwise a separate line should be used for each sample set.

000015

ALD INTERNAL LAB Sample Tracking Form

Custody Area: 209 Project Name: TWCP-RF/S3150-A Analytical Log #: 051010_6

Environmental/Regulatory Sample: YES

*Lab Spl ID(s): 5CZ77-1, 5CZ80-1

Sample Type: ☑ Original Sample ☐ TCLP Extract ☐ Sample Prep ☐ Other: _____

Location From	Location To	Date Time	Relinquished By	Received By	Analysis / Procedure	**Comments
209	207 / 211	10/26/05 14:05			Mercury	NA
207 / 211	209	10/26/05 16:50			Return Samples	NA
		/ / :				
		/ / :				
		/ / :				
		/ / :				
		/ / :				

000015

* All Sample codes listed on the line above must be maintained and handled as a batch. If any sample is going to be handled differently, a separate tracking form must be used.

NOTE: Return this form to Custody Area when samples are returned, relinquished, consumed, or disposed.

ALD INTERNAL LAB Sample Tracking Form

Custody Area: 209 Project Name: TWCP-RF/S3150-A Analytical Log #: 051010 6

Environmental/Regulatory Sample: YES

*Lab Spl ID(s): 5CZ77-1, 5CZ80-1

Sample Type: ☒ Original Sample ☐ TCLP Extract ☐ Sample Prep ☐ Other: _____

Location From	Location To	Date Time	Relinquished By	Received By	Analysis / Procedure	**Comments
209	207 / 211	10/19/05 08:35	BSF	Kyle Madden	Metals	NA
207 / 211	209	10/19/05 15:37	Kyle Madden	BSF	Return Samples	NA
		/ / :				
		/ / :				
		/ / :				
		/ / :				
		/ / :				

000017

* All Sample codes listed on the line above must be maintained and handled as a batch. If any sample is going to be handled differently, a separate tracking form must be used.

NOTE: Return this form to Custody Area when samples are returned, relinquished, consumed, or disposed.

ALD CUSTODY AREA Sample Tracking Form

Project Name: TWCP-RF/S3150-A Analytical Log #: 051013_4

Custody Area: 209 Environmental/Regulatory Sample: YES

*Lab Sample ID(s)	Date / Time Removed	Relinquished By	Received By	To Lab	Analysis / Procedure	Date / Time Returned	Returned By	Received By	**Comments
5DB29-4	10/17/05 08:15			242	Hazard Index	10/17/05 16:35			
5DB26-1, 5DB28-1, 5DB29-1, 5DB31-1, 5DB31-2, 5DB31-3	10/18/05 10:05			214	VOC Analysis	10/18/05 13:40			Consumed in Analysis
5DB26-2, 5DB28-2, 5DB29-2, 5DB31-4, 5DB31-5, 5DB31-6	10/17/05 09:38	BOP		211	NHVOC Analysis	10/17/05 13:50			Returned ~~Consumed In Analysis~~
5DB27-1, 5DB30-1, 5DB32-1	10/18/05 08:40			~~207~~/211	SemiVol Analysis	10/18/05 20/17/05 15:50			
5DB27-1, 5DB30-1, 5DB32-1	10/19/05 14:05			207 / 211	Mercury	10/26/05 16:58			
5DB27-1, 5DB30-1, 5DB32-1	10/19/05 08:28	BOP		~~207~~/211	Metals	10/19/05 15:38			N/A
5DB29-4, 5DB31-8	10/19/05 07:53	BOP		BET 10/19/05 ~~207~~/211	NHVOC ANALYSIS	10/19/05 09:10			CONSUMED IN ANALYSIS
5DB27-1, 5DB30-1, 5DB32-1	10/24/05 08:48	BOP		262/211	SEMIVOL ANALYSIS	10/24/05 12:50			N/A
	/ / :					/ / :			
	/ / :					/ / :			

* Multi Lab Sample IDs can be listed on a single line IF and ONLY IF they will be maintained and handled the same; otherwise a separate line should be used for each sample set.

000018

ALD INTERNAL LAB Sample Tracking Form

Custody Area: 209 Project Name: TWCP-RF/S3150-A Analytical Log #: 051013_4

Environmental/Regulatory Sample: YES

*Lab Spl ID(s): 5DB27-1, 5DB30-1, 5DB32-1

Sample Type: ☒ Original Sample ☐ TCLP Extract ☐ Sample Prep ☐ Other: _____

Location From	Location To	Date Time	Relinquished By	Received By	Analysis / Procedure	**Comments
209	207 / 211	10/26/05 1:45			Mercury	N/A
207 / 211	209	10/26/05 16:50			Return Samples	N/A
		/ / :				
		/ / :				
		/ / :				
		/ / :				
		/ / :				

000019

* All Sample codes listed on the line above must be maintained and handled as a batch. If any sample is going to be handled differently, a separate tracking form must be used.

NOTE: Return this form to Custody Area when samples are returned, relinquished, consumed, or disposed.

ALD INTERNAL LAB Sample Tracking Form

Custody Area: 209 Project Name: TWCP-RF/S3150-A Analytical Log #: 051013_4

Environmental/Regulatory Sample: YES

*Lab Spl ID(s): 5DB27-1, 5DB30-1, 5DB32-1

Sample Type: ☒ Original Sample ☐ TCLP Extract ☐ Sample Prep ☐ Other: _____

Location From	Location To	Date Time	Relinquished By	Received By	Analysis / Procedure	**Comments
209	207 / 211	10/19/05 08:28	BA	Ky Maddox	Metals	NA
207 / 211	209	10/19/05 15:38	Ky Maddox	BA	Return Samples	NA
		/ / :				
		/ / :				
		/ / :				
		/ / :				
		/ / :				

020000

* All Sample codes listed on the line above must be maintained and handled as a batch. If any sample is going to be handled differently, a separate tracking form must be used.

NOTE: Return this form to Custody Area when samples are returned, relinquished, consumed, or disposed.

Section 3

Analysis Results

Batch Narrative

Transuranic Waste Characterization Program (TWCP) - RF- S3150-A Waste Drums

Sampling Batch Number: WCS-05-04

Analytical Batch ID: 0510066

Data Report Number: ALD05034M

ICP-AE

Sample Preparation

The TWCP RF-S3150-A samples were prepared on 10/19/05 through 10/20/05 according to ACMM Method 8909, Revision 9. The following table summarizes the preparation batch.

Log Number	Field Sample ID	Lab Sample ID
0510066	1001850311M1	5CY97
0510066	1001850311M1S & SD	5CY97S & SD
0510066	1001850321M1	5CZ01
0510106	1001688611M1	5CZ77
0510106	1001887511M1	5CZ80
0510134	1001817811M1	5DB27
0510134	1001886711M1	5DB30
0510134	1001886721M1	5DB32

Both an LCS and a Laboratory Blank were prepared with the samples. The LCS was prepared using aliquots from an Environmental Resource Associates Priority PollutnT Inorganic Soil Standard, Lot D038540. Duplicate matrix spikes were prepared on sample 5CY97.

Sample Analysis

The analytical run was performed on 10/25/05 following ACMM Method 2901, Revision 3. QC requirements set forth in TWCP documentation were followed. Background corrections were applied by the instrument computer during data acquisition. During the analytical run, the five potentially interfering elements - aluminum, calcium, magnesium, iron and uranium were quantitatively analyzed with the target analytes to determine their concentrations in the samples. It was determined that none of these elements were at interfering concentrations in the dilutions analyzed. Therefore, no interelement corrections were applied to any of the reported sample results.

During the technical review of the analytical data, the following observations were noted:

1. Each of the spike recoveries was within the required 80-120% range for the Matrix Spike (MS) and Matrix Spike Duplicate (MSD) on sample 5CY97. The precision (RPD) for all elements was within the required ± 30% criteria.

2. A serial dilution analysis was performed on sample 5DB32. The percent differences (%D's) were within limits for all elements whose concentrations were greater than fifty times the IDL.

3. A post-digestion spike analysis was performed on sample 5DB32. The spike recoveries for all elements were within the required 75-125% acceptance criteria.

4. The concentrations of Ni and Zn in the Laboratory Blank prepared with the samples were 1.49 and 3.87 mg/Kg respectively. Although above the detection limits, these concentrations are $\leq$ 3 times the PRDLs for these elements. The nickel and zinc concentrations were greater than five times the IDL; therefore, no "J" qualifiers were needed. Since the nickel and zinc concentrations in this blank were greater than 20% of the concentrations in 5CY97 and 5CZ01, "B" qualifiers were required for the reported nickel and zinc data for these samples. "B" qualifiers were also required for the reported nickel results for samples 5CZ77, 5CZ80 and 5DB27 due to the concentration of nickel in this blank. In addition, a "B" qualifier was required for sample 5DB30 due to the concentration of zinc in the Laboratory Blank.

5. Nickel was detected in one of the Continuing Calibration Blanks (CCBs) at a concentration greater than the IDL. The nickel data for this CCB was reported with a "J" qualifier. No "B" qualifiers were required for the reported sample data due to the concentration of nickel in this calibration verification blank.

6. Titanium, manganese and copper were monitored in each of the samples for potential interferences. The profiles of the samples indicated that these three elements were not at interfering concentrations in the dilutions analyzed.

Mercury CVAA

Sample Preparation

The TWCP RF-S3150-A samples were prepared on 10/26/05 through 10/27/05 according to ACMM 2810, Revision 3. Duplicate Matrix Spikes were prepared on sample 5CY97. Approximately 0.5 grams of each sample diluted to 50 mL with reagents was used in the sample preparation. All samples, spikes, calibration standards and ICV were taken through the digestion procedure. Both an LCS and a Laboratory Blank were prepared with the samples. The LCS was prepared using aliquots from an Environmental Resource Associates Priority PollutnT Inorganic Soil Standard, Lot D038540.

Sample Analysis

The TWCP RF-S3150-A samples were analyzed on 10/27/05, according to ACMM 2810, Revision 3. The QC requirements set forth in TWCP documentation were followed during the analysis.

The duplicate spikes prepared on sample 5CY97 were analyzed, and each of the spike recoveries was within the required range of 80-120%. These spikes were recovered at 86.4% and 88.0% in the Matrix Spike (MS) and Matrix Spike Duplicate (MSD) respectively. The precision (RPD) of these spiked duplicates was 1.7%, which is within the required limits.

No serial dilution or post-digestion spike analyses were performed with this batch of samples since the MS and MSD were recovered within the required range.

All other QC samples were analyzed within the prescribed limits.

11/2/05

Jeff Laug
Inorganic Chemistry Supervisor

Idaho National Engineering and Environmental Laboratory
Analytical Laboratories Department

TRU Waste Characterization Program

Data Qualifier Flag Definitions for Metals

Flag	Definition
B	Analyte blank concentration (laboratory or calibration verification) ≥ 20% of the sample concentration prior to dilution correction
H	Holding time exceeded
J	Analyte concentration ≥ IDL but < 5 x IDL before dilution correction
U	Analyte was undetected (reported as sample-specific IDL, corrected for dilution)
Z	One or more QC sample results do not meet acceptance criteria

Metals Method Codes

Code	Definition
P	ICP-AES per ACMM-2901
V	CVAA per ACMM-2810

TOTAL METALS ANALYSIS DATA SHEET

IDAHO CLEANUP PROJECT

TRANSURANIC WASTE CHARACTERIZATION PGM

Field Sample ID: 1001850311M1
Lab Sample ID: 5CY97
Sampling Batch No.: WCS-05-04
Data Report No. : ALD05034M
Date Sampled: 10/04/2005
Analytical Batch ID: 0510066
Date Digested, ICP: 10/20/2005
Date Digested, CVAA: 10/27/2005
Method, CVAA: ACMM-2810-R3
Instrument ID, CVAA: CVHG-1
Method, ICP-AES Prep.: ACMM-8909-R9
Microwave Digester ID: MW-3
Method, ICP-AES Analysis: ACMM-2901-R3
Instrument ID, ICP-AES: ICP-4

Concentration Units: mg/kg

CAS No.	Analyte	Concentration	C	Q	Date and Time of Analysis	Holding Time, Days	M
7440-36-0	Antimony	6.0E-01	U		10/25/2005 11:34:38	21	P
7440-38-2	Arsenic	8.0E-01	U		10/25/2005 11:34:38	21	P
7440-39-3	Barium	1.7E+00			10/25/2005 11:34:38	21	P
7440-41-7	Beryllium	1.0E-01	U		10/25/2005 11:34:38	21	P
7440-43-9	Cadmium	1.0E-01	U		10/25/2005 11:34:38	21	P
7440-47-3	Chromium	9.4E-01			10/25/2005 11:34:38	21	P
7439-92-1	Lead	1.7E+00	J		10/25/2005 11:34:38	21	P
7439-97-6	Mercury	1.0E-02	U		10/27/2005 09:13:23	23	V
7440-02-0	Nickel	1.3E+00		B	10/25/2005 11:34:38	21	P
7782-49-2	Selenium	6.0E-01	U		10/25/2005 12:58:04	21	P
7440-22-4	Silver	6.5E-01	J		10/25/2005 11:34:38	21	P
7440-28-0	Thallium	1.0E+00	U		10/25/2005 11:34:38	21	P
7440-62-2	Vanadium	3.5E-01	J		10/25/2005 11:34:38	21	P
7440-66-6	Zinc	1.4E+01		B	10/25/2005 11:34:38	21	P

C = concentration qualifier; Q = data qualifier; M = method code;

Comments:

TOTAL METALS ANALYSIS DATA SHEET

IDAHO CLEANUP PROJECT

TRANSURANIC WASTE CHARACTERIZATION PGM

Field Sample ID:	1001850321M1	Lab Sample ID:	5CZ01
Sampling Batch No.:	WCS-05-04	Data Report No. :	ALD05034M
Date Sampled:	10/04/2005	Analytical Batch ID:	0510066
Date Digested, ICP:	10/20/2005	Date Digested, CVAA:	10/27/2005
Method, CVAA:	ACMM-2810-R3	Instrument ID, CVAA:	CVHG-1
Method, ICP-AES Prep.:	ACMM-8909-R9	Microwave Digester ID:	MW-3
Method, ICP-AES Analysis:	ACMM-2901-R3	Instrument ID, ICP-AES:	ICP-4

Concentration Units: mg/kg

CAS No.	Analyte	Concentration	C	Q	Date and Time of Analysis	Holding Time, Days	M
7440-36-0	Antimony	6.0E-01	U		10/25/2005 12:04:27	21	P
7440-38-2	Arsenic	8.0E-01	U		10/25/2005 12:04:27	21	P
7440-39-3	Barium	1.9E+00			10/25/2005 12:04:27	21	P
7440-41-7	Beryllium	1.0E-01	U		10/25/2005 12:04:27	21	P
7440-43-9	Cadmium	1.0E-01	U		10/25/2005 12:04:27	21	P
7440-47-3	Chromium	5.0E-01			10/25/2005 12:04:27	21	P
7439-92-1	Lead	1.6E+00	U		10/25/2005 12:04:27	21	P
7439-97-6	Mercury	1.0E-02	U		10/27/2005 09:20:57	23	V
7440-02-0	Nickel	1.6E+00		B	10/25/2005 12:04:27	21	P
7782-49-2	Selenium	6.0E-01	U		10/25/2005 13:09:11	21	P
7440-22-4	Silver	8.9E-01	J		10/25/2005 12:04:27	21	P
7440-28-0	Thallium	1.0E+00	U		10/25/2005 12:04:27	21	P
7440-62-2	Vanadium	3.0E-01	J		10/25/2005 12:04:27	21	P
7440-66-6	Zinc	1.7E+01		B	10/25/2005 12:04:27	21	P

C = concentration qualifier; Q = data qualifier; M = method code;

Comments:

TOTAL METALS ANALYSIS DATA SHEET

IDAHO CLEANUP PROJECT

TRANSURANIC WASTE CHARACTERIZATION PGM

Field Sample ID: 1001688611M1
Lab Sample ID: 5CZ77
Sampling Batch No.: WCS-05-04
Data Report No. : ALD05034M
Date Sampled: 10/06/2005
Analytical Batch ID: 0510066
Date Digested, ICP: 10/20/2005
Date Digested, CVAA: 10/27/2005
Method, CVAA: ACMM-2810-R3
Instrument ID, CVAA: CVHG-1
Method, ICP-AES Prep.: ACMM-8909-R9
Microwave Digester ID: MW-3
Method, ICP-AES Analysis: ACMM-2901-R3
Instrument ID, ICP-AES: ICP-4

Concentration Units: mg/kg

CAS No.	Analyte	Concentration	C	Q	Date and Time of Analysis	Holding Time, Days	M
7440-36-0	Antimony	6.0E-01	U		10/25/2005 14:36:13	19	P
7440-38-2	Arsenic	8.0E-01	U		10/25/2005 14:36:13	19	P
7440-39-3	Barium	1.2E+01			10/25/2005 14:36:13	19	P
7440-41-7	Beryllium	1.4E-01	J		10/25/2005 14:36:13	19	P
7440-43-9	Cadmium	1.0E-01	U		10/25/2005 14:36:13	19	P
7440-47-3	Chromium	2.8E+00			10/25/2005 14:36:13	19	P
7439-92-1	Lead	1.6E+00	U		10/25/2005 14:36:13	19	P
7439-97-6	Mercury	8.1E-02			10/27/2005 09:23:30	21	V
7440-02-0	Nickel	4.1E+00		B	10/25/2005 14:36:13	19	P
7782-49-2	Selenium	6.0E-01	U		10/25/2005 14:36:13	19	P
7440-22-4	Silver	5.5E-01	J		10/25/2005 14:36:13	19	P
7440-28-0	Thallium	1.0E+00	U		10/25/2005 14:36:13	19	P
7440-62-2	Vanadium	3.7E-01	J		10/25/2005 14:36:13	19	P
7440-66-6	Zinc	2.2E+01			10/25/2005 14:36:13	19	P

C = concentration qualifier; Q = data qualifier; M = method code;

Comments:

TOTAL METALS ANALYSIS DATA SHEET

IDAHO CLEANUP PROJECT

TRANSURANIC WASTE CHARACTERIZATION PGM

Field Sample ID:	1001887511M1	Lab Sample ID:	5CZ80
Sampling Batch No.:	WCS-05-04	Data Report No. :	ALD05034M
Date Sampled:	10/07/2005	Analytical Batch ID:	0510066
Date Digested, ICP:	10/20/2005	Date Digested, CVAA:	10/27/2005
Method, CVAA:	ACMM-2810-R3	Instrument ID, CVAA:	CVHG-1
Method, ICP-AES Prep.:	ACMM-8909-R9	Microwave Digester ID:	MW-3
Method, ICP-AES Analysis:	ACMM-2901-R3	Instrument ID, ICP-AES:	ICP-4

Concentration Units: mg/kg

CAS No.	Analyte	Concentration	C	Q	Date and Time of Analysis	Holding Time, Days	M
7440-36-0	Antimony	6.0E-01	U		10/25/2005 14:45:10	18	P
7440-38-2	Arsenic	8.0E-01	U		10/25/2005 14:45:10	18	P
7440-39-3	Barium	1.9E+01			10/25/2005 14:45:10	18	P
7440-41-7	Beryllium	1.2E+00			10/25/2005 14:45:10	18	P
7440-43-9	Cadmium	1.0E-01	U		10/25/2005 14:45:10	18	P
7440-47-3	Chromium	1.8E+00			10/25/2005 14:45:10	18	P
7439-92-1	Lead	4.8E+00	J		10/25/2005 14:45:10	18	P
7439-97-6	Mercury	9.9E-03	U		10/27/2005 09:54:25	20	V
7440-02-0	Nickel	2.5E+00		B	10/25/2005 14:45:10	18	P
7782-49-2	Selenium	6.0E-01	U		10/25/2005 14:45:10	18	P
7440-22-4	Silver	4.9E-01	J		10/25/2005 14:45:10	18	P
7440-28-0	Thallium	1.0E+00	U		10/25/2005 14:45:10	18	P
7440-62-2	Vanadium	2.7E-01	J		10/25/2005 14:45:10	18	P
7440-66-6	Zinc	2.6E+01			10/25/2005 14:45:10	18	P

C = concentration qualifier; Q = data qualifier; M = method code;

Comments:

TOTAL METALS ANALYSIS DATA SHEET

IDAHO CLEANUP PROJECT

TRANSURANIC WASTE CHARACTERIZATION PGM

Field Sample ID:	1001817811M1	Lab Sample ID:	5DB27
Sampling Batch No.:	WCS-05-04	Data Report No. :	ALD05034M
Date Sampled:	10/10/2005	Analytical Batch ID:	0510066
Date Digested, ICP:	10/20/2005	Date Digested, CVAA:	10/27/2005
Method, CVAA:	ACMM-2810-R3	Instrument ID, CVAA:	CVHG-1
Method, ICP-AES Prep.:	ACMM-8909-R9	Microwave Digester ID:	MW-3
Method, ICP-AES Analysis:	ACMM-2901-R3	Instrument ID, ICP-AES:	ICP-4

Concentration Units: mg/kg

CAS No.	Analyte	Concentration	C	Q	Date and Time of Analysis	Holding Time, Days	M
7440-36-0	Antimony	6.0E-01	U		10/25/2005 14:53:41	15	P
7440-38-2	Arsenic	8.0E-01	U		10/25/2005 14:53:41	15	P
7440-39-3	Barium	3.2E+00			10/25/2005 14:53:41	15	P
7440-41-7	Beryllium	1.0E-01	U		10/25/2005 14:53:41	15	P
7440-43-9	Cadmium	1.0E-01	U		10/25/2005 14:53:41	15	P
7440-47-3	Chromium	3.0E-01	J		10/25/2005 14:53:41	15	P
7439-92-1	Lead	1.6E+00	U		10/25/2005 14:53:41	15	P
7439-97-6	Mercury	1.0E-02	U		10/27/2005 09:56:54	17	V
7440-02-0	Nickel	1.5E+00		B	10/25/2005 14:53:41	15	P
7782-49-2	Selenium	6.0E-01	U		10/25/2005 14:53:41	15	P
7440-22-4	Silver	7.6E-01	J		10/25/2005 14:53:41	15	P
7440-28-0	Thallium	1.0E+00	U		10/25/2005 14:53:41	15	P
7440-62-2	Vanadium	2.2E-01	J		10/25/2005 14:53:41	15	P
7440-66-6	Zinc	2.3E+01			10/25/2005 14:53:41	15	P

C = concentration qualifier; Q = data qualifier; M = method code;

Comments:

TOTAL METALS ANALYSIS DATA SHEET

IDAHO CLEANUP PROJECT

TRANSURANIC WASTE CHARACTERIZATION PGM

Field Sample ID: 1001886711M1
Lab Sample ID: 5DB30
Sampling Batch No.: WCS-05-04
Data Report No. : ALD05034M
Date Sampled: 10/11/2005
Analytical Batch ID: 0510066
Date Digested, ICP: 10/20/2005
Date Digested, CVAA: 10/27/2005
Method, CVAA: ACMM-2810-R3
Instrument ID, CVAA: CVHG-1
Method, ICP-AES Prep.: ACMM-8909-R9
Microwave Digester ID: MW-3
Method, ICP-AES Analysis: ACMM-2901-R3
Instrument ID, ICP-AES: ICP-4

Concentration Units: mg/kg

CAS No.	Analyte	Concentration	C	Q	Date and Time of Analysis	Holding Time, Days	M
7440-36-0	Antimony	6.0E-01	U		10/25/2005 15:04:18	14	P
7440-38-2	Arsenic	1.8E+00	J		10/25/2005 15:04:18	14	P
7440-39-3	Barium	4.4E+01			10/25/2005 15:04:18	14	P
7440-41-7	Beryllium	1.4E+00			10/25/2005 15:04:18	14	P
7440-43-9	Cadmium	2.0E+00			10/25/2005 15:04:18	14	P
7440-47-3	Chromium	1.4E+01			10/25/2005 15:04:18	14	P
7439-92-1	Lead	5.2E+00	J		10/25/2005 15:04:18	14	P
7439-97-6	Mercury	3.9E-02	J		10/27/2005 09:49:26	16	V
7440-02-0	Nickel	1.2E+01			10/25/2005 15:04:18	14	P
7782-49-2	Selenium	1.4E+00	J		10/25/2005 15:04:18	14	P
7440-22-4	Silver	4.1E-01	J		10/25/2005 15:04:18	14	P
7440-28-0	Thallium	1.0E+00	U		10/25/2005 15:04:18	14	P
7440-62-2	Vanadium	2.8E+01			10/25/2005 15:04:18	14	P
7440-66-6	Zinc	1.9E+01		B	10/25/2005 15:04:18	14	P

C = concentration qualifier; Q = data qualifier; M = method code;

Comments:

TOTAL METALS ANALYSIS DATA SHEET

IDAHO CLEANUP PROJECT

TRANSURANIC WASTE CHARACTERIZATION PGM

Field Sample ID: 1001886721M1
Lab Sample ID: 5DB32
Sampling Batch No.: WCS-05-04
Data Report No. : ALD05034M
Date Sampled: 10/11/2005
Analytical Batch ID: 0510066
Date Digested, ICP: 10/20/2005
Date Digested, CVAA: 10/27/2005
Method, CVAA: ACMM-2810-R3
Instrument ID, CVAA: CVHG-1
Method, ICP-AES Prep.: ACMM-8909-R9
Microwave Digester ID: MW-3
Method, ICP-AES Analysis: ACMM-2901-R3
Instrument ID, ICP-AES: ICP-4

Concentration Units: mg/kg

CAS No.	Analyte	Concentration	C	Q	Date and Time of Analysis	Holding Time, Days	M
7440-36-0	Antimony	6.0E-01	U		10/25/2005 15:14:14	14	P
7440-38-2	Arsenic	1.8E+00	J		10/25/2005 15:14:14	14	P
7440-39-3	Barium	4.8E+01			10/25/2005 15:36:01	14	P
7440-41-7	Beryllium	1.5E+00			10/25/2005 15:14:14	14	P
7440-43-9	Cadmium	2.1E+00			10/25/2005 15:36:01	14	P
7440-47-3	Chromium	1.5E+01			10/25/2005 15:36:01	14	P
7439-92-1	Lead	4.7E+00	J		10/25/2005 15:14:14	14	P
7439-97-6	Mercury	3.6E-02	J		10/27/2005 09:51:56	16	V
7440-02-0	Nickel	1.3E+01			10/25/2005 15:36:01	14	P
7782-49-2	Selenium	1.9E+00	J		10/25/2005 15:14:14	14	P
7440-22-4	Silver	4.2E-01	J		10/25/2005 15:14:14	14	P
7440-28-0	Thallium	9.9E-01	U		10/25/2005 15:14:14	14	P
7440-62-2	Vanadium	3.0E+01			10/25/2005 15:36:01	14	P
7440-66-6	Zinc	2.6E+01			10/25/2005 15:36:01	14	P

C = concentration qualifier; Q = data qualifier; M = method code;

Comments:

Section 4

Batch Quality Control Results

LABORATORY CONTROL SAMPLE

IDAHO CLEANUP PROJECT
ANALYTICAL LABORATORIES DEPARTMENT

TRANSURANIC WASTE CHARACTERIZATION PGM

LCS Source, CVAA: ERA Lot D038540
LCS Source, ICP-AES: ERA Lot D038540
Method, CVAA: ACMM-2810-R3
Method, ICP-AES Prep.: ACMM-8909-R9
Method, ICP-AES Analysis: ACMM-2901-R3

Data Report Number : ALD05034M
Analytical Batch ID: 0510066
LCS ID, CVAA: LCS803-47
LCS ID, ICP-AES: LCS900-22

Concentration Units: mg/kg

Analyte	True	Found	C	Control Limits Low	Control Limits High	%R	M
Antimony	119.80	113.00		79.4	160.0	94.3	P
Arsenic	112.69	117.50		94.7	131.0	104.3	P
Barium	349.52	325.20		297.0	402.0	93.0	P
Beryllium	137.20	144.40		118.0	156.0	105.2	P
Cadmium	102.58	99.48		88.3	117.0	97.0	P
Chromium	179.96	171.80		154.0	206.0	95.5	P
Lead	104.64	107.90		88.7	121.0	103.1	P
Mercury	3.71	3.61		2.5	4.9	97.3	V
Nickel	135.97	127.80		116.0	156.0	94.0	P
Selenium	174.54	177.70		148.0	201.0	101.8	P
Silver	81.27	76.43		66.9	95.7	94.0	P
Thallium	139.42	146.30		113.0	166.0	104.9	P
Vanadium	140.85	137.50		118.0	164.0	97.6	P
Zinc	207.55	189.52		174.0	241.0	91.3	P

C = concentration qualifier; M = method code

MATRIX SPIKE RECOVERY

IDAHO CLEANUP PROJECT
ANALYTICAL LABORATORIES DEPARTMENT

TRANSURANIC WASTE CHARACTERIZATION PGM

Field Sample ID #: 1001850311M1S
Method, CVAA: ACMM-2810-R3
Method, ICP-AES Prep.: ACMM-8909-R9
Method, ICP-AES Analysis : ACMM-2901-R3

Lab Sample ID: 5CY97S
Data Report Number: ALD05034M
Analytical Batch ID: 0510066

Concentration Units: mg/kg

Analyte	Spike Sample Result	C	Sample Result	C	Spike Added	%R	Q	M
Antimony	89.1200		0.6000	U	100.00	89.1		P
Arsenic	98.2700		0.8000	U	100.00	98.3		P
Barium	88.1800		1.6700		100.00	86.5		P
Beryllium	89.4200		0.1000	U	100.00	89.4		P
Cadmium	17.1200		0.1000	U	20.00	85.6		P
Chromium	90.1100		0.9400		100.00	89.2		P
Lead	90.8600		1.7300	J	100.00	89.1		P
Mercury	0.3455		0.0100	U	0.40	86.4		V
Nickel	87.9100		1.2700		100.00	86.6		P
Selenium	20.7500		0.6000	U	20.00	103.8		P
Silver	90.4200		0.6500	J	100.00	89.8		P
Thallium	80.6200		1.0000	U	100.00	80.6		P
Vanadium	89.0900		0.3500	J	100.00	88.7		P
Zinc	95.8700		14.1800		100.00	81.7		P

C = concentration qualifier; Q = data qualifier; M = method code

Comments:

MATRIX SPIKE RECOVERY

IDAHO CLEANUP PROJECT
ANALYTICAL LABORATORIES DEPARTMENT

TRANSURANIC WASTE CHARACTERIZATION PGM

Field Sample ID #: 1001850311M1SD
Method, CVAA: ACMM-2810-R3
Method, ICP-AES Prep.: ACMM-8909-R9
Method, ICP-AES Analysis : ACMM-2901-R3

Lab Sample ID: 5CY97SD
Data Report Number: ALD05034M
Analytical Batch ID: 0510066

Concentration Units: mg/kg

Analyte	Spike Sample Result	C	Sample Result	C	Spike Added	%R	Q	M
Antimony	83.5400		0.6000	U	100.00	83.5		P
Arsenic	96.0900		0.8000	U	100.00	96.1		P
Barium	87.1800		1.6700		100.00	85.5		P
Beryllium	90.0100		0.1000	U	100.00	90.0		P
Cadmium	16.6800		0.1000	U	20.00	83.4		P
Chromium	89.3000		0.9400		100.00	88.4		P
Lead	92.8200		1.7300	J	100.00	91.1		P
Mercury	0.3518		0.0100	U	0.40	88.0		V
Nickel	87.5800		1.2700		100.00	86.3		P
Selenium	21.0700		0.6000	U	20.00	105.3		P
Silver	86.4100		0.6500	J	100.00	85.8		P
Thallium	81.9700		1.0000	U	100.00	82.0		P
Vanadium	91.0100		0.3500	J	100.00	90.7		P
Zinc	97.1500		14.1800		100.00	83.0		P

C = concentration qualifier; Q = data qualifier; M = method code

Comments:

POST DIGESTION SPIKE RECOVERY

IDAHO CLEANUP PROJECT
ANALYTICAL LABORATORIES DEPARTMENT
TRANSURANIC WASTE CHARACTERIZATION PGM

Field Sample ID: 1001886721M1A
Lab Sample ID: 5DB32A
Method, CVAA: ACMM-2810-R3
Data Report Number: ALD05034M
Method, ICP-AES Prep.: ACMM-8909-R9
Analytical Batch ID: 0510066
Method, ICP-AES Analysis : ACMM-2901-R3

Concentration Units: ug/L

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	%R	Q	M
Antimony	962.10		6.00	U	980.39	98.1		P
Arsenic	976.80		17.55	J	980.39	97.8		P
Barium	1322.00		475.69		980.39	86.3		P
Beryllium	1005.00		14.80		980.39	101.0		P
Cadmium	887.90		20.98		980.39	88.4		P
Chromium	1058.00		149.61		980.39	92.7		P
Lead	966.60		46.37	J	980.39	93.9		P
Mercury						NA		V
Nickel	1026.00		129.22		980.39	91.5		P
Selenium	1076.00		18.82	J	980.39	107.8		P
Silver	891.80		4.12	J	980.39	90.5		P
Thallium	968.70		10.00	U	980.39	98.8		P
Vanadium	1238.00		293.43		980.39	96.3		P
Zinc	1160.00		254.02		980.39	92.4		P

C = concentration qualifier; Q = data qualifier; M = method code

Comments:

MATRIX SPIKE DUPLICATE AGREEMENT

IDAHO CLEANUP PROJECT
ANALYTICAL LABORATORIES DEPARTMENT

TRANSURANIC WASTE CHARACTERIZATION PGM

Field Sample ID: 1001850311M1
Lab Sample ID: 5CY97
Method, CVAA: ACMM-2810-R3
Data Report Number : ALD05034M
Method, ICP-AES Prep.: ACMM-8909-R9
Analytical Batch ID: 0510066
Method, ICP-AES Analysis: ACMM-2901-R3

Concentration Units: mg/kg

Analyte	Matrix Spike Result	C	Matrix Spike Duplicate Result	C	RPD	Q	M
Antimony	89.120		83.540		6.5		P
Arsenic	98.270		96.090		2.2		P
Barium	88.180		87.180		1.1		P
Beryllium	89.420		90.010		0.7		P
Cadmium	17.120		16.680		2.6		P
Chromium	90.110		89.300		0.9		P
Lead	90.860		92.820		2.1		P
Mercury	0.346		0.352		1.7		V
Nickel	87.910		87.580		0.4		P
Selenium	20.750		21.070		1.5		P
Silver	90.420		86.410		4.5		P
Thallium	80.620		81.970		1.7		P
Vanadium	89.090		91.010		2.1		P
Zinc	95.870		97.150		1.3		P

RPD = relative percent difference;
C = concentration qualifier; Q = data qualifier; M = method code

SERIAL DILUTION AGREEMENT

IDAHO CLEANUP PROJECT
ANALYTICAL LABORATORIES DEPARTMENT

TRANSURANIC WASTE CHARACTERIZATION PGM

Field Sample ID: 1001886721M1L
Method, CVAA: ACMM-2810-R3
Method, ICP-AES Prep.: ACMM-8909-R9
Method, ICP-AES Analysis : ACMM-2901-R3

Lab Sample ID: 5DB32L
Data Report No. : ALD05034M
Analytical Batch ID: 0510066

Concentration Units: ug/L

Analyte	Sample Result	C	Serial Dilution Result	C	%Difference	Q	M
Antimony	6.00	U	30.00	U			P
Arsenic	17.90	J	40.00	U			P
Barium	485.20		518.00		6.8		P
Beryllium	15.10		16.50	J	9.3		P
Cadmium	21.40		25.50		19.2		P
Chromium	152.60		163.50		7.1		P
Lead	47.30	J	80.00	U			P
Mercury					NA		V
Nickel	131.80		142.50		8.1		P
Selenium	19.20	J	30.00	U			P
Silver	4.20	J	15.00	U			P
Thallium	10.00	U	50.00	U			P
Vanadium	299.30		324.00		8.3		P
Zinc	259.10		279.00		7.7		P

C = concentration qualifier; Q = data qualifier; M = method code

Data Updated: 11/01/2005 16:04:53

Section 5

Instrument Calibration and Quality Control Results

INITIAL AND CONTINUING CALIBRATION VERIFICATION

IDAHO CLEANUP PROJECT
ANALYTICAL LABORATORIES DEPARTMENT

TRANSURANIC WASTE CHARACTERIZATION PGM

Data Report Number: ALD05034M
Method, CVAA: ACMM-2810-R3
Method, ICP-AES: ACMM-2901-R3
Calibration Source, ICP-AES: CPI
ICV Source, ICP-AES: SPEX Industries
CCV Source, ICP-AES: SPEX Industries
Calibration Source, CVAA: SPEX Industries
ICV Source, CVAA: CPI
CCV Source, CVAA: SPEX Industries

Analytical Batch ID: 0510066
Instrument ID, CVAA: CVHG-1
Instrument ID, ICP-AES: ICP-4

Concentration Units: ug/L

Analyte	Initial Calibration Verification			Continuing Calibration Verification					M
	True	Found	%R	True	Found	%R(1)	Found	%R(2)	
Antimony	2500.0	2478.00	99.1	2500.0	2428.00	97.1	2487.00	99.5	P
Arsenic	2500.0	2497.00	99.9	2500.0	2451.00	98.0	2441.00	97.6	P
Barium	2500.0	2480.00	99.2	2500.0	2425.00	97.0	2508.00	100.3	P
Beryllium	2500.0	2536.00	101.4	2500.0	2505.00	100.2	2573.00	102.9	P
Cadmium	2500.0	2475.00	99.0	2500.0	2388.00	95.5	2405.00	96.2	P
Chromium	2500.0	2504.00	100.2	2500.0	2488.00	99.5	2511.00	100.4	P
Lead	2500.0	2485.00	99.4	2500.0	2399.00	96.0	2536.00	101.4	P
Mercury	4.0	4.10	102.5	4.0	4.16	104.0	4.07	101.8	V
Nickel	2500.0	2498.00	99.9	2500.0	2420.00	96.8	2485.00	99.4	P
Selenium	2500.0	2416.00	96.6	2500.0	2420.00	96.8	2468.00	98.7	P
Silver	2500.0	2560.00	102.4	2500.0	2327.00	93.1	2409.00	96.4	P
Thallium	2500.0	2560.00	102.4	2500.0	2541.00	101.6	2599.00	104.0	P
Vanadium	2500.0	2532.00	101.3	2500.0	2475.00	99.0	2536.00	101.4	P
Zinc	2500.0	2507.85	100.3	2500.0	2405.05	96.2	2496.89	99.9	P

Data Updated: 11/01/2005 15:57:01

INITIAL AND CONTINUING CALIBRATION VERIFICATION

IDAHO CLEANUP PROJECT
ANALYTICAL LABORATORIES DEPARTMENT

TRANSURANIC WASTE CHARACTERIZATION PGM

Data Report Number: ALD05034M
Analytical Batch ID: 0510066
Method, CVAA: ACMM-2810-R3
Instrument ID, CVAA: CVHG-1
Method, ICP-AES: ACMM-2901-R3
Instrument ID, ICP-AES: ICP-4
Calibration Source, ICP-AES: CPI
ICV Source, ICP-AES:
CCV Source, ICP-AES: SPEX Industries
Calibration Source, CVAA: SPEX Industries
ICV Source, CVAA:
CCV Source, CVAA: SPEX Industries

Concentration Units: ug/L

Analyte	Initial Calibration Verification			Continuing Calibration Verification					
	True	Found	%R	True	Found	%R(1)	Found	%R(2)	M
Antimony			NA	2500.0	2463.00	98.5		NA	P
Arsenic			NA	2500.0	2428.00	97.1		NA	P
Barium			NA	2500.0	2573.00	102.9	2571.00	102.8	P
Beryllium			NA	2500.0	2523.00	100.9		NA	P
Cadmium			NA	2500.0	2450.00	98.0		NA	P
Chromium			NA	2500.0	2500.00	100.0	2483.00	99.3	P
Lead			NA	2500.0	2507.00	100.3		NA	P
Mercury			NA	4.0	4.09	102.2		NA	V
Nickel			NA	2500.0	2496.00	99.8	2529.00	101.2	P
Selenium			NA	2500.0	2463.00	98.5		NA	P
Silver			NA	2500.0	2275.00	91.0		NA	P
Thallium			NA	2500.0	2581.00	103.2	2569.00	102.8	P
Vanadium			NA	2500.0	2527.00	101.1		NA	P
Zinc			NA	2500.0	2476.86	99.1	2483.78	99.4	P

Data Updated: 11/01/2005 15:57:46

LOW LEVEL CONCENTRATION CHECK STANDARD, ICP-AES

IDAHO CLEANUP PROJECT
ANALYTICAL LABORATORIES DEPARTMENT

TRANSURANIC WASTE CHARACTERIZATION PGM

Instrument ID, ICP-AES: ICP-4
Method, ICP-AES: ACMM-2901-R3
Data Report Number: ALD05034M
Analytical Batch ID: 0510066

Concentration Units: ug/L

Analyte	True	Found	%R
Antimony	200.0	198.5	99.2
Arsenic	200.0	193.0	96.5
Barium	200.0	201.5	100.8
Beryllium	200.0	205.3	102.6
Cadmium	200.0	197.0	98.5
Chromium	200.0	202.7	101.4
Lead	200.0	191.8	95.9
Nickel	200.0	199.1	99.6
Selenium	200.0	194.1	97.0
Silver	200.0	196.1	98.0
Thallium	200.0	205.8	102.9
Vanadium	200.0	204.2	102.1
Zinc	200.0	198.2	99.1

Data Updated: 11/01/2005 15:58:06

BLANKS

IDAHO CLEANUP PROJECT
ANALYTICAL LABORATORIES DEPARTMENT

TRANSURANIC WASTE CHARACTERIZATION PGM

Instrument ID, CVAA: CVHG-1
Instrument ID, ICP-AES: ICP-4
Method, CVAA: ACMM-2810-R3
Method, ICP-AES Prep.: ACMM-8909-R9
Method, ICP-AES Analysis: ACMM-2901-R3

Data Report Number: ALD05034M
Analytical Batch ID: 0510066
Lab Blank ID, CVAA: LB803-47
Lab Blank ID, ICP-AES: LB900-22

	Initial Calibration Blank, ug/L		Continuing Calibration Blank, ug/L						Laboratory Blank, mg/kg		
Analyte		C	1	C	2	C	3	C		C	M
Antimony	6.0	U	6.0	U	6.0	U	6.0	U	0.600	U	P
Arsenic	8.0	U	8.0	U	8.0	U	8.0	U	0.800	U	P
Barium	1.0	U	1.0	U	1.0	U	1.0	U	0.100	U	P
Beryllium	1.0	U	1.0	U	1.0	U	1.0	U	0.100	U	P
Cadmium	1.0	U	1.0	U	1.0	U	1.0	U	0.100	U	P
Chromium	1.0	U	1.0	U	1.0	U	1.0	U	0.100	U	P
Lead	16.0	U	16.0	U	16.0	U	16.0	U	1.600	U	P
Mercury	0.1	U	0.1	U	0.1	U	0.1	U	0.010	U	V
Nickel	2.0	U	2.0	U	2.2	J	2.0	U	1.490		P
Selenium	6.0	U	6.0	U	6.0	U	6.0	U	0.600	U	P
Silver	3.0	U	3.0	U	3.0	U	3.0	U	0.300	U	P
Thallium	10.0	U	10.0	U	10.0	U	10.0	U	1.000	U	P
Vanadium	2.0	U	2.0	U	2.0	U	2.0	U	0.200	U	P
Zinc	1.0	U	1.0	U	1.0	U	1.0	U	3.870		P

C = concentration qualifier; M = method code;

Data Updated: 11/01/2005 15:58:47

BLANKS

IDAHO CLEANUP PROJECT
ANALYTICAL LABORATORIES DEPARTMENT

TRANSURANIC WASTE CHARACTERIZATION PGM

Instrument ID, CVAA: CVHG-1
Instrument ID, ICP-AES: ICP-4
Method, CVAA: ACMM-2810-R3
Method, ICP-AES Prep.: ACMM-8909-R9
Method, ICP-AES Analysis: ACMM-2901-R3

Data Report Number: ALD05034M
Analytical Batch ID: 0510066
Lab Blank ID, CVAA:
Lab Blank ID, ICP-AES:

	Initial Calibration Blank, ug/L		Continuing Calibration Blank, ug/L						Laboratory Blank, mg/kg		
Analyte		C	1	C	2	C	3	C		C	M
Antimony											P
Arsenic											P
Barium			1.0	U							P
Beryllium											P
Cadmium											P
Chromium			1.0	U							P
Lead											P
Mercury											V
Nickel			2.0	U							P
Selenium											P
Silver											P
Thallium			10.0	U							P
Vanadium											P
Zinc			1.0	U							P

C = concentration qualifier; M = method code;

Data Updated: 11/01/2005 15:59:55

INTERFERENCE CHECK SAMPLE, ICP-AES

IDAHO CLEANUP PROJECT
ANALYTICAL LABORATORIES DEPARTMENT

TRANSURANIC WASTE CHARACTERIZATION PGM

Instrument ID, ICP-AES: ICP-4
Data Report Number: ALD05034M
Method, ICP-AES Analysis: ACMM-2901-R3
Analytical Batch ID: 0510066

Concentration Units: ug/L

Analyte	True		Initial Found			Final Found		
	Solution A	Solution AB	Sol. A	Sol. AB	%R	Sol. A	Sol. AB	%R
Antimony		980	10	934.6	95.4	9	940.4	96.0
Arsenic		980	-11	906.4	92.5	-11	878.3	89.6
Barium		490	4	417.6	85.2	4	434.9	88.8
Beryllium		490	1	467.5	95.4	1	460.7	94.0
Cadmium		980	4	855.8	87.3	1	853.4	87.1
Chromium		490	4	434.2	88.6	4	431.8	88.1
Lead		980	-8	924.5	94.3	-23	852.9	87.0
Nickel		980	17	824.4	84.1	13	847.7	86.5
Selenium		980	4	916.1	93.5	6	884.5	90.3
Silver		980	53	958.2	97.8	-42	880.9	89.9
Thallium		980	5	900.6	91.9	8	904.4	92.3
Vanadium		490	-7	433.3	88.4	-4	426.9	87.1
Zinc		980	5	883.4	90.1	3	891.4	91.0

Data Updated: 11/02/2005 15:14:44

INSTRUMENT DETECTION LIMITS

IDAHO CLEANUP PROJECT
ANALYTICAL LABORATORIES DEPARTMENT

TRANSURANIC WASTE CHARACTERIZATION PGM

Instrument ID, CVAA: CVHG-1
Instrument ID, ICP-AES: ICP-4
Method, CVAA: ACMM-2810-R3
Method, ICP-AES Analysis : ACMM-2901-R3

Data Report Number: ALD05034M
Analytical Batch ID: 0510066

Analyte	Wavelength (nm)	IDL (ug/L)	IDL Effective Date	M
Antimony	206.83	6.0	07/13/2005	P
Arsenic	189.04	8.0	07/13/2005	P
Barium	233.53	1.0	07/13/2005	P
Beryllium	234.86	1.0	07/13/2005	P
Cadmium	226.50	1.0	07/13/2005	P
Chromium	205.55	1.0	07/13/2005	P
Lead	182.15	16.0	07/13/2005	P
Mercury	253.70	0.1	05/19/2005	V
Nickel	231.60	2.0	07/13/2005	P
Selenium	196.09	6.0	07/13/2005	P
Silver	338.29	3.0	07/13/2005	P
Thallium	190.86	10.0	07/13/2005	P
Vanadium	292.40	2.0	07/13/2005	P
Zinc	213.86	1.0	07/13/2005	P

IDL = instrument detection limit; M = method code

Data Updated: 11/01/2005 16:05:25

LINEAR RANGES, ICP-AES

IDAHO CLEANUP PROJECT
ANALYTICAL LABORATORIES DEPARTMENT

TRANSURANIC WASTE CHARACTERIZATION PGM

Instrument ID, ICP-AES: ICP-4
Method, ICP-AES Analysis : ACMM-2901-R3
Data Report Number: ALD05034M
Analytical Batch ID: 0510066

Analyte	Wavelength (nm)	Linear Range (ug/L)	Linear Range Effective Date
Aluminum	237.31	300000.0	07/13/2005
Antimony	206.83	5000.0	07/13/2005
Arsenic	189.04	5000.0	07/13/2005
Barium	233.53	30000.0	07/13/2005
Beryllium	234.86	5000.0	07/13/2005
Cadmium	226.50	30000.0	07/13/2005
Calcium	317.93	300000.0	07/13/2005
Chromium	205.55	30000.0	07/13/2005
Iron	238.20	250000.0	07/13/2005
Lead	182.15	30000.0	07/13/2005
Magnesium	279.08	300000.0	07/13/2005
Nickel	231.60	30000.0	07/13/2005
Selenium	196.09	5000.0	07/13/2005
Silver	338.29	5000.0	07/13/2005
Thallium	190.86	5000.0	07/13/2005
Uranium	263.55	333000.0	07/13/2005
Vanadium	292.40	5000.0	07/13/2005
Zinc	213.86	30000.0	07/13/2005

Data Updated: 11/01/2005 16:07:21

Section 6

Data Review Checklists

TWCP SAMPLE RECEIVING & CUSTODY REVIEW CHECKLIST
INEEL ANALYTICAL LABORATORIES DEPARTMENT

Log Number: 051006 6	IDC #: TWCP-RF/S3150-A	NCR Initiation Required? ☐ Yes ☒ No
COC #(s):	WCA-936, WCA-937	If Yes NCR Number: _____
Reviewer: Julie Daley	10/10/2005	
Printed Name/Signature	Date	

Instructions:

Complete one checklist per log. Enter appropriate response for each question. Each "No" response requires explanation. A "No" response to a question may require initiation of an NCR.

Requirement	Yes	No	Comments
1. FIELD CHAIN-OF-CUSTODY (COC)			
a. Was a COC form received with each shipping container?	☒	☐	
b. Did the content of each shipping container match that listed on the associated COC form?	☒	☐	
c. Were all custody transfers completely documented by signatures of relinquishers and receivers, with date and time of transfer?	☒	☐	
d. Does all sample information (e.g., sample ID, sampling date and time, sampling batch) listed on the COC form corresponds with the information on the sample labels?	☒	☐	
e. Is the correct analysis requested for each sample?	☒	☐	
f. Were any corrections on the COC appropriately made (a single line through the incorrect entry and correct data written in [not overwritten], initialed and dated)?	☒	☐	
2. SAMPLE LABELS			
a. Was each sample received with a completed sample label?	☒	☐	
b. Do the field IDs on the sample labels correspond to those on the field COC form?	☒	☐	
c. Were the sampling batch number, sampling date, time and requested analysis recorded on each sample label, and they correspond with those recorded on the COC?	☒	☐	
d. Are the sampler initials, organization and sample description recorded on each sample label?	☒	☐	
e. Are any corrections on the sample labels appropriately made (a single line through the incorrect entry and correct data written in [not overwritten], initialed and dated)?	☒	☐	
3. SAMPLE INTEGRITY			
a. Were custody seals used on the shipping container?	☒	☐	
b. Were custody seals used on each individual sample container?	☒	☐	
c. Were all custody seals intact and undamaged upon receipt at ALD?	☒	☐	
d. Were all custody seals placed such that the container could not be opened without damaging the seal?	☒	☐	
e. Has the physical integrity of all samples been maintained (i.e., no cracks)?	☒	☐	
f. Were all samples preserved during shipment with "Blue Ice" or equivalent cooling mechanism?	☒	☐	
g. Were all samples placed in refrigerated storage (4° ± 2° C) after login?	☒	☐	
4. INTERNAL SAMPLE TRACKING			
a. Were all samples logged into the Analytical Computer System?	☒	☐	
b. Was all sample information correctly transcribed from the field documentation into the ACS?	☒	☐	
c. Were all sample bottles labeled with the ACS log number and the laboratory sample ID?	☒	☐	
d. Were internal tracking forms prepared for each log?	☒	☐	

Contact the sampling organization if any discrepancies are found in the field COC and sample label documentation. Document the name of the person Contacting the sampling organization, the name of the person contacted, the date and time of the contact, and the resolution of the problem.

Notes:

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TWCP SAMPLE RECEIVING & CUSTODY REVIEW CHECKLIST
INEEL ANALYTICAL LABORATORIES DEPARTMENT

Log Number: 0510106	IDC #: TWCP-RF/S3150-A	NCR Initiation Required? ☐ Yes ☒ No
COC #(s):	WCA-938, WCA-939	If Yes NCR Number: _____
Reviewer: Julie Daley (Printed Name / Signature)		10/10/2005 (Date)

Instructions:
Complete one checklist per log. Enter appropriate response for each question. Each "No" response requires explanation. A "No" response to a question may require initiation of an NCR

	Requirement	Yes	No	Comments
	1. FIELD CHAIN-OF-CUSTODY (COC)			
a.	Was a COC form received with each shipping container?	☒	☐	
b.	Did the content of each shipping container match that listed on the associated COC form?	☒	☐	
c.	Were all custody transfers completely documented by signatures of relinquishers and receivers, with date and time of transfer?	☒	☐	
d.	Does all sample information (e.g., sample ID, sampling date and time, sampling batch) listed on the COC form corresponds with the information on the sample labels?	☒	☐	
e.	Is the correct analysis requested for each sample?	☒	☐	
f.	Were any corrections on the COC appropriately made (a single line through the incorrect entry and correct data written in [not overwritten], initialed and dated)?	☒	☐	
	2. SAMPLE LABELS			
a.	Was each sample received with a completed sample label?	☒	☐	
b.	Do the field IDs on the sample labels correspond to those on the field COC form?	☒	☐	
c.	Were the sampling batch number, sampling date, time and requested analysis recorded on each sample label, and they correspond with those recorded on the COC?	☒	☐	
d.	Are the sampler initials, organization and sample description recorded on each sample label?	☒	☐	
e.	Are any corrections on the sample labels appropriately made (a single line through the incorrect entry and correct data written in [not overwritten], initialed and dated)?	☒	☐	
	3. SAMPLE INTEGRITY			
a.	Were custody seals used on the shipping container?	☒	☐	
b.	Were custody seals used on each individual sample container?	☒	☐	
c.	Were all custody seals intact and undamaged upon receipt at ALD?	☒	☐	
d.	Were all custody seals placed such that the container could not be opened without damaging the seal?	☒	☐	
e.	Has the physical integrity of all samples been maintained (i.e., no cracks)?	☒	☐	
f.	Were all samples preserved during shipment with "Blue Ice" or equivalent cooling mechanism?	☒	☐	
g.	Were all samples placed in refrigerated storage (4° ± 2° C) after login?	☒	☐	
	4. INTERNAL SAMPLE TRACKING			
a.	Were all samples logged into the Analytical Computer System?	☒	☐	
b.	Was all sample information correctly transcribed from the field documentation into the ACS?	☒	☐	
c.	Were all sample bottles labeled with the ACS log number and the laboratory sample ID?	☒	☐	
d.	Were internal tracking forms prepared for each log?	☒	☐	

Contact the sampling organization if any discrepancies are found in the field COC and sample label documentation. Document the name of the person Contacting the sampling organization, the name of the person contacted, the date and time of the contact, and the resolution of the problem.

Notes:

ALD Document: Log 0510106 TWCP-RF_S3150-A.tif - Scanned:10/10/2005 5:04:40 PM

TWCP SAMPLE RECEIVING & CUSTODY REVIEW CHECKLIST
INEEL ANALYTICAL LABORATORIES DEPARTMENT

Log Number: 051013 4	IDC #: ID-RF-S3150-A (IDC's 700, 801)	NCR Initiation Required? ☐ Yes ☒ No
COC #(s): WCA-940, WCA-941, WCA-942		If Yes NCR Number: _____
Reviewer: Blane Teckmeyer / BEP (Printed Name/Signature)		10/17/2005 (Date)

Instructions:
Complete one checklist per log. Enter appropriate response for each question. Each "No" response requires explanation. A "No" response to a question may require initiation of an NCR

	Requirement	Yes	No	Comments
	1. FIELD CHAIN-OF-CUSTODY (COC)			
a.	Was a COC form received with each shipping container?	☒	☐	
b.	Did the content of each shipping container match that listed on the associated COC form?	☒	☐	
c.	Were all custody transfers completely documented by signatures of relinquishers and receivers, with date and time of transfer?	☒	☐	
d.	Does all sample information (e.g., sample ID, sampling date and time, sampling batch) listed on the COC form corresponds with the information on the sample labels?	☒	☐	Note 1
e.	Is the correct analysis requested for each sample?	☒	☐	
f.	Were any corrections on the COC appropriately made (a single line through the incorrect entry and correct data written in [not overwritten], initialed and dated)?	☒	☐	
	2. SAMPLE LABELS			
a.	Was each sample received with a completed sample label?	☒	☐	
b.	Do the field IDs on the sample labels correspond to those on the field COC form?	☒	☐	
c.	Were the sampling batch number, sampling date, time and requested analysis recorded on each sample label, and they correspond with those recorded on the COC?	☒	☐	~~Note 1~~ BET 10/19/05
d.	Are the sampler initials, organization and sample description recorded on each sample label?	☒	☐	
e.	Are any corrections on the sample labels appropriately made (a single line through the incorrect entry and correct data written in [not overwritten], initialed and dated)?	☒	☐	
	3. SAMPLE INTEGRITY			
a.	Were custody seals used on the shipping container?	☒	☐	
b.	Were custody seals used on each individual sample container?	☒	☐	
c.	Were all custody seals intact and undamaged upon receipt at ALD?	☒	☐	
d.	Were all custody seals placed such that the container could not be opened without damaging the seal?	☒	☐	
e.	Has the physical integrity of all samples been maintained (i.e., no cracks)?	☒	☐	
f.	Were all samples preserved during shipment with "Blue Ice" or equivalent cooling mechanism?	☒	☐	
g.	Were all samples placed in refrigerated storage (4° ± 2° C) after login?	☒	☐	
	4. INTERNAL SAMPLE TRACKING			
a.	Were all samples logged into the Analytical Computer System?	☒	☐	
b.	Was all sample information correctly transcribed from the field documentation into the ACS?	☒	☐	
c.	Were all sample bottles labeled with the ACS log number and the laboratory sample ID?	☒	☐	
d.	Were internal tracking forms prepared for each log?	☒	☐	

Contact the sampling organization if any discrepancies are found in the field COC and sample label documentation. Document the name of the person Contacting the sampling organization, the name of the person contacted, the date and time of the contact, and the resolution of the problem.

Notes:

1 WCA-942, Sample ID Number: 10018867 21V5, Sample Weight: 2.73g on the COC, Sample Label: 2.69g; CORRECT WEIGHT ON COC AR COC. ~~WCA-940, Container I.D.C.: ID-RF-S315-A-A, should be ID-RF-S3150-A~~ BET 10/19/05 COMMENT. BET 10/19/05

Form effective Date 10Mar05

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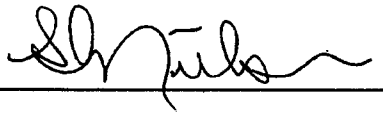
ALD Document: Log 0510134 TWCP-RF_S3150-A.tif - Scanned:10/19/2005 11:29:28 AM

ICP Analytical Laboratories Department

Data Generator Checklist for TWCP

Data Report Number: ALD05034M	Analytical Batch: 0510066
Analysis Procedure: ACMM-2810	Procedure Revision: 3
Analysis Date(s): 10/27/05	
Data Generator Signature:  (S. Dennis Nielsen)	

Criteria	Yes	No	Comments
1. Samples analyzed in accordance with cited analytical method.	X		
2. All logbook entries completed in accordance with MCP-2011.	X		
3. All data entry and corrections made in accordance with MCP-2008.	X		
4. All raw data signed/initialed and dated in indelible black ink.	X		
5. Data reviewed for completeness and accuracy.	X		

ICP Analytical Laboratories Department

Data Generator Checklist for TWCP

Data Report Number: ALD05034M	Analytical Batch: 0510066
Analysis Procedure: ACMM-2901	Procedure Revision: 3
Analysis Date(s): 10/25/05	
Data Generator Signature: (Duane S. Lundholm)	

Criteria	Yes	No	Comments
1. Samples analyzed in accordance with cited analytical method.	✓		
2. All logbook entries completed in accordance with MCP-2011.	✓		
3. All data entry and corrections made in accordance with MCP-2008.	✓		
4. All raw data signed/initialed and dated in indelible black ink.	✓		
5. Data reviewed for completeness and accuracy.	✓		

ICP Analytical Laboratories Department
Independent Technical Review Checklist for TWCP
Total Mercury in Homogeneous Solids and Soil/Gravel by CVAA

Analytical Batch #: 0510066		**Method: ACMM-2810**		
Run # and Analysis Date	Data Generator	Reviewer Signature	Review Date	OK for Release?
1. 10/27/05	**S. Dennis Nielsen**	(Jeffrey S. Laug)	11/2/05	(Yes) or No
2.				Yes or No

Instructions: Complete one checklist per analytical batch. If more than two instrument runs were needed to complete the batch analysis, use a second checklist. Enter appropriate responses for each question. Each "No" response requires an explanation.

Requirement	Run #1		Run #2		Comments
	Yes	No	Yes	No	
1. Initial Calibration					
a. Was the initial calibration performed using a minimum of 5 standards and a blank?	✓				
b. Is the regression coefficient (r) ≥ 0.995?	✓				
2. Initial Calibration Verification (ICV)					
a. Was an ICV analyzed after the initial calibration and prior to analysis of any samples?	✓				
b. Is the recovery of the ICV between 80% and 120%?	✓				
c. Is the ICV standard prepared from a different source than that of the initial calibration standards?	✓				
d. Are Initial and Continuing Calibration Verification forms present and correct for all ICVs associated with the run?	✓				
3. Continuing Calibration Verification (CCV)					
a. Was the CCV analyzed prior to the analysis of samples?	✓				
b. Is the percent recovery for the CCV between 80% and 120%?	✓				
c. Was a compliant CCV (%R between 80 and 120%) analyzed at the completion of the analytical run?	✓				
d. Were every ten samples bracketed by compliant CCVs?	✓				
e. Are Initial and Continuing Calibration Verification forms present and correct for all CCVs associated with the run?	✓				
4. Blanks					
a. Was at least one laboratory blank (LB) digested and analyzed with the analytical batch?	✓				
b. Are all laboratory blank results ≤ 3×PRDL?	✓				
c. Was an ICB analyzed immediately after the ICV?	✓				
d. Was a CCB analyzed immediately after each CCV?	✓				
e. Is each of the ICB and CCB results ≤ PRDL?	✓				
f. Are Blank forms present and correct for all blanks associated with the analytical run (all LB, ICB, and CCB)?	✓				
5. Laboratory Control Sample (LCS)					
a. Was at least one LCS digested and analyzed with the analytical batch?	✓				
b. Is the recovery within the manufacturer/statistical control limits for LCSs?	✓				
c. Is the LCS form present and correct for each LCS analyzed in the analytical batch?	✓				

Mercury CVAA Independent Technical Review Checklist For Analytical Batch: 0510044

Requirement	Run #1 Yes	Run #1 No	Run #2 Yes	Run #2 No	Comments
6. Matrix Spikes (MS) and Matrix Spike Duplicates (MSD)					
a. Were a MS and a MSD performed on at least one sample from the analytical batch?	✓				
b. Is the MS/MSD RPD ≤30%?	✓				
c. Are percent recoveries (%R) between 80% and 120% for the MS and MSD?	✓				
d. Are the Matrix Spike Recovery and the Matrix Spike Duplicate Agreement forms present and correct for all matrix spikes and matrix spike duplicates analyzed in the analytical batch?	✓				
e. Are all noncompliant matrix spike recoveries and RPDs discussed in the report narrative?	✓				
7. Samples (Including MS, MSD, Post Digestion Spike (PDS) and Serial Dilution (SD))					
a. Were all samples analyzed within 28 days of sample collection?	✓				
b. Were all samples and QC samples with mercury readings exceeding the calibration range reanalyzed with a dilution?	✓				
c. Are all raw data signed/initialed and dated by the analyst?	✓				
d. Was a SD analyzed in the analytical batch if 6c is NO and at least one sample concentration exceeded 10xIDL?	NA				SD not required - MS & MSD recovered within range.
e. If a SD was analyzed, is %D ≤10?	NA				" " " " " "
f. Are Serial Dilution Agreement forms present and correct for each (if any) serial dilution associated with the analytical batch?	NA				" " " " " "
g. IF 6c is *NO* AND 7e is *NO* or *N/A*, was a PDS performed in the analytical batch?	NA				PDS not required - MS & MSD recovered within range.
h. IF 7g is *YES* was the PDS spike recovery between 85% and 115%?	NA				" " " " " "
i. Are PDS Recovery forms present and correct for each (if any) PDS with the analytical batch?	NA				" " " " " "
j. Was MSA used for quantitation if PDS was required AND did not meet the acceptance criteria?	NA				MSA not needed
k. Are any corrective actions taken during the analysis documented in the raw data?	✓				
l. Is each sample result reported on a Total Metals Analysis Data Sheet?	✓				
8. Data Report					
a. Are all reporting forms present and correct? Are reported values on the Total Metals Analysis Sheet reported in mg/kg and rounded to 2 significant figures? Analytical Batch ID correct? Sample IDs consistent with the Analysis Request?	✓				
b. Are all values less than the IDL reported as the IDL corrected for dilution and flagged with a "U" qualifier?	✓				
c. Are all values ≥IDL and < 5x IDL (before dilution correction) reported with a "J" qualifier?	✓				
d. Are "B" qualifiers used when the blank concentration (laboratory or calibration verification) is ≥ 20% of the sample concentration prior to dilution correction?	✓				
e. Is a "Z" qualifier used when one or more QC sample results are outside the acceptance criteria?	✓				
f. Are all noncompliant QC and their impact on data quality discussed in the report narrative, and any necessary NCRs issued?	✓				
g. Were all samples and method performance supporting this analytical batch run by personnel having current TWCP qualifications?	✓				
h. Were all calculations performed using validated software or 100% manually-verified?	✓				
i. Have the data been reviewed for transcription errors?	✓				

ICP Analytical Laboratories Department
Independent Technical Review Checklist for TWCP
Total Metals in Homogeneous Solids and Soil/Gravel by ICP-AES

Analytical Batch #: 0510066		Methods: ACMM-2901 and ACMM-8909		
Run # and Analysis Date	Data Generator	Reviewer Signature	Review Date	OK for Release?
1. 10/25/05	**Duane S. Lundholm**	(Jeffrey S. Laug)	11/2/05	(Yes) or No
2.				Yes or No

Instructions: Complete one checklist per analytical batch. If more than two instrument runs were needed to complete the batch analysis, use a second checklist. Enter appropriate responses for each question. Each "No" response requires an explanation.

Requirement	Run #1		Run #2		Comments
	Yes	No	Yes	No	
1. Initial Calibration					
a. Was the initial calibration performed using a minimum of 1 standard and a blank?	✓				
2. Initial Calibration Verification (ICV)					
a. Was an ICV analyzed after the initial calibration and prior to analysis of any samples?	✓				
b. Are the recoveries for each reported analyte in the ICV between 90% and 110%?	✓				
c. Is the ICV standard from a different source than the initial calibration standards?	✓				
d. Are Initial and Continuing Calibration Verification forms present and correct for all ICVs associated with the run?	✓				
3. Continuing Calibration Verification (CCV)					
a. Was the CCV solution analyzed (as ICV) prior to the analysis of samples?	✓				
b. Is the percent recovery of each reported analyte between 90% and 110%?	✓				
c. Was a compliant CCV analyzed for reported analytes at the completion of the analytical run?	✓				
d. Were every 10 samples bracketed by compliant CCVs or ICV/CCV pair for reported analytes?	✓				
e. Are Initial and Continuing Calibration Verification forms present and correct for all CCVs associated with the run?	✓				
4. Low Level Concentration Check Standard (LLC)					
a. Was the LLC solution analyzed prior to the analysis of samples?	✓				
b. Is the percent recovery of each reported analyte between 80% and 120%?	✓				
c. Is the Low Level Concentration Check Standard form present and correct?	✓				
5. Blanks	-				
a. Was at least one laboratory blank digested and analyzed with the analytical batch?	✓				
b. Are the laboratory blank results ≤ 3×PRDL for all reported analytes?	✓				
c. Was an ICB analyzed immediately after the ICV?	✓				
d. Was a CCB analyzed immediately after each CCV?	✓				
e. Are each of the ICB and CCB results ≤ the PRDL for all reported analytes?	✓				
f. Are Blank forms present and correct for all blanks associated with the analytical run (both laboratory and calibration verification blanks)?	✓				
6. Laboratory Control Samples (LCS)					
a. Was at least one LCS digested and analyzed with the analytical batch?	✓				
b. Is %R for all reported analytes between 80% and 120% for aqueous LCSs, or within manufacturer or statistical control limits for solid LCSs?	✓				

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Total Metals Independent Technical Review Checklist for Analytical Batch: 051666

Requirement	Run #1		Run #2		Comments
	Yes	No	Yes	No	
c. Is the LCS form present and correct for each LCS analyzed with the analytical batch?	✓				
7. Matrix Spikes (MS) and Matrix Spike Duplicates (MSD)					
a. Were a MS and a MSD performed on at least one field sample from the analytical batch?	✓				
b. Is the MS/MSD RPD ≤ 30% for all analytes?	✓				
c. Is %R between 80% to 120% for all analytes in the MS and MSD?	✓				
d. Are the Matrix Spike Recovery and the Matrix Spike Duplicate Agreement forms present and correct for all matrix spikes and matrix spike duplicates analyzed with the run?	✓				
8. Background Correction and Interference Check Samples					
a. Was background correction used during the analysis and applied correctly?	✓				
b. Were the interfering elements monitored during the analysis and interelement correction factors correctly applied where necessary?	✓				
c. Were the ICSA and ICSAB solutions analyzed within prescribed limits at both the beginning and end of the analytical run, or twice per 8 hour shift, whichever is more frequent?	✓				
d. Are Interference Check Sample forms present and correct for all ICSA and ICSAB solutions associated with the analytical run?	✓				
9. Samples [Including MS, MSD, Post Digestion Spike (PDS) and Serial Dilution (SD)]					
a. Were all sample analyses, including required dilutions, performed within 180 days of sample collection?	✓				
b. Are all raw data signed/initialed and dated by the analyst?	✓				
c. Were all samples having analytes detected in amounts exceeding the Linear Dynamic Range reanalyzed with a dilution?	✓				
d. Was at least one serial dilution analysis per matrix performed in the analytical batch?	✓				
e. For all analytes > 50x IDL in the initial sample, are serial dilution results ≤ 10 %D of initial value?	✓				
f. Are Serial Dilution Agreement forms present and correct for each serial dilution associated with the analytical batch?	✓				
g. Was at least one post-digestion spike (PDS) analysis performed in the analytical batch if MS, MSD, or SD failed (see 7c and 9e)?	✓				
h. If a PDS was analyzed, was the PDS recovery within the required range of 75% to 125%?	✓				
i. Are Post-Digestion Spike Recovery forms present and correct for each (if any) PDS with the analytical batch?	✓				
j. Are any corrective actions taken during the analysis documented in the raw data?	✓				
k. Is each sample result reported on a Total Metals Analysis Sheet?	✓				
10. Data Report					
a. Are all reporting forms present and correct? Are reported values on the Total Metals Analysis Sheet reported in mg/kg and rounded to 2 significant figures? Analytical Batch ID correct? Sample IDs consistent with the analysis request?	✓				
b. Are all values less than the IDL reported as the IDL corrected for dilution and flagged with a "U" qualifier?	✓				
c. Are all values ≥ IDL and < 5x IDL (before dilution correction) reported with a "J" qualifier?	✓				
d. Are "B" qualifiers used when the analyte blank concentration (laboratory or calibration verification) is ≥20% of the sample concentration prior to dilution correction?	✓				
e. Are "Z" qualifiers used if one or more QC sample results are outside the acceptance criteria?	✓				
f. Are all noncompliant QC and their impact on data quality discussed in the data report narrative and any necessary NCRs initiated?	✓				
g. Were all samples and method performance supporting this analytical batch run by personnel having current TWCP qualifications?	✓				

Total Metals Independent Technical Review Checklist for Analytical Batch: 0510666

Requirement	Run #1		Run #2		Comments
	Yes	No	Yes	No	
h. Were all calculations performed using validated software or 100% manually verified?	✓				
i. Have the data been reviewed for transcription errors?	✓				

Technical Supervisory Data Review Checklist for TWCP

ICP Analytical Laboratories Department

Analytical Batch Data Report Number:	Method(s):
ALD05034M	ACMM-8909 Revision 9 ACMM-2810 Revision 3 ACMM-2901 Revision 3
Technical Supervisory Signature Release: (Jeffrey S. Laug)	Date: 11/07/07

Requirement	Yes	No	Comments
a. Data are technically reasonable based on method(s) used	✓		
b. All data have received independent technical review	✓		
c. QC documentation is accurate and complete per PLN-600	✓		
d. Raw data/supporting data are complete	✓		
e. Sample holding time requirements are met, or exceptions documented	✓		
f. Chain-of custody (COC) documentation is complete	✓		

Quality Assurance Data Review Checklist for TWCP
ICP Analytical Laboratories Department

Total Metals in Homogeneous Solids and Soil/Gravel

Analytical Batch Data Report Number: ALD05034M	**Methods: ACMM-8909, ACMM-2901, ACMM-2810**
QA Officer Signature Release: Laura A. Morgan Laura A Morgan	**Date:** 11/07/05

Requirement	Yes	No	Comment
Section 1: Sample Integrity Verification			
1a. COC documentation present, complete, and accurate for all reported samples	✓		
1b. Physical integrity of all samples verified as satisfactory at VTSR	✓		
1c. All samples stored at 4 ± 2 °C between receipt and analysis	✓		
1d. All samples prepared & analyzed by ICP-AES (ACMM-8909 and -2901) within 180 days of collection	✓		
1e. All samples prepared and analyzed by CVAA (ACMM-2810 or ACMM-7802) within 28 days of collection	✓		
Section 2: Data Report (DR) Completeness Verification			
2a. Cover Page including Table of Contents	✓		
2b. Cross Reference Table identifying field sample IDs and laboratory sample IDs	✓		
2c. Copy of Field COC Form(s)	✓		
2d. Narrative	✓		
2e. Analysis Data Sheet for each sample	✓		
2f. Initial/Continuing Calibration Verification Form(s) for all ICV/CCVs associated with reported samples	✓		
2g. Low Level Concentration Check Form(s) for all CRIs associated with reported samples	✓		NA for Hg
2h. Laboratory Blank & Initial/Continuing Blank Verification Form(s) for all LB/ICB/CCBs associated with reported samples	✓		
2i. Interference Check Sample Form(s) for all ICSA/ICSABs associated with reported samples	✓		NA for Hg
2j. Matrix Spike and Matrix Spike Duplicate Recovery Form(s) for all MSs and MSDs associated with reported samples	✓		
2k. MSD RPD Form(s) for all MSDs associated with reported samples	✓		
2l. Post-Digestion Spike Sample form(s) for all PDSs associated with reported samples	✓		NA for Hg
2m. Laboratory Control Sample form(s) for all LCSs associated with reported samples	✓		
2n. Serial Dilution Sample form (s) for all serial dilutions associated with reported samples	✓		NA for Hg
2o. Method of Standard Additions Form(s) for any reported MSA analyses		✓	NA
2p. Linear Range Determination Form(s) for any linear range determination associated with reported data	✓		NA for Hg
2q. Instrument Detection Limits form(s) for all instruments, analytes, and wavelengths used for analysis	✓		
Section 3: Supporting Data Package Completeness Verification			
3a. Raw data (instrument and computer system print-outs) for all analytical runs associated with reported data	✓		
3b. Copies of sample digestion/preparation log books for all reported samples	✓		
3c. Copies of standard preparation log books for all working standards associated with reported data	✓		
Section 4: QC Results Verification			
4a. All LCS recoveries within specifications	✓		
4b. All Laboratory Blank results within specifications	✓		
4c. All ICV recoveries within specifications	✓		
4d. All regression coefficients within specifications for CVAA/CVAF (Hg)	✓		
4e. All CCV recoveries for reported analytes within specifications	✓		
4f. All ICB/CCB results for reported analytes within specifications	✓		
4g. All CRI recoveries within specifications for reported ICP-AES analytes	✓		
4h. All ISCAB recoveries between within specifications for reported ICP-AES target analytes	✓		
4i. All MS and MSD recoveries within specifications	✓		
4j. All MS/MSD RPDs within specifications	✓		
4k. All required Serial Dilution percent differences within specifications	✓		
4l. All required Post-Digestion Spike recoveries within specifications	✓		
Section 5: Instrument, Method and Personnel Qualification Verification			
5a. All analytical tasks conducted by personnel having current qualifications	✓		
5b. Acceptable demonstration of precision, accuracy, and IDLs performed within the last 6 months	✓		
5c. All deviations from ACMM-8908, ACMM-2810, and ACMM-2901 clearly stated and explained on raw data or in DR narrative and all required NCRs issued	✓		NCRs Not Required
5d. All noncompliant QC discussed in DR narrative, and all required NCRs issued	✓		NCRs Not Required
Section 6: Data Recording and Review Verification			
6a. All changes to original data or forms made by line-out of incorrect entry, initialed/signed and dated by the person making the change	✓		
6b. All raw data initialed/signed and dated by generator in permanent black ink	✓		
6c. All pages in data package legible, correctly paginated, and copied pages complete (e.g., margins not cut off)	✓		
6d. All data received documented data generator review and signature	✓		
6e. All data received documented independent technical review and signature	✓		
6f. All data received documented technical supervisory review and signature	✓		

Attachment 5 – CCP Site Project Manager Data Validation Summary **AK54**

On-Line Headspace Gas Analysis (HSG)			Visual Examination (VE)	
Nondestructive Examination (NDE)			Nondestructive Assay (NDA)	
Direct-Canister HSG Analysis			Homogeneous Waste Analysis (HWA)	X
Radiological Characterization				

BATCH DATA REPORT NUMBER: ALD05025N **DATE:** 12, 17 & 19 October 2005

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
1. ITR, Tech Sup, and Facility QA checklists are complete and signed. **Reference Source: WAP B3-10b(2)** **Verification Source: DGL Checklist**	X			
2. The batch data report is complete. **Reference Source: WAP B3-10b(2) and WAC A.5.2** **Verification Source: Data Sheets**	X			
3. QAOs have been met. **Reference Source: WAP B3-10b(2)** **Verification Source: QC Data Sheets**	X			**Container Numbers:** 10016886, 10018178, 10018503, 10018867, 10018875
4. Data reported with correct units and significant figures. **Reference Source: WAP B3-10b(2)** **Verification Source: Data Sheets**	X			
5. Data have been assessed correctly. **Reference Sources: WAP B3-10b(2) and B3-10b(3)** **Verification Source: Data Sheets**	X			
6. Is there a reference to or copy of the associated NCRS? **Reference Source: WAP Tables B3-11, B3-12 and B3-13** **Verification Source: NCR**	X			NCR-CCP-0505-05 (Lab NCR 100077): Balance 721549 was used beyond the calibration expiration.
7. The applicable SPQAO Project Level Validation Checklist is complete, signed, and dated. **Reference Source: WAP B3-10b(2)** **Verification Source: SPQAO Checklist**	X			
8. **NDA** batch QC checks (e.g., weekly interfering matrix, background, performance, and transmission checks, measurement system checks) were properly performed. **Reference Source: WAC A.4.2 and/or WAC Table A-4.3** **Verification Source: QC Data Sheets**			X	This is a solids non-halogenated VOC analytical BDR.

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Attachment 5 – CCP Site Project Manager Data Validation Summary (continued)

BATCH DATA REPORT NUMBER: ALD05025N **DATE:** 12, 17 & 19 October 2005

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers	
9. **HSG** – All data are reported with the appropriate flags. **Reference Source: WAP B3-10b(2) Verification Source: Data Sheet**			X	This is a solids non-halogenated VOC analytical BDR.	
10. **HSG** batch QC checks (e.g., on-line blanks, duplicates, and laboratory control samples) were properly performed and meet the established usability criteria. **Reference Sources: WAP B3-10b(2) and Table B3-3 and/or B1-1b Verification Source: QC Data Sheets**			X	This is a solids non-halogenated VOC analytical BDR.	
11. **HSG** DAC assignment is valid based upon an assessment of the data collection and evaluation necessary to make the assignment. **Reference Source: WAP B3-10b(2) Verification Source: Drum Data Form**			X	This is a solids non-halogenated VOC analytical BDR.	
12. **NDE** data are complete and acceptable based on the videotape or equivalent media review (independent observation and replicate scan). **Reference Sources: WAP , B1-3b(2) and B3-10b(2) Verification Source: QC Data Sheets**			X	Container numbers:	This is a solids non-halogenated VOC analytical BDR.
				Rep:	
				IO:	
13. **VE** data is complete and properly reported. **Reference Sources: WAP B1-3b(3) and B3-10b(2) Verification Source: BDR**			X	This is a solids non-halogenated VOC analytical BDR.	
14. **HWA** Solid/Soil VOC batch QC checks (e.g., laboratory duplicates, blanks, and control samples) were properly performed and meet the established usability criteria. **Reference Sources: WAP B1-2b, B3-10b(2) and Table B3-5 Verification Source: QC Data Sheets**	X			▪ The surrogate recoveries for MS, 10018875, 10018867 and the associated duplicate failed for the original extraction and were re-extracted. The surrogate recovery for 10018875 failed the second extraction. Surrogate failures attributed to matrix affects.	
15. **HWA** Solid/Soil Semi-VOC batch QC checks (e.g., laboratory duplicates, blanks, and control samples) were properly performed and meet the established usability criteria. **Reference Sources: WAP B1-2b, B3-10b(2) and Table B3-7 Verification Source: QC Data Sheets**			X	This is a solids non-halogenated VOC analytical BDR.	

Attachment 5 – CCP Site Project Manager Data Validation Summary (continued)

BATCH DATA REPORT NUMBER: ALD05025N **DATE:** 12, 17 & 19 October 2005

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
16. **HWA Solid/Soil Total Metals Batch QC checks** (e.g., duplicates, blanks, and laboratory control samples) were properly performed and meet the established criteria. **Reference Sources: WAP B1-2b, B3-10b(2), and Table B3-9 Verification Source: QC Data Sheets**			X	This is a solids non-halogenated VOC analytical BDR.
17. **OSR** for LANL Sealed Sources, does the waste meet the definition of sealed sources per 10 CFR 30.4 and 10 CFR 835.2 (effective January 1, 2004) and documentation included with the AK information? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	This is not an LANL OSR BDR.
18. **OSR** for LANL Sealed Sources, does the Pipe Overpack Container (POC) only contain sources and packaging material (no non-packaging items are allowed in the waste container)? **Reference Source: WAP B-3a(1)(iii) Verification Source: Data Sheet**			X	This is not an LANL OSR BDR.
19. **OSR** for LANL Sealed Sources, is the sealed source a US DOT Special Form Class 7 (Radioactive Material) per 49 CFR 34.27 (effective January 1, 2004) and is this documented in the AK information? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	This is not an LANL OSR BDR.
20. For LANL Sealed Sources, is the integrity of each sealed source validated by documented contamination survey results to meet the requirements of 10 CFR 34.27 (effective January 1, 2004), and is assembled as part of AK documentation? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	This is not an LANL OSR BDR.
21. **OSR** for LANL Sealed Sources, is each source a rigid sealed container or is it in a rigid sealed container less than or equal to 4 L? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	This is not an LANL OSR BDR.

Attachment 5 – CCP Site Project Manager Data Validation Summary (continued)

BATCH DATA REPORT NUMBER: ALD05025N **DATE:** 12, 17 & 19 October 2005

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
22. **OSR** for LANL Sealed Sources, does the AK information document that no VOC or VOC-bearing material are constituents of the waste? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information**			X	This is not an LANL OSR BDR.
23. **OSR** for LANL Sealed Sources, does the AK information document that the outer casing of the sealed source is a non-VOC bearing material and is this verified during VE? **Reference Source: WAP B-3a(1)(iii) Verification Source: AK information and Data Sheet**			X	This is not an LANL OSR BDR.

The data for all containers in this batch are complete, properly reported, technically reasonable, representative and meet the Quality Assurance Objectives (QAOs). On a per waste container basis, as evidenced by my review of the Batch Data Report, all data have been validated in accordance with the QAPjP (CCP-PO-001) and are acceptable. This validation was accomplished through the generation level and project level data review, validation, and verification of this Batch Data Report.

David W. Moody David W. Moody 21 November 05

Site Project Manager Signature Date

Attachment 10 – CCP SPQAO Solid/Soil Total Non-Halogenated Volatile Organic Compound Analysis Project Level Validation Checklist and Summary

BATCH DATA REPORT NUMBER: ALD05025N **ANALYSIS DATE:** 10/12/05, 10/17/05, 10/19/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
1. Does the Batch Data Report contain the batch number, laboratory name, and the date of the batch report? **Reference Source: WAP Table B3-13** **Verification Source: Cover Page**	X			
2. Has a Batch Data Report narrative been included with the Batch Data Report? **Reference Source: WAP Table B3-13** **Verification Source: Report Narrative and comments**	X			
3. Is there a cross reference between waste container number, field sample number, and lab sample number ID; and signature release by lab personnel in the Batch Data Report? **References Source: WAP Table B3-13** **Verification Source: Cover Page and/or Total NHVOC Analysis Sample Cross-Reference Table**	X			
4. Does the Batch Data Report contain a table of contents? **Reference Source: CCP-TP-001** **Verification Source: Batch Data Report**	X			
5. Are there 20 or less samples per analytical batch? **Reference Source: WAP Section B3-10** **Verification Source: Total NHVOC Analysis Sample Cross-Reference Table**	X			7 samples (2 co-located samples) and 3 trip blanks.
6. Does the Batch Data Report contain a complete and signed copy of the COC form? **Reference Source: WAP Table B3-13** **Verification Source: COC Form**	X			
7. Does the Batch Data Report include the date and time of analysis for each sample? **Reference Source: WAP Table B3-13** **Verification Source: Total NHVOC Analysis Data Sheets**	X			

Attachment 10 – CCP SPQAO Solid/Soil Total Non-Halogenated Volatile Organic Compound Analysis Project Level Validation Checklist and Summary (continued)

BATCH DATA REPORT NUMBER: ALD05025N **ANALYSIS DATE:** 10/12/05, 10/17/05, 10/19/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
8. Are holding times between collection and analysis within the 14-day requirement? **Reference Source: WAP Table B1-4 Verification Source: Total NHVOC Analysis Data Sheets**	X			
9. Have QC designations for samples been applied as appropriate? **Reference Source: WAP Table B3-13 Verification Source: Total NHVOC Analysis Sample Cross-Reference Table and/or QC Sample Section of Batch Data Report**	X			
10. Is there a minimum of one laboratory control sample (LCS) analyzed per analytical batch? **Reference Source: WAP Table B3-5 Verification Source: Laboratory Control Sample**	X			
11. Are the percent recoveries (%Rs) for all LCS analytes within the Table B3-4 and B3-5 acceptable range? **Reference Source: WAP Table B3-5 Verification Source: Laboratory Control Sample**	X			
12. Is a minimum of one matrix spike/matrix spike duplicate (MS/MSD) pair analyzed per analytical batch? *Note: The MSD is used in place of the laboratory duplicate.* **Reference Source: WAP Table B3-5 Verification Source: Matrix Spike/Matrix Spike Duplicate Reporting Form**	X			
13. Are the %Rs for all MS and MSD analytes within the Table B3-4 and B3-5 acceptance range? *Note: The MSD is used in place of the laboratory duplicate.* **Reference Source: WAP Table B3-5 Verification Source: Matrix Spike/Matrix Spike Duplicate Reporting Form**	X			

Attachment 10 – CCP SPQAO Solid/Soil Total Non-Halogenated Volatile Organic Compound Analysis Project Level Validation Checklist and Summary (continued)

BATCH DATA REPORT NUMBER: ALD05025N **ANALYSIS DATE:** 10/12/05, 10/17/05, 10/19/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
14. Do the MS/MSD relative percent differences (RPDs) for all analytes meet the requirements listed in Table B3-4? **Reference Source: WAP Table B3-5 Verification Source: Matrix Spike/Matrix Spike Duplicate Reporting Form**	X			
15. Is a minimum of one trip blank analyzed per analytical batch? **Reference Source: WAP SW-846 8015 Verification Source: Total NHVOC Analysis Data Sheets**	X			
16. Are the results of the trip blank ≤3* the program-required MDL? **Reference Source: WAP SW-846 8015 Verification Source: Total NHVOC Analysis Data Sheets**	X			
17. Is there a minimum of one lab blank analyzed per analytical batch? **Reference Source: WAP Table B3-5 Verification Source: Blank Form and Laboratory Blank Summary**	X			
18. Are all lab blank compounds ≤3* the program-required MDL? **Reference Source: WAP Table B3-5 Verification Source: Blank Form**	X			
19. Are the analytical samples spiked with surrogate matrix compounds (SMCs)? **Reference Source: WAP Table B3-5 Verification Source: Surrogate Recovery Form**	X			
20. Are the SMCs %R values within specified criteria? **Reference Source: WAP Table B3-5 Verification Source: Surrogate Recovery Form**	X			Surrogate recovery failed for the original extractions of 5CY99MS, 5CZ79, 5DB29, and 5DB31. All were re-extracted and re-analyzed, with the surrogates for 5CZ79 failing the second time. According to the Narrative, recovery failures are due to sample matrix.
21. Is the three-point (minimum) initial calibration complete? **Reference Source: WAP Table B3-5 Verification Source: Initial Calibration Data**	X			

Attachment 10 – CCP SPQAO Solid/Soil Total Non-Halogenated Volatile Organic Compound Analysis Project Level Validation Checklist and Summary (continued)

BATCH DATA REPORT NUMBER: ALD05025N **ANALYSIS DATE:** 10/12/05, 10/17/05, 10/19/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
22. Is calibration performed at a minimum frequency of every 12 hours of operation? **Reference Source: WAP Table B3-5 Verification Source: Continuing Calibration Verification, Blank Summary**	X			
23. Is the correlation coefficient (r) ≥0.990? **Reference Source: WAP Table B3-5 Verification Source: Initial Calibration Data**	X			
24. Is the %D ≤15% for all compounds? **Reference Source: WAP Table B3-5 Verification Source: Continuing Calibration Verification**	X			
25. Are the retention times (RTs) for the continuing calibrations ±3 standard deviations from the initial calibration per applicable SW-846 method? **Reference Source: WAP Table B3-5 Verification Source: Continuing Calibration Verification**	X			
26. Does the Batch Data Report include MDLs (mg/kg) that are ≤PRQL in Table B3-4? **Reference Source: WAP Table B3-4 Verification Source: MDL Reporting Form**	X			MDL determination performed on 5/24/05.
27. Are analytical procedures (including data revision) used to develop these data referenced in the Batch Data Report? **Reference Source: WAP Table B3-13 Verification Source: Data Generator Checklist for TWCP**	X			ACMM-9441, Rev. 11 – Analysis.
28. Does the Batch Data Report include the operator's signature and analysis date? **Reference Source: WAP Table B3-13 Verification Source: Data Generator Checklist for TWCP**	X			

Attachment 10 – CCP SPQAO Solid/Soil Total Non-Halogenated Volatile Organic Compound Analysis Project Level Validation Checklist and Summary (continued)

BATCH DATA REPORT NUMBER: ALD05025N **ANALYSIS DATE:** 10/12/05, 10/17/05, 10/19/05

Description of Criteria Reviewed	Criteria Met? Y/N/NA			Comments/Qualifiers
29. Are data reporting forms complete with data reported properly (i.e., data is reported in correct units, with correct significant figures, and with correct qualifying flags)? **Reference Source: WAP Table B3-13, B3-10b(1) Verification Source: Batch Data Report**	X			
30. Have data reporting flags been assigned properly? **Reference Source: WAP Table B3-13 Verification Source: DGL Checklists**	X			
31. Have the batch samples been properly preserved (4° ± 2°C)? **Reference Source: WAP Table B1-4 Verification Source: COC Form, Sample Receipt Checklist, and/or QA Data Review Checklist**	X			
32. Are there any NCR(s) associated with this batch? Identify the NCR(s). **Reference Source: WAP B3-13 Verification Source: DGL Checklists, Batch Data Report Narrative, and/or batch comments**	X			NCR-CCP-0505-05, Rev. 0 was initiated to bring laboratory NCR 100077 into CCP's tracking system. The NCR was issued due to a balance and check weight having an expired calibration. Since the recalibration was within tolerance, the NCR was dispositioned as "Use-As-Is".
33. Are Batch Data Generation Level ITR, TS, and QA Data Review Checklists complete, accurate, and signed? **Reference Source: WAP Table B3-13 Verification Source: DGL Checklists**	X			
34. Is Attachment 6 included?	X			

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

Richard Kantrowitz
Site Project QA Officer

Signature

11/11/05
Date

Attachment 6 – CCP Checklist Addendum

Note: The use of this form may involve multiple pages. See the line below for the total number of pages associated with this BDR.

Page: 1 of 1

Batch Data Report (BDR) Number: ALD05025N

	Headspace Gas (HSG)		Visual Examination (VE)
	Nondestructive Assay (NDA)		Radiography (RTR)
X	Homogeneous Waste		Radiological Characterization

Comments	Comment Resolution
NCR-CCP-0505-05, Rev. 0 was initiated to bring laboratory NCR 100077 into CCP's tracking system. The NCR was issued due to a balance and check weight having an expired calibration.	Refer to attached NCR.

Additional information provided at time of review?	X	YES		NO

All comments addressed:

Name: Richard Kantrowitz

Signature: Richard Kantrowitz

Date: 11/11/05

Attachment 1 – CCP Nonconformance Report (NCR)

NCR No. NCR –CCP - 0505 – 05 Revision 0

1. Lot No./Heat No. or Serial No.: N/A	2. Process (NDA, HSG, NDE, VE, Other): Other	3. Batch Data Report # (s): ALD05025N, ALD05026N ALD05031S, ALD05032S
4. Order/Work Order/Job Control Number (as applicable): INL NCR number 100077	5. PO #: N/A 6. Supplier: N/A	Container#(s): See Attachment 2

DESCRIPTION OF NONCONFORMANCE

7. (a) Hold Tag Applied? ☐ YES ☒ NO (If NO, explain) Segregation Method(s): ☐ NA
CCP administrative NCR to document INL NCR number 100077

☐ < 100 nCi/g ☐ Prohibited Item ☐ >500 ppmv Flamm. VOCs

☐ E-Flag ☐ TRAMPAC Criteria ☐ Receiving Inspection ☒ Other

COPY

(b) Description of Nonconformance
Required Condition (Implementing Procedure, Section & Revision)
MCP-2610, REv. 4, Section 4.8.5 "M&TE User: Use only M&TE with current and reliable calibration...Do NOT use or continue to use any M&TE if the calibration due date or interval has passed without recalibration or if the device produces results known to be in error.

(c). Actual Condition
Balance (721549) used for weighing lab blank and laboratory control samples solid matrix was used beyond the calibration expiration date of 10/12/05. Check weight (721550) used for checking balance 721549 was used beyond the calibration expiration date of 10/14/05.

See continuation sheet (Attachment 2)

8. NCR Originator (Print name, sign and date) 11/11/05 Irene Quintana Irene Quintana	9. SPQAO/FQAO Validation (Print name, sign and date) Richard Kentrowitz 11/11/05
10. Significant Condition? ☐ YES ☐ NO ☒ NA	11. Recurring Condition? ☐ YES ☒ NO (If YES, List NCRs/CARs)
12. Trend Code: A	13. Responsible Manager: R. A. Billett / C.A. STEPZINSKI

SPQAO-2

Attachment 1 – CCP Nonconformance Report (NCR)	
NCR No. NCR -CCP - 0505 - 05 Revision 0	
INTERIM DISPOSITION	
14. Interim Disposition (Check One) ☒ N/A (See final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort ☐ Reinspect/Retest ☐ Remediate (a) Instructions for Completion of the Interim Disposition:	
INTERIM DISPOSITION APPROVALS	
15 .Responsible Manager/Individual (Print, sign and date)	16. SPQAO/FQAO (Print, sign and date)
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
COMPLETION OF INTERIM DISPOSITION	
17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date)	
18. Interim Disposition Verified SPQAO/FQAO: (Print, sign and date)	

SPQAO-3

Attachment 1 – CCP Nonconformance Report (NCR)	
NCR No. NCR –CCP- 0505 - 05 Revision 0	
FINAL DISPOSITION	
19. Final Disposition (Check One) ☒ Use-As Is ☐ Reject ☐ Repair ☐ Rework ☐ Scrap	
(a) Technical Justification (Required for "Use-As-is" and "Repair" dispositions, N/A for "Reject," "Scrap," or "Rework" dispositions.) Balance in question was recalibrated on 10/31/05 and found to be in tolerance.	
(b) Disposition Instructions (Required for "Reject" and "Scrap") N/A	
(c) Instructions for Completion of the Final Disposition, including Inspection Criteria (Required for "Repair" and "Rework") N/A	
(d) Corrective Actions (Actions to Prevent Recurrence) - as required. N/A	
FINAL DISPOSITION APPROVALS	
20. Responsible Manager/Individual: (Print, sign and date) R. A. Billett 11/11/05 C.A. STEPZINSKI FOR BOB BILLETT	21. SPQAO/FQAO: (Print, sign and date) Robert Czyzewski R Czyzewski 11/11/05
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
CLOSURE	
22. Final Disposition Complete Responsible Manager/Individual: (Print, sign and date) C.A. STEPZINSKI 11/11/05	
23. Final Disposition Verified – NCR Closed * R. Czyzewski SPQAO: (Print, sign and date) R Czyzewski 11/11/05	

*CTS was updated to indicate closed this date.

SPQAO-4

Attachment 1 to NCR-CCP-0505-05, Rev. 0 Page 1 of 5

CH2M-WG

230.01
Revision date
09/30/2003

Control of Nonconforming Items

Nonconformance Documentation

Initiator:	S Number:	Work Org.:	Work Phone:
Jaser, Jeffrey L	077565	5384	6-1968

Documentation

NCR Number:	Date Identified:	*SSC:	*Facility:INTEC *Location:602 Description:Analytical Laboratories Department
100077	10/27/2005	N/A	

*Item Name:	Req. No/P.O. No./SC and/or Project No.:
TRU Waste Characterization Samples	N/A
Supplier Name/Address: N/A	*This NCR is for: ☒ ICP ☐ INEEL ☐ Other

*Is the non-conformance under the requirement of SNF or NRC-licensed activities (DOE/RW-0333P)? ○ Yes ● No

*Specification to which item does not perform:

MCP-2610, Rev. 4, Section 4.6.5: "M&TE User: Use only M&TE with current and reliable calibration.....Do NOT use or continue to use any M&TE if the calibration due date or interval has passed without recalibration or if the device produces results known to be in error.

Associated Documents:
Data Reports ALD05025N, ALD05026N, ALD05031S, ALD05032S

*Non-Conformance Description:

Balance (721549) used for weighing lab blank and laboratory control sample solid matrix was used beyond the calibration expiration date of 10/12/05. Check weight (721550) used for checking balance 721549 was used beyond the calibration expiration date of 10/14/05.

Affected samples include:

1) ALD05025N, analytical batch 0510086, samples LBN101705, LBN101905, ALD log number 051008-8, sample 5CY99MSRE, ALD log number 051010-8, sample 5CZ79RE, ALD log number 051013-4, samples 5DB26, 5DB28, 5DB29, 5DB29RE, 5DB31, and 5DB31RE

2) ALD05026N analytical batch 0510108 samples LBN101305, LBN101805, ALD log number 051010-8 samples 5DA06RE and 5DA11RE, ALD log number 051010-10, samples 5DA35, 5DA35RE, 5DA36, 5DA40, 5DA40RE, 5DA41, 5DA45, 5DA45RE, 5DA46, 5DA50, and 5DA51, ALD log number 051012-11, samples 55DB17, 5DB18, 5DB22, and 5DB23

3) ALD05031S, analytical batch 0510088, samples LBS101305A, LBS101805A, LBS102405A, and LCSS0510188A, ALD log number 5CY97, 5CZ01, 5CZ01MS, and 5CZ01MSD, ALD log number 5CZ77 and 5CZ80, ALD log number 051013-4, 5DB27, 5DB30, 5DB30RE, 5DB32, and 5DB32RE

4) ALD05032S, analytical batch 0510108, sample LBS101705A, ALD log number 051010-10, samples 5DA37, 5DA42, 5DA47, and 5DA52, ALD lognumber 051012-11, samples 5DB19 and 5DB24

*Responsible Manager (RM):	*Responsible Quality Engineer (QE):
Brewer, Ken N	Dunhour, Frederick J
Alternate RM for processing NCR: Salter Siemer, Shelly J	

Next Activity: NCR Closed
Actionee: N/A
Date Due:

Screening - Responsible Manager

SPQAO-5

Attachment 1 of to NCR-CCP-0505-05, Rev. 0 page 2 of 5

ICP ICARE NCR System

Responsible Manager (RM):	Organization	Phone:	Date Screened:
Seiler Siemer, Shelly J	5360	6-5988	10/27/2005

*Initiator has selected "No" to the non-conformance under the requirement of SNF or NRC-licensed activities (DOE/RW-0333P). Is this Correct?
● Yes ○ No

*Does the NCR require Stop Work?
○ Yes ● No

*Safety Category or (Quality Level) of Material/Equipment/Components:
○ SO(1) ● LSC(3)
○ SS(2) ○ CG(4)

*Does this NCR support Environmental Requirements? ○ Yes ● No

RM Comments:
N/A

Screening - Quality Engineer

Quality Engineer (QE):	Organization	Phone:	Date Screened:
Dunhour, Frederick J		6-2484	10/27/2005

*Is the NCR valid? ● Yes ○ No

Quality Comments:
Quality Level -3 assignment is based on regulatory significance of these samples for the DOE-CBFO customer, and supported through application of the CBFO-approved INL TWCP QA Program.

Notification - RM

Responsible Manager (RM):	Organization	Phone:	Date Notified:
Seiler Siemer, Shelly J	5360	6-5988	10/27/2005

ORPS Report Number:
N/A

*Is the NCR operational equipment needed for Conditional Use?
○ Yes ● No

*Area of Responsibility:
ICP - INL TRU Waste Characterization Program

Optional Internal Area of Responsibility:
N/A

Cognizant Director:
Brower, Ken N

*Facility Manager:
Brower, Ken N

Cognizant Director's Alternate(s):
Dunhour, Frederick J; Seiler Siemer, Shelly J

Compliance Coordinator(s) to determine Price Anderson (PAAA) applicability:
Dunhour, Frederick J

*Does the non-conformance involve suspect/counterfeit items?
○ Yes ● No

*Does this NCR pertain to Waste Containers, Waste Packaging, or Packaging and Transportation activities? ○ Yes ● No

Method of Segregation:
Administratively controlled by the TWCP sample management and data review processes.

Method of Identification:
Administratively controlled by the TWCP sample management and data review processes.

*Lead Disposition Evaluator:
Jeter, Jeffrey L

This block is intentionally left blank.

Additional Disposition Evaluator(s):
(These evaluators verify and concur the disposition of NCR.)

Additional Notification:
Amy M Sumariwalla; Adrian D Chapman; David W Lodman; Thomas G Moffett; Faye E Srala; Wendy L Rice

QE Red Tag Process

Quality Engineer (QE):	Organization	Phone:	Date Processed:
Dunhour, Frederick J		6-2484	10/27/2005

Tagging Information/Other Methods:
Administratively controlled by the TWCP sample management and data review processes.

Other means of Tag Identification:
Administratively controlled by the TWCP sample management and data review processes.

Disposition

Lead Disposition Evaluator:	Organization:	Phone:	Date Disposition sent for approval:
Jeter, Jeffrey L	5364	6-1966	11/03/2005

Dg Ulrich 5

Attachment 1 of to NCR-CCP-0505-05, Rev. 0

ICP ICARE NCR System

*NCR Disposition: ● Use As Is ○ Reject ○ Repair ○ Multiple Disposition ○ Rework	This block is intentionally left blank.
*Does Disposition represent Design Change? ○ Yes ● No	*Does this item require a Unreviewed Safety Question (USQ) screening and evaluation? ○ Yes ● No

Identify as-built drawings and other documentation:(*For Use-As-Is and Repair)
N/A

Method of Disposal:(*For Reject)
N/a

Technical Justification:(*For Use-As-Is and Repair)
Balance in question was recalibrated on 10/31/05 and found to be in tolerance. See attached.

Technical requirements and acceptance criteria to be used for repair work:
n/a

Inspections and Verification Criteria for acceptability of repair or rework:
N/A

Other Documents or QA records requiring the change:
N/A

If this nonconforming item is associated with, or caused by, a program, procedure, or process problem, document the issue in accordance with MCP-598:
N/A

Disposition Concurrence/Approval

Approval RM(Signature)	Concurrence/Approval QE(Signature)	This block is intentionally left blank.	This block is intentionally left blank.
Sailer Siemer, Shelly J *Shelly J Sailer Siemer* 11/03/2005	Dunhour, Frederick J *Frederick J Dunhour* 11/03/2005		

Implementation Completion - RM

Responsible Manager (RM):	Organization	Phone:	Date Completion:
Sailer Siemer, Shelly J	5360	6-5988	11/03/2005

The Disposition as approved has been completed and implemented: ○ Yes ● N/A

*Provide Justification for N/A:
No implementation actions required for approved "use-as-is" disposition.

Implementing Documentation:
N/A

Implementation Verification - QE

Quality Engineer (QE):	Organization	Phone:	Date Verified:
Dunhour, Frederick J		6-2484	11/03/2005
*Verifier/Inspector: Dunhour, Frederick J	*Organization: 5360 Phone: 6-2484		

*Identify any reference documents by number and name, and if available, reference them here or attach in Attachment Section:
N/A

Verification Comments:
No disposition actions were required based on the approved "use-as-is" disposition.

Closure - RM

Responsible Manager (RM):	Organization	Phone:	Date Closed:
Sailer Siemer, Shelly J	5360	6-5988	11/03/2005
*1. Verified that the NCR inspection/verification activities have been performed as required, and are properly documented, signed off on the NCR, and attachments or references to document supporting completion of those actions are provided as necessary.			○ Yes ● N/A

SPQAO-7

Attachment 1 to NCR-CCP-0505-05, Rev. 0

ICP ICARE NCR System

*2. Verified that as-built documents identified in the disposition have been revised, or their change control forms have been approved.	○ Yes ● N/A
*3. I have reviewed the NCR to ensure that all attachments are legible within the electronic system.	● Yes ○ N/A
*4. I have started to process any Lessons Learned from the investigation, disposition and resolution of the NCR per MCP-192, "Lessons Learned System." NOTE: Lessons Learned is not part of the electronic NCR process. This should be completed in parallel with the NCR process and could be on-going after NCR closure.	○ Yes ● N/A
*5. I verified that all other attachments such as USQ Evaluation and Disposition Calculations are attached to the NCR.	○ Yes ● N/A
Closure Comment: This NCR and the records cited therein contain adequate documentation of the nonconformance and justification for its "use-as-is" disposition.	
Closure Signature (RM): *Shelly J Sailer Siemer*	

Closure Validation QE

Quality Engineer (QE):	Organization	Phone:	Date Validated:
Dunhour, Frederick J		6-2484	11/03/2005

*1. I have reviewed the NCR and found it as complete, with all documents attached as necessary.	● Yes ○ N/A
*2. I verify that all the NCR Red tags have been removed and destroyed.	○ Yes ● N/A
*3. I verify that Quality Accepted (Green) tags have been attached as necessary to maintain traceability of the item.	○ Yes ● N/A
*4. I verify that Conditional Use (White) tags have been removed.	○ Yes ● N/A
*5. The NCR is validated as complete.	● Yes ○ N/A
Closure Comment: This NCR and the records cited therein contain adequate documentation of the nonconformance and justification for its "use-as-is" disposition.	
Closure Signature (QE): *Frederick J Dunhour*	

Attachments/Comments

721549calpl.pdf

Revision History

11/03/2005 01:20 PM : Frederick J Dunhour as a QE closed the NCR.The following people were notified about the NCR Closer:
Jeter, Jeffrey L; Sailer Siemer, Shelly J; Brewer, Ken N; Brewer, Ken N; Dunhour, Frederick J; Sailer Siemer, Shelly J; Dunhour, Frederick J; Jeter, Jeffrey L; Amy M Sumariwalla; Adrian D Chapman; David W Lodman; Thomas G Moffett; Faye E Sraia; Wendy L Rice
11/03/2005 01:15 PM : Shelly J Sailer Siemer as an RM completed closure process and submitted to Dunhour, Frederick J for QE for final closure.
11/03/2005 12:51 PM : Frederick J Dunhour completed implementation and verification and forwarded for closure to Sailer Siemer, Shelly J
11/03/2005 12:38 PM : Shelly J Sailer Siemer completed implementation and forwarded for verification to Dunhour, Frederick J
11/03/2005 12:34 PM : Shelly J Sailer Siemer as an RM concurred the Disposition and signed off.
11/03/2005 12:01 PM : Frederick J Dunhour as a QE concurred the Disposition and signed off.
11/03/2005 11:45 AM : Jeffrey L Jeter made the changes to the document as follows:
The previous Technical Justification was
Balance in question was recalibrated on 10/31/05 and found to be in tolerance.

11/03/2005 11:44 AM : Jeffrey L Jeter completed NCR Disposition and submitted to Sailer Siemer, Shelly J; Dunhour, Frederick J for their concurrence and approval.
10/27/2005 03:20 PM : Shelly J Sailer Siemer completed Notification Process and notified Dunhour, Frederick J; Brewer, Ken N; Dunhour, Frederick J; Sailer Siemer, Shelly J; Dunhour, Frederick J; Brewer, Ken N; Jeter, Jeffrey L; Amy M Sumariwalla; Adrian D Chapman; David W Lodman; Thomas G Moffett; Faye E Sraia; Wendy L Rice
10/27/2005 02:38 PM : Frederick J Dunhour completed screening and forwarded to Sailer Siemer, Shelly J for Notification process.
10/27/2005 02:24 PM : Shelly J Sailer Siemer completed screening and forwarded to Dunhour, Frederick J for QE Screening.
10/27/2005 02:08 PM : Jeffrey L Jeter resubmitted NCR to RM Sailer Siemer, Shelly J for screening.

SPOA0-8

Attachment 1 to NCR-CCP-0505-05, Rev. 0

Page 5 of 5

ICP ICARE NCR System

10/27/2005 02:06 PM : Shelly J Sailer Siemer returned to initiator Jeter, Jeffrey L for additional modification/correction.
10/27/2005 01:58 PM : Jeffrey L Jeter made the changes to the document as follows:
The previous Nonconformance Description was
Balance (721549) used for weighing lab blank and laboratory control sample solid matrix was used beyond the calibration expiration date of 10/12/05. Check weight (721550) used for checking balance 721549 was used beyond the calibration expiration date of 10/14/05.

Affected samples include:

1) ALD05025N, analytical batch 0510066, samples LBN101705, LBN101905, ALD log number 051006-6, sample 5CY99MSRE, ALD log number 051010-6, sample 5CZ79RE, ALD log number 051013-4, samples 5DB26, 5DB28, 5DB29, 5DB29RE, 5DB31, and 5DB31RE

2) ALD05026N analytical batch 0510108 samples LBN101305, LBN101805, ALD log number 051010-8 samples 5DA06RE and 5DA11RE, ALD log number 051010-10, samples 5DA35, 5DA35RE, 5DA36, 5DA40, 5DA40RE, 5DA41, 5DA45, 5DA45RE, 5DA46, 5DA50, and 5DA51, ALD log number 051012-11, samples 55DB17, 5DB18, 5DB22, and 5DB23

3)ALD05029S, analytical batch 0509281, sample LB101205B, ALD log number050929-5, sample 5CW19RE

4) ALD05031S, analytical batch 0510066, samples LBS101305A, LBS101805A, LBS102405A, and LCS60510166A, ALD log number 5CY97, 5CZ01, 5CZ01MS, and 5CZ01MSD, ALD log number 5CZ77 and 5CZ80, ALD log number 051013-4, 5DB27, 5DB30, 5DB30RE, 5DB32, and 5DB32RE

5) ALD05032S, analytical batch 0510108, samples LBS101205A, LBS101705A, and LCSS0510108A, ALD log number 051010-8, samples 5DA08, 5DA13, 5DA13MS, and 5DA13MSD, ALD log number 051010-10, samples 5DA37, 5DA42, 5DA47, and 5DA52, ALD lognumber 051012-11, samples 5DB19 and 5DB24

10/27/2005 01:58 PM : Jeffrey L Jeter resubmitted NCR to RM Sailer Siemer, Shelly J for screening.
10/27/2005 01:40 PM : Shelly J Sailer Siemer returned to initiator Jeter, Jeffrey L for additional modification/correction.
10/27/2005 11:50 AM : Jeffrey L Jeter submitted NCR to RM and his alternate Brewer, Ken N, Sailer Siemer, Shelly J for screening.

The following fields are general purpose public use. Any data entered here is not related to NCR process and solely used for one's individual need. Integrity of the data is not guaranteed since it can be replaced by any user randomly.

FIELD A:
(Field Name: FIELDA, type Text)

FIELD B:
(Field Name: FIELDb, type Text)

Attachment 2 – CCP Nonconformance Report (NCR) Continuation Sheet				
NCR No. NCR – CCP - 0505 - 05	Revision No. 0	Attachment # 1	Page 1 of 1	

Continuation from Section Number: 3 and 7(b)
Affected samples include:
1) ALD05025N, analytical batch 0510066, samples LBN101705, LBN101905, ALD log number 051006-6, sample 5CY99MSRE (container 10018503), ALD log number 051010-6 sample 5CZ79RE (container 10018875), ALD log number 051013-4, samples 5DB26 (container 10018178), 5DB28, 5DB29 (container 10018867), 5DB29RE (container 10018867), 5DB31, and 5DB31RE.

2) ALD05026N analytical batch 0510108 samples LBN101305, LBN101805, ALD log number 051010-8 samples 5DA06RE and 5DA11RE ALD log number 051010-10, samples 5DA35, 5DA35RE, 5DA36, 5DA40, 5DA40RE, 5DA41, 5DA45, 5DA45RE, 5DA46, 5DA50, and 5DA51, ALD log number 051012-11, samples 55DB17, 5DB18, 5DB22, and 5DB23.

3) ALD05031S, analytical batch 0510066, samples LBS101305A, LBS101805A, LBS102405A, and LCSS0510066A, ALD log number 5CY97 (container 10018503), 5CZ01, 5CZ01MS, and 5CZ01MSD, ALD log number 5CZ77 (container 10016886) and 5CZ80 (container 10018875), ALD log number 051013-4, 5DB27 (container 10018178), 5DB30 (container 10018867), 5DB30RE, 5DB32, and 5DB32RE.

4) ALD05032S, analytical batch 0510108, sample LBS101705 A, ALD log number 0510-10, samples 5DA37, 5DA42, 5DA47, and 5DA52, ALD log number 051012-11, samples 5DB19, and 5DB24.

This NCR is created to document INL NCR 100077 under the CCP program.

SPQA0-10

CH2M•WG IDAHO, LLC

Analytical Laboratories Department

Idaho Cleanup Project

Transuranic Waste Characterization Program

RCRA Analysis Data Report

Batch Data Report Number: ALD05025N
Revision Number: 0
Issue Date: November 7, 2005

Analytical Method: ACMM-9441
Analyte(s): NHVOCs

Issued to: Mr. Robert Billett, SPM
C/O CCP Records Coordinator
4021 National Parks Highway
Carlsbad, NM 88220

Summary: This data report contains analysis results for 5 samples and 3 associated trip blanks from Sampling Batch WCS-05-04.

Report Content:

Section	Content	Pages
1	Sample Identification Table	0002 – 0003
2	Sample Custody and Tracking Documents	0004 – 0017
3	Analysis Results	0018 – 0036
4	Batch QC Sample Results	0037 – 0049
5	Instrument QC Data	0050 – 0058
6	Data Review Checklists	0059 – 0067

Release Authorization:

Name & Position	Signature	Date
Faye E. Srala Acting Technical Leader		11/7/05
Jeffrey L. Jeter Organics Supervisor		11/7/05
Shelly J. Sailer Quality Assurance Officer		11/07/05

Section 1

Sample Identification Table

TOTAL NHVOC ANALYSIS
SAMPLE CROSS-REFERENCE TABLE

Idaho Cleanup Project
Analytical Laboratories Department

TRU Waste Characterization Program

Preparation Method: ACMM-9441-R11
Analytical Method: ACMM-9441-R11

Data Report Number: ALD05025N
Analytical Batch ID: 0510066

Field Sample ID	Lab Sample ID
NA	LBN101205B
NA	LCSN0510066
1001850311V2DL10	5CY96DL10
TB93B	5CY98
1001850321V4DL5	5CY99DL5
1001850321V6MSDDL10	5CY99MSDDL10
1001688611V2DL10	5CZ76DL10
TB94B	5CZ78
1001887511V2DL40	5CZ79DL40
NA	LBN101705
1001850321V5MSREDL9	5CY99MSREDL9
1001887511V4REDL30	5CZ79REDL30
1001817811V2DL9	5DB26DL9
TB95B	5DB28
NA	LBN101905
1001886711V4RE	5DB29RE
1001886721V8RE	5DB31RE

Section 2

Sample Custody and Tracking Documents

Idaho National Laboratory - Waste Characterization Area - TWCP Chain-of-Custody

COC No. WCA-936

[HFEF-OI-6921, Rev. 3e, 5/11/04

Sampling Location: MFC / HFEF / WCA

Analytical Location: INL - INTEC

Sample Batch No.: WCS-05-04

Container Identification No.: 10018503

Container I.D.C.: ID-RF-S3150-A*

Sample Matrix: SOLID

Chain of Custody Initiated: Signature: JM Magnuson 10/4/05 1303 Date / Time:

Sample ID Number	Sample Date	Sample Time	Container Size	Sample Weight (gm)	VOC	NHVOC	Semi VOC	Metals	Other	Comments	Disposition
10018503 11V1	10/4/2005	1303	20-ml	2.57	X						
10018503 11V2	10/4/2005	1305	20-ml	2.64		X					
10018503 11V3	10/4/2005	1307	20-ml	2.67						SPARE	
10018503 11V4	10/4/2005	1309	20-ml	2.74						SPARE	
10018503 11M1	10/4/2005	1312	250-ml	33.34			X	X			
TB 93a	10/4/2005	1512	20-ml	2.89	X					TRIP BLANK	
TB 93b	10/4/2005	1512	20-ml	2.77		X				TRIP BLANK	
TB 93c	10/4/2005	1512	20-ml	2.79						TRIP BLANK/SPARE	

NOTE: For preservation, all samples were stored at a controlled temperature of 4° C and then packed in chemical ice for shipment.

ALD LOG # 05,0066 1 of 1

Sampler Relinquishment to HFEF TWCP Sample Custodian: Signature: JM Magnuson

Sample Custodian receipt: JM Magnuson 10/4/05 1515 Signature: Date / Time:

Samples placed in locked storage: JM Magnuson 10/4/05 1515 Signature: Date / Time:

Samples retrieved from locked storage: B. Adams 10-6-05 0840 Signature: Date / Time:

Shipping TID #: 4700

BET 10/12/05

Relinquished By:		
BAdams	10-6-05	1018
Received By:	Date	Time
BOP	10/06/05	1230
Relinquished By:		
Received By:	Date	Time

Discrepancies / Comments 50A BET 10/12/05

*Waste Stream ID-RF-S3114 includes IDCs ~~008~~, 700, & 801 CORRECTED PER CCP-AK-WL-005.

BOP 10/12/05

All sample analysis complete and samples removed from custody control and dispositioned. _____ Signature Date

0005

Idaho National Laboratory - Waste Characterization Area - TWCP Chain-of-Custody

COC No. WCA-937

[HFEF-OI-6921, Rev. 3e, 5/11/04]

Sampling Location: MFC / HFEF / WCA
Analytical Location: INL - INTEC
Sample Batch No.: WCS-05-04
Container identification No.: 10018503
Container I.D.C.: ID-RF-S3150-A*
Sample Matrix: SOLID
Chain of Custody Initiated: JM Magnuson (Signature:) 10/4/05 (Date) 1318 (Time)

Sample ID Number	Sample Date	Sample Time	Container Size	Sample Weight (gm)	VOC	NHVOC	Semi VOC	Metals	Other	Comments	Disposition
10018503 21V1	10/4/2005	1318	20-ml	2.99	X					QC	
10018503 21V2	10/4/2005	1319	20-ml	2.87	X					QC	
10018503 21V3	10/4/2005	1321	20-ml	2.95	X					QC	
10018503 21V4	10/4/2005	1323	20-ml	2.93		X				QC	
10018503 21V5	10/4/2005	1325	20-ml	2.68		X				QC	
10018503 21V6	10/4/2005	1327	20-ml	2.92		X				QC	
10018503 21V7	10/4/2005	1328	20-ml	2.59						SPARE/QC	
10018503 21V8	10/4/2005	1330	20-ml	2.66						SPARE/QC	
10018503 21M1	10/4/2005	1333	250-ml	37.02			X	X		QC	
TB NA	SEE COMMENTS				X						
						X					

NOTE: For preservation, all samples were stored at a controlled temperature of 4° C and then packed in chemical ice for shipment.

Sampler Relinquishment to HFEF TWCP Sample Custodian: JM Magnuson (Signature:)

ALD LOG # 0510066
1 of 1

Sample Custodian receipt: JM Magnuson (Signature:) 10/4/05 1543 (Date / Time:)

Samples placed in locked storage: JM Magnuson (Signature:) 10/4/05 1543 (Date / Time:)

Samples retrieved from locked storage: B. A... (Signature) 10-6-05 0840 (Date / Time)

Shipping TID #: 4700

Relinquished By:			Discrepancies / Comments Samples listed on this COC will be shipped with samples listed on COC 936.
B. A...	10-6-05	1018	Trip Blanks are listed on COC 936. COC 936 & 937 will sent in same shipping container. JM M 10/4/05
Received By:	Date	Time	Quality Control Samples. BET 10/12/05
BSP	10/6/05	1230	50A BET 10/12/05
Relinquished By:			*Waste Stream ID-RF-S3114 includes IDCs ~~008~~, 700, & 801 CORRECTED PER CCP-AK-WL-005. BSP 10/12/05
Received By:	Date	Time	

All sample analysis complete and samples removed from custody control and dispositioned. _____ (Signature) _____ (Date)

9000

ALD Document: Log 0510066 TWCP-RF_S3150-A.tif - Scanned:10/12/2005 1:54:06 PM

Idaho National Laboratory - Waste Characterization Area - TWCP Chain-of-Custody

COC No. WCA-938

[HFEF-OI-6921, Rev. 3e, 5/11/04

Sampling Location: MFC / HFEF / WCA | Analytical Location: INL - INTEC | Sample Batch No.: WCS-05-04

Container Identification No.: 10016886 | Container I.D.C.: ID-RF-S3150-A* | Sample Matrix: SOLID

Chain of Custody Initiated: Signature: J M Magnuson 10/6/05 Date / Time: 1358

Sample ID Number	Sample Date	Sample Time	Container Size	Sample Weight (gm)	VOC	NHVOC	Semi VOC	Metals	Other	Comments	Disposition
10016886 11V1	10/6/05	1358	20-ml	2.77	X						
10016886 11V2	10/6/05	1400	20-ml	2.84		X					
10016886 11V3	10/6/05	1402	20-ml	2.85						SPARE	
10016886 11V4	10/6/05	1404	20-ml	2.66						SPARE	
10016886 11M1	10/6/05	1408	250-ml	31.53			X	X			
TB 94a	10/6/05	1511	20-ml	2.81	X					TRIP BLANK	
TB 94b	10/6/05	1511	20-ml	2.90		X				TRIP BLANK	
TB 94c	10/6/05	1511	20-ml	2.76						TRIP BLANK/SPARE	

NOTE: For preservation, all samples were stored at a controlled temperature of 4° C and then packed in chemical ice for shipment.

Sampler Relinquishment to HFEF TWCP Sample Custodian: Signature: J M Magnuson

ALD LOG # 0510106 1 of 1

Sample Custodian receipt: Signature: J M Magnuson 10/6/05 1515 Date / Time:

Samples placed in locked storage: Signature: J M Magnuson 10/6/05 1515 Date / Time:

Samples retrieved from locked storage: Signature: B. A[illegible]s 10/10/05 0800 Date / Time:

Shipping TID #: 4699

Relinquished By:			Discrepancies / Comments
B. A[illegible]s	10-10-05	1015	*Waste Stream ID-RF-S3150-A includes IDCs 700, & 801
Received By:	Date	Time	
[illegible]	10-10-05	1130	
Relinquished By:			
Received By:	Date	Time	

All sample analysis complete and samples removed from custody control and dispositioned. _____ Signature _____ Date

0002

Idaho National Laboratory - Waste Characterization Area - TWCP Chain-of-Custody

COC No. WCA-939

[HFEF-OI-6921, Rev. 3e, 5/11/04

Sampling Location: MFC / HFEF / WCA | Analytical Location: INL - INTEC | Sample Batch No.: WCS-05-04

Container Identification No.: 10018875 | Container I.D.C.: ID-RF-S3150-A* | Sample Matrix: SOLID

Chain of Custody Initiated: Signature: J M Magnuson 10/7/05 1253 (Date / Time:)

Sample ID Number	Sample Date	Sample Time	Container Size	Sample Weight (gm)	VOC	NHVOC	Semi VOC	Metals	Other	Comments	Disposition
10018875 11V1	10/7/05	1253	20-ml	2.96	X						
10018875 11V2	10/7/05	1255	20-ml	2.69		X					
10018875 11V3	10/7/05	1257	20-ml	2.65						SPARE	
10018875 11V4	10/7/05	1259	20-ml	2.62						SPARE	
10018875 11M1	10/7/05	1301	250-ml	38.46			X	X			
TB 3			20-ml		X					TRIP BLANK	
TB SEE COMMENTS			20-ml			X				TRIP BLANK	
TB			20-ml							TRIP BLANK/SPARE	

NOTE: For preservation, all samples were stored at a controlled temperature of 4° C and then packed in chemical ice for shipment.

Sampler Relinquishment to HFEF TWCP Sample Custodian: Signature: J M Magnuson

ALD LOG # 051010 60 1 of 1

Sample Custodian receipt: Signature: J M Magnuson 10/7/05 1415 (Date / Time:)

Samples placed in locked storage: J M Magnuson 10/7/05 1415 (Signature: / Date / Time:)

Samples retrieved from locked storage: B. A[illegible]s 10/10/05 0800 (Signature: / Date / Time:)

Shipping TID #: 4699

Relinquished By:			Discrepancies / Comments
B. A[illegible]s	10-10-05	1015	*Waste Stream ID-RF-S3150-A includes IDCs 700, & 801
Received By:	Date	Time	
[illegible]	10-7005	1130	THIS COC AND COC 938 WILL BE SHIPPED IN THE
Relinquished By:			SAME CONTAINER. COC 938 HAS THE TRIP BLANKS
			J M Magnuson 10/7/05
Received By:	Date	Time	

All sample analysis complete and samples removed from custody control and dispositioned. _____ Signature Date

8000

ALD Log # 0510134 1 of 1

Idaho National Laboratory - Waste Characterization Area - TWCP Chain-of-Custody

COC No. WCA-940

[HFEF-OI-6921, Rev. 3e, 5/11/04

Sampling Location: MFC / HFEF / WCA | Analytical Location INL - INTEC | Sample Batch No. WCS-05-04

Container Identification No. 10018178 | Container I.D.C. ID-RF-S315-A* | Sample Matrix: SOLID

Chain of Custody Initiated: Signature: J M Magnuson 10/10/05 1323

Date / Time: 10/19/05 **

Sample ID Number	Sample Date	Sample Time	Container Size	Sample Weight (gm)	VOC	NHVOC	Semi VOC	Metals	Other	Comments	Disposition
10018178 11V1	10/10/05	1323	20-ml	2.85	X						
10018178 11V2	10/10/05	1326	20-ml	2.95		X					
10018178 11V3	10/10/05	1327	20-ml	2.71						SPARE	
10018178 11V4	10/10/05	1331	20-ml	2.68						SPARE	
10018178 11M1	10/10/05	1333	250-ml	32.28			X	X			
TB 95a	10/10/05	1438	20-ml	2.79	X					TRIP BLANK	
TB 95b	10/10/05	1438	20-ml	2.88		X				TRIP BLANK	
TB 95c	10/10/05	1438	20-ml	2.71						TRIP BLANK/SPARE	

NOTE: For preservation, all samples were stored at a controlled temperature of 4° C and then packed in chemical ice for shipment.

Sampler Relinquishment to HFEF TWCP Sample Custodian: Signature: J M Magnuson

Sample Custodian receipt: Signature: J M Magnuson 10/10/05 1440 Date / Time:

Samples placed in locked storage: Signature: J M Magnuson 10/10/05 1440 Date / Time:

Samples retrieved from locked storage: B. Ad[illegible] 10-13-05 1000 Signature: Date / Time:

Shipping TID #: 4692

Relinquished By:			Discrepancies / Comments
B. Ad[illegible]	10-13-05	1010	*Waste Stream ID-RF-S3150-A includes IDCs 700, & 801
Received By:	Date	Time	** CORRECTED CONSISTENT WITH OTHER FIELD DATA. BET 10/19/05
B[illegible]	10/13/05	1259	
Relinquished By:			
Received By:	Date	Time	

All sample analysis complete and samples removed from custody control and dispositioned. _____

Signature Date

6009

ALD Document: Log 0510134 TWCP-RF_S3150-A.tif - Scanned:10/19/2005 11:29:28 AM

Idaho National Laboratory - Waste Characterization Area - TWCP Chain-of-Custody

ALD LOG # 05-0134

COC No. WCA-941

[HFEF-OI-6921, Rev. 3e, 5/11/04

Sampling Location: MFC / HFEF / WCA Analytical Location INL - INTEC Sample Batch No. WCS-05-04

Container Identification No. 10018867 Container I.D.C. ID-RF-S3150-A* Sample Matrix: ~~SOLID~~

Chain of Custody Initiated: Signature: J M Magnuson 10/11/05 1257 (Date / Time:)

Sample ID Number	Sample Date	Sample Time	Container Size	Sample Weight (gm)	VOC	NHVOC	Semi VOC	Metals	Other	Comments	Disposition
10018867 11V1	10/11/05	1257	20-ml	2.56	X						
10018867 11V2	10/11/05	1300	20-ml	2.58		X					
10018867 11V3	10/11/05	1303	20-ml	2.56						SPARE	
10018867 11V4	10/11/05	1305	20-ml	2.68						SPARE	
10018867 11M1	10/11/05	1308	250-ml	30.45			X	X			
TB			20-ml		X					TRIP BLANK	
TB SEG COC	940		20-ml			X				TRIP BLANK	
TB FOR TRIP	BLANKS		20-ml							TRIP BLANK/SPARE	

NOTE: For preservation, all samples were stored at a controlled temperature of 4° C and then packed in chemical ice for shipment.

Sampler Relinquishment to HFEF TWCP Sample Custodian: Signature: J M Magnuson

Sample Custodian receipt: Signature: J M Magnuson 10/11/05 1526 (Date / Time:)

Samples placed in locked storage: Signature: J M Magnuson 10/11/05 1526 (Date / Time:)

Samples retrieved from locked storage: Signature: B Adams 10-13-05 1000 (Date / Time:)

Shipping TID #: 4692

Relinquished By:			Discrepancies / Comments
B. Adams	10-13-05	1010	*Waste Stream ID-RF-S3150-A includes IDCs 700, & 801
Received By:	Date	Time	
	10/13/05	1259	
Relinquished By:			
Received By:	Date	Time	

All sample analysis complete and samples removed from custody control and dispositioned. _____ Signature Date

0010

ALD Document: Log 0510134 TWCP-RF_S3150-A.tif - Scanned:10/19/2005 11:29:28 AM

Idaho National Laboratory - Waste Characterization Area - TWCP Chain-of-Custody

ALD LOG # 0510134 T-1

COC No. WCA-942

[HFEF-OI-6921, Rev. 3e, 5/11/04]

Sampling Location:MFC / HFEF / WCA | Analytical Location INL - INTEC | Sample Batch No. WCS-05-04

Container identification No. 10018867 | Container I.D.C. ID-RF-S3150-A* | Sample Matrix: SOLID

Chain of Custody Initiated: JM Magnuson (Signature) 10/11/05 (Date) 1323 (Time)

Sample ID Number	Sample Date	Sample Time	Container Size	Sample Weight (gm)	VOC	NHVOC	Semi VOC	Metals	Other	Comments	Disposition
10018867 21V1	10/11/05	1323	20-ml	2.69	X					QC	
10018867 21V2	10/11/05	1325	20-ml	2.92	X					QC	
10018867 21V3	10/11/05	1328	20-ml	2.84	X					QC	
10018867 21V4	10/11/05	1329	20-ml	2.69		X				QC	
10018867 21V5	10/11/05	1331	20-ml	2.73		X				QC	
10018867 21V6	10/11/05	1333	20-ml	2.51		X				QC	
10018867 21V7	10/11/05	1334	20-ml	2.63						SPARE/QC	
10018867 21V8	10/11/05	1336	20-ml	2.64						SPARE/QC	
10018867 21M1	10/11/05	1339	250-ml	31.75			X	X		QC	
TB			20-ml		X					TRIP BLANK	
TB SEE COC 940			20-ml			X				TRIP BLANK	
TB FOR TRIP BLANKS			20-ml							TRIP BLANK/SPARE	

NOTE: For preservation, all samples were stored at a controlled temperature of 4° C and then packed in chemical ice for shipment.

Sampler Relinquishment to HFEF TWCP Sample Custodian: JM Magnuson (Signature)

Sample Custodian receipt: JM Magnuson (Signature) 10/11/05 (Date) 1526 (Time)

Samples placed in locked storage: JM Magnuson (Signature) 10/11/05 (Date) 1526 (Time)

Samples retrieved from locked storage: B. Al-s (Signature) 10-13-05 (Date) 0725 (Time) 1000 QA 10/13/05

Shipping TID #: 4692

Relinquished By:			Discrepancies / Comments
B. Al-s	10-13-05	1010	
Received By:	Date	Time	Quality Control Samples.
BOP	10/13/05	1259	1) INNER LABEL HAS WRONG SAMPLE WEIGHT
Relinquished By:			*Waste Stream ID-RF-S3150-A includes IDCs 700, & 801
Received By:	Date	Time	

All sample analysis complete and samples removed from custody control and dispositioned. _____ Signature _____ Date

0011

ALD CUSTODY AREA Sample Tracking Form

Project Name: TWCP-RF/S3150-A Analytical Log #: 051006 6

Custody Area: 209 Environmental/Regulatory Sample: YES

*Lab Sample ID(s)	Date / Time Removed	Relinquished By	Received By	To Lab	Analysis / Procedure	Date / Time Returned	Returned By	Received By	**Comments
5CY99-8	10/10/05 14:20			242	Hazard Index	10/10/05 16:10			
5CY96-1, 5CY98-1, 5CY99-1, 5CY99-2, 5CY99-3	10/13 FS								
5CY96-2, 5CY98-2, 5CY99-4, 5CY99-5, 5CY99-6	08:4			214	VOC Analysis	10/18/05 13:40			Consumed in Analysis
5CY97-1, 5CZ01-1	10/12/05 12:24			211	NHVOC Analysis	10/13/05 13:05			Consumed in Analysis
5CY97-1, 5CZ01-1	10/13/05 08:20			207 / 211	SemiVol Analysis	10/13/05 15:45			
5CY97-1, 5CZ01-1	/ / :			207 / 211	Mercury	/ / :			
	10/19/05 08:33			207 / 211	Metals	10/19/05 15:36			
	/ / :			207 / 211		/ / :			
5cy99-8	10/17/05 08:20			211	NHVOC ANALYSIS	10/17/05 13:50			CONSUMED IN ANALYSIS
	/ / :					/ / :			
	/ / :					/ / :			

* Multi Lab Sample IDs can be listed on a single line IF and ONLY IF they will be maintained and handled the same; otherwise a separate line should be used for each sample set.

** If consumed in Analysis, document in Comments field.

0012

ALD INTERNAL LAB Sample Tracking Form

Custody Area: 209 Project Name: TWCP-RF/S3150-A Analytical Log #: 051006 6

Environmental/Regulatory Sample: YES

*Lab Spl ID(s): 5CY96-2, 5CY98-2, 5CY99-4, 5CY99-5, 5CY99-6, 5CY99-8

Sample Type: ☒ Original Sample ☐ TCLP Extract ☐ Sample Prep ☐ Other: _____

Location From	Location To	Date Time	Relinquished By	Received By	Analysis / Procedure	**Comments
209	211	10/12/05 12:24			NHVOC Analysis	Originals were consumed in Analysis Water extracts were created and consumed in analysis.
211	209	10/13/05 13:05			Return Paperwork	NA
209	211	10/17/05 08:20			NHVOC ANALYSIS	5CY99-8 CONSUMED IN ANALYSIS.
211	209	10/17/05 13:50			—	Returned paper
		/ / :				
		/ / :				
		/ / :				

* All Sample codes listed on the line above must be maintained and handled as a batch. If any sample is going to be handled differently, a separate tracking form must be used.

** If consumed in Analysis, document in Comments field.

NOTE: Return this form to Custody Area when samples are returned, relinquished, consumed, or disposed.

00013

ALD CUSTODY AREA Sample Tracking Form

Project Name: TWCP-RF/S3150-A Analytical Log #: 051010_6

Custody Area: 209 Environmental/Regulatory Sample: YES

*Lab Sample ID(s)	Date / Time Removed	Relinquished By	Received By	To Lab	Analysis / Procedure	Date / Time Returned	Returned By	Received By	**Comments
5CZ76-4	10/10/05 14:32	BSP	[illegible]	242	Hazard Index	10/10/05 16:10	[illegible]	[illegible]	
5CZ76-1, 5CZ78-1, 5CZ79-1	10/13/05 08:45	[illegible]	[illegible]	214	VOC Analysis	10/18/05 13:40	[illegible]	[illegible]	Consumed in Analysis
5CZ76-2, 5CZ78-2, 5CZ79-2	10/12/05 12:24	BSP	[illegible]	211	NHVOC Analysis	10/13/05 13:05	[illegible]	[illegible]	Consumed in Analysis
5CZ77-1, 5CZ80-1	10/13/05 08:20	[illegible]	[illegible]	207/211	SemiVol Analysis	10/13/05 15:45	[illegible]	[illegible]	N/A
5CZ77-1, 5CZ80-1	/ / :			207 / 211	Mercury	/ / :			
	10/19/05 08:35	BSP	[illegible]	207 / 211	Metals	10/19/05 15:37	[illegible]	BSP	
	/ / :			207 / 211		/ / :			
5CZ79-4	10/17/05 08:22	BSP	[illegible]	211	NHVOC ANALYSIS	10/17/05 13:50	[illegible]	[illegible]	CONSUMED IN ANALYSIS
	/ / :					/ / :			
	/ / :					/ / :			

* Multi Lab Sample IDs can be listed on a single line IF and ONLY IF they will be maintained and handled the same; otherwise a separate line should be used for each sample set.

0014

ALD INTERNAL LAB Sample Tracking Form

Custody Area: 209 Project Name: TWCP-RF/S3150-A Analytical Log #: 051010_6

Environmental/Regulatory Sample: YES

*Lab Spl ID(s): 5CZ76-2, 5CZ78-2, 5CZ79-2 5CZ79-4

Sample Type: ☒ Original Sample ☐ TCLP Extract ☐ Sample Prep ☐ Other: _____

Location From	Location To	Date Time	Relinquished By	Received By	Analysis / Procedure	**Comments
209	211	10/12/05 12:24			NHVOC Analysis	Originals were consumed in Analysis Water extracts were created and consumed in analysis.
211	209	10/13/05 13:05			N/A	N/A
209	211	10/17/05 08:22			NHVOC ANALYSIS	5CZ79-4 CONSUMED IN ANALYSIS
211	209	10/17/05 13:50			—	Returned paper
		/ / :				
		/ / :				
		/ / :				

* All Sample codes listed on the line above must be maintained and handled as a batch. If any sample is going to be handled differently, a separate tracking form must be used.

NOTE: Return this form to Custody Area when samples are returned, relinquished, consumed, or disposed.

0015

ALD CUSTODY AREA Sample Tracking Form

Project Name: **TWCP-RF/S3150-A** Analytical Log #: **051013_4**

Custody Area: **209** Environmental/Regulatory Sample: **YES**

*Lab Sample ID(s)	Date / Time Removed	Relinquished By	Received By	To Lab	Analysis / Procedure	Date / Time Returned	Returned By	Received By	**Comments
5DB29-4	10/17/05 08:15	JDaley		242	Hazard Index	10/17/05 16:35		JDaley	Jan 10/17/05 5DB31-2 t3 returned
5DB26-1, 5DB28-1, 5DB29-1, 5DB31-1, 5DB31-2, 5DB31-3	10/18/05 10:05	JDaley	JDaley	214	VOC Analysis	10/18/05 13:40	JDaley		Consumed in Analysis
5DB26-2, 5DB28-2, 5DB29-2, 5DB31-4, 5DB31-5, 5DB31-6	10/17/05 09:38	BDP		211	NHVOC Analysis	10/17/05 13:50			~~Returned~~ ~~Consumed in Analysis~~ 5BB31-MS MSD
5DB27-1, 5DB30-1, 5DB32-1	10/18/05 08:40	JDaley	JDaley	~~207~~/211	SemiVol Analysis	10/18/05 1416 10/17/05 15:50	BDP 10/17/05	JDaley	
5DB27-1, 5DB30-1, 5DB32-1	/ / :			207 / 211	Mercury	/ / :			
5DB27-1, 5DB30-1, 5DB32-1	10/19/05 08:28	BDP		~~207~~/211	Metals	10/19/05 15:32	BDP		
5DB29-4, 5DB31-8	10/19/05 07:53	BDP		GET 10/19/05 ~~207~~/211	NHVOC ANALYSIS	10/19/05 09:10		JDaley	CONSUMED IN ANALYSIS
	/ / :					/ / :			
	/ / :					/ / :			
	/ / :					/ / :			

* Multi Lab Sample IDs can be listed on a single line IF and ONLY IF they will be maintained and handled the same; otherwise a separate line should be used for each sample set.

0016

ALD INTERNAL LAB Sample Tracking Form

Custody Area: 209 Project Name: TWCP-RF/S3150-A Analytical Log #: 051013_4

Environmental/Regulatory Sample: YES

*Lab Spl ID(s): 5DB26-2, 5DB28-2, 5DB29-2, 5DB31-4, 5DB31-5, 5DB31-6, 5DB29-4, 5DB31-8

Sample Type: ☒ Original Sample ☐ TCLP Extract ☐ Sample Prep ☐ Other: _____

Location From	Location To	Date Time	Relinquished By	Received By	Analysis / Procedure	**Comments
209	211	10/17/05 09:38			NHVOC Analysis	Originals were consumed in Analysis Water extracts were created and consumed in analysis.
211	209	10/17/05 13:50			Returned samples	5DB31MS & 5DB31MSD
209	211	10/19/05 07:53			NHVOC Analysis	5DB29-4, 5DB31-8 consumed in Analysis
211	209	10/19/05 09:10			Rec'd Paperwork	N/A
		/ / :				
		/ / :				
		/ / :				

* All Sample codes listed on the line above must be maintained and handled as a batch. If any sample is going to be handled differently, a separate tracking form must be used.

NOTE: Return this form to Custody Area when samples are returned, relinquished, consumed, or disposed.

0017

Section 3

Analysis Results

Idaho Cleanup Project
Analytical Laboratories Department

Data Report Narrative for ALD05025N

This data report contains NHVOC results for 5 samples from waste drums and 3 associated trip blanks, received 10/06/05, 10/10/05, and 10/13/05 from CCP- INL for the TRU Waste Characterization Program (TWCP).

Sample analysis was performed using ACMM-9441 Revision 11, which implements EPA SW-846 Method 8015B, "Non-Halogenated Organics Using GC/FID" and Method 8000B, "Determinative Chromatographic Separations."

Most waste sample extracts required dilution (5x to 40x) due to high radionuclide content in order to safely handle them at the instrument. For all diluted samples the sample-specific MDLs are above the program required MDLs, but less than the PRQLs for all analytes.

Samples 5CY99MS, 5CZ79, 5DB29, and 5DB31 were re-extracted due to surrogate failure. Surrogate recovery for 5CY99MSRE, 5DB29RE, and 5DB31RE passed and only the re-extracted results are reported. Sample 5CZ79 surrogates failed on both the original and the re-extraction, indicating matrix effects; results of both extractions are reported. All other QC samples passed method requirements.

The analytical balance used to weigh sand aliquots for the LCS and the laboratory blanks in this batch was used beyond it calibration expiration date of 10/12/05 (a different balance is used to weigh the sample aliquots). NCR 100077 was issued to document this nonconformance (see copy after narrative). The balance was recalibrated on 10/31/05 and found to be in tolerance. The NCR was therefore dispositioned "use-as-is."

The holding time for solid samples is 14 days from collection to analysis. All samples were analyzed within the holding time.

The extracted laboratory blank was used to satisfy requirements in ACMM-9441 for analysis of a daily method blank before sample analysis.

CH2M•WG

230.01
Revision date
09/30/2003

Control of Nonconforming Items

Nonconformance Documentation

Initiator:	S Number:	Work Org.:	Work Phone:
Jeter, Jeffrey L	077565	5364	6-1966

Documentation

NCR Number:	Date Identified:	*SSC:	*Facility:INTEC *Location:602 Description:Analytical Laboratories Department
100077	10/27/2005	N/A	

*Item Name:	Req. No/P.O. No./SC and/or Project No.:
TRU Waste Characterization Samples	N/A
Supplier Name/Address: N/A	*This NCR is for: ☒ ICP ☐ INEEL ☐ Other

*Is the non-conformance under the requirement of SNF or NRC-licensed activities (DOE/RW-0333P)? ○ Yes ● No

*Specification to which Item does not perform:

MCP-2610, Rev. 4, Section 4.8.5: "M&TE User: Use only M&TE with current and reliable calibration.....Do NOT use or continue to use any M&TE if the calibration due date or interval has passed without recalibration or if the device produces results known to be in error.

Associated Documents:
Data Reports ALD05025N, ALD05026N, ALD05031S, ALD05032S

*Non-Conformance Description:

Balance (721549) used for weighing lab blank and laboratory control sample solid matrix was used beyond the calibration expiration date of 10/12/05. Check weight (721550) used for checking balance 721549 was used beyond the calibration expiration date of 10/14/05.

Affected samples include:

1) ALD05025N, analytical batch 0510066, samples LBN101705, LBN101905, ALD log number 051006-6, sample 5CY99MSRE, ALD log number 051010-6, sample 5CZ79RE, ALD log number 051013-4, samples 5DB26, 5DB28, 5DB29, 5DB29RE, 5DB31, and 5DB31RE

2) ALD05026N analytical batch 0510108 samples LBN101305, LBN101805, ALD log number 051010-8 samples 5DA06RE and 5DA11RE, ALD log number 051010-10, samples 5DA35, 5DA35RE, 5DA36, 5DA40, 5DA40RE, 5DA41, 5DA45, 5DA45RE, 5DA46, 5DA50, and 5DA51, ALD log number 051012-11, samples 55DB17, 5DB18, 5DB22, and 5DB23

3) ALD05031S, analytical batch 0510066, samples LBS101305A, LBS101805A, LBS102405A, and LCSS0510166A, ALD log number 5CY97, 5CZ01, 5CZ01MS, and 5CZ01MSD, ALD log number 5CZ77 and 5CZ80, ALD log number 051013-4, 5DB27, 5DB30, 5DB30RE, 5DB32, and 5DB32RE

4) ALD05032S, analytical batch 0510108, sample LBS101705A, ALD log number 051010-10, samples 5DA37, 5DA42, 5DA47, and 5DA52, ALD lognumber 051012-11, samples 5DB19 and 5DB24

*Responsible Manager (RM):	*Responsible Quality Engineer (QE):
Brewer, Ken N Alternate RM for processing NCR: Sailer Siemer, Shelly J	Dunhour, Frederick J

Next Activity: NCR Closed
Actionee: N/A
Date Due:

Screening - Responsible Manager

Responsible Manager (RM):	Organization	Phone:	Date Screened:
Sailer Siemer, Shelly J	5360	6-5988	10/27/2005

*Initiator has selected "No" to the non-conformance under the requirement of SNF or NRC-licensed activities (DOE/RW-0333P). Is this Correct?
● Yes ○ No

*Does the NCR require Stop Work?
○ Yes ● No

*Safety Category or (Quality Level) of Material/Equipment/Components:
○ SC(1) ● LSC(3)
○ SS(2) ○ CG(4)

*Does this NCR support Environmental Requirements? ○ Yes ● No

RM Comments:
N/A

Screening - Quality Engineer

Quality Engineer (QE):	Organization	Phone:	Date Screened:
Dunhour, Frederick J		6-2484	10/27/2005

*Is the NCR valid? ● Yes ○ No

Quality Comments:
Quality Level -3 assignment is based on regulatory significance of these samples for the DOE-CBFO customer, and supported through application of the CBFO-approved INL TWCP QA Program.

Notification - RM

Responsible Manager (RM):	Organization	Phone:	Date Notified:
Sailer Siemer, Shelly J	5360	6-5988	10/27/2005

ORPS Report Number:
N/A

*Is the NCR operational equipment needed for Conditional Use?
○ Yes ● No

*Area of Responsibility:
ICP - INL TRU Waste Characterization Program

Optional Internal Area of Responsibility:
N/A

Cognizant Director:
Brewer, Ken N
Cognizant Director's Alternate(s):
Dunhour, Frederick J; Sailer Siemer, Shelly J

*Facility Manager:
Brewer, Ken N

Compliance Coordinator(s) to determine Price Anderson (PAAA) applicability:
Dunhour, Frederick J

*Does the non-conformance involve suspect/counterfeit items?
○ Yes ● No

*Does this NCR pertain to Waste Containers, Waste Packaging, or Packaging and Transportation activities? ○ Yes ● No

Method of Segregation:
Administratively controlled by the TWCP sample management and data review processes.

Method of Identification:
Administratively controlled by the TWCP sample management and data review processes.

*Lead Disposition Evaluator:
Jeter, Jeffrey L
Additional Disposition Evaluator(s):
(These evaluators verify and concur the disposition of NCR.)

This block is intentionally left blank.

Additional Notification:
Amy M Sumariwalla; Adrian D Chapman; David W Lodman; Thomas G Moffett; Faye E Srala; Wendy L Rice

QE Red Tag Process

Quality Engineer (QE):	Organization	Phone:	Date Processed:
Dunhour, Frederick J		6-2484	10/27/2005

Tagging information/Other Methods:
Administratively controlled by the TWCP sample management and data review processes.

Other means of Tag Identification:
Administratively controlled by the TWCP sample management and data review processes.

Disposition

Lead Disposition Evaluator:	Organization:	Phone:	Date Disposition sent for approval:
Jeter, Jeffrey L	5364	6-1966	11/03/2005

*NCR Disposition: ● Use As Is ○ Reject ○ Repair ○ Multiple Disposition ○ Rework	This block is intentionally left blank.
*Does Disposition represent Design Change? ○ Yes ● No	*Does this item require a Unreviewed Safety Question (USQ) screening and evaluation? ○ Yes ● No

Identify as-built drawings and other documentation:(*For Use-As-Is and Repair)
N/A

Method of Disposal:(*For Reject)
N/a

Technical Justification:(*For Use-As-Is and Repair)
Balance in question was recalibrated on 10/31/05 and found to be in tolerance. See attached.

Technical requirements and acceptance criteria to be used for repair work:
n/a

Inspections and Verification Criteria for acceptability of repair or rework:
N/A

Other Documents or QA records requiring the change:
N/A

If this nonconforming item is associated with, or caused by, a program, procedure, or process problem, document the issue in accordance with MCP-598:

N/A

Disposition Concurrence/Approval

Approval RM(Signature)	Concurrence/Approval QE(Signature)	This block is intentionally left blank.	This block is intentionally left blank.
Sailer Siemer, Shelly J *Shelly J Sailer Siemer* 11/03/2005	Dunhour, Frederick J *Frederick J Dunhour* 11/03/2005		

Implementation Completion - RM

Responsible Manager (RM):	Organization	Phone:	Date Completion:
Sailer Siemer, Shelly J	5360	6-5988	11/03/2005

The Disposition as approved has been completed and implemented: ○ Yes ● N/A

*Provide Justification for N/A:
No implementation actions required for approved "use-as-is" disposition.

Implementing Documentation:
N/A

Implementation Verification - QE

Quality Engineer (QE):	Organization	Phone:	Date Verified:
Dunhour, Frederick J		6-2484	11/03/2005
*Verifier/Inspector: Dunhour, Frederick J	*Organization: 5360 Phone: 6-2484		

*Identify any reference documents by number and name, and if available, reference them here or attach in Attachment Section:
N/A

Verification Comments:
No disposition actions were required based on the approved "use-as-is" disposition.

Closure - RM

Responsible Manager (RM):	Organization	Phone:	Date Closed:
Sailer Siemer, Shelly J	5360	6-5988	11/03/2005
*1. Verified that the NCR inspection/verification activities have been performed as required, and are properly documented, signed off on the NCR, and attachments or references to document supporting completion of those actions are provided as necessary.			○ Yes ● N/A

*2. Verified that as-built documents identified in the disposition have been revised, or their change control forms have been approved.	○ Yes ● N/A
*3. I have reviewed the NCR to ensure that all attachments are legible within the electronic system.	● Yes ○ N/A
*4. I have started to process any Lessons Learned from the investigation, disposition and resolution of the NCR per MCP-192, "Lessons Learned System." NOTE: Lessons Learned is not part of the electronic NCR process. This should be completed in parallel with the NCR process and could be on-going after NCR closure.	○ Yes ● N/A
*5. I verifed that all other attachments such as USQ Evaluation and Disposition Calculations are attached to the NCR.	○ Yes ● N/A
Closure Comment: This NCR and the records cited therein contain adequate documentation of the nonconformance and justification for its "use-as-is" disposition.	
Closure Signature (RM):*Shelly J Sailer Siemer*	

Closure Validation QE

Quality Engineer (QE): Dunhour, Frederick J	Organization	Phone: 6-2484	Date Validated: 11/03/2005

*1. I have reviewed the NCR and found it as complete, with all documents attached as necessary.	● Yes ○ N/A
*2. I verify that all the NCR Red tags have been removed and destroyed.	○ Yes ● N/A
*3. I verify that Quality Accepted (Green) tags have been attached as necessary to maintain traceability of the item.	○ Yes ● N/A
*4. I verify that Conditional Use (White) tags have been removed.	○ Yes ● N/A
*5. The NCR is validated as complete.	● Yes ○ N/A
Closure Comment: This NCR and the records cited therein contain adequate documentation of the nonconformance and justification for its "use-as-is" disposition.	
Closure Signature (QE):*Frederick J Dunhour*	

Attachments/Comments

721549calrpt.pdf

Revision History

11/03/2005 01:20 PM : Frederick J Dunhour as a QE closed the NCR.The following people were notified about the NCR Closer:
Jeter, Jeffrey L; Sailer Siemer, Shelly J; Brewer, Ken N; Brewer, Ken N; Dunhour, Frederick J; Sailer Siemer, Shelly J; Dunhour, Frederick J; Jeter, Jeffrey L; Amy M Sumariwalla; Adrian D Chapman; David W Lodman; Thomas G Moffett; Faye E Srala; Wendy L Rice
11/03/2005 01:15 PM : Shelly J Sailer Siemer as an RM completed closure process and submitted to Dunhour, Frederick J for QE for final closure.
11/03/2005 12:51 PM : Frederick J Dunhour completed implementation and verification and forwarded for closure to Sailer Siemer, Shelly J
11/03/2005 12:38 PM : Shelly J Sailer Siemer completed implementation and forwarded for verfication to Dunhour, Frederick J
11/03/2005 12:34 PM : Shelly J Sailer Siemer as an RM concurred the Disposition and signed off.
11/03/2005 12:01 PM : Frederick J Dunhour as a QE concurred the Disposition and signed off.
11/03/2005 11:45 AM : Jeffrey L Jeter made the changes to the document as follows:
The previous Technical Justification was
Balance in question was recalibrated on 10/31/05 and found to be in tolerance.

11/03/2005 11:44 AM : Jeffrey L Jeter completed NCR Disposition and submitted to Sailer Siemer, Shelly J; Dunhour, Frederick J for their concurrence and approval.
10/27/2005 03:20 PM : Shelly J Sailer Siemer completed Notification Process and notified Dunhour, Frederick J; Brewer, Ken N; Dunhour, Frederick J; Sailer Siemer, Shelly J; Dunhour, Frederick J; Brewer, Ken N; Jeter, Jeffrey L; Amy M Sumariwalla; Adrian D Chapman; David W Lodman; Thomas G Moffett; Faye E Srala; Wendy L Rice
10/27/2005 02:38 PM : Frederick J Dunhour completed screening and forwarded to Sailer Siemer, Shelly J for Notification process.
10/27/2005 02:24 PM : Shelly J Sailer Siemer completed screening and forwarded to Dunhour, Frederick J for QE Screening.
10/27/2005 02:08 PM : Jeffrey L Jeter resubmitted NCR to RM Sailer Siemer, Shelly J for screening.

10/27/2005 02:06 PM : Shelly J Sailer Siemer returned to initiator Jeter, Jeffrey L for additional modification/correction.
10/27/2005 01:58 PM : Jeffrey L Jeter made the changes to the document as follows:
The previous Nonconformance Description was
Balance (721549) used for weighing lab blank and laboratory control sample solid matrix was used beyond the calibration expiration date of 10/12/05. Check weight (721550) used for checking balance 721549 was used beyond the calibration expiration date of 10/14/05.

Affected samples include:

1) ALD05025N, analytical batch 0510066, samples LBN101705, LBN101905, ALD log number 051006-6, sample 5CY99MSRE, ALD log number 051010-6, sample 5CZ79RE, ALD log number 051013-4, samples 5DB26, 5DB28, 5DB29, 5DB29RE, 5DB31, and 5DB31RE

2) ALD05026N analytical batch 0510108 samples LBN101305, LBN101805, ALD log number 051010-8 samples 5DA06RE and 5DA11RE, ALD log number 051010-10, samples 5DA35, 5DA35RE, 5DA36, 5DA40, 5DA40RE, 5DA41, 5DA45, 5DA45RE, 5DA46, 5DA50, and 5DA51, ALD log number 051012-11, samples 55DB17, 5DB18, 5DB22, and 5DB23

3)ALD05029S, analytical batch 0509281, sample LB101205B, ALD log number050929-5, sample 5CW19RE

4) ALD05031S, analytical batch 0510066, samples LBS101305A, LBS101805A, LBS102405A, and LCSS0510166A, ALD log number 5CY97, 5CZ01, 5CZ01MS, and 5CZ01MSD, ALD log number 5CZ77 and 5CZ80, ALD log number 051013-4, 5DB27, 5DB30, 5DB30RE, 5DB32, and 5DB32RE

5) ALD05032S, analytical batch 0510108, samples LBS101205A, LBS101705A, and LCSS0510108A, ALD log number 051010-8, samples 5DA08, 5DA13, 5DA13MS, and 5DA13MSD, ALD log number 051010-10, samples 5DA37, 5DA42, 5DA47, and 5DA52, ALD lognumber 051012-11, samples 5DB19 and 5DB24

10/27/2005 01:58 PM : Jeffrey L Jeter resubmitted NCR to RM Sailer Siemer, Shelly J for screening.
10/27/2005 01:40 PM : Shelly J Sailer Siemer returned to initiator Jeter, Jeffrey L for additional modification/correction.
10/27/2005 11:50 AM : Jeffrey L Jeter submitted NCR to RM and his alternate Brewer, Ken N, Sailer Siemer, Shelly J for screening.

The following fields are general purpose public use. Any data entered here is not related to NCR process and solely used for one's individual need. Integrity of the data is not guarantied since it can be replaced by any user randomly.

FIELD A:
(Field Name: FIELDA, type Text)

FIELD B:
(Field Name: FIELDb, type Text)

Idaho Cleanup Project
Analytical Laboratories Department

TRU Waste Characterization Program

Data Qualifier Flag Definitions for NHVOCs

Flag	Definition
B	Analyte detected in associated laboratory blank or method blank
E	Reported analyte concentration exceeds the calibration range
D	Reported analyte concentration is from a secondary dilution of the sample
H	Holding time exceeded
J	Target Analyte concentration <PRQL but ≥ MDL
U	Analyte was undetected (reported as sample-specific MDL)
Z	One or more QC sample results do not meet acceptance criteria

TOTAL NHVOC ANALYSIS DATA SHEET

Idaho Cleanup Project
Analytical Laboratories Department
TRU Waste Characterization Program

Field Sample ID:	1001850311V2DL10	Lab File ID:	SN101793
Sampling Batch No:	WCS-05-04	Lab Sample ID:	5CY96DL10
Date Sampled:	10/4/2005	Data Report Number:	ALD05025N
Date Extracted:	10/12/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	8 days		
Date/Time Analyzed:	10/12/2005 19:09	Instrument ID:	GC-1
Analysis Holding Time:	<1 day	Sample Matrix:	SOLID
Preparation Method:	ACMM-9441-R11	Dilution Factor:	10
Analytical Method:	ACMM-9441-R11		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION (mg/kg)	Q
67-64-1	Acetone	35	UD
71-36-3	Butanol	35	UD
67-56-1	Methanol	23	UD
78-93-3	Methyl ethyl ketone	35	UD
60-29-7	Ethyl ether	35	UD
78-83-1	Isobutanol	23	UD
110-86-1	Pyridine	35	UD

* = Column B value used

TOTAL NHVOC ANALYSIS DATA SHEET

Idaho Cleanup Project
Analytical Laboratories Department
TRU Waste Characterization Program

Field Sample ID:	TB93B	Lab File ID:	SN101794
Sampling Batch No:	WCS-05-04	Lab Sample ID:	5CY98
Date Sampled:	10/4/2005	Data Report Number:	ALD05025N
Date Extracted:	10/12/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	8 days		
Date/Time Analyzed:	10/12/2005 19:41	Instrument ID:	GC-1
Analysis Holding Time:	<1 day	Sample Matrix:	SOLID
Preparation Method:	ACMM-9441-R11	Dilution Factor:	1
Analytical Method:	ACMM-9441-R11		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION (mg/kg)	Q
67-64-1	Acetone	3.4	U
71-36-3	Butanol	3.4	U
67-56-1	Methanol	2.3	U
78-93-3	Methyl ethyl ketone	3.4	U
60-29-7	Ethyl ether	3.4	U
78-83-1	Isobutanol	2.3	U
110-86-1	Pyridine	3.4	U

* = Column B value used

TOTAL NHVOC ANALYSIS DATA SHEET

Idaho Cleanup Project
Analytical Laboratories Department
TRU Waste Characterization Program

Field Sample ID:	1001850321V4DL5	Lab File ID:	SN101795
Sampling Batch No:	WCS-05-04	Lab Sample ID:	5CY99DL5
Date Sampled:	10/4/2005	Data Report Number:	ALD05025N
Date Extracted:	10/12/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	8 days		
Date/Time Analyzed:	10/12/2005 20:12	Instrument ID:	GC-1
Analysis Holding Time:	<1 day	Sample Matrix:	SOLID
Preparation Method:	ACMM-9441-R11	Dilution Factor:	5
Analytical Method:	ACMM-9441-R11		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION (mg/kg)	Q
67-64-1	Acetone	15	UD
71-36-3	Butanol	15	UD
67-56-1	Methanol	10	UD
78-93-3	Methyl ethyl ketone	15	UD
60-29-7	Ethyl ether	15	UD
78-83-1	Isobutanol	10	UD
110-86-1	Pyridine	15	UD

* = Column B value used

TOTAL NHVOC ANALYSIS DATA SHEET

Idaho Cleanup Project
Analytical Laboratories Department
TRU Waste Characterization Program

Field Sample ID:	1001688611V2DL10	Lab File ID:	SN101798
Sampling Batch No:	WCS-05-04	Lab Sample ID:	5CZ76DL10
Date Sampled:	10/6/2005	Data Report Number:	ALD05025N
Date Extracted:	10/12/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	6 days		
Date/Time Analyzed:	10/12/2005 21:48	Instrument ID:	GC-1
Analysis Holding Time:	<1 day	Sample Matrix:	SOLID
Preparation Method:	ACMM-9441-R11	Dilution Factor:	10
Analytical Method:	ACMM-9441-R11		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION (mg/kg)	Q
67-64-1	Acetone	32	UD
71-36-3	Butanol	32	UD
67-56-1	Methanol	37 *	JD
78-93-3	Methyl ethyl ketone	32	UD
60-29-7	Ethyl ether	32	UD
78-83-1	Isobutanol	21	UD
110-86-1	Pyridine	32	UD

* = Column B value used

TOTAL NHVOC ANALYSIS DATA SHEET

Idaho Cleanup Project
Analytical Laboratories Department
TRU Waste Characterization Program

Field Sample ID:	TB94B	Lab File ID:	SN101799
Sampling Batch No:	WCS-05-04	Lab Sample ID:	5CZ78
Date Sampled:	10/6/2005	Data Report Number:	ALD05025N
Date Extracted:	10/12/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	6 days		
Date/Time Analyzed:	10/12/2005 22:20	Instrument ID:	GC-1
Analysis Holding Time:	<1 day	Sample Matrix:	SOLID
Preparation Method:	ACMM-9441-R11	Dilution Factor:	1
Analytical Method:	ACMM-9441-R11		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION (mg/kg)	Q
67-64-1	Acetone	3.3	U
71-36-3	Butanol	3.3	U
67-56-1	Methanol	2.2	U
78-93-3	Methyl ethyl ketone	3.3	U
60-29-7	Ethyl ether	3.3	U
78-83-1	Isobutanol	2.2	U
110-86-1	Pyridine	3.3	U

* = Column B value used

TOTAL NHVOC ANALYSIS DATA SHEET

Idaho Cleanup Project
Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	1001887511V2DL40	Lab File ID:	SN101800
Sampling Batch No:	WCS-05-04	Lab Sample ID:	5CZ79DL40
Date Sampled:	10/7/2005	Data Report Number:	ALD05025N
Date Extracted:	10/12/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	5 days		
Date/Time Analyzed:	10/12/2005 22:51	Instrument ID:	GC-1
Analysis Holding Time:	<1 day	Sample Matrix:	SOLID
Preparation Method:	ACMM-9441-R11	Dilution Factor:	40
Analytical Method:	ACMM-9441-R11		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION (mg/kg)	Q
67-64-1	Acetone	130	UD
71-36-3	Butanol	130	UD
67-56-1	Methanol	89	UD
78-93-3	Methyl ethyl ketone	130	UD
60-29-7	Ethyl ether	130	UD
78-83-1	Isobutanol	89	UD
110-86-1	Pyridine	130	UD

* = Column B value used

TOTAL NHVOC ANALYSIS DATA SHEET

Idaho Cleanup Project
Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	1001887511V4REDL30	Lab File ID:	SN101820
Sampling Batch No:	WCS-05-04	Lab Sample ID:	5CZ79REDL30
Date Sampled:	10/7/2005	Data Report Number:	ALD05025N
Date Extracted:	10/17/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	10 days		
Date/Time Analyzed:	10/17/2005 14:54	Instrument ID:	GC-1
Analysis Holding Time:	<1 day	Sample Matrix:	SOLID
Preparation Method:	ACMM-9441-R11	Dilution Factor:	30
Analytical Method:	ACMM-9441-R11		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION (mg/kg)	Q
67-64-1	Acetone	110	UD
71-36-3	Butanol	110	UD
67-56-1	Methanol	71	UD
78-93-3	Methyl ethyl ketone	110	UD
60-29-7	Ethyl ether	110	UD
78-83-1	Isobutanol	71	UD
110-86-1	Pyridine	110	UD

* = Column B value used

TOTAL NHVOC ANALYSIS DATA SHEET

Idaho Cleanup Project
Analytical Laboratories Department
TRU Waste Characterization Program

Field Sample ID:	1001817811V2DL9	Lab File ID:	SN101821
Sampling Batch No:	WCS-05-04	Lab Sample ID:	5DB26DL9
Date Sampled:	10/10/2005	Data Report Number:	ALD05025N
Date Extracted:	10/17/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	7 days		
Date/Time Analyzed:	10/17/2005 15:26	Instrument ID:	GC-1
Analysis Holding Time:	<1 day	Sample Matrix:	SOLID
Preparation Method:	ACMM-9441-R11	Dilution Factor:	9
Analytical Method:	ACMM-9441-R11		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION (mg/kg)	Q
67-64-1	Acetone	28	UD
71-36-3	Butanol	28	UD
67-56-1	Methanol	18	UD
78-93-3	Methyl ethyl ketone	28	UD
60-29-7	Ethyl ether	28	UD
78-83-1	Isobutanol	18	UD
110-86-1	Pyridine	28	UD

* = Column B value used

TOTAL NHVOC ANALYSIS DATA SHEET

Idaho Cleanup Project
Analytical Laboratories Department
TRU Waste Characterization Program

Field Sample ID:	TB95B	Lab File ID:	SN101822
Sampling Batch No:	WCS-05-04	Lab Sample ID:	5DB28
Date Sampled:	10/10/2005	Data Report Number:	ALD05025N
Date Extracted:	10/17/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	7 days		
Date/Time Analyzed:	10/17/2005 15:58	Instrument ID:	GC-1
Analysis Holding Time:	<1 day	Sample Matrix:	SOLID
Preparation Method:	ACMM-9441-R11	Dilution Factor:	1
Analytical Method:	ACMM-9441-R11		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION (mg/kg)	Q
67-64-1	Acetone	3.3	U
71-36-3	Butanol	3.3	U
67-56-1	Methanol	2.2	U
78-93-3	Methyl ethyl ketone	3.3	U
60-29-7	Ethyl ether	3.3	U
78-83-1	Isobutanol	2.2	U
110-86-1	Pyridine	3.3	U

* = Column B value used

TOTAL NHVOC ANALYSIS DATA SHEET

Idaho Cleanup Project
Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	1001886711V4RE	Lab File ID:	SN101838
Sampling Batch No:	WCS-05-04	Lab Sample ID:	5DB29RE
Date Sampled:	10/11/2005	Data Report Number:	ALD05025N
Date Extracted:	10/19/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	8 days		
Date/Time Analyzed:	10/19/2005 10:08	Instrument ID:	GC-1
Analysis Holding Time:	<1 day	Sample Matrix:	SOLID
Preparation Method:	ACMM-9441-R11	Dilution Factor:	1
Analytical Method:	ACMM-9441-R11		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION (mg/kg)	Q
67-64-1	Acetone	3.3	U
71-36-3	Butanol	3.3	U
67-56-1	Methanol	2.2	U
78-93-3	Methyl ethyl ketone	3.3	U
60-29-7	Ethyl ether	3.3	U
78-83-1	Isobutanol	2.2	U
110-86-1	Pyridine	3.3	U

* = Column B value used

TOTAL NHVOC ANALYSIS DATA SHEET

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	1001886721V8RE	Lab File ID:	SN101839
Sampling Batch No:	WCS-05-04	Lab Sample ID:	5DB31RE
Date Sampled:	10/11/2005	Data Report Number:	ALD05025N
Date Extracted:	10/19/2005	Analytical Batch ID:	0510066
Extraction Holding Time:	8 days		
Date/Time Analyzed:	10/19/2005 10:40	Instrument ID:	GC-1
Analysis Holding Time:	<1 day	Sample Matrix:	SOLID
Preparation Method:	ACMM-9441-R11	Dilution Factor:	1
Analytical Method:	ACMM-9441-R11		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION (mg/kg)	Q
67-64-1	Acetone	3.3	U
71-36-3	Butanol	6.2	J
67-56-1	Methanol	2.2	U
78-93-3	Methyl ethyl ketone	3.3	U
60-29-7	Ethyl ether	3.3	U
78-83-1	Isobutanol	2.2	U
110-86-1	Pyridine	3.3	U

* = Column B value used

Section 4

Batch QC Sample Results

TOTAL NHVOC ANALYSIS
SURROGATE RECOVERY FORM

Idaho Cleanup Project

Analytical Laboratories Department

TRU Waste Characterization Program

Preparation Method: ACMM-9441-R11

Analytical Method: ACMM-9441-R11

Data Report Number: ALD05025N

Analytical Batch No: 0510066

Instrument ID: GC-1

Matrix: SOLID

	LAB SAMPLE ID	Isopropanol-d8 %R COLUMN A	Isopropanol-d8 %R COLUMN B	TOTAL OUT
1	LBN101205B	102	102	0
2	LCSN0510066	104	107	0
3	5CY96DL10	89	96	0
4	5CY98	101	102	0
5	5CY99DL5	87	91	0
6	5CY99MSDDL10	91	98	0
7	5CZ76DL10	99	103	0
8	5CZ78	104	102	0
9	5CZ79DL40	0 Z	0 Z	2
10	LBN101705	103	101	0
11	5CY99MSREDL9	92	97	0
12	5CZ79REDL30	0 Z	0 Z	2
13	5DB26DL9	99	103	0
14	5DB28	103	102	0
15	LBN101905	100	100	0
16	5DB29RE	101	100	0
17	5DB31RE	102	102	0

%R Acceptance Criteria 74 - 132

Z = Values does not meet acceptance criteria

D = Surrogate Diluted out

TOTAL NHVOC ANALYSIS
MATRIX SPIKE/MATRIX SPIKE DUPLICATE REPORTING FORM

Idaho Cleanup Project
Analytical Laboratories Department
TRU Waste Characterization Program

Preparation Method:	ACMM-9441-R11			Data Report Number:	ALD05025N
Analytical Method:	ACMM-9441-R11			Analytical Batch ID:	0510066
Instrument ID:	GC-1			Sample Matrix:	SOLID
Lab Sample ID:	5CY99DL5	MS Lab Sample ID:	5CY99MSREDL9	MSD Lab Sample ID:	5CY99MSDDL10
Field Sample ID:	1001850321V4DL5	MS Field Sample ID	1001850321V5MSREDL9	MSD Field Sample ID:	1001850321V6MSDDL10
Lab File ID:	SN101795	MS Lab File ID:	SN101819	MSD Lab File ID:	SN101797
Date Analyzed:	10/12/2005	MS Date Analyzed:	10/17/2005	MSD Date Analyzed:	10/12/2005

COLUMN A ID: DB-624

TARGET ANALYTE	SPIKE ADDED (mg/kg)	SAMPLE CONCENTRATION (mg/kg)		SPIKED SAMPLE CONCENTRATION (mg/kg)	MS % RECOVERY	ACCEPTANCE CRITERIA % RECOVERY
Acetone	112.782	15.43	U	110.40	98	60 - 150
Butanol	112.782	15.43	U	131.43	117	60 - 150
Methanol	112.782	10.29	U	135.86	120	60 - 150
Methyl ethyl ketone	112.782	15.43	U	130.95	116	60 - 150
Ethyl ether	112.782	15.43	U	107.51	95	60 - 150
Isobutanol	112.782	10.29	U	143.30	127	60 - 150
Pyridine	112.782	15.43	U	128.57	114	60 - 150

TARGET ANALYTE	SPIKE ADDED (mg/kg)	DUPLICATE SAMPLE CONCENTRATION (mg/kg)	%RPD	MSD % RECOVERY	ACCEPTANCE CRITERIA RPD
Acetone	102.740	84.77	17.1	83	≤ 50
Butanol	102.740	109.10	9.3	106	≤ 50
Methanol	102.740	103.55	17.8	101	≤ 50
Methyl ethyl ketone	102.740	106.35	11.5	104	≤ 50
Ethyl ether	102.740	77.77	23.0	76	≤ 50
Isobutanol	102.740	114.10	13.4	111	≤ 50
Pyridine	102.740	108.13	8.0	105	≤ 50

Z = Values outside of QC limits

RPD: 0 out of 7 outside acceptance criteria
Spike Recovery: 0 out of 14 outside acceptance criteria

TOTAL NHVOC ANALYSIS
BLANK FORM

Idaho Cleanup Project
Analytical Laboratories Department

TRU Waste Characterization Program

Date/Time Analyzed:	10/12/2005 18:06	Lab Sample ID:	LBN101205B
Preparation Method:	ACMM-9441-R11	Lab File ID:	BN101791
Analytical Method:	ACMM-9441-R11	Data Report Number:	ALD05025N
		Analytical Batch ID:	0510066
		Instrument ID:	GC-1
		Sample Matrix:	SOLID

Column A ID: DB-624

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
67-64-1	Acetone	3.1	U
71-36-3	Butanol	3.1	U
67-56-1	Methanol	2.1	U
78-93-3	Methyl ethyl ketone	3.1	U
60-29-7	Ethyl ether	3.1	U
78-83-1	Isobutanol	2.1	U
110-86-1	Pyridine	3.1	U

Column B ID: DB-1

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
67-64-1	Acetone	2.1	U
71-36-3	Butanol	2.1	U
67-56-1	Methanol	2.1	U
78-93-3	Methyl ethyl ketone	2.1	U
60-29-7	Ethyl ether	3.1	U
78-83-1	Isobutanol	2.1	U
110-86-1	Pyridine	2.1	U

Acceptance Criteria: $\leq$ 3MDL

TOTAL NHVOC ANALYSIS
BLANK FORM

Idaho Cleanup Project
Analytical Laboratories Department

TRU Waste Characterization Program

Date/Time Analyzed:	10/17/2005 13:51	Lab Sample ID:	LBN101705
Preparation Method:	ACMM-9441-R11	Lab File ID:	BN101818
Analytical Method:	ACMM-9441-R11	Data Report Number:	ALD05025N
		Analytical Batch ID:	0510066
		Instrument ID:	GC-1
		Sample Matrix:	SOLID

Column A ID: DB-624

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
67-64-1	Acetone	3.1	U
71-36-3	Butanol	3.1	U
67-56-1	Methanol	2.1	U
78-93-3	Methyl ethyl ketone	3.1	U
60-29-7	Ethyl ether	3.1	U
78-83-1	Isobutanol	2.1	U
110-86-1	Pyridine	3.1	U

Column B ID: DB-1

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
67-64-1	Acetone	2.1	U
71-36-3	Butanol	2.1	U
67-56-1	Methanol	2.1	U
78-93-3	Methyl ethyl ketone	2.1	U
60-29-7	Ethyl ether	3.1	U
78-83-1	Isobutanol	2.1	U
110-86-1	Pyridine	2.1	U

Acceptance Criteria: $\leq$ 3MDL

TOTAL NHVOC ANALYSIS
BLANK FORM

Idaho Cleanup Project
Analytical Laboratories Department
TRU Waste Characterization Program

Date/Time Analyzed:	10/19/2005 09:36	Lab Sample ID:	LBN101905
Preparation Method:	ACMM-9441-R11	Lab File ID:	BN101837
Analytical Method:	ACMM-9441-R11	Data Report Number:	ALD05025N
		Analytical Batch ID:	0510066
		Instrument ID:	GC-1
		Sample Matrix:	SOLID

Column A ID: DB-624

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
67-64-1	Acetone	3.2	U
71-36-3	Butanol	3.2	U
67-56-1	Methanol	2.1	U
78-93-3	Methyl ethyl ketone	3.2	U
60-29-7	Ethyl ether	3.2	U
78-83-1	Isobutanol	2.1	U
110-86-1	Pyridine	3.2	U

Column B ID: DB-1

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
67-64-1	Acetone	2.1	U
71-36-3	Butanol	2.1	U
67-56-1	Methanol	2.1	U
78-93-3	Methyl ethyl ketone	2.1	U
60-29-7	Ethyl ether	3.2	U
78-83-1	Isobutanol	2.1	U
110-86-1	Pyridine	2.1	U

Acceptance Criteria: $\leq$ 3MDL

TOTAL NHVOC ANALYSIS
LABORATORY BLANK SUMMARY

Idaho Cleanup Project
Analytical Laboratories Department

TRU Waste Characterization Program

Date/Time Analyzed:	10/12/2005 18:06	Lab Sample ID:	LBN101205B
Preparation Method:	ACMM-9441-R11	Lab File ID:	BN101791
Analytical Method:	ACMM-9441-R11	Data Report Number:	ALD05025N
		Analytical Batch ID:	0510066
		Instrument ID:	GC-1
		Sample Matrix:	SOLID

THIS BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, AND STANDARDS

FIELD ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
NA	LCSN0510066	LN101792	10/12/2005	18:38
1001850311V2DL10	5CY96DL10	SN101793	10/12/2005	19:09
TB93B	5CY98	SN101794	10/12/2005	19:41
1001850321V4DL5	5CY99DL5	SN101795	10/12/2005	20:12
1001850321V6MSDDL10	5CY99MSDDL10	SN101797	10/12/2005	21:16
1001688611V2DL10	5CZ76DL10	SN101798	10/12/2005	21:48
TB94B	5CZ78	SN101799	10/12/2005	22:20
1001887511V2DL40	5CZ79DL40	SN101800	10/12/2005	22:51

TOTAL NHVOC ANALYSIS
LABORATORY BLANK SUMMARY

Idaho Cleanup Project
Analytical Laboratories Department

TRU Waste Characterization Program

Date/Time Analyzed:	10/17/2005 13:51	Lab Sample ID:	LBN101705
Preparation Method:	ACMM-9441-R11	Lab File ID:	BN101818
Analytical Method:	ACMM-9441-R11	Data Report Number:	ALD05025N
		Analytical Batch ID:	0510066
		Instrument ID:	GC-1
		Sample Matrix:	SOLID

THIS BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, AND STANDARDS

FIELD ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1001850321V5MSREDL9	5CY99MSREDL9	SN101819	10/17/2005	14:23
1001887511V4REDL30	5CZ79REDL30	SN101820	10/17/2005	14:54
1001817811V2DL9	5DB26DL9	SN101821	10/17/2005	15:26
TB95B	5DB28	SN101822	10/17/2005	15:58

TOTAL NHVOC ANALYSIS
LABORATORY BLANK SUMMARY

Idaho Cleanup Project
Analytical Laboratories Department

TRU Waste Characterization Program

Date/Time Analyzed:	10/19/2005 09:36	Lab Sample ID:	LBN101905
Preparation Method:	ACMM-9441-R11	Lab File ID:	BN101837
Analytical Method:	ACMM-9441-R11	Data Report Number:	ALD05025N
		Analytical Batch ID:	0510066
		Instrument ID:	GC-1
		Sample Matrix:	SOLID

THIS BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, AND STANDARDS

FIELD ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1001886711V4RE	5DB29RE	SN101838	10/19/2005	10:08
1001886721V8RE	5DB31RE	SN101839	10/19/2005	10:40

TOTAL NHVOC ANALYSIS
LABORATORY CONTROL SAMPLE FORM

Idaho Cleanup Project
Analytical Laboratories Department
TRU Waste Characterization Program

Date/Time Analyzed: 10/12/2005 18:38
Preparation Method: ACMM-9441-R11
Analytical Method: ACMM-9441-R11

Lab File ID: LN101792
Lab Sample ID: LCSN0510066
Data Report Number: ALD05025N
Analytical Batch ID: 0510066
Instrument ID: GC-1
Sample Matrix: SOLID

TARGET ANALYTE	KNOWN CONCENTRATION (mg/kg)	MEASURED CONCENTRATION (mg/kg)	%RECOVERY
Acetone	100.00	104.047	104
Butanol	100.00	105.251	105
Methanol	100.00	105.832	106
Methyl ethyl ketone	100.00	104.764	105
Ethyl ether	100.00	99.281	99
Isobutanol	100.00	106.932	107
Pyridine	100.00	100.717	101

Acceptance Criteria: 60 - 150
Z = Value outside Acceptance Criteria

TOTAL NHVOC ANALYSIS
LABORATORY CONTROL SAMPLE FORM

Idaho Cleanup Project
Analytical Laboratories Department
TRU Waste Characterization Program

Date/Time Analyzed: 10/12/2005 18:38
Preparation Method: ACMM-9441-R11
Analytical Method: ACMM-9441-R11

Lab File ID: LN101792
Lab Sample ID: LCSN0510066
Data Report Number: ALD05025N
Analytical Batch ID: 0510066
Instrument ID: GC-1
Sample Matrix: SOLID

TARGET ANALYTE	KNOWN CONCENTRATION (mg/kg)	MEASURED CONCENTRATION (mg/kg)	%RECOVERY
Acetone	100.00	105.399	105
Butanol	100.00	108.330	108
Methanol	100.00	108.799	109
Methyl ethyl ketone	100.00	106.124	106
Ethyl ether	100.00	100.225	100
Isobutanol	100.00	108.807	109
Pyridine	100.00	102.161	102

Acceptance Criteria: 60 - 150
Z = Value outside Acceptance Criteria

TOTAL NHVOC ANALYSIS
ANALYTE IDENTIFICATION FORM

Idaho Cleanup Project
Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	1001688611V2DL10	Lab File ID:	SN101798
Date/Time Analyzed:	10/12/2005 21:48	Lab Sample ID:	5CZ76DL10
Preparation Method:	ACMM-9441-R11	Data Report Number:	ALD05025N
Analytical Method:	ACMM-9441-R11	Analytical Batch ID:	0510066
		Instrument ID:	GC-1
		Sample Matrix:	SOLID

TARGET ANALYTE	COLUMN	RETENTION TIME (min)	RT WINDOW (min) From	To	CONCENTRATION mg/kg	RPD
Acetone	A					
	B					
Butanol	A					
	B					
Methanol	A	2.467	2.253	2.669	23.36	
	[redacted]	2.095	1.915	2.255	36.91	44.97
Methyl ethyl ketone	A					
	B					
Ethyl ether	A					
	B					
Isobutanol	A					
	B					
Pyridine	A					
	B					

* = column used for final report

TOTAL NHVOC ANALYSIS
ANALYTE IDENTIFICATION FORM

Idaho Cleanup Project
Analytical Laboratories Department

TRU Waste Characterization Program

Field Sample ID:	1001886721V8RE	Lab File ID:	SN101839
Date/Time Analyzed:	10/19/2005 10:40	Lab Sample ID:	5DB31RE
Preparation Method:	ACMM-9441-R11	Data Report Number:	ALD05025N
Analytical Method:	ACMM-9441-R11	Analytical Batch ID:	0510066
		Instrument ID:	GC-1
		Sample Matrix:	SOLID

TARGET ANALYTE	COLUMN	RETENTION TIME (min)	RT WINDOW (min) From	To	CONCENTRATION mg/kg	RPD
Acetone	A					
	B					
Butanol	* A	8.939	8.639	9.203	6.24	
	B	7.839	7.338	7.938	30.03	131.22
Methanol	A					
	B					
Methyl ethyl ketone	A					
	B					
Ethyl ether	A					
	B					
Isobutanol	A					
	B					
Pyridine	A					
	B					

* = column used for final report

Section 5

Instrument QC Data

TOTAL NHVOC ANALYSIS
Initial Calibration Data

Idaho Cleanup Project
Analytical Laboratories Department
TRU Waste Characterization Program

Analytical Method: ACMM-9441-R11

Data Report Number: ALD05025N

Analytical Batch ID: 0510066

ICAL ID: IN105001

Instrument ID: GC-1

GC Column A: ID: DB-624

ICAL Std Conc (ug/mL)	0.5	2.5	15	75	200			
TARGET ANALYTE	IN101691 09/14/2005 RT	IN101692 09/14/2005 RT	IN101693 09/14/2005 RT	IN101694 09/14/2005 RT	IN101695 09/14/2005 RT	RT WINDOW (min) FROM	TO	CORRELATION COEFFICIENT (r)
Isopropanol-d8	4.344	4.352	4.346	4.341	4.339	4.190	4.817	1.000
Acetone	4.128	4.124	4.121	4.116	4.113	3.930	4.567	1.000
Butanol	8.925	8.919	8.908	8.903	8.899	8.789	9.353	1.000
Methanol	2.479	2.478	2.476	2.473	2.470	2.346	2.761	1.000
Methyl ethyl ketone	6.887	6.882	6.875	6.869	6.865	6.710	7.322	1.000
Ethyl ether	3.643	3.638	3.635	3.632	3.629	3.434	4.043	1.000
Isobutanol	8.028	8.026	8.020	8.014	8.012	7.891	8.466	1.000
Pyridine	10.561	10.514	10.486	10.474	10.469	10.393	10.984	1.000

GC Column B: ID: DB-1

ICAL Std Conc (ug/mL)	0.5	2.5	15	75	200			
TARGET ANALYTE	IN101691 09/14/2005 RT	IN101692 09/14/2005 RT	IN101693 09/14/2005 RT	IN101694 09/14/2005 RT	IN101695 09/14/2005 RT	RT WINDOW (min) FROM	TO	CORRELATION COEFFICIENT (r)
Isopropanol-d8	3.296	3.298	3.293	3.288	3.284	2.922	3.458	1.000
Acetone	3.151	3.152	3.147	3.142	3.139	2.780	3.294	1.000
Butanol	7.662	7.644	7.629	7.618	7.614	7.257	7.857	1.000
Methanol	2.101	2.100	2.097	2.095	2.092	1.838	2.178	1.000
Methyl ethyl ketone	5.643	5.628	5.614	5.605	5.602	5.187	5.831	1.000
Ethyl ether	3.679	3.679	3.675	3.670	3.668	3.247	3.842	1.000
Isobutanol	6.718	6.708	6.697	6.688	6.685	6.303	6.921	1.000
Pyridine	9.606	9.528	9.478	9.455	9.447	9.156	9.773	1.000

Acceptance Criteria: $r \geq 0.990$
Retention Time within RT Window

Z = Value outside Acceptance Criteria
! = Mean Retention Time outside RT Window

TOTAL NHVOC ANALYSIS
CONTINUING CALIBRATION CHECK

Idaho Cleanup Project
Analytical Laboratories Department

TRU Waste Characterization Program

Date/Time Analyzed: 10/12/2005 17:34
Analytical Method: ACMM-9441-R11

Initial Calibration Date: 09/14/2005

Lab Sample ID: CCN101205C
Lab File ID: CN101790
Data Report Number: ALD05025N
Analytical Batch ID: 0510066
Instrument ID: GC-1

Column A ID: DB-624

TARGET ANALYTE	RETENTION TIME (min)	RT WINDOW (min) FROM	TO	MEASURED CONCENTRATION (ug/mL)	KNOWN CONCENTRATION (ug/mL)	%D
Isopropanol-d8	4.322	4.190	4.817	78.584	75	4.78
Acetone	4.097	3.930	4.567	78.147	75	4.20
Butanol	8.885	8.789	9.353	77.770	75	3.69
Methanol	2.461	2.346	2.761	76.448	75	1.93
Methyl ethyl ketone	6.849	6.710	7.322	77.922	75	3.90
Ethyl ether	3.615	3.434	4.043	79.251	75	5.67
Isobutanol	7.996	7.891	8.466	77.468	75	3.29
Pyridine	10.455	10.393	10.984	79.408	75	5.88

Column B ID: DB-1

TARGET ANALYTE	RETENTION TIME (min)	RT WINDOW (min) FROM	TO	MEASURED CONCENTRATION (ug/mL)	KNOWN CONCENTRATION (ug/mL)	%D
Isopropanol-d8	3.273	2.922	3.458	79.911	75	6.55
Acetone	3.129	2.780	3.294	78.680	75	4.91
Butanol	7.602	7.257	7.857	78.508	75	4.68
Methanol	2.085	1.838	2.178	77.558	75	3.41
Methyl ethyl ketone	5.587	5.187	5.831	78.692	75	4.92
Ethyl ether	3.654	3.247	3.842	81.359	75	8.48
Isobutanol	6.671	6.303	6.921	78.468	75	4.62
Pyridine	9.438	9.156	9.773	80.096	75	6.79

Acceptance Criteria: %D $\leq$ 15%
Retention Times within RT Window

Z = %D > 15%
! = Retention Time outside RT Window

TOTAL NHVOC ANALYSIS
CONTINUING CALIBRATION CHECK

Idaho Cleanup Project
Analytical Laboratories Department

TRU Waste Characterization Program

Date/Time Analyzed: 10/12/2005 23:24
Analytical Method: ACMM-9441-R11

Initial Calibration Date: 09/14/2005

Lab Sample ID: CCN101205D
Lab File ID: CN101801
Data Report Number: ALD05025N
Analytical Batch ID: 0510066
Instrument ID: GC-1

Column A ID: DB-624

TARGET ANALYTE	RETENTION TIME (min)	RT WINDOW (min) FROM	TO	MEASURED CONCENTRATION (ug/mL)	KNOWN CONCENTRATION (ug/mL)	%D
Isopropanol-d8	4.336	4.008	4.636	76.393	75	1.86
Acetone	4.110	3.779	4.415	76.602	75	2.14
Butanol	8.892	8.603	9.167	75.538	75	0.72
Methanol	2.471	2.253	2.669	75.936	75	1.25
Methyl ethyl ketone	6.859	6.543	7.155	75.934	75	1.25
Ethyl ether	3.629	3.311	3.919	79.082	75	5.44
Isobutanol	8.004	7.709	8.283	75.298	75	0.40
Pyridine	10.463	10.160	10.750	77.124	75	2.83

Column B ID: DB-1

TARGET ANALYTE	RETENTION TIME (min)	RT WINDOW (min) FROM	TO	MEASURED CONCENTRATION (ug/mL)	KNOWN CONCENTRATION (ug/mL)	%D
Isopropanol-d8	3.287	3.005	3.541	76.425	75	1.90
Acetone	3.141	2.872	3.386	76.921	75	2.56
Butanol	7.611	7.302	7.902	76.292	75	1.72
Methanol	2.093	1.915	2.255	76.178	75	1.57
Methyl ethyl ketone	5.600	5.265	5.909	76.679	75	2.24
Ethyl ether	3.668	3.356	3.952	78.862	75	5.15
Isobutanol	6.681	6.362	6.980	76.528	75	2.04
Pyridine	9.447	9.129	9.747	77.607	75	3.48

Acceptance Criteria: %D $\leq$ 15%
Retention Times within RT Window

Z = %D > 15%
! = Retention Time outside RT Window

TOTAL NHVOC ANALYSIS
CONTINUING CALIBRATION CHECK

Idaho Cleanup Project
Analytical Laboratories Department

TRU Waste Characterization Program

Date/Time Analyzed: 10/17/2005 13:20
Analytical Method: ACMM-9441-R11

Initial Calibration Date: 09/14/2005

Lab Sample ID: CCN101705A
Lab File ID: CN101817
Data Report Number: ALD05025N
Analytical Batch ID: 0510066
Instrument ID: GC-1

Column A ID: DB-624

TARGET ANALYTE	RETENTION TIME (min)	RT WINDOW (min) FROM	RT WINDOW (min) TO	MEASURED CONCENTRATION (ug/mL)	KNOWN CONCENTRATION (ug/mL)	%D
Isopropanol-d8	4.374	4.190	4.817	76.842	75	2.46
Acetone	4.149	3.930	4.567	77.239	75	2.99
Butanol	8.927	8.789	9.353	76.099	75	1.47
Methanol	2.494	2.346	2.761	76.791	75	2.39
Methyl ethyl ketone	6.897	6.710	7.322	77.511	75	3.35
Ethyl ether	3.664	3.434	4.043	77.291	75	3.05
Isobutanol	8.039	7.891	8.466	76.218	75	1.62
Pyridine	10.499	10.393	10.984	78.412	75	4.55

Column B ID: DB-1

TARGET ANALYTE	RETENTION TIME (min)	RT WINDOW (min) FROM	RT WINDOW (min) TO	MEASURED CONCENTRATION (ug/mL)	KNOWN CONCENTRATION (ug/mL)	%D
Isopropanol-d8	3.316	2.922	3.458	77.505	75	3.34
Acetone	3.169	2.780	3.294	77.661	75	3.55
Butanol	7.643	7.257	7.857	77.243	75	2.99
Methanol	2.112	1.838	2.178	76.897	75	2.53
Methyl ethyl ketone	5.634	5.187	5.831	77.136	75	2.85
Ethyl ether	3.702	3.247	3.842	77.073	75	2.76
Isobutanol	6.715	6.303	6.921	77.277	75	3.04
Pyridine	9.481	9.156	9.773	78.364	75	4.49

Acceptance Criteria: %D $\leq$ 15%
Retention Times within RT Window

Z = %D > 15%
! = Retention Time outside RT Window

TOTAL NHVOC ANALYSIS
CONTINUING CALIBRATION CHECK

Idaho Cleanup Project
Analytical Laboratories Department

TRU Waste Characterization Program

Date/Time Analyzed: 10/17/2005 17:36
Analytical Method: ACMM-9441-R11

Initial Calibration Date: 09/14/2005

Lab Sample ID: CCN101705B
Lab File ID: CN101825
Data Report Number: ALD05025N
Analytical Batch ID: 0510066
Instrument ID: GC-1

Column A ID: DB-624

TARGET ANALYTE	RETENTION TIME (min)	RT WINDOW (min) FROM	RT WINDOW (min) TO	MEASURED CONCENTRATION (ug/mL)	KNOWN CONCENTRATION (ug/mL)	%D
Isopropanol-d8	4.341	4.060	4.688	78.384	75	4.51
Acetone	4.115	3.831	4.467	77.525	75	3.37
Butanol	8.902	8.645	9.209	78.132	75	4.18
Methanol	2.472	2.286	2.702	77.212	75	2.95
Methyl ethyl ketone	6.868	6.591	7.203	78.033	75	4.04
Ethyl ether	3.631	3.360	3.968	77.727	75	3.64
Isobutanol	8.014	7.752	8.326	78.162	75	4.22
Pyridine	10.474	10.204	10.794	79.581	75	6.11

Column B ID: DB-1

TARGET ANALYTE	RETENTION TIME (min)	RT WINDOW (min) FROM	RT WINDOW (min) TO	MEASURED CONCENTRATION (ug/mL)	KNOWN CONCENTRATION (ug/mL)	%D
Isopropanol-d8	3.287	3.048	3.584	80.041	75	6.72
Acetone	3.142	2.912	3.426	78.149	75	4.20
Butanol	7.618	7.343	7.943	79.274	75	5.70
Methanol	2.094	1.942	2.282	77.588	75	3.45
Methyl ethyl ketone	5.604	5.312	5.956	77.860	75	3.81
Ethyl ether	3.670	3.404	4.000	78.697	75	4.93
Isobutanol	6.688	6.406	7.024	79.286	75	5.71
Pyridine	9.456	9.172	9.790	80.318	75	7.09

Acceptance Criteria: %D $\leq$ 15%
Retention Times within RT Window

Z = %D > 15%
! = Retention Time outside RT Window

TOTAL NHVOC ANALYSIS
CONTINUING CALIBRATION CHECK

Idaho Cleanup Project
Analytical Laboratories Department

TRU Waste Characterization Program

Date/Time Analyzed: 10/19/2005 09:05
Analytical Method: ACMM-9441-R11

Lab Sample ID: CCN101905A
Lab File ID: CN101836
Data Report Number: ALD05025N
Analytical Batch ID: 0510066
Instrument ID: GC-1

Initial Calibration Date: 09/14/2005

Column A ID: DB-624

TARGET ANALYTE	RETENTION TIME (min)	RT WINDOW (min) FROM	TO	MEASURED CONCENTRATION (ug/mL)	KNOWN CONCENTRATION (ug/mL)	%D
Isopropanol-d8	4.365	4.190	4.817	77.768	75	3.69
Acetone	4.140	3.930	4.567	77.653	75	3.54
Butanol	8.921	8.789	9.353	76.851	75	2.47
Methanol	2.488	2.346	2.761	76.582	75	2.11
Methyl ethyl ketone	6.891	6.710	7.322	77.180	75	2.91
Ethyl ether	3.654	3.434	4.043	77.909	75	3.88
Isobutanol	8.034	7.891	8.466	76.992	75	2.66
Pyridine	10.495	10.393	10.984	79.278	75	5.70

Column B ID: DB-1

TARGET ANALYTE	RETENTION TIME (min)	RT WINDOW (min) FROM	TO	MEASURED CONCENTRATION (ug/mL)	KNOWN CONCENTRATION (ug/mL)	%D
Isopropanol-d8	3.308	2.922	3.458	78.763	75	5.02
Acetone	3.162	2.780	3.294	77.914	75	3.89
Butanol	7.638	7.257	7.857	77.681	75	3.57
Methanol	2.109	1.838	2.178	77.108	75	2.81
Methyl ethyl ketone	5.627	5.187	5.831	77.688	75	3.58
Ethyl ether	3.694	3.247	3.842	78.360	75	4.48
Isobutanol	6.708	6.303	6.921	77.958	75	3.94
Pyridine	9.476	9.156	9.773	78.527	75	4.70

Acceptance Criteria: %D $\leq$ 15%
Retention Times within RT Window

Z = %D > 15%
! = Retention Time outside RT Window

TOTAL NHVOC ANALYSIS
CONTINUING CALIBRATION CHECK

Idaho Cleanup Project
Analytical Laboratories Department

TRU Waste Characterization Program

Date/Time Analyzed:	10/19/2005 11:12	Lab Sample ID:	CCN101905B
Analytical Method:	ACMM-9441-R11	Lab File ID:	CN101840
		Data Report Number:	ALD05025N
		Analytical Batch ID:	0510066
Initial Calibration Date:	09/14/2005	Instrument ID:	GC-1

Column A ID: DB-624

TARGET ANALYTE	RETENTION TIME (min)	RT WINDOW (min) FROM	RT WINDOW (min) TO	MEASURED CONCENTRATION (ug/mL)	KNOWN CONCENTRATION (ug/mL)	%D
Isopropanol-d8	4.356	4.051	4.679	79.762	75	6.35
Acetone	4.130	3.822	4.458	79.474	75	5.96
Butanol	8.913	8.639	9.203	78.647	75	4.86
Methanol	2.481	2.280	2.696	78.018	75	4.02
Methyl ethyl ketone	6.881	6.585	7.197	78.678	75	4.90
Ethyl ether	3.645	3.350	3.958	78.854	75	5.14
Isobutanol	8.027	7.747	8.321	78.614	75	4.82
Pyridine	10.487	10.200	10.790	80.389	75	7.18

Column B ID: DB-1

TARGET ANALYTE	RETENTION TIME (min)	RT WINDOW (min) FROM	RT WINDOW (min) TO	MEASURED CONCENTRATION (ug/mL)	KNOWN CONCENTRATION (ug/mL)	%D
Isopropanol-d8	3.300	3.040	3.576	80.643	75	7.52
Acetone	3.154	2.905	3.419	79.892	75	6.52
Butanol	7.632	7.338	7.938	79.605	75	6.14
Methanol	2.102	1.939	2.279	79.209	75	5.61
Methyl ethyl ketone	5.620	5.305	5.949	78.757	75	5.01
Ethyl ether	3.684	3.396	3.992	79.406	75	5.87
Isobutanol	6.702	6.399	7.017	79.778	75	6.37
Pyridine	9.470	9.167	9.785	80.400	75	7.20

Acceptance Criteria: %D $\leq$ 15%
Retention Times within RT Window

Z = %D > 15%
! = Retention Time outside RT Window

TOTAL NHVOC ANALYSIS
MDL REPORTING FORM

Idaho Cleanup Project
Analytical Laboratories Department
TRU Waste Characterization Program

Preparation Method: ACMM-9441-R11
Analysis Method: ACMM-9441-R11
MDL Determination Date: 05/24/2005
Instrument ID GC-1
Sample Matrix: SOLID

COLUMN A ID: DB-624

TARGET ANALYTE	REPORTED MDL (mg/kg)	PROGRAM REQUIRED MDL (mg/kg)	PRQL (mg/kg)
Isopropanol-d8	2.0	10	100
Acetone	3.0	10	100
Butanol	3.0	10	100
Methanol	2.0	10	100
Methyl ethyl ketone	3.0	10	100
Ethyl ether	3.0	10	100
Isobutanol	2.0	10	100
Pyridine	3.0	10	100

COLUMN B ID: DB-1

TARGET ANALYTE	REPORTED MDL (mg/kg)	Program Required MDL (mg/kg)	PRQL (mg/kg)
Isopropanol-d8	2.0	10	100
Acetone	2.0	10	100
Butanol	2.0	10	100
Methanol	2.0	10	100
Methyl ethyl ketone	2.0	10	100
Ethyl ether	3.0	10	100
Isobutanol	2.0	10	100
Pyridine	2.0	10	100

SOLIDS: MDLs calculated assuming 3.00 gram sample and 22mL extraction volume

Section 6

Data Review Checklists

TWCP SAMPLE RECEIVING & CUSTODY REVIEW CHECKLIST
INEEL ANALYTICAL LABORATORIES DEPARTMENT

Log Number: 051006 6	IDC #: TWCP-RF/S3150-A	NCR Initiation Required? ☐ Yes ☒ No
COC #(s):	WCA-936, WCA-937	If Yes NCR Number: _____
Reviewer: Julie Daley (Printed Name/Signature)	10/10/2005 (Date)	

Instructions:

Complete one checklist per log. Enter appropriate response for each question. Each "No" response requires explanation. A "No" response to a question may require initiation of an NCR

	Requirement	Yes	No	Comments
	1. FIELD CHAIN-OF-CUSTODY (COC)			
a.	Was a COC form received with each shipping container?	☒	☐	
b.	Did the content of each shipping container match that listed on the associated COC form?	☒	☐	
c.	Were all custody transfers completely documented by signatures of relinquishers and receivers, with date and time of transfer?	☒	☐	
d.	Does all sample information (e.g., sample ID, sampling date and time, sampling batch) listed on the COC form corresponds with the information on the sample labels?	☒	☐	
e.	Is the correct analysis requested for each sample?	☒	☐	
f.	Were any corrections on the COC appropriately made (a single line through the incorrect entry and correct data written in [not overwritten], initialed and dated)?	☒	☐	
	2. SAMPLE LABELS			
a.	Was each sample received with a completed sample label?	☒	☐	
b.	Do the field IDs on the sample labels correspond to those on the field COC form?	☒	☐	
c.	Were the sampling batch number, sampling date, time and requested analysis recorded on each sample label, and they correspond with those recorded on the COC?	☒	☐	
d.	Are the sampler initials, organization and sample description recorded on each sample label?	☒	☐	
e.	Are any corrections on the sample labels appropriately made (a single line through the incorrect entry and correct data written in [not overwritten], initialed and dated)?	☒	☐	
	3. SAMPLE INTEGRITY			
a.	Were custody seals used on the shipping container?	☒	☐	
b.	Were custody seals used on each individual sample container?	☒	☐	
c.	Were all custody seals intact and undamaged upon receipt at ALD?	☒	☐	
d.	Were all custody seals placed such that the container could not be opened without damaging the seal?	☒	☐	
e.	Has the physical integrity of all samples been maintained (i.e., no cracks)?	☒	☐	
f.	Were all samples preserved during shipment with "Blue Ice" or equivalent cooling mechanism?	☒	☐	
g.	Were all samples placed in refrigerated storage (4° ± 2° C) after login?	☒	☐	
	4. INTERNAL SAMPLE TRACKING			
a.	Were all samples logged into the Analytical Computer System?	☒	☐	
b.	Was all sample information correctly transcribed from the field documentation into the ACS?	☒	☐	
c.	Were all sample bottles labeled with the ACS log number and the laboratory sample ID?	☒	☐	
d.	Were internal tracking forms prepared for each log?	☒	☐	

Contact the sampling organization if any discrepancies are found in the field COC and sample label documentation. Document the name of the person Contacting the sampling organization, the name of the person contacted, the date and time of the contact, and the resolution of the problem.

Notes:

Form effective Date 10Mar05

ALD Document: Log 0510066 TWCP-RF_S3150-A.tif - Scanned:10/12/2005 1:54:06 PM

TWCP SAMPLE RECEIVING & CUSTODY REVIEW CHECKLIST
INEEL ANALYTICAL LABORATORIES DEPARTMENT

Log Number: 0510106	IDC #: TWCP-RF/S3150-A	NCR Initiation Required? ☐ Yes ☒ No
COC #(s):	WCA-938, WCA-939	If Yes NCR Number: _____
Reviewer: Julie Daley (Printed Name/Signature)	10/10/2005 (Date)	

Instructions:
Complete one checklist per log. Enter appropriate response for each question. Each "No" response requires explanation. A "No" response to a question may require initiation of an NCR

	Requirement	Yes	No	Comments
	1. FIELD CHAIN-OF-CUSTODY (COC)			
a.	Was a COC form received with each shipping container?	☒	☐	
b.	Did the content of each shipping container match that listed on the associated COC form?	☒	☐	
c.	Were all custody transfers completely documented by signatures of relinquishers and receivers, with date and time of transfer?	☒	☐	
d.	Does all sample information (e.g., sample ID, sampling date and time, sampling batch) listed on the COC form corresponds with the information on the sample labels?	☒	☐	
e.	Is the correct analysis requested for each sample?	☒	☐	
f.	Were any corrections on the COC appropriately made (a single line through the incorrect entry and correct data written in [not overwritten], initialed and dated)?	☒	☐	
	2. SAMPLE LABELS			
a.	Was each sample received with a completed sample label?	☒	☐	
b.	Do the field IDs on the sample labels correspond to those on the field COC form?	☒	☐	
c.	Were the sampling batch number, sampling date, time and requested analysis recorded on each sample label, and they correspond with those recorded on the COC?	☒	☐	
d.	Are the sampler initials, organization and sample description recorded on each sample label?	☒	☐	
e.	Are any corrections on the sample labels appropriately made (a single line through the incorrect entry and correct data written in [not overwritten], initialed and dated)?	☒	☐	
	3. SAMPLE INTEGRITY			
a.	Were custody seals used on the shipping container?	☒	☐	
b.	Were custody seals used on each individual sample container?	☒	☐	
c.	Were all custody seals intact and undamaged upon receipt at ALD?	☒	☐	
d.	Were all custody seals placed such that the container could not be opened without damaging the seal?	☒	☐	
e.	Has the physical integrity of all samples been maintained (i.e., no cracks)?	☒	☐	
f.	Were all samples preserved during shipment with "Blue Ice" or equivalent cooling mechanism?	☒	☐	
g.	Were all samples placed in refrigerated storage (4° ± 2° C) after login?	☒	☐	
	4. INTERNAL SAMPLE TRACKING			
a.	Were all samples logged into the Analytical Computer System?	☒	☐	
b.	Was all sample information correctly transcribed from the field documentation into the ACS?	☒	☐	
c.	Were all sample bottles labeled with the ACS log number and the laboratory sample ID?	☒	☐	
d.	Were internal tracking forms prepared for each log?	☒	☐	

Contact the sampling organization if any discrepancies are found in the field COC and sample label documentation. Document the name of the person Contacting the sampling organization, the name of the person contacted, the date and time of the contact, and the resolution of the problem.

Notes:

Form effective Date 10Mar05

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TWCP SAMPLE RECEIVING & CUSTODY REVIEW CHECKLIST
INEEL ANALYTICAL LABORATORIES DEPARTMENT

Log Number: 051013 4	IDC #: ID-RF-S3150-A (IDC's 700, 801)	NCR Initiation Required? ☐ Yes ☒ No
COC #(s):	WCA-940, WCA-941, WCA-942	If Yes NCR Number: _____
Reviewer: Blane Teckmeyer / BTP (Printed Name/Signature)		10/17/2005 (Date)

Instructions:
Complete one checklist per log. Enter appropriate response for each question. Each "No" response requires explanation. A "No" response to a question may require initiation of an NCR

Requirement	Yes	No	Comments
1. FIELD CHAIN-OF-CUSTODY (COC)			
a. Was a COC form received with each shipping container?	☒	☐	
b. Did the content of each shipping container match that listed on the associated COC form?	☒	☐	
c. Were all custody transfers completely documented by signatures of relinquishers and receivers, with date and time of transfer?	☒	☐	
d. Does all sample information (e.g., sample ID, sampling date and time, sampling batch) listed on the COC form corresponds with the information on the sample labels?	☒	☐	Note 1
e. Is the correct analysis requested for each sample?	☒	☐	
f. Were any corrections on the COC appropriately made (a single line through the incorrect entry and correct data written in [not overwritten], initialed and dated)?	☒	☐	
2. SAMPLE LABELS			
a. Was each sample received with a completed sample label?	☒	☐	
b. Do the field IDs on the sample labels correspond to those on the field COC form?	☒	☐	
c. Were the sampling batch number, sampling date, time and requested analysis recorded on each sample label, and they correspond with those recorded on the COC?	☒	☐	~~Note 1~~ BET 10/19/05
d. Are the sampler initials, organization and sample description recorded on each sample label?	☒	☐	
e. Are any corrections on the sample labels appropriately made (a single line through the incorrect entry and correct data written in [not overwritten], initialed and dated)?	☒	☐	
3. SAMPLE INTEGRITY			
a. Were custody seals used on the shipping container?	☒	☐	
b. Were custody seals used on each individual sample container?	☒	☐	
c. Were all custody seals intact and undamaged upon receipt at ALD?	☒	☐	
d. Were all custody seals placed such that the container could not be opened without damaging the seal?	☒	☐	
e. Has the physical integrity of all samples been maintained (i.e., no cracks)?	☒	☐	
f. Were all samples preserved during shipment with "Blue Ice" or equivalent cooling mechanism?	☒	☐	
g. Were all samples placed in refrigerated storage (4° ± 2° C) after login?	☒	☐	
4. INTERNAL SAMPLE TRACKING			
a. Were all samples logged into the Analytical Computer System?	☒	☐	
b. Was all sample information correctly transcribed from the field documentation into the ACS?	☒	☐	
c. Were all sample bottles labeled with the ACS log number and the laboratory sample ID?	☒	☐	
d. Were internal tracking forms prepared for each log?	☒	☐	

Contact the sampling organization if any discrepancies are found in the field COC and sample label documentation. Document the name of the person Contacting the sampling organization, the name of the person contacted, the date and time of the contact, and the resolution of the problem.

Notes:

1 WCA-942, Sample ID Number: 10018867 21V5, Sample Weight: 2.73g on the COC, Sample Label: 2.69g; ~~WCA-940, Container I.D.C.: ID-RF-S315-A4, should be ID-RF-S3150-A~~. BET 10/19/05 CORRECT WEIGHT ON COC PER COC COMMENT. BET 10/19/05

Form effective Date 10Mar05

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0062

ICP Analytical Laboratories Department

Data Generator Checklist for TWCP

Data Report Number: ALD05025N	Analytical Batch: 0510066
Analysis Procedure: ACMM-9441	Procedure Revision: 11
Analysis Date(s): 10/12/05, 10/17/05 and 10/19/05	
Data Generator Signature:	

Criteria	Yes	No	Comments
1. Samples analyzed in accordance with cited analytical method.	✓		
2. All logbook entries completed in accordance with MCP-2011.	✓		
3. All data entry and corrections made in accordance with MCP-2008.	✓		
4. All raw data signed/initialed and dated in indelible black ink.	✓		
5. Data reviewed for completeness and accuracy.	✓		

ICP Analytical Laboratories Department
Independent Technical Review Checklist for TWCP
Total NHVOCs in Homogenous Solids and Soil/Gravel by GC/FID

Analytical Batch: 0510066				**Method:** ACMM-9441	
Run # and Analysis Date		Data Generator	Independent Reviewer Signature	Review Date	OK for Release?
#1	10-12-05	Scott Pristupa		10-24-05	(Yes) or No
#2	10-17-05	↓		10-24-05	(Yes) or No
#3	10-19-05	↓		10-24-05	(Yes) or No

Instructions: Complete one checklist per analytical batch. If more than three instrument runs were needed to complete the batch analysis, use a second checklist. Enter the appropriate response for each question. Each "No" response requires explanation.

Requirement	Run #1		Run #2		Run #3		Comments
	Yes	No	Yes	No	Yes	No	
1. Retention Time (RT) Windows	///	///	///	///	///	///	
a. Have all RT windows used with this analytical batch been verified and approved for use as documented by a completed RT Window Determination and Initial Calibration Independent Technical Review Checklist?	✓		✓		✓		
2. Initial Calibration (ICAL)	///	///	///	///	///	///	
a. Have all ICALs used with this analytical batch been verified and approved for use as documented by a completed RT Window Determination and Initial Calibration Independent Technical Review Checklist?	✓		✓		✓		
3. Continuing Calibration Verification (CCV)	///	///	///	///	///	///	
a. Were CCV standards analyzed at the beginning of each 12-hour analytical shift (before analysis of samples), and at the end of the shift (after sample analysis and within 12 hours of the beginning CCV)?	✓		✓		✓		
b. Are all target analyte peaks within the initial RT windows for the beginning CCV?	✓		✓		✓		
c. Are all target analyte peaks within the daily RT (centered around beginning CCV RTs) windows for the ending CCV?	✓		✓		✓		
d. Are the measured concentration %Ds ≤15% for each target analyte on both analytical columns for the beginning and ending CCVs?	✓		✓		✓		
4. Samples (Including LCSs, Blanks, MS and MSDs)	///	///	///	///	///	///	
a. Were all samples extracted within 14 days of sample collection?	✓		✓		✓		
b. Were all analyses of sample extracts (including dilutions and reanalyses) performed within 14 days of sample collection?	✓		✓		✓		
c. Were all samples analyzed within 6 months of valid MDL and P&A determinations?	✓		✓		✓		
d. Are all detected target analytes identified on both the quantitation and confirmation column with peaks within the daily RT windows and in concentrations ≥MDL?	✓		✓		✓		
e. Were all samples having analytes detected in amounts exceeding the calibration range reanalyzed on a dilution?	NA		NA		NA		
f. Do all surrogate compound recoveries meet ACMM-9441 acceptance criteria?		✓		✓	✓		See Narrative
g. Are all analytes showing discrepancies (interferences) between columns quantitated per ACMM-9441?	✓		✓		✓		
h. Are analyte retention time windows checked for multiple peaks falling within the RT windows?	✓		✓		✓		
i. Have peak baselines been checked for correct integration?	✓		✓		✓		
j. Were the correct quantitation routines used for each column?	✓		✓		✓		
k. Are peak areas proportionally consistent with those of the CCV?	✓		✓		✓		

0064

ICP Analytical Laboratories Department
Independent Technical Review Checklist for TWCP
Total NHVOCs in Homogenous Solids and Soil/Gravel by GC/FID

Analytical Batch: 0510066

	Requirement	Yes	No	Comments
	5. Blanks	///	///	
a.	Was at least one unique laboratory blank extracted and analyzed with the analytical batch?	✓		
b.	Was a blank (laboratory or method) analyzed daily prior to the analysis of samples?	✓		
c.	Are all blank results ≤3 x program-required MDLs for all target analytes?	✓		
	6. Laboratory Control Samples (LCSs)	///	///	
a.	Was at least one unique LCS extracted and analyzed with the analytical batch?	✓		
b.	Are all LCSs prepared from a standard source different from that used for the calibration standards?	✓		
d.	Does the LCS contain all of the NHVOC target analytes?	✓		
d.	Are the percent recoveries for each target analyte in each LCS between 60% and 150%?	✓		
	7. Matrix Spike and Matrix Spike Duplicate Samples (MS/MSD)	///	///	
a.	Was at least one matrix spike sample (MS) analyzed with the analytical batch?	✓		
b.	Was at least one matrix spike duplicate sample (MSD) analyzed with the analytical batch?	✓		
c.	Are all percent recoveries for the MS and MSD between 60% and 150%?	✓		
d.	Are all RPDs between the MS and MSD ≤50?	✓		
	8. Data Report & Supporting Raw Data Package	///	///	
a.	Does the report contain a Data Report Narrative that addresses, at a minimum: 1) any deviations from ACMM-9441 and the justification for the deviations; 2) any QC samples that failed the acceptance criteria, and their impact on data quality; 3) any NCRs associated with the reported samples; and 4) any problems or unusual conditions encountered during the analysis?	✓		See NCR 100077.
b.	Are Analysis Data Sheets present in the data report and accurate for all samples in the analytical batch?	✓		
c.	Are the analyte concentrations on the Analysis Data Sheets reported in units of mg/kg and correctly rounded to 2 significant figures?	✓		
d	Are reporting forms present and accurate for surrogate recoveries, MS/MSDs, LBs, LCSs, ICALs, CCVs, MDLs and Analyte Identification?	✓		
e.	Do Analysis Data Sheets or Analyte Identification Forms contain a note regarding interferences for all samples having questionable analyte confirmation or quantitation?	✓		
f.	Are U, J, B, D, E, H, and Z data qualifying flags correctly assigned on the reporting forms?	✓		
g.	Were all samples, associated method performance, and ICALs supporting this analytical batch run by personnel having current TWCP qualifications?	✓		
h.	Are copies of all COC documentation, sample preparation logs, and sample analysis logs included in the data package?	✓		
i.	Are all raw data and instrument printouts signed/initialed and dated by the analyst and present in the data package?	✓		
j.	Were all calculations performed using validated software or 100% manually verified?	✓		
k.	Have the data been reviewed for transcription errors?	✓		

Additional Comments: Corrections have been reviewed and accepted. RG 11-03-05

0065

Technical Supervisory Data Review Checklist for TWCP

ICP Analytical Laboratories Department

Analytical Batch Data Report Number: ALD05025N	Method(s): ACMM-9441 Revision 11
Technical Supervisory Signature Release:	Date: 10/25/04

Requirement	Yes	No	Comments
a. Data are technically reasonable based on method(s) used	✓		
b. All data have received independent technical review	✓		
c. QC documentation is accurate and complete per PLN-600	✓		
d. Raw data/supporting data are complete	✓		
e. Sample holding time requirements are met, or exceptions documented	✓		
f. Chain-of custody (COC) documentation is complete	✓		

RESOLUTIONS ACCEPTED 11/3/05

Quality Assurance Data Review Checklist for TWCP
ICP Analytical Laboratories Department

Total NHVOCs in Homogeneous Solids and Soil/Gravel

Analytical Batch Data Report Number: ALD05025N	Method: ACMM-9441
QA Officer Signature Release: Adrian Chapman	Date: 11/03/05

Requirement	Yes	No	Comment
Section 1: Sample Integrity Verification			
1a. COC documentation present, complete, and accurate for all reported samples	✓		
1b. Physical integrity of all samples verified as satisfactory at VTSR	✓		
1c. All samples stored at 4 ± 2 °C between receipt and analysis	✓		
1d. All samples analyzed within 14 days of collection	✓		
Section 2: Data Report (DR) Completeness Verification			
2a. Cover Page including Table of Contents	✓		
2b. Cross Reference Table identifying field sample IDs and laboratory sample IDs	✓		
2c. Copy of Field COC Form(s)	✓		
2d. Narrative	✓		
2e. Analysis Data Sheet for each sample	✓		
2f. Laboratory Control Sample Form(s) for all LCSs associated with reported data	✓		
2g. Matrix Spike and Matrix Spike Duplicate Reporting Form(s) for all MS/MSDs associated with reported samples	✓		
2h. Surrogate Recovery form(s) including all reported samples	✓		
2i. Laboratory Blank Summary forms for all lab blanks associated with the reported samples	✓		
2j. Method Blank Summary forms for method blanks associated with the reported samples	✓		
2k. Analyte Identification Form for all samples with detected NHVOCs	✓		
2l. Initial Calibration Data form(s) for all ICALs associated with reported data	✓		
2m. Continuing Calibration Check forms for all CCVs associated with reported data	✓		
2n. MDL Reporting Form(s) for all instruments used for analysis	✓		
Section 3: Supporting Data Package Completeness Verification			
3a. External Standard Reports for every standard, sample, and QC sample reported	✓		
3b. Copies of extraction/preparation log books for all extracted samples and QC samples	✓		
3c. Copies of analysis run logs for every standard, sample and QC sample reported	✓		
3d. Copies of standard preparation log books and QC Lab documentation for all working standards and intermediate stock standards associated with reported data	✓		
Section 4: QC Results Verification			
4a. All ICALs within specifications	✓		
4b. All CCVs within specifications	✓		
4c. All LCS recoveries within specifications	✓		
4d. All Laboratory Blank results within specifications	✓		
4e. All Method Blank results within specifications	✓		
4f. All MS and MSD percent recoveries within specifications	✓		
4g. All RPDs for MSD analyses within specifications	✓		
4h. All surrogate recoveries within specifications		✓	See Narrative
Section 5: Instrument, Method and Personnel Qualification Verification			
5a. All analytical tasks conducted by personnel having current qualifications	✓		
5b. Acceptable demonstration of precision, accuracy, and MDLs performed within the last 6 months	✓		
5c. All deviations from ACMM-9441 clearly stated and explained on raw data or in DR narrative and all required NCRs issued	✓		See NCR# 100077
5d. All noncompliant QC discussed in DR narrative, and all required NCRs issued	✓		See NCR# 100077
Section 6: Data Recording and Review Verification			
6a. All changes to original data or forms made by line-out of incorrect entry, initialed/signed and dated by the person making the change	✓		
6b. All raw data initialed/signed and dated by generator in permanent black ink	✓		
6c. All pages in data package legible, correctly paginated, and copied pages complete (e.g., margins not cut off)	✓		
6d. All data received documented data generator review and signature	✓		
6e. All data received documented independent technical review and signature	✓		
6f. All data received documented technical supervisory review and signature	✓		

Attachment 4 – CCP SPM S3000/S4000 Waste Sampling Checklist and Summary

BDR Number: S4200-LOT-05-07	Sampling Date: 01/31/12			
Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
1. Does the Batch Data Report (BDR) have a BDR Table of Contents? **Reference Source: CCP Technical Procedures**	X			
2. Does the BDR contain the sampling BDR number, BDR date, and facility name? **Reference Source: CCP-PO-001, Table C3-12**	X			
3. Does the BDR contain the identification number(s) and container numbers for the waste packages represented in this BDR? **Reference Source: CCP-PO-001, Table C3-12**	X			
4. Are there 20 or less field samples per sampling batch? **Reference Source: CCP-PO-001, C3-10**	X			ARP30100 (repacked from ARP24217)
5. Is there a reference to or copy of any associated NCRs (if any) in the BDR? **Reference Source: CCP-PO-001, Table C3-12**	X			NCR-INL-0335-12 has a "use-as-is" disposition.
6. Are the chain-of-custody (COC) forms and appropriate data sheets for each waste package included in this BDR? **Reference Source: CCP-PO-001, Table C3-12**	X			
7. Does the BDR contain the sampling ID numbers and location (physical location within the container)? **Reference Source: CCP-PO-001, Table C3-12**	X			
8. Does the waste package BDR contain the sampling date and time? **Reference Source: CCP-PO-001, Table C3-12**	X			
9. Does the waste package BDR contain the sampler's signature? **Reference Source: CCP-PO-001, Table C3-12**	X			
10. Is the sample matrix and type identified within the sampling BDR? **Reference Source: CCP-PO-001, Table C1-2**	X			
11. Does the BDR identify the sample number and size? **Reference Source: CCP-PO-001, Table C3-12**	X			

CCP RECORDS ORIGINAL
DATE REC'D 2-27-12

COPY

Attachment 4 – CCP SPM S3000/S4000 Waste Sampling Checklist and Summary (Continued)

BDR Number: S4200-LOT-05-07	**Sampling Date: 01/31/12**			
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
12. Does the BDR identify the correct Waste Matrix Code? **Reference Source: CCP-PO-001, Table C3-12**	X			
13. Is there a minimum of one co-located core/sample (or field duplicate) collected per sample batch or one per week during sampling operation, and is a description of the collected core included in the BDR? **Reference Source: CCP-PO-001, C3-3**	X			Grab sampling.
14. Is there a minimum of one equipment blank for coring tools collected per equipment cleaning batch when sampling with compactor/coring unit? **Reference Source: CCP-PO-001, C1-2b**			X	Disposable sampling tools used.
15. Is there a minimum of one equipment blank for coring tools cleaned when sampling with single coring unit? **Reference Source: CCP-PO-001, C1-2b**			X	Disposable sampling tools used.
16. Is there a minimum of one equipment blank for liners collected per equipment cleaning batch? **Reference Source: CCP-PO-001, C1-2b**			X	Disposable sampling tools used.
17. Are samples preserved by keeping them at a temperature of 4°C, $\pm$ 2° C? **Reference Source: CCP-PO-001, Table C1-4**	X			
18. Were proper procedures, including revision number, used and referenced in BDR? **Reference Source: CCP-PO-001, Table C3-12**	X			
19. Were samples collected within 14 days, and is a time given between coring and sub-sampling? **Reference Source: CCP-PO-001, Table C3-12**	X			
20. Were the samples transferred to the lab within the maximum holding times? **Reference Source: CCP-PO-001, Table C1-4**	X			
21. Are sampling equipment numbers (lot number for disposable equipment) included in the BDR? **Reference Source: CCP-PO-001, Table C3-12**	X			

Attachment 4 – CCP SPM S3000/S4000 Waste Sampling Checklist and Summary (Continued)

BDR Number: S4200-LOT-05-07	**Sampling Date: 01/31/12**			
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
22. Are field records present in the BDR? Field records include: collecting problems (if applicable), sequence of sampling collection, inspection of the solids sampling area, inspection of the solids sampling equipment, coring tool test, and random location of sub-sample? **Reference Source: CCP-PO-001, Table C3-12**	X			
23. Is the location (point of origin) where each sample was taken included in the BDR? **Reference Source: CCP-PO-001, Table C3-12**	X			
24. Is the completed, signed, and dated Independent Technical Reviewer Checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, Table C3-12**	X			
25. Does the BDR include a record of analysis requested and the laboratory? **Reference Source: CCP-PO-001, Table C3-12**	X			
26. Is there a cross-reference of sampling equipment numbers with associated cleaning batch numbers in the BDR? **Reference Source: CCP-PO-001, Table C3-12**	X			
27. Is the depth of waste included for each waste container? **Reference Source: CCP-PO-001, Table C3-12**			X	Grab sampling
28. Are the calculations of core recovery included in the BDR? NA if the sampling is not a core. **Reference Source: CCP-PO-001, Table C3-12**			X	Grab sampling

Attachment 4 – CCP SPM S3000/S4000 Waste Sampling Checklist and Summary (Continued)

BDR Number: S4200-LOT-05-07	**Sampling Date: 01/31/12**			
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
29. Is the co-located core/sample description included in the BDR? **Reference Source: CCP-PO-001 Table C3-12**	X			
Comments: None.				
The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.				
Barbara Broomfield				02/20/12
SPM Printed Name	Signature			Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

Attachment 5 – CCP Solids Sampling Batch Data Report Cover Sheet

Batch Data Report No.: S4200-LOT-05-07

	Waste Container ID Number
1	ARP30100
2	
3	
4	
5	
6	
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8	
9	
10	
11	
12	N A MH 2-7-12
13	
14	
15	
16	
17	
18	
19	
20	

ITR:		
Jeffrey Poole	J.S. Poole	2-13-12
Printed Name	**Signature**	**Date**
	J.S. Poole	2-8-12
VEE:		
Brad Stack	Brad Stack	2-13-12
Printed Name	**Signature**	**Date**

Attachment 4 – CCP Solids Sampling Batch Data Report Table of Contents

Sampling Batch No.: 54200-L01-05-07 **Date:** 1-31-12

Table of Contents		
Item	Description	Page No.
1	CCP Solids Sampling Batch Data Report Cover Sheet	01
2	CCP Solids Sampling Batch Data Report Table of Contents	02
3	CCP Solids Sampling Tracking Form	03
4	CCP Solids Sampling Independent Technical Review Checklist	05
5	Copy of NCRs (N/A, if **NOT** applicable) BRS 2-8-12	~~NA~~ 06
6	Copy of Temperature Data Logger Sheets BRS 2-8-12	~~06~~ 09
7	Copy of Chain of Custody (COC) Form BRS 2-8-12	~~24~~ 27
8	Copy of Certification of cleanliness for sampling equipment BRS 2-8-12	~~28~~ 31
9	Copy of Attachment 1, the Waste Data and Approvals Sections, of CCP-TP-006 BRS 2-8-12	~~29~~ 32

10 OTHER INFORMATION 33 BRS 2-8-12

BRS 2-8-12

Attachment 1 – CCP Solids Sample Tracking Form

General Information – Complete form in indelible ink. Make correction with a single line strikeout. Initial and date changes.

1. ~~Sample~~ Sampling Location: Accelerated Retrieval Project Site MH 2-7-12
2. Sample Purpose: Support of Acceptable Knowledge
3. Sampling area within DPS is visibly clean? YES ☒
4. Sample equipment and bags are **NOT** damaged? YES ☒
5. Sampling containers are **NOT** damaged and the containers are visibly clean? YES ☒
6. Kit acceptable and ready for use? YES ☒
7. Sample date: 1-31-12
8. Co-Located Sample? Circle (Yes) or NO
9. Chain of Custody Form Number: ~~AR405781, AR405782~~, AR405781, AR405782 MH 2-8-12
10. Waste Drum Number: ARP30100
11. Sample Batch Number: S4200-LOT-05-07
12. Random Sample Number: 07 Time container opened or waste tray brought into DPS: 1401
13. Assigned Tray Quadrant: 02 Alternate Tray Quadrant: N/A
14. Sample Description:
    - ☐ Homogeneous Solids (Waste Matrix Code S3900 Waste Stream ID-SDA-Sludge)
    - ☒ Soil/Gravel (Waste Matrix Code S4200, Waste Stream ID-SDA-Soil)
15. Comments (Include sample collection problems, if any): N/A
16. One Hour sample time limit met: ☒ YES ☐ NO
17. Sampling equipment used: Stainless Steel scoop/s/a
18. Name of Solids Sampler: Print: Michael Haderlie Sign: [signature] Date: 1-31-12
19. Sample ID numbers match the information recorded on the COC Form: ☒ YES ☐ N/A ☐ NO
20. Shipping Container TID S/N: N/A
21. **Name of Solids Sampler:** Michael Haderlie (**Printed Name**) [signature] (**Signature**) 2-1-12 (**Date**)

Attachment 1 – CCP Solids Sample Tracking Form

General Information – Complete form in indelible ink. Make correction with a single line strikeout. Initial and date changes.

1. ~~Sample~~ Sampling Location: Accelerated Retrieval Project Site MH 2-7-12
2. Sample Purpose: Support of Acceptable Knowledge
3. Sampling area within DPS is visibly clean? YES ☒
4. Sample equipment and bags are **NOT** damaged? YES ☒
5. Sampling containers are **NOT** damaged and the containers are visibly clean? YES ☒
6. Kit acceptable and ready for use? YES ☒
7. Sample date: 1-31-12
8. Co-Located Sample? Circle Yes or (NO) MH 2-8-12
9. Chain of Custody Form Number: AR405781, AR405782, ~~AR405781, AR405782~~
10. Waste Drum Number: ARP30100
11. Sample Batch Number: S4200-LOT-05-07
12. Random Sample Number: 07 Time container opened or waste tray brought into DPS: 1401
13. Assigned Tray Quadrant: 02 Alternate Tray Quadrant: NA
14. Sample Description:
    - ☐ Homogeneous Solids (Waste Matrix Code S3900 Waste Stream ID-SDA-Sludge)
    - ☒ Soil/Gravel (Waste Matrix Code S4200, Waste Stream ID-SDA-Soil)
15. Comments (Include sample collection problems, if any): NA
16. One Hour sample time limit met: ☒ YES ☐ NO
17. Sampling equipment used: stainless steel scoopula
18. Name of Solids Sampler: Print: Michael Haderlie Sign: [signature] Date: 1-31-12
19. Sample ID numbers match the information recorded on the COC Form: ☒ YES ☐ N/A ☐ NO
20. Shipping Container TID S/N: NA
21. **Name of Solids Sampler:** Michael Haderlie (**Printed Name**) [signature] (**Signature**) 2-1-12 (**Date**)

Attachment 3 – CCP Solids Sampling Independent Technical Review Checklist

Batch Data Report No.: 54200-LOT-05-07

Description	YES	NO	N/A
1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods used?	X		
2. Was the correct revision of operating procedure used? Rev. 9	X		
3. Were the data reviewed for transcription errors?	X		
4. Are BDR contents and field sampling records complete and do they match the CCP Solids Sampling Batch Data Report Table of Contents (Attachment 4)?	X		
5. Does the Sample Batch Report include up to 20 samples all taken within 14 days of the first sample?	X		
6. Were the sampling equipment and sample containers (e.g., spoons, sub-samplers, vials) used for all samples in this batch cleaned (or purchased clean)?	X		
7. Was a co-located sample collected once per sampling batch or every seven days (whichever is more frequent)? (Attachment 1)	X		
8. Was the co-located sample collected from the same quadrant? (Attachment 1)	X		
9. Was a trip blank included in each sample package?	X		
10. Were samples cooled to 4° C for storage and/or were samples transported in a shipping container with frozen Blue Ice®?	X		
11. For each sample taken, were the data complete in Attachments 1 and 2 for the following?			
a. Name of sampling facility	X		
b. Waste container ID number	X		
c. Sample ID number	X		
d. Type of sample matrix (i.e., solids or soil/gravel)	X		
e. Type of sampling equipment used (e.g., scoop, chisel)	X		
f. Type of sample container used and manufacturer's lot number assigned to that container.	X		
g. Analysis requested	X		
h. QC designation, if applicable (e.g., trip blank, field duplicate [co-located])	X		
i. COC form number	X		
j. Analytical laboratory requested to do analysis	X		
k. Names, signatures, dates, times of sample handlers (from sample collection [initiation of custody] through acceptance by analytical laboratory.)	X		
l. Comments pertinent to sampling activities	X		
m. Randomly selected quadrant(s)	X		
n. Sample size [container size] Note that sample weights are included in analytical BDR	X		
12. Is all the data provided using indelible ink and by the individual(s) generating it?	X		
13. Is all data entered clearly, legibly, and accurately?	X		
14. All changes to original data lined out, initialed and dated by the individual making the changes?	X		
15. Was justification made for changing the original data?	X		
16. Were data changes made by a qualified individual?	X		
17. Individual sample VOC containers were closed within one-hour of the sample being brought into the DPS or when the liner bag of the selected drum has been breached/opened.	X		

Comments: ~~N/A~~ ESP 2-13-12
Reviewed Batch Data Report

I have reviewed 100% of the container specific and batch data in this report and find it acceptable for VEE review.

Independent Technical Reviewer:

Jeffrey Poole	J.S. Poole	2-13-12
Printed Name	Signature	2-8-12 Date

Attachment 1 – CCP Nonconformance Report (NCR)

NCR No. NCR-INL- 0335-12	Revision 0	
1. Lot No./Heat No. or Serial No. (as applicable): N/A	2. Process (e.g., NDA, HSG, NDE, VE, Other): Solid Sampling	3. Batch Data Report #(s): S4200-LOT-05-08 (ARP30103) S4200-LOT-05-07 (ARP30100)
4. Order/Work Order/Job Control Number (as applicable): N/A	5. PO # (as applicable): N/A	Container #(s): ARP30103 ARP30100
	6. Supplier (as applicable): N/A	

DESCRIPTION OF NONCONFORMANCE

7. (a) NCR Description: ☐ < 100 nCi/g ☐ Prohibited Item ☐ >500 ppmv Flamm. VOCs

☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☒ Other

7. (b) Description of Nonconformance Required Condition (Implementing Procedure, Revision, Section, & Text):

CCP-TP-008 Rev9, CCP *Solids Sampling Procedure*: Note below 2.5: **NOTE** The field sample storage refrigerator has a temperature range of approximately ± 2 °C. The refrigerator temperature is monitored using a data logger calibrated per INL Measuring and Test Equipment (M&TE) program and 2.5.1 Samples will be cooled to 4 °C. Samples are to be transported in a shipping container packed with frozen Blue Ice® packs.

7. (c) Actual Condition:

After reviewing the temperature data logger information it was discovered that on 02/01/12 at 0450 a temperature changed occurred from 2.4 °C to -17.8 °C this variance lasted until 0552 when the temperature adjusted back to 2.6 °C. Solid samples were secure in the field refrigerator at the time of the temperature variance.

8. NCR Originator (Print name, sign, and date)	9. CCP QA Engineer or Designee Validation (Print name, sign, and date)
Jeff Poole J.S. Poole 2-7-12	RACHEL YOUNG Rachel Young 2/7/12

9a. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE
If YES or INDETERMINATE, then apply Trend Code L in Block 12.

9b. Have the CCP HOLD TAGS associated with the NCR been applied? ☐ YES ☒ NO If no is marked, provide an explanation. The samples have been sent to the lab for analysis and are inaccessible to apply hold tags.

10. Significant Condition? (If Yes, List CAR) ☐ YES ☒ NO	11. Recurring Condition? ☐ YES ☒ NO (If YES, List NCRs/CARs)
12. Trend Code: K	13. Responsible Manager: Charlie Turner

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Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-INL- 0335-12	Revision 0
INTERIM DISPOSITION	
14. Interim Disposition (Check One) ☒ N/A (See Final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort ☐ Reinspect/Retest ☐ Remediate (a) Instructions for Completion of the Interim Disposition:	
INTERIM DISPOSITION APPROVALS	
15 .Responsible Manager/Individual (Print, sign, and date)	16. CCP QA Engineer or Designee (Print, sign and date)
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
COMPLETION OF INTERIM DISPOSITION	
17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date)	
18. Interim Disposition Verified CCP QA Engineer: (Print, sign and date)	

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Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No.NCR-INL-0335-12 Revision 0	
FINAL DISPOSITION	
19. Final Disposition (Check One) X Use-As-Is ☐ Reject ☐ Repair ☐ Rework ☐ Scrap (a) Technical Justification (Required for Use-As-Is and Repair dispositions, N/A for Reject, Scrap, or Rework dispositions.) For the refrigerator to drop from 2.4 °C to -17.8 °C and back to 2.6 °C in about one hour seems physically unlikely and was probably to do a datalogger glitch. One of the main reasons for keeping the samples at 4 ± 2 °C is to reduce sample degradation. At temperature below 4 ± 2 °C degradation is even more unlikely. Finally the samples are in sealed container so loss of sample through evaporation/volatilization is not possible. Therefore the samples are acceptable to use-as-is.	
(b) Disposition Instructions (Required for Reject and Scrap, N/A for Use-As-Is, Rework, and Repair) NA	
(c) Instructions for Completion of the Final Disposition, including Inspection Criteria (Required for Repair and Rework, N/A for Use-As-Is, Reject and Scrap) NA	
(d) Corrective Actions (Actions to Prevent Recurrence) - as required, N/A if left blank. NA	
FINAL DISPOSITION APPROVALS	
20. Responsible Manager/Individual: (Print, sign, and date) Charles Turner 2-7-~~2017~~ 2012 2/7/12	21. CCP QA Engineer or Designee: (Print, sign, and date) RACHEL YOUNG 2/7/2012
Additional Approvals: (Print, sign, and date)	Additional Approvals: (Print, sign, and date)
CLOSURE	
22. Final Disposition Complete Responsible Manager/Individual: (Print, sign, and date) Charles Turner 2-7-2012	
23. Attachments:	
24. (a) HOLD TAG removal has been validated and reconciled for all nonconforming items on the NCR. ☐ (b) Check if not applicable (N/A) and provide an explanation here or on a continuation sheet. ☐	
25. Final Disposition Verified – NCR Closed	CCP QA Engineer: (Print, sign, and date)

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~~0007~~ BRB 2-8-12

0008

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~~006~~ BRS
0009 ~~0008~~ 2-8-12

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~~009~~ BES 2-8-12

~~0011~~ BES 2-8-12

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~~017~~ BRS 2-8-12

~~0019~~ BRS 2-8-12

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~~018~~ BRB 2-8-12

~~0020~~ BRB 2-8-12

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"2/1/2012 6:54:20 AM",8.9,2.5,10622
"2/1/2012 6:56:20 AM",8.9,2.6,10623
"2/1/2012 6:58:20 AM",8.9,2.6,10624
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~~019~~ BPS 2-8-12

0022 ~~0021~~ BPS 2-8-12

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"2/1/2012 8:28:20 AM",9.8,2.6,10669
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"2/1/2012 8:36:20 AM",10.0,2.4,10673
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"2/1/2012 8:48:20 AM",10.2,2.5,10679
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"2/1/2012 8:58:20 AM",10.4,2.6,10684
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"2/1/2012 9:06:20 AM",10.6,2.5,10688
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~~020~~ BRS 2-8-12

0023 ~~0022~~ BRS 2-8-12

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0024 ~~021~~ BRS 2-8-12

~~0023~~ BRS 2-8-12

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"2/1/2012 12:28:20 PM",13.6,2.8,10789
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"2/1/2012 12:40:20 PM",13.6,2.7,10795
"2/1/2012 12:42:20 PM",13.7,2.8,10796
"2/1/2012 12:44:20 PM",13.7,2.8,10797
"2/1/2012 12:46:20 PM",13.7,2.9,10798

~~0023~~ BRB 2-8-12
~~0025~~ BRB 2-8-12

Accelerated Retrieval Project Chain of Custody

COC No. **AR4057R1**

Sampling Location: **RWMC AR** Lab: ~~INEEL-INTEC~~ INL-RWMC MH 1-31-12 Type Sample: **Regular** DDTC #: NA

Sample Matrix: **SOLID** ☐ Homogeneous Solid ☒ Soil/Gravel Sampling Batch No.: S4200-LOT-05-07

Sampler(s): Michael Haderlie (Printed) (Signature) 1-31-12 (Date)

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No.	Sample Analysis	Comments	Disposition*
AR405701V1	1-31-12	~~1400~~ 1410	1 x 20	007630	VOC Sample		
AR405701V2	1-31-12	1411	1 x 20	007630	VOC Spare		
AR4057T1V1	1-31-12	1411	1 x 20	007630	VOC Trip Blank Sample		
AR4057T1V2	1-31-12	1408	1 x 20	007630	VOC Trip Blank Spare		
AR405701N1	1-31-12	1413	1 x 20	007630	NHVOC Sample		
AR405701N2	1-31-12	1414	1 x 20	007630	NHVOC Spare		
AR4057T1N1	1-31-12	1414	1 x 20	007630	NHVOC Trip Blank Sample		
AR4057T1N2	1-31-12	1408	1 x 20	007630	NHVOC Trip Blank Spare		

NOTE: For preservation, all samples were stored at a controlled temperature of 4 degrees C, then packed with chemical ice for shipment.

Samples Relinquished by (Signature):	Date	Time	Samples Received by (Signature):	Date	Time
	2-1-12	1247		2-01-12	12 47

Comments: * Disposition fields are completed by the laboratory.

One hour time limit met. MH 1-31-12

ARP30100 MH 1-31-12

All sample analyses are complete and all samples have been removed from custody control and have been dispositioned

Signature Date

~~024~~ BKS 2-8-12

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0027 ~~0026~~ 2-8-12 BKS

Accelerated Retrieval Project Chain of Custody

COC No. **AR4057R2**

Sampling Location: **RWMC AR** Lab: ~~INEEL-INTEC~~ INL-RWMC MH 1-31-12 Type Sample: **Regular** DDTC #: NA

Sample Matrix: **SOLID** ☐ Homogeneous Solid ☒ Soil/Gravel Sampling Batch No.: S4200-LOT-05-07

Sampler(s): Michael Haderlie (Printed) (Signature) 1-31-12 (Date)

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No.	Sample Analysis	Comments	Disposition*
AR405701MS	1-31-12	1426	1 x 250	003253	Metals and SVOC		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		

NOTE: For preservation, all samples were stored at a controlled temperature of 4 degrees C, then packed with chemical ice for shipment.

Samples Relinquished by (Signature):	Date	Time	Samples Received by (Signature):	Date	Time
	2-1-12	1247		2-01-12	1247

Comments: * Disposition fields are completed by the laboratory.

one hour time limit met. MH 1-31-12

ARP 30100 MW 1-31-12

All sample analyses are complete and all samples have been removed from custody control and have been dispositioned

~~025~~ BRS 2-8-12 Signature Date

0028 0027 MH 2-8-12

Accelerated Retrieval Project Chain of Custody

COC No. **AR4057C1**

Sampling Location: **RWMC AR** Lab: ~~INEEL-INTEC~~ INL-RWMC MH 1-31-12 Type Sample: **Co-located** DDTC #: NA

Sample Matrix: **SOLID** ☐ Homogeneous Solid ☒ Soil/Gravel Sampling Batch No.: S4200-COT-05-07

Sampler(s): Michael Haderlie (Printed) _____ (Signature) 1-31-12 (Date)

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No.	Sample Analysis	Comments	Disposition*
AR405702V1	1-31-12	1416	1 x 20	007630	VOC Sample		
AR405702V2	1-31-12	1417	1 x 20	007630	VOC Spare		
AR405702V3	1-31-12	1421	1 x 20	007630	VOC MS		
AR405702V4	1-31-12	1422	1 x 20	007630	VOC MSD		
AR4057T2V1	1-31-12	1417	1 x 20	007630	VOC Trip Blank Sample		
AR4057T2V2	1-31-12	1422	1 x 20	007630	VOC Trip Blank Spare		
N/A			N/A		N/A		
N/A			N/A		N/A		

NOTE: For preservation, all samples were stored at a controlled temperature of 4 degrees C, then packed with chemical ice for shipment.

Samples Relinquished by (Signature):	Date	Time	Samples Received by (Signature):	Date	Time
_____	2-1-12	1247	_____	2-01-12	1247

Comments: * Disposition fields are completed by the laboratory.

one hour time limit met. MH 1-31-12

ARP 30100. MH 1-31-12

All sample analyses are complete and all samples have been removed from custody control and have been dispositioned

~~026~~ BRS 2-8-12 (Signature) (Date)

0029 ~~0028~~ 2-8-12 BRS

Accelerated Retrieval Project Chain of Custody

COC No. **AR4057C2**

Sampling Location: **RWMC AR** Lab: ~~INEEL-INTEC~~ INL- RWMC MH 1-31-12 Type Sample: **Co-located** DDTC #: NA

Sample Matrix: **SOLID** ☐ Homogeneous Solid ☒ Soil/Gravel Sampling Batch No.: S4200-LOT-05-07

Sampler(s): Michael Haderlie (Printed) _____ (Signature) 1-31-12 (Date)

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No.	Sample Analysis	Comments	Disposition*
AR405702N1	1-31-12	1418	1 x 20	007630	NHVOC Sample		
AR405702N2	1-31-12	1419	1 x 20	007630	NHVOC Spare		
AR405702N3	1-31-12	1434	1 x 20	007630	NHVOC MS		
AR405702N4	1-31-12	1434	1 x 20	007630	NHVOC MSD		
AR4057T2N1	1-31-12	1419	1 x 20	007630	NHVOC Trip Blank Sample		
AR4057T2N2	1-31-12	1425	1 x 20	007630	NHVOC Trip Blank Spare		
AR405702MS	1-31-12	1427	1 x 250	003253	Metals and SVOC		
N/A			N/A		N/A		

NOTE: For preservation, all samples were stored at a controlled temperature of 4 degrees C, then packed with chemical ice for shipment.

Samples Relinquished by (Signature):	Date	Time	Samples Received by (Signature):	Date	Time
	2-1-12	1247		2-01-12	1247

Comments: * Disposition fields are completed by the laboratory.

one hour time limit met. MH 1-31-12

ARP30100. MH 1-31-12

All sample analyses are complete and all samples have been removed from custody control and have been dispositioned

~~027~~ RPS 2-8-12 _____ (Signature) _____ (Date)

~~0028~~ ~~0029~~ 0030 2-8-12 ~~0028~~ 2-8-12

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
155 McCutcheon, Suite H El Paso, Texas 79932 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Certificate of Conformance

Date of shipment: January 24, 2005

TraceAnalysis, Inc. certifies that the apparatus cleaned under the following lot numbers on December 12, 2004 and December 29, 2004 meet or exceed the requirements given by Waste Isolation Pilot Plant, Hazardous Waste Permit and ASME-NQA-1-1989. Furthermore, this stipulates that the analytical results are less than three times the detection limits as per the purchase order. These tests were performed under purchase order 403388.

Lot Number	Quantity(Lot)	Quantity(Shipped)	Description
41212-001	140	106	Spoons
41212-002	140	106	Scoopulas
41212-003	50	36	Tongs
41212-04	13	4	Chisels
41229-001	107	107	Chisels

Two of the tongs lot number 41212-03 and four of the chisels lot number 41212-04 were repackaged due to an issuficient seal from the prior shipment. The technical requirements have been met in accordance with TraceAnalysis, Inc. QAPP.

Michael T. Abel

~~0028~~ BLS 2-8-12

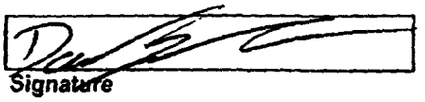
0031

~~0030~~ BLS 2-8-12

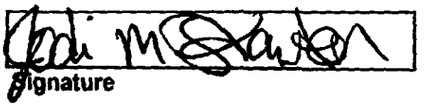
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP30100	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	30.3
31. Total volume of Solidified Organics (L):	0.0
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	66.3
a. Total volume (L):	96.6
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	
c. Soil (S4200):	X
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	0.0%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	N/A

Section 6: Approvals

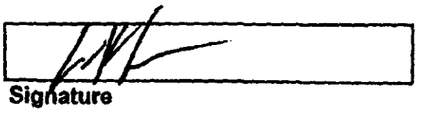
Visual Examination Operator 1:

D. JACKMAN		1-31-12
Enter Name	Signature	Date

Visual Examination Operator 2:

J. STANTON		1/31/12
Enter Name	Signature	Date

Visual Examination Expert:

L. GROVER		1-31-12
Enter Name	Signature	Date

0032 ~~016~~
95P 95P
2-13-12 2-13-12

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP30100	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	30.3
31. Total volume of Solidified Organics (L):	0.0
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	66.3
a. Total volume (L):	96.6
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	
c. Soil (S4200):	X
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	0.0%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	N/A

Section 6: Approvals

Visual Examination Operator 1:		
D. JACKMAN		
Enter Name	Signature	Date
Visual Examination Operator 2:		
J. STANTON		
Enter Name	Signature	Date
Visual Examination Expert:		
L. GROVER		
Enter Name	Signature	Date

GSP 2-13-12

SUPERCEDED
GSP 2-13-12

~~029~~ RLS 2-8-12
0032A
GSP 2-13-12 ~~0031~~ RLS 2-8-12

From: Gatliffe, Tom - WTS [Tom.Gatliffe@wipp.ws]
Sent: Wednesday, January 18, 2012 11:47 AM
To: Poole, Jeffrey S
Cc: Vernon, Jim - WTS; Turner, Charles - WTS; Broomfield, Barbara - INL; Verlanic, Bill; Pearcy, Mark - WTS
Subject: ID-SDA-SOIL RS Lot 5 Sample Quadrant Assignments

Jeff,

Because none of the containers to be sampled are in the first 10 slots in the Random Selection (RS) Lot, the tray quadrant assigned for sampling should be determined from Table 1 in CCP-TP-008 by entering with the table "Random Sample Number" that corresponds to the final digit in the container's RS order number on the RS listing.

Specifically, for the containers in your list, the following tray quadrants from the "Random Sample Lot 5" section of Table 1 should be used:

Container ID	RS Order Number	Table 1 "Random Sample Number"	Table 1 Assigned Tray Quadrant
ARP24217	17	7	2
ARP23897	13	3	3
ARP26744	18	8	1
ARP26887	16	6	1
ARP27237	20	10	3

A copy of this email should be included in the associated solid sampling BDR(s) for use as needed in reviews.

Tom Gatliffe
Principal Engineer, CCP/RCT WIPP Carlsbad
Washington TRU Solutions LLC
Contractor to the Department of Energy
(575) 234-7563 (office) (575) 302-3232 (cell)

From: Poole, Jeffrey
Sent: Wednesday, January 18, 2012 10:13 AM
To: Gatliffe, Tom - WTS
Subject: sample info

Tom, here's the information you requested; these are the drums CWI intends to sample thanks Jeff.

Barcode	VE/Pack Date	Org Conc	Percent Full	IWTS Gross LBS	IWTS Net LBS	IWTS Gross KGS	IWTS Net KGS	TRU nCi/g
ARP24217	11/8/2010	0.0%	100%	297.6	222.7	135.0	101.0	5778.10
ARP23897	10/18/2010	0.0%	80%	361.6	286.6	164.0	130.0	4211.80
ARP26744	4/26/2011	0.0%	95%	388.5	313.5	176.2	142.2	2665.80
ARP26887	4/25/2011	0.0%	90%	310.9	235.9	141.0	107.0	1057.10
ARP27237	5/18/2011	19.8%	95%	464.7	389.8	210.8	176.8	680.04

Thank You
Jeffrey Poole
CCP/Visual Examination Expert
Retrieval Characterization & Transportation
URS Washington TRU Solutions LLC.
Contractor for the U.S. Department of Energy
Office : 208-533-0692
Cell : 208-569-0758

0033

~~**0032**~~ BRP 2-8-12

01-31-12 OPERATIONAL CCP AT INL

0630LG PREJOB BRIEF AT 610 WITH B. VERLANIC. DISCUSSED SAFETY, COBRA, AND PERFORMING SOLID SAMPLE TODAY. ALSO DISCUSSED TRAINING AND QUALS DUE.

0740LG PREJOB BRIEF AT ARP TRAILER FROM B. STARK. DISCUSSED SAFETY, COBRA AND SOLID SAMPLE THAT IS BEING PREFORMED TODAY.

0800LG CONFIRMED ON THE SFTP SITE THAT CCP-TP-006 Rev16, CCP-TP-008 Rev9, AND CCP-TP-068 Rev 8 ARE THE CURRENT WORKING PROCEDURES. SOFTWARE WASTE_VE_Technique.xls Revision 14 Add4 MATches the SIL 798 AND is Downloaded to LAptops in the Airlock. The LOQI is 01-30-12 AND is Posted. All Personel PERFORMING WORK ARE Listed trained AND QUALIFIED to PERFORM WORK.

1000LG ENTERED WORKING AREA IN AIRLOCK 3. PERFORMED SAFETY WALK DOWN. All is SAT. SET UP FOR SOLID SAMPLE. WAITING FOR OPERATIONS

1211LG BEGIN OPERATIONS. SAMPLE TRAY ENTERED DPS 10. SAMPLE is pulled FROM DRUM ARP26744 AND PLACED into DRUM ARP30103 SAMPLE #~~7~~ 8 LG 1-31-12

1250LG SAMPLE #~~7~~ 8 ~~Reached~~ LG 1-31-12 LG 1-31-12 WAS FINISHED in the ONE hour time FRAME.

1400LG SAMPLE #7 is brought IN to DPS 8. this SAMPLE comes FROM DRUM 24217 AND will be PLACED into DRUM ARP 30100

~~0033~~ 0034

BRB 2-8-12

[redacted]

continue 1-31-12 operation CCP at INL

1430 LG | one hour time frame was met on sample #7.

1520 LG | Finished with VE operations. Finished 2 drums on BDR 2704. Both drums were sampled. J. Stanton and D. Jackman performed the VE. M. Haderlie and B. Stark performed the solid sample. B. Stark performed OST for L. Verlanic on solid sample.

1530 LG | Crew left airlock to finish paper work in VE trailer.

1550 LG | Post Job brief, no issues or concerns. EST Meeting

1630 LG | No further posts for this date

N LG 1-31-12

A

0035

~~0034~~

BRS 2-8-12

Operational 2-1-12 CCP at INL

pk 0630 QSP WMF 610 with Bill, NO ISSUES for ARP VE Continue with Solid Sampling.

L 0710 QSP Confirmed on the SSEP site CCP-TP-006 Rev 16 CCP-TP-008 Rev 9 and CCP-TP-068 Rev 8 are the were current working procedures. Software Waste-VE. Technique s/s version 14, Addendum 4 matches the SSL .STARK #798 and is downloaded to the laptops in Airlock 3. The erformed Logs 1-30-12 is current and Posted all Personnel in Performing CCP activities are verified listed.

0815 QSP CCP Personnel Standing by Airlock 3,

EST 0925 LG Begin VE operations in Airlock 3. Performed safety walk down of facility. All is SAT. Performing RANDOM SAMPLE #3. This sample was pulled from DRUM ARP23897 and will be placed in DRUM ARP30018. Pulled TRAY into DPS unit 8.

0945 LG One hour time limit was met on RANDOM SAMPLE #3.

1045 LG DRUM is Finished. Finished with VE operations in Airlock 3 Due to operations training. B. STARK AND M. HADERLIE performed SAMPLE. B. STARK performed OJT FOR L. VERLANIC. D JACKMAN and J. STANTON performed VE. Also taking samples to FRIDGE. 0036

1235 LG J. POOLE, M. HADERLIE, and L. VERLANIC take ~~0035~~ BDR 2-1-12 RANDOM samples 8, 7, and 3 FROM FRIDGE

[redacted]

CONTINUED 2-1-12 OPERATIONAL CCP AT INL
to LAb. Received TRANSPORTATION FROM CWI
operator M LARSEN FROM VE TRAILER to TRAILER
14.

1300 LG PERSONEL ARE Reviewing PROCEDURES, catching up
ON TRAINING. J. POOLE, M. HADERLIE, AND L. VERLANIC
RETURNED FROM TAKING SAMPLES to LAb.

1640 LG Post brief Given by J. Poole. NO issues OR
CONCERNS. NO FURTHER ENTRIES FOR this DATE.

N LG 2-1-12
A

2-2-12 OPERATIONAL CCP AT INL

CWI trailer — 0630 LG POD At 610 with B. VERIANC. DISCUSSED SAMPLE EVOLUTION, SAFETY, AND COBR. SAMPLES ARE being PERFORMED ON ~~to~~ LG 2-2-12 Newly GENERATED WASTE.

ring up IANIC — 0730 LG POD AT VE TRAILER with J. Poole. Discussed sample EVOLUTION AND PREPARATIONS NEEDED. Discussed SAFety and COBRA.

OR DATE. — 0745 LG PRE JOB With CWI OPERATIONS

0755 LG CONFIRMED ON SFTP site CCP-TP-006 Rev 16, CCP-TP-008 Rev 9 and CCP-TP-068 Rev 8 are the CURRENT WORKING PROCEDURES. Software WASTE_VE_Technique.xls Revision 14 Addendum 4 matches the SIL 798 AND is DOWNLOADED to LAPTOPS IN AIRLOCK 3. The LOQI is 2-1-12 AND is POSTED. All PERSONEL PERFORMING WORK ARE Listed TRAINED AND QUALIFIED to PERFORM WORK.

0810 LG ENTERED AIRLOCK 3 to PERFORM VE AND SAMPLE. PERFORMED SAFety WALKdown. All is SAT. CCP PERSONEL ARE STAGED AND WAITING FOR CWI OPERATIONS to begin. TRAYS ARE staged AT END OF DPS, but WAITING for OPERATIONS to LEAVE RETRIEVAL AREA.

0857 LG READY to perform WASTE HANDELING IN AIRLOCK 3. PULLED RANDOM SAMPLE #6 INTO DPS #10, AND begin time Limit ON SAMPLE. M. HADERLIE, AND B. STARK Will PERFORM SAMPLE. B. STARK is TRAINING L. VERIANIC. SAMPLE COMES FROM DRUM ARP26887

[redacted]

B25 2-8-12

CONTINUED 2-2-12 OPERATIONAL CCP AT INL
AND will be placed into DRUM ARP30081.

0917 LG Notified by M. HADERlie that the 1hour time FRAME WAS met.

0930 LG J. STANTON AND D. JACKMAN begin VE ON TRAY

1010 LG Closed DRUM ARP30081

1015 LG BROught TRAY into DPS B FOR Next SAMPLE to begin This RANDOM SAMPLE # 10. This SAMPLE is pulled FROM Newly GENERATED WASTE DRUM ARP27237. Is being placed into DRUM ARP 30014.

1030 LG Notified by B. STARIC AND L. VERIANIC that the SAMPLE WAS completed in the one hour time FRAME.

1037 LG J. STANTON and D. JACKMAN perform VE ON TRAY

1113 LG DRUM ARP30014 is closed, SAMPLE complete, AND VE complete.

1130 LG B. STARK, M. HADERlie, and L. VERIANIC take samples to LAB IN TRAILER 14 with TRANSPORTATION FROM CWI PERSONEL.

1300 LG CREW IN TRAILER Reviewing PROCEDURES AND TRAINING.

1640 LG Post JOB BRIEF GIVEN, NO ISSUES OR CONCERNS. NO FURTHER posts FOR this DATE.

NLG 2-2-12

A

0039 ~~0038~~
BEJ 2-3-12

Attachment 7 – CCP SPM S3000/S4000 Total Volatile Organic Compound Analysis Project Level Validation Checklist and Summary

BDR Number: ALD12005V				Analysis Date: 2/14/12, 2/20/12, 2/23/12, 2/28/12
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
1. Does the Batch Data Report (BDR) contain the batch number, laboratory name, and the date of the batch report? **Reference Source: CCP-PO-001, Table C3-13**	X			
2. Has a BDR Narrative been included in the BDR? **Reference Source: CCP-PO-001, Table C3-13**	X			
3. Is there a cross-reference between waste container number, field sample number, and lab sample number ID; and signature release by lab personnel in the BDR? **Reference Source: CCP-PO-001, Table C3-13**	X			
4. Is the BDR complete? **Reference Source: CCP-PO-001 C3-10b**	X			
5. List all containers that have met QAOs. **Reference Source: CCP-PO-001, C3-10b**				Container Numbers: ARP30100 ARP30103 ARP30018 ARP30081 ARP30014
6. Are there 20 or less samples per analytical batch? **Reference Source: CCP-PO-001, C3-10**	X			
7. Is there a reference to or copy of any associated NCRs (if any) in the BDR? NA if no NCRs associated with the BDR. **Reference Source: CCP-PO-001, Table C3-13**			X	None generated.
8. Does the BDR contain a complete and signed copy of the COC form? **Reference Source: CCP-PO-001, Table C3-13**	X			
9. Does the BDR include the date and time of analysis for each sample? **Reference Source: CCP-PO-001, Table C3-13**	X			
10. Are the training qualifications for all personnel acceptable? **CCP-PO-001, Table C3-13**	X			
11. Are holding times between collection and extraction within the 14-day requirement? **Reference Source: CCP-PO-001, Table C1-4**	X			
12. Have QC designations for samples been applied as appropriate? **Reference Source: CCP-PO-001, Table C3-13**	X			

CCP RECORDS ORIGINAL
DATE REC'D 3-26-12

Attachment 7 – CCP SPM S3000/S4000 Total Volatile Organic Compound Analysis
Project Level Validation Checklist and Summary (Continued)

BDR Number: ALD12005V				Analysis Date: 2/14/12, 2/20/12, 2/23/12, 2/28/12
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
13. Is there a minimum of one laboratory control sample (LCS) analyzed per analytical batch? **Reference Source: CCP-PO-001, Table C3-5**	X			
14. Are the percent recoveries (%Rs) for all LCS analytes within the acceptable range? **Reference Source: CCP-PO-001, Table C3-4**	X			
15. Is a minimum of one matrix spike (MS) analyzed per analytical batch? **Reference Source: CCP-PO-001, Table C3-5**	X			
16. Are the %Rs for all MS compounds within the acceptable range? **Reference Source: CCP-PO-001, Table C3-4**	X			Exception: Trichloroethene did not meet acceptance criteria; results flagged Z.
17. Is a minimum of one matrix spike duplicate (MSD) analyzed per analytical batch? Note: The MSD is used in place of the laboratory duplicate. **Reference Source: CCP-PO-001, Table C3-5**	X			
18. Are the %Rs for all MSD compounds within the acceptable range? Note: The MSD is used in place of the laboratory duplicate **Reference Source: CCP-PO-001, Table C3-4**	X			
19. Do the MS/MSD relative percent differences (RPDs) for all analytes meet the requirements? **Reference Source: CCP-PO-001, Table C3-4**	X			
19. Has the CCP Site Project Manager calculated and reported the results of the RPD and F-Test Method? **Reference Source: CCP-PO-001, Section C3-3**	X			CCP interoffice correspondence CP:12:01131 UFC: 5900.00
20. Were the applicable RPD or F-test method acceptance criteria met? **Reference Source: CCP-PO-001, Section C3-3**	X			F-test not performed.
21. Is a minimum of one trip blank analyzed per analytical batch? **Reference Source: EPA Method SW-846 8260**	X			

Attachment 7 – CCP SPM S3000/S4000 Total Volatile Organic Compound Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: ALD12005V				Analysis Date: 2/14/12, 2/20/12, 2/23/12, 2/28/12
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
22. Are the results of the trip blank ≤3 times the program-required MDL? **Reference Source: EPA Method SW-846 8260**	X			
23. Is there a minimum of one lab blank analyzed per analytical batch? **Reference Source: CCP-PO-001, Table C3-5**	X			
24. Are all lab blank compounds ≤3 times the program-required MDL? **Reference Source: CCP-PO-001, Table C3-5**	X			
25. Are the analytical samples spiked with surrogate matrix compounds (SMCs)? **Reference Source: CCP-PO-001, Table C3-5**	X			
26. Are the SMCs %R values within specified criteria? **Reference Source: CCP-PO-001, Table C3-5**	X			Exception: Surrogates of two diluted samples were diluted out.
27. Is the five-point (minimum) initial calibration complete? **Reference Source: CCP-PO-001, Table C3-5**	X			
28. Is the $r^2 \geq 0.990$? **Reference Source: CCP-PO-001, Table C3-5**			X	Not required.
29. Are the percent relative standard deviations (%RSDs) for all target analytes calibration check compounds (CCCs) less than or equal to 30%? **Reference Source: CCP-PO-001, Table C3-5**	X			
30. Are the relative response factors for all target analytes System Performance Check Compounds (SPCCs) OK? Chloromethane: ≥ 0.10 1,1-Dichloroethane: ≥ 0.10 Bromoform: ≥ 0.10 Chlorobenzene: ≥ 0.30 1, 1, 2, 2-Tetrachloroethane: ≥ 0.30 SW-846 Method 8260B, Section 7.3.5.4 **Reference Source: CCP-PO-001, Table C3-5**	X			
31. If %RSD is less than or equal to 15, is average relative response factor used? **Reference Source: CCP-PO-001, Table C3-5**	X			

Attachment 7 – CCP SPM S3000/S4000 Total Volatile Organic Compound Analysis
Project Level Validation Checklist and Summary (Continued)

BDR Number: ALD12005V				Analysis Date: 2/14/12, 2/20/12, 2/23/12, 2/28/12
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
32. If %RSD is greater than 15, is regression equation generated and used? **Reference Source: CCP-PO-001, Table C3-5**			X	%RSD is < 15 for all compounds.
33. Is RRF for all non-SPCCs ≥0.01? **Reference Source: CCP-PO-001, Table C3-5**	X			
34. Were the Bromofluorobenzene (BFB) ion abundance criteria satisfied? **Reference Source: CCP-PO-001, Table C3-5**	X			
35. Is the BFB Tune performed at the beginning of the run before the QC samples? **Reference Source: CCP-PO-001, Table C3-5**	X			
36. Is BFB Tune performed at a minimum frequency of every 12 hours of operation? **Reference Source: CCP-PO-001, Table C3-5**	X			
37. Is continuing calibration performed at a minimum frequency of every 12 hours of operation? **Reference Source: CCP-PO-001, Table C3-5**	X			
38. Are the %Ds less than or equal to 20% for target analytes CCCs? **Reference Source: CCP-PO-001, Table C3-5**	X			
39. Is the retention time (RT) for internal standards ±30 seconds from last daily calibration check? **Reference Source: CCP-PO-001, Table C3-5**	X			
40. Is internal standard area count >50% and <200% of the last daily calibration? **Reference Source: CCP-PO-001, Table C3-5**	X			
41. For GC/FID, are the RTs for the continuing calibrations ±3 standard deviations from the initial calibration per applicable SW-846 method? **Reference Source: CCP-PO-001, Table C3-5**			X	Not GC/FID

Attachment 7 – CCP SPM S3000/S4000 Total Volatile Organic Compound Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: ALD12005V				Analysis Date: 2/14/12, 2/20/12, 2/23/12, 2/28/12
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
42. Does the BDR include MDLs (mg/kg) that are ≤PRQL in Table C3-4? **Reference Source: CCP-PO-001, Table C3-4**	X			
43. Are analytical procedures (including data revision) used to develop the data referenced in the BDR? **Reference Source: CCP-PO-001, C3-10**	X			
44. Does the BDR include the operator's signature and analysis date? **Reference Source: CCP-PO-001, Table C3-13**	X			
45. Are data reporting forms complete with data reported properly (i.e., data is reported in correct units, with correct significant figures, and with correct qualifying flags)? **Reference Source: CCP-PO-001, C3-10b**	X			
46. Have data reporting flags been assigned properly? **Reference Source: CCP-PO-001, C3-10b**	X			
47. Have the batch samples been properly preserved (cool to 4°C, ± 2° C)? **Reference Source: CCP-PO-001, Table C1-4**	X			
48. Is the completed, signed, and dated Independent Technical Reviewer Checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, Table C3-13**	X			
49. Does the BDR contain at least one calibration standard ≤ PRQL? **Reference Source: CCP-PO-001, C3-6**	X			
50. Has the laboratory successfully participated in the PDP? **Reference Source: CCP-PO-001, C3-6**	X			
51. Does the laboratory use traceable standards? **Reference Source: CCP-PO-001, C3-6**	X			
52. Has the laboratory had acceptable demonstration of precision, accuracy, and MDLs [method performance samples] performed within the last 6 months? **Reference Source: CCP-PO-001, Table C3-5**	X			

Attachment 7 – CCP SPM S3000/S4000 Total Volatile Organic Compound Analysis
Project Level Validation Checklist and Summary (Continued)

BDR Number: ALD12005V				**Analysis Date: 2/14/12, 2/20/12, 2/23/12, 2/28/12**
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
53. Has the laboratory met the 90% completeness requirement? **Reference Source: CCP-PO-001, Table C3-4**	X			
54. Has the laboratory met the 90% completeness requirement? **Reference Source: CCP-PO-001, Table C3-4**	X			
Comments: None.				
The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.				
Barbara Broomfield				03/22/12
SPM Printed Name	Signature			Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

AMWTP
Advanced Mixed Waste Treatment Project
Idaho Treatment Group

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory

Central Characterization Project

RCRA Analysis Data Report

Batch Data Report Number:	ALD12005V	Analytical Method:	CCP-TP-184
Revision Number:	0	Analyte(s):	VOCs
Change Number:	1		

Issue Date: 03/21/12

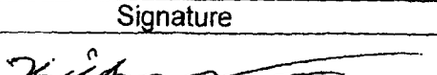
Waste Generator Site: CCP-INL

Summary: This data report contains analysis results for 10 samples and 10 trip blanks from Sampling Batches S4200-LOT-05-07, S4200-LOT-05-08, S4200-LOT-05-03, S4200-LOT-05-10 and S4200-LOT-05-06. Change Number 1 corrects a typographical error in the data report narrative and updates the ITR checklist to reflect review of the change.

Report Content:

Section	Content	Pages
1	Sample Identification Table	0002 – 0004
2	Sample Custody Documents	0005 – 0027
3	Analysis Results	0028 – 0072
4	Batch QC Sample Results	0073 – 0093
5	Instrument QC Data	0094 – 0117
6	Data Review Checklists	0118 – 0123

Laboratory Release Authorization:

Independent Technical Reviewer	Signature	Date
Bill Strong		3-21-12

AMWTP
Advanced Mixed Waste Treatment Project
Idaho Treatment Group

SUPERSEDED

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory

Central Characterization Project

RCRA Analysis Data Report

Batch Data Report Number: ALD12005V
Revision Number: 0
Change Number: 0

Analytical Method: CCP-TP-184
Analyte(s): VOCs

Issue Date: 03/12/12

Waste Generator Site: CCP-INL

3-21-12

Summary: This data report contains analysis results for 10 samples and 10 trip blanks from Sampling Batches S4200-LOT-05-07, S4200-LOT-05-08, S4200-LOT-05-03, S4200-LOT-05-10 and S4200-LOT-05-06.

Report Content:

Section	Content	Pages
1	Sample Identification Table	0002 – 0004
2	Sample Custody Documents	0005 – 0027
3	Analysis Results	0028 – 0072
4	Batch QC Sample Results	0073 – 0093
5	Instrument QC Data	0094 – 0117
6	Data Review Checklists	0118 – 0123

Laboratory Release Authorization:

Independent Technical Reviewer	Signature	Date
Bill Strong		3-12-12

CCP RECORDS ORIGINAL
DATE REC'D 3/13/2012

Section 1

Sample Identification Table

TOTAL VOC ANALYSIS
SAMPLE CROSS-REFERENCE TABLE

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Preparation Method: CCP-TP-184-R0 Data Report Number: ALD12005V

Analytical Method: CCP-TP-184-R0 Analytical Batch ID: 1202011

Field Sample ID	Lab Sample ID
NA	MBV021412A
AR405702V3MS	2BZ01MS
AR405702V4MSD	2BZ01MSD
AR405801V1	2BZ06
AR405802V1	2BZ11
AR406001V1	2BZ16
AR406002V1	2BZ21
AR405001V1	2BZ26
AR405002V1	2BZ31
NA	MBV022012A
AR405002V1DL50	2BZ31DL50
AR405901V1RA	2BZ36RA
AR405902V1RA	2BZ41RA
AR405001V1DL80	2BZ26DL80
NA	LBV020512A
NA	LCSV1202011A
AR4057T1V1	2BY96
AR4058T1V1	2BZ07
AR4058T2V1	2BZ12
AR4060T1V1	2BZ17
AR4050T1V1	2BZ27
AR4059T1V1	2BZ37
AR4057T2V1	2BZ02
NA	MBV022812A
AR4060T2V1	2BZ22

TOTAL VOC ANALYSIS
SAMPLE CROSS-REFERENCE TABLE

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Preparation Method: CCP-TP-184-R0 Data Report Number: ALD12005V

Analytical Method: CCP-TP-184-R0 Analytical Batch ID: 1202011

Field Sample ID	Lab Sample ID
AR4050T2V1	2BZ32
AR4059T2V1	2BZ42
AR405702V1	2BZ01
AR405701V1	2BY95

Section 2

Sample Custody Documents

ALD LOG #
1202011

Accelerated Retrieval Project Chain of Custody

COC No. **AR4057R1**

Sampling Location: **RWMC AR**

Lab: ~~INEEL-INTEC~~ INL-RWMC MH 1-31-12

Type Sample: **Regular**

DDTC #: NA

Sample Matrix: **SOLID**

☐ Homogeneous Solid ☒ Soil/Gravel

Sampling Batch No.: S4200-LOT-05-07

Sampler(s): Michael Haderlie _____ 1-31-12

Printed Signature Date

Sample ID Number	Sample Date	Sample Time 1-31-12 MH	Container Size (mL)	I-CHEM Container Production No.	Sample Analysis	Comments	Disposition*
AR405701V1	1-31-12	~~1410~~ 1400	1 x 20	007630	VOC Sample		
AR405701V2	1-31-12	1411	1 x 20	007630	VOC Spare		
AR4057T1V1	1-31-12	1411	1 x 20	007630	VOC Trip Blank Sample		
AR4057T1V2	1-31-12	1408	1 x 20	007630	VOC Trip Blank Spare		
AR405701N1	1-31-12	1419	1 x 20	007630	NHVOC Sample		
AR405701N2	1-31-12	1414	1 x 20	007630	NHVOC Spare		
AR4057T1N1	1-31-12	1414	1 x 20	007630	NHVOC Trip Blank Sample		
AR4057T1N2	1-31-12	1408	1 x 20	007630	NHVOC Trip Blank Spare		

NOTE: For preservation, all samples were stored at a controlled temperature of 4 degrees C, then packed with chemical ice for shipment.

Samples Relinquished by (Signature):	Date	Time	Samples Received by (Signature):	Date	Time
	2-1-12	1247		2-01-12	1247

COPY OF IN-PROCESS RECORD

Comments: * Disposition fields are completed by the laboratory.

One hour time limit met. MH 1-31-12

ARP30100 MH 1-31-12

All sample analyses are complete and all samples have been removed from custody control and have been dispositioned

Signature Date

ALD Document: Log 1202011 CCP-ARP Soils.tif - Scanned:2/7/2012 9:27:10 AM

0009

ALD LOG #
1202011

Accelerated Retrieval Project Chain of Custody

COC No. AR4057C1

Sampling Location: RWMC AR

Lab: ~~INEEL-INTEC~~ TAL, Rapid MH 1-31-12

Type Sample: Co-located

DDTC #: NA

Sample Matrix: SOLID

☐ Homogeneous Solid ☒ Soil/Gravel

Sampling Batch No.: S4200-COT-05-07

Sampler(s): Michael Haderlie (Printed) _____ (Signature) 1-31-12 (Date)

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No.	Sample Analysis	Comments	Disposition*
AR405702V1	1-31-12	1416	1 x 20	007630	VOC Sample		
AR405702V2	1-31-12	1417	1 x 20	007630	VOC Spare		
AR405702V3	1-31-12	1421	1 x 20	007630	VOC MS		
AR405702V4	1-31-12	1422	1 x 20	007630	VOC MSD		
AR4057T2V1	1-31-12	1417	1 x 20	007630	VOC Trip Blank Sample		
AR4057T2V2	1-31-12	1429	1 x 20	007630	VOC Trip Blank Spare		
N/A			N/A		N/A		
N/A			N/A		N/A		

NOTE: For preservation, all samples were stored at a controlled temperature of 4 degrees C, then packed with chemical ice for shipment.

Samples Relinquished by (Signature):	Date	Time	Samples Received by (Signature):	Date	Time
	2-1-12	1247		2-01-12	1247

COPY OF IN-PROCESS RECORD

Comments: * Disposition fields are completed by the laboratory.

one hour time limit met. MH 1-31-12

ARP 30100. MH 1-31-12

All sample analyses are complete and all samples have been removed from custody control and have been dispositioned

Signature _____ Date _____

ALD Document: Log 1202011 CCP-ARP Soils.tif - Scanned:2/7/2012 9:27:10 AM

0007

ALD LOG #
1202011

Accelerated Retrieval Project Chain of Custody

COC No. **AR4058R1**

Sampling Location: **RWMC AR**

Lab: ~~INEEL-INTEC~~ INL - RWMC MH 1-31-12

Type Sample: **Regular**

DDTC #: NA

Sample Matrix: **SOLID**

☐ Homogeneous Solid ☒ Soil/Gravel

Sampling Batch No.: ~~54200-LOT-04-05~~ 54200-LOT-05-08 MH 1-31-12

Sampler(s): Michael Haderlie (Printed) _____ (Signature) 1-31-12 (Date)

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No.	Sample Analysis	Comments	Disposition*
AR405801V1	1-31-12	1219	1 x 20	007630	VOC Sample		
AR405801V2	1-31-12	1221	1 x 20	007630	VOC Spare		
AR4058T1V1	1-31-12	1222	1 x 20	007630	VOC Trip Blank Sample		
AR4058T1V2	1-31-12	1224	1 x 20	007630	VOC Trip Blank Spare		
AR405801N1	1-31-12	1223	1 x 20	007630	NHVOC Sample		
AR405801N2	1-31-12	1223	1 x 20	007630	NHVOC Spare		
AR4058T1N1	1-31-12	1224	1 x 20	007630	NHVOC Trip Blank Sample		
AR4058T1N2	1-31-12	1224	1 x 20	007630	NHVOC Trip Blank Spare		

NOTE: For preservation, all samples were stored at a controlled temperature of 4 degrees C, then packed with chemical ice for shipment.

Samples Relinquished by (Signature):	Date	Time	Samples Received by (Signature):	Date	Time
	2-1-12	1248		2-01-12	1248

COPY OF IN-PROCESS RECORD

Comments: * Disposition fields are completed by the laboratory.

ARP30103 . MH 2-1-12

one hour time limit met. MH 2-1-12

All sample analyses are complete and all samples have been removed from custody control and have been dispositioned

Signature _____ Date _____

ALD Document: Log 1202011 CCP-ARP Soils.tif - Scanned:2/7/2012 9:27:10 AM

ALD LOG #
1202011

Accelerated Retrieval Project Chain of Custody

COC No. **AR4058C1**

Sampling Location: **RWMC AR**

Lab: ~~INEEL INTEC~~ INL-RWMC MH 1-31-12

Type Sample: **Co-located**

DDTC #: NA

Sample Matrix: **SOLID**

☐ Homogeneous Solid ☒ Soil/Gravel

Sampling Batch No.: ~~S4200-LOT-04-05~~ S4200-LOT-05-08 MH 1-31-12

Sampler(s): Michael Haderlie (Printed) _____ (Signature) 1-31-12 (Date)

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No.	Sample Analysis	Comments	Disposition*
AR405802V1	1-31-12	1227	1 x 20	007630	VOC Sample		
AR405802V2	1-31-12	1226	1 x 20	007630	VOC Spare		
AR405802V3	1-31-12	1232	1 x 20	007630	VOC MS		
AR405802V4	1-31-12	1233	1 x 20	007630	VOC MSD		
AR4058T2V1	1-31-12	1228	1 x 20	007630	VOC Trip Blank Sample		
AR4058T2V2	1-31-12	1234	1 x 20	007630	VOC Trip Blank Spare		
N/A			N/A		N/A		
N/A			N/A		N/A		

NOTE: For preservation, all samples were stored at a controlled temperature of 4 degrees C, then packed with chemical ice for shipment.

Samples Relinquished by (Signature):	Date	Time	Samples Received by (Signature):	Date	Time
	2-1-12	1248		2-01-12	1248

COPY OF IN-PROCESS RECORD

Comments: * Disposition fields are completed by the laboratory.

ARP30103. MH 2-1-12

One hour time limit met. MH 2-1-12

All sample analyses are complete and all samples have been removed from custody control and have been dispositioned

_____ Signature _____ Date

ALD Document: Log 1202011 CCP-ARP Soils.tif - Scanned:2/7/2012 9:27:10 AM

0009

ALD LOG # 1202011

Accelerated Retrieval Project Chain of Custody

COC No. **AR4060R1**

Sampling Location: **RWMC AR**

Lab: ~~INEEL-INTEC~~ INL-Radiac
Key 2-07-12 Per B. Stark e-Mail.

Type Sample: **Regular**

DDTC #: NA

Sample Matrix: **SOLID**

☐ Homogeneous Solid ☒ Soil/Gravel

Sampling Batch No.: 54200-LOT-05-03

Sampler(s): Michael Hoelterlie (Printed) _____ (Signature) 2-1-12 (Date)

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No.	Sample Analysis	Comments	Disposition*
AR406001V1	2-1-12	0930	1 x 20	007630	VOC Sample		
AR406001V2	2-1-12	0931	1 x 20	007630	VOC Spare		
AR4060T1V1	2-1-12	0931	1 x 20	007630	VOC Trip Blank Sample		
AR4060T1V2	2-1-12	0933	1 x 20	007630	VOC Trip Blank Spare		
AR406001N1	2-1-12	0932	1 x 20	007630	NHVOC Sample		
AR406001N2	2-1-12	0933	1 x 20	007630	NHVOC Spare		
AR4060T1N1	2-1-12	0933	1 x 20	007630	NHVOC Trip Blank Sample		
AR4060T1N2	2-1-12	0934	1 x 20	007630	NHVOC Trip Blank Spare		

NOTE: For preservation, all samples were stored at a controlled temperature of 4 degrees C, then packed with chemical ice for shipment.

Samples Relinquished by (Signature):	Date	Time	Samples Received by (Signature):	Date	Time
	2-1-12	1249		2-01-12	1249
			COPY OF IN-PROCESS RECORD		

Comments: * Disposition fields are completed by the laboratory.
one hour time limit was met. MN 2-1-12
ARP 30018. MN 2-1-12

All sample analyses are complete and all samples have been removed from custody control and have been dispositioned

Signature _____ Date _____

ALD Document: Log 1202011 CCP-ARP Soils.tif - Scanned:2/7/2012 9:27:10 AM

0010

ALD LOG #
1202011

Accelerated Retrieval Project Chain of Custody

COC No. **AR4060C1**

Sampling Location: **RWMC AR**

Lab: ~~INEEL-ITEC~~ INL- RWMC
Beg. 2-07-12 per B. Stark e-mail

Type Sample: **Co-located**

DDTC #: NA

Sample Matrix: **SOLID**

☐ Homogeneous Solid ☒ Soil/Gravel

Sampling Batch No.: S4200-LOT-05-03

Sampler(s): Michael Haderlie (Printed) _____ (Signature) 2-1-12 (Date)

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No.	Sample Analysis	Comments	Disposition*
AR406002V1	2-1-12	0935	1 x 20	007630	VOC Sample		
AR406002V2	2-1-12	0936	1 x 20	007630	VOC Spare		
AR406002V3	2-1-12	0940	1 x 20	007630	VOC MS		
AR406002V4	2-1-12	0940	1 x 20	007630	VOC MSD		
AR4060T2V1	2-1-12	0936	1 x 20	007630	VOC Trip Blank Sample		
AR4060T2V2	2-1-12	0940	1 x 20	007630	VOC Trip Blank Spare		
N/A			N/A		N/A		
N/A			N/A		N/A		

NOTE: For preservation, all samples were stored at a controlled temperature of 4 degrees C, then packed with chemical ice for shipment.

Samples Relinquished by (Signature):	Date	Time	Samples Received by (Signature):	Date	Time
	2-1-12	1249		2-01-12	1249

COPY OF IN-PROCESS RECORD

Comments: * Disposition fields are completed by the laboratory.
one hour time limit was met. 2-1-12 MH

ARP30018 MH 2-1-12

All sample analyses are complete and all samples have been removed from custody control and have been dispositioned

_____ Signature _____ Date

ALD Document: Log 1202011 CCP-ARP Soils.tif - Scanned:2/7/2012 9:27:10 AM

0011

ALD LOG # 1202011

Accelerated Retrieval Project Chain of Custody

COC No. **AR4050R1**

Sampling Location: **RWMC AR**

Lab: ~~INEEL INTEC~~ INL - RLSMC MH 2-2-12

Type Sample: **Regular**

DDTC #: N/A

Sample Matrix: **SOLID**

☐ Homogeneous Solid ☒ Soil/Gravel

Sampling Batch No.: 54200-L05-05-10 MH 2-2-12

Sampler(s): Michael Haderlie — Printed

Signature

2-2-12 — Date

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No.	Sample Analysis	Comments	Disposition*
AR405001V1	2-2-12	1015	1 x 20	007230	VOC Sample		
AR405001V2	2-2-12	1016	1 x 20	007230	VOC Spare		
AR4050T1V1	2-2-12	1017	1 x 20	007230	VOC Trip Blank Sample		
AR4050T1V2	2-2-12	1019	1 x 20	007230	VOC Trip Blank Spare		
AR405001N1	2-2-12	1018	1 x 20	007230	NHVOC Sample		
AR405001N2	2-2-12	1018	1 x 20	007230	NHVOC Spare		
AR4050T1N1	2-2-12	1018	1 x 20	007230	NHVOC Trip Blank Sample		
AR4050T1N2	2-2-12	1019	1 x 20	007230	NHVOC Trip Blank Spare		

NOTE: For preservation, all samples were stored at a controlled temperature of 4 degrees C, then packed with chemical ice for shipment.

Samples Relinquished by (Signature):	Date	Time	Samples Received by (Signature):	Date	Time
	2-2-12	1136		2-02-12	1136

COPY OF IN-PROCESS RECORD

Comments: * Disposition fields are completed by the laboratory.

one hour time limit was met. MH 2-2-12

ARP 30014. MH 2-2-12

All sample analyses are complete and all samples have been removed from custody control and have been dispositioned

Signature — Date

ALD Document: Log 1202011 CCP-ARP Soils.tif - Scanned:2/7/2012 9:27:10 AM

0012

ALD LOG # 1202011

Accelerated Retrieval Project Chain of Custody

COC No. **AR4050C1**

Sampling Location: **RWMC AR**

Lab: ~~INEEL-INTEC~~ INL-RWMC MH 2-2-12

Type Sample: **Co-located**

DDTC #: N/A

Sample Matrix: **SOLID**

☐ Homogeneous Solid ☒ Soil/Gravel

Sampling Batch No.: 54200-LOT-05-~~06~~ 10 MH 2-2-12

Sampler(s): Michael Haderlie _____ 2-2-12

Printed Signature Date

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No.	Sample Analysis	Comments	Disposition*
AR405002V1	2-2-12	1030	1 x 20	007230	VOC Sample		
AR405002V2	2-2-12	1030	1 x 20	007230	VOC Spare		
AR405002V3	2-2-12	1024	1 x 20	007230	VOC MS		
AR405002V4	2-2-12	1024	1 x 20	007230	VOC MSD		
AR4050T2V1	2-2-12	1021	1 x 20	007230	VOC Trip Blank Sample		
AR4050T2V2	2-2-12	1024	1 x 20	007230	VOC Trip Blank Spare		
N/A			N/A		N/A		
N/A			N/A		N/A		

NOTE: For preservation, all samples were stored at a controlled temperature of 4 degrees C, then packed with chemical ice for shipment.

Samples Relinquished by (Signature):	Date	Time	Samples Received by (Signature):	Date	Time
	2-2-12	1136		2-02-12	1136

COPY OF IN-PROCESS RECORD

Comments: * Disposition fields are completed by the laboratory.

one hour time limit was met. MH 2-2-12

ARP30014. MH 2-2-12

All sample analyses are complete and all samples have been removed from custody control and have been dispositioned

Signature Date

ALD Document: Log 1202011 CCP-ARP Soils.tif - Scanned:2/7/2012 9:27:10 AM

ALD LOG # 1202011

Accelerated Retrieval Project Chain of Custody

COC No. AR4059R1

Sampling Location: RWMC AR

Lab: ~~INEEL-INTEC~~ INL- RWMC MH 2-2-12

Type Sample: Regular

DDTC #: NA

Sample Matrix: SOLID

☐ Homogeneous Solid ☒ Soil/Gravel

Sampling Batch No.: S4200-LOT-05-06

Sampler(s): Michael Haderlie (Printed) _____ (Signature) 2-2-12 (Date)

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No.	Sample Analysis	Comments	Disposition*
AR405901V1	2-2-12	0901	1 x 20	007630	VOC Sample		
AR405901V2	2-2-12	0902	1 x 20	007630	VOC Spare		
AR4059T1V1	2-2-12	0902	1 x 20	007630	VOC Trip Blank Sample		
AR4059T1V2	2-2-12	0904	1 x 20	007630	VOC Trip Blank Spare		
AR405901N1	2-2-12	0903	1 x 20	007630	NHVOC Sample		
AR405901N2	2-2-12	0904	1 x 20	007630	NHVOC Spare		
AR4059T1N1	2-2-12	0904	1 x 20	007630	NHVOC Trip Blank Sample		
AR4059T1N2	2-2-12	0904	1 x 20	007630	NHVOC Trip Blank Spare		

NOTE: For preservation, all samples were stored at a controlled temperature of 4 degrees C, then packed with chemical ice for shipment.

Samples Relinquished by (Signature):	Date	Time	Samples Received by (Signature):	Date	Time
	2-2-12	1137		2-02-12	1137
			COPY OF IN-PROCESS RECORD		

Comments: * Disposition fields are completed by the laboratory.

one hour time limit was met. MH 2-2-12

ARP30081. MH 2-2-12

All sample analyses are complete and all samples have been removed from custody control and have been dispositioned

_____ Signature _____ Date

ALD Document: Log 1202011 CCP-ARP Soils.tif - Scanned:2/7/2012 9:27:10 AM

ALD LOG # 1202011

Accelerated Retrieval Project Chain of Custody

COC No. **AR4059C1**

Sampling Location: **RWMC AR** Lab: ~~INEEL-INTEC~~ INL-RWMC MH 2-2-12 Type Sample: **Co-located** DDTC #: NA

Sample Matrix: **SOLID** ☐ Homogeneous Solid ☒ Soil/Gravel Sampling Batch No.: S4200-COT-05-06

Sampler(s): Michael Haderlie (Printed) _____ (Signature) 2-2-12 (Date)

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No.	Sample Analysis	Comments	Disposition*
AR405902V1	2-2-12	0906	1 x 20	007630	VOC Sample		
AR405902V2	2-2-12	0907	1 x 20	007630	VOC Spare		
AR405902V3	2-2-12	0909	1 x 20	007630	VOC MS		
AR405902V4	2-2-12	0910	1 x 20	007630	VOC MSD		
AR4059T2V1	2-2-12	0907	1 x 20	007630	VOC Trip Blank Sample		
AR4059T2V2	2-2-12	0910	1 x 20	007630	VOC Trip Blank Spare		
N/A			N/A		N/A		
N/A			N/A		N/A		

NOTE: For preservation, all samples were stored at a controlled temperature of 4 degrees C, then packed with chemical ice for shipment.

Samples Relinquished by (Signature):	Date	Time	Samples Received by (Signature):	Date	Time
	2-2-12	1137		2-02-12	1137

COPY OF IN-PROCESS RECORD

Comments: * Disposition fields are completed by the laboratory.

one hour time limit was met. MH 2-2-12

ARP 30081. MH 2-2-12

All sample analyses are complete and all samples have been removed from custody control and have been dispositioned _____ (Signature) _____ (Date)

ALD Document: Log 1202011 CCP-ARP Soils.tif - Scanned:2/7/2012 9:27:10 AM

ALD LOG #
1202011

ICP Analytical Laboratories Department
TRU Waste Characterization Program
Sample Container Weight Information for AR4057
Regular Sample

Sample ID Number	Production Number	Container Number	Container Size (mL)	Sample Analysis	Tare Weight (g)	Tare Date Time	Tare By	Tare Balance	Gross Weight (g)	Gross Date Time	Gross By	Gross Balance	Net Weight (g)
AR405701V1	007630	000577	20	VOC Sample	17.93	2005-04-18 14:20	Blane Teckmeyer	Cal#722200 PG802-S	21.98	2-01-12 1415	Bill Strong	Cal# 726992 ML303E	4.05
AR405701V2	007630	000583	20	VOC Spare	17.80	2005-04-18 14:21	Blane Teckmeyer	Cal#722200 PG802-S	20.74	2-01-12 1416	Bill Strong	*	2.94
AR4057T1V1	007630	000531	20	VOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:35	Blane Teckmeyer	Cal#722200 PG802-S	2.99	2005-04-18 08:35	Blane Teckmeyer	Cal#722200 PG802-S	2.99
AR4057T1V2	007630	000519	20	VOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 08:30	Blane Teckmeyer	Cal#722200 PG802-S	3.05	2005-04-18 08:30	Blane Teckmeyer	Cal#722200 PG802-S	3.05
AR405701N1	007630	000585	20	NHVOC Sample	17.90	2005-04-18 14:21	Blane Teckmeyer	Cal#722200 PG802-S	22.67	2-01-12 1417	Bill Strong	*	4.77
AR405701N2	007630	000582	20	NHVOC Spare	18.15	2005-04-18 14:21	Blane Teckmeyer	Cal#722200 PG802-S	21.60	2-01-12 1418	Bill Strong	*	3.45
AR4057T1N1	007630	000502	20	NHVOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:29	Blane Teckmeyer	Cal#722200 PG802-S	2.97	2005-04-18 08:29	Blane Teckmeyer	Cal#722200 PG802-S	2.97
AR4057T1N2	007630	000505	20	NHVOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 08:26	Blane Teckmeyer	Cal#722200 PG802-S	3.02	2005-04-18 08:26	Blane Teckmeyer	Cal#722200 PG802-S	3.02
AR405701MS	003253	002128	250	Metals and SVOC	211.11	2005-04-18 14:20	Blane Teckmeyer	Cal#722200 PG802-S	263.97	2-01-12 1429	Bill Strong	*	52.86

*= Cal# 726992 ML303E JG 2-07-12

Packaged by: Blane Teckmeyer
Packaging Independent Verification by: Julie Daley 04/18/2005 2:23:42PM

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0016

ALD LOG #
1202011

ICP Analytical Laboratories Department
TRU Waste Characterization Program
Sample Container Weight Information for AR4057
Co-located Sample

Sample ID Number	Production Number	Container Number	Container Size (mL)	Sample Analysis	Tare Weight (g)	Tare Date Time	Tare By	Tare Balance	Gross Weight (g)	Gross Date Time	Gross By	Gross Balance	Net Weight (g)
AR405702V1	007630	000571	20	VOC Sample	17.87	2005-04-18 14:28	Blane Teckmeyer	Cal#722200 PG802-S	21.19	2-01-12 1420	Bill Strong	*	3.32
AR405702V2	007630	000308	20	VOC Spare	17.93	2005-04-18 14:28	Blane Teckmeyer	Cal#722200 PG802-S	22.85	2-01-12 1421	Bill Strong	*	4.92
AR405702V3	007630	000609	20	VOC MS	17.91	2005-04-18 14:28	Blane Teckmeyer	Cal#722200 PG802-S	21.84	2-01-12 1422	Bill Strong	*	3.93
AR405702V4	007630	000619	20	VOC MSD	17.90	2005-04-18 14:28	Blane Teckmeyer	Cal#722200 PG802-S	22.58	2-01-12 1423	Bill Strong	*	4.68
AR4057T2V1	007630	000530	20	VOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:27	Blane Teckmeyer	Cal#722200 PG802-S	2.97	2005-04-18 08:27	Blane Teckmeyer	Cal#722200 PG802-S	2.97
AR4057T2V2	007630	000498	20	VOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 08:32	Blane Teckmeyer	Cal#722200 PG802-S	3.05	2005-04-18 08:32	Blane Teckmeyer	Cal#722200 PG802-S	3.05
AR405702N1	007630	000296	20	NHVOC Sample	17.81	2005-04-18 14:29	Blane Teckmeyer	Cal#722200 PG802-S	22.26	2-01-12 1424	Bill Strong	*	4.45
AR405702N2	007630	000597	20	NHVOC Spare	17.88	2005-04-18 14:29	Blane Teckmeyer	Cal#722200 PG802-S	22.99	2-01-12 1425	Bill Strong	*	5.11
AR405702N3	007630	000595	20	NHVOC MS	17.85	2005-04-18 14:30	Blane Teckmeyer	Cal#722200 PG802-S	22.88	2-01-12 1426	Bill Strong	*	5.03
AR405702N4	007630	000611	20	NHVOC MSD	17.81	2005-04-18 14:30	Blane Teckmeyer	Cal#722200 PG802-S	22.05	2-01-12 1427	Bill Strong	*	4.24
AR4057T2N1	007630	000494	20	NHVOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:29	Blane Teckmeyer	Cal#722200 PG802-S	3.04	2005-04-18 08:29	Blane Teckmeyer	Cal#722200 PG802-S	3.04
AR4057T2N2	007630	000506	20	NHVOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 08:33	Blane Teckmeyer	Cal#722200 PG802-S	2.98	2005-04-18 08:33	Blane Teckmeyer	Cal#722200 PG802-S	2.98
AR405702MS	003253	002132	250	Metals and SVOC	213.67	2005-04-18 14:30	Blane Teckmeyer	Cal#722200 PG802-S	260.03	2-01-12 1430	Bill Strong	*	46.36

*= Cal#726992 ML303E BG 2-07-12

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0017

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1202011

ICP Analytical Laboratories Department
TRU Waste Characterization Program
Sample Container Weight Information for AR4058
Regular Sample

Sample ID Number	Production Number	Container Number	Container Size (mL)	Sample Analysis	Tare Weight (g)	Tare Date Time	Tare By	Tare Balance	Gross Weight (g)	Gross Date Time	Gross By	Gross Balance	Net Weight (g)
AR405801V1	007630	000273	20	VOC Sample	17.89	2005-04-18 14:41	Blane Teckmeyer	Cal#722200 PG802-S	20.31	2-01-12 1444	Bill Strong	*	2.42
AR405801V2	007630	000295	20	VOC Spare	17.92	2005-04-18 14:40	Blane Teckmeyer	Cal#722200 PG802-S	21.74	2-01-12 1445	Bill Strong	*	3.82
AR4058T1V1	007630	000493	20	VOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:25	Blane Teckmeyer	Cal#722200 PG802-S	3.02	2005-04-18 08:25	Blane Teckmeyer	Cal#722200 PG802-S	3.02
AR4058T1V2	007630	000523	20	VOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 08:24	Blane Teckmeyer	Cal#722200 PG802-S	3.01	2005-04-18 08:24	Blane Teckmeyer	Cal#722200 PG802-S	3.01
AR405801N1	007630	000270	20	NHVOC Sample	17.83	2005-04-18 14:41	Blane Teckmeyer	Cal#722200 PG802-S	22.26	2-01-12 1446	Bill Strong	*	4.43
AR405801N2	007630	000274	20	NHVOC Spare	17.93	2005-04-18 14:41	Blane Teckmeyer	Cal#722200 PG802-S	22.31	2-01-12 1447	Bill Strong	*	4.38
AR4058T1N1	007630	000541	20	NHVOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:21	Blane Teckmeyer	Cal#722200 PG802-S	3.04	2005-04-18 08:21	Blane Teckmeyer	Cal#722200 PG802-S	3.04
AR4058T1N2	007630	000542	20	NHVOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 08:27	Blane Teckmeyer	Cal#722200 PG802-S	3.03	2005-04-18 08:27	Blane Teckmeyer	Cal#722200 PG802-S	3.03
AR405801MS	003253	002123	250	Metals and SVOC	210.89	2005-04-18 14:40	Blane Teckmeyer	Cal#722200 PG802-S	247.06	2-01-12 1458	Bill Strong	*	36.17

*= Cal# 726992 ML303E BCG 2-07-12

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ICP Analytical Laboratories Department
TRU Waste Characterization Program
Sample Container Weight Information for AR4058
Co-located Sample

Sample ID Number	Production Number	Container Number	Container Size (mL)	Sample Analysis	Tare Weight (g)	Tare Date Time	Tare By	Tare Balance	Gross Weight (g)	Gross Date Time	Gross By	Gross Balance	Net Weight (g)
AR405802V1	007630	000267	20	VOC Sample	17.88	2005-04-18 15:02	Blane Teckmeyer	Cal#722200 PG802-S	20.43	2-01-12 1449	Bill Strong	*	2.55
AR405802V2	007630	000268	20	VOC Spare	17.84	2005-04-18 15:02	Blane Teckmeyer	Cal#722200 PG802-S	20.19	2-01-12 1450	Bill Strong	*	2.35
AR405802V3	007630	000266	20	VOC MS	17.81	2005-04-18 15:03	Blane Teckmeyer	Cal#722200 PG802-S	20.52	2-01-12 1451	Bill Strong	*	2.71
AR405802V4	007630	000280	20	VOC MSD	17.85	2005-04-18 15:03	Blane Teckmeyer	Cal#722200 PG802-S	20.79	2-01-12 1452	Bill Strong	*	2.94
AR4058T2V1	007630	000540	20	VOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 09:17	Blane Teckmeyer	Cal#722200 PG802-S	3.02	2005-04-18 09:17	Blane Teckmeyer	Cal#722200 PG802-S	3.02
AR4058T2V2	007630	000536	20	VOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 09:20	Blane Teckmeyer	Cal#722200 PG802-S	2.96	2005-04-18 09:20	Blane Teckmeyer	Cal#722200 PG802-S	2.96
AR405802N1	007630	000279	20	NHVOC Sample	17.82	2005-04-18 15:04	Blane Teckmeyer	Cal#722200 PG802-S	20.37	2-01-12 1453	Bill Strong	*	2.55
AR405802N2	007630	000278	20	NHVOC Spare	17.86	2005-04-18 15:03	Blane Teckmeyer	Cal#722200 PG802-S	21.57	2-01-12 1454	Bill Strong	*	3.71
AR405802N3	007630	000269	20	NHVOC MS	17.90	2005-04-18 15:04	Blane Teckmeyer	Cal#722200 PG802-S	21.81	2-01-12 1455	Bill Strong	*	3.91
AR405802N4	007630	000282	20	NHVOC MSD	17.88	2005-04-18 15:04	Blane Teckmeyer	Cal#722200 PG802-S	21.34	2-01-12 1456	Bill Strong	*	3.46
AR4058T2N1	007630	000524	20	NHVOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:36	Blane Teckmeyer	Cal#722200 PG802-S	3.05	2005-04-18 08:36	Blane Teckmeyer	Cal#722200 PG802-S	3.05
AR4058T2N2	007630	000535	20	NHVOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 09:22	Blane Teckmeyer	Cal#722200 PG802-S	3.02	2005-04-18 09:22	Blane Teckmeyer	Cal#722200 PG802-S	3.02
AR405802MS	003253	002129	250	Metals and SVOC	213.88	2005-04-18 15:01	Blane Teckmeyer	Cal#722200 PG802-S	250.39	2-01-12 1459	Bill Strong	*	36.51

* = Cal# 726992 ML303E BG 2-07-12

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ICP Analytical Laboratories Department
TRU Waste Characterization Program
Sample Container Weight Information for AR4060
Regular Sample

Sample ID Number	Production Number	Container Number	Container Size (mL)	Sample Analysis	Tare Weight (g)	Tare Date Time	Tare By	Tare Balance	Gross Weight (g)	Gross Date Time	Gross By	Gross Balance	Net Weight (g)
AR406001V1	007630	000286	20	VOC Sample	17.81	2005-04-18 15:40	Blane Teckmeyer	Cal#722200 PG802-S	22.03	2-01-12 1515	Bill Strong	*	4.22
AR406001V2	007630	000263	20	VOC Spare	17.94	2005-04-18 15:40	Blane Teckmeyer	Cal#722200 PG802-S	22.01	2-01-12 1516	Bill Strong	*	4.07
AR4060T1V1	007630	000525	20	VOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 09:24	Blane Teckmeyer	Cal#722200 PG802-S	2.97	2005-04-18 09:24	Blane Teckmeyer	Cal#722200 PG802-S	2.97
AR4060T1V2	007630	000515	20	VOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 09:23	Blane Teckmeyer	Cal#722200 PG802-S	3.02	2005-04-18 09:23	Blane Teckmeyer	Cal#722200 PG802-S	3.02
AR406001N1	007630	000299	20	NHVOC Sample	17.81	2005-04-18 15:41	Blane Teckmeyer	Cal#722200 PG802-S	20.94	2-01-12 1517	Bill Strong	*	3.13
AR406001N2	007630	000298	20	NHVOC Spare	17.87	2005-04-18 15:41	Blane Teckmeyer	Cal#722200 PG802-S	20.71	2-01-12 1518	Bill Strong	*	2.84
AR4060T1N1	007630	000518	20	NHVOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:31	Blane Teckmeyer	Cal#722200 PG802-S	3.05	2005-04-18 08:31	Blane Teckmeyer	Cal#722200 PG802-S	3.05
AR4060T1N2	007630	000484	20	NHVOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 09:24	Blane Teckmeyer	Cal#722200 PG802-S	2.98	2005-04-18 09:24	Blane Teckmeyer	Cal#722200 PG802-S	2.98
AR406001MS	003253	002795	250	Metals and SVOC	214.64	2005-04-18 15:38	Blane Teckmeyer	Cal#722200 PG802-S	282.41	2-01-12 1529	Bill Strong	*	67.77

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ALD LOG # 1202011

ICP Analytical Laboratories Department
TRU Waste Characterization Program
Sample Container Weight Information for AR4060
Co-located Sample

Sample ID Number	Production Number	Container Number	Container Size (mL)	Sample Analysis	Tare Weight (g)	Tare Date Time	Tare By	Tare Balance	Gross Weight (g)	Gross Date Time	Gross By	Gross Balance	Net Weight (g)
AR406002V1	007630	000327	20	VOC Sample	17.91	2005-04-18 15:47	Blane Teckmeyer	Cal#722200 PG802-S	21.39	2-01-12 1520	Bill Strong	*	3.48
AR406002V2	007630	000287	20	VOC Spare	17.85	2005-04-18 15:47	Blane Teckmeyer	Cal#722200 PG802-S	22.34	2-01-12 1521	Bill Strong	*	4.49
AR406002V3	007630	000304	20	VOC MS	17.89	2005-04-18 15:48	Blane Teckmeyer	Cal#722200 PG802-S	20.85	2-01-12 1522	Bill Strong	*	2.96
AR406002V4	007630	000314	20	VOC MSD	17.79	2005-04-18 15:48	Blane Teckmeyer	Cal#722200 PG802-S	20.94	2-01-12 1523	Bill Strong	*	3.15
AR4060T2V1	007630	000483	20	VOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 09:27	Blane Teckmeyer	Cal#722200 PG802-S	3.01	2005-04-18 09:27	Blane Teckmeyer	Cal#722200 PG802-S	3.01
AR4060T2V2	007630	000510	20	VOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 09:26	Blane Teckmeyer	Cal#722200 PG802-S	3.01	2005-04-18 09:26	Blane Teckmeyer	Cal#722200 PG802-S	3.01
AR406002N1	007630	000262	20	NHVOC Sample	17.86	2005-04-18 15:49	Blane Teckmeyer	Cal#722200 PG802-S	21.69	2-01-12 1524	Bill Strong	*	3.83
AR406002N2	007630	000313	20	NHVOC Spare	17.85	2005-04-18 15:49	Blane Teckmeyer	Cal#722200 PG802-S	21.10	2-01-12 1525	Bill Strong	*	3.25
AR406002N3	007630	000328	20	NHVOC MS	17.90	2005-04-18 15:50	Blane Teckmeyer	Cal#722200 PG802-S	21.08	2-01-12 1526	Bill Strong	*	3.18
AR406002N4	007630	000329	20	NHVOC MSD	17.82	2005-04-18 15:49	Blane Teckmeyer	Cal#722200 PG802-S	19.91	2-01-12 1527	Bill Strong	*	2.09
AR4060T2N1	007630	000511	20	NHVOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 09:22	Blane Teckmeyer	Cal#722200 PG802-S	3.03	2005-04-18 09:22	Blane Teckmeyer	Cal#722200 PG802-S	3.03
AR4060T2N2	007630	000512	20	NHVOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 09:25	Blane Teckmeyer	Cal#722200 PG802-S	3.00	2005-04-18 09:25	Blane Teckmeyer	Cal#722200 PG802-S	3.00
AR406002MS	003253	002793	250	Metals and SVOC	210.84	2005-04-18 15:46	Blane Teckmeyer	Cal#722200 PG802-S	264.49	2-01-12 1530	Bill Strong	*	53.65

* Cal# 726992 ML303E BG 2-07-12

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0021

ALD LOG #
12020II

ICP Analytical Laboratories Department
TRU Waste Characterization Program
Sample Container Weight Information for AR4050
Regular Sample

Sample ID Number	Production Number	Container Number	Container Size (mL)	Sample Analysis	Tare Weight (g)	Tare Date Time	Tare By	Tare Balance	Gross Weight (g)	Gross Date Time	Gross By	Gross Balance	Net Weight (g)
AR405001V1	007230	001635	20	VOC Sample	17.73	2005-04-14 15:05	Blane Teckmeyer	Cal#722200 PG802-S	22.94	2012-02-02 13:02	W. (Bill) Strong	Cal#726992 ML-303	5.21
AR405001V2	007230	001634	20	VOC Spare	17.77	2005-04-14 15:05	Blane Teckmeyer	Cal#722200 PG802-S	22.84	2012-02-02 13:02	W. (Bill) Strong	Cal#726992 ML-303	5.07
AR4050T1V1	007230	003157	20	VOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-14 10:06	Blane Teckmeyer	Cal#722200 PG802-S	3.04	2005-04-14 10:06	Blane Teckmeyer	Cal#722200 PG802-S	3.04
AR4050T1V2	007230	003094	20	VOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-14 10:10	Blane Teckmeyer	Cal#722200 PG802-S	3.05	2005-04-14 10:10	Blane Teckmeyer	Cal#722200 PG802-S	3.05
AR405001N1	007230	001715	20	NHVOC Sample	17.71	2005-04-14 15:06	Blane Teckmeyer	Cal#722200 PG802-S	23.47	2012-02-02 13:00	W. (Bill) Strong	Cal#726992 ML-303	5.76
AR405001N2	007230	001636	20	NHVOC Spare	18.02	2005-04-14 15:06	Blane Teckmeyer	Cal#722200 PG802-S	23.40	2012-02-02 12:59	W. (Bill) Strong	Cal#726992 ML-303	5.38
AR4050T1N1	007230	003197	20	NHVOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-14 10:09	Blane Teckmeyer	Cal#722200 PG802-S	2.99	2005-04-14 10:09	Blane Teckmeyer	Cal#722200 PG802-S	2.99
AR4050T1N2	007230	003132	20	NHVOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-14 10:10	Blane Teckmeyer	Cal#722200 PG802-S	3.05	2005-04-14 10:10	Blane Teckmeyer	Cal#722200 PG802-S	3.05
AR405001MS	007694	001240	250	Metals and SVOC	209.97	2005-04-14 15:02	Blane Teckmeyer	Cal#722200 PG802-S	261.61	2012-02-02 12:31	W. (Bill) Strong	Cal#726992 ML-303	51.64

Packaged by: Blane Teckmeyer
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0022

ALD LOG #
1202011

ICP Analytical Laboratories Department
TRU Waste Characterization Program
Sample Container Weight Information for AR4050
Co-located Sample

Sample ID Number	Production Number	Container Number	Container Size (mL)	Sample Analysis	Tare Weight (g)	Tare Date Time	Tare By	Tare Balance	Gross Weight (g)	Gross Date Time	Gross By	Gross Balance	Net Weight (g)
AR405002V1	007230	001859	20	VOC Sample	17.98	2005-04-14 15:32	Blane Teckmeyer	Cal#722200 PG802-S	22.61	2012-02-02 12:35	W. (Bill) Strong	Cal#726992 ML-303	4.63
AR405002V2	007230	001676	20	VOC Spare	17.78	2005-04-14 15:22	Blane Teckmeyer	Cal#722200 PG802-S	23.93	2012-02-02 12:36	W. (Bill) Strong	Cal#726992 ML-303	6.15
AR405002V3	007230	001760	20	VOC MS	17.74	2005-04-14 15:33	Blane Teckmeyer	Cal#722200 PG802-S	22.06	2012-02-02 12:57	W. (Bill) Strong	Cal#726992 ML-303	4.32
AR405002V4	007230	001610	20	VOC MSD	17.80	2005-04-14 15:33	Blane Teckmeyer	Cal#722200 PG802-S	23.04	2012-02-02 12:56	W. (Bill) Strong	Cal#726992 ML-303	5.24
AR4050T2V1	007230	003178	20	VOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-14 10:14	Blane Teckmeyer	Cal#722200 PG802-S	2.97	2005-04-14 10:14	Blane Teckmeyer	Cal#722200 PG802-S	2.97
AR4050T2V2	007230	003124	20	VOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-14 10:19	Blane Teckmeyer	Cal#722200 PG802-S	2.98	2005-04-14 10:19	Blane Teckmeyer	Cal#722200 PG802-S	2.98
AR405002N1	007230	001590	20	NHVOC Sample	17.86	2005-04-14 15:35	Blane Teckmeyer	Cal#722200 PG802-S	23.39	2012-02-02 12:38	W. (Bill) Strong	Cal#726992 ML-303	5.53
AR405002N2	007230	001721	20	NHVOC Spare	17.89	2005-04-14 15:35	Blane Teckmeyer	Cal#722200 PG802-S	22.04	2012-02-02 12:39	W. (Bill) Strong	Cal#726992 ML-303	4.15
AR405002N3	007230	001582	20	NHVOC MS	17.76	2005-04-14 15:37	Blane Teckmeyer	Cal#722200 PG802-S	22.22	2012-02-02 12:55	W. (Bill) Strong	Cal#726992 ML-303	4.46
AR405002N4	007230	001759	20	NHVOC MSD	17.85	2005-04-14 15:36	Blane Teckmeyer	Cal#722200 PG802-S	22.25	2012-02-02 12:55	W. (Bill) Strong	Cal#726992 ML-303	4.40
AR4050T2N1	007230	003183	20	NHVOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-14 10:17	Blane Teckmeyer	Cal#722200 PG802-S	3.03	2005-04-14 10:17	Blane Teckmeyer	Cal#722200 PG802-S	3.03
AR4050T2N2	007230	003172	20	NHVOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-14 10:18	Blane Teckmeyer	Cal#722200 PG802-S	3.01	2005-04-14 10:18	Blane Teckmeyer	Cal#722200 PG802-S	3.01
AR405002MS	007694	001244	250	Metals and SVOC	213.35	2005-04-14 15:09	Blane Teckmeyer	Cal#722200 PG802-S	260.15	2012-02-02 12:33	W. (Bill) Strong	Cal#726992 ML-303	46.80

Packaged by: Blane Teckmeyer
Packaging Independent Verification by: Julie Daley 04/14/2005 3:42:11PM

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ALD LOG #
1202011

ICP Analytical Laboratories Department
TRU Waste Characterization Program
Sample Container Weight Information for AR4059
Regular Sample

Sample ID Number	Production Number	Container Number	Container Size (mL)	Sample Analysis	Tare Weight (g)	Tare Date Time	Tare By	Tare Balance	Gross Weight (g)	Gross Date Time	Gross By	Gross Balance	Net Weight (g)
AR405901V1	007630	000276	20	VOC Sample	17.95	2005-04-18 15:16	Blane Teckmeyer	Cal#722200 PG802-S	22.71	2012-02-02 12:44	W. (Bill) Strong	Cal#726992 ML-303	4.76
AR405901V2	007630	000275	20	VOC Spare	17.87	2005-04-18 15:16	Blane Teckmeyer	Cal#722200 PG802-S	21.34	2012-02-02 12:46	W. (Bill) Strong	Cal#726992 ML-303	3.47
AR4059T1V1	007630	000486	20	VOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:26	Blane Teckmeyer	Cal#722200 PG802-S	3.03	2005-04-18 08:26	Blane Teckmeyer	Cal#722200 PG802-S	3.03
AR4059T1V2	007630	000529	20	VOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 08:22	Blane Teckmeyer	Cal#722200 PG802-S	2.99	2005-04-18 08:22	Blane Teckmeyer	Cal#722200 PG802-S	2.99
AR405901N1	007630	000265	20	NHVOC Sample	17.96	2005-04-18 15:16	Blane Teckmeyer	Cal#722200 PG802-S	24.23	2012-02-02 12:52	W. (Bill) Strong	Cal#726992 ML-303	6.27
AR405901N2	007630	000264	20	NHVOC Spare	17.88	2005-04-18 15:17	Blane Teckmeyer	Cal#722200 PG802-S	23.26	2012-02-02 12:53	W. (Bill) Strong	Cal#726992 ML-303	5.38
AR4059T1N1	007630	000497	20	NHVOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:22	Blane Teckmeyer	Cal#722200 PG802-S	2.95	2005-04-18 08:22	Blane Teckmeyer	Cal#722200 PG802-S	2.95
AR4059T1N2	007630	000504	20	NHVOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 08:23	Blane Teckmeyer	Cal#722200 PG802-S	2.99	2005-04-18 08:23	Blane Teckmeyer	Cal#722200 PG802-S	2.99
AR405901MS	003253	002122	250	Metals and SVOC	211.02	2005-04-18 15:15	Blane Teckmeyer	Cal#722200 PG802-S	264.20	2012-02-02 12:41	W. (Bill) Strong	Cal#726992 ML-303	53.18

Packaged by: Blane Teckmeyer
Packaging Independent Verification by: Julie Daley 04/18/2005 3:18:40PM

Data Generator Review of the Above Raw Data Performed by:

Signature

2-07-12
Date

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ALD LOG # 1202011

ICP Analytical Laboratories Department
TRU Waste Characterization Program
Sample Container Weight Information for AR4059
Co-located Sample

Sample ID Number	Production Number	Container Number	Container Size (mL)	Sample Analysis	Tare Weight (g)	Tare Date Time	Tare By	Tare Balance	Gross Weight (g)	Gross Date Time	Gross By	Gross Balance	Net Weight (g)
AR405902V1	007630	000293	20	VOC Sample	17.87	2005-04-18 15:23	Blane Teckmeyer	Cal#722200 PG802-S	23.54	2012-02-02 12:27	W. (Bill) Strong	Cal#726992 ML-303	5.67
AR405902V2	007630	000303	20	VOC Spare	17.83	2005-04-18 15:23	Blane Teckmeyer	Cal#722200 PG802-S	21.68	2012-02-02 12:23	W. (Bill) Strong	Cal#726992 ML-303	3.85
AR405902V3	007630	000301	20	VOC MS	18.00	2005-04-18 15:24	Blane Teckmeyer	Cal#722200 PG802-S	22.09	2012-02-02 13:05	W. (Bill) Strong	Cal#726992 ML-303	4.09
AR405902V4	007630	000294	20	VOC MSD	17.93	2005-04-18 15:24	Blane Teckmeyer	Cal#722200 PG802-S	22.01	2012-02-02 13:03	W. (Bill) Strong	Cal#726992 ML-303	4.08
AR4059T2V1	007630	000547	20	VOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:19	Blane Teckmeyer	Cal#722200 PG802-S	2.95	2005-04-18 08:19	Blane Teckmeyer	Cal#722200 PG802-S	2.95
AR4059T2V2	007630	000532	20	VOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 08:20	Blane Teckmeyer	Cal#722200 PG802-S	3.02	2005-04-18 08:20	Blane Teckmeyer	Cal#722200 PG802-S	3.02
AR405902N1	007630	000300	20	NHVOC Sample	17.92	2005-04-18 15:25	Blane Teckmeyer	Cal#722200 PG802-S	22.73	2012-02-02 13:06	W. (Bill) Strong	Cal#726992 ML-303	4.81
AR405902N2	007630	000302	20	NHVOC Spare	17.89	2005-04-18 15:25	Blane Teckmeyer	Cal#722200 PG802-S	21.61	2012-02-02 13:06	W. (Bill) Strong	Cal#726992 ML-303	3.72
AR405902N3	007630	000312	20	NHVOC MS	17.87	2005-04-18 15:25	Blane Teckmeyer	Cal#722200 PG802-S	22.23	2012-02-02 12:49	W. (Bill) Strong	Cal#726992 ML-303	4.36
AR405902N4	007630	000311	20	NHVOC MSD	17.92	2005-04-18 15:26	Blane Teckmeyer	Cal#722200 PG802-S	23.51	2012-02-02 12:47	W. (Bill) Strong	Cal#726992 ML-303	5.59
AR4059T2N1	007630	000522	20	NHVOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:18	Blane Teckmeyer	Cal#722200 PG802-S	2.98	2005-04-18 08:18	Blane Teckmeyer	Cal#722200 PG802-S	2.98
AR4059T2N2	007630	000545	20	NHVOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 08:17	Blane Teckmeyer	Cal#722200 PG802-S	3.02	2005-04-18 08:17	Blane Teckmeyer	Cal#722200 PG802-S	3.02
AR405902MS	003253	002127	250	Metals and SVOC	211.10	2005-04-18 15:22	Blane Teckmeyer	Cal#722200 PG802-S	264.73	2012-02-02 12:29	W. (Bill) Strong	Cal#726992 ML-303	53.63

Packaged by: Blane Teckmeyer
Packaging Independent Verification by: Julie Daley 04/18/2005 3:30:58PM

Data Generator Review of the Above Raw Data Performed by:

Signature 2-07-12 Date

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I-CHEM™ Brand Products

Nalge Nunc International

CERTIFICATE OF ANALYSIS

PRODUCTION NUMBER : 007230

Item Number: S326-0020

Item Description: VIAL CLEAR BOROSILICATE
Group 3 is applicable

This is your Certificate of Analysis for I-CHEM Certified™ product which has been prepared in accordance with I-CHEM Performance-Based Specifications. This product meets or exceeds analyte specifications established in the U.S. EPA "Specification and Guidance for Contaminant-free Sample Containers" for use in Superfund and other hazardous waste programs.

Group 1. Glass and HDPE/LDPE Sample containers for use in the analysis of Metals

Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg /L)
Aluminum	<80	Calcium (all HDPE)	<100	Magnesium	<100	Selenium	<2
Antimony	<5	Chromium	<10	Manganese	<10	Silver	<5
Arsenic	<2	Cobalt	<10	Mercury	<0.2	Sodium	<500
Barium	<20	Copper	<10	Nickel	<20	Sodium (all HDPE)	<100
Beryllium	<0.5	Iron	<50	Potassium	<750	Thallium	<5
Cadmium	<1	Lead	<2	Potassium (all HDPE)	<100	Vanadium	<10
Calcium	<500					Zinc	<10

In addition to the above analytes, NALGENE® containers are certified for these analytes:

Analyte[1]	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)
Chloride	<100	Fluoride	<20	Nitrite	<50	Sulfate	<100
Cyanide	<10	Nitrate	<20	Paraquat (amber only)	<0.4	Sulfide	<30
Diquat (amber only)	<1.0					Sulfite	<1000

Group 2. Glass Sample Containers for use in the analysis of Semivolatiles and Pesticides/PCBs

Compound	Quantitation Limit (µg/L)	Compound	Quantitation Limit (µg/L)	Compound	Quantitation Limit (µg/L)
Acenaphthene	<5	Acenaphthylene	<5	Anthracene	<5
Benzo(a)anthracene	<5	Benzo(a)pyrene	<5	Benzo(b)fluoranthene	<5
Benzo(k)Fluoranthene	<5	Benzo(g,h,i)perylene	<5	Benzoic Acid	<20
Benzyl Alcohol	<5	4-Bromophenyl-phenylether	<5	Butylbenzylphthalate	<5
4-Chloroaniline	<5	4-Chloro-3-methylphenol	<5	bis-(2-Chloroethoxy) methane	<5
bis-(2-Chloroethyl)ether	<5	bis-(2-Chloroisopropyl)ether	<5	2-Chloronaphthalene	<5
2-Chlorophenol	<5	4-Chlorophenyl-phenylether	<5	Chrysene	<5
Di-n-butylphthalate	<5	Di-n-octylphthalate	<5	Dibenzo(a,h)anthracene	<5
Dibenzofuran	<5	1,2-Dichlorobenzene	<5	1,4-Dichlorobenzene	<5
1,3-Dichlorobenzene	<5	3,3 -Dichlorobenzidine	<5	2,4-Dichlorophenol	<5
Diethylphthalate	<5	Dimethylphthalate	<5	2,4-Dinitrotoluene	<5
4,6-Dinitro-2-methylphenol	<20	2,4-Dinitrophenol	<20	Fluoranthene	<5
2,6-Dinitrotoluene	<5	bis-(2-Ethylhexyl)phthalate	<5	Hexachlorobutadiene	<5
Fluorene	<5	Hexachlorobenzene	<5	Indeno(1,2,3-cd)pyrene	<5
Hexachlorocyclopentadiene	<5	Hexachloroethane	<5	2-Methylphenol	<5
Isophorone	<5	2-Methylnaphthalene	<5	3-Nitroaniline	<20
4-Methylphenol	<5	2-Nitroaniline	<20	N-Nitrosodimethylamine	<5
4-Nitroaniline	<20	N-Nitroso-di-n-propylamine	<5	Nitrobenzene	<5
N-Nitrosodiphenylamine	<5	Naphthlene	<5	Pentachlorophenol	<20
2-Nitrophenol	<5	4-Nitrophenol	<20	Pyrene	<5
Phenanthrene	<5	Phenol	<5	2,4,6-Trichlorophenol	<5
1,2,4-Trichlorobenzene	<5	2,4,5-Trichlorophenol	<20	Aldrin	<0.01
Azobenzene	<5	Carbazole	<5	Alpha-BHC	<0.01
4,4-DDD	<0.02	Endosulfan II	<0.02	Beta-BHC	<0.01
4,4-DDE	<0.02	Endosulfan Sulfate	<0.02	Delta-BHC	<0.01
4,4-DDT	<0.02	Endrin	<0.02	Gamma-BHC	<0.01
Dieldrin	<0.02	Endrin Aldehyde	<0.02	Heptachlor Epoxide	<0.01
Endosulfan I	<0.01	Heptachlor	<0.01	Alpha-Chlordane	<0.01
Methoxychlor	<0.10	Endrin Ketone	<0.02	Aroclor-1016	<0.20
Gamma-Chlordane	<0.01	Toxaphene	<0.30	Aroclor-1242	<0.20
Aroclor-1221	<0.20	Aroclor-1232	<0.20	Aroclor-1260	<0.20
Aroclor-1248	<0.20	Aroclor-1254	<0.20	2,4-Dimethylphenol	<5
Aroclor-1262	<0.20	Aroclor-1268	<0.20		

Group 3. Glass Sample Containers for use in the analysis of Volatiles

Compound	Quantitation Limit (µg/L)	Compound	Quantitation Limit (µg/L)	Compound	Quantitation Limit (µg/L)
Acetone	<5	1,3-Dichloropropane	<1	Benzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1	1,2-Dichloropropane	<1
Bromodichloromethane	<1	trans-1,3-Dichloropropene	<1	Bromoform	<1
cis-1,3-Dichloropropene	<1	Bromomethane	<1	1,1-Dichloropropene	<1
2-Butanone	<5	Ethylbenzene	<1	tert-Butylbenzene	<1
Hexachlorobutadiene	<1	sec-Butylbenzene	<1	2-Hexanone	<5
n-Butylbenzene	<1	Isopropylbenzene	<1	Carbon Disulfide	<1
p-Isopropyltoluene	<1	Carbon Tetrachloride	<1	4-Methyl-2-pentanone	<5
Chlorobenzene	<1	Methylene Chloride	<2	Chloroethane	<1
Naphthalene	<1	Chloroform	<1	n-Propylbenzene	<1
Chloromethane	<1	Styrene	<1	2 & 4 Chlorotoluene	<1
1,1,2,2-Tetrachloroethane	<1	1,2-Dibromo-3-chloropropane	<1	Tetrachloroethene	<1
Dibromochloromethane	<1	Toluene	<1	1,2-Dibromoethane (EDB)	<1
1,2,3-Trichlorobenzene	<1	Dibromomethane	<1	1,2,4-Trichlorobenzene	<1
1,4-Dichlorobenzene	<1	1,1,2-Trichloroethane	<1	1,3-Dichlorobenzene	<1
1,1,1-Trichloroethane	<1	1,2-Dichlorobenzene	<1	Trichloroethene	<1
Dichlorodifluoromethane	<1	Trichlorofluoromethane	<1	1,2-Dichloroethane	<1
1,2,3-Trichloropropane	<1	1,1-Dichloroethane	<1	Bromochloromethane	<1
trans-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1		
Vinyl Acetate	<5	1,1-Dichloroethene	<1		
Xylenes (total)	<1	1,2,4-Trimethylbenzene	<1		
Vinyl Chloride	<1	cis-1,2-Dichloroethene	<1		

In addition to the above analytes in Group 3, 40 mL and 60 mL vials are certified for:

Compound	Quantitation Limit (µg/L)
Total Organic Carbon	<600

Please keep this certificate for your records and to facilitate any necessary correspondence.
If additional information is required, contact our Technical Service Department at(800) 625-4327.

James L. Riner

James L. Riner
QA Director

Chase Scientific Glass, Inc.
234 Cardiff Valley Road
Rockwood, TN 37854

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I-CHEM™ Brand Products

CERTIFICATE OF ANALYSIS

PRODUCTION NUMBER : 007630 **Item Number: S326-0020** **Item Description: VIAL CLEAR BOROSILICATE** **Group 3 is applicable**

This is your Certificate of Analysis for I-CHEM Certified™ product which has been prepared in accordance with I-CHEM Performance-Based Specifications. This product meets or exceeds analyte specifications established in the U.S. EPA "Specification and Guidance for Contaminant-free Sample Containers" for use in Superfund and other hazardous waste programs.

Group 1. Glass and HDPE/LDPE Sample containers for use in the analysis of Metals

Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg /L)
Aluminum	<80	Calcium (all HDPE)	<100	Magnesium	<100	Selenium	<2
Antimony	<5	Chromium	<10	Manganese	<10	Silver	<5
Arsenic	<2	Cobalt	<10	Mercury	<0.2	Sodium	<500
Barium	<20	Copper	<10	Nickel	<20	Sodium (all HDPE)	<100
Beryllium	<0.5	Iron	<50	Potassium	<750	Thallium	<5
Cadmium	<1	Lead	<2	Potassium (all HDPE)	<100	Vanadium	<10
Calcium	<500					Zinc	<10

In addition to the above analytes, NALGENE® containers are certified for these analytes:

Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)
Chloride	<100	Fluoride	<20	Nitrite	<50	Sulfate	<100
Cyanide	<10	Nitrate	<20	Paraquat (amber only)	<0.4	Sulfide	<30
Diquat (amber only)	<1.0					Sulfite	<1000

Group 2. Glass Sample Containers for use in the analysis of Semivolatiles and Pesticides/PCBs

Compound	Quantitation Limit (µg/L)	Compound	Quantitation Limit (µg/L)	Compound	Quantitation Limit (µg/L)
Acenaphthene	<5	Acenaphthylene	<5	Anthracene	<5
Benzo(a)anthracene	<5	Benzo(a)pyrene	<5	Benzo(b)fluoranthene	<5
Benzo(k)Fluoranthene	<5	Benzo(g,h,i)perylene	<5	Benzoic Acid	<20
Benzyl Alcohol	<5	4-Bromophenyl-phenylether	<5	Butylbenzylphthalate	<5
4-Chloroaniline	<5	4-Chloro-3-methylphenol	<5	bis-(2-Chloroethoxy) methane	<5
bis-(2-Chloroethyl)ether	<5	bis-(2-Chloroisopropyl)ether	<5	2-Chloronaphthalene	<5
2-Chlorophenol	<5	4-Chlorophenyl-phenylether	<5	Chrysene	<5
Di-n-butylphthalate	<5	Di-n-octylphthalate	<5	Dibenzo(a,h)anthracene	<5
Dibenzofuran	<5	1,2-Dichlorobenzene	<5	1,4-Dichlorobenzene	<5
1,3-Dichlorobenzene	<5	3,3 -Dichlorobenzidine	<5	2,4-Dichlorophenol	<5
Diethylphthalate	<5	Dimethylphthalate	<5	2,4-Dinitrotoluene	<5
4,6-Dinitro-2-methylphenol	<20	2,4-Dinitrophenol	<20	Fluoranthene	<5
2,6-Dinitrotoluene	<5	bis-(2-Ethylhexyl)phthalate	<5	Hexachlorobutadiene	<5
Fluorene	<5	Hexachlorobenzene	<5	Indeno(1,2,3-cd)pyrene	<5
Hexachlorocyclopentadiene	<5	Hexachloroethane	<5	2-Methylphenol	<5
Isophorone	<5	2-Methylnaphthalene	<5	3-Nitroaniline	<20
4-Methylphenol	<5	2-Nitroaniline	<20	N-Nitrosodimethylamine	<5
4-Nitroaniline	<20	N-Nitroso-di-n-propylamine	<5	Nitrobenzene	<5
N-Nitrosodiphenylamine	<5	Naphthalene	<5	Pentachlorophenol	<20
2-Nitrophenol	<5	4-Nitrophenol	<20	Pyrene	<5
Phenanthrene	<5	Phenol	<5	2,4,6-Trichlorophenol	<5
1,2,4-Trichlorobenzene	<5	2,4,5-Trichlorophenol	<20	Aldrin	<0.01
Azobenzene	<5	Carbazole	<5	Alpha-BHC	<0.01
4,4-DDD	<0.02	Endosulfan II	<0.02	Beta-BHC	<0.01
4,4-DDE	<0.02	Endosulfan Sulfate	<0.02	Delta-BHC	<0.01
4,4-DDT	<0.02	Endrin	<0.02	Gamma-BHC	<0.01
Dieldrin	<0.02	Endrin Aldehyde	<0.02	Heptachlor Epoxide	<0.01
Endosulfan I	<0.01	Heptachlor	<0.01	Alpha-Chlordane	<0.01
Methoxychlor	<0.10	Endrin Ketone	<0.02	Aroclor-1016	<0.20
Gamma-Chlordane	<0.01	Toxaphene	<0.30	Aroclor-1242	<0.20
Aroclor-1221	<0.20	Aroclor-1232	<0.20	Aroclor-1260	<0.20
Aroclor-1248	<0.20	Aroclor-1254	<0.20	2,4-Dimethylphenol	<5
Aroclor-1262	<0.20	Aroclor-1268	<0.20		

Group 3. Glass Sample Containers for use in the analysis of Volatiles

Compound	Quantitation Limit (µg/L)	Compound	Quantitation Limit (µg/L)	Compound	Quantitation Limit (µg/L)
Acetone	<5	1,3-Dichloropropane	<1	Benzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1	1,2-Dichloropropane	<1
Bromodichloromethane	<1	trans-1,3-Dichloropropene	<1	Bromoform	<1
cis-1,3-Dichloropropene	<1	Bromomethane	<1	1,1-Dichloropropene	<1
2-Butanone	<5	Ethylbenzene	<1	tert-Butylbenzene	<1
Hexachlorobutadiene	<1	sec-Butylbenzene	<1	2-Hexanone	<5
n-Butylbenzene	<1	Isopropylbenzene	<1	Carbon Disulfide	<1
p-Isopropyltoluene	<1	Carbon Tetrachloride	<1	4-Methyl-2-pentanone	<5
Chlorobenzene	<1	Methylene Chloride	<1	Chloroethane	<1
Naphthalene	<1	Chloroform	<1	n-Propylbenzene	<1
Chloromethane	<1	Styrene	<1	2 & 4 Chlorotoluene	<1
1,1,2,2-Tetrachloroethane	<1	1,2-Dibromo-3-chloropropane	<1	Tetrachloroethene	<1
Dibromochloromethane	<1	Toluene	<1	1,2-Dibromoethane (EDB)	<1
1,2,3-Trichlorobenzene	<1	Dibromomethane	<1	1,2,4-Trichlorobenzene	<1
1,4-Dichlorobenzene	<1	1,1,2-Trichloroethane	<1	1,3-Dichlorobenzene	<1
1,1,1-Trichloroethane	<1	1,2-Dichlorobenzene	<1	Trichloroethene	<1
Dichlorodifluoromethane	<1	Trichlorofluoromethane	<1	1,2-Dichloroethane	<1
1,2,3-Trichloropropane	<1	1,1-Dichloroethane	<1	Bromochloromethane	<1
trans-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1		
Vinyl Acetate	<5	1,1-Dichloroethene	<1		
Xylenes (total)	<1	1,2,4-Trimethylbenzene	<1		
Vinyl Chloride	<1	cis-1,2-Dichloroethene	<1		

In addition to the above analytes in Group 3, 40 mL and 60 mL vials are certified for:

Compound	Quantitation Limit (µg/L)
Total Organic Carbon	<600

Please keep this certificate for your records and to facilitate any necessary correspondence.
If additional information is required, contact our Technical Service Department at(800) 625-4327.

James L. Riner

James L. Riner
QA Director
00027 Rev. 2

Chase Scientific Glass, Inc.
234 Cardiff Valley Road
Rockwood, TN 37854

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0027

Section 3

Analysis Results

AMWTP Analytical Chemistry Laboratory

Data Report Narrative for ALD12005V

This data report contains volatile organic compound (VOC) analysis results for ten samples from waste drums and ten associated trip blanks, received 02/01/12 and 02/02/12 from ARP for CCP-INL.

Sample preparation and analysis was performed using CCP-TP-184 Revision 0, which implements the requirements of SW-846 Method 8260B.

Holding times for solid samples are 14 days from collection to extraction and 40 days from extraction to analysis. All samples were analyzed within the required holding times.

There are two initial calibrations (ICAL), IV512W01 and IV512W02 associated with these analyses. All compounds %RSD less than 15 and use average relative response factors for quantitation.

Methylene chloride was detected in the method blank run on 2/14/12 at less than 3x the MDL. Samples run on this day are B flagged on form I.

Samples 2BZ26 and 2BZ31 required a dilution due to analytes above the linear calibration range. The surrogates were diluted out for these dilutions.

Reanalysis results ("RA" suffix) only are reported for samples 2BZ36 and 2BZ41. The initial analyses for these two samples were invalidated due to potential cross-contamination from high level samples 2BZ26 and 2BZ31, which were analyzed immediately before them.

2BZ01MS failed the trichloroethene %recovery criteria. Trichloroethene is Z flagged on form Is. Comparison to satisfactory LCS recoveries indicates that the MS recovery failure is due to sample matrix.

Semivolatile organic Appendix VIII compounds were identified in the TIC searches for several waste samples. However, because these compounds were identified and reported from the SVOC analysis (see batch data report ALD12005S), these TICS are not reported as VOCs.

All other quality control parameters meet acceptance criteria for this analytical batch.

The CAS number for m/p-xylene is 179601-23-1. The CAS numbers for m-xylene and p-xylene are 108-38-3 and 106-42-3, respectively.

SUPERSEDED

AMWTP Analytical Chemistry Laboratory

Data Report Narrative for ALD12005V

This data report contains volatile organic compound (VOC) analysis results for ten samples from waste drums and ten associated trip blanks, received 02/01/12 and 02/02/12 from ARP for CCP-INL.

Sample preparation and analysis was performed using CCP-TP-184 Revision 0, which implements the requirements of SW-846 Method 8260B.

Holding times for solid samples are 14 days from collection to extraction and 40 days from extraction to analysis. All samples were analyzed within the required holding times.

There are two initial calibrations (ICAL), IV512W01 and IV512W02 associated with these analyses. All compounds %RSD less than 15 and use average relative response factors for quantitation.

Methylene chloride was detected in the method blank run on 2/14/12 at less than 3x the MDL. Samples run on this day are B flagged on form I.

Samples 2BZ26 and 2BZ31 required a dilution due to analytes above the linear calibration range. The surrogates were diluted out for these dilutions.

Reanalysis results ("RA" suffix) only are reported for samples 2BZ36 and 2BZ41. The initial analyses for these two samples were invalidated due to potential cross-contamination from high level samples 2BZ26 and 2BZ31, which were analyzed immediately before them.

2BZ01MS failed the trichloroethane %recovery criteria. Trichloroethane is Z flagged on form Is. Comparison to satisfactory LCS recoveries indicates that the MS recovery failure is due to sample matrix.

Semivolatile organic Appendix VIII compounds were identified in the TIC searches for several waste samples. However, because these compounds were identified and reported from the SVOC analysis (see batch data report ALD12005S), these TICS are not reported as VOCs.

All other quality control parameters meet acceptance criteria for this analytical batch.

The CAS number for m/p-xylene is 179601-23-1. The CAS numbers for m-xylene and p-xylene are 108-38-3 and 106-42-3, respectively.

3-21-12

AMWTP Analytical Chemistry Laboratory

Central Characterization Project

Data Qualifier Flag Definitions for VOCs

Flag	Definition
B	Analyte detected in associated laboratory blank or method blank
E	Reported analyte concentration exceeds the calibration range
D	Reported analyte concentration is from a secondary dilution of the sample
H	Holding time exceeded
J	Target Analyte concentration <PRQL but ≥ MDL
J	TIC concentration is estimated by comparison to nearest internal standard, and has high analytical uncertainty.
N	Presumptive evidence of a compound, based on a mass spectral library search (TICs only)
U	Analyte was undetected (reported as sample-specific MDL)
Z	One or more QC sample results do not meet acceptance criteria

TOTAL VOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405701V1	Lab Sample ID:	2BY95
Sampling Batch No:	S4200-LOT-05-07	Lab File ID:	SV500459
Date Sampled:	01/31/2012	Data Report Number:	ALD12005V
Date Extracted:	02/05/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	5 days		
Date/Time Analyzed:	02/28/2012 15:28	Instrument ID:	VOA-5
Analysis Holding Time:	23 days	Matrix:	SOLID
Preparation Method:	CCP-TP-184-R0	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	0.12	U
75-25-2	Bromoform	0.12	U
75-15-0	Carbon Disulfide	0.12	U
56-23-5	Carbon Tetrachloride	0.51	J
108-90-7	Chlorobenzene	0.12	U
67-66-3	Chloroform	0.12	U
75-35-4	1,1-Dichloroethene	0.25	U
107-06-2	1,2-Dichloroethane	0.12	U
100-41-4	Ethylbenzene	0.12	U
75-09-2	Methylene Chloride	0.12	U
179601-23-1	m-Xylene and p-Xylene mix	0.12	U
95-47-6	o-Xylene	0.12	U
79-34-5	1,1,2,2-Tetrachloroethane	0.12	U
127-18-4	Tetrachloroethene	4.0	J
108-88-3	Toluene	0.12	U
156-60-5	trans-1,2-Dichloroethene	0.12	U
71-55-6	1,1,1-Trichloroethane	0.12	U
79-01-6	Trichloroethene	1.1	JZ
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.25	U
79-00-5	1,1,2-Trichloroethane	0.12	U
75-69-4	Trichlorofluoromethane	0.12	U
75-01-4	Vinyl Chloride	0.12	U

TOTAL VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405701V1	Lab Sample ID:	2BY95
Sampling Batch No:	S4200-LOT-05-07	Lab File ID:	SV500459
Date Sampled:	01/31/2012	Data Report Number:	ALD12005V
Date Extracted:	02/05/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	5 days		
Date/Time Analyzed:	02/28/2012 15:28	Instrument ID:	VOA-5
Analysis Holding Time:	23 days	Matrix:	SOLID
Preparation Method:	CCP-TP-184-R0	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

Number of TICs Found: 0

	CAS Number	Tentatively Identified VOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

TOTAL VOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR4057T1V1	Lab Sample ID:	2BY96
Sampling Batch No:	S4200-LOT-05-07	Lab File ID:	SV500425
Date Sampled:	01/31/2012	Data Report Number:	ALD12005V
Date Extracted:	02/05/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	5 days		
Date/Time Analyzed:	02/23/2012 15:53	Instrument ID:	VOA-5
Analysis Holding Time:	18 days	Matrix:	SOLID
Preparation Method:	CCP-TP-184-R0	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	0.17	U
75-25-2	Bromoform	0.17	U
75-15-0	Carbon Disulfide	0.17	U
56-23-5	Carbon Tetrachloride	0.17	U
108-90-7	Chlorobenzene	0.17	U
67-66-3	Chloroform	0.17	U
75-35-4	1,1-Dichloroethene	0.33	U
107-06-2	1,2-Dichloroethane	0.17	U
100-41-4	Ethylbenzene	0.17	U
75-09-2	Methylene Chloride	0.17	U
179601-23-1	m-Xylene and p-Xylene mix	0.17	U
95-47-6	o-Xylene	0.17	U
79-34-5	1,1,2,2-Tetrachloroethane	0.17	U
127-18-4	Tetrachloroethene	0.17	U
108-88-3	Toluene	0.17	U
156-60-5	trans-1,2-Dichloroethene	0.17	U
71-55-6	1,1,1-Trichloroethane	0.17	U
79-01-6	Trichloroethene	0.17	UZ
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.33	U
79-00-5	1,1,2-Trichloroethane	0.17	U
75-69-4	Trichlorofluoromethane	0.17	U
75-01-4	Vinyl Chloride	0.17	U

TOTAL VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR4057T1V1	Lab Sample ID:	2BY96
Sampling Batch No:	S4200-LOT-05-07	Lab File ID:	SV500425
Date Sampled:	01/31/2012	Data Report Number:	ALD12005V
Date Extracted:	02/05/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	5 days		
Date/Time Analyzed:	02/23/2012 15:53	Instrument ID:	VOA-5
Analysis Holding Time:	18 days	Matrix:	SOLID
Preparation Method:	CCP-TP-184-R0	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

Number of TICs Found: 0

	CAS Number	Tentatively Identified VOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

TOTAL VOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405702V1	Lab Sample ID:	2BZ01
Sampling Batch No:	S4200-LOT-05-07	Lab File ID:	SV500458
Date Sampled:	01/31/2012	Data Report Number:	ALD12005V
Date Extracted:	02/05/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	5 days		
Date/Time Analyzed:	02/28/2012 14:56	Instrument ID:	VOA-5
Analysis Holding Time:	23 days	Matrix:	SOLID
Preparation Method:	CCP-TP-184-R0	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	0.15	U
75-25-2	Bromoform	0.15	U
75-15-0	Carbon Disulfide	0.15	U
56-23-5	Carbon Tetrachloride	0.15	U
108-90-7	Chlorobenzene	0.15	U
67-66-3	Chloroform	0.15	U
75-35-4	1,1-Dichloroethene	0.30	U
107-06-2	1,2-Dichloroethane	0.15	U
100-41-4	Ethylbenzene	0.15	U
75-09-2	Methylene Chloride	0.15	U
179601-23-1	m-Xylene and p-Xylene mix	0.15	U
95-47-6	o-Xylene	0.15	U
79-34-5	1,1,2,2-Tetrachloroethane	0.15	U
127-18-4	Tetrachloroethene	5.0	J
108-88-3	Toluene	0.15	U
156-60-5	trans-1,2-Dichloroethene	0.15	U
71-55-6	1,1,1-Trichloroethane	0.15	U
79-01-6	Trichloroethene	0.25	JZ
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.30	U
79-00-5	1,1,2-Trichloroethane	0.15	U
75-69-4	Trichlorofluoromethane	0.15	U
75-01-4	Vinyl Chloride	0.15	U

TOTAL VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405702V1	Lab Sample ID:	2BZ01
Sampling Batch No:	S4200-LOT-05-07	Lab File ID:	SV500458
Date Sampled:	01/31/2012	Data Report Number:	ALD12005V
Date Extracted:	02/05/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	5 days		
Date/Time Analyzed:	02/28/2012 14:56	Instrument ID:	VOA-5
Analysis Holding Time:	23 days	Matrix:	SOLID
Preparation Method:	CCP-TP-184-R0	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

Number of TICs Found: 0

	CAS Number	Tentatively Identified VOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

TOTAL VOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR4057T2V1	Lab Sample ID:	2BZ02
Sampling Batch No:	S4200-LOT-05-07	Lab File ID:	SV500434
Date Sampled:	01/31/2012	Data Report Number:	ALD12005V
Date Extracted:	02/05/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	5 days		
Date/Time Analyzed:	02/23/2012 20:37	Instrument ID:	VOA-5
Analysis Holding Time:	18 days	Matrix:	SOLID
Preparation Method:	CCP-TP-184-R0	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	0.17	U
75-25-2	Bromoform	0.17	U
75-15-0	Carbon Disulfide	0.17	U
56-23-5	Carbon Tetrachloride	0.17	U
108-90-7	Chlorobenzene	0.17	U
67-66-3	Chloroform	0.17	U
75-35-4	1,1-Dichloroethene	0.34	U
107-06-2	1,2-Dichloroethane	0.17	U
100-41-4	Ethylbenzene	0.17	U
75-09-2	Methylene Chloride	0.17	U
179601-23-1	m-Xylene and p-Xylene mix	0.17	U
95-47-6	o-Xylene	0.17	U
79-34-5	1,1,2,2-Tetrachloroethane	0.17	U
127-18-4	Tetrachloroethene	0.17	U
108-88-3	Toluene	0.17	U
156-60-5	trans-1,2-Dichloroethene	0.17	U
71-55-6	1,1,1-Trichloroethane	0.17	U
79-01-6	Trichloroethene	0.17	UZ
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.34	U
79-00-5	1,1,2-Trichloroethane	0.17	U
75-69-4	Trichlorofluoromethane	0.17	U
75-01-4	Vinyl Chloride	0.17	U

TOTAL VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR4057T2V1	Lab Sample ID:	2BZ02
Sampling Batch No:	S4200-LOT-05-07	Lab File ID:	SV500434
Date Sampled:	01/31/2012	Data Report Number:	ALD12005V
Date Extracted:	02/05/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	5 days		
Date/Time Analyzed:	02/23/2012 20:37	Instrument ID:	VOA-5
Analysis Holding Time:	18 days	Matrix:	SOLID
Preparation Method:	CCP-TP-184-R0	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

Number of TICs Found: 0

	CAS Number	Tentatively Identified VOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

TOTAL VOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405801V1	Lab Sample ID:	2BZ06
Sampling Batch No:	S4200-LOT-05-08	Lab File ID:	SV500397
Date Sampled:	01/31/2012	Data Report Number:	ALD12005V
Date Extracted:	02/05/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	5 days		
Date/Time Analyzed:	02/14/2012 13:47	Instrument ID:	VOA-5
Analysis Holding Time:	9 days	Matrix:	SOLID
Preparation Method:	CCP-TP-184-R0	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	0.21	U
75-25-2	Bromoform	0.21	U
75-15-0	Carbon Disulfide	0.21	U
56-23-5	Carbon Tetrachloride	2.0	J
108-90-7	Chlorobenzene	0.21	U
67-66-3	Chloroform	0.21	U
75-35-4	1,1-Dichloroethene	0.41	U
107-06-2	1,2-Dichloroethane	0.21	U
100-41-4	Ethylbenzene	0.21	U
75-09-2	Methylene Chloride	0.21	UB
179601-23-1	m-Xylene and p-Xylene mix	0.21	U
95-47-6	o-Xylene	0.21	U
79-34-5	1,1,2,2-Tetrachloroethane	0.21	U
127-18-4	Tetrachloroethene	1.1	J
108-88-3	Toluene	0.21	U
156-60-5	trans-1,2-Dichloroethene	0.21	U
71-55-6	1,1,1-Trichloroethane	0.21	U
79-01-6	Trichloroethene	2.4	JZ
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.41	U
79-00-5	1,1,2-Trichloroethane	0.21	U
75-69-4	Trichlorofluoromethane	0.21	U
75-01-4	Vinyl Chloride	0.21	U

TOTAL VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405801V1	Lab Sample ID:	2BZ06
Sampling Batch No:	S4200-LOT-05-08	Lab File ID:	SV500397
Date Sampled:	01/31/2012	Data Report Number:	ALD12005V
Date Extracted:	02/05/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	5 days		
Date/Time Analyzed:	02/14/2012 13:47	Instrument ID:	VOA-5
Analysis Holding Time:	9 days	Matrix:	SOLID
Preparation Method:	CCP-TP-184-R0	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

Number of TICs Found: 0

	CAS Number	Tentatively Identified VOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

TOTAL VOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR4058T1V1	Lab Sample ID:	2BZ07
Sampling Batch No:	S4200-LOT-05-08	Lab File ID:	SV500426
Date Sampled:	01/31/2012	Data Report Number:	ALD12005V
Date Extracted:	02/05/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	5 days		
Date/Time Analyzed:	02/23/2012 16:25	Instrument ID:	VOA-5
Analysis Holding Time:	18 days	Matrix:	SOLID
Preparation Method:	CCP-TP-184-R0	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	0.17	U
75-25-2	Bromoform	0.17	U
75-15-0	Carbon Disulfide	0.17	U
56-23-5	Carbon Tetrachloride	0.17	U
108-90-7	Chlorobenzene	0.17	U
67-66-3	Chloroform	0.17	U
75-35-4	1,1-Dichloroethene	0.33	U
107-06-2	1,2-Dichloroethane	0.17	U
100-41-4	Ethylbenzene	0.17	U
75-09-2	Methylene Chloride	0.17	U
179601-23-1	m-Xylene and p-Xylene mix	0.17	U
95-47-6	o-Xylene	0.17	U
79-34-5	1,1,2,2-Tetrachloroethane	0.17	U
127-18-4	Tetrachloroethene	0.17	U
108-88-3	Toluene	0.17	U
156-60-5	trans-1,2-Dichloroethene	0.17	U
71-55-6	1,1,1-Trichloroethane	0.17	U
79-01-6	Trichloroethene	0.17	UZ
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.33	U
79-00-5	1,1,2-Trichloroethane	0.17	U
75-69-4	Trichlorofluoromethane	0.17	U
75-01-4	Vinyl Chloride	0.17	U

TOTAL VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR4058T1V1	Lab Sample ID:	2BZ07
Sampling Batch No:	S4200-LOT-05-08	Lab File ID:	SV500426
Date Sampled:	01/31/2012	Data Report Number:	ALD12005V
Date Extracted:	02/05/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	5 days		
Date/Time Analyzed:	02/23/2012 16:25	Instrument ID:	VOA-5
Analysis Holding Time:	18 days	Matrix:	SOLID
Preparation Method:	CCP-TP-184-R0	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

Number of TICs Found: 0

	CAS Number	Tentatively Identified VOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

TOTAL VOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405802V1	Lab Sample ID:	2BZ11
Sampling Batch No:	S4200-LOT-05-08	Lab File ID:	SV500398
Date Sampled:	01/31/2012	Data Report Number:	ALD12005V
Date Extracted:	02/05/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	5 days		
Date/Time Analyzed:	02/14/2012 14:19	Instrument ID:	VOA-5
Analysis Holding Time:	9 days	Matrix:	SOLID
Preparation Method:	CCP-TP-184-R0	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	0.20	U
75-25-2	Bromoform	0.20	U
75-15-0	Carbon Disulfide	0.20	U
56-23-5	Carbon Tetrachloride	4.4	J
108-90-7	Chlorobenzene	0.20	U
67-66-3	Chloroform	0.58	J
75-35-4	1,1-Dichloroethene	0.39	U
107-06-2	1,2-Dichloroethane	0.20	U
100-41-4	Ethylbenzene	0.20	U
75-09-2	Methylene Chloride	0.20	UB
179601-23-1	m-Xylene and p-Xylene mix	0.20	U
95-47-6	o-Xylene	0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	U
127-18-4	Tetrachloroethene	1.9	J
108-88-3	Toluene	0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	U
71-55-6	1,1,1-Trichloroethane	0.20	U
79-01-6	Trichloroethene	4.2	JZ
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.39	U
79-00-5	1,1,2-Trichloroethane	0.20	U
75-69-4	Trichlorofluoromethane	0.20	U
75-01-4	Vinyl Chloride	0.20	U

TOTAL VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405802V1	Lab Sample ID:	2BZ11
Sampling Batch No:	S4200-LOT-05-08	Lab File ID:	SV500398
Date Sampled:	01/31/2012	Data Report Number:	ALD12005V
Date Extracted:	02/05/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	5 days		
Date/Time Analyzed:	02/14/2012 14:19	Instrument ID:	VOA-5
Analysis Holding Time:	9 days	Matrix:	SOLID
Preparation Method:	CCP-TP-184-R0	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

Number of TICs Found: 0

	CAS Number	Tentatively Identified VOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

TOTAL VOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR4058T2V1	Lab Sample ID:	2BZ12
Sampling Batch No:	S4200-LOT-05-08	Lab File ID:	SV500427
Date Sampled:	01/31/2012	Data Report Number:	ALD12005V
Date Extracted:	02/05/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	5 days		
Date/Time Analyzed:	02/23/2012 16:56	Instrument ID:	VOA-5
Analysis Holding Time:	18 days	Matrix:	SOLID
Preparation Method:	CCP-TP-184-R0	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	0.17	U
75-25-2	Bromoform	0.17	U
75-15-0	Carbon Disulfide	0.17	U
56-23-5	Carbon Tetrachloride	0.17	U
108-90-7	Chlorobenzene	0.17	U
67-66-3	Chloroform	0.17	U
75-35-4	1,1-Dichloroethene	0.33	U
107-06-2	1,2-Dichloroethane	0.17	U
100-41-4	Ethylbenzene	0.17	U
75-09-2	Methylene Chloride	0.17	U
179601-23-1	m-Xylene and p-Xylene mix	0.17	U
95-47-6	o-Xylene	0.17	U
79-34-5	1,1,2,2-Tetrachloroethane	0.17	U
127-18-4	Tetrachloroethene	0.17	U
108-88-3	Toluene	0.17	U
156-60-5	trans-1,2-Dichloroethene	0.17	U
71-55-6	1,1,1-Trichloroethane	0.17	U
79-01-6	Trichloroethene	0.17	UZ
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.33	U
79-00-5	1,1,2-Trichloroethane	0.17	U
75-69-4	Trichlorofluoromethane	0.17	U
75-01-4	Vinyl Chloride	0.17	U

TOTAL VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR4058T2V1	Lab Sample ID:	2BZ12
Sampling Batch No:	S4200-LOT-05-08	Lab File ID:	SV500427
Date Sampled:	01/31/2012	Data Report Number:	ALD12005V
Date Extracted:	02/05/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	5 days		
Date/Time Analyzed:	02/23/2012 16:56	Instrument ID:	VOA-5
Analysis Holding Time:	18 days	Matrix:	SOLID
Preparation Method:	CCP-TP-184-R0	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

Number of TICs Found: 0

	CAS Number	Tentatively Identified VOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

TOTAL VOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR406001V1	Lab Sample ID:	2BZ16
Sampling Batch No:	S4200-LOT-05-03	Lab File ID:	SV500399
Date Sampled:	02/01/2012	Data Report Number:	ALD12005V
Date Extracted:	02/05/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	4 days		
Date/Time Analyzed:	02/14/2012 15:39	Instrument ID:	VOA-5
Analysis Holding Time:	9 days	Matrix:	SOLID
Preparation Method:	CCP-TP-184-R0	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	0.12	U
75-25-2	Bromoform	0.12	U
75-15-0	Carbon Disulfide	0.12	U
56-23-5	Carbon Tetrachloride	0.12	U
108-90-7	Chlorobenzene	0.12	U
67-66-3	Chloroform	0.12	U
75-35-4	1,1-Dichloroethene	0.24	U
107-06-2	1,2-Dichloroethane	0.12	U
100-41-4	Ethylbenzene	0.12	U
75-09-2	Methylene Chloride	0.12	UB
179601-23-1	m-Xylene and p-Xylene mix	0.12	U
95-47-6	o-Xylene	0.12	U
79-34-5	1,1,2,2-Tetrachloroethane	0.12	U
127-18-4	Tetrachloroethene	0.12	U
108-88-3	Toluene	0.12	U
156-60-5	trans-1,2-Dichloroethene	0.12	U
71-55-6	1,1,1-Trichloroethane	0.12	U
79-01-6	Trichloroethene	0.12	UZ
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.24	U
79-00-5	1,1,2-Trichloroethane	0.12	U
75-69-4	Trichlorofluoromethane	0.12	U
75-01-4	Vinyl Chloride	0.12	U

TOTAL VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR406001V1	Lab Sample ID:	2BZ16
Sampling Batch No:	S4200-LOT-05-03	Lab File ID:	SV500399
Date Sampled:	02/01/2012	Data Report Number:	ALD12005V
Date Extracted:	02/05/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	4 days		
Date/Time Analyzed:	02/14/2012 15:39	Instrument ID:	VOA-5
Analysis Holding Time:	9 days	Matrix:	SOLID
Preparation Method:	CCP-TP-184-R0	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

Number of TICs Found: 0

	CAS Number	Tentatively Identified VOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

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TOTAL VOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR4060T1V1	Lab Sample ID:	2BZ17
Sampling Batch No:	S4200-LOT-05-03	Lab File ID:	SV500428
Date Sampled:	02/01/2012	Data Report Number:	ALD12005V
Date Extracted:	02/05/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	4 days		
Date/Time Analyzed:	02/23/2012 17:28	Instrument ID:	VOA-5
Analysis Holding Time:	18 days	Matrix:	SOLID
Preparation Method:	CCP-TP-184-R0	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	0.17	U
75-25-2	Bromoform	0.17	U
75-15-0	Carbon Disulfide	0.17	U
56-23-5	Carbon Tetrachloride	0.17	U
108-90-7	Chlorobenzene	0.17	U
67-66-3	Chloroform	0.17	U
75-35-4	1,1-Dichloroethene	0.34	U
107-06-2	1,2-Dichloroethane	0.17	U
100-41-4	Ethylbenzene	0.17	U
75-09-2	Methylene Chloride	0.17	U
179601-23-1	m-Xylene and p-Xylene mix	0.17	U
95-47-6	o-Xylene	0.17	U
79-34-5	1,1,2,2-Tetrachloroethane	0.17	U
127-18-4	Tetrachloroethene	0.17	U
108-88-3	Toluene	0.17	U
156-60-5	trans-1,2-Dichloroethene	0.17	U
71-55-6	1,1,1-Trichloroethane	0.17	U
79-01-6	Trichloroethene	0.17	UZ
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.34	U
79-00-5	1,1,2-Trichloroethane	0.17	U
75-69-4	Trichlorofluoromethane	0.17	U
75-01-4	Vinyl Chloride	0.17	U

TOTAL VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR4060T1V1	Lab Sample ID:	2BZ17
Sampling Batch No:	S4200-LOT-05-03	Lab File ID:	SV500428
Date Sampled:	02/01/2012	Data Report Number:	ALD12005V
Date Extracted:	02/05/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	4 days		
Date/Time Analyzed:	02/23/2012 17:28	Instrument ID:	VOA-5
Analysis Holding Time:	18 days	Matrix:	SOLID
Preparation Method:	CCP-TP-184-R0	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

Number of TICs Found: 0

	CAS Number	Tentatively Identified VOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

TOTAL VOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR406002V1	Lab Sample ID:	2BZ21
Sampling Batch No:	S4200-LOT-05-03	Lab File ID:	SV500400
Date Sampled:	02/01/2012	Data Report Number:	ALD12005V
Date Extracted:	02/05/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	4 days		
Date/Time Analyzed:	02/14/2012 16:11	Instrument ID:	VOA-5
Analysis Holding Time:	9 days	Matrix:	SOLID
Preparation Method:	CCP-TP-184-R0	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	0.14	U
75-25-2	Bromoform	0.14	U
75-15-0	Carbon Disulfide	0.14	U
56-23-5	Carbon Tetrachloride	0.14	U
108-90-7	Chlorobenzene	0.14	U
67-66-3	Chloroform	0.14	U
75-35-4	1,1-Dichloroethene	0.29	U
107-06-2	1,2-Dichloroethane	0.14	U
100-41-4	Ethylbenzene	0.14	U
75-09-2	Methylene Chloride	0.14	UB
179601-23-1	m-Xylene and p-Xylene mix	0.14	U
95-47-6	o-Xylene	0.14	U
79-34-5	1,1,2,2-Tetrachloroethane	0.14	U
127-18-4	Tetrachloroethene	0.14	U
108-88-3	Toluene	0.14	U
156-60-5	trans-1,2-Dichloroethene	0.14	U
71-55-6	1,1,1-Trichloroethane	0.14	U
79-01-6	Trichloroethene	0.14	UZ
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.29	U
79-00-5	1,1,2-Trichloroethane	0.14	U
75-69-4	Trichlorofluoromethane	0.14	U
75-01-4	Vinyl Chloride	0.14	U

TOTAL VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR406002V1	Lab Sample ID:	2BZ21
Sampling Batch No:	S4200-LOT-05-03	Lab File ID:	SV500400
Date Sampled:	02/01/2012	Data Report Number:	ALD12005V
Date Extracted:	02/05/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	4 days		
Date/Time Analyzed:	02/14/2012 16:11	Instrument ID:	VOA-5
Analysis Holding Time:	9 days	Matrix:	SOLID
Preparation Method:	CCP-TP-184-R0	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

Number of TICs Found: 0

	CAS Number	Tentatively Identified VOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

TOTAL VOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR4060T2V1	Lab Sample ID:	2BZ22
Sampling Batch No:	S4200-LOT-05-03	Lab File ID:	SV500455
Date Sampled:	02/01/2012	Data Report Number:	ALD12005V
Date Extracted:	02/05/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	4 days		
Date/Time Analyzed:	02/28/2012 13:21	Instrument ID:	VOA-5
Analysis Holding Time:	23 days	Matrix:	SOLID
Preparation Method:	CCP-TP-184-R0	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	0.17	U
75-25-2	Bromoform	0.17	U
75-15-0	Carbon Disulfide	0.17	U
56-23-5	Carbon Tetrachloride	0.17	U
108-90-7	Chlorobenzene	0.17	U
67-66-3	Chloroform	0.17	U
75-35-4	1,1-Dichloroethene	0.33	U
107-06-2	1,2-Dichloroethane	0.17	U
100-41-4	Ethylbenzene	0.17	U
75-09-2	Methylene Chloride	0.17	U
179601-23-1	m-Xylene and p-Xylene mix	0.17	U
95-47-6	o-Xylene	0.17	U
79-34-5	1,1,2,2-Tetrachloroethane	0.17	U
127-18-4	Tetrachloroethene	0.17	U
108-88-3	Toluene	0.17	U
156-60-5	trans-1,2-Dichloroethene	0.17	U
71-55-6	1,1,1-Trichloroethane	0.17	U
79-01-6	Trichloroethene	0.17	UZ
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.33	U
79-00-5	1,1,2-Trichloroethane	0.17	U
75-69-4	Trichlorofluoromethane	0.17	U
75-01-4	Vinyl Chloride	0.17	U

TOTAL VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR4060T2V1	Lab Sample ID:	2BZ22
Sampling Batch No:	S4200-LOT-05-03	Lab File ID:	SV500455
Date Sampled:	02/01/2012	Data Report Number:	ALD12005V
Date Extracted:	02/05/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	4 days		
Date/Time Analyzed:	02/28/2012 13:21	Instrument ID:	VOA-5
Analysis Holding Time:	23 days	Matrix:	SOLID
Preparation Method:	CCP-TP-184-R0	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

Number of TICs Found: 0

	CAS Number	Tentatively Identified VOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

TOTAL VOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405001V1	Lab Sample ID:	2BZ26
Sampling Batch No:	S4200-LOT-05-10	Lab File ID:	SV500401
Date Sampled:	02/02/2012	Data Report Number:	ALD12005V
Date Extracted:	02/05/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	3 days		
Date/Time Analyzed:	02/14/2012 16:43	Instrument ID:	VOA-5
Analysis Holding Time:	9 days	Matrix:	SOLID
Preparation Method:	CCP-TP-184-R0	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	0.096	U
75-25-2	Bromoform	0.096	U
75-15-0	Carbon Disulfide	0.10	J
56-23-5	Carbon Tetrachloride	430	E
108-90-7	Chlorobenzene	0.096	U
67-66-3	Chloroform	20	E
75-35-4	1,1-Dichloroethene	0.37	J
107-06-2	1,2-Dichloroethane	0.096	U
100-41-4	Ethylbenzene	0.096	U
75-09-2	Methylene Chloride	0.79	JB
179601-23-1	m-Xylene and p-Xylene mix	0.096	U
95-47-6	o-Xylene	0.096	U
79-34-5	1,1,2,2-Tetrachloroethane	2.0	J
127-18-4	Tetrachloroethene	390	E
108-88-3	Toluene	3.4	J
156-60-5	trans-1,2-Dichloroethene	0.096	U
71-55-6	1,1,1-Trichloroethane	49	E
79-01-6	Trichloroethene	140	EZ
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.19	U
79-00-5	1,1,2-Trichloroethane	0.77	J
75-69-4	Trichlorofluoromethane	0.096	U
75-01-4	Vinyl Chloride	0.096	U

TOTAL VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405001V1	Lab Sample ID:	2BZ26
Sampling Batch No:	S4200-LOT-05-10	Lab File ID:	SV500401
Date Sampled:	02/02/2012	Data Report Number:	ALD12005V
Date Extracted:	02/05/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	3 days		
Date/Time Analyzed:	02/14/2012 16:43	Instrument ID:	VOA-5
Analysis Holding Time:	9 days	Matrix:	SOLID
Preparation Method:	CCP-TP-184-R0	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

Number of TICs Found: 0

	CAS Number	Tentatively Identified VOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

TOTAL VOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405001V1DL80	Lab Sample ID:	2BZ26DL80
Sampling Batch No:	S4200-LOT-05-10	Lab File ID:	SV500414
Date Sampled:	02/02/2012	Data Report Number:	ALD12005V
Date Extracted:	02/05/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	3 days		
Date/Time Analyzed:	02/20/2012 15:54	Instrument ID:	VOA-5
Analysis Holding Time:	15 days	Matrix:	SOLID
Preparation Method:	CCP-TP-184-R0	Dilution Factor:	80
Analytical Method:	CCP-TP-184-R0		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	7.7	UD
75-25-2	Bromoform	7.7	UD
75-15-0	Carbon Disulfide	7.7	UD
56-23-5	Carbon Tetrachloride	870	D
108-90-7	Chlorobenzene	7.7	UD
67-66-3	Chloroform	14	D
75-35-4	1,1-Dichloroethene	15	UD
107-06-2	1,2-Dichloroethane	7.7	UD
100-41-4	Ethylbenzene	7.7	UD
75-09-2	Methylene Chloride	7.7	UD
179601-23-1	m-Xylene and p-Xylene mix	7.7	UD
95-47-6	o-Xylene	7.7	UD
79-34-5	1,1,2,2-Tetrachloroethane	7.7	UD
127-18-4	Tetrachloroethene	720	D
108-88-3	Toluene	7.7	UD
156-60-5	trans-1,2-Dichloroethene	7.7	UD
71-55-6	1,1,1-Trichloroethane	31	D
79-01-6	Trichloroethene	130	DZ
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	15	UD
79-00-5	1,1,2-Trichloroethane	7.7	UD
75-69-4	Trichlorofluoromethane	7.7	UD
75-01-4	Vinyl Chloride	7.7	UD

TOTAL VOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR4050T1V1	Lab Sample ID:	2BZ27
Sampling Batch No:	S4200-LOT-05-10	Lab File ID:	SV500430
Date Sampled:	02/02/2012	Data Report Number:	ALD12005V
Date Extracted:	02/02/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	<1 day		
Date/Time Analyzed:	02/23/2012 18:31	Instrument ID:	VOA-5
Analysis Holding Time:	21 days	Matrix:	SOLID
Preparation Method:	CCP-TP-184-R0	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	0.16	U
75-25-2	Bromoform	0.16	U
75-15-0	Carbon Disulfide	0.16	U
56-23-5	Carbon Tetrachloride	0.38	J
108-90-7	Chlorobenzene	0.16	U
67-66-3	Chloroform	0.16	U
75-35-4	1,1-Dichloroethene	0.33	U
107-06-2	1,2-Dichloroethane	0.16	U
100-41-4	Ethylbenzene	0.16	U
75-09-2	Methylene Chloride	0.16	U
179601-23-1	m-Xylene and p-Xylene mix	0.16	U
95-47-6	o-Xylene	0.16	U
79-34-5	1,1,2,2-Tetrachloroethane	0.16	U
127-18-4	Tetrachloroethene	0.16	U
108-88-3	Toluene	0.16	U
156-60-5	trans-1,2-Dichloroethene	0.16	U
71-55-6	1,1,1-Trichloroethane	0.16	U
79-01-6	Trichloroethene	0.16	UZ
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.33	U
79-00-5	1,1,2-Trichloroethane	0.16	U
75-69-4	Trichlorofluoromethane	0.16	U
75-01-4	Vinyl Chloride	0.16	U

TOTAL VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR4050T1V1	Lab Sample ID:	2BZ27
Sampling Batch No:	S4200-LOT-05-10	Lab File ID:	SV500430
Date Sampled:	02/02/2012	Data Report Number:	ALD12005V
Date Extracted:	02/02/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	<1 day		
Date/Time Analyzed:	02/23/2012 18:31	Instrument ID:	VOA-5
Analysis Holding Time:	21 days	Matrix:	SOLID
Preparation Method:	CCP-TP-184-R0	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

Number of TICs Found: 0

	CAS Number	Tentatively Identified VOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

TOTAL VOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405002V1	Lab Sample ID:	2BZ31
Sampling Batch No:	S4200-LOT-05-10	Lab File ID:	SV500402
Date Sampled:	02/02/2012	Data Report Number:	ALD12005V
Date Extracted:	02/02/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	<1 day		
Date/Time Analyzed:	02/14/2012 17:14	Instrument ID:	VOA-5
Analysis Holding Time:	12 days	Matrix:	SOLID
Preparation Method:	CCP-TP-184-R0	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	0.11	U
75-25-2	Bromoform	0.11	U
75-15-0	Carbon Disulfide	0.11	U
56-23-5	Carbon Tetrachloride	400	E
108-90-7	Chlorobenzene	0.11	U
67-66-3	Chloroform	7.3	J
75-35-4	1,1-Dichloroethene	0.22	U
107-06-2	1,2-Dichloroethane	0.11	U
100-41-4	Ethylbenzene	0.11	U
75-09-2	Methylene Chloride	0.11	UB
179601-23-1	m-Xylene and p-Xylene mix	0.11	U
95-47-6	o-Xylene	0.11	U
79-34-5	1,1,2,2-Tetrachloroethane	1.8	J
127-18-4	Tetrachloroethene	380	E
108-88-3	Toluene	2.6	J
156-60-5	trans-1,2-Dichloroethene	0.11	U
71-55-6	1,1,1-Trichloroethane	20	E
79-01-6	Trichloroethene	88	EZ
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.22	U
79-00-5	1,1,2-Trichloroethane	0.57	J
75-69-4	Trichlorofluoromethane	0.11	U
75-01-4	Vinyl Chloride	0.11	U

TOTAL VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405002V1	Lab Sample ID:	2BZ31
Sampling Batch No:	S4200-LOT-05-10	Lab File ID:	SV500402
Date Sampled:	02/02/2012	Data Report Number:	ALD12005V
Date Extracted:	02/02/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	<1 day		
Date/Time Analyzed:	02/14/2012 17:14	Instrument ID:	VOA-5
Analysis Holding Time:	12 days	Matrix:	SOLID
Preparation Method:	CCP-TP-184-R0	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

Number of TICs Found: 1

	CAS Number	Tentatively Identified VOCs	Concentration mg/kg	Q	Retention Time (min)
1	76-01-7	pentachloroethane	4.1	JN	21.38

TOTAL VOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405002V1DL50	Lab Sample ID:	2BZ31DL50
Sampling Batch No:	S4200-LOT-05-10	Lab File ID:	SV500410
Date Sampled:	02/02/2012	Data Report Number:	ALD12005V
Date Extracted:	02/02/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	<1 day		
Date/Time Analyzed:	02/20/2012 13:47	Instrument ID:	VOA-5
Analysis Holding Time:	18 days	Matrix:	SOLID
Preparation Method:	CCP-TP-184-R0	Dilution Factor:	50
Analytical Method:	CCP-TP-184-R0		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	5.4	UD
75-25-2	Bromoform	5.4	UD
75-15-0	Carbon Disulfide	5.4	UD
56-23-5	Carbon Tetrachloride	420	D
108-90-7	Chlorobenzene	5.4	UD
67-66-3	Chloroform	5.6	JD
75-35-4	1,1-Dichloroethene	11	UD
107-06-2	1,2-Dichloroethane	5.4	UD
100-41-4	Ethylbenzene	5.4	UD
75-09-2	Methylene Chloride	5.4	UD
179601-23-1	m-Xylene and p-Xylene mix	5.4	UD
95-47-6	o-Xylene	5.4	UD
79-34-5	1,1,2,2-Tetrachloroethane	5.4	UD
127-18-4	Tetrachloroethene	560	D
108-88-3	Toluene	5.4	UD
156-60-5	trans-1,2-Dichloroethene	5.4	UD
71-55-6	1,1,1-Trichloroethane	13	D
79-01-6	Trichloroethene	70	DZ
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	11	UD
79-00-5	1,1,2-Trichloroethane	5.4	UD
75-69-4	Trichlorofluoromethane	5.4	UD
75-01-4	Vinyl Chloride	5.4	UD

TOTAL VOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR4050T2V1	Lab Sample ID:	2BZ32
Sampling Batch No:	S4200-LOT-05-10	Lab File ID:	SV500456
Date Sampled:	02/02/2012	Data Report Number:	ALD12005V
Date Extracted:	02/05/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	3 days		
Date/Time Analyzed:	02/28/2012 13:52	Instrument ID:	VOA-5
Analysis Holding Time:	23 days	Matrix:	SOLID
Preparation Method:	CCP-TP-184-R0	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	0.17	U
75-25-2	Bromoform	0.17	U
75-15-0	Carbon Disulfide	0.17	U
56-23-5	Carbon Tetrachloride	0.74	J
108-90-7	Chlorobenzene	0.17	U
67-66-3	Chloroform	0.17	U
75-35-4	1,1-Dichloroethene	0.34	U
107-06-2	1,2-Dichloroethane	0.17	U
100-41-4	Ethylbenzene	0.17	U
75-09-2	Methylene Chloride	0.17	U
179601-23-1	m-Xylene and p-Xylene mix	0.17	U
95-47-6	o-Xylene	0.17	U
79-34-5	1,1,2,2-Tetrachloroethane	0.17	U
127-18-4	Tetrachloroethene	0.17	U
108-88-3	Toluene	0.17	U
156-60-5	trans-1,2-Dichloroethene	0.17	U
71-55-6	1,1,1-Trichloroethane	0.17	U
79-01-6	Trichloroethene	0.17	UZ
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.34	U
79-00-5	1,1,2-Trichloroethane	0.17	U
75-69-4	Trichlorofluoromethane	0.17	U
75-01-4	Vinyl Chloride	0.17	U

TOTAL VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR4050T2V1	Lab Sample ID:	2BZ32
Sampling Batch No:	S4200-LOT-05-10	Lab File ID:	SV500456
Date Sampled:	02/02/2012	Data Report Number:	ALD12005V
Date Extracted:	02/05/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	3 days		
Date/Time Analyzed:	02/28/2012 13:52	Instrument ID:	VOA-5
Analysis Holding Time:	23 days	Matrix:	SOLID
Preparation Method:	CCP-TP-184-R0	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

Number of TICs Found: 0

	CAS Number	Tentatively Identified VOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

TOTAL VOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405901V1RA	Lab Sample ID:	2BZ36RA
Sampling Batch No:	S4200-LOT-05-06	Lab File ID:	SV500411
Date Sampled:	02/02/2012	Data Report Number:	ALD12005V
Date Extracted:	02/02/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	<1 day		
Date/Time Analyzed:	02/20/2012 14:19	Instrument ID:	VOA-5
Analysis Holding Time:	18 days	Matrix:	SOLID
Preparation Method:	CCP-TP-184-R0	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	0.11	U
75-25-2	Bromoform	0.11	U
75-15-0	Carbon Disulfide	0.11	U
56-23-5	Carbon Tetrachloride	1.6	J
108-90-7	Chlorobenzene	0.11	U
67-66-3	Chloroform	0.11	U
75-35-4	1,1-Dichloroethene	0.21	U
107-06-2	1,2-Dichloroethane	0.11	U
100-41-4	Ethylbenzene	0.11	U
75-09-2	Methylene Chloride	0.11	U
179601-23-1	m-Xylene and p-Xylene mix	0.11	U
95-47-6	o-Xylene	0.11	U
79-34-5	1,1,2,2-Tetrachloroethane	0.11	U
127-18-4	Tetrachloroethene	0.32	J
108-88-3	Toluene	0.11	U
156-60-5	trans-1,2-Dichloroethene	0.11	U
71-55-6	1,1,1-Trichloroethane	0.11	U
79-01-6	Trichloroethene	0.22	JZ
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.21	U
79-00-5	1,1,2-Trichloroethane	0.11	U
75-69-4	Trichlorofluoromethane	0.11	U
75-01-4	Vinyl Chloride	0.11	U

TOTAL VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405901V1RA	Lab Sample ID:	2BZ36RA
Sampling Batch No:	S4200-LOT-05-06	Lab File ID:	SV500411
Date Sampled:	02/02/2012	Data Report Number:	ALD12005V
Date Extracted:	02/02/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	<1 day		
Date/Time Analyzed:	02/20/2012 14:19	Instrument ID:	VOA-5
Analysis Holding Time:	18 days	Matrix:	SOLID
Preparation Method:	CCP-TP-184-R0	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

Number of TICs Found: 0

	CAS Number	Tentatively Identified VOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

TOTAL VOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR4059T1V1	Lab Sample ID:	2BZ37
Sampling Batch No:	S4200-LOT-05-06	Lab File ID:	SV500432
Date Sampled:	02/02/2012	Data Report Number:	ALD12005V
Date Extracted:	02/05/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	3 days		
Date/Time Analyzed:	02/23/2012 19:34	Instrument ID:	VOA-5
Analysis Holding Time:	18 days	Matrix:	SOLID
Preparation Method:	CCP-TP-184-R0	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	0.17	U
75-25-2	Bromoform	0.17	U
75-15-0	Carbon Disulfide	0.17	U
56-23-5	Carbon Tetrachloride	0.47	J
108-90-7	Chlorobenzene	0.17	U
67-66-3	Chloroform	0.17	U
75-35-4	1,1-Dichloroethene	0.33	U
107-06-2	1,2-Dichloroethane	0.17	U
100-41-4	Ethylbenzene	0.17	U
75-09-2	Methylene Chloride	0.17	U
179601-23-1	m-Xylene and p-Xylene mix	0.17	U
95-47-6	o-Xylene	0.17	U
79-34-5	1,1,2,2-Tetrachloroethane	0.17	U
127-18-4	Tetrachloroethene	0.17	U
108-88-3	Toluene	0.17	U
156-60-5	trans-1,2-Dichloroethene	0.17	U
71-55-6	1,1,1-Trichloroethane	0.17	U
79-01-6	Trichloroethene	0.17	UZ
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.33	U
79-00-5	1,1,2-Trichloroethane	0.17	U
75-69-4	Trichlorofluoromethane	0.17	U
75-01-4	Vinyl Chloride	0.17	U

TOTAL VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR4059T1V1	Lab Sample ID:	2BZ37
Sampling Batch No:	S4200-LOT-05-06	Lab File ID:	SV500432
Date Sampled:	02/02/2012	Data Report Number:	ALD12005V
Date Extracted:	02/05/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	3 days		
Date/Time Analyzed:	02/23/2012 19:34	Instrument ID:	VOA-5
Analysis Holding Time:	18 days	Matrix:	SOLID
Preparation Method:	CCP-TP-184-R0	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

Number of TICs Found: 0

	CAS Number	Tentatively Identified VOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

TOTAL VOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405902V1RA	Lab Sample ID:	2BZ41RA
Sampling Batch No:	S4200-LOT-05-06	Lab File ID:	SV500412
Date Sampled:	02/02/2012	Data Report Number:	ALD12005V
Date Extracted:	02/05/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	3 days		
Date/Time Analyzed:	02/20/2012 14:51	Instrument ID:	VOA-5
Analysis Holding Time:	15 days	Matrix:	SOLID
Preparation Method:	CCP-TP-184-R0	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	0.088	U
75-25-2	Bromoform	0.088	U
75-15-0	Carbon Disulfide	0.088	U
56-23-5	Carbon Tetrachloride	1.1	J
108-90-7	Chlorobenzene	0.088	U
67-66-3	Chloroform	0.088	U
75-35-4	1,1-Dichloroethene	0.18	U
107-06-2	1,2-Dichloroethane	0.088	U
100-41-4	Ethylbenzene	0.088	U
75-09-2	Methylene Chloride	0.088	U
179601-23-1	m-Xylene and p-Xylene mix	0.088	U
95-47-6	o-Xylene	0.088	U
79-34-5	1,1,2,2-Tetrachloroethane	0.088	U
127-18-4	Tetrachloroethene	0.13	J
108-88-3	Toluene	0.088	U
156-60-5	trans-1,2-Dichloroethene	0.088	U
71-55-6	1,1,1-Trichloroethane	0.088	U
79-01-6	Trichloroethene	0.13	JZ
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.18	U
79-00-5	1,1,2-Trichloroethane	0.088	U
75-69-4	Trichlorofluoromethane	0.088	U
75-01-4	Vinyl Chloride	0.088	U

TOTAL VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405902V1RA	Lab Sample ID:	2BZ41RA
Sampling Batch No:	S4200-LOT-05-06	Lab File ID:	SV500412
Date Sampled:	02/02/2012	Data Report Number:	ALD12005V
Date Extracted:	02/05/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	3 days		
Date/Time Analyzed:	02/20/2012 14:51	Instrument ID:	VOA-5
Analysis Holding Time:	15 days	Matrix:	SOLID
Preparation Method:	CCP-TP-184-R0	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

Number of TICs Found: 0

	CAS Number	Tentatively Identified VOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

TOTAL VOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR4059T2V1	Lab Sample ID:	2BZ42
Sampling Batch No:	S4200-LOT-05-06	Lab File ID:	SV500457
Date Sampled:	02/02/2012	Data Report Number:	ALD12005V
Date Extracted:	02/05/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	3 days		
Date/Time Analyzed:	02/28/2012 14:24	Instrument ID:	VOA-5
Analysis Holding Time:	23 days	Matrix:	SOLID
Preparation Method:	CCP-TP-184-R0	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	0.17	U
75-25-2	Bromoform	0.17	U
75-15-0	Carbon Disulfide	0.17	U
56-23-5	Carbon Tetrachloride	0.96	J
108-90-7	Chlorobenzene	0.17	U
67-66-3	Chloroform	0.17	U
75-35-4	1,1-Dichloroethene	0.34	U
107-06-2	1,2-Dichloroethane	0.17	U
100-41-4	Ethylbenzene	0.17	U
75-09-2	Methylene Chloride	0.17	U
179601-23-1	m-Xylene and p-Xylene mix	0.17	U
95-47-6	o-Xylene	0.17	U
79-34-5	1,1,2,2-Tetrachloroethane	0.17	U
127-18-4	Tetrachloroethene	0.17	U
108-88-3	Toluene	0.17	U
156-60-5	trans-1,2-Dichloroethene	0.17	U
71-55-6	1,1,1-Trichloroethane	0.17	U
79-01-6	Trichloroethene	0.17	UZ
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.34	U
79-00-5	1,1,2-Trichloroethane	0.17	U
75-69-4	Trichlorofluoromethane	0.17	U
75-01-4	Vinyl Chloride	0.17	U

TOTAL VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR4059T2V1	Lab Sample ID:	2BZ42
Sampling Batch No:	S4200-LOT-05-06	Lab File ID:	SV500457
Date Sampled:	02/02/2012	Data Report Number:	ALD12005V
Date Extracted:	02/05/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	3 days		
Date/Time Analyzed:	02/28/2012 14:24	Instrument ID:	VOA-5
Analysis Holding Time:	23 days	Matrix:	SOLID
Preparation Method:	CCP-TP-184-R0	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

Number of TICs Found: 0

	CAS Number	Tentatively Identified VOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

Section 4

Batch QC Sample Results

TOTAL VOC ANALYSIS
SURROGATE RECOVERY FORM

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Preparation Method: CCP-TP-184-R0

Analytical Method: CCP-TP-184-R0

Data Report Number: ALD12005V

Analytical Batch ID: 1202011

Instrument ID: VOA-5

Matrix: SOLID

	LAB SAMPLE ID	SMC1 %R (BFB)	SMC2 %R (DCA)	SMC3 %R (TOL)	TOTAL OUT
1	MBV021412A	95	104	103	0
2	2BZ01MS	99	108	108	0
3	2BZ01MSD	91	105	105	0
4	2BZ06	92	110	110	0
5	2BZ11	92	111	110	0
6	2BZ16	88	106	107	0
7	2BZ21	93	114	113	0
8	2BZ26	89	101	106	0
9	2BZ31	87	103	106	0
10	MBV022012A	99	97	99	0
11	2BZ31DL50	101	0 D	0 D	0
12	2BZ36RA	87	90	92	0
13	2BZ41RA	90	91	93	0
14	2BZ26DL80	0 D	0 D	0 D	0
15	LBV020512A	92	97	95	0
16	LCSV1202011A	101	107	104	0
17	2BY96	97	103	99	0
18	2BZ07	99	105	102	0
19	2BZ12	101	104	104	0
20	2BZ17	99	103	100	0
21	2BZ27	95	103	101	0
22	2BZ37	97	105	103	0
23	2BZ02	99	107	104	0
24	MBV022812A	101	100	98	0
25	2BZ22	97	96	93	0
26	2BZ32	97	100	95	0
27	2BZ42	98	94	94	0

TOTAL VOC ANALYSIS
SURROGATE RECOVERY FORM

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Preparation Method: CCP-TP-184-R0

Analytical Method: CCP-TP-184-R0

Data Report Number: ALD12005V

Analytical Batch ID: 1202011

Instrument ID: VOA-5

Matrix: SOLID

	LAB SAMPLE ID	SMC1 %R (BFB)	SMC2 %R (DCA)	SMC3 %R (TOL)	TOTAL OUT
28	2BZ01	92	88	87	0
29	2BY95	94	88	87	0

Control Limits for samples (%R)

Solids

S1 (BFB) = 4-Bromofluorobenzene 72 - 104

S2 (DCA) = 1,2,-Dichloroethane-d4 72 - 117

S3 (TOL) = Toluene-d8 78 - 114

Z = Values outside of acceptance criteria

D = Surrogates diluted out

TOTAL VOC ANALYSIS
MATRIX SPIKE/MATRIX SPIKE DUPLICATE REPORTING FORM

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Preparation Method:	CCP-TP-184-R0			Data Report Number:	ALD12005V
Analytical Method:	CCP-TP-184-R0			Analytical Batch ID:	1202011
Instrument ID:	VOA-5			Matrix:	SOLID
Lab Sample ID:	2BZ01	MS Lab Sample ID:	2BZ01MS	MSD Lab Sample ID:	2BZ01MSD
Field Sample ID:	AR405702V1	MS Field Sample ID:	AR405702V3MS	MSD Field Sample ID:	AR405702V4MSD
Lab File ID:	SV500458	MS Lab File ID:	SV500395	MSD Lab File ID:	SV500396
Date Analyzed:	2 /28/2012	MS Date Analyzed:	2 /14/2012	MSD Date Analyzed:	2 /14/2012

TARGET ANALYTE	SPIKE ADDED mg/kg	SAMPLE CONCENTRATION mg/kg	SPIKED SAMPLE CONCENTRATION mg/kg	MS % RECOVERY	ACCEPTANCE CRITERIA % RECOVERY
Benzene	6.36	0.15 U	6.95	109	37 - 151
Chlorobenzene	6.36	0.15 U	6.29	99	37 - 160
1,1-Dichloroethene	6.36	0.30 U	6.88	108	D - 234
Toluene	6.36	0.15 U	6.34	100	47 - 150
Trichloroethene	6.36	0.25	10.46	160 Z	71 - 157

TARGET ANALYTE	SPIKE ADDED mg/kg	DUPLICATE SPIKED SAMPLE CONCENTRATION mg/kg	MSD % RECOVERY	RPD	ACCEPTANCE CRITERIA RPD
Benzene	5.34	5.70	107	2.3	≤ 45
Chlorobenzene	5.34	5.00	94	5.4	≤ 38
1,1-Dichloroethene	5.34	5.58	104	3.5	≤ 250
Toluene	5.34	5.09	95	4.4	≤ 29
Trichloroethene	5.34	6.41	115	32.8	≤ 36

Z = Did not meet acceptance criteria

D = Spiked Analytes Diluted out

RPD:	0	out of	5	outside limits
Spike Recovery:	1	out of	10	outside limits

TOTAL VOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	NA	Lab Sample ID:	LBV020512A
Sampling Batch No:	NA	Lab File ID:	BV500423
Date Sampled:	NA	Data Report Number:	ALD12005V
Date Extracted:	02/05/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	NA		
Date/Time Analyzed:	02/23/2012 14:50	Instrument ID:	VOA-5
Analysis Holding Time:	18 days	Matrix:	SOLID
Preparation Method:	CCP-TP-184-R0	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	0.17	U
75-25-2	Bromoform	0.17	U
75-15-0	Carbon Disulfide	0.17	U
56-23-5	Carbon Tetrachloride	0.17	U
108-90-7	Chlorobenzene	0.17	U
67-66-3	Chloroform	0.17	U
75-35-4	1,1-Dichloroethene	0.33	U
107-06-2	1,2-Dichloroethane	0.17	U
100-41-4	Ethylbenzene	0.17	U
75-09-2	Methylene Chloride	0.17	U
179601-23-1	m-Xylene and p-Xylene mix	0.17	U
95-47-6	o-Xylene	0.17	U
79-34-5	1,1,2,2-Tetrachloroethane	0.17	U
127-18-4	Tetrachloroethene	0.17	U
108-88-3	Toluene	0.17	U
156-60-5	trans-1,2-Dichloroethene	0.17	U
71-55-6	1,1,1-Trichloroethane	0.17	U
79-01-6	Trichloroethene	0.17	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.33	U
79-00-5	1,1,2-Trichloroethane	0.17	U
75-69-4	Trichlorofluoromethane	0.17	U
75-01-4	Vinyl Chloride	0.17	U

TOTAL VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	NA	Lab Sample ID:	LBV020512A
Sampling Batch No:	NA	Lab File ID:	BV500423
Date Sampled:	NA	Data Report Number:	ALD12005V
Date Extracted:	02/05/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	NA		
Date/Time Analyzed:	02/23/2012 14:50	Instrument ID:	VOA-5
Analysis Holding Time:	18 days	Matrix:	SOLID
Preparation Method:	CCP-TP-184-R0	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

Number of TICs Found: 0

	CAS Number	Tentatively Identified VOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

TOTAL VOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	NA	Lab Sample ID:	MBV021412A
Sampling Batch No:	NA	Lab File ID:	BV500394
Date Sampled:	NA	Data Report Number:	ALD12005V
Date Extracted:	NA	Analytical Batch ID:	1202011
Extraction Holding Time:	NA		
Date/Time Analyzed:	02/14/2012 12:11	Instrument ID:	VOA-5
Analysis Holding Time:	NA	Matrix:	SOLID
Preparation Method:	NA	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	0.17	U
75-25-2	Bromoform	0.17	U
75-15-0	Carbon Disulfide	0.17	U
56-23-5	Carbon Tetrachloride	0.17	U
108-90-7	Chlorobenzene	0.17	U
67-66-3	Chloroform	0.17	U
75-35-4	1,1-Dichloroethene	0.33	U
107-06-2	1,2-Dichloroethane	0.17	U
100-41-4	Ethylbenzene	0.17	U
75-09-2	Methylene Chloride	0.23	J
179601-23-1	m-Xylene and p-Xylene mix	0.17	U
95-47-6	o-Xylene	0.17	U
79-34-5	1,1,2,2-Tetrachloroethane	0.17	U
127-18-4	Tetrachloroethene	0.17	U
108-88-3	Toluene	0.17	U
156-60-5	trans-1,2-Dichloroethene	0.17	U
71-55-6	1,1,1-Trichloroethane	0.17	U
79-01-6	Trichloroethene	0.17	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.33	U
79-00-5	1,1,2-Trichloroethane	0.17	U
75-69-4	Trichlorofluoromethane	0.17	U
75-01-4	Vinyl Chloride	0.17	U

TOTAL VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	NA	Lab Sample ID:	MBV021412A
Sampling Batch No:	NA	Lab File ID:	BV500394
Date Sampled:	NA	Data Report Number:	ALD12005V
Date Extracted:	NA	Analytical Batch ID:	1202011
Extraction Holding Time:	NA		
Date/Time Analyzed:	02/14/2012 12:11	Instrument ID:	VOA-5
Analysis Holding Time:	NA	Matrix:	SOLID
Preparation Method:	NA	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

Number of TICs Found: 0

	CAS Number	Tentatively Identified VOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

TOTAL VOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	NA	Lab Sample ID:	MBV022012A
Sampling Batch No:	NA	Lab File ID:	BV500408
Date Sampled:	NA	Data Report Number:	ALD12005V
Date Extracted:	NA	Analytical Batch ID:	1202011
Extraction Holding Time:	NA		
Date/Time Analyzed:	02/20/2012 11:54	Instrument ID:	VOA-5
Analysis Holding Time:	NA	Matrix:	SOLID
Preparation Method:	NA	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	0.17	U
75-25-2	Bromoform	0.17	U
75-15-0	Carbon Disulfide	0.17	U
56-23-5	Carbon Tetrachloride	0.17	U
108-90-7	Chlorobenzene	0.17	U
67-66-3	Chloroform	0.17	U
75-35-4	1,1-Dichloroethene	0.33	U
107-06-2	1,2-Dichloroethane	0.17	U
100-41-4	Ethylbenzene	0.17	U
75-09-2	Methylene Chloride	0.17	U
179601-23-1	m-Xylene and p-Xylene mix	0.17	U
95-47-6	o-Xylene	0.17	U
79-34-5	1,1,2,2-Tetrachloroethane	0.17	U
127-18-4	Tetrachloroethene	0.17	U
108-88-3	Toluene	0.17	U
156-60-5	trans-1,2-Dichloroethene	0.17	U
71-55-6	1,1,1-Trichloroethane	0.17	U
79-01-6	Trichloroethene	0.17	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.33	U
79-00-5	1,1,2-Trichloroethane	0.17	U
75-69-4	Trichlorofluoromethane	0.17	U
75-01-4	Vinyl Chloride	0.17	U

TOTAL VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	NA	Lab Sample ID:	MBV022012A
Sampling Batch No:	NA	Lab File ID:	BV500408
Date Sampled:	NA	Data Report Number:	ALD12005V
Date Extracted:	NA	Analytical Batch ID:	1202011
Extraction Holding Time:	NA		
Date/Time Analyzed:	02/20/2012 11:54	Instrument ID:	VOA-5
Analysis Holding Time:	NA	Matrix:	SOLID
Preparation Method:	NA	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

Number of TICs Found: 0

	CAS Number	Tentatively Identified VOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

TOTAL VOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	NA	Lab Sample ID:	MBV022812A
Sampling Batch No:	NA	Lab File ID:	BV500454
Date Sampled:	NA	Data Report Number:	ALD12005V
Date Extracted:	NA	Analytical Batch ID:	1202011
Extraction Holding Time:	NA		
Date/Time Analyzed:	02/28/2012 12:40	Instrument ID:	VOA-5
Analysis Holding Time:	NA	Matrix:	SOLID
Preparation Method:	NA	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
71-43-2	Benzene	0.17	U
75-25-2	Bromoform	0.17	U
75-15-0	Carbon Disulfide	0.17	U
56-23-5	Carbon Tetrachloride	0.17	U
108-90-7	Chlorobenzene	0.17	U
67-66-3	Chloroform	0.17	U
75-35-4	1,1-Dichloroethene	0.33	U
107-06-2	1,2-Dichloroethane	0.17	U
100-41-4	Ethylbenzene	0.17	U
75-09-2	Methylene Chloride	0.17	U
179601-23-1	m-Xylene and p-Xylene mix	0.17	U
95-47-6	o-Xylene	0.17	U
79-34-5	1,1,2,2-Tetrachloroethane	0.17	U
127-18-4	Tetrachloroethene	0.17	U
108-88-3	Toluene	0.17	U
156-60-5	trans-1,2-Dichloroethene	0.17	U
71-55-6	1,1,1-Trichloroethane	0.17	U
79-01-6	Trichloroethene	0.17	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.33	U
79-00-5	1,1,2-Trichloroethane	0.17	U
75-69-4	Trichlorofluoromethane	0.17	U
75-01-4	Vinyl Chloride	0.17	U

TOTAL VOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	NA	Lab Sample ID:	MBV022812A
Sampling Batch No:	NA	Lab File ID:	BV500454
Date Sampled:	NA	Data Report Number:	ALD12005V
Date Extracted:	NA	Analytical Batch ID:	1202011
Extraction Holding Time:	NA		
Date/Time Analyzed:	02/28/2012 12:40	Instrument ID:	VOA-5
Analysis Holding Time:	NA	Matrix:	SOLID
Preparation Method:	NA	Dilution Factor:	1
Analytical Method:	CCP-TP-184-R0		

Number of TICs Found: 0

	CAS Number	Tentatively Identified VOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

TOTAL VOC ANALYSIS
LABORATORY BLANK SUMMARY

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Date Extracted:	02/05/2012	Lab Sample ID:	LBV020512A
Date/Time Analyzed:	02/14/2012 14:50	Lab File ID:	BV500423
Preparation Method:	CCP-TP-184-R0	Data Report Number:	ALD12005V
Analytical Method:	CCP-TP-184-R0	Analytical Batch ID:	1202011
		Instrument ID:	VOA-5
		Sample Matrix:	SOLID

THIS BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, AND MSD AND STANDARDS

FIELD ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
AR405702V3MS	2BZ01MS	SV500395	02/14/2012	12:43
AR405702V4MSD	2BZ01MSD	SV500396	02/14/2012	13:15
AR405801V1	2BZ06	SV500397	02/14/2012	13:47
AR405802V1	2BZ11	SV500398	02/14/2012	14:19
AR406001V1	2BZ16	SV500399	02/14/2012	15:39
AR406002V1	2BZ21	SV500400	02/14/2012	16:11
AR405001V1	2BZ26	SV500401	02/14/2012	16:43
AR405002V1	2BZ31	SV500402	02/14/2012	17:14
AR405002V1DL50	2BZ31DL50	SV500410	02/20/2012	13:47
AR405901V1RA	2BZ36RA	SV500411	02/20/2012	14:19
AR405902V1RA	2BZ41RA	SV500412	02/20/2012	14:51
AR405001V1DL80	2BZ26DL80	SV500414	02/20/2012	15:54
NA	LCSV1202011A	LV500424	02/23/2012	15:21
AR4057T1V1	2BY96	SV500425	02/23/2012	15:53
AR4058T1V1	2BZ07	SV500426	02/23/2012	16:25
AR4058T2V1	2BZ12	SV500427	02/23/2012	16:56
AR4060T1V1	2BZ17	SV500428	02/23/2012	17:28
AR4050T1V1	2BZ27	SV500430	02/23/2012	18:31
AR4059T1V1	2BZ37	SV500432	02/23/2012	19:34
AR4057T2V1	2BZ02	SV500434	02/23/2012	20:37
AR4060T2V1	2BZ22	SV500455	02/28/2012	13:21
AR4050T2V1	2BZ32	SV500456	02/28/2012	13:52
AR4059T2V1	2BZ42	SV500457	02/28/2012	14:24
AR405702V1	2BZ01	SV500458	02/28/2012	14:56
AR405701V1	2BY95	SV500459	02/28/2012	15:28

Samples using this Laboratory Blank as the daily Method Blank are identified on the associated Form V (TV500415).

TOTAL VOC ANALYSIS
METHOD BLANK SUMMARY

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Date Extracted:	NA	Lab Sample ID:	MBV021412A
Date/Time Analyzed:	02/14/2012 12:11	Lab File ID:	BV500394
Preparation Method:	NA	Data Report Number:	ALD12005V
Analytical Method:	CCP-TP-184-R0	Analytical Batch ID:	1202011
		Instrument ID:	VOA-5
		Sample Matrix:	SOLID

THIS BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, AND MSD AND STANDARDS

FIELD ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
AR405702V3MS	2BZ01MS	SV500395	02/14/2012	12:43
AR405702V4MSD	2BZ01MSD	SV500396	02/14/2012	13:15
AR405801V1	2BZ06	SV500397	02/14/2012	13:47
AR405802V1	2BZ11	SV500398	02/14/2012	14:19
AR406001V1	2BZ16	SV500399	02/14/2012	15:39
AR406002V1	2BZ21	SV500400	02/14/2012	16:11
AR405001V1	2BZ26	SV500401	02/14/2012	16:43
AR405002V1	2BZ31	SV500402	02/14/2012	17:14

TOTAL VOC ANALYSIS
METHOD BLANK SUMMARY

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Date Extracted:	NA	Lab Sample ID:	MBV022012A
Date/Time Analyzed:	02/20/2012 11:54	Lab File ID:	BV500408
Preparation Method:	NA	Data Report Number:	ALD12005V
Analytical Method:	CCP-TP-184-R0	Analytical Batch ID:	1202011
		Instrument ID:	VOA-5
		Sample Matrix:	SOLID

THIS BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, AND MSD AND STANDARDS

FIELD ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
AR405002V1DL50	2BZ31DL50	SV500410	02/20/2012	13:47
AR405901V1RA	2BZ36RA	SV500411	02/20/2012	14:19
AR405902V1RA	2BZ41RA	SV500412	02/20/2012	14:51
AR405001V1DL80	2BZ26DL80	SV500414	02/20/2012	15:54

TOTAL VOC ANALYSIS
METHOD BLANK SUMMARY

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Date Extracted:	NA	Lab Sample ID:	MBV022812A
Date/Time Analyzed:	02/28/2012 12:40	Lab File ID:	BV500454
Preparation Method:	NA	Data Report Number:	ALD12005V
Analytical Method:	CCP-TP-184-R0	Analytical Batch ID:	1202011
		Instrument ID:	VOA-5
		Sample Matrix:	SOLID

THIS BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, AND MSD AND STANDARDS

FIELD ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
AR4060T2V1	2BZ22	SV500455	02/28/2012	13:21
AR4050T2V1	2BZ32	SV500456	02/28/2012	13:52
AR4059T2V1	2BZ42	SV500457	02/28/2012	14:24
AR405702V1	2BZ01	SV500458	02/28/2012	14:56
AR405701V1	2BY95	SV500459	02/28/2012	15:28

TOTAL VOC ANALYSIS
LABORATORY CONTROL SAMPLE FORM
(QC REFERENCE CHECK)

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Date Extracted: 02/05/2012

Date/Time Analyzed: 02/23/2012 15:21

Preparation Method: CCP-TP-184-R0

Analytical Method: CCP-TP-184-R0

Lab Sample ID: LCSV1202011A

Lab File ID: LV500424

Data Report Number: ALD12005V

Analytical Batch ID: 1202011

Instrument ID: VOA-5

Matrix: SOLID

TARGET ANALYTE	MEASURED CONCENTRATION (mg/kg)	KNOWN CONCENTRATION (mg/kg)	PERCENT RECOVERY	ACCEPTANCE CRITERIA %RECOVERY
Benzene	8.20	8.33	98	37 - 151
Chlorobenzene	8.32	8.33	100	37 - 160
1,1-Dichloroethene	8.21	8.33	99	D - 234
Toluene	8.29	8.33	100	47 - 150
Trichloroethene	8.14	8.33	98	71 - 157

Z = Did not meet acceptance criteria

TOTAL VOC ANALYSIS
INTERNAL STANDARD AREA AND RT SUMMARY

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Date/Time Analyzed: 02/14/2012 10:36
Analytical Method: CCP-TP-184-R0
Heated Purge (yes/no): no

Daily CCAL Sample ID: CC021412A
Daily CCAL Lab File ID: CV500393
Data Report Number: ALD12005V
Analytical Batch ID: 1202011
Instrument ID: VOA-5

	IS1 (BCM) Area	RT MIN.	IS2 (DFB) Area	RT MIN.	IS3 (CBZ) Area	RT MIN.
12 HOUR STANDARD	151991	12.99	1109224	14.11	1111457	18.49
UPPER LIMIT	303982	13.49	2218448	14.61	2222914	18.99
LOWER LIMIT	75996	12.49	554612	13.61	555728	17.99

	Lab Sample ID						
1	MBV021412A	143930	12.99	1088462	14.11	1088626	18.49
2	2BZ01MS	151593	12.99	1059086	14.11	1093468	18.49
3	2BZ01MSD	152588	12.99	1088204	14.11	1144837	18.49
4	2BZ06	155420	12.99	1099319	14.11	1141252	18.49
5	2BZ11	159629	12.99	1127027	14.11	1173447	18.49
6	2BZ16	160062	12.99	1142601	14.11	1186986	18.49
7	2BZ21	159802	12.99	1133718	14.11	1183778	18.49
8	2BZ26	130428	12.99	1124747	14.11	1203745	18.49
9	2BZ31	161607	12.99	1141983	14.11	1222571	18.49

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene-d4
IS3 (CBZ) = Chlorobenzene-d5

Z = Values outside of Acceptance Criteria

Area upper limit = +100% of internal standard area
Area lower limit = -50% of internal standard area

RT upper limit = +30 seconds of internal standard RT
RT lower limit = -30 seconds of internal standard RT

TOTAL VOC ANALYSIS
INTERNAL STANDARD AREA AND RT SUMMARY

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Date/Time Analyzed: 02/20/2012 11:18
Analytical Method: CCP-TP-184-R0
Heated Purge (yes/no): no

Daily CCAL Sample ID: CC022012B
Daily CCAL Lab File ID: CV500407
Data Report Number: ALD12005V
Analytical Batch ID: 1202011
Instrument ID: VOA-5

	IS1 (BCM) Area	RT MIN.	IS2 (DFB) Area	RT MIN.	IS3 (CBZ) Area	RT MIN.
12 HOUR STANDARD	183341	12.99	1222135	14.11	1089173	18.49
UPPER LIMIT	366682	13.49	2444270	14.61	2178346	18.99
LOWER LIMIT	91670	12.49	611068	13.61	544586	17.99

	Lab Sample ID						
1	MBV022012A	183812	12.99	1208628	14.11	1077187	18.49
2	2BZ31DL50	182120	12.99	1189097	14.11	1071510	18.49
3	2BZ36RA	182413	12.99	1191543	14.11	1081782	18.49
4	2BZ41RA	180951	12.99	1168523	14.11	1075106	18.49
5	2BZ26DL80	171985	12.99	1162722	14.11	1072429	18.49

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene-d4
IS3 (CBZ) = Chlorobenzene-d5

Z = Values outside of Acceptance Criteria

Area upper limit = +100% of internal standard area
Area lower limit = -50% of internal standard area

RT upper limit = +30 seconds of internal standard RT
RT lower limit = -30 seconds of internal standard RT

TOTAL VOC ANALYSIS
INTERNAL STANDARD AREA AND RT SUMMARY

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Date/Time Analyzed: 02/23/2012 14:05
Analytical Method: CCP-TP-184-R0
Heated Purge (yes/no): no

Daily CCAL Sample ID: CC022312A
Daily CCAL Lab File ID: CV500422
Data Report Number: ALD12005V
Analytical Batch ID: 1202011
Instrument ID: VOA-5

	IS1 (BCM) Area	RT MIN.	IS2 (DFB) Area	RT MIN.	IS3 (CBZ) Area	RT MIN.
12 HOUR STANDARD	151165	12.99	1073402	14.11	994457	18.48
UPPER LIMIT	302330	13.49	2146804	14.61	1988914	18.98
LOWER LIMIT	75582	12.49	536701	13.61	497228	17.98

	Lab Sample ID						
1	LBV020512A	161053	12.99	1060084	14.11	999485	18.49
2	LCSV1202011A	160136	12.99	1075052	14.11	998668	18.49
3	2BY96	153964	12.99	1063353	14.11	1000728	18.48
4	2BZ07	154866	12.99	1053446	14.11	1002350	18.49
5	2BZ12	158390	13.00	1076357	14.11	1026396	18.48
6	2BZ17	161416	12.99	1073076	14.11	1014127	18.48
7	2BZ27	155110	12.99	1072745	14.11	1021243	18.48
8	2BZ37	154123	12.99	1067378	14.11	1019243	18.49
9	2BZ02	161533	12.99	1073158	14.11	1037266	18.49

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene-d4
IS3 (CBZ) = Chlorobenzene-d5

Z = Values outside of Acceptance Criteria

Area upper limit = +100% of internal standard area
Area lower limit = -50% of internal standard area

RT upper limit = +30 seconds of internal standard RT
RT lower limit = -30 seconds of internal standard RT

TOTAL VOC ANALYSIS
INTERNAL STANDARD AREA AND RT SUMMARY

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Date/Time Analyzed: 02/28/2012 11:00
Analytical Method: CCP-TP-184-R0
Heated Purge (yes/no): no

Daily CCAL Sample ID: CC022812A
Daily CCAL Lab File ID: CV500453
Data Report Number: ALD12005V
Analytical Batch ID: 1202011
Instrument ID: VOA-5

	IS1 (BCM) Area	RT MIN.	IS2 (DFB) Area	RT MIN.	IS3 (CBZ) Area	RT MIN.
12 HOUR STANDARD	148301	12.99	967424	14.11	859516	18.49
UPPER LIMIT	296602	13.49	1934848	14.61	1719032	18.99
LOWER LIMIT	74150	12.49	483712	13.61	429758	17.99

	Lab Sample ID						
1	MBV022812A	145809	12.99	944960	14.11	827639	18.49
2	2BZ22	165828	12.99	1034908	14.11	917674	18.48
3	2BZ32	159983	13.00	1015954	14.11	925435	18.49
4	2BZ42	158779	12.99	1033594	14.11	906609	18.49
5	2BZ01	164334	12.99	1048111	14.11	938803	18.49
6	2BY95	167120	12.99	1075986	14.11	955785	18.49

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene-d4
IS3 (CBZ) = Chlorobenzene-d5

Z = Values outside of Acceptance Criteria

Area upper limit = +100% of internal standard area
Area lower limit = -50% of internal standard area

RT upper limit = +30 seconds of internal standard RT
RT lower limit = -30 seconds of internal standard RT

Section 5

Instrument QC Data

TOTAL VOC ANALYSIS
INSTRUMENT PERFORMANCE CHECK

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

BFB Injection Date/Time: 02/14/2012 10:17

Analytical Method: CCP-TP-184-R0

Heated Purge (yes/no): no

Lab Sample ID: BFB021412A

Lab File ID: TV500392

Data Report Number: ALD12005V

Analytical Batch ID: 1202011

Instrument ID: VOA-5

m/z	Ion Abundance Criteria	% Rel Abundance
50	15.0 - 40.0% of mass 95	21.9
75	30.0 - 60.0% of mass 95	46.1
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.8 (1)
174	Greater than 50.0% of mass 95	69.0
175	5.0 - 9.0% of mass 174	7.3 (1)
176	95.0 - 101.0% of mass 174	96.5 (1)
177	5.0 - 9.0% of mass 176	6.8 (2)

1 - Value is % mass 174 2 - Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS

FIELD ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
NA	CC021412A	CV500393	02/14/2012	10:36
NA	MBV021412A	BV500394	02/14/2012	12:11
AR405702V3MS	2BZ01MS	SV500395	02/14/2012	12:43
AR405702V4MSD	2BZ01MSD	SV500396	02/14/2012	13:15
AR405801V1	2BZ06	SV500397	02/14/2012	13:47
AR405802V1	2BZ11	SV500398	02/14/2012	14:19
AR406001V1	2BZ16	SV500399	02/14/2012	15:39
AR406002V1	2BZ21	SV500400	02/14/2012	16:11
AR405001V1	2BZ26	SV500401	02/14/2012	16:43
AR405002V1	2BZ31	SV500402	02/14/2012	17:14

TOTAL VOC ANALYSIS
INSTRUMENT PERFORMANCE CHECK

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

BFB Injection Date/Time: 02/20/2012 10:12

Analytical Method: CCP-TP-184-R0

Heated Purge (yes/no): no

Lab Sample ID: BFB022012A

Lab File ID: TV500405

Data Report Number: ALD12005V

Analytical Batch ID: 1202011

Instrument ID: VOA-5

m/z	Ion Abundance Criteria	% Rel Abundance
50	15.0 - 40.0% of mass 95	22.3
75	30.0 - 60.0% of mass 95	46.9
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.9 (1)
174	Greater than 50.0% of mass 95	72.0
175	5.0 - 9.0% of mass 174	7.4 (1)
176	95.0 - 101.0% of mass 174	96.2 (1)
177	5.0 - 9.0% of mass 176	6.1 (2)

1 - Value is % mass 174 2 - Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS

FIELD ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
NA	CC022012B	CV500407	02/20/2012	11:18
NA	MBV022012A	BV500408	02/20/2012	11:54
AR405002V1DL50	2BZ31DL50	SV500410	02/20/2012	13:47
AR405901V1RA	2BZ36RA	SV500411	02/20/2012	14:19
AR405902V1RA	2BZ41RA	SV500412	02/20/2012	14:51
AR405001V1DL80	2BZ26DL80	SV500414	02/20/2012	15:54

TOTAL VOC ANALYSIS
INSTRUMENT PERFORMANCE CHECK

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

BFB Injection Date/Time: 02/23/2012 08:45

Analytical Method: CCP-TP-184-R0

Heated Purge (yes/no): no

Lab Sample ID: BFB022312A

Lab File ID: TV500415

Data Report Number: ALD12005V

Analytical Batch ID: 1202011

Instrument ID: VOA-5

m/z	Ion Abundance Criteria	% Rel Abundance
50	15.0 - 40.0% of mass 95	21.5
75	30.0 - 60.0% of mass 95	46.3
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.9
173	Less than 2.0% of mass 174	0.6 (1)
174	Greater than 50.0% of mass 95	69.8
175	5.0 - 9.0% of mass 174	7.1 (1)
176	95.0 - 101.0% of mass 174	97.5 (1)
177	5.0 - 9.0% of mass 176	6.3 (2)

1 - Value is % mass 174 2 - Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS

FIELD ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
NA	IC022312A	IV500416	02/23/2012	09:10
NA	IC022312B	IV500417	02/23/2012	09:50
NA	IC022312C	IV500418	02/23/2012	11:59
NA	IC022312D	IV500419	02/23/2012	12:31
NA	IC022312E	IV500420	02/23/2012	13:03

TOTAL VOC ANALYSIS
INSTRUMENT PERFORMANCE CHECK

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

BFB Injection Date/Time: 02/23/2012 13:37

Analytical Method: CCP-TP-184-R0

Heated Purge (yes/no): no

Lab Sample ID: BFB022312B

Lab File ID: TV500421

Data Report Number: ALD12005V

Analytical Batch ID: 1202011

Instrument ID: VOA-5

m/z	Ion Abundance Criteria	% Rel Abundance
50	15.0 - 40.0% of mass 95	21.4
75	30.0 - 60.0% of mass 95	46.5
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	5.9
173	Less than 2.0% of mass 174	0.4 (1)
174	Greater than 50.0% of mass 95	70.9
175	5.0 - 9.0% of mass 174	6.8 (1)
176	95.0 - 101.0% of mass 174	97.8 (1)
177	5.0 - 9.0% of mass 176	6.5 (2)

1 - Value is % mass 174 2 - Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS

FIELD ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
NA	CC022312A	CV500422	02/23/2012	14:05
NA	LBV020512A	BV500423	02/23/2012	14:50
NA	LCSV1202011A	LV500424	02/23/2012	15:21
AR4057T1V1	2BY96	SV500425	02/23/2012	15:53
AR4058T1V1	2BZ07	SV500426	02/23/2012	16:25
AR4058T2V1	2BZ12	SV500427	02/23/2012	16:56
AR4060T1V1	2BZ17	SV500428	02/23/2012	17:28
AR4050T1V1	2BZ27	SV500430	02/23/2012	18:31
AR4059T1V1	2BZ37	SV500432	02/23/2012	19:34
AR4057T2V1	2BZ02	SV500434	02/23/2012	20:37

TOTAL VOC ANALYSIS
INSTRUMENT PERFORMANCE CHECK

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

BFB Injection Date/Time: 02/28/2012 09:05

Analytical Method: CCP-TP-184-R0

Heated Purge (yes/no): no

Lab Sample ID: BFB022812C

Lab File ID: TV500452

Data Report Number: ALD12005V

Analytical Batch ID: 1202011

Instrument ID: VOA-5

m/z	Ion Abundance Criteria	% Rel Abundance
50	15.0 - 40.0% of mass 95	20.7
75	30.0 - 60.0% of mass 95	44.4
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	8.1
173	Less than 2.0% of mass 174	0.7 (1)
174	Greater than 50.0% of mass 95	73.5
175	5.0 - 9.0% of mass 174	7.6 (1)
176	95.0 - 101.0% of mass 174	95.8 (1)
177	5.0 - 9.0% of mass 176	7.4 (2)

1 - Value is % mass 174 2 - Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS

FIELD ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
NA	CC022812A	CV500453	02/28/2012	11:00
NA	MBV022812A	BV500454	02/28/2012	12:40
AR4060T2V1	2BZ22	SV500455	02/28/2012	13:21
AR4050T2V1	2BZ32	SV500456	02/28/2012	13:52
AR4059T2V1	2BZ42	SV500457	02/28/2012	14:24
AR405702V1	2BZ01	SV500458	02/28/2012	14:56
AR405701V1	2BY95	SV500459	02/28/2012	15:28

TOTAL VOC ANALYSIS
INITIAL CALIBRATION DATA

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Calibration Dates/Times: 02/13/2012 15:27 - 02/13/2012 17:34
Analytical Method: CCP-TP-184-R0
Heated Purge (yes/no): no

ICAL File ID: IV512W01
Data Report Number: ALD12005V
Analytical Batch ID: 1202011
Instrument ID: VOA-5

LAB FILE ID	IV500381	IV500379	IV500380	IV500382	IV500383	NA			
CONCENTRATION (ug/L)	50	150	100	20	10	NA			
TARGET ANALYTE	RRF 1	RRF 2	RRF 3	RRF 4	RRF 5	RRF 6	AVE RRF	% RSD	#
Benzene	1.406	1.204	1.336	1.445	1.544		1.387	9.16	
4-Bromofluorobenzene	0.057	0.054	0.055	0.062	0.071		0.060	11.87	
Bromoform **	0.262	0.265	0.268	0.263	0.264		0.264	0.90	
Carbon Disulfide	7.652	7.616	7.703	7.650	8.128		7.750	2.75	
Carbon Tetrachloride	0.450	0.337	0.436	0.454	0.459		0.427	11.93	
Chlorobenzene **	1.033	0.958	0.999	1.057	1.143		1.038	6.69	
Chloroform *	4.219	3.988	4.123	4.151	4.287		4.154	2.71	
Chloromethane **	1.488	1.699	1.452	1.494	1.530		1.532	6.34	
1,1-Dichloroethane **	4.953	4.710	4.912	4.965	5.274		4.963	4.08	
1,1-Dichloroethene *	2.226	2.160	2.225	2.216	2.396		2.245	3.97	
1,2-Dichloroethane	0.539	0.455	0.516	0.555	0.586		0.530	9.26	
1,2-Dichloroethane-d4	0.085	0.070	0.079	0.085	0.093		0.082	10.38	
1,2-Dichloropropane *	0.397	0.340	0.380	0.409	0.422		0.390	8.20	
Ethylbenzene *	0.581	0.546	0.565	0.600	0.627		0.584	5.36	
Methylene Chloride	2.518	2.357	2.453	2.518	2.766		2.522	5.99	
m-Xylene and p-Xylene mix	0.715	0.657	0.686	0.740	0.759		0.711	5.76	
o-Xylene	0.699	0.654	0.680	0.719	0.741		0.698	4.87	
1,1,2,2-Tetrachloroethane **	0.534	0.509	0.511	0.568	0.600		0.544	7.20	
Tetrachloroethene	0.302	0.285	0.294	0.314	0.325		0.304	5.17	
Toluene *	0.946	0.899	0.930	0.984	1.020		0.956	4.96	
Toluene-d8	1.265	1.085	1.210	1.287	1.376		1.245	8.65	
trans-1,2-Dichloroethene	2.562	2.445	2.536	2.581	2.761		2.577	4.47	
1,1,1-Trichloroethane	3.705	3.599	3.674	3.674	3.886		3.708	2.89	
Trichloroethene	0.358	0.303	0.337	0.373	0.395		0.353	9.91	
1,1,2-Trichloro-1,2,2-trifluoroethane	1.936	1.930	1.918	1.958	1.995		1.947	1.56	
1,1,2-Trichloroethane	0.338	0.324	0.335	0.353	0.369		0.344	5.06	
Trichlorofluoromethane	3.641	3.575	3.598	3.616	3.865		3.659	3.22	
Vinyl Chloride *	2.789	2.621	2.719	2.783	2.849		2.752	3.14	

0100

TOTAL VOC ANALYSIS
INITIAL CALIBRATION DATA

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Calibration Dates/Times: 02/13/2012 15:27 - 02/13/2012 17:34
Analytical Method: CCP-TP-184-R0
Heated Purge (yes/no): no

ICAL File ID: IV512W01
Data Report Number: ALD12005V
Analytical Batch ID: 1202011
Instrument ID: VOA-5

LAB FILE ID	IV500381	IV500379	IV500380	IV500382	IV500383	NA			
CONCENTRATION (ug/L)	50	150	100	20	10	NA			
TARGET ANALYTE	RRF 1	RRF 2	RRF 3	RRF 4	RRF 5	RRF 6	AVE RRF	% RSD	#

CCC RSD ≤ 30%

CCC - Calibration Check Compounds (*)
SPCC - System Performance Check Compounds (**)

NA = Not applicable
Z = Did not meet acceptance criteria
# Column used to flag modeled compounds

SPCC Average RRF

Chloromethane	≥ 0.10
1,1 - Dichloroethane	≥ 0.10
Bromoform	≥ 0.10
Chlorobenzene	≥ 0.30
1,1,2,2-Tetrachloroethane	≥ 0.30
All Other Analytes	≥ 0.01

M = Modeled compound:

TOTAL VOC ANALYSIS
INITIAL CALIBRATION DATA

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Calibration Dates/Times: 02/23/2012 09:10 - 02/23/2012 13:03
Analytical Method: CCP-TP-184-R0
Heated Purge (yes/no): no

ICAL File ID: IV512W02
Data Report Number: ALD12005V
Analytical Batch ID: 1202011
Instrument ID: VOA-5

LAB FILE ID	IV500416	IV500417	IV500418	IV500419	IV500420	NA			
CONCENTRATION (ug/L)	0	150	100	20	10	NA			
TARGET ANALYTE	RRF 1	RRF 2	RRF 3	RRF 4	RRF 5	RRF 6	AVE RRF	% RSD	#
Benzene	3.401	3.500	3.414	3.432	3.404		3.430	1.19	
4-Bromofluorobenzene	0.141	0.147	0.145	0.150	0.145		0.146	2.44	
Bromoform **	0.613	0.695	0.674	0.609	0.586		0.635	7.28	
Carbon Disulfide	16.790	17.100	17.800	18.430	17.070		17.440	3.83	
Carbon Tetrachloride	0.901	0.927	0.887	1.074	1.005		0.959	8.23	
Chlorobenzene **	2.580	2.675	2.605	2.663	2.595		2.623	1.62	
Chloroform *	9.230	9.170	9.500	10.380	10.010		9.660	5.43	
Chloromethane **	2.198	2.131	2.993	2.753	2.520		2.519	14.49	
1,1-Dichloroethane **	10.780	10.780	11.290	11.980	11.490		11.260	4.51	
1,1-Dichloroethene *	5.045	4.958	5.247	5.332	5.204		5.157	2.96	
1,2-Dichloroethane	1.309	1.361	1.296	1.354	1.314		1.327	2.15	
1,2-Dichloroethane-d4	0.200	0.206	0.196	0.206	0.197		0.201	2.37	
1,2-Dichloropropane *	0.942	0.964	0.947	0.941	0.938		0.946	1.08	
Ethylbenzene *	1.454	1.500	1.478	1.488	1.432		1.471	1.88	
Methylene Chloride	5.532	5.396	5.778	6.164	5.813		5.736	5.14	
m-Xylene and p-Xylene mix	1.797	1.857	1.802	1.839	1.801		1.819	1.49	
o-Xylene	1.741	1.804	1.736	1.750	1.710		1.748	1.97	
1,1,2,2-Tetrachloroethane **	1.272	1.340	1.343	1.377	1.331		1.333	2.88	
Tetrachloroethene	0.769	0.808	0.784	0.799	0.754		0.782	2.82	
Toluene *	2.374	2.491	2.390	2.421	2.315		2.398	2.70	
Toluene-d8	3.086	3.202	3.090	3.131	3.026		3.107	2.09	
trans-1,2-Dichloroethene	5.651	5.636	5.989	6.172	5.846		5.859	3.89	
1,1,1-Trichloroethane	8.253	8.264	8.757	9.221	8.657		8.631	4.64	
Trichloroethene	0.860	0.886	0.869	0.876	0.853		0.869	1.47	
1,1,2-Trichloro-1,2,2-trifluoroethane	4.416	4.466	4.816	4.932	4.623		4.651	4.77	
1,1,2-Trichloroethane	0.835	0.880	0.851	0.878	0.843		0.857	2.39	
Trichlorofluoromethane	8.265	8.263	8.771	8.977	8.776		8.610	3.80	
Vinyl Chloride *	5.811	5.655	5.995	6.277	6.138		5.975	4.16	

TOTAL VOC ANALYSIS
INITIAL CALIBRATION DATA

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Calibration Dates/Times: 02/23/2012 09:10 - 02/23/2012 13:03
Analytical Method: CCP-TP-184-R0
Heated Purge (yes/no): no

ICAL File ID: IV512W02
Data Report Number: ALD12005V
Analytical Batch ID: 1202011
Instrument ID: VOA-5

LAB FILE ID	IV500416	IV500417	IV500418	IV500419	IV500420	NA			
CONCENTRATION (ug/L)	0	150	100	20	10	NA			
TARGET ANALYTE	RRF 1	RRF 2	RRF 3	RRF 4	RRF 5	RRF 6	AVE RRF	% RSD	#

CCC RSD ≤ 30%

CCC - Calibration Check Compounds (*)
SPCC - System Performance Check Compounds (**)

NA = Not applicable
Z = Did not meet acceptance criteria
# Column used to flag modeled compounds

SPCC Average RRF

Chloromethane	≥ 0.10
1,1 - Dichloroethane	≥ 0.10
Bromoform	≥ 0.10
Chlorobenzene	≥ 0.30
1,1,2,2-Tetrachloroethane	≥ 0.30
All Other Analytes	≥ 0.01

M = Modeled compound:

TOTAL VOC ANALYSIS
CONTINUING CALIBRATION CHECK

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Calibration Date/Time:	02/14/2012 10:36	Lab Sample ID:	CC021412A
Analytical Method:	CCP-TP-184-R0	Lab File ID:	CV500393
Heated Purge (yes/no):	no	Data Report Number:	ALD12005V
Initial Calibration Date(s):	02/13/2012 15:27 - 02/13/2012 17:34	Analytical Batch ID:	1202011
		Instrument ID:	VOA-5

TARGET ANALYTE	AVE RRF	CCAL RRF	%D
Benzene	1.387	1.587	14.4
4-Bromofluorobenzene	0.060	0.062	3.3
Bromoform **	0.264	0.275	4.2
Carbon Disulfide	7.750	8.386	8.2
Carbon Tetrachloride	0.427	0.488	14.3
Chlorobenzene **	1.038	1.113	7.2
Chloroform *	4.154	4.771	14.9
Chloromethane **	1.532	1.191	22.3
1,1-Dichloroethane **	4.963	5.637	13.6
1,1-Dichloroethene *	2.245	2.465	9.8
1,2-Dichloroethane	0.530	0.612	15.5
1,2-Dichloroethane-d4	0.082	0.094	14.6
1,2-Dichloropropane *	0.390	0.449	15.1
Ethylbenzene *	0.584	0.638	9.2
Methylene Chloride	2.522	2.826	12.1
m-Xylene and p-Xylene mix	0.711	0.777	9.3
o-Xylene	0.698	0.753	7.9
1,1,2,2-Tetrachloroethane **	0.544	0.582	7.0
Tetrachloroethene	0.304	0.333	9.5
Toluene *	0.956	1.024	7.1
Toluene-d8	1.245	1.441	15.7
trans-1,2-Dichloroethene	2.577	2.921	13.3
1,1,1-Trichloroethane	3.708	4.256	14.8
Trichloroethene	0.353	0.402	13.9
1,1,2-Trichloro-1,2,2-trifluoroethane	1.947	2.226	14.3
1,1,2-Trichloroethane	0.344	0.366	6.4

TOTAL VOC ANALYSIS
CONTINUING CALIBRATION CHECK

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Calibration Date/Time:	02/14/2012 10:36	Lab Sample ID:	CC021412A
Analytical Method:	CCP-TP-184-R0	Lab File ID:	CV500393
Heated Purge (yes/no):	no	Data Report Number:	ALD12005V
Initial Calibration Date(s):	02/13/2012 15:27 - 02/13/2012 17:34	Analytical Batch ID:	1202011
		Instrument ID:	VOA-5

TARGET ANALYTE	AVE RRF	CCAL RRF	%D
Trichlorofluoromethane	3.659	3.994	9.2
Vinyl Chloride *	2.752	2.551	7.3

CCC %D $\leq$ 20%

CCC - Calibration Check Compounds (*)
SPCC - System Performance Check Compounds(**)

Z = Did not meet acceptance criteria

SPCC RRF	
Chloromethane	$\geq$ 0.10
1,1 - Dichloroethane	$\geq$ 0.10
Bromoform	$\geq$ 0.10
Chlorobenzene	$\geq$ 0.30
1,1,2,2-Tetrachloroethane	$\geq$ 0.30
All Other Analytes	$\geq$ 0.01

TOTAL VOC ANALYSIS
CONTINUING CALIBRATION CHECK

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Calibration Date/Time:	02/20/2012 11:18	Lab Sample ID:	CC022012B
Analytical Method:	CCP-TP-184-R0	Lab File ID:	CV500407
Heated Purge (yes/no):	no	Data Report Number:	ALD12005V
Initial Calibration Date(s):	02/13/2012 15:27 - 02/13/2012 17:34	Analytical Batch ID:	1202011
		Instrument ID:	VOA-5

TARGET ANALYTE	AVE RRF	CCAL RRF	%D
Benzene	1.387	1.385	0.1
4-Bromofluorobenzene	0.060	0.060	0.0
Bromoform **	0.264	0.271	2.7
Carbon Disulfide	7.750	7.231	6.7
Carbon Tetrachloride	0.427	0.398	6.8
Chlorobenzene **	1.038	1.090	5.0
Chloroform *	4.154	3.800	8.5
Chloromethane **	1.532	1.118	27.0
1,1-Dichloroethane **	4.963	4.425	10.8
1,1-Dichloroethene *	2.245	2.079	7.4
1,2-Dichloroethane	0.530	0.533	0.6
1,2-Dichloroethane-d4	0.082	0.084	2.4
1,2-Dichloropropane *	0.390	0.388	0.5
Ethylbenzene *	0.584	0.623	6.7
Methylene Chloride	2.522	2.298	8.9
m-Xylene and p-Xylene mix	0.711	0.759	6.8
o-Xylene	0.698	0.739	5.9
1,1,2,2-Tetrachloroethane **	0.544	0.548	0.7
Tetrachloroethene	0.304	0.337	10.9
Toluene *	0.956	1.011	5.8
Toluene-d8	1.245	1.256	0.9
trans-1,2-Dichloroethene	2.577	2.347	8.9
1,1,1-Trichloroethane	3.708	3.386	8.7
Trichloroethene	0.353	0.349	1.1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.947	1.871	3.9
1,1,2-Trichloroethane	0.344	0.361	4.9

TOTAL VOC ANALYSIS
CONTINUING CALIBRATION CHECK

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Calibration Date/Time:	02/20/2012 11:18	Lab Sample ID:	CC022012B
Analytical Method:	CCP-TP-184-R0	Lab File ID:	CV500407
Heated Purge (yes/no):	no	Data Report Number:	ALD12005V
Initial Calibration Date(s):	02/13/2012 15:27 - 02/13/2012 17:34	Analytical Batch ID:	1202011
		Instrument ID:	VOA-5

TARGET ANALYTE	AVE RRF	CCAL RRF	%D
Trichlorofluoromethane	3.659	3.424	6.4
Vinyl Chloride *	2.752	2.625	4.6

CCC %D $\leq$ 20%

CCC - Calibration Check Compounds (*)

SPCC - System Performance Check Compounds(**)

Z = Did not meet acceptance criteria

SPCC RRF	
Chloromethane	$\geq$ 0.10
1,1 - Dichloroethane	$\geq$ 0.10
Bromoform	$\geq$ 0.10
Chlorobenzene	$\geq$ 0.30
1,1,2,2-Tetrachloroethane	$\geq$ 0.30
All Other Analytes	$\geq$ 0.01

TOTAL VOC ANALYSIS
CONTINUING CALIBRATION CHECK

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Calibration Date/Time:	02/23/2012 14:05	Lab Sample ID:	CC022312A
Analytical Method:	CCP-TP-184-R0	Lab File ID:	CV500422
Heated Purge (yes/no):	no	Data Report Number:	ALD12005V
Initial Calibration Date(s):	02/23/2012 09:10 - 02/23/2012 13:03	Analytical Batch ID:	1202011
		Instrument ID:	VOA-5

TARGET ANALYTE	AVE RRF	CCAL RRF	%D
Benzene	3.430	3.193	6.9
4-Bromofluorobenzene	0.146	0.140	4.1
Bromoform **	0.635	0.565	11.0
Carbon Disulfide	17.440	16.957	2.8
Carbon Tetrachloride	0.959	0.633	34.0
Chlorobenzene **	2.623	2.440	7.0
Chloroform *	9.660	9.322	3.5
Chloromethane **	2.519	2.369	6.0
1,1-Dichloroethane **	11.260	10.834	3.8
1,1-Dichloroethene *	5.157	5.112	0.9
1,2-Dichloroethane	1.327	1.241	6.5
1,2-Dichloroethane-d4	0.201	0.187	7.0
1,2-Dichloropropane *	0.946	0.892	5.7
Ethylbenzene *	1.471	1.369	6.9
Methylene Chloride	5.736	5.575	2.8
m-Xylene and p-Xylene mix	1.819	1.684	7.4
o-Xylene	1.748	1.641	6.1
1,1,2,2-Tetrachloroethane **	1.333	1.203	9.8
Tetrachloroethene	0.782	0.708	9.5
Toluene *	2.398	2.214	7.7
Toluene-d8	3.107	2.909	6.4
trans-1,2-Dichloroethene	5.859	5.697	2.8
1,1,1-Trichloroethane	8.631	7.981	7.5
Trichloroethene	0.869	0.821	5.5
1,1,2-Trichloro-1,2,2-trifluoroethane	4.651	4.396	5.5
1,1,2-Trichloroethane	0.857	0.794	7.4

TOTAL VOC ANALYSIS
CONTINUING CALIBRATION CHECK

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Calibration Date/Time:	02/23/2012 14:05	Lab Sample ID:	CC022312A
Analytical Method:	CCP-TP-184-R0	Lab File ID:	CV500422
Heated Purge (yes/no):	no	Data Report Number:	ALD12005V
Initial Calibration Date(s):	02/23/2012 09:10 - 02/23/2012 13:03	Analytical Batch ID:	1202011
		Instrument ID:	VOA-5

TARGET ANALYTE	AVE RRF	CCAL RRF	%D
Trichlorofluoromethane	8.610	8.301	3.6
Vinyl Chloride *	5.975	5.922	0.9

CCC %D ≤ 20%

CCC - Calibration Check Compounds (*)

SPCC - System Performance Check Compounds(**)

Z = Did not meet acceptance criteria

SPCC RRF	
Chloromethane	≥ 0.10
1,1 - Dichloroethane	≥ 0.10
Bromoform	≥ 0.10
Chlorobenzene	≥ 0.30
1,1,2,2-Tetrachloroethane	≥ 0.30
All Other Analytes	≥ 0.01

TOTAL VOC ANALYSIS
CONTINUING CALIBRATION CHECK

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Calibration Date/Time:	02/28/2012 11:00	Lab Sample ID:	CC022812A
Analytical Method:	CCP-TP-184-R0	Lab File ID:	CV500453
Heated Purge (yes/no):	no	Data Report Number:	ALD12005V
Initial Calibration Date(s):	02/23/2012 09:10 - 02/23/2012 13:03	Analytical Batch ID:	1202011
		Instrument ID:	VOA-5

TARGET ANALYTE	AVE RRF	CCAL RRF	%D
Benzene	3.430	3.051	11.0
4-Bromofluorobenzene	0.146	0.136	6.8
Bromoform **	0.635	0.620	2.4
Carbon Disulfide	17.440	14.933	14.4
Carbon Tetrachloride	0.959	0.990	3.2
Chlorobenzene **	2.623	2.519	4.0
Chloroform *	9.660	8.330	13.8
Chloromethane **	2.519	2.176	13.6
1,1-Dichloroethane **	11.260	9.510	15.6
1,1-Dichloroethene *	5.157	4.425	14.2
1,2-Dichloroethane	1.327	1.228	7.5
1,2-Dichloroethane-d4	0.201	0.188	6.5
1,2-Dichloropropane *	0.946	0.842	11.0
Ethylbenzene *	1.471	1.404	4.6
Methylene Chloride	5.736	4.813	16.1
m-Xylene and p-Xylene mix	1.819	1.759	3.3
o-Xylene	1.748	1.676	4.1
1,1,2,2-Tetrachloroethane **	1.333	1.272	4.6
Tetrachloroethene	0.782	0.757	3.2
Toluene *	2.398	2.267	5.5
Toluene-d8	3.107	2.832	8.9
trans-1,2-Dichloroethene	5.859	5.003	14.6
1,1,1-Trichloroethane	8.631	7.749	10.2
Trichloroethene	0.869	0.781	10.1
1,1,2-Trichloro-1,2,2-trifluoroethane	4.651	4.091	12.0
1,1,2-Trichloroethane	0.857	0.806	6.0

TOTAL VOC ANALYSIS
CONTINUING CALIBRATION CHECK

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Calibration Date/Time:	02/28/2012 11:00	Lab Sample ID:	CC022812A
Analytical Method:	CCP-TP-184-R0	Lab File ID:	CV500453
Heated Purge (yes/no):	no	Data Report Number:	ALD12005V
Initial Calibration Date(s):	02/23/2012 09:10 - 02/23/2012 13:03	Analytical Batch ID:	1202011
		Instrument ID:	VOA-5

TARGET ANALYTE	AVE RRF	CCAL RRF	%D
Trichlorofluoromethane	8.610	7.508	12.8
Vinyl Chloride *	5.975	5.340	10.6

CCC %D ≤ 20%

CCC - Calibration Check Compounds (*)
SPCC - System Performance Check Compounds(**)

Z = Did not meet acceptance criteria

SPCC RRF	
Chloromethane	≥ 0.10
1,1 - Dichloroethane	≥ 0.10
Bromoform	≥ 0.10
Chlorobenzene	≥ 0.30
1,1,2,2-Tetrachloroethane	≥ 0.30
All Other Analytes	≥ 0.01

TOTAL VOC ANALYSIS
CCAL INTERNAL STANDARD AREA AND RT SUMMARY

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Date/Time Analyzed: 02/14/2012 10:36
Analytical Method: CCP-TP-184-R0
Heated Purge (yes/no): no
ICAL/CCAL Sample ID: IC021312C
ICAL/CCAL Lab File ID: IV500381
Date Analyzed: 2 /13/2012

Daily CCAL Sample ID: CC021412A
Daily CCAL Lab File ID: CV500393
Data Report Number: ALD12005V
Analytical Batch ID: 1202011
Instrument ID: VOA-5

		IS1 (BCM) Area	RT MIN.	IS2 (DFB) Area	RT MIN.	IS3 (CBZ) Area	RT MIN.
Previous ICAL/CCAL	12 HOUR STANDARD	227236	12.99	1641524	14.11	1576676	18.49
	UPPER LIMIT	454472	13.49	3283048	14.61	3153352	18.99
	LOWER LIMIT	113618	12.49	820762	13.61	788338	17.99
Continuing Calibration Check		151991	12.99	1109224	14.11	1111457	18.49

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene-d4
IS3 (CBZ) = Chlorobenzene-d5

Z = Values outside of Acceptance Criteria

Area upper limit = +100% of internal standard area
Area lower limit = -50% of internal standard area

RT upper limit = +30 seconds of internal standard RT
RT lower limit = -30 seconds of internal standard RT

TOTAL VOC ANALYSIS
CCAL INTERNAL STANDARD AREA AND RT SUMMARY

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Date/Time Analyzed:	02/20/2012 11:18	Daily CCAL Sample ID:	CC022012B
Analytical Method:	CCP-TP-184-R0	Daily CCAL Lab File ID:	CV500407
Heated Purge (yes/no):	no	Data Report Number:	ALD12005V
ICAL/CCAL Sample ID:	CC021412A	Analytical Batch ID:	1202011
ICAL/CCAL Lab File ID:	CV500393	Instrument ID:	VOA-5
Date Analyzed:	2 /14/2012		

		IS1 (BCM) Area	RT MIN.	IS2 (DFB) Area	RT MIN.	IS3 (CBZ) Area	RT MIN.
Previous ICAL/CCAL	12 HOUR STANDARD	151991	12.99	1109224	14.11	1111457	18.49
	UPPER LIMIT	303982	13.49	2218448	14.61	2222914	18.99
	LOWER LIMIT	75996	12.49	554612	13.61	555728	17.99
Continuing Calibration Check		183341	12.99	1222135	14.11	1089173	18.49

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene-d4
IS3 (CBZ) = Chlorobenzene-d5

Z = Values outside of Acceptance Criteria

Area upper limit = +100% of internal standard area
Area lower limit = -50% of internal standard area

RT upper limit = +30 seconds of internal standard RT
RT lower limit = -30 seconds of internal standard RT

TOTAL VOC ANALYSIS
CCAL INTERNAL STANDARD AREA AND RT SUMMARY

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Date/Time Analyzed:	02/23/2012 14:05	Daily CCAL Sample ID:	CC022312A
Analytical Method:	CCP-TP-184-R0	Daily CCAL Lab File ID:	CV500422
Heated Purge (yes/no):	no	Data Report Number:	ALD12005V
ICAL/CCAL Sample ID:	IC022312A	Analytical Batch ID:	1202011
ICAL/CCAL Lab File ID:	IV500416	Instrument ID:	VOA-5
Date Analyzed:	2 /23/2012		

		IS1 (BCM) Area	RT MIN.	IS2 (DFB) Area	RT MIN.	IS3 (CBZ) Area	RT MIN.
Previous ICAL/CCAL	12 HOUR STANDARD	165062	12.99	1097282	14.11	1018498	18.49
	UPPER LIMIT	330124	13.49	2194564	14.61	2036996	18.99
	LOWER LIMIT	82531	12.49	548641	13.61	509249	17.99
Continuing Calibration Check		151165	12.99	1073402	14.11	994457	18.48

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene-d4
IS3 (CBZ) = Chlorobenzene-d5

Z = Values outside of Acceptance Criteria

Area upper limit = +100% of internal standard area
Area lower limit = -50% of internal standard area

RT upper limit = +30 seconds of internal standard RT
RT lower limit = -30 seconds of internal standard RT

TOTAL VOC ANALYSIS
CCAL INTERNAL STANDARD AREA AND RT SUMMARY

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Date/Time Analyzed:	02/28/2012 11:00	Daily CCAL Sample ID:	CC022812A
Analytical Method:	CCP-TP-184-R0	Daily CCAL Lab File ID:	CV500453
Heated Purge (yes/no):	no	Data Report Number:	ALD12005V
ICAL/CCAL Sample ID:	CC022312A	Analytical Batch ID:	1202011
ICAL/CCAL Lab File ID:	CV500422	Instrument ID:	VOA-5
Date Analyzed:	2 /23/2012		

		IS1 (BCM) Area	RT MIN.	IS2 (DFB) Area	RT MIN.	IS3 (CBZ) Area	RT MIN.
Previous ICAL/CCAL	12 HOUR STANDARD	151165	12.99	1073402	14.11	994457	18.48
	UPPER LIMIT	302330	13.49	2146804	14.61	1988914	18.98
	LOWER LIMIT	75582	12.49	536701	13.61	497228	17.98
Continuing Calibration Check		148301	12.99	967424	14.11	859516	18.49

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene-d4
IS3 (CBZ) = Chlorobenzene-d5

Z = Values outside of Acceptance Criteria

Area upper limit = +100% of internal standard area
Area lower limit = -50% of internal standard area

RT upper limit = +30 seconds of internal standard RT
RT lower limit = -30 seconds of internal standard RT

TOTAL VOC ANALYSIS
MDL REPORTING FORM

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

MDL Determination Date: 02/13/2012 Instrument ID: VOA-5

Preparation Method: CCP-TP-184-R0 Matrix: SOLID

Analytical Method: CCP-TP-184-R0

TARGET ANALYTE	Reported MDL mg/kg	PROGRAM REQUIRED MDL mg/kg	PRQL mg/kg
Benzene	0.17	1	10
4-Bromofluorobenzene	0.17	1	10
Bromoform	0.17	1	10
Carbon Disulfide	0.17	1	10
Carbon Tetrachloride	0.17	1	10
Chlorobenzene	0.17	1	10
Chloroform	0.17	1	10
1,1-Dichloroethene	0.33	1	10
1,2-Dichloroethane	0.17	1	10
1,2-Dichloroethane-d4	0.33	1	10
Ethylbenzene	0.17	1	10
Methylene Chloride	0.17	1	10
m-Xylene and p-Xylene mix	0.17	1	10
o-Xylene	0.17	1	10
1,1,2,2-Tetrachloroethane	0.17	1	10
Tetrachloroethene	0.17	1	10
Toluene	0.17	1	10
Toluene-d8	0.17	1	10
trans-1,2-Dichloroethene	0.17	1	10
1,1,1-Trichloroethane	0.17	1	10
Trichloroethene	0.17	1	10
1,1,2-Trichloro-1,2,2-trifluoroethane	0.33	1	10
1,1,2-Trichloroethane	0.17	1	10
Trichlorofluoromethane	0.17	1	10
Vinyl Chloride	0.17	1	4

SOLIDS: MDLs calculated assuming 3.00g sample and 10mL extraction volume.

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TOTAL VOC ANALYSIS
METHOD PRECISION AND ACCURACY (P&A) DEMONSTRATION

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Method P&A Effective Date: 02/13/2012
Data Report Number: ALD12005V
Analytical Batch ID: 1202011
Preparation Method: CCP-TP-184-R0
Analytical Method: CCP-TP-184-R0
Instrument ID: VOA-5

TARGET ANALYTE	Number of Method Performance Samples	Accuracy		Precision	
		Mean %R	Acceptance Limits (%R)	%RSD	Acceptance Limits (%RSD)
Benzene	7	109.0	37–151	1.8	≤45
Bromoform	7	93.2	45–169	2.6	≤47
Carbon Disulfide	7	100.1	60–150	2.1	≤50
Carbon Tetrachloride	7	106.8	70–140	2.9	≤30
Chlorobenzene	7	106.4	37–160	1.5	≤38
Chloroform	7	102.9	51–138	2.5	≤44
1,1-Dichloroethene	7	100.3	D[a]–234	3.3	≤250
1,2-Dichloroethane	7	108.5	49–155	1.9	≤42
Ethylbenzene	7	103.9	37–162	1.4	≤43
Methylene Chloride	7	103.7	D[a]–221	1.9	≤50
m-Xylene and p-Xylene mix	7	105.4	60–150	1.3	≤50
o-Xylene	7	103.5	60–150	1.1	≤50
1,1,2,2-Tetrachloroethane	7	106.7	46–157	2.5	≤55
Tetrachloroethene	7	104.0	64–148	2.1	≤29
Toluene	7	103.8	47–150	2.1	≤29
trans-1,2-Dichloroethene	7	99.8	60–150	3.1	≤50
1,1,1-Trichloroethane	7	101.2	52–162	2.1	≤33
Trichloroethene	7	104.5	71–157	2.3	≤36
1,1,2-Trichloro-1,2,2-trifluoroethane	7	101.5	60–150	4.2	≤50
1,1,2-Trichloroethane	7	103.4	52–150	2.5	≤38
Trichlorofluoromethane	7	101.7	17–181	3.0	≤110
Vinyl Chloride	7	103.6	D[a]–251	2.5	≤200

[a]D = Detected; result must be greater than zero
Z = Did not meet acceptance criteria

Section 6

Data Review Checklists

CCP Sample Receiving & Custody Review Checklist
AMWTP Analytical Chemistry Laboratory

Log Number: 1202011	Waste Stream ID: ARP Soils	NCR Initiation Required? ☐ Yes X No
COC Numbers: AR4057R1,AR4057R2,AR4057C1,AR4057C2,AR4058R1,AR4058R2, AR4058C1,AR4058C2,AR4060R1,AR4060R2,AR4060C1,AR4060C2,AR4050R1, AR4050R2,AR4050C1,AR4050C2,AR4059R1,AR4059R2,AR4059C1,AR4059C2		IF Yes, NCR Number:
Reviewer: Bill Strong (Printed Name)	Signature	2-07-2012 (Date) / Procedure Number: CCP-TP-180 Revision 2

Instructions: Complete one checklist per analytical log. Enter the appropriate response for each question. Each "No" response requires explanation. A "No" response to a question may require initiation of an NCR.

Requirement	Yes	No	Comments
1. Field Chain of Custody (COC) Forms			
a. Was a COC form received with each shipping container?	☒	☐	
b. Did the content of each shipping container match that listed on the associated COC form?	☒	☐	
c. Are all custody transfers completely documented by signatures of relinquishers and receivers, with date and time of transfer?	☒	☐	
d. Does all sample information (e.g., sample ID, sampling date and time, sampling batch) listed on the COC form correspond with the information on the sample labels?	☒	☐	
e. Is the correct analysis requested for each sample?	☒	☐	
f. Are any corrections on the COC form appropriately made with a single line through the incorrect entry and the correct data written in (not overwritten), initialed and dated?	☒	☐	See Note 1
2. Sample Labels			
a. Was each sample received with a completed sample label?	☒	☐	
b. Do the field sample IDs on the sample labels correspond to those on the field COC form?	☒	☐	
c. Are the sampling batch number, sampling date, time and requested analysis recorded on each sample label, and correspond with those recorded on the COC form?	☒	☐	
d. Are the sampler initials, organization and sample description recorded on each sample label?	☒	☐	
e. Are any corrections on the sample labels appropriately made with a single line through the incorrect entry and the correct data written in (not overwritten), initialed and dated?	☒	☐	
3. Sample Integrity			
a. Were custody seals used on the shipping container?	☐	☒	See Note 2
b. Were custody seals used on each individual sample container?	☒	☐	
c. Were all custody seals intact and undamaged upon receipt at the laboratory?	☒	☐	
d. Were all custody seals placed such that the container could not be opened without damaging the seal?	☒	☐	
e. Has the physical integrity of each sample been maintained (e.g., no cracks or leaks)?	☒	☐	
f. Were all samples preserved during shipment with "Blue Ice" or equivalent cooling mechanism?	☒	☐	
g. Were all samples placed in refrigerated storage (4 ± 2 °C) after log-in?	☒	☐	
4. Internal Sample Tracking			
a. Are all samples logged into the Analytical Computer System (ACS)?	☒	☐	
b. Is all sample information correctly transcribed from the field documentation into the ACS?	☒	☐	
c. Are all sample containers labeled with the ACS log number and the laboratory sample ID?	☒	☐	
d. Is log information entered into the Sample Tracking Logbook?	☒	☐	

Contact the sampling organization if any discrepancies are found in the field COC and sample label documentation. Document the name of the person contacting the sampling organization, the name of the person contacted, the date and time of the contact, and the resolution of the problem.

Note 1 **Corrections to COCs AR4060R1, AR4060R2, AR4060C1 and AR4060C2 made per CCP (Brad Stark) request via email on 2/06/12.**

Note 2 ***Direct transfer of custody from Solids sampler to laboratory sample custodian.***

ALD Document: Log 1202011 CCP-ARP Soils.tif - Scanned:2/21/2012 4:04:52 PM
0119

Sailer Siemer, Shelly J.

From: Stark, Bradley R [Bradley.Stark@icp.doe.gov]
Sent: Monday, February 06, 2012 4:20 PM
To: Sailer Siemer, Shelly J.
Subject: RE: Corrections needed on ARP Solid Sample COCs for Sampling Batch S4200-LOT-05-03

Thank you, I give you permission to fix the error on the COC's.

Thank You

Brad Stark
International Engineering Site Manager
International Engineering Services
Sub-Contractor to URS Washington TRU Solutions LLC.
Office: 208-533-0593
Cell: 208-521-7466

From: Sailer Siemer, Shelly J. [mailto:Shelly.Sailer@amwtp.inl.gov]
Sent: Monday, February 06, 2012 3:58 PM
To: Stark, Bradley R
Cc: Strong, William C; Nicklas, John H; Lundholm, Duane S; Laug, Jeffrey S
Subject: Corrections needed on ARP Solid Sample COCs for Sampling Batch S4200-LOT-05-03

Hi Brad,

As received at the laboratory, all four COC forms for ARP sampling batch S4200-LOT-05-03 (COC Numbers AR4060R1, AR4060R2, AR4060C1, AR4060C2) have corrections made to the laboratory name ("INEEL INTEC" lined out and "INL-RWMC" written in) which have not been initialed and dated.

Please reply to this note with permission to correct these errors and we will fix the COC forms for you.

Please let me know if you have questions. Thanks.

Shelly J. Sailer
QA Officer, AMWTP Analytical Chemistry Laboratory
Office: (208) 557-6650
Cell: (208) 932-6458
e-mail: shelly.sailer@amwtp.inl.gov

AMWTP Analytical Chemistry Laboratory

Data Generator Checklist for CCP

Data Report Number: ALD12005V	Analytical Batch: 1202011
Analysis Procedure: CCP-TP-184	Procedure Revision: 0
Analysis Date(s): 02-14-12, 02-20-12, 02-23-12, and 02-28-12	
Data Generator Signature:	

Criteria	Yes	No	Comments
1. Samples analyzed in accordance with cited analytical method.	✓		
2. All logbook entries completed in accordance with CCP-QP-008.	✓		
3. All data entry and corrections made in accordance with CCP-TP-188.	✓		
4. All raw data signed/initialed and dated in indelible black ink.	✓		
5. Data reviewed for completeness and accuracy.	✓		

AMWTP Analytical Chemistry Laboratory
Independent Technical Review (ITR) Checklist for CCP
Total VOCs in Homogeneous Solids and Soil/Gravel by GC/MS

Analytical Batch: 1202011	Data Report: ALD12005V	Method: CCP-TP-184

Analysis Date(s)	Data Generator(s)	ITR Review Date	ITR Release Signature	ITR Release Date
02-14,20,23,28-12	Faye Srala	3-08-12		3-12-12

Requirement	Yes	No	N/A	Comments (Entries required ONLY if "No" is checked)
1. Instrument Performance Check (BFB Tune)	///	///	///	///
a. Was a BFB tune performed at the beginning of each 12-hour analytical shift, before analysis of standards or samples?	✓			
b. Does the BFB tune meet CCP-TP-184 acceptance criteria?	✓			
2. Initial Calibration (ICAL)	///	///	///	///
a. Have all ICALs used with this analytical batch been verified to meet specifications and approved for use as documented by a completed Initial Calibration Independent Technical Review Checklist?	✓			
3. Continuing Calibration Verification (CCAL)	///	///	///	///
a. Was a CCAL standard analyzed at the beginning of each 12-hour analytical shift, after the BFB tune but before sample analysis?	✓			
b. Are all CCC RRF or concentration (for modeled compounds) %Ds ≤20?	✓			
c. Are the RRFs ≥0.300 for SPCCs chlorobenzene and 1,1,2,2-tetrachloroethane, ≥0.100 for all other SPCCs, and ≥ 0.01 for non-SPCCs?	✓			
d. Are internal standard areas within 50 to 200% of the areas in the last daily calibration standard (CCAL or midpoint ICAL standard)?	✓			
e. Are internal standard retention times (RTs) within 30 seconds of the RT in the last daily calibration standard (CCAL or midpoint ICAL standard)?	✓			
4. Samples (Including LCSs, Blanks, MS and MSDs)	///	///	///	///
a. Are the internal standard areas within 50 to 200% of those in the associated CCAL?	✓			
b. Are the internal standard retention times within 30 seconds of those in the associated CCAL?	✓			
c. Do all surrogate compound recoveries meet CCP-TP-184 acceptance criteria?	✓			Diluted out on 2 samples.
d. Were all samples having analytes detected in amounts exceeding the calibration range reanalyzed on a dilution?	✓			
e. Are detected target analyte RRTs within 0.06 RRT units of the associated CCAL RRT, or is the qualitative identification justified by the operator?	✓			
f. In your opinion, do the sample spectra for positive hits match the reference spectra?	✓			
g. In your opinion, are the quantitation ion peak areas correctly integrated?	✓			
h. Was a TIC search conducted on each sample and blank in the analytical batch?	✓			
i. Are TIC identities appropriately assigned per the identification criteria of CCP-TP-184?	✓			
5. Blanks	///	///	///	///
a. Was at least one unique laboratory blank extracted and analyzed with the analytical batch?	✓			
b. Was a blank (method or laboratory) analyzed daily prior to analysis of samples?	✓			
c. Are all laboratory and method blank results ≤3 × program-required MDLs for all target analytes?	✓			
6. Laboratory Control Samples (LCSs)	///	///	///	///
a. Was at least one unique LCS extracted and analyzed with the analytical batch?	✓			
b. Are all LCSs prepared from a standard source different from that used for the ICAL standards?	✓			
c. Do percent recoveries for all spiked analytes in each LCS meet CCP-TP-184 acceptance criteria?	✓			

0122

AMWTP Analytical Chemistry Laboratory
Independent Technical Review (ITR) Checklist for CCP
Total VOCs in Homogeneous Solids and Soil/Gravel by GC/MS

Analytical Batch: 1202011	Data Report: ALD12005V	Method: CCP-TP-184

Requirement	Yes	No	N/A	Comments (Entries required ONLY if "No" is checked)
7. Matrix Spike and Matrix Spike Duplicate Samples (MS/MSD)	///	///	///	///
a. Was at least one matrix spike sample (MS) analyzed with the analytical batch?	✓			
b. Was at least one matrix spike duplicate sample (MSD) analyzed with the analytical batch?	✓			
c. Do all percent recoveries for the MS and MSD meet CCP-TP-184 acceptance criteria?		✓		See Narrative
d. Do the RPDs between the MS and MSD meet CCP-TP-184 acceptance criteria?	✓			
8. Sample Integrity Verification	///	///	///	///
a. Is COC documentation complete and accurate for all reported samples?	✓			
b. Was physical integrity of all samples verified as satisfactory at VTSR?	✓			
c. Were all samples and associated extracts stored at 4 ± 2 °C between receipt and analysis?	✓			
d. Were all samples extracted within 14 days of collection and analyzed (including dilutions and reanalyses) within 40 days of extraction?	✓			
9. Instrument, Method and Personnel Qualification Verification	///	///	///	///
a. Were all analytical tasks, including sample analysis and supporting method performance and ICALs, conducted by personnel having current program qualifications?	✓			
b. Was acceptable demonstration of precision, accuracy, and MDLs performed within the last 6 months?	✓			
10. Supporting Data Package Completeness	///	///	///	///
a. Are all raw data and instrument printouts signed/initialed and dated by the operator and included in the supporting data package?	✓			
b. Are copies of all extraction/preparation and sample run log books for the analytical batch included in the supporting data package?	✓			
c. Are standard certificates and QC Lab preparation records present and accurate for all working, intermediate and stock standard solutions used?	✓			
d. Are all changes to original data made by line-out of incorrect data, initialed/signed and dated by the person making the change?	✓			
11. Batch Data Report Completeness	///	///	///	///
a. Does the report contain a Data Report Narrative that addresses, at a minimum: 1) any deviations from CCP-TP-184 due to sample matrix or ALARA concerns and the justification for the deviations; 2) any QC samples that failed the acceptance criteria, and their impact on data quality; 3) any NCRs associated with the reported samples; and 4) any problems or unusual conditions encountered during the analysis?	✓			
b. Are copies of any NCRs associated with the data included?			✓	
c. Are Analysis Data Sheets and TIC Analysis Data Sheets present and accurate for all samples in the analytical batch?	✓			
d. Are the analyte concentrations on the Analysis Data Sheets reported in units of mg/kg and correctly rounded to 2 significant figures?	✓			
e Are U, J, B, D, E, H, Z, and N qualifying flags correctly assigned on the reporting forms?	✓			
f. Are reporting forms present and accurate for surrogate recoveries, MS/MSDs, LBs, MBs, ISA&RTs, LCSs, BFB tunes, ICALs, CCALs, CCAL ISA&RTs, and MDLs?	✓			
g. Are copies of all COC documentation included?	✓			
h. Have all data received documented data generator review and signature?	✓			
i. Were all calculations performed using validated software or 100% manually-verified?	✓			
j. Have the data been reviewed for transcription errors?	✓			
k. Are all pages in the data report legible and correctly paginated?	✓			

0123

Change 1 revisions reviewed and approval [signature] 3-21-12

AMWTP Analytical Chemistry Laboratory
Independent Technical Review (ITR) Checklist for CCP
Total VOCs in Homogeneous Solids and Soil/Gravel by GC/MS

Analytical Batch: 1202011	Data Report: ALD12005V	Method: CCP-TP-184

Requirement	Yes	No	N/A	Comments (Entries required ONLY if "No" is checked)
7. Matrix Spike and Matrix Spike Duplicate Samples (MS/MSD)	///	///	///	///
a. Was at least one matrix spike sample (MS) analyzed with the analytical batch?	✓			
b. Was at least one matrix spike duplicate sample (MSD) analyzed with the analytical batch?	✓			
c. Do all percent recoveries for the MS and MSD meet CCP-TP-184 acceptance criteria?		✓		See Narrative
d. Do the RPDs between the MS and MSD meet CCP-TP-184 acceptance criteria?	✓			
8. Sample Integrity Verification	///	///	///	///
a. Is COC documentation complete and accurate for all reported samples?	✓			
b. Was physical integrity of all samples verified as satisfactory at VTSR?	✓			
c. Were all samples and associated extracts stored at 4 ± 2 °C between receipt and analysis?	✓			
d. Were all samples extracted within 14 days of collection and analyzed (including dilutions and reanalyses) within 40 days of extraction?	✓			
9. Instrument, Method and Personnel Qualification Verification	///	///	///	///
a. Were all analytical tasks, including sample analysis and supporting method performance and ICALs, conducted by personnel having current program qualifications?	✓			
b. Was acceptable demonstration of precision, accuracy, and MDLs performed within the last 6 months?	✓			
10. Supporting Data Package Completeness	///	///	///	///
a. Are all raw data and instrument printouts signed/initialed and dated by the operator and included in the supporting data package?	✓			
b. Are copies of all extraction/preparation and sample run log books for the analytical batch included in the supporting data package?	✓			
c. Are standard certificates and QC Lab preparation records present and accurate for all working, intermediate and stock standard solutions used?	✓			
d. Are all changes to original data made by line-out of incorrect data, initialed/signed and dated by the person making the change?	✓			
11. Batch Data Report Completeness	///	///	///	///
a. Does the report contain a Data Report Narrative that addresses, at a minimum: 1) any deviations from CCP-TP-184 due to sample matrix or ALARA concerns and the justification for the deviations; 2) any QC samples that failed the acceptance criteria, and their impact on data quality; 3) any NCRs associated with the reported samples; and 4) any problems or unusual conditions encountered during the analysis?	✓			
b. Are copies of any NCRs associated with the data included?			✓	
c. Are Analysis Data Sheets and TIC Analysis Data Sheets present and accurate for all samples in the analytical batch?	✓			
d. Are the analyte concentrations on the Analysis Data Sheets reported in units of mg/kg and correctly rounded to 2 significant figures?	✓			
e Are U, J, B, D, E, H, Z, and N qualifying flags correctly assigned on the reporting forms?	✓			
f. Are reporting forms present and accurate for surrogate recoveries, MS/MSDs, LBs, MBs, ISA&RTs, LCSs, BFB tunes, ICALs, CCALs, CCAL ISA&RTs, and MDLs?	✓			
g. Are copies of all COC documentation included?	✓			
h. Have all data received documented data generator review and signature?	✓			
i. Were all calculations performed using validated software or 100% manually-verified?	✓			
j. Have the data been reviewed for transcription errors?	✓			
k. Are all pages in the data report legible and correctly paginated?	✓			

0123A

SUPERSEDED

Attachment 8 – CCP SPM S3000/S4000 Total Semi-Volatile Organic Compound Analysis Project Level Validation Checklist and Summary

BDR Number: ALD12005S	Analysis Date: 02/06-07/12			
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
1. Does the Batch Data Report (BDR) contain the batch number, laboratory name, and the date of the batch report? **Reference Source: CCP-PO-001, Table C3-13**	X			
2. Has a BDR Narrative been included with the BDR? **Reference Source: CCP-PO-001, Table C3-13**	X			
3. Is there a cross-reference between waste container number, field sample number, and lab sample number ID; and signature release by lab personnel in the BDR? **Reference Source: CCP-PO-001, Table C3-13**	X			
4. Is the BDR complete? **Reference Source: CCP-PO-001, C3-10b**	X			
5. List all containers that have met QAOs. **Reference Source: CCP-PO-001, C3-10b**				Container Numbers: ARP30100 ARP30103 ARP30018 ARP30081 ARP30014
6. Is there a reference to or copy of any associated NCRs (if any) in the BDR? NA if no NCRs associated with the BDR. **Reference Source: CCP-PO-001, Table C3-13**			X	None generated
7. Are there 20 or less samples per analytical batch? **Reference Source: CCP-PO-001, C3-10**	X			
8. Does the BDR contain a complete and signed copy of the COC form? **Reference Source: CCP-PO-001, Table C3-13**	X			
9. Does the BDR include the date and time of analysis for each sample? **Reference Source: CCP-PO-001, Table C3-13**	X			
10. Are the training qualifications for all personnel acceptable? **CCP-PO-001, Table C3-13**	X			
11. Are holding times between collection and extraction within the 14-day requirement? **Reference Source: CCP-PO-001, Table C1-4**	X			
12. Are the holding times between extraction and analysis within the 40-day requirement? **Reference Source: CCP-PO-001, Table C1-4**	X			

CCP RECORDS ORIGINAL
DATE REC'D 3-22-12

Attachment 8 – CCP SPM S3000/S4000 Total Semi-Volatile Organic Compound Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: ALD12005S	**Analysis Date: 02/06-07/12**			
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
13. Have QC designations for samples been applied as appropriate? **Reference Source: CCP-PO-001, Table C3-13**	X			
14. Is there a minimum of one laboratory control sample (LCS) analyzed per analytical batch? **Reference Source: CCP-PO-001, Table C3-7**	X			
15. Are the percent recoveries (%Rs) for all LCS analytes within the acceptable range? **Reference Source: CCP-PO-001, Table C3-6**	X			
16. Is a minimum of one matrix spike (MS) analyzed per analytical batch? **Reference Source: CCP-PO-001, Table C3-6**	X			
17. Are the %Rs for all MS compounds within the acceptance range? **Reference Source: CCP-PO-001, Table C3-7**	X			
18. Is a minimum of one matrix spike duplicate (MSD) analyzed per analytical batch? Note: The MSD is used in place of the laboratory duplicate. **Reference Source: CCP-PO-001, Table C3-7**	X			
19. Are the %Rs for all MSD compounds within the acceptance range? Note: The MSD is used in place of the laboratory duplicate. **Reference Source: CCP-PO-001, Table C3-6**	X			
20. Do the MS/MSD relative percent differences (RPDs) for all analytes meet the requirements? **Reference Source: CCP-PO-001, Table C3-6**	X			
21. Has the CCP Site Project Manager calculated and reported the results of the RPD and F-Test Method? **Reference Source: CCP-PO-001, Section C3-3**	X			CCP interoffice correspondence CP:12:01131 UFC: 5900.00
22. Were the applicable RPD or F-test method acceptance criteria met? **Reference Source: CCP-PO-001, Section C3-3**	X			F-test was not performed.

Attachment 8 – CCP SPM S3000/S4000 Total Semi-Volatile Organic Compound Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: ALD12005S			Analysis Date: 02/06-07/12	
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
23. Is there a minimum of one lab blank analyzed per analytical batch? **Reference Source: CCP-PO-001, Table C3-7**	X			
24. Are all lab blank compounds ≤3 times the program-required MDL? **Reference Source: CCP-PO-001, Table C3-7**	X			
25. Are the analytical samples spiked with surrogate matrix compounds (SMCs)? **Reference Source: CCP-PO-001, Table C3-7**	X			
26. Are the SMCs %R values within specified criteria listed on the Surrogate Recovery Form included in the BDR? **Reference Source: CCP-PO-001, Table C3-7**	X			Exception: recovery of surrogates for highly diluted samples were below detection limit; results flagged Z or D.
27. Is the five-point (minimum) initial calibration complete? **Reference Source: CCP-PO-001, Table C3-7**	X			
28. Are the percent relative standard deviations (%RSDs) for all target analytes calibration check compounds (CCCs) less than or equal to 30%? **Reference Source: CCP-PO-001, Table C3-7**	X			
29. Are the %RSDs for all other compounds ≤ 15%? **Reference Source: CCP-PO-001, Table C3-7**	X			
30. Are the relative response factors (RRFs) for all target analytes System Performance Check Compounds (SPCCs) ≥ 0.05? **Reference Source: CCP-PO-001, Table C3-7 and SW 846**	X			
31. If %RSD is less than or equal to 15, is average relative response factor used? **Reference Source: CCP-PO-001, Table C3-7**	X			
32. When an alternative curve is used, is the $r^2 \geq 0.990$? NA if %RSD is less than or equal to 15. **Reference Source: CCP-PO-001, Table C3-7**	X			Regression required for 2,4-Dinitrophenol only.

Attachment 8 – CCP SPM S3000/S4000 Total Semi-Volatile Organic Compound Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: ALD12005S	Analysis Date: 02/06-07/12			
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
33. If %RSD is greater than 15, is regression equation generated and used? NA if %RSD is less than or equal to 15. **Reference Source: CCP-PO-001, Table C3-7**	X			%RSD is less than 15 for all compounds except 2,4-Dintrophenol, which is modeled.
34. Is RRF for all non-SPCCs ≥0.01? **Reference Source: CCP-PO-001, Table C3-7**	X			
35. Were the decafluorotriphenylphosphine (DFTPP) ion abundance criteria satisfied? **Reference Source: CCP-PO-001, Table C3-7**	X			
36. Is the DFTPP Tune performed at the beginning of the run before the QC samples? **Reference Source: CCP-PO-001, Table C3-7**	X			
37. Is DFTPP tune performed at a minimum frequency of every 12 hours of operation? **Reference Source: CCP-PO-001, Table C3-7**	X			
38. Were the ion abundance criteria satisfied? **Reference Source: CCP-PO-001, Table C3-7**	X			
39. Is continuing calibration performed at a minimum frequency of every 12 hours of operation? **Reference Source: CCP-PO-001, Table C3-7**	X			
40. Are the %Ds for the continuing calibration less than or equal to 20% for target analytes CCCs? **Reference Source: CCP-PO-001, Table C3-7**	X			
41. Is the RT for the continuing calibration internal standards ±30 seconds from last daily calibration check? **Reference Source: CCP-PO-001, Table C3-7**	X			
42. Is the continuing calibration internal standard area count >50% and <200% of the last daily calibration? **Reference Source: CCP-PO-001, Table C3-7**	X			

Attachment 8 – CCP SPM S3000/S4000 Total Semi-Volatile Organic Compound Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: ALD12005S	Analysis Date: 02/06-07/12			
Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
43. Does the BDR include MDLs (mg/kg) that are ≤ PRQL in Table C3-6? **Reference Source: CCP-PO-001, Table C3-6**	X			
44. Are analytical procedures (including data revision) used to develop the data referenced in the BDR? **Reference Source: CCP-PO-001, C3-10**	X			
45. Does the BDR include the operator's signature and analysis date? **Reference Source: CCP-PO-001, Table C3-13**	X			
46. Are data reporting forms complete with data reported properly (i.e., data is reported in correct units, with correct significant figures, and with correct qualifying flags)? **Reference Source: CCP-PO-001, C3-10b**	X			
47. Have data reporting flags been assigned properly? **Reference Source: CCP-PO-001, C3-10b**	X			
48. Have the batch samples been properly preserved (cool to 4°C, ± 2° C)? **Reference Source: CCP-PO-001, Table C1-4**	X			
49. Is the completed, signed, and dated Independent Technical Reviewer Checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, Table C3-13**	X			
50. Does the initial calibration contain at least one calibration standard less than or equal to the PRQL? **Reference Source: CCP-PO-001, C3-7**	X			
51. Has the laboratory successfully participated in the PDP? **Reference Source: CCP-PO-001, C3-7**	X			
52. Has the laboratory met the 90% completeness requirement? **Reference Source: CCP-PO-001, Table C3-6**	X			
53. Does the laboratory use traceable standards? **Reference Source: CCP-PO-001, C3-7**	X			

Attachment 8 – CCP SPM S3000/S4000 Total Semi-Volatile Organic Compound Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: ALD12005S				Analysis Date: 02/06-07/12
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
54. Has the laboratory had acceptable demonstration of precision, accuracy, and MDLs [method performance samples] performed within the last 6 months? **Reference Source: CCP-PO-001, Table C3-7**	X			
Comments: None.				
The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.				
Barbara Broomfield				03/19/12
SPM Printed Name	Signature			Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

AMWTP
Advanced Mixed Waste Treatment Project
Idaho Treatment Group

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory

Central Characterization Project

RCRA Analysis Data Report

Batch Data Report Number:	ALD12005S	Analytical Method:	CCP-TP-185 CCP-TP-187
Revision Number:	0		
Change Number:	0	Analyte(s):	SVOCs

Issue Date: 02/28/12

Waste Generator Site: CCP-INL

Summary: This data report contains analysis results for 10 samples from Sampling Batches S4200-LOT-05-07, S4200-LOT-05-08, S4200-LOT-05-03, S4200-LOT-05-10 and S4200-LOT-05-06.

Report Content:

Section	Content	Pages
1	Sample Identification Table	0002 – 0003
2	Sample Custody Documents	0004 – 0026
3	Analysis Results	0027 – 0052
4	Batch QC Sample Results	0053 – 0063
5	Instrument QC Data	0064 – 0080
6	Data Review Checklists	0081 – 0086

Laboratory Release Authorization:

Independent Technical Reviewer	Signature	Date
Bill Strong	Bill Strong	2-28-12

CCP RECORDS ORIGINAL
DATE REC'D 3/1/2012

Section 1

Sample Identification Table

TOTAL SVOC ANALYSIS
SAMPLE CROSS-REFERENCE TABLE

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory
Central Characterization Project

Preparation Method: CCP-TP-187-R1
Analytical Method: CCP-TP-185-R1

Data Report Number: ALD12005S
Analytical Batch ID: 1202011

Field Sample ID	Lab Sample ID
NA	LBS020212A
NA	LCSS1202011A
AR405701MS	2BY99
AR405701MSMS	2BY99MS
AR405701MSMSD	2BY99MSD
AR405702MS	2BZ05
AR405801MS	2BZ10
AR405802MS	2BZ15
AR406001MS	2BZ20
AR406002MS	2BZ25
AR405901MS	2BZ40
AR405902MS	2BZ45
AR405702MSDL2	2BZ05DL2
AR405002MS	2BZ35
AR405001MS	2BZ30
AR405002MSDL20	2BZ35DL20
AR405001MSDL10	2BZ30DL10

Section 2

Sample Custody Documents

ALD LOG # 1202011

Accelerated Retrieval Project Chain of Custody

COC No. AR4057R2

Sampling Location: RWMC AR

Lab: ~~INEEL-INTEC~~ INL-RWMC MW 1-31-12

Type Sample: Regular

DDTC #: NA

Sample Matrix: SOLID

☐ Homogeneous Solid ☒ Soil/Gravel

Sampling Batch No.: 54200-LOT-05-07

Sampler(s): Michael Haberlie (Printed) _____ (Signature) 1-31-12 (Date)

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No.	Sample Analysis	Comments	Disposition*
AR405701MS	1-31-12	1426	1 x 250	003253	Metals and SVOC		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		

NOTE: For preservation, all samples were stored at a controlled temperature of 4 degrees C, then packed with chemical ice for shipment.

Samples Relinquished by (Signature):	Date	Time	Samples Received by (Signature):	Date	Time
_____	2-1-12	1247	_____	2-01-12	1247

COPY OF IN-PROCESS RECORD

Comments: * Disposition fields are completed by the laboratory.

one hour time limit met. MW 1-31-12

ARP 30100 MW 1-31-12

All sample analyses are complete and all samples have been removed from custody control and have been dispositioned _____ (Signature) _____ (Date)

ALD Document: Log 1202011 CCP-ARP Soils.tif - Scanned:2/7/2012 9:27:10 AM

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ALD LOG # 1202011

Accelerated Retrieval Project Chain of Custody

COC No. AR4057C2

Sampling Location: RWMC AR

Lab: ~~INEEL-INTEC~~ INL- RWMC MN 1-31-12

Type Sample: Co-located

DDTC #: NA

Sample Matrix: SOLID

☐ Homogeneous Solid ☒ Soil/Gravel

Sampling Batch No.: 54200-COT-05-07

Sampler(s): Michael Haderlie (Printed) _____ (Signature) 1-31-12 (Date)

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No.	Sample Analysis	Comments	Disposition*
AR405702N1	1-31-12	1418	1 x 20	007630	NHVOC Sample		
AR405702N2	1-31-12	1419	1 x 20	007630	NHVOC Spare		
AR405702N3	1-31-12	1424	1 x 20	007630	NHVOC MS		
AR405702N4	1-31-12	1424	1 x 20	007630	NHVOC MSD		
AR4057T2N1	1-31-12	1419	1 x 20	007630	NHVOC Trip Blank Sample		
AR4057T2N2	1-31-12	1425	1 x 20	007630	NHVOC Trip Blank Spare		
AR405702MS	1-31-12	1427	1 x 250	003253	Metals and SVOC		
N/A			N/A		N/A		

NOTE: For preservation, all samples were stored at a controlled temperature of 4 degrees C, then packed with chemical ice for shipment.

Samples Relinquished by (Signature):	Date	Time	Samples Received by (Signature):	Date	Time
[signature]	2-1-12	1247	[signature]	2-01-12	1247

COPY OF IN-PROCESS RECORD

Comments: * Disposition fields are completed by the laboratory.

one hour time limit met. MN 1-31-12

ARP30100. MN 1-31-12

All sample analyses are complete and all samples have been removed from custody control and have been dispositioned

_____ Signature _____ Date

ALD Document: Log 1202011 CCP-ARP Soils.tif - Scanned:2/7/2012 9:27:10 AM

0006

ALD LOG # 1202011

Accelerated Retrieval Project Chain of Custody

COC No. AR4058R2

Sampling Location: RWMC AR

Lab: ~~INEEL INTEC~~ ENL-RWMC MH 1-31-12

Type Sample: Regular

DDTC #: NA

Sample Matrix: SOLID

☐ Homogeneous Solid ☒ Soil/Gravel

Sampling Batch No.: ~~54200-LOT-04-05~~ 54200-LOT-05-08 MH 1-31-12

Sampler(s): Michael Haderlie (Printed) (Signature) 1-31-12 (Date)

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No.	Sample Analysis	Comments	Disposition*
AR405801MS	1-31-12	1238	1 x 250	003253	Metals and SVOC		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		

NOTE: For preservation, all samples were stored at a controlled temperature of 4 degrees C, then packed with chemical ice for shipment.

Samples Relinquished by (Signature):	Date	Time	Samples Received by (Signature):	Date	Time
	2-1-12	1248		2-01-12	1248

COPY OF IN-PROCESS RECORD

Comments: * Disposition fields are completed by the laboratory.

ARP30103. MH 2-1-12

one hour time limit met. MH 2-1-12

All sample analyses are complete and all samples have been removed from custody control and have been dispositioned

Signature Date

ALD Document: Log 1202011 CCP-ARP Soils.tif, Scanned:2/7/2012 9:27:10 AM

0007

ALD LOG # 1202011

Accelerated Retrieval Project Chain of Custody

COC No. AR4058C2

Sampling Location: RWMC AR

Lab: ~~INEEL-INTEC~~ TAL-RWMC MH 1-31-12

Type Sample: Co-located

DDTC #: NA

Sample Matrix: SOLID

☐ Homogeneous Solid ☒ Soil/Gravel

Sampling Batch No.: 54200-LOT-05-08 ~~54200-LOT-04-05~~ MH 1-31-12

Sampler(s): Michael Haderlie (Printed) _____ (Signature) 1-31-12 (Date)

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No.	Sample Analysis	Comments	Disposition*
AR405802N1	1-31-12	1229	1 x 20	007630	NHVOC Sample		
AR405802N2	1-31-12	1230	1 x 20	007630	NHVOC Spare		
AR405802N3	1-31-12	1236	1 x 20	007630	NHVOC MS		
AR405802N4	1-31-12	1235	1 x 20	007630	NHVOC MSD		
AR4058T2N1	1-31-12	1230	1 x 20	007630	NHVOC Trip Blank Sample		
AR4058T2N2	1-31-12	1236	1 x 20	007630	NHVOC Trip Blank Spare		
AR405802MS	1-31-12	1239	1 x 250	003253	Metals and SVOC		
N/A			N/A		N/A		

NOTE: For preservation, all samples were stored at a controlled temperature of 4 degrees C, then packed with chemical ice for shipment.

Samples Relinquished by (Signature):	Date	Time	Samples Received by (Signature):	Date	Time
	2-1-12	1248		2-01-12	1248

COPY OF IN-PROCESS RECORD

Comments; * Disposition fields are completed by the laboratory.

ARP 30103. MH 2-1-12

one hour time limit met. MH 2-1-12

All sample analyses are complete and all samples have been removed from custody control and have been dispositioned _____ (Signature) _____ (Date)

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0008

ALD Log #
1202011

Accelerated Retrieval Project Chain of Custody

COC No. **AR4060R2**

Sampling Location: **RWMC AR**

Lab: ~~INEEL-INTEC~~ INL - RWMC
Beg 2-07-12 per B.Stark e-mail

Type Sample: **Regular**

DDTC #: NA

Sample Matrix: **SOLID**

☐ Homogeneous Solid ☒ Soil/Gravel

Sampling Batch No.: S4200-LOT-05-03

Sampler(s): Michael Haderlie (Printed) _____ (Signature) 2-1-12 (Date)

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No.	Sample Analysis	Comments	Disposition*
AR406001MS	2-1-12	0944	1 x 250	003253	Metals and SVOC		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		

NOTE: For preservation, all samples were stored at a controlled temperature of 4 degrees C, then packed with chemical ice for shipment.

Samples Relinquished by (Signature):	Date	Time	Samples Received by (Signature):	Date	Time
	2-1-12	1249		2-01-12	1249

COPY OF IN-PROCESS RECORD

Comments: * Disposition fields are completed by the laboratory.
one hour time limit was met. MN 2-1-12
ARP 30018. MN 2-1-12

All sample analyses are complete and all samples have been removed from custody control and have been dispositioned

_____ (Signature) _____ (Date)

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0008

ALD LOG # 1202011

Accelerated Retrieval Project Chain of Custody

COC No. AR4060C2

Sampling Location: RWMC AR

Lab: ~~INEEL-INTEC~~ INL-RWMC
BCG 2-07-12 per B Stark e-mail

Type Sample: Co-located

DDTC #: N/A

Sample Matrix: SOLID

☐ Homogeneous Solid ☒ Soil/Gravel

Sampling Batch No.: 54200-LOT-05-03

Sampler(s): Michael Haderlie (Printed) _____ (Signature) 2-1-12 (Date)

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No.	Sample Analysis	Comments	Disposition*
AR406002N1	2-1-12	0938	1 x 20	007630	NHVOC Sample		
AR406002N2	2-1-12	0938	1 x 20	007630	NHVOC Spare		
AR406002N3	2-1-12	0942	1 x 20	007630	NHVOC MS		
AR406002N4	2-1-12	0942	1 x 20	007630	NHVOC MSD		
AR4060T2N1	2-1-12	0939	1 x 20	007630	NHVOC Trip Blank Sample		
AR4060T2N2	2-1-12	0942	1 x 20	007630	NHVOC Trip Blank Spare		
AR406002MS	2-1-12	0945	1 x 250	003253	Metals and SVOC		
N/A			N/A		N/A		

NOTE: For preservation, all samples were stored at a controlled temperature of 4 degrees C, then packed with chemical ice for shipment.

Samples Relinquished by (Signature):	Date	Time	Samples Received by (Signature):	Date	Time
[signature]	2-1-12	1249	[signature]	2-01-12	1249

COPY OF IN-PROCESS RECORD

Comments: * Disposition fields are completed by the laboratory.

one hour time limit was met. MH 2-1-12

~~ARD 3000~~ MH 2-1-12

ARD30018. MH 2-1-12

All sample analyses are complete and all samples have been removed from custody control and have been dispositioned

_____ Signature _____ Date

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0010

ALD LOG # 1202011

Accelerated Retrieval Project Chain of Custody

COC No. **AR4050R2**

Sampling Location: **RWMC AR** Lab: ~~INEEL-INTEC~~ INL-RWMC MH 2-2-12 Type Sample: **Regular** DDTC #: N/A

Sample Matrix: **SOLID** ☐ Homogeneous Solid ☒ Soil/Gravel Sampling Batch No.: 54300-LOT-05-10 MH 2-2-12

Sampler(s): Michael Haderlie (Printed) (Signature) 2-2-12 (Date)

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No.	Sample Analysis	Comments	Disposition*
AR405001MS	2-2-12	1037	1 x 250	007694	Metals and SVOC		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		

NOTE: For preservation, all samples were stored at a controlled temperature of 4 degrees C, then packed with chemical ice for shipment.

Sampler Relinquished by (Signature):	Date	Time	Samples Received by (Signature):	Date	Time
	2-2-12	1136		2-02-12	1136

COPY OF IN-PROCESS RECORD

Comments: * Disposition fields are completed by the laboratory.

one hour time limit was met. MH 2-2-12

ARD 30014. MH 2-2-12

All sample analyses are complete and all samples have been removed from custody control and have been dispositioned

Signature Date

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ALD LOG # 1202011

Accelerated Retrieval Project Chain of Custody

COC No. **AR4050C2**

Sampling Location: **RWMC AR** Lab: ~~INEEL-INTEC~~ INL-RWMC MD 2-2-12 Type Sample: **Co-located** DDTC #: N/A

Sample Matrix: **SOLID** ☐ Homogeneous Solid ☒ Soil/Gravel Sampling Batch No.: 54300-LOT-05-~~05~~ 10 MH 2-2-12

Sampler(s): Michael Haderlie (Printed) _____ (Signature) 2-2-12 (Date)

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No.	Sample Analysis	Comments	Disposition*
AR405002N1	2-2-12	1021	1 x 20	007230	NHVOC Sample		
AR405002N2	2-2-12	1022	1 x 20	007230	NHVOC Spare		
AR405002N3	2-2-12	1025	1 x 20	007230	NHVOC MS		
AR405002N4	2-2-12	1025	1 x 20	007230	NHVOC MSD		
AR4050T2N1	2-2-12	1022	1 x 20	007230	NHVOC Trip Blank Sample		
AR4050T2N2	2-2-12	1026	1 x 20	007230	NHVOC Trip Blank Spare		
AR405002MS	2-2-12	1028	1 x 250	007694	Metals and SVOC		
N/A			N/A		N/A		

NOTE: For preservation, all samples were stored at a controlled temperature of 4 degrees C, then packed with chemical ice for shipment.

Samples Relinquished by (Signature):	Date	Time	Samples Received by (Signature):	Date	Time
	2-2-12	1136		2-02-12	1136

COPY OF IN-PROCESS RECORD

Comments: * Disposition fields are completed by the laboratory.

one hour time limit met. MH 2-2-12

ARP 30014. MH 2-2-12

All sample analyses are complete and all samples have been removed from custody control and have been dispositioned

_____ Signature _____ Date

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0012

ALD LOG #
1202011

Accelerated Retrieval Project Chain of Custody

COC No. **AR4059R2**

Sampling Location: **RWMC AR** Lab: ~~INEEL-INTEC~~ INL-RWMC MH 2-2-12 Type Sample: **Regular** DDTC #: NA

Sample Matrix: **SOLID** ☐ Homogeneous Solid ☒ Soil/Gravel Sampling Batch No.: S4200-LOT-05-06

Sampler(s): Michael Haderlie (Printed) (Signature) 2-2-12 (Date)

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No.	Sample Analysis	Comments	Disposition*
AR405901MS	2-2-12	0913	1 x 250	003253	Metals and SVOC		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		

NOTE: For preservation, all samples were stored at a controlled temperature of 4 degrees C, then packed with chemical ice for shipment.

Sampler Relinquished by (Signature):	Date	Time	Samples Received by (Signature):	Date	Time
	2-2-12	1137		2-02-12	1137
			COPY OF IN-PROCESS RECORD		

Comments: * Disposition fields are completed by the laboratory.

one hour time was met. MH 2-2-12

ARP30081. MH 2-2-12

All sample analyses are complete and all samples have been removed from custody control and have been dispositioned

Signature Date

ALD Document: Log 1202011 CCP-ARP-00113 Scanned:2/7/2012 9:27:10 AM
00113-00135
2-28-12

ALD LOG # 1202011

Accelerated Retrieval Project Chain of Custody

COC No. AR4059C2

Sampling Location: RWMC AR

Lab: ~~INEEL INTEC~~ INL-RWMC MN 2-2-12

Type Sample: Co-located

DDTC #: NA

Sample Matrix: SOLID

☐ Homogeneous Solid ☒ Soil/Gravel

Sampling Batch No.: S4200-LOT-05-06

Sampler(s): MN 2-2-12 ~~S4200~~ Michael Haderlie (Printed) _____ (Signature) 2-2-12 (Date)

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No.	Sample Analysis	Comments	Disposition*
AR405902N1	2-2-12	0908	1 x 20	007630	NHVOC Sample		
AR405902N2	2-2-12	0908	1 x 20	007630	NHVOC Spare		
AR405902N3	2-2-12	0911	1 x 20	007630	NHVOC MS		
AR405902N4	2-2-12	0912	1 x 20	007630	NHVOC MSD		
AR4059T2N1	2-2-12	0908	1 x 20	007630	NHVOC Trip Blank Sample		
AR4059T2N2	2-2-12	0912	1 x 20	007630	NHVOC Trip Blank Spare		
AR405902MS	2-2-12	0914	1 x 250	003253	Metals and SVOC		
N/A			N/A		N/A		

NOTE: For preservation, all samples were stored at a controlled temperature of 4 degrees C, then packed with chemical ice for shipment.

Samples Relinquished by (Signature):	Date	Time	Samples Received by (Signature):	Date	Time
	2-2-12	1137		2-02-12	1137
			COPY OF IN-PROCESS RECORD		

Comments: * Disposition fields are completed by the laboratory.

one hour time limit was met. MN 2-2-12

ARP 30081. MN 2-2-12

All sample analyses are complete and all samples have been removed from custody control and have been dispositioned _____ (Signature) _____ (Date)

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1202011

ICP Analytical Laboratories Department
TRU Waste Characterization Program
Sample Container Weight Information for AR4057
Regular Sample

Sample ID Number	Production Number	Container Number	Container Size (mL)	Sample Analysis	Tare Weight (g)	Tare Date Time	Tare By	Tare Balance	Gross Weight (g)	Gross Date Time	Gross By	Gross Balance	Net Weight (g)
AR405701V1	007630	000577	20	VOC Sample	17.93	2005-04-18 14:20	Blane Teckmeyer	Cal#722200 PG802-S	21.98	2-01-12 1415	Bill Strong	Cal# 726992 ML303E	4.05
AR405701V2	007630	000583	20	VOC Spare	17.80	2005-04-18 14:21	Blane Teckmeyer	Cal#722200 PG802-S	20.74	2-01-12 1416	Bill Strong	*	2.94
AR4057T1V1	007630	000531	20	VOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:35	Blane Teckmeyer	Cal#722200 PG802-S	2.99	2005-04-18 08:35	Blane Teckmeyer	Cal#722200 PG802-S	2.99
AR4057T1V2	007630	000519	20	VOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 08:30	Blane Teckmeyer	Cal#722200 PG802-S	3.05	2005-04-18 08:30	Blane Teckmeyer	Cal#722200 PG802-S	3.05
AR405701N1	007630	000585	20	NHVOC Sample	17.90	2005-04-18 14:21	Blane Teckmeyer	Cal#722200 PG802-S	22.67	2-01-12 1417	Bill Strong	*	4.77
AR405701N2	007630	000582	20	NHVOC Spare	18.15	2005-04-18 14:21	Blane Teckmeyer	Cal#722200 PG802-S	21.60	2-01-12 1418	Bill Strong	*	3.45
AR4057T1N1	007630	000502	20	NHVOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:29	Blane Teckmeyer	Cal#722200 PG802-S	2.97	2005-04-18 08:29	Blane Teckmeyer	Cal#722200 PG802-S	2.97
AR4057T1N2	007630	000505	20	NHVOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 08:26	Blane Teckmeyer	Cal#722200 PG802-S	3.02	2005-04-18 08:26	Blane Teckmeyer	Cal#722200 PG802-S	3.02
AR405701MS	003253	002128	250	Metals and SVOC	211.11	2005-04-18 14:20	Blane Teckmeyer	Cal#722200 PG802-S	263.97	2-01-12 1429	Bill Strong	*	52.86

*= Cal# 726992 ML303E BS 2-07-12

Packaged by: Blane Teckmeyer
Packaging Independent Verification by: Julie Daley 04/18/2005 2:23:42PM

Data Generator Review of the Above Raw Data Performed by:

Signature 2-07-12 Date

Report Generated: 2/1/2012 3:09:57PM

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0015

ALD LOG #
1202011

ICP Analytical Laboratories Department
TRU Waste Characterization Program
Sample Container Weight Information for AR4057
Co-located Sample

Sample ID Number	Production Number	Container Number	Container Size (mL)	Sample Analysis	Tare Weight (g)	Tare Date Time	Tare By	Tare Balance	Gross Weight (g)	Gross Date Time	Gross By	Gross Balance	Net Weight (g)
AR405702V1	' 007630	000571	20	VOC Sample	17.87	2005-04-18 14:28	Blane Teckmeyer	Cal#722200 PG802-S	21.19	2-01-12 1420	Bill Strong	*	3.32
AR405702V2	007630	000308	20	VOC Spare	17.93	2005-04-18 14:28	Blane Teckmeyer	Cal#722200 PG802-S	22.85	2-01-12 1421	Bill Strong	*	4.92
AR405702V3	007630	000609	20	VOC MS	17.91	2005-04-18 14:28	Blane Teckmeyer	Cal#722200 PG802-S	21.84	2-01-12 1422	Bill Strong	*	3.93
AR405702V4	007630	000619	20	VOC MSD	17.90	2005-04-18 14:28	Blane Teckmeyer	Cal#722200 PG802-S	22.58	2-01-12 1423	Bill Strong	*	4.68
AR4057T2V1	007630	000530	20	VOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:27	Blane Teckmeyer	Cal#722200 PG802-S	2.97	2005-04-18 08:27	Blane Teckmeyer	Cal#722200 PG802-S	2.97
AR4057T2V2	007630	000498	20	VOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 08:32	Blane Teckmeyer	Cal#722200 PG802-S	3.05	2005-04-18 08:32	Blane Teckmeyer	Cal#722200 PG802-S	3.05
AR405702N1	007630	000296	20	NHVOC Sample	17.81	2005-04-18 14:29	Blane Teckmeyer	Cal#722200 PG802-S	22.26	2-01-12 1424	Bill Strong	*	4.45
AR405702N2	007630	000597	20	NHVOC Spare	17.88	2005-04-18 14:29	Blane Teckmeyer	Cal#722200 PG802-S	22.99	2-01-12 1425	Bill Strong	*	5.11
AR405702N3	007630	000595	20	NHVOC MS	17.85	2005-04-18 14:30	Blane Teckmeyer	Cal#722200 PG802-S	22.88	2-01-12 1426	Bill Strong	*	5.03
AR405702N4	007630	000611	20	NHVOC MSD	17.81	2005-04-18 14:30	Blane Teckmeyer	Cal#722200 PG802-S	22.05	2-01-12 1427	Bill Strong	*	4.24
AR4057T2N1	007630	000494	20	NHVOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:29	Blane Teckmeyer	Cal#722200 PG802-S	3.04	2005-04-18 08:29	Blane Teckmeyer	Cal#722200 PG802-S	3.04
AR4057T2N2	007630	000506	20	NHVOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 08:33	Blane Teckmeyer	Cal#722200 PG802-S	2.98	2005-04-18 08:33	Blane Teckmeyer	Cal#722200 PG802-S	2.98
AR405702MS	003253	002132	250	Metals and SVOC	213.67	2005-04-18 14:30	Blane Teckmeyer	Cal#722200 PG802-S	260.03	2-01-12 1430	Bill Strong	*	46.36

*= Cal#726992 ML3036 BG 2-07-12

Packaged by: Blane Teckmeyer
Packaging Independent Verification by: Julie Daley 04/18/2005 2:37:04PM

Data Generator Review of the Above Raw Data Performed by:

Signature 2-07-12 Date

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0016

ALD LOG #
1202011

ICP Analytical Laboratories Department
TRU Waste Characterization Program
Sample Container Weight Information for AR4058
Regular Sample

Sample ID Number	Production Number	Container Number	Container Size (mL)	Sample Analysis	Tare Weight (g)	Tare Date Time	Tare By	Tare Balance	Gross Weight (g)	Gross Date Time	Gross By	Gross Balance	Net Weight (g)
AR405801V1	007630	000273	20	VOC Sample	17.89	2005-04-18 14:41	Blane Teckmeyer	Cal#722200 PG802-S	20.31	2-01-12 1444	Bill Strong	*	2.42
AR405801V2	007630	000295	20	VOC Spare	17.92	2005-04-18 14:40	Blane Teckmeyer	Cal#722200 PG802-S	21.74	2-01-12 1445	Bill Strong	*	3.82
AR4058T1V1	007630	000493	20	VOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:25	Blane Teckmeyer	Cal#722200 PG802-S	3.02	2005-04-18 08:25	Blane Teckmeyer	Cal#722200 PG802-S	3.02
AR4058T1V2	007630	000523	20	VOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 08:24	Blane Teckmeyer	Cal#722200 PG802-S	3.01	2005-04-18 08:24	Blane Teckmeyer	Cal#722200 PG802-S	3.01
AR405801N1	007630	000270	20	NHVOC Sample	17.83	2005-04-18 14:41	Blane Teckmeyer	Cal#722200 PG802-S	22.26	2-01-12 1446	Bill Strong	*	4.43
AR405801N2	007630	000274	20	NHVOC Spare	17.93	2005-04-18 14:41	Blane Teckmeyer	Cal#722200 PG802-S	22.31	2-01-12 1447	Bill Strong	*	4.38
AR4058T1N1	007630	000541	20	NHVOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:21	Blane Teckmeyer	Cal#722200 PG802-S	3.04	2005-04-18 08:21	Blane Teckmeyer	Cal#722200 PG802-S	3.04
AR4058T1N2	007630	000542	20	NHVOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 08:27	Blane Teckmeyer	Cal#722200 PG802-S	3.03	2005-04-18 08:27	Blane Teckmeyer	Cal#722200 PG802-S	3.03
AR405801MS	003253	002123	250	Metals and SVOC	210.89	2005-04-18 14:40	Blane Teckmeyer	Cal#722200 PG802-S	247.06	2-01-12 1458	Bill Strong	*	36.17

*= Cal# 726992 ML303E BCG 2-07-12

Packaged by: Blane Teckmeyer
Packaging Independent Verification by: Julie Daley 04/18/2005 2:43:22PM

Data Generator Review of the Above Raw Data Performed by:

Signature

2-07-12
Date

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0017

ALD LOG #
1202011

ICP Analytical Laboratories Department
TRU Waste Characterization Program
Sample Container Weight Information for AR4058
Co-located Sample

Sample ID Number	Production Number	Container Number	Container Size (mL)	Sample Analysis	Tare Weight (g)	Tare Date Time	Tare By	Tare Balance	Gross Weight (g)	Gross Date Time	Gross By	Gross Balance	Net Weight (g)
AR405802V1	007630	000267	20	VOC Sample	17.88	2005-04-18 15:02	Blane Teckmeyer	Cal#722200 PG802-S	20.43	2-01-12 1449	Bill Strong	*	2.55
AR405802V2	007630	000268	20	VOC Spare	17.84	2005-04-18 15:02	Blane Teckmeyer	Cal#722200 PG802-S	20.19	2-01-12 1450	Bill Strong	*	2.35
AR405802V3	007630	000266	20	VOC MS	17.81	2005-04-18 15:03	Blane Teckmeyer	Cal#722200 PG802-S	20.52	2-01-12 1451	Bill Strong	*	2.71
AR405802V4	007630	000280	20	VOC MSD	17.85	2005-04-18 15:03	Blane Teckmeyer	Cal#722200 PG802-S	20.79	2-01-12 1452	Bill Strong	*	2.94
AR4058T2V1	007630	000540	20	VOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 09:17	Blane Teckmeyer	Cal#722200 PG802-S	3.02	2005-04-18 09:17	Blane Teckmeyer	Cal#722200 PG802-S	3.02
AR4058T2V2	007630	000536	20	VOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 09:20	Blane Teckmeyer	Cal#722200 PG802-S	2.96	2005-04-18 09:20	Blane Teckmeyer	Cal#722200 PG802-S	2.96
AR405802N1	007630	000279	20	NHVOC Sample	17.82	2005-04-18 15:04	Blane Teckmeyer	Cal#722200 PG802-S	20.37	2-01-12 1453	Bill Strong	*	2.55
AR405802N2	007630	000278	20	NHVOC Spare	17.86	2005-04-18 15:03	Blane Teckmeyer	Cal#722200 PG802-S	21.57	2-01-12 1454	Bill Strong	*	3.71
AR405802N3	007630	000269	20	NHVOC MS	17.90	2005-04-18 15:04	Blane Teckmeyer	Cal#722200 PG802-S	21.81	2-01-12 1455	Bill Strong	*	3.91
AR405802N4	007630	000282	20	NHVOC MSD	17.88	2005-04-18 15:04	Blane Teckmeyer	Cal#722200 PG802-S	21.34	2-01-12 1456	Bill Strong	*	3.46
AR4058T2N1	007630	000524	20	NHVOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:36	Blane Teckmeyer	Cal#722200 PG802-S	3.05	2005-04-18 08:36	Blane Teckmeyer	Cal#722200 PG802-S	3.05
AR4058T2N2	007630	000535	20	NHVOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 09:22	Blane Teckmeyer	Cal#722200 PG802-S	3.02	2005-04-18 09:22	Blane Teckmeyer	Cal#722200 PG802-S	3.02
AR405802MS	003253	002129	250	Metals and SVOC	213.88	2005-04-18 15:01	Blane Teckmeyer	Cal#722200 PG802-S	250.39	2-01-12 1459	Bill Strong	*	36.51

* = Cal# 726992 ML303E By 2-07-12

Packaged by: Blane Teckmeyer
Packaging Independent Verification by: Julie Daley 04/18/2005 3:10:49PM

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ALD LOG # 1202011

ICP Analytical Laboratories Department
TRU Waste Characterization Program
Sample Container Weight Information for AR4060
Regular Sample

Sample ID Number	Production Number	Container Number	Container Size (mL)	Sample Analysis	Tare Weight (g)	Tare Date Time	Tare By	Tare Balance	Gross Weight (g)	Gross Date Time	Gross By	Gross Balance	Net Weight (g)
AR406001V1	007630	000286	20	VOC Sample	17.81	2005-04-18 15:40	Blane Teckmeyer	Cal#722200 PG802-S	22.03	2-01-12 1515	Bill Strong	*	4.22
AR406001V2	007630	000263	20	VOC Spare	17.94	2005-04-18 15:40	Blane Teckmeyer	Cal#722200 PG802-S	22.01	2-01-12 1516	Bill Strong	*	4.07
AR4060T1V1	007630	000525	20	VOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 09:24	Blane Teckmeyer	Cal#722200 PG802-S	2.97	2005-04-18 09:24	Blane Teckmeyer	Cal#722200 PG802-S	2.97
AR4060T1V2	007630	000515	20	VOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 09:23	Blane Teckmeyer	Cal#722200 PG802-S	3.02	2005-04-18 09:23	Blane Teckmeyer	Cal#722200 PG802-S	3.02
AR406001N1	007630	000299	20	NHVOC Sample	17.81	2005-04-18 15:41	Blane Teckmeyer	Cal#722200 PG802-S	20.94	2-01-12 1517	Bill Strong	*	3.13
AR406001N2	007630	000298	20	NHVOC Spare	17.87	2005-04-18 15:41	Blane Teckmeyer	Cal#722200 PG802-S	20.71	2-01-12 1518	Bill Strong	*	2.84
AR4060T1N1	007630	000518	20	NHVOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:31	Blane Teckmeyer	Cal#722200 PG802-S	3.05	2005-04-18 08:31	Blane Teckmeyer	Cal#722200 PG802-S	3.05
AR4060T1N2	007630	000484	20	NHVOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 09:24	Blane Teckmeyer	Cal#722200 PG802-S	2.98	2005-04-18 09:24	Blane Teckmeyer	Cal#722200 PG802-S	2.98
AR406001MS	003253	002795	250	Metals and SVOC	214.64	2005-04-18 15:38	Blane Teckmeyer	Cal#722200 PG802-S	282.41	2-01-12 1529	Bill Strong	*	67.77

*= Cal# 726992 ML303E BG 2-07-12

Packaged by: Blane Teckmeyer
Packaging Independent Verification by: Julie Daley 04/18/2005 3:43:09PM

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0019

ALD LOG # 1202011

ICP Analytical Laboratories Department
TRU Waste Characterization Program
Sample Container Weight Information for AR4060
Co-located Sample

Sample ID Number	Production Number	Container Number	Container Size (mL)	Sample Analysis	Tare Weight (g)	Tare Date Time	Tare By	Tare Balance	Gross Weight (g)	Gross Date Time	Gross By	Gross Balance	Net Weight (g)
AR406002V1	007630	000327	20	VOC Sample	17.91	2005-04-18 15:47	Blane Teckmeyer	Cal#722200 PG802-S	21.39	2-01-12 1520	Bill Strong	*	3.48
AR406002V2	007630	000287	20	VOC Spare	17.85	2005-04-18 15:47	Blane Teckmeyer	Cal#722200 PG802-S	22.34	2-01-12 1521	Bill Strong	*	4.49
AR406002V3	007630	000304	20	VOC MS	17.89	2005-04-18 15:48	Blane Teckmeyer	Cal#722200 PG802-S	20.85	2-01-12 1522	Bill Strong	*	2.96
AR406002V4	007630	000314	20	VOC MSD	17.79	2005-04-18 15:48	Blane Teckmeyer	Cal#722200 PG802-S	20.94	2-01-12 1523	Bill Strong	*	3.15
AR4060T2V1	007630	000483	20	VOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 09:27	Blane Teckmeyer	Cal#722200 PG802-S	3.01	2005-04-18 09:27	Blane Teckmeyer	Cal#722200 PG802-S	3.01
AR4060T2V2	007630	000510	20	VOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 09:26	Blane Teckmeyer	Cal#722200 PG802-S	3.01	2005-04-18 09:26	Blane Teckmeyer	Cal#722200 PG802-S	3.01
AR406002N1	007630	000262	20	NHVOC Sample	17.86	2005-04-18 15:49	Blane Teckmeyer	Cal#722200 PG802-S	21.69	2-01-12 1524	Bill Strong	*	3.83
AR406002N2	007630	000313	20	NHVOC Spare	17.85	2005-04-18 15:49	Blane Teckmeyer	Cal#722200 PG802-S	21.10	2-01-12 1525	Bill Strong	*	3.25
AR406002N3	007630	000328	20	NHVOC MS	17.90	2005-04-18 15:50	Blane Teckmeyer	Cal#722200 PG802-S	21.08	2-01-12 1526	Bill Strong	*	3.18
AR406002N4	007630	000329	20	NHVOC MSD	17.82	2005-04-18 15:49	Blane Teckmeyer	Cal#722200 PG802-S	19.91	2-01-12 1527	Bill Strong	*	2.09
AR4060T2N1	007630	000511	20	NHVOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 09:22	Blane Teckmeyer	Cal#722200 PG802-S	3.03	2005-04-18 09:22	Blane Teckmeyer	Cal#722200 PG802-S	3.03
AR4060T2N2	007630	000512	20	NHVOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 09:25	Blane Teckmeyer	Cal#722200 PG802-S	3.00	2005-04-18 09:25	Blane Teckmeyer	Cal#722200 PG802-S	3.00
AR406002MS	003253	002793	250	Metals and SVOC	210.84	2005-04-18 15:46	Blane Teckmeyer	Cal#722200 PG802-S	264.49	2-01-12 1530	Bill Strong	*	53.65

* Cal# 726992 ML303E 2-07-12

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0020

ALD LOG #
1202011

ICP Analytical Laboratories Department
TRU Waste Characterization Program
Sample Container Weight Information for AR4050
Regular Sample

Sample ID Number	Production Number	Container Number	Container Size (mL)	Sample Analysis	Tare Weight (g)	Tare Date Time	Tare By	Tare Balance	Gross Weight (g)	Gross Date Time	Gross By	Gross Balance	Net Weight (g)
AR405001V1	007230	001635	20	VOC Sample	17.73	2005-04-14 15:05	Blane Teckmeyer	Cal#722200 PG802-S	22.94	2012-02-02 13:02	W. (Bill) Strong	Cal#726992 ML-303	5.21
AR405001V2	007230	001634	20	VOC Spare	17.77	2005-04-14 15:05	Blane Teckmeyer	Cal#722200 PG802-S	22.84	2012-02-02 13:02	W. (Bill) Strong	Cal#726992 ML-303	5.07
AR4050T1V1	007230	003157	20	VOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-14 10:06	Blane Teckmeyer	Cal#722200 PG802-S	3.04	2005-04-14 10:06	Blane Teckmeyer	Cal#722200 PG802-S	3.04
AR4050T1V2	007230	003094	20	VOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-14 10:10	Blane Teckmeyer	Cal#722200 PG802-S	3.05	2005-04-14 10:10	Blane Teckmeyer	Cal#722200 PG802-S	3.05
AR405001N1	007230	001715	20	NHVOC Sample	17.71	2005-04-14 15:06	Blane Teckmeyer	Cal#722200 PG802-S	23.47	2012-02-02 13:00	W. (Bill) Strong	Cal#726992 ML-303	5.76
AR405001N2	007230	001636	20	NHVOC Spare	18.02	2005-04-14 15:06	Blane Teckmeyer	Cal#722200 PG802-S	23.40	2012-02-02 12:59	W. (Bill) Strong	Cal#726992 ML-303	5.38
AR4050T1N1	007230	003197	20	NHVOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-14 10:09	Blane Teckmeyer	Cal#722200 PG802-S	2.99	2005-04-14 10:09	Blane Teckmeyer	Cal#722200 PG802-S	2.99
AR4050T1N2	007230	003132	20	NHVOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-14 10:10	Blane Teckmeyer	Cal#722200 PG802-S	3.05	2005-04-14 10:10	Blane Teckmeyer	Cal#722200 PG802-S	3.05
AR405001MS	007694	001240	250	Metals and SVOC	209.97	2005-04-14 15:02	Blane Teckmeyer	Cal#722200 PG802-S	261.61	2012-02-02 12:31	W. (Bill) Strong	Cal#726992 ML-303	51.64

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ICP Analytical Laboratories Department
TRU Waste Characterization Program
Sample Container Weight Information for AR4050 Co-located Sample

Sample ID Number	Production Number	Container Number	Container Size (mL)	Sample Analysis	Tare Weight (g)	Tare Date Time	Tare By	Tare Balance	Gross Weight (g)	Gross Date Time	Gross By	Gross Balance	Net Weight (g)
AR405002V1	007230	001859	20	VOC Sample	17.98	2005-04-14 15:32	Blane Teckmeyer	Cal#722200 PG802-S	22.61	2012-02-02 12:35	W. (Bill) Strong	Cal#726992 ML-303	4.63
AR405002V2	007230	001676	20	VOC Spare	17.78	2005-04-14 15:22	Blane Teckmeyer	Cal#722200 PG802-S	23.93	2012-02-02 12:36	W. (Bill) Strong	Cal#726992 ML-303	6.15
AR405002V3	007230	001760	20	VOC MS	17.74	2005-04-14 15:33	Blane Teckmeyer	Cal#722200 PG802-S	22.06	2012-02-02 12:57	W. (Bill) Strong	Cal#726992 ML-303	4.32
AR405002V4	007230	001610	20	VOC MSD	17.80	2005-04-14 15:33	Blane Teckmeyer	Cal#722200 PG802-S	23.04	2012-02-02 12:56	W. (Bill) Strong	Cal#726992 ML-303	5.24
AR4050T2V1	007230	003178	20	VOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-14 10:14	Blane Teckmeyer	Cal#722200 PG802-S	2.97	2005-04-14 10:14	Blane Teckmeyer	Cal#722200 PG802-S	2.97
AR4050T2V2	007230	003124	20	VOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-14 10:19	Blane Teckmeyer	Cal#722200 PG802-S	2.98	2005-04-14 10:19	Blane Teckmeyer	Cal#722200 PG802-S	2.98
AR405002N1	007230	001590	20	NHVOC Sample	17.86	2005-04-14 15:35	Blane Teckmeyer	Cal#722200 PG802-S	23.39	2012-02-02 12:38	W. (Bill) Strong	Cal#726992 ML-303	5.53
AR405002N2	007230	001721	20	NHVOC Spare	17.89	2005-04-14 15:35	Blane Teckmeyer	Cal#722200 PG802-S	22.04	2012-02-02 12:39	W. (Bill) Strong	Cal#726992 ML-303	4.15
AR405002N3	007230	001582	20	NHVOC MS	17.76	2005-04-14 15:37	Blane Teckmeyer	Cal#722200 PG802-S	22.22	2012-02-02 12:55	W. (Bill) Strong	Cal#726992 ML-303	4.46
AR405002N4	007230	001759	20	NHVOC MSD	17.85	2005-04-14 15:36	Blane Teckmeyer	Cal#722200 PG802-S	22.25	2012-02-02 12:55	W. (Bill) Strong	Cal#726992 ML-303	4.40
AR4050T2N1	007230	003183	20	NHVOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-14 10:17	Blane Teckmeyer	Cal#722200 PG802-S	3.03	2005-04-14 10:17	Blane Teckmeyer	Cal#722200 PG802-S	3.03
AR4050T2N2	007230	003172	20	NHVOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-14 10:18	Blane Teckmeyer	Cal#722200 PG802-S	3.01	2005-04-14 10:18	Blane Teckmeyer	Cal#722200 PG802-S	3.01
AR405002MS	007694	001244	250	Metals and SVOC	213.35	2005-04-14 15:09	Blane Teckmeyer	Cal#722200 PG802-S	260.15	2012-02-02 12:33	W. (Bill) Strong	Cal#726992 ML-303	46.80

Packaged by: Blane Teckmeyer
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ICP Analytical Laboratories Department
TRU Waste Characterization Program
Sample Container Weight Information for AR4059
Regular Sample

Sample ID Number	Production Number	Container Number	Container Size (mL)	Sample Analysis	Tare Weight (g)	Tare Date Time	Tare By	Tare Balance	Gross Weight (g)	Gross Date Time	Gross By	Gross Balance	Net Weight (g)
AR405901V1	007630	000276	20	VOC Sample	17.95	2005-04-18 15:16	Blane Teckmeyer	Cal#722200 PG802-S	22.71	2012-02-02 12:44	W. (Bill) Strong	Cal#726992 ML-303	4.76
AR405901V2	007630	000275	20	VOC Spare	17.87	2005-04-18 15:16	Blane Teckmeyer	Cal#722200 PG802-S	21.34	2012-02-02 12:46	W. (Bill) Strong	Cal#726992 ML-303	3.47
AR4059T1V1	007630	000486	20	VOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:26	Blane Teckmeyer	Cal#722200 PG802-S	3.03	2005-04-18 08:26	Blane Teckmeyer	Cal#722200 PG802-S	3.03
AR4059T1V2	007630	000529	20	VOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 08:22	Blane Teckmeyer	Cal#722200 PG802-S	2.99	2005-04-18 08:22	Blane Teckmeyer	Cal#722200 PG802-S	2.99
AR405901N1	007630	000265	20	NHVOC Sample	17.96	2005-04-18 15:16	Blane Teckmeyer	Cal#722200 PG802-S	24.23	2012-02-02 12:52	W. (Bill) Strong	Cal#726992 ML-303	6.27
AR405901N2	007630	000264	20	NHVOC Spare	17.88	2005-04-18 15:17	Blane Teckmeyer	Cal#722200 PG802-S	23.26	2012-02-02 12:53	W. (Bill) Strong	Cal#726992 ML-303	5.38
AR4059T1N1	007630	000497	20	NHVOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:22	Blane Teckmeyer	Cal#722200 PG802-S	2.95	2005-04-18 08:22	Blane Teckmeyer	Cal#722200 PG802-S	2.95
AR4059T1N2	007630	000504	20	NHVOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 08:23	Blane Teckmeyer	Cal#722200 PG802-S	2.99	2005-04-18 08:23	Blane Teckmeyer	Cal#722200 PG802-S	2.99
AR405901MS	003253	002122	250	Metals and SVOC	211.02	2005-04-18 15:15	Blane Teckmeyer	Cal#722200 PG802-S	264.20	2012-02-02 12:41	W. (Bill) Strong	Cal#726992 ML-303	53.18

Packaged by: Blane Teckmeyer
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ICP Analytical Laboratories Department
TRU Waste Characterization Program
Sample Container Weight Information for AR4059
Co-located Sample

Sample ID Number	Production Number	Container Number	Container Size (mL)	Sample Analysis	Tare Weight (g)	Tare Date Time	Tare By	Tare Balance	Gross Weight (g)	Gross Date Time	Gross By	Gross Balance	Net Weight (g)
AR405902V1	007630	000293	20	VOC Sample	17.87	2005-04-18 15:23	Blane Teckmeyer	Cal#722200 PG802-S	23.54	2012-02-02 12:27	W. (Bill) Strong	Cal#726992 ML-303	5.67
AR405902V2	007630	000303	20	VOC Spare	17.83	2005-04-18 15:23	Blane Teckmeyer	Cal#722200 PG802-S	21.68	2012-02-02 12:23	W. (Bill) Strong	Cal#726992 ML-303	3.85
AR405902V3	007630	000301	20	VOC MS	18.00	2005-04-18 15:24	Blane Teckmeyer	Cal#722200 PG802-S	22.09	2012-02-02 13:05	W. (Bill) Strong	Cal#726992 ML-303	4.09
AR405902V4	007630	000294	20	VOC MSD	17.93	2005-04-18 15:24	Blane Teckmeyer	Cal#722200 PG802-S	22.01	2012-02-02 13:03	W. (Bill) Strong	Cal#726992 ML-303	4.08
AR4059T2V1	007630	000547	20	VOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:19	Blane Teckmeyer	Cal#722200 PG802-S	2.95	2005-04-18 08:19	Blane Teckmeyer	Cal#722200 PG802-S	2.95
AR4059T2V2	007630	000532	20	VOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 08:20	Blane Teckmeyer	Cal#722200 PG802-S	3.02	2005-04-18 08:20	Blane Teckmeyer	Cal#722200 PG802-S	3.02
AR405902N1	007630	000300	20	NHVOC Sample	17.92	2005-04-18 15:25	Blane Teckmeyer	Cal#722200 PG802-S	22.73	2012-02-02 13:06	W. (Bill) Strong	Cal#726992 ML-303	4.81
AR405902N2	007630	000302	20	NHVOC Spare	17.89	2005-04-18 15:25	Blane Teckmeyer	Cal#722200 PG802-S	21.61	2012-02-02 13:06	W. (Bill) Strong	Cal#726992 ML-303	3.72
AR405902N3	007630	000312	20	NHVOC MS	17.87	2005-04-18 15:25	Blane Teckmeyer	Cal#722200 PG802-S	22.23	2012-02-02 12:49	W. (Bill) Strong	Cal#726992 ML-303	4.36
AR405902N4	007630	000311	20	NHVOC MSD	17.92	2005-04-18 15:26	Blane Teckmeyer	Cal#722200 PG802-S	23.51	2012-02-02 12:47	W. (Bill) Strong	Cal#726992 ML-303	5.59
AR4059T2N1	007630	000522	20	NHVOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:18	Blane Teckmeyer	Cal#722200 PG802-S	2.98	2005-04-18 08:18	Blane Teckmeyer	Cal#722200 PG802-S	2.98
AR4059T2N2	007630	000545	20	NHVOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 08:17	Blane Teckmeyer	Cal#722200 PG802-S	3.02	2005-04-18 08:17	Blane Teckmeyer	Cal#722200 PG802-S	3.02
AR405902MS	003253	002127	250	Metals and SVOC	211.10	2005-04-18 15:22	Blane Teckmeyer	Cal#722200 PG802-S	264.73	2012-02-02 12:29	W. (Bill) Strong	Cal#726992 ML-303	53.63

Packaged by: Blane Teckmeyer
Packaging Independent Verification by: Julie Daley 04/18/2005 3:30:58PM

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Nalge Nunc International

I-CHEM™ Brand Products

CERTIFICATE OF ANALYSIS

PRODUCTION NUMBER : 003253 **Item Number: 320-0250** **Item Description: JAR SHORT CLEAR WM**

Groups 1 and 2 are applicable

This is your Certificate of Analysis for I-CHEM Certified™ product which has been prepared in accordance with I-CHEM Performance-Based Specifications. This product meets or exceeds analyte specifications established in the U.S. EPA "Specification and Guidance for Contaminant-free Sample Containers" for use in Superfund and other hazardous waste programs.

Group 1. Glass and HDPE/LDPE Sample containers for use in the analysis of Metals

Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg /L)
Aluminum	<80	Calcium (all HDPE)	<100	Magnesium	<100	Selenium	<2
Antimony	<5	Chromium	<10	Manganese	<10	Silver	<5
Arsenic	<2	Cobalt	<10	Mercury	<0.2	Sodium	<5000
Barium	<20	Copper	<10	Nickel	<20	Sodium (all HDPE)	<100
Beryllium	<0.5	Iron	<50	Potassium	<750	Thallium	<5
Cadmium	<1	Lead	<2	Potassium (all HDPE)	<100	Vanadium	<10
Calcium	<500					Zinc	<10

In addition to the above analytes, NALGENE® containers are certified for these analytes:

Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)
Chloride	<100	Fluoride	<20	Nitrite	<50	Sulfate	<100
Cyanide	<10	Nitrate	<20	Paraquat (amber only)	<0.4	Sulfide	<30
Diquat (amber only)	<1.0					Sulfite	<1000

Group 2. Glass Sample Containers for use in the analysis of Semivolatiles and Pesticides/PCBs

Compound	Quantitation Limit (µg/L)	Compound	Quantitation Limit (µg/L)	Compound	Quantitation Limit (µg/L)
Acenaphthene	<5	Acenaphthylene	<5	Anthracene	<5
Benzo(a)anthracene	<5	Benzo(a)pyrene	<5	Benzo(b)fluoranthene	<5
Benzo(k)Fluoranthene	<5	Benzo(g,h,i)perylene	<5	Benzoic Acid	<20
Benzyl Alcohol	<5	4-Bromophenyl-phenylether	<5	Butylbenzylphthalate	<5
4-Chloroaniline	<5	4-Chloro-3-methylphenol	<5	bis-(2-Chloroethoxy) methane	<5
bis-(2-Chloroethyl)ether	<5	bis-(2-Chloroisopropyl)ether	<5	2-Chloronaphthalene	<5
2-Chlorophenol	<5	4-Chlorophenyl-phenylether	<5	Chrysene	<5
Di-n-butylphthalate	<5	Di-n-octylphthalate	<5	Dibenzo(a,h)anthracene	<5
Dibenzofuran	<5	1,2-Dichlorobenzene	<5	1,4-Dichlorobenzene	<5
1,3-Dichlorobenzene	<5	3,3 -Dichlorobenzidine	<5	2,4-Dichlorophenol	<5
Diethylphthalate	<5	Dimethylphthalate	<5	2,4-Dimitrotoluene	<5
4,6-Dinitro-2-methylphenol	<20	2,4-Dinitrophenol	<20	Fluoranthene	<5
2,6-Dinitrotoluene	<5	bis-(2-Ethylhexyl)phthalate	<5	Hexachlorobutadiene	<5
Fluorene	<5	Hexachlorobenzene	<5	Indeno(1,2,3-cd)pyrene	<5
Hexachlorocyclopentadiene	<5	Hexachloroethane	<5	2-Methylphenol	<5
Isophorone	<5	2-Methylnaphthalene	<5	3-Nitroaniline	<20
4-Methylphenol	<5	2-Nitroaniline	<20	N-Nitrosodimethylamine	<5
4-Nitroaniline	<20	N-Nitroso-di-n-propylamine	<5	Nitrobenzene	<5
N-Nitrosodiphenylamine	<5	Naphthalene	<5	Pentachlorophenol	<20
2-Nitrophenol	<5	4-Nitrophenol	<20	Pyrene	<5
Phenanthrene	<5	Phenol	<5	2,4,6-Trichlorophenol	<5
1,2,4-Trichlorobenzene	<5	2,4,5-Trichlorophenol	<20	Aldrin	<0.01
Azobenzene	<5	Carbazole	<5	Alpha-BHC	<0.01
4,4-DDD	<0.02	Endosulfan II	<0.02	Beta-BHC	<0.01
4,4-DDE	<0.02	Endosulfan Sulfate	<0.02	Delta-BHC	<0.01
4,4-DDT	<0.02	Endrin	<0.02	Gamma-BHC	<0.01
Dieldrin	<0.02	Endrin Aldehyde	<0.02	Heptachlor Epoxide	<0.01
Endosulfan I	<0.01	Heptachlor	<0.01	Alpha-Chlordane	<0.01
Methoxychlor	<0.10	Endrin Ketone	<0.02	Aroclor-1016	<0.20
Gamma-Chlordane	<0.01	Toxaphene	<0.30	Aroclor-1242	<0.20
Aroclor-1221	<0.20	Aroclor-1232	<0.20	Aroclor-1260	<0.20
Aroclor-1248	<0.20	Aroclor-1254	<0.20	2,4-Dimethylphenol	<5
Aroclor-1262	<0.20	Aroclor-1268	<0.20		

Group 3. Glass Sample Containers for use in the analysis of Volatiles

Compound	Quantitation Limit (µg/L)	Compound	Quantitation Limit (µg/L)	Compound	Quantitation Limit (µg/L)
Acetone	<5	1,3-Dichloropropane	<1	Benzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1	1,2-Dichloropropane	<1
Bromodichloromethane	<1	trans-1,3-Dichloropropene	<1	Bromoform	<1
cis-1,3-Dichloropropene	<1	Bromomethane	<1	1,1-Dichloropropene	<1
2-Butanone	<5	Ethylbenzene	<1	tert-Butylbenzene	<1
Hexachlorobutadiene	<1	sec-Butylbenzene	<1	2-Hexanone	<5
n-Butylbenzene	<1	Isopropylbenzene	<1	Carbon Disulfide	<1
p-Isopropyltoluene	<1	Carbon Tetrachloride	<1	4-Methyl-2-pentanone	<5
Chlorobenzene	<1	Methylene Chloride	<2	Chloroethane	<1
Naphthalene	<1	Chloroform	<1	n-Propylbenzene	<1
Chloromethane	<1	Styrene	<1	2 & 4 Chlorotoluene	<1
1,1,2,2-Tetrachloromethane	<1	1,2-Dibromo-3-chloropropane	<1	Tetrachloroethene	<1
Dibromochloromethane	<1	Toluene	<1	1,2-Dibromoethane (EDB)	<1
1,2,3-Trichlorobenzene	<1	Dibromomethane	<1	1,2,4-Trichlorobenzene	<1
1,4-Dichlorobenzene	<1	1,1,2-Trichloroethane	<1	1,3-Dichlorobenzene	<1
1,1,1-Trichloroethane	<1	1,2-Dichlorobenzene	<1	Trichloroethene	<1
Dichlorodifluoromethane	<1	Trichlorofluoromethane	<1	1,2-Dichloroethene	<1
1,2,3-Trichloropropane	<1	1,1-Dichloroethane	<1	Bromochloromethane	<1
trans-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1		
Vinyl Acetate	<5	1,1-Dichloroethene	<1		
Xylenes (total)	<1	1,2,4-Trimethylbenzene	<1		
Vinyl Chloride	<1	cis-1,2-Dichloroethene	<1		

In addition to the above analytes in Group 3, 40 mL and 60 mL vials are certified for:

Compound	Quantitation Limit (µg/L)
Total Organic Carbon	<600

Please keep this certificate for your records and to facilitate any necessary correspondence.
If additional information is required, contact our Technical Service Department at(800) 443-1689.

James L. Riner

James L. Riner
QA Director
00037 Rev. 2

Chase Scientific Glass, Inc.
234 Cardiff Valley Road
Rockwood, TN 37854

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I-CHEM™ Brand Products

CERTIFICATE OF ANALYSIS

PRODUCTION NUMBER : 007694

Item Number: 320-0250

Item Description: JAR SHORT CLEAR WM

Groups 1 and 2 are applicable

This is your Certificate of Analysis for I-CHEM Certified™ product which has been prepared in accordance with I-CHEM Performance-Based Specifications. This product meets or exceeds analyte specifications established in the U.S. EPA "Specification and Guidance for Contaminant-free Sample Containers" for use in Superfund and other hazardous waste programs.

Group 1. Glass and HDPE/LDPE Sample containers for use in the analysis of Metals

Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg /L)
Aluminum	<80	Calcium (all HDPE)	<100	Magnesium	<100	Selenium	<2
Antimony	<5	Chromium	<10	Manganese	<10	Silver	<5
Arsenic	<2	Cobalt	<10	Mercury	<0.2	Sodium	<500
Barium	<20	Copper	<10	Nickel	<20	Sodium (all HDPE)	<100
Beryllium	<0.5	Iron	<50	Potassium	<750	Thallium	<5
Cadmium	<1	Lead	<2	Potassium (all HDPE)	<100	Vanadium	<10
Calcium	<500					Zinc	<10

In addition to the above analytes, NALGENE® containers are certified for these analytes:

Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)
Chloride	<100	Fluoride	<20	Nitrite	<50	Sulfate	<100
Cyanide	<10	Nitrate	<20	Paraquat (amber only)	<0.4	Sulfide	<30
Diquat (amber only)	<1.0					Sulfite	<1000

Group 2. Glass Sample Containers for use in the analysis of Semivolatiles and Pesticides/PCBs

Compound	Quantitation Limit (µg/L)	Compound	Quantitation Limit (µg/L)	Compound	Quantitation Limit (µg/L)
Acenaphthene	<5	Acenaphthylene	<5	Anthracene	<5
Benzo(a)anthracene	<5	Benzo(a)pyrene	<5	Benzo(b)fluoranthene	<5
Benzo(k)Fluoranthene	<5	Benzo(g,h,i)perylene	<5	Benzoic Acid	<20
Benzyl Alcohol	<5	4-Bromophenyl-phenylether	<5	Butylbenzylphthalate	<5
4-Chloroaniline	<5	4-Chloro-3-methylphenol	<5	bis-(2-Chloroethoxy) methane	<5
bis-(2-Chloroethyl)ether	<5	bis-(2-Chloroisopropyl)ether	<5	2-Chloronaphthalene	<5
2-Chlorophenol	<5	4-Chlorophenyl-phenylether	<5	Chrysene	<5
Di-n-butylphthalate	<5	Di-n-octylphthalate	<5	Dibenzo(a,h)anthracene	<5
Dibenzofuran	<5	1,2-Dichlorobenzene	<5	1,4-Dichlorobenzene	<5
1,3-Dichlorobenzene	<5	3,3 -Dichlorobenzidine	<5	2,4-Dichlorophenol	<5
Diethylphthalate	<5	Dimethylphthalate	<5	2,4-Dinitrotoluene	<5
4,6-Dinitro-2-methylphenol	<20	2,4-Dinitrophenol	<20	Fluoranthene	<5
2,6-Dinitrotoluene	<5	bis-(2-Ethylhexyl)phthalate	<5	Hexachlorobutadiene	<5
Fluorene	<5	Hexachlorobenzene	<5	Indeno(1,2,3-cd)pyrene	<5
Hexachlorocyclopentadiene	<5	Hexachloroethane	<5	2-Methylphenol	<5
Isophorone	<5	2-Methylnaphthalene	<5	3-Nitroaniline	<20
4-Methylphenol	<5	2-Nitroaniline	<20	N-Nitrosodimethylamine	<5
4-Nitroaniline	<20	N-Nitroso-di-n-propylamine	<5	Nitrobenzene	<5
N-Nitrosodiphenylamine	<5	Naphthalene	<5	Pentachlorophenol	<20
2-Nitrophenol	<5	4-Nitrophenol	<20	Pyrene	<5
Phenanthrene	<5	Phenol	<5	2,4,6-Trichlorophenol	<5
1,2,4-Trichlorobenzene	<5	2,4,5-Trichlorophenol	<20	Aldrin	<0.01
Azobenzene	<5	Carbazole	<5	Alpha-BHC	<0.01
4,4-DDD	<0.02	Endosulfin II	<0.02	Beta-BHC	<0.01
4,4-DDE	<0.02	Endosulfin Sulfate	<0.02	Delta-BHC	<0.01
4,4-DDT	<0.02	Endrin	<0.02	Gamma-BHC	<0.01
Dieldrin	<0.02	Endrin Aldehyde	<0.02	Heptachlor Epoxide	<0.01
Endosulfin I	<0.01	Heptachlor	<0.01	Alpha-Chlordane	<0.01
Methoxychlor	<0.10	Endrin Ketone	<0.02	Aroclor-1016	<0.20
Gamma-Chlordane	<0.01	Toxaphene	<0.30	Aroclor-1242	<0.20
Aroclor-1221	<0.20	Aroclor-1232	<0.20	Aroclor-1260	<0.20
Aroclor-1248	<0.20	Aroclor-1254	<0.20	2,4-Dimethylphenol	<5
Aroclor-1262	<0.20	Aroclor-1268	<0.20		

Group 3. Glass Sample Containers for use in the analysis of Volatiles

Compound	Quantitation Limit (µg/L)	Compound	Quantitation Limit (µg/L)	Compound	Quantitation Limit (µg/L)
Acetone	<5	1,3-Dichloropropane	<1	Benzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1	1,2-Dichloropropane	<1
Bromodichloromethane	<1	trans-1,3-Dichloropropene	<1	Bromoform	<1
cis-1,3-Dichloropropene	<1	Bromomethane	<1	1,1-Dichloropropene	<1
2-Butanone	<5	Ethylbenzene	<1	tert-Butylbenzene	<1
Hexachlorobutadiene	<1	sec-Butylbenzene	<1	2-Hexanone	<5
n-Butylbenzene	<1	Isopropylbenzene	<1	Carbon Disulfide	<1
p-Isopropyltoluene	<1	Carbon Tetrachloride	<1	4-Methyl-2-pentanone	<5
Chlorobenzene	<1	Methylene Chloride	<2	Chloroethane	<1
Naphthalene	<1	Chloroform	<1	n-Propylbenzene	<1
Chloromethane	<1	Styrene	<1	2 & 4 Chlorotoluene	<1
1,1,2,2-Tetrachloroethane	<1	1,2-Dibromo-3-chloropropane	<1	Tetrachloroethene	<1
Dibromochloromethane	<1	Toluene	<1	1,2-Dibromoethane (EDB)	<1
1,2,3-Trichlorobenzene	<1	Dibromomethane	<1	1,2,4-Trichlorobenzene	<1
1,4-Dichlorobenzene	<1	1,1,2-Trichloroethane	<1	1,3-Dichlorobenzene	<1
1,1,1-Trichloroethane	<1	1,2-Dichlorobenzene	<1	Trichloroethene	<1
Dichlorodifluoromethane	<1	Trichlorofluoromethane	<1	1,2-Dichloroethane	<1
1,2,3-Trichloropropane	<1	1,1-Dichloroethane	<1	Bromochloromethane	<1
trans-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1		
Vinyl Acetate	<5	1,1-Dichloroethene	<1		
Xylenes (total)	<1	1,2,4-Trimethylbenzene	<1		
Vinyl Chloride	<1	cis-1,2-Dichloroethene	<1		

In addition to the above analytes in Group 3, 40 mL and 60 mL vials are certified for:

Compound	Quantitation Limit (µg/L)
Total Organic Carbon	<600

Please keep this certificate for your records and to facilitate any necessary correspondence.
If additional information is required, contact our Technical Service Department at(800) 625-4327.

James L. Riner

James L. Riner
QA Director

Chase Scientific Glass, Inc.
234 Cardiff Valley Road
Rockwood, TN 37854

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Section 3

Analysis Results

AMWTP Analytical Chemistry Laboratory

Data Report Narrative for ALD12005S

This data report contains semivolatile organic compound (SVOC) analysis results for 10 samples received 02/01/12 and 02/02/12 from ARP for CCP-INL.

Sample analysis was performed using methods CCP-TP-187 and CCP-TP-185, which implement the requirements of SW-846 Methods 3550B and 8270C, respectively. All applicable holding times were met.

One initial calibration (ICAL) is associated with these analyses. All target compounds use average response factors for quantitation except 2,4-dinitrophenol which uses a linear model.

All samples were analyzed neat and at dilutions as needed to quantitate all target analytes.

All surrogate recoveries are satisfactory in the undiluted runs demonstrating that the analytical system is in control. Many surrogates for the diluted runs are below the detection limit. Form II is D or Z flagged for the surrogates that are diluted below the detection limit.

All analytical calibration and batch quality control acceptance criteria were met.

Three of the samples contain di-n-octyl phthalate. Identification of di-n-octyl phthalate is supported by known retention time and spectrum (it is present in the CCAL standard solution).

However, the identification assigned to the chlorinated TICs in these samples are highly uncertain; mass spectra for isomers are very similar, and specific identification cannot be performed without analysis of a known standard for comparison of retention times and spectra.

The CAS number for 3 & 4-methylphenol on Form I is the CAS number for 4-methylphenol. The CAS number for 3-methylphenol is 108-39-4.

AMWTP Analytical Chemistry Laboratory

Central Characterization Project

Data Qualifier Flag Definitions for SVOCs

Flag	Definition
B	Analyte detected in associated laboratory blank
E	Reported analyte concentration exceeds the calibration range
D	Reported analyte concentration is from a secondary dilution of the sample
H	Holding time exceeded
J	Target Analyte concentration <PRQL but ≥ MDL
J	TIC concentration is estimated by comparison to nearest internal standard, and has high analytical uncertainty.
N	Presumptive evidence of a compound, based on a mass spectral library search (TICs only)
U	Analyte was undetected (reported as sample-specific MDL)
Z	One or more QC sample results do not meet acceptance criteria

TOTAL SVOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405701MS	Lab Sample ID:	2BY99
Sampling Batch No:	S4200-LOT-05-07	Lab File ID:	SS605391
Date Sampled:	1 /31/2012	Data Report Number:	ALD12005S
Date Extracted:	2 /2 /2012	Analytical Batch ID:	1202011
Extraction Holding Time:	2 days		
Date/Time Analyzed:	02/06/2012 15:55	Instrument ID:	SV-6
Analysis Holding Time:	4 days	Matrix:	SOLID
Preparation Method:	CCP-TP-187-R1	Dilution Factor:	1
Analytical Method:	CCP-TP-185-R1		

CAS #	TARGET ANALYTE	CONCENTRATION mg/kg	Q
117-81-7	bis(2-Ethylhexyl)phthalate	5.3	J
95-50-1	1,2-Dichlorobenzene	0.58	U
106-46-7	1,4-Dichlorobenzene	0.58	U
51-28-5	2,4-Dinitrophenol	0.19	U
121-14-2	2,4-Dinitrotoluene	0.29	U
118-74-1	Hexachlorobenzene	0.29	U
87-68-3	Hexachlorobutadiene	11	
67-72-1	Hexachloroethane	2.6	J
95-48-7	2-Methylphenol	0.39	U
65794-96-9	3&4-Methylphenol	0.39	U
98-95-3	Nitrobenzene	0.58	U
87-86-5	Pentachlorophenol	0.19	U

TOTAL SVOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405701MS	Lab Sample ID:	2BY99
Sampling Batch No:	S4200-LOT-05-07	Lab File ID:	SS605391
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Extraction Holding Time:	2 days		
Date/Time Analyzed:	02/06/2012 15:55	Instrument ID:	SV-6
Analysis Holding Time:	4 days	Matrix:	SOLID
Preparation Method:	CCP-TP-187-R1	Dilution Factor:	1
Analytical Method:	CCP-TP-185-R1		

Number of TICs Found: 5

	CAS Number	Tentatively Identified SVOCs	Concentration mg/kg	Q	Retention Time (min)
1	634-90-2	Benzene, 1,2,3,5-tetrachloro-	3.2	JN	14.95
2	634-66-2	Benzene, 1,2,3,4-tetrachloro-	4.0	JN	15.46
3	608-93-5	Benzene, pentachloro-	3.4	JN	15.99
4	1888-71-7	1-Propene, 1,1,2,3,3,3-hexachloro-	6.7	JN	16.73
5	26914-33-0	Tetrachlorobiphenyl	0.67	JN	19.19

TOTAL SVOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405702MS	Lab Sample ID:	2BZ05
Sampling Batch No:	S4200-LOT-05-07	Lab File ID:	SS605394
Date Sampled:	1 /31/2012	Data Report Number:	ALD12005S
Date Extracted:	2 /2 /2012	Analytical Batch ID:	1202011
Extraction Holding Time:	2 days		
Date/Time Analyzed:	02/06/2012 18:07	Instrument ID:	SV-6
Analysis Holding Time:	4 days	Matrix:	SOLID
Preparation Method:	CCP-TP-187-R1	Dilution Factor:	1
Analytical Method:	CCP-TP-185-R1		

CAS #	TARGET ANALYTE	CONCENTRATION mg/kg	Q
117-81-7	bis(2-Ethylhexyl)phthalate	6.5	J
95-50-1	1,2-Dichlorobenzene	0.51	U
106-46-7	1,4-Dichlorobenzene	0.51	U
51-28-5	2,4-Dinitrophenol	0.17	U
121-14-2	2,4-Dinitrotoluene	0.26	U
118-74-1	Hexachlorobenzene	0.26	U
87-68-3	Hexachlorobutadiene	13	E
67-72-1	Hexachloroethane	3.5	J
95-48-7	2-Methylphenol	0.34	U
65794-96-9	3&4-Methylphenol	0.34	U
98-95-3	Nitrobenzene	0.51	U
87-86-5	Pentachlorophenol	0.17	U

TOTAL SVOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405702MS	Lab Sample ID:	2BZ05
Sampling Batch No:	S4200-LOT-05-07	Lab File ID:	SS605394
Date Sampled:	1 /31/2012	Data Report Number:	ALD12005S
Date Extracted:	2 /2 /2012	Analytical Batch ID:	1202011
Extraction Holding Time:	2 days		
Date/Time Analyzed:	02/06/2012 18:07	Instrument ID:	SV-6
Analysis Holding Time:	4 days	Matrix:	SOLID
Preparation Method:	CCP-TP-187-R1	Dilution Factor:	1
Analytical Method:	CCP-TP-185-R1		

Number of TICs Found: 6

	CAS Number	Tentatively Identified SVOCs	Concentration mg/kg	Q	Retention Time (min)
1	634-90-2	Benzene, 1,2,3,5-tetrachloro-	4.6	JN	14.96
2	634-66-2	Benzene, 1,2,3,4-tetrachloro-	4.2	JN	15.47
3	608-93-5	Benzene, pentachloro-	3.8	JN	15.99
4	1888-71-7	1-Propene, 1,1,2,3,3,3-hexachloro-	8.8	JN	16.74
5	26914-33-0	Tetrachlorobiphenyl	2.4	JN	19.20
6	117-84-0	Di-n-octylphthalate	4.3	JN	25.54

TOTAL SVOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405702MSDL2	Lab Sample ID:	2BZ05DL2
Sampling Batch No:	S4200-LOT-05-07	Lab File ID:	SS605403
Date Sampled:	1 /31/2012	Data Report Number:	ALD12005S
Date Extracted:	2 /2 /2012	Analytical Batch ID:	1202011
Extraction Holding Time:	2 days		
Date/Time Analyzed:	02/07/2012 08:42	Instrument ID:	SV-6
Analysis Holding Time:	5 days	Matrix:	SOLID
Preparation Method:	CCP-TP-187-R1	Dilution Factor:	2
Analytical Method:	CCP-TP-185-R1		

CAS #	TARGET ANALYTE	CONCENTRATION mg/kg	Q
117-81-7	bis(2-Ethylhexyl)phthalate	8.6	JD
95-50-1	1,2-Dichlorobenzene	1.0	UD
106-46-7	1,4-Dichlorobenzene	1.0	UD
51-28-5	2,4-Dinitrophenol	0.34	UD
121-14-2	2,4-Dinitrotoluene	0.51	UD
118-74-1	Hexachlorobenzene	0.51	UD
87-68-3	Hexachlorobutadiene	14	D
67-72-1	Hexachloroethane	3.7	JD
95-48-7	2-Methylphenol	0.69	UD
65794-96-9	3&4-Methylphenol	0.69	UD
98-95-3	Nitrobenzene	1.0	UD
87-86-5	Pentachlorophenol	0.34	UD

TOTAL SVOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405801MS	Lab Sample ID:	2BZ10
Sampling Batch No:	S4200-LOT-05-08	Lab File ID:	SS605395
Date Sampled:	1 /31/2012	Data Report Number:	ALD12005S
Date Extracted:	2 /2 /2012	Analytical Batch ID:	1202011
Extraction Holding Time:	2 days		
Date/Time Analyzed:	02/06/2012 18:50	Instrument ID:	SV-6
Analysis Holding Time:	4 days	Matrix:	SOLID
Preparation Method:	CCP-TP-187-R1	Dilution Factor:	1
Analytical Method:	CCP-TP-185-R1		

CAS #	TARGET ANALYTE	CONCENTRATION mg/kg	Q
117-81-7	bis(2-Ethylhexyl)phthalate	6.4	J
95-50-1	1,2-Dichlorobenzene	0.60	U
106-46-7	1,4-Dichlorobenzene	0.60	U
51-28-5	2,4-Dinitrophenol	0.20	U
121-14-2	2,4-Dinitrotoluene	0.30	U
118-74-1	Hexachlorobenzene	0.30	U
87-68-3	Hexachlorobutadiene	1.0	J
67-72-1	Hexachloroethane	1.6	J
95-48-7	2-Methylphenol	0.40	U
65794-96-9	3&4-Methylphenol	0.40	U
98-95-3	Nitrobenzene	0.60	U
87-86-5	Pentachlorophenol	0.20	U

TOTAL SVOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405801MS	Lab Sample ID:	2BZ10
Sampling Batch No:	S4200-LOT-05-08	Lab File ID:	SS605395
Date Sampled:	1 /31/2012	Data Report Number:	ALD12005S
Date Extracted:	2 /2 /2012	Analytical Batch ID:	1202011
Extraction Holding Time:	2 days		
Date/Time Analyzed:	02/06/2012 18:50	Instrument ID:	SV-6
Analysis Holding Time:	4 days	Matrix:	SOLID
Preparation Method:	CCP-TP-187-R1	Dilution Factor:	1
Analytical Method:	CCP-TP-185-R1		

Number of TICs Found: 3

	CAS Number	Tentatively Identified SVOCs	Concentration mg/kg	Q	Retention Time (min)
1	634-90-2	Benzene, 1,2,3,5-tetrachloro-	1.1	JN	14.96
2	634-66-2	Benzene, 1,2,3,4-tetrachloro-	3.1	JN	15.47
3	1888-71-7	1-Propene, 1,1,2,3,3,3-hexachloro-	1.0	JN	16.74

TOTAL SVOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405802MS	Lab Sample ID:	2BZ15
Sampling Batch No:	S4200-LOT-05-08	Lab File ID:	SS605396
Date Sampled:	1 /31/2012	Data Report Number:	ALD12005S
Date Extracted:	2 /2 /2012	Analytical Batch ID:	1202011
Extraction Holding Time:	2 days		
Date/Time Analyzed:	02/06/2012 19:34	Instrument ID:	SV-6
Analysis Holding Time:	4 days	Matrix:	SOLID
Preparation Method:	CCP-TP-187-R1	Dilution Factor:	1
Analytical Method:	CCP-TP-185-R1		

CAS #	TARGET ANALYTE	CONCENTRATION mg/kg	Q
117-81-7	bis(2-Ethylhexyl)phthalate	4.7	J
95-50-1	1,2-Dichlorobenzene	0.54	U
106-46-7	1,4-Dichlorobenzene	0.54	U
51-28-5	2,4-Dinitrophenol	0.18	U
121-14-2	2,4-Dinitrotoluene	0.27	U
118-74-1	Hexachlorobenzene	0.27	U
87-68-3	Hexachlorobutadiene	0.78	J
67-72-1	Hexachloroethane	1.0	J
95-48-7	2-Methylphenol	0.36	U
65794-96-9	3&4-Methylphenol	0.36	U
98-95-3	Nitrobenzene	0.54	U
87-86-5	Pentachlorophenol	0.18	U

TOTAL SVOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405802MS	Lab Sample ID:	2BZ15
Sampling Batch No:	S4200-LOT-05-08	Lab File ID:	SS605396
Date Sampled:	1 /31/2012	Data Report Number:	ALD12005S
Date Extracted:	2 /2 /2012	Analytical Batch ID:	1202011
Extraction Holding Time:	2 days		
Date/Time Analyzed:	02/06/2012 19:34	Instrument ID:	SV-6
Analysis Holding Time:	4 days	Matrix:	SOLID
Preparation Method:	CCP-TP-187-R1	Dilution Factor:	1
Analytical Method:	CCP-TP-185-R1		

Number of TICs Found: 4

	CAS Number	Tentatively Identified SVOCs	Concentration mg/kg	Q	Retention Time (min)
1	634-90-2	Benzene, 1,2,3,5-tetrachloro-	1.3	JN	14.95
2	634-66-2	Benzene, 1,2,3,4-tetrachloro-	2.2	JN	15.47
3	1888-71-7	1-Propene, 1,1,2,3,3,3-hexachloro-	0.91	JN	16.74
4	26914-33-0	Tetrachlorobiphenyl	1.2	JN	19.19

TOTAL SVOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR406001MS	Lab Sample ID:	2BZ20
Sampling Batch No:	S4200-LOT-05-03	Lab File ID:	SS605397
Date Sampled:	2 /1 /2012	Data Report Number:	ALD12005S
Date Extracted:	2 /2 /2012	Analytical Batch ID:	1202011
Extraction Holding Time:	1 day		
Date/Time Analyzed:	02/06/2012 20:18	Instrument ID:	SV-6
Analysis Holding Time:	4 days	Matrix:	SOLID
Preparation Method:	CCP-TP-187-R1	Dilution Factor:	1
Analytical Method:	CCP-TP-185-R1		

CAS #	TARGET ANALYTE	CONCENTRATION mg/kg	Q
117-81-7	bis(2-Ethylhexyl)phthalate	0.37	U
95-50-1	1,2-Dichlorobenzene	0.56	U
106-46-7	1,4-Dichlorobenzene	0.56	U
51-28-5	2,4-Dinitrophenol	0.19	U
121-14-2	2,4-Dinitrotoluene	0.28	U
118-74-1	Hexachlorobenzene	0.28	U
87-68-3	Hexachlorobutadiene	0.56	U
67-72-1	Hexachloroethane	0.56	U
95-48-7	2-Methylphenol	0.37	U
65794-96-9	3&4-Methylphenol	0.37	U
98-95-3	Nitrobenzene	0.56	U
87-86-5	Pentachlorophenol	0.19	U

TOTAL SVOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR406001MS	Lab Sample ID:	2BZ20
Sampling Batch No:	S4200-LOT-05-03	Lab File ID:	SS605397
Date Sampled:	2 /1 /2012	Data Report Number:	ALD12005S
Date Extracted:	2 /2 /2012	Analytical Batch ID:	1202011
Extraction Holding Time:	1 day		
Date/Time Analyzed:	02/06/2012 20:18	Instrument ID:	SV-6
Analysis Holding Time:	4 days	Matrix:	SOLID
Preparation Method:	CCP-TP-187-R1	Dilution Factor:	1
Analytical Method:	CCP-TP-185-R1		

Number of TICs Found: 0

	CAS Number	Tentatively Identified SVOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

TOTAL SVOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR406002MS	Lab Sample ID:	2BZ25
Sampling Batch No:	S4200-LOT-05-03	Lab File ID:	SS605398
Date Sampled:	2 /1 /2012	Data Report Number:	ALD12005S
Date Extracted:	2 /2 /2012	Analytical Batch ID:	1202011
Extraction Holding Time:	1 day		
Date/Time Analyzed:	02/06/2012 21:01	Instrument ID:	SV-6
Analysis Holding Time:	4 days	Matrix:	SOLID
Preparation Method:	CCP-TP-187-R1	Dilution Factor:	1
Analytical Method:	CCP-TP-185-R1		

CAS #	TARGET ANALYTE	CONCENTRATION mg/kg	Q
117-81-7	bis(2-Ethylhexyl)phthalate	0.40	U
95-50-1	1,2-Dichlorobenzene	0.60	U
106-46-7	1,4-Dichlorobenzene	0.60	U
51-28-5	2,4-Dinitrophenol	0.20	U
121-14-2	2,4-Dinitrotoluene	0.30	U
118-74-1	Hexachlorobenzene	0.30	U
87-68-3	Hexachlorobutadiene	0.60	U
67-72-1	Hexachloroethane	0.60	U
95-48-7	2-Methylphenol	0.40	U
65794-96-9	3&4-Methylphenol	0.40	U
98-95-3	Nitrobenzene	0.60	U
87-86-5	Pentachlorophenol	0.20	U

TOTAL SVOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR406002MS	Lab Sample ID:	2BZ25
Sampling Batch No:	S4200-LOT-05-03	Lab File ID:	SS605398
Date Sampled:	2 /1 /2012	Data Report Number:	ALD12005S
Date Extracted:	2 /2 /2012	Analytical Batch ID:	1202011
Extraction Holding Time:	1 day		
Date/Time Analyzed:	02/06/2012 21:01	Instrument ID:	SV-6
Analysis Holding Time:	4 days	Matrix:	SOLID
Preparation Method:	CCP-TP-187-R1	Dilution Factor:	1
Analytical Method:	CCP-TP-185-R1		

Number of TICs Found: 0

	CAS Number	Tentatively Identified SVOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

TOTAL SVOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405001MS	Lab Sample ID:	2BZ30
Sampling Batch No:	S4200-LOT-05-10	Lab File ID:	SS605406
Date Sampled:	2 /2 /2012	Data Report Number:	ALD12005S
Date Extracted:	2 /2 /2012	Analytical Batch ID:	1202011
Extraction Holding Time:	< 1 day		
Date/Time Analyzed:	02/07/2012 13:16	Instrument ID:	SV-6
Analysis Holding Time:	5 days	Matrix:	SOLID
Preparation Method:	CCP-TP-187-R1	Dilution Factor:	1
Analytical Method:	CCP-TP-185-R1		

CAS #	TARGET ANALYTE	CONCENTRATION mg/kg	Q
117-81-7	bis(2-Ethylhexyl)phthalate	35	E
95-50-1	1,2-Dichlorobenzene	0.60	U
106-46-7	1,4-Dichlorobenzene	0.60	U
51-28-5	2,4-Dinitrophenol	0.20	U
121-14-2	2,4-Dinitrotoluene	0.30	U
118-74-1	Hexachlorobenzene	0.30	U
87-68-3	Hexachlorobutadiene	24	E
67-72-1	Hexachloroethane	89	E
95-48-7	2-Methylphenol	0.40	U
65794-96-9	3&4-Methylphenol	0.40	U
98-95-3	Nitrobenzene	0.60	U
87-86-5	Pentachlorophenol	0.20	U

TOTAL SVOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405001MS	Lab Sample ID:	2BZ30
Sampling Batch No:	S4200-LOT-05-10	Lab File ID:	SS605406
Date Sampled:	2 /2 /2012	Data Report Number:	ALD12005S
Date Extracted:	2 /2 /2012	Analytical Batch ID:	1202011
Extraction Holding Time:	< 1 day		
Date/Time Analyzed:	02/07/2012 13:16	Instrument ID:	SV-6
Analysis Holding Time:	5 days	Matrix:	SOLID
Preparation Method:	CCP-TP-187-R1	Dilution Factor:	1
Analytical Method:	CCP-TP-185-R1		

Number of TICs Found: 7

	CAS Number	Tentatively Identified SVOCs	Concentration mg/kg	Q	Retention Time (min)
1	123-91-1	1,4-Dioxane	1.2	JN	2.56
2	26638-19-7	Dichloropropane N.O.S.	0.74	JN	10.61
3	1888-71-7	1-Propene, 1,1,2,3,3,3-hexachloro-	0.82	JN	12.06
4	634-90-2	Benzene, 1,2,3,5-tetrachloro-	11	JN	14.96
5	634-66-2	Benzene, 1,2,3,4-tetrachloro-	18	JN	15.47
6	1888-71-7	1-Propene, 1,1,2,3,3,3-hexachloro-	13	JN	16.74
7	117-84-0	Di-n-octyl phthalate	12	JN	25.51

TOTAL SVOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405001MSDL10	Lab Sample ID:	2BZ30DL10
Sampling Batch No:	S4200-LOT-05-10	Lab File ID:	SS605411
Date Sampled:	2 /2 /2012	Data Report Number:	ALD12005S
Date Extracted:	2 /2 /2012	Analytical Batch ID:	1202011
Extraction Holding Time:	< 1 day		
Date/Time Analyzed:	02/07/2012 16:55	Instrument ID:	SV-6
Analysis Holding Time:	5 days	Matrix:	SOLID
Preparation Method:	CCP-TP-187-R1	Dilution Factor:	10
Analytical Method:	CCP-TP-185-R1		

CAS #	TARGET ANALYTE	CONCENTRATION mg/kg	Q
117-81-7	bis(2-Ethylhexyl)phthalate	38	JD
95-50-1	1,2-Dichlorobenzene	6.0	UD
106-46-7	1,4-Dichlorobenzene	6.0	UD
51-28-5	2,4-Dinitrophenol	2.0	UD
121-14-2	2,4-Dinitrotoluene	3.0	UD
118-74-1	Hexachlorobenzene	3.0	UD
87-68-3	Hexachlorobutadiene	23	D
67-72-1	Hexachloroethane	98	D
95-48-7	2-Methylphenol	4.0	UD
65794-96-9	3&4-Methylphenol	4.0	UD
98-95-3	Nitrobenzene	6.0	UD
87-86-5	Pentachlorophenol	2.0	UD

TOTAL SVOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405002MS	Lab Sample ID:	2BZ35
Sampling Batch No:	S4200-LOT-05-10	Lab File ID:	SS605405
Date Sampled:	2 /2 /2012	Data Report Number:	ALD12005S
Date Extracted:	2 /2 /2012	Analytical Batch ID:	1202011
Extraction Holding Time:	< 1 day		
Date/Time Analyzed:	02/07/2012 12:32	Instrument ID:	SV-6
Analysis Holding Time:	5 days	Matrix:	SOLID
Preparation Method:	CCP-TP-187-R1	Dilution Factor:	1
Analytical Method:	CCP-TP-185-R1		

CAS #	TARGET ANALYTE	CONCENTRATION mg/kg	Q
117-81-7	bis(2-Ethylhexyl)phthalate	37	E
95-50-1	1,2-Dichlorobenzene	0.59	U
106-46-7	1,4-Dichlorobenzene	0.59	U
51-28-5	2,4-Dinitrophenol	0.20	U
121-14-2	2,4-Dinitrotoluene	0.30	U
118-74-1	Hexachlorobenzene	0.30	U
87-68-3	Hexachlorobutadiene	26	E
67-72-1	Hexachloroethane	99	E
95-48-7	2-Methylphenol	0.40	U
65794-96-9	3&4-Methylphenol	0.40	U
98-95-3	Nitrobenzene	0.59	U
87-86-5	Pentachlorophenol	0.20	U

TOTAL SVOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405002MS	Lab Sample ID:	2BZ35
Sampling Batch No:	S4200-LOT-05-10	Lab File ID:	SS605405
Date Sampled:	2 /2 /2012	Data Report Number:	ALD12005S
Date Extracted:	2 /2 /2012	Analytical Batch ID:	1202011
Extraction Holding Time:	< 1 day		
Date/Time Analyzed:	02/07/2012 12:32	Instrument ID:	SV-6
Analysis Holding Time:	5 days	Matrix:	SOLID
Preparation Method:	CCP-TP-187-R1	Dilution Factor:	1
Analytical Method:	CCP-TP-185-R1		

Number of TICs Found: 8

	CAS Number	Tentatively Identified SVOCs	Concentration mg/kg	Q	Retention Time (min)
1	123-91-1	1,4-Dioxane	1.4	JN	2.56
2	76-01-7	Ethane, pentachloro	0.93	JN	8.89
3	26638-19-7	Dichloropropane N.O.S.	0.81	JN	10.61
4	1888-71-7	1-Propene, 1,1,2,3,3,3-hexachloro-	0.99	JN	12.07
5	634-90-2	Benzene, 1,2,3,5-tetrachloro-	11	JN	14.96
6	634-66-2	Benzene, 1,2,3,4-tetrachloro-	18	JN	15.47
7	1888-71-7	1-Propene, 1,1,2,3,3,3-hexachloro-	11	JN	16.74
8	117-84-0	Di-n-octyl phthalate	5.0	JN	25.52

TOTAL SVOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405002MSDL20	Lab Sample ID:	2BZ35DL20
Sampling Batch No:	S4200-LOT-05-10	Lab File ID:	SS605410
Date Sampled:	2 /2 /2012	Data Report Number:	ALD12005S
Date Extracted:	2 /2 /2012	Analytical Batch ID:	1202011
Extraction Holding Time:	< 1 day		
Date/Time Analyzed:	02/07/2012 16:12	Instrument ID:	SV-6
Analysis Holding Time:	5 days	Matrix:	SOLID
Preparation Method:	CCP-TP-187-R1	Dilution Factor:	20
Analytical Method:	CCP-TP-185-R1		

CAS #	TARGET ANALYTE	CONCENTRATION mg/kg	Q
117-81-7	bis(2-Ethylhexyl)phthalate	47	D
95-50-1	1,2-Dichlorobenzene	12	UD
106-46-7	1,4-Dichlorobenzene	12	UD
51-28-5	2,4-Dinitrophenol	4.0	UD
121-14-2	2,4-Dinitrotoluene	5.9	UD
118-74-1	Hexachlorobenzene	5.9	UD
87-68-3	Hexachlorobutadiene	31	D
67-72-1	Hexachloroethane	130	D
95-48-7	2-Methylphenol	7.9	UD
65794-96-9	3&4-Methylphenol	7.9	UD
98-95-3	Nitrobenzene	12	UD
87-86-5	Pentachlorophenol	4.0	UD

TOTAL SVOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405901MS	Lab Sample ID:	2BZ40
Sampling Batch No:	S4200-LOT-05-06	Lab File ID:	SS605399
Date Sampled:	2 /2 /2012	Data Report Number:	ALD12005S
Date Extracted:	2 /2 /2012	Analytical Batch ID:	1202011
Extraction Holding Time:	< 1 day		
Date/Time Analyzed:	02/06/2012 21:45	Instrument ID:	SV-6
Analysis Holding Time:	4 days	Matrix:	SOLID
Preparation Method:	CCP-TP-187-R1	Dilution Factor:	1
Analytical Method:	CCP-TP-185-R1		

CAS #	TARGET ANALYTE	CONCENTRATION mg/kg	Q
117-81-7	bis(2-Ethylhexyl)phthalate	1.1	J
95-50-1	1,2-Dichlorobenzene	0.60	U
106-46-7	1,4-Dichlorobenzene	0.60	U
51-28-5	2,4-Dinitrophenol	0.20	U
121-14-2	2,4-Dinitrotoluene	0.30	U
118-74-1	Hexachlorobenzene	0.30	U
87-68-3	Hexachlorobutadiene	0.60	U
67-72-1	Hexachloroethane	0.60	U
95-48-7	2-Methylphenol	0.40	U
65794-96-9	3&4-Methylphenol	0.40	U
98-95-3	Nitrobenzene	0.60	U
87-86-5	Pentachlorophenol	0.20	U

TOTAL SVOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405901MS	Lab Sample ID:	2BZ40
Sampling Batch No:	S4200-LOT-05-06	Lab File ID:	SS605399
Date Sampled:	2 /2 /2012	Data Report Number:	ALD12005S
Date Extracted:	2 /2 /2012	Analytical Batch ID:	1202011
Extraction Holding Time:	< 1 day		
Date/Time Analyzed:	02/06/2012 21:45	Instrument ID:	SV-6
Analysis Holding Time:	4 days	Matrix:	SOLID
Preparation Method:	CCP-TP-187-R1	Dilution Factor:	1
Analytical Method:	CCP-TP-185-R1		

Number of TICs Found: 0

	CAS Number	Tentatively Identified SVOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

TOTAL SVOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405902MS	Lab Sample ID:	2BZ45
Sampling Batch No:	S4200-LOT-05-06	Lab File ID:	SS605400
Date Sampled:	2 /2 /2012	Data Report Number:	ALD12005S
Date Extracted:	2 /2 /2012	Analytical Batch ID:	1202011
Extraction Holding Time:	< 1 day		
Date/Time Analyzed:	02/06/2012 22:28	Instrument ID:	SV-6
Analysis Holding Time:	4 days	Matrix:	SOLID
Preparation Method:	CCP-TP-187-R1	Dilution Factor:	1
Analytical Method:	CCP-TP-185-R1		

CAS #	TARGET ANALYTE	CONCENTRATION mg/kg	Q
117-81-7	bis(2-Ethylhexyl)phthalate	0.40	U
95-50-1	1,2-Dichlorobenzene	0.60	U
106-46-7	1,4-Dichlorobenzene	0.60	U
51-28-5	2,4-Dinitrophenol	0.20	U
121-14-2	2,4-Dinitrotoluene	0.30	U
118-74-1	Hexachlorobenzene	0.30	U
87-68-3	Hexachlorobutadiene	0.60	U
67-72-1	Hexachloroethane	0.60	U
95-48-7	2-Methylphenol	0.40	U
65794-96-9	3&4-Methylphenol	0.40	U
98-95-3	Nitrobenzene	0.60	U
87-86-5	Pentachlorophenol	0.20	U

TOTAL SVOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405902MS	Lab Sample ID:	2BZ45
Sampling Batch No:	S4200-LOT-05-06	Lab File ID:	SS605400
Date Sampled:	2 /2 /2012	Data Report Number:	ALD12005S
Date Extracted:	2 /2 /2012	Analytical Batch ID:	1202011
Extraction Holding Time:	< 1 day		
Date/Time Analyzed:	02/06/2012 22:28	Instrument ID:	SV-6
Analysis Holding Time:	4 days	Matrix:	SOLID
Preparation Method:	CCP-TP-187-R1	Dilution Factor:	1
Analytical Method:	CCP-TP-185-R1		

Number of TICs Found: 1

	CAS Number	Tentatively Identified SVOCs	Concentration mg/kg	Q	Retention Time (min)
1	634-66-2	Benzene, 1,2,3,4-tetrachloro-	0.88	JN	15.45

Section 4

Batch QC Sample Results

TOTAL SVOC ANALYSIS
SURROGATE RECOVERY FORM

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Preparation Method: CCP-TP-187-R1
Analytical Method: CCP-TP-185-R1

Data Report Number: ALD12005S
Analytical Batch ID: 1202011
Instrument ID: SV-6
Sample Matrix: SOLID

	LAB SAMPLE ID	SMC1 %R (2FP)	SMC2 %R (PHL)	SMC3 %R (NBZ)	SMC4 %R (FBP)	SMC5 %R (TBP)	SMC6 %R (TPH)	TOTAL OUT
1	LBS020212A	56	60	63	66	66	80	0
2	LCSS1202011A	52	57	55	60	72	86	0
3	2BY99	58	70	76	78	93	75	0
4	2BY99MS	54	65	70	72	92	75	0
5	2BY99MSD	64	76	81	81	102	83	0
6	2BZ05	50	64	71	71	84	68	0
7	2BZ10	59	73	81	84	95	78	0
8	2BZ15	62	76	83	89	104	84	0
9	2BZ20	48	55	51	58	92	80	0
10	2BZ25	40	46	44	51	97	89	0
11	2BZ40	58	66	70	74	98	82	0
12	2BZ45	67	77	82	83	104	85	0
13	2BZ05DL2	53	69	76	78	91	76	0
14	2BZ35	30	30	52	50	67	48	0
15	2BZ30	26	27	48	48	67	48	0
16	2BZ35DL20	0 Z	0 Z	0 D	0 D	56	0 Z	~~3~~ 0
17	2BZ30DL10	0 Z	0 Z	0 D	0 D	50	42	~~2~~ 0

Acceptance Criteria

S1 (2FP) = 2-Fluorophenol Detected - 82
S2 (PHL) = Phenol-d6 Detected - 87
S3 (NBZ) = Nitrobenzene-d5 Detected - 90
S4 (FBP) = 2-Fluorobiphenyl Detected - 97
S5 (TBP) = 2,4,6-Tribromophenol Detected - 115
S6 (TPH) = p-Terphenyl-d14 Detected - 135

Z =Values Outside of Acceptance Criteria
D = Surrogates diluted out

0054

TOTAL SVOC ANALYSIS
MATRIX SPIKE/MATRIX SPIKE DUPLICATE REPORTING FORM

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Preparation Method:	CCP-TP-187-R1			Data Report Number:	ALD12005S
Analytical Method:	CCP-TP-185-R1			Analytical Batch ID:	1202011
Instrument ID:	SV-6			Matrix:	SOLID
Lab Sample ID:	2BY99	MS Lab Sample ID:	2BY99MS	MSD Lab Sample ID:	2BY99MSD
Field Sample ID:	AR405701MS	MS Field Sample ID:	AR405701MSMS	MSD Field Sample ID:	AR405701MSMSD
Lab File ID:	SS605391	MS Lab File ID:	SS605392	MSD Lab File ID:	SS605393
Date Analyzed:	02/06/2012	MS Date Analyzed:	02/06/2012	MSD Date Analyzed:	02/06/2012

TARGET ANALYTE	SPIKE ADDED mg/kg	SAMPLE CONCENTRATION mg/kg		SPIKED SAMPLE CONCENTRATION mg/kg	MS % RECOVERY	ACCEPTANCE CRITERIA % RECOVERY
1,4-Dichlorobenzene	4.95	0.58	U	3.19	64	20 - 124
2,4-Dinitrotoluene	4.95	0.29	U	3.92	79	39 - 139
Pentachlorophenol	9.90	0.19	U	8.35	84	14 - 176

TARGET ANALYTE	SPIKE ADDED mg/kg	DUPLICATE SPIKED SAMPLE CONCENTRATION mg/kg	%RPD	MSD % RECOVERY	QC LIMITS RPD
1,4-Dichlorobenzene	4.84	3.62	15.1	75	≤ 86
2,4-Dinitrotoluene	4.84	4.24	10.3	88	≤ 46
Pentachlorophenol	9.67	9.75	17.8	101	≤ 128

Z =Values Outside of Acceptance Criteria
D = Spiked Analytes Diluted Out

RPD: 0 out of 3 outside limits

Spike Recovery: 0 out of 6 outside limits

TOTAL SVOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	NA	Lab Sample ID:	LBS020212A
Sampling Batch No:	NA	Lab File ID:	BS605389
Date Sampled:	NA	Data Report Number:	ALD12005S
Date Extracted:	2 /2 /2012	Analytical Batch ID:	1202011
Extraction Holding Time:	NA		
Date/Time Analyzed:	02/06/2012 14:27	Instrument ID:	SV-6
Analysis Holding Time:	4 days	Matrix:	SOLID
Preparation Method:	CCP-TP-187-R1	Dilution Factor:	1
Analytical Method:	CCP-TP-185-R1		

CAS #	TARGET ANALYTE	CONCENTRATION mg/kg	Q
117-81-7	bis(2-Ethylhexyl)phthalate	0.40	U
95-50-1	1,2-Dichlorobenzene	0.60	U
106-46-7	1,4-Dichlorobenzene	0.60	U
51-28-5	2,4-Dinitrophenol	0.20	U
121-14-2	2,4-Dinitrotoluene	0.30	U
118-74-1	Hexachlorobenzene	0.30	U
87-68-3	Hexachlorobutadiene	0.60	U
67-72-1	Hexachloroethane	0.60	U
95-48-7	2-Methylphenol	0.40	U
65794-96-9	3&4-Methylphenol	0.40	U
98-95-3	Nitrobenzene	0.60	U
87-86-5	Pentachlorophenol	0.20	U

TOTAL SVOC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	NA	Lab Sample ID:	LBS020212A
Sampling Batch No:	NA	Lab File ID:	BS605389
Date Sampled:	NA	Data Report Number:	ALD12005S
Date Extracted:	2 /2 /2012	Analytical Batch ID:	1202011
Extraction Holding Time:	NA		
Date/Time Analyzed:	02/06/2012 14:27	Instrument ID:	SV-6
Analysis Holding Time:	4 days	Matrix:	SOLID
Preparation Method:	CCP-TP-187-R1	Dilution Factor:	1
Analytical Method:	CCP-TP-185-R1		

Number of TICs Found: 0

	CAS Number	Tentatively Identified SVOCs	Concentration mg/kg	Q	Retention Time (min)
1		None			

TOTAL SVOC ANALYSIS
LABORATORY BLANK SUMMARY

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Date Extracted:	02/02/2012	Lab Sample ID:	LBS020212A
Date/Time Analyzed:	02/06/2012 14:27	Lab File ID:	BS605389
Preparation Method:	CCP-TP-187-R1	Data Report Number:	ALD12005S
Analytical Method:	CCP-TP-185-R1	Analytical Batch ID:	1202011
		Instrument ID:	SV-6
		Matrix:	SOLID

THIS BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD AND STANDARDS

FIELD ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
NA	LCSS1202011A	LS605390	2/6/2012	15:11
AR405701MS	2BY99	SS605391	2/6/2012	15:55
AR405701MSMS	2BY99MS	SS605392	2/6/2012	16:39
AR405701MSMSD	2BY99MSD	SS605393	2/6/2012	17:23
AR405702MS	2BZ05	SS605394	2/6/2012	18:07
AR405801MS	2BZ10	SS605395	2/6/2012	18:50
AR405802MS	2BZ15	SS605396	2/6/2012	19:34
AR406001MS	2BZ20	SS605397	2/6/2012	20:18
AR406002MS	2BZ25	SS605398	2/6/2012	21:01
AR405901MS	2BZ40	SS605399	2/6/2012	21:45
AR405902MS	2BZ45	SS605400	2/6/2012	22:28
AR405702MSDL2	2BZ05DL2	SS605403	2/7/2012	08:42
AR405002MS	2BZ35	SS605405	2/7/2012	12:32
AR405001MS	2BZ30	SS605406	2/7/2012	13:16
AR405002MSDL20	2BZ35DL20	SS605410	2/7/2012	16:12
AR405001MSDL10	2BZ30DL10	SS605411	2/7/2012	16:55

TOTAL SVOC ANALYSIS
LABORATORY CONTROL SAMPLE FORM
(QC REFERENCE CHECK)

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Date Extracted:	2/2/2012	Lab Sample ID:	LCSS1202011A
Date/Time Analyzed:	02/06/2012 15:11	Lab File ID:	LS605390
Preparation Method:	CCP-TP-187-R1	Data Report Number:	ALD12005S
Analytical Method:	CCP-TP-185-R1	Analytical Batch ID:	1202011
		Instrument ID:	SV-6
		Matrix:	SOLID

TARGET ANALYTE	MEASURED CONCENTRATION mg/kg	KNOWN CONCENTRATION mg/kg	PERCENT RECOVERY	ACCEPTANCE CRITERIA % RECOVERY
1,4-Dichlorobenzene	3.02	5.00	60	20 - 124
2,4-Dinitrotoluene	3.06	5.00	61	39 - 139
Pentachlorophenol	7.01	10.00	70	14 - 176

Z =Values Outside of Acceptance Criteria

TOTAL SVOC ANALYSIS
INTERNAL STANDARD AREA AND RT SUMMARY

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Date/Time Analyzed: 02/06/2012 13:44

Analytical Method: CCP-TP-185-R1

Daily CCAL Sample ID: CC020612A

Daily CCAL Lab File ID: CS605388

Data Report Number: ALD12005S

Analytical Batch ID: 1202011

Instrument ID: SV-6

	IS1 (DCB) Area	RT (min.)	IS2 (NPT) Area	RT (min.)	IS3 (ANT) Area	RT (min.)
12 HOUR STANDARD	245419	9.42	958426	11.80	558153	15.14
UPPER LIMIT	490838	9.92	1916852	12.30	1116306	15.64
LOWER LIMIT	122710	8.92	479213	11.30	279076	14.64

	Lab Sample ID						
1	LBS020212A	228744	9.42	890539	11.80	517105	15.14
2	LCSS1202011A	224437	9.42	876012	11.80	513278	15.14
3	2BY99	252000	9.42	998241	11.80	613690	15.14
4	2BY99MS	223852	9.42	892427	11.80	560850	15.14
5	2BY99MSD	238416	9.42	949175	11.80	591664	15.14
6	2BZ05	285429	9.42	1134462	11.80	717730	15.14
7	2BZ10	270462	9.42	1063373	11.80	644478	15.15
8	2BZ15	278525	9.42	1108208	11.80	653379	15.14
9	2BZ20	277348	9.42	1087876	11.80	664541	15.14
10	2BZ25	288952	9.42	1149915	11.80	699480	15.14
11	2BZ40	284492	9.42	1133972	11.80	685754	15.14
12	2BZ45	287356	9.42	1142789	11.80	699325	15.14

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

Z = Values outside of Acceptance Criteria

Area upper limit = +100% of internal standard area
Area lower limit = -50% of internal standard area

RT upper limit = +30 seconds of internal standard RT
RT lower limit = -30 seconds of internal standard RT

TOTAL SVOC ANALYSIS
INTERNAL STANDARD AREA AND RT SUMMARY

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Date/Time Analyzed: 02/06/2012 13:44

Analytical Method: CCP-TP-185-R1

Daily CCAL Sample ID: CC020612A

Daily CCAL Lab File ID: CS605388

Data Report Number: ALD12005S

Analytical Batch ID: 1202011

Instrument ID: SV-6

	IS4 (PHN) Area	RT (min.)	IS5 (CRY) Area	RT (min.)	IS6 (PRY) Area	RT (min.)
12 HOUR STANDARD	902094	17.92	690349	23.25	608428	26.85
UPPER LIMIT	1804188	18.42	1380698	23.75	1216856	27.35
LOWER LIMIT	451047	17.42	345174	22.75	304214	26.35

	Lab Sample ID						
1	LBS020212A	841296	17.92	657493	23.25	495553	26.85
2	LCSS1202011A	831387	17.92	617798	23.25	465486	26.85
3	2BY99	997179	17.93	631343	23.37	613479	26.96
4	2BY99MS	917176	17.93	622733	23.33	581964	26.94
5	2BY99MSD	968410	17.93	650728	23.35	625981	26.95
6	2BZ05	1199307	17.94	758596	23.39	654112	26.98
7	2BZ10	1039627	17.94	542628	23.48	517118	26.99
8	2BZ15	1022303	17.93	541950	23.43	535603	26.98
9	2BZ20	1106389	17.92	976342	23.25	819008	26.85
10	2BZ25	1176691	17.92	937712	23.25	728199	26.85
11	2BZ40	1133956	17.92	891798	23.28	815080	26.87
12	2BZ45	1152686	17.93	821684	23.32	827512	26.91

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

Z = Values outside of Acceptance Criteria

Area upper limit = +100% of internal standard area
Area lower limit = -50% of internal standard area

RT upper limit = +30 seconds of internal standard RT
RT lower limit = -30 seconds of internal standard RT

TOTAL SVOC ANALYSIS
INTERNAL STANDARD AREA AND RT SUMMARY

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Date/Time Analyzed: 02/07/2012 07:58

Analytical Method: CCP-TP-185-R1

Daily CCAL Sample ID: CC020712A

Daily CCAL Lab File ID: CS605402

Data Report Number: ALD12005S

Analytical Batch ID: 1202011

Instrument ID: SV-6

	IS1 (DCB) Area	RT (min.)	IS2 (NPT) Area	RT (min.)	IS3 (ANT) Area	RT (min.)
12 HOUR STANDARD	343744	9.42	1354977	11.80	819816	15.14
UPPER LIMIT	687488	9.92	2709954	12.30	1639632	15.64
LOWER LIMIT	171872	8.92	677488	11.30	409908	14.64

	Lab Sample ID						
1	2BZ05DL2	317240	9.42	1253997	11.80	770381	15.14
2	2BZ35	310586	9.42	1240233	11.80	755186	15.15
3	2BZ30	311890	9.42	1247298	11.80	772552	15.15
4	2BZ35DL20	313060	9.42	1222089	11.80	742844	15.14
5	2BZ30DL10	359236	9.42	1412008	11.80	848754	15.14

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

Z = Values outside of Acceptance Criteria

Area upper limit = +100% of internal standard area
Area lower limit = -50% of internal standard area

RT upper limit = +30 seconds of internal standard RT
RT lower limit = -30 seconds of internal standard RT

TOTAL SVOC ANALYSIS
INTERNAL STANDARD AREA AND RT SUMMARY

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Date/Time Analyzed: 02/07/2012 07:58

Analytical Method: CCP-TP-185-R1

Daily CCAL Sample ID: CC020712A

Daily CCAL Lab File ID: CS605402

Data Report Number: ALD12005S

Analytical Batch ID: 1202011

Instrument ID: SV-6

	IS4 (PHN) Area	RT (min.)	IS5 (CRY) Area	RT (min.)	IS6 (PRY) Area	RT (min.)
12 HOUR STANDARD	1337522	17.93	1071434	23.25	884890	26.85
UPPER LIMIT	2675044	18.43	2142868	23.75	1769780	27.35
LOWER LIMIT	668761	17.43	535717	22.75	442445	26.35

	Lab Sample ID						
1	2BZ05DL2	1258975	17.93	919200	23.33	911889	26.94
2	2BZ35	1086142	17.95	928075	23.34	685721	26.98
3	2BZ30	1107965	17.95	941137	23.32	664030	26.97
4	2BZ35DL20	1236200	17.93	1040795	23.26	776142	26.86
5	2BZ30DL10	1326571	17.93	1041670	23.26	808848	26.86

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

Z = Values outside of Acceptance Criteria

Area upper limit = +100% of internal standard area
Area lower limit = -50% of internal standard area

RT upper limit = +30 seconds of internal standard RT
RT lower limit = -30 seconds of internal standard RT

Section 5

Instrument QC Data

TOTAL SVOC ANALYSIS
INSTRUMENT PERFORMANCE CHECK

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

DFTPP Injection Date/Time 02/06/2012 13:20

Analytical Method: CCP-TP-185-R1

Lab Sample ID: DFT020612A

Lab File ID: TS605387

Data Report Number: ALD12005S

Analytical Batch ID: 1202011

Instrument ID: SV-6

m/z	Ion Abundance Criteria	% Rel Abundance
51	30.0 - 60.0% of mass 198	35.8
68	Less than 2.0% of mass 69	0.7 (1)
69	Mass 69 relative abundance	34.0
70	Less than 2.0% of mass 69	0.0 (1)
127	40.0 - 60.0% of mass 198	42.9
197	Less than 1.0% of mass 198	0.3
198	Base Peak, 100% relative abundance	100.0
199	5.0 - 9.0% of mass 198	7.1
275	10.0 - 30.0% of mass 198	26.1
365	Greater than 1.0% of mass 198	2.7
441	Present, but less than mass 443	69.3 (3)
442	Greater than 40.0% of mass 198	90.8
443	17.0 - 23.0% of mass 442	20.3 (2)

1 - Value is % mass 69 2 - Value is % mass 442 3 - Value is % mass 443

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS

FIELD ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
NA	CC020612A	CS605388	2/6/2012	13:44
NA	LBS020212A	BS605389	2/6/2012	14:27
NA	LCSS1202011A	LS605390	2/6/2012	15:11
AR405701MS	2BY99	SS605391	2/6/2012	15:55
AR405701MSMS	2BY99MS	SS605392	2/6/2012	16:39
AR405701MSMSD	2BY99MSD	SS605393	2/6/2012	17:23
AR405702MS	2BZ05	SS605394	2/6/2012	18:07
AR405801MS	2BZ10	SS605395	2/6/2012	18:50
AR405802MS	2BZ15	SS605396	2/6/2012	19:34
AR406001MS	2BZ20	SS605397	2/6/2012	20:18
AR406002MS	2BZ25	SS605398	2/6/2012	21:01
AR405901MS	2BZ40	SS605399	2/6/2012	21:45
AR405902MS	2BZ45	SS605400	2/6/2012	22:28

TOTAL SVOC ANALYSIS
INSTRUMENT PERFORMANCE CHECK

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

DFTPP Injection Date/Time 02/07/2012 07:34

Analytical Method: CCP-TP-185-R1

Lab Sample ID: DFT020712A

Lab File ID: TS605401

Data Report Number: ALD12005S

Analytical Batch ID: 1202011

Instrument ID: SV-6

m/z	Ion Abundance Criteria	% Rel Abundance
51	30.0 - 60.0% of mass 198	33.1
68	Less than 2.0% of mass 69	0.0 (1)
69	Mass 69 relative abundance	32.3
70	Less than 2.0% of mass 69	0.3 (1)
127	40.0 - 60.0% of mass 198	41.1
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 - 9.0% of mass 198	6.5
275	10.0 - 30.0% of mass 198	26.4
365	Greater than 1.0% of mass 198	2.9
441	Present, but less than mass 443	76.5 (3)
442	Greater than 40.0% of mass 198	82.9
443	17.0 - 23.0% of mass 442	20.2 (2)

1 - Value is % mass 69 2 - Value is % mass 442 3 - Value is % mass 443

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS

FIELD ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
NA	CC020712A	CS605402	2/7/2012	07:58
AR405702MSDL2	2BZ05DL2	SS605403	2/7/2012	08:42
AR405002MS	2BZ35	SS605405	2/7/2012	12:32
AR405001MS	2BZ30	SS605406	2/7/2012	13:16
AR405002MSDL20	2BZ35DL20	SS605410	2/7/2012	16:12
AR405001MSDL10	2BZ30DL10	SS605411	2/7/2012	16:55

TOTAL SVOC ANALYSIS
INITIAL CALIBRATION DATA

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Calibration Dates/Times: 11/17/2011 14:11 - 11/17/2011 17:44
Analytical Method: CCP-TP-185-R1

ICAL File ID: IS611W04
Data Report Number: ALD12005S
Analytical Batch ID: 1202011
Instrument ID: SV-6

LAB FILE ID	IS605225	IS605226	IS605227	IS605228	IS605229	IS605230			
CONCENTRATION (ug/L)	60	50	40	30	20	10			
TARGET ANALYTE	RRF 1	RRF 2	RRF 3	RRF 4	RRF 5	RRF 6	AVE RRF	% RSD	#
2-Fluorophenol	1.240	1.381	1.452	1.494	1.337	1.384	1.381	6.45	
Phenol-d6	1.507	1.693	1.754	1.814	1.623	1.692	1.680	6.34	
Phenol *	1.418	1.592	1.656	1.724	1.556	1.617	1.594	6.50	
1,4-Dichlorobenzene *	1.392	1.564	1.634	1.719	1.553	1.653	1.586	7.11	
1,2-Dichlorobenzene	1.322	1.494	1.556	1.623	1.482	1.556	1.506	6.85	
2-Methylphenol	0.467	0.528	0.545	0.556	0.493	0.506	0.516	6.47	
3&4-Methylphenol	0.676	0.767	0.798	0.813	0.725	0.722	0.750	6.90	
N-Nitroso-di-n-propylamine **	0.875	0.989	1.022	1.052	0.940	0.960	0.973	6.47	
Hexachloroethane	0.501	0.555	0.585	0.605	0.555	0.574	0.562	6.31	
Nitrobenzene-d5	1.232	1.379	1.427	1.476	1.308	1.361	1.364	6.33	
Nitrobenzene	1.266	1.422	1.480	1.532	1.380	1.448	1.421	6.48	
2-Nitrophenol *	0.177	0.197	0.209	0.215	0.190	0.189	0.196	7.12	
2,4-Dichlorophenol *	0.234	0.266	0.282	0.292	0.257	0.265	0.266	7.48	
Hexachlorobutadiene *	0.157	0.177	0.188	0.197	0.179	0.191	0.181	7.75	
4-Chloro-3-methylphenol *	0.189	0.214	0.223	0.233	0.200	0.206	0.211	7.58	
Hexachlorocyclopentadiene **	0.341	0.366	0.395	0.402	0.329	0.330	0.360	9.01	
2,4,6-Trichlorophenol *	0.299	0.337	0.365	0.377	0.336	0.337	0.342	7.93	
2-Fluorobiphenyl	1.094	1.233	1.346	1.411	1.279	1.342	1.284	8.68	
Acenaphthene *	0.866	0.975	1.048	1.110	1.008	1.073	1.014	8.53	
2,4-Dinitrophenol **		0.151	0.141	0.131	0.099	0.070	0.118	28.25	M
4-Nitrophenol **	0.186	0.214	0.211	0.209	0.177	0.167	0.194	10.32	
2,4-Dinitrotoluene	0.330	0.376	0.387	0.398	0.352	0.359	0.367	6.82	
N-Nitrosodiphenylamine *	0.385	0.446	0.464	0.489	0.438	0.460	0.447	7.80	
2,4,6-Tribromophenol	0.091	0.102	0.112	0.114	0.101	0.097	0.103	8.60	
Hexachlorobenzene	0.198	0.220	0.244	0.253	0.227	0.241	0.231	8.62	
Pentachlorophenol *	0.128	0.141	0.150	0.147	0.122	0.109	0.133	12.16	
Fluoranthene *	0.885	1.012	1.045	1.069	0.970	1.026	1.001	6.56	
Terphenyl-d14	0.768	0.875	0.960	1.006	0.893	0.969	0.912	9.43	
bis(2-Ethylhexyl)phthalate	0.664	0.752	0.779	0.802	0.665	0.677	0.723	8.54	
Di-n-octylphthalate *	1.133	1.292	1.289	1.266	1.025	1.002	1.168	11.42	
Benzo(a)pyrene *	0.726	0.807	0.869	0.867	0.750	0.720	0.790	8.60	

TOTAL SVOC ANALYSIS
INITIAL CALIBRATION DATA

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Calibration Dates/Times: 11/17/2011 14:11 - 11/17/2011 17:44
Analytical Method: CCP-TP-185-R1

ICAL File ID: IS611W04
Data Report Number: ALD12005S
Analytical Batch ID: 1202011
Instrument ID: SV-6

LAB FILE ID	IS605225	IS605226	IS605227	IS605228	IS605229	IS605230			
CONCENTRATION (ug/L)	60	50	40	30	20	10			
TARGET ANALYTE	RRF 1	RRF 2	RRF 3	RRF 4	RRF 5	RRF 6	AVE RRF	% RSD	#

CCC RSD ≤30%

SPCC Average RRF ≥0.050
Non-SPCC Average RRF ≥0.010

CCC - Calibration Check Compounds (*)
SPCC - System Performance Check Compounds (**)
NA = Not applicable
Z = Did not meet acceptance criteria
# Column used to flag modeled compounds

M = Modeled compound:

Compound Name	r^2
2,4-Dinitrophenol	0.9960

TOTAL SVOC ANALYSIS
CONTINUING CALIBRATION CHECK

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Date/Time Analyzed: 02/06/2012 13:44
Analytical Method: CCP-TP-185-R1

Initial Calibration Date/Time: 11/17/2011 14:11 - 11/17/2011 17:44

Lab Sample ID: CC020612A
Lab File ID: CS605388
Data Report Number: ALD12005S
Analytical Batch ID: 1202011
Instrument ID: SV-6

TARGET ANALYTE	AVE RRF	CCAL RRF	%D
2-Fluorophenol	1.381	1.313	4.9
Phenol-d6	1.680	1.563	7.0
Phenol *	1.594	1.534	3.8
1,4-Dichlorobenzene *	1.586	1.597	0.7
1,2-Dichlorobenzene	1.506	1.534	1.9
2-Methylphenol	0.516	0.467	9.5
3&4-Methylphenol	0.750	0.682	9.1
N-Nitroso-di-n-propylamine **	0.973	0.968	0.5
Hexachloroethane	0.562	0.562	0.0
Nitrobenzene-d5	1.364	1.338	1.9
Nitrobenzene	1.421	1.400	1.5
2-Nitrophenol *	0.196	0.193	1.5
2,4-Dichlorophenol *	0.266	0.265	0.4
Hexachlorobutadiene *	0.181	0.189	4.4
4-Chloro-3-methylphenol *	0.211	0.205	2.8
Hexachlorocyclopentadiene **	0.360	0.381	5.8
2,4,6-Trichlorophenol *	0.342	0.343	0.3
2-Fluorobiphenyl	1.284	1.336	4.0
Acenaphthene *	1.014	1.052	3.7
4-Nitrophenol **	0.194	0.184	5.2
2,4-Dinitrotoluene	0.367	0.383	4.4
N-Nitrosodiphenylamine *	0.447	0.478	6.9
2,4,6-Tribromophenol	0.103	0.101	1.9
Hexachlorobenzene	0.231	0.241	4.3
Pentachlorophenol *	0.133	0.133	0.0
Fluoranthene *	1.001	1.084	8.3

TOTAL SVOC ANALYSIS
CONTINUING CALIBRATION CHECK

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Date/Time Analyzed: 02/06/2012 13:44
Analytical Method: CCP-TP-185-R1

Initial Calibration Date/Time: 11/17/2011 14:11 - 11/17/2011 17:44

Lab Sample ID: CC020612A
Lab File ID: CS605388
Data Report Number: ALD12005S
Analytical Batch ID: 1202011
Instrument ID: SV-6

TARGET ANALYTE	AVE RRF	CCAL RRF	%D
Terphenyl-d14	0.912	0.862	5.5
bis(2-Ethylhexyl)phthalate	0.723	0.686	5.1
Di-n-octylphthalate *	1.168	1.008	13.7
Benzo(a)pyrene *	0.790	0.727	8.0

CCC %D $\leq$ 20%

SPCC Average RRF $\geq$ 0.050
Non-SPCC Average RRF $\geq$ 0.010

* = CCC - Calibration Check Compounds
** = SPCC - System Performance Check Compounds

Z =Values Outside of Acceptance Criteria

TOTAL SVOC ANALYSIS
MODELED COMPOUND REPORT

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Calibration Date/Time: 02/06/2012 13:44
Analytical Method: CCP-TP-185-R1

Initial Calibration Date/Time: 11/17/2011 14:11 - 11/17/2011 17:44

Lab Sample ID: CC020612A
Lab File ID: CS605388
Data Report Number: ALD12005S
Analytical Batch ID: 1202011
Instrument ID: SV-6

TARGET ANALYTE	CCAL RRF	CALCULATED RESULT ug/mL	KNOWN CONC. ug/mL	%D
2,4-Dinitrophenol **	0.100	18.770	20.000	6.2

CCC %D $\leq$ 20%

SPCC Average RRF $\geq$ 0.050
Non-SPCC Average RRF $\geq$ 0.010

* = CCC - Calibration Check Compounds
** = SPCC - System Performance Check Compounds

Z =Values Outside of Acceptance Criteria

TOTAL SVOC ANALYSIS
CONTINUING CALIBRATION CHECK

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Date/Time Analyzed: 02/07/2012 07:58
Analytical Method: CCP-TP-185-R1

Initial Calibration Date/Time: 11/17/2011 14:11 - 11/17/2011 17:44

Lab Sample ID: CC020712A
Lab File ID: CS605402
Data Report Number: ALD12005S
Analytical Batch ID: 1202011
Instrument ID: SV-6

TARGET ANALYTE	AVE RRF	CCAL RRF	%D
2-Fluorophenol	1.381	1.171	15.2
Phenol-d6	1.680	1.419	15.5
Phenol *	1.594	1.356	14.9
1,4-Dichlorobenzene *	1.586	1.383	12.8
1,2-Dichlorobenzene	1.506	1.318	12.5
2-Methylphenol	0.516	0.433	16.1
3&4-Methylphenol	0.750	0.624	16.8
N-Nitroso-di-n-propylamine **	0.973	0.859	11.7
Hexachloroethane	0.562	0.486	13.5
Nitrobenzene-d5	1.364	1.196	12.3
Nitrobenzene	1.421	1.236	13.0
2-Nitrophenol *	0.196	0.173	11.7
2,4-Dichlorophenol *	0.266	0.239	10.2
Hexachlorobutadiene *	0.181	0.167	7.7
4-Chloro-3-methylphenol *	0.211	0.192	9.0
Hexachlorocyclopentadiene **	0.360	0.302	16.1
2,4,6-Trichlorophenol *	0.342	0.299	12.6
2-Fluorobiphenyl	1.284	1.120	12.8
Acenaphthene *	1.014	0.898	11.4
4-Nitrophenol **	0.194	0.180	7.2
2,4-Dinitrotoluene	0.367	0.341	7.1
N-Nitrosodiphenylamine *	0.447	0.435	2.7
2,4,6-Tribromophenol	0.103	0.093	9.7
Hexachlorobenzene	0.231	0.207	10.4
Pentachlorophenol *	0.133	0.118	11.3
Fluoranthene *	1.001	0.948	5.3

TOTAL SVOC ANALYSIS
CONTINUING CALIBRATION CHECK

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Date/Time Analyzed: 02/07/2012 07:58
Analytical Method: CCP-TP-185-R1

Initial Calibration Date/Time: 11/17/2011 14:11 - 11/17/2011 17:44

Lab Sample ID: CC020712A
Lab File ID: CS605402
Data Report Number: ALD12005S
Analytical Batch ID: 1202011
Instrument ID: SV-6

TARGET ANALYTE	AVE RRF	CCAL RRF	%D
Terphenyl-d14	0.912	0.727	20.3
bis(2-Ethylhexyl)phthalate	0.723	0.708	2.1
Di-n-octylphthalate *	1.168	1.259	7.8
Benzo(a)pyrene *	0.790	0.725	8.2

CCC %D $\leq$ 20%

SPCC Average RRF $\geq$ 0.050
Non-SPCC Average RRF $\geq$ 0.010

* = CCC - Calibration Check Compounds
** = SPCC - System Performance Check Compounds

Z =Values Outside of Acceptance Criteria

TOTAL SVOC ANALYSIS
MODELED COMPOUND REPORT

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Calibration Date/Time: 02/07/2012 07:58
Analytical Method: CCP-TP-185-R1

Initial Calibration Date/Time: 11/17/2011 14:11 - 11/17/2011 17:44

Lab Sample ID: CC020712A
Lab File ID: CS605402
Data Report Number: ALD12005S
Analytical Batch ID: 1202011
Instrument ID: SV-6

TARGET ANALYTE	CCAL RRF	CALCULATED RESULT ug/mL	KNOWN CONC. ug/mL	%D
2,4-Dinitrophenol **	0.096	18.320	20.000	8.4

CCC %D $\leq$ 20%

SPCC Average RRF $\geq$ 0.050
Non-SPCC Average RRF $\geq$ 0.010

* = CCC - Calibration Check Compounds
** = SPCC - System Performance Check Compounds

Z =Values Outside of Acceptance Criteria

TOTAL SVOC ANALYSIS
CCAL INTERNAL STANDARD AREA AND RT SUMMARY

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Date/Time Analyzed: 02/06/2012 13:44
Analytical Method: CCP-TP-185-R1
ICAL/CCAL Sample ID: CC012312D
ICAL/CCAL Lab File ID: CS605374
Date Analyzed: 1/23/2012

Daily CCAL Sample ID: CC020612A
Daily CCAL Lab File ID: CS605388
Data Report Number: ALD12005S
Analytical Batch ID: 1202011
Instrument ID: SV-6

		IS1 (DCB) Area	RT (MIN)	IS2 (NPT) Area	RT (MIN)	IS3 (ANT) Area	RT (MIN)
Previous ICAL/CCAL	12 HOUR STANDARD	230352	9.42	894790	11.80	528041	15.14
	UPPER LIMIT	460704	9.92	1789580	12.30	1056082	15.64
	LOWER LIMIT	115176	8.92	447395	11.30	264020	14.64
Continuing Calibration Check		245419	9.42	958426	11.80	558153	15.14

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

Z = Values outside of Acceptance Criteria

Area upper limit = +100% of internal standard area
Area lower limit = -50% of internal standard area

RT upper limit = +30 seconds of internal standard RT
RT lower limit = -30 seconds of internal standard RT

TOTAL SVOC ANALYSIS
CCAL INTERNAL STANDARD AREA AND RT SUMMARY

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Date/Time Analyzed: 02/06/2012 13:44
Analytical Method: CCP-TP-185-R1
ICAL/CCAL Sample ID: CC012312D
ICAL/CCAL Lab File ID: CS605374
Date Analyzed: 1/23/2012

Daily CCAL Sample ID: CC020612A
Daily CCAL Lab File ID: CS605388
Data Report Number: ALD12005S
Analytical Batch ID: 1202011
Instrument ID: SV-6

		IS4 (PHN) Area	RT (MIN)	IS5 (CRY) Area	RT (MIN)	IS6 (PRY) Area	RT (MIN)
Previous ICAL/CCAL	12 HOUR STANDARD	866041	17.92	694643	23.25	591233	26.85
	UPPER LIMIT	1732082	18.42	1389286	23.75	1182466	27.35
	LOWER LIMIT	433020	17.42	347322	22.75	295616	26.35
Continuing Calibration Check		902094	17.92	690349	23.25	608428	26.85

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

Z = Values outside of Acceptance Criteria

Area upper limit = +100% of internal standard area
Area lower limit = -50% of internal standard area

RT upper limit = +30 seconds of internal standard RT
RT lower limit = -30 seconds of internal standard RT

TOTAL SVOC ANALYSIS
CCAL INTERNAL STANDARD AREA AND RT SUMMARY

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Date/Time Analyzed: 02/07/2012 07:58
Analytical Method: CCP-TP-185-R1
ICAL/CCAL Sample ID: CC020612A
ICAL/CCAL Lab File ID: CS605388
Date Analyzed: 2/6/2012

Daily CCAL Sample ID: CC020712A
Daily CCAL Lab File ID: CS605402
Data Report Number: ALD12005S
Analytical Batch ID: 1202011
Instrument ID: SV-6

		IS1 (DCB) Area	RT (MIN)	IS2 (NPT) Area	RT (MIN)	IS3 (ANT) Area	RT (MIN)
Previous ICAL/CCAL	12 HOUR STANDARD	245419	9.42	958426	11.80	558153	15.14
	UPPER LIMIT	490838	9.92	1916852	12.30	1116306	15.64
	LOWER LIMIT	122710	8.92	479213	11.30	279076	14.64
Continuing Calibration Check		343744	9.42	1354977	11.80	819816	15.14

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

Z = Values outside of Acceptance Criteria

Area upper limit = +100% of internal standard area
Area lower limit = -50% of internal standard area

RT upper limit = +30 seconds of internal standard RT
RT lower limit = -30 seconds of internal standard RT

TOTAL SVOC ANALYSIS
CCAL INTERNAL STANDARD AREA AND RT SUMMARY

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Date/Time Analyzed: 02/07/2012 07:58
Analytical Method: CCP-TP-185-R1
ICAL/CCAL Sample ID: CC020612A
ICAL/CCAL Lab File ID: CS605388
Date Analyzed: 2/6/2012

Daily CCAL Sample ID: CC020712A
Daily CCAL Lab File ID: CS605402
Data Report Number: ALD12005S
Analytical Batch ID: 1202011
Instrument ID: SV-6

		IS4 (PHN) Area	RT (MIN)	IS5 (CRY) Area	RT (MIN)	IS6 (PRY) Area	RT (MIN)
Previous ICAL/CCAL	12 HOUR STANDARD	902094	17.92	690349	23.25	608428	26.85
	UPPER LIMIT	1804188	18.42	1380698	23.75	1216856	27.35
	LOWER LIMIT	451047	17.42	345174	22.75	304214	26.35
Continuing Calibration Check		1337522	17.93	1071434	23.25	884890	26.85

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

Area upper limit = +100% of internal standard area
Area lower limit = -50% of internal standard area

Z = Values outside of Acceptance Criteria

RT upper limit = +30 seconds of internal standard RT
RT lower limit = -30 seconds of internal standard RT

TOTAL SVOC ANALYSIS
MDL REPORTING FORM

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

MDL Determination Date: 1/4/2012

Preparation Method: CCP-TP-187-R1

Analytical Method: CCP-TP-185-R1

Instrument ID: SV-6

Matrix: SOLID

TARGET ANALYTE	Reported MDL mg/kg	Program Required MDL mg/kg	PRQL mg/kg
bis(2-Ethylhexyl)phthalate	0.40	5	40
1,2-Dichlorobenzene	0.60	5	40
1,4-Dichlorobenzene	0.60	5	40
2,4-Dinitrophenol	0.20	5	40
2,4-Dinitrotoluene	0.30	0.3	2.6
Hexachlorobenzene	0.30	0.3	2.6
Hexachlorobutadiene	0.60	1.2	10
Hexachloroethane	0.60	5	40
2-Methylphenol	0.40	5	40
3&4-Methylphenol	0.40	5	40
Nitrobenzene	0.60	5	40
Pentachlorophenol	0.20	5	40

TOTAL SVOC ANALYSIS
METHOD PRECISION AND ACCURACY (P&A) DEMONSTRATION

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Method P&A Effective Date: 01/04/2012

Data Report Number: ALD12005S
Analytical Batch ID: 1202011

Preparation Method: CCP-TP-187-R1
Analytical Method: CCP-TP-185-R1

Instrument ID: SV-6

TARGET ANALYTE	Number of Method Performance Samples	Accuracy		Precision	
		Mean %R	Acceptance Limits (%R)	%RSD	Acceptance Limits (%RSD)
bis(2-Ethylhexyl)phthalate	7	97.4	8–158	7.6	≤100
1,2-Dichlorobenzene	7	61.5	32–129	22.2	≤64
1,4-Dichlorobenzene	7	61.4	20–124	22.7	≤86
2,4-Dinitrophenol	7	151.8	D[a]–172	1.1	≤119
2,4-Dinitrotoluene	7	53.4	39–139	16.2	≤46
Hexachlorobenzene	7	77.4	D[a]–152	11.8	≤319
Hexachlorobutadiene	7	62.1	24–116	25.7	≤64
Hexachloroethane	7	60.4	40–113	24.6	≤44
2-Methylphenol	7	36.5	25–115	27.5	≤50
3&4-Methylphenol	7	37.4	25–115	24.7	≤50
Nitrobenzene	7	56.3	35–180	23.9	≤72
Pentachlorophenol	7	48.2	14–176	9.9	≤128

[a]D = Detected; result must be greater than zero
Z = Did not meet acceptance criteria

Section 6

Data Review Checklists

CCP Sample Receiving & Custody Review Checklist
AMWTP Analytical Chemistry Laboratory

Log Number: 1202011	Waste Stream ID: ARP Soils	NCR Initiation Required? ☐ Yes X No
COC Numbers: AR4057R1,AR4057R2,AR4057C1,AR4057C2,AR4058R1,AR4058R2, AR4058C1,AR4058C2,AR4060R1,AR4060R2,AR4060C1,AR4060C2,AR4050R1, AR4050R2,AR4050C1,AR4050C2,AR4059R1,AR4059R2,AR4059C1,AR4059C2		IF Yes, NCR Number:
Reviewer: Bill Strong (Printed Name) — (Signature) — 2-07-2012 (Date)		Procedure Number: CCP-TP-180 Revision 2

Instructions: Complete one checklist per analytical log. Enter the appropriate response for each question. Each "No" response requires explanation. A "No" response to a question may require initiation of an NCR.

Requirement	Yes	No	Comments
1. Field Chain of Custody (COC) Forms			
a. Was a COC form received with each shipping container?	☒	☐	
b. Did the content of each shipping container match that listed on the associated COC form?	☒	☐	
c. Are all custody transfers completely documented by signatures of relinquishers and receivers, with date and time of transfer?	☒	☐	
d. Does all sample information (e.g., sample ID, sampling date and time, sampling batch) listed on the COC form correspond with the information on the sample labels?	☒	☐	
e. Is the correct analysis requested for each sample?	☒	☐	
f. Are any corrections on the COC form appropriately made with a single line through the incorrect entry and the correct data written in (not overwritten), initialed and dated?	☒	☐	See Note 1
2. Sample Labels			
a. Was each sample received with a completed sample label?	☒	☐	
b. Do the field sample IDs on the sample labels correspond to those on the field COC form?	☒	☐	
c. Are the sampling batch number, sampling date, time and requested analysis recorded on each sample label, and correspond with those recorded on the COC form?	☒	☐	
d. Are the sampler initials, organization and sample description recorded on each sample label?	☒	☐	
e. Are any corrections on the sample labels appropriately made with a single line through the incorrect entry and the correct data written in (not overwritten), initialed and dated?	☒	☐	
3. Sample Integrity			
a. Were custody seals used on the shipping container?	☐	☒	See Note 2
b. Were custody seals used on each individual sample container?	☒	☐	
c. Were all custody seals intact and undamaged upon receipt at the laboratory?	☒	☐	
d. Were all custody seals placed such that the container could not be opened without damaging the seal?	☒	☐	
e. Has the physical integrity of each sample been maintained (e.g., no cracks or leaks)?	☒	☐	
f. Were all samples preserved during shipment with "Blue Ice" or equivalent cooling mechanism?	☒	☐	
g. Were all samples placed in refrigerated storage (4 ± 2 °C) after log-in?	☒	☐	
4. Internal Sample Tracking			
a. Are all samples logged into the Analytical Computer System (ACS)?	☒	☐	
b. Is all sample information correctly transcribed from the field documentation into the ACS?	☒	☐	
c. Are all sample containers labeled with the ACS log number and the laboratory sample ID?	☒	☐	
d. Is log information entered into the Sample Tracking Logbook?	☒	☐	

Contact the sampling organization if any discrepancies are found in the field COC and sample label documentation. Document the name of the person contacting the sampling organization, the name of the person contacted, the date and time of the contact, and the resolution of the problem.

Note 1 **Corrections to COCs AR4060R1, AR4060R2, AR4060C1 and AR4060C2 made per CCP (Brad Stark) request via email on 2/06/12.**

Note 2 ***Direct transfer of custody from Solids sampler to laboratory sample custodian.***

ALD Document: Log 1202011 CCP-ARP Soils.tif - Scanned:2/21/2012 4:04:52 PM

Sailer Siemer, Shelly J.

From: Stark, Bradley R [Bradley.Stark@icp.doe.gov]
Sent: Monday, February 06, 2012 4:20 PM
To: Sailer Siemer, Shelly J.
Subject: RE: Corrections needed on ARP Solid Sample COCs for Sampling Batch S4200-LOT-05-03

Thank you, I give you permission to fix the error on the COC's.

Thank You

Brad Stark
International Engineering Site Manager
International Engineering Services
Sub-Contractor to URS Washington TRU Solutions LLC.
Office: 208-533-0593
Cell: 208-521-7466

From: Sailer Siemer, Shelly J. [mailto:Shelly.Sailer@amwtp.inl.gov]
Sent: Monday, February 06, 2012 3:58 PM
To: Stark, Bradley R
Cc: Strong, William C; Nicklas, John H; Lundholm, Duane S; Laug, Jeffrey S
Subject: Corrections needed on ARP Solid Sample COCs for Sampling Batch S4200-LOT-05-03

Hi Brad,

As received at the laboratory, all four COC forms for ARP sampling batch S4200-LOT-05-03 (COC Numbers AR4060R1, AR4060R2, AR4060C1, AR4060C2) have corrections made to the laboratory name ("INEEL INTEC" lined out and "INL-RWMC" written in) which have not been initialed and dated.

Please reply to this note with permission to correct these errors and we will fix the COC forms for you.

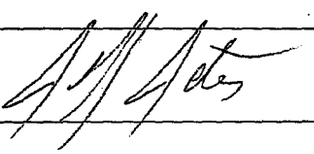
Please let me know if you have questions. Thanks.

Shelly J. Sailer
QA Officer, AMWTP Analytical Chemistry Laboratory
Office: (208) 557-6650
Cell: (208) 932-6458
e-mail: shelly.sailer@amwtp.inl.gov

ALD Document: Log 1202011 CCP-ARP Soils.tif - Scanned:2/7/2012 9:27:10 AM

AMWTP Analytical Chemistry Laboratory

Data Generator Checklist for CCP

Data Report Number: ALD12005S	Analytical Batch: 1202011
Analysis Procedure: CCP-TP-185	Procedure Revision: 1
Analysis Date(s): 2/6,7/2012	
Data Generator Signature: 	

Criteria	Yes	No	Comments
1. Samples analyzed in accordance with cited analytical method.	✓		
2. All logbook entries completed in accordance with CCP-QP-008.	✓		
3. All data entry and corrections made in accordance with CCP-TP-188.	✓		
4. All raw data signed/initialed and dated in indelible black ink.	✓		
5. Data reviewed for completeness and accuracy.	✓		

AMWTP Analytical Chemistry Laboratory
Independent Technical Review (ITR) Checklist for CCP
Total SVOCs in Homogeneous Solids and Soil/Gravel by GC/MS

Analytical Batch: 1202011	Data Report: ALD12005S	Methods: CCP-TP-185 and CCP-TP-187

Analysis Date(s)	Data Generator(s)	ITR Review Date	ITR Signature Release	ITR Release Date
2/6,7/2012	Jeff Jeter	2-15-12	[signature]	2-28-12

Requirement	Yes	No	N/A	Comments (Entries required ONLY if "No" is checked)
1. Instrument Performance Check (DFTPP Tune)	///	///	///	///
a. Was a DFTPP tune performed at the beginning of each 12-hour analytical shift, before analysis of standards or samples?	✓			
b. Does the DFTPP tune meet CCP-TP-185 acceptance criteria?	✓			
2. Initial Calibration (ICAL)	///	///	///	///
a. Have all ICALs used with this analytical batch been verified to meet specifications and approved for use as documented by a completed Initial Calibration Independent Technical Review Checklist?	✓			
3. Continuing Calibration Verification (CCAL)	///	///	///	///
a. Was a CCAL standard analyzed at the beginning of each 12-hour analytical shift, after the DFTPP tune but before sample analysis?	✓			
b. Are all CCC RRF or concentration (for modeled compounds) %Ds ≤20?	✓			
c. Are the RRFs ≥0.050 for all SPCCs and ≥ 0.01 for non-SPCCs?	✓			
d. Are internal standard areas within 50 to 200% of the areas in the last daily calibration standard (CCAL or midpoint ICAL standard)?	✓			
e. Are internal standard retention times (RTs) within 30 seconds of the RT in the last daily calibration standard (CCAL or midpoint ICAL standard)?	✓			
4. Samples (Including LCSs, Blanks, MS and MSDs)	///	///	///	///
a. Are the internal standard areas within 50 to 200% of those in the associated CCAL?	✓			
b. Are the internal standard retention times within 30 seconds of those in the associated CCAL?	✓			
c. Do all surrogate compound recoveries meet CCP-TP-185 acceptance criteria?		✓		See Narrative
d. Were all samples having analytes detected in amounts exceeding the calibration range reanalyzed on a dilution?	✓			
e. Are detected target analyte RRTs within 0.06 RRT units of the associated CCAL RRT, or is the qualitative identification justified by the operator?	✓			
f. In your opinion, do the sample spectra for positive hits match the reference spectra?	✓			
g. In your opinion, are the quantitation ion peak areas correctly integrated?	✓			
h. Was a TIC search conducted on each sample and blank in the analytical batch?	✓			
i. Are TIC identities appropriately assigned per the identification criteria of CCP-TP-185?	✓			
5. Blanks	///	///	///	///
a. Was at least one unique laboratory blank extracted and analyzed with the analytical batch?	✓			
b. Are all laboratory blank results ≤3 × program-required MDLs for all target analytes?	✓			
6. Laboratory Control Samples (LCSs)	///	///	///	///
a. Was at least one unique LCS extracted and analyzed with the analytical batch?	✓			
b. Are all LCSs prepared from a standard source different from that used for the ICAL standards?	✓			
c. Do percent recoveries for all spiked analytes in each LCS meet CCP-TP-185 acceptance criteria?	✓			
7. Matrix Spike and Matrix Spike Duplicate Samples (MS/MSD)	///	///	///	///
a. Was at least one matrix spike sample (MS) analyzed with the analytical batch?	✓			
b. Was at least one matrix spike duplicate sample (MSD) analyzed with the analytical batch?	✓			
c. Do all percent recoveries for the MS and MSD meet CCP-TP-185 acceptance criteria?	✓			
d. Do the RPDs between the MS and MSD meet CCP-TP-185 acceptance criteria?	✓			

0085

AMWTP Analytical Chemistry Laboratory
Independent Technical Review (ITR) Checklist for CCP
Total SVOCs in Homogeneous Solids and Soil/Gravel by GC/MS

Analytical Batch: 1202011	Data Report: ALD12005S	Methods: CCP-TP-185 and CCP-TP-187

Requirement	Yes	No	N/A	Comments (Entries required ONLY if "No" is checked)
8. Sample Integrity Verification	///	///	///	///
a. Is COC documentation complete and accurate for all reported samples?	✓			
b. Was physical integrity of all samples verified as satisfactory at VTSR?	✓			
c. Were all samples stored at 4 ± 2 °C between receipt and analysis?	✓			
d. Were all extracts stored at < -10 °C between preparation and analysis?	✓			
e. Were all samples extracted within 14 days of collection and analyzed (including dilutions and reanalyses) within 40 days of extraction?	✓			
9. Instrument, Method and Personnel Qualification Verification	///	///	///	///
a. Were all analytical tasks, including sample analysis and supporting method performance and ICALs, conducted by personnel having current program qualifications?	✓			
b. Was acceptable demonstration of precision, accuracy, and MDLs performed within the last 6 months?	✓			
10. Supporting Data Package Completeness	///	///	///	///
a. Are all raw data and instrument printouts signed/initialed (in permanent black ink) and dated by the operator and included in the supporting data package?	✓			
b. Are copies of all extraction/preparation and analysis run log books for the analytical batch included in the supporting data package?	✓			
c. Are standard certificates and QC Lab preparation records present and accurate for all working, intermediate and stock standard solutions used?	✓			
d. Are all changes to original data made by line-out of incorrect data, initialed/signed and dated by the person making the change?	✓			
11. Batch Data Report Completeness	///	///	///	///
a. Does the report contain a Data Report Narrative that addresses, at a minimum: 1) any deviations from CCP-TP-185 or CCP-TP-187 due to sample matrix or ALARA concerns and the justification for the deviations; 2) any QC samples that failed the acceptance criteria, and their impact on data quality; 3) any NCRs associated with the reported samples; and 4) any problems or unusual conditions encountered during the analysis?	✓			
b. Are copies of any NCRs associated with the data included?			✓	
c. Are Analysis Data Sheets and TIC Analysis Data Sheets present and accurate for all samples in the analytical batch?	✓			
d. Are the analyte concentrations on the Analysis Data Sheets reported in units of mg/kg and correctly rounded to 2 significant figures?	✓			
e. Are U, J, B, D, E, H, Z, and N qualifying flags correctly assigned on the reporting forms?	✓			
f. Are reporting forms present and accurate for surrogate recoveries, MS/MSDs, LBs, MBs, ISA&RTs, LCSs, DFTPP tunes, ICALs, CCALs, CCAL ISA&RTs, and MDLs?	✓			
g. Are copies of all COC documentation included?	✓			
h. Have all data received documented data generator review and signature?	✓			
i. Were all calculations performed using validated software or 100% manually verified?	✓			
j. Have the data been reviewed for transcription errors?	✓			
k. Are all pages in the data report legible and correctly paginated?	✓			

0800

Attachment 5 – CCP SPM S3000/S4000 Total Metals Analysis Project Level Validation Checklist and Summary

BDR Number: ALD12005M	Analysis Date: 02/09/12			
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
1. Does the Batch Data Report (BDR) contain the batch number, laboratory name, and the date of the batch report? **Reference Source: CCP-PO-001, Table C3-13**	X			
2. Has a BDR Narrative been included in the BDR? **Reference Source: CCP-PO-001, Table C3-13**	X			
3. Is there a cross-reference between waste container number, field sample number, and lab sample number ID; and signature release by lab personnel in the BDR? **Reference Source: CCP-PO-001, Table C3-13**	X			
4. Is the BDR complete? **Reference Source: CCP-PO-001, C3-10b**	X			
5. List all containers that have met QAOs. **Reference Source: CCP-PO-001, C3-10b**				Container Numbers: ARP30100 ARP30103 ARP30018 ARP30081 ARP30014
6. Are there 20 or less samples per analytical batch? **Reference Source: CCP-PO-001, C3-10**	X			
7. Is there a reference to or copy of any associated NCRs (if any) in the BDR? NA if no NCRs associated with BDR. **Reference Source: CCP-PO-001, Table C3-13**			X	None generated
8. Does the BDR contain a complete and signed copy of the COC form? **Reference Source: CCP-PO-001, Table C3-13**	X			
9. Does the BDR include the date and time of analysis for each sample? **Reference Source: CCP-PO-001, Table C3-13**	X			
10. Are the training qualifications for all personnel acceptable? **CCP-PO-001, Table C3-13**	X			
11. Are holding times within the 180-day requirement (except Mercury)? **Reference Source: CCP-PO-001, Table C1-4**	X			
12. Are holding times within the 28-day requirement for Mercury? **Reference Source: CCP-PO-001, Table C1-4**	X			

CCP RECORDS ORIGINAL
DATE REC'D 3-22-12

Attachment 5 – CCP SPM S3000/S4000 Total Metals Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: ALD12005M	Analysis Date: 02/09/12			
Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
13. Have QC designations for samples been applied as appropriate? **Reference Source: CCP-PO-001, Table C3-13**	X			
14. Is there a minimum of one laboratory control sample (LCS) analyzed per analytical batch? **Reference Source: CCP-PO-001, Table C3-9**	X			
14. Do the found values for all LCS analytes fall within the low/high control limits listed on the Laboratory Control Sample Form included in the BDR? **Reference Source: CCP-PO-001, Table C3-8 Footnote b**	X			
15. Is there a minimum of one matrix spike (MS) analyzed per analytical batch? **Reference Source: CCP-PO-001, Table C3-9**	X			
16. Do the %Rs for all MS analytes meet the 80-120 %R requirements? **Reference Source: CCP-PO-001, Table C3-8**	X			Exception: Hg did not meet criteria; results flagged Z.
17. Is a minimum of one matrix spike duplicate (MSD) analyzed per analytical batch? Note: The MSD is used in place of the laboratory duplicate. **Reference Source: CCP-PO-001, Table C3-9**	X			
18. Do the %Rs for all MSD analytes meet the 80-120 %R requirements? Note: The MSD is used in place of the laboratory duplicate. **Reference Source: CCP-PO-001, Table C3-8**	X			Exception: Hg did not meet criteria; results flagged Z.
19. Are the MS/MSD relative percent differences (RPDs) for all analytes less than or equal to 30? **Reference Source: CCP-PO-001, Table C3-8**	X			Exception: Hg did not meet criteria; results flagged Z.
20. Has the CCP Site Project Manager calculated and reported the results of the RPD and F-Test Method? **Reference Source: CCP-PO-001, Section C3-3**	X			CCP interoffice correspondence CP:12:01131 UFC: 5900.00
21. Were the applicable RPD or F-test method acceptance criteria met? **Reference Source: CCP-PO-001, Section C3-3**	X			F-test not performed.

Attachment 5 – CCP SPM S3000/S4000 Total Metals Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: ALD12005M	Analysis Date: 02/09/12			
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
22. Is serial dilution performed once per analytical batch? Note: This applies only to inductively coupled plasma (ICP) analysis. **Reference Source: CCP-PO-001, Table C3-9**	X			
23. Is the serial dilution result ≤10% D for initial sample results >50 x IDL? If no, sample results must be "Z" flagged for sample results >10% D and >50 x IDL? Note: This applies only to ICP analysis. **Reference Source: CCP-PO-001, Table C3-9**	X			
24. Is the ICP initial calibration performed each day of operation? Note: This is a one standard and one blank calibration. **Reference Source: CCP-PO-001, Table C3-9**	X			
25. Is the ICP %R for the initial calibration verification (ICV) check standard within the 90% to 110% acceptance range? **Reference Source: CCP-PO-001, Table C3-9**	X			
26. Is Mercury initial calibration performed each day of operation? Note: This is a five-standard and one blank calibration. **Reference Source: CCP-PO-001, Table C3-9**	X			
27. Is the Mercury %R for the ICV within the 80 to 120% acceptance range? **Reference Source: CCP-PO-001, Table C3-9**	X			
28. Is the Mercury regression coefficient (r) greater than or equal to 0.995? **Reference Source: CCP-PO-001, Table C3-9**	X			
29. Is continuing calibration verification (CCV) performed every 10 samples, and at the beginning and end of the run? **Reference Source: CCP-PO-001, Table C3-9**	X			
30. Is the ICP %R for the CCV within the 90 to 110% acceptance range? **Reference Source: CCP-PO-001, Table C3-9**	X			

Attachment 5 – CCP SPM S3000/S4000 Total Metals Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: ALD12005M	**Analysis Date: 02/09/12**			
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
31. Is the Mercury %R for the CCV within the 80 to 120% acceptance range? **Reference Source: CCP-PO-001, Table C3-9**	X			
32. Is there a minimum of one lab blank analyzed per analytical batch? **Reference Source: CCP-PO-001, Table C3-9**	X			
33. Are all lab blanks analytes ≤ 3 the IDL? **Reference Source: CCP-PO-001, Table C3-9**	X			Zn is > than the minimum detection level but less than 3X's PRDL.
34. Is interference correction verification performed at the beginning and end of the analytical batch or every 8 hours for ICP (12 hours for ICP/MS), whichever is more frequent? **Reference Source: CCP-PO-001, Table C3-9**	X			
35. Are solutions containing interference plus analytes within the 80 to 120 %R acceptance range for all analytes? *Note: If response is no AND sample interferents are reported on the Total Metals Analysis Data Sheets at levels ≥ levels in the ICS(A) solution and an NCR has not already been produced at the DGL, write an NCR.* **Reference Source: CCP-PO-001, Table C3-9**	X			
36. Does the BDR include IDLs (µg/L) that are ≤ PRDL? **Reference Source: CCP-PO-001, Table C3-8**	X			
37. Are analytical procedures (including data revision) used to develop these data referenced in the BDR? **Reference Source: CCP-PO-001, C3-10**	X			
38. Does the BDR include the operator's signature and analysis date? **Reference Source: CCP-PO-001, Table C3-13**	X			
39. Are data reporting forms complete with data reported properly (i.e., data is reported in correct units, with correct significant figures, and with correct qualifying flags)? **Reference Source: CCP-PO-001, C3-10b(1)**	X			

Attachment 5 – CCP SPM S3000/S4000 Total Metals Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: ALD12005M	**Analysis Date: 02/09/12**			
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
40. Have data reporting flags been assigned properly? **Reference Source: CCP-PO-001, C3-10b(1)**	X			
41. Have the batch samples been properly preserved (cool to 4° C, ± 2° C)? **Reference Source: CCP-PO-001, Table C1-4**	X			
42. Is the completed, signed, and dated Independent Technical Reviewer Checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, Table C3-13**	X			
43. Does the BDR contain at least one calibration standard ≤ PRQL? **Reference Source: CCP-PO-001, C3-8**	X			
44. Does the laboratory use traceable standards? **Reference Source: CCP-PO-001, C3-8**	X			
45. Has the laboratory successfully participated in the PDP? **Reference Source: CCP-PO-001, C3-8**	X			
46. Has the laboratory met the 90% completeness requirement? **Reference Source: CCP-PO-001, Table C3-8**	X			
47. Has the laboratory had acceptable demonstration of precision, accuracy, and IDLs [method performance samples] performed within the last 6 months? **Reference Source: CCP-PO-001, C3-8**	X			
Comments: None				
The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.				
Barbara Broomfield				03/19/12
SPM Printed Name	Signature			Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

AMWTP Advanced Mixed Waste Treatment Project

Idaho Treatment Group

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory

Central Characterization Project

RCRA Analysis Data Report

Batch Data Report Number:	ALD12005M	Analytical Method:	CCP-TP-181
Revision Number:	0		CCP-TP-182
Change Number:	0		CCP-TP-183
		Analyte(s):	Metals

Issue Date: 02/28/12

Waste Generator Site: CCP-ARP

Summary: This data report contains analysis results for 10 samples from Sampling Batches S4200-LOT-05-03, S4200-LOT-05-06, S4200-LOT-05-07, S4200-LOT-05-08 and S4200-LOT-05-10.

Report Content:

Section	Content	Pages
1	Sample Identification Table	0002 – 0003
2	Sample Custody Documents	0004 – 0026
3	Analysis Results	0027 – 0041
4	Batch QC Sample Results	0042 – 0048
5	Instrument QC Data	0049 – 0061
6	Data Review Checklists	0062 – 0072

Laboratory Release Authorization:

Independent Technical Reviewer	Signature	Date
Jeffrey S. Laug		02/28/12

CCP RECORDS ORIGINAL
DATE REC'D 3/1/2012

Section 1

Sample Identification Table

TOTAL METALS SAMPLE CROSS-REFERENCE TABLE

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Data Report Number: ALD12005M
Analytical Batch ID: 1202011

Method, ICP-AES Preparation: CCP-TP-183-R0
Method, ICP-AES Analysis: CCP-TP-182-R1
Method, CVAA: CCP-TP-181-R0

Microwave Digester ID: MW-3
Instrument ID, ICP-AES: ICP-7
Instrument ID, CVAA: CVHG-2

Field Sample ID	Lab Sample ID
AR405001MS	2BZ30
AR405002MS	2BZ35
AR405701MS	2BY99
AR405702MS	2BZ05
AR405801MS	2BZ10
AR405801MSS	2BZ10S
AR405801MSSD	2BZ10SD
AR405802MS	2BZ15
AR405901MS	2BZ40
AR405902MS	2BZ45
AR406001MS	2BZ20
AR406002MS	2BZ25

Section 2

Sample Custody Documents

ALD LOG #
1202011

Accelerated Retrieval Project Chain of Custody

COC No. **AR4057R2**

Sampling Location: **RWMC AR**

Lab: ~~INEEL-INTEC~~ INL-RWMC MW 1-31-12

Type Sample: **Regular**

DDTC #: NA

Sample Matrix: **SOLID**

☐ Homogeneous Solid ☒ Soil/Gravel

Sampling Batch No.: 54200-LOT-05-07

Sampler(s): Michael Haderlie (Printed) _____ (Signature) 1-31-12 (Date)

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No.	Sample Analysis	Comments	Disposition*
AR405701MS	1-31-12	1426	1 x 250	003253	Metals and SVOC		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		

NOTE: For preservation, all samples were stored at a controlled temperature of 4 degrees C, then packed with chemical ice for shipment.

Samples Relinquished by (Signature):	Date	Time	Samples Received by (Signature):	Date	Time
	2-1-12	1247		2-01-12	1247

COPY OF IN-PROCESS RECORD

Comments: * Disposition fields are completed by the laboratory.

one hour time limit met. MW 1-31-12

ARP 30100 MW 1-31-12

All sample analyses are complete and all samples have been removed from custody control and have been dispositioned

Page 1 of 1

_____ Signature _____ Date

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ALD LOG # 1202011

Accelerated Retrieval Project Chain of Custody

COC No. AR4057C2

Sampling Location: RWMC AR

Lab: ~~INEEL-INTEC~~ INL- RWMC MH 1-31-12

Type Sample: Co-located

DDTC #: NA

Sample Matrix: SOLID

☐ Homogeneous Solid ☒ Soil/Gravel

Sampling Batch No.: S4200-COT-05-07

Sampler(s): Michael Haderlie (Printed) _____ (Signature) 1-31-12 (Date)

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No.	Sample Analysis	Comments	Disposition*
AR405702N1	1-31-12	1418	1 x 20	007630	NHVOC Sample		
AR405702N2	1-31-12	1419	1 x 20	007630	NHVOC Spare		
AR405702N3	1-31-12	1424	1 x 20	007630	NHVOC MS		
AR405702N4	1-31-12	1424	1 x 20	007630	NHVOC MSD		
AR4057T2N1	1-31-12	1419	1 x 20	007630	NHVOC Trip Blank Sample		
AR4057T2N2	1-31-12	1425	1 x 20	007630	NHVOC Trip Blank Spare		
AR405702MS	1-31-12	1427	1 x 250	003253	Metals and SVOC		
N/A			N/A		N/A		

NOTE: For preservation, all samples were stored at a controlled temperature of 4 degrees C, then packed with chemical ice for shipment.

Samples Relinquished by (Signature):	Date	Time	Samples Received by (Signature):	Date	Time
	2-1-12	1247		2-01-12	1247

COPY OF IN-PROCESS RECORD

Comments: * Disposition fields are completed by the laboratory.

one hour time limit met. MH 1-31-12

ARP30100. MH 1-31-12

All sample analyses are complete and all samples have been removed from custody control and have been dispositioned

Signature _____ Date _____

0006

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ALD LOG #
1202011

Accelerated Retrieval Project Chain of Custody

COC No. AR4058R2

Sampling Location: RWMC AR

Lab: ~~INEEL INTEC~~ ENL-RWMC MH 1-31-12

Type Sample: Regular

DDTC #: NA

Sample Matrix: SOLID

☐ Homogeneous Solid ☒ Soil/Gravel

Sampling Batch No.: 54200-LOT-05-08 ~~54200-LOT-04-05~~ MH 1-31-12

Sampler(s): Michael Haderlie (Printed) (Signature) 1-31-12 (Date)

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No.	Sample Analysis	Comments	Disposition*
AR405801MS	1-31-12	1238	1 x 250	003253	Metals and SVOC		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		

NOTE: For preservation, all samples were stored at a controlled temperature of 4 degrees C, then packed with chemical ice for shipment.

Samples Relinquished by (Signature):	Date	Time	Samples Received by (Signature):	Date	Time
	2-1-12	1248		2-01-12	1248

COPY OF IN-PROCESS RECORD

Comments: * Disposition fields are completed by the laboratory.

ARP30103. MH 2-1-12

one hour time limit met. MH 2-1-12

All sample analyses are complete and all samples have been removed from custody control and have been dispositioned

Signature Date

0007

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ALD LOG #
1202011

Accelerated Retrieval Project Chain of Custody

COC No. AR4058C2

Sampling Location: RWMC AR

Lab: ~~INEEL-INTEC~~ INL-RWMC MH 1-31-12

Type Sample: Co-located

DDTC #: NA

Sample Matrix: SOLID

☐ Homogeneous Solid ☒ Soil/Gravel

Sampling Batch No.: 54200-LOT-05-08 ~~54200-LOT-04-05~~ MH 1-31-12

Sampler(s): Michael Haderlie (Printed) (Signature) 1-31-12 (Date)

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No.	Sample Analysis	Comments	Disposition*
AR405802N1	1-31-12	1229	1 x 20	007630	NHVOC Sample		
AR405802N2	1-31-12	1230	1 x 20	007630	NHVOC Spare		
AR405802N3	1-31-12	1236	1 x 20	007630	NHVOC MS		
AR405802N4	1-31-12	1235	1 x 20	007630	NHVOC MSD		
AR4058T2N1	1-31-12	1230	1 x 20	007630	NHVOC Trip Blank Sample		
AR4058T2N2	1-31-12	1236	1 x 20	007630	NHVOC Trip Blank Spare		
AR405802MS	1-31-12	1239	1 x 250	003253	Metals and SVOC		
N/A			N/A		N/A		

NOTE: For preservation, all samples were stored at a controlled temperature of 4 degrees C, then packed with chemical ice for shipment.

Samples Relinquished by (Signature):	Date	Time	Samples Received by (Signature):	Date	Time
	2-1-12	1248		2-01-12	1248

COPY OF IN-PROCESS RECORD

Comments; * Disposition fields are completed by the laboratory.

ARP 30103. MH 2-1-12

one hour time limit met. MH 2-1-12

All sample analyses are complete and all samples have been removed from custody control and have been dispositioned

Signature Date

0008

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ALD LOG #
1202011

Accelerated Retrieval Project Chain of Custody

COC No. **AR4060R2**

Sampling Location: **RWMC AR**

Lab: ~~INEEL-INTEC~~ INL - Rome
Bay 2-07-12 per B. Stark e-mail

Type Sample: **Regular**

DDTC #: NA

Sample Matrix: **SOLID**

☐ Homogeneous Solid ☒ Soil/Gravel

Sampling Batch No.: 54200-LOT-05-03

Sampler(s): Michael Haderlie (Printed) _____ (Signature) 2-1-12 (Date)

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No.	Sample Analysis	Comments	Disposition*
AR406001MS	2-1-12	0944	1 x 250	003253	Metals and SVOC		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		

NOTE: For preservation, all samples were stored at a controlled temperature of 4 degrees C, then packed with chemical ice for shipment.

Samples Relinquished by (Signature):	Date	Time	Samples Received by (Signature):	Date	Time
	2-1-12	1249		2-01-12	1249

COPY OF IN-PROCESS RECORD

Comments: * Disposition fields are completed by the laboratory.
one hour time limit was met. MN 2-1-12
ARP 30018. MN 2-1-12

All sample analyses are complete and all samples have been removed from custody control and have been dispositioned

Page 1 of 1

_____ Signature _____ Date

0009

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ALD LOG # 1202011

Accelerated Retrieval Project Chain of Custody

COC No. AR4060C2

Sampling Location: RWMC AR

Lab: ~~INEEL-INTEC~~ INL-RWMC
BCG 2-07-12 per B. Starkey mail

Type Sample: Co-located

DDTC #: N/A

Sample Matrix: SOLID

☐ Homogeneous Solid ☒ Soil/Gravel

Sampling Batch No.: 54200-LOT-05-03

Sampler(s): Michael Haderlie (Printed) (Signature) 2-1-12 (Date)

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No.	Sample Analysis	Comments	Disposition*
AR406002N1	2-1-12	0938	1 x 20	007630	NHVOC Sample		
AR406002N2	2-1-12	0938	1 x 20	007630	NHVOC Spare		
AR406002N3	2-1-12	0942	1 x 20	007630	NHVOC MS		
AR406002N4	2-1-12	0942	1 x 20	007630	NHVOC MSD		
AR4060T2N1	2-1-12	0939	1 x 20	007630	NHVOC Trip Blank Sample		
AR4060T2N2	2-1-12	0942	1 x 20	007630	NHVOC Trip Blank Spare		
AR406002MS	2-1-12	0945	1 x 250	003253	Metals and SVOC		
N/A			N/A		N/A		

NOTE: For preservation, all samples were stored at a controlled temperature of 4 degrees C, then packed with chemical ice for shipment.

Samples Relinquished by (Signature):	Date	Time	Samples Received by (Signature):	Date	Time
	2-1-12	1249		2-01-12	1249

COPY OF IN-PROCESS RECORD

Comments: * Disposition fields are completed by the laboratory.

one hour time limit was met. MH 2-1-12

~~ARD 3600~~ MH 2-1-12

ARP30018. MH 2-1-12

All sample analyses are complete and all samples have been removed from custody control and have been dispositioned

Signature Date

0010

ALD Document: Log 1202011 CCP-ARP Soils.tif - Scanned:2/21/2012 4:04:52 PM

ALD LOG # 1202011

Accelerated Retrieval Project Chain of Custody

COC No. **AR4050R2**

Sampling Location: **RWMC AR**

Lab: ~~INEEL-INTEC~~ INL-RWMC MH 2-2-12

Type Sample: **Regular**

DDTC #: N/A

Sample Matrix: **SOLID**

☐ Homogeneous Solid ☒ Soil/Gravel

Sampling Batch No.: 54300-LOT-05-10 MH 2-2-12

Sampler(s): Michael Haderlie (Printed) _____ (Signature) 2-2-12 (Date)

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No.	Sample Analysis	Comments	Disposition*
AR405001MS	2-2-12	1057	1 x 250	007694	Metals and SVOC		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		

NOTE: For preservation, all samples were stored at a controlled temperature of 4 degrees C, then packed with chemical ice for shipment.

Samples Relinquished by (Signature):	Date	Time	Samples Received by (Signature):	Date	Time
_____	2-2-12	1136	_____	2-02-12	1136

COPY OF IN-PROCESS RECORD

Comments: * Disposition fields are completed by the laboratory.

one hour time limit was met. MH 2-2-12

ARD 30014. MH 2-2-12

All sample analyses are complete and all samples have been removed from custody control and have been dispositioned

_____ Signature _____ Date

0011

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ALD LOG #
1202011

Accelerated Retrieval Project Chain of Custody

COC No. **AR4050C2**

Sampling Location: **RWMC AR**

Lab: ~~INEEL-INTEC~~ INL-RWMC MD 2-2-12

Type Sample: **Co-located**

DDTC #: N/A

Sample Matrix: **SOLID**

☐ Homogeneous Solid ☒ Soil/Gravel

Sampling Batch No.: S4200-LOT-05-~~06~~ 19 MH 2-2-12

Sampler(s): Michael Haderlie (Printed) _____ (Signature) 2-2-12 (Date)

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No.	Sample Analysis	Comments	Disposition*
AR405002N1	2-2-12	1021	1 x 20	007230	NHVOC Sample		
AR405002N2	2-2-12	1022	1 x 20	007230	NHVOC Spare		
AR405002N3	2-2-12	1025	1 x 20	007230	NHVOC MS		
AR405002N4	2-2-12	1025	1 x 20	007230	NHVOC MSD		
AR4050T2N1	2-2-12	1022	1 x 20	007230	NHVOC Trip Blank Sample		
AR4050T2N2	2-2-12	1026	1 x 20	007230	NHVOC Trip Blank Spare		
AR405002MS	2-2-12	1028	1 x 250	007694	Metals and SVOC		
N/A			N/A		N/A		

NOTE: For preservation, all samples were stored at a controlled temperature of 4 degrees C, then packed with chemical ice for shipment.

Samples Relinquished by (Signature):	Date	Time	Samples Received by (Signature):	Date	Time
	2-2-12	1136		2-02-12	1136

COPY OF IN-PROCESS RECORD

Comments: * Disposition fields are completed by the laboratory.

one hour time limit met. MH 2-2-12

ARP 30014. MH 2-2-12

All sample analyses are complete and all samples have been removed from custody control and have been dispositioned

Signature _____ Date _____

0012

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ALD LOG # 1202011

Accelerated Retrieval Project Chain of Custody

COC No. AR4059R2

Sampling Location: RWMC AR

Lab: ~~INEEL-INTEC~~ INL-RWMC MH 2-2-12

Type Sample: Regular

DDTC #: NA

Sample Matrix: SOLID

☐ Homogeneous Solid ☒ Soil/Gravel

Sampling Batch No.: 54200-LOT-05-06

Sampler(s): Michael Haderlie (Printed) _____ (Signature) 2-2-12 (Date)

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No.	Sample Analysis	Comments	Disposition*
AR405901MS	2-2-12	0913	1 x 250	003253	Metals and SVOC		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		
N/A			N/A		N/A		

NOTE: For preservation, all samples were stored at a controlled temperature of 4 degrees C, then packed with chemical ice for shipment.

Sampler Relinquished by (Signature):	Date	Time	Samples Received by (Signature):	Date	Time
_____	2-2-12	1137	_____	2-02-12	1137

COPY OF IN-PROCESS RECORD

Comments: * Disposition fields are completed by the laboratory.

one hour time was met. MH 2-2-12

ARP 30081. MH 2-2-12

All sample analyses are complete and all samples have been removed from custody control and have been dispositioned

_____ (Signature) _____ (Date)

0013

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ALD LOG #
1202011

Accelerated Retrieval Project Chain of Custody

COC No. AR4059C2

Sampling Location: RWMC AR

Lab: ~~INEEL-INTEC~~ INL-RWMC MN 2-2-12

Type Sample: Co-located

DDTC #: NA

Sample Matrix: SOLID

☐ Homogeneous Solid ☒ Soil/Gravel

Sampling Batch No.: S4200-LOT-05-06

Sampler(s): MN 2-2-12 ~~S4200~~ Michael Haderlie

Printed

Signature

2-2-12

Date

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No.	Sample Analysis	Comments	Disposition*
AR405902N1	2-2-12	0908	1 x 20	007630	NHVOC Sample		
AR405902N2	2-2-12	0908	1 x 20	007630	NHVOC Spare		
AR405902N3	2-2-12	0911	1 x 20	007630	NHVOC MS		
AR405902N4	2-2-12	0912	1 x 20	007630	NHVOC MSD		
AR4059T2N1	2-2-12	0908	1 x 20	007630	NHVOC Trip Blank Sample		
AR4059T2N2	2-2-12	0912	1 x 20	007630	NHVOC Trip Blank Spare		
AR405902MS	2-2-12	0914	1 x 250	003253	Metals and SVOC		
N/A			N/A		N/A		

NOTE: For preservation, all samples were stored at a controlled temperature of 4 degrees C, then packed with chemical ice for shipment.

Samples Relinquished by (Signature):	Date	Time	Samples Received by (Signature):	Date	Time
	2-2-12	1137		2-02-12	1137
			COPY OF IN-PROCESS RECORD		

Comments: * Disposition fields are completed by the laboratory.

one hour time limit was met. MN 2-2-12

ARP 30081. MN 2-2-12

All sample analyses are complete and all samples have been removed from custody control and have been dispositioned

Signature

Date

0014

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ALD LOG # 1202011

ICP Analytical Laboratories Department
TRU Waste Characterization Program
Sample Container Weight Information for AR4057
Regular Sample

Sample ID Number	Production Number	Container Number	Container Size (mL)	Sample Analysis	Tare Weight (g)	Tare Date Time	Tare By	Tare Balance	Gross Weight (g)	Gross Date Time	Gross By	Gross Balance	Net Weight (g)
AR405701V1	007630	000577	20	VOC Sample	17.93	2005-04-18 14:20	Blane Teckmeyer	Cal#722200 PG802-S	21.98	2-01-12 1415	Bill Strong	Cal# 726992 ML303E	4.05
AR405701V2	007630	000583	20	VOC Spare	17.80	2005-04-18 14:21	Blane Teckmeyer	Cal#722200 PG802-S	20.74	2-01-12 1416	Bill Strong	*	2.94
AR4057T1V1	007630	000531	20	VOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:35	Blane Teckmeyer	Cal#722200 PG802-S	2.99	2005-04-18 08:35	Blane Teckmeyer	Cal#722200 PG802-S	2.99
AR4057T1V2	007630	000519	20	VOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 08:30	Blane Teckmeyer	Cal#722200 PG802-S	3.05	2005-04-18 08:30	Blane Teckmeyer	Cal#722200 PG802-S	3.05
AR405701N1	007630	000585	20	NHVOC Sample	17.90	2005-04-18 14:21	Blane Teckmeyer	Cal#722200 PG802-S	22.67	2-01-12 1417	Bill Strong	*	4.77
AR405701N2	007630	000582	20	NHVOC Spare	18.15	2005-04-18 14:21	Blane Teckmeyer	Cal#722200 PG802-S	21.60	2-01-12 1418	Bill Strong	*	3.45
AR4057T1N1	007630	000502	20	NHVOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:29	Blane Teckmeyer	Cal#722200 PG802-S	2.97	2005-04-18 08:29	Blane Teckmeyer	Cal#722200 PG802-S	2.97
AR4057T1N2	007630	000505	20	NHVOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 08:26	Blane Teckmeyer	Cal#722200 PG802-S	3.02	2005-04-18 08:26	Blane Teckmeyer	Cal#722200 PG802-S	3.02
AR405701MS	003253	002128	250	Metals and SVOC	211.11	2005-04-18 14:20	Blane Teckmeyer	Cal#722200 PG802-S	263.97	2-01-12 1429	Bill Strong	*	52.86

*= Cal# 726992 ML303E 2-07-12

Packaged by: Blane Teckmeyer
Packaging Independent Verification by: Julie Daley 04/18/2005 2:23:42PM

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2-07-12
Date

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1202011

ICP Analytical Laboratories Department
TRU Waste Characterization Program
Sample Container Weight Information for AR4057
Co-located Sample

Sample ID Number	Production Number	Container Number	Container Size (mL)	Sample Analysis	Tare Weight (g)	Tare Date Time	Tare By	Tare Balance	Gross Weight (g)	Gross Date Time	Gross By	Gross Balance	Net Weight (g)
AR405702V1	007630	000571	20	VOC Sample	17.87	2005-04-18 14:28	Blane Teckmeyer	Cal#722200 PG802-S	21.19	2-01-12 1420	Bill Strong	*	3.32
AR405702V2	007630	000308	20	VOC Spare	17.93	2005-04-18 14:28	Blane Teckmeyer	Cal#722200 PG802-S	22.85	2-01-12 1421	Bill Strong	*	4.92
AR405702V3	007630	000609	20	VOC MS	17.91	2005-04-18 14:28	Blane Teckmeyer	Cal#722200 PG802-S	21.84	2-01-12 1422	Bill Strong	*	3.93
AR405702V4	007630	000619	20	VOC MSD	17.90	2005-04-18 14:28	Blane Teckmeyer	Cal#722200 PG802-S	22.58	2-01-12 1423	Bill Strong	*	4.68
AR4057T2V1	007630	000530	20	VOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:27	Blane Teckmeyer	Cal#722200 PG802-S	2.97	2005-04-18 08:27	Blane Teckmeyer	Cal#722200 PG802-S	2.97
AR4057T2V2	007630	000498	20	VOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 08:32	Blane Teckmeyer	Cal#722200 PG802-S	3.05	2005-04-18 08:32	Blane Teckmeyer	Cal#722200 PG802-S	3.05
AR405702N1	007630	000296	20	NHVOC Sample	17.81	2005-04-18 14:29	Blane Teckmeyer	Cal#722200 PG802-S	22.26	2-01-12 1424	Bill Strong	*	4.45
AR405702N2	007630	000597	20	NHVOC Spare	17.88	2005-04-18 14:29	Blane Teckmeyer	Cal#722200 PG802-S	22.99	2-01-12 1425	Bill Strong	*	5.11
AR405702N3	007630	000595	20	NHVOC MS	17.85	2005-04-18 14:30	Blane Teckmeyer	Cal#722200 PG802-S	22.88	2-01-12 1426	Bill Strong	*	5.03
AR405702N4	007630	000611	20	NHVOC MSD	17.81	2005-04-18 14:30	Blane Teckmeyer	Cal#722200 PG802-S	22.05	2-01-12 1427	Bill Strong	*	4.24
AR4057T2N1	007630	000494	20	NHVOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:29	Blane Teckmeyer	Cal#722200 PG802-S	3.04	2005-04-18 08:29	Blane Teckmeyer	Cal#722200 PG802-S	3.04
AR4057T2N2	007630	000506	20	NHVOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 08:33	Blane Teckmeyer	Cal#722200 PG802-S	2.98	2005-04-18 08:33	Blane Teckmeyer	Cal#722200 PG802-S	2.98
AR405702MS	003253	002132	250	Metals and SVOC	213.67	2005-04-18 14:30	Blane Teckmeyer	Cal#722200 PG802-S	260.03	2-01-12 1430	Bill Strong	*	46.36

*= Cal#726992 ML3036 BG 2-07-12

Packaged by: Blane Teckmeyer
Packaging Independent Verification by: Julie Daley 04/18/2005 2:37:04PM

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Signature 2-07-12 Date

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0016

ALD LOG #
1202011

ICP Analytical Laboratories Department
TRU Waste Characterization Program
Sample Container Weight Information for AR4058
Regular Sample

Sample ID Number	Production Number	Container Number	Container Size (mL)	Sample Analysis	Tare Weight (g)	Tare Date Time	Tare By	Tare Balance	Gross Weight (g)	Gross Date Time	Gross By	Gross Balance	Net Weight (g)
AR405801V1	007630	000273	20	VOC Sample	17.89	2005-04-18 14:41	Blane Teckmeyer	Cal#722200 PG802-S	20.31	2-01-12 1444	Bill Strong	*	2.42
AR405801V2	007630	000295	20	VOC Spare	17.92	2005-04-18 14:40	Blane Teckmeyer	Cal#722200 PG802-S	21.74	2-01-12 1445	Bill Strong	*	3.82
AR4058T1V1	007630	000493	20	VOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:25	Blane Teckmeyer	Cal#722200 PG802-S	3.02	2005-04-18 08:25	Blane Teckmeyer	Cal#722200 PG802-S	3.02
AR4058T1V2	007630	000523	20	VOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 08:24	Blane Teckmeyer	Cal#722200 PG802-S	3.01	2005-04-18 08:24	Blane Teckmeyer	Cal#722200 PG802-S	3.01
AR405801N1	007630	000270	20	NHVOC Sample	17.83	2005-04-18 14:41	Blane Teckmeyer	Cal#722200 PG802-S	22.26	2-01-12 1446	Bill Strong	*	4.43
AR405801N2	007630	000274	20	NHVOC Spare	17.93	2005-04-18 14:41	Blane Teckmeyer	Cal#722200 PG802-S	22.31	2-01-12 1447	Bill Strong	*	4.38
AR4058T1N1	007630	000541	20	NHVOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:21	Blane Teckmeyer	Cal#722200 PG802-S	3.04	2005-04-18 08:21	Blane Teckmeyer	Cal#722200 PG802-S	3.04
AR4058T1N2	007630	000542	20	NHVOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 08:27	Blane Teckmeyer	Cal#722200 PG802-S	3.03	2005-04-18 08:27	Blane Teckmeyer	Cal#722200 PG802-S	3.03
AR405801MS	003253	002123	250	Metals and SVOC	210.89	2005-04-18 14:40	Blane Teckmeyer	Cal#722200 PG802-S	247.06	2-01-12 1458	Bill Strong	*	36.17

*= Cal# 726992 ML303E BCG 2-07-12

Packaged by: Blane Teckmeyer
Packaging Independent Verification by: Julie Daley 04/18/2005 2:43:22PM

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0017

ALD LOG #
1202011

ICP Analytical Laboratories Department
TRU Waste Characterization Program
Sample Container Weight Information for AR4058
Co-located Sample

Sample ID Number	Production Number	Container Number	Container Size (mL)	Sample Analysis	Tare Weight (g)	Tare Date Time	Tare By	Tare Balance	Gross Weight (g)	Gross Date Time	Gross By	Gross Balance	Net Weight (g)
AR405802V1	007630	000267	20	VOC Sample	17.88	2005-04-18 15:02	Blane Teckmeyer	Cal#722200 PG802-S	20.43	2-01-12 1449	Bill Strong	*	2.55
AR405802V2	007630	000268	20	VOC Spare	17.84	2005-04-18 15:02	Blane Teckmeyer	Cal#722200 PG802-S	20.19	2-01-12 1450	Bill Strong	*	2.35
AR405802V3	007630	000266	20	VOC MS	17.81	2005-04-18 15:03	Blane Teckmeyer	Cal#722200 PG802-S	20.52	2-01-12 1451	Bill Strong	*	2.71
AR405802V4	007630	000280	20	VOC MSD	17.85	2005-04-18 15:03	Blane Teckmeyer	Cal#722200 PG802-S	20.79	2-01-12 1452	Bill Strong	*	2.94
AR4058T2V1	007630	000540	20	VOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 09:17	Blane Teckmeyer	Cal#722200 PG802-S	3.02	2005-04-18 09:17	Blane Teckmeyer	Cal#722200 PG802-S	3.02
AR4058T2V2	007630	000536	20	VOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 09:20	Blane Teckmeyer	Cal#722200 PG802-S	2.96	2005-04-18 09:20	Blane Teckmeyer	Cal#722200 PG802-S	2.96
AR405802N1	007630	000279	20	NHVOC Sample	17.82	2005-04-18 15:04	Blane Teckmeyer	Cal#722200 PG802-S	20.37	2-01-12 1453	Bill Strong	*	2.55
AR405802N2	007630	000278	20	NHVOC Spare	17.86	2005-04-18 15:03	Blane Teckmeyer	Cal#722200 PG802-S	21.57	2-01-12 1454	Bill Strong	*	3.71
AR405802N3	007630	000269	20	NHVOC MS	17.90	2005-04-18 15:04	Blane Teckmeyer	Cal#722200 PG802-S	21.81	2-01-12 1455	Bill Strong	*	3.91
AR405802N4	007630	000282	20	NHVOC MSD	17.88	2005-04-18 15:04	Blane Teckmeyer	Cal#722200 PG802-S	21.34	2-01-12 1456	Bill Strong	*	3.46
AR4058T2N1	007630	000524	20	NHVOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:36	Blane Teckmeyer	Cal#722200 PG802-S	3.05	2005-04-18 08:36	Blane Teckmeyer	Cal#722200 PG802-S	3.05
AR4058T2N2	007630	000535	20	NHVOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 09:22	Blane Teckmeyer	Cal#722200 PG802-S	3.02	2005-04-18 09:22	Blane Teckmeyer	Cal#722200 PG802-S	3.02
AR405802MS	003253	002129	250	Metals and SVOC	213.88	2005-04-18 15:01	Blane Teckmeyer	Cal#722200 PG802-S	250.39	2-01-12 1459	Bill Strong	*	36.51

* = Cal# 726992 ML303E 2-07-12

Packaged by: Blane Teckmeyer
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0018

ALD LOG #
1202011

ICP Analytical Laboratories Department
TRU Waste Characterization Program
Sample Container Weight Information for AR4060
Regular Sample

Sample ID Number	Production Number	Container Number	Container Size (mL)	Sample Analysis	Tare Weight (g)	Tare Date Time	Tare By	Tare Balance	Gross Weight (g)	Gross Date Time	Gross By	Gross Balance	Net Weight (g)
AR406001V1	007630	000286	20	VOC Sample	17.81	2005-04-18 15:40	Blane Teckmeyer	Cal#722200 PG802-S	22.03	2-01-12 1515	Bill Strong	*	4.22
AR406001V2	007630	000263	20	VOC Spare	17.94	2005-04-18 15:40	Blane Teckmeyer	Cal#722200 PG802-S	22.01	2-01-12 1516	Bill Strong	*	4.07
AR4060T1V1	007630	000525	20	VOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 09:24	Blane Teckmeyer	Cal#722200 PG802-S	2.97	2005-04-18 09:24	Blane Teckmeyer	Cal#722200 PG802-S	2.97
AR4060T1V2	007630	000515	20	VOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 09:23	Blane Teckmeyer	Cal#722200 PG802-S	3.02	2005-04-18 09:23	Blane Teckmeyer	Cal#722200 PG802-S	3.02
AR406001N1	007630	000299	20	NHVOC Sample	17.81	2005-04-18 15:41	Blane Teckmeyer	Cal#722200 PG802-S	20.94	2-01-12 1517	Bill Strong	*	3.13
AR406001N2	007630	000298	20	NHVOC Spare	17.87	2005-04-18 15:41	Blane Teckmeyer	Cal#722200 PG802-S	20.71	2-01-12 1518	Bill Strong	*	2.84
AR4060T1N1	007630	000518	20	NHVOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:31	Blane Teckmeyer	Cal#722200 PG802-S	3.05	2005-04-18 08:31	Blane Teckmeyer	Cal#722200 PG802-S	3.05
AR4060T1N2	007630	000484	20	NHVOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 09:24	Blane Teckmeyer	Cal#722200 PG802-S	2.98	2005-04-18 09:24	Blane Teckmeyer	Cal#722200 PG802-S	2.98
AR406001MS	003253	002795	250	Metals and SVOC	214.64	2005-04-18 15:38	Blane Teckmeyer	Cal#722200 PG802-S	282.41	2-01-12 1529	Bill Strong	*	67.77

*= Cal# 726992 ML303E BG 2-07-12

Packaged by: Blane Teckmeyer
Packaging Independent Verification by: Julie Daley 04/18/2005 3:43:09PM

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0019

ALD LOG # 1202011

ICP Analytical Laboratories Department
TRU Waste Characterization Program
Sample Container Weight Information for AR4060
Co-located Sample

Sample ID Number	Production Number	Container Number	Container Size (mL)	Sample Analysis	Tare Weight (g)	Tare Date Time	Tare By	Tare Balance	Gross Weight (g)	Gross Date Time	Gross By	Gross Balance	Net Weight (g)
AR406002V1	007630	000327	20	VOC Sample	17.91	2005-04-18 15:47	Blane Teckmeyer	Cal#722200 PG802-S	21.39	2-01-12 1520	Bill Strong	*	3.48
AR406002V2	007630	000287	20	VOC Spare	17.85	2005-04-18 15:47	Blane Teckmeyer	Cal#722200 PG802-S	22.34	2-01-12 1521	Bill Strong	*	4.49
AR406002V3	007630	000304	20	VOC MS	17.89	2005-04-18 15:48	Blane Teckmeyer	Cal#722200 PG802-S	20.85	2-01-12 1522	Bill Strong	*	2.96
AR406002V4	007630	000314	20	VOC MSD	17.79	2005-04-18 15:48	Blane Teckmeyer	Cal#722200 PG802-S	20.94	2-01-12 1523	Bill Strong	*	3.15
AR4060T2V1	007630	000483	20	VOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 09:27	Blane Teckmeyer	Cal#722200 PG802-S	3.01	2005-04-18 09:27	Blane Teckmeyer	Cal#722200 PG802-S	3.01
AR4060T2V2	007630	000510	20	VOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 09:26	Blane Teckmeyer	Cal#722200 PG802-S	3.01	2005-04-18 09:26	Blane Teckmeyer	Cal#722200 PG802-S	3.01
AR406002N1	007630	000262	20	NHVOC Sample	17.86	2005-04-18 15:49	Blane Teckmeyer	Cal#722200 PG802-S	21.69	2-01-12 1524	Bill Strong	*	3.83
AR406002N2	007630	000313	20	NHVOC Spare	17.85	2005-04-18 15:49	Blane Teckmeyer	Cal#722200 PG802-S	21.10	2-01-12 1525	Bill Strong	*	3.25
AR406002N3	007630	000328	20	NHVOC MS	17.90	2005-04-18 15:50	Blane Teckmeyer	Cal#722200 PG802-S	21.08	2-01-12 1526	Bill Strong	*	3.18
AR406002N4	007630	000329	20	NHVOC MSD	17.82	2005-04-18 15:49	Blane Teckmeyer	Cal#722200 PG802-S	19.91	2-01-12 1527	Bill Strong	*	2.09
AR4060T2N1	007630	000511	20	NHVOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 09:22	Blane Teckmeyer	Cal#722200 PG802-S	3.03	2005-04-18 09:22	Blane Teckmeyer	Cal#722200 PG802-S	3.03
AR4060T2N2	007630	000512	20	NHVOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 09:25	Blane Teckmeyer	Cal#722200 PG802-S	3.00	2005-04-18 09:25	Blane Teckmeyer	Cal#722200 PG802-S	3.00
AR406002MS	003253	002793	250	Metals and SVOC	210.84	2005-04-18 15:46	Blane Teckmeyer	Cal#722200 PG802-S	264.49	2-01-12 1530	Bill Strong	*	53.65

* = Cal# 726992 ML303E BG 2-07-12

Packaged by: Blane Teckmeyer
Packaging Independent Verification by: Julie Daley 04/18/2005 3:53:02PM

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0020

ALD LOG #
1202011

ICP Analytical Laboratories Department
TRU Waste Characterization Program
Sample Container Weight Information for AR4050
Regular Sample

Sample ID Number	Production Number	Container Number	Container Size (mL)	Sample Analysis	Tare Weight (g)	Tare Date Time	Tare By	Tare Balance	Gross Weight (g)	Gross Date Time	Gross By	Gross Balance	Net Weight (g)
AR405001V1	007230	001635	20	VOC Sample	17.73	2005-04-14 15:05	Blane Teckmeyer	Cal#722200 PG802-S	22.94	2012-02-02 13:02	W. (Bill) Strong	Cal#726992 ML-303	5.21
AR405001V2	007230	001634	20	VOC Spare	17.77	2005-04-14 15:05	Blane Teckmeyer	Cal#722200 PG802-S	22.84	2012-02-02 13:02	W. (Bill) Strong	Cal#726992 ML-303	5.07
AR4050T1V1	007230	003157	20	VOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-14 10:06	Blane Teckmeyer	Cal#722200 PG802-S	3.04	2005-04-14 10:06	Blane Teckmeyer	Cal#722200 PG802-S	3.04
AR4050T1V2	007230	003094	20	VOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-14 10:10	Blane Teckmeyer	Cal#722200 PG802-S	3.05	2005-04-14 10:10	Blane Teckmeyer	Cal#722200 PG802-S	3.05
AR405001N1	007230	001715	20	NHVOC Sample	17.71	2005-04-14 15:06	Blane Teckmeyer	Cal#722200 PG802-S	23.47	2012-02-02 13:00	W. (Bill) Strong	Cal#726992 ML-303	5.76
AR405001N2	007230	001636	20	NHVOC Spare	18.02	2005-04-14 15:06	Blane Teckmeyer	Cal#722200 PG802-S	23.40	2012-02-02 12:59	W. (Bill) Strong	Cal#726992 ML-303	5.38
AR4050T1N1	007230	003197	20	NHVOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-14 10:09	Blane Teckmeyer	Cal#722200 PG802-S	2.99	2005-04-14 10:09	Blane Teckmeyer	Cal#722200 PG802-S	2.99
AR4050T1N2	007230	003132	20	NHVOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-14 10:10	Blane Teckmeyer	Cal#722200 PG802-S	3.05	2005-04-14 10:10	Blane Teckmeyer	Cal#722200 PG802-S	3.05
AR405001MS	007694	001240	250	Metals and SVOC	209.97	2005-04-14 15:02	Blane Teckmeyer	Cal#722200 PG802-S	261.61	2012-02-02 12:31	W. (Bill) Strong	Cal#726992 ML-303	51.64

Packaged by: Blane Teckmeyer
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0021

ALD LOG # 1202011

ICP Analytical Laboratories Department
TRU Waste Characterization Program
Sample Container Weight Information for AR4050
Co-located Sample

Sample ID Number	Production Number	Container Number	Container Size (mL)	Sample Analysis	Tare Weight (g)	Tare Date Time	Tare By	Tare Balance	Gross Weight (g)	Gross Date Time	Gross By	Gross Balance	Net Weight (g)
AR405002V1	007230	001859	20	VOC Sample	17.98	2005-04-14 15:32	Blane Teckmeyer	Cal#722200 PG802-S	22.61	2012-02-02 12:35	W. (Bill) Strong	Cal#726992 ML-303	4.63
AR405002V2	007230	001676	20	VOC Spare	17.78	2005-04-14 15:22	Blane Teckmeyer	Cal#722200 PG802-S	23.93	2012-02-02 12:36	W. (Bill) Strong	Cal#726992 ML-303	6.15
AR405002V3	007230	001760	20	VOC MS	17.74	2005-04-14 15:33	Blane Teckmeyer	Cal#722200 PG802-S	22.06	2012-02-02 12:57	W. (Bill) Strong	Cal#726992 ML-303	4.32
AR405002V4	007230	001610	20	VOC MSD	17.80	2005-04-14 15:33	Blane Teckmeyer	Cal#722200 PG802-S	23.04	2012-02-02 12:56	W. (Bill) Strong	Cal#726992 ML-303	5.24
AR4050T2V1	007230	003178	20	VOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-14 10:14	Blane Teckmeyer	Cal#722200 PG802-S	2.97	2005-04-14 10:14	Blane Teckmeyer	Cal#722200 PG802-S	2.97
AR4050T2V2	007230	003124	20	VOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-14 10:19	Blane Teckmeyer	Cal#722200 PG802-S	2.98	2005-04-14 10:19	Blane Teckmeyer	Cal#722200 PG802-S	2.98
AR405002N1	007230	001590	20	NHVOC Sample	17.86	2005-04-14 15:35	Blane Teckmeyer	Cal#722200 PG802-S	23.39	2012-02-02 12:38	W. (Bill) Strong	Cal#726992 ML-303	5.53
AR405002N2	007230	001721	20	NHVOC Spare	17.89	2005-04-14 15:35	Blane Teckmeyer	Cal#722200 PG802-S	22.04	2012-02-02 12:39	W. (Bill) Strong	Cal#726992 ML-303	4.15
AR405002N3	007230	001582	20	NHVOC MS	17.76	2005-04-14 15:37	Blane Teckmeyer	Cal#722200 PG802-S	22.22	2012-02-02 12:55	W. (Bill) Strong	Cal#726992 ML-303	4.46
AR405002N4	007230	001759	20	NHVOC MSD	17.85	2005-04-14 15:36	Blane Teckmeyer	Cal#722200 PG802-S	22.25	2012-02-02 12:55	W. (Bill) Strong	Cal#726992 ML-303	4.40
AR4050T2N1	007230	003183	20	NHVOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-14 10:17	Blane Teckmeyer	Cal#722200 PG802-S	3.03	2005-04-14 10:17	Blane Teckmeyer	Cal#722200 PG802-S	3.03
AR4050T2N2	007230	003172	20	NHVOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-14 10:18	Blane Teckmeyer	Cal#722200 PG802-S	3.01	2005-04-14 10:18	Blane Teckmeyer	Cal#722200 PG802-S	3.01
AR405002MS	007694	001244	250	Metals and SVOC	213.35	2005-04-14 15:09	Blane Teckmeyer	Cal#722200 PG802-S	260.15	2012-02-02 12:33	W. (Bill) Strong	Cal#726992 ML-303	46.80

Packaged by: Blane Teckmeyer
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0022

ALD LOG #
1202011

ICP Analytical Laboratories Department
TRU Waste Characterization Program
Sample Container Weight Information for AR4059
Regular Sample

Sample ID Number	Production Number	Container Number	Container Size (mL)	Sample Analysis	Tare Weight (g)	Tare Date Time	Tare By	Tare Balance	Gross Weight (g)	Gross Date Time	Gross By	Gross Balance	Net Weight (g)
AR405901V1	007630	000276	20	VOC Sample	17.95	2005-04-18 15:16	Blane Teckmeyer	Cal#722200 PG802-S	22.71	2012-02-02 12:44	W. (Bill) Strong	Cal#726992 ML-303	4.76
AR405901V2	007630	000275	20	VOC Spare	17.87	2005-04-18 15:16	Blane Teckmeyer	Cal#722200 PG802-S	21.34	2012-02-02 12:46	W. (Bill) Strong	Cal#726992 ML-303	3.47
AR4059T1V1	007630	000486	20	VOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:26	Blane Teckmeyer	Cal#722200 PG802-S	3.03	2005-04-18 08:26	Blane Teckmeyer	Cal#722200 PG802-S	3.03
AR4059T1V2	007630	000529	20	VOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 08:22	Blane Teckmeyer	Cal#722200 PG802-S	2.99	2005-04-18 08:22	Blane Teckmeyer	Cal#722200 PG802-S	2.99
AR405901N1	007630	000265	20	NHVOC Sample	17.96	2005-04-18 15:16	Blane Teckmeyer	Cal#722200 PG802-S	24.23	2012-02-02 12:52	W. (Bill) Strong	Cal#726992 ML-303	6.27
AR405901N2	007630	000264	20	NHVOC Spare	17.88	2005-04-18 15:17	Blane Teckmeyer	Cal#722200 PG802-S	23.26	2012-02-02 12:53	W. (Bill) Strong	Cal#726992 ML-303	5.38
AR4059T1N1	007630	000497	20	NHVOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:22	Blane Teckmeyer	Cal#722200 PG802-S	2.95	2005-04-18 08:22	Blane Teckmeyer	Cal#722200 PG802-S	2.95
AR4059T1N2	007630	000504	20	NHVOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 08:23	Blane Teckmeyer	Cal#722200 PG802-S	2.99	2005-04-18 08:23	Blane Teckmeyer	Cal#722200 PG802-S	2.99
AR405901MS	003253	002122	250	Metals and SVOC	211.02	2005-04-18 15:15	Blane Teckmeyer	Cal#722200 PG802-S	264.20	2012-02-02 12:41	W. (Bill) Strong	Cal#726992 ML-303	53.18

Packaged by: Blane Teckmeyer
Packaging Independent Verification by: Julie Daley 04/18/2005 3:18:40PM

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1202011

ICP Analytical Laboratories Department
TRU Waste Characterization Program
Sample Container Weight Information for AR4059
Co-located Sample

Sample ID Number	Production Number	Container Number	Container Size (mL)	Sample Analysis	Tare Weight (g)	Tare Date Time	Tare By	Tare Balance	Gross Weight (g)	Gross Date Time	Gross By	Gross Balance	Net Weight (g)
AR405902V1	007630	000293	20	VOC Sample	17.87	2005-04-18 15:23	Blane Teckmeyer	Cal#722200 PG802-S	23.54	2012-02-02 12:27	W. (Bill) Strong	Cal#726992 ML-303	5.67
AR405902V2	007630	000303	20	VOC Spare	17.83	2005-04-18 15:23	Blane Teckmeyer	Cal#722200 PG802-S	21.68	2012-02-02 12:23	W. (Bill) Strong	Cal#726992 ML-303	3.85
AR405902V3	007630	000301	20	VOC MS	18.00	2005-04-18 15:24	Blane Teckmeyer	Cal#722200 PG802-S	22.09	2012-02-02 13:05	W. (Bill) Strong	Cal#726992 ML-303	4.09
AR405902V4	007630	000294	20	VOC MSD	17.93	2005-04-18 15:24	Blane Teckmeyer	Cal#722200 PG802-S	22.01	2012-02-02 13:03	W. (Bill) Strong	Cal#726992 ML-303	4.08
AR4059T2V1	007630	000547	20	VOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:19	Blane Teckmeyer	Cal#722200 PG802-S	2.95	2005-04-18 08:19	Blane Teckmeyer	Cal#722200 PG802-S	2.95
AR4059T2V2	007630	000532	20	VOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 08:20	Blane Teckmeyer	Cal#722200 PG802-S	3.02	2005-04-18 08:20	Blane Teckmeyer	Cal#722200 PG802-S	3.02
AR405902N1	007630	000300	20	NHVOC Sample	17.92	2005-04-18 15:25	Blane Teckmeyer	Cal#722200 PG802-S	22.73	2012-02-02 13:06	W. (Bill) Strong	Cal#726992 ML-303	4.81
AR405902N2	007630	000302	20	NHVOC Spare	17.89	2005-04-18 15:25	Blane Teckmeyer	Cal#722200 PG802-S	21.61	2012-02-02 13:06	W. (Bill) Strong	Cal#726992 ML-303	3.72
AR405902N3	007630	000312	20	NHVOC MS	17.87	2005-04-18 15:25	Blane Teckmeyer	Cal#722200 PG802-S	22.23	2012-02-02 12:49	W. (Bill) Strong	Cal#726992 ML-303	4.36
AR405902N4	007630	000311	20	NHVOC MSD	17.92	2005-04-18 15:26	Blane Teckmeyer	Cal#722200 PG802-S	23.51	2012-02-02 12:47	W. (Bill) Strong	Cal#726992 ML-303	5.59
AR4059T2N1	007630	000522	20	NHVOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:18	Blane Teckmeyer	Cal#722200 PG802-S	2.98	2005-04-18 08:18	Blane Teckmeyer	Cal#722200 PG802-S	2.98
AR4059T2N2	007630	000545	20	NHVOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 08:17	Blane Teckmeyer	Cal#722200 PG802-S	3.02	2005-04-18 08:17	Blane Teckmeyer	Cal#722200 PG802-S	3.02
AR405902MS	003253	002127	250	Metals and SVOC	211.10	2005-04-18 15:22	Blane Teckmeyer	Cal#722200 PG802-S	264.73	2012-02-02 12:29	W. (Bill) Strong	Cal#726992 ML-303	53.63

Packaged by: Blane Teckmeyer
Packaging Independent Verification by: Julie Daley 04/18/2005 3:30:58PM

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I-CHEM™ Brand Products

CERTIFICATE OF ANALYSIS

PRODUCTION NUMBER : 003253 **Item Number: 320-0250** **Item Description: JAR SHORT CLEAR WM**

Groups 1 and 2 are applicable

This is your Certificate of Analysis for I-CHEM Certified™ product which has been prepared in accordance with I-CHEM Performance-Based Specifications. This product meets or exceeds analyte specifications established in the U.S. EPA "Specification and Guidance for Contaminant-free Sample Containers" for use in Superfund and other hazardous waste programs.

Group 1. Glass and HDPE/LDPE Sample containers for use in the analysis of Metals

Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg /L)
Aluminum	<30	Calcium (all HDPE)	<100	Magnesium	<100	Selenium	<2
Antimony	<5	Chromium	<10	Manganese	<10	Silver	<5
Arsenic	<2	Cobalt	<10	Mercury	<0.2	Sodium	<5000
Barium	<20	Copper	<10	Nickel	<20	Sodium (all HDPE)	<100
Beryllium	<0.5	Iron	<50	Potassium	<750	Thallium	<5
Cadmium	<1	Lead	<2	Potassium (all HDPE)	<100	Vanadium	<10
Calcium	<500					Zinc	<10

In addition to the above analytes, NALGENE® containers are certified for these analytes:

Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)
Chloride	<100	Fluoride	<20	Nitrite	<50	Sulfate	<100
Cyanide	<10	Nitrate	<20	Paraquat (amber only)	<0.4	Sulfide	<10
Diquat (amber only)	<1.0					Sulfite	<1000

Group 2. Glass Sample Containers for use in the analysis of Semivolatiles and Pesticides/PCBs

Compound	Quantitation Limit (µg/L)	Compound	Quantitation Limit (µg/L)	Compound	Quantitation Limit (µg/L)
Acenaphthene	<5	Acenaphthylene	<5	Anthracene	<5
Benzo(a)anthracene	<5	Benzo(a)pyrene	<5	Benzo(b)fluoranthene	<5
Benzo(k)Fluoranthene	<5	Benzo(g,h,i)perylene	<5	Benzoic Acid	<20
Benzyl Alcohol	<5	4-Bromophenyl-phenylether	<5	Butylbenzylphthalate	<5
4-Chloroaniline	<5	4-Chloro-3-methylphenol	<5	bis-(2-Chloroethoxy) methane	<5
bis-(2-Chloroethyl)ether	<5	bis-(2-Chloroisopropyl)ether	<5	2-Chloronaphthalene	<5
2-Chlorophenol	<5	4-Chlorophenyl-phenylether	<5	Chrysene	<5
Di-n-butylphthalate	<5	Di-n-octylphthalate	<5	Dibenzo(a,h)anthracene	<5
Dibenzofuran	<5	1,2-Dichlorobenzene	<5	1,4-Dichlorobenzene	<5
1,3-Dichlorobenzene	<5	3,3 -Dichlorobenzidine	<5	2,4-Dichlorophenol	<5
Diethylphthalate	<5	Dimethylphthalate	<5	2,4-Dinitrotoluene	<5
4,6-Dinitro-2-methylphenol	<20	2,4-Dinitrophenol	<20	Fluoranthene	<5
2,6-Dinitrotoluene	<5	bis-(2-Ethylhexyl)phthalate	<5	Hexachlorobutadiene	<5
Fluorene	<5	Hexachlorobenzene	<5	Indeno(1,2,3-cd)pyrene	<5
Hexachlorocyclopentadiene	<5	Hexachloroethane	<5	2-Methylphenol	<5
Isophorone	<5	2-Methylnaphthalene	<5	3-Nitroaniline	<20
4-Methylphenol	<5	2-Nitroaniline	<20	N-Nitrosodimethylamine	<5
4-Nitroaniline	<20	N-Nitroso-di-n-propylamine	<5	Nitrobenzene	<5
N-Nitrosodiphenylamine	<5	Naphthalene	<5	Pentachlorophenol	<20
2-Nitrophenol	<5	4-Nitrophenol	<20	Pyrene	<5
Phenanthrene	<5	Phenol	<5	2,4,6-Trichlorophenol	<5
1,2,4-Trichlorobenzene	<5	2,4,5-Trichlorophenol	<20	Aldrin	<0.01
Azobenzene	<5	Carbazole	<5	Alpha-BHC	<0.01
4,4-DDD	<0.02	Endosulfan II	<0.02	Beta-BHC	<0.01
4,4-DDE	<0.02	Endosulfan Sulfate	<0.02	Delta-BHC	<0.01
4,4-DDT	<0.02	Endrin	<0.02	Gamma-BHC	<0.01
Dieldrin	<0.02	Endrin Aldehyde	<0.02	Heptachlor Epoxide	<0.01
Endosulfan I	<0.01	Heptachlor	<0.01	Alpha-Chlordane	<0.01
Methoxychlor	<0.10	Endrin Ketone	<0.02	Aroclor-1016	<0.20
Gamma-Chlordane	<0.01	Toxaphene	<0.30	Aroclor-1242	<0.20
Aroclor-1221	<0.20	Aroclor-1232	<0.20	Aroclor-1260	<0.20
Aroclor-1248	<0.20	Aroclor-1254	<0.20	2,4-Dimethylphenol	<5
Aroclor-1262	<0.20	Aroclor-1268	<0.20		

Group 3. Glass Sample Containers for use in the analysis of Volatiles

Compound	Quantitation Limit (µg/L)	Compound	Quantitation Limit (µg/L)	Compound	Quantitation Limit (µg/L)
Acetone	<5	1,3-Dichloropropane	<1	Benzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1	1,2-Dichloropropane	<1
Bromodichloromethane	<1	trans-1,3-Dichloropropene	<1	Bromoform	<1
cis-1,3-Dichloropropene	<1	Bromomethane	<1	1,1-Dichloropropene	<1
2-Butanone	<5	Ethylbenzene	<1	tert-Butylbenzene	<1
Hexachlorobutadiene	<1	sec-Butylbenzene	<1	2-Hexanone	<5
n-Butylbenzene	<1	Isopropylbenzene	<1	Carbon Disulfide	<1
p-Isopropyltoluene	<1	Carbon Tetrachloride	<1	4-Methyl-2-pentanone	<5
Chlorobenzene	<1	Methylene Chloride	<2	Chloroethane	<1
Naphthalene	<1	Chloroform	<1	n-Propylbenzene	<1
Chloromethane	<1	Styrene	<1	2 & 4 Chlorotoluene	<1
1,1,2,2-Tetrachloroethane	<1	1,2-Dibromo-3-chloropropane	<1	Tetrachloroethene	<1
Dibromochloromethane	<1	Toluene	<1	1,2-Dibromoethane (EDB)	<1
1,2,3-Trichlorobenzene	<1	Dibromomethane	<1	1,2,4-Trichlorobenzene	<1
1,4-Dichlorobenzene	<1	1,1,2-Trichloroethane	<1	1,3-Dichlorobenzene	<1
1,1,1-Trichloroethane	<1	1,2-Dichlorobenzene	<1	Trichloroethene	<1
Dichlorodifluoromethane	<1	Trichlorofluoromethene	<1	1,2-Dichloroethene	<1
1,2,3-Trichloropropane	<1	1,1-Dichloroethane	<1	Bromochloromethane	<1
trans-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1		
Vinyl Acetate	<5	1,1-Dichloroethene	<1		
Xylenes (total)	<1	1,2,4-Trimethylbenzene	<1		
Vinyl Chloride	<1	cis-1,2-Dichloroethene	<1		

In addition to the above analytes in Group 3, 40 mL and 60 mL vials are certified for:

Compound	Quantitation Limit (µg/L)
Total Organic Carbon	<600

Please keep this certificate for your records and to facilitate any necessary correspondence.
If additional information is required, contact our Technical Service Department at(800) 443-1689.

James L. Riner

James L. Riner
QA Director
60007 Rev. 2

Chase Scientific Glass, Inc.
234 Cardiff Valley Road
Rockwood, TN 37854

printed on recycled paper

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I-CHEM™ Brand Products

Nalge Nunc International

CERTIFICATE OF ANALYSIS

PRODUCTION NUMBER : 007694

Item Number: 320-0250

Item Description: JAR SHORT CLEAR WM

Groups 1 and 2 are applicable

This is your Certificate of Analysis for I-CHEM Certified™ product which has been prepared in accordance with I-CHEM Performance-Based Specifications. This product meets or exceeds analyte specifications established in the U.S. EPA "Specification and Guidance for Contaminant-free Sample Containers" for use in Superfund and other hazardous waste programs.

Group 1. Glass and HDPE/LDPE Sample containers for use in the analysis of Metals

Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg /L)
Aluminum	<80	Calcium (all HDPE)	<100	Magnesium	<100	Selenium	<2
Antimony	<5	Chromium	<10	Manganese	<10	Silver	<5
Arsenic	<2	Cobalt	<10	Mercury	<0.2	Sodium	<500
Barium	<20	Copper	<10	Nickel	<20	Sodium (all HDPE)	<100
Beryllium	<0.5	Iron	<50	Potassium	<750	Thallium	<5
Cadmium	<1	Lead	<2	Potassium (all HDPE)	<100	Vanadium	<10
Calcium	<500					Zinc	<10

In addition to the above analytes, NALGENE® containers are certified for these analytes:

Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)
Chloride	<100	Fluoride	<20	Nitrite	<50	Sulfate	<100
Cyanide	<10	Nitrate	<20	Paraquat (amber only)	<0.4	Sulfide	<30
Diquat (amber only)	<1.0					Sulfite	<1000

Group 2. Glass Sample Containers for use in the analysis of Semivolatiles and Pesticides/PCBs

Compound	Quantitation Limit (µg/L)	Compound	Quantitation Limit (µg/L)	Compound	Quantitation Limit (µg/L)
Acenaphthene	<5	Acenaphthylene	<5	Anthracene	<5
Benzo(a)anthracene	<5	Benzo(a)pyrene	<5	Benzo(b)fluoranthene	<5
Benzo(k)Fluoranthene	<5	Benzo(g,h,i)perylene	<5	Benzoic Acid	<20
Benzyl Alcohol	<5	4-Bromophenyl-phenylether	<5	Butylbenzylphthalate	<5
4-Chloroaniline	<5	4-Chloro-3-methylphenol	<5	bis-(2-Chloroethoxy) methane	<5
bis-(2-Chloroethyl)ether	<5	bis-(2-Chloroisopropyl)ether	<5	2-Chloronaphthalene	<5
2-Chlorophenol	<5	4-Chlorophenyl-phenylether	<5	Chrysene	<5
Di-n-butylphthalate	<5	Di-n-octylphthalate	<5	Dibenzo(a,h)anthracene	<5
Dibenzofuran	<5	1,2-Dichlorobenzene	<5	1,4-Dichlorobenzene	<5
1,3-Dichlorobenzene	<5	3,3 -Dichlorobenzidine	<5	2,4-Dichlorophenol	<5
Diethylphthalate	<5	Dimethylphthalate	<5	2,4-Dinitrotoluene	<5
4,6-Dinitro-2-methylphenol	<20	2,4-Dinitrophenol	<20	Fluoranthene	<5
2,6-Dinitrotoluene	<5	bis-(2-Ethylhexyl)phthalate	<5	Hexachlorobutadiene	<5
Fluorene	<5	Hexachlorobenzene	<5	Indeno(1,2,3-cd)pyrene	<5
Hexachlorocyclopentadiene	<5	Hexachloroethane	<5	2-Methylphenol	<5
Isophorone	<5	2-Methylnaphthalene	<5	3-Nitroaniline	<20
4-Methylphenol	<5	2-Nitroaniline	<20	N-Nitrosodimethylamine	<5
4-Nitroaniline	<20	N-Nitroso-di-n-propylamine	<5	Nitrobenzene	<5
N-Nitrosodiphenylamine	<5	Naphthalene	<5	Pentachlorophenol	<20
2-Nitrophenol	<5	4-Nitrophenol	<20	Pyrene	<5
Phenanthrene	<5	Phenol	<5	2,4,6-Trichlorophenol	<5
1,2,4-Trichlorobenzene	<5	2,4,5-Trichlorophenol	<20	Aldrin	<0.01
Azobenzene	<5	Carbazole	<5	Alpha-BHC	<0.01
4,4-DDD	<0.03	Endosulfan II	<0.02	Beta-BHC	<0.01
4,4-DDE	<0.02	Endosulfan Sulfate	<0.02	Delta-BHC	<0.01
4,4-DDT	<0.02	Endrin	<0.02	Gamma-BHC	<0.01
Dieldrin	<0.02	Endrin Aldehyde	<0.02	Heptachlor Epoxide	<0.01
Endosulfan I	<0.01	Heptachlor	<0.01	Alpha-Chlordane	<0.01
Methoxychlor	<0.10	Endrin Ketone	<0.02	Aroclor-1016	<0.20
Gamma-Chlordane	<0.01	Toxaphene	<0.30	Aroclor-1242	<0.20
Aroclor-1221	<0.20	Aroclor-1232	<0.20	Aroclor-1260	<0.20
Aroclor-1248	<0.20	Aroclor-1254	<0.20	2,4-Dimethylphenol	<5
Aroclor-1262	<0.20	Aroclor-1268	<0.20		

Group 3. Glass Sample Containers for use in the analysis of Volatiles

Compound	Quantitation Limit (µg/L)	Compound	Quantitation Limit (µg/L)	Compound	Quantitation Limit (µg/L)
Acetone	<5	1,3-Dichloropropene	<1	Benzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1	1,2-Dichloropropane	<1
Bromodichloromethane	<1	trans-1,3-Dichloropropene	<1	Bromoform	<1
cis-1,3-Dichloropropene	<1	Bromomethane	<1	1,1-Dichloropropene	<1
2-Butanone	<5	Ethylbenzene	<1	tert-Butylbenzene	<1
Hexachlorobutadiene	<1	sec-Butylbenzene	<1	2-Hexanone	<5
n-Butylbenzene	<1	Isopropylbenzene	<1	Carbon Disulfide	<1
p-Isopropyltoluene	<1	Carbon Tetrachloride	<1	4-Methyl-2-pentanone	<5
Chlorobenzene	<1	Methylene Chloride	<2	Chloroethane	<1
Naphthalene	<1	Chloroform	<1	n-Propylbenzene	<1
Chloromethane	<1	Styrene	<1	2 & 4 Chlorotoluene	<1
1,1,2,2-Tetrachloroethane	<1	1,2-Dibromo-3-chloropropane	<1	Tetrachloroethene	<1
Dibromochloromethane	<1	Toluene	<1	1,2-Dibromoethane (EDB)	<1
1,2,3-Trichlorobenzene	<1	Dibromomethane	<1	1,2,4-Trichlorobenzene	<1
1,4-Dichlorobenzene	<1	1,1,2-Trichloroethane	<1	1,3-Dichlorobenzene	<1
1,1,1-Trichloroethane	<1	1,2-Dichlorobenzene	<1	Trichloroethene	<1
Dichlorodifluoromethane	<1	Trichlorofluoromethane	<1	1,2-Dichloroethane	<1
1,2,3-Trichloropropane	<1	1,1-Dichloroethane	<1	Bromochloromethane	<1
trans-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1		
Vinyl Acetate	<5	1,1-Dichloroethene	<1		
Xylenes (total)	<1	1,2,4-Trimethylbenzene	<1		
Vinyl Chloride	<1	cis-1,2-Dichloroethene	<1		

In addition to the above analytes in Group 3, 40 mL and 60 mL vials are certified for:

Compound	Quantitation Limit (µg/L)
Total Organic Carbon	<600

Please keep this certificate for your records and to facilitate any necessary correspondence.
If additional information is required, contact our Technical Service Department at(800) 625-4327.

James L. Riner

James L. Riner
QA Director
90035 Rev. 2

Chase Scientific Glass, Inc.
234 Cardiff Valley Road
Rockwood, TN 37854

printed on recycled paper

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Section 3

Analysis Results

Data Report Narrative for ALD12005M

ARP Soils

Sampling Batch Numbers: S4200-LOT-05-03, S4200-LOT-05-06, S4200-LOT-05-07, S4200-LOT-05-08, S4200-LOT-05-10

Analytical Batch ID: 1202011

ICP-AES

Sample Preparation

The samples were prepared for metals analysis on 02/08/12 according to CCP-TP-183, Revision 0. The following table summarizes the preparation batch.

Log Number	Field Sample ID	Lab Sample ID
1202011	AR405701MS	2BY99
1202011	AR405702MS	2BZ05
1202011	AR405801MS	2BZ10
1202011	AR405801MSS & SD	2BZ10S & SD
1202011	AR405802MS	2BZ15
1202011	AR406001MS	2BZ20
1202011	AR406002MS	2BZ25
1202011	AR405001MS	2BZ30
1202011	AR405002MS	2BZ35
1202011	AR405901MS	2BZ40
1202011	AR405902MS	2BZ45

Both an LCS and a Laboratory Blank were prepared with the samples. The LCS was prepared using aliquots from an Environmental Resource Associates Priority PollutnT Inorganic Soil Standard, Lot # D067-540.

Sample Analysis

The analytical run was performed on 02/09/12 following CCP-TP-182, Revision 1. QC requirements set forth in Central Characterization Project (CCP) documents were followed. Background corrections were applied by the instrument computer during data acquisition. During the analytical run, potentially interfering elements were quantitatively analyzed with the target analytes to determine their concentrations in the samples. Interelement correction factors were applied by the instrument to each sample, as appropriate, during the analytical run prior to instrument output.

Data Report Narrative for ALD12005M

During the technical review of the data from this analytical run, the following observations were noted:

1. All analytes were within the required 80-120% recovery criteria for the duplicate matrix spikes on sample 2BZ10. The precision (RPD) for each of the elements was within the required ≤ 30% criteria.

2. A serial dilution analysis was performed on sample 2BZ10. The percent differences (%D's) were within limits for all elements whose concentrations were greater than fifty times the IDL.

3. A post-digestion spike analysis was performed on sample 2BZ10. The spike recoveries for all elements were within the required 75-125% acceptance criteria.

4. The concentration of zinc in the Laboratory Blank prepared with the samples was 2.34 mg/kg. Although above the detection limit, this concentration is less than three times the applicable PRDL. The zinc concentration in this blank was greater than five times the IDL; therefore, no "J" qualifier was needed for this element. No "B" qualifiers were required for the reported sample zinc data due to the concentration of this element in the Laboratory Blank.

5. Selenium was detected in two of the Continuing Calibration Verification Blanks (CCBs) at concentrations greater than the IDL. The CCB data for this element were reported with "J" qualifiers. Since the concentration of selenium in these blanks was ≥ 20% of the concentration (prior to dilution correction) in samples 2BZ05, 2BZ15, 2BZ20, 2BZ30, 2BZ40 and 2BZ45, "B" qualifiers were applied to these samples' selenium results.

6. Nickel was detected in the final CCB at a concentration greater than the IDL. The CCB data for this element was reported with a "J" qualifier. No "B" qualifiers were required for the reported sample results due to the concentration of nickel evident in this blank.

Mercury CVAA

Sample Preparation

The sample batch was prepared for analysis on 02/08/12 according to CCP-TP-181, Revision 0. Duplicate Matrix Spikes were prepared on sample 2BZ10. Approximately 0.5 grams of each sample diluted to 50 mL with reagents was used in the sample preparation. All samples, spikes, calibration standards and ICV were taken through the digestion procedure. Both an LCS and a Laboratory Blank were prepared with the samples. The LCS was prepared using aliquots from an Environmental Resource Associates Priority PollutnT Inorganic Soil Standard, Lot D067-540.

Sample Analysis

The samples were analyzed on 02/09/12 according to CCP-TP-181, Revision 0. The QC requirements set forth in CCP documents were followed during the analysis. The duplicate matrix spikes prepared on sample 2BZ10 were analyzed, and each of the spike recoveries was not within the required range of 80-120%. These spikes were recovered at 254.9% and 38.5% in the MS and MSD respectively. Therefore, the sample mercury data are reported with a "Z" qualifier due to these out-of-range duplicate matrix spiked samples. The poor spike recoveries in the MS and MSD were due to the non-homogeneous nature of the sample in regards to this element.

The precision (RPDs) of the spiked duplicates was **not** within the required ≤ 30% criteria. The RPD for mercury was 44.1%. Therefore, the sample mercury data are also reported with a "Z" qualifier due to the out-of-range precision. The high RPD also points to the non-homogeneous nature of the sample in regards to mercury.

Data Report Narrative for ALD12005M

Since the duplicate matrix spiked samples were recovered outside the required range, a serial dilution analysis was performed on sample 2BZ10. The percent difference (%D) between the sample and serial dilution result was 0.1%, which is within the required limit. No post-digestion spike analysis was analyzed for this batch of samples since the %D for the serial dilution analysis was acceptable. All other QC samples were analyzed within the prescribed limits.

AMWTP Analytical Chemistry Laboratory

Central Characterization Project

Data Qualifier Flag Definitions for Metals

Flag	Definition
B	Analyte blank concentration (laboratory or calibration verification) ≥ 20% of the sample concentration prior to dilution correction
H	Holding time exceeded
J	Analyte concentration ≥ IDL but < 5 × IDL before dilution correction
U	Analyte was undetected (reported as sample-specific IDL, corrected for dilution)
Z	One or more QC sample results do not meet acceptance criteria

Metals Method Codes

Code	Definition
P	ICP-AES per CCP-TP-182 and CCP-TP-183
V	CVAA per CCP-TP-181

TOTAL METALS ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Field Sample ID:	AR405701MS	Data Report Number:	ALD12005M
Sampling Batch No.:	S4200-LOT-05-07	Analytical Batch ID:	1202011
Date Sampled:	01/31/2012	Lab Sample ID:	2BY99
		Date Digested, ICP:	02/08/2012
		Date Digested, CVAA:	02/08/2012
Method, ICP-AES Preparation:	CCP-TP-183-R0	Microwave Digester ID:	MW-3
Method, ICP-AES Analysis:	CCP-TP-182-R1	Instrument ID, ICP-AES:	ICP-7
Method, CVAA:	CCP-TP-181-R0	Instrument ID, CVAA:	CVHG-2

Concentration Units: mg/kg

CAS No.	Analyte	Concentration	C	Q	Date and Time of Analysis	Holding Time, Days	M
7440-36-0	Antimony	6.3E+00			02/09/2012 14:36:30	9	P
7440-38-2	Arsenic	9.1E+00			02/09/2012 14:36:30	9	P
7440-39-3	Barium	2.3E+02			02/09/2012 14:36:30	9	P
7440-41-7	Beryllium	1.3E+01			02/09/2012 14:36:30	9	P
7440-43-9	Cadmium	1.5E+02			02/09/2012 14:36:30	9	P
7440-47-3	Chromium	4.2E+01			02/09/2012 14:36:30	9	P
7439-92-1	Lead	4.7E+01			02/09/2012 14:36:30	9	P
7439-97-6	Mercury	5.5E-01		Z	02/09/2012 12:43:34	9	V
7440-02-0	Nickel	3.6E+01			02/09/2012 14:36:30	9	P
7782-49-2	Selenium	9.0E-01	U		02/09/2012 14:36:30	9	P
7440-22-4	Silver	1.0E+00			02/09/2012 14:36:30	9	P
7440-28-0	Thallium	1.0E+00	U		02/09/2012 14:36:30	9	P
7440-62-2	Vanadium	4.4E+01			02/09/2012 14:36:30	9	P
7440-66-6	Zinc	2.2E+02			02/09/2012 14:36:30	9	P

C = concentration qualifier; Q = data qualifier; M = method code

TOTAL METALS ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Field Sample ID:	AR405702MS	Data Report Number:	ALD12005M
Sampling Batch No.:	S4200-LOT-05-07	Analytical Batch ID:	1202011
Date Sampled:	01/31/2012	Lab Sample ID:	2BZ05
		Date Digested, ICP:	02/08/2012
		Date Digested, CVAA:	02/08/2012
Method, ICP-AES Preparation:	CCP-TP-183-R0	Microwave Digester ID:	MW-3
Method, ICP-AES Analysis:	CCP-TP-182-R1	Instrument ID, ICP-AES:	ICP-7
Method, CVAA:	CCP-TP-181-R0	Instrument ID, CVAA:	CVHG-2

Concentration Units: mg/kg

CAS No.	Analyte	Concentration	C	Q	Date and Time of Analysis	Holding Time, Days	M
7440-36-0	Antimony	7.0E+00			02/09/2012 14:41:20	9	P
7440-38-2	Arsenic	8.9E+00			02/09/2012 14:41:20	9	P
7440-39-3	Barium	2.3E+02			02/09/2012 14:41:20	9	P
7440-41-7	Beryllium	1.4E+01			02/09/2012 14:41:20	9	P
7440-43-9	Cadmium	9.3E+01			02/09/2012 14:41:20	9	P
7440-47-3	Chromium	3.8E+01			02/09/2012 14:41:20	9	P
7439-92-1	Lead	3.9E+01			02/09/2012 14:41:20	9	P
7439-97-6	Mercury	3.1E-01		Z	02/09/2012 12:46:27	9	V
7440-02-0	Nickel	3.0E+01			02/09/2012 14:41:20	9	P
7782-49-2	Selenium	2.8E+00	J	B	02/09/2012 14:41:20	9	P
7440-22-4	Silver	7.7E-01	J		02/09/2012 14:41:20	9	P
7440-28-0	Thallium	1.0E+00	U		02/09/2012 14:41:20	9	P
7440-62-2	Vanadium	4.6E+01			02/09/2012 14:41:20	9	P
7440-66-6	Zinc	1.8E+02			02/09/2012 14:41:20	9	P

C = concentration qualifier; Q = data qualifier; M = method code

TOTAL METALS ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Field Sample ID:	AR405801MS	Data Report Number:	ALD12005M
Sampling Batch No.:	S4200-LOT-05-08	Analytical Batch ID:	1202011
Date Sampled:	01/31/2012	Lab Sample ID:	2BZ10
		Date Digested, ICP:	02/08/2012
		Date Digested, CVAA:	02/08/2012
Method, ICP-AES Preparation:	CCP-TP-183-R0	Microwave Digester ID:	MW-3
Method, ICP-AES Analysis:	CCP-TP-182-R1	Instrument ID, ICP-AES:	ICP-7
Method, CVAA:	CCP-TP-181-R0	Instrument ID, CVAA:	CVHG-2

Concentration Units: mg/kg

CAS No.	Analyte	Concentration	C	Q	Date and Time of Analysis	Holding Time, Days	M
7440-36-0	Antimony	1.8E+00	J		02/09/2012 12:52:03	9	P
7440-38-2	Arsenic	1.0E+01			02/09/2012 12:52:03	9	P
7440-39-3	Barium	2.6E+02			02/09/2012 12:52:03	9	P
7440-41-7	Beryllium	4.8E+01			02/09/2012 12:52:03	9	P
7440-43-9	Cadmium	3.1E+01			02/09/2012 12:52:03	9	P
7440-47-3	Chromium	6.2E+01			02/09/2012 12:52:03	9	P
7439-92-1	Lead	4.9E+01			02/09/2012 12:52:03	9	P
7439-97-6	Mercury	2.7E+00		Z	02/09/2012 12:34:58	9	V
7440-02-0	Nickel	4.7E+01			02/09/2012 12:52:03	9	P
7782-49-2	Selenium	9.0E-01	U		02/09/2012 12:52:03	9	P
7440-22-4	Silver	6.2E+00			02/09/2012 12:52:03	9	P
7440-28-0	Thallium	1.0E+00	U		02/09/2012 12:52:03	9	P
7440-62-2	Vanadium	5.1E+01			02/09/2012 12:52:03	9	P
7440-66-6	Zinc	1.5E+02			02/09/2012 12:52:03	9	P

C = concentration qualifier; Q = data qualifier; M = method code

TOTAL METALS ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Field Sample ID:	AR405802MS	Data Report Number:	ALD12005M
Sampling Batch No.:	S4200-LOT-05-08	Analytical Batch ID:	1202011
Date Sampled:	01/31/2012	Lab Sample ID:	2BZ15
		Date Digested, ICP:	02/08/2012
		Date Digested, CVAA:	02/08/2012
Method, ICP-AES Preparation:	CCP-TP-183-R0	Microwave Digester ID:	MW-3
Method, ICP-AES Analysis:	CCP-TP-182-R1	Instrument ID, ICP-AES:	ICP-7
Method, CVAA:	CCP-TP-181-R0	Instrument ID, CVAA:	CVHG-2

Concentration Units: mg/kg

CAS No.	Analyte	Concentration	C	Q	Date and Time of Analysis	Holding Time, Days	M
7440-36-0	Antimony	1.5E+00	J		02/09/2012 14:46:10	9	P
7440-38-2	Arsenic	1.1E+01			02/09/2012 14:46:10	9	P
7440-39-3	Barium	2.8E+02			02/09/2012 14:46:10	9	P
7440-41-7	Beryllium	3.5E+01			02/09/2012 14:46:10	9	P
7440-43-9	Cadmium	4.3E+01			02/09/2012 14:46:10	9	P
7440-47-3	Chromium	4.7E+01			02/09/2012 14:46:10	9	P
7439-92-1	Lead	6.4E+01			02/09/2012 14:46:10	9	P
7439-97-6	Mercury	4.0E+00		Z	02/09/2012 12:59:24	9	V
7440-02-0	Nickel	3.7E+01			02/09/2012 14:46:10	9	P
7782-49-2	Selenium	2.9E+00	J	B	02/09/2012 14:46:10	9	P
7440-22-4	Silver	5.6E+00			02/09/2012 14:46:10	9	P
7440-28-0	Thallium	9.9E-01	U		02/09/2012 14:46:10	9	P
7440-62-2	Vanadium	5.6E+01			02/09/2012 14:46:10	9	P
7440-66-6	Zinc	1.8E+02			02/09/2012 14:46:10	9	P

C = concentration qualifier; Q = data qualifier; M = method code

TOTAL METALS ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Field Sample ID:	AR406001MS	Data Report Number:	ALD12005M
Sampling Batch No.:	S4200-LOT-05-03	Analytical Batch ID:	1202011
Date Sampled:	02/01/2012	Lab Sample ID:	2BZ20
		Date Digested, ICP:	02/08/2012
		Date Digested, CVAA:	02/08/2012
Method, ICP-AES Preparation:	CCP-TP-183-R0	Microwave Digester ID:	MW-3
Method, ICP-AES Analysis:	CCP-TP-182-R1	Instrument ID, ICP-AES:	ICP-7
Method, CVAA:	CCP-TP-181-R0	Instrument ID, CVAA:	CVHG-2

Concentration Units: mg/kg

CAS No.	Analyte	Concentration	C	Q	Date and Time of Analysis	Holding Time, Days	M
7440-36-0	Antimony	1.5E+00	J		02/09/2012 14:51:00	8	P
7440-38-2	Arsenic	1.3E+01			02/09/2012 14:51:00	8	P
7440-39-3	Barium	3.9E+02			02/09/2012 14:51:00	8	P
7440-41-7	Beryllium	7.8E+00			02/09/2012 14:51:00	8	P
7440-43-9	Cadmium	4.0E+00			02/09/2012 14:51:00	8	P
7440-47-3	Chromium	4.0E+01			02/09/2012 14:51:00	8	P
7439-92-1	Lead	4.9E+01			02/09/2012 14:51:00	8	P
7439-97-6	Mercury	8.1E-02		Z	02/09/2012 13:02:20	8	V
7440-02-0	Nickel	2.9E+01			02/09/2012 14:51:00	8	P
7782-49-2	Selenium	1.6E+00	J	B	02/09/2012 14:51:00	8	P
7440-22-4	Silver	1.6E+00			02/09/2012 14:51:00	8	P
7440-28-0	Thallium	1.0E+00	U		02/09/2012 14:51:00	8	P
7440-62-2	Vanadium	4.7E+01			02/09/2012 14:51:00	8	P
7440-66-6	Zinc	2.0E+02			02/09/2012 14:51:00	8	P

C = concentration qualifier; Q = data qualifier; M = method code

TOTAL METALS ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Field Sample ID:	AR406002MS	Data Report Number:	ALD12005M
Sampling Batch No.:	S4200-LOT-05-03	Analytical Batch ID:	1202011
Date Sampled:	02/01/2012	Lab Sample ID:	2BZ25
		Date Digested, ICP:	02/08/2012
		Date Digested, CVAA:	02/08/2012
Method, ICP-AES Preparation:	CCP-TP-183-R0	Microwave Digester ID:	MW-3
Method, ICP-AES Analysis:	CCP-TP-182-R1	Instrument ID, ICP-AES:	ICP-7
Method, CVAA:	CCP-TP-181-R0	Instrument ID, CVAA:	CVHG-2

Concentration Units: mg/kg

CAS No.	Analyte	Concentration	C	Q	Date and Time of Analysis	Holding Time, Days	M
7440-36-0	Antimony	3.7E+00	J		02/09/2012 14:55:50	8	P
7440-38-2	Arsenic	1.1E+01			02/09/2012 14:55:50	8	P
7440-39-3	Barium	2.6E+02			02/09/2012 14:55:50	8	P
7440-41-7	Beryllium	4.3E+00			02/09/2012 14:55:50	8	P
7440-43-9	Cadmium	3.8E+00			02/09/2012 14:55:50	8	P
7440-47-3	Chromium	3.8E+01			02/09/2012 14:55:50	8	P
7439-92-1	Lead	1.3E+01			02/09/2012 14:55:50	8	P
7439-97-6	Mercury	4.1E-02	J	Z	02/09/2012 13:05:13	8	V
7440-02-0	Nickel	2.6E+01			02/09/2012 14:55:50	8	P
7782-49-2	Selenium	9.0E-01	U		02/09/2012 14:55:50	8	P
7440-22-4	Silver	1.0E+00			02/09/2012 14:55:50	8	P
7440-28-0	Thallium	1.0E+00	U		02/09/2012 14:55:50	8	P
7440-62-2	Vanadium	4.9E+01			02/09/2012 14:55:50	8	P
7440-66-6	Zinc	1.4E+02			02/09/2012 14:55:50	8	P

C = concentration qualifier; Q = data qualifier; M = method code

TOTAL METALS ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Field Sample ID:	AR405001MS	Data Report Number:	ALD12005M
Sampling Batch No.:	S4200-LOT-05-10	Analytical Batch ID:	1202011
Date Sampled:	02/02/2012	Lab Sample ID:	2BZ30
		Date Digested, ICP:	02/08/2012
		Date Digested, CVAA:	02/08/2012
Method, ICP-AES Preparation:	CCP-TP-183-R0	Microwave Digester ID:	MW-3
Method, ICP-AES Analysis:	CCP-TP-182-R1	Instrument ID, ICP-AES:	ICP-7
Method, CVAA:	CCP-TP-181-R0	Instrument ID, CVAA:	CVHG-2

Concentration Units: mg/kg

CAS No.	Analyte	Concentration	C	Q	Date and Time of Analysis	Holding Time, Days	M
7440-36-0	Antimony	1.7E+00	J		02/09/2012 15:00:38	7	P
7440-38-2	Arsenic	1.0E+01			02/09/2012 15:00:38	7	P
7440-39-3	Barium	2.3E+02			02/09/2012 15:00:38	7	P
7440-41-7	Beryllium	1.9E+00			02/09/2012 15:00:38	7	P
7440-43-9	Cadmium	3.2E+01			02/09/2012 15:00:38	7	P
7440-47-3	Chromium	3.8E+01			02/09/2012 15:00:38	7	P
7439-92-1	Lead	1.6E+01			02/09/2012 15:00:38	7	P
7439-97-6	Mercury	1.1E-02	J	Z	02/09/2012 13:07:01	7	V
7440-02-0	Nickel	3.5E+01			02/09/2012 15:00:38	7	P
7782-49-2	Selenium	1.1E+00	J	B	02/09/2012 15:00:38	7	P
7440-22-4	Silver	2.0E-01	U		02/09/2012 15:00:38	7	P
7440-28-0	Thallium	1.0E+00	U		02/09/2012 15:00:38	7	P
7440-62-2	Vanadium	5.3E+01			02/09/2012 15:00:38	7	P
7440-66-6	Zinc	9.2E+01			02/09/2012 15:00:38	7	P

C = concentration qualifier; Q = data qualifier; M = method code

TOTAL METALS ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Field Sample ID:	AR405002MS	Data Report Number:	ALD12005M
Sampling Batch No.:	S4200-LOT-05-10	Analytical Batch ID:	1202011
Date Sampled:	02/02/2012	Lab Sample ID:	2BZ35
		Date Digested, ICP:	02/08/2012
		Date Digested, CVAA:	02/08/2012
Method, ICP-AES Preparation:	CCP-TP-183-R0	Microwave Digester ID:	MW-3
Method, ICP-AES Analysis:	CCP-TP-182-R1	Instrument ID, ICP-AES:	ICP-7
Method, CVAA:	CCP-TP-181-R0	Instrument ID, CVAA:	CVHG-2

Concentration Units: mg/kg

CAS No.	Analyte	Concentration	C	Q	Date and Time of Analysis	Holding Time, Days	M
7440-36-0	Antimony	1.3E+00	J		02/09/2012 15:05:29	7	P
7440-38-2	Arsenic	1.0E+01			02/09/2012 15:05:29	7	P
7440-39-3	Barium	2.2E+02			02/09/2012 15:05:29	7	P
7440-41-7	Beryllium	2.8E+00			02/09/2012 15:05:29	7	P
7440-43-9	Cadmium	3.6E+01			02/09/2012 15:05:29	7	P
7440-47-3	Chromium	4.0E+01			02/09/2012 15:05:29	7	P
7439-92-1	Lead	1.7E+01			02/09/2012 15:05:29	7	P
7439-97-6	Mercury	1.6E-02	J	Z	02/09/2012 13:08:49	7	V
7440-02-0	Nickel	3.6E+01			02/09/2012 15:05:29	7	P
7782-49-2	Selenium	9.0E-01	U		02/09/2012 15:05:29	7	P
7440-22-4	Silver	2.0E-01	U		02/09/2012 15:05:29	7	P
7440-28-0	Thallium	1.0E+00	U		02/09/2012 15:05:29	7	P
7440-62-2	Vanadium	5.3E+01			02/09/2012 15:05:29	7	P
7440-66-6	Zinc	8.8E+01			02/09/2012 15:05:29	7	P

C = concentration qualifier; Q = data qualifier; M = method code

TOTAL METALS ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Field Sample ID:	AR405901MS	Data Report Number:	ALD12005M
Sampling Batch No.:	S4200-LOT-05-06	Analytical Batch ID:	1202011
Date Sampled:	02/02/2012	Lab Sample ID:	2BZ40
		Date Digested, ICP:	02/08/2012
		Date Digested, CVAA:	02/08/2012
Method, ICP-AES Preparation:	CCP-TP-183-R0	Microwave Digester ID:	MW-3
Method, ICP-AES Analysis:	CCP-TP-182-R1	Instrument ID, ICP-AES:	ICP-7
Method, CVAA:	CCP-TP-181-R0	Instrument ID, CVAA:	CVHG-2

Concentration Units: mg/kg

CAS No.	Analyte	Concentration	C	Q	Date and Time of Analysis	Holding Time, Days	M
7440-36-0	Antimony	5.7E+00			02/09/2012 15:17:53	7	P
7440-38-2	Arsenic	1.2E+01			02/09/2012 15:17:53	7	P
7440-39-3	Barium	2.5E+02			02/09/2012 15:17:53	7	P
7440-41-7	Beryllium	9.4E+00			02/09/2012 15:17:53	7	P
7440-43-9	Cadmium	2.9E+01			02/09/2012 15:17:53	7	P
7440-47-3	Chromium	5.4E+01			02/09/2012 15:17:53	7	P
7439-92-1	Lead	2.7E+01			02/09/2012 15:17:53	7	P
7439-97-6	Mercury	7.4E-02		Z	02/09/2012 13:10:37	7	V
7440-02-0	Nickel	4.4E+01			02/09/2012 15:17:53	7	P
7782-49-2	Selenium	1.4E+00	J	B	02/09/2012 15:17:53	7	P
7440-22-4	Silver	1.5E+00			02/09/2012 15:17:53	7	P
7440-28-0	Thallium	1.0E+00	U		02/09/2012 15:17:53	7	P
7440-62-2	Vanadium	5.5E+01			02/09/2012 15:17:53	7	P
7440-66-6	Zinc	1.2E+02			02/09/2012 15:17:53	7	P

C = concentration qualifier; Q = data qualifier; M = method code

TOTAL METALS ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Field Sample ID:	AR405902MS	Data Report Number:	ALD12005M
Sampling Batch No.:	S4200-LOT-05-06	Analytical Batch ID:	1202011
Date Sampled:	02/02/2012	Lab Sample ID:	2BZ45
		Date Digested, ICP:	02/08/2012
		Date Digested, CVAA:	02/08/2012
Method, ICP-AES Preparation:	CCP-TP-183-R0	Microwave Digester ID:	MW-3
Method, ICP-AES Analysis:	CCP-TP-182-R1	Instrument ID, ICP-AES:	ICP-7
Method, CVAA:	CCP-TP-181-R0	Instrument ID, CVAA:	CVHG-2

Concentration Units: mg/kg

CAS No.	Analyte	Concentration	C	Q	Date and Time of Analysis	Holding Time, Days	M
7440-36-0	Antimony	2.4E+00	J		02/09/2012 15:22:43	7	P
7440-38-2	Arsenic	1.1E+01			02/09/2012 15:22:43	7	P
7440-39-3	Barium	2.7E+02			02/09/2012 15:22:43	7	P
7440-41-7	Beryllium	8.4E+00			02/09/2012 15:22:43	7	P
7440-43-9	Cadmium	1.1E+01			02/09/2012 15:22:43	7	P
7440-47-3	Chromium	4.8E+01			02/09/2012 15:22:43	7	P
7439-92-1	Lead	1.8E+01			02/09/2012 15:22:43	7	P
7439-97-6	Mercury	1.4E-01		Z	02/09/2012 13:13:30	7	V
7440-02-0	Nickel	4.3E+01			02/09/2012 15:22:43	7	P
7782-49-2	Selenium	1.7E+00	J	B	02/09/2012 15:22:43	7	P
7440-22-4	Silver	1.5E+00			02/09/2012 15:22:43	7	P
7440-28-0	Thallium	9.9E-01	U		02/09/2012 15:22:43	7	P
7440-62-2	Vanadium	5.9E+01			02/09/2012 15:22:43	7	P
7440-66-6	Zinc	1.2E+02			02/09/2012 15:22:43	7	P

C = concentration qualifier; Q = data qualifier; M = method code

Section 4

Batch QC Sample Results

LABORATORY CONTROL SAMPLE

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

LCS ID, ICP-AES:	LCS1443-08	Data Report Number:	ALD12005M
LCS ID, CVAA:	LCS1395-18	Analytical Batch ID:	1202011
LCS Source, ICP-AES:	ERA LOT# D067-540		
LCS Source, CVAA:	ERA LOT# D067-540		
		Date Digested, ICP-AES:	02/08/2012
		Date Digested, CVAA:	02/08/2012
Method, ICP-AES Preparation:	CCP-TP-183-R0	Microwave Digester ID:	MW-3
Method, ICP-AES Analysis:	CCP-TP-182-R1	Instrument ID, ICP-AES:	ICP-7
Method, CVAA:	CCP-TP-181-R0	Instrument ID, CVAA:	CVHG-2

Concentration Units: mg/kg

Analyte	True	Found	C	Control Limits Low	Control Limits High	%R	M
Antimony	167.88	179.2900		94.86	241.49	106.8	P
Arsenic	150.39	148.7000		137.51	163.49	98.9	P
Barium	278.06	294.6500		248.51	307.49	106.0	P
Beryllium	157.20	156.3300		143.51	171.49	99.4	P
Cadmium	70.34	69.1800		62.35	78.34	98.4	P
Chromium	114.00	118.5500		103.51	124.49	104.0	P
Lead	138.36	144.4800		123.51	153.49	104.4	P
Mercury	25.30	23.9250		18.10	32.40	94.6	V
Nickel	130.50	127.3900		116.51	144.49	97.6	P
Selenium	215.82	211.4000		198.51	233.49	98.0	P
Silver	45.98	45.2300		41.15	50.85	98.4	P
Thallium	138.90	136.1900		126.51	151.49	98.0	P
Vanadium	89.23	92.0300		81.06	97.34	103.1	P
Zinc	243.18	242.8800		216.51	269.49	99.9	P

C = concentration qualifier; M = method code

Acceptance Criteria: %R within established statistical control limits for solid LCS material

MATRIX SPIKE RECOVERY

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Field Sample ID: AR405801MSS

Data Report Number: ALD12005M
Analytical Batch ID: 1202011
Lab Sample ID: 2BZ10S

Method, ICP-AES Preparation: CCP-TP-183-R0
Method, ICP-AES Analysis: CCP-TP-182-R1
Method, CVAA: CCP-TP-181-R0

Microwave Digester ID: MW-3
Instrument ID, ICP-AES: ICP-7
Instrument ID, CVAA: CVHG-2

Concentration Units: mg/kg

Analyte	Spike Sample Result	C	Sample Result	C	Spike Added	%R	Q	M
Antimony	96.0300		1.8300	J	100.0000	94.2		P
Arsenic	114.4900		10.1400		100.0000	104.4		P
Barium	2197.1000		257.6600		2000.0000	97.0		P
Beryllium	162.4000		48.1600		100.0000	114.2		P
Cadmium	49.7200		30.6900		20.0000	95.2		P
Chromium	153.2600		62.4900		100.0000	90.8		P
Lead	145.8600		48.6200		100.0000	97.2		P
Mercury	4.7794		2.7445		0.7984	254.9	Z	V
Nickel	136.1400		47.2900		100.0000	88.8		P
Selenium	22.2800		0.9000	U	20.0000	111.4		P
Silver	107.4000		6.1500		100.0000	101.2		P
Thallium	80.3100		1.0000	U	100.0000	80.3		P
Vanadium	143.8400		50.6300		100.0000	93.2		P
Zinc	238.7200		152.9900		100.0000	85.7		P

C= concentration qualifier; Q=data qualifier; M=method code

Acceptance Criteria: %R 80-120 for target analytes

0044

MATRIX SPIKE RECOVERY

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Field Sample ID: AR405801MSSD

Data Report Number: ALD12005M
Analytical Batch ID: 1202011
Lab Sample ID: 2BZ10SD

Method, ICP-AES Preparation: CCP-TP-183-R0
Method, ICP-AES Analysis: CCP-TP-182-R1
Method, CVAA: CCP-TP-181-R0

Microwave Digester ID: MW-3
Instrument ID, ICP-AES: ICP-7
Instrument ID, CVAA: CVHG-2

Concentration Units: mg/kg

Analyte	Spike Sample Result	C	Sample Result	C	Spike Added	%R	Q	M
Antimony	87.1400		1.8300	J	100.0000	85.3		P
Arsenic	119.1000		10.1400		100.0000	109.0		P
Barium	2129.4000		257.6600		2000.0000	93.6		P
Beryllium	150.9700		48.1600		100.0000	102.8		P
Cadmium	54.0200		30.6900		20.0000	116.6		P
Chromium	149.7100		62.4900		100.0000	87.2		P
Lead	152.5900		48.6200		100.0000	104.0		P
Mercury	3.0513		2.7445		0.7968	38.5	Z	V
Nickel	135.7800		47.2900		100.0000	88.5		P
Selenium	20.5700		0.9000	U	20.0000	102.8		P
Silver	111.3700		6.1500		100.0000	105.2		P
Thallium	80.9600		1.0000	U	100.0000	81.0		P
Vanadium	150.4800		50.6300		100.0000	99.8		P
Zinc	260.4300		152.9900		100.0000	107.4		P

C= concentration qualifier; Q=data qualifier; M=method code

Acceptance Criteria: %R 80-120 for target analytes

MATRIX SPIKE DUPLICATE AGREEMENT

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Field Sample ID: AR405801MS

Data Report Number: ALD12005M
Analytical Batch ID: 1202011
Lab Sample ID: 2BZ10

Method, ICP-AES Preparation: CCP-TP-183-R0
Method, ICP-AES Analysis: CCP-TP-182-R1
Method, CVAA: CCP-TP-181-R0

Microwave Digester ID: MW-3
Instrument ID, ICP-AES: ICP-7
Instrument ID, CVAA: CVHG-2

Concentration Units: mg/kg

Analyte	Matrix Spike Result	C	Matrix Spike Duplicate Result	C	RPD	Q	M
Antimony	96.0300		87.1400		9.7		P
Arsenic	114.4900		119.1000		3.9		P
Barium	2197.1000		2129.4000		3.1		P
Beryllium	162.4000		150.9700		7.3		P
Cadmium	49.7200		54.0200		8.3		P
Chromium	153.2600		149.7100		2.3		P
Lead	145.8600		152.5900		4.5		P
Mercury	4.7794		3.0513		44.1	Z	V
Nickel	136.1400		135.7800		0.3		P
Selenium	22.2800		20.5700		8.0		P
Silver	107.4000		111.3700		3.6		P
Thallium	80.3100		80.9600		0.8		P
Vanadium	143.8400		150.4800		4.5		P
Zinc	238.7200		260.4300		8.7		P

C = concentration qualifier; Q = data qualifier; M = method code
RPD = relative percent difference

Acceptance Criteria for CVAA: RPD ≤ 30

Acceptance Criteria for ICP-AES: RPD ≤30 when sample and duplicate concentrations are ≥10 × IDL. Absolute difference ≤ PRDL when sample and duplicate concentrations are <10 × IDL.

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POST DIGESTION SPIKE RECOVERY

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Field Sample ID:	AR405801MSA	Data Report No.:	ALD12005M
		Analytical Batch ID:	1202011
		Lab Sample ID:	2BZ10A
Method, ICP-AES Analysis:	CCP-TP-182-R1	Instrument ID, ICP-AES:	ICP-7
Method, CVAA:	CCP-TP-181-R0	Instrument ID, CVAA:	CVHG-2

Concentration Units: ug/L

Analyte	Spiked Result	C	Sample Result	C	Spike Added	%R	Q	M
Antimony	1048.5000		18.3000	J	1000.0000	103.0		P
Arsenic	1184.2000		101.4000		1000.0000	108.3		P
Barium	3631.1000		2576.6000		1000.0000	105.4		P
Beryllium	1515.0000		481.6000		1000.0000	103.3		P
Cadmium	1280.4000		306.9000		1000.0000	97.4		P
Chromium	1625.8000		624.9000		1000.0000	100.1		P
Lead	1450.7000		486.2000		1000.0000	96.4		P
Mercury						NA		V
Nickel	1427.7000		472.9000		1000.0000	95.5		P
Selenium	1102.8000		9.0000	U	1000.0000	110.3		P
Silver	1125.1000		61.5000		1000.0000	106.4		P
Thallium	974.4000		10.0000	U	1000.0000	97.4		P
Vanadium	1506.6000		506.3000		1000.0000	100.0		P
Zinc	2507.4000		1529.9000		1000.0000	97.8		P

C = concentration qualifier; Q = data qualifier; M = method code

Acceptance Criteria: %R 85-115 for mercury

%R 75-125 for all other target analytes

SERIAL DILUTION AGREEMENT

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Field Sample ID:	AR405801MSL	Data Report No.:	ALD12005M
		Analytical Batch ID:	1202011
		Lab Sample ID:	2BZ10L
Method, ICP-AES Analysis:	CCP-TP-182-R1	Instrument ID, ICP-AES:	ICP-7
Method, CVAA:	CCP-TP-181-R0	Instrument ID, CVAA:	CVHG-2

Concentration Units: ug/L

Analyte	Sample Result	C	Serial Dilution Result	C	%Difference	Q	M
Antimony	18.3000	J	50.0000	U	100.0		P
Arsenic	101.4000		123.5000	J	21.8		P
Barium	2576.6000		2520.5000		2.2		P
Beryllium	481.6000		475.5000		1.3		P
Cadmium	306.9000		313.0000		2.0		P
Chromium	624.9000		615.5000		1.5		P
Lead	486.2000		472.5000		2.8		P
Mercury	5.4890		5.4950		0.1		V
Nickel	472.9000		496.0000		4.9		P
Selenium	9.0000	U	45.0000	U			P
Silver	61.5000		51.0000		17.1		P
Thallium	10.0000	U	50.0000	U			P
Vanadium	506.3000		497.0000		1.8		P
Zinc	1529.9000		1560.0000		2.0		P

C = concentration qualifier; Q = data qualifier; M = method code

Acceptance Criteria: ≤ 10 %D for target analyte concentration > 50×IDL

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Section 5

Instrument QC Data

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Data Report Number: ALD12005M
Analytical Batch ID: 1202011

Calibration Source, ICP-AES: CPI International
ICV Source, ICP-AES: SPEX Industries
CCV Source, ICP-AES: SPEX Industries

Calibration Source, CVAA: SPEX Industries
ICV Source, CVAA: CPI International
CCV Source, CVAA: SPEX Industries

Method, ICP-AES Analysis: CCP-TP-182-R1
Method, CVAA: CCP-TP-181-R0

Instrument ID, ICP-AES: ICP-7
Instrument ID, CVAA: CVHG-2

Concentration Units: ug/L

Analyte	Initial Calibration Verification			Continuing Calibration Verification					M
	True	Found	%R	True	Found	%R	Found	%R	
Aluminum	2500.0	2630.400	105.2	2500.0	2677.200	107.1	2642.700	105.7	P
Antimony	2500.0	2455.400	98.2	2500.0	2455.900	98.2	2480.300	99.2	P
Arsenic	2500.0	2512.300	100.5	2500.0	2516.500	100.7	2547.300	101.9	P
Barium	2500.0	2513.900	100.6	2500.0	2599.600	104.0	2535.300	101.4	P
Beryllium	2500.0	2518.900	100.8	2500.0	2482.500	99.3	2519.500	100.8	P
Cadmium	2500.0	2525.800	101.0	2500.0	2528.500	101.1	2530.300	101.2	P
Calcium	2500.0	2525.300	101.0	2500.0	2501.400	100.1	2500.700	100.0	P
Chromium	2500.0	2566.600	102.7	2500.0	2563.700	102.5	2556.400	102.3	P
Copper	2500.0	2557.600	102.3	2500.0	2519.700	100.8	2576.600	103.1	P
Iron	2500.0	2546.800	101.9	2500.0	2548.400	101.9	2537.000	101.5	P
Lead	2500.0	2497.100	99.9	2500.0	2508.500	100.3	2530.000	101.2	P
Magnesium	2500.0	2450.300	98.0	2500.0	2449.900	98.0	2453.500	98.1	P
Manganese	2500.0	2558.000	102.3	2500.0	2548.100	101.9	2559.600	102.4	P
Mercury	4.0	4.118	103.0	4.0	4.168	104.2	4.151	103.8	V
Nickel	2500.0	2548.700	101.9	2500.0	2540.900	101.6	2545.500	101.8	P
Selenium	2500.0	2531.100	101.2	2500.0	2566.600	102.7	2542.100	101.7	P
Silver	2500.0	2495.100	99.8	2500.0	2426.500	97.1	2519.500	100.8	P
Thallium	2500.0	2574.900	103.0	2500.0	2575.600	103.0	2611.800	104.5	P
Titanium	2500.0	2526.500	101.1	2500.0	2515.700	100.6	2516.200	100.6	P
Uranium	2500.0	2650.000	106.0	2500.0	2676.300	107.1	2466.500	98.7	P
Vanadium	2500.0	2514.200	100.6	2500.0	2452.100	98.1	2494.000	99.8	P
Zinc	2500.0	2546.700	101.9	2500.0	2530.300	101.2	2550.200	102.0	P

Acceptance Criteria: %R 80-120 for mercury
%R 90-110 for all other analytes

0050

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Data Report Number: ALD12005M
Analytical Batch ID: 1202011

Calibration Source, ICP-AES: CPI International
ICV Source, ICP-AES:
CCV Source, ICP-AES: SPEX Industries

Calibration Source, CVAA: SPEX Industries
ICV Source, CVAA:
CCV Source, CVAA: SPEX Industries

Method, ICP-AES Analysis: CCP-TP-182-R1
Method, CVAA: CCP-TP-181-R0

Instrument ID, ICP-AES: ICP-7
Instrument ID, CVAA: CVHG-2

Concentration Units: ug/L

Analyte	Initial Calibration Verification			Continuing Calibration Verification					M
	True	Found	%R	True	Found	%R	Found	%R	
Aluminum			NA	2500.0	2600.900	104.0	2614.800	104.6	P
Antimony			NA	2500.0	2512.500	100.5	2504.100	100.2	P
Arsenic			NA	2500.0	2599.500	104.0	2578.400	103.1	P
Barium			NA	2500.0	2620.400	104.8	2757.100	110.3	P
Beryllium			NA	2500.0	2623.500	104.9	2657.200	106.3	P
Cadmium			NA	2500.0	2562.200	102.5	2545.200	101.8	P
Calcium			NA	2500.0	2601.700	104.1	2640.100	105.6	P
Chromium			NA	2500.0	2576.900	103.1	2559.900	102.4	P
Copper			NA	2500.0	2610.000	104.4	2617.600	104.7	P
Iron			NA	2500.0	2625.300	105.0	2744.500	109.8	P
Lead			NA	2500.0	2556.200	102.2	2560.100	102.4	P
Magnesium			NA	2500.0	2539.000	101.6	2640.900	105.6	P
Manganese			NA	2500.0	2707.400	108.3	2756.300	110.3	P
Mercury			NA	4.0	4.171	104.3		NA	V
Nickel			NA	2500.0	2580.000	103.2	2541.100	101.6	P
Selenium			NA	2500.0	2613.100	104.5	2573.800	103.0	P
Silver			NA	2500.0	2553.200	102.1	2528.100	101.1	P
Thallium			NA	2500.0	2625.800	105.0	2622.900	104.9	P
Titanium			NA	2500.0	2544.700	101.8	2564.000	102.6	P
Uranium			NA	2500.0	2566.000	102.6	2577.400	103.1	P
Vanadium			NA	2500.0	2621.800	104.9	2678.900	107.2	P
Zinc			NA	2500.0	2589.100	103.6	2571.300	102.9	P

Acceptance Criteria: %R 80-120 for mercury

%R 90-110 for all other analytes

0051

ICP-AES LOW LEVEL CONCENTRATION CHECK STANDARD

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Data Report Number: ALD12005M
Analytical Batch ID: 1202011

Method, ICP-AES: CCP-TP-182-R1

Instrument ID, ICP-AES: ICP-7

Concentration Units: ug/L

Analyte	True	Found	%R
Antimony	200.0	200.5	100.2
Arsenic	200.0	203.8	101.9
Barium	1000.0	921.4	92.1
Beryllium	200.0	207.0	103.5
Cadmium	200.0	207.4	103.7
Chromium	200.0	210.3	105.2
Lead	200.0	201.0	100.5
Nickel	200.0	206.0	103.0
Selenium	200.0	204.6	102.3
Silver	200.0	192.4	96.2
Thallium	200.0	217.8	108.9
Vanadium	200.0	208.0	104.0
Zinc	200.0	206.9	103.4

Acceptance Criteria: %R 80-120 for target anaytes

0052

BLANKS

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Data Report Number: ALD12005M
Analytical Batch ID: 1202011

Lab Blank ID ICP-AES: LB1443-08
Lab Blank ID CVAA: LB1395-18

Date Digested ICP-AES: 02/08/2012
Date Digested, CVAA: 02/08/2012

Method, ICP-AES Preparation: CCP-TP-183-R0
Method, ICP-AES Analysis: CCP-TP-182-R1
Method, CVAA: CCP-TP-181-R0

Microwave Digester ID: MW-3
Instrument ID, ICP-AES: ICP-7
Instrument ID, CVAA: CVHG-2

	Initial Calibration Blank, ug/L		Continuing Calibration Blank, ug/L						Laboratory Blank, mg/kg		
Analyte		**C**	**1**	**C**	**2**	**C**	**3**	**C**		**C**	**M**
Aluminum	8.0	U	8.0	U	8.0	U	8.0	U	NA		P
Antimony	10.0	U	10.0	U	10.0	U	10.0	U	1.000	U	P
Arsenic	10.0	U	10.0	U	10.0	U	10.0	U	1.000	U	P
Barium	66.0	U	66.0	U	66.0	U	66.0	U	6.600	U	P
Beryllium	1.0	U	1.0	U	1.0	U	1.0	U	0.100	U	P
Cadmium	1.0	U	1.0	U	1.0	U	1.0	U	0.100	U	P
Calcium	17.0	U	17.0	U	17.0	U	17.0	U	NA		P
Chromium	1.0	U	1.0	U	1.0	U	1.0	U	0.100	U	P
Copper	2.0	U	2.0	U	2.0	U	2.0	U	NA		P
Iron	16.0	U	16.0	U	16.0	U	16.0	U	NA		P
Lead	3.0	U	3.0	U	3.0	U	3.0	U	0.300	U	P
Magnesium	17.0	U	19.5	J	17.0	U	17.0	U	NA		P
Manganese	1.0	U	1.0	U	1.0	U	1.0	U	NA		P
Mercury	0.1	U	0.1	U	0.1	U	0.1	U	0.010	U	V
Nickel	1.0	U	1.0	U	1.0	U	1.0	U	0.100	U	P
Selenium	9.0	U	14.7	J	9.0	U	9.0	U	0.900	U	P
Silver	2.0	U	2.0	U	2.0	U	2.0	U	0.200	U	P
Thallium	10.0	U	10.0	U	10.0	U	10.0	U	1.000	U	P
Titanium	1.0	U	1.0	U	1.0	U	1.0	U	NA		P
Uranium	28.0	U	28.0	U	28.0	U	28.0	U	NA		P
Vanadium	3.0	U	3.0	U	3.0	U	3.0	U	0.300	U	P
Zinc	2.0	U	2.0	U	2.0	U	2.0	U	2.340		P

C = concentration qualifier; M = method code

Acceptance Criteria, ICB/CCB: Absolute value of result ≤ PRDL

Acceptance Criteria, LB: Result ≤ 3 × PRDL

0053

BLANKS

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Data Report Number: ALD12005M
Analytical Batch ID: 1202011

Lab Blank ID ICP-AES: LB1443-08
Lab Blank ID CVAA: LB1395-18

Date Digested ICP-AES: 02/08/2012
Date Digested, CVAA: 02/08/2012

Method, ICP-AES Preparation: CCP-TP-183-R0
Method, ICP-AES Analysis: CCP-TP-182-R1
Method, CVAA: CCP-TP-181-R0

Microwave Digester ID: MW-3
Instrument ID, ICP-AES: ICP-7
Instrument ID, CVAA: CVHG-2

	Initial Calibration Blank, ug/L		Continuing Calibration Blank, ug/L						Laboratory Blank, mg/kg		
Analyte		C	1	C	2	C	3	C		C	M
Aluminum			8.0	U					NA		P
Antimony			10.0	U							P
Arsenic			10.0	U							P
Barium			66.0	U							P
Beryllium			1.0	U							P
Cadmium			1.0	U							P
Calcium			17.0	U					NA		P
Chromium			1.0	U							P
Copper			2.0	U					NA		P
Iron			16.0	U					NA		P
Lead			3.0	U							P
Magnesium			20.4	J					NA		P
Manganese			1.0	U					NA		P
Mercury											V
Nickel			1.1	J							P
Selenium			11.4	J							P
Silver			2.0	U							P
Thallium			10.0	U							P
Titanium			1.0	U					NA		P
Uranium			28.0	U					NA		P
Vanadium			3.0	U							P
Zinc			2.0	U							P

C = concentration qualifier; M = method code

Acceptance Criteria, ICB/CCB: Absolute value of result ≤ PRDL

Acceptance Criteria, LB: Result ≤ 3 × PRDL

0054

ICP-AES INTERFERENCE CHECK SAMPLE

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Data Report Number: ALD12005M
Analytical Batch ID: 1202011

Method, ICP-AES Analysis: CCP-TP-182-R1 Instrument ID, ICP-AES: ICP-7

Concentration Units: ug/L

Analyte	True		Initial Found			Final Found		
	Solution A	Solution AB	Sol. A	Sol. AB	%R	Sol. A	Sol. AB	%R
Antimony		1000	23	1073.3	107.3	14	1048.1	104.8
Arsenic		1000	1	1087.5	108.8	8	1099.7	110.0
Barium		1000	-2	857.4	85.7	-6	1015.1	101.5
Beryllium		500	2	486.5	97.3	2	516.7	103.3
Cadmium		1000	2	930.3	93.0	1	930.7	93.1
Chromium		500	-2	474.4	94.9	-2	470.4	94.1
Lead		1000	3	916.1	91.6	11	935.8	93.6
Nickel		1000	2	895.8	89.6	1	904.3	90.4
Selenium		1000	27	1115.1	111.5	17	1127.8	112.8
Silver		1000	13	1050.1	105.0	11	1064.8	106.5
Thallium		1000	-26	888.3	88.8	-22	875.8	87.6
Vanadium		500	16	484.1	96.8	10	517.5	103.5
Zinc		1000	3	924.0	92.4	2	931.1	93.1

Acceptance Criteria: Sol. AB (ICSAB) %R 80-120 for target analytes

INSTRUMENT DETECTION LIMITS

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Data Report Number: ALD12005M
Analytical Batch ID: 1202011

Method, ICP-AES Analysis: CCP-TP-182-R1
Method, CVAA: CCP-TP-181-R0

Instrument ID, ICP-AES: ICP-7
Instrument ID, CVAA: CVHG-2

Analyte	Wavelength (nm)	IDL (ug/L)	IDL Effective Date	M
Aluminum	396.15	8.0	12/07/2011	P
Antimony	206.83	10.0	12/07/2011	P
Arsenic	188.98	10.0	12/07/2011	P
Barium	233.53	66.0	12/07/2011	P
Beryllium	313.11	1.0	12/07/2011	P
Cadmium	214.44	1.0	12/07/2011	P
Calcium	317.93	17.0	12/07/2011	P
Chromium	205.56	1.0	12/07/2011	P
Copper	324.75	2.0	12/07/2011	P
Iron	273.96	16.0	12/07/2011	P
Lead	220.35	3.0	12/07/2011	P
Magnesium	279.08	17.0	12/07/2011	P
Manganese	257.61	1.0	12/07/2011	P
Mercury	253.70	0.1	12/05/2011	V
Nickel	231.60	1.0	12/07/2011	P
Selenium	196.03	9.0	12/07/2011	P
Silver	328.07	2.0	12/07/2011	P
Thallium	190.80	10.0	12/07/2011	P
Titanium	334.94	1.0	12/07/2011	P
Uranium	409.01	28.0	12/07/2011	P
Vanadium	292.40	3.0	12/07/2011	P
Zinc	206.20	2.0	12/07/2011	P

IDL = instrument detection limit; M = method code

Acceptance Criteria: IDL ≤ PRDL 0056

ICP-AES LINEAR RANGES

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Data Report Number: ALD12005M
Analytical Batch ID: 1202011

Method, ICP-AES Analysis: CCP-TP-182-R1

Instrument ID, ICP-AES: ICP-7

Analyte	Wavelength (nm)	Linear Range (ug/L)	Linear Range Effective Date
Aluminum	396.15	1000000.0	12/08/2011
Antimony	206.83	50000.0	12/08/2011
Arsenic	188.98	5000.0	12/08/2011
Barium	233.53	100000.0	12/08/2011
Beryllium	313.11	50000.0	12/08/2011
Cadmium	214.44	25000.0	12/08/2011
Calcium	317.93	2500000.0	12/08/2011
Chromium	205.56	50000.0	12/08/2011
Copper	324.75	500000.0	12/08/2011
Iron	273.96	1000000.0	12/08/2011
Lead	220.35	100000.0	12/08/2011
Magnesium	279.08	1000000.0	12/08/2011
Manganese	257.61	100000.0	12/08/2011
Nickel	231.60	100000.0	12/08/2011
Selenium	196.03	5000.0	12/08/2011
Silver	328.07	5000.0	12/08/2011
Thallium	190.80	50000.0	12/08/2011
Titanium	334.94	100000.0	12/08/2011
Uranium	409.01	1000000.0	12/08/2011
Vanadium	292.40	100000.0	12/08/2011
Zinc	206.20	50000.0	12/08/2011

TOTAL METALS ANALYSIS
ICP-AES ANALYSIS SEQUENCE

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Analysis Date: 02/09/2012

Data Report Number: ALD12005M
Analytical Batch ID: 1202011

Method, ICP-AES Analysis: CCP-TP-182-R1

Instrument ID, ICP-AES: ICP-7

			Target Analytes													
Lab Sample ID	DF	Time	Sb	As	Ba	Be	Cd	Cr	Pb	Ni	Se	Ag	Tl	V	Zn	Comments
StdLow	1.0	11:55	X	X	X	X	X	X	X	X	X	X	X	X	X	Calibration Blank
StdHigh	1.0	11:59	X	X	X	X	X	X	X	X	X	X	X	X	X	5 mg/L
StdHighUTi	1.0	12:02														5 mg/L (U & Ti)
ICV	1.0	12:05	X	X	X	X	X	X	X	X	X	X	X	X	X	2.5 mg/L
ICB	1.0	12:09	X	X	X	X	X	X	X	X	X	X	X	X	X	
LLC	1.0	12:13	X	X		X	X	X	X	X	X	X	X	X	X	0.2 mg/L
LLC	1.0	12:17			X											1.0 mg/L
ICSA	1.0	12:20	X	X	X	X	X	X	X	X	X	X	X	X	X	
ICSAB	1.0	12:25														Re-prepared Ba,1 ppm
ICSAB	1.0	12:38	X	X	X	X	X	X	X	X	X	X	X	X	X	
LB1443-08	1.0	12:43	X	X	X	X	X	X	X	X	X	X	X	X	X	
LCS1443-08	1.0	12:47	X	X	X	X	X	X	X	X	X	X	X	X	X	
2BZ10	1.0	12:52	X	X	X	X	X	X	X	X	X	X	X	X	X	
2BZ10L	5.0	12:56	X	X	X	X	X	X	X	X	X	X	X	X	X	
2BZ10S	1.0	13:00	X	X	X	X	X	X	X	X	X	X	X	X	X	
CCV	1.0	13:06	X	X	X	X	X	X	X	X	X	X	X	X	X	2.5 mg/L
CCB	1.0	13:09	X	X	X	X	X	X	X	X	X	X	X	X	X	
2BZ10SD	1.0	13:13														DNR- CCV out for Ba
2BZ10A	1.0	13:18														DNR- CCV out for Ba
2BY99	1.0	13:23														DNR- CCV out for Ba
2BZ05	1.0	13:28														DNR- CCV out for Ba
2BZ15	1.0	13:33														DNR- CCV out for Ba
2BZ20	1.0	13:37														DNR- CCV out for Ba
2BZ25	1.0	13:42														DNR- CCV out for Ba
2BZ30	1.0	13:47														DNR- CCV out for Ba
2BZ35	1.0	13:52														DNR- CCV out for Ba
CCV	1.0	13:57														DNR- CCV out for Ba
CCB	1.0	14:01														DNR- CCV out for Ba

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TOTAL METALS ANALYSIS
ICP-AES ANALYSIS SEQUENCE

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Analysis Date: 02/09/2012

Data Report Number: ALD12005M
Analytical Batch ID: 1202011

Method, ICP-AES Analysis: CCP-TP-182-R1

Instrument ID, ICP-AES: ICP-7

			Target Analytes													
Lab Sample ID	DF	Time	Sb	As	Ba	Be	Cd	Cr	Pb	Ni	Se	Ag	Tl	V	Zn	Comments
StdLow	1.0	14:08	X	X	X	X	X	X	X	X	X	X	X	X	X	Calibration Blank
StdHigh	1.0	14:11	X	X	X	X	X	X	X	X	X	X	X	X	X	5 mg/L
StdHighUTi	1.0	14:15														5 mg/L (U & Ti)
CCV	1.0	14:19	X	X	X	X	X	X	X	X	X	X	X	X	X	2.5 mg/L
CCB	1.0	14:23	X	X	X	X	X	X	X	X	X	X	X	X	X	
2BZ10SD	1.0	14:26	X	X	X	X	X	X	X	X	X	X	X	X	X	
2BZ10A	1.0	14:31	X	X	X	X	X	X	X	X	X	X	X	X	X	
2BY99	1.0	14:36	X	X	X	X	X	X	X	X	X	X	X	X	X	
2BZ05	1.0	14:41	X	X	X	X	X	X	X	X	X	X	X	X	X	
2BZ15	1.0	14:46	X	X	X	X	X	X	X	X	X	X	X	X	X	
2BZ20	1.0	14:51	X	X	X	X	X	X	X	X	X	X	X	X	X	
2BZ25	1.0	14:55	X	X	X	X	X	X	X	X	X	X	X	X	X	
2BZ30	1.0	15:00	X	X	X	X	X	X	X	X	X	X	X	X	X	
2BZ35	1.0	15:05	X	X	X	X	X	X	X	X	X	X	X	X	X	
CCV	1.0	15:10	X	X	X	X	X	X	X	X	X	X	X	X	X	2.5 mg/L
CCB	1.0	15:14	X	X	X	X	X	X	X	X	X	X	X	X	X	
2BZ40	1.0	15:17	X	X	X	X	X	X	X	X	X	X	X	X	X	
2BZ45	1.0	15:22	X	X	X	X	X	X	X	X	X	X	X	X	X	
ICSA	1.0	15:27	X	X	X	X	X	X	X	X	X	X	X	X	X	
ICSAB	1.0	15:32	X	X	X	X	X	X	X	X	X	X	X	X	X	
CCV	1.0	15:37	X	X	X	X	X	X	X	X	X	X	X	X	X	2.5 mg/L
CCB	1.0	15:40	X	X	X	X	X	X	X	X	X	X	X	X	X	

DF = at instrument dilution factor

0059

TOTAL METALS ANALYSIS
CVAA ANALYSIS SEQUENCE

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Analysis Date: 02/09/2012

Data Report Number: ALD12005M
Analytical Batch ID: 1202011

Method, CVAA: CCP-TP-181-R0

Instrument ID, CVAA: CVHG-2

CVAA Calibration Correlation Coefficient (r): 0.99964

Lab Sample ID	DF	Time	Hg	Comments
S0	1.00	11:52	X	Calibration Blank
S0.2	1.00	11:54	X	0.2 ug/L
S1	1.00	11:56	X	1.0 ug/L
S4	1.00	11:59	X	4.0 ug/L
S8	1.00	12:02	X	8.0 ug/L
S12	1.00	12:05	X	12.0 ug/L
ICV1395-18	1.00	12:08	X	4.0 ug/L
ICB	1.00	12:11	X	
CCV	1.00	12:12	X	4.0 ug/L
CCB	1.00	12:15	X	
LB1395-18	1.00	12:17	X	
LCS1395-18	20.00	12:22	X	
2BZ10	1.00	12:25		DNR-Dilution needed
2BZ10	5.00	12:34	X	
2BZ10S	5.00	12:37	X	
2BZ10SD	5.00	12:40	X	
2BY99	1.00	12:43	X	
2BZ05	1.00	12:46	X	
2BZ15	1.00	12:49		DNR-Dilution needed
CCV	1.00	12:54	X	4.0 ug/L
CCB	1.00	12:57	X	
2BZ15	5.00	12:59	X	
2BZ20	1.00	13:02	X	
2BZ25	1.00	13:05	X	
2BZ30	1.00	13:07	X	
2BZ35	1.00	13:08	X	
2BZ40	1.00	13:10	X	
2BZ45	1.00	13:13	X	
2BZ10L	25.00	13:20	X	
CCV	1.00	13:23	X	4.0 ug/L
CCB	1.00	13:26	X	

TOTAL METALS ANALYSIS
METHOD PRECISION AND ACCURACY (P&A) DEMONSTRATION

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Method P&A Effective Date, ICP-AES: 10/18/2011
Method P&A Effective Date, CVAA: 10/18/2011

Data Report Number: ALD12005M
Analytical Batch ID: 1202011

Method Performance Sample Source: ERA LOT# D067-540

Method, ICP-AES Preparation: CCP-TP-183-R0
Method, ICP-AES Analysis: CCP-TP-182-R1
Method, CVAA: CCP-TP-181-R0

Microwave Digester ID: MW-3
Instrument ID, ICP-AES: ICP-7
Instrument ID, CVAA: CVHG-2

Target Analyte	Number of Method Performance Samples	Accuracy					Precision		M
		True Value (mg/kg)	Mean Found Value (mg/kg)	Acceptance Limits (mg/kg)		%R	%RSD	Acceptance Limits (%RSD)	
				Lower	Upper				
Antimony	4	167.88	154.11	94.86	241.49	91.8	8.5	≤30	P
Arsenic	4	150.39	151.90	137.51	163.49	101.0	1.9	≤30	P
Barium	4	278.06	271.60	248.51	307.49	97.7	2.6	≤30	P
Beryllium	4	157.20	158.24	143.51	171.49	100.7	2.2	≤30	P
Cadmium	4	70.34	70.77	62.35	78.34	100.6	3.2	≤30	P
Chromium	4	114.00	111.17	103.51	124.49	97.5	1.7	≤30	P
Lead	4	138.36	139.17	123.51	153.49	100.6	2.7	≤30	P
Mercury	4	25.30	24.29	18.10	32.40	96.0	6.5	≤30	V
Nickel	4	130.50	129.27	116.51	144.49	99.1	3.2	≤30	P
Selenium	4	215.82	215.65	198.51	233.49	99.9	0.7	≤30	P
Silver	4	45.98	46.60	41.15	50.85	101.3	1.1	≤30	P
Thallium	4	138.90	141.27	126.51	151.49	101.7	2.7	≤30	P
Vanadium	4	89.23	84.60	81.06	97.34	94.8	4.1	≤30	P
Zinc	4	243.18	236.32	216.51	269.49	97.2	1.9	≤30	P

M = Method Code (P = ICP-AES; V = CVAA)

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Section 6

Data Review Checklists

CCP Sample Receiving & Custody Review Checklist
AMWTP Analytical Chemistry Laboratory

Log Number: 1202011	Waste Stream ID: ARP Soils	NCR Initiation Required? ☐ Yes X No
COC Numbers: AR4057R1,AR4057R2,AR4057C1,AR4057C2,AR4058R1,AR4058R2, AR4058C1,AR4058C2,AR4060R1,AR4060R2,AR4060C1,AR4060C2,AR4050R1, AR4050R2,AR4050C1,AR4050C2,AR4059R1,AR4059R2,AR4059C1,AR4059C2		IF Yes, NCR Number:
Reviewer: Bill Strong (Printed Name) — (Signature) — 2-07-2012 (Date)		Procedure Number: CCP-TP-180 Revision 2

Instructions: Complete one checklist per analytical log. Enter the appropriate response for each question. Each "No" response requires explanation. A "No" response to a question may require initiation of an NCR.

Requirement	Yes	No	Comments
1. Field Chain of Custody (COC) Forms			
a. Was a COC form received with each shipping container?	☒	☐	
b. Did the content of each shipping container match that listed on the associated COC form?	☒	☐	
c. Are all custody transfers completely documented by signatures of relinquishers and receivers, with date and time of transfer?	☒	☐	
d. Does all sample information (e.g., sample ID, sampling date and time, sampling batch) listed on the COC form correspond with the information on the sample labels?	☒	☐	
e. Is the correct analysis requested for each sample?	☒	☐	
f. Are any corrections on the COC form appropriately made with a single line through the incorrect entry and the correct data written in (not overwritten), initialed and dated?	☒	☐	See Note 1
2. Sample Labels			
a. Was each sample received with a completed sample label?	☒	☐	
b. Do the field sample IDs on the sample labels correspond to those on the field COC form?	☒	☐	
c. Are the sampling batch number, sampling date, time and requested analysis recorded on each sample label, and correspond with those recorded on the COC form?	☒	☐	
d. Are the sampler initials, organization and sample description recorded on each sample label?	☒	☐	
e. Are any corrections on the sample labels appropriately made with a single line through the incorrect entry and the correct data written in (not overwritten), initialed and dated?	☒	☐	
3. Sample Integrity			
a. Were custody seals used on the shipping container?	☐	☒	See Note 2
b. Were custody seals used on each individual sample container?	☒	☐	
c. Were all custody seals intact and undamaged upon receipt at the laboratory?	☒	☐	
d. Were all custody seals placed such that the container could not be opened without damaging the seal?	☒	☐	
e. Has the physical integrity of each sample been maintained (e.g., no cracks or leaks)?	☒	☐	
f. Were all samples preserved during shipment with "Blue Ice" or equivalent cooling mechanism?	☒	☐	
g. Were all samples placed in refrigerated storage (4 ± 2 °C) after log-in?	☒	☐	
4. Internal Sample Tracking			
a. Are all samples logged into the Analytical Computer System (ACS)?	☒	☐	
b. Is all sample information correctly transcribed from the field documentation into the ACS?	☒	☐	
c. Are all sample containers labeled with the ACS log number and the laboratory sample ID?	☒	☐	
d. Is log information entered into the Sample Tracking Logbook?	☒	☐	

Contact the sampling organization if any discrepancies are found in the field COC and sample label documentation. Document the name of the person contacting the sampling organization, the name of the person contacted, the date and time of the contact, and the resolution of the problem.

Note 1 **Corrections to COCs AR4060R1, AR4060R2, AR4060C1 and AR4060C2 made per CCP (Brad Stark) request via email on 2/06/12.**

Note 2 **Direct transfer of custody from Solids sampler to laboratory sample custodian.**

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Sailer Siemer, Shelly J.

From: Stark, Bradley R [Bradley.Stark@icp.doe.gov]
Sent: Monday, February 06, 2012 4:20 PM
To: Sailer Siemer, Shelly J.
Subject: RE: Corrections needed on ARP Solid Sample COCs for Sampling Batch S4200-LOT-05-03

Thank you, I give you permission to fix the error on the COC's.

Thank You

Brad Stark
International Engineering Site Manager
International Engineering Services
Sub-Contractor to URS Washington TRU Solutions LLC.
Office: 208-533-0593
Cell: 208-521-7466

From: Sailer Siemer, Shelly J. [mailto:Shelly.Sailer@amwtp.inl.gov]
Sent: Monday, February 06, 2012 3:58 PM
To: Stark, Bradley R
Cc: Strong, William C; Nicklas, John H; Lundholm, Duane S; Laug, Jeffrey S
Subject: Corrections needed on ARP Solid Sample COCs for Sampling Batch S4200-LOT-05-03

Hi Brad,

As received at the laboratory, all four COC forms for ARP sampling batch S4200-LOT-05-03 (COC Numbers AR4060R1, AR4060R2, AR4060C1, AR4060C2) have corrections made to the laboratory name ("INEEL INTEC" lined out and "INL-RWMC" written in) which have not been initialed and dated.

Please reply to this note with permission to correct these errors and we will fix the COC forms for you.

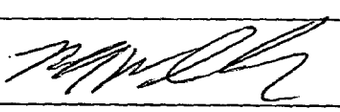
Please let me know if you have questions. Thanks.

Shelly J. Sailer
QA Officer, AMWTP Analytical Chemistry Laboratory
Office: (208) 557-6650
Cell: (208) 932-6458
e-mail: shelly.sailer@amwtp.inl.gov

ALD Document: Log 1202011 CCP-ARP Soils.tif - Scanned:2/21/2012 4:04:52 PM

AMWTP Analytical Chemistry Laboratory

Data Generator Checklist for CCP

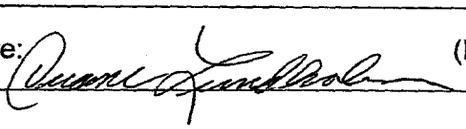
Data Report Number: ALD12005M	Analytical Batch: 1202011
Analysis Procedure: CCP-TP-181	Procedure Revision: 0
Analysis Date(s): 02/09/2012	
Data Generator Signature: 	Richard D. Wells

Criteria	Yes	No	Comments
1. Samples analyzed in accordance with cited analytical method.	X		
2. All logbook entries completed in accordance with CCP-QP-008.	X		
3. All data entry and corrections made in accordance with CCP-TP-188.	X		
4. All raw data signed/initialed and dated in indelible black ink.	X		
5. Data reviewed for completeness and accuracy.	X		

0065

AMWTP Analytical Chemistry Laboratory

Data Generator Checklist for CCP

Data Report Number: ALD12005M	Analytical Batch: 1202011
Analysis Procedure: CCP-TP-182	Procedure Revision: 1
Analysis Date(s): 02/09/2012	
Data Generator Signature:  (Duane Lundholm)	

Criteria	Yes	No	Comments
1. Samples analyzed in accordance with cited analytical method.	✓		
2. All logbook entries completed in accordance with CCP-QP-008.	✓		
3. All data entry and corrections made in accordance with CCP-TP-188.	✓		
4. All raw data signed/initialed and dated in indelible black ink.	✓		
5. Data reviewed for completeness and accuracy.	✓		

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AMWTP Analytical Chemistry Laboratory
Independent Technical Review (ITR) Checklist for CCP
Total Mercury in Homogeneous Solids and Soil/Gravel by CVAA

Analytical Batch: 1202011	Data Report: ALD12005M	Method: CCP-TP-181

Analysis Date(s)	Data Generator	ITR Review Date	ITR Release Signature	ITR Release Date
02/09/2012	**Richard D. Wells**	02/16/2012	(Jeffrey S. Laug)	02/28/12

Requirement	Yes	No	N/A	Comments (Entries required ONLY if "No" is checked)
1. Initial Calibration	///	///	///	///
a. Was the initial calibration performed using a minimum of 5 standards and a blank?	✓			
b. Is the regression coefficient (r) ≥ 0.995?	✓			
2. Initial Calibration Verification (ICV)	///	///	///	///
a. Was an ICV analyzed after the initial calibration and prior to analysis of any samples?	✓			
b. Is the recovery of the ICV between 80% and 120%?	✓			
c. Is the ICV standard prepared from a different source than that of the initial calibration standards?	✓			
3. Continuing Calibration Verification (CCV)	///	///	///	///
a. Was the CCV analyzed prior to the analysis of samples?	✓			
b. Is the percent recovery for the CCV between 80% and 120%?	✓			
c. Was a compliant CCV (%R between 80% and 120%) analyzed at the completion of the analytical run?	✓			
d. Were every ten samples bracketed by compliant CCVs?	✓			
4. Blanks	///	///	///	///
a. Was at least one laboratory blank (LB) digested and analyzed with the analytical batch?	✓			
b. Are all laboratory blank results ≤ 3×PRDL?	✓			
c. Was an ICB analyzed immediately after the ICV?	✓			
d. Was a CCB analyzed immediately after each CCV?	✓			
e. Is each of the ICB and CCB results ≤ PRDL?	✓			
5. Laboratory Control Sample (LCS)	///	///	///	///
a. Was at least one LCS digested and analyzed with the analytical batch?	✓			
b. Is the recovery within the manufacturer/statistical control limits for LCSs?	✓			
6. Matrix Spikes (MS) and Matrix Spike Duplicates (MSD)	///	///	///	///
a. Were a MS and a MSD performed on at least one sample from the analytical batch?	✓			
b. Is the MS/MSD RPD ≤30?		✓		RPD = 44.1% - Hg Data qualified with 'Z'. See narrative.
c. Are percent recoveries (%R) between 80% and 120% for the MS and MSD?		✓		MS & MSD recovered outside Mngt. Data reported with 'Z' qualifiers. See narrative.

AMWTP Analytical Chemistry Laboratory
Independent Technical Review (ITR) Checklist for CCP
Total Mercury in Homogeneous Solids and Soil/Gravel by CVAA

Analytical Batch: 1202011	Data Report: ALD12005M	Method: CCP-TP-181

Requirement	Yes	No	N/A	Comments (Entries required ONLY if "No" is checked)
7. Samples (Including MS, MSD, Post Digestion Spike (PDS) and Serial Dilution (SD))	///	///	///	///
a. Were all samples and QC samples with mercury readings exceeding the calibration range reanalyzed with a dilution?	✓			
b. Was a SD analyzed in the analytical batch if 6c is NO and at least one sample concentration exceeded 10xIDL?	✓			
c. If a SD was analyzed, is %D ≤10?	✓			
d. IF 6c is *NO* AND 7c is *NO* or *N/A*, was a PDS performed in the analytical batch?			✓	
e. IF 7d is *YES* was the PDS spike recovery between 85% and 115%?			✓	
f. Was MSA used for quantitation if PDS was required AND did not meet the acceptance criteria?			✓	
g. Are any corrective actions taken during the analysis documented in the raw data?	✓			
8. Sample Integrity Verification	///	///	///	///
a. Is COC documentation complete and accurate for all reported samples?	✓			
b. Was physical integrity of all samples verified as satisfactory at VTSR?	✓			
c. Were all samples stored at 4 ± 2 °C between receipt and analysis?	✓			
d. Were all samples prepared and analyzed (including dilutions) within 28 days of collection?	✓			
9. Instrument, Method and Personnel Qualification Verification	///	///	///	///
a. Were all analytical tasks, including sample analysis and supporting method performance, conducted by personnel having current program qualifications?	✓			
b. Was acceptable demonstration of precision, accuracy, and IDLs performed within the last 6 months?	✓			
10. Supporting Data Package Completeness	///	///	///	///
a. Are all instrument and computer system printouts present and accurate for every reported standard, sample and QC sample?	✓			
b. Are copies of preparation and analysis run log books for all samples and QC samples present and accurate?	✓			
c. Are standard certificates and QC Lab preparation records present and accurate for all working and intermediate standards used?	✓			
d. Are all raw data initialed/signed by the operator in permanent black ink?	✓			
e. Are all changes to original data made by line-out of incorrect data, initialed/signed and dated by the person making the change?	✓			
11. Batch Data Report Completeness	///	///	///	///
a. Does the report contain a Data Report Narrative that addresses, at a minimum: 1) any deviations from CCP-TP-181 due to sample matrix or ALARA concerns and the justification for the deviations; 2) any QC samples that failed the acceptance criteria, and their impact on data quality; 3) any NCRs associated with the reported samples; and 4) any problems or unusual conditions encountered during the analysis?	✓			

AMWTP Analytical Chemistry Laboratory
Independent Technical Review (ITR) Checklist for CCP
Total Mercury in Homogeneous Solids and Soil/Gravel by CVAA

Analytical Batch: 1202011	Data Report: ALD12005M	Method: CCP-TP-181

Requirement	Yes	No	N/A	Comments (Entries required ONLY if "No" is checked)
b. Are copies of any NCRs associated with the data included?			✓	
c. Are Analysis Data Sheets present and accurate for all samples in the analytical batch?	✓			
d. Are analyte concentrations on the Analysis Data Sheets reported in units of mg/kg and correctly rounded to 2 significant figures?	✓			
e. Are U, J, B, H and Z data qualifying flags correctly assigned on the reporting forms?	✓			
f. Are reporting forms present and accurate for MS/MSD %R and RPD, LCSs, ICB/CCB/LBs, ICV/CCVs, and IDLs? SDs, PDSs, and MSA if required?	✓			
g. Are copies of all COC documentation included?	✓			
h. Have all data received documented data generator review and signature?	✓			
i. Were all calculations performed using validated software or 100% manually verified?	✓			
j. Have the data been reviewed for transcription errors?	✓			
k. Are all pages in the data report legible and correctly paginated?	✓			

AMWTP Analytical Chemistry Laboratory
Independent Technical Review (ITR) Checklist for CCP
Total Metals in Homogeneous Solids and Soil/Gravel by ICP-AES

Analytical Batch: 1202011	Data Report: ALD12005M	Methods: CCP-TP-182 & CCP-TP-183

Analysis Date(s)	Data Generator	ITR Review Date	ITR Signature Release	ITR Release Date
02/09/2012	**Duane S. Lundholm**	02/25/2012	(Jeffrey S. Laug)	02/25/12

Requirement	Yes	No	N/A	Comments (Entries required ONLY if "No" is checked)
1. Initial Calibration	///	///	///	///
a. Was the initial calibration performed using a minimum of 1 standard and a blank?	✓			
2. Initial Calibration Verification (ICV)	///	///	///	///
a. Was an ICV analyzed after the initial calibration and prior to analysis of any samples?	✓			
b. Are the recoveries for each reported analyte in the ICV between 90% and 110%?	✓			
c. Is the ICV standard from a different source than the initial calibration standards?	✓			
3. Continuing Calibration Verification (CCV)	///	///	///	///
a. Was the CCV solution analyzed (as ICV) prior to the analysis of samples?	✓			
b. Is the percent recovery of each reported analyte between 90% and 110%?	✓			
c. Was a compliant CCV analyzed for reported analytes at the completion of the analytical run?	✓			
d. Were every 10 samples bracketed by compliant CCVs or ICV/CCV pair for reported analytes?	✓			
4. Low Level Concentration Check Standard (LLC)	///	///	///	///
a. Was the LLC solution analyzed prior to the analysis of samples?	✓			
b. Is the percent recovery of each reported analyte between 80% and 120%?	✓			
5. Blanks	///	///	///	///
a. Was at least one laboratory blank digested and analyzed with the analytical batch?	✓			
b. Are the laboratory blank results ≤ 3×PRDL for all reported analytes?	✓			
c. Was an ICB analyzed immediately after the ICV?	✓			
d. Was a CCB analyzed immediately after each CCV?	✓			
e. Are each of the ICB and CCB results ≤ the PRDL for all reported analytes?	✓			
6. Laboratory Control Samples (LCS)	///	///	///	///
a. Was at least one LCS digested and analyzed with the analytical batch?	✓			
b. Is %R for all reported analytes between 80% and 120% for aqueous LCSs, or within manufacturer or statistical control limits for solid LCSs?	✓			
7. Matrix Spikes (MS) and Matrix Spike Duplicates (MSD)	///	///	///	///
a. Were a MS and a MSD performed on at least one field sample from the analytical batch?	✓			
b. Is the MS/MSD RPD ≤ 30 for all analytes?	✓			
c. Is %R between 80% to 120% for all analytes in the MS and MSD?	✓			

AMWTP Analytical Chemistry Laboratory
Independent Technical Review (ITR) Checklist for CCP
Total Metals in Homogeneous Solids and Soil/Gravel by ICP-AES

Analytical Batch: 1202011	Data Report: ALD12005M	Methods: CCP-TP-182 & CCP-TP-183

Requirement	Yes	No	N/A	Comments (Entries required ONLY if "No" is checked)
8. Background Correction and Interference Check Samples	///	///	///	///
a. Was background correction used during the analysis and applied correctly?	✓			
b. Were the interfering elements monitored during the analysis and interelement correction factors correctly applied where necessary?	✓			
c. Were the ICSA and ICSAB solutions analyzed within prescribed limits at both the beginning and end of the analytical run, or twice per 8 hour shift, whichever is more frequent?	✓			
9. Samples [Including MS, MSD, Post Digestion Spike (PDS) and Serial Dilution (SD)]	///	///	///	///
a. Were all samples having analytes detected in amounts exceeding the Documented Linear Range reanalyzed with a dilution?			✓	
b. Was at least one serial dilution analysis per matrix performed in the analytical batch?	✓			
c. For all analytes > 50x IDL in the initial sample, are serial dilution results ≤ 10 %D of initial value?	✓			
d. Was at least one post-digestion spike (PDS) analysis performed in the analytical batch if MS, MSD, or SD failed (see 7c and 9c)?	✓			
e. If a PDS was analyzed, was the PDS recovery within the required range of 75% to 125%?	✓			
f. Are any corrective actions taken during the analysis documented in the raw data?	✓			
10. Sample Integrity Verification	///	///	///	///
a. Is COC documentation complete and accurate for all reported samples?	✓			
b. Was physical integrity of all samples verified as satisfactory at VTSR?	✓			
c. Were all samples stored at 4 ± 2 °C between receipt and analysis?	✓			
d. Were all samples prepared and analyzed (including dilutions) within 180 days of collection?	✓			
11. Instrument, Method and Personnel Qualification Verification	///	///	///	///
a. Were all analytical tasks, including sample analysis and supporting method performance, conducted by personnel having current program qualifications?	✓			
b. Was acceptable demonstration of precision, accuracy, and IDLs performed within the last 6 months?	✓			
12. Supporting Data Package Completeness	///	///	///	///
a. Are all instrument and computer system printouts present and accurate for every reported standard, sample and QC sample?	✓			
b. Are copies of preparation log books for all digested samples and QC samples present and accurate?	✓			
c. Are standard certificates and QC Lab preparation records present and accurate for all working and intermediate standards used?	✓			
d. Are all raw data initialed/signed by the operator in permanent black ink?	✓			
e. Are all changes to original data made by line-out of incorrect data, initialed/signed and dated by the person making the change?	✓			
13. Batch Data Report Completeness	///	///	///	///
a. Does the report contain a Data Report Narrative that addresses, at a minimum: 1) any deviations from CCP-TP-182 or CCP-TP-183 due to sample matrix or ALARA concerns and the justification for the deviations; 2) any QC samples that failed the acceptance criteria, and their impact on data quality; 3) any NCRs associated with the reported samples; and 4) any problems or unusual conditions encountered during the analysis?	✓			

AMWTP Analytical Chemistry Laboratory
Independent Technical Review (ITR) Checklist for CCP
Total Metals in Homogeneous Solids and Soil/Gravel by ICP-AES

Analytical Batch: 1202011	Data Report: ALD12005M	Methods: CCP-TP-182 & CCP-TP-183

Requirement	Yes	No	N/A	Comments (Entries required ONLY if "No" is checked)
b. Are copies of any NCRs associated with the data included?			✓	
c. Are Analysis Data Sheets present and accurate for all samples in the analytical batch?	✓			
d. Are analyte concentrations on the Analysis Data Sheets reported in units of mg/kg and correctly rounded to 2 significant figures?	✓			
e. Are U, J, B, H and Z data qualifying flags correctly assigned on the reporting forms?	✓			
f. Are reporting forms present and accurate for MS/MSD %R and RPD, LCSs, ICB/CCB/LBs, ICV/CCVs, LLCs, ICSA/ICSABs, SDs, linear range, and IDLs? PDSs as required?	✓			
g. Are copies of all COC documentation included?	✓			
h. Have all data received documented data generator review and signature?	✓			
i. Were all calculations performed using validated software or 100% manually verified?	✓			
j. Have the data been reviewed for transcription errors?	✓			
k. Are all pages in the data report legible and correctly paginated?	✓			

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Attachment 6 – CCP SPM S3000/S4000 Total Non-Halogenated Volatile Organic Compound Analysis Project Level Validation Checklist and Summary

BDR Number: ALD12005N	Analysis Date: 02/07-08/12			
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
1. Does the Batch Data Report (BDR) contain the batch number, laboratory name, and the date of the batch report? **Reference Source: CCP-PO-001, Table C3-13**	X			
2. Has a BDR Narrative been included with the BDR? **Reference Source: CCP-PO-001, Table C3-13**	X			
3. Is there a cross-reference between waste container number, field sample number, and lab sample number ID; and signature release by lab personnel in the BDR? **Reference Source: CCP-PO-001, Table C3-13**	X			
4. Is the BDR complete? **Reference Source: CCP-PO-001, C3-10b**	X			
5. List all containers that have met QAOs. **Reference Source: CCP-PO-001, C3-10b**				Container Numbers: ARP30100 ARP30103 ARP30018 ARP30081 ARP30014
6. Are there 20 or less samples per analytical batch? **Reference Source: CCP-PO-001, C3-10**	X			
7. Is there a reference to or copy of any associated NCRs (if any) in the BDR? NA if no NCRs associated with the BDR. **Reference Source: CCP-PO-001, Table C3-13**			X	None generated.
8. Does the BDR contain a complete and signed copy of the COC form? **Reference Source: CCP-PO-001, Table C3-13**	X			
9. Does the BDR include the date and time of analysis for each sample? **Reference Source: CCP-PO-001, Table C3-13**	X			
10. Are the training qualifications for all personnel acceptable? **CCP-PO-001, Table C3-13**	X			
11. Are holding times between collection and analysis within the 14-day requirement? **Reference Source: CCP-PO-001, Table C1-4**	X			

COPY

CCP RECORDS ORIGINAL
DATE REC'D 3-22-12

Attachment 6 – CCP SPM S3000/S4000 Total Non-Halogenated Volatile Organic Compound Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: ALD12005N	Analysis Date: 02/07-08/12			
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
12. Have QC designations for samples been applied as appropriate? **Reference Source: CCP-PO-001, Table C3-13**	X			
13. Is there a minimum of one laboratory control sample (LCS) analyzed per analytical batch? **Reference Source: CCP-PO-001, Table C3-5**	X			
14. Do the %Rs for all LCS analytes meet the 60-150 %R requirements? **Reference Source: CCP-PO-001, Table C3-4**	X			
15. Is a minimum of one matrix spike/matrix spike duplicate (MS/MSD) pair analyzed per analytical batch? Note: The MSD is used in place of the laboratory duplicate. **Reference Source: CCP-PO-001, Table C3-5**	X			
16. Do the %Rs for all MS and MSD analytes meet the 60-150 %R requirements? Note: The MSD is used in place of the laboratory duplicate. **Reference Source: CCP-PO-001, Table C3-4**	X			
17. Do the MS/MSD RPDs for all analytes meet the ≤ 50 requirement? **Reference Source: CCP-PO-001, Table C3-4**	X			
18. Has the CCP Site Project Manager calculated and reported the results of the RPD and F-Test Method? **Reference Source: CCP-PO-001, Section C3-3**	X			CCP interoffice correspondence CP:12:01131 UFC: 5900.00
19. Were the applicable RPD or F-test method acceptance criteria met? **Reference Source: CCP-PO-001, Section C3-3**	X			F-test not performed.
20. Is a minimum of one trip blank analyzed per analytical batch? **Reference Source: CCP-PO-001, SW-846 8015**	X			

Attachment 6 – CCP SPM S3000/S4000 Total Non-Halogenated Volatile Organic Compound Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: ALD12005N	Analysis Date: 02/07-08/12			
Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
21. Are the results of the trip blank ≤ 3 times the program-required MDL? **Reference Source: CCP-PO-001, SW-846 8015**	X			
22. Is there a minimum of one lab blank analyzed per analytical batch? **Reference Source: CCP-PO-001, Table C3-5**	X			
23. Are all lab blank compounds ≤ 3 times the program-required MDL? **Reference Source: CCP-PO-001, Table C3-5**	X			
24. Are the analytical samples spiked with surrogate matrix compounds (SMCs)? **Reference Source: CCP-PO-001, Table C3-5**	X			
25. Are the SMCs %R values within specified criteria listed on the Surrogate Recovery Form included in the BDR? **Reference Source: CCP-PO-001, Table C3-5**	X			
26. Is the GC/FID three-point (minimum) initial calibration complete? **Reference Source: CCP-PO-001, Table C3-5**	X			
27. Is the $r^2 \geq 0.990$? **Reference Source: CCP-PO-001, Table C3-5**	X			$r \geq 0.990$
28. Is the continuing calibration performed at a minimum frequency of every 12 hours of operation? **Reference Source: CCP-PO-001, Table C3-5**	X			
29. Is the CCV %D ≤ 15% for all compounds? **Reference Source: CCP-PO-001, Table C3-5**	X			
30. Are the retention times (RTs) for the continuing calibrations ±3 standard deviations from the initial calibration per applicable SW-846 method? **Reference Source: CCP-PO-001, Table C3-5**	X			
31. Does the BDR include MDLs (mg/kg) that are ≤PRQL in Table C3-4? **Reference Source: CCP-PO-001, Table C3-4**	X			

Attachment 6 – CCP SPM S3000/S4000 Total Non-Halogenated Volatile Organic Compound Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: ALD12005N	**Analysis Date: 02/07-08/12**			
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
32. Are analytical procedures (including data revision) used to develop these data referenced in the BDR? **Reference Source: CCP-PO-001, C3-10**	X			
33. Does the BDR include the operator's signature and analysis date? **Reference Source: CCP-PO-001, Table C3-13**	X			
34. Are data reporting forms complete with data reported properly (i.e., data is reported in correct units, with correct significant figures, and with correct qualifying flags)? **Reference Source: CCP-PO-001, C3-10b**	X			
35. Have data reporting flags been assigned properly? **Reference Source: CCP-PO-001, C3-10b**	X			
36. Have the batch samples been properly preserved (cool to 4°C, ± 2° C)? **Reference Source: CCP-PO-001, Table C1-4**	X			
37. Is the completed, signed, and dated Independent Technical Reviewer Checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, Table C3-13**	X			
38. Does the BDR contain at least one calibration standard ≤ PRQL? **Reference Source: CCP-PO-001, C3-6**	X			
39. Does the laboratory use traceable standards? **Reference Source: CCP-PO-001, C3-6**	X			
40. Has the laboratory had acceptable demonstration of precision, accuracy, and MDLs [method performance samples] performed within the last 6 months? **Reference Source: CCP-PO-001, Table C3-5**	X			
41. Has the laboratory met the 90% completeness requirement? **Reference Source: CCP-PO-001, Table C3-4**	X			
42. Has the laboratory successfully participated in the PDP? **Reference Source: CCP-PO-001, C3-6**	X			

Attachment 6 – CCP SPM S3000/S4000 Total Non-Halogenated Volatile Organic Compound Analysis Project Level Validation Checklist and Summary (Continued)

BDR Number: ALD12005N	**Analysis Date: 02/07-08/12**			
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
43. Has the laboratory successfully participated in the PDP? **Reference Source: CCP-PO-001, C3-6**	X			
Comments: None.				
The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.				
Barbara Broomfield (SPM Printed Name)	(Signature)			03/19/12 (Date)

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date

AMWTP Advanced Mixed Waste Treatment Project

Idaho Treatment Group

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory

Central Characterization Project

RCRA Analysis Data Report

Batch Data Report Number: ALD12005N
Revision Number: 0
Change Number: 0

Analytical Method: CCP-TP-186
Analyte(s): NHVOCs

Issue Date: 02/29/12

Waste Generator Site: CCP-INL

Summary: This data report contains analysis results for 10 samples and 10 trip blanks from Sampling Batches S4200-LOT-05-07, S4200-LOT-05-08, S4200-LOT-05-03, S4200-LOT-05-10 and S4200-LOT-05-06.

Report Content:

Section	Content	Pages
1	Sample Identification Table	0002 – 0004
2	Sample Custody Documents	0005 – 0027
3	Analysis Results	0028 – 0050
4	Batch QC Sample Results	0051 – 0063
5	Instrument QC Data	0064 – 0073
6	Data Review Checklists	0074 – 0079

Laboratory Release Authorization:

Independent Technical Reviewer	Signature	Date
John H. Nicklas	John H Nicklas	2/29/12

CCP RECORDS ORIGINAL
DATE REC'D 3/8/2012
JH 3/8/12

Section 1

Sample Identification Table

TOTAL NHVOC ANALYSIS
SAMPLE CROSS-REFERENCE TABLE

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory

Central Characterization Project

Preparation Method: CCP-TP-186-R1
Analytical Method: CCP-TP-186-R1

Data Report Number: ALD12005N
Analytical Batch ID: 1202011

Field Sample ID	Lab Sample ID
NA	LBN020612
NA	LCSN1202011
AR4057T1N1	2BY98
AR4057T2N1	2BZ04
AR4058T1N1	2BZ09
AR4058T2N1	2BZ14
AR4060T1N1	2BZ19
AR4060T2N1	2BZ24
NA	LBN020712
AR405001N1	2BZ28
AR4050T1N1	2BZ29
AR405002N1	2BZ33
AR405002N3MS	2BZ33MS
AR405002N4MSD	2BZ33MSD
AR4050T2N1	2BZ34
AR405901N1	2BZ38
AR4059T1N1	2BZ39
AR405902N1	2BZ43
AR4059T2N1	2BZ44
NA	LBN020812
AR405701N2RE	2BY97RE
AR405702N2RE	2BZ03RE
AR405801N2RE	2BZ08RE
AR405802N2RE	2BZ13RE
AR406001N2RE	2BZ18RE

TOTAL NHVOC ANALYSIS
SAMPLE CROSS-REFERENCE TABLE

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory

Central Characterization Project

Preparation Method: CCP-TP-186-R1
Analytical Method: CCP-TP-186-R1
Data Report Number: ALD12005N
Analytical Batch ID: 1202011

Field Sample ID	Lab Sample ID
AR406002N2RE	2BZ23RE

Section 2

Sample Custody Documents

ALD LOG # 1202011

Accelerated Retrieval Project Chain of Custody

COC No. **AR4057R1**

Sampling Location: **RWMC AR**

Lab: ~~INEEL-INTEC~~ INL-RWMC MH 1-31-12

Type Sample: **Regular**

DDTC #: NA

Sample Matrix: **SOLID**

☐ Homogeneous Solid ☒ Soil/Gravel

Sampling Batch No.: S4700-LOT-05-07

Sampler(s): Michael Haderlie _____ 1-31-12

Printed Signature Date

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No.	Sample Analysis	Comments	Disposition*
AR405701V1	1-31-12	~~1410~~ 1408	1 x 20	007630	VOC Sample		
AR405701V2	1-31-12	1411	1 x 20	007630	VOC Spare		
AR4057T1V1	1-31-12	1411	1 x 20	007630	VOC Trip Blank Sample		
AR4057T1V2	1-31-12	1408	1 x 20	007630	VOC Trip Blank Spare		
AR405701N1	1-31-12	1413	1 x 20	007630	NHVOC Sample		
AR405701N2	1-31-12	1414	1 x 20	007630	NHVOC Spare		
AR4057T1N1	1-31-12	1414	1 x 20	007630	NHVOC Trip Blank Sample		
AR4057T1N2	1-31-12	1408	1 x 20	007630	NHVOC Trip Blank Spare		

NOTE: For preservation, all samples were stored at a controlled temperature of 4 degrees C, then packed with chemical ice for shipment.

Samples Relinquished by (Signature):	Date	Time	Samples Received by (Signature):	Date	Time
	2-1-12	1247		2-01-12	12 47

COPY OF IN-PROCESS RECORD

Comments: * Disposition fields are completed by the laboratory.

One hour time limit met. MH 1-31-12

ARP30100 MH 1-31-12

All sample analyses are complete and all samples have been removed from custody control and have been dispositioned

Signature Date

ALD Document: Log 1202011 CCP-ARP Soils.tif - Scanned:2/7/2012 9:27:10 AM

0006

ALD LOG # 1202011

Accelerated Retrieval Project Chain of Custody

COC No. **AR4057C2**

Sampling Location: **RWMC AR**

Lab: ~~INEEL-ENTEC~~ INL-RWMC MN 1-31-12

Type Sample: **Co-located**

DDTC #: NA

Sample Matrix: **SOLID**

☐ Homogeneous Solid ☒ Soil/Gravel

Sampling Batch No.: S4200-LOT-05-07

Sampler(s): Michael Haderle (Printed) _____ (Signature) 1-31-12 (Date)

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No.	Sample Analysis	Comments	Disposition*
AR405702N1	1-31-12	1418	1 x 20	007630	NHVOC Sample		
AR405702N2	1-31-12	1419	1 x 20	007630	NHVOC Spare		
AR405702N3	1-31-12	1424	1 x 20	007630	NHVOC MS		
AR405702N4	1-31-12	1424	1 x 20	007630	NHVOC MSD		
AR4057T2N1	1-31-12	1419	1 x 20	007630	NHVOC Trip Blank Sample		
AR4057T2N2	1-31-12	1425	1 x 20	007630	NHVOC Trip Blank Spare		
AR405702MS	1-31-12	1427	1 x 250	003253	Metals and SVOC		
N/A			N/A		N/A		

NOTE: For preservation, all samples were stored at a controlled temperature of 4 degrees C, then packed with chemical ice for shipment.

Samples Relinquished by (Signature):	Date	Time	Samples Received by (Signature):	Date	Time
	2-1-12	1247		2-01-12	1247

COPY OF IN-PROCESS RECORD

Comments: * Disposition fields are completed by the laboratory.

one hour time limit met. MN 1-31-12

ARP30100. MN 1-31-12

All sample analyses are complete and all samples have been removed from custody control and have been dispositioned

Signature _____ Date _____

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0007

ALD LOG #
1202011

Accelerated Retrieval Project Chain of Custody

COC No. **AR4058R1**

Sampling Location: **RWMC AR**

Lab: ~~INEEL-INTEC~~ INL-RWMC MH 1-31-12

Type Sample: **Regular**

DDTC #: NA

Sample Matrix: **SOLID**

☐ Homogeneous Solid ☒ Soil/Gravel

Sampling Batch No.: ~~54200-LOT-04-05~~ 54200-LOT-05-08 MH 1-31-12

Sampler(s): Michael Haderlie (Printed) _____ (Signature) 1-31-12 (Date)

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No.	Sample Analysis	Comments	Disposition*
AR405801V1	1-31-12	1219	1 x 20	007630	VOC Sample		
AR405801V2	1-31-12	1221	1 x 20	007630	VOC Spare		
AR4058T1V1	1-31-12	1222	1 x 20	007630	VOC Trip Blank Sample		
AR4058T1V2	1-31-12	1224	1 x 20	007630	VOC Trip Blank Spare		
AR405801N1	1-31-12	1223	1 x 20	007630	NHVOC Sample		
AR405801N2	1-31-12	1223	1 x 20	007630	NHVOC Spare		
AR4058T1N1	1-31-12	1224	1 x 20	007630	NHVOC Trip Blank Sample		
AR4058T1N2	1-31-12	1224	1 x 20	007630	NHVOC Trip Blank Spare		

NOTE: For preservation, all samples were stored at a controlled temperature of 4 degrees C, then packed with chemical ice for shipment.

Samples Relinquished by (Signature):	Date	Time	Samples Received by (Signature):	Date	Time
	2-1-12	1248		2-01-12	1248

COPY OF IN-PROCESS RECORD

Comments: * Disposition fields are completed by the laboratory.

ARP30103 . MH 2-1-12

One hour time limit met. MH 2-1-12

All sample analyses are complete and all samples have been removed from custody control and have been dispositioned

_____ Signature _____ Date

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0008

ALD LOG #
1202011

Accelerated Retrieval Project Chain of Custody

COC No. **AR4058C2**

Sampling Location: **RWMC AR**

Lab: ~~INEEL-INTEC~~ INL-RWMC MN 1-31-12

Type Sample: **Co-located**

DDTC #: NA

Sample Matrix: **SOLID**

☐ Homogeneous Solid ☒ Soil/Gravel

Sampling Batch No.: 54200-LOT-05-08 ~~54200-LOT-04-05~~ MN 1-31-12

Sampler(s): Michael Haderlie (Printed) (Signature) 1-31-12 (Date)

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No.	Sample Analysis	Comments	Disposition*
AR405802N1	1-31-12	1229	1 x 20	007630	NHVOC Sample		
AR405802N2	1-31-12	1230	1 x 20	007630	NHVOC Spare		
AR405802N3	1-31-12	1236	1 x 20	007630	NHVOC MS		
AR405802N4	1-31-12	1235	1 x 20	007630	NHVOC MSD		
AR4058T2N1	1-31-12	1230	1 x 20	007630	NHVOC Trip Blank Sample		
AR4058T2N2	1-31-12	1236	1 x 20	007630	NHVOC Trip Blank Spare		
AR405802MS	1-31-12	1239	1 x 250	003253	Metals and SVOC		
N/A			N/A		N/A		

NOTE: For preservation, all samples were stored at a controlled temperature of 4 degrees C, then packed with chemical ice for shipment.

Samples Relinquished by (Signature):	Date	Time	Samples Received by (Signature):	Date	Time
	2-1-12	1248		2-01-12	1248

COPY OF IN-PROCESS RECORD

Comments; * Disposition fields are completed by the laboratory.

ARP 30103. MN 2-1-12

one hour time limit met. MN 2-1-12

All sample analyses are complete and all samples have been removed from custody control and have been dispositioned

Signature Date

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0009

ALD LOG # 1202011

Accelerated Retrieval Project Chain of Custody

COC No. **AR4060R1**

Sampling Location: **RWMC AR**

Lab: ~~INEEL-INTEC~~ INL-RESRC
Beg 2-07-12 Per B. Stark e-mail.

Type Sample: **Regular**

DDTC #: NA

Sample Matrix: **SOLID**

☐ Homogeneous Solid ☒ Soil/Gravel

Sampling Batch No.: S4200-LOT-05-03

Sampler(s): Michael Hoderlie (Printed) _____ (Signature) 2-1-12 (Date)

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No.	Sample Analysis	Comments	Disposition*
AR406001V1	2-1-12	0930	1 x 20	007630	VOC Sample		
AR406001V2	2-1-12	0931	1 x 20	007630	VOC Spare		
AR4060T1V1	2-1-12	0931	1 x 20	007630	VOC Trip Blank Sample		
AR4060T1V2	2-1-12	0933	1 x 20	007630	VOC Trip Blank Spare		
AR406001N1	2-1-12	0932	1 x 20	007630	NHVOC Sample		
AR406001N2	2-1-12	0933	1 x 20	007630	NHVOC Spare		
AR4060T1N1	2-1-12	0933	1 x 20	007630	NHVOC Trip Blank Sample		
AR4060T1N2	2-1-12	0934	1 x 20	007630	NHVOC Trip Blank Spare		

NOTE: For preservation, all samples were stored at a controlled temperature of 4 degrees C, then packed with chemical ice for shipment.

Samples Relinquished by (Signature):	Date	Time	Samples Received by (Signature):	Date	Time
	2-1-12	1249		2-01-12	1249

COPY OF IN-PROCESS RECORD

Comments: * Disposition fields are completed by the laboratory.
one hour time limit was met. MN 2-1-12
ARP 30018. MN 2-1-12

All sample analyses are complete and all samples have been removed from custody control and have been dispositioned

_____ (Signature) _____ (Date)

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0010

ALD LOG # 1202011

Accelerated Retrieval Project Chain of Custody

COC No. AR4060C2

Sampling Location: RWMC AR

Lab: ~~INEEL-INTEC~~ INL- RWMC
By 2-07-12 per B.Stark e-mail

Type Sample: Co-located

DDTC #: N/A

Sample Matrix: SOLID

☐ Homogeneous Solid ☒ Soil/Gravel

Sampling Batch No.: SY200-LOT-05-03

Sampler(s): Michael Hedelius (Printed) (Signature) 2-1-12 (Date)

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No.	Sample Analysis	Comments	Disposition*
AR406002N1	2-1-12	0938	1 x 20	007630	NHVOC Sample		
AR406002N2	2-1-12	0938	1 x 20	007630	NHVOC Spare		
AR406002N3	2-1-12	0942	1 x 20	007630	NHVOC MS		
AR406002N4	2-1-12	0942	1 x 20	007630	NHVOC MSD		
AR4060T2N1	2-1-12	0939	1 x 20	007630	NHVOC Trip Blank Sample		
AR4060T2N2	2-1-12	0942	1 x 20	007630	NHVOC Trip Blank Spare		
AR406002MS	2-1-12	0945	1 x 250	003253	Metals and SVOC		
N/A			N/A		N/A		

NOTE: For preservation, all samples were stored at a controlled temperature of 4 degrees C, then packed with chemical ice for shipment.

Samples Relinquished by (Signature):	Date	Time	Samples Received by (Signature):	Date	Time
	2-1-12	1249		2-01-12	1249
			COPY OF IN-PROCESS RECORD		

Comments: * Disposition fields are completed by the laboratory.

one hour time limit was met. MH 2-1-12

~~ARD 30000~~ MH 2-1-12

ARP30018. MH 2-1-12

All sample analyses are complete and all samples have been removed from custody control and have been dispositioned

Signature Date

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0011

ALD LOG # 1202011

Accelerated Retrieval Project Chain of Custody

COC No. **AR4050R1**

Sampling Location: **RWMC AR**

Lab: ~~INEEL-INTEC~~ INL-RWMC MH 2-2-12

Type Sample: **Regular**

DDTC #: N/A

Sample Matrix: **SOLID**

☐ Homogeneous Solid ☒ Soil/Gravel

Sampling Batch No.: 54200-LOS-05-10 MH 2-2-12

Sampler(s): Michael Haderlie (Printed) _____ (Signature) 2-2-12 (Date)

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No.	Sample Analysis	Comments	Disposition*
AR405001V1	2-2-12	1015	1 x 20	007230	VOC Sample		
AR405001V2	2-2-12	1016	1 x 20	007230	VOC Spare		
AR4050T1V1	2-2-12	1017	1 x 20	007230	VOC Trip Blank Sample		
AR4050T1V2	2-2-12	1019	1 x 20	007230	VOC Trip Blank Spare		
AR405001N1	2-2-12	1018	1 x 20	007230	NHVOC Sample		
AR405001N2	2-2-12	1018	1 x 20	007230	NHVOC Spare		
AR4050T1N1	2-2-12	1018	1 x 20	007230	NHVOC Trip Blank Sample		
AR4050T1N2	2-2-12	1019	1 x 20	007230	NHVOC Trip Blank Spare		

NOTE: For preservation, all samples were stored at a controlled temperature of 4 degrees C, then packed with chemical ice for shipment.

Samples Relinquished by (Signature):	Date	Time	Samples Received by (Signature):	Date	Time
	2-2-12	1136		2-02-12	1136

COPY OF IN-PROCESS RECORD

Comments: * Disposition fields are completed by the laboratory.

one hour time limit was met. MH 2-2-12

ARP 30014. MH 2-2-12

All sample analyses are complete and all samples have been removed from custody control and have been dispositioned _____ (Signature) _____ (Date)

ALD Document: Log 1202011 CCP-ARP Soils.tif - Scanned:2/7/2012 9:27:10 AM

ALD LOG # 1202011

Accelerated Retrieval Project Chain of Custody

COC No. **AR4050C2**

Sampling Location: **RWMC AR**

Lab: ~~INEEL-INTEC~~ INL-RWMC MH 2-2-12

Type Sample: **Co-located**

DDTC #: N/A

Sample Matrix: **SOLID**

☐ Homogeneous Solid ☒ Soil/Gravel

Sampling Batch No.: 54500-LOT-05-09 MH 2-2-12

Sampler(s): Michael Haderlie (Printed) _____ (Signature) 2-2-12 (Date)

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No.	Sample Analysis	Comments	Disposition*
AR405002N1	2-2-12	1021	1 x 20	007230	NHVOC Sample		
AR405002N2	2-2-12	1022	1 x 20	007230	NHVOC Spare		
AR405002N3	2-2-12	1025	1 x 20	007230	NHVOC MS		
AR405002N4	2-2-12	1025	1 x 20	007230	NHVOC MSD		
AR4050T2N1	2-2-12	1029	1 x 20	007230	NHVOC Trip Blank Sample		
AR4050T2N2	2-2-12	1026	1 x 20	007230	NHVOC Trip Blank Spare		
AR405002MS	2-2-12	1028	1 x 250	007694	Metals and SVOC		
N/A			N/A		N/A		

NOTE: For preservation, all samples were stored at a controlled temperature of 4 degrees C, then packed with chemical ice for shipment.

Samples Relinquished by (Signature):	Date	Time	Samples Received by (Signature):	Date	Time
_____	2-2-12	1136	_____	2-02-12	1136

COPY OF IN-PROCESS RECORD

Comments: * Disposition fields are completed by the laboratory.

one hour time limit met. MH 2-2-12

ARD 30014. MH 2-2-12

All sample analyses are complete and all samples have been removed from custody control and have been dispositioned

_____ Signature _____ Date

ALD Document: Log 1202011 CCP-ARP Soils.tif - Scanned:2/7/2012 9:27:10 AM

0013

ALD LOG # 1202011

Accelerated Retrieval Project Chain of Custody

COC No. **AR4059R1**

Sampling Location: **RWMC AR**

Lab: ~~INEEL-INTEC~~ INL- RWMC MH 2-2-12

Type Sample: **Regular**

DDTC #: NA

Sample Matrix: **SOLID**

☐ Homogeneous Solid ☒ Soil/Gravel

Sampling Batch No.: S4200-LOT-05-06

Sampler(s): Michael Haderlie (Printed) _____ (Signature) 2-2-12 (Date)

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No.	Sample Analysis	Comments	Disposition*
AR405901V1	2-2-12	0901	1 x 20	007630	VOC Sample		
AR405901V2	2-2-12	0902	1 x 20	007630	VOC Spare		
AR4059T1V1	2-2-12	0902	1 x 20	007630	VOC Trip Blank Sample		
AR4059T1V2	2-2-12	0904	1 x 20	007630	VOC Trip Blank Spare		
AR405901N1	2-2-12	0903	1 x 20	007630	NHVOC Sample		
AR405901N2	2-2-12	0904	1 x 20	007630	NHVOC Spare		
AR4059T1N1	2-2-12	0904	1 x 20	007630	NHVOC Trip Blank Sample		
AR4059T1N2	2-2-12	0904	1 x 20	007630	NHVOC Trip Blank Spare		

NOTE: For preservation, all samples were stored at a controlled temperature of 4 degrees C, then packed with chemical ice for shipment.

Samples Relinquished by (Signature):	Date	Time	Samples Received by (Signature):	Date	Time
	2-2-12	1137		2-02-12	1137
			COPY OF IN-PROCESS RECORD		

Comments: * Disposition fields are completed by the laboratory.

one hour time limit was met. MH 2-2-12

ARP30081. MH 2-2-12

All sample analyses are complete and all samples have been removed from custody control and have been dispositioned

_____ (Signature) _____ (Date)

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ALD LOG # 1202011

Accelerated Retrieval Project Chain of Custody

COC No. **AR4059C2**

Sampling Location: **RWMC AR** Lab: ~~INEEL-INTEC~~ INL-RWMC MN 2-2-12 Type Sample: **Co-located** DDTC #: NA

Sample Matrix: **SOLID** ☐ Homogeneous Solid ☒ Soil/Gravel Sampling Batch No.: S4200-LOT-05-06

Sampler(s): MN 2-2-12 ~~S4200~~ Michael Haderlie (Printed) (Signature) 2-2-12 (Date)

Sample ID Number	Sample Date	Sample Time	Container Size (mL)	I-CHEM Container Production No.	Sample Analysis	Comments	Disposition*
AR405902N1	2-2-12	0908	1 x 20	007630	NHVOC Sample		
AR405902N2	2-2-12	0908	1 x 20	007630	NHVOC Spare		
AR405902N3	2-2-12	0911	1 x 20	007630	NHVOC MS		
AR405902N4	2-2-12	0912	1 x 20	007630	NHVOC MSD		
AR4059T2N1	2-2-12	0908	1 x 20	007630	NHVOC Trip Blank Sample		
AR4059T2N2	2-2-12	0912	1 x 20	007630	NHVOC Trip Blank Spare		
AR405902MS	2-2-12	0914	1 x 250	003253	Metals and SVOC		
N/A			N/A		N/A		

NOTE: For preservation, all samples were stored at a controlled temperature of 4 degrees C, then packed with chemical ice for shipment.

Samples Relinquished by (Signature):	Date	Time	Samples Received by (Signature):	Date	Time
	2-2-12	1137		2-02-12	1137
			COPY OF IN-PROCESS RECORD		

Comments: * Disposition fields are completed by the laboratory.

one hour time limit was met. MN 2-2-12

ARP 30081. MN 2-2-12

All sample analyses are complete and all samples have been removed from custody control and have been dispositioned

Signature Date

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0015

ALD LOG # 1202011

ICP Analytical Laboratories Department
TRU Waste Characterization Program
Sample Container Weight Information for AR4057
Regular Sample

Sample ID Number	Production Number	Container Number	Container Size (mL)	Sample Analysis	Tare Weight (g)	Tare Date Time	Tare By	Tare Balance	Gross Weight (g)	Gross Date Time	Gross By	Gross Balance	Net Weight (g)
AR405701V1	007630	000577	20	VOC Sample	17.93	2005-04-18 14:20	Blane Teckmeyer	Cal#722200 PG802-S	21.98	2-01-12 1415	Bill Strong	Cal# 726992 ML303E	4.05
AR405701V2	007630	000583	20	VOC Spare	17.80	2005-04-18 14:21	Blane Teckmeyer	Cal#722200 PG802-S	20.74	2-01-12 1416	Bill Strong	*	2.94
AR4057T1V1	007630	000531	20	VOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:35	Blane Teckmeyer	Cal#722200 PG802-S	2.99	2005-04-18 08:35	Blane Teckmeyer	Cal#722200 PG802-S	2.99
AR4057T1V2	007630	000519	20	VOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 08:30	Blane Teckmeyer	Cal#722200 PG802-S	3.05	2005-04-18 08:30	Blane Teckmeyer	Cal#722200 PG802-S	3.05
AR405701N1	007630	000585	20	NHVOC Sample	17.90	2005-04-18 14:21	Blane Teckmeyer	Cal#722200 PG802-S	22.67	2-01-12 1417	Bill Strong	*	4.77
AR405701N2	007630	000582	20	NHVOC Spare	18.15	2005-04-18 14:21	Blane Teckmeyer	Cal#722200 PG802-S	21.60	2-01-12 1418	Bill Strong	*	3.45
AR4057T1N1	007630	000502	20	NHVOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:29	Blane Teckmeyer	Cal#722200 PG802-S	2.97	2005-04-18 08:29	Blane Teckmeyer	Cal#722200 PG802-S	2.97
AR4057T1N2	007630	000505	20	NHVOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 08:26	Blane Teckmeyer	Cal#722200 PG802-S	3.02	2005-04-18 08:26	Blane Teckmeyer	Cal#722200 PG802-S	3.02
AR405701MS	003253	002128	250	Metals and SVOC	211.11	2005-04-18 14:20	Blane Teckmeyer	Cal#722200 PG802-S	263.97	2-01-12 1429	Bill Strong	*	52.86

*= Cal# 726992 ML303E BS 2-07-12

Packaged by: Blane Teckmeyer
Packaging Independent Verification by: Julie Daley 04/18/2005 2:23:42PM

Data Generator Review of the Above Raw Data Performed by:

Bill Strong — Signature

2-07-12 — Date

Report Generated: 2/1/2012 3:09:57PM

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1202011

ICP Analytical Laboratories Department
TRU Waste Characterization Program
Sample Container Weight Information for AR4057
Co-located Sample

Sample ID Number	Production Number	Container Number	Container Size (mL)	Sample Analysis	Tare Weight (g)	Tare Date Time	Tare By	Tare Balance	Gross Weight (g)	Gross Date Time	Gross By	Gross Balance	Net Weight (g)
AR405702V1	007630	000571	20	VOC Sample	17.87	2005-04-18 14:28	Blane Teckmeyer	Cal#722200 PG802-S	21.19	2-01-12 1420	Bill Strong	*	3.32
AR405702V2	007630	000308	20	VOC Spare	17.93	2005-04-18 14:28	Blane Teckmeyer	Cal#722200 PG802-S	22.85	2-01-12 1421	Bill Strong	*	4.92
AR405702V3	007630	000609	20	VOC MS	17.91	2005-04-18 14:28	Blane Teckmeyer	Cal#722200 PG802-S	21.84	2-01-12 1422	Bill Strong	*	3.93
AR405702V4	007630	000619	20	VOC MSD	17.90	2005-04-18 14:28	Blane Teckmeyer	Cal#722200 PG802-S	22.58	2-01-12 1423	Bill Strong	*	4.68
AR4057T2V1	007630	000530	20	VOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:27	Blane Teckmeyer	Cal#722200 PG802-S	2.97	2005-04-18 08:27	Blane Teckmeyer	Cal#722200 PG802-S	2.97
AR4057T2V2	007630	000498	20	VOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 08:32	Blane Teckmeyer	Cal#722200 PG802-S	3.05	2005-04-18 08:32	Blane Teckmeyer	Cal#722200 PG802-S	3.05
AR405702N1	007630	000296	20	NHVOC Sample	17.81	2005-04-18 14:29	Blane Teckmeyer	Cal#722200 PG802-S	22.26	2-01-12 1424	Bill Strong	*	4.45
AR405702N2	007630	000597	20	NHVOC Spare	17.88	2005-04-18 14:29	Blane Teckmeyer	Cal#722200 PG802-S	22.99	2-01-12 1425	Bill Strong	*	5.11
AR405702N3	007630	000595	20	NHVOC MS	17.85	2005-04-18 14:30	Blane Teckmeyer	Cal#722200 PG802-S	22.88	2-01-12 1426	Bill Strong	*	5.03
AR405702N4	007630	000611	20	NHVOC MSD	17.81	2005-04-18 14:30	Blane Teckmeyer	Cal#722200 PG802-S	22.05	2-01-12 1427	Bill Strong	*	4.24
AR4057T2N1	007630	000494	20	NHVOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:29	Blane Teckmeyer	Cal#722200 PG802-S	3.04	2005-04-18 08:29	Blane Teckmeyer	Cal#722200 PG802-S	3.04
AR4057T2N2	007630	000506	20	NHVOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 08:33	Blane Teckmeyer	Cal#722200 PG802-S	2.98	2005-04-18 08:33	Blane Teckmeyer	Cal#722200 PG802-S	2.98
AR405702MS	003253	002132	250	Metals and SVOC	213.67	2005-04-18 14:30	Blane Teckmeyer	Cal#722200 PG802-S	260.03	2-01-12 1430	Bill Strong	*	46.36

*= Cal#726992 ML3036 BCG 2-07-12

Packaged by: Blane Teckmeyer
Packaging Independent Verification by: Julie Daley 04/18/2005 2:37:04PM

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0017

ALD.LOG #
1202011

ICP Analytical Laboratories Department
TRU Waste Characterization Program
Sample Container Weight Information for AR4058
Regular Sample

Sample ID Number	Production Number	Container Number	Container Size (mL)	Sample Analysis	Tare Weight (g)	Tare Date Time	Tare By	Tare Balance	Gross Weight (g)	Gross Date Time	Gross By	Gross Balance	Net Weight (g)
AR405801V1	007630	000273	20	VOC Sample	17.89	2005-04-18 14:41	Blane Teckmeyer	Cal#722200 PG802-S	20.31	2-01-12 1444	Bill Strong	*	2.42
AR405801V2	007630	000295	20	VOC Spare	17.92	2005-04-18 14:40	Blane Teckmeyer	Cal#722200 PG802-S	21.74	2-01-12 1445	Bill Strong	*	3.82
AR4058T1V1	007630	000493	20	VOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:25	Blane Teckmeyer	Cal#722200 PG802-S	3.02	2005-04-18 08:25	Blane Teckmeyer	Cal#722200 PG802-S	3.02
AR4058T1V2	007630	000523	20	VOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 08:24	Blane Teckmeyer	Cal#722200 PG802-S	3.01	2005-04-18 08:24	Blane Teckmeyer	Cal#722200 PG802-S	3.01
AR405801N1	007630	000270	20	NHVOC Sample	17.83	2005-04-18 14:41	Blane Teckmeyer	Cal#722200 PG802-S	22.26	2-01-12 1446	Bill Strong	*	4.43
AR405801N2	007630	000274	20	NHVOC Spare	17.93	2005-04-18 14:41	Blane Teckmeyer	Cal#722200 PG802-S	22.31	2-01-12 1447	Bill Strong	*	4.38
AR4058T1N1	007630	000541	20	NHVOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:21	Blane Teckmeyer	Cal#722200 PG802-S	3.04	2005-04-18 08:21	Blane Teckmeyer	Cal#722200 PG802-S	3.04
AR4058T1N2	007630	000542	20	NHVOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 08:27	Blane Teckmeyer	Cal#722200 PG802-S	3.03	2005-04-18 08:27	Blane Teckmeyer	Cal#722200 PG802-S	3.03
AR405801MS	003253	002123	250	Metals and SVOC	210.89	2005-04-18 14:40	Blane Teckmeyer	Cal#722200 PG802-S	247.06	2-01-12 1458	Bill Strong	*	36.17

*= Cal# 726992 ML303E BCG 2-07-12

Packaged by: Blane Teckmeyer
Packaging Independent Verification by: Julie Daley 04/18/2005 2:43:22PM

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ICP Analytical Laboratories Department
TRU Waste Characterization Program
Sample Container Weight Information for AR4058
Co-located Sample

Sample ID Number	Production Number	Container Number	Container Size (mL)	Sample Analysis	Tare Weight (g)	Tare Date Time	Tare By	Tare Balance	Gross Weight (g)	Gross Date Time	Gross By	Gross Balance	Net Weight (g)
AR405802V1	007630	000267	20	VOC Sample	17.88	2005-04-18 15:02	Blane Teckmeyer	Cal#722200 PG802-S	20.43	2-01-12 1449	Bill Strong	*	2.55
AR405802V2	007630	000268	20	VOC Spare	17.84	2005-04-18 15:02	Blane Teckmeyer	Cal#722200 PG802-S	20.19	2-01-12 1450	Bill Strong	*	2.35
AR405802V3	007630	000266	20	VOC MS	17.81	2005-04-18 15:03	Blane Teckmeyer	Cal#722200 PG802-S	20.52	2-01-12 1451	Bill Strong	*	2.71
AR405802V4	007630	000280	20	VOC MSD	17.85	2005-04-18 15:03	Blane Teckmeyer	Cal#722200 PG802-S	20.79	2-01-12 1452	Bill Strong	*	2.94
AR4058T2V1	007630	000540	20	VOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 09:17	Blane Teckmeyer	Cal#722200 PG802-S	3.02	2005-04-18 09:17	Blane Teckmeyer	Cal#722200 PG802-S	3.02
AR4058T2V2	007630	000536	20	VOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 09:20	Blane Teckmeyer	Cal#722200 PG802-S	2.96	2005-04-18 09:20	Blane Teckmeyer	Cal#722200 PG802-S	2.96
AR405802N1	007630	000279	20	NHVOC Sample	17.82	2005-04-18 15:04	Blane Teckmeyer	Cal#722200 PG802-S	20.37	2-01-12 1453	Bill Strong	*	2.55
AR405802N2	007630	000278	20	NHVOC Spare	17.86	2005-04-18 15:03	Blane Teckmeyer	Cal#722200 PG802-S	21.57	2-01-12 1454	Bill Strong	*	3.71
AR405802N3	007630	000269	20	NHVOC MS	17.90	2005-04-18 15:04	Blane Teckmeyer	Cal#722200 PG802-S	21.81	2-01-12 1455	Bill Strong	*	3.91
AR405802N4	007630	000282	20	NHVOC MSD	17.88	2005-04-18 15:04	Blane Teckmeyer	Cal#722200 PG802-S	21.34	2-01-12 1456	Bill Strong	*	3.46
AR4058T2N1	007630	000524	20	NHVOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:36	Blane Teckmeyer	Cal#722200 PG802-S	3.05	2005-04-18 08:36	Blane Teckmeyer	Cal#722200 PG802-S	3.05
AR4058T2N2	007630	000535	20	NHVOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 09:22	Blane Teckmeyer	Cal#722200 PG802-S	3.02	2005-04-18 09:22	Blane Teckmeyer	Cal#722200 PG802-S	3.02
AR405802MS	003253	002129	250	Metals and SVOC	213.88	2005-04-18 15:01	Blane Teckmeyer	Cal#722200 PG802-S	250.39	2-01-12 1459	Bill Strong	*	36.51

* = Cal# 726992 ML303E Exp 2-07-12

Packaged by: Blane Teckmeyer
Packaging Independent Verification by: Julie Daley 04/18/2005 3:10:49PM

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1202011

ICP Analytical Laboratories Department
TRU Waste Characterization Program
Sample Container Weight Information for AR4060
Regular Sample

Sample ID Number	Production Number	Container Number	Container Size (mL)	Sample Analysis	Tare Weight (g)	Tare Date Time	Tare By	Tare Balance	Gross Weight (g)	Gross Date Time	Gross By	Gross Balance	Net Weight (g)
AR406001V1	007630	000286	20	VOC Sample	17.81	2005-04-18 15:40	Blane Teckmeyer	Cal#722200 PG802-S	22.03	2-01-12 1515	Bill Strong	*	4.22
AR406001V2	007630	000263	20	VOC Spare	17.94	2005-04-18 15:40	Blane Teckmeyer	Cal#722200 PG802-S	22.01	2-01-12 1516	Bill Strong	*	4.07
AR4060T1V1	007630	000525	20	VOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 09:24	Blane Teckmeyer	Cal#722200 PG802-S	2.97	2005-04-18 09:24	Blane Teckmeyer	Cal#722200 PG802-S	2.97
AR4060T1V2	007630	000515	20	VOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 09:23	Blane Teckmeyer	Cal#722200 PG802-S	3.02	2005-04-18 09:23	Blane Teckmeyer	Cal#722200 PG802-S	3.02
AR406001N1	007630	000299	20	NHVOC Sample	17.81	2005-04-18 15:41	Blane Teckmeyer	Cal#722200 PG802-S	20.94	2-01-12 1517	Bill Strong	*	3.13
AR406001N2	007630	000298	20	NHVOC Spare	17.87	2005-04-18 15:41	Blane Teckmeyer	Cal#722200 PG802-S	20.71	2-01-12 1518	Bill Strong	*	2.84
AR4060T1N1	007630	000518	20	NHVOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:31	Blane Teckmeyer	Cal#722200 PG802-S	3.05	2005-04-18 08:31	Blane Teckmeyer	Cal#722200 PG802-S	3.05
AR4060T1N2	007630	000484	20	NHVOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 09:24	Blane Teckmeyer	Cal#722200 PG802-S	2.98	2005-04-18 09:24	Blane Teckmeyer	Cal#722200 PG802-S	2.98
AR406001MS	003253	002795	250	Metals and SVOC	214.64	2005-04-18 15:38	Blane Teckmeyer	Cal#722200 PG802-S	282.41	2-01-12 1529	Bill Strong	*	67.77

*= Cal# 726992 ML303E BG 2-07-12

Packaged by: Blane Teckmeyer
Packaging Independent Verification by: Julie Daley 04/18/2005 3:43:09PM

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0020

ALD LOG # 1202011

ICP Analytical Laboratories Department
TRU Waste Characterization Program
Sample Container Weight Information for AR4060
Co-located Sample

Sample ID Number	Production Number	Container Number	Container Size (mL)	Sample Analysis	Tare Weight (g)	Tare Date Time	Tare By	Tare Balance	Gross Weight (g)	Gross Date Time	Gross By	Gross Balance	Net Weight (g)
AR406002V1	007630	000327	20	VOC Sample	17.91	2005-04-18 15:47	Blane Teckmeyer	Cal#722200 PG802-S	21.39	2-01-12 1520	Bill Strong	*	3.48
AR406002V2	007630	000287	20	VOC Spare	17.85	2005-04-18 15:47	Blane Teckmeyer	Cal#722200 PG802-S	22.34	2-01-12 1521	Bill Strong	*	4.49
AR406002V3	007630	000304	20	VOC MS	17.89	2005-04-18 15:48	Blane Teckmeyer	Cal#722200 PG802-S	20.85	2-01-12 1522	Bill Strong	*	2.96
AR406002V4	007630	000314	20	VOC MSD	17.79	2005-04-18 15:48	Blane Teckmeyer	Cal#722200 PG802-S	20.94	2-01-12 1523	Bill Strong	*	3.15
AR4060T2V1	007630	000483	20	VOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 09:27	Blane Teckmeyer	Cal#722200 PG802-S	3.01	2005-04-18 09:27	Blane Teckmeyer	Cal#722200 PG802-S	3.01
AR4060T2V2	007630	000510	20	VOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 09:26	Blane Teckmeyer	Cal#722200 PG802-S	3.01	2005-04-18 09:26	Blane Teckmeyer	Cal#722200 PG802-S	3.01
AR406002N1	007630	000262	20	NHVOC Sample	17.86	2005-04-18 15:49	Blane Teckmeyer	Cal#722200 PG802-S	21.69	2-01-12 1524	Bill Strong	*	3.83
AR406002N2	007630	000313	20	NHVOC Spare	17.85	2005-04-18 15:49	Blane Teckmeyer	Cal#722200 PG802-S	21.10	2-01-12 1525	Bill Strong	*	3.25
AR406002N3	007630	000328	20	NHVOC MS	17.90	2005-04-18 15:50	Blane Teckmeyer	Cal#722200 PG802-S	21.08	2-01-12 1526	Bill Strong	*	3.18
AR406002N4	007630	000329	20	NHVOC MSD	17.82	2005-04-18 15:49	Blane Teckmeyer	Cal#722200 PG802-S	19.91	2-01-12 1527	Bill Strong	*	2.09
AR4060T2N1	007630	000511	20	NHVOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 09:22	Blane Teckmeyer	Cal#722200 PG802-S	3.03	2005-04-18 09:22	Blane Teckmeyer	Cal#722200 PG802-S	3.03
AR4060T2N2	007630	000512	20	NHVOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 09:25	Blane Teckmeyer	Cal#722200 PG802-S	3.00	2005-04-18 09:25	Blane Teckmeyer	Cal#722200 PG802-S	3.00
AR406002MS	003253	002793	250	Metals and SVOC	210.84	2005-04-18 15:46	Blane Teckmeyer	Cal#722200 PG802-S	264.49	2-01-12 1530	Bill Strong	*	53.65

* Cal# 726992 ML303E BG 2-07-12

Packaged by: Blane Teckmeyer
Packaging Independent Verification by: Julie Daley 04/18/2005 3:53:02PM

Data Generator Review of the Above Raw Data Performed by:

Signature

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Date

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0021

ALD LOG # 1202011

ICP Analytical Laboratories Department
TRU Waste Characterization Program
Sample Container Weight Information for AR4050
Regular Sample

Sample ID Number	Production Number	Container Number	Container Size (mL)	Sample Analysis	Tare Weight (g)	Tare Date Time	Tare By	Tare Balance	Gross Weight (g)	Gross Date Time	Gross By	Gross Balance	Net Weight (g)
AR405001V1	007230	001635	20	VOC Sample	17.73	2005-04-14 15:05	Blane Teckmeyer	Cal#722200 PG802-S	22.94	2012-02-02 13:02	W. (Bill) Strong	Cal#726992 ML-303	5.21
AR405001V2	007230	001634	20	VOC Spare	17.77	2005-04-14 15:05	Blane Teckmeyer	Cal#722200 PG802-S	22.84	2012-02-02 13:02	W. (Bill) Strong	Cal#726992 ML-303	5.07
AR4050T1V1	007230	003157	20	VOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-14 10:06	Blane Teckmeyer	Cal#722200 PG802-S	3.04	2005-04-14 10:06	Blane Teckmeyer	Cal#722200 PG802-S	3.04
AR4050T1V2	007230	003094	20	VOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-14 10:10	Blane Teckmeyer	Cal#722200 PG802-S	3.05	2005-04-14 10:10	Blane Teckmeyer	Cal#722200 PG802-S	3.05
AR405001N1	007230	001715	20	NHVOC Sample	17.71	2005-04-14 15:06	Blane Teckmeyer	Cal#722200 PG802-S	23.47	2012-02-02 13:00	W. (Bill) Strong	Cal#726992 ML-303	5.76
AR405001N2	007230	001636	20	NHVOC Spare	18.02	2005-04-14 15:06	Blane Teckmeyer	Cal#722200 PG802-S	23.40	2012-02-02 12:59	W. (Bill) Strong	Cal#726992 ML-303	5.38
AR4050T1N1	007230	003197	20	NHVOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-14 10:09	Blane Teckmeyer	Cal#722200 PG802-S	2.99	2005-04-14 10:09	Blane Teckmeyer	Cal#722200 PG802-S	2.99
AR4050T1N2	007230	003132	20	NHVOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-14 10:10	Blane Teckmeyer	Cal#722200 PG802-S	3.05	2005-04-14 10:10	Blane Teckmeyer	Cal#722200 PG802-S	3.05
AR405001MS	007694	001240	250	Metals and SVOC	209.97	2005-04-14 15:02	Blane Teckmeyer	Cal#722200 PG802-S	261.61	2012-02-02 12:31	W. (Bill) Strong	Cal#726992 ML-303	51.64

Packaged by: Blane Teckmeyer
Packaging Independent Verification by: Julie Daley 04/14/2005 3:08:33PM

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ALD LOG # 1202011

ICP Analytical Laboratories Department
TRU Waste Characterization Program
Sample Container Weight Information for AR4050
Co-located Sample

Sample ID Number	Production Number	Container Number	Container Size (mL)	Sample Analysis	Tare Weight (g)	Tare Date Time	Tare By	Tare Balance	Gross Weight (g)	Gross Date Time	Gross By	Gross Balance	Net Weight (g)
AR405002V1	007230	001859	20	VOC Sample	17.98	2005-04-14 15:32	Blane Teckmeyer	Cal#722200 PG802-S	22.61	2012-02-02 12:35	W. (Bill) Strong	Cal#726992 ML-303	4.63
AR405002V2	007230	001676	20	VOC Spare	17.78	2005-04-14 15:22	Blane Teckmeyer	Cal#722200 PG802-S	23.93	2012-02-02 12:36	W. (Bill) Strong	Cal#726992 ML-303	6.15
AR405002V3	007230	001760	20	VOC MS	17.74	2005-04-14 15:33	Blane Teckmeyer	Cal#722200 PG802-S	22.06	2012-02-02 12:57	W. (Bill) Strong	Cal#726992 ML-303	4.32
AR405002V4	007230	001610	20	VOC MSD	17.80	2005-04-14 15:33	Blane Teckmeyer	Cal#722200 PG802-S	23.04	2012-02-02 12:56	W. (Bill) Strong	Cal#726992 ML-303	5.24
AR4050T2V1	007230	003178	20	VOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-14 10:14	Blane Teckmeyer	Cal#722200 PG802-S	2.97	2005-04-14 10:14	Blane Teckmeyer	Cal#722200 PG802-S	2.97
AR4050T2V2	007230	003124	20	VOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-14 10:19	Blane Teckmeyer	Cal#722200 PG802-S	2.98	2005-04-14 10:19	Blane Teckmeyer	Cal#722200 PG802-S	2.98
AR405002N1	007230	001590	20	NHVOC Sample	17.86	2005-04-14 15:35	Blane Teckmeyer	Cal#722200 PG802-S	23.39	2012-02-02 12:38	W. (Bill) Strong	Cal#726992 ML-303	5.53
AR405002N2	007230	001721	20	NHVOC Spare	17.89	2005-04-14 15:35	Blane Teckmeyer	Cal#722200 PG802-S	22.04	2012-02-02 12:39	W. (Bill) Strong	Cal#726992 ML-303	4.15
AR405002N3	007230	001582	20	NHVOC MS	17.76	2005-04-14 15:37	Blane Teckmeyer	Cal#722200 PG802-S	22.22	2012-02-02 12:55	W. (Bill) Strong	Cal#726992 ML-303	4.46
AR405002N4	007230	001759	20	NHVOC MSD	17.85	2005-04-14 15:36	Blane Teckmeyer	Cal#722200 PG802-S	22.25	2012-02-02 12:55	W. (Bill) Strong	Cal#726992 ML-303	4.40
AR4050T2N1	007230	003183	20	NHVOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-14 10:17	Blane Teckmeyer	Cal#722200 PG802-S	3.03	2005-04-14 10:17	Blane Teckmeyer	Cal#722200 PG802-S	3.03
AR4050T2N2	007230	003172	20	NHVOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-14 10:18	Blane Teckmeyer	Cal#722200 PG802-S	3.01	2005-04-14 10:18	Blane Teckmeyer	Cal#722200 PG802-S	3.01
AR405002MS	007694	001244	250	Metals and SVOC	213.35	2005-04-14 15:09	Blane Teckmeyer	Cal#722200 PG802-S	260.15	2012-02-02 12:33	W. (Bill) Strong	Cal#726992 ML-303	46.80

Packaged by: Blane Teckmeyer
Packaging Independent Verification by: Julie Daley 04/14/2005 3:42:11PM

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1202011

ICP Analytical Laboratories Department
TRU Waste Characterization Program
Sample Container Weight Information for AR4059
Regular Sample

Sample ID Number	Production Number	Container Number	Container Size (mL)	Sample Analysis	Tare Weight (g)	Tare Date Time	Tare By	Tare Balance	Gross Weight (g)	Gross Date Time	Gross By	Gross Balance	Net Weight (g)
AR405901V1	007630	000276	20	VOC Sample	17.95	2005-04-18 15:16	Blane Teckmeyer	Cal#722200 PG802-S	22.71	2012-02-02 12:44	W. (Bill) Strong	Cal#726992 ML-303	4.76
AR405901V2	007630	000275	20	VOC Spare	17.87	2005-04-18 15:16	Blane Teckmeyer	Cal#722200 PG802-S	21.34	2012-02-02 12:46	W. (Bill) Strong	Cal#726992 ML-303	3.47
AR4059T1V1	007630	000486	20	VOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:26	Blane Teckmeyer	Cal#722200 PG802-S	3.03	2005-04-18 08:26	Blane Teckmeyer	Cal#722200 PG802-S	3.03
AR4059T1V2	007630	000529	20	VOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 08:22	Blane Teckmeyer	Cal#722200 PG802-S	2.99	2005-04-18 08:22	Blane Teckmeyer	Cal#722200 PG802-S	2.99
AR405901N1	007630	000265	20	NHVOC Sample	17.96	2005-04-18 15:16	Blane Teckmeyer	Cal#722200 PG802-S	24.23	2012-02-02 12:52	W. (Bill) Strong	Cal#726992 ML-303	6.27
AR405901N2	007630	000264	20	NHVOC Spare	17.88	2005-04-18 15:17	Blane Teckmeyer	Cal#722200 PG802-S	23.26	2012-02-02 12:53	W. (Bill) Strong	Cal#726992 ML-303	5.38
AR4059T1N1	007630	000497	20	NHVOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:22	Blane Teckmeyer	Cal#722200 PG802-S	2.95	2005-04-18 08:22	Blane Teckmeyer	Cal#722200 PG802-S	2.95
AR4059T1N2	007630	000504	20	NHVOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 08:23	Blane Teckmeyer	Cal#722200 PG802-S	2.99	2005-04-18 08:23	Blane Teckmeyer	Cal#722200 PG802-S	2.99
AR405901MS	003253	002122	250	Metals and SVOC	211.02	2005-04-18 15:15	Blane Teckmeyer	Cal#722200 PG802-S	264.20	2012-02-02 12:41	W. (Bill) Strong	Cal#726992 ML-303	53.18

Packaged by: Blane Teckmeyer
Packaging Independent Verification by: Julie Daley 04/18/2005 3:18:40PM

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ALD LOG # 1202011

ICP Analytical Laboratories Department
TRU Waste Characterization Program
Sample Container Weight Information for AR4059
Co-located Sample

Sample ID Number	Production Number	Container Number	Container Size (mL)	Sample Analysis	Tare Weight (g)	Tare Date Time	Tare By	Tare Balance	Gross Weight (g)	Gross Date Time	Gross By	Gross Balance	Net Weight (g)
AR405902V1	007630	000293	20	VOC Sample	17.87	2005-04-18 15:23	Blane Teckmeyer	Cal#722200 PG802-S	23.54	2012-02-02 12:27	W. (Bill) Strong	Cal#726992 ML-303	5.67
AR405902V2	007630	000303	20	VOC Spare	17.83	2005-04-18 15:23	Blane Teckmeyer	Cal#722200 PG802-S	21.68	2012-02-02 12:23	W. (Bill) Strong	Cal#726992 ML-303	3.85
AR405902V3	007630	000301	20	VOC MS	18.00	2005-04-18 15:24	Blane Teckmeyer	Cal#722200 PG802-S	22.09	2012-02-02 13:05	W. (Bill) Strong	Cal#726992 ML-303	4.09
AR405902V4	007630	000294	20	VOC MSD	17.93	2005-04-18 15:24	Blane Teckmeyer	Cal#722200 PG802-S	22.01	2012-02-02 13:03	W. (Bill) Strong	Cal#726992 ML-303	4.08
AR4059T2V1	007630	000547	20	VOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:19	Blane Teckmeyer	Cal#722200 PG802-S	2.95	2005-04-18 08:19	Blane Teckmeyer	Cal#722200 PG802-S	2.95
AR4059T2V2	007630	000532	20	VOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 08:20	Blane Teckmeyer	Cal#722200 PG802-S	3.02	2005-04-18 08:20	Blane Teckmeyer	Cal#722200 PG802-S	3.02
AR405902N1	007630	000300	20	NHVOC Sample	17.92	2005-04-18 15:25	Blane Teckmeyer	Cal#722200 PG802-S	22.73	2012-02-02 13:06	W. (Bill) Strong	Cal#726992 ML-303	4.81
AR405902N2	007630	000302	20	NHVOC Spare	17.89	2005-04-18 15:25	Blane Teckmeyer	Cal#722200 PG802-S	21.61	2012-02-02 13:06	W. (Bill) Strong	Cal#726992 ML-303	3.72
AR405902N3	007630	000312	20	NHVOC MS	17.87	2005-04-18 15:25	Blane Teckmeyer	Cal#722200 PG802-S	22.23	2012-02-02 12:49	W. (Bill) Strong	Cal#726992 ML-303	4.36
AR405902N4	007630	000311	20	NHVOC MSD	17.92	2005-04-18 15:26	Blane Teckmeyer	Cal#722200 PG802-S	23.51	2012-02-02 12:47	W. (Bill) Strong	Cal#726992 ML-303	5.59
AR4059T2N1	007630	000522	20	NHVOC Trip Blank Sample *(Fisher Lot# 034124)*	0.00	2005-04-18 08:18	Blane Teckmeyer	Cal#722200 PG802-S	2.98	2005-04-18 08:18	Blane Teckmeyer	Cal#722200 PG802-S	2.98
AR4059T2N2	007630	000545	20	NHVOC Trip Blank Spare *(Fisher Lot# 034124)*	0.00	2005-04-18 08:17	Blane Teckmeyer	Cal#722200 PG802-S	3.02	2005-04-18 08:17	Blane Teckmeyer	Cal#722200 PG802-S	3.02
AR405902MS	003253	002127	250	Metals and SVOC	211.10	2005-04-18 15:22	Blane Teckmeyer	Cal#722200 PG802-S	264.73	2012-02-02 12:29	W. (Bill) Strong	Cal#726992 ML-303	53.63

Packaged by: Blane Teckmeyer
Packaging Independent Verification by: Julie Daley 04/18/2005 3:30:58PM

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Nalge Nunc International

I-CHEM™ Brand Products

CERTIFICATE OF ANALYSIS

PRODUCTION NUMBER : 007230

Item Number: S326-0020

Item Description: VIAL CLEAR BOROSILICATE
Group 3 is applicable

This is your Certificate of Analysis for I-CHEM Certified™ product which has been prepared in accordance with I-CHEM Performance-Based Specifications. This product meets or exceeds analyte specifications established in the U.S. EPA "Specification and Guidance for Contaminant-free Sample Containers" for use in Superfund and other hazardous waste programs.

Group 1. Glass and HDPE/LDPE Sample containers for use in the analysis of Metals

Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg /L)
Aluminum	<80	Calcium (all HDPE)	<100	Magnesium	<100	Selenium	<2
Antimony	<5	Chromium	<10	Manganese	<10	Silver	<5
Arsenic	<2	Cobalt	<10	Mercury	<0.2	Sodium	<500
Barium	<20	Copper	<10	Nickel	<20	Sodium (all HDPE)	<100
Beryllium	<0.5	Iron	<50	Potassium	<750	Thallium	<5
Cadmium	<1	Lead	<2	Potassium (all HDPE)	<100	Vanadium	<10
Calcium	<500					Zinc	<10

In addition to the above analytes, NALGENE® containers are certified for these analytes:

Analyte[1]	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)
Chloride	<100	Fluoride	<20	Nitrite	<50	Sulfate	<100.
Cyanide	<10	Nitrate	<20	Paraquat (amber only)	<0.4	Sulfide	<30
Diquat (amber only)	<1.0					Sulfite	<1000

Group 2. Glass Sample Containers for use in the analysis of Semivolatiles and Pesticides/PCBs

Compound	Quantitation Limit (µg/L)	Compound	Quantitation Limit (µg/L)	Compound	Quantitation Limit (µg/L)
Acenaphthene	<5	Acenaphthylene	<5	Anthracene	<5
Benzo(a)anthracene	<5	Benzo(a)pyrene	<5	Benzo(b)fluoranthene	<5
Benzo(k)Fluoranthene	<5	Benzo(g,h,i)perylene	<5	Benzoic Acid	<20
Benzyl Alcohol	<5	4-Bromophenyl-phenylether	<5	Butylbenzylphthalate	<5
4-Chloroaniline	<5	4-Chloro-3-methylphenol	<5	bis-(2-Chloroethoxy) methane	<5
bis-(2-Chloroethyl)ether	<5	bis-(2-Chloroisopropyl)ether	<5	2-Chloronaphthalene	<5
2-Chlorophenol	<5	4-Chlorophenyl-phenylether	<5	Chrysene	<5
Di-n-butylphthalate	<5	Di-n-octylphthalate	<5	Dibenzo(a,h)anthracene	<5
Dibenzofuran	<5	1,2-Dichlorobenzene	<5	1,4-Dichlorobenzene	<5
1,3-Dichlorobenzene	<5	3,3 -Dichlorobenzidine	<5	2,4-Dichlorophenol	<5
Diethylphthalate	<5	Dimethylphthalate	<5	2,4-Dinitrotoluene	<5
4,6-Dinitro-2-methylphenol	<20	2,4-Dinitrophenol	<20	Fluoranthene	<5
2,6-Dinitrotoluene	<5	bis-(2-Ethylhexyl)phthalate	<5	Hexachlorobutadiene	<5
Fluorene	<5	Hexachlorobenzene	<5	Indeno(1,2,3-cd)pyrene	<5
Hexachlorocyclopentadiene	<5	Hexachloroethane	<5	2-Methylphenol	<5
Isophorone	<5	2-Methylnaphthalene	<5	3-Nitroaniline	<20
4-Methylphenol	<5	2-Nitroaniline	<20	N-Nitrosodimethylamine	<5
4-Nitroaniline	<20	N-Nitroso-di-n-propylamine	<5	Nitrobenzene	<5
N-Nitrosodiphenylamine	<5	Naphthlene	<5	Pentachlorophenol	<20
2-Nitrophenol	<5	4-Nitrophenol	<20	Pyrene	<5
Phenanthrene	<5	Phenol	<5	2,4,6-Trichlorophenol	<5
1,2,4-Trichlorobenzene	<5	2,4,5-Trichlorophenol	<20	Aldrin	<0.01
Azobenzene	<5	Carbazole	<5	Alpha-BHC	<0.01
4,4-DDD	<0.02	Endosulfan II	<0.02	Beta-BHC	<0.01
4,4-DDE	<0.02	Endosulfan Sulfate	<0.02	Delta-BHC	<0.01
4,4-DDT	<0.02	Endrin	<0.02	Gamma-BHC	<0.01
Dieldrin	<0.02	Endrin Aldehyde	<0.02	Heptachlor Epoxide	<0.01
Endosulfan I	<0.01	Heptachlor	<0.01	Alpha-Chlordane	<0.01
Methoxychlor	<0.10	Endrin Ketone	<0.02	Aroclor-1016	<0.01
Gamma-Chlordane	<0.01	Toxaphene	<0.30	Aroclor-1242	<0.20
Aroclor-1221	<0.20	Aroclor-1232	<0.20	Aroclor-1260	<0.20
Aroclor-1248	<0.20	Aroclor-1254	<0.20	2,4-Dimethylphenol	<5
Aroclor-1262	<0.20	Aroclor-1268	<0.20		

Group 3. Glass Sample Containers for use in the analysis of Volatiles

Compound	Quantitation Limit (µg/L)	Compound	Quantitation Limit (µg/L)	Compound	Quantitation Limit (µg/L)
Acetone	<5	1,3-Dichloropropane	<1	Benzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1	1,2-Dichloropropane	<1
Bromodichloromethane	<1	trans-1,3-Dichloropropene	<1	Bromoform	<1
cis-1,3-Dichloropropene	<1	Bromomethane	<1	1,1-Dichloropropene	<1
2-Butanone	<5	Ethylbenzene	<1	tert-Butylbenzene	<1
Hexachlorobutadiene	<1	sec-Butylbenzene	<1	2-Hexanone	<5
n-Butylbenzene	<1	Isopropylbenzene	<1	Carbon Disulfide	<1
p-Isopropyltoluene	<1	Carbon Tetrachloride	<1	4-Methyl-2-pentanone	<5
Chlorobenzene	<1	Methylene Chloride	<2	Chloroethane	<1
Naphthalene	<1	Chloroform	<1	n-Propylbenzene	<1
Chloromethane	<1	Styrene	<1	2 & 4 Chlorotoluene	<1
1,1,2,2-Tetrachloroethane	<1	1,2-Dibromo-3-chloropropane	<2	Tetrachloroethene	<1
Dibromochloromethane	<1	Toluene	<1	1,2-Dibromoethane (EDB)	<1
1,2,3-Trichlorobenzene	<1	Dibromomethane	<1	1,2,4-Trichlorobenzene	<1
1,4-Dichlorobenzene	<1	1,1,2-Trichloroethane	<1	1,3-Dichlorobenzene	<1
1,1,1-Trichloroethane	<1	1,2-Dichlorobenzene	<1	Trichloroethene	<1
Dichlorodifluoromethane	<1	Trichlorofluoromethane	<1	1,2-Dichloroethane	<1
1,2,3-Trichloropropane	<1	1,1-Dichloroethane	<2	Bromochloromethane	<1
trans-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1		
Vinyl Acetate	<5	1,1-Dichloroethene	<1		
Xylenes (total)	<1	1,2,4-Trimethylbenzene	<1		
Vinyl Chloride	<1	cis-1,2-Dichloroethene	<1		

In addition to the above analytes in Group 3, 40 mL and 60 mL vials are certified for:

Compound	Quantitation Limit (µg/L)
Total Organic Carbon	<600

Please keep this certificate for your records and to facilitate any necessary correspondence.
If additional information is required, contact our Technical Service Department at(800) 625-4327.

James L. Riner

James L. Riner
QA Director
00810 Rev. 7

Chase Scientific Glass, Inc.
234 Cardiff Valley Road
Rockwood, TN 37854

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I-CHEM™ Brand Products

Nalge Nunc International

CERTIFICATE OF ANALYSIS

PRODUCTION NUMBER : 007630

Item Number: S326-0020

Item Description: VIAL CLEAR BOROSILICATE

Group 3 is applicable

This is your Certificate of Analysis for I-CHEM Certified™ product which has been prepared in accordance with I-CHEM Performance-Based Specifications. This product meets or exceeds analyte specifications established in the U.S. EPA "Specification and Guidance for Contaminant-free Sample Containers" for use in Superfund and other hazardous waste programs.

Group 1. Glass and HDPE/LDPE Sample containers for use in the analysis of Metals

Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg /L)
Aluminum	<80	Calcium (all HDPE)	<100	Magnesium	<100	Selenium	<2
Antimony	<5	Chromium	<10	Manganese	<10	Silver	<5
Arsenic	<2	Cobalt	<10	Mercury	<0.2	Sodium	<500
Barium	<20	Copper	<10	Nickel	<20	Sodium (all HDPE)	<100
Beryllium	<0.5	Iron	<50	Potassium	<750	Thallium	<5
Cadmium	<1	Lead	<2	Potassium (all HDPE)	<100	Vanadium	<10
Calcium	<500					Zinc	<10

In addition to the above analytes, NALGENE® containers are certified for these analytes:

Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)
Chloride	<100	Fluoride	<20	Nitrite	<50	Sulfate	<100
Cyanide	<10	Nitrate	<20	Paraquat (amber only)	<0.4	Sulfide	<30
Diquat (amber only)	<1.0					Sulfite	<1000

Group 2. Glass Sample Containers for use in the analysis of Semivolatiles and Pesticides/PCBs

Compound	Quantitation Limit (µg/L)	Compound	Quantitation Limit (µg/L)	Compound	Quantitation Limit (µg/L)
Acenaphthene	<5	Acenaphthylene	<5	Anthracene	<5
Benzo(a)anthracene	<5	Benzo(a)pyrene	<5	Benzo(b)fluoranthene	<5
Benzo(k)Fluoranthene	<5	Benzo(g,h,i)perylene	<5	Benzoic Acid	<20
Benzyl Alcohol	<5	4-Bromophenyl-phenylether	<5	Butylbenzylphthalate	<5
4-Chloroaniline	<5	4-Chloro-3-methylphenol	<5	bis-(2-Chloroethoxy) methane	<5
bis-(2-Chloroethyl)ether	<5	bis-(2-Chloroisopropyl)ether	<5	2-Chloronaphthalene	<5
2-Chlorophenol	<5	4-Chlorophenyl-phenylether	<5	Chrysene	<5
Di-n-butylphthalate	<5	Di-n-octylphthalate	<5	Dibenzo(a,h)anthracene	<5
Dibenzofuran	<5	1,2-Dichlorobenzene	<5	1,4-Dichlorobenzene	<5
1,3-Dichlorobenzene	<5	3,3 -Dichlorobenzidine	<5	2,4-Dichlorophenol	<5
Diethylphthalate	<5	Dimethylphthalate	<5	2,4-Dinitrotoluene	<5
4,6-Dinitro-2-methylphenol	<20	2,4-Dinitrophenol	<20	Fluoranthene	<5
2,6-Dinitrotoluene	<5	bis-(2-Ethylhexyl)phthalate	<5	Hexachlorobutadiene	<5
Fluorene	<5	Hexachlorobenzene	<5	Indeno(1,2,3-cd)pyrene	<5
Hexachlorocyclopentadiene	<5	Hexachloroethane	<5	2-Methylphenol	<5
Isophorone	<5	2-Methylnaphthalene	<5	3-Nitroaniline	<20
4-Methylphenol	<5	2-Nitroaniline	<20	N-Nitrosodimethylamine	<5
4-Nitroaniline	<20	N-Nitroso-di-n-propylamine	<5	Nitrobenzene	<5
N-Nitrosodiphenylamine	<5	Naphthalene	<5	Pentachlorophenol	<20
2-Nitrophenol	<5	4-Nitrophenol	<20	Pyrene	<5
Phenanthrene	<5	Phenol	<5	2,4,6-Trichlorophenol	<5
1,2,4-Trichlorobenzene	<5	2,4,5-Trichlorophenol	<20	Aldrin	<0.01
Azobenzene	<5	Carbazole	<5	Alpha-BHC	<0.01
4,4-DDD	<0.02	Endosulfan II	<0.02	Beta-BHC	<0.01
4,4-DDE	<0.02	Endosulfan Sulfate	<0.02	Delta-BHC	<0.01
4,4-DDT	<0.02	Endrin	<0.02	Gamma-BHC	<0.01
Dieldrin	<0.02	Endrin Aldehyde	<0.02	Heptachlor Epoxide	<0.01
Endosulfan I	<0.01	Heptachlor	<0.01	Alpha-Chlordane	<0.01
Methoxychlor	<0.10	Endrin Ketone	<0.02	Aroclor-1016	<0.20
Gamma-Chlordane	<0.01	Toxaphene	<0.30	Aroclor-1242	<0.20
Aroclor-1221	<0.20	Aroclor-1232	<0.20	Aroclor-1260	<0.20
Aroclor-1248	<0.20	Aroclor-1254	<0.20	2,4-Dimethylphenol	<5
Aroclor-1262	<0.20	Aroclor-1268	<0.20		

Group 3. Glass Sample Containers for use in the analysis of Volatiles

Compound	Quantitation Limit (µg/L)	Compound	Quantitation Limit (µg/L)	Compound	Quantitation Limit (µg/L)
Acetone	<5	1,3-Dichloropropane	<1	Benzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1	1,2-Dichloropropane	<1
Bromodichloromethane	<1	trans-1,3-Dichloropropene	<1	Bromoform	<1
cis-1,3-Dichloropropene	<1	Bromomethane	<1	1,1-Dichloropropene	<1
2-Butanone	<5	Ethylbenzene	<1	tert-Butylbenzene	<1
Hexachlorobutadiene	<1	sec-Butylbenzene	<1	2-Hexanone	<5
n-Butylbenzene	<1	Isopropylbenzene	<1	Carbon Disulfide	<1
p-Isopropyltoluene	<1	Carbon Tetrachloride	<1	4-Methyl-2-pentanone	<5
Chlorobenzene	<1	Methylene Chloride	<2	Chloroethane	<1
Naphthalene	<1	Chloroform	<1	n-Propylbenzene	<1
Chloromethane	<1	Styrene	<1	2 & 4 Chlorotoluene	<1
1,1,2,2-Tetrachloroethane	<1	1,2-Dibromo-3-chloropropane	<1	Tetrachloroethene	<1
Dibromochloromethane	<1	Toluene	<1	1,2-Dibromoethane (EDB)	<1
1,2,3-Trichlorobenzene	<1	Dibromomethane	<1	1,2,4-Trichlorobenzene	<1
1,4-Dichlorobenzene	<1	1,1,2-Trichloroethane	<1	1,3-Dichlorobenzene	<1
1,1,1-Trichloroethane	<1	1,2-Dichlorobenzene	<1	Trichloroethene	<1
Dichlorodifluoromethane	<1	Trichlorofluoromethane	<1	1,2-Dichloroethane	<1
1,2,3-Trichloropropane	<1	1,1-Dichloroethane	<1	Bromochloromethane	<1
trans-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1		
Vinyl Acetate	<5	1,1-Dichloroethene	<1		
Xylenes (total)	<1	1,2,4-Trimethylbenzene	<1		
Vinyl Chloride	<1	cis-1,2-Dichloroethene	<1		

In addition to the above analytes in Group 3, 40 mL and 60 mL vials are certified for:

Compound	Quantitation Limit (µg/L)
Total Organic Carbon	<600

Please keep this certificate for your records and to facilitate any necessary correspondence.
If additional information is required, contact our Technical Service Department at(800) 625-4327.

James L. Riner

James L. Riner
QA Director

Chase Scientific Glass, Inc.
234 Cardiff Valley Road
Rockwood, TN 37854

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Section 3

Analysis Results

AMWTP Analytical Chemistry Laboratory

Data Report Narrative for ALD12005N

This data report contains non-halogenated volatile organic compound (NHVOC) analysis results for ten samples from waste drums and ten associated trip blanks, received 02-01-12 and 02-02-12 from ARP for CCP-INL.

Sample preparation and analysis was performed using CCP-TP-186 Revision 1, which implements EPA SW-846 Method 8015B, "Non-Halogenated Organics Using GC/FID" and Method 8000B, "Determinative Chromatographic Separations."

The holding time for solid samples is 14 days from collection to analysis. All samples were analyzed within the holding time.

The extracted laboratory blank was used to satisfy the requirement in CCP-TP-186 for analysis of a daily method blank before sample analysis.

The original extracts for samples 2BY97, 2BZ03, 2BZ08, 2BZ13, 2BZ18 and 2BZ23 required dilution (9X up to 135X) due to ALARA considerations. Consequently, surrogates were either diluted out or failed percent recovery criteria. The re-extractions of these samples required no dilution and all surrogate recoveries are acceptable. Therefore, only the re-extracted results (-RE suffixes) are reported for these samples.

Samples 2BZ33MS and 2BZ33MSD have unresolved co-eluting interferring compounds in the Column A butanol RT window. The interferent is also found in the Column B butanol RT window, but is clearly resolved from the known (spiked) butanol peak. Therefore, the Column B results are reported for butanol on the Form III for both of those samples.

Samples 2BZ28 and 2BZ33 have single peaks within the butanol RT windows on both columns. The RTs of the Column B peaks match those of the interferent peak observed in the MS and MSD. Since Column B peaks at this RT are clearly not butanol, based on the MS and MSD chromatograms, butanol is reported as non-detects for samples 2BZ28 and 2BZ33, using the Column B MDL.

All QC parameters meet acceptance criteria for this analytical batch.

AMWTP Analytical Chemistry Laboratory

Central Characterization Project

Data Qualifier Flag Definitions for NHVOCs

Flag	Definition
B	Analyte detected in associated laboratory blank or method blank
E	Reported analyte concentration exceeds the calibration range
D	Reported analyte concentration is from a secondary dilution of the sample
H	Holding time exceeded
J	Target Analyte concentration <PRQL but ≥ MDL
U	Analyte was undetected (reported as sample-specific MDL)
Z	One or more QC sample results do not meet acceptance criteria

TOTAL NHVOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405701N2RE	Lab File ID:	SN103815
Sampling Batch No:	S4200-LOT-05-07	Lab Sample ID:	2BY97RE
Date Sampled:	1/31/2012	Data Report Number:	ALD12005N
Date Extracted:	02/08/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	8 days		
Date/Time Analyzed:	02/08/2012 11:51	Instrument ID:	GC-1
Analysis Holding Time:	<1 day	Sample Matrix:	SOLID
Preparation Method:	CCP-TP-186-R1	Dilution Factor:	1
Analytical Method:	CCP-TP-186-R1		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION (mg/kg)	Q
67-64-1	Acetone	0.89	U
71-36-3	Butanol	1.8	U
67-56-1	Methanol	0.89	U
78-93-3	Methyl ethyl ketone	0.89	U
60-29-7	Ethyl ether	0.89	U
78-83-1	Isobutanol	1.8	U
110-86-1	Pyridine	0.89	U

* = Column B value used

TOTAL NHVOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR4057T1N1	Lab File ID:	SN103788
Sampling Batch No:	S4200-LOT-05-07	Lab Sample ID:	2BY98
Date Sampled:	1/31/2012	Data Report Number:	ALD12005N
Date Extracted:	02/06/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	6 days		
Date/Time Analyzed:	02/07/2012 11:46	Instrument ID:	GC-1
Analysis Holding Time:	1 day	Sample Matrix:	SOLID
Preparation Method:	CCP-TP-186-R1	Dilution Factor:	1
Analytical Method:	CCP-TP-186-R1		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION (mg/kg)	Q
67-64-1	Acetone	1.0	U
71-36-3	Butanol	2.1	U
67-56-1	Methanol	1.0	U
78-93-3	Methyl ethyl ketone	1.0	U
60-29-7	Ethyl ether	1.0	U
78-83-1	Isobutanol	2.1	U
110-86-1	Pyridine	1.0	U

* = Column B value used

TOTAL NHVOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405702N2RE	Lab File ID:	SN103816
Sampling Batch No:	S4200-LOT-05-07	Lab Sample ID:	2BZ03RE
Date Sampled:	1/31/2012	Data Report Number:	ALD12005N
Date Extracted:	02/08/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	8 days		
Date/Time Analyzed:	02/08/2012 12:23	Instrument ID:	GC-1
Analysis Holding Time:	<1 day	Sample Matrix:	SOLID
Preparation Method:	CCP-TP-186-R1	Dilution Factor:	1
Analytical Method:	CCP-TP-186-R1		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION (mg/kg)	Q
67-64-1	Acetone	0.58	U
71-36-3	Butanol	1.2	U
67-56-1	Methanol	0.58	U
78-93-3	Methyl ethyl ketone	0.58	U
60-29-7	Ethyl ether	0.58	U
78-83-1	Isobutanol	1.2	U
110-86-1	Pyridine	0.58	U

* = Column B value used

TOTAL NHVOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR4057T2N1	Lab File ID:	SN103790
Sampling Batch No:	S4200-LOT-05-07	Lab Sample ID:	2BZ04
Date Sampled:	1/31/2012	Data Report Number:	ALD12005N
Date Extracted:	02/06/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	6 days		
Date/Time Analyzed:	02/07/2012 12:49	Instrument ID:	GC-1
Analysis Holding Time:	1 day	Sample Matrix:	SOLID
Preparation Method:	CCP-TP-186-R1	Dilution Factor:	1
Analytical Method:	CCP-TP-186-R1		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION (mg/kg)	Q
67-64-1	Acetone	1.0	U
71-36-3	Butanol	2.1	U
67-56-1	Methanol	1.0	U
78-93-3	Methyl ethyl ketone	1.0	U
60-29-7	Ethyl ether	1.0	U
78-83-1	Isobutanol	2.1	U
110-86-1	Pyridine	1.0	U

* = Column B value used

TOTAL NHVOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405801N2RE	Lab File ID:	SN103817
Sampling Batch No:	S4200-LOT-05-08	Lab Sample ID:	2BZ08RE
Date Sampled:	1/31/2012	Data Report Number:	ALD12005N
Date Extracted:	02/08/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	8 days		
Date/Time Analyzed:	02/08/2012 12:55	Instrument ID:	GC-1
Analysis Holding Time:	<1 day	Sample Matrix:	SOLID
Preparation Method:	CCP-TP-186-R1	Dilution Factor:	1
Analytical Method:	CCP-TP-186-R1		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION (mg/kg)	Q
67-64-1	Acetone	0.69	U
71-36-3	Butanol	1.4	U
67-56-1	Methanol	0.69	U
78-93-3	Methyl ethyl ketone	0.69	U
60-29-7	Ethyl ether	0.69	U
78-83-1	Isobutanol	1.4	U
110-86-1	Pyridine	0.69	U

* = Column B value used

TOTAL NHVOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR4058T1N1	Lab File ID:	SN103792
Sampling Batch No:	S4200-LOT-05-08	Lab Sample ID:	2BZ09
Date Sampled:	1/31/2012	Data Report Number:	ALD12005N
Date Extracted:	02/06/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	6 days		
Date/Time Analyzed:	02/07/2012 13:53	Instrument ID:	GC-1
Analysis Holding Time:	1 day	Sample Matrix:	SOLID
Preparation Method:	CCP-TP-186-R1	Dilution Factor:	1
Analytical Method:	CCP-TP-186-R1		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION (mg/kg)	Q
67-64-1	Acetone	1.0	U
71-36-3	Butanol	2.1	U
67-56-1	Methanol	1.0	U
78-93-3	Methyl ethyl ketone	1.0	U
60-29-7	Ethyl ether	1.0	U
78-83-1	Isobutanol	2.1	U
110-86-1	Pyridine	1.0	U

* = Column B value used

TOTAL NHVOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405802N2RE	Lab File ID:	SN103818
Sampling Batch No:	S4200-LOT-05-08	Lab Sample ID:	2BZ13RE
Date Sampled:	1/31/2012	Data Report Number:	ALD12005N
Date Extracted:	02/08/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	8 days		
Date/Time Analyzed:	02/08/2012 13:27	Instrument ID:	GC-1
Analysis Holding Time:	<1 day	Sample Matrix:	SOLID
Preparation Method:	CCP-TP-186-R1	Dilution Factor:	1
Analytical Method:	CCP-TP-186-R1		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION (mg/kg)	Q
67-64-1	Acetone	0.83	U
71-36-3	Butanol	1.7	U
67-56-1	Methanol	0.83	U
78-93-3	Methyl ethyl ketone	0.83	U
60-29-7	Ethyl ether	0.83	U
78-83-1	Isobutanol	1.7	U
110-86-1	Pyridine	0.83	U

* = Column B value used

TOTAL NHVOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR4058T2N1	Lab File ID:	SN103794
Sampling Batch No:	S4200-LOT-05-08	Lab Sample ID:	2BZ14
Date Sampled:	1/31/2012	Data Report Number:	ALD12005N
Date Extracted:	02/06/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	6 days		
Date/Time Analyzed:	02/07/2012 14:57	Instrument ID:	GC-1
Analysis Holding Time:	1 day	Sample Matrix:	SOLID
Preparation Method:	CCP-TP-186-R1	Dilution Factor:	1
Analytical Method:	CCP-TP-186-R1		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION (mg/kg)	Q
67-64-1	Acetone	1.0	U
71-36-3	Butanol	2.0	U
67-56-1	Methanol	1.0	U
78-93-3	Methyl ethyl ketone	1.0	U
60-29-7	Ethyl ether	1.0	U
78-83-1	Isobutanol	2.0	U
110-86-1	Pyridine	1.0	U

* = Column B value used

TOTAL NHVOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR406001N2RE	Lab File ID:	SN103819
Sampling Batch No:	S4200-LOT-05-03	Lab Sample ID:	2BZ18RE
Date Sampled:	2/1/2012	Data Report Number:	ALD12005N
Date Extracted:	02/08/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	7 days		
Date/Time Analyzed:	02/08/2012 13:59	Instrument ID:	GC-1
Analysis Holding Time:	<1 day	Sample Matrix:	SOLID
Preparation Method:	CCP-TP-186-R1	Dilution Factor:	1
Analytical Method:	CCP-TP-186-R1		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION (mg/kg)	Q
67-64-1	Acetone	1.1	U
71-36-3	Butanol	2.2	U
67-56-1	Methanol	1.1	U
78-93-3	Methyl ethyl ketone	1.1	U
60-29-7	Ethyl ether	1.1	U
78-83-1	Isobutanol	2.2	U
110-86-1	Pyridine	1.1	U

* = Column B value used

TOTAL NHVOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR4060T1N1	Lab File ID:	SN103796
Sampling Batch No:	S4200-LOT-05-03	Lab Sample ID:	2BZ19
Date Sampled:	2/1/2012	Data Report Number:	ALD12005N
Date Extracted:	02/06/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	5 days		
Date/Time Analyzed:	02/07/2012 16:02	Instrument ID:	GC-1
Analysis Holding Time:	1 day	Sample Matrix:	SOLID
Preparation Method:	CCP-TP-186-R1	Dilution Factor:	1
Analytical Method:	CCP-TP-186-R1		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION (mg/kg)	Q
67-64-1	Acetone	1.0	U
71-36-3	Butanol	2.0	U
67-56-1	Methanol	1.0	U
78-93-3	Methyl ethyl ketone	1.0	U
60-29-7	Ethyl ether	1.0	U
78-83-1	Isobutanol	2.0	U
110-86-1	Pyridine	1.0	U

* = Column B value used

TOTAL NHVOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR406002N2RE	Lab File ID:	SN103820
Sampling Batch No:	S4200-LOT-05-03	Lab Sample ID:	2BZ23RE
Date Sampled:	2/1/2012	Data Report Number:	ALD12005N
Date Extracted:	02/08/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	7 days		
Date/Time Analyzed:	02/08/2012 14:31	Instrument ID:	GC-1
Analysis Holding Time:	<1 day	Sample Matrix:	SOLID
Preparation Method:	CCP-TP-186-R1	Dilution Factor:	1
Analytical Method:	CCP-TP-186-R1		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION (mg/kg)	Q
67-64-1	Acetone	0.94	U
71-36-3	Butanol	1.9	U
67-56-1	Methanol	0.94	U
78-93-3	Methyl ethyl ketone	0.94	U
60-29-7	Ethyl ether	0.94	U
78-83-1	Isobutanol	1.9	U
110-86-1	Pyridine	0.94	U

* = Column B value used

TOTAL NHVOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR4060T2N1	Lab File ID:	SN103798
Sampling Batch No:	S4200-LOT-05-03	Lab Sample ID:	2BZ24
Date Sampled:	2/1/2012	Data Report Number:	ALD12005N
Date Extracted:	02/06/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	5 days		
Date/Time Analyzed:	02/07/2012 17:06	Instrument ID:	GC-1
Analysis Holding Time:	1 day	Sample Matrix:	SOLID
Preparation Method:	CCP-TP-186-R1	Dilution Factor:	1
Analytical Method:	CCP-TP-186-R1		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION (mg/kg)	Q
67-64-1	Acetone	1.0	U
71-36-3	Butanol	2.1	U
67-56-1	Methanol	1.0	U
78-93-3	Methyl ethyl ketone	1.0	U
60-29-7	Ethyl ether	1.0	U
78-83-1	Isobutanol	2.1	U
110-86-1	Pyridine	1.0	U

* = Column B value used

TOTAL NHVOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405001N1	Lab File ID:	SN103802
Sampling Batch No:	S4200-LOT-05-10	Lab Sample ID:	2BZ28
Date Sampled:	2/2/2012	Data Report Number:	ALD12005N
Date Extracted:	02/07/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	5 days		
Date/Time Analyzed:	02/07/2012 19:14	Instrument ID:	GC-1
Analysis Holding Time:	<1 day	Sample Matrix:	SOLID
Preparation Method:	CCP-TP-186-R1	Dilution Factor:	1
Analytical Method:	CCP-TP-186-R1		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION (mg/kg)	Q
67-64-1	Acetone	0.5	U
71-36-3	Butanol	1.0 *	U
67-56-1	Methanol	7.0	J
78-93-3	Methyl ethyl ketone	0.5	U
60-29-7	Ethyl ether	0.5	U
78-83-1	Isobutanol	1.0	U
110-86-1	Pyridine	0.5	U

* = Column B value used

TOTAL NHVOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR4050T1N1	Lab File ID:	SN103803
Sampling Batch No:	S4200-LOT-05-10	Lab Sample ID:	2BZ29
Date Sampled:	2/2/2012	Data Report Number:	ALD12005N
Date Extracted:	02/07/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	5 days		
Date/Time Analyzed:	02/07/2012 19:46	Instrument ID:	GC-1
Analysis Holding Time:	<1 day	Sample Matrix:	SOLID
Preparation Method:	CCP-TP-186-R1	Dilution Factor:	1
Analytical Method:	CCP-TP-186-R1		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION (mg/kg)	Q
67-64-1	Acetone	1.1	U
71-36-3	Butanol	2.1	U
67-56-1	Methanol	1.1	U
78-93-3	Methyl ethyl ketone	1.1	U
60-29-7	Ethyl ether	1.1	U
78-83-1	Isobutanol	2.1	U
110-86-1	Pyridine	1.1	U

* = Column B value used

TOTAL NHVOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405002N1	Lab File ID:	SN103804
Sampling Batch No:	S4200-LOT-05-10	Lab Sample ID:	2BZ33
Date Sampled:	2/2/2012	Data Report Number:	ALD12005N
Date Extracted:	02/07/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	5 days		
Date/Time Analyzed:	02/07/2012 20:18	Instrument ID:	GC-1
Analysis Holding Time:	<1 day	Sample Matrix:	SOLID
Preparation Method:	CCP-TP-186-R1	Dilution Factor:	1
Analytical Method:	CCP-TP-186-R1		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION (mg/kg)	Q
67-64-1	Acetone	0.53	U
71-36-3	Butanol	1.1 *	U
67-56-1	Methanol	7.1	J
78-93-3	Methyl ethyl ketone	0.53	U
60-29-7	Ethyl ether	0.53	U
78-83-1	Isobutanol	1.1	U
110-86-1	Pyridine	0.53	U

* = Column B value used

TOTAL NHVOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Field Sample ID:	AR4050T2N1	Lab File ID:	SN103807
Sampling Batch No:	S4200-LOT-05-10	Lab Sample ID:	2BZ34
Date Sampled:	2/2/2012	Data Report Number:	ALD12005N
Date Extracted:	02/07/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	5 days		
Date/Time Analyzed:	02/07/2012 21:53	Instrument ID:	GC-1
Analysis Holding Time:	<1 day	Sample Matrix:	SOLID
Preparation Method:	CCP-TP-186-R1	Dilution Factor:	1
Analytical Method:	CCP-TP-186-R1		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION (mg/kg)	Q
67-64-1	Acetone	1.0	U
71-36-3	Butanol	2.1	U
67-56-1	Methanol	1.0	U
78-93-3	Methyl ethyl ketone	1.0	U
60-29-7	Ethyl ether	1.0	U
78-83-1	Isobutanol	2.1	U
110-86-1	Pyridine	1.0	U

* = Column B value used

TOTAL NHVOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405901N1	Lab File ID:	SN103808
Sampling Batch No:	S4200-LOT-05-06	Lab Sample ID:	2BZ38
Date Sampled:	2/2/2012	Data Report Number:	ALD12005N
Date Extracted:	02/07/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	5 days		
Date/Time Analyzed:	02/07/2012 22:25	Instrument ID:	GC-1
Analysis Holding Time:	<1 day	Sample Matrix:	SOLID
Preparation Method:	CCP-TP-186-R1	Dilution Factor:	1
Analytical Method:	CCP-TP-186-R1		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION (mg/kg)	Q
67-64-1	Acetone	0.46	U
71-36-3	Butanol	0.92	U
67-56-1	Methanol	0.46	U
78-93-3	Methyl ethyl ketone	0.46	U
60-29-7	Ethyl ether	0.46	U
78-83-1	Isobutanol	0.92	U
110-86-1	Pyridine	0.46	U

* = Column B value used

TOTAL NHVOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR4059T1N1	Lab File ID:	SN103809
Sampling Batch No:	S4200-LOT-05-06	Lab Sample ID:	2BZ39
Date Sampled:	2/2/2012	Data Report Number:	ALD12005N
Date Extracted:	02/07/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	5 days		
Date/Time Analyzed:	02/07/2012 22:57	Instrument ID:	GC-1
Analysis Holding Time:	<1 day	Sample Matrix:	SOLID
Preparation Method:	CCP-TP-186-R1	Dilution Factor:	1
Analytical Method:	CCP-TP-186-R1		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION (mg/kg)	Q
67-64-1	Acetone	1.0	U
71-36-3	Butanol	2.1	U
67-56-1	Methanol	1.0	U
78-93-3	Methyl ethyl ketone	1.0	U
60-29-7	Ethyl ether	1.0	U
78-83-1	Isobutanol	2.1	U
110-86-1	Pyridine	1.0	U

* = Column B value used

TOTAL NHVOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405902N1	Lab File ID:	SN103810
Sampling Batch No:	S4200-LOT-05-06	Lab Sample ID:	2BZ43
Date Sampled:	2/2/2012	Data Report Number:	ALD12005N
Date Extracted:	02/07/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	5 days		
Date/Time Analyzed:	02/07/2012 23:29	Instrument ID:	GC-1
Analysis Holding Time:	<1 day	Sample Matrix:	SOLID
Preparation Method:	CCP-TP-186-R1	Dilution Factor:	1
Analytical Method:	CCP-TP-186-R1		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION (mg/kg)	Q
67-64-1	Acetone	0.62	U
71-36-3	Butanol	1.2	U
67-56-1	Methanol	0.62	U
78-93-3	Methyl ethyl ketone	0.62	U
60-29-7	Ethyl ether	0.62	U
78-83-1	Isobutanol	1.2	U
110-86-1	Pyridine	0.62	U

* = Column B value used

TOTAL NHVOC ANALYSIS DATA SHEET

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR4059T2N1	Lab File ID:	SN103811
Sampling Batch No:	S4200-LOT-05-06	Lab Sample ID:	2BZ44
Date Sampled:	2/2/2012	Data Report Number:	ALD12005N
Date Extracted:	02/07/2012	Analytical Batch ID:	1202011
Extraction Holding Time:	5 days		
Date/Time Analyzed:	02/08/2012 00:00	Instrument ID:	GC-1
Analysis Holding Time:	1 day	Sample Matrix:	SOLID
Preparation Method:	CCP-TP-186-R1	Dilution Factor:	1
Analytical Method:	CCP-TP-186-R1		

CAS NUMBER	TARGET ANALYTE	CONCENTRATION (mg/kg)	Q
67-64-1	Acetone	1.1	U
71-36-3	Butanol	2.1	U
67-56-1	Methanol	1.1	U
78-93-3	Methyl ethyl ketone	1.1	U
60-29-7	Ethyl ether	1.1	U
78-83-1	Isobutanol	2.1	U
110-86-1	Pyridine	1.1	U

* = Column B value used

Section 4

Batch QC Sample Results

TOTAL NHVOC ANALYSIS
SURROGATE RECOVERY FORM

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Preparation Method: CCP-TP-186-R1

Analytical Method: CCP-TP-186-R1

Data Report Number: ALD12005N

Analytical Batch No: 1202011

Instrument ID: GC-1

Matrix: SOLID

	LAB SAMPLE ID	Isopropanol-d8 %R COLUMN A	Isopropanol-d8 %R COLUMN B	TOTAL OUT
1	LBN020612	109	106	0
2	LCSN1202011	110	109	0
3	2BY98	109	106	0
4	2BZ04	110	108	0
5	2BZ09	109	106	0
6	2BZ14	109	106	0
7	2BZ19	106	104	0
8	2BZ24	109	106	0
9	LBN020712	108	106	0
10	2BZ28	66	64	0
11	2BZ29	108	106	0
12	2BZ33	108	107	0
13	2BZ33MS	86	85	0
14	2BZ33MSD	94	92	0
15	2BZ34	109	106	0
16	2BZ38	91	89	0
17	2BZ39	108	105	0
18	2BZ43	99	96	0
19	2BZ44	109	106	0
20	LBN020812	107	105	0
21	2BY97RE	104	101	0
22	2BZ03RE	99	96	0

%R Acceptance Criteria 56 - 144

Z = Values does not meet acceptance criteria

D = Surrogate Diluted out

TOTAL NHVOC ANALYSIS
SURROGATE RECOVERY FORM

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Preparation Method: CCP-TP-186-R1

Analytical Method: CCP-TP-186-R1

Data Report Number: ALD12005N

Analytical Batch No: 1202011

Instrument ID: GC-1

Matrix: SOLID

	LAB SAMPLE ID	Isopropanol-d8 %R COLUMN A	Isopropanol-d8 %R COLUMN B	TOTAL OUT
23	2BZ08RE	87	84	0
24	2BZ13RE	96	94	0
25	2BZ18RE	106	104	0
26	2BZ23RE	100	97	0

%R Acceptance Criteria 56 - 144

Z = Values does not meet acceptance criteria

D = Surrogate Diluted out

TOTAL NHVOC ANALYSIS
MATRIX SPIKE/MATRIX SPIKE DUPLICATE REPORTING FORM

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Preparation Method:	CCP-TP-186-R1			Data Report Number:	ALD12005N
Analytical Method:	CCP-TP-186-R1			Analytical Batch ID:	1202011
Instrument ID:	GC-1			Sample Matrix:	SOLID
Lab Sample ID:	2BZ33	MS Lab Sample ID:	2BZ33MS	MSD Lab Sample ID:	2BZ33MSD
Field Sample ID:	AR405002N1	MS Field Sample ID	AR405002N3MS	MSD Field Sample ID:	AR405002N4MSD
Lab File ID:	SN103804	MS Lab File ID:	SN103805	MSD Lab File ID:	SN103806
Date Analyzed:	02/07/2012	MS Date Analyzed:	02/07/2012	MSD Date Analyzed:	02/07/2012

COLUMN A ID: DB-624

TARGET ANALYTE	SPIKE ADDED (mg/kg)	SAMPLE CONCENTRATION (mg/kg)		SPIKED SAMPLE CONCENTRATION (mg/kg)	MS % RECOVERY	ACCEPTANCE CRITERIA % RECOVERY
Acetone	67.265	0.53	U	65.79	98	60 - 150
Butanol	67.265	1.06	U	72.25	107	60 - 150
Methanol	67.265	7.10		70.78	95	60 - 150
Methyl ethyl ketone	67.265	0.53	U	67.22	100	60 - 150
Ethyl ether	67.265	0.53	U	71.57	106	60 - 150
Isobutanol	67.265	1.06	U	74.57	111	60 - 150
Pyridine	67.265	0.53	U	61.32	91	60 - 150

TARGET ANALYTE	SPIKE ADDED (mg/kg)	DUPLICATE SAMPLE CONCENTRATION (mg/kg)	%RPD	MSD % RECOVERY	ACCEPTANCE CRITERIA RPD
Acetone	68.182	57.94	14.0	85	≤ 50
Butanol	68.182	64.94	12.0	95	≤ 50
Methanol	68.182	62.42	15.4	81	≤ 50
Methyl ethyl ketone	68.182	59.20	14.0	87	≤ 50
Ethyl ether	68.182	63.73	12.9	93	≤ 50
Isobutanol	68.182	67.40	11.5	99	≤ 50
Pyridine	68.182	54.51	13.1	80	≤ 50

Z = Values outside of QC limits

RPD: 0 out of 7 outside acceptance criteria
Spike Recovery: 0 out of 14 outside acceptance criteria

TOTAL NHVOC ANALYSIS
BLANK FORM

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory

Central Characterization Project

Date/Time Analyzed:	02/07/2012 10:08	Lab Sample ID:	LBN020612
Preparation Method:	CCP-TP-186-R1	Lab File ID:	BN103785
Analytical Method:	CCP-TP-186-R1	Data Report Number:	ALD12005N
		Analytical Batch ID:	1202011
		Instrument ID:	GC-1
		Sample Matrix:	SOLID

Column A ID: DB-624

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
67-64-1	Acetone	1.0	U
71-36-3	Butanol	2.0	U
67-56-1	Methanol	1.0	U
78-93-3	Methyl ethyl ketone	1.0	U
60-29-7	Ethyl ether	1.0	U
78-83-1	Isobutanol	2.0	U
110-86-1	Pyridine	1.0	U

Column B ID: DB-1

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
67-64-1	Acetone	1.0	U
71-36-3	Butanol	2.0	U
67-56-1	Methanol	1.0	U
78-93-3	Methyl ethyl ketone	1.0	U
60-29-7	Ethyl ether	1.0	U
78-83-1	Isobutanol	2.0	U
110-86-1	Pyridine	1.0	U

Acceptance Criteria: $\leq$ 3MDL

TOTAL NHVOC ANALYSIS
BLANK FORM

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory

Central Characterization Project

Date/Time Analyzed:	02/07/2012 18:42	Lab Sample ID:	LBN020712
Preparation Method:	CCP-TP-186-R1	Lab File ID:	BN103801
Analytical Method:	CCP-TP-186-R1	Data Report Number:	ALD12005N
		Analytical Batch ID:	1202011
		Instrument ID:	GC-1
		Sample Matrix:	SOLID

Column A ID: DB-624

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
67-64-1	Acetone	1.0	U
71-36-3	Butanol	2.0	U
67-56-1	Methanol	1.0	U
78-93-3	Methyl ethyl ketone	1.0	U
60-29-7	Ethyl ether	1.0	U
78-83-1	Isobutanol	2.0	U
110-86-1	Pyridine	1.0	U

Column B ID: DB-1

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
67-64-1	Acetone	1.0	U
71-36-3	Butanol	2.0	U
67-56-1	Methanol	1.0	U
78-93-3	Methyl ethyl ketone	1.0	U
60-29-7	Ethyl ether	1.0	U
78-83-1	Isobutanol	2.0	U
110-86-1	Pyridine	1.0	U

Acceptance Criteria: $\leq$ 3MDL

TOTAL NHVOC ANALYSIS
BLANK FORM

Advanced Mixed Waste Treatment Project

Analytical Chemistry Laboratory

Central Characterization Project

Date/Time Analyzed:	02/08/2012 11:19	Lab Sample ID:	LBN020812
Preparation Method:	CCP-TP-186-R1	Lab File ID:	BN103814
Analytical Method:	CCP-TP-186-R1	Data Report Number:	ALD12005N
		Analytical Batch ID:	1202011
		Instrument ID:	GC-1
		Sample Matrix:	SOLID

Column A ID: DB-624

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
67-64-1	Acetone	1.0	U
71-36-3	Butanol	2.0	U
67-56-1	Methanol	1.0	U
78-93-3	Methyl ethyl ketone	1.0	U
60-29-7	Ethyl ether	1.0	U
78-83-1	Isobutanol	2.0	U
110-86-1	Pyridine	1.0	U

Column B ID: DB-1

CAS NUMBER	TARGET ANALYTE	CONCENTRATION mg/kg	Q
67-64-1	Acetone	1.0	U
71-36-3	Butanol	2.0	U
67-56-1	Methanol	1.0	U
78-93-3	Methyl ethyl ketone	1.0	U
60-29-7	Ethyl ether	1.0	U
78-83-1	Isobutanol	2.0	U
110-86-1	Pyridine	1.0	U

Acceptance Criteria: $\leq$ 3MDL

TOTAL NHVOC ANALYSIS
LABORATORY BLANK SUMMARY

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory

Central Characterization Project

Date/Time Analyzed:	02/07/2012 10:08	Lab Sample ID:	LBN020612
Preparation Method:	CCP-TP-186-R1	Lab File ID:	BN103785
Analytical Method:	CCP-TP-186-R1	Data Report Number:	ALD12005N
		Analytical Batch ID:	1202011
		Instrument ID:	GC-1
		Sample Matrix:	SOLID

THIS BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, AND STANDARDS

FIELD ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
NA	LCSN1202011	LN103786	2/7/2012	10:40
AR4057T1N1	2BY98	SN103788	2/7/2012	11:46
AR4057T2N1	2BZ04	SN103790	2/7/2012	12:49
AR4058T1N1	2BZ09	SN103792	2/7/2012	13:53
AR4058T2N1	2BZ14	SN103794	2/7/2012	14:57
AR4060T1N1	2BZ19	SN103796	2/7/2012	16:02
AR4060T2N1	2BZ24	SN103798	2/7/2012	17:06

TOTAL NHVOC ANALYSIS
LABORATORY BLANK SUMMARY

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory

Central Characterization Project

Date/Time Analyzed: 02/07/2012 18:42
Preparation Method: CCP-TP-186-R1
Analytical Method: CCP-TP-186-R1

Lab Sample ID: LBN020712
Lab File ID: BN103801
Data Report Number: ALD12005N
Analytical Batch ID: 1202011
Instrument ID: GC-1
Sample Matrix: SOLID

THIS BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, AND STANDARDS

FIELD ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
AR405001N1	2BZ28	SN103802	2/7/2012	19:14
AR4050T1N1	2BZ29	SN103803	2/7/2012	19:46
AR405002N1	2BZ33	SN103804	2/7/2012	20:18
AR405002N3MS	2BZ33MS	SN103805	2/7/2012	20:50
AR405002N4MSD	2BZ33MSD	SN103806	2/7/2012	21:22
AR4050T2N1	2BZ34	SN103807	2/7/2012	21:53
AR405901N1	2BZ38	SN103808	2/7/2012	22:25
AR4059T1N1	2BZ39	SN103809	2/7/2012	22:57
AR405902N1	2BZ43	SN103810	2/7/2012	23:29
AR4059T2N1	2BZ44	SN103811	2/8/2012	00:00

TOTAL NHVOC ANALYSIS
LABORATORY BLANK SUMMARY

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory

Central Characterization Project

Date/Time Analyzed: 02/08/2012 11:19
Preparation Method: CCP-TP-186-R1
Analytical Method: CCP-TP-186-R1

Lab Sample ID: LBN020812
Lab File ID: BN103814
Data Report Number: ALD12005N
Analytical Batch ID: 1202011
Instrument ID: GC-1
Sample Matrix: SOLID

THIS BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, AND STANDARDS

FIELD ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
AR405701N2RE	2BY97RE	SN103815	2/8/2012	11:51
AR405702N2RE	2BZ03RE	SN103816	2/8/2012	12:23
AR405801N2RE	2BZ08RE	SN103817	2/8/2012	12:55
AR405802N2RE	2BZ13RE	SN103818	2/8/2012	13:27
AR406001N2RE	2BZ18RE	SN103819	2/8/2012	13:59
AR406002N2RE	2BZ23RE	SN103820	2/8/2012	14:31

TOTAL NHVOC ANALYSIS
LABORATORY CONTROL SAMPLE FORM

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Date/Time Analyzed: 02/07/2012 10:40
Preparation Method: CCP-TP-186-R1
Analytical Method: CCP-TP-186-R1

Lab File ID: LN103786
Lab Sample ID: LCSN1202011
Data Report Number: ALD12005N
Analytical Batch ID: 1202011
Instrument ID: GC-1
Sample Matrix: SOLID

TARGET ANALYTE	KNOWN CONCENTRATION (mg/kg)	MEASURED CONCENTRATION (mg/kg)	%RECOVERY
Acetone	100.00	106.343	106
Butanol	100.00	109.769	110
Methanol	100.00	111.286	111
Methyl ethyl ketone	100.00	109.628	110
Ethyl ether	100.00	118.308	118
Isobutanol	100.00	113.802	114
Pyridine	100.00	103.032	103

Acceptance Criteria: 60 - 150
Z = Value outside Acceptance Criteria

TOTAL NHVOC ANALYSIS
ANALYTE IDENTIFICATION FORM

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405001N1	Lab File ID:	SN103802
Date/Time Analyzed:	2/7/2012 19:14	Lab Sample ID:	2BZ28
Preparation Method:	CCP-TP-186-R1	Data Report Number:	ALD12005N
Analytical Method:	CCP-TP-186-R1	Analytical Batch ID:	1202011
		Instrument ID:	GC-1
		Sample Matrix:	SOLID

TARGET ANALYTE	COLUMN	RETENTION TIME (min)	RT WINDOW (min) From	To	CONCENTRATION mg/kg	RPD
Acetone	A					
	B					
Butanol	A					
	B					
Methanol	* A	2.552	2.346	2.761	6.95	
	B	2.075	1.838	2.178	7.10	2.16
Methyl ethyl ketone	A					
	B					
Ethyl ether	A					
	B					
Isobutanol	A					
	B					
Pyridine	A					
	B					

* = column used for final report

TOTAL NHVOC ANALYSIS
ANALYTE IDENTIFICATION FORM

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory

Central Characterization Project

Field Sample ID:	AR405002N1	Lab File ID:	SN103804
Date/Time Analyzed:	2/7/2012 20:18	Lab Sample ID:	2BZ33
Preparation Method:	CCP-TP-186-R1	Data Report Number:	ALD12005N
Analytical Method:	CCP-TP-186-R1	Analytical Batch ID:	1202011
		Instrument ID:	GC-1
		Sample Matrix:	SOLID

TARGET ANALYTE	COLUMN	RETENTION TIME (min)	RT WINDOW (min) From	RT WINDOW (min) To	CONCENTRATION mg/kg	RPD
Acetone	A					
	B					
Butanol	A					
	B					
Methanol	* A	2.552	2.346	2.761	7.10	
	B	2.075	1.838	2.178	7.29	2.67
Methyl ethyl ketone	A					
	B					
Ethyl ether	A					
	B					
Isobutanol	A					
	B					
Pyridine	A					
	B					

* = column used for final report

Section 5

Instrument QC Data

TOTAL NHVOC ANALYSIS
Initial Calibration Data

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory

Central Characterization Project

Analytical Method: CCP-TP-186-R1

Data Report Number: ALD12005N

ICAL ID: IN112001

Analytical Batch ID: 1202011

Instrument ID: GC-1

GC Column A: ID: DB-624

ICAL Std Conc (ug/mL)	15	75	125	200	5			
TARGET ANALYTE	IN103779 01/30/2012 RT	IN103780 01/30/2012 RT	IN103781 01/30/2012 RT	IN103782 01/30/2012 RT	IN103783 01/30/2012 RT	RT WINDOW (min) FROM	TO	CORRELATION COEFFICIENT (r)
Isopropanol-d8	4.467	4.461	4.468	4.464	4.463	4.190	4.817	1.000
Acetone	4.234	4.228	4.236	4.230	4.232	3.930	4.567	1.000
Butanol	9.039	9.034	9.038	9.033	9.037	8.789	9.353	1.000
Methanol	2.543	2.536	2.544	2.540	2.541	2.346	2.761	1.000
Methyl ethyl ketone	6.995	6.990	6.994	6.989	6.991	6.710	7.322	1.000
Ethyl ether	3.737	3.731	3.739	3.733	3.733	3.434	4.043	1.000
Isobutanol	8.145	8.141	8.146	8.141	8.142	7.891	8.466	1.000
Pyridine	10.637	10.630	10.634	10.628	10.640	10.393	10.984	1.000

GC Column B: ID: DB-1

ICAL Std Conc (ug/mL)	15	75	125	200	5			
TARGET ANALYTE	IN103779 01/30/2012 RT	IN103780 01/30/2012 RT	IN103781 01/30/2012 RT	IN103782 01/30/2012 RT	IN103783 01/30/2012 RT	RT WINDOW (min) FROM	TO	CORRELATION COEFFICIENT (r)
Isopropanol-d8	3.261	3.255	3.262	3.257	3.258	2.922	3.458	1.000
Acetone	3.114	3.108	3.115	3.110	3.112	2.780	3.294	1.000
Butanol	7.631	7.626	7.630	7.625	7.630	7.257	7.857	1.000
Methanol	2.068	2.062	2.069	2.065	2.067	1.838	2.178	1.000
Methyl ethyl ketone	5.594	5.589	5.595	5.589	5.594	5.187	5.831	1.000
Ethyl ether	3.645	3.639	3.647	3.641	3.641	3.247	3.842	1.000
Isobutanol	6.690	6.685	6.690	6.685	6.687	6.303	6.921	1.000
Pyridine	9.487	9.479	9.480	9.475	9.493	9.156	9.773	1.000

Acceptance Criteria: $r \geq 0.990$
Retention Time within RT Window

Z = Value outside Acceptance Criteria
! = Mean Retention Time outside RT Window

TOTAL NHVOC ANALYSIS
CONTINUING CALIBRATION CHECK

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory

Central Characterization Project

Date/Time Analyzed: 02/07/2012 09:35
Analytical Method: CCP-TP-186-R1

Initial Calibration Date: 01/30/2012

Lab Sample ID: CCN020712A
Lab File ID: CN103784
Data Report Number: ALD12005N
Analytical Batch ID: 1202011
Instrument ID: GC-1

Column A ID: DB-624

TARGET ANALYTE	RETENTION TIME (min)	RT WINDOW (min) FROM	RT WINDOW (min) TO	MEASURED CONCENTRATION (ug/mL)	KNOWN CONCENTRATION (ug/mL)	%D
Isopropanol-d8	4.502	4.190	4.817	75.605	75	0.81
Acetone	4.269	3.930	4.567	77.018	75	2.69
Butanol	9.067	8.789	9.353	72.102	75	3.86
Methanol	2.565	2.346	2.761	76.075	75	1.43
Methyl ethyl ketone	7.025	6.710	7.322	76.892	75	2.52
Ethyl ether	3.769	3.434	4.043	81.088	75	8.12
Isobutanol	8.175	7.891	8.466	73.641	75	1.81
Pyridine	10.664	10.393	10.984	76.445	75	1.93

Column B ID: DB-1

TARGET ANALYTE	RETENTION TIME (min)	RT WINDOW (min) FROM	RT WINDOW (min) TO	MEASURED CONCENTRATION (ug/mL)	KNOWN CONCENTRATION (ug/mL)	%D
Isopropanol-d8	3.287	2.922	3.458	75.315	75	0.42
Acetone	3.140	2.780	3.294	76.503	75	2.00
Butanol	7.658	7.257	7.857	74.263	75	0.98
Methanol	2.085	1.838	2.178	75.846	75	1.13
Methyl ethyl ketone	5.624	5.187	5.831	76.408	75	1.88
Ethyl ether	3.674	3.247	3.842	80.244	75	6.99
Isobutanol	6.718	6.303	6.921	75.225	75	0.30
Pyridine	9.510	9.156	9.773	75.427	75	0.57

Acceptance Criteria: %D ≤ 15%
Retention Times within RT Window

Z = %D > 15%
! = Retention Time outside RT Window

TOTAL NHVOC ANALYSIS
CONTINUING CALIBRATION CHECK

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory

Central Characterization Project

Date/Time Analyzed: 02/07/2012 17:38
Analytical Method: CCP-TP-186-R1

Lab Sample ID: CCN020712B
Lab File ID: CN103799
Data Report Number: ALD12005N
Analytical Batch ID: 1202011
Instrument ID: GC-1

Initial Calibration Date: 01/30/2012

Column A ID: DB-624

TARGET ANALYTE	RETENTION TIME (min)	RT WINDOW (min) FROM	RT WINDOW (min) TO	MEASURED CONCENTRATION (ug/mL)	KNOWN CONCENTRATION (ug/mL)	%D
Isopropanol-d8	4.473	4.188	4.816	75.359	75	0.48
Acetone	4.240	3.951	4.587	76.044	75	1.39
Butanol	9.043	8.785	9.349	73.493	75	2.01
Methanol	2.543	2.357	2.773	75.432	75	0.58
Methyl ethyl ketone	7.000	6.719	7.331	76.299	75	1.73
Ethyl ether	3.743	3.465	4.073	80.523	75	7.36
Isobutanol	8.151	7.888	8.462	75.837	75	1.12
Pyridine	10.641	10.369	10.959	76.190	75	1.59

Column B ID: DB-1

TARGET ANALYTE	RETENTION TIME (min)	RT WINDOW (min) FROM	RT WINDOW (min) TO	MEASURED CONCENTRATION (ug/mL)	KNOWN CONCENTRATION (ug/mL)	%D
Isopropanol-d8	3.264	3.019	3.555	75.298	75	0.40
Acetone	3.117	2.883	3.397	76.312	75	1.75
Butanol	7.635	7.358	7.958	75.747	75	1.00
Methanol	2.067	1.915	2.255	75.592	75	0.79
Methyl ethyl ketone	5.600	5.302	5.946	76.380	75	1.84
Ethyl ether	3.650	3.376	3.972	80.352	75	7.14
Isobutanol	6.696	6.409	7.027	76.524	75	2.03
Pyridine	9.488	9.201	9.819	74.343	75	0.88

Acceptance Criteria: %D $\leq$ 15%
Retention Times within RT Window

Z = %D > 15%
! = Retention Time outside RT Window

TOTAL NHVOC ANALYSIS
CONTINUING CALIBRATION CHECK

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory

Central Characterization Project

Date/Time Analyzed: 02/07/2012 18:10
Analytical Method: CCP-TP-186-R1

Initial Calibration Date: 01/30/2012

Lab Sample ID: CCN020712C
Lab File ID: CN103800
Data Report Number: ALD12005N
Analytical Batch ID: 1202011
Instrument ID: GC-1

Column A ID: DB-624

TARGET ANALYTE	RETENTION TIME (min)	RT WINDOW (min) FROM	TO	MEASURED CONCENTRATION (ug/mL)	KNOWN CONCENTRATION (ug/mL)	%D
Isopropanol-d8	4.479	4.190	4.817	75.181	75	0.24
Acetone	4.247	3.930	4.567	75.932	75	1.24
Butanol	9.046	8.789	9.353	72.121	75	3.84
Methanol	2.551	2.346	2.761	75.453	75	0.60
Methyl ethyl ketone	7.004	6.710	7.322	76.132	75	1.51
Ethyl ether	3.749	3.434	4.043	80.261	75	7.01
Isobutanol	8.153	7.891	8.466	75.741	75	0.99
Pyridine	10.643	10.393	10.984	75.113	75	0.15

Column B ID: DB-1

TARGET ANALYTE	RETENTION TIME (min)	RT WINDOW (min) FROM	TO	MEASURED CONCENTRATION (ug/mL)	KNOWN CONCENTRATION (ug/mL)	%D
Isopropanol-d8	3.271	2.922	3.458	75.212	75	0.28
Acetone	3.124	2.780	3.294	76.011	75	1.35
Butanol	7.639	7.257	7.857	75.552	75	0.74
Methanol	2.074	1.838	2.178	75.625	75	0.83
Methyl ethyl ketone	5.605	5.187	5.831	76.004	75	1.34
Ethyl ether	3.656	3.247	3.842	79.948	75	6.60
Isobutanol	6.700	6.303	6.921	76.216	75	1.62
Pyridine	9.491	9.156	9.773	74.307	75	0.92

Acceptance Criteria: %D $\leq$ 15%
Retention Times within RT Window

Z = %D > 15%
! = Retention Time outside RT Window

TOTAL NHVOC ANALYSIS
CONTINUING CALIBRATION CHECK

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory

Central Characterization Project

Date/Time Analyzed: 02/08/2012 00:32
Analytical Method: CCP-TP-186-R1

Initial Calibration Date: 01/30/2012

Lab Sample ID: CCN020712D
Lab File ID: CN103812
Data Report Number: ALD12005N
Analytical Batch ID: 1202011
Instrument ID: GC-1

Column A ID: DB-624

TARGET ANALYTE	RETENTION TIME (min)	RT WINDOW (min) FROM	RT WINDOW (min) TO	MEASURED CONCENTRATION (ug/mL)	KNOWN CONCENTRATION (ug/mL)	%D
Isopropanol-d8	4.484	4.165	4.793	75.041	75	0.05
Acetone	4.252	3.929	4.565	75.844	75	1.13
Butanol	9.052	8.764	9.328	72.012	75	3.98
Methanol	2.552	2.343	2.759	75.097	75	0.13
Methyl ethyl ketone	7.008	6.698	7.310	76.081	75	1.44
Ethyl ether	3.754	3.445	4.053	80.281	75	7.04
Isobutanol	8.159	7.866	8.440	75.690	75	0.92
Pyridine	10.649	10.348	10.938	75.018	75	0.02

Column B ID: DB-1

TARGET ANALYTE	RETENTION TIME (min)	RT WINDOW (min) FROM	RT WINDOW (min) TO	MEASURED CONCENTRATION (ug/mL)	KNOWN CONCENTRATION (ug/mL)	%D
Isopropanol-d8	3.275	3.003	3.539	74.977	75	0.03
Acetone	3.128	2.867	3.381	75.977	75	1.30
Butanol	7.645	7.339	7.939	75.472	75	0.63
Methanol	2.075	1.904	2.244	75.199	75	0.27
Methyl ethyl ketone	5.611	5.283	5.927	75.979	75	1.31
Ethyl ether	3.661	3.358	3.954	80.013	75	6.68
Isobutanol	6.705	6.391	7.009	76.218	75	1.62
Pyridine	9.497	9.182	9.800	74.147	75	1.14

Acceptance Criteria: %D $\leq$ 15%
Retention Times within RT Window

Z = %D > 15%
! = Retention Time outside RT Window

TOTAL NHVOC ANALYSIS
CONTINUING CALIBRATION CHECK

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory

Central Characterization Project

Date/Time Analyzed: 02/08/2012 10:47
Analytical Method: CCP-TP-186-R1

Lab Sample ID: CCN020812A
Lab File ID: CN103813
Data Report Number: ALD12005N
Analytical Batch ID: 1202011
Instrument ID: GC-1

Initial Calibration Date: 01/30/2012

Column A ID: DB-624

TARGET ANALYTE	RETENTION TIME (min)	RT WINDOW (min) FROM	TO	MEASURED CONCENTRATION (ug/mL)	KNOWN CONCENTRATION (ug/mL)	%D
Isopropanol-d8	4.501	4.190	4.817	75.229	75	0.31
Acetone	4.268	3.930	4.567	76.162	75	1.55
Butanol	9.067	8.789	9.353	72.069	75	3.91
Methanol	2.565	2.346	2.761	75.306	75	0.41
Methyl ethyl ketone	7.027	6.710	7.322	76.141	75	1.52
Ethyl ether	3.769	3.434	4.043	80.233	75	6.98
Isobutanol	8.174	7.891	8.466	75.901	75	1.20
Pyridine	10.665	10.393	10.984	75.543	75	0.72

Column B ID: DB-1

TARGET ANALYTE	RETENTION TIME (min)	RT WINDOW (min) FROM	TO	MEASURED CONCENTRATION (ug/mL)	KNOWN CONCENTRATION (ug/mL)	%D
Isopropanol-d8	3.287	2.922	3.458	75.925	75	1.23
Acetone	3.140	2.780	3.294	76.299	75	1.73
Butanol	7.657	7.257	7.857	74.417	75	0.78
Methanol	2.085	1.838	2.178	75.105	75	0.14
Methyl ethyl ketone	5.624	5.187	5.831	76.055	75	1.41
Ethyl ether	3.675	3.247	3.842	80.320	75	7.09
Isobutanol	6.718	6.303	6.921	75.709	75	0.94
Pyridine	9.510	9.156	9.773	74.565	75	0.58

Acceptance Criteria: %D $\leq$ 15%
Retention Times within RT Window

Z = %D > 15%
! = Retention Time outside RT Window

TOTAL NHVOC ANALYSIS
CONTINUING CALIBRATION CHECK

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory

Central Characterization Project

Date/Time Analyzed: 02/08/2012 15:03
Analytical Method: CCP-TP-186-R1

Lab Sample ID: CCN020812B
Lab File ID: CN103821
Data Report Number: ALD12005N
Analytical Batch ID: 1202011
Instrument ID: GC-1

Initial Calibration Date: 01/30/2012

Column A ID: DB-624

TARGET ANALYTE	RETENTION TIME (min)	RT WINDOW (min) FROM	RT WINDOW (min) TO	MEASURED CONCENTRATION (ug/mL)	KNOWN CONCENTRATION (ug/mL)	%D
Isopropanol-d8	4.487	4.187	4.815	74.360	75	0.85
Acetone	4.255	3.950	4.586	74.915	75	0.11
Butanol	9.055	8.785	9.349	71.216	75	5.05
Methanol	2.552	2.357	2.773	74.181	75	1.09
Methyl ethyl ketone	7.013	6.721	7.333	75.210	75	0.28
Ethyl ether	3.757	3.465	4.073	78.851	75	5.13
Isobutanol	8.162	7.887	8.461	75.038	75	0.05
Pyridine	10.652	10.370	10.960	74.118	75	1.18

Column B ID: DB-1

TARGET ANALYTE	RETENTION TIME (min)	RT WINDOW (min) FROM	RT WINDOW (min) TO	MEASURED CONCENTRATION (ug/mL)	KNOWN CONCENTRATION (ug/mL)	%D
Isopropanol-d8	3.276	3.019	3.555	74.296	75	0.94
Acetone	3.129	2.883	3.397	75.140	75	0.19
Butanol	7.648	7.357	7.957	74.453	75	0.73
Methanol	2.074	1.915	2.255	74.556	75	0.59
Methyl ethyl ketone	5.614	5.302	5.946	75.114	75	0.15
Ethyl ether	3.664	3.377	3.973	78.754	75	5.00
Isobutanol	6.708	6.409	7.027	75.274	75	0.36
Pyridine	9.501	9.201	9.819	73.579	75	1.89

Acceptance Criteria: %D ≤ 15%
Retention Times within RT Window

Z = %D > 15%
! = Retention Time outside RT Window

TOTAL NHVOC ANALYSIS
MDL REPORTING FORM

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Preparation Method: CCP-TP-186-R1
Analysis Method: CCP-TP-186-R1
MDL Determination Date: 11/02/2011
Instrument ID: GC-1
Sample Matrix: SOLID

COLUMN A ID: DB-624

TARGET ANALYTE	REPORTED MDL (mg/kg)	PROGRAM REQUIRED MDL (mg/kg)	PRQL (mg/kg)
Isopropanol-d8	1.0	10	100
Acetone	1.0	10	100
Butanol	2.0	10	100
Methanol	1.0	10	100
Methyl ethyl ketone	1.0	10	100
Ethyl ether	1.0	10	100
Isobutanol	2.0	10	100
Pyridine	1.0	10	100

COLUMN B ID: DB-1

TARGET ANALYTE	REPORTED MDL (mg/kg)	Program Required MDL (mg/kg)	PRQL (mg/kg)
Isopropanol-d8	1.0	10	100
Acetone	1.0	10	100
Butanol	2.0	10	100
Methanol	1.0	10	100
Methyl ethyl ketone	1.0	10	100
Ethyl ether	1.0	10	100
Isobutanol	2.0	10	100
Pyridine	1.0	10	100

SOLIDS: MDLs calculated assuming 3.00 gram sample and 22mL extraction volume

TOTAL NHVOC ANALYSIS
METHOD PRECISION AND ACCURACY (P&A) DEMONSTRATION

Advanced Mixed Waste Treatment Project
Analytical Chemistry Laboratory
Central Characterization Project

Method P&A Effective Date: 11/02/2011

Data Report Number: ALD12005N
Analytical Batch ID: 1202011

Preparation Method: CCP-TP-186-R1
Analytical Method: CCP-TP-186-R1

Instrument ID: GC-1

TARGET ANALYTE	Number of Method Performance Samples	Accuracy		Precision	
		Mean %R	Acceptance Limits (%R)	%RSD	Acceptance Limits (%RSD)
Acetone	7	92.1	60–150	1.4	≤50
Butanol	7	85.7	60–150	1.3	≤50
Methanol	7	96.7	60–150	1.4	≤50
Methyl ethyl ketone	7	96.0	60–150	1.4	≤50
Ethyl ether	7	83.6	60–150	6.8	≤50
Isobutanol	7	88.9	60–150	1.6	≤50
Pyridine	7	91.9	60–150	1.3	≤50

[a]D = Detected; result must be greater than zero
Z = Did not meet acceptance criteria

Section 6

Data Review Checklists

CCP Sample Receiving & Custody Review Checklist
AMWTP Analytical Chemistry Laboratory

Log Number: 1202011	Waste Stream ID: ARP Soils	NCR Initiation Required? ☐ Yes X No
COC Numbers: AR4057R1,AR4057R2,AR4057C1,AR4057C2,AR4058R1,AR4058R2, AR4058C1,AR4058C2,AR4060R1,AR4060R2,AR4060C1,AR4060C2,AR4050R1, AR4050R2,AR4050C1,AR4050C2,AR4059R1,AR4059R2,AR4059C1,AR4059C2		IF Yes, NCR Number:
Reviewer: Bill Strong (Printed Name) — (Signature) — 2-07-2012 (Date)		Procedure Number: CCP-TP-180 Revision 2

Instructions: Complete one checklist per analytical log. Enter the appropriate response for each question. Each "No" response requires explanation. A "No" response to a question may require initiation of an NCR.

Requirement	Yes	No	Comments
1. Field Chain of Custody (COC) Forms			
a. Was a COC form received with each shipping container?	☒	☐	
b. Did the content of each shipping container match that listed on the associated COC form?	☒	☐	
c. Are all custody transfers completely documented by signatures of relinquishers and receivers, with date and time of transfer?	☒	☐	
d. Does all sample information (e.g., sample ID, sampling date and time, sampling batch) listed on the COC form correspond with the information on the sample labels?	☒	☐	
e. Is the correct analysis requested for each sample?	☒	☐	
f. Are any corrections on the COC form appropriately made with a single line through the incorrect entry and the correct data written in (not overwritten), initialed and dated?	☒	☐	See Note 1
2. Sample Labels			
a. Was each sample received with a completed sample label?	☒	☐	
b. Do the field sample IDs on the sample labels correspond to those on the field COC form?	☒	☐	
c. Are the sampling batch number, sampling date, time and requested analysis recorded on each sample label, and correspond with those recorded on the COC form?	☒	☐	
d. Are the sampler initials, organization and sample description recorded on each sample label?	☒	☐	
e. Are any corrections on the sample labels appropriately made with a single line through the incorrect entry and the correct data written in (not overwritten), initialed and dated?	☒	☐	
3. Sample Integrity			
a. Were custody seals used on the shipping container?	☐	☒	See Note 2
b. Were custody seals used on each individual sample container?	☒	☐	
c. Were all custody seals intact and undamaged upon receipt at the laboratory?	☒	☐	
d. Were all custody seals placed such that the container could not be opened without damaging the seal?	☒	☐	
e. Has the physical integrity of each sample been maintained (e.g., no cracks or leaks)?	☒	☐	
f. Were all samples preserved during shipment with "Blue Ice" or equivalent cooling mechanism?	☒	☐	
g. Were all samples placed in refrigerated storage (4 ± 2 °C) after log-in?	☒	☐	
4. Internal Sample Tracking			
a. Are all samples logged into the Analytical Computer System (ACS)?	☒	☐	
b. Is all sample information correctly transcribed from the field documentation into the ACS?	☒	☐	
c. Are all sample containers labeled with the ACS log number and the laboratory sample ID?	☒	☐	
d. Is log information entered into the Sample Tracking Logbook?	☒	☐	

Contact the sampling organization if any discrepancies are found in the field COC and sample label documentation. Document the name of the person contacting the sampling organization, the name of the person contacted, the date and time of the contact, and the resolution of the problem.

Note 1 **Corrections to COCs AR4060R1, AR4060R2, AR4060C1 and AR4060C2 made per CCP (Brad Stark) request via email on 2/06/12.**

Note 2 ***Direct transfer of custody from Solids sampler to laboratory sample custodian.***

Form Date: 05/11/11

ALD Document: Log 1202011 CCP-ARP Soils.tif - Scanned:2/21/2012 4:04:52 PM
0075

Sailer Siemer, Shelly J.

From: Stark, Bradley R [Bradley.Stark@icp.doe.gov]
Sent: Monday, February 06, 2012 4:20 PM
To: Sailer Siemer, Shelly J.
Subject: RE: Corrections needed on ARP Solid Sample COCs for Sampling Batch S4200-LOT-05-03

Thank you, I give you permission to fix the error on the COC's.

Thank You

Brad Stark
International Engineering Site Manager
International Engineering Services
Sub-Contractor to URS Washington TRU Solutions LLC.
Office: 208-533-0593
Cell: 208-521-7466

From: Sailer Siemer, Shelly J. [mailto:Shelly.Sailer@amwtp.inl.gov]
Sent: Monday, February 06, 2012 3:58 PM
To: Stark, Bradley R
Cc: Strong, William C; Nicklas, John H; Lundholm, Duane S; Laug, Jeffrey S
Subject: Corrections needed on ARP Solid Sample COCs for Sampling Batch S4200-LOT-05-03

Hi Brad,

As received at the laboratory, all four COC forms for ARP sampling batch S4200-LOT-05-03 (COC Numbers AR4060R1, AR4060R2, AR4060C1, AR4060C2) have corrections made to the laboratory name ("INEEL INTEC" lined out and "INL-RWMC" written in) which have not been initialed and dated.

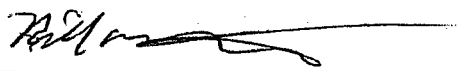
Please reply to this note with permission to correct these errors and we will fix the COC forms for you.

Please let me know if you have questions. Thanks.

Shelly J. Sailer
QA Officer, AMWTP Analytical Chemistry Laboratory
Office: (208) 557-6650
Cell: (208) 932-6458
e-mail: shelly.sailer@amwtp.inl.gov

AMWTP Analytical Chemistry Laboratory

Data Generator Checklist for CCP

Data Report Number: ALD12005N	Analytical Batch: 1202011
Analysis Procedure: CCP-TP-186	Procedure Revision: 1
Analysis Date(s): 02-07-12 and 02-08-12	
Data Generator Signature: 	

Criteria	Yes	No	Comments
1. Samples analyzed in accordance with cited analytical method.	✓		
2. All logbook entries completed in accordance with CCP-QP-008.	✓		
3. All data entry and corrections made in accordance with CCP-TP-188.	✓		
4. All raw data signed/initialed and dated in indelible black ink.	✓		
5. Data reviewed for completeness and accuracy.	✓		

AMWTP Analytical Chemistry Laboratory
Independent Technical Review (ITR) Checklist for CCP
Total NHVOCs in Homogenous Solids and Soil/Gravel by GC/FID

Analytical Batch: 1202011	Data Report: ALD12005N	Method: CCP-TP-186

Analysis Date(s)	Data Generator(s)	ITR Review Date	ITR Release Signature	ITR Release Date
2-07-12 and 2-08-12	Bill Strong	2/23/12	Jack A Gibson	2/29/12

Requirement	Yes	No	N/A	Comments (Entries are required ONLY if "No" is checked)
1. Retention Time (RT) Windows	///	///	///	///
a. Have all RT windows used with this analytical batch been verified and approved for use as documented by a completed RT Window Determination and Initial Calibration Independent Technical Review Checklist?	✓			
2. Initial Calibration (ICAL)	///	///	///	///
a. Have all ICALs used with this analytical batch been verified to meet specifications and approved for use as documented by a completed RT Window Determination and Initial Calibration Independent Technical Review Checklist?	✓			
3. Continuing Calibration Verification (CCV)	///	///	///	///
a. Were CCV standards analyzed at the beginning of each 12-hour analytical shift (before analysis of samples), and at the end of the shift (after sample analysis and within 12 hours of the beginning CCV)?	✓			
b. Are all target analyte peaks within the initial RT windows for the beginning CCV?	✓			
c. Are all target analyte peaks within the daily RT (centered around beginning CCV RTs) windows for the ending CCV?	✓			
d. Are the measured concentration %D ≤15 for each target analyte on both analytical columns for the beginning and ending CCVs?	✓			
4. Samples (Including LCSs, Blanks, MS and MSDs)	///	///	///	///
a. Are all detected target analytes identified on both the quantitation and confirmation column with peaks within the daily RT windows and in concentrations ≥MDL?	✓			
b. Were all samples having analytes detected in amounts exceeding the calibration range reanalyzed on a dilution?			✓	
c. Do all surrogate compound recoveries meet CCP-TP-186 acceptance criteria?	✓			
d. Are all analytes showing discrepancies (interferences) between columns quantitated per CCP-TP-186?	✓			See Case Narrative
e. Are analyte retention time windows checked for multiple peaks falling within the RT windows?	✓			
f. Have peak baselines been checked for correct integration?	✓			
g. Were the correct quantitation routines used for each column?	✓			
h. Are peak areas proportionaliy consistent with those of the CCV?	✓			
5. Blanks	///	///	///	///
a. Was at least one unique laboratory blank extracted and analyzed with the analytical batch?	✓			
b. Was a blank (laboratory or method) analyzed daily prior to the analysis of samples?	✓			
c. Are all blank results ≤3 x program-required MDLs for all target analytes?	✓			
6. Laboratory Control Samples (LCSs)	///	///	///	///
a. Was at least one unique LCS extracted and analyzed with the analytical batch?	✓			
b. Are all LCSs prepared from a standard source different from that used for the calibration standards?	✓			
c. Does the LCS contain all of the NHVOC target analytes?	✓			
d. Are the percent recoveries for each target analyte in each LCS between 60% and 150%?	✓			

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AMWTP Analytical Chemistry Laboratory
Independent Technical Review (ITR) Checklist for CCP
Total NHVOCs in Homogenous Solids and Soil/Gravel by GC/FID

Analytical Batch: 1202011	Data Report: ALD12005N	Method: CCP-TP-186

Requirement	Yes	No	N/A	Comments (Entries are required ONLY if "No" is checked)
7. Matrix Spike and Matrix Spike Duplicate Samples (MS/MSD)	///	///	///	///
a. Was at least one matrix spike sample (MS) analyzed with the analytical batch?	✓			
b. Was at least one matrix spike duplicate sample (MSD) analyzed with the analytical batch?	✓			
c. Are all percent recoveries for the MS and MSD between 60% and 150%?	✓			
d. Are all RPDs between the MS and MSD ≤50?	✓			
8. Sample Integrity Verification	///	///	///	///
a. Is COC documentation complete and accurate for all reported samples?	✓			
b. Was physical integrity of all samples verified as satisfactory at VTSR?	✓			
c. Were all samples and associated extracts stored at 4 ± 2 °C between receipt and analysis?	✓			
d. Were all samples (including dilutions and reanalyses) analyzed within 14 days of collection?	✓			
9. Instrument, Method and Personnel Qualification Verification	///	///	///	///
a. Were all analytical tasks, including sample analysis and supporting method performance and ICALs, conducted by personnel having current program qualifications?	✓			
b. Was acceptable demonstration of precision, accuracy, and MDLs performed within the last 6 months?	✓			
10. Supporting Data Package Completeness	///	///	///	///
a. Are all raw data and instrument printouts signed/initialed (in permanent black ink) and dated by the operator and included in the supporting data package?	✓			
b. Are copies of all extraction/preparation and analysis run log books for the analytical batch included in the supporting data package?	✓			
c. Are standard certificates and QC Lab preparation records present and accurate for all working, intermediate and stock standard solutions used?	✓			
d. Are all changes to original data made by line-out of incorrect data, initialed/signed and dated by the person making the change?	✓			
11. Batch Data Report Completeness	///	///	///	///
a. Does the report contain a Data Report Narrative that addresses, at a minimum: 1) any deviations from CCP-TP-186 due to sample matrix or ALARA concerns and the justification for the deviations; 2) any QC samples that failed the acceptance criteria, and their impact on data quality; 3) any NCRs associated with the reported samples; and 4) any problems or unusual conditions encountered during the analysis?	✓			
b. Are copies of any NCRs associated with the data included?			✓	
c. Are Analysis Data Sheets present and accurate for all samples in the analytical batch?	✓			
d. Are the analyte concentrations on the Analysis Data Sheets reported in units of mg/kg and correctly rounded to 2 significant figures?	✓			
e. Are U, J, B, D, E, H, and Z data qualifying flags correctly assigned on the reporting forms?	✓			
f. Are reporting forms present and accurate for surrogate recoveries, MS/MSDs, LBs, LCSs, ICALs, CCVs, MDLs and Analyte Identification?	✓			
g. Are copies of all COC documentation included?	✓			
h. Have all data received documented data generator review and signature?	✓			
i. Were all calculations performed using validated software or 100% manually verified?	✓			
j. Have the data been reviewed for transcription errors?	✓			
k. Are all pages in the data report legible and correctly paginated?	✓			

0079

Attachment 9 – CCP SPM HSG Summa Sampling Project Level Validation Checklist and Summary

BDR Number: INHSG1202 **Sampling Date:** 6/25/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
1. Does the Batch Data Report (BDR) contain the batch number? **Reference Source: CCP-PO-001, Table C3-12**	X			
2. Is the BDR complete according to the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-10b**	X			
3. Does the BDR contain the BDR date? **Reference Source: CCP-PO-001, Table C3-12**	X			
4. Is the sample matrix and type included for each sample in the BDR? **Reference Source: CCP-PO-001, Table C3-12**	X			
5. Is the BDR complete as defined by the process procedures? **Reference Source: CCP-PO-001, C3-10, CCP Technical Procedures**	X			
6. List all containers that have met QAOs. **Reference Source: CCP-PO-001, Table C3-12**				Container Numbers: NRFTRUSPC023-1 NRFTRUSPC027-1 NRFTRUSPC003-1 NRFTRUSPC026-1
7. Does the BDR include the requested analyses and the name of the laboratory? **Reference Source: CCP-PO-001, Table C3-12**	X			
8. Is there a reference to or copy of any associated NCRs (if any) in the BDR? NA if no NCRs associated with the BDR. **Reference Source: CCP-PO-001, Table C3-12**			X	NO NCR'S
9. Does the BDR include the point of origin for sampling (e.g., building number, room)? **Reference Source: CCP-PO-001, Table C3-12**	X			
10. Is the sample size included in the BDR? **Reference Source: CCP-PO-001, Table C3-12**	X			
11. Does the BDR include the sample location of each container? Note: Location within container is where the sample is taken. The BDR must specify what layer of confinement was sampled (e.g., under the lid). **Reference Source: CCP-PO-001, Table C3-12**	X			

CCP RECORDS ORIGINAL
DATE REC'D 7/18/12

Attachment 9 – CCP SPM HSG Summa Sampling Project Level Validation Checklist and Summary (Continued)

BDR Number: INHSG1202 **Sampling Date:** 6/25/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
12. Is the person collecting the sample identified in the BDR and qualified? **Reference Source: CCP-PO-001, Table C3-12**	X			
13. Does the BDR contain a chain of custody record? **Reference Source: CCP-PO-001, Table C3-12**	X			
14. Does the chain of custody form correctly identify the Waste Stream ID? **Reference Source: CCP-PO-001, Table C3-12**	X			
15. Is there a reference to sampling equipment numbers or lot numbers for disposable equipment? **Reference Source: CCP-PO-001, Table C3-12**	X			
16. Is there verification of rigid liner venting? **Reference Source: CCP-PO-001, Table C3-12**			X	NO RIGID LINER
17. Does the BDR include the operator/sampler signature and date and time of sampling for each sample? **Reference Source: CCP-PO-001, Table C3-12**	X			
18. Are there 20 samples or less (excluding QC) in the batch and all samples collected within 14 days of the first sample collected? **Reference Source: CCP-PO-001, C1-1b**	X			
19. Are the correct revisions of the procedures used and identified? **Reference Source: CCP-PO-001, Table C3-12**	X			
20. Are all data reporting forms complete with data reported properly (correct units and significant figures)? **Reference Source: CCP-PO-001, C3-10b(1)**	X			
21. Is there a cross-reference between waste container number and field sample number? **Reference Source: CCP-PO-001, C1-5**	X			
22. Have the samples been properly preserved (0-40° C)? **Reference Source: CCP-PO-001, Table C1-1**	X			

Attachment 9 – CCP SPM HSG Summa Sampling Project Level Validation Checklist and Summary (Continued)

BDR Number: INHSG1202	Sampling Date: 6/25/12			
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
23. Have the samples been properly preserved (0-40° C)? **Reference Source: CCP-PO-001, Table C1-1**	X			
24. Has the correct DAC scenario and waste packaging configuration been selected? **Reference Source: CCP-PO-001, C3-2**	X			
25. Do the samples meet the required DAC equilibrium times? **Reference Source: CCP-PO-001, C3-2**	X			
26. Prior to canister use was the following performed: equipment blank, sample canister equipment cleaning and leak check, and field reference standard (or on-line control standard) performed as required? **Reference Source: CCP-PO-001, C1-1b**	X			
27. Has one field blank per batch been collected? **Reference Source: CCP-PO-001, Table C1-2**	X			
28. Has a minimum of one equipment blank been collected for the applicable cleaning batch blanks? **Reference Source: CCP-PO-001, Table C1-2**	X			
29. Has one field duplicate per batch been collected? **Reference Source: CCP-PO-001, Table C1-2**	X			
30. Has the canister pressure and ambient temperature and pressure been recorded? **Reference Source: CCP-PO-001, Table C3-12**	X			
31. Have the ambient pressure and temperature sensors been calibrated? **Reference Source: CCP-PO-001, C1-1d**	X			
32. Have all the waste containers equilibrated for a minimum of 72 hours at 18° C or higher? **Reference Source: CCP-PO-001, C1-1a**	X			
33. Is the completed, signed, and dated Independent Technical Reviewer Checklist in the BDR? **Reference Source: CCP-PO-001, Table C3-12**	X			

Attachment 9 – CCP SPM HSG Summa Sampling Project Level Validation Checklist and Summary (Continued)

BDR Number: INHSG1202 **Sampling Date:** 6/25/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
34. Is the completed, signed, and dated Independent Technical Reviewer Checklist in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, Table C3-12**	X			

Comments: NA

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

LAURA NELSON	Laura Nelson	7/9/2012
SPM Printed Name	Signature	Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

Attachment 1 – HSG Sampling Batch Data Report Cover Sheet

Page 1 of 1

Headspace Gas Sampling

HSG Sampling Batch Number: INHSG1202

Waste Matrix Code: S5100

Waste Container Identification Numbers

NRFTRUSPC023-1	N/A
NRFTRUSPC027-1	N/A
NRFTRUSPC003-1	N/A
NRFTRUSPC026-1	N/A
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

Comments: **Waste Stream ID's for this batch are IN-ID-NRF-SPC. No filter change out required.**

HSG Independent Technical Reviewer:

Jeri Miles
Printed Name

Jeri Miles
Signature

7/2/2012
Date

CCP RECORDS ORIGINAL
DATE REC'D 7-3-12

Attachment 2 – HSG Sampling Batch Data Report Table of Contents Page 1 of 1

Section		Page No.
1.	HSG Sampling Batch Data Report Cover Sheet (Attachment 1)	1
2.	HSG Sampling Batch Data Report Table of Contents (Attachment 2)	2
3.	Independent Technical Reviewer (ITR) Review Checklist (Attachment 3)	3
	Sampling Batch Data Report Forms:	
4.	Chain of Custody/Canister Tag Forms (Attachment 1 from CCP-TP-093)	5
5.	Copy of Laboratory Canister Tags	7
6.	Cleanliness Certification for needle assemblies as applicable to the Sampling Batch Data Report (or copy of the certifications from CCP-TP-093)	13
7.	Sample Drum Data Form (Attachment 2 from CCP-TP-093)	15
8.	Copy of Sampling Port Installation Records (CCP-TP-098, Attachment 1), if applicable	N/A
9.	Copy of Drum Filter Changeout Form (Attachment 1 of CCP-TP-082), if applicable.	N/A
10.	Shipment Request Forms, if applicable.	N/A
11.	72-Hour Temperature Equilibration Plots	17
12.	Copy of NCRs, if applicable	N/A

Attachment 3 – Independent Technical Reviewer (ITR) Review Checklist

HSG Sampling Batch Number: INHSG1202

1.	Is the HSG Sampling BDR complete as specified in step 4.1.2 and are the field sampling records complete?	X			
2.	Are calculations correct for the Drum Age Criteria (DAC), temperature equilibrium time, and percent complete?	X			
3.	Did the containers meet the DAC?	X			
4.	Did the containers meet the temperature equilibrium requirement (stored at 18°C or higher for 72-hours prior to sampling)?	X			
5.	Do the temperature plots indicate the drums were stored at 18 °C (64.5 °F) or higher for 72-hours prior to sampling?	X			
5a.	Are the waste stream IDs completed correctly on the Chain of Custody (COC) Form?	X			
6.	Was a Field Duplicate collected once per batch?	X			
7.	Was a Field Reference Sample collected?		X		Not Needed
8.	Was a Field Blank collected one per batch prior to sampling containers?	X			
9.	Is the percentage of valid samples collected and submitted for analysis greater than or equal to 90 percent?	X			
10.	Is the data technically reasonable based upon the technique used?	X			
11.	Was the sampling equipment checked for leaks after sample collection?	X			
12.	Was the data generation and reduction conducted in a technically correct manner?	X			
13.	Was the data reported in proper units and with the correct number of significant figures?	X			
14.	Were the samples maintained at a temperature between 0°C - 40°C?	X			
15.	Was the equipment involved in the sampling activities in calibration (i.e., torque wrenches, ambient temperature and pressure gauges, dataloggers, ultrasonic micrometer, min/max thermometers)?	X			

Attachment 3 – Independent Technical Reviewer (ITR) Review Checklist (continued)

HSG Sampling Batch Number: INHSG1202

16.	Are there satisfactory equipment blanks, canister cleaning blanks, and needle assembly cleanliness results?	X			
17.	Has the data been reviewed for transcription errors?	X			
18.	Verify all the data is signed and dated, and the data is recorded clearly, legibly, and accurately.	X			
19.	No more than 20 waste containers are in the batch (excluding the QC samples).	X			
20.	Procedure Number: CCP-TP-093 Revision: 16				
21.	Is the procedure number and revision correct?	X			
22.	All changes to original data are lined out, initialed, and dated by the individual making the change, and a justification included. (NOTE: Original data must not be obliterated or otherwise disfigured as not to be readable. Data changes shall only be made by the individual who originally collected the data or an individual authorized to change the data.)	X			

Independent Technical Reviewer:

Jeri Miles
Printed Name

Jeri Miles
Signature

7/2/2012
Date

Attachment 1 – Chain of Custody/Canister Tag Chain of Custody # 591 Page 1 of 2

Location: Under Drum Lid	Point of Origin: CPP-659	Sample Matrix is Gas	Ambient Conditions
	Field Batch Number: INHSG1202		Temperature (centigrade): 25.2
			Pressure (in. Hg): 25

Site	Date	SUMMA® Canister No.	Size (mL)	TID No.	Container ID /Barcode No.	Waste Stream ID	Cleaning Batch No.	Needle Assembly Batch No.	Type SS B D F C (Note 1)	Vent Seal (Y/NA)	Start Time	End Time	Beginning Pressure (in.Hg or psig)	End Pressure (in.Hg or psig)	Sampler's Initials
IN	062512	EI684	250	0825621	N/A	N/A	429C	INHSG1201NB	B	N/A	1001	1002	25 in.Hg	1 in.Hg	AM
IN	062512	EI756	250	0825622	NRFTRUSPC023-1	IN-ID-NRF-SPC	429C	INHSG1102NB	D	Y	1015	1020	25 in.Hg	3 in.Hg	AM
IN	062512	EIC78	250	0825623	NRFTRUSPC023-1	IN-ID-NRF-SPC	429C	INHSG1102NB	D	Y	1015	1020	26 in.Hg	1 in.Hg	AM
IN	062512	EIB79	250	0825624	NRFTRUSPC027-1	IN-ID-NRF-SPC	429C	INHSG1201NB	SS	Y	1037	1042	25 in.Hg	1 in.Hg	AM
IN	062512	EIC73	250	0825625	NRFTRUSPC003-1	IN-ID-NRF-SPC	429C	INHSG1201NB	SS	Y	1055	1059	25 in.Hg	2 in.Hg	AM
IN	062512	EI169	250	0825626	NRFTRUSPC026-1	IN-ID-NRF-SPC	429C	INHSG1201NB	SS	Y	1115	1120	25 in.Hg	1 in.Hg	AM
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Note 1. Analysis required:
C - Needle Assembly Cleanliness Certification: VOC.
SS - Single Sample: VOC, H_2, CH_4
B - Field Blank: VOC
D - Duplicate: VOC, H_2, CH_4
F - Field Reference Standard: VOC

Sampler's Signature

Attachment 1 – Chain of Custody/Canister Tag (Continued) Chain of Custody # 591 Page 2 of 2

Field Batch Number: INHSG1202					
Comments: N/A		Instrument Section	M&TE ID No.	Calibration Due Date	Initials/Date
Analytical Laboratory - ECL		Pressure Meter	XC0566	8-16-2012	6-25-12
Shipping Tracking #N/A	Method of Shipping: ECL Pickup	Thermometer	XC0717	6-5-2013	6-25-12
		Min /Max Thermometer	723204 XC0552	10-12-2012 10-12-2012	6-25-12
Analysis Requested VOC		Preservation Method: 0 - 40°C			
TID Number(s) 0825627		TID Initials and date:		6-26-12	

Custody Initiated By: (Sampler Name/Organization) CCP	Date/Time 6-25-12 1002		
Relinquished By: (Name/Organization) CCP	Date/Time 6-26-12 1400	Received By: (Name/Organization)	Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)	Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)	Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)	Date/Time
Final Disposition By: (Name/Organization)	Date/Time	Disposition:	

900000

GAS SAMPLE CANISTER TAG

1	W	0	6	2	5	1	2	E	I	6	8	4
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSL1202 Drum Number: N/A

Sampling Organization: CCP Sample Description: FIELD BLANK

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 23	061312	1430	TBL
Cleaning Batch: 429C	M= <5.0E-2	P= 639T			
Field-	C= 25" Hg	T= 25.2			
Before Sample Collection	M=	P= 25	062512	1001	MD
Field-	C= 1" Hg	T= 25.2			
After Sample Collection	M= ~~1~~ 00 0792.12 Hg	P= 25	062512	1002	MD
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? (Y) / N (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	6	2	5	1	2	E	I	7	5	6
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1202 Drum Number: NRFTRUSPC023-1

Sampling Organization: CCP Sample Description: Duplicate Sample

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 23	061312	1430	TBL
Cleaning Batch: 429C	M= <5.0E-2	P= 639T			
Field-	C= 25" Hg	T= 25.2	062512	1015	AD
Before Sample Collection	M=	P= 25			
Field-	C= 3 "Hg	T= 25.2	062512	1020	AD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	6	2	5	1	2	E	I	C	7	8
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INH3G1202 Drum Number: NRFTRUSPC023-1

Sampling Organization: CCP Sample Description: Duplicate Sample

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 23	061312	1430	TBL
Cleaning Batch: 429C	M= <5.0E-2	P= 639T			
Field-	C= 26 "Hg	T= 25.2	062512	1015	AD
Before Sample Collection	M=	P= 25			
Field-	C= 1 "Hg	T= 25.2	062512	1020	AD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	6	2	5	1	2	E	I	B	7	9
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: 1NHSG1202 Drum Number: NRFTRUSPC027-1

Sampling Organization: CCP Sample Description: Sample

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 23	061312	1430	TBL
Cleaning Batch: 429C	M= <5.0E-2	P= 639T			
Field-	C= 25 "Hg	T= 25.2	062512	1037	DD
Before Sample Collection	M=	P= 25			
Field-	C= 1 "Hg	T= 25.2	062512	1042	DD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

GAS SAMPLE CANISTER TAG

1	N	0	6	2	5	1	2	E	I	C	7	3
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1202 Drum Number: NRFTRUSPC003-1

Sampling Organization: CCP Sample Description: Sample

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 23	061312	1430	TBL
Cleaning Batch: 429C	M= <5.0E-2	P= 639T			
Field-	C= 25 "Hg	T= 25.2	062512	1055	DD
Before Sample Collection	M=	P= 25			
Field-	C= 2 "Hg	T= 25.2	062512	1059	DD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	6	2	5	1	2	E	I	1	6	9
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHS61202 Drum Number: NRFTRUSPC026-1

Sampling Organization: CCP Sample Description: Sample

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 23	061312	1430	TBL
Cleaning Batch: 429C	M= <5.0E-2	P= 639T			
Field-	C= 25 "Hg	T= 25.2	062512	1115	DD
Before Sample Collection	M=	P= 25			
Field-	C= 1 "Hg	T= 25.2	062512	1120	DD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

From: Catherine A Crowder [Catherine.Crowder@inl.gov]
Sent: Monday, March 28, 2011 1:00 PM
To: Broomfield, Barbara J.; Walters, Ed E.; charles.turner@wipp.ws
Subject: Needle Assembly Blanks

Analytical results for needle assembly equipment blanks in field batch INHSG1102NB were acceptable. Concentrations of all VOC target analytes were less than or equal to three times the MDLs listed in Table B3-2 in Permit Attachment B3.

From: Catherine A Crowder [Catherine.Crowder@inl.gov]
Sent: Tuesday, May 01, 2012 4:36 PM
To: Broomfield, Barbara J.; Poirier, Joe; charles.turner@wipp.ws
Subject: Needle Assembly Blanks

Analytical results for needle assembly equipment blanks in field batch INHSG1201NB were acceptable. Concentrations of all VOC target analytes were less than or equal to three times the MDLs listed in Table B3-2 in Permit Attachment B3.

Attachment 2 – Sample Container Data Form

Field Batch Number: INHSG1202

	Container ID	Sampling Scenario	Summary Category Group	Rigid Liner (Y/N/)	Rigid Liner Lid (Y/N)	Rigid Liner Lid Hole Diameter (in.)	Number of Inner Bags	Number of Liner Bags	Filter Model No.	Number of Filters	Restrictive Hydrogen Diffusivity (m/s/mf)	Package Configuration Group No.
1	NRFTRUSPC023-1	3	S5000	N	N	N/A	0	0	NucFil-019SDS	1	3.70E-06	1
2	NRFTRUSPC027-1	3	S5000	N	N	N/A	0	0	NucFil-019SDS	1	3.70E-06	1
3	NRFTRUSPC003-1	3	S5000	N	N	N/A	0	0	NucFil-019SDS	1	3.70E-06	1
4	NRFTRUSPC026-1	3	S5000	N	N	N/A	0	0	NucFil-019SDS	1	3.70E-06	1
5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
22	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Attachment 2 – Sample Container Data Form (Continued)

Field Batch Number: INHSG1202

	Container ID	Closure Date	Vent Date	Permit Required Equilibrium Time (Days)	Container Age (Days)	Container Fill Factor (%)	Can This Container Be Sampled? (Y / N)	Temperature Recorder M&TE /ID No.: XC0709 12-13-12 Temperature Recorder Calibration Due Date: 72 – Hour Container Equilibrium	
								Start Date/Time	End Date/Time
1	NRFTRUSPC023-1	04/02/2012	04/02/2012	4	84	85	Y	6-21-12 1600	6-25-12 0945
2	NRFTRUSPC027-1	04/02/2012	04/02/2012	4	84	85	Y	6-21-12 1600	6-25-12 0945
3	NRFTRUSPC003-1	04/17/2012	04/17/2012	4	69	85	Y	6-21-12 1600	6-25-12 0945
4	NRFTRUSPC026-1	04/17/2012	04/17/2012	4	69	85	Y	6-21-12 1600	6-25-12 0945
5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
22	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

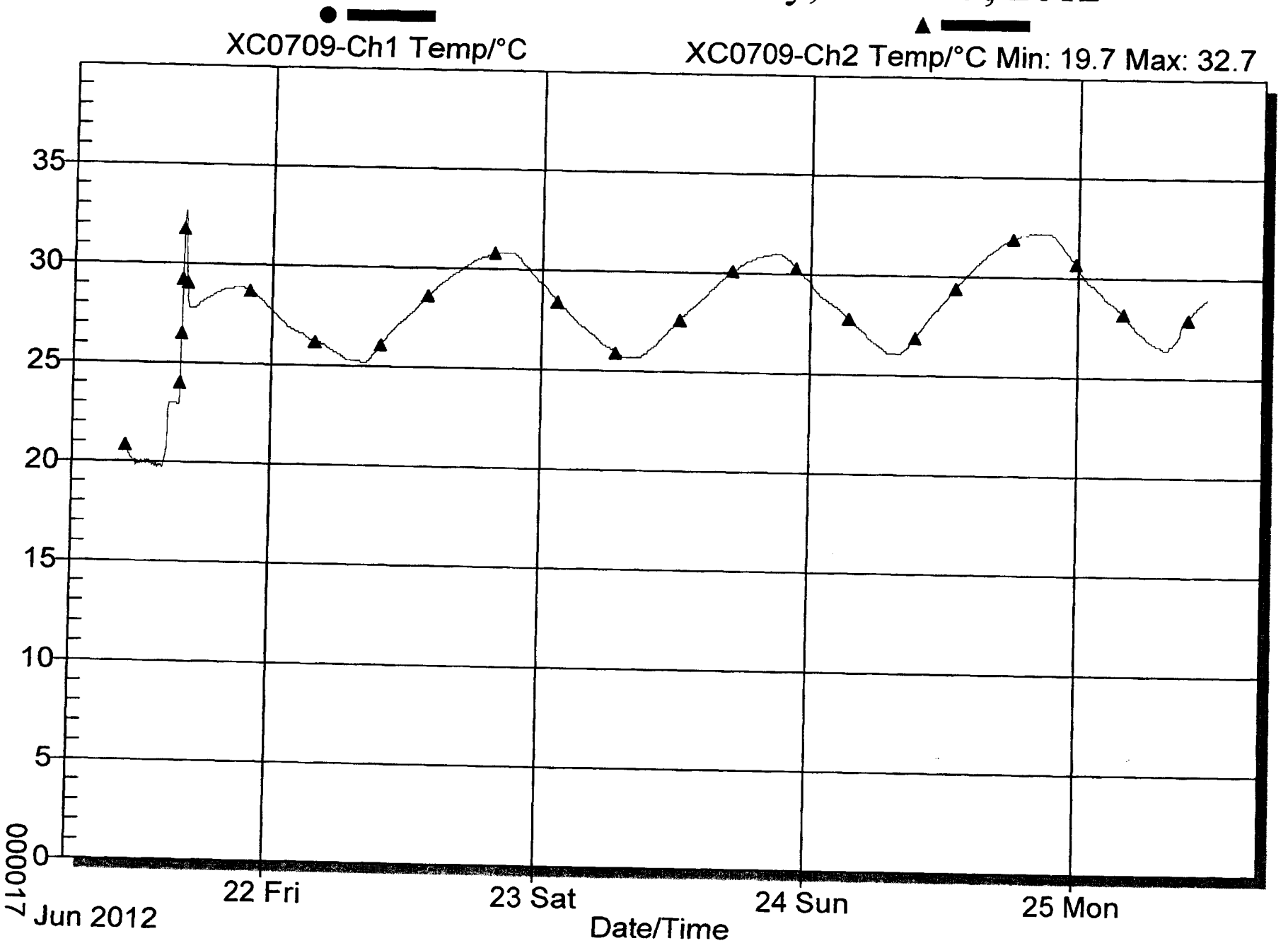
HSG Sampler: Dale Queen
Print Name

Signature

06-25-12
Date

000016

Downloaded Data - Monday, June 25, 2012



DIVIDER PAGE ONLY

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Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

	Original Record
	Fax Record
x	Electronic Record

☐ Copy

Attn:	Sheri Punchios	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Hwy	Company:	WTS
	MS:GSA 212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	7/9/12
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
INHSG1202	SPM Checklist	7/9/12	4

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted	☒	Tami Parker	TAMI PARKER	7/18/12
		Signature	Printed Name	Date
Records Rejected	☐			
		Signature	Printed Name	Date

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	3017
DESTINATION TEL #	913038432208
DESTINATION ID	DENVER
ST. TIME	07/18 13:19
TIME USE	00'16
PAGES SENT	1
RESULT	OK

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[ ] Original Record [ ] Copy
[ ] Fax Record
[x] Electronic Record

Attn:	Sheri Punchios	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Hwy	Company:	WTS
	MS:GSA 212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	7/9/12
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Dates	Total Pages
INHSG1202	SPM Checklist	7/9/12	4

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

TAMI PARKER 7/10/12

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	RH - SHERI PUNCHIOS	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	07/19/2012
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
INHSG1202	BATCH DATA REPORT HSG SAMPLING RH	07/02/2012	17
	N/A		

Comments

SPM CHECKLIST IS LOCATED IN CARLSBAD

(When the Record accepted line has been completed, the rest of the page below may be left blank.)

Acceptance/Rejection Signature and Date

Records Accepted [X] Tami Parker — TAMI PARKER — 7/25/12
Signature — Printed Name — Date

Records Rejected [ ] _____ — _____ — _____
Signature — Printed Name — Date

Reason for Rejection:

Re-submittal: _____ — _____ — _____
Signature — Printed Name — Date

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	3082
DESTINATION TEL #	912085577396
DESTINATION ID	INL
ST. TIME	07/25 07:51
TIME USE	00'18
PAGES SENT	1
RESULT	OK

Controlled Copy

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	RH - SHERI PUNCHIOS	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	07/19/2012
Telephone Number:	575-234-7523		

Document Number	Title/Description	Record Date	# of Pages
INHSG1202	BATCH DATA REPORT HSG SAMPLING RH	07/02/2012	17
	N/A		

Comments

SPM CHECKLIST IS LOCATED IN CARLSBAD

(When the Record accepted line has been completed, the rest of the page below may be left blank.)

Acceptance/Rejection Signature and Date

DIVIDER

PAGE

Attachment 9 – CCP SPM HSG Summa Sampling Project Level Validation Checklist and Summary

BDR Number: INHSG1204 **Sampling Date:** 7-17-12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
1. Does the Batch Data Report (BDR) contain the batch number? **Reference Source: CCP-PO-001, Table C3-12**	X			
2. Is the BDR complete according to the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-10b**	X			
3. Does the BDR contain the BDR date? **Reference Source: CCP-PO-001, Table C3-12**	X			
4. Is the sample matrix and type included for each sample in the BDR? **Reference Source: CCP-PO-001, Table C3-12**	X			
5. Is the BDR complete as defined by the process procedures? **Reference Source: CCP-PO-001, C3-10, CCP Technical Procedures**	X			
6. List all containers that have met QAOs. **Reference Source: CCP-PO-001, Table C3-12**				Container Numbers: 10124637,10186445,10127573 10088793,10221733,10223021 10101976,10102259,10102536 10202170,10217850
7. Does the BDR include the requested analyses and the name of the laboratory? **Reference Source: CCP-PO-001, Table C3-12**	X			
8. Is there a reference to or copy of any associated NCRs (if any) in the BDR? NA if no NCRs associated with the BDR. **Reference Source: CCP-PO-001, Table C3-12**			X	No NCR's
9. Does the BDR include the point of origin for sampling (e.g., building number, room)? **Reference Source: CCP-PO-001, Table C3-12**	X			
10. Is the sample size included in the BDR? **Reference Source: CCP-PO-001, Table C3-12**	X			
11. Does the BDR include the sample location of each container? Note: Location within container is where the sample is taken. The BDR must specify what layer of confinement was sampled (e.g., under the lid). **Reference Source: CCP-PO-001, Table C3-12**	X			

Attachment 9 – CCP SPM HSG Summa Sampling Project Level Validation Checklist and Summary (Continued)

BDR Number: INHSG1204			Sampling Date: 7-17-12	
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
12. Is the person collecting the sample identified in the BDR and qualified? **Reference Source: CCP-PO-001, Table C3-12**	X			
13. Does the BDR contain a chain of custody record? **Reference Source: CCP-PO-001, Table C3-12**	X			
14. Does the chain of custody form correctly identify the Waste Stream ID? **Reference Source: CCP-PO-001, Table C3-12**	X			
15. Is there a reference to sampling equipment numbers or lot numbers for disposable equipment? **Reference Source: CCP-PO-001, Table C3-12**	X			
16. Is there verification of rigid liner venting? **Reference Source: CCP-PO-001, Table C3-12**	X			
17. Does the BDR include the operator/sampler signature and date and time of sampling for each sample? **Reference Source: CCP-PO-001, Table C3-12**	X			
18. Are there 20 samples or less (excluding QC) in the batch and all samples collected within 14 days of the first sample collected? **Reference Source: CCP-PO-001, C1-1b**	X			
19. Are the correct revisions of the procedures used and identified? **Reference Source: CCP-PO-001, Table C3-12**	X			
20. Are all data reporting forms complete with data reported properly (correct units and significant figures)? **Reference Source: CCP-PO-001, C3-10b(1)**	X			
21. Is there a cross-reference between waste container number and field sample number? **Reference Source: CCP-PO-001, C1-5**	X			
22. Have the samples been properly preserved (0-40° C)? **Reference Source: CCP-PO-001, Table C1-1**	X			

Attachment 9 – CCP SPM HSG Summa Sampling Project Level Validation Checklist and Summary (Continued)

BDR Number: INHSG1204 **Sampling Date:** 7-17-12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
23. Have the samples been properly preserved (0-40° C)? **Reference Source: CCP-PO-001, Table C1-1**	X			
24. Has the correct DAC scenario and waste packaging configuration been selected? **Reference Source: CCP-PO-001, C3-2**	X			
25. Do the samples meet the required DAC equilibrium times? **Reference Source: CCP-PO-001, C3-2**	X			
26. Prior to canister use was the following performed: equipment blank, sample canister equipment cleaning and leak check, and field reference standard (or on-line control standard) performed as required? **Reference Source: CCP-PO-001, C1-1b**	X			
27. Has one field blank per batch been collected? **Reference Source: CCP-PO-001, Table C1-2**	X			
28. Has a minimum of one equipment blank been collected for the applicable cleaning batch blanks? **Reference Source: CCP-PO-001, Table C1-2**	X			
29. Has one field duplicate per batch been collected? **Reference Source: CCP-PO-001, Table C1-2**	X			
30. Has the canister pressure and ambient temperature and pressure been recorded? **Reference Source: CCP-PO-001, Table C3-12**	X			
31. Have the ambient pressure and temperature sensors been calibrated? **Reference Source: CCP-PO-001, C1-1d**	X			
32. Have all the waste containers equilibrated for a minimum of 72 hours at 18° C or higher? **Reference Source: CCP-PO-001, C1-1a**	X			
33. Is the completed, signed, and dated Independent Technical Reviewer Checklist in the BDR? **Reference Source: CCP-PO-001, Table C3-12**	X			

Attachment 9 – CCP SPM HSG Summa Sampling Project Level Validation Checklist and Summary (Continued)

BDR Number: INHSG1204 **Sampling Date:** 7-17-12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
34. Is the completed, signed, and dated Independent Technical Reviewer Checklist in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, Table C3-12**	X			

Comments: None

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

Jim Vernon		8-9-12
SPM Printed Name	Signature	Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

Attachment 1 – HSG Sampling Batch Data Report Cover Sheet Page 1 of 1

Headspace Gas Sampling

HSG Sampling Batch Number: INHSG1204

Waste Matrix Code: S5300

Waste Container Identification Numbers

10223021	10102536
10124637	N/A
10102259	N/A
10101976	N/A
10221733	N/A
10217850	N/A
10127573	N/A
10088793	N/A
10186445	N/A
10202170	N/A

Comments: **Waste Stream ID's for this batch are ID-RF-S5300-A. No filter change out required.**

HSG Independent Technical Reviewer:

Jeri Miles
Printed Name

Signature

08/01/2012
Date

CCP RECORDS ORIGINAL
DATE REC'D 8-2-12

Attachment 2 – HSG Sampling Batch Data Report Table of Contents Page 1 of 1

Section		Page No.
1.	HSG Sampling Batch Data Report Cover Sheet (Attachment 1)	1
2.	HSG Sampling Batch Data Report Table of Contents (Attachment 2)	2
3.	Independent Technical Reviewer (ITR) Review Checklist (Attachment 3)	3
Sampling Batch Data Report Forms:		
4.	Chain of Custody/Canister Tag Forms (Attachment 1 from CCP-TP-093)	5
5.	Copy of Laboratory Canister Tags	7
6.	Cleanliness Certification for needle assemblies as applicable to the Sampling Batch Data Report (or copy of the certifications from CCP-TP-093)	20
7.	Sample Drum Data Form (Attachment 2 from CCP-TP-093)	21
8.	Copy of Sampling Port Installation Records (CCP-TP-098, Attachment 1), if applicable	N/A
9.	Copy of Drum Filter Changeout Form (Attachment 1 of CCP-TP-082), if applicable.	N/A
10.	Shipment Request Forms, if applicable.	N/A
11.	72-Hour Temperature Equilibration Plots	23
12.	Copy of NCRs, if applicable	N/A

Attachment 3 – Independent Technical Reviewer (ITR) Review Checklist

HSG Sampling Batch Number: INHSG1204

Description		YES	NO	NA	
1.	Is the HSG Sampling BDR complete as specified in step 4.1.2 and are the field sampling records complete?	X			
Sampling Documentation		**YES**	**NO**	**NA**	**Comments**
2.	Are calculations correct for the Drum Age Criteria (DAC), temperature equilibrium time, and percent complete?	X			
3.	Did the containers meet the DAC?	X			
4.	Did the containers meet the temperature equilibrium requirement (stored at 18°C or higher for 72-hours prior to sampling)?	X			
5.	Do the temperature plots indicate the drums were stored at 18 °C (64.5 °F) or higher for 72-hours prior to sampling?	X			
5a.	Are the waste stream IDs completed correctly on the Chain of Custody (COC) Form?	X			
Quality Control Samples					
Precision		**YES**	**NO**	**NA**	**Comments**
6.	Was a Field Duplicate collected once per batch?	X			
Accuracy		**YES**	**NO**	**NA**	**Comments**
7.	Was a Field Reference Sample collected?		X		NOT NEEDED
8.	Was a Field Blank collected one per batch prior to sampling containers?	X			
Completeness		**YES**	**NO**	**NA**	**Comments**
9.	Is the percentage of valid samples collected and submitted for analysis greater than or equal to 90 percent?	X			
Additional Checks		**YES**	**NO**	**NA**	**Comments**
10.	Is the data technically reasonable based upon the technique used?	X			
11.	Was the sampling equipment checked for leaks after sample collection?	X			
12.	Was the data generation and reduction conducted in a technically correct manner?	X			
13.	Was the data reported in proper units and with the correct number of significant figures?	X			
14.	Were the samples maintained at a temperature between 0°C - 40°C?	X			
15.	Was the equipment involved in the sampling activities in calibration (i.e., torque wrenches, ambient temperature and pressure gauges, dataloggers, ultrasonic micrometer, min/max thermometers)?	X			

Attachment 3 – Independent Technical Reviewer (ITR) Review Checklist (continued)

HSG Sampling Batch Number: INHSG1204

Raw Data Collection and Management	YES	NO	NA	Comments
16. Are there satisfactory equipment blanks, canister cleaning blanks, and needle assembly cleanliness results?	X			
17. Has the data been reviewed for transcription errors?	X			
18. Verify all the data is signed and dated, and the data is recorded clearly, legibly, and accurately.	X			
19. No more than 20 waste containers are in the batch (excluding the QC samples).	X			
20. Procedure Number: CCP-TP-093				Revision: 16
21. Is the procedure number and revision correct?	X			
22. All changes to original data are lined out, initialed, and dated by the individual making the change, and a justification included. (NOTE: Original data must not be obliterated or otherwise disfigured as not to be readable. Data changes shall only be made by the individual who originally collected the data or an individual authorized to change the data.)	X			

Independent Technical Reviewer:

Jeri Miles
Printed Name

Jeri Miles
Signature

08/01/2012
Date

Attachment 1 – Chain of Custody/Canister Tag Chain of Custody # 593 Page 1 of 2

Location: Under Drum Lid		Point of Origin: WMF-628	Sample Matrix is Gas	Ambient Conditions	
		Field Batch Number: INHSG1204		Temperature (centigrade): 28.0	
				Pressure (in. Hg): 25	

Site	Date	SUMMA® Canister No.	Size (mL)	TID No.	Container ID /Barcode No.	Waste Stream ID	Cleaning Batch No.	Needle Assembly Batch No	Type SS B D F C (Note 1)	Vent Seal (Y/NA)	Start Time	End Time	Beginning Pressure (in.Hg or psig)	End Pressure (in.Hg or psig)	Sampler's Initials
IN	071712	EI209	250	0825562	N/A	N/A	436C	INHSG1203NB	B	N/A	1329	1334	25 in.Hg	2 in.Hg	
IN	071712	EID18	250	0825563	10223021	ID-RF-S5300-A	436C	INHSG1203NB	D	Y	1339	1344	25 in.Hg	2 in.Hg	
IN	071712	EI340	250	0825564	10223021	ID-RF-S5300-A	436C	INHSG1203NB	D	Y	1339	1344	25 in.Hg	0 in.Hg	
IN	071712	EIC62	250	0825565	10124637	ID-RF-S5300-A	436C	INHSG1203NB	SS	Y	1349	1354	25 in.Hg	3 in.Hg	
IN	071712	EI392	250	0825566	10102259	ID-RF-S5300-A	436C	INHSG1203NB	SS	Y	1350	1355	25 in.Hg	1 in.Hg	
IN	071712	EID01	250	0825567	10101976	ID-RF-S5300-A	429C	INHSG1203NB	SS	Y	1351	1356	25 in.Hg	3 in.Hg	
IN	071712	EIC87	250	0825568	10221733	ID-RF-S5300-A	436C	INHSG1203NB	SS	Y	1351	1356	24 in.Hg	2 in.Hg	
IN	071712	EI558	250	0825569	10217850	ID-RF-S5300-A	436C	INHSG1203NB	SS	Y	1405	1410	25 in.Hg	2 in.Hg	
IN	071712	EIB47	250	0825570	10127573	ID-RF-S5300-A	436C	INHSG1203NB	SS	Y	1354	1359	26 in.Hg	2 in.Hg	
IN	071712	EI451	250	0825571	10088793	ID-RF-S5300-A	436C	INHSG1203NB	SS	Y	1354	1359	25 in.Hg	2 in.Hg	
IN	071712	EI780	250	0825572	10186445	ID-RF-S5300-A	436C	INHSG1203NB	SS	Y	1406	1411	24 in.Hg	2 in.Hg	
IN	071712	EIB42	250	0825573	10202170	ID-RF-S5300-A	436C	INHSG1203NB	SS	Y	1407	1412	24 in.Hg	2 in.Hg	
IN	071712	EI367	250	0825574	10102536	ID-RF-S5300-A	436C	INHSG1203NB	SS	Y	1423	1428	26 in.Hg	3 in.Hg	
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Note 1 Analysis required:

C - Needle Assembly Cleanliness Certification: VOC
SS - Single Sample: VOC, H_2, CH_4
B - Field Blank: VOC
D - Duplicate: VOC, H_2, CH_4
F - Field Reference Standard: VOC

Sampler's Signature

000005

Attachment 1 – Chain of Custody/Canister Tag (Continued) Chain of Custody # 593

Field Batch Number: INHSG1204					
Comments: N/A		Instrument Section	M&TE ID No.	Calibration Due Date	Initials/Date
Analytical Laboratory - ECL		Pressure Meter	XC0566	8-16-12	DD 7-17-12
Shipping Tracking #N/A	Method of Shipping ECL Pickup	Thermometer	XC0363	6-5-13	DD 7-17-12
		Min /Max Thermometer	XC0553 XC0692	10-12-12 10-12-12	DD 7-17-12
Analysis Requested VOC		Preservation Method: 0 - 40°C			
TID Number(s) 0825575		TID Initials and date: DD 7-18-12			

Custody Initiated By: (Sampler Name/Organization) CCP	Date/Time 7-17-12 1334		
Relinquished By: (Name/Organization) CCP	Date/Time 7-18-12 1500	Received By: (Name/Organization)	Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)	Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)	Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)	Date/Time
Final Disposition By: (Name/Organization)	Date/Time	Disposition:	

GAS SAMPLE CANISTER TAG

1	N	U	7	1	7	1	2	E	I	2	0	9
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSC1204 Drum Number: ~~FIELD BLANK~~ 07-17-12 N/A

Sampling Organization: CCP Sample Description: FIELD BLANK

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	070512	1330	TBL
Cleaning Batch: 436C	M= <5.0E-2	P= 640T			
Field-	C= 25" Hg	T= 28.0	071712	1329	DD
Before Sample Collection	M=	P= 25			
Field-	C= 2" Hg	T= 28.0	071712	1334	DD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? (Y) / N (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	7	1	7	1	2	E	I	D	1	8
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: IN1561204 Drum Number: 10223021

Sampling Organization: CCI Sample Description: DUPLICATE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	070512	1330	TBL
Cleaning Batch: 436C	M= <5.0E-2	P= 640T			
Field-	C= 25" Hg	T= 28.0	071712	1339	DD
Before Sample Collection	M=	P= 25			
Field-	C= 2" Hg	T= 28.0	071712	1344	DD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: [signature]

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

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GAS SAMPLE CANISTER TAG

1	N	0	7	1	7	1	2	E	I	3	4	0
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSC1204 Drum Number: 10223021

Sampling Organization: CCP Sample Description: DUPLICATE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	070512	1330	TBL
Cleaning Batch: 436C	M= <5.0E-2	P= 640T			
Field-	C= 25" Hg	T= 28.0	071712	1339	DD
Before Sample Collection	M=	P= 25			
Field-	C= 0" Hg	T= 28.0	071712	1344	DD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	7	1	7	1	2	E	I	C	6	2
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: 1N1HSG1204 Drum Number: 10124637

Sampling Organization: CCP Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	070512	1330	TBL
Cleaning Batch: 436C	M= <5.0E-2	P= 640T			
Field-	C= 25" Hg	T= 28.0			
Before Sample Collection	M=	P= 25	071712	1349	M
Field-	C= 3" Hg	T= 28.0			
After Sample Collection	M=	P= 25	071712	1354	AD
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	7	1	7	1	2	E	I	3	9	2
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: 1N456120Y Drum Number: 10102259

Sampling Organization: CCL Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	070512	1330	TBL
Cleaning Batch: 436C	M= <5.0E-2	P= 640T			
Field-	C= 25" Hg	T= 28.0			
Before Sample Collection	M=	P= 25	071712	1350	DD
Field-	C= 1" Hg	T= 28.0			
After Sample Collection	M=	P= 25	071712	1355	DD
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

I	N	0	7	1	7	1	2	E	I	D	0	1
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INH561204 Drum Number: 10101976

Sampling Organization: CCP Sample Description: Sample

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 23	061312	1430	TBL
Cleaning Batch: 429C	M= <5.0E-2	P= 639T			
Field-	C= 25" Hg	T= 28.0	071712	1351	MJ
Before Sample Collection	M=	P= 25			
Field-	C= 3" Hg	T= 28.0	071712	1356	MJ
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

Z	Z	M	M	D	D	Y	Y	A	A	X	X	X
1	N	0	7	1	7	1	2	E	1	C	8	7

Sampling Site | Date | Canister ID

Batch Number: INHSG1204 Drum Number: 10221733

Sampling Organization: CCP Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	070512	1330	TBL
Cleaning Batch: 436C	M= <5.0E-2	P= 640T			
Field-	C= 24" Hg	T= 28.0			
Before Sample Collection	M=	P= 25	071712	1351	AD
Field-	C= 2" Hg	T= 28.0			
After Sample Collection	M=	P= 25	071712	1356	AD
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	7	1	7	1	2	E	I	5	5	8
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: 1N1156 1204 Drum Number: 10217850

Sampling Organization: CCP Sample Description: Sump

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	070512	1330	TBL
Cleaning Batch: 436C	M= <5.0E-2	P= 640T			
Field-	C= 25" Hg	T= 28.0	071712	1405	DM
Before Sample Collection	M=	P= 25			
Field-	C= 2" Hg	T= 28.0	071712	1410	DM
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	U	7	1	7	1	2	E	I	B	4	7
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INH561204 Drum Number: 10127573

Sampling Organization: CCP Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	070512	1330	TBL
Cleaning Batch: 436C	M= <5.0E-2	P= 640T			
Field-	C= 26" Hg	T= 28.0	071712	1354 (0207-24-12)	AM
Before Sample Collection	M=	P= 25			
Field-	C= 2" Hg	T= 28.0	071712	1359	AM
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	7	1	7	1	2	E	I	4	5	1
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: 1NHSG1204 Drum Number: 100887793

Sampling Organization: CCP Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	070512	1330	TBL
Cleaning Batch: 436C	M= <5.0E-2	P= 640T			
Field-	C= 25" Hg	T= 28.0	071712	1354	JO
Before Sample Collection	M=	P= 25			
Field-	C= 2" Hg	T= 28.0	071712 ~~07-17-12~~	1359	JO
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: [signature]

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

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GAS SAMPLE CANISTER TAG

09	16	N	0	7	1	7	1	2	E	I	7	8	0
071712	Z	Z	M	M	D	D	Y	Y	A	A	X	X	X
	Sampling Site				Date						Canister ID		

Batch Number: 1NH561204 Drum Number: 10186445

Sampling Organization: CCP Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	070512	1330	TBL
Cleaning Batch: 436C	M= <5.0E-2	P= 640T			
Field-	C= 24" Hg	T= 28.0	071712	1406	DD
Before Sample Collection	M=	P= 25			
Field-	C= 2" Hg	T= 28.0	071712	1411	AP
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: [signature]

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	7	1	7	1	2	E	I	B	4	2
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site — Date — Canister ID

Batch Number: IN1456120Y Drum Number: 10202170

Sampling Organization: CCP Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	070512	1330	TBL
Cleaning Batch: 436C	M= <5.0E-2	P= 640T			
Field-	C= 24" Hg	T= 28.0			
Before Sample Collection	M=	P= 25	071712	1407	DT
Field-	C= 2" Hg	T= 28.0			
After Sample Collection	M=	P= 25	071712	1412	DD
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: [signature]

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	7	1	7	1	2	E	I	3	6	7
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site — Date — Canister ID

Batch Number: INHS61204 Drum Number: 10102536

Sampling Organization: CCP Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 21	070512	1330	TBL
Cleaning Batch: 436C	M= <5.0E-2	P= 640T			
Field-	C= 26" Hg	T= 28.0			
Before Sample Collection	M=	P= 25	071712	1423	MD
Field-	C= 3" Hg	T= 28.0			
After Sample Collection	M=	P= 25	071712	1428	MD
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: [signature]

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

From: Catherine A Crowder
To: Dale A. Dover; charles.turner@wipp.ws
Subject: Needle Assembly Blanks
Date: Wednesday, July 11, 2012 3:55:40 PM

Analytical results for needle assembly equipment blanks in field batch INHSG1203NB were acceptable. Concentrations of all VOC target analytes were less than or equal to three times the MDLs listed in Table C3-2 in Permit Attachment C3.

Attachment 2 – Sample Container Data Form

Field Batch Number: INHSG1204

	Container ID	Sampling Scenario	Summary Category Group	Rigid Liner (Y/N/)	Rigid Liner Lid (Y/N)	Rigid Liner Lid Hole Diameter (in.)	Number of Inner Bags	Number of Liner Bags	Filter Model No.	Number of Filters	Restrictive Hydrogen Diffusivity (m/s/mf)	Package Configuration Group No.
1	10223021	2	S5000	N	N	1	N/A	N/A	NucFil-020DS	1	1.90E-06	N/A
2	10124637	2	S5000	N	N	1	N/A	N/A	NucFil-020S	1	1.90E-06	N/A
3	10102259	2	S5000	N	N	1	N/A	N/A	NucFil-7DS	1	3.70E-06	N/A
4	10101976	2	S5000	N	N	1	N/A	N/A	NucFil-7DS	1	3.70E-06	N/A
5	10221733	2	S5000	N	N	1	N/A	N/A	NucFil-020DS	1	1.90E-06	N/A
6	10217850	2	S5000	N	N	1	N/A	N/A	NucFil-020DS	1	1.90E-06	N/A
7	10127573	2	S5000	Y	Y	0.3	N/A	N/A	NucFil-020	1	1.90E-06	N/A
8	10088793	3	S5000	Y	N	N/A	0	2	NucFil-019SDS	1	3.70E-06	3
9	10186445	2	S5000	Y	Y	0.3	N/A	N/A	NucFil-020DS	1	1.90E-06	N/A
10	10202170	2	S5000	N	N	1	N/A	N/A	NucFil-7DS	1	3.70E-06	N/A
11	10102536	2	S5000	N	N	1	N/A	N/A	NucFil-7DS	1	3.70E-06	N/A
12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
22	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Attachment 2 – Sample Container Data Form (Continued)

Field Batch Number: INHSG1204

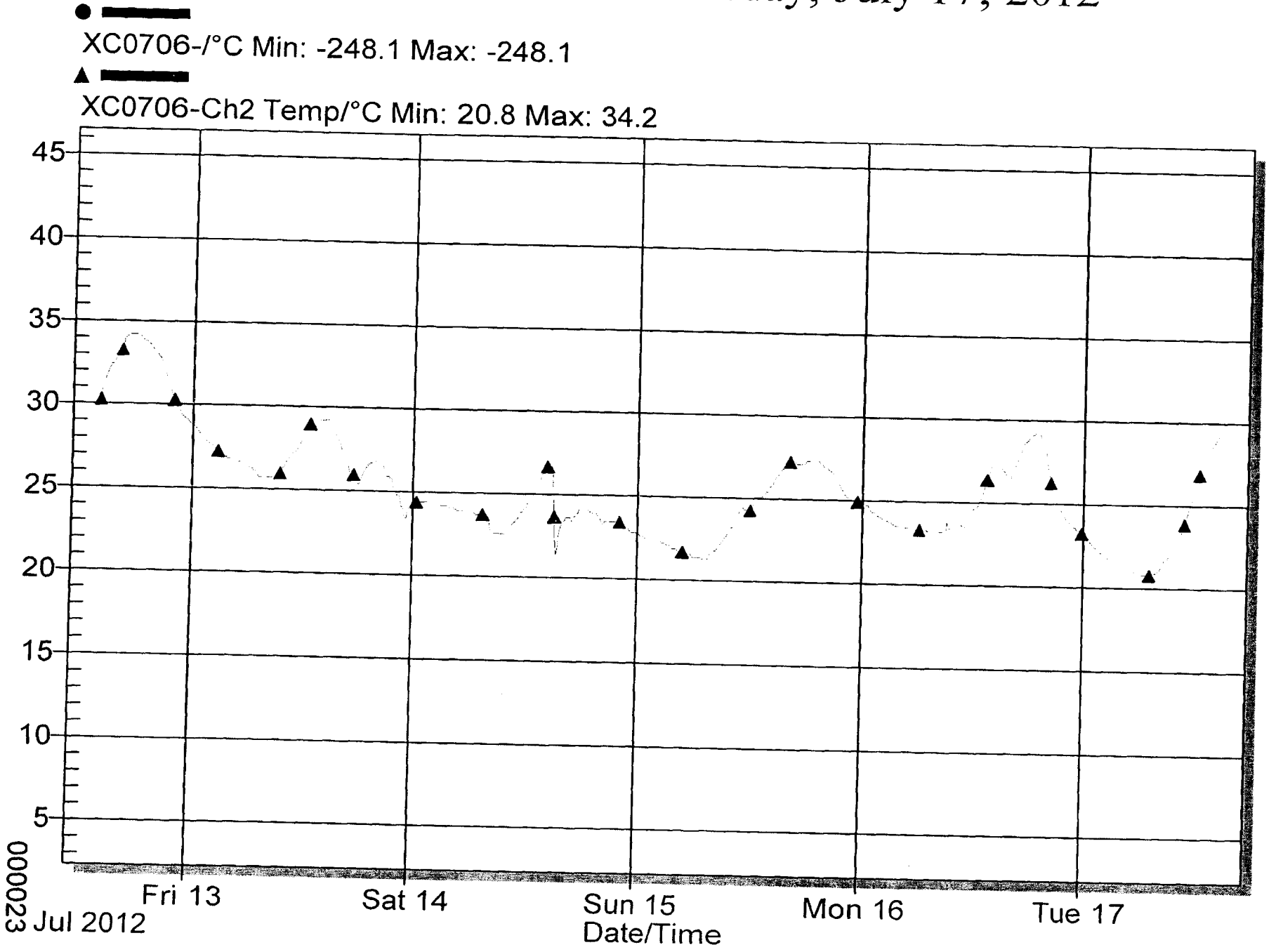
	Container ID	Closure Date	Vent Date	Permit Required Equilibrium Time (Days)	Container Age (Days)	Container Fill Factor (%)	Can This Container Be Sampled? (Y / N)	Temperature Recorder M&TE /ID No.: XC0706 12/13/12 XC0709 12/13/12 Temperature Recorder Calibration Due Date: 72 – Hour Container Equilibrium Start Date/Time	End Date/Time
1	10223021	3/16/72	5/23/08	12	1515	100	Y	7-12-12 1500	7-17-12 1250
2	10124637	10/14/72	12/15/06	12	2040	100	Y	7-12-12 1500	7-17-12 1250
3	10102259	12/14/73	7/25/06	11	2183	95	Y	7-12-12 1500	7-17-12 1250
4	10101976	10/2/73	7/26/06	11	2182	90	Y	7-12-12 1500	7-17-12 1250
5	10221733	1/3/72	7/11/08	12	1466	95	Y	7-12-12 1500	7-17-12 1250
6	10217850	2/11/72	5/10/08	12	1528	95	Y	7-12-12 1500	7-17-12 1250
7	10127573	10/11/72	11/16/06	29	2069	85	Y	7-12-12 1500	7-17-12 1250
8	10088793	6/29/10	6/29/10	46	748	85	Y	7-12-12 1500	7-17-12 1250
9	10186445	7/14/72	12/29/11	29	200	85	Y	7-12-12 1500	7-17-12 1250
10	10202170	4/10/72	1/5/08	11	1654	90	Y	7-12-12 1500	7-17-12 1250
11	10102536	3/4/74	7/16/06	11	2192	90	Y	7-12-12 1500	7-17-12 1250
12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
22	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

HSG Sampler: Dale Bowser
Print Name

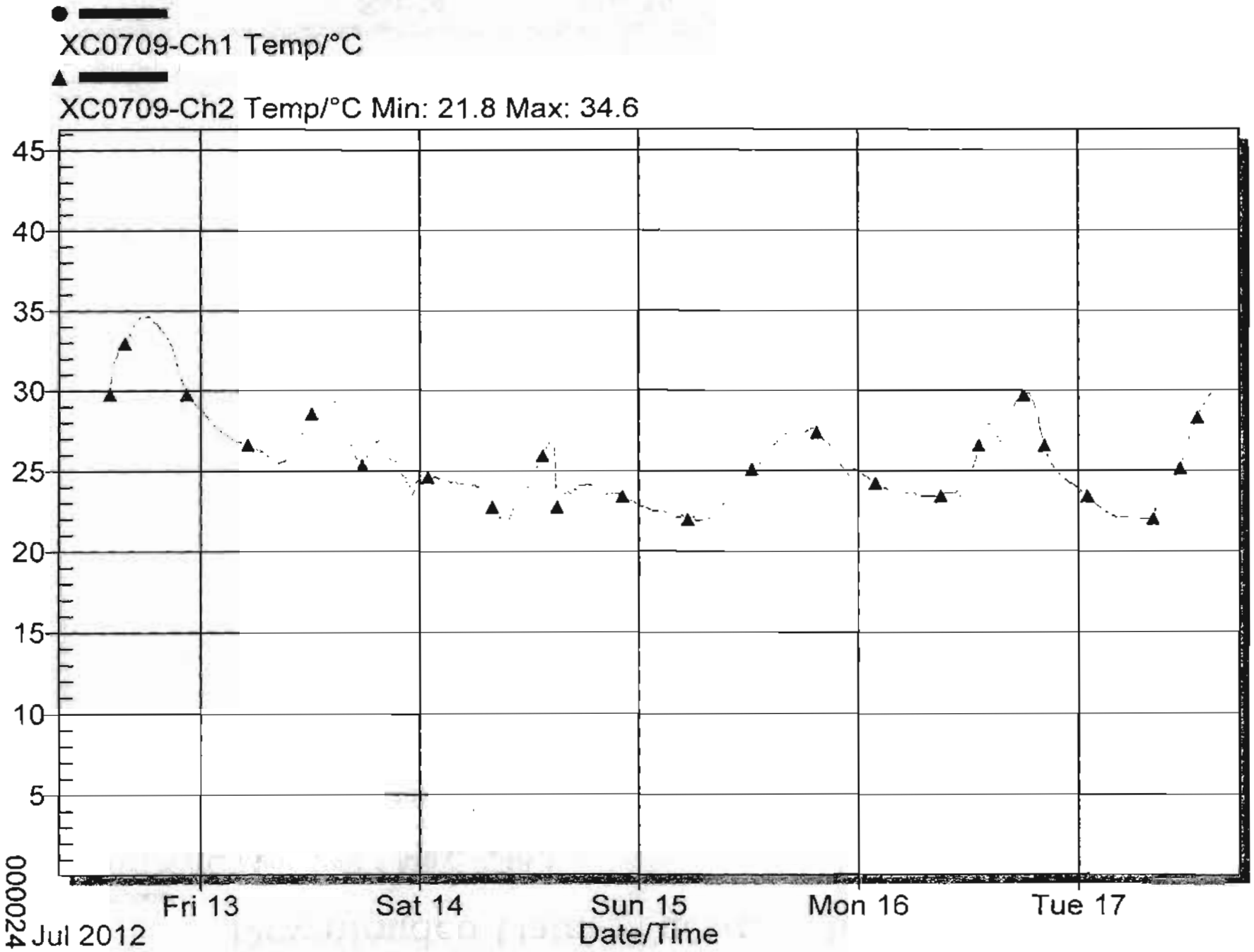
Signature

07-18-12
Date

Downloaded Data - Tuesday, July 17, 2012



Downloaded Data - Tuesday, July 17, 2012



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Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	RECORDS CUSTODIAN	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	08/09/2012
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
INHSG1204	BATCH DATA REPORT HSG SUMMA SAMPLING	07/18/2012	24
	N/A		

Comments

SPM CHECKLIST LOCATED IN CARLSBAD

(When the Record accepted line has been completed, the rest of the page below may be left blank.)

Acceptance/Rejection Signature and Date

Records Accepted [X]	Shanique Jordan Signature	Shanique Jordan Printed Name	8-15-12 Date
Records Rejected [ ]	Signature	Printed Name	Date

Reason for Rejection:

Re-submittal:	Signature	Printed Name	Date

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	3528
DESTINATION TEL #	912085577396
DESTINATION ID	INL
ST. TIME	08/15 14:42
TIME USE	00'16
PAGES SENT	1
RESULT	OK

Controlled Copy

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Document Number	Title/Description	Record Dates	Total Pages
INHSG1204	BATCH DATA REPORT HSG SUMMA SAMPLING	07/18/2012	24
	N/A		

Comments

SPM CHECKLIST LOCATED IN CARLSBAD

(When the Record accepted line has been completed, the rest of the page below may be left blank.)

DIVIDER

PAGE

Attachment 9 – CCP SPM HSG Summa Sampling Project Level Validation Checklist and Summary

BDR Number: INHSG1206 **Sampling Date:** 9/4/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
1. Does the Batch Data Report (BDR) contain the batch number? **Reference Source: CCP-PO-001, Table C3-12**	X			
2. Is the BDR complete according to the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-10b**	X			
3. Does the BDR contain the BDR date? **Reference Source: CCP-PO-001, Table C3-12**	X			
4. Is the sample matrix and type included for each sample in the BDR? **Reference Source: CCP-PO-001, Table C3-12**	X			
5. Is the BDR complete as defined by the process procedures? **Reference Source: CCP-PO-001, C3-10, CCP Technical Procedures**	X			
6. List all containers that have met QAOs. **Reference Source: CCP-PO-001, Table C3-12**				Container Numbers: NRFTRUSPC022-1 NRFTRUSPC005-1 NRFTRUSPC007-1 NRFTRUSPC009-1 NRFTRUSPC016-1 NRFTRUSPC018-1
7. Does the BDR include the requested analyses and the name of the laboratory? **Reference Source: CCP-PO-001, Table C3-12**	X			
8. Is there a reference to or copy of any associated NCRs (if any) in the BDR? NA if no NCRs associated with the BDR. **Reference Source: CCP-PO-001, Table C3-12**			X	NO NCR'S
9. Does the BDR include the point of origin for sampling (e.g., building number, room)? **Reference Source: CCP-PO-001, Table C3-12**	X			
10. Is the sample size included in the BDR? **Reference Source: CCP-PO-001, Table C3-12**	X			
11. Does the BDR include the sample location of each container? Note: Location within container is where the sample is taken. The BDR must specify what layer of confinement was sampled (e.g., under the lid). **Reference Source: CCP-PO-001, Table C3-12**	X			

CCP RECORDS ORIGINAL
DATE REC'D 9.12.12

Attachment 9 – CCP SPM HSG Summa Sampling Project Level Validation Checklist and Summary (Continued)

BDR Number: INHSG1206	Sampling Date: 9/4/12			
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
12. Is the person collecting the sample identified in the BDR and qualified? **Reference Source: CCP-PO-001, Table C3-12**	X			
13. Does the BDR contain a chain of custody record? **Reference Source: CCP-PO-001, Table C3-12**	X			
14. Does the chain of custody form correctly identify the Waste Stream ID? **Reference Source: CCP-PO-001, Table C3-12**	X			
15. Is there a reference to sampling equipment numbers or lot numbers for disposable equipment? **Reference Source: CCP-PO-001, Table C3-12**	X			
16. Is there verification of rigid liner venting? **Reference Source: CCP-PO-001, Table C3-12**			X	NO RIGID LINERS OR LIDS
17. Does the BDR include the operator/sampler signature and date and time of sampling for each sample? **Reference Source: CCP-PO-001, Table C3-12**	X			
18. Are there 20 samples or less (excluding QC) in the batch and all samples collected within 14 days of the first sample collected? **Reference Source: CCP-PO-001, C1-1b**	X			
19. Are the correct revisions of the procedures used and identified? **Reference Source: CCP-PO-001, Table C3-12**	X			
20. Are all data reporting forms complete with data reported properly (correct units and significant figures)? **Reference Source: CCP-PO-001, C3-10b(1)**	X			
21. Is there a cross-reference between waste container number and field sample number? **Reference Source: CCP-PO-001, C1-5**	X			
22. Have the samples been properly preserved (0-40° C)? **Reference Source: CCP-PO-001, Table C1-1**	X			

Attachment 9 – CCP SPM HSG Summa Sampling Project Level Validation Checklist and Summary (Continued)

BDR Number: INHSG1206				Sampling Date: 9/4/12
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
23. Have the samples been properly preserved (0-40° C)? **Reference Source: CCP-PO-001, Table C1-1**	X			
24. Has the correct DAC scenario and waste packaging configuration been selected? **Reference Source: CCP-PO-001, C3-2**	X			
25. Do the samples meet the required DAC equilibrium times? **Reference Source: CCP-PO-001, C3-2**	X			
26. Prior to canister use was the following performed: equipment blank, sample canister equipment cleaning and leak check, and field reference standard (or on-line control standard) performed as required? **Reference Source: CCP-PO-001, C1-1b**	X			
27. Has one field blank per batch been collected? **Reference Source: CCP-PO-001, Table C1-2**	X			
28. Has a minimum of one equipment blank been collected for the applicable cleaning batch blanks? **Reference Source: CCP-PO-001, Table C1-2**	X			
29. Has one field duplicate per batch been collected? **Reference Source: CCP-PO-001, Table C1-2**	X			
30. Has the canister pressure and ambient temperature and pressure been recorded? **Reference Source: CCP-PO-001, Table C3-12**	X			
31. Have the ambient pressure and temperature sensors been calibrated? **Reference Source: CCP-PO-001, C1-1d**	X			
32. Have all the waste containers equilibrated for a minimum of 72 hours at 18° C or higher? **Reference Source: CCP-PO-001, C1-1a**	X			
33. Is the completed, signed, and dated Independent Technical Reviewer Checklist in the BDR? **Reference Source: CCP-PO-001, Table C3-12**	X			

Attachment 9 – CCP SPM HSG Summa Sampling Project Level Validation Checklist and Summary (Continued)

BDR Number: INHSG1206 **Sampling Date:** 9/4/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
34. Is the completed, signed, and dated Independent Technical Reviewer Checklist in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, Table C3-12**	X			

Comments: NONE

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

LAURA NELSON	Laura Nelson	9-12-12
SPM Printed Name	Signature	Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

Attachment 1 – HSG Sampling Batch Data Report Cover Sheet Page 1 of 1

Headspace Gas Sampling

HSG Sampling Batch Number: INHSG1206

Waste Matrix Code: S5100

Waste Container Identification Numbers

NRFTRUSPC022-1	N/A
NRFTRUSPC005-1	N/A
NRFTRUSPC007-1	N/A
NRFTRUSPC009-1	N/A
NRFTRUSPC016-1	N/A
NRFTRUSPC018-1	N/A
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

Comments: **Waste stream ID's for this batch are IN-ID-NRF-SPC. No filter change out required.**

HSG Independent Technical Reviewer: 9-12-12

Spencer Pattee
Printed Name

Signature

9-6-12
Date

CCP RECORDS ORIGINAL
DATE REC'D 9-11-12

001

Attachment 2 – HSG Sampling Batch Data Report Table of Contents Page 1 of 1

Section		Page No.
1.	HSG Sampling Batch Data Report Cover Sheet (Attachment 1)	1
2.	HSG Sampling Batch Data Report Table of Contents (Attachment 2)	2
3.	Independent Technical Reviewer (ITR) Review Checklist (Attachment 3)	3
Sampling Batch Data Report Forms:		
4.	Chain of Custody/Canister Tag Forms (Attachment 1 from CCP-TP-093)	5
5.	Copy of Laboratory Canister Tags	7
6.	Cleanliness Certification for needle assemblies as applicable to the Sampling Batch Data Report (or copy of the certifications from CCP-TP-093)	15
7.	Sample Drum Data Form (Attachment 2 from CCP-TP-093)	16
8.	Copy of Sampling Port Installation Records (CCP-TP-098, Attachment 1), if applicable	N/A
9.	Copy of Drum Filter Changeout Form (Attachment 1 of CCP-TP-082), if applicable.	N/A
10.	Shipment Request Forms, if applicable.	N/A
11.	72-Hour Temperature Equilibration Plots	18
12.	Copy of NCRs, if applicable	N/A

Attachment 3 – Independent Technical Reviewer (ITR) Review Checklist

HSG Sampling Batch Number: INHSG1206

Description	YES	NO	NA	
1. Is the HSG Sampling BDR complete as specified in step 4.1.2 and are the field sampling records complete?	✓			
Sampling Documentation	**YES**	**NO**	**NA**	**Comments**
2. Are calculations correct for the Drum Age Criteria (DAC), temperature equilibrium time, and percent complete?	✓			
3. Did the containers meet the DAC?	✓			
4. Did the containers meet the temperature equilibrium requirement (stored at 18°C or higher for 72-hours prior to sampling)?	✓			
5. Do the temperature plots indicate the drums were stored at 18 °C (64.5 °F) or higher for 72-hours prior to sampling?	✓			
5a. Are the waste stream IDs completed correctly on the Chain of Custody (COC) Form?	✓			
Quality Control Samples				
Precision	**YES**	**NO**	**NA**	**Comments**
6. Was a Field Duplicate collected once per batch?	✓			
Accuracy	**YES**	**NO**	**NA**	**Comments**
7. Was a Field Reference Sample collected?		✓		Not Needed
8. Was a Field Blank collected one per batch prior to sampling containers?	✓			
Completeness	**YES**	**NO**	**NA**	**Comments**
9. Is the percentage of valid samples collected and submitted for analysis greater than or equal to 90 percent?	✓			
Additional Checks	**YES**	**NO**	**NA**	**Comments**
10. Is the data technically reasonable based upon the technique used?	✓			
11. Was the sampling equipment checked for leaks after sample collection?	✓			
12. Was the data generation and reduction conducted in a technically correct manner?	✓			
13. Was the data reported in proper units and with the correct number of significant figures?	✓			
14. Were the samples maintained at a temperature between 0°C - 40°C?	✓			
15. Was the equipment involved in the sampling activities in calibration (i.e., torque wrenches, ambient temperature and pressure gauges, dataloggers, ultrasonic micrometer, min/max thermometers)?	✓			

Attachment 3 – Independent Technical Reviewer (ITR) Review Checklist (continued)

Page 2 of 2

HSG Sampling Batch Number: INHSG1206

Raw Data Collection and Management	YES	NO	NA	Comments
16. Are there satisfactory equipment blanks, canister cleaning blanks, and needle assembly cleanliness results?	✓			
17. Has the data been reviewed for transcription errors?	✓			
18. Verify all the data is signed and dated, and the data is recorded clearly, legibly, and accurately.	✓			
19. No more than 20 waste containers are in the batch (excluding the QC samples).	✓			
20. Procedure Number: CCP-TP-093 Revision: 16				
21. Is the procedure number and revision correct?	✓			
22. All changes to original data are lined out, initialed, and dated by the individual making the change, and a justification included. (NOTE: Original data must not be obliterated or otherwise disfigured as not to be readable. Data changes shall only be made by the individual who originally collected the data or an individual authorized to change the data.)	✓			

Independent Technical Reviewer:

Spencer Pattee
Printed Name

Signature

9-12-12
9-6-12
Date

Attachment 1 – Chain of Custody/Canister Tag Chain of Custody # 595 Page 1 of 2

Location: Under Drum Lid		Point of Origin: CPP-659	**Sample Matrix is Gas**	Ambient Conditions
		Field Batch Number: INHSG1206		Temperature (centigrade): 22.5
				Pressure (in. Hg): 25

Site	Date	SUMMA® Canister No.	Size (mL)	TID No.	Container ID /Barcode No.	Waste Stream ID	Cleaning Batch No.	Needle Assembly Batch No.	Type SS B D F C (Note 1)	Vent Seal (Y/NA)	Start Time	End Time	Beginning Pressure (in.Hg or psig)	End Pressure (in.Hg or psig)	Sampler's Initials
IN	090412	EI779	250	0825585	N/A	N/A	439C	INHSG1203NB	B	N/A	0907	0912	25 in. Hg	3 in. Hg	
IN	090412	EIB85	250	0825586	NRFTRUSPC022-1	IN-ID-NRF-SPC	439C	INHSG1203NB	D	Y	0920	0925	25 in. Hg	1 in. Hg	
IN	090412	EI504	250	0825587	NRFTRUSPC022-1	IN-ID-NRF-SPC	439C	INHSG1203NB	D	Y	0920	0925	25 in. Hg	2 in. Hg	
IN	090412	EI770	250	0825588	NRFTRUSPC005-1	IN-ID-NRF-SPC	439C	INHSG1203NB	SS	Y	0946	0951	26 in. Hg	2 in. Hg	
IN	090412	EI672	250	0825589	NRFTRUSPC007-1	IN-ID-NRF-SPC	439C	INHSG1203NB	SS	Y	1005	1010	26 in. Hg	3 in. Hg	
IN	090412	EIC22	250	0825590	NRFTRUSPC009-1	IN-ID-NRF-SPC	439C	INHSG1203NB	SS	Y	1024	1029	26 in. Hg	2 in. Hg	
IN	090412	EI291	250	0825594	NRFTRUSPC016-1	IN-ID-NRF-SPC	439C	INHSG1203NB	SS	Y	1039	1044	27 in. Hg	2 in. Hg	
IN	090412	EIB00	250	0825595	NRFTRUSPC018-1	IN-ID-NRF-SPC	439C	INHSG1203NB	SS	Y	1055	1059	26 in. Hg	0 in. Hg	
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Note 1. Analysis required:
C - Needle Assembly Cleanliness Certification VOC
SS - Single Sample: VOC, H_2, CH_4
B - Field Blank, VOC
D - Duplicate: VOC, H_2, CH_4
F - Field Reference Standard: VOC

Sampler's Signature:

Attachment 1 – Chain of Custody/Canister Tag (Continued) Chain of Custody # 595

Field Batch Number: INHSG1206					
Comments: N/A		Instrument Section	M&TE ID No.	Calibration Due Date	Initials/Date
Analytical Laboratory - ECL		Pressure Meter	XC0517	~~1-31-2013~~ ~~1-13-2013~~ 08 09-12-12	NN 09/04/12
Shipping Tracking # N/A	Method of Shipping ECL Pickup	Thermometer	XC0717	6-5-2013	NN 09/04/12
		Min /Max Thermometer	XC0553 XC0689	10-12-2012 10-12-2012	NN 09/04/12
Analysis Requested VOC		Preservation Method: 0 - 40°C			
TID Number(s) 0825596		TID Initials and date: NN 09/04/12			

Custody Initiated By: (Sampler Name/Organization)	Date/Time 09-04-12 0912		
Relinquished By: (Name/Organization)	Date/Time 09-05-12 0800	Received By: (Name/Organization)	Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)	Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)	Date/Time
Relinquished By: (Name/Organization)	Date/Time	Received By: (Name/Organization)	Date/Time
Final Disposition By: (Name/Organization)	Date/Time	Disposition:	

GAS SAMPLE CANISTER TAG

1	N	0	9	0	4	1	2	E	I	7	7	9
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: IN1H5G1206 Drum Number: N/A

Sampling Organization: CCP Sample Description: FIELD BLANK

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 22	072512	1015	TBL
Cleaning Batch: 439C	M= <5.0E-2	P= 643T			
Field-	C= 25 "Hg	T= 22.5	090412	0907	DD
Before Sample Collection	M=	P= 25			
Field-	C= 3 "Hg	T= 22.5	090412	0912	DD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? (Y) / N (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	9	0	4	1	2	E	I	B	8	5
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site — Date — Canister ID

Batch Number: INHSG1206 Drum Number: NRETRUSPC022-1

Sampling Organization: CCI Sample Description: DUPLICATE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 22	072512	1015	TBL
Cleaning Batch: 439C	M= <5.0E-2	P= 643T			
Field-	C= 25" Hg	T= 22.5	090412	0920	DD
Before Sample Collection	M=	P= 25			
Field-	C= 1 "Hg	T= 22.5	090412	0925	DD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: [signature]

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	9	0	4	1	2	E	I	5	0	4
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1206 Drum Number: NRFTRUSPC022-1

Sampling Organization: CCP Sample Description: DUPLICATE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 22	072512	1015	TBL
Cleaning Batch: 439C	M= <5.0E-2	P= 643T			
Field-	C= 25 "Hg	T= 22.5	090412	0920	DD
Before Sample Collection	M=	P= 25			
Field-	C= 2 "Hg	T= 22.5	090412	0925	DD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: [signature]

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	D	9	0	4	1	2	E	I	7	7	0
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1206 Drum Number: NRETRYSPL005-1

Sampling Organization: CCP Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 22	072512	1015	TBL
Cleaning Batch: 439C	M= <5.0E-2	P= 643T			
Field-	C= 26 "Hg	T= 22.5	090412	0946	MD
Before Sample Collection	M=	P= 25			
Field-	C= 2 "Hg	T= 22.5	090412	0951	MD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	9	0	4	1	2	E	I	6	7	2
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1206 Drum Number: NRFTRUSPC007-1

Sampling Organization: CCP Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 22	072512	1015	TBL
Cleaning Batch: 439C	M= <5.0E-2	P= 643T			
Field-	C= 26" Hg	T= 22.5	090412	1005	M
Before Sample Collection	M=	P= 25			
Field-	C= 3 " Hg	T= 22.5	090412	1010	M
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	9	0	4	1	2	E	I	C	2	2
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: IN1456206 Drum Number: NRFTM4SPC009-1

Sampling Organization: CCP Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 22	072512	1015	TBL
Cleaning Batch: 439C	M= <5.0E-2	P= 643T			
Field-	C= 26 "Hg	T= 22.5	090412	1024	DD
Before Sample Collection	M=	P= 25			
Field-	C= 2 "Hg	T= 22.5	090412	1029	DD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature:

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	9	0	4	1	2	E	I	2	9	1
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: 1NHSG1206 **Drum Number:** NRITRUSPC016-1

Sampling Organization: CCV **Sample Description:** SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 22	072512	1015	TBL
Cleaning Batch: 439C	M= <5.0E-2	P= 643T			
Field-	C= 27" Hg	T= 22.5	090412	1039	AT
Before Sample Collection	M=	P= 25			
Field-	C= 2 " Hg	T= 22.5	090412	1044	MD
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: [signature]

Notes:
(1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

GAS SAMPLE CANISTER TAG

1	N	0	9	0	4	1	2	E	I	B	0	0
Z	Z	M	M	D	D	Y	Y	A	A	X	X	X

Sampling Site | Date | Canister ID

Batch Number: INHSG1206 Drum Number: AIRFTRUSPC018-1

Sampling Organization: CCP Sample Description: SAMPLE

Location	Canister Pressure C or M (1)	Ambient P and T (2)	Date MMDDYY	Time 24 Hour	Initials
Certifying Laboratory	C=	T= 22	072512	1015	TBL
Cleaning Batch: 439C	M= <5.0E-2	P= 643T			
Field-	C= 26 "Hg	T= 22.5	090412	1055	MM
Before Sample Collection	M=	P= 25			
Field-	C= 0 "Hg	T= 22.5	090412	1059	MM
After Sample Collection	M=	P= 25			
Analytical Laboratory	C=	T=			
	M=	P=			

Blank Sample? Y / (N) (Circle one)

Analysis Requested	VOC's	Hydrogen	Methane
	✓		

Remarks: N/A

Sampler Signature: [signature]

Notes: (1) C = Canister pressure gauge reading inches Hg (evacuated), or PSIG (pressurized); M = Manifold pressure gauge in mm Hg.

(2) P = pressure in inches Hg; T = Temperature in C.

Rev (09-05)

From: Catherine A Crowder
To: Dale A. Dover; charles.turner@wipp.ws
Subject: Needle Assembly Blanks
Date: Wednesday, July 11, 2012 3:55:40 PM

Analytical results for needle assembly equipment blanks in field batch INHSG1203NB were acceptable. Concentrations of all VOC target analytes were less than or equal to three times the MDLs listed in Table C3-2 in Permit Attachment C3.

Attachment 2 – Sample Container Data Form

Field Batch Number: INHSG1206

	Container ID	Sampling Scenario	Summary Category Group	Rigid Liner (Y/N/)	Rigid Liner Lid (Y/N)	Rigid Liner Lid Hole Diameter (in.)	Number of Inner Bags	Number of Liner Bags	Filter Model No.	Number of Filters	Restrictive Hydrogen Diffusivity (m/s/mf)	Package Configuration Group No.
1	NRFTRUSPC022-1	3	S5000	N	N	N/A	0	0	NucFil-019SDS	1	3.70E-06	1
2	NRFTRUSPC005-1	3	S5000	N	N	N/A	0	0	NucFil-019SDS	1	3.70E-06	1
3	NRFTRUSPC007-1	3	S5000	N	N	N/A	0	0	NucFil-019SDS	1	3.70E-06	1
4	NRFTRUSPC009-1	3	S5000	N	N	N/A	0	0	NucFil-019SDS	1	3.70E-06	1
5	NRFTRUSPC016-1	3	S5000	N	N	N/A	0	0	NucFil-019SDS	1	3.70E-06	1
6	NRFTRUSPC018-1	3	S5000	N	N	N/A	0	0	NucFil-019SDS	1	3.70E-06	1
7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
22	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Attachment 2 – Sample Container Data Form (Continued)

Page 2 of 2

Field Batch Number: INHSG1206

	Container ID	Closure Date	Vent Date	Permit Required Equilibrium Time (Days)	Container Age (Days)	Container Fill Factor (%)	Can This Container Be Sampled? (Y / N)	Temperature Recorder M&TE /ID No.: XC0706 12-13-12 XC0712 2-13-13 Temperature Recorder Calibration Due Date: 72 – Hour Container Equilibrium	
								Start Date/Time	End Date/Time
1	NRFTRUSPC022-1	8/1/2012	8/1/2012	4	34	85	Y	8-30-12 1600	9-4-12 0845
2	NRFTRUSPC005-1	5/14/2012	5/14/2012	4	113	85	Y	8-30-12 1600	9-4-12 0845
3	NRFTRUSPC007-1	5/14/2012	5/14/2012	4	113	85	Y	8-30-12 1600	9-4-12 0845
4	NRFTRUSPC009-1	5/14/2012	5/14/2012	4	113	85	Y	8-30-12 1600	9-4-12 0845
5	NRFTRUSPC016-1	8/1/2012	8/1/2012	4	34	85	Y	8-30-12 1600	9-4-12 0845
6	NRFTRUSPC018-1	8/1/2012	8/1/2012	4	34	85	Y	8-30-12 1600	9-4-12 0845
7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
22	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

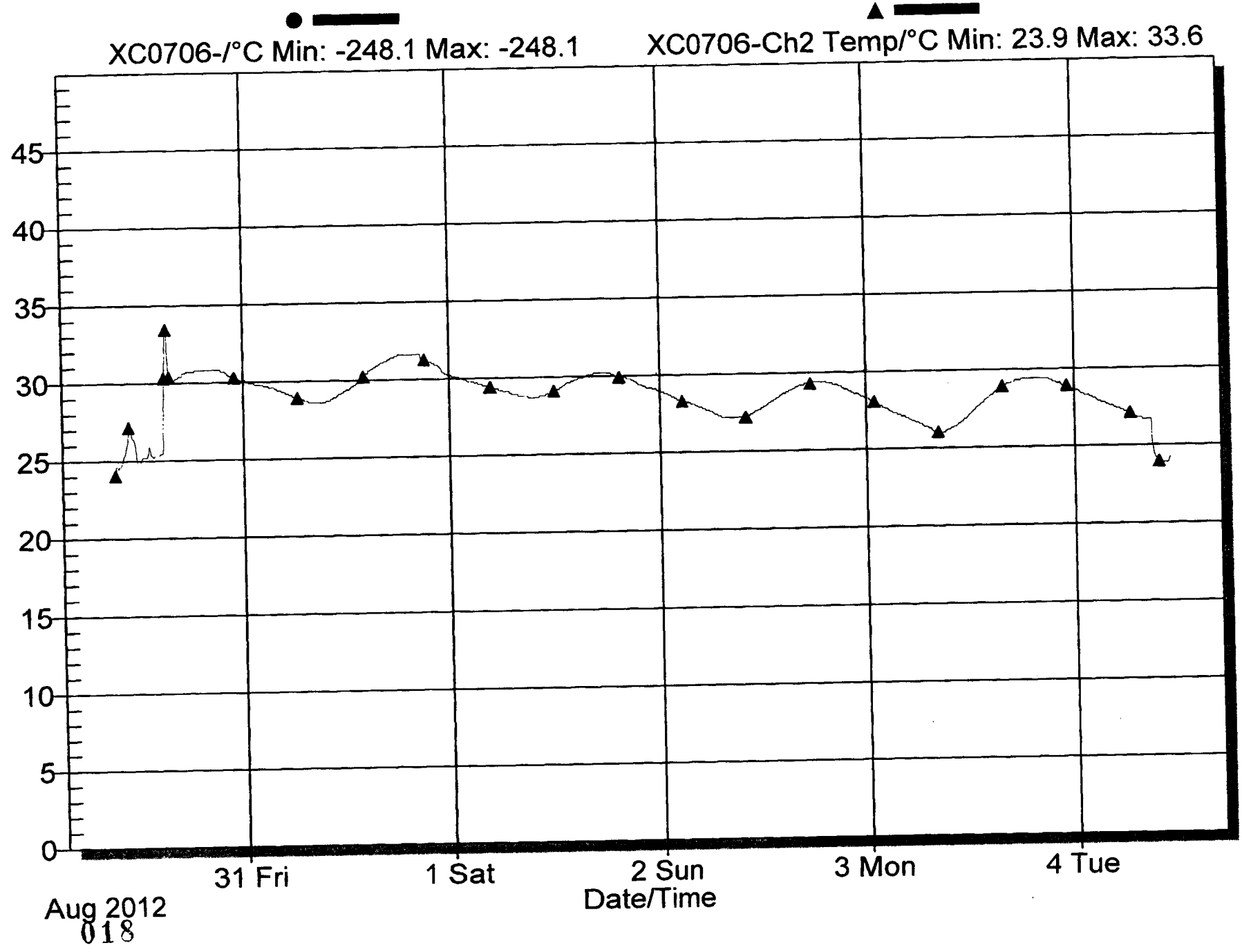
HSG Sampler: Jace Vowen
Print Name

Signature

09-04-12
Date

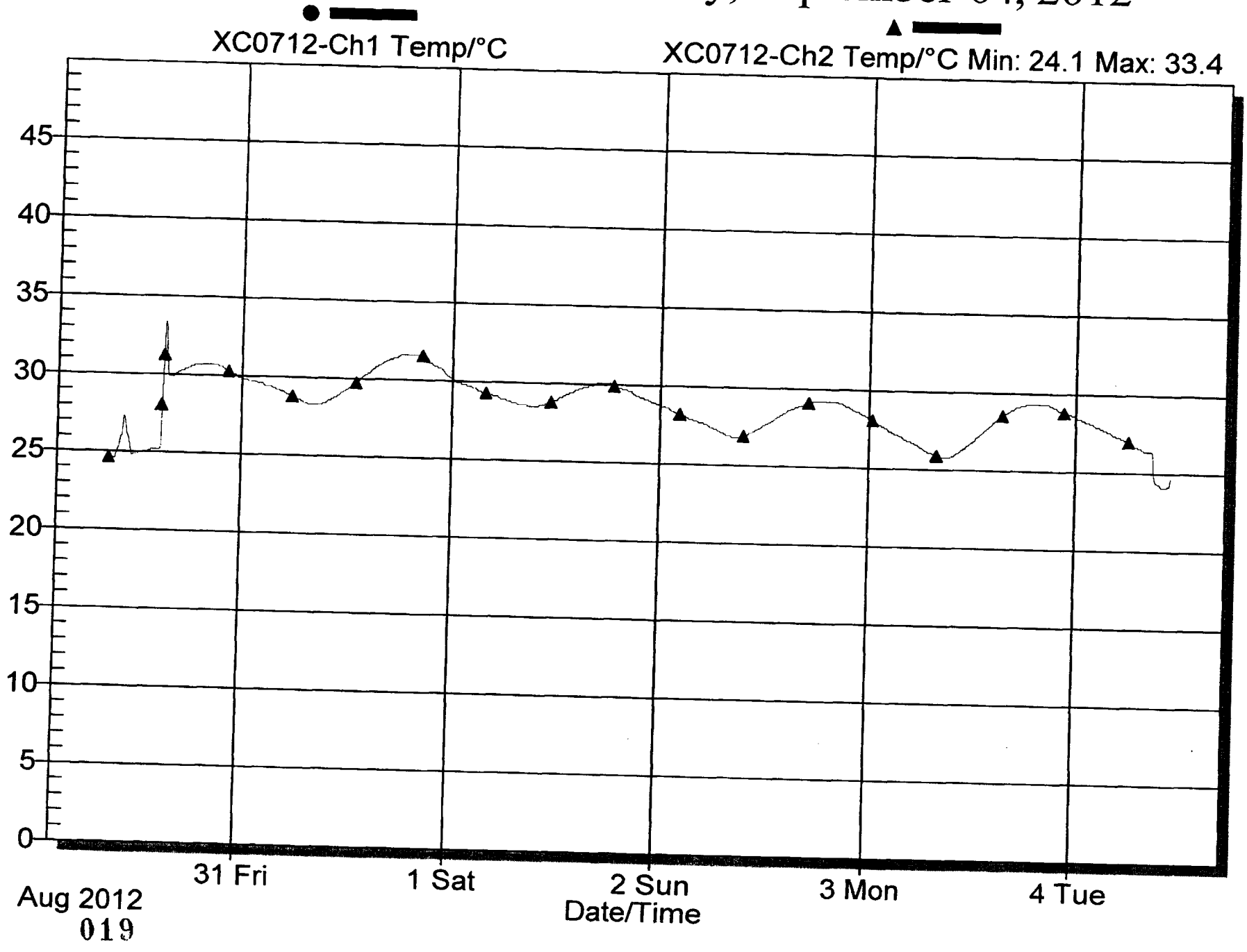
017

Downloaded Data - Tuesday, September 04, 2012



018

Downloaded Data - Tuesday, September 04, 2012



019

DIVIDER PAGE ONLY

Not part of page count

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[ ] Original Record [ ] Copy
[ ] Fax Record
[x] Electronic Record

Attn:	Sheri Punchios/Tami Parker/Linda Martin	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Hwy	Company:	WTS
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	9/12/12
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
INHSG1206	SPM Checklist	9/12/12	4
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [✓]	Linda Martin Signature	Linda Martin Printed Name	9.12.12 Date
Records Rejected [ ]	Signature	Printed Name	Date

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	4309
DESTINATION TEL #	913038432208
DESTINATION ID	DENVER
ST. TIME	09/12 16:13
TIME USE	00'16
PAGES SENT	1
RESULT	OK

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7039

[ ] Original Record [ ] Copy
[ ] Fax Record
[x] Electronic Record

Attn:	Sheri Punchios/Tami Parker/Linda Martin	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Hwy	Company:	WTS
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	9/12/12
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
INHSG1206	SPM Checklist	9/12/12	4
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record
[ ] Fax Record
[ ] Electronic Record
[ ] Copy

Attn:	RH - LINDA MARTIN	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	09/12/2012
Telephone Number:	575-234-7200		

Document Number	Title / Description	Record Date	Total Pages
INHSG1206	BATCH DATA REPORT HSG SAMPLING RH	09/04/2012	19
	N/A		

Comments

SPM CHECKLIST LOCATED IN CARLSBAD

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [✓]	Linda Martin	**Linda Martin**	9.27.12
	Signature	Printed Name	Date
Records Rejected [ ]			
	Signature	Printed Name	Date

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	4760
DESTINATION TEL #	912085577396
DESTINATION ID	INL
ST. TIME	09/27 12:50
TIME USE	00'16
PAGES SENT	1
RESULT	OK

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway • MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	RH - LINDA MARTIN	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	09/12/2012
Telephone Number:	575-234-7200		

Document Number	Title / Description	Record Date	Total Pages
INHSG1206	BATCH DATA REPORT HSG SAMPLING RH	09/04/2012	19
	N/A		

Comments
SPM CHECKLIST LOCATED IN CARLSBAD

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [✓] Linda Martin — Signature

Linda Martin — Printed Name

9.27.12 — Date

HSG2

COPY

Washington
TRU Solutions LLC

CP:05:01128
UFC:5900.00

April 26, 2005

Mr. K. W. Watson, Director
Office of Characterization and Transportation
Carlsbad Field Office
U.S. Department of Energy
P.O. Box 3090
Carlsbad, NM 88221-3090

Subject: REPORT OF FIELD REFERENCE STANDARD RESULTS FOR THE CENTRAL CHARACTERIZATION PROJECT - IDAHO NATIONAL LABORATORY

Dear Mr. Watson:

Below is a table providing field reference standard results in support of the Central Characterization Project (CCP) – Idaho National Laboratory (INL) SUMMA canister sample collections.

		True Value (ppmv)	Found Value (ppmv)		Found Value (ppmv)		Found Value (ppmv)	
	Canister ID	Standard	IN040605EIB44	%R	IN040605EI367	%R	IN040605EI294	%R
Compound								
Benzene		50	55	110	55	110	57	114
Carbon Tetrachloride		50	53	106	53	106	53	106
Chloroform		50	51	102	51	102	50	100
1,2-Dichloroethane		50	50	100	52	104	51	102
Methylene Chloride		50	58	116	47	94	47	94
Toluene		50	51	102	53	106	54	108

The results provided above meet the permit requirements under B1-1b(3) Field Reference Standards (FRS) with recoveries between 70 and 130 percent. CCP-INL will discontinue collection of the FRS, once the transmission of this letter is filed in CCP Records.

UNIQUE #	DOE UFC	DATE REC'VD	ADDRESSEES
501811	5900	APR 2 6 2005	K Watson

P.O. Box 2078 • Carlsbad, New Mexico USA 88221-2078
Phone: (505) 234-7200 • Fax: (505) 234-7083

If you have any questions, please call me at (505) 234-7535.

Sincerely,

Paul C. Gomez, Site Project Manager
Retrieval, Characterization and Transportation
Idaho National Laboratory

PCG:jm

bcc: WTS Distribution

R. A. Billett	ED
B. Broomfield	ED
C. Gomez	ED
P. C. Gomez	ED
D. H. Haar	ED
T. G. Hedahl	ED
S. Pearcy	ED
M. F. Sharif	ED
C. Stepzinski	ED
CCP Records Custodian	GSA-103

WRES Distribution

L. Price	ED

CERTIFIED MASTER CLASS

Single-Certified Calibration Standard

Scott Specialty Gases
500 WEAVER PARK RD,LONGMONT,CO 80501 Phone: 888-253-1635 Fax: 303-772-7673

CERTIFICATE OF ACCURACY: Certified Master Class Calibration Standard

Product Information
Project No.: 08-23072-001
Item No.: OCS STANDARD I.27
P.O. No.: WIPP1-PO404179
Folio #: OCS STANDARD I.
Cylinder Number: ALM061876
Cylinder Size: AL
Certification Date: 05Apr2005
Expiration Date: 05Apr2006

Customer

WASHINGTON TRU SOLUTIONS LLC
HOLLY ASHLEY 208-526-8328
C/O BECHTEL BWXT
RWMC
SCOVILLE, ID 83415

CERTIFIED CONCENTRATION

Component Name	Concentration (Moles)		Accuracy (+/-%)
BENZENE	51.	PPM	2
CARBON TETRACHLORIDE	52.	PPM	2
CHLOROFORM	51.	PPM	2
1,2-DICHLOROETHANE	51.	PPM	2
HYDROGEN	0.500	%	2
METHANE	0.506	%	2
METHYLENE CHLORIDE	51.	PPM	2
TOLUENE	51.	PPM	2
NITROGEN		BALANCE	

TRACEABILITY

Traceable To

Scott Reference Standard

APPROVED BY: JON WITZAK

DATE: 4-8-05

SPECIFICATIONS

Component Name	Requested Concentration (Moles)		Certified Concentration (Moles)		Blend Tolerance Result (+/- %)	Certified Accuracy Result (+/- %)
BENZENE	50.	PPM	51.	PPM	2.0	2.00
CARBON TETRACHLORIDE	50.	PPM	52.	PPM	4.0	2.00
CHLOROFORM	50.	PPM	51.	PPM	2.0	2.00
1,2-DICHLOROETHANE	50.	PPM	51.	PPM	2.0	2.00
HYDROGEN	0.5	%	0.500	%	.0	2.00
METHANE	0.5	%	0.506	%	1.2	2.00
METHYLENE CHLORIDE	50.	PPM	51.	PPM	2.0	2.00
TOLUENE	50.	PPM	51.	PPM	2.0	2.00
NITROGEN		BAL		BAL		

TRACEABILITY

Traceable To
Scott Reference Standard

PHYSICAL PROPERTIES

Cylinder Size: AL

Pressure: 2000 PSIG
Expiration Date: 05Apr2006

Valve Connection: 350

SPECIAL HANDLING INSTRUCTIONS

Do not use or store cylinder at or below the stated dew point temperature. Possible condensation of heavier components could result. In the event the cylinder has been exposed to temperatures at or below the dew point, place cylinder in heated area for 24 hours and then roll cylinder for 15 minutes to re-mix.

Use of calibration standards at or below dew point temperature may result in calibration error.

COMMENTS

I.27 OCS STANDARD OCS
ON LINE CONTROL STANDARD OCS
NIST TRACEABLE BY WEIGHTS

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary

BDR Number: IN-ARP-VE-002793 **Examination Date:** 08/02/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
1. Is the completed, signed and dated Independent Technical Reviewer Checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, C3-10b**	X			
2. Does the BDR contain all items addressed in the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-10b**	X			
3. Does the BDR include a listing of all container numbers in the batch? **Reference Source: CCP-PO-001, C3-10b**	X			
4. List all containers that have met QAOs. **Reference Source: CCP-PO-001, C3-10b**				Container Numbers: ARP70797 ARP70900, ARP70903, ARP70911 ARP70915, ARP70941, ARP70942 ARP71009, ARP71011, ARP71013 ARP71016, ARP71018, ARP71021 ARP71029, ARP71044, ARP71047 ARP71051, ARP71054, ARP71055
5. Is the current implementing procedure and revision number included in the BDR? **Reference Source: CCP-PO-001, C3-4, C3-10b, Table C3-11**	X			
6. Is the BDR date included? **Reference Source: CCP-PO-001, Table C3-11**	X			
7. Is there a reference to or copy of any associated NCRs (if any) in the BDR? **Reference Source: CCP-PO-001, Table C3-11**			X	No NCRs
8. Are there 20 or fewer containers in the batch? **Reference Source: CCP-PO-001 C3-10**	X			
9. Are the data properly reported (i.e., data are reported in correct units and with correct significant figures). **Reference Source: CCP-PO-001 C3-10b**	X			
10. Is there evidence of verification that the physical form matches the Waste Matrix Code? **Reference Source: CCP-PO-001, C3-4**	X			
11. Is there evidence of verification that the physical form matches the waste stream description? **Reference Source: CCP-PO-001, C1-4**	X			
12. Are prohibited items absent? **Reference Source: CCP-PO-001, C3-4**	X			

COPY

CCP RECORDS ORIGINAL
DATE REC'D 8-10-12

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-ARP-VE-002793 **Examination Date:** 08/02/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
13. Does observable liquid, if present, meet the criteria of the TSDF-WAC? **Reference Source: CCP-PO-001, C3-4b**	X			
14. Were discrepancies between the Visual Examination operator and the ITR with regards to identification of waste matrix code, liquids in excess of the TSDF-WAC, or compressed gases reconciled? NA if no discrepancies. **Reference Source: CCP-PO-001, C3-4b**			X	No discrepancies
15. Are the training requirements met for the VE Expert and VE Operators who have signed the data forms? **Reference Source: CCP-PO-001, C1-4, C3-4**	X			
16. Is evidence of a satisfactory audio/video test included in the BDR? NA [not applicable] for VE Method for Newly Generated Waste. **Reference Source: CCP-PO-001, C1-4**			X	Newly Generated Waste
17. If the VE was not recorded using audio/video media, does the data sheet contain the signature of two qualified operators who observed for themselves the waste being placed into the container? NA if audio/video used. **Reference Source: CCP-PO-001, C1-4**	X			
18. Are the weights/estimated weights for the 12 waste material parameters reported in kilograms (kg)? **Reference Source: CCP Technical Procedures**	X			
19. Are the descriptions for each waste material parameter included in the BDR? **Reference Source: CCP-PO-001, C1-4**	X			
20. Is the gross weight reported (in kg) for each container included in the BDR? **Reference Source: CCP Technical Procedures**	X			
21. Is the number of layers of confinement recorded? **Reference Source: CCP-PO-001, C-3d**	X			
22. Is sufficient information included in the BDR to determine the packaging configuration? **Reference Source: CCP-PO-001 C-3d**	X			

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-ARP-VE-002793 **Examination Date:** 08/02/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
23. Is the type and number of filters recorded? **Reference Source: CCP-PO-001, C-3d**	X			
24. Is the size of the rigid liner vent hole recorded to determine the appropriate DAC? NA if no liner lid. **Reference Source: CCP-PO-001, C-3d**			X	No liner lid
25. For Los Alamos National Laboratory (LANL) Sealed Sources, does the characterized waste container meet the definition of sealed sources per Title 10 Code of Federal Regulations (CFR) 30.4 and Title 10 CFR 835.2 (effective January 1, 2004) evidence of which is assembled as part of AK documentation? **Reference Source: CCP Technical Procedures**			X	Not from LANL
26. For LANL Sealed Sources, are sealed sources the only non-packaging items in the waste container? **Reference Source: CCP Technical Procedures**			X	Not from LANL
27. For LANL Sealed Sources, are the sealed sources a U.S. Department of Transportation (DOT) Special Form Class 7 (Radioactive Material) per Title 49 CFR 34.27 (effective January 1, 2004) and the certification of which is assembled as part of the AK documentation? **Reference Source: CCP Technical Procedures**			X	Not from LANL
28. For LANL Sealed Sources, is the integrity of each sealed source validated by documented contamination survey results to meet the requirements of Title 10 CFR 34.27 (effective January 1, 2004), and assembled as part of AK documentation? **Reference Source: CCP Technical Procedures**			X	Not from LANL

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-ARP-VE-002793 **Examination Date:** 08/02/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
29. For LANL Sealed Sources, is each sealed source a rigid sealed container less than or equal to 4 L in size or in a rigid sealed container less than or equal to 4 L? **Reference Source: CCP Technical Procedures**			X	Not from LANL
30. For LANL Sealed Sources, AK documentation does not indicate the use of volatile organic compounds (VOCs) or VOC-bearing materials as constituents of sealed sources? **Reference Source: CCP Technical Procedures**			X	Not from LANL
31. For LANL Sealed Sources, the outer casing of each sealed source is of a non VOC-bearing material which is verified using the VE technique at the time of packaging? **Reference Source: CCP Technical Procedures**			X	Not from LANL

Comments: None

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

Steve Castro	Ste Cast	8-10-12
SPM Printed Name	Signature	Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

Attachment 4 – CCP Waste VE Technique Batch Data Report Cover Sheet

Batch Data Report No.: IN-ARP-VE-002793

	Waste Container ID Number
1	ARP71011
2	ARP71054
3	ARP70941
4	ARP71018
5	ARP 71051
6	ARP 70900
7	ARP 71009
8	ARP 71029
9	ARP71016
10	ARP 71055
11	ARP 71044
12	ARP71021
13	ARP70942
14	ARP71013
15	ARP70903
16	ARP70797
17	ARP71047
18	ARP70911
19	ARP70915
20	N/A GS 8/2/12

ITR:

Brad Stark — Printed Name
Signature — Date: 8-6-12

VEE:

Spencer Pattee — Printed Name
Signature — Date: 8-6-12

CCP RECORDS ORIGINAL
DATE REC'D 8-6-12

001

Attachment 3 – CCP Waste VE Technique Batch Data Report Table of Contents

Batch Data Report No.: IN-ARP-VE-002793 **Batch Data Report Date:** 8/2/12

Table of Contents

Item	Description	Page No.
1	Attachment 4, CCP Waste VE Technique Batch Data Report Cover Sheet	1
2	Attachment 3, CCP Waste VE Technique Batch Data Report Table of Contents	2
3	CCP Waste Visual Examination Technique Data Form	3
4	Attachment 2, CCP Waste VE Technique Independent Technical Reviewer Checklist	136
5	Copy of NCRs (NA, If Not Applicable)	N/A

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	ARP71011
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location:	IN-RWMC-ARP-6
3.	Batch Number:	IN-ARP-VE-002793
4.	Examination Date:	08/02/12
5.	Procedure CCP-TP-006, Rev.:	16
6.	a. Drum Packing Station (DPS) Number:	701
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	XC0917
	c. Scale Calibration Due Date:	06/07/13
	d. Test Weight ID:	XC0834
	e. Test Weight Calibration Due Date:	12/16/12
	f. Test Weight (kgs):	5.0
	g. Scale Readout of Test Weight (kgs):	5.0
	h. Difference Between Test Weight and Scale Readout (kgs):	0.0
	i. DPS Scale Check SAT (Y):	Y
	Container Scale Check	
	j. Scale Serial/ID Number:	729255
	k. Scale Calibration Due Date:	11/07/12
	l. Test Weight ID:	722311
	m. Test Weight Calibration Due Date:	11/07/12
	n. Test Weight (kg):	224.0
	o. Scale Readout of Test Weight (kgs):	224.0
	p. Difference Between Test Weight and Scale Readout (kgs):	0.0
	q. Container Scale Check SAT (Y):	Y
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	221224
8.	Container Filter Torque Data:	
	a. Filter Torque Wrench Serial/ID Number:	726775
	b. Filter Torque Wrench Calibration Due Date:	09/19/12
	c. Filter Model No.:	NUCFIL-019DS
	d. Filter Serial No.:	HL-95
	e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
	f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71011							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.3	N/A		0.0
7				METAL	0.3	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71011							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	l. Other inorganic materials (Ol)				9.1	N/A		15.0
30		j. Graphite			0.1	N/A		0.0
31			SMALL GRAPHITE PIECE		0.1	2.2		0.0
32			N/A		N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34			N/A		N/A	2.3		0.0
35			N/A		N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37			N/A		N/A	2.0		0.0
38			N/A		N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40			N/A		N/A	3.0		0.0
41			N/A		N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43			N/A		N/A	2.0 - 5.0	0.0	0.0
44			N/A		N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46			N/A		N/A	2.0		0.0
47			N/A		N/A	2.0		0.0
48		p. Inorganic sorbents			9.0	N/A		15.0
49			OIL DRI ON TOP (WAIP)		9.0	0.1 - 2.8	0.6	15.0
50			N/A		N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52			N/A		N/A	0.0		0.0
53			N/A		N/A	0.0		0.0
54			N/A		N/A	0.0		0.0
55	r. Cellulosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57			PAPER (NSW)		N/A	0.9		0.0
58			N/A		N/A	0.9		0.0
59			N/A		N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61			N/A		N/A	0.8		0.0
62			N/A		N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64			N/A		N/A	1.0		0.0
65			N/A		N/A	1.0		0.0

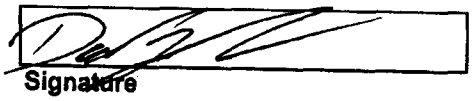
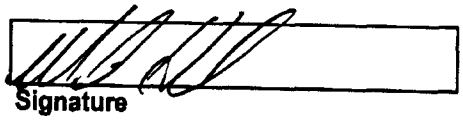
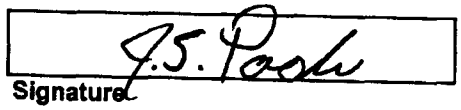
	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003					
2	Container ID: ARP71011					
3	Section 2: Waste Material Parameter (WMP) Estimates					
4	9. Waste Material Parameter and Item Description		10. WMP Estimate	11. Density		12.Volume
5			By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)		0.0	N/A		0.0
67		N/A	N/A	0.9 - 2.0	0.0	0.0
68		N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)		0.0	N/A		0.0
70		NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71		PLASTIC (NSW)	N/A	0.9		0.0
72		N/A	N/A	0.9		0.0
73		N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)		94.0	N/A		78.3
75	x1. Sludge		94.0	N/A		78.3
76		PALE YELLOWISH BROWN POWDERY SLUDGE WITH CALCIUM SILICATE	94.0	1.0 - 1.5	1.2	78.3
77		N/A	N/A	1.0 - 1.5	0.0	0.0
78		N/A	N/A	1.0 - 1.5	0.0	0.0
79	x2. Other (See Note a)		0.0	N/A		0.0
80		N/A	N/A	0.0		0.0
81		N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)		14.2	N/A		11.8
83	y1. Sludge		14.0	N/A		11.7
84		LIGHT BROWN CRUMBLY SLUDGE WITH PORTLAND CEMENT	14.0	1.0 - 1.5	1.2	11.7
85		N/A	N/A	1.0 - 1.5	0.0	0.0
86		N/A	N/A	1.0 - 1.5	0.0	0.0
87	y2. Roaster Oxides		0.0	N/A		0.0
88		N/A	N/A	1.5 - 4.0	0.0	0.0
89		N/A	N/A	1.5 - 4.0	0.0	0.0
90		N/A	N/A	1.5 - 4.0	0.0	0.0
91	y3. Other (See Note a)		0.2	N/A		0.1
92		EVAPORATOR SALT	0.2	2.2		0.1
93		N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)		6.0	N/A		5.0
95		SOIL	6.0	1.0 - 1.4	1.2	5.0
96		N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL		123.6	N/A		110.1
98	13. (ORGANIC SLUDGE) weight (94.0) kg was obtained by subtracting the weighed waste weight of (29.6) kg and the container net weight of (34.0) kg from the gross weight (157.6) kg of the waste container. (157.6) - (29.6) - (34.0) = (94.0) kg					
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.					
100	b. REFERENCE LETTER: CP:08:00210 / UFC:2300.00					
101						

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71011	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71011	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	23.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	720178
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	09/21/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	0915
22. Measured gross weight of loaded container, fully assembled (kgs):	157.6
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	347.4
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	70.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	123.6
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71011	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.0
31. Total volume of Solidified Organics (L):	78.3
32. Total volume of Solidified Inorganics (L):	26.8
33. Total volume of Soils/Gravel (L):	5.0
a. Total volume (L):	110.1
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	76.1%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:		
D. JACKMAN Enter Name	 Signature	8-2-12 Date
Visual Examination Operator 2:		
M. HADERLIE Enter Name	 Signature	8-2-12 Date
Visual Examination Expert:		
J. POOLE Enter Name	 Signature	8-2-12 Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	ARP71054
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	DP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location:	IN-RWMC-ARP-6
3. Batch Number:	IN-ARP-VE-002793
4. Examination Date:	08/02/12
5. Procedure CCP-TP-006, Rev.:	16
6. a. Drum Packing Station (DPS) Number:	703
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	XC0918
c. Scale Calibration Due Date:	06/07/13
d. Test Weight ID:	XC0842
e. Test Weight Calibration Due Date:	12/20/12
f. Test Weight (kgs):	5.0
g. Scale Readout of Test Weight (kgs):	5.0
h. Difference Between Test Weight and Scale Readout (kgs):	0.0
i. DPS Scale Check SAT (Y):	Y
Container Scale Check	
j. Scale Serial/ID Number:	729257
k. Scale Calibration Due Date:	11/07/12
l. Test Weight ID:	722311
m. Test Weight Calibration Due Date:	11/07/12
n. Test Weight (kg):	224.0
o. Scale Readout of Test Weight (kgs):	224.0
p. Difference Between Test Weight and Scale Readout (kgs):	0.0
q. Container Scale Check SAT (Y):	Y
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	221224
8. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726773
b. Filter Torque Wrench Calibration Due Date:	09/19/12
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	HL-69
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71054							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.1	N/A		0.0
7				METAL	0.1	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71054							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	l. Other Inorganic materials (Oi)				9.0	N/A		15.0
30		j. Graphite			0.0	N/A		0.0
31			N/A		N/A	2.2		0.0
32			N/A		N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34			N/A		N/A	2.3		0.0
35			N/A		N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37			GLASS (NSW)		N/A	2.0		0.0
38			N/A		N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40			N/A		N/A	3.0		0.0
41			N/A		N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43			N/A		N/A	2.0 - 5.0	0.0	0.0
44			N/A		N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46			N/A		N/A	2.0		0.0
47			N/A		N/A	2.0		0.0
48		p. Inorganic sorbents			9.0	N/A		15.0
49			OIL-DRI TOP (WAIP)		9.0	0.1 - 2.8	0.6	15.0
50			N/A		N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52			N/A		N/A	0.0		0.0
53			N/A		N/A	0.0		0.0
54			N/A		N/A	0.0		0.0
55	r. Cellulosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57			PAPER (NSW)		N/A	0.9		0.0
58			N/A		N/A	0.9		0.0
59			N/A		N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61			N/A		N/A	0.8		0.0
62			N/A		N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64			N/A		N/A	1.0		0.0
65			N/A		N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71054							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
66	v. Rubber (R)				0.0	N/A		0.0
67				RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC (NSW)	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				0.0	N/A		0.0
75		x1. Sludge			0.0	N/A		0.0
76				N/A	N/A	1.0 - 1.5	0.0	0.0
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				78.7	N/A		65.6
83		y1. Sludge			78.7	N/A		65.6
84				MODERATE RED CRUMBLY SLUDGE WITH PORTLAND CEMENT	78.7	1.0 - 1.5	1.2	65.6
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				39.0	N/A		32.5
95				SOIL	39.0	1.0 - 1.4	1.2	32.5
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				126.8	N/A		113.1
98	13. (INORGANIC SLUDGE) weight (78.7) kg was obtained by subtracting the weighed waste weight of (48.1) kg and the container net weight of (34.0) kg from the gross weight (160.8) kg of the waste container. (160.8) - (48.1) - (34.0) = (78.7) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. N/A							
101								

013

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71054	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71054	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	21.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728635
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	10/23/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	0919
22. Measured gross weight of loaded container, fully assembled (kgs):	160.8
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	354.5
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	65.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	126.8
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71054	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.0
31. Total volume of Solidified Organics (L):	0.0
32. Total volume of Solidified Inorganics (L):	80.6
33. Total volume of Soils/Gravel (L):	32.5
a. Total volume (L):	113.1
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	0.0%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	N/A

Section 6: Approvals

Visual Examination Operator 1:

L. VERLANIC	L. Verlanic	8-2-12
Enter Name	Signature	Date

Visual Examination Operator 2:

J. STANTON	Jodi M. Stanton	8/2/12
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE	J.S. Poole	8-2-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	ARP70941
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	~~Y~~
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location:	IN-RWMC-ARP-6
3. Batch Number:	IN-ARP-VE-002793
4. Examination Date:	08/02/12
5. Procedure CCP-TP-006, Rev.:	16
6. a. Drum Packing Station (DPS) Number:	701
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	221224
8. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726775
b. Filter Torque Wrench Calibration Due Date:	09/19/12
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	HL-255
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70941							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.2	N/A		0.0
7				METAL	0.2	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70941							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
29	l.	Other inorganic materials (OI)			9.0	N/A		15.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		9.0	N/A		15.0
49				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				PAPER (NSW)	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70941							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.0	N/A		0.0
67				RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC (NSW)	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				5.0	N/A		4.2
75		x1. Sludge			5.0	N/A		4.2
76				PALE YELLOWISH BROWN POWDERY SLUDGE WITH CALCIUM SILICATE	5.0	1.0 - 1.5	1.2	4.2
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				69.6	N/A		58.0
83		y1. Sludge			69.6	N/A		58.0
84				MODERATE REDDISH BROWN CRUMBLY SLUDGE WITH PORTLAND CEMENT	69.6	1.0 - 1.5	1.2	58.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				30.0	N/A		25.0
95				SOIL	30.0	1.0 - 1.4	1.2	25.0
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				113.8	N/A		102.2

98 13. (INORGANIC SLUDGE) weight (69.6) kg was obtained by subtracting the weighed waste weight of (44.2) kg and the container net weight of (34.0) kg from the gross weight (147.8) kg of the waste container. (147.8) - (44.2) - (34.0) = (69.6) kg

99 a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.

100 b. N/A

101

020

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70941	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70941	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	23.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	720178
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	09/21/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	0945
22. Measured gross weight of loaded container, fully assembled (kgs):	147.8
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	325.8
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	70.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	113.8
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70941	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.0
31. Total volume of Solidified Organics (L):	4.2
32. Total volume of Solidified Inorganics (L):	73.0
33. Total volume of Soils/Gravel (L):	25.0
a. Total volume (L):	102.2
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	4.4%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:		
M. HADERLIE Enter Name	Signature	8-2-12 Date
Visual Examination Operator 2:		
D. JACKMAN Enter Name	Signature	8-2-12 Date
Visual Examination Expert:		
J. POOLE Enter Name	Signature	8-2-12 Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	ARP71018
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	BP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location:	IN-RWMC-ARP-6
3. Batch Number:	IN-ARP-VE-002793
4. Examination Date:	08/02/12
5. Procedure CCP-TP-006, Rev.:	16
6. a. Drum Packing Station (DPS) Number:	703
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	221224
8. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726773
b. Filter Torque Wrench Calibration Due Date:	09/19/12
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	HL-79
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71018							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4				9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				METAL (NSW)	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71018							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	l. Other inorganic materials (OI)				9.0	N/A		15.0
30		j. Graphite			0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p. Inorganic sorbents			9.0	N/A		15.0
49				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r. Cellulosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57				PAPER (NSW)	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71018							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.0	N/A		0.0
67				N/A	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				PLASTIC (NSW)	N/A	0.9		0.0
71				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				9.0	N/A		7.5
75		x1. Sludge			9.0	N/A		7.5
76				PALE YELLOWISH BROWN POWDERY SLUDGE WITH CALCIUM SILICATE	9.0	1.0 - 1.5	1.2	7.5
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				114.0	N/A		94.8
83		y1. Sludge			113.5	N/A		94.6
84				MODERATE REDDISH BROWN CLAY LIKE SLUDGE WITH PORTLAND CEMENT	113.5	1.0 - 1.5	1.2	94.6
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.5	N/A		0.2
92				EVAPORATOR SALT	0.5	2.2		0.2
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				38.0	N/A		31.7
95				SOIL	38.0	1.0 - 1.4	1.2	31.7
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				170.0	N/A		149.0
98	13. (INORGANIC SLUDGE) weight (113.5) kg was obtained by subtracting the weighed waste weight of (56.5) kg and the container net weight of (34.0) kg from the gross weight (204.0) kg of the waste container. (204.0) - (56.5) - (34.0) = (113.5) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. REFERENCE LETTER: CP:08:00210/UFC:2300.00							
101								

027

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71018	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71018	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	24.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728635
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	10/23/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	0947
22. Measured gross weight of loaded container, fully assembled (kgs):	204.0
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	449.7
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	75.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	170.0
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71018	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.0
31. Total volume of Solidified Organics (L):	7.5
32. Total volume of Solidified Inorganics (L):	109.8
33. Total volume of Soils/Gravel (L):	31.7
a. Total volume (L):	149.0
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	5.3%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

J. STANTON	Jodi M. Stanton	8/2/12
Enter Name	Signature	Date

Visual Examination Operator 2:

L. VERLANIC	L. Verlanic	8-2-12
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE	J.S. Poole	8-2-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	ARP71051
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	JSP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location:	IN-RWMC-ARP-6
3. Batch Number:	IN-ARP-VE-002793
4. Examination Date:	08/02/12
5. Procedure CCP-TP-006, Rev.:	16
6. a. Drum Packing Station (DPS) Number:	703
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	221223
8. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726773
b. Filter Torque Wrench Calibration Due Date:	09/19/12
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	HL-51
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71051							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.2	N/A		0.0
7				METAL	0.2	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71051							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	i. Other Inorganic materials (OI)				9.1	N/A		15.1
30		j. Graphite			0.0	N/A		0.0
31			N/A		N/A	2.2		0.0
32			N/A		N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34			N/A		N/A	2.3		0.0
35			N/A		N/A	2.3		0.0
36		l. Glass			0.1	N/A		0.1
37			GLASS		0.1	2.0		0.1
38			N/A		N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40			N/A		N/A	3.0		0.0
41			N/A		N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43			N/A		N/A	2.0 - 5.0	0.0	0.0
44			N/A		N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46			N/A		N/A	2.0		0.0
47			N/A		N/A	2.0		0.0
48		p. Inorganic sorbents			9.0	N/A		15.0
49			OIL-DRI TOP (WAIP)		9.0	0.1 - 2.8	0.6	15.0
50			N/A		N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52			N/A		N/A	0.0		0.0
53			N/A		N/A	0.0		0.0
54			N/A		N/A	0.0		0.0
55	r. Cellulosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57			PAPER (NSW)		N/A	0.9		0.0
58			N/A		N/A	0.9		0.0
59			N/A		N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61			N/A		N/A	0.8		0.0
62			N/A		N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64			N/A		N/A	1.0		0.0
65			N/A		N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71051							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4				9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.1	N/A		0.1
67				RUBBER	0.1	0.9 - 2.0	1.1	0.1
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC (NSW)	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				18.0	N/A		15.0
75		x1. Sludge			18.0	N/A		15.0
76				MODERATE YELLOWISH BROWN POWDERY SLUDGE WITH CALCIUM SILICATE	18.0	1.0 - 1.5	1.2	15.0
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				101.0	N/A		84.0
83		y1. Sludge			100.5	N/A		83.8
84				MODERATE REDDISH ORANGE CRUMBLY SLUDGE WITH PORTLAND CEMENT	100.5	1.0 - 1.5	1.2	83.8
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.5	N/A		0.2
92				EVAPORATOR SALT	0.5	2.2		0.2
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				13.0	N/A		10.8
95				SOIL	13.0	1.0 - 1.4	1.2	10.8
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				141.4	N/A		125.0
98	13. (INORGANIC SLUDGE) weight (100.5) kg was obtained by subtracting the weighed waste weight of (40.9) kg and the container net weight of (34.0) kg from the gross weight (175.4) kg of the waste container. (175.4) - (40.9) - (34.0) = (100.5) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. REFERENCE LETTER: CP:08:00210 / UFC:2300.00							
101								

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71051	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71051	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	26.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221223
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728635
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	10/23/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1015
22. Measured gross weight of loaded container, fully assembled (kgs):	175.4
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	386.7
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	80.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	141.4
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71051	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.2
31. Total volume of Solidified Organics (L):	15.0
32. Total volume of Solidified Inorganics (L):	99.0
33. Total volume of Soils/Gravel (L):	10.8
a. Total volume (L):	125.0
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	12.7%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

L. VERLANIC	L. Verlanic	8-2-12
Enter Name	Signature	Date

Visual Examination Operator 2:

J. STANTON	Jodi M. Stanton	8/2/12
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE	J.S. Poole	8-2-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	ARP70900
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	BD
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location:	IN-RWMC-ARP-6
3. Batch Number:	IN-ARP-VE-002793
4. Examination Date:	08/02/12
5. Procedure CCP-TP-006, Rev.:	16
6. a. Drum Packing Station (DPS) Number:	701
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	221225
8. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726775
b. Filter Torque Wrench Calibration Due Date:	09/19/12
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	HL-146
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70900							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.2	N/A		0.0
7				METAL	0.2	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70900							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	l.	Other Inorganic materials (OI)			9.1	N/A		15.1
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.1	N/A		0.1
37				GLASS	0.1	2.0		0.1
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		9.0	N/A		15.0
49				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70900							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.0	N/A		0.0
67				RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC (NSW)	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				98.9	N/A		82.4
75		x1. Sludge			98.9	N/A		82.4
76				PALE YELLOWISH BROWN POWDERY SLUDGE WITH CALCIUM SILICATE	98.9	1.0 - 1.5	1.2	82.4
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				18.2	N/A		15.1
83		y1. Sludge			18.0	N/A		15.0
84				DUSKY RED CRUMBLY SLUDGE WITH WHITE CHUNKS	18.0	1.0 - 1.5	1.2	15.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.2	N/A		0.1
92				EVAPORATOR SALT	0.2	2.2		0.1
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				6.0	N/A		5.0
95				SOIL	6.0	1.0 - 1.4	1.2	5.0
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				132.4	N/A		117.6
98	13. (ORGANIC SLUDGE) weight (98.9) kg was obtained by subtracting the weighed waste weight of (33.5) kg and the container net weight of (34.0) kg from the gross weight (166.4) kg of the waste container. (166.4) - (33.5) - (34.0) = (98.9) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. REFERENCE LETTER: CP:08:00210 / UFC:2300.00							
101								

041

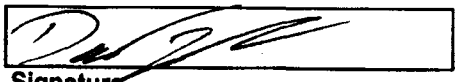
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70900	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70900	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	27.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221225
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	720178
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	09/21/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1016
22. Measured gross weight of loaded container, fully assembled (kgs):	166.4
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	366.8
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	85.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	132.4
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

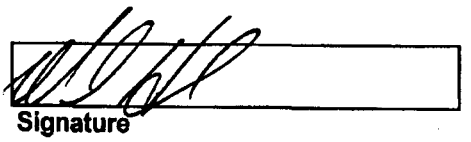
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70900	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.1
31. Total volume of Solidified Organics (L):	82.4
32. Total volume of Solidified Inorganics (L):	30.1
33. Total volume of Soils/Gravel (L):	5.0
a. Total volume (L):	117.6
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	74.7%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

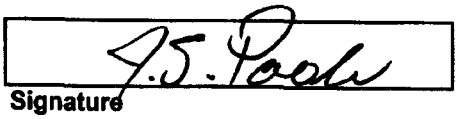
Visual Examination Operator 1:

D. JACKMAN		8-2-12
Enter Name	Signature	Date

Visual Examination Operator 2:

M. HADERLIE		8-2-12
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE		8-2-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	ARP71009
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	GSP
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location:	IN-RWMC-ARP-6
3.	Batch Number:	IN-ARP-VE-002793
4.	Examination Date:	08/02/12
5.	Procedure CCP-TP-006, Rev.:	16
6.	a. Drum Packing Station (DPS) Number:	703
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	221224
8.	Container Filter Torque Data:	
	a. Filter Torque Wrench Serial/ID Number:	726773
	b. Filter Torque Wrench Calibration Due Date:	09/19/12
	c. Filter Model No.:	NUCFIL-019DS
	d. Filter Serial No.:	HL-90
	e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
	f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71009							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				N/A	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71009							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
29	i. Other inorganic materials (OI)				9.0	N/A		15.0
30		j. Graphite			0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37				GLASS (NSW)	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p. Inorganic sorbents			9.0	N/A		15.0
49				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r. Cellulosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57				PAPER (NSW)	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003					
2	Container ID: ARP71009					
3	Section 2: Waste Material Parameter (WMP) Estimates					
4	9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density			12.Volume
5		By Weight (kg)	(kg/L)			(L)
66	v. Rubber (R)	0.0	N/A			0.0
67	N/A	N/A	0.9 - 2.0		0.0	0.0
68	N/A	N/A	0.9 - 2.0		0.0	0.0
69	w. Plastics (waste materials) (PW)	0.0	N/A			0.0
70	PLASTIC (NSW)	N/A	0.9			0.0
71	NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9			0.0
72	N/A	N/A	0.9			0.0
73	N/A	N/A	0.9			0.0
74	x. Organic matrix (OR)	108.4	N/A			90.3
75	x1. Sludge	108.4	N/A			90.3
76	PALE YELLOWISH ORANGE POWDERY SLUDGE WITH CALCIUM SILICATE	108.4	1.0 - 1.5		1.2	90.3
77	N/A	N/A	1.0 - 1.5		0.0	0.0
78	N/A	N/A	1.0 - 1.5		0.0	0.0
79	x2. Other (See Note a)	0.0	N/A			0.0
80	N/A	N/A	0.0			0.0
81	N/A	N/A	0.0			0.0
82	y. Inorganic matrix (IN)	0.0	N/A			0.0
83	y1. Sludge	0.0	N/A			0.0
84	N/A	N/A	1.0 - 1.5		0.0	0.0
85	N/A	N/A	1.0 - 1.5		0.0	0.0
86	N/A	N/A	1.0 - 1.5		0.0	0.0
87	y2. Roaster Oxides	0.0	N/A			0.0
88	N/A	N/A	1.5 - 4.0		0.0	0.0
89	N/A	N/A	1.5 - 4.0		0.0	0.0
90	N/A	N/A	1.5 - 4.0		0.0	0.0
91	y3. Other (See Note a)	0.0	N/A			0.0
92	N/A	N/A	0.0			0.0
93	N/A	N/A	0.0			0.0
94	z. Soils/gravel (S)	4.0	N/A			3.3
95	SOIL	4.0	1.0 - 1.4		1.2	3.3
96	N/A	N/A	1.0 - 1.4		0.0	0.0
97	aa. TOTAL	121.4	N/A			108.6
98	13. (ORGANIC SLUDGE) weight (108.4) kg was obtained by subtracting the weighed waste weight of (13.0) kg and the container net weight of (34.0) kg from the gross weight (155.4) kg of the waste container. (155.4) - (13.0) - (34.0) = (108.4) kg					
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.					
100	b. N/A					
101						

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71009	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71009	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	25.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728635
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	10/23/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1043
22. Measured gross weight of loaded container, fully assembled (kgs):	155.4
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	342.6
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	80.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	121.4
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71009	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.0
31. Total volume of Solidified Organics (L):	90.3
32. Total volume of Solidified Inorganics (L):	15.0
33. Total volume of Soils/Gravel (L):	3.3
a. Total volume (L):	108.6
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	89.3%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:		
J. STANTON	Jodi M Stanton	8/2/12
Enter Name	Signature	Date
Visual Examination Operator 2:		
L. VERLANIC	L. Verlanic	8-2-12
Enter Name	Signature	Date
Visual Examination Expert:		
J. POOLE	J.S. Poole	8-2-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	ARP71029
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location:	IN-RWMC-ARP-6
3.	Batch Number:	IN-ARP-VE-002793
4.	Examination Date:	08/02/12
5.	Procedure CCP-TP-006, Rev.:	16
6.	a. Drum Packing Station (DPS) Number:	701
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	221224
8.	Container Filter Torque Data:	
	a. Filter Torque Wrench Serial/ID Number:	726773
	b. Filter Torque Wrench Calibration Due Date:	09/19/12
	c. Filter Model No.:	NUCFIL-019DS
	d. Filter Serial No.:	HL-256
	e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
	f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71029							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.2	N/A		0.0
7				METAL	0.2	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71029							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	l.	Other inorganic materials (OI)			10.0	N/A		15.5
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		1.0	N/A		0.5
37				GLASS	1.0	2.0		0.5
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		9.0	N/A		15.0
49				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				PAPER (NSW)	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71029							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.0	N/A		0.0
67				N/A	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC (NSW)	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				91.5	N/A		76.3
75		x1. Sludge			91.5	N/A		76.3
76				MODERATE OLIVE BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE	91.5	1.0 - 1.5	1.2	76.3
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				25.1	N/A		20.8
83		y1. Sludge			25.0	N/A		20.8
84				MODERATE REDDISH BROWN CRUMBLY SLUDGE WITH WHITE CHUNKS	25.0	1.0 - 1.5	1.2	20.8
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.1	N/A		0.0
92				EVAPORATOR SALT	0.1	2.2		0.0
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				20.0	N/A		16.7
95				SOIL	20.0	1.0 - 1.4	1.2	16.7
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				146.8	N/A		129.3
98	13. (ORGANIC SLUDGE) weight (91.5) kg was obtained by subtracting the weighed waste weight of (55.3) kg and the container net weight of (34.0) kg from the gross weight (180.8) kg of the waste container. (180.8) - (55.3) - (34.0) = (91.5) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. REFERENCE LETTER: CP:08:00210/UFC:2300.00							
101								

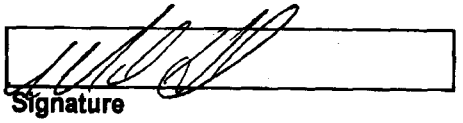
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71029	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71029	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	24.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	720178
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	09/21/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1043
22. Measured gross weight of loaded container, fully assembled (kgs):	180.8
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	398.6
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	75.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	146.8
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

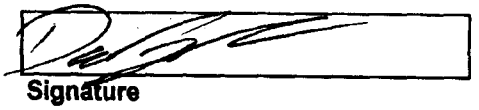
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71029	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.5
31. Total volume of Solidified Organics (L):	76.3
32. Total volume of Solidified Inorganics (L):	35.8
33. Total volume of Soils/Gravel (L):	16.7
a. Total volume (L):	129.3
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	62.3%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

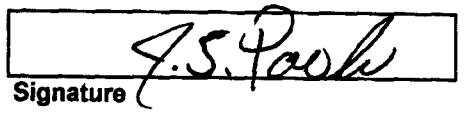
Visual Examination Operator 1:

M. HADERLIE		8-2-12
Enter Name	Signature	Date

Visual Examination Operator 2:

D. JACKMAN		8-2-12
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE		8-2-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	ARP71016
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location:	IN-RWMC-ARP-6
3.	Batch Number:	IN-ARP-VE-002793
4.	Examination Date:	08/02/12
5.	Procedure CCP-TP-006, Rev.:	16
6.	a. Drum Packing Station (DPS) Number:	703
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	221224
8.	Container Filter Torque Data:	
	a. Filter Torque Wrench Serial/ID Number:	726773
	b. Filter Torque Wrench Calibration Due Date:	09/19/12
	c. Filter Model No.:	NUCFIL-019DS
	d. Filter Serial No.:	HL-76
	e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
	f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71016							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.2	N/A		0.0
7				METAL	0.2	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				ALUMINUM (NSW)	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71016							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	i. Other inorganic materials (OI)				0.0	N/A		0.0
30		j. Graphite			0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37				GLASS (NSW)	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p. Inorganic sorbents			0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r. Cellulosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71016							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.0	N/A		0.0
67				N/A	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.9	N/A		1.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				1 TRAY LINER (WAIP)	0.9	0.9		1.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				3.0	N/A		2.5
75		x1. Sludge			3.0	N/A		2.5
76				VERY PALE ORANGE CRUMBLY SLUDGE WITH CALCIUM SILICATE	3.0	1.0 - 1.5	1.2	2.5
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				14.0	N/A		8.6
83		y1. Sludge			6.0	N/A		5.0
84				DUSKY RED CRUMBLY SLUDGE	6.0	1.0 - 1.5	1.2	5.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			8.0	N/A		3.6
92				EVAPORATOR SALT	8.0	2.2		3.6
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				133.1	N/A		110.9
95				SOIL	133.1	1.0 - 1.4	1.2	110.9
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				151.2	N/A		123.0
98	13. (SOIL) weight (133.1) kg was obtained by subtracting the weighed waste weight of (18.1) kg and the container net weight of (34.0) kg from the gross weight (185.2) kg of the waste container. (185.2) - (18.1) - (34.0) = (133.1) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. REFERENCE LETTER: CP:08:00210 / UFC:2300.00							
101								

062

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71016	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71016	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	30.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728635
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	10/23/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1106
22. Measured gross weight of loaded container, fully assembled (kgs):	185.2
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	408.3
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	95.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	151.2
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71016	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	1.0
31. Total volume of Solidified Organics (L):	2.5
32. Total volume of Solidified Inorganics (L):	8.6
33. Total volume of Soils/Gravel (L):	110.9
a. Total volume (L):	123.0
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	
c. Soil (S4200):	X
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	2.0%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

L. VERLANIC	L. Verlanic	8-3-12
Enter Name	Signature	Date

Visual Examination Operator 2:

J. STANTON	Jodi M. Stanton	8/2/12
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE	J.S. Poole	8-2-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	ARP71055
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	JDP
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location:	IN-RWMC-ARP-6
3.	Batch Number:	IN-ARP-VE-002793
4.	Examination Date:	08/02/12
5.	Procedure CCP-TP-006, Rev.:	16
6.	a. Drum Packing Station (DPS) Number:	701
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	221224
8.	Container Filter Torque Data:	
	a. Filter Torque Wrench Serial/ID Number:	726773
	b. Filter Torque Wrench Calibration Due Date:	09/19/12
	c. Filter Model No.:	NUCFIL-019DS
	d. Filter Serial No.:	HL-70
	e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
	f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:		
NOTHING ADDED TO THE CONTAINER VERIFIED		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71055							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.2	N/A		0.0
7				METAL	0.2	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71055							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	l.	Other inorganic materials (OI)			9.0	N/A		15.0
30		j.	Graphite		0.0	N/A		0.0
31			N/A		N/A	2.2		0.0
32			N/A		N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34			N/A		N/A	2.3		0.0
35			N/A		N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37			N/A		N/A	2.0		0.0
38			N/A		N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40			N/A		N/A	3.0		0.0
41			N/A		N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43			N/A		N/A	2.0 - 5.0	0.0	0.0
44			N/A		N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46			N/A		N/A	2.0		0.0
47			N/A		N/A	2.0		0.0
48		p.	Inorganic sorbents		9.0	N/A		15.0
49			OIL DRI ON TOP (WAIP)		9.0	0.1 - 2.8	0.6	15.0
50			N/A		N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52			N/A		N/A	0.0		0.0
53			N/A		N/A	0.0		0.0
54			N/A		N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57			N/A		N/A	0.9		0.0
58			N/A		N/A	0.9		0.0
59			N/A		N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61			N/A		N/A	0.8		0.0
62			N/A		N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64			N/A		N/A	1.0		0.0
65			N/A		N/A	1.0		0.0

	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003					
2	Container ID: ARP71055					
3	Section 2: Waste Material Parameter (WMP) Estimates					
4	9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density		12.Volume	
5		By Weight (kg)	(kg/L)		(L)	
66	v. Rubber (R)	0.0	N/A		0.0	
67	N/A	N/A	0.9 - 2.0	0.0	0.0	
68	N/A	N/A	0.9 - 2.0	0.0	0.0	
69	w. Plastics (waste materials) (PW)	0.0	N/A		0.0	
70	NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0	
71	PLASTIC (NSW)	N/A	0.9		0.0	
72	N/A	N/A	0.9		0.0	
73	N/A	N/A	0.9		0.0	
74	x. Organic matrix (OR)	93.8	N/A		78.2	
75	x1. Sludge	93.8	N/A		78.2	
76	DARK YELLOWISH BROWN POWDERY SLUDGE WITH CALCIUM SILICATE	93.8	1.0 - 1.5	1.2	78.2	
77	N/A	N/A	1.0 - 1.5	0.0	0.0	
78	N/A	N/A	1.0 - 1.5	0.0	0.0	
79	x2. Other (See Note a)	0.0	N/A		0.0	
80	N/A	N/A	0.0		0.0	
81	N/A	N/A	0.0		0.0	
82	y. Inorganic matrix (IN)	7.0	N/A		5.8	
83	y1. Sludge	7.0	N/A		5.8	
84	DUSKY RED CRUMBLY SLUDGE WITH WHITE CHUNKS	7.0	1.0 - 1.5	1.2	5.8	
85	N/A	N/A	1.0 - 1.5	0.0	0.0	
86	N/A	N/A	1.0 - 1.5	0.0	0.0	
87	y2. Roaster Oxides	0.0	N/A		0.0	
88	N/A	N/A	1.5 - 4.0	0.0	0.0	
89	N/A	N/A	1.5 - 4.0	0.0	0.0	
90	N/A	N/A	1.5 - 4.0	0.0	0.0	
91	y3. Other (See Note a)	0.0	N/A		0.0	
92	N/A	N/A	0.0		0.0	
93	N/A	N/A	0.0		0.0	
94	z. Soils/gravel (S)	9.0	N/A		7.5	
95	SOIL	9.0	1.0 - 1.4	1.2	7.5	
96	N/A	N/A	1.0 - 1.4	0.0	0.0	
97	aa. TOTAL	119.0	N/A		106.5	
98	13. (ORGANIC SLUDGE) weight (93.8) kg was obtained by subtracting the weighed waste weight of (25.2) kg and the container net weight of (34.0) kg from the gross weight (153.0) kg of the waste container. (153.0) - (25.2) - (34.0) = (93.8) kg					
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.					
100	b. N/A					
101						

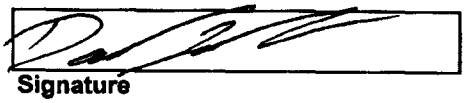
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71055	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71055	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	22.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	720178
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	09/21/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1236
22. Measured gross weight of loaded container, fully assembled (kgs):	153.0
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	337.3
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	70.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	119.0
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

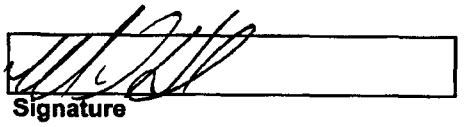
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71055	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.0
31. Total volume of Solidified Organics (L):	78.2
32. Total volume of Solidified Inorganics (L):	20.8
33. Total volume of Soils/Gravel (L):	7.5
a. Total volume (L):	106.5
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	78.8%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

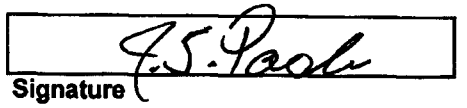
Visual Examination Operator 1:

D. JACKMAN		8-2-12
Enter Name	Signature	Date

Visual Examination Operator 2:

M. HADERLIE		8-2-12
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE		8-2-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	ARP71044
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location:	IN-RWMC-ARP-6
3. Batch Number:	IN-ARP-VE-002793
4. Examination Date:	08/02/12
5. Procedure CCP-TP-006, Rev.:	16
6. a. Drum Packing Station (DPS) Number:	703
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	221224
8. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726773
b. Filter Torque Wrench Calibration Due Date:	09/19/12
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	HL-206
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71044							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
6	a.	Iron-based metals/alloys (IM)			2.2	N/A		0.3
7				METAL	2.2	8.0		0.3
8				N/A	N/A	8.0		0.0
9	b.	Aluminum-based metals/alloys (AM)			0.0	N/A		0.0
10				ALUMINUM (NSW)	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c.	Other metals (OM)			0.0	N/A		0.0
13		d.	Lead		0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e.	Beryllium		0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f.	Depleted uranium		0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g.	Copper		0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h.	Other (See Note a)		0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71044							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	i. Other inorganic materials (OI)				0.0	N/A		0.0
30		j. Graphite			0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p. Inorganic sorbents			0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r. Cellulosics (C)				0.4	N/A		0.4
56		s. Paper			0.3	N/A		0.3
57				PAPER	0.3	0.9		0.3
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u. Wood			0.1	N/A		0.1
64				WOOD	0.1	1.0		0.1
65				N/A	N/A	1.0		0.0

	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003					
2	Container ID: ARP71044					
3	Section 2: Waste Material Parameter (WMP) Estimates					
4		9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density		12.Volume
5			By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)		0.0	N/A		0.0
67		RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
68		N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)		1.5	N/A		1.7
70		PLASTIC	0.6	0.9		0.7
71		NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
72		TRAY LINER (WAIP)	0.9	0.9		1.0
73		N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)		5.0	N/A		4.2
75	x1. Sludge		5.0	N/A		4.2
76		LIGHT BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE	5.0	1.0 - 1.5	1.2	4.2
77		N/A	N/A	1.0 - 1.5	0.0	0.0
78		N/A	N/A	1.0 - 1.5	0.0	0.0
79	x2. Other (See Note a)		0.0	N/A		0.0
80		N/A	N/A	0.0		0.0
81		N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)		0.3	N/A		0.1
83	y1. Sludge		0.0	N/A		0.0
84		N/A	N/A	1.0 - 1.5	0.0	0.0
85		N/A	N/A	1.0 - 1.5	0.0	0.0
86		N/A	N/A	1.0 - 1.5	0.0	0.0
87	y2. Roaster Oxides		0.0	N/A		0.0
88		N/A	N/A	1.5 - 4.0	0.0	0.0
89		N/A	N/A	1.5 - 4.0	0.0	0.0
90		N/A	N/A	1.5 - 4.0	0.0	0.0
91	y3. Other (See Note a)		0.3	N/A		0.1
92		EVAPORATOR SALT	0.3	2.2		0.1
93		N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)		162.2	N/A		135.2
95		SOIL	162.2	1.0 - 1.4	1.2	135.2
96		N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL		171.6	N/A		141.9
98	13. (SOIL) weight (162.2) kg was obtained by subtracting the weighed waste weight of (9.4) kg and the container net weight of (34.0) kg from the gross weight (205.6) kg of the waste container. (205.6) - (9.4) - (34.0) = (162.2) kg					
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.					
100	b.	REFERENCE LETTER: CP:08:00210/UFC:2300.00				
101						

076

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71044	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71044	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	29.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728635
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	10/23/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1332
22. Measured gross weight of loaded container, fully assembled (kgs):	205.6
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	453.3
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	90.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	171.6
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71044	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	2.4
31. Total volume of Solidified Organics (L):	4.2
32. Total volume of Solidified Inorganics (L):	0.1
33. Total volume of Soils/Gravel (L):	135.2
a. Total volume (L):	141.9
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	
c. Soil (S4200):	X
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	2.9%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

J. STANTON	Jodi M. Stanton	8/2/12
Enter Name	Signature	Date

Visual Examination Operator 2:

L. VERLANIC	S. Verlanic	8-2-12
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE	J.S. Poole	8-2-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	ARP71021
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location:	IN-RWMC-ARP-6
3.	Batch Number:	IN-ARP-VE-002793
4.	Examination Date:	08/02/12
5.	Procedure CCP-TP-006, Rev.:	16
6.	a. Drum Packing Station (DPS) Number:	701
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	221224
8.	Container Filter Torque Data:	
	a. Filter Torque Wrench Serial/ID Number:	728434
	b. Filter Torque Wrench Calibration Due Date:	09/27/12
	c. Filter Model No.:	NUCFIL-019DS
	d. Filter Serial No.:	HL-55
	e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
	f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71021							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
6	a. Iron-based metals/alloys (IM)				0.3	N/A		0.0
7				METAL	0.3	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71021							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	i.	Other Inorganic materials (OI)			9.0	N/A		15.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		9.0	N/A		15.0
49				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				PAPER (NSW)	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003					
2	Container ID: ARP71021					
3	Section 2: Waste Material Parameter (WMP) Estimates					
4 5		9. Waste Material Parameter and Item Description	10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
66	v. Rubber (R)		0.0	N/A		0.0
67		RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
68		N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)		0.0	N/A		0.0
70		NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71		PLASTIC (NSW)	N/A	0.9		0.0
72		N/A	N/A	0.9		0.0
73		N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)		5.0	N/A		4.2
75	x1. Sludge		5.0	N/A		4.2
76		PALE YELLOWISH BROWN POWDERY SLUDGE WITH CALCIUM SILICATE	5.0	1.0 - 1.5	1.2	4.2
77		N/A	N/A	1.0 - 1.5	0.0	0.0
78		N/A	N/A	1.0 - 1.5	0.0	0.0
79	x2. Other (See Note a)		0.0	N/A		0.0
80		N/A	N/A	0.0		0.0
81		N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)		105.5	N/A		87.8
83	y1. Sludge		105.4	N/A		87.8
84		MODERATE REDDISH BROWN CRUMBLY SLUDGE WITH PORTLAND CEMENT	105.4	1.0 - 1.5	1.2	87.8
85		N/A	N/A	1.0 - 1.5	0.0	0.0
86		N/A	N/A	1.0 - 1.5	0.0	0.0
87	y2. Roaster Oxides		0.0	N/A		0.0
88		N/A	N/A	1.5 - 4.0	0.0	0.0
89		N/A	N/A	1.5 - 4.0	0.0	0.0
90		N/A	N/A	1.5 - 4.0	0.0	0.0
91	y3. Other (See Note a)		0.1	N/A		0.0
92		EVAPORATOR SALT	0.1	2.2		0.0
93		N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)		30.0	N/A		25.0
95		SOIL	30.0	1.0 - 1.4	1.2	25.0
96		N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL		149.8	N/A		132.0
98	13. (INORGANIC SLUDGE) weight (105.4) kg was obtained by subtracting the weighed waste weight of (44.4) kg and the container net weight of (34.0) kg from the gross weight (183.8) kg of the waste container. (183.8) - (44.4) - (34.0) = (105.4) kg					
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.					
100	b.	REFERENCE LETTER: CP:08:00210/UFC:2300.00				
101						

083

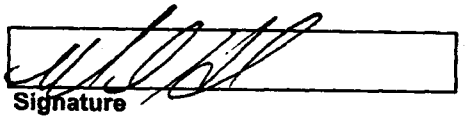
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71021	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71021	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	27.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	720178
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	09/21/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1339
22. Measured gross weight of loaded container, fully assembled (kgs):	183.8
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	405.2
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	85.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	149.8
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71021	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.0
31. Total volume of Solidified Organics (L):	4.2
32. Total volume of Solidified Inorganics (L):	102.8
33. Total volume of Soils/Gravel (L):	25.0
a. Total volume (L):	132.0
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	3.3%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

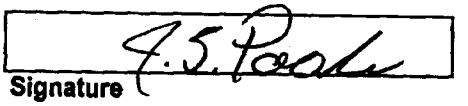
Visual Examination Operator 1:

M. HADERLIE		8-2-12
Enter Name	Signature	Date

Visual Examination Operator 2:

D. JACKMAN		8-2-12
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE		8-2-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	ARP70942
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location:	IN-RWMC-ARP-6
3.	Batch Number:	IN-ARP-VE-002793
4.	Examination Date:	08/02/12
5.	Procedure CCP-TP-006, Rev.:	16
6.	a. Drum Packing Station (DPS) Number:	703
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	221224
8.	Container Filter Torque Data:	
	a. Filter Torque Wrench Serial/ID Number:	726773
	b. Filter Torque Wrench Calibration Due Date:	09/19/12
	c. Filter Model No.:	NUCFIL-019DS
	d. Filter Serial No.:	HL-210
	e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
	f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70942							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.4	N/A		0.1
7				METAL	0.4	8.0		0.1
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

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	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70942							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4 5	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
29	i. Other inorganic materials (OI)				9.0	N/A		15.0
30		j. Graphite			0.0	N/A		0.0
31			N/A		N/A	2.2		0.0
32			N/A		N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34			N/A		N/A	2.3		0.0
35			N/A		N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37			N/A		N/A	2.0		0.0
38			N/A		N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40			N/A		N/A	3.0		0.0
41			N/A		N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43			N/A		N/A	2.0 - 5.0	0.0	0.0
44			N/A		N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46			N/A		N/A	2.0		0.0
47			N/A		N/A	2.0		0.0
48		p. Inorganic sorbents			9.0	N/A		15.0
49			OIL-DRI TOP (WAIP)		9.0	0.1 - 2.8	0.6	15.0
50			N/A		N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52			N/A		N/A	0.0		0.0
53			N/A		N/A	0.0		0.0
54			N/A		N/A	0.0		0.0
55	r. Cellulosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57			PAPER (NSW)		N/A	0.9		0.0
58			N/A		N/A	0.9		0.0
59			N/A		N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61			N/A		N/A	0.8		0.0
62			N/A		N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64			N/A		N/A	1.0		0.0
65			N/A		N/A	1.0		0.0

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	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70942							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.0	N/A		0.0
67				N/A	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC (NSW)	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				0.0	N/A		0.0
75		x1. Sludge			0.0	N/A		0.0
76				N/A	N/A	1.0 - 1.5	0.0	0.0
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				91.0	N/A		75.8
83		y1. Sludge			91.0	N/A		75.8
84				MODERATE BROWN CRUMBLY SLUDGE WITH PORTLAND CEMENT AND WHITE CHUNKS	91.0	1.0 - 1.5	1.2	75.8
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Rooster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				20.0	N/A		16.7
95				SOIL	20.0	1.0 - 1.4	1.2	16.7
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				120.4	N/A		107.6
98	13. (INORGANIC SLUDGE) weight (91.0) kg was obtained by subtracting the weighed waste weight of (29.4) kg and the container net weight of (34.0) kg from the gross weight (154.4) kg of the waste container. (154.4) - (29.4) - (34.0) = (91.0) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. N/A							
101								

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Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70942	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70942	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	24.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728635
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	10/23/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1357
22. Measured gross weight of loaded container, fully assembled (kgs):	154.4
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	340.4
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	75.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	120.4
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70942	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.1
31. Total volume of Solidified Organics (L):	0.0
32. Total volume of Solidified Inorganics (L):	90.8
33. Total volume of Soils/Gravel (L):	16.7
a. Total volume (L):	107.6
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	0.0%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	N/A

Section 6: Approvals

Visual Examination Operator 1:		
L. VERLANIC	L. Verlanic	8-2-12
Enter Name	Signature	Date
Visual Examination Operator 2:		
J. STANTON	Jodi M. Stanton	8/2/12
Enter Name	Signature	Date
Visual Examination Expert:		
J. POOLE	J. Poole	8-2-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	ARP71013
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	KSP
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location:	IN-RWMC-ARP-6
3.	Batch Number:	IN-ARP-VE-002793
4.	Examination Date:	08/02/12
5.	Procedure CCP-TP-006, Rev.:	16
6.	a. Drum Packing Station (DPS) Number:	701
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	221224
8.	Container Filter Torque Data:	
	a. Filter Torque Wrench Serial/ID Number:	728434
	b. Filter Torque Wrench Calibration Due Date:	09/27/12
	c. Filter Model No.:	NUCFIL-019DS
	d. Filter Serial No.:	HL-83
	e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
	f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71013							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
6	a. Iron-based metals/alloys (IM)				0.2	N/A		0.0
7				METAL	0.2	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71013							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	l. Other inorganic materials (Oi)				9.0	N/A		15.0
30		j. Graphite			0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p. Inorganic sorbents			9.0	N/A		15.0
49				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r. Cellulosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57				PAPER (NSW)	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64				WOOD (NSW)	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003					
2	Container ID: ARP71013					
3	Section 2: Waste Material Parameter (WMP) Estimates					
4	9. Waste Material Parameter and Item Description		10. WMP Estimate	11. Density		12.Volume
5			By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)		0.0	N/A		0.0
67		N/A	N/A	0.9 - 2.0	0.0	0.0
68		N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)		0.0	N/A		0.0
70		NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71		PLASTIC (NSW)	N/A	0.9		0.0
72		N/A	N/A	0.9		0.0
73		N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)		3.0	N/A		2.5
75	x1. Sludge		3.0	N/A		2.5
76		VERY PALE ORANGE POWDERY SLUDGE WITH CALCIUM SILICATE	3.0	1.0 - 1.5	1.2	2.5
77		N/A	N/A	1.0 - 1.5	0.0	0.0
78		N/A	N/A	1.0 - 1.5	0.0	0.0
79	x2. Other (See Note a)		0.0	N/A		0.0
80		N/A	N/A	0.0		0.0
81		N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)		110.0	N/A		91.7
83	y1. Sludge		110.0	N/A		91.7
84		DUSKY RED CRUMBLY SLUDGE WITH WHITE CHUNKS AND PORTLAND CEMENT	110.0	1.0 - 1.5	1.2	91.7
85		N/A	N/A	1.0 - 1.5	0.0	0.0
86		N/A	N/A	1.0 - 1.5	0.0	0.0
87	y2. Rooster Oxides		0.0	N/A		0.0
88		N/A	N/A	1.5 - 4.0	0.0	0.0
89		N/A	N/A	1.5 - 4.0	0.0	0.0
90		N/A	N/A	1.5 - 4.0	0.0	0.0
91	y3. Other (See Note a)		0.0	N/A		0.0
92		N/A	N/A	0.0		0.0
93		N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)		32.0	N/A		26.7
95		SOIL	32.0	1.0 - 1.4	1.2	26.7
96		N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL		154.2	N/A		135.9
98	13. (INORGANIC SLUDGE) weight (110.0) kg was obtained by subtracting the weighed waste weight of (44.2) kg and the container net weight of (34.0) kg from the gross weight (188.2) kg of the waste container. (188.2) - (44.2) - (34.0) = (110.0) kg					
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.					
100	b.	N/A				
101						

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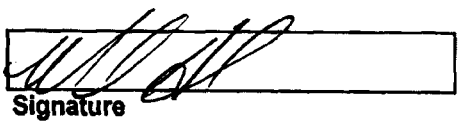
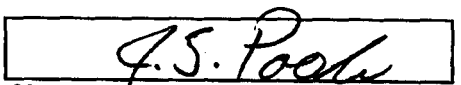
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71013	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71013	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	25.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	720178
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	09/21/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1409
22. Measured gross weight of loaded container, fully assembled (kgs):	188.2
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	414.9
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	80.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	154.2
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71013	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.0
31. Total volume of Solidified Organics (L):	2.5
32. Total volume of Solidified Inorganics (L):	106.7
33. Total volume of Soils/Gravel (L):	26.7
a. Total volume (L):	135.9
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	1.9%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:		
D. JACKMAN		8-2-12
Enter Name	Signature	Date
Visual Examination Operator 2:		
M. HADERLIE		8-2-12
Enter Name	Signature	Date
Visual Examination Expert:		
J. POOLE		8-2-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	ARP70903
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	BSP
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location:	IN-RWMC-ARP-6
3.	Batch Number:	IN-ARP-VE-002793
4.	Examination Date:	08/02/12
5.	Procedure CCP-TP-006, Rev.:	16
6.	a. Drum Packing Station (DPS) Number:	703
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	221224
8.	Container Filter Torque Data:	
	a. Filter Torque Wrench Serial/ID Number:	726773
	b. Filter Torque Wrench Calibration Due Date:	09/19/12
	c. Filter Model No.:	NUCFIL-019DS
	d. Filter Serial No.:	HL-135
	e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
	f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70903							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
6	a. Iron-based metals/alloys (IM)				0.4	N/A		0.1
7				METAL	0.4	8.0		0.1
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				ALUMINUM (NSW)	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70903							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	i. Other inorganic materials (OI)				9.0	N/A		15.0
30		j. Graphite			0.0	N/A		0.0
31			N/A		N/A	2.2		0.0
32			N/A		N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34			N/A		N/A	2.3		0.0
35			N/A		N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37			N/A		N/A	2.0		0.0
38			N/A		N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40			N/A		N/A	3.0		0.0
41			N/A		N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43			N/A		N/A	2.0 - 5.0	0.0	0.0
44			N/A		N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46			N/A		N/A	2.0		0.0
47			N/A		N/A	2.0		0.0
48		p. Inorganic sorbents			9.0	N/A		15.0
49			OIL DRI ON TOP (WAIP)		9.0	0.1 - 2.8	0.6	15.0
50			N/A		N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52			N/A		N/A	0.0		0.0
53			N/A		N/A	0.0		0.0
54			N/A		N/A	0.0		0.0
55	r. Cellulosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57			PAPER (NSW)		N/A	0.9		0.0
58			N/A		N/A	0.9		0.0
59			N/A		N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61			N/A		N/A	0.8		0.0
62			N/A		N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64			N/A		N/A	1.0		0.0
65			N/A		N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70903							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.0	N/A		0.0
67				RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				PLASTIC (NSW)	N/A	0.9		0.0
71				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				0.0	N/A		0.0
75		x1. Sludge			0.0	N/A		0.0
76				N/A	N/A	1.0 - 1.5	0.0	0.0
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				86.2	N/A		71.7
83		y1. Sludge			85.9	N/A		71.6
84				DUSKY RED CRUMBLY SLUDGE WITH PORTLAND CEMENT AND WHITE CHUNKS	85.9	1.0 - 1.5	1.2	71.6
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.3	N/A		0.1
92				EVAPORATOR SALT	0.3	2.2		0.1
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				30.0	N/A		25.0
95				SOIL	30.0	1.0 - 1.4	1.2	25.0
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				125.6	N/A		111.8
98	13. (INORGANIC SLUDGE) weight (85.9) kg was obtained by subtracting the weighed waste weight of (39.7) kg and the container net weight of (34.0) kg from the gross weight (159.6) kg of the waste container. (159.6) - (39.7) - (34.0) = (85.9) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. REFERENCE LETTER: CP:08:00210/UFC:2300.00							
101								

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70903	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70903	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	26.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728635
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	10/23/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1424
22. Measured gross weight of loaded container, fully assembled (kgs):	159.6
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	351.9
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	80.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	125.6
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70903	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.1
31. Total volume of Solidified Organics (L):	0.0
32. Total volume of Solidified Inorganics (L):	86.7
33. Total volume of Soils/Gravel (L):	25.0
a. Total volume (L):	111.8
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	0.0%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	N/A

Section 6: Approvals

Visual Examination Operator 1:

Enter Name	Signature	Date
J. STANTON	Jodi M. Stanton	8/2/12

Visual Examination Operator 2:

Enter Name	Signature	Date
L. VERLANIC	L. Verlanic	8-2-12

Visual Examination Expert:

Enter Name	Signature	Date
J. POOLE	J.S. Poole	8-2-12

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	ARP70797
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	JSP
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location:	IN-RWMC-ARP-6
3.	Batch Number:	IN-ARP-VE-002793
4.	Examination Date:	08/02/12
5.	Procedure CCP-TP-006, Rev.:	16
6.	a. Drum Packing Station (DPS) Number:	703
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	223196
8.	Container Filter Torque Data:	
	a. Filter Torque Wrench Serial/ID Number:	726773
	b. Filter Torque Wrench Calibration Due Date:	09/19/12
	c. Filter Model No.:	NUCFIL-019DS
	d. Filter Serial No.:	HL-182
	e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
	f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70797							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
6	a. Iron-based metals/alloys (IM)				0.4	N/A		0.1
7				METAL	0.4	8.0		0.1
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70797							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
29	l. Other Inorganic materials (OI)				9.0	N/A		15.0
30		j. Graphite			0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p. Inorganic sorbents			9.0	N/A		15.0
49				OIL-DRI TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r. Cellulosics (C)				0.2	N/A		0.2
56		s. Paper			0.2	N/A		0.2
57				PAPER	0.2	0.9		0.2
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70797							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.0	N/A		0.0
67				RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC (NSW)	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				8.5	N/A		7.1
75		x1. Sludge			8.5	N/A		7.1
76				OLIVE GRAY POWDERY SLUDGE WITH CALCIUM SILICATE	8.5	1.0 - 1.5	1.2	7.1
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				93.1	N/A		76.8
83		y1. Sludge			91.1	N/A		75.9
84				MODERATE REDDISH BROWN CLAY LIKE SLUDGE WITH PORTLAND CEMENT	91.1	1.0 - 1.5	1.2	75.9
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Rooster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			2.0	N/A		0.9
92				EVAPORATOR SALT	2.0	2.2		0.9
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				32.0	N/A		26.7
95				SOIL	32.0	1.0 - 1.4	1.2	26.7
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				143.2	N/A		125.9
98	13. (INORGANIC SLUDGE) weight (91.1) kg was obtained by subtracting the weighed waste weight of (52.1) kg and the container net weight of (34.0) kg from the gross weight (177.2) kg of the waste container. (177.2) - (52.1) - (34.0) = (91.1) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. REFERENCE LETTER: CP:08:00210 / UFC:2300.00							
101								

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70797	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70797	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	30.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	223196
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728635
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	10/23/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1451
22. Measured gross weight of loaded container, fully assembled (kgs):	177.2
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	390.7
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	95.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	143.2
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70797	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.3
31. Total volume of Solidified Organics (L):	7.1
32. Total volume of Solidified Inorganics (L):	91.8
33. Total volume of Soils/Gravel (L):	26.7
a. Total volume (L):	125.9
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	5.9%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

L. VERLANIC	S. Verlanic	8-2-12
Enter Name	Signature	Date

Visual Examination Operator 2:

J. STANTON	Jodi M. Stanton	8/2/12
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE	J. Poole	8-2-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	ARP71047
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location:	IN-RWMC-ARP-6
3. Batch Number:	IN-ARP-VE-002793
4. Examination Date:	08/02/12
5. Procedure CCP-TP-006, Rev.:	16
6. a. Drum Packing Station (DPS) Number:	701
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	221224
8. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	728434
b. Filter Torque Wrench Calibration Due Date:	09/27/12
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	HL-93
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71047							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.1	N/A		0.0
7				METAL	0.1	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71047							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	l. Other Inorganic materials (OI)				9.0	N/A		15.0
30		j. Graphite			0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37				GLASS (NSW)	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p. Inorganic sorbents			9.0	N/A		15.0
49				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.8	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r. Cellulosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64				WOOD (NSW)	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71047							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.0	N/A		0.0
67				N/A	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC (NSW)	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				5.0	N/A		4.2
75		x1. Sludge			5.0	N/A		4.2
76				PALE YELLOWISH BROWN POWDERY SLUDGE WITH CALCIUM SILICATE	5.0	1.0 - 1.5	1.2	4.2
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				140.1	N/A		116.8
83		y1. Sludge			140.1	N/A		116.8
84				MODERATE REDDISH BROWN CRUMBLY SLUDGE WITH PORTLAND CEMENT	140.1	1.0 - 1.5	1.2	116.8
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				25.0	N/A		20.8
95				SOIL	25.0	1.0 - 1.4	1.2	20.8
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				179.2	N/A		156.8
98	13. (INORGANIC SLUDGE) weight (140.1) kg was obtained by subtracting the weighed waste weight of (39.1) kg and the container net weight of (34.0) kg from the gross weight (213.2) kg of the waste container. (213.2) - (39.1) - (34.0) = (140.1) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. N/A							
101								

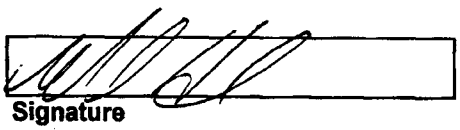
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71047	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71047	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	29.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	720178
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	09/21/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1451
22. Measured gross weight of loaded container, fully assembled (kgs):	213.2
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	470.0
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	90.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	179.2
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71047	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.0
31. Total volume of Solidified Organics (L):	4.2
32. Total volume of Solidified Inorganics (L):	131.8
33. Total volume of Soils/Gravel (L):	20.8
a. Total volume (L):	156.8
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	2.8%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

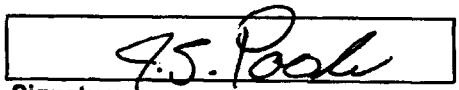
Visual Examination Operator 1:

M. HADERLIE		8-2-12
Enter Name	Signature	Date

Visual Examination Operator 2:

D. JACKMAN		8-2-12
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE		8-2-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	ARP70911
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location:	IN-RWMC-ARP-6
3.	Batch Number:	IN-ARP-VE-002793
4.	Examination Date:	08/02/12
5.	Procedure CCP-TP-006, Rev.:	16
6.	a. Drum Packing Station (DPS) Number:	703
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	221224
8.	Container Filter Torque Data:	
	a. Filter Torque Wrench Serial/ID Number:	726773
	b. Filter Torque Wrench Calibration Due Date:	09/19/12
	c. Filter Model No.:	NUCFIL-019DS
	d. Filter Serial No.:	HL-150
	e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
	f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70911							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.4	N/A		0.1
7				METAL	0.4	8.0		0.1
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70911							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	l.	Other Inorganic materials (OI)			9.0	N/A		15.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		9.0	N/A		15.0
49				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.3	N/A		0.3
56		s.	Paper		0.3	N/A		0.3
57				PAPER	0.3	0.9		0.3
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70911							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
66	v. Rubber (R)				0.0	N/A		0.0
67				N/A	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				PLASTIC (NSW)	N/A	0.9		0.0
71				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				8.0	N/A		6.7
75		x1. Sludge			8.0	N/A		6.7
76				VERY PALE ORANGE PUTTY LIKE SLUDGE WITH CALCIUM SILICATE	8.0	1.0 - 1.5	1.2	6.7
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				116.3	N/A		96.9
83		y1. Sludge			116.3	N/A		96.9
84				DUSKY RED CRUMBLY SLUDGE WITH PORTLAND CEMENT	116.3	1.0 - 1.5	1.2	96.9
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				13.0	N/A		10.8
95				SOIL	13.0	1.0 - 1.4	1.2	10.8
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				147.0	N/A		129.8
98	13. (INORGANIC SLUDGE) weight (116.3) kg was obtained by subtracting the weighed waste weight of (30.7) kg and the container net weight of (34.0) kg from the gross weight (181.0) kg of the waste container. (181.0) - (30.7) - (34.0) = (116.3) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. N/A							
101								

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70911	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70911	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	23.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728635
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	10/23/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1514
22. Measured gross weight of loaded container, fully assembled (kgs):	181.0
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	399.0
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	70.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	147.0
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70911	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.4
31. Total volume of Solidified Organics (L):	6.7
32. Total volume of Solidified Inorganics (L):	111.9
33. Total volume of Soils/Gravel (L):	10.8
a. Total volume (L):	129.8
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	5.4%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

J. STANTON	Jodi M. Stanton	8/2/12
Enter Name	Signature	Date

Visual Examination Operator 2:

L. VERLANIC	L. Verlanic	8-2-12
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE	J.S. Poole	8-2-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	ARP70915
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location:	IN-RWMC-ARP-6
3. Batch Number:	IN-ARP-VE-002793
4. Examination Date:	08/02/12
5. Procedure CCP-TP-006, Rev.:	16
6. a. Drum Packing Station (DPS) Number:	701
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	221224
8. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	728434
b. Filter Torque Wrench Calibration Due Date:	09/27/12
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	HL-233
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70915							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.4	N/A		0.1
7				METAL	0.4	8.0		0.1
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70915							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	l.	Other inorganic materials (Ol)			9.0	N/A		15.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		9.0	N/A		15.0
49				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				WOOD (NSW)	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70915							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.0	N/A		0.0
67				N/A	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC (NSW)	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				7.0	N/A		5.8
75		x1. Sludge			7.0	N/A		5.8
76				VERY PALE ORANGE POWDERY SLUDGE WITH CALCIUM SILICATE	7.0	1.0 - 1.5	1.2	5.8
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				131.0	N/A		109.1
83		y1. Sludge			130.8	N/A		109.0
84				LIGHT BROWN CRUMBLY SLUDGE WITH PORTLAND CEMENT	130.8	1.0 - 1.5	1.2	109.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.2	N/A		0.1
92				EVAPORATOR SALT	0.2	2.2		0.1
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				12.0	N/A		10.0
95				SOIL	12.0	1.0 - 1.4	1.2	10.0
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				159.4	N/A		140.0
98	13. (INORGANIC SLUDGE) weight (130.8) kg was obtained by subtracting the weighed waste weight of (28.6) kg and the container net weight of (34.0) kg from the gross weight (193.4) kg of the waste container. (193.4) - (28.6) - (34.0) = (130.8) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. REFERENCE LETTER: CP:08:00210 / UFC:2300.00							
101								

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70915	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70915	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	28.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	720178
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	09/21/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1524
22. Measured gross weight of loaded container, fully assembled (kgs):	193.4
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	426.4
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	90.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	159.4
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

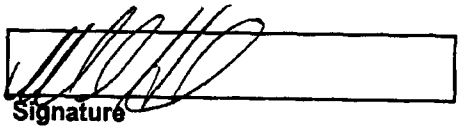
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70915	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.1
31. Total volume of Solidified Organics (L):	5.8
32. Total volume of Solidified Inorganics (L):	124.1
33. Total volume of Soils/Gravel (L):	10.0
a. Total volume (L):	140.0
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	4.4%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

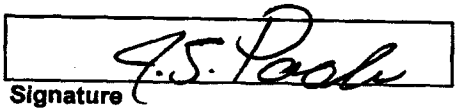
Visual Examination Operator 1:

D. JACKMAN		8-2-12
Enter Name	Signature	Date

Visual Examination Operator 2:

M. HADERLIE		8-2-12
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE		8-2-12
Enter Name	Signature	Date

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist

Batch Data Report No.: IN-ARP-VE-002793

Description			
1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods used?	☐ NO	☑ YES	☐ NA
a. Was the description of the waste items adequate?	☐ NO	☑ YES	☐ NA
2. Was the correct revision of operating procedure used? (Attachment 1, Section 1, Line 5)	☐ NO	☑ YES	☐ NA
3. Were the following calculation spot checks performed?			
a. Attachment 1, Section 2: Verify the total waste volume in Column 12, Row aa does not exceed 208 L for a 55-gallon drum or 1456 L for an SWB and verify the estimated weights in Row aa matches the measured net weight of waste in Attachment 1, Section 4, Row 26.	☐ NO	☑ YES	☐ NA
b. Attachment 1, Section 5: Verify the total waste volume in Row 33 a., matches the total waste volume in Section 2, Column 12, Row aa.	☐ NO	☑ YES	☐ NA
c. Attachment 1, Section 1: Check hand calculations in Lines 6h and 6p, and any additional hand calculations recorded in the comments field or in Section 2, Line 13.	☐ NO	☑ YES	☐ NA
4. Is only one waste stream selected in Line 34 of Attachment 1, Section 5, and is it consistent with the values shown in Attachment 1, Section 2, Column 12?	☐ NO	☑ YES	☐ NA
5. Is the data entered in the correct units and correct number of significant figures?	☐ NO	☑ YES	☐ NA
6. Were the data reviewed for transcription errors?	☐ NO	☑ YES	☐ NA
7. Does the BDR include VE for up to 20 containers?	☐ NO	☑ YES	☐ NA
8. Are BDR contents complete and do they match, Attachment 3, CCP Waste VE Batch Data Report Table of Contents?	☐ NO	☑ YES	☐ NA
9. Was completeness verified for data entry on the CCP VE Technique Data Form for the following?			
a. Section 1	☐ NO	☑ YES	☐ NA
b. Section 2	☐ NO	☑ YES	☐ NA
c. Section 3	☐ NO	☑ YES	☐ NA
d. Section 4	☐ NO	☑ YES	☐ NA
e. Section 5	☐ NO	☑ YES	☐ NA

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: IN-ARP-VE-002793

Description			
10. Is all the data signed and dated in Attachment 1, Section 6, using reproducible ink, and by the individual(s) generating it?	☐ NO	☑ YES	☐ NA
11. Is all data entered clearly, legibly, and accurately?	☐ NO	☑ YES	☐ NA
12. Were discrepancies between the operators reconciled?	☐ NO	☐ YES	☑ NA
13. Are all changes to original data lined out, initialed and dated by the individual making the changes?	☐ NO	☐ YES	☑ NA BJB 8-6-12
14. Were data changes made by the individual who originally collected the data or an equally qualified individual?	☐ NO	☐ YES	☑ NA
15. Was the DPS scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☑ YES	☐ NA
16. Was the daily DPS scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☑ YES	☐ NA
17. Was the container scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☑ YES	☐ NA
18. Was the daily container scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☑ YES	☐ NA
19. Was the torque wrench(es) in calibration prior to VE Technique and documented correctly?	☐ NO	☑ YES	☐ NA
20. Were NCR(s) initiated as indicated in Attachment 1, Section 1, dispositioned, and approved appropriately?	☐ NO	☐ YES	☑ NA
21. Was the correct waste stream and waste matrix code assigned?	☐ NO	☑ YES	☐ NA
22. Is there a valid VE data form for each drum in the batch?	☐ NO	☑ YES	☐ NA
23. Were the operators trained and qualified in accordance with the applicable requirements?	☐ NO	☑ YES	☐ NA

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: IN-ARP-VE-002793

Description			
24. Was precision maintained by reconciling any discrepancies between the operator(s) and the ITR with regard to identification of waste matrix code, liquids in excess of WIPP Hazardous Waste Facility Permit and WIPP Waste Acceptance Criteria limits and compressed gases?	☐ NO	☐ YES	☑ NA

Description

Comments:

12, 24 MARKED N/A DUE TO NO DISCEPANCIES. BRS 8-6-12

13, 14 MARKED N/A DUE TO NO CHANGES MADE BRS 8-6-12

20 MARKED N/A DUE TO NO NCR. BRS 8-6-12

I have reviewed 100 percent of the container-specific and batch data in this BDR and find it acceptable.

ITR:

Brad Stark — Printed Name

Brad Stark — Signature

8-6-12 — Date

DIVIDER

PAGE

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary

BDR Number: IN-SRP-VE-000028 **Examination Date:** 22 January 2013

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
1. Is the completed, signed and dated Independent Technical Reviewer Checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, C3-10b**	X			
2. Does the BDR contain all items addressed in the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-10b**	X			
3. Does the BDR include a listing of all container numbers in the batch? **Reference Source: CCP-PO-001, C3-10b**	X			
4. List all containers that have met QAOs. **Reference Source: CCP-PO-001, C3-10b**				**Container(s):** SRP12314, SRP12310, SRP12309, SRP12315, SRP12316, SRP12308, SRP12333, SRP12307, SRP12339, SRP12345, SRP12311, SRP12340, SRP12344
5. Is the current implementing procedure and revision number included in the BDR? **Reference Source: CCP-PO-001, C3-4, C3-10b, Table C3-11**	X			
6. Is the BDR date included? **Reference Source: CCP-PO-001, Table C3-11**	X			
7. Is there a reference to or copy of any associated NCRs (if any) in the BDR? **Reference Source: CCP-PO-001, Table C3-11**			X	No NCRs associated with this BDR
8. Are there 20 or fewer containers in the batch? **Reference Source: CCP-PO-001 C3-10**	X			
9. Are the data properly reported (i.e., data are reported in correct units and with correct significant figures). **Reference Source: CCP-PO-001 C3-10b**	X			
10. Is there evidence of verification that the physical form matches the Waste Matrix Code? **Reference Source: CCP-PO-001, C3-4**	X			
11. Is there evidence of verification that the physical form matches the waste stream description? **Reference Source: CCP-PO-001, C1-4**	X			
12. Are prohibited items absent? **Reference Source: CCP-PO-001, C3-4**	X			

COPY

CCP RECORDS ORIGINAL
DATE REC'D 2-6-13

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-SRP-VE-000028 Examination Date: 22 January 2013

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
13. Does observable liquid, if present, meet the criteria of the TSDF-WAC? **Reference Source: CCP-PO-001, C3-4b**	X			
14. Were discrepancies between the Visual Examination operator and the ITR with regards to identification of waste matrix code, liquids in excess of the TSDF-WAC, or compressed gases reconciled? NA if no discrepancies. **Reference Source: CCP-PO-001, C3-4b**			X	No discrepancies
15. Are the training requirements met for the VE Expert and VE Operators who have signed the data forms? **Reference Source: CCP-PO-001, C1-4, C3-4**	X			
16. Is evidence of a satisfactory audio/video test included in the BDR? NA [not applicable] for VE Method for Newly Generated Waste. **Reference Source: CCP-PO-001, C1-4**			X	Newly generated waste
17. If the VE was not recorded using audio/video media, does the data sheet contain the signature of two qualified operators who observed for themselves the waste being placed into the container? NA if audio/video used. **Reference Source: CCP-PO-001, C1-4**	X			
18. Are the weights/estimated weights for the 12 waste material parameters reported in kilograms (kg)? **Reference Source: CCP Technical Procedures**	X			
19. Are the descriptions for each waste material parameter included in the BDR? **Reference Source: CCP-PO-001, C1-4**	X			
20. Is the gross weight reported (in kg) for each container included in the BDR? **Reference Source: CCP Technical Procedures**	X			
21. Is the number of layers of confinement recorded? **Reference Source: CCP-PO-001, C-3d**	X			
22. Is sufficient information included in the BDR to determine the packaging configuration? **Reference Source: CCP-PO-001 C-3d**	X			

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-SRP-VE-000028 **Examination Date:** 22 January 2013

Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
23. Is the type and number of filters recorded? **Reference Source: CCP-PO-001, C-3d**	X			
24. Is the size of the rigid liner vent hole recorded to determine the appropriate DAC? NA if no liner lid. **Reference Source: CCP-PO-001, C-3d**			X	No liner lid
25. For Los Alamos National Laboratory (LANL) Sealed Sources, does the characterized waste container meet the definition of sealed sources per Title 10 Code of Federal Regulations (CFR) 30.4 and Title 10 CFR 835.2 (effective January 1, 2004) evidence of which is assembled as part of AK documentation? **Reference Source: CCP Technical Procedures**			X	Not a Sealed Source
26. For LANL Sealed Sources, are sealed sources the only non-packaging items in the waste container? **Reference Source: CCP Technical Procedures**			X	Not a Sealed Source
27. For LANL Sealed Sources, are the sealed sources a U.S. Department of Transportation (DOT) Special Form Class 7 (Radioactive Material) per Title 49 CFR 34.27 (effective January 1, 2004) and the certification of which is assembled as part of the AK documentation? **Reference Source: CCP Technical Procedures**			X	Not a Sealed Source
28. For LANL Sealed Sources, is the integrity of each sealed source validated by documented contamination survey results to meet the requirements of Title 10 CFR 34.27 (effective January 1, 2004), and assembled as part of AK documentation? **Reference Source: CCP Technical Procedures**			X	Not a Sealed Source

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-SRP-VE-000028 **Examination Date:** 22 January 2013

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
29. For LANL Sealed Sources, is each sealed source a rigid sealed container less than or equal to 4 L in size or in a rigid sealed container less than or equal to 4 L? **Reference Source: CCP Technical Procedures**			X	Not a Sealed Source
30. For LANL Sealed Sources, AK documentation does not indicate the use of volatile organic compounds (VOCs) or VOC-bearing materials as constituents of sealed sources? **Reference Source: CCP Technical Procedures**			X	Not a Sealed Source
31. For LANL Sealed Sources, the outer casing of each sealed source is of a non VOC-bearing material which is verified using the VE technique at the time of packaging? **Reference Source: CCP Technical Procedures**			X	Not a Sealed Source

Comments: **None**

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

David W. Moody		6 February 2013
SPM Printed Name	Signature	Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

Attachment 4 – CCP Waste VE Technique Batch Data Report Cover Sheet

Batch Data Report No.: IN-SRP-VE-000028

	Waste Container ID Number
1	SRP12314
2	SRP12310
3	SRP12309
4	SRP12315
5	SRP12316
6	SRP12308
7	SRP12333
8	SRP12307
9	SRP12339
10	SRP12345
11	SRP12311
12	SRP12340
13	SRP12344
14	
15	
16	
17	N A
18	
19	1-22-13
20	

ITR:

Jodi M. Stanton — Printed Name
Jodi M Stanton — Signature
1/23/13 — Date

VEE:

Spencer Pattee — Printed Name
Signature
1/29/13 — Date

CCP RECORDS ORIGINAL
DATE REC'D 1-30-13

001

Attachment 3 – CCP Waste VE Technique Batch Data Report Table of Contents

Batch Data Report No.: W-SRP-VE-000028 **Batch Data Report Date:** 1-22-13

Table Of Contents

Item	Description	Page No.
1	Attachment 4, CCP Waste VE Technique Batch Data Report Cover Sheet	1
2	Attachment 3, CCP Waste VE Technique Batch Data Report Table of Contents	2
3	CCP Waste Visual Examination Technique Data Form	3
4	Attachment 2, CCP Waste VE Technique Independent Technical Reviewer Checklist	94
5	Copy of NCRs (NA, If Not Applicable)	N/A

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	SRP12314
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	BP
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location (Airlock):	IN-RWMC-ARP-5
3.	Batch Number:	IN-SRP-VE-000028
4.	Examination Start Date:	01/22/13
5.	Procedure CCP-TP-006, Rev.:	17
6.	a. Drum Packing Station (DPS) Number:	501
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	XC0977
	c. Scale Calibration Due Date:	07/02/13
	d. Test Weight ID:	XC0490
	e. Test Weight Calibration Due Date:	04/03/13
	f. Test Weight (kgs):	5.0
	g. Scale Readout of Test Weight (kgs):	5.0
	h. Difference Between Test Weight and Scale Readout (kgs):	0.0
	i. DPS Scale Check SAT (Y):	Y
	Container Scale Check	
	j. Scale Serial/ID Number:	725494
	k. Scale Calibration Due Date:	11/21/13
	l. Test Weight ID:	722311
	m. Test Weight Calibration Due Date:	10/16/13
	n. Test Weight (kg):	226.8
	o. Scale Readout of Test Weight (kgs):	226.6
	p. Difference Between Test Weight and Scale Readout (kgs):	0.2
	q. Container Scale Check SAT (Y):	Y
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	220177
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12314							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				METAL (NSW)	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

004

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12314							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	l.	Other Inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				PAPER (NSW)	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

005

	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003					
2	Container ID: SRP12314					
3	**Section 2: Waste Material Parameter (WMP) Estimates**					
4		9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density		12.Volume
5			By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)		0.0	N/A		0.0
67		N/A	N/A	0.9 - 2.0	0.0	0.0
68		N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)		0.0	N/A		0.0
70		NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71		N/A	N/A	0.9		0.0
72		N/A	N/A	0.9		0.0
73		N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)		126.0	N/A		105.0
75	x1. Sludge		126.0	N/A		105.0
76		YELLOWISH BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE	126.0	1.0 - 1.5	1.2	105.0
77		N/A	N/A	1.0 - 1.5	0.0	0.0
78		N/A	N/A	1.0 - 1.5	0.0	0.0
79	x2. Other (See Note a)		0.0	N/A		0.0
80		N/A	N/A	0.0		0.0
81		N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)		0.0	N/A		0.0
83	y1. Sludge		0.0	N/A		0.0
84		N/A	N/A	1.0 - 1.5	0.0	0.0
85		N/A	N/A	1.0 - 1.5	0.0	0.0
86		N/A	N/A	1.0 - 1.5	0.0	0.0
87	y2. Roaster Oxides		0.0	N/A		0.0
88		N/A	N/A	1.5 - 4.0	0.0	0.0
89		N/A	N/A	1.5 - 4.0	0.0	0.0
90		N/A	N/A	1.5 - 4.0	0.0	0.0
91	y3. Salt		0.0	N/A		0.0
92		N/A	N/A	0.0		0.0
93		N/A	N/A	0.0		0.0
94	y4. Other (See Note a)		0.0	N/A		0.0
95		N/A	N/A	0.0		0.0
96		N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)		0.0	N/A		0.0
98		N/A	N/A	1.0 - 1.4	0.0	0.0
99		N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL		126.0	N/A		105.0
101	13. (ORGANIC SLUDGE) weight (126.0) kg was obtained by subtracting the weighed waste weight of (0.0) kg and the container net weight of (34.0) kg from the gross weight (160.0) kg of the waste container. (160.0) - (0.0) - (34.0) = (126.0) kg					
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.					
103	b.	N/A				
104						

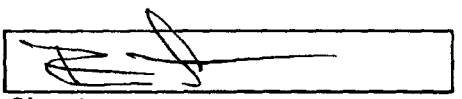
006

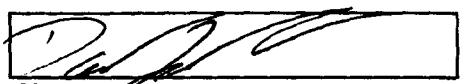
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12314	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

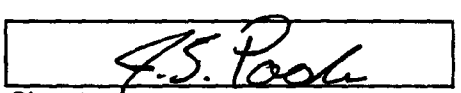
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12314	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (Inches) (N/A the waste depth for an SWB)	25.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	220177
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	725482
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	02/12/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	0932
22. Measured gross weight of loaded container, fully assembled (kgs):	160.0
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	352.7
23. Container closure date (mm/dd/yy):	01/22/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726753
b. Filter Torque Wrench Calibration Due Date:	02/01/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	DM-562
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	80.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	126.0
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12314	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.0
31. Total volume of Solidified Organics (L):	105.0
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	105.0
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
I. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	100.0%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:		
R. CUMMINS		1-22-13
Enter Name	Signature	Date

Visual Examination Operator 2:		
D. JACKMAN		1-22-13
Enter Name	Signature	Date

Visual Examination Expert:		
J. POOLE		1-22-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP12310
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
b. Container Type: 55 gal. drum or SWB:	55 GAL.
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000028
4. Examination Start Date:	01/22/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	502
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	XC0972
c. Scale Calibration Due Date:	07/02/13
d. Test Weight ID:	XC0838
e. Test Weight Calibration Due Date:	06/13/14
f. Test Weight (kgs):	5.0
g. Scale Readout of Test Weight (kgs):	5.0
h. Difference Between Test Weight and Scale Readout (kgs):	0.0
i. DPS Scale Check SAT (Y):	Y
Container Scale Check	
j. Scale Serial/ID Number:	725494
k. Scale Calibration Due Date:	11/21/13
l. Test Weight ID:	722311
m. Test Weight Calibration Due Date:	10/16/13
n. Test Weight (kg):	226.8
o. Scale Readout of Test Weight (kgs):	226.6
p. Difference Between Test Weight and Scale Readout (kgs):	0.2
q. Container Scale Check SAT (Y):	Y
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	220177
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12310							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.1	N/A		0.0
7	METAL TIGHTLY BOUND ON TOP				0.1	8.0		0.0
8	N/A				N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10	N/A				N/A	3.0		0.0
11	N/A				N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14		N/A			N/A	11.0		0.0
15		N/A			N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17		N/A			N/A	1.8		0.0
18		N/A			N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20		N/A			N/A	19.1		0.0
21		N/A			N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23		N/A			N/A	9.0		0.0
24		N/A			N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26		N/A			N/A	0.0		0.0
27		N/A			N/A	0.0		0.0
28		N/A			N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12310							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	l.	Other inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12310							
3	**Section 2: Waste Material Parameter (WMP) Estimates**							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.3	N/A		0.3
67				RUBBER BANDS (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				2.9	N/A		3.3
70				PLASTIC TIGHTLY BOUND ON TOP	1.0	0.9		1.1
71				NYLON STRAP TIGHTLY BOUND ON TOP (WAIP)	0.5	0.9		0.6
72				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
73				1 TRAY LINER, 1 BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
74	x. Organic matrix (OR)				84.3	N/A		70.3
75		x1. Sludge			84.3	N/A		70.3
76				DARK YELLOWISH BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE	84.3	1.0 - 1.5	1.2	70.3
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95				N/A	N/A	0.0		0.0
96				N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98				N/A	N/A	1.0 - 1.4	0.0	0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				87.6	N/A		73.9
101	13. (ORGANIC SLUDGE) weight (84.3) kg was obtained by subtracting the weighed waste weight of (3.3) kg and the container net weight of (34.0) kg from the gross weight (121.6) kg of the waste container. (121.6) - (3.3) - (34.0) = (84.3) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

013

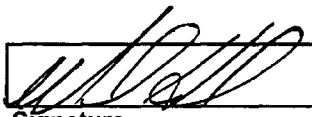
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12310	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Container ID: SRP12310		
Section 4: Waste Packaging Data		
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)		29.0
16. Inner Bags:		
a.	Total Number of Inner Bag(s):	0
b.	Closure Method (See Below for Proper Designator):	N/A
	TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c.	Layers of Confinement (>4 liters):	0
d.	Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:		
a.	Total Number of Liner Bag(s):	1
b.	Closure Method (See Below for Proper Designator):	TTF
	TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c.	Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):		Y
19. Rigid Liner with NO lid Verified? (Y/N):		Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):		Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:		
a.	Container Manufacturer Lot Number:	220177
b.	Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	725482
c.	Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	02/12/13
d.	Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e.	Time the container was closed:	0950
22. Measured gross weight of loaded container, fully assembled (kgs):		121.6
a.	Gross weight of loaded container, fully assembled converted to pounds (lbs)	268.1
23. Container closure date (mm/dd/yy):		01/22/13
24. Container Filter Torque Data:		
a.	Filter Torque Wrench Serial/ID Number:	726753
b.	Filter Torque Wrench Calibration Due Date:	02/01/13
c.	Filter Model No.:	NUCFIL-019DS
d.	Filter Serial No.:	DM-538
e.	Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f.	Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:		90.0%
26. Total layers of confinement:		1
27. Measured net weight of waste (kgs):		87.6
28. Estimated plastic added from packaging, including rigid liner (kgs):		5.4
29. Estimated steel added from packaging (kgs):		28.6
29a Total net weight of fully assembled container (kgs):		34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12310	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	3.6
31. Total volume of Solidified Organics (L):	70.3
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	73.9
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	96.2%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

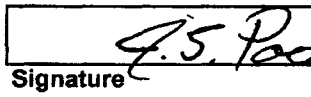
Visual Examination Operator 1:

M. HADERLIE		1-22-13
Enter Name	Signature	Date

Visual Examination Operator 2:

J. HULSE		1/22/13
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE		1-22-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP12309
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000028
4. Examination Start Date:	01/22/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	502
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	220177
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12309							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.2	N/A		0.0
7	METAL TIGHTLY BOUND ON TOP				0.2	8.0		0.0
8	N/A				N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10	N/A				N/A	3.0		0.0
11	N/A				N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14		N/A			N/A	11.0		0.0
15		N/A			N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17		N/A			N/A	1.8		0.0
18		N/A			N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20		N/A			N/A	19.1		0.0
21		N/A			N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23		N/A			N/A	9.0		0.0
24		N/A			N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26		N/A			N/A	0.0		0.0
27		N/A			N/A	0.0		0.0
28		N/A			N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12309							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	l.	Other inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12309							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.3	N/A		0.3
67				RUBBER BANDS (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				2.5	N/A		2.8
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC TIGHTLY BOUND ON TOP	1.1	0.9		1.2
72				TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				86.0	N/A		71.7
75		x1. Sludge			86.0	N/A		71.7
76				MODERATE OLIVE BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE	86.0	1.0 - 1.5	1.2	71.7
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95				N/A	N/A	0.0		0.0
96				N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98				N/A	N/A	1.0 - 1.4	0.0	0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				89.0	N/A		74.8
101	13. (ORGANIC SLUDGE) weight (86.0) kg was obtained by subtracting the weighed waste weight of (3.0) kg and the container net weight of (34.0) kg from the gross weight (123.0) kg of the waste container. (123.0) - (3.0) - (34.0) = (86.0) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

020

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12309	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Container ID: SRP12309		
Section 4: Waste Packaging Data		
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)		26.0
16. Inner Bags:		
	a. Total Number of Inner Bag(s):	0
	b. Closure Method (See Below for Proper Designator):	N/A
	TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
	c. Layers of Confinement (>4 liters):	0
	d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:		
	a. Total Number of Liner Bag(s):	1
	b. Closure Method (See Below for Proper Designator):	TTF
	TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
	c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):		Y
19. Rigid Liner with NO lid Verified? (Y/N):		Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):		Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:		
	a. Container Manufacturer Lot Number:	220177
	b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	725482
	c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	02/12/13
	d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
	e. Time the container was closed:	1016
22. Measured gross weight of loaded container, fully assembled (kgs):		123.0
	a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	271.2
23. Container closure date (mm/dd/yy):		01/22/13
24. Container Filter Torque Data:		
	a. Filter Torque Wrench Serial/ID Number:	726753
	b. Filter Torque Wrench Calibration Due Date:	02/01/13
	c. Filter Model No.:	NUCFIL-019DS
	d. Filter Serial No.:	DM-537
	e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
	f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:		80.0%
26. Total layers of confinement:		1
27. Measured net weight of waste (kgs):		89.0
28. Estimated plastic added from packaging, including rigid liner (kgs):		5.4
29. Estimated steel added from packaging (kgs):		28.6
29a Total net weight of fully assembled container (kgs):		34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12309	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	3.1
31. Total volume of Solidified Organics (L):	71.7
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	74.8
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	96.6%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

Enter Name	Signature	Date
J. HULSE	J Hulse	1/22/13

Visual Examination Operator 2:

Enter Name	Signature	Date
M. HADERLIE	M Haderlie	1-22-13

Visual Examination Expert:

Enter Name	Signature	Date
J. POOLE	J.S Poole	1-22-13

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	SRP12315
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location (Airlock):	IN-RWMC-ARP-5
3.	Batch Number:	IN-SRP-VE-000028
4.	Examination Start Date:	01/22/13
5.	Procedure CCP-TP-006, Rev.:	17
6.	a. Drum Packing Station (DPS) Number:	501
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	220177
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12315							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5					0.0	N/A		0.0
6	a. Iron-based metals/alloys (IM)				N/A	8.0		0.0
7				METAL (NSW)	N/A	8.0		0.0
8				N/A	0.0	N/A		0.0
9	b. Aluminum-based metals/alloys (AM)				N/A	3.0		0.0
10				N/A	N/A	3.0		0.0
11				N/A	0.0	N/A		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			N/A	11.0		0.0
14				N/A	N/A	11.0		0.0
15				N/A	0.0	N/A		0.0
16		e. Beryllium			N/A	1.8		0.0
17				N/A	N/A	1.8		0.0
18				N/A	0.0	N/A		0.0
19		f. Depleted uranium			N/A	19.1		0.0
20				N/A	N/A	19.1		0.0
21				N/A	0.0	N/A		0.0
22		g. Copper			N/A	9.0		0.0
23				N/A	N/A	9.0		0.0
24				N/A	0.0	N/A		0.0
25		h. Other (See Note a)			N/A	0.0		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28								

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12315							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	i. Other inorganic materials (OI)				0.0	N/A		0.0
30		j. Graphite			0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	0.0	N/A		0.0
33		k. Concrete			N/A	2.2		0.0
34				N/A	N/A	2.3		0.0
35				N/A	0.0	N/A		0.0
36		l. Glass			N/A	2.3		0.0
37				N/A	N/A	2.0		0.0
38				N/A	0.0	N/A		0.0
39		m. Firebrick			N/A	2.0		0.0
40				N/A	N/A	3.0		0.0
41				N/A	0.0	N/A		0.0
42		n. Ceramics			N/A	2.0 - 5.0	0.0	0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	0.0	N/A		0.0
45		o. Sand			N/A	2.0		0.0
46				N/A	N/A	2.0		0.0
47				N/A	0.0	N/A		0.0
48		p. Inorganic sorbents			N/A	0.1 - 2.8	0.0	0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	0.0	N/A		0.0
51		q. Other (See Note a)			N/A	0.0		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	0.2	N/A		0.2
55	r. Cellulosics (C)				0.2	N/A		0.2
56		s. Paper			N/A	0.9		0.0
57				PAPER (NSW)	0.2	0.9		0.2
58				LEATHER GLOVE TIGHTLY BOUND ON TOP	N/A	0.9		0.0
59				N/A	0.0	N/A		0.0
60		t. Cardboard			N/A	0.8		0.0
61				N/A	N/A	0.8		0.0
62				N/A	0.0	N/A		0.0
63		u. Wood			N/A	1.0		0.0
64				N/A	N/A	1.0		0.0
65				N/A				

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12315							
3	**Section 2: Waste Material Parameter (WMP) Estimates**							
4	**9. Waste Material Parameter and Item Description**				**10. WMP Estimate**	**11. Density**		**12.Volume**
5					**By Weight (kg)**	**(kg/L)**		**(L)**
66	v. Rubber (R)				0.3	N/A		0.3
67				RUBBER BANDS (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68				RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				2.1	N/A		2.4
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC TIGHTLY BOUND ON TOP	0.7	0.9		0.8
72				TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				127.6	N/A		106.3
75		x1. Sludge			127.6	N/A		106.3
76				YELLOWISH GRAY CRUMBLY SLUDGE WITH CALCIUM SILICATE	127.6	1.0 - 1.5	1.2	106.3
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Rooster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95				N/A	N/A	0.0		0.0
96				N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98				N/A	N/A	1.0 - 1.4	0.0	0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				130.2	N/A		109.2
101	13. (ORGANIC SLUDGE) weight (127.6) kg was obtained by subtracting the weighed waste weight of (2.6) kg and the container net weight of (34.0) kg from the gross weight (164.2) kg of the waste container. (164.2) - (2.6) - (34.0) = (127.6) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

027

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12315	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12315	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	32.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	220177
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	725482
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	02/12/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1008
22. Measured gross weight of loaded container, fully assembled (kgs):	164.2
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	362.0
23. Container closure date (mm/dd/yy):	01/22/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726753
b. Filter Torque Wrench Calibration Due Date:	02/01/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	DM-539
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	100.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	130.2
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

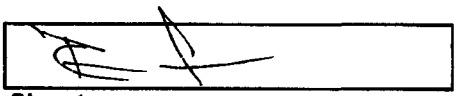
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12315	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	2.9
31. Total volume of Solidified Organics (L):	106.3
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	109.2
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	98.0%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

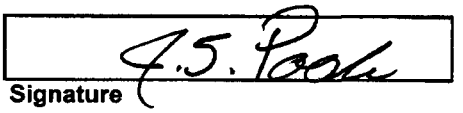
Visual Examination Operator 1:

D. JACKMAN		1-22-13
Enter Name	Signature	Date

Visual Examination Operator 2:

R. CUMMINS		1·22·13
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE		1-22-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	SRP12316
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	✓
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location (Airlock):	IN-RWMC-ARP-5
3.	Batch Number:	IN-SRP-VE-000028
4.	Examination Start Date:	01/22/13
5.	Procedure CCP-TP-006, Rev.:	17
6.	a. Drum Packing Station (DPS) Number:	501
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	220177
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12316							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7	METAL (NSW)				N/A	8.0		0.0
8	N/A				N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10	N/A				N/A	3.0		0.0
11	N/A				N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14		N/A			N/A	11.0		0.0
15		N/A			N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17		N/A			N/A	1.8		0.0
18		N/A			N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20		N/A			N/A	19.1		0.0
21		N/A			N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23		N/A			N/A	9.0		0.0
24		N/A			N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26		N/A			N/A	0.0		0.0
27		N/A			N/A	0.0		0.0
28		N/A			N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12316							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	i. Other inorganic materials (OI)				0.0	N/A		0.0
30		j. Graphite			0.0	N/A		0.0
31			N/A		N/A	2.2		0.0
32			N/A		N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34			N/A		N/A	2.3		0.0
35			N/A		N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37			N/A		N/A	2.0		0.0
38			N/A		N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40			N/A		N/A	3.0		0.0
41			N/A		N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43			N/A		N/A	2.0 - 5.0	0.0	0.0
44			N/A		N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46			N/A		N/A	2.0		0.0
47			N/A		N/A	2.0		0.0
48		p. Inorganic sorbents			0.0	N/A		0.0
49			N/A		N/A	0.1 - 2.8	0.0	0.0
50			N/A		N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52			N/A		N/A	0.0		0.0
53			N/A		N/A	0.0		0.0
54			N/A		N/A	0.0		0.0
55	r. Cellulosics (C)				0.1	N/A		0.1
56		s. Paper			0.0	N/A		0.0
57			PAPER (NSW)		N/A	0.9		0.0
58			N/A		N/A	0.9		0.0
59			N/A		N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61			N/A		N/A	0.8		0.0
62			N/A		N/A	0.8		0.0
63		u. Wood			0.1	N/A		0.1
64			WOOD (WAIP)		0.1	1.0		0.1
65			N/A		N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12316							
3	**Section 2: Waste Material Parameter (WMP) Estimates**							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
66	v. Rubber (R)				0.6	N/A		0.5
67	RUBBER BANDS (WAIP)				0.6	0.9 - 2.0	1.1	0.5
68	N/A				N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				4.8	N/A		5.3
70	NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED				N/A	0.9		0.0
71	PLASTIC TIGHTLY BOUND ON TOP				2.0	0.9		2.2
72	2 TRAY LINERS AND 2 BAG OUT STUBS TIGHTLY BOUND ON TOP (WAIP)				2.8	0.9		3.1
73	N/A				N/A	0.9		0.0
74	x. Organic matrix (OR)				53.9	N/A		44.9
75		x1. Sludge			53.9	N/A		44.9
76		YELLOWISH BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE			53.9	1.0 - 1.5	1.2	44.9
77		N/A			N/A	1.0 - 1.5	0.0	0.0
78		N/A			N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80		N/A			N/A	0.0		0.0
81		N/A			N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84		N/A			N/A	1.0 - 1.5	0.0	0.0
85		N/A			N/A	1.0 - 1.5	0.0	0.0
86		N/A			N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88		N/A			N/A	1.5 - 4.0	0.0	0.0
89		N/A			N/A	1.5 - 4.0	0.0	0.0
90		N/A			N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92		N/A			N/A	0.0		0.0
93		N/A			N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95		N/A			N/A	0.0		0.0
96		N/A			N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98	N/A				N/A	1.0 - 1.4	0.0	0.0
99	N/A				N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				59.4	N/A		50.8

101 13. (ORGANIC SLUDGE) weight (53.9) kg was obtained by subtracting the weighed waste weight of (5.5) kg and the container net weight of (34.0) kg from the gross weight (93.4) kg of the waste container. (93.4) - (5.5) - (34.0) = (53.9) kg

102 a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.

103 b. N/A

104

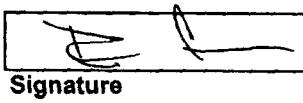
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12316	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12316	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (Inches) (N/A the waste depth for an SWB)	29.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	220177
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	725482
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	02/12/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1047
22. Measured gross weight of loaded container, fully assembled (kgs):	93.4
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	205.9
23. Container closure date (mm/dd/yy):	01/22/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726753
b. Filter Torque Wrench Calibration Due Date:	02/01/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	DM-534
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	90.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	59.4
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

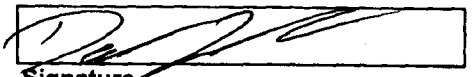
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12316	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	5.9
31. Total volume of Solidified Organics (L):	44.9
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	50.8
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	90.7%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

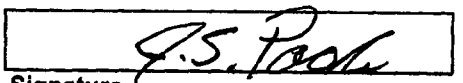
Visual Examination Operator 1:

R. CUMMINS		1-22-13
Enter Name	Signature	Date

Visual Examination Operator 2:

D. JACKMAN		1-22-13
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE		1-22-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	SRP12308
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	BSP
	b. Container Type: 55 gal. drum or SWB:	55 GAL.
2.	Site ID and Location (Airlock):	IN-RWMC-ARP-5
3.	Batch Number:	IN-SRP-VE-000028
4.	Examination Start Date:	01/22/13
5.	Procedure CCP-TP-006, Rev.:	17
6.	a. Drum Packing Station (DPS) Number:	502
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	220177
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12308							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.1	N/A		0.0
7	METAL TIGHTLY BOUND ON TOP				0.1	8.0		0.0
8	N/A				N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10	N/A				N/A	3.0		0.0
11	N/A				N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14		N/A			N/A	11.0		0.0
15		N/A			N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17		N/A			N/A	1.8		0.0
18		N/A			N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20		N/A			N/A	19.1		0.0
21		N/A			N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23		N/A			N/A	9.0		0.0
24		N/A			N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26		N/A			N/A	0.0		0.0
27		N/A			N/A	0.0		0.0
28		N/A			N/A	0.0		0.0

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	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12308							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	l.	Other inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12308							
3	**Section 2: Waste Material Parameter (WMP) Estimates**							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
66	v. Rubber (R)				0.3	N/A		0.3
67				RUBBER BANDS (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				3.0	N/A		3.4
70				PLASTIC TIGHTLY BOUND ON TOP	1.6	0.9		1.8
71				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
72				1 TRAY LINER, 1 BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				119.2	N/A		99.3
75		x1. Sludge			119.2	N/A		99.3
76				MODERATE YELLOWISH BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE	119.2	1.0 - 1.5	1.2	99.3
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95				N/A	N/A	0.0		0.0
96				N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98				N/A	N/A	1.0 - 1.4	0.0	0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				122.6	N/A		103.0
101	13. (ORGANIC SLUDGE) weight (119.2) kg was obtained by subtracting the weighed waste weight of (3.4) kg and the container net weight of (34.0) kg from the gross weight (156.6) kg of the waste container. (156.6) - (3.4) - (34.0) = (119.2) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

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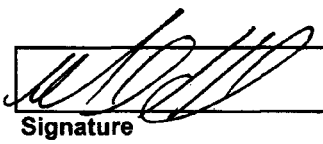
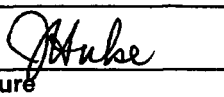
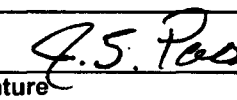
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12308	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12308	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (Inches) (N/A the waste depth for an SWB)	32.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	220177
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	725482
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	02/12/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1055
22. Measured gross weight of loaded container, fully assembled (kgs):	156.6
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	345.2
23. Container closure date (mm/dd/yy):	01/22/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726753
b. Filter Torque Wrench Calibration Due Date:	02/01/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	DM-532
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	100.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	122.6
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12308	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	3.7
31. Total volume of Solidified Organics (L):	99.3
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	103.0
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	97.2%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:		
M. HADERLIE		1-22-13
Enter Name	Signature	Date
Visual Examination Operator 2:		
J. HULSE		1/22/13
Enter Name	Signature	Date
Visual Examination Expert:		
J. POOLE		1-22-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	SRP12333
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location (Airlock):	IN-RWMC-ARP-5
3.	Batch Number:	IN-SRP-VE-000028
4.	Examination Start Date:	01/22/13
5.	Procedure CCP-TP-006, Rev.:	17
6.	a. Drum Packing Station (DPS) Number:	501
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	220177
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12333							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				N/A	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12333							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
29	l.	Other Inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.2	N/A		0.2
56		s.	Paper		0.2	N/A		0.2
57				LEATHER GLOVE TIGHTLY BOUND ON TOP	0.2	0.9		0.2
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

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	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003					
2	Container ID: SRP12333					
3	Section 2: Waste Material Parameter (WMP) Estimates					
4		9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density		12.Volume
5			By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)		0.4	N/A		0.4
67		RUBBER BANDS (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68		RUBBER	0.1	0.9 - 2.0	1.1	0.1
69	w. *Plastics (waste materials) (PW)*		3.4	N/A		3.8
70		NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71		TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
72		PLASTIC TIGHTLY BOUND ON TOP	2.0	0.9		2.2
73		N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)		83.6	N/A		69.7
75	x1. Sludge		83.6	N/A		69.7
76		OLIVE GRAY PUTTY LIKE SLUDGE WITH CALCIUM SILICATE	83.6	1.0 - 1.5	1.2	69.7
77		N/A	N/A	1.0 - 1.5	0.0	0.0
78		N/A	N/A	1.0 - 1.5	0.0	0.0
79	x2. Other (See Note a)		0.0	N/A		0.0
80		N/A	N/A	0.0		0.0
81		N/A	N/A	0.0		0.0
82	y. *Inorganic matrix (IN)*		0.0	N/A		0.0
83	y1. Sludge		0.0	N/A		0.0
84		N/A	N/A	1.0 - 1.5	0.0	0.0
85		N/A	N/A	1.0 - 1.5	0.0	0.0
86		N/A	N/A	1.0 - 1.5	0.0	0.0
87	y2. Roaster Oxides		0.0	N/A		0.0
88		N/A	N/A	1.5 - 4.0	0.0	0.0
89		N/A	N/A	1.5 - 4.0	0.0	0.0
90		N/A	N/A	1.5 - 4.0	0.0	0.0
91	y3. Salt		0.0	N/A		0.0
92		N/A	N/A	0.0		0.0
93		N/A	N/A	0.0		0.0
94	y4. Other (See Note a)		0.0	N/A		0.0
95		N/A	N/A	0.0		0.0
96		N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)		0.0	N/A		0.0
98		N/A	N/A	1.0 - 1.4	0.0	0.0
99		N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL		87.6	N/A		74.1
101	13. (ORGANIC SLUDGE) weight (83.6) kg was obtained by subtracting the weighed waste weight of (4.0) kg and the container net weight of (34.0) kg from the gross weight (121.6) kg of the waste container. (121.6) - (4.0) - (34.0) = (83.6) kg					
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.					
103	b.	N/A				
104						

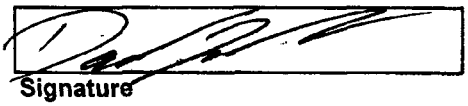
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12333	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12333	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	25.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	220177
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	725482
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	02/12/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1126
22. Measured gross weight of loaded container, fully assembled (kgs):	121.6
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	268.1
23. Container closure date (mm/dd/yy):	01/22/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726753
b. Filter Torque Wrench Calibration Due Date:	02/01/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	DM-564
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	80.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	87.6
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

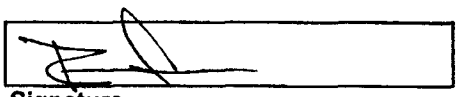
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12333	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	4.4
31. Total volume of Solidified Organics (L):	69.7
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	74.1
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	95.4%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

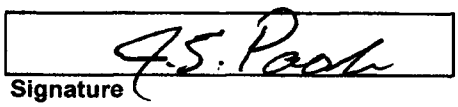
Visual Examination Operator 1:

D. JACKMAN		1-22-13
Enter Name	Signature	Date

Visual Examination Operator 2:

R. CUMMINS		1-22-13
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE		1-22-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP12307
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	JSP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000028
4. Examination Start Date:	01/22/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	502
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	220177
Comments:	
NOTHING ADDED TO THE CONTAINER VERIFIED	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12307							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.2	N/A		0.0
7				METAL	0.2	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12307							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	l.	Other inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.6	N/A		0.6
56		s.	Paper		0.6	N/A		0.6
57				PAPER TIGHTLY BOUND ON TOP	0.2	0.9		0.2
58				LEATHER GLOVES TIGHTLY BOUND ON TOP	0.4	0.9		0.4
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003					
2	Container ID: SRP12307					
3	Section 2: Waste Material Parameter (WMP) Estimates					
4	9. Waste Material Parameter and Item Description		10. WMP Estimate	11. Density		12.Volume
5			By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)		1.3	N/A		1.2
67		RUBBER	1.0	0.9 - 2.0	1.1	0.9
68		RUBBER BANDS (WAIP)	0.3	0.9 - 2.0	1.1	0.3
69	w. Plastics (waste materials) (PW)		3.0	N/A		3.4
70		NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71		PLASTIC TIGHTLY BOUND ON TOP	1.6	0.9		1.6
72		TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
73		N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)		138.5	N/A		115.4
75	x1. Sludge		138.5	N/A		115.4
76		MODERATE YELLOWISH ORANGE CRUMBLY SLUDGE WITH CALCIUM SILICATE, AND PORTLAND CEMENT	138.5	1.0 - 1.5	1.2	115.4
77		N/A	N/A	1.0 - 1.5	0.0	0.0
78		N/A	N/A	1.0 - 1.5	0.0	0.0
79	x2. Other (See Note a)		0.0	N/A		0.0
80		N/A	N/A	0.0		0.0
81		N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)		0.0	N/A		0.0
83	y1. Sludge		0.0	N/A		0.0
84		N/A	N/A	1.0 - 1.5	0.0	0.0
85		N/A	N/A	1.0 - 1.5	0.0	0.0
86		N/A	N/A	1.0 - 1.5	0.0	0.0
87	y2. Roaster Oxides		0.0	N/A		0.0
88		N/A	N/A	1.5 - 4.0	0.0	0.0
89		N/A	N/A	1.5 - 4.0	0.0	0.0
90		N/A	N/A	1.5 - 4.0	0.0	0.0
91	y3. Salt		0.0	N/A		0.0
92		N/A	N/A	0.0		0.0
93		N/A	N/A	0.0		0.0
94	y4. Other (See Note a)		0.0	N/A		0.0
95		N/A	N/A	0.0		0.0
96		N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)		0.0	N/A		0.0
98		N/A	N/A	1.0 - 1.4	0.0	0.0
99		N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL		143.6	N/A		120.6

5.1 MH 1-23-17

101 13. (ORGANIC SLUDGE) weight (138.5) kg was obtained by subtracting the weighed waste weight of (~~45.1~~) kg and the container net weight of (34.0) kg from the gross weight (177.6) kg of the waste container. (177.6) - (5.1) - (34.0) = (138.5) kg

102 a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.

103 b. N/A

104

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12307	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12307	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	32.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	220177
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	725482
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	02/12/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1243
22. Measured gross weight of loaded container, fully assembled (kgs):	177.6
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	391.5
23. Container closure date (mm/dd/yy):	01/22/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726753
b. Filter Torque Wrench Calibration Due Date:	02/01/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	DM-529
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	100.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	143.6
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12307	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	5.2
31. Total volume of Solidified Organics (L):	115.4
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	120.6
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	96.4%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:	JHulse	1/23/13
J. HULSE	JHulse	1/23/13
Enter Name	Signature	Date
Visual Examination Operator 2:		1-23-13 ~~1-23-13~~ MH 1-23-13
M. HADERLIE		1-22-13
Enter Name	Signature	Date
Visual Examination Expert:	J.S. Poole	1-23-13
J. POOLE	J.S. Poole	1-22-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	SRP12339
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
	b. Container Type: 55 gal. drum or SWB:	55 GAL.
2.	Site ID and Location (Airlock):	IN-RWMC-ARP-5
3.	Batch Number:	IN-SRP-VE-000028
4.	Examination Start Date:	01/22/13
5.	Procedure CCP-TP-006, Rev.:	17
6.	a. Drum Packing Station (DPS) Number:	502
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	220178
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12339							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
6	a. Iron-based metals/alloys (IM)				0.4	N/A		0.1
7	METAL TIGHTLY BOUND ON TOP (WAIP)				0.4	8.0		0.1
8	N/A				N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10	N/A				N/A	3.0		0.0
11	N/A				N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14		N/A			N/A	11.0		0.0
15		N/A			N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17		N/A			N/A	1.8		0.0
18		N/A			N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20		N/A			N/A	19.1		0.0
21		N/A			N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23		N/A			N/A	9.0		0.0
24		N/A			N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26		N/A			N/A	0.0		0.0
27		N/A			N/A	0.0		0.0
28		N/A			N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12339							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	i. Other inorganic materials (OI)				0.0	N/A		0.0
30		j. Graphite			0.0	N/A		0.0
31			N/A		N/A	2.2		0.0
32			N/A		N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34			N/A		N/A	2.3		0.0
35			N/A		N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37			N/A		N/A	2.0		0.0
38			N/A		N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40			N/A		N/A	3.0		0.0
41			N/A		N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43			N/A		N/A	2.0 - 5.0	0.0	0.0
44			N/A		N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46			N/A		N/A	2.0		0.0
47			N/A		N/A	2.0		0.0
48		p. Inorganic sorbents			0.0	N/A		0.0
49			N/A		N/A	0.1 - 2.8	0.0	0.0
50			N/A		N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52			N/A		N/A	0.0		0.0
53			N/A		N/A	0.0		0.0
54			N/A		N/A	0.0		0.0
55	r. Cellulosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57			N/A		N/A	0.9		0.0
58			N/A		N/A	0.9		0.0
59			N/A		N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61			N/A		N/A	0.8		0.0
62			N/A		N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64			N/A		N/A	1.0		0.0
65			N/A		N/A	1.0		0.0

	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003					
2	Container ID: SRP12339					
3	Section 2: Waste Material Parameter (WMP) Estimates					
4		9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density		12.Volume
5			By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)		0.3	N/A		0.3
67		RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
68		RUBBER BANDS (WAIP)	0.3	0.9 - 2.0	1.1	0.3
69	w. Plastics (waste materials) (PW)		3.4	N/A		3.8
70		NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71		PLASTIC TIGHTLY BOUND ON TOP	2.0	0.9		2.2
72		1 TRAY LINER, 1 BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
73		N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)		78.1	N/A		65.1
75	x1. Sludge		78.1	N/A		65.1
76		DARK YELLOWISH BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE	78.1	1.0 - 1.5	1.2	65.1
77		N/A	N/A	1.0 - 1.5	0.0	0.0
78		N/A	N/A	1.0 - 1.5	0.0	0.0
79	x2. Other (See Note a)		0.0	N/A		0.0
80		N/A	N/A	0.0		0.0
81		N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)		0.0	N/A		0.0
83	y1. Sludge		0.0	N/A		0.0
84		N/A	N/A	1.0 - 1.5	0.0	0.0
85		N/A	N/A	1.0 - 1.5	0.0	0.0
86		N/A	N/A	1.0 - 1.5	0.0	0.0
87	y2. Roaster Oxides		0.0	N/A		0.0
88		N/A	N/A	1.5 - 4.0	0.0	0.0
89		N/A	N/A	1.5 - 4.0	0.0	0.0
90		N/A	N/A	1.5 - 4.0	0.0	0.0
91	y3. Salt		0.0	N/A		0.0
92		N/A	N/A	0.0		0.0
93		N/A	N/A	0.0		0.0
94	y4. Other (See Note a)		0.0	N/A		0.0
95		N/A	N/A	0.0		0.0
96		N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)		0.0	N/A		0.0
98		N/A	N/A	1.0 - 1.4	0.0	0.0
99		N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL		82.2	N/A		69.3
101	13. (ORGANIC SLUDGE) weight (78.1) kg was obtained by subtracting the weighed waste weight of (4.1) kg and the container net weight of (34.0) kg from the gross weight (116.2) kg of the waste container. (116.2) - (4.1) - (34.0) = (78.1) kg					
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.					
103	b.	N/A				
104						

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Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12339	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12339	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	26.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	220178
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	725482
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	02/12/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1330
22. Measured gross weight of loaded container, fully assembled (kgs):	116.2
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	256.2
23. Container closure date (mm/dd/yy):	01/22/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726753
b. Filter Torque Wrench Calibration Due Date:	02/01/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	DM-555
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	80.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	82.2
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12339	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	4.2
31. Total volume of Solidified Organics (L):	65.1
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	69.3
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	95.0%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

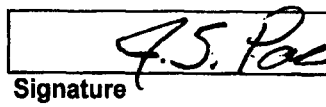
Visual Examination Operator 1:

M. HADERLIE		1-22-13
Enter Name	Signature	Date

Visual Examination Operator 2:

J. HULSE		1/22/13
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE		1-22-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	SRP12345
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	GSP
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location (Airlock):	IN-RWMC-ARP-5
3.	Batch Number:	IN-SRP-VE-000028
4.	Examination Start Date:	01/22/13
5.	Procedure CCP-TP-006, Rev.:	17
6.	a. Drum Packing Station (DPS) Number:	502
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	220178
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12345							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.3	N/A		0.0
7				METAL	0.3	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12345							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	l.	Other inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12345							
3	**Section 2: Waste Material Parameter (WMP) Estimates**							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
66	v. Rubber (R)				0.3	N/A		0.3
67	RUBBER BANDS (WAIP)				0.3	0.9 - 2.0	1.1	0.3
68	N/A				N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				4.4	N/A		4.9
70	NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED				N/A	0.9		0.0
71	PLASTIC TIGHTLY BOUND ON TOP				3.0	0.9		3.3
72	TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)				1.4	0.9		1.6
73	N/A				N/A	0.9		0.0
74	x. Organic matrix (OR)				115.2	N/A		96.0
75		x1. Sludge			115.2	N/A		96.0
76		MODERATE OLIVE BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE			115.2	1.0 - 1.5	1.2	96.0
77		N/A			N/A	1.0 - 1.5	0.0	0.0
78		N/A			N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80		N/A			N/A	0.0		0.0
81		N/A			N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84		N/A			N/A	1.0 - 1.5	0.0	0.0
85		N/A			N/A	1.0 - 1.5	0.0	0.0
86		N/A			N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88		N/A			N/A	1.5 - 4.0	0.0	0.0
89		N/A			N/A	1.5 - 4.0	0.0	0.0
90		N/A			N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92		N/A			N/A	0.0		0.0
93		N/A			N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95		N/A			N/A	0.0		0.0
96		N/A			N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98	N/A				N/A	1.0 - 1.4	0.0	0.0
99	N/A				N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				120.2	N/A		101.2
101	13. (ORGANIC SLUDGE) weight (115.2) kg was obtained by subtracting the weighed waste weight of (5.0) kg and the container net weight of (34.0) kg from the gross weight (154.2) kg of the waste container. (154.2) - (5.0) - (34.0) = (115.2) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

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Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12345	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12345	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	32.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	220178
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	725482
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	02/12/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1404
22. Measured gross weight of loaded container, fully assembled (kgs):	154.2
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	339.9
23. Container closure date (mm/dd/yy):	01/22/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726753
b. Filter Torque Wrench Calibration Due Date:	02/01/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	IL-670
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	100.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	120.2
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12345	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	5.2
31. Total volume of Solidified Organics (L):	96.0
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	101.2
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	95.8%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

J. HULSE	J Hulse	1/22/13
Enter Name	Signature	Date

Visual Examination Operator 2:

M. HADERLIE		1-22-13
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE	J.S. Poole	1-22-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	SRP12311
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
	b. Container Type: 55 gal. drum or SWB:	55 GAL.
2.	Site ID and Location (Airlock):	IN-RWMC-ARP-5
3.	Batch Number:	IN-SRP-VE-000028
4.	Examination Start Date:	01/22/13
5.	Procedure CCP-TP-006, Rev.:	17
6.	a. Drum Packing Station (DPS) Number:	502
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	220177
Comments:		
N/A		

	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003					
2	Container ID: SRP12311					
3	Section 2: Waste Material Parameter (WMP) Estimates					
4		9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density		12.Volume
5			By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)		0.0	N/A		0.0
7		N/A	N/A	8.0		0.0
8		N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)		0.0	N/A		0.0
10		N/A	N/A	3.0		0.0
11		N/A	N/A	3.0		0.0
12	c. Other metals (OM)		0.0	N/A		0.0
13	d. Lead		0.0	N/A		0.0
14		N/A	N/A	11.0		0.0
15		N/A	N/A	11.0		0.0
16	e. Beryllium		0.0	N/A		0.0
17		N/A	N/A	1.8		0.0
18		N/A	N/A	1.8		0.0
19	f. Depleted uranium		0.0	N/A		0.0
20		N/A	N/A	19.1		0.0
21		N/A	N/A	19.1		0.0
22	g. Copper		0.0	N/A		0.0
23		N/A	N/A	9.0		0.0
24		N/A	N/A	9.0		0.0
25	h. Other (See Note a)		0.0	N/A		0.0
26		N/A	N/A	0.0		0.0
27		N/A	N/A	0.0		0.0
28		N/A	N/A	0.0		0.0

	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003					
2	Container ID: SRP12311					
3	Section 2: Waste Material Parameter (WMP) Estimates					
4	9. Waste Material Parameter and Item Description		10. WMP Estimate	11. Density		12.Volume
5			By Weight (kg)	(kg/L)		(L)
29	i. Other Inorganic materials (OI)		0.0	N/A		0.0
30	j. Graphite		0.0	N/A		0.0
31		N/A	N/A	2.2		0.0
32		N/A	N/A	2.2		0.0
33	k. Concrete		0.0	N/A		0.0
34		N/A	N/A	2.3		0.0
35		N/A	N/A	2.3		0.0
36	l. Glass		0.0	N/A		0.0
37		N/A	N/A	2.0		0.0
38		N/A	N/A	2.0		0.0
39	m. Firebrick		0.0	N/A		0.0
40		N/A	N/A	3.0		0.0
41		N/A	N/A	3.0		0.0
42	n. Ceramics		0.0	N/A		0.0
43		N/A	N/A	2.0 - 5.0	0.0	0.0
44		N/A	N/A	2.0 - 5.0	0.0	0.0
45	o. Sand		0.0	N/A		0.0
46		N/A	N/A	2.0		0.0
47		N/A	N/A	2.0		0.0
48	p. Inorganic sorbents		0.0	N/A		0.0
49		N/A	N/A	0.1 - 2.8	0.0	0.0
50		N/A	N/A	0.1 - 2.8	0.0	0.0
51	q. Other (See Note a)		0.0	N/A		0.0
52		N/A	N/A	0.0		0.0
53		N/A	N/A	0.0		0.0
54		N/A	N/A	0.0		0.0
55	r. Cellulosics (C)		0.3	N/A		0.3
56	s. Paper		0.3	N/A		0.3
57		PAPER TIGHTLY BOUND ON TOP	0.3	0.9		0.3
58		N/A	N/A	0.9		0.0
59		N/A	N/A	0.9		0.0
60	t. Cardboard		0.0	N/A		0.0
61		N/A	N/A	0.8		0.0
62		N/A	N/A	0.8		0.0
63	u. Wood		0.0	N/A		0.0
64		N/A	N/A	1.0		0.0
65		N/A	N/A	1.0		0.0

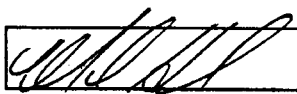
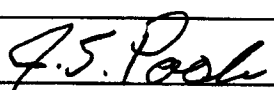
	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003					
2	Container ID: SRP12311					
3	**Section 2: Waste Material Parameter (WMP) Estimates**					
4	9. Waste Material Parameter and Item Description		10. WMP Estimate	11. Density		12.Volume
5			By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)		0.5	N/A		0.5
67		RUBBER TIGHTLY BOUND ON TOP	0.2	0.9 - 2.0	1.1	0.2
68		RUBBER BANDS (WAIP)	0.3	0.9 - 2.0	1.1	0.3
69	w. Plastics (waste materials) (PW)		2.4	N/A		2.7
70		PLASTIC TIGHTLY BOUND ON TOP	1.0	0.9		1.1
71		NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
72		1 TRAY LINER, 1 BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
73		N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)		102.8	N/A		85.7
75	x1. Sludge		102.8	N/A		85.7
76		DARK YELLOWISH BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE	102.8	1.0 - 1.5	1.2	85.7
77		N/A	N/A	1.0 - 1.5	0.0	0.0
78		N/A	N/A	1.0 - 1.5	0.0	0.0
79	x2. Other (See Note a)		0.0	N/A		0.0
80		N/A	N/A	0.0		0.0
81		N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)		0.0	N/A		0.0
83	y1. Sludge		0.0	N/A		0.0
84		N/A	N/A	1.0 - 1.5	0.0	0.0
85		N/A	N/A	1.0 - 1.5	0.0	0.0
86		N/A	N/A	1.0 - 1.5	0.0	0.0
87	y2. Roaster Oxides		0.0	N/A		0.0
88		N/A	N/A	1.5 - 4.0	0.0	0.0
89		N/A	N/A	1.5 - 4.0	0.0	0.0
90		N/A	N/A	1.5 - 4.0	0.0	0.0
91	y3. Salt		0.0	N/A		0.0
92		N/A	N/A	0.0		0.0
93		N/A	N/A	0.0		0.0
94	y4. Other (See Note a)		0.0	N/A		0.0
95		N/A	N/A	0.0		0.0
96		N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)		0.0	N/A		0.0
98		N/A	N/A	1.0 - 1.4	0.0	0.0
99		N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL		106.0	N/A		89.2
101	13. (ORGANIC SLUDGE) weight (102.8) kg was obtained by subtracting the weighed waste weight of (3.2) kg and the container net weight of (34.0) kg from the gross weight (140.0) kg of the waste container. (140.0) - (3.2) - (34.0) = (102.8) kg					
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.					
103	b.	N/A				
104						

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12311	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12311	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	28.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	220177
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	725482
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	02/12/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1440
22. Measured gross weight of loaded container, fully assembled (kgs):	140.0
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	308.6
23. Container closure date (mm/dd/yy):	01/22/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726753
b. Filter Torque Wrench Calibration Due Date:	02/01/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	DM-547
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	90.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	106.0
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12311	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	3.5
31. Total volume of Solidified Organics (L):	85.7
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	89.2
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	97.0%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:		
M. HADERLIE		1-22-13
Enter Name	Signature	Date
Visual Examination Operator 2:		
J. HULSE		1/22/13
Enter Name	Signature	Date
Visual Examination Expert:		
J. POOLE		1-22-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	SRP12340
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location (Airlock):	IN-RWMC-ARP-5
3.	Batch Number:	IN-SRP-VE-000028
4.	Examination Start Date:	01/22/13
5.	Procedure CCP-TP-006, Rev.:	17
6.	a. Drum Packing Station (DPS) Number:	502
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	220177
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12340							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				N/A	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

081

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12340							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	i.	Other inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.4	N/A		0.4
56		s.	Paper		0.4	N/A		0.4
57				LEATHER GLOVES TIGHTLY BOUND ON TOP	0.4	0.9		0.4
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

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	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12340							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.3	N/A		0.3
67	RUBBER BANDS (WAIP)				0.3	0.9 - 2.0	1.1	0.3
68	N/A				N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				3.4	N/A		3.8
70	NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED				N/A	0.9		0.0
71	PLASTIC TIGHTLY BOUND ON TOP				2.0	0.9		2.2
72	TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)				1.4	0.9		1.6
73	N/A				N/A	0.9		0.0
74	x. Organic matrix (OR)				103.5	N/A		86.3
75		x1. Sludge			103.5	N/A		86.3
76		LIGHT OLIVE BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE			103.5	1.0 - 1.5	1.2	86.3
77		N/A			N/A	1.0 - 1.5	0.0	0.0
78		N/A			N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80		N/A			N/A	0.0		0.0
81		N/A			N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84		N/A			N/A	1.0 - 1.5	0.0	0.0
85		N/A			N/A	1.0 - 1.5	0.0	0.0
86		N/A			N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88		N/A			N/A	1.5 - 4.0	0.0	0.0
89		N/A			N/A	1.5 - 4.0	0.0	0.0
90		N/A			N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92		N/A			N/A	0.0		0.0
93		N/A			N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95		N/A			N/A	0.0		0.0
96		N/A			N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98	N/A				N/A	1.0 - 1.4	0.0	0.0
99	N/A				N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				107.6	N/A		90.8
101	13. (ORGANIC SLUDGE) weight (103.5) kg was obtained by subtracting the weighed waste weight of (4.1) kg and the container net weight of (34.0) kg from the gross weight (141.6) kg of the waste container. (141.6) - (4.1) - (34.0) = (103.5) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

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Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12340	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12340	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	28.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	220177
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	725482
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	02/12/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1511
22. Measured gross weight of loaded container, fully assembled (kgs):	141.6
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	312.2
23. Container closure date (mm/dd/yy):	01/22/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726753
b. Filter Torque Wrench Calibration Due Date:	02/01/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	DM-560
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	90.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	107.6
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12340	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	4.5
31. Total volume of Solidified Organics (L):	86.3
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	90.8
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	96.2%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

J. HULSE	J Hulse	1/22/13
Enter Name	Signature	Date

Visual Examination Operator 2:

M. HADERLIE		1-22-13
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE	J.S. Poole	1-22-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP12344
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	JSP
b. Container Type: 55 gal. drum or SWB:	55 GAL.
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000028
4. Examination Start Date:	01/22/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	502
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	220177
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12344							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				N/A	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

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	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12344							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
29	l. Other inorganic materials (OI)				0.0	N/A		0.0
30		j. Graphite			0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p. Inorganic sorbents			0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r. Cellulosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

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	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003					
2	Container ID: SRP12344					
3	**Section 2: Waste Material Parameter (WMP) Estimates**					
4		9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density		12.Volume
5			By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)		0.3	N/A		0.3
67		RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
68		RUBBER BANDS (WAIP)	0.3	0.9 - 2.0	1.1	0.3
69	w. Plastics (waste materials) (PW)		2.8	N/A		3.2
70		PLASTIC TIGHTLY BOUND ON TOP	1.4	0.9		1.6
71		NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
72		1 TRAY LINER, 1 BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
73		N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)		113.7	N/A		94.8
75	x1. Sludge		113.7	N/A		94.8
76		DUSKY YELLOWISH BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE	113.7	1.0 - 1.5	1.2	94.8
77		N/A	N/A	1.0 - 1.5	0.0	0.0
78		N/A	N/A	1.0 - 1.5	0.0	0.0
79	x2. Other (See Note a)		0.0	N/A		0.0
80		N/A	N/A	0.0		0.0
81		N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)		0.0	N/A		0.0
83	y1. Sludge		0.0	N/A		0.0
84		N/A	N/A	1.0 - 1.5	0.0	0.0
85		N/A	N/A	1.0 - 1.5	0.0	0.0
86		N/A	N/A	1.0 - 1.5	0.0	0.0
87	y2. Roaster Oxides		0.0	N/A		0.0
88		N/A	N/A	1.5 - 4.0	0.0	0.0
89		N/A	N/A	1.5 - 4.0	0.0	0.0
90		N/A	N/A	1.5 - 4.0	0.0	0.0
91	y3. Salt		0.0	N/A		0.0
92		N/A	N/A	0.0		0.0
93		N/A	N/A	0.0		0.0
94	y4. Other (See Note a)		0.0	N/A		0.0
95		N/A	N/A	0.0		0.0
96		N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)		0.0	N/A		0.0
98		N/A	N/A	1.0 - 1.4	0.0	0.0
99		N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL		116.8	N/A		98.3
101	13. (ORGANIC SLUDGE) weight (113.7) kg was obtained by subtracting the weighed waste weight of (3.1) kg and the container net weight of (34.0) kg from the gross weight (150.8) kg of the waste container. (150.8) - (3.1) - (34.0) = (113.7) kg					
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.					
103	b. N/A					
104						

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Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12344	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12344	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	30.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	220177
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	725482
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	02/12/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1540
22. Measured gross weight of loaded container, fully assembled (kgs):	150.8
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	332.5
23. Container closure date (mm/dd/yy):	01/22/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726753
b. Filter Torque Wrench Calibration Due Date:	02/01/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	IL-675
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	95.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	116.8
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12344	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	3.5
31. Total volume of Solidified Organics (L):	94.8
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	98.3
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	97.3%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

M. HADERLIE		1-22-13
Enter Name	Signature	Date

Visual Examination Operator 2:

J. HULSE		1/22/13
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE		1-22-13
Enter Name	Signature	Date

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist

Batch Data Report No.: IN-SRP-UE-000028

Description			
1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods used?	☐ NO	☑ YES	☐ NA
a. Was the description of the waste items adequate?	☐ NO	☑ YES	☐ NA
2. Was the correct revision of operating procedure used? (Attachment 1, Section 1, Line 5)	☐ NO	☑ YES	☐ NA
3. Were the following calculation spot checks performed?			
a. Attachment 1, Section 2: Verify the total waste volume in Column 12, Row aa does not exceed 208 L for a 55-gallon drum or 1456 L for an SWB and verify the estimated weights in Column 10, Row aa matches the measured net weight of waste in Attachment 1, Section 4, Row 27.	☐ NO	☑ YES	☐ NA
b. Attachment 1, Section 5: Verify the total waste volume in Row 33 a., matches the total waste volume in Section 2, Column 12, Row aa.	☐ NO	☑ YES	☐ NA
c. Attachment 1, Section 1: Check hand calculations in Lines 6h and 6p, and any additional hand calculations recorded in the comments field or in Section 2, Line 13.	☐ NO	☑ YES	☐ NA
4. Is only one waste stream selected in Line 34 of Attachment 1, Section 5, and is it consistent with the values shown in Attachment 1, Section 2, Column 12?	☐ NO	☑ YES	☐ NA
5. Is the data entered in the correct units and correct number of significant figures?	☐ NO	☑ YES	☐ NA
6. Were the data reviewed for transcription errors?	☐ NO	☑ YES	☐ NA
7. Does the BDR include VE for up to 20 containers?	☐ NO	☑ YES	☐ NA
8. Are BDR contents complete and do they match, Attachment 3, CCP Waste VE Batch Data Report Table of Contents?	☐ NO	☑ YES	☐ NA
9. Was completeness verified for data entry on the CCP VE Technique Data Form for the following?			
a. Section 1	☐ NO	☑ YES	☐ NA
b. Section 2	☐ NO	☑ YES	☐ NA
c. Section 3	☐ NO	☑ YES	☐ NA
d. Section 4	☐ NO	☑ YES	☐ NA
e. Section 5	☐ NO	☑ YES	☐ NA

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: IN-SRP-VE-000028

Description			
10. Is all the data signed and dated in Attachment 1, Section 6, using reproducible ink, and by the individual(s) generating it?	☐ NO	☑ YES	☐ NA
11. Is all data entered clearly, legibly, and accurately?	☐ NO	☑ YES	☐ NA
12. Were discrepancies between the operators reconciled?	☐ NO	☐ YES	☑ NA
13. Are all changes to original data lined out, initialed and dated by the individual making the changes?	☐ NO	☑ YES	☐ NA
14. Were data changes made by the individual who originally collected the data or an equally qualified individual?	☐ NO	☑ YES	☐ NA
15. Was the DPS scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☑ YES	☐ NA
16. Was the daily DPS scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☑ YES	☐ NA
17. Was the container scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☑ YES	☐ NA
18. Was the daily container scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☑ YES	☐ NA
19. Was the torque wrench(es) in calibration prior to VE Technique and documented correctly?	☐ NO	☑ YES	☐ NA
20. Were NCR(s) initiated as indicated in Attachment 1, Section 1, dispositioned, and approved appropriately?	☐ NO	☐ YES	☑ NA
21. Was the correct waste stream and waste matrix code assigned?	☐ NO	☑ YES	☐ NA
22. Is there a valid VE data form for each drum in the batch?	☐ NO	☑ YES	☐ NA
23. Were the operators trained and qualified in accordance with the applicable requirements?	☐ NO	☑ YES	☐ NA

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: IN-SRP-VE-000028

Description			
24. Was precision maintained by reconciling any discrepancies between the operator(s) and the ITR with regard to identification of waste matrix code, liquids in excess of WIPP Hazardous Waste Facility Permit and WIPP Waste Acceptance Criteria limits and compressed gases?	☐ NO	☐ YES	☑ NA

Description

Comments:

N/A

I have reviewed 100 percent of the container-specific and batch data in this BDR and find it acceptable.

ITR:

Printed Name	Signature	Date
Jodi M. Stanton	Jodi M Stanton	1/23/13

DIVIDER

PAGE

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary

BDR Number: IN-SRP-VE-000001 **Examination Date:** 11/20/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
1. Is the completed, signed and dated Independent Technical Reviewer Checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, C3-10b**	X			
2. Does the BDR contain all items addressed in the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-10b**	X			
3. Does the BDR include a listing of all container numbers in the batch? **Reference Source: CCP-PO-001, C3-10b**	X			
4. List all containers that have met QAOs. **Reference Source: CCP-PO-001, C3-10b**				Container Numbers: SRP12000, SRP12001, SRP12010
5. Is the current implementing procedure and revision number included in the BDR? **Reference Source: CCP-PO-001, C3-4, C3-10b, Table C3-11**	X			
6. Is the BDR date included? **Reference Source: CCP-PO-001, Table C3-11**	X			
7. Is there a reference to or copy of any associated NCRs (if any) in the BDR? **Reference Source: CCP-PO-001, Table C3-11**	X			NCR-INL-1759-12 (SRP12000, SRP12001)
8. Are there 20 or fewer containers in the batch? **Reference Source: CCP-PO-001 C3-10**	X			
9. Are the data properly reported (i.e., data are reported in correct units and with correct significant figures). **Reference Source: CCP-PO-001 C3-10b**	X			
10. Is there evidence of verification that the physical form matches the Waste Matrix Code? **Reference Source: CCP-PO-001, C3-4**	X			
11. Is there evidence of verification that the physical form matches the waste stream description? **Reference Source: CCP-PO-001, C1-4**	X			
12. Are prohibited items absent? **Reference Source: CCP-PO-001, C3-4**	X			

CCP RECORDS ORIGINAL
DATE REC'D 11-30-12

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-SRP-VE-000001				Examination Date: 11/20/12
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
13. Does observable liquid, if present, meet the criteria of the TSDF-WAC? **Reference Source: CCP-PO-001, C3-4b**	X			
14. Were discrepancies between the Visual Examination operator and the ITR with regards to identification of waste matrix code, liquids in excess of the TSDF-WAC, or compressed gases reconciled? NA if no discrepancies. **Reference Source: CCP-PO-001, C3-4b**			X	No Discrepancies
15. Are the training requirements met for the VE Expert and VE Operators who have signed the data forms? **Reference Source: CCP-PO-001, C1-4, C3-4**	X			
16. Is evidence of a satisfactory audio/video test included in the BDR? NA [not applicable] for VE Method for Newly Generated Waste. **Reference Source: CCP-PO-001, C1-4**			X	VE for Newly Generated Waste
17. If the VE was not recorded using audio/video media, does the data sheet contain the signature of two qualified operators who observed for themselves the waste being placed into the container? NA if audio/video used. **Reference Source: CCP-PO-001, C1-4**	X			
18. Are the weights/estimated weights for the 12 waste material parameters reported in kilograms (kg)? **Reference Source: CCP Technical Procedures**	X			
19. Are the descriptions for each waste material parameter included in the BDR? **Reference Source: CCP-PO-001, C1-4**	X			
20. Is the gross weight reported (in kg) for each container included in the BDR? **Reference Source: CCP Technical Procedures**	X			
21. Is the number of layers of confinement recorded? **Reference Source: CCP-PO-001, C-3d**	X			
22. Is sufficient information included in the BDR to determine the packaging configuration? **Reference Source: CCP-PO-001 C-3d**	X			

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-SRP-VE-000001 **Examination Date:** 11/20/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
23. Is the type and number of filters recorded? **Reference Source: CCP-PO-001, C-3d**	X			
24. Is the size of the rigid liner vent hole recorded to determine the appropriate DAC? NA if no liner lid. **Reference Source: CCP-PO-001, C-3d**			X	No Liner Lids
25. For Los Alamos National Laboratory (LANL) Sealed Sources, does the characterized waste container meet the definition of sealed sources per Title 10 Code of Federal Regulations (CFR) 30.4 and Title 10 CFR 835.2 (effective January 1, 2004) evidence of which is assembled as part of AK documentation? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Sources
26. For LANL Sealed Sources, are sealed sources the only non-packaging items in the waste container? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Sources
27. For LANL Sealed Sources, are the sealed sources a U.S. Department of Transportation (DOT) Special Form Class 7 (Radioactive Material) per Title 49 CFR 34.27 (effective January 1, 2004) and the certification of which is assembled as part of the AK documentation? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Sources
28. For LANL Sealed Sources, is the integrity of each sealed source validated by documented contamination survey results to meet the requirements of Title 10 CFR 34.27 (effective January 1, 2004), and assembled as part of AK documentation? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Sources

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-SRP-VE-000001 **Examination Date:** 11/20/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
29. For LANL Sealed Sources, is each sealed source a rigid sealed container less than or equal to 4 L in size or in a rigid sealed container less than or equal to 4 L? ***Reference Source: CCP Technical Procedures***			X	Not LANL Sealed Sources
30. For LANL Sealed Sources, AK documentation does not indicate the use of volatile organic compounds (VOCs) or VOC-bearing materials as constituents of sealed sources? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Sources
31. For LANL Sealed Sources, the outer casing of each sealed source is of a non VOC-bearing material which is verified using the VE technique at the time of packaging? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Sources

Comments: None

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

Jim Vernon		11/30/12
SPM Printed Name	Signature	Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

Attachment 4 – CCP Waste VE Technique Batch Data Report Cover Sheet

Batch Data Report No.: IN-SRP-VE-000001

1	SRP12000
2	SRP12010
3	SRP12001
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	N A
14	Lv. 11-20-12
15	
16	
17	
18	
19	
20	

ITR: Brad Stark 11-29-12

BRAD STARK (Printed Name) Brad Stark (Signature) 11-26-12 (Date)

VEE:

Spencer Pattee (Printed Name) Spencer Pattee (Signature) 11/26/12 (Date)

Spencer Pattee 11-29-12

CCP RECORDS ORIGINAL
DATE REC'D 11-26-12

001

Attachment 3 – CCP Waste VE Technique Batch Data Report Table of Contents

Batch Data Report No.: IN-SRP-VE-000001 **Batch Data Report Date:** 11-20-12

Item	Description	Page No.
1	Attachment 4, CCP Waste VE Technique Batch Data Report Cover Sheet	1
2	Attachment 3, CCP Waste VE Technique Batch Data Report Table of Contents	2
3	CCP Waste Visual Examination Technique Data Form	3
4	Attachment 2, CCP Waste VE Technique Independent Technical Reviewer Checklist	24
5	Copy of NCRs (NA, If Not Applicable) SP 11-28-12	~~N/A~~ 27

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP12000
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	QSP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000001
4. Examination Start Date:	11/20/12
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	504
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	XC0976
c. Scale Calibration Due Date:	07/02/13
d. Test Weight ID:	XC0835
e. Test Weight Calibration Due Date:	12/16/12
f. Test Weight (kgs):	5.0
g. Scale Readout of Test Weight (kgs):	5.0
h. Difference Between Test Weight and Scale Readout (kgs):	0.0
i. DPS Scale Check SAT (Y):	Y
Container Scale Check	
j. Scale Serial/ID Number:	725494
k. Scale Calibration Due Date:	05/23/13
l. Test Weight ID:	722311
m. Test Weight Calibration Due Date:	10/16/13
n. Test Weight (kg):	226.8
o. Scale Readout of Test Weight (kgs):	226.8
p. Difference Between Test Weight and Scale Readout (kgs):	0.0
q. Container Scale Check SAT (Y):	Y
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	232657
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12000							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5	a. Iron-based metals/alloys (IM)							
6				METAL (NSW)	0.0	N/A		0.0
7				N/A	N/A	8.0		0.0
8	b. Aluminum-based metals/alloys (AM)				N/A	8.0		0.0
9				N/A	0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11	c. Other metals (OM)				N/A	3.0		0.0
12		d. Lead			0.0	N/A		0.0
13				N/A	0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15		e. Beryllium			N/A	11.0		0.0
16				N/A	0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18		f. Depleted uranium			N/A	1.8		0.0
19				N/A	0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21		g. Copper			N/A	19.1		0.0
22				N/A	0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24		h. Other (See Note a)			N/A	9.0		0.0
25				N/A	0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12000							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4								
5				9. Waste Material Parameter and Item Description	10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
29	l.	Other inorganic materials (OI)			9.0	N/A		15.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		9.0	N/A		15.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				WOOD (NSW)	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

005
SP 11-28-12

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003

Container ID: SRPT2000

Section 2: Waste Material Parameter (WMP) Estimates

9. Waste Material Parameter and Item Description	10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
i. Other inorganic materials (OI)	18.0	N/A		30.0
j. Graphite	0.0	N/A		0.0
N/A	N/A	2.2		0.0
N/A	N/A	2.2		0.0
k. Concrete	0.0	N/A		0.0
N/A	N/A	2.3		0.0
N/A	N/A	2.3		0.0
l. Glass	0.0	N/A		0.0
N/A	N/A	2.0		0.0
N/A	N/A	2.0		0.0
m. Firebrick	0.0	N/A		0.0
N/A	N/A	3.0		0.0
N/A	N/A	3.0		0.0
n. Ceramics	0.0	N/A		0.0
N/A	N/A	2.0 - 5.0	0.0	0.0
N/A	N/A	2.0 - 5.0	0.0	0.0
o. Sand	0.0	N/A		0.0
N/A	N/A	2.0		0.0
N/A	N/A	2.0		0.0
p. Inorganic sorbents	18.0	N/A		30.0
ABSORBENT MIXED WITH WASTE	9.0	0.1 - 2.8	0.6	15.0
OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
q. Other (See Note a)	0.0	N/A		0.0
N/A	N/A	0.0		0.0
N/A	N/A	0.0		0.0
N/A	N/A	0.0		0.0
r. Cellulosics (C)	0.0	N/A		0.0
s. Paper	0.0	N/A		0.0
N/A	N/A	0.9		0.0
N/A	N/A	0.9		0.0
N/A	N/A	0.9		0.0
t. Cardboard	0.0	N/A		0.0
N/A	N/A	0.8		0.0
N/A	N/A	0.8		0.0
u. Wood	0.0	N/A		0.0
WOOD (NSW)	N/A	1.0		0.0
N/A	N/A	1.0		0.0

005A QSP 11-28-12

SUPERCEDED QSP 11-28-12

QSP 11-28-12

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003

Container ID: SRP12000

Section 2: Waste Material Parameter (WMP) Estimates

9. Waste Material Parameter and Item Description	10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
v. Rubber (R)	0.3	N/A		0.3
RUBBER BANDS (WAIP)	0.3	0.9 - 2.0	1.1	0.3
N/A	N/A	0.9 - 2.0	0.0	0.0
w. Plastics (waste materials) (PW)	4.4	N/A		4.9
2 BAG OUT STUBS AND 1 TRAY LINER TIGHTLY BOUND ON TOP (WAIP)	1.6	0.9		1.8
PLASTIC TIGHTLY BOUND ON TOP	2.8	0.9		3.1
NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
N/A	N/A	0.9		0.0
x. Organic matrix (OR)	95.1	N/A		79.3
x1. Sludge	95.1	N/A		79.3
LIGHT OLIVE GRAY PUTTY LIKE SLUDGE WITH CALCIUM SILICATE	95.1	1.0 - 1.5	1.2	79.3
N/A	N/A	1.0 - 1.5	0.0	0.0
N/A	N/A	1.0 - 1.5	0.0	0.0
x2. Other (See Note a)	0.0	N/A		0.0
N/A	N/A	0.0		0.0
N/A	N/A	0.0		0.0
y. Inorganic matrix (IN)	0.0	N/A		0.0
y1. Sludge	0.0	N/A		0.0
N/A	N/A	1.0 - 1.5	0.0	0.0
N/A	N/A	1.0 - 1.5	0.0	0.0
N/A	N/A	1.0 - 1.5	0.0	0.0
y2. Roaster Oxides	0.0	N/A		0.0
N/A	N/A	1.5 - 4.0	0.0	0.0
N/A	N/A	1.5 - 4.0	0.0	0.0
N/A	N/A	1.5 - 4.0	0.0	0.0
y3. Salt	0.0	N/A		0.0
N/A	N/A	0.0		0.0
N/A	N/A	0.0		0.0
y4. Other (See Note a)	0.0	N/A		0.0
N/A	N/A	0.0		0.0
N/A	N/A	0.0		0.0
z. Soils/gravel (S)	0.0	N/A		0.0
N/A	N/A	1.0 - 1.4	0.0	0.0
N/A	N/A	1.0 - 1.4	0.0	0.0
aa. TOTAL	108.8	N/A		99.5

13. (ORGANIC SLUDGE) weight (95.1) kg was obtained by subtracting the weighed waste weight of (13.7) kg and the container net weight of (34.0) kg from the gross weight (142.8) kg of the waste container. (142.8) - (13.7) - (34.0) = (95.1) kg

a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.

b. N/A

006 SSP 11-28-12

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003

Container ID: SRP12000

Section 2: Waste Material Parameter (WMP) Estimates

	9. Waste Material Parameter and Item Description	10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
v.	Rubber (R)	0.3	N/A		0.3
	RUBBER BANDS (WAIP)	0.3	0.9 - 2.0	1.1	0.3
	N/A	N/A	0.9 - 2.0	0.0	0.0
w.	Plastics (waste materials) (PW)	4.4	N/A		4.9
	2 BAG OUT STUBS AND 1 TRAY LINER TIGHTLY BOUND ON TOP (WAIP)	1.6	0.9		1.8
	PLASTIC TIGHTLY BOUND ON TOP	2.8	0.9		3.1
	NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
	N/A	N/A	0.9		0.0
x.	Organic matrix (OR)	86.1	N/A		71.8
	x1. Sludge	86.1	N/A		71.8
	LIGHT OLIVE GRAY PUTTY LIKE SLUDGE WITH CALCIUM SILICATE	86.1	1.0 - 1.5	1.2	71.8
	N/A	N/A	1.0 - 1.5	0.0	0.0
	N/A	N/A	1.0 - 1.5	0.0	0.0
	x2. Other (See Note a)	0.0	N/A		0.0
	N/A	N/A	0.0		0.0
	N/A	N/A	0.0		0.0
y.	Inorganic matrix (IN)	0.0	N/A		0.0
	y1. Sludge	0.0	N/A		0.0
	N/A	N/A	1.0 - 1.5	0.0	0.0
	N/A	N/A	1.0 - 1.5	0.0	0.0
	N/A	N/A	1.0 - 1.5	0.0	0.0
	y2. Roaster Oxides	0.0	N/A		0.0
	N/A	N/A	1.5 - 4.0	0.0	0.0
	N/A	N/A	1.5 - 4.0	0.0	0.0
	N/A	N/A	1.5 - 4.0	0.0	0.0
	y3. Salt	0.0	N/A		0.0
	N/A	N/A	0.0		0.0
	N/A	N/A	0.0		0.0
	y4. Other (See Note a)	0.0	N/A		0.0
	N/A	N/A	0.0		0.0
	N/A	N/A	0.0		0.0
z.	Soils/gravel (S)	0.0	N/A		0.0
	N/A	N/A	1.0 - 1.4	0.0	0.0
	N/A	N/A	1.0 - 1.4	0.0	0.0
aa.	TOTAL	108.8	N/A		107.0

13. (ORGANIC SLUDGE) weight (86.1) kg was obtained by subtracting the weighed waste weight of (22.7) kg and the container net weight of (34.0) kg from the gross weight (142.8) kg of the waste container. (142.8) - (22.7) - (34.0) = (86.1) kg

a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.

b. N/A

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SUPERCEDED SEP 11-28-12

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12000	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12000	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	28.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	232657
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	724667
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	01/18/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1417
22. Measured gross weight of loaded container, fully assembled (kgs):	142.8
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	314.8
23. Container closure date (mm/dd/yy):	11/20/12
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	728706
b. Filter Torque Wrench Calibration Due Date:	02/01/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	IL-436
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	90.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	108.8
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12000	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	5.2
31. Total volume of Solidified Organics (L):	79.3
32. Total volume of Solidified Inorganics (L):	15.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	99.5
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	
e. ID-RF-S3150 (S3150):	X
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	
36. Beryllium concentration (wt%):	0.0
37. Solidified organics concentration (wt%):	0.0%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	87.4%
	X

Section 6: Approvals

Visual Examination Operator 1:

M. HADERLIE		11-28-12
Enter Name	Signature	Date

Visual Examination Operator 2:

D. JACKMAN		11-28-12
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE	J.S. Poole	11-28-12
Enter Name	Signature	Date

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SRP 11-28-12

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12000	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	5.2
31. Total volume of Solidified Organics (L):	71.8
32. Total volume of Solidified Inorganics (L):	30.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	107.0
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	
e. ID-RF-S3150 (S3150):	X
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	79.1%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

M. HADERLIE		11-20-12
Enter Name	Signature	Date

Visual Examination Operator 2:

D. JACKMAN		11-20-12
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE	J.S. Poole	11-20-12
Enter Name	Signature	Date

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Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP12010
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000001
4. Examination Start Date:	11/20/12
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	501
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	XC0977
c. Scale Calibration Due Date:	07/02/13
d. Test Weight ID:	XC0833
e. Test Weight Calibration Due Date:	12/20/12
f. Test Weight (kgs):	5.0
g. Scale Readout of Test Weight (kgs):	5.0
h. Difference Between Test Weight and Scale Readout (kgs):	0.0
i. DPS Scale Check SAT (Y):	Y
Container Scale Check	
j. Scale Serial/ID Number:	725494
k. Scale Calibration Due Date:	05/23/13
l. Test Weight ID:	722311
m. Test Weight Calibration Due Date:	10/16/13
n. Test Weight (kg):	226.8
o. Scale Readout of Test Weight (kgs):	226.8
p. Difference Between Test Weight and Scale Readout (kgs):	0.0
q. Container Scale Check SAT (Y):	Y
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	232657
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12010							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)		11. Density (kg/L)	12.Volume (L)
5								
6	a. Iron-based metals/alloys (IM)				0.4		N/A	0.1
7				METAL	0.4		8.0	0.1
8				N/A	N/A		8.0	0.0
9	b. Aluminum-based metals/alloys (AM)				0.0		N/A	0.0
10				N/A	N/A		3.0	0.0
11				N/A	N/A		3.0	0.0
12	c. Other metals (OM)				0.0		N/A	0.0
13		d. Lead			0.0		N/A	0.0
14				N/A	N/A		11.0	0.0
15				N/A	N/A		11.0	0.0
16		e. Beryllium			0.0		N/A	0.0
17				N/A	N/A		1.8	0.0
18				N/A	N/A		1.8	0.0
19		f. Depleted uranium			0.0		N/A	0.0
20				N/A	N/A		19.1	0.0
21				N/A	N/A		19.1	0.0
22		g. Copper			0.0		N/A	0.0
23				N/A	N/A		9.0	0.0
24				N/A	N/A		9.0	0.0
25		h. Other (See Note a)			0.0		N/A	0.0
26				N/A	N/A		0.0	0.0
27				N/A	N/A		0.0	0.0
28				N/A	N/A		0.0	0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12010							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	i. Other inorganic materials (OI)				9.0	N/A		15.0
30		j. Graphite			0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p. Inorganic sorbents			9.0	N/A		15.0
49				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r. Cellulosics (C)				0.2	N/A		0.2
56		s. Paper			0.2	N/A		0.2
57				PAPER (NSW)	N/A	0.9		0.0
58				CLOTH GLOVE	0.2	0.9		0.2
59				N/A	N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12010							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
66	v. Rubber (R)				0.3	N/A		0.3
67				RUBBER BANDS (WAIP) TIGHTLY BOUND ON TOP OF OIL DRI	0.3	0.9 - 2.0	1.1	0.3
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				2.6	N/A		2.9
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				ONE TRAY LINER, TWO BAG OUT STUBS (WAIP) TIGHTLY BOUND ON TOP OF OIL DRI	1.6	0.9		1.8
72				PLASTIC	1.0	0.9		1.1
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				105.9	N/A		88.3
75		x1. Sludge			105.9	N/A		88.3
76				PALE YELLOWISH BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE	105.9	1.0 - 1.5	1.2	88.3
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				N/A	0.0		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	0.0	N/A		0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			N/A	1.0 - 1.5	0.0	0.0
88				N/A	0.0	N/A		0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			N/A	1.5 - 4.0	0.0	0.0
92				N/A	0.0	N/A		0.0
93				N/A	N/A	0.0		0.0
94		y4. Other (See Note a)			N/A	0.0		0.0
95				N/A	0.0	N/A		0.0
96				N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)				N/A	0.0		0.0
98				N/A	0.0	N/A		0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				N/A	1.0 - 1.4	0.0	0.0
					118.4	N/A		106.8

101 13. (ORGANIC SLUDGE) weight (105.9) kg was obtained by subtracting the weighed waste weight of (12.5) kg and the container net weight of (34.0) kg from the gross weight (152.4) kg of the waste container. (152.4) - (12.5) - (34.0) = (105.9) kg

102 a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.

103 b. N/A

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Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12010	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12010	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	32.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	232657
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	725482
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	02/12/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1425
22. Measured gross weight of loaded container, fully assembled (kgs):	152.4
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	336.0
23. Container closure date (mm/dd/yy):	11/20/12
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	722443
b. Filter Torque Wrench Calibration Due Date:	02/14/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	IL-430
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	NA
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	100.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	118.4
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12010	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	3.5
31. Total volume of Solidified Organics (L):	88.3
32. Total volume of Solidified Inorganics (L):	15.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	106.8
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	
e. ID-RF-S3150 (S3150):	X
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	
36. Beryllium concentration (wt%):	0.0
37. Solidified organics concentration (wt%):	0.0%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	89.4%
	X

Section 6: Approvals

Visual Examination Operator 1:

L. GROVER		11/20/12
Enter Name	Signature	Date

Visual Examination Operator 2:

L. VERLANIC		11-20-12
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE		11-20-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP12001
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000001
4. Examination Start Date:	11/20/12
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	504
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	231467
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12001							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				N/A	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12001							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	l.	Other inorganic materials (OI)			9.0	N/A		15.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		9.0	N/A		15.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

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	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12001							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4 5	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
29	i.	Other inorganic materials (OI)			15.0	N/A		25.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		15.0	N/A		25.0
49				ABSORBENT MIXED WITH WASTE	6.0	0.1 - 2.8	0.6	10.0
50				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Celluiosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

SUPERCEDED QSP 11-28-12

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019A
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	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003					
2	Container ID: SRP12001					
3	Section 2: Waste Material Parameter (WMP) Estimates					
4		9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density		12.Volume
5			By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)		0.3	N/A		0.3
67		RUBBER BANDS (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68		N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)		7.5	N/A		8.4
70		1 TRAY LINER AND 2 BAG OUT STUBS TIGHTLY BOUND ON TOP OF OIL DRI (WAIP)	1.6	0.9		1.8
71		PLASTIC TIGHTLY BOUND ON TOP OF OIL DRI	5.9	0.9		6.6
72		NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
73		N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)		100.4	N/A		83.7
75	x1. Sludge		100.4	N/A		83.7
76		LIGHT OLIVE GRAY PUTTY LIKE SLUDGE WITH CALCIUM SILICATE	100.4	1.0 - 1.5	1.2	83.7
77		N/A	N/A	1.0 - 1.5	0.0	0.0
78		N/A	N/A	1.0 - 1.5	0.0	0.0
79	x2. Other (See Note a)		0.0	N/A		0.0
80		N/A	N/A	0.0		0.0
81		N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)		0.0	N/A		0.0
83	y1. Sludge		0.0	N/A		0.0
84		N/A	N/A	1.0 - 1.5	0.0	0.0
85		N/A	N/A	1.0 - 1.5	0.0	0.0
86		N/A	N/A	1.0 - 1.5	0.0	0.0
87	y2. Roaster Oxides		0.0	N/A		0.0
88		N/A	N/A	1.5 - 4.0	0.0	0.0
89		N/A	N/A	1.5 - 4.0	0.0	0.0
90		N/A	N/A	1.5 - 4.0	0.0	0.0
91	y3. Salt		0.0	N/A		0.0
92		N/A	N/A	0.0		0.0
93		N/A	N/A	0.0		0.0
94	y4. Other (See Note a)		0.0	N/A		0.0
95		N/A	N/A	0.0		0.0
96		N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)		0.0	N/A		0.0
98		N/A	N/A	1.0 - 1.4	0.0	0.0
99		N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL		123.2	N/A		117.4
101	13. (ORGANIC SLUDGE) weight (100.4) kg was obtained by subtracting the weighed waste weight of (22.8) kg and the container net weight of (34.0) kg from the gross weight (157.2) kg of the waste container. (157.2) - (22.8) - (34.0) = (100.4) kg					
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.					
103	b.	N/A				
104						

SUPERCEDED SRP 11-28-12

SRP 11-28-12

020A SRP 11-28-12

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12001							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.3	N/A		0.3
67				RUBBER BANDS (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				7.5	N/A		8.4
70				1 TRAY LINER AND 2 BAG OUT STUBS TIGHTLY BOUND ON TOP OF OIL DRI (WAIP)	1.6	0.9		1.8
71				PLASTIC TIGHTLY BOUND ON TOP OF OIL DRI	5.9	0.9		6.6
72				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				106.4	N/A		88.7
75		x1. Sludge			106.4	N/A		88.7
76				LIGHT OLIVE GRAY PUTTY LIKE SLUDGE WITH CALCIUM SILICATE	106.4	1.0 - 1.5	1.2	88.7
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95				N/A	N/A	0.0		0.0
96				N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98				N/A	N/A	1.0 - 1.4	0.0	0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				123.2	N/A		112.4
101	13. (ORGANIC SLUDGE) weight (106.4) kg was obtained by subtracting the weighed waste weight of (16.8) kg and the container net weight of (34.0) kg from the gross weight (157.2) kg of the waste container. (157.2) - (16.8) - (34.0) = (106.4) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

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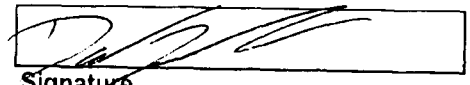
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12001	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12001	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	30.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	231467
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	724667
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	01/18/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1502
22. Measured gross weight of loaded container, fully assembled (kgs):	157.2
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	346.6
23. Container closure date (mm/dd/yy):	11/20/12
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	728706
b. Filter Torque Wrench Calibration Due Date:	02/01/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	IL-425
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	95.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	123.2
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

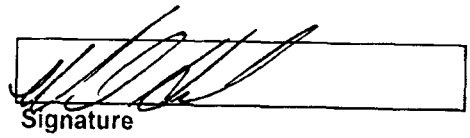
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12001	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	8.7
31. Total volume of Solidified Organics (L):	88.7
32. Total volume of Solidified Inorganics (L):	15.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	112.4
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	86.4%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

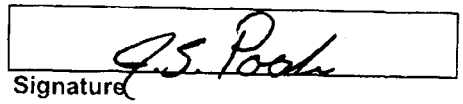
Visual Examination Operator 1:

D. JACKMAN		11-28-12
Enter Name	Signature	Date

Visual Examination Operator 2:

M. HADERLIE		11-28-12
Enter Name	Signature	Date

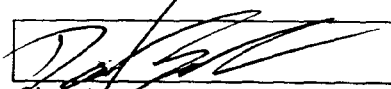
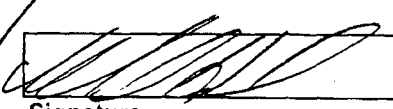
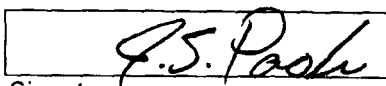
Visual Examination Expert:

J. POOLE		11-28-12
Enter Name	Signature	Date

023
SRP 11-28-12

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12001	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	8.7
31. Total volume of Solidified Organics (L):	83.7
32. Total volume of Solidified Inorganics (L):	25.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	117.4
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	81.5%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:		
D. JACKMAN		11-20-12
Enter Name	Signature	Date
Visual Examination Operator 2:		
M. HADERLIE		11-20-12
Enter Name	Signature	Date
Visual Examination Expert:		
J. POOLE		11-20-12
Enter Name	Signature	Date

QSP 11-28-12

SUPERCEDED QSP 11-28-12

023A

QSP 11-28-12

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist

Batch Data Report No.: IN-SRP-VE-000001

1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods used?	☐ NO	☑ YES	☐ NA
a. Was the description of the waste items adequate?	☐ NO	☑ YES	☐ NA
2. Was the correct revision of operating procedure used? (Attachment 1, Section 1, Line 5)	☐ NO	☑ YES	☐ NA
3. Were the following calculation spot checks performed?			
a. Attachment 1, Section 2: Verify the total waste volume in Column 12, Row aa does not exceed 208 L for a 55-gallon drum or 1456 L for an SWB and verify the estimated weights in Column 10, Row aa matches the measured net weight of waste in Attachment 1, Section 4, Row 27.	☐ NO	☑ YES	☐ NA
b. Attachment 1, Section 5: Verify the total waste volume in Row 33 a., matches the total waste volume in Section 2, Column 12, Row aa.	☐ NO	☑ YES	☐ NA
c. Attachment 1, Section 1: Check hand calculations in Lines 6h and 6p, and any additional hand calculations recorded in the comments field or in Section 2, Line 13.	☐ NO	☑ YES	☐ NA
4. Is only one waste stream selected in Line 34 of Attachment 1, Section 5, and is it consistent with the values shown in Attachment 1, Section 2, Column 12?	☐ NO	☑ YES	☐ NA
5. Is the data entered in the correct units and correct number of significant figures?	☐ NO	☑ YES	☐ NA
6. Were the data reviewed for transcription errors?	☐ NO	☑ YES	☐ NA
7. Does the BDR include VE for up to 20 containers?	☐ NO	☑ YES	☐ NA
8. Are BDR contents complete and do they match, Attachment 3, CCP Waste VE Batch Data Report Table of Contents?	☐ NO	☑ YES	☐ NA
9. Was completeness verified for data entry on the CCP VE Technique Data Form for the following?			
a. Section 1	☐ NO	☑ YES	☐ NA
b. Section 2	☐ NO	☑ YES	☐ NA
c. Section 3	☐ NO	☑ YES	☐ NA
d. Section 4	☐ NO	☑ YES	☐ NA
e. Section 5	☐ NO	☑ YES	☐ NA

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: IN-SRP-VE-00000\

10. Is all the data signed and dated in Attachment 1, Section 6, using reproducible ink, and by the individual(s) generating it?	☐ NO	☑ YES	☐ NA	
11. Is all data entered clearly, legibly, and accurately?	☐ NO	☑ YES	☐ NA	
12. Were discrepancies between the operators reconciled?	☐ NO	☐ YES	☑ NA	
13. Are all changes to original data lined out, initialed and dated by the individual making the changes?	☐ NO	☑ YES	~~☑ NA~~	BRB 11-29-12
14. Were data changes made by the individual who originally collected the data or an equally qualified individual?	☐ NO	☑ YES	~~☑ NA~~	BRB 11-29-12
15. Was the DPS scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☑ YES	☐ NA	
16. Was the daily DPS scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☑ YES	☐ NA	
17. Was the container scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☑ YES	☐ NA	
18. Was the daily container scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☑ YES	☐ NA	
19. Was the torque wrench(es) in calibration prior to VE Technique and documented correctly?	☐ NO	☑ YES	☐ NA	
20. Were NCR(s) initiated as indicated in Attachment 1, Section 1, dispositioned, and approved appropriately?	☐ NO	☑ YES	~~☑ NA~~	BRB 11-29-12
21. Was the correct waste stream and waste matrix code assigned?	☐ NO	☑ YES	☐ NA	
22. Is there a valid VE data form for each drum in the batch?	☐ NO	☑ YES	☐ NA	
23. Were the operators trained and qualified in accordance with the applicable requirements?	☐ NO	☑ YES	☐ NA	

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: IN-SRP-VE-00000\

24. Was precision maintained by reconciling any discrepancies between the operator(s) and the ITR with regard to identification of waste matrix code, liquids in excess of WIPP Hazardous Waste Facility Permit and WIPP Waste Acceptance Criteria limits and compressed gases?	☐ NO	☐ YES	☑ NA

Comments:

12, # 24 marked N/A because there were no discrepancies. BRS 11/26/12

~~# 13, # 14 marked N/A because there were no changes made BRS 11/26/12~~ BRS 11-29-12

~~# 20 marked N/A because there was not an NCR. BRS~~ BRS 11-29-12 ~~11/26/12~~ BRS 11-29-12

BRS 11-29-12

RE ITRd due to the NCR. NCR INL-1759-12 BRS 11-29-12

I have reviewed 100 percent of the container-specific and batch data in this BDR and find it acceptable.

ITR: BRAD STARK Brad Stark 11-29-12

Printed Name Signature Date

Attachment 1 – CCP Nonconformance Report (NCR)

CCP NONCONFORMANCE REPORT (NCR)

(Use NCR Continuation, Attachment 2, if necessary)

NCR No. NCR- INL-1759-12 **Revision:** 0

1. Lot No., Heat No., or Serial No. (if applicable):	2. Process (e.g., NDA, HSG, NDE, VE, Other):	3. Batch Data Report #(s):
N/A	VE	IN-SRP-VE-000001
4. Order/Work Order/Job Control Number (if applicable):	**5. PO # (if applicable):**	**Container #(s):**
N/A	N/A	SRP12000 SRP12001
	6. Supplier (if applicable):	
	N/A	

DESCRIPTION OF NONCONFORMANCE

7a. NCR Description: ☐ < 100 nCi/g ☐ Prohibited Item ☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WMIS/WDS ☑ Other

7b. Requirement(s) (Enter Implementing Procedure No., Revision, Section No., & Quoted Text):

CCP-TP-006, Rev.17 - 4.2.4 [B], "Record the description in Section 2: Waste Material Parameter and Item Description, Column 9 Rows a through z, for the corresponding WMP identified."

7c. Actual Condition:

Containers SRP12000 and SRP12001 have "Absorbent Mixed With Waste" entered in Section 2 - Waste Material Parameter and Item Description under Other Inorganic Materials. The correct Waste Material Parameter for Absorbent Mixed With Waste" is Organic Matrix.

7d. Have the CCP HOLD TAGS associated with this NCR been applied? ☒ YES ☐ NO **(If no is checked, explain:)**

11/28/12 LRT

8. NCR Originator:

Jim Vernon _____ 11/27/12

printed name signature date

9. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE

If YES or INDETERMINATE, enter Trend Code L in Block 10.

10. Trend Code: A	11. Responsible Manager: Jim Vernon
12. Significant Condition? ☐ YES ☒ NO **(If Yes, enter CAR No.:)**	**13. Recurring Condition?** ☐ YES ☒ NO **(If Yes, list NCRs and CARs:)**

14. CCP QA Engineer or CCP QA Designee validation:

Laura K. Jones _____ Laura Lawson Jones 11/27/2012

printed name signature date

027
SSP
11-28-12

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR- INL-1759-12 **Revision:** 0

INTERIM DISPOSITION

15a. Interim Disposition (Check Only One):

☑ N/A (See Final Disposition) ☐ Hold ☐ Conditionally Accept ☐ Conditionally Use

☐ Sort ☐ Reinspect or Retest ☐ Remediate

15b. Instructions for Completion of the Interim Disposition:

INTERIM DISPOSITION APPROVALS

16a. Responsible Manager or Individual:			**16b. CCP QA Engineer or CCP QA Designee:**		
printed name	signature	date	printed name	signature	date
Additional Approvals:			**Additional Approvals:**		
printed name	signature	date	printed name	signature	date

COMPLETION OF INTERIM DISPOSITION

17. Interim Disposition Complete – Responsible Manager or Individual:

printed name signature date

18. Interim Disposition Verified – CCP QA Engineer:

printed name signature date

028
GSP 11-28-12

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR- INL-1759-12 **Revision:** 0

FINAL DISPOSITION

19. Final Disposition (Check Only One):

☐ Use-As-Is ☐ Repair

19a. Technical Justification – Required for Use-As-Is or Repair dispositions. (Enter "N/A" for Reject, Rework, and Scrap:)

N/A

☐ Reject ☑ Rework ☐ Scrap

19b. Instructions for Completion – Required for Reject, Repair, Rework, or Scrap. (Enter "N/A" for Use-As-Is:)

1. DGL to add amount of Absorbent Mixed With Waste in Section 2 to WMP Estimate for Organic Sludge.
2. Re-calculate Container WMP weights, as applicable
3. DGL Insert NCR into BDR
4. DGL Re-Sign BDR
5. SPM to insert corrections into BDR

19c. Corrective Actions (Actions to Prevent Recurrence – For Repair or Rework, if applicable. Enter "N/A," if not applicable, and for Use-As-Is, Reject, and Scrap):

N/A

FINAL DISPOSITION APPROVALS

20. Responsible Manager or Individual:			21. CCP QA Engineer or CCP QA Designee:		
Jim Vernon		11/27/12	Laura R Jons	Laura R Jons	11/27/2012
printed name	signature	date	printed name	signature	date
Additional Approvals:			**Additional Approvals:**		
printed name	signature	date	printed name	signature	date

CLOSURE

22. Final Disposition Complete – Responsible Manager or Individual:

printed name signature date

23. Attachments:

24a. HOLD TAG removal has been verified and reconciled for all nonconforming items on the NCR. ☐

24b. Check if not applicable (N/A) and explain. ☐

25. Final Disposition Verified – NCR Closed **CCP QA Engineer:**

printed name signature date

029
95P 11-28-12

DIVIDER PAGE ONLY

Not part of page count

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	RECORDS CUSTODIAN	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
IN-SRP-VE-000001	BATCH DATA REPORT VE SRP	11/20/2012	35
	N/A		

Comments

SPM CHECKLIST LOCATED IN CARLSBAD

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [✓]	Linda Martin	Linda Martin	12.12.12
	Signature	Printed Name	Date
Records Rejected [ ]			
	Signature	Printed Name	Date

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	2412
DESTINATION TEL #	912085577396
DESTINATION ID	INL
ST. TIME	12/12 11:33
TIME USE	00'17
PAGES SENT	1
RESULT	OK

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	RECORDS CUSTODIAN	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	
Telephone Number:	575-234-7523		

Document Number	Title/Description	Record Date	Total Pages
IN-SRP-VE-000001	BATCH DATA REPORT VE SRP	11/20/2012	35
	N/A		

Comments

SPM CHECKLIST LOCATED IN CARLSBAD

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [✓] Linda Martin — Signature — Linda Martin — Printed Name — 12.12.12 — Date

Divider Page

Not apart of page count.

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523, 575-234-7431, or 575-234-7095

Fax Number: 575-234-7033

[ ] Original Record [ ] Copy
[ ] Fax Record
[X] Electronic Record

Attn:	RECORDS CUSTODIAN	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	06/05/2013
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
IN-SRP-VE-000001	BATCH DATA REPORT VE (SRP) CORRECTIONS: PGS 1, 25, 26	11/20/2012	3
	N/A		

Comments

BATCH DATA REPORT LOCATED IN CARLSBAD. PLEASE HAVE SPM INSERT CORRECTIONS.

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [ ] _____ _____ _____
Signature Printed Name Date

Records Rejected [✓] Ruthie Goff Ruthie Goff 6.5.13
Signature Printed Name Date

Reason for Rejection: Corrections were already made 11/29/12. This is a scanning issue. Made adjustment

Re-submittal: _____ _____ _____
Signature Printed Name Date

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	2081
DESTINATION TEL #	912085577396
DESTINATION ID	INL
ST. TIME	06/05 08:44
TIME USE	00'17
PAGES SENT	1
RESULT	OK

Controlled Copy

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220
Telephone Number: 575-234-7523, 575-234-7431, or 575-234-7095
Fax Number: 575-234-7033

☐ Original Record ☐ Copy
☐ Fax Record
☒ Electronic Record

Attn:	RECORDS CUSTODIAN	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	06/05/2013
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
IN-SRP-VE-000001	BATCH DATA REPORT VE (SRP) CORRECTIONS: PGS 1, 25, 26	11/20/2012	3
	N/A		

Comments

BATCH DATA REPORT LOCATED IN CARLSBAD. PLEASE HAVE SPM INSERT CORRECTIONS.

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

DIVIDER

PAGE

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary

BDR Number: IN-SRP-VE-000183				Examination Date: 5/14/2013
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
1. Is the completed, signed and dated Independent Technical Reviewer Checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, C3-10b**	X			
2. Does the BDR contain all items addressed in the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-10b**	X			
3. Does the BDR include a listing of all container numbers in the batch? **Reference Source: CCP-PO-001, C3-10b**	X			
4. List all containers that have met QAOs. **Reference Source: CCP-PO-001, C3-10b**				Container Numbers: SRP14424, SRP14550, SRP14553, SRP14563, SRP14566, SRP14570, SRP14580, SRP14597, SRP14598, SRP14605, SRP14611, SRP14615, SRP14617, SRP14618, SRP14623, SRP14624, SRP14625, SRP14626, SRP14628, SRP14632
5. Is the current implementing procedure and revision number included in the BDR? **Reference Source: CCP-PO-001, C3-4, C3-10b, Table C3-11**	X			
6. Is the BDR date included? **Reference Source: CCP-PO-001, Table C3-11**	X			
7. Is there a reference to or copy of any associated NCRs (if any) in the BDR? **Reference Source: CCP-PO-001, Table C3-11**			X	NO NCRS
8. Are there 20 or fewer containers in the batch? **Reference Source: CCP-PO-001 C3-10**	X			
9. Are the data properly reported (i.e., data are reported in correct units and with correct significant figures). **Reference Source: CCP-PO-001 C3-10b**	X			
10. Is there evidence of verification that the physical form matches the Waste Matrix Code? **Reference Source: CCP-PO-001, C3-4**	X			
11. Is there evidence of verification that the physical form matches the waste stream description? **Reference Source: CCP-PO-001, C1-4**	X			
12. Are prohibited items absent? **Reference Source: CCP-PO-001, C3-4**	X			

COPY

NTPC RECORDS ORIGINAL
DATE REC'D 5.23.13 RCJ

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-SRP-VE-000183				Examination Date: 5/14/2013
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
13. Does observable liquid, if present, meet the criteria of the TSDF-WAC? **Reference Source: CCP-PO-001, C3-4b**	X			
14. Were discrepancies between the Visual Examination operator and the ITR with regards to identification of waste matrix code, liquids in excess of the TSDF-WAC, or compressed gases reconciled? NA if no discrepancies. **Reference Source: CCP-PO-001, C3-4b**			X	No Discrepancies
15. Are the training requirements met for the VE Expert and VE Operators who have signed the data forms? **Reference Source: CCP-PO-001, C1-4, C3-4**	X			
16. Is evidence of a satisfactory audio/video test included in the BDR? NA [not applicable] for VE Method for Newly Generated Waste. **Reference Source: CCP-PO-001, C1-4**			X	VE Method for Newly Generated Waste
17. If the VE was not recorded using audio/video media, does the data sheet contain the signature of two qualified operators who observed for themselves the waste being placed into the container? NA if audio/video used. **Reference Source: CCP-PO-001, C1-4**	X			
18. Are the weights/estimated weights for the 12 waste material parameters reported in kilograms (kg)? **Reference Source: CCP Technical Procedures**	X			
19. Are the descriptions for each waste material parameter included in the BDR? **Reference Source: CCP-PO-001, C1-4**	X			
20. Is the gross weight reported (in kg) for each container included in the BDR? **Reference Source: CCP Technical Procedures**	X			
21. Is the number of layers of confinement recorded? **Reference Source: CCP-PO-001, C-3d**	X			
22. Is sufficient information included in the BDR to determine the packaging configuration? **Reference Source: CCP-PO-001 C-3d**	X			

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-SRP-VE-000183				Examination Date: 5/14/2013
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
23. Is the type and number of filters recorded? **Reference Source: CCP-PO-001, C-3d**	X			
24. Is the size of the rigid liner vent hole recorded to determine the appropriate DAC? NA if no liner lid. **Reference Source: CCP-PO-001, C-3d**			X	No Liner Lid
25. For Los Alamos National Laboratory (LANL) Sealed Sources, does the characterized waste container meet the definition of sealed sources per Title 10 Code of Federal Regulations (CFR) 30.4 and Title 10 CFR 835.2 (effective January 1, 2004) evidence of which is assembled as part of AK documentation? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Sources
26. For LANL Sealed Sources, are sealed sources the only non-packaging items in the waste container? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Sources
27. For LANL Sealed Sources, are the sealed sources a U.S. Department of Transportation (DOT) Special Form Class 7 (Radioactive Material) per Title 49 CFR 34.27 (effective January 1, 2004) and the certification of which is assembled as part of the AK documentation? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Sources
28. For LANL Sealed Sources, is the integrity of each sealed source validated by documented contamination survey results to meet the requirements of Title 10 CFR 34.27 (effective January 1, 2004), and assembled as part of AK documentation? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Sources

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-SRP-VE-000183				Examination Date: 5/14/2013
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
29. For LANL Sealed Sources, is each sealed source a rigid sealed container less than or equal to 4 L in size or in a rigid sealed container less than or equal to 4 L? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Sources
30. For LANL Sealed Sources, AK documentation does not indicate the use of volatile organic compounds (VOCs) or VOC-bearing materials as constituents of sealed sources? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Sources
31. For LANL Sealed Sources, the outer casing of each sealed source is of a non VOC-bearing material which is verified using the VE technique at the time of packaging? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Sources
Comments: None				
The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.				
Brandye Pyeatt	Brandye Pyeatt			5/21/13
SPM Printed Name	Signature			Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

Attachment 4 – CCP Waste VE Technique Batch Data Report Cover Sheet

Batch Data Report No.: IN-SRP-VE-000183

	Waste Container ID Number
1	SRP 14563
2	SRP 14570
3	SRP 14598
4	SRP 14566
5	SRP 14580
6	SRP 14605
7	SRP 14597
8	SRP 14625
9	SRP 14623
10	SRP 14618
11	SRP 14624
12	SRP 14617
13	SRP 14632
14	SRP 14626
15	SRP 14611
16	SRP 14615
17	SRP 14553
18	SRP 14628
19	SRP 14550
20	SRP 14424

ITR:

Printed Name	Signature	Date
GERARD BARR	Gerard Barr	5-16-13

VEE:

Printed Name	Signature	Date
LUKE GROVER		5-16-13

NTPC RECORDS ORIGINAL
DATE REC'D 5/16/13

001

Attachment 3 – CCP Waste VE Technique Batch Data Report Table of Contents

Batch Data Report No.: IN-SRP-VE-000183 **Batch Data Report Date:** 5/14/13

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Item	Description	Page No.
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4	Attachment 2, CCP Waste VE Technique Independent Technical Reviewer Checklist	143
5	Copy of NCRs (NA, If Not Applicable)	N/A

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP14563
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000183
4. Examination Start Date:	05/14/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	501
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	XC0968
c. Scale Calibration Due Date:	12/10/13
d. Test Weight ID:	730293
e. Test Weight Calibration Due Date:	07/17/14
f. Test Weight (kgs):	5.0
g. Scale Readout of Test Weight (kgs):	5.0
h. Difference Between Test Weight and Scale Readout (kgs):	0.0
i. DPS Scale Check SAT (Y):	Y
Container Scale Check	
j. Scale Serial/ID Number:	725494
k. Scale Calibration Due Date:	11/21/13
l. Test Weight ID:	722311
m. Test Weight Calibration Due Date:	10/16/13
n. Test Weight (kg):	226.8
o. Scale Readout of Test Weight (kgs):	226.4
p. Difference Between Test Weight and Scale Readout (kgs):	0.4
q. Container Scale Check SAT (Y):	Y
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	237751
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14563							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.1	N/A		0.0
7				METAL	0.1	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003

Container ID: SRP14563

Section 2: Waste Material Parameter (WMP) Estimates

9. Waste Material Parameter and Item Description	10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
l. Other inorganic materials (OI)	0.0	N/A		0.0
j. Graphite	0.0	N/A		0.0
N/A	N/A	2.2		0.0
N/A	N/A	2.2		0.0
k. Concrete	0.0	N/A		0.0
N/A	N/A	2.3		0.0
N/A	N/A	2.3		0.0
l. Glass	0.0	N/A		0.0
N/A	N/A	2.0		0.0
N/A	N/A	2.0		0.0
m. Firebrick	0.0	N/A		0.0
N/A	N/A	3.0		0.0
N/A	N/A	3.0		0.0
n. Ceramics	0.0	N/A		0.0
N/A	N/A	2.0 - 5.0	0.0	0.0
N/A	N/A	2.0 - 5.0	0.0	0.0
o. Sand	0.0	N/A		0.0
N/A	N/A	2.0		0.0
N/A	N/A	2.0		0.0
p. Inorganic sorbents	0.0	N/A		0.0
N/A	N/A	0.1 - 2.8	0.0	0.0
N/A	N/A	0.1 - 2.8	0.0	0.0
q. Other (See Note a)	0.0	N/A		0.0
N/A	N/A	0.0		0.0
N/A	N/A	0.0		0.0
N/A	N/A	0.0		0.0
r. Cellulosics (C)	0.2	N/A		0.2
s. Paper	0.2	N/A		0.2
1 LEATHER GLOVE	0.2	0.9		0.2
N/A	N/A	0.9		0.0
N/A	N/A	0.9		0.0
t. Cardboard	0.0	N/A		0.0
N/A	N/A	0.8		0.0
N/A	N/A	0.8		0.0
u. Wood	0.0	N/A		0.0
N/A	N/A	1.0		0.0
N/A	N/A	1.0		0.0

	A B C D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003				
2	Container ID: SRP14563				
3	**Section 2: Waste Material Parameter (WMP) Estimates**				
4	9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density		12.Volume
5		By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)	0.4	N/A		0.4
67	RUBBER	0.1	0.9 - 2.0	1.1	0.1
68	RUBBER BANDS TIGHTLY BOUND ON TOP (WAIP)	0.3	0.9 - 2.0	1.1	0.3
69	w. Plastics (waste materials) (PW)	1.4	N/A		1.6
70	NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71	PLASTIC (NSW)	N/A	0.9		0.0
72	1 TRAY LINER AND 1 BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
73	N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)	123.3	N/A		102.8
75	x1. Sludge	123.3	N/A		102.8
76	MODERATE YELLOWISH BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE	123.3	1.0 - 1.5	1.2	102.8
77	N/A	N/A	1.0 - 1.5	0.0	0.0
78	N/A	N/A	1.0 - 1.5	0.0	0.0
79	x2. Other (See Note a)	0.0	N/A		0.0
80	N/A	N/A	0.0		0.0
81	N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)	0.0	N/A		0.0
83	y1. Sludge	0.0	N/A		0.0
84	N/A	N/A	1.0 - 1.5	0.0	0.0
85	N/A	N/A	1.0 - 1.5	0.0	0.0
86	N/A	N/A	1.0 - 1.5	0.0	0.0
87	y2. Roaster Oxides	0.0	N/A		0.0
88	N/A	N/A	1.5 - 4.0	0.0	0.0
89	N/A	N/A	1.5 - 4.0	0.0	0.0
90	N/A	N/A	1.5 - 4.0	0.0	0.0
91	y3. Salt	0.0	N/A		0.0
92	N/A	N/A	0.0		0.0
93	N/A	N/A	0.0		0.0
94	y4. Other (See Note a)	0.0	N/A		0.0
95	N/A	N/A	0.0		0.0
96	N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)	0.0	N/A		0.0
98	N/A	N/A	1.0 - 1.4	0.0	0.0
99	N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL	125.4	N/A		105.0
101	13. (ORGANIC SLUDGE) weight (123.3) kg was obtained by subtracting the weighed waste weight of (2.1) kg and the container net weight of (34.0) kg from the gross weight (159.4) kg of the waste container. (159.4) - (2.1) - (34.0) = (123.3) kg				
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.				
103	b. N/A				
104					

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14563	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14563	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	28.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	237751
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	723312
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	07/18/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	0855
22. Measured gross weight of loaded container, fully assembled (kgs):	159.4
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	351.4
23. Container closure date (mm/dd/yy):	05/14/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	722444
b. Filter Torque Wrench Calibration Due Date:	07/22/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	CN-176
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	90.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	125.4
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14563	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	2.2
31. Total volume of Solidified Organics (L):	102.8
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	105.0
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	98.3%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

L. MUNTEAN	R. Muntean	5/14/13
Enter Name	Signature	Date

Visual Examination Operator 2:

J. STANTON	Jodi M. Stanton	5/14/13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		5-14-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP14570
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	GP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000183
4. Examination Start Date:	05/14/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	502
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	XC0972
c. Scale Calibration Due Date:	07/02/13
d. Test Weight ID:	XC0838
e. Test Weight Calibration Due Date:	06/13/14
f. Test Weight (kgs):	5.0
g. Scale Readout of Test Weight (kgs):	5.0
h. Difference Between Test Weight and Scale Readout (kgs):	0.0
i. DPS Scale Check SAT (Y):	Y
Container Scale Check	
j. Scale Serial/ID Number:	725494
k. Scale Calibration Due Date:	11/21/13
l. Test Weight ID:	722311
m. Test Weight Calibration Due Date:	10/16/13
n. Test Weight (kg):	226.8
o. Scale Readout of Test Weight (kgs):	226.4
p. Difference Between Test Weight and Scale Readout (kgs):	0.4
q. Container Scale Check SAT (Y):	Y
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	237751
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14570							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				N/A	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14570							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	i.	Other inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.2	N/A		0.2
56		s.	Paper		0.2	N/A		0.2
57				PAPER	0.2	0.9		0.2
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003					
2	Container ID: SRP14570					
3	Section 2: Waste Material Parameter (WMP) Estimates					
4	9. Waste Material Parameter and Item Description		10. WMP Estimate	11. Density		12.Volume
5			By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)		0.3	N/A		0.3
67		RUBBER TIGHTLY BOUND ON TOP (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68		RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)		2.2	N/A		2.5
70		NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71		TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
72		PLASTIC TIGHTLY BOUND ON TOP	0.8	0.9		0.9
73		N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)		126.7	N/A		105.6
75	x1. Sludge		126.7	N/A		105.6
76		YELLOWISH GRAY CRUMBLY SLUDGE WITH CALCIUM SILICATE	126.7	1.0 - 1.5	1.2	105.6
77		N/A	N/A	1.0 - 1.5	0.0	0.0
78		N/A	N/A	1.0 - 1.5	0.0	0.0
79	x2. Other (See Note a)		0.0	N/A		0.0
80		N/A	N/A	0.0		0.0
81		N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)		0.0	N/A		0.0
83	y1. Sludge		0.0	N/A		0.0
84		N/A	N/A	1.0 - 1.5	0.0	0.0
85		N/A	N/A	1.0 - 1.5	0.0	0.0
86		N/A	N/A	1.0 - 1.5	0.0	0.0
87	y2. Roaster Oxides		0.0	N/A		0.0
88		N/A	N/A	1.5 - 4.0	0.0	0.0
89		N/A	N/A	1.5 - 4.0	0.0	0.0
90		N/A	N/A	1.5 - 4.0	0.0	0.0
91	y3. Salt		0.0	N/A		0.0
92		N/A	N/A	0.0		0.0
93		N/A	N/A	0.0		0.0
94	y4. Other (See Note a)		0.0	N/A		0.0
95		N/A	N/A	0.0		0.0
96		N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)		0.0	N/A		0.0
98		N/A	N/A	1.0 - 1.4	0.0	0.0
99		N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL		129.4	N/A		108.6
101	13. (ORGANIC SLUDGE) weight (126.7) kg was obtained by subtracting the weighed waste weight of (2.7) kg and the container net weight of (34.0) kg from the gross weight (163.4) kg of the waste container. (163.4) - (2.7) - (34.0) = (126.7) kg					
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.					
103	b.	N/A				
104						

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14570	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14570	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	27.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	237751
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	723312
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	07/18/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	0905
22. Measured gross weight of loaded container, fully assembled (kgs):	163.4
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	360.2
23. Container closure date (mm/dd/yy):	05/14/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	722444
b. Filter Torque Wrench Calibration Due Date:	07/22/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	CN-194
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	85.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	129.4
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14570	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	3.0
31. Total volume of Solidified Organics (L):	105.6
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	108.6
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	97.9%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

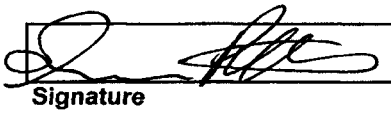
Visual Examination Operator 1:

M. HADERLIE		5-14-13
Enter Name	Signature	Date

Visual Examination Operator 2:

R. CUMMINS		5-14-13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		5-14-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP14598
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
b. Container Type: 55 gal. drum or SWB:	55 GAL.
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000183
4. Examination Start Date:	05/14/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	501
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	237751
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14598							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)	12.Volume (L)	
5								
6	a. Iron-based metals/alloys (IM)				0.2	N/A	0.0	
7				METAL TIGHTLY BOUND ON TOP	0.2	8.0	0.0	
8				N/A	N/A	8.0	0.0	
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A	0.0	
10				N/A	N/A	3.0	0.0	
11				N/A	N/A	3.0	0.0	
12	c. Other metals (OM)				0.0	N/A	0.0	
13		d. Lead			0.0	N/A	0.0	
14				N/A	N/A	11.0	0.0	
15				N/A	N/A	11.0	0.0	
16		e. Beryllium			0.0	N/A	0.0	
17				N/A	N/A	1.8	0.0	
18				N/A	N/A	1.8	0.0	
19		f. Depleted uranium			0.0	N/A	0.0	
20				N/A	N/A	19.1	0.0	
21				N/A	N/A	19.1	0.0	
22		g. Copper			0.0	N/A	0.0	
23				N/A	N/A	9.0	0.0	
24				N/A	N/A	9.0	0.0	
25		h. Other (See Note a)			0.0	N/A	0.0	
26				N/A	N/A	0.0	0.0	
27				N/A	N/A	0.0	0.0	
28				N/A	N/A	0.0	0.0	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14598							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	i.	Other inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.4	N/A		0.4
56		s.	Paper		0.4	N/A		0.4
57				PAPER (NSW)	N/A	0.9		0.0
58				TWO LEATHER GLOVES TIGHTLY BOUND ON TOP	0.4	0.9		0.4
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				WOOD (NSW)	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A B C D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003				
2	Container ID: SRP14598				
3	**Section 2: Waste Material Parameter (WMP) Estimates**				
4	9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density		12.Volume
5		By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)	0.3	N/A		0.3
67	RUBBER BANDS TIGHTLY BOUND ON TOP (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68	N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)	1.4	N/A		1.6
70	NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71	TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
72	PLASTIC (NSW)	N/A	0.9		0.0
73	N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)	111.3	N/A		92.8
75	x1. Sludge	111.3	N/A		92.8
76	MODERATE YELLOW CRUMBLY SLUDGE WITH CALCIUM SILICATE	111.3	1.0 - 1.5	1.2	92.8
77	N/A	N/A	1.0 - 1.5	0.0	0.0
78	N/A	N/A	1.0 - 1.5	0.0	0.0
79	x2. Other (See Note a)	0.0	N/A		0.0
80	N/A	N/A	0.0		0.0
81	N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)	0.0	N/A		0.0
83	y1. Sludge	0.0	N/A		0.0
84	N/A	N/A	1.0 - 1.5	0.0	0.0
85	N/A	N/A	1.0 - 1.5	0.0	0.0
86	N/A	N/A	1.0 - 1.5	0.0	0.0
87	y2. Roaster Oxides	0.0	N/A		0.0
88	N/A	N/A	1.5 - 4.0	0.0	0.0
89	N/A	N/A	1.5 - 4.0	0.0	0.0
90	N/A	N/A	1.5 - 4.0	0.0	0.0
91	y3. Salt	0.0	N/A		0.0
92	N/A	N/A	0.0		0.0
93	N/A	N/A	0.0		0.0
94	y4. Other (See Note a)	0.0	N/A		0.0
95	N/A	N/A	0.0		0.0
96	N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)	0.0	N/A		0.0
98	N/A	N/A	1.0 - 1.4	0.0	0.0
99	N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL	113.6	N/A		95.1
101	13. (ORGANIC SLUDGE) weight (111.3) kg was obtained by subtracting the weighed waste weight of (2.3) kg and the container net weight of (34.0) kg from the gross weight (147.6) kg of the waste container. (147.6) - (2.3) - (34.0) = (111.3) kg				
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.				
103	b. N/A				
104					

020

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14598	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14598	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	28.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	237751
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	723312
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	07/18/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	0920
22. Measured gross weight of loaded container, fully assembled (kgs):	147.6
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	325.4
23. Container closure date (mm/dd/yy):	05/14/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	722444
b. Filter Torque Wrench Calibration Due Date:	07/22/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	CN-115
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	90.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	113.6
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14598	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	2.3
31. Total volume of Solidified Organics (L):	92.8
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	95.1
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	98.0%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

J. STANTON	Jodi M Stanton	5/14/13
Enter Name	Signature	Date

Visual Examination Operator 2:

L. MUNTEAN	L. Muntean	5/14/13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		5-14-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP14566
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000183
4. Examination Start Date:	05/14/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	502
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	237751
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14566							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				N/A	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14566							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	i. Other inorganic materials (OI)				0.0	N/A		0.0
30		j. Graphite			0.0	N/A		0.0
31			N/A		N/A	2.2		0.0
32			N/A		N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34			N/A		N/A	2.3		0.0
35			N/A		N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37			N/A		N/A	2.0		0.0
38			N/A		N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40			N/A		N/A	3.0		0.0
41			N/A		N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43			N/A		N/A	2.0 - 5.0	0.0	0.0
44			N/A		N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46			N/A		N/A	2.0		0.0
47			N/A		N/A	2.0		0.0
48		p. Inorganic sorbents			0.0	N/A		0.0
49			N/A		N/A	0.1 - 2.8	0.0	0.0
50			N/A		N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52			N/A		N/A	0.0		0.0
53			N/A		N/A	0.0		0.0
54			N/A		N/A	0.0		0.0
55	r. Cellulosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57			N/A		N/A	0.9		0.0
58			N/A		N/A	0.9		0.0
59			N/A		N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61			N/A		N/A	0.8		0.0
62			N/A		N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64			N/A		N/A	1.0		0.0
65			N/A		N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14566							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.3	N/A		0.3
67	RUBBER TIGHTLY BOUND ON TOP (WAIP)				0.3	0.9 - 2.0	1.1	0.3
68	RUBBER (NSW)				N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				2.0	N/A		2.3
70	NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED				N/A	0.9		0.0
71	PLASTIC TIGHTLY BOUND ON TOP				0.6	0.9		0.7
72	TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)				1.4	0.9		1.6
73	N/A				N/A	0.9		0.0
74	x. Organic matrix (OR)				109.1	N/A		90.9
75		x1. Sludge			109.1	N/A		90.9
76		YELLOWISH BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE			109.1	1.0 - 1.5	1.2	90.9
77		N/A			N/A	1.0 - 1.5	0.0	0.0
78		N/A			N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80		N/A			N/A	0.0		0.0
81		N/A			N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84		N/A			N/A	1.0 - 1.5	0.0	0.0
85		N/A			N/A	1.0 - 1.5	0.0	0.0
86		N/A			N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88		N/A			N/A	1.5 - 4.0	0.0	0.0
89		N/A			N/A	1.5 - 4.0	0.0	0.0
90		N/A			N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92		N/A			N/A	0.0		0.0
93		N/A			N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95		N/A			N/A	0.0		0.0
96		N/A			N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98	N/A				N/A	1.0 - 1.4	0.0	0.0
99	N/A				N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				111.4	N/A		93.5
101	13. (ORGANIC SLUDGE) weight (109.1) kg was obtained by subtracting the weighed waste weight of (2.3) kg and the container net weight of (34.0) kg from the gross weight (145.4) kg of the waste container. (145.4) - (2.3) - (34.0) = (109.1) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

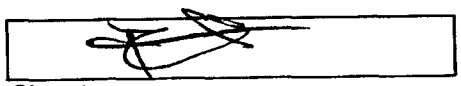
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14566	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14566	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	22.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	237751
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	723312
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	07/18/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	0929
22. Measured gross weight of loaded container, fully assembled (kgs):	145.4
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	320.5
23. Container closure date (mm/dd/yy):	05/14/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	722444
b. Filter Torque Wrench Calibration Due Date:	07/22/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	CN-193
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	70.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	111.4
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

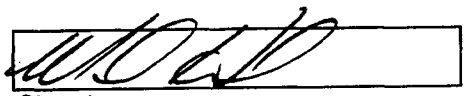
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14566	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	2.6
31. Total volume of Solidified Organics (L):	90.9
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	93.5
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	97.9%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

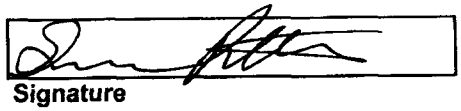
Visual Examination Operator 1:

R. CUMMINS		5-14-13
Enter Name	Signature	Date

Visual Examination Operator 2:

M. HADERLIE		5-14-13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		5-14-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP14580
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000183
4. Examination Start Date:	05/14/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	501
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	237743
Comments:	
N/A	

	A B C D	G	H I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003			
2	Container ID: SRP14580			
3	**Section 2: Waste Material Parameter (WMP) Estimates**			
4	9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density	12.Volume
5		By Weight (kg)	(kg/L)	(L)
6	a. Iron-based metals/alloys (IM)	0.0	N/A	0.0
7	N/A	N/A	8.0	0.0
8	N/A	N/A	8.0	0.0
9	b. Aluminum-based metals/alloys (AM)	0.0	N/A	0.0
10	N/A	N/A	3.0	0.0
11	N/A	N/A	3.0	0.0
12	c. Other metals (OM)	0.0	N/A	0.0
13	d. Lead	0.0	N/A	0.0
14	N/A	N/A	11.0	0.0
15	N/A	N/A	11.0	0.0
16	e. Beryllium	0.0	N/A	0.0
17	N/A	N/A	1.8	0.0
18	N/A	N/A	1.8	0.0
19	f. Depleted uranium	0.0	N/A	0.0
20	N/A	N/A	19.1	0.0
21	N/A	N/A	19.1	0.0
22	g. Copper	0.0	N/A	0.0
23	N/A	N/A	9.0	0.0
24	N/A	N/A	9.0	0.0
25	h. Other (See Note a)	0.0	N/A	0.0
26	N/A	N/A	0.0	0.0
27	N/A	N/A	0.0	0.0
28	N/A	N/A	0.0	0.0

	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003					
2	Container ID: SRP14580					
3	**Section 2: Waste Material Parameter (WMP) Estimates**					
4	9. Waste Material Parameter and Item Description		10. WMP Estimate	11. Density		12.Volume
5			By Weight (kg)	(kg/L)		(L)
29	i. Other inorganic materials (OI)		0.0	N/A		0.0
30	j. Graphite		0.0	N/A		0.0
31		N/A	N/A	2.2		0.0
32		N/A	N/A	2.2		0.0
33	k. Concrete		0.0	N/A		0.0
34		N/A	N/A	2.3		0.0
35		N/A	N/A	2.3		0.0
36	l. Glass		0.0	N/A		0.0
37		N/A	N/A	2.0		0.0
38		N/A	N/A	2.0		0.0
39	m. Firebrick		0.0	N/A		0.0
40		N/A	N/A	3.0		0.0
41		N/A	N/A	3.0		0.0
42	n. Ceramics		0.0	N/A		0.0
43		N/A	N/A	2.0 - 5.0	0.0	0.0
44		N/A	N/A	2.0 - 5.0	0.0	0.0
45	o. Sand		0.0	N/A		0.0
46		N/A	N/A	2.0		0.0
47		N/A	N/A	2.0		0.0
48	p. Inorganic sorbents		0.0	N/A		0.0
49		N/A	N/A	0.1 - 2.8	0.0	0.0
50		N/A	N/A	0.1 - 2.8	0.0	0.0
51	q. Other (See Note a)		0.0	N/A		0.0
52		N/A	N/A	0.0		0.0
53		N/A	N/A	0.0		0.0
54		N/A	N/A	0.0		0.0
55	r. Cellulosics (C)		0.0	N/A		0.0
56	s. Paper		0.0	N/A		0.0
57		N/A	N/A	0.9		0.0
58		N/A	N/A	0.9		0.0
59		N/A	N/A	0.9		0.0
60	t. Cardboard		0.0	N/A		0.0
61		N/A	N/A	0.8		0.0
62		N/A	N/A	0.8		0.0
63	u. Wood		0.0	N/A		0.0
64		N/A	N/A	1.0		0.0
65		N/A	N/A	1.0		0.0

	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003					
2	Container ID: SRP14580					
3	**Section 2: Waste Material Parameter (WMP) Estimates**					
4		9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density		12.Volume
5			By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)		0.5	N/A		0.5
67		RUBBER	0.2	0.9 - 2.0	1.1	0.2
68		RUBBER BANDS TIGHTLY BOUND ON TOP (WAIP)	0.3	0.9 - 2.0	1.1	0.3
69	w. Plastics (waste materials) (PW)		3.1	N/A		3.5
70		PLASTIC TIGHTLY BOUND ON TOP	1.7	0.9		1.9
71		NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
72		1 TRAY LINER AND 1 BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
73		N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)		103.0	N/A		85.8
75	x1. Sludge		103.0	N/A		85.8
76		GRAYISH OLIVE PUTTY LIKE SLUDGE WITH CALCIUM SILICATE	103.0	1.0 - 1.5	1.2	85.8
77		N/A	N/A	1.0 - 1.5	0.0	0.0
78		N/A	N/A	1.0 - 1.5	0.0	0.0
79	x2. Other (See Note a)		0.0	N/A		0.0
80		N/A	N/A	0.0		0.0
81		N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)		0.0	N/A		0.0
83	y1. Sludge		0.0	N/A		0.0
84		N/A	N/A	1.0 - 1.5	0.0	0.0
85		N/A	N/A	1.0 - 1.5	0.0	0.0
86		N/A	N/A	1.0 - 1.5	0.0	0.0
87	y2. Roaster Oxides		0.0	N/A		0.0
88		N/A	N/A	1.5 - 4.0	0.0	0.0
89		N/A	N/A	1.5 - 4.0	0.0	0.0
90		N/A	N/A	1.5 - 4.0	0.0	0.0
91	y3. Salt		0.0	N/A		0.0
92		N/A	N/A	0.0		0.0
93		N/A	N/A	0.0		0.0
94	y4. Other (See Note a)		0.0	N/A		0.0
95		N/A	N/A	0.0		0.0
96		N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)		0.0	N/A		0.0
98		N/A	N/A	1.0 - 1.4	0.0	0.0
99		N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL		106.6	N/A		89.8
101	13. (ORGANIC SLUDGE) weight (103.0) kg was obtained by subtracting the weighed waste weight of (3.6) kg and the container net weight of (34.0) kg from the gross weight (140.6) kg of the waste container. (140.6) - (3.6) - (34.0) = (103.0) kg					
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.					
103	b.	N/A				
104						

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14580	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14580	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	26.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	237743
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	723312
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	07/18/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	0945
22. Measured gross weight of loaded container, fully assembled (kgs):	140.6
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	310.0
23. Container closure date (mm/dd/yy):	05/14/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	722444
b. Filter Torque Wrench Calibration Due Date:	07/22/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	CN-119
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	80.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	106.6
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14580	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	4.0
31. Total volume of Solidified Organics (L):	85.8
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	89.8
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	96.6%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

L. MUNTEAN	L. Muntean	5/14/13
Enter Name	Signature	Date

Visual Examination Operator 2:

J. STANTON	Jodi M. Stanton	5/14/13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		5-14-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP14605
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000183
4. Examination Start Date:	05/14/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	502
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	237751
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14605							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.2	N/A		0.0
7				METAL	0.2	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14605							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5					0.0	N/A		0.0
29	i.	Other inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		N/A	2.2		0.0
31				N/A	N/A	2.2		0.0
32				N/A	0.0	N/A		0.0
33		k.	Concrete		N/A	2.3		0.0
34				N/A	N/A	2.3		0.0
35				N/A	0.0	N/A		0.0
36		l.	Glass		N/A	2.0		0.0
37				N/A	N/A	2.0		0.0
38				N/A	0.0	N/A		0.0
39		m.	Firebrick		N/A	3.0		0.0
40				N/A	N/A	3.0		0.0
41				N/A	0.0	N/A		0.0
42		n.	Ceramics		N/A	2.0 - 5.0	0.0	0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	0.0	N/A		0.0
45		o.	Sand		N/A	2.0		0.0
46				N/A	N/A	2.0		0.0
47				N/A	0.0	N/A		0.0
48		p.	Inorganic sorbents		N/A	0.1 - 2.8	0.0	0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	0.0	N/A		0.0
51		q.	Other (See Note a)		N/A	0.0		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	0.0	N/A		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		N/A	0.9		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	0.0	N/A		0.0
60		t.	Cardboard		N/A	0.8		0.0
61				N/A	N/A	0.8		0.0
62				N/A	0.0	N/A		0.0
63		u.	Wood		N/A	1.0		0.0
64				N/A	N/A	1.0		0.0
65				N/A				

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14605							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4				9. Waste Material Parameter and Item Description	10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
66	v. Rubber (R)				0.3	N/A		0.3
67				RUBBER TIGHTLY BOUND ON TOP (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68				RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				2.3	N/A		2.6
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
72				PLASTIC TIGHTLY BOUND ON TOP	0.9	0.9		1.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				99.2	N/A		82.7
75		x1. Sludge			99.2	N/A		82.7
76				GRAYISH OLIVE CRUMBLY SLUDGE WITH CALCIUM SILICATE	99.2	1.0 - 1.5	1.2	82.7
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95				N/A	N/A	0.0		0.0
96				N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98				N/A	N/A	1.0 - 1.4	0.0	0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				102.0	N/A		85.6
101	13. (ORGANIC SLUDGE) weight (99.2) kg was obtained by subtracting the weighed waste weight of (2.8) kg and the container net weight of (34.0) kg from the gross weight (136.0) kg of the waste container. (136.0) - (2.8) - (34.0) = (99.2) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

041

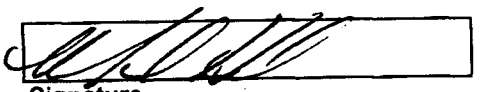
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14605	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14605	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	32.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	237751
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	723312
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	07/18/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	0955
22. Measured gross weight of loaded container, fully assembled (kgs):	136.0
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	299.8
23. Container closure date (mm/dd/yy):	05/14/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	722444
b. Filter Torque Wrench Calibration Due Date:	07/22/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	CN-192
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	100.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	102.0
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

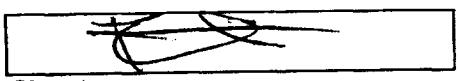
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14605	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	2.9
31. Total volume of Solidified Organics (L):	82.7
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	85.6
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	97.3%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

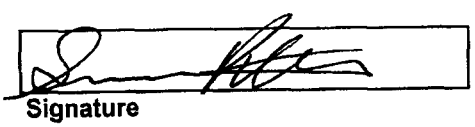
Visual Examination Operator 1:

M. HADERLIE		5-14-13
Enter Name	Signature	Date

Visual Examination Operator 2:

R. CUMMINS		5-14-13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		5-14-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP14597
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
b. Container Type: 55 gal. drum or SWB:	55 GAL.
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000183
4. Examination Start Date:	05/14/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	501
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	237751
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14597							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				N/A	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003					
2	Container ID: SRP14597					
3	**Section 2: Waste Material Parameter (WMP) Estimates**					
4	**9. Waste Material Parameter and Item Description**		**10. WMP Estimate**	**11. Density**		**12.Volume**
5			**By Weight (kg)**	**(kg/L)**		**(L)**
29	l. Other inorganic materials (Ol)		0.0	N/A		0.0
30	j. Graphite		0.0	N/A		0.0
31		N/A	N/A	2.2		0.0
32		N/A	N/A	2.2		0.0
33	k. Concrete		0.0	N/A		0.0
34		N/A	N/A	2.3		0.0
35		N/A	N/A	2.3		0.0
36	l. Glass		0.0	N/A		0.0
37		N/A	N/A	2.0		0.0
38		N/A	N/A	2.0		0.0
39	m. Firebrick		0.0	N/A		0.0
40		N/A	N/A	3.0		0.0
41		N/A	N/A	3.0		0.0
42	n. Ceramics		0.0	N/A		0.0
43		N/A	N/A	2.0 - 5.0	0.0	0.0
44		N/A	N/A	2.0 - 5.0	0.0	0.0
45	o. Sand		0.0	N/A		0.0
46		N/A	N/A	2.0		0.0
47		N/A	N/A	2.0		0.0
48	p. Inorganic sorbents		0.0	N/A		0.0
49		N/A	N/A	0.1 - 2.8	0.0	0.0
50		N/A	N/A	0.1 - 2.8	0.0	0.0
51	q. Other (See Note a)		0.0	N/A		0.0
52		N/A	N/A	0.0		0.0
53		N/A	N/A	0.0		0.0
54		N/A	N/A	0.0		0.0
55	r. Cellulosics (C)		0.0	N/A		0.0
56	s. Paper		0.0	N/A		0.0
57		N/A	N/A	0.9		0.0
58		N/A	N/A	0.9		0.0
59		N/A	N/A	0.9		0.0
60	t. Cardboard		0.0	N/A		0.0
61		N/A	N/A	0.8		0.0
62		N/A	N/A	0.8		0.0
63	u. Wood		0.0	N/A		0.0
64		N/A	N/A	1.0		0.0
65		N/A	N/A	1.0		0.0

	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003					
2	Container ID: SRP14597					
3	Section 2: Waste Material Parameter (WMP) Estimates					
4		9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density		12.Volume
5			By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)		0.5	N/A		0.5
67		RUBBER BANDS TIGHTLY BOUND ON TOP (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68		RUBBER	0.2	0.9 - 2.0	1.1	0.2
69	w. Plastics (waste materials) (PW)		2.9	N/A		3.3
70		NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71		TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
72		PLASTIC TIGHTLY BOUND ON TOP	1.5	0.9		1.7
73		N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)		109.6	N/A		91.3
75	x1. Sludge		109.6	N/A		91.3
76		VERY PALE ORANGE POWDERY SLUDGE WITH CALCIUM SILICATE	109.6	1.0 - 1.5	1.2	91.3
77		N/A	N/A	1.0 - 1.5	0.0	0.0
78		N/A	N/A	1.0 - 1.5	0.0	0.0
79	x2. Other (See Note a)		0.0	N/A		0.0
80		N/A	N/A	0.0		0.0
81		N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)		0.0	N/A		0.0
83	y1. Sludge		0.0	N/A		0.0
84		N/A	N/A	1.0 - 1.5	0.0	0.0
85		N/A	N/A	1.0 - 1.5	0.0	0.0
86		N/A	N/A	1.0 - 1.5	0.0	0.0
87	y2. Roaster Oxides		0.0	N/A		0.0
88		N/A	N/A	1.5 - 4.0	0.0	0.0
89		N/A	N/A	1.5 - 4.0	0.0	0.0
90		N/A	N/A	1.5 - 4.0	0.0	0.0
91	y3. Salt		0.0	N/A		0.0
92		N/A	N/A	0.0		0.0
93		N/A	N/A	0.0		0.0
94	y4. Other (See Note a)		0.0	N/A		0.0
95		N/A	N/A	0.0		0.0
96		N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)		0.0	N/A		0.0
98		N/A	N/A	1.0 - 1.4	0.0	0.0
99		N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL		113.0	N/A		95.1
101	13. (ORGANIC SLUDGE) weight (109.6) kg was obtained by subtracting the weighed waste weight of (3.4) kg and the container net weight of (34.0) kg from the gross weight (147.0) kg of the waste container. (147.0) - (3.4) - (34.0) = (109.6) kg					
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.					
103	b.	N/A				
104						

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14597	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14597	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	28.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	237751
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	723312
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	07/18/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1015
22. Measured gross weight of loaded container, fully assembled (kgs):	147.0
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	324.1
23. Container closure date (mm/dd/yy):	05/14/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	722444
b. Filter Torque Wrench Calibration Due Date:	07/22/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	CN-110
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	90.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	113.0
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14597	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	3.8
31. Total volume of Solidified Organics (L):	91.3
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	95.1
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	97.0%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

J. STANTON	Jodi M. Stanton	5/14/13
Enter Name	Signature	Date

Visual Examination Operator 2:

L. MUNTEAN	L. Muntean	5/14/13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		5-14-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	SRP14625
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location (Airlock):	IN-RWMC-ARP-5
3.	Batch Number:	IN-SRP-VE-000183
4.	Examination Start Date:	05/14/13
5.	Procedure CCP-TP-006, Rev.:	17
6.	a. Drum Packing Station (DPS) Number:	502
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	237749
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14625							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4				9. Waste Material Parameter and Item Description	10. WMP Estimate By Weight (kg)	11. Density (kg/L)	12.Volume (L)	
5					0.4	N/A	0.1	
6	a.	Iron-based metals/alloys (IM)			0.4	8.0	0.1	
7				METAL TIGHTLY BOUND ON TOP	N/A	8.0	0.0	
8				N/A	0.0	N/A	0.0	
9	b.	Aluminum-based metals/alloys (AM)			N/A	3.0	0.0	
10				N/A	N/A	3.0	0.0	
11				N/A	0.0	N/A	0.0	
12	c.	Other metals (OM)			0.0	N/A	0.0	
13		d.	Lead		N/A	11.0	0.0	
14				N/A	N/A	11.0	0.0	
15				N/A	0.0	N/A	0.0	
16		e.	Beryllium		N/A	1.8	0.0	
17				N/A	N/A	1.8	0.0	
18				N/A	0.0	N/A	0.0	
19		f.	Depleted uranium		N/A	19.1	0.0	
20				N/A	N/A	19.1	0.0	
21				N/A	0.0	N/A	0.0	
22		g.	Copper		N/A	9.0	0.0	
23				N/A	N/A	9.0	0.0	
24				N/A	0.0	N/A	0.0	
25		h.	Other (See Note a)		N/A	0.0	0.0	
26				N/A	N/A	0.0	0.0	
27				N/A	N/A	0.0	0.0	
28				N/A				

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14625							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	l. Other inorganic materials (OI)				0.0	N/A		0.0
30		j. Graphite			0.0	N/A		0.0
31			N/A		N/A	2.2		0.0
32			N/A		N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34			N/A		N/A	2.3		0.0
35			N/A		N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37			N/A		N/A	2.0		0.0
38			N/A		N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40			N/A		N/A	3.0		0.0
41			N/A		N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43			N/A		N/A	2.0 - 5.0	0.0	0.0
44			N/A		N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46			N/A		N/A	2.0		0.0
47			N/A		N/A	2.0		0.0
48		p. Inorganic sorbents			0.0	N/A		0.0
49			N/A		N/A	0.1 - 2.8	0.0	0.0
50			N/A		N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52			N/A		N/A	0.0		0.0
53			N/A		N/A	0.0		0.0
54			N/A		N/A	0.0		0.0
55	r. Cellulosics (C)				18.0	N/A		20.0
56		s. Paper			18.0	N/A		20.0
57			PAPER AND LEATHER TIGHTLY BOUND ON TOP		18.0	0.9		20.0
58			N/A		N/A	0.9		0.0
59			N/A		N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61			N/A		N/A	0.8		0.0
62			N/A		N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64			N/A		N/A	1.0		0.0
65			N/A		N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14625							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.7	N/A		0.7
67				RUBBER TIGHTLY BOUND ON TOP (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68				RUBBER TIGHTLY BOUND ON TOP	0.4	0.9 - 2.0	1.1	0.4
69	w. Plastics (waste materials) (PW)				1.6	N/A		1.8
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	0.5	0.9		0.6
72				PLASTIC TIGHTLY BOUND ON TOP	1.1	0.9		1.2
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				47.9	N/A		39.9
75		x1. Sludge			47.9	N/A		39.9
76				MODERATE BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE	47.9	1.0 - 1.5	1.2	39.9
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95				N/A	N/A	0.0		0.0
96				N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98				N/A	N/A	1.0 - 1.4	0.0	0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				68.6	N/A		62.5
101	13. (ORGANIC SLUDGE) weight (47.9) kg was obtained by subtracting the weighed waste weight of (20.7) kg and the container net weight of (34.0) kg from the gross weight (102.6) kg of the waste container. (102.6) - (20.7) - (34.0) = (47.9) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

055

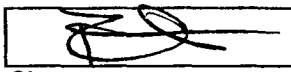
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14625	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14625	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	24.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	237749
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	723312
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	07/18/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1036
22. Measured gross weight of loaded container, fully assembled (kgs):	102.6
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	226.2
23. Container closure date (mm/dd/yy):	05/14/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	722444
b. Filter Torque Wrench Calibration Due Date:	07/22/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	JM-683
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	75.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	68.6
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

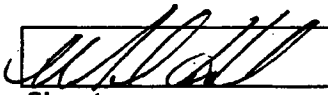
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14625	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	22.6
31. Total volume of Solidified Organics (L):	39.9
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	62.5
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	69.8%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

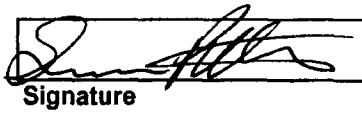
Visual Examination Operator 1:

R. CUMMINS		5-14-13
Enter Name	Signature	Date

Visual Examination Operator 2:

M. HADERLIE		5-14-13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		5-14-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP14623
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000183
4. Examination Start Date:	05/14/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	501
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	237749
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14623							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5					0.0	N/A		0.0
6	a. Iron-based metals/alloys (IM)				N/A	8.0		0.0
7				N/A	N/A	8.0		0.0
8				N/A	0.0	N/A		0.0
9	b. Aluminum-based metals/alloys (AM)				N/A	3.0		0.0
10				N/A	N/A	3.0		0.0
11				N/A	0.0	N/A		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			N/A	11.0		0.0
14				N/A	N/A	11.0		0.0
15				N/A	0.0	N/A		0.0
16		e. Beryllium			N/A	1.8		0.0
17				N/A	N/A	1.8		0.0
18				N/A	0.0	N/A		0.0
19		f. Depleted uranium			N/A	19.1		0.0
20				N/A	N/A	19.1		0.0
21				N/A	0.0	N/A		0.0
22		g. Copper			N/A	9.0		0.0
23				N/A	N/A	9.0		0.0
24				N/A	0.0	N/A		0.0
25		h. Other (See Note a)			N/A	0.0		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A				

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14623							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	l.	Other inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003					
2	Container ID: SRP14623					
3	**Section 2: Waste Material Parameter (WMP) Estimates**					
4		**9. Waste Material Parameter and Item Description**	**10. WMP Estimate**	**11. Density**		**12.Volume**
5			**By Weight (kg)**	**(kg/L)**		**(L)**
66	v. Rubber (R)		0.3	N/A		0.3
67		RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
68		RUBBER BANDS TIGHTLY BOUND ON TOP (WAIP)	0.3	0.9 - 2.0	1.1	0.3
69	w. Plastics (waste materials) (PW)		1.4	N/A		1.6
70		PLASTIC (NSW)	N/A	0.9		0.0
71		NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
72		1 TRAY LINER AND 1 BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
73		N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)		91.1	N/A		75.9
75	x1. Sludge		91.1	N/A		75.9
76		PALE YELLOWISH ORANGE POWDERY SLUDGE WITH CALCIUM SILICATE	91.1	1.0 - 1.5	1.2	75.9
77		N/A	N/A	1.0 - 1.5	0.0	0.0
78		N/A	N/A	1.0 - 1.5	0.0	0.0
79	x2. Other (See Note a)		0.0	N/A		0.0
80		N/A	N/A	0.0		0.0
81		N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)		0.0	N/A		0.0
83	y1. Sludge		0.0	N/A		0.0
84		N/A	N/A	1.0 - 1.5	0.0	0.0
85		N/A	N/A	1.0 - 1.5	0.0	0.0
86		N/A	N/A	1.0 - 1.5	0.0	0.0
87	y2. Roaster Oxides		0.0	N/A		0.0
88		N/A	N/A	1.5 - 4.0	0.0	0.0
89		N/A	N/A	1.5 - 4.0	0.0	0.0
90		N/A	N/A	1.5 - 4.0	0.0	0.0
91	y3. Salt		0.0	N/A		0.0
92		N/A	N/A	0.0		0.0
93		N/A	N/A	0.0		0.0
94	y4. Other (See Note a)		0.0	N/A		0.0
95		N/A	N/A	0.0		0.0
96		N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)		0.0	N/A		0.0
98		N/A	N/A	1.0 - 1.4	0.0	0.0
99		N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL		92.8	N/A		77.8
101	13. (ORGANIC SLUDGE) weight (91.1) kg was obtained by subtracting the weighed waste weight of (1.7) kg and the container net weight of (34.0) kg from the gross weight (126.8) kg of the waste container. (126.8) - (1.7) - (34.0) = (91.1) kg					
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.					
103	b.	N/A				
104						

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Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14623	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14623	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	22.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	237749
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	723312
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	07/18/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1039
22. Measured gross weight of loaded container, fully assembled (kgs):	126.8
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	279.5
23. Container closure date (mm/dd/yy):	05/14/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	722444
b. Filter Torque Wrench Calibration Due Date:	07/22/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	JM-692
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	70.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	92.8
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14623	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	1.9
31. Total volume of Solidified Organics (L):	75.9
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	77.8
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	98.2%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

L. MUNTEAN	L. Muntean	5/14/13
Enter Name	Signature	Date

Visual Examination Operator 2:

J. STANTON	Jodi M. Stanton	5/14/13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		5-14-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP14618
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000183
4. Examination Start Date:	05/14/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	502
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	237751
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14618							
3	**Section 2: Waste Material Parameter (WMP) Estimates**							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.4	N/A		0.1
7				METAL	0.4	8.0		0.1
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14618							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	l. Other Inorganic materials (OI)				0.0	N/A		0.0
30		j. Graphite			0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p. Inorganic sorbents			0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r. Cellulosics (C)				6.6	N/A		7.3
56		s. Paper			6.6	N/A		7.3
57				PAPER AND LEATHER TIGHTLY BOUND ON TOP	6.6	0.9		7.3
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14618							
3	**Section 2: Waste Material Parameter (WMP) Estimates**							
4				**9. Waste Material Parameter and Item Description**	**10. WMP Estimate**	**11. Density**		**12.Volume**
5					**By Weight (kg)**	**(kg/L)**		**(L)**
66	v. Rubber (R)				0.8	N/A		0.8
67				RUBBER TIGHTLY BOUND ON TOP (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68				RUBBER	0.5	0.9 - 2.0	1.1	0.5
69	w. Plastics (waste materials) (PW)				1.3	N/A		1.4
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				TRAY LINER TIGHTLY BOUND ON TOP (WAIP)	0.9	0.9		1.0
72				PLASTIC TIGHTLY BOUND ON TOP	0.4	0.9		0.4
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				124.5	N/A		103.8
75		x1. Sludge			124.5	N/A		103.8
76				DUSKY YELLOW CRUMBLY SLUDGE WITH CALCIUM SILICATE	124.5	1.0 - 1.5	1.2	103.8
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95				N/A	N/A	0.0		0.0
96				N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98				N/A	N/A	1.0 - 1.4	0.0	0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				133.6	N/A		113.4
101	13. (ORGANIC SLUDGE) weight (124.5) kg was obtained by subtracting the weighed waste weight of (9.1) kg and the container net weight of (34.0) kg from the gross weight (167.6) kg of the waste container. (167.6) - (9.1) - (34.0) = (124.5) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

069

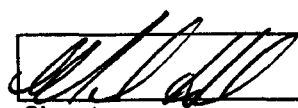
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14618	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14618	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	31.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	237751
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	723312
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	07/18/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1100
22. Measured gross weight of loaded container, fully assembled (kgs):	167.6
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	369.5
23. Container closure date (mm/dd/yy):	05/14/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	722444
b. Filter Torque Wrench Calibration Due Date:	07/22/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	CN-156
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	95.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	133.6
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

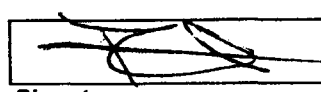
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14618	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	9.6
31. Total volume of Solidified Organics (L):	103.8
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	113.4
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	93.2%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

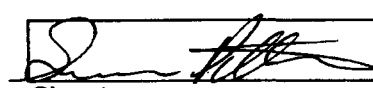
Visual Examination Operator 1:

M. HADERLIE		5-14-13
Enter Name	Signature	Date

Visual Examination Operator 2:

R. CUMMINS		5/14/13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		5-14-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP14624
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
b. Container Type: 55 gal. drum or SWB:	55 GAL.
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000183
4. Examination Start Date:	05/14/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	501
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	237749
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14624							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				N/A	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14624							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4 5	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
29	l. Other inorganic materials (OI)				0.0	N/A		0.0
30		j. Graphite			0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p. Inorganic sorbents			0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r. Cellulosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14624							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.3	N/A		0.3
67	RUBBER BANDS TIGHTLY BOUND ON TOP (WAIP)				0.3	0.9 - 2.0	1.1	0.3
68	N/A				N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				3.4	N/A		3.8
70	NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED				N/A	0.9		0.0
71	TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)				1.4	0.9		1.6
72	PLASTIC TIGHTLY BOUND ON TOP				2.0	0.9		2.2
73	N/A				N/A	0.9		0.0
74	x. Organic matrix (OR)				115.7	N/A		96.4
75		x1. Sludge			115.7	N/A		96.4
76		MODERATE YELLOWISH BROWN PUTTY LIKE SLUDGE WITH CALCIUM SILICATE			115.7	1.0 - 1.5	1.2	96.4
77		N/A			N/A	1.0 - 1.5	0.0	0.0
78		N/A			N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80		N/A			N/A	0.0		0.0
81		N/A			N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84		N/A			N/A	1.0 - 1.5	0.0	0.0
85		N/A			N/A	1.0 - 1.5	0.0	0.0
86		N/A			N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88		N/A			N/A	1.5 - 4.0	0.0	0.0
89		N/A			N/A	1.5 - 4.0	0.0	0.0
90		N/A			N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92		N/A			N/A	0.0		0.0
93		N/A			N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95		N/A			N/A	0.0		0.0
96		N/A			N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98	N/A				N/A	1.0 - 1.4	0.0	0.0
99	N/A				N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				119.4	N/A		100.5
101	13. (ORGANIC SLUDGE) weight (115.7) kg was obtained by subtracting the weighed waste weight of (3.7) kg and the container net weight of (34.0) kg from the gross weight (153.4) kg of the waste container. (153.4) - (3.7) - (34.0) = (115.7) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14624	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Container ID: SRP14624		
Section 4: Waste Packaging Data		
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)		32.0
16. Inner Bags:		
a. Total Number of Inner Bag(s):		0
b. Closure Method (See Below for Proper Designator):		N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)		
c. Layers of Confinement (>4 liters):		0
d. Estimated Weight of Each Inner Bag (kgs):		0.0
17. Liner Bags:		
a. Total Number of Liner Bag(s):		1
b. Closure Method (See Below for Proper Designator):		TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)		
c. Estimated Weight of Each Liner Bag (kgs):		0.9
18. Rigid Liner Present? (Y/N):		Y
19. Rigid Liner with NO lid Verified? (Y/N):		Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):		Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:		
a. Container Manufacturer Lot Number:		237749
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:		723312
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:		07/18/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):		Y
e. Time the container was closed:		1117
22. Measured gross weight of loaded container, fully assembled (kgs):		153.4
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)		338.2
23. Container closure date (mm/dd/yy):		05/14/13
24. Container Filter Torque Data:		
a. Filter Torque Wrench Serial/ID Number:		722444
b. Filter Torque Wrench Calibration Due Date:		07/22/13
c. Filter Model No.:		NUCFIL-019DS
d. Filter Serial No.:		JM-687
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))		N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):		Y
25. Percent fill of container:		100.0%
26. Total layers of confinement:		1
27. Measured net weight of waste (kgs):		119.4
28. Estimated plastic added from packaging, including rigid liner (kgs):		5.4
29. Estimated steel added from packaging (kgs):		28.6
29a Total net weight of fully assembled container (kgs):		34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14624	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	4.1
31. Total volume of Solidified Organics (L):	96.4
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	100.5
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	96.9%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

J. STANTON	Jodi M Stanton	5/14/13
Enter Name	Signature	Date

Visual Examination Operator 2:

L. MUNTEAN	L. Munteam	5/14/13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		5-14-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	SRP14617
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location (Airlock):	IN-RWMC-ARP-5
3.	Batch Number:	IN-SRP-VE-000183
4.	Examination Start Date:	05/14/13
5.	Procedure CCP-TP-006, Rev.:	17
6.	a. Drum Packing Station (DPS) Number:	502
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	237751
Comments:		
NOTHING ADDED TO THE CONTAINER VERIFIED		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14617							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.1	N/A		0.0
7				METAL	0.1	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14617							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	i. Other inorganic materials (OI)				0.0	N/A		0.0
30		j. Graphite			0.0	N/A		0.0
31			N/A		N/A	2.2		0.0
32			N/A		N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34			N/A		N/A	2.3		0.0
35			N/A		N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37			N/A		N/A	2.0		0.0
38			N/A		N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40			N/A		N/A	3.0		0.0
41			N/A		N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43			N/A		N/A	2.0 - 5.0	0.0	0.0
44			N/A		N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46			N/A		N/A	2.0		0.0
47			N/A		N/A	2.0		0.0
48		p. Inorganic sorbents			0.0	N/A		0.0
49			N/A		N/A	0.1 - 2.8	0.0	0.0
50			N/A		N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52			N/A		N/A	0.0		0.0
53			N/A		N/A	0.0		0.0
54			N/A		N/A	0.0		0.0
55	r. Cellulosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57			N/A		N/A	0.9		0.0
58			N/A		N/A	0.9		0.0
59			N/A		N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61			N/A		N/A	0.8		0.0
62			N/A		N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64			N/A		N/A	1.0		0.0
65			N/A		N/A	1.0		0.0

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	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14617							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.6	N/A		0.5
67	RUBBER TIGHTLY BOUND ON TOP (WAIP)				0.6	0.9 - 2.0	1.1	0.5
68	N/A				N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				3.6	N/A		4.0
70	NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED				N/A	0.9		0.0
71	PLASTIC TIGHTLY BOUND ON TOP				0.8	0.9		0.9
72	2 TRAY LINERS AND 2 BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)				2.8	0.9		3.1
73	N/A				N/A	0.9		0.0
74	x. Organic matrix (OR)				109.1	N/A		90.9
75		x1. Sludge			109.1	N/A		90.9
76		MODERATE BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE			109.1	1.0 - 1.5	1.2	90.9
77		N/A			N/A	1.0 - 1.5	0.0	0.0
78		N/A			N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80		N/A			N/A	0.0		0.0
81		N/A			N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84		N/A			N/A	1.0 - 1.5	0.0	0.0
85		N/A			N/A	1.0 - 1.5	0.0	0.0
86		N/A			N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88		N/A			N/A	1.5 - 4.0	0.0	0.0
89		N/A			N/A	1.5 - 4.0	0.0	0.0
90		N/A			N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92		N/A			N/A	0.0		0.0
93		N/A			N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95		N/A			N/A	0.0		0.0
96		N/A			N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98	N/A				N/A	1.0 - 1.4	0.0	0.0
99	N/A				N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				113.4	N/A		95.4
101	13. (ORGANIC SLUDGE) weight (109.1) kg was obtained by subtracting the weighed waste weight of (4.3) kg and the container net weight of (34.0) kg from the gross weight (147.4) kg of the waste container. (147.4) - (4.3) - (34.0) = (109.1) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

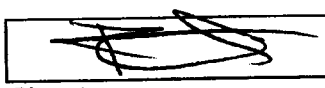
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14617	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14617	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	32.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	237751
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	723312
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	07/18/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1240
22. Measured gross weight of loaded container, fully assembled (kgs):	147.4
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	325.0
23. Container closure date (mm/dd/yy):	05/14/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	722444
b. Filter Torque Wrench Calibration Due Date:	07/22/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	CN-171
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	100.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	113.4
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

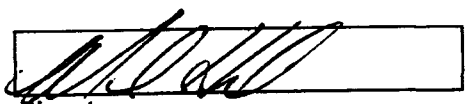
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14617	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	4.5
31. Total volume of Solidified Organics (L):	90.9
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	95.4
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	96.2%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

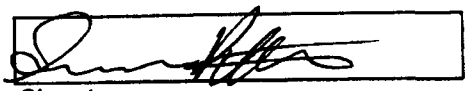
Visual Examination Operator 1:

R. CUMMINS		5-14-13
Enter Name	Signature	Date

Visual Examination Operator 2:

M. HADERLIE		5-14-13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		5-14-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP14632
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000183
4. Examination Start Date:	05/14/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	501
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	237749
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14632							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				N/A	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14632							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	i.	Other inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14632							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.3	N/A		0.3
67				RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
68				RUBBER BANDS TIGHTLY BOUND ON TOP (WAIP)	0.3	0.9 - 2.0	1.1	0.3
69	w. Plastics (waste materials) (PW)				1.9	N/A		2.2
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				1 BREACHED AND EMPTY BOTTLE WITH PLASTIC TIGHTLY BOUND ON TOP	0.5	0.9		0.6
72				1 BAG OUT STUB AND 1 TRAY LINER TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				112.2	N/A		93.5
75		x1. Sludge			112.2	N/A		93.5
76				MODERATE OLIVE BROWN PUTTY LIKE SLUDGE WITH CALCIUM SILICATE	112.2	1.0 - 1.5	1.2	93.5
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95				N/A	N/A	0.0		0.0
96				N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98				N/A	N/A	1.0 - 1.4	0.0	0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				114.4	N/A		96.0
101	13. (ORGANIC SLUDGE) weight (112.2) kg was obtained by subtracting the weighed waste weight of (2.2) kg and the container net weight of (34.0) kg from the gross weight (148.4) kg of the waste container. (148.4) - (2.2) - (34.0) = (112.2) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

090

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14632	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14632	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	28.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	237749
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	723312
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	07/18/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1302
22. Measured gross weight of loaded container, fully assembled (kgs):	148.4
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	327.2
23. Container closure date (mm/dd/yy):	05/14/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	722444
b. Filter Torque Wrench Calibration Due Date:	07/22/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	CN-151
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	90.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	114.4
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14632	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	2.5
31. Total volume of Solidified Organics (L):	93.5
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	96.0
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	98.1%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

L. MUNTEAN	L. Munteans	5/14/13
Enter Name	Signature	Date

Visual Examination Operator 2:

J. STANTON	Jodi M Stanton	5/14/13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		5-14-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP14626
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000183
4. Examination Start Date:	05/14/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	502
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	237749
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14626							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				N/A	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14626							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4				9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	i.	Other inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14626							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
66	v. Rubber (R)				0.3	N/A		0.3
67	RUBBER TIGHTLY BOUND ON TOP (WAIP)				0.3	0.9 - 2.0	1.1	0.3
68	N/A				N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				2.0	N/A		2.3
70	NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED				N/A	0.9		0.0
71	TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)				1.4	0.9		1.6
72	PLASTIC TIGHTLY BOUND ON TOP				0.6	0.9		0.7
73	N/A				N/A	0.9		0.0
74	x. Organic matrix (OR)				101.3	N/A		84.4
75		x1. Sludge			101.3	N/A		84.4
76		YELLOWISH GRAY CRUMBLY SLUDGE WITH CALCIUM SILICATE			101.3	1.0 - 1.5	1.2	84.4
77		N/A			N/A	1.0 - 1.5	0.0	0.0
78		N/A			N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80		N/A			N/A	0.0		0.0
81		N/A			N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84		N/A			N/A	1.0 - 1.5	0.0	0.0
85		N/A			N/A	1.0 - 1.5	0.0	0.0
86		N/A			N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88		N/A			N/A	1.5 - 4.0	0.0	0.0
89		N/A			N/A	1.5 - 4.0	0.0	0.0
90		N/A			N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92		N/A			N/A	0.0		0.0
93		N/A			N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95		N/A			N/A	0.0		0.0
96		N/A			N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98	N/A				N/A	1.0 - 1.4	0.0	0.0
99	N/A				N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				103.6	N/A		87.0
101	13. (ORGANIC SLUDGE) weight (101.3) kg was obtained by subtracting the weighed waste weight of (2.3) kg and the container net weight of (34.0) kg from the gross weight (137.6) kg of the waste container. (137.6) - (2.3) - (34.0) = (101.3) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14626	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14626	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	29.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	237749
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	723312
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	07/18/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1310
22. Measured gross weight of loaded container, fully assembled (kgs):	137.6
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	303.4
23. Container closure date (mm/dd/yy):	05/14/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	722444
b. Filter Torque Wrench Calibration Due Date:	07/22/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	JM-693
e. Filter Serial No.: (N/A, If container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	90.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	103.6
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14626	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	2.6
31. Total volume of Solidified Organics (L):	84.4
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	87.0
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	97.8%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

M. HADERLIE		5-14-13
Enter Name	Signature	Date

Visual Examination Operator 2:

R. CUMMINS		5-14-13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		5-14-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP14611
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
b. Container Type: 55 gal. drum or SWB:	55 GAL.
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000183
4. Examination Start Date:	05/14/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	501
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	237751
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14611							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5					0.2	N/A		0.0
6	a. Iron-based metals/alloys (IM)				0.2	8.0		0.0
7				METAL	N/A	8.0		0.0
8				N/A	0.0	N/A		0.0
9	b. Aluminum-based metals/alloys (AM)				N/A	3.0		0.0
10				N/A	N/A	3.0		0.0
11				N/A	0.0	N/A		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			N/A	11.0		0.0
14				N/A	N/A	11.0		0.0
15				N/A	0.0	N/A		0.0
16		e. Beryllium			N/A	1.8		0.0
17				N/A	N/A	1.8		0.0
18				N/A	0.0	N/A		0.0
19		f. Depleted uranium			N/A	19.1		0.0
20				N/A	N/A	19.1		0.0
21				N/A	0.0	N/A		0.0
22		g. Copper			N/A	9.0		0.0
23				N/A	N/A	9.0		0.0
24				N/A	0.0	N/A		0.0
25		h. Other (See Note a)			N/A	0.0		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A				

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14611							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	i.	Other inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.2	N/A		0.2
56		s.	Paper		0.2	N/A		0.2
57				PAPER (NSW)	N/A	0.9		0.0
58				LEATHER GLOVE	0.2	0.9		0.2
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				CARDBOARD (NSW)	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				WOOD (NSW)	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14611							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.3	N/A		0.3
67	RUBBER BANDS TIGHTLY BOUND ON TOP (WAIP)				0.3	0.9 - 2.0	1.1	0.3
68	RUBBER (NSW)				N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				1.6	N/A		1.8
70	NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED				N/A	0.9		0.0
71	TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)				1.4	0.9		1.6
72	PLASTIC TIGHTLY BOUND ON TOP				0.2	0.9		0.2
73	N/A				N/A	0.9		0.0
74	x. Organic matrix (OR)				90.1	N/A		75.1
75		x1. Sludge			90.1	N/A		75.1
76		MODERATE YELLOWISH BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE			90.1	1.0 - 1.5	1.2	75.1
77		N/A			N/A	1.0 - 1.5	0.0	0.0
78		N/A			N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80		N/A			N/A	0.0		0.0
81		N/A			N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84		N/A			N/A	1.0 - 1.5	0.0	0.0
85		N/A			N/A	1.0 - 1.5	0.0	0.0
86		N/A			N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88		N/A			N/A	1.5 - 4.0	0.0	0.0
89		N/A			N/A	1.5 - 4.0	0.0	0.0
90		N/A			N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92		N/A			N/A	0.0		0.0
93		N/A			N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95		N/A			N/A	0.0		0.0
96		N/A			N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98	N/A				N/A	1.0 - 1.4	0.0	0.0
99	N/A				N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				92.4	N/A		77.4
101	13. (ORGANIC SLUDGE) weight (90.1) kg was obtained by subtracting the weighed waste weight of (2.3) kg and the container net weight of (34.0) kg from the gross weight (126.4) kg of the waste container. (126.4) - (2.3) - (34.0) = (90.1) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14611	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14611	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	27.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	237751
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	723312
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	07/18/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1330
22. Measured gross weight of loaded container, fully assembled (kgs):	126.4
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	278.7
23. Container closure date (mm/dd/yy):	05/14/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	722444
b. Filter Torque Wrench Calibration Due Date:	07/22/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	CN-157
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	85.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	92.4
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14611	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	2.3
31. Total volume of Solidified Organics (L):	75.1
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	77.4
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	97.5%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

J. STANTON	Jodi M. Stanton	5/14/13
Enter Name	Signature	Date

Visual Examination Operator 2:

L. MUNTEAN	L. Munteau	5/14/13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		5-14-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP14615
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000183
4. Examination Start Date:	05/14/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	502
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	237751
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14615							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)	12.Volume (L)	
5					0.1	N/A	0.0	
6	a. Iron-based metals/alloys (IM)				0.1	8.0	0.0	
7				METAL	N/A	8.0	0.0	
8				N/A	0.0	N/A	0.0	
9	b. Aluminum-based metals/alloys (AM)				N/A	3.0	0.0	
10				N/A	N/A	3.0	0.0	
11				N/A	0.0	N/A	0.0	
12	c. Other metals (OM)				0.0	N/A	0.0	
13		d. Lead			N/A	11.0	0.0	
14				N/A	N/A	11.0	0.0	
15				N/A	0.0	N/A	0.0	
16		e. Beryllium			N/A	1.8	0.0	
17				N/A	N/A	1.8	0.0	
18				N/A	0.0	N/A	0.0	
19		f. Depleted uranium			N/A	19.1	0.0	
20				N/A	N/A	19.1	0.0	
21				N/A	0.0	N/A	0.0	
22		g. Copper			N/A	9.0	0.0	
23				N/A	N/A	9.0	0.0	
24				N/A	0.0	N/A	0.0	
25		h. Other (See Note a)			N/A	0.0	0.0	
26				N/A	N/A	0.0	0.0	
27				N/A	N/A	0.0	0.0	
28				N/A				

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14615							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	i.	Other inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14615							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.3	N/A		0.3
67	RUBBER TIGHTLY BOUND ON TOP (WAIP)				0.3	0.9 - 2.0	1.1	0.3
68	RUBBER (NSW)				N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				2.2	N/A		2.5
70	NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED				N/A	0.9		0.0
71	PLASTIC TIGHTLY BOUND ON TOP				0.8	0.9		0.9
72	TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)				1.4	0.9		1.6
73	N/A				N/A	0.9		0.0
74	x. Organic matrix (OR)				74.4	N/A		62.0
75		x1. Sludge			74.4	N/A		62.0
76			MODERATE YELLOWISH BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE		74.4	1.0 - 1.5	1.2	62.0
77			N/A		N/A	1.0 - 1.5	0.0	0.0
78			N/A		N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80			N/A		N/A	0.0		0.0
81			N/A		N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84			N/A		N/A	1.0 - 1.5	0.0	0.0
85			N/A		N/A	1.0 - 1.5	0.0	0.0
86			N/A		N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88			N/A		N/A	1.5 - 4.0	0.0	0.0
89			N/A		N/A	1.5 - 4.0	0.0	0.0
90			N/A		N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92			N/A		N/A	0.0		0.0
93			N/A		N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95			N/A		N/A	0.0		0.0
96			N/A		N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98	N/A				N/A	1.0 - 1.4	0.0	0.0
99	N/A				N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				77.0	N/A		64.8
101	13. (ORGANIC SLUDGE) weight (74.4) kg was obtained by subtracting the weighed waste weight of (2.6) kg and the container net weight of (34.0) kg from the gross weight (111.0) kg of the waste container. (111.0) - (2.6) - (34.0) = (74.4) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

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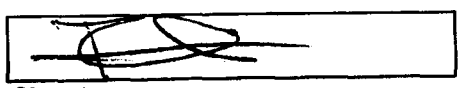
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14615	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14615	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	32.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	237751
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	723312
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	07/18/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1331
22. Measured gross weight of loaded container, fully assembled (kgs):	111.0
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	244.7
23. Container closure date (mm/dd/yy):	05/14/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	722444
b. Filter Torque Wrench Calibration Due Date:	07/22/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	CN-173
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	100.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	77.0
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

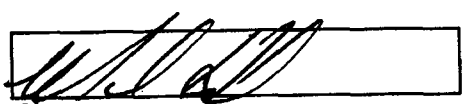
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14615	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	2.8
31. Total volume of Solidified Organics (L):	62.0
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	64.8
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	96.6%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

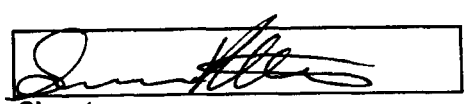
Visual Examination Operator 1:

R. CUMMINS		5-14-13
Enter Name	Signature	Date

Visual Examination Operator 2:

M. HADERLIE		5-14-13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		5-14-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP14553
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000183
4. Examination Start Date:	05/14/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	501
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	237751
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14553							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
6	a. Iron-based metals/alloys (IM)				0.1	N/A		0.0
7				METAL	0.1	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14553							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	i.	Other Inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31			N/A		N/A	2.2		0.0
32			N/A		N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34			N/A		N/A	2.3		0.0
35			N/A		N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37			N/A		N/A	2.0		0.0
38			N/A		N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40			N/A		N/A	3.0		0.0
41			N/A		N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43			N/A		N/A	2.0 - 5.0	0.0	0.0
44			N/A		N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46			N/A		N/A	2.0		0.0
47			N/A		N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49			N/A		N/A	0.1 - 2.8	0.0	0.0
50			N/A		N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52			N/A		N/A	0.0		0.0
53			N/A		N/A	0.0		0.0
54			N/A		N/A	0.0		0.0
55	r.	Cellulosics (C)			0.2	N/A		0.2
56		s.	Paper		0.2	N/A		0.2
57			1 LEATHER GLOVE		0.2	0.9		0.2
58			N/A		N/A	0.9		0.0
59			N/A		N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61			CARDBOARD (NSW)		N/A	0.8		0.0
62			N/A		N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64			N/A		N/A	1.0		0.0
65			N/A		N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14553							
3	**Section 2: Waste Material Parameter (WMP) Estimates**							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.3	N/A		0.3
67				RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
68				RUBBER BANDS TIGHTLY BOUND ON TOP (WAIP)	0.3	0.9 - 2.0	1.1	0.3
69	w. Plastics (waste materials) (PW)				1.8	N/A		2.0
70				PLASTIC TIGHTLY BOUND ON TOP	0.4	0.9		0.4
71				NO BAG OUT STUB AT THE BOTTOM OF THE ~~CONAINER~~ VERIFIED Container ok 5/16/13	N/A	0.9		0.0
72				1 BAG OUT STUB AND 1 TRAY LINER TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				112.0	N/A		93.3
75		x1. Sludge			112.0	N/A		93.3
76				PALE YELLOWISH BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE	112.0	1.0 - 1.5	1.2	93.3
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95				N/A	N/A	0.0		0.0
96				N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98				N/A	N/A	1.0 - 1.4	0.0	0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				114.4	N/A		95.8
101	13. (ORGANIC SLUDGE) weight (112.0) kg was obtained by subtracting the weighed waste weight of (2.4) kg and the container net weight of (34.0) kg from the gross weight (148.4) kg of the waste container. (148.4) - (2.4) - (34.0) = (112.0) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14553	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14553	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	25.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	237751
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	723312
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	07/18/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1353
22. Measured gross weight of loaded container, fully assembled (kgs):	148.4
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	327.2
23. Container closure date (mm/dd/yy):	05/14/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	722444
b. Filter Torque Wrench Calibration Due Date:	07/22/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	CN-187
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	80.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	114.4
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14553	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	2.5
31. Total volume of Solidified Organics (L):	93.3
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	95.8
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	97.9%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

L. MUNTEAN	L. Muntean	5/14/13
Enter Name	Signature	Date

Visual Examination Operator 2:

J. STANTON	Jodi M. Stanton	5/14/13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		5-14-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP14628
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000183
4. Examination Start Date:	05/14/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	502
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	237749
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14628							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				N/A	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14628							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	l.	Other inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14628							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
66	v. Rubber (R)				0.3	N/A		0.3
67				RUBBER TIGHTLY BOUND ON TOP (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68				RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				1.4	N/A		1.6
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
72				PLASTIC (NSW)	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				97.5	N/A		81.3
75		x1. Sludge			97.5	N/A		81.3
76				MODERATE YELLOWISH BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE	97.5	1.0 - 1.5	1.2	81.3
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95				N/A	N/A	0.0		0.0
96				N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98				N/A	N/A	1.0 - 1.4	0.0	0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				99.2	N/A		83.2
101	13. (ORGANIC SLUDGE) weight (97.5) kg was obtained by subtracting the weighed waste weight of (1.7) kg and the container net weight of (34.0) kg from the gross weight (133.2) kg of the waste container. (133.2) - (1.7) - (34.0) = (97.5) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

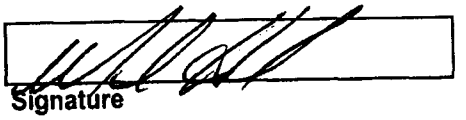
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14628	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14628	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	25.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	237749
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	723312
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	07/18/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1355
22. Measured gross weight of loaded container, fully assembled (kgs):	133.2
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	293.7
23. Container closure date (mm/dd/yy):	05/14/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	722444
b. Filter Torque Wrench Calibration Due Date:	07/22/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	CN-165
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	80.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	99.2
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

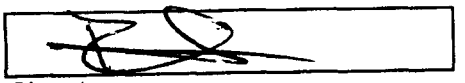
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14628	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	1.9
31. Total volume of Solidified Organics (L):	81.3
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	83.2
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	98.3%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

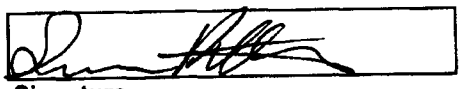
Visual Examination Operator 1:

M. HADERLIE		5-14-13
Enter Name	Signature	Date

Visual Examination Operator 2:

R. CUMMINS		5-14-13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		5-14-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP14550
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000183
4. Examination Start Date:	05/14/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	502
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	237751
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14550							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4				9. Waste Material Parameter and Item Description	10. WMP Estimate By Weight (kg)	11. Density (kg/L)	12.Volume (L)	
5								
6	a. Iron-based metals/alloys (IM)				0.0	N/A	0.0	
7				N/A	N/A	8.0	0.0	
8				N/A	N/A	8.0	0.0	
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A	0.0	
10				N/A	N/A	3.0	0.0	
11				N/A	N/A	3.0	0.0	
12	c. Other metals (OM)				0.0	N/A	0.0	
13		d. Lead			0.0	N/A	0.0	
14				N/A	N/A	11.0	0.0	
15				N/A	N/A	11.0	0.0	
16		e. Beryllium			0.0	N/A	0.0	
17				N/A	N/A	1.8	0.0	
18				N/A	N/A	1.8	0.0	
19		f. Depleted uranium			0.0	N/A	0.0	
20				N/A	N/A	19.1	0.0	
21				N/A	N/A	19.1	0.0	
22		g. Copper			0.0	N/A	0.0	
23				N/A	N/A	9.0	0.0	
24				N/A	N/A	9.0	0.0	
25		h. Other (See Note a)			0.0	N/A	0.0	
26				N/A	N/A	0.0	0.0	
27				N/A	N/A	0.0	0.0	
28				N/A	N/A	0.0	0.0	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14550							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	i. Other Inorganic materials (OI)				0.0	N/A		0.0
30		j. Graphite			0.0	N/A		0.0
31			N/A		N/A	2.2		0.0
32			N/A		N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34			N/A		N/A	2.3		0.0
35			N/A		N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37			N/A		N/A	2.0		0.0
38			N/A		N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40			N/A		N/A	3.0		0.0
41			N/A		N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43			N/A		N/A	2.0 - 5.0	0.0	0.0
44			N/A		N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46			N/A		N/A	2.0		0.0
47			N/A		N/A	2.0		0.0
48		p. Inorganic sorbents			0.0	N/A		0.0
49			N/A		N/A	0.1 - 2.8	0.0	0.0
50			N/A		N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52			N/A		N/A	0.0		0.0
53			N/A		N/A	0.0		0.0
54			N/A		N/A	0.0		0.0
55	r. Cellulosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57			N/A		N/A	0.9		0.0
58			N/A		N/A	0.9		0.0
59			N/A		N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61			N/A		N/A	0.8		0.0
62			N/A		N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64			N/A		N/A	1.0		0.0
65			N/A		N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14550							
3	**Section 2: Waste Material Parameter (WMP) Estimates**							
4	**9. Waste Material Parameter and Item Description**				**10. WMP Estimate**	**11. Density**		**12.Volume**
5					**By Weight (kg)**	**(kg/L)**		**(L)**
66	v. Rubber (R)				0.3	N/A		0.3
67				RUBBER TIGHTLY BOUND ON TOP (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				2.1	N/A		2.4
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC TIGHTLY BOUND ON TOP	0.7	0.9		0.8
72				TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				103.0	N/A		85.8
75		x1. Sludge			103.0	N/A		85.8
76				MODERATE BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE	103.0	1.0 - 1.5	1.2	85.8
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95				N/A	N/A	0.0		0.0
96				N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98				N/A	N/A	1.0 - 1.4	0.0	0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				105.4	N/A		88.5
101	13. (ORGANIC SLUDGE) weight (103.0) kg was obtained by subtracting the weighed waste weight of (2.4) kg and the container net weight of (34.0) kg from the gross weight (139.4) kg of the waste container. (139.4) - (2.4) - (34.0) = (103.0) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

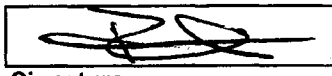
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14550	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14550	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	30.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	237751
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	723312
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	07/18/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1420
22. Measured gross weight of loaded container, fully assembled (kgs):	139.4
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	307.3
23. Container closure date (mm/dd/yy):	05/14/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	722444
b. Filter Torque Wrench Calibration Due Date:	07/22/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	CN-120
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	95.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	105.4
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

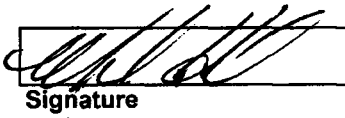
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14550	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	2.7
31. Total volume of Solidified Organics (L):	85.8
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	88.5
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	97.7%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

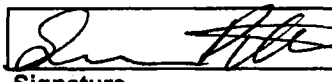
Visual Examination Operator 1:

R. CUMMINS		5-14-13
Enter Name	Signature	Date

Visual Examination Operator 2:

M. HADERLIE		5-14-13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		5-14-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	SRP14424
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
	b. Container Type: 55 gal. drum or SWB:	55 GAL.
2.	Site ID and Location (Airlock):	IN-RWMC-ARP-5
3.	Batch Number:	IN-SRP-VE-000183
4.	Examination Start Date:	05/14/13
5.	Procedure CCP-TP-006, Rev.:	17
6.	a. Drum Packing Station (DPS) Number:	501
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	237746
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14424							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. *Iron-based metals/alloys (IM)*				0.0	N/A		0.0
7				N/A	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14424							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	l.	Other inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				PAPER (NSW)	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14424							
3	**Section 2: Waste Material Parameter (WMP) Estimates**							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.3	N/A		0.3
67				RUBBER TIGHTLY BOUND ON TOP (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68				RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				2.2	N/A		2.5
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
72				PLASTIC TIGHTLY BOUND ON TOP	0.8	0.9		0.9
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				111.7	N/A		93.1
75		x1. Sludge			111.7	N/A		93.1
76				LIGHT OLIVE GRAY PUTTY LIKE SLUDGE WITH CALCIUM SILICATE	111.7	1.0 - 1.5	1.2	93.1
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95				N/A	N/A	0.0		0.0
96				N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98				N/A	N/A	1.0 - 1.4	0.0	0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				114.2	N/A		95.9
101	13. (ORGANIC SLUDGE) weight (111.7) kg was obtained by subtracting the weighed waste weight of (2.5) kg and the container net weight of (34.0) kg from the gross weight (148.2) kg of the waste container. (148.2) - (2.5) - (34.0) = (111.7) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14424	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14424	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	31.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	237746
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	723312
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	07/18/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1423
22. Measured gross weight of loaded container, fully assembled (kgs):	148.2
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	326.7
23. Container closure date (mm/dd/yy):	05/14/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	722444
b. Filter Torque Wrench Calibration Due Date:	07/22/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	JM-1010
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	95.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	114.2
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14424	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	2.8
31. Total volume of Solidified Organics (L):	93.1
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	95.9
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	97.8%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

J. STANTON	Jodi M. Stanton	5/14/13
Enter Name	Signature	Date

Visual Examination Operator 2:

L. MUNTEAN	L. Munteau	5/14/13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		5-14-13
Enter Name	Signature	Date

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist

Batch Data Report No.: TW-SRP-VE-000183

Description			
1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods used?	☐ NO	☒ YES	☐ NA
a. Was the description of the waste items adequate?	☐ NO	☒ YES	☐ NA
2. Was the correct revision of operating procedure used? (Attachment 1, Section 1, Line 5)	☐ NO	☒ YES	☐ NA
3. Were the following calculation spot checks performed?			
a. Attachment 1, Section 2: Verify the total waste volume in Column 12, Row aa does not exceed 208 L for a 55-gallon drum or 1456 L for an SWB and verify the estimated weights in Column 10, Row aa matches the measured net weight of waste in Attachment 1, Section 4, Row 27.	☐ NO	☒ YES	☐ NA
b. Attachment 1, Section 5: Verify the total waste volume in Row 33 a., matches the total waste volume in Section 2, Column 12, Row aa.	☐ NO	☒ YES	☐ NA
c. Attachment 1, Section 1: Check hand calculations in Lines 6h and 6p, and any additional hand calculations recorded in the comments field or in Section 2, Line 13.	☐ NO	☒ YES	☐ NA
4. Is only one waste stream selected in Line 34 of Attachment 1, Section 5, and is it consistent with the values shown in Attachment 1, Section 2, Column 12?	☐ NO	☒ YES	☐ NA
5. Is the data entered in the correct units and correct number of significant figures?	☐ NO	☒ YES	☐ NA
6. Were the data reviewed for transcription errors?	☐ NO	☒ YES	☐ NA
7. Does the BDR include VE for up to 20 containers?	☐ NO	☒ YES	☐ NA
8. Are BDR contents complete and do they match, Attachment 3, CCP Waste VE Batch Data Report Table of Contents?	☐ NO	☒ YES	☐ NA
9. Was completeness verified for data entry on the CCP VE Technique Data Form for the following?			
a. Section 1	☐ NO	☒ YES	☐ NA
b. Section 2	☐ NO	☒ YES	☐ NA
c. Section 3	☐ NO	☒ YES	☐ NA
d. Section 4	☐ NO	☒ YES	☐ NA
e. Section 5	☐ NO	☒ YES	☐ NA

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: IN-SRP-VE-000183

Description			
10. Is all the data signed and dated in Attachment 1, Section 6, using reproducible ink, and by the individual(s) generating it?	☐ NO	☒ YES	☐ NA
11. Is all data entered clearly, legibly, and accurately?	☐ NO	☒ YES	☐ NA
12. Were discrepancies between the operators reconciled?	☐ NO	☐ YES	☒ NA
13. Are all changes to original data lined out, initialed and dated by the individual making the changes?	☐ NO	☒ YES	☐ NA
14. Were data changes made by the individual who originally collected the data or an equally qualified individual?	☐ NO	☒ YES	☐ NA
15. Was the DPS scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
16. Was the daily DPS scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
17. Was the container scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
18. Was the daily container scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
19. Was the torque wrench(es) in calibration prior to VE Technique and documented correctly?	☐ NO	☒ YES	☐ NA
20. Were NCR(s) initiated as indicated in Attachment 1, Section 1, dispositioned, and approved appropriately?	☐ NO	☐ YES	☒ NA
21. Was the correct waste stream and waste matrix code assigned?	☐ NO	☒ YES	☐ NA
22. Is there a valid VE data form for each drum in the batch?	☐ NO	☒ YES	☐ NA
23. Were the operators trained and qualified in accordance with the applicable requirements?	☐ NO	☒ YES	☐ NA

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: IN-SRP-VE-000183

Description			
24. Was precision maintained by reconciling any discrepancies between the operator(s) and the ITR with regard to identification of waste matrix code, liquids in excess of WIPP Hazardous Waste Facility Permit and WIPP Waste Acceptance Criteria limits and compressed gases?	☐ NO	☐ YES	☒ NA

Description

Comments:

N/A

I have reviewed 100 percent of the container-specific and batch data in this BDR and find it acceptable.

ITR: GERARD BARR | Gerard Barr | 5-16-13

Printed Name | Signature | Date

DIVIDER

PAGE

Attachment 3 – Visual Examination Site Project Manager Checklist

Batch Data Report No.: INERHVE12001

1. Has all the data received an independent technical review as evidenced by a completed checklist (Attachment 2) and the appropriate ITR signature?		☐ NO	☑ YES
2. Are BDR contents complete and match the Visual Examination Batch Data Report Table of Contents?		☐ NO	☑ YES
3. Is the BDR complete (appropriately filled in forms for each container)?		☐ NO	☑ YES
4. Have the RH Quality Assurance Objectives (QAOs) for VE been met? Precision – reconciled discrepancies between operators Accuracy – trained operators Representativeness – description of container contents Completeness – completed data form and/or recording Comparability – proper training and adequate AK for unopened containers		☐ NO ☐ NO ☐ NO ☐ NO ☐ NO ☐ NO	☑ YES ☑ YES ☑ YES ☑ YES ☑ YES ☑ YES
5. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☑ N/A

Comments

No NCR's.

SPM:

Laura Nelson
Printed Name

Laura Nelson
Signature

11-19-12
Date

COPY

CCP RECORDS ORIGINAL
DATE REC'D 11.19.12

Attachment 4 – Visual Examination Batch Data Report Cover Sheet

Batch Data Report No.: INLRHVE12001 Date: 11/14/12

	Waste Container ID Number:
1	FF-43C
2	FF-45D
3	DD-45D
4	
5	
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10	
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12	
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14	
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17	
18	
19	
20	

N
A
ASP 11-14-12

CCP RECORDS ORIGINAL
DATE REC'D 11-15-12

001

Attachment 5 – Visual Examination Batch Data Report Table of Contents

Batch Data Report No.: INLRHVE12001 Date: 11/14/12

Item	Description	Page No.
1	Visual Examination Batch Data Report Cover Sheet (Attachment 4)	1
2	Visual Examination Batch Data Report Table of Contents (Attachment 5)	2
3	Visual Examination Data Forms (Attachment 1)	3
4	Visual Examination Independent Technical Reviewer Checklist (Attachment 2)	15
5	Copy of NCRs (N/A [If not applicable])	N/A

Attachment 1 – Visual Examination Data Form

Site ID: RHINL			
Examination Date: 11/14/12	Batch Number: INLRHVE12001		
Procedure #: CCP-TP-500	Revision #: 11	Video Number: N/A	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: N/A	Recording Stop: N/A	

Initial Container ☒ N/A	Final Container ☐ N/A
Container or Package ID Number:	Container or Package ID Number: FF-43C
Container Type:	Container Type: 55 GAL DRUM
Waste Matrix Code:	Waste Matrix Code: S5110
Waste Stream:	Waste Stream: ID-EBR-S5000
	Rigid Liner: ☐Y ☒N Type: / Rigid Liner Lid: ☐ Y ☒N
	Rigid Liner Vented or Hole Size: N/A

Percent Fill:	Percent Organic Waste:	Percent Fill: 90	Percent Organic Waste: 10
Layers of Confinement:	Closure Method:	Layers of Confinement: 0	Closure Method: N/A

Comments (e.g., filter information, NCRs):
FILTER MODEL: NUCFIL- 019SDS, SERIAL NUMBER: BL-34

Waste Description:
30 GALLON DRUM # FF-43C (IM)
WIRE ROPE SLING WITH METAL HOOK (IM)
BREACHED PLASTIC SLEEVING (P)
NYLON DRUM LIFTING BAG (P)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number FF-43C

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:

Bret Parmer
Print Name

J Bret Parmer
Signature

11-14-12
Date

Visual Examination Operator 2:

Jeffrey Poole
Print Name

J.S. Poole
Signature

11-14-12
Date

Attachment 1 – Visual Examination Data Form

Site ID: RHINL			
Examination Date: 11/12/12	Batch Number: INLRHVE12001		
Procedure #: CCP-TP-500	Revision #: 11	Video Number:NA	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: N/A	Recording Stop: N/A	

Initial Container ☐ N/A	Final Container ☒ N/A
Container or Package ID Number: FF-43C	Container or Package ID Number:
Container Type: 30 GAL DRUM	Container Type:
Waste Matrix Code: S5110	Waste Matrix Code:
Waste Stream: ID-EBR-S5000	Waste Stream:
	Rigid Liner: ☐Y ☐N Type: / Rigid Liner Lid: ☐ Y ☐N
	Rigid Liner Vented or Hole Size:
Percent Fill: 30 Percent Organic Waste: 0	Percent Fill: Percent Organic Waste:
Layers of Confinement: 0 / Closure Method: N/A	Layers of Confinement: / Closure Method:

Comments (e.g., filter information, NCRs): NUCFIL-019DS, SERIAL NUMBER GE-1072

Waste Description:
METAL BRICKS 4 (IM) (OM)
WIRE ROPE SLINGS 3 (IM)
DRILL BITS 3 (IM)
WIRE ROPE WITH METAL HOOK (IM)
BRACING (AM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number FF-43C

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:
Bret Parmer (Print Name) — Signature — Date: 11-12-12

Visual Examination Operator 2:
Jeffrey Poole (Print Name) — Signature — Date: 11-12-12

Attachment 1 – Visual Examination Data Form

Site ID: RHINL			
Examination Date: 11/14/12	Batch Number: INLRHVE12001		
Procedure #: CCP-TP-500	Revision #: 11	Video Number: N/A	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: N/A	Recording Stop: N/A	

Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: FF-45D	
Container Type:		Container Type: 55 GAL DRUM	
Waste Matrix Code:		Waste Matrix Code: S5110	
Waste Stream:		Waste Stream: ID-EBR-S5000	
		Rigid Liner: ☐Y ☒N Type:	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: N/A	

Percent Fill:	Percent Organic Waste:	Percent Fill: 90	Percent Organic Waste: 10
Layers of Confinement:	Closure Method:	Layers of Confinement: 0	Closure Method: N/A

Comments (e.g., filter information, NCRs):
FILTER MODEL: NUCFIL- 019SDS, SERIAL NUMBER: BL-50

Waste Description:
30 GALLON DRUM # FF-45D (IM)
WIRE ROPE SLING WITH METAL HOOK (IM)
BREACHED PLASTIC SLEEVING (P)
NYLON DRUM LIFTING BAG (P)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number FF-45D

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:

Bret Parmer
Print Name

J Bret Parmer
Signature

11-14-12
Date

Visual Examination Operator 2:

Jeffrey Poole
Print Name

J.S. Poole
Signature

11-14-12
Date

Attachment 1 – Visual Examination Data Form

Site ID: RHINL			
Examination Date: 11/12/12	Batch Number: INLRHVE12001		
Procedure #: CCP-TP-500	Revision #: 11	Video Number:N/A	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: N/A	Recording Stop: N/A	

Initial Container ☐ N/A	Final Container ☒ N/A
Container or Package ID Number: FF-45D	Container or Package ID Number:
Container Type: 30 GAL DRUM	Container Type:
Waste Matrix Code: S5110	Waste Matrix Code:
Waste Stream: ID-EBR-S5000	Waste Stream:
	Rigid Liner: ☐Y ☐N Type: / Rigid Liner Lid: ☐ Y ☐N
	Rigid Liner Vented or Hole Size:
Percent Fill: 20 Percent Organic Waste: 0	Percent Fill: Percent Organic Waste:
Layers of Confinement: 0 / Closure Method: N/A	Layers of Confinement: / Closure Method:
Comments (e.g., filter information, NCRs): NUCFIL-019DS, SERIAL NUMBER AJ-2600	

Waste Description:
METAL BRICKS 2 (IM) (OM)
WIRE ROPE SLINGS 2 (IM)
BRACING (AM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number FF-45D

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:
Bret Parmer
Print Name
J. Bret Parmer
Signature
11-12-12
Date

Visual Examination Operator 2:
Jeffrey Poole
Print Name
J.S. Poole
Signature
11-12-12
Date

Attachment 1 – Visual Examination Data Form

Site ID: RHINL			
Examination Date: 11/14/12	Batch Number: INLRHVE12001		
Procedure #: CCP-TP-500	Revision #: 11	Video Number: N/A	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: N/A	Recording Stop: N/A	
Initial Container ☒ N/A	Final Container ☐ N/A		
Container or Package ID Number:	Container or Package ID Number: DD-45D		
Container Type:	Container Type: 55 GAL DRUM		
Waste Matrix Code:	Waste Matrix Code: S5110		
Waste Stream:	Waste Stream: ID-EBR-S5000		
	Rigid Liner: ☐Y ☒N Type:	Rigid Liner Lid: ☐ Y ☒N	
	Rigid Liner Vented or Hole Size: N/A		
Percent Fill: Percent Organic Waste:	Percent Fill: 90 Percent Organic Waste: 10		
Layers of Confinement: Closure Method:	Layers of Confinement: 0	Closure Method: N/A	
Comments (e.g., filter information, NCRs): FILTER MODEL: NUCFIL- 019SDS, SERIAL NUMBER: BL-39			

Waste Description:
30 GALLON DRUM # DD-45D (IM)
WIRE ROPE SLING WITH METAL HOOK (IM)
BREACHED PLASTIC SLEEVING (P)
NYLON DRUM LIFTING BAG (P)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number DD-45D

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags NOT defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:
Bret Parmer (Print Name) — J Bret Parmer (Signature) — 11-14-12 (Date)

Visual Examination Operator 2:
Jeffrey Poole (Print Name) — J.S. Poole (Signature) — 11-14-12 (Date)

Attachment 1 – Visual Examination Data Form

Site ID: RHINL			
Examination Date: 11/12/12	Batch Number: INLRHVE12001		
Procedure #: CCP-TP-500	Revision #: 11	Video Number:N/A	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: N/A	Recording Stop: N/A	

Initial Container ☐ N/A	Final Container ☒ N/A
Container or Package ID Number: DD-45D	Container or Package ID Number:
Container Type: 30 GAL DRUM	Container Type:
Waste Matrix Code: S5110	Waste Matrix Code:
Waste Stream: ID-EBR-S5000	Waste Stream:
	Rigid Liner: ☐Y ☐N Type: / Rigid Liner Lid: ☐ Y ☐N
	Rigid Liner Vented or Hole Size:
Percent Fill: 20 Percent Organic Waste: 0	Percent Fill: Percent Organic Waste:
Layers of Confinement: 0 / Closure Method: N/A	Layers of Confinement: / Closure Method:

Comments (e.g., filter information, NCRs): NUCFIL-019DS, SERIAL NUMBER DJ-1815

Waste Description:

METAL BRICKS 2 (IM) (OM)
WIRE ROPE SLINGS WITH HOOKS 2 (IM)
BRACING (AM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number DD-45D

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:
Bret Parmer (Print Name) — J Bret Parmer (Signature) — 11-12-12 (Date)

Visual Examination Operator 2:
Jeffrey Poole (Print Name) — J.S. Poole (Signature) — 11-12-12 (Date)

Attachment 2 – Visual Examination Independent Technical Reviewer Checklist

Batch Data Report No.: INLRHVE12001

1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods (procedure) used?	☐ NO	☒ YES	☐ N/A
2. Was the correct revision of the operating procedure used?	☐ NO	☒ YES	☐ N/A
3. Were all the transcription errors corrected?	☐ NO	☐ YES	☒ N/A
4. Are BDR contents complete and match the Visual Examination Batch Data report Table of Contents?	☐ NO	☒ YES	☐ N/A
5. Does the BDR include VE for no more than 20 containers?	☐ NO	☒ YES	☐ N/A
6. Is all data recorded signed and dated in reproducible ink?	☐ NO	☒ YES	☐ N/A
7. Is all raw data recorded clearly, legibly, and accurately?	☐ NO	☒ YES	☐ N/A
8. Are all changes to original data lined out, initialed and dated by the individual making the changes or an individual authorized to make the change?	☐ NO	☐ YES	☒ N/A
9. Is there an adequate written description of the contents?	☐ NO	☒ YES	☐ N/A
10. Were the recording equipment checks satisfactory?	☐ NO	☐ YES	☒ N/A
11. Has each container in this BDR been evaluated for the presence of prohibited wastes?	☐ NO	☒ YES	☐ N/A
12. Has the physical waste form in each container in this BDR been evaluated against the Waste Stream Description and the Waste Matrix Code?	☐ NO	☒ YES	☐ N/A
13. Have the RH Quality Assurance Objectives (QAOs) for VE been met?	☐ NO	☒ YES	☐ N/A
Precision – reconciled discrepancies between operators or between the operator and ITR.	☐	☒	☐
Accuracy – trained operators	☐	☒	☐
Representativeness – description of container contents	☐	☒	☐
Completeness – completed data form and/or recording	☐	☒	☐
Comparability – proper training and adequate AK source documents are available for unopened containers.	☐	☒	☐
14. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☒ N/A
Comments: N/A			

Independent Technical Reviewer:

Spencer Patten
Printed Name

Signature

11/15/12
Date

COPY

National TRU Program Certification
Effective Date: 02/28/2013

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: Spencer Troy Pattee

Education/Experience	
Resume documenting education and experience on file with National TRU Program Certification (NTPC) Training.	Cheryl Munoz 05-22-13 NTPC Training — Date

Job Specific Training

☐ Initial Qualification ☑ Requalification ☐ Full Requalification

Qualification Limit	**This qualification is valid for two (2) years.** If necessary, additional training may be required by the Site Project Manager (SPM) or the Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the Manager Responsible for Training. The candidate must successfully complete the entire qualification card to reestablish qualification. Qualification is valid for this site and process only.
Requalification Requirements	Items required for requalification are identified by text.

Indoctrination
(Required at Initial Qualification and Full Requalification)

Initial/Indoctrination Reading:

1. CCP-HSP-014, *Health and Safety Program Implementation for CCP*
2. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
3. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
4. CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)*
5. CCP-QP-002, *CCP Training and Qualification Plan*
6. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
7. CCP-QP-008, *CCP Records Management*
8. CCP-QP-010, *CCP Document Preparation, Approval, and Control*
9. CCP-QP-016, *CCP Control of Measuring and Testing Equipment*
10. CCP-QP-022, *CCP Software Quality Assurance Plan*
11. CCP-QP-023, *CCP Handling, Storage, and Shipping*
12. CCP-QP-029, *CCP Corrective Action Management*
13. CCP-TP-006, *CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste*

I have read the listed Initial/Indoctrination Reading and understand my responsibilities as applicable to the procedures above.	N/A Trainee — Date

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: Spencer Troy Pattee

Additional Training Requirements	
1. WAP/QAPjP Briefing and Test *(One-time Requirement)*	Cheryl Mings NTPC Training — 05-22-13 Date
2. CCP-VE-101, *Visual Examination (VE) TRU Waste Characterization Briefing (Always Required)*	Cheryl Mings NTPC Training — 05-22-13 Date
3. VE Comprehensive Exam *(Always Required)*	Cheryl Mings NTPC Training — 05-22-13 Date

Formal Training	On-the-Job Training (OJT) Knowledge Requirements *(Required at Initial Qualification and Full Requalification)*	Visual Examination Expert (VEE) Subject Matter Expert (SME)/OJT Signature/Date
CCP-PO-001	1. List the Quality Assurance objectives validated by VE.	
CCP-QP-002	2. State the purpose of the List of Qualified Individuals (LOQI).	
CCP-QP-005	3. State when a nonconformance report (NCR) should be prepared and who is responsible to initiate it.	
	4. Describe how nonconforming items are documented.	
	5. Describe how nonconforming items are controlled to prevent their use.	N A
	6. State who has the responsibility to validate the NCR once initiated.	
	7. Describe how to revise an NCR.	QSP 5-22-13
	8. Describe how to void an NCR.	
CCP-QP-029	9. Describe the purpose of the corrective action report (CAR) process.	
	10. State the person responsible for originating a CAR.	
	11. Describe how corrective actions are documented.	
	12. State who has the responsibility to validate the CAR once initiated.	

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: Spencer Troy Pattee

	13. Describe actions personnel may take when conditions adverse to quality are discovered.	
CCP-QP-008	14. List the responsibilities of record generators.	
	15. State the storage and control requirements for Records.	
	16. Explain the process and proper method to make corrections or revisions to Records.	
CCP-QP-010	17. State the importance of using approved documents.	
	18. State when to verify a document revision.	
CCP-TP-006/ CCP-VE-101 Briefing	19. Explain how to confirm the electronic .xls data sheet on the sftp site.	
	20. Explain the purpose of VE.	N A
	21. State the requirements of the VE Operators in performing VE.	
	22. Describe where to obtain the tare weight of a waste container.	
	23. What must the VE Operators concur on during the performance of VE?	
	24. What actions are taken if the VE Operators do not concur?	
	25. Discuss the difference in performing VE on debris waste versus homogeneous waste.	
	26. Discuss the difference in identification of soils versus homogeneous waste.	
	27. Define how often calibration due dates should be checked on certified equipment.	
	28. State how to verify the calibration of M&TE used in VE.	
	29. State individual responsible for verifying the calibration of M&TE.	
	30. Describe what is done with an out-of-calibration piece of M&TE.	
	31. Discuss the requirements for packaging of sharp or heavy objects.	

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: Spencer Troy Pattee

CCP-TP-006	32. Describe how to obtain the net weight of a waste container.	
	33. Define "layers of confinement".	
	34. State how often a scale operational check is performed.	
	35. State the Waste Material Parameters (WMPs).	
	36. Define the following WMP acronyms: a. IN d. S b. OR e. R c. PW	
	37. Describe the actions taken if prohibited items are found.	
	38. State five (5) examples of prohibited items.	
	39. Describe how a non-transparent container is handled when liquid is suspected.	N A
	40. State the acceptable liquid limits in a characterized container.	
	41. Discuss the process of absorbing liquids that may be processed at the host facility.	
	42. Discuss how unvented heat-sealed bags are handled during processing of prohibited items.	
	43. Describe the conditions that would generate an NCR during the VE process.	
	44. State three (3) examples of potentially "unsafe" packages/items that may be encountered.	
	45. State who decides whether to open a package/item and why it may be necessary.	
	46. Describe the information that should be recorded when describing waste items.	
	47. Describe the unit of measurement for weights to be recorded during VE.	
	48. Describe the unit of measurement that the final weights are converted to in the VE Data Sheet.	
	49. State how to determine the weight of a material using historically derived waste weights.	

QSP 5-22-13

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: Spencer Troy Pattee

CCP-TP-006	50. Define WAIP.	
	51. Describe how to determine Volume Utilization Percentage (VUP).	
	52. Define the increments in which the VUP are recorded.	
	53. Explain who is allowed to make data changes in data sheets.	
	54. State the criteria for the rigid liner/liner bag to be considered vented.	
	55. Describe the authorized methods of closure of a liner bag.	
	56. Explain how to obtain a closure time and why it is important.	
	57. State how to determine the torque value for the ring bolt.	
	58. State how to determine the torque value for the filter.	N A
	59. Define waste matrix codes.	
	60. Describe waste stream descriptions.	
	61. State the number of waste containers allowed per Batch Data Report (BDR).	
	62. Describe the information contained in a BDR per CCP-TP-006.	
	63. Explain the responsibilities and functions of the Independent Technical Reviewer (ITR).	
	64. State who cannot complete the ITR checklist in a testing batch.	
	65. Describe what constitutes a completed BDR.	
	66. State the differences and similarities between targeted and TRU waste.	
	67. State what waste is currently approved for standard waste boxes (SWB).	
	68. State how containers are tracked within the characterization process.	

QSP 5-22-13

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: Spencer Troy Pattee

	69. Define how many digits in a BDR number.			N/A SRP 5-22-13
	70. State the number of digits that are in a drum number.			
	71. Describe the waste matrix codes that could be assigned once VE is complete.			
	72. Define the waste stream descriptions assigned to the Accelerated Retrieval Project (ARP) and the Sludge Repackaging Project (SRP).			
	73. Define the responsibilities of the VEE.			
Formal Training	**OJT Practical Requirements[1]** *(This section must be performed in the presence of a VEE) (Always Required)*			**VEE SME/OJT Signature/Date**
CCP-TP-006	1. Verify scale calibration check.	(P)	S	Q.S. Poole 5-21-13
	2. Obtain the net weight for the waste container.	(P)	S	Q.S. Poole 5-21-13
	3. Estimate the VUP.	(P)	S	Q.S. Poole 5-21-13
	4. Determine the WMP.	(P)	S	Q.S. Poole 5-21-13
	5. Describe WMP on the VE Data Sheet.	(P)	S	Q.S. Poole 5-21-13
	6. Obtain weight of each WMP.	(P)	S	Q.S. Poole 5-21-13
	7. Determine layers of confinement.	(P)	S	Q.S. Poole 5-21-13
	8. Identify and process prohibited items.	P	(S)	Q.S. Poole 5-21-13
	9. Obtain waste container gross weight.	(P)	S	Q.S. Poole 5-21-13
	10. Complete data sheets.	(P)	S	Q.S. Poole 5-21-13
	11. Complete ITR checklist.	(P)	S	Q.S. Poole 5-20-13
	12. Maintain VE logbooks.	(P)	S	Q.S. Poole 5-22-13
	13. Compile a batch data report BDR.	P	(S)	Q.S. Poole 5-21-13

[1] For simulated steps that involve the recording of information, the steps can be satisfied by the trainee's ability to identify the specific location in the correct record form where actual data would be entered, and explain where the information would be obtained. All required calculations will actually be performed; for simulations, representative data will be used in lieu of actual data. Circle "P" if actually performed or "S" if requirement was simulated.

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: Spencer Troy Pattee

Approvals	
I have completed formal training and received OJT for this position. I fully understand my responsibilities as a VE Operator/ITR at INL.	Spencer Pattee — Trainee Signature *(printed name and signature)* — 5-22-13 Date
I have monitored the training of this individual and believe they are ready to perform the duties of a VE Operator/ITR at INL. *(Validation by the VEE SME/OJT instructor(s) involved in the training of this individual)*	Jeffrey Poole — VEE SME/OJT Instructor *(printed name and signature)* — 5-22-13 Date
	N/A — VEE SME/OJT Instructor *(printed name and signature)* — Date
I approve this employee to perform the duties of a VE Operator/ITR at INL.	Jim Vernon — SPM *(printed name and signature)* — 5-22-13 Date

Approved for Content & Format: **Jeffrey Poole** ***(Approval on File)*** — SME/OJT — **02/28/2013** Date

Approved for Applicability, Content & Format: **Andrew Stallings** ***(Approval on File)*** — Cognizant Engineer — **02/28/2013** Date

Approved for Content: **Jim Vernon** ***(Approval on File)*** — SPM — **02/28/2013** Date

Approved for Applicability, Content, Format, & Use: **A.J. Fisher** ***(Approval on File)*** — Manager Responsible for Training — **02/28/2013** Date

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Central Characterization Project Effective Date: 10/5/2011	RH-VE-01, Rev. 4 Page 1 of 6

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
for Remote-Handled (RH) Waste
Qualification Card

Name: Jeff Poole	Badge Number: [redacted]
Email Address: [redacted]	

Job Specific Training	
☐ Initial Qualification	☒ Requalification
Qualification Limit	**This qualification is valid for two (2) years.** If necessary, additional training may be required by the CCP Lead Site Project Manager (SPM) or the CCP Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the CCP Manager Responsible for Training. The candidate must successfully complete the entire CCP qualification card to reestablish qualification.
Requalification Requirements	Items required for requalification are identified by text.

Indoctrination

(Required at initial qualification, or in the event of requalification after disqualification only.)

Initial/Indoctrination Reading:

1. DOE/WIPP 02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*
2. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
3. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
4. CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*
5. CCP-QP-002, *CCP Training and Qualification Plan*
6. CCP-QP-004, *CCP Corrective Action Management*
7. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
8. CCP-QP-006, *CCP Corrective Action Reporting and Control*
9. CCP-QP-008, *CCP Records Management*
10. CCP-QP-010, *CCP Document Preparation Approval and Control*
11. CCP-QP-016, *CCP Control of Measuring, Testing, and Data Collection Equipment*
12. CCP-QP-023, *CCP Handling, Storage, and Shipping*
13. CCP-TP-163, *CCP Standard VE of Records*
14. CCP-TP-500, *CCP Remote-Handled Waste Visual Examination*
15. CCP-TP-513, *CCP Procedure for Radiological Documentation Package for Dimensional or Gravimetric Radiological Characterization for Remote-Handled Transuranic Waste*

I have read the listed initial/indoctrination reading and understand my responsibilities as applicable to the procedures above.	N/A
	Trainee — Date

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
for Remote-Handled (RH) Waste
Qualification Card

Name: Jeff Poole	**Badge Number:** [redacted]
Email Address: [redacted]	

Additional Training Requirements	
1. WAP/QAPjP Briefing and Test. *(One-time requirement)*	Michele Billett 2/1/12 CCP Training — Date
2. Visual Examination (VE) TRU Waste Characterization Briefing for Contact-Handled (CH) & Remote-Handled (RH) Waste *(Required at initial and each requalification)*	Michele Billett 2/1/12 CCP Training — Date
3. CCP VE Comprehensive Exam (score 80% or higher) administered by CCP Training. *(To be administered at initial and each requalification)*	Michele Billett 2/1/12 CCP Training — Date

Formal Training	**On-the-Job Training (OJT) Knowledge Requirements** *(Required at initial qualification or in the event of requalification after disqualification only)*	**Visual Examination Expert (VEE) Subject Matter Expert (SME)/OJT Signature/Date**
CCP-PO-001	1. List the VE Quality Assurance Objectives (QAOs) per the WAP.	
	2. List the VE Data Quality Objectives (DQOs) per the WAP.	
DOE/WIPP 02-3214	3. List the VE QAOs per the PIP.	
	4. List the VE DQOs per the PIP.	
CCP-QP-002	5. State the purpose of the List of Qualified Individuals (LOQI).	
CCP-QP-005	6. State when a nonconformance report (NCR) should be prepared and who is responsible to initiate it.	N A
	7. Describe how nonconforming items are documented.	
	8. Describe how nonconforming items are controlled to prevent their use.	
	9. State who has the responsibility to validate the NCR once initiated.	
	10. Describe how to revise a NCR.	
	11. Describe how to void a NCR.	

TRP 1-19-12

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Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
for Remote-Handled (RH) Waste
Qualification Card

Name: Bret Parmer

Education/Experience	
Resume documenting education and experience on file with Central Characterization Project (CCP) Training.	Cheryl Munyon 01-15-13 CCP Training Date

Job Specific Training

☐ **Initial Qualification** ☑ **Requalification** ☐ **Full Requalification**

Qualification Limit	**This qualification is valid for two (2) years.** If necessary, additional training may be required by the CCP Site Project Manager (SPM) or the CCP Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the CCP Manager Responsible for Training. The candidate must successfully complete the entire CCP qualification card to reestablish qualification.
Requalification Requirements	Items required for requalification are identified by text.

Indoctrination
(Required at Initial Qualification and Full Requalification)

Initial/Indoctrination Reading:

1. DOE/WIPP 02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*
2. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
3. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
4. CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC)*
5. CCP-QP-002, *CCP Training and Qualification Plan*
6. CCP-QP-004, *CCP Corrective Action Management*
7. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
8. CCP-QP-006, *CCP Corrective Action Reporting and Control*
9. CCP-QP-008, *CCP Records Management*
10. CCP-QP-010, *CCP Document Preparation, Approval, and Control*
11. CCP-QP-016, *CCP Control of Measuring and Testing Equipment*
12. CCP-QP-023, *CCP Handling, Storage, and Shipping*
13. CCP-TP-163, *CCP Evaluation of Waste Packaging Records for Visual Examination of Records*
14. CCP-TP-500, *CCP Remote-Handled Waste Visual Examination*
15. CCP-TP-513, *CCP Procedure for Dimensional or Gravimetric Measurements for Radiological Characterization of Remote-Handled Transuranic Waste*

I have read the listed Initial/Indoctrination Reading and understand my responsibilities as applicable to the procedures above.	N/A Trainee Date

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
for Remote-Handled (RH) Waste
Qualification Card

Name: Bret Parmer

Additional Training Requirements	
1. WAP/QAPjP Briefing and Test *(One-time Requirement)*	CCP Training 01-15-13 Date
2. CCP-VE-101, *Visual Examination (VE) TRU Waste Characterization Briefing (Always Required)*	CCP Training 01-15-13 Date
3. CCP VE Comprehensive Exam *(Always Required)*	CCP Training 01-15-13 Date

Formal Training	On-the-Job Training (OJT) Knowledge Requirements *(Required at Initial Qualification and Full Requalification)*	Visual Examination Expert (VEE) Subject Matter Expert (SME)/OJT Signature/Date
CCP-PO-001	1. List the VE Quality Assurance Objectives (QAOs) per the WAP.	
	2. List the VE Data Quality Objectives (DQOs) per the WAP.	
DOE/WIPP 02-3214	3. List the VE QAOs per the PIP.	
	4. List the VE DQOs per the PIP.	
CCP-QP-002	5. State the purpose of the List of Qualified Individuals (LOQI).	N A
CCP-QP-005	6. State when a nonconformance report (NCR) should be prepared and who is responsible to initiate it.	
	7. Describe how nonconforming items are documented.	
	8. Describe how nonconforming items are controlled to prevent their use.	1-9-13
	9. State who has the responsibility to validate the NCR once initiated.	
	10. Describe how to revise a NCR.	
	11. Describe how to void a NCR.	
CCP-QP-006	12. Describe the purpose of the corrective action report (CAR) process.	

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
for Remote-Handled (RH) Waste
Qualification Card

Name: Bret Parmer

	13. State the person responsible for originating a CAR.	
	14. Describe how corrective actions are documented.	
	15. State who has the responsibility to validate the CAR once initiated.	
	16. Describe actions CCP personnel may take when conditions adverse to quality are discovered.	
CCP-QP-008	17. List the responsibilities of record generators.	
	18. State the storage and control requirements for CCP records.	
	19. Explain the process and proper method to make corrections or revisions to CCP records.	
CCP-QP-010	20. State the importance of using approved documents.	
	21. State when to verify a document revision.	N A
CCP-QP-016	22. List the Measuring & Testing Equipment (M&TE) items used during VE.	
CCP-TP-500/ CCP-VE-101 Briefing	23. Explain the purpose of VE and the roles and responsibilities of the VE Operator.	31-6-1 CAD
	24. Identify who is responsible for overall direction and implementation of the VE of that facility.	
	25. Define the two phases of VE technique for remote-handled waste.	
	26. State the number of waste containers allowed per Batch Data Report (BDR).	
	27. Define "layers of confinement."	
	28. State the authorized methods to close a liner bag.	
	29. State the action to be taken if a condition adverse to quality arises.	
	30. State the waste material parameters (WMP).	
	31. Describe the information that should be recorded when describing waste items.	
	32. State five (5) examples of prohibited items.	

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
for Remote-Handled (RH) Waste
Qualification Card

Name: Bret Parmer

	33. Describe how a non-transparent container is handled when liquid is suspected.			
	34. State the acceptable liquid limits in a characterized container.			
	35. Explain the responsibilities and functions of the Independent Technical Review (ITR).			N A
	36. Define layers of confinement.			BP
	37. Describe how to determine Volume Utilization Percentage (VUP).			1-9-13
	38. State the allowable fill percent increments.			
Formal Training	**OJT Practical Requirements[1]** *(This section must be performed in the presence of a VEE) (Always Required)*			**VEE SME/OJT Signature/Date**
CCP-TP-500	1. Prepare the recording equipment. *(This activity is at the discretion of the SME instructor)*	P	(S)	T.S. Poole 1-9-13
	2. Complete CCP-TP-500 Attachment 1.	P	(S)	T.S. Poole 1-9-13
	3. Prepare a BDR.	P	(S)	T.S. Poole 1-9-13
	4. Determine the VUP.	P	(S)	T.S. Poole 1-9-13
	5. Complete an ITR.	P	(S)	T.S. Poole 1-9-13
	6. Determine Waste Material Parameter (WMP).	P	(S)	T.S. Poole 1-9-13
	7. Verify the physical form of the waste matches the waste stream ID.	P	(S)	T.S. Poole 1-9-13
CCP-TP-513	8. Perform a dimensional or gravimetric measurement and determine the measurement acceptability[2].	P	S	N/A

[1] For simulated steps that involve the recording of information, the steps can be satisfied by the trainee's ability to identify the specific location in the correct record form where actual data would be entered, and explain where the information would be obtained. All required calculations will actually be performed: for simulations, representative data will be used in lieu of actual data. Circle "P" if actually performed or "S" if requirement was simulated.

[2] Procedure CCP-TP-513 is not applicable at all sites. The OJT Practical Requirement for this procedure is only required if the procedure is invoked.

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Bret Parmer

Approvals	
I have completed formal training and received OJT for this position. I fully understand my responsibilities as a RH VE Operator/ITR.	J. Bret Parmer Bret Parmer 1-14-13 Trainee *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of a RH VE Operator/ITR. *(Validation by the RH VEE SME/OJT instructor(s) involved in the training of this individual).*	Jeffrey Book J.S. Book 1-15-13 RH VEE SME/OJT Instructor *(printed name and signature)* Date N/A RH VEE SME/OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of a RH VE Operator/ITR.	Laura Nelson Laura Nelson 1-15-13 CCP SPM *(printed name and signature)* Date

Approved for Content & Format: **Wes Root *(Approval on File)*** **09/18/2012**
SME/OJT Date

Approved for Applicability, Content & Format: **Andrew Stallings *(Approval on File)*** **09/18/2012**
Cognizant Engineer Date

Approved for Content: **Irene Quintana *(Approval on File)*** **09/18/2012**
CCP SPM Date

Approved for Applicability, Content, Format, & Use: **A.J. Fisher *(Approval on File)*** **09/18/2012**
CCP Manager Responsible for Training Date

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Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: Michael Haderlie

Education/Experience	
Resume documenting education and experience on file with National TRU Program Certification (NTPC) Training.	NTPC Training: [signature] Date: 05-29-13

Job Specific Training

☐ Initial Qualification ☑ Requalification ☐ Full Requalification

Qualification Limit	**This qualification is valid for two (2) years.** If necessary, additional training may be required by the Site Project Manager (SPM) or the Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the Manager Responsible for Training. The candidate must successfully complete the entire qualification card to reestablish qualification. Qualification is valid for this site and process only.
Requalification Requirements	Items required for requalification are identified by text.

Indoctrination
(Required at Initial Qualification and Full Requalification)

Initial/Indoctrination Reading:

1. CCP-HSP-014, *Health and Safety Program Implementation for CCP*
2. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
3. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
4. CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)*
5. CCP-QP-002, *CCP Training and Qualification Plan*
6. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
7. CCP-QP-008, *CCP Records Management*
8. CCP-QP-010, *CCP Document Preparation, Approval, and Control*
9. CCP-QP-016, *CCP Control of Measuring and Testing Equipment*
10. CCP-QP-022, *CCP Software Quality Assurance Plan*
11. CCP-QP-023, *CCP Handling, Storage, and Shipping*
12. CCP-QP-029, *CCP Corrective Action Management*
13. CCP-TP-006, *CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste*

I have read the listed Initial/Indoctrination Reading and understand my responsibilities as applicable to the procedures above.	N/A Trainee Date

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: Michael Haderlie

Additional Training Requirements	
1. WAP/QAPjP Briefing and Test *(One-time Requirement)*	Cheryl Arrigo 05-29-13 NTPC Training — Date
2. CCP-VE-101, *Visual Examination (VE) TRU Waste Characterization Briefing* *(Always Required)*	Cheryl Arrigo 05-29-13 NTPC Training — Date
3. VE Comprehensive Exam *(Always Required)*	Cheryl Arrigo 05-29-13 NTPC Training — Date

Formal Training	On-the-Job Training (OJT) Knowledge Requirements *(Required at Initial Qualification and Full Requalification)*	Visual Examination Expert (VEE) Subject Matter Expert (SME)/OJT Signature/Date
CCP-PO-001	1. List the Quality Assurance objectives validated by VE.	
CCP-QP-002	2. State the purpose of the List of Qualified Individuals (LOQI).	
CCP-QP-005	3. State when a nonconformance report (NCR) should be prepared and who is responsible to initiate it.	
	4. Describe how nonconforming items are documented.	
	5. Describe how nonconforming items are controlled to prevent their use.	N A
	6. State who has the responsibility to validate the NCR once initiated.	
	7. Describe how to revise an NCR.	RSP 5-23-13
	8. Describe how to void an NCR.	
CCP-QP-029	9. Describe the purpose of the corrective action report (CAR) process.	
	10. State the person responsible for originating a CAR.	
	11. Describe how corrective actions are documented.	
	12. State who has the responsibility to validate the CAR once initiated.	

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: Michael Haderlie

	13. Describe actions personnel may take when conditions adverse to quality are discovered.	
CCP-QP-008	14. List the responsibilities of record generators.	
	15. State the storage and control requirements for Records.	
	16. Explain the process and proper method to make corrections or revisions to Records.	
CCP-QP-010	17. State the importance of using approved documents.	
	18. State when to verify a document revision.	
CCP-TP-006/ CCP-VE-101 Briefing	19. Explain how to confirm the electronic .xls data sheet on the sftp site.	
	20. Explain the purpose of VE.	N A
	21. State the requirements of the VE Operators in performing VE.	
	22. Describe where to obtain the tare weight of a waste container.	
	23. What must the VE Operators concur on during the performance of VE?	
	24. What actions are taken if the VE Operators do not concur?	
	25. Discuss the difference in performing VE on debris waste versus homogeneous waste.	
	26. Discuss the difference in identification of soils versus homogeneous waste.	
	27. Define how often calibration due dates should be checked on certified equipment.	
	28. State how to verify the calibration of M&TE used in VE.	
	29. State individual responsible for verifying the calibration of M&TE.	
	30. Describe what is done with an out-of-calibration piece of M&TE.	
	31. Discuss the requirements for packaging of sharp or heavy objects.	

ASP 5-23-13

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: Michael Haderlie

CCP-TP-006	32. Describe how to obtain the net weight of a waste container.	
	33. Define "layers of confinement".	
	34. State how often a scale operational check is performed.	
	35. State the Waste Material Parameters (WMPs).	
	36. Define the following WMP acronyms: a. IN d. S b. OR e. R c. PW	
	37. Describe the actions taken if prohibited items are found.	
	38. State five (5) examples of prohibited items.	N A
	39. Describe how a non-transparent container is handled when liquid is suspected.	
	40. State the acceptable liquid limits in a characterized container.	
	41. Discuss the process of absorbing liquids that may be processed at the host facility.	5-23-13
	42. Discuss how unvented heat-sealed bags are handled during processing of prohibited items.	
	43. Describe the conditions that would generate an NCR during the VE process.	
	44. State three (3) examples of potentially "unsafe" packages/items that may be encountered.	
	45. State who decides whether to open a package/item and why it may be necessary.	
	46. Describe the information that should be recorded when describing waste items.	
	47. Describe the unit of measurement for weights to be recorded during VE.	
	48. Describe the unit of measurement that the final weights are converted to in the VE Data Sheet.	
	49. State how to determine the weight of a material using historically derived waste weights.	

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: Michael Haderlie

CCP-TP-006	50. Define WAIP.	
	51. Describe how to determine Volume Utilization Percentage (VUP).	
	52. Define the increments in which the VUP are recorded.	
	53. Explain who is allowed to make data changes in data sheets.	
	54. State the criteria for the rigid liner/liner bag to be considered vented.	
	55. Describe the authorized methods of closure of a liner bag.	
	56. Explain how to obtain a closure time and why it is important.	
	57. State how to determine the torque value for the ring bolt.	N A
	58. State how to determine the torque value for the filter.	
	59. Define waste matrix codes.	
	60. Describe waste stream descriptions.	
	61. State the number of waste containers allowed per Batch Data Report (BDR).	
	62. Describe the information contained in a BDR per CCP-TP-006.	
	63. Explain the responsibilities and functions of the Independent Technical Reviewer (ITR).	
	64. State who cannot complete the ITR checklist in a testing batch.	
	65. Describe what constitutes a completed BDR.	
	66. State the differences and similarities between targeted and TRU waste.	
	67. State what waste is currently approved for standard waste boxes (SWB).	
	68. State how containers are tracked within the characterization process.	

ESP 5-23-13

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: Michael Haderlie

	69. Define how many digits in a BDR number.			N/A per 5-23-13
	70. State the number of digits that are in a drum number.			
	71. Describe the waste matrix codes that could be assigned once VE is complete.			
	72. Define the waste stream descriptions assigned to the Accelerated Retrieval Project (ARP) and the Sludge Repackaging Project (SRP).			
	73. Define the responsibilities of the VEE.			
Formal Training	**OJT Practical Requirements[1]** *(This section must be performed in the presence of a VEE)* *(Always Required)*			**VEE SME/OJT Signature/Date**
CCP-TP-006	1. Verify scale calibration check.	(P)	S	Q.S. Poole 5-23-13
	2. Obtain the net weight for the waste container.	(P)	S	Q.S. Poole 5-23-13
	3. Estimate the VUP.	(P)	S	Q.S. Poole 5-23-13
	4. Determine the WMP.	(P)	S	Q.S. Poole 5-23-13
	5. Describe WMP on the VE Data Sheet.	(P)	S	Q.S. Poole 5-23-13
	6. Obtain weight of each WMP.	(P)	S	Q.S. Poole 5-23-13
	7. Determine layers of confinement.	(P)	S	Q.S. Poole 5-23-13
	8. Identify and process prohibited items.	P	(S)	Q.S. Poole 5-23-13
	9. Obtain waste container gross weight.	(P)	S	Q.S. Poole 5-23-13
	10. Complete data sheets.	(P)	S	Q.S. Poole 5-23-13
	11. Complete ITR checklist.	P	(S)	Q.S. Poole 5-23-13
	12. Maintain VE logbooks.	P	(S)	Q.S. Poole 5-23-13
	13. Compile a batch data report BDR.	(P)	S	Q.S. Poole 5-23-13

[1] For simulated steps that involve the recording of information, the steps can be satisfied by the trainee's ability to identify the specific location in the correct record form where actual data would be entered, and explain where the information would be obtained. All required calculations will actually be performed; for simulations, representative data will be used in lieu of actual data. Circle "P" if actually performed or "S" if requirement was simulated.

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: Michael Haderlie

Approvals	
I have completed formal training and received OJT for this position. I fully understand my responsibilities as a VE Operator/ITR at INL.	Michael Haderlie 5-23-13 Trainee Signature *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of a VE Operator/ITR at INL. *(Validation by the VEE SME/OJT instructor(s) involved in the training of this individual)*	Jeffrey Poole 5-23-13 VEE SME/OJT Instructor *(printed name and signature)* Date N/A VEE SME/OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of a VE Operator/ITR at INL.	5-29-13 SPM *(printed name and signature)* Date

Approved for Content & Format:	**Jeffrey Poole *(Approval on File)***	**02/28/2013**
	SME/OJT	Date
Approved for Applicability, Content & Format:	**Andrew Stallings *(Approval on File)***	**02/28/2013**
	Cognizant Engineer	Date
Approved for Content:	**Jim Vernon *(Approval on File)***	**02/28/2013**
	SPM	Date
Approved for Applicability, Content, Format, & Use:	**A.J. Fisher *(Approval on File)***	**02/28/2013**
	Manager Responsible for Training	Date

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National TRU Program Certification Effective Date: 02/28/2013	VE-PIT-01, Rev. 5 Page 1 of 7

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: David Jackman

Education/Experience	
Resume documenting education and experience on file with National TRU Program Certification (NTPC) Training.	Cheryl Almijo 03-26-13 NTPC Training — Date

Job Specific Training

☐ **Initial Qualification** ☑ **Requalification** ☐ **Full Requalification**

Qualification Limit	**This qualification is valid for two (2) years.** If necessary, additional training may be required by the Site Project Manager (SPM) or the Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the Manager Responsible for Training. The candidate must successfully complete the entire qualification card to reestablish qualification. Qualification is valid for this site and process only.
Requalification Requirements	Items required for requalification are identified by text.

Indoctrination
(Required at Initial Qualification and Full Requalification)

Initial/Indoctrination Reading:

1. CCP-HSP-014, *Health and Safety Program Implementation for CCP*
2. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
3. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
4. CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)*
5. CCP-QP-002, *CCP Training and Qualification Plan*
6. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
7. CCP-QP-008, *CCP Records Management*
8. CCP-QP-010, *CCP Document Preparation, Approval, and Control*
9. CCP-QP-016, *CCP Control of Measuring and Testing Equipment*
10. CCP-QP-022, *CCP Software Quality Assurance Plan*
11. CCP-QP-023, *CCP Handling, Storage, and Shipping*
12. CCP-QP-029, *CCP Corrective Action Management*
13. CCP-TP-006, *CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste*

I have read the listed Initial/Indoctrination Reading and understand my responsibilities as applicable to the procedures above.	N/A Trainee — Date

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: David Jackman

Additional Training Requirements	
1. WAP/QAPjP Briefing and Test *(One-time Requirement)*	Cheryl Mingo 03-26-13 NTPC Training — Date
2. CCP-VE-101, *Visual Examination (VE) TRU Waste Characterization Briefing (Always Required)*	Cheryl Mingo 03-26-13 NTPC Training — Date
3. VE Comprehensive Exam *(Always Required)*	Cheryl Mingo 03-26-13 NTPC Training — Date

Formal Training	On-the-Job Training (OJT) Knowledge Requirements *(Required at Initial Qualification and Full Requalification)*	Visual Examination Expert (VEE) Subject Matter Expert (SME)/OJT Signature/Date
CCP-PO-001	1. List the Quality Assurance objectives validated by VE.	N/A
CCP-QP-002	2. State the purpose of the List of Qualified Individuals (LOQI).	N/A
CCP-QP-005	3. State when a nonconformance report (NCR) should be prepared and who is responsible to initiate it.	N/A
	4. Describe how nonconforming items are documented.	N/A
	5. Describe how nonconforming items are controlled to prevent their use.	N/A
	6. State who has the responsibility to validate the NCR once initiated.	N/A
	7. Describe how to revise an NCR.	N/A
	8. Describe how to void an NCR.	N/A
CCP-QP-029	9. Describe the purpose of the corrective action report (CAR) process.	N/A
	10. State the person responsible for originating a CAR.	N/A
	11. Describe how corrective actions are documented.	N/A
	12. State who has the responsibility to validate the CAR once initiated.	N/A

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: David Jackman

	13. Describe actions personnel may take when conditions adverse to quality are discovered.	N/A
CCP-QP-008	14. List the responsibilities of record generators.	N/A
	15. State the storage and control requirements for Records.	N/A
	16. Explain the process and proper method to make corrections or revisions to Records.	N/A
CCP-QP-010	17. State the importance of using approved documents.	N/A
	18. State when to verify a document revision.	N/A
CCP-TP-006/ CCP-VE-101 Briefing	19. Explain how to confirm the electronic .xls data sheet on the sftp site.	N/A
	20. Explain the purpose of VE.	N/A
	21. State the requirements of the VE Operators in performing VE.	N/A
	22. Describe where to obtain the tare weight of a waste container.	N/A
	23. What must the VE Operators concur on during the performance of VE?	N/A
	24. What actions are taken if the VE Operators do not concur?	N/A
	25. Discuss the difference in performing VE on debris waste versus homogeneous waste.	N/A
	26. Discuss the difference in identification of soils versus homogeneous waste.	N/A
	27. Define how often calibration due dates should be checked on certified equipment.	N/A
	28. State how to verify the calibration of M&TE used in VE.	N/A
	29. State individual responsible for verifying the calibration of M&TE.	N/A
	30. Describe what is done with an out-of-calibration piece of M&TE.	N/A
	31. Discuss the requirements for packaging of sharp or heavy objects.	N/A

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: David Jackman

CCP-TP-006	32. Describe how to obtain the net weight of a waste container.	N/A
	33. Define "layers of confinement".	N/A
	34. State how often a scale operational check is performed.	N/A
	35. State the Waste Material Parameters (WMPs).	N/A
	36. Define the following WMP acronyms: a. IN d. S b. OR e. R c. PW	N/A
	37. Describe the actions taken if prohibited items are found.	N/A
	38. State five (5) examples of prohibited items.	N/A
	39. Describe how a non-transparent container is handled when liquid is suspected.	N/A
	40. State the acceptable liquid limits in a characterized container.	N/A
	41. Discuss the process of absorbing liquids that may be processed at the host facility.	N/A
	42. Discuss how unvented heat-sealed bags are handled during processing of prohibited items.	N/A
	43. Describe the conditions that would generate an NCR during the VE process.	N/A
	44. State three (3) examples of potentially "unsafe" packages/items that may be encountered.	N/A
	45. State who decides whether to open a package/item and why it may be necessary.	N/A
	46. Describe the information that should be recorded when describing waste items.	N/A
	47. Describe the unit of measurement for weights to be recorded during VE.	N/A
	48. Describe the unit of measurement that the final weights are converted to in the VE Data Sheet.	N/A
	49. State how to determine the weight of a material using historically derived waste weights.	N/A

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: David Jackman

CCP-TP-006	50. Define WAIP.	N/A
	51. Describe how to determine Volume Utilization Percentage (VUP).	N/A
	52. Define the increments in which the VUP are recorded.	N/A
	53. Explain who is allowed to make data changes in data sheets.	N/A
	54. State the criteria for the rigid liner/liner bag to be considered vented.	N/A
	55. Describe the authorized methods of closure of a liner bag.	N/A
	56. Explain how to obtain a closure time and why it is important.	N/A
	57. State how to determine the torque value for the ring bolt.	N/A
	58. State how to determine the torque value for the filter.	N/A
	59. Define waste matrix codes.	N/A
	60. Describe waste stream descriptions.	N/A
	61. State the number of waste containers allowed per Batch Data Report (BDR).	N/A
	62. Describe the information contained in a BDR per CCP-TP-006.	N/A
	63. Explain the responsibilities and functions of the Independent Technical Reviewer (ITR).	N/A
	64. State who cannot complete the ITR checklist in a testing batch.	N/A
	65. Describe what constitutes a completed BDR.	N/A
	66. State the differences and similarities between targeted and TRU waste.	N/A
	67. State what waste is currently approved for standard waste boxes (SWB).	N/A
	68. State how containers are tracked within the characterization process.	N/A

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: David Jackman

	69. Define how many digits in a BDR number.			N/A
	70. State the number of digits that are in a drum number.			N/A
	71. Describe the waste matrix codes that could be assigned once VE is complete.			N/A
	72. Define the waste stream descriptions assigned to the Accelerated Retrieval Project (ARP) and the Sludge Repackaging Project (SRP).			N/A
	73. Define the responsibilities of the VEE.			N/A
Formal Training	**OJT Practical Requirements[1]** *(This section must be performed in the presence of a VEE) (Always Required)*			**VEE SME/OJT Signature/Date**
CCP-TP-006	1. Verify scale calibration check.	(P)	S	T.S. Pool 3-20-13
	2. Obtain the net weight for the waste container.	(P)	S	T.S. Pool 3-20-13
	3. Estimate the VUP.	(P)	S	T.S. Pool 3-20-13
	4. Determine the WMP.	(P)	S	T.S. Pool 3-20-13
	5. Describe WMP on the VE Data Sheet.	(P)	S	T.S. Pool 3-20-13
	6. Obtain weight of each WMP.	(P)	S	T.S. Pool 3-20-13
	7. Determine layers of confinement.	(P)	S	T.S. Pool 3-20-13
	8. Identify and process prohibited items.	P	(S)	T.S. Pool 3-20-13
	9. Obtain waste container gross weight.	(P)	S	T.S. Pool 3-20-13
	10. Complete data sheets.	(P)	S	T.S. Pool 3-20-13
	11. Complete ITR checklist.	(P)	S	Brad [illegible] 3-21-13
	12. Maintain VE logbooks.	P	(S)	T.S. Pool 3-20-13
	13. Compile a batch data report BDR.	(P)	S	T.S. Pool 3-20-13

[1] For simulated steps that involve the recording of information, the steps can be satisfied by the trainee's ability to identify the specific location in the correct record form where actual data would be entered, and explain where the information would be obtained. All required calculations will actually be performed; for simulations, representative data will be used in lieu of actual data. Circle "P" if actually performed or "S" if requirement was simulated.

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) at Idaho National Laboratory (INL) Qualification Card

Name: David Jackman

Approvals	
I have completed formal training and received OJT for this position. I fully understand my responsibilities as a VE Operator/ITR at INL.	David Jackman 3-26-13 Trainee Signature *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of a VE Operator/ITR at INL. *(Validation by the VEE SME/OJT instructor(s) involved in the training of this individual)*	Jeffrey Poole 3-26-13 VEE SME/OJT Instructor *(printed name and signature)* Date
	BRAD STARK 3-26-13 ~~3-26-13~~ 3-26-13 VEE SME/OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of a VE Operator/ITR at INL.	Richard Kantrowitz 3/26/13 SPM *(printed name and signature)* Date

Approved for Content & Format:	**Jeffrey Poole *(Approval on File)***	**02/28/2013**
	SME/OJT	Date
Approved for Applicability, Content & Format:	**Andrew Stallings *(Approval on File)***	**02/28/2013**
	Cognizant Engineer	Date
Approved for Content:	**Jim Vernon *(Approval on File)***	**02/28/2013**
	SPM	Date
Approved for Applicability, Content, Format, & Use:	**A.J. Fisher *(Approval on File)***	**02/28/2013**
	Manager Responsible for Training	Date

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Central Characterization Project **Effective Date: 9/26/2011**	**VE-PIT-01, Rev. 2** **Page 1 of 8**

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: Jodi Stanton	**Badge Number:** [redacted]
Email Address: [redacted]	

Job Specific Training	
☐ **Initial Qualification**	☒ **Requalification**
Qualification Limit	**This qualification is valid for two (2) years.** If necessary, additional training may be required by the CCP Lead Site Project Manager (SPM) or the CCP Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the CCP Manager responsible for Training. The candidate must successfully complete the entire CCP qualification card to reestablish qualification. Qualification is valid for this site and process only.
Requalification Requirements	Items required for requalification are identified by text.

Indoctrination
(Required at initial qualification, or in the event of requalification after disqualification only.)

Initial/Indoctrination Reading:

1. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
2. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
3. CCP-PO-003, *CCP TRUPACT-II Authorized Methods for Payload Control (TRAMPAC)*
4. CCP-QP-002, *CCP Training and Qualification Plan*
5. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
6. CCP-QP-006, *CCP Corrective Action Reporting and Control*
7. CCP-QP-008, *CCP Records Management*
8. CCP-QP-010, *CCP Document Preparation Approval and Control*
9. CCP-QP-016, *CCP Control of Measuring, Testing, and Equipment*
10. CCP-QP-022, *CCP Software Quality Assurance Plan*
11. CCP-QP-023, *CCP Handling, Storage, and Shipping*
12. CCP-TP-006, *CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved from Pits*

I have read the listed initial/indoctrination reading and understand my responsibilities as applicable to the procedures above.	N/A Trainee	Date

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: Jodi Stanton	**Badge Number:** [redacted]
Email Address: [redacted]	

Additional Training Requirements	
1. WAP/QAPjP Briefing and Test. *(One-time requirement)*	CCP Training 10/11/11 Date
2. Visual Examination (VE) TRU Waste Characterization Briefing. *(Required at each requalification)*	CCP Training 10/11/11 Date
3. CCP VE Comprehensive Exam (score 80% or higher) administered by CCP Training. *(To be administered at initial and each requalification)*	CCP Training 10/11/11 Date

Formal Training	**On-the-Job Training (OJT) Knowledge Requirements** *(Required at initial qualification, or in the event of requalification after disqualification only)*	**Visual Examination Expert (VEE) Subject Matter Expert (SME)/OJT Signature/Date**
CCP-PO-001	1. List the Quality Assurance objectives validated by VE.	Q.S. Poole 10-4-11
CCP-QP-002	2. State the purpose of the List of Qualified Individuals (LOQI).	Q.S. Poole 10-4-11
CCP-QP-005	3. State when a nonconformance report (NCR) should be prepared and who is responsible to initiate it.	Q.S. Poole 10-4-11
	4. Describe how nonconforming items are documented.	Q.S. Poole 10-4-11
	5. Describe how nonconforming items are controlled to prevent their use.	Q.S. Poole 10-4-11
	6. State who has the responsibility to validate the NCR once initiated.	Q.S. Poole 10-4-11
	7. Describe how to revise an NCR.	Q.S. Poole 10-4-11
	8. Describe how to void an NCR.	Q.S. Poole 10-4-11
CCP-QP-006	9. Describe the purpose of the corrective action report (CAR) process.	Q.S. Poole 10-4-11
	10. State the person responsible for originating a CAR.	Q.S. Poole 10-4-11
	11. Describe how corrective actions are documented.	Q.S. Poole 10-4-11
	12. State who has the responsibility to validate the CAR once initiated.	Q.S. Poole 10-4-11

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: Jodi Stanton	Badge Number: [redacted]
Email Address: [redacted]	

CCP-QP-008	13. Describe actions CCP personnel may take when conditions adverse to quality are discovered.	S. Poole 10-4-11
	14. List the responsibilities of record generators.	S. Poole 10-4-11
	15. State the storage and control requirements for CCP records.	S. Poole 10-4-11
	16. Explain the process and proper method to make corrections or revisions to CCP records.	S. Poole 10-4-11
CCP-QP-010	17. State the importance of using approved documents.	S. Poole 10-4-11
	18. State when to verify a document revision.	S. Poole 10-4-11
CCP-TP-006/ CCP-VE-101 Briefing	19. Explain how to confirm the electronic .xls data sheet on the ftp site.	S. Poole 10-4-11
	20. Explain the purpose of Visual Examination (VE) of Newly Generated TRU Waste.	S. Poole 10-4-11
	21. State the requirements of the VE Operators in performing VE.	S. Poole 10-4-11
	22. Describe where to obtain the tare weight of a waste container.	S. Poole 10-4-11
	23. What must the VE Operators concur on during the performance of VE?	S. Poole 10-4-11
	24. What actions are taken if the VE Operators do not concur?	S. Poole 10-4-11
	25. Discuss the difference in performing VE on debris waste versus homogeneous waste.	S. Poole 10-4-11
	26. Define how often calibration due dates should be checked on certified equipment.	S. Poole 10-4-11
	27. State how to verify the calibration of M&TE used in VE Newly Generated TRU Waste.	S. Poole 10-4-11
	28. State individual responsible for verifying the calibration of M&TE.	S. Poole 10-4-11
	29. Describe what is done with an out-of-calibration piece of M&TE.	S. Poole 10-4-11
	30. Discuss the requirements for packaging of sharp or heavy objects.	S. Poole 10-4-11
	31. Describe how to obtain the net weight of a waste container.	S. Poole 10-4-11
	32. Define "layers of confinement".	S. Poole 10-4-11

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: Jodi Stanton	Badge Number: [redacted]
Email Address: [redacted]	

CCP-TP-006	33. State how often a scale operational check is performed.	T.S. Poole 10-4-11
	34. State the Waste Material Parameters (WMPs).	T.S. Poole 10-4-11
	35. Define the following WMP acronyms: a.I N b. OR c.P W d. S e.R	T.S. Poole 10-4-11
	36. Describe the actions taken if prohibited items are found.	T.S. Poole 10-4-11
	37. State five (5) examples of prohibited items.	T.S. Poole 10-4-11
	38. Describe how a non-transparent container is handled when liquid is suspected.	T.S. Poole 10-4-11
	39. State the acceptable liquid limits in a characterized container.	T.S. Poole 10-4-11
	40. Discuss the process of absorbing liquids that may be processed at the host facility.	T.S. Poole 10-4-11
	41. Discuss how unvented heat-sealed bags are handled during processing of prohibited items.	T.S Poole 10-4-11
	42. Describe the conditions that would generate an NCR during the VE process.	T.S. Poole 10-4-11
	43. State three (3) examples of potentially "unsafe" packages/items that may be encountered.	T.S. Poole 10-4-11
	44. State who decides whether to open a package/item and why it may be necessary.	T.S. Poole 10-4-11
	45. Describe the information that should be recorded when describing waste items.	T.S. Poole 10-4-11
	46. Describe the unit of measurement for weights to be recorded during VE.	T.S. Poole 10-4-11
	47. Describe the unit of measurement that the final weights are converted to in the VE Data Sheet.	T.S. Poole 10-4-11
	48. State how to determine the weight of a material using historically derived waste weights.	T.S. Poole 10-4-11
	49. Define WAIP.	T.S. Poole 10-4-11
CCP-TP-006	50. Describe how to determine Volume Utilization Percentage (VUP).	T.S. Poole 10-4-11

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: Jodi Stanton	**Badge Number:** [redacted]
Email Address: [redacted]	

CCP-TP-006	51. Define the increments in which the VUP are recorded.	Q.S. Poole 10-5-11
	52. Explain who is allowed to make data changes in data sheets.	Q.S. Poole 10-5-11
	53. State the criteria for the rigid liner/liner bag to be considered vented.	Q.S. Poole 10-5-11
	54. Describe the authorized methods of closure of a liner bag.	Q.S. Poole 10-5-11
	55. Explain how to obtain a closure time and why it is important.	Q.S. Poole 10-5-11
	56. State how to determine the torque value for the ring bolt.	Q.S. Poole 10-5-11
	57. State how to determine the torque value for the filter.	Q.S. Poole 10-5-11
	58. Define waste matrix codes.	Q.S. Poole 10-5-11
	59. Describe waste stream descriptions.	Q.S. Poole 10-5-11
	60. State the number of waste containers allowed per Batch Data Report (BDR).	Q.S. Poole 10-5-11
	61. Describe the information contained in a BDR per CCP-TP-006.	Q.S. Poole 10-5-11
	62. Explain the responsibilities and functions of the Independent Technical Reviewer (ITR).	Q.S. Poole 10-5-11
	63. State who cannot complete the ITR checklist in a testing batch.	Q.S. Poole 10-5-11
	64. Describe what constitutes a completed BDR.	Q.S. Poole 10-5-11
	65. State the differences and similarities between targeted and TRU waste.	Q.S. Poole 10-5-11
	66. State what waste is currently approved for standard waste boxes (SWB).	Q.S. Poole 10-5-11
	67. State how containers are tracked within the CCP process.	Q.S. Poole 10-5-11
	68. Define how many digits in a BDR number.	Q.S. Poole 10-5-11
	69. State the number of digits that are in a drum number.	Q.S. Poole 10-5-11
	70. State the three (3) waste matrix codes that could be assigned once VE is completed.	Q.S. Poole 10-5-11

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: Jodi Stanton	**Badge Number:** [redacted]
Email Address: [redacted]	

	71. Define the waste stream description assigned to the ARP.			T.S. Poole 10-5-11
	72. Define the responsibilities of the VEE.			T.S. Poole 10-5-11
Formal Training	**OJT Practical Requirements**[1] *(Required at initial qualification and at requalification) (This section must be performed in the presence of a VEE for initial and requalification)*			**VEE SME/OJT Signature/Date**
CCP-TP-006	1. Verify scale calibration check.	(P)	S	T.S. Poole 9-29-11
	2. Obtain the net weight for the waste container.	(P)	S	T.S. Poole 9-29-11
	3. Estimate the VUP.	(P)	S	T.S. Poole 9-29-11
	4. Determine the WMP.	(P)	S	T.S. Poole 9-29-11
	5. Describe WMP on the VE Data Sheet.	(P)	S	T.S. Poole 9-29-11
	6. Obtain weight of each WMP.	(P)	S	T.S. Poole 9-29-11
	7. Determine layers of confinement.	(P)	S	T.S. Poole 9-29-11
	8. Identify and process prohibited items.	P	(S)	T.S. Poole 9-29-11
	9. Obtain waste container gross weight.	(P)	S	T.S. Poole 9-29-11
	10. Complete data sheets.	(P)	S	T.S. Poole 9-29-11
	11. Complete ITR checklist.	(P)	S	T.S. Poole 10-4-11
	12. Maintain VE logbooks.	P	(S)	T.S. Poole 9-29-11
	13. Compile a batch data report BDR.	(P)	S	T.S. Poole 9-27-11

[1] For simulated steps that involve the recording of information, the steps can be satisfied by the trainee's ability to identify the specific location in the correct record form where actual data would be entered, and explain where the information would be obtained. All required calculations will actually be performed: for simulations, representative data will be used in lieu of actual data. Circle "P" if actually performed or "S" if requirement was simulated.

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: Jodi Stanton	**Badge Number:** [redacted]
Email Address: [redacted]	

	Approvals
I have completed formal training and received OJT for this position. I fully understand my responsibilities as a VE Operator/ITR for Newly Generated TRU Waste Retrieved from the Pits.	Jodi M. Stanton 10/10/11 Trainee Signature *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of a VE Operator/ITR for Newly Generated TRU Waste Retrieved from the Pits. *(Validation by the SME/OJT instructor(s) involved in the training of this individual)*	Jeffrey Poole J.S. Poole 10-10-11 VEE SME/OJT Instructor *(printed name and signature)* Date N/A VEE SME/OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of a VE Operator/ITR for Newly Generated TRU Waste Retrieved from the Pits.	Jim Vernon 10-11-11 CCP Lead or Alternate SPM *(printed name and signature)* Date

Approved for Content & Format:	**Jeffrey Poole (Approval on file)** VEE SME/OJT	**9/26/2011** Date
Approved for Content & Format:	**Andrew Stallings (Approval on file)** Cognizant Engineer	**9/26/2011** Date
Approved for Content:	**Jim Vernon (Approval on file)** CCP Lead or Alternate SPM	**9/26/2011** Date
Approved for Use:	**AJ Fisher (Approval on file)** CCP Manager Responsible for Training	**9/26/2011** Date

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: Jodi Stanton	**Badge Number:** [redacted]
Email Address: [redacted]	

Site: INL

List of Applicable Waste Streams *(based on applicable Acceptable Knowledge Reports read):**	
	N
	A

**For use with Initial and Additional Sites (To be completed for each site the trainee is qualifying for)*

I have read the applicable Acceptable Knowledge Reports for this site. I understand my responsibilities regarding the waste streams listed above.

Jodi M. Stanton Jodi M Stanton — Trainee *(Printed Name and Signature)*

10/10/11 — Date

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Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: LeAnn Verlanic	**Badge Number:** [redacted]
Email Address: [redacted]	

Job Specific Training	
☐ **Initial Qualification**	☒ **Requalification**
Qualification Limit	**This qualification is valid for two (2) years.** If necessary, additional training may be required by the CCP Lead Site Project Manager (SPM) or the CCP Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the CCP Manager responsible for Training. The candidate must successfully complete the entire CCP qualification card to reestablish qualification. Qualification is valid for this site and process only.
Requalification Requirements	Items required for requalification are identified by text.

Indoctrination
(Required at initial qualification, or in the event of requalification after disqualification only.)

Initial/Indoctrination Reading:

1. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
2. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
3. CCP-PO-003, *CCP TRUPACT-II Authorized Methods for Payload Control (TRAMPAC)*
4. CCP-QP-002, *CCP Training and Qualification Plan*
5. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
6. CCP-QP-006, *CCP Corrective Action Reporting and Control*
7. CCP-QP-008, *CCP Records Management*
8. CCP-QP-010, *CCP Document Preparation Approval and Control*
9. CCP-QP-016, *CCP Control of Measuring, Testing, and Equipment*
10. CCP-QP-022, *CCP Software Quality Assurance Plan*
11. CCP-QP-023, *CCP Handling, Storage, and Shipping*
12. CCP-TP-006, *CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved from Pits*

I have read the listed initial/indoctrination reading and understand my responsibilities as applicable to the procedures above.	LeAnn Verlanic 9-26-11
	Trainee — Date

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: LeAnn Verlanic	**Badge Number:** [redacted]
Email Address: [redacted]	

Additional Training Requirements	
1. WAP/QAPjP Briefing and Test. *(One-time requirement)*	CCP Training — 10/17/11 Date
2. Visual Examination (VE) TRU Waste Characterization Briefing. *(Required at each requalification)*	CCP Training — 10/17/11 Date
3. CCP VE Comprehensive Exam (score 80% or higher) administered by CCP Training. *(To be administered at initial and each requalification)*	CCP Training — 10/17/11 Date

Formal Training	**On-the-Job Training (OJT) Knowledge Requirements** *(Required at initial qualification, or in the event of requalification after disqualification only)*	**Visual Examination Expert (VEE) Subject Matter Expert (SME)/OJT Signature/Date**
CCP-PO-001	1. List the Quality Assurance objectives validated by VE.	Brad Stark 10-5-11
CCP-QP-002	2. State the purpose of the List of Qualified Individuals (LOQI).	Brad Stark 10-5-11
CCP-QP-005	3. State when a nonconformance report (NCR) should be prepared and who is responsible to initiate it.	Brad Stark 10-5-11
	4. Describe how nonconforming items are documented.	Brad Stark 10.5.11
	5. Describe how nonconforming items are controlled to prevent their use.	Brad Stark 10.5.11
	6. State who has the responsibility to validate the NCR once initiated.	Brad Stark 10.5.11
	7. Describe how to revise an NCR.	Brad Stark 10.5.11
	8. Describe how to void an NCR.	Brad Stark 10.5.11
CCP-QP-006	9. Describe the purpose of the corrective action report (CAR) process.	Brad Stark 10.5.11
	10. State the person responsible for originating a CAR.	Brad Stark 10.5.11
	11. Describe how corrective actions are documented.	Brad Stark 10.5.11
	12. State who has the responsibility to validate the CAR once initiated.	Brad Stark 10.5.11

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: LeAnn Verlanic	**Badge Number:** [redacted]
Email Address: [redacted]	

	13. Describe actions CCP personnel may take when conditions adverse to quality are discovered.	Brad Stark	10-5-11
CCP-QP-008	14. List the responsibilities of record generators.	Brad Stark	10-5-11
	15. State the storage and control requirements for CCP records.	Brad Stark	10-5-11
	16. Explain the process and proper method to make corrections or revisions to CCP records.	Brad Stark	10-5-11
CCP-QP-010	17. State the importance of using approved documents.	Brad Stark	10-5-11
	18. State when to verify a document revision.	Brad Stark	10-5-11
CCP-TP-006/ CCP-VE-101 Briefing	19. Explain how to confirm the electronic .xls data sheet on the ftp site.	Brad Stark	10-5-11
	20. Explain the purpose of Visual Examination (VE) of Newly Generated TRU Waste.	Brad Stark	10-5-11
	21. State the requirements of the VE Operators in performing VE.	Brad Stark	10-5-11
	22. Describe where to obtain the tare weight of a waste container.	Brad Stark	10-5-11
	23. What must the VE Operators concur on during the performance of VE?	Brad Stark	10-5-11
	24. What actions are taken if the VE Operators do not concur?	Brad Stark	10-5-11
	25. Discuss the difference in performing VE on debris waste versus homogeneous waste.	Brad Stark	10-5-11
	26. Define how often calibration due dates should be checked on certified equipment.	Brad Stark	10-5-11
	27. State how to verify the calibration of M&TE used in VE Newly Generated TRU Waste.	Brad Stark	10-5-11
	28. State individual responsible for verifying the calibration of M&TE.	Brad Stark	10-5-11
	29. Describe what is done with an out-of-calibration piece of M&TE.	Brad Stark	10-5-11
	30. Discuss the requirements for packaging of sharp or heavy objects.	Brad Stark	10-5-11
	31. Describe how to obtain the net weight of a waste container.	Brad Stark	10-5-11
	32. Define "layers of confinement".	Brad Stark	10-5-11

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: LeAnn Verlanic	**Badge Number:** [redacted]
Email Address: [redacted]	

CCP-TP-006	33. State how often a scale operational check is performed.	9.5. Poole 10-6-11
	34. State the Waste Material Parameters (WMPs).	9.5. Poole 10-6-11
	35. Define the following WMP acronyms: a. IN b. OR c. PW d. S e. R	9.5. Poole 10-6-11
	36. Describe the actions taken if prohibited items are found.	9.5. Poole 10-6-11
	37. State five (5) examples of prohibited items.	9.5. Poole 10-6-11
	38. Describe how a non-transparent container is handled when liquid is suspected.	9.5. Poole 10-6-11
	39. State the acceptable liquid limits in a characterized container.	9.5. Poole 10-6-11
	40. Discuss the process of absorbing liquids that may be processed at the host facility.	9.5. Poole 10-6-11
	41. Discuss how unvented heat-sealed bags are handled during processing of prohibited items.	9.5. Poole 10-6-11
	42. Describe the conditions that would generate an NCR during the VE process.	9.5 Poole 10-6-11
	43. State three (3) examples of potentially "unsafe" packages/items that may be encountered.	9.5. Poole 10-6-11
	44. State who decides whether to open a package/item and why it may be necessary.	9.5 Poole 10-6-11
	45. Describe the information that should be recorded when describing waste items.	9.5 Poole 10-6-11
	46. Describe the unit of measurement for weights to be recorded during VE.	9.5. Poole 10-6-11
	47. Describe the unit of measurement that the final weights are converted to in the VE Data Sheet.	9.5. Poole 10-6-11
	48. State how to determine the weight of a material using historically derived waste weights.	9.5. Poole 10-6-11
	49. Define WAIP.	9.5. Poole 10-6-11
CCP-TP-006	50. Describe how to determine Volume Utilization Percentage (VUP).	9.5. Poole 10-6-11

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: LeAnn Verlanic	**Badge Number:** [redacted]
Email Address: [redacted]	

CCP-TP-006	51. Define the increments in which the VUP are recorded.	9.5. Poole 10-6-11
	52. Explain who is allowed to make data changes in data sheets.	9.5. Poole 10-6-11
	53. State the criteria for the rigid liner/liner bag to be considered vented.	9.5. Poole 10-6-11
	54. Describe the authorized methods of closure of a liner bag.	9.5. Poole 10-5-11
	55. Explain how to obtain a closure time and why it is important.	9.5. Poole 10-6-11
	56. State how to determine the torque value for the ring bolt.	9.5. Poole 10-6-11
	57. State how to determine the torque value for the filter.	9.5. Poole 10-6-11
	58. Define waste matrix codes.	9.5. Poole 10-5-11
	59. Describe waste stream descriptions.	9.5. Poole 10-5-11
	60. State the number of waste containers allowed per Batch Data Report (BDR).	9.5. Poole 10-5-11
	61. Describe the information contained in a BDR per CCP-TP-006.	9.5. Poole 10-5-11
	62. Explain the responsibilities and functions of the Independent Technical Reviewer (ITR).	9.5. Poole 10-5-11
	63. State who cannot complete the ITR checklist in a testing batch.	9.5. Poole 10-5-11
	64. Describe what constitutes a completed BDR.	9.5. Poole 10-5-11
	65. State the differences and similarities between targeted and TRU waste.	9.5. Poole 10-5-11
	66. State what waste is currently approved for standard waste boxes (SWB).	9.5. Poole 10-5-11
	67. State how containers are tracked within the CCP process.	9.5. Poole 10-5-11
	68. Define how many digits in a BDR number.	9.5. Poole 10-5-11
	69. State the number of digits that are in a drum number.	9.5. Poole 10-5-11
	70. State the three (3) waste matrix codes that could be assigned once VE is completed.	9.5. Poole 10-5-11

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: LeAnn Verlanic	**Badge Number:** [redacted]
Email Address: [redacted]	

	71. Define the waste stream description assigned to the ARP.			Q.S. Poole 10-5-11
	72. Define the responsibilities of the VEE.			Q.S. Poole 10-5-11
Formal Training	**OJT Practical Requirements[1]** *(Required at initial qualification and at requalification) (This section must be performed in the presence of a VEE for initial and requalification)*			**VEE SME/OJT Signature/Date**
CCP-TP-006	1. Verify scale calibration check.	(P)	S	Q.S. Poole 9-29-11
	2. Obtain the net weight for the waste container.	(P)	S	Q.S. Poole 9-29-11
	3. Estimate the VUP.	(P)	S	Q.S. Poole 10-3-11
	4. Determine the WMP.	(P)	S	Q.S. Poole 10-3-11
	5. Describe WMP on the VE Data Sheet.	(P)	S	Q.S. Poole 10-3-11
	6. Obtain weight of each WMP.	(P)	S	Q.S. Poole 10-3-11
	7. Determine layers of confinement.	(P)	S	Q.S. Poole 10-3-11
	8. Identify and process prohibited items.	P	(S)	Q.S. Poole 10-3-11
	9. Obtain waste container gross weight.	(P)	S	Q.S. Poole 10-3-11
	10. Complete data sheets.	(P)	S	Q.S. Poole 10-3-11
	11. Complete ITR checklist.	(P)	S	Q.S. Poole 10-6-11
	12. Maintain VE logbooks.	P	(S)	Q.S. Poole 9-29-11
	13. Compile a batch data report BDR.	(P)	S	Q.S. Poole 9-28-11

[1] For simulated steps that involve the recording of information, the steps can be satisfied by the trainee's ability to identify the specific location in the correct record form where actual data would be entered, and explain where the information would be obtained. All required calculations will actually be performed: for simulations, representative data will be used in lieu of actual data. Circle "P" if actually performed or "S" if requirement was simulated.

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: LeAnn Verlanic	**Badge Number:** [redacted]
Email Address: [redacted]	

Approvals	
I have completed formal training and received OJT for this position. I fully understand my responsibilities as a VE Operator/ITR for Newly Generated TRU Waste Retrieved from the Pits.	LeAnn Verlanic LeAnn Verlanic 10-10-11 Trainee Signature *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of a VE Operator/ITR for Newly Generated TRU Waste Retrieved from the Pits. *(Validation by the SME/OJT instructor(s) involved in the training of this individual)*	Jeffrey Poole J.S. Poole 10-10-11 VEE SME/OJT Instructor *(printed name and signature)* Date
	Brad Stacy Brad Stacy 10/17/11 VEE SME/OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of a VE Operator/ITR for Newly Generated TRU Waste Retrieved from the Pits.	Jim Vernon 10-17-11 CCP Lead or Alternate SPM *(printed name and signature)* Date

Approved for Content & Format:	**Jeffrey Poole (Approval on file)** VEE SME/OJT	**9/26/2011** Date
Approved for Content & Format:	**Andrew Stallings (Approval on file)** Cognizant Engineer	**9/26/2011** Date
Approved for Content:	**Jim Vernon (Approval on file)** CCP Lead or Alternate SPM	**9/26/2011** Date
Approved for Use:	**AJ Fisher (Approval on file)** CCP Manager Responsible for Training	**9/26/2011** Date

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: LeAnn Verlanic	**Badge Number:** [redacted]
Email Address: [redacted]	

Site: INL

List of Applicable Waste Streams ***(based on applicable Acceptable Knowledge Reports read):****	
	N
	A

**For use with Initial and Additional Sites (To be completed for each site the trainee is qualifying for)*

I have read the applicable Acceptable Knowledge Reports for this site. I understand my responsibilities regarding the waste streams listed above.

LeAnn Verlanic LeAnn Verlanic 10-10-11
Trainee *(Printed Name and Signature)* Date

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Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste*

Name: Jackie Hulse

Education/Experience	
Resume documenting education and experience on file with National TRU Program Certification (NTPC) Training.	Michele Billett 1/17/13 NTPC Training Date

Job Specific Training

☐ **Initial Qualification** ☐ **Requalification** ☑ **Full Requalification**

Qualification Limit	**This qualification is valid for two (2) years.** If necessary, additional training may be required by the Site Project Manager (SPM) or the Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the Manager Responsible for Training. The candidate must successfully complete the entire qualification card to reestablish qualification. Qualification is valid for this site and process only.
Requalification Requirements	Items required for requalification are identified by text.

Indoctrination
(Required at Initial Qualification and Full Requalification)

Initial/Indoctrination Reading:

1. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
2. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
3. CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)*
4. CCP-QP-002, *CCP Training and Qualification Plan*
5. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
6. CCP-QP-006, *CCP Corrective Action Reporting and Control*
7. CCP-QP-008, *CCP Records Management*
8. CCP-QP-010, *CCP Document Preparation, Approval, and Control*
9. CCP-QP-016, *CCP Control of Measuring and Testing Equipment*
10. CCP-QP-022, *CCP Software Quality Assurance Plan*
11. CCP-QP-023, *CCP Handling, Storage, and Shipping*
12. CCP-TP-006, *CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste*

I have read the listed Initial/Indoctrination Reading and understand my responsibilities as applicable to the procedures above.	[signature] 1/8/13 Trainee Date

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste*

Name: Jackie Hulse

Additional Training Requirements	
1. WAP/QAPjP Briefing and Test *(One-time Requirement)*	Michele Billett 1/17/13 NTPC Training Date
2. CCP-VE-101, *Visual Examination (VE) TRU Waste Characterization Briefing (Always Required)*	Michele Billett 1/17/13 NTPC Training Date
3. CCP VE Comprehensive Exam *(Always Required)*	Michele Billett 1/17/13 NTPC Training Date

Formal Training	On-the-Job Training (OJT) Knowledge Requirements *(Required at Initial Qualification and Full Requalification)*	Visual Examination Expert (VEE) Subject Matter Expert (SME)/OJT Signature/Date
CCP-PO-001	1. List the Quality Assurance objectives validated by VE.	1-8-13
CCP-QP-002	2. State the purpose of the List of Qualified Individuals (LOQI).	1-8-13
CCP-QP-005	3. State when a nonconformance report (NCR) should be prepared and who is responsible to initiate it.	1-8-13
	4. Describe how nonconforming items are documented.	1-8-13
	5. Describe how nonconforming items are controlled to prevent their use.	1-8-13
	6. State who has the responsibility to validate the NCR once initiated.	1-8-13
	7. Describe how to revise an NCR.	1-8-13
	8. Describe how to void an NCR.	1-8-13
CCP-QP-006	9. Describe the purpose of the corrective action report (CAR) process.	1-8-13
	10. State the person responsible for originating a CAR.	1-8-13
	11. Describe how corrective actions are documented.	1-8-13
	12. State who has the responsibility to validate the CAR once initiated.	1-8-13

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste*

Name: Jackie Hulse

	13. Describe actions NTPC personnel may take when conditions adverse to quality are discovered.	1-8-13
CCP-QP-008	14. List the responsibilities of record generators.	1-8-13
	15. State the storage and control requirements for NTPC Records.	1-8-13
	16. Explain the process and proper method to make corrections or revisions to NTPC Records.	1-8-13
CCP-QP-010	17. State the importance of using approved documents.	1-8-13
	18. State when to verify a document revision.	1-8-13
CCP-TP-006/ CCP-VE-101 Briefing	19. Explain how to confirm the electronic .xls data sheet on the sftp site.	1-8-13
	20. Explain the purpose of Visual Examination (VE) of Newly Generated TRU Waste.	1-8-13
	21. State the requirements of the VE Operators in performing VE.	1-8-13
	22. Describe where to obtain the tare weight of a waste container.	1-8-13
	23. What must the VE Operators concur on during the performance of VE?	1-8-13
	24. What actions are taken if the VE Operators do not concur?	1-8-13
	25. Discuss the difference in performing VE on debris waste versus homogeneous waste.	1-8-13
	26. Discuss the difference in identification of soils versus homogeneous waste.	1-8-13
	27. Define how often calibration due dates should be checked on certified equipment.	1-8-13
	28. State how to verify the calibration of M&TE used in VE Newly Generated TRU Waste.	1-8-13
	29. State individual responsible for verifying the calibration of M&TE.	1-8-13
	30. Describe what is done with an out-of-calibration piece of M&TE.	1-8-13
	31. Discuss the requirements for packaging of sharp or heavy objects.	1-8-13

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste*

Name: Jackie Hulse

CCP-TP-006	32. Describe how to obtain the net weight of a waste container.	1-8-13
	33. Define "layers of confinement".	1-8-13
	34. State how often a scale operational check is performed.	1-8-13
	35. State the Waste Material Parameters (WMPs).	1-8-13
	36. Define the following WMP acronyms: a. IN b. OR c. PW d. S e. R	1-8-13
	37. Describe the actions taken if prohibited items are found.	T.S. Poole 1-9-13
	38. State five (5) examples of prohibited items.	T.S. Poole 1-9-13
	39. Describe how a non-transparent container is handled when liquid is suspected.	T.S. Poole 1-9-13
	40. State the acceptable liquid limits in a characterized container.	T.S. Poole 1-9-13
	41. Discuss the process of absorbing liquids that may be processed at the host facility.	T.S. Poole 1-9-13
	42. Discuss how unvented heat-sealed bags are handled during processing of prohibited items.	T.S. Poole 1-9-13
	43. Describe the conditions that would generate an NCR during the VE process.	T.S. Poole 1-9-13
	44. State three (3) examples of potentially "unsafe" packages/items that may be encountered.	T.S. Poole 1-9-13
	45. State who decides whether to open a package/item and why it may be necessary.	T.S. Poole 1-9-13
	46. Describe the information that should be recorded when describing waste items.	T.S. Poole 1-9-13
	47. Describe the unit of measurement for weights to be recorded during VE.	T.S. Poole 1-9-13
	48. Describe the unit of measurement that the final weights are converted to in the VE Data Sheet.	T.S. Poole 1-9-13
	49. State how to determine the weight of a material using historically derived waste weights.	T.S. Poole 1-9-13

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste*

Name: Jackie Hulse

CCP-TP-006	50. Define WAIP.	Q.S. Poole 1-9-13
	51. Describe how to determine Volume Utilization Percentage (VUP).	Q.S. Poole 1-9-13
	52. Define the increments in which the VUP are recorded.	Q.S. Poole 1-9-13
	53. Explain who is allowed to make data changes in data sheets.	Q.S. Poole 1-9-13
	54. State the criteria for the rigid liner/liner bag to be considered vented.	Q.S. Poole 1-9-13
	55. Describe the authorized methods of closure of a liner bag.	Q.S. Poole 1-9-13
	56. Explain how to obtain a closure time and why it is important.	Q.S. Poole 1-9-13
	57. State how to determine the torque value for the ring bolt.	Q.S. Poole 1-9-13
	58. State how to determine the torque value for the filter.	Q.S. Poole 1-9-13
	59. Define waste matrix codes.	Q.S. Poole 1-9-13
	60. Describe waste stream descriptions.	Q.S. Poole 1-9-13
	61. State the number of waste containers allowed per Batch Data Report (BDR).	Q.S. Poole 1-9-13
	62. Describe the information contained in a BDR per CCP-TP-006.	Q.S. Poole 1-9-13
	63. Explain the responsibilities and functions of the Independent Technical Reviewer (ITR).	Q.S. Poole 1-9-13
	64. State who cannot complete the ITR checklist in a testing batch.	Q.S. Poole 1-9-13
	65. Describe what constitutes a completed BDR.	Q.S. Poole 1-9-13
	66. State the differences and similarities between targeted and TRU waste.	Q.S. Poole 1-9-13
	67. State what waste is currently approved for standard waste boxes (SWB).	Q.S. Poole 1-9-13
	68. State how containers are tracked within the NTPC process.	Q.S. Poole 1-9-13
	69. Define how many digits in a BDR number.	Q.S. Poole 1-9-13

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste*

Name: Jackie Hulse

	70. State the number of digits that are in a drum number.			Q.S. Poole 1-9-13
	71. State the three (3) waste matrix codes that could be assigned once VE is completed.			Q.S. Poole 1-9-13
	72. Define the waste stream description assigned to the ARP.			Q.S. Poole 1-9-13
	73. Define the responsibilities of the VEE.			Q.S. Poole 1-9-13
Formal Training	**OJT Practical Requirements[1]** *(This section must be performed in the presence of a VEE)* *(Always Required)*			**VEE SME/OJT Signature/Date**
CCP-TP-006	1. Verify scale calibration check.	P	(S)	Q.S. Poole 1-9-13
	2. Obtain the net weight for the waste container.	P	(S)	Q.S. Poole 1-9-13
	3. Estimate the VUP.	P	(S)	Q.S. Poole 1-9-13
	4. Determine the WMP.	(P)	S	01-16-13
	5. Describe WMP on the VE Data Sheet.	(P)	S	01-16-13
	6. Obtain weight of each WMP.	(P)	S	01-16-13
	7. Determine layers of confinement.	P	(S)	Q.S. Poole 1-9-13
	8. Identify and process prohibited items.	P	(S)	Q.S. Poole 1-9-13
	9. Obtain waste container gross weight.	P	(S)	Q.S. Poole 1-9-13
	10. Complete data sheets.	(P)	S	01-16-13
	11. Complete ITR checklist.	(P)	S	Brad Tuck 1-15-13
	12. Maintain VE logbooks.	P	(S)	Q.S. Poole 1-9-13
	13. Compile a batch data report BDR.	P	(S)	Q.S. Poole 1-9-13

[1] For simulated steps that involve the recording of information, the steps can be satisfied by the trainee's ability to identify the specific location in the correct record form where actual data would be entered, and explain where the information would be obtained. All required calculations will actually be performed: for simulations, representative data will be used in lieu of actual data. Circle "P" if actually performed or "S" if requirement was simulated.

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste*

Name: Jackie Hulse

Approvals	
I have completed formal training and received OJT for this position. I fully understand my responsibilities as a VE Operator/ITR for Newly Generated TRU Waste Retrieved from the Pits.	Jackie Hulse 1/17/13 Trainee Signature *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of a VE Operator/ITR for Newly Generated TRU Waste Retrieved from the Pits. *(Validation by the VEE SME/OJT instructor(s) involved in the training of this individual)*	Spencer Puttee 1-17-13 VEE SME/OJT Instructor *(printed name and signature)* Date LUKE GROVER 1-21-13 BRAD STARK 1-21-13 Jeffrey Poole 1-17-13 VEE SME/OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of a VE Operator/ITR for Newly Generated TRU Waste Retrieved from the Pits.	Richard Kantrowitz 1/21/13 SPM *(printed name and signature)* Date

Approved for Content & Format: **Jeffrey Poole *(Approval on File)*** **11/01/2012**
SME/OJT Date

Approved for Applicability, Content & Format: **Andrew Stallings *(Approval on File)*** **11/01/2012**
Cognizant Engineer Date

Approved for Content: **Jim Vernon *(Approval on File)*** **11/01/2012**
SPM Date

Approved for Applicability, Content, Format, & Use: **A.J. Fisher *(Approval on File)*** **11/01/2012**
Manager Responsible for Training Date

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary

BDR Number: IN-ARP-VE-002793 **Examination Date:** 08/02/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
1. Is the completed, signed and dated Independent Technical Reviewer Checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, C3-10b**	X			
2. Does the BDR contain all items addressed in the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-10b**	X			
3. Does the BDR include a listing of all container numbers in the batch? **Reference Source: CCP-PO-001, C3-10b**	X			
4. List all containers that have met QAOs. **Reference Source: CCP-PO-001, C3-10b**				Container Numbers: ARP70797 ARP70900, ARP70903, ARP70911 ARP70915, ARP70941, ARP70942 ARP71009, ARP71011, ARP71013 ARP71016, ARP71018, ARP71021 ARP71029, ARP71044, ARP71047 ARP71051, ARP71054, ARP71055
5. Is the current implementing procedure and revision number included in the BDR? **Reference Source: CCP-PO-001, C3-4, C3-10b, Table C3-11**	X			
6. Is the BDR date included? **Reference Source: CCP-PO-001, Table C3-11**	X			
7. Is there a reference to or copy of any associated NCRs (if any) in the BDR? **Reference Source: CCP-PO-001, Table C3-11**			X	No NCRs
8. Are there 20 or fewer containers in the batch? **Reference Source: CCP-PO-001 C3-10**	X			
9. Are the data properly reported (i.e., data are reported in correct units and with correct significant figures). **Reference Source: CCP-PO-001 C3-10b**	X			
10. Is there evidence of verification that the physical form matches the Waste Matrix Code? **Reference Source: CCP-PO-001, C3-4**	X			
11. Is there evidence of verification that the physical form matches the waste stream description? **Reference Source: CCP-PO-001, C1-4**	X			
12. Are prohibited items absent? **Reference Source: CCP-PO-001, C3-4**	X			

COPY

CCP RECORDS ORIGINAL
DATE REC'D 8-10-12

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-ARP-VE-002793 **Examination Date:** 08/02/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
13. Does observable liquid, if present, meet the criteria of the TSDF-WAC? **Reference Source: CCP-PO-001, C3-4b**	X			
14. Were discrepancies between the Visual Examination operator and the ITR with regards to identification of waste matrix code, liquids in excess of the TSDF-WAC, or compressed gases reconciled? NA if no discrepancies. **Reference Source: CCP-PO-001, C3-4b**			X	No discrepancies
15. Are the training requirements met for the VE Expert and VE Operators who have signed the data forms? **Reference Source: CCP-PO-001, C1-4, C3-4**	X			
16. Is evidence of a satisfactory audio/video test included in the BDR? NA [not applicable] for VE Method for Newly Generated Waste. **Reference Source: CCP-PO-001, C1-4**			X	Newly Generated Waste
17. If the VE was not recorded using audio/video media, does the data sheet contain the signature of two qualified operators who observed for themselves the waste being placed into the container? NA if audio/video used. **Reference Source: CCP-PO-001, C1-4**	X			
18. Are the weights/estimated weights for the 12 waste material parameters reported in kilograms (kg)? **Reference Source: CCP Technical Procedures**	X			
19. Are the descriptions for each waste material parameter included in the BDR? **Reference Source: CCP-PO-001, C1-4**	X			
20. Is the gross weight reported (in kg) for each container included in the BDR? **Reference Source: CCP Technical Procedures**	X			
21. Is the number of layers of confinement recorded? **Reference Source: CCP-PO-001, C-3d**	X			
22. Is sufficient information included in the BDR to determine the packaging configuration? **Reference Source: CCP-PO-001 C-3d**	X			

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-ARP-VE-002793 **Examination Date:** 08/02/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
23. Is the type and number of filters recorded? **Reference Source: CCP-PO-001, C-3d**	X			
24. Is the size of the rigid liner vent hole recorded to determine the appropriate DAC? NA if no liner lid. **Reference Source: CCP-PO-001, C-3d**			X	No liner lid
25. For Los Alamos National Laboratory (LANL) Sealed Sources, does the characterized waste container meet the definition of sealed sources per Title 10 Code of Federal Regulations (CFR) 30.4 and Title 10 CFR 835.2 (effective January 1, 2004) evidence of which is assembled as part of AK documentation? **Reference Source: CCP Technical Procedures**			X	Not from LANL
26. For LANL Sealed Sources, are sealed sources the only non-packaging items in the waste container? **Reference Source: CCP Technical Procedures**			X	Not from LANL
27. For LANL Sealed Sources, are the sealed sources a U.S. Department of Transportation (DOT) Special Form Class 7 (Radioactive Material) per Title 49 CFR 34.27 (effective January 1, 2004) and the certification of which is assembled as part of the AK documentation? **Reference Source: CCP Technical Procedures**			X	Not from LANL
28. For LANL Sealed Sources, is the integrity of each sealed source validated by documented contamination survey results to meet the requirements of Title 10 CFR 34.27 (effective January 1, 2004), and assembled as part of AK documentation? **Reference Source: CCP Technical Procedures**			X	Not from LANL

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-ARP-VE-002793 **Examination Date:** 08/02/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
29. For LANL Sealed Sources, is each sealed source a rigid sealed container less than or equal to 4 L in size or in a rigid sealed container less than or equal to 4 L? **Reference Source: CCP Technical Procedures**			X	Not from LANL
30. For LANL Sealed Sources, AK documentation does not indicate the use of volatile organic compounds (VOCs) or VOC-bearing materials as constituents of sealed sources? **Reference Source: CCP Technical Procedures**			X	Not from LANL
31. For LANL Sealed Sources, the outer casing of each sealed source is of a non VOC-bearing material which is verified using the VE technique at the time of packaging? **Reference Source: CCP Technical Procedures**			X	Not from LANL

Comments: None

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

Steve Castro	Ste Cast	8-10-12
SPM Printed Name	Signature	Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

Attachment 4 – CCP Waste VE Technique Batch Data Report Cover Sheet

Batch Data Report No.: IN-ARP-VE-002793

	Waste Container ID Number
1	ARP71011
2	ARP71054
3	ARP70941
4	ARP71018
5	ARP 71051
6	ARP 70900
7	ARP 71009
8	ARP 71029
9	ARP71016
10	ARP 71055
11	ARP 71044
12	ARP71021
13	ARP70942
14	ARP71013
15	ARP70903
16	ARP70797
17	ARP71047
18	ARP70911
19	ARP70915
20	N/A GS 8/2/12

ITR:

Brad Stark — Printed Name
Signature — Date: 8-6-12

VEE:

Spencer Pattee — Printed Name
Signature — Date: 8-6-12

CCP RECORDS ORIGINAL
DATE REC'D 8-6-12

001

Attachment 3 – CCP Waste VE Technique Batch Data Report Table of Contents

Batch Data Report No.: IN-ARP-VE-002793 **Batch Data Report Date:** 8/2/12

Table of Contents

Item	Description	Page No.
1	Attachment 4, CCP Waste VE Technique Batch Data Report Cover Sheet	1
2	Attachment 3, CCP Waste VE Technique Batch Data Report Table of Contents	2
3	CCP Waste Visual Examination Technique Data Form	3
4	Attachment 2, CCP Waste VE Technique Independent Technical Reviewer Checklist	136
5	Copy of NCRs (NA, If Not Applicable)	N/A

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	ARP71011
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location:	IN-RWMC-ARP-6
3.	Batch Number:	IN-ARP-VE-002793
4.	Examination Date:	08/02/12
5.	Procedure CCP-TP-006, Rev.:	16
6.	a. Drum Packing Station (DPS) Number:	701
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	XC0917
	c. Scale Calibration Due Date:	06/07/13
	d. Test Weight ID:	XC0834
	e. Test Weight Calibration Due Date:	12/16/12
	f. Test Weight (kgs):	5.0
	g. Scale Readout of Test Weight (kgs):	5.0
	h. Difference Between Test Weight and Scale Readout (kgs):	0.0
	i. DPS Scale Check SAT (Y):	Y
	Container Scale Check	
	j. Scale Serial/ID Number:	729255
	k. Scale Calibration Due Date:	11/07/12
	l. Test Weight ID:	722311
	m. Test Weight Calibration Due Date:	11/07/12
	n. Test Weight (kg):	224.0
	o. Scale Readout of Test Weight (kgs):	224.0
	p. Difference Between Test Weight and Scale Readout (kgs):	0.0
	q. Container Scale Check SAT (Y):	Y
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	221224
8.	Container Filter Torque Data:	
	a. Filter Torque Wrench Serial/ID Number:	726775
	b. Filter Torque Wrench Calibration Due Date:	09/19/12
	c. Filter Model No.:	NUCFIL-019DS
	d. Filter Serial No.:	HL-95
	e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
	f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71011							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.3	N/A		0.0
7				METAL	0.3	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71011							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	l. Other inorganic materials (Ol)				9.1	N/A		15.0
30		j. Graphite			0.1	N/A		0.0
31			SMALL GRAPHITE PIECE		0.1	2.2		0.0
32			N/A		N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34			N/A		N/A	2.3		0.0
35			N/A		N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37			N/A		N/A	2.0		0.0
38			N/A		N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40			N/A		N/A	3.0		0.0
41			N/A		N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43			N/A		N/A	2.0 - 5.0	0.0	0.0
44			N/A		N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46			N/A		N/A	2.0		0.0
47			N/A		N/A	2.0		0.0
48		p. Inorganic sorbents			9.0	N/A		15.0
49			OIL DRI ON TOP (WAIP)		9.0	0.1 - 2.8	0.6	15.0
50			N/A		N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52			N/A		N/A	0.0		0.0
53			N/A		N/A	0.0		0.0
54			N/A		N/A	0.0		0.0
55	r. Cellulosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57			PAPER (NSW)		N/A	0.9		0.0
58			N/A		N/A	0.9		0.0
59			N/A		N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61			N/A		N/A	0.8		0.0
62			N/A		N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64			N/A		N/A	1.0		0.0
65			N/A		N/A	1.0		0.0

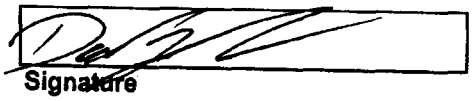
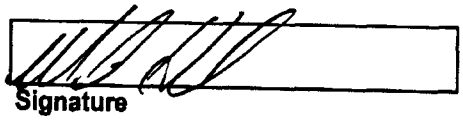
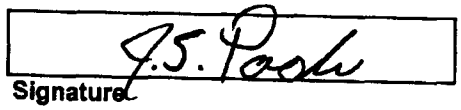
	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003					
2	Container ID: ARP71011					
3	Section 2: Waste Material Parameter (WMP) Estimates					
4	9. Waste Material Parameter and Item Description		10. WMP Estimate	11. Density		12.Volume
5			By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)		0.0	N/A		0.0
67		N/A	N/A	0.9 - 2.0	0.0	0.0
68		N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)		0.0	N/A		0.0
70		NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71		PLASTIC (NSW)	N/A	0.9		0.0
72		N/A	N/A	0.9		0.0
73		N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)		94.0	N/A		78.3
75	x1. Sludge		94.0	N/A		78.3
76		PALE YELLOWISH BROWN POWDERY SLUDGE WITH CALCIUM SILICATE	94.0	1.0 - 1.5	1.2	78.3
77		N/A	N/A	1.0 - 1.5	0.0	0.0
78		N/A	N/A	1.0 - 1.5	0.0	0.0
79	x2. Other (See Note a)		0.0	N/A		0.0
80		N/A	N/A	0.0		0.0
81		N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)		14.2	N/A		11.8
83	y1. Sludge		14.0	N/A		11.7
84		LIGHT BROWN CRUMBLY SLUDGE WITH PORTLAND CEMENT	14.0	1.0 - 1.5	1.2	11.7
85		N/A	N/A	1.0 - 1.5	0.0	0.0
86		N/A	N/A	1.0 - 1.5	0.0	0.0
87	y2. Roaster Oxides		0.0	N/A		0.0
88		N/A	N/A	1.5 - 4.0	0.0	0.0
89		N/A	N/A	1.5 - 4.0	0.0	0.0
90		N/A	N/A	1.5 - 4.0	0.0	0.0
91	y3. Other (See Note a)		0.2	N/A		0.1
92		EVAPORATOR SALT	0.2	2.2		0.1
93		N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)		6.0	N/A		5.0
95		SOIL	6.0	1.0 - 1.4	1.2	5.0
96		N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL		123.6	N/A		110.1
98	13. (ORGANIC SLUDGE) weight (94.0) kg was obtained by subtracting the weighed waste weight of (29.6) kg and the container net weight of (34.0) kg from the gross weight (157.6) kg of the waste container. (157.6) - (29.6) - (34.0) = (94.0) kg					
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.					
100	b. REFERENCE LETTER: CP:08:00210 / UFC:2300.00					
101						

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71011	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71011	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	23.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	720178
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	09/21/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	0915
22. Measured gross weight of loaded container, fully assembled (kgs):	157.6
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	347.4
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	70.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	123.6
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71011	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.0
31. Total volume of Solidified Organics (L):	78.3
32. Total volume of Solidified Inorganics (L):	26.8
33. Total volume of Soils/Gravel (L):	5.0
a. Total volume (L):	110.1
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	76.1%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:		
D. JACKMAN Enter Name	 Signature	8-2-12 Date
Visual Examination Operator 2:		
M. HADERLIE Enter Name	 Signature	8-2-12 Date
Visual Examination Expert:		
J. POOLE Enter Name	 Signature	8-2-12 Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	ARP71054
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	DP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location:	IN-RWMC-ARP-6
3. Batch Number:	IN-ARP-VE-002793
4. Examination Date:	08/02/12
5. Procedure CCP-TP-006, Rev.:	16
6. a. Drum Packing Station (DPS) Number:	703
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	XC0918
c. Scale Calibration Due Date:	06/07/13
d. Test Weight ID:	XC0842
e. Test Weight Calibration Due Date:	12/20/12
f. Test Weight (kgs):	5.0
g. Scale Readout of Test Weight (kgs):	5.0
h. Difference Between Test Weight and Scale Readout (kgs):	0.0
i. DPS Scale Check SAT (Y):	Y
Container Scale Check	
j. Scale Serial/ID Number:	729257
k. Scale Calibration Due Date:	11/07/12
l. Test Weight ID:	722311
m. Test Weight Calibration Due Date:	11/07/12
n. Test Weight (kg):	224.0
o. Scale Readout of Test Weight (kgs):	224.0
p. Difference Between Test Weight and Scale Readout (kgs):	0.0
q. Container Scale Check SAT (Y):	Y
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	221224
8. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726773
b. Filter Torque Wrench Calibration Due Date:	09/19/12
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	HL-69
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71054							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.1	N/A		0.0
7				METAL	0.1	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71054							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	l. Other Inorganic materials (Oi)				9.0	N/A		15.0
30		j. Graphite			0.0	N/A		0.0
31			N/A		N/A	2.2		0.0
32			N/A		N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34			N/A		N/A	2.3		0.0
35			N/A		N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37			GLASS (NSW)		N/A	2.0		0.0
38			N/A		N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40			N/A		N/A	3.0		0.0
41			N/A		N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43			N/A		N/A	2.0 - 5.0	0.0	0.0
44			N/A		N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46			N/A		N/A	2.0		0.0
47			N/A		N/A	2.0		0.0
48		p. Inorganic sorbents			9.0	N/A		15.0
49			OIL-DRI TOP (WAIP)		9.0	0.1 - 2.8	0.6	15.0
50			N/A		N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52			N/A		N/A	0.0		0.0
53			N/A		N/A	0.0		0.0
54			N/A		N/A	0.0		0.0
55	r. Cellulosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57			PAPER (NSW)		N/A	0.9		0.0
58			N/A		N/A	0.9		0.0
59			N/A		N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61			N/A		N/A	0.8		0.0
62			N/A		N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64			N/A		N/A	1.0		0.0
65			N/A		N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71054							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
66	v. Rubber (R)				0.0	N/A		0.0
67				RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC (NSW)	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				0.0	N/A		0.0
75		x1. Sludge			0.0	N/A		0.0
76				N/A	N/A	1.0 - 1.5	0.0	0.0
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				78.7	N/A		65.6
83		y1. Sludge			78.7	N/A		65.6
84				MODERATE RED CRUMBLY SLUDGE WITH PORTLAND CEMENT	78.7	1.0 - 1.5	1.2	65.6
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				39.0	N/A		32.5
95				SOIL	39.0	1.0 - 1.4	1.2	32.5
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				126.8	N/A		113.1
98	13. (INORGANIC SLUDGE) weight (78.7) kg was obtained by subtracting the weighed waste weight of (48.1) kg and the container net weight of (34.0) kg from the gross weight (160.8) kg of the waste container. (160.8) - (48.1) - (34.0) = (78.7) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. N/A							
101								

013

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71054	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71054	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	21.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728635
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	10/23/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	0919
22. Measured gross weight of loaded container, fully assembled (kgs):	160.8
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	354.5
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	65.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	126.8
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71054	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.0
31. Total volume of Solidified Organics (L):	0.0
32. Total volume of Solidified Inorganics (L):	80.6
33. Total volume of Soils/Gravel (L):	32.5
a. Total volume (L):	113.1
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	0.0%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	N/A

Section 6: Approvals

Visual Examination Operator 1:

L. VERLANIC	L. Verlanic	8-2-12
Enter Name	Signature	Date

Visual Examination Operator 2:

J. STANTON	Jodi M. Stanton	8/2/12
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE	J.S. Poole	8-2-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	ARP70941
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	~~Y~~
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location:	IN-RWMC-ARP-6
3. Batch Number:	IN-ARP-VE-002793
4. Examination Date:	08/02/12
5. Procedure CCP-TP-006, Rev.:	16
6. a. Drum Packing Station (DPS) Number:	701
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	221224
8. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726775
b. Filter Torque Wrench Calibration Due Date:	09/19/12
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	HL-255
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70941							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.2	N/A		0.0
7				METAL	0.2	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70941							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
29	l.	Other inorganic materials (OI)			9.0	N/A		15.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		9.0	N/A		15.0
49				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				PAPER (NSW)	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70941							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.0	N/A		0.0
67				RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC (NSW)	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				5.0	N/A		4.2
75		x1. Sludge			5.0	N/A		4.2
76				PALE YELLOWISH BROWN POWDERY SLUDGE WITH CALCIUM SILICATE	5.0	1.0 - 1.5	1.2	4.2
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				69.6	N/A		58.0
83		y1. Sludge			69.6	N/A		58.0
84				MODERATE REDDISH BROWN CRUMBLY SLUDGE WITH PORTLAND CEMENT	69.6	1.0 - 1.5	1.2	58.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				30.0	N/A		25.0
95				SOIL	30.0	1.0 - 1.4	1.2	25.0
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				113.8	N/A		102.2

98 13. (INORGANIC SLUDGE) weight (69.6) kg was obtained by subtracting the weighed waste weight of (44.2) kg and the container net weight of (34.0) kg from the gross weight (147.8) kg of the waste container. (147.8) - (44.2) - (34.0) = (69.6) kg

99 a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.

100 b. N/A

101

020

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70941	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70941	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	23.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	720178
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	09/21/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	0945
22. Measured gross weight of loaded container, fully assembled (kgs):	147.8
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	325.8
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	70.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	113.8
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70941	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.0
31. Total volume of Solidified Organics (L):	4.2
32. Total volume of Solidified Inorganics (L):	73.0
33. Total volume of Soils/Gravel (L):	25.0
a. Total volume (L):	102.2
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	4.4%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:		
M. HADERLIE Enter Name	Signature	8-2-12 Date
Visual Examination Operator 2:		
D. JACKMAN Enter Name	Signature	8-2-12 Date
Visual Examination Expert:		
J. POOLE Enter Name	Signature	8-2-12 Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	ARP71018
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	BP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location:	IN-RWMC-ARP-6
3. Batch Number:	IN-ARP-VE-002793
4. Examination Date:	08/02/12
5. Procedure CCP-TP-006, Rev.:	16
6. a. Drum Packing Station (DPS) Number:	703
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	221224
8. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726773
b. Filter Torque Wrench Calibration Due Date:	09/19/12
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	HL-79
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71018							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4				9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				METAL (NSW)	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71018							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	l. Other inorganic materials (OI)				9.0	N/A		15.0
30		j. Graphite			0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p. Inorganic sorbents			9.0	N/A		15.0
49				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r. Cellulosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57				PAPER (NSW)	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71018							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.0	N/A		0.0
67				N/A	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				PLASTIC (NSW)	N/A	0.9		0.0
71				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				9.0	N/A		7.5
75		x1. Sludge			9.0	N/A		7.5
76				PALE YELLOWISH BROWN POWDERY SLUDGE WITH CALCIUM SILICATE	9.0	1.0 - 1.5	1.2	7.5
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				114.0	N/A		94.8
83		y1. Sludge			113.5	N/A		94.6
84				MODERATE REDDISH BROWN CLAY LIKE SLUDGE WITH PORTLAND CEMENT	113.5	1.0 - 1.5	1.2	94.6
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.5	N/A		0.2
92				EVAPORATOR SALT	0.5	2.2		0.2
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				38.0	N/A		31.7
95				SOIL	38.0	1.0 - 1.4	1.2	31.7
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				170.0	N/A		149.0
98	13. (INORGANIC SLUDGE) weight (113.5) kg was obtained by subtracting the weighed waste weight of (56.5) kg and the container net weight of (34.0) kg from the gross weight (204.0) kg of the waste container. (204.0) - (56.5) - (34.0) = (113.5) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. REFERENCE LETTER: CP:08:00210/UFC:2300.00							
101								

027

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71018	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71018	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	24.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728635
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	10/23/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	0947
22. Measured gross weight of loaded container, fully assembled (kgs):	204.0
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	449.7
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	75.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	170.0
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71018	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.0
31. Total volume of Solidified Organics (L):	7.5
32. Total volume of Solidified Inorganics (L):	109.8
33. Total volume of Soils/Gravel (L):	31.7
a. Total volume (L):	149.0
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	5.3%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

J. STANTON	Jodi M. Stanton	8/2/12
Enter Name	Signature	Date

Visual Examination Operator 2:

L. VERLANIC	L. Verlanic	8-2-12
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE	J.S. Poole	8-2-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	ARP71051
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	JSP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location:	IN-RWMC-ARP-6
3. Batch Number:	IN-ARP-VE-002793
4. Examination Date:	08/02/12
5. Procedure CCP-TP-006, Rev.:	16
6. a. Drum Packing Station (DPS) Number:	703
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	221223
8. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726773
b. Filter Torque Wrench Calibration Due Date:	09/19/12
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	HL-51
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71051							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.2	N/A		0.0
7				METAL	0.2	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71051							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	i. Other Inorganic materials (OI)				9.1	N/A		15.1
30		j. Graphite			0.0	N/A		0.0
31			N/A		N/A	2.2		0.0
32			N/A		N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34			N/A		N/A	2.3		0.0
35			N/A		N/A	2.3		0.0
36		l. Glass			0.1	N/A		0.1
37			GLASS		0.1	2.0		0.1
38			N/A		N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40			N/A		N/A	3.0		0.0
41			N/A		N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43			N/A		N/A	2.0 - 5.0	0.0	0.0
44			N/A		N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46			N/A		N/A	2.0		0.0
47			N/A		N/A	2.0		0.0
48		p. Inorganic sorbents			9.0	N/A		15.0
49			OIL-DRI TOP (WAIP)		9.0	0.1 - 2.8	0.6	15.0
50			N/A		N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52			N/A		N/A	0.0		0.0
53			N/A		N/A	0.0		0.0
54			N/A		N/A	0.0		0.0
55	r. Cellulosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57			PAPER (NSW)		N/A	0.9		0.0
58			N/A		N/A	0.9		0.0
59			N/A		N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61			N/A		N/A	0.8		0.0
62			N/A		N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64			N/A		N/A	1.0		0.0
65			N/A		N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71051							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4				9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.1	N/A		0.1
67				RUBBER	0.1	0.9 - 2.0	1.1	0.1
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC (NSW)	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				18.0	N/A		15.0
75		x1. Sludge			18.0	N/A		15.0
76				MODERATE YELLOWISH BROWN POWDERY SLUDGE WITH CALCIUM SILICATE	18.0	1.0 - 1.5	1.2	15.0
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				101.0	N/A		84.0
83		y1. Sludge			100.5	N/A		83.8
84				MODERATE REDDISH ORANGE CRUMBLY SLUDGE WITH PORTLAND CEMENT	100.5	1.0 - 1.5	1.2	83.8
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.5	N/A		0.2
92				EVAPORATOR SALT	0.5	2.2		0.2
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				13.0	N/A		10.8
95				SOIL	13.0	1.0 - 1.4	1.2	10.8
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				141.4	N/A		125.0
98	13. (INORGANIC SLUDGE) weight (100.5) kg was obtained by subtracting the weighed waste weight of (40.9) kg and the container net weight of (34.0) kg from the gross weight (175.4) kg of the waste container. (175.4) - (40.9) - (34.0) = (100.5) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. REFERENCE LETTER: CP:08:00210 / UFC:2300.00							
101								

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71051	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71051	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	26.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221223
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728635
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	10/23/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1015
22. Measured gross weight of loaded container, fully assembled (kgs):	175.4
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	386.7
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	80.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	141.4
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71051	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.2
31. Total volume of Solidified Organics (L):	15.0
32. Total volume of Solidified Inorganics (L):	99.0
33. Total volume of Soils/Gravel (L):	10.8
a. Total volume (L):	125.0
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	12.7%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

L. VERLANIC	L. Verlanic	8-2-12
Enter Name	Signature	Date

Visual Examination Operator 2:

J. STANTON	Jodi M. Stanton	8/2/12
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE	J.S. Poole	8-2-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	ARP70900
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	BD
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location:	IN-RWMC-ARP-6
3. Batch Number:	IN-ARP-VE-002793
4. Examination Date:	08/02/12
5. Procedure CCP-TP-006, Rev.:	16
6. a. Drum Packing Station (DPS) Number:	701
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	221225
8. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726775
b. Filter Torque Wrench Calibration Due Date:	09/19/12
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	HL-146
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70900							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.2	N/A		0.0
7				METAL	0.2	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70900							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	l.	Other Inorganic materials (OI)			9.1	N/A		15.1
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.1	N/A		0.1
37				GLASS	0.1	2.0		0.1
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		9.0	N/A		15.0
49				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70900							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.0	N/A		0.0
67				RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC (NSW)	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				98.9	N/A		82.4
75		x1. Sludge			98.9	N/A		82.4
76				PALE YELLOWISH BROWN POWDERY SLUDGE WITH CALCIUM SILICATE	98.9	1.0 - 1.5	1.2	82.4
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				18.2	N/A		15.1
83		y1. Sludge			18.0	N/A		15.0
84				DUSKY RED CRUMBLY SLUDGE WITH WHITE CHUNKS	18.0	1.0 - 1.5	1.2	15.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.2	N/A		0.1
92				EVAPORATOR SALT	0.2	2.2		0.1
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				6.0	N/A		5.0
95				SOIL	6.0	1.0 - 1.4	1.2	5.0
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				132.4	N/A		117.6
98	13. (ORGANIC SLUDGE) weight (98.9) kg was obtained by subtracting the weighed waste weight of (33.5) kg and the container net weight of (34.0) kg from the gross weight (166.4) kg of the waste container. (166.4) - (33.5) - (34.0) = (98.9) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. REFERENCE LETTER: CP:08:00210 / UFC:2300.00							
101								

041

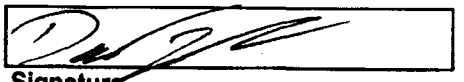
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70900	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70900	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	27.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221225
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	720178
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	09/21/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1016
22. Measured gross weight of loaded container, fully assembled (kgs):	166.4
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	366.8
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	85.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	132.4
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

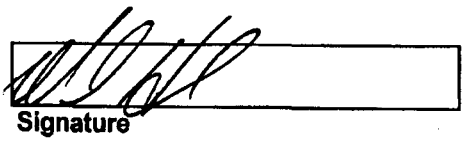
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70900	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.1
31. Total volume of Solidified Organics (L):	82.4
32. Total volume of Solidified Inorganics (L):	30.1
33. Total volume of Soils/Gravel (L):	5.0
a. Total volume (L):	117.6
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	74.7%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

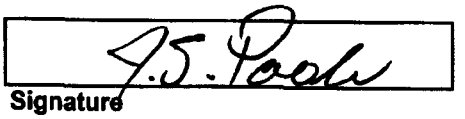
Visual Examination Operator 1:

D. JACKMAN		8-2-12
Enter Name	Signature	Date

Visual Examination Operator 2:

M. HADERLIE		8-2-12
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE		8-2-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	ARP71009
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	GSP
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location:	IN-RWMC-ARP-6
3.	Batch Number:	IN-ARP-VE-002793
4.	Examination Date:	08/02/12
5.	Procedure CCP-TP-006, Rev.:	16
6.	a. Drum Packing Station (DPS) Number:	703
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	221224
8.	Container Filter Torque Data:	
	a. Filter Torque Wrench Serial/ID Number:	726773
	b. Filter Torque Wrench Calibration Due Date:	09/19/12
	c. Filter Model No.:	NUCFIL-019DS
	d. Filter Serial No.:	HL-90
	e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
	f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71009							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				N/A	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71009							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
29	i. Other inorganic materials (OI)				9.0	N/A		15.0
30		j. Graphite			0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37				GLASS (NSW)	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p. Inorganic sorbents			9.0	N/A		15.0
49				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r. Cellulosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57				PAPER (NSW)	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003					
2	Container ID: ARP71009					
3	Section 2: Waste Material Parameter (WMP) Estimates					
4	9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density			12.Volume
5		By Weight (kg)	(kg/L)			(L)
66	v. Rubber (R)	0.0	N/A			0.0
67	N/A	N/A	0.9 - 2.0		0.0	0.0
68	N/A	N/A	0.9 - 2.0		0.0	0.0
69	w. Plastics (waste materials) (PW)	0.0	N/A			0.0
70	PLASTIC (NSW)	N/A	0.9			0.0
71	NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9			0.0
72	N/A	N/A	0.9			0.0
73	N/A	N/A	0.9			0.0
74	x. Organic matrix (OR)	108.4	N/A			90.3
75	x1. Sludge	108.4	N/A			90.3
76	PALE YELLOWISH ORANGE POWDERY SLUDGE WITH CALCIUM SILICATE	108.4	1.0 - 1.5		1.2	90.3
77	N/A	N/A	1.0 - 1.5		0.0	0.0
78	N/A	N/A	1.0 - 1.5		0.0	0.0
79	x2. Other (See Note a)	0.0	N/A			0.0
80	N/A	N/A	0.0			0.0
81	N/A	N/A	0.0			0.0
82	y. Inorganic matrix (IN)	0.0	N/A			0.0
83	y1. Sludge	0.0	N/A			0.0
84	N/A	N/A	1.0 - 1.5		0.0	0.0
85	N/A	N/A	1.0 - 1.5		0.0	0.0
86	N/A	N/A	1.0 - 1.5		0.0	0.0
87	y2. Roaster Oxides	0.0	N/A			0.0
88	N/A	N/A	1.5 - 4.0		0.0	0.0
89	N/A	N/A	1.5 - 4.0		0.0	0.0
90	N/A	N/A	1.5 - 4.0		0.0	0.0
91	y3. Other (See Note a)	0.0	N/A			0.0
92	N/A	N/A	0.0			0.0
93	N/A	N/A	0.0			0.0
94	z. Soils/gravel (S)	4.0	N/A			3.3
95	SOIL	4.0	1.0 - 1.4		1.2	3.3
96	N/A	N/A	1.0 - 1.4		0.0	0.0
97	aa. TOTAL	121.4	N/A			108.6
98	13. (ORGANIC SLUDGE) weight (108.4) kg was obtained by subtracting the weighed waste weight of (13.0) kg and the container net weight of (34.0) kg from the gross weight (155.4) kg of the waste container. (155.4) - (13.0) - (34.0) = (108.4) kg					
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.					
100	b. N/A					
101						

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71009	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71009	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	25.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728635
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	10/23/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1043
22. Measured gross weight of loaded container, fully assembled (kgs):	155.4
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	342.6
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	80.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	121.4
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71009	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.0
31. Total volume of Solidified Organics (L):	90.3
32. Total volume of Solidified Inorganics (L):	15.0
33. Total volume of Soils/Gravel (L):	3.3
a. Total volume (L):	108.6
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	89.3%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:		
J. STANTON	Jodi M Stanton	8/2/12
Enter Name	Signature	Date
Visual Examination Operator 2:		
L. VERLANIC	L. Verlanic	8-2-12
Enter Name	Signature	Date
Visual Examination Expert:		
J. POOLE	J.S. Poole	8-2-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	ARP71029
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location:	IN-RWMC-ARP-6
3.	Batch Number:	IN-ARP-VE-002793
4.	Examination Date:	08/02/12
5.	Procedure CCP-TP-006, Rev.:	16
6.	a. Drum Packing Station (DPS) Number:	701
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	221224
8.	Container Filter Torque Data:	
	a. Filter Torque Wrench Serial/ID Number:	726773
	b. Filter Torque Wrench Calibration Due Date:	09/19/12
	c. Filter Model No.:	NUCFIL-019DS
	d. Filter Serial No.:	HL-256
	e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
	f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71029							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.2	N/A		0.0
7				METAL	0.2	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71029							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	l.	Other inorganic materials (OI)			10.0	N/A		15.5
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		1.0	N/A		0.5
37				GLASS	1.0	2.0		0.5
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		9.0	N/A		15.0
49				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				PAPER (NSW)	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71029							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.0	N/A		0.0
67				N/A	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC (NSW)	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				91.5	N/A		76.3
75		x1. Sludge			91.5	N/A		76.3
76				MODERATE OLIVE BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE	91.5	1.0 - 1.5	1.2	76.3
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				25.1	N/A		20.8
83		y1. Sludge			25.0	N/A		20.8
84				MODERATE REDDISH BROWN CRUMBLY SLUDGE WITH WHITE CHUNKS	25.0	1.0 - 1.5	1.2	20.8
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.1	N/A		0.0
92				EVAPORATOR SALT	0.1	2.2		0.0
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				20.0	N/A		16.7
95				SOIL	20.0	1.0 - 1.4	1.2	16.7
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				146.8	N/A		129.3
98	13. (ORGANIC SLUDGE) weight (91.5) kg was obtained by subtracting the weighed waste weight of (55.3) kg and the container net weight of (34.0) kg from the gross weight (180.8) kg of the waste container. (180.8) - (55.3) - (34.0) = (91.5) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. REFERENCE LETTER: CP:08:00210/UFC:2300.00							
101								

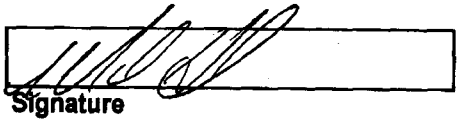
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71029	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71029	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	24.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	720178
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	09/21/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1043
22. Measured gross weight of loaded container, fully assembled (kgs):	180.8
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	398.6
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	75.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	146.8
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

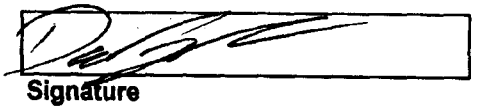
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71029	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.5
31. Total volume of Solidified Organics (L):	76.3
32. Total volume of Solidified Inorganics (L):	35.8
33. Total volume of Soils/Gravel (L):	16.7
a. Total volume (L):	129.3
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	62.3%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

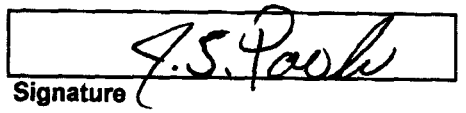
Visual Examination Operator 1:

M. HADERLIE		8-2-12
Enter Name	Signature	Date

Visual Examination Operator 2:

D. JACKMAN		8-2-12
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE		8-2-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	ARP71016
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location:	IN-RWMC-ARP-6
3.	Batch Number:	IN-ARP-VE-002793
4.	Examination Date:	08/02/12
5.	Procedure CCP-TP-006, Rev.:	16
6.	a. Drum Packing Station (DPS) Number:	703
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	221224
8.	Container Filter Torque Data:	
	a. Filter Torque Wrench Serial/ID Number:	726773
	b. Filter Torque Wrench Calibration Due Date:	09/19/12
	c. Filter Model No.:	NUCFIL-019DS
	d. Filter Serial No.:	HL-76
	e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
	f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71016							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.2	N/A		0.0
7				METAL	0.2	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				ALUMINUM (NSW)	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71016							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	i. Other inorganic materials (OI)				0.0	N/A		0.0
30		j. Graphite			0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37				GLASS (NSW)	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p. Inorganic sorbents			0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r. Cellulosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71016							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.0	N/A		0.0
67				N/A	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.9	N/A		1.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				1 TRAY LINER (WAIP)	0.9	0.9		1.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				3.0	N/A		2.5
75		x1. Sludge			3.0	N/A		2.5
76				VERY PALE ORANGE CRUMBLY SLUDGE WITH CALCIUM SILICATE	3.0	1.0 - 1.5	1.2	2.5
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				14.0	N/A		8.6
83		y1. Sludge			6.0	N/A		5.0
84				DUSKY RED CRUMBLY SLUDGE	6.0	1.0 - 1.5	1.2	5.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			8.0	N/A		3.6
92				EVAPORATOR SALT	8.0	2.2		3.6
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				133.1	N/A		110.9
95				SOIL	133.1	1.0 - 1.4	1.2	110.9
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				151.2	N/A		123.0
98	13. (SOIL) weight (133.1) kg was obtained by subtracting the weighed waste weight of (18.1) kg and the container net weight of (34.0) kg from the gross weight (185.2) kg of the waste container. (185.2) - (18.1) - (34.0) = (133.1) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. REFERENCE LETTER: CP:08:00210 / UFC:2300.00							
101								

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Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71016	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71016	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	30.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728635
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	10/23/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1106
22. Measured gross weight of loaded container, fully assembled (kgs):	185.2
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	408.3
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	95.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	151.2
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71016	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	1.0
31. Total volume of Solidified Organics (L):	2.5
32. Total volume of Solidified Inorganics (L):	8.6
33. Total volume of Soils/Gravel (L):	110.9
a. Total volume (L):	123.0
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	
c. Soil (S4200):	X
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	2.0%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

L. VERLANIC	L. Verlanic	8-3-12
Enter Name	Signature	Date

Visual Examination Operator 2:

J. STANTON	Jodi M. Stanton	8/2/12
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE	J.S. Poole	8-2-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	ARP71055
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	JDP
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location:	IN-RWMC-ARP-6
3.	Batch Number:	IN-ARP-VE-002793
4.	Examination Date:	08/02/12
5.	Procedure CCP-TP-006, Rev.:	16
6.	a. Drum Packing Station (DPS) Number:	701
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	221224
8.	Container Filter Torque Data:	
	a. Filter Torque Wrench Serial/ID Number:	726773
	b. Filter Torque Wrench Calibration Due Date:	09/19/12
	c. Filter Model No.:	NUCFIL-019DS
	d. Filter Serial No.:	HL-70
	e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
	f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:		
NOTHING ADDED TO THE CONTAINER VERIFIED		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71055							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.2	N/A		0.0
7				METAL	0.2	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71055							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	l.	Other inorganic materials (OI)			9.0	N/A		15.0
30		j.	Graphite		0.0	N/A		0.0
31			N/A		N/A	2.2		0.0
32			N/A		N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34			N/A		N/A	2.3		0.0
35			N/A		N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37			N/A		N/A	2.0		0.0
38			N/A		N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40			N/A		N/A	3.0		0.0
41			N/A		N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43			N/A		N/A	2.0 - 5.0	0.0	0.0
44			N/A		N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46			N/A		N/A	2.0		0.0
47			N/A		N/A	2.0		0.0
48		p.	Inorganic sorbents		9.0	N/A		15.0
49			OIL DRI ON TOP (WAIP)		9.0	0.1 - 2.8	0.6	15.0
50			N/A		N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52			N/A		N/A	0.0		0.0
53			N/A		N/A	0.0		0.0
54			N/A		N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57			N/A		N/A	0.9		0.0
58			N/A		N/A	0.9		0.0
59			N/A		N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61			N/A		N/A	0.8		0.0
62			N/A		N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64			N/A		N/A	1.0		0.0
65			N/A		N/A	1.0		0.0

	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003					
2	Container ID: ARP71055					
3	Section 2: Waste Material Parameter (WMP) Estimates					
4	9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density		12.Volume	
5		By Weight (kg)	(kg/L)		(L)	
66	v. Rubber (R)	0.0	N/A		0.0	
67	N/A	N/A	0.9 - 2.0	0.0	0.0	
68	N/A	N/A	0.9 - 2.0	0.0	0.0	
69	w. Plastics (waste materials) (PW)	0.0	N/A		0.0	
70	NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0	
71	PLASTIC (NSW)	N/A	0.9		0.0	
72	N/A	N/A	0.9		0.0	
73	N/A	N/A	0.9		0.0	
74	x. Organic matrix (OR)	93.8	N/A		78.2	
75	x1. Sludge	93.8	N/A		78.2	
76	DARK YELLOWISH BROWN POWDERY SLUDGE WITH CALCIUM SILICATE	93.8	1.0 - 1.5	1.2	78.2	
77	N/A	N/A	1.0 - 1.5	0.0	0.0	
78	N/A	N/A	1.0 - 1.5	0.0	0.0	
79	x2. Other (See Note a)	0.0	N/A		0.0	
80	N/A	N/A	0.0		0.0	
81	N/A	N/A	0.0		0.0	
82	y. Inorganic matrix (IN)	7.0	N/A		5.8	
83	y1. Sludge	7.0	N/A		5.8	
84	DUSKY RED CRUMBLY SLUDGE WITH WHITE CHUNKS	7.0	1.0 - 1.5	1.2	5.8	
85	N/A	N/A	1.0 - 1.5	0.0	0.0	
86	N/A	N/A	1.0 - 1.5	0.0	0.0	
87	y2. Roaster Oxides	0.0	N/A		0.0	
88	N/A	N/A	1.5 - 4.0	0.0	0.0	
89	N/A	N/A	1.5 - 4.0	0.0	0.0	
90	N/A	N/A	1.5 - 4.0	0.0	0.0	
91	y3. Other (See Note a)	0.0	N/A		0.0	
92	N/A	N/A	0.0		0.0	
93	N/A	N/A	0.0		0.0	
94	z. Soils/gravel (S)	9.0	N/A		7.5	
95	SOIL	9.0	1.0 - 1.4	1.2	7.5	
96	N/A	N/A	1.0 - 1.4	0.0	0.0	
97	aa. TOTAL	119.0	N/A		106.5	
98	13. (ORGANIC SLUDGE) weight (93.8) kg was obtained by subtracting the weighed waste weight of (25.2) kg and the container net weight of (34.0) kg from the gross weight (153.0) kg of the waste container. (153.0) - (25.2) - (34.0) = (93.8) kg					
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.					
100	b. N/A					
101						

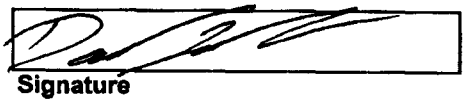
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71055	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71055	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	22.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	720178
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	09/21/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1236
22. Measured gross weight of loaded container, fully assembled (kgs):	153.0
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	337.3
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	70.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	119.0
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

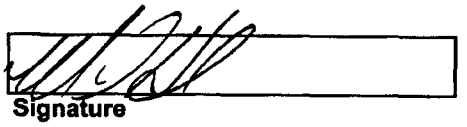
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71055	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.0
31. Total volume of Solidified Organics (L):	78.2
32. Total volume of Solidified Inorganics (L):	20.8
33. Total volume of Soils/Gravel (L):	7.5
a. Total volume (L):	106.5
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	78.8%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

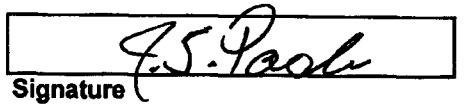
Visual Examination Operator 1:

D. JACKMAN		8-2-12
Enter Name	Signature	Date

Visual Examination Operator 2:

M. HADERLIE		8-2-12
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE		8-2-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	ARP71044
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location:	IN-RWMC-ARP-6
3. Batch Number:	IN-ARP-VE-002793
4. Examination Date:	08/02/12
5. Procedure CCP-TP-006, Rev.:	16
6. a. Drum Packing Station (DPS) Number:	703
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	221224
8. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726773
b. Filter Torque Wrench Calibration Due Date:	09/19/12
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	HL-206
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71044							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
6	a.	Iron-based metals/alloys (IM)			2.2	N/A		0.3
7				METAL	2.2	8.0		0.3
8				N/A	N/A	8.0		0.0
9	b.	Aluminum-based metals/alloys (AM)			0.0	N/A		0.0
10				ALUMINUM (NSW)	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c.	Other metals (OM)			0.0	N/A		0.0
13		d.	Lead		0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e.	Beryllium		0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f.	Depleted uranium		0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g.	Copper		0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h.	Other (See Note a)		0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71044							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	i. Other inorganic materials (OI)				0.0	N/A		0.0
30		j. Graphite			0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p. Inorganic sorbents			0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r. Cellulosics (C)				0.4	N/A		0.4
56		s. Paper			0.3	N/A		0.3
57				PAPER	0.3	0.9		0.3
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u. Wood			0.1	N/A		0.1
64				WOOD	0.1	1.0		0.1
65				N/A	N/A	1.0		0.0

	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003					
2	Container ID: ARP71044					
3	Section 2: Waste Material Parameter (WMP) Estimates					
4		9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density		12.Volume
5			By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)		0.0	N/A		0.0
67		RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
68		N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)		1.5	N/A		1.7
70		PLASTIC	0.6	0.9		0.7
71		NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
72		TRAY LINER (WAIP)	0.9	0.9		1.0
73		N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)		5.0	N/A		4.2
75	x1. Sludge		5.0	N/A		4.2
76		LIGHT BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE	5.0	1.0 - 1.5	1.2	4.2
77		N/A	N/A	1.0 - 1.5	0.0	0.0
78		N/A	N/A	1.0 - 1.5	0.0	0.0
79	x2. Other (See Note a)		0.0	N/A		0.0
80		N/A	N/A	0.0		0.0
81		N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)		0.3	N/A		0.1
83	y1. Sludge		0.0	N/A		0.0
84		N/A	N/A	1.0 - 1.5	0.0	0.0
85		N/A	N/A	1.0 - 1.5	0.0	0.0
86		N/A	N/A	1.0 - 1.5	0.0	0.0
87	y2. Roaster Oxides		0.0	N/A		0.0
88		N/A	N/A	1.5 - 4.0	0.0	0.0
89		N/A	N/A	1.5 - 4.0	0.0	0.0
90		N/A	N/A	1.5 - 4.0	0.0	0.0
91	y3. Other (See Note a)		0.3	N/A		0.1
92		EVAPORATOR SALT	0.3	2.2		0.1
93		N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)		162.2	N/A		135.2
95		SOIL	162.2	1.0 - 1.4	1.2	135.2
96		N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL		171.6	N/A		141.9
98	13. (SOIL) weight (162.2) kg was obtained by subtracting the weighed waste weight of (9.4) kg and the container net weight of (34.0) kg from the gross weight (205.6) kg of the waste container. (205.6) - (9.4) - (34.0) = (162.2) kg					
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.					
100	b.	REFERENCE LETTER: CP:08:00210/UFC:2300.00				
101						

076

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71044	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71044	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	29.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728635
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	10/23/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1332
22. Measured gross weight of loaded container, fully assembled (kgs):	205.6
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	453.3
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	90.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	171.6
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71044	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	2.4
31. Total volume of Solidified Organics (L):	4.2
32. Total volume of Solidified Inorganics (L):	0.1
33. Total volume of Soils/Gravel (L):	135.2
a. Total volume (L):	141.9
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	
c. Soil (S4200):	X
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	2.9%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

J. STANTON	Jodi M. Stanton	8/2/12
Enter Name	Signature	Date

Visual Examination Operator 2:

L. VERLANIC	S. Verlanic	8-2-12
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE	J.S. Poole	8-2-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	ARP71021
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location:	IN-RWMC-ARP-6
3.	Batch Number:	IN-ARP-VE-002793
4.	Examination Date:	08/02/12
5.	Procedure CCP-TP-006, Rev.:	16
6.	a. Drum Packing Station (DPS) Number:	701
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	221224
8.	Container Filter Torque Data:	
	a. Filter Torque Wrench Serial/ID Number:	728434
	b. Filter Torque Wrench Calibration Due Date:	09/27/12
	c. Filter Model No.:	NUCFIL-019DS
	d. Filter Serial No.:	HL-55
	e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
	f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71021							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
6	a. Iron-based metals/alloys (IM)				0.3	N/A		0.0
7				METAL	0.3	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71021							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	i.	Other Inorganic materials (OI)			9.0	N/A		15.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		9.0	N/A		15.0
49				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				PAPER (NSW)	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003					
2	Container ID: ARP71021					
3	Section 2: Waste Material Parameter (WMP) Estimates					
4 5		9. Waste Material Parameter and Item Description	10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
66	v. Rubber (R)		0.0	N/A		0.0
67		RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
68		N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)		0.0	N/A		0.0
70		NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71		PLASTIC (NSW)	N/A	0.9		0.0
72		N/A	N/A	0.9		0.0
73		N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)		5.0	N/A		4.2
75	x1. Sludge		5.0	N/A		4.2
76		PALE YELLOWISH BROWN POWDERY SLUDGE WITH CALCIUM SILICATE	5.0	1.0 - 1.5	1.2	4.2
77		N/A	N/A	1.0 - 1.5	0.0	0.0
78		N/A	N/A	1.0 - 1.5	0.0	0.0
79	x2. Other (See Note a)		0.0	N/A		0.0
80		N/A	N/A	0.0		0.0
81		N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)		105.5	N/A		87.8
83	y1. Sludge		105.4	N/A		87.8
84		MODERATE REDDISH BROWN CRUMBLY SLUDGE WITH PORTLAND CEMENT	105.4	1.0 - 1.5	1.2	87.8
85		N/A	N/A	1.0 - 1.5	0.0	0.0
86		N/A	N/A	1.0 - 1.5	0.0	0.0
87	y2. Roaster Oxides		0.0	N/A		0.0
88		N/A	N/A	1.5 - 4.0	0.0	0.0
89		N/A	N/A	1.5 - 4.0	0.0	0.0
90		N/A	N/A	1.5 - 4.0	0.0	0.0
91	y3. Other (See Note a)		0.1	N/A		0.0
92		EVAPORATOR SALT	0.1	2.2		0.0
93		N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)		30.0	N/A		25.0
95		SOIL	30.0	1.0 - 1.4	1.2	25.0
96		N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL		149.8	N/A		132.0
98	13. (INORGANIC SLUDGE) weight (105.4) kg was obtained by subtracting the weighed waste weight of (44.4) kg and the container net weight of (34.0) kg from the gross weight (183.8) kg of the waste container. (183.8) - (44.4) - (34.0) = (105.4) kg					
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.					
100	b.	REFERENCE LETTER: CP:08:00210/UFC:2300.00				
101						

083

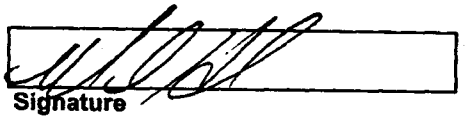
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71021	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71021	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	27.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	720178
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	09/21/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1339
22. Measured gross weight of loaded container, fully assembled (kgs):	183.8
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	405.2
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	85.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	149.8
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71021	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.0
31. Total volume of Solidified Organics (L):	4.2
32. Total volume of Solidified Inorganics (L):	102.8
33. Total volume of Soils/Gravel (L):	25.0
a. Total volume (L):	132.0
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	3.3%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

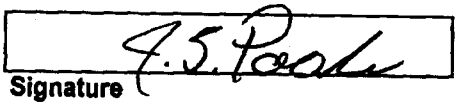
Visual Examination Operator 1:

M. HADERLIE		8-2-12
Enter Name	Signature	Date

Visual Examination Operator 2:

D. JACKMAN		8-2-12
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE		8-2-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	ARP70942
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location:	IN-RWMC-ARP-6
3.	Batch Number:	IN-ARP-VE-002793
4.	Examination Date:	08/02/12
5.	Procedure CCP-TP-006, Rev.:	16
6.	a. Drum Packing Station (DPS) Number:	703
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	221224
8.	Container Filter Torque Data:	
	a. Filter Torque Wrench Serial/ID Number:	726773
	b. Filter Torque Wrench Calibration Due Date:	09/19/12
	c. Filter Model No.:	NUCFIL-019DS
	d. Filter Serial No.:	HL-210
	e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
	f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70942							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.4	N/A		0.1
7				METAL	0.4	8.0		0.1
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

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	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70942							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4 5	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
29	i. Other inorganic materials (OI)				9.0	N/A		15.0
30		j. Graphite			0.0	N/A		0.0
31			N/A		N/A	2.2		0.0
32			N/A		N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34			N/A		N/A	2.3		0.0
35			N/A		N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37			N/A		N/A	2.0		0.0
38			N/A		N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40			N/A		N/A	3.0		0.0
41			N/A		N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43			N/A		N/A	2.0 - 5.0	0.0	0.0
44			N/A		N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46			N/A		N/A	2.0		0.0
47			N/A		N/A	2.0		0.0
48		p. Inorganic sorbents			9.0	N/A		15.0
49			OIL-DRI TOP (WAIP)		9.0	0.1 - 2.8	0.6	15.0
50			N/A		N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52			N/A		N/A	0.0		0.0
53			N/A		N/A	0.0		0.0
54			N/A		N/A	0.0		0.0
55	r. Cellulosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57			PAPER (NSW)		N/A	0.9		0.0
58			N/A		N/A	0.9		0.0
59			N/A		N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61			N/A		N/A	0.8		0.0
62			N/A		N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64			N/A		N/A	1.0		0.0
65			N/A		N/A	1.0		0.0

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	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70942							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.0	N/A		0.0
67				N/A	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC (NSW)	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				0.0	N/A		0.0
75		x1. Sludge			0.0	N/A		0.0
76				N/A	N/A	1.0 - 1.5	0.0	0.0
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				91.0	N/A		75.8
83		y1. Sludge			91.0	N/A		75.8
84				MODERATE BROWN CRUMBLY SLUDGE WITH PORTLAND CEMENT AND WHITE CHUNKS	91.0	1.0 - 1.5	1.2	75.8
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Rooster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				20.0	N/A		16.7
95				SOIL	20.0	1.0 - 1.4	1.2	16.7
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				120.4	N/A		107.6
98	13. (INORGANIC SLUDGE) weight (91.0) kg was obtained by subtracting the weighed waste weight of (29.4) kg and the container net weight of (34.0) kg from the gross weight (154.4) kg of the waste container. (154.4) - (29.4) - (34.0) = (91.0) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. N/A							
101								

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Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70942	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70942	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	24.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728635
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	10/23/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1357
22. Measured gross weight of loaded container, fully assembled (kgs):	154.4
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	340.4
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	75.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	120.4
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70942	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.1
31. Total volume of Solidified Organics (L):	0.0
32. Total volume of Solidified Inorganics (L):	90.8
33. Total volume of Soils/Gravel (L):	16.7
a. Total volume (L):	107.6
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	0.0%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	N/A

Section 6: Approvals

Visual Examination Operator 1:		
L. VERLANIC	L. Verlanic	8-2-12
Enter Name	Signature	Date
Visual Examination Operator 2:		
J. STANTON	Jodi M. Stanton	8/2/12
Enter Name	Signature	Date
Visual Examination Expert:		
J. POOLE	J. Poole	8-2-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	ARP71013
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	KSP
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location:	IN-RWMC-ARP-6
3.	Batch Number:	IN-ARP-VE-002793
4.	Examination Date:	08/02/12
5.	Procedure CCP-TP-006, Rev.:	16
6.	a. Drum Packing Station (DPS) Number:	701
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	221224
8.	Container Filter Torque Data:	
	a. Filter Torque Wrench Serial/ID Number:	728434
	b. Filter Torque Wrench Calibration Due Date:	09/27/12
	c. Filter Model No.:	NUCFIL-019DS
	d. Filter Serial No.:	HL-83
	e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
	f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71013							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
6	a. Iron-based metals/alloys (IM)				0.2	N/A		0.0
7				METAL	0.2	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71013							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	l. Other inorganic materials (Oi)				9.0	N/A		15.0
30		j. Graphite			0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p. Inorganic sorbents			9.0	N/A		15.0
49				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r. Cellulosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57				PAPER (NSW)	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64				WOOD (NSW)	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003					
2	Container ID: ARP71013					
3	Section 2: Waste Material Parameter (WMP) Estimates					
4	9. Waste Material Parameter and Item Description		10. WMP Estimate	11. Density		12.Volume
5			By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)		0.0	N/A		0.0
67		N/A	N/A	0.9 - 2.0	0.0	0.0
68		N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)		0.0	N/A		0.0
70		NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71		PLASTIC (NSW)	N/A	0.9		0.0
72		N/A	N/A	0.9		0.0
73		N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)		3.0	N/A		2.5
75	x1. Sludge		3.0	N/A		2.5
76		VERY PALE ORANGE POWDERY SLUDGE WITH CALCIUM SILICATE	3.0	1.0 - 1.5	1.2	2.5
77		N/A	N/A	1.0 - 1.5	0.0	0.0
78		N/A	N/A	1.0 - 1.5	0.0	0.0
79	x2. Other (See Note a)		0.0	N/A		0.0
80		N/A	N/A	0.0		0.0
81		N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)		110.0	N/A		91.7
83	y1. Sludge		110.0	N/A		91.7
84		DUSKY RED CRUMBLY SLUDGE WITH WHITE CHUNKS AND PORTLAND CEMENT	110.0	1.0 - 1.5	1.2	91.7
85		N/A	N/A	1.0 - 1.5	0.0	0.0
86		N/A	N/A	1.0 - 1.5	0.0	0.0
87	y2. Rooster Oxides		0.0	N/A		0.0
88		N/A	N/A	1.5 - 4.0	0.0	0.0
89		N/A	N/A	1.5 - 4.0	0.0	0.0
90		N/A	N/A	1.5 - 4.0	0.0	0.0
91	y3. Other (See Note a)		0.0	N/A		0.0
92		N/A	N/A	0.0		0.0
93		N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)		32.0	N/A		26.7
95		SOIL	32.0	1.0 - 1.4	1.2	26.7
96		N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL		154.2	N/A		135.9
98	13. (INORGANIC SLUDGE) weight (110.0) kg was obtained by subtracting the weighed waste weight of (44.2) kg and the container net weight of (34.0) kg from the gross weight (188.2) kg of the waste container. (188.2) - (44.2) - (34.0) = (110.0) kg					
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.					
100	b.	N/A				
101						

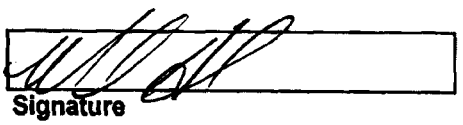
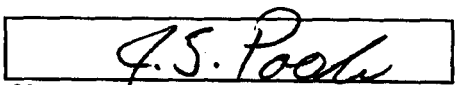
097

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71013	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71013	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	25.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	720178
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	09/21/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1409
22. Measured gross weight of loaded container, fully assembled (kgs):	188.2
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	414.9
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	80.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	154.2
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71013	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.0
31. Total volume of Solidified Organics (L):	2.5
32. Total volume of Solidified Inorganics (L):	106.7
33. Total volume of Soils/Gravel (L):	26.7
a. Total volume (L):	135.9
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	1.9%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:		
D. JACKMAN		8-2-12
Enter Name	Signature	Date
Visual Examination Operator 2:		
M. HADERLIE		8-2-12
Enter Name	Signature	Date
Visual Examination Expert:		
J. POOLE		8-2-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	ARP70903
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	BSP
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location:	IN-RWMC-ARP-6
3.	Batch Number:	IN-ARP-VE-002793
4.	Examination Date:	08/02/12
5.	Procedure CCP-TP-006, Rev.:	16
6.	a. Drum Packing Station (DPS) Number:	703
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	221224
8.	Container Filter Torque Data:	
	a. Filter Torque Wrench Serial/ID Number:	726773
	b. Filter Torque Wrench Calibration Due Date:	09/19/12
	c. Filter Model No.:	NUCFIL-019DS
	d. Filter Serial No.:	HL-135
	e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
	f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70903							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
6	a. Iron-based metals/alloys (IM)				0.4	N/A		0.1
7				METAL	0.4	8.0		0.1
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				ALUMINUM (NSW)	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70903							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	i. Other inorganic materials (OI)				9.0	N/A		15.0
30		j. Graphite			0.0	N/A		0.0
31			N/A		N/A	2.2		0.0
32			N/A		N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34			N/A		N/A	2.3		0.0
35			N/A		N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37			N/A		N/A	2.0		0.0
38			N/A		N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40			N/A		N/A	3.0		0.0
41			N/A		N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43			N/A		N/A	2.0 - 5.0	0.0	0.0
44			N/A		N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46			N/A		N/A	2.0		0.0
47			N/A		N/A	2.0		0.0
48		p. Inorganic sorbents			9.0	N/A		15.0
49			OIL DRI ON TOP (WAIP)		9.0	0.1 - 2.8	0.6	15.0
50			N/A		N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52			N/A		N/A	0.0		0.0
53			N/A		N/A	0.0		0.0
54			N/A		N/A	0.0		0.0
55	r. Cellulosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57			PAPER (NSW)		N/A	0.9		0.0
58			N/A		N/A	0.9		0.0
59			N/A		N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61			N/A		N/A	0.8		0.0
62			N/A		N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64			N/A		N/A	1.0		0.0
65			N/A		N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70903							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.0	N/A		0.0
67				RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				PLASTIC (NSW)	N/A	0.9		0.0
71				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				0.0	N/A		0.0
75		x1. Sludge			0.0	N/A		0.0
76				N/A	N/A	1.0 - 1.5	0.0	0.0
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				86.2	N/A		71.7
83		y1. Sludge			85.9	N/A		71.6
84				DUSKY RED CRUMBLY SLUDGE WITH PORTLAND CEMENT AND WHITE CHUNKS	85.9	1.0 - 1.5	1.2	71.6
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.3	N/A		0.1
92				EVAPORATOR SALT	0.3	2.2		0.1
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				30.0	N/A		25.0
95				SOIL	30.0	1.0 - 1.4	1.2	25.0
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				125.6	N/A		111.8
98	13. (INORGANIC SLUDGE) weight (85.9) kg was obtained by subtracting the weighed waste weight of (39.7) kg and the container net weight of (34.0) kg from the gross weight (159.6) kg of the waste container. (159.6) - (39.7) - (34.0) = (85.9) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. REFERENCE LETTER: CP:08:00210/UFC:2300.00							
101								

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70903	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70903	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	26.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728635
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	10/23/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1424
22. Measured gross weight of loaded container, fully assembled (kgs):	159.6
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	351.9
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	80.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	125.6
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70903	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.1
31. Total volume of Solidified Organics (L):	0.0
32. Total volume of Solidified Inorganics (L):	86.7
33. Total volume of Soils/Gravel (L):	25.0
a. Total volume (L):	111.8
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	0.0%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	N/A

Section 6: Approvals

Visual Examination Operator 1:

Enter Name	Signature	Date
J. STANTON	Jodi M. Stanton	8/2/12

Visual Examination Operator 2:

Enter Name	Signature	Date
L. VERLANIC	L. Verlanic	8-2-12

Visual Examination Expert:

Enter Name	Signature	Date
J. POOLE	J.S. Poole	8-2-12

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	ARP70797
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	JSP
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location:	IN-RWMC-ARP-6
3.	Batch Number:	IN-ARP-VE-002793
4.	Examination Date:	08/02/12
5.	Procedure CCP-TP-006, Rev.:	16
6.	a. Drum Packing Station (DPS) Number:	703
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	223196
8.	Container Filter Torque Data:	
	a. Filter Torque Wrench Serial/ID Number:	726773
	b. Filter Torque Wrench Calibration Due Date:	09/19/12
	c. Filter Model No.:	NUCFIL-019DS
	d. Filter Serial No.:	HL-182
	e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
	f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70797							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
6	a. Iron-based metals/alloys (IM)				0.4	N/A		0.1
7				METAL	0.4	8.0		0.1
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70797							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
29	l. Other Inorganic materials (OI)				9.0	N/A		15.0
30		j. Graphite			0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p. Inorganic sorbents			9.0	N/A		15.0
49				OIL-DRI TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r. Cellulosics (C)				0.2	N/A		0.2
56		s. Paper			0.2	N/A		0.2
57				PAPER	0.2	0.9		0.2
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70797							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.0	N/A		0.0
67				RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC (NSW)	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				8.5	N/A		7.1
75		x1. Sludge			8.5	N/A		7.1
76				OLIVE GRAY POWDERY SLUDGE WITH CALCIUM SILICATE	8.5	1.0 - 1.5	1.2	7.1
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				93.1	N/A		76.8
83		y1. Sludge			91.1	N/A		75.9
84				MODERATE REDDISH BROWN CLAY LIKE SLUDGE WITH PORTLAND CEMENT	91.1	1.0 - 1.5	1.2	75.9
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Rooster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			2.0	N/A		0.9
92				EVAPORATOR SALT	2.0	2.2		0.9
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				32.0	N/A		26.7
95				SOIL	32.0	1.0 - 1.4	1.2	26.7
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				143.2	N/A		125.9
98	13. (INORGANIC SLUDGE) weight (91.1) kg was obtained by subtracting the weighed waste weight of (52.1) kg and the container net weight of (34.0) kg from the gross weight (177.2) kg of the waste container. (177.2) - (52.1) - (34.0) = (91.1) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. REFERENCE LETTER: CP:08:00210 / UFC:2300.00							
101								

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70797	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70797	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	30.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	223196
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728635
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	10/23/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1451
22. Measured gross weight of loaded container, fully assembled (kgs):	177.2
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	390.7
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	95.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	143.2
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70797	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.3
31. Total volume of Solidified Organics (L):	7.1
32. Total volume of Solidified Inorganics (L):	91.8
33. Total volume of Soils/Gravel (L):	26.7
a. Total volume (L):	125.9
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	5.9%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

L. VERLANIC	S. Verlanic	8-2-12
Enter Name	Signature	Date

Visual Examination Operator 2:

J. STANTON	Jodi M. Stanton	8/2/12
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE	J. Poole	8-2-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	ARP71047
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location:	IN-RWMC-ARP-6
3. Batch Number:	IN-ARP-VE-002793
4. Examination Date:	08/02/12
5. Procedure CCP-TP-006, Rev.:	16
6. a. Drum Packing Station (DPS) Number:	701
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	221224
8. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	728434
b. Filter Torque Wrench Calibration Due Date:	09/27/12
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	HL-93
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71047							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.1	N/A		0.0
7				METAL	0.1	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71047							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	l. Other Inorganic materials (OI)				9.0	N/A		15.0
30		j. Graphite			0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37				GLASS (NSW)	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p. Inorganic sorbents			9.0	N/A		15.0
49				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.8	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r. Cellulosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64				WOOD (NSW)	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP71047							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.0	N/A		0.0
67				N/A	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC (NSW)	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				5.0	N/A		4.2
75		x1. Sludge			5.0	N/A		4.2
76				PALE YELLOWISH BROWN POWDERY SLUDGE WITH CALCIUM SILICATE	5.0	1.0 - 1.5	1.2	4.2
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				140.1	N/A		116.8
83		y1. Sludge			140.1	N/A		116.8
84				MODERATE REDDISH BROWN CRUMBLY SLUDGE WITH PORTLAND CEMENT	140.1	1.0 - 1.5	1.2	116.8
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				25.0	N/A		20.8
95				SOIL	25.0	1.0 - 1.4	1.2	20.8
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				179.2	N/A		156.8
98	13. (INORGANIC SLUDGE) weight (140.1) kg was obtained by subtracting the weighed waste weight of (39.1) kg and the container net weight of (34.0) kg from the gross weight (213.2) kg of the waste container. (213.2) - (39.1) - (34.0) = (140.1) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. N/A							
101								

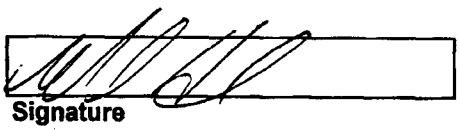
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71047	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71047	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	29.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	720178
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	09/21/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1451
22. Measured gross weight of loaded container, fully assembled (kgs):	213.2
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	470.0
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	90.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	179.2
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP71047	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.0
31. Total volume of Solidified Organics (L):	4.2
32. Total volume of Solidified Inorganics (L):	131.8
33. Total volume of Soils/Gravel (L):	20.8
a. Total volume (L):	156.8
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	2.8%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

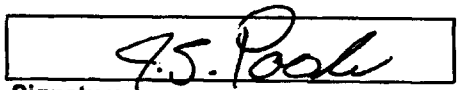
Visual Examination Operator 1:

M. HADERLIE		8-2-12
Enter Name	Signature	Date

Visual Examination Operator 2:

D. JACKMAN		8-2-12
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE		8-2-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	ARP70911
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location:	IN-RWMC-ARP-6
3.	Batch Number:	IN-ARP-VE-002793
4.	Examination Date:	08/02/12
5.	Procedure CCP-TP-006, Rev.:	16
6.	a. Drum Packing Station (DPS) Number:	703
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	221224
8.	Container Filter Torque Data:	
	a. Filter Torque Wrench Serial/ID Number:	726773
	b. Filter Torque Wrench Calibration Due Date:	09/19/12
	c. Filter Model No.:	NUCFIL-019DS
	d. Filter Serial No.:	HL-150
	e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
	f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70911							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.4	N/A		0.1
7				METAL	0.4	8.0		0.1
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70911							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	l.	Other Inorganic materials (OI)			9.0	N/A		15.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		9.0	N/A		15.0
49				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.3	N/A		0.3
56		s.	Paper		0.3	N/A		0.3
57				PAPER	0.3	0.9		0.3
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70911							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
66	v. Rubber (R)				0.0	N/A		0.0
67				N/A	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				PLASTIC (NSW)	N/A	0.9		0.0
71				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				8.0	N/A		6.7
75		x1. Sludge			8.0	N/A		6.7
76				VERY PALE ORANGE PUTTY LIKE SLUDGE WITH CALCIUM SILICATE	8.0	1.0 - 1.5	1.2	6.7
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				116.3	N/A		96.9
83		y1. Sludge			116.3	N/A		96.9
84				DUSKY RED CRUMBLY SLUDGE WITH PORTLAND CEMENT	116.3	1.0 - 1.5	1.2	96.9
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				13.0	N/A		10.8
95				SOIL	13.0	1.0 - 1.4	1.2	10.8
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				147.0	N/A		129.8
98	13. (INORGANIC SLUDGE) weight (116.3) kg was obtained by subtracting the weighed waste weight of (30.7) kg and the container net weight of (34.0) kg from the gross weight (181.0) kg of the waste container. (181.0) - (30.7) - (34.0) = (116.3) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. N/A							
101								

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70911	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70911	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	23.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	728635
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	10/23/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1514
22. Measured gross weight of loaded container, fully assembled (kgs):	181.0
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	399.0
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	70.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	147.0
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70911	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.4
31. Total volume of Solidified Organics (L):	6.7
32. Total volume of Solidified Inorganics (L):	111.9
33. Total volume of Soils/Gravel (L):	10.8
a. Total volume (L):	129.8
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	5.4%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

J. STANTON	Jodi M. Stanton	8/2/12
Enter Name	Signature	Date

Visual Examination Operator 2:

L. VERLANIC	L. Verlanic	8-2-12
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE	J.S. Poole	8-2-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	ARP70915
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location:	IN-RWMC-ARP-6
3. Batch Number:	IN-ARP-VE-002793
4. Examination Date:	08/02/12
5. Procedure CCP-TP-006, Rev.:	16
6. a. Drum Packing Station (DPS) Number:	701
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	221224
8. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	728434
b. Filter Torque Wrench Calibration Due Date:	09/27/12
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	HL-233
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70915							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.4	N/A		0.1
7				METAL	0.4	8.0		0.1
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70915							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	l.	Other inorganic materials (Ol)			9.0	N/A		15.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		9.0	N/A		15.0
49				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				WOOD (NSW)	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003							
2	Container ID: ARP70915							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.0	N/A		0.0
67				N/A	N/A	0.9 - 2.0	0.0	0.0
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				0.0	N/A		0.0
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC (NSW)	N/A	0.9		0.0
72				N/A	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				7.0	N/A		5.8
75		x1. Sludge			7.0	N/A		5.8
76				VERY PALE ORANGE POWDERY SLUDGE WITH CALCIUM SILICATE	7.0	1.0 - 1.5	1.2	5.8
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				131.0	N/A		109.1
83		y1. Sludge			130.8	N/A		109.0
84				LIGHT BROWN CRUMBLY SLUDGE WITH PORTLAND CEMENT	130.8	1.0 - 1.5	1.2	109.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Other (See Note a)			0.2	N/A		0.1
92				EVAPORATOR SALT	0.2	2.2		0.1
93				N/A	N/A	0.0		0.0
94	z. Soils/gravel (S)				12.0	N/A		10.0
95				SOIL	12.0	1.0 - 1.4	1.2	10.0
96				N/A	N/A	1.0 - 1.4	0.0	0.0
97	aa. TOTAL				159.4	N/A		140.0
98	13. (INORGANIC SLUDGE) weight (130.8) kg was obtained by subtracting the weighed waste weight of (28.6) kg and the container net weight of (34.0) kg from the gross weight (193.4) kg of the waste container. (193.4) - (28.6) - (34.0) = (130.8) kg							
99	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
100	b. REFERENCE LETTER: CP:08:00210 / UFC:2300.00							
101								

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70915	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70915	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	28.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	221224
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	720178
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	09/21/12
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1524
22. Measured gross weight of loaded container, fully assembled (kgs):	193.4
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	426.4
23. Container closure date (mm/dd/yy):	08/02/12
24. Percent fill of container:	90.0%
25. Total layers of confinement:	1
26. Measured net weight of waste (kgs):	159.4
27. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
28. Estimated steel added from packaging (kgs):	28.6
29. Total net weight of fully assembled container (kgs):	34.0

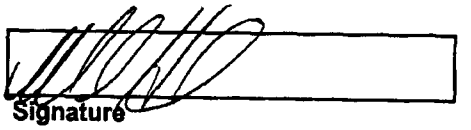
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 4 Windows XP 2002 MS Excel 2003	
Container ID: ARP70915	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.1
31. Total volume of Solidified Organics (L):	5.8
32. Total volume of Solidified Inorganics (L):	124.1
33. Total volume of Soils/Gravel (L):	10.0
a. Total volume (L):	140.0
34. Waste Stream and Waste Matrix Code:	
a. Heterogeneous Debris (S5400):	
b. Homogeneous Solids (S3900):	X
c. Soil (S4200):	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	4.4%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

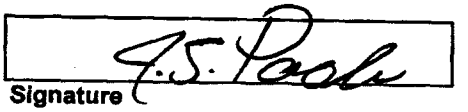
Visual Examination Operator 1:

D. JACKMAN		8-2-12
Enter Name	Signature	Date

Visual Examination Operator 2:

M. HADERLIE		8-2-12
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE		8-2-12
Enter Name	Signature	Date

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist

Batch Data Report No.: IN-ARP-VE-002793

Description			
1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods used?	☐ NO	☑ YES	☐ NA
a. Was the description of the waste items adequate?	☐ NO	☑ YES	☐ NA
2. Was the correct revision of operating procedure used? (Attachment 1, Section 1, Line 5)	☐ NO	☑ YES	☐ NA
3. Were the following calculation spot checks performed?			
a. Attachment 1, Section 2: Verify the total waste volume in Column 12, Row aa does not exceed 208 L for a 55-gallon drum or 1456 L for an SWB and verify the estimated weights in Row aa matches the measured net weight of waste in Attachment 1, Section 4, Row 26.	☐ NO	☑ YES	☐ NA
b. Attachment 1, Section 5: Verify the total waste volume in Row 33 a., matches the total waste volume in Section 2, Column 12, Row aa.	☐ NO	☑ YES	☐ NA
c. Attachment 1, Section 1: Check hand calculations in Lines 6h and 6p, and any additional hand calculations recorded in the comments field or in Section 2, Line 13.	☐ NO	☑ YES	☐ NA
4. Is only one waste stream selected in Line 34 of Attachment 1, Section 5, and is it consistent with the values shown in Attachment 1, Section 2, Column 12?	☐ NO	☑ YES	☐ NA
5. Is the data entered in the correct units and correct number of significant figures?	☐ NO	☑ YES	☐ NA
6. Were the data reviewed for transcription errors?	☐ NO	☑ YES	☐ NA
7. Does the BDR include VE for up to 20 containers?	☐ NO	☑ YES	☐ NA
8. Are BDR contents complete and do they match, Attachment 3, CCP Waste VE Batch Data Report Table of Contents?	☐ NO	☑ YES	☐ NA
9. Was completeness verified for data entry on the CCP VE Technique Data Form for the following?			
a. Section 1	☐ NO	☑ YES	☐ NA
b. Section 2	☐ NO	☑ YES	☐ NA
c. Section 3	☐ NO	☑ YES	☐ NA
d. Section 4	☐ NO	☑ YES	☐ NA
e. Section 5	☐ NO	☑ YES	☐ NA

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: IN-ARP-VE-002793

Description			
10. Is all the data signed and dated in Attachment 1, Section 6, using reproducible ink, and by the individual(s) generating it?	☐ NO	☑ YES	☐ NA
11. Is all data entered clearly, legibly, and accurately?	☐ NO	☑ YES	☐ NA
12. Were discrepancies between the operators reconciled?	☐ NO	☐ YES	☑ NA
13. Are all changes to original data lined out, initialed and dated by the individual making the changes?	☐ NO	☐ YES	☑ NA BJB 8-6-12
14. Were data changes made by the individual who originally collected the data or an equally qualified individual?	☐ NO	☐ YES	☑ NA
15. Was the DPS scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☑ YES	☐ NA
16. Was the daily DPS scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☑ YES	☐ NA
17. Was the container scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☑ YES	☐ NA
18. Was the daily container scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☑ YES	☐ NA
19. Was the torque wrench(es) in calibration prior to VE Technique and documented correctly?	☐ NO	☑ YES	☐ NA
20. Were NCR(s) initiated as indicated in Attachment 1, Section 1, dispositioned, and approved appropriately?	☐ NO	☐ YES	☑ NA
21. Was the correct waste stream and waste matrix code assigned?	☐ NO	☑ YES	☐ NA
22. Is there a valid VE data form for each drum in the batch?	☐ NO	☑ YES	☐ NA
23. Were the operators trained and qualified in accordance with the applicable requirements?	☐ NO	☑ YES	☐ NA

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: IN-ARP-VE-002793

Description			
24. Was precision maintained by reconciling any discrepancies between the operator(s) and the ITR with regard to identification of waste matrix code, liquids in excess of WIPP Hazardous Waste Facility Permit and WIPP Waste Acceptance Criteria limits and compressed gases?	☐ NO	☐ YES	☑ NA

Description

Comments:

12, 24 MARKED N/A DUE TO NO DISCEPANCIES. BRS 8-6-12

13, 14 MARKED N/A DUE TO NO CHANGES MADE BRS 8-6-12

20 MARKED N/A DUE TO NO NCR. BRS 8-6-12

I have reviewed 100 percent of the container-specific and batch data in this BDR and find it acceptable.

ITR:

Brad Stark — Printed Name

Brad Stark — Signature

8-6-12 — Date

DIVIDER

PAGE

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary

BDR Number: IN-SRP-VE-000028 **Examination Date:** 22 January 2013

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
1. Is the completed, signed and dated Independent Technical Reviewer Checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, C3-10b**	X			
2. Does the BDR contain all items addressed in the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-10b**	X			
3. Does the BDR include a listing of all container numbers in the batch? **Reference Source: CCP-PO-001, C3-10b**	X			
4. List all containers that have met QAOs. **Reference Source: CCP-PO-001, C3-10b**				**Container(s):** SRP12314, SRP12310, SRP12309, SRP12315, SRP12316, SRP12308, SRP12333, SRP12307, SRP12339, SRP12345, SRP12311, SRP12340, SRP12344
5. Is the current implementing procedure and revision number included in the BDR? **Reference Source: CCP-PO-001, C3-4, C3-10b, Table C3-11**	X			
6. Is the BDR date included? **Reference Source: CCP-PO-001, Table C3-11**	X			
7. Is there a reference to or copy of any associated NCRs (if any) in the BDR? **Reference Source: CCP-PO-001, Table C3-11**			X	No NCRs associated with this BDR
8. Are there 20 or fewer containers in the batch? **Reference Source: CCP-PO-001 C3-10**	X			
9. Are the data properly reported (i.e., data are reported in correct units and with correct significant figures). **Reference Source: CCP-PO-001 C3-10b**	X			
10. Is there evidence of verification that the physical form matches the Waste Matrix Code? **Reference Source: CCP-PO-001, C3-4**	X			
11. Is there evidence of verification that the physical form matches the waste stream description? **Reference Source: CCP-PO-001, C1-4**	X			
12. Are prohibited items absent? **Reference Source: CCP-PO-001, C3-4**	X			

COPY

CCP RECORDS ORIGINAL
DATE REC'D 2-6-13

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-SRP-VE-000028 Examination Date: 22 January 2013

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
13. Does observable liquid, if present, meet the criteria of the TSDF-WAC? **Reference Source: CCP-PO-001, C3-4b**	X			
14. Were discrepancies between the Visual Examination operator and the ITR with regards to identification of waste matrix code, liquids in excess of the TSDF-WAC, or compressed gases reconciled? NA if no discrepancies. **Reference Source: CCP-PO-001, C3-4b**			X	No discrepancies
15. Are the training requirements met for the VE Expert and VE Operators who have signed the data forms? **Reference Source: CCP-PO-001, C1-4, C3-4**	X			
16. Is evidence of a satisfactory audio/video test included in the BDR? NA [not applicable] for VE Method for Newly Generated Waste. **Reference Source: CCP-PO-001, C1-4**			X	Newly generated waste
17. If the VE was not recorded using audio/video media, does the data sheet contain the signature of two qualified operators who observed for themselves the waste being placed into the container? NA if audio/video used. **Reference Source: CCP-PO-001, C1-4**	X			
18. Are the weights/estimated weights for the 12 waste material parameters reported in kilograms (kg)? **Reference Source: CCP Technical Procedures**	X			
19. Are the descriptions for each waste material parameter included in the BDR? **Reference Source: CCP-PO-001, C1-4**	X			
20. Is the gross weight reported (in kg) for each container included in the BDR? **Reference Source: CCP Technical Procedures**	X			
21. Is the number of layers of confinement recorded? **Reference Source: CCP-PO-001, C-3d**	X			
22. Is sufficient information included in the BDR to determine the packaging configuration? **Reference Source: CCP-PO-001 C-3d**	X			

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-SRP-VE-000028 **Examination Date:** 22 January 2013

Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
23. Is the type and number of filters recorded? **Reference Source: CCP-PO-001, C-3d**	X			
24. Is the size of the rigid liner vent hole recorded to determine the appropriate DAC? NA if no liner lid. **Reference Source: CCP-PO-001, C-3d**			X	No liner lid
25. For Los Alamos National Laboratory (LANL) Sealed Sources, does the characterized waste container meet the definition of sealed sources per Title 10 Code of Federal Regulations (CFR) 30.4 and Title 10 CFR 835.2 (effective January 1, 2004) evidence of which is assembled as part of AK documentation? **Reference Source: CCP Technical Procedures**			X	Not a Sealed Source
26. For LANL Sealed Sources, are sealed sources the only non-packaging items in the waste container? **Reference Source: CCP Technical Procedures**			X	Not a Sealed Source
27. For LANL Sealed Sources, are the sealed sources a U.S. Department of Transportation (DOT) Special Form Class 7 (Radioactive Material) per Title 49 CFR 34.27 (effective January 1, 2004) and the certification of which is assembled as part of the AK documentation? **Reference Source: CCP Technical Procedures**			X	Not a Sealed Source
28. For LANL Sealed Sources, is the integrity of each sealed source validated by documented contamination survey results to meet the requirements of Title 10 CFR 34.27 (effective January 1, 2004), and assembled as part of AK documentation? **Reference Source: CCP Technical Procedures**			X	Not a Sealed Source

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-SRP-VE-000028 **Examination Date:** 22 January 2013

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
29. For LANL Sealed Sources, is each sealed source a rigid sealed container less than or equal to 4 L in size or in a rigid sealed container less than or equal to 4 L? **Reference Source: CCP Technical Procedures**			X	Not a Sealed Source
30. For LANL Sealed Sources, AK documentation does not indicate the use of volatile organic compounds (VOCs) or VOC-bearing materials as constituents of sealed sources? **Reference Source: CCP Technical Procedures**			X	Not a Sealed Source
31. For LANL Sealed Sources, the outer casing of each sealed source is of a non VOC-bearing material which is verified using the VE technique at the time of packaging? **Reference Source: CCP Technical Procedures**			X	Not a Sealed Source

Comments: **None**

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

David W. Moody		6 February 2013
SPM Printed Name	Signature	Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

Attachment 4 – CCP Waste VE Technique Batch Data Report Cover Sheet

Batch Data Report No.: IN-SRP-VE-000028

	Waste Container ID Number
1	SRP12314
2	SRP12310
3	SRP12309
4	SRP12315
5	SRP12316
6	SRP12308
7	SRP12333
8	SRP12307
9	SRP12339
10	SRP12345
11	SRP12311
12	SRP12340
13	SRP12344
14	
15	
16	
17	N A
18	
19	1-22-13
20	

ITR:

Jodi M. Stanton — Printed Name
Jodi M Stanton — Signature
1/23/13 — Date

VEE:

Spencer Pattee — Printed Name
Signature
1/29/13 — Date

CCP RECORDS ORIGINAL
DATE REC'D 1-30-13

001

Attachment 3 – CCP Waste VE Technique Batch Data Report Table of Contents

Batch Data Report No.: W-SRP-VE-000028 **Batch Data Report Date:** 1-22-13

Table Of Contents

Item	Description	Page No.
1	Attachment 4, CCP Waste VE Technique Batch Data Report Cover Sheet	1
2	Attachment 3, CCP Waste VE Technique Batch Data Report Table of Contents	2
3	CCP Waste Visual Examination Technique Data Form	3
4	Attachment 2, CCP Waste VE Technique Independent Technical Reviewer Checklist	94
5	Copy of NCRs (NA, If Not Applicable)	N/A

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	SRP12314
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	BP
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location (Airlock):	IN-RWMC-ARP-5
3.	Batch Number:	IN-SRP-VE-000028
4.	Examination Start Date:	01/22/13
5.	Procedure CCP-TP-006, Rev.:	17
6.	a. Drum Packing Station (DPS) Number:	501
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	XC0977
	c. Scale Calibration Due Date:	07/02/13
	d. Test Weight ID:	XC0490
	e. Test Weight Calibration Due Date:	04/03/13
	f. Test Weight (kgs):	5.0
	g. Scale Readout of Test Weight (kgs):	5.0
	h. Difference Between Test Weight and Scale Readout (kgs):	0.0
	i. DPS Scale Check SAT (Y):	Y
	Container Scale Check	
	j. Scale Serial/ID Number:	725494
	k. Scale Calibration Due Date:	11/21/13
	l. Test Weight ID:	722311
	m. Test Weight Calibration Due Date:	10/16/13
	n. Test Weight (kg):	226.8
	o. Scale Readout of Test Weight (kgs):	226.6
	p. Difference Between Test Weight and Scale Readout (kgs):	0.2
	q. Container Scale Check SAT (Y):	Y
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	220177
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12314							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				METAL (NSW)	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

004

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12314							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	l.	Other Inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				PAPER (NSW)	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

005

	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003					
2	Container ID: SRP12314					
3	**Section 2: Waste Material Parameter (WMP) Estimates**					
4		9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density		12.Volume
5			By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)		0.0	N/A		0.0
67		N/A	N/A	0.9 - 2.0	0.0	0.0
68		N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)		0.0	N/A		0.0
70		NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71		N/A	N/A	0.9		0.0
72		N/A	N/A	0.9		0.0
73		N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)		126.0	N/A		105.0
75	x1. Sludge		126.0	N/A		105.0
76		YELLOWISH BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE	126.0	1.0 - 1.5	1.2	105.0
77		N/A	N/A	1.0 - 1.5	0.0	0.0
78		N/A	N/A	1.0 - 1.5	0.0	0.0
79	x2. Other (See Note a)		0.0	N/A		0.0
80		N/A	N/A	0.0		0.0
81		N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)		0.0	N/A		0.0
83	y1. Sludge		0.0	N/A		0.0
84		N/A	N/A	1.0 - 1.5	0.0	0.0
85		N/A	N/A	1.0 - 1.5	0.0	0.0
86		N/A	N/A	1.0 - 1.5	0.0	0.0
87	y2. Roaster Oxides		0.0	N/A		0.0
88		N/A	N/A	1.5 - 4.0	0.0	0.0
89		N/A	N/A	1.5 - 4.0	0.0	0.0
90		N/A	N/A	1.5 - 4.0	0.0	0.0
91	y3. Salt		0.0	N/A		0.0
92		N/A	N/A	0.0		0.0
93		N/A	N/A	0.0		0.0
94	y4. Other (See Note a)		0.0	N/A		0.0
95		N/A	N/A	0.0		0.0
96		N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)		0.0	N/A		0.0
98		N/A	N/A	1.0 - 1.4	0.0	0.0
99		N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL		126.0	N/A		105.0
101	13. (ORGANIC SLUDGE) weight (126.0) kg was obtained by subtracting the weighed waste weight of (0.0) kg and the container net weight of (34.0) kg from the gross weight (160.0) kg of the waste container. (160.0) - (0.0) - (34.0) = (126.0) kg					
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.					
103	b.	N/A				
104						

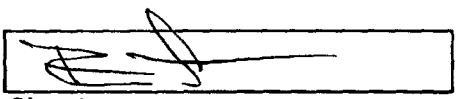
006

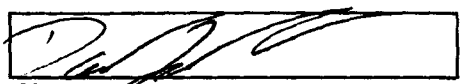
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12314	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

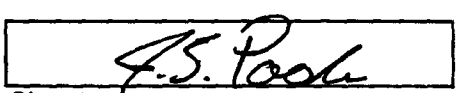
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12314	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (Inches) (N/A the waste depth for an SWB)	25.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	220177
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	725482
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	02/12/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	0932
22. Measured gross weight of loaded container, fully assembled (kgs):	160.0
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	352.7
23. Container closure date (mm/dd/yy):	01/22/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726753
b. Filter Torque Wrench Calibration Due Date:	02/01/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	DM-562
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	80.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	126.0
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12314	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	0.0
31. Total volume of Solidified Organics (L):	105.0
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	105.0
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
I. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	100.0%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:		
R. CUMMINS		1-22-13
Enter Name	Signature	Date

Visual Examination Operator 2:		
D. JACKMAN		1-22-13
Enter Name	Signature	Date

Visual Examination Expert:		
J. POOLE		1-22-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP12310
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
b. Container Type: 55 gal. drum or SWB:	55 GAL.
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000028
4. Examination Start Date:	01/22/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	502
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	XC0972
c. Scale Calibration Due Date:	07/02/13
d. Test Weight ID:	XC0838
e. Test Weight Calibration Due Date:	06/13/14
f. Test Weight (kgs):	5.0
g. Scale Readout of Test Weight (kgs):	5.0
h. Difference Between Test Weight and Scale Readout (kgs):	0.0
i. DPS Scale Check SAT (Y):	Y
Container Scale Check	
j. Scale Serial/ID Number:	725494
k. Scale Calibration Due Date:	11/21/13
l. Test Weight ID:	722311
m. Test Weight Calibration Due Date:	10/16/13
n. Test Weight (kg):	226.8
o. Scale Readout of Test Weight (kgs):	226.6
p. Difference Between Test Weight and Scale Readout (kgs):	0.2
q. Container Scale Check SAT (Y):	Y
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	220177
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12310							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.1	N/A		0.0
7	METAL TIGHTLY BOUND ON TOP				0.1	8.0		0.0
8	N/A				N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10	N/A				N/A	3.0		0.0
11	N/A				N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14		N/A			N/A	11.0		0.0
15		N/A			N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17		N/A			N/A	1.8		0.0
18		N/A			N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20		N/A			N/A	19.1		0.0
21		N/A			N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23		N/A			N/A	9.0		0.0
24		N/A			N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26		N/A			N/A	0.0		0.0
27		N/A			N/A	0.0		0.0
28		N/A			N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12310							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	l.	Other inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12310							
3	**Section 2: Waste Material Parameter (WMP) Estimates**							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.3	N/A		0.3
67				RUBBER BANDS (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				2.9	N/A		3.3
70				PLASTIC TIGHTLY BOUND ON TOP	1.0	0.9		1.1
71				NYLON STRAP TIGHTLY BOUND ON TOP (WAIP)	0.5	0.9		0.6
72				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
73				1 TRAY LINER, 1 BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
74	x. Organic matrix (OR)				84.3	N/A		70.3
75		x1. Sludge			84.3	N/A		70.3
76				DARK YELLOWISH BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE	84.3	1.0 - 1.5	1.2	70.3
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95				N/A	N/A	0.0		0.0
96				N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98				N/A	N/A	1.0 - 1.4	0.0	0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				87.6	N/A		73.9
101	13. (ORGANIC SLUDGE) weight (84.3) kg was obtained by subtracting the weighed waste weight of (3.3) kg and the container net weight of (34.0) kg from the gross weight (121.6) kg of the waste container. (121.6) - (3.3) - (34.0) = (84.3) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

013

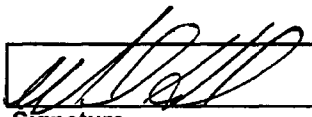
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12310	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Container ID: SRP12310		
Section 4: Waste Packaging Data		
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)		29.0
16. Inner Bags:		
a.	Total Number of Inner Bag(s):	0
b.	Closure Method (See Below for Proper Designator):	N/A
	TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c.	Layers of Confinement (>4 liters):	0
d.	Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:		
a.	Total Number of Liner Bag(s):	1
b.	Closure Method (See Below for Proper Designator):	TTF
	TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c.	Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):		Y
19. Rigid Liner with NO lid Verified? (Y/N):		Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):		Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:		
a.	Container Manufacturer Lot Number:	220177
b.	Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	725482
c.	Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	02/12/13
d.	Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e.	Time the container was closed:	0950
22. Measured gross weight of loaded container, fully assembled (kgs):		121.6
a.	Gross weight of loaded container, fully assembled converted to pounds (lbs)	268.1
23. Container closure date (mm/dd/yy):		01/22/13
24. Container Filter Torque Data:		
a.	Filter Torque Wrench Serial/ID Number:	726753
b.	Filter Torque Wrench Calibration Due Date:	02/01/13
c.	Filter Model No.:	NUCFIL-019DS
d.	Filter Serial No.:	DM-538
e.	Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f.	Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:		90.0%
26. Total layers of confinement:		1
27. Measured net weight of waste (kgs):		87.6
28. Estimated plastic added from packaging, including rigid liner (kgs):		5.4
29. Estimated steel added from packaging (kgs):		28.6
29a Total net weight of fully assembled container (kgs):		34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12310	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	3.6
31. Total volume of Solidified Organics (L):	70.3
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	73.9
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	96.2%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

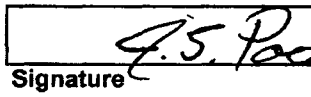
Visual Examination Operator 1:

M. HADERLIE		1-22-13
Enter Name	Signature	Date

Visual Examination Operator 2:

J. HULSE		1/22/13
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE		1-22-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP12309
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000028
4. Examination Start Date:	01/22/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	502
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	220177
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12309							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.2	N/A		0.0
7	METAL TIGHTLY BOUND ON TOP				0.2	8.0		0.0
8	N/A				N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10	N/A				N/A	3.0		0.0
11	N/A				N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14		N/A			N/A	11.0		0.0
15		N/A			N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17		N/A			N/A	1.8		0.0
18		N/A			N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20		N/A			N/A	19.1		0.0
21		N/A			N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23		N/A			N/A	9.0		0.0
24		N/A			N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26		N/A			N/A	0.0		0.0
27		N/A			N/A	0.0		0.0
28		N/A			N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12309							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	l.	Other inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12309							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.3	N/A		0.3
67				RUBBER BANDS (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				2.5	N/A		2.8
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC TIGHTLY BOUND ON TOP	1.1	0.9		1.2
72				TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				86.0	N/A		71.7
75		x1. Sludge			86.0	N/A		71.7
76				MODERATE OLIVE BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE	86.0	1.0 - 1.5	1.2	71.7
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95				N/A	N/A	0.0		0.0
96				N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98				N/A	N/A	1.0 - 1.4	0.0	0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				89.0	N/A		74.8
101	13. (ORGANIC SLUDGE) weight (86.0) kg was obtained by subtracting the weighed waste weight of (3.0) kg and the container net weight of (34.0) kg from the gross weight (123.0) kg of the waste container. (123.0) - (3.0) - (34.0) = (86.0) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

020

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12309	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Container ID: SRP12309		
Section 4: Waste Packaging Data		
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)		26.0
16. Inner Bags:		
	a. Total Number of Inner Bag(s):	0
	b. Closure Method (See Below for Proper Designator):	N/A
	TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
	c. Layers of Confinement (>4 liters):	0
	d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:		
	a. Total Number of Liner Bag(s):	1
	b. Closure Method (See Below for Proper Designator):	TTF
	TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
	c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):		Y
19. Rigid Liner with NO lid Verified? (Y/N):		Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):		Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:		
	a. Container Manufacturer Lot Number:	220177
	b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	725482
	c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	02/12/13
	d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
	e. Time the container was closed:	1016
22. Measured gross weight of loaded container, fully assembled (kgs):		123.0
	a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	271.2
23. Container closure date (mm/dd/yy):		01/22/13
24. Container Filter Torque Data:		
	a. Filter Torque Wrench Serial/ID Number:	726753
	b. Filter Torque Wrench Calibration Due Date:	02/01/13
	c. Filter Model No.:	NUCFIL-019DS
	d. Filter Serial No.:	DM-537
	e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
	f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:		80.0%
26. Total layers of confinement:		1
27. Measured net weight of waste (kgs):		89.0
28. Estimated plastic added from packaging, including rigid liner (kgs):		5.4
29. Estimated steel added from packaging (kgs):		28.6
29a Total net weight of fully assembled container (kgs):		34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12309	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	3.1
31. Total volume of Solidified Organics (L):	71.7
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	74.8
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	96.6%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

Enter Name	Signature	Date
J. HULSE	J Hulse	1/22/13

Visual Examination Operator 2:

Enter Name	Signature	Date
M. HADERLIE	M Haderlie	1-22-13

Visual Examination Expert:

Enter Name	Signature	Date
J. POOLE	J.S Poole	1-22-13

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	SRP12315
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location (Airlock):	IN-RWMC-ARP-5
3.	Batch Number:	IN-SRP-VE-000028
4.	Examination Start Date:	01/22/13
5.	Procedure CCP-TP-006, Rev.:	17
6.	a. Drum Packing Station (DPS) Number:	501
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	220177
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12315							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5					0.0	N/A		0.0
6	a. Iron-based metals/alloys (IM)				N/A	8.0		0.0
7				METAL (NSW)	N/A	8.0		0.0
8				N/A	0.0	N/A		0.0
9	b. Aluminum-based metals/alloys (AM)				N/A	3.0		0.0
10				N/A	N/A	3.0		0.0
11				N/A	0.0	N/A		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			N/A	11.0		0.0
14				N/A	N/A	11.0		0.0
15				N/A	0.0	N/A		0.0
16		e. Beryllium			N/A	1.8		0.0
17				N/A	N/A	1.8		0.0
18				N/A	0.0	N/A		0.0
19		f. Depleted uranium			N/A	19.1		0.0
20				N/A	N/A	19.1		0.0
21				N/A	0.0	N/A		0.0
22		g. Copper			N/A	9.0		0.0
23				N/A	N/A	9.0		0.0
24				N/A	0.0	N/A		0.0
25		h. Other (See Note a)			N/A	0.0		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28								

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12315							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	i. Other inorganic materials (OI)				0.0	N/A		0.0
30		j. Graphite			0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	0.0	N/A		0.0
33		k. Concrete			N/A	2.2		0.0
34				N/A	N/A	2.3		0.0
35				N/A	0.0	N/A		0.0
36		l. Glass			N/A	2.3		0.0
37				N/A	N/A	2.0		0.0
38				N/A	0.0	N/A		0.0
39		m. Firebrick			N/A	2.0		0.0
40				N/A	N/A	3.0		0.0
41				N/A	0.0	N/A		0.0
42		n. Ceramics			N/A	2.0 - 5.0	0.0	0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	0.0	N/A		0.0
45		o. Sand			N/A	2.0		0.0
46				N/A	N/A	2.0		0.0
47				N/A	0.0	N/A		0.0
48		p. Inorganic sorbents			N/A	0.1 - 2.8	0.0	0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	0.0	N/A		0.0
51		q. Other (See Note a)			N/A	0.0		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	0.2	N/A		0.2
55	r. Cellulosics (C)				0.2	N/A		0.2
56		s. Paper			N/A	0.9		0.0
57				PAPER (NSW)	0.2	0.9		0.2
58				LEATHER GLOVE TIGHTLY BOUND ON TOP	N/A	0.9		0.0
59				N/A	0.0	N/A		0.0
60		t. Cardboard			N/A	0.8		0.0
61				N/A	N/A	0.8		0.0
62				N/A	0.0	N/A		0.0
63		u. Wood			N/A	1.0		0.0
64				N/A	N/A	1.0		0.0
65				N/A				

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12315							
3	**Section 2: Waste Material Parameter (WMP) Estimates**							
4	**9. Waste Material Parameter and Item Description**				**10. WMP Estimate**	**11. Density**		**12.Volume**
5					**By Weight (kg)**	**(kg/L)**		**(L)**
66	v. Rubber (R)				0.3	N/A		0.3
67				RUBBER BANDS (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68				RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				2.1	N/A		2.4
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC TIGHTLY BOUND ON TOP	0.7	0.9		0.8
72				TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				127.6	N/A		106.3
75		x1. Sludge			127.6	N/A		106.3
76				YELLOWISH GRAY CRUMBLY SLUDGE WITH CALCIUM SILICATE	127.6	1.0 - 1.5	1.2	106.3
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Rooster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95				N/A	N/A	0.0		0.0
96				N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98				N/A	N/A	1.0 - 1.4	0.0	0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				130.2	N/A		109.2
101	13. (ORGANIC SLUDGE) weight (127.6) kg was obtained by subtracting the weighed waste weight of (2.6) kg and the container net weight of (34.0) kg from the gross weight (164.2) kg of the waste container. (164.2) - (2.6) - (34.0) = (127.6) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

027

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12315	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12315	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	32.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	220177
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	725482
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	02/12/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1008
22. Measured gross weight of loaded container, fully assembled (kgs):	164.2
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	362.0
23. Container closure date (mm/dd/yy):	01/22/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726753
b. Filter Torque Wrench Calibration Due Date:	02/01/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	DM-539
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	100.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	130.2
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

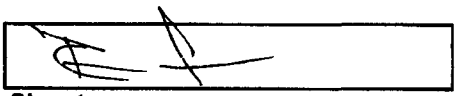
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12315	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	2.9
31. Total volume of Solidified Organics (L):	106.3
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	109.2
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	98.0%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

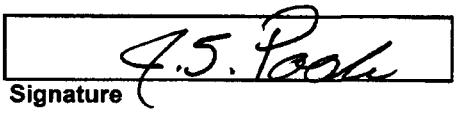
Visual Examination Operator 1:

D. JACKMAN		1-22-13
Enter Name	Signature	Date

Visual Examination Operator 2:

R. CUMMINS		1·22·13
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE		1-22-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	SRP12316
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	✓
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location (Airlock):	IN-RWMC-ARP-5
3.	Batch Number:	IN-SRP-VE-000028
4.	Examination Start Date:	01/22/13
5.	Procedure CCP-TP-006, Rev.:	17
6.	a. Drum Packing Station (DPS) Number:	501
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	220177
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12316							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7	METAL (NSW)				N/A	8.0		0.0
8	N/A				N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10	N/A				N/A	3.0		0.0
11	N/A				N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14		N/A			N/A	11.0		0.0
15		N/A			N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17		N/A			N/A	1.8		0.0
18		N/A			N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20		N/A			N/A	19.1		0.0
21		N/A			N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23		N/A			N/A	9.0		0.0
24		N/A			N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26		N/A			N/A	0.0		0.0
27		N/A			N/A	0.0		0.0
28		N/A			N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12316							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	i. Other inorganic materials (OI)				0.0	N/A		0.0
30		j. Graphite			0.0	N/A		0.0
31			N/A		N/A	2.2		0.0
32			N/A		N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34			N/A		N/A	2.3		0.0
35			N/A		N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37			N/A		N/A	2.0		0.0
38			N/A		N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40			N/A		N/A	3.0		0.0
41			N/A		N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43			N/A		N/A	2.0 - 5.0	0.0	0.0
44			N/A		N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46			N/A		N/A	2.0		0.0
47			N/A		N/A	2.0		0.0
48		p. Inorganic sorbents			0.0	N/A		0.0
49			N/A		N/A	0.1 - 2.8	0.0	0.0
50			N/A		N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52			N/A		N/A	0.0		0.0
53			N/A		N/A	0.0		0.0
54			N/A		N/A	0.0		0.0
55	r. Cellulosics (C)				0.1	N/A		0.1
56		s. Paper			0.0	N/A		0.0
57			PAPER (NSW)		N/A	0.9		0.0
58			N/A		N/A	0.9		0.0
59			N/A		N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61			N/A		N/A	0.8		0.0
62			N/A		N/A	0.8		0.0
63		u. Wood			0.1	N/A		0.1
64			WOOD (WAIP)		0.1	1.0		0.1
65			N/A		N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12316							
3	**Section 2: Waste Material Parameter (WMP) Estimates**							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
66	v. Rubber (R)				0.6	N/A		0.5
67	RUBBER BANDS (WAIP)				0.6	0.9 - 2.0	1.1	0.5
68	N/A				N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				4.8	N/A		5.3
70	NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED				N/A	0.9		0.0
71	PLASTIC TIGHTLY BOUND ON TOP				2.0	0.9		2.2
72	2 TRAY LINERS AND 2 BAG OUT STUBS TIGHTLY BOUND ON TOP (WAIP)				2.8	0.9		3.1
73	N/A				N/A	0.9		0.0
74	x. Organic matrix (OR)				53.9	N/A		44.9
75		x1. Sludge			53.9	N/A		44.9
76		YELLOWISH BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE			53.9	1.0 - 1.5	1.2	44.9
77		N/A			N/A	1.0 - 1.5	0.0	0.0
78		N/A			N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80		N/A			N/A	0.0		0.0
81		N/A			N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84		N/A			N/A	1.0 - 1.5	0.0	0.0
85		N/A			N/A	1.0 - 1.5	0.0	0.0
86		N/A			N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88		N/A			N/A	1.5 - 4.0	0.0	0.0
89		N/A			N/A	1.5 - 4.0	0.0	0.0
90		N/A			N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92		N/A			N/A	0.0		0.0
93		N/A			N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95		N/A			N/A	0.0		0.0
96		N/A			N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98	N/A				N/A	1.0 - 1.4	0.0	0.0
99	N/A				N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				59.4	N/A		50.8

101 13. (ORGANIC SLUDGE) weight (53.9) kg was obtained by subtracting the weighed waste weight of (5.5) kg and the container net weight of (34.0) kg from the gross weight (93.4) kg of the waste container. (93.4) - (5.5) - (34.0) = (53.9) kg

102 a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.

103 b. N/A

104

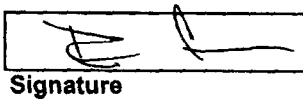
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12316	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12316	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (Inches) (N/A the waste depth for an SWB)	29.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	220177
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	725482
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	02/12/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1047
22. Measured gross weight of loaded container, fully assembled (kgs):	93.4
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	205.9
23. Container closure date (mm/dd/yy):	01/22/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726753
b. Filter Torque Wrench Calibration Due Date:	02/01/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	DM-534
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	90.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	59.4
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

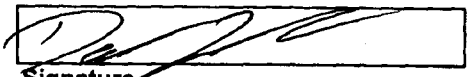
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12316	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	5.9
31. Total volume of Solidified Organics (L):	44.9
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	50.8
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	90.7%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

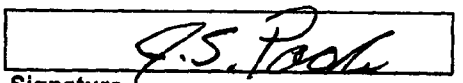
Visual Examination Operator 1:

R. CUMMINS		1-22-13
Enter Name	Signature	Date

Visual Examination Operator 2:

D. JACKMAN		1-22-13
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE		1-22-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	SRP12308
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	BSP
	b. Container Type: 55 gal. drum or SWB:	55 GAL.
2.	Site ID and Location (Airlock):	IN-RWMC-ARP-5
3.	Batch Number:	IN-SRP-VE-000028
4.	Examination Start Date:	01/22/13
5.	Procedure CCP-TP-006, Rev.:	17
6.	a. Drum Packing Station (DPS) Number:	502
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	220177
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12308							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.1	N/A		0.0
7	METAL TIGHTLY BOUND ON TOP				0.1	8.0		0.0
8	N/A				N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10	N/A				N/A	3.0		0.0
11	N/A				N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14		N/A			N/A	11.0		0.0
15		N/A			N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17		N/A			N/A	1.8		0.0
18		N/A			N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20		N/A			N/A	19.1		0.0
21		N/A			N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23		N/A			N/A	9.0		0.0
24		N/A			N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26		N/A			N/A	0.0		0.0
27		N/A			N/A	0.0		0.0
28		N/A			N/A	0.0		0.0

039

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12308							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	l.	Other inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12308							
3	**Section 2: Waste Material Parameter (WMP) Estimates**							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
66	v. Rubber (R)				0.3	N/A		0.3
67				RUBBER BANDS (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				3.0	N/A		3.4
70				PLASTIC TIGHTLY BOUND ON TOP	1.6	0.9		1.8
71				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
72				1 TRAY LINER, 1 BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				119.2	N/A		99.3
75		x1. Sludge			119.2	N/A		99.3
76				MODERATE YELLOWISH BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE	119.2	1.0 - 1.5	1.2	99.3
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95				N/A	N/A	0.0		0.0
96				N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98				N/A	N/A	1.0 - 1.4	0.0	0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				122.6	N/A		103.0
101	13. (ORGANIC SLUDGE) weight (119.2) kg was obtained by subtracting the weighed waste weight of (3.4) kg and the container net weight of (34.0) kg from the gross weight (156.6) kg of the waste container. (156.6) - (3.4) - (34.0) = (119.2) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

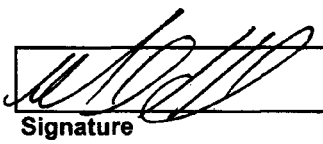
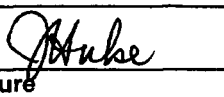
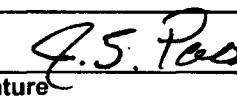
041

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12308	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12308	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (Inches) (N/A the waste depth for an SWB)	32.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	220177
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	725482
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	02/12/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1055
22. Measured gross weight of loaded container, fully assembled (kgs):	156.6
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	345.2
23. Container closure date (mm/dd/yy):	01/22/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726753
b. Filter Torque Wrench Calibration Due Date:	02/01/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	DM-532
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	100.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	122.6
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12308	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	3.7
31. Total volume of Solidified Organics (L):	99.3
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	103.0
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	97.2%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:		
M. HADERLIE		1-22-13
Enter Name	Signature	Date
Visual Examination Operator 2:		
J. HULSE		1/22/13
Enter Name	Signature	Date
Visual Examination Expert:		
J. POOLE		1-22-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	SRP12333
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location (Airlock):	IN-RWMC-ARP-5
3.	Batch Number:	IN-SRP-VE-000028
4.	Examination Start Date:	01/22/13
5.	Procedure CCP-TP-006, Rev.:	17
6.	a. Drum Packing Station (DPS) Number:	501
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	220177
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12333							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				N/A	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12333							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
29	l.	Other Inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.2	N/A		0.2
56		s.	Paper		0.2	N/A		0.2
57				LEATHER GLOVE TIGHTLY BOUND ON TOP	0.2	0.9		0.2
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

047

	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003					
2	Container ID: SRP12333					
3	Section 2: Waste Material Parameter (WMP) Estimates					
4		9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density		12.Volume
5			By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)		0.4	N/A		0.4
67		RUBBER BANDS (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68		RUBBER	0.1	0.9 - 2.0	1.1	0.1
69	w. *Plastics (waste materials) (PW)*		3.4	N/A		3.8
70		NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71		TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
72		PLASTIC TIGHTLY BOUND ON TOP	2.0	0.9		2.2
73		N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)		83.6	N/A		69.7
75	x1. Sludge		83.6	N/A		69.7
76		OLIVE GRAY PUTTY LIKE SLUDGE WITH CALCIUM SILICATE	83.6	1.0 - 1.5	1.2	69.7
77		N/A	N/A	1.0 - 1.5	0.0	0.0
78		N/A	N/A	1.0 - 1.5	0.0	0.0
79	x2. Other (See Note a)		0.0	N/A		0.0
80		N/A	N/A	0.0		0.0
81		N/A	N/A	0.0		0.0
82	y. *Inorganic matrix (IN)*		0.0	N/A		0.0
83	y1. Sludge		0.0	N/A		0.0
84		N/A	N/A	1.0 - 1.5	0.0	0.0
85		N/A	N/A	1.0 - 1.5	0.0	0.0
86		N/A	N/A	1.0 - 1.5	0.0	0.0
87	y2. Roaster Oxides		0.0	N/A		0.0
88		N/A	N/A	1.5 - 4.0	0.0	0.0
89		N/A	N/A	1.5 - 4.0	0.0	0.0
90		N/A	N/A	1.5 - 4.0	0.0	0.0
91	y3. Salt		0.0	N/A		0.0
92		N/A	N/A	0.0		0.0
93		N/A	N/A	0.0		0.0
94	y4. Other (See Note a)		0.0	N/A		0.0
95		N/A	N/A	0.0		0.0
96		N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)		0.0	N/A		0.0
98		N/A	N/A	1.0 - 1.4	0.0	0.0
99		N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL		87.6	N/A		74.1
101	13. (ORGANIC SLUDGE) weight (83.6) kg was obtained by subtracting the weighed waste weight of (4.0) kg and the container net weight of (34.0) kg from the gross weight (121.6) kg of the waste container. (121.6) - (4.0) - (34.0) = (83.6) kg					
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.					
103	b.	N/A				
104						

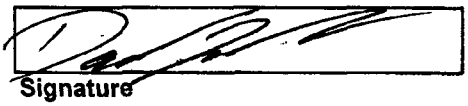
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12333	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12333	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	25.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	220177
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	725482
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	02/12/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1126
22. Measured gross weight of loaded container, fully assembled (kgs):	121.6
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	268.1
23. Container closure date (mm/dd/yy):	01/22/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726753
b. Filter Torque Wrench Calibration Due Date:	02/01/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	DM-564
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	80.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	87.6
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

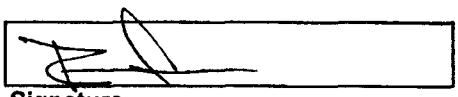
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12333	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	4.4
31. Total volume of Solidified Organics (L):	69.7
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	74.1
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	95.4%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

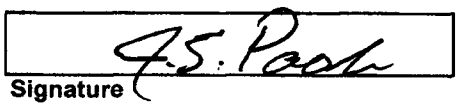
Visual Examination Operator 1:

D. JACKMAN		1-22-13
Enter Name	Signature	Date

Visual Examination Operator 2:

R. CUMMINS		1-22-13
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE		1-22-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP12307
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	JSP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000028
4. Examination Start Date:	01/22/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	502
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	220177
Comments:	
NOTHING ADDED TO THE CONTAINER VERIFIED	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12307							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.2	N/A		0.0
7				METAL	0.2	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12307							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	l.	Other inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.6	N/A		0.6
56		s.	Paper		0.6	N/A		0.6
57				PAPER TIGHTLY BOUND ON TOP	0.2	0.9		0.2
58				LEATHER GLOVES TIGHTLY BOUND ON TOP	0.4	0.9		0.4
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003					
2	Container ID: SRP12307					
3	Section 2: Waste Material Parameter (WMP) Estimates					
4	9. Waste Material Parameter and Item Description		10. WMP Estimate	11. Density		12.Volume
5			By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)		1.3	N/A		1.2
67		RUBBER	1.0	0.9 - 2.0	1.1	0.9
68		RUBBER BANDS (WAIP)	0.3	0.9 - 2.0	1.1	0.3
69	w. Plastics (waste materials) (PW)		3.0	N/A		3.4
70		NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71		PLASTIC TIGHTLY BOUND ON TOP	1.6	0.9		1.6
72		TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
73		N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)		138.5	N/A		115.4
75	x1. Sludge		138.5	N/A		115.4
76		MODERATE YELLOWISH ORANGE CRUMBLY SLUDGE WITH CALCIUM SILICATE, AND PORTLAND CEMENT	138.5	1.0 - 1.5	1.2	115.4
77		N/A	N/A	1.0 - 1.5	0.0	0.0
78		N/A	N/A	1.0 - 1.5	0.0	0.0
79	x2. Other (See Note a)		0.0	N/A		0.0
80		N/A	N/A	0.0		0.0
81		N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)		0.0	N/A		0.0
83	y1. Sludge		0.0	N/A		0.0
84		N/A	N/A	1.0 - 1.5	0.0	0.0
85		N/A	N/A	1.0 - 1.5	0.0	0.0
86		N/A	N/A	1.0 - 1.5	0.0	0.0
87	y2. Roaster Oxides		0.0	N/A		0.0
88		N/A	N/A	1.5 - 4.0	0.0	0.0
89		N/A	N/A	1.5 - 4.0	0.0	0.0
90		N/A	N/A	1.5 - 4.0	0.0	0.0
91	y3. Salt		0.0	N/A		0.0
92		N/A	N/A	0.0		0.0
93		N/A	N/A	0.0		0.0
94	y4. Other (See Note a)		0.0	N/A		0.0
95		N/A	N/A	0.0		0.0
96		N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)		0.0	N/A		0.0
98		N/A	N/A	1.0 - 1.4	0.0	0.0
99		N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL		143.6	N/A		120.6

5.1 MH 1-23-17

101 13. (ORGANIC SLUDGE) weight (138.5) kg was obtained by subtracting the weighed waste weight of (~~45.1~~) kg and the container net weight of (34.0) kg from the gross weight (177.6) kg of the waste container. (177.6) - (5.1) - (34.0) = (138.5) kg

102 a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.

103 b. N/A

104

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12307	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12307	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	32.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	220177
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	725482
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	02/12/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1243
22. Measured gross weight of loaded container, fully assembled (kgs):	177.6
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	391.5
23. Container closure date (mm/dd/yy):	01/22/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726753
b. Filter Torque Wrench Calibration Due Date:	02/01/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	DM-529
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	100.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	143.6
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12307	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	5.2
31. Total volume of Solidified Organics (L):	115.4
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	120.6
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	96.4%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:	JHulse	1/23/13
J. HULSE	JHulse	1/23/13
Enter Name	Signature	Date
Visual Examination Operator 2:		1-23-13 ~~1-23-13~~ MH 1-23-13
M. HADERLIE		1-22-13
Enter Name	Signature	Date
Visual Examination Expert:	J.S. Poole	1-23-13
J. POOLE	J.S. Poole	1-22-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	SRP12339
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
	b. Container Type: 55 gal. drum or SWB:	55 GAL.
2.	Site ID and Location (Airlock):	IN-RWMC-ARP-5
3.	Batch Number:	IN-SRP-VE-000028
4.	Examination Start Date:	01/22/13
5.	Procedure CCP-TP-006, Rev.:	17
6.	a. Drum Packing Station (DPS) Number:	502
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	220178
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12339							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
6	a. Iron-based metals/alloys (IM)				0.4	N/A		0.1
7	METAL TIGHTLY BOUND ON TOP (WAIP)				0.4	8.0		0.1
8	N/A				N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10	N/A				N/A	3.0		0.0
11	N/A				N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14		N/A			N/A	11.0		0.0
15		N/A			N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17		N/A			N/A	1.8		0.0
18		N/A			N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20		N/A			N/A	19.1		0.0
21		N/A			N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23		N/A			N/A	9.0		0.0
24		N/A			N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26		N/A			N/A	0.0		0.0
27		N/A			N/A	0.0		0.0
28		N/A			N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12339							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	i. Other inorganic materials (OI)				0.0	N/A		0.0
30		j. Graphite			0.0	N/A		0.0
31			N/A		N/A	2.2		0.0
32			N/A		N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34			N/A		N/A	2.3		0.0
35			N/A		N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37			N/A		N/A	2.0		0.0
38			N/A		N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40			N/A		N/A	3.0		0.0
41			N/A		N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43			N/A		N/A	2.0 - 5.0	0.0	0.0
44			N/A		N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46			N/A		N/A	2.0		0.0
47			N/A		N/A	2.0		0.0
48		p. Inorganic sorbents			0.0	N/A		0.0
49			N/A		N/A	0.1 - 2.8	0.0	0.0
50			N/A		N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52			N/A		N/A	0.0		0.0
53			N/A		N/A	0.0		0.0
54			N/A		N/A	0.0		0.0
55	r. Cellulosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57			N/A		N/A	0.9		0.0
58			N/A		N/A	0.9		0.0
59			N/A		N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61			N/A		N/A	0.8		0.0
62			N/A		N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64			N/A		N/A	1.0		0.0
65			N/A		N/A	1.0		0.0

	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003					
2	Container ID: SRP12339					
3	Section 2: Waste Material Parameter (WMP) Estimates					
4		9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density		12.Volume
5			By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)		0.3	N/A		0.3
67		RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
68		RUBBER BANDS (WAIP)	0.3	0.9 - 2.0	1.1	0.3
69	w. Plastics (waste materials) (PW)		3.4	N/A		3.8
70		NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71		PLASTIC TIGHTLY BOUND ON TOP	2.0	0.9		2.2
72		1 TRAY LINER, 1 BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
73		N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)		78.1	N/A		65.1
75	x1. Sludge		78.1	N/A		65.1
76		DARK YELLOWISH BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE	78.1	1.0 - 1.5	1.2	65.1
77		N/A	N/A	1.0 - 1.5	0.0	0.0
78		N/A	N/A	1.0 - 1.5	0.0	0.0
79	x2. Other (See Note a)		0.0	N/A		0.0
80		N/A	N/A	0.0		0.0
81		N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)		0.0	N/A		0.0
83	y1. Sludge		0.0	N/A		0.0
84		N/A	N/A	1.0 - 1.5	0.0	0.0
85		N/A	N/A	1.0 - 1.5	0.0	0.0
86		N/A	N/A	1.0 - 1.5	0.0	0.0
87	y2. Roaster Oxides		0.0	N/A		0.0
88		N/A	N/A	1.5 - 4.0	0.0	0.0
89		N/A	N/A	1.5 - 4.0	0.0	0.0
90		N/A	N/A	1.5 - 4.0	0.0	0.0
91	y3. Salt		0.0	N/A		0.0
92		N/A	N/A	0.0		0.0
93		N/A	N/A	0.0		0.0
94	y4. Other (See Note a)		0.0	N/A		0.0
95		N/A	N/A	0.0		0.0
96		N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)		0.0	N/A		0.0
98		N/A	N/A	1.0 - 1.4	0.0	0.0
99		N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL		82.2	N/A		69.3
101	13. (ORGANIC SLUDGE) weight (78.1) kg was obtained by subtracting the weighed waste weight of (4.1) kg and the container net weight of (34.0) kg from the gross weight (116.2) kg of the waste container. (116.2) - (4.1) - (34.0) = (78.1) kg					
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.					
103	b.	N/A				
104						

062

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12339	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12339	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	26.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	220178
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	725482
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	02/12/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1330
22. Measured gross weight of loaded container, fully assembled (kgs):	116.2
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	256.2
23. Container closure date (mm/dd/yy):	01/22/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726753
b. Filter Torque Wrench Calibration Due Date:	02/01/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	DM-555
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	80.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	82.2
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12339	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	4.2
31. Total volume of Solidified Organics (L):	65.1
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	69.3
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	95.0%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

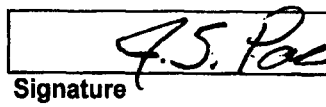
Visual Examination Operator 1:

M. HADERLIE		1-22-13
Enter Name	Signature	Date

Visual Examination Operator 2:

J. HULSE		1/22/13
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE		1-22-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	SRP12345
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	GSP
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location (Airlock):	IN-RWMC-ARP-5
3.	Batch Number:	IN-SRP-VE-000028
4.	Examination Start Date:	01/22/13
5.	Procedure CCP-TP-006, Rev.:	17
6.	a. Drum Packing Station (DPS) Number:	502
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	220178
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12345							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.3	N/A		0.0
7				METAL	0.3	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12345							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	l.	Other inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12345							
3	**Section 2: Waste Material Parameter (WMP) Estimates**							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
66	v. Rubber (R)				0.3	N/A		0.3
67	RUBBER BANDS (WAIP)				0.3	0.9 - 2.0	1.1	0.3
68	N/A				N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				4.4	N/A		4.9
70	NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED				N/A	0.9		0.0
71	PLASTIC TIGHTLY BOUND ON TOP				3.0	0.9		3.3
72	TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)				1.4	0.9		1.6
73	N/A				N/A	0.9		0.0
74	x. Organic matrix (OR)				115.2	N/A		96.0
75		x1. Sludge			115.2	N/A		96.0
76		MODERATE OLIVE BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE			115.2	1.0 - 1.5	1.2	96.0
77		N/A			N/A	1.0 - 1.5	0.0	0.0
78		N/A			N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80		N/A			N/A	0.0		0.0
81		N/A			N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84		N/A			N/A	1.0 - 1.5	0.0	0.0
85		N/A			N/A	1.0 - 1.5	0.0	0.0
86		N/A			N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88		N/A			N/A	1.5 - 4.0	0.0	0.0
89		N/A			N/A	1.5 - 4.0	0.0	0.0
90		N/A			N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92		N/A			N/A	0.0		0.0
93		N/A			N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95		N/A			N/A	0.0		0.0
96		N/A			N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98	N/A				N/A	1.0 - 1.4	0.0	0.0
99	N/A				N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				120.2	N/A		101.2
101	13. (ORGANIC SLUDGE) weight (115.2) kg was obtained by subtracting the weighed waste weight of (5.0) kg and the container net weight of (34.0) kg from the gross weight (154.2) kg of the waste container. (154.2) - (5.0) - (34.0) = (115.2) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

069

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12345	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12345	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	32.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	220178
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	725482
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	02/12/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1404
22. Measured gross weight of loaded container, fully assembled (kgs):	154.2
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	339.9
23. Container closure date (mm/dd/yy):	01/22/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726753
b. Filter Torque Wrench Calibration Due Date:	02/01/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	IL-670
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	100.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	120.2
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12345	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	5.2
31. Total volume of Solidified Organics (L):	96.0
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	101.2
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	95.8%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

J. HULSE	J Hulse	1/22/13
Enter Name	Signature	Date

Visual Examination Operator 2:

M. HADERLIE		1-22-13
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE	J.S. Poole	1-22-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	SRP12311
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
	b. Container Type: 55 gal. drum or SWB:	55 GAL.
2.	Site ID and Location (Airlock):	IN-RWMC-ARP-5
3.	Batch Number:	IN-SRP-VE-000028
4.	Examination Start Date:	01/22/13
5.	Procedure CCP-TP-006, Rev.:	17
6.	a. Drum Packing Station (DPS) Number:	502
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	220177
Comments:		
N/A		

	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003					
2	Container ID: SRP12311					
3	Section 2: Waste Material Parameter (WMP) Estimates					
4		9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density		12.Volume
5			By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)		0.0	N/A		0.0
7		N/A	N/A	8.0		0.0
8		N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)		0.0	N/A		0.0
10		N/A	N/A	3.0		0.0
11		N/A	N/A	3.0		0.0
12	c. Other metals (OM)		0.0	N/A		0.0
13	d. Lead		0.0	N/A		0.0
14		N/A	N/A	11.0		0.0
15		N/A	N/A	11.0		0.0
16	e. Beryllium		0.0	N/A		0.0
17		N/A	N/A	1.8		0.0
18		N/A	N/A	1.8		0.0
19	f. Depleted uranium		0.0	N/A		0.0
20		N/A	N/A	19.1		0.0
21		N/A	N/A	19.1		0.0
22	g. Copper		0.0	N/A		0.0
23		N/A	N/A	9.0		0.0
24		N/A	N/A	9.0		0.0
25	h. Other (See Note a)		0.0	N/A		0.0
26		N/A	N/A	0.0		0.0
27		N/A	N/A	0.0		0.0
28		N/A	N/A	0.0		0.0

	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003					
2	Container ID: SRP12311					
3	Section 2: Waste Material Parameter (WMP) Estimates					
4	9. Waste Material Parameter and Item Description		10. WMP Estimate	11. Density		12.Volume
5			By Weight (kg)	(kg/L)		(L)
29	i. Other Inorganic materials (OI)		0.0	N/A		0.0
30	j. Graphite		0.0	N/A		0.0
31		N/A	N/A	2.2		0.0
32		N/A	N/A	2.2		0.0
33	k. Concrete		0.0	N/A		0.0
34		N/A	N/A	2.3		0.0
35		N/A	N/A	2.3		0.0
36	l. Glass		0.0	N/A		0.0
37		N/A	N/A	2.0		0.0
38		N/A	N/A	2.0		0.0
39	m. Firebrick		0.0	N/A		0.0
40		N/A	N/A	3.0		0.0
41		N/A	N/A	3.0		0.0
42	n. Ceramics		0.0	N/A		0.0
43		N/A	N/A	2.0 - 5.0	0.0	0.0
44		N/A	N/A	2.0 - 5.0	0.0	0.0
45	o. Sand		0.0	N/A		0.0
46		N/A	N/A	2.0		0.0
47		N/A	N/A	2.0		0.0
48	p. Inorganic sorbents		0.0	N/A		0.0
49		N/A	N/A	0.1 - 2.8	0.0	0.0
50		N/A	N/A	0.1 - 2.8	0.0	0.0
51	q. Other (See Note a)		0.0	N/A		0.0
52		N/A	N/A	0.0		0.0
53		N/A	N/A	0.0		0.0
54		N/A	N/A	0.0		0.0
55	r. Cellulosics (C)		0.3	N/A		0.3
56	s. Paper		0.3	N/A		0.3
57		PAPER TIGHTLY BOUND ON TOP	0.3	0.9		0.3
58		N/A	N/A	0.9		0.0
59		N/A	N/A	0.9		0.0
60	t. Cardboard		0.0	N/A		0.0
61		N/A	N/A	0.8		0.0
62		N/A	N/A	0.8		0.0
63	u. Wood		0.0	N/A		0.0
64		N/A	N/A	1.0		0.0
65		N/A	N/A	1.0		0.0

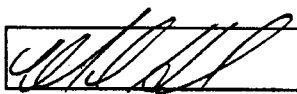
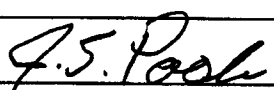
	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003					
2	Container ID: SRP12311					
3	**Section 2: Waste Material Parameter (WMP) Estimates**					
4	9. Waste Material Parameter and Item Description		10. WMP Estimate	11. Density		12.Volume
5			By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)		0.5	N/A		0.5
67		RUBBER TIGHTLY BOUND ON TOP	0.2	0.9 - 2.0	1.1	0.2
68		RUBBER BANDS (WAIP)	0.3	0.9 - 2.0	1.1	0.3
69	w. Plastics (waste materials) (PW)		2.4	N/A		2.7
70		PLASTIC TIGHTLY BOUND ON TOP	1.0	0.9		1.1
71		NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
72		1 TRAY LINER, 1 BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
73		N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)		102.8	N/A		85.7
75	x1. Sludge		102.8	N/A		85.7
76		DARK YELLOWISH BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE	102.8	1.0 - 1.5	1.2	85.7
77		N/A	N/A	1.0 - 1.5	0.0	0.0
78		N/A	N/A	1.0 - 1.5	0.0	0.0
79	x2. Other (See Note a)		0.0	N/A		0.0
80		N/A	N/A	0.0		0.0
81		N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)		0.0	N/A		0.0
83	y1. Sludge		0.0	N/A		0.0
84		N/A	N/A	1.0 - 1.5	0.0	0.0
85		N/A	N/A	1.0 - 1.5	0.0	0.0
86		N/A	N/A	1.0 - 1.5	0.0	0.0
87	y2. Roaster Oxides		0.0	N/A		0.0
88		N/A	N/A	1.5 - 4.0	0.0	0.0
89		N/A	N/A	1.5 - 4.0	0.0	0.0
90		N/A	N/A	1.5 - 4.0	0.0	0.0
91	y3. Salt		0.0	N/A		0.0
92		N/A	N/A	0.0		0.0
93		N/A	N/A	0.0		0.0
94	y4. Other (See Note a)		0.0	N/A		0.0
95		N/A	N/A	0.0		0.0
96		N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)		0.0	N/A		0.0
98		N/A	N/A	1.0 - 1.4	0.0	0.0
99		N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL		106.0	N/A		89.2
101	13. (ORGANIC SLUDGE) weight (102.8) kg was obtained by subtracting the weighed waste weight of (3.2) kg and the container net weight of (34.0) kg from the gross weight (140.0) kg of the waste container. (140.0) - (3.2) - (34.0) = (102.8) kg					
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.					
103	b.	N/A				
104						

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12311	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12311	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	28.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	220177
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	725482
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	02/12/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1440
22. Measured gross weight of loaded container, fully assembled (kgs):	140.0
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	308.6
23. Container closure date (mm/dd/yy):	01/22/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726753
b. Filter Torque Wrench Calibration Due Date:	02/01/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	DM-547
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	90.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	106.0
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12311	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	3.5
31. Total volume of Solidified Organics (L):	85.7
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	89.2
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	97.0%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:		
M. HADERLIE		1-22-13
Enter Name	Signature	Date
Visual Examination Operator 2:		
J. HULSE		1/22/13
Enter Name	Signature	Date
Visual Examination Expert:		
J. POOLE		1-22-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	SRP12340
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location (Airlock):	IN-RWMC-ARP-5
3.	Batch Number:	IN-SRP-VE-000028
4.	Examination Start Date:	01/22/13
5.	Procedure CCP-TP-006, Rev.:	17
6.	a. Drum Packing Station (DPS) Number:	502
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	220177
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12340							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				N/A	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

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	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12340							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	i.	Other inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.4	N/A		0.4
56		s.	Paper		0.4	N/A		0.4
57				LEATHER GLOVES TIGHTLY BOUND ON TOP	0.4	0.9		0.4
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

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	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12340							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.3	N/A		0.3
67	RUBBER BANDS (WAIP)				0.3	0.9 - 2.0	1.1	0.3
68	N/A				N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				3.4	N/A		3.8
70	NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED				N/A	0.9		0.0
71	PLASTIC TIGHTLY BOUND ON TOP				2.0	0.9		2.2
72	TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)				1.4	0.9		1.6
73	N/A				N/A	0.9		0.0
74	x. Organic matrix (OR)				103.5	N/A		86.3
75		x1. Sludge			103.5	N/A		86.3
76		LIGHT OLIVE BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE			103.5	1.0 - 1.5	1.2	86.3
77		N/A			N/A	1.0 - 1.5	0.0	0.0
78		N/A			N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80		N/A			N/A	0.0		0.0
81		N/A			N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84		N/A			N/A	1.0 - 1.5	0.0	0.0
85		N/A			N/A	1.0 - 1.5	0.0	0.0
86		N/A			N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88		N/A			N/A	1.5 - 4.0	0.0	0.0
89		N/A			N/A	1.5 - 4.0	0.0	0.0
90		N/A			N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92		N/A			N/A	0.0		0.0
93		N/A			N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95		N/A			N/A	0.0		0.0
96		N/A			N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98	N/A				N/A	1.0 - 1.4	0.0	0.0
99	N/A				N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				107.6	N/A		90.8
101	13. (ORGANIC SLUDGE) weight (103.5) kg was obtained by subtracting the weighed waste weight of (4.1) kg and the container net weight of (34.0) kg from the gross weight (141.6) kg of the waste container. (141.6) - (4.1) - (34.0) = (103.5) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

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Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12340	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12340	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	28.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	220177
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	725482
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	02/12/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1511
22. Measured gross weight of loaded container, fully assembled (kgs):	141.6
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	312.2
23. Container closure date (mm/dd/yy):	01/22/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726753
b. Filter Torque Wrench Calibration Due Date:	02/01/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	DM-560
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	90.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	107.6
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12340	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	4.5
31. Total volume of Solidified Organics (L):	86.3
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	90.8
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	96.2%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

J. HULSE	J Hulse	1/22/13
Enter Name	Signature	Date

Visual Examination Operator 2:

M. HADERLIE		1-22-13
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE	J.S. Poole	1-22-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP12344
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	JSP
b. Container Type: 55 gal. drum or SWB:	55 GAL.
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000028
4. Examination Start Date:	01/22/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	502
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	220177
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12344							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				N/A	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

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	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12344							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
29	l. Other inorganic materials (OI)				0.0	N/A		0.0
30		j. Graphite			0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p. Inorganic sorbents			0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r. Cellulosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

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	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003					
2	Container ID: SRP12344					
3	**Section 2: Waste Material Parameter (WMP) Estimates**					
4		9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density		12.Volume
5			By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)		0.3	N/A		0.3
67		RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
68		RUBBER BANDS (WAIP)	0.3	0.9 - 2.0	1.1	0.3
69	w. Plastics (waste materials) (PW)		2.8	N/A		3.2
70		PLASTIC TIGHTLY BOUND ON TOP	1.4	0.9		1.6
71		NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
72		1 TRAY LINER, 1 BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
73		N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)		113.7	N/A		94.8
75	x1. Sludge		113.7	N/A		94.8
76		DUSKY YELLOWISH BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE	113.7	1.0 - 1.5	1.2	94.8
77		N/A	N/A	1.0 - 1.5	0.0	0.0
78		N/A	N/A	1.0 - 1.5	0.0	0.0
79	x2. Other (See Note a)		0.0	N/A		0.0
80		N/A	N/A	0.0		0.0
81		N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)		0.0	N/A		0.0
83	y1. Sludge		0.0	N/A		0.0
84		N/A	N/A	1.0 - 1.5	0.0	0.0
85		N/A	N/A	1.0 - 1.5	0.0	0.0
86		N/A	N/A	1.0 - 1.5	0.0	0.0
87	y2. Roaster Oxides		0.0	N/A		0.0
88		N/A	N/A	1.5 - 4.0	0.0	0.0
89		N/A	N/A	1.5 - 4.0	0.0	0.0
90		N/A	N/A	1.5 - 4.0	0.0	0.0
91	y3. Salt		0.0	N/A		0.0
92		N/A	N/A	0.0		0.0
93		N/A	N/A	0.0		0.0
94	y4. Other (See Note a)		0.0	N/A		0.0
95		N/A	N/A	0.0		0.0
96		N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)		0.0	N/A		0.0
98		N/A	N/A	1.0 - 1.4	0.0	0.0
99		N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL		116.8	N/A		98.3
101	13. (ORGANIC SLUDGE) weight (113.7) kg was obtained by subtracting the weighed waste weight of (3.1) kg and the container net weight of (34.0) kg from the gross weight (150.8) kg of the waste container. (150.8) - (3.1) - (34.0) = (113.7) kg					
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.					
103	b. N/A					
104						

090

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12344	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12344	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	30.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	220177
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	725482
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	02/12/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1540
22. Measured gross weight of loaded container, fully assembled (kgs):	150.8
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	332.5
23. Container closure date (mm/dd/yy):	01/22/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	726753
b. Filter Torque Wrench Calibration Due Date:	02/01/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	IL-675
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	95.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	116.8
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12344	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	3.5
31. Total volume of Solidified Organics (L):	94.8
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	98.3
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	97.3%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

M. HADERLIE		1-22-13
Enter Name	Signature	Date

Visual Examination Operator 2:

J. HULSE		1/22/13
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE		1-22-13
Enter Name	Signature	Date

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist

Batch Data Report No.: IN-SRP-UE-000028

Description			
1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods used?	☐ NO	☑ YES	☐ NA
a. Was the description of the waste items adequate?	☐ NO	☑ YES	☐ NA
2. Was the correct revision of operating procedure used? (Attachment 1, Section 1, Line 5)	☐ NO	☑ YES	☐ NA
3. Were the following calculation spot checks performed?			
a. Attachment 1, Section 2: Verify the total waste volume in Column 12, Row aa does not exceed 208 L for a 55-gallon drum or 1456 L for an SWB and verify the estimated weights in Column 10, Row aa matches the measured net weight of waste in Attachment 1, Section 4, Row 27.	☐ NO	☑ YES	☐ NA
b. Attachment 1, Section 5: Verify the total waste volume in Row 33 a., matches the total waste volume in Section 2, Column 12, Row aa.	☐ NO	☑ YES	☐ NA
c. Attachment 1, Section 1: Check hand calculations in Lines 6h and 6p, and any additional hand calculations recorded in the comments field or in Section 2, Line 13.	☐ NO	☑ YES	☐ NA
4. Is only one waste stream selected in Line 34 of Attachment 1, Section 5, and is it consistent with the values shown in Attachment 1, Section 2, Column 12?	☐ NO	☑ YES	☐ NA
5. Is the data entered in the correct units and correct number of significant figures?	☐ NO	☑ YES	☐ NA
6. Were the data reviewed for transcription errors?	☐ NO	☑ YES	☐ NA
7. Does the BDR include VE for up to 20 containers?	☐ NO	☑ YES	☐ NA
8. Are BDR contents complete and do they match, Attachment 3, CCP Waste VE Batch Data Report Table of Contents?	☐ NO	☑ YES	☐ NA
9. Was completeness verified for data entry on the CCP VE Technique Data Form for the following?			
a. Section 1	☐ NO	☑ YES	☐ NA
b. Section 2	☐ NO	☑ YES	☐ NA
c. Section 3	☐ NO	☑ YES	☐ NA
d. Section 4	☐ NO	☑ YES	☐ NA
e. Section 5	☐ NO	☑ YES	☐ NA

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: IN-SRP-VE-000028

Description			
10. Is all the data signed and dated in Attachment 1, Section 6, using reproducible ink, and by the individual(s) generating it?	☐ NO	☑ YES	☐ NA
11. Is all data entered clearly, legibly, and accurately?	☐ NO	☑ YES	☐ NA
12. Were discrepancies between the operators reconciled?	☐ NO	☐ YES	☑ NA
13. Are all changes to original data lined out, initialed and dated by the individual making the changes?	☐ NO	☑ YES	☐ NA
14. Were data changes made by the individual who originally collected the data or an equally qualified individual?	☐ NO	☑ YES	☐ NA
15. Was the DPS scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☑ YES	☐ NA
16. Was the daily DPS scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☑ YES	☐ NA
17. Was the container scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☑ YES	☐ NA
18. Was the daily container scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☑ YES	☐ NA
19. Was the torque wrench(es) in calibration prior to VE Technique and documented correctly?	☐ NO	☑ YES	☐ NA
20. Were NCR(s) initiated as indicated in Attachment 1, Section 1, dispositioned, and approved appropriately?	☐ NO	☐ YES	☑ NA
21. Was the correct waste stream and waste matrix code assigned?	☐ NO	☑ YES	☐ NA
22. Is there a valid VE data form for each drum in the batch?	☐ NO	☑ YES	☐ NA
23. Were the operators trained and qualified in accordance with the applicable requirements?	☐ NO	☑ YES	☐ NA

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: IN-SRP-VE-000028

Description			
24. Was precision maintained by reconciling any discrepancies between the operator(s) and the ITR with regard to identification of waste matrix code, liquids in excess of WIPP Hazardous Waste Facility Permit and WIPP Waste Acceptance Criteria limits and compressed gases?	☐ NO	☐ YES	☑ NA

Description

Comments:

N/A

I have reviewed 100 percent of the container-specific and batch data in this BDR and find it acceptable.

ITR:

Printed Name	Signature	Date
Jodi M. Stanton	Jodi M Stanton	1/23/13

DIVIDER

PAGE

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary

BDR Number: IN-SRP-VE-000001 **Examination Date:** 11/20/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
1. Is the completed, signed and dated Independent Technical Reviewer Checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, C3-10b**	X			
2. Does the BDR contain all items addressed in the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-10b**	X			
3. Does the BDR include a listing of all container numbers in the batch? **Reference Source: CCP-PO-001, C3-10b**	X			
4. List all containers that have met QAOs. **Reference Source: CCP-PO-001, C3-10b**				Container Numbers: SRP12000, SRP12001, SRP12010
5. Is the current implementing procedure and revision number included in the BDR? **Reference Source: CCP-PO-001, C3-4, C3-10b, Table C3-11**	X			
6. Is the BDR date included? **Reference Source: CCP-PO-001, Table C3-11**	X			
7. Is there a reference to or copy of any associated NCRs (if any) in the BDR? **Reference Source: CCP-PO-001, Table C3-11**	X			NCR-INL-1759-12 (SRP12000, SRP12001)
8. Are there 20 or fewer containers in the batch? **Reference Source: CCP-PO-001 C3-10**	X			
9. Are the data properly reported (i.e., data are reported in correct units and with correct significant figures). **Reference Source: CCP-PO-001 C3-10b**	X			
10. Is there evidence of verification that the physical form matches the Waste Matrix Code? **Reference Source: CCP-PO-001, C3-4**	X			
11. Is there evidence of verification that the physical form matches the waste stream description? **Reference Source: CCP-PO-001, C1-4**	X			
12. Are prohibited items absent? **Reference Source: CCP-PO-001, C3-4**	X			

CCP RECORDS ORIGINAL
DATE REC'D 11-30-12

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-SRP-VE-000001				Examination Date: 11/20/12
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
13. Does observable liquid, if present, meet the criteria of the TSDF-WAC? **Reference Source: CCP-PO-001, C3-4b**	X			
14. Were discrepancies between the Visual Examination operator and the ITR with regards to identification of waste matrix code, liquids in excess of the TSDF-WAC, or compressed gases reconciled? NA if no discrepancies. **Reference Source: CCP-PO-001, C3-4b**			X	No Discrepancies
15. Are the training requirements met for the VE Expert and VE Operators who have signed the data forms? **Reference Source: CCP-PO-001, C1-4, C3-4**	X			
16. Is evidence of a satisfactory audio/video test included in the BDR? NA [not applicable] for VE Method for Newly Generated Waste. **Reference Source: CCP-PO-001, C1-4**			X	VE for Newly Generated Waste
17. If the VE was not recorded using audio/video media, does the data sheet contain the signature of two qualified operators who observed for themselves the waste being placed into the container? NA if audio/video used. **Reference Source: CCP-PO-001, C1-4**	X			
18. Are the weights/estimated weights for the 12 waste material parameters reported in kilograms (kg)? **Reference Source: CCP Technical Procedures**	X			
19. Are the descriptions for each waste material parameter included in the BDR? **Reference Source: CCP-PO-001, C1-4**	X			
20. Is the gross weight reported (in kg) for each container included in the BDR? **Reference Source: CCP Technical Procedures**	X			
21. Is the number of layers of confinement recorded? **Reference Source: CCP-PO-001, C-3d**	X			
22. Is sufficient information included in the BDR to determine the packaging configuration? **Reference Source: CCP-PO-001 C-3d**	X			

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-SRP-VE-000001 **Examination Date:** 11/20/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
23. Is the type and number of filters recorded? **Reference Source: CCP-PO-001, C-3d**	X			
24. Is the size of the rigid liner vent hole recorded to determine the appropriate DAC? NA if no liner lid. **Reference Source: CCP-PO-001, C-3d**			X	No Liner Lids
25. For Los Alamos National Laboratory (LANL) Sealed Sources, does the characterized waste container meet the definition of sealed sources per Title 10 Code of Federal Regulations (CFR) 30.4 and Title 10 CFR 835.2 (effective January 1, 2004) evidence of which is assembled as part of AK documentation? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Sources
26. For LANL Sealed Sources, are sealed sources the only non-packaging items in the waste container? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Sources
27. For LANL Sealed Sources, are the sealed sources a U.S. Department of Transportation (DOT) Special Form Class 7 (Radioactive Material) per Title 49 CFR 34.27 (effective January 1, 2004) and the certification of which is assembled as part of the AK documentation? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Sources
28. For LANL Sealed Sources, is the integrity of each sealed source validated by documented contamination survey results to meet the requirements of Title 10 CFR 34.27 (effective January 1, 2004), and assembled as part of AK documentation? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Sources

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-SRP-VE-000001 **Examination Date:** 11/20/12

Description of Criteria Reviewed	Criteria Met? YES	NO	NA	Comments/Qualifiers
29. For LANL Sealed Sources, is each sealed source a rigid sealed container less than or equal to 4 L in size or in a rigid sealed container less than or equal to 4 L? ***Reference Source: CCP Technical Procedures***			X	Not LANL Sealed Sources
30. For LANL Sealed Sources, AK documentation does not indicate the use of volatile organic compounds (VOCs) or VOC-bearing materials as constituents of sealed sources? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Sources
31. For LANL Sealed Sources, the outer casing of each sealed source is of a non VOC-bearing material which is verified using the VE technique at the time of packaging? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Sources

Comments: None

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

Jim Vernon		11/30/12
SPM Printed Name	Signature	Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

Attachment 4 – CCP Waste VE Technique Batch Data Report Cover Sheet

Batch Data Report No.: IN-SRP-VE-000001

1	SRP12000
2	SRP12010
3	SRP12001
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	N A
14	Lv. 11-20-12
15	
16	
17	
18	
19	
20	

ITR: Brad Stark 11-29-12

BRAD STARK (Printed Name) Brad Stark (Signature) 11-26-12 (Date)

VEE:

Spencer Pattee (Printed Name) Spencer Pattee (Signature) 11/26/12 (Date)

Spencer Pattee 11-29-12

CCP RECORDS ORIGINAL
DATE REC'D 11-26-12

001

Attachment 3 – CCP Waste VE Technique Batch Data Report Table of Contents

Batch Data Report No.: IN-SRP-VE-000001 **Batch Data Report Date:** 11-20-12

Item	Description	Page No.
1	Attachment 4, CCP Waste VE Technique Batch Data Report Cover Sheet	1
2	Attachment 3, CCP Waste VE Technique Batch Data Report Table of Contents	2
3	CCP Waste Visual Examination Technique Data Form	3
4	Attachment 2, CCP Waste VE Technique Independent Technical Reviewer Checklist	24
5	Copy of NCRs (NA, If Not Applicable) SP 11-28-12	~~N/A~~ 27

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP12000
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	QSP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000001
4. Examination Start Date:	11/20/12
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	504
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	XC0976
c. Scale Calibration Due Date:	07/02/13
d. Test Weight ID:	XC0835
e. Test Weight Calibration Due Date:	12/16/12
f. Test Weight (kgs):	5.0
g. Scale Readout of Test Weight (kgs):	5.0
h. Difference Between Test Weight and Scale Readout (kgs):	0.0
i. DPS Scale Check SAT (Y):	Y
Container Scale Check	
j. Scale Serial/ID Number:	725494
k. Scale Calibration Due Date:	05/23/13
l. Test Weight ID:	722311
m. Test Weight Calibration Due Date:	10/16/13
n. Test Weight (kg):	226.8
o. Scale Readout of Test Weight (kgs):	226.8
p. Difference Between Test Weight and Scale Readout (kgs):	0.0
q. Container Scale Check SAT (Y):	Y
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	232657
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12000							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5	a. Iron-based metals/alloys (IM)							
6				METAL (NSW)	0.0	N/A		0.0
7				N/A	N/A	8.0		0.0
8	b. Aluminum-based metals/alloys (AM)				N/A	8.0		0.0
9				N/A	0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11	c. Other metals (OM)				N/A	3.0		0.0
12		d. Lead			0.0	N/A		0.0
13				N/A	0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15		e. Beryllium			N/A	11.0		0.0
16				N/A	0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18		f. Depleted uranium			N/A	1.8		0.0
19				N/A	0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21		g. Copper			N/A	19.1		0.0
22				N/A	0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24		h. Other (See Note a)			N/A	9.0		0.0
25				N/A	0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12000							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4								
5				9. Waste Material Parameter and Item Description	10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
29	l.	Other inorganic materials (OI)			9.0	N/A		15.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		9.0	N/A		15.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				WOOD (NSW)	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

005
SP 11-28-12

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003

Container ID: SRPT2000

Section 2: Waste Material Parameter (WMP) Estimates

9. Waste Material Parameter and Item Description	10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
i. Other inorganic materials (OI)	18.0	N/A		30.0
j. Graphite	0.0	N/A		0.0
N/A	N/A	2.2		0.0
N/A	N/A	2.2		0.0
k. Concrete	0.0	N/A		0.0
N/A	N/A	2.3		0.0
N/A	N/A	2.3		0.0
l. Glass	0.0	N/A		0.0
N/A	N/A	2.0		0.0
N/A	N/A	2.0		0.0
m. Firebrick	0.0	N/A		0.0
N/A	N/A	3.0		0.0
N/A	N/A	3.0		0.0
n. Ceramics	0.0	N/A		0.0
N/A	N/A	2.0 - 5.0	0.0	0.0
N/A	N/A	2.0 - 5.0	0.0	0.0
o. Sand	0.0	N/A		0.0
N/A	N/A	2.0		0.0
N/A	N/A	2.0		0.0
p. Inorganic sorbents	18.0	N/A		30.0
ABSORBENT MIXED WITH WASTE	9.0	0.1 - 2.8	0.6	15.0
OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
q. Other (See Note a)	0.0	N/A		0.0
N/A	N/A	0.0		0.0
N/A	N/A	0.0		0.0
N/A	N/A	0.0		0.0
r. Cellulosics (C)	0.0	N/A		0.0
s. Paper	0.0	N/A		0.0
N/A	N/A	0.9		0.0
N/A	N/A	0.9		0.0
N/A	N/A	0.9		0.0
t. Cardboard	0.0	N/A		0.0
N/A	N/A	0.8		0.0
N/A	N/A	0.8		0.0
u. Wood	0.0	N/A		0.0
WOOD (NSW)	N/A	1.0		0.0
N/A	N/A	1.0		0.0

005A QSP 11-28-12

SUPERCEDED QSP 11-28-12

QSP 11-28-12

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003

Container ID: SRP12000

Section 2: Waste Material Parameter (WMP) Estimates

9. Waste Material Parameter and Item Description	10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
v. Rubber (R)	0.3	N/A		0.3
RUBBER BANDS (WAIP)	0.3	0.9 - 2.0	1.1	0.3
N/A	N/A	0.9 - 2.0	0.0	0.0
w. Plastics (waste materials) (PW)	4.4	N/A		4.9
2 BAG OUT STUBS AND 1 TRAY LINER TIGHTLY BOUND ON TOP (WAIP)	1.6	0.9		1.8
PLASTIC TIGHTLY BOUND ON TOP	2.8	0.9		3.1
NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
N/A	N/A	0.9		0.0
x. Organic matrix (OR)	95.1	N/A		79.3
x1. Sludge	95.1	N/A		79.3
LIGHT OLIVE GRAY PUTTY LIKE SLUDGE WITH CALCIUM SILICATE	95.1	1.0 - 1.5	1.2	79.3
N/A	N/A	1.0 - 1.5	0.0	0.0
N/A	N/A	1.0 - 1.5	0.0	0.0
x2. Other (See Note a)	0.0	N/A		0.0
N/A	N/A	0.0		0.0
N/A	N/A	0.0		0.0
y. Inorganic matrix (IN)	0.0	N/A		0.0
y1. Sludge	0.0	N/A		0.0
N/A	N/A	1.0 - 1.5	0.0	0.0
N/A	N/A	1.0 - 1.5	0.0	0.0
N/A	N/A	1.0 - 1.5	0.0	0.0
y2. Roaster Oxides	0.0	N/A		0.0
N/A	N/A	1.5 - 4.0	0.0	0.0
N/A	N/A	1.5 - 4.0	0.0	0.0
N/A	N/A	1.5 - 4.0	0.0	0.0
y3. Salt	0.0	N/A		0.0
N/A	N/A	0.0		0.0
N/A	N/A	0.0		0.0
y4. Other (See Note a)	0.0	N/A		0.0
N/A	N/A	0.0		0.0
N/A	N/A	0.0		0.0
z. Soils/gravel (S)	0.0	N/A		0.0
N/A	N/A	1.0 - 1.4	0.0	0.0
N/A	N/A	1.0 - 1.4	0.0	0.0
aa. TOTAL	108.8	N/A		99.5

13. (ORGANIC SLUDGE) weight (95.1) kg was obtained by subtracting the weighed waste weight of (13.7) kg and the container net weight of (34.0) kg from the gross weight (142.8) kg of the waste container. (142.8) - (13.7) - (34.0) = (95.1) kg

a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.

b. N/A

006 SSP 11-28-12

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003

Container ID: SRP12000

Section 2: Waste Material Parameter (WMP) Estimates

	9. Waste Material Parameter and Item Description	10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
v.	Rubber (R)	0.3	N/A		0.3
	RUBBER BANDS (WAIP)	0.3	0.9 - 2.0	1.1	0.3
	N/A	N/A	0.9 - 2.0	0.0	0.0
w.	Plastics (waste materials) (PW)	4.4	N/A		4.9
	2 BAG OUT STUBS AND 1 TRAY LINER TIGHTLY BOUND ON TOP (WAIP)	1.6	0.9		1.8
	PLASTIC TIGHTLY BOUND ON TOP	2.8	0.9		3.1
	NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
	N/A	N/A	0.9		0.0
x.	Organic matrix (OR)	86.1	N/A		71.8
	x1. Sludge	86.1	N/A		71.8
	LIGHT OLIVE GRAY PUTTY LIKE SLUDGE WITH CALCIUM SILICATE	86.1	1.0 - 1.5	1.2	71.8
	N/A	N/A	1.0 - 1.5	0.0	0.0
	N/A	N/A	1.0 - 1.5	0.0	0.0
	x2. Other (See Note a)	0.0	N/A		0.0
	N/A	N/A	0.0		0.0
	N/A	N/A	0.0		0.0
y.	Inorganic matrix (IN)	0.0	N/A		0.0
	y1. Sludge	0.0	N/A		0.0
	N/A	N/A	1.0 - 1.5	0.0	0.0
	N/A	N/A	1.0 - 1.5	0.0	0.0
	N/A	N/A	1.0 - 1.5	0.0	0.0
	y2. Roaster Oxides	0.0	N/A		0.0
	N/A	N/A	1.5 - 4.0	0.0	0.0
	N/A	N/A	1.5 - 4.0	0.0	0.0
	N/A	N/A	1.5 - 4.0	0.0	0.0
	y3. Salt	0.0	N/A		0.0
	N/A	N/A	0.0		0.0
	N/A	N/A	0.0		0.0
	y4. Other (See Note a)	0.0	N/A		0.0
	N/A	N/A	0.0		0.0
	N/A	N/A	0.0		0.0
z.	Soils/gravel (S)	0.0	N/A		0.0
	N/A	N/A	1.0 - 1.4	0.0	0.0
	N/A	N/A	1.0 - 1.4	0.0	0.0
aa.	TOTAL	108.8	N/A		107.0

13. (ORGANIC SLUDGE) weight (86.1) kg was obtained by subtracting the weighed waste weight of (22.7) kg and the container net weight of (34.0) kg from the gross weight (142.8) kg of the waste container. (142.8) - (22.7) - (34.0) = (86.1) kg

a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.

b. N/A

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005 A SEP 11-28-12

SUPERCEDED SEP 11-28-12

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12000	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12000	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	28.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	232657
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	724667
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	01/18/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1417
22. Measured gross weight of loaded container, fully assembled (kgs):	142.8
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	314.8
23. Container closure date (mm/dd/yy):	11/20/12
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	728706
b. Filter Torque Wrench Calibration Due Date:	02/01/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	IL-436
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	90.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	108.8
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12000	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	5.2
31. Total volume of Solidified Organics (L):	79.3
32. Total volume of Solidified Inorganics (L):	15.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	99.5
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	
e. ID-RF-S3150 (S3150):	X
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	
36. Beryllium concentration (wt%):	0.0
37. Solidified organics concentration (wt%):	0.0%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	87.4%
	X

Section 6: Approvals

Visual Examination Operator 1:

M. HADERLIE		11-28-12
Enter Name	Signature	Date

Visual Examination Operator 2:

D. JACKMAN		11-28-12
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE	J.S. Poole	11-28-12
Enter Name	Signature	Date

009
SRP 11-28-12

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12000	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	5.2
31. Total volume of Solidified Organics (L):	71.8
32. Total volume of Solidified Inorganics (L):	30.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	107.0
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	
e. ID-RF-S3150 (S3150):	X
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	79.1%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

M. HADERLIE		11-20-12
Enter Name	Signature	Date

Visual Examination Operator 2:

D. JACKMAN		11-20-12
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE	J.S. Poole	11-20-12
Enter Name	Signature	Date

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009A

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Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP12010
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000001
4. Examination Start Date:	11/20/12
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	501
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	XC0977
c. Scale Calibration Due Date:	07/02/13
d. Test Weight ID:	XC0833
e. Test Weight Calibration Due Date:	12/20/12
f. Test Weight (kgs):	5.0
g. Scale Readout of Test Weight (kgs):	5.0
h. Difference Between Test Weight and Scale Readout (kgs):	0.0
i. DPS Scale Check SAT (Y):	Y
Container Scale Check	
j. Scale Serial/ID Number:	725494
k. Scale Calibration Due Date:	05/23/13
l. Test Weight ID:	722311
m. Test Weight Calibration Due Date:	10/16/13
n. Test Weight (kg):	226.8
o. Scale Readout of Test Weight (kgs):	226.8
p. Difference Between Test Weight and Scale Readout (kgs):	0.0
q. Container Scale Check SAT (Y):	Y
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	232657
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12010							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)		11. Density (kg/L)	12.Volume (L)
5								
6	a. Iron-based metals/alloys (IM)				0.4		N/A	0.1
7				METAL	0.4		8.0	0.1
8				N/A	N/A		8.0	0.0
9	b. Aluminum-based metals/alloys (AM)				0.0		N/A	0.0
10				N/A	N/A		3.0	0.0
11				N/A	N/A		3.0	0.0
12	c. Other metals (OM)				0.0		N/A	0.0
13		d. Lead			0.0		N/A	0.0
14				N/A	N/A		11.0	0.0
15				N/A	N/A		11.0	0.0
16		e. Beryllium			0.0		N/A	0.0
17				N/A	N/A		1.8	0.0
18				N/A	N/A		1.8	0.0
19		f. Depleted uranium			0.0		N/A	0.0
20				N/A	N/A		19.1	0.0
21				N/A	N/A		19.1	0.0
22		g. Copper			0.0		N/A	0.0
23				N/A	N/A		9.0	0.0
24				N/A	N/A		9.0	0.0
25		h. Other (See Note a)			0.0		N/A	0.0
26				N/A	N/A		0.0	0.0
27				N/A	N/A		0.0	0.0
28				N/A	N/A		0.0	0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12010							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	i. Other inorganic materials (OI)				9.0	N/A		15.0
30		j. Graphite			0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p. Inorganic sorbents			9.0	N/A		15.0
49				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r. Cellulosics (C)				0.2	N/A		0.2
56		s. Paper			0.2	N/A		0.2
57				PAPER (NSW)	N/A	0.9		0.0
58				CLOTH GLOVE	0.2	0.9		0.2
59				N/A	N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12010							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
66	v. Rubber (R)				0.3	N/A		0.3
67				RUBBER BANDS (WAIP) TIGHTLY BOUND ON TOP OF OIL DRI	0.3	0.9 - 2.0	1.1	0.3
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				2.6	N/A		2.9
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				ONE TRAY LINER, TWO BAG OUT STUBS (WAIP) TIGHTLY BOUND ON TOP OF OIL DRI	1.6	0.9		1.8
72				PLASTIC	1.0	0.9		1.1
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				105.9	N/A		88.3
75		x1. Sludge			105.9	N/A		88.3
76				PALE YELLOWISH BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE	105.9	1.0 - 1.5	1.2	88.3
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				N/A	0.0		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	0.0	N/A		0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			N/A	1.0 - 1.5	0.0	0.0
88				N/A	0.0	N/A		0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			N/A	1.5 - 4.0	0.0	0.0
92				N/A	0.0	N/A		0.0
93				N/A	N/A	0.0		0.0
94		y4. Other (See Note a)			N/A	0.0		0.0
95				N/A	0.0	N/A		0.0
96				N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)				N/A	0.0		0.0
98				N/A	0.0	N/A		0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				N/A	1.0 - 1.4	0.0	0.0
					118.4	N/A		106.8

101 13. (ORGANIC SLUDGE) weight (105.9) kg was obtained by subtracting the weighed waste weight of (12.5) kg and the container net weight of (34.0) kg from the gross weight (152.4) kg of the waste container. (152.4) - (12.5) - (34.0) = (105.9) kg

102 a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.

103 b. N/A

104

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12010	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12010	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	32.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	232657
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	725482
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	02/12/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1425
22. Measured gross weight of loaded container, fully assembled (kgs):	152.4
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	336.0
23. Container closure date (mm/dd/yy):	11/20/12
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	722443
b. Filter Torque Wrench Calibration Due Date:	02/14/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	IL-430
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	NA
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	100.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	118.4
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12010	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	3.5
31. Total volume of Solidified Organics (L):	88.3
32. Total volume of Solidified Inorganics (L):	15.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	106.8
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	
e. ID-RF-S3150 (S3150):	X
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	
36. Beryllium concentration (wt%):	0.0
37. Solidified organics concentration (wt%):	0.0%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	89.4%
	X

Section 6: Approvals

Visual Examination Operator 1:

L. GROVER		11/20/12
Enter Name	Signature	Date

Visual Examination Operator 2:

L. VERLANIC		11-20-12
Enter Name	Signature	Date

Visual Examination Expert:

J. POOLE		11-20-12
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP12001
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000001
4. Examination Start Date:	11/20/12
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	504
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	231467
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12001							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				N/A	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12001							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	l.	Other inorganic materials (OI)			9.0	N/A		15.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		9.0	N/A		15.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

019
SSP 11-28-12

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12001							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4 5	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
29	i.	Other inorganic materials (OI)			15.0	N/A		25.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		15.0	N/A		25.0
49				ABSORBENT MIXED WITH WASTE	6.0	0.1 - 2.8	0.6	10.0
50				OIL DRI ON TOP (WAIP)	9.0	0.1 - 2.8	0.6	15.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Celluiosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

SUPERCEDED QSP 11-28-12

QSP 11-28-12

019A
QSP 11-28-12

	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003					
2	Container ID: SRP12001					
3	Section 2: Waste Material Parameter (WMP) Estimates					
4		9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density		12.Volume
5			By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)		0.3	N/A		0.3
67		RUBBER BANDS (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68		N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)		7.5	N/A		8.4
70		1 TRAY LINER AND 2 BAG OUT STUBS TIGHTLY BOUND ON TOP OF OIL DRI (WAIP)	1.6	0.9		1.8
71		PLASTIC TIGHTLY BOUND ON TOP OF OIL DRI	5.9	0.9		6.6
72		NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
73		N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)		100.4	N/A		83.7
75	x1. Sludge		100.4	N/A		83.7
76		LIGHT OLIVE GRAY PUTTY LIKE SLUDGE WITH CALCIUM SILICATE	100.4	1.0 - 1.5	1.2	83.7
77		N/A	N/A	1.0 - 1.5	0.0	0.0
78		N/A	N/A	1.0 - 1.5	0.0	0.0
79	x2. Other (See Note a)		0.0	N/A		0.0
80		N/A	N/A	0.0		0.0
81		N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)		0.0	N/A		0.0
83	y1. Sludge		0.0	N/A		0.0
84		N/A	N/A	1.0 - 1.5	0.0	0.0
85		N/A	N/A	1.0 - 1.5	0.0	0.0
86		N/A	N/A	1.0 - 1.5	0.0	0.0
87	y2. Roaster Oxides		0.0	N/A		0.0
88		N/A	N/A	1.5 - 4.0	0.0	0.0
89		N/A	N/A	1.5 - 4.0	0.0	0.0
90		N/A	N/A	1.5 - 4.0	0.0	0.0
91	y3. Salt		0.0	N/A		0.0
92		N/A	N/A	0.0		0.0
93		N/A	N/A	0.0		0.0
94	y4. Other (See Note a)		0.0	N/A		0.0
95		N/A	N/A	0.0		0.0
96		N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)		0.0	N/A		0.0
98		N/A	N/A	1.0 - 1.4	0.0	0.0
99		N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL		123.2	N/A		117.4
101	13. (ORGANIC SLUDGE) weight (100.4) kg was obtained by subtracting the weighed waste weight of (22.8) kg and the container net weight of (34.0) kg from the gross weight (157.2) kg of the waste container. (157.2) - (22.8) - (34.0) = (100.4) kg					
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.					
103	b.	N/A				
104						

SUPERCEDED SRP 11-28-12

SRP 11-28-12

020A SRP 11-28-12

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP12001							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.3	N/A		0.3
67				RUBBER BANDS (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				7.5	N/A		8.4
70				1 TRAY LINER AND 2 BAG OUT STUBS TIGHTLY BOUND ON TOP OF OIL DRI (WAIP)	1.6	0.9		1.8
71				PLASTIC TIGHTLY BOUND ON TOP OF OIL DRI	5.9	0.9		6.6
72				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				106.4	N/A		88.7
75		x1. Sludge			106.4	N/A		88.7
76				LIGHT OLIVE GRAY PUTTY LIKE SLUDGE WITH CALCIUM SILICATE	106.4	1.0 - 1.5	1.2	88.7
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95				N/A	N/A	0.0		0.0
96				N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98				N/A	N/A	1.0 - 1.4	0.0	0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				123.2	N/A		112.4
101	13. (ORGANIC SLUDGE) weight (106.4) kg was obtained by subtracting the weighed waste weight of (16.8) kg and the container net weight of (34.0) kg from the gross weight (157.2) kg of the waste container. (157.2) - (16.8) - (34.0) = (106.4) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

020 SSP 11-28-12

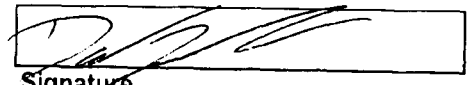
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12001	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12001	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	30.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	231467
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	724667
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	01/18/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1502
22. Measured gross weight of loaded container, fully assembled (kgs):	157.2
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	346.6
23. Container closure date (mm/dd/yy):	11/20/12
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	728706
b. Filter Torque Wrench Calibration Due Date:	02/01/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	IL-425
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	95.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	123.2
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

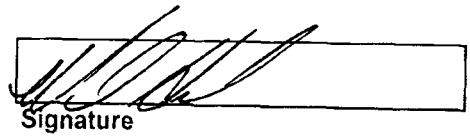
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12001	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	8.7
31. Total volume of Solidified Organics (L):	88.7
32. Total volume of Solidified Inorganics (L):	15.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	112.4
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	86.4%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

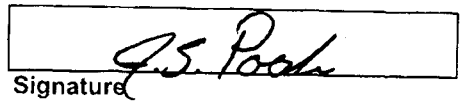
Visual Examination Operator 1:

D. JACKMAN		11-28-12
Enter Name	Signature	Date

Visual Examination Operator 2:

M. HADERLIE		11-28-12
Enter Name	Signature	Date

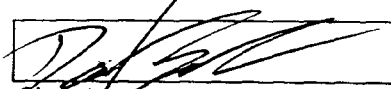
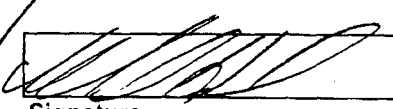
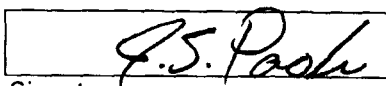
Visual Examination Expert:

J. POOLE		11-28-12
Enter Name	Signature	Date

023
SRP 11-28-12

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP12001	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	8.7
31. Total volume of Solidified Organics (L):	83.7
32. Total volume of Solidified Inorganics (L):	25.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	117.4
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	81.5%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:		
D. JACKMAN		11-20-12
Enter Name	Signature	Date
Visual Examination Operator 2:		
M. HADERLIE		11-20-12
Enter Name	Signature	Date
Visual Examination Expert:		
J. POOLE		11-20-12
Enter Name	Signature	Date

QSP 11-28-12

SUPERCEDED QSP 11-28-12

023A

QSP 11-28-12

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist

Batch Data Report No.: IN-SRP-VE-000001

1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods used?	☐ NO	☑ YES	☐ NA
a. Was the description of the waste items adequate?	☐ NO	☑ YES	☐ NA
2. Was the correct revision of operating procedure used? (Attachment 1, Section 1, Line 5)	☐ NO	☑ YES	☐ NA
3. Were the following calculation spot checks performed?			
a. Attachment 1, Section 2: Verify the total waste volume in Column 12, Row aa does not exceed 208 L for a 55-gallon drum or 1456 L for an SWB and verify the estimated weights in Column 10, Row aa matches the measured net weight of waste in Attachment 1, Section 4, Row 27.	☐ NO	☑ YES	☐ NA
b. Attachment 1, Section 5: Verify the total waste volume in Row 33 a., matches the total waste volume in Section 2, Column 12, Row aa.	☐ NO	☑ YES	☐ NA
c. Attachment 1, Section 1: Check hand calculations in Lines 6h and 6p, and any additional hand calculations recorded in the comments field or in Section 2, Line 13.	☐ NO	☑ YES	☐ NA
4. Is only one waste stream selected in Line 34 of Attachment 1, Section 5, and is it consistent with the values shown in Attachment 1, Section 2, Column 12?	☐ NO	☑ YES	☐ NA
5. Is the data entered in the correct units and correct number of significant figures?	☐ NO	☑ YES	☐ NA
6. Were the data reviewed for transcription errors?	☐ NO	☑ YES	☐ NA
7. Does the BDR include VE for up to 20 containers?	☐ NO	☑ YES	☐ NA
8. Are BDR contents complete and do they match, Attachment 3, CCP Waste VE Batch Data Report Table of Contents?	☐ NO	☑ YES	☐ NA
9. Was completeness verified for data entry on the CCP VE Technique Data Form for the following?			
a. Section 1	☐ NO	☑ YES	☐ NA
b. Section 2	☐ NO	☑ YES	☐ NA
c. Section 3	☐ NO	☑ YES	☐ NA
d. Section 4	☐ NO	☑ YES	☐ NA
e. Section 5	☐ NO	☑ YES	☐ NA

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: IN-SRP-VE-00000\

10. Is all the data signed and dated in Attachment 1, Section 6, using reproducible ink, and by the individual(s) generating it?	☐ NO	☑ YES	☐ NA	
11. Is all data entered clearly, legibly, and accurately?	☐ NO	☑ YES	☐ NA	
12. Were discrepancies between the operators reconciled?	☐ NO	☐ YES	☑ NA	
13. Are all changes to original data lined out, initialed and dated by the individual making the changes?	☐ NO	☑ YES	~~☑ NA~~	BRB 11-29-12
14. Were data changes made by the individual who originally collected the data or an equally qualified individual?	☐ NO	☑ YES	~~☑ NA~~	BRB 11-29-12
15. Was the DPS scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☑ YES	☐ NA	
16. Was the daily DPS scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☑ YES	☐ NA	
17. Was the container scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☑ YES	☐ NA	
18. Was the daily container scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☑ YES	☐ NA	
19. Was the torque wrench(es) in calibration prior to VE Technique and documented correctly?	☐ NO	☑ YES	☐ NA	
20. Were NCR(s) initiated as indicated in Attachment 1, Section 1, dispositioned, and approved appropriately?	☐ NO	☑ YES	~~☑ NA~~	BRB 11-29-12
21. Was the correct waste stream and waste matrix code assigned?	☐ NO	☑ YES	☐ NA	
22. Is there a valid VE data form for each drum in the batch?	☐ NO	☑ YES	☐ NA	
23. Were the operators trained and qualified in accordance with the applicable requirements?	☐ NO	☑ YES	☐ NA	

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: IN-SRP-VE-00000\

24. Was precision maintained by reconciling any discrepancies between the operator(s) and the ITR with regard to identification of waste matrix code, liquids in excess of WIPP Hazardous Waste Facility Permit and WIPP Waste Acceptance Criteria limits and compressed gases?	☐ NO	☐ YES	☑ NA

Comments:

12, # 24 marked N/A because there were no discrepancies. BRS 11/26/12

~~# 13, # 14 marked N/A because there were no changes made BRS 11/26/12~~ BRS 11-29-12

~~# 20 marked N/A because there was not an NCR. BRS 11/26/12~~ BRS 11-29-12 BRS 11-29-12 BRS 11-29-12

RE ITRd due to the NCR. NCR INL-1759-12 BRS 11-29-12

I have reviewed 100 percent of the container-specific and batch data in this BDR and find it acceptable.

ITR: BRAD STARK Brad Stark 11-29-12

Printed Name Signature Date

11-26-12

Attachment 1 – CCP Nonconformance Report (NCR)

CCP NONCONFORMANCE REPORT (NCR)

(Use NCR Continuation, Attachment 2, if necessary)

NCR No. NCR- INL-1759-12 **Revision:** 0

1. Lot No., Heat No., or Serial No. (if applicable):	2. Process (e.g., NDA, HSG, NDE, VE, Other):	3. Batch Data Report #(s):
N/A	VE	IN-SRP-VE-000001
4. Order/Work Order/Job Control Number (if applicable):	**5. PO # (if applicable):**	**Container #(s):**
N/A	N/A	SRP12000 SRP12001
	6. Supplier (if applicable):	
	N/A	

DESCRIPTION OF NONCONFORMANCE

7a. NCR Description: ☐ < 100 nCi/g ☐ Prohibited Item ☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WMIS/WDS ☑ Other

7b. Requirement(s) (Enter Implementing Procedure No., Revision, Section No., & Quoted Text):

CCP-TP-006, Rev.17 - 4.2.4 [B], "Record the description in Section 2: Waste Material Parameter and Item Description, Column 9 Rows a through z, for the corresponding WMP identified."

7c. Actual Condition:

Containers SRP12000 and SRP12001 have "Absorbent Mixed With Waste" entered in Section 2 - Waste Material Parameter and Item Description under Other Inorganic Materials. The correct Waste Material Parameter for Absorbent Mixed With Waste" is Organic Matrix.

7d. Have the CCP HOLD TAGS associated with this NCR been applied? ☒ YES ☐ NO **(If no is checked, explain:)**

11/28/12 LRT

8. NCR Originator:

Jim Vernon _____ 11/27/12

printed name signature date

9. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE

If YES or INDETERMINATE, enter Trend Code L in Block 10.

10. Trend Code: A	11. Responsible Manager: Jim Vernon
12. Significant Condition? ☐ YES ☒ NO **(If Yes, enter CAR No.:)**	**13. Recurring Condition?** ☐ YES ☒ NO **(If Yes, list NCRs and CARs:)**

14. CCP QA Engineer or CCP QA Designee validation:

Laura K. Jones _____ Laura Lawson Jones 11/27/2012

printed name signature date

027
SSP
11-28-12

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR- INL-1759-12 **Revision:** 0

INTERIM DISPOSITION

15a. Interim Disposition (Check Only One):

☑ N/A (See Final Disposition) ☐ Hold ☐ Conditionally Accept ☐ Conditionally Use

☐ Sort ☐ Reinspect or Retest ☐ Remediate

15b. Instructions for Completion of the Interim Disposition:

INTERIM DISPOSITION APPROVALS

16a. Responsible Manager or Individual:			**16b. CCP QA Engineer or CCP QA Designee:**		
printed name	signature	date	printed name	signature	date
Additional Approvals:			**Additional Approvals:**		
printed name	signature	date	printed name	signature	date

COMPLETION OF INTERIM DISPOSITION

17. Interim Disposition Complete – Responsible Manager or Individual:

printed name signature date

18. Interim Disposition Verified – CCP QA Engineer:

printed name signature date

028
GSP 11-28-12

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR- INL-1759-12 **Revision:** 0

FINAL DISPOSITION

19. Final Disposition (Check Only One):

☐ Use-As-Is ☐ Repair

19a. Technical Justification – Required for Use-As-Is or Repair dispositions. (Enter "N/A" for Reject, Rework, and Scrap:)

N/A

☐ Reject ☑ Rework ☐ Scrap

19b. Instructions for Completion – Required for Reject, Repair, Rework, or Scrap. (Enter "N/A" for Use-As-Is:)

1. DGL to add amount of Absorbent Mixed With Waste in Section 2 to WMP Estimate for Organic Sludge.
2. Re-calculate Container WMP weights, as applicable
3. DGL Insert NCR into BDR
4. DGL Re-Sign BDR
5. SPM to insert corrections into BDR

19c. Corrective Actions (Actions to Prevent Recurrence – For Repair or Rework, if applicable. Enter "N/A," if not applicable, and for Use-As-Is, Reject, and Scrap):

N/A

FINAL DISPOSITION APPROVALS

20. Responsible Manager or Individual:			21. CCP QA Engineer or CCP QA Designee:		
Jim Vernon		11/27/12	Laura R Jons	Laura R Jons	11/27/2012
printed name	signature	date	printed name	signature	date
Additional Approvals:			**Additional Approvals:**		
printed name	signature	date	printed name	signature	date

CLOSURE

22. Final Disposition Complete – Responsible Manager or Individual:

printed name signature date

23. Attachments:

24a. HOLD TAG removal has been verified and reconciled for all nonconforming items on the NCR. ☐

24b. Check if not applicable (N/A) and explain. ☐

25. Final Disposition Verified – NCR Closed **CCP QA Engineer:**

printed name signature date

029
95P 11-28-12

DIVIDER PAGE ONLY

Not part of page count

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	RECORDS CUSTODIAN	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
IN-SRP-VE-000001	BATCH DATA REPORT VE SRP	11/20/2012	35
	N/A		

Comments

SPM CHECKLIST LOCATED IN CARLSBAD

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [✓]	Linda Martin	Linda Martin	12.12.12
	Signature	Printed Name	Date
Records Rejected [ ]			
	Signature	Printed Name	Date

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	2412
DESTINATION TEL #	912085577396
DESTINATION ID	INL
ST. TIME	12/12 11:33
TIME USE	00'17
PAGES SENT	1
RESULT	OK

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	RECORDS CUSTODIAN	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	
Telephone Number:	575-234-7523		

Document Number	Title/Description	Record Date	Total Pages
IN-SRP-VE-000001	BATCH DATA REPORT VE SRP	11/20/2012	35
	N/A		

Comments

SPM CHECKLIST LOCATED IN CARLSBAD

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [✓] Linda Martin — Signature — Linda Martin — Printed Name — 12.12.12 — Date

Divider Page

Not apart of page count.

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523, 575-234-7431, or 575-234-7095

Fax Number: 575-234-7033

[ ] Original Record [ ] Copy
[ ] Fax Record
[X] Electronic Record

Attn:	RECORDS CUSTODIAN	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	06/05/2013
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
IN-SRP-VE-000001	BATCH DATA REPORT VE (SRP) CORRECTIONS: PGS 1, 25, 26	11/20/2012	3
	N/A		

Comments

BATCH DATA REPORT LOCATED IN CARLSBAD. PLEASE HAVE SPM INSERT CORRECTIONS.

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [ ] _____ _____ _____
Signature Printed Name Date

Records Rejected [✓] Ruthie Goff Ruthie Goff 6.5.13
Signature Printed Name Date

Reason for Rejection: Corrections were already made 11/29/12. This is a scanning issue. Made adjustment

Re-submittal: _____ _____ _____
Signature Printed Name Date

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	2081
DESTINATION TEL #	912085577396
DESTINATION ID	INL
ST. TIME	06/05 08:44
TIME USE	00'17
PAGES SENT	1
RESULT	OK

Controlled Copy

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220
Telephone Number: 575-234-7523, 575-234-7431, or 575-234-7095
Fax Number: 575-234-7033

☐ Original Record ☐ Copy
☐ Fax Record
☒ Electronic Record

Attn:	RECORDS CUSTODIAN	From:	TRISHA PIMENTEL
Ship to:	CCP RECORDS	Site:	INL
	4021 NATIONAL PARKS HWY	Company:	SM STOLLER
	CARLSBAD, NM	Telephone Number:	208-557-6364
	88220	Date Sent:	06/05/2013
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
IN-SRP-VE-000001	BATCH DATA REPORT VE (SRP) CORRECTIONS: PGS 1, 25, 26	11/20/2012	3
	N/A		

Comments

BATCH DATA REPORT LOCATED IN CARLSBAD. PLEASE HAVE SPM INSERT CORRECTIONS.

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

DIVIDER

PAGE

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary

BDR Number: IN-SRP-VE-000183				Examination Date: 5/14/2013
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
1. Is the completed, signed and dated Independent Technical Reviewer Checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, C3-10b**	X			
2. Does the BDR contain all items addressed in the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-10b**	X			
3. Does the BDR include a listing of all container numbers in the batch? **Reference Source: CCP-PO-001, C3-10b**	X			
4. List all containers that have met QAOs. **Reference Source: CCP-PO-001, C3-10b**				Container Numbers: SRP14424, SRP14550, SRP14553, SRP14563, SRP14566, SRP14570, SRP14580, SRP14597, SRP14598, SRP14605, SRP14611, SRP14615, SRP14617, SRP14618, SRP14623, SRP14624, SRP14625, SRP14626, SRP14628, SRP14632
5. Is the current implementing procedure and revision number included in the BDR? **Reference Source: CCP-PO-001, C3-4, C3-10b, Table C3-11**	X			
6. Is the BDR date included? **Reference Source: CCP-PO-001, Table C3-11**	X			
7. Is there a reference to or copy of any associated NCRs (if any) in the BDR? **Reference Source: CCP-PO-001, Table C3-11**			X	NO NCRS
8. Are there 20 or fewer containers in the batch? **Reference Source: CCP-PO-001 C3-10**	X			
9. Are the data properly reported (i.e., data are reported in correct units and with correct significant figures). **Reference Source: CCP-PO-001 C3-10b**	X			
10. Is there evidence of verification that the physical form matches the Waste Matrix Code? **Reference Source: CCP-PO-001, C3-4**	X			
11. Is there evidence of verification that the physical form matches the waste stream description? **Reference Source: CCP-PO-001, C1-4**	X			
12. Are prohibited items absent? **Reference Source: CCP-PO-001, C3-4**	X			

COPY

NTPC RECORDS ORIGINAL
DATE REC'D 5.23.13 RCJ

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-SRP-VE-000183				Examination Date: 5/14/2013
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
13. Does observable liquid, if present, meet the criteria of the TSDF-WAC? **Reference Source: CCP-PO-001, C3-4b**	X			
14. Were discrepancies between the Visual Examination operator and the ITR with regards to identification of waste matrix code, liquids in excess of the TSDF-WAC, or compressed gases reconciled? NA if no discrepancies. **Reference Source: CCP-PO-001, C3-4b**			X	No Discrepancies
15. Are the training requirements met for the VE Expert and VE Operators who have signed the data forms? **Reference Source: CCP-PO-001, C1-4, C3-4**	X			
16. Is evidence of a satisfactory audio/video test included in the BDR? NA [not applicable] for VE Method for Newly Generated Waste. **Reference Source: CCP-PO-001, C1-4**			X	VE Method for Newly Generated Waste
17. If the VE was not recorded using audio/video media, does the data sheet contain the signature of two qualified operators who observed for themselves the waste being placed into the container? NA if audio/video used. **Reference Source: CCP-PO-001, C1-4**	X			
18. Are the weights/estimated weights for the 12 waste material parameters reported in kilograms (kg)? **Reference Source: CCP Technical Procedures**	X			
19. Are the descriptions for each waste material parameter included in the BDR? **Reference Source: CCP-PO-001, C1-4**	X			
20. Is the gross weight reported (in kg) for each container included in the BDR? **Reference Source: CCP Technical Procedures**	X			
21. Is the number of layers of confinement recorded? **Reference Source: CCP-PO-001, C-3d**	X			
22. Is sufficient information included in the BDR to determine the packaging configuration? **Reference Source: CCP-PO-001 C-3d**	X			

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-SRP-VE-000183				Examination Date: 5/14/2013
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
23. Is the type and number of filters recorded? **Reference Source: CCP-PO-001, C-3d**	X			
24. Is the size of the rigid liner vent hole recorded to determine the appropriate DAC? NA if no liner lid. **Reference Source: CCP-PO-001, C-3d**			X	No Liner Lid
25. For Los Alamos National Laboratory (LANL) Sealed Sources, does the characterized waste container meet the definition of sealed sources per Title 10 Code of Federal Regulations (CFR) 30.4 and Title 10 CFR 835.2 (effective January 1, 2004) evidence of which is assembled as part of AK documentation? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Sources
26. For LANL Sealed Sources, are sealed sources the only non-packaging items in the waste container? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Sources
27. For LANL Sealed Sources, are the sealed sources a U.S. Department of Transportation (DOT) Special Form Class 7 (Radioactive Material) per Title 49 CFR 34.27 (effective January 1, 2004) and the certification of which is assembled as part of the AK documentation? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Sources
28. For LANL Sealed Sources, is the integrity of each sealed source validated by documented contamination survey results to meet the requirements of Title 10 CFR 34.27 (effective January 1, 2004), and assembled as part of AK documentation? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Sources

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: IN-SRP-VE-000183				Examination Date: 5/14/2013
Description of Criteria Reviewed	**Criteria Met?**			**Comments/Qualifiers**
	YES	**NO**	**NA**	
29. For LANL Sealed Sources, is each sealed source a rigid sealed container less than or equal to 4 L in size or in a rigid sealed container less than or equal to 4 L? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Sources
30. For LANL Sealed Sources, AK documentation does not indicate the use of volatile organic compounds (VOCs) or VOC-bearing materials as constituents of sealed sources? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Sources
31. For LANL Sealed Sources, the outer casing of each sealed source is of a non VOC-bearing material which is verified using the VE technique at the time of packaging? **Reference Source: CCP Technical Procedures**			X	Not LANL Sealed Sources
Comments: None				
The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.				
Brandye Pyeatt	Brandye Pyeatt			5/21/13
SPM Printed Name	Signature			Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

Attachment 4 – CCP Waste VE Technique Batch Data Report Cover Sheet

Batch Data Report No.: IN-SRP-VE-000183

	Waste Container ID Number
1	SRP 14563
2	SRP 14570
3	SRP 14598
4	SRP 14566
5	SRP 14580
6	SRP 14605
7	SRP 14597
8	SRP 14625
9	SRP 14623
10	SRP 14618
11	SRP 14624
12	SRP 14617
13	SRP 14632
14	SRP 14626
15	SRP 14611
16	SRP 14615
17	SRP 14553
18	SRP 14628
19	SRP 14550
20	SRP 14424

ITR:

Printed Name	Signature	Date
GERARD BARR	Gerard Barr	5-16-13

VEE:

Printed Name	Signature	Date
LUKE GROVER		5-16-13

NTPC RECORDS ORIGINAL
DATE REC'D 5/16/13

001

Attachment 3 – CCP Waste VE Technique Batch Data Report Table of Contents

Batch Data Report No.: IN-SRP-VE-000183 **Batch Data Report Date:** 5/14/13

Table Of Contents		
Item	Description	Page No.
1	Attachment 4, CCP Waste VE Technique Batch Data Report Cover Sheet	1
2	Attachment 3, CCP Waste VE Technique Batch Data Report Table of Contents	2
3	CCP Waste Visual Examination Technique Data Form	3
4	Attachment 2, CCP Waste VE Technique Independent Technical Reviewer Checklist	143
5	Copy of NCRs (NA, If Not Applicable)	N/A

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP14563
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000183
4. Examination Start Date:	05/14/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	501
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	XC0968
c. Scale Calibration Due Date:	12/10/13
d. Test Weight ID:	730293
e. Test Weight Calibration Due Date:	07/17/14
f. Test Weight (kgs):	5.0
g. Scale Readout of Test Weight (kgs):	5.0
h. Difference Between Test Weight and Scale Readout (kgs):	0.0
i. DPS Scale Check SAT (Y):	Y
Container Scale Check	
j. Scale Serial/ID Number:	725494
k. Scale Calibration Due Date:	11/21/13
l. Test Weight ID:	722311
m. Test Weight Calibration Due Date:	10/16/13
n. Test Weight (kg):	226.8
o. Scale Readout of Test Weight (kgs):	226.4
p. Difference Between Test Weight and Scale Readout (kgs):	0.4
q. Container Scale Check SAT (Y):	Y
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	237751
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14563							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.1	N/A		0.0
7				METAL	0.1	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003

Container ID: SRP14563

Section 2: Waste Material Parameter (WMP) Estimates

9. Waste Material Parameter and Item Description	10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
l. Other inorganic materials (OI)	0.0	N/A		0.0
j. Graphite	0.0	N/A		0.0
N/A	N/A	2.2		0.0
N/A	N/A	2.2		0.0
k. Concrete	0.0	N/A		0.0
N/A	N/A	2.3		0.0
N/A	N/A	2.3		0.0
l. Glass	0.0	N/A		0.0
N/A	N/A	2.0		0.0
N/A	N/A	2.0		0.0
m. Firebrick	0.0	N/A		0.0
N/A	N/A	3.0		0.0
N/A	N/A	3.0		0.0
n. Ceramics	0.0	N/A		0.0
N/A	N/A	2.0 - 5.0	0.0	0.0
N/A	N/A	2.0 - 5.0	0.0	0.0
o. Sand	0.0	N/A		0.0
N/A	N/A	2.0		0.0
N/A	N/A	2.0		0.0
p. Inorganic sorbents	0.0	N/A		0.0
N/A	N/A	0.1 - 2.8	0.0	0.0
N/A	N/A	0.1 - 2.8	0.0	0.0
q. Other (See Note a)	0.0	N/A		0.0
N/A	N/A	0.0		0.0
N/A	N/A	0.0		0.0
N/A	N/A	0.0		0.0
r. Cellulosics (C)	0.2	N/A		0.2
s. Paper	0.2	N/A		0.2
1 LEATHER GLOVE	0.2	0.9		0.2
N/A	N/A	0.9		0.0
N/A	N/A	0.9		0.0
t. Cardboard	0.0	N/A		0.0
N/A	N/A	0.8		0.0
N/A	N/A	0.8		0.0
u. Wood	0.0	N/A		0.0
N/A	N/A	1.0		0.0
N/A	N/A	1.0		0.0

	A B C D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003				
2	Container ID: SRP14563				
3	**Section 2: Waste Material Parameter (WMP) Estimates**				
4	9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density		12.Volume
5		By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)	0.4	N/A		0.4
67	RUBBER	0.1	0.9 - 2.0	1.1	0.1
68	RUBBER BANDS TIGHTLY BOUND ON TOP (WAIP)	0.3	0.9 - 2.0	1.1	0.3
69	w. Plastics (waste materials) (PW)	1.4	N/A		1.6
70	NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71	PLASTIC (NSW)	N/A	0.9		0.0
72	1 TRAY LINER AND 1 BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
73	N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)	123.3	N/A		102.8
75	x1. Sludge	123.3	N/A		102.8
76	MODERATE YELLOWISH BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE	123.3	1.0 - 1.5	1.2	102.8
77	N/A	N/A	1.0 - 1.5	0.0	0.0
78	N/A	N/A	1.0 - 1.5	0.0	0.0
79	x2. Other (See Note a)	0.0	N/A		0.0
80	N/A	N/A	0.0		0.0
81	N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)	0.0	N/A		0.0
83	y1. Sludge	0.0	N/A		0.0
84	N/A	N/A	1.0 - 1.5	0.0	0.0
85	N/A	N/A	1.0 - 1.5	0.0	0.0
86	N/A	N/A	1.0 - 1.5	0.0	0.0
87	y2. Roaster Oxides	0.0	N/A		0.0
88	N/A	N/A	1.5 - 4.0	0.0	0.0
89	N/A	N/A	1.5 - 4.0	0.0	0.0
90	N/A	N/A	1.5 - 4.0	0.0	0.0
91	y3. Salt	0.0	N/A		0.0
92	N/A	N/A	0.0		0.0
93	N/A	N/A	0.0		0.0
94	y4. Other (See Note a)	0.0	N/A		0.0
95	N/A	N/A	0.0		0.0
96	N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)	0.0	N/A		0.0
98	N/A	N/A	1.0 - 1.4	0.0	0.0
99	N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL	125.4	N/A		105.0
101	13. (ORGANIC SLUDGE) weight (123.3) kg was obtained by subtracting the weighed waste weight of (2.1) kg and the container net weight of (34.0) kg from the gross weight (159.4) kg of the waste container. (159.4) - (2.1) - (34.0) = (123.3) kg				
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.				
103	b. N/A				
104					

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14563	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14563	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	28.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	237751
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	723312
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	07/18/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	0855
22. Measured gross weight of loaded container, fully assembled (kgs):	159.4
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	351.4
23. Container closure date (mm/dd/yy):	05/14/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	722444
b. Filter Torque Wrench Calibration Due Date:	07/22/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	CN-176
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	90.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	125.4
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14563	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	2.2
31. Total volume of Solidified Organics (L):	102.8
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	105.0
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	98.3%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

L. MUNTEAN	R. Muntean	5/14/13
Enter Name	Signature	Date

Visual Examination Operator 2:

J. STANTON	Jodi M. Stanton	5/14/13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		5-14-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP14570
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	GP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000183
4. Examination Start Date:	05/14/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	502
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	XC0972
c. Scale Calibration Due Date:	07/02/13
d. Test Weight ID:	XC0838
e. Test Weight Calibration Due Date:	06/13/14
f. Test Weight (kgs):	5.0
g. Scale Readout of Test Weight (kgs):	5.0
h. Difference Between Test Weight and Scale Readout (kgs):	0.0
i. DPS Scale Check SAT (Y):	Y
Container Scale Check	
j. Scale Serial/ID Number:	725494
k. Scale Calibration Due Date:	11/21/13
l. Test Weight ID:	722311
m. Test Weight Calibration Due Date:	10/16/13
n. Test Weight (kg):	226.8
o. Scale Readout of Test Weight (kgs):	226.4
p. Difference Between Test Weight and Scale Readout (kgs):	0.4
q. Container Scale Check SAT (Y):	Y
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	237751
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14570							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				N/A	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14570							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	i.	Other inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.2	N/A		0.2
56		s.	Paper		0.2	N/A		0.2
57				PAPER	0.2	0.9		0.2
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003					
2	Container ID: SRP14570					
3	Section 2: Waste Material Parameter (WMP) Estimates					
4	9. Waste Material Parameter and Item Description		10. WMP Estimate	11. Density		12.Volume
5			By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)		0.3	N/A		0.3
67		RUBBER TIGHTLY BOUND ON TOP (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68		RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)		2.2	N/A		2.5
70		NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71		TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
72		PLASTIC TIGHTLY BOUND ON TOP	0.8	0.9		0.9
73		N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)		126.7	N/A		105.6
75	x1. Sludge		126.7	N/A		105.6
76		YELLOWISH GRAY CRUMBLY SLUDGE WITH CALCIUM SILICATE	126.7	1.0 - 1.5	1.2	105.6
77		N/A	N/A	1.0 - 1.5	0.0	0.0
78		N/A	N/A	1.0 - 1.5	0.0	0.0
79	x2. Other (See Note a)		0.0	N/A		0.0
80		N/A	N/A	0.0		0.0
81		N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)		0.0	N/A		0.0
83	y1. Sludge		0.0	N/A		0.0
84		N/A	N/A	1.0 - 1.5	0.0	0.0
85		N/A	N/A	1.0 - 1.5	0.0	0.0
86		N/A	N/A	1.0 - 1.5	0.0	0.0
87	y2. Roaster Oxides		0.0	N/A		0.0
88		N/A	N/A	1.5 - 4.0	0.0	0.0
89		N/A	N/A	1.5 - 4.0	0.0	0.0
90		N/A	N/A	1.5 - 4.0	0.0	0.0
91	y3. Salt		0.0	N/A		0.0
92		N/A	N/A	0.0		0.0
93		N/A	N/A	0.0		0.0
94	y4. Other (See Note a)		0.0	N/A		0.0
95		N/A	N/A	0.0		0.0
96		N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)		0.0	N/A		0.0
98		N/A	N/A	1.0 - 1.4	0.0	0.0
99		N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL		129.4	N/A		108.6
101	13. (ORGANIC SLUDGE) weight (126.7) kg was obtained by subtracting the weighed waste weight of (2.7) kg and the container net weight of (34.0) kg from the gross weight (163.4) kg of the waste container. (163.4) - (2.7) - (34.0) = (126.7) kg					
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.					
103	b.	N/A				
104						

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14570	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14570	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	27.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	237751
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	723312
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	07/18/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	0905
22. Measured gross weight of loaded container, fully assembled (kgs):	163.4
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	360.2
23. Container closure date (mm/dd/yy):	05/14/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	722444
b. Filter Torque Wrench Calibration Due Date:	07/22/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	CN-194
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	85.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	129.4
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14570	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	3.0
31. Total volume of Solidified Organics (L):	105.6
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	108.6
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	97.9%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

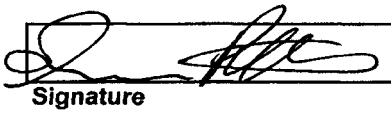
Visual Examination Operator 1:

M. HADERLIE		5-14-13
Enter Name	Signature	Date

Visual Examination Operator 2:

R. CUMMINS		5-14-13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		5-14-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP14598
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
b. Container Type: 55 gal. drum or SWB:	55 GAL.
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000183
4. Examination Start Date:	05/14/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	501
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	237751
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14598							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)	12.Volume (L)	
5								
6	a. Iron-based metals/alloys (IM)				0.2	N/A	0.0	
7				METAL TIGHTLY BOUND ON TOP	0.2	8.0	0.0	
8				N/A	N/A	8.0	0.0	
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A	0.0	
10				N/A	N/A	3.0	0.0	
11				N/A	N/A	3.0	0.0	
12	c. Other metals (OM)				0.0	N/A	0.0	
13		d. Lead			0.0	N/A	0.0	
14				N/A	N/A	11.0	0.0	
15				N/A	N/A	11.0	0.0	
16		e. Beryllium			0.0	N/A	0.0	
17				N/A	N/A	1.8	0.0	
18				N/A	N/A	1.8	0.0	
19		f. Depleted uranium			0.0	N/A	0.0	
20				N/A	N/A	19.1	0.0	
21				N/A	N/A	19.1	0.0	
22		g. Copper			0.0	N/A	0.0	
23				N/A	N/A	9.0	0.0	
24				N/A	N/A	9.0	0.0	
25		h. Other (See Note a)			0.0	N/A	0.0	
26				N/A	N/A	0.0	0.0	
27				N/A	N/A	0.0	0.0	
28				N/A	N/A	0.0	0.0	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14598							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	i.	Other inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.4	N/A		0.4
56		s.	Paper		0.4	N/A		0.4
57				PAPER (NSW)	N/A	0.9		0.0
58				TWO LEATHER GLOVES TIGHTLY BOUND ON TOP	0.4	0.9		0.4
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				WOOD (NSW)	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A B C D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003				
2	Container ID: SRP14598				
3	**Section 2: Waste Material Parameter (WMP) Estimates**				
4	9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density		12.Volume
5		By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)	0.3	N/A		0.3
67	RUBBER BANDS TIGHTLY BOUND ON TOP (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68	N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)	1.4	N/A		1.6
70	NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71	TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
72	PLASTIC (NSW)	N/A	0.9		0.0
73	N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)	111.3	N/A		92.8
75	x1. Sludge	111.3	N/A		92.8
76	MODERATE YELLOW CRUMBLY SLUDGE WITH CALCIUM SILICATE	111.3	1.0 - 1.5	1.2	92.8
77	N/A	N/A	1.0 - 1.5	0.0	0.0
78	N/A	N/A	1.0 - 1.5	0.0	0.0
79	x2. Other (See Note a)	0.0	N/A		0.0
80	N/A	N/A	0.0		0.0
81	N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)	0.0	N/A		0.0
83	y1. Sludge	0.0	N/A		0.0
84	N/A	N/A	1.0 - 1.5	0.0	0.0
85	N/A	N/A	1.0 - 1.5	0.0	0.0
86	N/A	N/A	1.0 - 1.5	0.0	0.0
87	y2. Roaster Oxides	0.0	N/A		0.0
88	N/A	N/A	1.5 - 4.0	0.0	0.0
89	N/A	N/A	1.5 - 4.0	0.0	0.0
90	N/A	N/A	1.5 - 4.0	0.0	0.0
91	y3. Salt	0.0	N/A		0.0
92	N/A	N/A	0.0		0.0
93	N/A	N/A	0.0		0.0
94	y4. Other (See Note a)	0.0	N/A		0.0
95	N/A	N/A	0.0		0.0
96	N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)	0.0	N/A		0.0
98	N/A	N/A	1.0 - 1.4	0.0	0.0
99	N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL	113.6	N/A		95.1
101	13. (ORGANIC SLUDGE) weight (111.3) kg was obtained by subtracting the weighed waste weight of (2.3) kg and the container net weight of (34.0) kg from the gross weight (147.6) kg of the waste container. (147.6) - (2.3) - (34.0) = (111.3) kg				
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.				
103	b. N/A				
104					

020

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14598	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14598	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	28.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	237751
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	723312
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	07/18/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	0920
22. Measured gross weight of loaded container, fully assembled (kgs):	147.6
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	325.4
23. Container closure date (mm/dd/yy):	05/14/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	722444
b. Filter Torque Wrench Calibration Due Date:	07/22/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	CN-115
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	90.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	113.6
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14598	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	2.3
31. Total volume of Solidified Organics (L):	92.8
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	95.1
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	98.0%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

J. STANTON	Jodi M Stanton	5/14/13
Enter Name	Signature	Date

Visual Examination Operator 2:

L. MUNTEAN	L. Muntean	5/14/13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		5-14-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP14566
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000183
4. Examination Start Date:	05/14/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	502
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	237751
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14566							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				N/A	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14566							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	i. Other inorganic materials (OI)				0.0	N/A		0.0
30		j. Graphite			0.0	N/A		0.0
31			N/A		N/A	2.2		0.0
32			N/A		N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34			N/A		N/A	2.3		0.0
35			N/A		N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37			N/A		N/A	2.0		0.0
38			N/A		N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40			N/A		N/A	3.0		0.0
41			N/A		N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43			N/A		N/A	2.0 - 5.0	0.0	0.0
44			N/A		N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46			N/A		N/A	2.0		0.0
47			N/A		N/A	2.0		0.0
48		p. Inorganic sorbents			0.0	N/A		0.0
49			N/A		N/A	0.1 - 2.8	0.0	0.0
50			N/A		N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52			N/A		N/A	0.0		0.0
53			N/A		N/A	0.0		0.0
54			N/A		N/A	0.0		0.0
55	r. Cellulosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57			N/A		N/A	0.9		0.0
58			N/A		N/A	0.9		0.0
59			N/A		N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61			N/A		N/A	0.8		0.0
62			N/A		N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64			N/A		N/A	1.0		0.0
65			N/A		N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14566							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.3	N/A		0.3
67	RUBBER TIGHTLY BOUND ON TOP (WAIP)				0.3	0.9 - 2.0	1.1	0.3
68	RUBBER (NSW)				N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				2.0	N/A		2.3
70	NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED				N/A	0.9		0.0
71	PLASTIC TIGHTLY BOUND ON TOP				0.6	0.9		0.7
72	TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)				1.4	0.9		1.6
73	N/A				N/A	0.9		0.0
74	x. Organic matrix (OR)				109.1	N/A		90.9
75		x1. Sludge			109.1	N/A		90.9
76		YELLOWISH BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE			109.1	1.0 - 1.5	1.2	90.9
77		N/A			N/A	1.0 - 1.5	0.0	0.0
78		N/A			N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80		N/A			N/A	0.0		0.0
81		N/A			N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84		N/A			N/A	1.0 - 1.5	0.0	0.0
85		N/A			N/A	1.0 - 1.5	0.0	0.0
86		N/A			N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88		N/A			N/A	1.5 - 4.0	0.0	0.0
89		N/A			N/A	1.5 - 4.0	0.0	0.0
90		N/A			N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92		N/A			N/A	0.0		0.0
93		N/A			N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95		N/A			N/A	0.0		0.0
96		N/A			N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98	N/A				N/A	1.0 - 1.4	0.0	0.0
99	N/A				N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				111.4	N/A		93.5
101	13. (ORGANIC SLUDGE) weight (109.1) kg was obtained by subtracting the weighed waste weight of (2.3) kg and the container net weight of (34.0) kg from the gross weight (145.4) kg of the waste container. (145.4) - (2.3) - (34.0) = (109.1) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

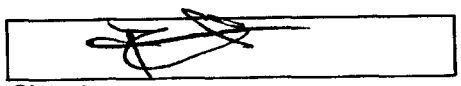
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14566	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14566	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	22.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	237751
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	723312
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	07/18/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	0929
22. Measured gross weight of loaded container, fully assembled (kgs):	145.4
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	320.5
23. Container closure date (mm/dd/yy):	05/14/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	722444
b. Filter Torque Wrench Calibration Due Date:	07/22/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	CN-193
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	70.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	111.4
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

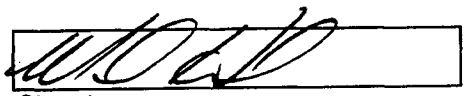
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14566	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	2.6
31. Total volume of Solidified Organics (L):	90.9
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	93.5
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	97.9%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

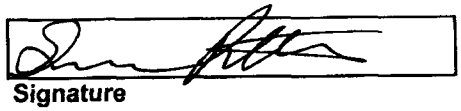
Visual Examination Operator 1:

R. CUMMINS		5-14-13
Enter Name	Signature	Date

Visual Examination Operator 2:

M. HADERLIE		5-14-13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		5-14-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP14580
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000183
4. Examination Start Date:	05/14/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	501
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	237743
Comments:	
N/A	

	A B C D	G	H I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003			
2	Container ID: SRP14580			
3	**Section 2: Waste Material Parameter (WMP) Estimates**			
4	9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density	12.Volume
5		By Weight (kg)	(kg/L)	(L)
6	a. Iron-based metals/alloys (IM)	0.0	N/A	0.0
7	N/A	N/A	8.0	0.0
8	N/A	N/A	8.0	0.0
9	b. Aluminum-based metals/alloys (AM)	0.0	N/A	0.0
10	N/A	N/A	3.0	0.0
11	N/A	N/A	3.0	0.0
12	c. Other metals (OM)	0.0	N/A	0.0
13	d. Lead	0.0	N/A	0.0
14	N/A	N/A	11.0	0.0
15	N/A	N/A	11.0	0.0
16	e. Beryllium	0.0	N/A	0.0
17	N/A	N/A	1.8	0.0
18	N/A	N/A	1.8	0.0
19	f. Depleted uranium	0.0	N/A	0.0
20	N/A	N/A	19.1	0.0
21	N/A	N/A	19.1	0.0
22	g. Copper	0.0	N/A	0.0
23	N/A	N/A	9.0	0.0
24	N/A	N/A	9.0	0.0
25	h. Other (See Note a)	0.0	N/A	0.0
26	N/A	N/A	0.0	0.0
27	N/A	N/A	0.0	0.0
28	N/A	N/A	0.0	0.0

	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003					
2	Container ID: SRP14580					
3	**Section 2: Waste Material Parameter (WMP) Estimates**					
4	9. Waste Material Parameter and Item Description		10. WMP Estimate	11. Density		12.Volume
5			By Weight (kg)	(kg/L)		(L)
29	i. Other inorganic materials (OI)		0.0	N/A		0.0
30	j. Graphite		0.0	N/A		0.0
31		N/A	N/A	2.2		0.0
32		N/A	N/A	2.2		0.0
33	k. Concrete		0.0	N/A		0.0
34		N/A	N/A	2.3		0.0
35		N/A	N/A	2.3		0.0
36	l. Glass		0.0	N/A		0.0
37		N/A	N/A	2.0		0.0
38		N/A	N/A	2.0		0.0
39	m. Firebrick		0.0	N/A		0.0
40		N/A	N/A	3.0		0.0
41		N/A	N/A	3.0		0.0
42	n. Ceramics		0.0	N/A		0.0
43		N/A	N/A	2.0 - 5.0	0.0	0.0
44		N/A	N/A	2.0 - 5.0	0.0	0.0
45	o. Sand		0.0	N/A		0.0
46		N/A	N/A	2.0		0.0
47		N/A	N/A	2.0		0.0
48	p. Inorganic sorbents		0.0	N/A		0.0
49		N/A	N/A	0.1 - 2.8	0.0	0.0
50		N/A	N/A	0.1 - 2.8	0.0	0.0
51	q. Other (See Note a)		0.0	N/A		0.0
52		N/A	N/A	0.0		0.0
53		N/A	N/A	0.0		0.0
54		N/A	N/A	0.0		0.0
55	r. Cellulosics (C)		0.0	N/A		0.0
56	s. Paper		0.0	N/A		0.0
57		N/A	N/A	0.9		0.0
58		N/A	N/A	0.9		0.0
59		N/A	N/A	0.9		0.0
60	t. Cardboard		0.0	N/A		0.0
61		N/A	N/A	0.8		0.0
62		N/A	N/A	0.8		0.0
63	u. Wood		0.0	N/A		0.0
64		N/A	N/A	1.0		0.0
65		N/A	N/A	1.0		0.0

	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003					
2	Container ID: SRP14580					
3	**Section 2: Waste Material Parameter (WMP) Estimates**					
4		9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density		12.Volume
5			By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)		0.5	N/A		0.5
67		RUBBER	0.2	0.9 - 2.0	1.1	0.2
68		RUBBER BANDS TIGHTLY BOUND ON TOP (WAIP)	0.3	0.9 - 2.0	1.1	0.3
69	w. Plastics (waste materials) (PW)		3.1	N/A		3.5
70		PLASTIC TIGHTLY BOUND ON TOP	1.7	0.9		1.9
71		NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
72		1 TRAY LINER AND 1 BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
73		N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)		103.0	N/A		85.8
75	x1. Sludge		103.0	N/A		85.8
76		GRAYISH OLIVE PUTTY LIKE SLUDGE WITH CALCIUM SILICATE	103.0	1.0 - 1.5	1.2	85.8
77		N/A	N/A	1.0 - 1.5	0.0	0.0
78		N/A	N/A	1.0 - 1.5	0.0	0.0
79	x2. Other (See Note a)		0.0	N/A		0.0
80		N/A	N/A	0.0		0.0
81		N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)		0.0	N/A		0.0
83	y1. Sludge		0.0	N/A		0.0
84		N/A	N/A	1.0 - 1.5	0.0	0.0
85		N/A	N/A	1.0 - 1.5	0.0	0.0
86		N/A	N/A	1.0 - 1.5	0.0	0.0
87	y2. Roaster Oxides		0.0	N/A		0.0
88		N/A	N/A	1.5 - 4.0	0.0	0.0
89		N/A	N/A	1.5 - 4.0	0.0	0.0
90		N/A	N/A	1.5 - 4.0	0.0	0.0
91	y3. Salt		0.0	N/A		0.0
92		N/A	N/A	0.0		0.0
93		N/A	N/A	0.0		0.0
94	y4. Other (See Note a)		0.0	N/A		0.0
95		N/A	N/A	0.0		0.0
96		N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)		0.0	N/A		0.0
98		N/A	N/A	1.0 - 1.4	0.0	0.0
99		N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL		106.6	N/A		89.8
101	13. (ORGANIC SLUDGE) weight (103.0) kg was obtained by subtracting the weighed waste weight of (3.6) kg and the container net weight of (34.0) kg from the gross weight (140.6) kg of the waste container. (140.6) - (3.6) - (34.0) = (103.0) kg					
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.					
103	b.	N/A				
104						

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14580	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14580	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	26.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	237743
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	723312
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	07/18/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	0945
22. Measured gross weight of loaded container, fully assembled (kgs):	140.6
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	310.0
23. Container closure date (mm/dd/yy):	05/14/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	722444
b. Filter Torque Wrench Calibration Due Date:	07/22/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	CN-119
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	80.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	106.6
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14580	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	4.0
31. Total volume of Solidified Organics (L):	85.8
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	89.8
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	96.6%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

L. MUNTEAN	L. Muntean	5/14/13
Enter Name	Signature	Date

Visual Examination Operator 2:

J. STANTON	Jodi M. Stanton	5/14/13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		5-14-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP14605
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000183
4. Examination Start Date:	05/14/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	502
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	237751
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14605							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.2	N/A		0.0
7				METAL	0.2	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14605							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5					0.0	N/A		0.0
29	i.	Other inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		N/A	2.2		0.0
31				N/A	N/A	2.2		0.0
32				N/A	0.0	N/A		0.0
33		k.	Concrete		N/A	2.3		0.0
34				N/A	N/A	2.3		0.0
35				N/A	0.0	N/A		0.0
36		l.	Glass		N/A	2.0		0.0
37				N/A	N/A	2.0		0.0
38				N/A	0.0	N/A		0.0
39		m.	Firebrick		N/A	3.0		0.0
40				N/A	N/A	3.0		0.0
41				N/A	0.0	N/A		0.0
42		n.	Ceramics		N/A	2.0 - 5.0	0.0	0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	0.0	N/A		0.0
45		o.	Sand		N/A	2.0		0.0
46				N/A	N/A	2.0		0.0
47				N/A	0.0	N/A		0.0
48		p.	Inorganic sorbents		N/A	0.1 - 2.8	0.0	0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	0.0	N/A		0.0
51		q.	Other (See Note a)		N/A	0.0		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	0.0	N/A		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		N/A	0.9		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	0.0	N/A		0.0
60		t.	Cardboard		N/A	0.8		0.0
61				N/A	N/A	0.8		0.0
62				N/A	0.0	N/A		0.0
63		u.	Wood		N/A	1.0		0.0
64				N/A	N/A	1.0		0.0
65				N/A				

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14605							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4				9. Waste Material Parameter and Item Description	10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
66	v. Rubber (R)				0.3	N/A		0.3
67				RUBBER TIGHTLY BOUND ON TOP (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68				RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				2.3	N/A		2.6
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
72				PLASTIC TIGHTLY BOUND ON TOP	0.9	0.9		1.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				99.2	N/A		82.7
75		x1. Sludge			99.2	N/A		82.7
76				GRAYISH OLIVE CRUMBLY SLUDGE WITH CALCIUM SILICATE	99.2	1.0 - 1.5	1.2	82.7
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95				N/A	N/A	0.0		0.0
96				N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98				N/A	N/A	1.0 - 1.4	0.0	0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				102.0	N/A		85.6
101	13. (ORGANIC SLUDGE) weight (99.2) kg was obtained by subtracting the weighed waste weight of (2.8) kg and the container net weight of (34.0) kg from the gross weight (136.0) kg of the waste container. (136.0) - (2.8) - (34.0) = (99.2) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

041

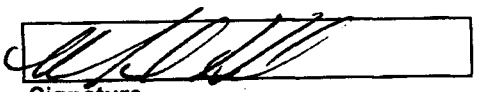
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14605	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14605	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	32.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	237751
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	723312
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	07/18/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	0955
22. Measured gross weight of loaded container, fully assembled (kgs):	136.0
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	299.8
23. Container closure date (mm/dd/yy):	05/14/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	722444
b. Filter Torque Wrench Calibration Due Date:	07/22/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	CN-192
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	100.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	102.0
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

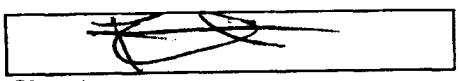
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14605	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	2.9
31. Total volume of Solidified Organics (L):	82.7
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	85.6
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	97.3%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

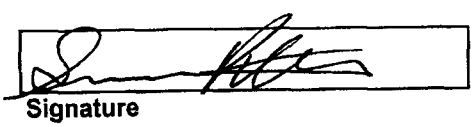
Visual Examination Operator 1:

M. HADERLIE		5-14-13
Enter Name	Signature	Date

Visual Examination Operator 2:

R. CUMMINS		5-14-13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		5-14-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP14597
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
b. Container Type: 55 gal. drum or SWB:	55 GAL.
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000183
4. Examination Start Date:	05/14/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	501
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	237751
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14597							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				N/A	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003					
2	Container ID: SRP14597					
3	**Section 2: Waste Material Parameter (WMP) Estimates**					
4	**9. Waste Material Parameter and Item Description**		**10. WMP Estimate**	**11. Density**		**12.Volume**
5			**By Weight (kg)**	**(kg/L)**		**(L)**
29	l. Other inorganic materials (Ol)		0.0	N/A		0.0
30	j. Graphite		0.0	N/A		0.0
31		N/A	N/A	2.2		0.0
32		N/A	N/A	2.2		0.0
33	k. Concrete		0.0	N/A		0.0
34		N/A	N/A	2.3		0.0
35		N/A	N/A	2.3		0.0
36	l. Glass		0.0	N/A		0.0
37		N/A	N/A	2.0		0.0
38		N/A	N/A	2.0		0.0
39	m. Firebrick		0.0	N/A		0.0
40		N/A	N/A	3.0		0.0
41		N/A	N/A	3.0		0.0
42	n. Ceramics		0.0	N/A		0.0
43		N/A	N/A	2.0 - 5.0	0.0	0.0
44		N/A	N/A	2.0 - 5.0	0.0	0.0
45	o. Sand		0.0	N/A		0.0
46		N/A	N/A	2.0		0.0
47		N/A	N/A	2.0		0.0
48	p. Inorganic sorbents		0.0	N/A		0.0
49		N/A	N/A	0.1 - 2.8	0.0	0.0
50		N/A	N/A	0.1 - 2.8	0.0	0.0
51	q. Other (See Note a)		0.0	N/A		0.0
52		N/A	N/A	0.0		0.0
53		N/A	N/A	0.0		0.0
54		N/A	N/A	0.0		0.0
55	r. Cellulosics (C)		0.0	N/A		0.0
56	s. Paper		0.0	N/A		0.0
57		N/A	N/A	0.9		0.0
58		N/A	N/A	0.9		0.0
59		N/A	N/A	0.9		0.0
60	t. Cardboard		0.0	N/A		0.0
61		N/A	N/A	0.8		0.0
62		N/A	N/A	0.8		0.0
63	u. Wood		0.0	N/A		0.0
64		N/A	N/A	1.0		0.0
65		N/A	N/A	1.0		0.0

	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003					
2	Container ID: SRP14597					
3	Section 2: Waste Material Parameter (WMP) Estimates					
4		9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density		12.Volume
5			By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)		0.5	N/A		0.5
67		RUBBER BANDS TIGHTLY BOUND ON TOP (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68		RUBBER	0.2	0.9 - 2.0	1.1	0.2
69	w. Plastics (waste materials) (PW)		2.9	N/A		3.3
70		NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71		TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
72		PLASTIC TIGHTLY BOUND ON TOP	1.5	0.9		1.7
73		N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)		109.6	N/A		91.3
75	x1. Sludge		109.6	N/A		91.3
76		VERY PALE ORANGE POWDERY SLUDGE WITH CALCIUM SILICATE	109.6	1.0 - 1.5	1.2	91.3
77		N/A	N/A	1.0 - 1.5	0.0	0.0
78		N/A	N/A	1.0 - 1.5	0.0	0.0
79	x2. Other (See Note a)		0.0	N/A		0.0
80		N/A	N/A	0.0		0.0
81		N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)		0.0	N/A		0.0
83	y1. Sludge		0.0	N/A		0.0
84		N/A	N/A	1.0 - 1.5	0.0	0.0
85		N/A	N/A	1.0 - 1.5	0.0	0.0
86		N/A	N/A	1.0 - 1.5	0.0	0.0
87	y2. Roaster Oxides		0.0	N/A		0.0
88		N/A	N/A	1.5 - 4.0	0.0	0.0
89		N/A	N/A	1.5 - 4.0	0.0	0.0
90		N/A	N/A	1.5 - 4.0	0.0	0.0
91	y3. Salt		0.0	N/A		0.0
92		N/A	N/A	0.0		0.0
93		N/A	N/A	0.0		0.0
94	y4. Other (See Note a)		0.0	N/A		0.0
95		N/A	N/A	0.0		0.0
96		N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)		0.0	N/A		0.0
98		N/A	N/A	1.0 - 1.4	0.0	0.0
99		N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL		113.0	N/A		95.1
101	13. (ORGANIC SLUDGE) weight (109.6) kg was obtained by subtracting the weighed waste weight of (3.4) kg and the container net weight of (34.0) kg from the gross weight (147.0) kg of the waste container. (147.0) - (3.4) - (34.0) = (109.6) kg					
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.					
103	b.	N/A				
104						

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14597	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14597	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	28.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	237751
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	723312
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	07/18/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1015
22. Measured gross weight of loaded container, fully assembled (kgs):	147.0
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	324.1
23. Container closure date (mm/dd/yy):	05/14/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	722444
b. Filter Torque Wrench Calibration Due Date:	07/22/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	CN-110
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	90.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	113.0
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14597	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	3.8
31. Total volume of Solidified Organics (L):	91.3
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	95.1
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	97.0%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

J. STANTON	Jodi M. Stanton	5/14/13
Enter Name	Signature	Date

Visual Examination Operator 2:

L. MUNTEAN	L. Muntean	5/14/13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		5-14-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	SRP14625
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location (Airlock):	IN-RWMC-ARP-5
3.	Batch Number:	IN-SRP-VE-000183
4.	Examination Start Date:	05/14/13
5.	Procedure CCP-TP-006, Rev.:	17
6.	a. Drum Packing Station (DPS) Number:	502
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	237749
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14625							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4				9. Waste Material Parameter and Item Description	10. WMP Estimate By Weight (kg)	11. Density (kg/L)	12.Volume (L)	
5					0.4	N/A	0.1	
6	a.	Iron-based metals/alloys (IM)			0.4	8.0	0.1	
7				METAL TIGHTLY BOUND ON TOP	N/A	8.0	0.0	
8				N/A	0.0	N/A	0.0	
9	b.	Aluminum-based metals/alloys (AM)			N/A	3.0	0.0	
10				N/A	N/A	3.0	0.0	
11				N/A	0.0	N/A	0.0	
12	c.	Other metals (OM)			0.0	N/A	0.0	
13		d.	Lead		N/A	11.0	0.0	
14				N/A	N/A	11.0	0.0	
15				N/A	0.0	N/A	0.0	
16		e.	Beryllium		N/A	1.8	0.0	
17				N/A	N/A	1.8	0.0	
18				N/A	0.0	N/A	0.0	
19		f.	Depleted uranium		N/A	19.1	0.0	
20				N/A	N/A	19.1	0.0	
21				N/A	0.0	N/A	0.0	
22		g.	Copper		N/A	9.0	0.0	
23				N/A	N/A	9.0	0.0	
24				N/A	0.0	N/A	0.0	
25		h.	Other (See Note a)		N/A	0.0	0.0	
26				N/A	N/A	0.0	0.0	
27				N/A	N/A	0.0	0.0	
28				N/A				

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14625							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	l. Other inorganic materials (OI)				0.0	N/A		0.0
30		j. Graphite			0.0	N/A		0.0
31			N/A		N/A	2.2		0.0
32			N/A		N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34			N/A		N/A	2.3		0.0
35			N/A		N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37			N/A		N/A	2.0		0.0
38			N/A		N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40			N/A		N/A	3.0		0.0
41			N/A		N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43			N/A		N/A	2.0 - 5.0	0.0	0.0
44			N/A		N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46			N/A		N/A	2.0		0.0
47			N/A		N/A	2.0		0.0
48		p. Inorganic sorbents			0.0	N/A		0.0
49			N/A		N/A	0.1 - 2.8	0.0	0.0
50			N/A		N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52			N/A		N/A	0.0		0.0
53			N/A		N/A	0.0		0.0
54			N/A		N/A	0.0		0.0
55	r. Cellulosics (C)				18.0	N/A		20.0
56		s. Paper			18.0	N/A		20.0
57			PAPER AND LEATHER TIGHTLY BOUND ON TOP		18.0	0.9		20.0
58			N/A		N/A	0.9		0.0
59			N/A		N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61			N/A		N/A	0.8		0.0
62			N/A		N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64			N/A		N/A	1.0		0.0
65			N/A		N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14625							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.7	N/A		0.7
67				RUBBER TIGHTLY BOUND ON TOP (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68				RUBBER TIGHTLY BOUND ON TOP	0.4	0.9 - 2.0	1.1	0.4
69	w. Plastics (waste materials) (PW)				1.6	N/A		1.8
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	0.5	0.9		0.6
72				PLASTIC TIGHTLY BOUND ON TOP	1.1	0.9		1.2
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				47.9	N/A		39.9
75		x1. Sludge			47.9	N/A		39.9
76				MODERATE BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE	47.9	1.0 - 1.5	1.2	39.9
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95				N/A	N/A	0.0		0.0
96				N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98				N/A	N/A	1.0 - 1.4	0.0	0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				68.6	N/A		62.5
101	13. (ORGANIC SLUDGE) weight (47.9) kg was obtained by subtracting the weighed waste weight of (20.7) kg and the container net weight of (34.0) kg from the gross weight (102.6) kg of the waste container. (102.6) - (20.7) - (34.0) = (47.9) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

055

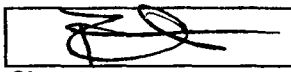
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14625	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14625	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	24.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	237749
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	723312
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	07/18/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1036
22. Measured gross weight of loaded container, fully assembled (kgs):	102.6
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	226.2
23. Container closure date (mm/dd/yy):	05/14/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	722444
b. Filter Torque Wrench Calibration Due Date:	07/22/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	JM-683
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	75.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	68.6
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

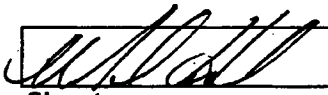
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14625	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	22.6
31. Total volume of Solidified Organics (L):	39.9
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	62.5
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	69.8%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

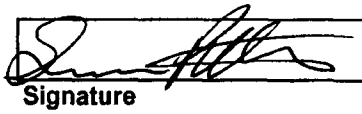
Visual Examination Operator 1:

R. CUMMINS		5-14-13
Enter Name	Signature	Date

Visual Examination Operator 2:

M. HADERLIE		5-14-13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		5-14-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP14623
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000183
4. Examination Start Date:	05/14/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	501
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	237749
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14623							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5					0.0	N/A		0.0
6	a. Iron-based metals/alloys (IM)				N/A	8.0		0.0
7				N/A	N/A	8.0		0.0
8				N/A	0.0	N/A		0.0
9	b. Aluminum-based metals/alloys (AM)				N/A	3.0		0.0
10				N/A	N/A	3.0		0.0
11				N/A	0.0	N/A		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			N/A	11.0		0.0
14				N/A	N/A	11.0		0.0
15				N/A	0.0	N/A		0.0
16		e. Beryllium			N/A	1.8		0.0
17				N/A	N/A	1.8		0.0
18				N/A	0.0	N/A		0.0
19		f. Depleted uranium			N/A	19.1		0.0
20				N/A	N/A	19.1		0.0
21				N/A	0.0	N/A		0.0
22		g. Copper			N/A	9.0		0.0
23				N/A	N/A	9.0		0.0
24				N/A	0.0	N/A		0.0
25		h. Other (See Note a)			N/A	0.0		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A				

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14623							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	l.	Other inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A B C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003					
2	Container ID: SRP14623					
3	**Section 2: Waste Material Parameter (WMP) Estimates**					
4		**9. Waste Material Parameter and Item Description**	**10. WMP Estimate**	**11. Density**		**12.Volume**
5			**By Weight (kg)**	**(kg/L)**		**(L)**
66	v. Rubber (R)		0.3	N/A		0.3
67		RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
68		RUBBER BANDS TIGHTLY BOUND ON TOP (WAIP)	0.3	0.9 - 2.0	1.1	0.3
69	w. Plastics (waste materials) (PW)		1.4	N/A		1.6
70		PLASTIC (NSW)	N/A	0.9		0.0
71		NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
72		1 TRAY LINER AND 1 BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
73		N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)		91.1	N/A		75.9
75	x1. Sludge		91.1	N/A		75.9
76		PALE YELLOWISH ORANGE POWDERY SLUDGE WITH CALCIUM SILICATE	91.1	1.0 - 1.5	1.2	75.9
77		N/A	N/A	1.0 - 1.5	0.0	0.0
78		N/A	N/A	1.0 - 1.5	0.0	0.0
79	x2. Other (See Note a)		0.0	N/A		0.0
80		N/A	N/A	0.0		0.0
81		N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)		0.0	N/A		0.0
83	y1. Sludge		0.0	N/A		0.0
84		N/A	N/A	1.0 - 1.5	0.0	0.0
85		N/A	N/A	1.0 - 1.5	0.0	0.0
86		N/A	N/A	1.0 - 1.5	0.0	0.0
87	y2. Roaster Oxides		0.0	N/A		0.0
88		N/A	N/A	1.5 - 4.0	0.0	0.0
89		N/A	N/A	1.5 - 4.0	0.0	0.0
90		N/A	N/A	1.5 - 4.0	0.0	0.0
91	y3. Salt		0.0	N/A		0.0
92		N/A	N/A	0.0		0.0
93		N/A	N/A	0.0		0.0
94	y4. Other (See Note a)		0.0	N/A		0.0
95		N/A	N/A	0.0		0.0
96		N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)		0.0	N/A		0.0
98		N/A	N/A	1.0 - 1.4	0.0	0.0
99		N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL		92.8	N/A		77.8
101	13. (ORGANIC SLUDGE) weight (91.1) kg was obtained by subtracting the weighed waste weight of (1.7) kg and the container net weight of (34.0) kg from the gross weight (126.8) kg of the waste container. (126.8) - (1.7) - (34.0) = (91.1) kg					
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.					
103	b.	N/A				
104						

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Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14623	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14623	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	22.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	237749
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	723312
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	07/18/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1039
22. Measured gross weight of loaded container, fully assembled (kgs):	126.8
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	279.5
23. Container closure date (mm/dd/yy):	05/14/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	722444
b. Filter Torque Wrench Calibration Due Date:	07/22/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	JM-692
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	70.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	92.8
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14623	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	1.9
31. Total volume of Solidified Organics (L):	75.9
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	77.8
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	98.2%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

L. MUNTEAN	L. Muntean	5/14/13
Enter Name	Signature	Date

Visual Examination Operator 2:

J. STANTON	Jodi M. Stanton	5/14/13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		5-14-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP14618
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000183
4. Examination Start Date:	05/14/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	502
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	237751
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14618							
3	**Section 2: Waste Material Parameter (WMP) Estimates**							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.4	N/A		0.1
7				METAL	0.4	8.0		0.1
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14618							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	l. Other Inorganic materials (OI)				0.0	N/A		0.0
30		j. Graphite			0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p. Inorganic sorbents			0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r. Cellulosics (C)				6.6	N/A		7.3
56		s. Paper			6.6	N/A		7.3
57				PAPER AND LEATHER TIGHTLY BOUND ON TOP	6.6	0.9		7.3
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14618							
3	**Section 2: Waste Material Parameter (WMP) Estimates**							
4				**9. Waste Material Parameter and Item Description**	**10. WMP Estimate**	**11. Density**		**12.Volume**
5					**By Weight (kg)**	**(kg/L)**		**(L)**
66	v. Rubber (R)				0.8	N/A		0.8
67				RUBBER TIGHTLY BOUND ON TOP (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68				RUBBER	0.5	0.9 - 2.0	1.1	0.5
69	w. Plastics (waste materials) (PW)				1.3	N/A		1.4
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				TRAY LINER TIGHTLY BOUND ON TOP (WAIP)	0.9	0.9		1.0
72				PLASTIC TIGHTLY BOUND ON TOP	0.4	0.9		0.4
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				124.5	N/A		103.8
75		x1. Sludge			124.5	N/A		103.8
76				DUSKY YELLOW CRUMBLY SLUDGE WITH CALCIUM SILICATE	124.5	1.0 - 1.5	1.2	103.8
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95				N/A	N/A	0.0		0.0
96				N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98				N/A	N/A	1.0 - 1.4	0.0	0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				133.6	N/A		113.4
101	13. (ORGANIC SLUDGE) weight (124.5) kg was obtained by subtracting the weighed waste weight of (9.1) kg and the container net weight of (34.0) kg from the gross weight (167.6) kg of the waste container. (167.6) - (9.1) - (34.0) = (124.5) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

069

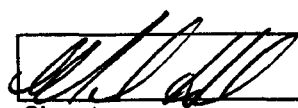
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14618	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14618	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	31.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	237751
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	723312
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	07/18/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1100
22. Measured gross weight of loaded container, fully assembled (kgs):	167.6
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	369.5
23. Container closure date (mm/dd/yy):	05/14/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	722444
b. Filter Torque Wrench Calibration Due Date:	07/22/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	CN-156
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	95.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	133.6
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

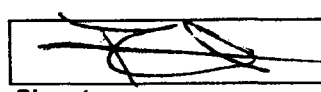
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14618	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	9.6
31. Total volume of Solidified Organics (L):	103.8
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	113.4
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	93.2%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

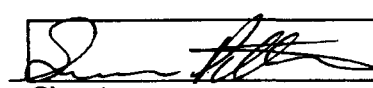
Visual Examination Operator 1:

M. HADERLIE		5-14-13
Enter Name	Signature	Date

Visual Examination Operator 2:

R. CUMMINS		5/14/13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		5-14-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP14624
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
b. Container Type: 55 gal. drum or SWB:	55 GAL.
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000183
4. Examination Start Date:	05/14/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	501
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	237749
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14624							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				N/A	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14624							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4 5	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
29	l. Other inorganic materials (OI)				0.0	N/A		0.0
30		j. Graphite			0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p. Inorganic sorbents			0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r. Cellulosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14624							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.3	N/A		0.3
67	RUBBER BANDS TIGHTLY BOUND ON TOP (WAIP)				0.3	0.9 - 2.0	1.1	0.3
68	N/A				N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				3.4	N/A		3.8
70	NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED				N/A	0.9		0.0
71	TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)				1.4	0.9		1.6
72	PLASTIC TIGHTLY BOUND ON TOP				2.0	0.9		2.2
73	N/A				N/A	0.9		0.0
74	x. Organic matrix (OR)				115.7	N/A		96.4
75		x1. Sludge			115.7	N/A		96.4
76		MODERATE YELLOWISH BROWN PUTTY LIKE SLUDGE WITH CALCIUM SILICATE			115.7	1.0 - 1.5	1.2	96.4
77		N/A			N/A	1.0 - 1.5	0.0	0.0
78		N/A			N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80		N/A			N/A	0.0		0.0
81		N/A			N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84		N/A			N/A	1.0 - 1.5	0.0	0.0
85		N/A			N/A	1.0 - 1.5	0.0	0.0
86		N/A			N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88		N/A			N/A	1.5 - 4.0	0.0	0.0
89		N/A			N/A	1.5 - 4.0	0.0	0.0
90		N/A			N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92		N/A			N/A	0.0		0.0
93		N/A			N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95		N/A			N/A	0.0		0.0
96		N/A			N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98	N/A				N/A	1.0 - 1.4	0.0	0.0
99	N/A				N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				119.4	N/A		100.5
101	13. (ORGANIC SLUDGE) weight (115.7) kg was obtained by subtracting the weighed waste weight of (3.7) kg and the container net weight of (34.0) kg from the gross weight (153.4) kg of the waste container. (153.4) - (3.7) - (34.0) = (115.7) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14624	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Container ID: SRP14624		
Section 4: Waste Packaging Data		
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)		32.0
16. Inner Bags:		
a. Total Number of Inner Bag(s):		0
b. Closure Method (See Below for Proper Designator):		N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)		
c. Layers of Confinement (>4 liters):		0
d. Estimated Weight of Each Inner Bag (kgs):		0.0
17. Liner Bags:		
a. Total Number of Liner Bag(s):		1
b. Closure Method (See Below for Proper Designator):		TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)		
c. Estimated Weight of Each Liner Bag (kgs):		0.9
18. Rigid Liner Present? (Y/N):		Y
19. Rigid Liner with NO lid Verified? (Y/N):		Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):		Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:		
a. Container Manufacturer Lot Number:		237749
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:		723312
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:		07/18/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):		Y
e. Time the container was closed:		1117
22. Measured gross weight of loaded container, fully assembled (kgs):		153.4
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)		338.2
23. Container closure date (mm/dd/yy):		05/14/13
24. Container Filter Torque Data:		
a. Filter Torque Wrench Serial/ID Number:		722444
b. Filter Torque Wrench Calibration Due Date:		07/22/13
c. Filter Model No.:		NUCFIL-019DS
d. Filter Serial No.:		JM-687
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))		N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):		Y
25. Percent fill of container:		100.0%
26. Total layers of confinement:		1
27. Measured net weight of waste (kgs):		119.4
28. Estimated plastic added from packaging, including rigid liner (kgs):		5.4
29. Estimated steel added from packaging (kgs):		28.6
29a Total net weight of fully assembled container (kgs):		34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14624	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	4.1
31. Total volume of Solidified Organics (L):	96.4
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	100.5
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	96.9%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

J. STANTON	Jodi M Stanton	5/14/13
Enter Name	Signature	Date

Visual Examination Operator 2:

L. MUNTEAN	L. Munteam	5/14/13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		5-14-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	SRP14617
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
	b. Container Type: 55 gal. drum or SWB:	55 GAL
2.	Site ID and Location (Airlock):	IN-RWMC-ARP-5
3.	Batch Number:	IN-SRP-VE-000183
4.	Examination Start Date:	05/14/13
5.	Procedure CCP-TP-006, Rev.:	17
6.	a. Drum Packing Station (DPS) Number:	502
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	237751
Comments:		
NOTHING ADDED TO THE CONTAINER VERIFIED		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14617							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. Iron-based metals/alloys (IM)				0.1	N/A		0.0
7				METAL	0.1	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14617							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	i. Other inorganic materials (OI)				0.0	N/A		0.0
30		j. Graphite			0.0	N/A		0.0
31			N/A		N/A	2.2		0.0
32			N/A		N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34			N/A		N/A	2.3		0.0
35			N/A		N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37			N/A		N/A	2.0		0.0
38			N/A		N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40			N/A		N/A	3.0		0.0
41			N/A		N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43			N/A		N/A	2.0 - 5.0	0.0	0.0
44			N/A		N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46			N/A		N/A	2.0		0.0
47			N/A		N/A	2.0		0.0
48		p. Inorganic sorbents			0.0	N/A		0.0
49			N/A		N/A	0.1 - 2.8	0.0	0.0
50			N/A		N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52			N/A		N/A	0.0		0.0
53			N/A		N/A	0.0		0.0
54			N/A		N/A	0.0		0.0
55	r. Cellulosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57			N/A		N/A	0.9		0.0
58			N/A		N/A	0.9		0.0
59			N/A		N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61			N/A		N/A	0.8		0.0
62			N/A		N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64			N/A		N/A	1.0		0.0
65			N/A		N/A	1.0		0.0

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	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14617							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.6	N/A		0.5
67	RUBBER TIGHTLY BOUND ON TOP (WAIP)				0.6	0.9 - 2.0	1.1	0.5
68	N/A				N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				3.6	N/A		4.0
70	NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED				N/A	0.9		0.0
71	PLASTIC TIGHTLY BOUND ON TOP				0.8	0.9		0.9
72	2 TRAY LINERS AND 2 BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)				2.8	0.9		3.1
73	N/A				N/A	0.9		0.0
74	x. Organic matrix (OR)				109.1	N/A		90.9
75		x1. Sludge			109.1	N/A		90.9
76		MODERATE BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE			109.1	1.0 - 1.5	1.2	90.9
77		N/A			N/A	1.0 - 1.5	0.0	0.0
78		N/A			N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80		N/A			N/A	0.0		0.0
81		N/A			N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84		N/A			N/A	1.0 - 1.5	0.0	0.0
85		N/A			N/A	1.0 - 1.5	0.0	0.0
86		N/A			N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88		N/A			N/A	1.5 - 4.0	0.0	0.0
89		N/A			N/A	1.5 - 4.0	0.0	0.0
90		N/A			N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92		N/A			N/A	0.0		0.0
93		N/A			N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95		N/A			N/A	0.0		0.0
96		N/A			N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98	N/A				N/A	1.0 - 1.4	0.0	0.0
99	N/A				N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				113.4	N/A		95.4
101	13. (ORGANIC SLUDGE) weight (109.1) kg was obtained by subtracting the weighed waste weight of (4.3) kg and the container net weight of (34.0) kg from the gross weight (147.4) kg of the waste container. (147.4) - (4.3) - (34.0) = (109.1) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

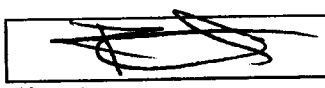
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14617	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14617	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	32.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	237751
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	723312
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	07/18/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1240
22. Measured gross weight of loaded container, fully assembled (kgs):	147.4
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	325.0
23. Container closure date (mm/dd/yy):	05/14/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	722444
b. Filter Torque Wrench Calibration Due Date:	07/22/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	CN-171
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	100.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	113.4
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

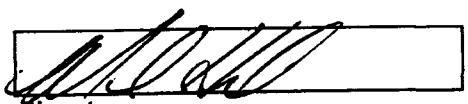
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14617	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	4.5
31. Total volume of Solidified Organics (L):	90.9
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	95.4
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	96.2%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

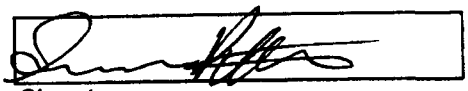
Visual Examination Operator 1:

R. CUMMINS		5-14-13
Enter Name	Signature	Date

Visual Examination Operator 2:

M. HADERLIE		5-14-13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		5-14-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP14632
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000183
4. Examination Start Date:	05/14/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	501
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	237749
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14632							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				N/A	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14632							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	i.	Other inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14632							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.3	N/A		0.3
67				RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
68				RUBBER BANDS TIGHTLY BOUND ON TOP (WAIP)	0.3	0.9 - 2.0	1.1	0.3
69	w. Plastics (waste materials) (PW)				1.9	N/A		2.2
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				1 BREACHED AND EMPTY BOTTLE WITH PLASTIC TIGHTLY BOUND ON TOP	0.5	0.9		0.6
72				1 BAG OUT STUB AND 1 TRAY LINER TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				112.2	N/A		93.5
75		x1. Sludge			112.2	N/A		93.5
76				MODERATE OLIVE BROWN PUTTY LIKE SLUDGE WITH CALCIUM SILICATE	112.2	1.0 - 1.5	1.2	93.5
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95				N/A	N/A	0.0		0.0
96				N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98				N/A	N/A	1.0 - 1.4	0.0	0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				114.4	N/A		96.0
101	13. (ORGANIC SLUDGE) weight (112.2) kg was obtained by subtracting the weighed waste weight of (2.2) kg and the container net weight of (34.0) kg from the gross weight (148.4) kg of the waste container. (148.4) - (2.2) - (34.0) = (112.2) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

090

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14632	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14632	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	28.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	237749
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	723312
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	07/18/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1302
22. Measured gross weight of loaded container, fully assembled (kgs):	148.4
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	327.2
23. Container closure date (mm/dd/yy):	05/14/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	722444
b. Filter Torque Wrench Calibration Due Date:	07/22/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	CN-151
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	90.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	114.4
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14632	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	2.5
31. Total volume of Solidified Organics (L):	93.5
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	96.0
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	98.1%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

L. MUNTEAN	L. Munteans	5/14/13
Enter Name	Signature	Date

Visual Examination Operator 2:

J. STANTON	Jodi M Stanton	5/14/13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		5-14-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP14626
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000183
4. Examination Start Date:	05/14/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	502
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	237749
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14626							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				N/A	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14626							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4				9. Waste Material Parameter and Item Description	10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	i.	Other inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14626							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
66	v. Rubber (R)				0.3	N/A		0.3
67	RUBBER TIGHTLY BOUND ON TOP (WAIP)				0.3	0.9 - 2.0	1.1	0.3
68	N/A				N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				2.0	N/A		2.3
70	NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED				N/A	0.9		0.0
71	TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)				1.4	0.9		1.6
72	PLASTIC TIGHTLY BOUND ON TOP				0.6	0.9		0.7
73	N/A				N/A	0.9		0.0
74	x. Organic matrix (OR)				101.3	N/A		84.4
75		x1. Sludge			101.3	N/A		84.4
76		YELLOWISH GRAY CRUMBLY SLUDGE WITH CALCIUM SILICATE			101.3	1.0 - 1.5	1.2	84.4
77		N/A			N/A	1.0 - 1.5	0.0	0.0
78		N/A			N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80		N/A			N/A	0.0		0.0
81		N/A			N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84		N/A			N/A	1.0 - 1.5	0.0	0.0
85		N/A			N/A	1.0 - 1.5	0.0	0.0
86		N/A			N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88		N/A			N/A	1.5 - 4.0	0.0	0.0
89		N/A			N/A	1.5 - 4.0	0.0	0.0
90		N/A			N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92		N/A			N/A	0.0		0.0
93		N/A			N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95		N/A			N/A	0.0		0.0
96		N/A			N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98	N/A				N/A	1.0 - 1.4	0.0	0.0
99	N/A				N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				103.6	N/A		87.0
101	13. (ORGANIC SLUDGE) weight (101.3) kg was obtained by subtracting the weighed waste weight of (2.3) kg and the container net weight of (34.0) kg from the gross weight (137.6) kg of the waste container. (137.6) - (2.3) - (34.0) = (101.3) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14626	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14626	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	29.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	237749
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	723312
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	07/18/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1310
22. Measured gross weight of loaded container, fully assembled (kgs):	137.6
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	303.4
23. Container closure date (mm/dd/yy):	05/14/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	722444
b. Filter Torque Wrench Calibration Due Date:	07/22/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	JM-693
e. Filter Serial No.: (N/A, If container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	90.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	103.6
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14626	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	2.6
31. Total volume of Solidified Organics (L):	84.4
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	87.0
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	97.8%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

M. HADERLIE		5-14-13
Enter Name	Signature	Date

Visual Examination Operator 2:

R. CUMMINS		5-14-13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		5-14-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP14611
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
b. Container Type: 55 gal. drum or SWB:	55 GAL.
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000183
4. Examination Start Date:	05/14/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	501
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	237751
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14611							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5					0.2	N/A		0.0
6	a. Iron-based metals/alloys (IM)				0.2	8.0		0.0
7				METAL	N/A	8.0		0.0
8				N/A	0.0	N/A		0.0
9	b. Aluminum-based metals/alloys (AM)				N/A	3.0		0.0
10				N/A	N/A	3.0		0.0
11				N/A	0.0	N/A		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			N/A	11.0		0.0
14				N/A	N/A	11.0		0.0
15				N/A	0.0	N/A		0.0
16		e. Beryllium			N/A	1.8		0.0
17				N/A	N/A	1.8		0.0
18				N/A	0.0	N/A		0.0
19		f. Depleted uranium			N/A	19.1		0.0
20				N/A	N/A	19.1		0.0
21				N/A	0.0	N/A		0.0
22		g. Copper			N/A	9.0		0.0
23				N/A	N/A	9.0		0.0
24				N/A	0.0	N/A		0.0
25		h. Other (See Note a)			N/A	0.0		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A				

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14611							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	i.	Other inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.2	N/A		0.2
56		s.	Paper		0.2	N/A		0.2
57				PAPER (NSW)	N/A	0.9		0.0
58				LEATHER GLOVE	0.2	0.9		0.2
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				CARDBOARD (NSW)	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				WOOD (NSW)	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14611							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.3	N/A		0.3
67	RUBBER BANDS TIGHTLY BOUND ON TOP (WAIP)				0.3	0.9 - 2.0	1.1	0.3
68	RUBBER (NSW)				N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				1.6	N/A		1.8
70	NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED				N/A	0.9		0.0
71	TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)				1.4	0.9		1.6
72	PLASTIC TIGHTLY BOUND ON TOP				0.2	0.9		0.2
73	N/A				N/A	0.9		0.0
74	x. Organic matrix (OR)				90.1	N/A		75.1
75		x1. Sludge			90.1	N/A		75.1
76		MODERATE YELLOWISH BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE			90.1	1.0 - 1.5	1.2	75.1
77		N/A			N/A	1.0 - 1.5	0.0	0.0
78		N/A			N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80		N/A			N/A	0.0		0.0
81		N/A			N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84		N/A			N/A	1.0 - 1.5	0.0	0.0
85		N/A			N/A	1.0 - 1.5	0.0	0.0
86		N/A			N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88		N/A			N/A	1.5 - 4.0	0.0	0.0
89		N/A			N/A	1.5 - 4.0	0.0	0.0
90		N/A			N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92		N/A			N/A	0.0		0.0
93		N/A			N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95		N/A			N/A	0.0		0.0
96		N/A			N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98	N/A				N/A	1.0 - 1.4	0.0	0.0
99	N/A				N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				92.4	N/A		77.4
101	13. (ORGANIC SLUDGE) weight (90.1) kg was obtained by subtracting the weighed waste weight of (2.3) kg and the container net weight of (34.0) kg from the gross weight (126.4) kg of the waste container. (126.4) - (2.3) - (34.0) = (90.1) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14611	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14611	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	27.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	237751
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	723312
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	07/18/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1330
22. Measured gross weight of loaded container, fully assembled (kgs):	126.4
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	278.7
23. Container closure date (mm/dd/yy):	05/14/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	722444
b. Filter Torque Wrench Calibration Due Date:	07/22/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	CN-157
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	85.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	92.4
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14611	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	2.3
31. Total volume of Solidified Organics (L):	75.1
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	77.4
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	97.5%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

J. STANTON	Jodi M. Stanton	5/14/13
Enter Name	Signature	Date

Visual Examination Operator 2:

L. MUNTEAN	L. Munteau	5/14/13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		5-14-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP14615
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000183
4. Examination Start Date:	05/14/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	502
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	237751
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14615							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)	12.Volume (L)	
5					0.1	N/A	0.0	
6	a. Iron-based metals/alloys (IM)				0.1	8.0	0.0	
7				METAL	N/A	8.0	0.0	
8				N/A	0.0	N/A	0.0	
9	b. Aluminum-based metals/alloys (AM)				N/A	3.0	0.0	
10				N/A	N/A	3.0	0.0	
11				N/A	0.0	N/A	0.0	
12	c. Other metals (OM)				0.0	N/A	0.0	
13		d. Lead			N/A	11.0	0.0	
14				N/A	N/A	11.0	0.0	
15				N/A	0.0	N/A	0.0	
16		e. Beryllium			N/A	1.8	0.0	
17				N/A	N/A	1.8	0.0	
18				N/A	0.0	N/A	0.0	
19		f. Depleted uranium			N/A	19.1	0.0	
20				N/A	N/A	19.1	0.0	
21				N/A	0.0	N/A	0.0	
22		g. Copper			N/A	9.0	0.0	
23				N/A	N/A	9.0	0.0	
24				N/A	0.0	N/A	0.0	
25		h. Other (See Note a)			N/A	0.0	0.0	
26				N/A	N/A	0.0	0.0	
27				N/A	N/A	0.0	0.0	
28				N/A				

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14615							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	i.	Other inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14615							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.3	N/A		0.3
67	RUBBER TIGHTLY BOUND ON TOP (WAIP)				0.3	0.9 - 2.0	1.1	0.3
68	RUBBER (NSW)				N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				2.2	N/A		2.5
70	NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED				N/A	0.9		0.0
71	PLASTIC TIGHTLY BOUND ON TOP				0.8	0.9		0.9
72	TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)				1.4	0.9		1.6
73	N/A				N/A	0.9		0.0
74	x. Organic matrix (OR)				74.4	N/A		62.0
75		x1. Sludge			74.4	N/A		62.0
76			MODERATE YELLOWISH BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE		74.4	1.0 - 1.5	1.2	62.0
77			N/A		N/A	1.0 - 1.5	0.0	0.0
78			N/A		N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80			N/A		N/A	0.0		0.0
81			N/A		N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84			N/A		N/A	1.0 - 1.5	0.0	0.0
85			N/A		N/A	1.0 - 1.5	0.0	0.0
86			N/A		N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88			N/A		N/A	1.5 - 4.0	0.0	0.0
89			N/A		N/A	1.5 - 4.0	0.0	0.0
90			N/A		N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92			N/A		N/A	0.0		0.0
93			N/A		N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95			N/A		N/A	0.0		0.0
96			N/A		N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98	N/A				N/A	1.0 - 1.4	0.0	0.0
99	N/A				N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				77.0	N/A		64.8
101	13. (ORGANIC SLUDGE) weight (74.4) kg was obtained by subtracting the weighed waste weight of (2.6) kg and the container net weight of (34.0) kg from the gross weight (111.0) kg of the waste container. (111.0) - (2.6) - (34.0) = (74.4) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

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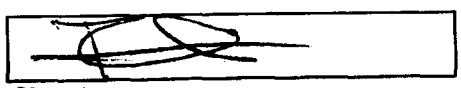
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14615	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14615	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	32.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	237751
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	723312
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	07/18/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1331
22. Measured gross weight of loaded container, fully assembled (kgs):	111.0
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	244.7
23. Container closure date (mm/dd/yy):	05/14/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	722444
b. Filter Torque Wrench Calibration Due Date:	07/22/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	CN-173
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	100.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	77.0
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

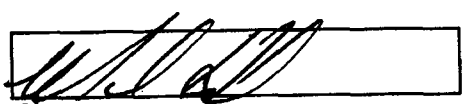
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14615	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	2.8
31. Total volume of Solidified Organics (L):	62.0
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	64.8
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	96.6%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

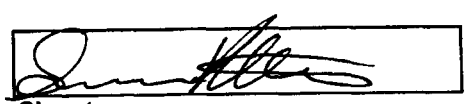
Visual Examination Operator 1:

R. CUMMINS		5-14-13
Enter Name	Signature	Date

Visual Examination Operator 2:

M. HADERLIE		5-14-13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		5-14-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP14553
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000183
4. Examination Start Date:	05/14/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	501
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	237751
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14553							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
6	a. Iron-based metals/alloys (IM)				0.1	N/A		0.0
7				METAL	0.1	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14553							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
29	i.	Other Inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31			N/A		N/A	2.2		0.0
32			N/A		N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34			N/A		N/A	2.3		0.0
35			N/A		N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37			N/A		N/A	2.0		0.0
38			N/A		N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40			N/A		N/A	3.0		0.0
41			N/A		N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43			N/A		N/A	2.0 - 5.0	0.0	0.0
44			N/A		N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46			N/A		N/A	2.0		0.0
47			N/A		N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49			N/A		N/A	0.1 - 2.8	0.0	0.0
50			N/A		N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52			N/A		N/A	0.0		0.0
53			N/A		N/A	0.0		0.0
54			N/A		N/A	0.0		0.0
55	r.	Cellulosics (C)			0.2	N/A		0.2
56		s.	Paper		0.2	N/A		0.2
57			1 LEATHER GLOVE		0.2	0.9		0.2
58			N/A		N/A	0.9		0.0
59			N/A		N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61			CARDBOARD (NSW)		N/A	0.8		0.0
62			N/A		N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64			N/A		N/A	1.0		0.0
65			N/A		N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14553							
3	**Section 2: Waste Material Parameter (WMP) Estimates**							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.3	N/A		0.3
67				RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
68				RUBBER BANDS TIGHTLY BOUND ON TOP (WAIP)	0.3	0.9 - 2.0	1.1	0.3
69	w. Plastics (waste materials) (PW)				1.8	N/A		2.0
70				PLASTIC TIGHTLY BOUND ON TOP	0.4	0.9		0.4
71				NO BAG OUT STUB AT THE BOTTOM OF THE ~~CONAINER~~ VERIFIED Container ok 5/16/13	N/A	0.9		0.0
72				1 BAG OUT STUB AND 1 TRAY LINER TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				112.0	N/A		93.3
75		x1. Sludge			112.0	N/A		93.3
76				PALE YELLOWISH BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE	112.0	1.0 - 1.5	1.2	93.3
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95				N/A	N/A	0.0		0.0
96				N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98				N/A	N/A	1.0 - 1.4	0.0	0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				114.4	N/A		95.8
101	13. (ORGANIC SLUDGE) weight (112.0) kg was obtained by subtracting the weighed waste weight of (2.4) kg and the container net weight of (34.0) kg from the gross weight (148.4) kg of the waste container. (148.4) - (2.4) - (34.0) = (112.0) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14553	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14553	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	25.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	237751
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	723312
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	07/18/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1353
22. Measured gross weight of loaded container, fully assembled (kgs):	148.4
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	327.2
23. Container closure date (mm/dd/yy):	05/14/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	722444
b. Filter Torque Wrench Calibration Due Date:	07/22/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	CN-187
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	80.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	114.4
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14553	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	2.5
31. Total volume of Solidified Organics (L):	93.3
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	95.8
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	97.9%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

L. MUNTEAN	L. Muntean	5/14/13
Enter Name	Signature	Date

Visual Examination Operator 2:

J. STANTON	Jodi M. Stanton	5/14/13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		5-14-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP14628
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000183
4. Examination Start Date:	05/14/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	502
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	237749
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14628							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
6	a. Iron-based metals/alloys (IM)				0.0	N/A		0.0
7				N/A	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14628							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	l.	Other inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				N/A	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14628							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
66	v. Rubber (R)				0.3	N/A		0.3
67				RUBBER TIGHTLY BOUND ON TOP (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68				RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				1.4	N/A		1.6
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
72				PLASTIC (NSW)	N/A	0.9		0.0
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				97.5	N/A		81.3
75		x1. Sludge			97.5	N/A		81.3
76				MODERATE YELLOWISH BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE	97.5	1.0 - 1.5	1.2	81.3
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95				N/A	N/A	0.0		0.0
96				N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98				N/A	N/A	1.0 - 1.4	0.0	0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				99.2	N/A		83.2
101	13. (ORGANIC SLUDGE) weight (97.5) kg was obtained by subtracting the weighed waste weight of (1.7) kg and the container net weight of (34.0) kg from the gross weight (133.2) kg of the waste container. (133.2) - (1.7) - (34.0) = (97.5) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

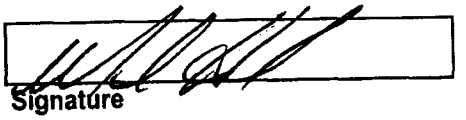
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14628	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14628	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	25.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	237749
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	723312
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	07/18/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1355
22. Measured gross weight of loaded container, fully assembled (kgs):	133.2
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	293.7
23. Container closure date (mm/dd/yy):	05/14/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	722444
b. Filter Torque Wrench Calibration Due Date:	07/22/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	CN-165
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	80.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	99.2
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

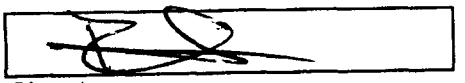
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14628	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	1.9
31. Total volume of Solidified Organics (L):	81.3
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	83.2
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	98.3%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

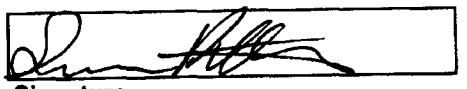
Visual Examination Operator 1:

M. HADERLIE		5-14-13
Enter Name	Signature	Date

Visual Examination Operator 2:

R. CUMMINS		5-14-13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		5-14-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Section 1: General Information	
1. Container ID:	SRP14550
a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
b. Container Type: 55 gal. drum or SWB:	55 GAL
2. Site ID and Location (Airlock):	IN-RWMC-ARP-5
3. Batch Number:	IN-SRP-VE-000183
4. Examination Start Date:	05/14/13
5. Procedure CCP-TP-006, Rev.:	17
6. a. Drum Packing Station (DPS) Number:	502
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.	
DPS Scale Check	
b. Scale Serial/ID Number:	N/A
c. Scale Calibration Due Date:	N/A
d. Test Weight ID:	N/A
e. Test Weight Calibration Due Date:	N/A
f. Test Weight (kgs):	N/A
g. Scale Readout of Test Weight (kgs):	N/A
h. Difference Between Test Weight and Scale Readout (kgs):	N/A
i. DPS Scale Check SAT (Y):	N/A
Container Scale Check	
j. Scale Serial/ID Number:	N/A
k. Scale Calibration Due Date:	N/A
l. Test Weight ID:	N/A
m. Test Weight Calibration Due Date:	N/A
n. Test Weight (kg):	N/A
o. Scale Readout of Test Weight (kgs):	N/A
p. Difference Between Test Weight and Scale Readout (kgs):	N/A
q. Container Scale Check SAT (Y):	N/A
7. Measured Tare Weight of Container fully assembled (kgs):	34.0
a. Container Manufacturer Lot Number:	237751
Comments:	
N/A	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14550							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4				9. Waste Material Parameter and Item Description	10. WMP Estimate By Weight (kg)	11. Density (kg/L)	12.Volume (L)	
5								
6	a. Iron-based metals/alloys (IM)				0.0	N/A	0.0	
7				N/A	N/A	8.0	0.0	
8				N/A	N/A	8.0	0.0	
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A	0.0	
10				N/A	N/A	3.0	0.0	
11				N/A	N/A	3.0	0.0	
12	c. Other metals (OM)				0.0	N/A	0.0	
13		d. Lead			0.0	N/A	0.0	
14				N/A	N/A	11.0	0.0	
15				N/A	N/A	11.0	0.0	
16		e. Beryllium			0.0	N/A	0.0	
17				N/A	N/A	1.8	0.0	
18				N/A	N/A	1.8	0.0	
19		f. Depleted uranium			0.0	N/A	0.0	
20				N/A	N/A	19.1	0.0	
21				N/A	N/A	19.1	0.0	
22		g. Copper			0.0	N/A	0.0	
23				N/A	N/A	9.0	0.0	
24				N/A	N/A	9.0	0.0	
25		h. Other (See Note a)			0.0	N/A	0.0	
26				N/A	N/A	0.0	0.0	
27				N/A	N/A	0.0	0.0	
28				N/A	N/A	0.0	0.0	

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14550							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	i. Other Inorganic materials (OI)				0.0	N/A		0.0
30		j. Graphite			0.0	N/A		0.0
31			N/A		N/A	2.2		0.0
32			N/A		N/A	2.2		0.0
33		k. Concrete			0.0	N/A		0.0
34			N/A		N/A	2.3		0.0
35			N/A		N/A	2.3		0.0
36		l. Glass			0.0	N/A		0.0
37			N/A		N/A	2.0		0.0
38			N/A		N/A	2.0		0.0
39		m. Firebrick			0.0	N/A		0.0
40			N/A		N/A	3.0		0.0
41			N/A		N/A	3.0		0.0
42		n. Ceramics			0.0	N/A		0.0
43			N/A		N/A	2.0 - 5.0	0.0	0.0
44			N/A		N/A	2.0 - 5.0	0.0	0.0
45		o. Sand			0.0	N/A		0.0
46			N/A		N/A	2.0		0.0
47			N/A		N/A	2.0		0.0
48		p. Inorganic sorbents			0.0	N/A		0.0
49			N/A		N/A	0.1 - 2.8	0.0	0.0
50			N/A		N/A	0.1 - 2.8	0.0	0.0
51		q. Other (See Note a)			0.0	N/A		0.0
52			N/A		N/A	0.0		0.0
53			N/A		N/A	0.0		0.0
54			N/A		N/A	0.0		0.0
55	r. Cellulosics (C)				0.0	N/A		0.0
56		s. Paper			0.0	N/A		0.0
57			N/A		N/A	0.9		0.0
58			N/A		N/A	0.9		0.0
59			N/A		N/A	0.9		0.0
60		t. Cardboard			0.0	N/A		0.0
61			N/A		N/A	0.8		0.0
62			N/A		N/A	0.8		0.0
63		u. Wood			0.0	N/A		0.0
64			N/A		N/A	1.0		0.0
65			N/A		N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14550							
3	**Section 2: Waste Material Parameter (WMP) Estimates**							
4	**9. Waste Material Parameter and Item Description**				**10. WMP Estimate**	**11. Density**		**12.Volume**
5					**By Weight (kg)**	**(kg/L)**		**(L)**
66	v. Rubber (R)				0.3	N/A		0.3
67				RUBBER TIGHTLY BOUND ON TOP (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68				N/A	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				2.1	N/A		2.4
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				PLASTIC TIGHTLY BOUND ON TOP	0.7	0.9		0.8
72				TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				103.0	N/A		85.8
75		x1. Sludge			103.0	N/A		85.8
76				MODERATE BROWN CRUMBLY SLUDGE WITH CALCIUM SILICATE	103.0	1.0 - 1.5	1.2	85.8
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95				N/A	N/A	0.0		0.0
96				N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98				N/A	N/A	1.0 - 1.4	0.0	0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				105.4	N/A		88.5
101	13. (ORGANIC SLUDGE) weight (103.0) kg was obtained by subtracting the weighed waste weight of (2.4) kg and the container net weight of (34.0) kg from the gross weight (139.4) kg of the waste container. (139.4) - (2.4) - (34.0) = (103.0) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

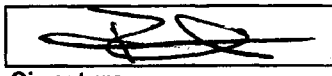
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14550	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14550	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	30.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	237751
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	723312
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	07/18/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1420
22. Measured gross weight of loaded container, fully assembled (kgs):	139.4
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	307.3
23. Container closure date (mm/dd/yy):	05/14/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	722444
b. Filter Torque Wrench Calibration Due Date:	07/22/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	CN-120
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	95.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	105.4
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

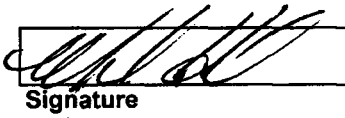
Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14550	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	2.7
31. Total volume of Solidified Organics (L):	85.8
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	88.5
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	97.7%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

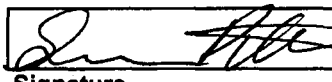
Visual Examination Operator 1:

R. CUMMINS		5-14-13
Enter Name	Signature	Date

Visual Examination Operator 2:

M. HADERLIE		5-14-13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		5-14-13
Enter Name	Signature	Date

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003		
Section 1: General Information		
1.	Container ID:	SRP14424
	a. Verified the Container ID in Line 1 matches the Container ID on the Container:	SP
	b. Container Type: 55 gal. drum or SWB:	55 GAL.
2.	Site ID and Location (Airlock):	IN-RWMC-ARP-5
3.	Batch Number:	IN-SRP-VE-000183
4.	Examination Start Date:	05/14/13
5.	Procedure CCP-TP-006, Rev.:	17
6.	a. Drum Packing Station (DPS) Number:	501
Enter "N/A" for items 6b through 6q if Daily Scale Checks were performed and SAT prior to the First VE of the Day.		
	DPS Scale Check	
	b. Scale Serial/ID Number:	N/A
	c. Scale Calibration Due Date:	N/A
	d. Test Weight ID:	N/A
	e. Test Weight Calibration Due Date:	N/A
	f. Test Weight (kgs):	N/A
	g. Scale Readout of Test Weight (kgs):	N/A
	h. Difference Between Test Weight and Scale Readout (kgs):	N/A
	i. DPS Scale Check SAT (Y):	N/A
	Container Scale Check	
	j. Scale Serial/ID Number:	N/A
	k. Scale Calibration Due Date:	N/A
	l. Test Weight ID:	N/A
	m. Test Weight Calibration Due Date:	N/A
	n. Test Weight (kg):	N/A
	o. Scale Readout of Test Weight (kgs):	N/A
	p. Difference Between Test Weight and Scale Readout (kgs):	N/A
	q. Container Scale Check SAT (Y):	N/A
7.	Measured Tare Weight of Container fully assembled (kgs):	34.0
	a. Container Manufacturer Lot Number:	237746
Comments:		
N/A		

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14424							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
6	a. *Iron-based metals/alloys (IM)*				0.0	N/A		0.0
7				N/A	N/A	8.0		0.0
8				N/A	N/A	8.0		0.0
9	b. Aluminum-based metals/alloys (AM)				0.0	N/A		0.0
10				N/A	N/A	3.0		0.0
11				N/A	N/A	3.0		0.0
12	c. Other metals (OM)				0.0	N/A		0.0
13		d. Lead			0.0	N/A		0.0
14				N/A	N/A	11.0		0.0
15				N/A	N/A	11.0		0.0
16		e. Beryllium			0.0	N/A		0.0
17				N/A	N/A	1.8		0.0
18				N/A	N/A	1.8		0.0
19		f. Depleted uranium			0.0	N/A		0.0
20				N/A	N/A	19.1		0.0
21				N/A	N/A	19.1		0.0
22		g. Copper			0.0	N/A		0.0
23				N/A	N/A	9.0		0.0
24				N/A	N/A	9.0		0.0
25		h. Other (See Note a)			0.0	N/A		0.0
26				N/A	N/A	0.0		0.0
27				N/A	N/A	0.0		0.0
28				N/A	N/A	0.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14424							
3	Section 2: Waste Material Parameter (WMP) Estimates							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate By Weight (kg)	11. Density (kg/L)		12.Volume (L)
5								
29	l.	Other inorganic materials (OI)			0.0	N/A		0.0
30		j.	Graphite		0.0	N/A		0.0
31				N/A	N/A	2.2		0.0
32				N/A	N/A	2.2		0.0
33		k.	Concrete		0.0	N/A		0.0
34				N/A	N/A	2.3		0.0
35				N/A	N/A	2.3		0.0
36		l.	Glass		0.0	N/A		0.0
37				N/A	N/A	2.0		0.0
38				N/A	N/A	2.0		0.0
39		m.	Firebrick		0.0	N/A		0.0
40				N/A	N/A	3.0		0.0
41				N/A	N/A	3.0		0.0
42		n.	Ceramics		0.0	N/A		0.0
43				N/A	N/A	2.0 - 5.0	0.0	0.0
44				N/A	N/A	2.0 - 5.0	0.0	0.0
45		o.	Sand		0.0	N/A		0.0
46				N/A	N/A	2.0		0.0
47				N/A	N/A	2.0		0.0
48		p.	Inorganic sorbents		0.0	N/A		0.0
49				N/A	N/A	0.1 - 2.8	0.0	0.0
50				N/A	N/A	0.1 - 2.8	0.0	0.0
51		q.	Other (See Note a)		0.0	N/A		0.0
52				N/A	N/A	0.0		0.0
53				N/A	N/A	0.0		0.0
54				N/A	N/A	0.0		0.0
55	r.	Cellulosics (C)			0.0	N/A		0.0
56		s.	Paper		0.0	N/A		0.0
57				PAPER (NSW)	N/A	0.9		0.0
58				N/A	N/A	0.9		0.0
59				N/A	N/A	0.9		0.0
60		t.	Cardboard		0.0	N/A		0.0
61				N/A	N/A	0.8		0.0
62				N/A	N/A	0.8		0.0
63		u.	Wood		0.0	N/A		0.0
64				N/A	N/A	1.0		0.0
65				N/A	N/A	1.0		0.0

	A	B	C	D	G	H	I	J
1	Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003							
2	Container ID: SRP14424							
3	**Section 2: Waste Material Parameter (WMP) Estimates**							
4	9. Waste Material Parameter and Item Description				10. WMP Estimate	11. Density		12.Volume
5					By Weight (kg)	(kg/L)		(L)
66	v. Rubber (R)				0.3	N/A		0.3
67				RUBBER TIGHTLY BOUND ON TOP (WAIP)	0.3	0.9 - 2.0	1.1	0.3
68				RUBBER (NSW)	N/A	0.9 - 2.0	0.0	0.0
69	w. Plastics (waste materials) (PW)				2.2	N/A		2.5
70				NO BAG OUT STUB AT THE BOTTOM OF THE CONTAINER VERIFIED	N/A	0.9		0.0
71				TRAY LINER AND BAG OUT STUB TIGHTLY BOUND ON TOP (WAIP)	1.4	0.9		1.6
72				PLASTIC TIGHTLY BOUND ON TOP	0.8	0.9		0.9
73				N/A	N/A	0.9		0.0
74	x. Organic matrix (OR)				111.7	N/A		93.1
75		x1. Sludge			111.7	N/A		93.1
76				LIGHT OLIVE GRAY PUTTY LIKE SLUDGE WITH CALCIUM SILICATE	111.7	1.0 - 1.5	1.2	93.1
77				N/A	N/A	1.0 - 1.5	0.0	0.0
78				N/A	N/A	1.0 - 1.5	0.0	0.0
79		x2. Other (See Note a)			0.0	N/A		0.0
80				N/A	N/A	0.0		0.0
81				N/A	N/A	0.0		0.0
82	y. Inorganic matrix (IN)				0.0	N/A		0.0
83		y1. Sludge			0.0	N/A		0.0
84				N/A	N/A	1.0 - 1.5	0.0	0.0
85				N/A	N/A	1.0 - 1.5	0.0	0.0
86				N/A	N/A	1.0 - 1.5	0.0	0.0
87		y2. Roaster Oxides			0.0	N/A		0.0
88				N/A	N/A	1.5 - 4.0	0.0	0.0
89				N/A	N/A	1.5 - 4.0	0.0	0.0
90				N/A	N/A	1.5 - 4.0	0.0	0.0
91		y3. Salt			0.0	N/A		0.0
92				N/A	N/A	0.0		0.0
93				N/A	N/A	0.0		0.0
94		y4. Other (See Note a)			0.0	N/A		0.0
95				N/A	N/A	0.0		0.0
96				N/A	N/A	0.0		0.0
97	z. Soils/gravel (S)				0.0	N/A		0.0
98				N/A	N/A	1.0 - 1.4	0.0	0.0
99				N/A	N/A	1.0 - 1.4	0.0	0.0
100	aa. TOTAL				114.2	N/A		95.9
101	13. (ORGANIC SLUDGE) weight (111.7) kg was obtained by subtracting the weighed waste weight of (2.5) kg and the container net weight of (34.0) kg from the gross weight (148.2) kg of the waste container. (148.2) - (2.5) - (34.0) = (111.7) kg							
102	a. If other material parameter(s) are identified, describe material in column 9 and enter corresponding material density value in column 11 based on an operator aid, engineering handbook, or other technical publication. Cite reference(s) below.							
103	b. N/A							
104								

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14424	
Section 3: Prohibited Item(s)	
14. Were all prohibited items listed below in lines 14a through 14m verified absent from the waste packaged for future WIPP disposition? (Y/N):	Y
a. Liquid Waste (Observable liquid not meeting the following criteria is prohibited: • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE • Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. • Observable liquid shall not be present in a container with EPA HWN U134 assigned)	
b. Non-Radioactive Pyrophorics / Radioactive Pyrophorics < 1% by weight	
c. Non-Mixed Hazardous waste	
d. Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials and/or other wastes.)	
e. Explosives	
f. Compressed Gases / Pressurized Containers (e.g., aerosol cans)	
g. Polychlorinated Biphenyls (PCB) (Present that are not authorized under an EPA PCB waste disposal authorization.)	
h. Ignitables	
i. Corrosives	
j. Reactive waste	
k. Sealed containers greater than 4 liters	
l. Heat-sealed bags (unvented) greater than 4 liters	
m. Sharp or heavy objects not adequately blocked, braced, or packaged	

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14424	
Section 4: Waste Packaging Data	
15. Measured Waste Depth (inches) (N/A the waste depth for an SWB)	31.0
16. Inner Bags:	
a. Total Number of Inner Bag(s):	0
b. Closure Method (See Below for Proper Designator):	N/A
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Layers of Confinement (>4 liters):	0
d. Estimated Weight of Each Inner Bag (kgs):	0.0
17. Liner Bags:	
a. Total Number of Liner Bag(s):	1
b. Closure Method (See Below for Proper Designator):	TTF
TT = Twist and tape, FT = Fold and tape, (Add "F" after designator if bag is filtered)	
c. Estimated Weight of Each Liner Bag (kgs):	0.9
18. Rigid Liner Present? (Y/N):	Y
19. Rigid Liner with NO lid Verified? (Y/N):	Y
20. Protection is Adequate for Heavy and/or Sharp Objects? (Y/N):	Y
21. Lid Locking Ring Bolt / Bolt(s) Tightening:	
a. Container Manufacturer Lot Number:	237746
b. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Serial/ID Number:	723312
c. Container Lid / Lid Locking Ring Bolt(s) Torque Wrench Calibration Due Date:	07/18/13
d. Container Lid / Lid Locking Ring Bolt(s) Closed Per Manufacturer's Specification? (Y):	Y
e. Time the container was closed:	1423
22. Measured gross weight of loaded container, fully assembled (kgs):	148.2
a. Gross weight of loaded container, fully assembled converted to pounds (lbs)	326.7
23. Container closure date (mm/dd/yy):	05/14/13
24. Container Filter Torque Data:	
a. Filter Torque Wrench Serial/ID Number:	722444
b. Filter Torque Wrench Calibration Due Date:	07/22/13
c. Filter Model No.:	NUCFIL-019DS
d. Filter Serial No.:	JM-1010
e. Filter Serial No.: (N/A, if container does not contain multiple filter(s))	N/A
f. Filter(s) Torqued to Manufacturer's Specifications? (Y):	Y
25. Percent fill of container:	95.0%
26. Total layers of confinement:	1
27. Measured net weight of waste (kgs):	114.2
28. Estimated plastic added from packaging, including rigid liner (kgs):	5.4
29. Estimated steel added from packaging (kgs):	28.6
29a Total net weight of fully assembled container (kgs):	34.0

Attachment 1 - CCP Waste Visual Examination Technique Data Form SCO# 798 addendum 5 Windows XP 2002 MS Excel 2003	
Container ID: SRP14424	
Section 5: Waste Data	
30. Total volume of Heterogeneous Debris (L):	2.8
31. Total volume of Solidified Organics (L):	93.1
32. Total volume of Solidified Inorganics (L):	0.0
33. Total volume of Soils/Gravel (L):	0.0
a. Total volume (L):	95.9
34. Waste Stream and Waste Matrix Code:	
a. ID-SDA-DEBRIS (S5400):	
b. ID-SDA-SLUDGE (S3900):	
c. ID-SDA-SOIL (S4200):	
d. ID-RF-S3114 (S3114):	X
e. ID-RF-S3150 (S3150):	
f. BNINW216 (S3100):	
g. BNINW218 (S3121):	
h. BN600 (S5490):	
i. Other:	
35. Beryllium mass (kg):	0.0
36. Beryllium concentration (wt%):	0.0%
37. Solidified organics concentration (wt%):	97.8%
38. If there was any documented amount of Organic Matrix (OR) in the waste, mark (X)	X

Section 6: Approvals

Visual Examination Operator 1:

J. STANTON	Jodi M. Stanton	5/14/13
Enter Name	Signature	Date

Visual Examination Operator 2:

L. MUNTEAN	L. Munteau	5/14/13
Enter Name	Signature	Date

Visual Examination Expert:

S. PATTEE		5-14-13
Enter Name	Signature	Date

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist

Batch Data Report No.: TW-SRP-VE-000183

Description			
1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods used?	☐ NO	☒ YES	☐ NA
a. Was the description of the waste items adequate?	☐ NO	☒ YES	☐ NA
2. Was the correct revision of operating procedure used? (Attachment 1, Section 1, Line 5)	☐ NO	☒ YES	☐ NA
3. Were the following calculation spot checks performed?			
a. Attachment 1, Section 2: Verify the total waste volume in Column 12, Row aa does not exceed 208 L for a 55-gallon drum or 1456 L for an SWB and verify the estimated weights in Column 10, Row aa matches the measured net weight of waste in Attachment 1, Section 4, Row 27.	☐ NO	☒ YES	☐ NA
b. Attachment 1, Section 5: Verify the total waste volume in Row 33 a., matches the total waste volume in Section 2, Column 12, Row aa.	☐ NO	☒ YES	☐ NA
c. Attachment 1, Section 1: Check hand calculations in Lines 6h and 6p, and any additional hand calculations recorded in the comments field or in Section 2, Line 13.	☐ NO	☒ YES	☐ NA
4. Is only one waste stream selected in Line 34 of Attachment 1, Section 5, and is it consistent with the values shown in Attachment 1, Section 2, Column 12?	☐ NO	☒ YES	☐ NA
5. Is the data entered in the correct units and correct number of significant figures?	☐ NO	☒ YES	☐ NA
6. Were the data reviewed for transcription errors?	☐ NO	☒ YES	☐ NA
7. Does the BDR include VE for up to 20 containers?	☐ NO	☒ YES	☐ NA
8. Are BDR contents complete and do they match, Attachment 3, CCP Waste VE Batch Data Report Table of Contents?	☐ NO	☒ YES	☐ NA
9. Was completeness verified for data entry on the CCP VE Technique Data Form for the following?			
a. Section 1	☐ NO	☒ YES	☐ NA
b. Section 2	☐ NO	☒ YES	☐ NA
c. Section 3	☐ NO	☒ YES	☐ NA
d. Section 4	☐ NO	☒ YES	☐ NA
e. Section 5	☐ NO	☒ YES	☐ NA

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: IN-SRP-VE-000183

Description			
10. Is all the data signed and dated in Attachment 1, Section 6, using reproducible ink, and by the individual(s) generating it?	☐ NO	☒ YES	☐ NA
11. Is all data entered clearly, legibly, and accurately?	☐ NO	☒ YES	☐ NA
12. Were discrepancies between the operators reconciled?	☐ NO	☐ YES	☒ NA
13. Are all changes to original data lined out, initialed and dated by the individual making the changes?	☐ NO	☒ YES	☐ NA
14. Were data changes made by the individual who originally collected the data or an equally qualified individual?	☐ NO	☒ YES	☐ NA
15. Was the DPS scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
16. Was the daily DPS scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
17. Was the container scale in calibration prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
18. Was the daily container scale check SAT prior to the first VE Technique of the day and documented correctly?	☐ NO	☒ YES	☐ NA
19. Was the torque wrench(es) in calibration prior to VE Technique and documented correctly?	☐ NO	☒ YES	☐ NA
20. Were NCR(s) initiated as indicated in Attachment 1, Section 1, dispositioned, and approved appropriately?	☐ NO	☐ YES	☒ NA
21. Was the correct waste stream and waste matrix code assigned?	☐ NO	☒ YES	☐ NA
22. Is there a valid VE data form for each drum in the batch?	☐ NO	☒ YES	☐ NA
23. Were the operators trained and qualified in accordance with the applicable requirements?	☐ NO	☒ YES	☐ NA

Attachment 2 – CCP Waste VE Technique Independent Technical Reviewer Checklist (Continued)

Batch Data Report No.: IN-SRP-VE-000183

Description			
24. Was precision maintained by reconciling any discrepancies between the operator(s) and the ITR with regard to identification of waste matrix code, liquids in excess of WIPP Hazardous Waste Facility Permit and WIPP Waste Acceptance Criteria limits and compressed gases?	☐ NO	☐ YES	☒ NA

Description

Comments:

N/A

I have reviewed 100 percent of the container-specific and batch data in this BDR and find it acceptable.

ITR: GERARD BARR | Gerard Barr | 5-16-13

Printed Name | Signature | Date

DIVIDER

PAGE

Attachment 3 – Visual Examination Site Project Manager Checklist

Batch Data Report No.: INERHVE12001

1. Has all the data received an independent technical review as evidenced by a completed checklist (Attachment 2) and the appropriate ITR signature?		☐ NO	☑ YES
2. Are BDR contents complete and match the Visual Examination Batch Data Report Table of Contents?		☐ NO	☑ YES
3. Is the BDR complete (appropriately filled in forms for each container)?		☐ NO	☑ YES
4. Have the RH Quality Assurance Objectives (QAOs) for VE been met? Precision – reconciled discrepancies between operators Accuracy – trained operators Representativeness – description of container contents Completeness – completed data form and/or recording Comparability – proper training and adequate AK for unopened containers		☐ NO ☐ NO ☐ NO ☐ NO ☐ NO ☐ NO	☑ YES ☑ YES ☑ YES ☑ YES ☑ YES ☑ YES
5. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☑ N/A

Comments

No NCR's.

SPM:

Laura Nelson
Printed Name

Laura Nelson
Signature

11-19-12
Date

COPY

CCP RECORDS ORIGINAL
DATE REC'D 11.19.12

Attachment 4 – Visual Examination Batch Data Report Cover Sheet

Batch Data Report No.: INLRHVE12001 Date: 11/14/12

	Waste Container ID Number:
1	FF-43C
2	FF-45D
3	DD-45D
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

N
A
ASP 11-14-12

CCP RECORDS ORIGINAL
DATE REC'D 11-15-12

001

Attachment 5 – Visual Examination Batch Data Report Table of Contents

Batch Data Report No.: INLRHVE12001 Date: 11/14/12

Item	Description	Page No.
1	Visual Examination Batch Data Report Cover Sheet (Attachment 4)	1
2	Visual Examination Batch Data Report Table of Contents (Attachment 5)	2
3	Visual Examination Data Forms (Attachment 1)	3
4	Visual Examination Independent Technical Reviewer Checklist (Attachment 2)	15
5	Copy of NCRs (N/A [If not applicable])	N/A

Attachment 1 – Visual Examination Data Form

Site ID: RHINL			
Examination Date: 11/14/12	Batch Number: INLRHVE12001		
Procedure #: CCP-TP-500	Revision #: 11	Video Number: N/A	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: N/A	Recording Stop: N/A	

Initial Container ☒ N/A	Final Container ☐ N/A
Container or Package ID Number:	Container or Package ID Number: FF-43C
Container Type:	Container Type: 55 GAL DRUM
Waste Matrix Code:	Waste Matrix Code: S5110
Waste Stream:	Waste Stream: ID-EBR-S5000
	Rigid Liner: ☐Y ☒N Type: / Rigid Liner Lid: ☐ Y ☒N
	Rigid Liner Vented or Hole Size: N/A

Percent Fill:	Percent Organic Waste:	Percent Fill: 90	Percent Organic Waste: 10
Layers of Confinement:	Closure Method:	Layers of Confinement: 0	Closure Method: N/A

Comments (e.g., filter information, NCRs):
FILTER MODEL: NUCFIL- 019SDS, SERIAL NUMBER: BL-34

Waste Description:
30 GALLON DRUM # FF-43C (IM)
WIRE ROPE SLING WITH METAL HOOK (IM)
BREACHED PLASTIC SLEEVING (P)
NYLON DRUM LIFTING BAG (P)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number FF-43C

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:

Bret Parmer
Print Name

J Bret Parmer
Signature

11-14-12
Date

Visual Examination Operator 2:

Jeffrey Poole
Print Name

J.S. Poole
Signature

11-14-12
Date

Attachment 1 – Visual Examination Data Form

Site ID: RHINL			
Examination Date: 11/12/12	Batch Number: INLRHVE12001		
Procedure #: CCP-TP-500	Revision #: 11	Video Number:NA	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: N/A	Recording Stop: N/A	

Initial Container ☐ N/A	Final Container ☒ N/A
Container or Package ID Number: FF-43C	Container or Package ID Number:
Container Type: 30 GAL DRUM	Container Type:
Waste Matrix Code: S5110	Waste Matrix Code:
Waste Stream: ID-EBR-S5000	Waste Stream:
	Rigid Liner: ☐Y ☐N Type: / Rigid Liner Lid: ☐ Y ☐N
	Rigid Liner Vented or Hole Size:
Percent Fill: 30 Percent Organic Waste: 0	Percent Fill: Percent Organic Waste:
Layers of Confinement: 0 / Closure Method: N/A	Layers of Confinement: / Closure Method:

Comments (e.g., filter information, NCRs): NUCFIL-019DS, SERIAL NUMBER GE-1072

Waste Description:
METAL BRICKS 4 (IM) (OM)
WIRE ROPE SLINGS 3 (IM)
DRILL BITS 3 (IM)
WIRE ROPE WITH METAL HOOK (IM)
BRACING (AM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number FF-43C

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:
Bret Parmer (Print Name) — Signature — Date: 11-12-12

Visual Examination Operator 2:
Jeffrey Poole (Print Name) — Signature — Date: 11-12-12

Attachment 1 – Visual Examination Data Form

Site ID: RHINL			
Examination Date: 11/14/12	Batch Number: INLRHVE12001		
Procedure #: CCP-TP-500	Revision #: 11	Video Number: N/A	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: N/A	Recording Stop: N/A	

Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: FF-45D	
Container Type:		Container Type: 55 GAL DRUM	
Waste Matrix Code:		Waste Matrix Code: S5110	
Waste Stream:		Waste Stream: ID-EBR-S5000	
		Rigid Liner: ☐Y ☒N Type:	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: N/A	

Percent Fill:	Percent Organic Waste:	Percent Fill: 90	Percent Organic Waste: 10
Layers of Confinement:	Closure Method:	Layers of Confinement: 0	Closure Method: N/A

Comments (e.g., filter information, NCRs):
FILTER MODEL: NUCFIL- 019SDS, SERIAL NUMBER: BL-50

Waste Description:
30 GALLON DRUM # FF-45D (IM)
WIRE ROPE SLING WITH METAL HOOK (IM)
BREACHED PLASTIC SLEEVING (P)
NYLON DRUM LIFTING BAG (P)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number FF-45D

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:

Bret Parmer
Print Name

J Bret Parmer
Signature

11-14-12
Date

Visual Examination Operator 2:

Jeffrey Poole
Print Name

J.S. Poole
Signature

11-14-12
Date

Attachment 1 – Visual Examination Data Form

Site ID: RHINL			
Examination Date: 11/12/12	Batch Number: INLRHVE12001		
Procedure #: CCP-TP-500	Revision #: 11	Video Number:N/A	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: N/A	Recording Stop: N/A	

Initial Container ☐ N/A	Final Container ☒ N/A
Container or Package ID Number: FF-45D	Container or Package ID Number:
Container Type: 30 GAL DRUM	Container Type:
Waste Matrix Code: S5110	Waste Matrix Code:
Waste Stream: ID-EBR-S5000	Waste Stream:
	Rigid Liner: ☐Y ☐N Type: / Rigid Liner Lid: ☐ Y ☐N
	Rigid Liner Vented or Hole Size:
Percent Fill: 20 Percent Organic Waste: 0	Percent Fill: Percent Organic Waste:
Layers of Confinement: 0 / Closure Method: N/A	Layers of Confinement: / Closure Method:
Comments (e.g., filter information, NCRs): NUCFIL-019DS, SERIAL NUMBER AJ-2600	

Waste Description:
METAL BRICKS 2 (IM) (OM)
WIRE ROPE SLINGS 2 (IM)
BRACING (AM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number FF-45D

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:
Bret Parmer
Print Name
J. Bret Parmer
Signature
11-12-12
Date

Visual Examination Operator 2:
Jeffrey Poole
Print Name
J.S. Poole
Signature
11-12-12
Date

Attachment 1 – Visual Examination Data Form

Site ID: RHINL			
Examination Date: 11/14/12	Batch Number: INLRHVE12001		
Procedure #: CCP-TP-500	Revision #: 11	Video Number: N/A	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: N/A	Recording Stop: N/A	
Initial Container ☒ N/A	Final Container ☐ N/A		
Container or Package ID Number:	Container or Package ID Number: DD-45D		
Container Type:	Container Type: 55 GAL DRUM		
Waste Matrix Code:	Waste Matrix Code: S5110		
Waste Stream:	Waste Stream: ID-EBR-S5000		
	Rigid Liner: ☐Y ☒N Type:	Rigid Liner Lid: ☐ Y ☒N	
	Rigid Liner Vented or Hole Size: N/A		
Percent Fill: Percent Organic Waste:	Percent Fill: 90 Percent Organic Waste: 10		
Layers of Confinement: Closure Method:	Layers of Confinement: 0	Closure Method: N/A	
Comments (e.g., filter information, NCRs): FILTER MODEL: NUCFIL- 019SDS, SERIAL NUMBER: BL-39			

Waste Description:
30 GALLON DRUM # DD-45D (IM)
WIRE ROPE SLING WITH METAL HOOK (IM)
BREACHED PLASTIC SLEEVING (P)
NYLON DRUM LIFTING BAG (P)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number DD-45D

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags NOT defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:
Bret Parmer (Print Name) — J Bret Parmer (Signature) — 11-14-12 (Date)

Visual Examination Operator 2:
Jeffrey Poole (Print Name) — J.S. Poole (Signature) — 11-14-12 (Date)

Attachment 1 – Visual Examination Data Form

Site ID: RHINL			
Examination Date: 11/12/12	Batch Number: INLRHVE12001		
Procedure #: CCP-TP-500	Revision #: 11	Video Number:N/A	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: N/A	Recording Stop: N/A	

Initial Container ☐ N/A	Final Container ☒ N/A
Container or Package ID Number: DD-45D	Container or Package ID Number:
Container Type: 30 GAL DRUM	Container Type:
Waste Matrix Code: S5110	Waste Matrix Code:
Waste Stream: ID-EBR-S5000	Waste Stream:
	Rigid Liner: ☐Y ☐N Type: / Rigid Liner Lid: ☐ Y ☐N
	Rigid Liner Vented or Hole Size:
Percent Fill: 20 Percent Organic Waste: 0	Percent Fill: Percent Organic Waste:
Layers of Confinement: 0 / Closure Method: N/A	Layers of Confinement: / Closure Method:

Comments (e.g., filter information, NCRs): NUCFIL-019DS, SERIAL NUMBER DJ-1815

Waste Description:

METAL BRICKS 2 (IM) (OM)
WIRE ROPE SLINGS WITH HOOKS 2 (IM)
BRACING (AM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number DD-45D

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:
Bret Parmer (Print Name) — J Bret Parmer (Signature) — 11-12-12 (Date)

Visual Examination Operator 2:
Jeffrey Poole (Print Name) — J.S. Poole (Signature) — 11-12-12 (Date)

Attachment 2 – Visual Examination Independent Technical Reviewer Checklist

Batch Data Report No.: INLRHVE12001

1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods (procedure) used?	☐ NO	☒ YES	☐ N/A
2. Was the correct revision of the operating procedure used?	☐ NO	☒ YES	☐ N/A
3. Were all the transcription errors corrected?	☐ NO	☐ YES	☒ N/A
4. Are BDR contents complete and match the Visual Examination Batch Data report Table of Contents?	☐ NO	☒ YES	☐ N/A
5. Does the BDR include VE for no more than 20 containers?	☐ NO	☒ YES	☐ N/A
6. Is all data recorded signed and dated in reproducible ink?	☐ NO	☒ YES	☐ N/A
7. Is all raw data recorded clearly, legibly, and accurately?	☐ NO	☒ YES	☐ N/A
8. Are all changes to original data lined out, initialed and dated by the individual making the changes or an individual authorized to make the change?	☐ NO	☐ YES	☒ N/A
9. Is there an adequate written description of the contents?	☐ NO	☒ YES	☐ N/A
10. Were the recording equipment checks satisfactory?	☐ NO	☐ YES	☒ N/A
11. Has each container in this BDR been evaluated for the presence of prohibited wastes?	☐ NO	☒ YES	☐ N/A
12. Has the physical waste form in each container in this BDR been evaluated against the Waste Stream Description and the Waste Matrix Code?	☐ NO	☒ YES	☐ N/A
13. Have the RH Quality Assurance Objectives (QAOs) for VE been met?	☐ NO	☒ YES	☐ N/A
Precision – reconciled discrepancies between operators or between the operator and ITR.	☐	☒	☐
Accuracy – trained operators	☐	☒	☐
Representativeness – description of container contents	☐	☒	☐
Completeness – completed data form and/or recording	☐	☒	☐
Comparability – proper training and adequate AK source documents are available for unopened containers.	☐	☒	☐
14. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☒ N/A
Comments: N/A			

Independent Technical Reviewer:

Spencer Patten
Printed Name

Signature

11/15/12
Date

COPY

National TRU Program Certification
Effective Date: 02/28/2013

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: Spencer Troy Pattee

Education/Experience	
Resume documenting education and experience on file with National TRU Program Certification (NTPC) Training.	Cheryl Munoz 05-22-13 NTPC Training — Date

Job Specific Training

☐ Initial Qualification ☑ Requalification ☐ Full Requalification

Qualification Limit	**This qualification is valid for two (2) years.** If necessary, additional training may be required by the Site Project Manager (SPM) or the Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the Manager Responsible for Training. The candidate must successfully complete the entire qualification card to reestablish qualification. Qualification is valid for this site and process only.
Requalification Requirements	Items required for requalification are identified by text.

Indoctrination
(Required at Initial Qualification and Full Requalification)

Initial/Indoctrination Reading:

1. CCP-HSP-014, *Health and Safety Program Implementation for CCP*
2. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
3. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
4. CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)*
5. CCP-QP-002, *CCP Training and Qualification Plan*
6. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
7. CCP-QP-008, *CCP Records Management*
8. CCP-QP-010, *CCP Document Preparation, Approval, and Control*
9. CCP-QP-016, *CCP Control of Measuring and Testing Equipment*
10. CCP-QP-022, *CCP Software Quality Assurance Plan*
11. CCP-QP-023, *CCP Handling, Storage, and Shipping*
12. CCP-QP-029, *CCP Corrective Action Management*
13. CCP-TP-006, *CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste*

I have read the listed Initial/Indoctrination Reading and understand my responsibilities as applicable to the procedures above.	N/A Trainee — Date

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: Spencer Troy Pattee

Additional Training Requirements	
1. WAP/QAPjP Briefing and Test *(One-time Requirement)*	Cheryl Mings NTPC Training — 05-22-13 Date
2. CCP-VE-101, *Visual Examination (VE) TRU Waste Characterization Briefing (Always Required)*	Cheryl Mings NTPC Training — 05-22-13 Date
3. VE Comprehensive Exam *(Always Required)*	Cheryl Mings NTPC Training — 05-22-13 Date

Formal Training	On-the-Job Training (OJT) Knowledge Requirements *(Required at Initial Qualification and Full Requalification)*	Visual Examination Expert (VEE) Subject Matter Expert (SME)/OJT Signature/Date
CCP-PO-001	1. List the Quality Assurance objectives validated by VE.	
CCP-QP-002	2. State the purpose of the List of Qualified Individuals (LOQI).	
CCP-QP-005	3. State when a nonconformance report (NCR) should be prepared and who is responsible to initiate it.	
	4. Describe how nonconforming items are documented.	
	5. Describe how nonconforming items are controlled to prevent their use.	N A
	6. State who has the responsibility to validate the NCR once initiated.	
	7. Describe how to revise an NCR.	QSP 5-22-13
	8. Describe how to void an NCR.	
CCP-QP-029	9. Describe the purpose of the corrective action report (CAR) process.	
	10. State the person responsible for originating a CAR.	
	11. Describe how corrective actions are documented.	
	12. State who has the responsibility to validate the CAR once initiated.	

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: Spencer Troy Pattee

	13. Describe actions personnel may take when conditions adverse to quality are discovered.	
CCP-QP-008	14. List the responsibilities of record generators.	
	15. State the storage and control requirements for Records.	
	16. Explain the process and proper method to make corrections or revisions to Records.	
CCP-QP-010	17. State the importance of using approved documents.	
	18. State when to verify a document revision.	
CCP-TP-006/ CCP-VE-101 Briefing	19. Explain how to confirm the electronic .xls data sheet on the sftp site.	
	20. Explain the purpose of VE.	N A
	21. State the requirements of the VE Operators in performing VE.	
	22. Describe where to obtain the tare weight of a waste container.	
	23. What must the VE Operators concur on during the performance of VE?	
	24. What actions are taken if the VE Operators do not concur?	
	25. Discuss the difference in performing VE on debris waste versus homogeneous waste.	
	26. Discuss the difference in identification of soils versus homogeneous waste.	
	27. Define how often calibration due dates should be checked on certified equipment.	
	28. State how to verify the calibration of M&TE used in VE.	
	29. State individual responsible for verifying the calibration of M&TE.	
	30. Describe what is done with an out-of-calibration piece of M&TE.	
	31. Discuss the requirements for packaging of sharp or heavy objects.	

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: Spencer Troy Pattee

CCP-TP-006	32. Describe how to obtain the net weight of a waste container.	
	33. Define "layers of confinement".	
	34. State how often a scale operational check is performed.	
	35. State the Waste Material Parameters (WMPs).	
	36. Define the following WMP acronyms: a. IN d. S b. OR e. R c. PW	
	37. Describe the actions taken if prohibited items are found.	
	38. State five (5) examples of prohibited items.	
	39. Describe how a non-transparent container is handled when liquid is suspected.	N A
	40. State the acceptable liquid limits in a characterized container.	
	41. Discuss the process of absorbing liquids that may be processed at the host facility.	
	42. Discuss how unvented heat-sealed bags are handled during processing of prohibited items.	
	43. Describe the conditions that would generate an NCR during the VE process.	
	44. State three (3) examples of potentially "unsafe" packages/items that may be encountered.	
	45. State who decides whether to open a package/item and why it may be necessary.	
	46. Describe the information that should be recorded when describing waste items.	
	47. Describe the unit of measurement for weights to be recorded during VE.	
	48. Describe the unit of measurement that the final weights are converted to in the VE Data Sheet.	
	49. State how to determine the weight of a material using historically derived waste weights.	

QSP 5-22-13

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: Spencer Troy Pattee

CCP-TP-006	50. Define WAIP.	
	51. Describe how to determine Volume Utilization Percentage (VUP).	
	52. Define the increments in which the VUP are recorded.	
	53. Explain who is allowed to make data changes in data sheets.	
	54. State the criteria for the rigid liner/liner bag to be considered vented.	
	55. Describe the authorized methods of closure of a liner bag.	
	56. Explain how to obtain a closure time and why it is important.	
	57. State how to determine the torque value for the ring bolt.	
	58. State how to determine the torque value for the filter.	N A
	59. Define waste matrix codes.	
	60. Describe waste stream descriptions.	
	61. State the number of waste containers allowed per Batch Data Report (BDR).	
	62. Describe the information contained in a BDR per CCP-TP-006.	
	63. Explain the responsibilities and functions of the Independent Technical Reviewer (ITR).	
	64. State who cannot complete the ITR checklist in a testing batch.	
	65. Describe what constitutes a completed BDR.	
	66. State the differences and similarities between targeted and TRU waste.	
	67. State what waste is currently approved for standard waste boxes (SWB).	
	68. State how containers are tracked within the characterization process.	

QSP 5-22-13

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: Spencer Troy Pattee

	69. Define how many digits in a BDR number.			N/A SRP 5-22-13
	70. State the number of digits that are in a drum number.			
	71. Describe the waste matrix codes that could be assigned once VE is complete.			
	72. Define the waste stream descriptions assigned to the Accelerated Retrieval Project (ARP) and the Sludge Repackaging Project (SRP).			
	73. Define the responsibilities of the VEE.			
Formal Training	**OJT Practical Requirements[1]** *(This section must be performed in the presence of a VEE) (Always Required)*			**VEE SME/OJT Signature/Date**
CCP-TP-006	1. Verify scale calibration check.	(P)	S	Q.S. Poole 5-21-13
	2. Obtain the net weight for the waste container.	(P)	S	Q.S. Poole 5-21-13
	3. Estimate the VUP.	(P)	S	Q.S. Poole 5-21-13
	4. Determine the WMP.	(P)	S	Q.S. Poole 5-21-13
	5. Describe WMP on the VE Data Sheet.	(P)	S	Q.S. Poole 5-21-13
	6. Obtain weight of each WMP.	(P)	S	Q.S. Poole 5-21-13
	7. Determine layers of confinement.	(P)	S	Q.S. Poole 5-21-13
	8. Identify and process prohibited items.	P	(S)	Q.S. Poole 5-21-13
	9. Obtain waste container gross weight.	(P)	S	Q.S. Poole 5-21-13
	10. Complete data sheets.	(P)	S	Q.S. Poole 5-21-13
	11. Complete ITR checklist.	(P)	S	Q.S. Poole 5-20-13
	12. Maintain VE logbooks.	(P)	S	Q.S. Poole 5-22-13
	13. Compile a batch data report BDR.	P	(S)	Q.S. Poole 5-21-13

[1] For simulated steps that involve the recording of information, the steps can be satisfied by the trainee's ability to identify the specific location in the correct record form where actual data would be entered, and explain where the information would be obtained. All required calculations will actually be performed; for simulations, representative data will be used in lieu of actual data. Circle "P" if actually performed or "S" if requirement was simulated.

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: Spencer Troy Pattee

Approvals	
I have completed formal training and received OJT for this position. I fully understand my responsibilities as a VE Operator/ITR at INL.	Spencer Pattee — Trainee Signature *(printed name and signature)* — 5-22-13 Date
I have monitored the training of this individual and believe they are ready to perform the duties of a VE Operator/ITR at INL. *(Validation by the VEE SME/OJT instructor(s) involved in the training of this individual)*	Jeffrey Poole — VEE SME/OJT Instructor *(printed name and signature)* — 5-22-13 Date
	N/A — VEE SME/OJT Instructor *(printed name and signature)* — Date
I approve this employee to perform the duties of a VE Operator/ITR at INL.	Jim Vernon — SPM *(printed name and signature)* — 5-22-13 Date

Approved for Content & Format: **Jeffrey Poole** ***(Approval on File)*** — SME/OJT — **02/28/2013** Date

Approved for Applicability, Content & Format: **Andrew Stallings** ***(Approval on File)*** — Cognizant Engineer — **02/28/2013** Date

Approved for Content: **Jim Vernon** ***(Approval on File)*** — SPM — **02/28/2013** Date

Approved for Applicability, Content, Format, & Use: **A.J. Fisher** ***(Approval on File)*** — Manager Responsible for Training — **02/28/2013** Date

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Central Characterization Project Effective Date: 10/5/2011	RH-VE-01, Rev. 4 Page 1 of 6

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
for Remote-Handled (RH) Waste
Qualification Card

Name: Jeff Poole	Badge Number: [redacted]
Email Address: [redacted]	

Job Specific Training	
☐ Initial Qualification	☒ Requalification
Qualification Limit	**This qualification is valid for two (2) years.** If necessary, additional training may be required by the CCP Lead Site Project Manager (SPM) or the CCP Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the CCP Manager Responsible for Training. The candidate must successfully complete the entire CCP qualification card to reestablish qualification.
Requalification Requirements	Items required for requalification are identified by text.

Indoctrination

(Required at initial qualification, or in the event of requalification after disqualification only.)

Initial/Indoctrination Reading:

1. DOE/WIPP 02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*
2. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
3. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
4. CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*
5. CCP-QP-002, *CCP Training and Qualification Plan*
6. CCP-QP-004, *CCP Corrective Action Management*
7. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
8. CCP-QP-006, *CCP Corrective Action Reporting and Control*
9. CCP-QP-008, *CCP Records Management*
10. CCP-QP-010, *CCP Document Preparation Approval and Control*
11. CCP-QP-016, *CCP Control of Measuring, Testing, and Data Collection Equipment*
12. CCP-QP-023, *CCP Handling, Storage, and Shipping*
13. CCP-TP-163, *CCP Standard VE of Records*
14. CCP-TP-500, *CCP Remote-Handled Waste Visual Examination*
15. CCP-TP-513, *CCP Procedure for Radiological Documentation Package for Dimensional or Gravimetric Radiological Characterization for Remote-Handled Transuranic Waste*

I have read the listed initial/indoctrination reading and understand my responsibilities as applicable to the procedures above.	N/A
	Trainee — Date

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
for Remote-Handled (RH) Waste
Qualification Card

Name: Jeff Poole	**Badge Number:** [redacted]
Email Address: [redacted]	

Additional Training Requirements	
1. WAP/QAPjP Briefing and Test. *(One-time requirement)*	Michele Billett 2/1/12 CCP Training — Date
2. Visual Examination (VE) TRU Waste Characterization Briefing for Contact-Handled (CH) & Remote-Handled (RH) Waste *(Required at initial and each requalification)*	Michele Billett 2/1/12 CCP Training — Date
3. CCP VE Comprehensive Exam (score 80% or higher) administered by CCP Training. *(To be administered at initial and each requalification)*	Michele Billett 2/1/12 CCP Training — Date

Formal Training	**On-the-Job Training (OJT) Knowledge Requirements** *(Required at initial qualification or in the event of requalification after disqualification only)*	**Visual Examination Expert (VEE) Subject Matter Expert (SME)/OJT Signature/Date**
CCP-PO-001	1. List the VE Quality Assurance Objectives (QAOs) per the WAP.	
	2. List the VE Data Quality Objectives (DQOs) per the WAP.	
DOE/WIPP 02-3214	3. List the VE QAOs per the PIP.	
	4. List the VE DQOs per the PIP.	
CCP-QP-002	5. State the purpose of the List of Qualified Individuals (LOQI).	
CCP-QP-005	6. State when a nonconformance report (NCR) should be prepared and who is responsible to initiate it.	N A
	7. Describe how nonconforming items are documented.	
	8. Describe how nonconforming items are controlled to prevent their use.	
	9. State who has the responsibility to validate the NCR once initiated.	
	10. Describe how to revise a NCR.	
	11. Describe how to void a NCR.	

TRP 1-19-12

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Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
for Remote-Handled (RH) Waste
Qualification Card

Name: Bret Parmer

Education/Experience	
Resume documenting education and experience on file with Central Characterization Project (CCP) Training.	Cheryl Munyon 01-15-13 CCP Training Date

Job Specific Training

☐ **Initial Qualification** ☑ **Requalification** ☐ **Full Requalification**

Qualification Limit	**This qualification is valid for two (2) years.** If necessary, additional training may be required by the CCP Site Project Manager (SPM) or the CCP Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the CCP Manager Responsible for Training. The candidate must successfully complete the entire CCP qualification card to reestablish qualification.
Requalification Requirements	Items required for requalification are identified by text.

Indoctrination
(Required at Initial Qualification and Full Requalification)

Initial/Indoctrination Reading:

1. DOE/WIPP 02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*
2. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
3. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
4. CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC)*
5. CCP-QP-002, *CCP Training and Qualification Plan*
6. CCP-QP-004, *CCP Corrective Action Management*
7. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
8. CCP-QP-006, *CCP Corrective Action Reporting and Control*
9. CCP-QP-008, *CCP Records Management*
10. CCP-QP-010, *CCP Document Preparation, Approval, and Control*
11. CCP-QP-016, *CCP Control of Measuring and Testing Equipment*
12. CCP-QP-023, *CCP Handling, Storage, and Shipping*
13. CCP-TP-163, *CCP Evaluation of Waste Packaging Records for Visual Examination of Records*
14. CCP-TP-500, *CCP Remote-Handled Waste Visual Examination*
15. CCP-TP-513, *CCP Procedure for Dimensional or Gravimetric Measurements for Radiological Characterization of Remote-Handled Transuranic Waste*

I have read the listed Initial/Indoctrination Reading and understand my responsibilities as applicable to the procedures above.	N/A Trainee Date

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
for Remote-Handled (RH) Waste
Qualification Card

Name: Bret Parmer

Additional Training Requirements	
1. WAP/QAPjP Briefing and Test *(One-time Requirement)*	CCP Training 01-15-13 Date
2. CCP-VE-101, *Visual Examination (VE) TRU Waste Characterization Briefing (Always Required)*	CCP Training 01-15-13 Date
3. CCP VE Comprehensive Exam *(Always Required)*	CCP Training 01-15-13 Date

Formal Training	On-the-Job Training (OJT) Knowledge Requirements *(Required at Initial Qualification and Full Requalification)*	Visual Examination Expert (VEE) Subject Matter Expert (SME)/OJT Signature/Date
CCP-PO-001	1. List the VE Quality Assurance Objectives (QAOs) per the WAP.	
	2. List the VE Data Quality Objectives (DQOs) per the WAP.	
DOE/WIPP 02-3214	3. List the VE QAOs per the PIP.	
	4. List the VE DQOs per the PIP.	
CCP-QP-002	5. State the purpose of the List of Qualified Individuals (LOQI).	N A
CCP-QP-005	6. State when a nonconformance report (NCR) should be prepared and who is responsible to initiate it.	
	7. Describe how nonconforming items are documented.	
	8. Describe how nonconforming items are controlled to prevent their use.	1-9-13
	9. State who has the responsibility to validate the NCR once initiated.	
	10. Describe how to revise a NCR.	
	11. Describe how to void a NCR.	
CCP-QP-006	12. Describe the purpose of the corrective action report (CAR) process.	

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
for Remote-Handled (RH) Waste
Qualification Card

Name: Bret Parmer

	13. State the person responsible for originating a CAR.	
	14. Describe how corrective actions are documented.	
	15. State who has the responsibility to validate the CAR once initiated.	
	16. Describe actions CCP personnel may take when conditions adverse to quality are discovered.	
CCP-QP-008	17. List the responsibilities of record generators.	
	18. State the storage and control requirements for CCP records.	
	19. Explain the process and proper method to make corrections or revisions to CCP records.	
CCP-QP-010	20. State the importance of using approved documents.	
	21. State when to verify a document revision.	N A
CCP-QP-016	22. List the Measuring & Testing Equipment (M&TE) items used during VE.	
CCP-TP-500/ CCP-VE-101 Briefing	23. Explain the purpose of VE and the roles and responsibilities of the VE Operator.	31-6-1 CAD
	24. Identify who is responsible for overall direction and implementation of the VE of that facility.	
	25. Define the two phases of VE technique for remote-handled waste.	
	26. State the number of waste containers allowed per Batch Data Report (BDR).	
	27. Define "layers of confinement."	
	28. State the authorized methods to close a liner bag.	
	29. State the action to be taken if a condition adverse to quality arises.	
	30. State the waste material parameters (WMP).	
	31. Describe the information that should be recorded when describing waste items.	
	32. State five (5) examples of prohibited items.	

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
for Remote-Handled (RH) Waste
Qualification Card

Name: Bret Parmer

	33. Describe how a non-transparent container is handled when liquid is suspected.			
	34. State the acceptable liquid limits in a characterized container.			
	35. Explain the responsibilities and functions of the Independent Technical Review (ITR).			N A
	36. Define layers of confinement.			BP
	37. Describe how to determine Volume Utilization Percentage (VUP).			1-9-13
	38. State the allowable fill percent increments.			
Formal Training	**OJT Practical Requirements[1]** *(This section must be performed in the presence of a VEE) (Always Required)*			**VEE SME/OJT Signature/Date**
CCP-TP-500	1. Prepare the recording equipment. *(This activity is at the discretion of the SME instructor)*	P	(S)	T.S. Poole 1-9-13
	2. Complete CCP-TP-500 Attachment 1.	P	(S)	T.S. Poole 1-9-13
	3. Prepare a BDR.	P	(S)	T.S. Poole 1-9-13
	4. Determine the VUP.	P	(S)	T.S. Poole 1-9-13
	5. Complete an ITR.	P	(S)	T.S. Poole 1-9-13
	6. Determine Waste Material Parameter (WMP).	P	(S)	T.S. Poole 1-9-13
	7. Verify the physical form of the waste matches the waste stream ID.	P	(S)	T.S. Poole 1-9-13
CCP-TP-513	8. Perform a dimensional or gravimetric measurement and determine the measurement acceptability[2].	P	S	N/A

[1] For simulated steps that involve the recording of information, the steps can be satisfied by the trainee's ability to identify the specific location in the correct record form where actual data would be entered, and explain where the information would be obtained. All required calculations will actually be performed: for simulations, representative data will be used in lieu of actual data. Circle "P" if actually performed or "S" if requirement was simulated.

[2] Procedure CCP-TP-513 is not applicable at all sites. The OJT Practical Requirement for this procedure is only required if the procedure is invoked.

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Bret Parmer

Approvals	
I have completed formal training and received OJT for this position. I fully understand my responsibilities as a RH VE Operator/ITR.	J. Bret Parmer Bret Parmer 1-14-13 Trainee *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of a RH VE Operator/ITR. *(Validation by the RH VEE SME/OJT instructor(s) involved in the training of this individual).*	Jeffrey Book J.S. Book 1-15-13 RH VEE SME/OJT Instructor *(printed name and signature)* Date N/A RH VEE SME/OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of a RH VE Operator/ITR.	Laura Nelson Laura Nelson 1-15-13 CCP SPM *(printed name and signature)* Date

Approved for Content & Format: **Wes Root *(Approval on File)*** **09/18/2012**
SME/OJT Date

Approved for Applicability, Content & Format: **Andrew Stallings *(Approval on File)*** **09/18/2012**
Cognizant Engineer Date

Approved for Content: **Irene Quintana *(Approval on File)*** **09/18/2012**
CCP SPM Date

Approved for Applicability, Content, Format, & Use: **A.J. Fisher *(Approval on File)*** **09/18/2012**
CCP Manager Responsible for Training Date

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Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: Michael Haderlie

Education/Experience	
Resume documenting education and experience on file with National TRU Program Certification (NTPC) Training.	NTPC Training: [signature] Date: 05-29-13

Job Specific Training

☐ Initial Qualification ☑ Requalification ☐ Full Requalification

Qualification Limit	**This qualification is valid for two (2) years.** If necessary, additional training may be required by the Site Project Manager (SPM) or the Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the Manager Responsible for Training. The candidate must successfully complete the entire qualification card to reestablish qualification. Qualification is valid for this site and process only.
Requalification Requirements	Items required for requalification are identified by text.

Indoctrination
(Required at Initial Qualification and Full Requalification)

Initial/Indoctrination Reading:

1. CCP-HSP-014, *Health and Safety Program Implementation for CCP*
2. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
3. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
4. CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)*
5. CCP-QP-002, *CCP Training and Qualification Plan*
6. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
7. CCP-QP-008, *CCP Records Management*
8. CCP-QP-010, *CCP Document Preparation, Approval, and Control*
9. CCP-QP-016, *CCP Control of Measuring and Testing Equipment*
10. CCP-QP-022, *CCP Software Quality Assurance Plan*
11. CCP-QP-023, *CCP Handling, Storage, and Shipping*
12. CCP-QP-029, *CCP Corrective Action Management*
13. CCP-TP-006, *CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste*

I have read the listed Initial/Indoctrination Reading and understand my responsibilities as applicable to the procedures above.	N/A Trainee Date

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: Michael Haderlie

Additional Training Requirements	
1. WAP/QAPjP Briefing and Test *(One-time Requirement)*	Cheryl Arrigo 05-29-13 NTPC Training — Date
2. CCP-VE-101, *Visual Examination (VE) TRU Waste Characterization Briefing* *(Always Required)*	Cheryl Arrigo 05-29-13 NTPC Training — Date
3. VE Comprehensive Exam *(Always Required)*	Cheryl Arrigo 05-29-13 NTPC Training — Date

Formal Training	On-the-Job Training (OJT) Knowledge Requirements *(Required at Initial Qualification and Full Requalification)*	Visual Examination Expert (VEE) Subject Matter Expert (SME)/OJT Signature/Date
CCP-PO-001	1. List the Quality Assurance objectives validated by VE.	
CCP-QP-002	2. State the purpose of the List of Qualified Individuals (LOQI).	
CCP-QP-005	3. State when a nonconformance report (NCR) should be prepared and who is responsible to initiate it.	
	4. Describe how nonconforming items are documented.	
	5. Describe how nonconforming items are controlled to prevent their use.	N A
	6. State who has the responsibility to validate the NCR once initiated.	
	7. Describe how to revise an NCR.	RSP 5-23-13
	8. Describe how to void an NCR.	
CCP-QP-029	9. Describe the purpose of the corrective action report (CAR) process.	
	10. State the person responsible for originating a CAR.	
	11. Describe how corrective actions are documented.	
	12. State who has the responsibility to validate the CAR once initiated.	

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: Michael Haderlie

	13. Describe actions personnel may take when conditions adverse to quality are discovered.	
CCP-QP-008	14. List the responsibilities of record generators.	
	15. State the storage and control requirements for Records.	
	16. Explain the process and proper method to make corrections or revisions to Records.	
CCP-QP-010	17. State the importance of using approved documents.	
	18. State when to verify a document revision.	
CCP-TP-006/ CCP-VE-101 Briefing	19. Explain how to confirm the electronic .xls data sheet on the sftp site.	
	20. Explain the purpose of VE.	N A
	21. State the requirements of the VE Operators in performing VE.	
	22. Describe where to obtain the tare weight of a waste container.	
	23. What must the VE Operators concur on during the performance of VE?	
	24. What actions are taken if the VE Operators do not concur?	
	25. Discuss the difference in performing VE on debris waste versus homogeneous waste.	
	26. Discuss the difference in identification of soils versus homogeneous waste.	
	27. Define how often calibration due dates should be checked on certified equipment.	
	28. State how to verify the calibration of M&TE used in VE.	
	29. State individual responsible for verifying the calibration of M&TE.	
	30. Describe what is done with an out-of-calibration piece of M&TE.	
	31. Discuss the requirements for packaging of sharp or heavy objects.	

ASP 5-23-13

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: Michael Haderlie

CCP-TP-006	32. Describe how to obtain the net weight of a waste container.	
	33. Define "layers of confinement".	
	34. State how often a scale operational check is performed.	
	35. State the Waste Material Parameters (WMPs).	
	36. Define the following WMP acronyms: a. IN d. S b. OR e. R c. PW	
	37. Describe the actions taken if prohibited items are found.	
	38. State five (5) examples of prohibited items.	N A
	39. Describe how a non-transparent container is handled when liquid is suspected.	
	40. State the acceptable liquid limits in a characterized container.	
	41. Discuss the process of absorbing liquids that may be processed at the host facility.	5-23-13
	42. Discuss how unvented heat-sealed bags are handled during processing of prohibited items.	
	43. Describe the conditions that would generate an NCR during the VE process.	
	44. State three (3) examples of potentially "unsafe" packages/items that may be encountered.	
	45. State who decides whether to open a package/item and why it may be necessary.	
	46. Describe the information that should be recorded when describing waste items.	
	47. Describe the unit of measurement for weights to be recorded during VE.	
	48. Describe the unit of measurement that the final weights are converted to in the VE Data Sheet.	
	49. State how to determine the weight of a material using historically derived waste weights.	

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: Michael Haderlie

CCP-TP-006	50. Define WAIP.	
	51. Describe how to determine Volume Utilization Percentage (VUP).	
	52. Define the increments in which the VUP are recorded.	
	53. Explain who is allowed to make data changes in data sheets.	
	54. State the criteria for the rigid liner/liner bag to be considered vented.	
	55. Describe the authorized methods of closure of a liner bag.	
	56. Explain how to obtain a closure time and why it is important.	
	57. State how to determine the torque value for the ring bolt.	N A
	58. State how to determine the torque value for the filter.	
	59. Define waste matrix codes.	
	60. Describe waste stream descriptions.	
	61. State the number of waste containers allowed per Batch Data Report (BDR).	
	62. Describe the information contained in a BDR per CCP-TP-006.	
	63. Explain the responsibilities and functions of the Independent Technical Reviewer (ITR).	
	64. State who cannot complete the ITR checklist in a testing batch.	
	65. Describe what constitutes a completed BDR.	
	66. State the differences and similarities between targeted and TRU waste.	
	67. State what waste is currently approved for standard waste boxes (SWB).	
	68. State how containers are tracked within the characterization process.	

ESP 5-23-13

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: Michael Haderlie

	69. Define how many digits in a BDR number.			N/A per 5-23-13
	70. State the number of digits that are in a drum number.			
	71. Describe the waste matrix codes that could be assigned once VE is complete.			
	72. Define the waste stream descriptions assigned to the Accelerated Retrieval Project (ARP) and the Sludge Repackaging Project (SRP).			
	73. Define the responsibilities of the VEE.			
Formal Training	**OJT Practical Requirements[1]** *(This section must be performed in the presence of a VEE)* *(Always Required)*			**VEE SME/OJT Signature/Date**
CCP-TP-006	1. Verify scale calibration check.	(P)	S	Q.S. Poole 5-23-13
	2. Obtain the net weight for the waste container.	(P)	S	Q.S. Poole 5-23-13
	3. Estimate the VUP.	(P)	S	Q.S. Poole 5-23-13
	4. Determine the WMP.	(P)	S	Q.S. Poole 5-23-13
	5. Describe WMP on the VE Data Sheet.	(P)	S	Q.S. Poole 5-23-13
	6. Obtain weight of each WMP.	(P)	S	Q.S. Poole 5-23-13
	7. Determine layers of confinement.	(P)	S	Q.S. Poole 5-23-13
	8. Identify and process prohibited items.	P	(S)	Q.S. Poole 5-23-13
	9. Obtain waste container gross weight.	(P)	S	Q.S. Poole 5-23-13
	10. Complete data sheets.	(P)	S	Q.S. Poole 5-23-13
	11. Complete ITR checklist.	P	(S)	Q.S. Poole 5-23-13
	12. Maintain VE logbooks.	P	(S)	Q.S. Poole 5-23-13
	13. Compile a batch data report BDR.	(P)	S	Q.S. Poole 5-23-13

[1] For simulated steps that involve the recording of information, the steps can be satisfied by the trainee's ability to identify the specific location in the correct record form where actual data would be entered, and explain where the information would be obtained. All required calculations will actually be performed; for simulations, representative data will be used in lieu of actual data. Circle "P" if actually performed or "S" if requirement was simulated.

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: Michael Haderlie

Approvals	
I have completed formal training and received OJT for this position. I fully understand my responsibilities as a VE Operator/ITR at INL.	Michael Haderlie 5-23-13 Trainee Signature *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of a VE Operator/ITR at INL. *(Validation by the VEE SME/OJT instructor(s) involved in the training of this individual)*	Jeffrey Poole 5-23-13 VEE SME/OJT Instructor *(printed name and signature)* Date N/A VEE SME/OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of a VE Operator/ITR at INL.	5-29-13 SPM *(printed name and signature)* Date

Approved for Content & Format:	**Jeffrey Poole *(Approval on File)***	**02/28/2013**
	SME/OJT	Date
Approved for Applicability, Content & Format:	**Andrew Stallings *(Approval on File)***	**02/28/2013**
	Cognizant Engineer	Date
Approved for Content:	**Jim Vernon *(Approval on File)***	**02/28/2013**
	SPM	Date
Approved for Applicability, Content, Format, & Use:	**A.J. Fisher *(Approval on File)***	**02/28/2013**
	Manager Responsible for Training	Date

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National TRU Program Certification Effective Date: 02/28/2013	VE-PIT-01, Rev. 5 Page 1 of 7

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: David Jackman

Education/Experience	
Resume documenting education and experience on file with National TRU Program Certification (NTPC) Training.	Cheryl Almijo 03-26-13 NTPC Training — Date

Job Specific Training

☐ **Initial Qualification** ☑ **Requalification** ☐ **Full Requalification**

Qualification Limit	**This qualification is valid for two (2) years.** If necessary, additional training may be required by the Site Project Manager (SPM) or the Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the Manager Responsible for Training. The candidate must successfully complete the entire qualification card to reestablish qualification. Qualification is valid for this site and process only.
Requalification Requirements	Items required for requalification are identified by text.

Indoctrination
(Required at Initial Qualification and Full Requalification)

Initial/Indoctrination Reading:

1. CCP-HSP-014, *Health and Safety Program Implementation for CCP*
2. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
3. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
4. CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)*
5. CCP-QP-002, *CCP Training and Qualification Plan*
6. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
7. CCP-QP-008, *CCP Records Management*
8. CCP-QP-010, *CCP Document Preparation, Approval, and Control*
9. CCP-QP-016, *CCP Control of Measuring and Testing Equipment*
10. CCP-QP-022, *CCP Software Quality Assurance Plan*
11. CCP-QP-023, *CCP Handling, Storage, and Shipping*
12. CCP-QP-029, *CCP Corrective Action Management*
13. CCP-TP-006, *CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste*

I have read the listed Initial/Indoctrination Reading and understand my responsibilities as applicable to the procedures above.	N/A Trainee — Date

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: David Jackman

Additional Training Requirements	
1. WAP/QAPjP Briefing and Test *(One-time Requirement)*	Cheryl Mingo 03-26-13 NTPC Training — Date
2. CCP-VE-101, *Visual Examination (VE) TRU Waste Characterization Briefing (Always Required)*	Cheryl Mingo 03-26-13 NTPC Training — Date
3. VE Comprehensive Exam *(Always Required)*	Cheryl Mingo 03-26-13 NTPC Training — Date

Formal Training	On-the-Job Training (OJT) Knowledge Requirements *(Required at Initial Qualification and Full Requalification)*	Visual Examination Expert (VEE) Subject Matter Expert (SME)/OJT Signature/Date
CCP-PO-001	1. List the Quality Assurance objectives validated by VE.	N/A
CCP-QP-002	2. State the purpose of the List of Qualified Individuals (LOQI).	N/A
CCP-QP-005	3. State when a nonconformance report (NCR) should be prepared and who is responsible to initiate it.	N/A
	4. Describe how nonconforming items are documented.	N/A
	5. Describe how nonconforming items are controlled to prevent their use.	N/A
	6. State who has the responsibility to validate the NCR once initiated.	N/A
	7. Describe how to revise an NCR.	N/A
	8. Describe how to void an NCR.	N/A
CCP-QP-029	9. Describe the purpose of the corrective action report (CAR) process.	N/A
	10. State the person responsible for originating a CAR.	N/A
	11. Describe how corrective actions are documented.	N/A
	12. State who has the responsibility to validate the CAR once initiated.	N/A

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: David Jackman

	13. Describe actions personnel may take when conditions adverse to quality are discovered.	N/A
CCP-QP-008	14. List the responsibilities of record generators.	N/A
	15. State the storage and control requirements for Records.	N/A
	16. Explain the process and proper method to make corrections or revisions to Records.	N/A
CCP-QP-010	17. State the importance of using approved documents.	N/A
	18. State when to verify a document revision.	N/A
CCP-TP-006/ CCP-VE-101 Briefing	19. Explain how to confirm the electronic .xls data sheet on the sftp site.	N/A
	20. Explain the purpose of VE.	N/A
	21. State the requirements of the VE Operators in performing VE.	N/A
	22. Describe where to obtain the tare weight of a waste container.	N/A
	23. What must the VE Operators concur on during the performance of VE?	N/A
	24. What actions are taken if the VE Operators do not concur?	N/A
	25. Discuss the difference in performing VE on debris waste versus homogeneous waste.	N/A
	26. Discuss the difference in identification of soils versus homogeneous waste.	N/A
	27. Define how often calibration due dates should be checked on certified equipment.	N/A
	28. State how to verify the calibration of M&TE used in VE.	N/A
	29. State individual responsible for verifying the calibration of M&TE.	N/A
	30. Describe what is done with an out-of-calibration piece of M&TE.	N/A
	31. Discuss the requirements for packaging of sharp or heavy objects.	N/A

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: David Jackman

CCP-TP-006	32. Describe how to obtain the net weight of a waste container.	N/A
	33. Define "layers of confinement".	N/A
	34. State how often a scale operational check is performed.	N/A
	35. State the Waste Material Parameters (WMPs).	N/A
	36. Define the following WMP acronyms: a. IN d. S b. OR e. R c. PW	N/A
	37. Describe the actions taken if prohibited items are found.	N/A
	38. State five (5) examples of prohibited items.	N/A
	39. Describe how a non-transparent container is handled when liquid is suspected.	N/A
	40. State the acceptable liquid limits in a characterized container.	N/A
	41. Discuss the process of absorbing liquids that may be processed at the host facility.	N/A
	42. Discuss how unvented heat-sealed bags are handled during processing of prohibited items.	N/A
	43. Describe the conditions that would generate an NCR during the VE process.	N/A
	44. State three (3) examples of potentially "unsafe" packages/items that may be encountered.	N/A
	45. State who decides whether to open a package/item and why it may be necessary.	N/A
	46. Describe the information that should be recorded when describing waste items.	N/A
	47. Describe the unit of measurement for weights to be recorded during VE.	N/A
	48. Describe the unit of measurement that the final weights are converted to in the VE Data Sheet.	N/A
	49. State how to determine the weight of a material using historically derived waste weights.	N/A

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: David Jackman

CCP-TP-006	50. Define WAIP.	N/A
	51. Describe how to determine Volume Utilization Percentage (VUP).	N/A
	52. Define the increments in which the VUP are recorded.	N/A
	53. Explain who is allowed to make data changes in data sheets.	N/A
	54. State the criteria for the rigid liner/liner bag to be considered vented.	N/A
	55. Describe the authorized methods of closure of a liner bag.	N/A
	56. Explain how to obtain a closure time and why it is important.	N/A
	57. State how to determine the torque value for the ring bolt.	N/A
	58. State how to determine the torque value for the filter.	N/A
	59. Define waste matrix codes.	N/A
	60. Describe waste stream descriptions.	N/A
	61. State the number of waste containers allowed per Batch Data Report (BDR).	N/A
	62. Describe the information contained in a BDR per CCP-TP-006.	N/A
	63. Explain the responsibilities and functions of the Independent Technical Reviewer (ITR).	N/A
	64. State who cannot complete the ITR checklist in a testing batch.	N/A
	65. Describe what constitutes a completed BDR.	N/A
	66. State the differences and similarities between targeted and TRU waste.	N/A
	67. State what waste is currently approved for standard waste boxes (SWB).	N/A
	68. State how containers are tracked within the characterization process.	N/A

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
at Idaho National Laboratory (INL)
Qualification Card

Name: David Jackman

	69. Define how many digits in a BDR number.			N/A
	70. State the number of digits that are in a drum number.			N/A
	71. Describe the waste matrix codes that could be assigned once VE is complete.			N/A
	72. Define the waste stream descriptions assigned to the Accelerated Retrieval Project (ARP) and the Sludge Repackaging Project (SRP).			N/A
	73. Define the responsibilities of the VEE.			N/A
Formal Training	**OJT Practical Requirements[1]** *(This section must be performed in the presence of a VEE) (Always Required)*			**VEE SME/OJT Signature/Date**
CCP-TP-006	1. Verify scale calibration check.	(P)	S	T.S. Pool 3-20-13
	2. Obtain the net weight for the waste container.	(P)	S	T.S. Pool 3-20-13
	3. Estimate the VUP.	(P)	S	T.S. Pool 3-20-13
	4. Determine the WMP.	(P)	S	T.S. Pool 3-20-13
	5. Describe WMP on the VE Data Sheet.	(P)	S	T.S. Pool 3-20-13
	6. Obtain weight of each WMP.	(P)	S	T.S. Pool 3-20-13
	7. Determine layers of confinement.	(P)	S	T.S. Pool 3-20-13
	8. Identify and process prohibited items.	P	(S)	T.S. Pool 3-20-13
	9. Obtain waste container gross weight.	(P)	S	T.S. Pool 3-20-13
	10. Complete data sheets.	(P)	S	T.S. Pool 3-20-13
	11. Complete ITR checklist.	(P)	S	Brad [illegible] 3-21-13
	12. Maintain VE logbooks.	P	(S)	T.S. Pool 3-20-13
	13. Compile a batch data report BDR.	(P)	S	T.S. Pool 3-20-13

[1] For simulated steps that involve the recording of information, the steps can be satisfied by the trainee's ability to identify the specific location in the correct record form where actual data would be entered, and explain where the information would be obtained. All required calculations will actually be performed; for simulations, representative data will be used in lieu of actual data. Circle "P" if actually performed or "S" if requirement was simulated.

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) at Idaho National Laboratory (INL) Qualification Card

Name: David Jackman

Approvals	
I have completed formal training and received OJT for this position. I fully understand my responsibilities as a VE Operator/ITR at INL.	David Jackman 3-26-13 Trainee Signature *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of a VE Operator/ITR at INL. *(Validation by the VEE SME/OJT instructor(s) involved in the training of this individual)*	Jeffrey Poole 3-26-13 VEE SME/OJT Instructor *(printed name and signature)* Date
	BRAD STARK 3-26-13 ~~3-26-13~~ 3-26-13 VEE SME/OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of a VE Operator/ITR at INL.	Richard Kantrowitz 3/26/13 SPM *(printed name and signature)* Date

Approved for Content & Format:	**Jeffrey Poole *(Approval on File)***	**02/28/2013**
	SME/OJT	Date
Approved for Applicability, Content & Format:	**Andrew Stallings *(Approval on File)***	**02/28/2013**
	Cognizant Engineer	Date
Approved for Content:	**Jim Vernon *(Approval on File)***	**02/28/2013**
	SPM	Date
Approved for Applicability, Content, Format, & Use:	**A.J. Fisher *(Approval on File)***	**02/28/2013**
	Manager Responsible for Training	Date

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Central Characterization Project **Effective Date: 9/26/2011**	**VE-PIT-01, Rev. 2** **Page 1 of 8**

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: Jodi Stanton	**Badge Number:** [redacted]
Email Address: [redacted]	

Job Specific Training	
☐ **Initial Qualification**	☒ **Requalification**
Qualification Limit	**This qualification is valid for two (2) years.** If necessary, additional training may be required by the CCP Lead Site Project Manager (SPM) or the CCP Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the CCP Manager responsible for Training. The candidate must successfully complete the entire CCP qualification card to reestablish qualification. Qualification is valid for this site and process only.
Requalification Requirements	Items required for requalification are identified by text.

Indoctrination
(Required at initial qualification, or in the event of requalification after disqualification only.)

Initial/Indoctrination Reading:

1. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
2. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
3. CCP-PO-003, *CCP TRUPACT-II Authorized Methods for Payload Control (TRAMPAC)*
4. CCP-QP-002, *CCP Training and Qualification Plan*
5. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
6. CCP-QP-006, *CCP Corrective Action Reporting and Control*
7. CCP-QP-008, *CCP Records Management*
8. CCP-QP-010, *CCP Document Preparation Approval and Control*
9. CCP-QP-016, *CCP Control of Measuring, Testing, and Equipment*
10. CCP-QP-022, *CCP Software Quality Assurance Plan*
11. CCP-QP-023, *CCP Handling, Storage, and Shipping*
12. CCP-TP-006, *CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved from Pits*

I have read the listed initial/indoctrination reading and understand my responsibilities as applicable to the procedures above.	N/A Trainee	Date

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: Jodi Stanton	**Badge Number:** [redacted]
Email Address: [redacted]	

Additional Training Requirements	
1. WAP/QAPjP Briefing and Test. *(One-time requirement)*	CCP Training 10/11/11 Date
2. Visual Examination (VE) TRU Waste Characterization Briefing. *(Required at each requalification)*	CCP Training 10/11/11 Date
3. CCP VE Comprehensive Exam (score 80% or higher) administered by CCP Training. *(To be administered at initial and each requalification)*	CCP Training 10/11/11 Date

Formal Training	**On-the-Job Training (OJT) Knowledge Requirements** *(Required at initial qualification, or in the event of requalification after disqualification only)*	**Visual Examination Expert (VEE) Subject Matter Expert (SME)/OJT Signature/Date**
CCP-PO-001	1. List the Quality Assurance objectives validated by VE.	Q.S. Poole 10-4-11
CCP-QP-002	2. State the purpose of the List of Qualified Individuals (LOQI).	Q.S. Poole 10-4-11
CCP-QP-005	3. State when a nonconformance report (NCR) should be prepared and who is responsible to initiate it.	Q.S. Poole 10-4-11
	4. Describe how nonconforming items are documented.	Q.S. Poole 10-4-11
	5. Describe how nonconforming items are controlled to prevent their use.	Q.S. Poole 10-4-11
	6. State who has the responsibility to validate the NCR once initiated.	Q.S. Poole 10-4-11
	7. Describe how to revise an NCR.	Q.S. Poole 10-4-11
	8. Describe how to void an NCR.	Q.S. Poole 10-4-11
CCP-QP-006	9. Describe the purpose of the corrective action report (CAR) process.	Q.S. Poole 10-4-11
	10. State the person responsible for originating a CAR.	Q.S. Poole 10-4-11
	11. Describe how corrective actions are documented.	Q.S. Poole 10-4-11
	12. State who has the responsibility to validate the CAR once initiated.	Q.S. Poole 10-4-11

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: Jodi Stanton	Badge Number: [redacted]
Email Address: [redacted]	

CCP-QP-008	13. Describe actions CCP personnel may take when conditions adverse to quality are discovered.	S. Poole 10-4-11
	14. List the responsibilities of record generators.	S. Poole 10-4-11
	15. State the storage and control requirements for CCP records.	S. Poole 10-4-11
	16. Explain the process and proper method to make corrections or revisions to CCP records.	S. Poole 10-4-11
CCP-QP-010	17. State the importance of using approved documents.	S. Poole 10-4-11
	18. State when to verify a document revision.	S. Poole 10-4-11
CCP-TP-006/ CCP-VE-101 Briefing	19. Explain how to confirm the electronic .xls data sheet on the ftp site.	S. Poole 10-4-11
	20. Explain the purpose of Visual Examination (VE) of Newly Generated TRU Waste.	S. Poole 10-4-11
	21. State the requirements of the VE Operators in performing VE.	S. Poole 10-4-11
	22. Describe where to obtain the tare weight of a waste container.	S. Poole 10-4-11
	23. What must the VE Operators concur on during the performance of VE?	S. Poole 10-4-11
	24. What actions are taken if the VE Operators do not concur?	S. Poole 10-4-11
	25. Discuss the difference in performing VE on debris waste versus homogeneous waste.	S. Poole 10-4-11
	26. Define how often calibration due dates should be checked on certified equipment.	S. Poole 10-4-11
	27. State how to verify the calibration of M&TE used in VE Newly Generated TRU Waste.	S. Poole 10-4-11
	28. State individual responsible for verifying the calibration of M&TE.	S. Poole 10-4-11
	29. Describe what is done with an out-of-calibration piece of M&TE.	S. Poole 10-4-11
	30. Discuss the requirements for packaging of sharp or heavy objects.	S. Poole 10-4-11
	31. Describe how to obtain the net weight of a waste container.	S. Poole 10-4-11
	32. Define "layers of confinement".	S. Poole 10-4-11

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: Jodi Stanton	Badge Number: [redacted]
Email Address: [redacted]	

CCP-TP-006	33. State how often a scale operational check is performed.	T.S. Poole 10-4-11
	34. State the Waste Material Parameters (WMPs).	T.S. Poole 10-4-11
	35. Define the following WMP acronyms: a.I N b. OR c.P W d. S e.R	T.S. Poole 10-4-11
	36. Describe the actions taken if prohibited items are found.	T.S. Poole 10-4-11
	37. State five (5) examples of prohibited items.	T.S. Poole 10-4-11
	38. Describe how a non-transparent container is handled when liquid is suspected.	T.S. Poole 10-4-11
	39. State the acceptable liquid limits in a characterized container.	T.S. Poole 10-4-11
	40. Discuss the process of absorbing liquids that may be processed at the host facility.	T.S. Poole 10-4-11
	41. Discuss how unvented heat-sealed bags are handled during processing of prohibited items.	T.S Poole 10-4-11
	42. Describe the conditions that would generate an NCR during the VE process.	T.S. Poole 10-4-11
	43. State three (3) examples of potentially "unsafe" packages/items that may be encountered.	T.S. Poole 10-4-11
	44. State who decides whether to open a package/item and why it may be necessary.	T.S. Poole 10-4-11
	45. Describe the information that should be recorded when describing waste items.	T.S. Poole 10-4-11
	46. Describe the unit of measurement for weights to be recorded during VE.	T.S. Poole 10-4-11
	47. Describe the unit of measurement that the final weights are converted to in the VE Data Sheet.	T.S. Poole 10-4-11
	48. State how to determine the weight of a material using historically derived waste weights.	T.S. Poole 10-4-11
	49. Define WAIP.	T.S. Poole 10-4-11
CCP-TP-006	50. Describe how to determine Volume Utilization Percentage (VUP).	T.S. Poole 10-4-11

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: Jodi Stanton	**Badge Number:** [redacted]
Email Address: [redacted]	

CCP-TP-006	51. Define the increments in which the VUP are recorded.	Q.S. Poole 10-5-11
	52. Explain who is allowed to make data changes in data sheets.	Q.S. Poole 10-5-11
	53. State the criteria for the rigid liner/liner bag to be considered vented.	Q.S. Poole 10-5-11
	54. Describe the authorized methods of closure of a liner bag.	Q.S. Poole 10-5-11
	55. Explain how to obtain a closure time and why it is important.	Q.S. Poole 10-5-11
	56. State how to determine the torque value for the ring bolt.	Q.S. Poole 10-5-11
	57. State how to determine the torque value for the filter.	Q.S. Poole 10-5-11
	58. Define waste matrix codes.	Q.S. Poole 10-5-11
	59. Describe waste stream descriptions.	Q.S. Poole 10-5-11
	60. State the number of waste containers allowed per Batch Data Report (BDR).	Q.S. Poole 10-5-11
	61. Describe the information contained in a BDR per CCP-TP-006.	Q.S. Poole 10-5-11
	62. Explain the responsibilities and functions of the Independent Technical Reviewer (ITR).	Q.S. Poole 10-5-11
	63. State who cannot complete the ITR checklist in a testing batch.	Q.S. Poole 10-5-11
	64. Describe what constitutes a completed BDR.	Q.S. Poole 10-5-11
	65. State the differences and similarities between targeted and TRU waste.	Q.S. Poole 10-5-11
	66. State what waste is currently approved for standard waste boxes (SWB).	Q.S. Poole 10-5-11
	67. State how containers are tracked within the CCP process.	Q.S. Poole 10-5-11
	68. Define how many digits in a BDR number.	Q.S. Poole 10-5-11
	69. State the number of digits that are in a drum number.	Q.S. Poole 10-5-11
	70. State the three (3) waste matrix codes that could be assigned once VE is completed.	Q.S. Poole 10-5-11

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: Jodi Stanton	**Badge Number:** [redacted]
Email Address: [redacted]	

	71. Define the waste stream description assigned to the ARP.			T.S. Poole 10-5-11
	72. Define the responsibilities of the VEE.			T.S. Poole 10-5-11
Formal Training	**OJT Practical Requirements**[1] *(Required at initial qualification and at requalification) (This section must be performed in the presence of a VEE for initial and requalification)*			**VEE SME/OJT Signature/Date**
CCP-TP-006	1. Verify scale calibration check.	(P)	S	T.S. Poole 9-29-11
	2. Obtain the net weight for the waste container.	(P)	S	T.S. Poole 9-29-11
	3. Estimate the VUP.	(P)	S	T.S. Poole 9-29-11
	4. Determine the WMP.	(P)	S	T.S. Poole 9-29-11
	5. Describe WMP on the VE Data Sheet.	(P)	S	T.S. Poole 9-29-11
	6. Obtain weight of each WMP.	(P)	S	T.S. Poole 9-29-11
	7. Determine layers of confinement.	(P)	S	T.S. Poole 9-29-11
	8. Identify and process prohibited items.	P	(S)	T.S. Poole 9-29-11
	9. Obtain waste container gross weight.	(P)	S	T.S. Poole 9-29-11
	10. Complete data sheets.	(P)	S	T.S. Poole 9-29-11
	11. Complete ITR checklist.	(P)	S	T.S. Poole 10-4-11
	12. Maintain VE logbooks.	P	(S)	T.S. Poole 9-29-11
	13. Compile a batch data report BDR.	(P)	S	T.S. Poole 9-27-11

[1] For simulated steps that involve the recording of information, the steps can be satisfied by the trainee's ability to identify the specific location in the correct record form where actual data would be entered, and explain where the information would be obtained. All required calculations will actually be performed: for simulations, representative data will be used in lieu of actual data. Circle "P" if actually performed or "S" if requirement was simulated.

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: Jodi Stanton	**Badge Number:** [redacted]
Email Address: [redacted]	

	Approvals
I have completed formal training and received OJT for this position. I fully understand my responsibilities as a VE Operator/ITR for Newly Generated TRU Waste Retrieved from the Pits.	Jodi M. Stanton 10/10/11 Trainee Signature *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of a VE Operator/ITR for Newly Generated TRU Waste Retrieved from the Pits. *(Validation by the SME/OJT instructor(s) involved in the training of this individual)*	Jeffrey Poole J.S. Poole 10-10-11 VEE SME/OJT Instructor *(printed name and signature)* Date N/A VEE SME/OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of a VE Operator/ITR for Newly Generated TRU Waste Retrieved from the Pits.	Jim Vernon 10-11-11 CCP Lead or Alternate SPM *(printed name and signature)* Date

Approved for Content & Format:	**Jeffrey Poole (Approval on file)** VEE SME/OJT	**9/26/2011** Date
Approved for Content & Format:	**Andrew Stallings (Approval on file)** Cognizant Engineer	**9/26/2011** Date
Approved for Content:	**Jim Vernon (Approval on file)** CCP Lead or Alternate SPM	**9/26/2011** Date
Approved for Use:	**AJ Fisher (Approval on file)** CCP Manager Responsible for Training	**9/26/2011** Date

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: Jodi Stanton	**Badge Number:** [redacted]
Email Address: [redacted]	

Site: INL

List of Applicable Waste Streams *(based on applicable Acceptable Knowledge Reports read):**	
	N
	A

**For use with Initial and Additional Sites (To be completed for each site the trainee is qualifying for)*

I have read the applicable Acceptable Knowledge Reports for this site. I understand my responsibilities regarding the waste streams listed above.

Jodi M. Stanton Jodi M Stanton — Trainee *(Printed Name and Signature)*

10/10/11 — Date

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Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: LeAnn Verlanic	**Badge Number:** [redacted]
Email Address: [redacted]	

Job Specific Training	
☐ **Initial Qualification**	☒ **Requalification**
Qualification Limit	**This qualification is valid for two (2) years.** If necessary, additional training may be required by the CCP Lead Site Project Manager (SPM) or the CCP Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the CCP Manager responsible for Training. The candidate must successfully complete the entire CCP qualification card to reestablish qualification. Qualification is valid for this site and process only.
Requalification Requirements	Items required for requalification are identified by text.

Indoctrination
(Required at initial qualification, or in the event of requalification after disqualification only.)

Initial/Indoctrination Reading:

1. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
2. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
3. CCP-PO-003, *CCP TRUPACT-II Authorized Methods for Payload Control (TRAMPAC)*
4. CCP-QP-002, *CCP Training and Qualification Plan*
5. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
6. CCP-QP-006, *CCP Corrective Action Reporting and Control*
7. CCP-QP-008, *CCP Records Management*
8. CCP-QP-010, *CCP Document Preparation Approval and Control*
9. CCP-QP-016, *CCP Control of Measuring, Testing, and Equipment*
10. CCP-QP-022, *CCP Software Quality Assurance Plan*
11. CCP-QP-023, *CCP Handling, Storage, and Shipping*
12. CCP-TP-006, *CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved from Pits*

I have read the listed initial/indoctrination reading and understand my responsibilities as applicable to the procedures above.	LeAnn Verlanic 9-26-11
	Trainee — Date

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: LeAnn Verlanic	**Badge Number:** [redacted]
Email Address: [redacted]	

Additional Training Requirements	
1. WAP/QAPjP Briefing and Test. *(One-time requirement)*	CCP Training — 10/17/11 Date
2. Visual Examination (VE) TRU Waste Characterization Briefing. *(Required at each requalification)*	CCP Training — 10/17/11 Date
3. CCP VE Comprehensive Exam (score 80% or higher) administered by CCP Training. *(To be administered at initial and each requalification)*	CCP Training — 10/17/11 Date

Formal Training	**On-the-Job Training (OJT) Knowledge Requirements** *(Required at initial qualification, or in the event of requalification after disqualification only)*	**Visual Examination Expert (VEE) Subject Matter Expert (SME)/OJT Signature/Date**
CCP-PO-001	1. List the Quality Assurance objectives validated by VE.	Brad Stark 10-5-11
CCP-QP-002	2. State the purpose of the List of Qualified Individuals (LOQI).	Brad Stark 10-5-11
CCP-QP-005	3. State when a nonconformance report (NCR) should be prepared and who is responsible to initiate it.	Brad Stark 10-5-11
	4. Describe how nonconforming items are documented.	Brad Stark 10.5.11
	5. Describe how nonconforming items are controlled to prevent their use.	Brad Stark 10.5.11
	6. State who has the responsibility to validate the NCR once initiated.	Brad Stark 10.5.11
	7. Describe how to revise an NCR.	Brad Stark 10.5.11
	8. Describe how to void an NCR.	Brad Stark 10.5.11
CCP-QP-006	9. Describe the purpose of the corrective action report (CAR) process.	Brad Stark 10.5.11
	10. State the person responsible for originating a CAR.	Brad Stark 10.5.11
	11. Describe how corrective actions are documented.	Brad Stark 10.5.11
	12. State who has the responsibility to validate the CAR once initiated.	Brad Stark 10.5.11

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: LeAnn Verlanic	**Badge Number:** [redacted]
Email Address: [redacted]	

	13. Describe actions CCP personnel may take when conditions adverse to quality are discovered.	Brad Stark	10-5-11
CCP-QP-008	14. List the responsibilities of record generators.	Brad Stark	10-5-11
	15. State the storage and control requirements for CCP records.	Brad Stark	10-5-11
	16. Explain the process and proper method to make corrections or revisions to CCP records.	Brad Stark	10-5-11
CCP-QP-010	17. State the importance of using approved documents.	Brad Stark	10-5-11
	18. State when to verify a document revision.	Brad Stark	10-5-11
CCP-TP-006/ CCP-VE-101 Briefing	19. Explain how to confirm the electronic .xls data sheet on the ftp site.	Brad Stark	10-5-11
	20. Explain the purpose of Visual Examination (VE) of Newly Generated TRU Waste.	Brad Stark	10-5-11
	21. State the requirements of the VE Operators in performing VE.	Brad Stark	10-5-11
	22. Describe where to obtain the tare weight of a waste container.	Brad Stark	10-5-11
	23. What must the VE Operators concur on during the performance of VE?	Brad Stark	10-5-11
	24. What actions are taken if the VE Operators do not concur?	Brad Stark	10-5-11
	25. Discuss the difference in performing VE on debris waste versus homogeneous waste.	Brad Stark	10-5-11
	26. Define how often calibration due dates should be checked on certified equipment.	Brad Stark	10-5-11
	27. State how to verify the calibration of M&TE used in VE Newly Generated TRU Waste.	Brad Stark	10-5-11
	28. State individual responsible for verifying the calibration of M&TE.	Brad Stark	10-5-11
	29. Describe what is done with an out-of-calibration piece of M&TE.	Brad Stark	10-5-11
	30. Discuss the requirements for packaging of sharp or heavy objects.	Brad Stark	10-5-11
	31. Describe how to obtain the net weight of a waste container.	Brad Stark	10-5-11
	32. Define "layers of confinement".	Brad Stark	10-5-11

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: LeAnn Verlanic	**Badge Number:** [redacted]
Email Address: [redacted]	

CCP-TP-006	33. State how often a scale operational check is performed.	9.5. Poole 10-6-11
	34. State the Waste Material Parameters (WMPs).	9.5. Poole 10-6-11
	35. Define the following WMP acronyms: a. IN b. OR c. PW d. S e. R	9.5. Poole 10-6-11
	36. Describe the actions taken if prohibited items are found.	9.5. Poole 10-6-11
	37. State five (5) examples of prohibited items.	9.5. Poole 10-6-11
	38. Describe how a non-transparent container is handled when liquid is suspected.	9.5. Poole 10-6-11
	39. State the acceptable liquid limits in a characterized container.	9.5. Poole 10-6-11
	40. Discuss the process of absorbing liquids that may be processed at the host facility.	9.5. Poole 10-6-11
	41. Discuss how unvented heat-sealed bags are handled during processing of prohibited items.	9.5. Poole 10-6-11
	42. Describe the conditions that would generate an NCR during the VE process.	9.5 Poole 10-6-11
	43. State three (3) examples of potentially "unsafe" packages/items that may be encountered.	9.5. Poole 10-6-11
	44. State who decides whether to open a package/item and why it may be necessary.	9.5 Poole 10-6-11
	45. Describe the information that should be recorded when describing waste items.	9.5 Poole 10-6-11
	46. Describe the unit of measurement for weights to be recorded during VE.	9.5. Poole 10-6-11
	47. Describe the unit of measurement that the final weights are converted to in the VE Data Sheet.	9.5. Poole 10-6-11
	48. State how to determine the weight of a material using historically derived waste weights.	9.5. Poole 10-6-11
	49. Define WAIP.	9.5. Poole 10-6-11
CCP-TP-006	50. Describe how to determine Volume Utilization Percentage (VUP).	9.5. Poole 10-6-11

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: LeAnn Verlanic	**Badge Number:** [redacted]
Email Address: [redacted]	

CCP-TP-006	51. Define the increments in which the VUP are recorded.	9.5. Poole 10-6-11
	52. Explain who is allowed to make data changes in data sheets.	9.5. Poole 10-6-11
	53. State the criteria for the rigid liner/liner bag to be considered vented.	9.5. Poole 10-6-11
	54. Describe the authorized methods of closure of a liner bag.	9.5. Poole 10-5-11
	55. Explain how to obtain a closure time and why it is important.	9.5. Poole 10-6-11
	56. State how to determine the torque value for the ring bolt.	9.5. Poole 10-6-11
	57. State how to determine the torque value for the filter.	9.5. Poole 10-6-11
	58. Define waste matrix codes.	9.5. Poole 10-5-11
	59. Describe waste stream descriptions.	9.5. Poole 10-5-11
	60. State the number of waste containers allowed per Batch Data Report (BDR).	9.5. Poole 10-5-11
	61. Describe the information contained in a BDR per CCP-TP-006.	9.5. Poole 10-5-11
	62. Explain the responsibilities and functions of the Independent Technical Reviewer (ITR).	9.5. Poole 10-5-11
	63. State who cannot complete the ITR checklist in a testing batch.	9.5. Poole 10-5-11
	64. Describe what constitutes a completed BDR.	9.5. Poole 10-5-11
	65. State the differences and similarities between targeted and TRU waste.	9.5. Poole 10-5-11
	66. State what waste is currently approved for standard waste boxes (SWB).	9.5. Poole 10-5-11
	67. State how containers are tracked within the CCP process.	9.5. Poole 10-5-11
	68. Define how many digits in a BDR number.	9.5. Poole 10-5-11
	69. State the number of digits that are in a drum number.	9.5. Poole 10-5-11
	70. State the three (3) waste matrix codes that could be assigned once VE is completed.	9.5. Poole 10-5-11

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: LeAnn Verlanic	**Badge Number:** [redacted]
Email Address: [redacted]	

	71. Define the waste stream description assigned to the ARP.			Q.S. Poole 10-5-11
	72. Define the responsibilities of the VEE.			Q.S. Poole 10-5-11
Formal Training	**OJT Practical Requirements[1]** *(Required at initial qualification and at requalification) (This section must be performed in the presence of a VEE for initial and requalification)*			**VEE SME/OJT Signature/Date**
CCP-TP-006	1. Verify scale calibration check.	(P)	S	Q.S. Poole 9-29-11
	2. Obtain the net weight for the waste container.	(P)	S	Q.S. Poole 9-29-11
	3. Estimate the VUP.	(P)	S	Q.S. Poole 10-3-11
	4. Determine the WMP.	(P)	S	Q.S. Poole 10-3-11
	5. Describe WMP on the VE Data Sheet.	(P)	S	Q.S. Poole 10-3-11
	6. Obtain weight of each WMP.	(P)	S	Q.S. Poole 10-3-11
	7. Determine layers of confinement.	(P)	S	Q.S. Poole 10-3-11
	8. Identify and process prohibited items.	P	(S)	Q.S. Poole 10-3-11
	9. Obtain waste container gross weight.	(P)	S	Q.S. Poole 10-3-11
	10. Complete data sheets.	(P)	S	Q.S. Poole 10-3-11
	11. Complete ITR checklist.	(P)	S	Q.S. Poole 10-6-11
	12. Maintain VE logbooks.	P	(S)	Q.S. Poole 9-29-11
	13. Compile a batch data report BDR.	(P)	S	Q.S. Poole 9-28-11

[1] For simulated steps that involve the recording of information, the steps can be satisfied by the trainee's ability to identify the specific location in the correct record form where actual data would be entered, and explain where the information would be obtained. All required calculations will actually be performed: for simulations, representative data will be used in lieu of actual data. Circle "P" if actually performed or "S" if requirement was simulated.

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: LeAnn Verlanic	**Badge Number:** [redacted]
Email Address: [redacted]	

Approvals	
I have completed formal training and received OJT for this position. I fully understand my responsibilities as a VE Operator/ITR for Newly Generated TRU Waste Retrieved from the Pits.	LeAnn Verlanic LeAnn Verlanic 10-10-11 Trainee Signature *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of a VE Operator/ITR for Newly Generated TRU Waste Retrieved from the Pits. *(Validation by the SME/OJT instructor(s) involved in the training of this individual)*	Jeffrey Poole J.S. Poole 10-10-11 VEE SME/OJT Instructor *(printed name and signature)* Date
	Brad Stacy Brad Stacy 10/17/11 VEE SME/OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of a VE Operator/ITR for Newly Generated TRU Waste Retrieved from the Pits.	Jim Vernon 10-17-11 CCP Lead or Alternate SPM *(printed name and signature)* Date

Approved for Content & Format:	**Jeffrey Poole (Approval on file)** VEE SME/OJT	**9/26/2011** Date
Approved for Content & Format:	**Andrew Stallings (Approval on file)** Cognizant Engineer	**9/26/2011** Date
Approved for Content:	**Jim Vernon (Approval on file)** CCP Lead or Alternate SPM	**9/26/2011** Date
Approved for Use:	**AJ Fisher (Approval on file)** CCP Manager Responsible for Training	**9/26/2011** Date

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste Retrieved from Pits*

Name: LeAnn Verlanic	**Badge Number:** [redacted]
Email Address: [redacted]	

Site: INL

List of Applicable Waste Streams ***(based on applicable Acceptable Knowledge Reports read):****	
	N
	A

**For use with Initial and Additional Sites (To be completed for each site the trainee is qualifying for)*

I have read the applicable Acceptable Knowledge Reports for this site. I understand my responsibilities regarding the waste streams listed above.

LeAnn Verlanic LeAnn Verlanic 10-10-11
Trainee *(Printed Name and Signature)* Date

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Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste*

Name: Jackie Hulse

Education/Experience	
Resume documenting education and experience on file with National TRU Program Certification (NTPC) Training.	Michele Billett 1/17/13 NTPC Training Date

Job Specific Training

☐ **Initial Qualification** ☐ **Requalification** ☑ **Full Requalification**

Qualification Limit	**This qualification is valid for two (2) years.** If necessary, additional training may be required by the Site Project Manager (SPM) or the Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the Manager Responsible for Training. The candidate must successfully complete the entire qualification card to reestablish qualification. Qualification is valid for this site and process only.
Requalification Requirements	Items required for requalification are identified by text.

Indoctrination
(Required at Initial Qualification and Full Requalification)

Initial/Indoctrination Reading:

1. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
2. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
3. CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)*
4. CCP-QP-002, *CCP Training and Qualification Plan*
5. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
6. CCP-QP-006, *CCP Corrective Action Reporting and Control*
7. CCP-QP-008, *CCP Records Management*
8. CCP-QP-010, *CCP Document Preparation, Approval, and Control*
9. CCP-QP-016, *CCP Control of Measuring and Testing Equipment*
10. CCP-QP-022, *CCP Software Quality Assurance Plan*
11. CCP-QP-023, *CCP Handling, Storage, and Shipping*
12. CCP-TP-006, *CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste*

I have read the listed Initial/Indoctrination Reading and understand my responsibilities as applicable to the procedures above.	[signature] 1/8/13 Trainee Date

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste*

Name: Jackie Hulse

Additional Training Requirements	
1. WAP/QAPjP Briefing and Test *(One-time Requirement)*	Michele Billett 1/17/13 NTPC Training Date
2. CCP-VE-101, *Visual Examination (VE) TRU Waste Characterization Briefing (Always Required)*	Michele Billett 1/17/13 NTPC Training Date
3. CCP VE Comprehensive Exam *(Always Required)*	Michele Billett 1/17/13 NTPC Training Date

Formal Training	On-the-Job Training (OJT) Knowledge Requirements *(Required at Initial Qualification and Full Requalification)*	Visual Examination Expert (VEE) Subject Matter Expert (SME)/OJT Signature/Date
CCP-PO-001	1. List the Quality Assurance objectives validated by VE.	1-8-13
CCP-QP-002	2. State the purpose of the List of Qualified Individuals (LOQI).	1-8-13
CCP-QP-005	3. State when a nonconformance report (NCR) should be prepared and who is responsible to initiate it.	1-8-13
	4. Describe how nonconforming items are documented.	1-8-13
	5. Describe how nonconforming items are controlled to prevent their use.	1-8-13
	6. State who has the responsibility to validate the NCR once initiated.	1-8-13
	7. Describe how to revise an NCR.	1-8-13
	8. Describe how to void an NCR.	1-8-13
CCP-QP-006	9. Describe the purpose of the corrective action report (CAR) process.	1-8-13
	10. State the person responsible for originating a CAR.	1-8-13
	11. Describe how corrective actions are documented.	1-8-13
	12. State who has the responsibility to validate the CAR once initiated.	1-8-13

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste*

Name: Jackie Hulse

	13. Describe actions NTPC personnel may take when conditions adverse to quality are discovered.	1-8-13
CCP-QP-008	14. List the responsibilities of record generators.	1-8-13
	15. State the storage and control requirements for NTPC Records.	1-8-13
	16. Explain the process and proper method to make corrections or revisions to NTPC Records.	1-8-13
CCP-QP-010	17. State the importance of using approved documents.	1-8-13
	18. State when to verify a document revision.	1-8-13
CCP-TP-006/ CCP-VE-101 Briefing	19. Explain how to confirm the electronic .xls data sheet on the sftp site.	1-8-13
	20. Explain the purpose of Visual Examination (VE) of Newly Generated TRU Waste.	1-8-13
	21. State the requirements of the VE Operators in performing VE.	1-8-13
	22. Describe where to obtain the tare weight of a waste container.	1-8-13
	23. What must the VE Operators concur on during the performance of VE?	1-8-13
	24. What actions are taken if the VE Operators do not concur?	1-8-13
	25. Discuss the difference in performing VE on debris waste versus homogeneous waste.	1-8-13
	26. Discuss the difference in identification of soils versus homogeneous waste.	1-8-13
	27. Define how often calibration due dates should be checked on certified equipment.	1-8-13
	28. State how to verify the calibration of M&TE used in VE Newly Generated TRU Waste.	1-8-13
	29. State individual responsible for verifying the calibration of M&TE.	1-8-13
	30. Describe what is done with an out-of-calibration piece of M&TE.	1-8-13
	31. Discuss the requirements for packaging of sharp or heavy objects.	1-8-13

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
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Idaho National Laboratory (INL) – *Newly Generated TRU Waste*

Name: Jackie Hulse

CCP-TP-006	32. Describe how to obtain the net weight of a waste container.	1-8-13
	33. Define "layers of confinement".	1-8-13
	34. State how often a scale operational check is performed.	1-8-13
	35. State the Waste Material Parameters (WMPs).	1-8-13
	36. Define the following WMP acronyms: a. IN b. OR c. PW d. S e. R	1-8-13
	37. Describe the actions taken if prohibited items are found.	T.S. Poole 1-9-13
	38. State five (5) examples of prohibited items.	T.S. Poole 1-9-13
	39. Describe how a non-transparent container is handled when liquid is suspected.	T.S. Poole 1-9-13
	40. State the acceptable liquid limits in a characterized container.	T.S. Poole 1-9-13
	41. Discuss the process of absorbing liquids that may be processed at the host facility.	T.S. Poole 1-9-13
	42. Discuss how unvented heat-sealed bags are handled during processing of prohibited items.	T.S. Poole 1-9-13
	43. Describe the conditions that would generate an NCR during the VE process.	T.S. Poole 1-9-13
	44. State three (3) examples of potentially "unsafe" packages/items that may be encountered.	T.S. Poole 1-9-13
	45. State who decides whether to open a package/item and why it may be necessary.	T.S. Poole 1-9-13
	46. Describe the information that should be recorded when describing waste items.	T.S. Poole 1-9-13
	47. Describe the unit of measurement for weights to be recorded during VE.	T.S. Poole 1-9-13
	48. Describe the unit of measurement that the final weights are converted to in the VE Data Sheet.	T.S. Poole 1-9-13
	49. State how to determine the weight of a material using historically derived waste weights.	T.S. Poole 1-9-13

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste*

Name: Jackie Hulse

CCP-TP-006	50. Define WAIP.	Q.S. Poole 1-9-13
	51. Describe how to determine Volume Utilization Percentage (VUP).	Q.S. Poole 1-9-13
	52. Define the increments in which the VUP are recorded.	Q.S. Poole 1-9-13
	53. Explain who is allowed to make data changes in data sheets.	Q.S. Poole 1-9-13
	54. State the criteria for the rigid liner/liner bag to be considered vented.	Q.S. Poole 1-9-13
	55. Describe the authorized methods of closure of a liner bag.	Q.S. Poole 1-9-13
	56. Explain how to obtain a closure time and why it is important.	Q.S. Poole 1-9-13
	57. State how to determine the torque value for the ring bolt.	Q.S. Poole 1-9-13
	58. State how to determine the torque value for the filter.	Q.S. Poole 1-9-13
	59. Define waste matrix codes.	Q.S. Poole 1-9-13
	60. Describe waste stream descriptions.	Q.S. Poole 1-9-13
	61. State the number of waste containers allowed per Batch Data Report (BDR).	Q.S. Poole 1-9-13
	62. Describe the information contained in a BDR per CCP-TP-006.	Q.S. Poole 1-9-13
	63. Explain the responsibilities and functions of the Independent Technical Reviewer (ITR).	Q.S. Poole 1-9-13
	64. State who cannot complete the ITR checklist in a testing batch.	Q.S. Poole 1-9-13
	65. Describe what constitutes a completed BDR.	Q.S. Poole 1-9-13
	66. State the differences and similarities between targeted and TRU waste.	Q.S. Poole 1-9-13
	67. State what waste is currently approved for standard waste boxes (SWB).	Q.S. Poole 1-9-13
	68. State how containers are tracked within the NTPC process.	Q.S. Poole 1-9-13
	69. Define how many digits in a BDR number.	Q.S. Poole 1-9-13

Visual Examination (VE)
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Idaho National Laboratory (INL) – *Newly Generated TRU Waste*

Name: Jackie Hulse

	70. State the number of digits that are in a drum number.			Q.S. Poole 1-9-13
	71. State the three (3) waste matrix codes that could be assigned once VE is completed.			Q.S. Poole 1-9-13
	72. Define the waste stream description assigned to the ARP.			Q.S. Poole 1-9-13
	73. Define the responsibilities of the VEE.			Q.S. Poole 1-9-13
Formal Training	**OJT Practical Requirements[1]** *(This section must be performed in the presence of a VEE)* *(Always Required)*			**VEE SME/OJT Signature/Date**
CCP-TP-006	1. Verify scale calibration check.	P	(S)	Q.S. Poole 1-9-13
	2. Obtain the net weight for the waste container.	P	(S)	Q.S. Poole 1-9-13
	3. Estimate the VUP.	P	(S)	Q.S. Poole 1-9-13
	4. Determine the WMP.	(P)	S	01-16-13
	5. Describe WMP on the VE Data Sheet.	(P)	S	01-16-13
	6. Obtain weight of each WMP.	(P)	S	01-16-13
	7. Determine layers of confinement.	P	(S)	Q.S. Poole 1-9-13
	8. Identify and process prohibited items.	P	(S)	Q.S. Poole 1-9-13
	9. Obtain waste container gross weight.	P	(S)	Q.S. Poole 1-9-13
	10. Complete data sheets.	(P)	S	01-16-13
	11. Complete ITR checklist.	(P)	S	Brad Tuck 1-15-13
	12. Maintain VE logbooks.	P	(S)	Q.S. Poole 1-9-13
	13. Compile a batch data report BDR.	P	(S)	Q.S. Poole 1-9-13

[1] For simulated steps that involve the recording of information, the steps can be satisfied by the trainee's ability to identify the specific location in the correct record form where actual data would be entered, and explain where the information would be obtained. All required calculations will actually be performed: for simulations, representative data will be used in lieu of actual data. Circle "P" if actually performed or "S" if requirement was simulated.

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
Qualification Card
Idaho National Laboratory (INL) – *Newly Generated TRU Waste*

Name: Jackie Hulse

Approvals	
I have completed formal training and received OJT for this position. I fully understand my responsibilities as a VE Operator/ITR for Newly Generated TRU Waste Retrieved from the Pits.	Jackie Hulse 1/17/13 Trainee Signature *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of a VE Operator/ITR for Newly Generated TRU Waste Retrieved from the Pits. *(Validation by the VEE SME/OJT instructor(s) involved in the training of this individual)*	Spencer Puttee 1-17-13 VEE SME/OJT Instructor *(printed name and signature)* Date LUKE GROVER 1-21-13 BRAD STARK 1-21-13 Jeffrey Poole 1-17-13 VEE SME/OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of a VE Operator/ITR for Newly Generated TRU Waste Retrieved from the Pits.	Richard Kantrowitz 1/21/13 SPM *(printed name and signature)* Date

Approved for Content & Format: **Jeffrey Poole *(Approval on File)*** **11/01/2012**
SME/OJT Date

Approved for Applicability, Content & Format: **Andrew Stallings *(Approval on File)*** **11/01/2012**
Cognizant Engineer Date

Approved for Content: **Jim Vernon *(Approval on File)*** **11/01/2012**
SPM Date

Approved for Applicability, Content, Format, & Use: **A.J. Fisher *(Approval on File)*** **11/01/2012**
Manager Responsible for Training Date

COPY

10/15/2008
CCP Training

Washington TRU Solutions
4021 National Parks Highway
Mailstop GSA-103
Carlsbad, NM 88220

Subject: Letter for Jeff Poole for the position of Remote Handled (RH) – Visual Examination Expert (VEE).

I have determined Jeff Poole meets the prerequisites in accordance with CCP Transuranic Waste Characterization Quality Assurance Project Plan (CCP QAPjP; CCP-PO-001) Section B4-1, for the position of RH-VEE SME/OJT. This determination was based on his previous experience and training.

Mr. Poole has more than 25 years experience working in DOE TRU and LLW programs. Mr. Poole has been performing VE for CCP for 3.5 years and was appointed as a CCP Contact Handled – VEE SME/OJT ~ 2 years ago. Resume is on file with CCP Training.

Please initiate, as applicable, the CCP-specific training. Mr. Poole will not be considered qualified until all applicable/required training is completed and is on file at the CCP Project Office.

Sincerely,

Michael L. Sensibaugh
CCP RH/SQS Program Manager

Irene Quintana
RH Site Project Manager

DIVIDER

PAGE

COPY

Billett, Michele - Stoller

From: Quintana, Irene - WTS
Sent: Thursday, November 11, 2010 10:26 AM
To: Billett, Michele - Stoller; Martin, Ryan - Stoller
Cc: Hinojos, Felicia - Stoller
Subject: Amendment to CCP INL RH VEE Appointment - Jeff Poole

Jeff Poole has been previously appointed as VEEs for the CCP INL RH Project. I am amending that appointment to state that Jeff is appointed as VEEs for the CCP INL RH project at INTEC in building CPP-659. This is currently a RH waste process. Please place a copy of this Email in the applicable training records with the original appointment.

Thank you,

Irene Quintana
RH SPM
Washington TRU Solutions, LLC.
Contractor to the Department of Energy
720-982-7174
575-499-4579
irene.quintana@wipp.ws

From: Billett, Michele - Stoller
Sent: Thu 11/11/2010 10:18 AM
To: Quintana, Irene - WTS
Subject: FW: Amendment to CCP INL RH VEE Appointments

Irene,

Could you handle this for me? I need the RH SPM...

Thank you,

Michele Billett

CCP Training Coordinator

S.M. Stoller Corporation

Contractor to Washington TRU Solutions, LLC

575-234-7323

From: Billett, Michele - Stoller
Sent: Thursday, November 11, 2010 9:22 AM
To: Sensibaugh, Mike - WTS
Cc: Hinojos, Felicia - Stoller; Martin, Ryan - Stoller
Subject: FW: Amendment to CCP INL RH VEE Appointments

Mike,

Could you please write a similar email to the one below for Jeff Poole? I need it before the audit next week.

Thank you,

Michele Billett

CCP Training Coordinator

S.M. Stoller Corporation

Contractor to Washington TRU Solutions, LLC

575-234-7323

From: Billett, Bob
Sent: Tuesday, September 01, 2009 2:42 PM
To: Atwood, Alyca - Stoller; Billett, Michele - Stoller
Cc: Sensibaugh, Mike; Quintana, Irene; 'Salas, Paula V'; 'Troy.Pattee@icp.doe.gov'; 'Miles, Shane'; Mojica, Tommy
Subject: Amendment to CCP INL RH VEE Appointments

Alyca/Michele,

Paula Salas, Troy Pattee, Shane Miles, and Tommy Mojica had been previously appointed as VEEs for the CCP INL RH Project. I am amending that appointment to state that Paula, Troy, Shane, and Tommy are appointed as VEEs for the CCP INL RH project at INTEC in building CPP-659. This is currently a RH waste process. Please place a copy of this Email in the applicable training records with the original appointment.

Thanks!

Bob Billett

CCP Operations Manager

Office (575) 234-7682

Cell (865) 816-4202

DIVIDER

PAGE

Billett, Michele - Stoller **COPY**

From: Porter, Larry
Sent: Thursday, May 14, 2009 9:42 AM
To: Atwood, Alyca - Stoller; Billett, Michele - Stoller
Cc: Billett, Bob
Subject: Appointment of Jeff Poole as SME/OJT for VE at Hanford

I am appointing Jeff Poole to be the VE SME/OJT at Hanford. This appointment is based on Jeff's extensive knowledge in performing VE at Rocky Flats, and the Idaho National Laboratory (both CH and RH) and knowledge of the CCP Program from his work at INL. Please send Jeff the required training material to complete his training.

COPY

Washington
TRU Solutions LLC

CP:06:01161
UFC:3420.00

INTER-OFFICE CORRESPONDENCE

DATE: March 27, 2006

FROM: B. J. Broomfield BJB 3/27/06

LOCATION: Retrieval, Characterization & Transportation

TO: R. J. Walker

LOCATION: Retrieval, Characterization & Transportation

SUBJECT: APPOINTMENT LETTER FOR MR. J. POOLE AS CENTRAL CHARACTERIZATION PROJECT VISUAL EXAMINATION EXPERT AND VISUAL EXAMINATION OPERATOR/INDEPENDENT TECHNICAL REVIEWER/TECHNICAL SUPERVISOR/ FACILITY QUALITY ASSURANCE OFFICER FOR THE ACCELERATED RETRIEVAL PROJECT AT THE IDAHO NATIONAL LABORATORY

Mr. J. Poole has been appointed to the position of Central Characterization Project (CCP) Visual Examination Expert (VEE) and Visual Examination (VE) operator/Independent Technical Reviewer (ITR)/Technical Supervisor (TS)/Facility Quality Assurance Officer (FQAO) for the Idaho National Laboratory (INL) Accelerated Retrieval Project.

I have reviewed the training and education documentation for Mr. Poole and conclude he has the knowledge and expertise to be appointed VEE and VE operator/ITR/TS/FQAO for CCP INL.

This appointment letter is required for Mr. Poole to satisfy his CCP Expert Analyst qualifications per CCP-QP-002.

BJB:jm

SPM appointment for VEE

COPY

Washington
TRU Solutions LLC

CP:06:01161
UFC:3420.00

INTER-OFFICE CORRESPONDENCE

DATE: March 27, 2006

FROM: B. J. Broomfield BJB 3/27/06

LOCATION: Retrieval, Characterization & Transportation

TO: R. J. Walker

LOCATION: Retrieval, Characterization & Transportation

SUBJECT: APPOINTMENT LETTER FOR MR. J. POOLE AS CENTRAL CHARACTERIZATION PROJECT VISUAL EXAMINATION EXPERT AND VISUAL EXAMINATION OPERATOR/INDEPENDENT TECHNICAL REVIEWER/TECHNICAL SUPERVISOR/ FACILITY QUALITY ASSURANCE OFFICER FOR THE ACCELERATED RETRIEVAL PROJECT AT THE IDAHO NATIONAL LABORATORY

Mr. J. Poole has been appointed to the position of Central Characterization Project (CCP) Visual Examination Expert (VEE) and Visual Examination (VE) operator/Independent Technical Reviewer (ITR)/Technical Supervisor (TS)/Facility Quality Assurance Officer (FQAO) for the Idaho National Laboratory (INL) Accelerated Retrieval Project.

I have reviewed the training and education documentation for Mr. Poole and conclude he has the knowledge and expertise to be appointed VEE and VE operator/ITR/TS/FQAO for CCP INL.

This appointment letter is required for Mr. Poole to satisfy his CCP Expert Analyst qualifications per CCP-QP-002.

BJB:jm

SPM appointment for VEE

CAL SILICATE

COPY

Billett, Michele - Stoller

From: Vernon, Jim - WTS
Sent: Monday, July 18, 2011 3:20 PM
To: Martin, Ryan - Stoller; Billett, Michele - Stoller
Subject: FW: SME Appointments - Luke Grover and Spencer Pattee

To be clear I wish to appoint Luke and Spencer as VE SME's.

Jim Vernon
Washington TRU Solutions
Contractor to the Department of Energy
Site Project Manager
575-234-7141 (Work)
575-706-2981 (Cell)

From: Vernon, Jim - WTS
Sent: Monday, July 18, 2011 3:18 PM
To: Martin, Ryan - Stoller
Cc: Billett, Michele - Stoller; Verlanic, William; Carlson, Ted - WTS; Fisher, AJ - WTS; Sensibaugh, Mike - WTS
Subject: SME Appointments - Luke Grover and Spencer Pattee

Ryan,

Please appoint Luke Grover and Spencer Pattee as VE SME's. I have reviewed the training history for Luke and Spencer and feel that they will be adequate SME's.

Please call with any questions.

Jim Vernon
Washington TRU Solutions
Contractor to the Department of Energy
Site Project Manager
575-234-7141 - Work
575-706-2981 - Cell

COPY

January 21, 2009
CCP Training

SUBJECT: APPOINTMENT LETTER FOR MR. SPENCER TROY PATTEE AS A CENTRAL CHARACTERIZATION PROJECT (CCP) VISUAL EXAMINATION EXPERT (VEE) FOR THE IDAHO NATIONAL LABORATORY ADVANCED RETRIEVAL PROJECT (ARP) AT RWMC

In accordance with CCP-QP-002, Rev. 27, CCP Training and Qualification Plan, Section 3.3.2, 4.2.6 [C], 4.3.1, and Attachment 1, I have determined that Mr. Spencer Troy Pattee has met all the requirements to be appointed as a Visual Examination Expert (VEE). This determination was further based upon the individual's sustained superior performance and demonstrated leadership ability over the past 2 years, as observed by myself, and the CCP Vendor Project Manager (VPM) at ARP.

Please initiate, as applicable, any additional CCP Specific training for this individual.
Mr. Pattee will not be considered a Qualified Visual Examination Expert until all applicable / required CCP training has been completed and is on file at the CCP Project Office.

Very respectfully,

Charles A. Stepzinski
CCP PM @ INL
(208) 526-6468

Billett, Michele - Stoller

From:	Billett, Bob
Sent:	Monday, August 31, 2009 6:26 PM
To:	Atwood, Alyca - Stoller; Billett, Michele - Stoller
Cc:	Pearcy, Mark; Walentine, Michael; Verlanic, William; 'Salas, Paula V'; Poole, Jeffrey - CCP Hanford; 'Stark, Bradley R'; 'Troy.Pattee@icp.doe.gov'
Subject:	Amendment to CCP INL VEE Appointments

Alyca/Michele,

Jeff Poole, Brad Stark, Paula Salas, and Troy Pattee had been previously appointed as VEEs for the CCP INL Project. I am amending that appointment to state that Jeff, Brad, Paula, and Troy are appointed as VEEs for the CCP INL project at the Accelerated Retrieval Project (ARP). This appointment includes all retrieval areas and airlocks. This is currently a CH waste process. Please place a copy of this Email in the applicable training records with the original appointment.

Thanks!

Bob Billett
CCP Operations Manager
Office (575) 234-7682
Cell (865) 816-4202

Berry

Billett, Michele - Stoller

From: Billett, Bob
Sent: Monday, August 31, 2009 6:26 PM
To: Atwood, Alyca - Stoller; Billett, Michele - Stoller
Cc: Pearcy, Mark; Walentine, Michael; Verlanic, William; 'Salas, Paula V'; Poole, Jeffrey - CCP Hanford; 'Stark, Bradley R'; 'Troy.Pattee@icp.doe.gov'
Subject: Amendment to CCP INL VEE Appointments

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Thanks!

Bob Billett
CCP Operations Manager
Office (575) 234-7682
Cell (865) 816-4202

COPY

Washington
TRU Solutions LLC

CP:06:01161
UFC:3420.00

INTER-OFFICE CORRESPONDENCE

DATE: March 27, 2006

FROM: B. J. Broomfield BJB 3/27/06

LOCATION: Retrieval, Characterization & Transportation

TO: R. J. Walker

LOCATION: Retrieval, Characterization & Transportation

SUBJECT: APPOINTMENT LETTER FOR MR. J. POOLE AS CENTRAL CHARACTERIZATION PROJECT VISUAL EXAMINATION EXPERT AND VISUAL EXAMINATION OPERATOR/INDEPENDENT TECHNICAL REVIEWER/TECHNICAL SUPERVISOR/ FACILITY QUALITY ASSURANCE OFFICER FOR THE ACCELERATED RETRIEVAL PROJECT AT THE IDAHO NATIONAL LABORATORY

Mr. J. Poole has been appointed to the position of Central Characterization Project (CCP) Visual Examination Expert (VEE) and Visual Examination (VE) operator/Independent Technical Reviewer (ITR)/Technical Supervisor (TS)/Facility Quality Assurance Officer (FQAO) for the Idaho National Laboratory (INL) Accelerated Retrieval Project.

I have reviewed the training and education documentation for Mr. Poole and conclude he has the knowledge and expertise to be appointed VEE and VE operator/ITR/TS/FQAO for CCP INL.

This appointment letter is required for Mr. Poole to satisfy his CCP Expert Analyst qualifications per CCP-QP-002.

BJB:jm

SPM appointment for VEE